

Service Manual Peugeot Partner

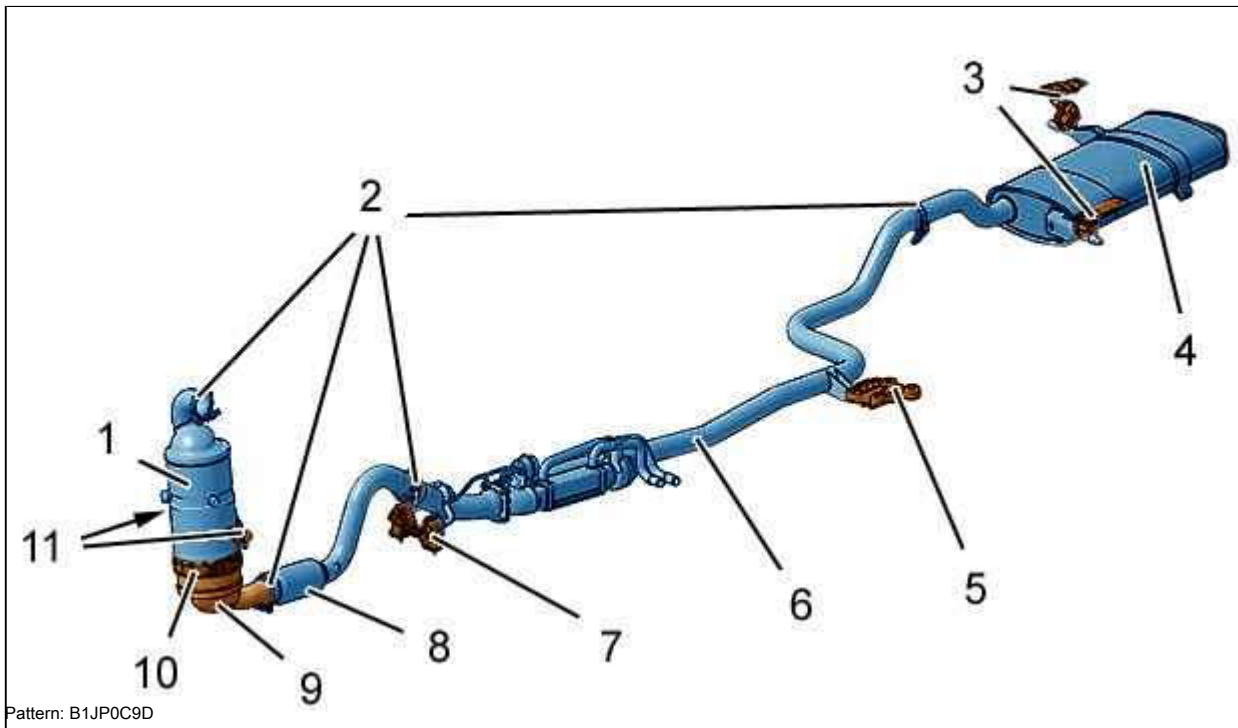


2008 - 2017

CHARACTERISTIC IDENTIFICATION: EXHAUST SYSTEM

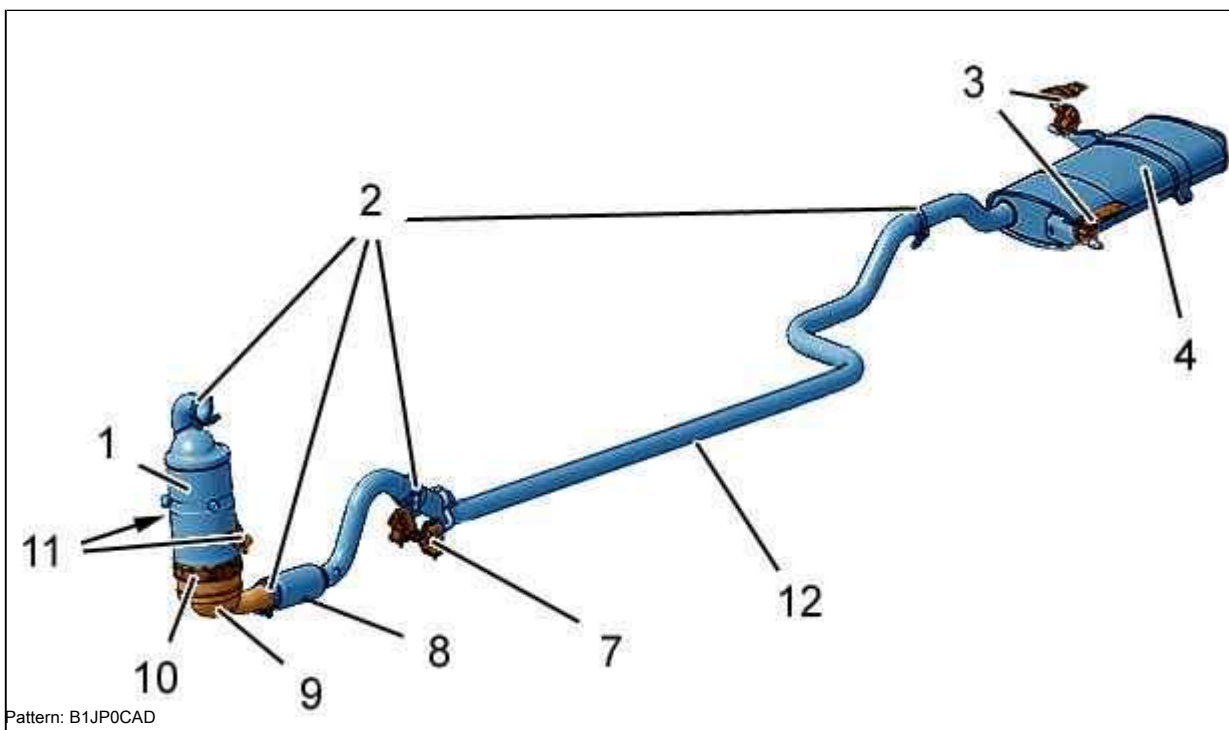
1. Characteristics

1.1. Vehicle with thermal recovery unit for exhaust gas system



Labels Designation		Number (reference)	Moment puffs
(1)	Catalytic converter (*) Catalytic converter	PSA K266 (with particulate filter)	
(2)	clamps	PSA K443 (without particulate filter)	2.5 ± 0.3 da.Nm
(3)	Exhaust system suspension		1 ± 0.2 da.Nm
(4)	Exhaust silencer	PSA 3167	
(five)	Exhaust suspension		1 ± 0.2 da.Nm
(6)	Intermediate exhaust pipe and heat exchanger		3.4 ± 0.5 da.Nm
(7)	Exhaust suspension		1 ± 0.2 da.Nm
(eight)	hose		
(nine)	Particulate filter (*)	PSA F010	
(ten)	Catalytic converter clamp + Particulate filter		2 ± 0.3 da.Nm
(eleven)	Catalytic Converter Mounts		2 ± 0.5 da.Nm
(*) Engine DV6TED4.			

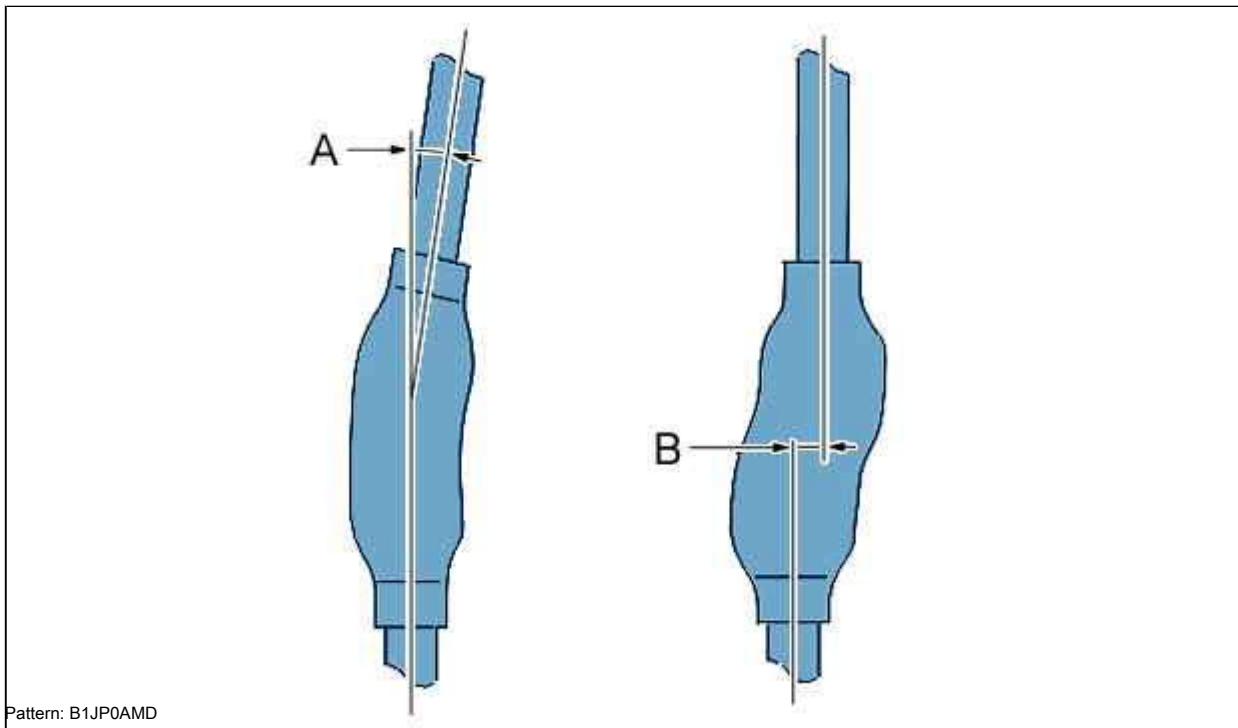
1.2. Vehicles without heat recovery exhaust system



Labels Designation		Number (reference)	Moment puffs
(1)	Catalytic converter (*) Catalytic converter	PSA K266 (with particulate filter) PSA K443 (without particulate filter)	
(2)	clamps		2.5 ± 0.3 da.Nm
(3)	Exhaust system suspension		1 ± 0.2 da.Nm
(4)	Exhaust silencer	PSA 3167	
(7)	Exhaust suspension		1 ± 0.2 da.Nm
(eight)	hose		
(nine)	Particulate filter (*)	PSA F010	
(ten)	Catalytic converter clamp + Particulate filter		2 ± 0.3 da.Nm
(eleven)	Catalytic Converter Mounts		2 ± 0.5 da.Nm
(12)	Intermediate pipe of the exhaust system		3.4 ± 0.5 da.Nm

(*) Engine DV6TED4.

2. Precautions



ATTENTION : Failure to observe these precautions will shorten the life of the front hose. Disconnecting or removing the exhaust system is necessary for operations that require lifting the power package.

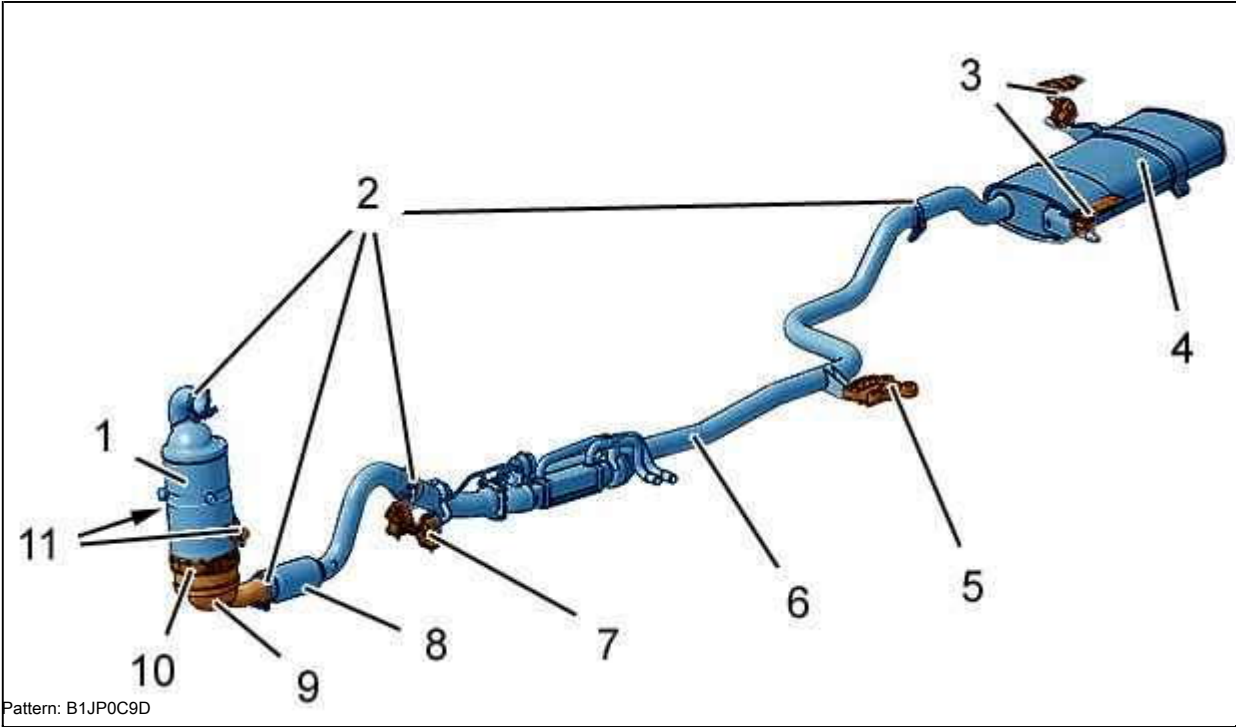
Observe the precautions that must be taken before carrying out work:

- The front hose must be protected from any external mechanical influences
- The front hose must not come into contact with corrosive substances
- Undeform the front flexible hose by more than 20 ° angular deformation "A", 20 mm axial deformation and 25 mm lateral deformation "B" (front hose removed)
- Undeform the front flexible hose by more than 3 ° angular deformation, 0 mm axial deformation and 3 mm lateral deformation "B" (front hose is installed)

TIGHTENING TORQUES: EXHAUST SYSTEM

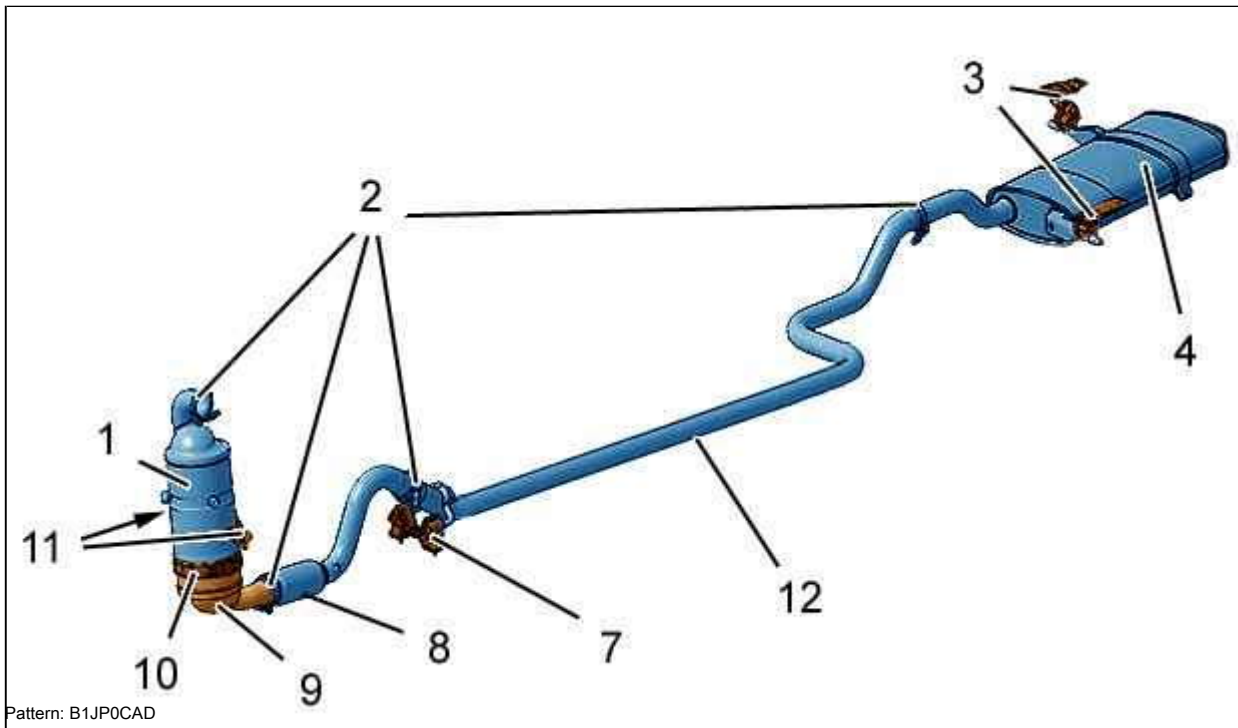
1. Exhaust system

1.1. Vehicles with step-recovery exhaust system



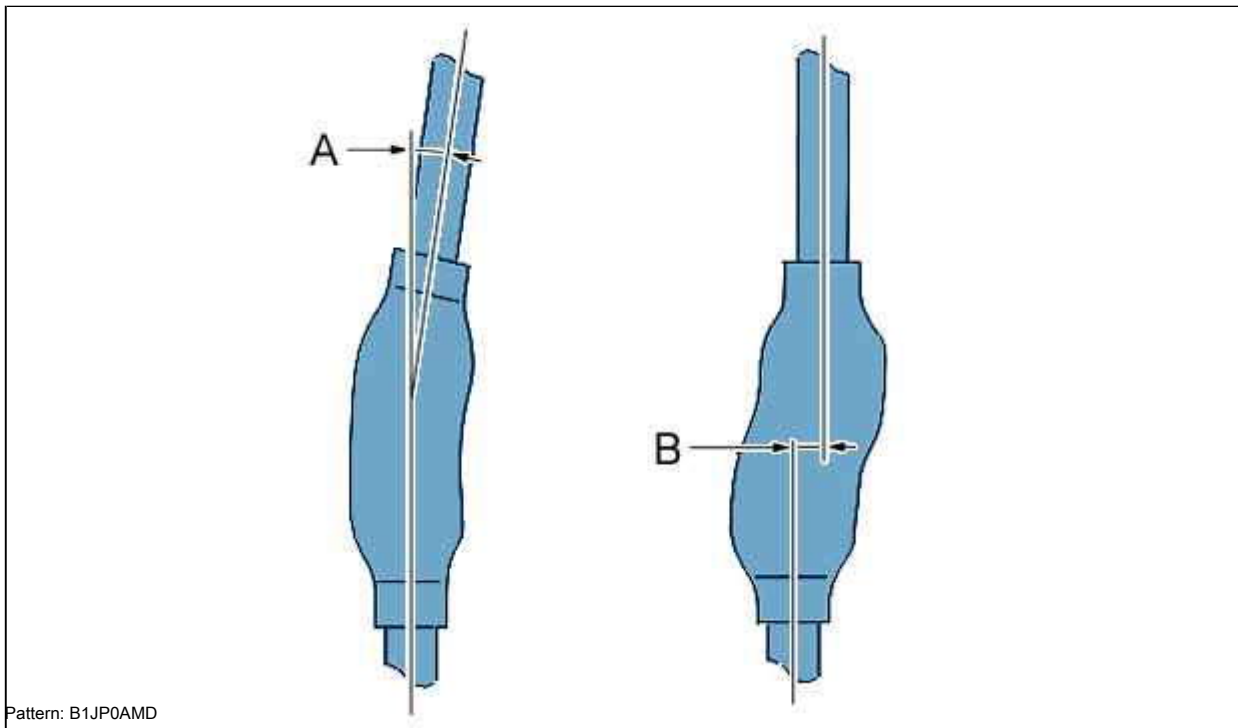
Labels Designation		Torque
(1)	Catalytic converter	
(2)	clamps	2.5 ± 0.3 da.Nm
(3)	Exhaust system suspension	1 ± 0.2 da.Nm
(4)	Exhaust silencer	
(five)	Exhaust suspension	1 ± 0.2 da.Nm
(6)	Intermediate pipe of the exhaust system and heat exchanger	3.4 ± 0.5 da.Nm Suspension of the
(7)	exhaust system	1 ± 0.2 da.Nm
(eight)	hose	
(nine)	Particulate filter	
(ten)	Clamp, catalytic converter + Diesel particulate filter	2 ± 0.3 da.Nm Catalytic converter mountings
(eleven)		2 ± 0.5 da.Nm

1.2. Vehicles without heat recovery exhaust system



Labels Designation		Torque
(1)	Catalytic converter	
(2)	clamps	2.5 ± 0.3 da.Nm
(3)	Exhaust system suspension	1 ± 0.2 da.Nm
(4)	Exhaust silencer	
(7)	Exhaust suspension	1 ± 0.2 da.Nm
(eight)	hose	
(nine)	Particulate filter	
(ten)	Clamp, catalytic converter + Diesel particulate filter	2 ± 0.3 da.Nm Catalytic converter mountings
(eleven)		2 ± 0.5 da.Nm
(12)	Intermediate pipe of the exhaust system	3.4 ± 0.5 da.Nm

2. Precautions



ATTENTION : Failure to observe these precautions will shorten the life of the front hose. Disconnecting or removing the exhaust system is necessary for operations that require lifting the power package.

Observe the precautions that must be taken before carrying out work:

- The front hose must be protected from any external mechanical influences
- The front hose must not come into contact with corrosive substances
- Undeform the front flexible hose by more than 20 ° angular deformation (A), 20 mm axial deformation and 25 mm lateral deformation (B) (front hose removed)
- Undeform the front flexible hose by more than 3 ° angular deformation, 0 mm axial deformation and 3 mm lateral deformation (B) (front hose installed)

REMOVAL INSTALLATION: EXHAUST SYSTEM

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment

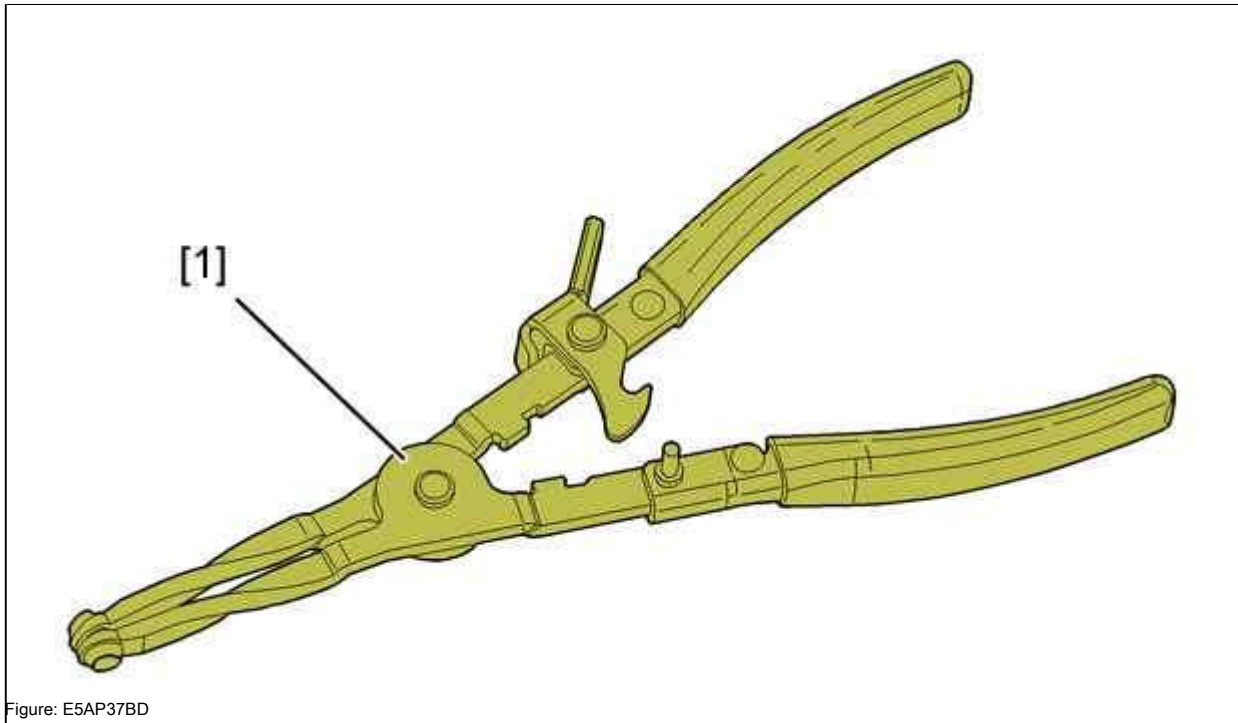
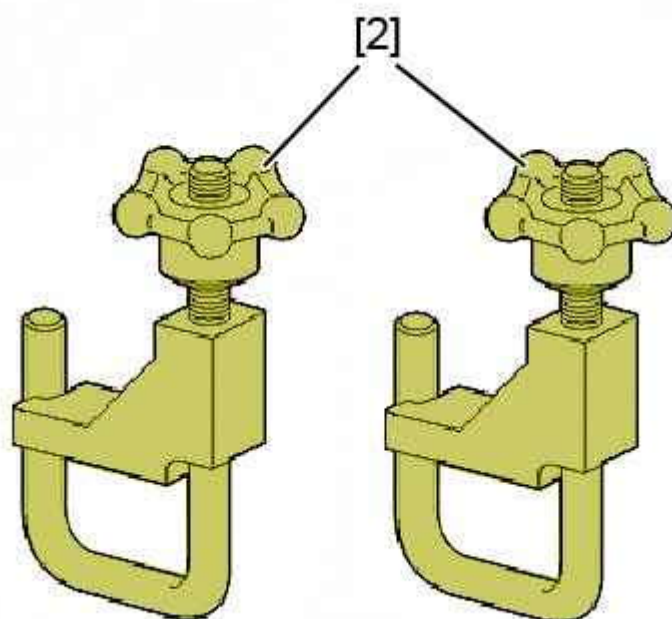


Figure: E5AP37BD

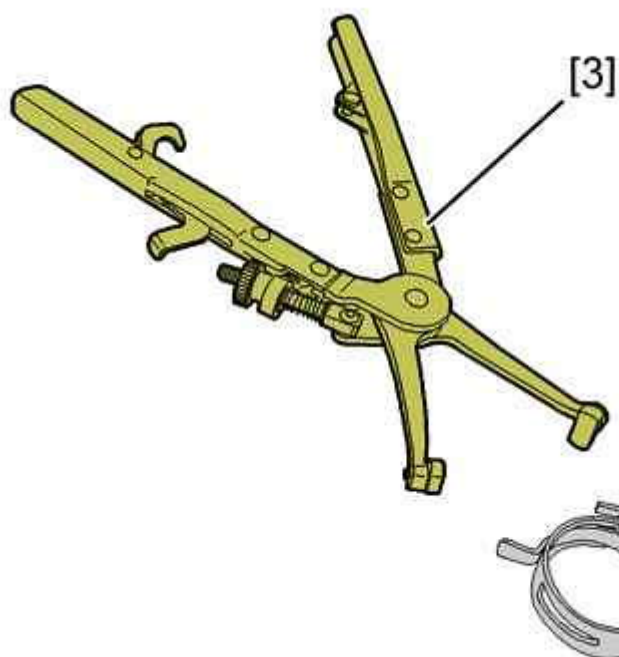
Label Designation		Number (reference)
[1]	Pliers for removing clamps of the exhaust system () .0193B	



Pattern: E5AP2YSD

Label Designation **Number (reference)** **Number (reference)**

[2]	Hose Clamp 4153T		() .1512



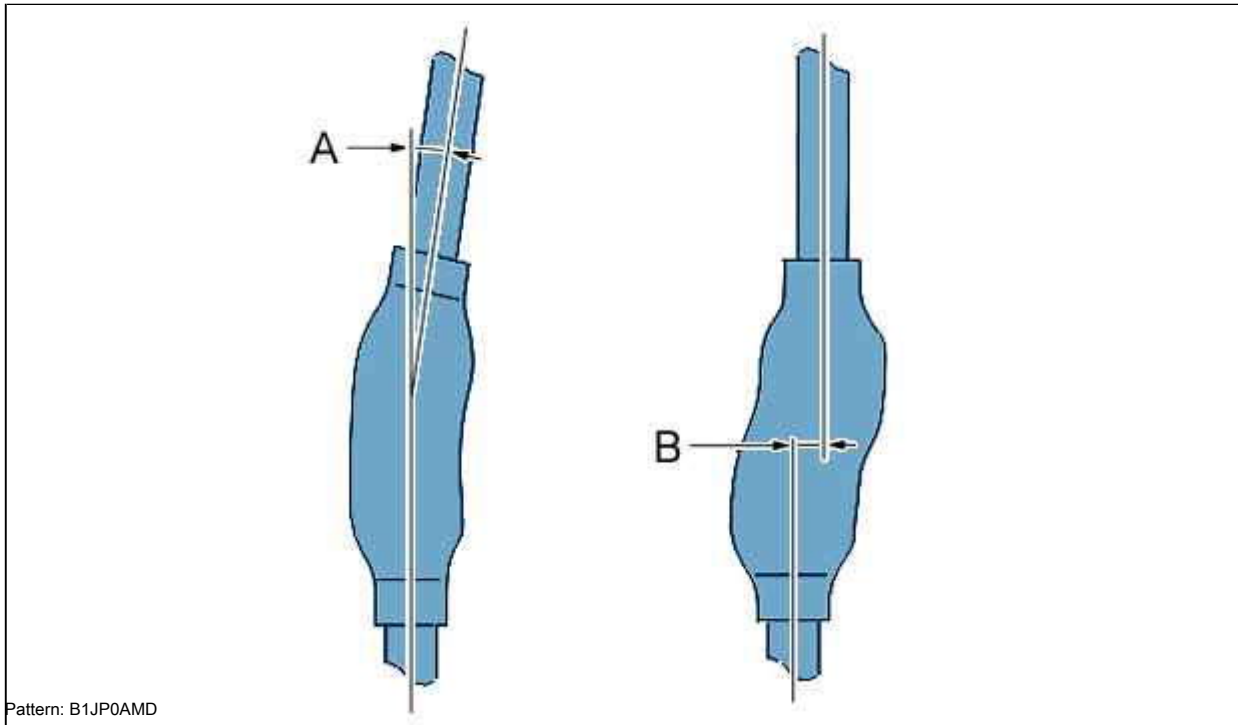
Pattern: E5AP32SD

Label Designation **Number (reference)** **Number (reference)**

[3]	Clamp removal pliers 9029T		() .0165

2. Necessary precautions

On a hot engine: Wait at least one hour before doing any work on the exhaust system.



Observe the precautions that must be taken before carrying out work:

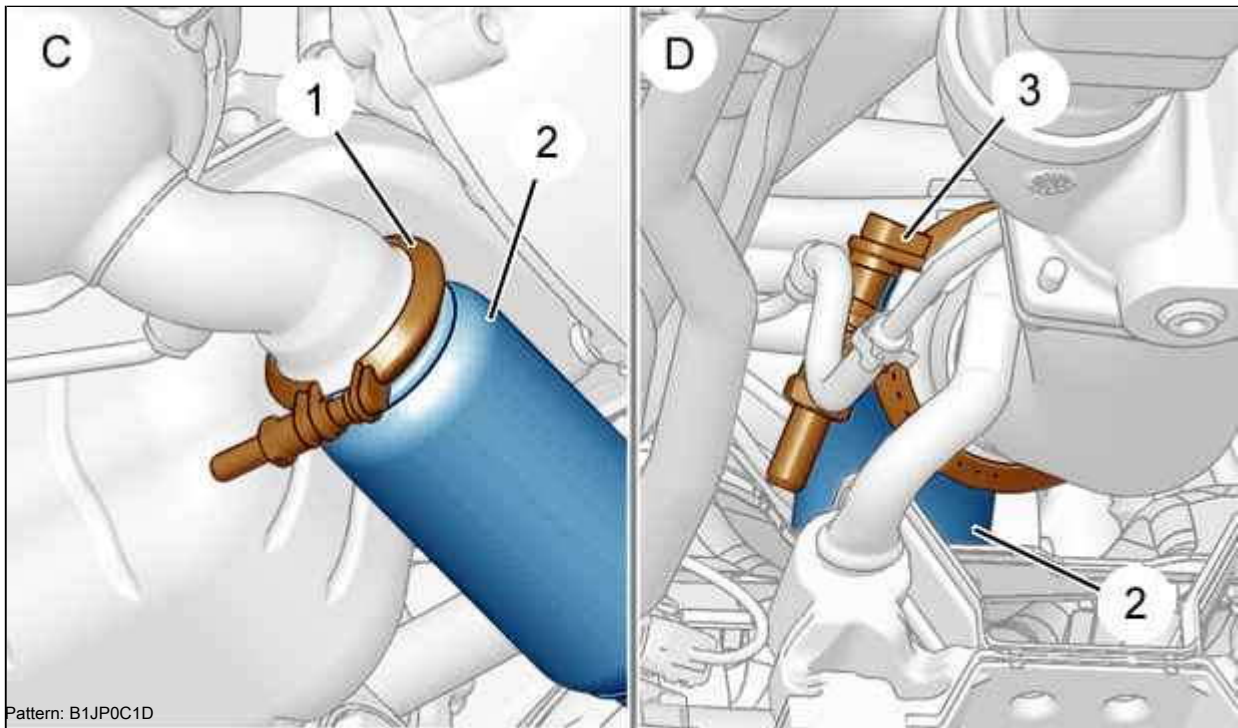
- The front hose must be protected from any external mechanical influences
- The front hose must not come into contact with corrosive substances
- The front hose must not be deformed more than 20 ° in the angular direction (A), 20 mm in the axial direction and 25 mm at the slide (B) (front hose removed)
- The front hose must not be deformed more than 3 ° in the angular direction, 0 mm in the axial direction and 3 mm at the slide (B) (front hose installed)

ATTENTION : Failure to observe these precautions will shorten the life of the front hose. Disconnecting or removing the exhaust system is necessary for operations that require lifting the power package.

3. Front intermediate pipe

3.1. Withdrawal

Raise and secure the vehicle with the suspended wheels. Remove engine cover.



C: View from the catalytic converter side.

D: View from the intermediate pipe of the exhaust system. Remove:

- Exhaust clamp (1); Using the tool [1]
- Exhaust clamp (3); Using the tool [1]
- Front intermediate tube (2)

3.2. Installation

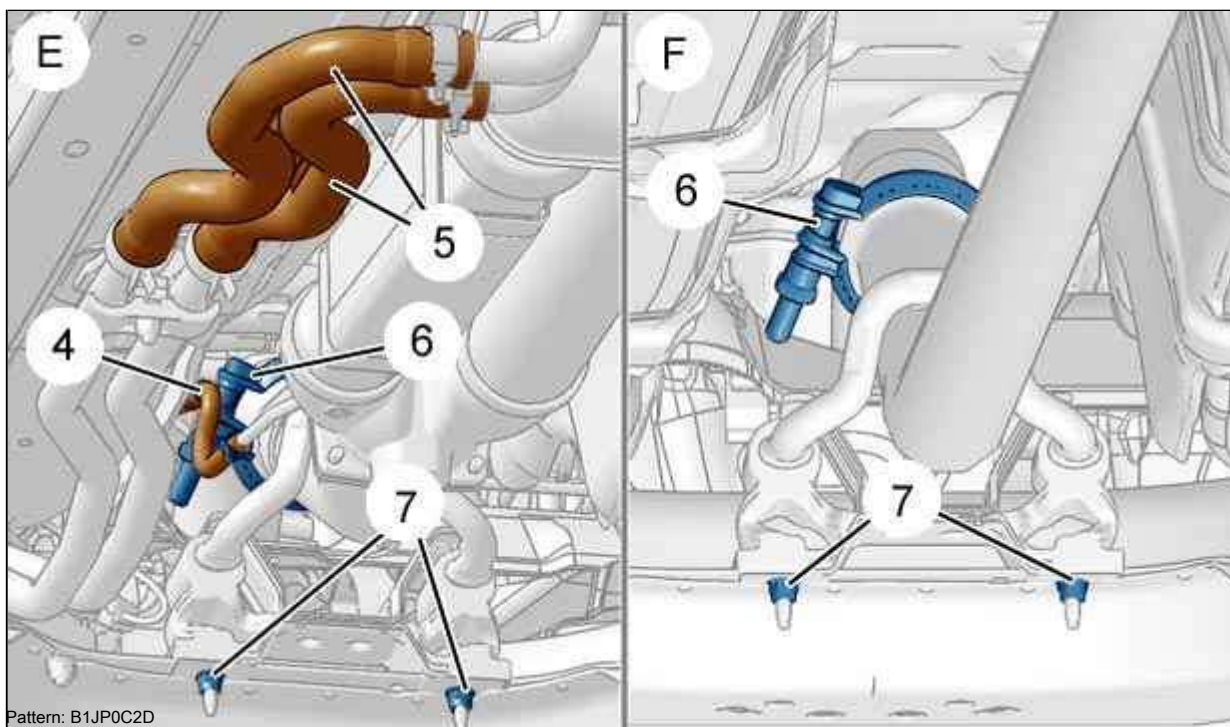
Install:

- Front intermediate tube (2)
- Exhaust clamp (3); Using the tool [1]; Tightening torque 2.5 ± 2.5 da.Nm
- Exhaust system clamp (1); Using the tool [1]; Tightening torque 2.5 ± 2.5 da.Nm
- Under engine guard

4. Intermediate pipe of the exhaust system

4.1. Withdrawal

Raise and secure the vehicle with the suspended wheels.



E: Vehicle with a heat recovery unit for the exhaust system. F: Vehicle without exhaust gas heat recovery unit.

4.2. Vehicle with thermal recovery unit for exhaust gas system

ATTENTION : Place a container under the intermediate pipe of the exhaust system.

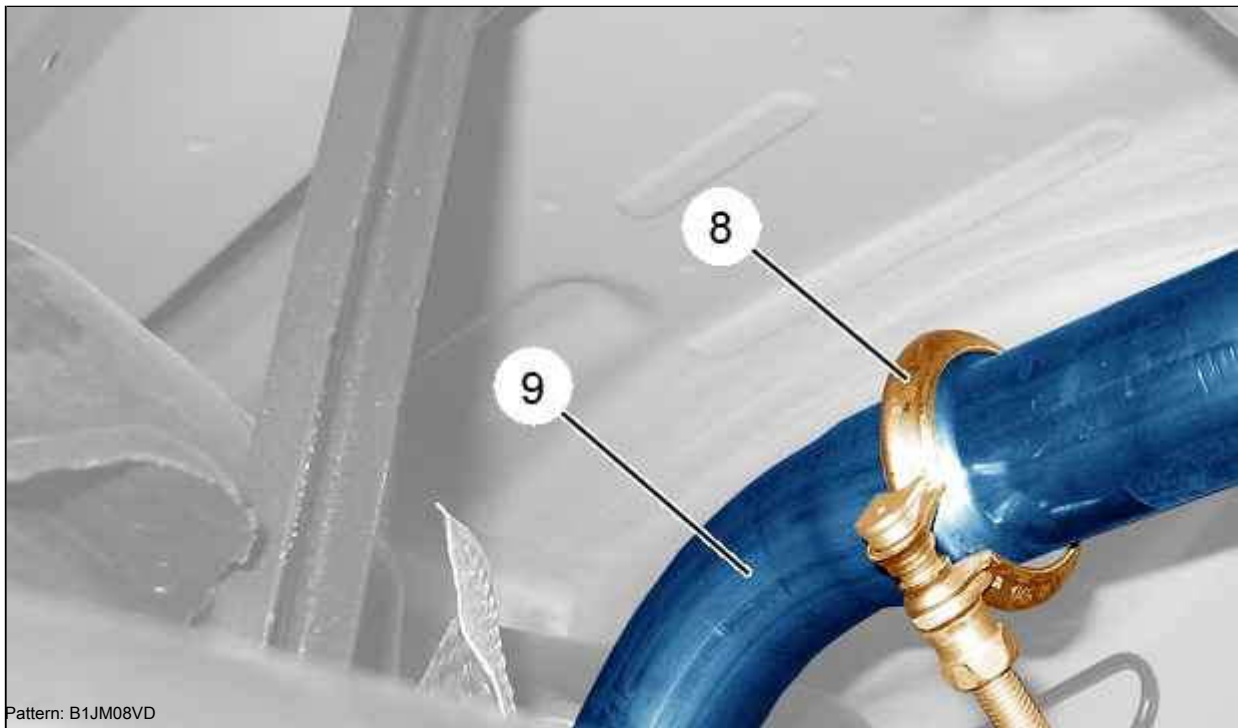
Install the clips [2] on the hoses (5) of the thermal recuperation unit of the exhaust system. Disconnect:

- Hoses (5) for the thermal recovery unit of the exhaust system; Using the tool [3]
- Tube (4)

4.3. Removal (continued)

Remove:

- Exhaust clamp (6); Using the tool [1]
- Exhaust suspension bolts (7)



Remove:

- Exhaust clamp (8); Using the tool [1]
- Middle Outlet Piping (9)

4.4. Installation

Install the intermediate exhaust pipe (9). Install:

- Exhaust clamp (8); Using the tool [1]; Tightening torque 2.5 ± 2.5 2 da.Nm
- Exhaust suspension bolts (7)
- Exhaust system clamp (6); Using the tool [1]; Tightening torque 2.5 ± 2.5 2 da.Nm

4.5. Vehicle with thermal recovery unit for exhaust gas system

Attach:

- hose (5); Using the tool [3]
- Tube (4)

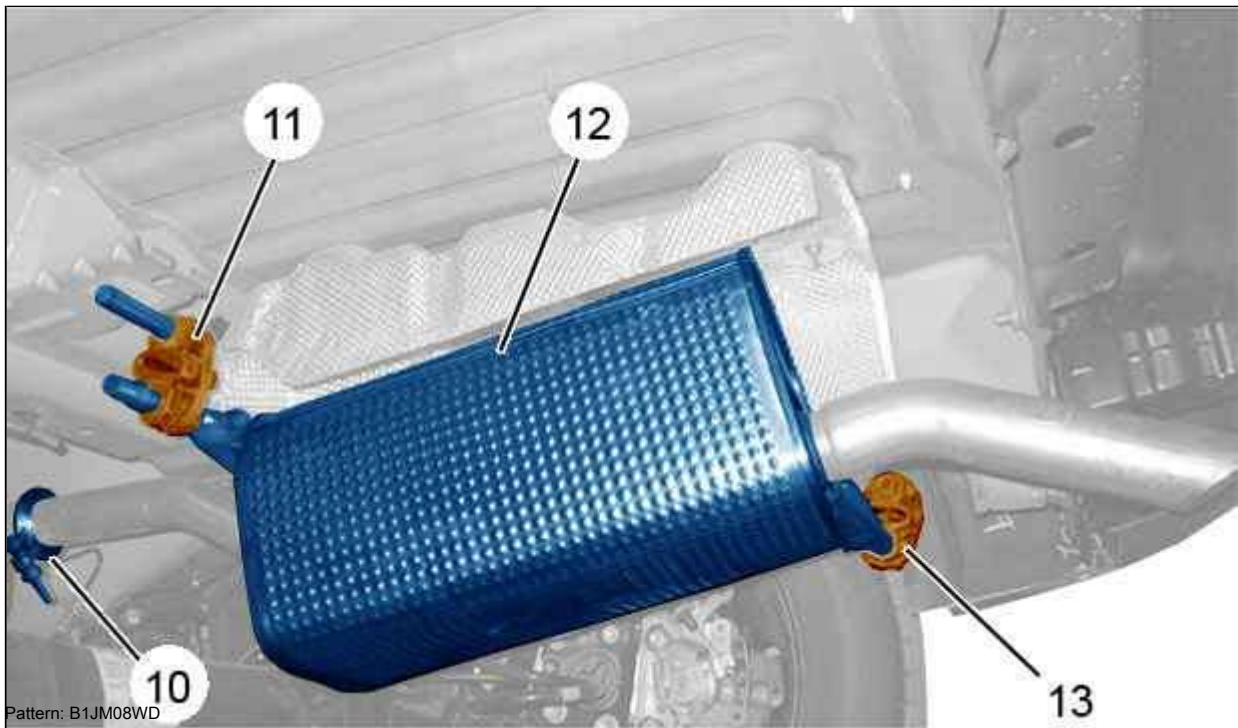
Remove the hose clamps [2].

Pump over the system and bring the coolant level to normal.

5. Rear exhaust muffler

5.1. Withdrawal

Raise and secure the vehicle with the suspended wheels.



Remove the exhaust system clamp (10); Using the tool [1]. Disconnect: the exhaust muffler from the suspension mounts (11), (13). Remove the rear exhaust muffler (12).

5.2. Installation

Install: Rear exhaust muffler (12).

Attach the exhaust muffler to its hangers (11) and (13).

Install the exhaust system clamp (10); Using the tool [1]; Tightening torque 2.5 ± 2.5 da.Nm.

6. Verification

Engine starting.

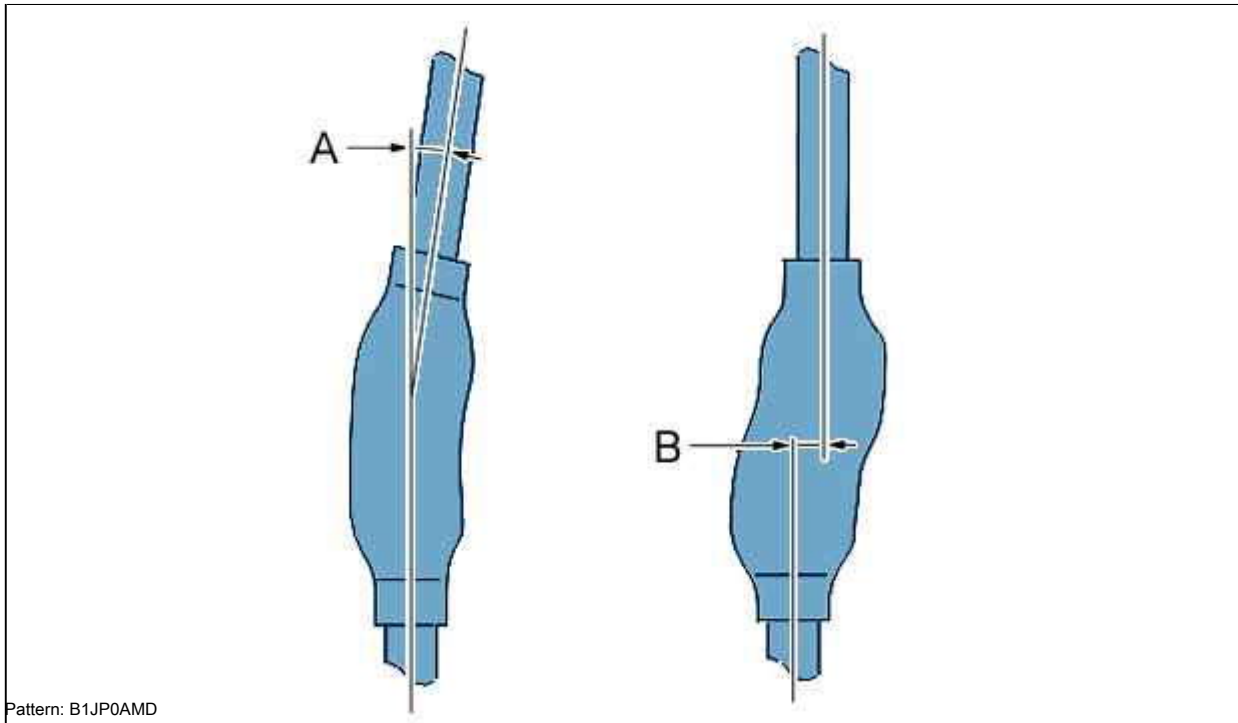
Check for exhaust gas leaks.

REMOVAL INSTALLATION: CATALYTIC CONVERTER

MANDATORY: Observe the cleanliness and safety rules



1. Necessary precautions



Observe the precautions that must be taken before any work:

- It is necessary to protect the front hose from any mechanical damage from the side of the outer rack
- The front hose must not come into contact with any corrosive product Undeform the front flexible hose by more than 20 ° angular deflection (A), 20 mm axial deflection and 25 mm lateral deflection (B) (Removing the front flex tube) Undeform the front flexible hose by more than 3 ° angular deflection (A), 0 mm axial deflection and 3 mm lateral deflection (B) (Installing the front flexure in place)
-

ATTENTION : Failure to observe these precautions will shorten the life of the front hose. Disconnecting or removing the exhaust system is necessary for operations that require lifting the power package.

2. Removal

MANDATORY: Comply with the safety and cleanliness recommendations specific to diesel engines with high pressure direct injection (HDI)



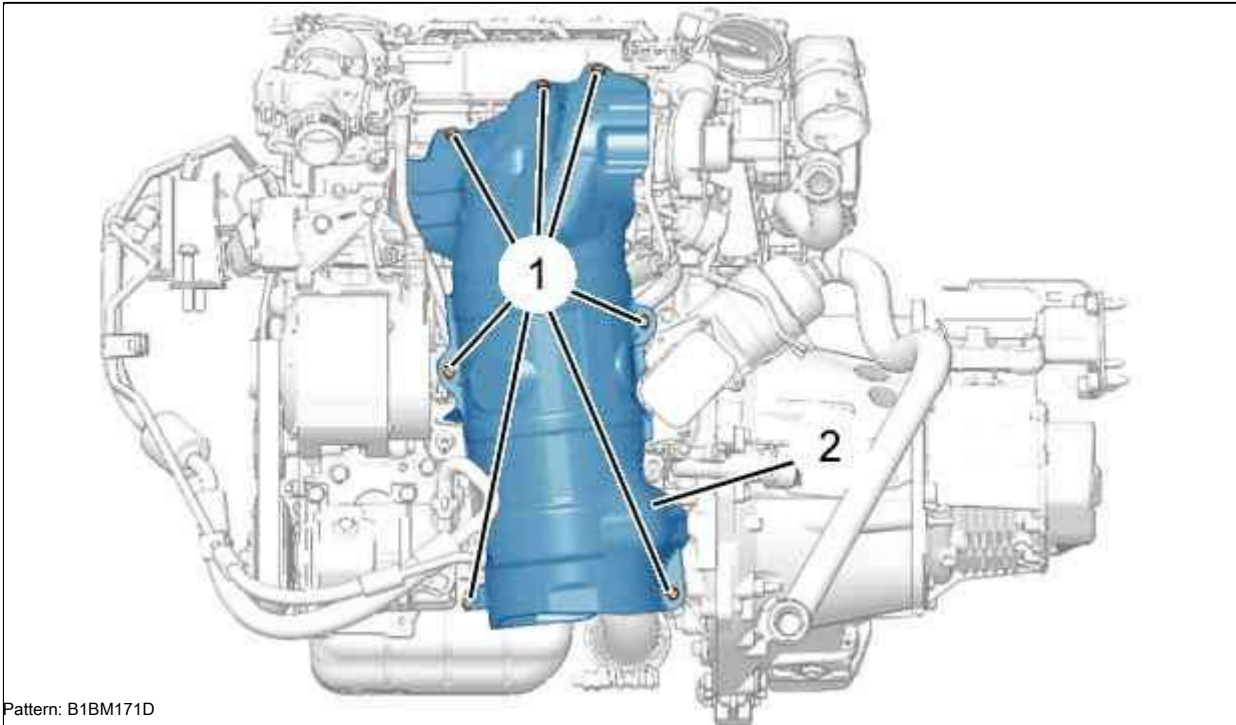
Install the motor on a hoist.

ATTENTION : On a hot engine: Wait at least one hour before proceeding with any

work with the exhaust system.

Raise the car.

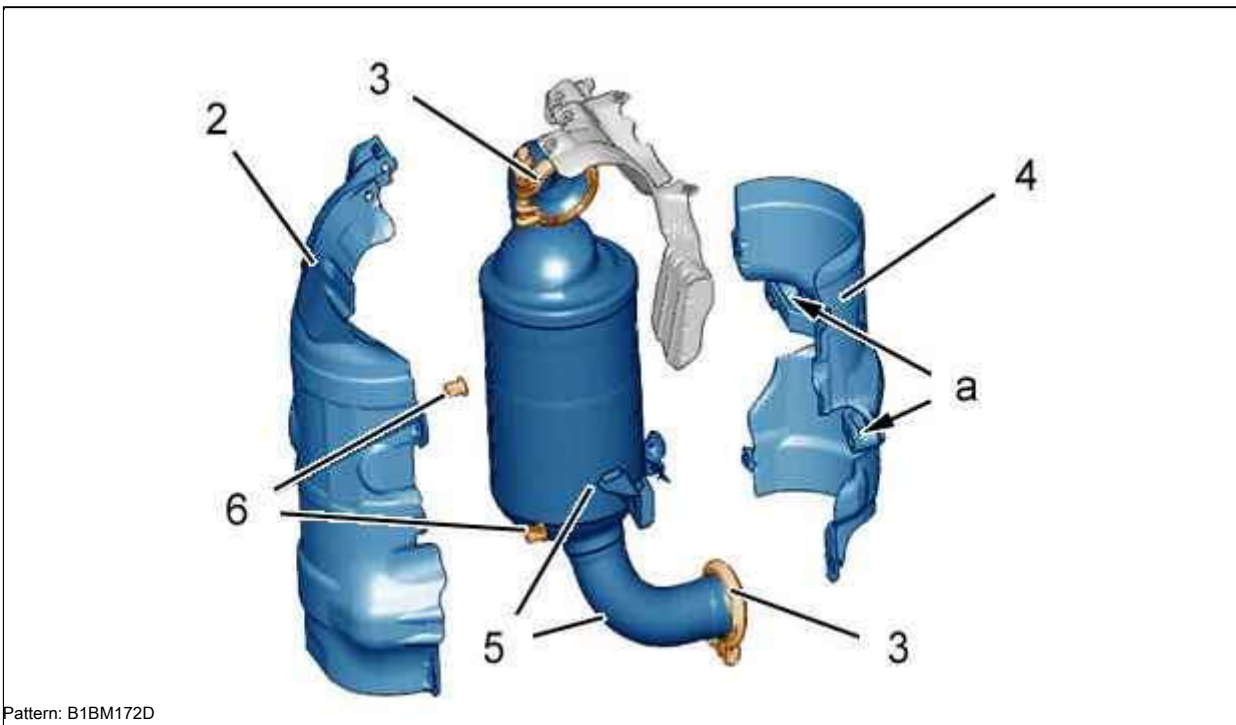
Remove engine cover.



Pattern: B1BM171D

Unscrew 7 screws (1).

Move aside: Front exhaust heat shield (2).



Pattern: B1BM172D

Raise the car.

Remove:

- clamp (s) (3)
- 2 fixing nuts (6)
- Retaining bracket (in "a") (Depending on equipment)
- Assembly: Exhaust Heat Shield (4) / Catalytic Converter (5)
- Front exhaust heat shield (2)

3. Installation

Perform a pre-assembly to accurately align the following items before final tightening:

- Assembly: Exhaust Heat Shield (4) / Catalytic Converter (5)
- Retaining bracket (in "a") (Depending on equipment)
- 2 nuts (6)
- clamp (s) (3)
- Front exhaust heat shield (2)

Tighten:

- Clamp of fastening (3) of the catalytic converter to the turbocharger; Torque 2 ± 0.2 ppm
- Fastening clamp (3) of the catalytic converter installed on the exhaust pipe; Torque 2 ± 0.2 ppm
- 2 catalytic converter retaining nuts (6) to cylinder block

Tightening method for the fastening nuts (6) of the catalytic converter on the cylinder blocks:

- Pre-tightening torque 0.4 ± 0.1 da.Nm
- Tightening torque 2 ± 2 da.Nm

Install:

- 7 bolts (1)
- Protective shield under the engine

Reconnect the battery.

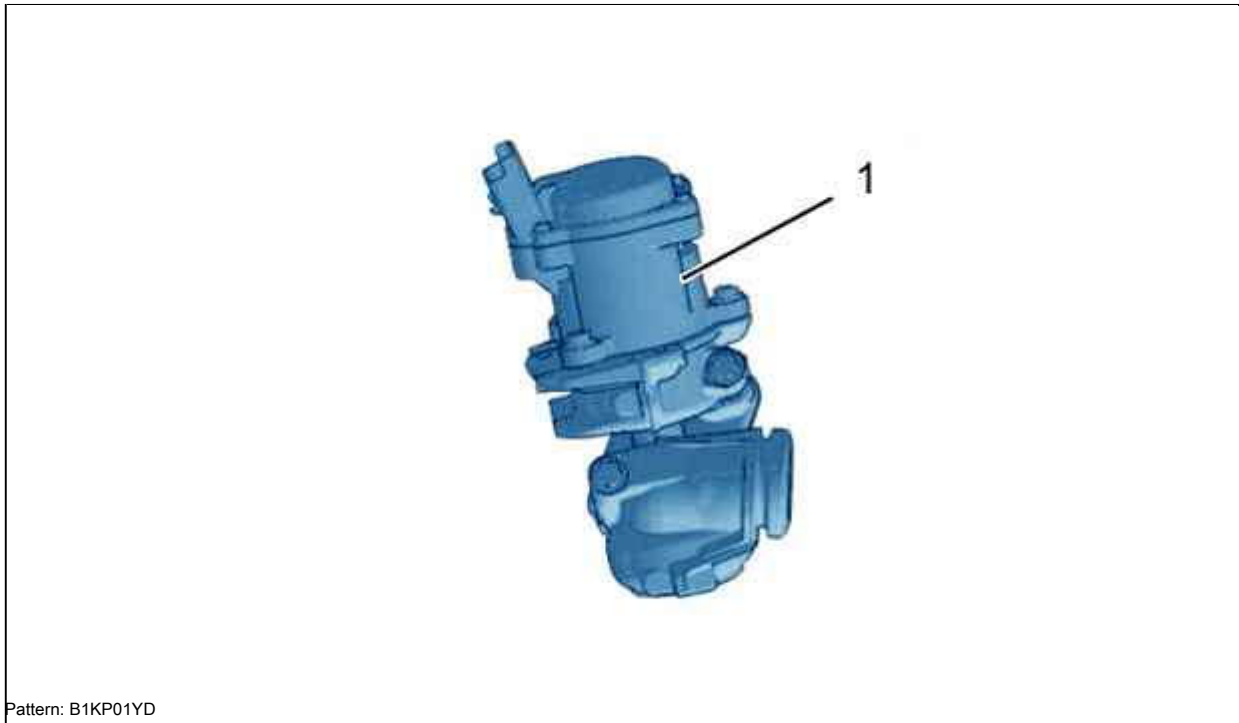
ATTENTION : Follow the steps to follow after removing the battery.

CHECK: EXHAUST GAS CIRCULATION

~~MANDATORY: Observe the cleanliness and safety rules~~



1. Electric Exhaust Gas Recirculation (EGR) valve



Pattern: B1KP01YD

(1) Electrically operated exhaust gas recirculation valve.

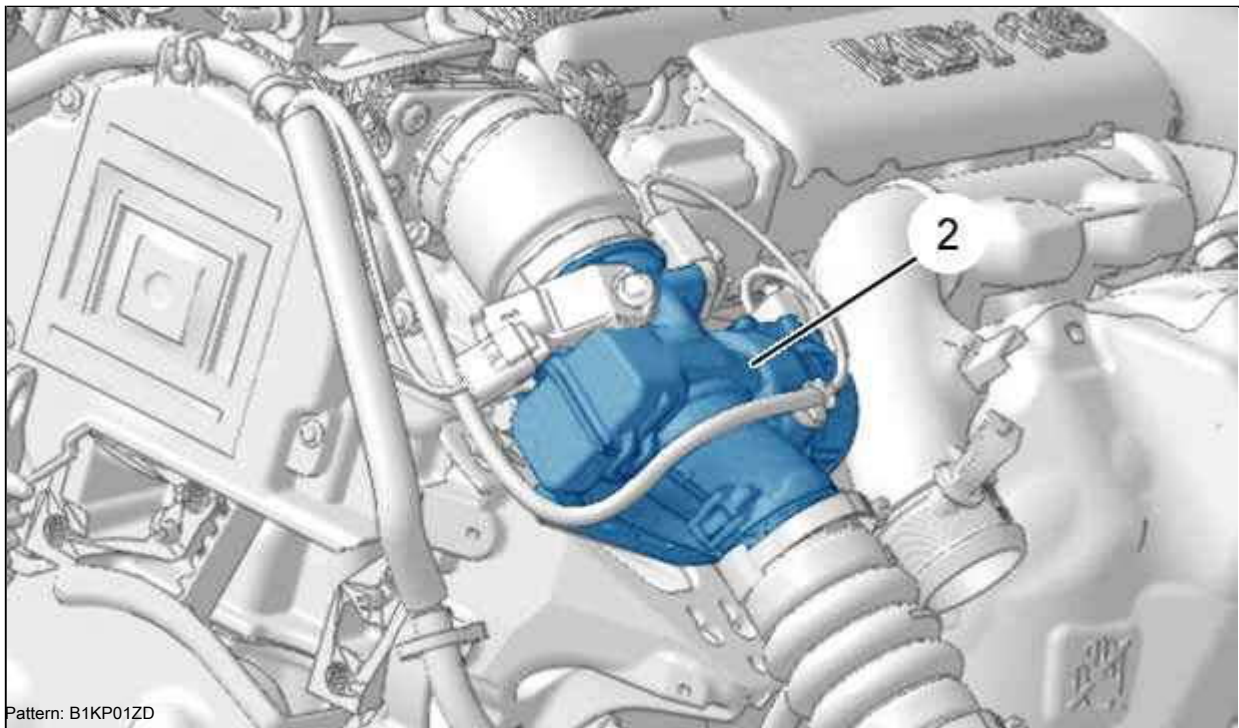
NOTE: The engine management computer controls the EGR solenoid valve.

Select the following scan tool switches:

- Menu: injection system
- Checking the drives
- Electric valve system EGR

Check for the presence of a snap action of the EGR solenoid valve

2. Throttle valve body (Vehicle without particulate filter)



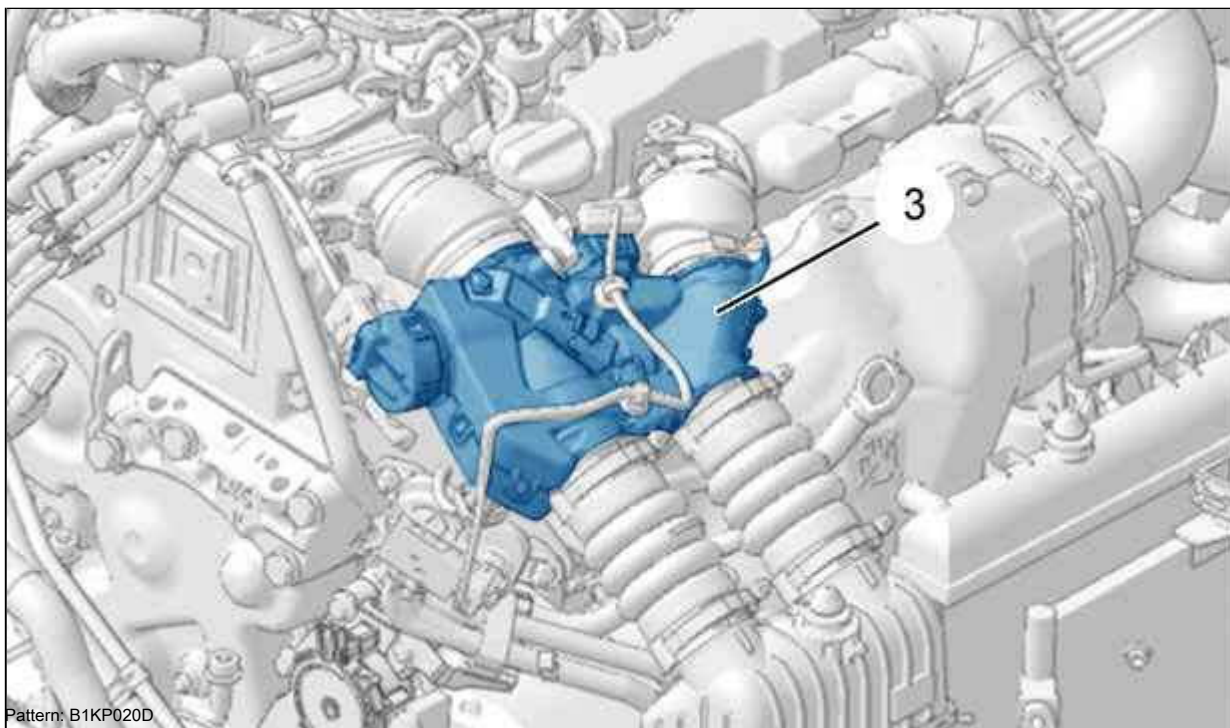
(2) Throttle body.

Select the following scan tool switches:

- Menu: injection system
- Checking the drives
- Throttle solenoid valveEGR

Check for a noticeable banging on the throttle valve.

3. Double throttle body (Vehicle equipped with particulate filter)



(3) Dual throttle body.

Select the following scan tool switches:

- Menu: injection system
- Checking the drives
- Throttle solenoid valveEGR
- By-pass throttle solenoid valve

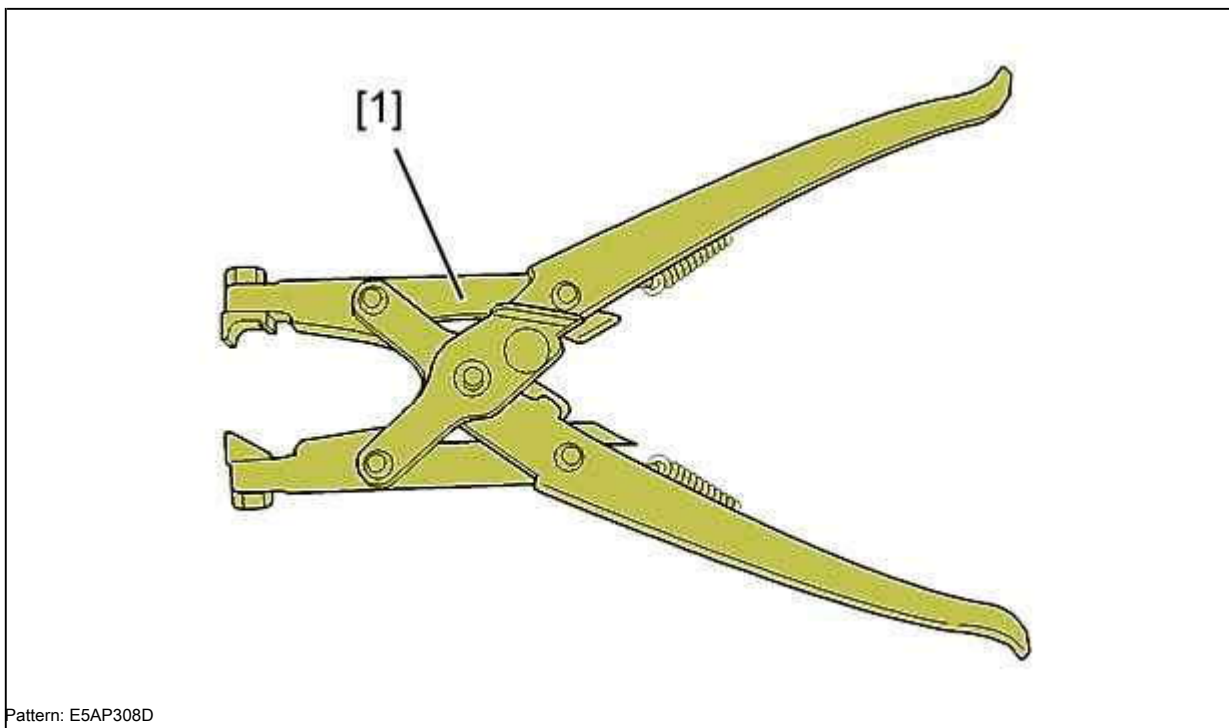
Check the audible click of the double throttle valve.

REMOVAL INSTALLATION: ELECTRIC VALVE OF EGR / SYSTEM EXHAUST GAS RECIRCULATION HEAT EXCHANGER

~~MANDATORY: Observe the cleanliness and safety rules~~



1. Recommended equipment



[1] Clamp for removing clamps type CLIC () .0172Z.

2. Removal

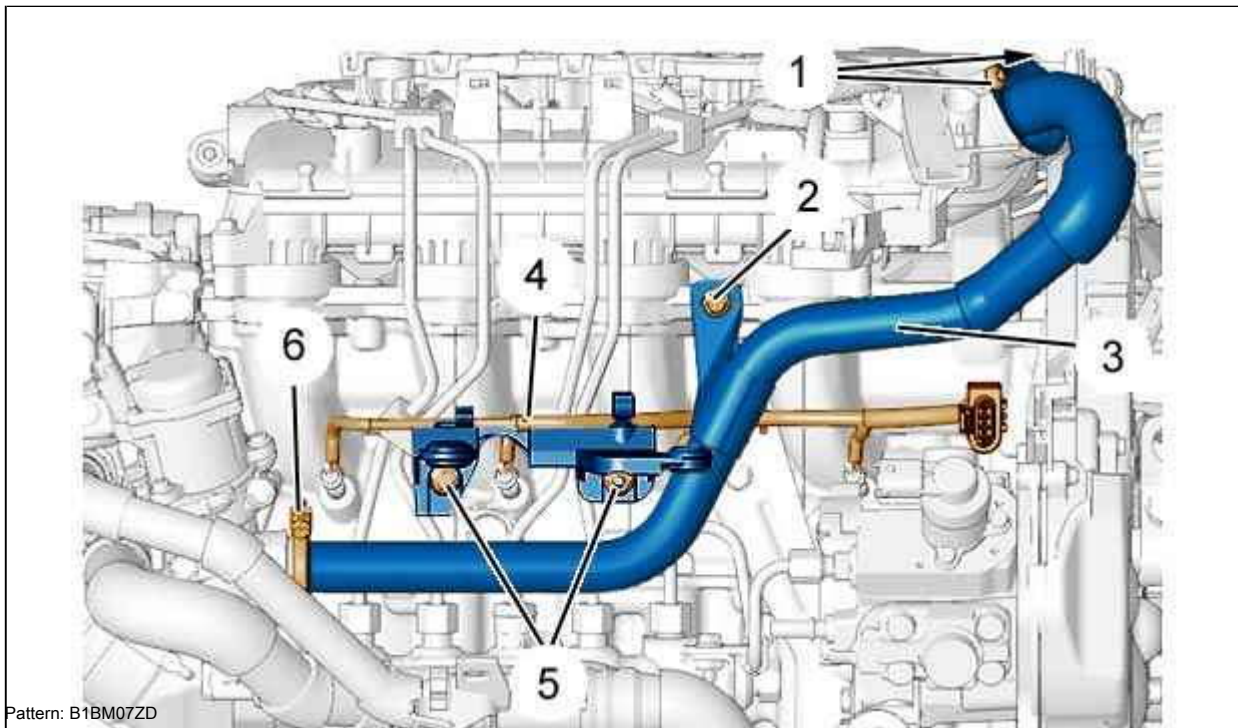
Remove the engine cover. Disconnect the battery.

Remove:

- **Upper integrated air intake system**
- **Fuel filter (/)**
- Fuel filter support



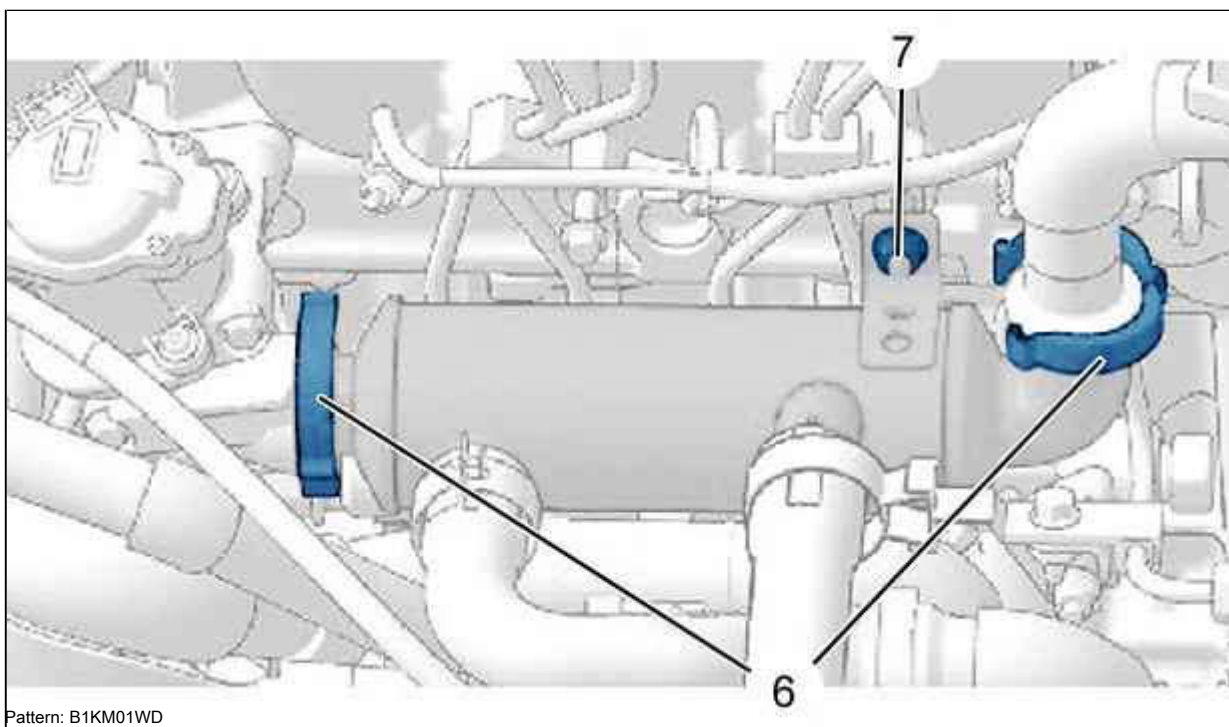
2.1. Version without heat exchanger system EGR



Move aside: Glow plug supply wiring (4). Remove:

- 2 bolts (1)
- Bolt (2)
- clips (5)
- Air filter unit support
- Clip-on clamp (6); Using the tool [1]
- Exhaust gas recirculation pipe (3)

2.2. Step exchanger version of the EGR system

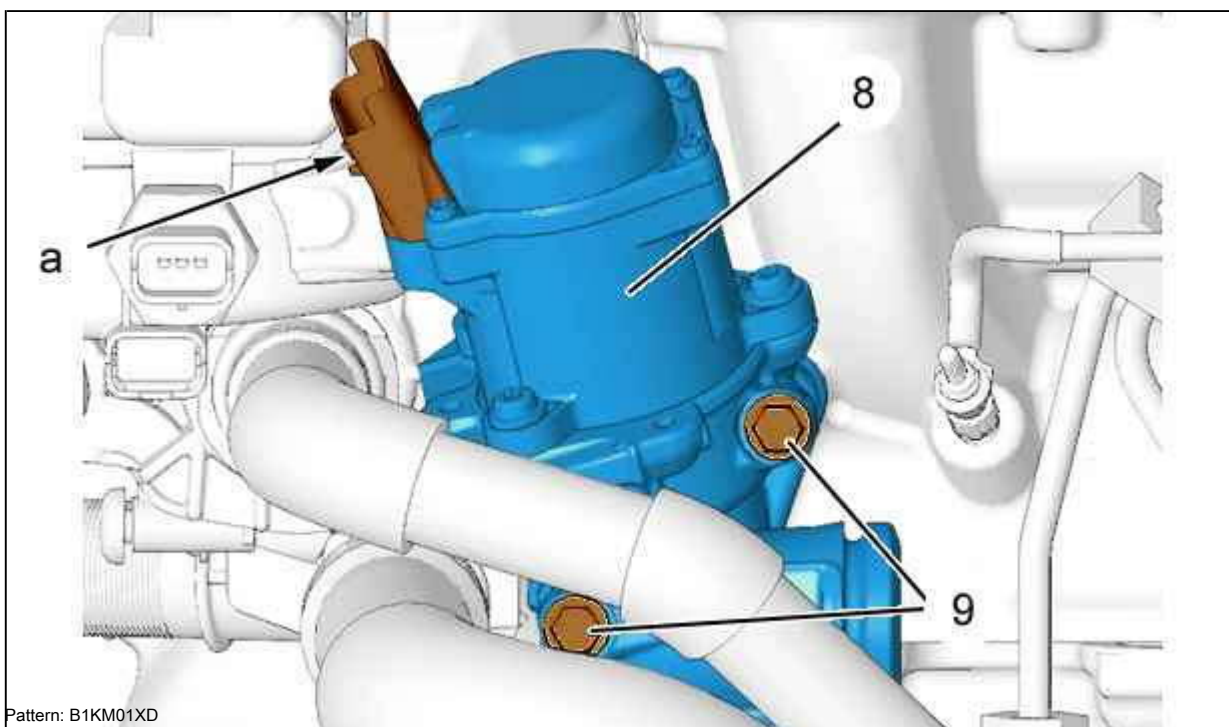


Remove:

- Mount (7)
- Clamps type clic (6); Using the tool [1]

Move aside: Exhaust gas recirculation heat exchanger (without opening the cooling circuit). Remove: Air filter unit support.

2.3. General operations



Disconnect the connector (at "a").

Remove:

- 2 bolts (9)
- EGR solenoid valve (8)

3. Installation

3.1. General operations

ATTENTION : When installing, the removed seals must be replaced with new ones.

ATTENTION : Use clamps with bolts (Applies to service). Make sure there are no foreign objects in the intake system.

Check: Air connection to the turbocharger. Replace systematically:

- Metal gasket
- Clic clamps (6)

Install:

- EGR solenoid valve (8)
- 2 bolts (9); Tightening torque 1 ± 0.1 da.Nm

Reconnect the connector (at "a").

3.2. Step exchanger version of the EGR system

Install:

- Air filter unit support
- Exhaust Gas Recirculation Heat Exchanger
- Clamps type clic (6) (new)
- Mount (7)

3.3. Version without heat exchanger system EGR

Install:

- Exhaust gas recirculation pipe (3) Clip-on clamp (6) (new) Air
- filter unit support
-
- clips (5)
- Bolt (2)
- 2 bolts (1)
- Glow Plug Power Harness (4)

3.4. General operations

Install:

- Fuel filter support; Tighten to 0.8 ± 0.1 da.Nm
- **Fuel filter (/)**
- **Upper integrated air intake system**

Reconnect the battery.

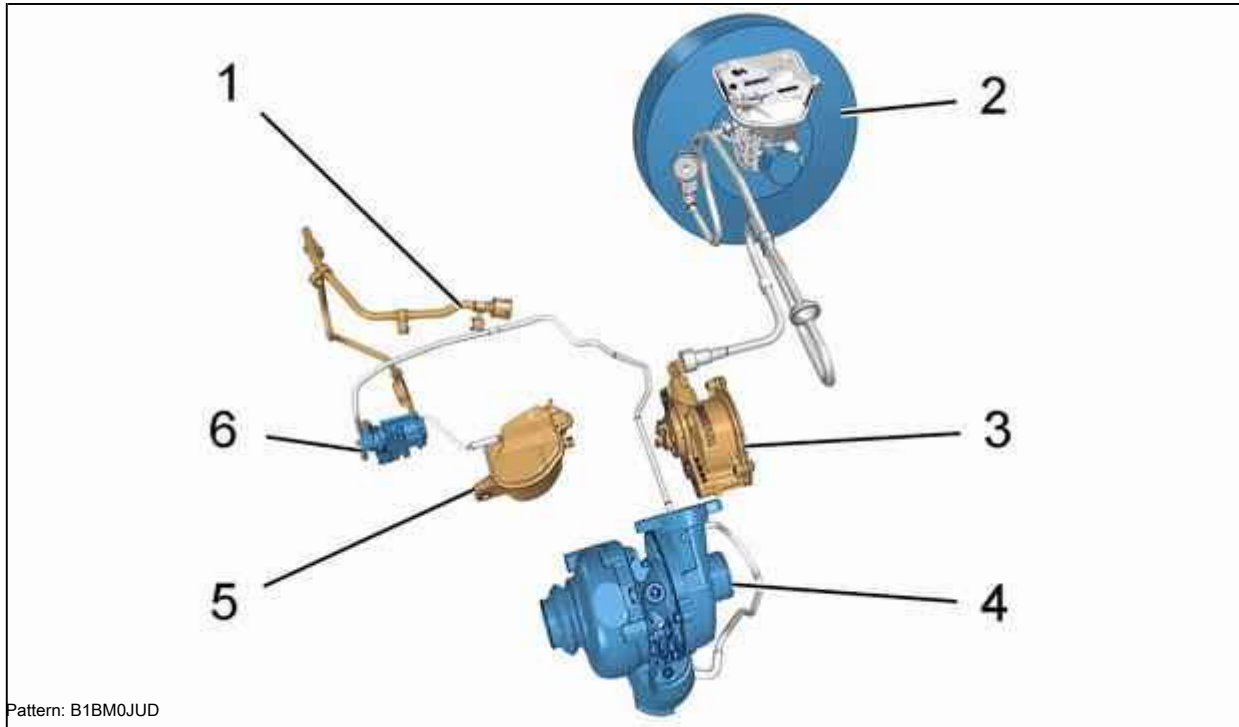
Install the engine cover.



CHARACTERISTIC IDENTIFICATION: UNIT CIRCUIT

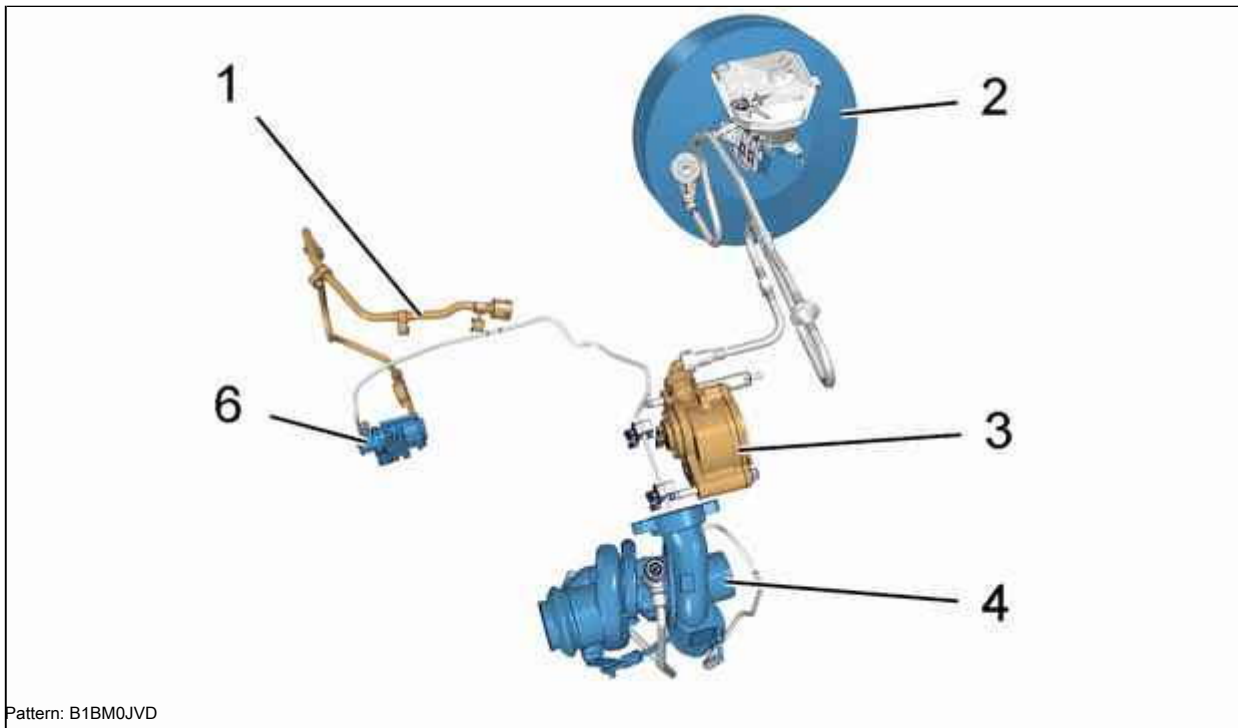
1. Identification

1.1. Dv6ted4 engine



- (1) open air access.
- (2) Brake booster. (3) vacuum pump.
- (4) turbocharger (GARRETT).
- (5) Vacuum tank.
- (6) Turbocharger control solenoid valve.

1.2. Engines DV6ATED4 / ATUD4 / BTED4 / BTUD4



(1) open air access.

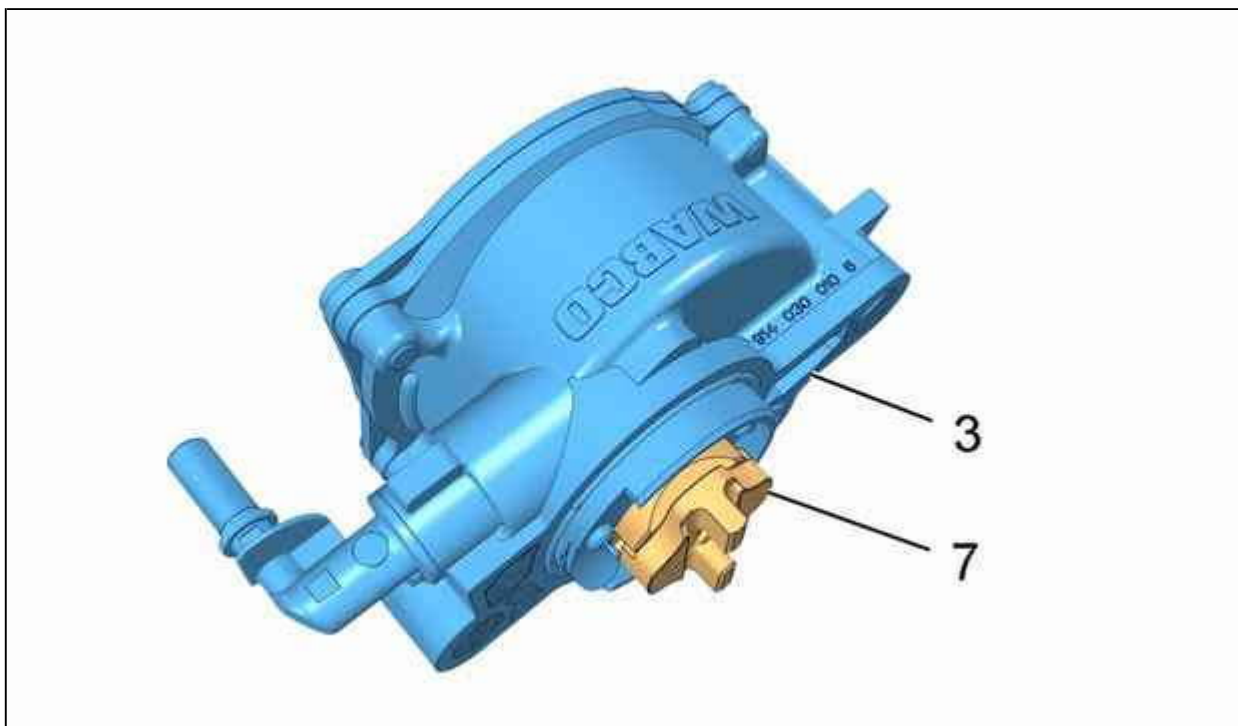
(2) Brake booster. (3) vacuum pump.

(4) turbocharger (MHI).

(6) Turbocharger control solenoid valve (depending on equipment).

2. Characteristics

2.1. Vacuum pump

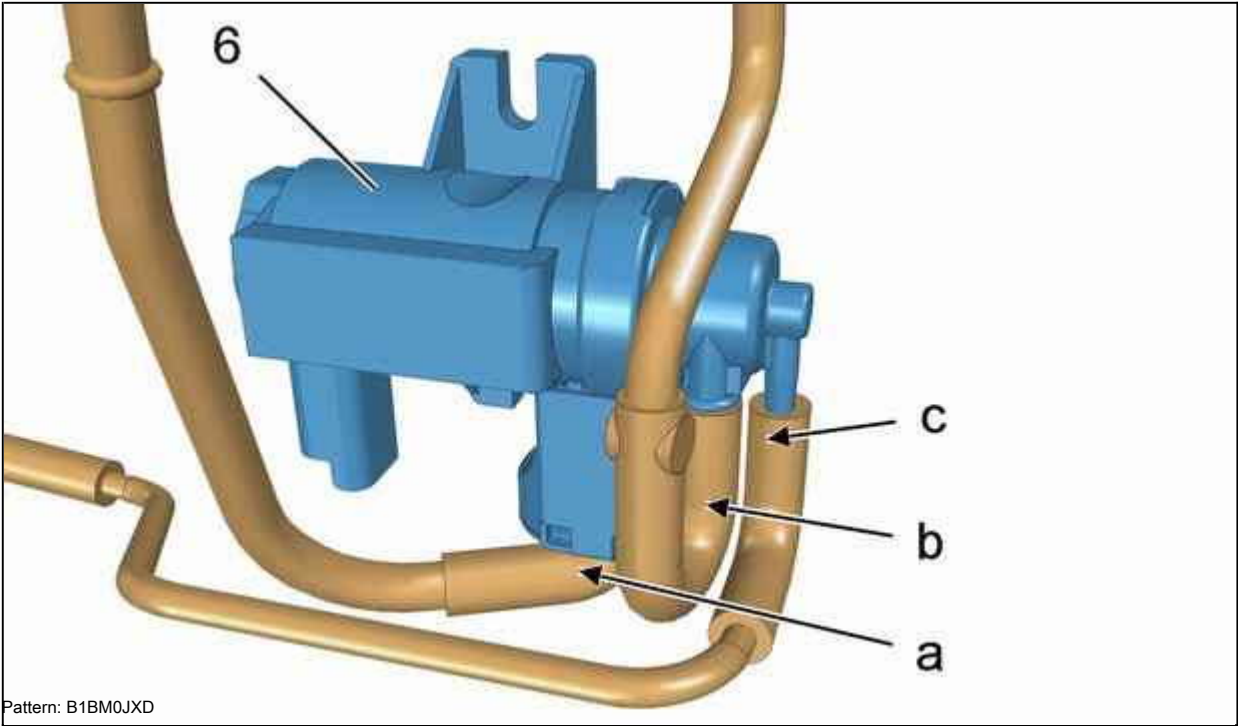


Pattern: B1BM0JWD

- (3) vacuum pump.
- (7) Drive pusher.

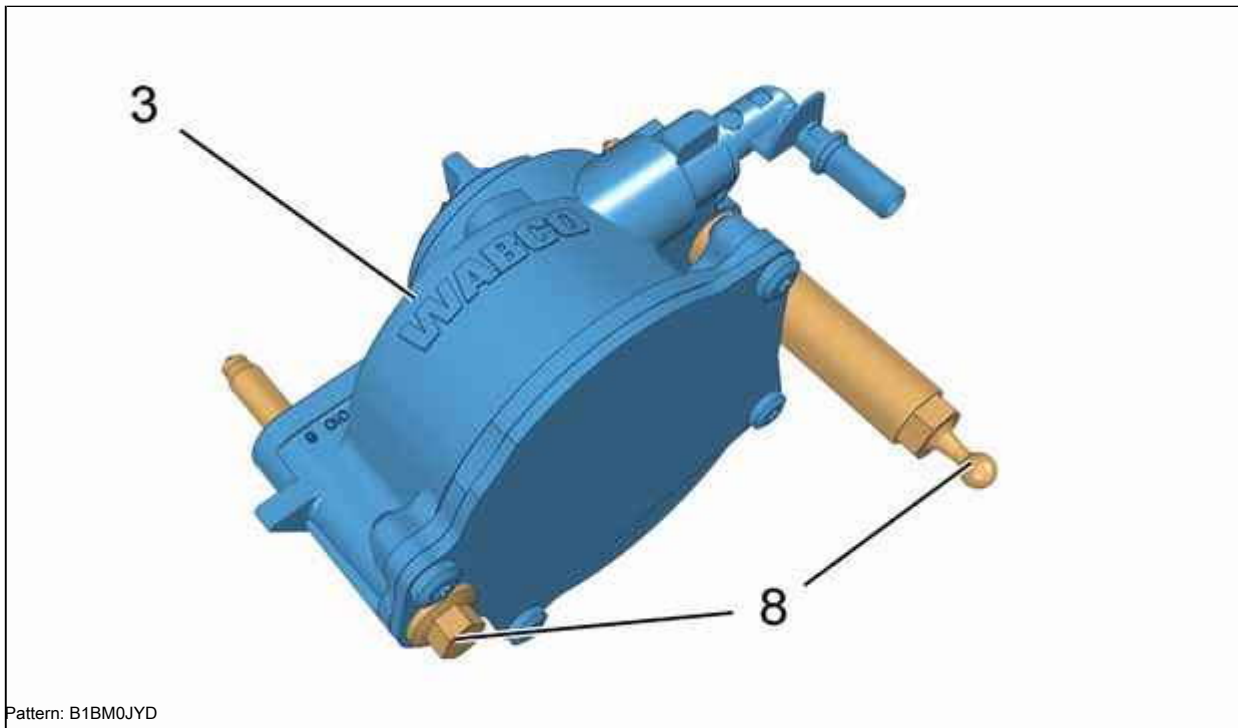
Vacuum pump (3)	
A type	Vacuum pump, single plate
suppliers	BOSCH
	WABCO
Capacity	130cc (For DV6 engine)
The pump is sold assembled by a driven push rod and retainer	

2.2. Turbocharger control solenoid valve



- Turbocharger control solenoid valve (6):
- Coupling "a" without marking: (/) open air access
 - Clutch "b" marked: White point: Turbocharger control solenoid valve
 - Coupling "c" without marking: Vacuum connection

3. Tightening torques



Label Designation		Tightening method	Moment
(3)	Vacuum pump		puffs
(eight)	Vacuum pump mountings on the cylinder head	Insert bolts manually	
		1st preliminary puff	0.3 ± 0.1 da.Nm
		2nd preliminary puff	0.5 ± 0.1 da.Nm
		Tightening	1.8 ± 0.3 da.Nm
		Angular retraction	5°

4. Recommendations for after-sales service

MANDATORY: When carrying out any work on the vacuum pump, replace the seals each time.

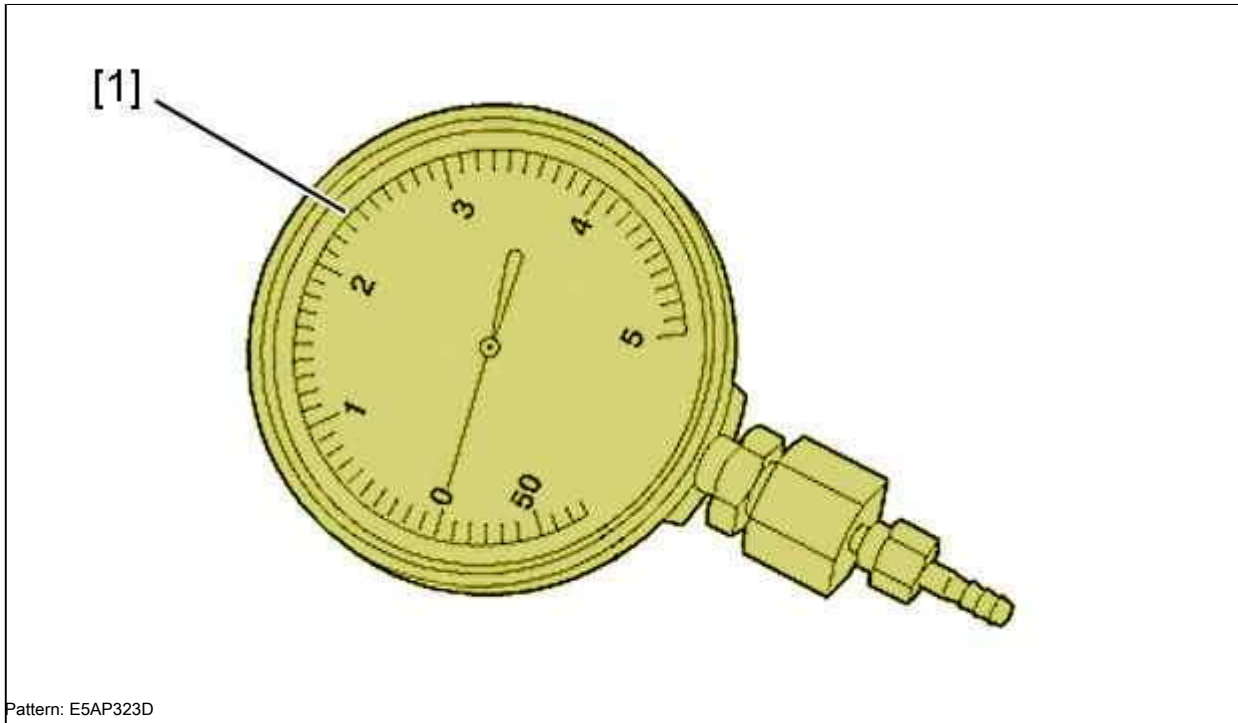
ATTENTION : Avoid any shock or contact with acid (Battery electrolyte).

CHECK: BLOWER PRESSURE

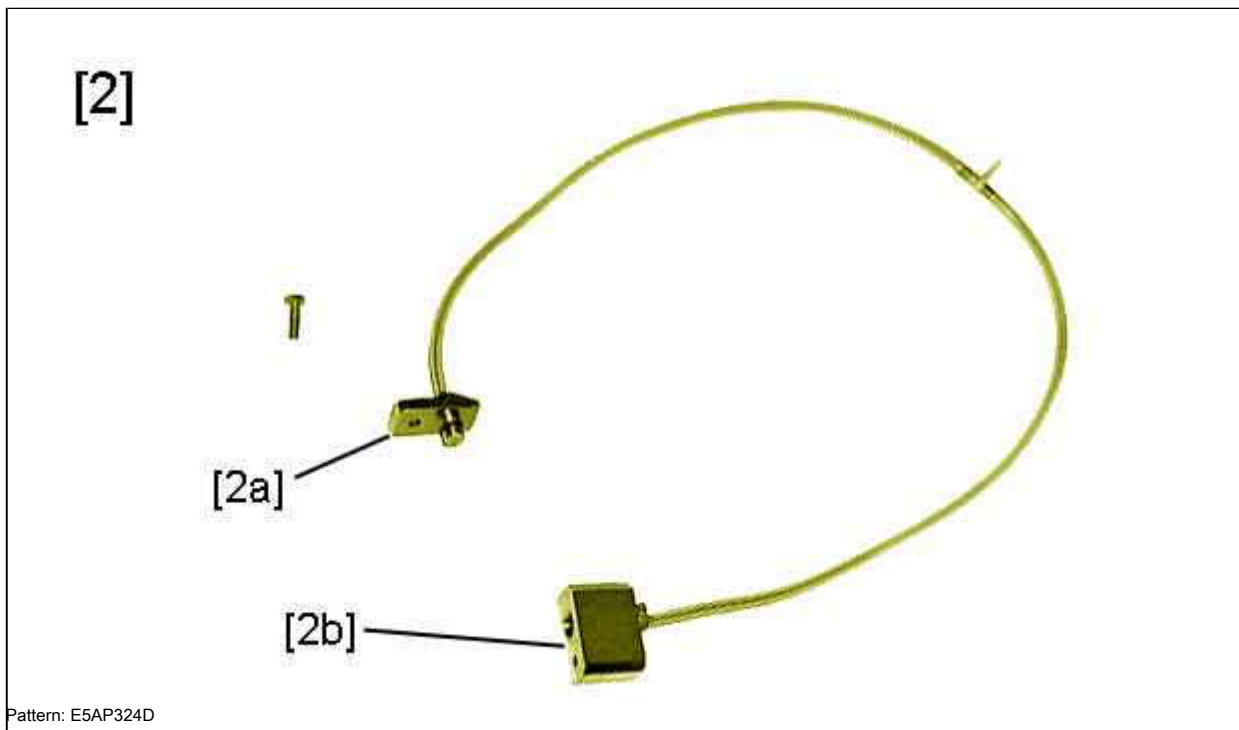
~~MANDATORY: Observe the cleanliness and safety rules~~



1. Recommended equipment



[1] boost pressure control gauge () 1604.A.



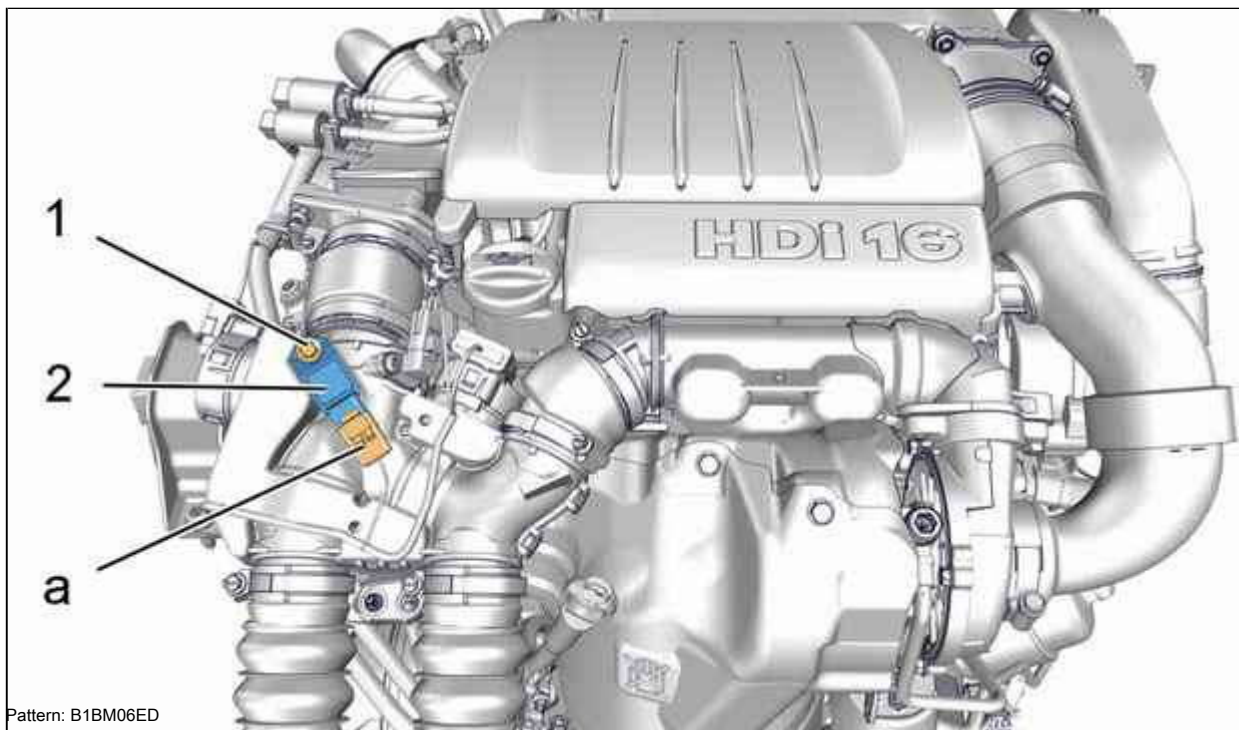
[2] Instrument for monitoring the intake air vacuum pressure (). 0171.G2.

2. Verification

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements

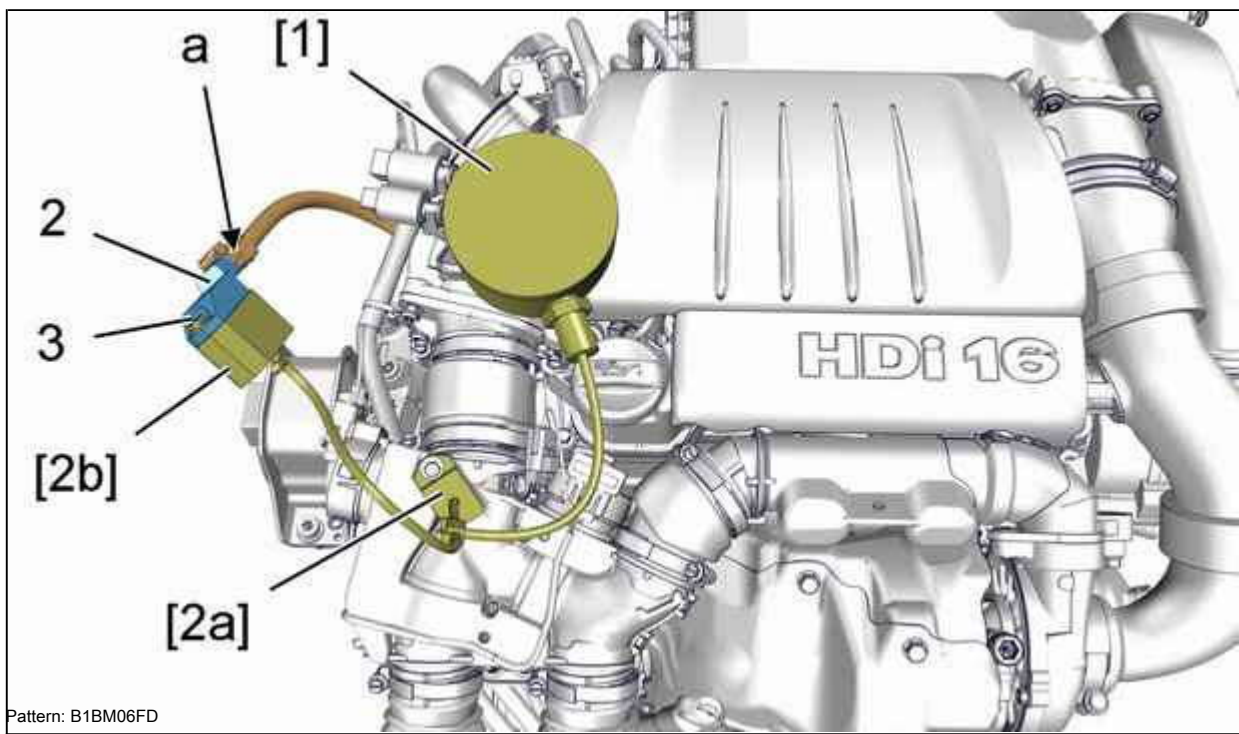


2.1. Dual intake air metering unit (Automobile particulate filter)



Disconnect the connector (at "a") (if necessary). Remove:

- Bolt (1)
- Charge air pressure sensor (2)



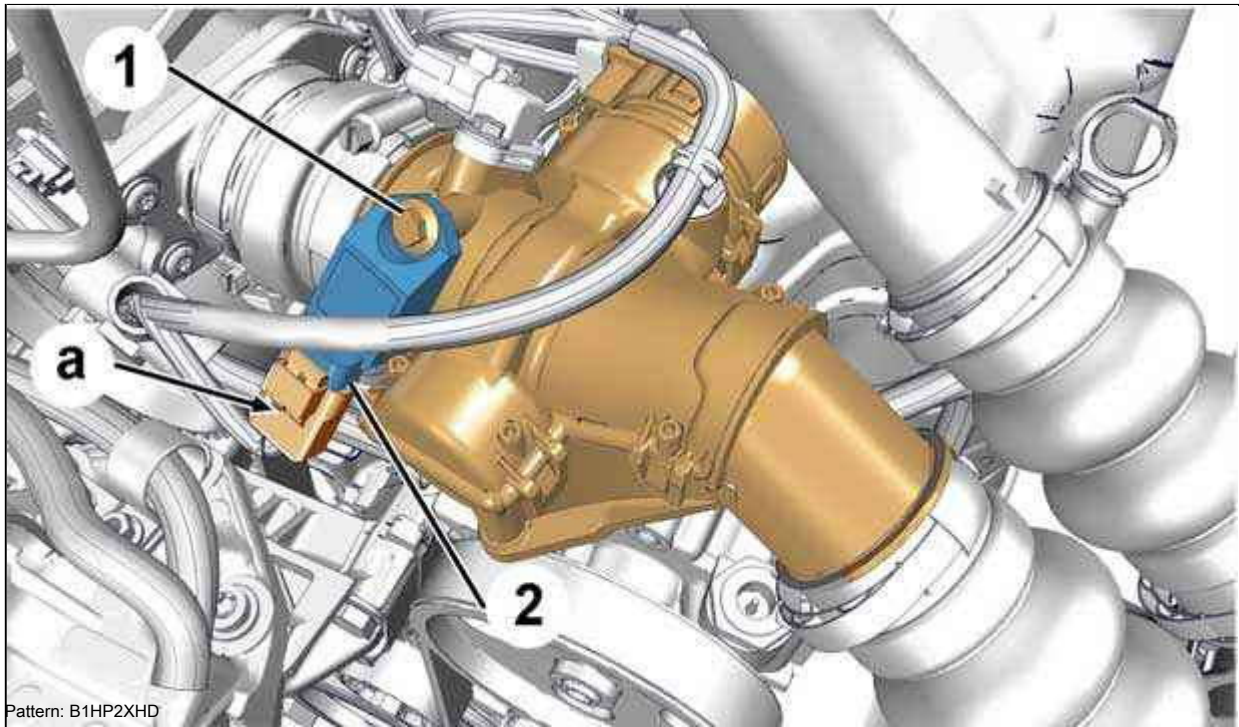
Attach:

- Tool [2a] in place of charge air pressure sensor (2); Tighten bolt (1)
- Charge air pressure sensor (2) to tool [2b]; Tighten bolt (3)

- Tool [1] to tool [2]

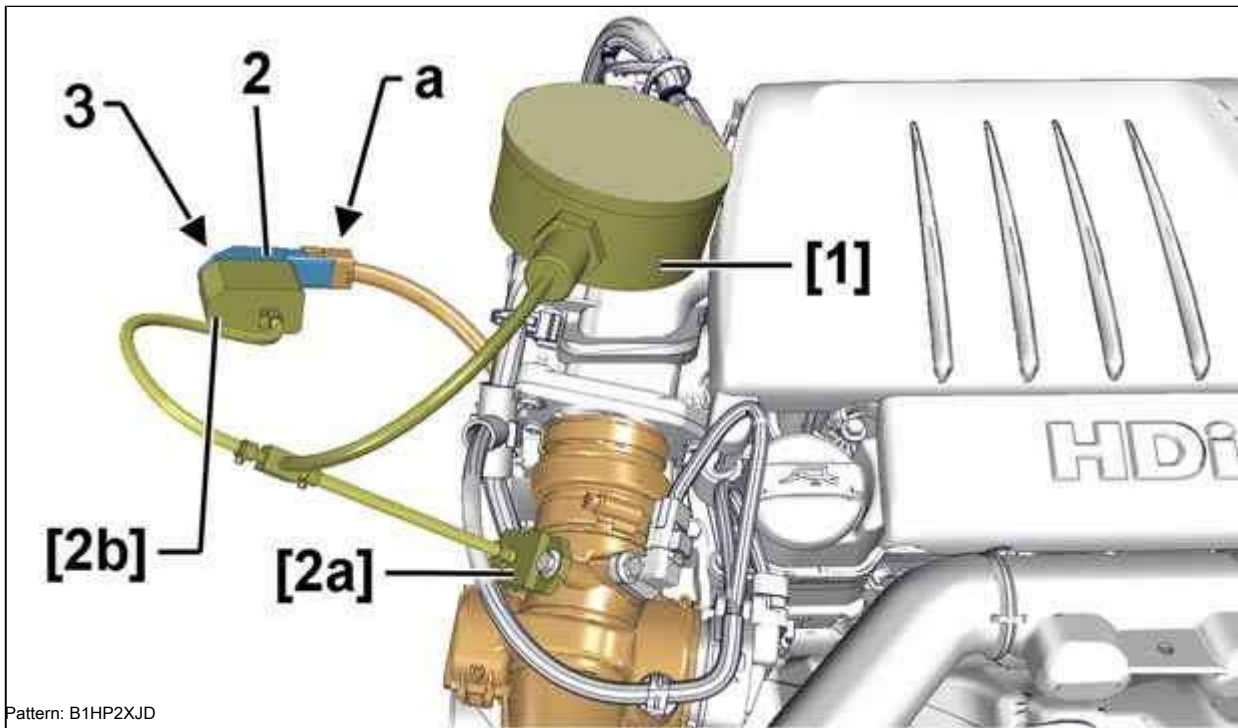
Connect the connector (at "a").

2.2. Air Meter Unit (Vehicle Diesel Particulate Filter)



Disconnect the connector (at "a") (if necessary). Remove:

- Bolt (1)
- Charge air pressure sensor (2)



Attach:

- Tool [2a] in place of charge air pressure sensor (2); Tighten bolt (1)
- Charge air pressure sensor (2) to tool [2b]; Tighten bolt (3)
- Tool [1] to tool [2]

Connect the connector (at "a").

2.3. Checking General Operations

Connect the diagnostic tool to the vehicle diagnostic socket. Turn the diagnostic device into parameter measurement mode. Start the engine.

Engine speed (lb / min) Boost pressure (bar) 2500

	0.2 ± 0.1
4000	0.7 ± 0.1

NOTE: If there is a large difference in the pressure readings from the scan tool and from the pressure gauge, replace the charge air sensor.

If the measured system pressure is below the specified value, check the following:

- Air ducts inlet and outlet of the turbocharger
- Air lines to the inlet and outlet of the charge air cooler
- Charge air cooler
- Turbocharger

If the measured system pressure (maximum 1 bar) exceeds the specified value, check the turbocharger regulation system.

REMOVAL INSTALLATION: TURBOCHARGER AIR COOLER

MANDATORY: Observe the cleanliness and safety rules



1. Removal

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements

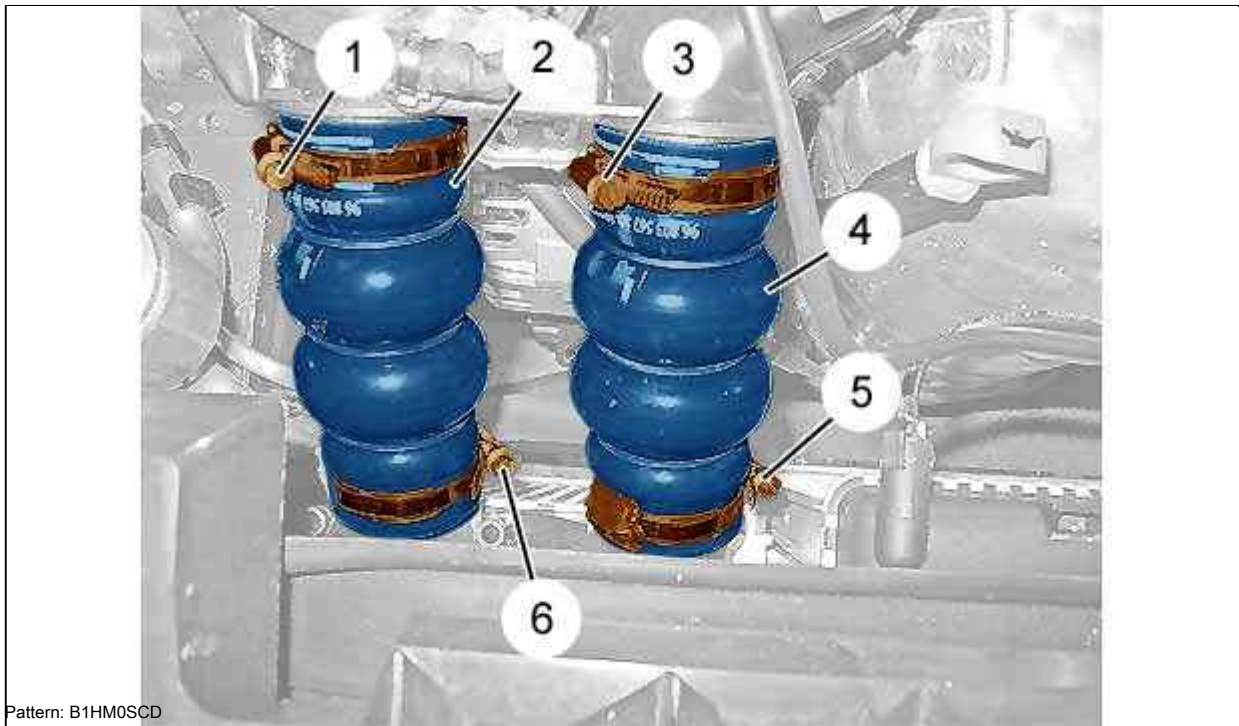


1.1. Preliminary operations

Disconnect the battery. Remove the engine cover.

1.2. Car without air conditioning

Place the car on a lift.



Loosen the clamps (1), (3), (5), (6). Remove:

- Air duct (2)
- Air duct (4)



Unscrew the bolts (7); through the front bumper slots. Raise the car.

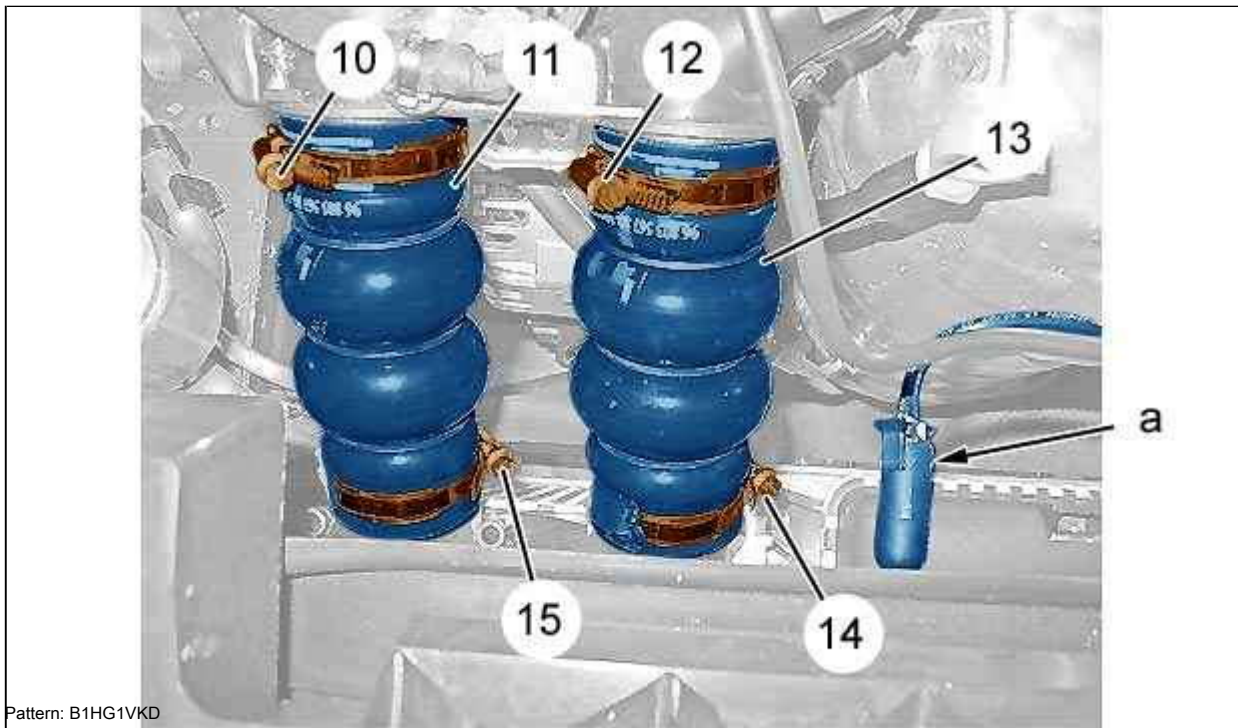
Remove engine cover.

Lift and remove: Charge air cooler (8) (Vehicle bottom).

1.3. Car air conditioner



Remove the front bumper (9).

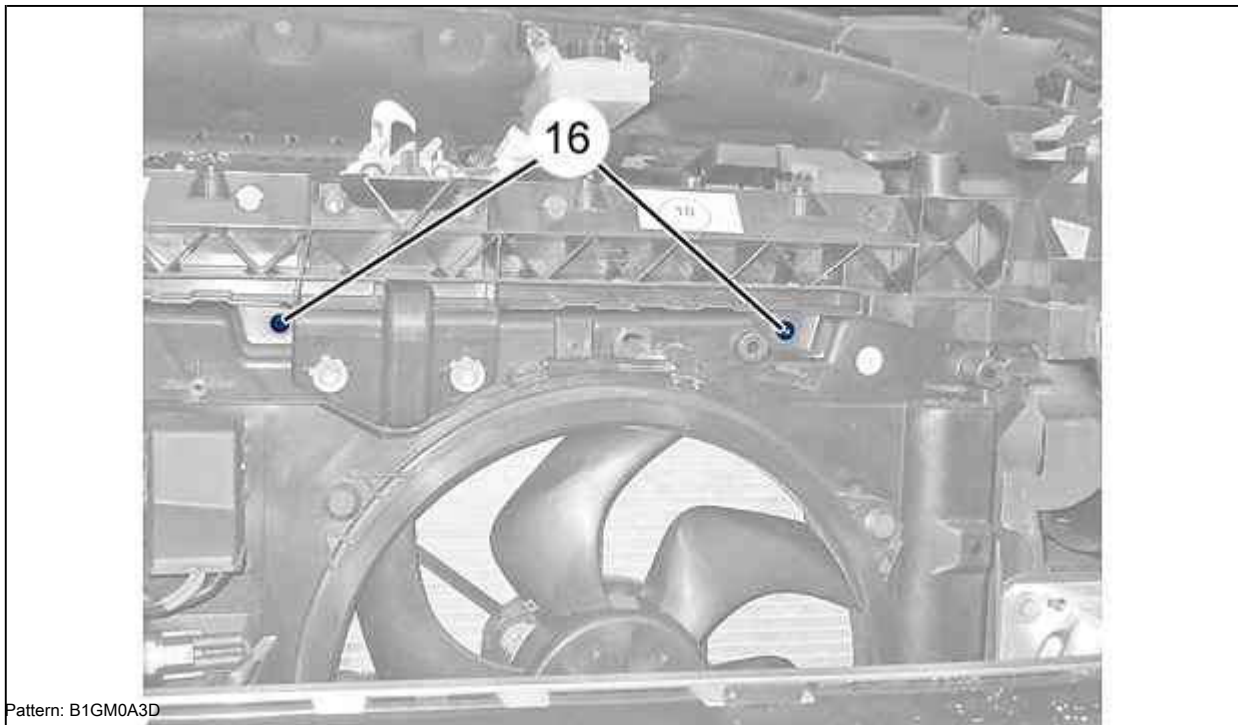


Pattern: B1HG1VKD

Loosen the clamps (10), (12), (14), (15).

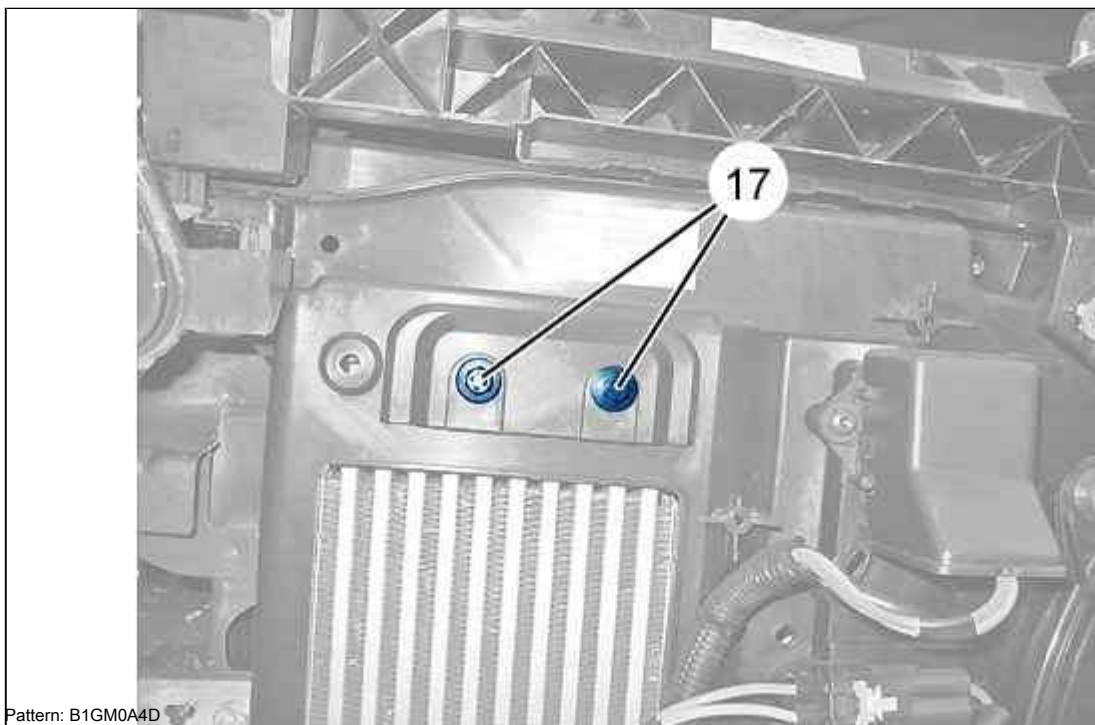
Disconnect the degassing pipe from the radiator (at "a") (if necessary). Remove:

- Air duct (11)
- Air duct (13)



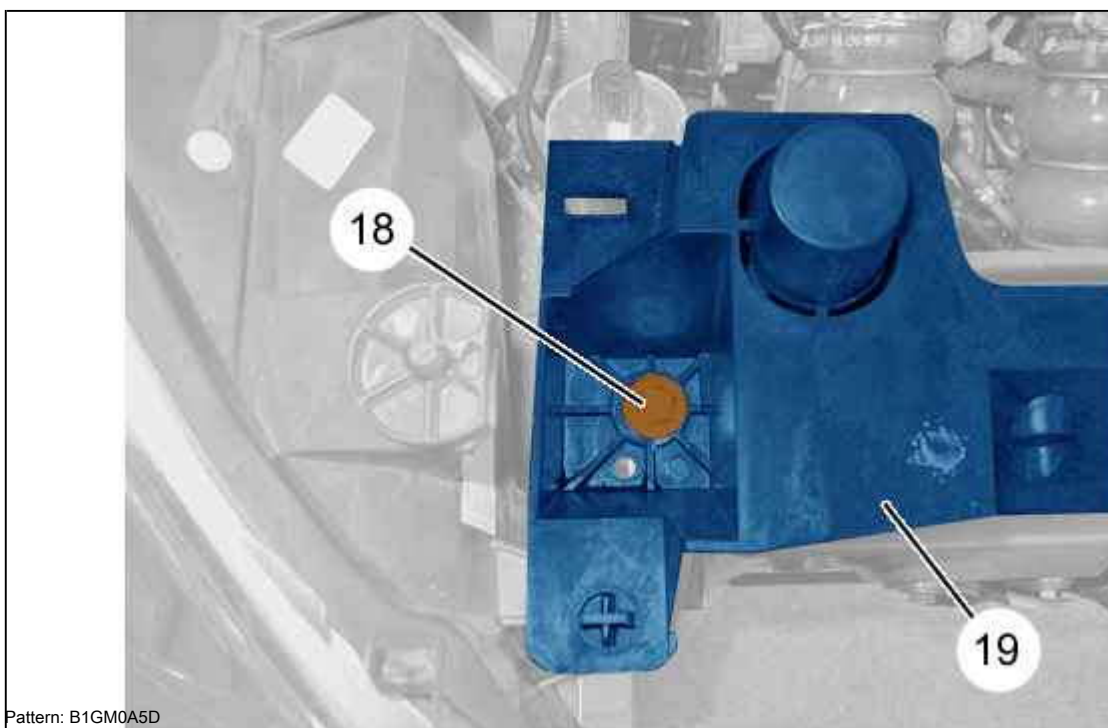
Pattern: B1GM0A3D

Loosen the screws (16).



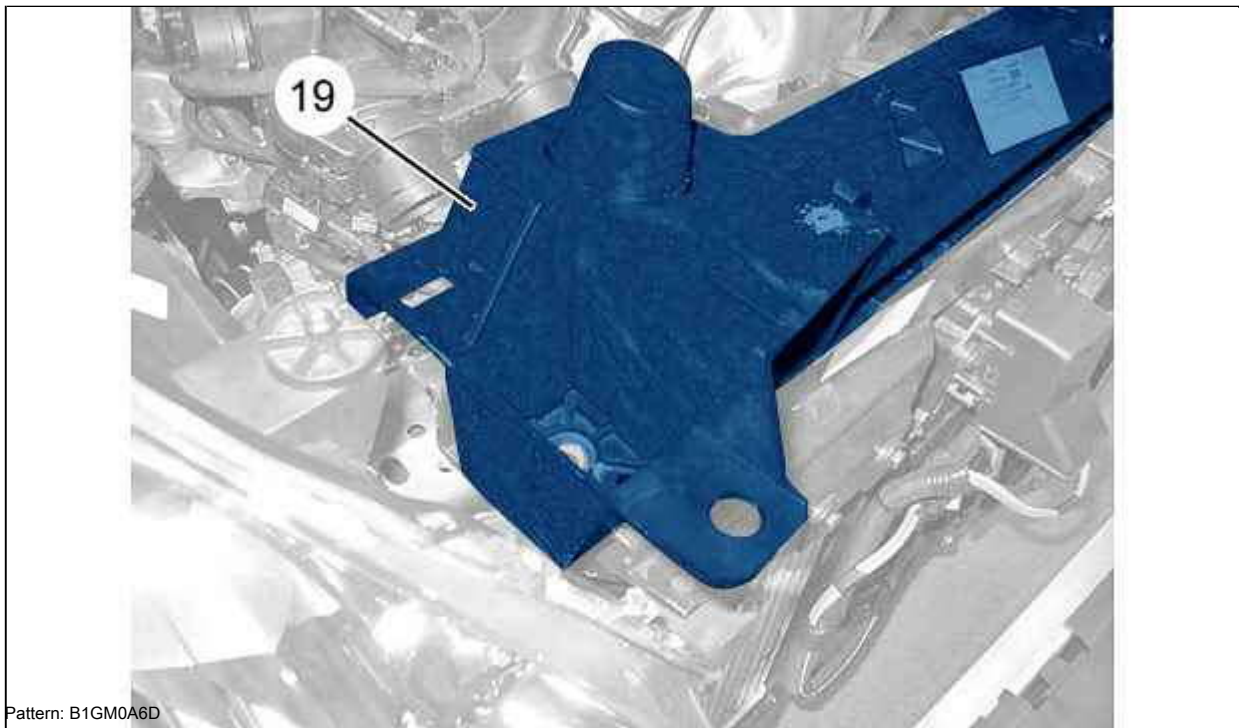
Pattern: B1GM0A4D

Loosen the screws (17).

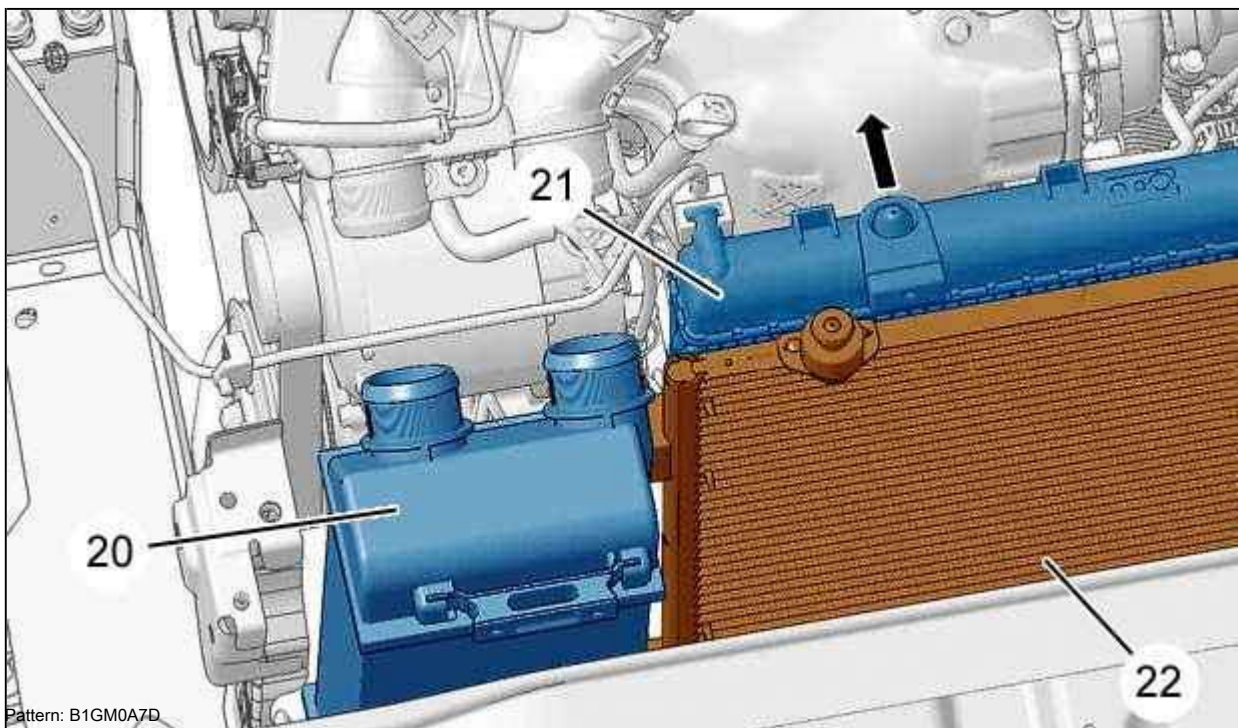


Pattern: B1GM0A5D

Remove the bolt (18) of the cooling cassette (19). Do the same on the other side.



Lift up Slide the coolant cassette (19) towards the front of the vehicle.



ATTENTION : Protect the engine cooling radiator (21) to avoid damaging the blades.

Tilt the Cooling Radiator (21) and A / C Condenser Assembly (22) slightly (Be careful; As indicated by the arrow).

Pull out air cooler (20) from the top (Be careful).

2. Installation

2.1. Car without air conditioning

Raise the car.

ATTENTION : Check the presence of rubber centering elements.

Refit turbocharger air cooler (8) into the rubber centring slots. Install the engine shield.

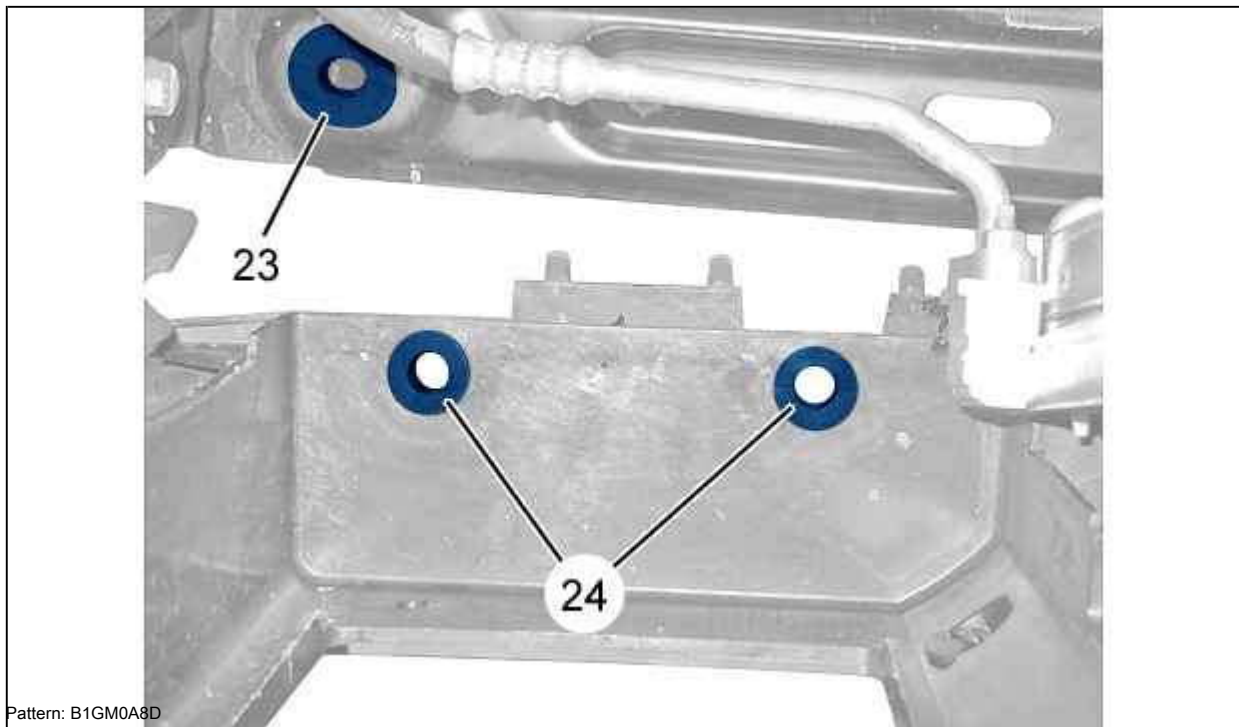
Lower the vehicle.

Install:

- the bolts (7)
- Air lines (2), (4)

Tighten the clamps (1), (3), (5), (6).

2.2. Car air conditioner



Check the presence of the rubber centering elements (24), (23) (right and left). Refit turbocharger air cooler (20) into the rubber centring slots (24).

Replace the bolts (17).

Install the coolant cassette (19) into its rubber guides (23) (right and left).

Install the fastening bolts (18).

Reposition enginecooling radiator (21) and aircon condenser (22) assembly. Install:

- the bolts (16)
- Air lines (11), (13)

Tighten the clamps (10), (12), (14), (15) again.

Connect the radiator degassing pipe (at "a") (if necessary).

Install the front bumper (9).

2.3. General operations

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Install the engine cover.

REMOVAL INSTALLATION: TURBOCHARGER

MANDATORY: Observe the cleanliness and safety rules



1. Removal

Disconnect the battery. Remove the engine cover.

1.1. DV6TED4 engine

Drain the engine cooling system.

ATTENTION : Protect radiator fins of cooling system from damage.

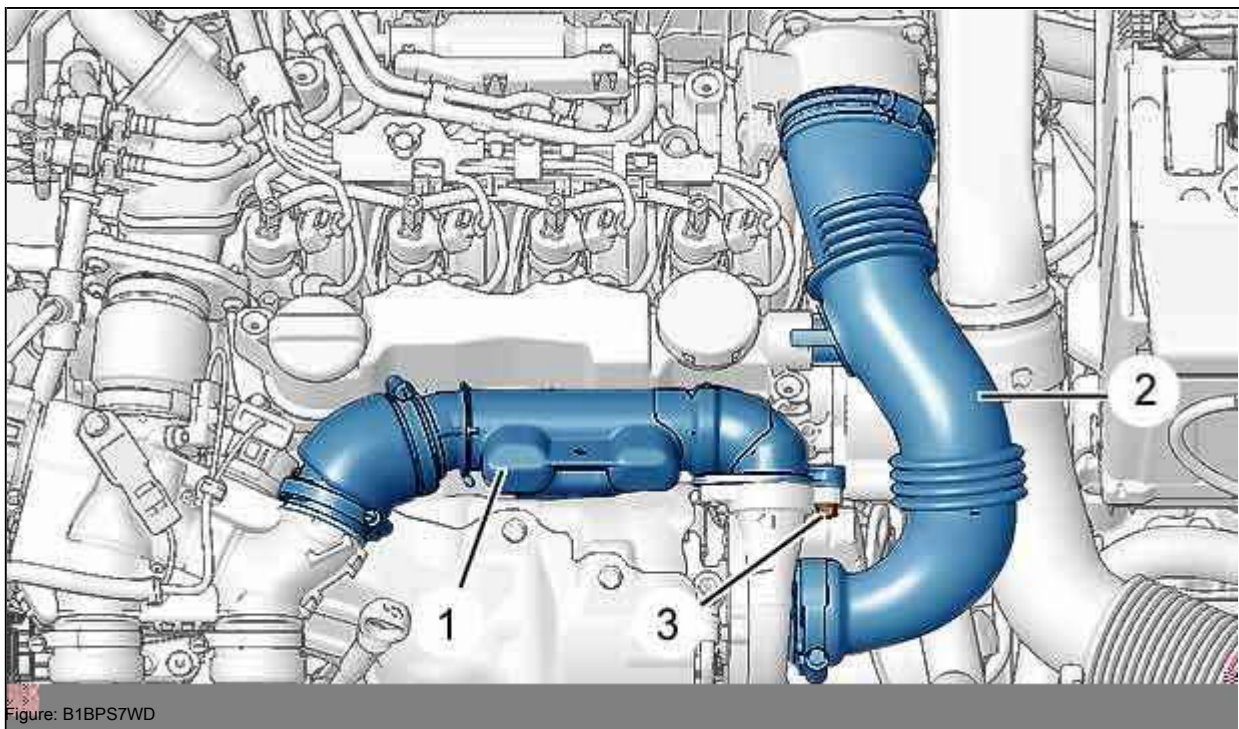


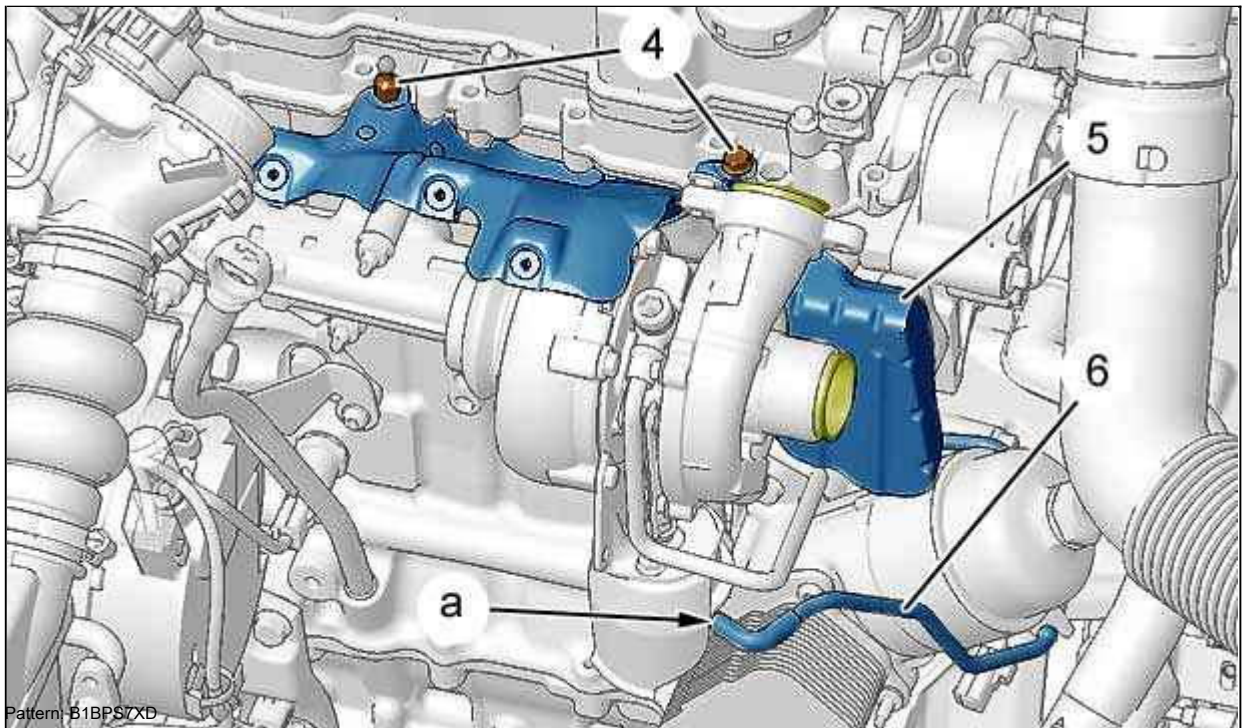
Figure: B1BPS7WD

ATTENTION : Plug the openings on and off the turbocharger.

Remove:

- Air duct (2)
- Bolt (3)
- Turbocharger silencer (1)

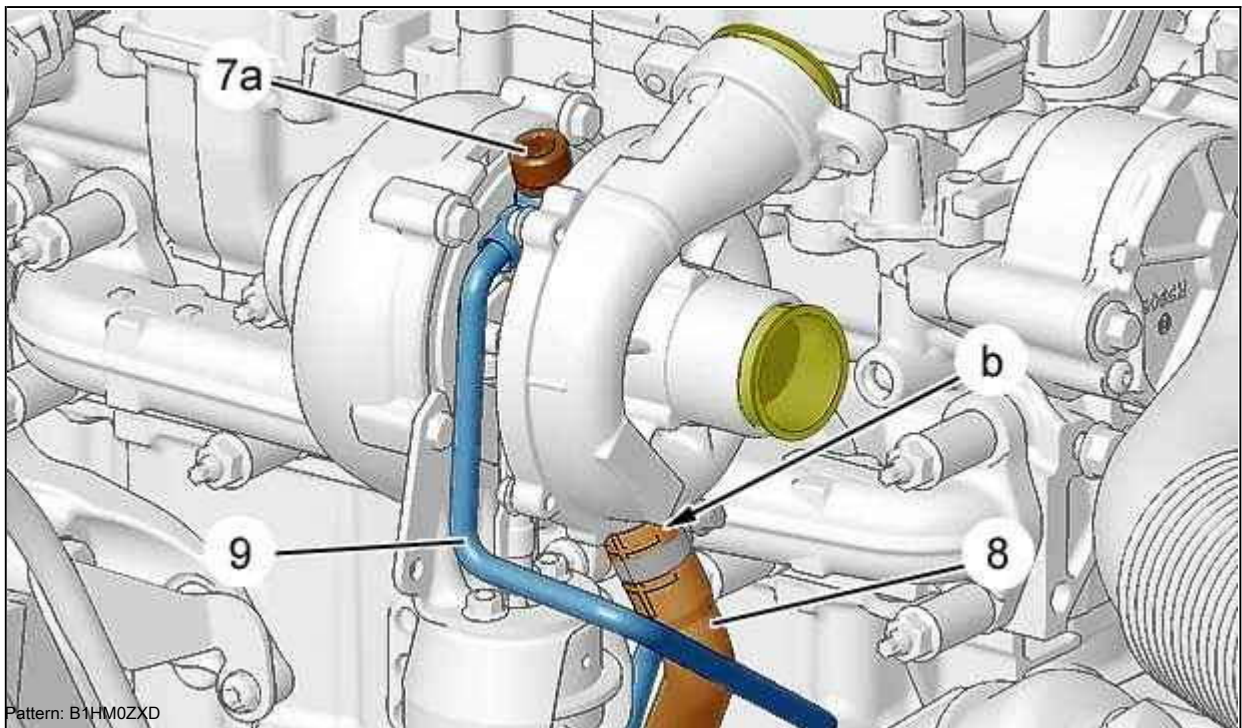
NOTE: Remove the turbocharger muffler by rotating it around the turbocharger manifold axis.



Remove:

- Cooling system radiator
- Particulate filter pressure take-off pipes
- Catalytic converter (/)
- bolts (4)
- Heat shield (5)

Disconnect the vacuum tube (6) (at "a").

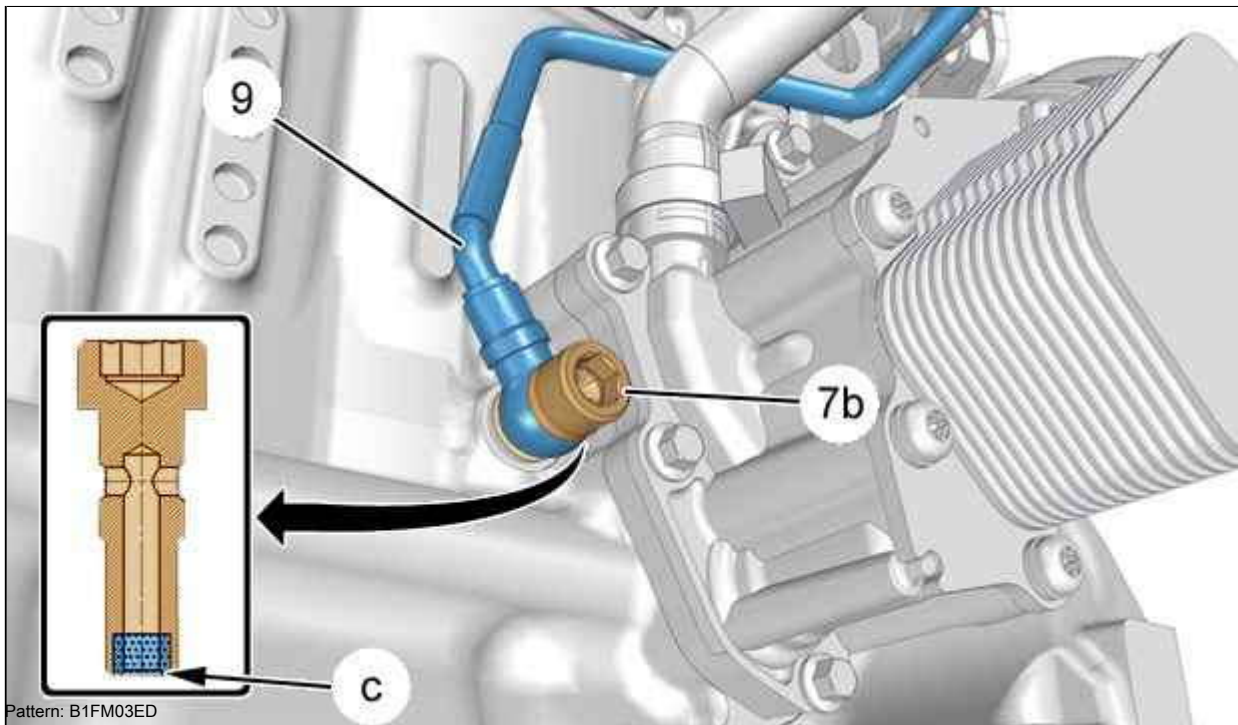


ATTENTION : Plug the turbocharger lubrication holes.

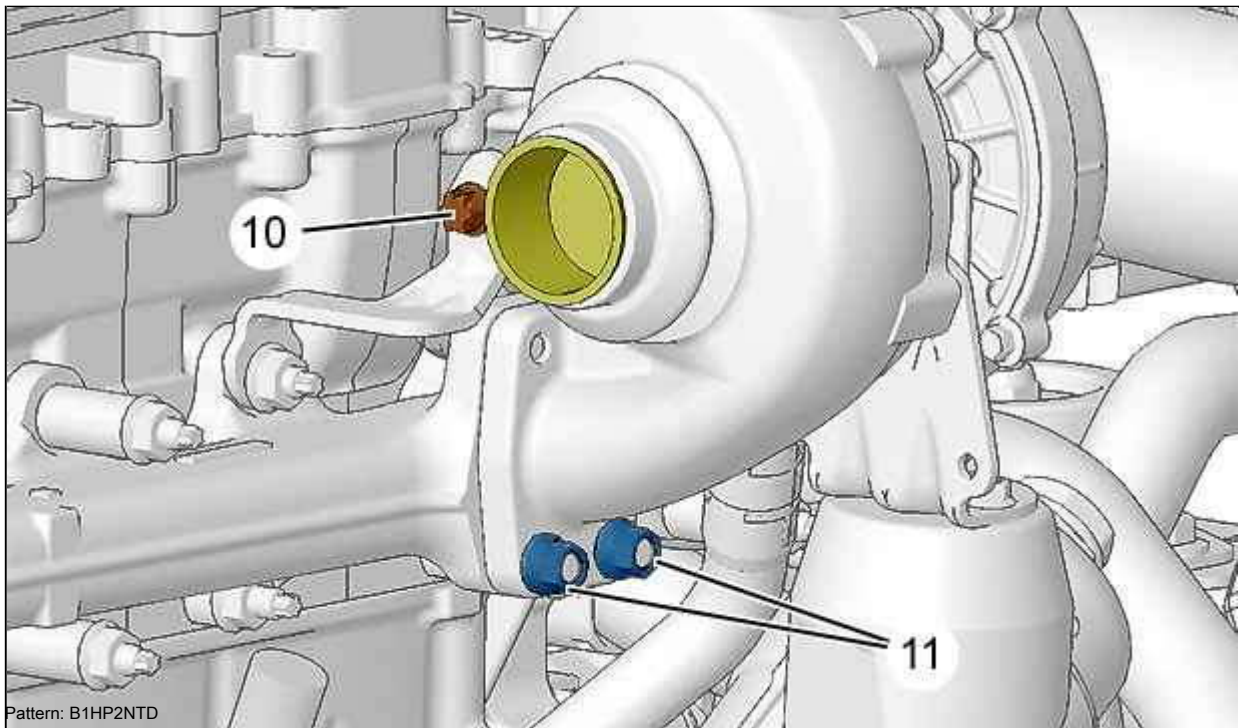
Disconnect the oil return line (8) (at "b").

ATTENTION : When unscrewing the pipe fittings, make sure that they do not turn (Hold them if necessary).

Remove the hollow head screw (7a), (7b) and O-rings in the oil line (9).

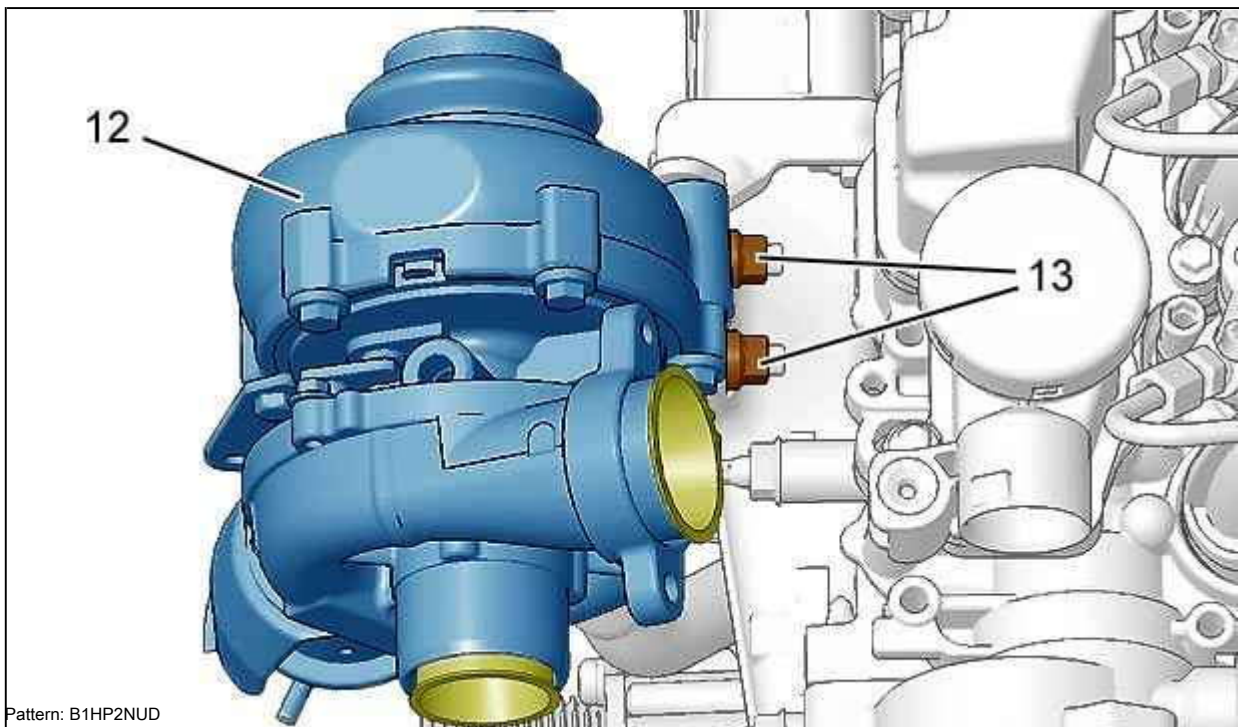


NOTE: Check for mesh in area "c" on bolt (7b). Remove (If necessary); Using screwdrivers.



Remove:

- Bolt (10)
- Nuts (11)

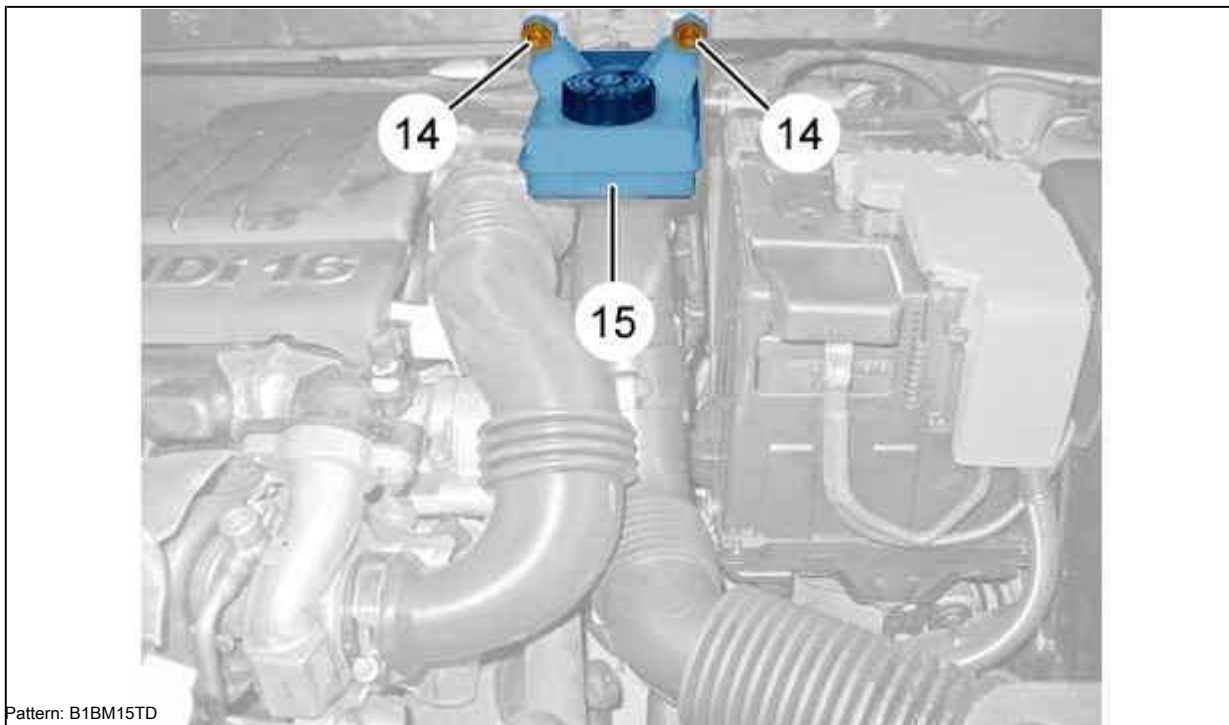


Remove:

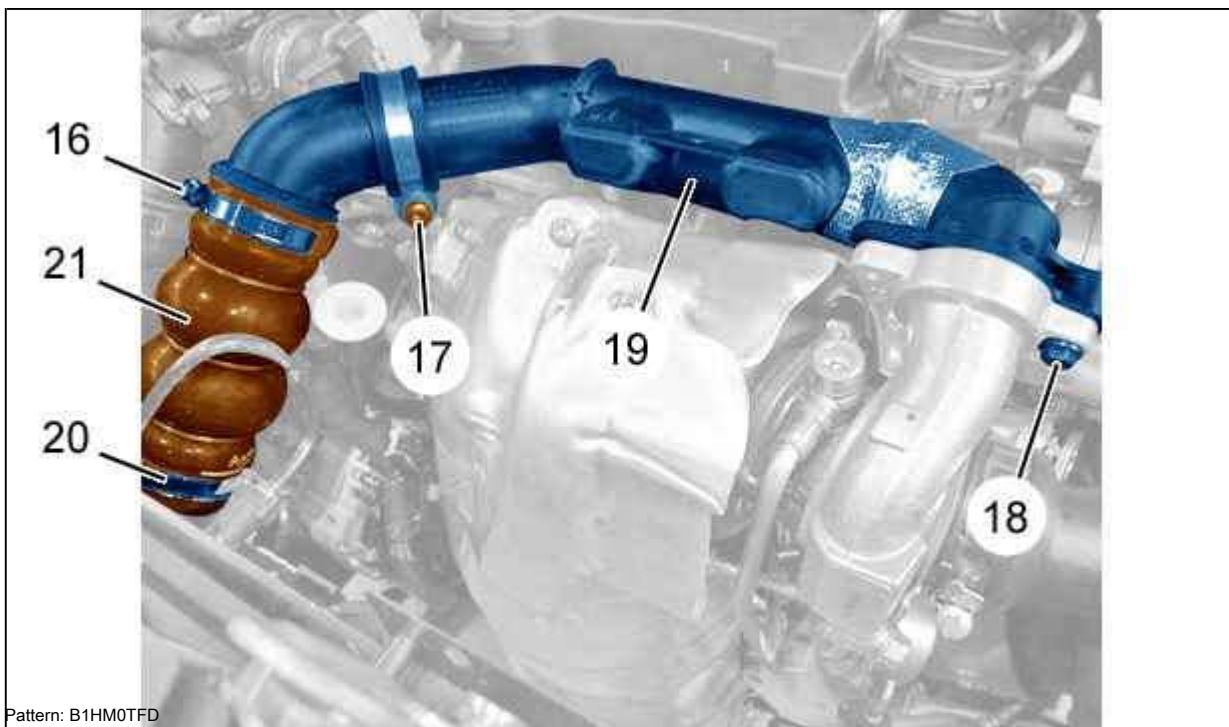
- Nuts (13)
- Turbocharger (12)

ATTENTION : Protect Exhaust manifold; With plug.

1.2. Engines DV6ATED4 / BTED4 / AUTED4 / BUTED4



Loosen the screws (14).
Move the brake fluid reservoir (15).
Oil dipstick (manual).

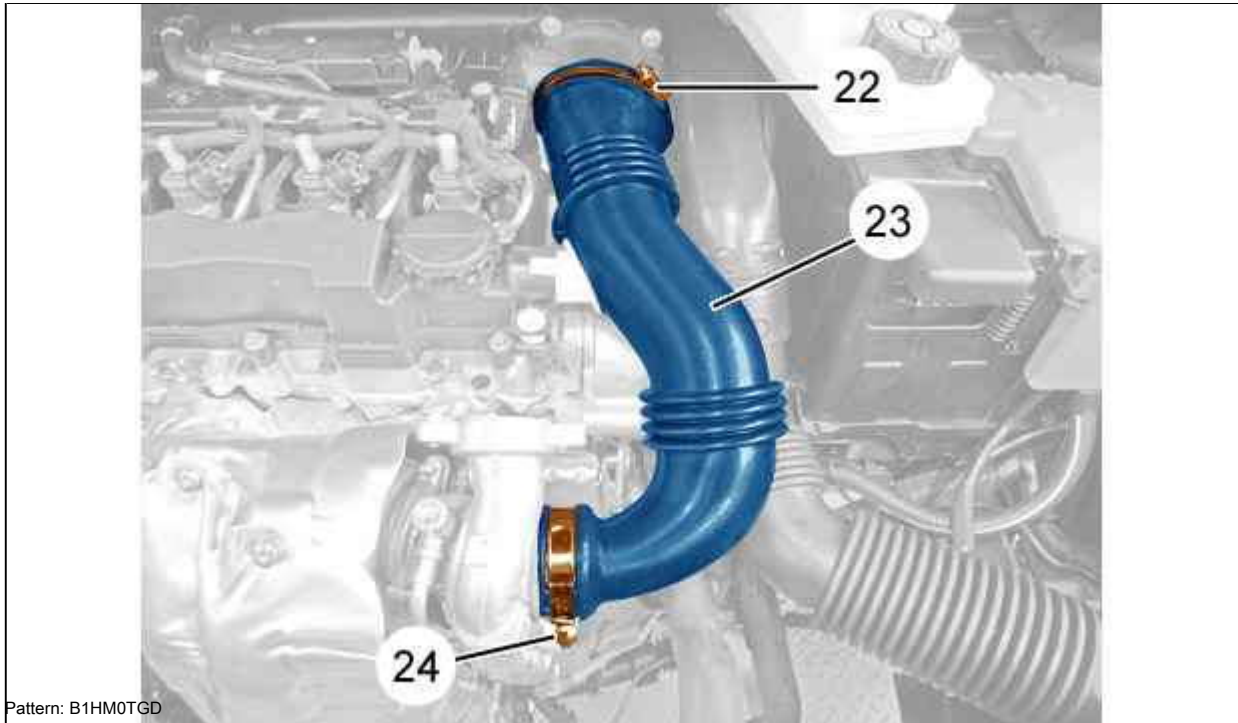


Loosen the clamps (16), (20).

Remove:

- Bolt (17)
- Bolt (18)
- Air Duct (21)
- Turbocharger silencer (19)

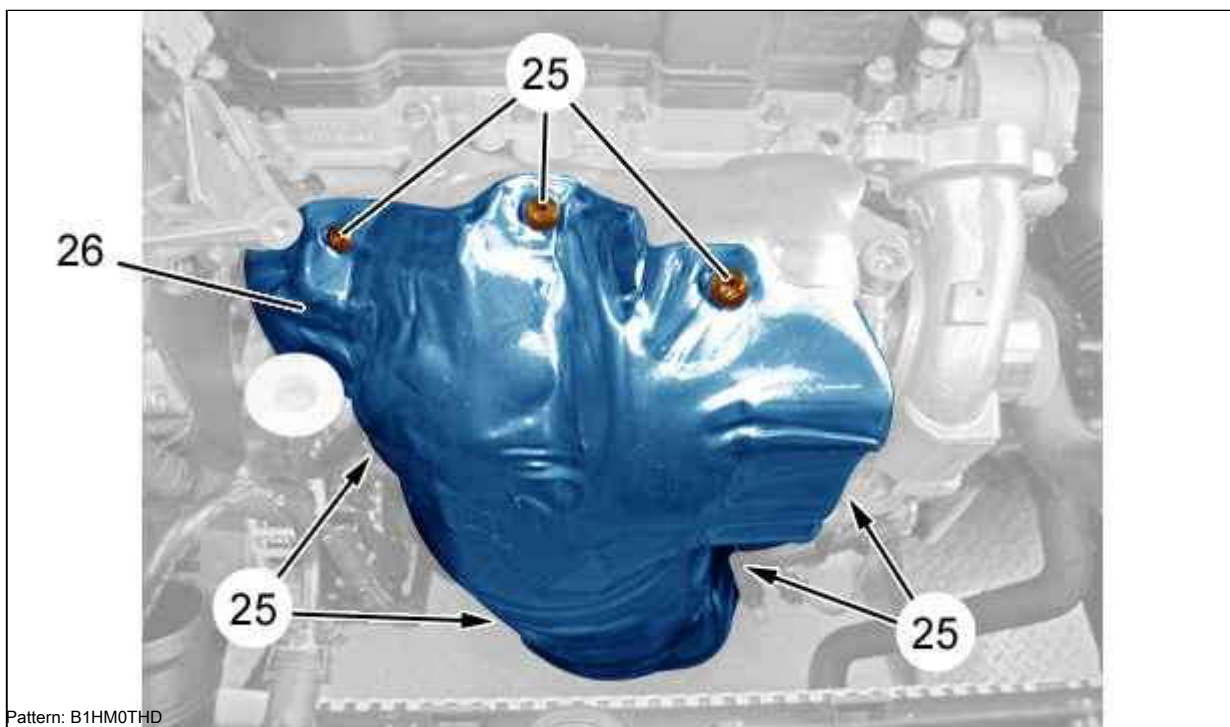
NOTE: Remove the turbocharger muffler by rotating it around the turbocharger manifold axis.



Loosen the clamps (22), (24).

Remove the air duct (23).

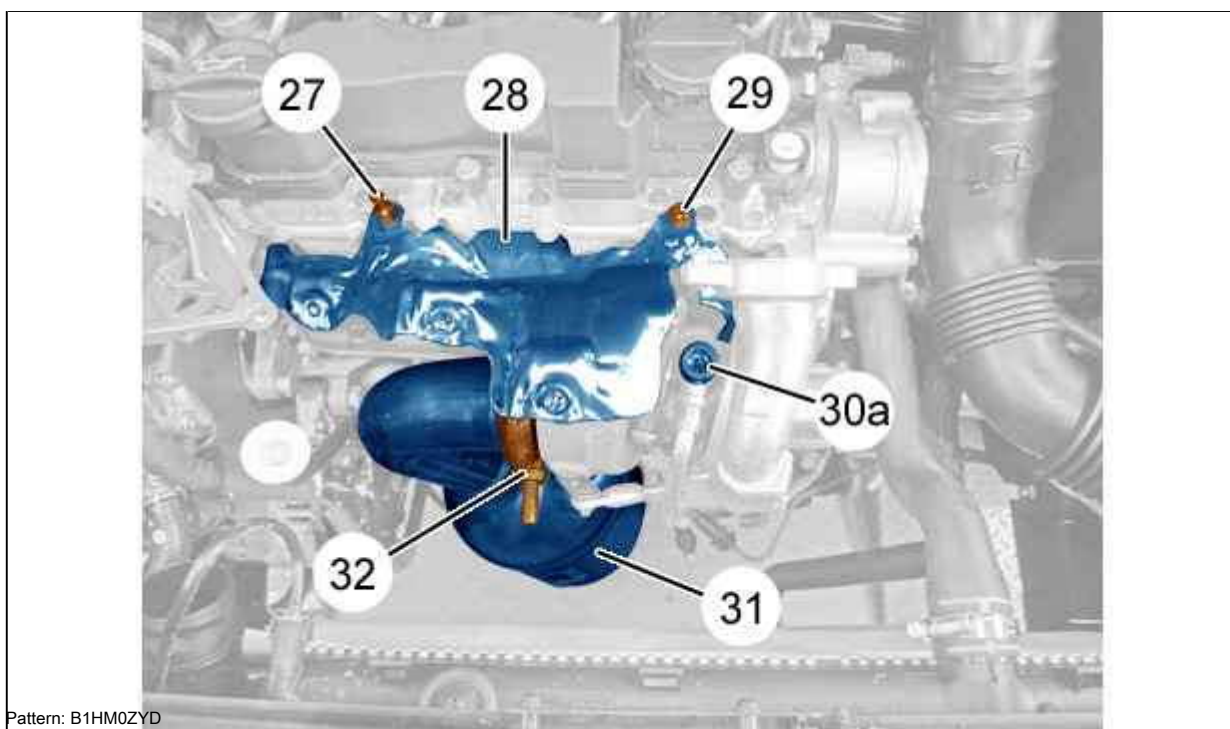
ATTENTION : Plug the openings on and off the turbocharger.



ATTENTION : Protect the radiator of the engine cooling system; Using cardboard.

Remove:

- the bolts (25)
- Heat shield (26)



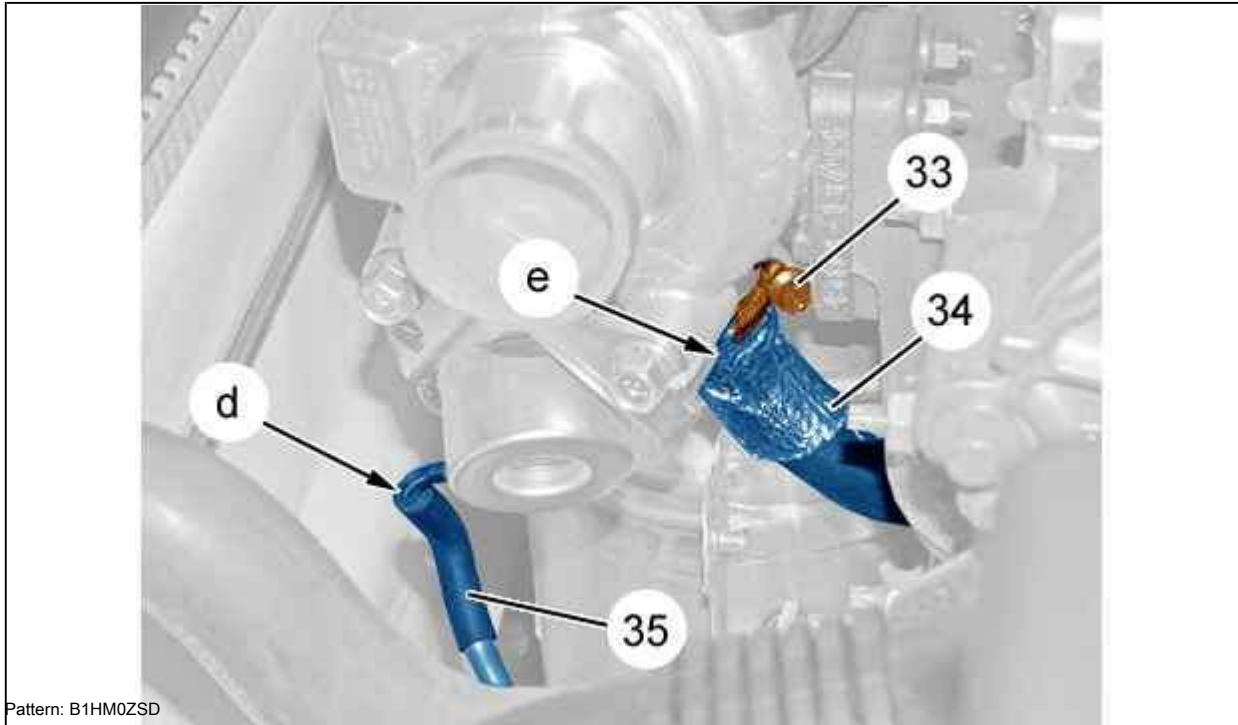
Remove:

- The bolt (27)

- Bolt (29)
- Heat shield (28)
- Hollow head bolt (30a)

Disconnect: Clamp (32).

Loosen: The catalytic converter mounting flange (31).

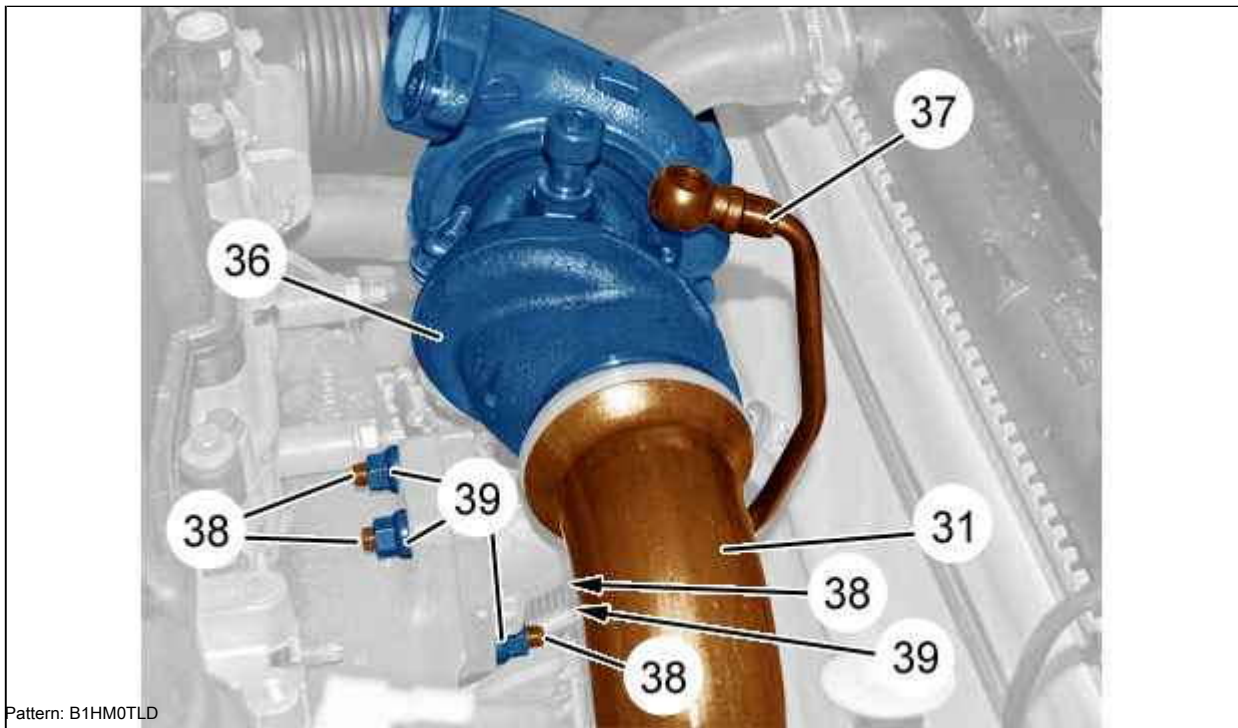


Pattern: B1HM0ZSD

Loosen the clamp (33).

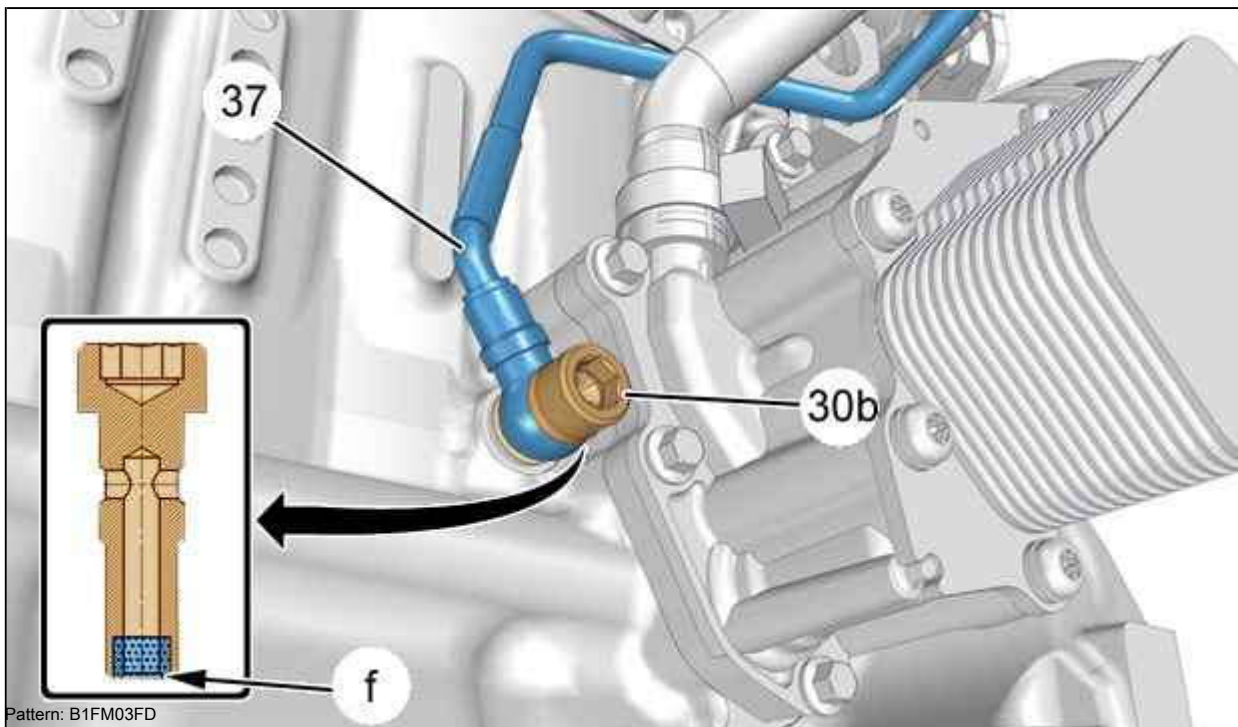
Disconnect:

- Oil return line (34) (in "e")
- Vacuum tube (35) (in "d")



Remove:

- Nuts (39)
- hairpins (38)



NOTE: Check for mesh in area "f" on bolt (30b). Remove (If necessary); Using screwdrivers.

Remove:

- Hollow head bolt (30b)
- Oil return pipe (37) from turbocharger

Move slightly: Catalytic converter (31). Remove turbocharger (36).

ATTENTION : Protect: Exhaust manifold; With plug.

2. Verification

Check the engine air filtration system. Verify :

- Air pipes
- Condition and correct positioning of the vacuum supply pipe to the turbocharger

Check that there are no foreign bodies in the following items:

- Air intake circuit
- Exhaust manifold (risk of destruction of the turbocharger when it is turned on)

Clean the surface of the turbocharger exhaust manifold. Make sure the oil circuit connections are clean.

ATTENTION : Use recommended screws and nuts (heat resistance).

Replace:

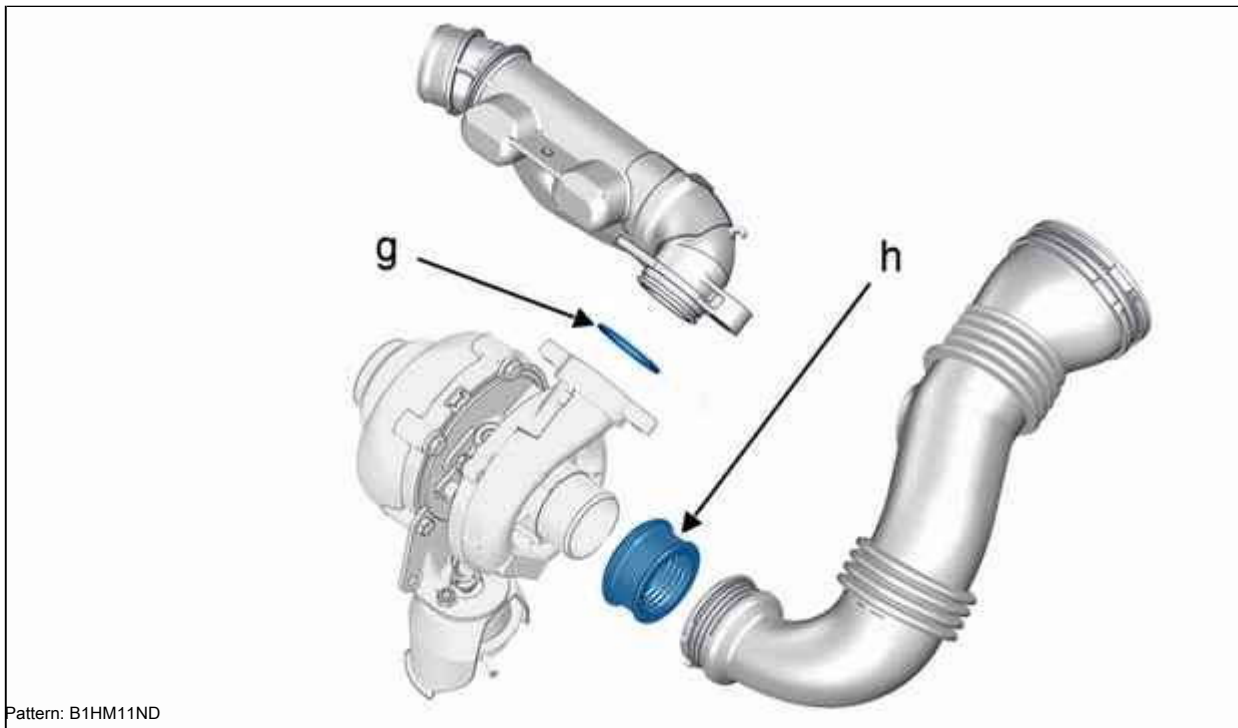
- Turbocharger retaining nuts
- Leather Seals for Turbocharger Lubrication Hollow Bolts
- Catalytic Converter Clamps

3. Installation

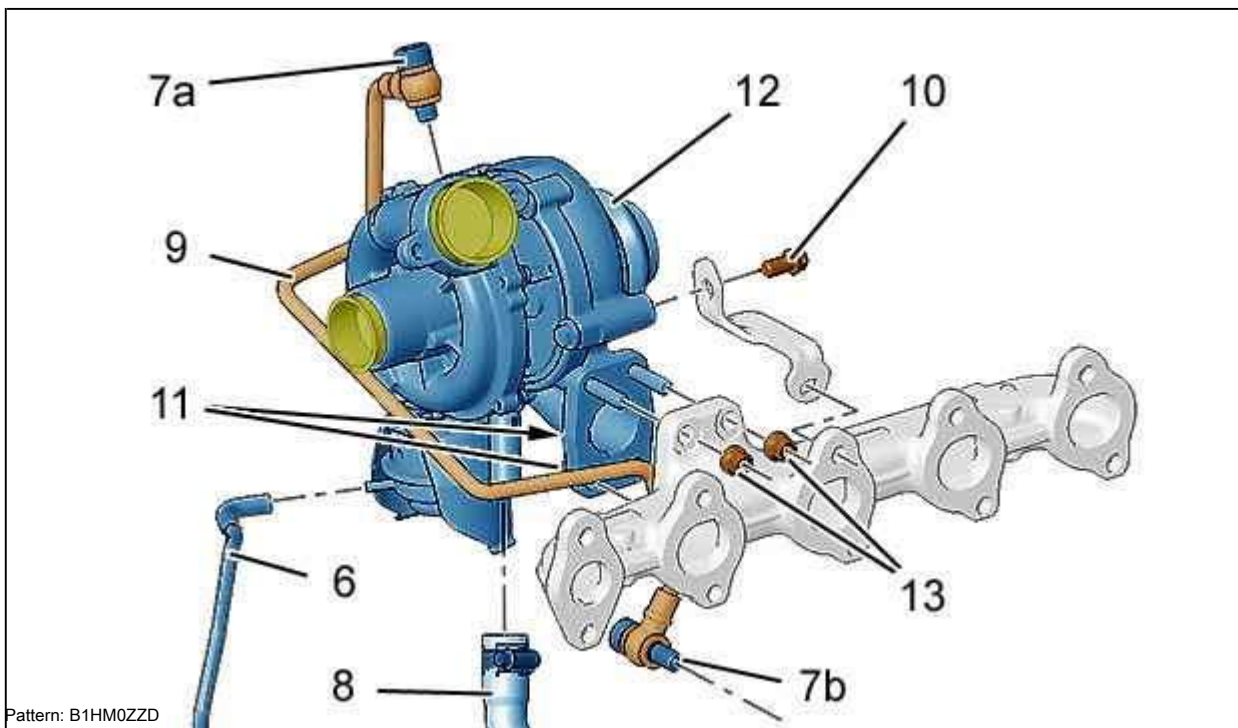
ATTENTION : Installation: Remove plugs from turbocharger at last moment.

3.1. DV6TED4 engine

ATTENTION : When installing, the removed seals must be replaced with new ones.



Replace the "g" and "h" gaskets of the turbocharger.



ATTENTION : Clean the mating surfaces with a certified metal removal product. Do not use abrasive or scratching tools on the mating surfaces. The planes to be joined must not contain any traces of impacts or cracks.

ATTENTION : Pre-assemble the turbocharger components for correct installation (Before final tightening).

ATTENTION : Always replace nuts (11) and (13) and screw (10).

Connect the turbocharger to the exhaust manifold. Unpinning:

- Nuts (13) and (11) (new nuts)
- Bolt (10) (new)

Install the hollow head screw (7a), (7b) and O-rings (new) in the oil collection line (9).

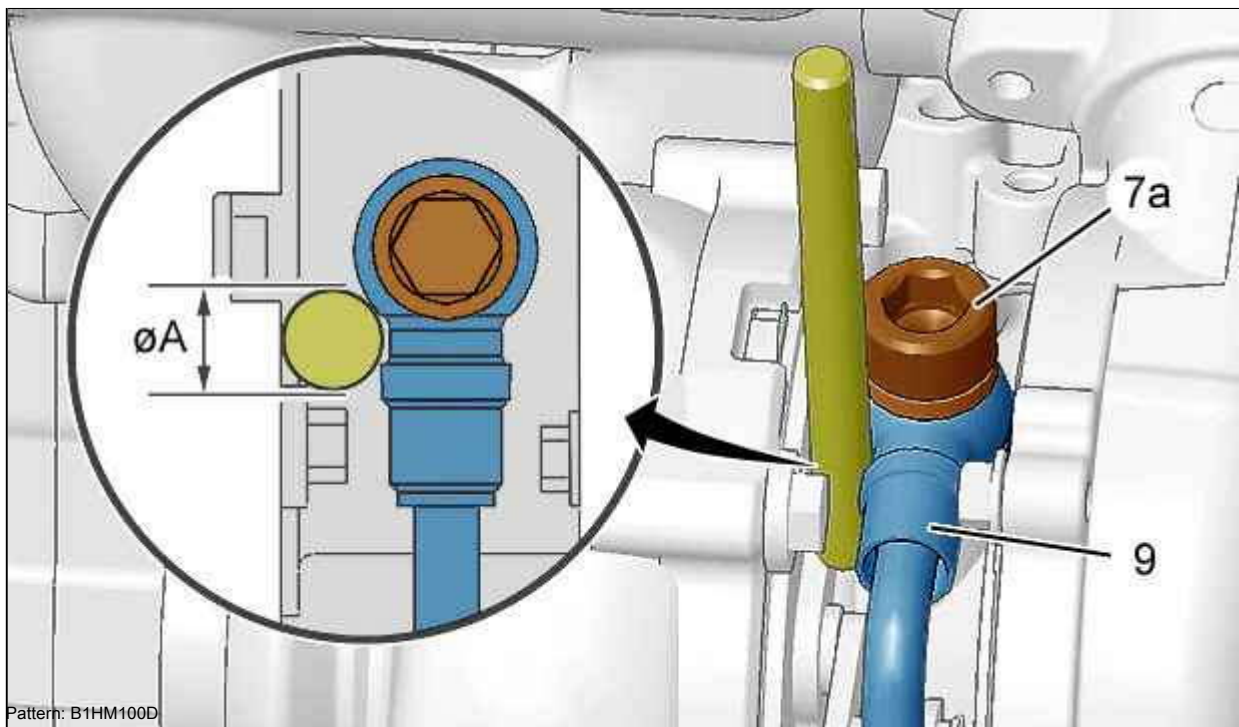
Tighten:

- nuts (13), (11) with a torque of 2.6 ± 0.6 da.Nm
- The bolt (10) to a torque of 2.5 ± 0.3 da.Nm

ATTENTION : When installing, lubricate the end of the return line with engine oil.

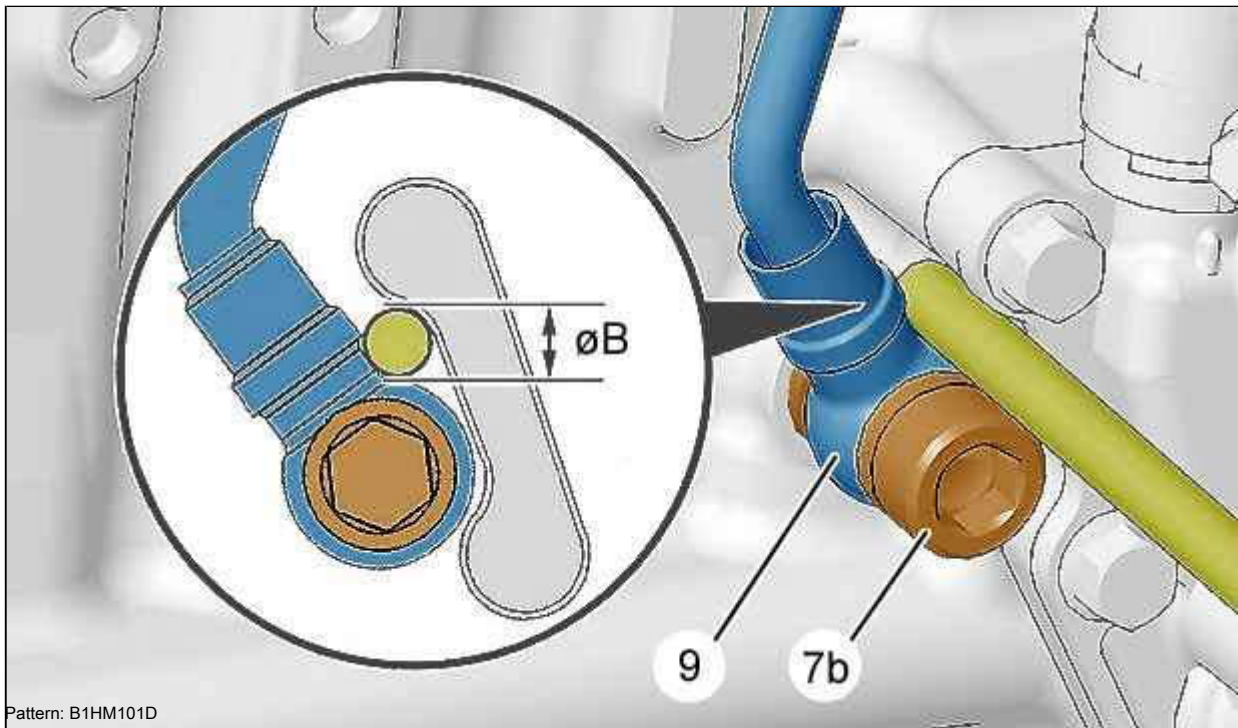
Attach:

- Oil return line (8)
- Vacuum tube (6)



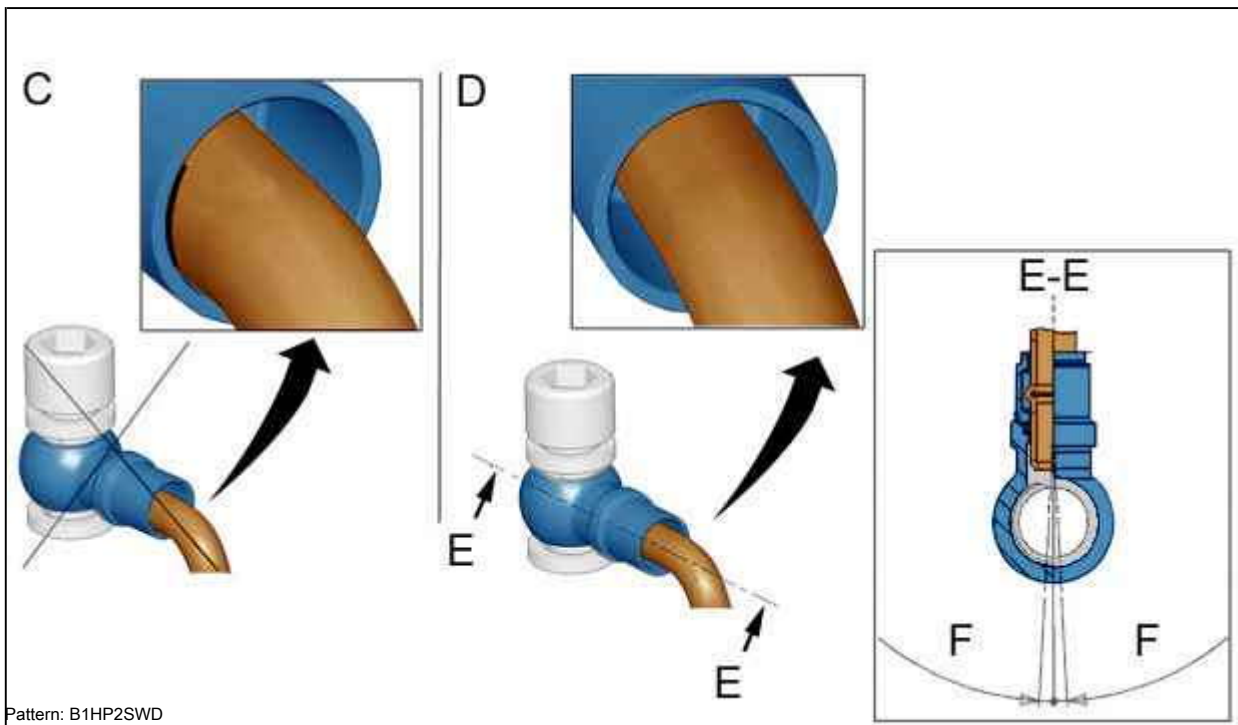
Tightening method of the upper pipe connector:

- Place pin vertically with diameter ("A" = 8.5mm); As shown above
- Tighten the bolt (7a) holding the connecting piece with the pin; Tighten to 3 ± 0.45 da.Nm



Tightening method for lower pipe connector:

- Install horizontal pin with diameter (" B " = 7.5mm); As shown above
- Tighten the bolt (7b) holding the connecting piece with the pin; to a torque of 3 ± 0.45 ppm



"C" Incorrect installation of the lubrication tube. "D" Correct installation of the lubrication tube.

"E" Sectional view.

"F" Permitted deflection angle: 3° (0; +0.2).

ATTENTION : Stressing the grease tube will cause engine oil to leak. After tightening the fittings, check the freedom of deflection of the lubrication tube. Otherwise, re-tighten the connections.

Install:

- Heat shield (5)
- bolts (4)
- Catalytic converter (/)
- Particulate filter pressure take-off pipes
- Cooling system radiator
- Turbocharger silencer (1) Bolt (3); Tighten to 0.6 ± 0.1 da.Nm
-
- Air duct (2)

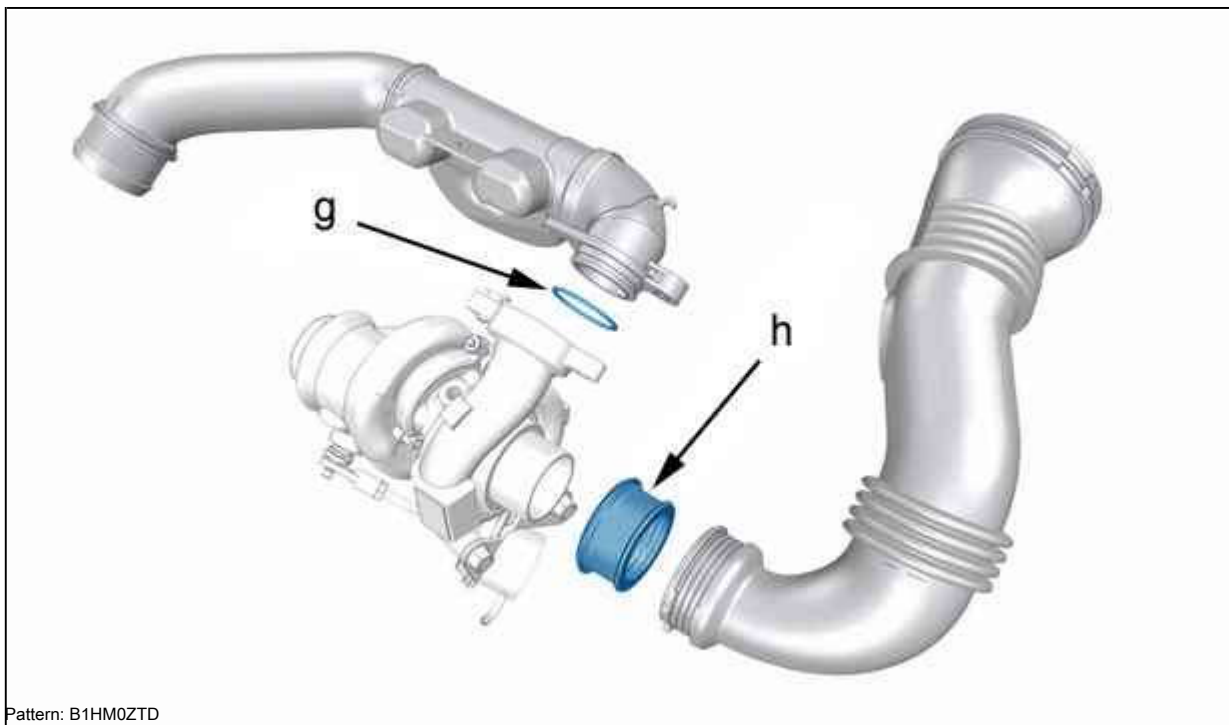
Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

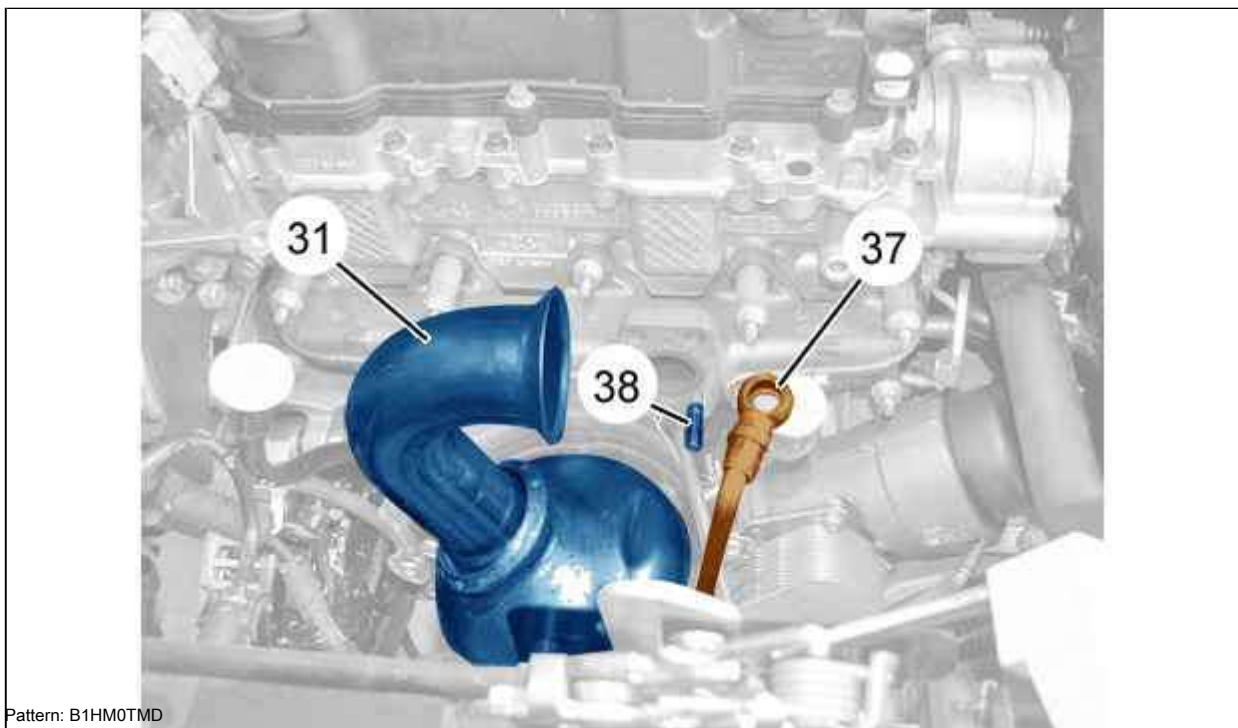
Fill with coolant and blow through the circuit.

3.2. Engines DV6ATED4 / BTED4 / AUTED4 / UTED4

ATTENTION : When installing, the removed seals must be replaced with new ones.

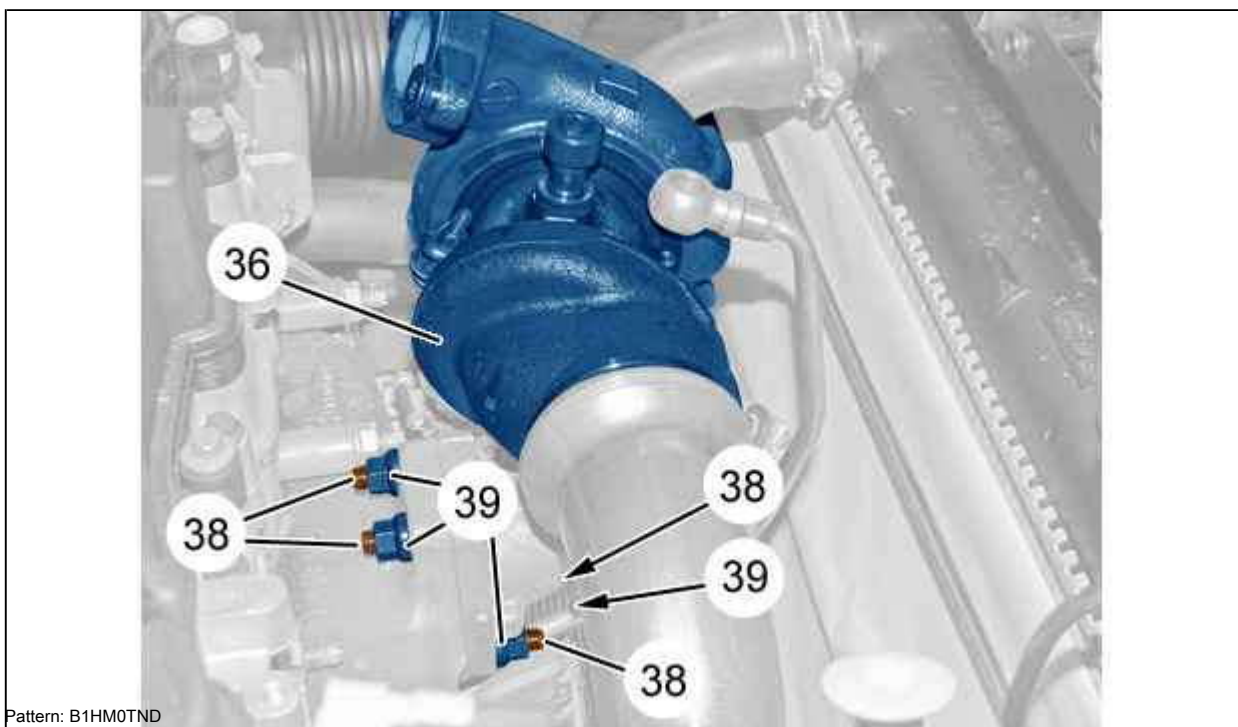


Replace the "g" and "h" gaskets of the turbocharger.



Install one of the four studs (38). Move slightly:

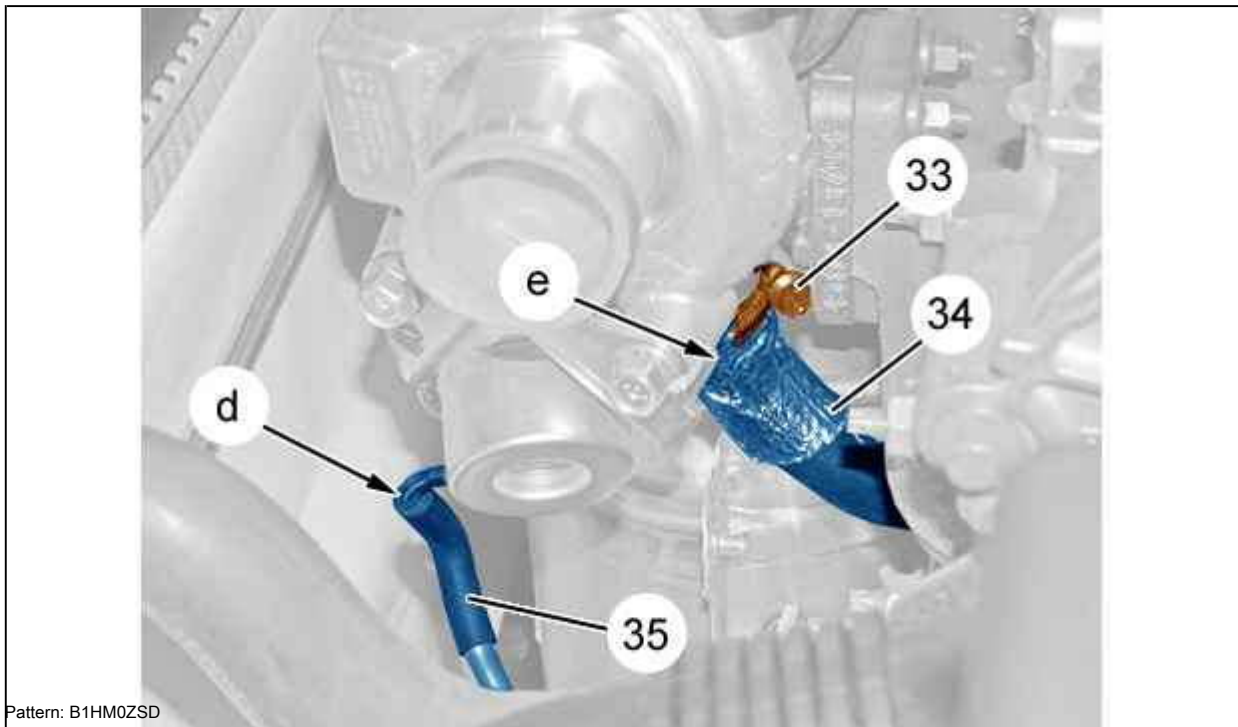
- Oil return pipe (37) from turbocharger
- Catalytic converter (31)



Install:

- Turbocharger (36)
- Three remaining pins (38)

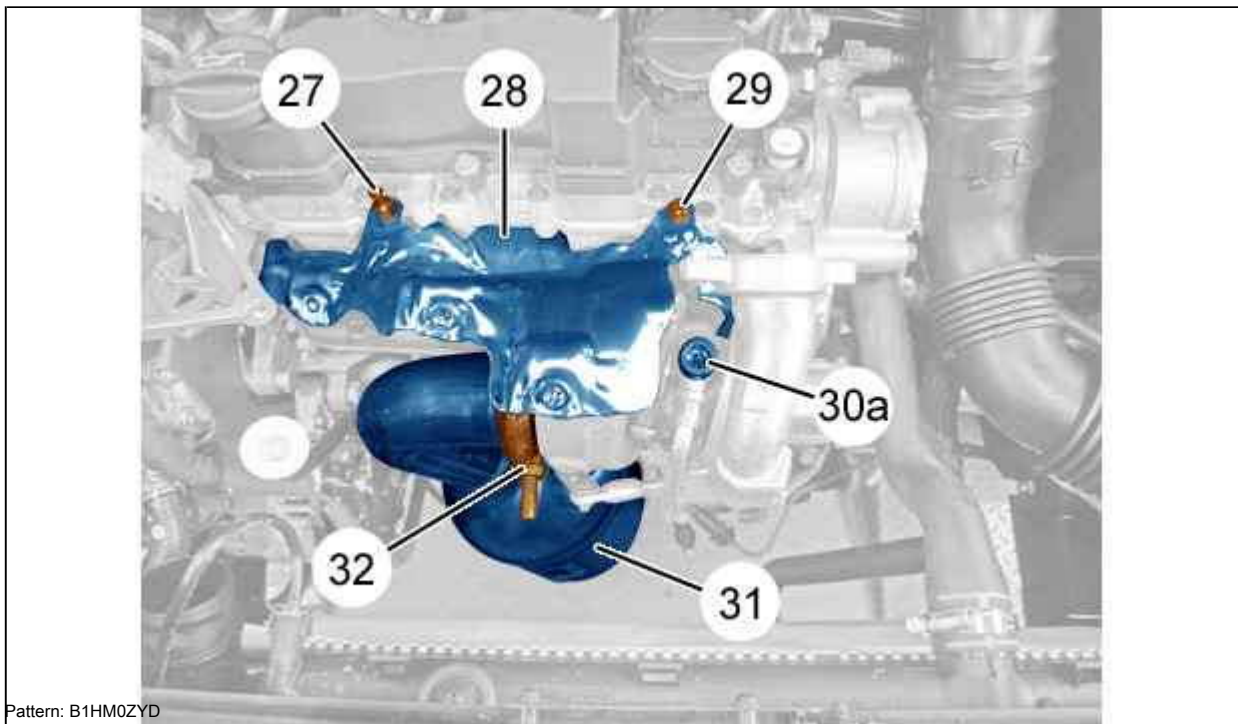
- Nuts (39); Tightening torque 2.6 ± 0.6 da.Nm



Attach:

- Oil return line (34) (in "e")
- Vacuum tube (35) (in "d")

Tighten the clamp (33).



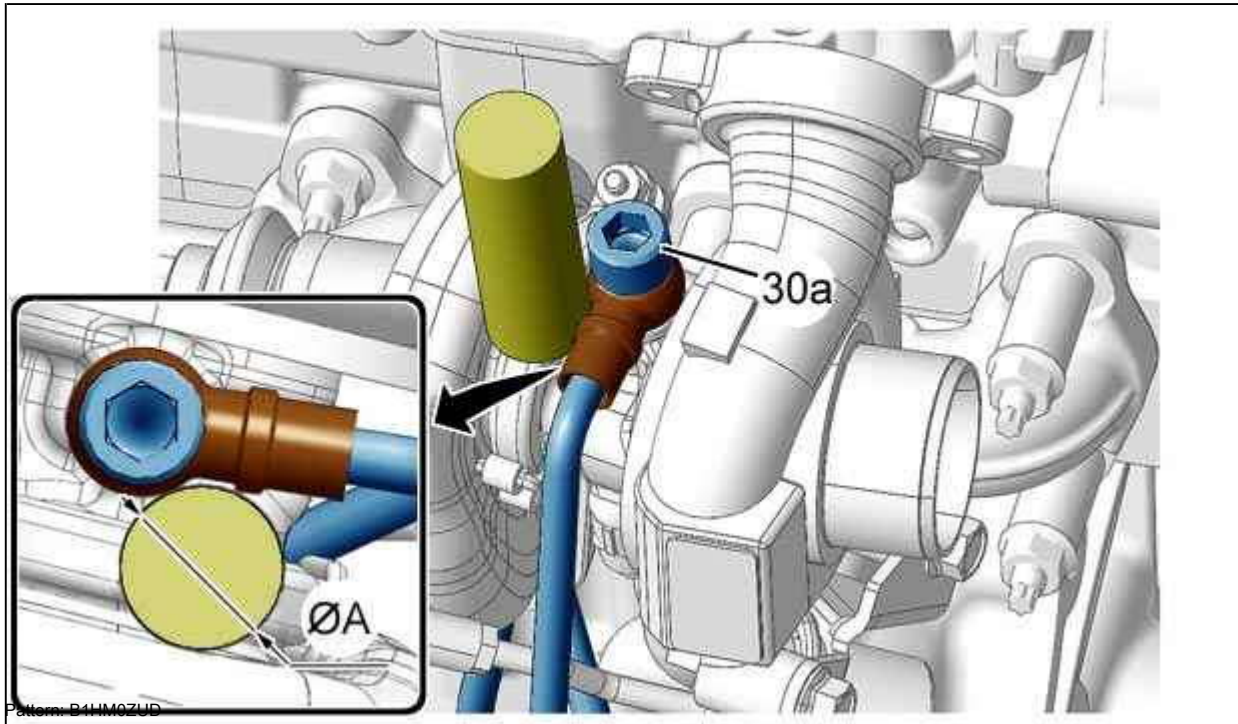
Connect: Collar (32).

Install:

- Heat shield (28)
- The bolt (27); Tightening torque 0.7 ± 0.1 da.Nm
- The bolt (29); Tightening torque 0.7 ± 0.1 da.Nm
- Hollow bolt (30a) with new seals

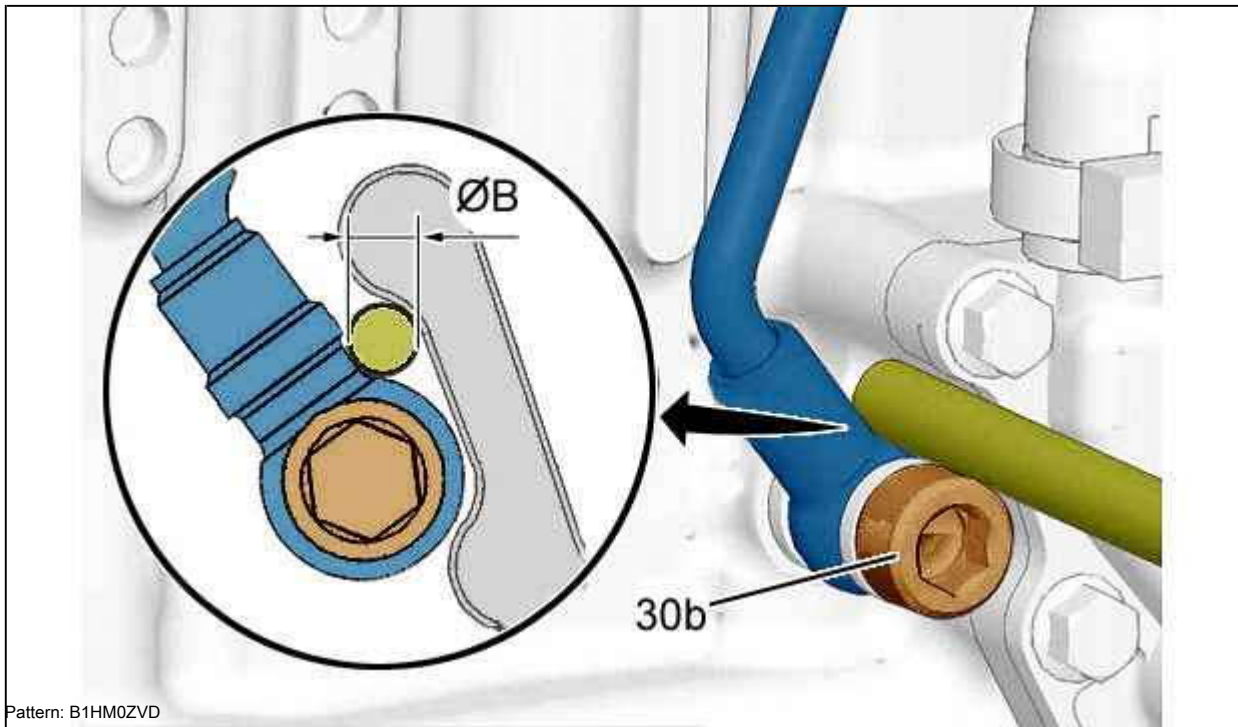
Tighten again:

- Catalytic converter mounting flange (31)
- Clamp (32) torque 2.5 ± 0.3 da.Nm



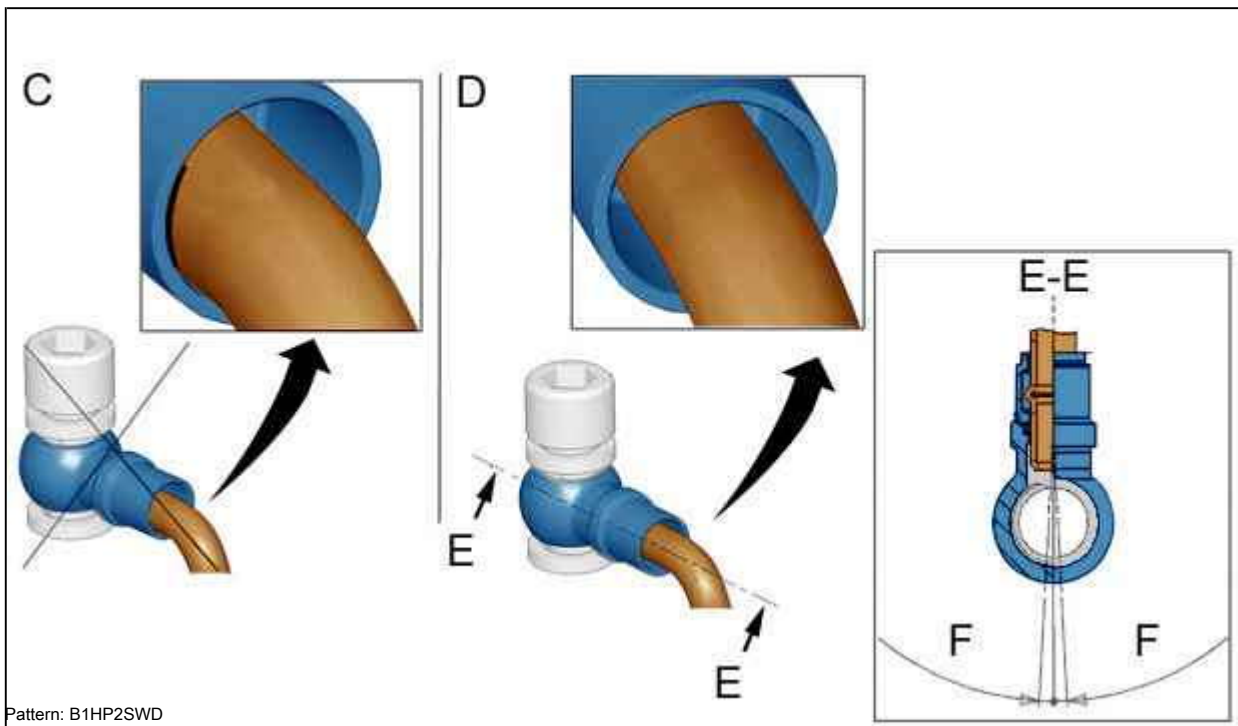
Tightening method of the upper pipe connector:

- Install vertically the pin with diameter "A" = 20.5 mm; As shown above
- Tighten the upper bolt (30a) to a torque of 3 ± 0.5 da.Nm, holding the tube with a pin



Tightening method for lower pipe connector:

- Install the pin horizontally with diameter "B" = 7.5mm; As shown above
- Tighten the bolt (30b) holding the connecting piece with the pin; to a torque of 3 ± 0.5 ppm



"C" Incorrect installation of the lubrication tube. "D" Correct installation of the lubrication tube.

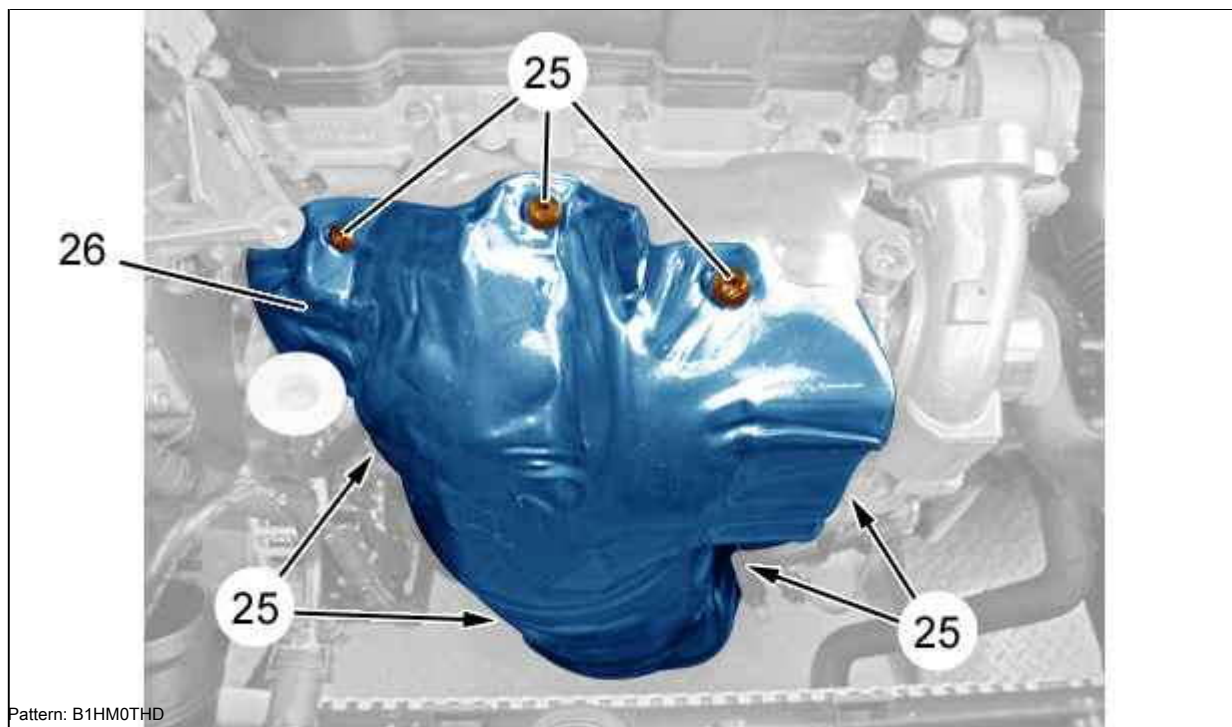
"E" Sectional view.

"F" Permitted deflection angle: 3° (0; +0.2).

ATTENTION : Clamping the tube will cause engine oil to leak; After tightening the fittings, check the freedom of deflection of the lubrication tube; Otherwise, repeat the operation of tightening the tube fasteners and replace the seals.

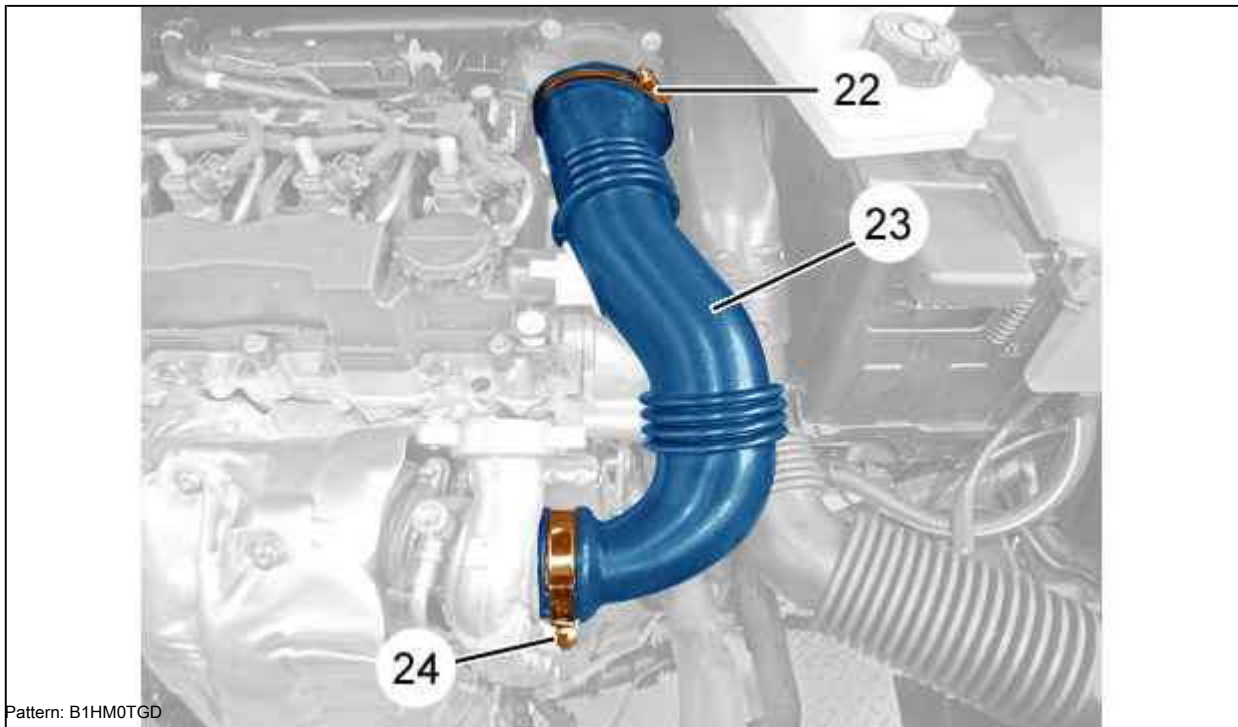
Connect: Turbocharger vacuum supply pipe (at "a").

ATTENTION : Perform a rough fit to adjust the position of the particulate filter catalyst assembly.

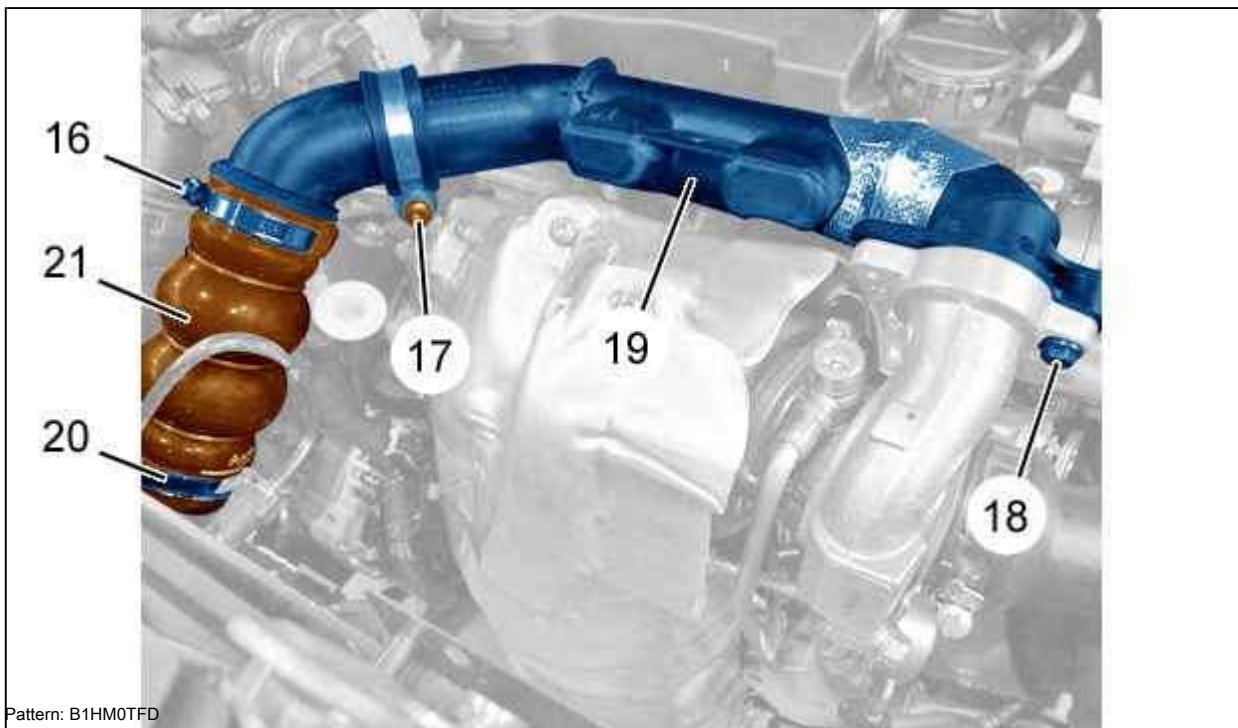


Install:

- Heat shield (26)
- bolts (25); Tightening torque 0.4 ± 0.1 da.Nm



Install the air duct (23).
Tighten clamps (22) and (24).

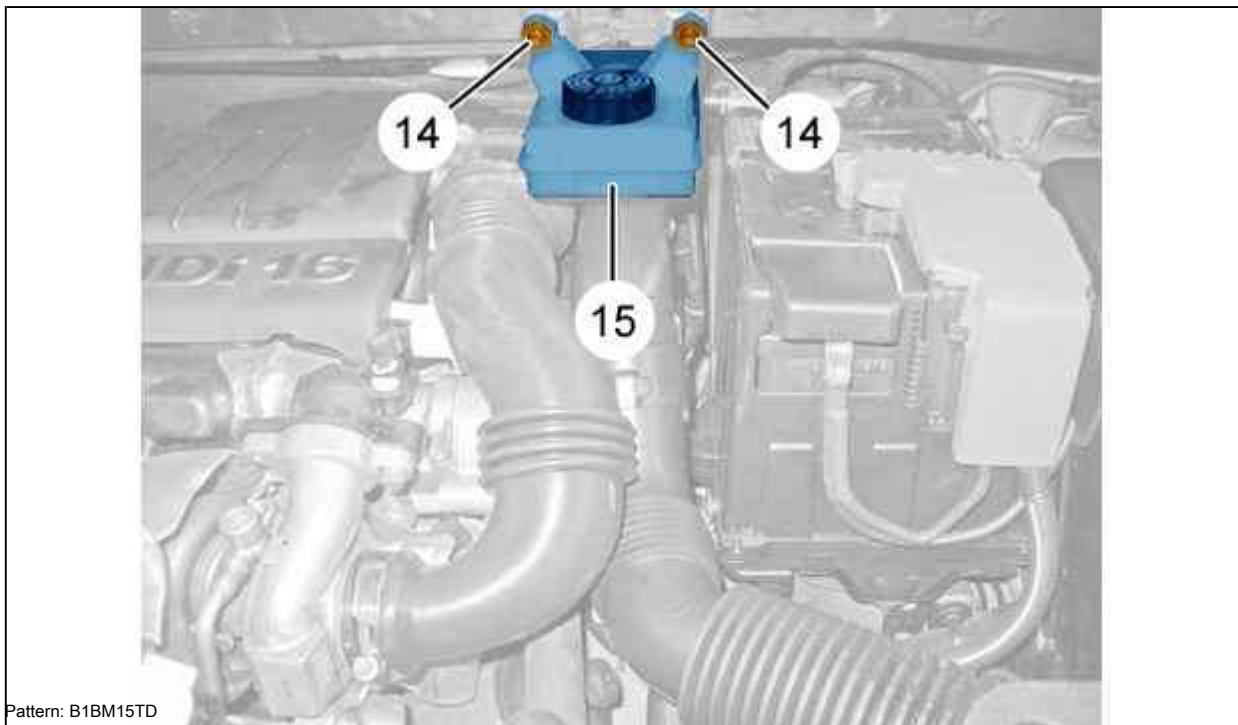


Install:

- Turbocharger silencer (19)
- Air Duct (21)
- Bolt (17)
- Bolt (18)

Tighten:

- The bolt (17) to a torque of 1 ± 0.1 da.Nm
- The bolt (18) to a torque of 0.6 ± 0.1 da.Nm
- Clamps (16) and (20)



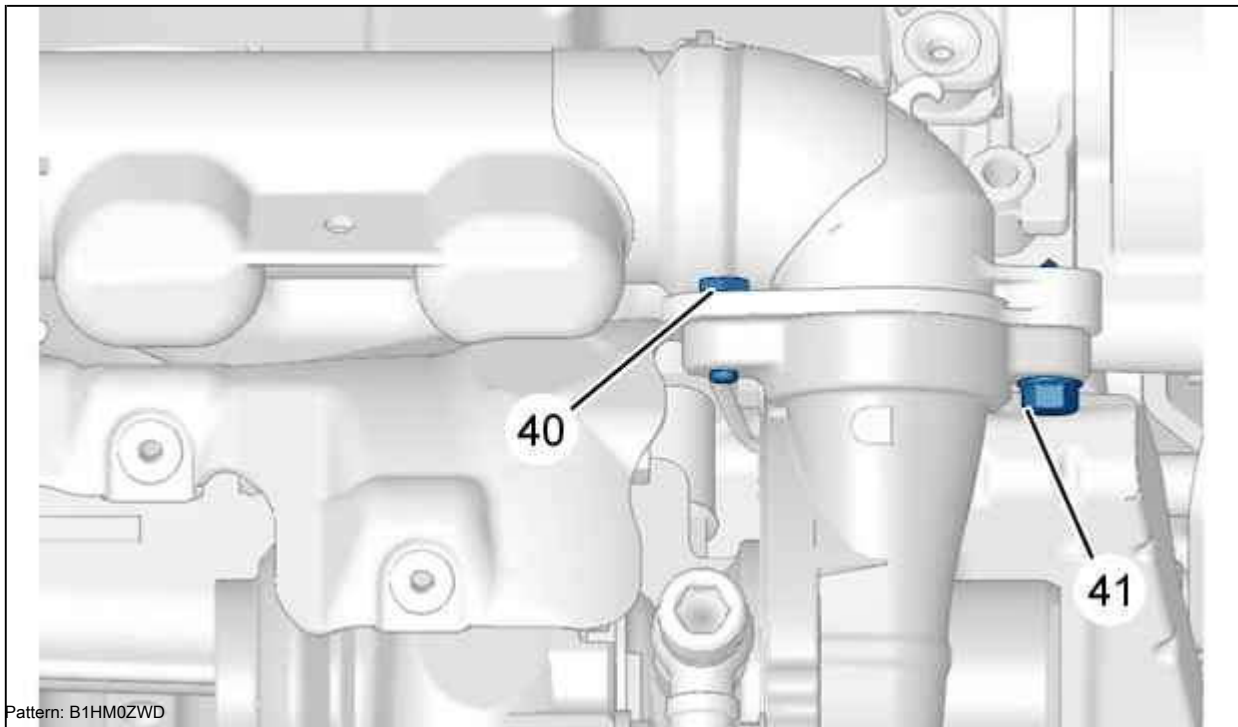
Position: Brake fluid reservoir (15). Replace the bolts (14).

Reconnect the battery.

ATTENTION : [Follow the steps to follow after removing the battery.](#)

4. Installation (continued)

Install the engine cover.



Tighten:

- The bolt (40) to a torque of 1 ± 0.1 da.Nm
- Shoulder bolt (41); torque 0.5 ± 0.1 ppm

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

5. Precautions to be taken before driving

Disconnect the diesel injector connectors.

Crank the engine with the starter for 15 seconds. Connect: Connectors for diesel injectors.

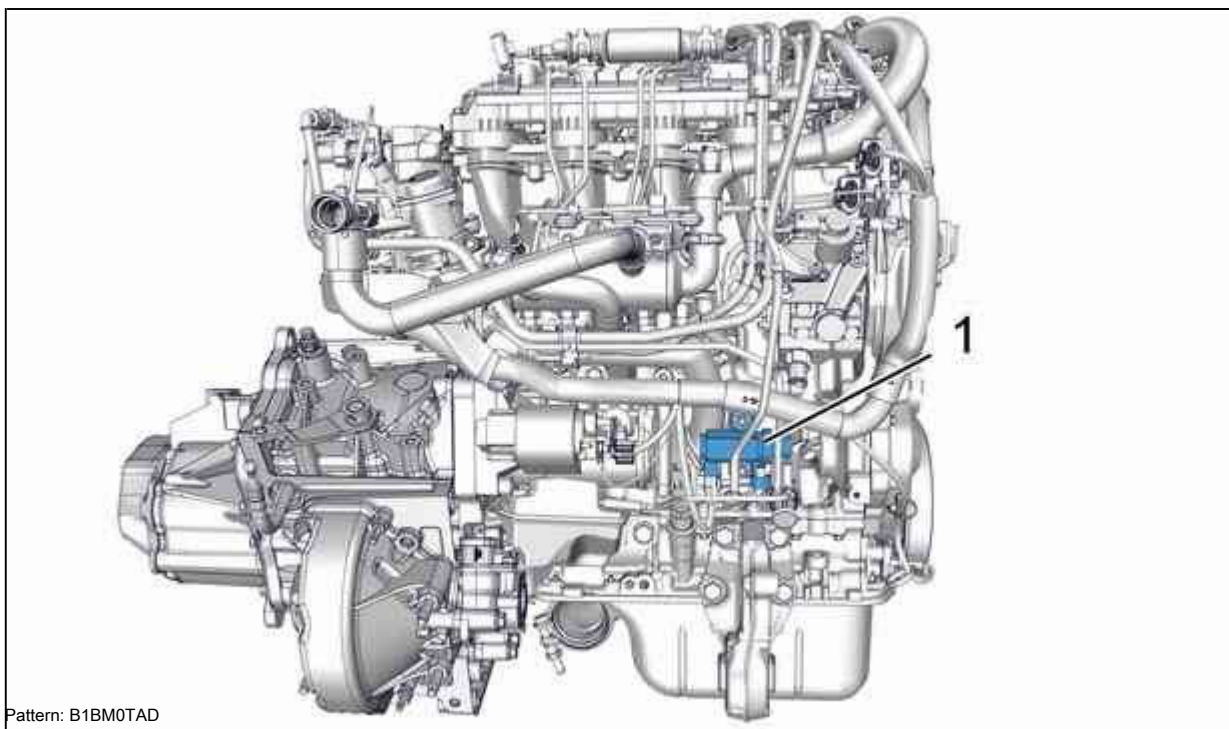
Allow the engine to idle for 30 seconds before increasing the load. After using the vehicle, check the tightness of the various connections. Clear errors from memory; Using a diagnostic tool.

REMOVAL INSTALLATION: ELECTROMAGNETIC CONTROL VALVE TURBOCHARGER PRESSURE

~~MANDATORY: Observe the cleanliness and safety rules~~



1. Accommodation

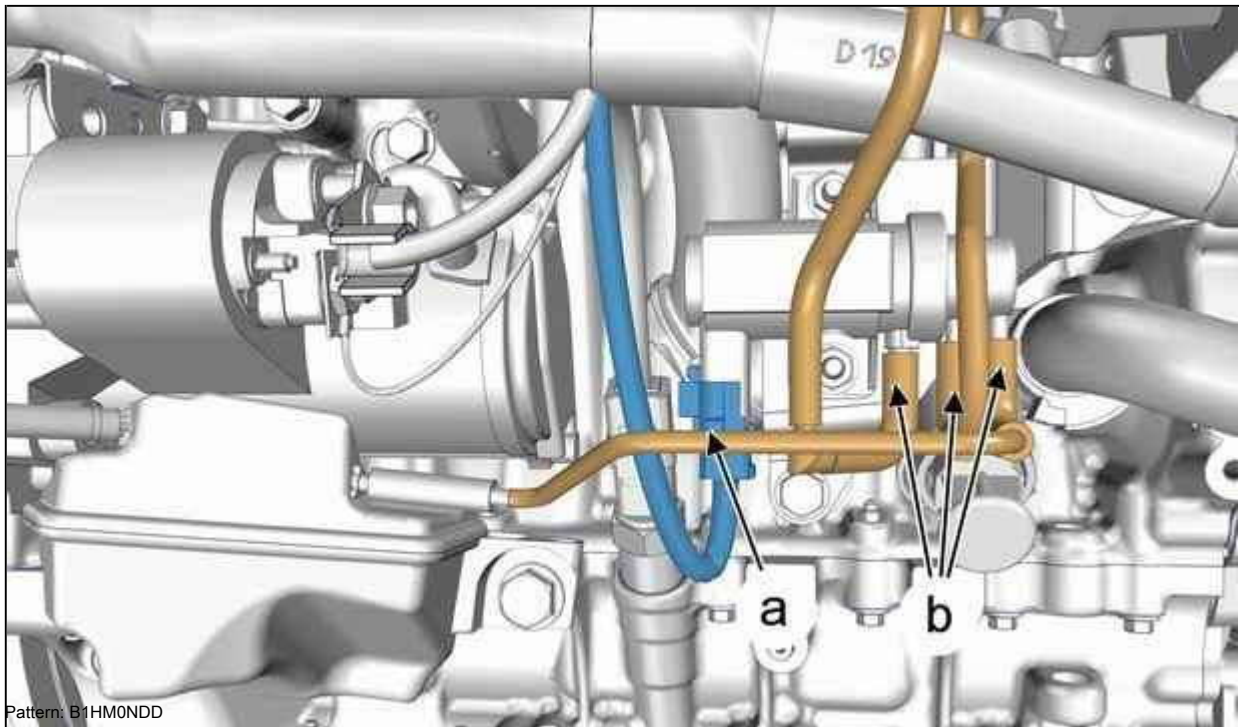


(1) Turbocharger pressure control solenoid valve.

2. Removal

Disconnect the battery.

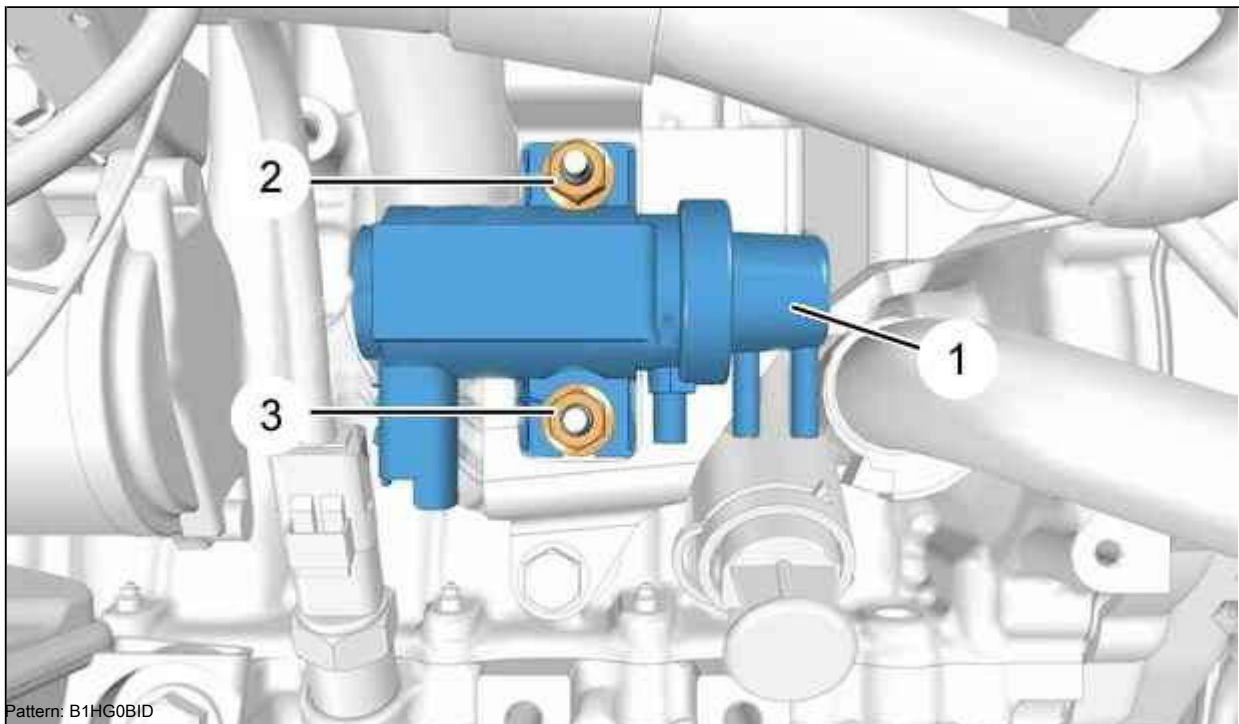
Raise and secure the vehicle in the raised position. Remove engine cover.



Disconnect the connector (at "a").

ATTENTION : At each removal: Mark the direction of installation of the vacuum pipes.

Disconnect the vacuum pipes (at "b").



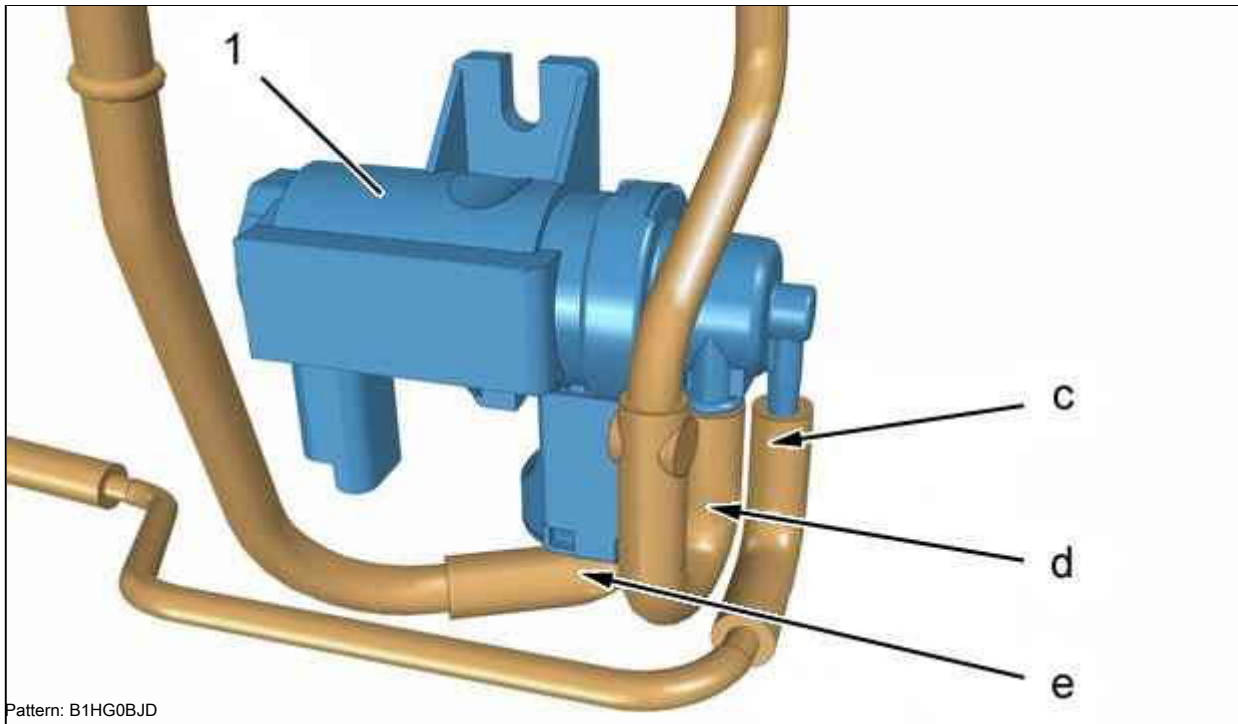
Loosen nut (2).

Remove:

- Nut (3)

- Turbocharger pressure control solenoid valve (1)

3. Installation



Install: The turbocharger pressure control solenoid valve (1). Tighten nut (2) (by hand).

Replace the nut (3). Tighten nuts (2), (3).

ATTENTION : Installation: Do not interchange vacuum tubes.

Connect: vacuum tubes (at "b"):

- Coupling "c" without marking: Vacuum connection
- Clutch "d" marked: White point: Turbocharger control solenoid valve
- Coupling "e" marked: open air

Connect the connector (at "a").

Install the engine shield.

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

CHECK AND ADJUSTMENT VALUES: ENGINE TYPE DV6A DV6AU DV6B DV6BU DV6TED4

1. Introduction

1.1. Units of pressure

1.1.1 The pressure unit is in bar.

NOTE: The bar is a comparison with the mean atmospheric pressure at sea level.

1.1.2 Pressure unit in millimeters of mercury (mmHg) or in torr (Torr).

The unit of pressure measurement was first taken as the mercury column pressure of 1 mm at 0 ° C, and later it was taken to the atmospheric pressure.

The pressures shown in the following tables are gauge readings (relative pressure).

NOTE: Relative pressure is equal to absolute pressure minus atmospheric pressure.

1.2. Units of voltage

In SEEM units, the deformation of a belt in a static tensioned position is measured when a deformation force is applied at part of its length.

2. General information to the mover

engine's type	DV6BTED4 DV6BUTED4	DV6TED4B DV6TED4BU	DV6ATED4 DV6AUTED4	DV6UTED4	DV6TED4
Allowed type engine	9HT	9HV9HS	9HX	9HU	9HZ9HY
Working volume cylinders	1560 cm3	1560 cm3	1560 cm3	1560 cm3	1560 cm3
Fuel	Diesel fuel	Diesel fuel	Diesel fuel	Diesel fuel	Diesel fuel
Maximum power	55.2 kW	66 kWt	66.2 kW	66.2 kW	80 kWt
Maximum mode 4000 rpm power		4000 rpm	4000 rpm	4000 rpm	4000 rpm
Maximum moment 18.5 da.Nm		21.5 da.Nm	21.5 da.Nm	18 da.Nm	24 da.Nm
Maximum mode 1750 rpm moment		1750 rpm	1750 rpm	1750 rpm	1750 rpm

3. Oil volume

engine's type	DV6 all types (Besides DV6UTED4)	DV6UTED4
Permitted engine type		9HU
Filling capacity of the lubrication system without replacing the filter element	3.25 liters	4.75 liters
The amount of oil to be filled, including the capacity of the oil filter 3.75 liters		5 liters
The difference in capacities between the minimum maximum	1.5 liters	
oil level sensor positions		
Oil change intervals: See Maintenance Notes.		

ATTENTION : Check the oil level systematically with a manual dipstick.

4. Oil pressure

NOTE: Check the engine oil level on a cold engine.

ATTENTION : The oil pressure check is carried out with the engine warm, after checking the oil level (110 ° C).

engine's type	DV6 All types except DV6UTED4
---------------	-------------------------------

Engine speed	Minimum oil pressure
--------------	----------------------

1000 rpm	1.3 bar
4000 rpm	3.5 bar
engine's type	DV6UTED4 (9HU)

Engine speed	Minimum oil pressure
--------------	----------------------

1000 rpm	1.2 bar
2000 rpm	2 bar
3000 rpm	2.7 bar
4000 rpm	2.9 bar

ATTENTION : Work on the engine is necessary if the pressure is lower than indicated in the table.

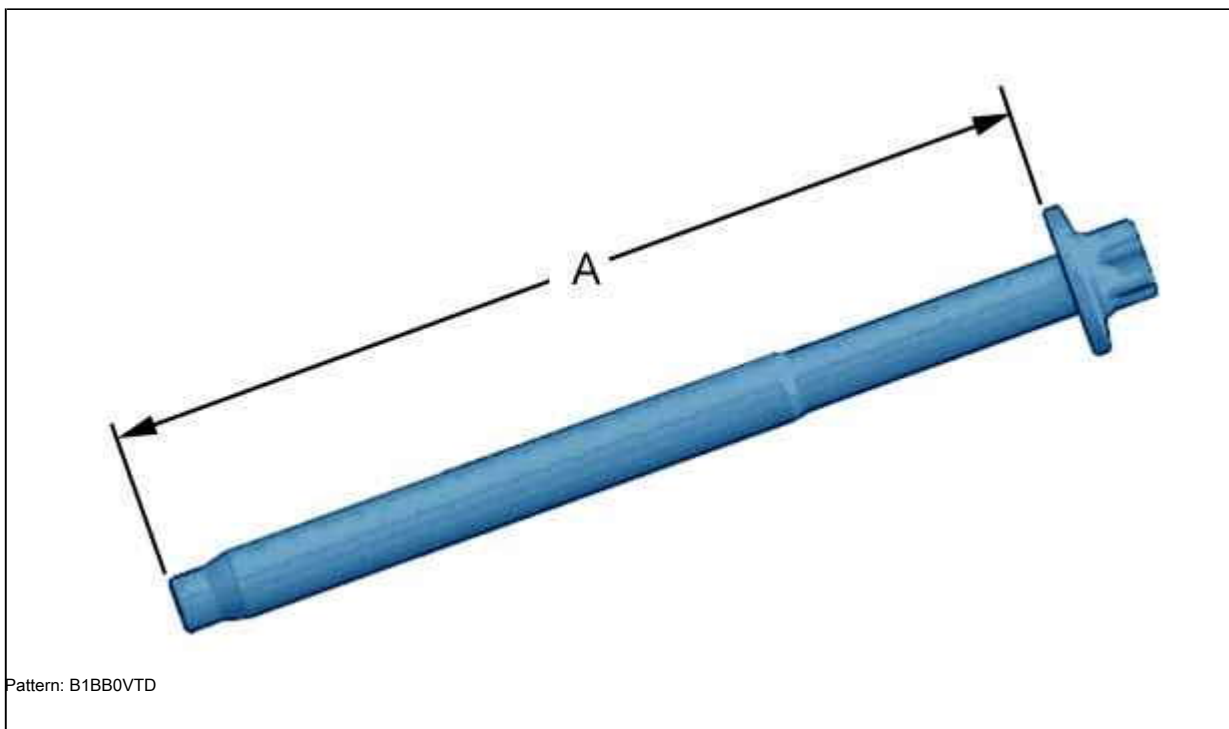
5. Belt drive ancillary equipment

With or without air conditioner With dynamic tensioner roller

6. Timing belt

Tensioning the belt with a mechanical tensioning roller

7. Bolt of fastening of the head of the block of cylinders



NOTE: Do not use head bolts longer than "A" mm, use new bolts.

Designation

"A"

Maximum length of head bolt 149 mm

8. Pressure, end of compression stroke

Measure the compression pressure in the required sequence on cylinders n ° 1, 2, 3 and 4.

NOTE: The differential pressure for 2 cylinders must not exceed 5 bar.

ATTENTION : In case of a significant difference in the measured values, search for the cause of the deviations from the norm.

9. Boost pressure

Engine speed Boost pressure 2500 rpm

0.2 ± 0.1 bar

4000 rpm	0.7 ± 0.1 bar

10. Air supply circuit

10.1. Vacuum pump

Engine speed Vacuum Idle

0.9 ± 0.1 bar

10.2. Boost pressure control valve	

Turbocharger supplier GARRET (depending on equipment).

Permitted engine type

9HZ 9HY 9HV 9HS

Boost pressure control valve Moving the control valve rod

200mbar	3.7 ± 1.5mm
500mbar	12.2 ± 0.6mm
Pressure over 600mbar	In extreme position
Turbocharger supplier IMHI (depending on equipment).	

Permitted engine type

9HT 9HU 9HX

Boost pressure control valve Moving the control valve rod

800mbar	6 ± 2mm

11. Low pressure fuel circuit

Base values

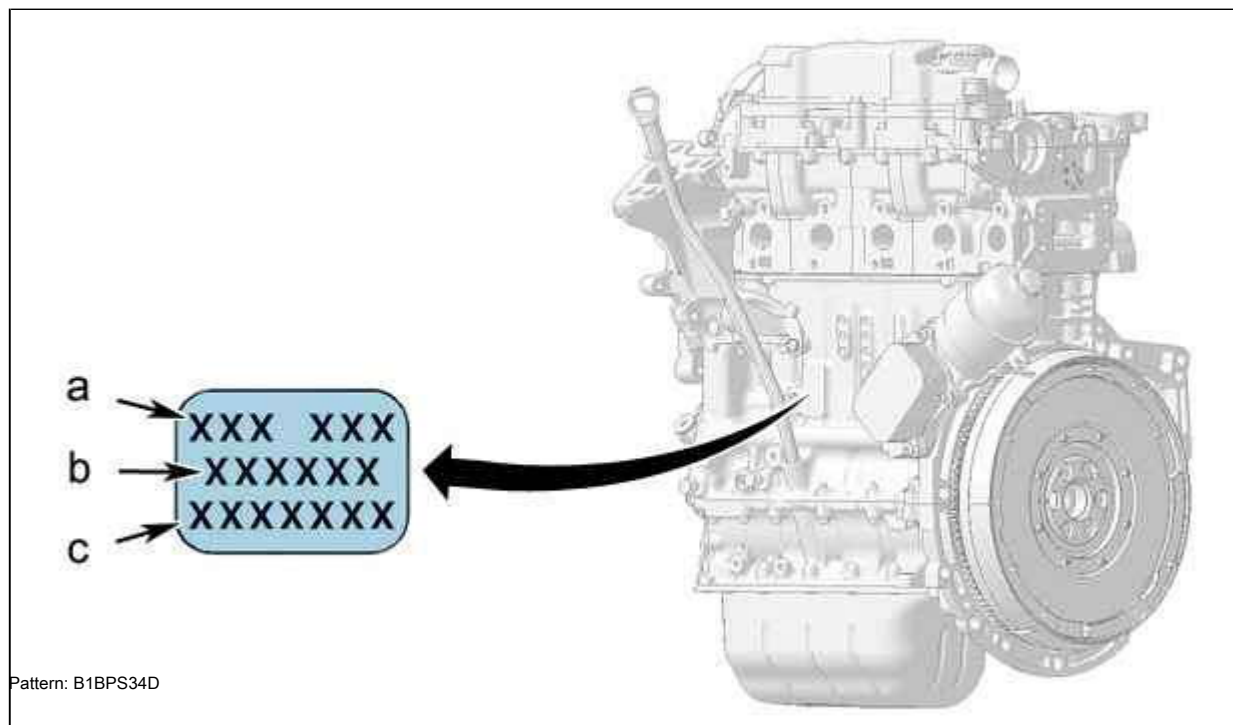
Vacuum measured Vacuum measured by pressure gauge [4073TA]

Motor idle or under starter action for less than 15 seconds (If

pressure gauge [1604A]

the motor is starts)	(see page)	Air pressure in intake manifold
The value of the vacuum to detect air entering the low pressure circuit	D <7.5 cm r.s.	D <100 mbar
Normal values	7.5 cm r.s. <D <22.5 cm r.s.	100 mbar <D <300mbar D> 300
The vacuum value to detect the traffic jam D> 22.5 cm r.s. into the low pressure circuit		mbar
(Contaminated,...)		

1. Identification



Engine label:

- "A" allowed type
- "" B "" organ label
- "c" serial production number

2. Characteristics

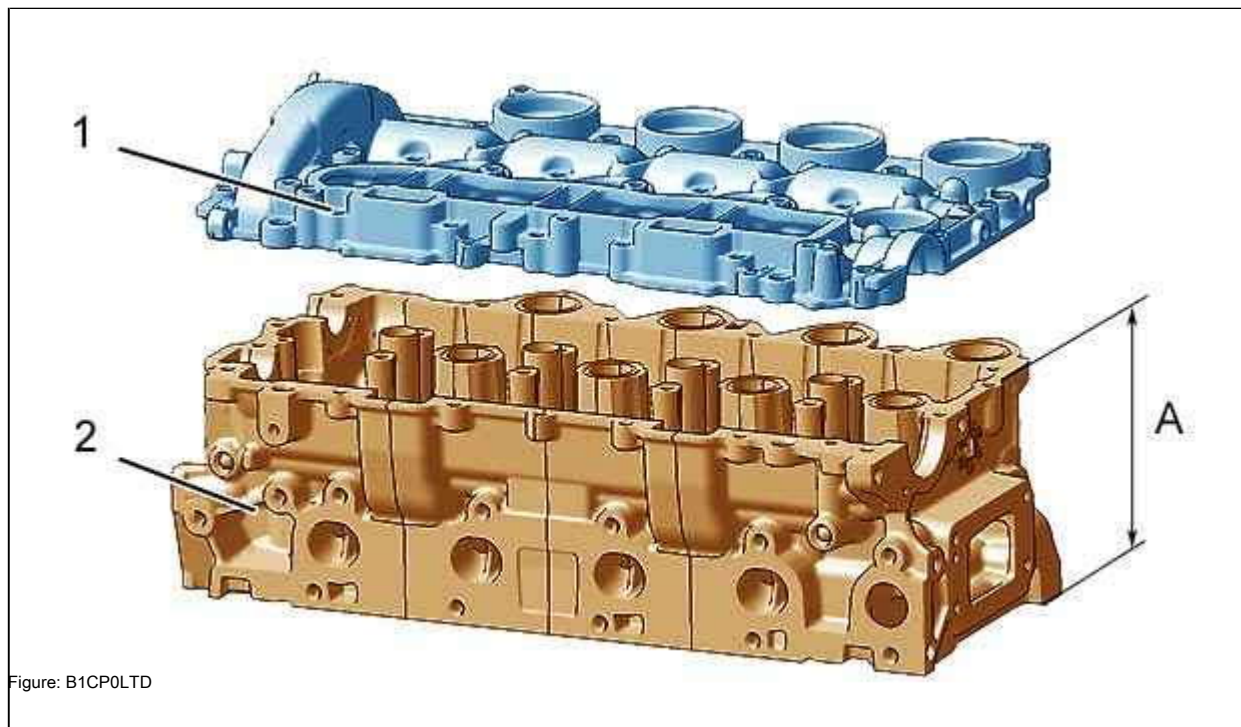
DV6AUTED4, DV6BUTED4 motors have the following differences from DV6TED4, DV6ATED4, DV6BTED4 motors:

- Cylinder block with hybrid liners Reinforced pistons
- Reinforced connecting rod half shells
- Reinforced lower root bushings
- Piston ring n ° 2 chrome-plated beveled cylinder head gasket with reinforced ribs Camshaft with
- cams 100C6
- Reinforced rotor oil pump

Engine code	DV6ATED4	DV6BTED4	DV6TED4	DV6AUTED4	DV6BUTED4
Particulate filter	Without	Without	FROM	Without	Without
Allowed type engine	9HX	9HT	9HZ	9HX	9HT
Engraving on engine	9H02	9H02	9H01	9H03	9H03
Volume of cylinders (cm3)	1560	1560	1560	1560	1560

amount cylinders	4	4	4	4	4
Boring x stroke piston (mm)	75 X 88.3	75 X 88.3	75 X 88.3	75 X 88.3	75 X 88.3
Compression ratio	18/1	18/1	18/1	18/1	18/1
Maximum power (by EU standard)	66.2 kW at 4000 min1	55.2 kW at 4000 min1	80 kW at 4000 66.2 kW at min1	at 4000 75 hp at 4000 rpm	55.2 kW at 4000 min1
Max. power (DIN)	90 h.p. at 4000 rpm	75 h.p. at 4000 rpm	110 h.p. at 4000 90 HP at 4000 rpm	at 4000 75 hp at 4000 rpm	
Maximum torque	21.5 da.Nm at 1750 rpm	18.5 da.Nm at 1750 rpm	24 da.Nm at 1750 rpm	21.5 da.Nm at 1750 rpm	18.5 da.Nm at 1750 rpm
Toxicity standards	Euro 4 EURO4		25.4 da.Nm at 1750 rpm (overboost) (*) EURO4	EURO4	EURO4
Fuel	Diesel	Diesel	Diesel	Diesel	Diesel
	fuel	fuel	fuel	fuel	fuel
turbocharger	MHI	MHI	GARETT	MHI	MHI
Boost pressure	1 bar	1 bar	1 bar	1 bar	1 bar
Injection system	System direct	System direct	System direct	System direct injection direct	System
provider	injectionHDi BOSCH	injectionHDi BOSCH	injectionHDi BOSCH	HDi BOSCH	injectionHDi BOSCH
A type	EDC 16C34	EDC 16C34	EDC 16C34	EDC 16C34	EDC 16C34
(*) Overboost: Increases engine torque temporarily by increasing the fuel cycle while staying within the traditional smoke limits.					

3. Cylinder head



Height of new cylinder head: "A" = 124 ± 0.05mm.
Fastening the cylinder head to the cylinder block with 10 TORX bolts. The exhaust manifold is held in place with 10 studs and 10 brass nuts with spacers. Permissible non-flatness = 0.05 mm.

Maximum permissible grinding size 0.4 mm.

3.1. Cylinder head gasket

The cylinder head gasket is metal, multilayer. supplier: REINZ.

Select the cylinder head gasket according to the piston protrusion.

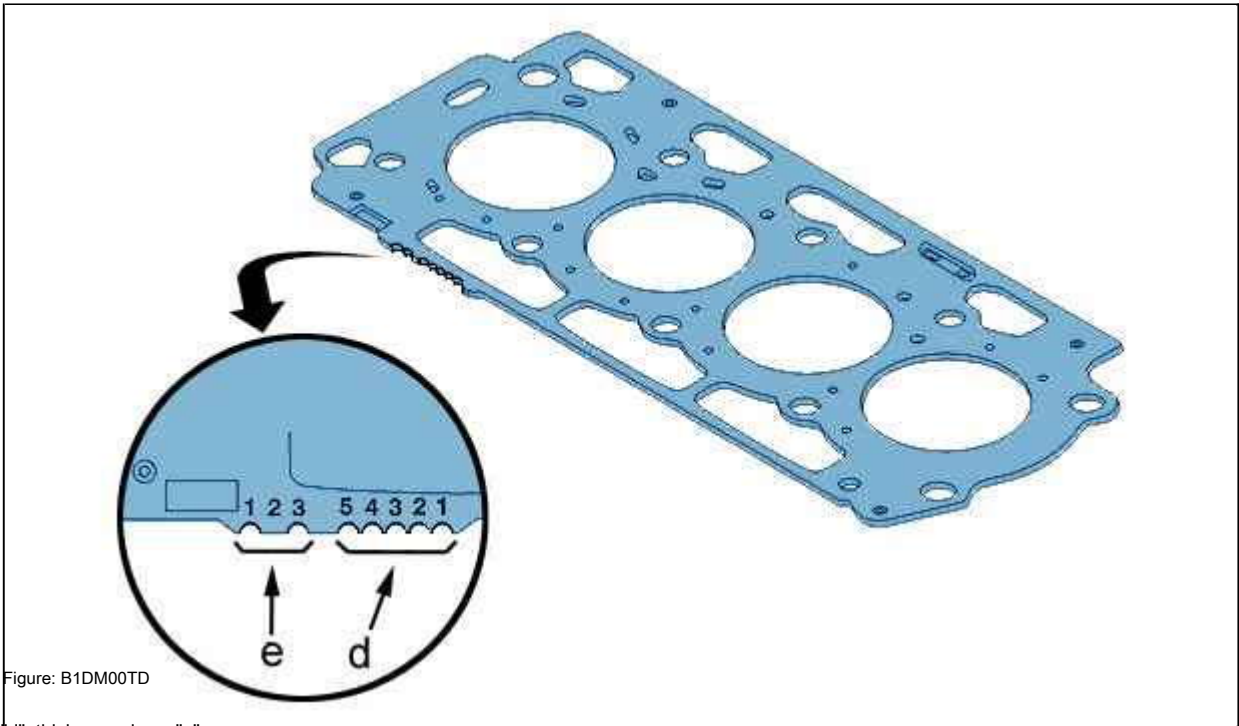
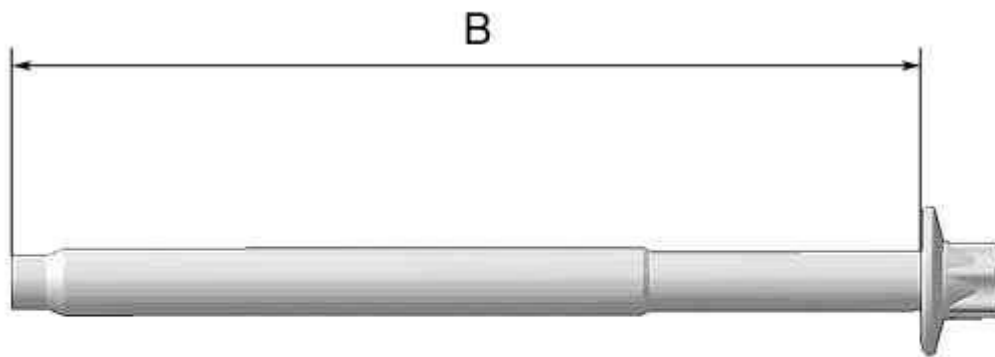


Figure: B1DM00TD

"d": thickness class. "e":
Engine label.

Protrusion by pistons Thickness Number cut in "d" Number cut in "e" 0.685 to 0.734 mm

	1.35 mm	1	1 + 3: DV6ATED4 / DV6BTED4 / DV6TED4 2 + 3:
0.533 to 0.634 mm 0.635 to	1.25 mm	1 + 2	DV6AUTED4 / DV6BUTED4
0.684 mm 0.735 to 0.784	1.30 mm	1 + 2 + 3	
mm 0.785 to 0.886 mm	1.40 mm	1 + 2 + 3 + 4	
	1.45 mm	1 + 2 + 3 + 4 + 5	
3.2. Cylinder head retaining bolt			



Pattern: B1DP21ND

Length of bolt under head "B" must be less than or equal to 149 mm.

4. Timing mechanism

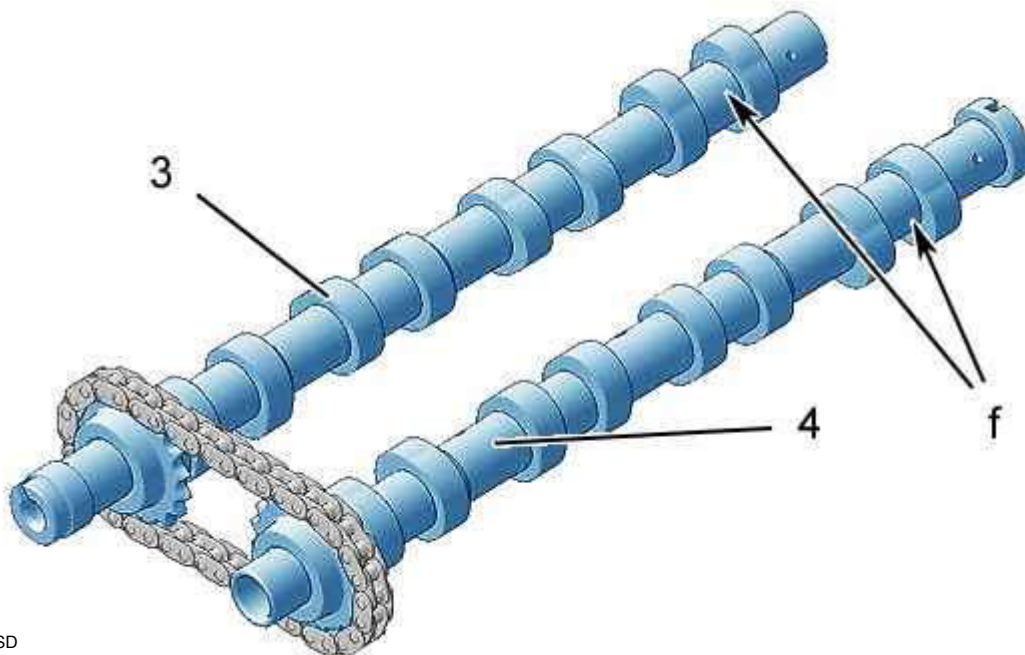
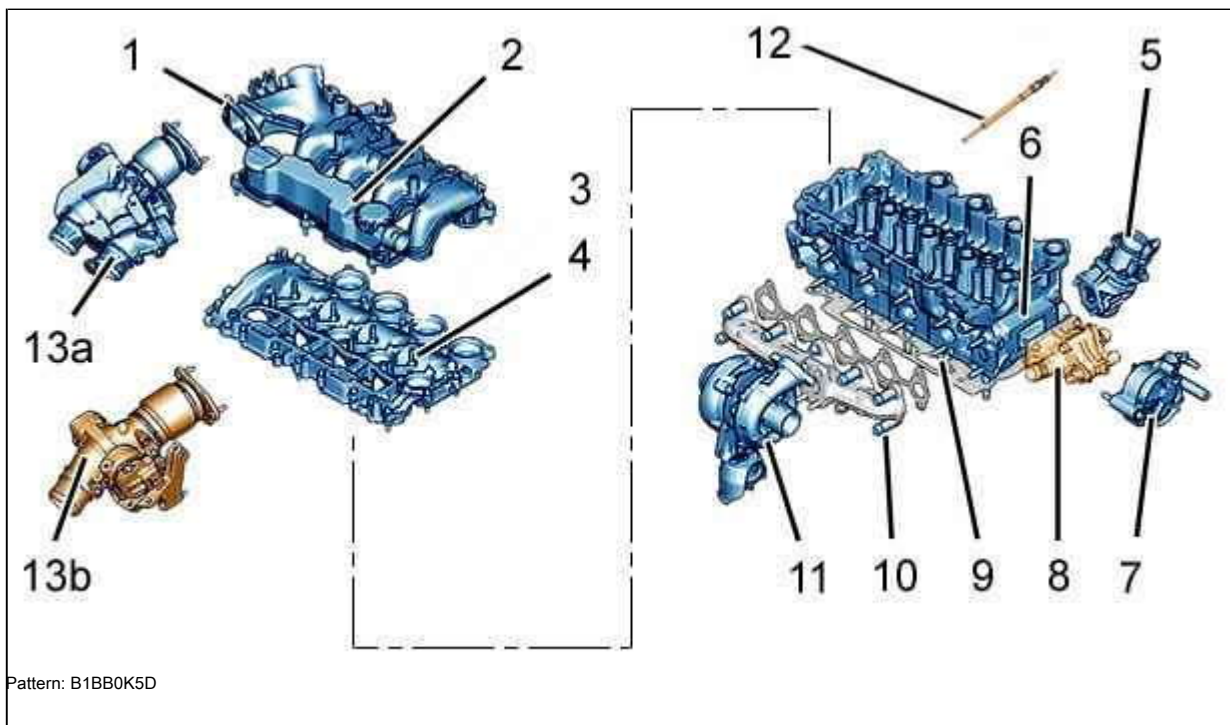


Figure: B1EP1TSD

(3): Intake camshaft. (4): Exhaust camshaft.

"f": Marking area.

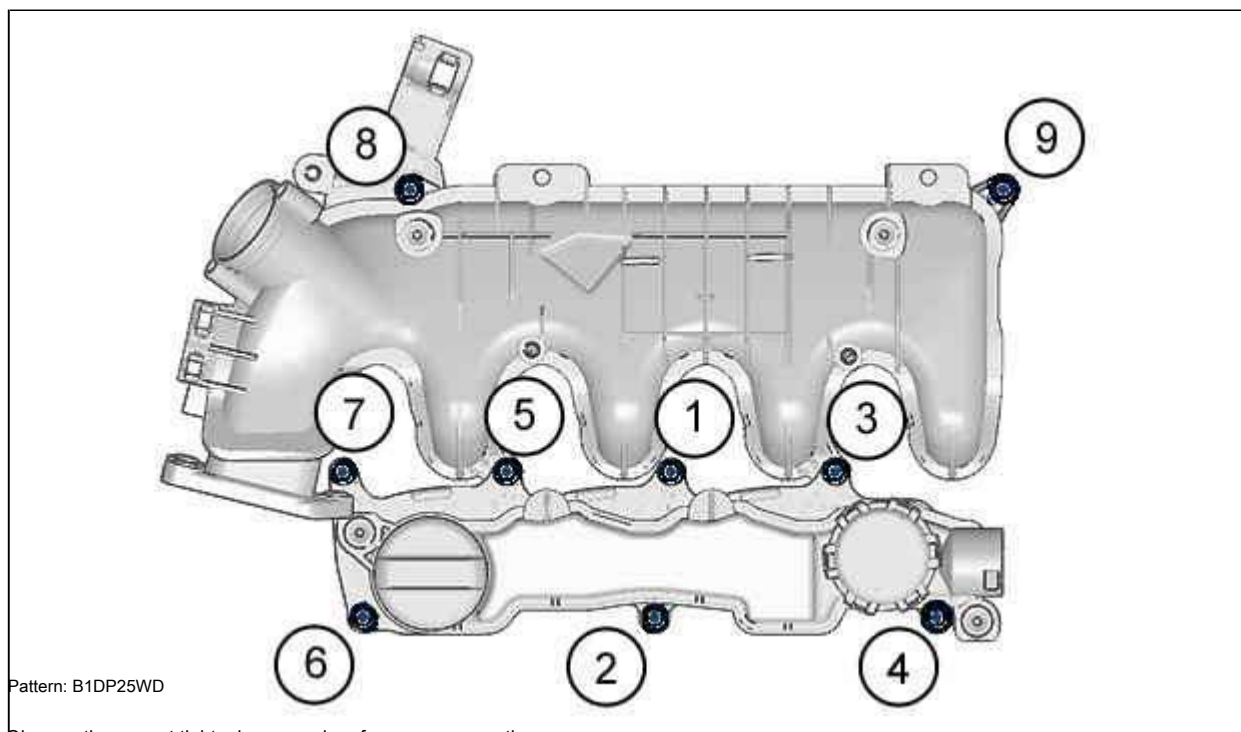
1. Cylinder head



Label Designation		Stage	Moment puffs
(1)	Intake manifold (*) Oil separator	Tightening	1.3 da.Nm
(2)	(*)	Tightening	1.3 da.Nm
(3)	bolt Camshaft bearing housings (*)	Preliminary	0.5 da.Nm
		puff	
(4)	studs Camshaft bearing housings	Tightening	1 da.Nm
		Preliminary	0.5 da.Nm
		puff	
(five)	Exhaust Gas Recirculation (EGR) Solenoid Valve (Depending on equipment)	Tightening	1 da.Nm
		Tightening	1.2 da.Nm
	Exhaust Gas Recirculation (EGR) Solenoid Valve (Depending on equipment)	Tightening	1 da.Nm
(6)	Cylinder head (*)	Preliminary puff	2 da.Nm
		Tightening	4 da.Nm
		Angle tightening	260 °
(7)	Vacuum pump	Preliminary	0.3 da.Nm
		puff	
		Preliminary puff	0.5 da.Nm
		Tightening	2 da.Nm
(eight)	Coolant outlet unit	Preliminary	0.3 da.Nm
		puff	

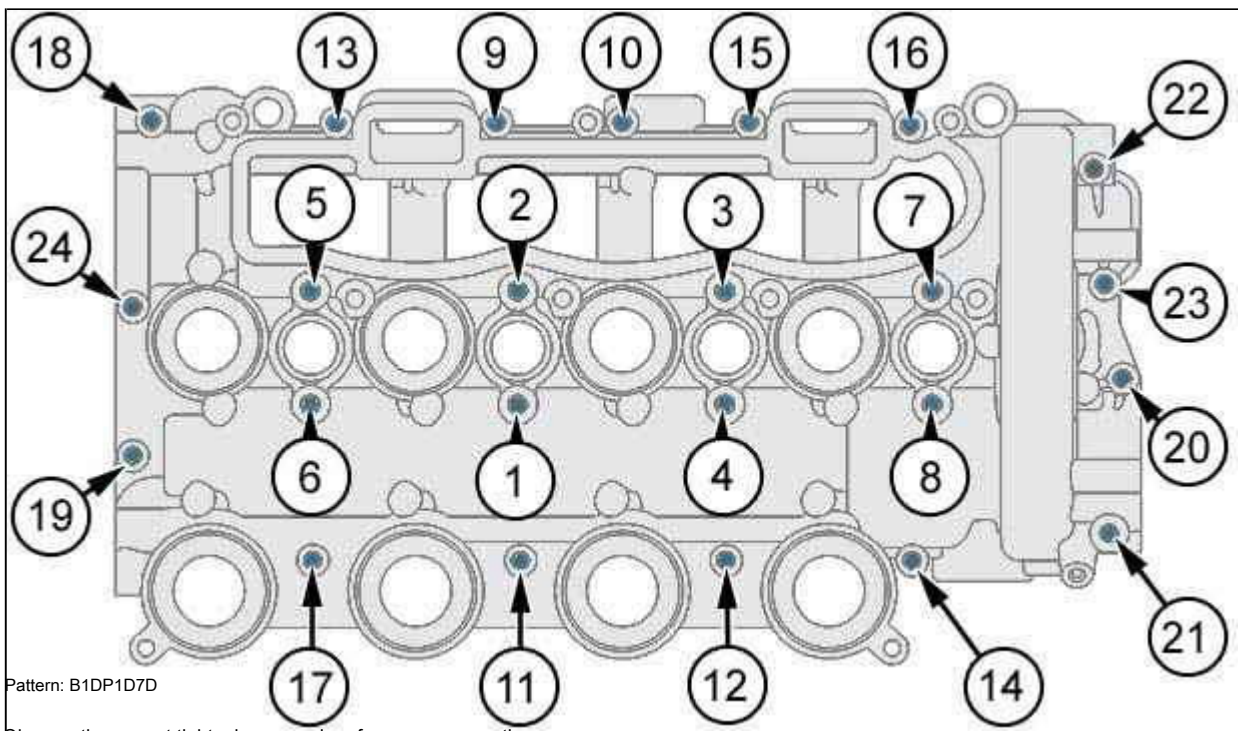
(nine)	Exhaust manifold	Tightening	0.7 da.Nm
(ten)	Studs Exhaust Manifold Nuts Turbocharger	Tightening	2.5 da.Nm
(eleven)		Tightening	1 da.Nm
(12)	Preheating plugs	Tightening	2.6 da.Nm
(13)	Dual throttle body (depending on equipment)	Tightening	0.9 da.Nm
		Preliminary	0.1 da.Nm
		puff	
	Air dispenser (depending on equipment)	Tightening	0.9 da.Nm
		Preliminary	0.1 da.Nm
		puff	
	Bolt Intake Air Pressure Control Sensor Bolt Intake Air Temperature Sensor	Tightening	0.9 da.Nm
		Tightening	0.8 da.Nm
		Tightening	0.8 da.Nm
(*)	Observe the correct order of tightening the screw connections		

1.1. Tightening Procedure for Oil Separator Manifold Air Intake Bolts



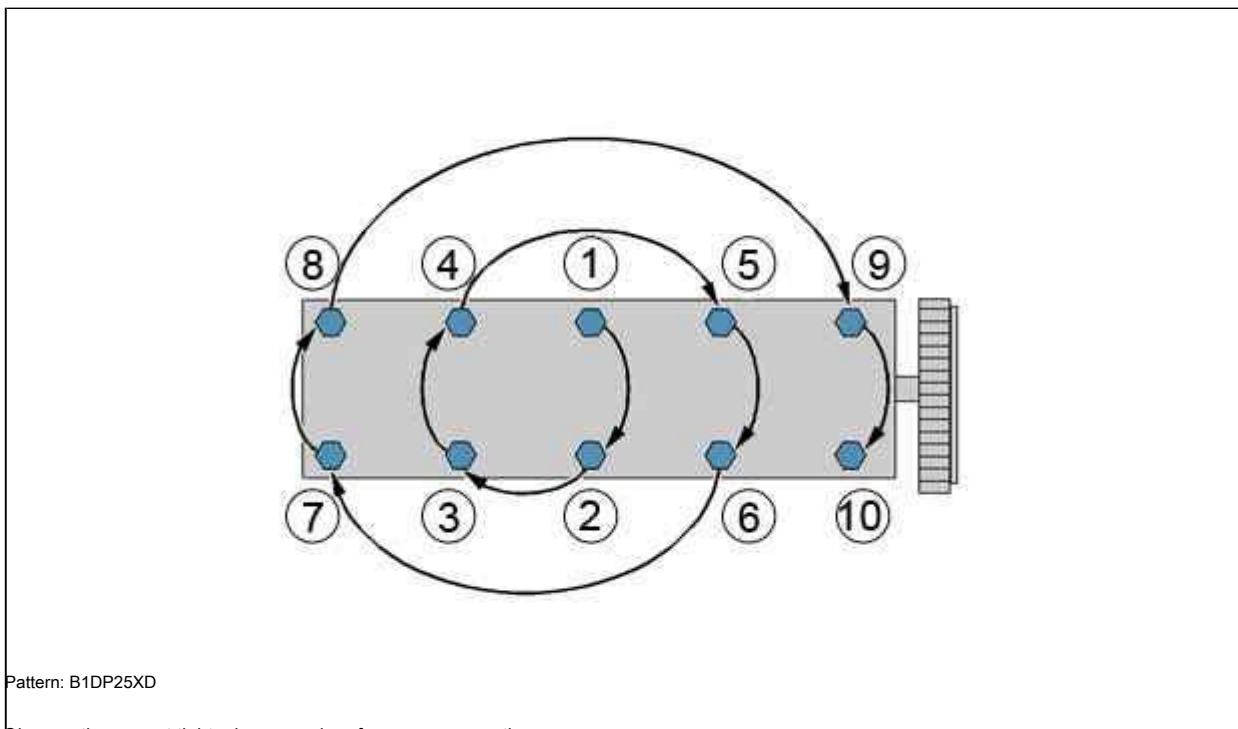
Observe the correct tightening procedure for screw connections.

1.2. The order of tightening the crankcase bolts of the camshaft bearing caps



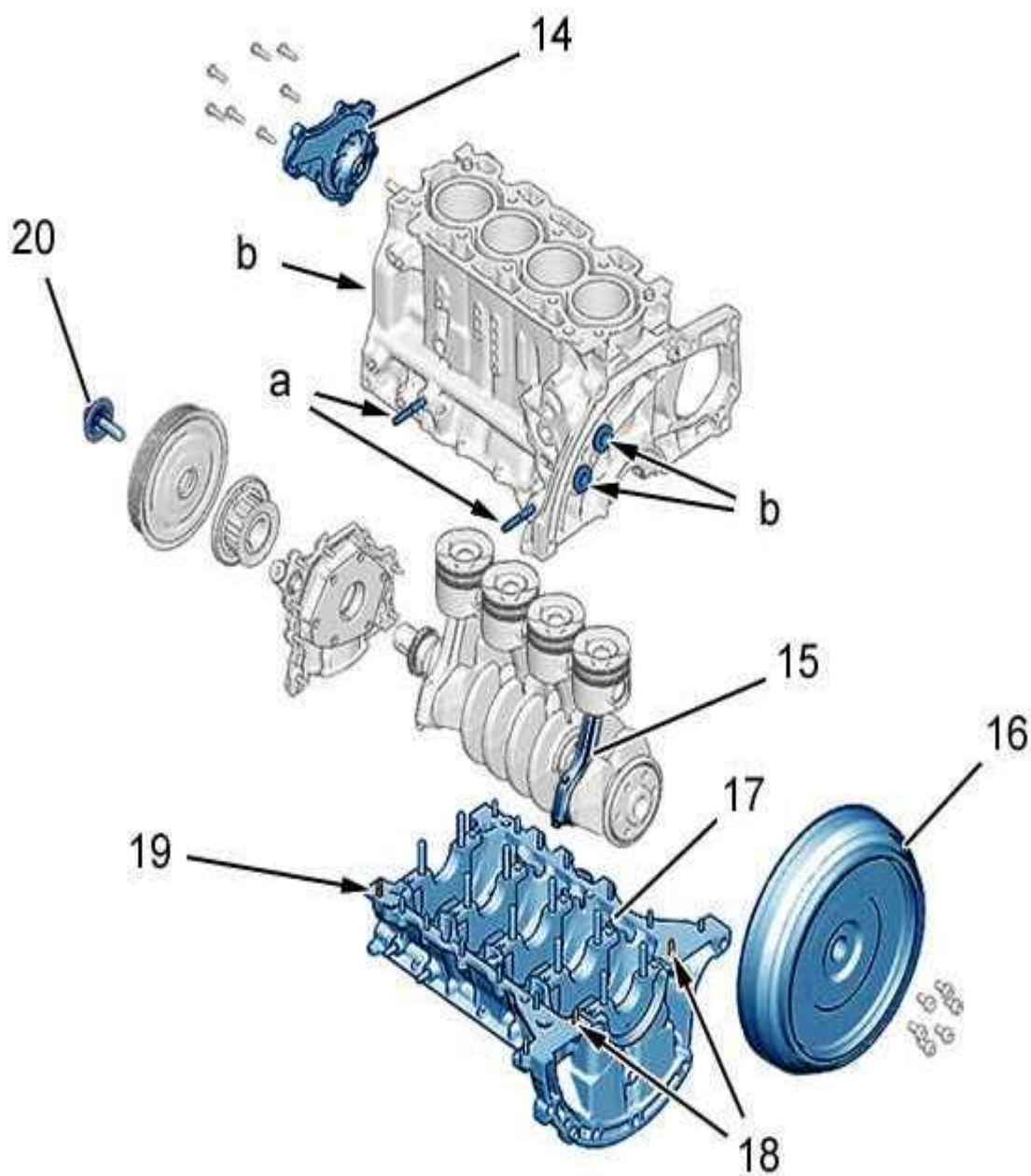
Observe the correct tightening procedure for screw connections.

1.3. Tightening order of the cylinder head bolts (6)



Observe the correct tightening procedure for screw connections.

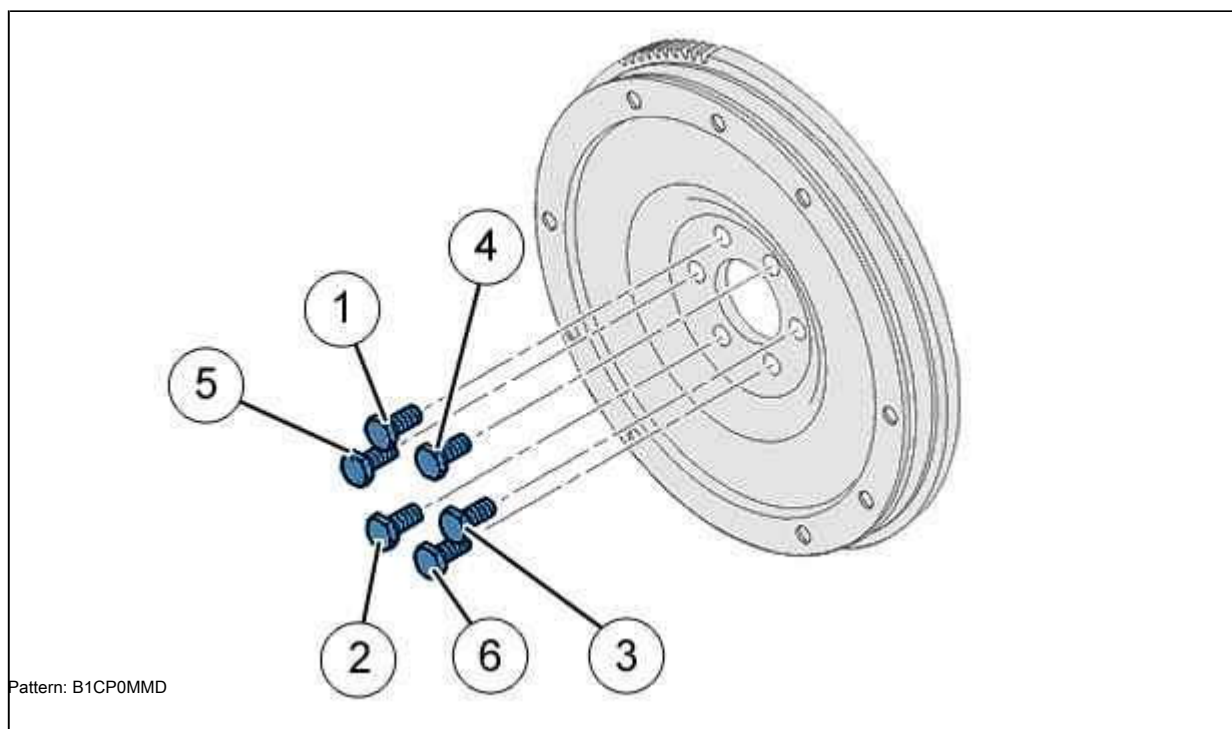
2. Cylinder block



Pattern: B1BB0RUP

Label Designation		Stage	Moment puffs
(fourteen)	Coolant pump (*)	Preliminary puff	0.4 da.Nm
(fifteen)	Connecting rod bolts	Tightening	0.9 da.Nm
		Preliminary puff	0.5 da.Nm
(sixteen)	Double damping flywheel (depending on	Tightening	1 da.Nm
		Angle tightening	130 °
		Preliminary	2.5 da.Nm

complete set) (*)		puff	
(17)	Engine flywheel (depending on equipment) (*)	Turning away	
		Preliminary	0.8 da.Nm
		puff	
		Tightening	3 da.Nm
		Angle tightening	90 °
	Support cover bolts (*)	Preliminary	2.5 da.Nm
		puff	
		Turning away	
		Preliminary	0.8 da.Nm
		puff	
(18)	bolt Crankcase of main journal bearing caps (*) bolt Casing of main journal bearing caps (*)	Preliminary	1.7 da.Nm
		puff	
		Angle tightening	75 °
		Preliminary	1 da.Nm
		puff	
(nineteen)		Corner turning away	180 °
		Tightening	3 da.Nm
		Angle tightening	140 °
		Tightening	0.8 da.Nm
		Preliminary	0.6 da.Nm
(20)	Attachment drive pulley	puff	
		Tightening	0.8 da.Nm
		Preliminary	3.5 da.Nm
		puff	
"a"	studs Catalytic converter and particulate filter assembly Tightening assembly (depending on equipment)	Angle tightening	190 °
			0.6 da.Nm
"b"	nuts Catalytic converter and particulate filter in collection (depending on configuration)	Tightening	2.5 da.Nm
	Cylinder block plugs	Tightening	3.2 da.Nm
	(*) Observe the correct order of tightening the screw connections		
2.1. Tightening the engine flywheel bolt (16)			

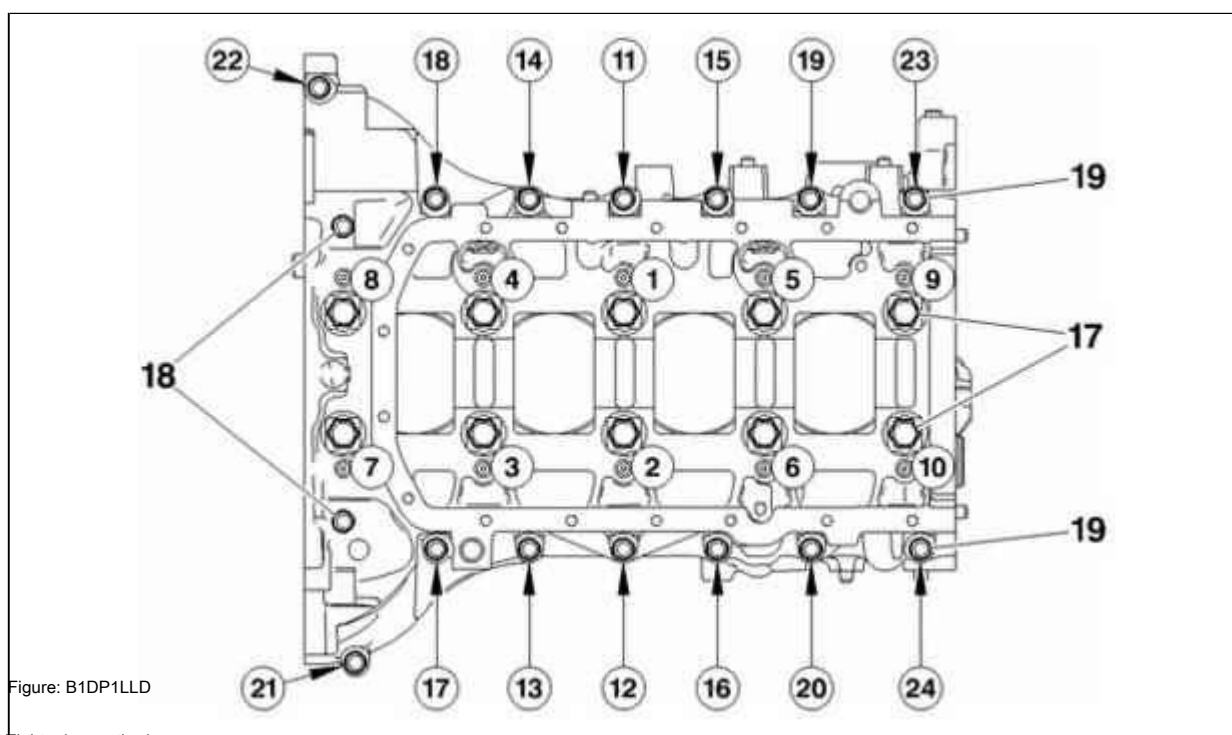


Observe the correct tightening procedure for screw connections.

2.2. The order of tightening the bolts of the bearing caps and the crankcase of the bearing caps of the crankshaft bearings (17), (18), (19)

(17): Bolts of the support covers (bolts M9).

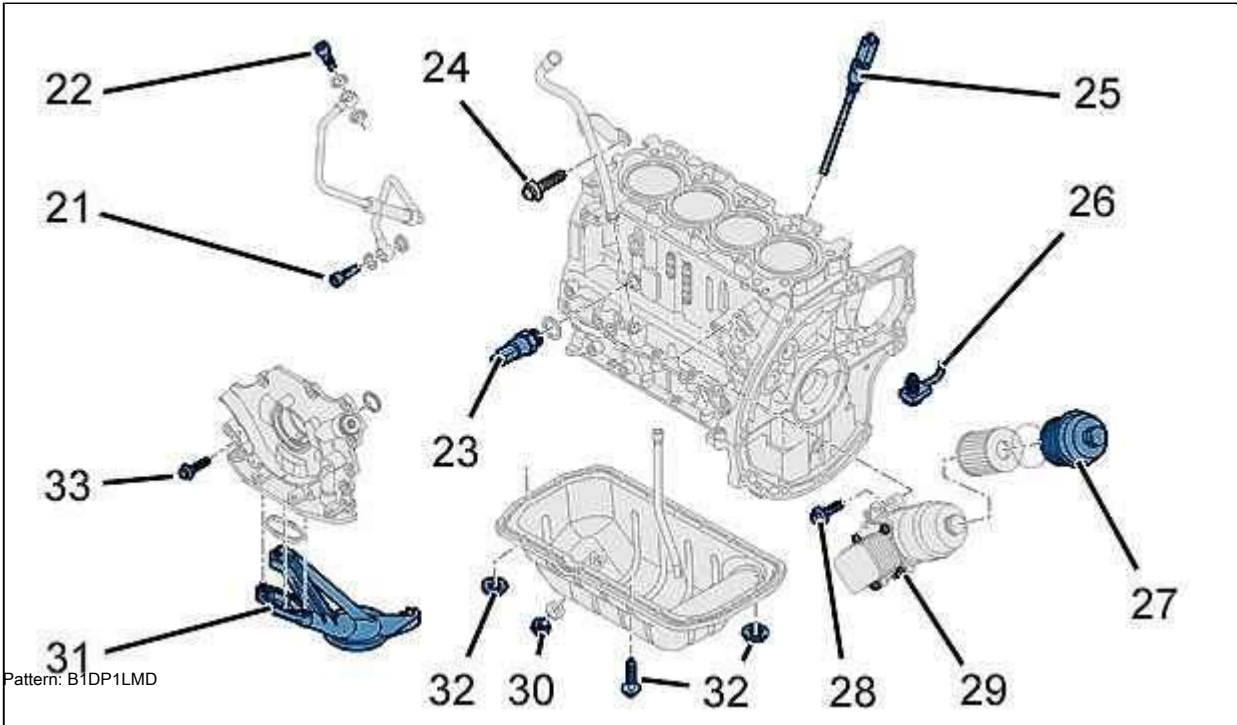
(18): Bolt for main bearing cap housing (bolt M6). (19): Bolt for the main journal bearing housing (bolt M6).



Tightening method:

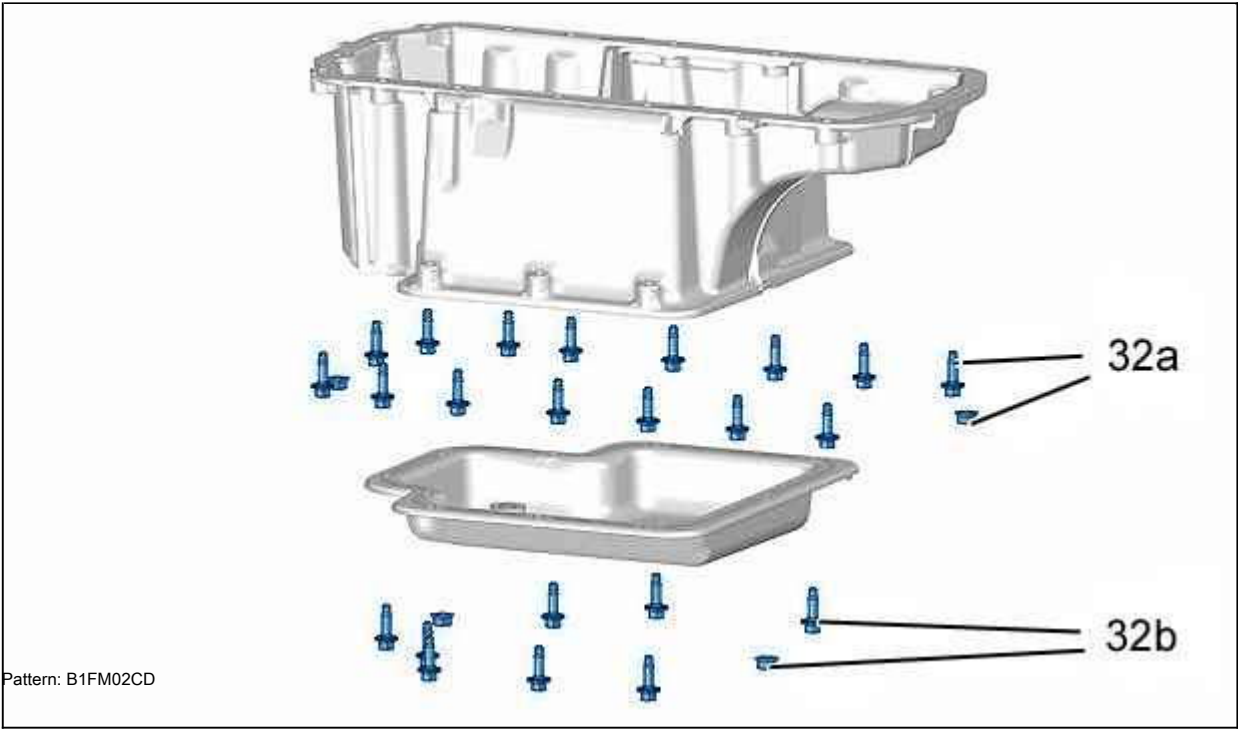
- Pre-tighten the 10 bolts (17) to 1 da.Nm (1 to 10) Pre-tighten the 14 bolts (19) to 0.6 da.Nm (11 to 24) Tighten the 2 bolts (18) to 0.8 da.Nm (from the inside) flywheel cap) Loosen bolts (17) 180 °
-
-
- Tightening 10 bolts (17) to 3 da.Nm (from 1 to 10) Tightening bolts (17)
- to 140 ° (from 1 to 10)
- Tightening 14 bolts (19) to 0.8 da.Nm (11 to 24)

3. Lubrication

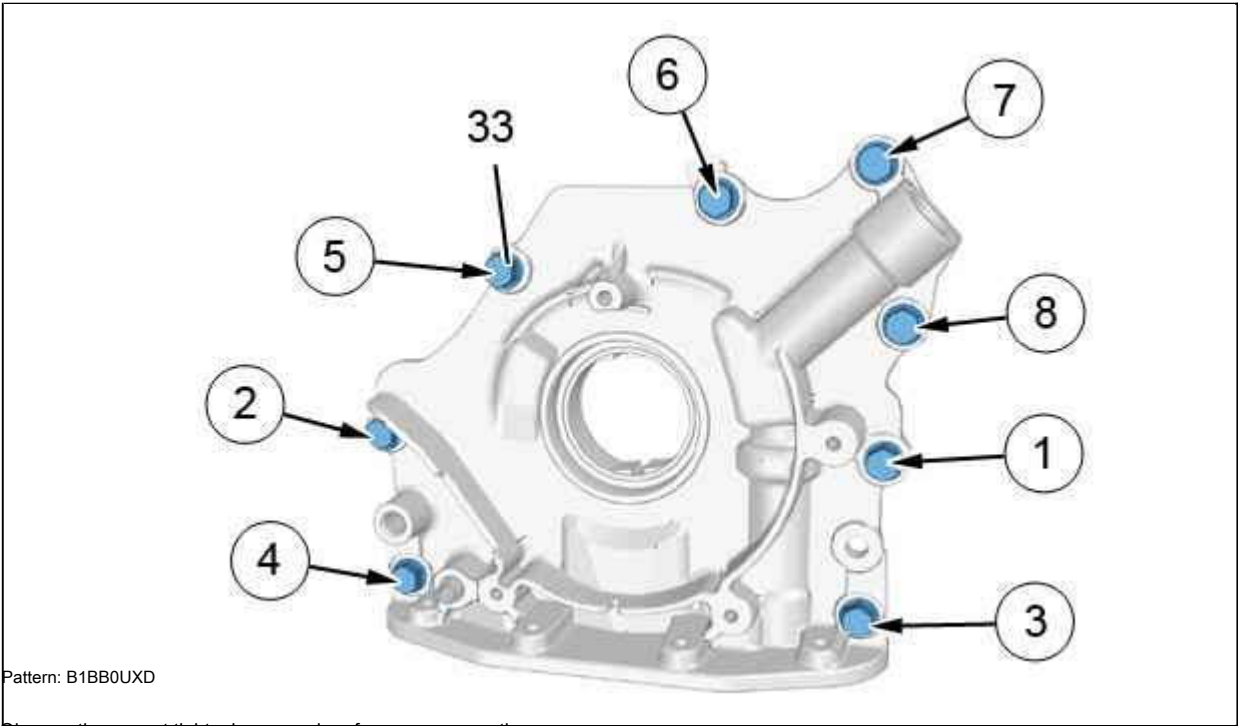


Label Designation		Stage	Torque
(21)	Turbocharger lubrication pipe	Tightening	3 da.Nm
(22)	Turbocharger lubrication pipe	Tightening	3 da.Nm
(23)	Oil pressure gauge switch Tightening oil dipstick		3.2 da.Nm
(24)		Tightening	0.8 da.Nm
(25)	Oil level sensor	Tightening	2.7 da.Nm
(26)	Piston oil cooling jets Oil filter covers	Tightening	2 da.Nm
(27)		Tightening	2.5 da.Nm
(28)	Oil filter support	Tightening	1 da.Nm
(29)	coolant / oil heat exchanger	Tightening	1 da.Nm
(thirty)	plug for drain	Tightening	2.5 da.Nm
(31)	Oil suction strainer	Tightening	1 da.Nm
(32)	oil pan (Except DV6UTED4)	Tightening	1.2 da.Nm
(33)	Oil pump assembly (*)	Pre-tightening 0.5 da.Nm Tightening	
			0.9 da.Nm
(*)	Observe the correct order of tightening the screw connections		

3.1. oil pan Engine DV6UTED4

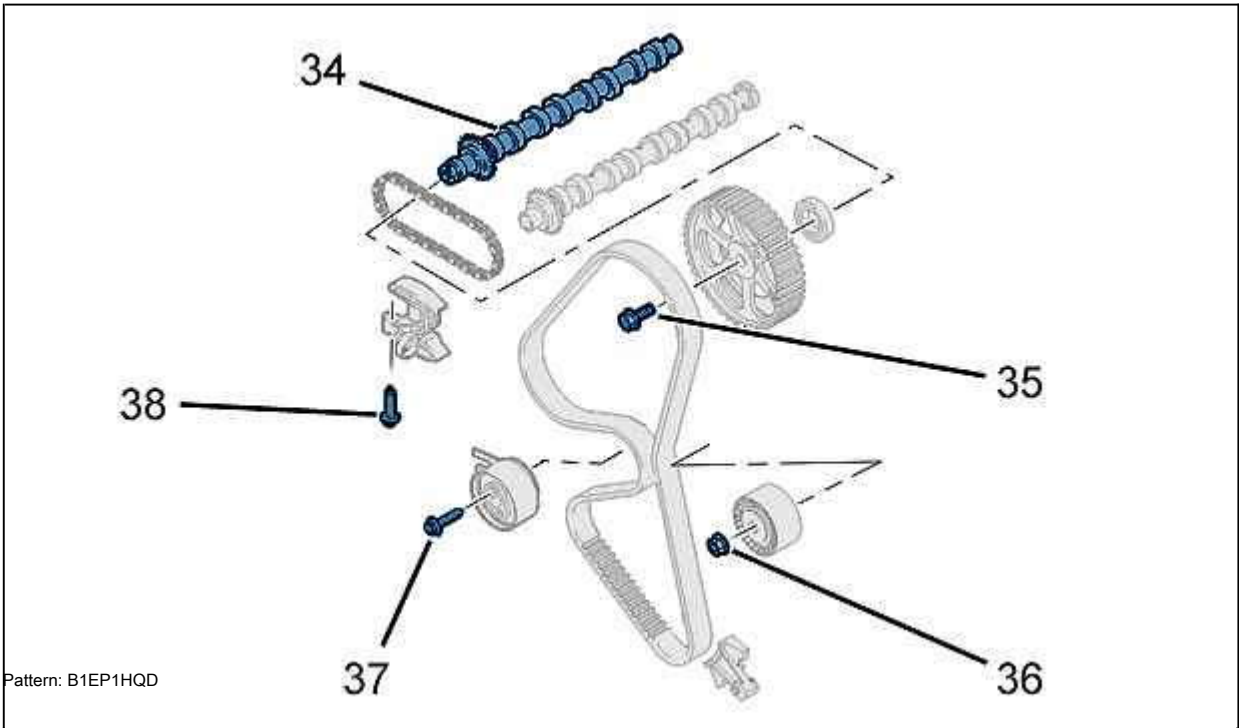


Label	Designation	Stage	Torque
(32a)	Oil pan of the engine crankcase	Tightening	1.2 da.Nm
(32b)	Upper oil pan	Tightening	1.2 da.Nm
3.2. Screw tightening procedure Oil pump assembly (33)			



Observe the correct tightening procedure for screw connections.

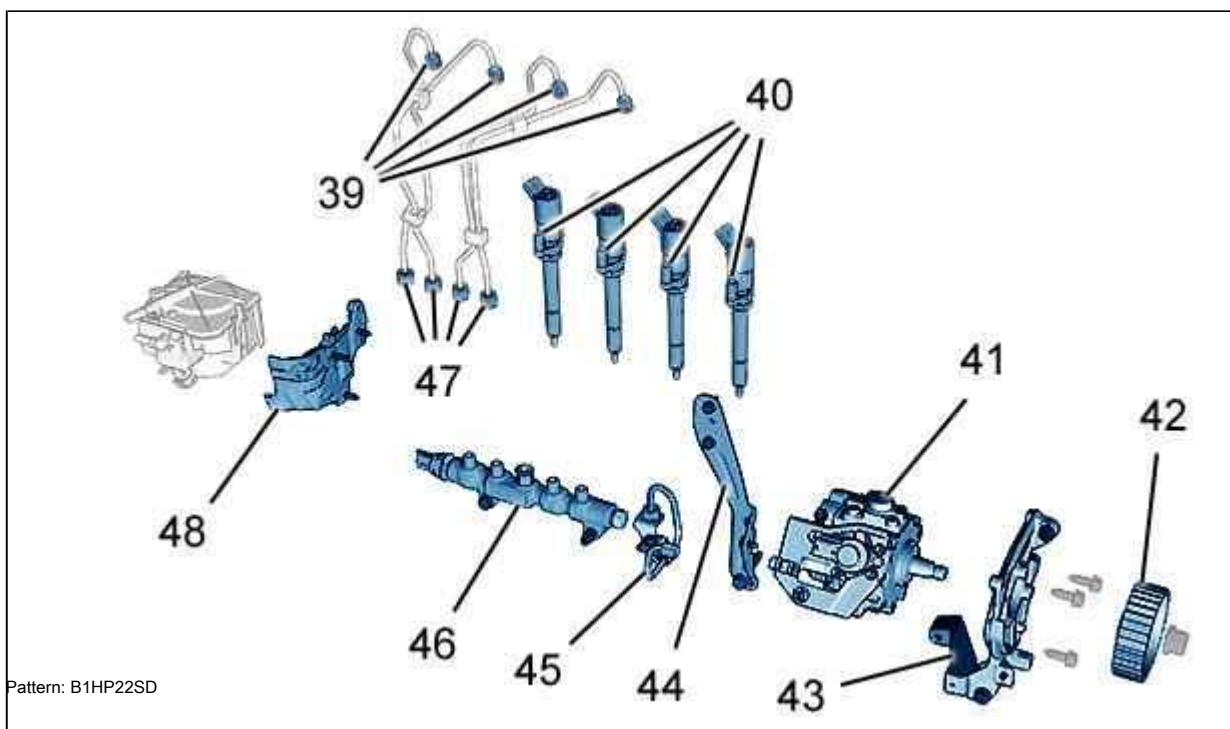
4. Timing mechanism



Label Designation		Stage	Moment puffs
(34)	Camshaft bearing caps	Tightening	1 da.Nm
(35)	Camshaft pulley	Preliminary	2 da.Nm
		puff	
(36)	Timing belt idler	Angle tightening	50 °
	Tightening mechanism		3.7 da.Nm
(37)	Camshaft belt tension roller		2.3 da.Nm
(38)	Camshaft chain tensioner	Tightening	1 da.Nm
	bolt Timing adjustment bracket	Tightening	0.6 da.Nm
	bolt engine speed sensor	Tightening	0.8 da.Nm
	Bolt Camshaft Position Sensor	Tightening	0.6 da.Nm

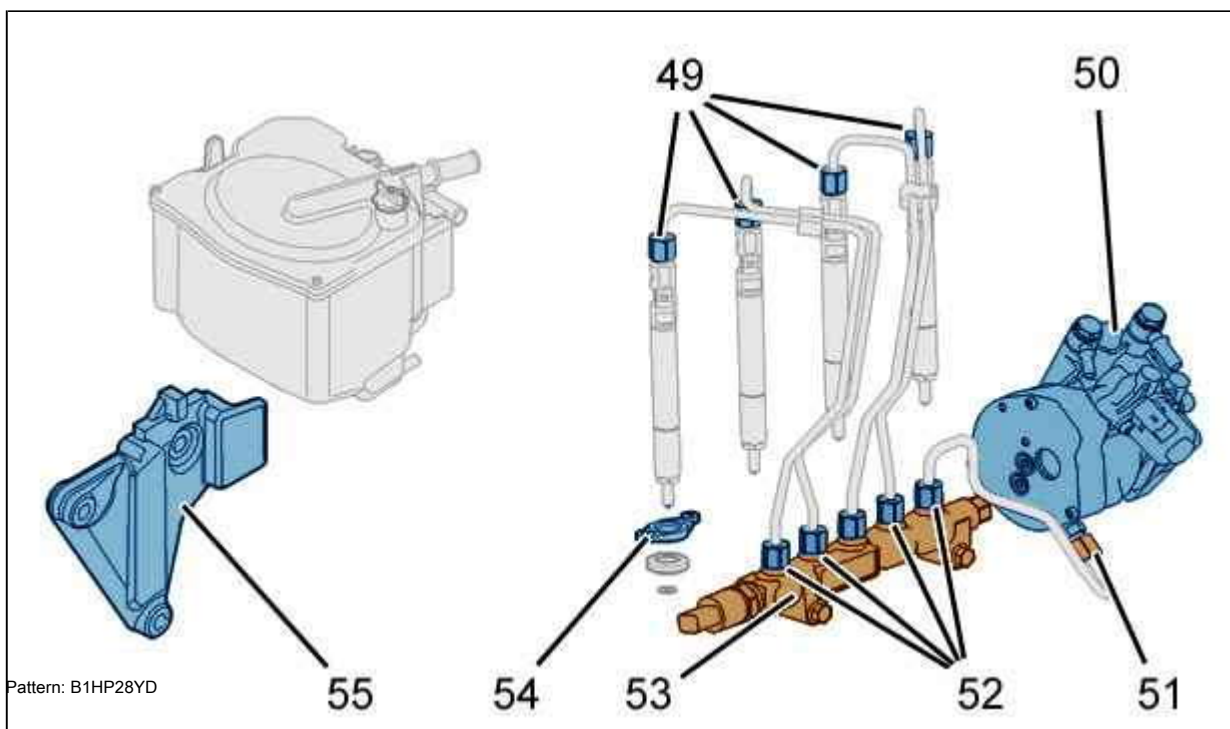
5. Injection circuit

5.1. Fuel injection system BOSCH



Pattern: B1HP22SD

Label Designation		Stage	Moment puffs
(39)	Diesel engine connection	Preliminary puff	2 da.Nm
(40)	Injector retaining nuts	Tightening	2.5 da.Nm
		Preliminary puff	0.4 da.Nm
(41)	Diesel fuel injection pump on support	Angle tightening	75 °
		Tightening	2.2 da.Nm
(42)	High pressure diesel fuel pump drive pulley	Tightening	5 da.Nm
(43)	Front high-pressure diesel fuel pump	Tightening	2 da.Nm
(44)	Rear high pressure radial diesel fuel pump	Tightening	2 da.Nm
(45)	High pressure supra-diesel fuel pump pipe connector	Preliminary puff	2 da.Nm
(46a) (46b)	High pressure fuel rail at engine block High pressure fuel sensor	Tightening	2.5 da.Nm
		Tightening	2.2 da.Nm
		Tightening	4.5 da.Nm
(47)	High pressure fuel rail pipe connections	Preliminary puff	2 da.Nm
(48)	Fuel filter support	Tightening	2.5 da.Nm
		Tightening	0.7 da.Nm
5.2. Fuel injection system DELPHI (Engine DV4TED4)			



Label Designation

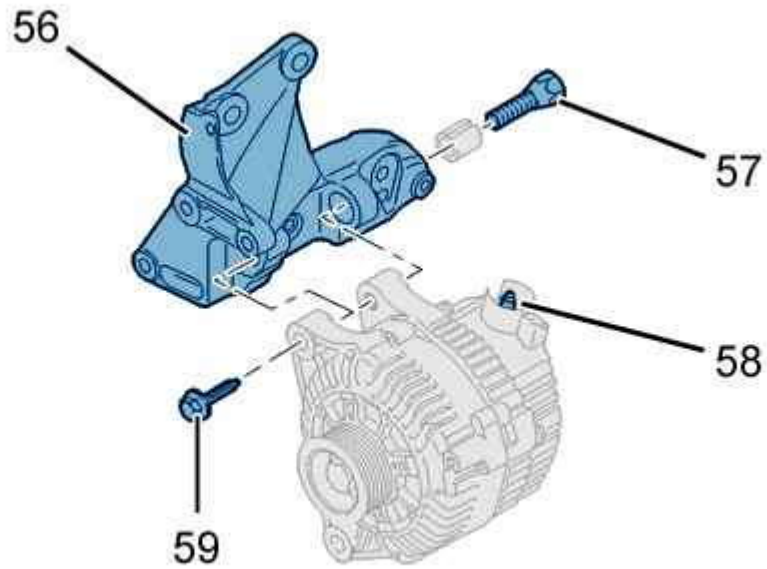
Stage

Moment
puffs

(49)	Diesel engine connection	Preliminary puff	2 da.Nm
(50)	High pressure diesel fuel pump on high pressure pump bearing	Tightening	2.5 da.Nm
(51)	Diesel fuel tube connector	Tightening	2.2 da.Nm
		Preliminary puff	2 da.Nm
(52)	High pressure fuel rail pipe connections	Tightening	2.5 da.Nm
		Preliminary puff	2 da.Nm
(53a)	High pressure fuel rail on engine block	Tightening	2.5 da.Nm
(53b)	High pressure fuel gauge	Tightening	2.2 da.Nm
(54)	Injector retaining nuts	Tightening	4.5 da.Nm
		Preliminary puff	0.5 da.Nm
(55)	Fuel filter support	Angle tightening	65 °
	High pressure diesel fuel pump drive pulley	Tightening	0.8 da.Nm
		Tightening	5 da.Nm

6. Attachments

6.1. Particulate filter version

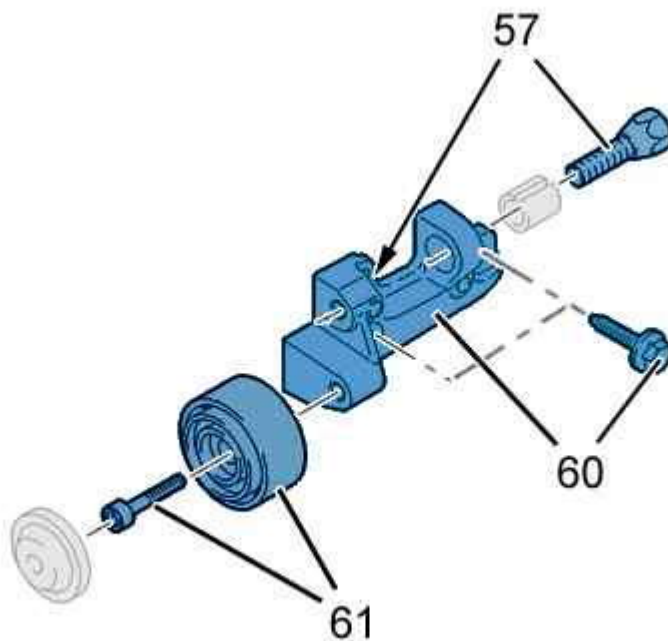


Pattern: D1AP04MD

Label	Designation	Stage	Torque
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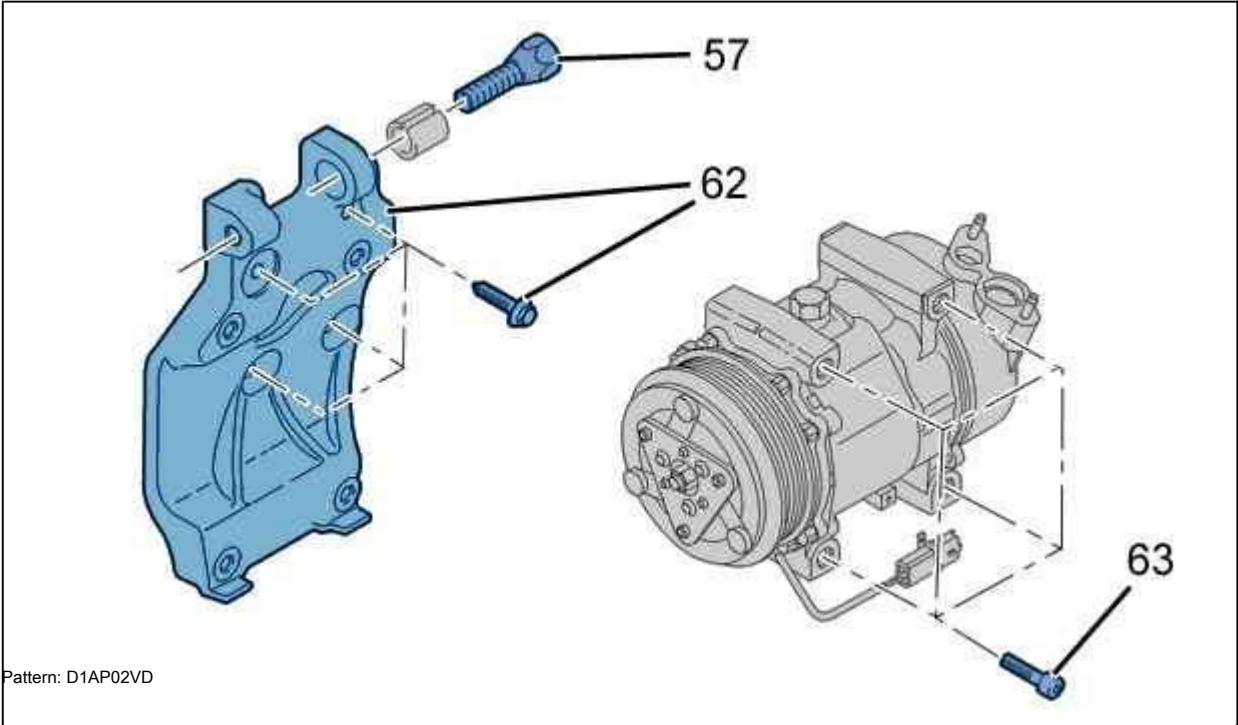
(56)	Supporting functional	Tightening bolt 2 da.Nm	Alternator
------	-----------------------	-------------------------	------------

(57)		Tightening 4.9	da.Nm
(58)	Generator power circuit	Tightening 1.6	da.Nm
(59)	bolt generator	Tightening 4.1	da.Nm
6.2. Version without air conditioner			



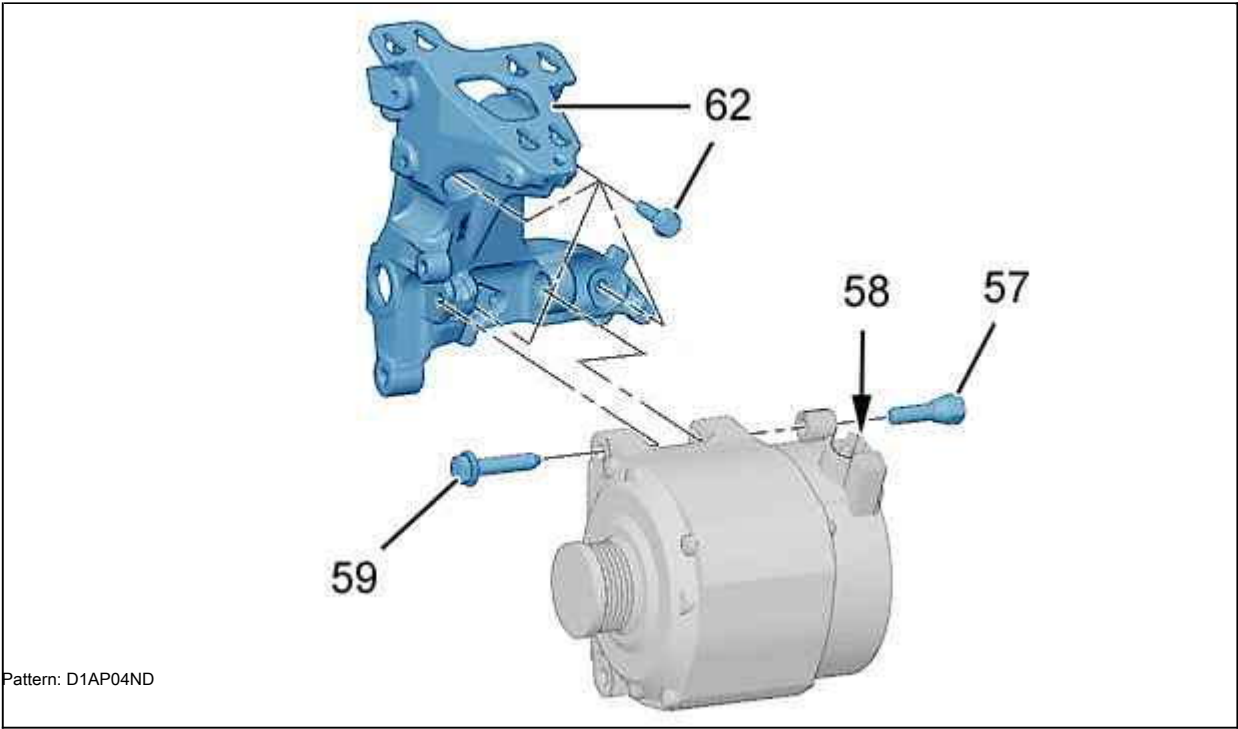
Pattern: D1AP02UD

Label Designation		Stage	Torque
(57)	bolt generator	Tightening 4.9 da.Nm	
(60)	bolts Support for attachment mounting	Tightening 2 da.Nm of the bolt	Intermediate roller
(61)		Tightening 4.5 da.Nm	
6.3. Air conditioner version			



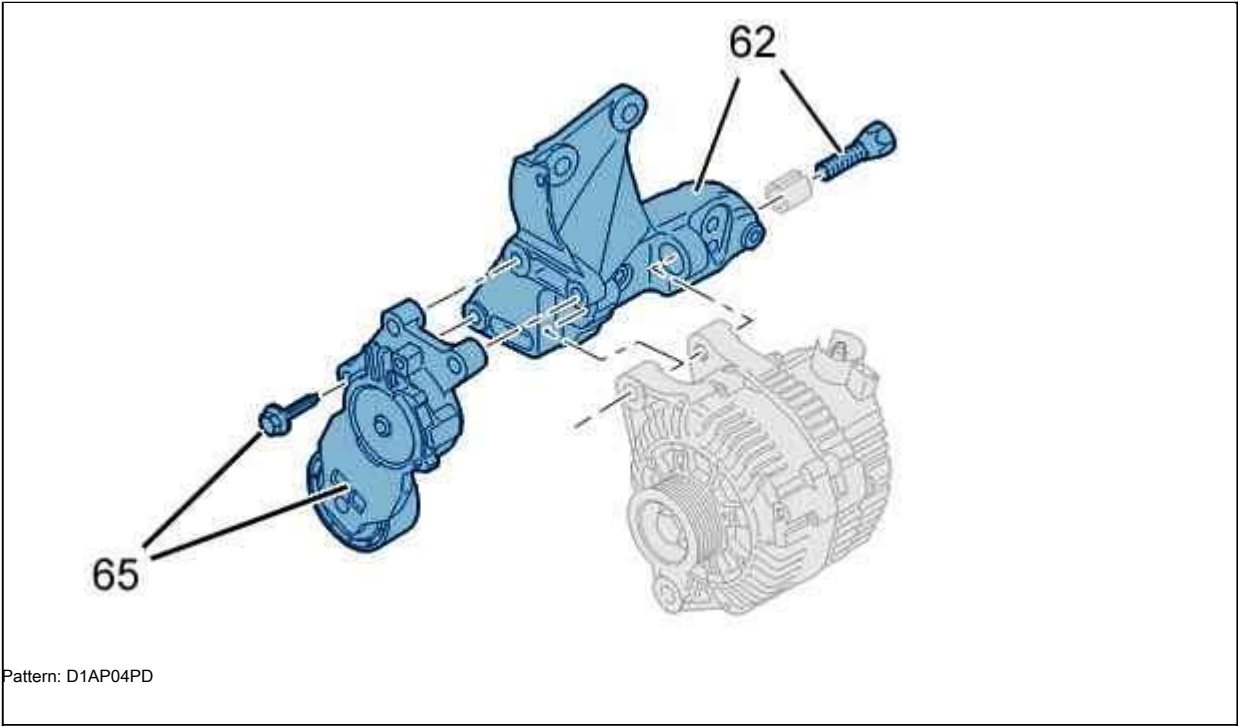
Pattern: D1AP02VD

Label Designation		Stage	Torque
(57)	bolt generator	Tightening 4.9 da.Nm	
(62)	bolts Air conditioning compressor support	Tightening 2 da.Nm of the bolts	air conditioning
(63)	compressor	Tightening 2.4 da.Nm	
6.4. Particulate filter version			



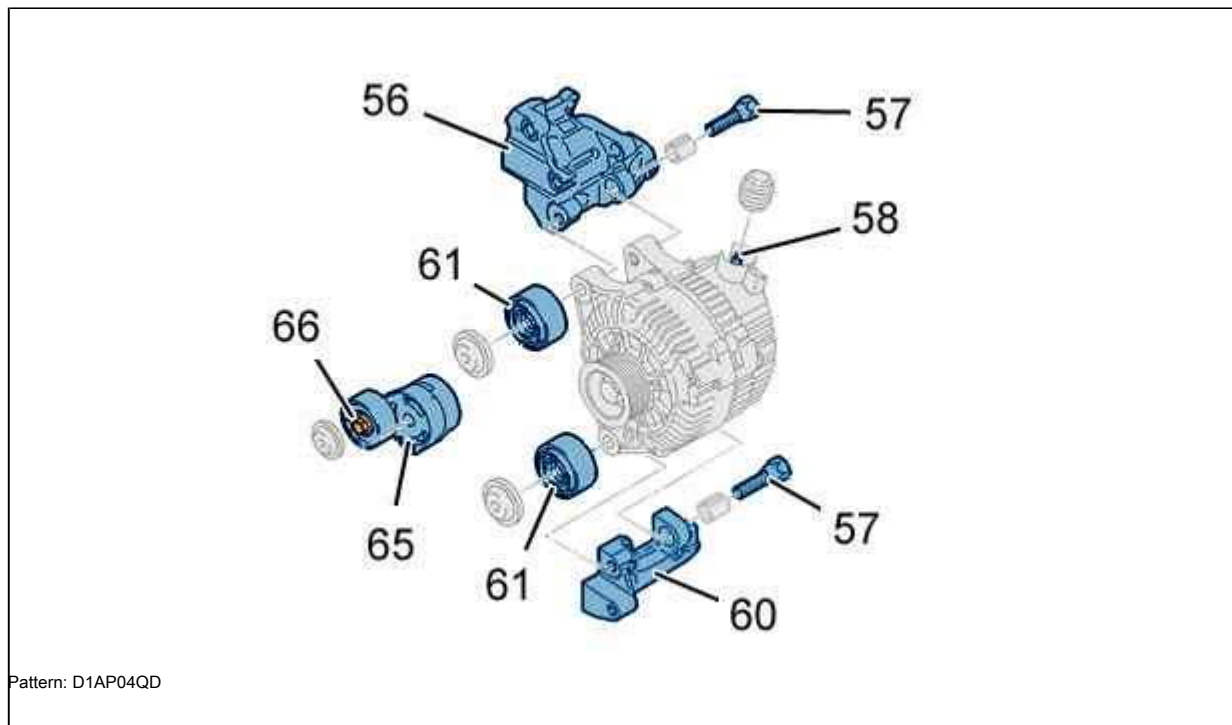
Pattern: D1AP04ND

Label Designation		Stage	Torque
(57)	bolt generator	Tightening 4.9 da.Nm	
(58)	nut Generator power circuit	Tightening 1.6 da.Nm	of the bolt Generator
(59)		Tightening 4.1 da.Nm	
(62)	bolt Top of the generator	Tightening 2 da.Nm	
6.5. Dynamic idler roller Electric power steering			



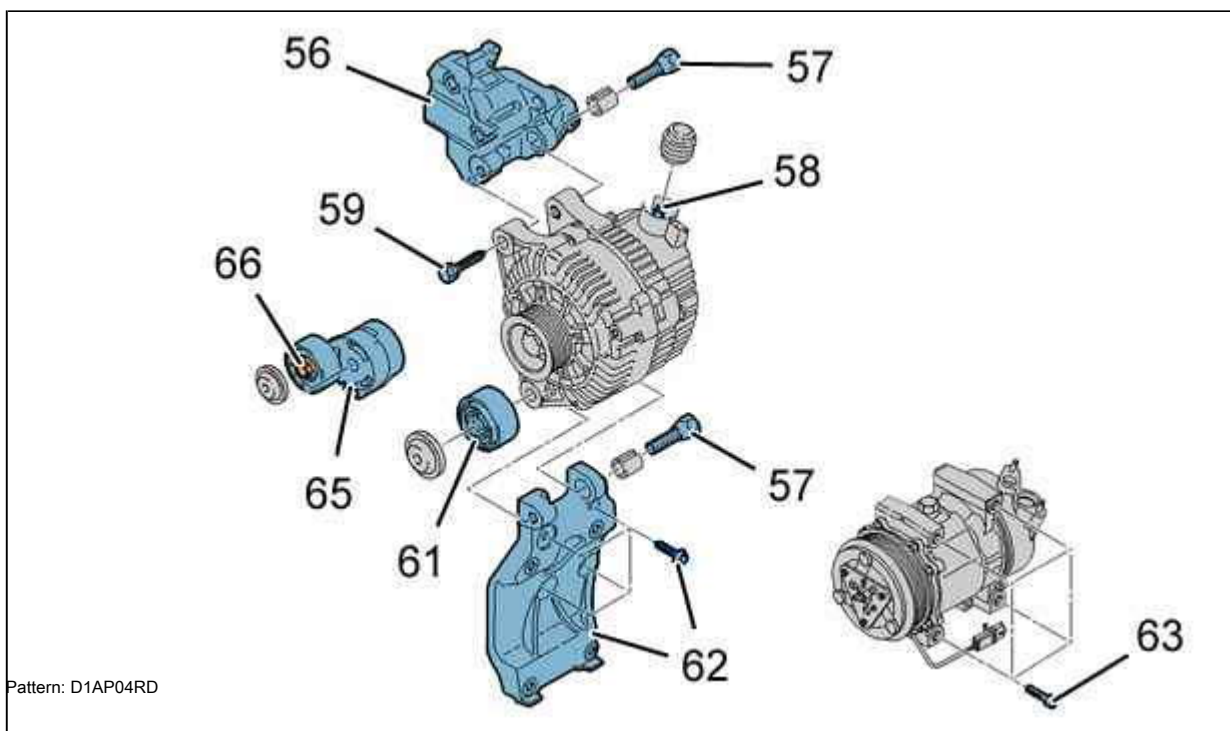
Pattern: D1AP04PD

Label Designation		Stage	Moment puffs
(62)	bolt top generator	Tightening 2	da.Nm
(65a)	bolt ancillary drive belt (ancillary drive belt)	Tightening 2	da.Nm
6.6. Dynamic tension roller Hydraulic power steering			



Version without air conditioner

Label Designation		Stage	Moment puffs
(56)	Support multifunctional	Tightening 2	da.Nm
(57)	bolt generator	Tightening 4.5	da.Nm
(58)	Generator power circuit	Tightening 1.6	da.Nm
(59)	bolt generator	Tightening 4.7	da.Nm
(60)	bolt Support for attachment bolt Intermediate roller	Tightening 2	da.Nm
(61)		Tightening 4.5	da.Nm
(65b)	Bolt Auto Idler Pulley (Attachment Drive Belt)	Tightening 3	da.Nm
(66)	Bolt Auto Idler Pulley (Attachment Drive Belt)	Tightening 2.7	da.Nm



Air conditioner version

Label Designation		Stage	Moment puffs
(56)	Support multifunctional	Tightening 2	ca.Nm
(57)	bolt generator	Tightening 4.9	da.Nm
(58)	Generator power circuit	Tightening 1.6	da.Nm
(59)	bolt generator	Tightening 4.1	da.Nm
(60)	bolt Support for attachment bolt Intermediate roller	Tightening 2	ca.Nm
(61)		Tightening 4.5	da.Nm
(62)	bolt Compressor support air conditioning	Tightening 2	ca.Nm
(65b)	Bolt Auto Idler Pulley (Attachment Drive Belt)	Tightening 3	ca.Nm
(66)	Bolt Auto Idler Pulley (Attachment Drive Belt)	Tightening 2.1	da.Nm

7. Starter

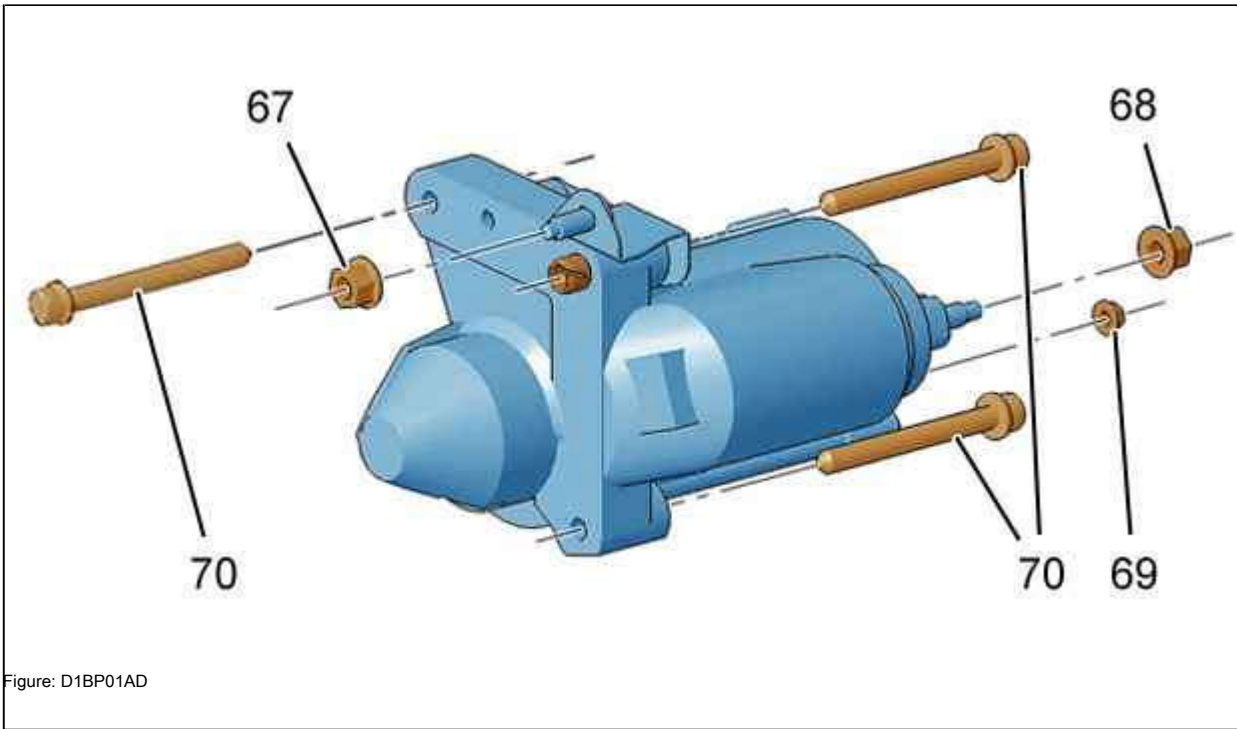
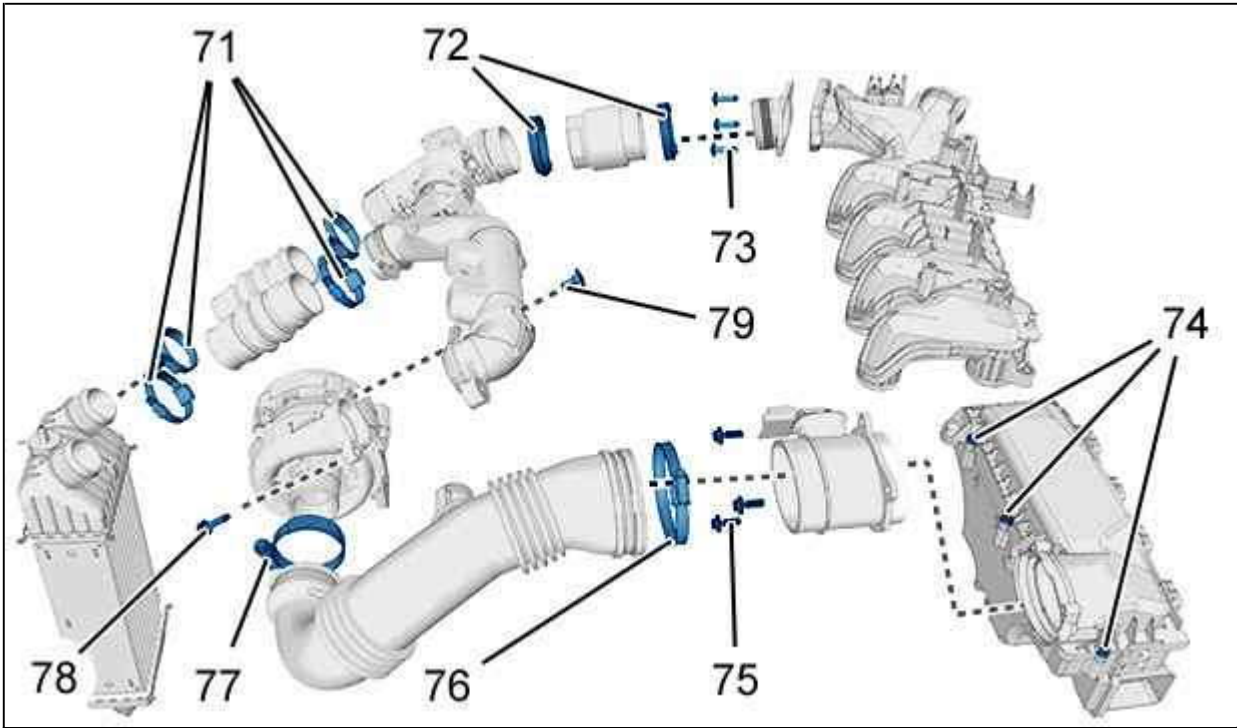


Figure: D1BP01AD

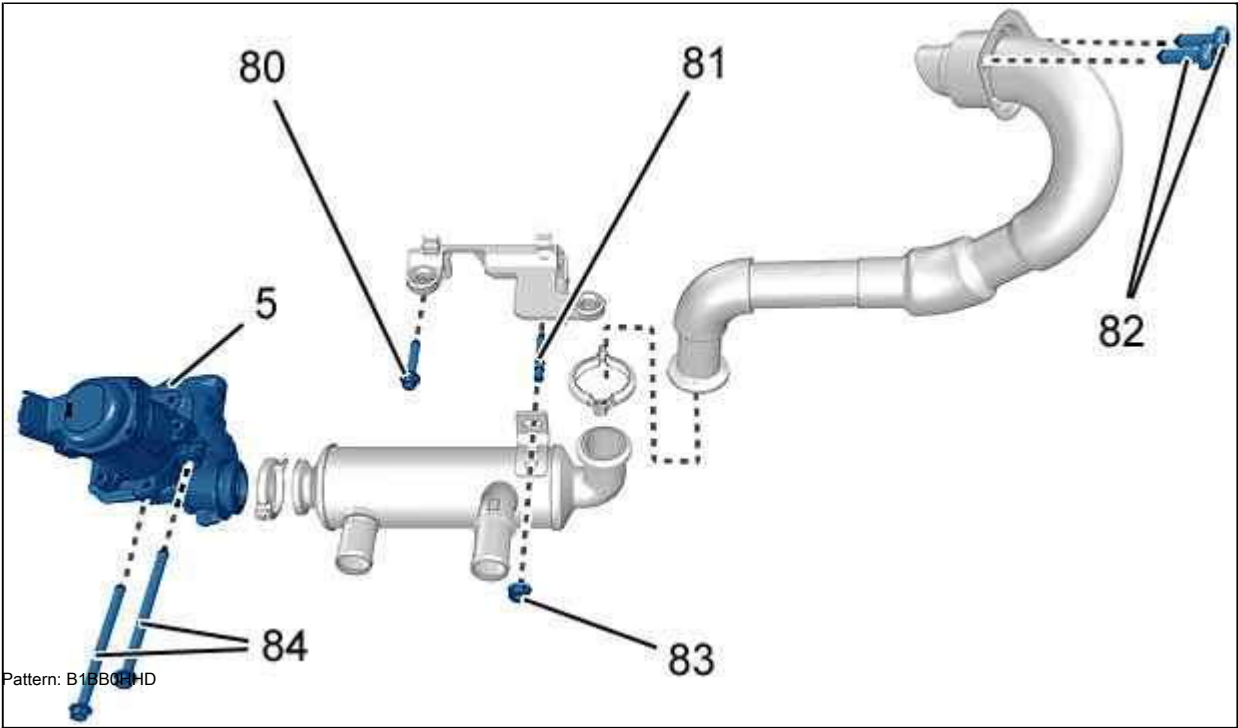
Label	Designation	Stage	Torque
(67)	starter foot nut	Tightening	1 da.Nm
(68)	nut Starter power cable	Tightening	1 da.Nm
(69)	nut Starter excitation cable	Tightening 0.5 da.Nm of the bolt Starter	
(70)		Tightening	2 da.Nm

8. Turbocharging circuit



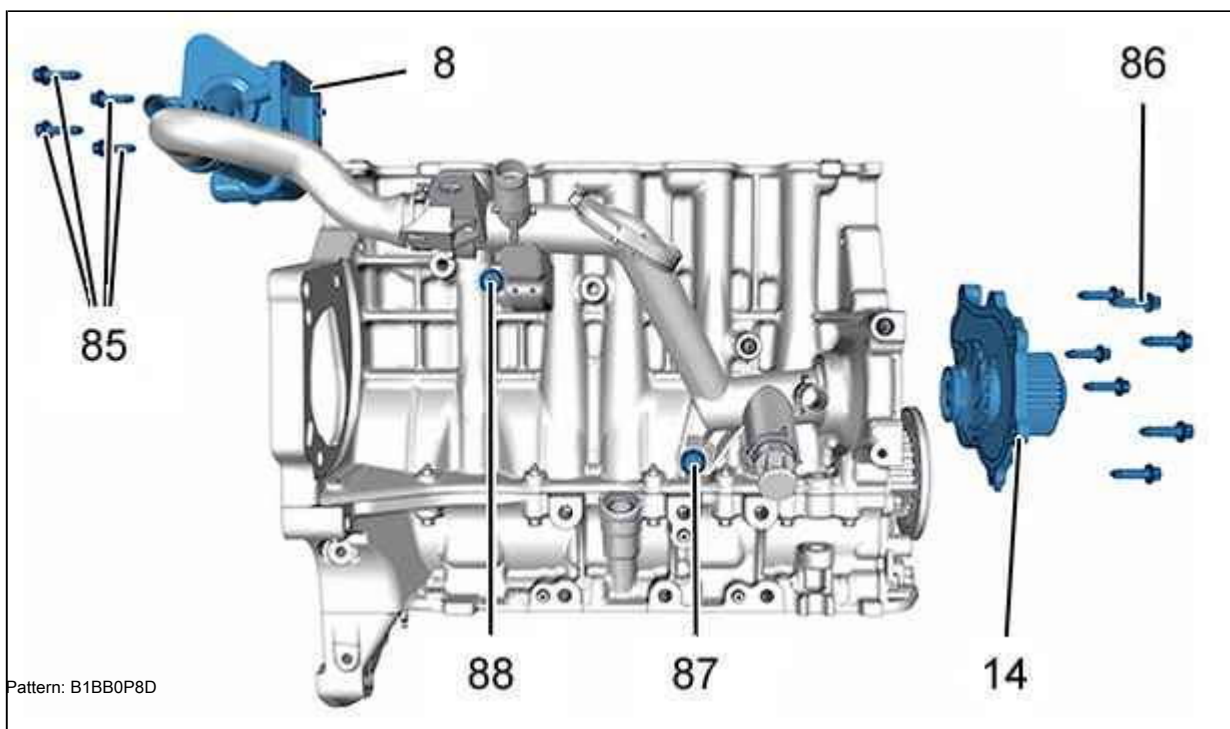
Label Designation	Stage	Torque
(71) Clamps Heat Exchanger	Tightening	0.3 da.Nm
(72) clamps Air dispenser	Tightening	0.3 da.Nm
(73) bolts Clutch Air inlet	Tightening	0.8 da.Nm
(74) bolt Air cleaner cover	Tightening	0.5 da.Nm
(75) Bolt Air Mass Sensor Clamps Heat	Tightening	0.3 da.Nm
(76) Exchanger	Tightening	0.3 da.Nm
(77) Clamps Heat Exchanger	Tightening	0.3 da.Nm
(78) Bolt Muffler Noise Turbocharger	Tightening	0.6 da.Nm
(79) Special bolt Turbocharger silencer Tightening 0.4 da.Nm		

9. Exhaust gas recirculation circuit



Label Designation	Stage	Moment puffs
(80) bolt Air cleaner housing support	Tightening	0.7 da.Nm
(81) Stud Air cleaner housing support	Tightening	0.5 da.Nm
(82) Exhaust Gas Recirculation (EGR) Pipe Bolt	Tightening	0.6 da.Nm
(83) Exhaust Gas Recirculation Heat Exchanger Nut (Depending on equipment)	Tightening	1 da.Nm
(84) bolt Exhaust gas recirculation (EGR) solenoid valve Tightening 1 da.Nm (Depending on equipment)		

10. Engine cooling system

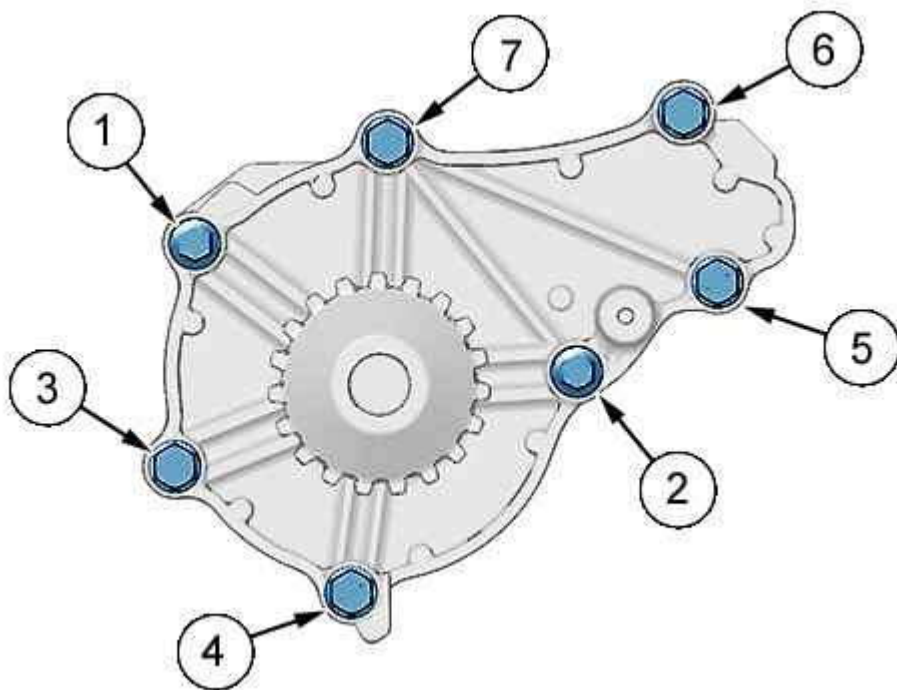


Label Designation

Stage

Moment
puffs

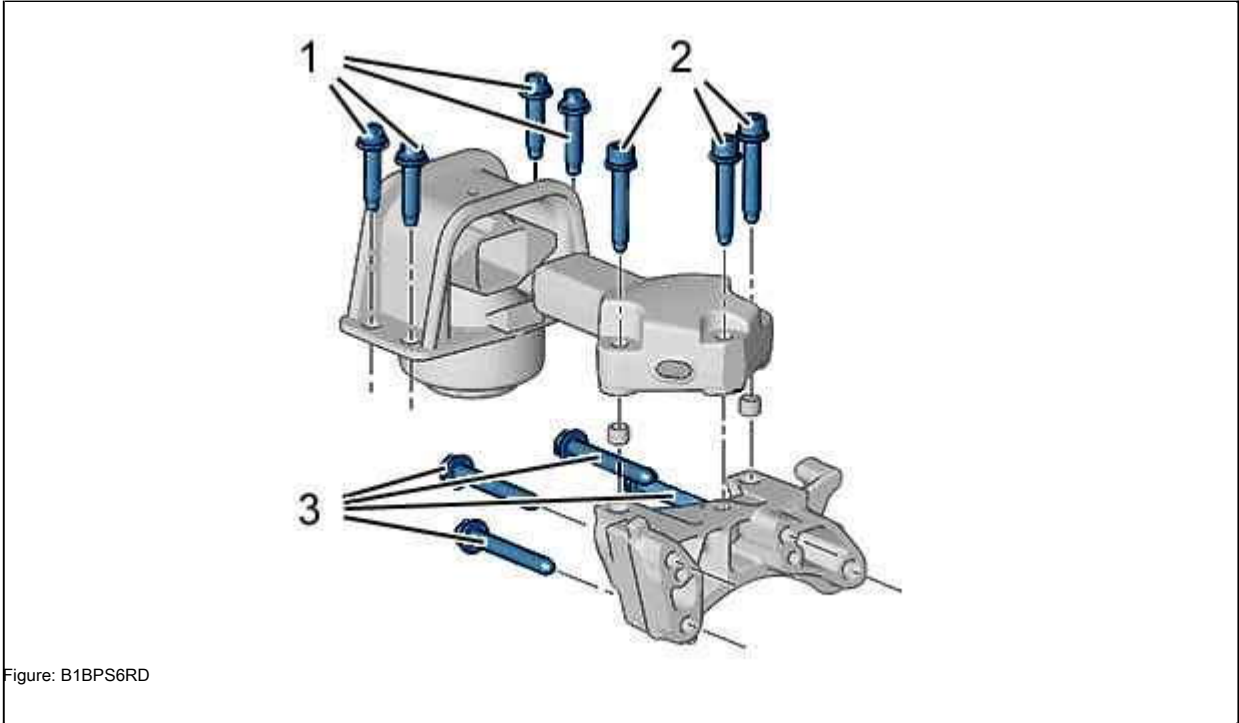
(85)	Securing the coolant outlet block	Preliminary puff	0.3 da.Nm
(86)	Coolant pump retaining bolts (*)	Tightening	0.7 da.Nm
		Preliminary puff	0.4 da.Nm
(87)	Coolant inlet manifold retaining bolts	Tightening	0.9 da.Nm
		Tightening	1.8 da.Nm
(88)	Coolant pipe retaining bolts	Tightening	1.8 da.Nm
(*) Observe the correct order of tightening the screw connections			



Pattern: B1BPS6QD

Tightening order of the coolant pump mounting bolts (86).

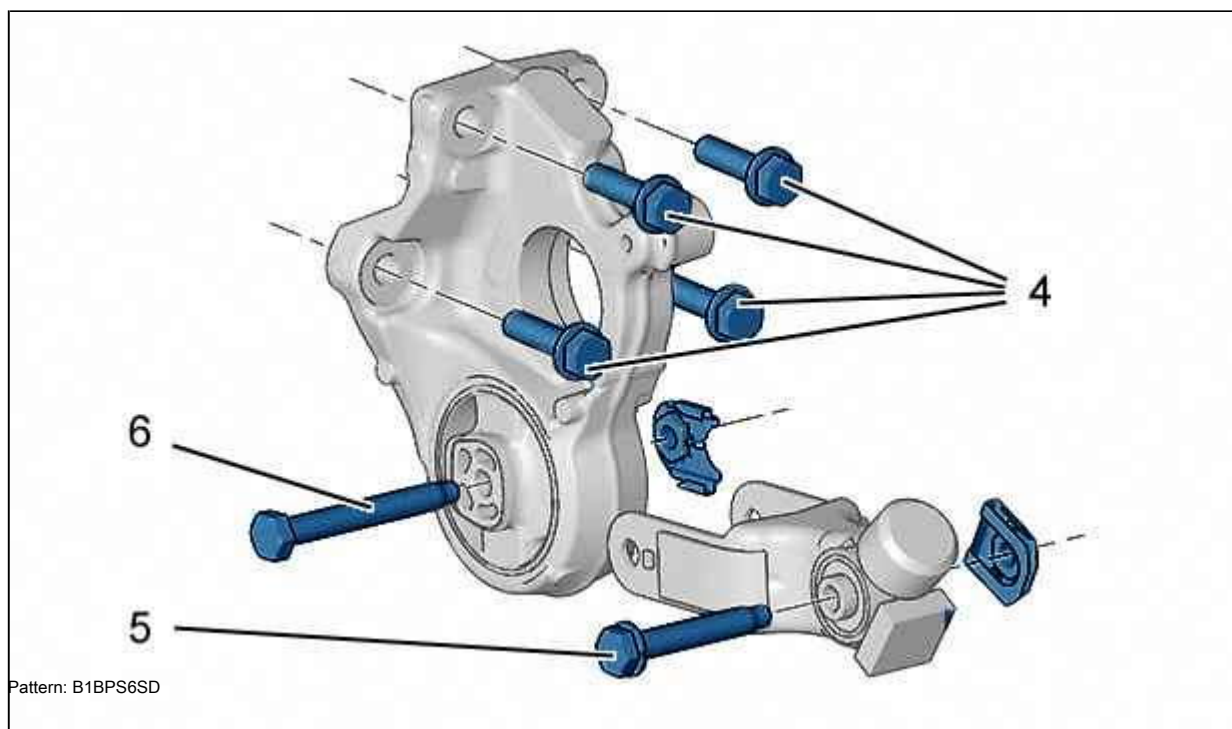
1. Right engine mount



Label Designation Tightening torques

(1)	bolts	$6 \pm 0.6 \text{ da.Nm}$
(2)	bolts	$6 \pm 0.6 \text{ da.Nm}$
(3)	bolts	$5.5 \pm 0.5 \text{ da.Nm}$

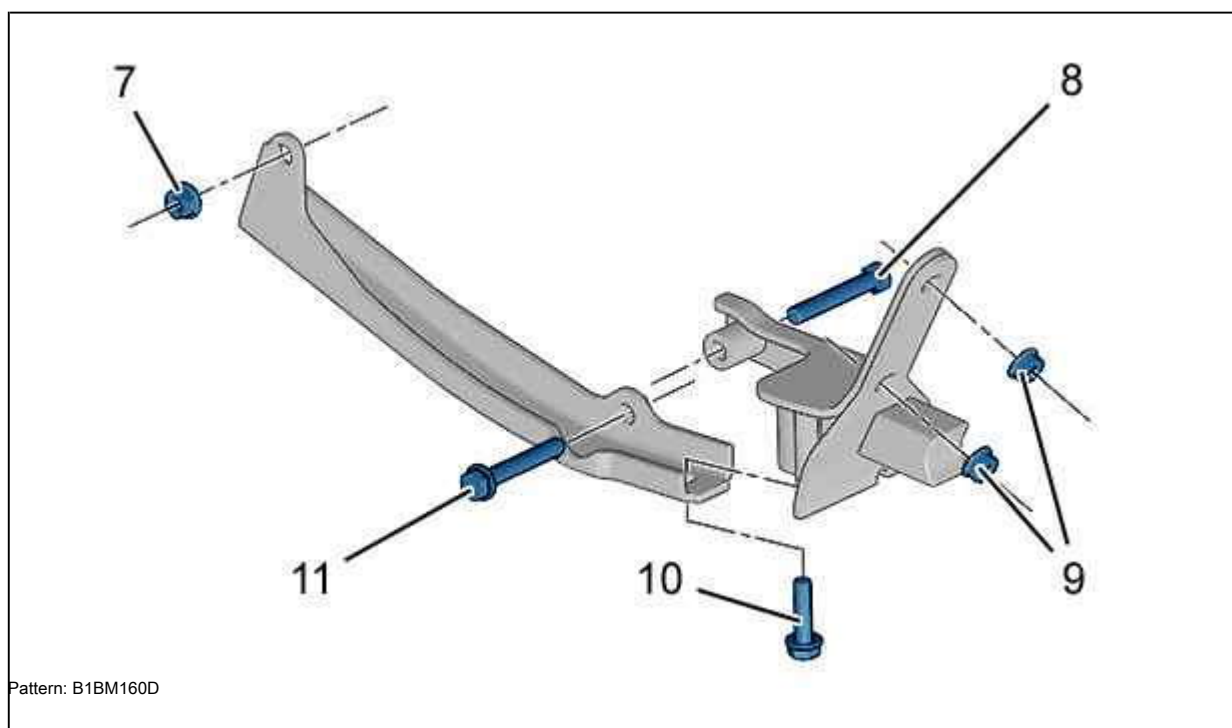
2. Reaction arm



Label Designation Tightening torques

(4)	bolts	$6 \pm 0.6 \text{ da.Nm}$
(five)	bolts	$4 \pm 0.4 \text{ da.Nm}$
(6)	bolts	$4 \pm 0.4 \text{ da.Nm}$

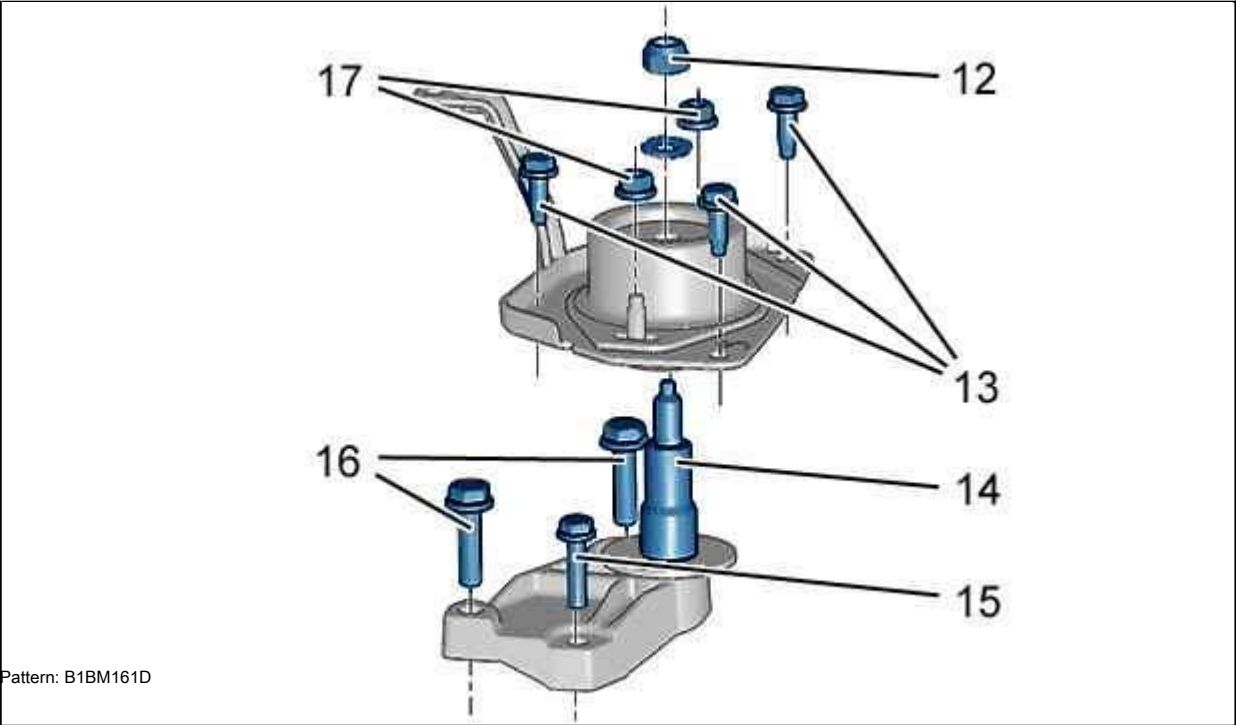
3. Extinguisher



Label Designation Tightening torques

(7)	nut	$4 \pm 0.6 \text{ da.Nm}$
(eight)	bolts	$4 \pm 0.6 \text{ da.Nm}$
(nine)	nuts	$4 \pm 0.6 \text{ da.Nm}$
(ten)	bolts	$4 \pm 0.6 \text{ da.Nm}$
(eleven)	bolts	$4 \pm 0.6 \text{ da.Nm}$

4.stand for gearbox



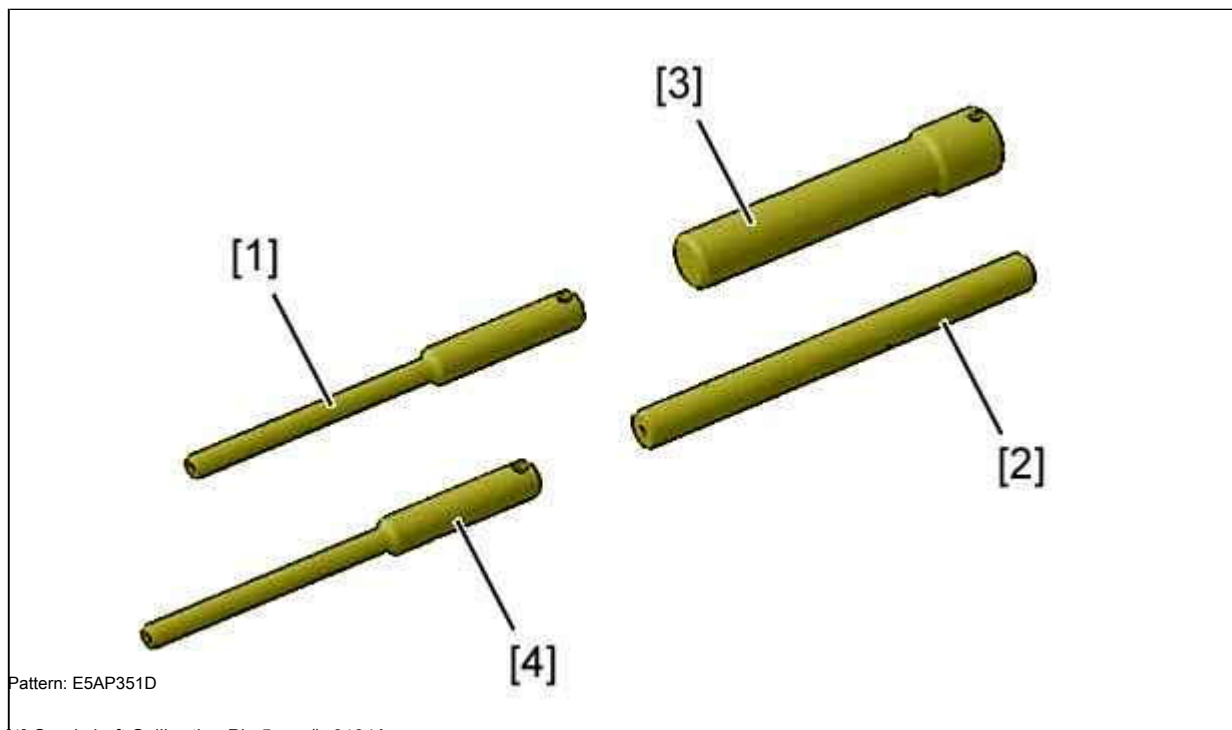
Pattern: B1BM161D

Label Designation		Tightening moments
(12)	nut	$6.5 \pm 0.6 \text{ da.Nm}$
(13)	bolts	$1.9 \pm 0.3 \text{ da.Nm}$
(fourteen)	Elastic support axis $5 \pm 0.5 \text{ da.Nm}$ of the bolt	
(fifteen)		$3 \pm 0.3 \text{ da.Nm}$
(sixteen)	bolts	$6 \pm 0.6 \text{ da.Nm}$
(17)	nuts	$3 \pm 0.3 \text{ da.Nm}$

**PRESENTATION: APPLIANCES FOR REPAIR AND MAINTENANCE
ENGINE TYPES WITH DV6 AND DV4 16 VALVES**

1. Tool box for engine repair () .0194

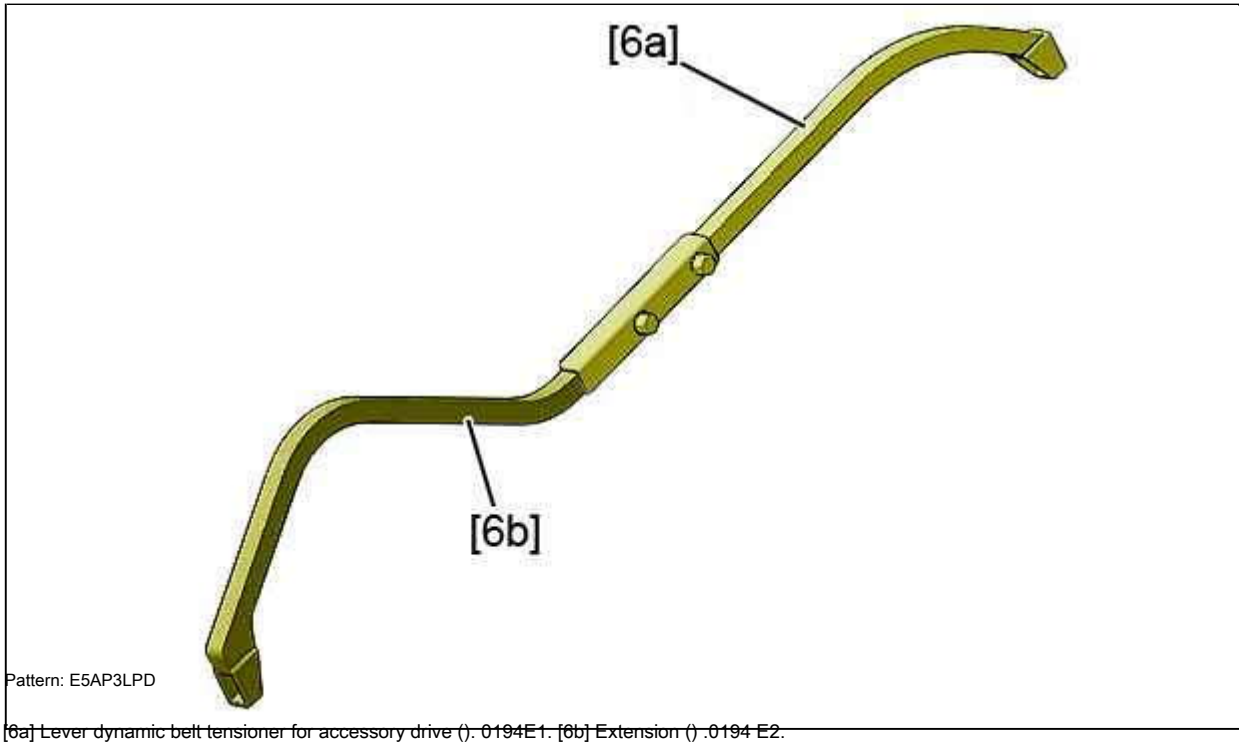
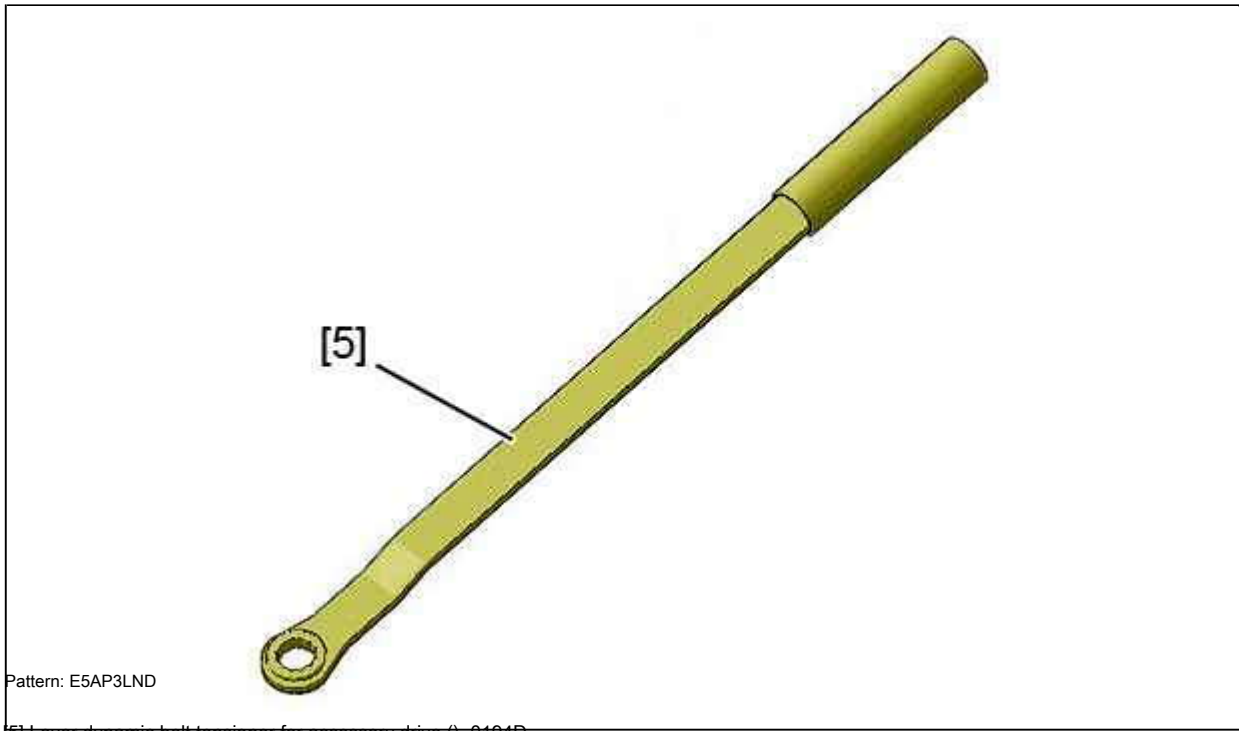
1.1. Accessories for work with a timing drive and a belt drive for additional equipment

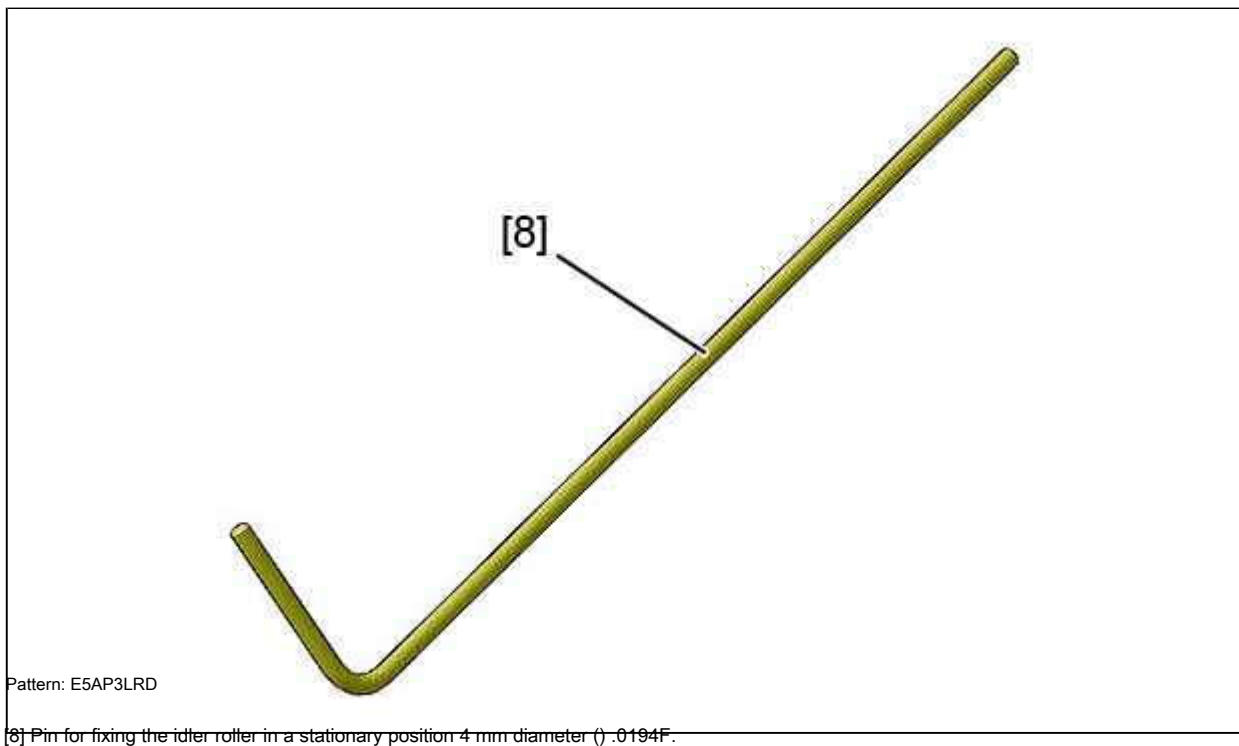
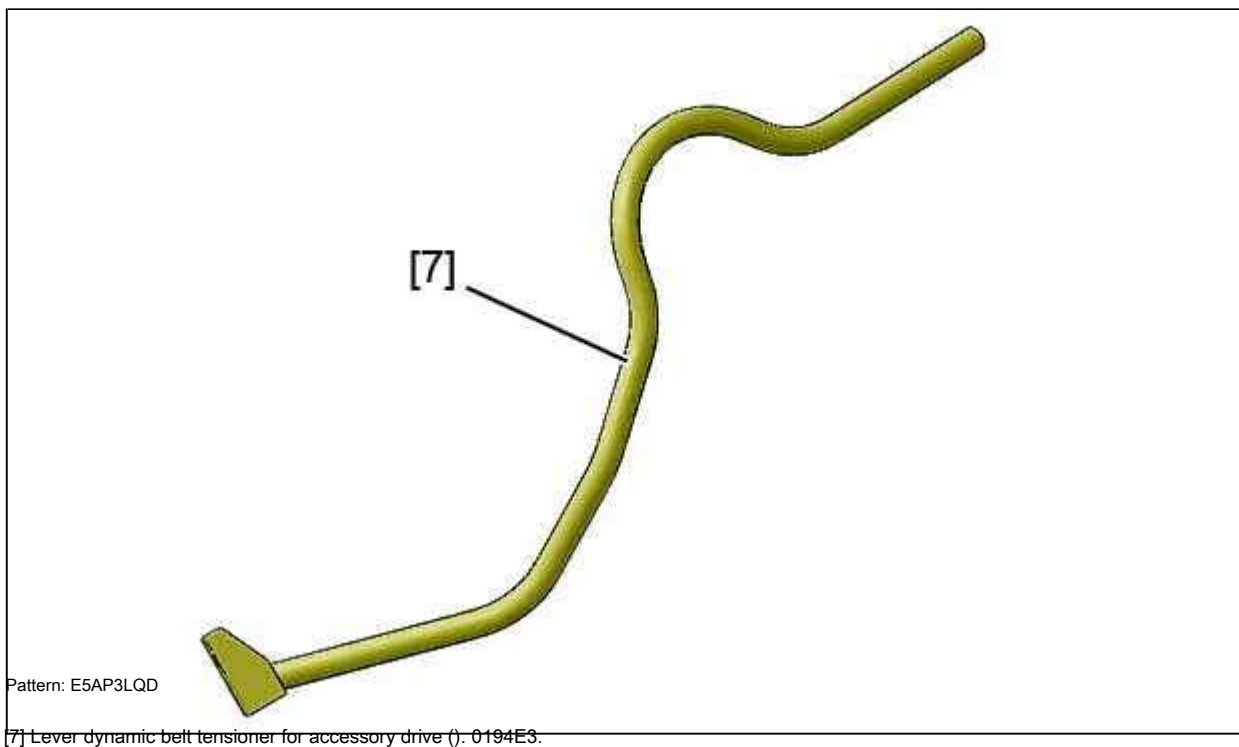


[1] Crankshaft Calibration Pin 5mm () .0194A.

[2] Camshaft pulley reference point pin 8 mm () .0194B. [3] Handwheel locking pin Diameter 12 mm () .0194C.

[4] Pin for reference point installation of high pressure fuel pump type CP1H () .0194A.





1.2. High Pressure Diesel Pump Crusher

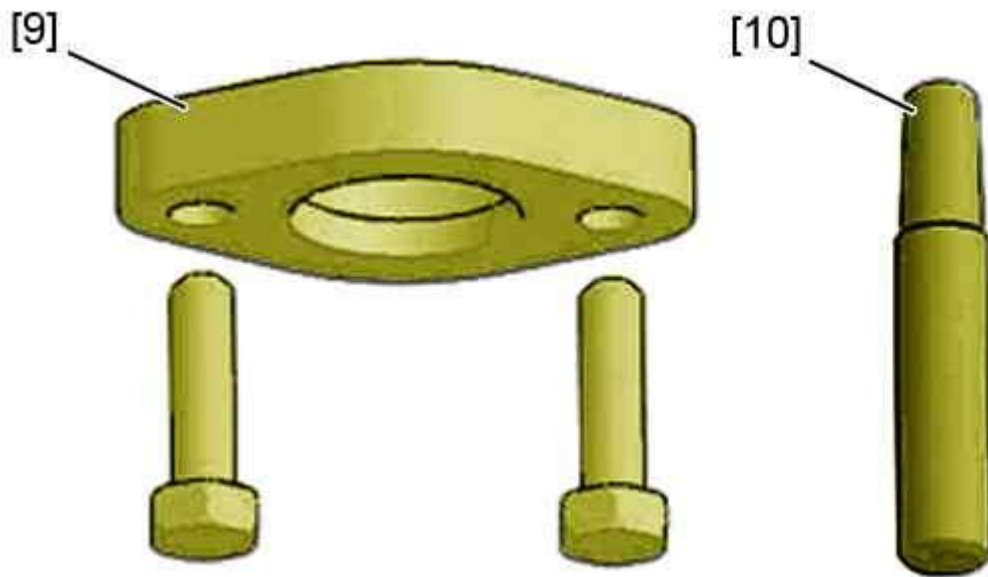


Figure: E5AP3LSD

[9] High Pressure Fuel Pump Gear Puller (). 0194H.

[10] High pressure fuel pump removal pin (). 0194J.

1.3. Compression pressure control devices

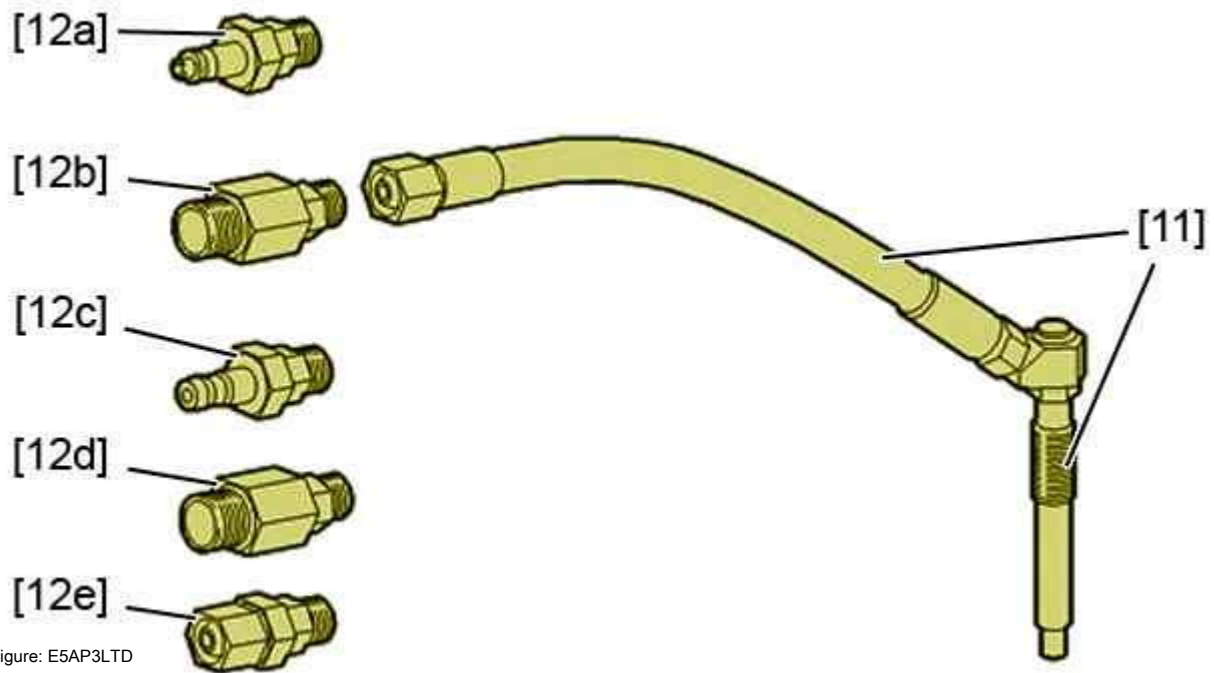


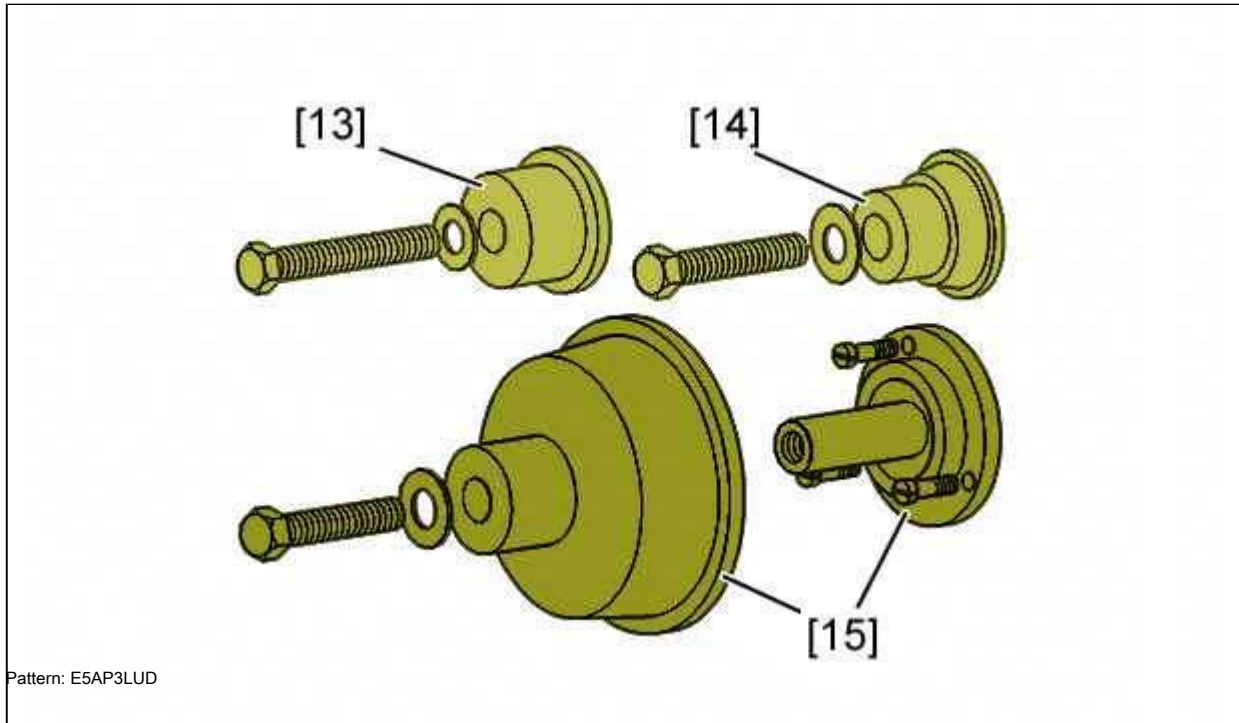
Figure: E5AP3LTD

Compression end pressure control devices (). 0194G:

- [11] Replacement plug for pressure take-off + hose (). 0188U1
- [12a] union (). 0188U2
- [12b] fitting (). 0188U3

- [12c] union () .0188U4
- [12d] fitting () .0188U5
- [12e] union () .0188U6

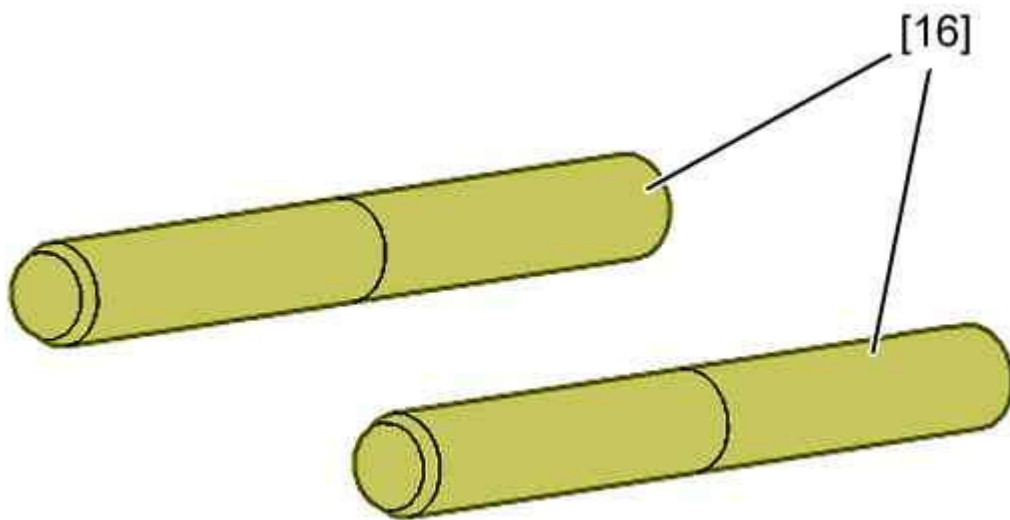
1.4. Seal mounting tool PTFE



Sealing devices:

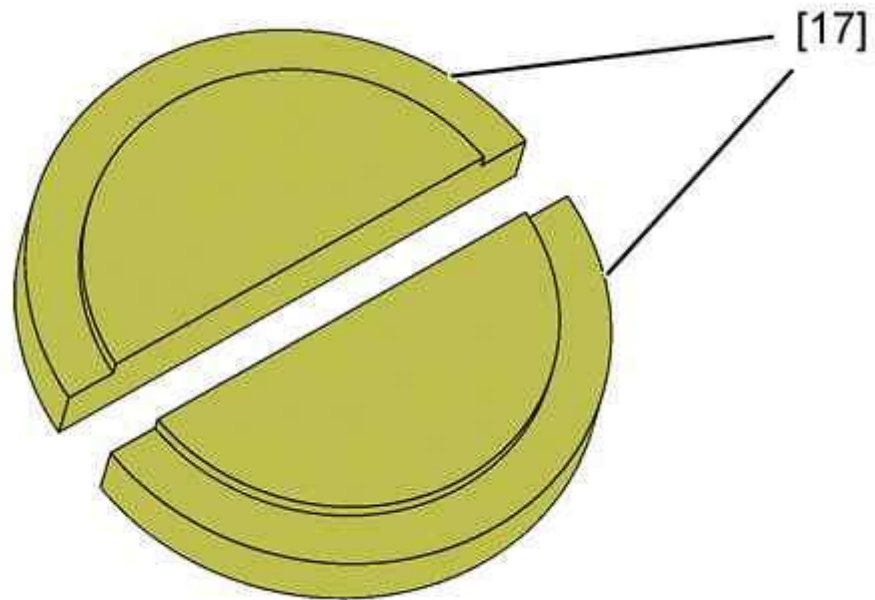
- [13] Camshaft PTFE oil seal installer () .0194K
- [14] Crankshaft PTFE Oil Seal Installer (Timing End) () .0194L
- [15] Crankshaft PTFE Oil Seal Installer (Flywheel Side) () .0194M

1.5. Engine repair tools



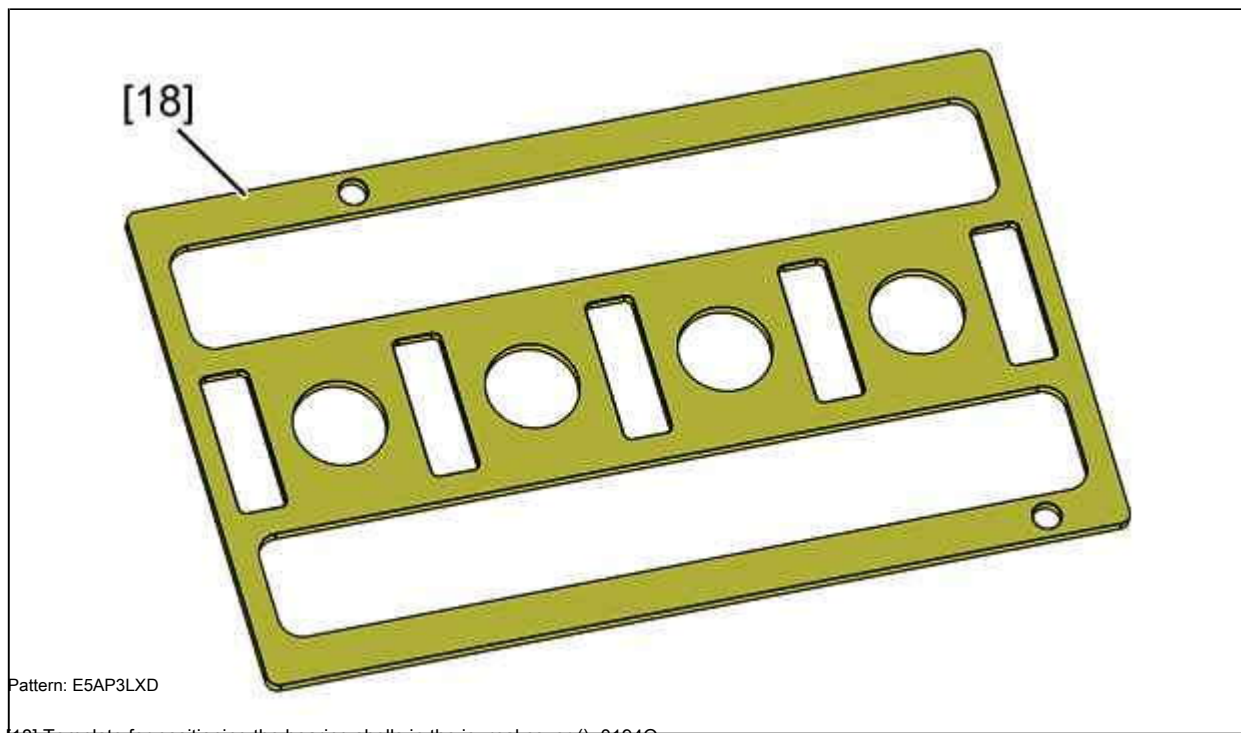
Pattern: E5AP3LVD

[16] Camshaft housing centering pins Diameter 12 mm X2 (I) .0194N.

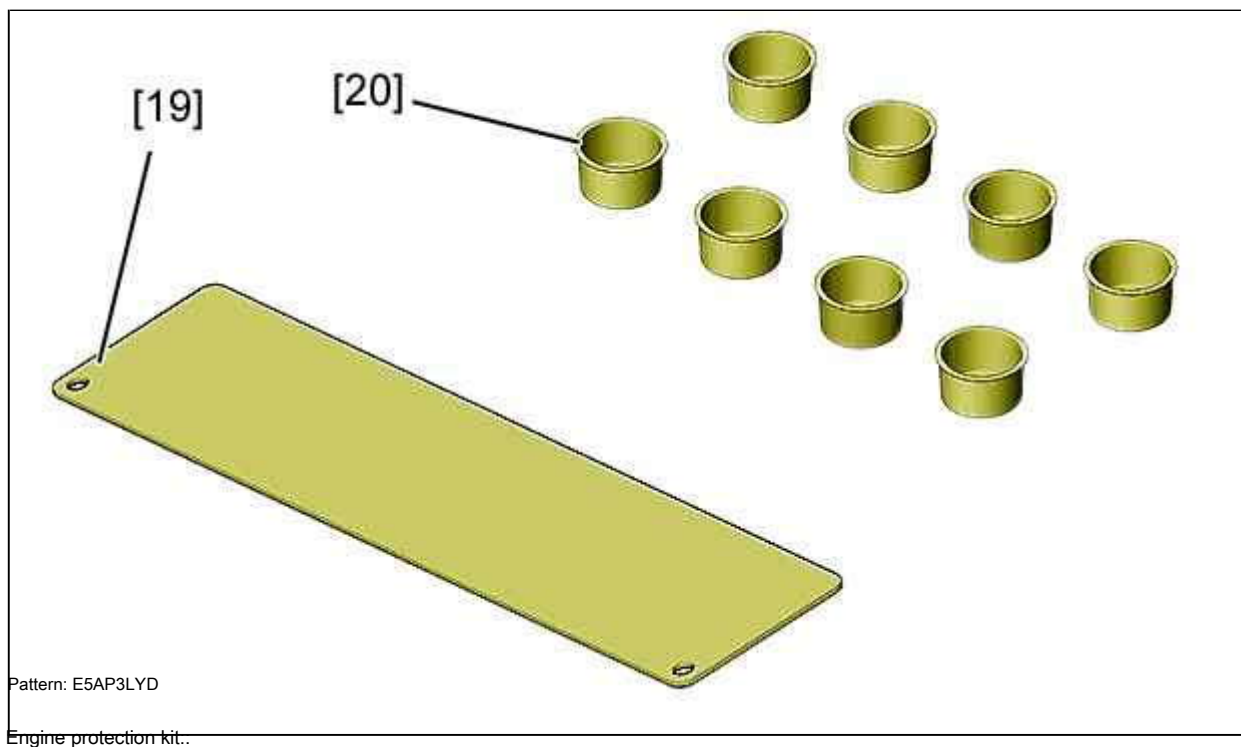


Pattern: E5AP3LWD

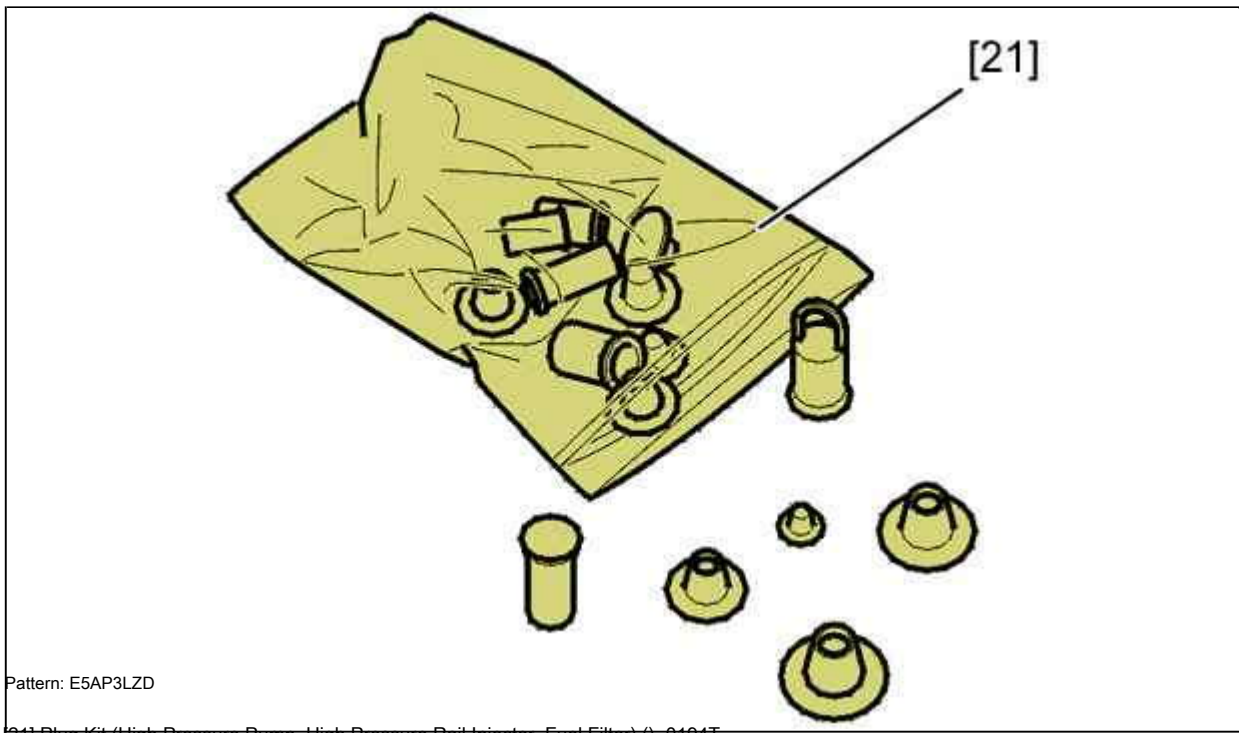
[17] Tool for centering connecting rod bushings (Thickness 2 * 3mm) (I) .0194P.



1.6. Engine protectors

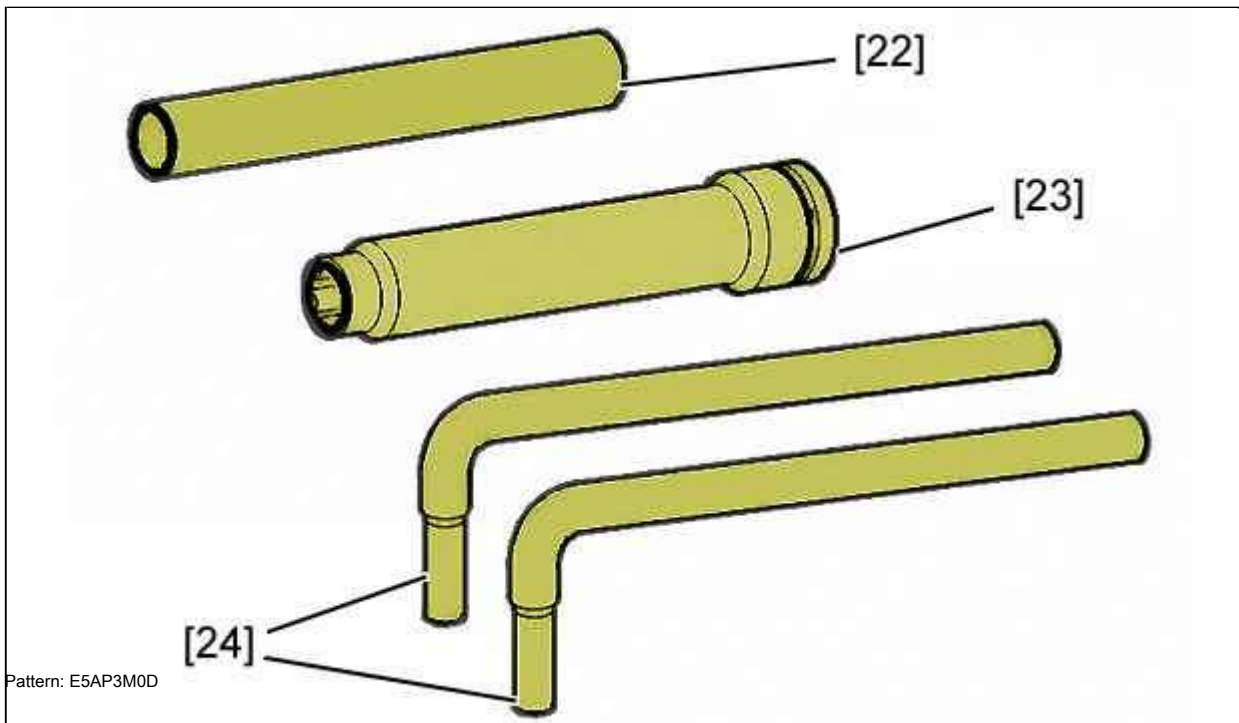


- [19] Motor protection shield (). 0194T1
- [20] Set of air intake caps (). 0194U



2. Additional device

2.1. Cylinder Head and Cylinder Head Inspectors



[22] Tool for pressing in valve sealing caps () .0132W. [23] Head for tightening the cylinder head bolts () .0185.

[24] Lever for separating the cylinder head () .0188L.

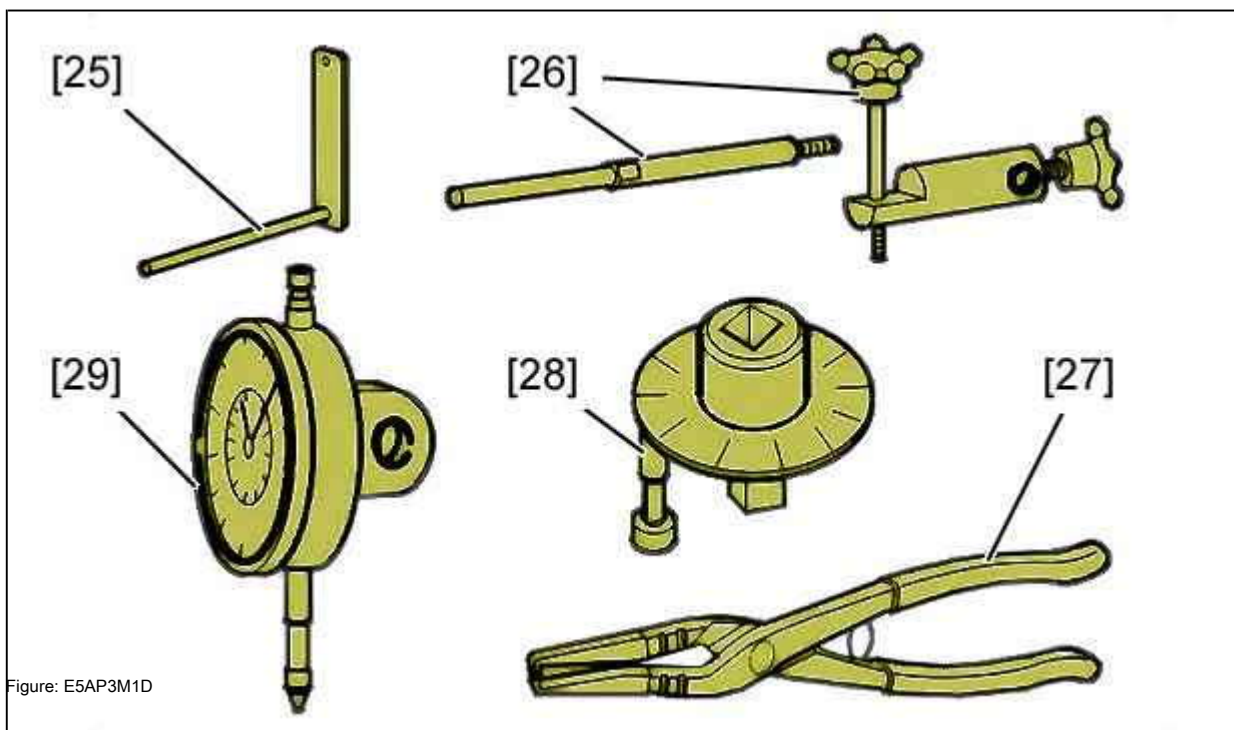


Figure: E5AP3M1D

[25] Pointer indicator () .0117AH.

[26] Pointer indicator () .0118EZ / FZ.

[27] Clamp for removing the valve stem sealing caps () .0170A. [28] Angle tightening device FACOM D.360.

[29] indicator () .1504.

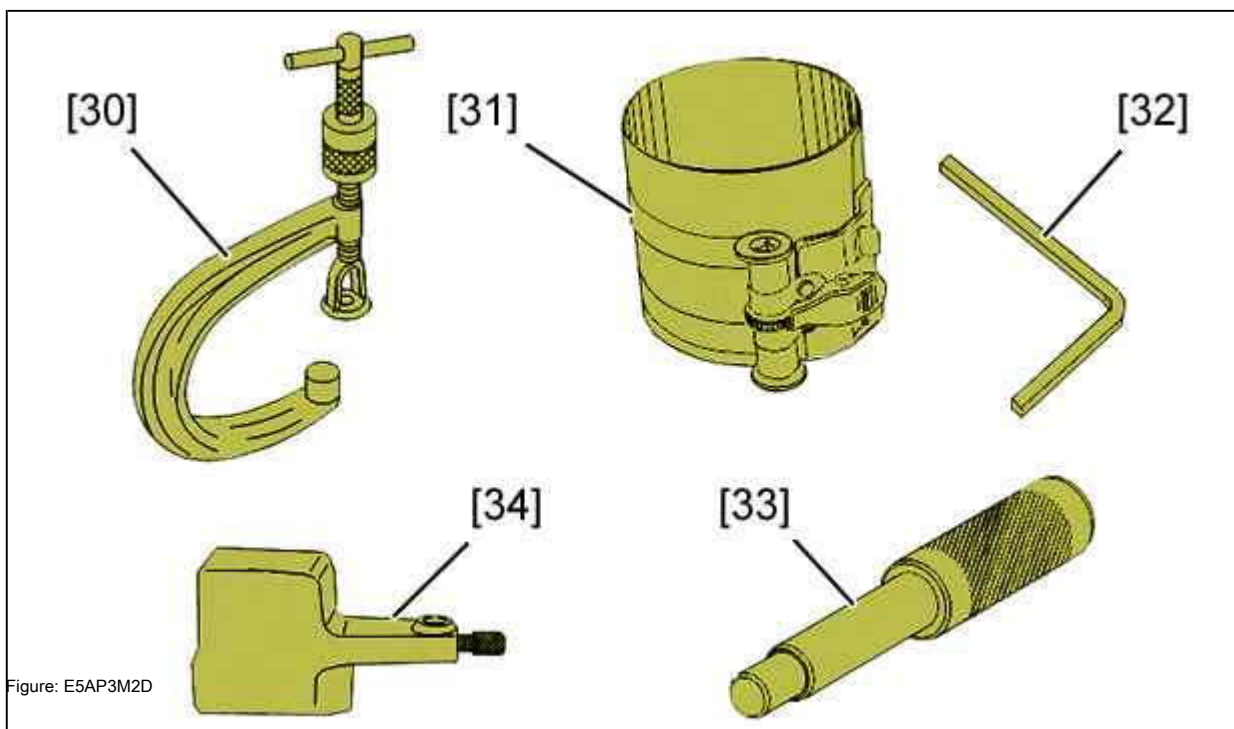


Figure: E5AP3M2D

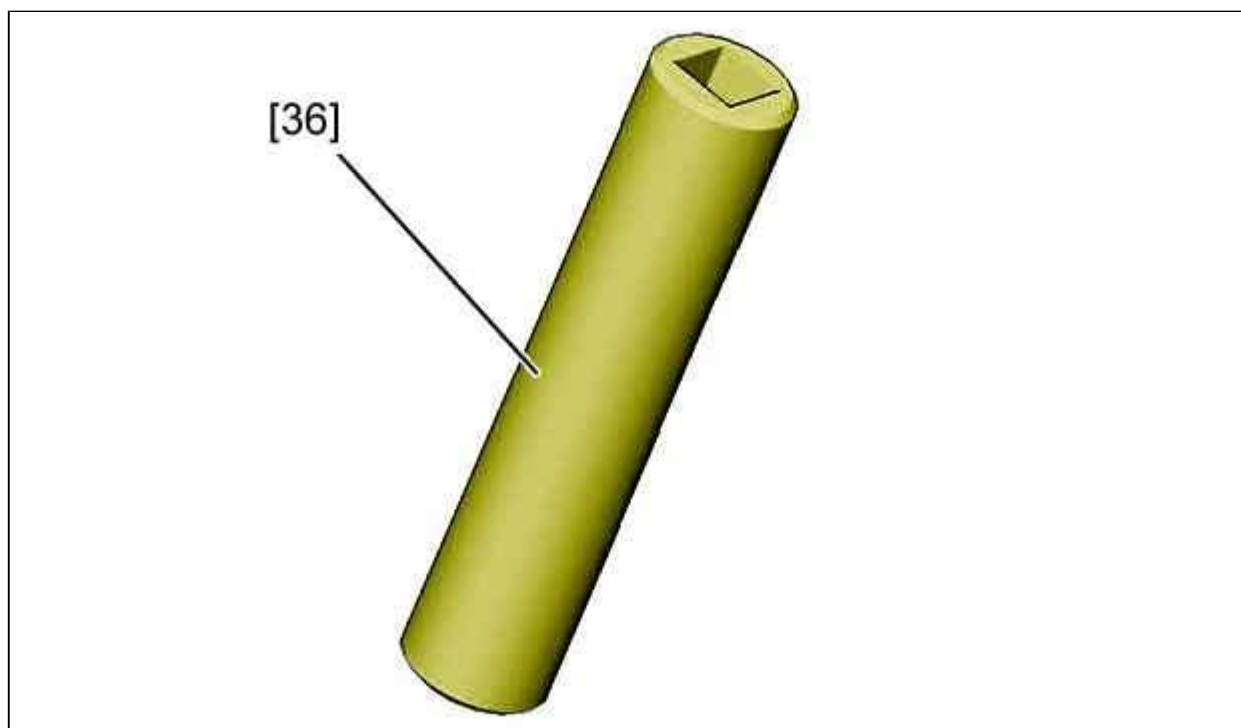
[30] Valve spring compressor FACOM U43.LA. [31], [32] Tool for fitting FACOM 750TB piston rings. [33] Centering member of the friction disc clutch () 0213. [34] Pointer Indicator (). 0132C.

2.2. Additional device

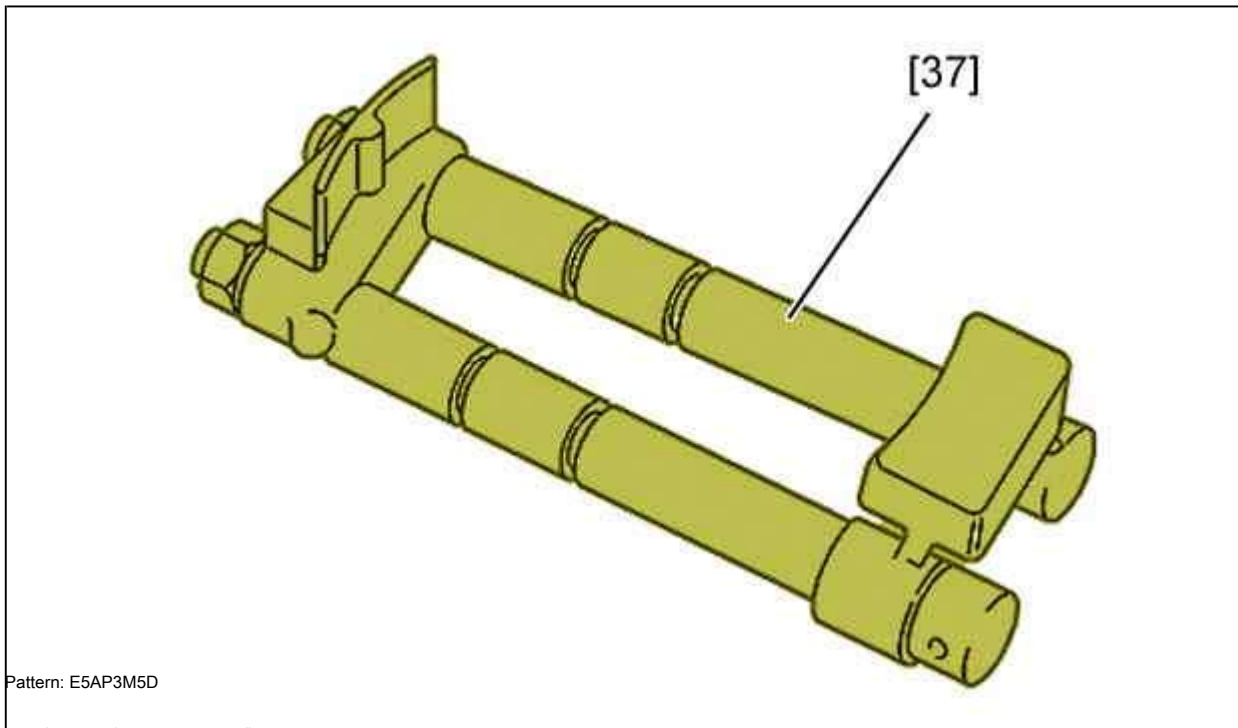


[35] Oil pressure connection (). 1503J.

NOTE: The toolbox, supplemented in this way, becomes () .1503ZU.

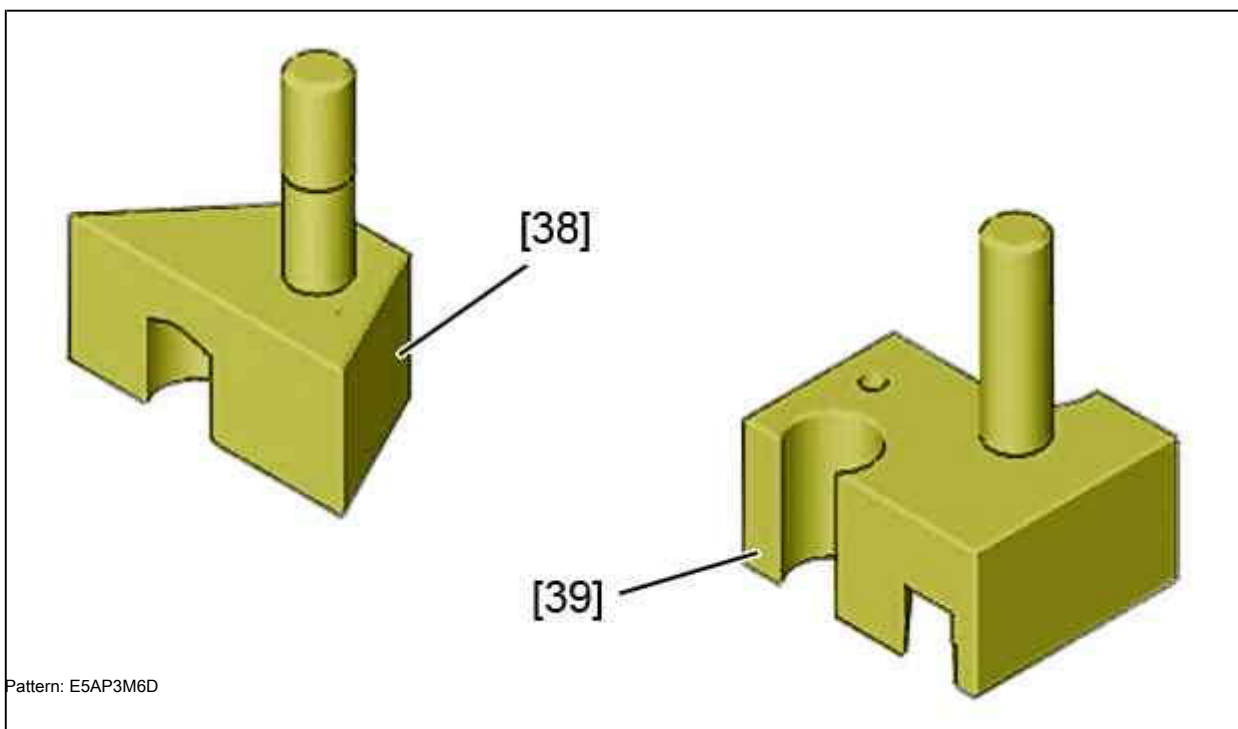


[36] Long head 8 mm for tightening the glow plugs (). 1253B.

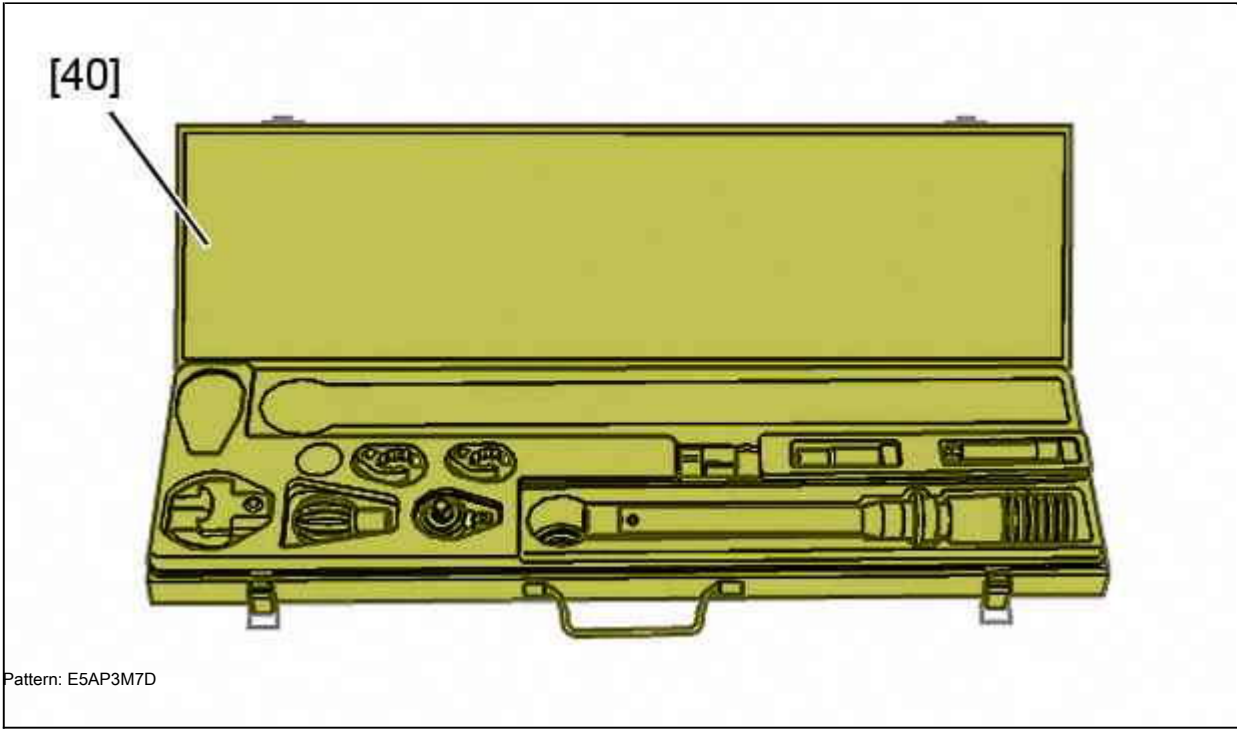


[37] Camshaft gear retainer (). 0191M.

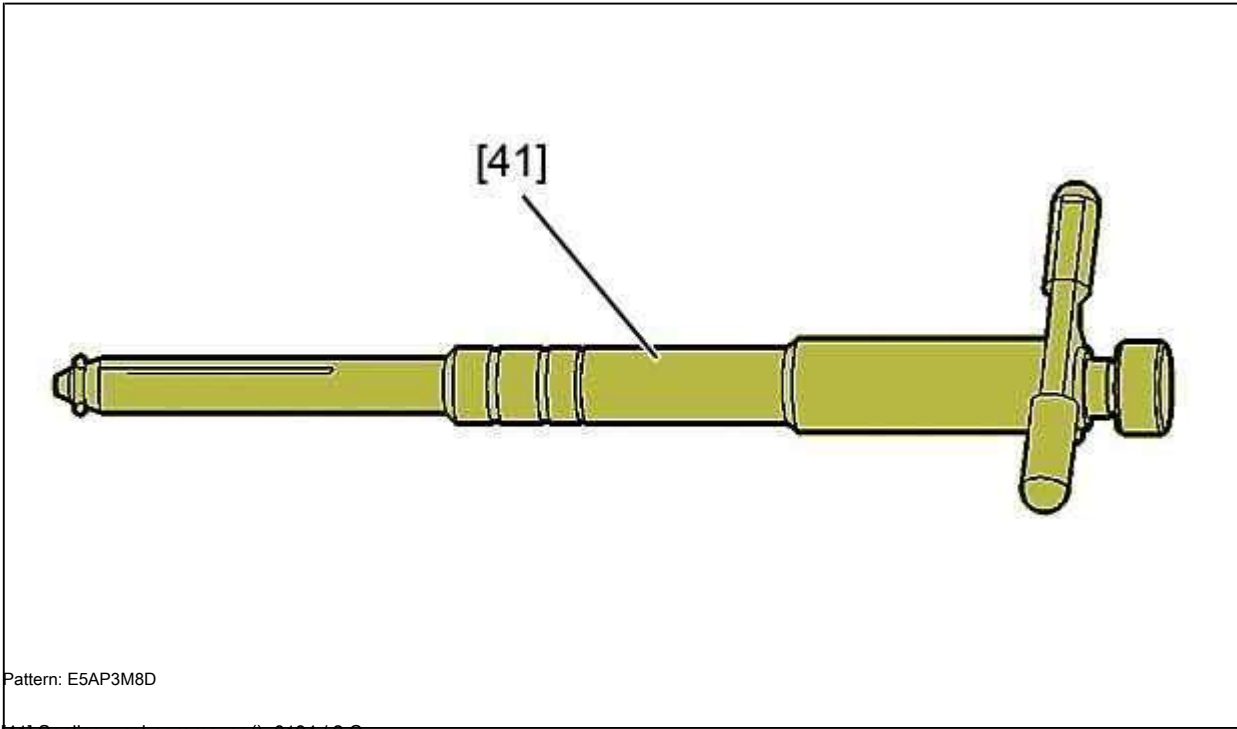
2.3. Diesel high pressure fittings

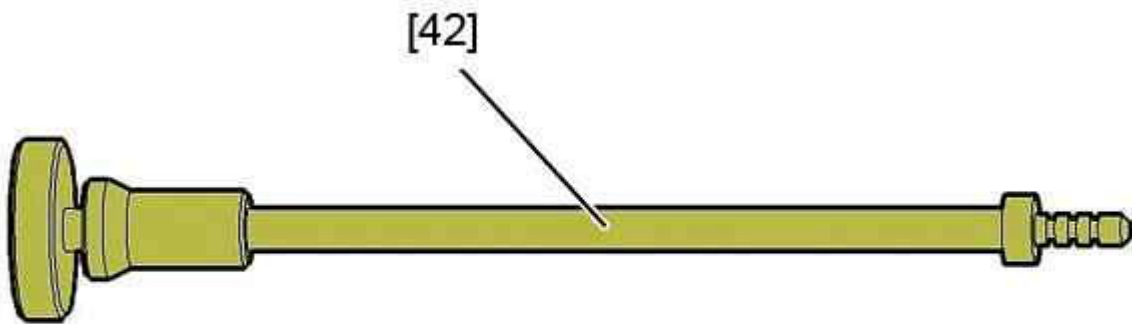


[38] Gasket for positioning the injector tubes 0194.V1. [39] Gasket for positioning the injector tubes 0194.V2.



Label Designation		room (reference)	room (reference)
[40]	Torque tool box for diesel high pressure fuel circuit	4220T	() .1603





Pattern: E5AP3M9D

[42] Diesel Injector Well Cleaner () .0194 / 2.D.

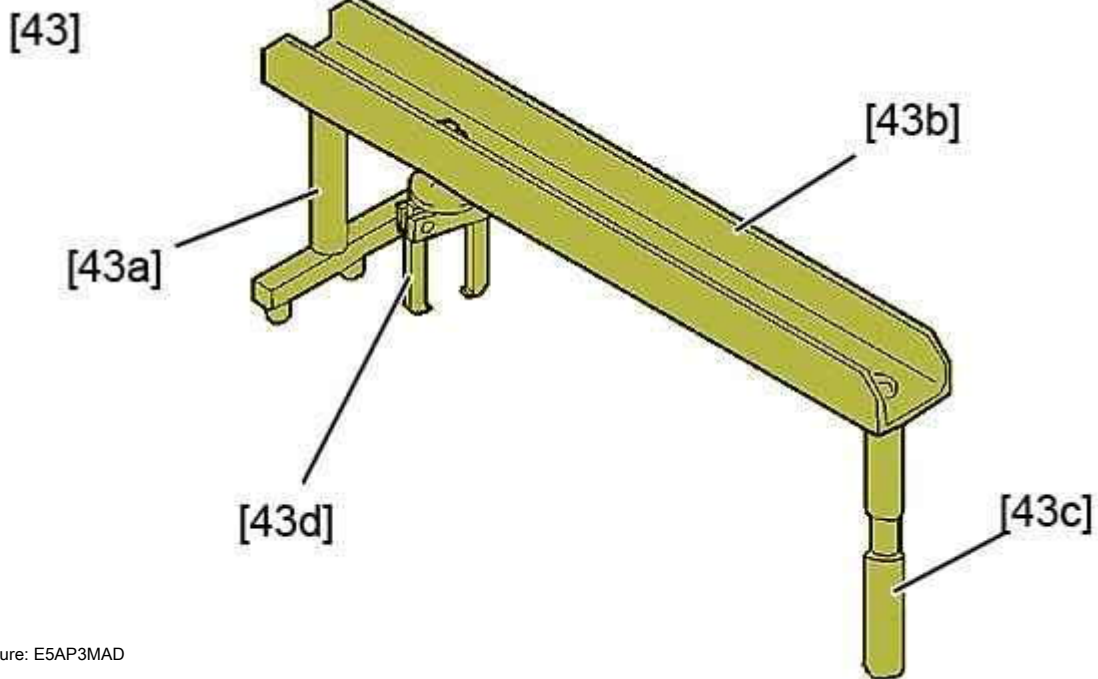
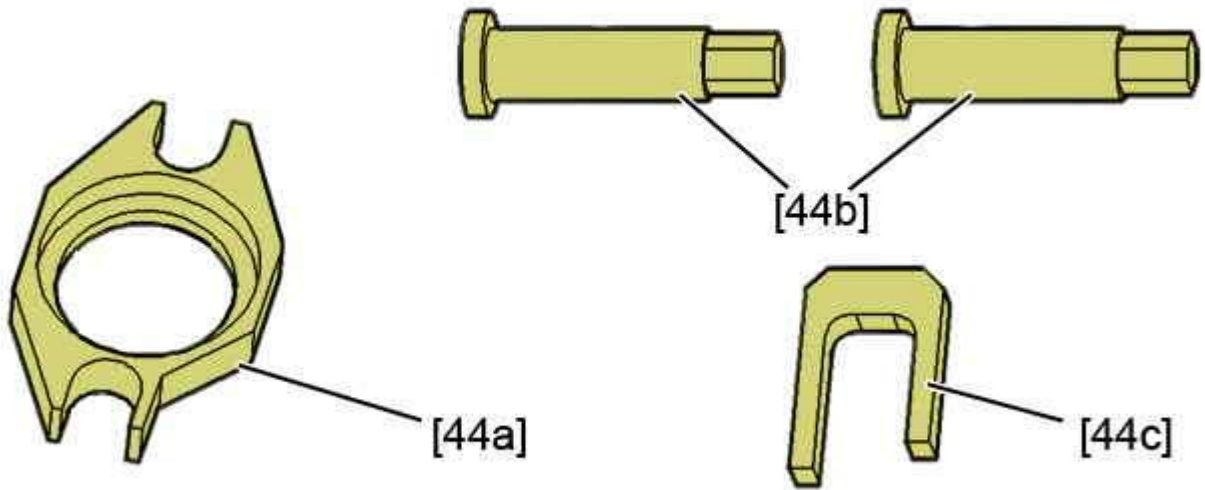


Figure: E5AP3MAD

[43] Diesel injector removal kit () .1616.A / B / C1 / C2.

3. Special attachments for the DV4TED4 engine

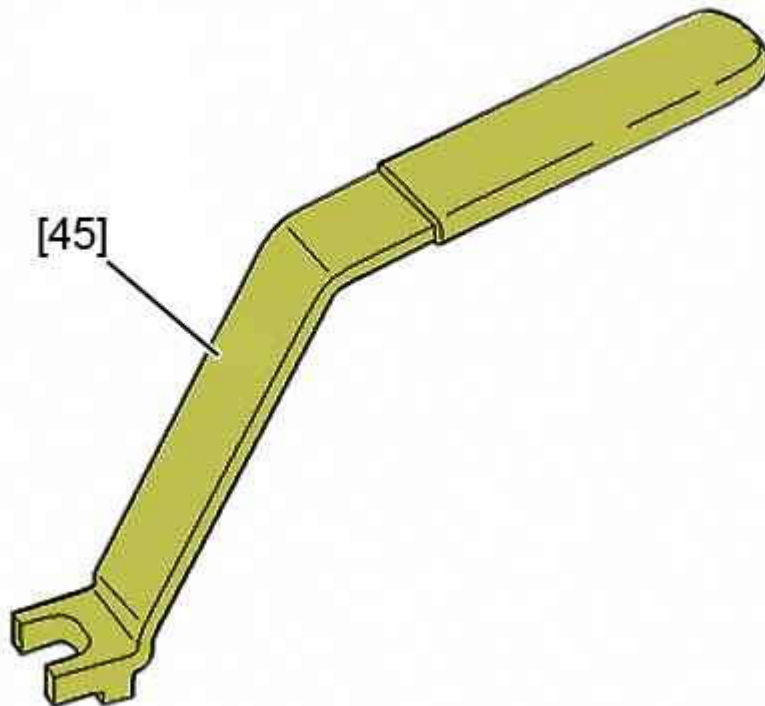
[44]



Pattern: E5AP3MBD

[44] puller of elements of the fuel injection system (). 0194 / 2.B (Engine DV4TED4).

- [44a] clamp () .0194 / 2.B1
- [44b] mounting studs () .0194 / 2.B2
- [44c] diesel injector stopper () .0194 / 2.B3



Pattern: E5AP3MCD

[45] a device for orienting the elements of the diesel fuel injection system (). 0194 / 2.A (DV4TED4 engine).

TECHNICAL REMINDER: ENGINE OIL QUANTITY

ATTENTION : Check the oil level regularly using the dipstick.

NOTE: Oil change intervals: See Maintenance Notes.

1. Gasoline engines

1.1. EW motors

engine's type	EW7A EW10A	EW7J4 EW10J4 EW12J4 EW12A	EW10D EW10J4S
Filling capacity of the lubrication system without replacing the filter element	4.75 liters 4 liters	5 liters	5 liters
Filling capacity of the lubrication system with replacement filter element		4.25 liters	5.25 liters
The difference in capacities between the minimum maximum positions of the oil level sensor	1.7 liters 1.7 liters		1.5 liters
1.2. Engines EP3 EP3C EP6 EP6C EP6CB EP6DT EP6DTS EP6CDT EP6CDTM EP6CDTX			

Refueling tank for the lubrication system without replacing the filter element	4 liters
Refilling tank for the lubrication system with replacing the filter element	4.25 liters
Capacitance difference between the minimum maximum positions of the level sensor 1.2 liters oils	
1.3. Engines 4B11 4B12	

	SFZ SFY AFZ
Refueling tank for the lubrication system without replacing the filter element	4.25 liters 4 liters
Refilling tank for the lubrication system with replacing the filter element	4.5 liters 4.3 liters
The difference in capacities between the minimum maximum positions of the oil level sensor	
1.4. Engine 384F	

Filling capacity of the lubrication system without replacing the filter element	2.75 l
Filling capacity of the lubrication system with replacement of the filter element	3 l
The difference in capacities between the minimum maximum positions of the oil level sensor 1 l	
1.5. ES9 motors	

engine's type	ES9J4S	ES9A ES9J4 ES9A
Permitted engine type	XFX	XFV XFU XFX XFW

Filling capacity of the lubrication system without replacing the filter element	5 liters	4.5 liters	4.25 liters
Filling capacity of the lubrication system with replacement of the filter element	5.25 liters	4.75 liters	4.5 liters
The difference in capacities between the minimum maximum oil level sensor positions	2 liters		
1.6. EngineET3J4			

Filling capacity of the lubrication system without replacing the filter element **2.75 l**

Filling capacity of the lubrication system with replacement of the filter element	3 l
The difference in capacities between the minimum maximum positions of the oil level sensor 1,5 l	
1.7. Engines TU1 TU3	

Filling capacity of the lubrication system without replacing the filter element **2.75 liters**

Filling capacity of the lubrication system with replacement of the filter element	3 liters
Capacitance difference between the minimum maximum positions of the level sensor 1.5 liters	
oils	
1.8. Engines TU5 TU9M	

Refueling tank for the lubrication system without replacing the filter element Refilling tank for the lubrication system with replacing the filter element **3 liters**
3.25 liters

Capacitance difference between the minimum maximum positions of the level sensor 1.5 liters	
oils	

2. Diesel engine

2.1. Motors DV4TD DV4TED

Filling capacity of the lubrication system without replacing the filter element **3.25 liters**

Filling capacity of the lubrication system with replacement of the filter element	3.75 liters
Capacitance difference between the minimum maximum positions of the level sensor 1.8 liters	
oils	
2.2. Motors DV4C DV6A DV6AU DV6B DV6BU DV6TED4 DV6C DV6CM DV6DTED DV6DBM DV6ETED	

Filling capacity of the lubrication system without replacing the filter element **3.25 liters**

Filling capacity of the lubrication system with replacement of the filter element	3.75 liters
Capacitance difference between the minimum maximum positions of the level sensor 1.5 liters	
oils	
2.3. EngineDV6UTED4	

Filling capacity of the lubrication system without replacing the filter element **4.75 liters**

Filling capacity of the lubrication system with replacement of the filter element	5 liters
Capacitance difference between the minimum maximum positions of the level sensor 1.5 liters	
oils	

2.4. Motors DW10TD DW10ATED4

Refueling tank for the lubrication system without replacing the filter element Refilling tank for the lubrication system with replacing the filter element

4.5 liters
4.75 liters

Capacitance difference between the minimum maximum positions of the level sensor 1.4 liters oils

2.5. Motors DW10BTED4 DW10UTED4

Refueling tank for the lubrication system without replacing the filter element Refilling tank for the lubrication system with replacing the filter element

5 liters
5, 25 liters

Capacitance difference between the minimum maximum positions of the level sensor 2 liters oils

2.6. Enginedw10cted4

NumberOPR Before11918 S 11919

Color: oil dipstick

A pen : A pen :

	Yellow	Orange
engine's type	DW10CTED4	
Permitted engine type	RHDRHERHH	
Filling capacity of the lubrication system without replacing the filter element	5.25 liters 4.75 liters	
Filling capacity of the lubrication system with replacement of the filter element	5.5 liters	5 liters
The difference in capacities between the minimum maximum oil level sensor positions	1.7 liters	1 liter
2.7. Engines DW10CD DW10DTED4		

engine's type DW10CD DW10DTED4

Permitted engine type	AHZ AHY RHB	
Filling capacity of the lubrication system without replacing the filter element 4.75 liters		
Filling capacity of the lubrication system with replacement of the filter element	5 liters	
The difference in capacities between the minimum maximum positions of the oil level sensor	1 liter	
2.8. Motors DW12C DW12TED4 DW12BTED4 DW12UTED DW12MTED4		

Beginning with
04/2011

Filling capacity of the lubrication system without replacing the filter element	5 liters 4.6 liters	
Filling capacity of the lubrication system with replacement of the filter element 5.25	liters	4.85 liters
Capacitance difference between minimum maximum positions 1.7 liters oil level sensor		
2.9. Engine F30DTE		

RatesEuro RatesEuro

4 five

Filling capacity of the lubrication system without replacing the filter element 6 liters		8 liters

Filling capacity of the lubrication system with replacement of the filter element	7 liters	9 liters
Capacitance difference between minimum maximum positions	1 liter	1 liter
oil level sensor		
2.10. EngineDT17ted4		

Designation	At the expense of gravity	At the expense of suction
Filling capacity of the lubrication system without replacing the filter element	5.25 liters	5.5 liters
Filling capacity of the lubrication system with replacement of the filter element	5.5 liters	5.75 liters
The difference in capacities between the minimum maximum oil level sensor positions	1.75 liters	1.75 liters
2.11. Engines F28D F28DT F28DTCR F28DTSE		

Designation	8140.63 8140.43	8140.23 8140.43 S
Filling capacity of the lubrication system without replacing the filter element	6 liters	7 liters
Filling capacity of the lubrication system with replacement of the filter element	4.7 liters	5.7 liters
The difference in capacities between the minimum maximum oil level sensor positions		
2.12. EngineDW8		

Designation	Without air conditioning Linear air pressure sensor liquid refrigerant	
Filling capacity of the lubrication system without replacing the filter element	4.5 liters	4.25 liters
Filling capacity of the lubrication system with replacement filter element	4.75 liters	4.5 liters
The difference in capacities between the minimum maximum positions of the oil level sensor	1.5 liters	
2.13. EngineDT20C		

Designation	At the expense of gravity	At the expense of suction
Filling capacity of the lubrication system without replacing the filter element	6.1 liters	6.35 liters
Filling capacity of the lubrication system with replacement of the filter element	6.25 liters	6.5 liters
The difference in capacities between the minimum maximum oil level sensor positions	1.75 liters	
2.14. Engine2,3 SOFIM		

Filling capacity of the lubrication system without replacing the filter element	5.9 liters
Filling capacity of the lubrication system with replacement of the filter element	6.5 liters
Capacitance difference between the minimum maximum positions of the level sensor oils	

2.15. EnginePUMA 2.2 DTE

Permitted engine type

4HV 4HU 4HM

Refueling tank for the lubrication system without replacing the filter element	5.75 liters		
Refilling tank for the lubrication system with replacing the filter element	6 liters		
The difference in capacities between the minimum maximum positions of the oil level sensor	1.5 liters		
2.16. Engine F13DTE			

Refueling tank for the lubrication system without replacing the filter element
Refilling tank for the lubrication system with replacing the filter element

3 liters

3.2 liters

Capacitance difference between the minimum maximum positions of the level sensor oils	

1. Engine code



First 2 marks of the Engine Commercial designation CF

	384F	1,0 l 12V
HF	TU1	1.1 l
KF	TU3	1,4 l
K6		
KF	ET3	1.4 16V
NF	TU5	1.6 16V
N6		
SF	4B12	2.4 l 16V
8F	EP3	1.4 VTi 16V
5F	EP6	1.6 VTi 16V
		1.6 THP16V
6F	EW7	1,8 l 16V
RF	EW10	2,0 l 16V
3F	EW12	2.2 l 16V
XF	ES9	V6 3.0 l 24V
8H	DV4	1.4 l HDi
9H	DV6	1.6 l HDi
RH	DW10	2.0 HDi 16v
4H	DW12	2.2 HDi 16v
	P22DTE	2.2 HDi (Engine type puma)
F1	F30DT	3.0 HDi (Sofim type engine)

UH	DT17	2.7 HDi 24v
X8	DT20	3.0 HDi 24v

2. Gasoline engines

384F TU1

TU3

ET3

Permitted engine type	CFA	HFX / HFV	KFX K6D / K6F	K6E KFT KFW KFS KFU	
Displacement (cm3)	998	1124	1360		
Piston bore (mm) Piston stroke (mm)	71	72	75		
Maximum power: (kW, CEE) 50		44	55 54 53	54 55	65
Maximum power mode, rpm	6000	5500	5400 5300	5400 5200 5500	5250
Maximum torque: (dNm, CEE)	9.3	9.4	11.1 11.8		12 13.3
Maximum torque mode moment, rpm	3600	3300	3400 3300 3400	3300	3400 2800 3250
		TJ5		4B12 MMC	EP3

Permitted engine type	NFR NFZ N6A NFV NFU NFS	SFZ	8FS / 8FP	8FR
Displacement (cm3)	1587		2359	1397
Piston bore (mm) Stroke (mm)	78		88	77
	77		97	75
Maximum power: (kW, CEE) Maximum power mode, rpm	66 65 78 70 80 90	125	70	72
	5800 5600	5700 5800 6500	6000	
Maximum torque: (dNm, 13.2 13.5 14.2 13.5 14.7 14.3 23.2 CEE)				13.6
Maximum torque mode moment, rpm	2500 3000 4000	3000 4000 3750 4000		
	EP6 / EP6C	EP6DT / EP6CDT		EP6DTS

Permitted engine type	5FK 5FP / 5FJ	5FW / 5FS / 5FT	5FX / 5FN / 5FL 5F4 / 5FE	5FV / 5FR	5FM 5FY
Displacement (cm3)	1598				
Piston bore (mm) Piston stroke (mm)	77				
Maximum power: (kW, CEE)	72 84 88	103 110	115	120 128	
Maximum power mode, rpm	6000 5200	6000	5800 6000		
Maximum torque: 15.2 16 (dNm, CEE)			24		
Maximum torque mode 3500 4250 moment, rpm			1400		1600
		EP6CDTS EP6CDTX EW7A		EW10A	

Permitted engine type	5FU	5FU	6FZ 6FY RFN RFH RFJ 1749 1749
Displacement (cm3)	1598		1997

Piston bore (mm) Piston stroke	77	82.7 82.7 85
(mm)	85	81.4 81.4 88
Maximum power: (kW, CEE) Maximum power mode,	135	147
rpm	6000	5800
Maximum torque: (dNm, CEE)	25.5	27.5
Maximum torque mode,	1600	1700
rpm		
	EW12J4 ES9	

Permitted engine type	3FZ	XFW XfV
Displacement (cm3)	2230	2946
Piston bore (mm) Piston stroke	86	87
(mm)	96	82.6
Maximum power: (kW, CEE) Maximum power mode,	116	150 155
rpm	5650	6000
Maximum torque: (da.Nm, CEE) Mode of the maximum torque, rpm	3900	28.5 29
		3750

3. Diesel engines

	DV4					DV6		
Permitted engine type	8HT 8HX 8HS / 8HP /			8HZ 8HY		9HW 9HN /		9HT
	8HR					9HK		
Displacement (cm3)	1398					1560		
Piston bore (mm) Piston stroke	73					75		
(mm)	82					88.3		
Maximum power: (kW, CEE) Maximum power mode,	40	50			66	55		
rpm	4000					4000		
Maximum torque: (dNm, CEE)	13	fifteen	sixteen		sixteen	20	17.5	18.5
Maximum torque mode, 1750 rpm					2000 1750	1500	1750	
DV6								DW8

Permitted engine type	9HH /	9HF /	9HU 9HX /	9HP /	9HY /	9HL 9HR 9HG WJZ /	
	9HM	9HE	9HV	9HJ	9HZ		WJY
Displacement (cm3)	1560						1868
Piston bore (mm) Piston stroke	75						82.2
(mm)	88.3						88
Maximum power: (kW, 66 CEE)				68	80	82	84 51
Maximum mode power, rpm	4000						4600
Maximum torque moment: (dNm, CEE)	18	21.5	18	21.5	23	24	27 25.4 12.5
Maximum mode torque, rpm	1500		1750			1500 1750	2500
	DW10						

Permitted engine type	RHV RHY AHY RHS /				RHT RHG /		RHL AHZ RHJ RHR /	
	RHM				RHK		RHD	
Displacement (cm3)	1997							
Piston bore (mm) Piston stroke	85							
(mm)	88							

Maximum power: (kV, CEE)

62 66 72 79 80 88 93 94 100 100

Maximum power mode, rpm	4000									
Maximum torque: 19.2 20.5 26 (dNm, CEE)	25 27 thirty 32 32 27 32									
Maximum torque mode 1900 moment, rpm			1500 1750			2000				
	DW10					DW12				
Permitted engine type	RHF RHE RHH RHC					4HW 4HN / 4HP 4HR 4HT				
						4HK				
Displacement (cm3)	1997					2179				
Piston bore (mm) Piston stroke (mm)	85 88					85 96				
Maximum power: (kW, CEE) Maximum power mode, rpm	103 110 120 4000 3750 3850 3750					94 115 120 120 125 4000				
Maximum torque: (dNm, CEE)	32 34 thirty					31.4 38 37 40 37				
Maximum torque mode, 2000 rpm						1750 2000 1500 1750 1500				
	DW12 DT17 DT20					P22DTE F30DT				

Permitted engine type	4HS 4HL UHZ		X8Y X8Z		4HV / A 4HU / B		4HM 2179		F1CE0481D	
Displacement (cm3)			2720 2993 2993		2198				2998	
Piston bore (mm) Piston stroke (mm)	85 96		81 88		84 90		86 94.6		88 94	
Maximum power: (kW, CEE)	125 150				177 175		74 88 95		115	
Maximum power mode, rpm	4000 3500 4000 3800						2900 3500		3500	
Maximum torque: (dNm, CEE)	40 45 44		50 45		25 32				40	
Maximum torque mode moment, rpm	1750 2000 1900				1600 1500		2000		1700	

4. Electric motors

ION / CZéro

Partner / Berlingo
Venturi

Permitted engine type	ZKZ	
engine's type	Moteur synchrone triphasé	
Maximum power: (kW, CEE) Continuous power	49	42
	35	
Maximum power mode, rpm	2500 to 8000 min1 18	
Maximum torque: (da.Nm, CEE) Mode of the maximum torque, rpm 0 to 2000 min1		

TECHNICAL REMINDER: ADDITIVE FOR DIESEL PARTICLE FILTER

ATTENTION : It is forbidden to mix additives.

This document deals with after-sales service operations related to changes in DPF additives.

NOTE: This method only applies to vehicles with a rigid reservoir The additive should only be used on vehicles equipped with a particulate filter.

The DPX42 additive must be used on diesel vehicles equipped with a particulate filter up to OPR 9491.

ATTENTION : From OPR 9492; Use an additive that matches the color of the quick coupler of the additive tank filler.

Reminder:

- ~~Green quick coupling: Eolys176 additive (until stock is exhausted)~~
- Green quick coupling: Infineum additive F7995
- Blue quick coupling: Rhodia Powerflex additive
- White quick coupling: RhodiaDPX42 additive

1. Elastic belt for the ancillary drive

MANDATORY: Before removing and for subsequent use of the removed drive belt, the engine must be at ambient temperature (less than 30 °C); In all other cases:

Replace the ancillary drive elastic belt.

ATTENTION : Before removing, note the direction of rotation of the accessory drive belt.

ATTENTION : If reusing the ancillary drive belt, reinstall it in proper order.

ATTENTION : Make sure the rollers rotate freely (no looseness or jamming).

2. Visual inspection

Check for cracks and traces of oil and timing belt. Check for traces of oil leaks (crankshaft and camshaft oil seals). Check for coolant leaks (water pump).

Check that the engine speed sensor track is not damaged or cracked.

NOTE: Replace defective parts.

3. Gasoline engines

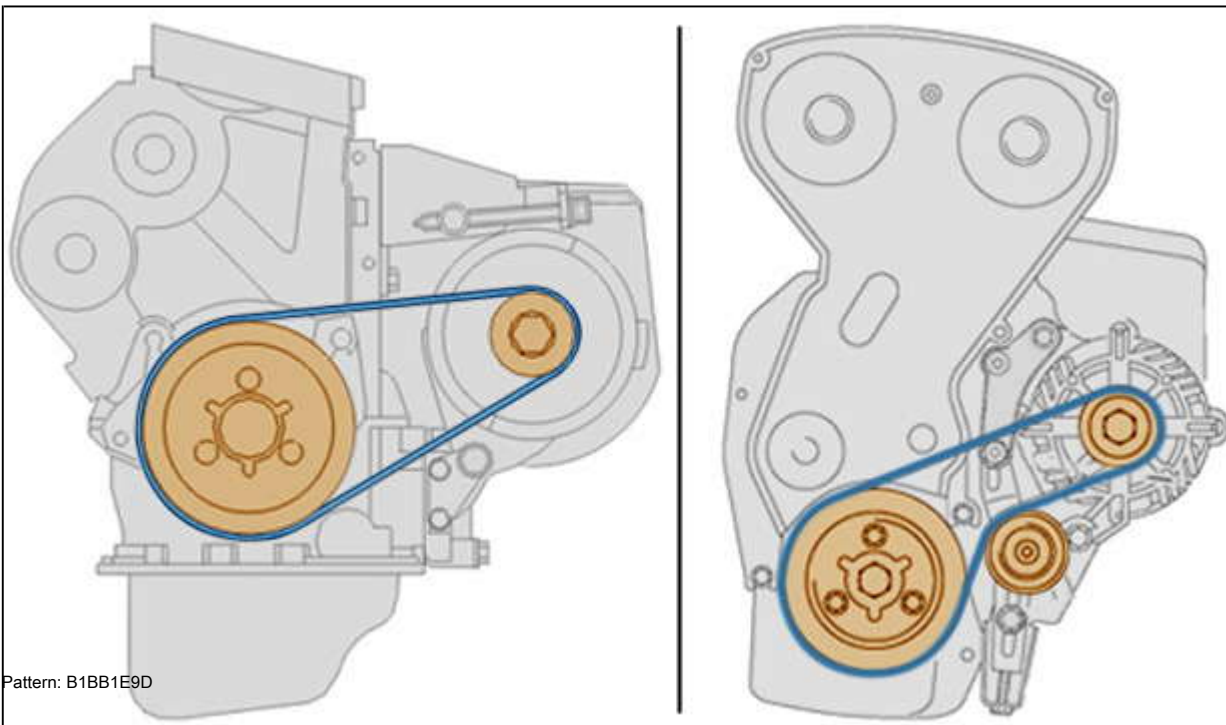
3.1. Engine 384F



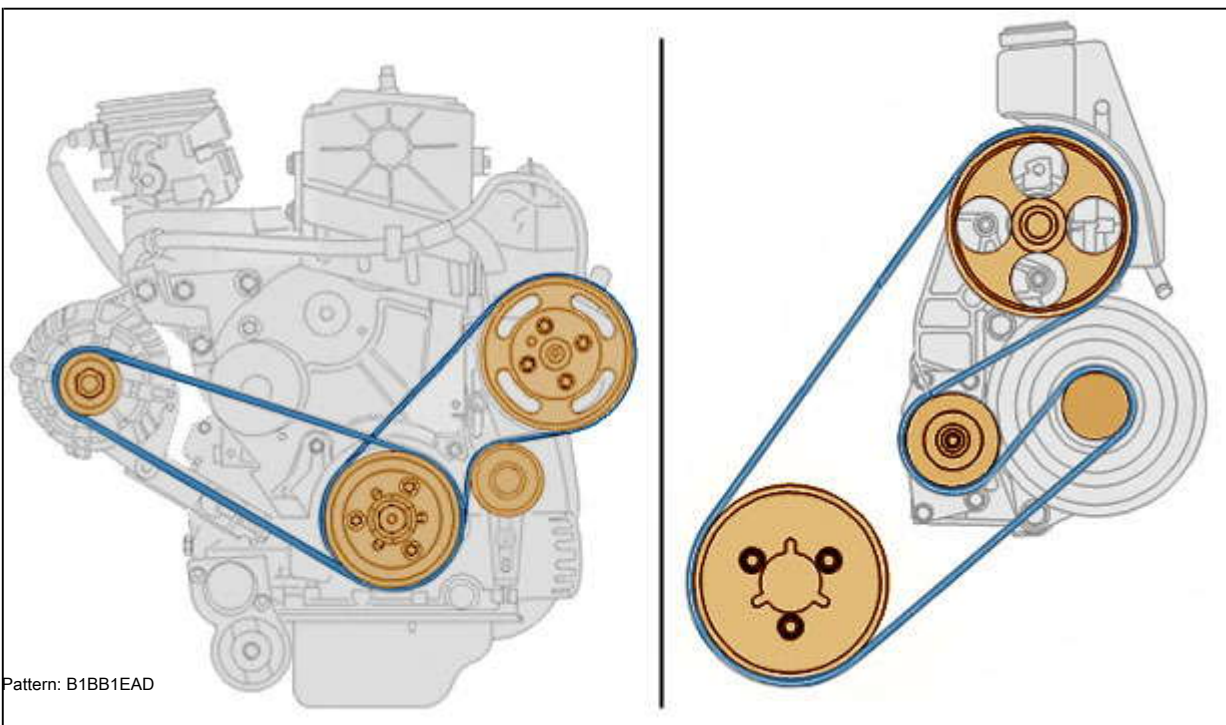
All types.

(1) Air conditioning compressor (depending on equipment level).

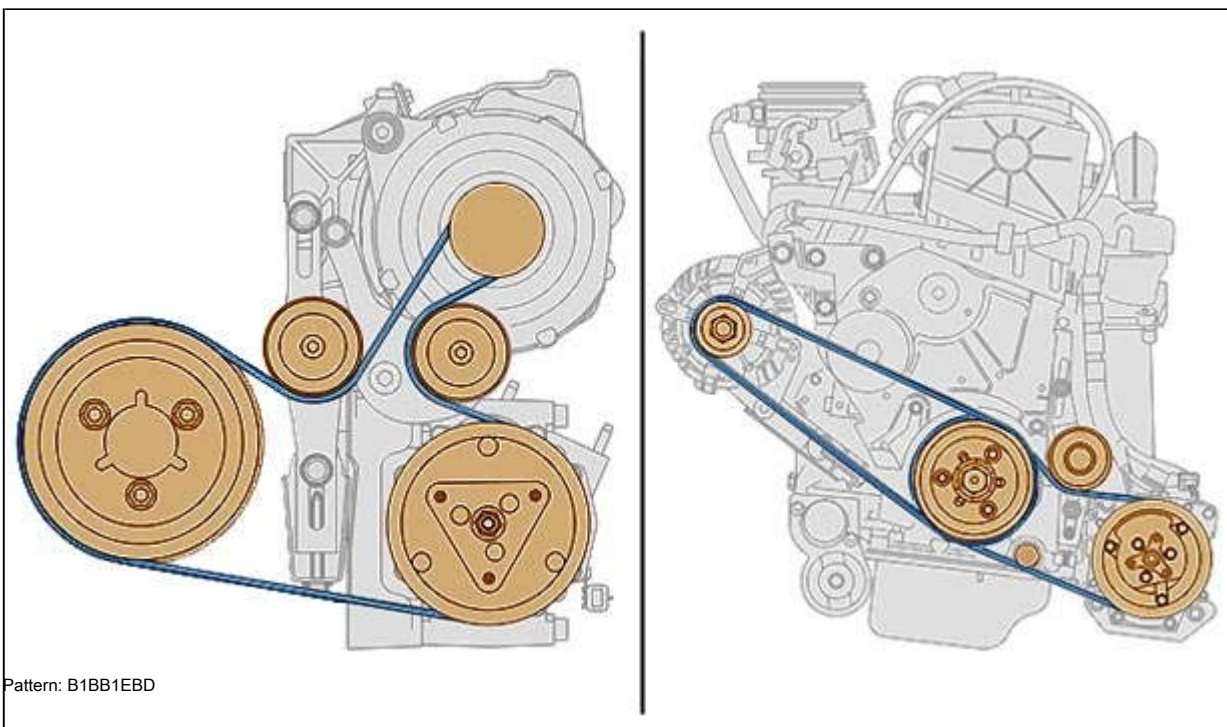
3.2. TU1 / TU3 / TU5 / ET3 motors



Without power steering and air conditioning.



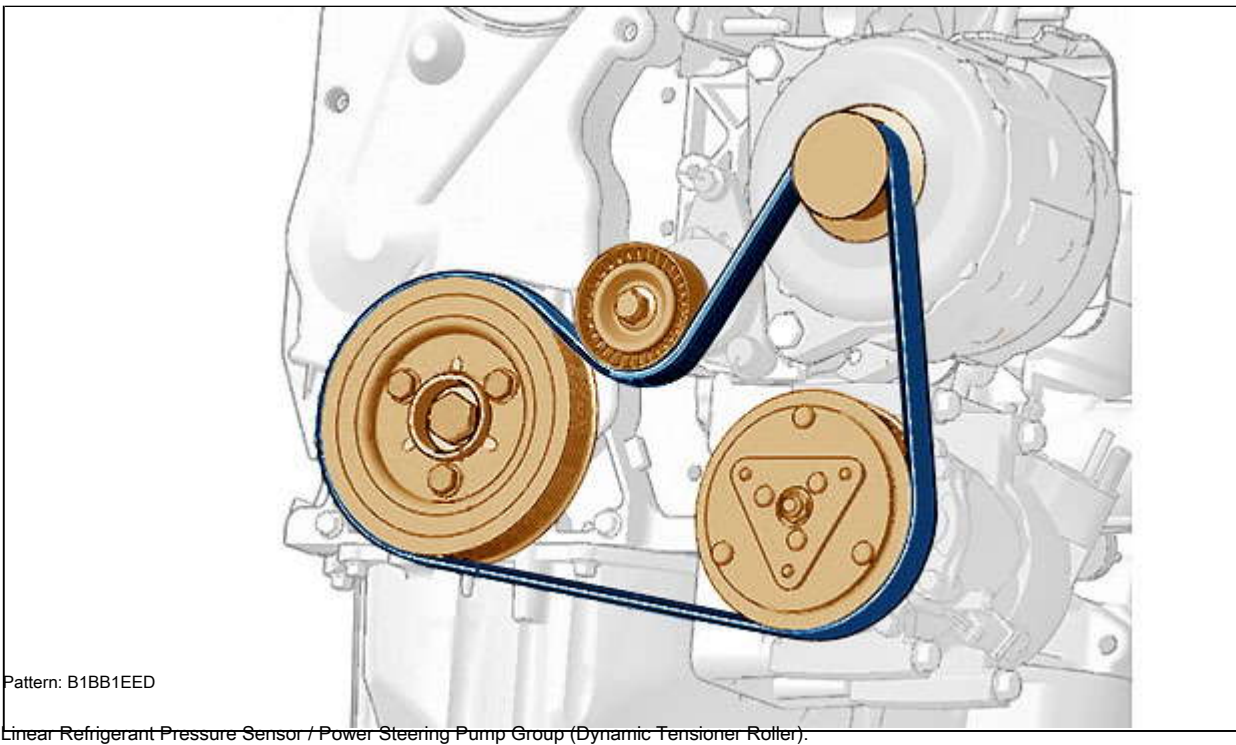
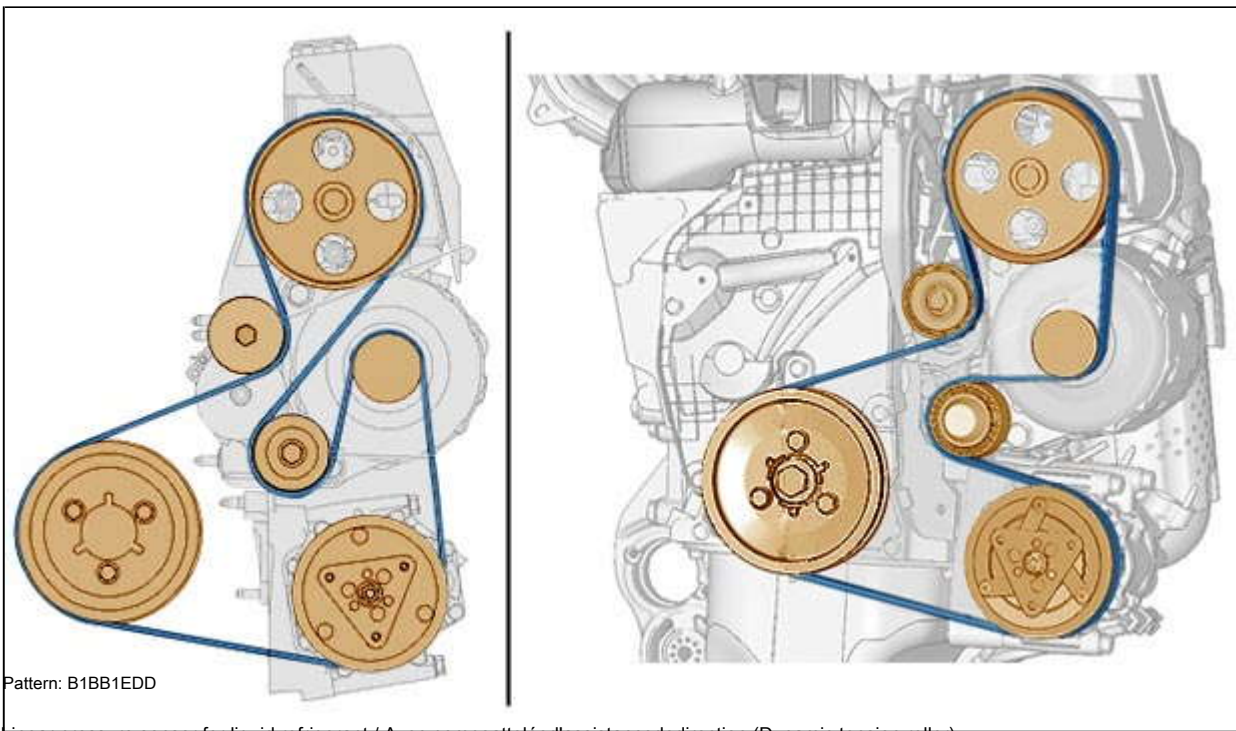
Without air conditioning / Avec pompe à l'huile d'assistance de direction.



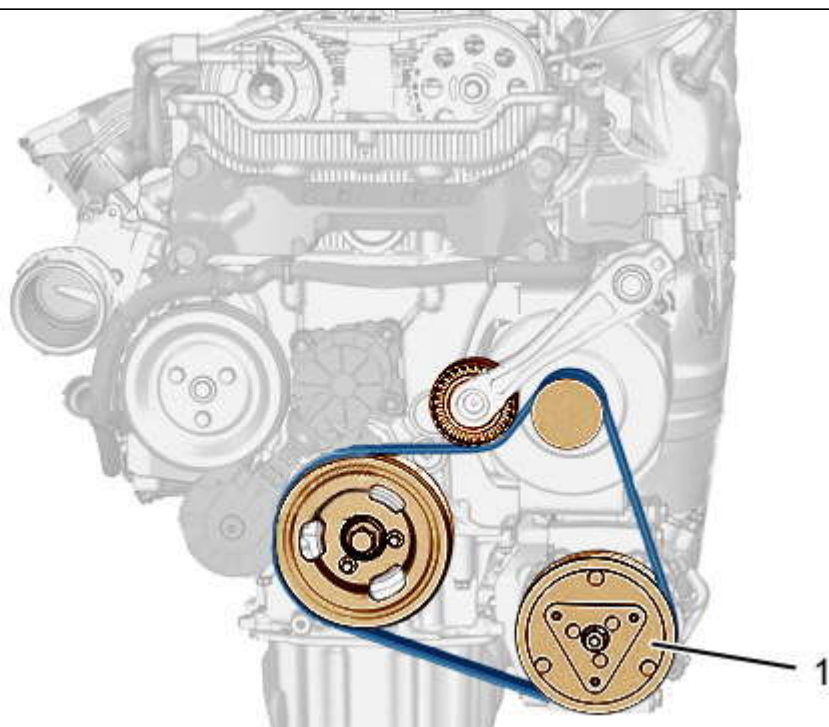
With air conditioning, but no power steering.



Linear pressure sensor for liquid refrigerant / Avec pompe à l'huile d'assistance de direction (Mechanical tensioner roller).



3.3. EP3 / EP6 engines

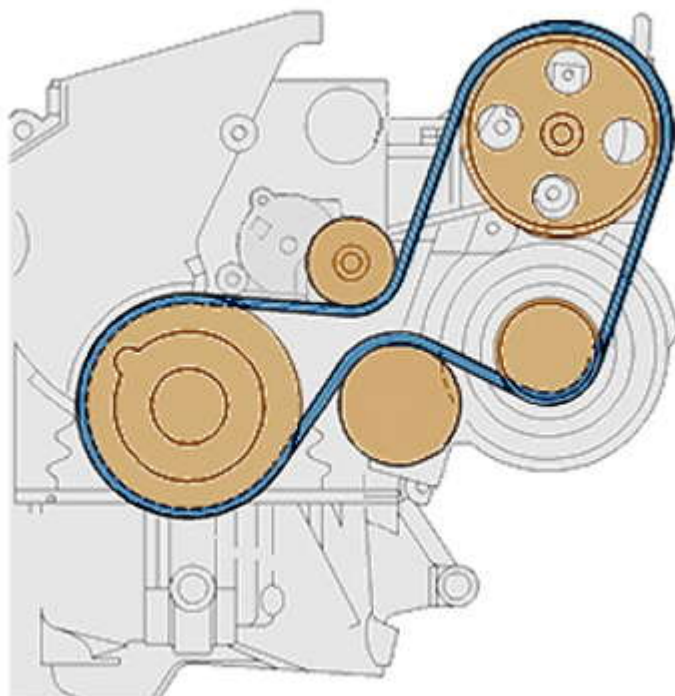


Pattern: B1BB1EFD

All types.

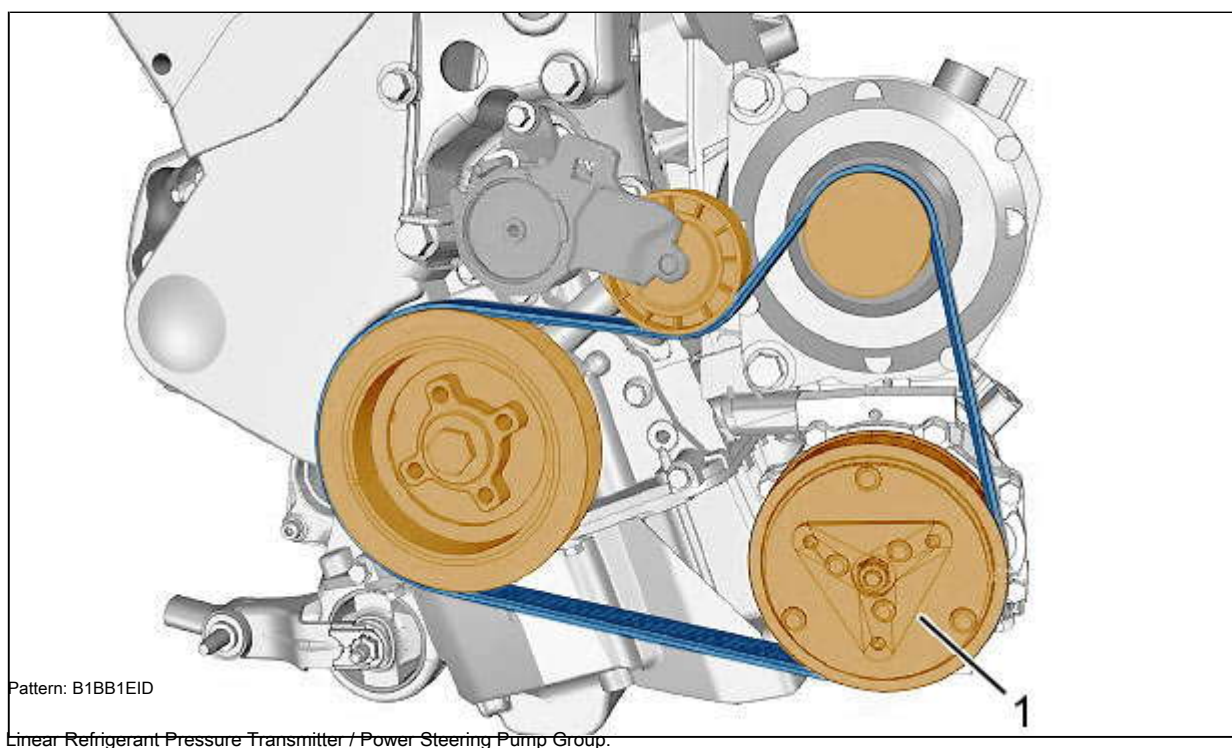
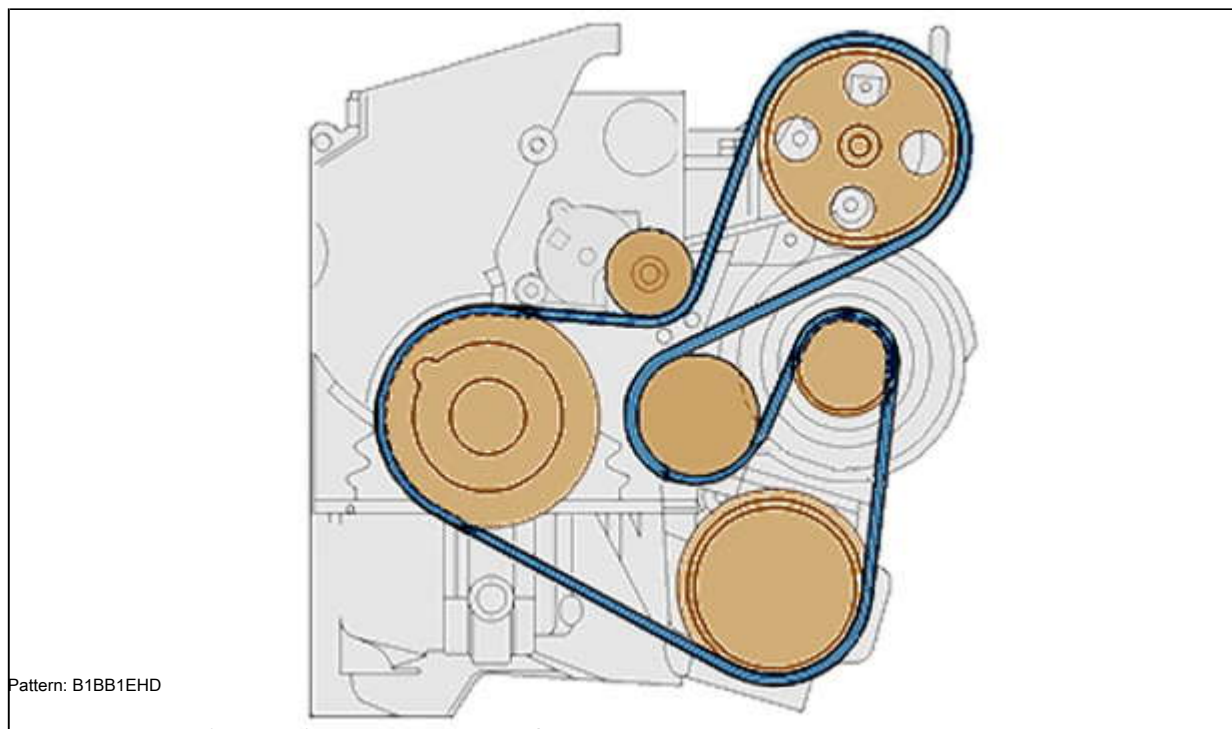
(1) Air conditioning compressor (depending on equipment level).

3.4. EW7 / EW10 / EW12 motors



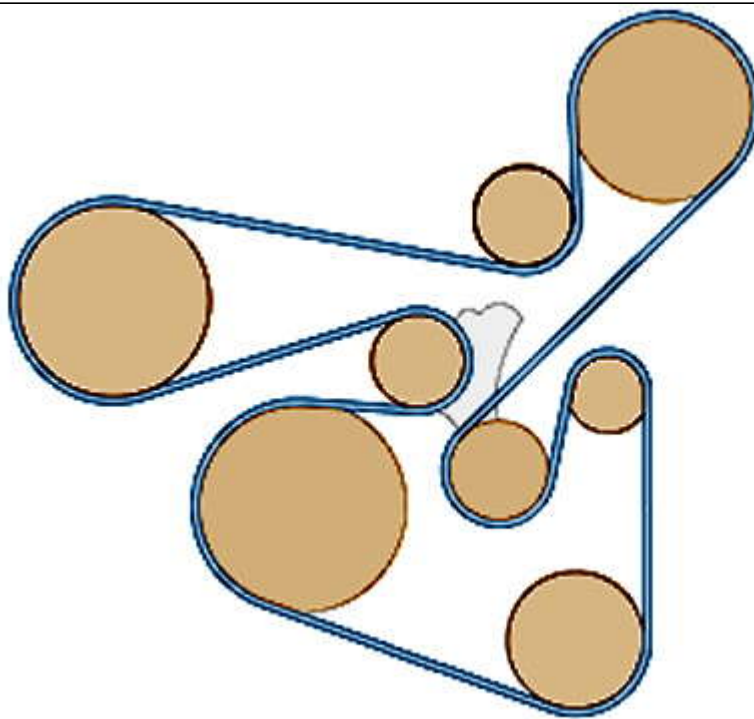
Pattern: B1BB1EGD

Without air conditioning / Avec pompe à huile assistée de direction.



(1): Air conditioning compressor (depending on equipment level).

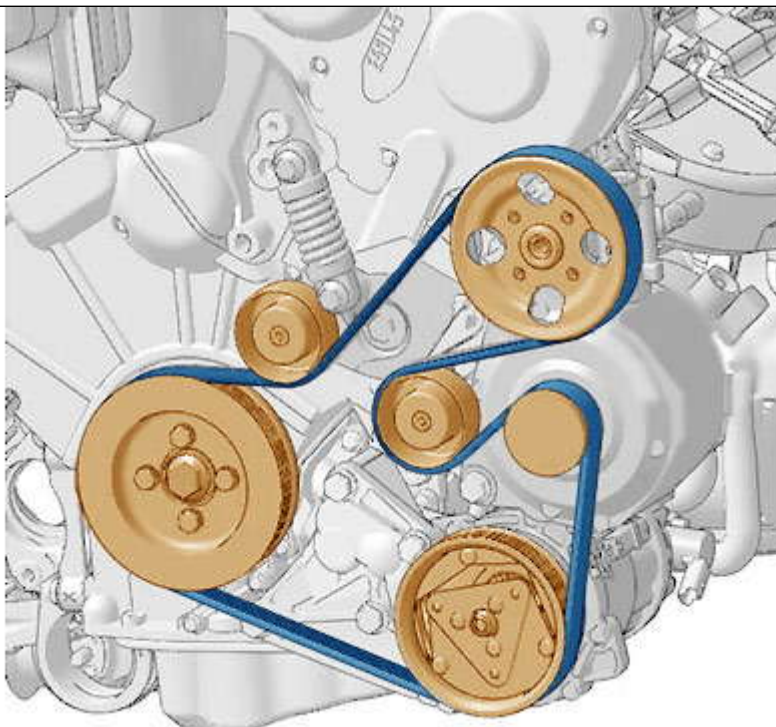
3.5. Engine 4B12



Pattern: B1BB1EJD

All types.

3.6. ES9 engine

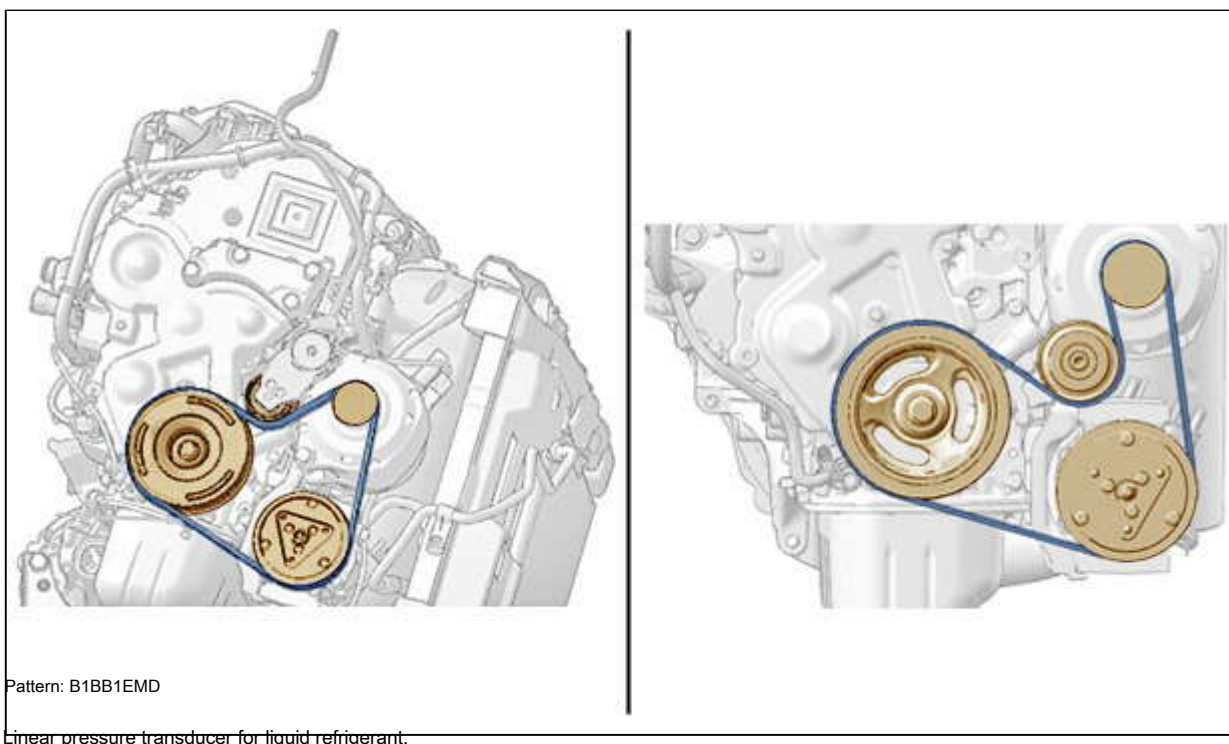
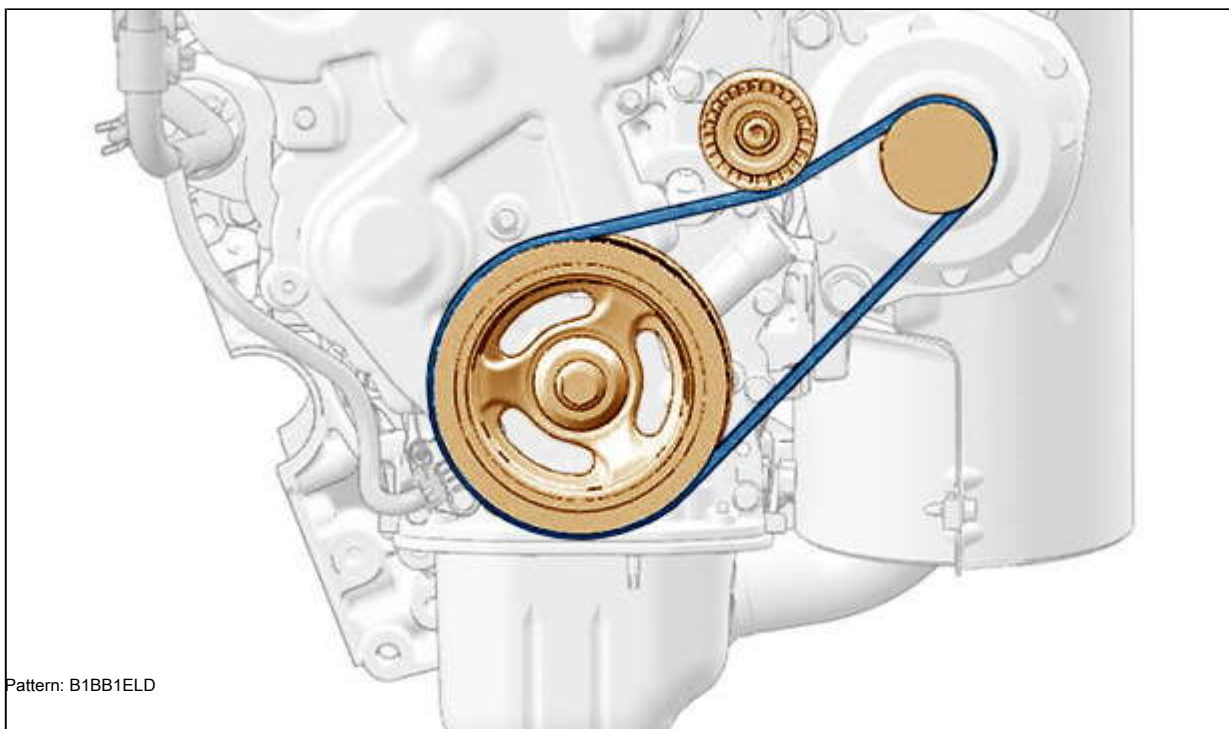


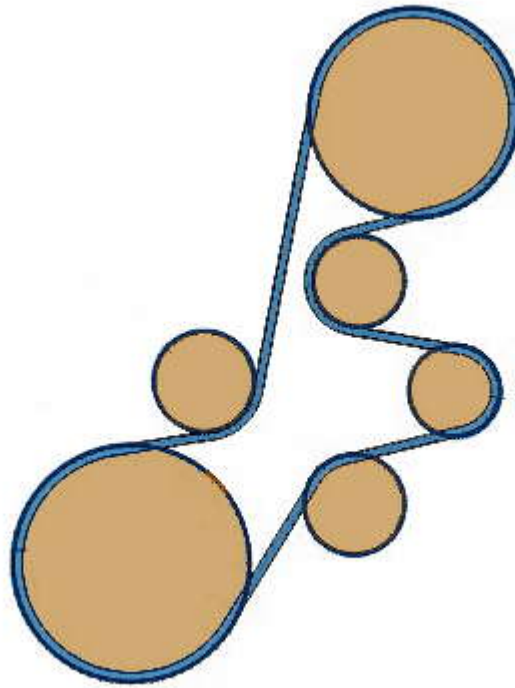
Pattern: B1BB1EKD

All types.

4. Diesel engines

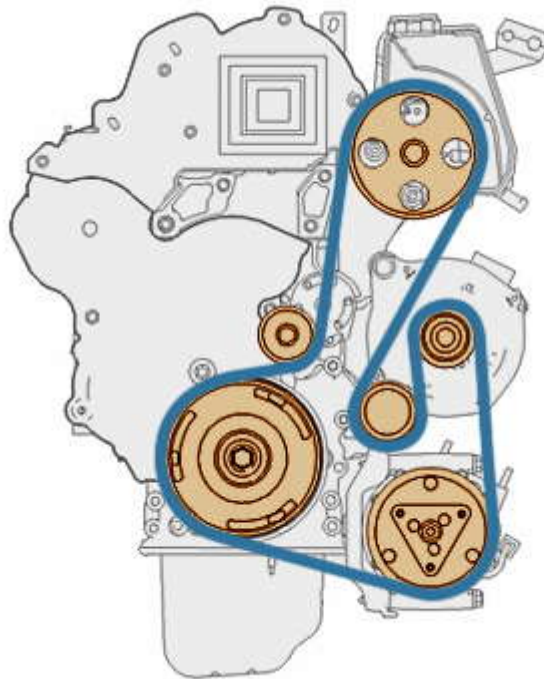
4.1. DV4 / DV6 engine





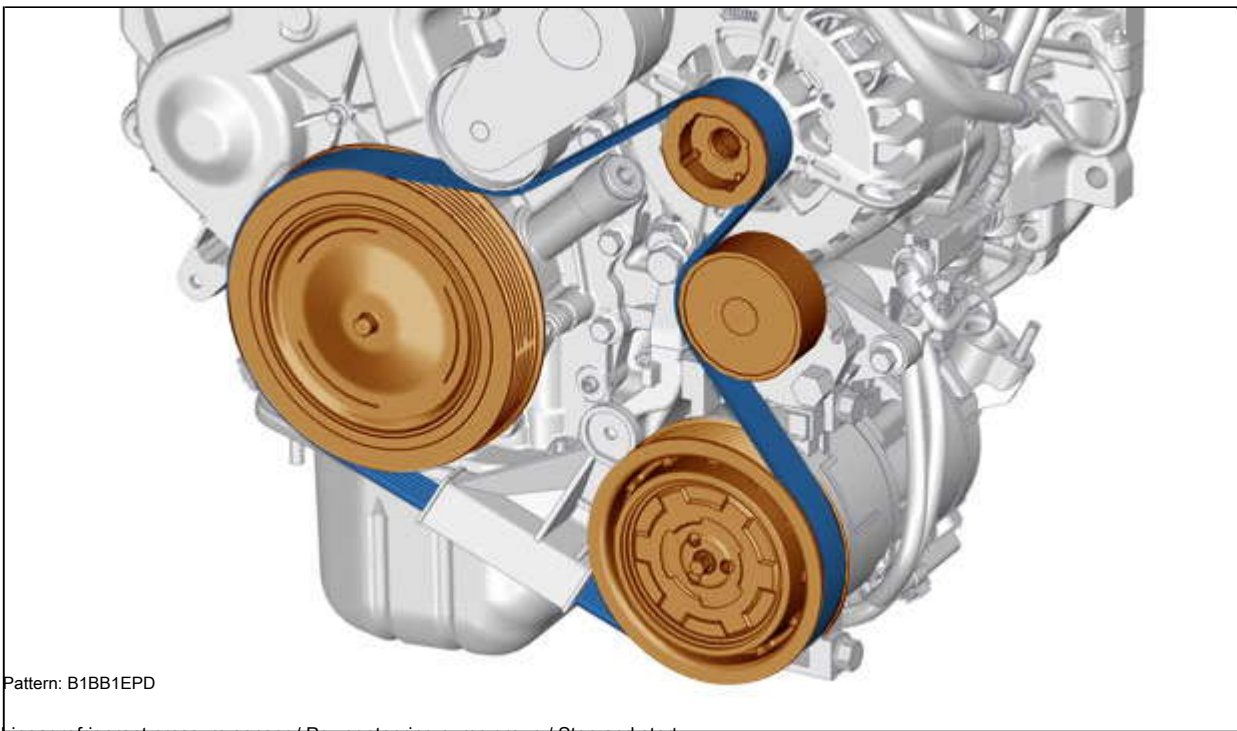
Pattern: B1BB1END

Without air conditioning / Avec pompe à froid assistée de direction.

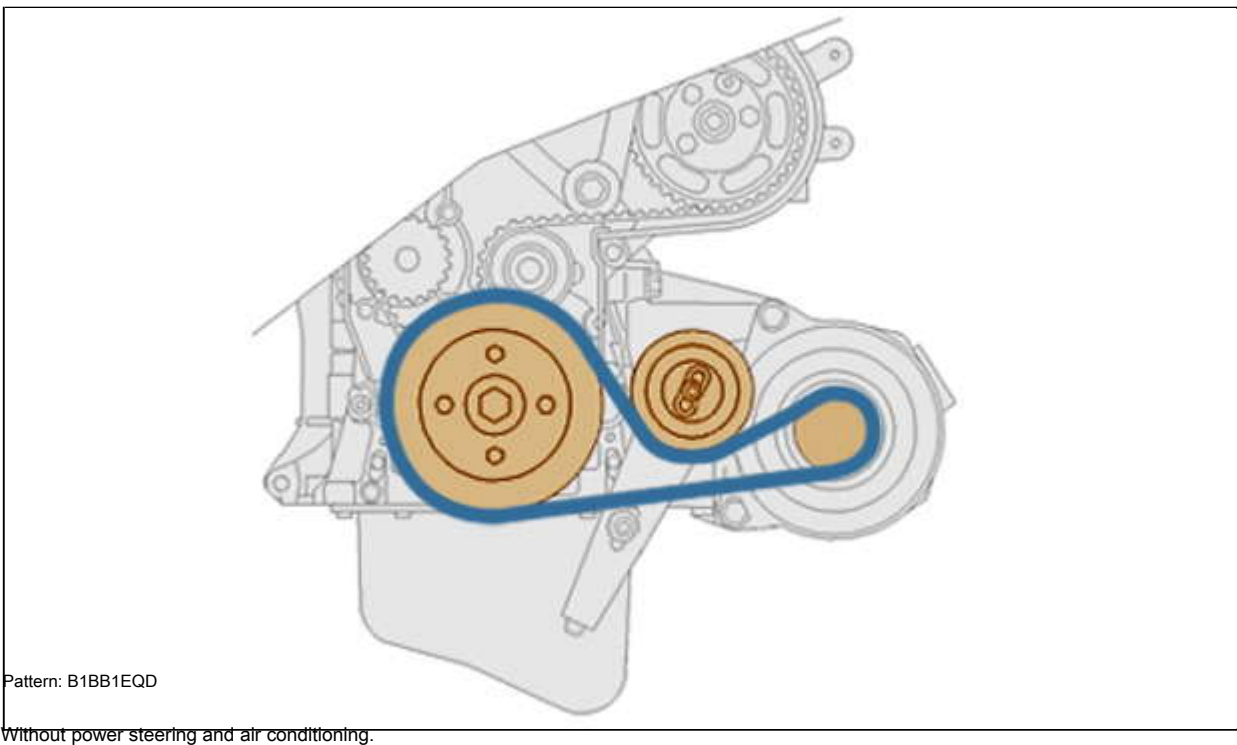


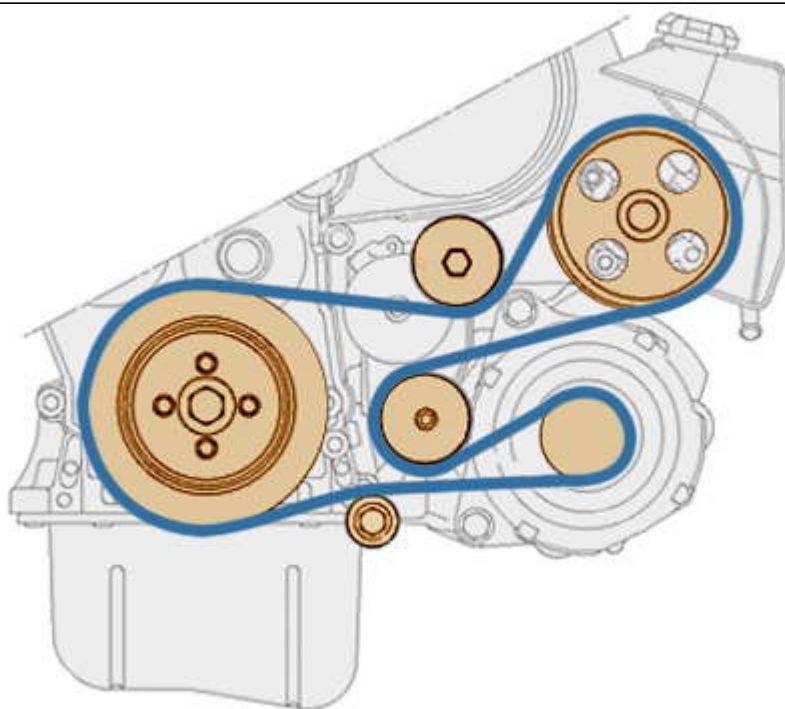
Pattern: B1BB1EOD

Linear pressure sensor for liquid refrigerant / Avec pompe à froid assistée de direction.



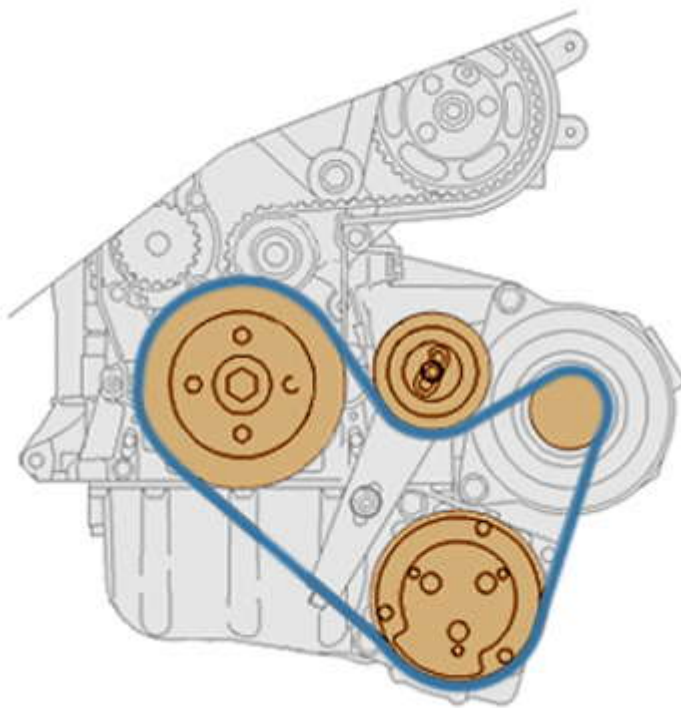
4.2. Motors DW8 / DW10 / DW12





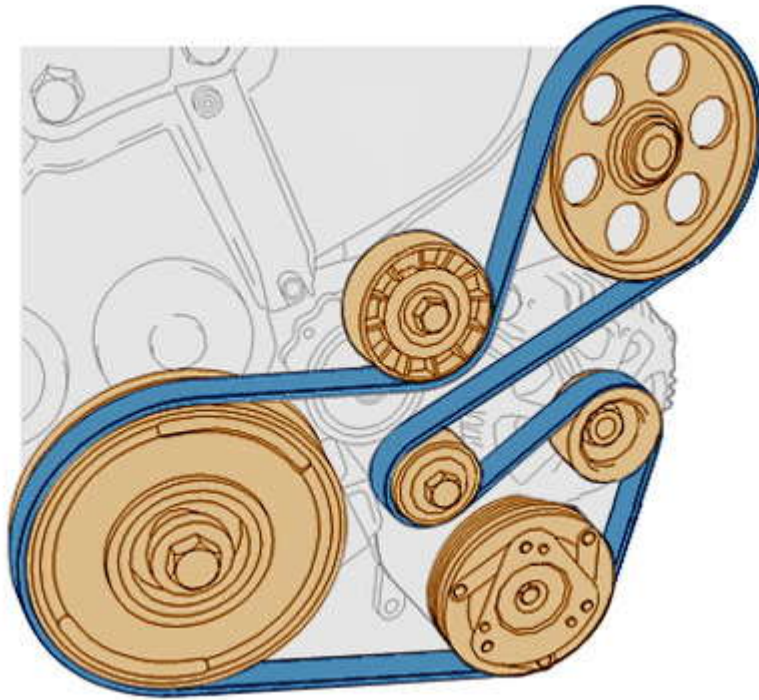
Pattern: B1BB1ESD

Without air conditioning / Avec pompe à téflé d'assistance de direction.



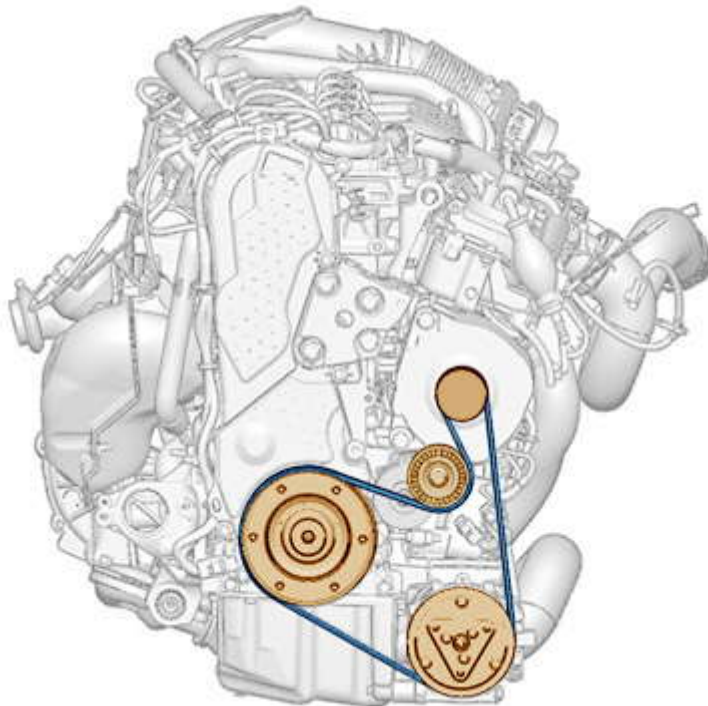
Pattern: B1BB1ETD

With air conditioning, but no power steering.



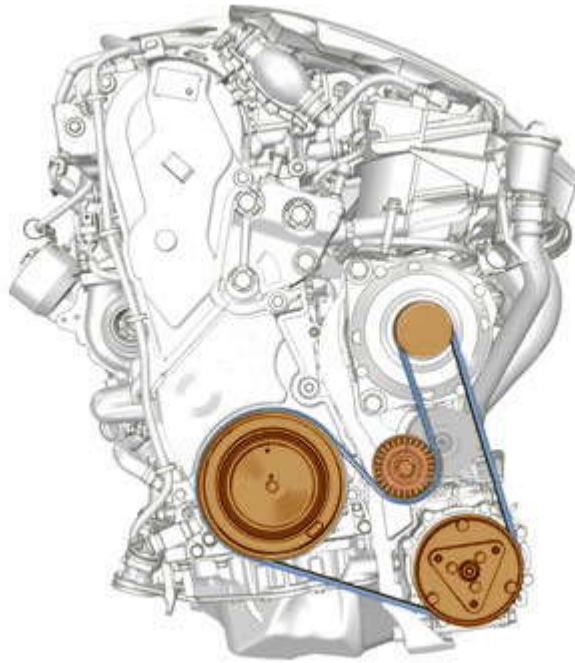
Pattern: B1BB1EUD

Linear pressure sensor for liquid refrigerant / Avec pompe attelée d'assistance de direction.



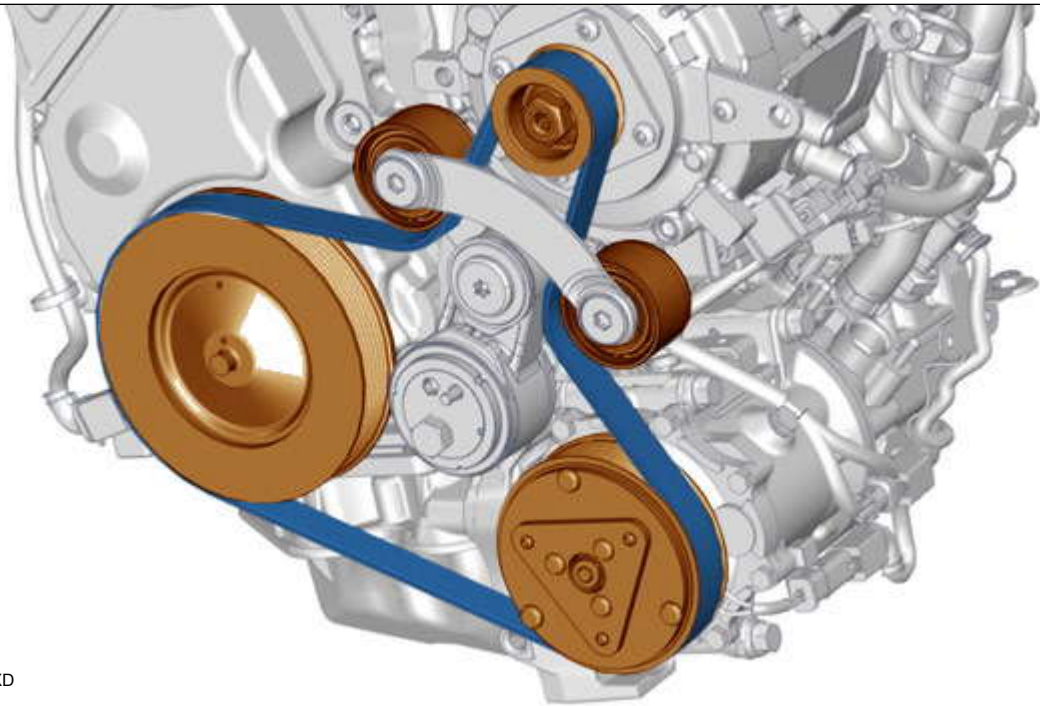
Pattern: B1BB1EVD

Linear Refrigerant Pressure Transmitter / Power Steering Pump Group.



Pattern: B1BB1EWD

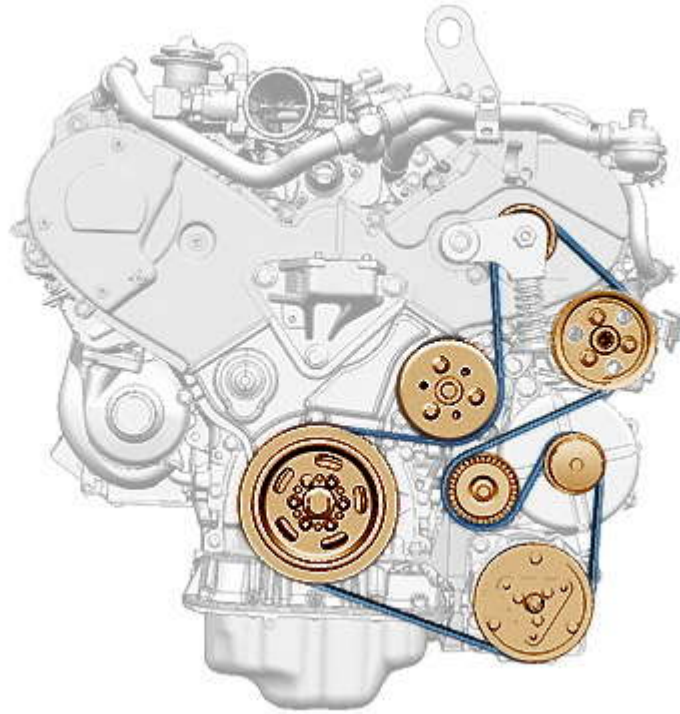
Linear Refrigerant Pressure Transmitter / Power Steering Pump Group.



Pattern: B1BB1EXD

Linear Refrigerant Pressure Sensor / Power Steering Pump Group / Hybrid.

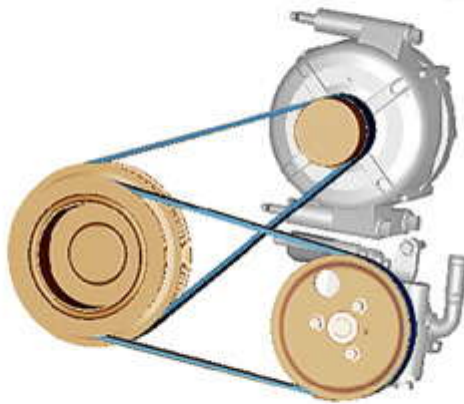
4.3. DT17 / DT20 engines



Pattern: B1BB1EYD

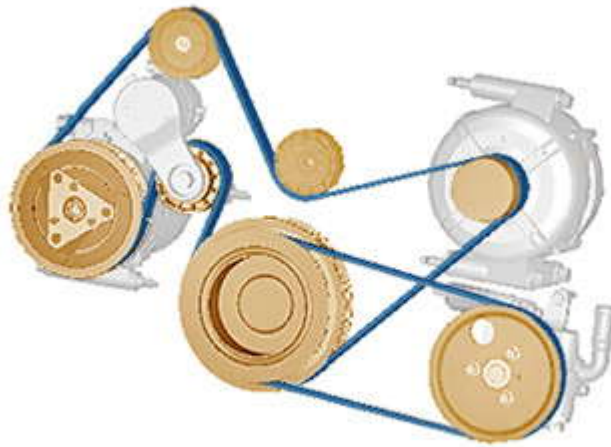
All types.

4.4. P22DTE engine



Pattern: B1BB1EZD

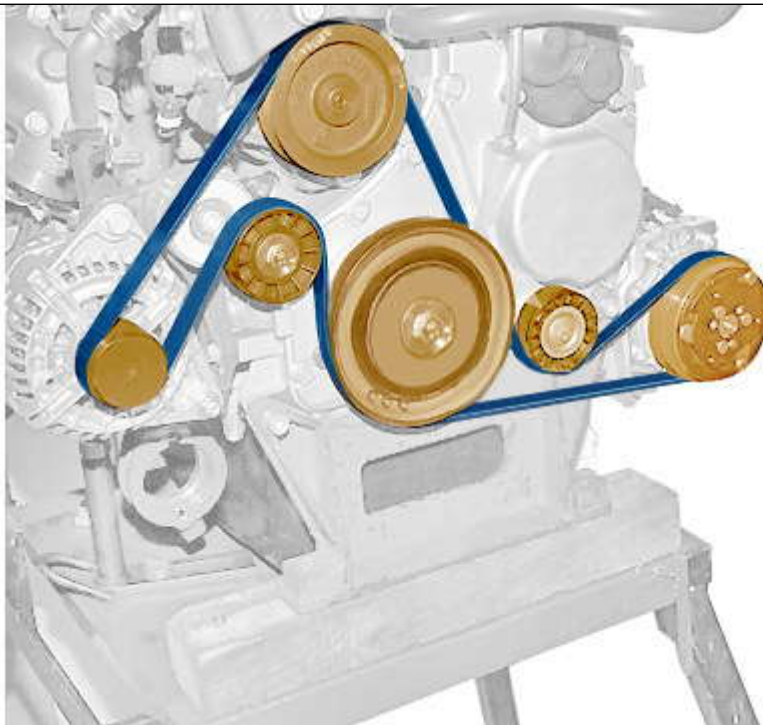
No air conditioner.



Pattern: B1BB1F0D

Linear pressure transducer for liquid refrigerant.

4.5. F30DT engine



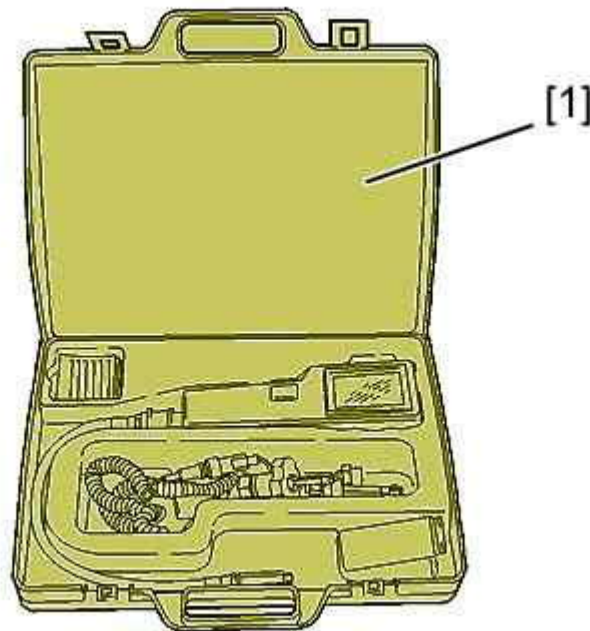
Pattern: B1BB1F1D

All types.

MANDATORY: Observe the cleanliness and safety rules



1. Tools



Pattern: E5AP2V9D

[1] Compressor MULLER 203 102100.

[2]

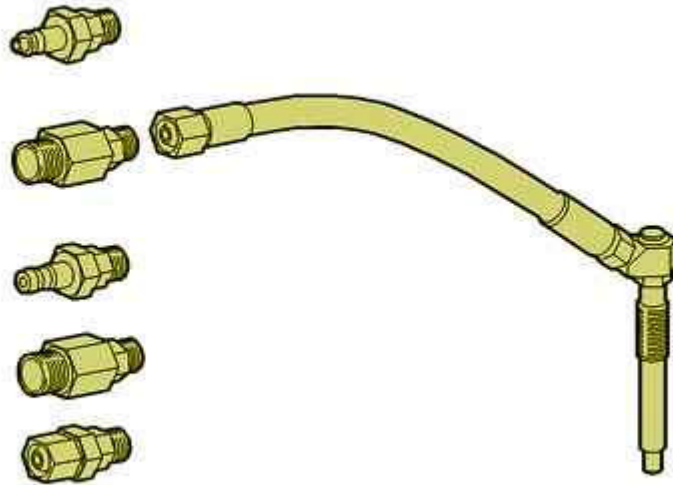
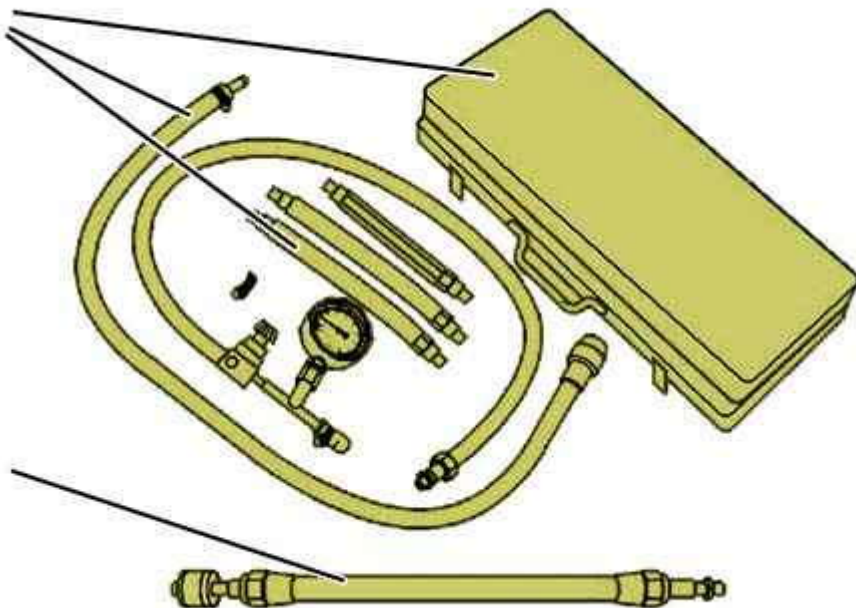


Figure: E5AP2VAD

[2] Spark plug simulator (-) .0194G.

[3]

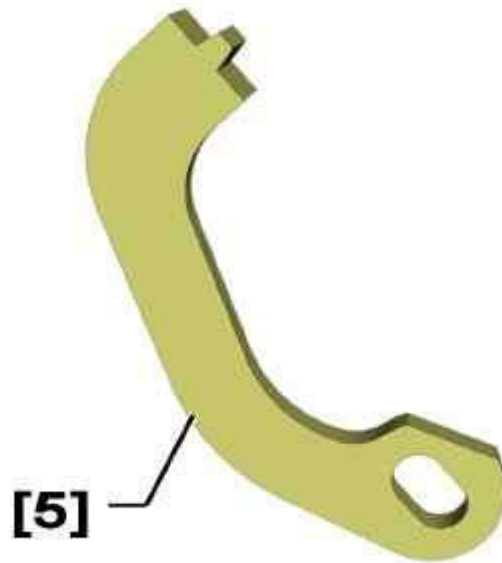
[4]



Pattern: E5AP3RFD

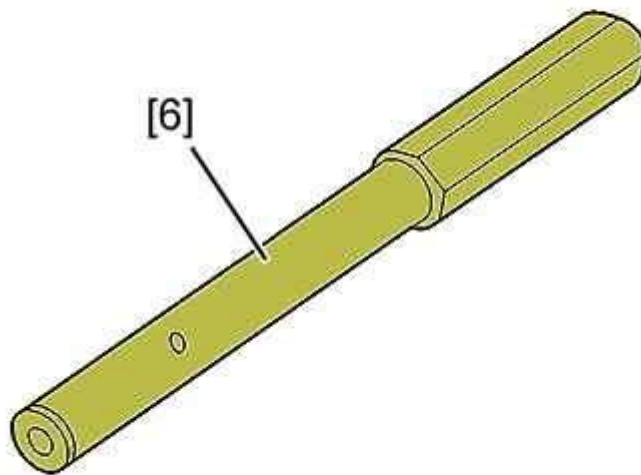
[3] Leakage controller FACOM 910.A.

[4] Diesel engine adapter FACOM 910.A6.



Pattern: E5AP3RGD

[5] engine flywheel stop (). 0194W.



Pattern: E5AM0AAD

[6] Camshaft Calibration Pin (). 0194B.

2. Preliminary operations

Make sure that the engine speed when cranking with the starter is correct (Minimum value: 250 rpm).

Check the engine oil level.

Check the condition of the air filter.

3. Removal

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements

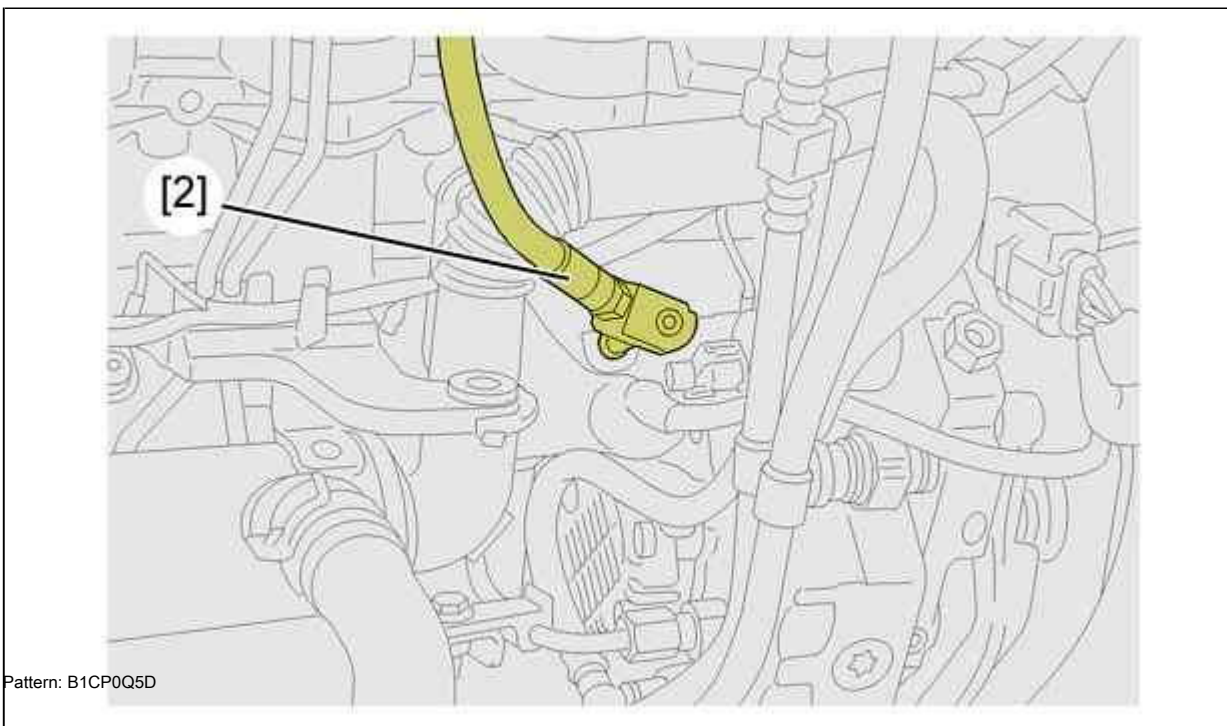
NOTE: The control is performed with a warm engine.



Remove the glow plugs.

Insulate the preheating plug power cable. Disconnect the diesel injector connectors.

4. Measurement of compression end pressures



NOTE: Cylinders nos. 2 and 3: Install the support mountings (Air cleaner housing).

Install the tool [2] on cylinder # 1; Tighten to 1 da.Nm. Connect the tool [1] to the tool [2].

Reconnect the battery.

Turn on the starter for 10 seconds.

Measure the compression pressure in the correct sequence, on cylinders n ° 1, 2, 3 and 4: The maximum difference between the 2 cylinders must be 5 bar.

ATTENTION : If the pressures are low, check the condition of the air filter and the cylinder head gasket before planning an engine revision.

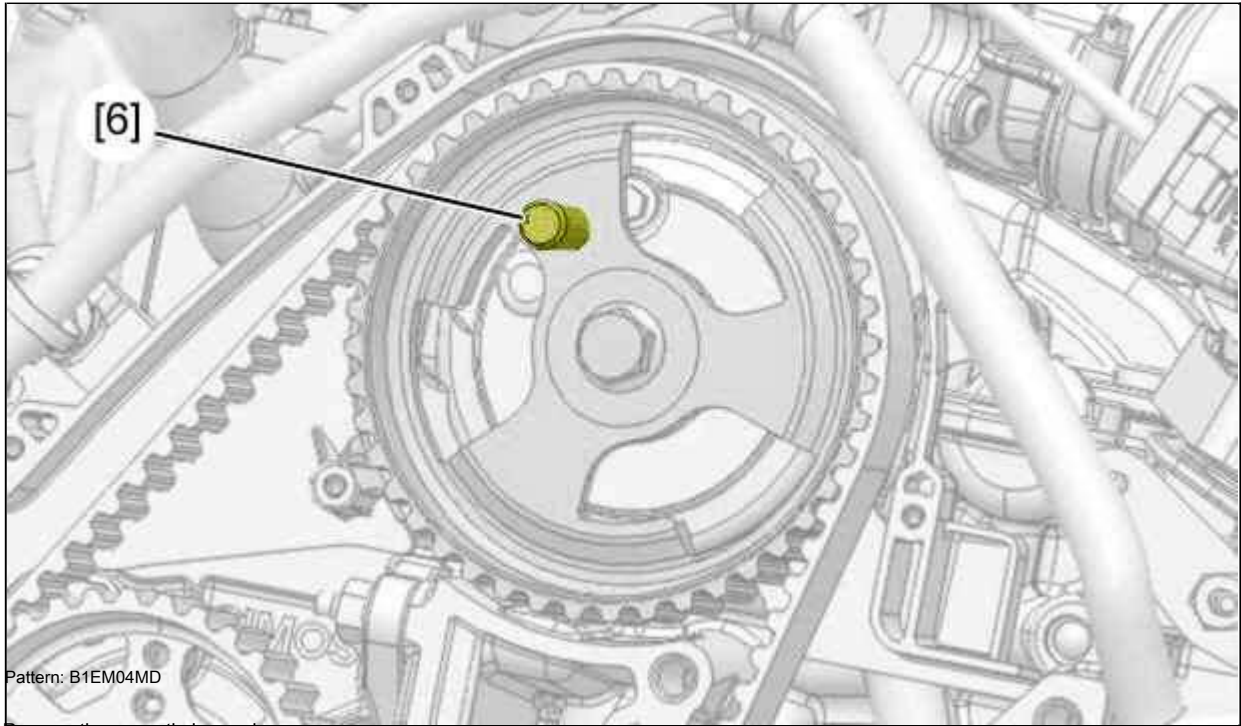
5. Additional check: Measurement of compression loss

ATTENTION : The control is performed with a warm engine.

Install the motor on a hoist.

Disconnect the battery. Remove:

- Under engine guard
- Transmission Actuator (If Required)

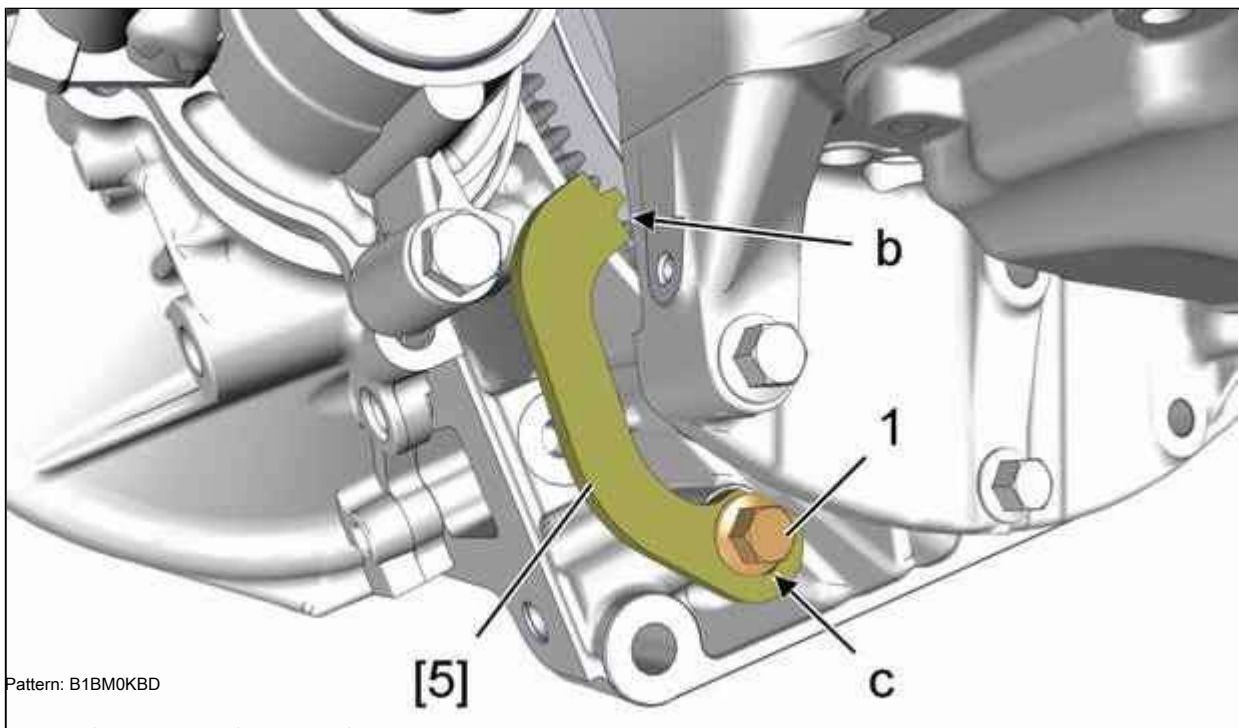
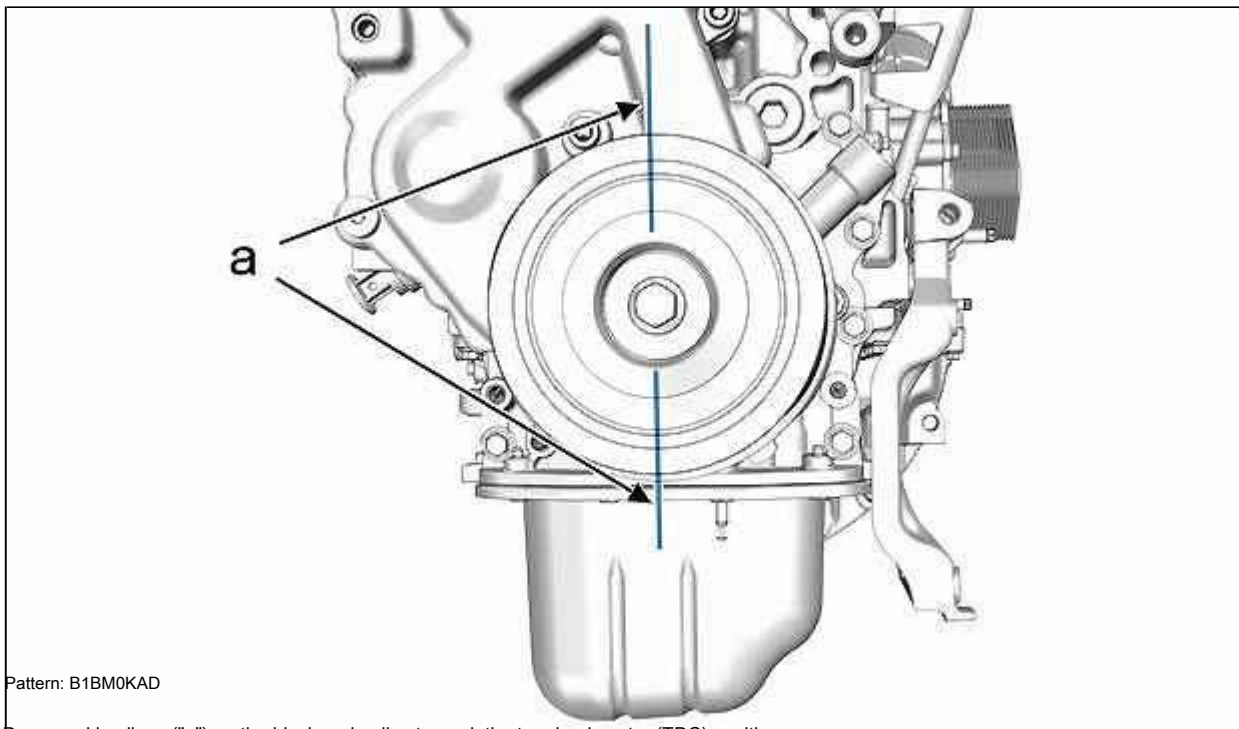


Remove the upper timing casing.

Set the timing belt to the reference point.

NOTE: Install the camshaft to the reference point; Using the tool [6].

Determine the cylinder in which the end of the compression occurs; Using the tools [2], [3], [4].



Read off compression loss; Using the tools [2], [3], [4] (average value = 20%). Attach:

- Attachment [4] to attachment [2]
- Attachment [3] to attachment [4]

Connect compressed air to tool [3] and increase the pressure (See operating instructions).

NOTE: A large compression leak produces noise or air bubbles in the cooling system.

In the case of a low compression ratio, faulty parts can be detected as the noise of the leaking air.

To determine the origin of the leak, use the tool [3] and an autoscope (type FACOM DM.77).

Determining the causes of loss of compression

Diagnostics	Check the status of the following parts
Air leakage: Intake air distributor	Intake valves
Air leakage: Exhaust manifold / Exhaust system	Exhaust valves
Air leakage: Oil filling / Dipstick well	pistons / Piston rings
Air bubbles: Cooling systems	Cylinder Head Gasket / Cylinder Head
Repeat this operation for the other 3 cylinders, each time turning the crankshaft half a turn using the pulley / crankcase marks.	

NOTE: Cylinder firing order: 1 3 4 2.

6. Installation

Remove the tools [1], [2], [3], [4], [5], [6]. Connect the injector connectors.

Install:

- Timing gear upper cover
- Air filter support fasteners
- Glow plugs
- Transmission Actuator (If Required)
- Under engine guard

Reconnect the battery.

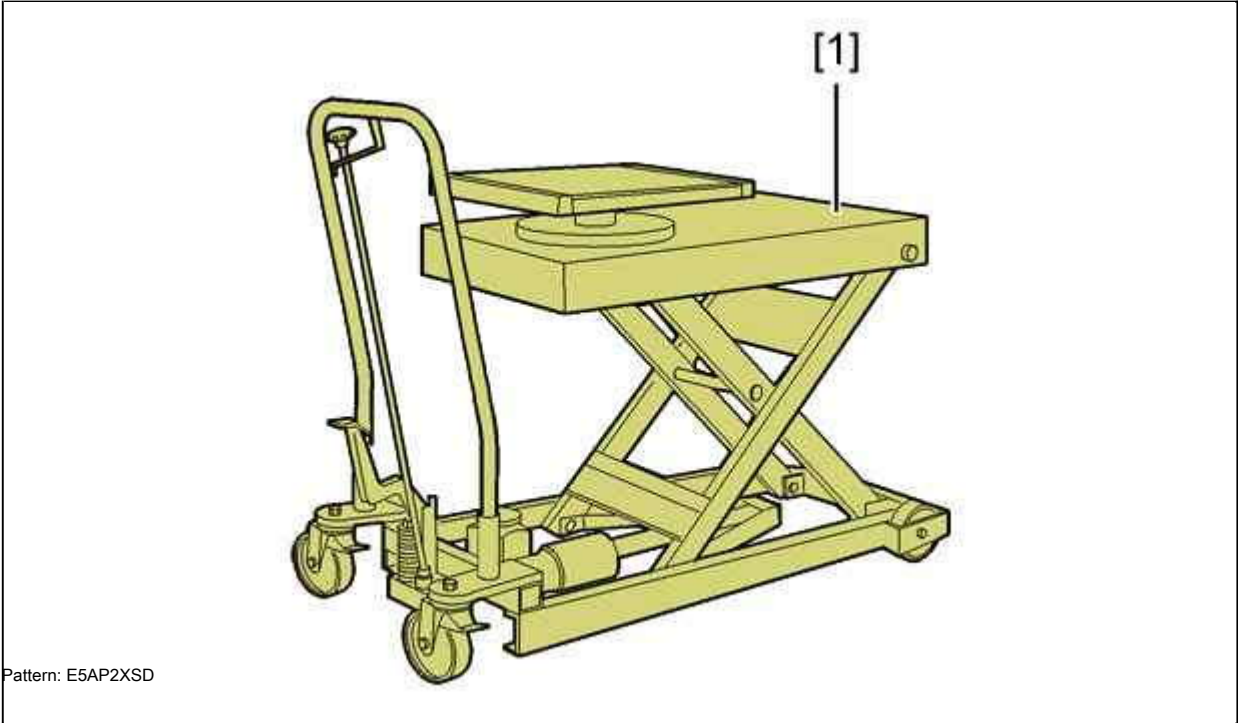
ATTENTION : Follow the steps to follow after removing the battery.

Clear errors from memory; Using a diagnostic tool.

MANDATORY: Observe the cleanliness and safety rules

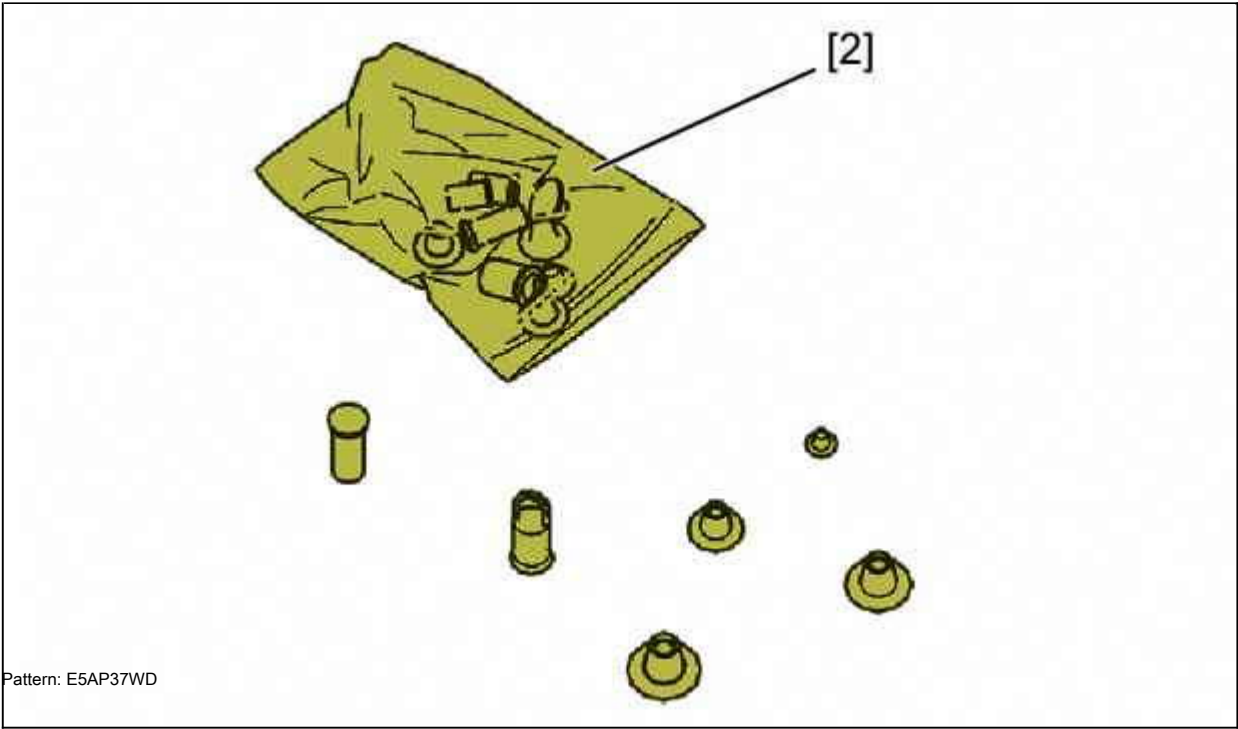


1. Recommended equipment



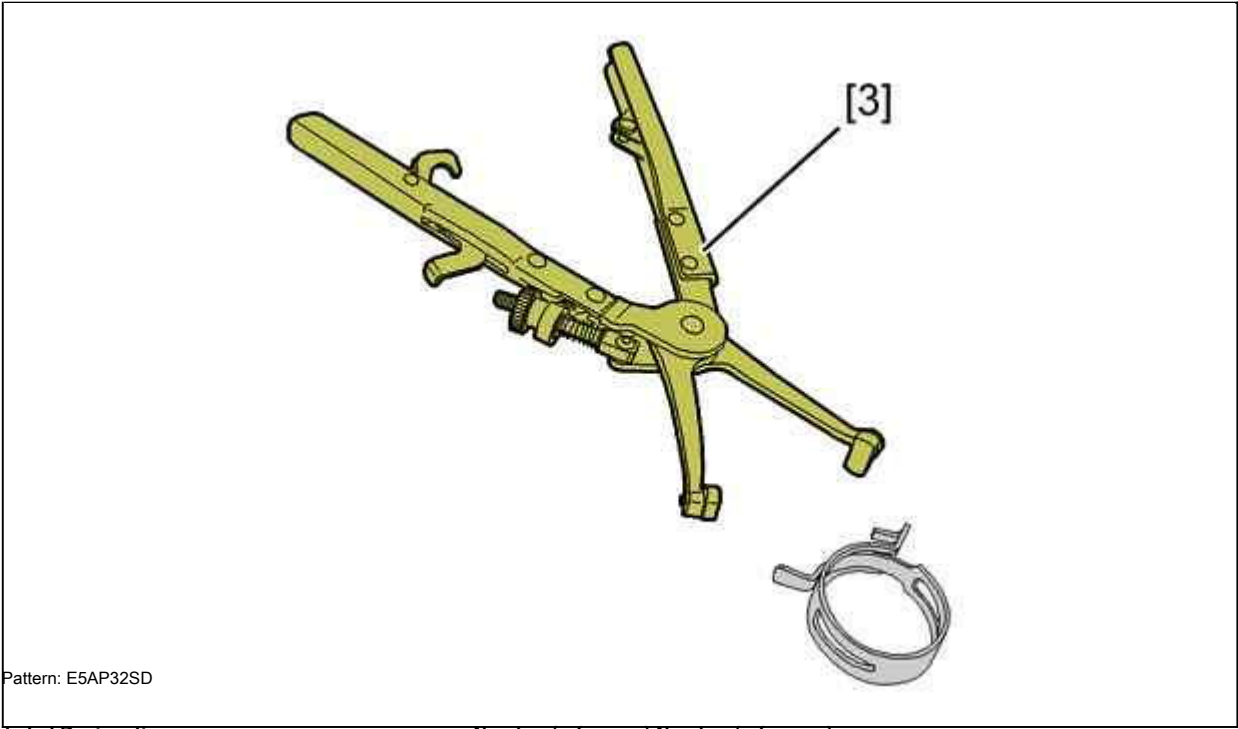
Label Designation Number (reference) Number (reference)

[1]	[/] lifting table 5702TA		() .0004



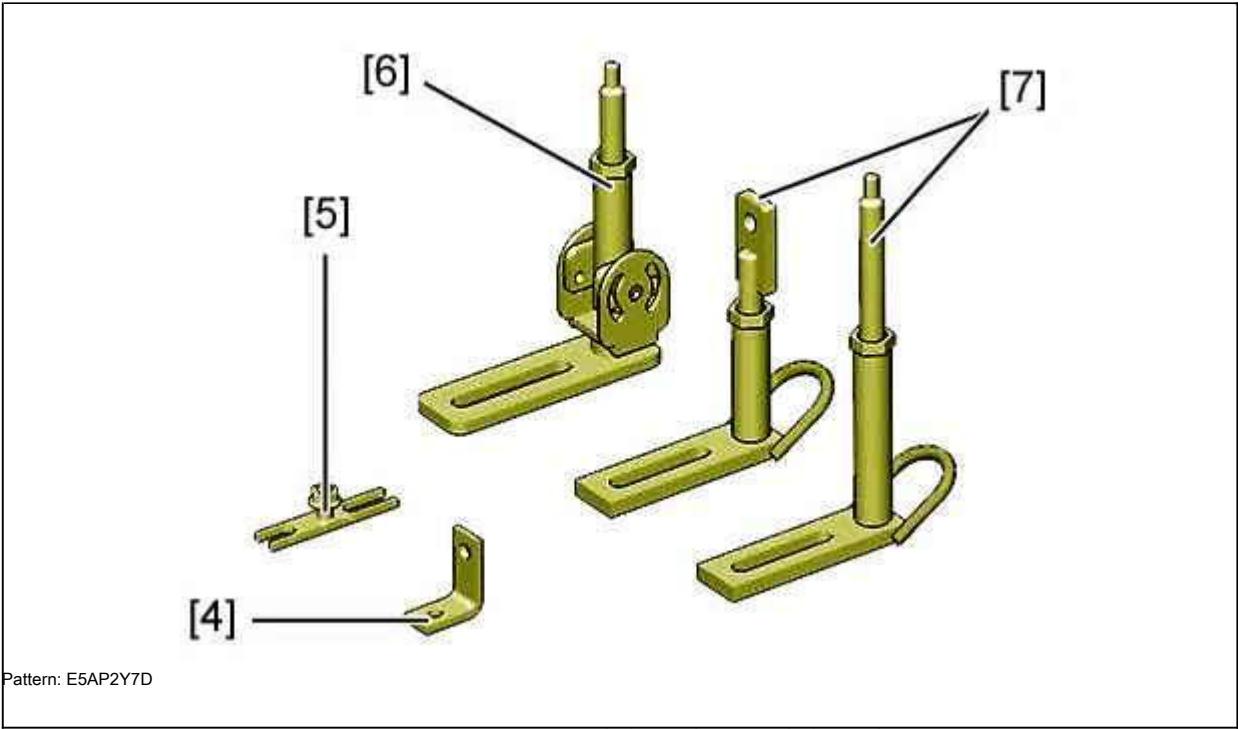
Label Designation Number (reference)

[2]	set of plugs () .0194T	



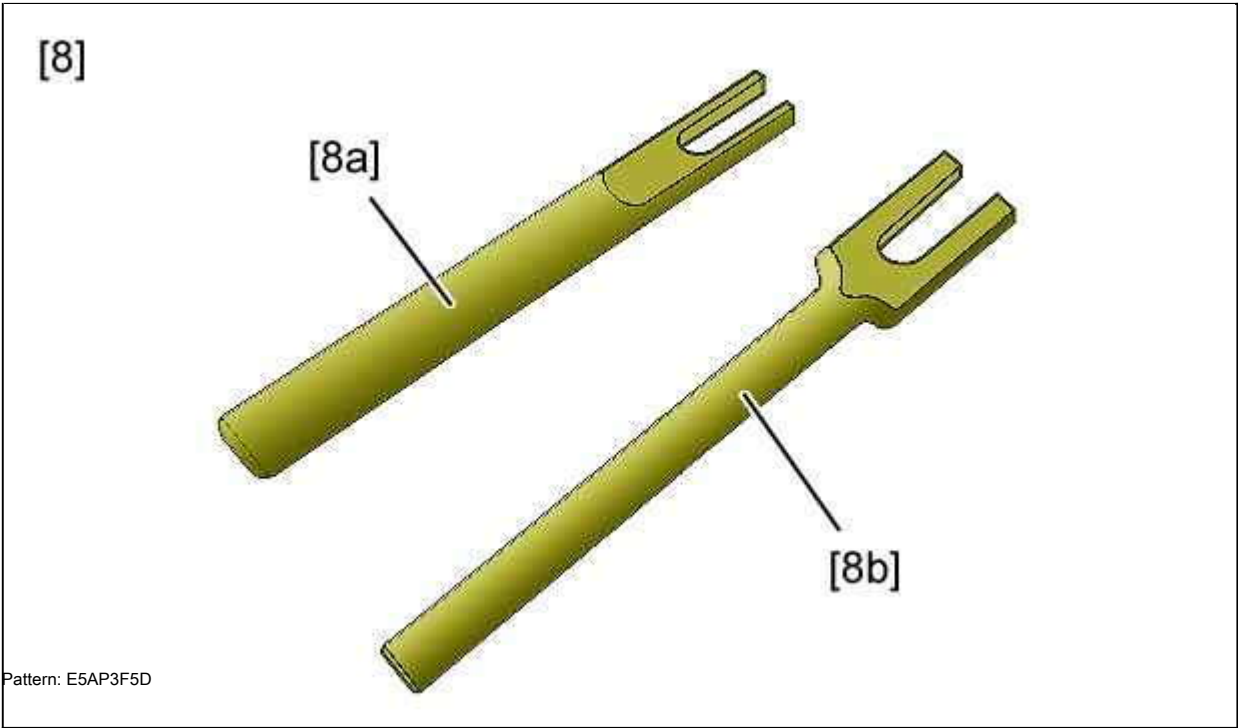
Label Designation Number (reference) Number (reference)

[3]	// puller for flexible clamps 9029T	() .0166



Pattern: E5AP2Y7D

Labels Designation		Number (reference)	
[4]	engine mount elbow	() .0005E	() .0005E
[five]	special stand	() .0005H1	() .0005H1
[6]	engine support	5704T	() .0005G
[7]	Reverse stand 5704T		() .0005C



Pattern: E5AP3F5D

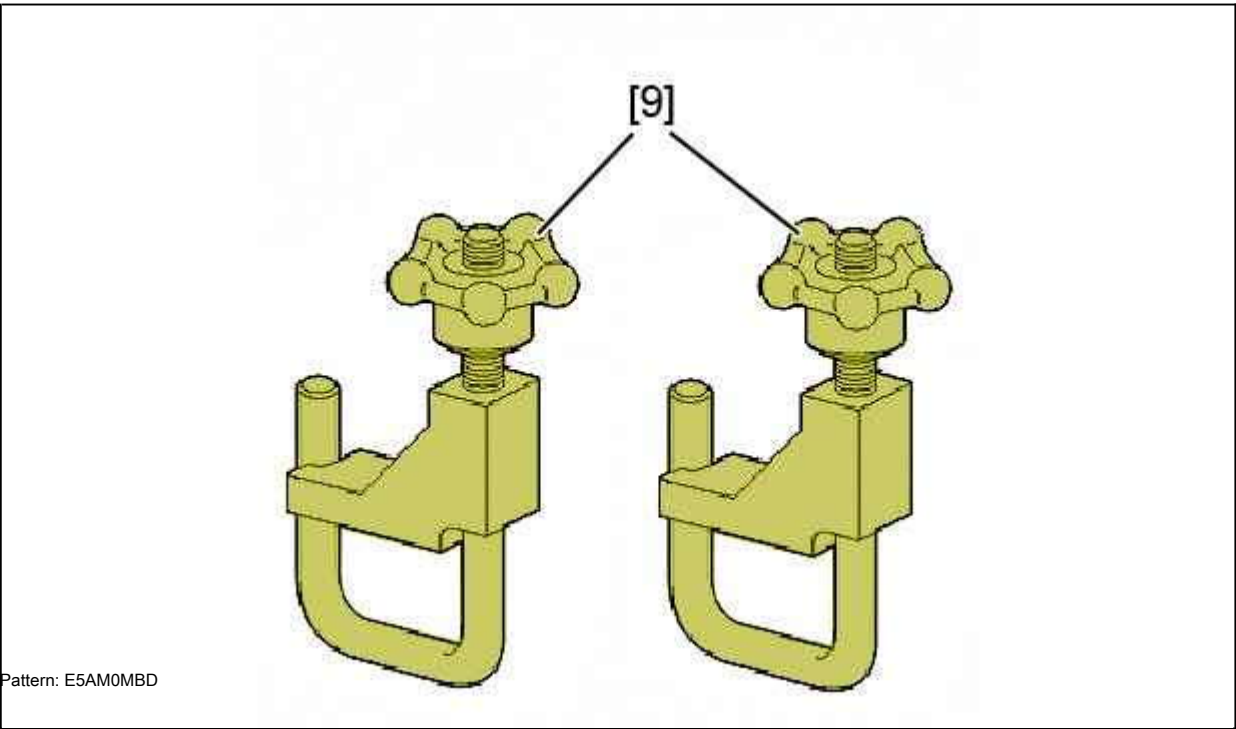
[8] Forks for removing transmission control rods

--	--	--

Label Designation

Number (reference)

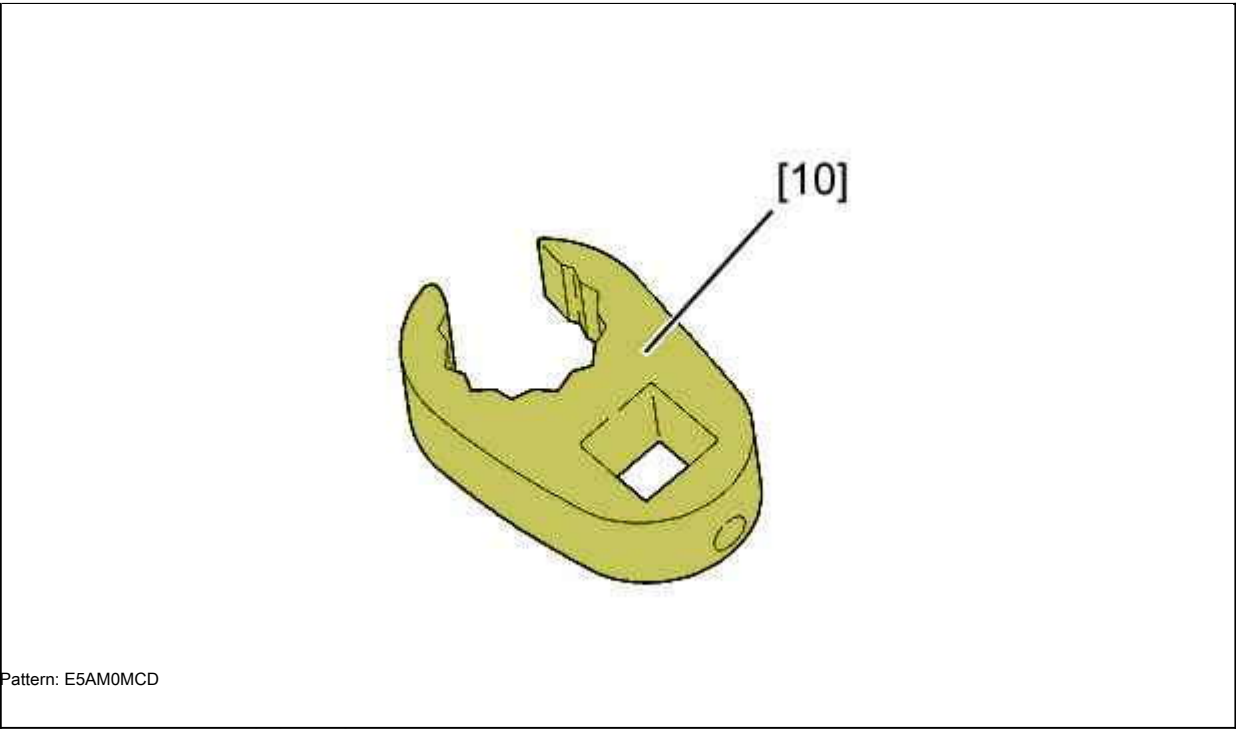
[8a]	Forks for removing transmission control rods () .0216G1	
[8b]		() .0216G2



Label Designation

Number (reference) Number (reference)

[nine]	set of two hose clips 4153T		() .1512



Label Designation Number (reference)

--	--	--

2. Removal

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements

Disconnect the battery. Remove the engine cover.



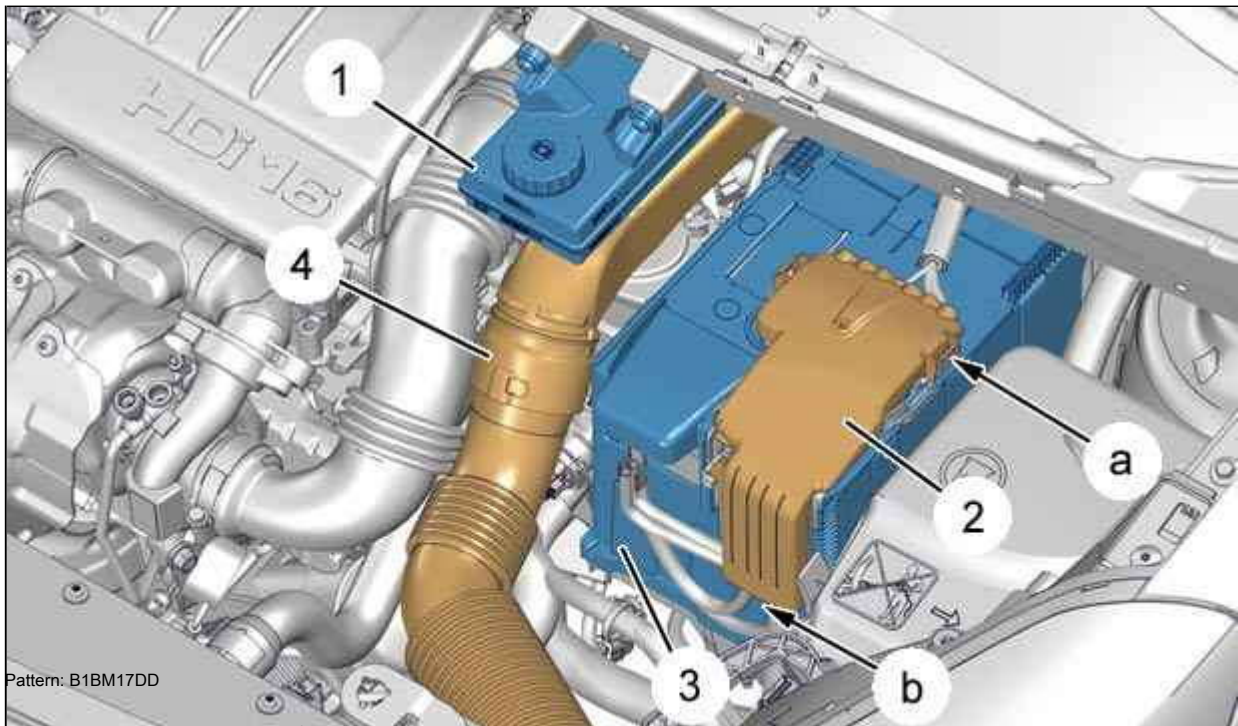
Drain:

- **Cooling systems**
- Transmission



Remove:

- Front wheels
- front mudguards
- **Cooling system radiator**
- Exhaust gas pressure measuring tubes (depending on equipment)
- Particulate filter pressure sensor (depending on equipment)
- Front intermediate pipe of the exhaust system
- **Sub-frame**
- **Front transmission**



Disconnect and move to the side of the fuel supply and return pipes; Plug with the tool [2].

ATTENTION : Seal openings in the air supply circuit.

Remove the pipes inlet and outlet of the heat exchanger.

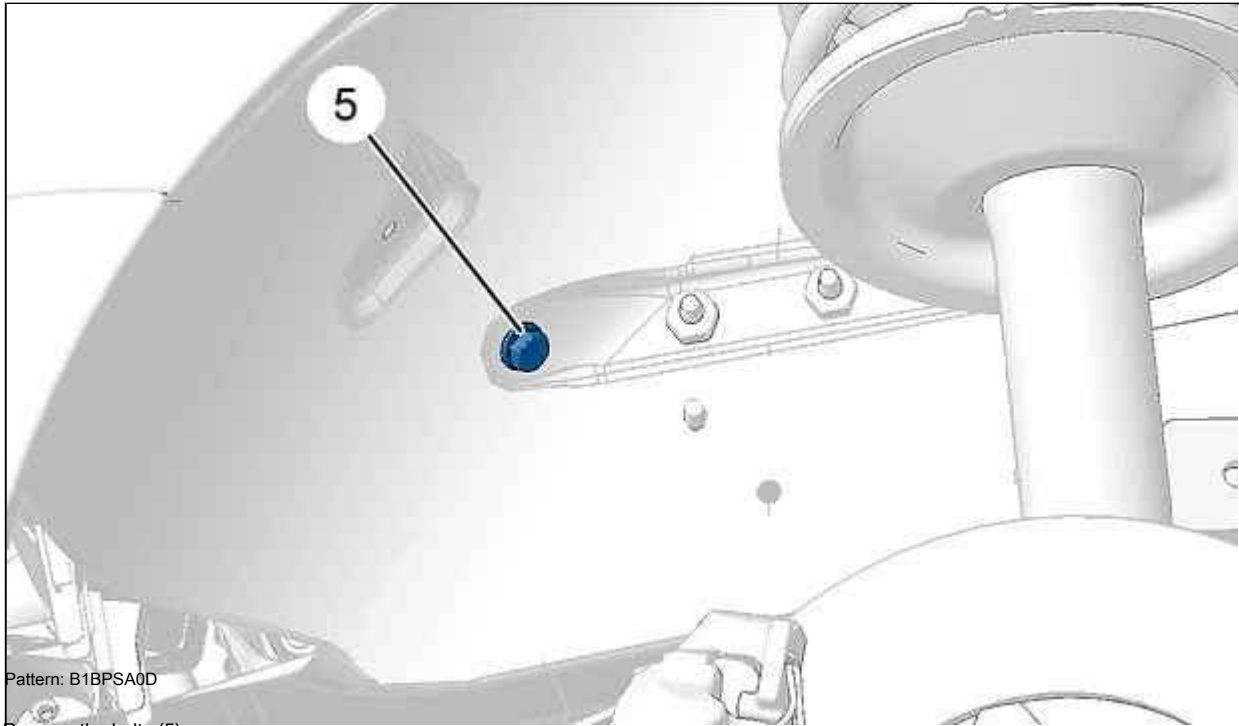
Press the zone "a", "b"; Slide up the fuse box (2) (Be careful). Remove the fuse box (2).

Remove:

- Air intake connector (4)

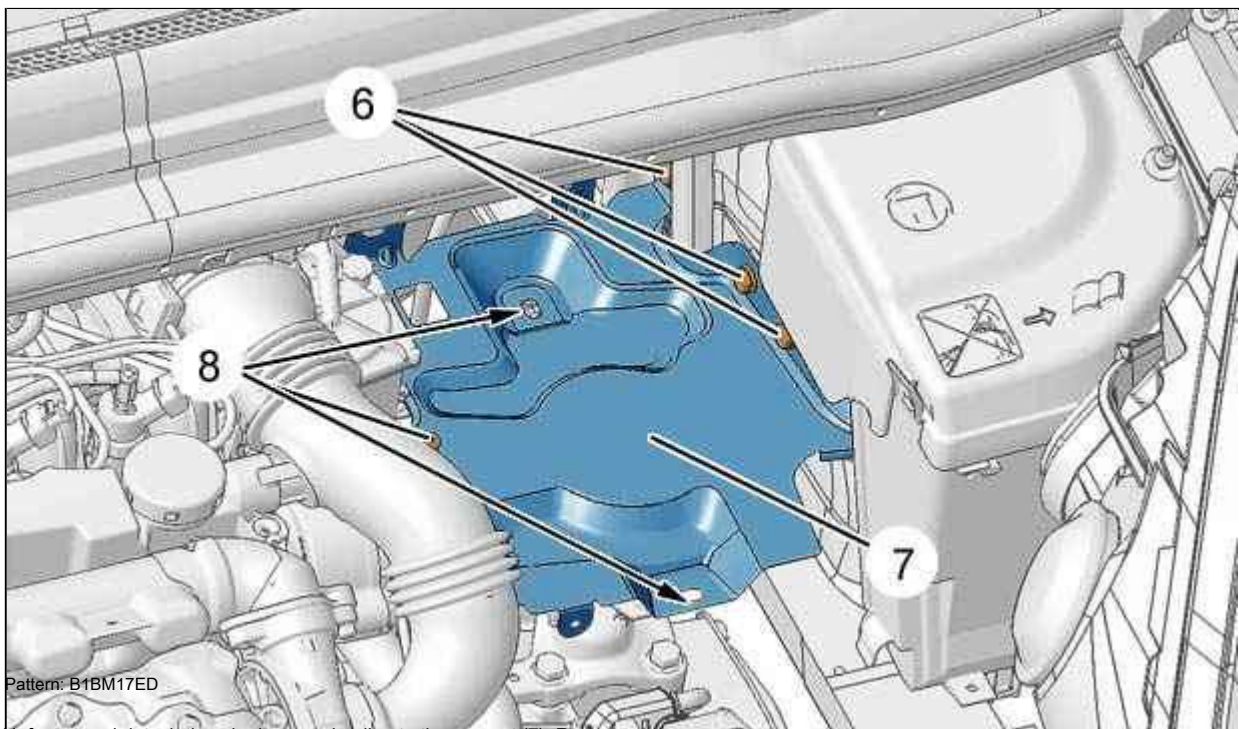
- Decorative battery cover (3)
- Accumulator battery

Move aside: Brake fluid reservoir (1).



Pattern: B1BPSA0D

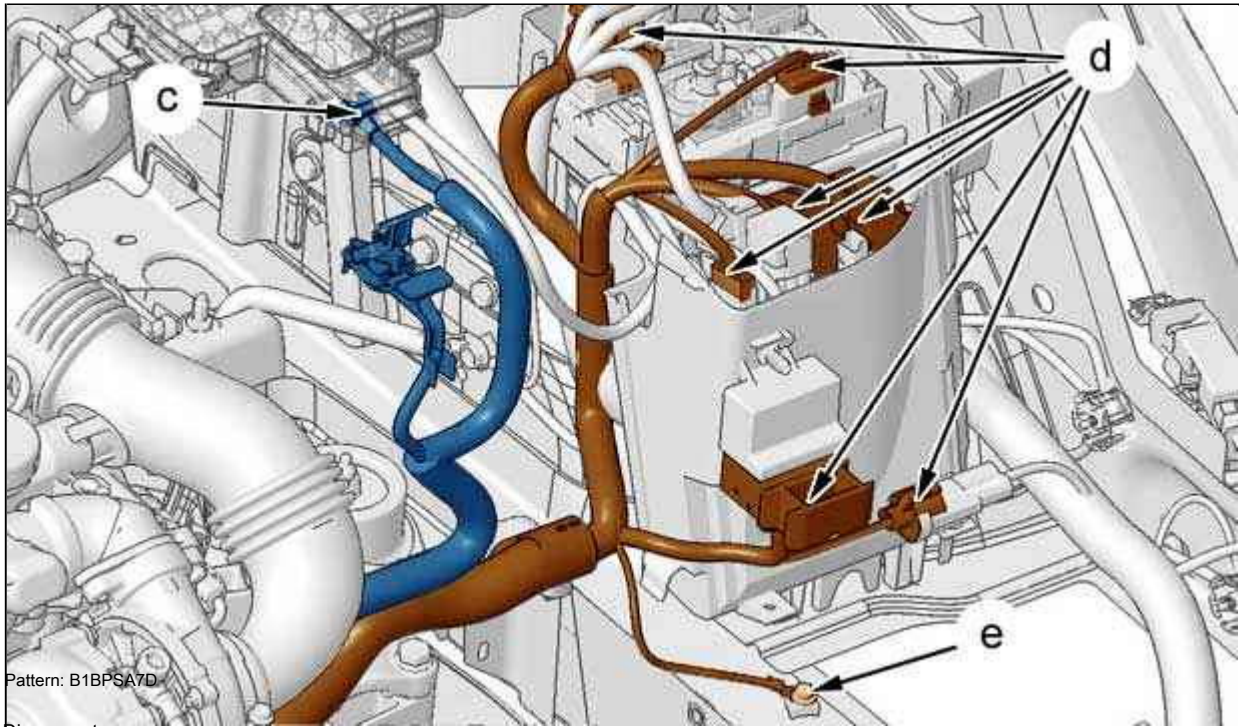
Remove the bolts (5).



Pattern: B1BM17ED

Unfasten and detach the wire harness leading to the support (7). Remove.

- the bolts (8)
- 3 bolts (6)
- Support (7)

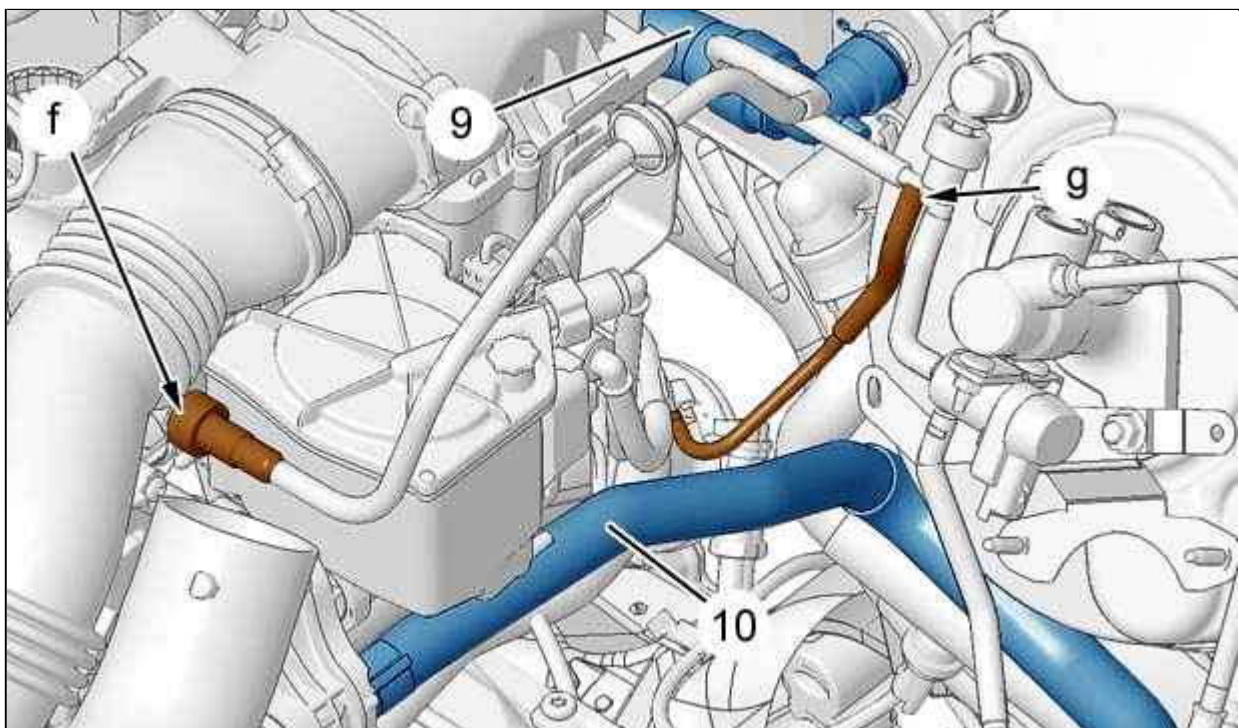


Pattern: B1BPSA7D

Disconnect.

- Electrical harness (in "c")
- Electrical harness (in "d", "e")

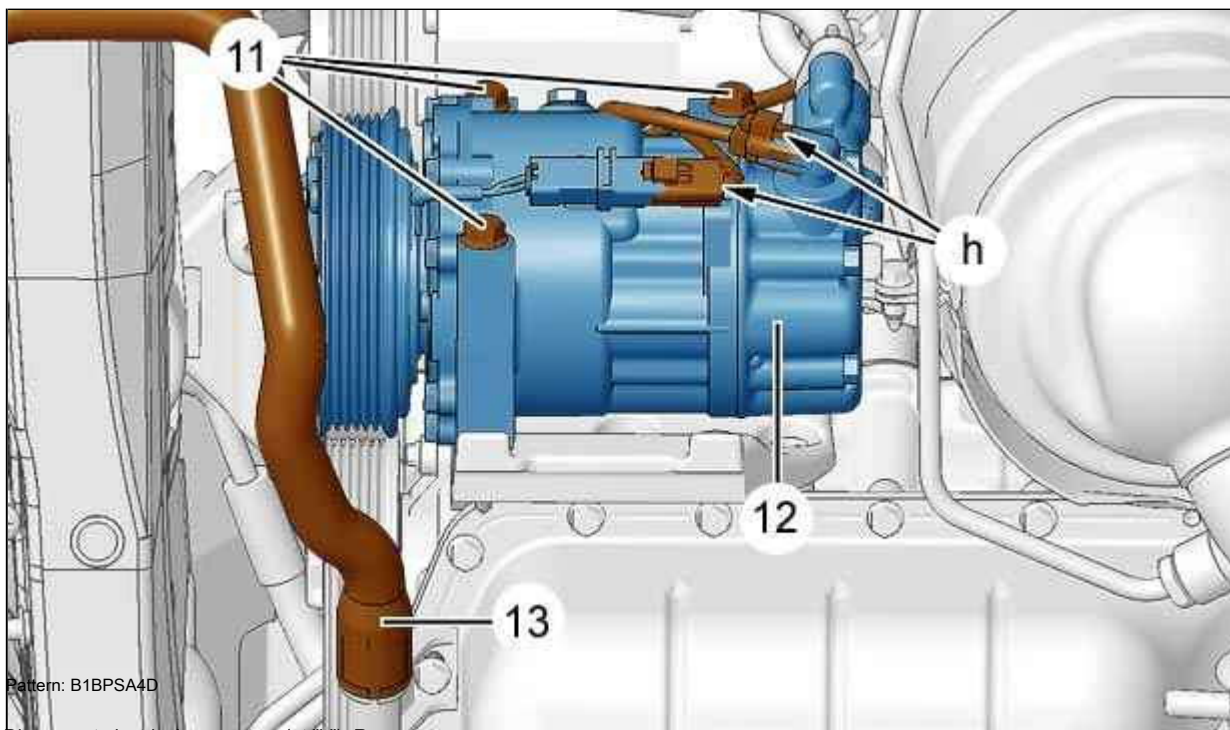
Unfasten and slide the electrical harnesses from the body.



Disconnect and move:

- Vacuum supply tubes (in "f", "g")
- Durite hose (10); Using the tool [3]
- Durite Hose (9)

2.1. Car air conditioner



Pattern: B1BPSA4D

Disconnect electrical connectors (at "h"). Remove.

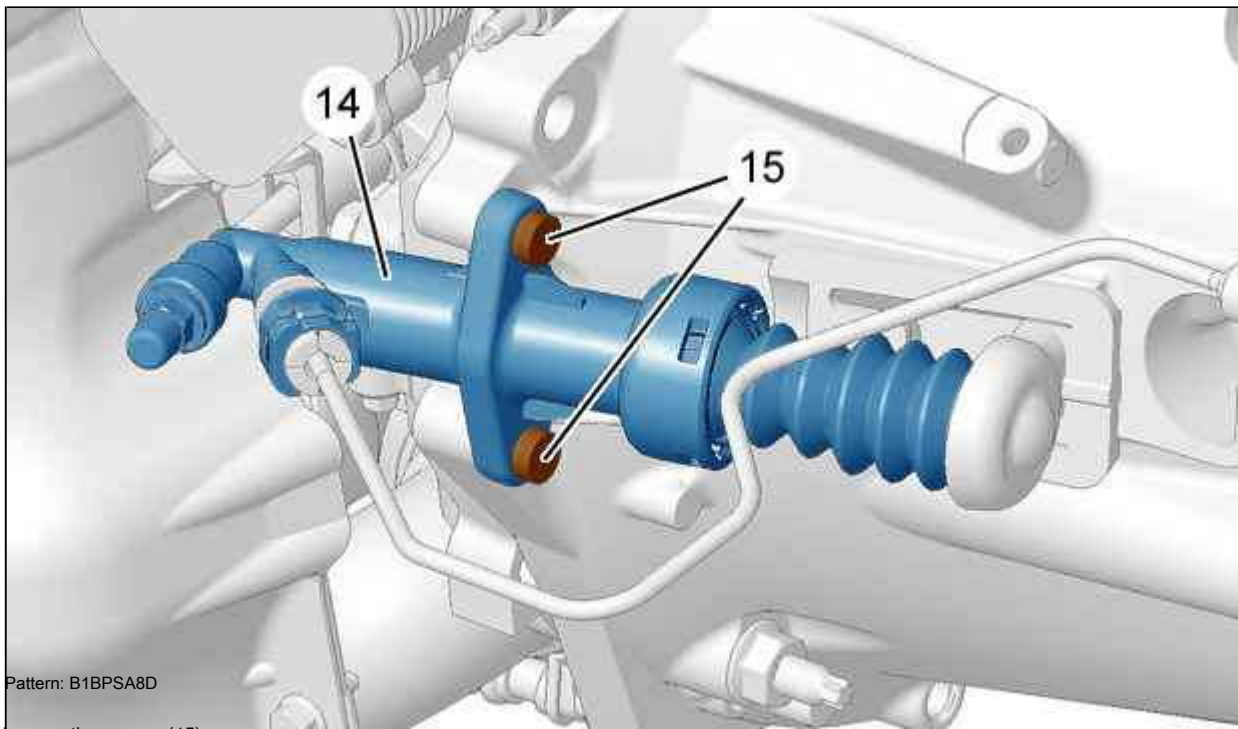
- Attachment drive belt
- 3 bolts (11)

Move aside and secure the compressor (12) (without disconnecting the tubes).

2.2. General operations

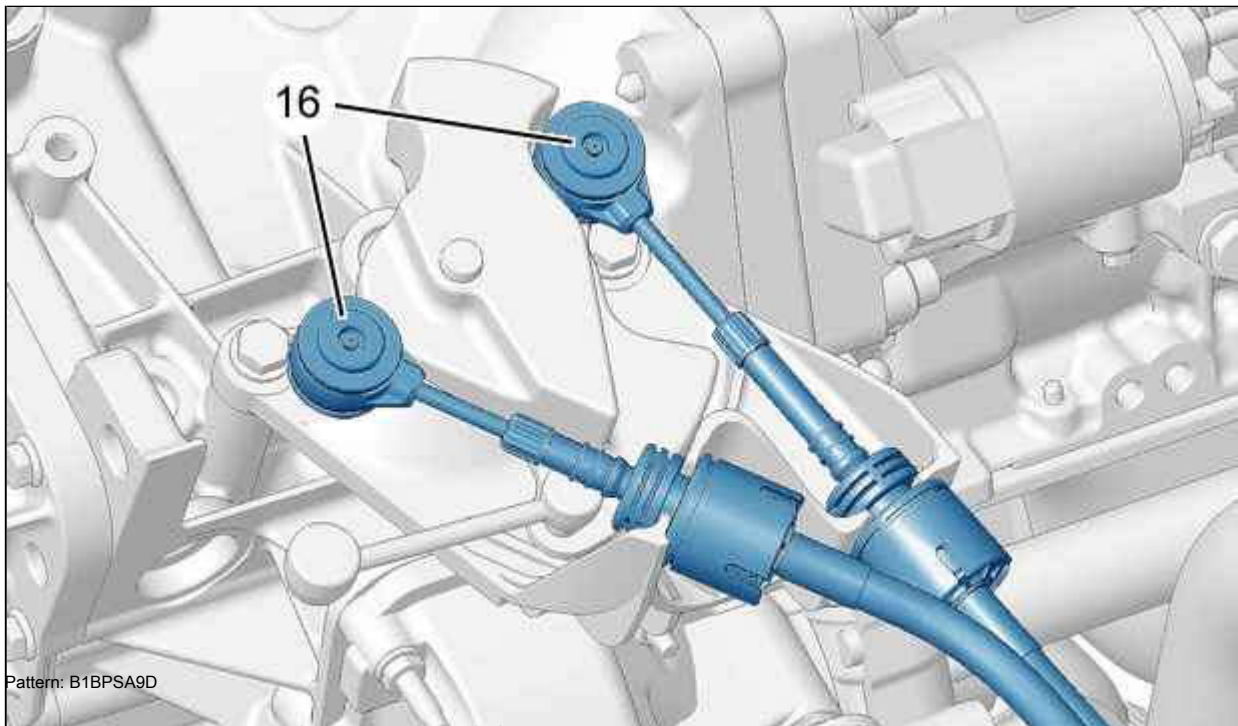
Disconnect the hose (13).

Disconnect the durite hose (13).



Loosen the screws (15).

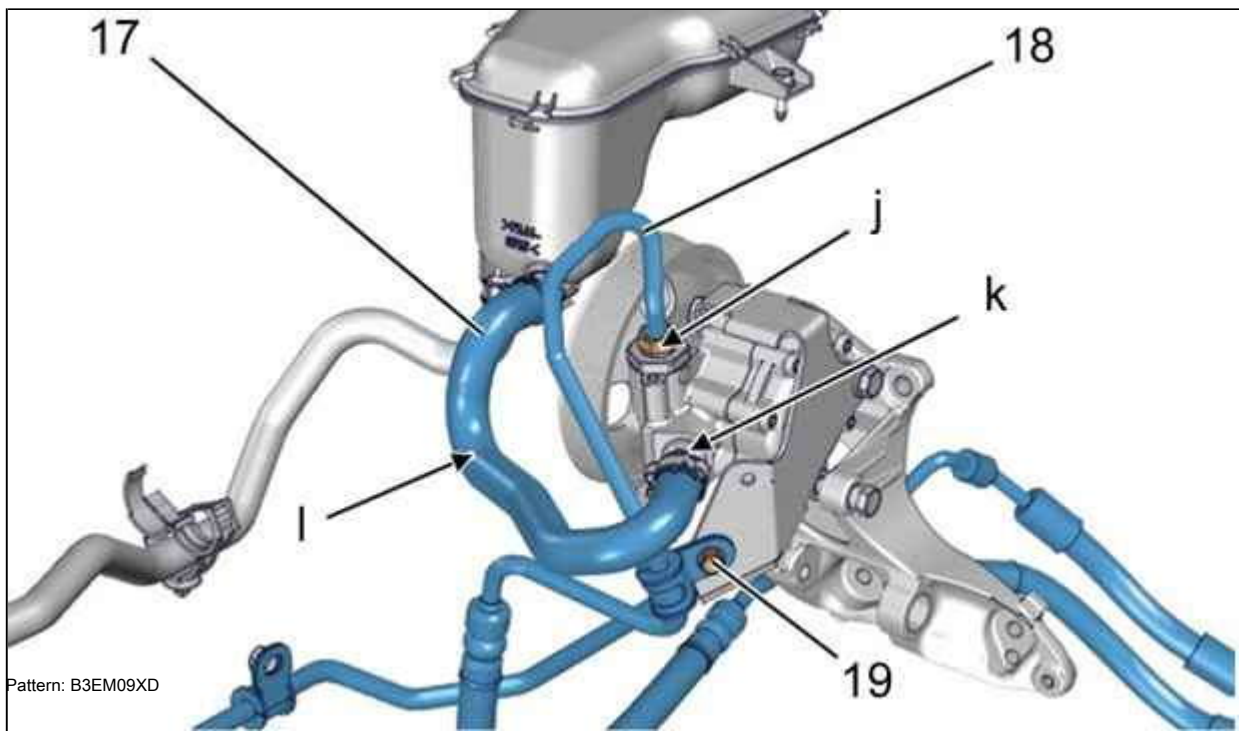
Slide the clutch receiver (14) aside without opening the hydraulic drive system.



Disconnect and move to the side of the gear drives (16), Using the tool [8]. Disconnect the reversing lamp connector (on the gearbox).

Disconnect the ground wire (on the gearbox).

2.3. Vehicle equipped with power steering



ATTENTION : Protect the generator from oil.

Clamp the power steering pump supply hose (17) (at "l"); Using the tool [8].

Loosen the power steering high pressure pipe (18) (at "j"); Using the tool [9].

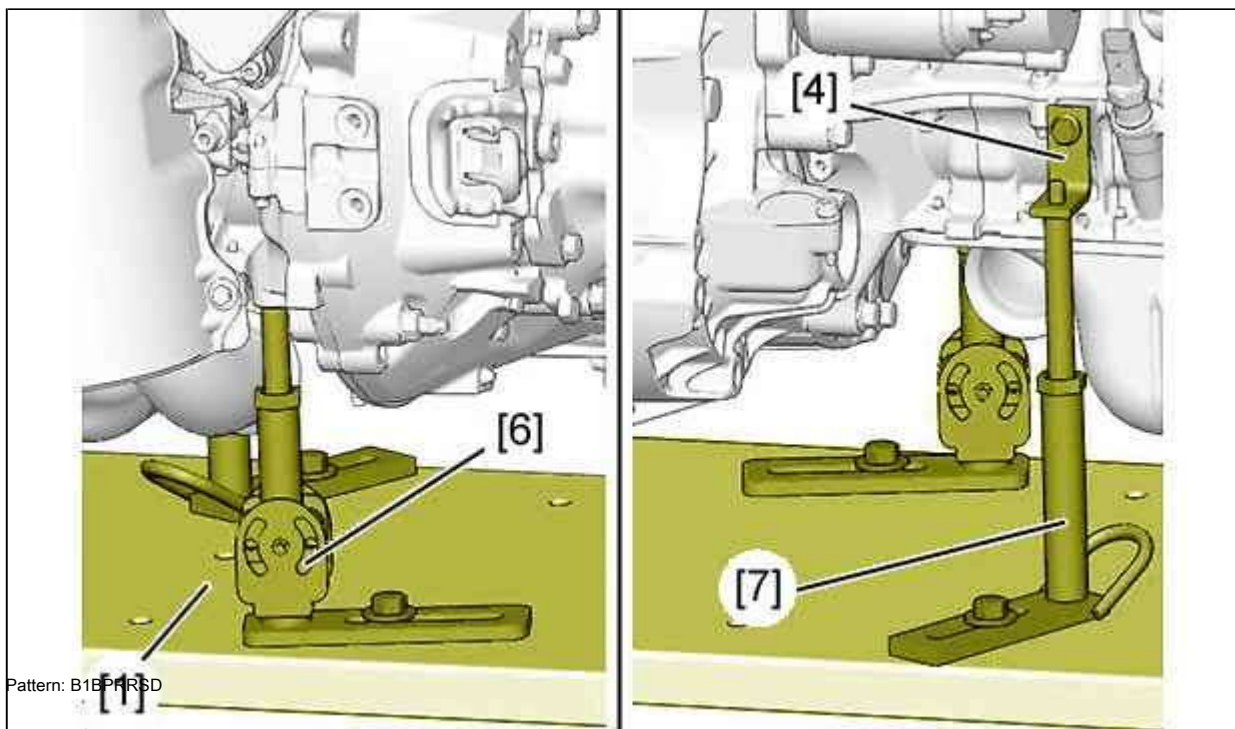
Remove bolts (19).

Disconnect (Prepare power steering fluid container):

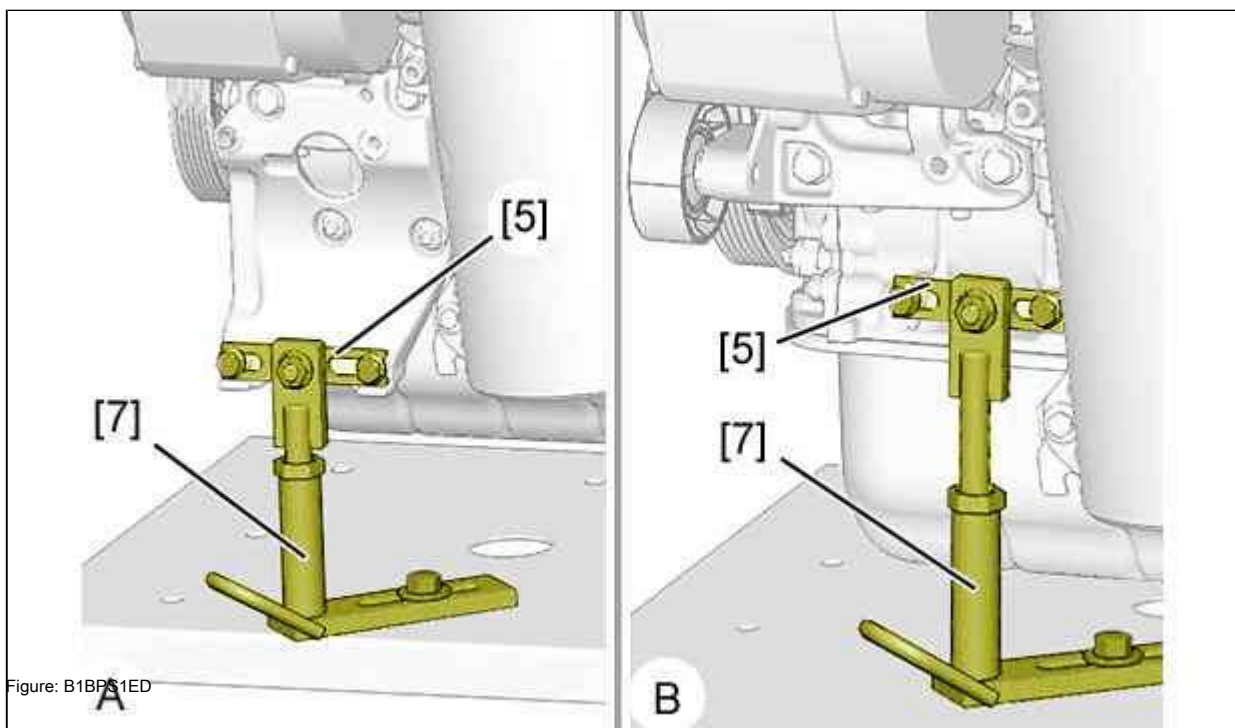
- Power steering high pressure pipe (18) (in "j")
- Power steering pump fluid supply pipe (17) (in "k")

Seal openings of hydraulic system bodies; Using plugs.

2.4. General operations



Place a lift table [1] with supports [6], [7] under the power unit. Secure the intermediate bearing [4] on the cylinder block.



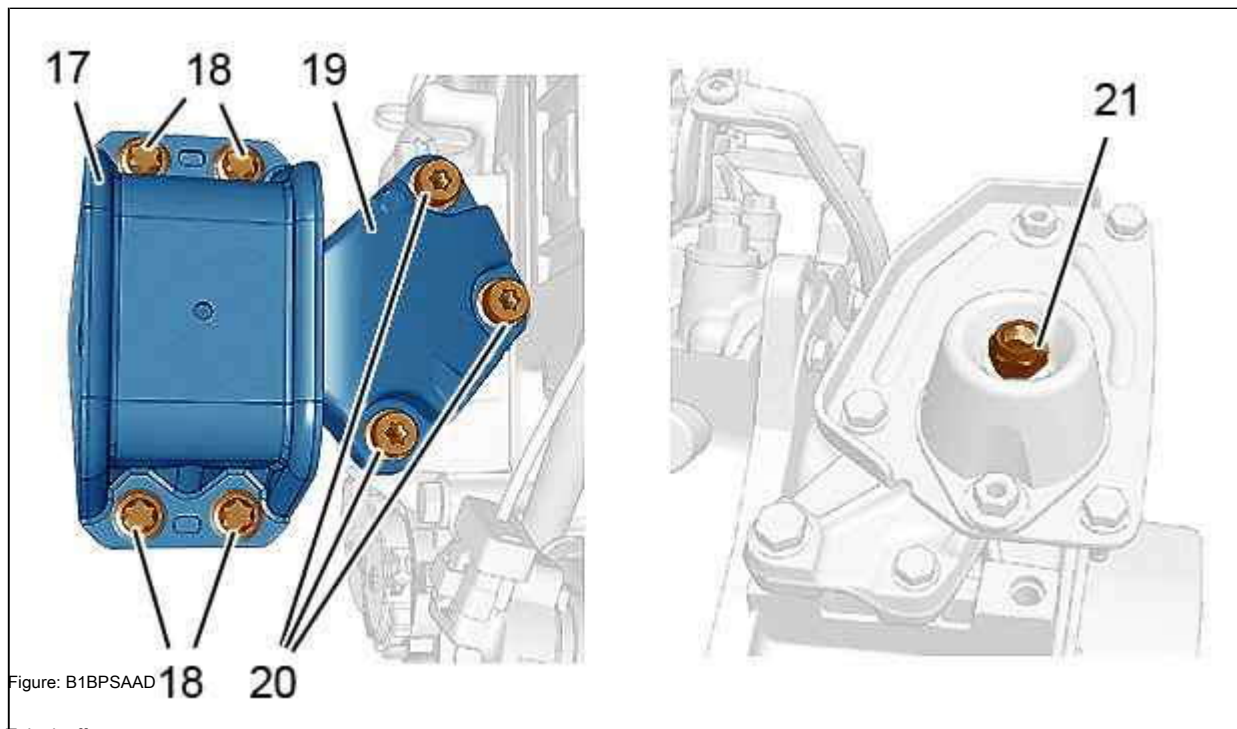
"A": Vehicle with air conditioning.

Fix the intermediate support [5] on the air conditioner compressor support. "B": Vehicle without air conditioning.

Secure the intermediate bearing [5] on the cylinder block. Tighten the feet.

Raise the lift table [1] slightly so that it rests on the power unit.

Mark the floor position of the lift table [1].



ATTENTION : Then make sure that the power unit does not fit the order of the car.

Remove the engine and transmission assemblies.

3. Installation

ATTENTION : When installing, the removed seals must be replaced with new ones.

ATTENTION : Then make sure that the power unit does not fit the order of the car.

Install the lift platform [1] and the transmission motor assembly to the previously marked positions when removed.

Install the engine gearbox assembly.

Install:

- The nut (21); Tightening torque 6.5 ± 0.6 da.Nm
- Right engine mounts (17) and (19)
- 4 bolts (18); Tightening torque 6 ± 0.6 da.Nm
- 3 bolts (20); Tightening torque 6 ± 0.6 da.Nm

Remove the lifting platform from under the vehicle. Remove the tools [4], [5].

Connect the reversing light connector (on the gearbox). Connect the ground wire (on the gearbox).

Connect the gearbox drives (16). Adjust the gearbox drives.

Install the clutch receiving cylinder (14) on the gearbox; Tightening torque 1.9 ± 1.9 2 da.Nm.

3.1. Vehicle equipped with power steering

Remove the covers.

Attach:

- Power steering pump fluid supply pipe (17) (in "k")

- Power steering high pressure pipe (18) (in "j")

Install the screw (19); Tighten to 0.8 ± 0.2 da.Nm.

Tighten the power steering high pressure pipe (18) (at "j"); Tightening torque 2 ± 2 da.Nm; Using the tool [9].

Remove the tool [8].

3.2. Car air conditioner

Disconnect the A / C compressor (12).

Install:

- Air conditioning compressor (12); Tightening torque 2.4 ± 2.4 da.Nm
- Elastic drive belt for attachments

Connect the air conditioner compressor electrical connectors.

3.3. General operations

Attach:

- Durite Hose (9)
- Durite Hose (10)
- Vacuum supply tubes

Attach: Electrical harnesses (Nakuzove). Connect:

- Electrical harness (in "d", "e")
- Electrical harness (in "c")

Install:

- Support (7)
- 3 bolts (6)
- 3 bolts (8)

Attach all wire harnesses adjacent to the support (7). Install screw (5).

Remove the covers.

Install:

- Accumulator battery
- Decorative battery cover (3) Fuse box (2)
-
- Air intake connector (4)
- Brake fluid reservoir (1)
- air / air heat exchanger inlet and outlet pipes

Connect the fuel supply and return pipes. Install:

- **Front transmission**
- **Sub-frame**
- Front intermediate pipe of the exhaust system; **Tighten with a moment**
- Particulate filter pressure sensor (depending on equipment)
- Exhaust gas pressure measuring tubes (depending on equipment)
- **Cooling system radiator**
- front mudguards
- Front wheels

Fill and check the gearbox oil level.

Refill the cooling system, bleed the system and set the required fluid level

...

Top up the engine oil level. Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.



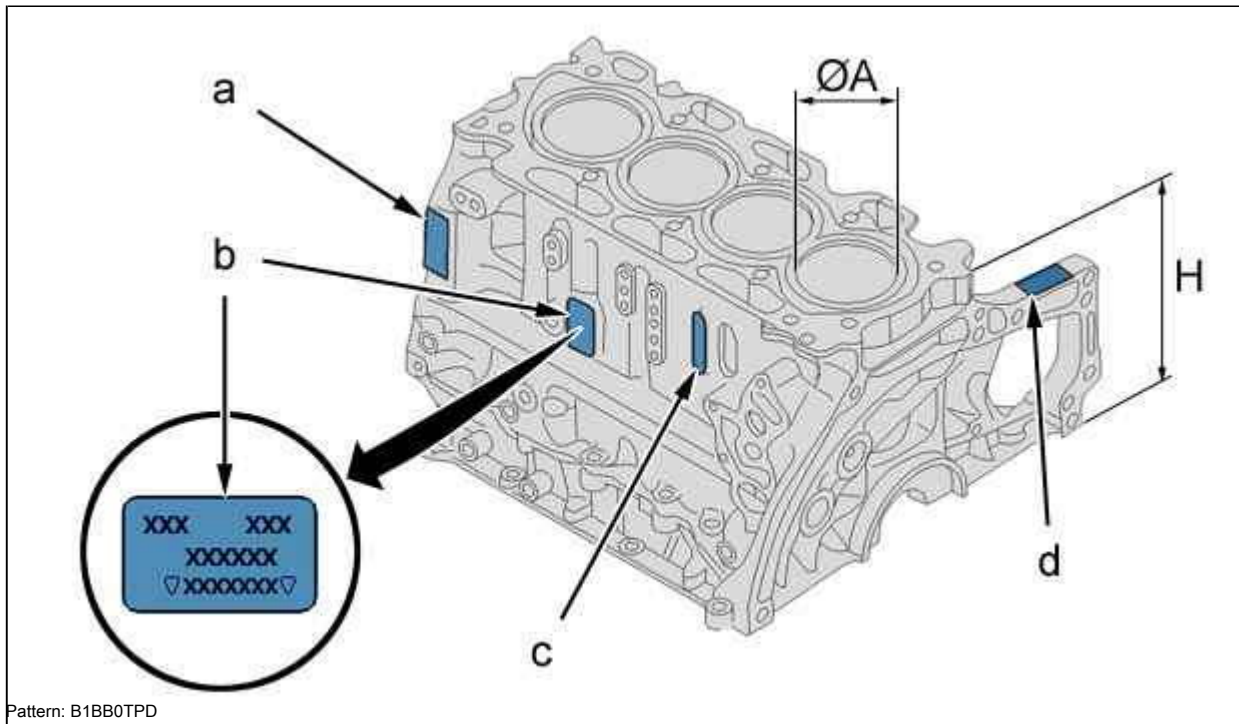
3.4. Checks

Check the function of the air conditioning system (depending on equipment). Produce:

- Road check
- Autodiagnosics results stored in the unit memory

CHARACTERISTICS: CYLINDER BLOCK

1. Identification marking



Marking in "a":

- Application by engraving of the diameter classes of the crankshaft bearing journals
- Bearing Orientation To Clutch, To Timing Drive)

Marking in "b":

- Manufacturer's marking
- Allowed type
- Node marking
- Serial number

Marking in "c":

- Processing marking
- Year of issue

Marking after the ceremony in "d":

- DV6 motors of all types: "+ 0.4"
- DV4 motors of all types: "+ 0.6" (except for DV4TED4 motor)

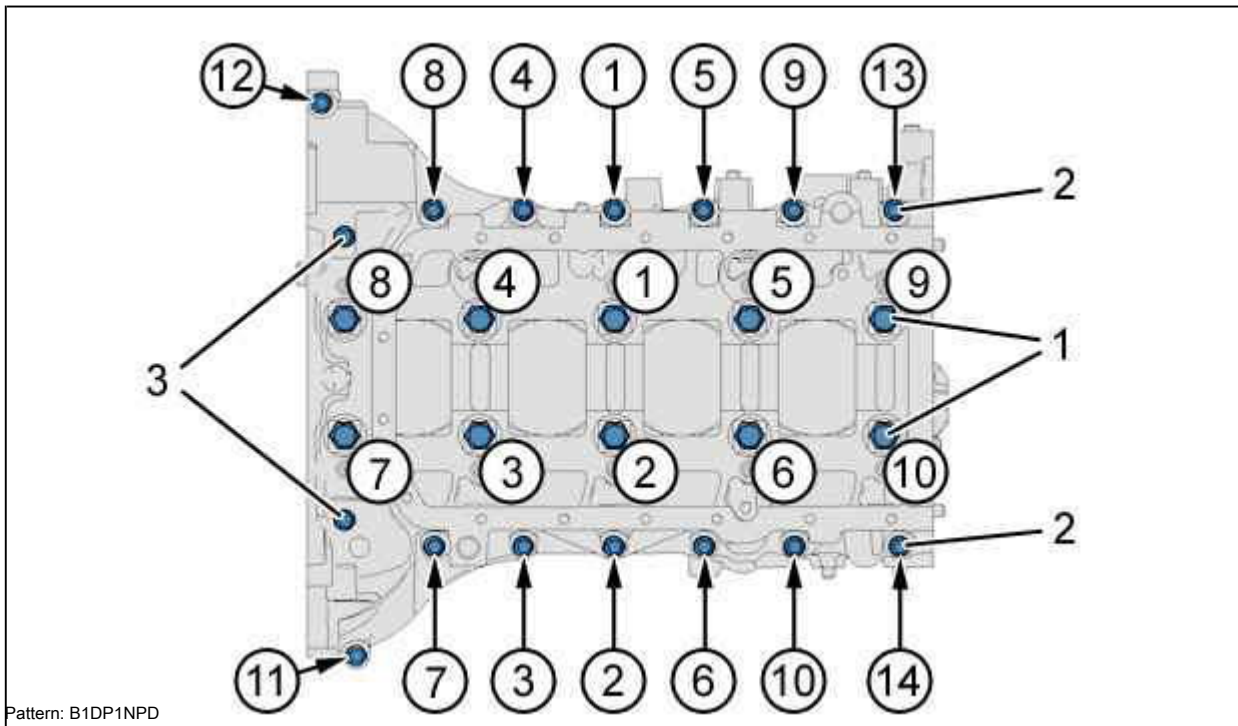
2. Characteristics

DV6 motors of all types Nominal size Repair side Height "H"

	221.9 mm \pm 0.05 mm 75	221.66mm \pm 0.05mm
$\varnothing A$	(+ 0.018; 0) mm	75.4 (+ 0.018; 0) mm

3. Tightening method: Carter of the bearing caps

ATTENTION : Observe the required tightening torques



Pre-tighten in the following order:

- 10 new crankshaft bearing cap screws (1) to 1 da.Nm (order 1 to 10)
- 14 bead screws (2) with a torque of 0.6 da.Nm (order 1 to 14)
- 2 bead screws (3) to 0.8 da.Nm (from inside the flywheel cap)

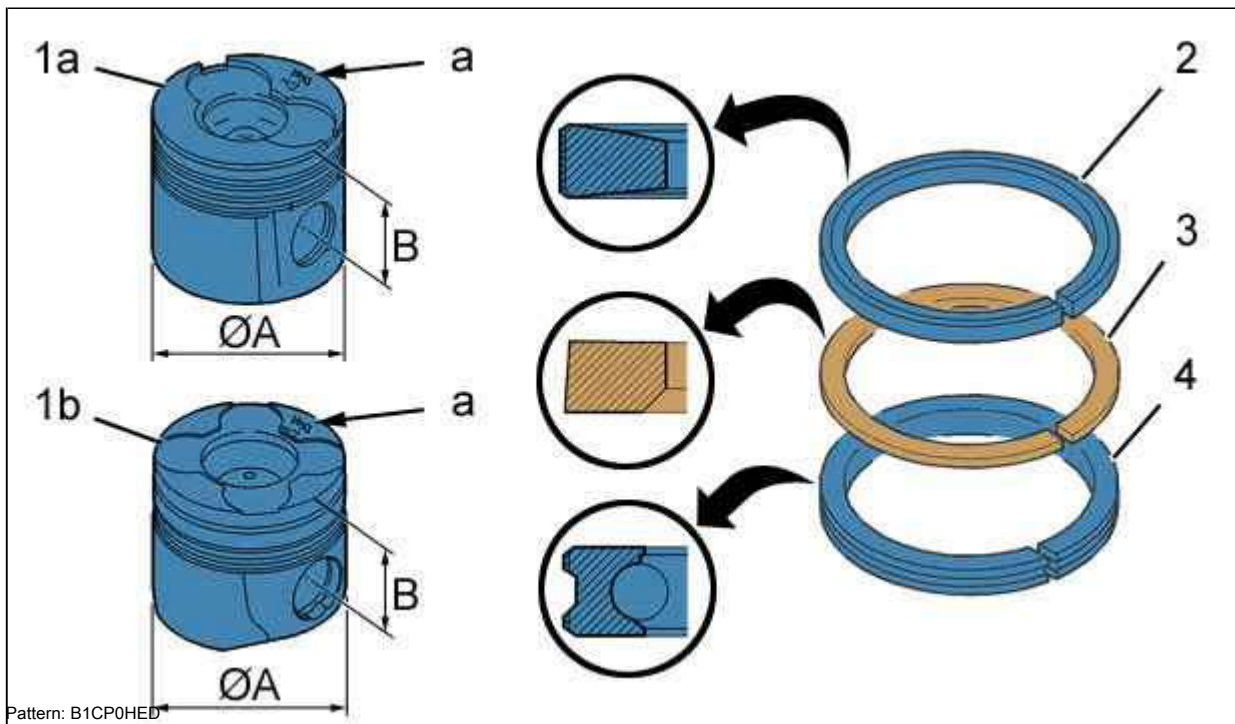
Loosen 10 screws (1) 180 °.

Tighten 10 bolts (2) to 3 da.Nm (order from 1 to 10). Tighten in the following order:

- 10 screws (1) at 140 ° (order from 1 to 10)
- 14 bolts (2) to 0.8 da.Nm (order 1 to 14)

CHARACTERISTICS: PISTON, PISTON RINGS, PISTON PIN

1. Piston



Marking in "a": Piston orientation.

(1a) Aluminum alloy piston (DV4TD).

(1b) Aluminum alloy piston (DV4TED4 and DV6).

(2) Trapezoidal top compression ring. (3) Tapered lower compression ring.

(4) Oil scraper ring with trapezoidal spring.

Dimensions

DV4TD Motor DV4TED4 Motor DV6 Motor

Diameter "A": Nominal size $73.528 \pm 0.075\text{mm}$			$74.945 \pm 0.075\text{mm}$
Diameter "A": Repair side Height "B"	$73.928 \pm 0.075\text{mm}$ Without		$75.345 \pm 0.075\text{mm}$
	$42.944 \pm 0.025\text{mm}$		$41.7 \pm 0.025\text{mm}$
Axial displacement of the piston finger $0.4 \pm 0.075\text{mm}$			

2. Piston rings

2.1. DV4TD engine

DV4TD engine	Afire piston	Compression	Oil scraper
	compression ring	piston ring	piston ring
Colored label:	yellow color	Blue	Violet
Nominal size			
Colored label:			
Repair side			
Slit clearance	0.2 to 0.35 mm	0.8 to 1 mm	0.2 to 0.4 mm
Thick	2.5 mm	1.95 mm	2.5 mm

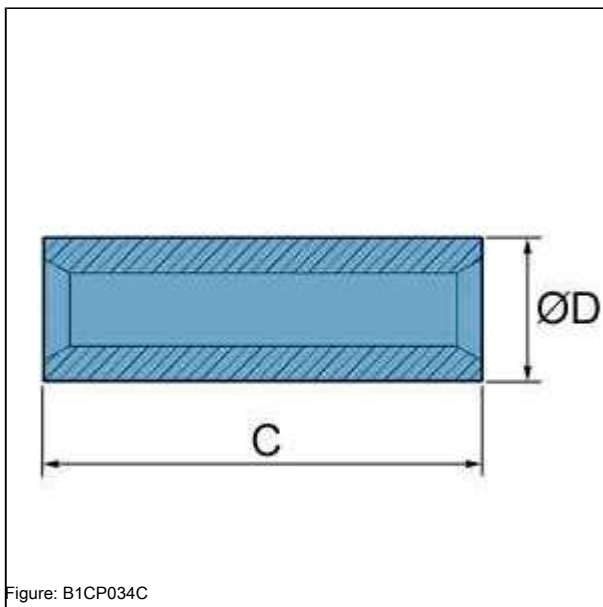
2.2. DV4TED4 engine

DV4TED4 engine	Afire piston	Compression	Oil scraper
	compression ring	piston ring	piston ring
Colored label:	yellow color	Blue	Violet
Nominal size			
Slit clearance	0.2 to 0.35 mm	0.8 to 1 mm	0.2 to 0.4 mm
Thick	2.5 mm	1.95 mm	2.5 mm

2.3. DV6 engine

DV6 engine	Afire piston	Compression	Oil scraper
	compression ring	piston ring	piston ring
Colored label:	Red	Green Blue	yellow color
Nominal size			Green
Colored label:	Orange	Pink	Violet
Repair side			
Slit clearance	0.15 to 0.25 mm	0.3 to 0.5 mm	0.35 to 0.55 mm
Thick	2.83 mm	1.95 mm	2.50 mm

3. Piston pin



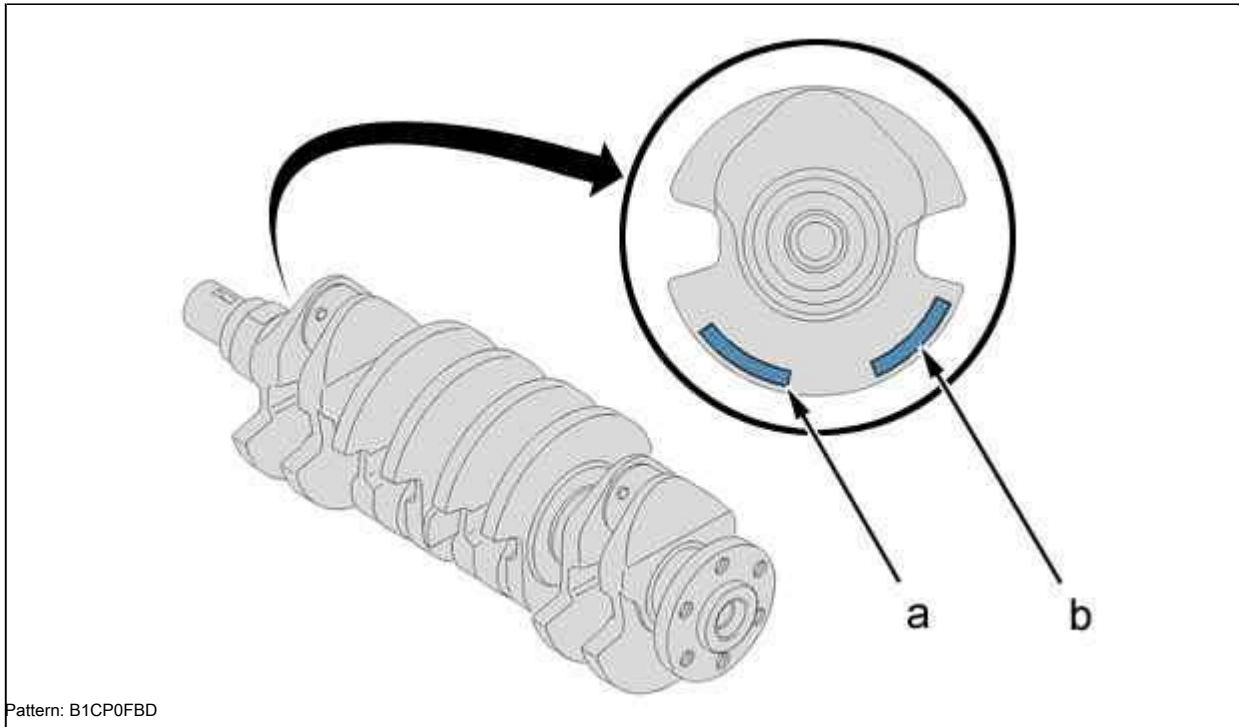
Dimensions	DV4 motor	DV6 motor
Length "C"	60 (0; 0.3) mm	61 (0; 0.3) mm
Diameter "D" 25 (0; 0.005) mm	26 (0; 0.005) mm	

NOTE: Piston pins fit loosely in the upper connecting rod heads and in the piston bosses. The piston pins are secured against movement by circlips.

CHARACTERISTICS: CRANKSHAFT NECK SUPPORT INSERTS CRANKSHAFT

1. Crankshaft

1.1. Identification



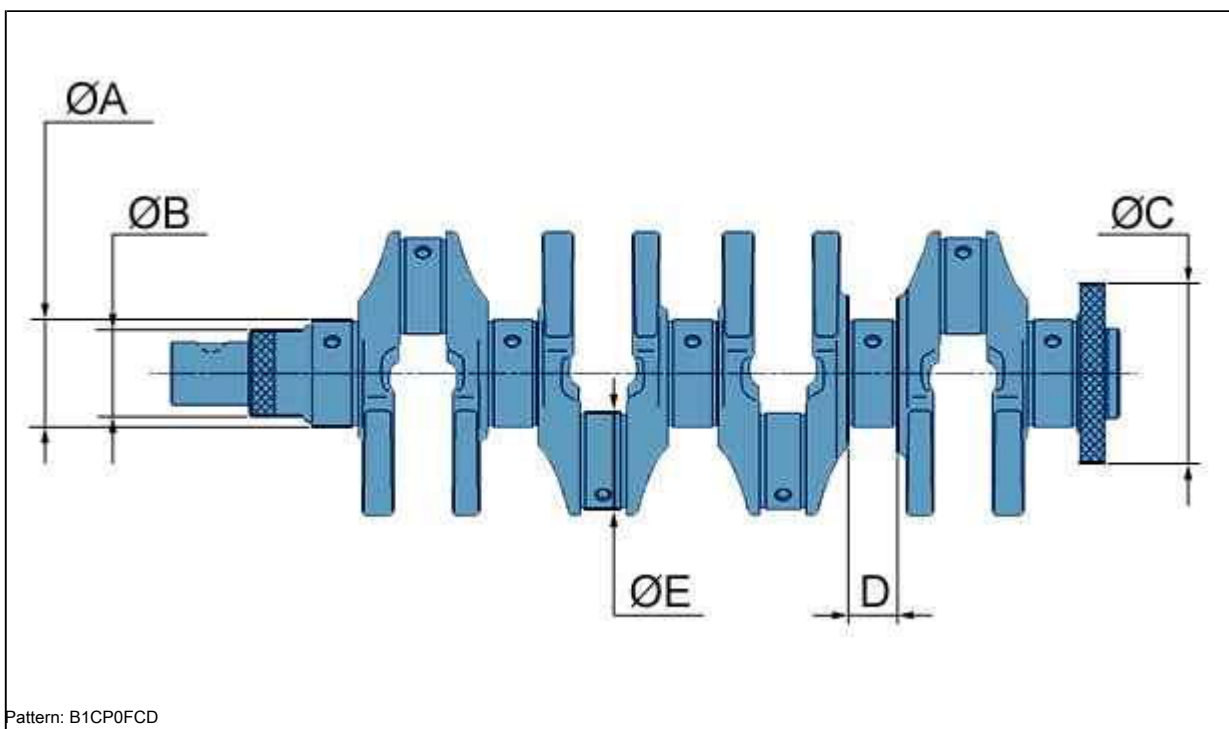
"a" Crankshaft bearing classes (with coil markings).

"b" Marking for sanding (marking with an electric pencil).

Mark "/" Repair mark M

	4 crankshaft journal
T	5 crankshaft main journals
FB	2 surfaces of thrust bearing
JE	Seal bearing surface (clutch side) Seal bearing surface (timing drive side)
JD	

1.2. Characteristics



crankshaft bearing

Diameter A	DV4 engine	DV6 engine
Nominal size	49.981 (0; 0.19) mm	49.981 (0; 0.19) mm
Repair side	49.681 (0; 0.19) mm	49.681 (0; 0.19) mm

Tightness (timing side)

Diameter B	DV4 engine	DV6 engine
Nominal size	40 (0; 0.16) mm	40 (0; 0.16) mm
Repair side	39.8 (0; 0.16) mm	39.8 (0; 0.16) mm

NOTE: Reconditioning B requires a new seal.

Tightness (clutch side)

Diameter C	DV4 motor	DV6 motor
Nominal size	85 (0; 0.22) mm	85 (0; 0.22) mm
Repair side	84 (0; 0.22) mm	84.8 (0; 0.22) mm

NOTE: Reconditioning C requires a new seal.

Crankshaft main neck width

Diameter D	DV4 engine	DV6 engine
Nominal size	23.39 (+ 0.052; 0) mm	23.39 (+ 0.052; 0) mm
Repair side	Without	Without

crankshaft connecting rod

Diameter E	DV4 engine	DV6 engine
Nominal size	45 (0.009; 0.025) mm	47 (0.009; 0.025) mm
Repair side	44.7 (0.009; 0.025) mm	46.7 (0.009; 0.025) mm

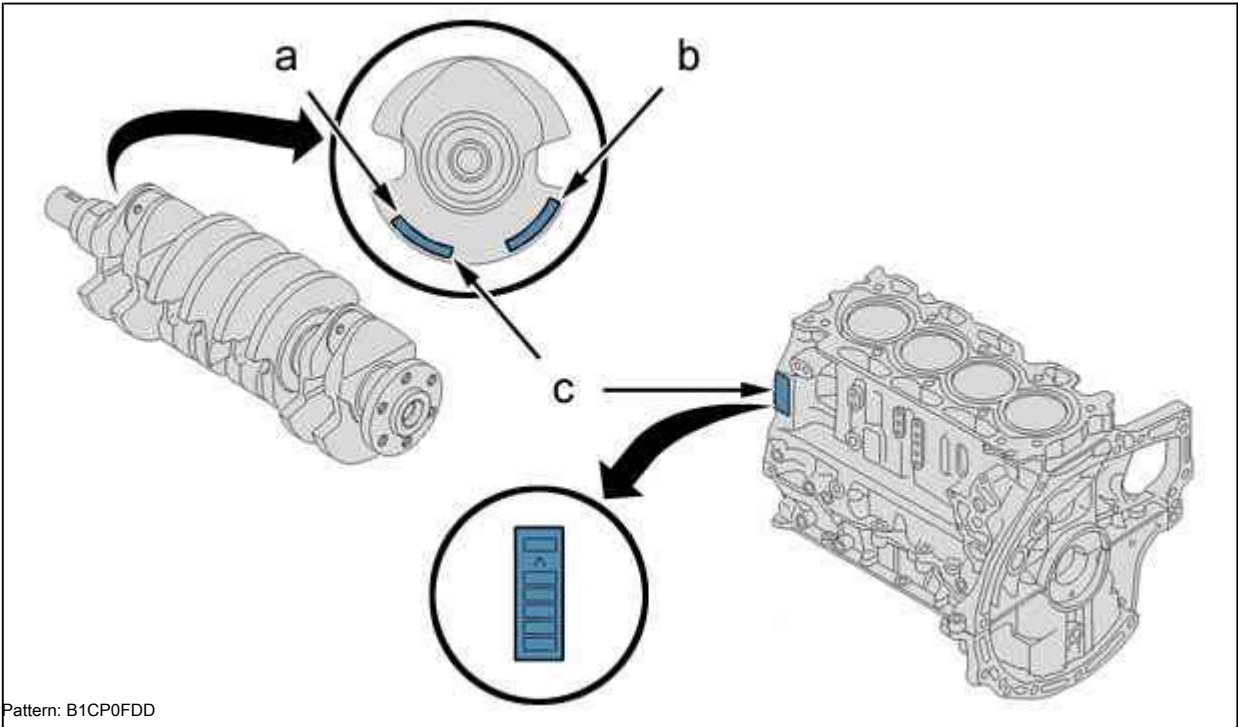
1.3. Crankshaft side clearance

The axial clearance is adjusted with 2 half rings on support No. 2.

Crankshaft side clearance gaskets

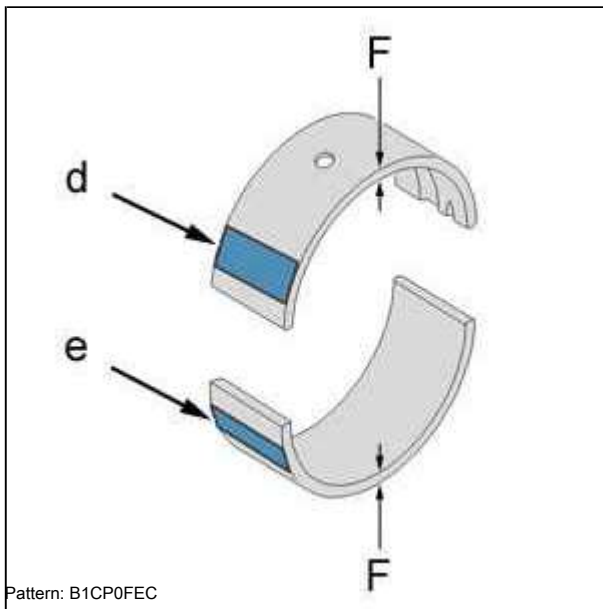
Thick	DV4 motor DV6 motor	
Nominal size	2.4 ± 0.05mm	2.4 ± 0.05mm
Repair side	Without	Without

2. Liners of the crankshaft main neck supports



"a": Marking of the crankshaft bearing class to the crankshaft.
"b": Marking of the camshaft bearing classes on the remanufactured crankshaft. "c": Marking of the crankshaft bearings at the crankshaft and at the cylinder block.
The working clearance in the crankshaft bearings is ensured through the use of 3 classes of lower plain liners (from the side of the crankshaft bearing caps).

2.1. Top inserts (scanned)



There is only one class for top bushings (grooved) (cylinder block side). Grooved top shells are marked in "d" with part number.

Top bushings (scanned) / DV4 and DV6 motors

Nominal size Repair side		
Size F	1.834 ± 0.003mm	1.984 ± 0.003mm
Mark "d"	371606	844592
Color label Orange		Sans

2.2. Bottom shells (smooth)

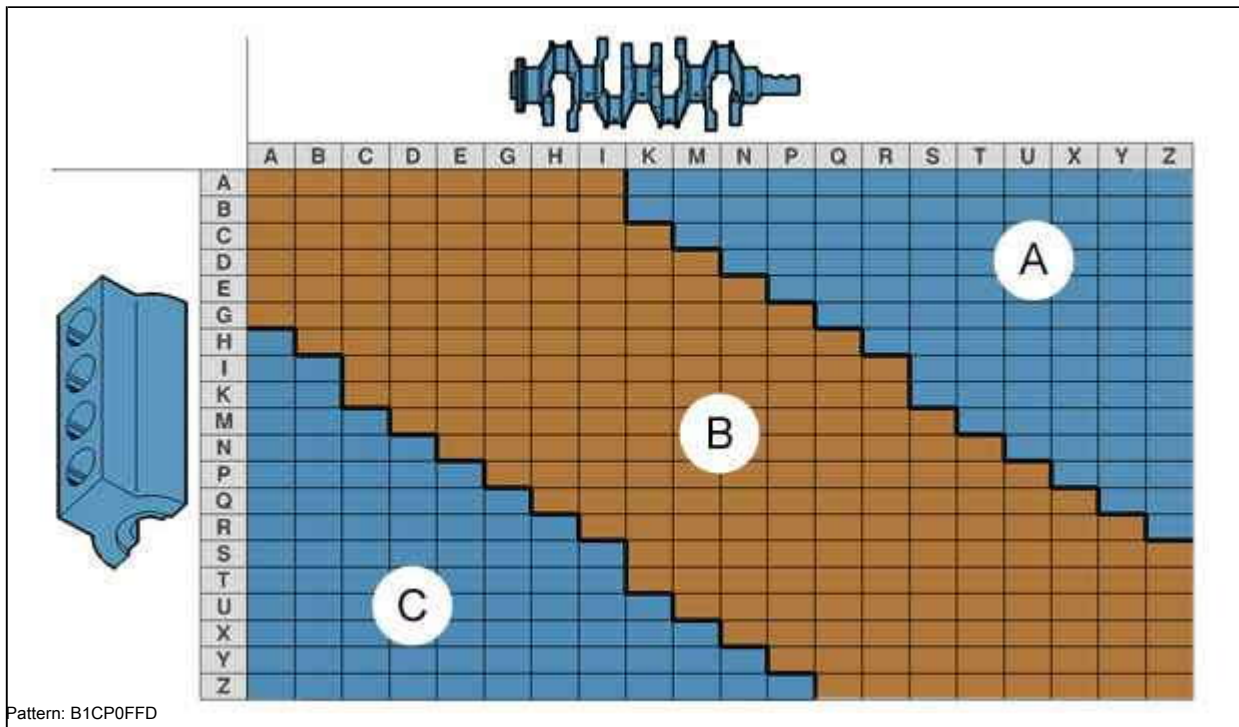
NOTE: Positioning the lower bushings requires the use of a special tool, [REFERENCE \(\) .0194Q](#).

The crankshaft bearing lower bearing shells are marked with a colored mark in the "e" area. The selection of the correct earbuds should be done using the pairing table using the "a" and "c" markings.

The first sign corresponds to the root collar No. 5, the second root collar No. 4, and so on.

NOTE: The bearings are numbered 1 through 5, journal # 1 located on the flywheel side of the engine.

2.3. Parity table



Zone A / Motors DV4 and DV6

Nominal size Repair side		
Size D	1.822 ± 0.003mm	1.972 ± 0.003mm
Colored meta in area "e" White or blue	Blue	

ZoneB / DV4 and DV6 Engines

Nominal size Repair side		
Size D	1.834 ± 0.003mm	1.984 ± 0.003mm
Colored meta in area "e" Yellow or black	The black	

Zone C / DV4 and DV6 motors

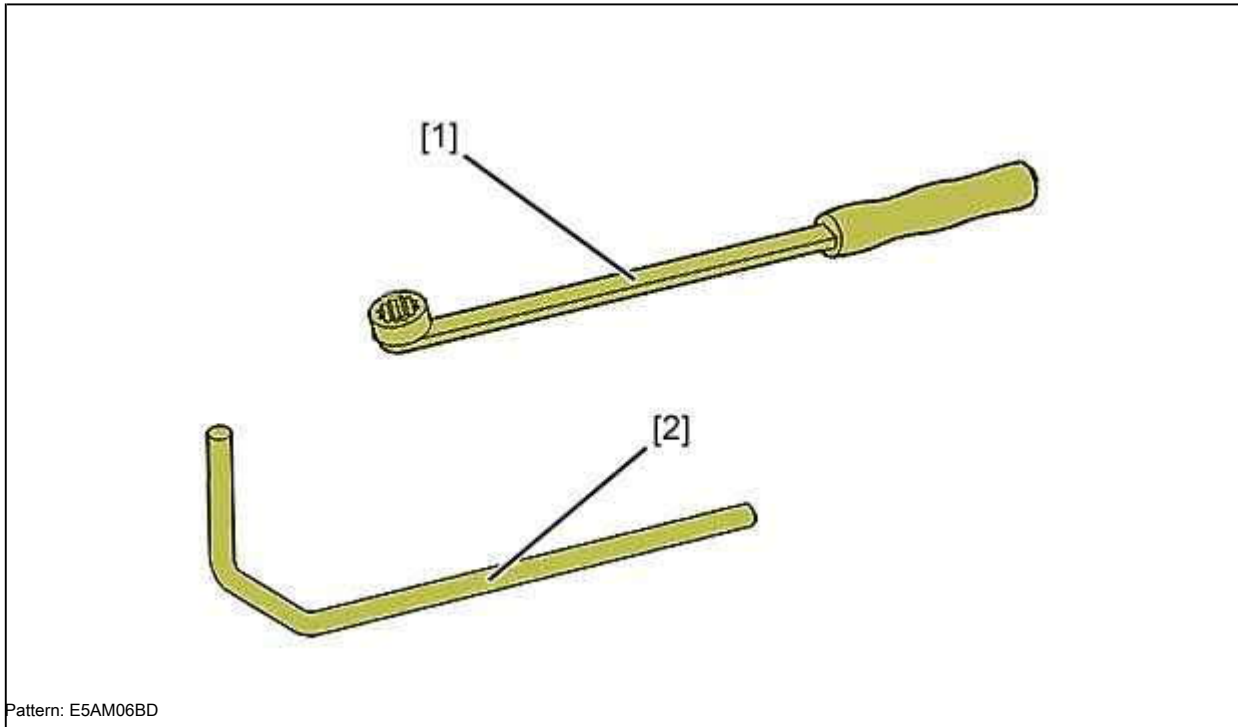
Nominal size		Repair side
Size D	1.846 ± 0.003mm	1.996 ± 0.003mm
Colored meta in area "e" Brown or Green	Green	

REMOVAL REFITTING: ANCHORED EQUIPMENT DRIVE BELT (POWER STEERING)

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



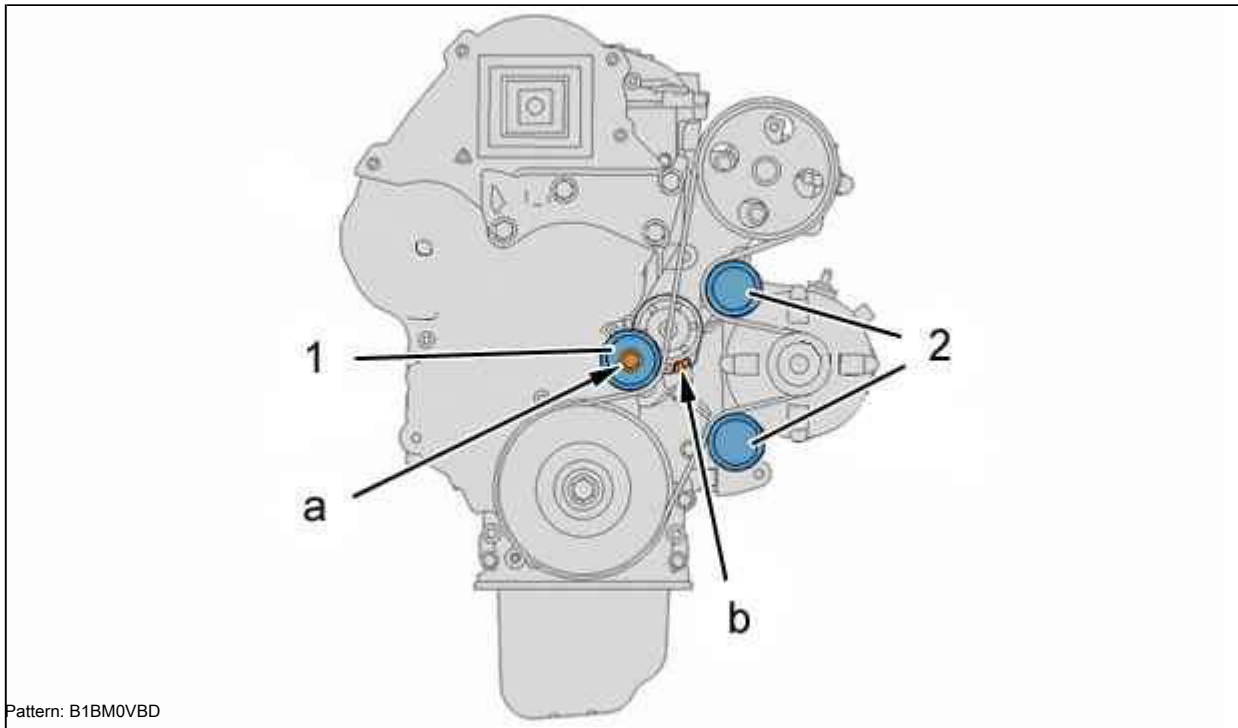
[1] Lever for spring compression of dynamic tensioner (). 0188Z. [2] Pin for dynamic tensioning roller (). 0194F.

2. Removal

Disconnect the battery. Remove:

- Front right wheel
- Under engine guard

2.1. Car without air conditioning



ATTENTION : Mark the mounting direction of the ancillary drive belt if reused.

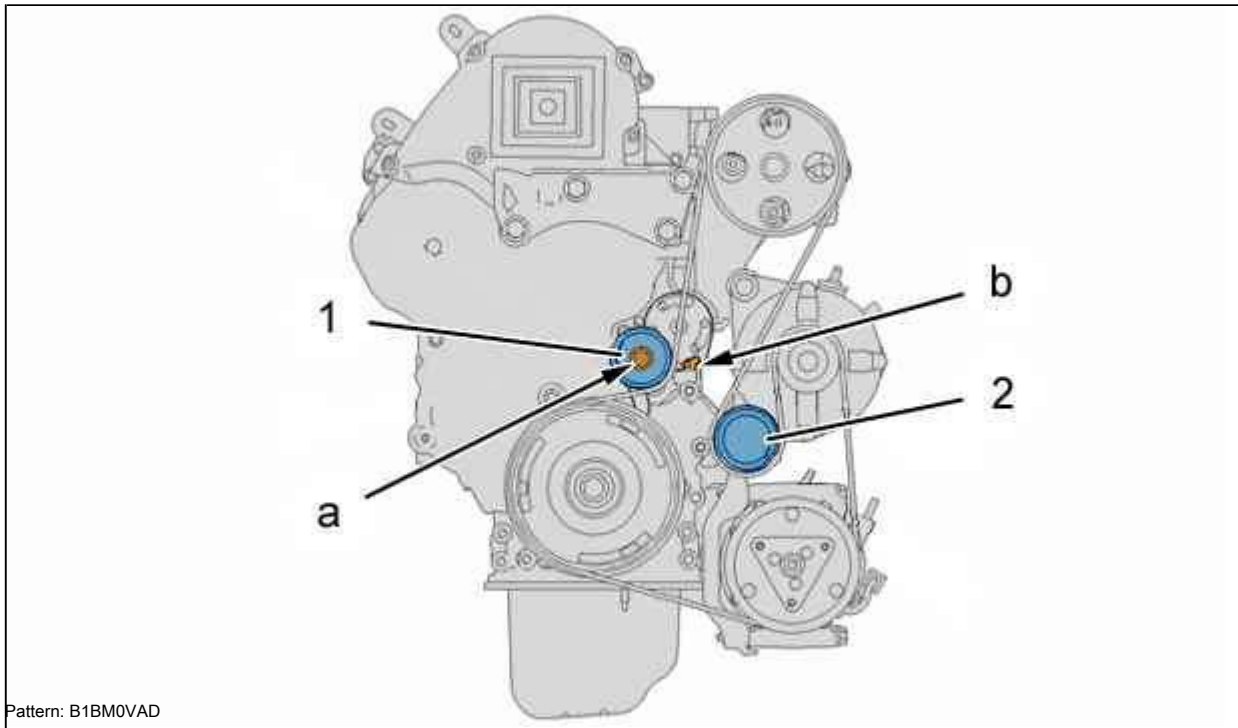
Squeeze the dynamic tensioner roller (1) by pressing in "a" (clockwise); Using the tool [1].

Secure with a pin (at "b"); Using a pin [2].

Hold dynamic tensioner roller (1) compressed and remove bodywork belt.

ATTENTION : Make sure that the rollers (1), (2) rotate freely (without play and jamming).

2.2. Car air conditioner



ATTENTION : Mark the mounting direction of the ancillary drive belt if reused.

Squeeze the dynamic tensioner roller (1) by pressing in "a" (clockwise); Using the tool [1].

Secure with a pin (at "b"); Using a pin [2].

Hold dynamic tensioner roller (1) compressed and remove bodywork belt.

ATTENTION : Make sure that the rollers (1), (2) rotate freely (without play and jamming).

3. Installation

ATTENTION : Drive belt that has already been used: Observe the direction of installation of the drive belt.

Replace the ancillary drive belt.

Squeeze the dynamic tensioner roller (1) by pressing in "a" (clockwise); Using the tool [1].

Remove the pin [2].

ATTENTION : Observe the normal installation of the attachment drive belt in the grooves of the various pulleys.

Install:

- Under engine guard
- Front right wheel

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL INSTALLATION: ENGINE OIL SEALS

MANDATORY: Observe the cleanliness and safety rules.



NOTE: The oil seals ensure the tightness of the crankshaft from the oil pump and flywheel side, as well as at the end of the camshaft from the timing pulley side; The sealing cuffs have a Teflon edge of a given shape

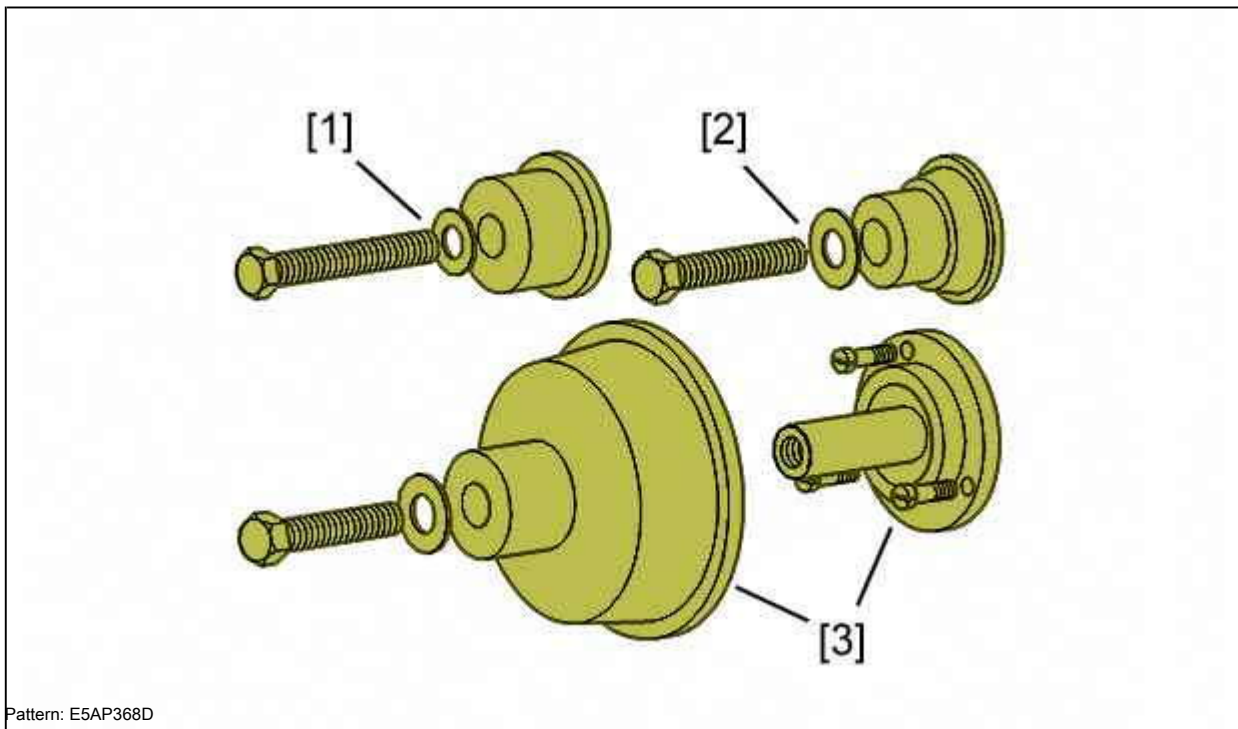
When the motor is started, pressure acts on the sealing lip, which presses against the shaft surface, leaving a thin film of oil on the shaft surface, which creates a seal.

ATTENTION : Check for traces of oil on the seal seat surfaces.

ATTENTION : If the lip of the seal is deformed, replace the O-ring.

NOTE: When replacing, leave the gland in the mandrel for mounting; If loose from the mandrel, reinstall the seal back in the mandrel and leave it assembled for 30 minutes before re-installing.
installation.

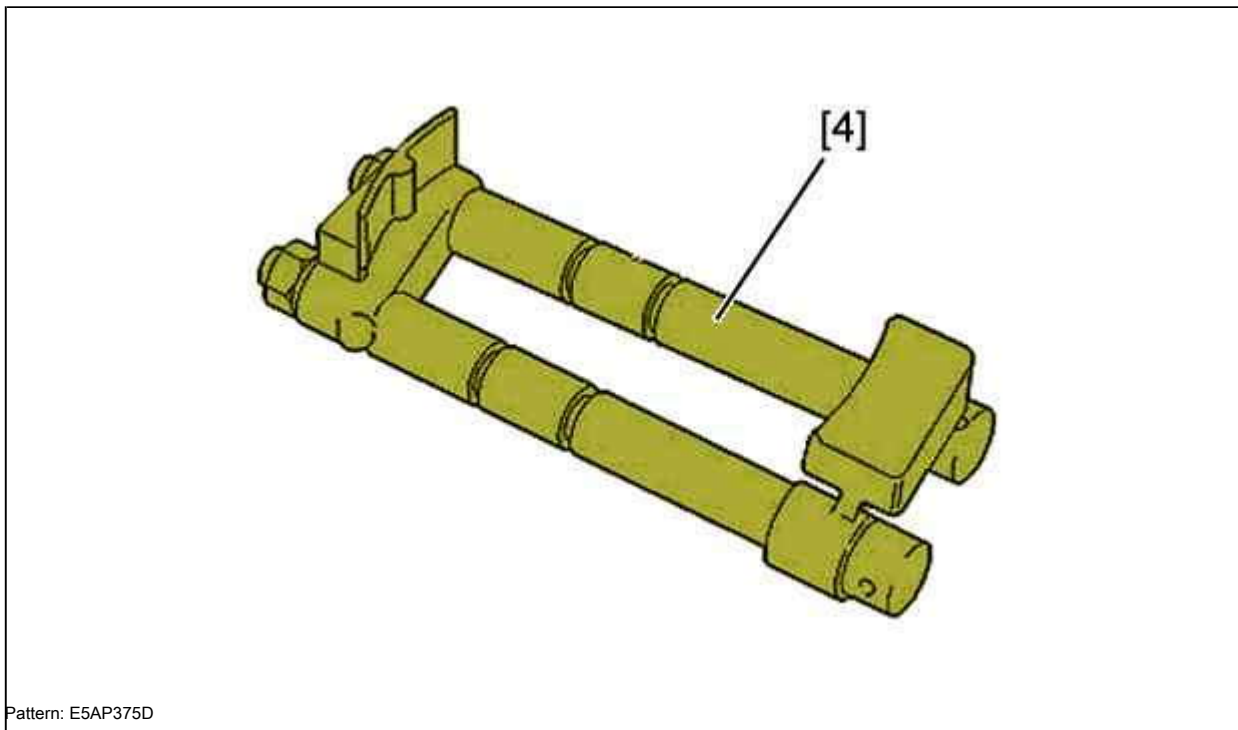
1. Recommended fixtures



Pattern: E5AP368D

[1] Camshaft seal adapter: camshaft () .0194K. [2] Camshaft seal adapter: oil pump () .0194L.

[3] Camshaft seal adapter: Crankshaft (Flywheel side) (). 0194M.



[4] Tool for fixing the camshaft in a stationary position 1 860 765 000 (Tool box () .0191).

2. Camshaft oil seal

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements

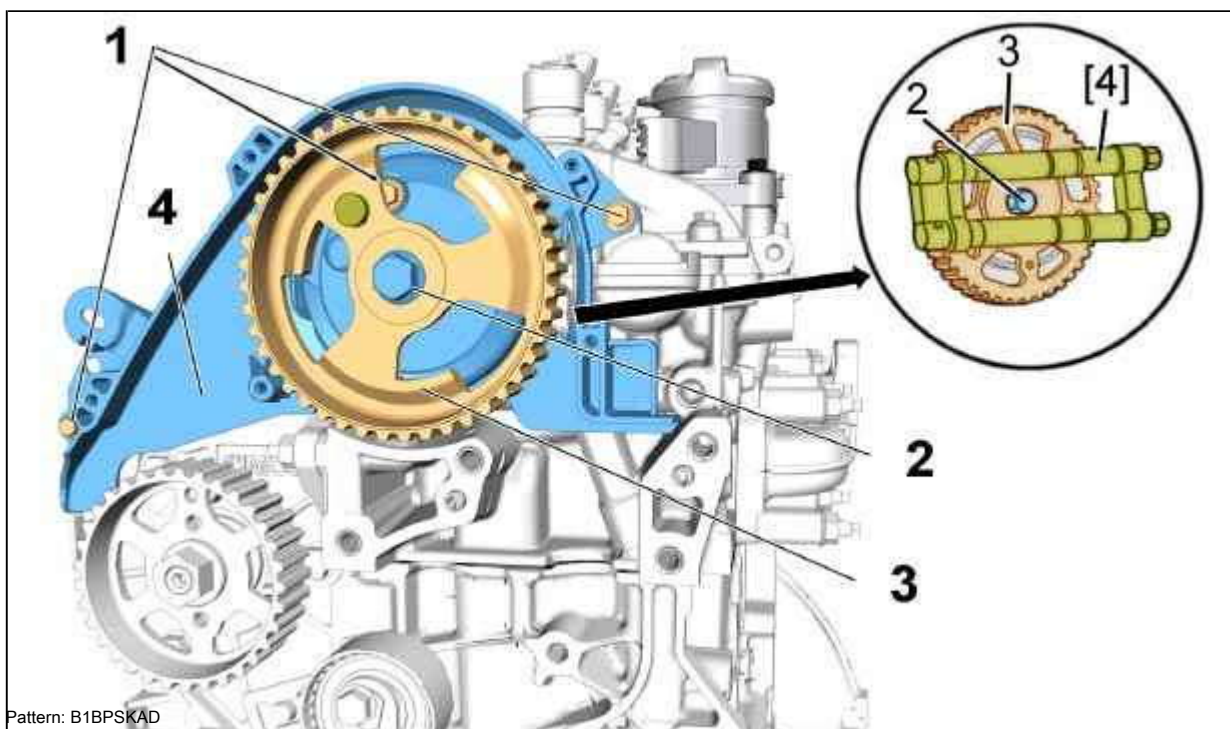


2.1. Withdrawal

Disconnect the battery. Remove:

- Engine cover
- **Timing belt**

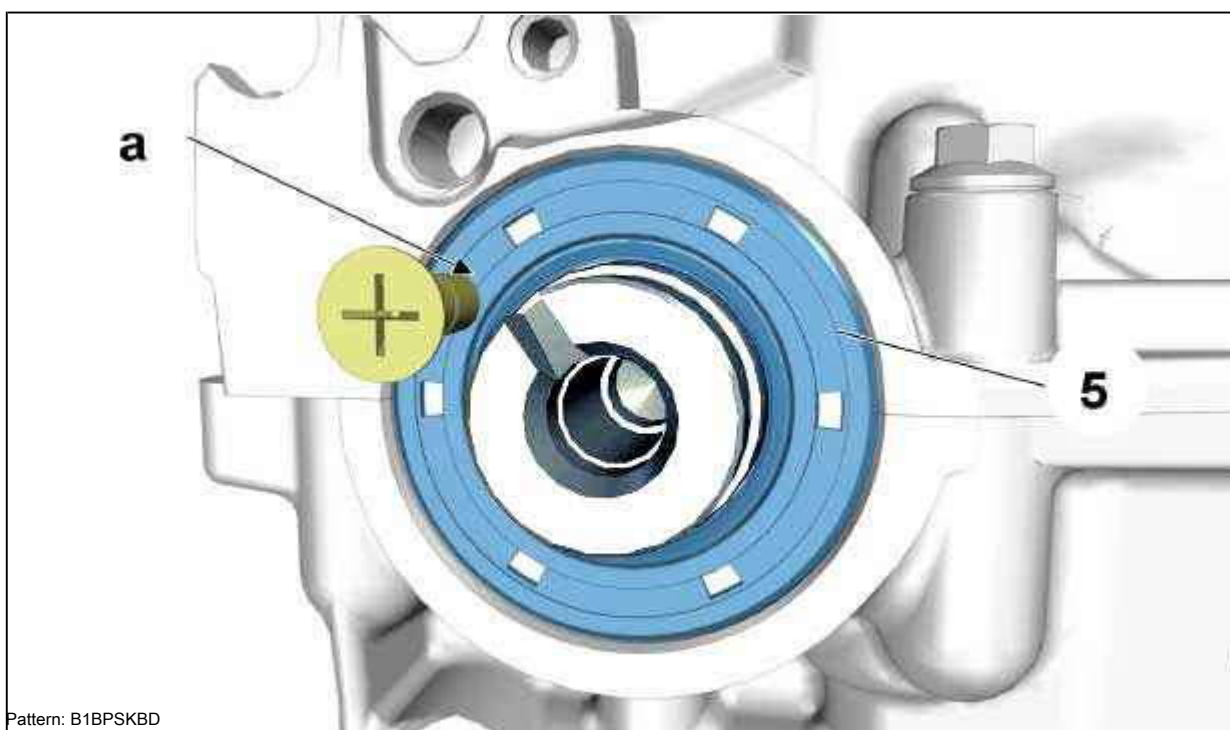




ATTENTION : Remove the camshaft locking pin.

Fix the camshaft pulley (3); Using the tool [4]. Remove:

- Bolt (2)
- Camshaft pulley (3)
- bolts (1)
- The timing cover (4)

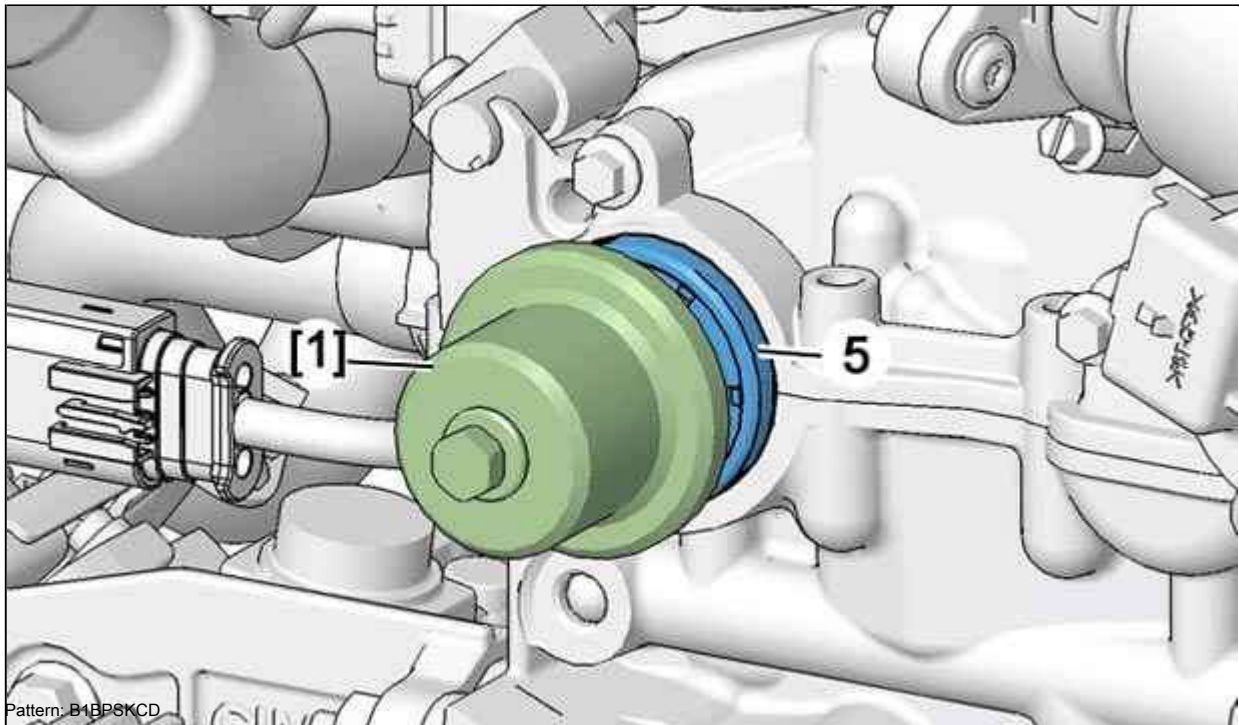


ATTENTION : Check for traces of oil on the seal seat surfaces.

Drill a $\varnothing 3.5$ hole in the seal (5) (at "a"). Screw the screw into the hole (at "a").

Pull out the gland assembly using pliers.

2.2. Installation



ATTENTION : Wipe off all traces of oil on the seal seat; Check for traces of oil on the seal seat surfaces.

Install the sleeve with the seal (5) on the camshaft. Install the tool [1].

Tighten the screw of the tool [1] until the end of the tool comes into contact with the surface of the camshaft support.

Remove the tool [1].

ATTENTION : Always replace the bolt (2).

Install:

- The timing cover (4)
- bolts (1)
- Camshaft pulley (3)
- Bolt (2) (New)

Bolt tightening method (2); Using tool [4]:

- Pre-tightening torque 2 ± 0.2 da.Nm
- Angle tightening $50 \pm 5^\circ$ Install:

- **Timing belt**
- Engine cover



Reconnect the battery.

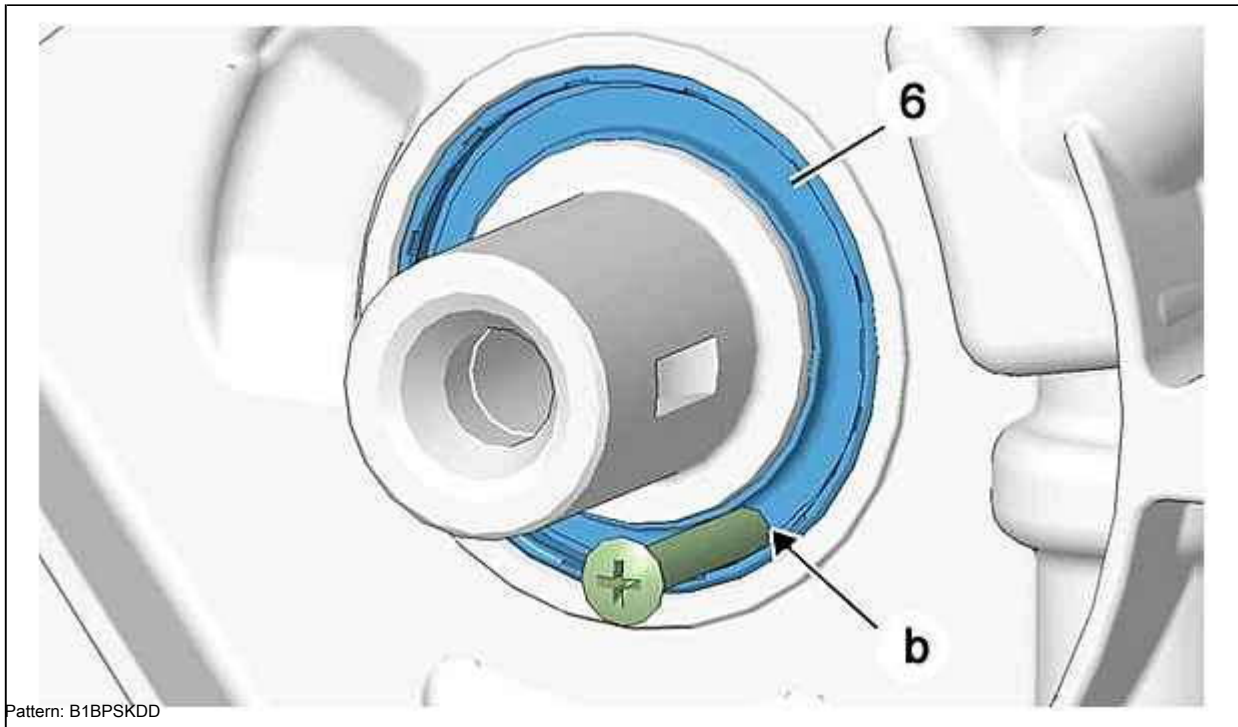
3. Oil pump seal

3.1. Withdrawal

Disconnect the battery. Remove the engine cover.

Remove:

- Engine cover
- **Timing belt**
- Crankshaft pulley
- Crankshaft pulley key



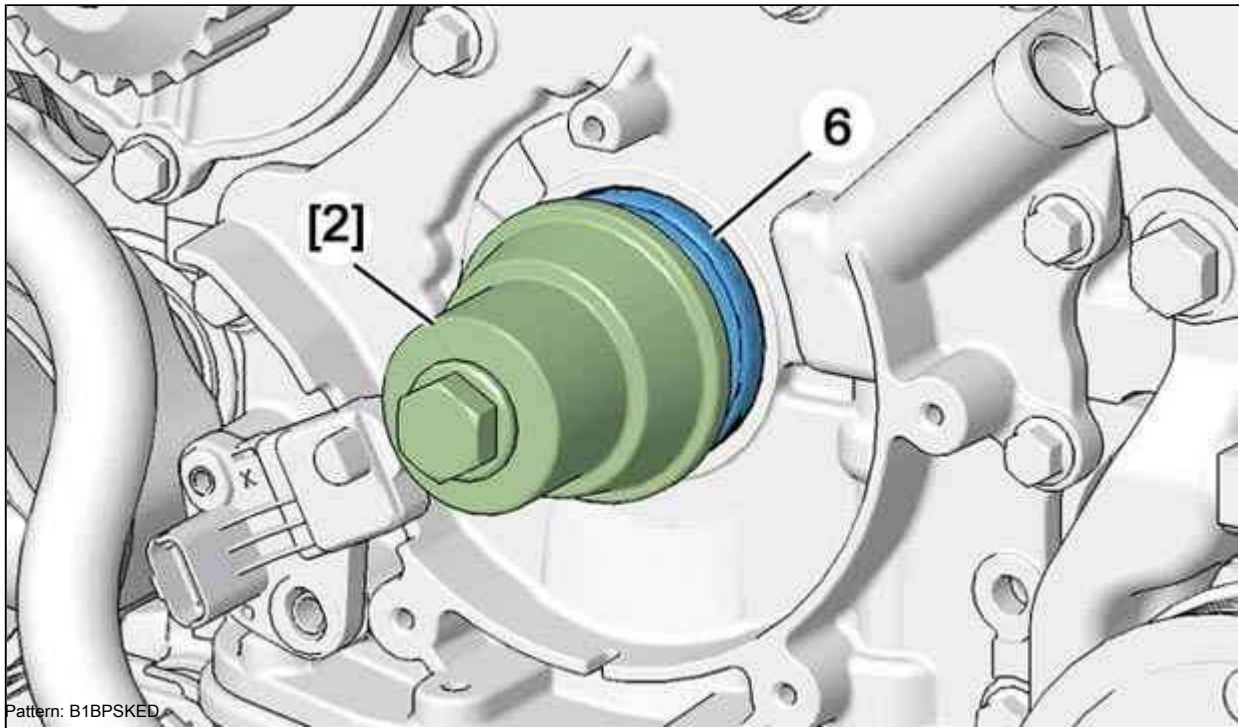
Pattern: B1BPSKDD

ATTENTION : Check for traces of oil on the seal seat surfaces.

Drill a $\varnothing 3.5$ hole in the seal (6) (in "b"). Screw the screw into the hole (at "b").

Pull out the gland assembly using pliers.

3.2. Installation



Pattern: B1BPSKED

ATTENTION : Wipe off all traces of oil on the seal seat; Check for traces of oil on the seal seat surfaces.

Install a sleeve with an O-ring (6) on the crankshaft. Install the tool [2] and the crankshaft pulley screw.

Tighten the crankshaft pulley bolt until the end face of the tool [2] comes into contact with the surface of the oil pump.

Remove the tool [2].

Install:

- Crankshaft pulley key
- Crankshaft pulley
- **Timing belt**
- Engine cover



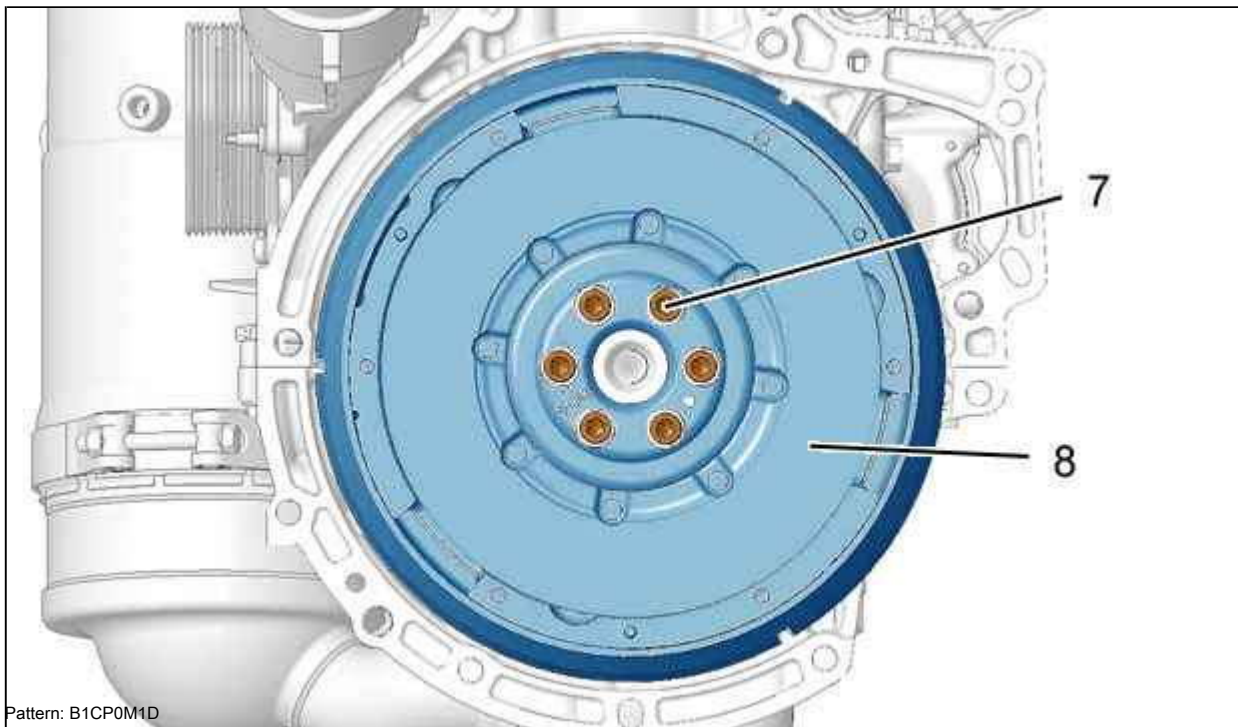
Reconnect the battery.

4. Crankshaft oil seal

4.1. Withdrawal

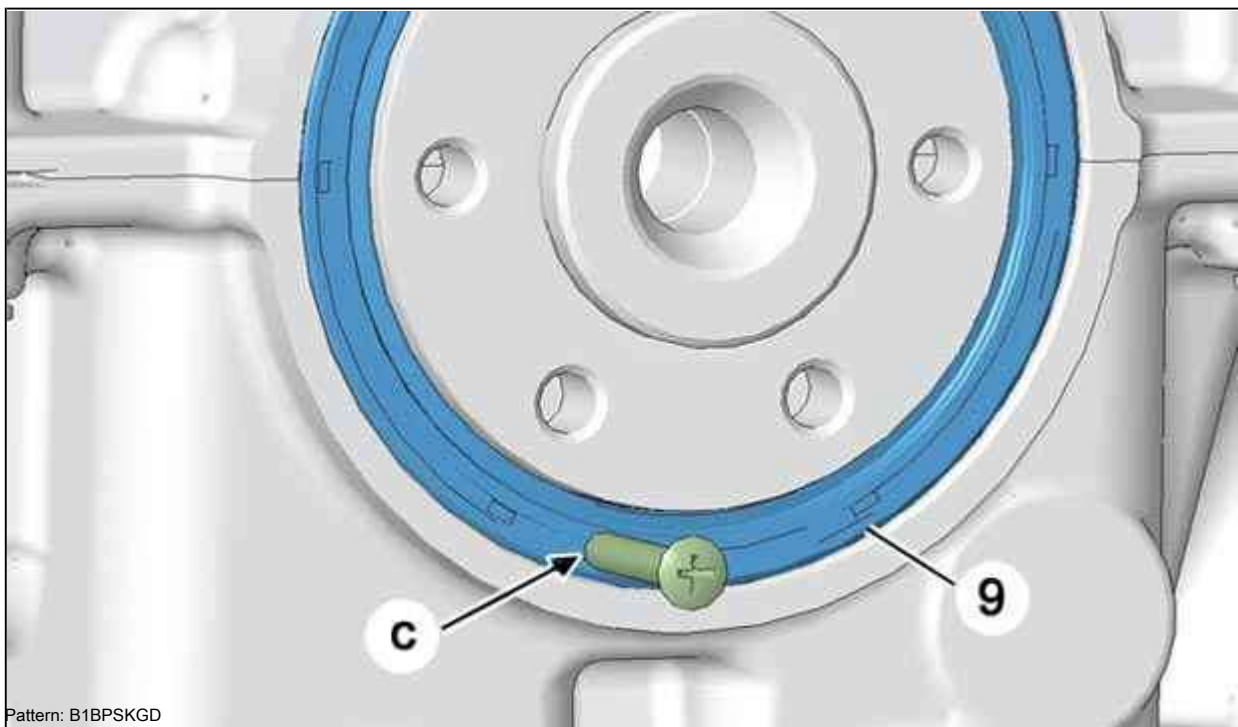
Disconnect the battery. Remove:

- Engine cover
- Transmission
- Clutch mechanism



Remove:

- the bolts (7)
- Flywheel (8)



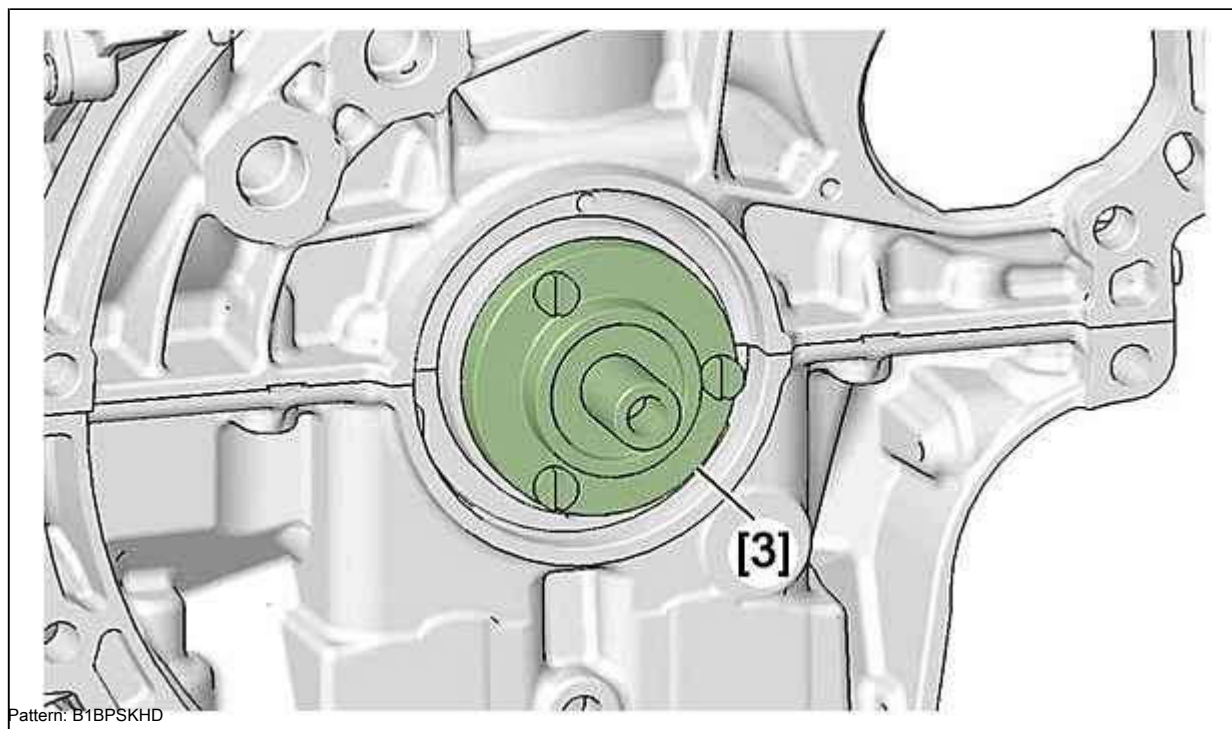
ATTENTION : Check for traces of oil on the seal seat surfaces.

Drill a $\varnothing 3.5$ hole in the seal (9) (at "c"). Screw the screw into the hole (at "c").

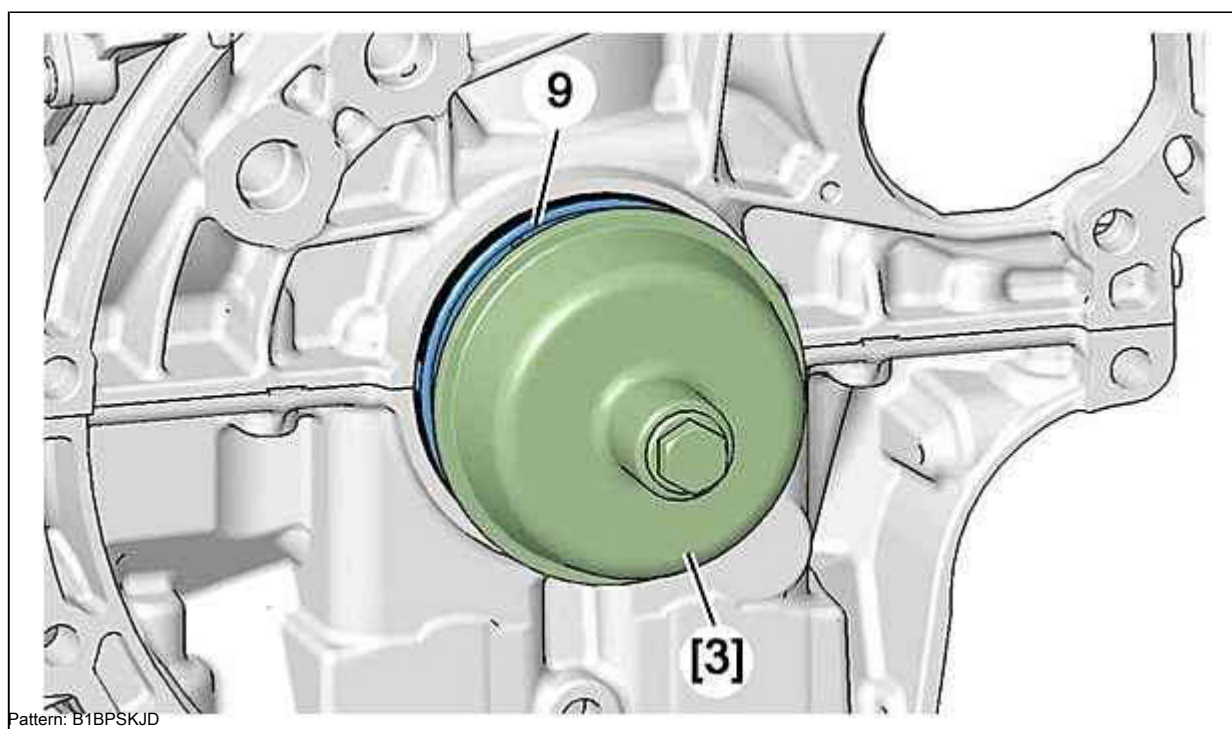
Pull out the gland assembly using pliers.

4.2. Installation

ATTENTION : Wipe off all traces of oil on the seal seat; Check for traces of oil on the seal seat surfaces.

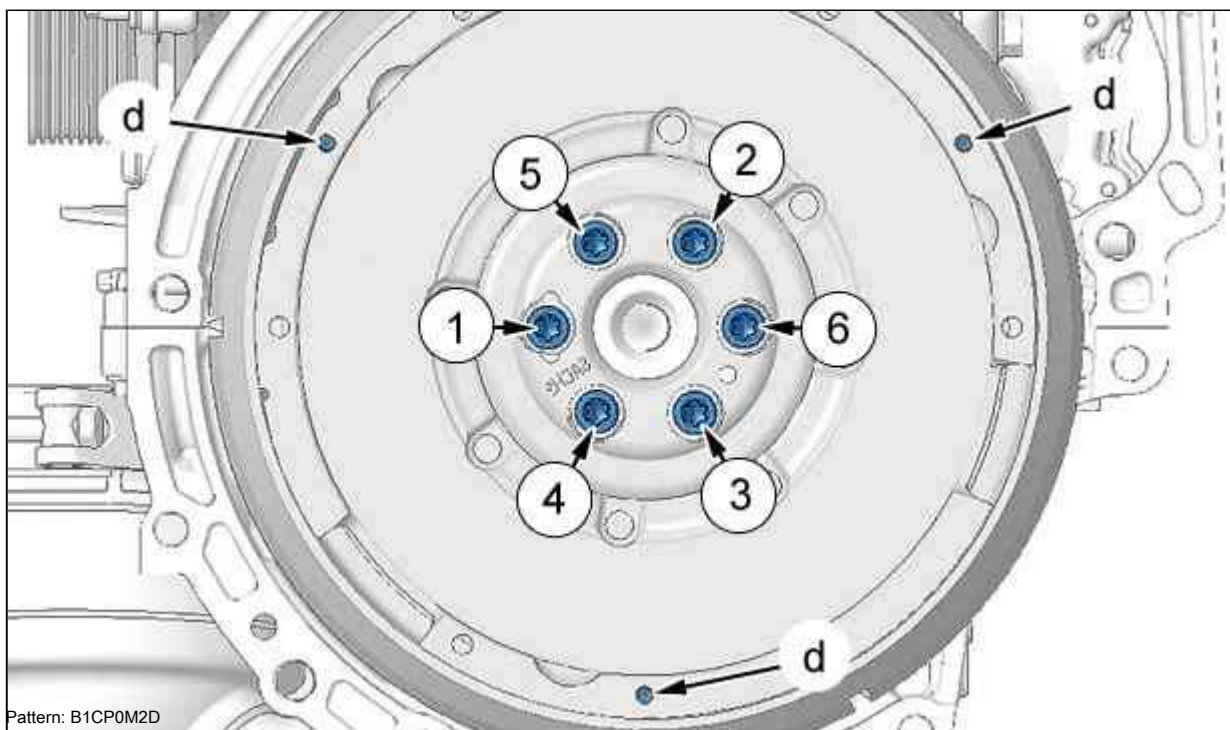


Install the lower part of the engine flywheel tool [3].



Install the removed sleeve with seal (9) on the lower part of the tool [3]. Tighten the screw [3] of the tool until the end of the tool comes into contact with the surface of the cylinder block.

Remove the tool [3].



Install the twin engine flywheel (8).

Make sure the 3 clutch centering pins are present (in "d").

ATTENTION : Replace the bolt (7) periodically.

ATTENTION : Observe the tightening order of the screws (7).

Bolt tightening method ((7)):

- Pre-tightening torque 2.5 ± 0.2 da.Nm
- Turning away
- Pre-tightening torque 0.8 ± 0.1 da.Nm
- Tightening torque 3 ± 3.2 da.Nm
- Angle tightening $90 \pm 5^\circ$

Install:

- Clutch mechanism
- Transmission
- Engine cover

Reconnect the battery.

CHARACTERISTICS: CYLINDER HEAD GASKET

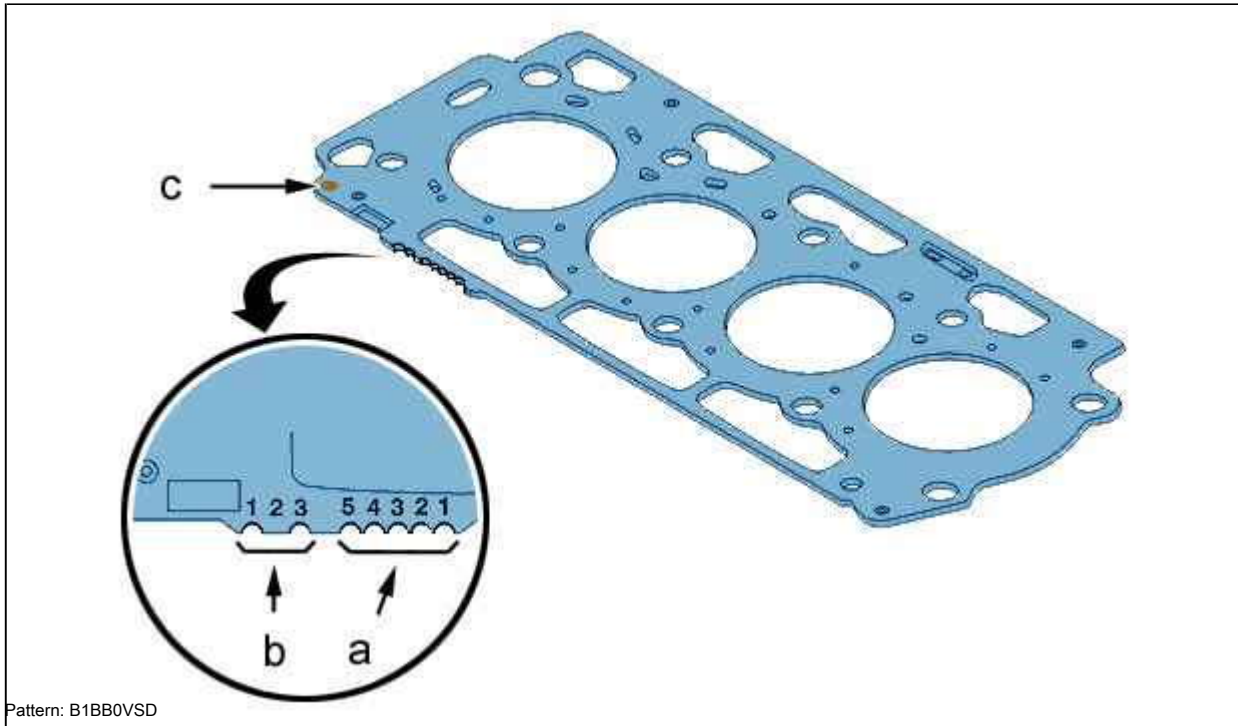
1. Characteristics

Multi-layer metal cylinder head gasket (5 thickness classes)

Engine	Suppliers
DV4TD	ELRING
DV4TED4	ELRING
DV6 toustypes	REINZ FEDERAL MOGUL

2. Identification

ATTENTION : Select the cylinder head gasket according to the piston protrusion.



"a" Thickness metric.

"b" Vendor code.

"c" Marking after the ceremony.

Protrusion of pistons (mm) Thickness (mm) Position of groove "a" Marking after ceremony

			"c"
0.685 0.734	1.35	(1)	Without
0.533 0.634	1.25	(1 + 2)	Without
0.635 0.684	1.30	(1 + 2 + 3)	Without
0.735 0.784	1.40	(1 + 2 + 3 + 4)	Without
0.785 0.886	1.45	(1 + 2 + 3 + 4 + 5)	Without
Repair size (depending on configuration).			

Protrusion of pistons (mm) Thickness (mm) Position of groove "a" Marking after ceremony

			"c"
0.736 0.844	1.45	(1 + 2 + 3 + 4 + 5) (2)	Without
0.845 0.894	1.50		FROM
0.895 0.944	1.55	(2 + 3)	FROM
0.945 0.994	1.60	(2 + 3 + 4)	FROM
0.995 1.103	1.65	(2 + 3 + 4 + 5)	FROM

CHARACTERISTICS: CYLINDER HEAD BOLT

CYLINDER HEAD BOLT TIGHTENING

1. Bolt of the cylinder head

ATTENTION : Check the length of the cylinder head bolts before reusing them.

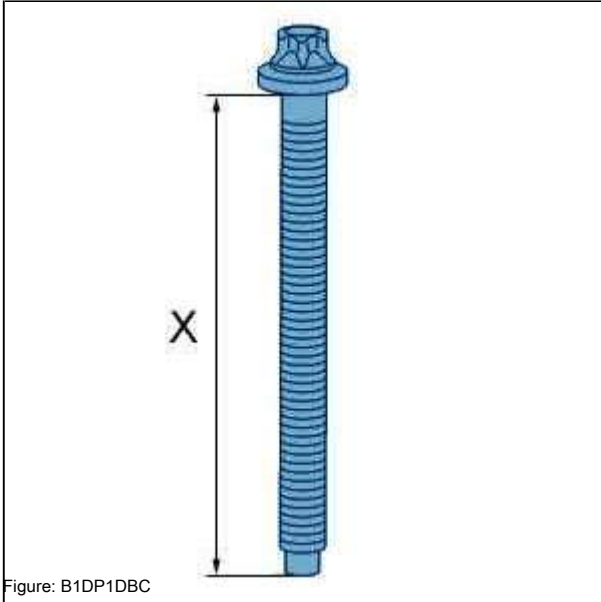


Figure: B1DP1DBC

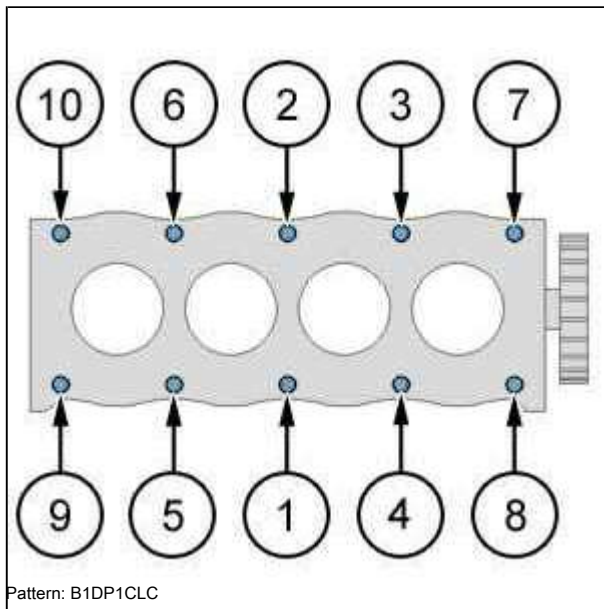
"X" = Maximum bolt shank length.

Length of reusable bolts: "X" = 149 mm.

ATTENTION : Do not reuse cylinder head bolts that are longer than 149 mm.

2. Tightening the cylinder head mounting bolts

2.1. Tightening sequence



2.2. Tightening method

ATTENTION : Observe the required tightening torques.

Tightening: From bolts to bolts in the sequence c1 to 10. Loosening: Proceed in reverse order (10 to 1).

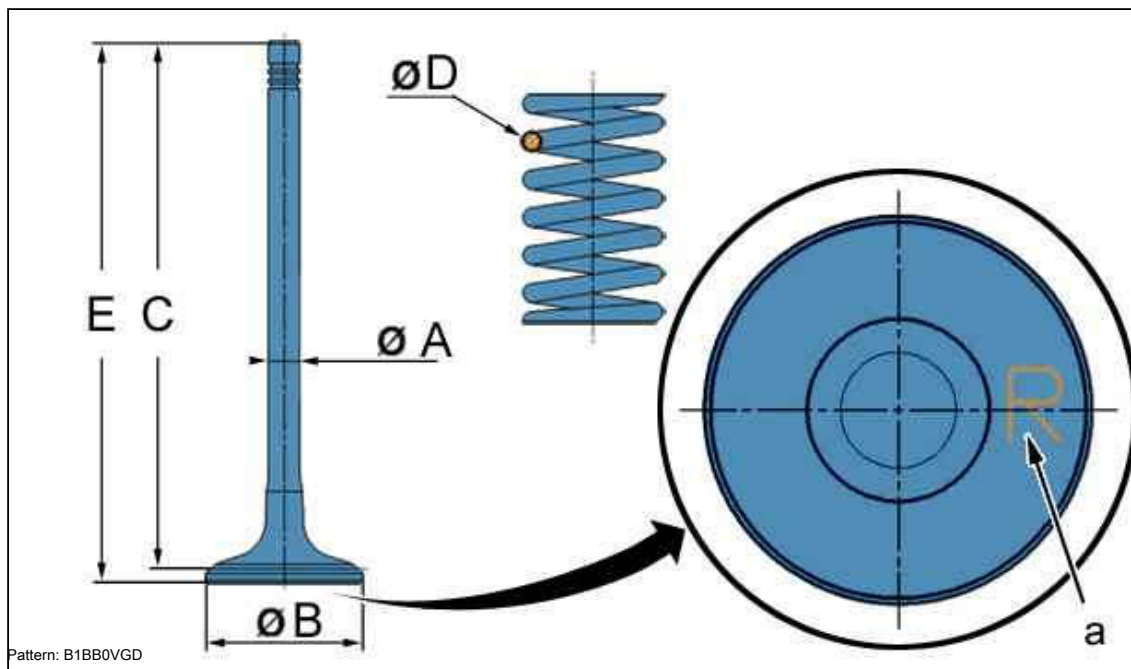
Observe the required tightening torques:

- **DV4TD motors of all types**
- **DV6TED4 motors of all types**



CHARACTERISTICS: VALVES AND VALVE SPRINGS

1.valves



"a" Marking after the ceremony.

1.1. Inlet valve

DV6 engines of all types (EURO 4) Inlet valve

Label	Nominal size Repair side $\varnothing A$	
	5.485 (0; 0.015) mm	
$\varnothing B$	25.6 \pm 0.1mm	
Length C	94.715 \pm 0.15mm	
Length E	96.435 \pm 0.25mm	96.035 \pm 0.25mm

1.2. Exhaust valve

DV6 motors of all types (EURO 4) Exhaust valve

Label	Nominal size Repair side $\varnothing A$	
	5.475 (0; 0.015) mm	
$\varnothing B$	23.4 \pm 0.1mm	
Length C	94.63 \pm 0.15mm	
Length E	96.6 \pm 0.25mm	96.2 \pm 0.25mm

2. Valve springs

NOTE: The valve springs for the intake and exhaust valves are identical.

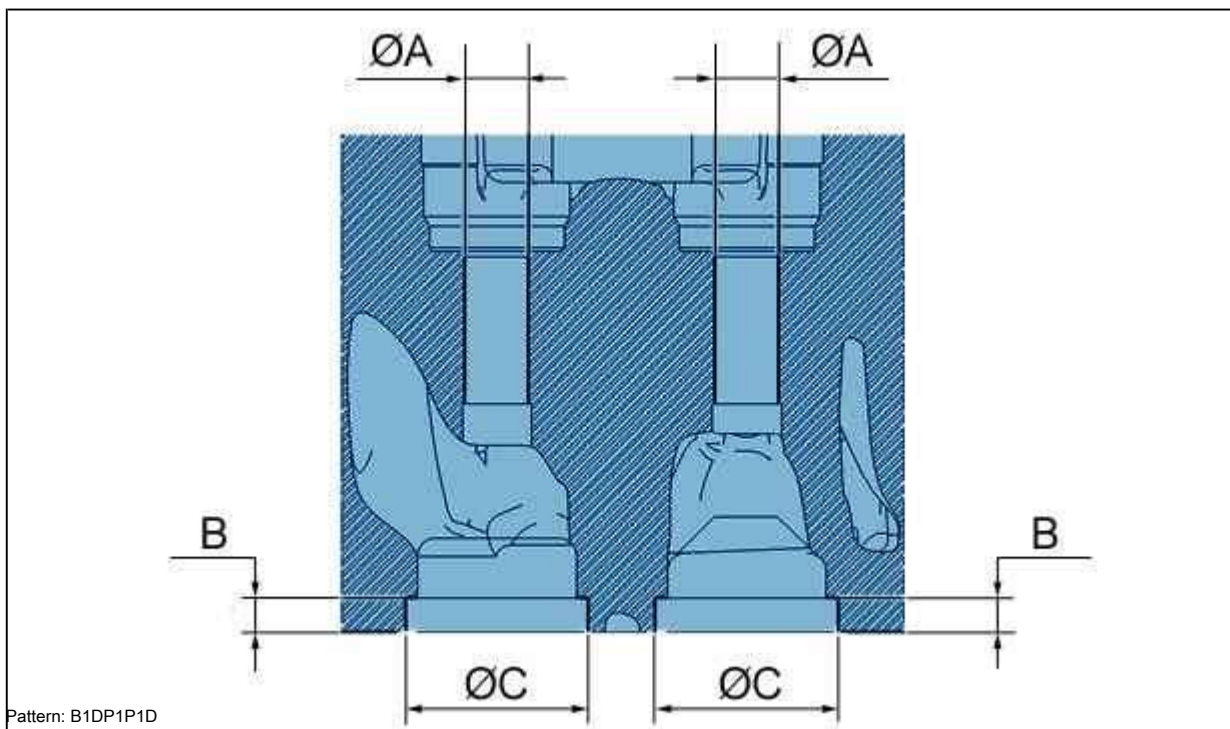
Diameter D = 2.8 \pm 0.02mm.

Identification: No label.

FEATURES: SEATS AND VALVE GUIDE BUSHES

1. Processing in the cylinder head

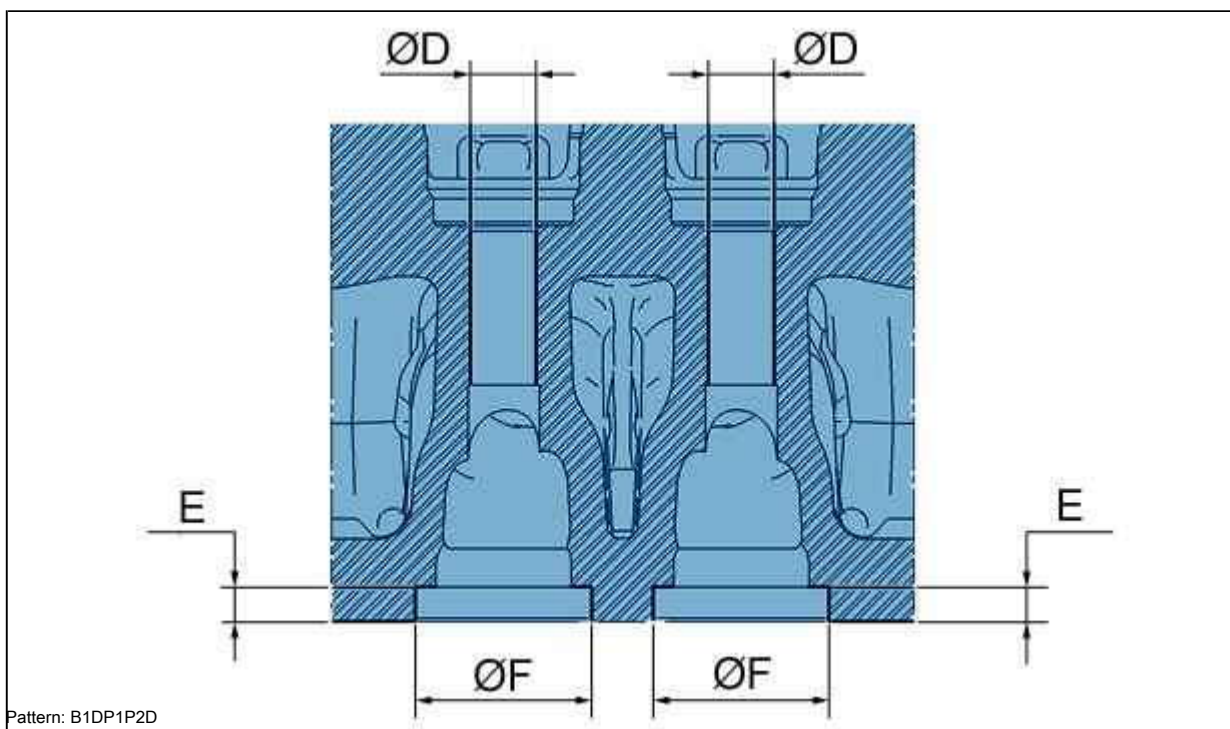
1.1. Dimensions for machining the cylinder head of the intake valves



DV6 Euro4 engine (All types)

Cylinder head machining Nominal size Repair side $\varnothing A$		
	9.474 (+ 0.022; 0) mm 5 (+	9.974 (+ 0.022; 0) mm
B	0.4; 0.2) mm	
$\varnothing C$	27.4 (+ 0.025; 0) mm	

1.2. Dimensions for machining the exhaust cylinder head

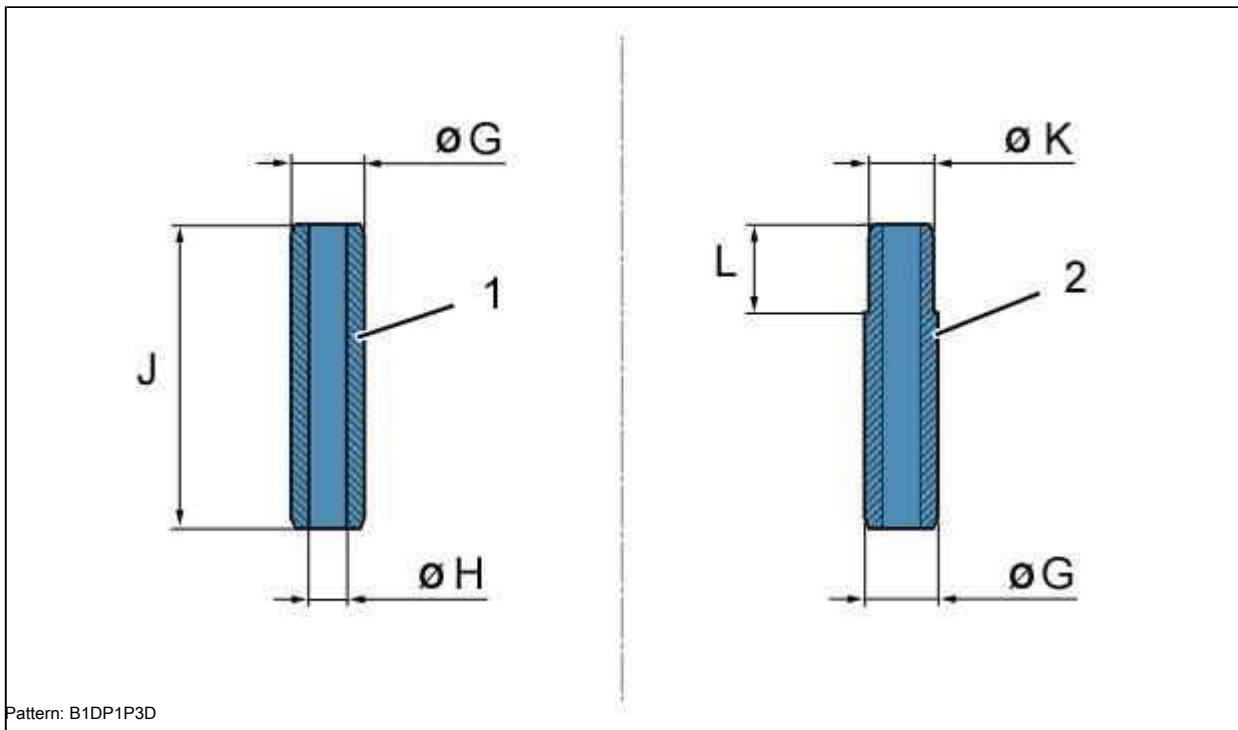


DV6 Euro4 engine (All types)

Cylinder head machining Nominal size Repair side $\varnothing D$		
	9.474 (+ 0.022; 0) mm 5 (+	9.974 (+ 0.022; 0) mm
E	0.4; 0.2) mm	
$\varnothing F$	26.09 (+ 0.025; 0) mm	

2. Valve guides

2.1. Dimensions for processing guides

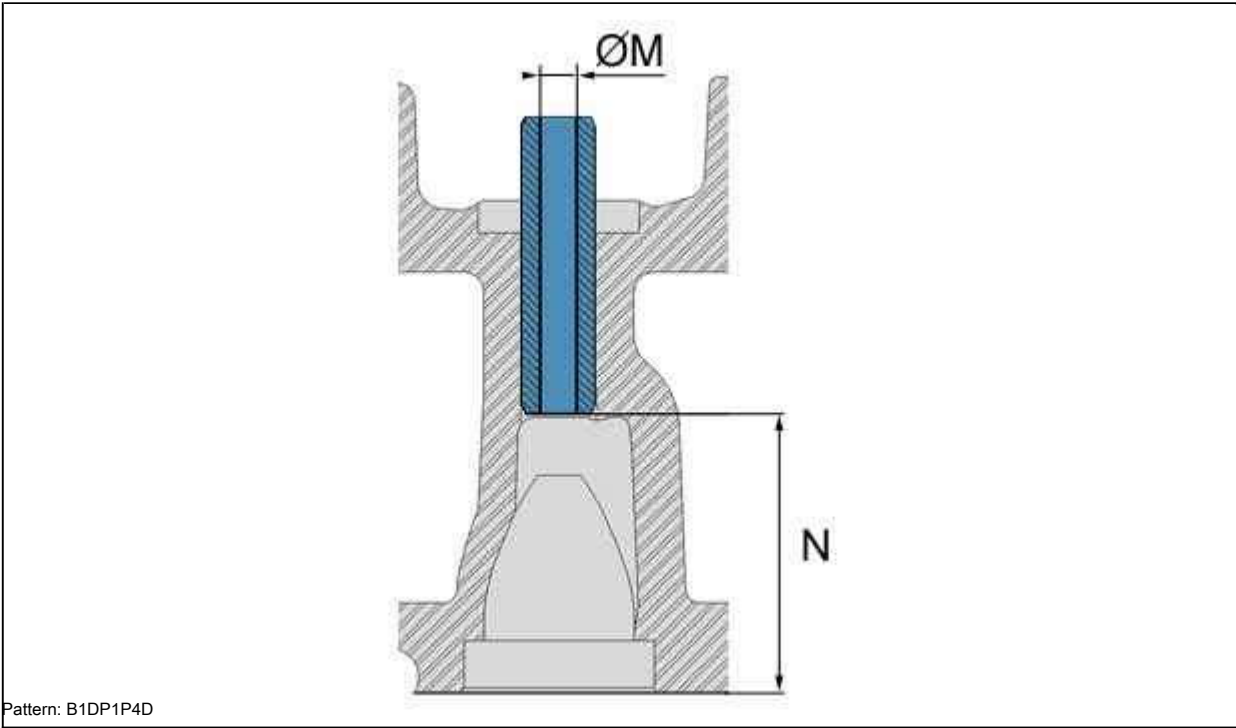


(1) Exhaust and inlet valve guide (serial size). (2) Exhaust and inlet valve guide (Oversized).

Dimensions for slideway machining Nominal size Repair side Ø G

	9.55 (+ 0.04; + 0.03) mm 10 (+ 0.04; + 0.03) mm 5 ± 0.05mm	
Ø H		
Ø J	34 ± 0.25mm	
Ø K		9.55 (+ 0.04; + 0.03) mm 10 ±
L		0.1mm

2.2. Accommodation

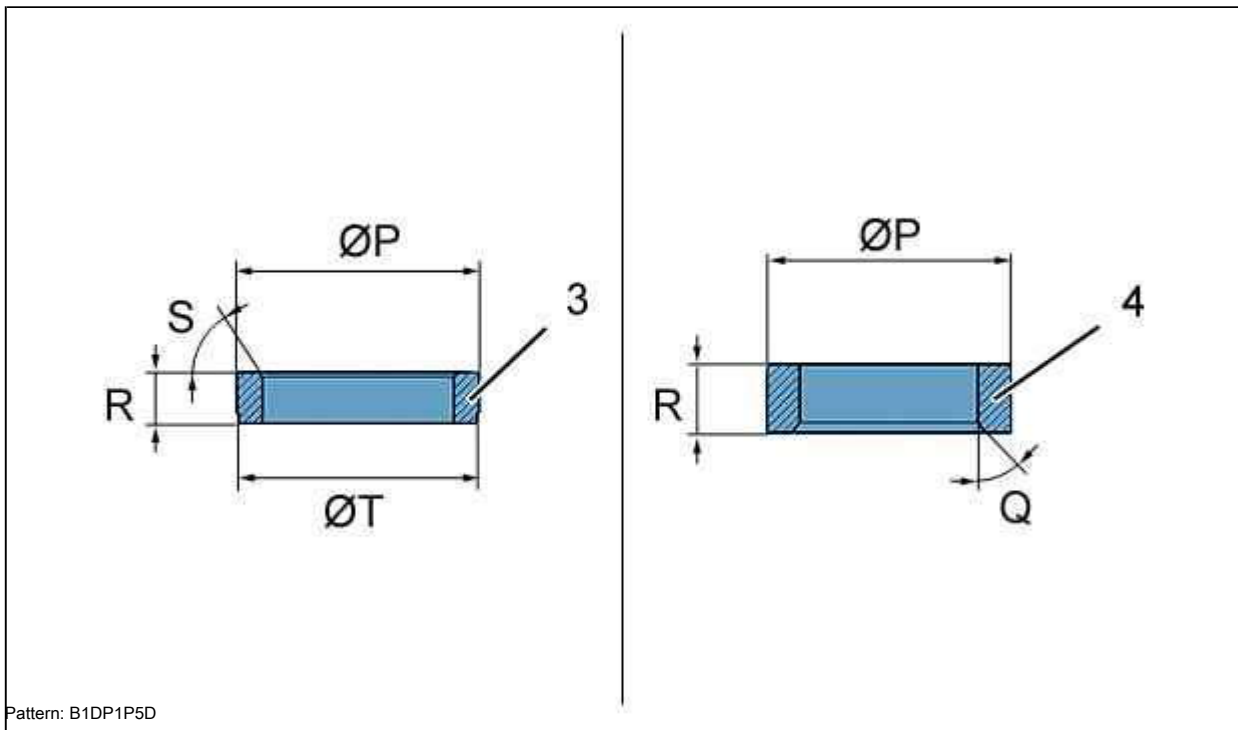


DV6 Euro4 engine (All types)

Valve guides Inlet valve Ø M		Exhaust valve
	5.5 (0; 0.018) mm	5.5 (0; 0.018) mm
Height: N	29.38 (+ 0.6; 0.5) mm	29.88 (+ 0.6; 0.5) mm

3. Valve seats

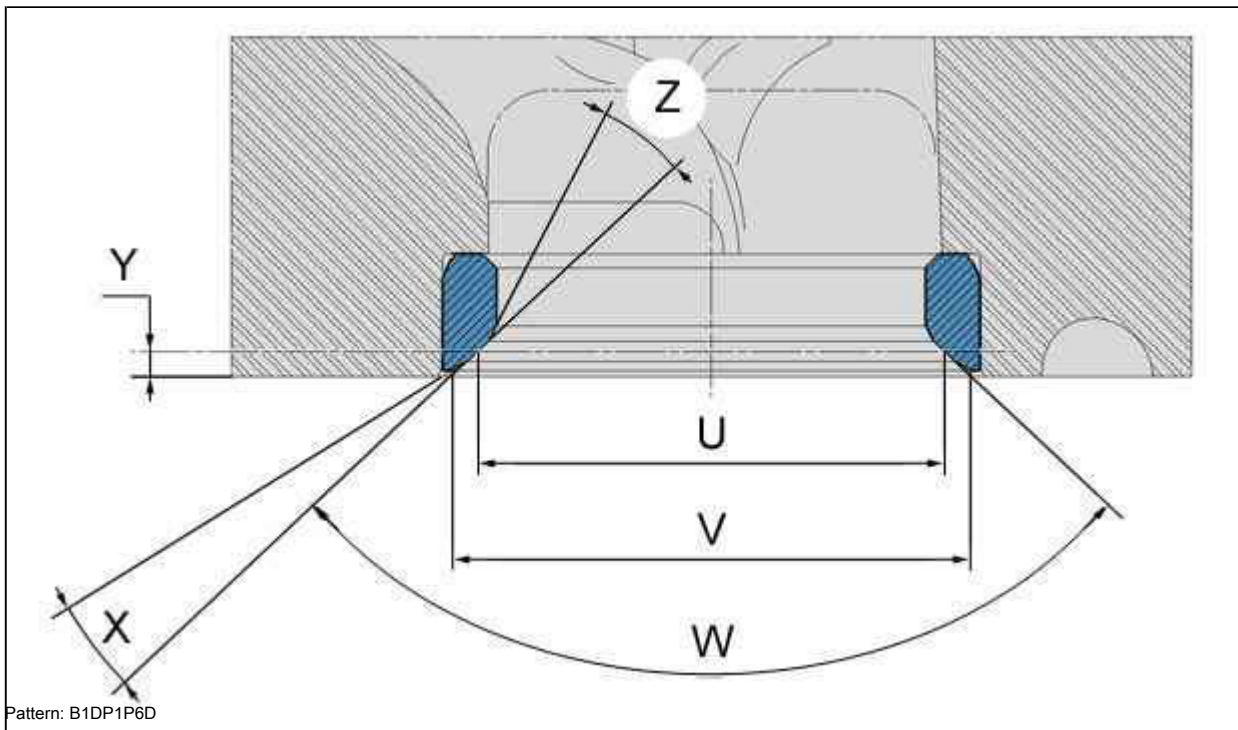
3.1. Dimensions for machining saddles



- (3) Saddle of the inlet valves.
- (4) Vent valve seats.

DV6 Euro4 Engine (All Types) Intake Valve Seats		
Dimensions for machining seats Nominal size		Repair side
R	4.7 (0; 0.05) mm 45 °	4.5 (0; 0.05) mm
Angle S		
Ø P	27.41 (+ 0.085; + 0.075) mm	27.91 (+ 0.085; + 0.075) mm
Ø T	27.2 ± 0.1mm	27.7 ± 0.1mm
DV6 Euro4 Engine (All Types) Exhaust Valve Seats		
Dimensions for machining seats Nominal size		Repair side
R	4.7 (0; 0.05) mm	4.5 (0; 0.05) mm 45 °
Angle Q		
Ø P	25.21 (+ 0.085; + 0.075) mm	25.71 (+ 0.085; + 0.075) mm

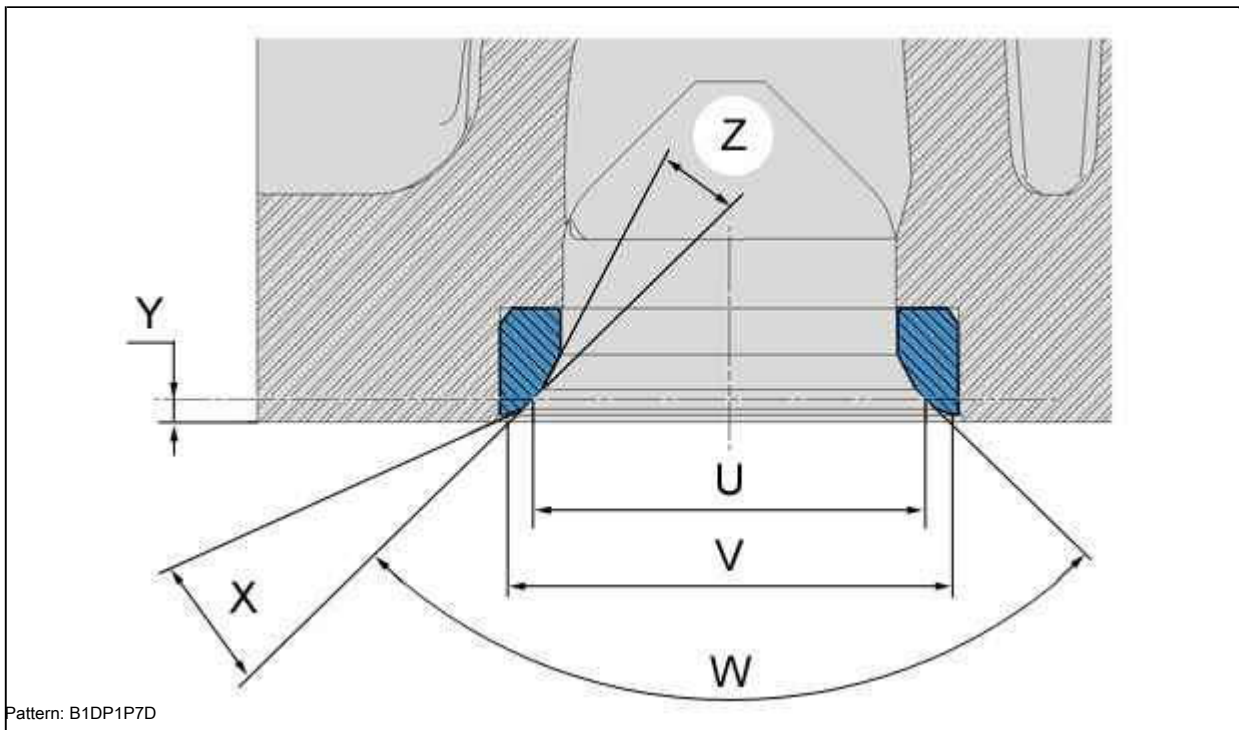
3.2. Intake Valve Seats Placement



DV6 Euro4 Engine (All Types) Intake Valve Seats

Y	1.02 (+ 0.1; 0) mm
AngleZ	15 °
U	24.4 ± 0.15mm
V	26.29 ± 0.15mm
Angle W	90 °
AngleX	15 °

3.3. Exhaust Valve Seats Placement



DV6 Euro4 Engine (All Types) Exhaust Valve Seats

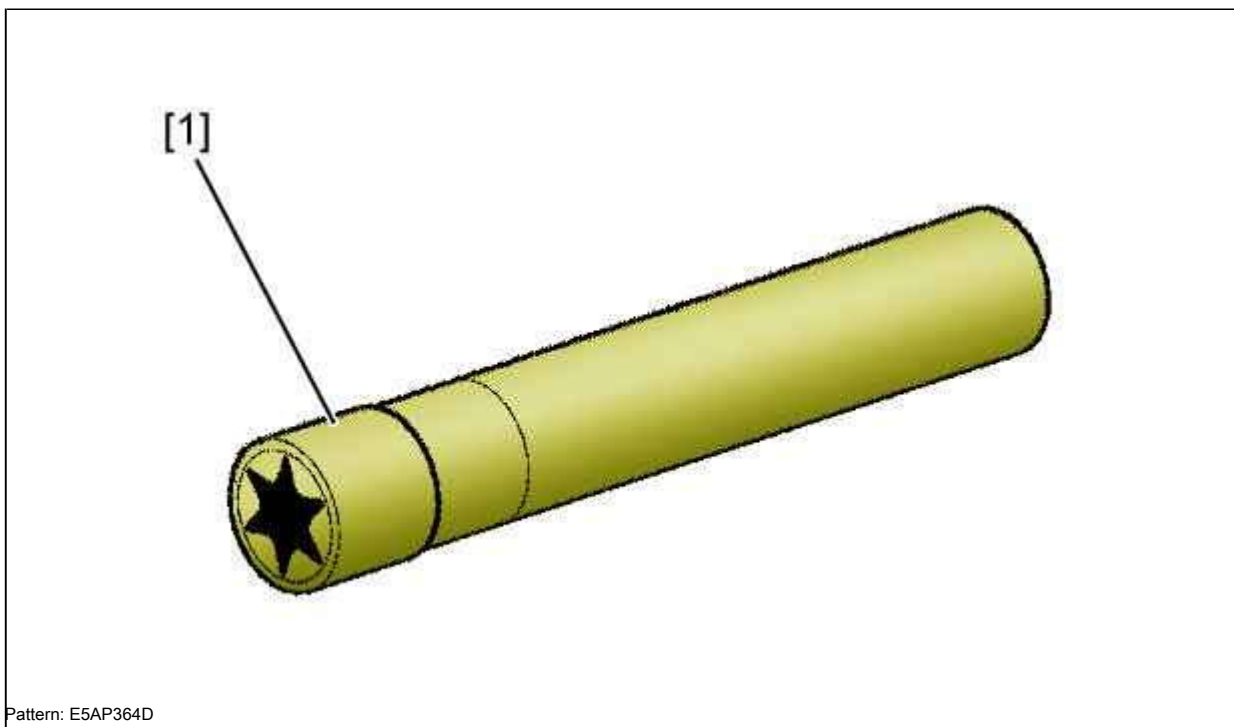
Y	1.12 (+ 0.1; 0) mm
AngleZ	15 °
U	22 ± 0.15mm
V	24.49 ± 0.15mm
Angle W	90 °
AngleX	20 °

REMOVAL REFITTING: CYLINDER HEAD (ON VEHICLE)

MANDATORY: Observe the cleanliness and safety rules

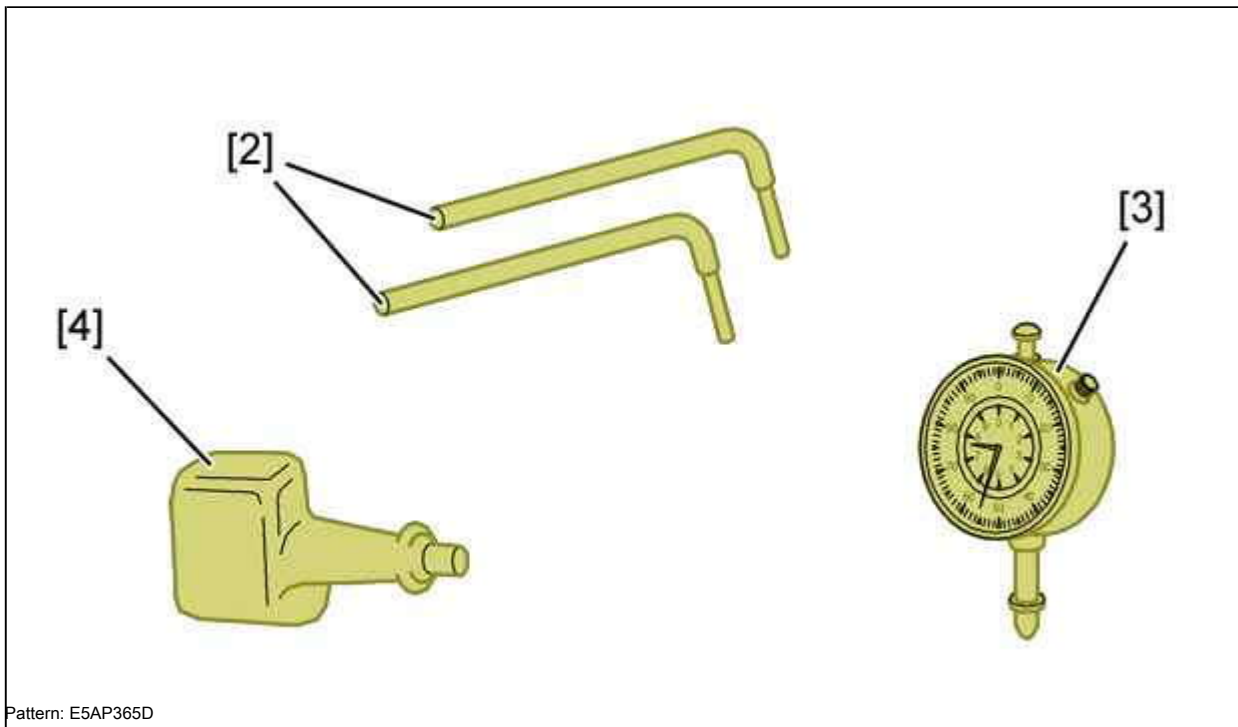


1. Recommended equipment



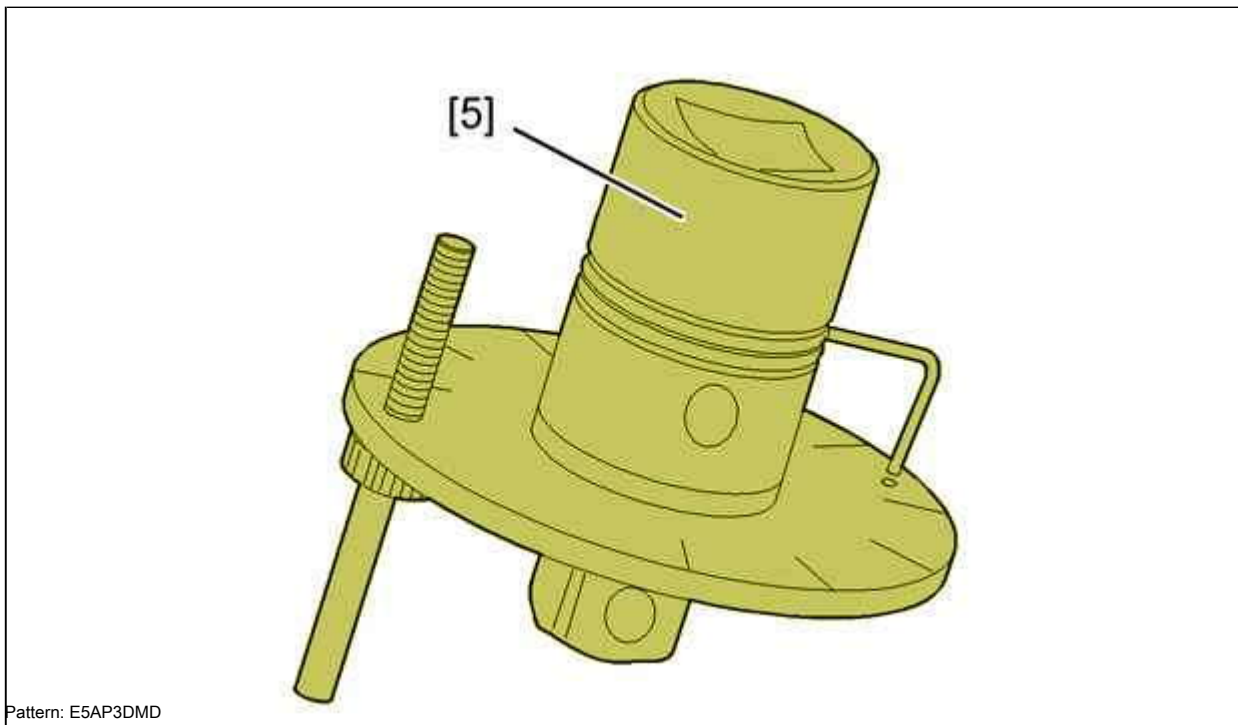
Pattern: E5AP364D

[1] Key for cylinder head bolt () .0185.



[2] Lever for separating the cylinder head () .0188L. [3] indicator () .1504.

[4] Pointer indicator () .0110.



[5] adapter for angular tightening 4069T.

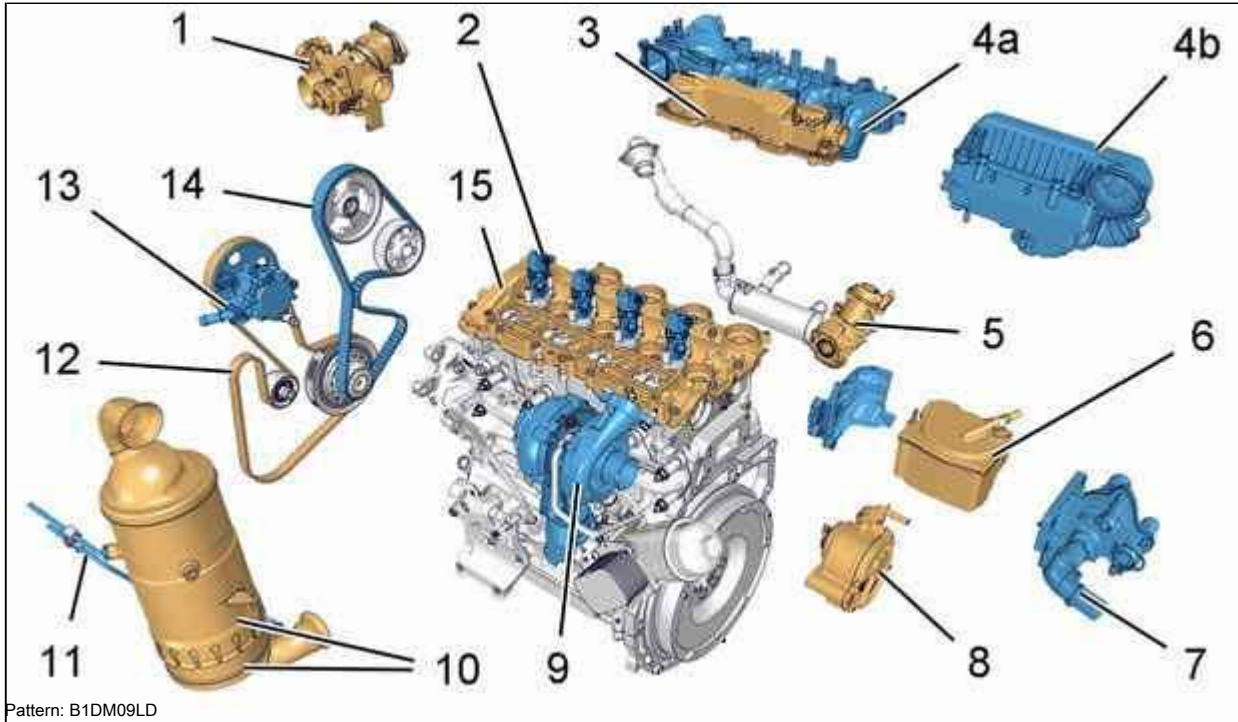
2. Removal

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements



Disconnect the battery. Remove the engine cover.

Drain the coolant circuit



Pattern: B1DM09LD

Remove:

- **Integrated air intake system (4b)**
- Air metering unit (1) (depending on equipment)
- **Integrated air intake system (4a)**
- Oil separator (3)
- Exhaust Gas Recirculation Solenoid Valve (5)
- **diesel injectors (2)**
- **Fuel filter with bracket assembly (6)**
- **Coolant outlet unit (7)**
- **Vacuum pump (8)**
- Exhaust gas pressure measuring tubes (11) (depending on equipment)
- Neutralizer unit and mechanical filter (10) (depending on equipment)
- Turbocharger (9) (depending on equipment)
- Attachment drive belt (12) (depending on equipment)
- **Timing Belt (14)**
- Power steering pump (13) (depending on equipment)
- **Camshaft bed cover (15)**

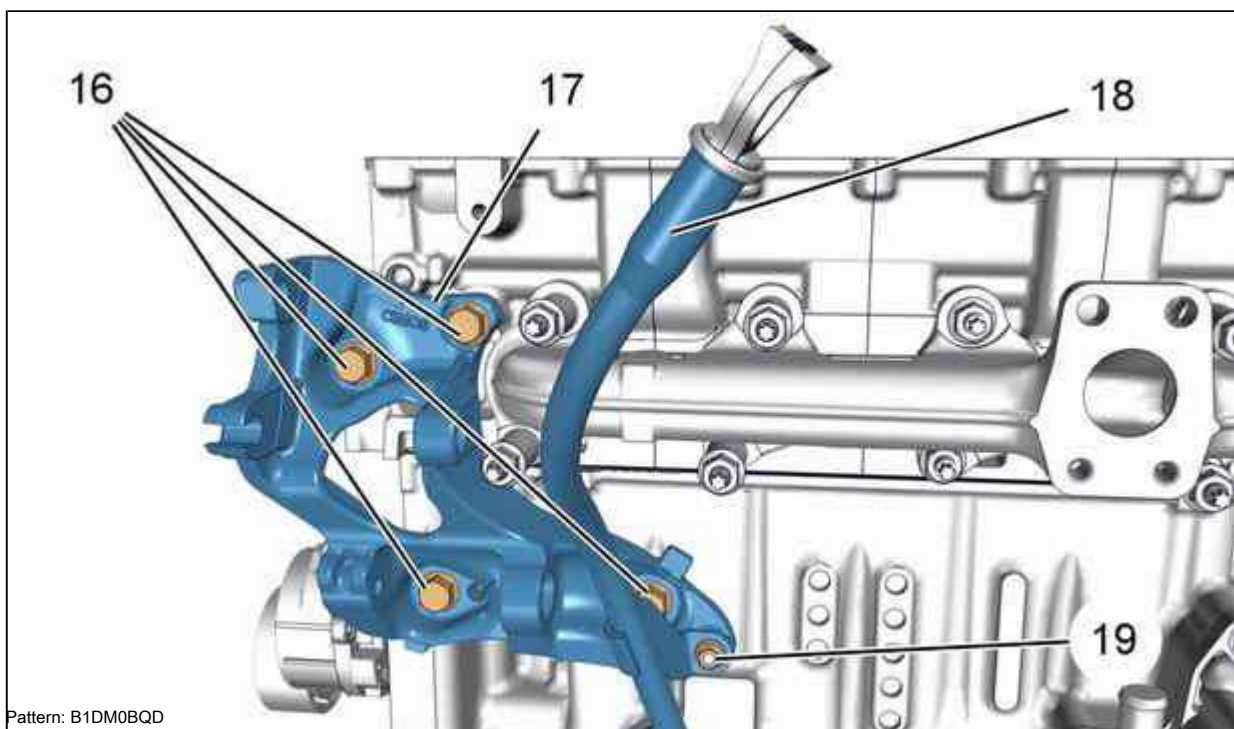
(top)




(lower)



2.1. Steering with hydraulic booster



Remove:

- **Generator**
- Bolt (19) 
- Oil dipstick guide (18)
- the bolts (16)
- Multifunction support (17)

2.2. Electric power steering

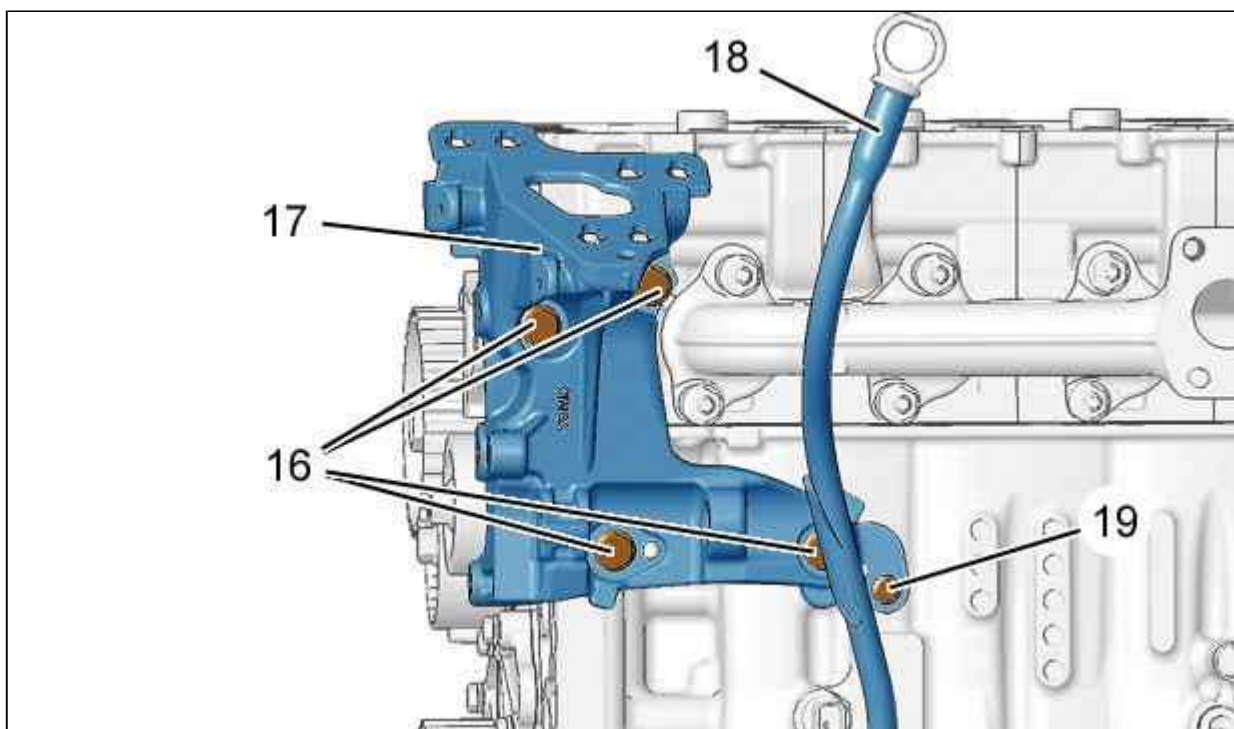
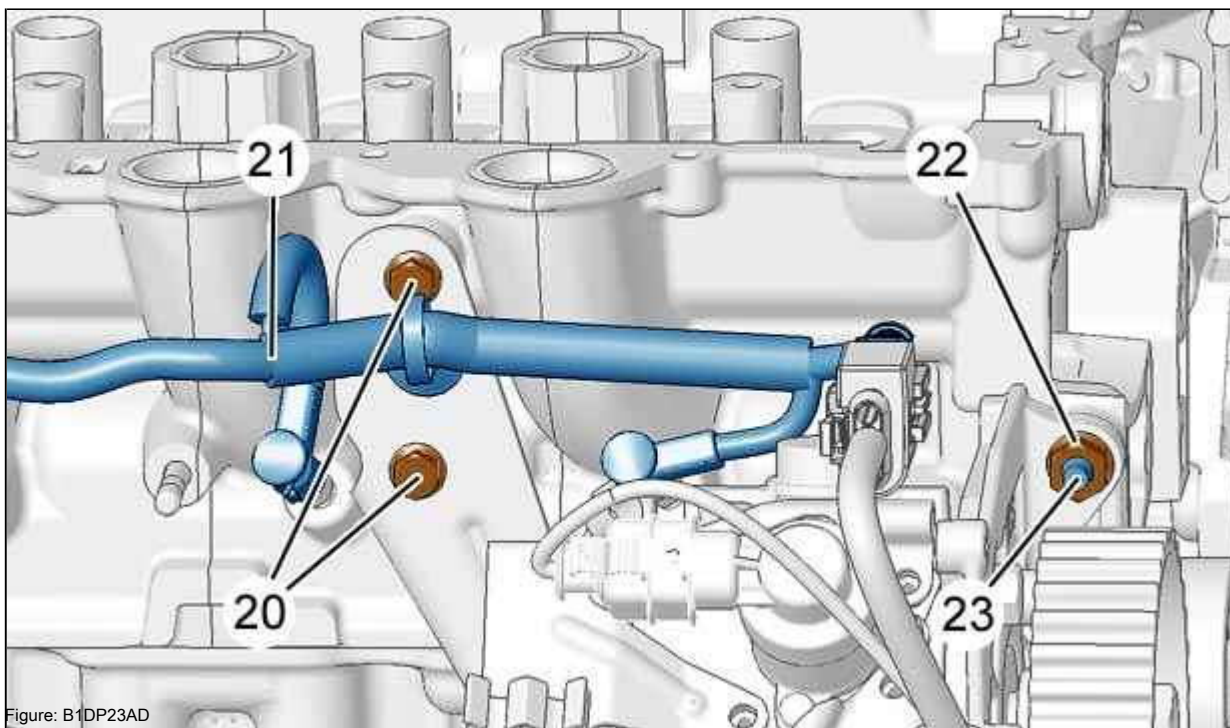


Figure: B1DP239D

Remove:

- **Generator**
- Bolt (19) ⓘ
- Oil dipstick guide (18)
- the bolts (16)
- Multifunction support (17)

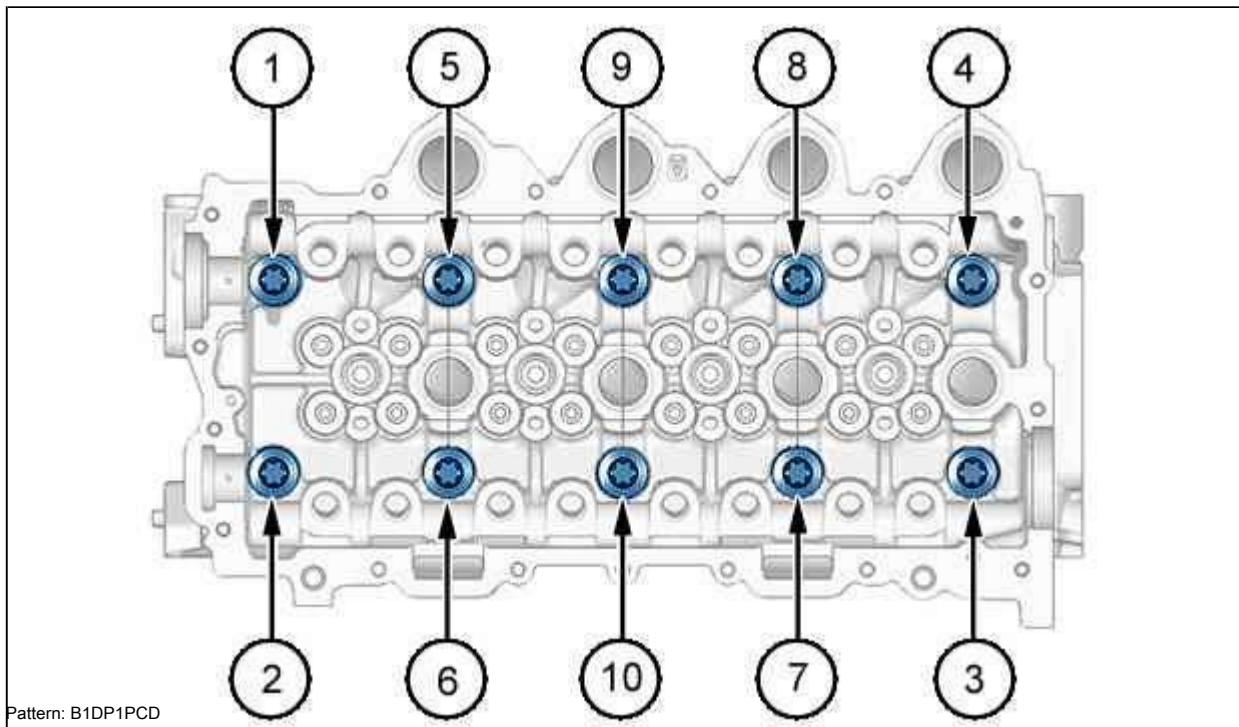
2.3. Removal (continued)



Remove:

- Glow Plug Power Harness (21)
- **Glow plugs**
- the bolts (20)
- Nut (22)
- Hairpin (23)





ATTENTION : Follow the tightening sequence shown (order 1 to 10).

Remove:

- Cylinder head bolt (order 1 to 10); Using tool [1]
- Cylinder head
- Head gasket

NOTE: If necessary, rock the cylinder head and separate it from the block; Using the levers [2].

3. Cleaning to be carried out immediately prior to re-installation

ATTENTION : Clean the mating surfaces with a certified metal removal product. Do not use any abrasive or scratching tools on the joining surfaces;

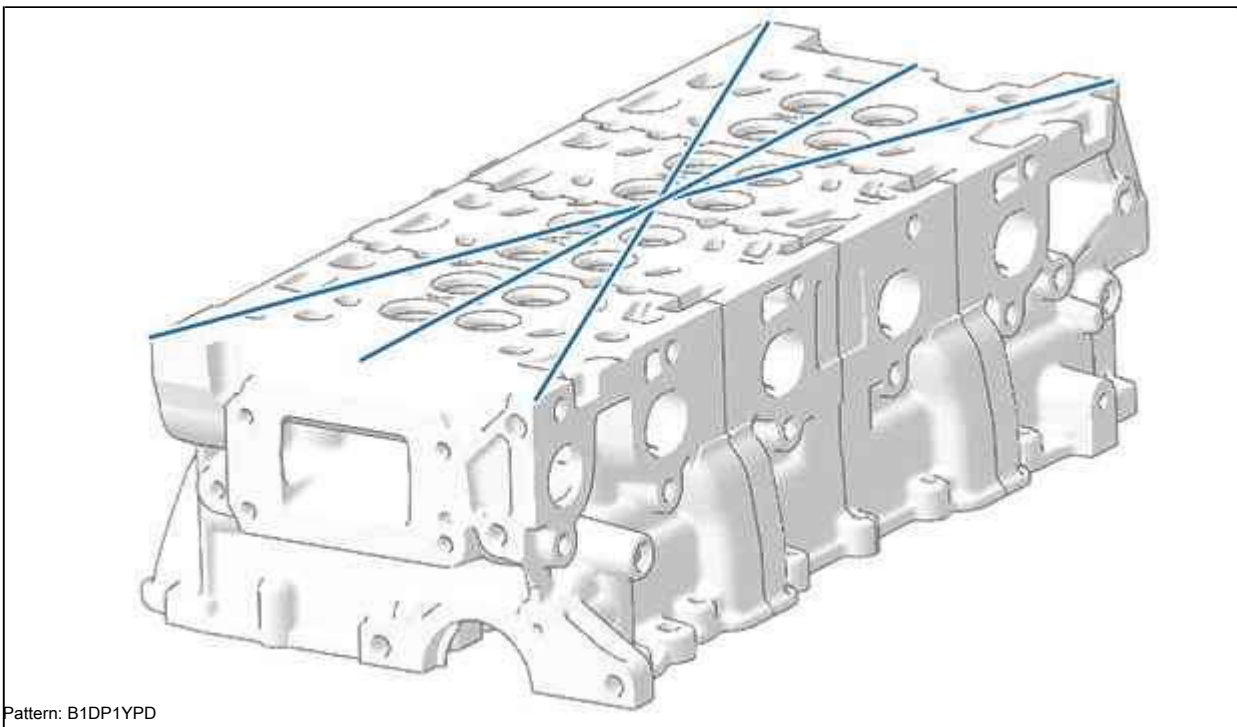
The planes to be joined must not contain any traces of impacts or cracks.

Clean the threaded holes in the cylinder blocks with a tamper where the cylinder head bolts enter (tap 11 x 150).

Clean the threads of the cylinder head bolts with a brush.

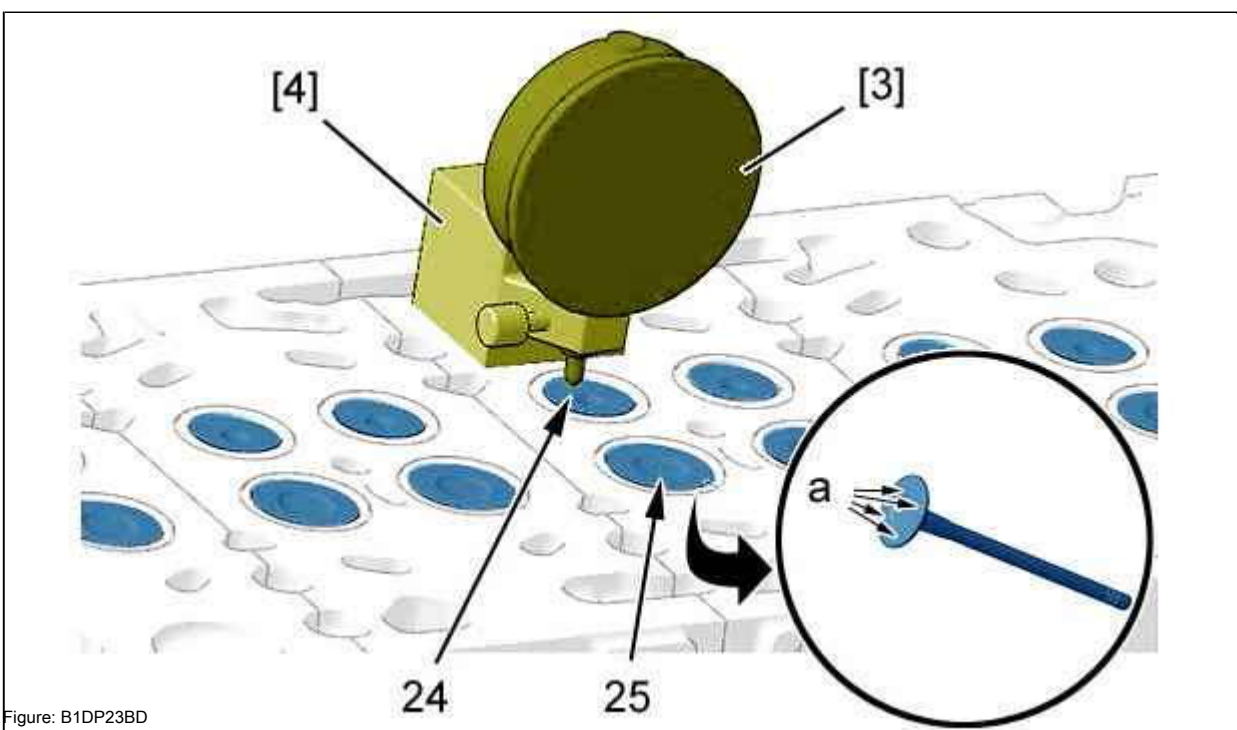
4. Verification

4.1. Flatness control



Check for flatness of the cylinder head; Using a set of gaskets and a straight edge. Maximum allowable deformation = 0.05 mm.

4.2. Checking the valve protrusion height



ATTENTION : If the measured values do not correspond to the above, determine the cause of the malfunction (measurement error, error during work, defective parts).

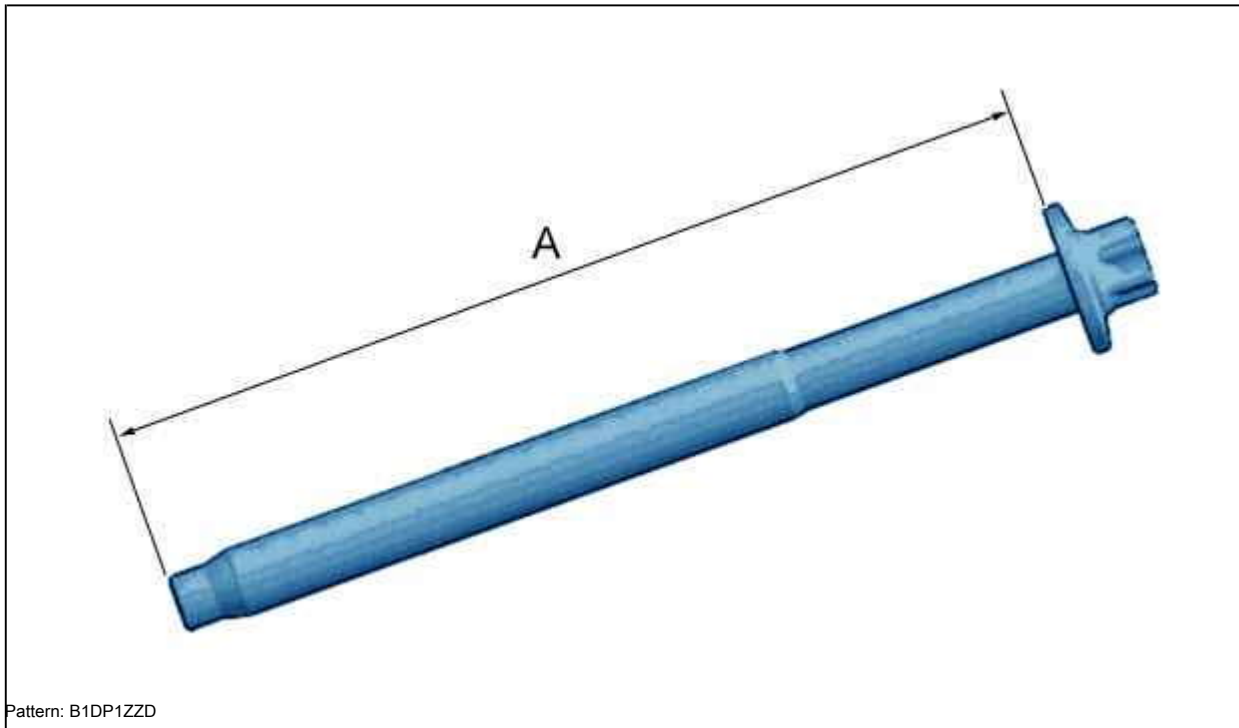
Check the protrusion of the valves in relation to the plane of the joint of the cylinder head: Points

control (in "a"):

- Exhaust valves (24) = $0.85 \pm 0.2\text{mm}$
- Inlet valves (25) = $0.7 \pm 0.2\text{mm}$

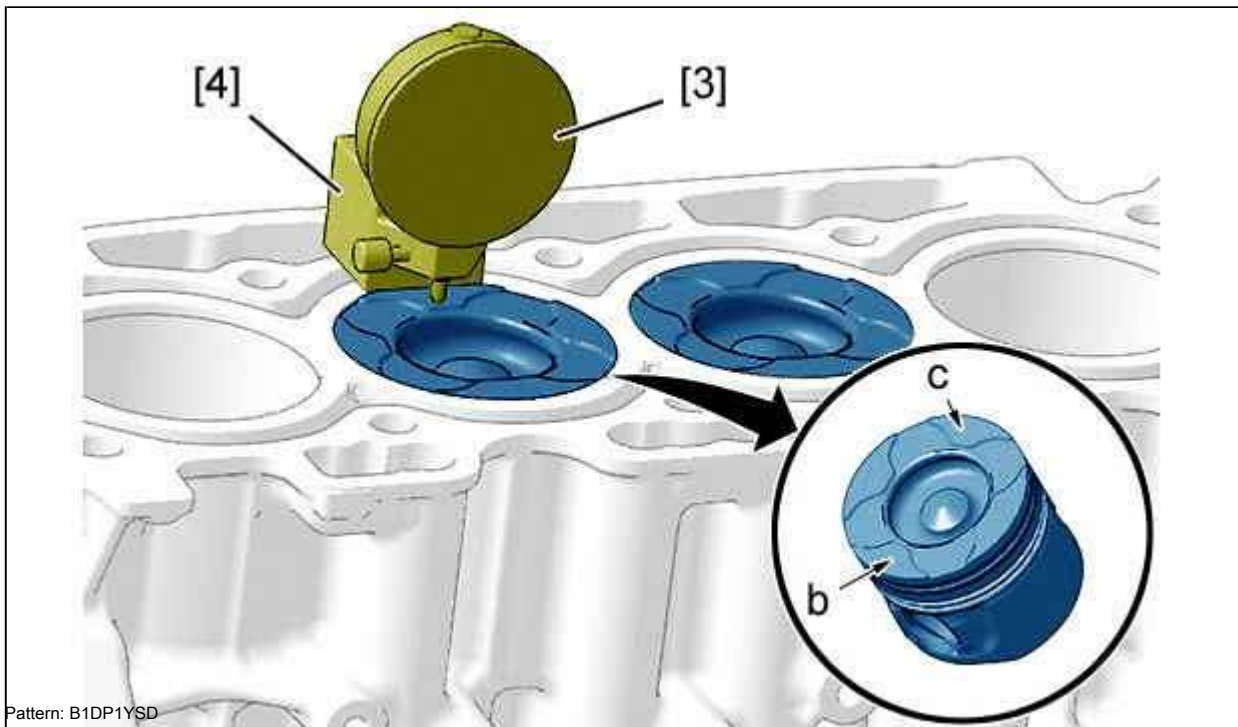
NOTE: Calculate the average based on the 4 results obtained.

4.3. Inspection of cylinder head bolts before reuse



The length of the bolt under head "A" must be less than or equal to 149 mm. Replace screws (if necessary).

4.4. Selection of cylinder head gasket



Move the bracket [4] and the dial indicator [3] on the plane of the cylinder block joint. Remove the crankshaft alignment pin.

Place the dial gauge probe on the top of the cylinder block and set the indicator to zero.

Place the dial gauge probe at one of the test points (Test point "b"). Rotate the crankshaft to bring the piston to top dead center, not exceeding it (clockwise).

Write down the value.

Place the dial gauge probe at one of the test points (Test point "c"). Write down the value.

Calculate the average based on 2 the results obtained. Perform the same operation for the other pistons.

The largest value determines the thickness of the cylinder head gasket to be installed.



NOTE: Maximum deviation between pistons: 0.1 mm.

ATTENTION : If the measured values do not correspond to the above, determine the cause of the malfunction (measurement error, error during work, defective parts).

Clean the seating area of the liquid removal unit gasket. Secure the engine flywheel with the pin.

5. Installation

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements



ATTENTION : When installing, the removed seals must be replaced with new ones.

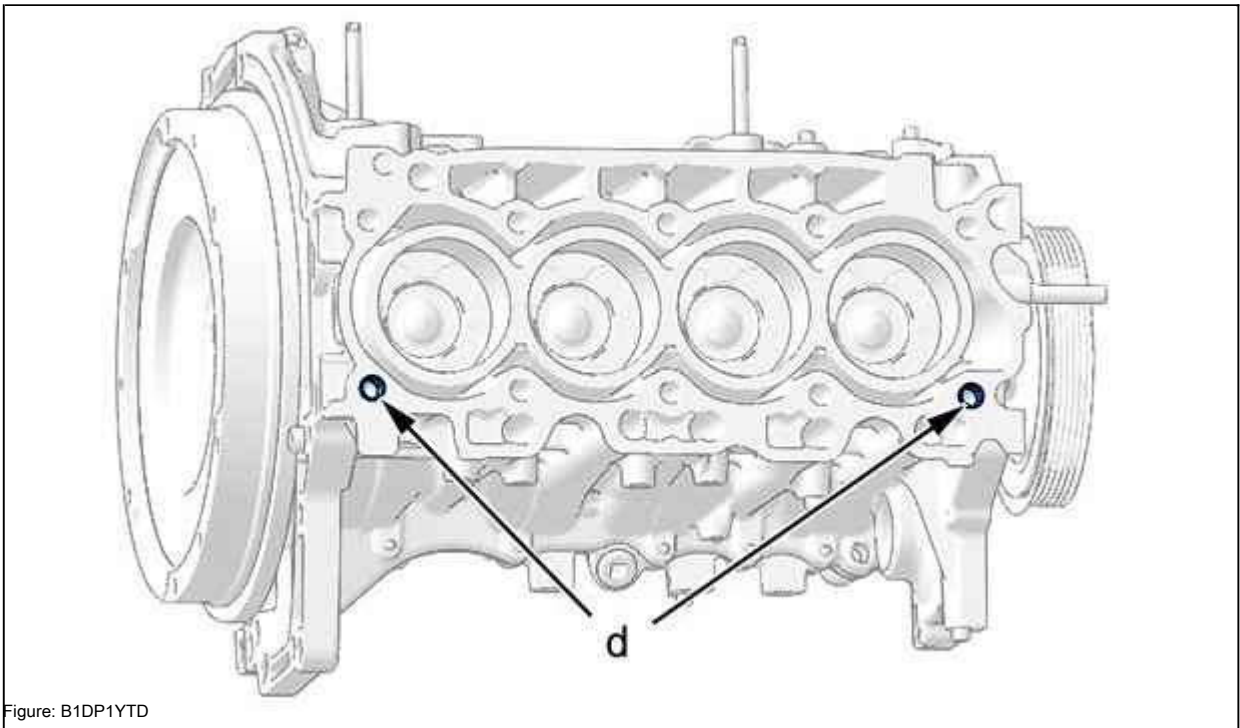


Figure: B1DP1YTD

NOTE: Check for presence of dowel pins (in "d").

Check the correct installation of the crankshaft.

NOTE: Check the correct positioning of the seals when installing the cylinder head gasket. Apply grease "G12" to threads and bolt heads (refer to product catalog).

Install:

- Cylinder head
- Cylinder head bolt; Using the tool [1]

5.1. Tightening the cylinder head bolts

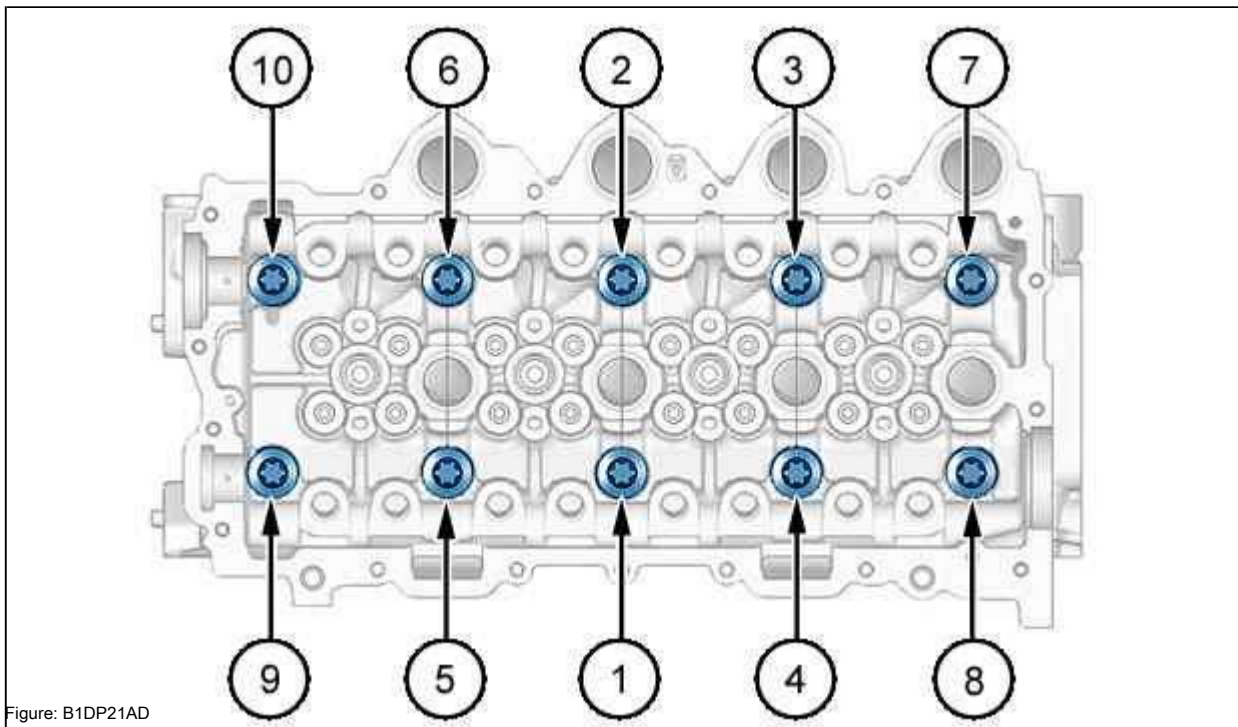


Figure: B1DP21AD

ATTENTION : Proceed in sequence from bolt to bolt in the order shown (order 1 to 10).

Tightening method:

- Pre-tightening torque 2 ± 0.2 da.Nm
- Tightening torque 4 ± 0.2 da.Nm
- Angle tightening $260 \pm 5^\circ$; Using the tool [5]

5.2. Installation (continued)

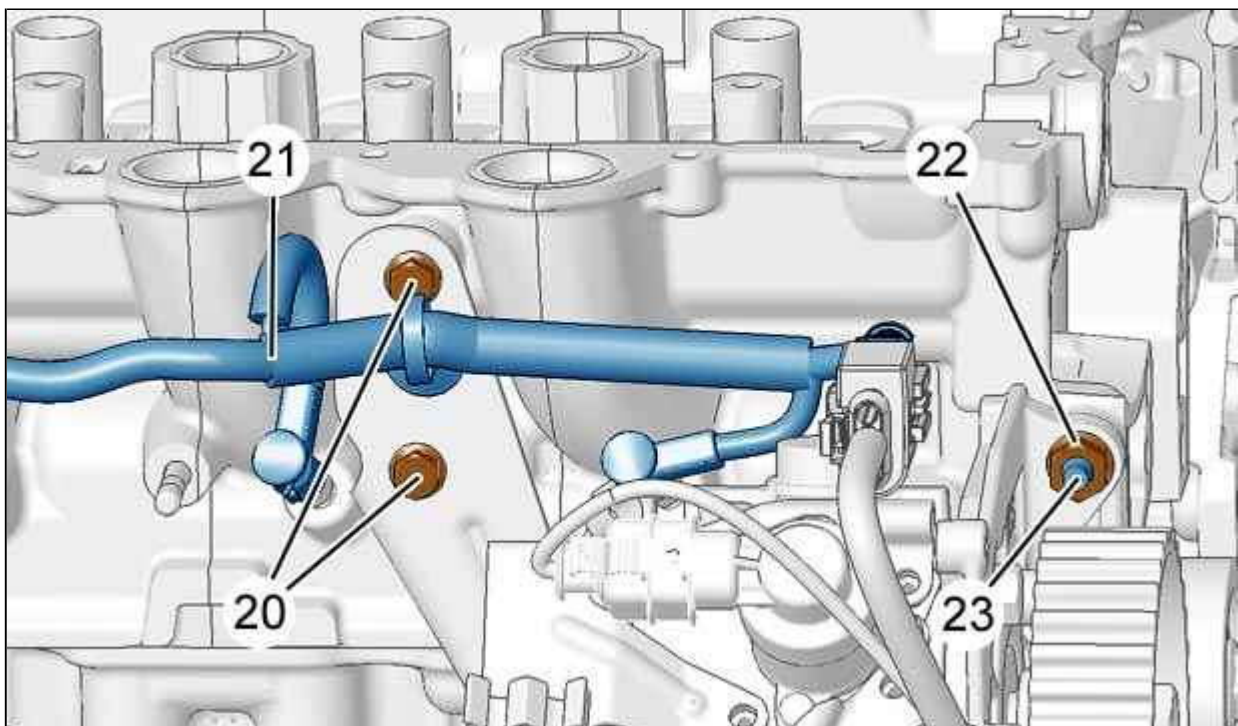

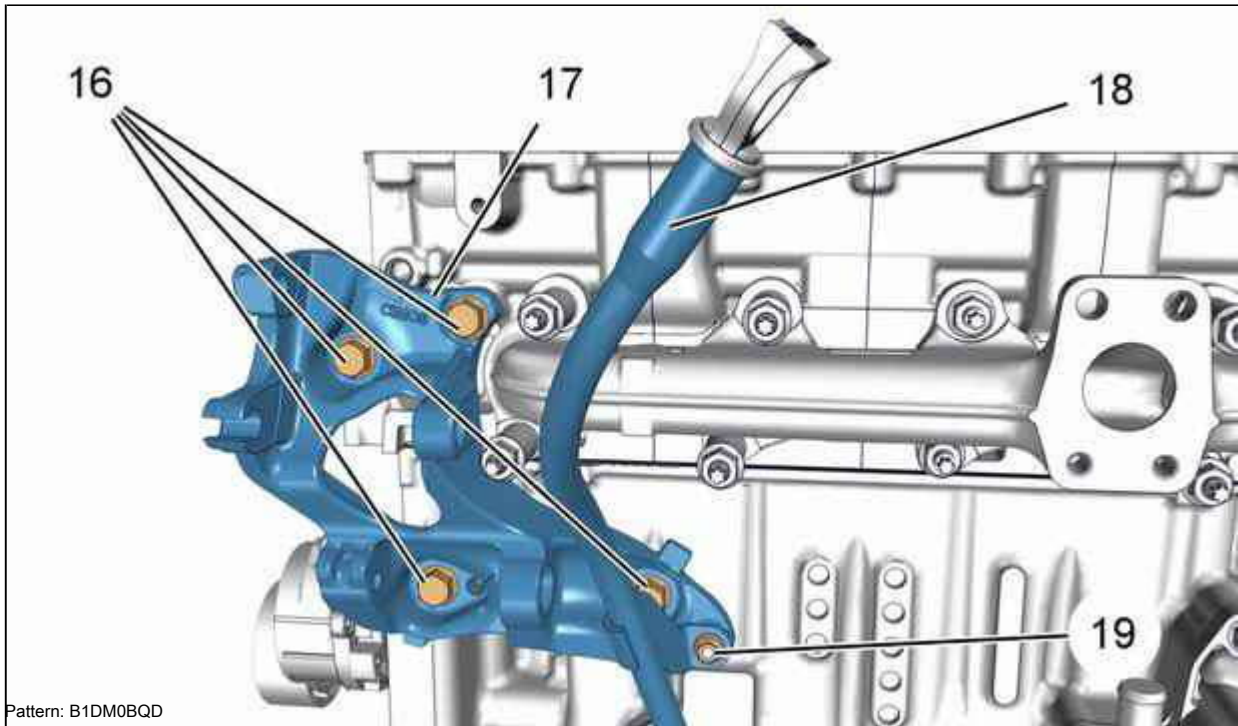


Figure: B1DP23AD


Install:

- Stud (23); Tighten to 1 ± 0.2 da.Nm
- The nut (22); Tightening torque 2 ± 0.5 da.Nm
- bolts (20); Tightening torque 1 ± 0.1 da.Nm
- **Glow plugs** ; Tightening torque 0.85 ± 0.85 2 da.Nm
- Electric power harness (21) for preheating plugs 

5.3. Steering with hydraulic booster



Install:

- Multifunction support (17)
- bolts (19); Tightening torque 2 ± 0.5 da.Nm
- Oil dipstick guide (18)
- Bolt (16); Tightening torque 0.8 ± 0.2 da.Nm
- **Generator** 

5.4. Electric power steering

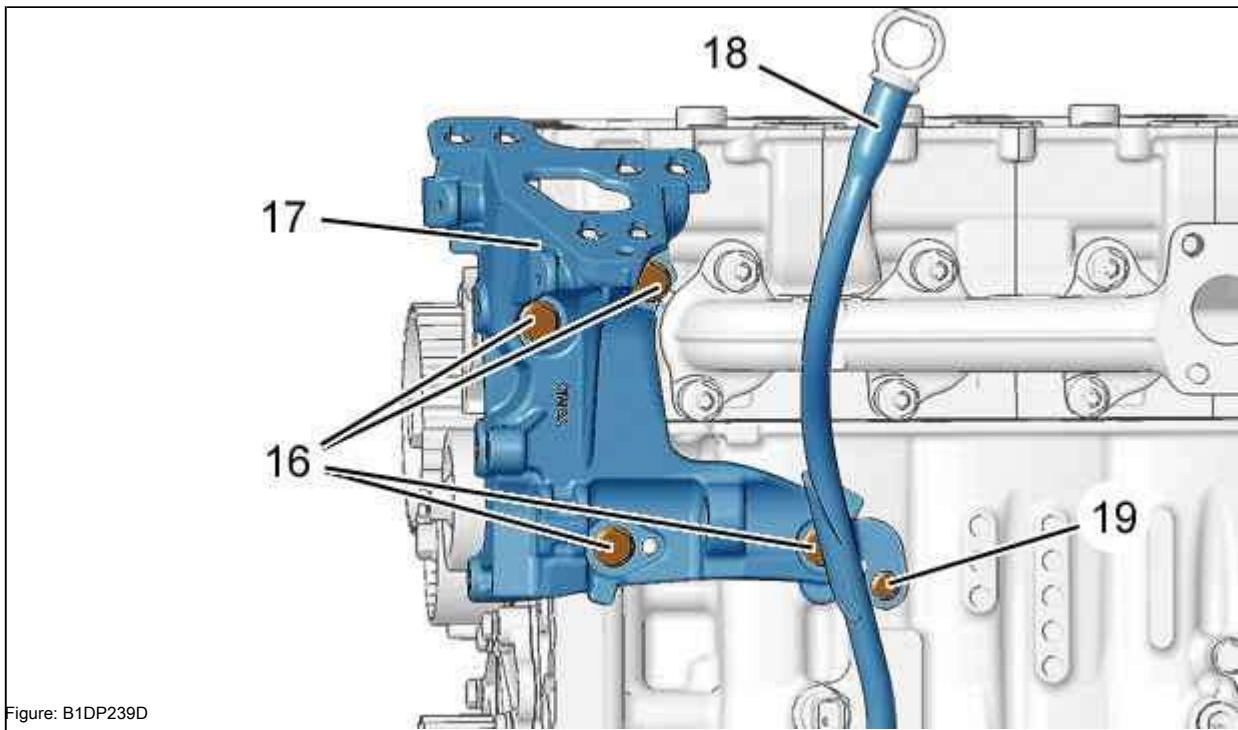


Figure: B1DP239D

Remove:

- Multifunction support (17)
- bolts (19); Tightening torque 2 ± 0.5 da.Nm
- Oil dipstick guide (18)
- Bolt (16); Tightening torque 0.8 ± 0.2 da.Nm
- **Generator**



5.5. Installation (continued)

Install:

- **Camshaft bed cover (15)**
- Power steering pump (13) (depending on equipment)
- **Timing Belt (14)**
- Attachment drive belt (12) (depending on equipment)
- Turbocharger (9) (depending on equipment)
- Neutralizer unit and mechanical filter (10) (depending on equipment)
- Exhaust gas pressure measuring tubes (11) (depending on equipment)
- **Vacuum pump (8)**
- **Coolant outlet unit (7)**
- **Fuel filter with bracket assembly (6)**
- **diesel injectors (2)**
- Exhaust Gas Recirculation Solenoid Valve (5)
- Oil separator (3)
- **Integrated air intake system (4a)**
- Air dispenser unit (1)
- **Integrated air intake system (4b)**



(lower)



(top)



Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

Install the engine cover.

Fill with coolant and blow through the circuit

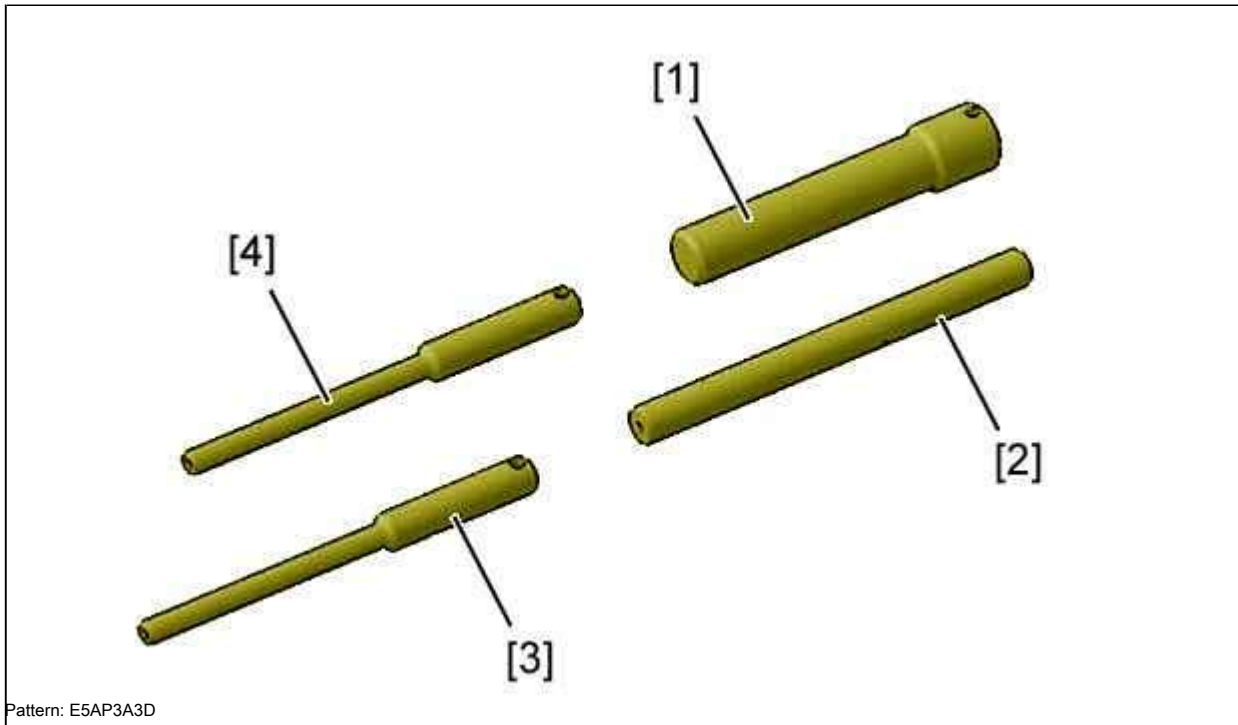


CHECK: GAS DISTRIBUTION MECHANISM RETAINED

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment

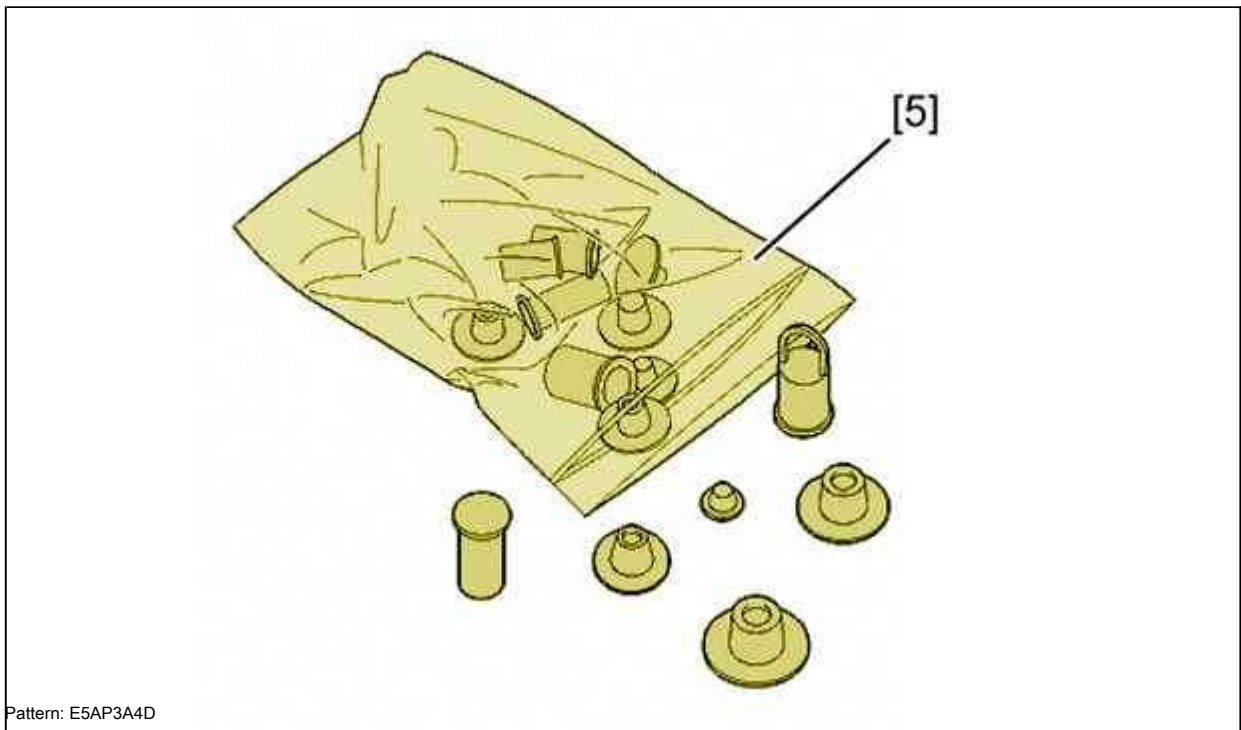


Pattern: E5AP3A3D

[1] Engine flywheel adjustment gauge (). 0194.C.

[2] Camshaft Calibration Pin (). 0194.B. [3] Crankshaft Calibration Pin (). 0194.A.

[4] Dowel pin to secure the high pressure fuel pump (). 0194.A.



[5] set of stubs () .0188.T.

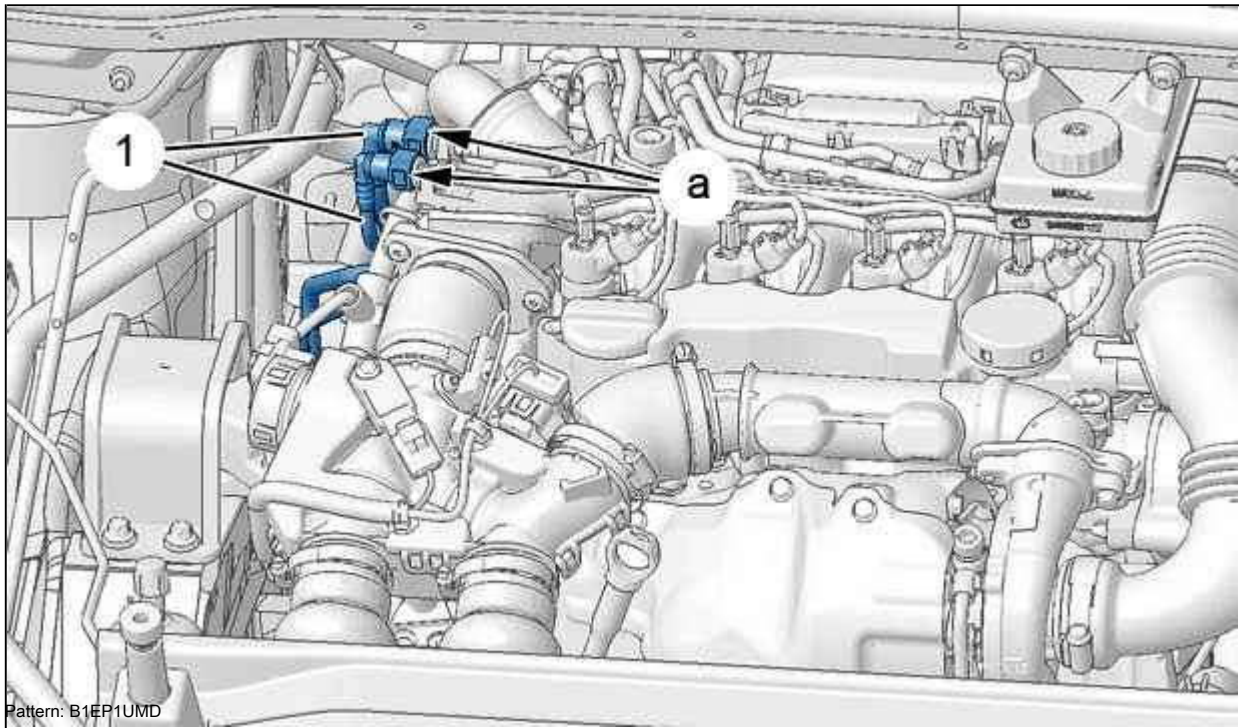
2. Removal

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements



Place the car on a lift.

Disconnect the battery. Remove the engine cover.



Disconnect and swivel to the side of the tube (1) (at "a"); Plug with the tool [5]. Remove:

- Front right wheel
- Front right wheel arch liner

2.1. Electric power steering

Remove the attachment drive belt.



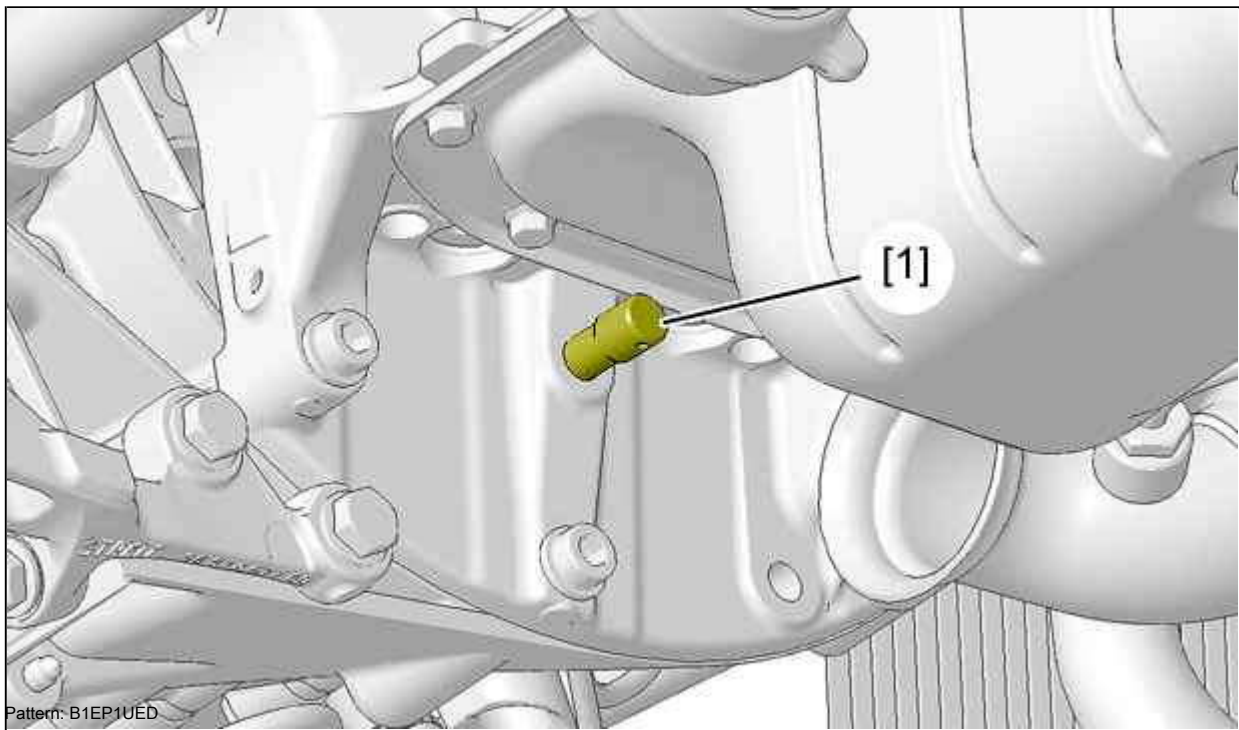
2.2. Steering with hydraulic booster

Remove the attachment drive belt.

Remove and move aside the power steering reservoir (without opening the circuit).



2.3. General operations



Remove the front intermediate pipe of the exhaust system.

Install the flywheel pin [1] in the crankcase fixing hole of the crankshaft bearing cover.

Turn the motor in the normal direction of rotation so that the latch [1] fits into the latching holes.

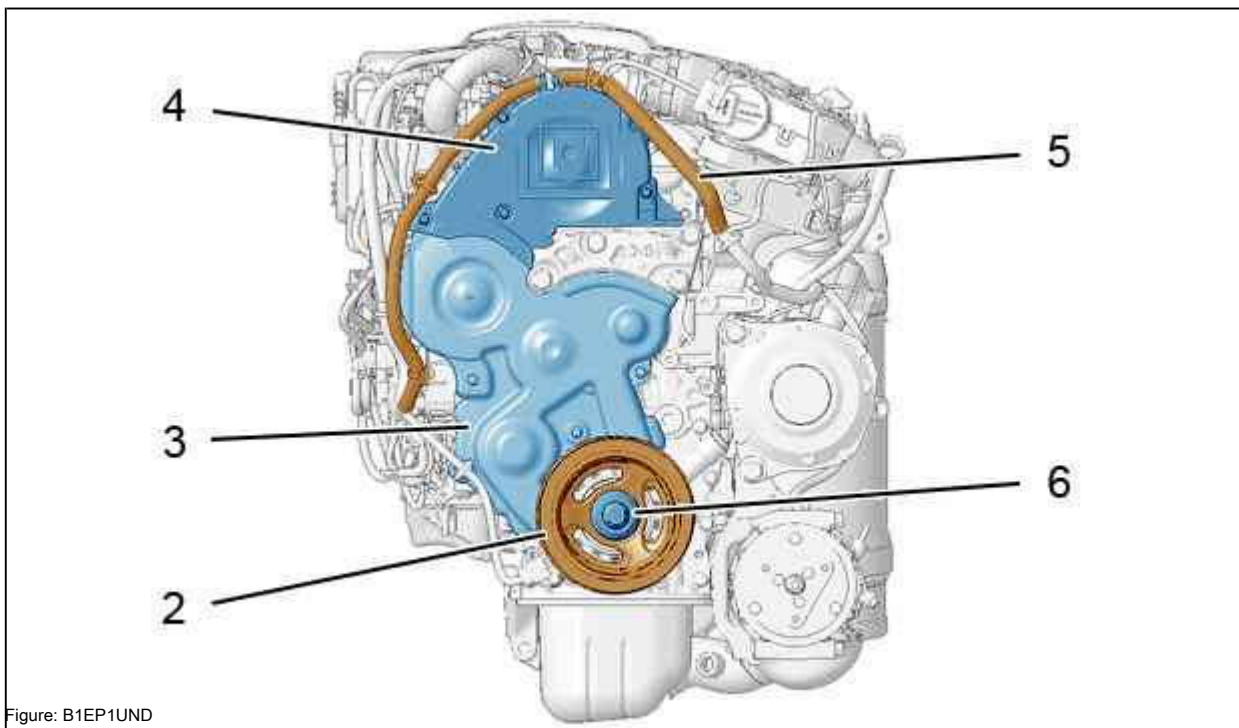


Figure: B1EP1UND

Move aside the wiring harness (5).

Remove:

- Upper timing case (4)

- Bolt (6)
- Pulley (2)
- Lower timing case (3)

Install the bolt (6).

Remove the tool [1].

3. Verification

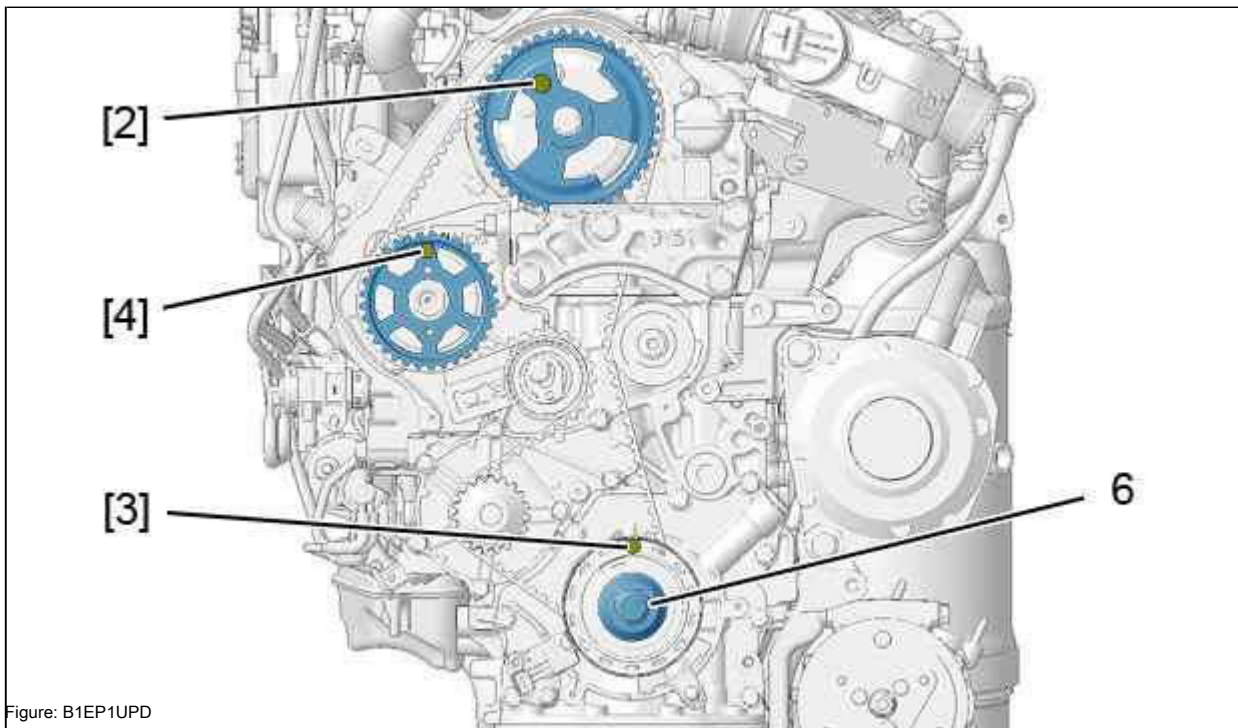
3.1. Visual control

ATTENTION : Carry out the checks below.

Check for cracks and traces of oil and timing belt. Check for traces of oil leaks (crankshaft and camshaft oil seals). Check for coolant leaks (water pump).

Make sure the engine speed sensor strips are not damaged or cracked. Replace defective parts.

3.2. Checking the correct adjustment of the gas distribution mechanism



ATTENTION : There should be no signs of damage on the magnetic strip. Do not put magnetic sources near the magnetic stripe; otherwise, replace the crankshaft pulleys.

Turn the crankshaft 6 times clockwise with the bolt (6).

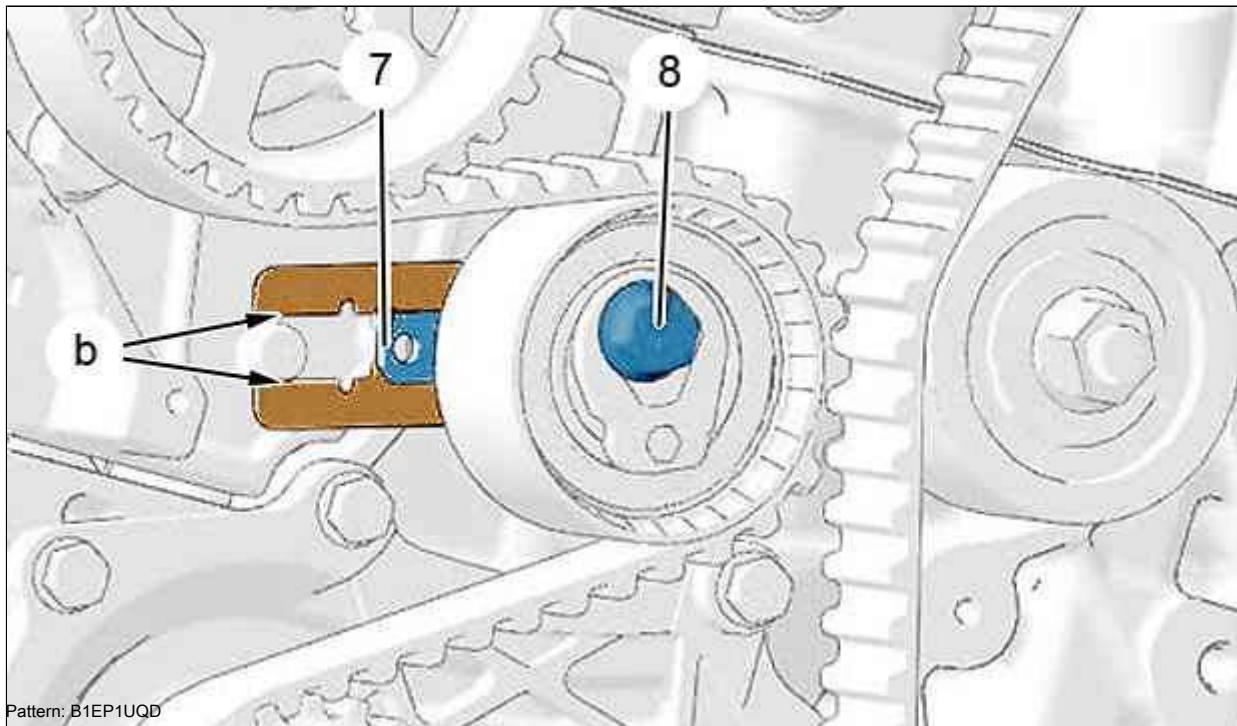
ATTENTION : It is forbidden to rotate the crankshaft in the opposite direction.

Secure with a pin:

- Crankshaft; Using the tool [3]
- Camshaft; Using pin [2] (lubricate pin)
- High pressure fuel pump drive pulley; Using tool [4] (lubricate pin)

ATTENTION : If the camshaft pin connection is not possible, check that

so that the offset between the hole in the camshaft pulley and the bore of the pinned joint does not exceed 1 mm; Otherwise, repeat the procedure to install the timing belt.



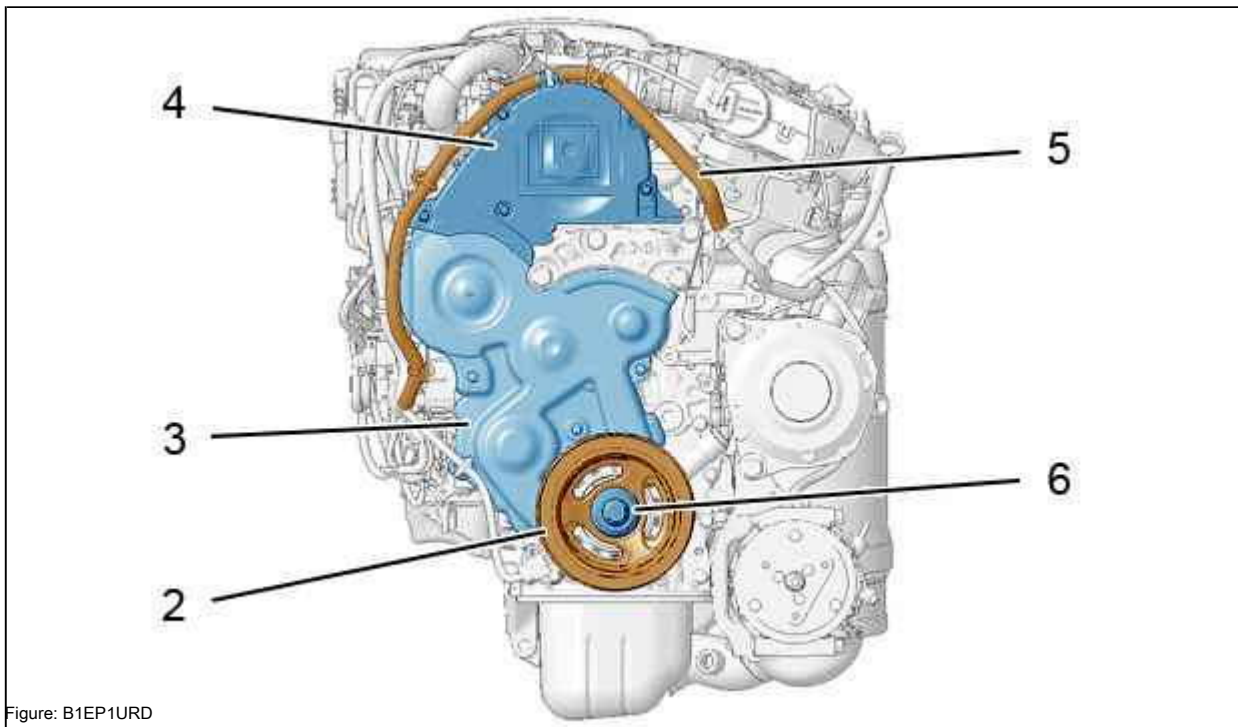
Check the position of the pointer (7).

NOTE: The pointer (7) of the dynamic idler roller should be in the center of gap "b".

ATTENTION : Otherwise, repeat the procedure for tensioning the timing belt.

Remove the tools [2], [3], [4].

4. Installation



Install the tool [1].

Remove the bolts (6).

Install:

- Lower timing case (3)
- Pulley (2)

Install the bolt (6) (new). Bolt tightening

method (6):

- Pre-tighten to a torque of 3.4 ± 0.4 da.Nm
- Tighten to $190^\circ \pm 5^\circ$

ATTENTION : When the required angle has been reached, make sure that the tightening torque of the bolt is between 8 and 16 da.Nm.

Remove the tool [1].

Install:

- Upper timing case (4)
- Electrical Harness (5)

NOTE: Use new plastic straps.

Install:

- Attachment drive belt (depending on equipment)
- Power steering reservoir (depending on configuration)
- Air pipes (1)

Connect the fuel supply and return pipes (in "a"). Install:

- Engine cover
- Front right wheel arch liner
- Front right wheel

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

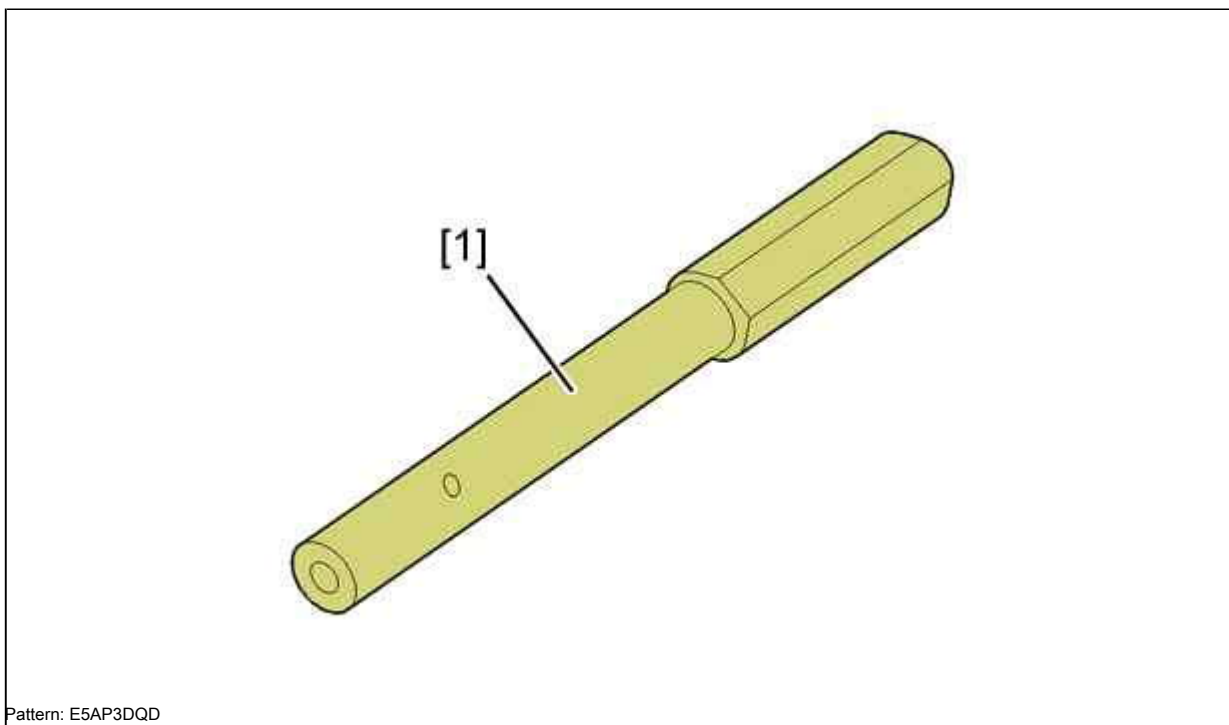
Press the manual priming pump several times to fill the fuel circuit.

REMOVAL REFITTING: CAMSHAFT

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



Pattern: E5AP3DQD

[1] Camshaft Pulley Calibration Pin (). 0194B.

2. Removal

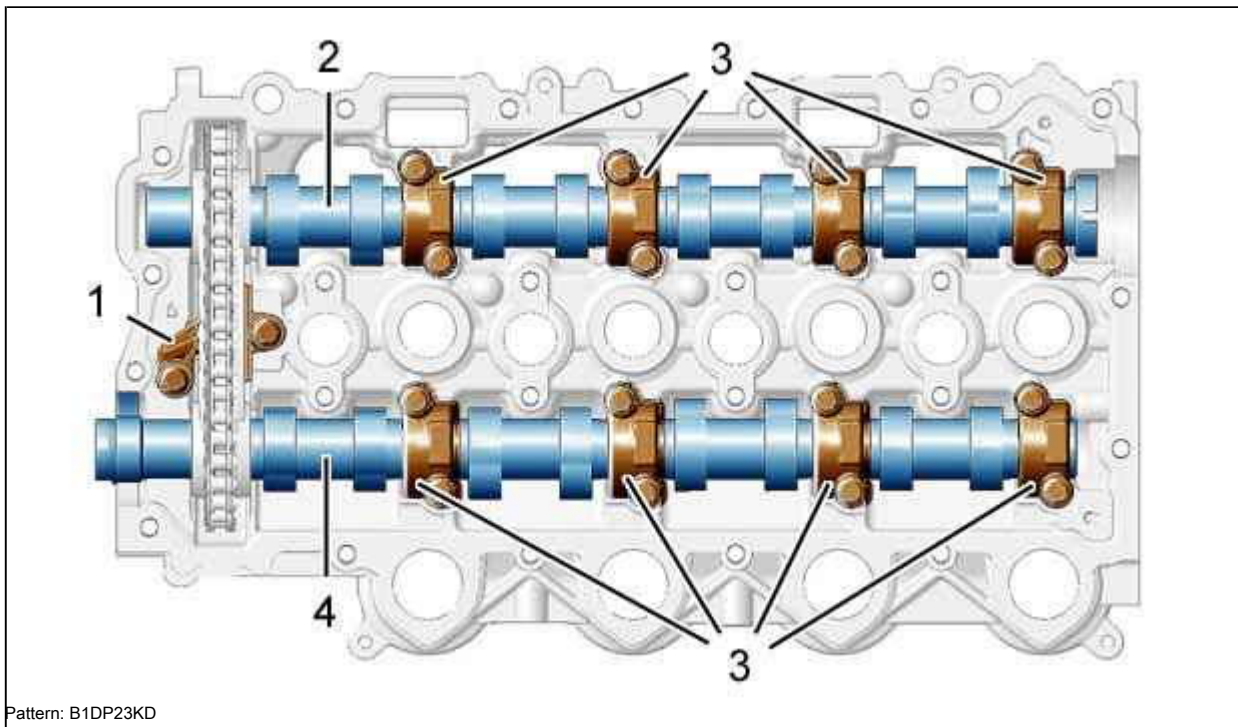
MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements



Disconnect the battery. Remove:

- Engine cover
- **Cylinder head cover**





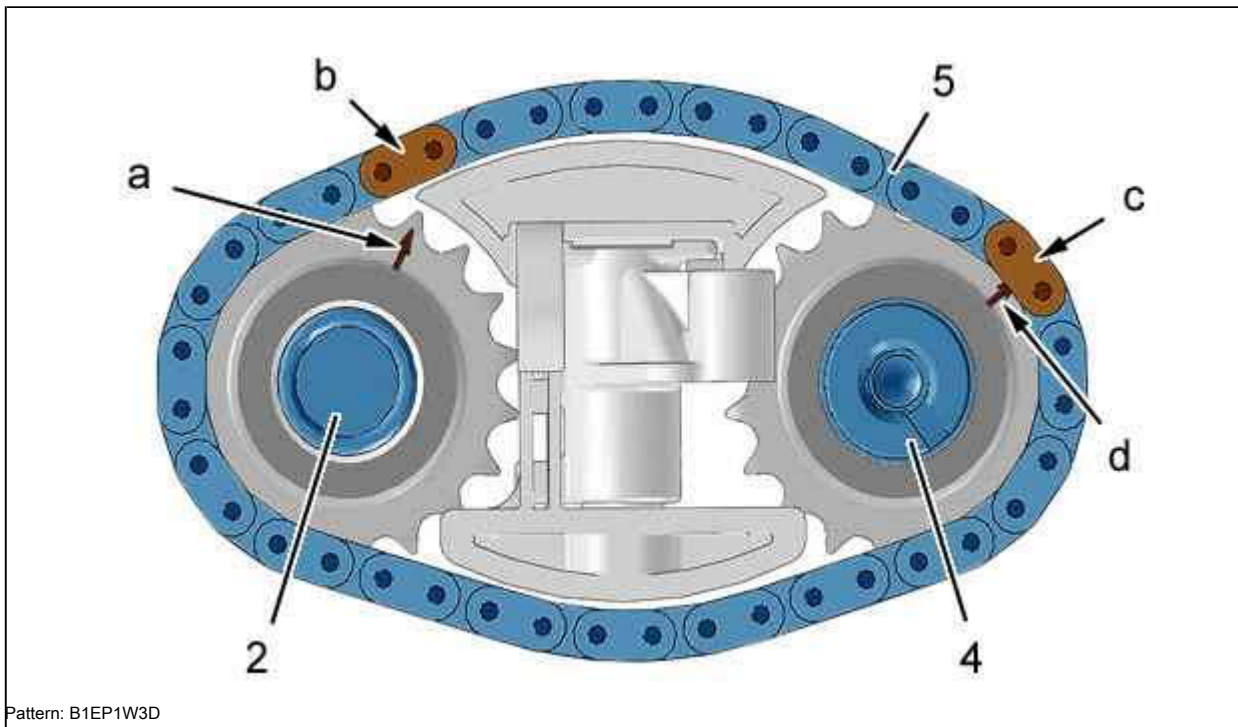
ATTENTION : Mark the position of the camshaft bearing caps (3).

NOTE: Unscrew the camshaft bearing cap screws in sequence.

Remove:

- Camshaft bearing caps (3)
- Timing chain tensioner (1)
- Camshafts (2) and (4)

3. Installation



Install the chain (5) for the camshaft sprocket (2) and (4).

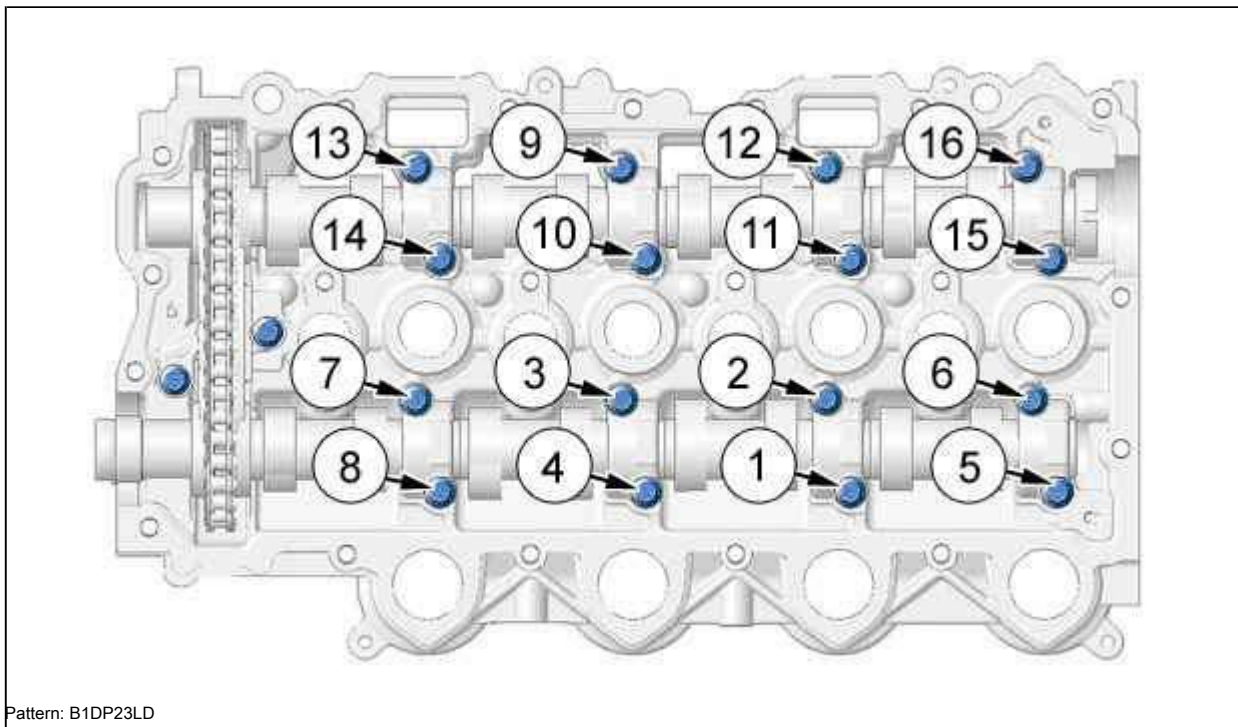
Align the black marked chain links "b" and "c" with the marked teeth "a" and "d" of the camshaft sprockets (2) and (4).

Lubricate the camshaft bearing caps (3); With engine oil. Install:

- Chain (5) with chain tensioner (1) and camshafts (2) and (4)
- Camshaft bearing caps (3)

ATTENTION : If replacing the chain tensioner, remove its locking pin.

ATTENTION : Make sure the black marked chain links "b" and "c" are against the teeth marked "a" and "d" on the camshaft sprockets; otherwise, start with the camshaft installation.

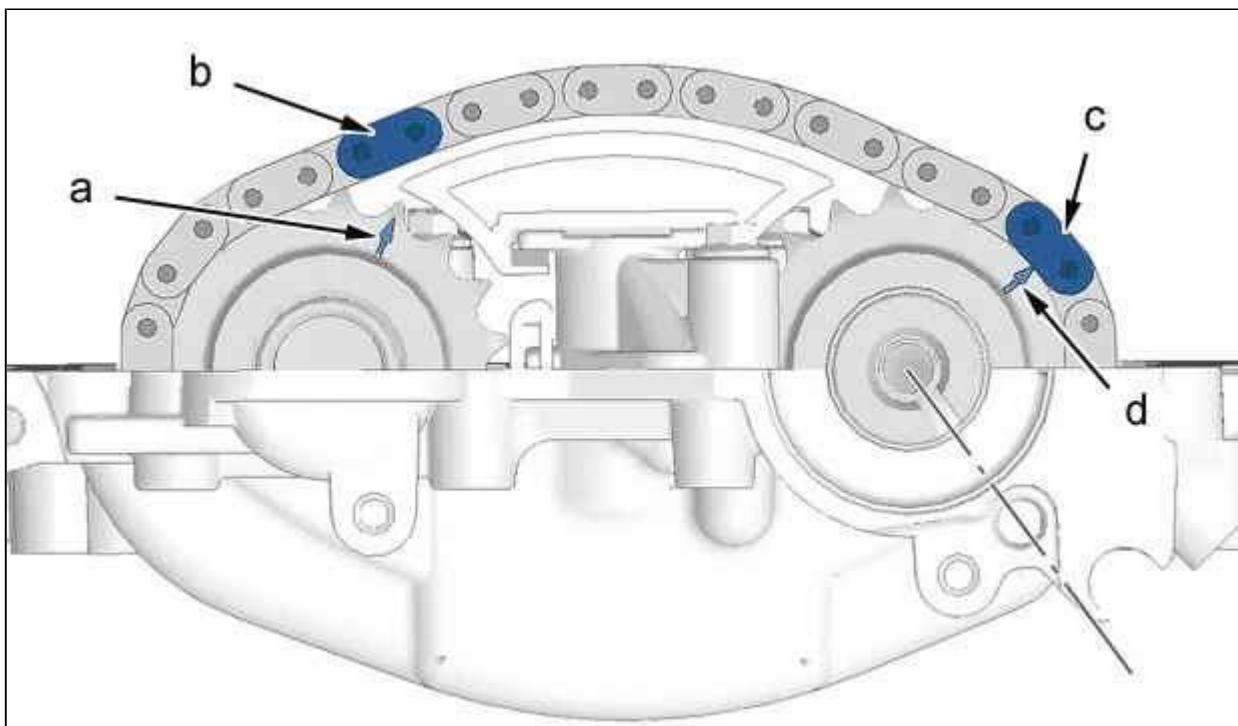


ATTENTION : Insert and then tighten the retaining bolts in sequence in the order shown (1 to sixteen).

Tighten:

- Camshaft bearing cap screws with a torque of 1 ± 0.1 daNm
- Timing chain tensioner mounting bolts with a torque of 1 ± 0.1 daNm

3.1. Checking the correct installation of the camshaft drive chain



ATTENTION : The notch in the camshaft gear should be opposite the bore of the pinned connection on the camshaft bearing covers.

Install:

- Camshaft pulley
- Camshaft pulley bolt

Install the camshaft to the reference point; Using the tool [1]. Remove the tool [1].

Turn the camshafts 40 turns.

Install the camshaft to the reference point; Using the tool [1]. Make sure that the black marked chain links "b" and "c" are against the teeth marked "a" and "d" on the camshaft sprockets, otherwise start reinstalling the camshafts first.

Remove:

- Fixture [1]
- Camshaft pulley bolt
- Camshaft pulley

3.2. Additional operations

Install:

- **Cylinder head cover**
- Engine cover



Reconnect the battery.

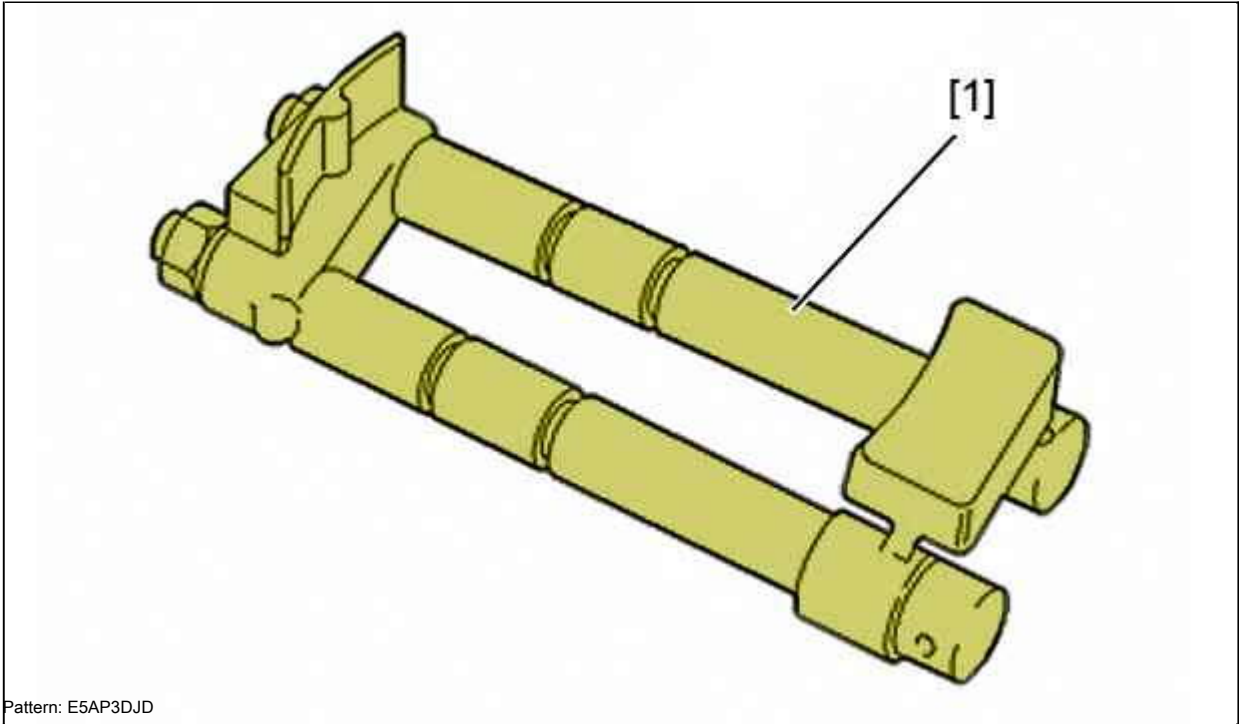
ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL REFITTING: CAMSHAFT HOLDER

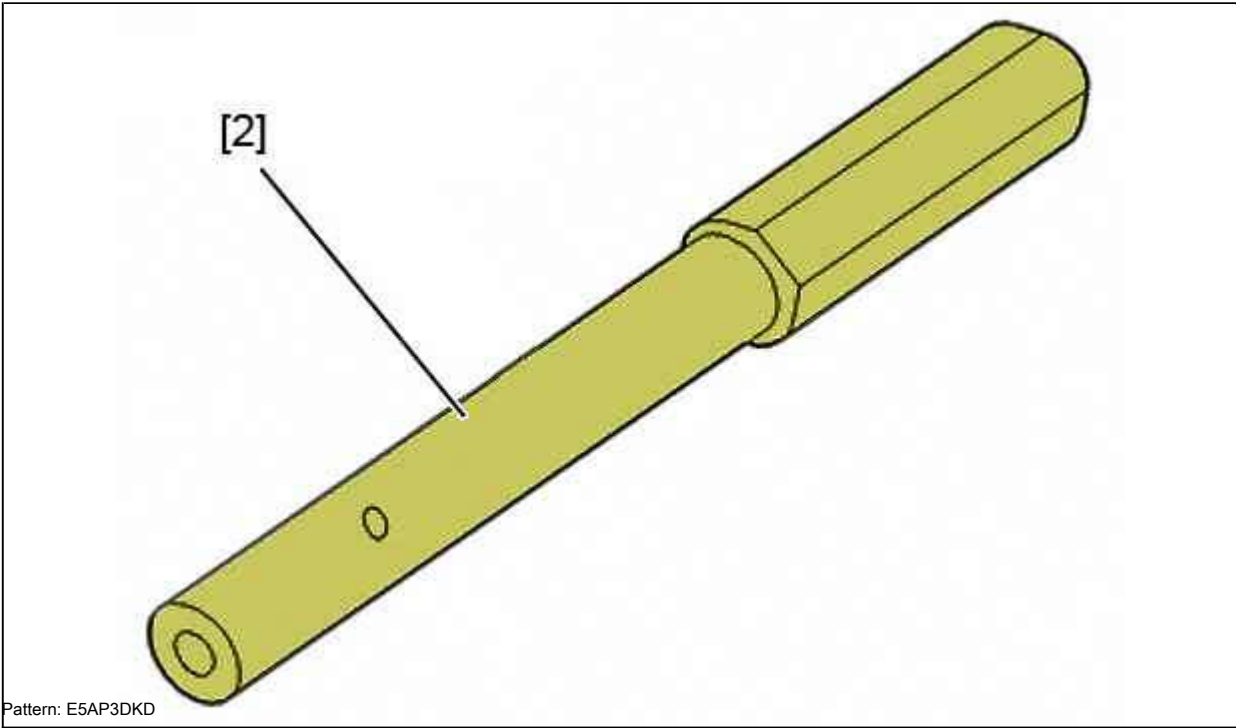
MANDATORY: Observe the cleanliness and safety rules



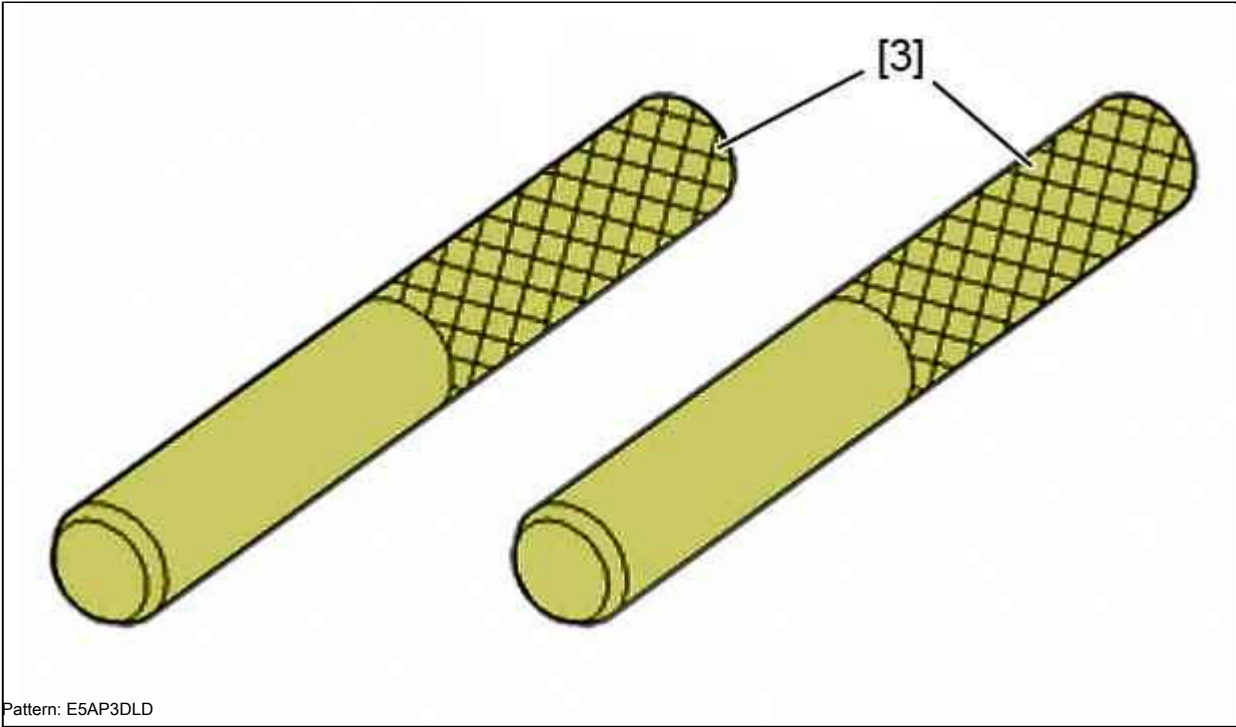
1. Recommended equipment



Label Designation		Number (reference)	
[1]	[/] fixation device	1,860,765,000	1,860,765,000
	toothed belt pulley1	Toolbox (). 0191	Toolbox (). 0191



Label Designation		Number (reference)	Number (reference)
[2]	Camshaft Pulley Calibration Pin () .0194.B		() .0194.B



Label Designation		Number (reference)	Number (reference)
[3]	Camshaft support assembly pin () .0194.N		() .0194.N

2. Removal

MANDATORY: Observe the special requirements for cleanliness and safety when working with the injection system of diesel engines HDi



Remove the engine cover. Disconnect the battery.

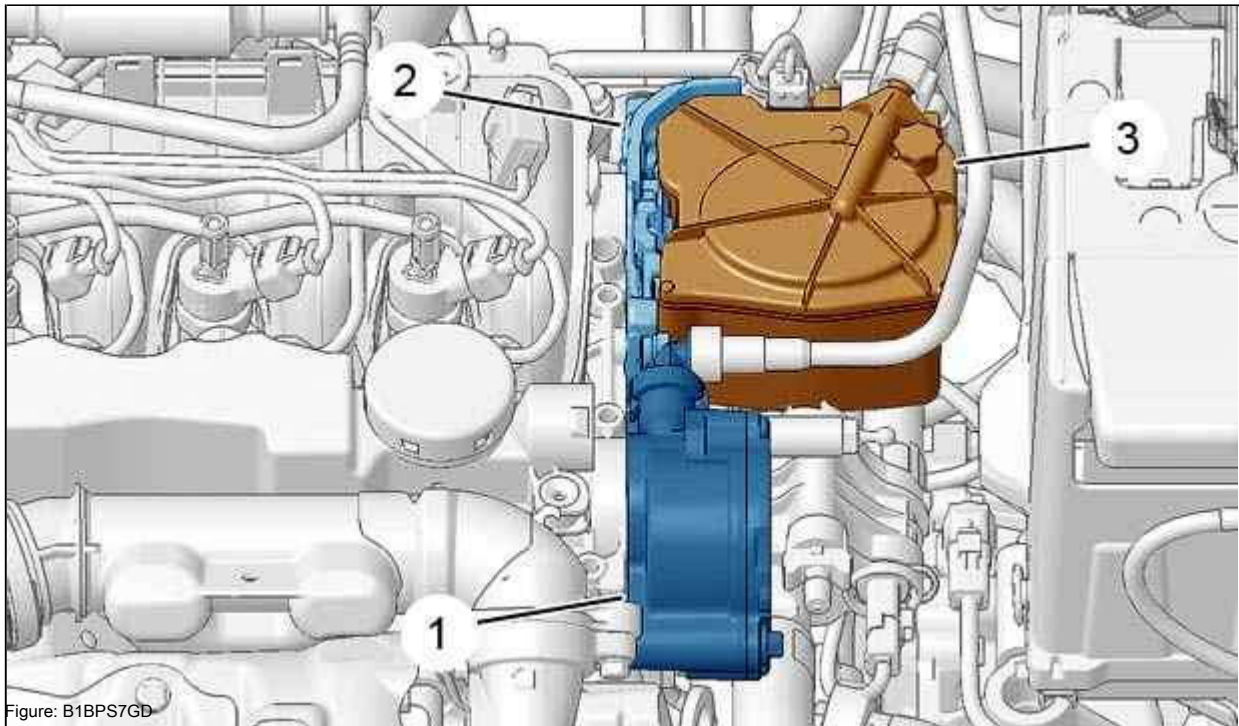
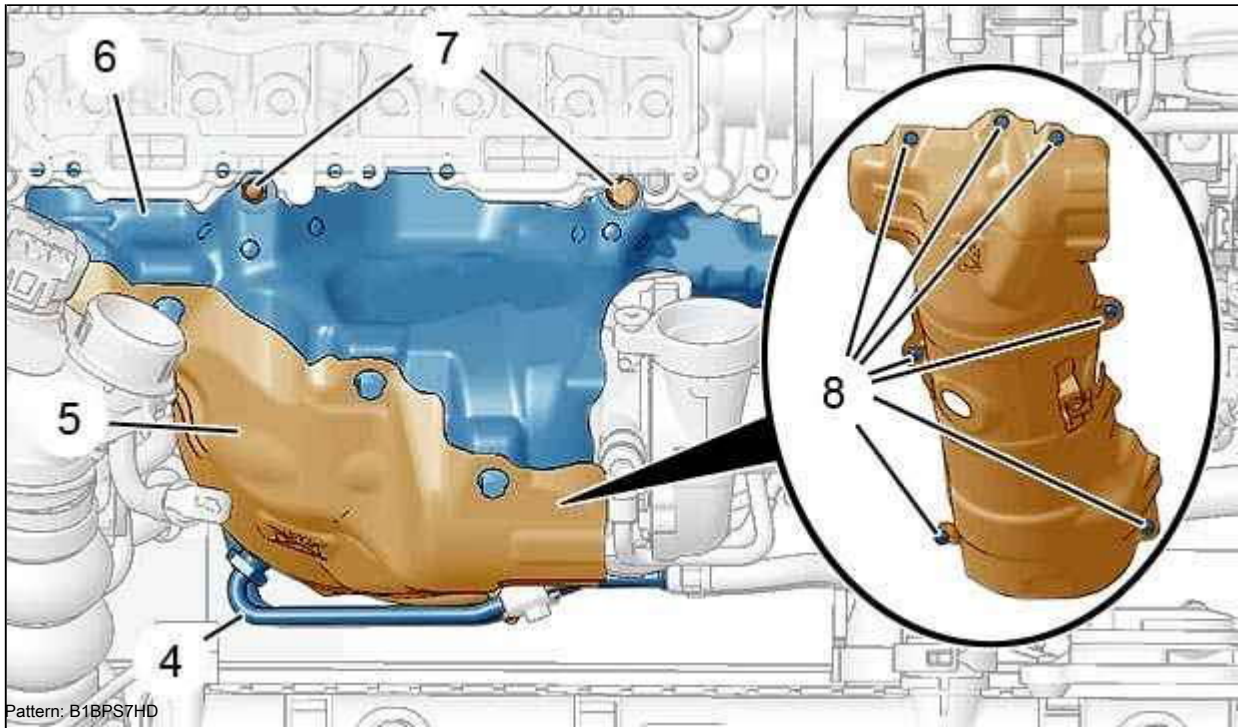


Figure: B1BPS7GD

Remove:

- Air supply system
- diesel injectors
- Fuel filter (3)
- Fuel filter support (2)
- Vacuum pump (1)



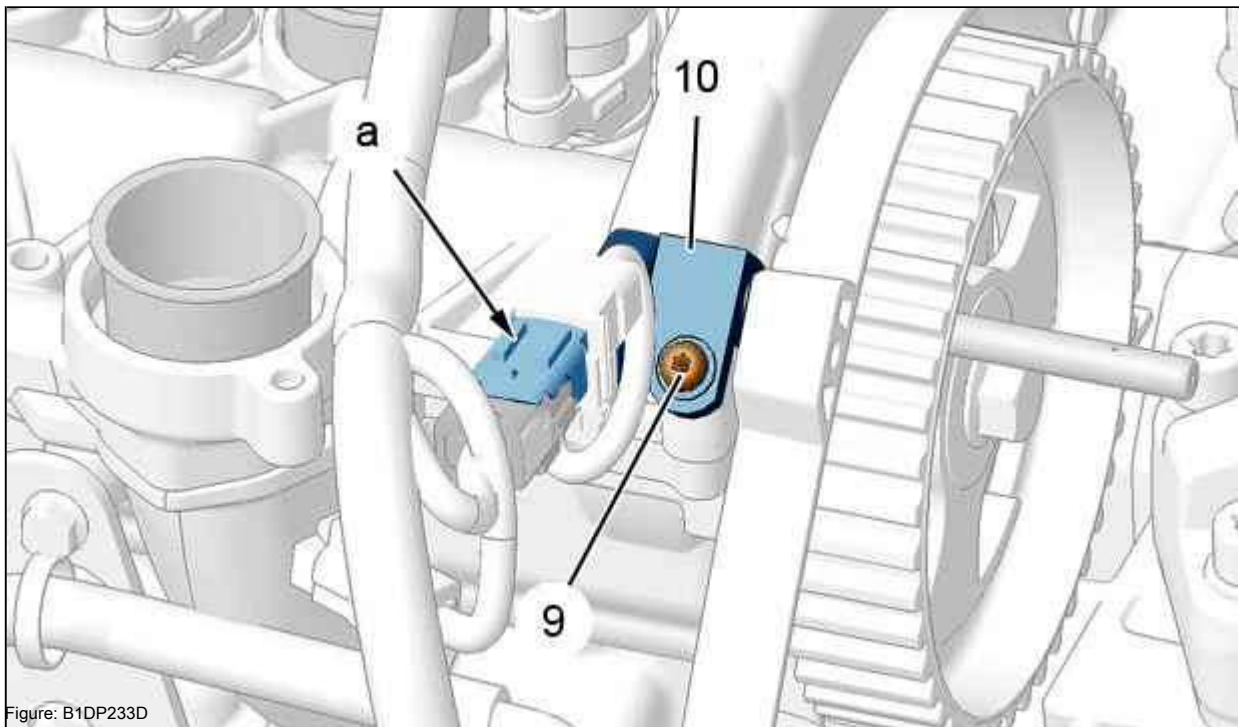
ATTENTION : Protect radiator fins of cooling system from damage.

Remove:

- Exhaust Pressure Tubes (4)
- the bolts (8)

Move the heat shield (5) (Be careful). Remove:

- the bolts (7)
- Heat shield (6)

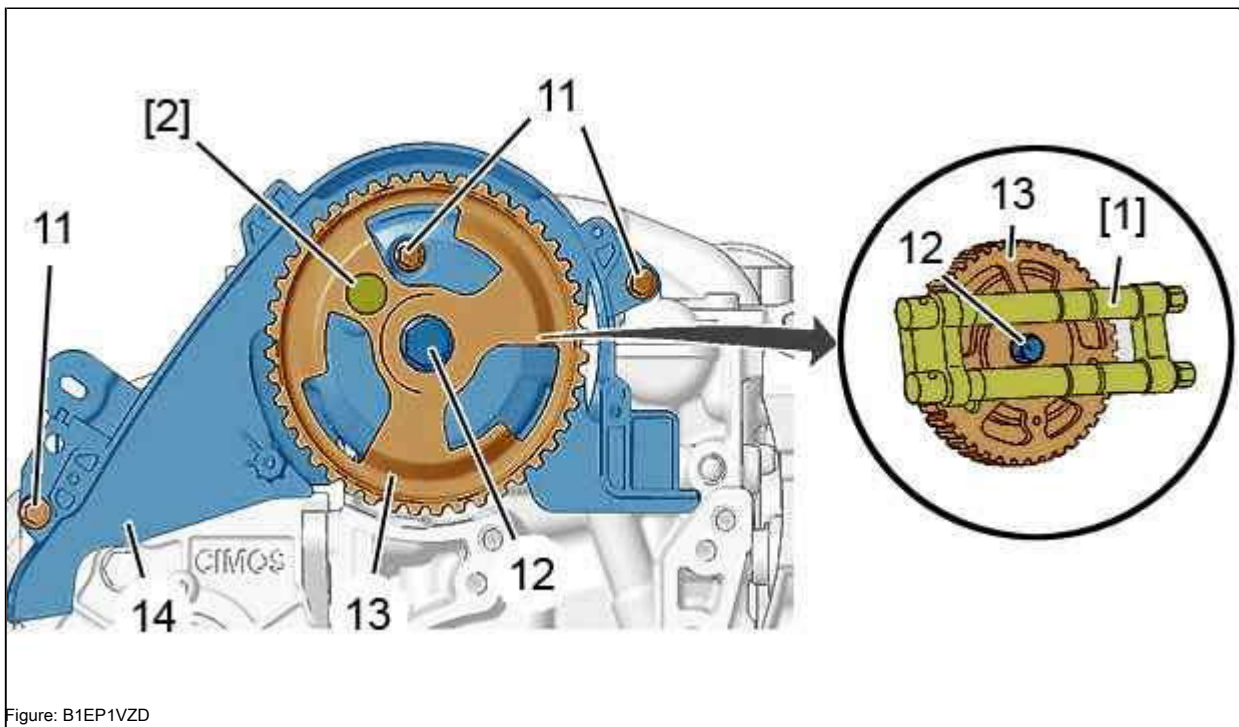


Remove:

- Attachment drive belt
- Timing belt
- Disconnect the connector (at "a")

Remove:

- Bolt (9)
- Sensor (10)



ATTENTION : Camshaft locking pin [2].

Fix the camshaft pulley (13); Using the tool [1]. Remove:

- The bolt (12)
- The camshaft pulley (13)
- the bolts (11)
- The timing cover (14)

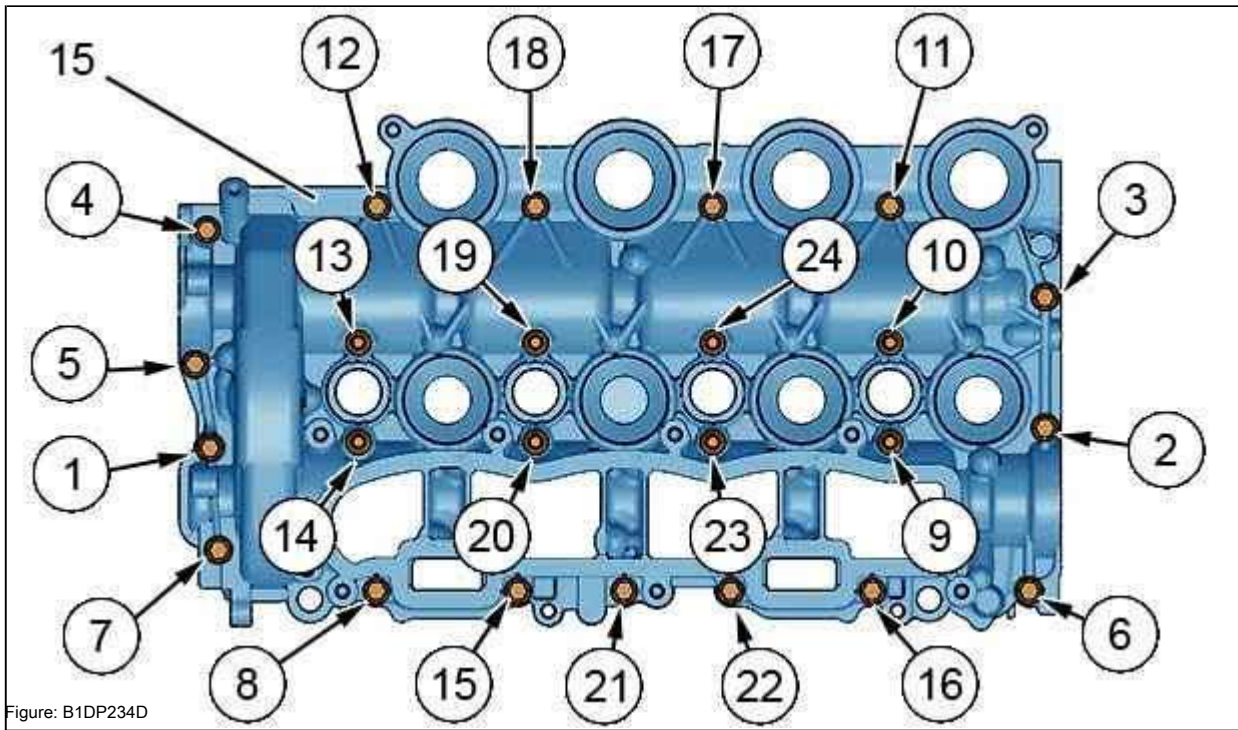


Figure: B1DP234D

ATTENTION : Observe the tightening sequence shown (Sequence 1 to 24).

Remove the camshaft bearing cap screws and studs (15). Detach the camshaft bearing cap housing (15).

Remove:

- Camshaft cover housing (15)
- Camshaft oil seal

3. Verification

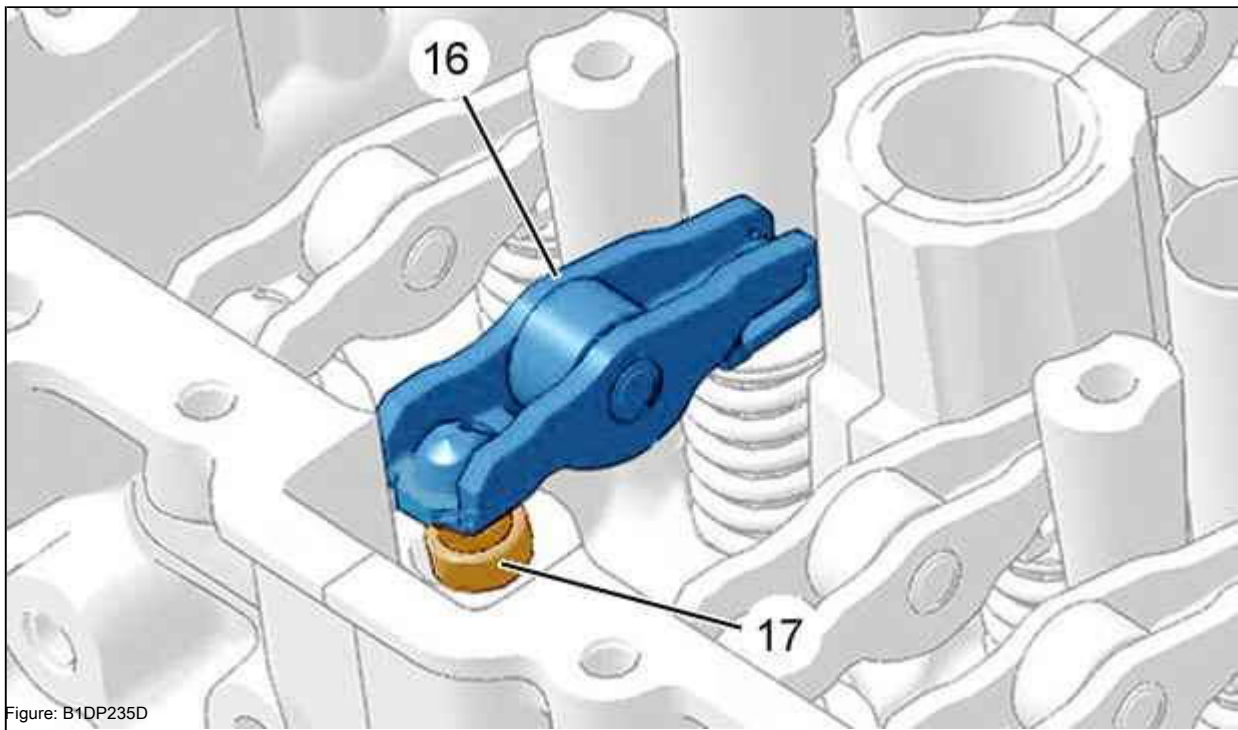


Figure: B1DP235D

ATTENTION : Mark the positions of the stopper (16) and pushers (17).

Check that the hydraulic pushers rotate freely in the cylinder head.

Before installing the camshaft bearing caps, check the function of the stops and hydraulic pushers (Bearing rotation, condition of surfaces).

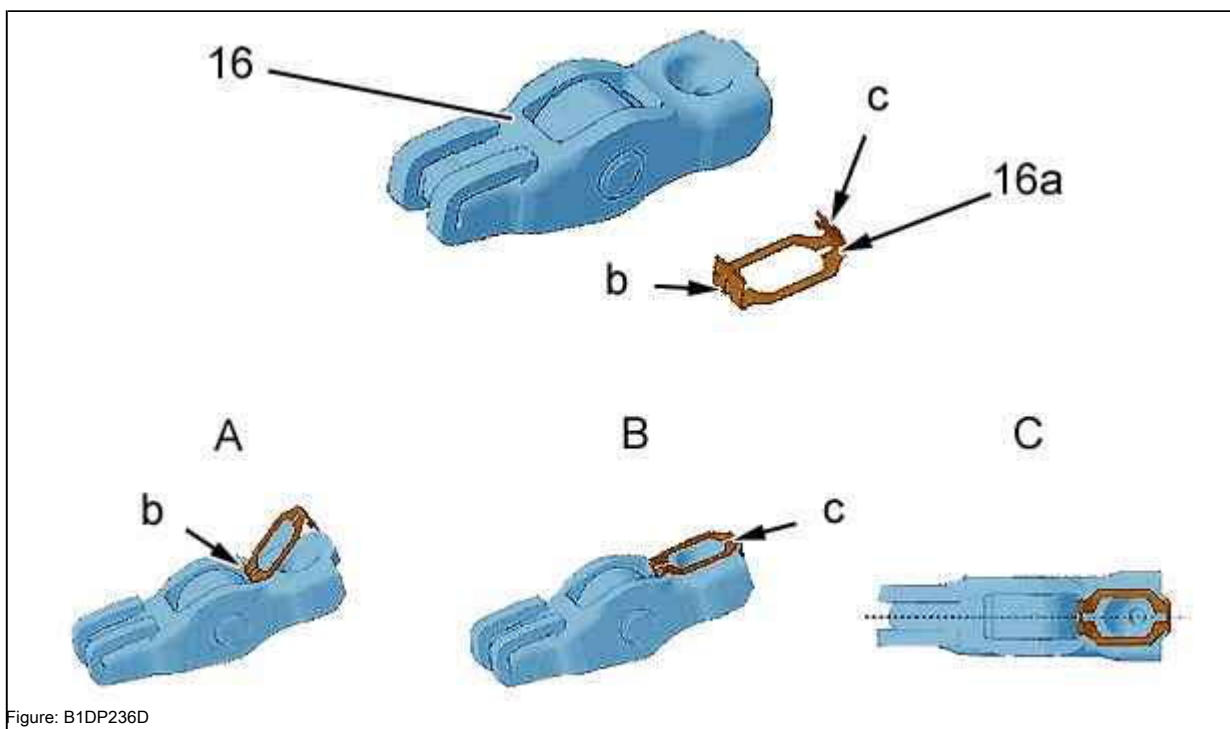
Check the condition of the cam surfaces of the intake and exhaust camshafts. Check the condition of the chain tensioner (tensioner freedom of movement, condition of surfaces). Check the condition of the drive circuit.

Replace defective parts.

4. Installation

ATTENTION : When installing, the removed seals must be replaced with new ones.

4.1. Installing the clips on the stoppers



Install the clips (16a) on the supports (16).

NOTE: Brackets (16a) are supplied as spare parts.

Composition :

- (16) Stopper
- (16a) Catch: "b" Side without protrusion; "c" Side with protrusion

ATTENTION : The catch must not be deformed under any circumstances.

Step A: Install the lock 16 side b on the inner edge of the lock roller. Step B: Attach the retainer 16 side to the outer edge of the anchor. Step C: Check the latch alignment.

Lubricate (with engine oil):

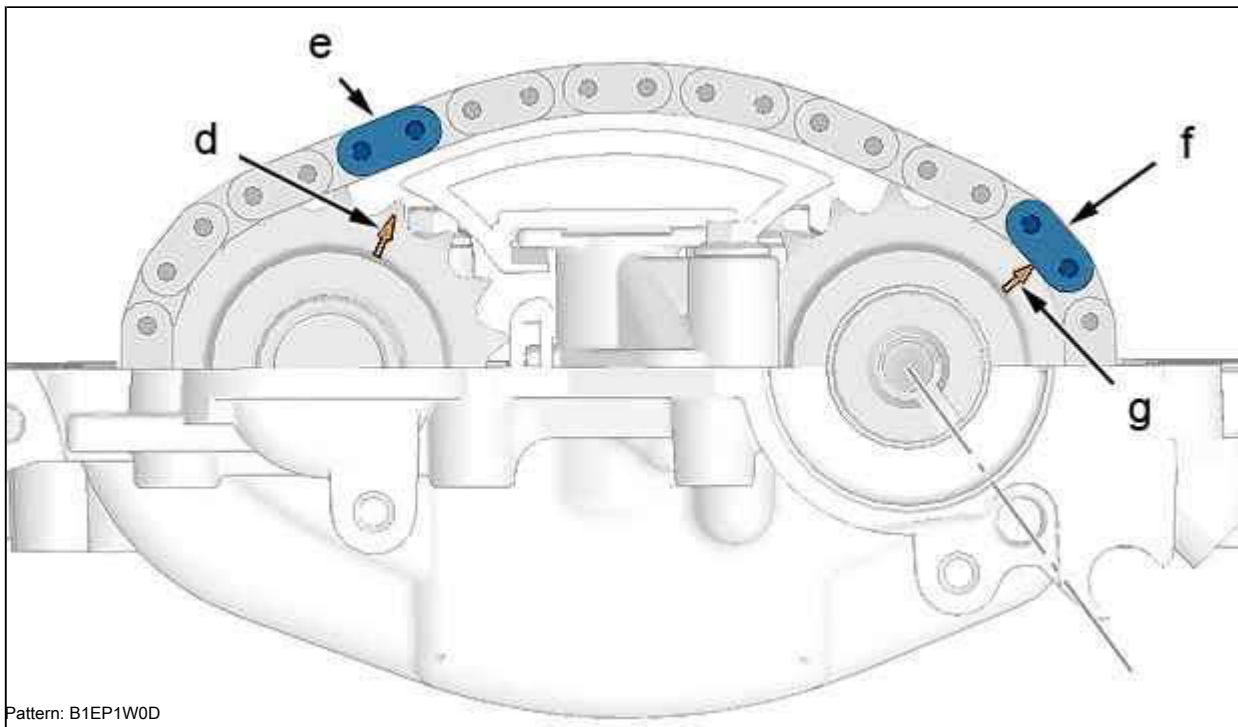
- Hydraulic Push Housings (17)
- Stopper (16)

Install:

- hydraulic pushers (17) (respecting the initial location)
- Stopper (16) assembled with clips (16a) (respecting the original location)

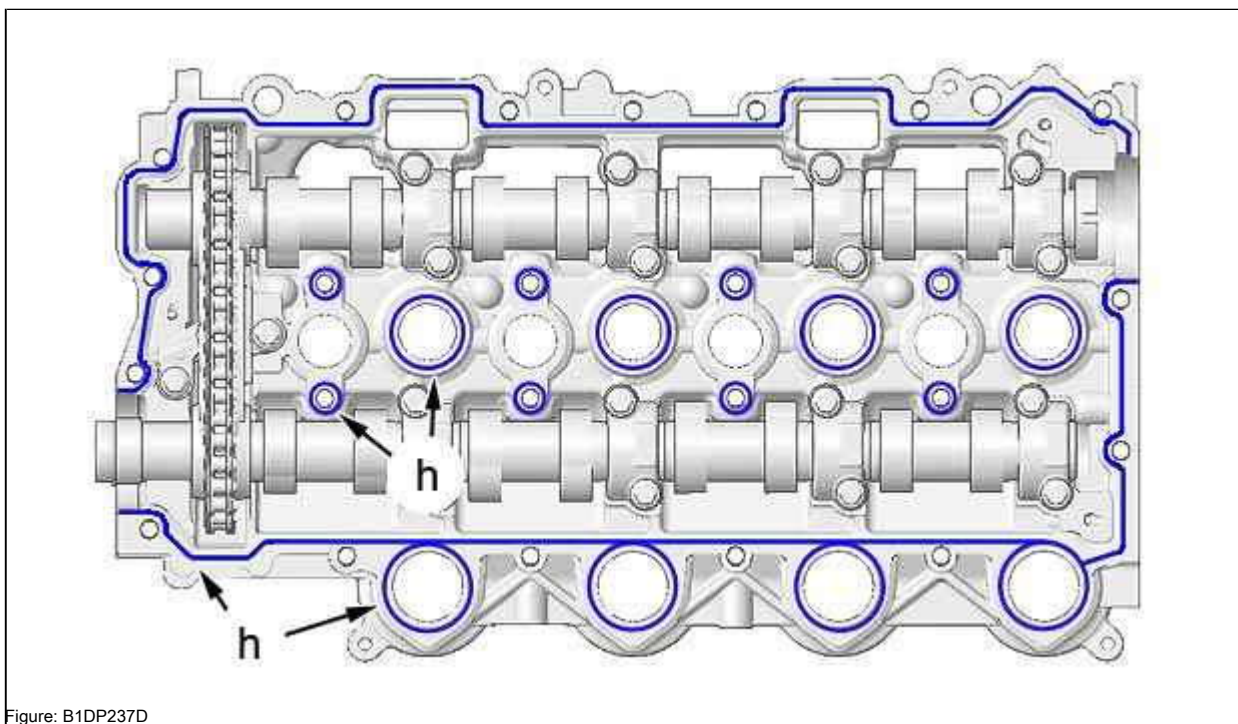
ATTENTION : Check the rocker arms and tappets for proper operation before installing the camshaft cover.

4.2. Additional operations



ATTENTION : Align the notch in the pinion with the bore of the pinned joint in the camshaft bearing housing before installing.

ATTENTION : Make sure that the links marked in black "e" and "f" are against the teeth marked "d" and "g" on the camshaft gears; otherwise, start the camshaft installation procedure first.



ATTENTION : Clean the mating surfaces with a certified metal removal product. Do not use any abrasive or scratching tools on the mating planes; Mating planes must not contain any marks of impact or cracks.

Apply sealant "E10" to the bearing surface of the bearing housing cover "h" (refer to product catalog).

ATTENTION : Do not plug the channels through which oil is supplied to the hydraulic timing chain tensioners (in "h") with sealant.

ATTENTION : Perform the installation operation in less than 5 minutes.

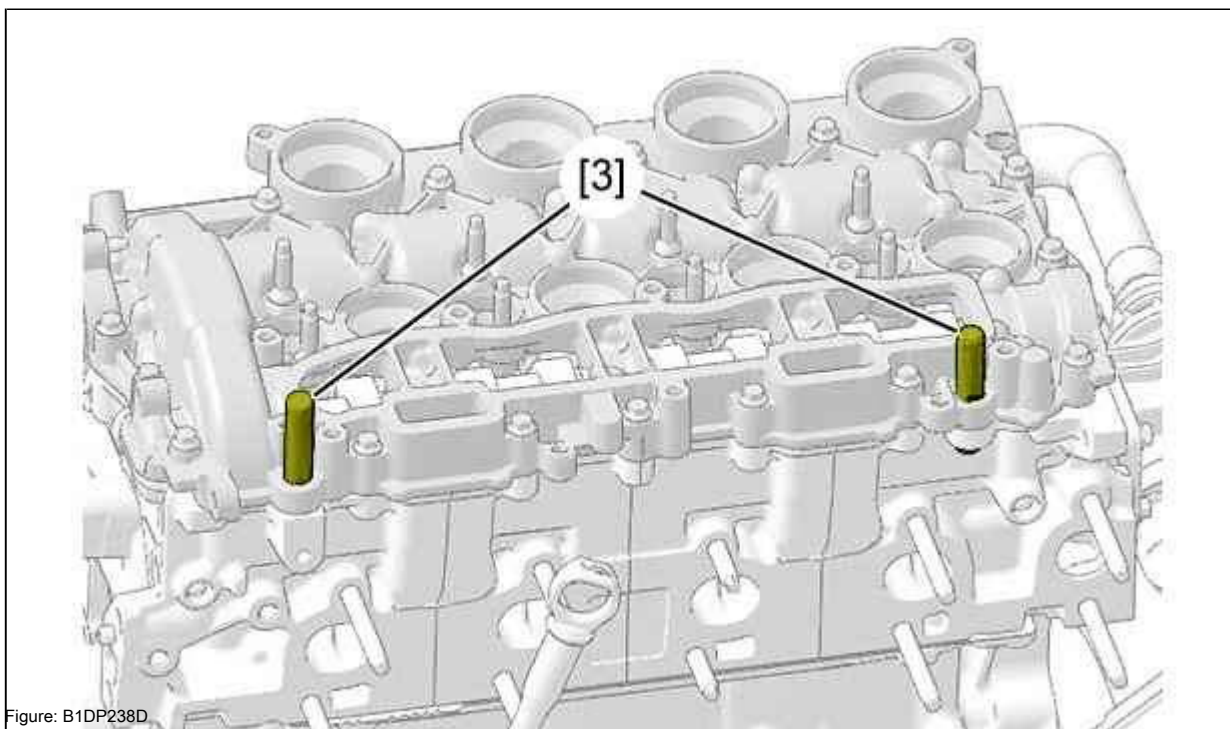
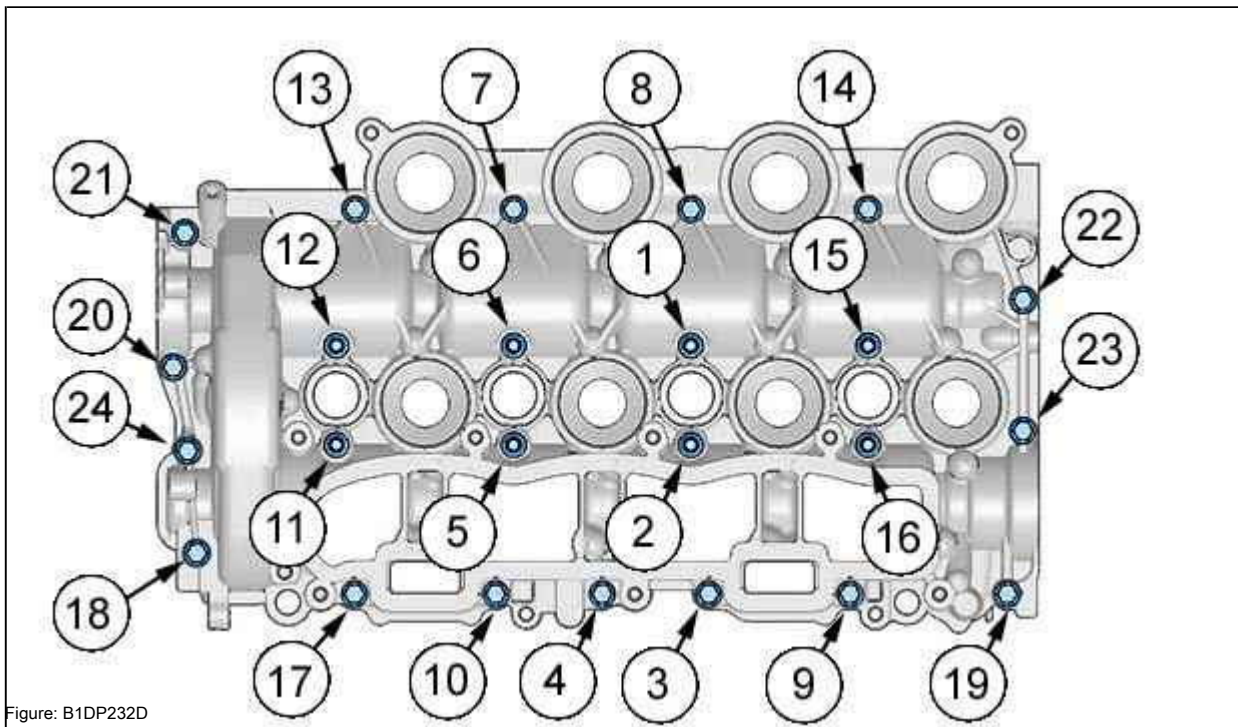


Figure: B1DP238D

Install the guide pins [3].

Install the camshaft bearing housing and the cylinder head using the tool [3].



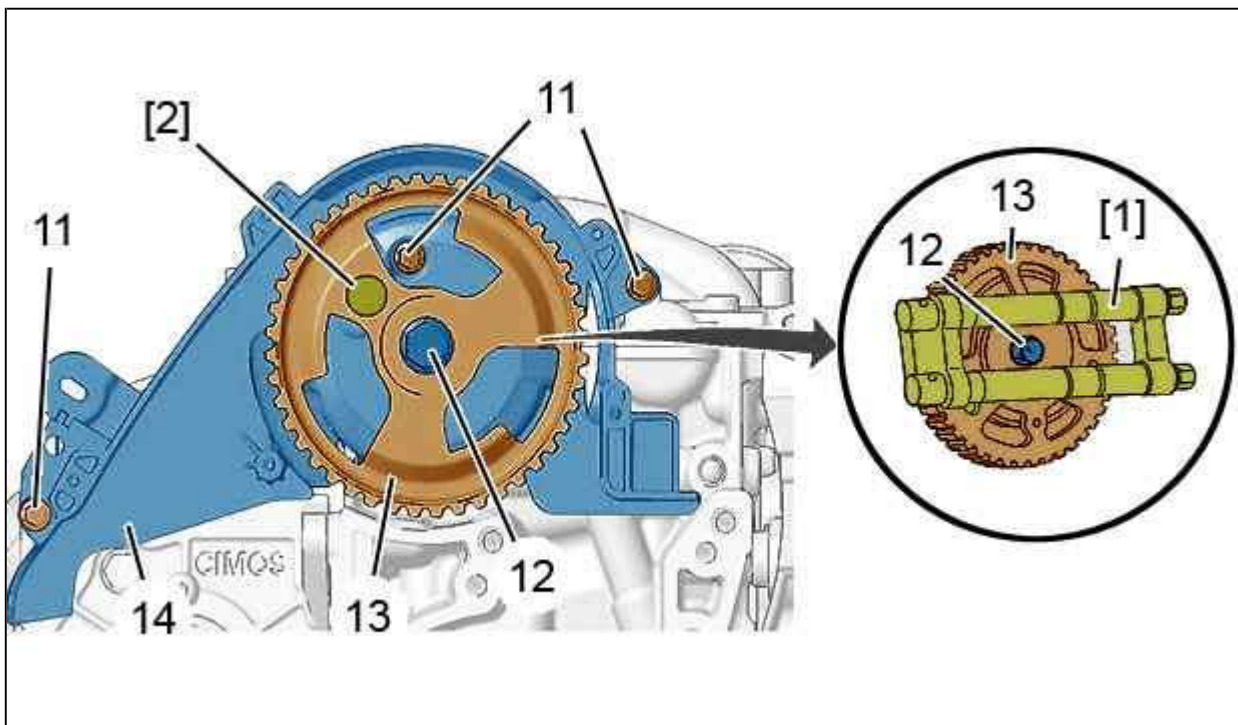
ATTENTION : Observe the correct order of tightening the screw connections (Tighten the screws in the sequence 1 to 24).

Install the camshaft bearing cap screws in place:

- Pre-tighten the bolts to a torque of 0.5 ± 0.1 da.Nm (in the order shown)
- Bolt tighten to a torque of 1 ± 0.1 da.Nm (in the order shown)

Remove the tools [3].

Install a new camshaft seal.



ATTENTION : Always replace the bolt (12).

Install:

- The timing cover (14)
- the bolts (11)
- The camshaft pulley (13)

Install a new bolt (12).

Tightening method for bolt (12); Using tool [1]:

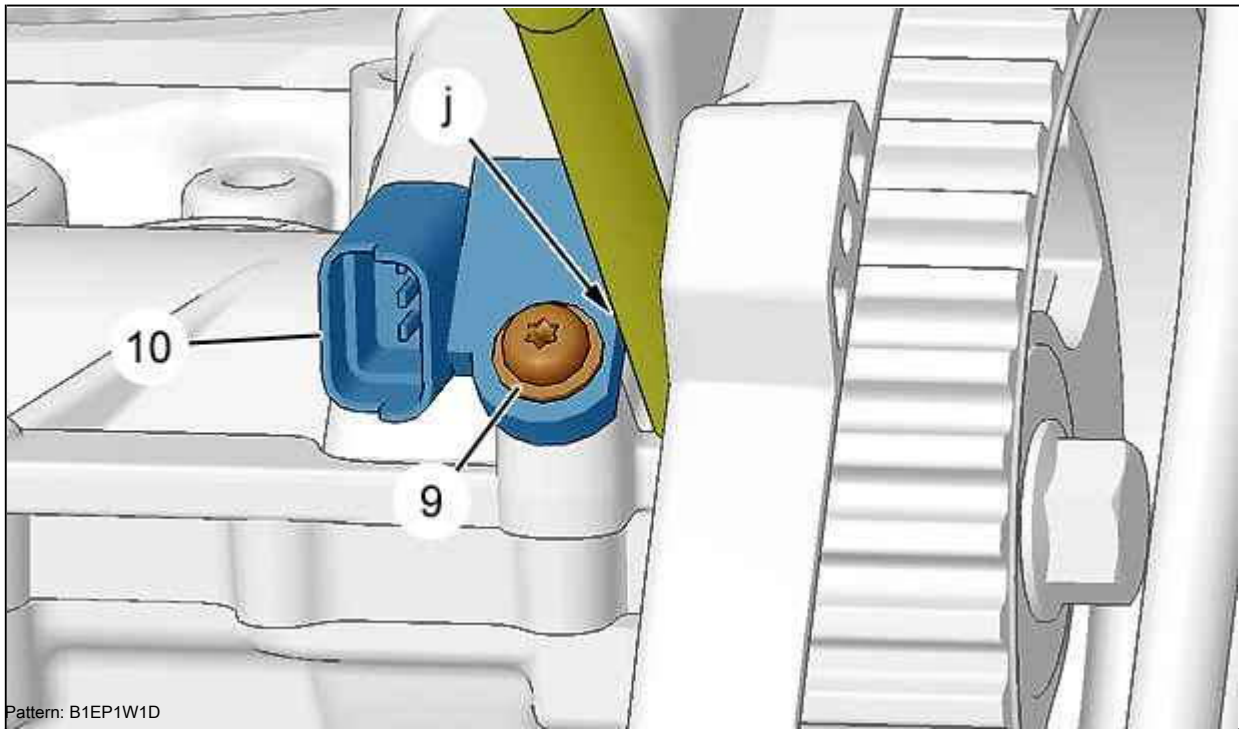
- Pre-tighten to a torque of 2 ± 0.2 da.Nm
- Angle tighten $50 \pm 5^\circ$

Turn the camshaft pulley 13 clockwise; Using the tool [1].

If the pulley is turned too far, return it to the counter clockwise side of the locating hole.

Fix the camshaft; Using the tool [2].

4.3. Camshaft Position Sensor Adjustment



ATTENTION : When installing the camshaft position sensor, observe the correct mutual position of the sensor and the "target".

Loosen the screw (9).

Move the camshaft position sensor (10) to the depth of the slots. Tighten screw 9 a few turns.

Adjust the clearance (1.2 mm) between the camshaft position sensor and the target (10):

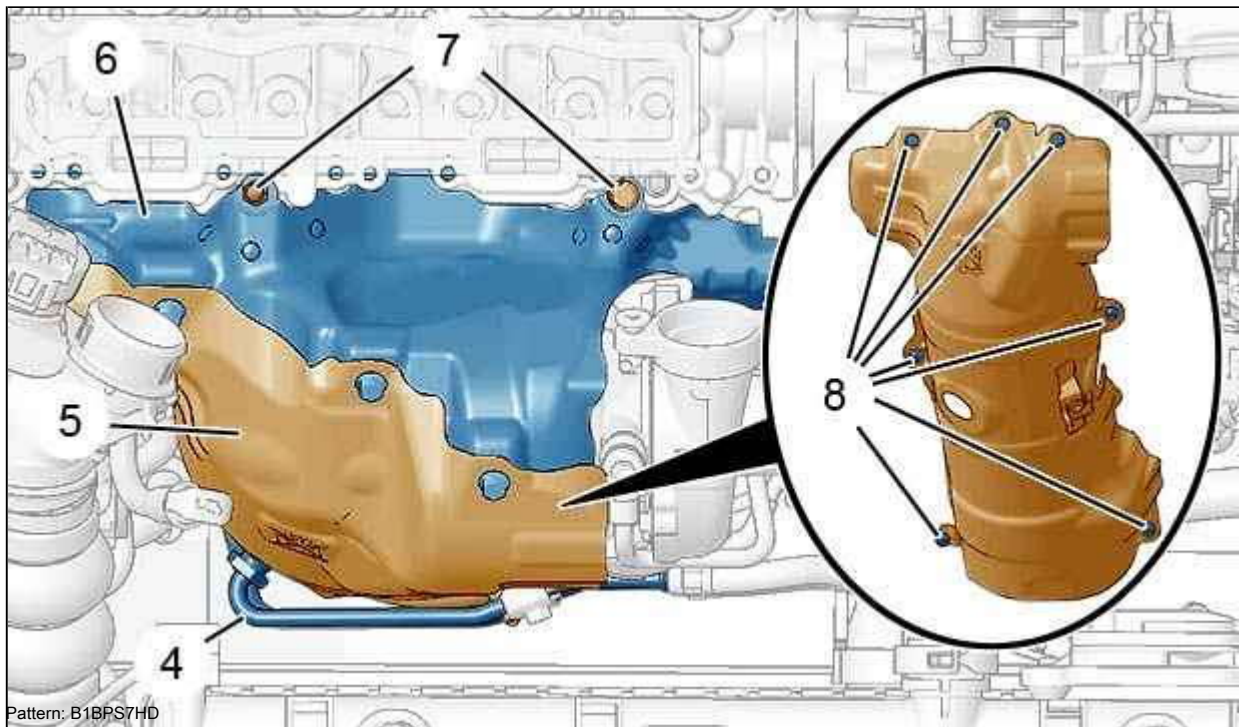
- New camshaft position sensor: Insert the camshaft position sensor protrusion into contact with the camshaft timing stripe target (13)
- Reusing the camshaft position sensor: Place a drill bit j (diameter 9.5 mm) between the camshaft position sensor (10) and the timing case (14)

Tighten the bolts to a torque of (9) to 0.4 ± 0.1 da.Nm.

4.4. Additional operations

Connect the connector (at "a"). Install:

- Timing belt
- Attachment drive belt



Install:

- Heat shield (6)
- the bolts (7)

Move: Heat shield (5) (Be careful). Install:

- bolts (8); Tighten to 0.4 ± 0.1 da.Nm
- Exhaust Pressure Tubes (4)

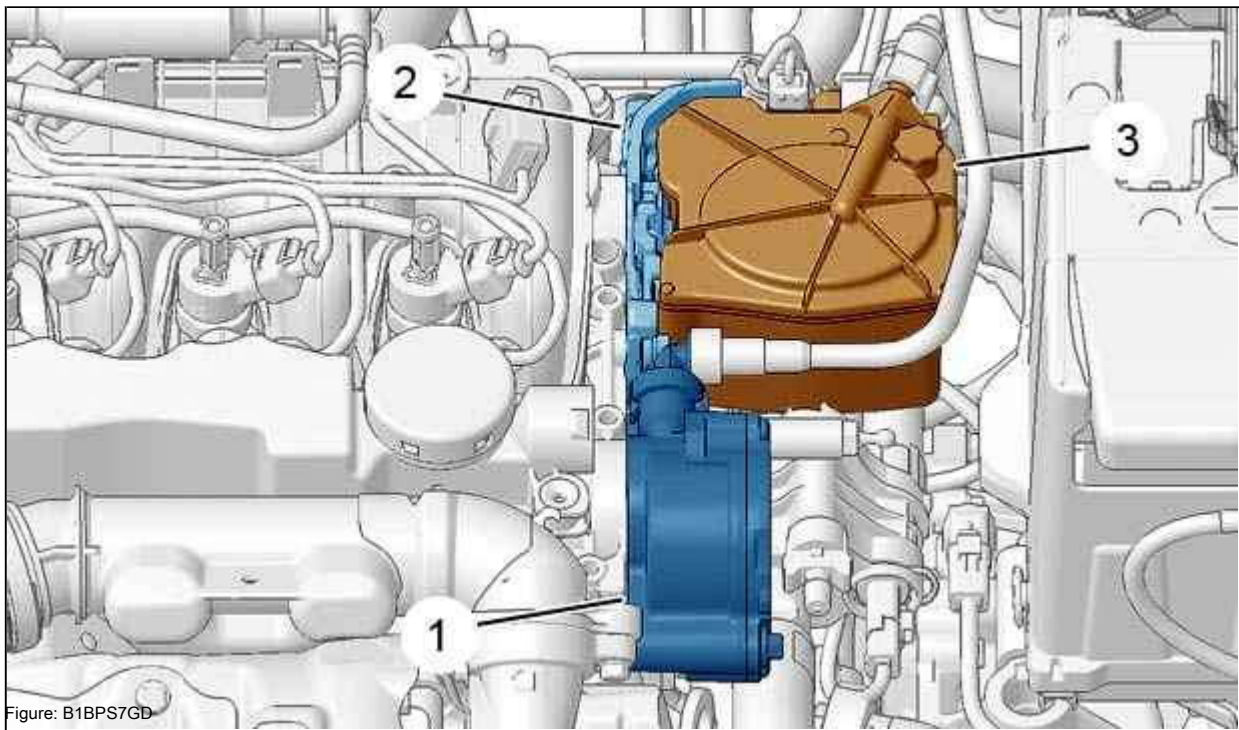


Figure: B1BPS7GD

Install:

- Vacuum pump (1)
- Fuel filter support (2)
- Fuel filter (3)
- diesel injectors
- Air supply system

ATTENTION : Follow the steps to follow after removing the battery.

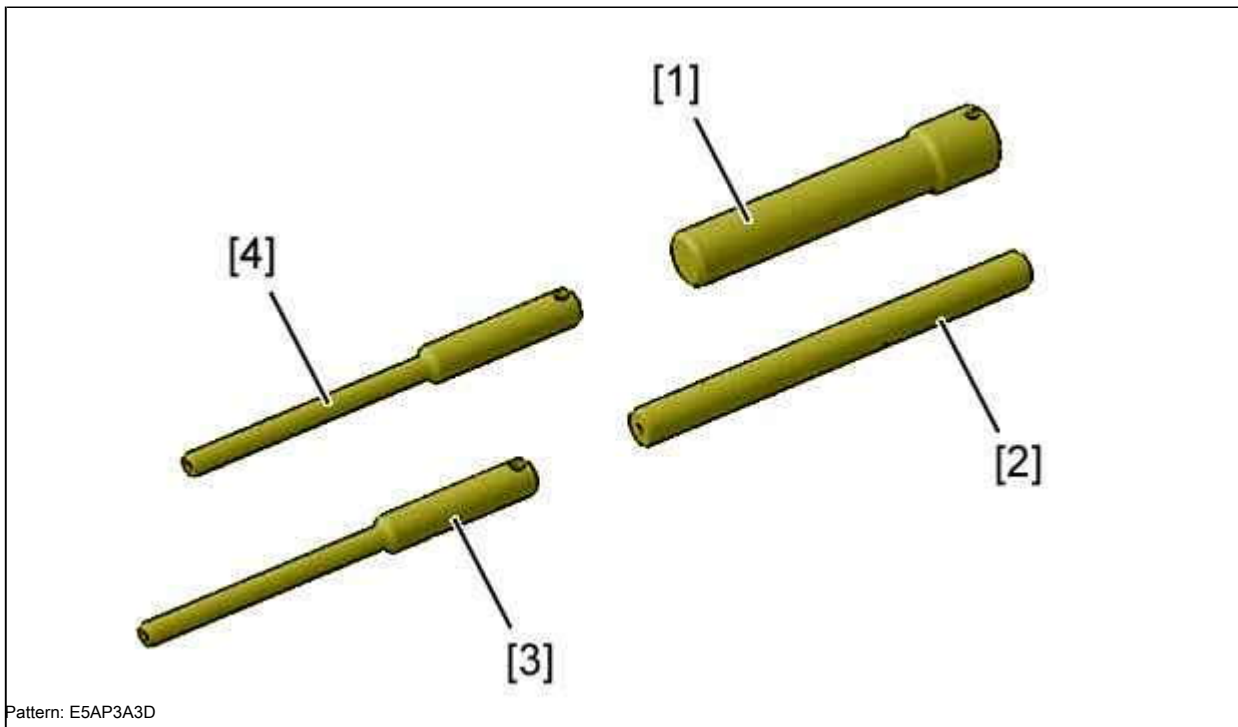
Reconnect the battery.

REMOVAL REFITTING: TIMING BELT

MANDATORY: Observe the cleanliness and safety rules



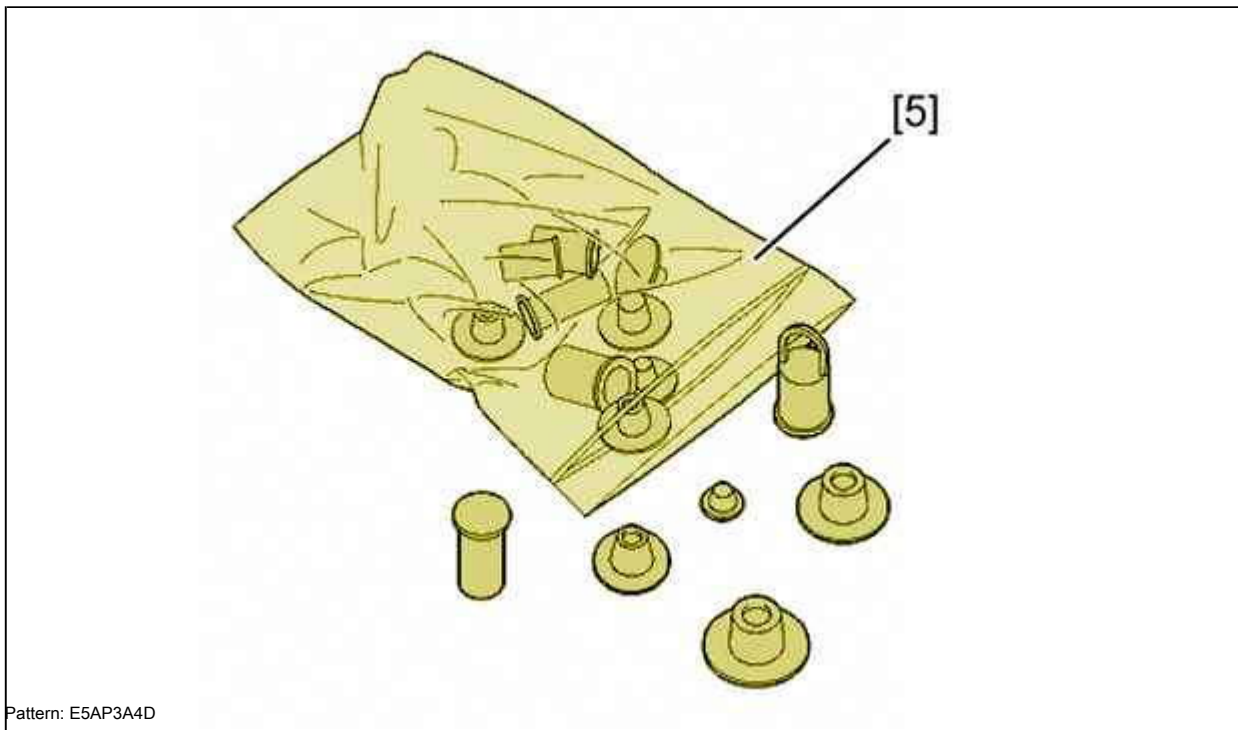
1. Recommended equipment



[1] Engine flywheel adjustment gauge (). 0194C.

[2] Camshaft Calibration Pin (). 0194B. [3] Crankshaft Calibration Pin (). 0194A.

[4] Dowel pin for high pressure fuel pump pulley (). 0194A.



Pattern: E5AP3A4D

[5] set of plugs () .0194T.

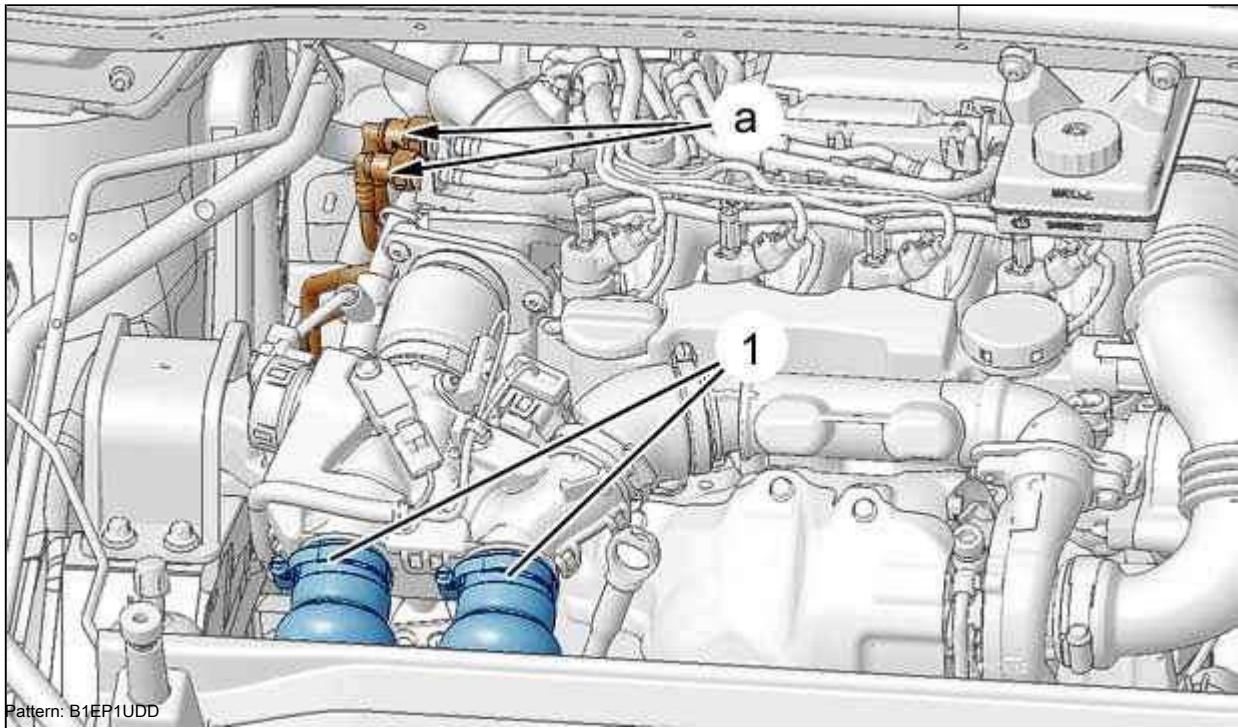
2. Removal

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements



Place the car on a lift.

Disconnect the battery. Remove the engine cover.



Disconnect and move to the side of the fuel supply and return pipe (at "a"). Plugging the fuel supply and return pipes; Using the tool [5]. Remove:

- Air pipes (1)
- Front right wheel
- Front right wheel arch liner

2.1. Electric power steering

Remove the attachment drive belt.



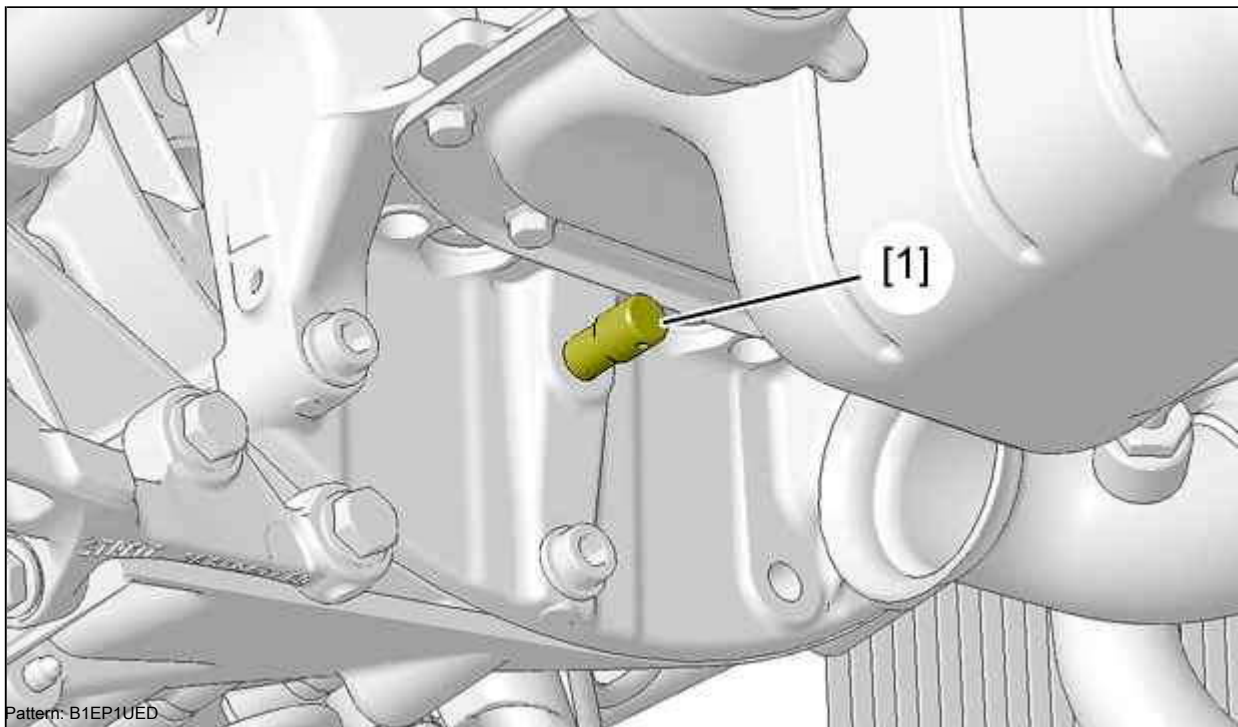
2.2. Steering with hydraulic booster

Remove the attachment drive belt.

Remove and move aside the power steering reservoir (without opening the circuit).

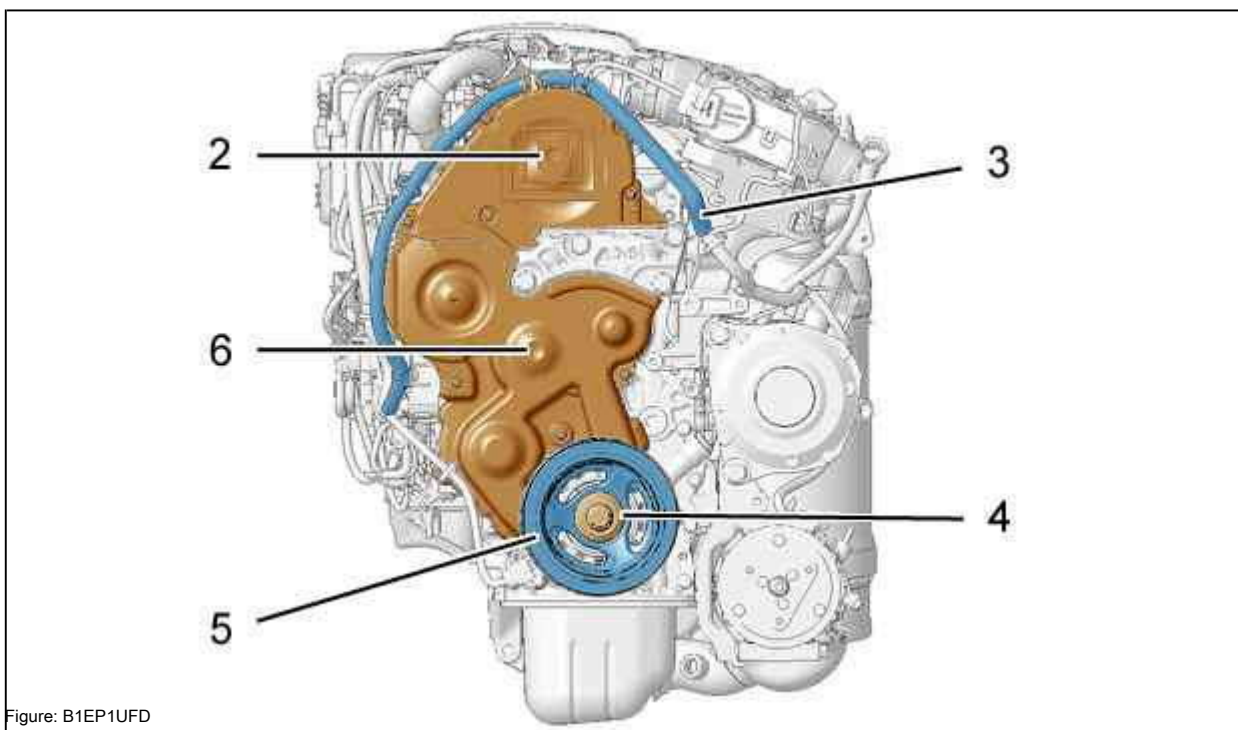


2.3. General operations



Disconnect the exhaust system to avoid damaging the front flex tube (At flex tube level). Install the flywheel pin [1] in the crankcase fixing hole of the crankshaft bearing cover.

Crank engine in normal direction of rotation until pin [1] is in bore.



Move aside the wiring harness (3).

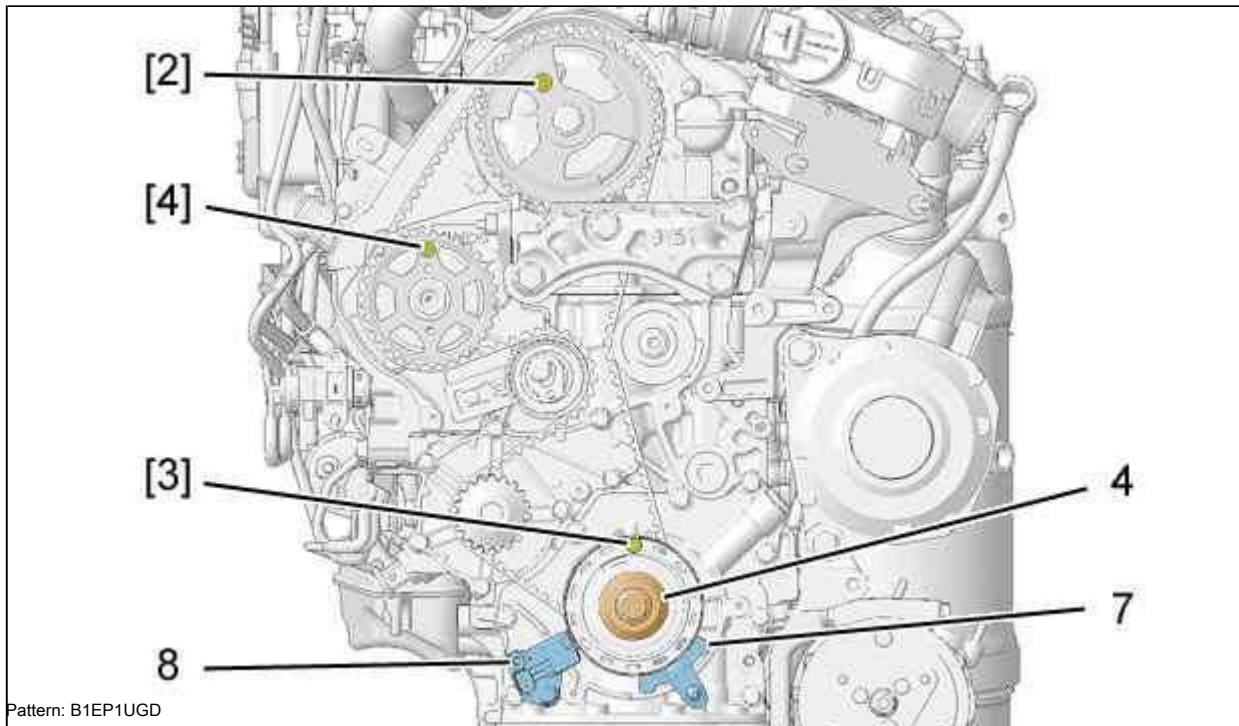
Remove:

- Upper timing case (2)
- Bolt (4)

- Pulley (5)
- Lower timing case (6)

Install the bolt (4).

Remove the pin [1].



ATTENTION : The magnetic track of the crankshaft pulley must not show any signs of cracking and must not come close to any source of magnetic field; otherwise, replace the crankshaft pulley.

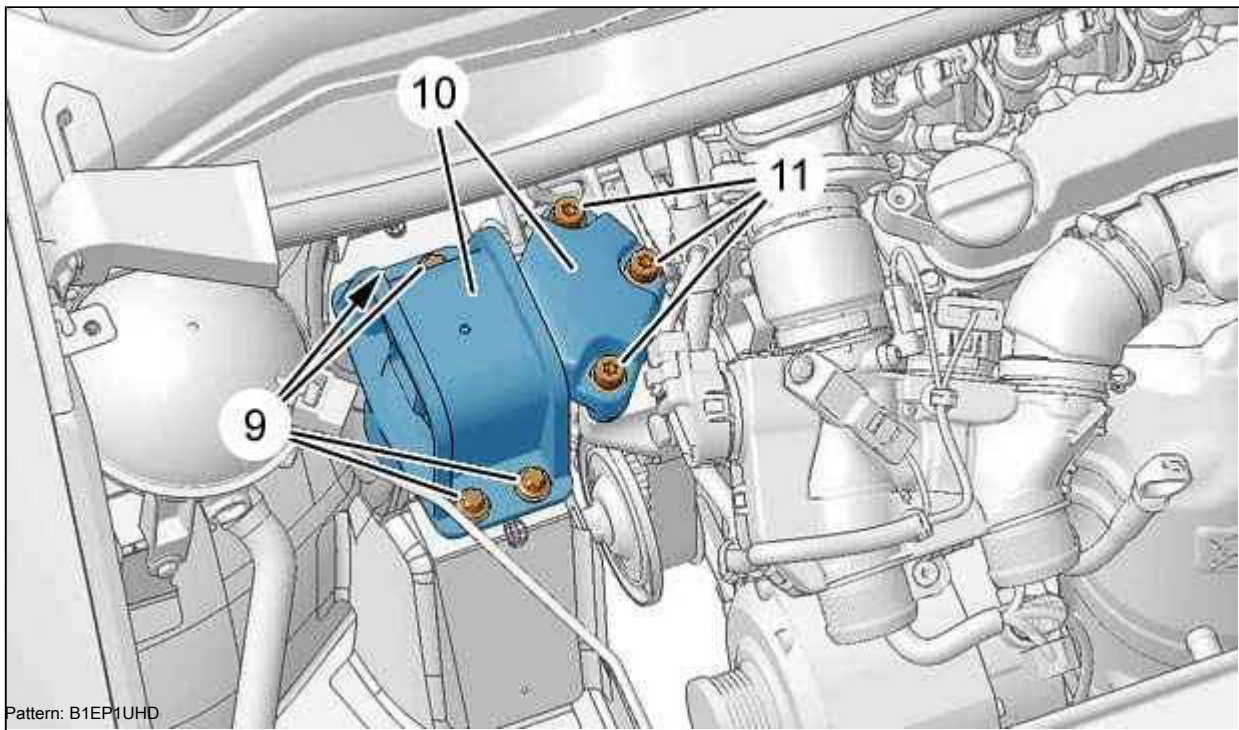
Remove:

- Engine speed sensor (8)
- Anti-stall bracket (7)

Turn the crankshaft with the bolt (4) until the camshaft is at its pinned point.

Secure with a pin:

- Camshaft; Using pin [2] (lubricate pin)
- High pressure fuel pump drive pulley; With pin [4] (lubricate pin)
- Crankshaft; With pin [3]

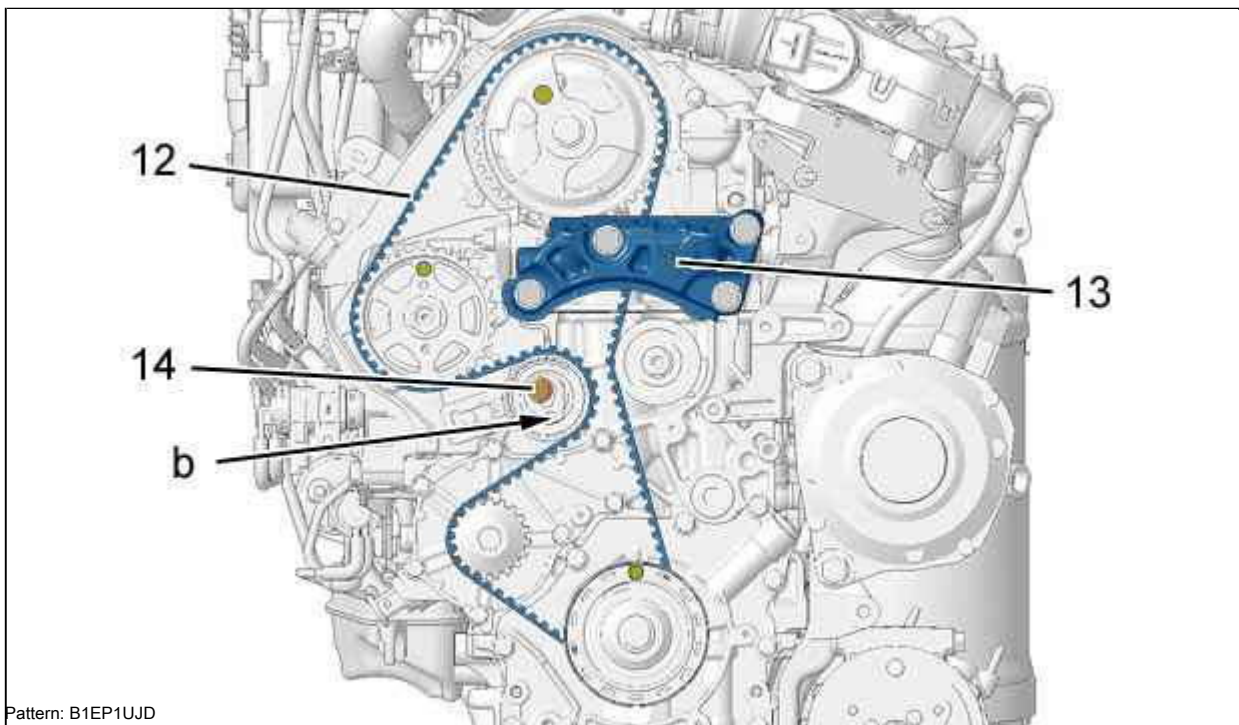


Install a rolling jack with a soft gasket under the engine oil sump.

NOTE: The trolley jack must support the power unit.

Remove:

- bolts ((9))
- the bolts (11)
- Plastic Engine Mount Kit (10)



Remove the intermediate engine mount (13).

ATTENTION : Fasten the tension roller; Using the hexagonal wrench (in "b").

Loosen the screw (14).

Loosen the tension on the timing belt (12) by turning the dynamic tensioner roller clockwise.

Remove the timing belt (12), starting from the cooling pump pulley.

3. Verification

ATTENTION : Perform the following checks immediately prior to installation.

Make sure that the rollers and pulley of the coolant pump rotate freely (no play or jamming). Check for traces of oil leaks (crankshaft and camshaft oil seals).

Check for coolant leaks (water pump).

Check that the engine speed sensor track (8) is not damaged or cracked.

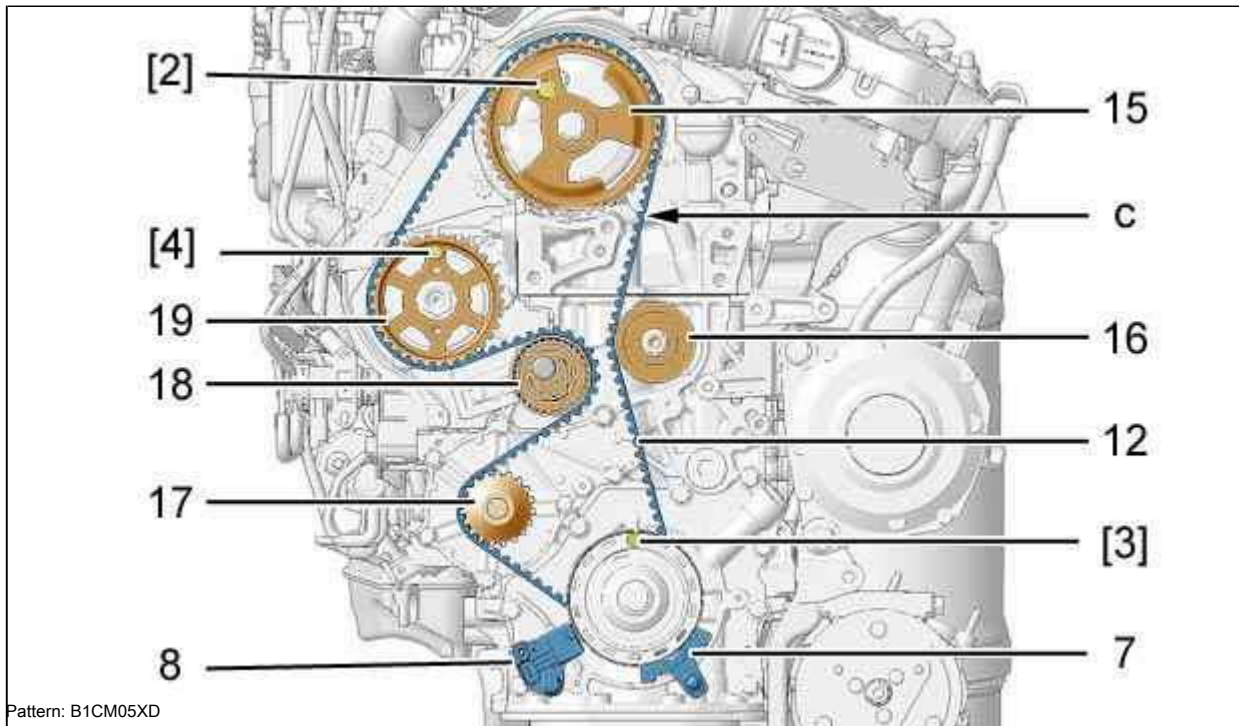
NOTE: Replace defective parts.

4. Installation

4.1. Installing the rollers

Tightening torques:

- Intermediate roller (/); Tightening torque 3.7 ± 3.7 2 da.Nm
- Dynamic tensioner roller (/); Tightening torque 2.3 ± 2.3 2 da.Nm (After adjusting the timing belt tension)



Check the tightness of the idler roller (16); Tightening torque 3.7 ± 3.7 2 da.Nm. Install the timing belt (12) with the crankshaft bearing. Set the timing belt (12) to the bypass roller. Make sure the belt is well tensioned.

Install:

- Bracket of the anti-stall mechanism (7); Tightening torque 0.6 ± 0.6 2 da.Nm

- Engine speed sensor (8); Tightening torque $0.7 \pm 0.7 \text{ da.Nm}$

Install the timing belt, branch "c", pulling it well, in the following order:

- Idler roller (16)
- The camshaft pulley (15)
- High pressure fuel pump pulley (19)
- Coolant pump pulley (17)
- Dynamic idler roller (18)

4.2. Adjusting the timing belt tension

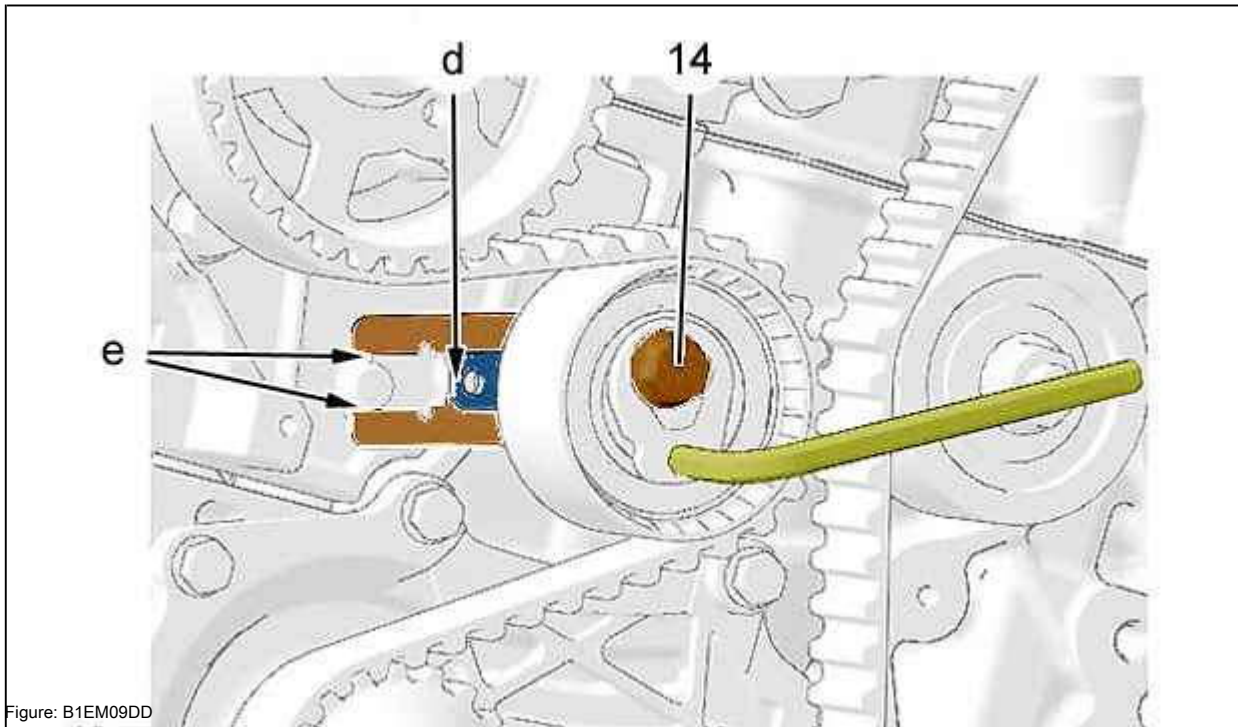


Figure: B1EM09DD

Place pointer "d" in the center of space "e" by turning the tensioner counterclockwise; Using a 6-point wrench.

Tighten the bolts to a torque of (14) to $2.3 \pm 0.2 \text{ da.Nm}$.

ATTENTION : The pointer "d" of the dynamic idler roller should be in the center of the gap "e".

Remove the pins [2], [3], [4]. Install:

- Intermediate engine support (13); **Tighten with a moment**
- Plastic Engine Mount Kit (10)
- 3 bolts (11); **Tighten with a moment**
- 4 bolts (9); **Tighten with a moment**



Remove the rolling jack.

ATTENTION : It is forbidden to rotate the crankshaft in the opposite direction.

Rotate the crankshaft 6 clockwise.

Secure the crankshaft with a calibrated pin; Using the pin [3]. Check the position of the "d" pointer.

NOTE: The pointer "d" on the dynamic idler should be centered

interval "e".

ATTENTION : Otherwise, repeat the procedure for tensioning the timing belt.

Install the camshaft to the reference point. Using the pin [2]. Secure the high pressure fuel pump drive pulley with the pin [4].

ATTENTION : If the camshaft pinned connection is not possible, check that the offset between the hole in the camshaft pulley and the pinned joint hole does not exceed 1 mm. If this value does not correspond to the norm, resume the operation.

Remove the pins [2], [3], [4].

4.3. Installation (continued)

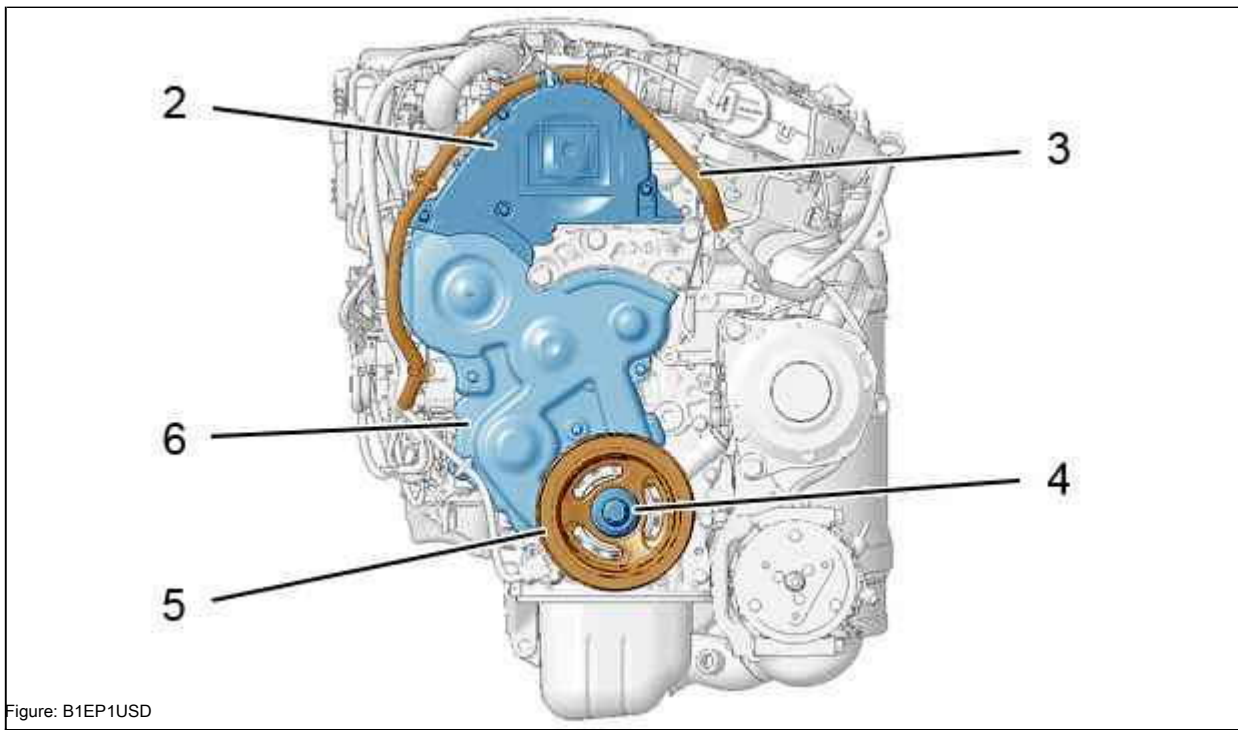


Figure: B1EP1USD

Install pin [1].

Remove the bolts (4).

Install:

- Lower timing case (6)
- Pulley (5)

Install the bolt (4) (new). Bolt tightening

method (4):

- Pre-tighten to a torque of 3.4 ± 0.4 da.Nm
- Torque to $190 \pm 5^\circ$

ATTENTION : After the angular tightening, check the tightening torque of the screw: it should be between 8 and 16.

Remove the pin [1].

Install:

- Upper timing case (2)
- Electrical Harness (3)

NOTE: Use new plastic straps.

Install:

- Attachment drive belt (/) (depending on equipment)
- Power steering reservoir (depending on configuration)
- Air pipes (1)

Connect the fuel supply and return pipes (in "a"). Install:

- Engine cover
- Front right wheel arch liner
- Front right wheel

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

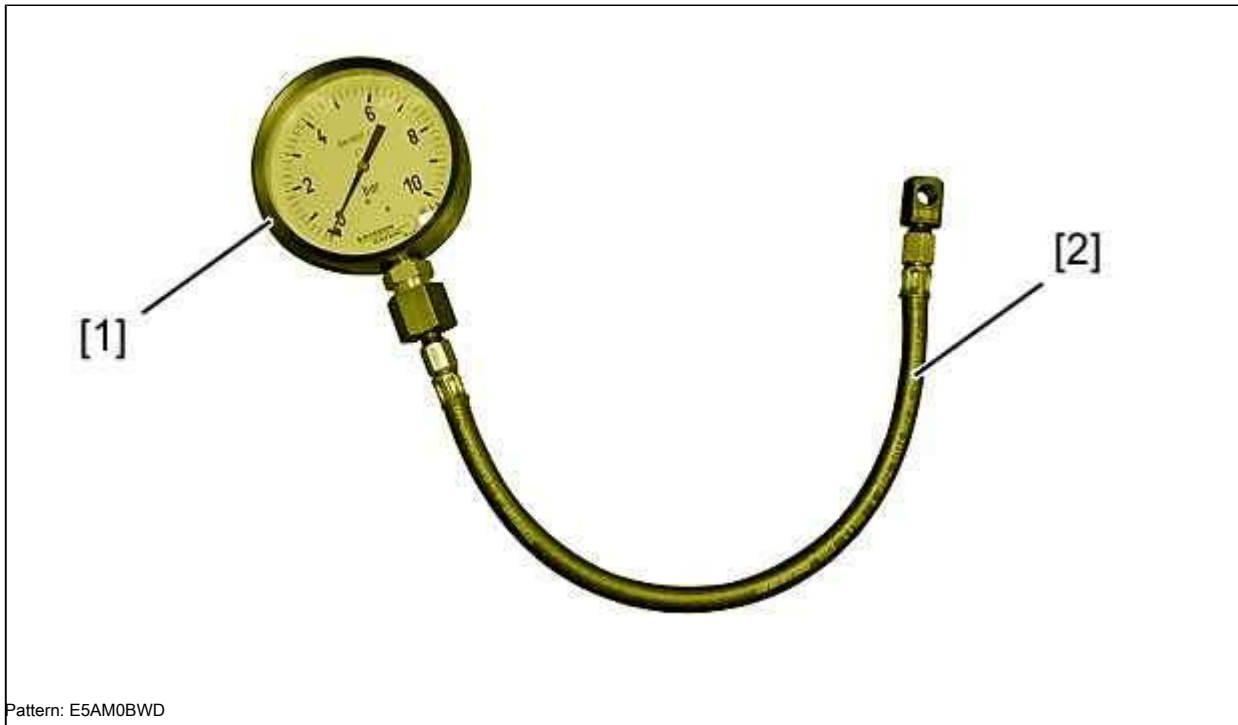
Press the manual priming pump several times to fill the fuel circuit.

CHECK: OIL PRESSURE

MANDATORY: Observe the cleanliness and safety rules

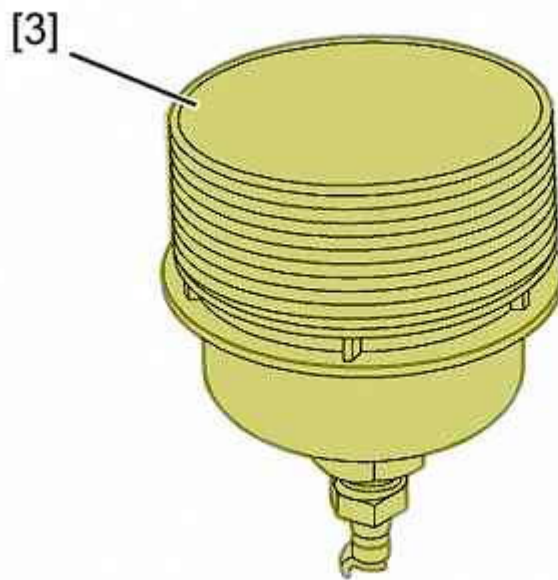


1. Recommended equipment



[1] pressure gauge 1503AY.

[2] Hoses 1503B.



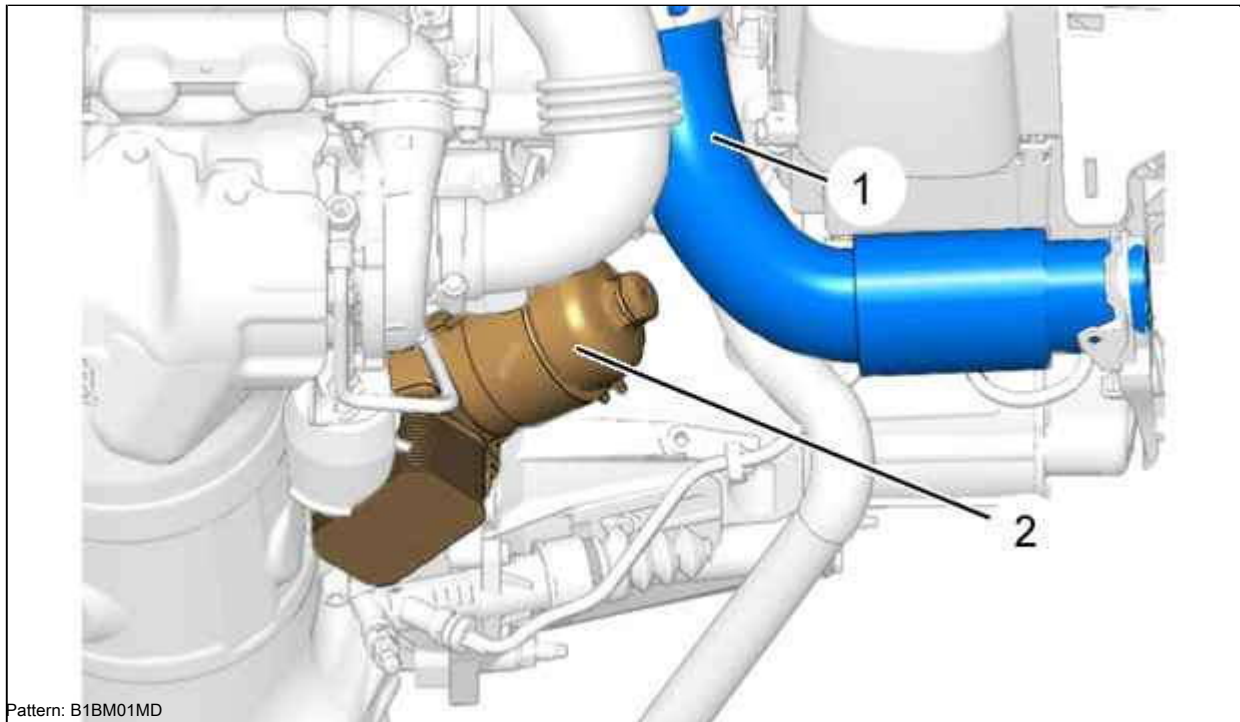
Pattern: E5AM01HD

[3] Connector for engine oil pressure sensor 1503J.

2. Pressure check

Check oil level.

ATTENTION : The oil pressure check is performed with the engine warm, after checking the oil level.



Pattern: B1BM01MD

Remove:

- Air intake (1)
- Filter element protective cover (2)

Detach the filter element of the protective cover (2). Place the filter element on the oil filter support. Install:

- Device [3] on the oil filter support; Tightening torque ... 2.5 da.Nm
- Hose 2 on tool [3]
- Pressure gauge [1] to tool [2]

Engine starting.

Check the oil pressure values measured with the pressure gauge given in the table

Remove:



- Pressure gauge [1]
- Flexible hose [2]
- Pressure take-off tube

Detach the filter element from the tool [3]. Install:

- Filter element against oil filter support
- Protective cover of the filter element (2); Tightening torque ... 2.5 da.Nm
- Air intake (1)

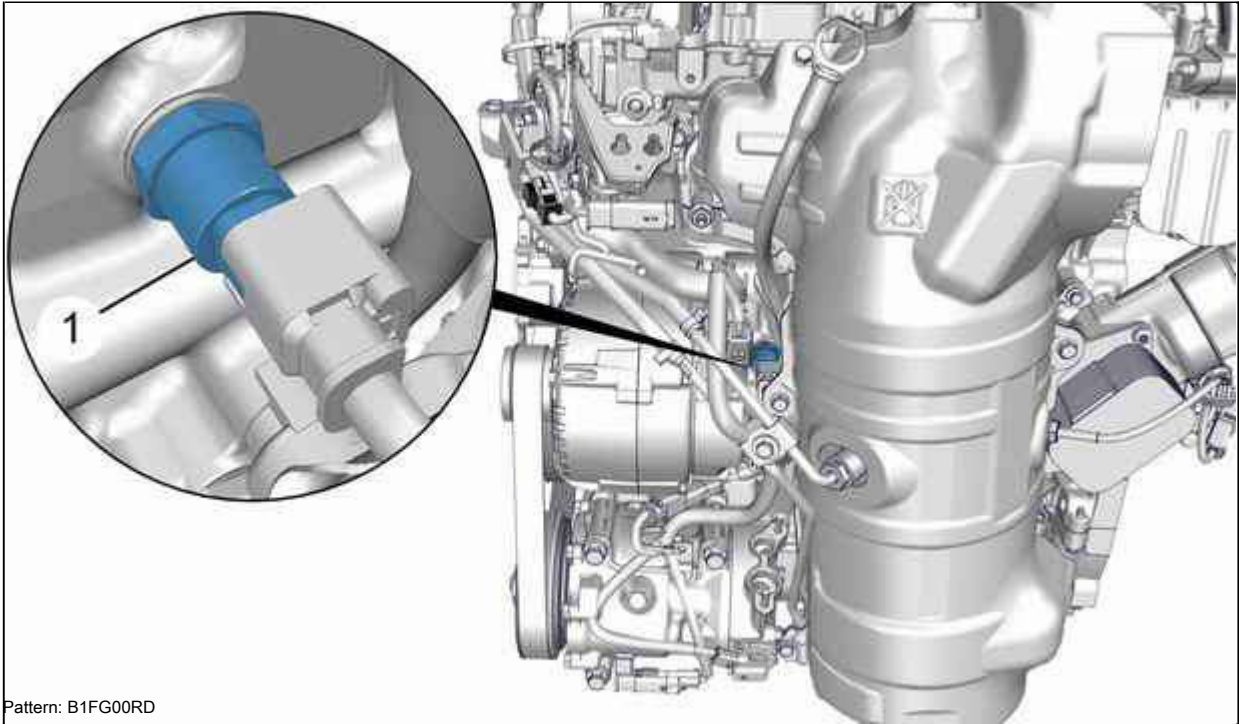
Top up the engine oil level.

REMOVAL REFITTING: OIL PRESSURE SENSOR

MANDATORY: Observe the cleanliness and safety rules



1. Accommodation



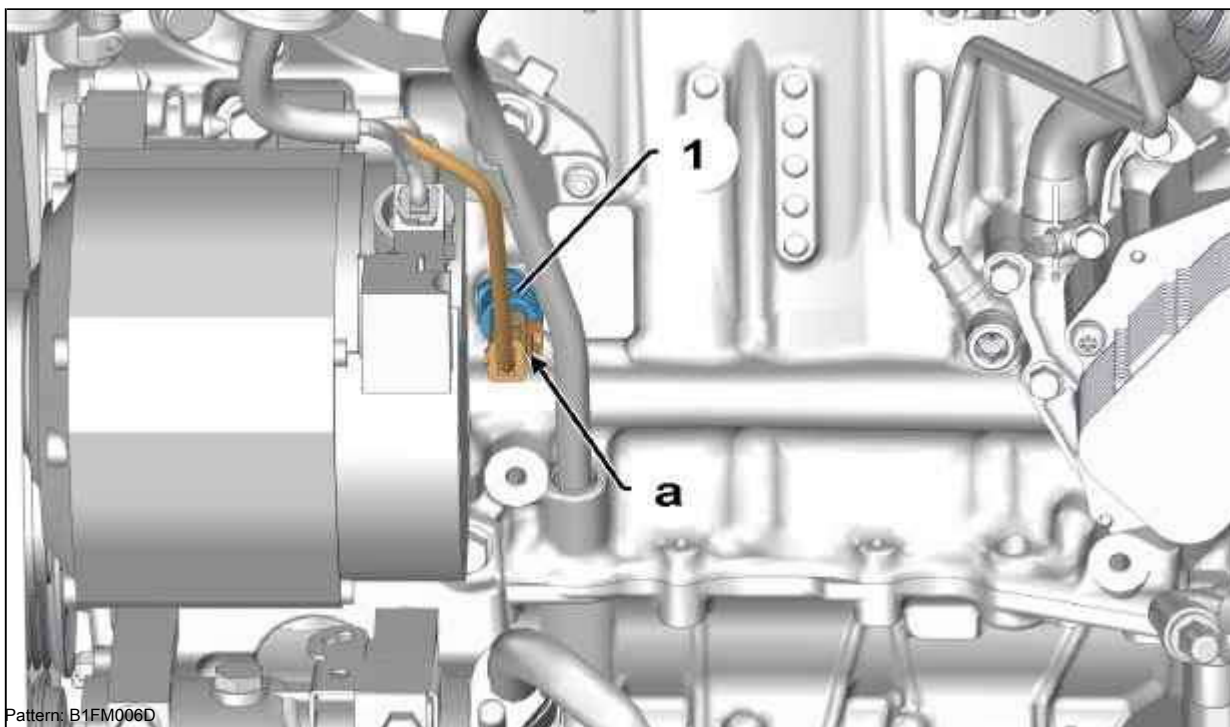
Pattern: B1FG00RD

(1) Oil level and temperature sensor.

2. Removal

Disconnect the battery.

Remove: Catalytic converter / particulate filter assembly (Depending on equipment).



Disconnect the connector (at "a").

Protect this area with absorbent paper or a clean cloth. Remove:

- Oil pressure sensor (1)
- Gasket

3. Installation

ATTENTION : Observe the required tightening torques



ATTENTION : Replace the seal (new seal) after each removal.

Install:

- Gasket (new)
- Oil pressure sensor (1)

Connect the connector (at "a").

Install: Catalytic converter / particulate filter assembly (Depending on equipment).

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

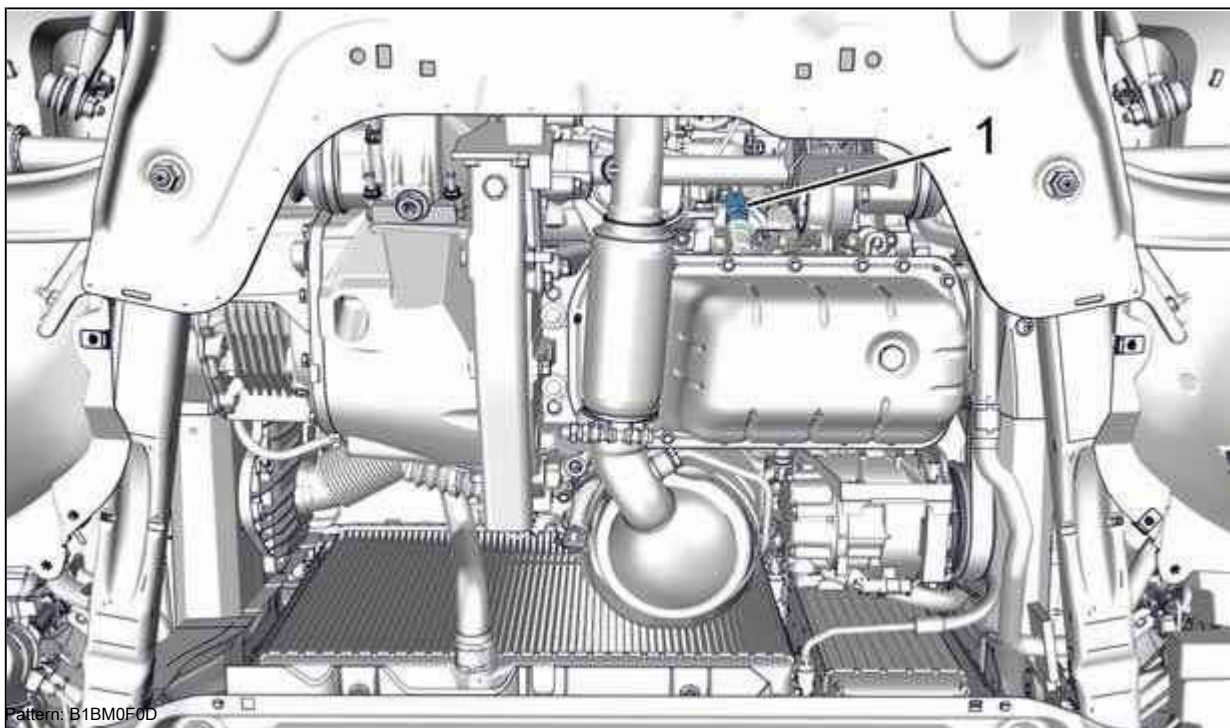
Top up the engine oil level.

REMOVAL INSTALLATION: ENGINE LEVEL AND TEMPERATURE SENSOR OIL

~~MANDATORY: Observe the cleanliness and safety rules~~



1. Accommodation

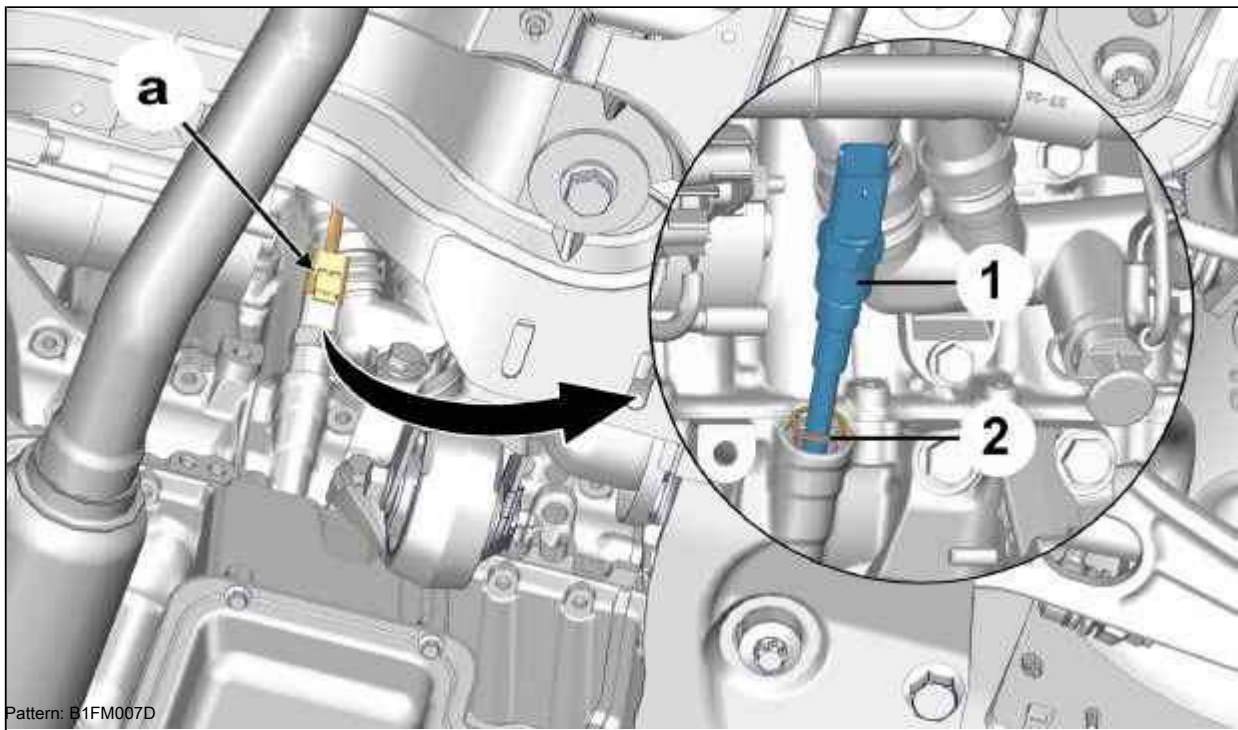


(1) Oil level and temperature sensor.

2. Removal

Disconnect the battery.

Raise and secure the vehicle in the raised position. Remove engine cover.



Disconnect the connector (at "a").

Remove:

- Sensor (1)
- Seal (2)

3. Installation

ATTENTION : Always replace the gasket (2).

Install:

- Seal (2) (new)
- Sensor (1); Tighten with torque 2.7 ± 0.2 da.Nm

Connect the connector (at "a").

Install the engine shield.

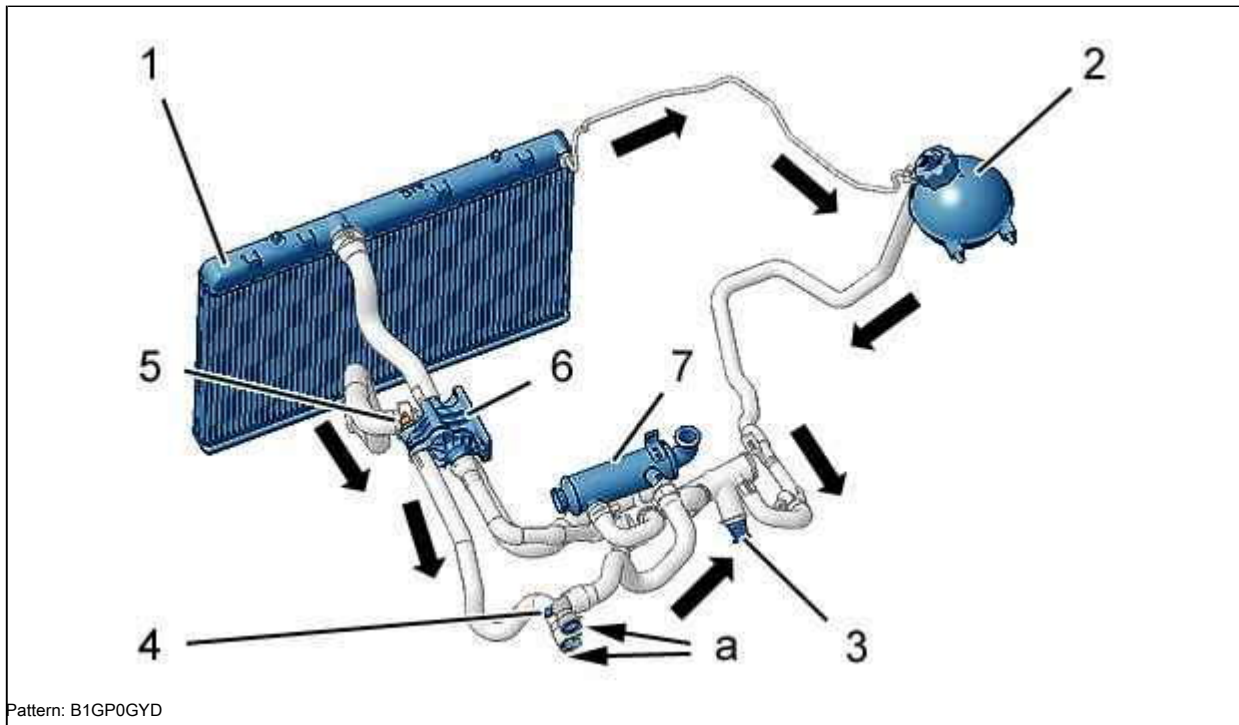
ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

CHARACTERISTIC IDENTIFICATION: COOLING SYSTEMS (ENGINE TYPE DV6)

1. Cooling systems

1.1. Engine coolant circuit without exhaust gas thermal recovery unit



"a" to the interior radiator.

(1) engine cooling radiator.

(2) Expansion tank (With coolant level sensor).

(3) plum plugs (all countries, excluding very cold climates). (4) bleed fittings.

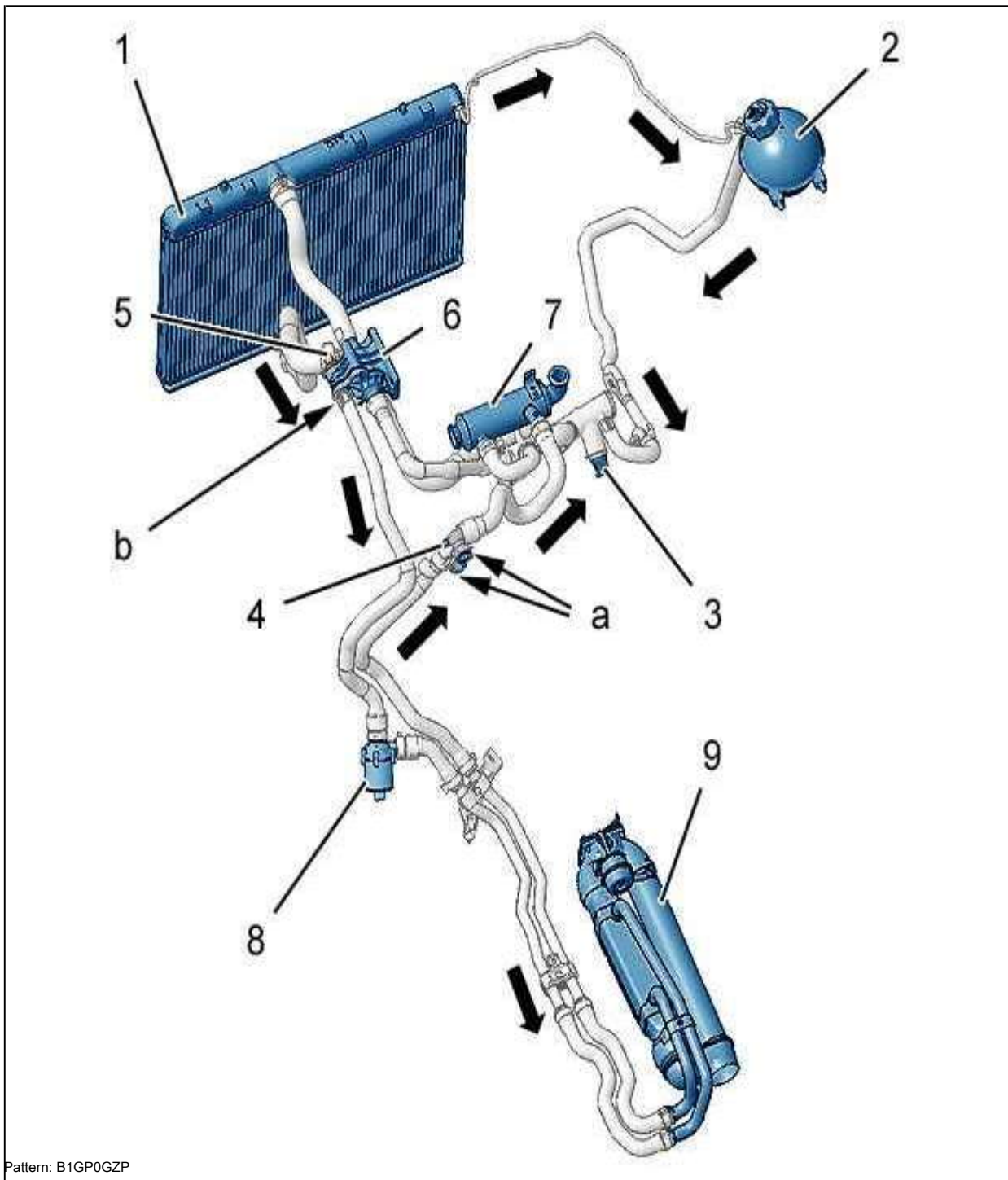
(5) coolant thermostat.

(6) Coolant outlet block with thermostat.

(7) Exhaust gas recirculation (EGR) heat exchanger.

NOTE: Cooling system with or without air conditioning.

1.2. Engine coolant circuit with thermal recovery unit of the exhaust system



Pattern: B1GP0GZP

"a" to the interior radiator.

"b" to the coolant outlet block. (1) engine cooling radiator.

(2) Expansion tank (With coolant level sensor).

(3) plum plugs (all countries, excluding very cold climates). (4) bleed fittings.

(5) coolant thermostat.

(6) Coolant outlet block with thermostat (depending on equipment). (7) Exhaust gas recirculation (EGR) heat exchanger.

(8) additional electric water pump.

(9) thermal recovery unit for the exhaust system.

NOTE: The heat recovery unit of the exhaust system is connected to the intermediate pipe of the exhaust system.

2. Characteristics

Cooling system volume with thermal recovery unit of the exhaust system

6.25 liters

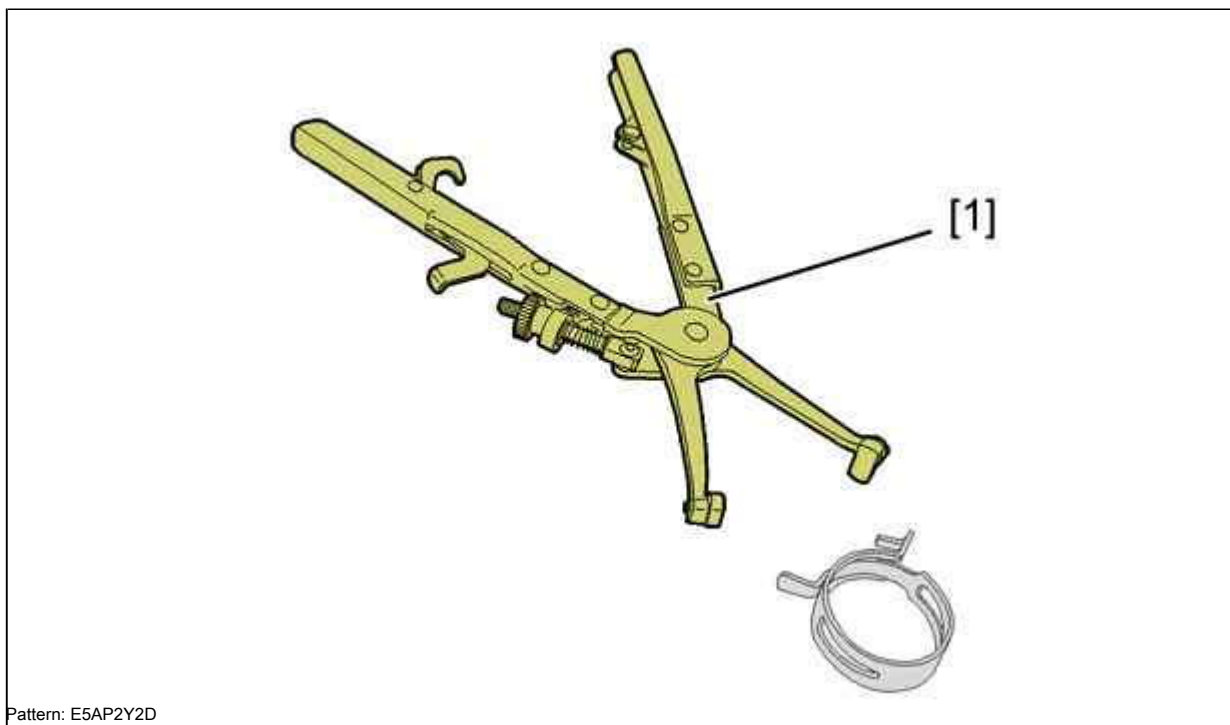
The volume of the cooling system circuit without the thermal recovery unit of the exhaust system	6.05 liters (except DV6TED4)
	6.25 liters DV6TED4
Cooling system radiator area	21 dm ²
Crimping	The cork is tared on 1.4
	bar
Opening the thermostatic regulator	83 ° C
Electric fan	With the management of it
	shutdown
Response limit	97 ° C (stop at 94 ° C) 1 x 130 W
Electrical power numbers	
Disconnecting the air conditioner	115 ° C
Warning	118 ° C
Subsequent cooling	105 ° C (for 6 minutes) Connector
Coolant temperature sensor and warning lamp located on the coolant outlet block	(green)
Coolant level sensor	Installed on
	expansion tank

REMOVAL INSTALLATION: COOLANT OUTLET UNIT

MANDATORY: Observe the cleanliness and safety rules

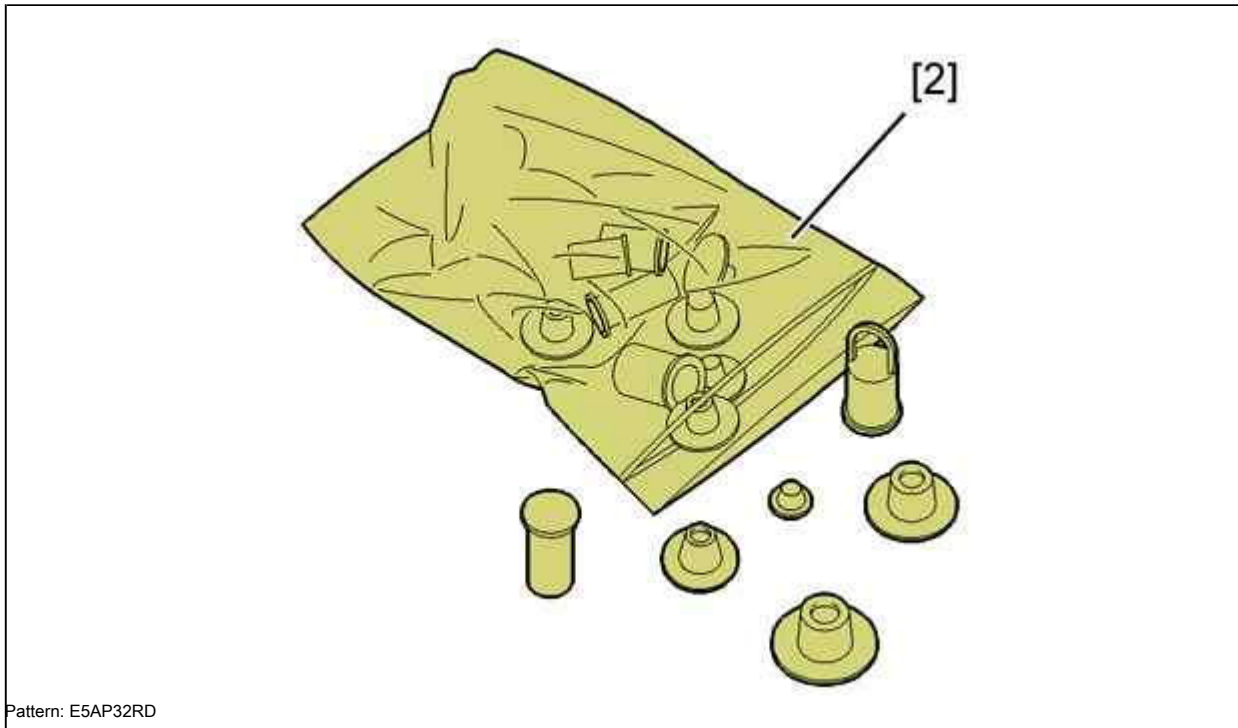


1. Recommended equipment



Pattern: E5AP2Y2D

[1] Elastic hose clamp removal pliers 9029T.



[2] set of plugs () .0194T.

2. Removal

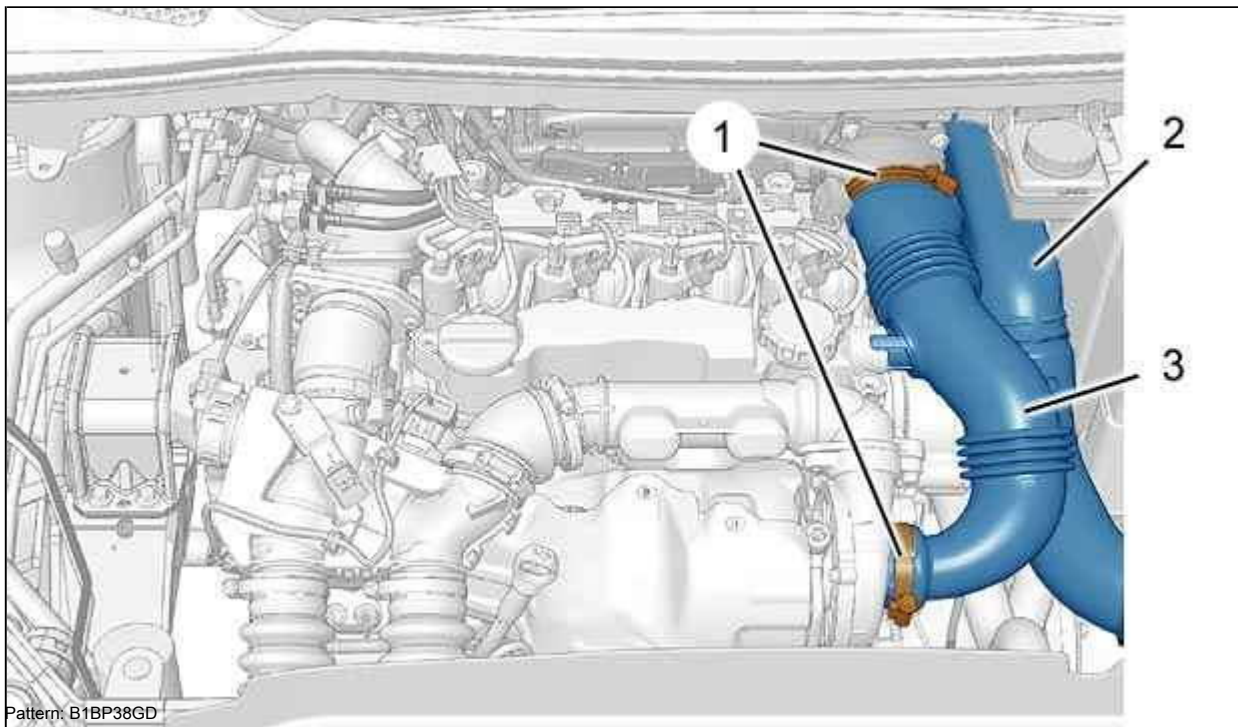
MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements



Remove the engine cover. Disconnect the battery.
Remove engine cover.

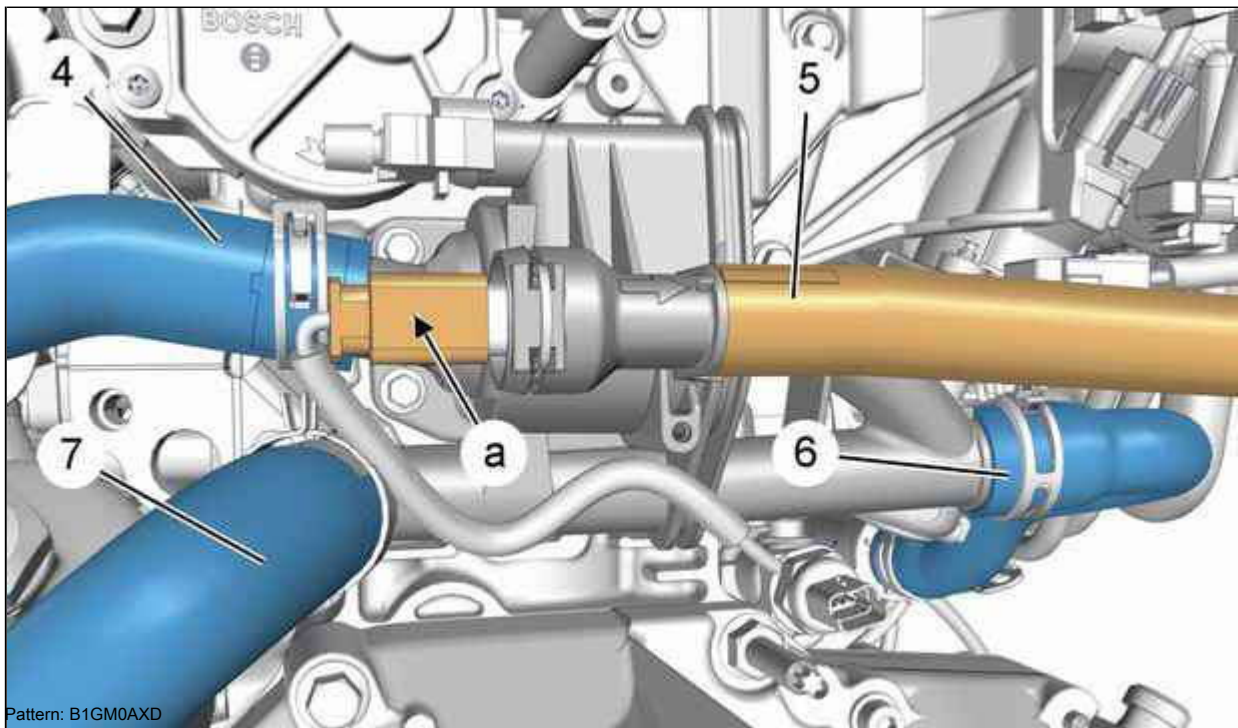
Drain the coolant circuit





Remove:

- clamp (s) (1)
- Coupling (2)
- Coupling (3)
- **Fuel filter**



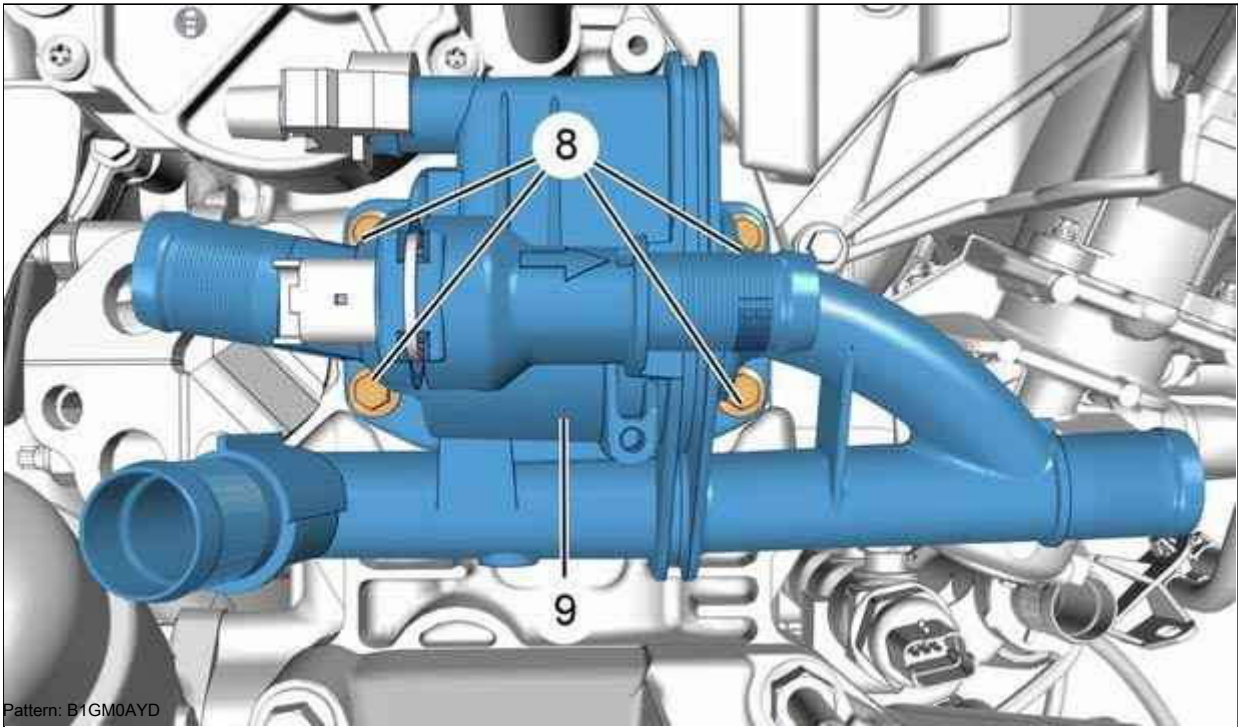
MANDATORY: Do not use cutting tools or a hammer for any operation on

removal of the installation details. Replace the part in case of a fall or strong impact.

Disconnect the connector (at "a").

Disconnect, plug and move aside (plug holes with tool [2]):

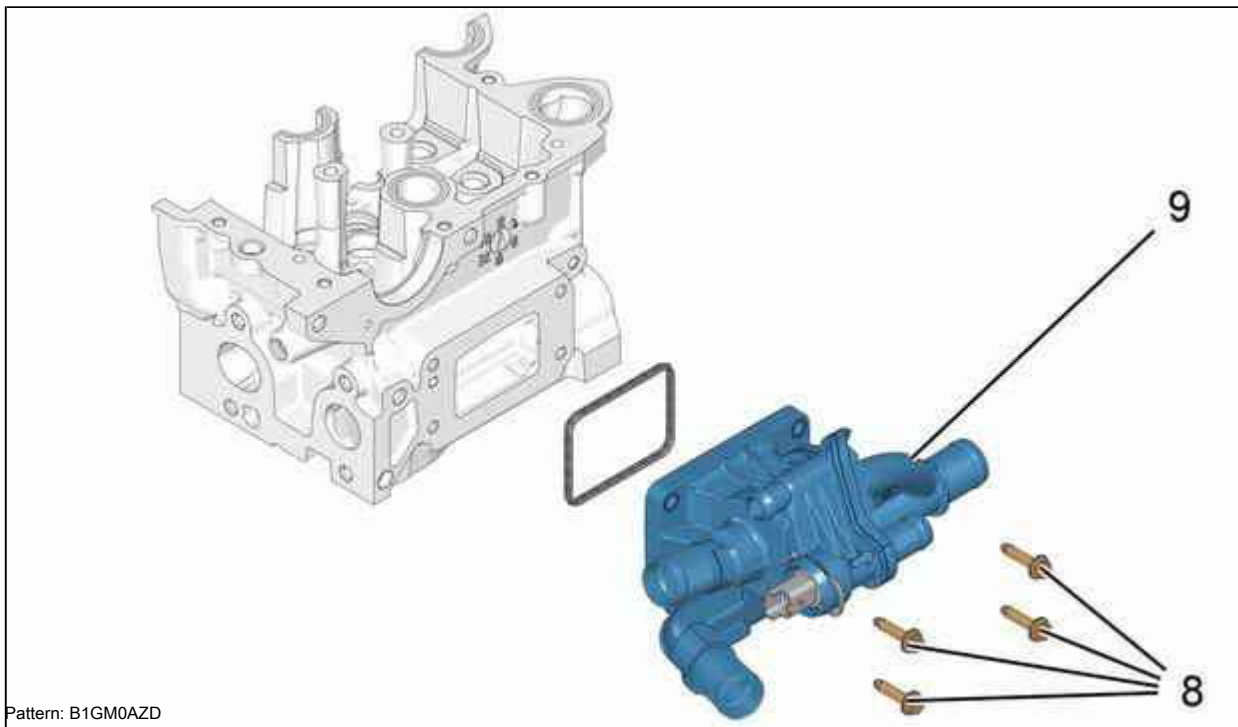
- Durite hose (4); Using the tool [1]
- Durite hose (7); Using the tool [1]
- Trumpet (5)
- Durite hose (6); Using the tool [1]



Remove:

- the bolts (8)
- Coolant outlet unit (9)

3. Installation



ATTENTION : When removing the temperature sensor installation, replace the sensor gasket with a new pre-lubricated gasket

coolant, replace its gasket.

... When removing the installation of the output unit



Install the coolant outlet block (9) with a new seal.

ATTENTION : Observe the normal position of the gasket in its socket.

Bolt tightening method (8):

- Pre-tighten to a torque of 0.3 ± 0.1 da.Nm
- Tighten to 0.7 ± 0.1 da.Nm

Attach:

- Durite hose (6); Using the tool [1]
- Trumpet (5)
- Durite hose (7); Using the tool [1]
- Durite hose (4); Using the tool [1]

Connect the connector (at "a"). Install:

- **Fuel filter**
- Coupling (3)
- Coupling (2)
- clamp (s) (1)



Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

Fill with coolant and blow through the circuit



REMOVAL REFITTING: COOLING TEMPERATURE SENSOR LIQUIDS

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment

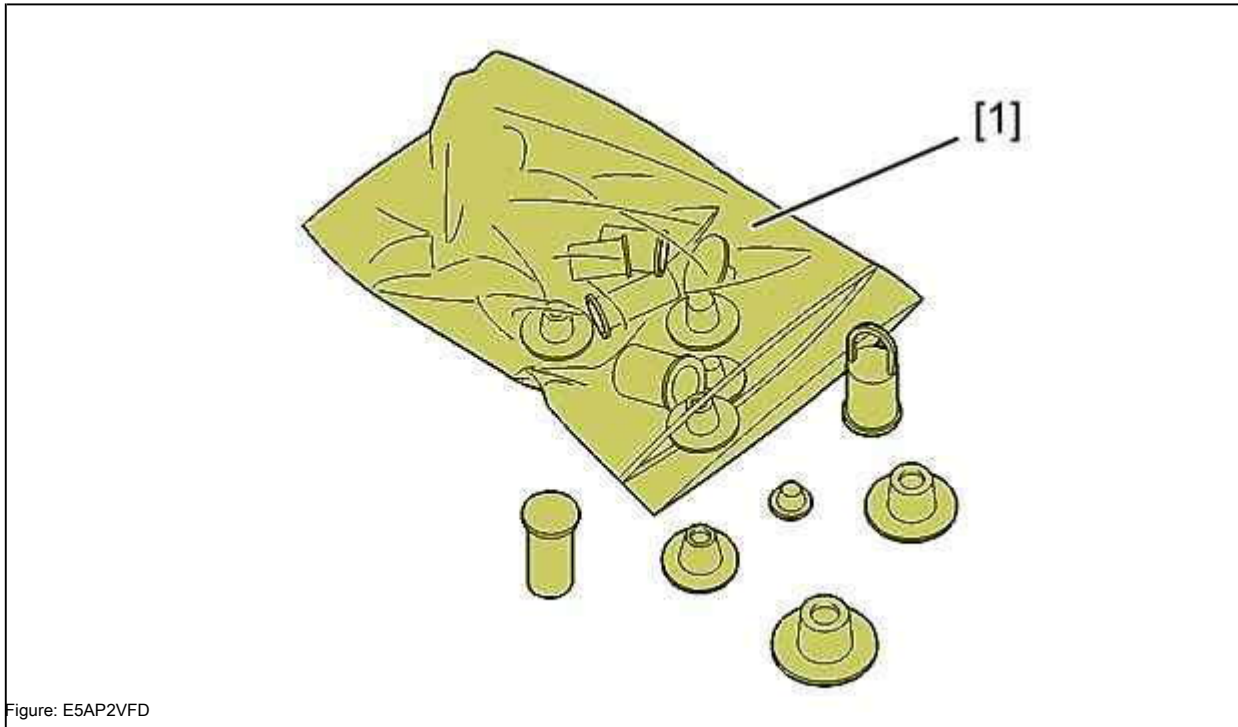


Figure: E5AP2VFD

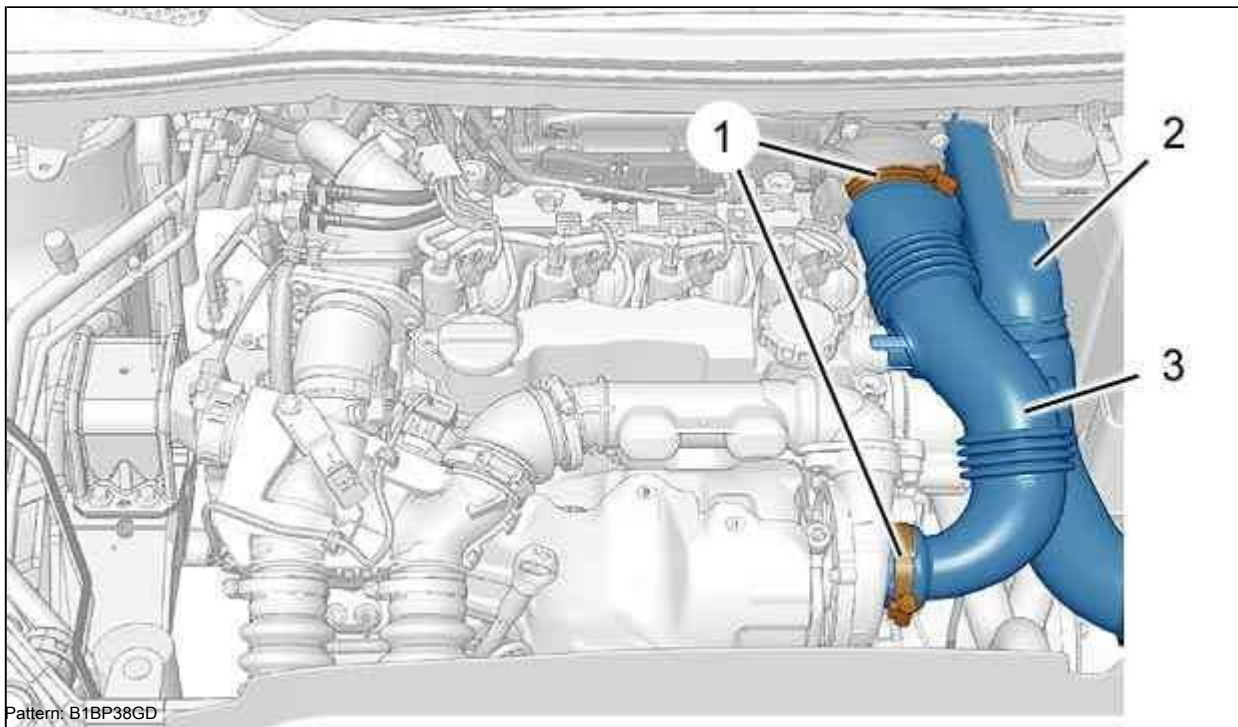
[1] set of plugs () .0188T.

2. Removal

Disconnect the battery. Remove the engine cover.

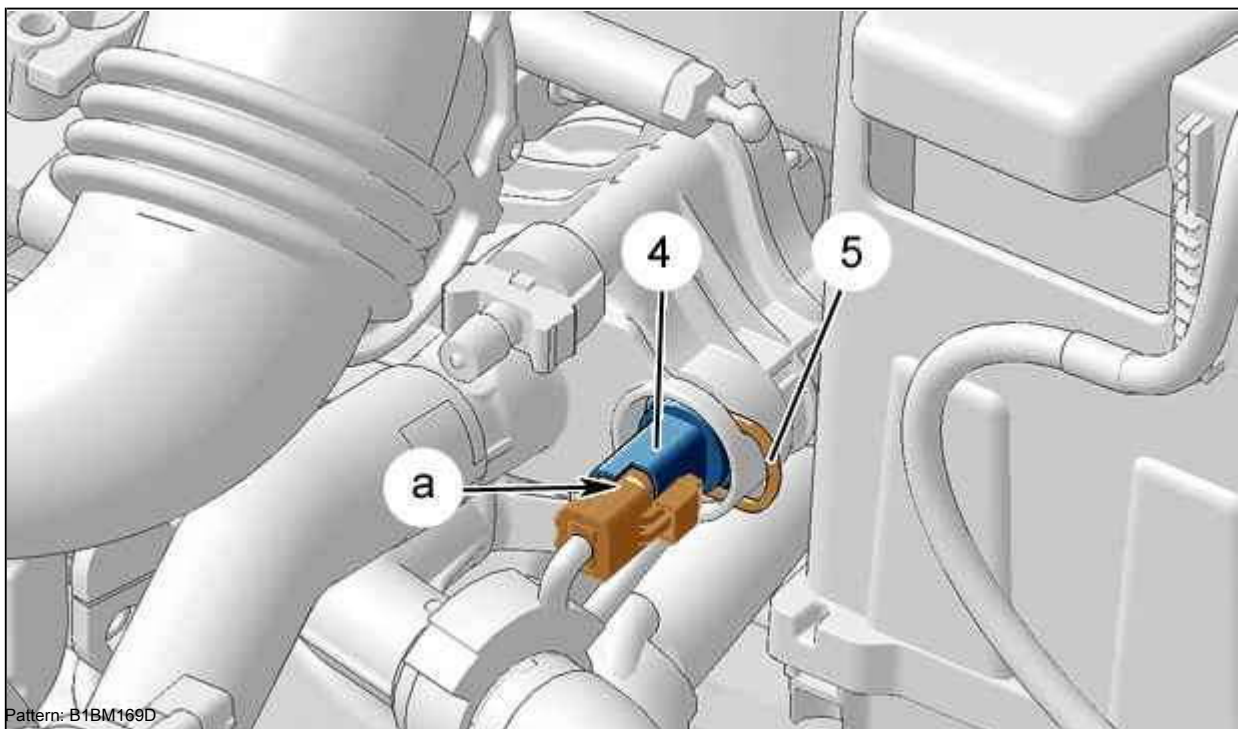
Drain the coolant circuit





Remove:

- clamp (s) (1)
- Air couplings (2), (3)



ATTENTION : Do not use a cutting tool or hammer to remove the set of elements. Replace the part in case of a fall or strong impact.

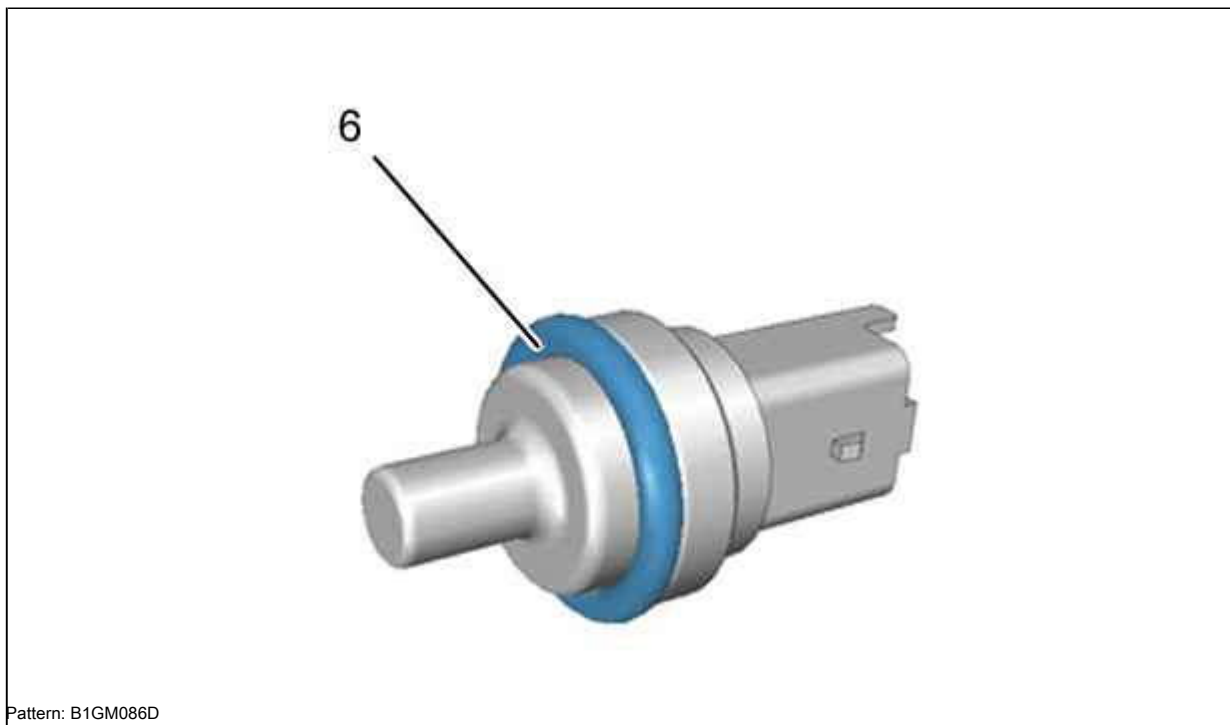
Disconnect the connector (at "a").

Remove:

- Retainer (5)
- Temperature sensor (4)
- Gasket (/)

Close the coolant outlet block with the plug; Using the tools [1].

3. Installation



ATTENTION : Replace the seal (6) with a new seal after having lubricated it.

ATTENTION : Be sure to install the temperature sensor seal (4).

Install:

- Temperature sensor (4) with new seal
- Retainer (5)

Connect the connector (at "a").

Install:

- Air couplings (2), (3)
- clamp (s) (1)

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Fill the cooling system

Check for leaks.

Install the engine cover.



REMOVAL INSTALLATION: COOLING PUMP

MANDATORY: Observe the cleanliness and safety rules



1. Removal

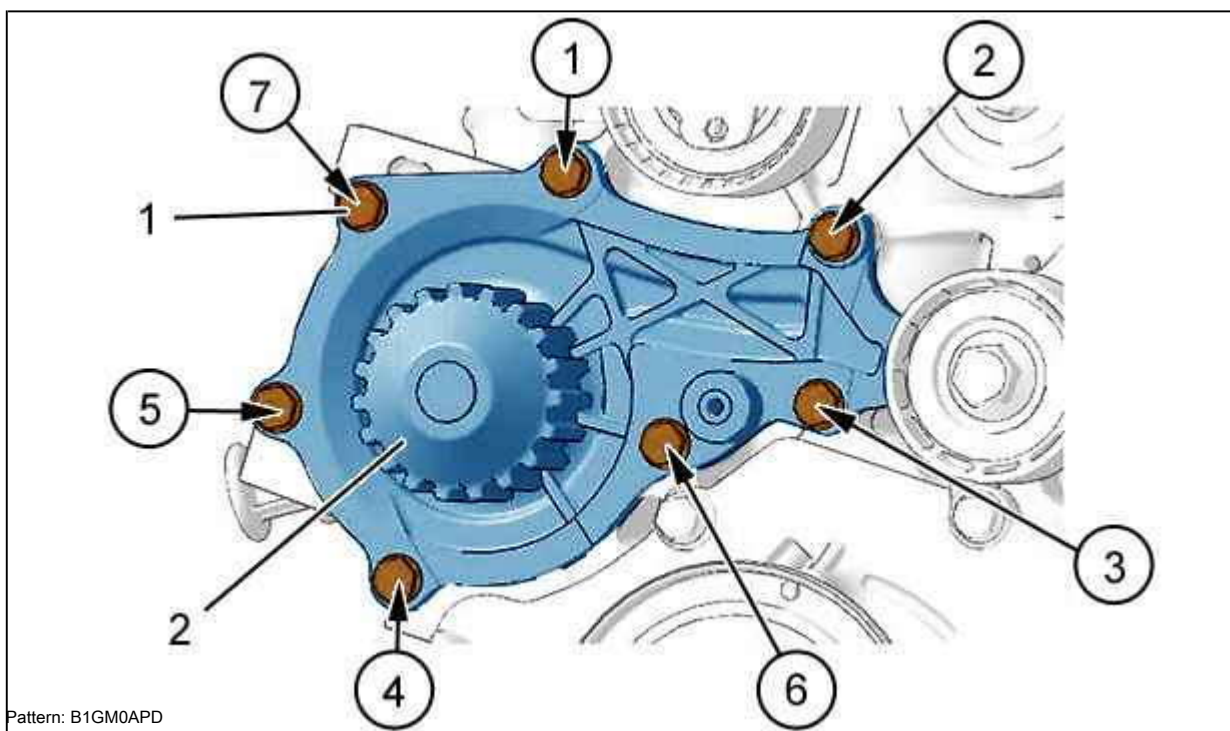
MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements



Position the vehicle on a 2 post lift. Disconnect the battery.

Drain the engine cooling system. Remove:

- Attachment drive belt
- Timing belt



Remove:

- the bolt (1) of the coolant pump (2) (In the sequence shown)
- Coolant pump (2)
- Gasket

2. Installation

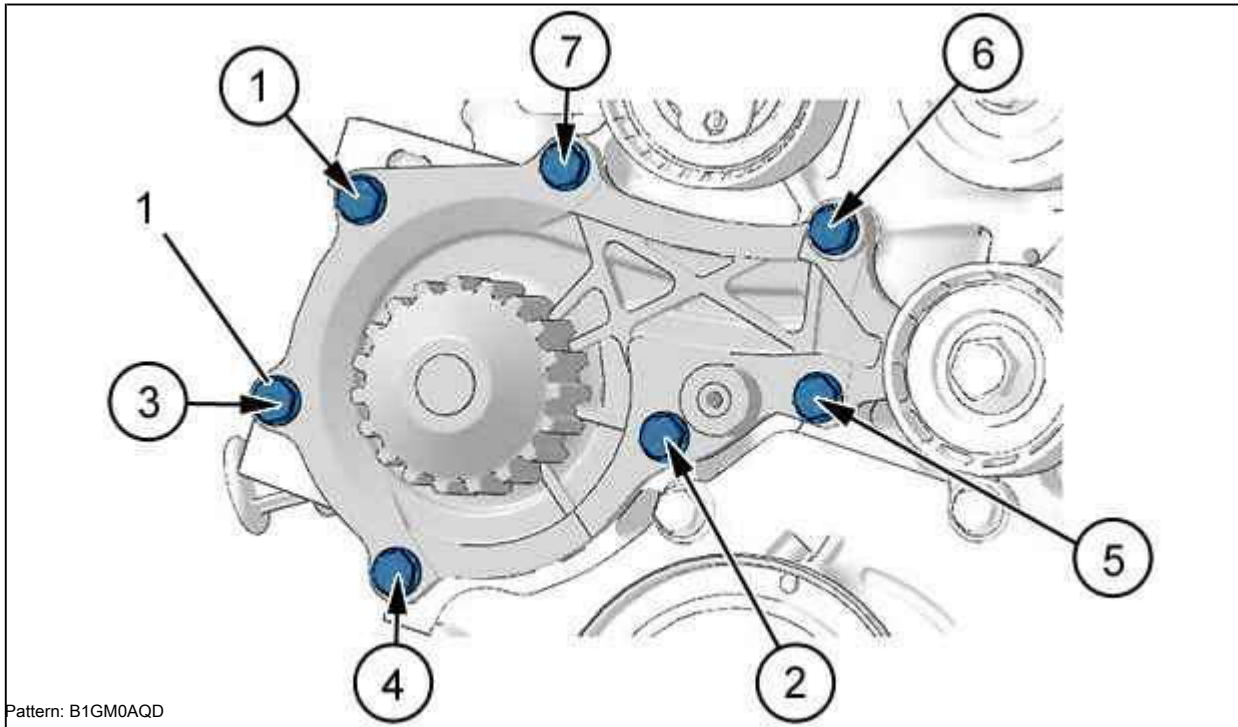
ATTENTION : Observe the required tightening torques



ATTENTION : Always replace the coolant pump gasket (2).

ATTENTION : The connecting planes must not show signs of impacts or cracks.

Install the coolant pump (2) (with a new gasket).



ATTENTION : Observe the correct tightening order for screw connections (1 to 7).

Install:


- Cooling pump mounting bolts (1)
- Timing belt
- Attachment drive belt

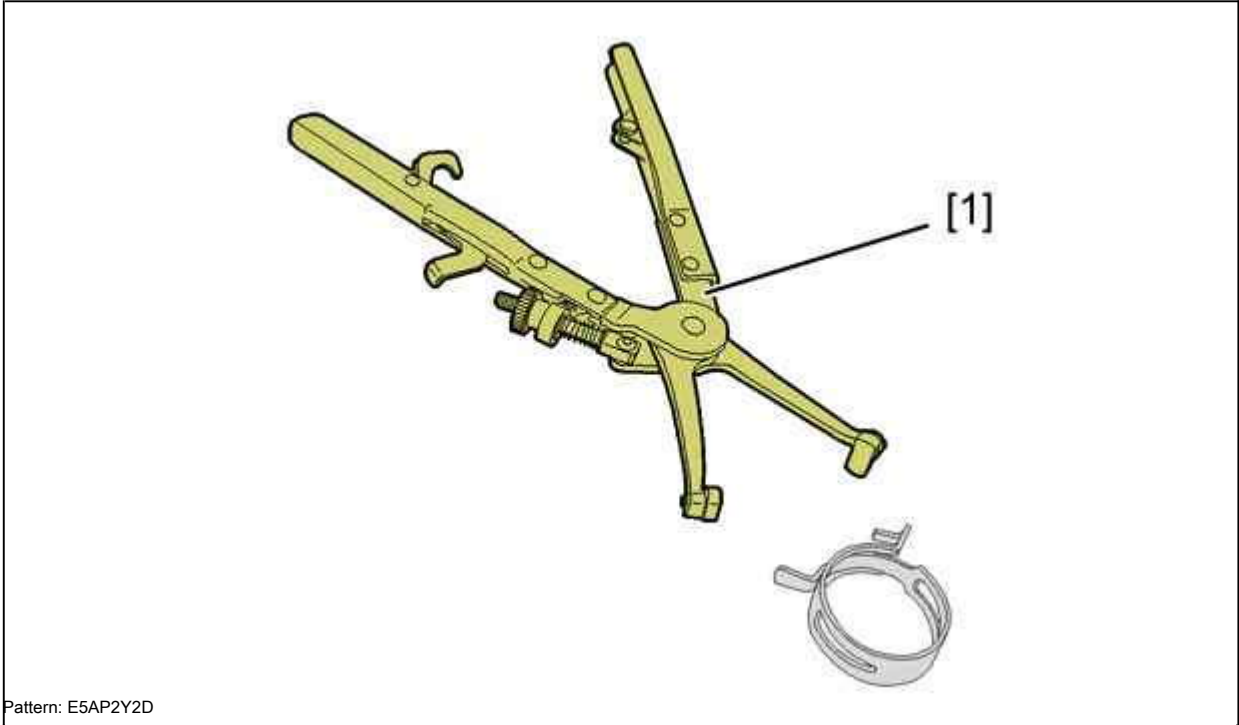
Fill and bleed the engine cooling system. Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL REFITTING: ENGINE COOLING RADIATOR

MANDATORY: Observe the cleanliness and safety rules



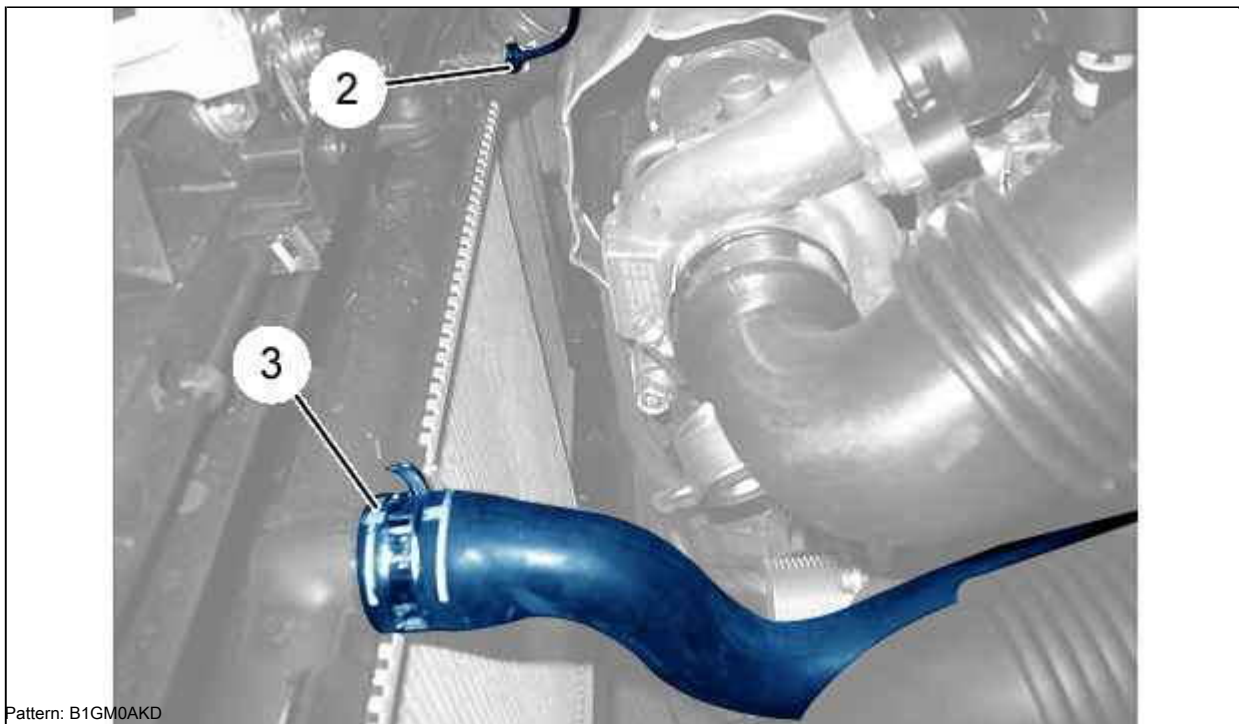


Label Designation		Number (reference)	Number (reference)
[1]	Clamp removal pliers 9029T		() .0165

- 1. Removal**
- Place the car on a lift.
- Disconnect the battery.
- Drain the engine cooling system.

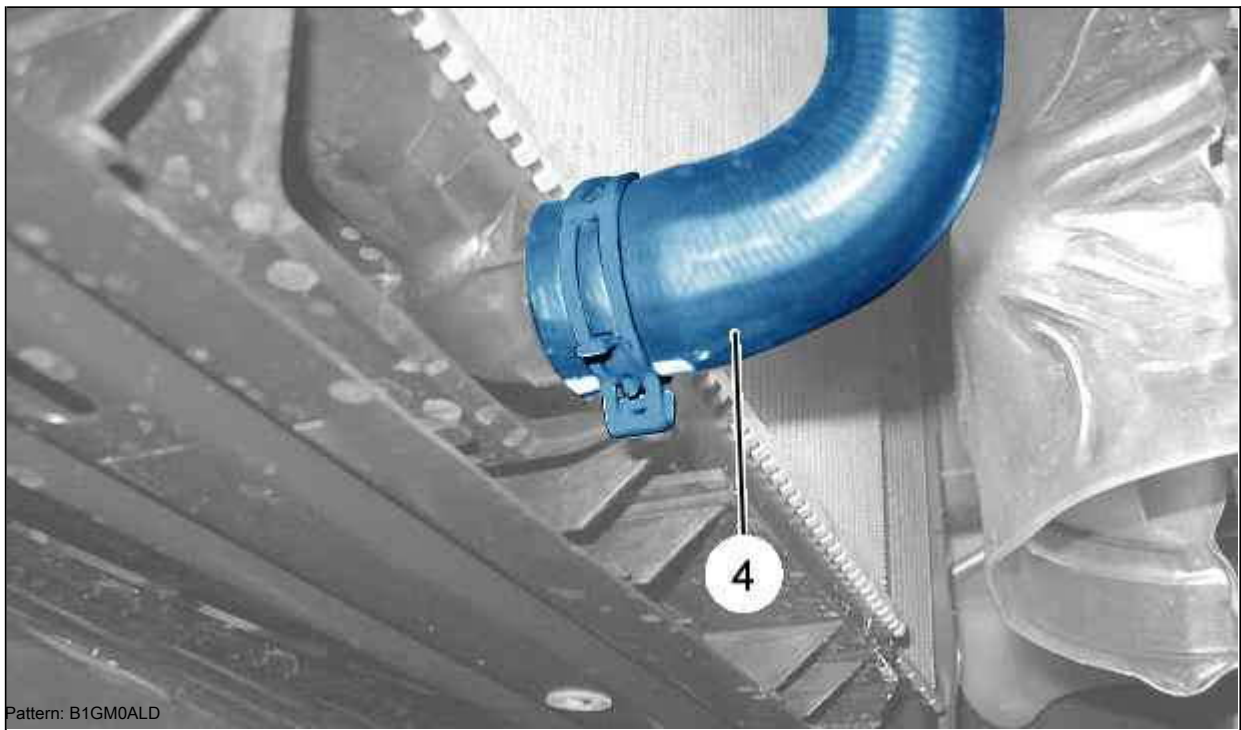


Remove the front bumper (1).

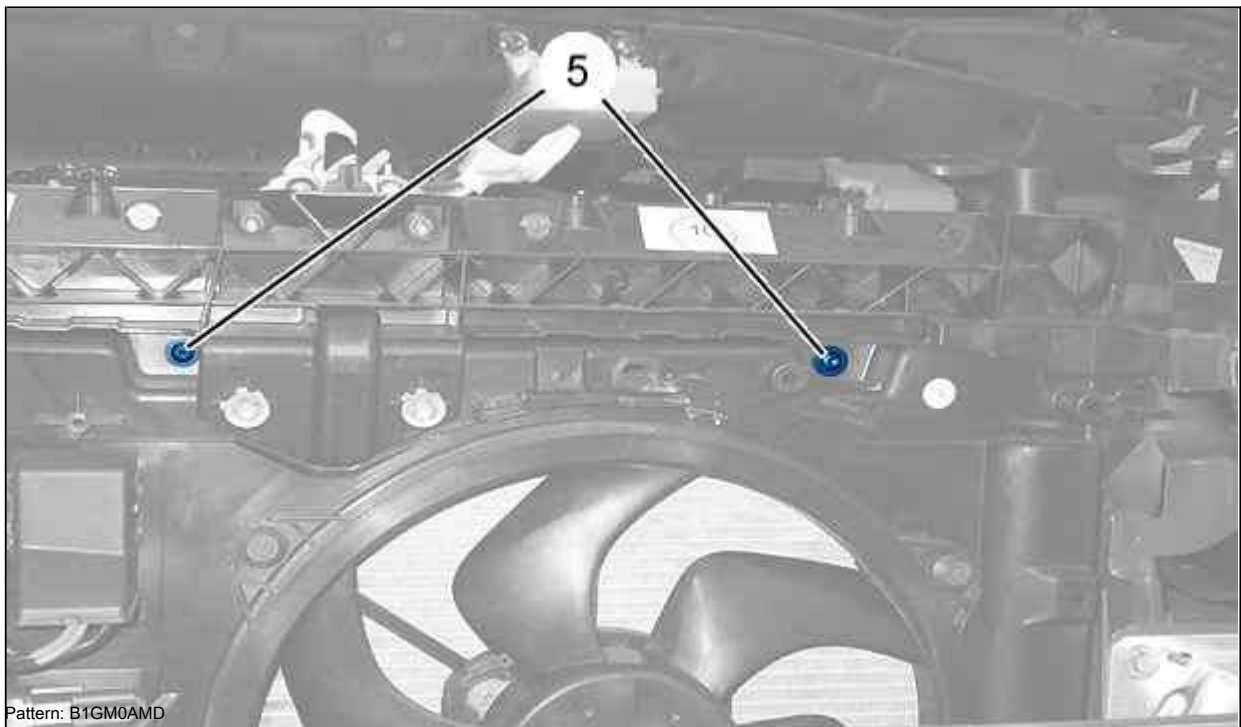


Disconnect:

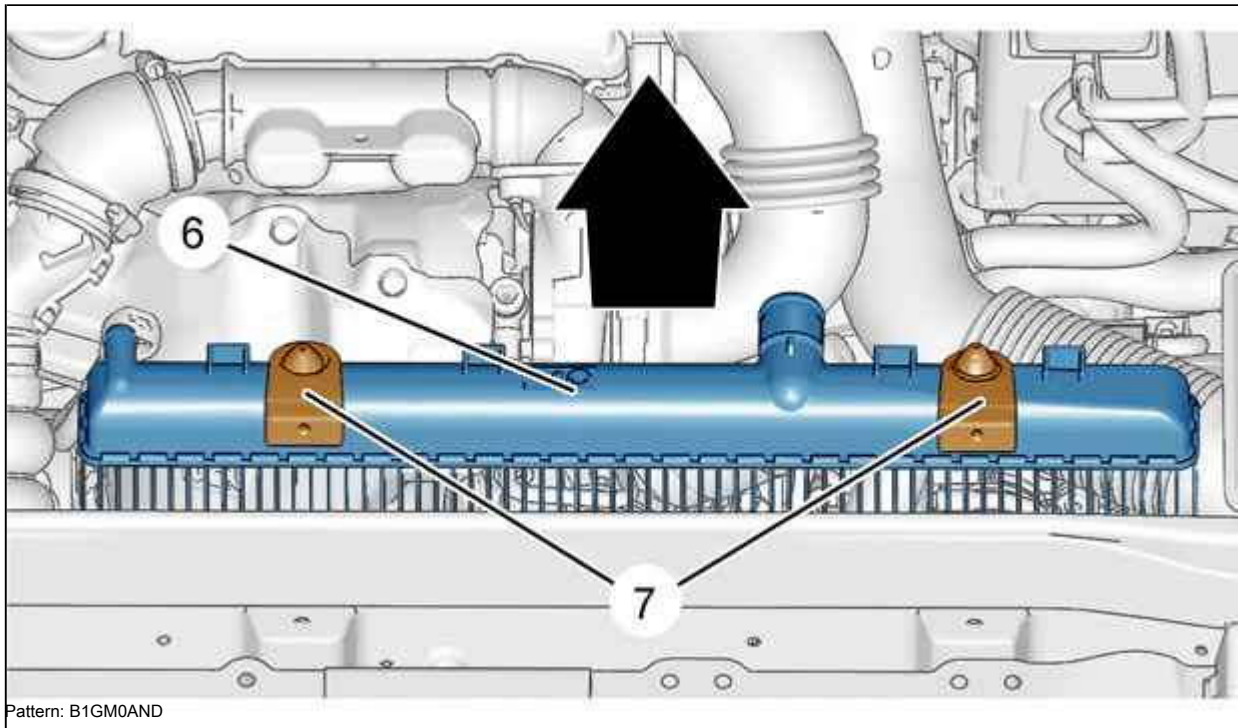
- Durite hose (3); Using the tool [1]
- Steam pipe (2)



Disconnect the hose (4); Using the tool [1].



Loosen screws (5).



ATTENTION : Protect the radiator of the engine cooling system; with a protective cardboard sheet.

Tilt the engine cooling radiator (6) towards the engine.

Raise the engine cooling radiator (6) to release it from the lower mountings. Remove:

- retaining brackets (7)
- Cooling system radiator (6) (As shown by arrow) (Be careful)

2. Installation

ATTENTION : Protect the radiator of the engine cooling system; with a protective cardboard sheet.

Install:

- Cooling radiator retaining brackets (7)
- Cooling system radiator (6) with fixing brackets (7)
- the bolts (5)

NOTE: Replace any removed elastic bands.

Attach:

- Durite hose (4); Using the tool [1]
- Durite hose (3); Using the tool [1]
- Steam pipe (2)

Install the front bumper (1).

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Fill and bleed the engine cooling system.

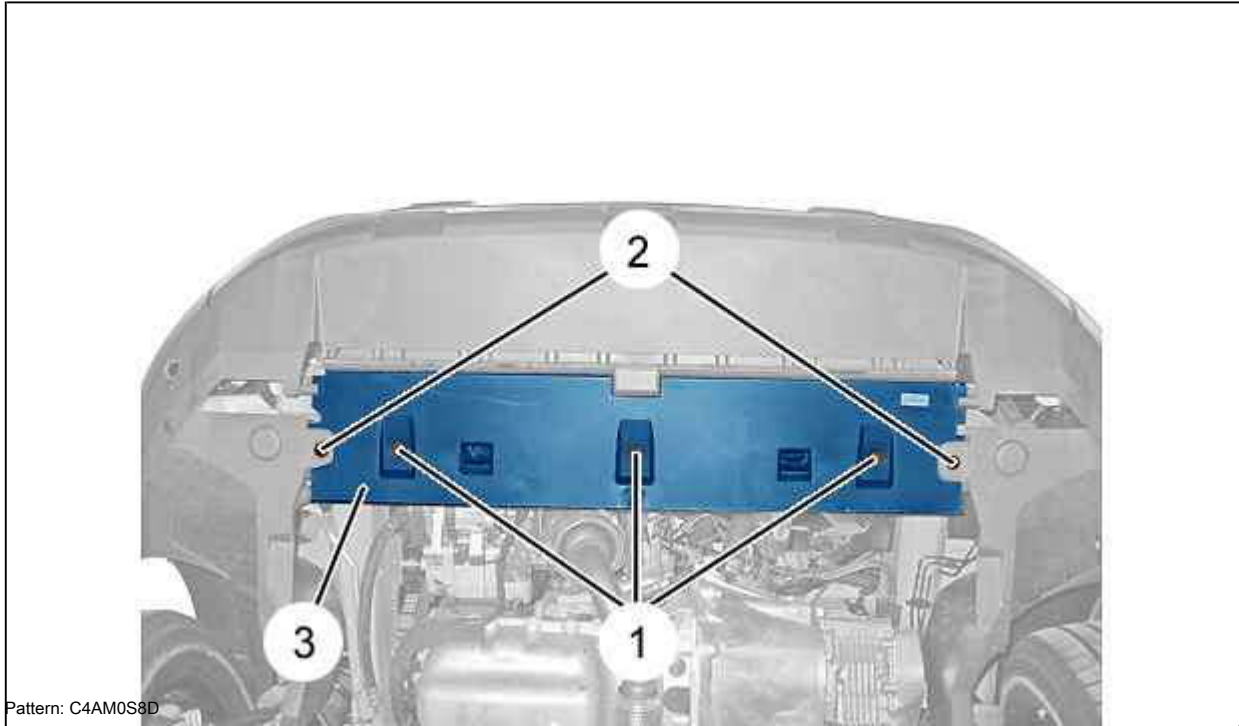
REMOVAL INSTALLATION: ELECTRIC FAN

MANDATORY: Observe the cleanliness and safety rules



1. Removal

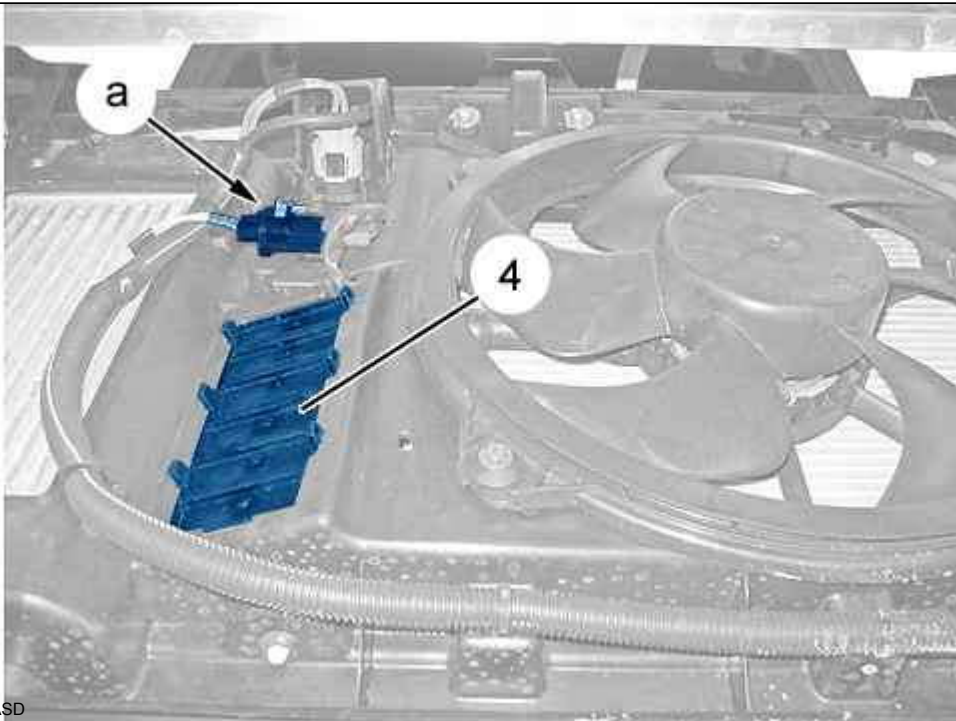
Disconnect the battery. Use a two-post lift.



Remove:

- clips (1)
- bolts (2)

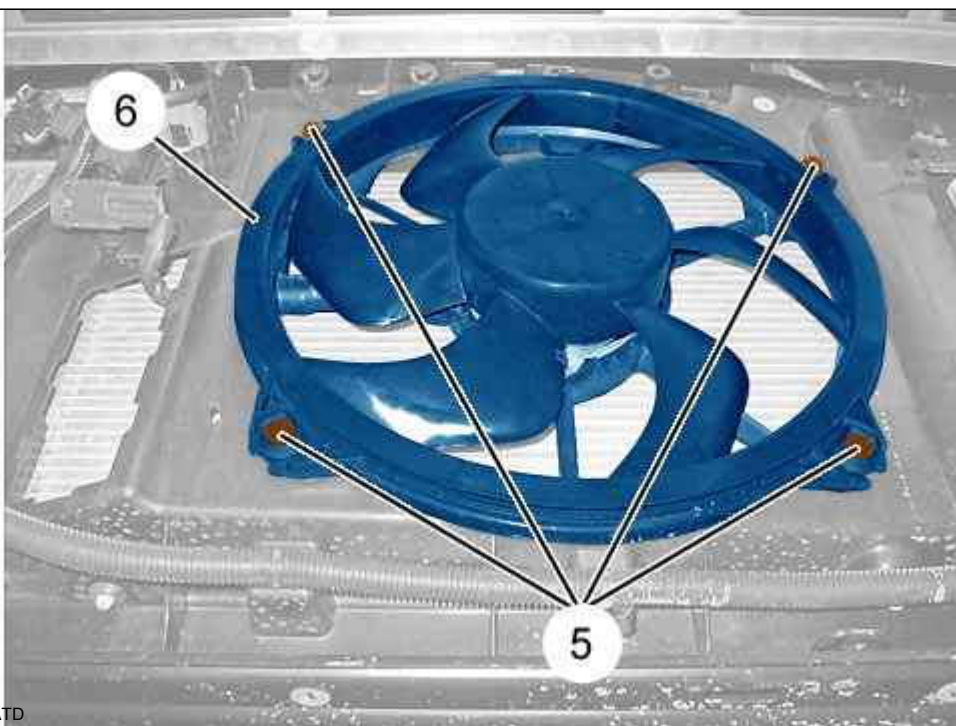
Fold back the cover (3).



Pattern: B1GM0ASD

ATTENTION : Protect the cooling system radiator fins from damage.

Remove: Anti-recirculation panel (4). Disconnect and move aside the connector, (at "a").



Pattern: B1GM0ATD

Remove:

- the bolts (5)
- Electric fan (6) (Through the bottom of the vehicle)

2. Installation

Install:

- Electric fan (6)
- the bolts (5)

Connect the connector (at "a").

Install:


- Anti-recirculation panel (4)
- Cover (3)
- bolts (2)
- clips (1)
- A car on its wheels

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

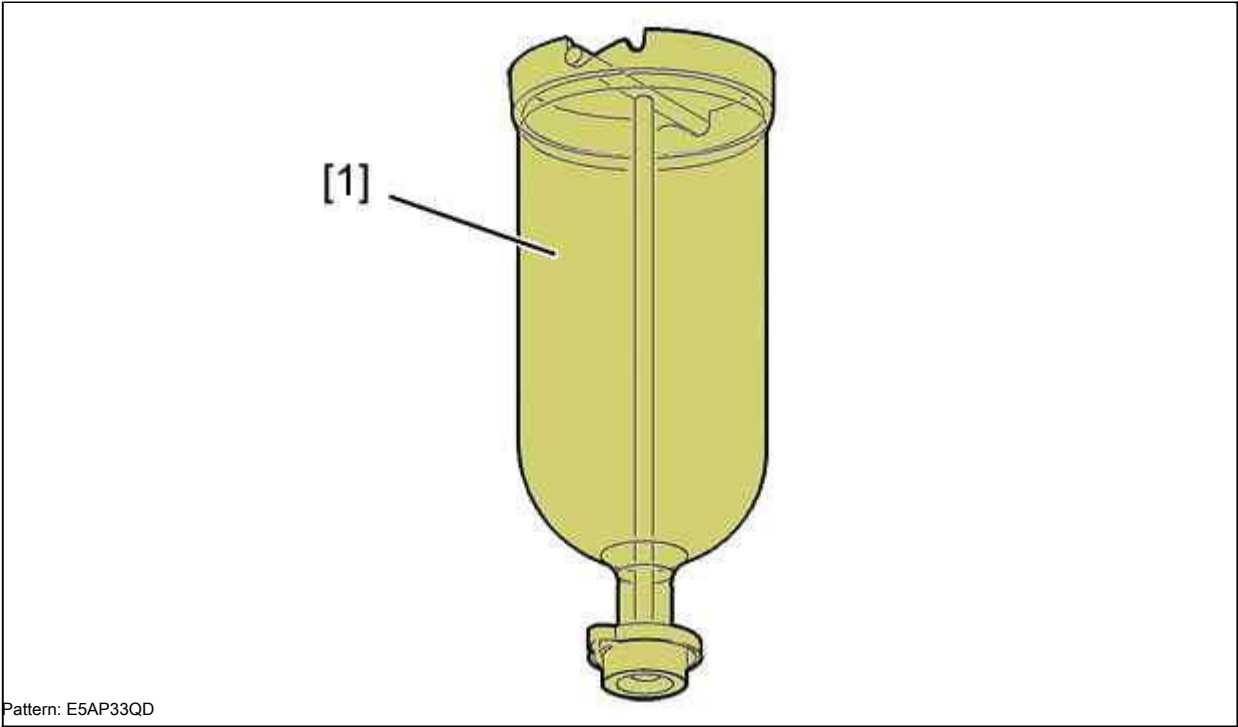
DRAIN FILL PURGE: COOLING SYSTEMS

MANDATORY: Observe the cleanliness and safety rules

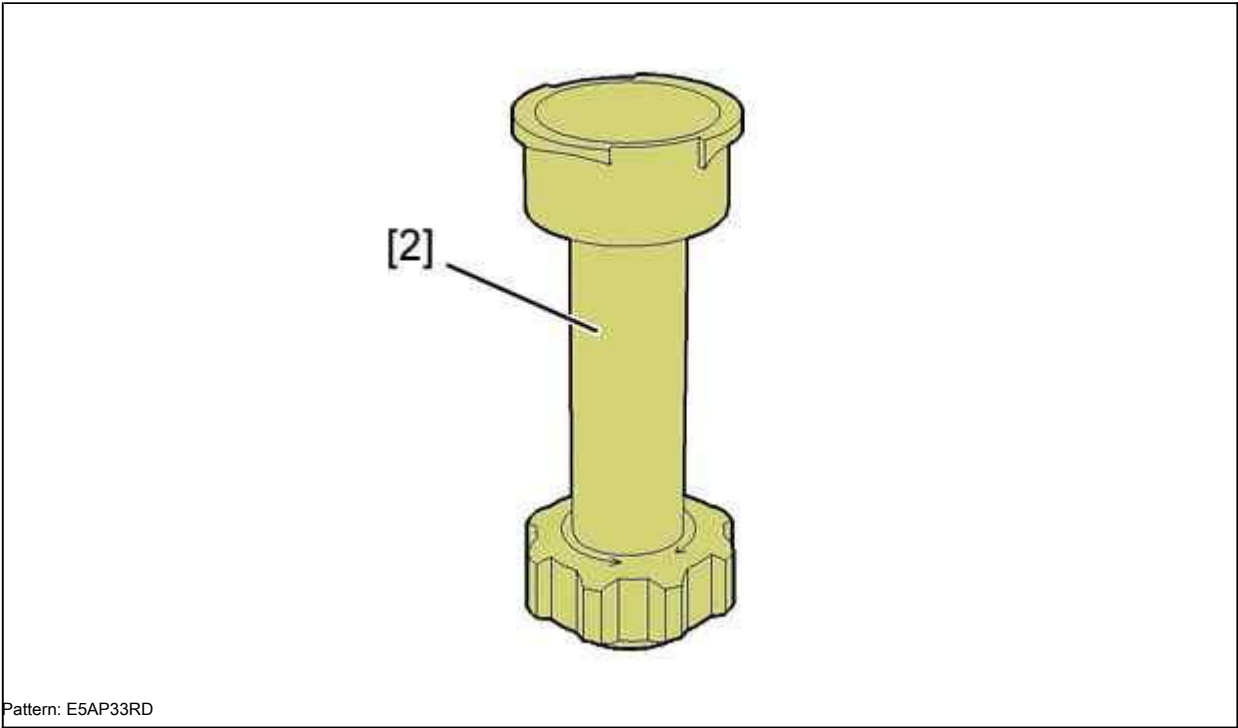


NOTE: Draining and refilling the cooling system may be performed using an approved coolant change unit. Be sure to use the installation method.

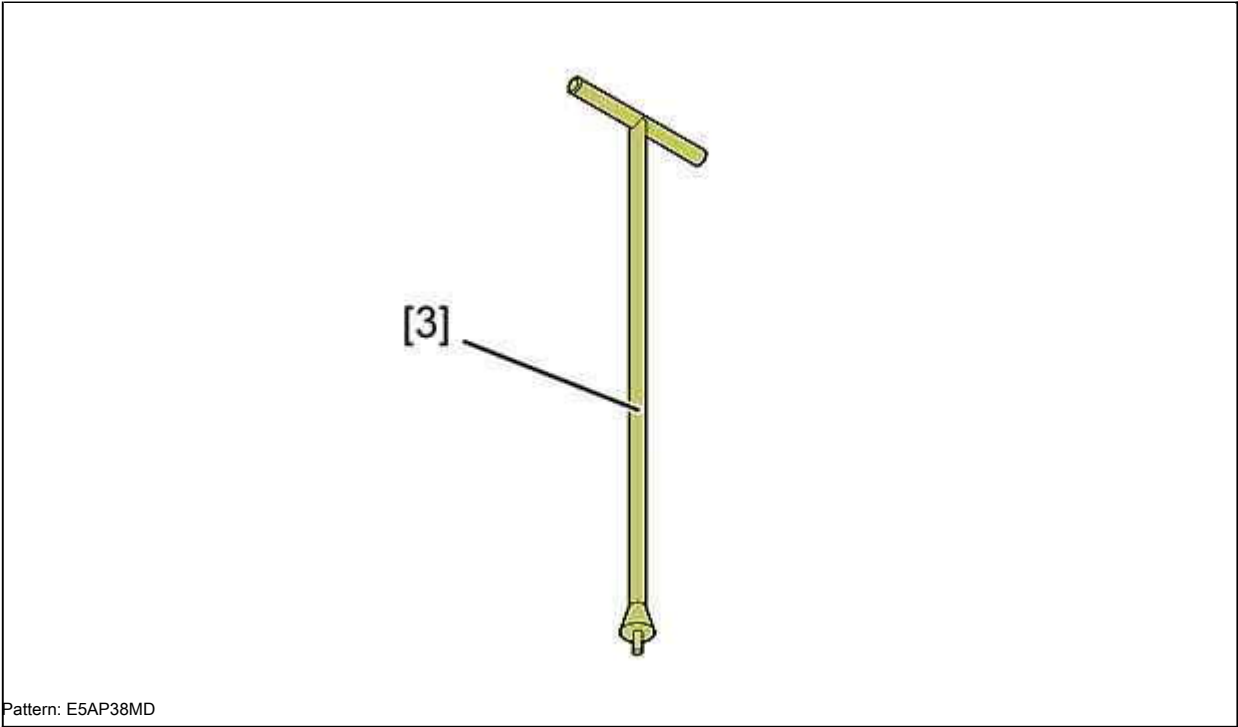
1. Recommended equipment



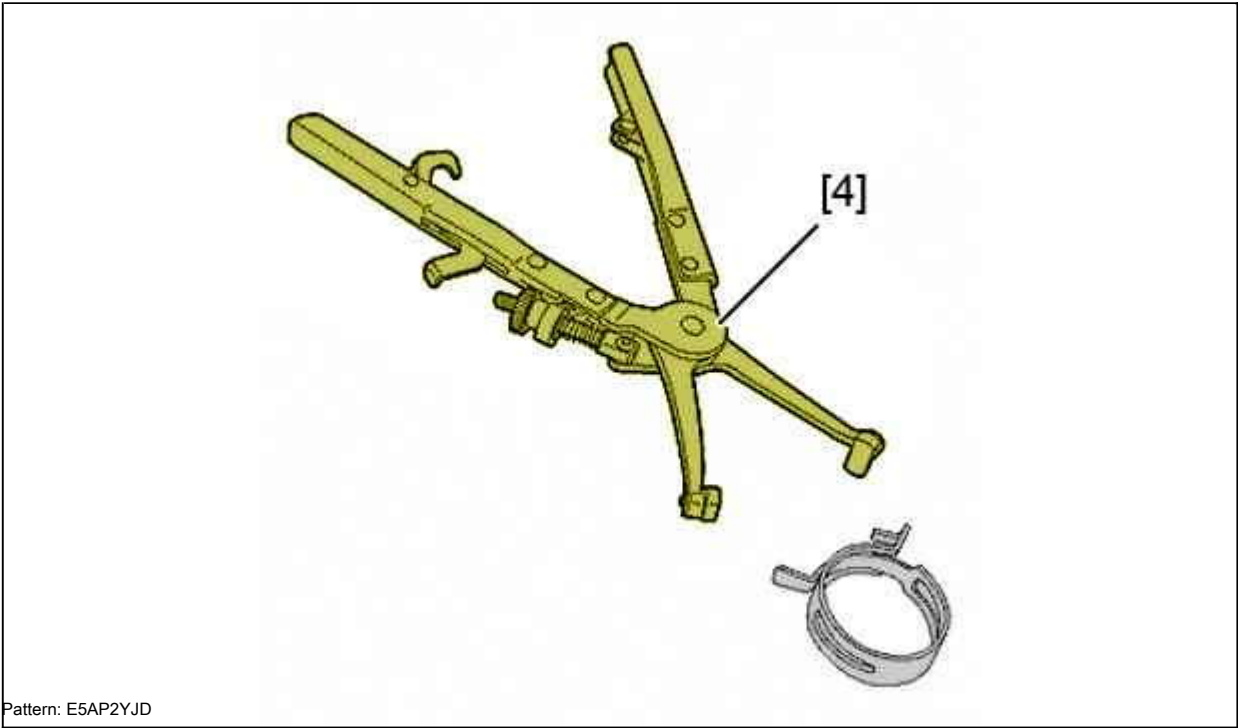
Label Designation		Number (reference) Number (reference)	
[1]	bay cylinder 4520T		() .0173 / 2



Label Designation		Number (reference)	Number (reference)
[2]	adapter for filling cylinder 4222T		() .0173 / B



Label Designation		Number (reference)	Number (reference)
[3]	rod for closing filling cylinder 4370T		() .0173 / C




Pattern: E5AP2YJD

Label Designation		Number (reference) Number (reference)	
[4]	Clamp removal pliers 9029T		() .0165

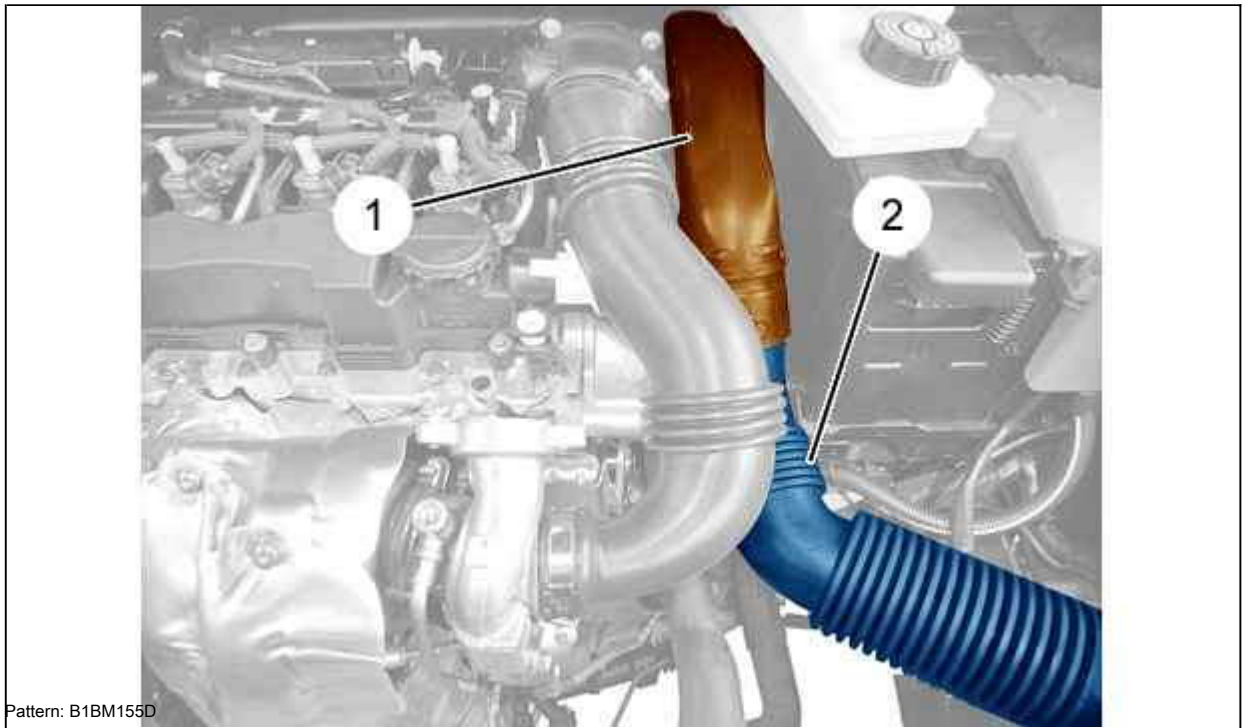
2. Draining

MANDATORY: Observe high pressure fuel injection (HDI) diesel engine safety and cleanliness requirements

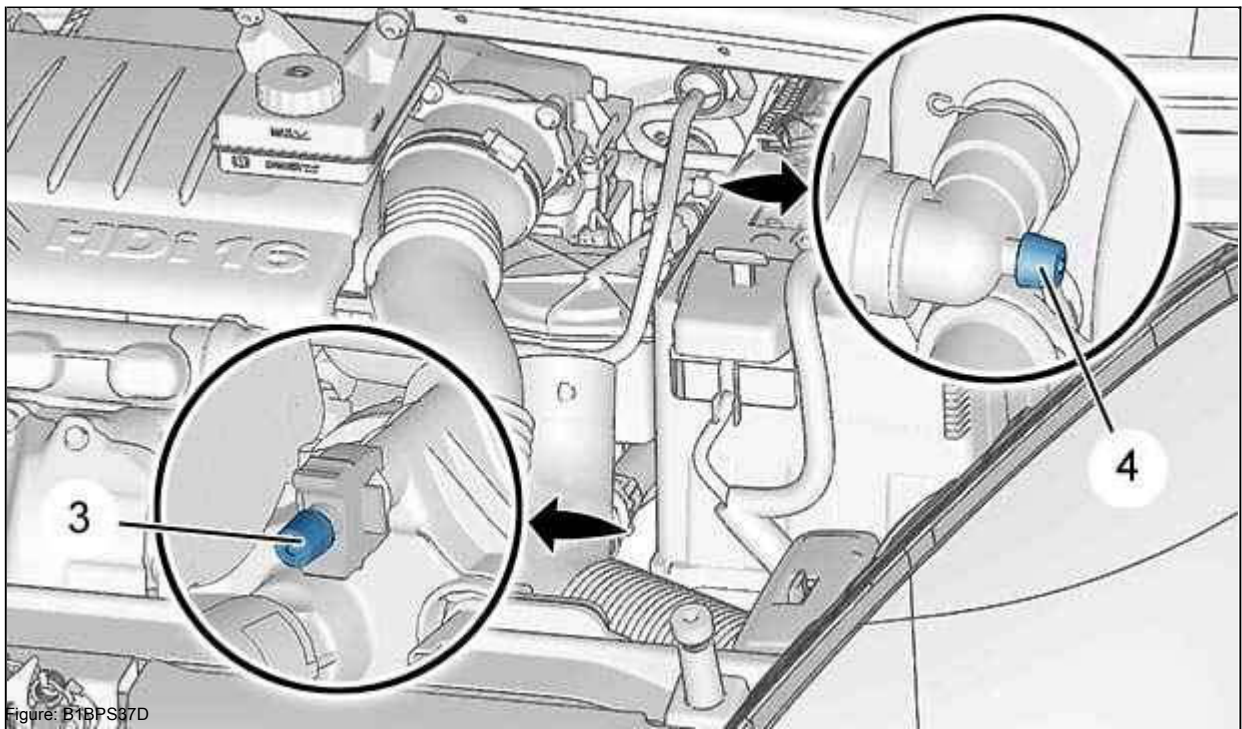


Disconnect the battery. Remove:

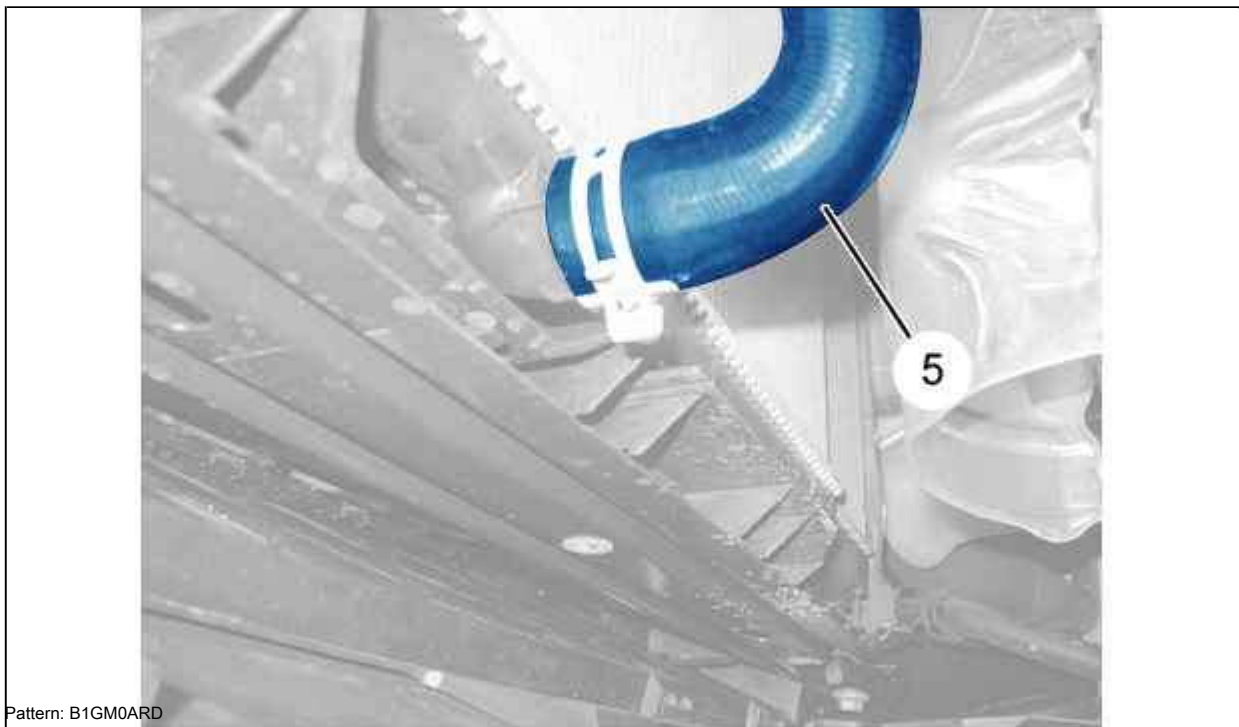
- Under engine guard
- Expansion bottle cap (Be careful)



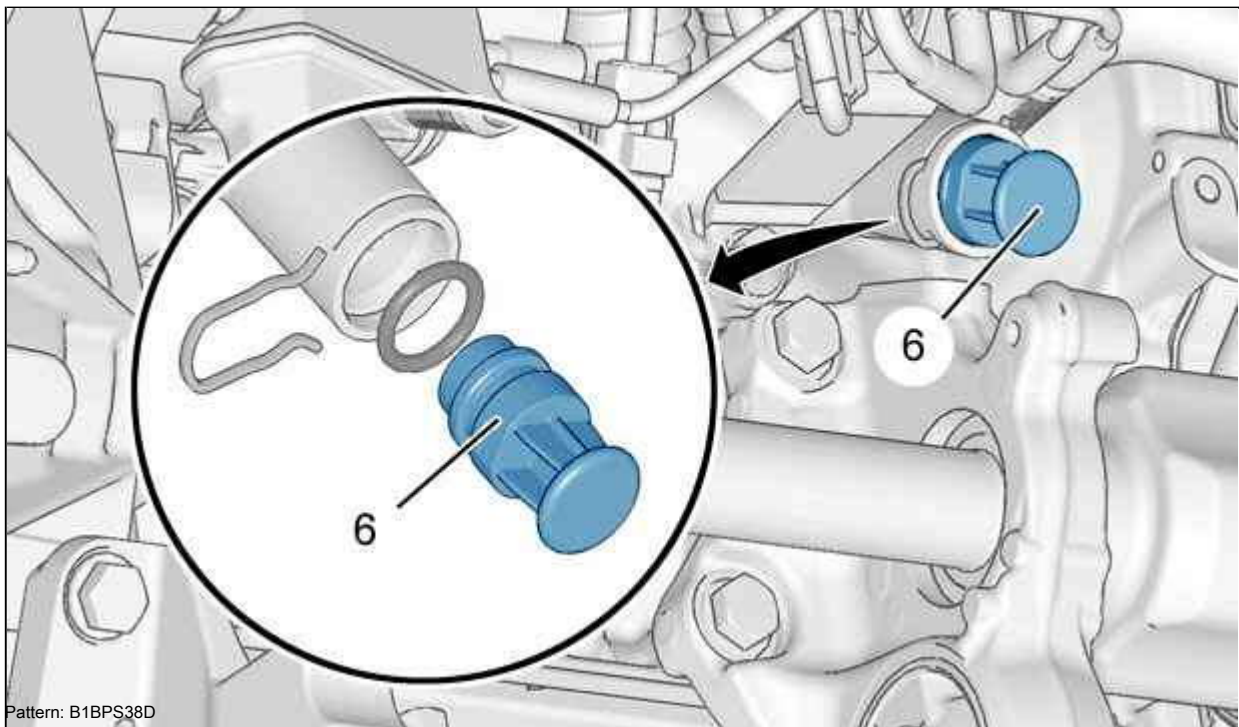
Disconnect and detach the air inlet (2) from the air inlet (1). Remove the air connection (1).



Unscrew plugs (3), (4) of drain holes of the cooling system.



Place a container for collecting liquids under the engine.
Disconnect the lower hose (5); Using the tool [4]. Drain the cooling system radiator.



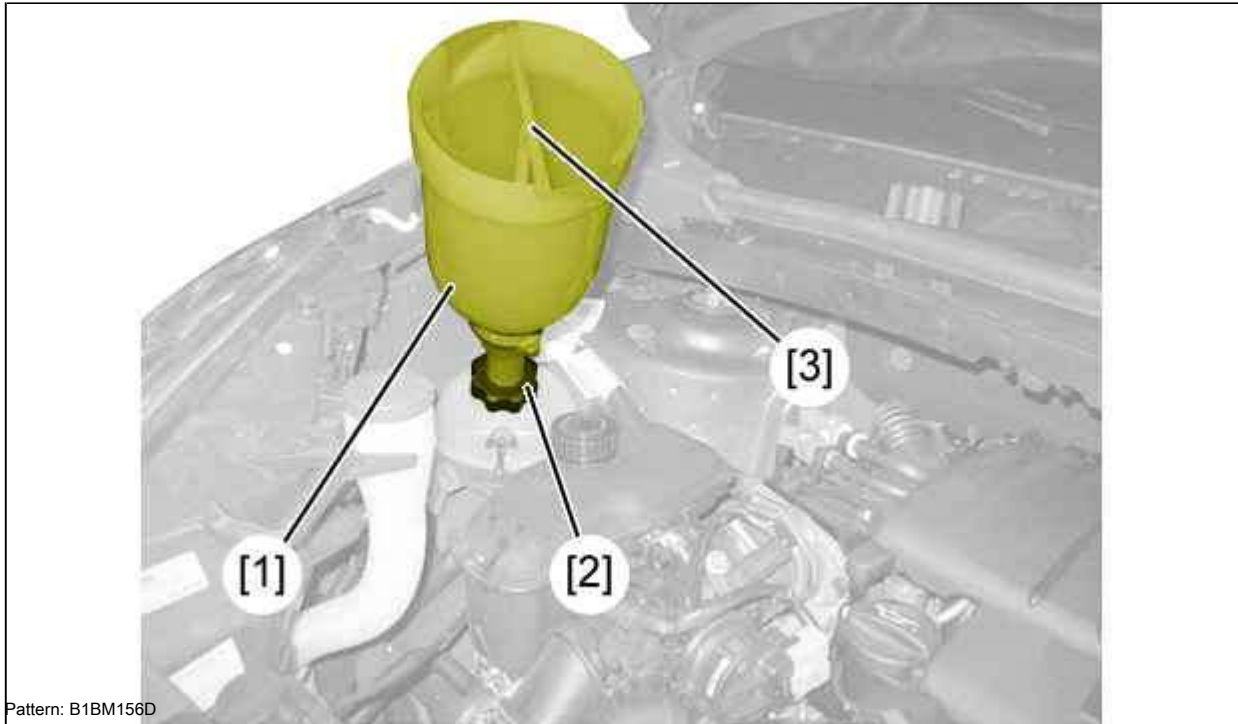
Drain the cylinder block by removing the plug (6).
Refit the drain plug (6) (with new gasket and new stopper).

3. Fill the bleed circuit

MANDATORY: Follow the instructions for closing the cooling circuit.

Connect the lower hose (5). Using the tool [4], install the air connection (1).

Connect the air connection (2) to the air connection (1).



Pattern: B1BM156D

Install the filler cylinder assembly [1], plug [3] and adapter [2] into the filler hole. Add coolant to the engine cooling circuit.

Close the filling screw (3), (4) as soon as all the coolant has drained out without air bubbles.

NOTE: Maintain the maximum fluid level in the fill cylinder.

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

Engine starting.

Close the filling cylinder [1] with the plug [3].

Remove the assembly from the filling cylinder assembly [1], plug [3] and adapter [2]. Install the expansion tank plug.

Stop the engine.

4. Verification

Engine starting.

Maintain engine operation at 1500 rpm until the first cooling cycle (turning on and off the electric fan or electric fans).

Stop the engine and allow it to cool.

MANDATORY: Carefully remove the expansion tank cap.

Remove the cap from the expansion tank.

If necessary, fill the level to the maximum mark (engine cooled). Install:

- Expansion tank cap

- Under engine guard

FEATURE IDENTIFICATION: CLUTCH

1. Characteristics

1.1. Petrol engines

engine's type	TU5JP4 TU5JP4B	EP6C
Transmission type	BE4R	
Clutch friction disc VALEO200 XS		235 F 810DS
Clutch mechanism	VALEO200 CPX 3850	SACHS228M 4100
Engine flywheel type	Simple engine flywheel	
Clutch type	Clutch of push type with hydraulic drive	

1.2. Diesel Engines

engine's type	DV6TED4 DV6ATED4 DV6BTED4 DV6AUTED4 DV6BUTED4 DV6TED4BU
Transmission type	BE4R
Friction disc	LUK 235/810 DS
clutch	
Clutch mechanism	LUK 235 P4800
Engine flywheel type	Simple engine flywheel
Clutch type	Double flywheel
	Engaged clutch
	Clutch clutch with wear compensation system

2. Feature '

The LUK clutch mechanism of the SAC type contains an automatic wear compensation device, which requires the use of special equipment when re-installing.

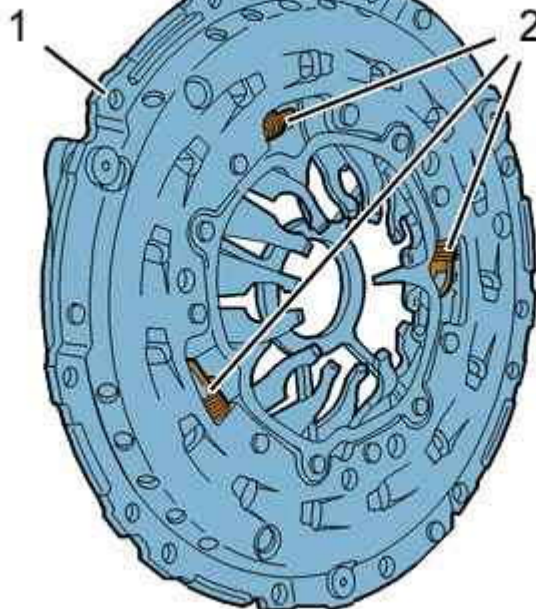


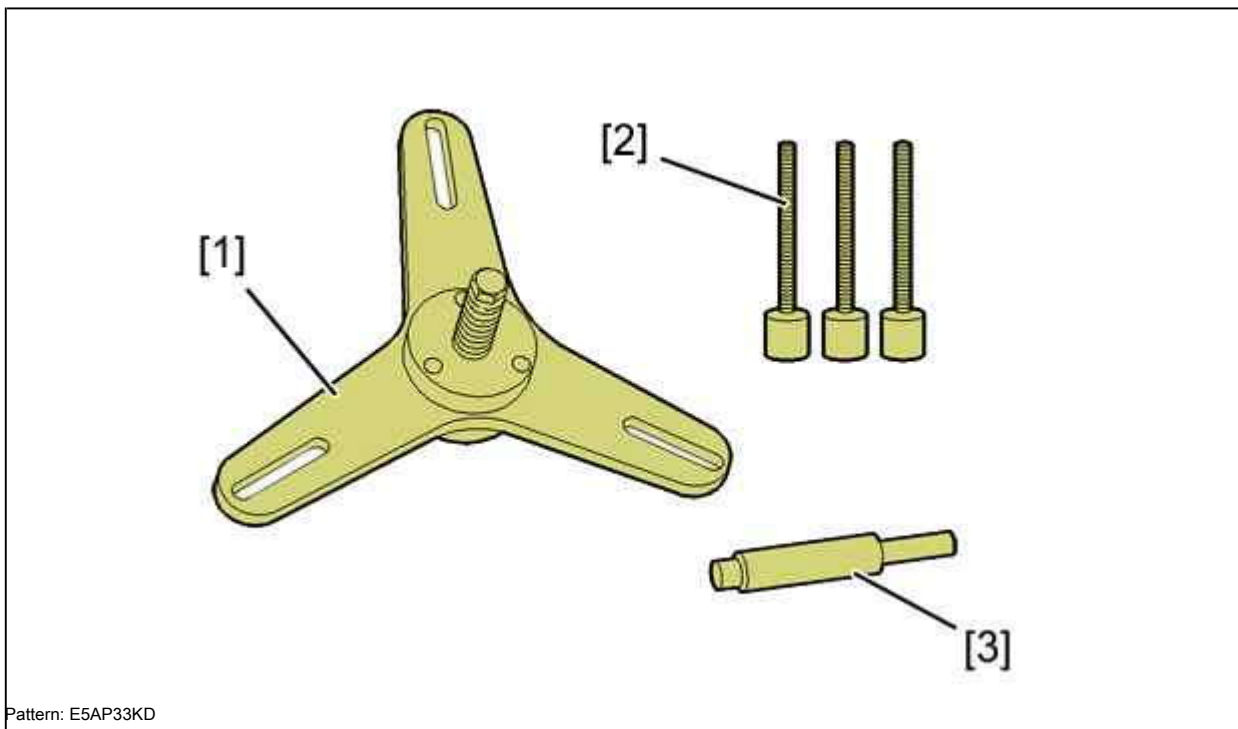
Figure: B2BP2PYD

(1) Automatic gap sampling mechanism. (2) Damper springs.

NOTE: When installing, the side of the clutch disc bearing the # PSA 96 XXX XXX 80 must face towards the transmission.

3. Repair

ATTENTION : To improve the centering of the friction elements and eliminate engine jerks, vibration and noise, squeeze the clutch mechanism while tightening the mounting bolts; Using the tool ().0217.



Clutch Compression Tool ().0217 (Automatic Wear Compensation Clutch):

- [1] Clutch compressor ().0217A
- [2] Holding rod (Ø8 mm) ().0217B2Z
- [3] Clutch centering rod ().0217C

TIGHTENING TORQUES: CLUTCH

1. Clutch mechanism

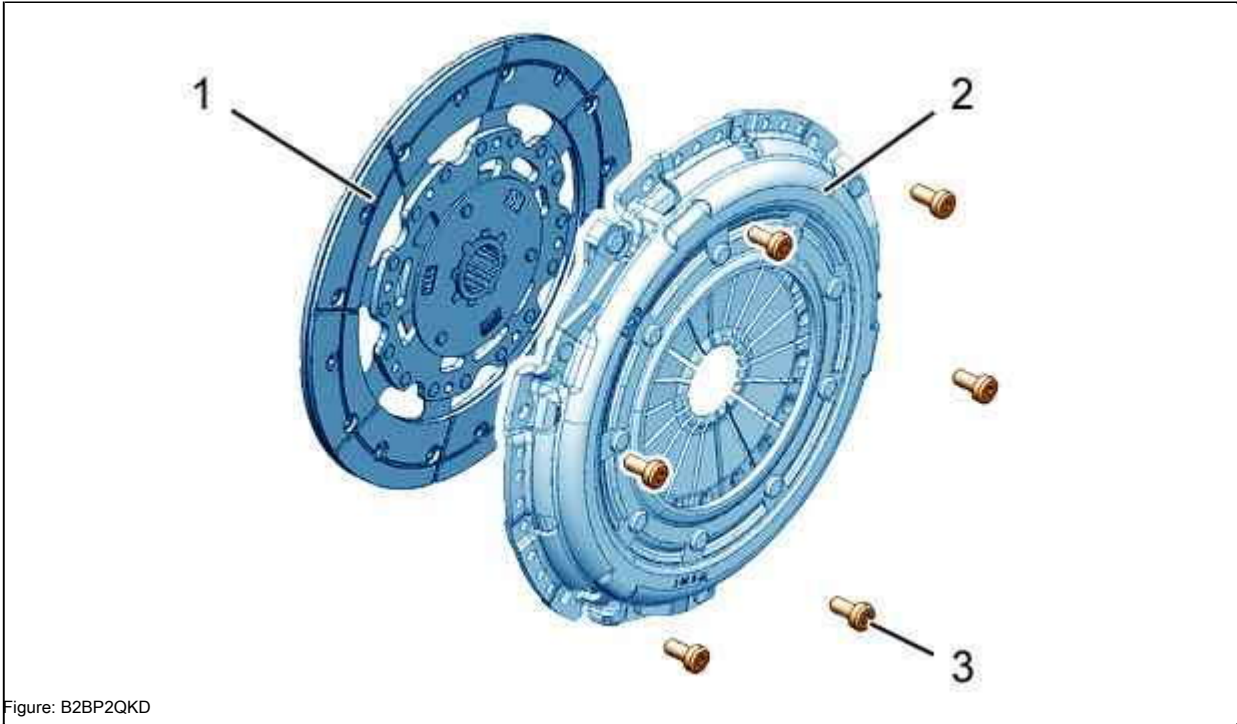


Figure: B2BP2QKD

- (1) Clutch disc. (2) Clutch mechanism.
- (3) Clutch bolt.

All types of motors		
Label Designation		Torque
(3)	Securing bolt of the clutch mechanism	2 da.Nm

2. Design with a working cylinder of the hydraulic clutch

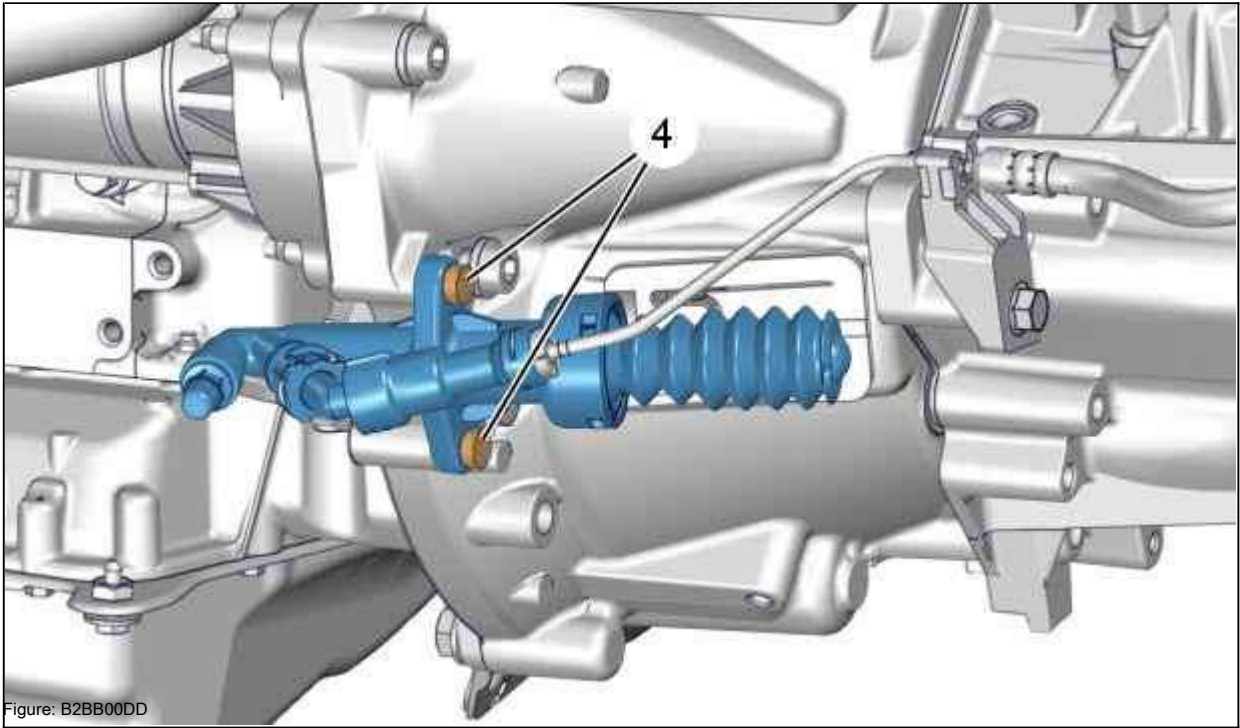


Figure: B2BB00DD

Label Designation		Torque
(4)	mounting bolts: Clutch slave cylinder 1.9 da.Nm	

REMOVAL INSTALLATION: HYDRAULIC CLUTCH ACTUATOR

MANDATORY: Observe the cleanliness and safety rules.



MANDATORY: When sending hydraulic clutch control unit components to a warranty return center, cover all openings of the removed components to facilitate examination (Use covers installed on new parts). There are 2 communication systems with the clutch pedal master: cylinder communication, hinge communication.

1. Preliminary operation

Place the car on a lift.

Disconnect the battery.

Remove the hydraulic clutch elements, which must be removed.

2. Fluids: Clutch drive system

ATTENTION : Mark the brake fluid level in the reservoir before removing.

There are several pumping systems:

- Pumping system with double locking
- Pumping system with screw

2.1. Double-lock pumping system

ATTENTION : When connecting and disconnecting, move the hydraulic pipe only along its axis and do not use a lever force to avoid breaking the pipe.

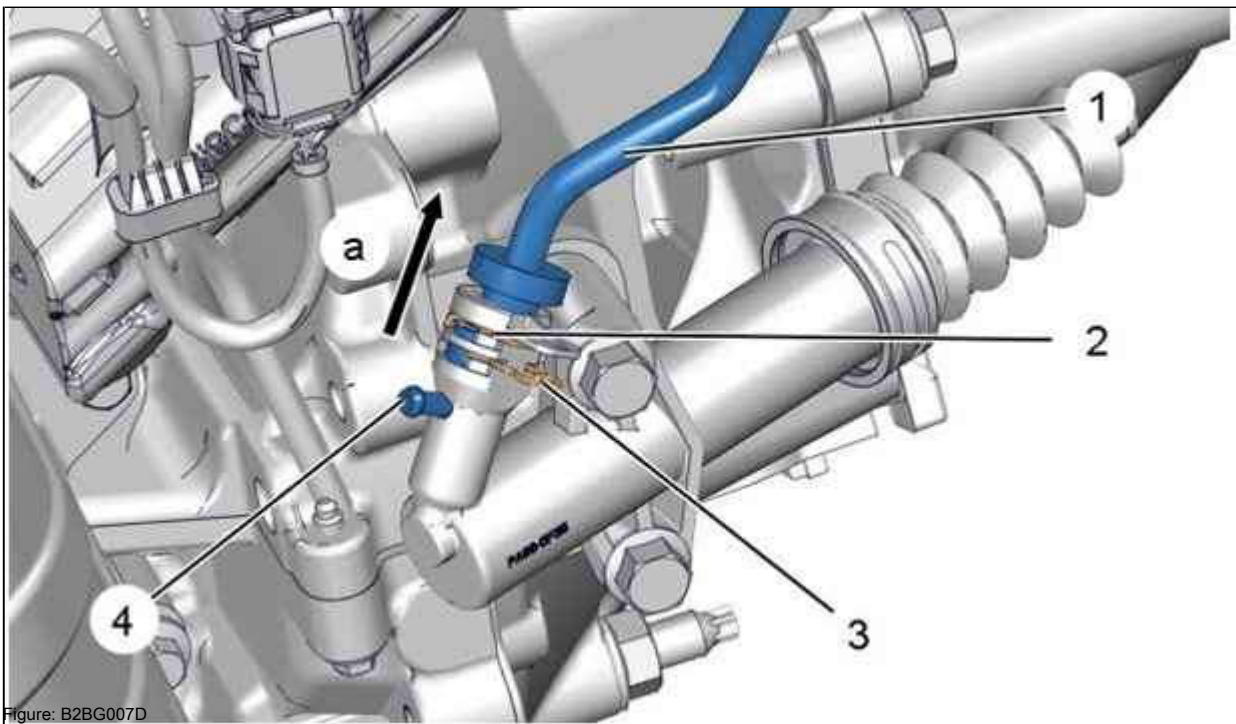


Figure: B2BG007D

Remove the protective plug from the bleed port (4).

Store protective caps in a clean place.
Connect the transparent tube to the bleed port (4).

ATTENTION : The end of the transparent tube must be immersed in a container with brake fluid.

Tighten the lock (2).

ATTENTION : The retainer (2) always remains attached to the hydraulic clutch actuator during bleeding.

Detach retainer (3).

Pull the collar (1) to release the bleeding hole (4) (in accordance with the arrow "a"). Let the brake fluid drain off by gravity.

Tighten the lock (3).

Insert the tube (1) to close the bleeding hole (4) (counter-arrow). Detach the retainer (2) (not removable).

Disconnect the transparent hose.

Install the protective plug on the bleed hole (4).

2.2. Lead-pumping system ("Quarter-turn" system)

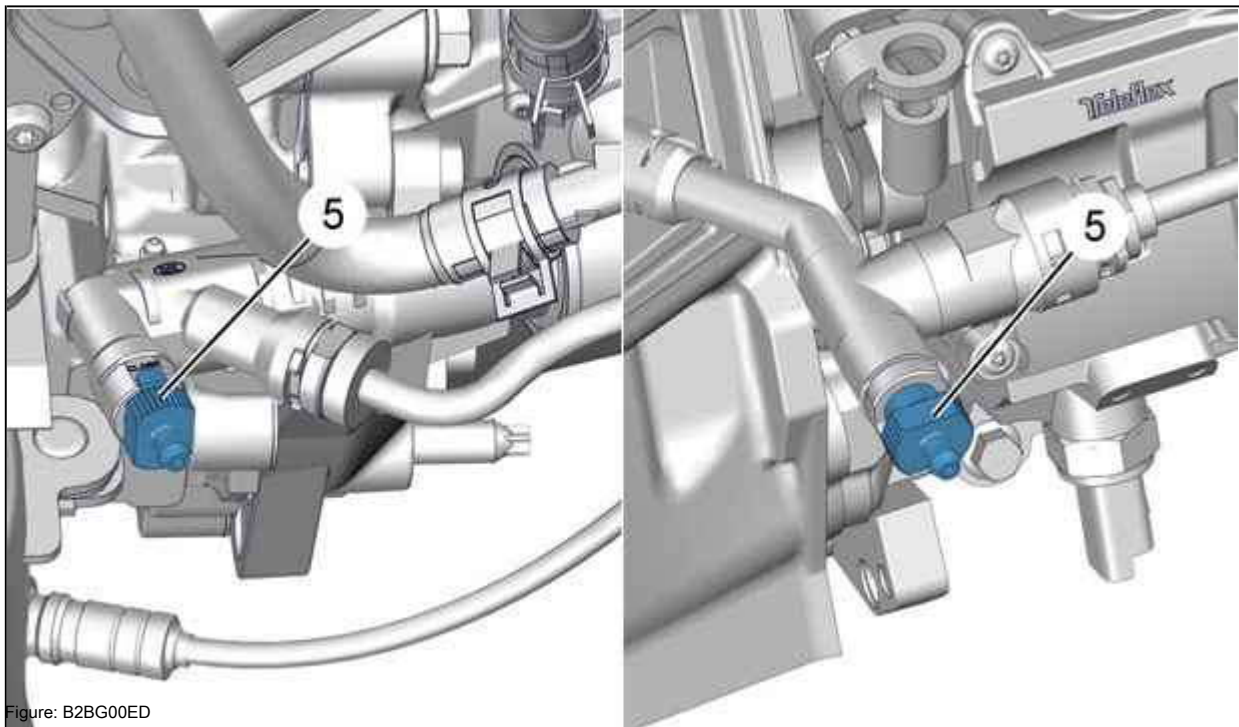


Figure: B2BG00ED

Remove: Protective plug of the bleeding screw (5). Store protective caps in a clean place.
Connect a transparent hose to the bleed screw (5).

ATTENTION : The end of the transparent tube must be immersed in a container with brake fluid.

Turn the bleed screw (5) half a turn (clockwise). Let the brake fluid drain off by gravity.

Tighten bleed screw (5) (Counterclockwise). Disconnect the transparent hose.

Remove the protective cover of the bleed screw (5).

2.3. Lead pumping system (6-sided screw system)

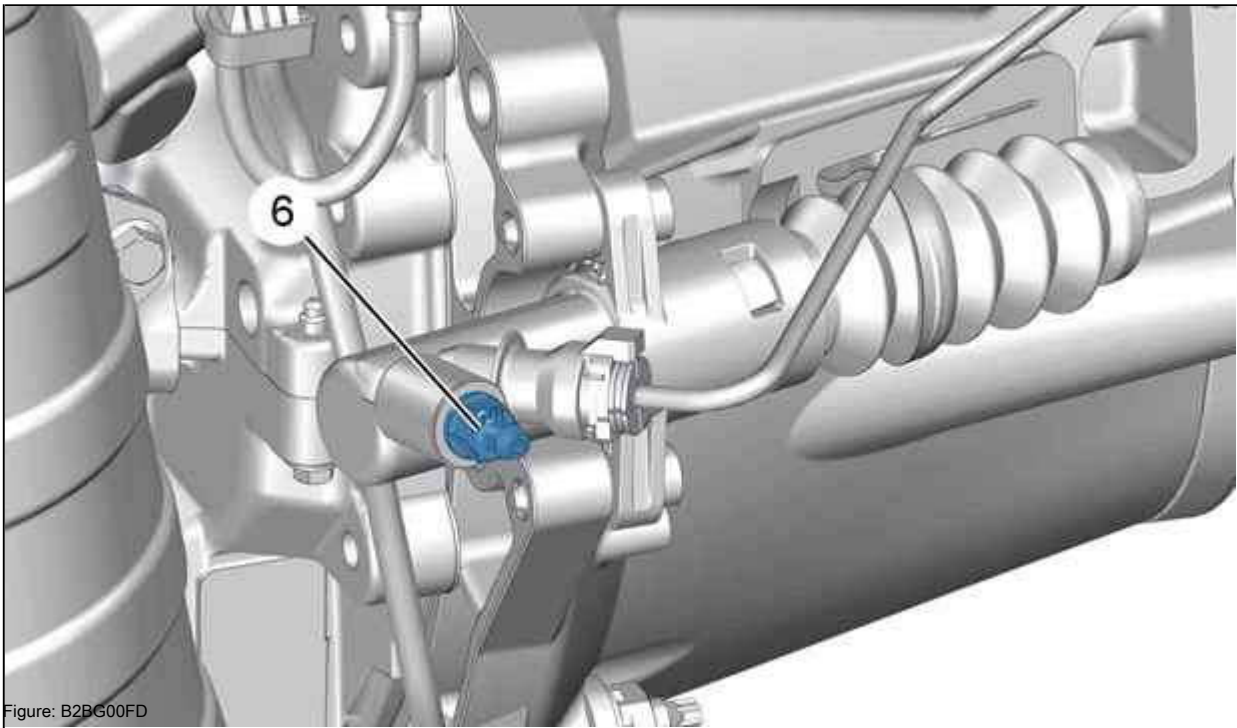


Figure: B2BG00FD

Remove: Protective plug of the bleeding screw (6). Store protective caps in a clean place.
Connect a transparent hose to the bleed screw (6).

ATTENTION : The end of the transparent tube must be immersed in a container with brake fluid.

Turn the bleed screw (6) (Counterclockwise). Let the brake fluid drain off by gravity.

Install the bleed screw (6) (clockwise). Disconnect the transparent hose.

Remove the protective cover of the bleed screw (6).

3. The master cylinder of the clutch drive with the connection of the cylinder on the clutch pedal

3.1. Withdrawal

ATTENTION : When connecting and disconnecting, move the hydraulic pipe only along its axis and do not use a lever force to avoid breaking the pipe.

ATTENTION : Do not break the protrusions of the thrust head of the clutch master cylinder

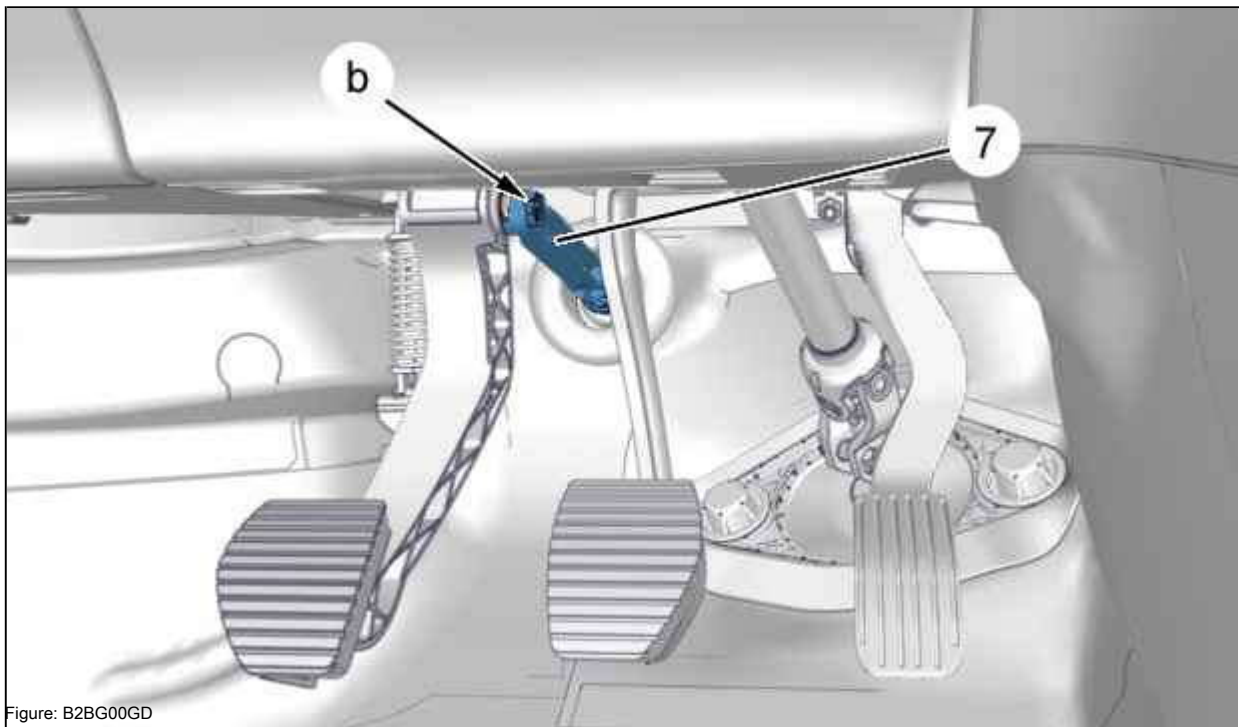


Figure: B2BG00GD

Detach the rod (7) of the clutch master cylinder (at "b").

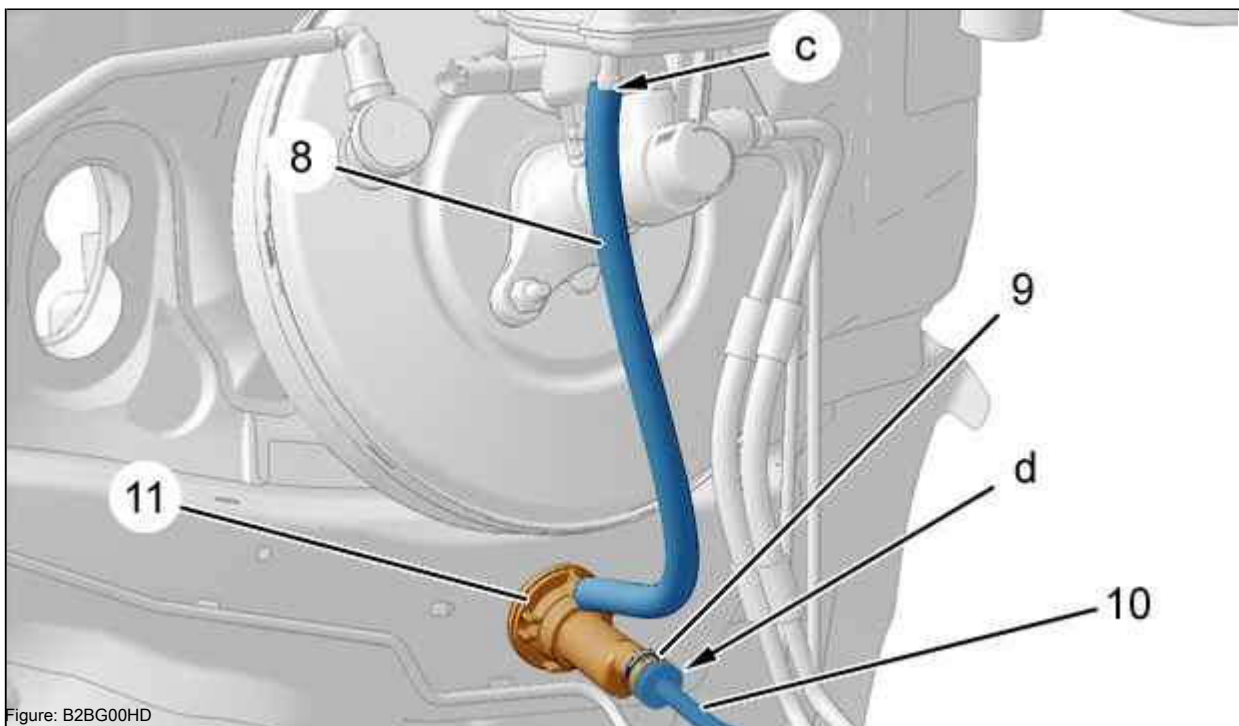


Figure: B2BG00HD

ATTENTION : Allow brake fluid to leak out. Use rags.

Disconnect: Feed tube (8) (at "c").

Close the opening of the brake fluid reservoir (in "c"); With a clean cap. Detach the retainer (9).

Disconnect the hydraulic pipe (10) (at "d").

Unlock the clutch master cylinder (11) (Turning one eighth turn clockwise).

Remove the clutch master cylinder (11).

3.2. Installation

ATTENTION : When connecting, move the hydraulic tube (10) along its axis and do not use it as a lever in order not to damage it.

Lightly lubricate the rod connections (7) of the master cylinder (11) of the hydraulic clutch with the pedal assembly; Use grease G7.

Replace the clutch master cylinder (11).

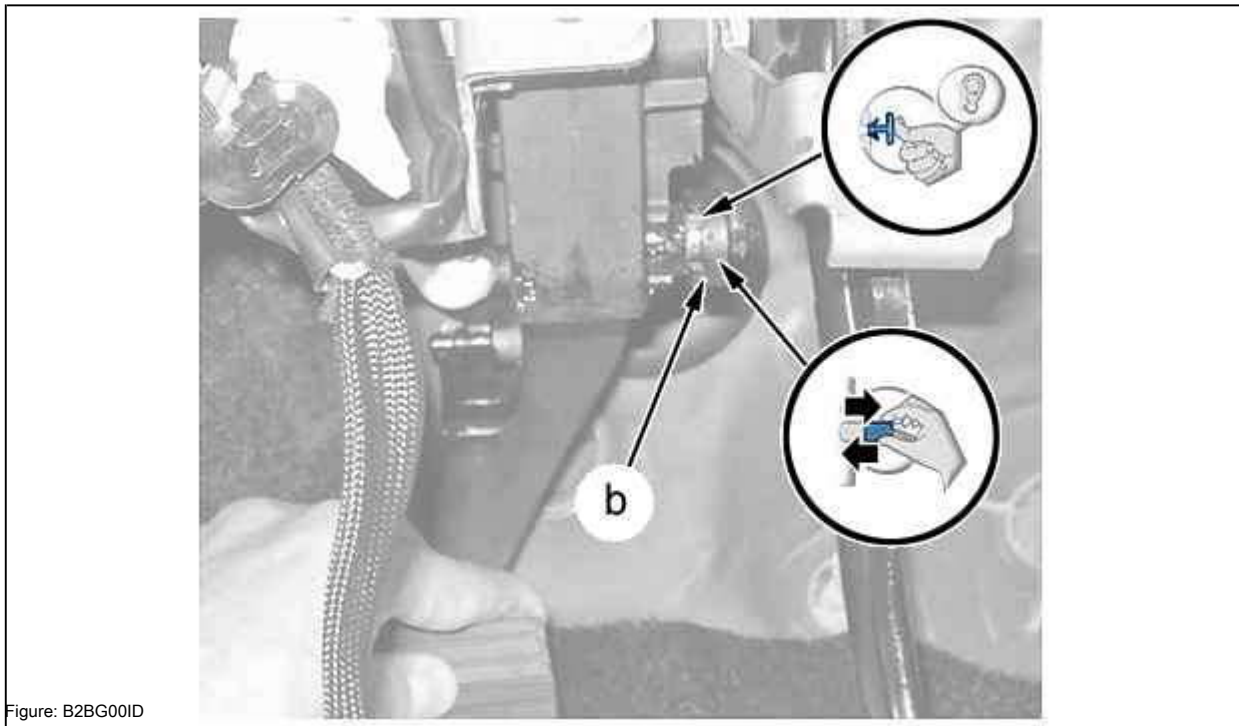
Lock the clutch master cylinder (11) (Turn 1/8 turn counterclockwise).

Tighten the lock (9).

Attach:

- Hydraulic pipe (10) (in "d")
- Feed tube (8) (in "c")

Secure the rod (7) of the clutch master cylinder (11) (in "b").



Secure the rod (7) of the clutch master cylinder (11) (in "b").

Check the tightness of the link (7) of the clutch master cylinder (11) (at "b") (Pull push).

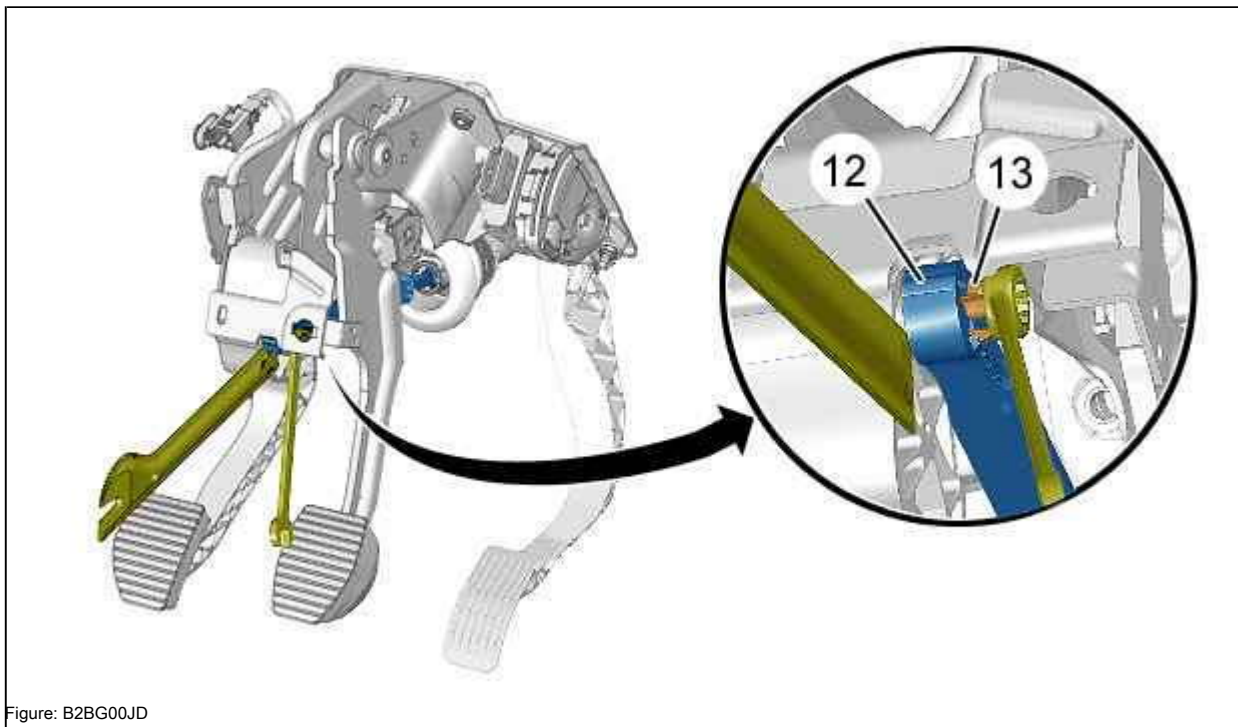
4. Clutch master cylinder with articulation pedal

4.1. Withdrawal

NOTE: First installation.

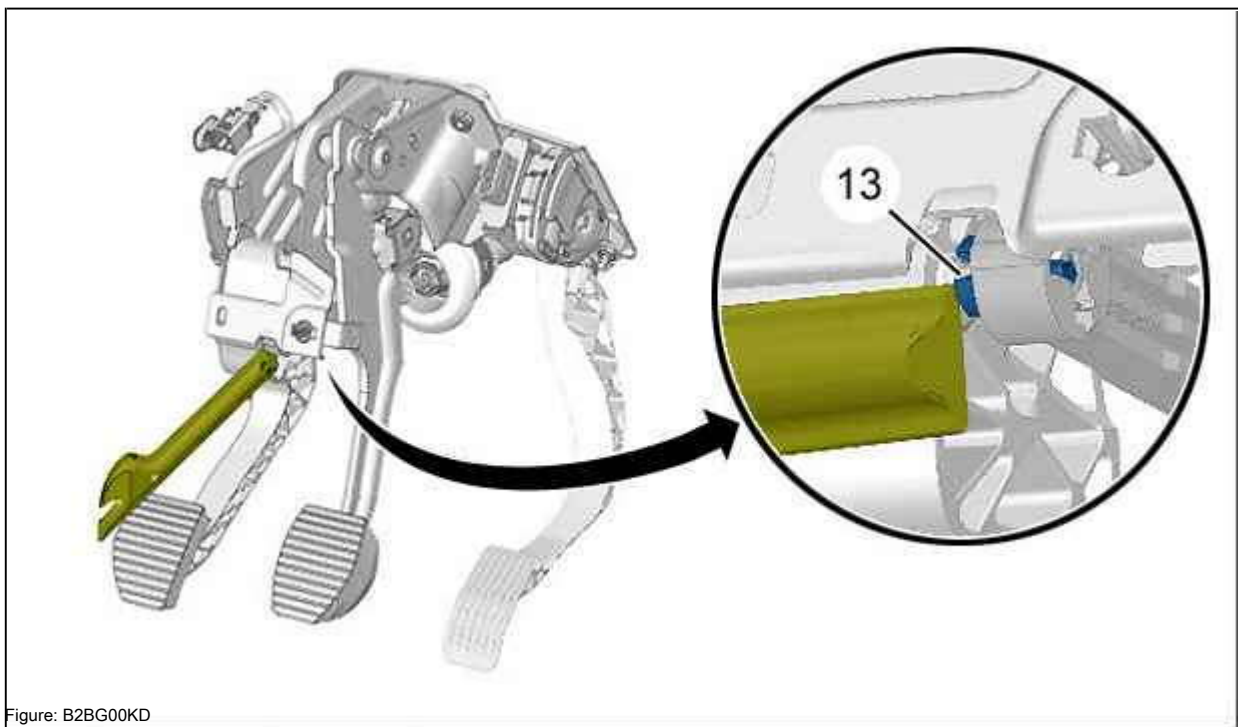
ATTENTION : When connecting and disconnecting, move the hydraulic tube (10) only along its axis and do not use force like a lever to avoid breaking the tube.

ATTENTION : Do not break the lugs on the link head of the hydraulic clutch master cylinder (11).



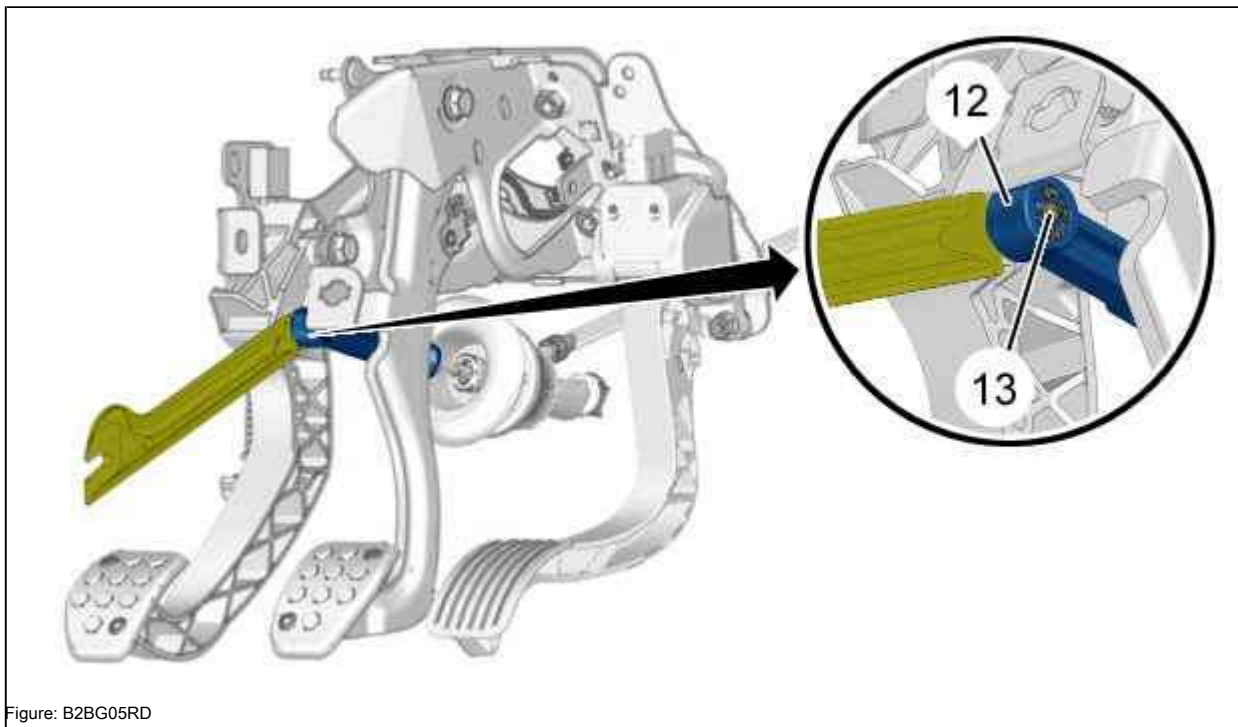
Perform the following operations at the same time:

- Tighten the lugs of the latch (13); Using a ring spanner 10
- Separate the rod (12) from the pedal; Using a plastic spatula



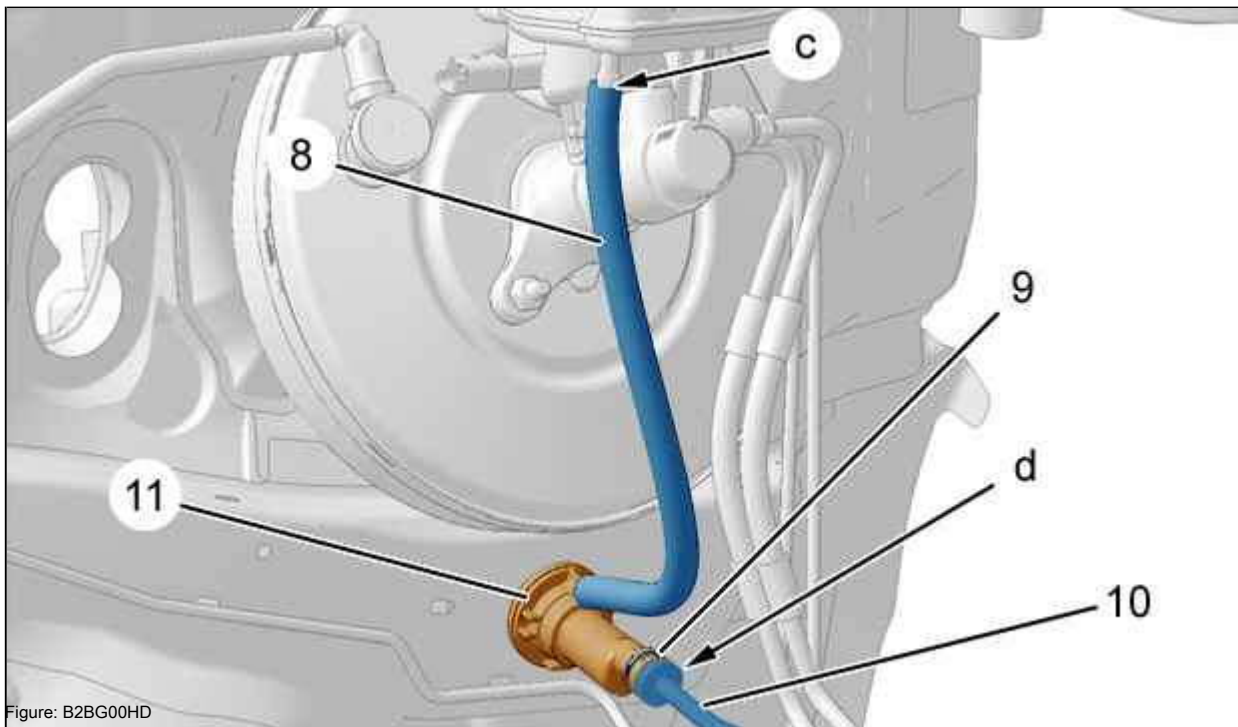
Detach the retainer (13) from the pedal assembly; Using a plastic spatula.

NOTE: Second installation.



Press down on the latch (13).

Disconnect the rod (12) of the hydraulic clutch master cylinder from the pedal assembly; Using a plastic blade.



ATTENTION : Allow brake fluid to leak out. Use rags.

Disconnect: Feed tube (8) (at "c").

Close the opening of the brake fluid reservoir (in "c"); With a clean cap.

Detach the retainer (9).

Disconnect the hydraulic pipe (10) (at "d").

Unlock the clutch master cylinder (11) (Turning one eighth turn clockwise). Remove the clutch master cylinder (11).

4.2. Installation

ATTENTION : When connecting, move the hydraulic tube (10) along its axis and do not use it as a lever in order not to damage it.

Replace the clutch master cylinder (11).

Lock the clutch master cylinder (11) (Turn 1/8 turn counterclockwise).

NOTE: First installation.

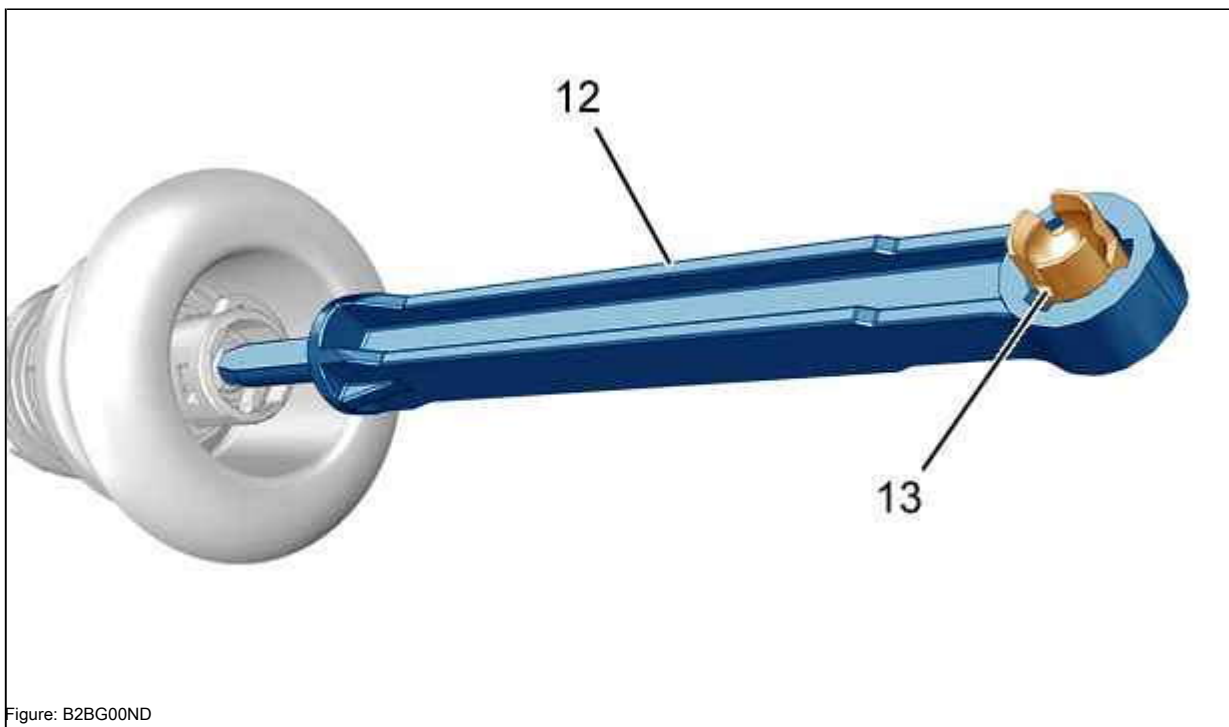


Figure: B2BG00ND

NOTE: Check that the locking clip (13) of the new clutch hydraulic master cylinder (11) is in the position above.

NOTE: Second installation.

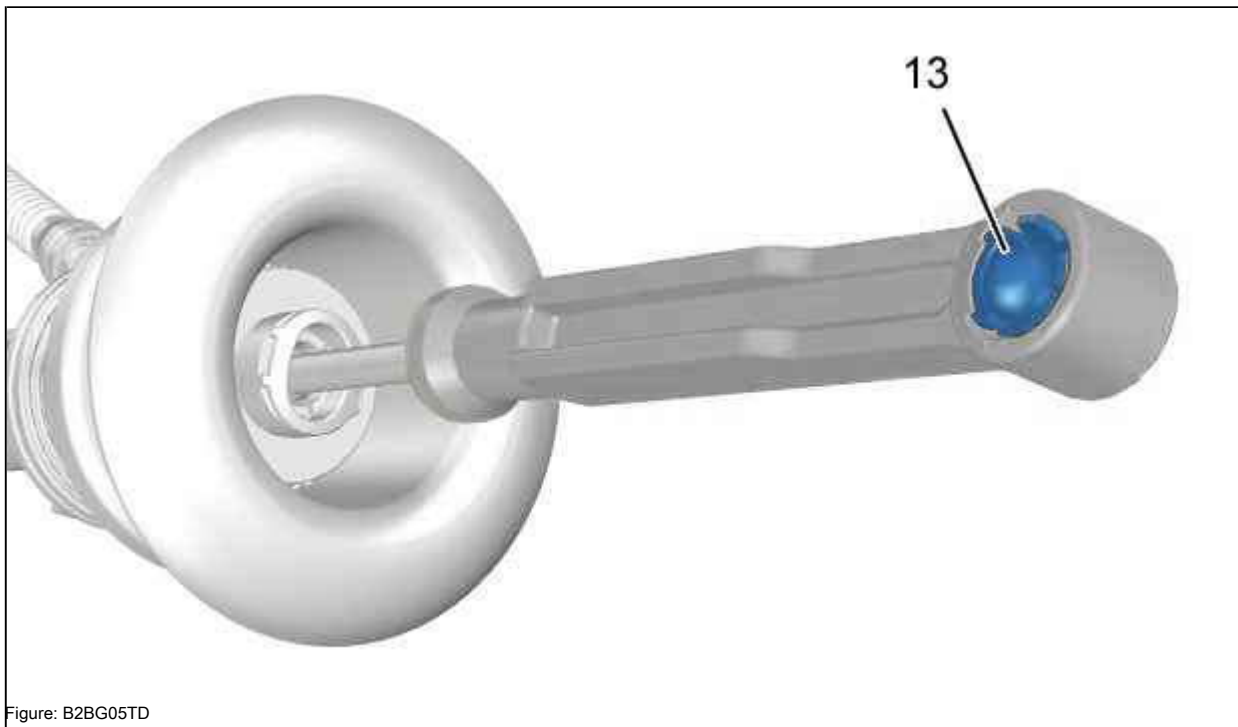


Figure: B2BG05TD

NOTE: Check that the locking latch (13) of the new clutch master cylinder is in the above position.

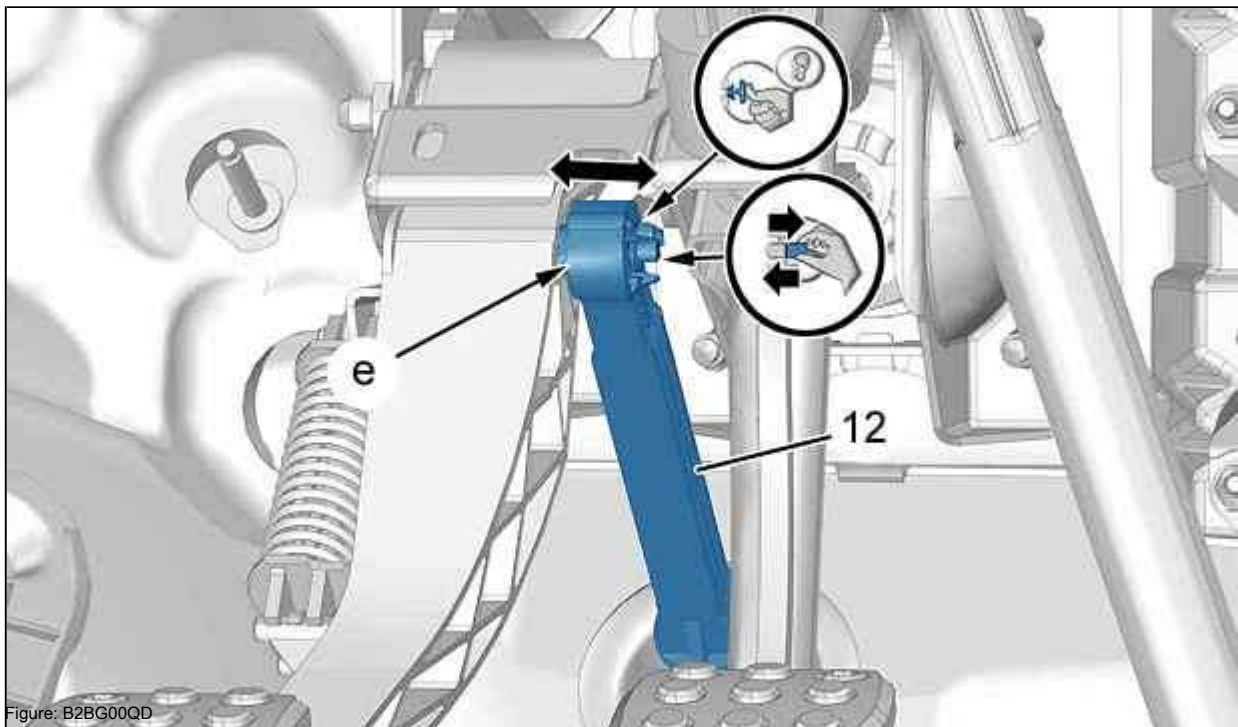
Tighten the lock (9).

Attach:

- Hydraulic pipe (10) (in "d")
- Feed tube (8) (in "c")

Fasten in clips:

- Catch (13) to the pedal assembly
- Therod (12) of theclutch hydraulic master cylinder (11) onto the locking clip (13)



Check the tightness of the link (12) of the clutch master cylinder (11) (at "e") (Pull push).

5. Clutch slave cylinder (Double detent bleed system)

5.1. Withdrawal

ATTENTION : When connecting and disconnecting, move the hydraulic tube (1) only along its axis and do not use force like a lever to avoid breaking the tube.

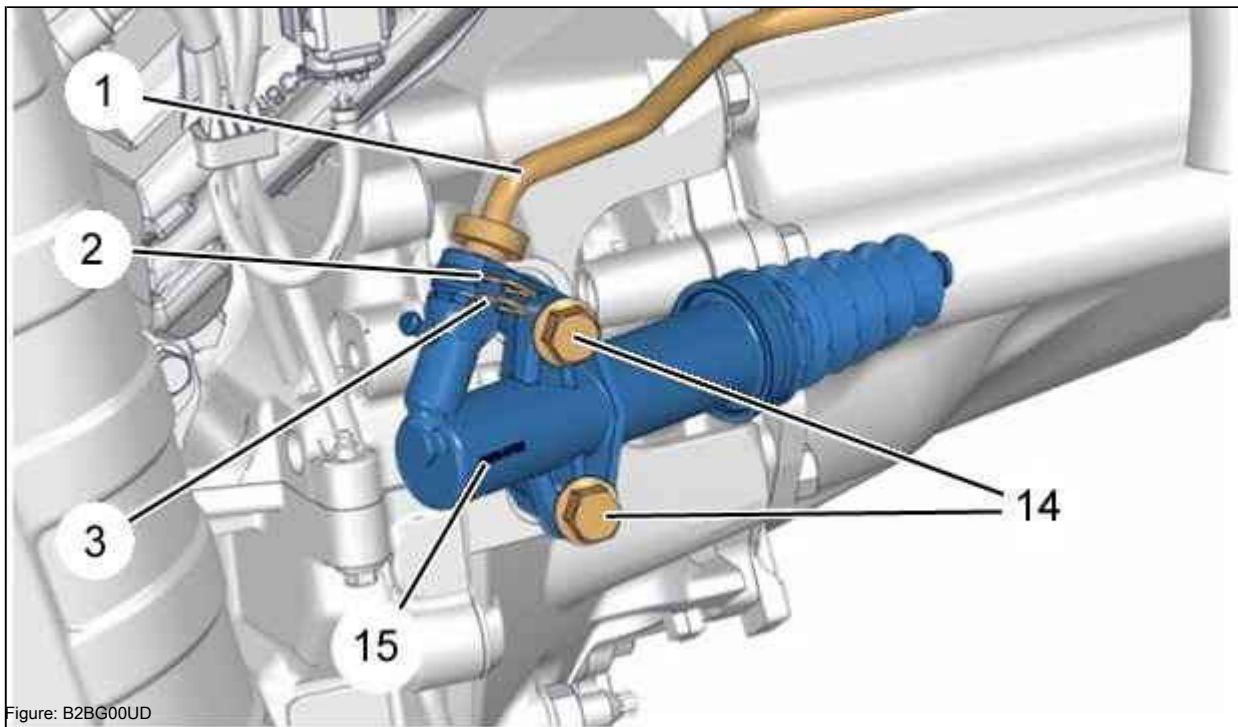


Figure: B2BG00UD

ATTENTION : Allow brake fluid to leak out. Use rags.

Detach catches (2), (3) (Do not remove). Disconnect the hydraulic line (1).

Remove:

- 2 bolts (14)
- Clutch slave cylinder (15)

5.2. Installation

ATTENTION : Observe the required tightening torques.

ATTENTION : When connecting, move the hydraulic tube (1) along its axis and do not use it as a lever, so as not to damage it.

Lightly lubricate the connection between the clutch slave cylinder rod (15) and the clutch fork; Using grease G12.

Install:

- Clutch slave cylinder (15)
- 2 bolts (14) (new screws)

Install the clips (2), (3).

Connect the hydraulic pipe (1).

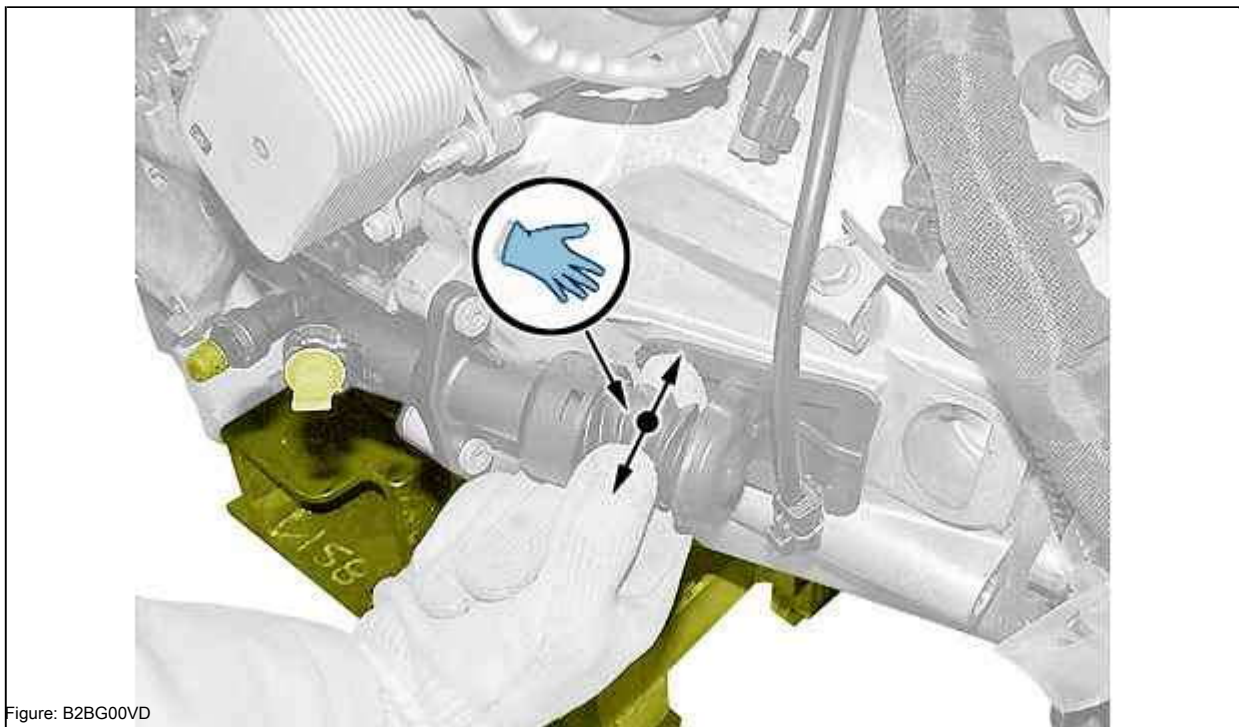


Figure: B2BG00VD

Check the position of the clutch slave cylinder rod (15) in the clutch fork.

6. Clutch slave cylinder (Lead bleed system)

6.1. Withdrawal

ATTENTION : When connecting and disconnecting, move the hydraulic pipe only along its axis and do not use a lever force to avoid breaking the pipe.

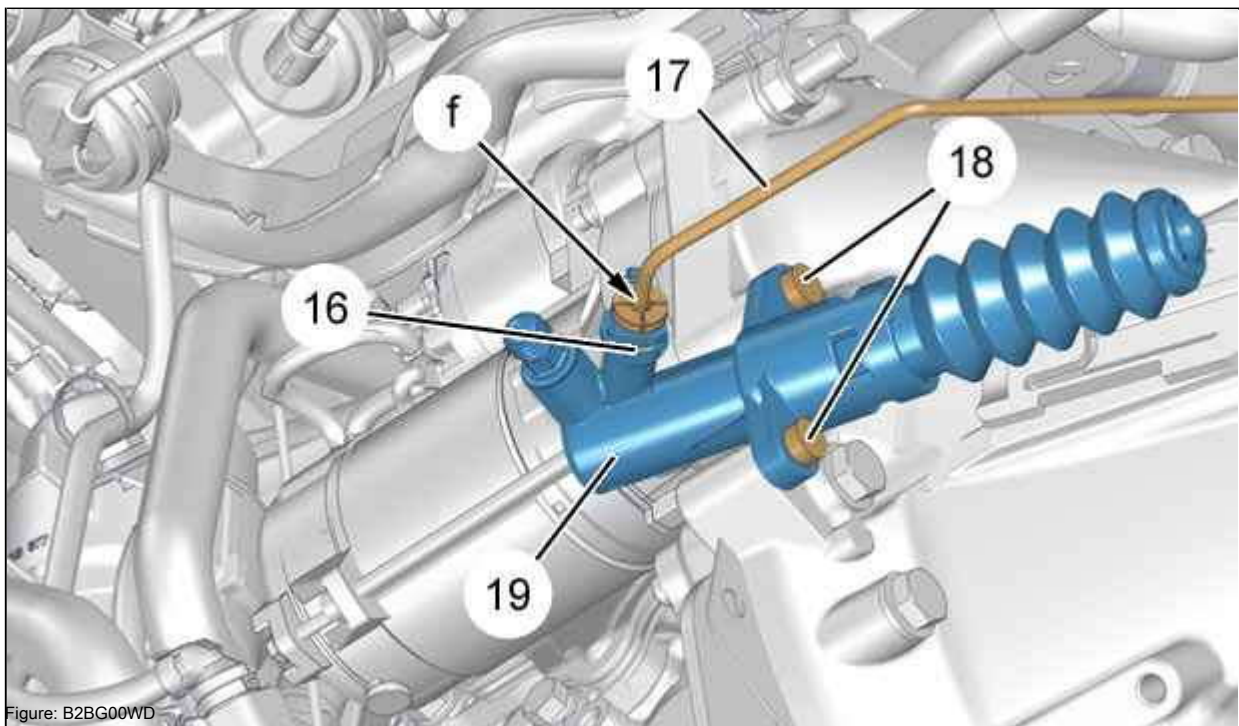


Figure: B2BG00WD

ATTENTION : Allow for leakage of brake fluid .Use rags.

Detach the retainer (16) (Do not remove).

Disconnect the hydraulic pipe (17) (at "f"). Remove:

- 2 bolts (18)
- Clutch slave cylinder (19)

6.2. Installation

ATTENTION : Observe the required tightening torques.

ATTENTION : When connecting, move the hydraulic tube (17) along its axis and do not use it as a lever, so as not to damage it.

Lightly lubricate the clutch slave cylinder rod (19) and clutch yoke; Using grease G12.

Install:

- Clutch slave cylinder (19)
- 2 bolts (18) (new screws)

Tighten the lock (16).

Connect the hydraulic pipe (17) (at "f").

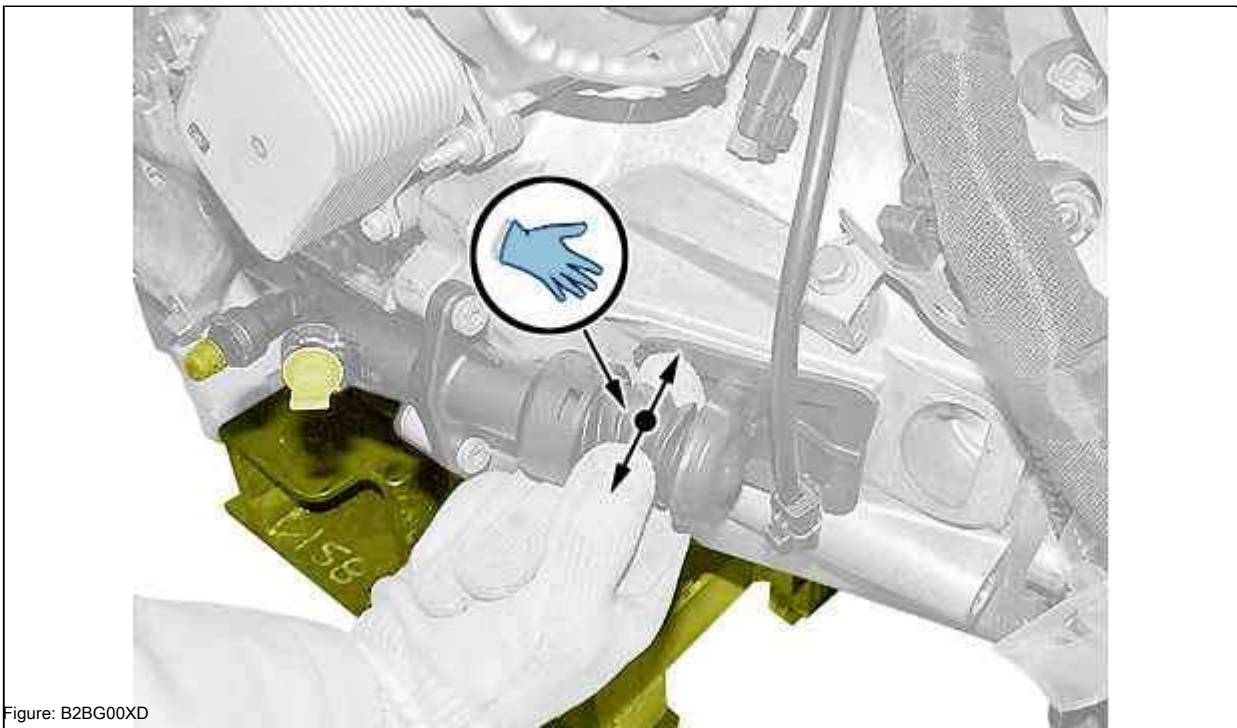


Figure: B2BG00XD

Check the position of the clutch slave cylinder rod (19) in the clutch fork.

7. Installation together with a hydraulic cylinder

7.1. Withdrawal

ATTENTION : When connecting and disconnecting, move the hydraulic pipe only along its axis and do not use a lever force to avoid breaking the pipe.

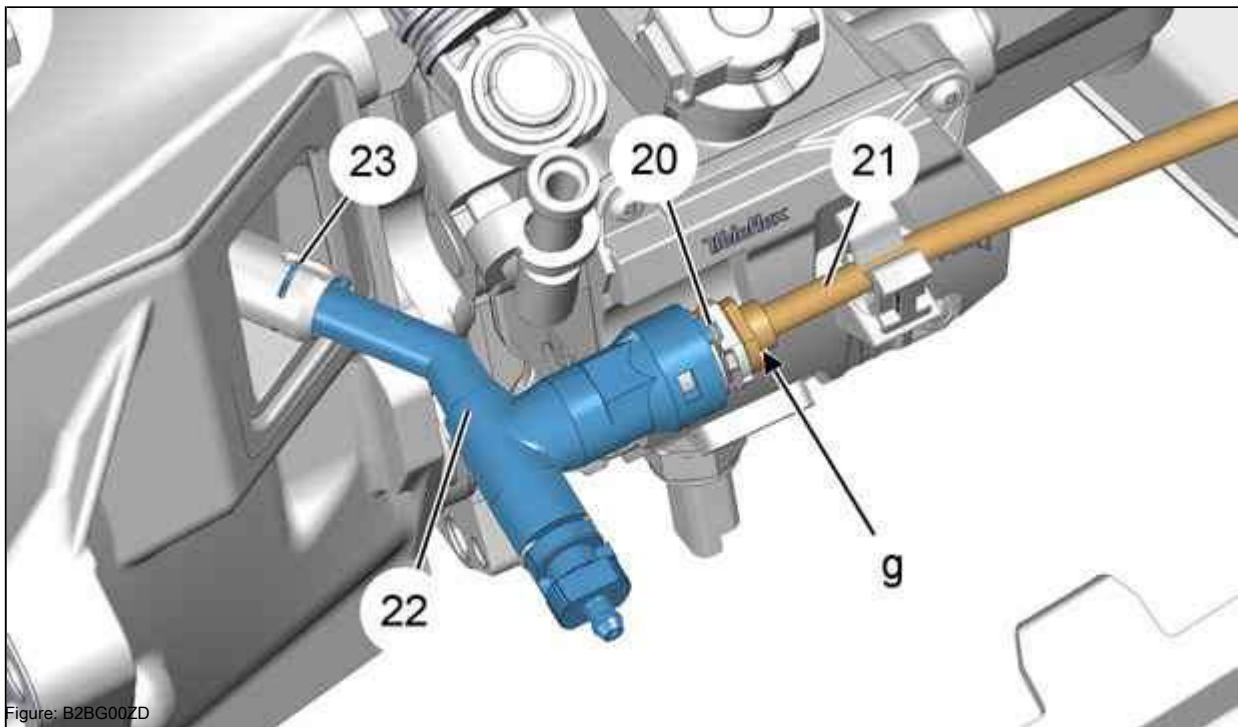


Figure: B2BG00ZD

Detach the retainer (20) (Do not remove).
 Disconnect the hydraulic pipe (21) (at "g"). Remove:

- Retainer (23)
- Bleed connection (22)
- Transmission

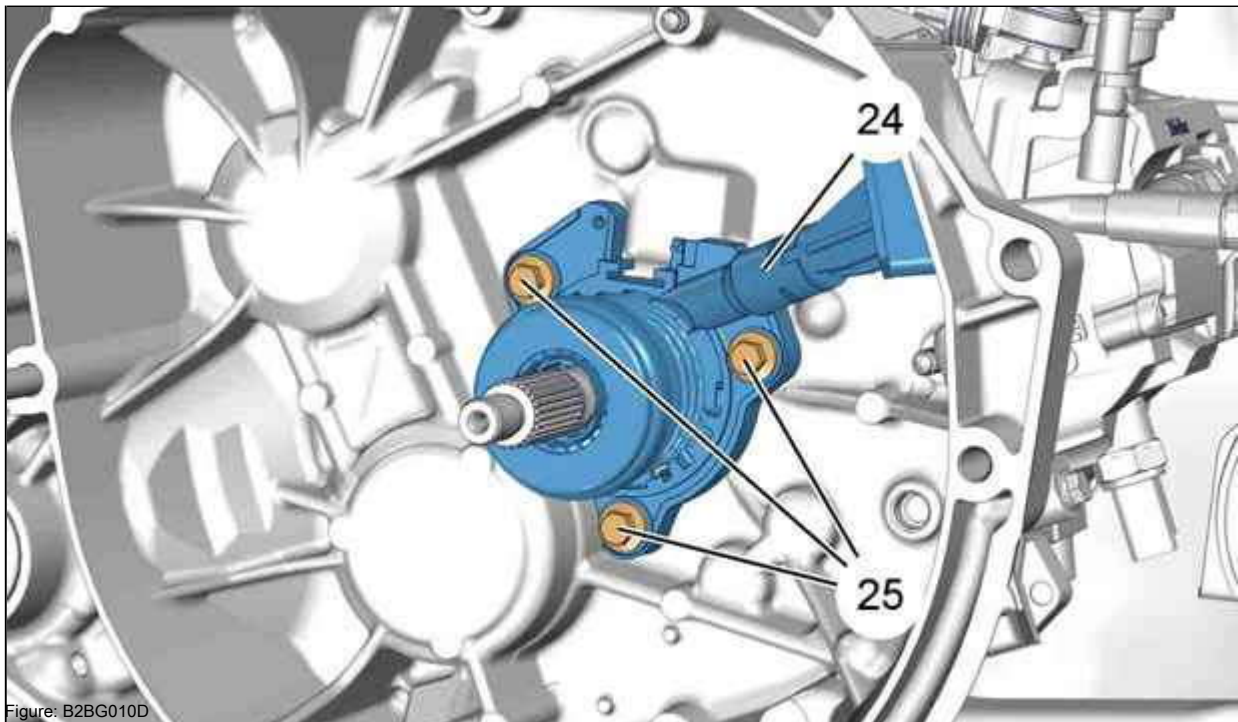


Figure: B2BG010D

Remove:

- the bolts (25)
- Release bearing hydraulic drive (24)

7.2. Installation

ATTENTION : Observe the required tightening torques.

ATTENTION : When connecting, move the hydraulic tube (21) along its axis and do not use it as a lever in order not to damage it.

Install:

- Release bearing hydraulic drive (24)
- the bolts (25)
- Transmission
- Bleed connection (22)
- Retainer (23)

Tighten the lock (20).

Connect the hydraulic pipe (21) (at "g").

8. Hydraulic clutch pipe

ATTENTION : When connecting and disconnecting, move the hydraulic tube (10) only along its axis and do not use force like a lever to avoid breaking the tube.

NOTE: There are 2 systems for connecting the hydraulic drive tube (10) with the clutch slave cylinder (11).

8.1. Removal: Clutch Master Cylinder Sides

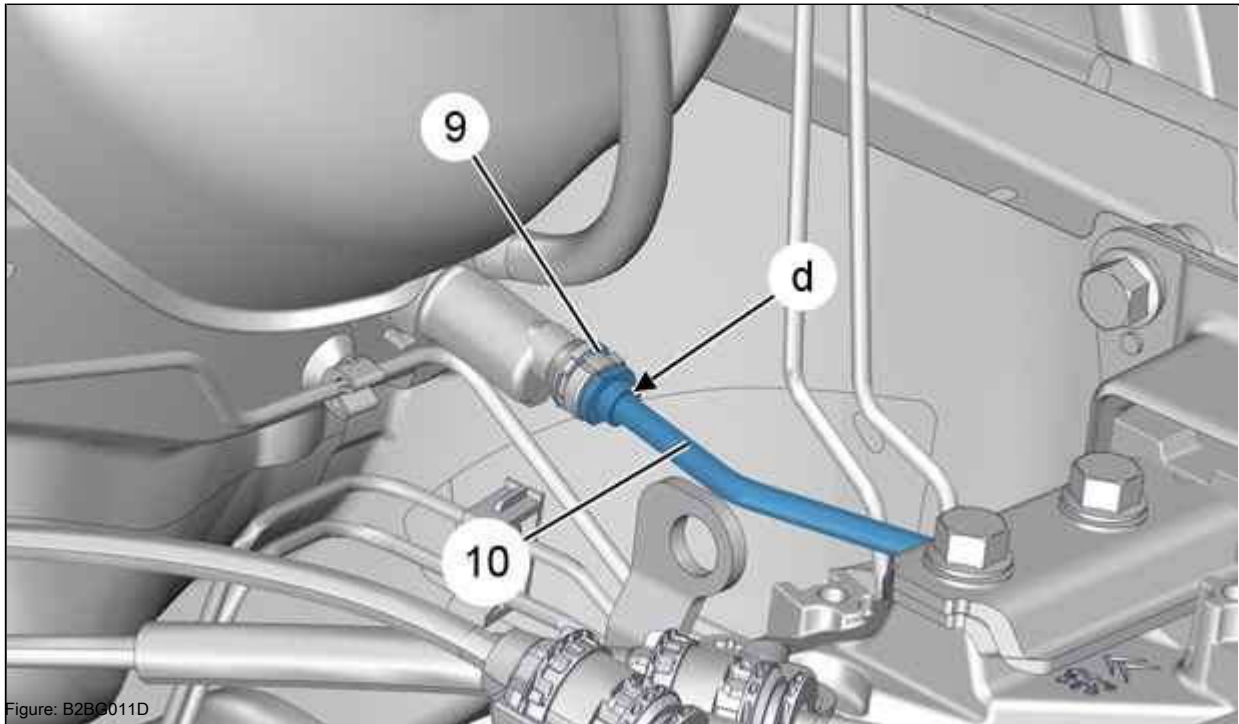
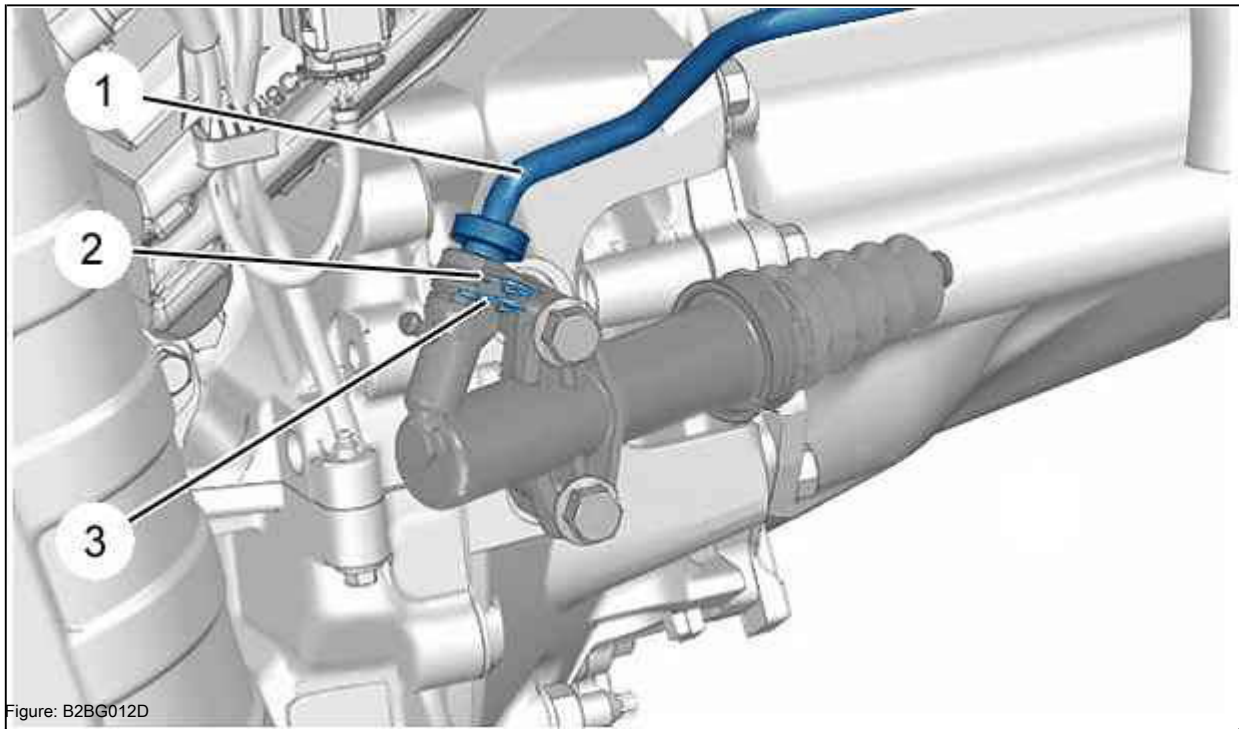


Figure: B2BQ011D

Detach the latch (9) (Do not remove).

Disconnect the hydraulic pipe (10) (at "d").

8.2. Removal: Clutch Actuator Cylinder Side (Dual Retainer Bleeding System)



ATTENTION : Allow brake fluid to leak out. Use rags.

Detach catches (2), (3) (Do not remove). Disconnect the hydraulic line (1).

8.3. Removal: Clutch Actuator Cylinder Sides (Lead Bleed System)

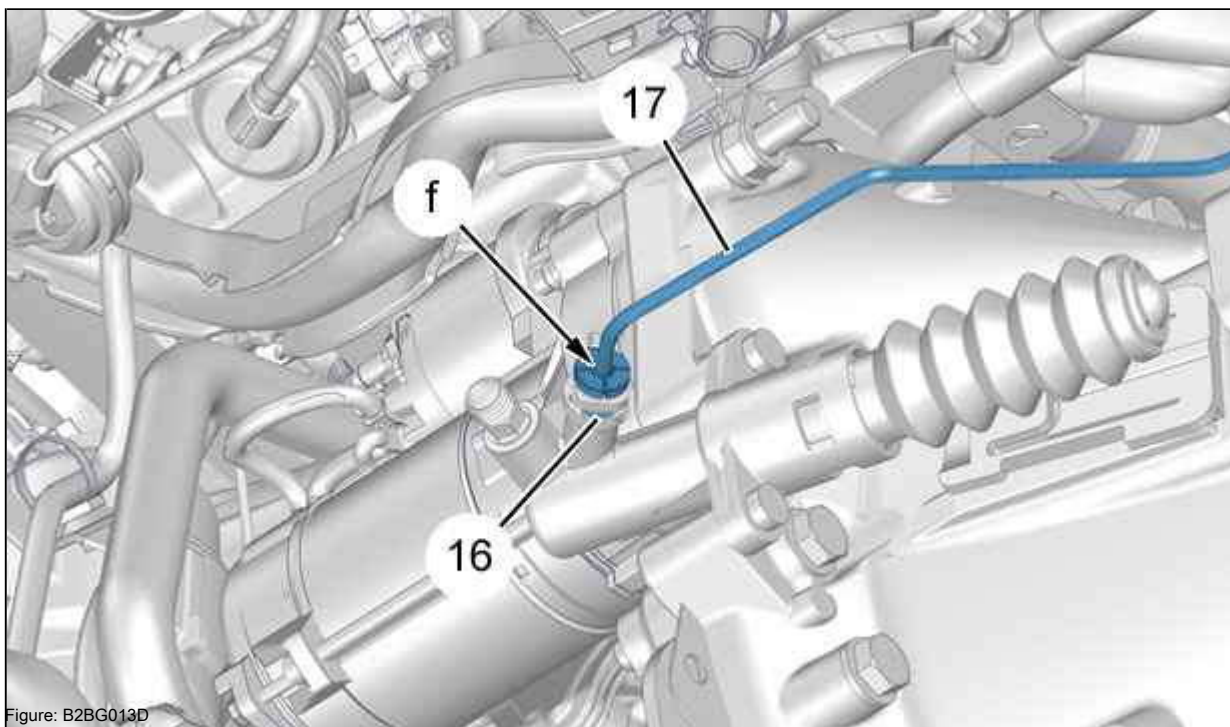


Figure: B2BG013D

ATTENTION : Allow brake fluid to leak out. Use rags.

Detach the retainer (16) (Do not remove).

Disconnect the hydraulic pipe (17) (at "f").

8.4. Removal: Hydraulic squeeze device bleed stub side

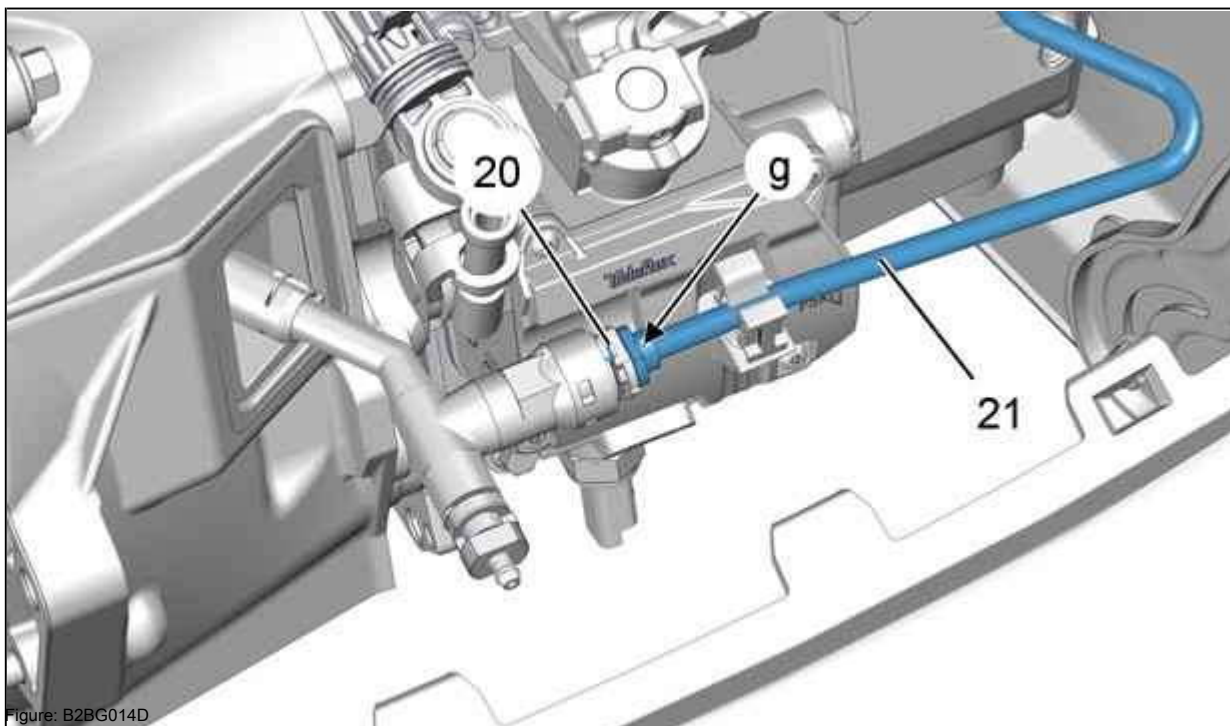


Figure: B2BG014D

Detach the retainer (20) (Do not remove).

Disconnect the hydraulic pipe (21) (at "g").

8.5. Installation

ATTENTION : When connecting, move the hydraulic tube (21) along its axis and do not use it as a lever in order not to damage it.

Condition of pumping fitting for hydraulic release bearing (24):

- Clamp the latch (20)
- Connect the hydraulic pipe (21) (in "g")

From the side of the clutch slave cylinder (22) (bleeding system with screw):

- Clamp the latch (16)
- Connect the hydraulic pipe (17) (in "f")

From the side of the clutch slave cylinder (15) (Bleeding system with double detent):

- Clamp the latch (3)
- Connect the hydraulic pipe (1)

From the side of the clutch master cylinder (11):

- Clamp the latch (9)
- Connect the hydraulic pipe (10) (in "d")

9. Installation (Continued)

Bleed the clutch hydraulic drive.

Install the removed hydraulic clutch elements. Lower the vehicle to the ground.

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

ATTENTION : Check that the bleed opening is correctly closed by operating the clutch pedal several times and checking that there are no leaks or seeping (risk of vehicle fire in the event of a leak).

REMOVAL REFITTING: CLUTCH MECHANISM

MANDATORY: Comply with safety and cleanliness requirements

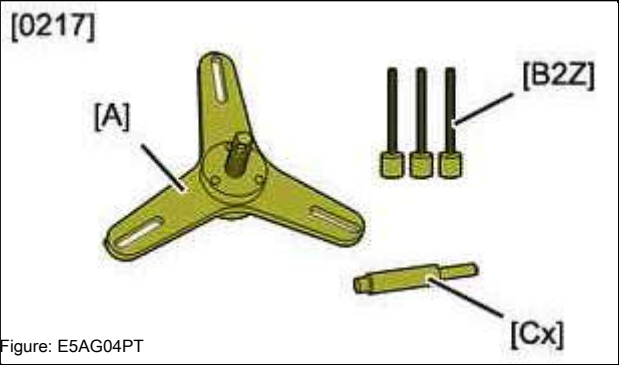


ATTENTION : To improve the centering of the friction elements and eliminate engine jerks, vibration and noise, compress the clutch mechanism when tightening the mounting bolts;
[0217].

1. Equipment

Adaptation

Reference Name

 <p>Figure: E5AG04PT</p>	[0217]	Device for compression mechanism clutch
	[0217A]	Compressor Clutch
	[0217 B2Z]	Holding rod (Ø8 mm)
	[0217Cx]	Rod for centering the clutch
		(According to the gearbox, see the table below)

Clutch centering rod

Engines	[0217C1]	[0217C2]	[0217C3Z]	[0217C4]	[0217C5Z]	[0217C6Z]	[0217C7]
DV4		BE	MA / MAP				
DV4 C						MA / MAP	
DV6	MCM	BE			MCP		
DV6UC			BE				
DV6C (M)					MCP / MCM BE		
DV6D (M)			BE				
DV6E (M)			BE				
DW10	ML / BE				MCP		
DW12	ML						W6MBA
4B12							W5MBA
EP3 EP3C			BE / MA / MAP				
EP6 EP6C (M)			BE / MA / MCM		MCP		
EP6CDTR					MCM		
EP6DTS					MCM		
EP6CDT					MCM / MCP		
EP6CDTX					MCM		

ES9				ML			
ET3			MA / MAP				
EW10						BE / MCP	
EW12						BE	
EW6						BE	
EW7						BE	
TU1			MA				
TU3			MA / MAP				
TU5			MA / MAP			BE	
SOFIM	MLGU5			M40			
PUMA	MLGU5 / MLGU6						
1.3 DTE					MTM / MTA		

2. Clutch mechanism with automatic gap selection device

2.1. Withdrawal

Remove the gearbox.

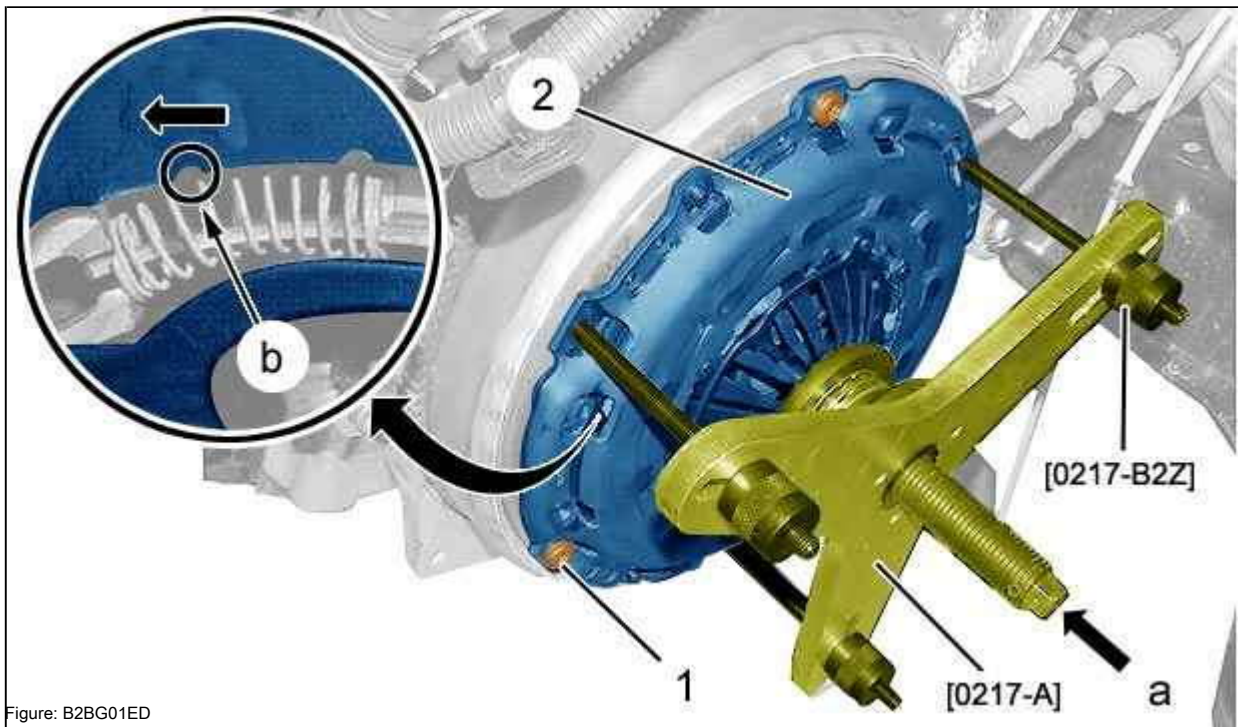
NOTE: Mark the position of the lash selector clutch in relation to the engine tandem flywheel (DVA).

ATTENTION : The mechanism and the clutch disc are originally "paired" and cannot be replaced separately.



Figure: B2BG01DD

Install tool [0217CX].



Remove the 3 mounting bolts (1) (One bolt on the dual element).

Install tools [0217A] and [0217B2Z] on the clutch mechanism (2). Screw in:

- 3 retaining rods [0217B2Z]; in place of screws (1)
- Squeeze the clutch mechanism (2) by rotating the center bolt of the tool [0217A] (at "a")

ATTENTION : When compressed, the spring travel must not go beyond the "b" mark to prevent destruction of the clutch mechanism (2).

Remove the remaining screws (1).

Release the clutch mechanism (2) by acting on the center bolt of the tool [0217A] (at "a"). Remove tools [0217A] and [0217B2Z].

Remove:

- Clutch mechanism (2)
- Clutch disc

2.2. Installation in place; General operations

ATTENTION : Observe the correct tightening torques for the screw connections.

Visually check:

- Free of impact marks or cracks on the engine flywheel holder
- Flywheel wear
- Status of the gear starter
- Clutch mechanism (2)

If there is a clutch mechanism (2):

- Replace the crankshaft oil seal
- Replace clutch thrust bearing guide

ATTENTION : Do not reuse a clutch disc whose hub shows any signs of corrosion.

Eliminate all traces of corrosion from the primary shaft and from the bearing guide; With metal

brushes.

ATTENTION : Completely clean the input shaft along its entire length, completely clean the input shaft along its entire length, around its entire circumference and in all its splines.

Vehicles equipped with a gearbox with a mechanical clutch release bearing: Spray a small amount of MOLYCOTECRAPID PLUS (aerosol) grease on the input shaft and on the clutch release bearing guide sleeve.

Vehicles equipped with a gearbox with a hydraulic clutch release bearing: Lubricate the input shaft splines with Klüberpaste46MR 401 grease.

ATTENTION : Excessive lubrication will oil the clutch disc and cause noise when engaged in neutral, slipping or vibration when engaging the clutch.

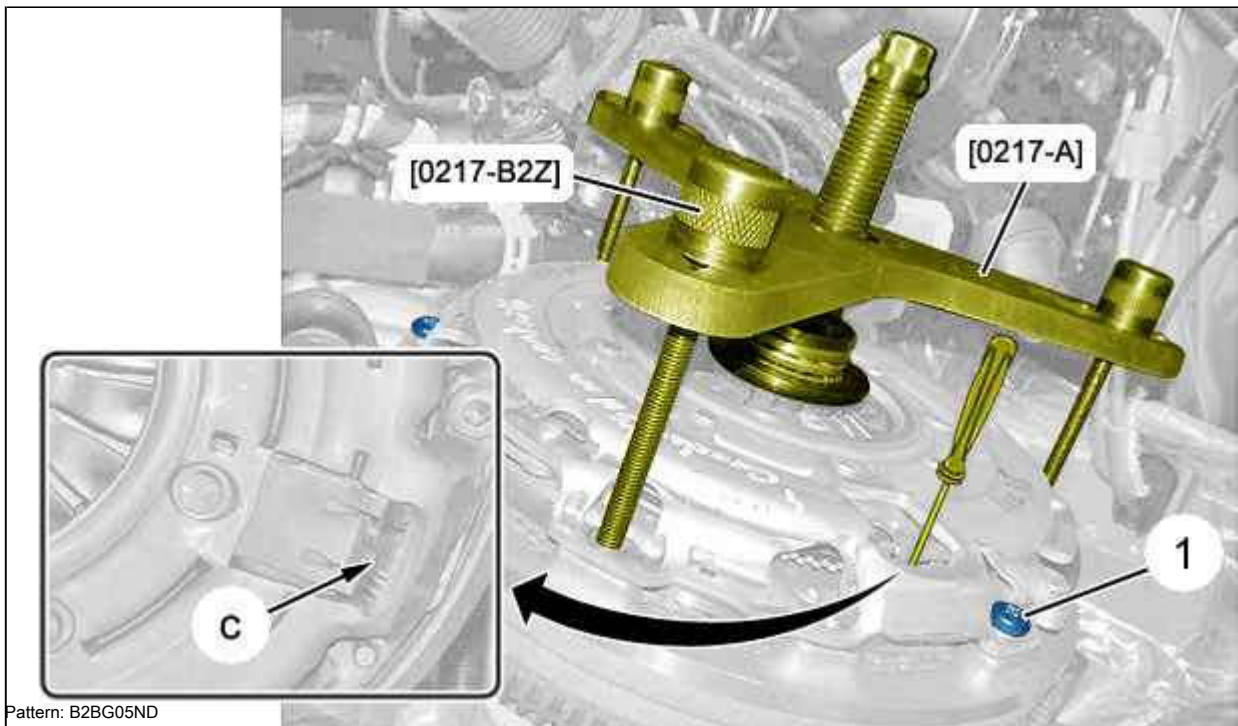
NOTE: Protect the interior of the clutch card from grease.

Wipe off excess grease with a rag from the tops of the splines and the end of the input shaft.

2.3. Feature ' ; Used re-engaging device for automatic gap compensation; Supplier: VALEO

Installation of an automatic control system for clutch clearance. Remove the clutch disc.

Center the clutch disc; Using the tool [0217CX]. Installing the clutch mechanism (2).



Install tools [0217A] and [0217B2Z] on the clutch mechanism (2). Screw in the 3 retaining rods [0217B2Z] in place of the fixing screws (1).

Using a small thin flat screwdriver; Disengage the clutch (at "c").

2.4. Reinstallation; Used re-engagement with automatic backlash compensation; General operations

Installation of an automatic control system for clutch clearance.

ATTENTION : Clearance elimination is carried out without clutch disc.

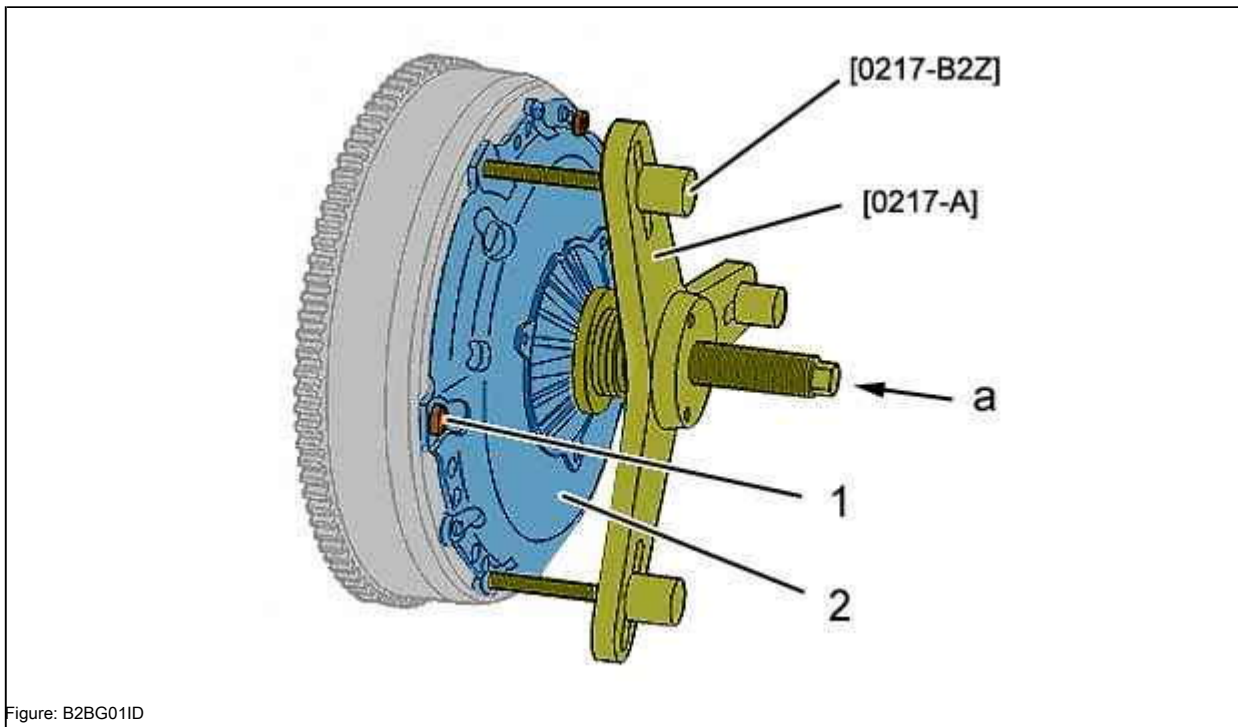


Figure: B2BG01ID

Install clutch mechanism (2) without clutch disc.

Install tools [0217A] and [0217B2Z] on the clutch mechanism (2). Screw in:

- The 3 retaining rods [0217B2Z] in place of the fixing screws (1)
- Squeeze the clutch mechanism (2) by rotating the center bolt of the tool [0217A] (at "a")

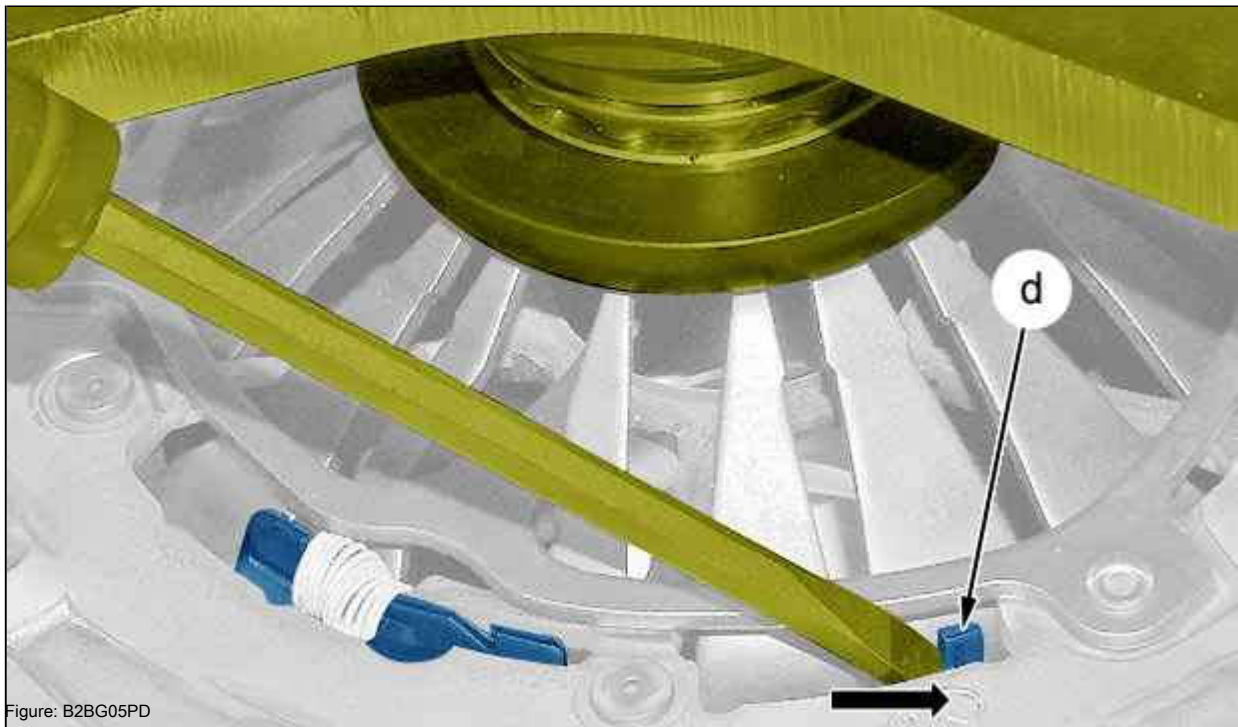


Figure: B2BG05PD

Keep the clearance adjustment springs compressed and unscrew the centre bolt of the tool [0217A] (at "a") a few turns to detension the clutch mechanism (2).

Compress the 3 springs of the gap selector; Using screwdrivers; Press the pointer (in "d") (in accordance with the arrow).

ATTENTION : Keep the clearance adjustment springs compressed and unscrew the center bolt of the tool [0217 A] (at "a") a few turns to detension the clutch mechanism (2). The backlash springs must remain compressed.

Unscrew the center bolt of the tool [0217A] (at "a") by several turns to detension the clutch mechanism (2). Remove:

- Attachments [0217A] and [0217B2Z]
- Clutch mechanism (2)

Install the clutch mechanism (2) without clutch disc (follow the procedure for "installing a new clutch mechanism with automatic clearance selection device").

2.5. Reinstallation: Automatic Gap Clutch (New)

ATTENTION : The clutch mechanism (2) and the clutch disc are matched at the factory and cannot be replaced separately.

ATTENTION : When refitting it, position the face of the clutch disc where it says n ° PSA 96 XXX XXX 80, gearbox end.

Remove the clutch disc.

Center the clutch disc; Using the tool [0217CX].

NOTE: Not removing the device [0217CX].

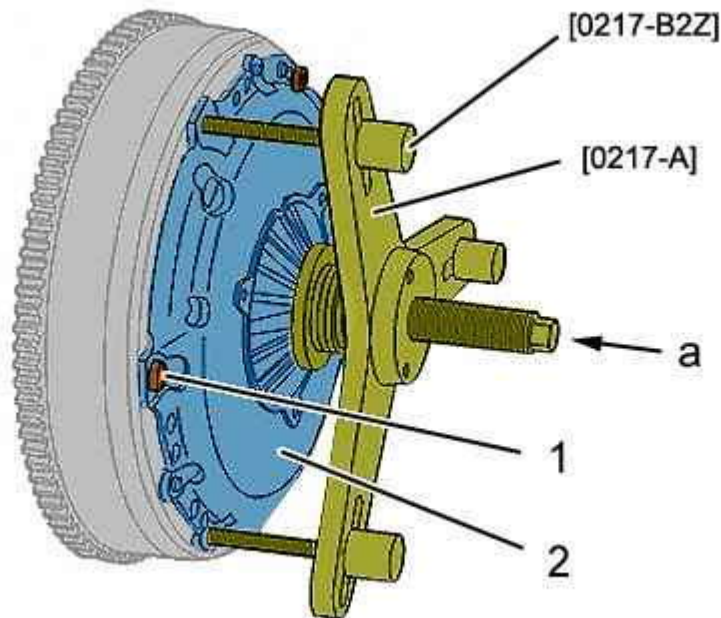


Figure: B2BG01ND

Installing the clutch mechanism (2).

Install tools [0217A] and [0217B2Z] on the clutch mechanism (2). Screw in:

- The 3 retaining rods [0217B2Z] in place of the fixing screws (1)
- Squeeze the clutch mechanism (2) by rotating the center bolt of the tool [0217A] (at "a")

Install the bolts (1).

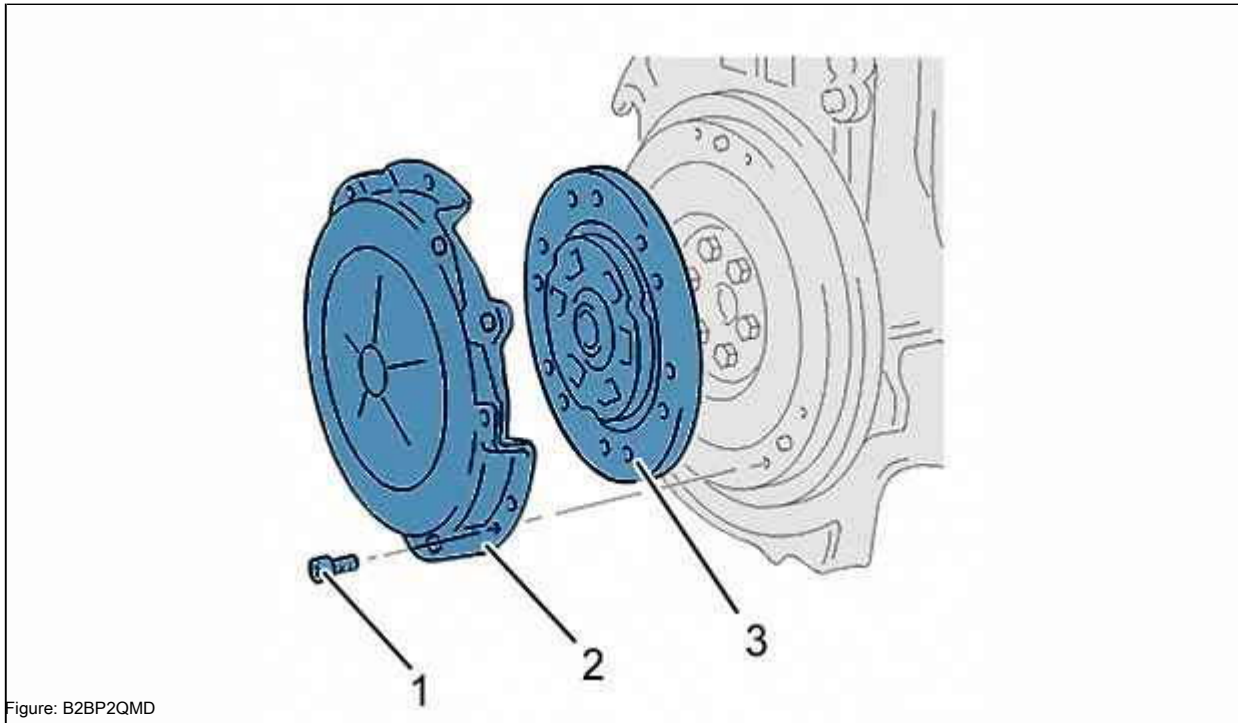
Unscrew the centre bolt of the tool [0217A] (at "a") by several turns to detension the clutch mechanism (2). Remove tools [0217A], [0217B2Z] and [0217CX].

Install: The remaining fixing screws (1). Install the gearbox in place.

3. Clutch mechanism without device for automatic gap compensation

3.1. Withdrawal

Remove the gearbox.



Remove:

- mounting bolts (1)
- Clutch mechanism (2)
- Clutch Disc (3)

3.2. Reinstallation

ATTENTION : Observe the correct tightening torques for the screw connections.

Visually check:

- Free of impact marks or cracks on the engine flywheel holder
- Flywheel wear
- Status of the gear starter
- Clutch mechanism (2)

If there is a clutch mechanism (2):

- Replace the crankshaft oil seal
- Replace clutch thrust bearing guide

ATTENTION : Do not reuse a clutch disc (3) whose hub shows any signs of corrosion.

Eliminate all traces of oxidation on the input shaft and the thrust guide. With a metal

brushes.

ATTENTION : Completely clean the input shaft along its entire length, completely clean the input shaft along its entire length, around its entire circumference and in all its splines.

Vehicles equipped with a gearbox with a mechanical clutch release bearing: Spray a small amount of MOLYCOTEGRAPID PLUS (aerosol) grease on the input shaft and on the clutch release bearing guide sleeve.

Vehicles equipped with a gearbox with a hydraulic clutch release bearing: Lubricate the input shaft splines with KLUBERPASTE 46MR 401 grease.

NOTE: Protect the interior of the clutch card from grease.

Wipe off excess grease with a rag from the tops of the splines and the end of the input shaft.

ATTENTION : When refitting it, position the face of the clutch disc (3) where it says n ° PSA 96 XXX XXX 80, gearbox end.

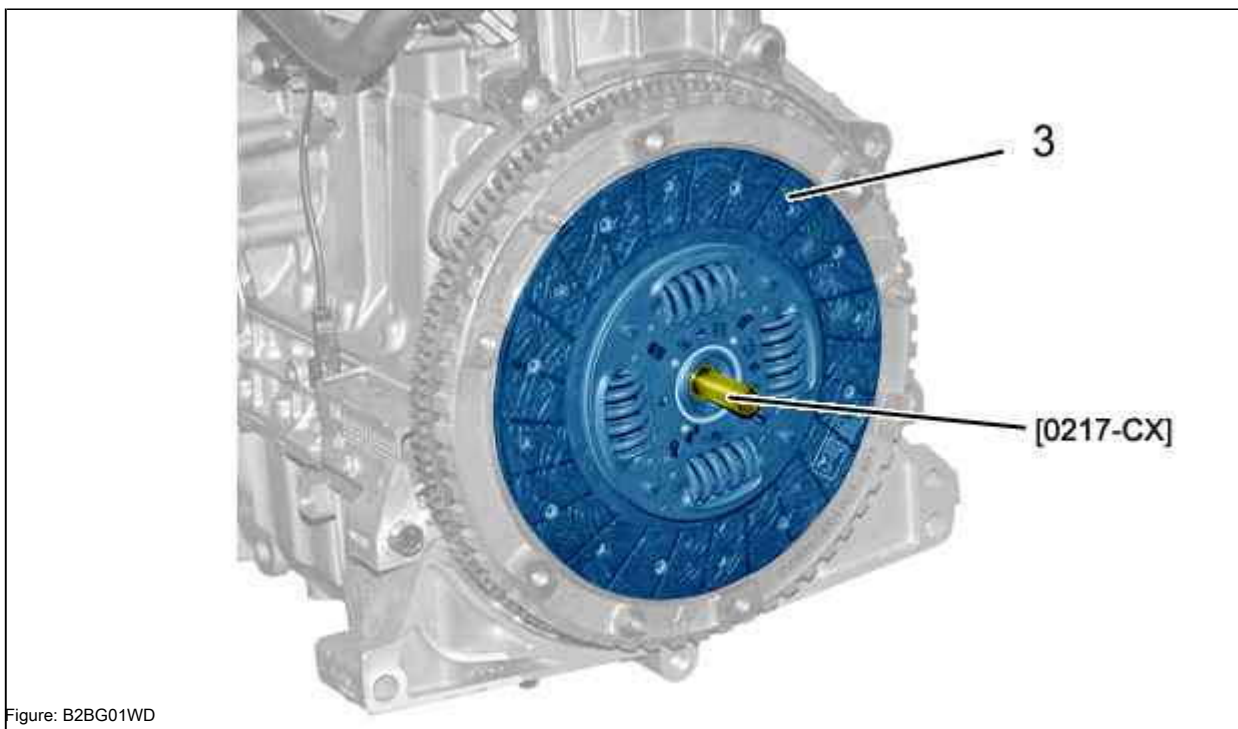


Figure: B2BG01WD

Remove the clutch disc (3).

Center the clutch disc (3); Using the tool [0217CX].

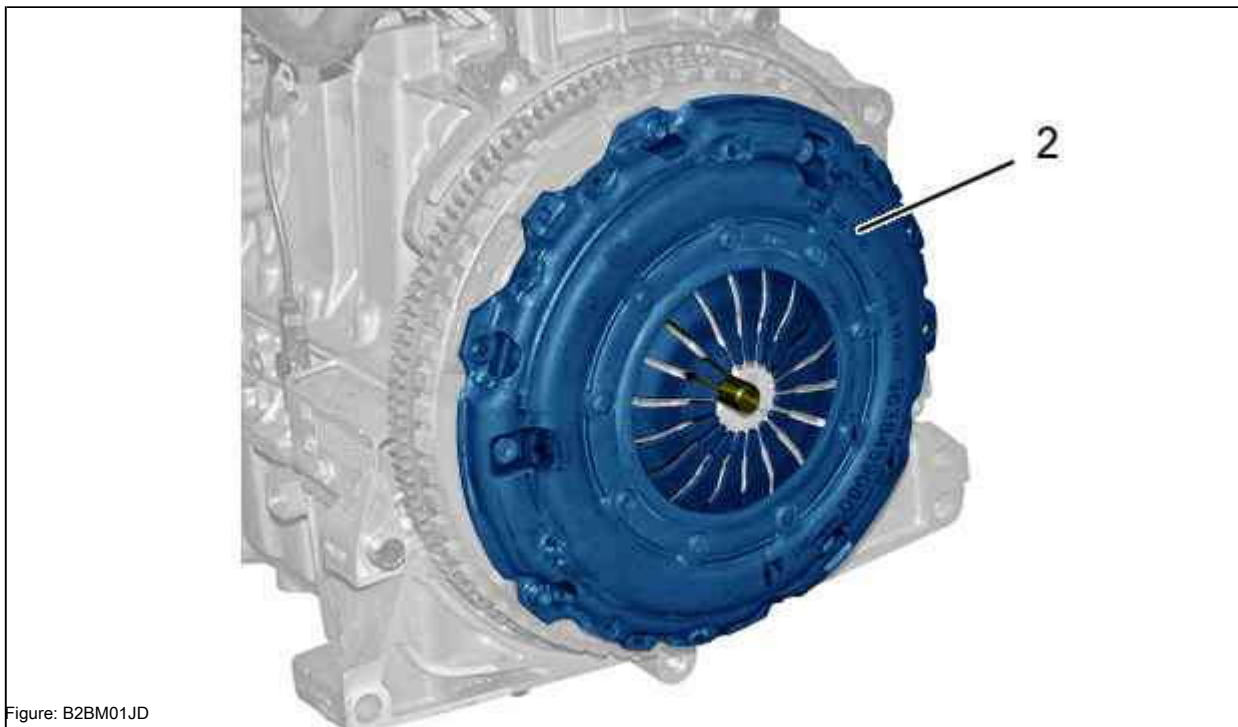


Figure: B2BM01JD

Installing the clutch mechanism (2).

NOTE: Not removing the device [0217CX].

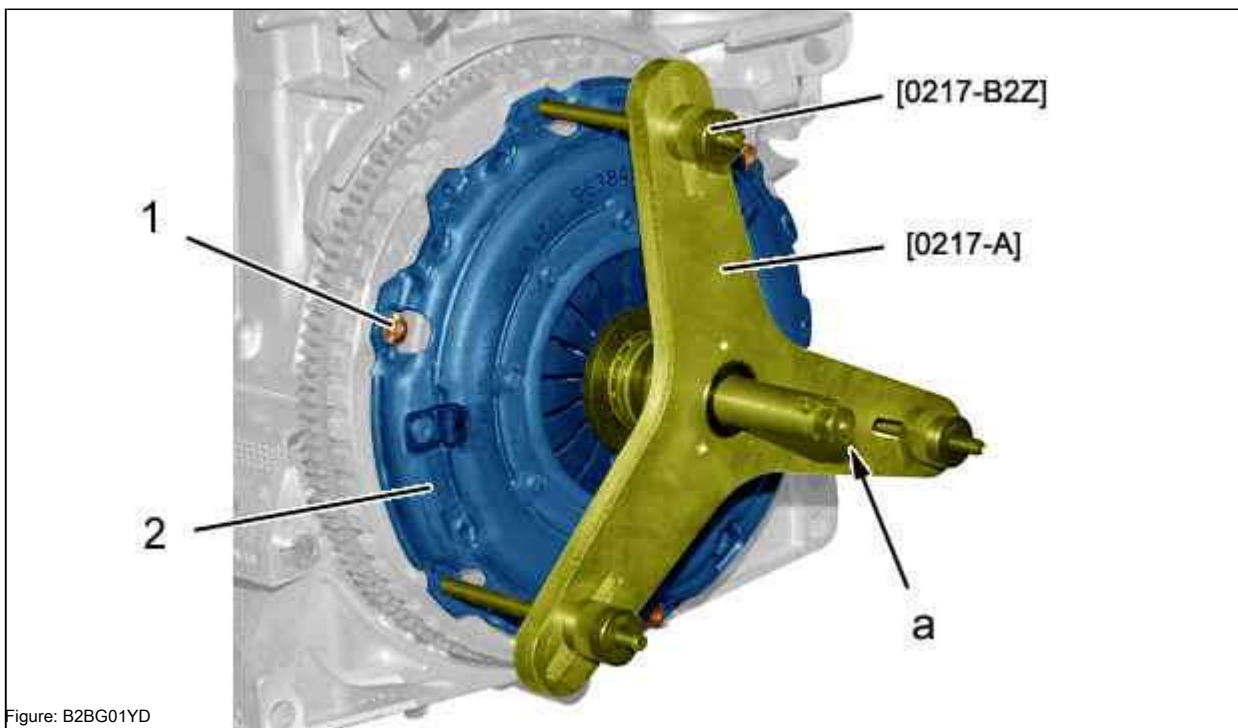


Figure: B2BG01YD

Set the position of the tool [0217A] and [0217B2Z].

Compress the clutch mechanism (2) by 10mm by turning the center bolt of the tool [0217A] (in "a"). The first 3 fixing screws (1).

Release the clutch mechanism (2) by acting on the center bolt of the tool [0217A] (at "a"). Remove tools [0217A], [0217B2Z] and [0217CX].

Install:

- Theremaining fixing screws (1)
- Transmission

PURGE: HYDRAULIC CLUTCH ACTUATOR

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : Use only new and non-emulsified brake fluid. Do not allow dirt to enter the hydraulic system.

There are several pumping systems:

- Pumping system with double locking
- Pumping system with screw

1. Preliminary operation

Place the car on a lift.

Remove the necessary bleeding elements for the hydraulic clutch control unit.

NOTE: Use only certified hydraulic fluids recommended by the manufacturer.

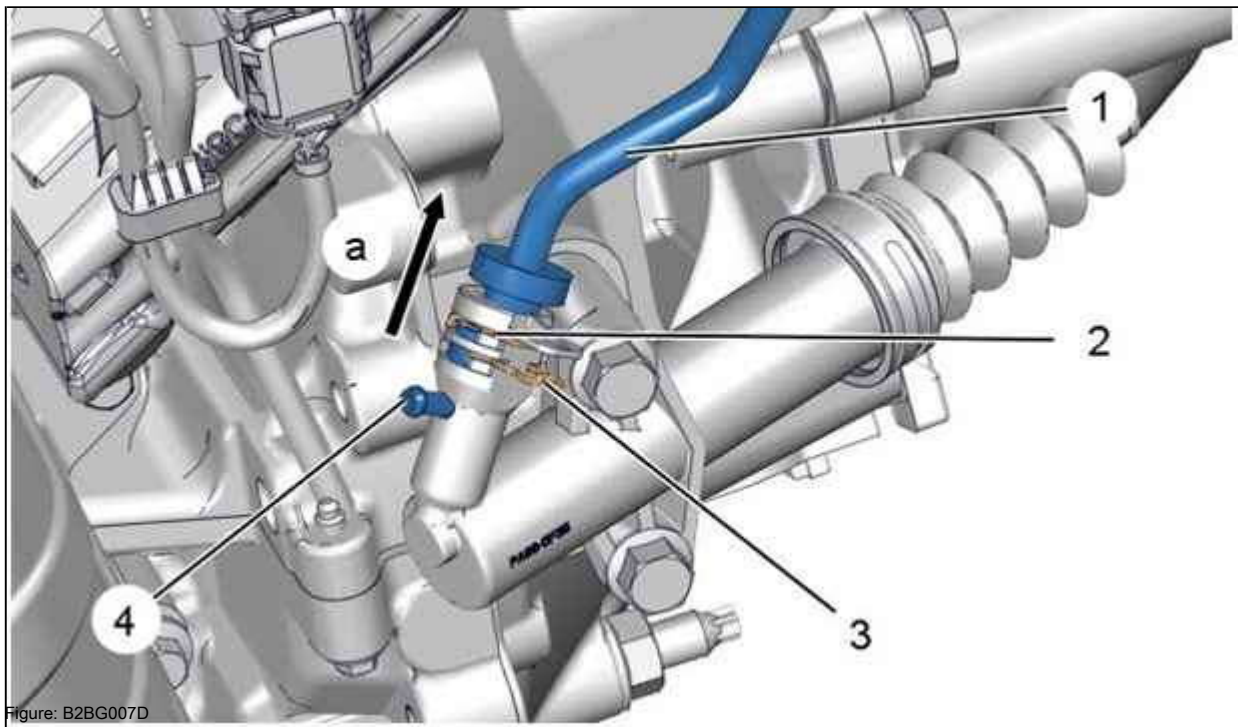
MANDATORY: While purging, observe the level of brake fluid in the reservoir and top up (if necessary).

Before carrying out any work:

- Mark the brake fluid level in the reservoir
- Remove the plug from the brake fluid reservoir
- Fill the reservoir with brake fluid to its maximum volume

2. Purge: Hydraulic Clutch Actuator (Dual Detent Purge System)

ATTENTION : When engaging and disengaging the clutch, manipulate the hydraulic pipe and do not use the lever to avoid bursting.



Remove the protective plug from the bleed port (4). Store protective caps in a clean place.

Connect the transparent tube to the bleed port (4).

ATTENTION : The end of the transparent tube must be immersed in a container with brake fluid.

Tighten the lock (2).

ATTENTION : The retainer (2) always remains attached to the hydraulic clutch actuator during bleeding.

Detach retainer (3).

Pull out the hydraulic line (1) to clear the bleed ports (4) (As shown arrow "a").

Leave the brake fluid to flow freely by gravity until air bubbles disappear. Tighten the lock (3).

Insert the hydraulic line (1) to close the bleed ports (4) (counter-arrow).

Fill the reservoir with brake fluid to its maximum volume.

NOTE: The next step requires two workers.

Detach retainer (3).

Pull out the hydraulic line (1) to clear the bleed ports (4) (Counter direction arrow "a").

Slowly depress the clutch pedal all the way. Tighten the lock (3).

Insert the hydraulic line (1) to close the bleed ports (4) (In the opposite direction of the arrow "a").

Detach retainer (2).

NOTE: Move the clutch pedal by hand to the extreme upper position.

Repeat the operation until clean brake fluid flows out without air bubbles ((20 times the minimum)).

Add brake fluid to the previously marked level.

Replace the brake fluid reservoir plug. Disconnect the transparent hose.

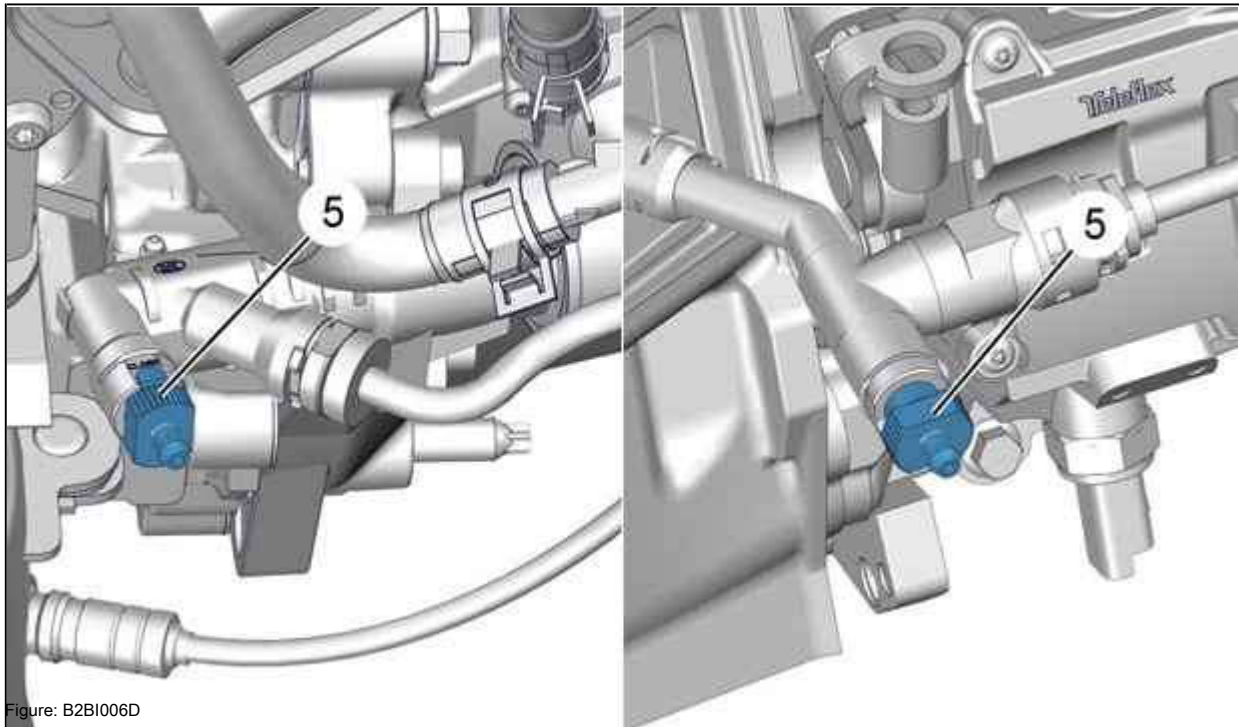
Install the protective plug on the bleed hole (4).

Check the stroke of the receiver cylinder of the hydraulic clutch control unit (refer to the relevant section).

ATTENTION : Check that the bleed opening (4) is correctly closed by operating the clutch pedal several times. Check there are no leaks or seeping (risk of vehicle fire in the event of a leak).

3. Purge: Hydraulic clutch drive (Propeller purge system)

3.1. Quarter-turn system



Remove: Protective plug of the bleeding screw (5). Store protective caps in a clean place.

Connect a transparent hose to the bleed screw (5).

ATTENTION : The end of the transparent tube must be immersed in a container with brake fluid.

NOTE: The next step requires two workers.

Press down and hold the clutch pedal in the down position. Unscrew the bleed screw (5):

- Half turn clockwise for hydraulic clutch actuator cylinder
- Half-turn counterclockwise for pumping

Let the brake fluid drain off by gravity. Tighten the bleed screw (5):

- A half turn clockwise for a hydraulic clutch control slave cylinder
- Half turn clockwise for pumping pump

NOTE: Move the clutch pedal by hand to the extreme upper position.

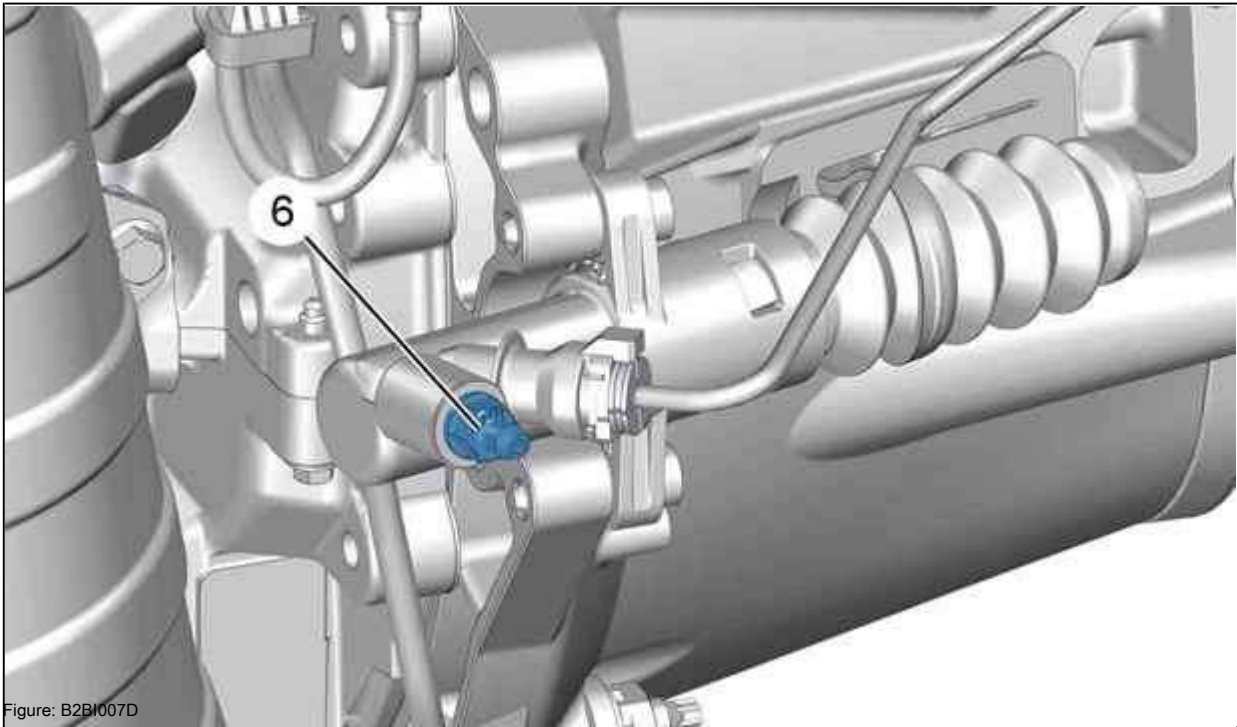
Repeat the operation until clean brake fluid flows out without air bubbles ((20 times the minimum)).

Add brake fluid to the previously marked level. Replace the brake fluid reservoir plug. Disconnect the transparent pipe from the bleed screw (5). Install: Protective plug of the bleed screw (5).

Check the travel of the hydraulic clutch master cylinder (See paragraph 4).

ATTENTION : Check there are no leaks or seeping (risk of vehicle fire in the event of a leak).

3.2. 6-point screw system



Remove: Protective plug of the bleeding screw (6). Store protective caps in a clean place.

Connect a transparent hose to the bleed screw (6).

ATTENTION : The end of the transparent tube must be immersed in a container with brake fluid.

NOTE: The next step requires two workers.

Press down and hold the clutch pedal in the down position. Turn the bleed screw (6) (Counterclockwise).

Let the brake fluid drain off by gravity. Install the bleed screw (6) (clockwise).

NOTE: Move the clutch pedal by hand to the extreme upper position.

Repeat the operation until clean brake fluid flows out without air bubbles ((20 times the minimum)).

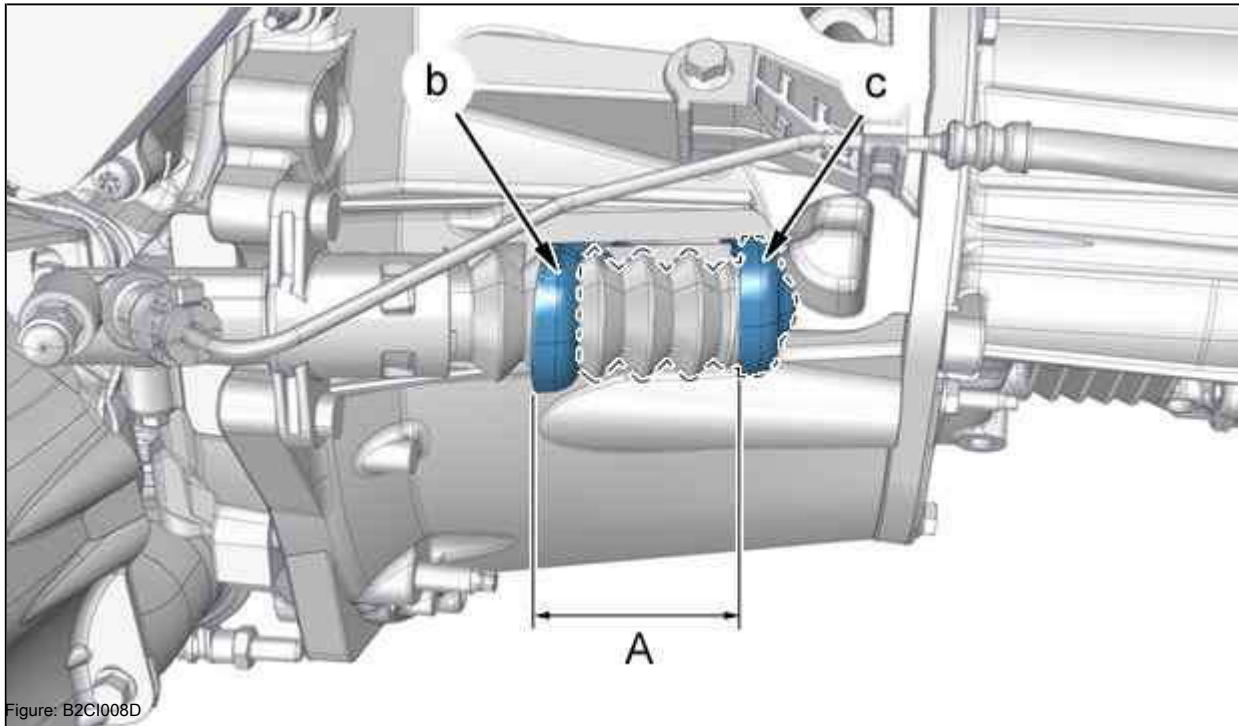
Add brake fluid to the previously marked level. Replace the brake fluid reservoir plug. Disconnect the transparent hose.

Remove the protective cover of the bleed screw (6).

Check the travel of the hydraulic clutch master cylinder (See paragraph 4).

ATTENTION : Check there are no leaks or seeping (risk of vehicle fire in the event of a leak).

4. Checking: Travel of the receiving cylinder of the hydraulic clutch control unit



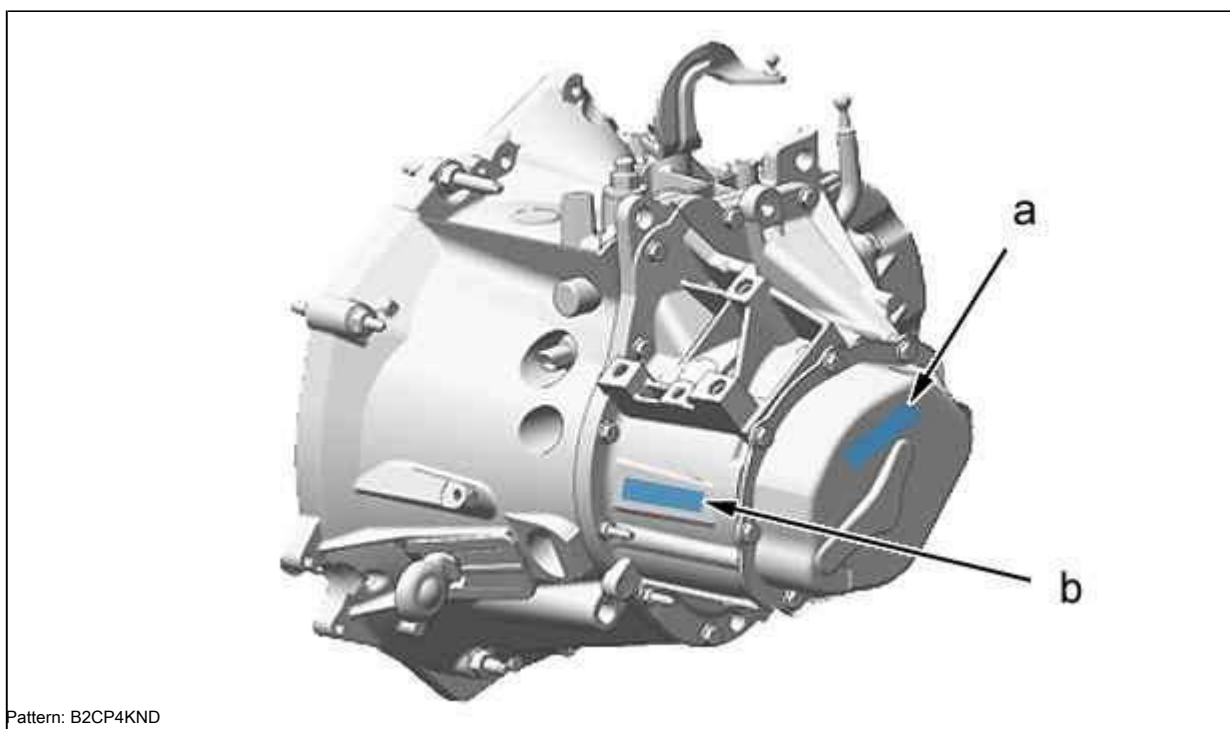
Measure travel "A" from on position "b" to off position "c". Stroke "A" must be between 18 ... 22 mm.

If the air gap is not correct: Carry out the bleeding operations first.

PERFORMANCE IDENTIFICATION: MANUAL GEARBOX TYPE BE4R

1. Identification

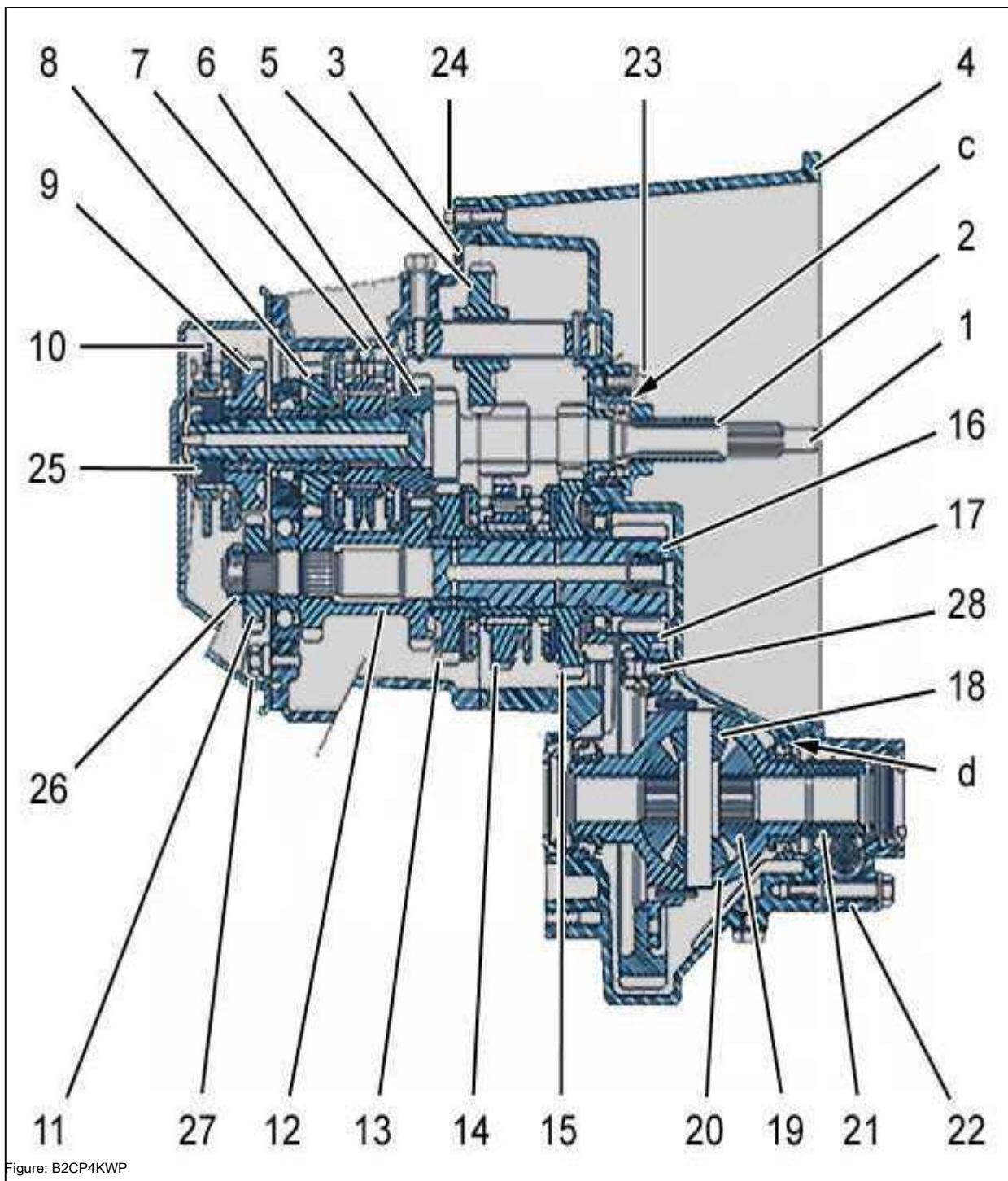
1.1. Outdoor presentation



Pattern: B2CP4KND

"a" is the place where the serial number and the gearbox number are printed. "b" Identification plate.

1.2. Internal presentation



- (1) INPUT SHAFT.
- (2) thrust bearing guide bush. (3) transmission housing.
- (4) clutch housing.
- (5) reverse gear. (6) pinion gear (3rd).
- (7) synchronizer (3rd / 4th gear). (8) pinion gear (4th).
- (9) pinion gear (5th).
- (10) synchronizer (5th).
- (11) driven gear (5th).
- (12) driven gear (3rd / 4th gear).

(13) driven gear (2nd).
 (14) synchronizer (! I / 2nd gear). (15) driven gear (1st).
 (16) output shaft.
 (17) Ring gear. (18) satellites.
 (19) planetary gears.
 (20) differential housing.
 (21) tachometer bolt.
 (22) Extension cable.
 (23) Release bearing guide retaining bolt. (24) Bolt for clutch card.

(25) Input shaft nut.
 (26) output shaft nut.
 (27) Bolt holding the retaining ring. (28) Differential ring gear screw. "c" adjusting rings: 0.7 to 1.95 mm. "d" adjusting rings: 1.4 to 1.6 mm.

2. Characteristics

2.1. Affiliation

Petrol engines		
Typical design Approved type Gearbox type / Range TU5JP4		
	NFU	BE4 / 5N
TU5JP4B	NFR	
EP6C	5FS	

Diesel Engines		
Typical development	Approved type Transmission type / Range	
DV6TED4 with particulate filter	9HZ	BE4 / 5L
DV6TED4B with particulate filter	9HV	
DV6ATED4	9HX	
DV6AUTED4	9HT	
DV6BTED4		
DV6BUTED4		
DV6BUTED4 with particulate filter 9HS		
DV6CTED	9HL	BE4 / 5L
DV6DTED	9HF	
DV6ETED	9HN	
DV6DTEDM	9HJ	
DV6ETEDM	9HK	

2.2. Gear ratios

Gearbox range 1st BE4 / 5N	2nd	3rd	4th	5th	Reverse gears
	11/38 15/28 31/40	41/39 47/35 12/31	40 11/38	15/28 32/37	
BE4 / 5L	45/37 50/33 12/31	40			

2.3. Speed at 1000min¹ (km / h) (km / h)

Petrol engines			
Allowed type	NFU NFR NFU NFR 5FS		
main gear	15/76		
speedometer gear	Without		

Differential	84		
Tires	195/70 R15	205/65 R15	215/60 R16
Treadmill length 1.999		1,973	2.017
1st	6.85	6.76	6.91
2nd	12.68	12.52	12.80
3rd	18.35	18.11	18.51
4th	24.89	24.56	25.11
5th	31.79	31.38	32.07
Reverse gears 9.16		9.04	7.17

Diesel Engines

Allowed type	9HZ 9HF 9HS		9HV9HX 9HT 9HV9HX 9HT 9HL		
main gear	17/71	17/71	17/73	17/73	17/71
speedometer gear	Without	Without	Without	Without	Without
Differential	84	84	84	84	84
Tires	195/70 R15 205/65 R15	195/70 R15	205/65 R15	215/45 R18	
Treadmill length 1.999		1,973	1.999	1,973	1,986
1st	8.31	8.20	8.09	7.98	8.26
2nd	15.38	15.18	14.96	14.77	15.28
3rd	24.84	24.51	24.16	23.84	24.68
4th	34.93	34.47	33.97	33.53	34.70
5th	43.51	42.95	42.32	41.77	42.23
Reverse gears 11.12		10.97	10.81	10.67	8.56

Diesel Engines

Allowed type	9HF	9HN	9HJ 9HK
main gear	17x71	17x71	17 x 73
speedometer gear	22/18		Without
Differential	84		
Tires	195/55 R16	205/65 R15	195/70 R15
Treadmill length 1,891		1,973	1.999
1st	7.86	8.20	8.09
2nd	14.55	15.18	14.96
3rd	23.50	24.51	24.16
4th	33.04	34.47	33.97
5th	41.16	42.95	42.32
Reverse gears 8.15		8.50	8.38

3. Lubrication

Amount of oil to be filled into an empty gearbox: 1.9 liters. Oil quality: ESSO75W80 EZL 848 or TOTAL 75W80 H 6965. Oil level check: No oil level check (*). Lubrication Intervals: No replacement required.

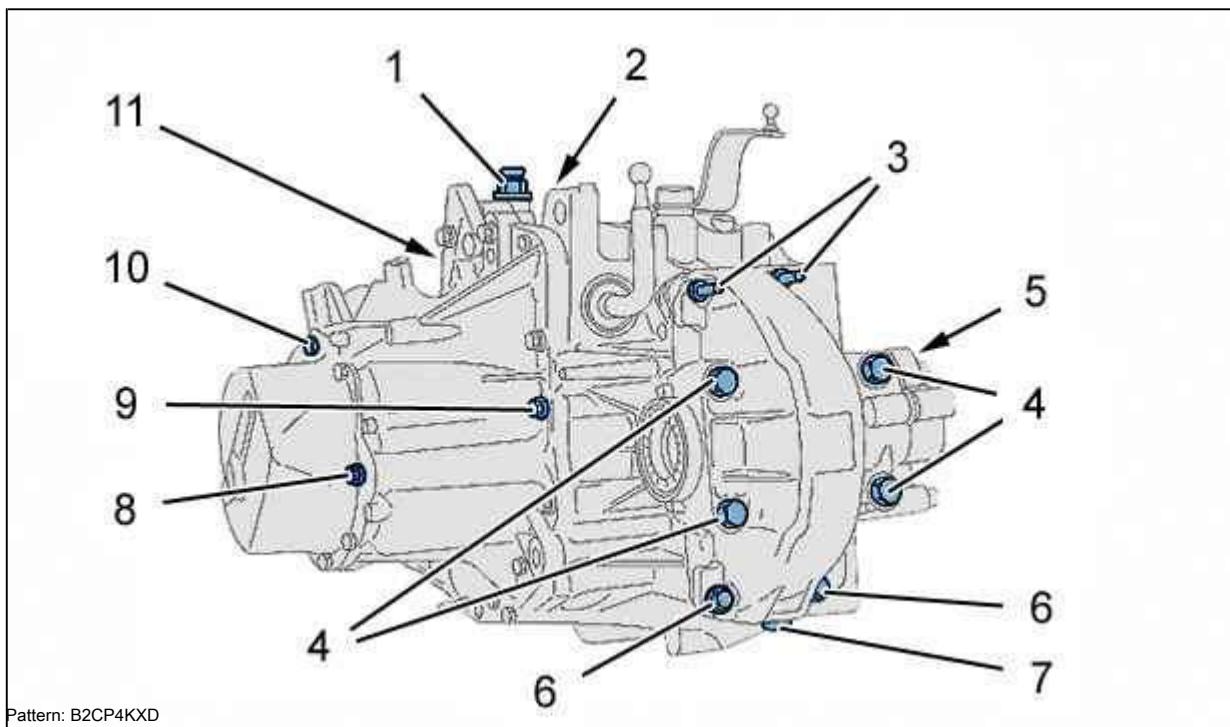
NOTE: (*) Carry out a visual check for leaks every time the engine oil is changed.



Pattern: B2CB04DD

Fill gearbox with oil through purge holes (29).

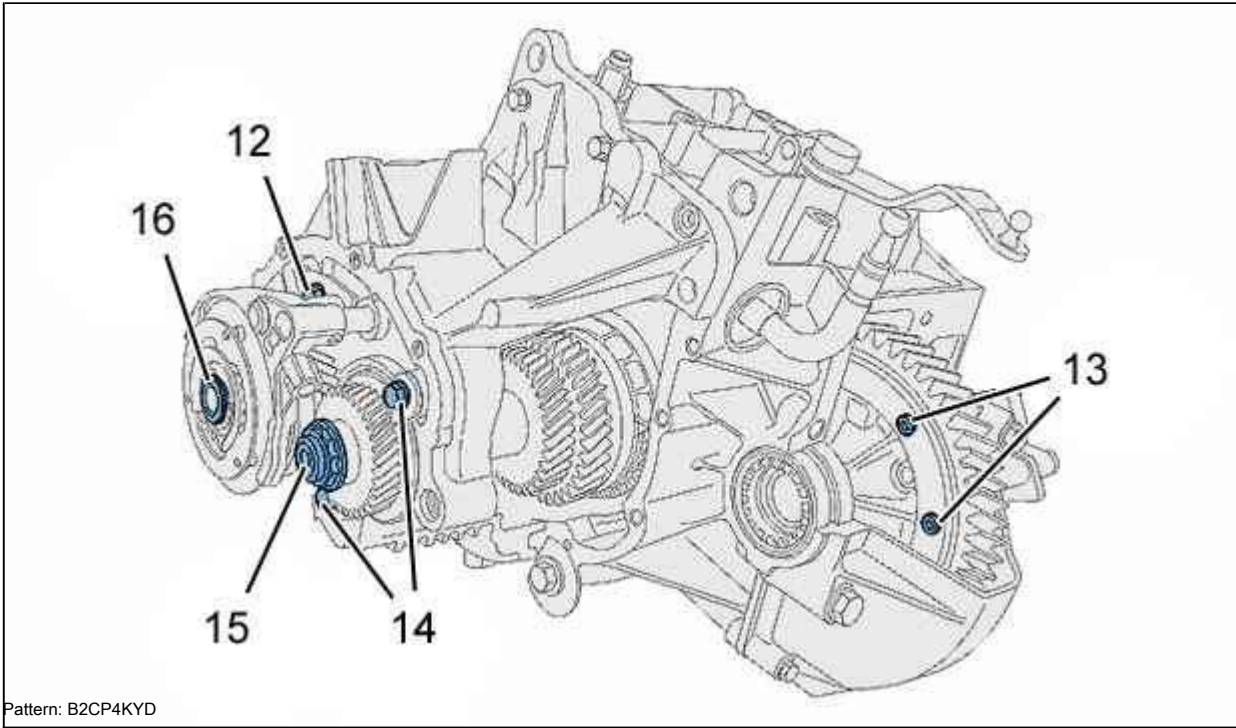
TIGHTENING TORQUES: MANUAL GEARBOX TYPE BE4



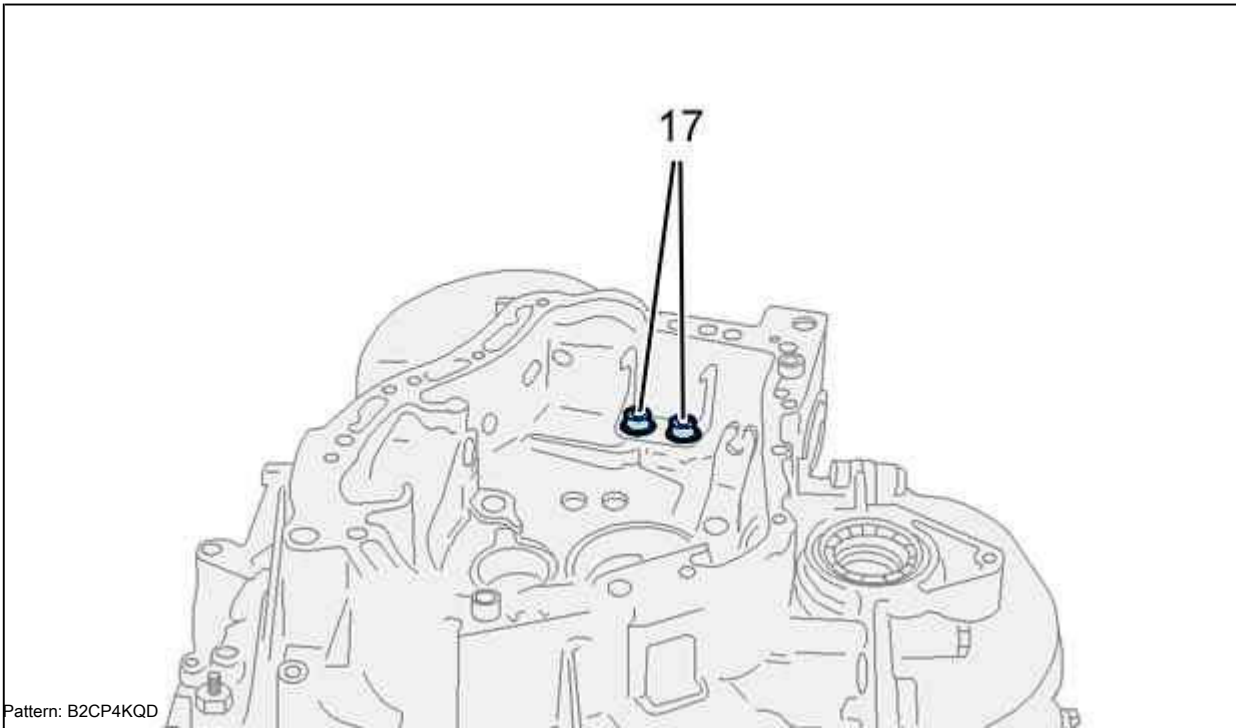
Label Designation

Torque

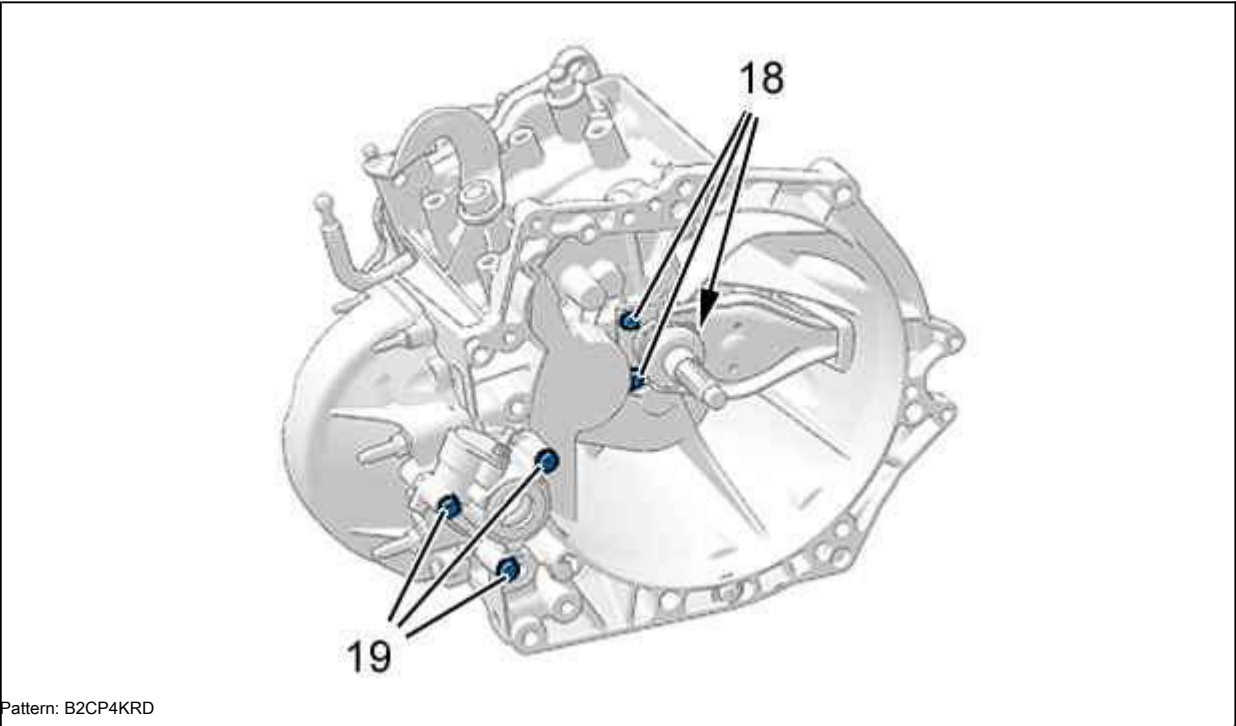
(1)	Ventilation hole	1.5 da.Nm
(2)	Nut for securing the rocker arm axle reverse	4.5 da.Nm
(3)	case	1.5 da.Nm
(4)	Mounting bolt (ØM10) (Differential housing)	4 da.Nm
(five)	Bracket for speedometer connector	1.5 da.Nm
(6)	Bolt (ØM7) (Differential housing) drain plug	1.5 da.Nm
(7)		3.5 da.Nm
(eight)	Level measuring plug	2.2 da.Nm
(nine)	bolts gear	1.5 da.Nm
(ten)	gearbox housing	1.5 da.Nm
(eleven)	clutch housing	1.5 da.Nm
	5th gear housing bolt	2.5 da.Nm



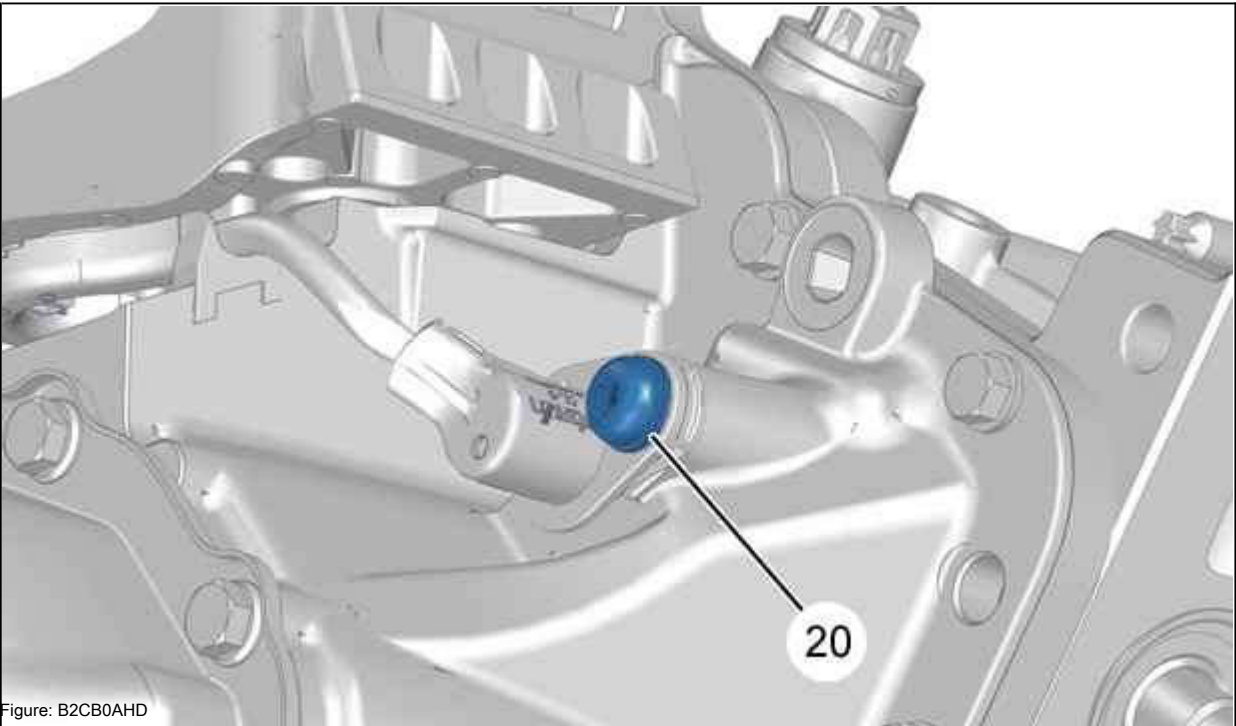
Label Designation		Torque
(12)	Fork axle stop screw	1.5 da.Nm
(13)	differential ring gear screw 3 da.Nm + Angle tightening	35 Bearing cover bolts
(fourteen)		1.5 da.Nm
(fifteen)	output shaft nut	6.5 da.Nm
(sixteen)	Input shaft nut	7.2 da.Nm



Label Designation		Torque
(17)	Gearshift support bolt 1.5 da.Nm	



Label Designation		Torque
(18)	Release bearing guide bolt 1.5 da.Nm Speedometer block mounting bolt	
(nineteen)		1.5 da.Nm



Label Designation		Torque

(20)

Neutral sensor mounting bolt 1 da.Nm

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TIGHTENING TORQUES: ENGINE CONNECTION GEARBOX

1. Gearbox type BE

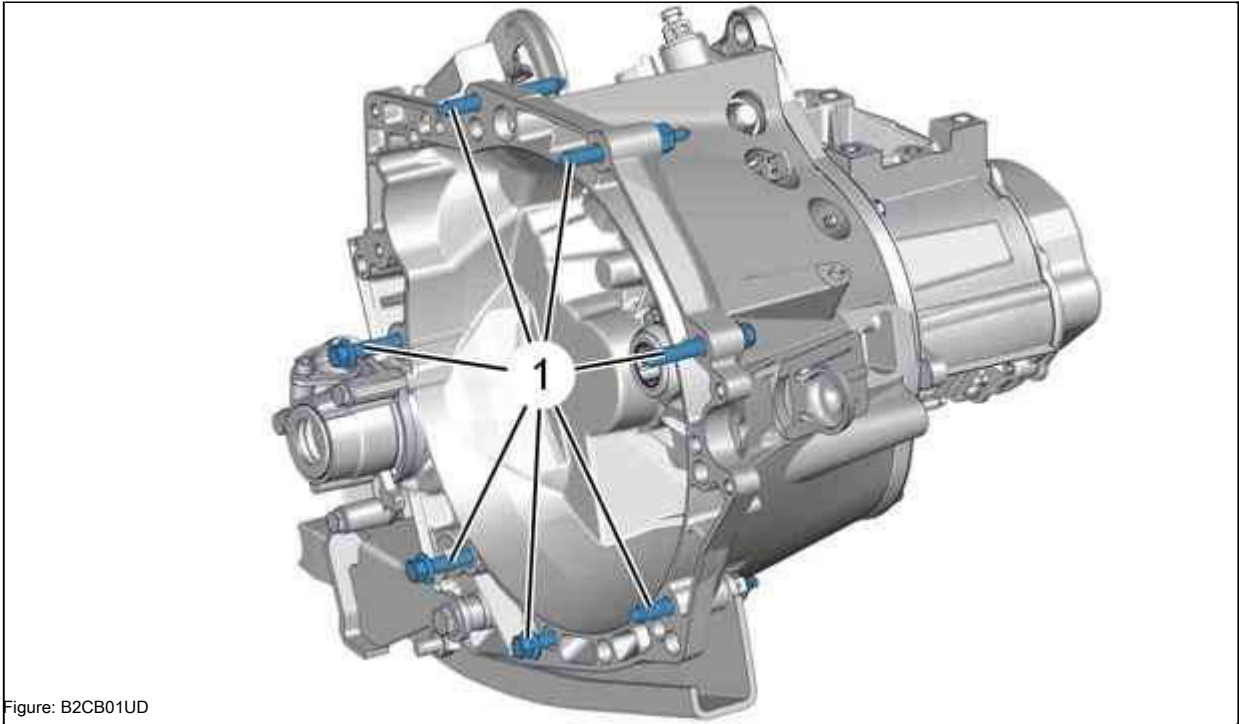
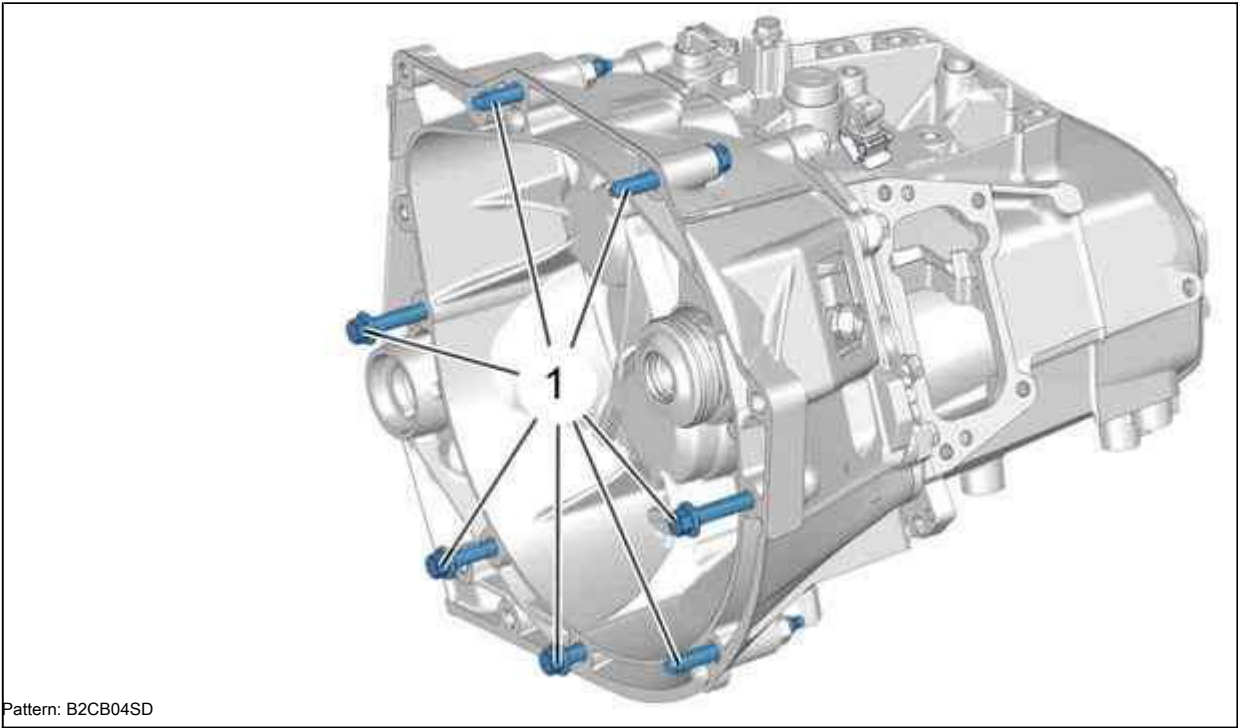


Figure: B2CB01UD

Label Designation		Torque
(1)	Engine connection gearbox 5.4 da.Nm	

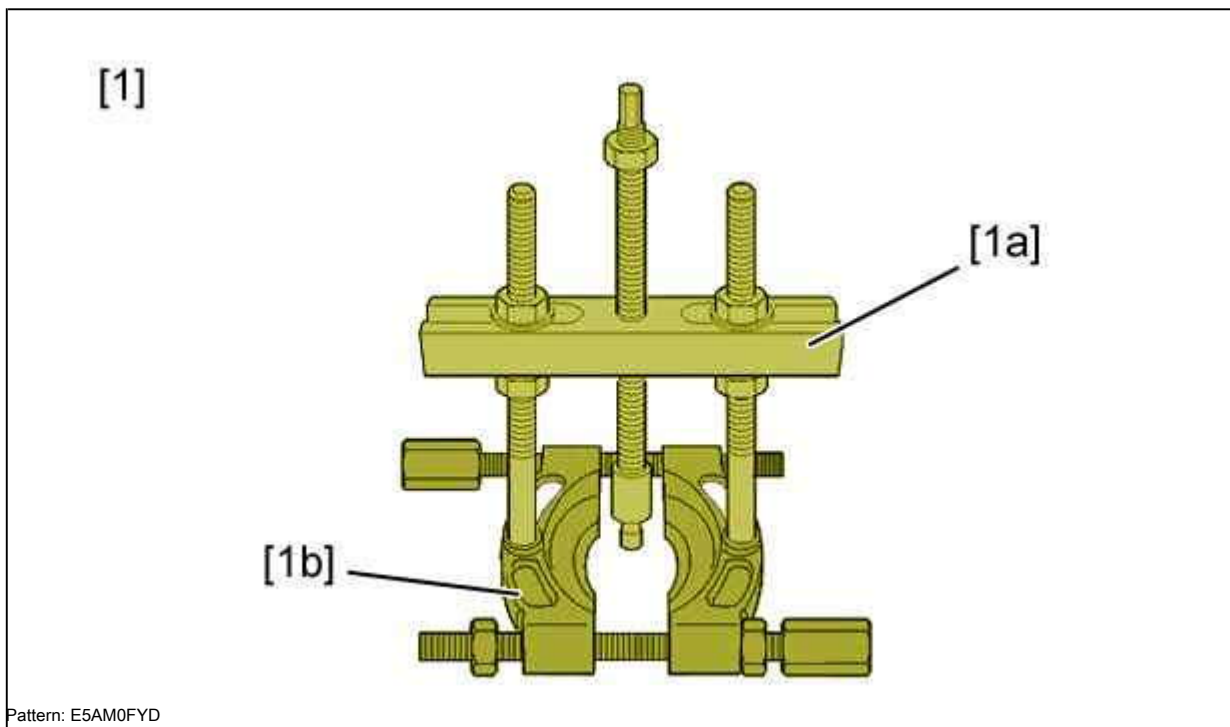
2. Gearbox type MC



Pattern: B2CB04SD

Label Designation		Torque
(1)	Engine connection gearbox 5.4 da.Nm	

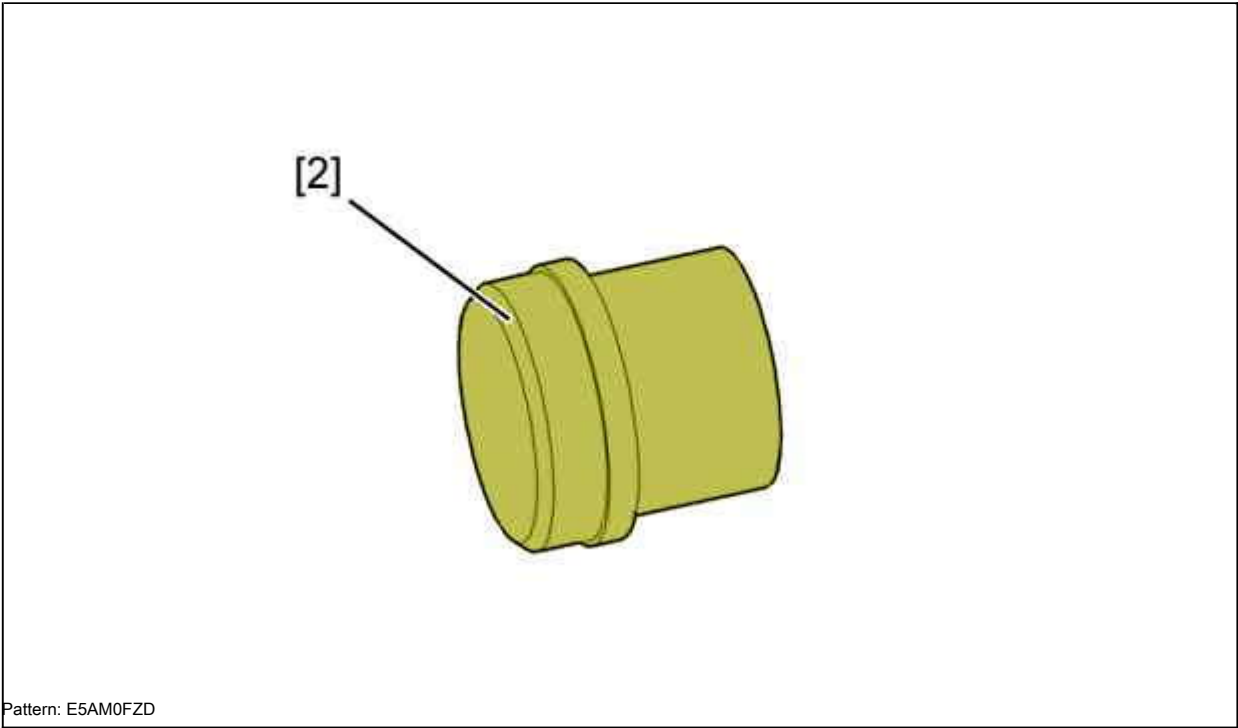
PRESENTATION: TOOLS



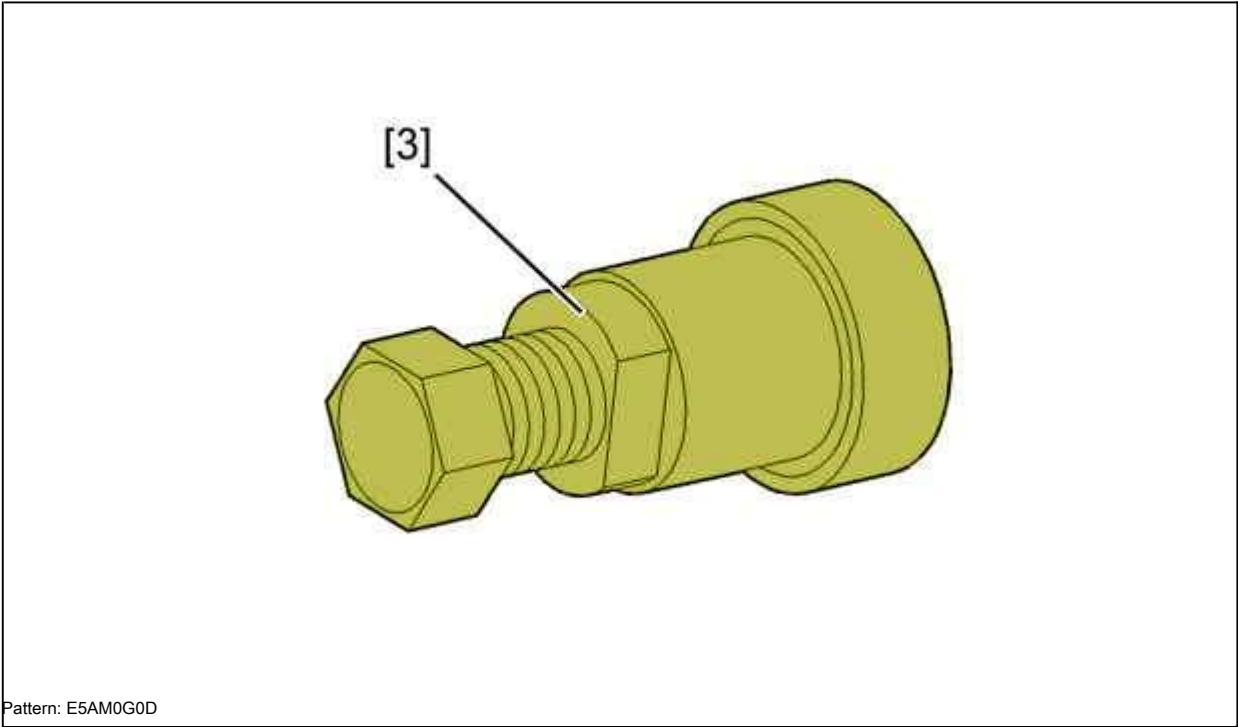
Label Description

Number (reference) Number (reference)

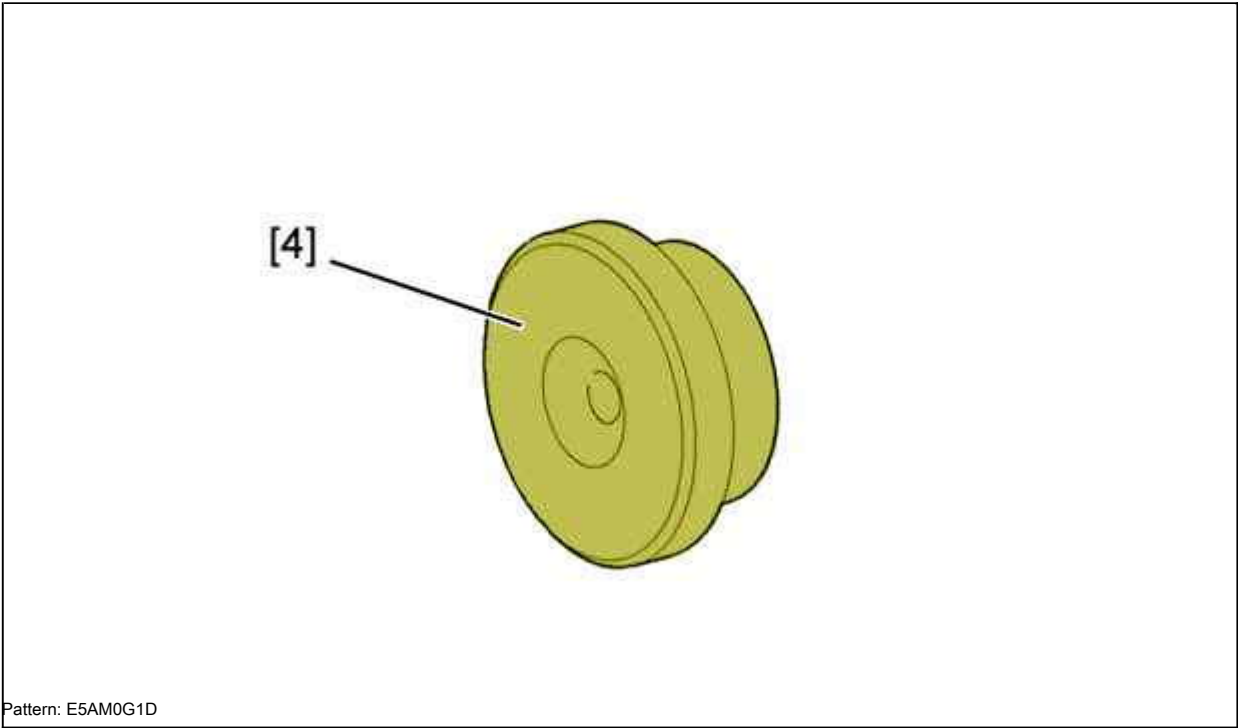
[1a]	Universal puller bracket	FacomU53 K2	4108T
[1b]	Breakers for the universal puller FacomU53 T2		4108T



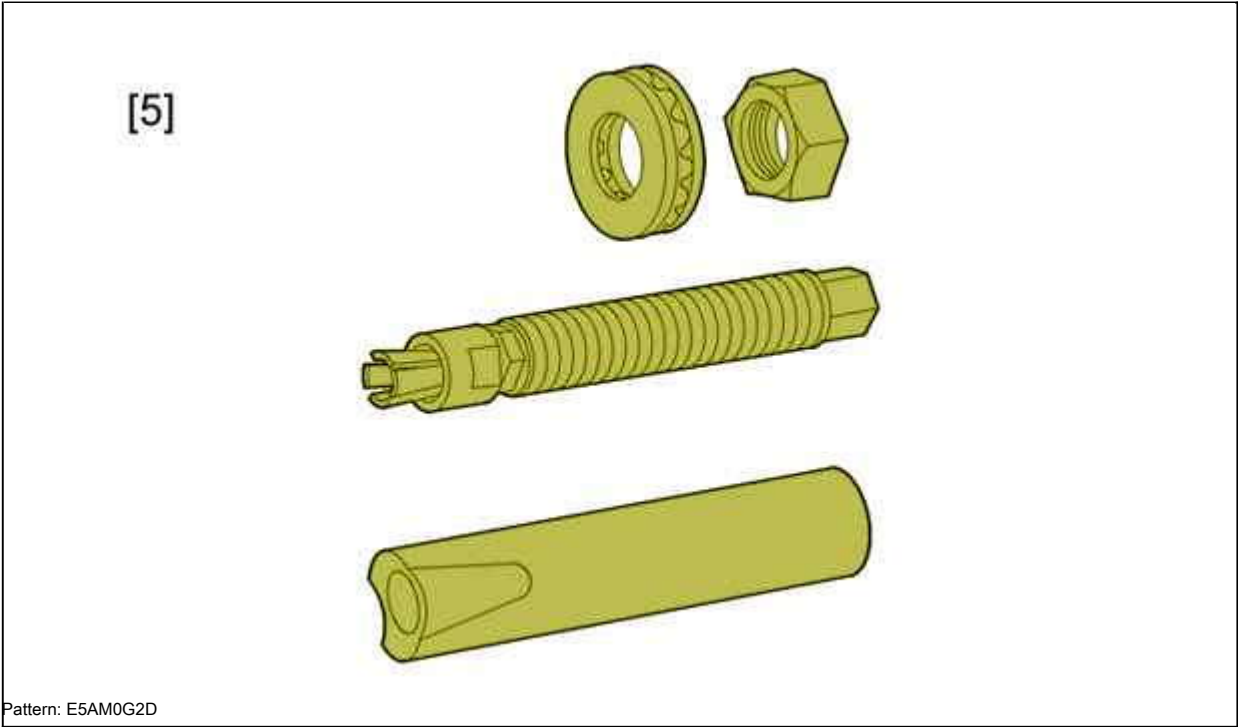
Label Description		room	room
[2]	Adapter for removing and installing outer bearing ring (). 0317AR input shaft	(reference)	(reference)
			8013T .AR



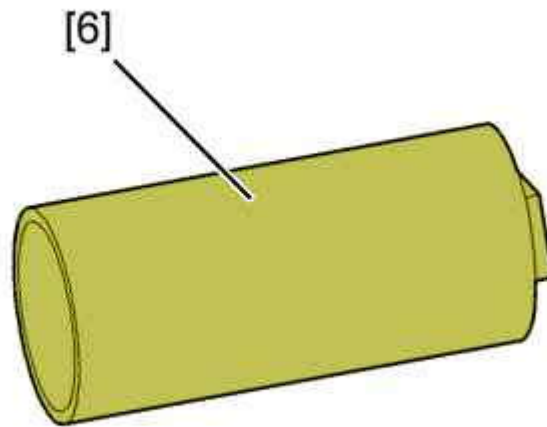
Label Description		Number (reference)	Number (reference)
[3]	5th gear clutch puller (). 0317Y		7116TE



Label Description		Number (reference)	Number (reference)
[4]	auxiliary liner ().0317JZ		4508TJ

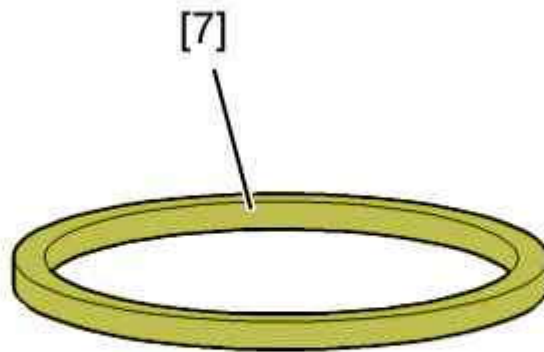


Label Description		Number (reference)	Number (reference)
[five]	Puller for gear lever fixing pins (). 0317AL		8013T.AL



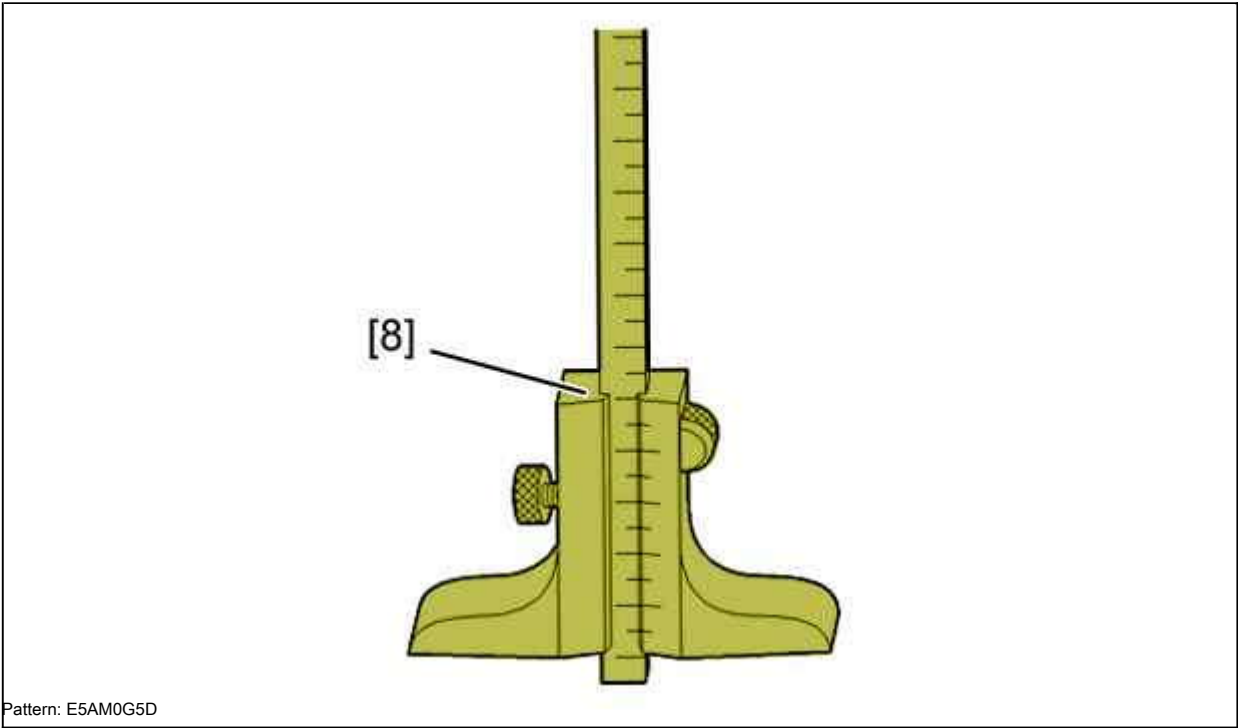
Pattern: E5AM0G3D

Label Description		Number (reference) Number (reference)	
[6]	Differential housing bearing mounting bush (). 0317D		7101TD



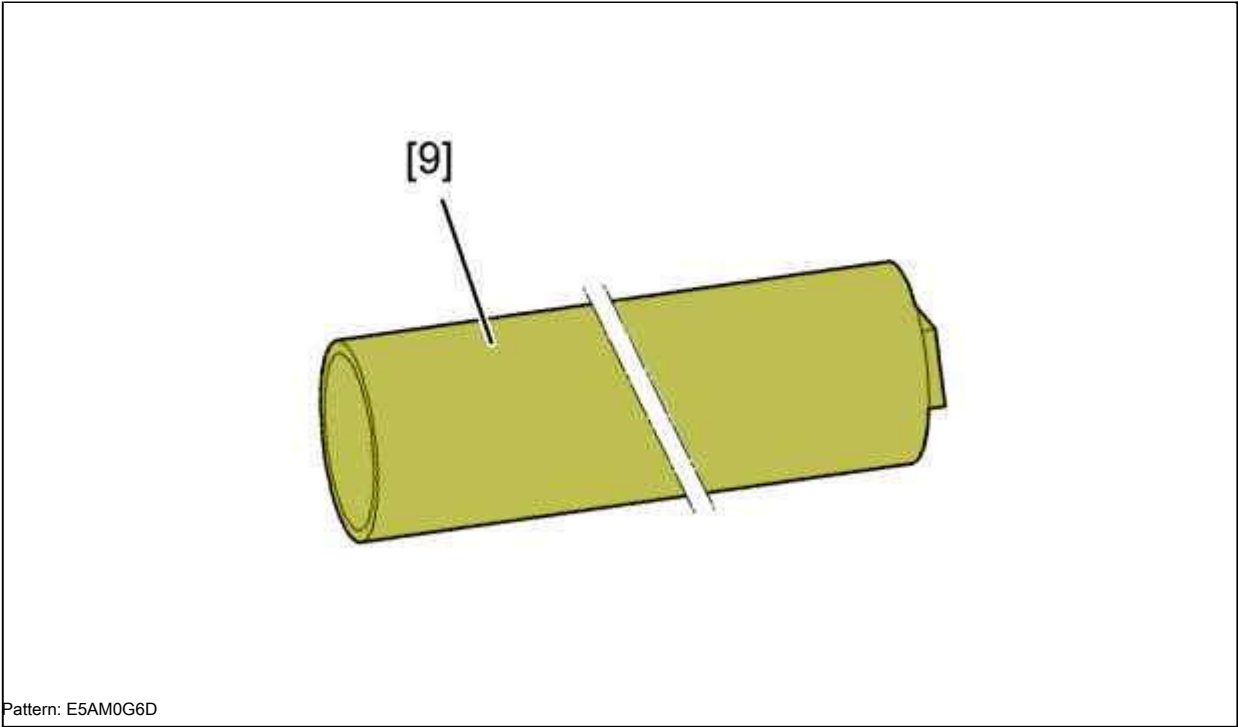
Pattern: E5AM0G4D

Label Description		Number (reference) Number (reference)	
[7]	Differential bearing adjusting ring ().0317K		7101TK



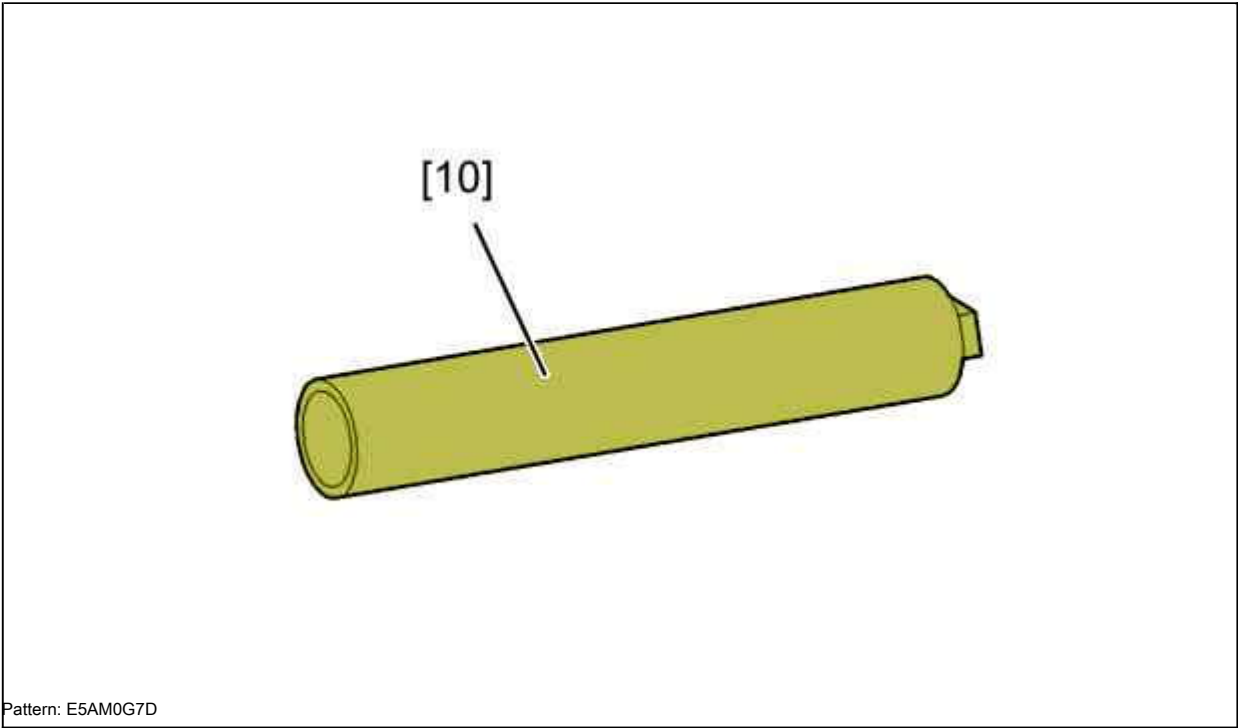
Pattern: E5AM0G5D

Label Description		Number (reference)	Number (reference)
[eight]	FACOM 811 depth sensor		FACOM 811

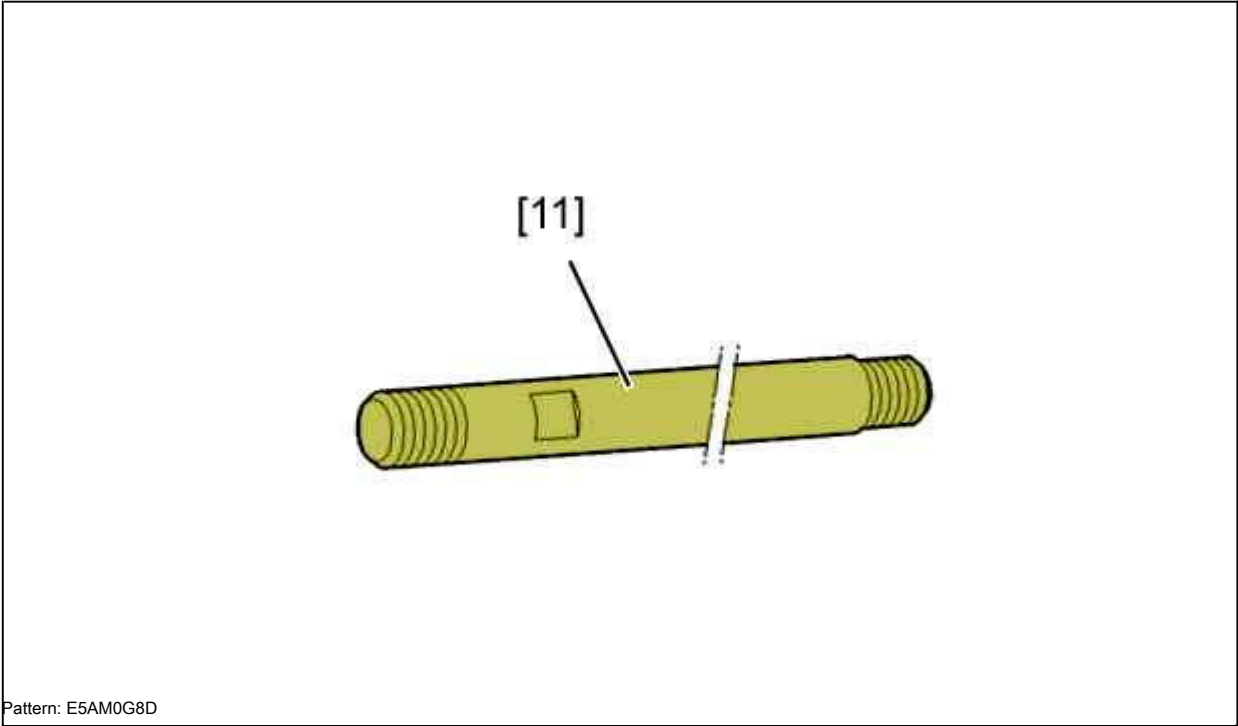


Pattern: E5AM0G6D

Label Description		Number (reference)	Number (reference)
[nine]	Guide for installing input shaft bearings (. 0317E		7101TE

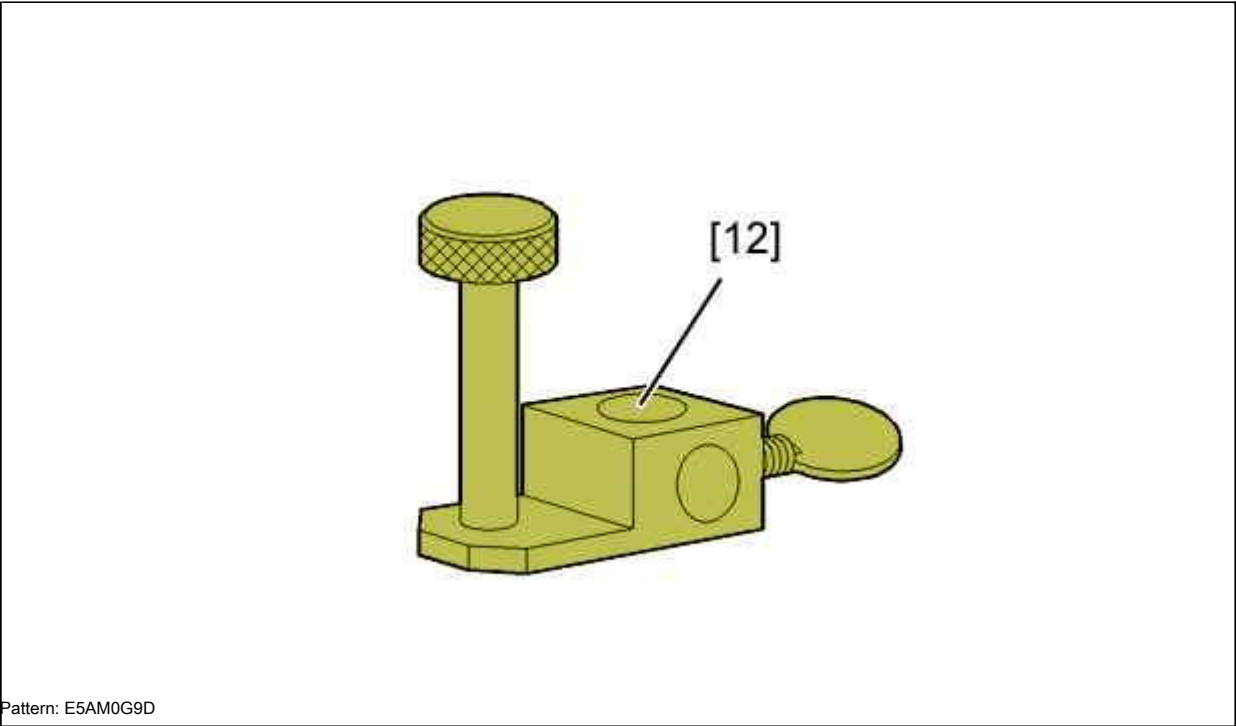


Label Description		room	room
		(reference)	(reference)
[ten]	Mandrel for installing the front and rear bearings of the input shaft	() .0317F	7101TF
	Mandrel for installing the front and rear bearings of the output shaft		

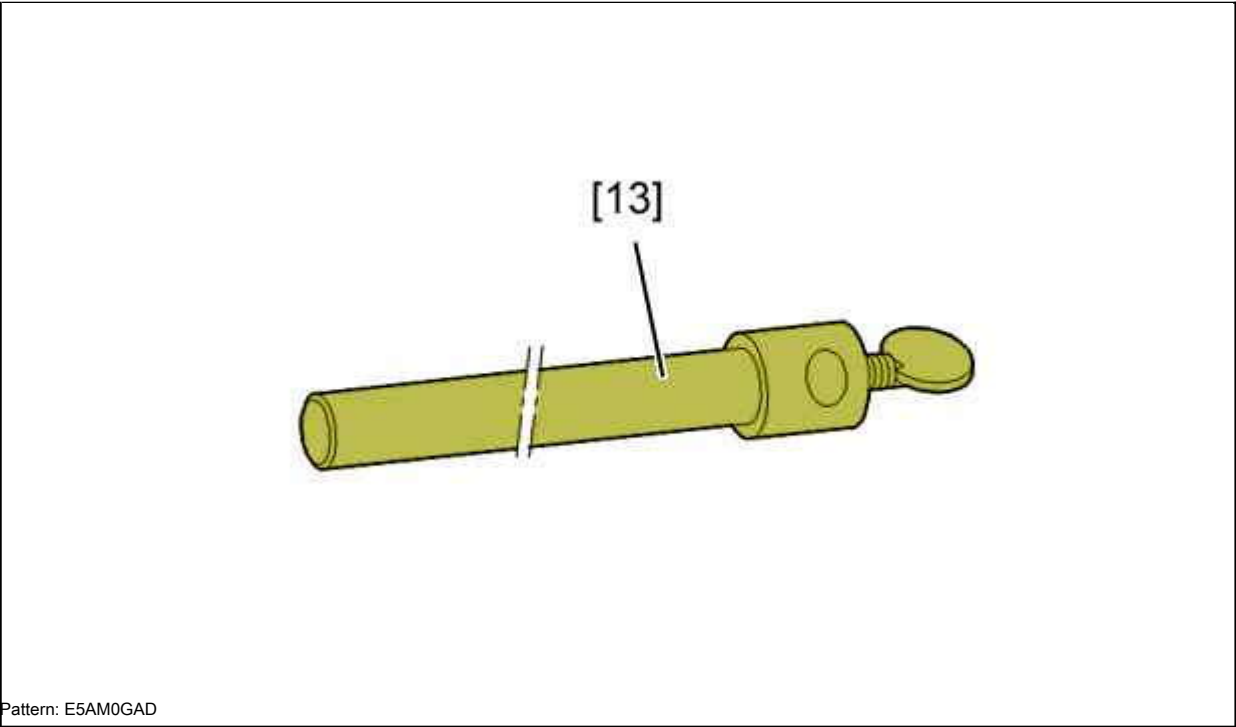


Label Description		Number (reference)	Number (reference)

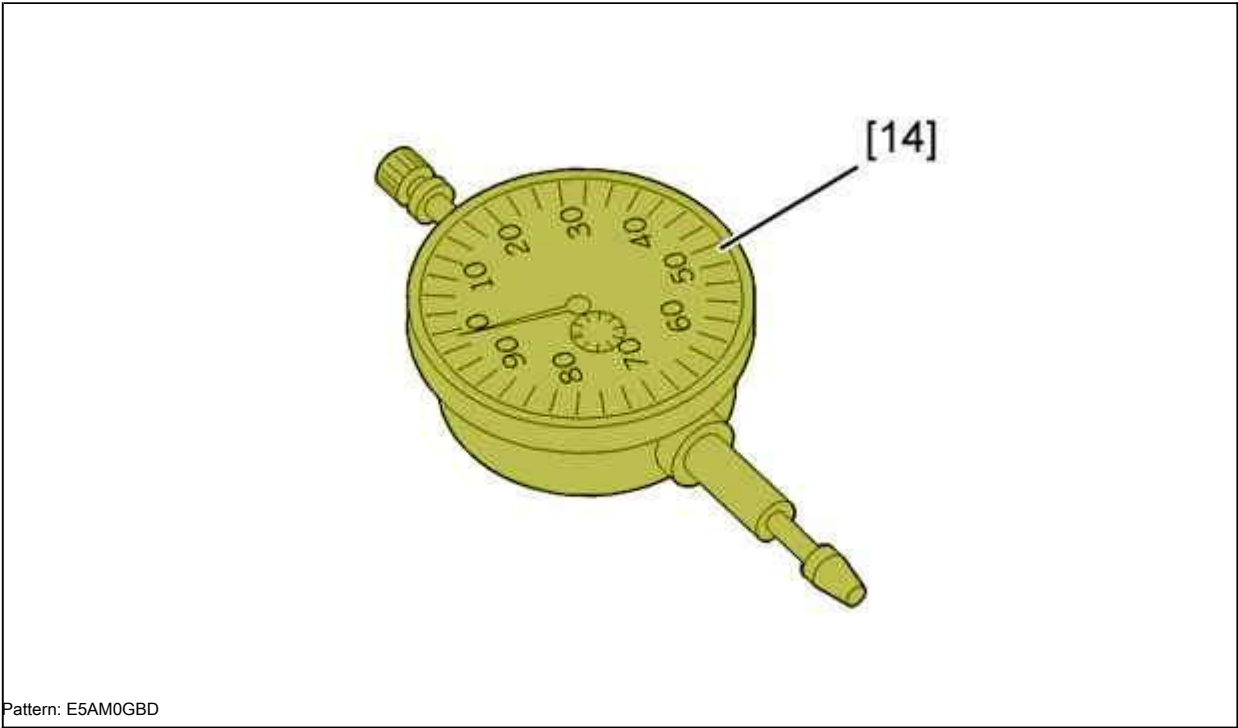
[eleven]	indicator thrust bearing () .0317AP	8013T.AP
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Label Description	Number (reference)	Number (reference)
[12]	indicator bracket () .0330V2	5708T.V2

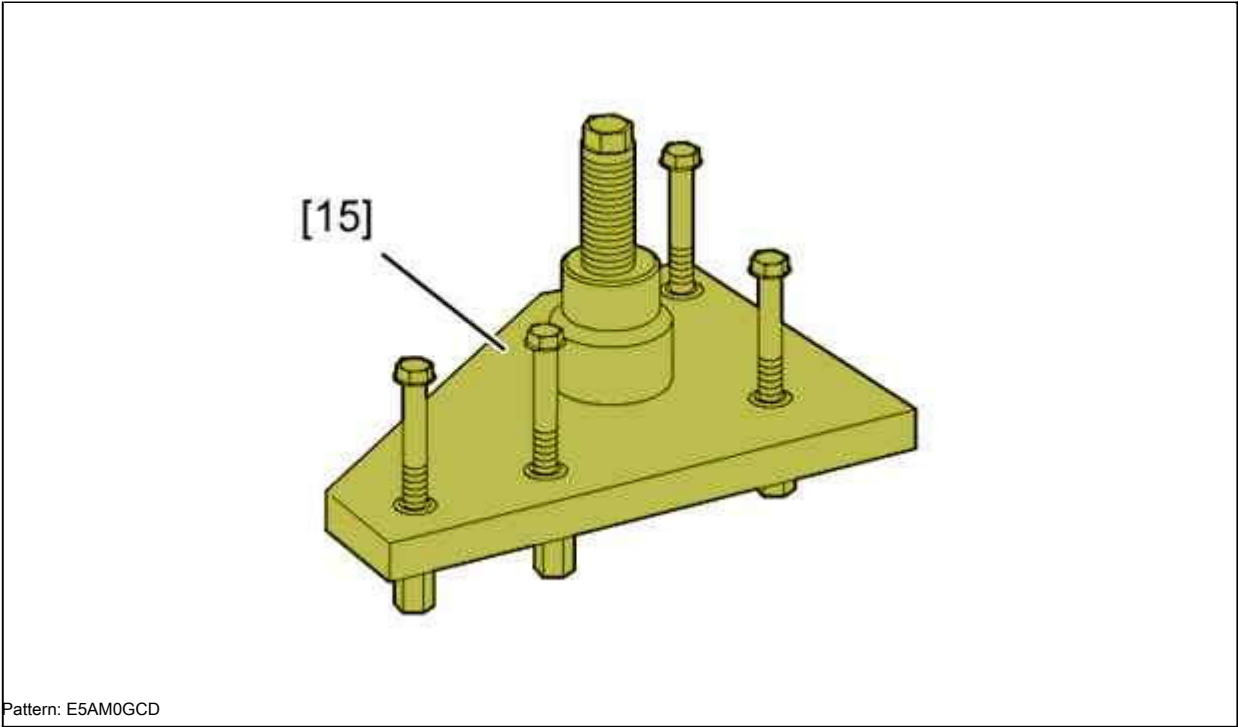


Label Description	Number (reference)	Number (reference)
[13]	indicator thrust bearing () .0330V3	5708T.V3



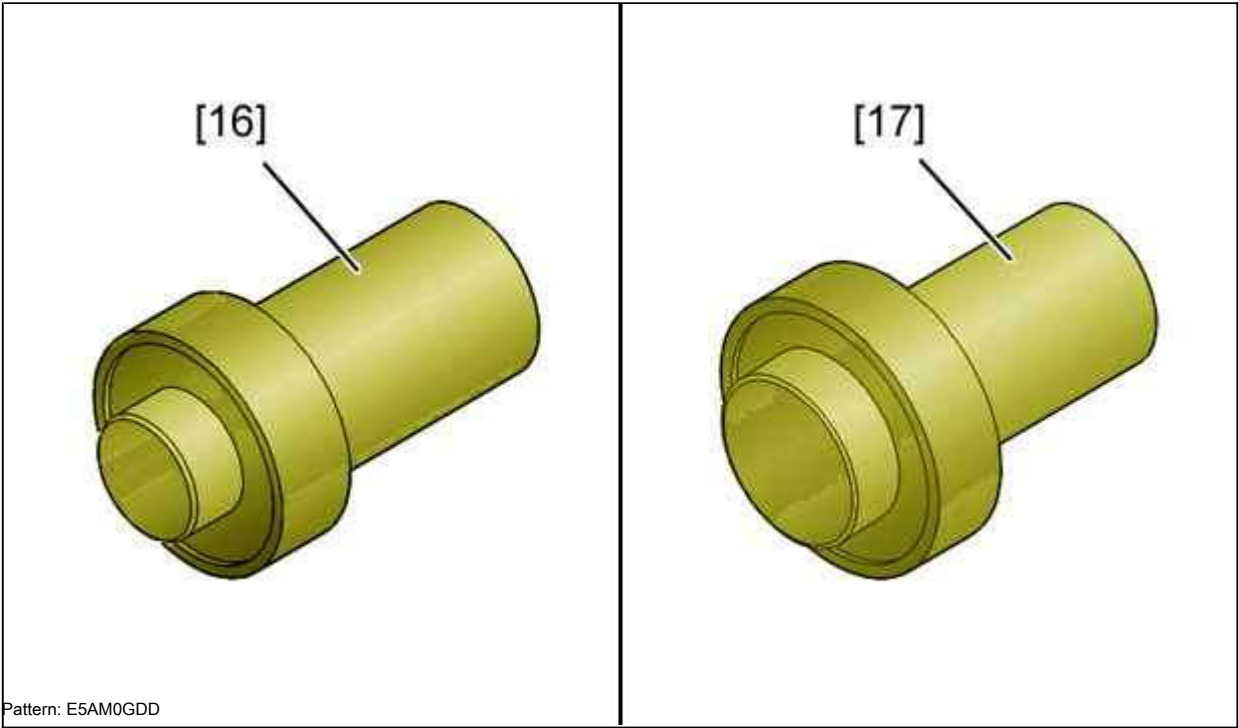
Label Description Number (reference) Number (reference) [14]

	indicator () .1504		2437T

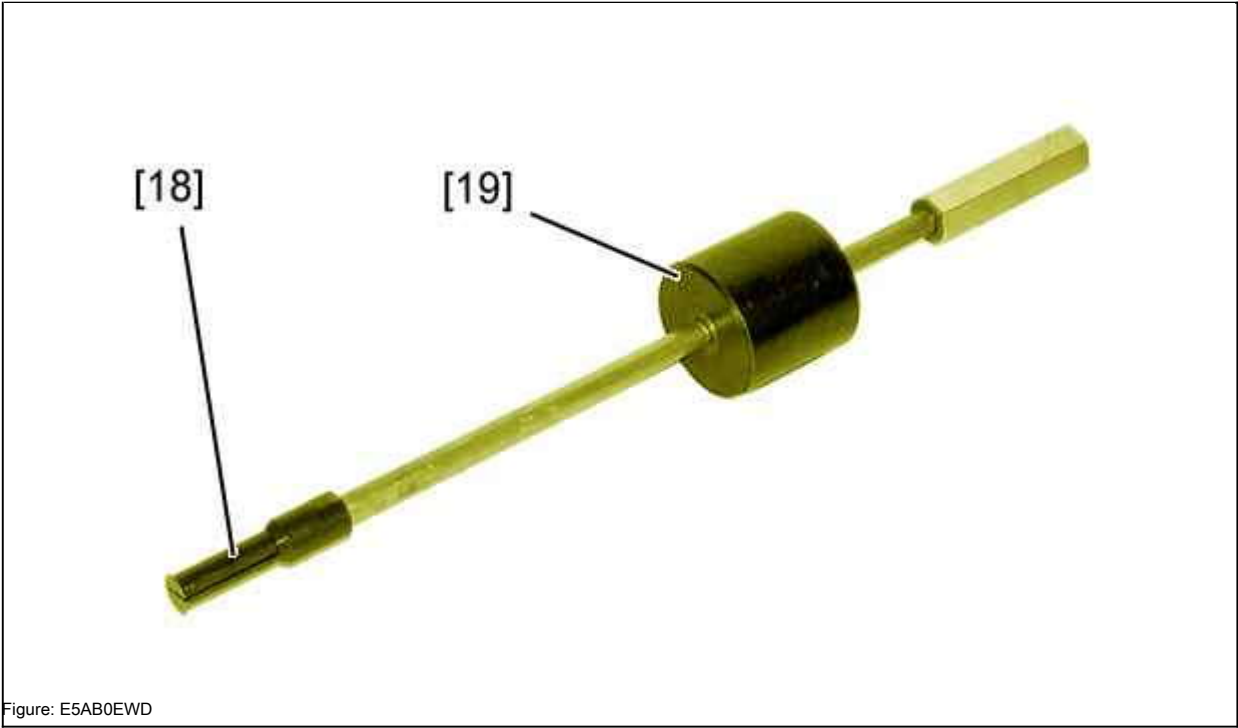


Label Description Number (reference) Number (reference)

[fifteen]	Tool for pressing the cotter pin () .0317AM		8013T.AM



Label Description		Number (reference)	Number (reference)
[sixteen]	mandrel for installing the right transmission seal () .0317U	mandrel for installing the left	7114TX
[17]	transmission seal () .0317T		7114TW



Label Designation		Number (reference)	Number (reference)
[18]	puller: Fork bushings () .0346M	inertial puller ()	.0346M
[nineteen]	.1671T		() .0316A

CHECK ADJUSTMENT: INPUT SHAFT BEARING KIT

MANDATORY: Observe the cleanliness and safety rules



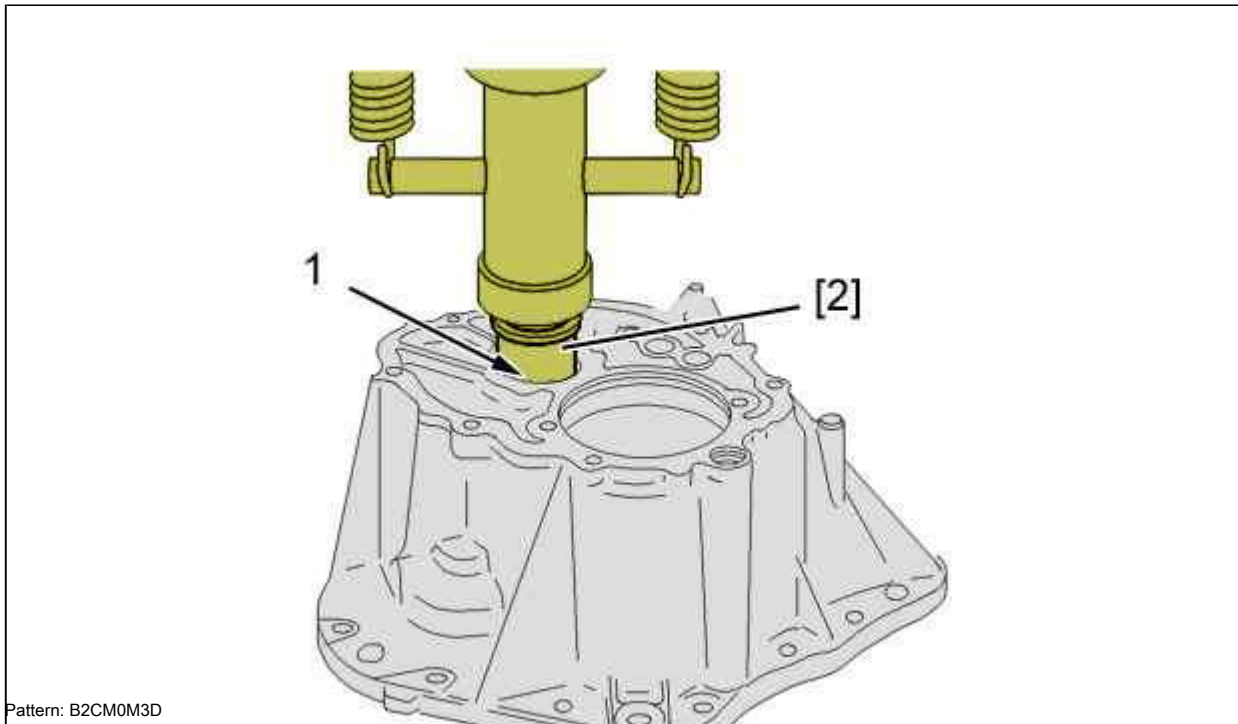
1. Recommended equipment

Presentation : Recommended fixtures



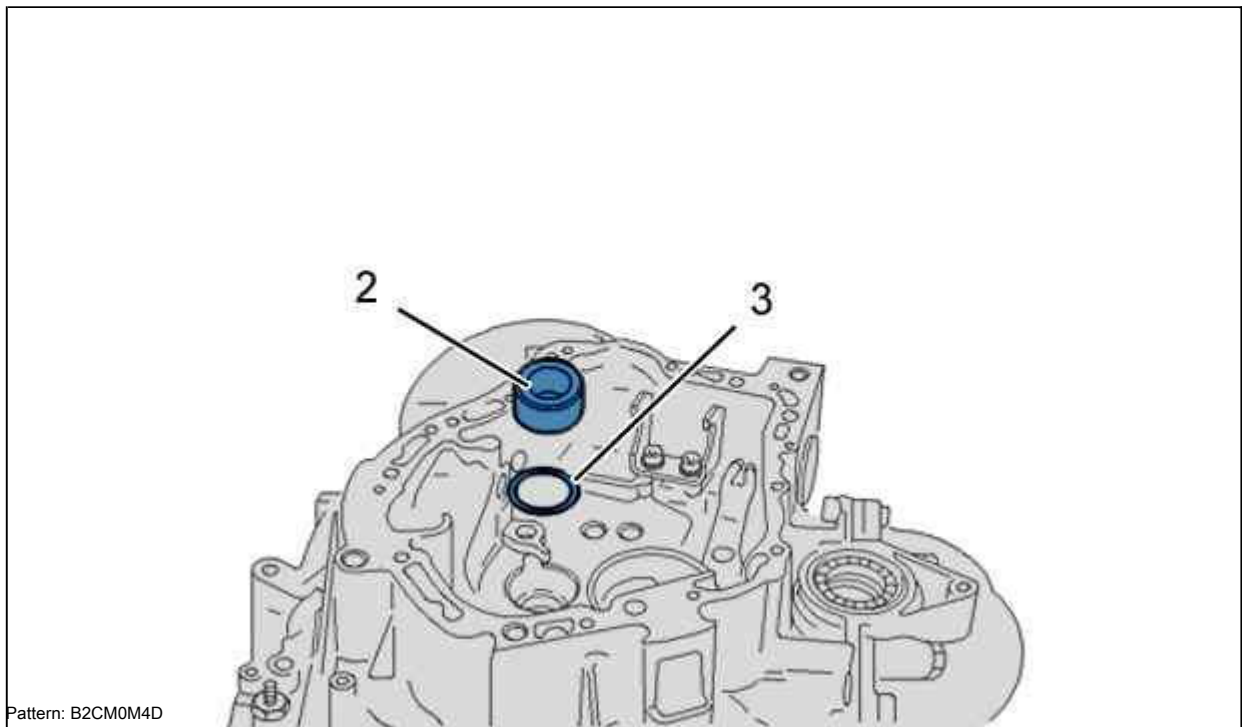
2. Removal

2.1. Outer ring bearing (side of the transmission case)



Remove the bearing outer race (1); Using the tool [2] and a press.

2.2. Outer ring bearing (side of the clutch housing)



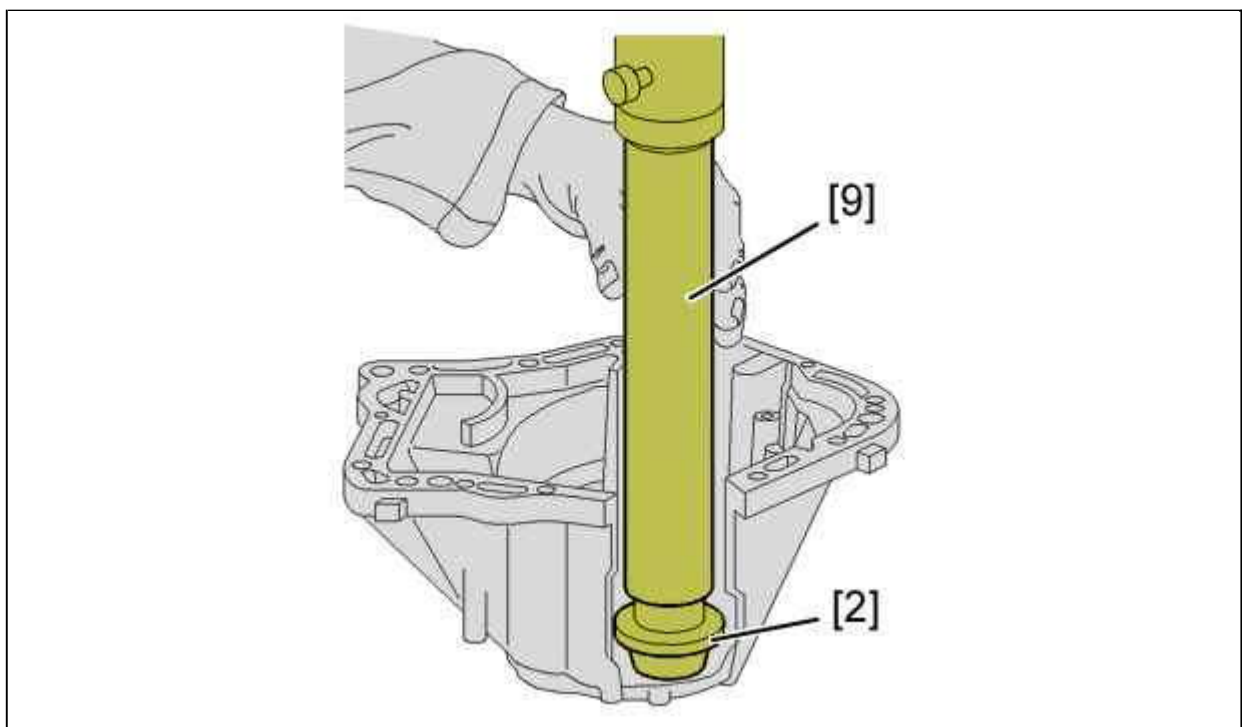
Remove:

- Bearing outer ring (2)
- Shim (3)

Measure the thickness of the shims (3).

3. Installation

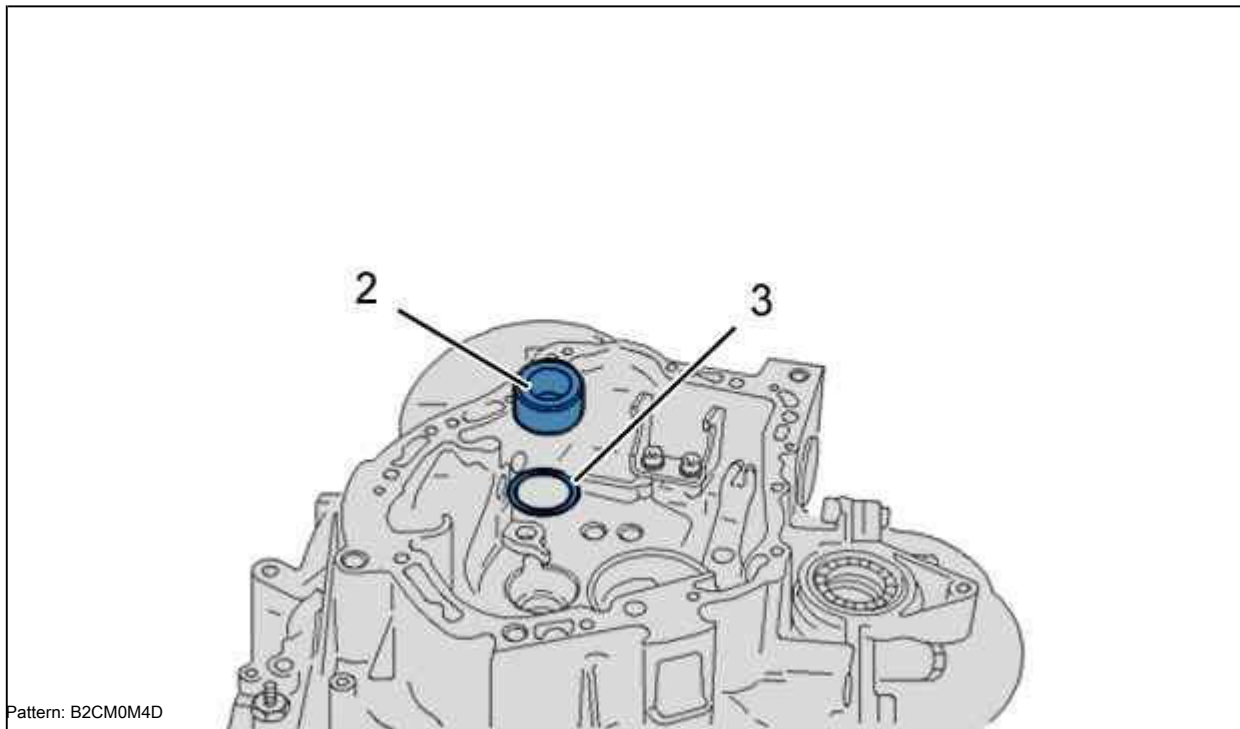
3.1. Outer ring bearing (side of the transmission case)



Pattern: B2CM0M5D

Install the bearing outer race (1) (new); Using the tool [2], [9] and a press.

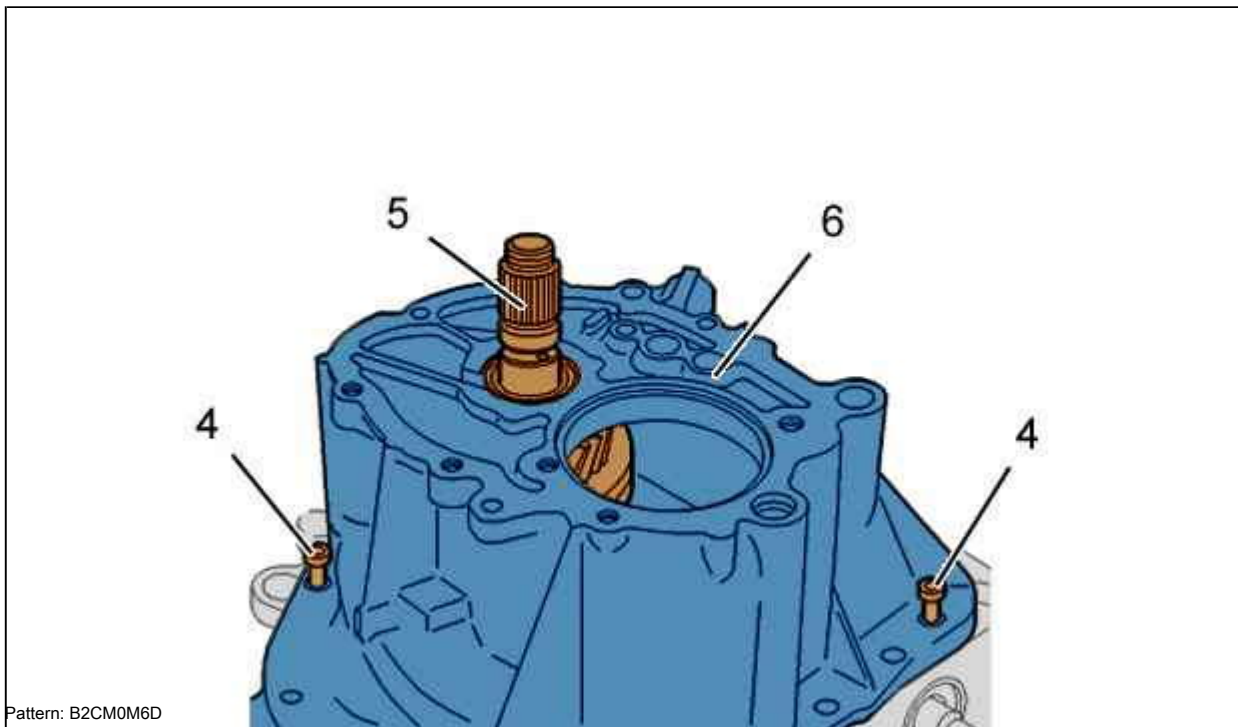
3.2. Outer ring bearing (side of the clutch housing)



ATTENTION : Install the shim (3) 0.20 mm thinner than the removed shim.

Install:

- Release bearing guide bush
- Shim (3)
- Outer ring (2) of the input shaft bearing

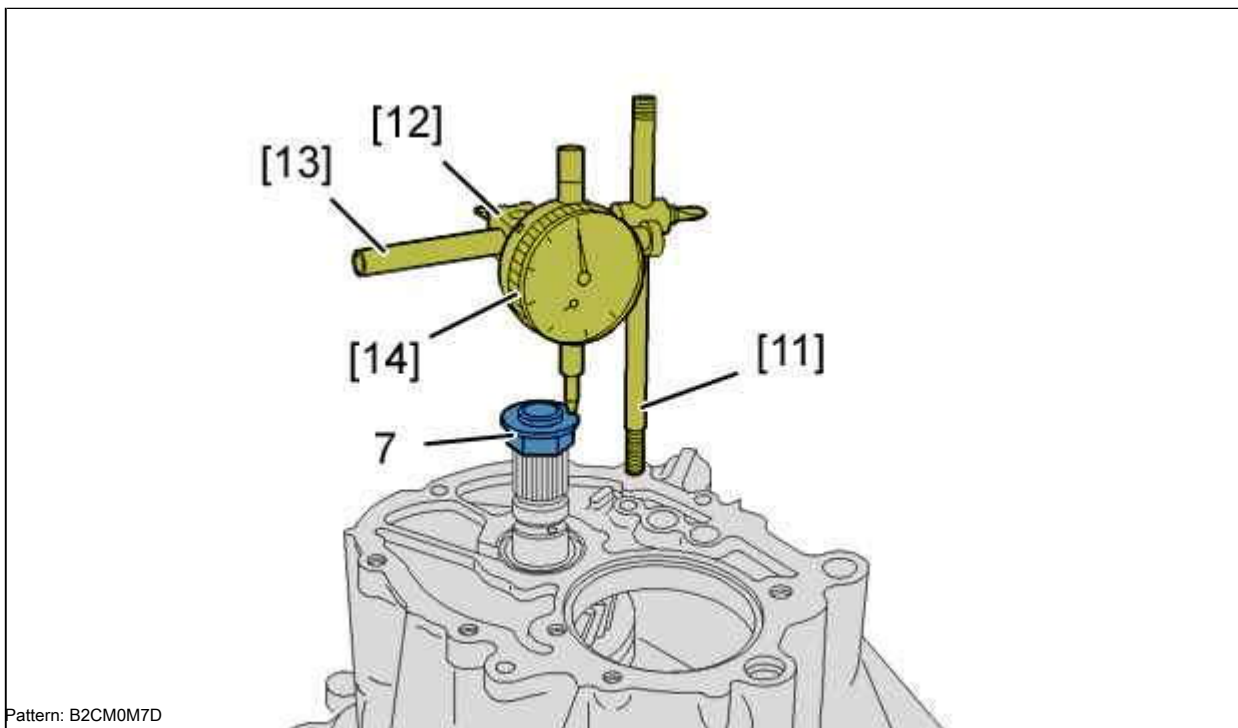


Install:

- Input shaft (5)
- Transmission housing (6)
- bolts (4) (one bolt out of two); Tighten to 1.25 da.Nm

Turn input shaft (5) a few turns.

4. Adjustment



Install the input shaft nut with the bearing surface outward (7). Tighten nut (7) lightly.

Place the indicator [14] on the brackets [11], [12] and [13]. Install the feeler nut (7).

Press the input shaft down. Install indicator [14]
nano. Pull input shaft up. Write value:

- The gap should be between 0.05 and 0.15 mm
- If the value shown by the indicator is incorrect, adjust the clearances again.

Remove:

- Indicator [14] on brackets [11], [12] and [13]
- Nut (7)
- bolts (4)
- Transmission housing (6)
- Input shaft (5)

REMOVAL: MANUAL GEARBOX

MANDATORY: Observe the cleanliness and safety rules

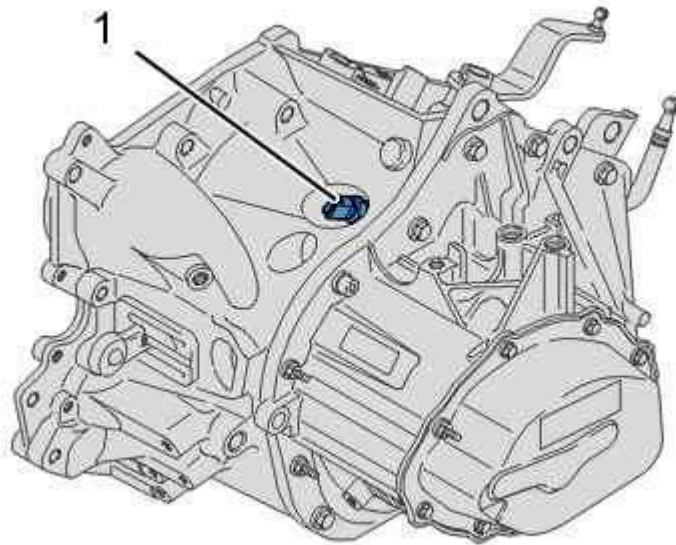


1. Recommended equipment

Presentation: **Recommended fixtures**

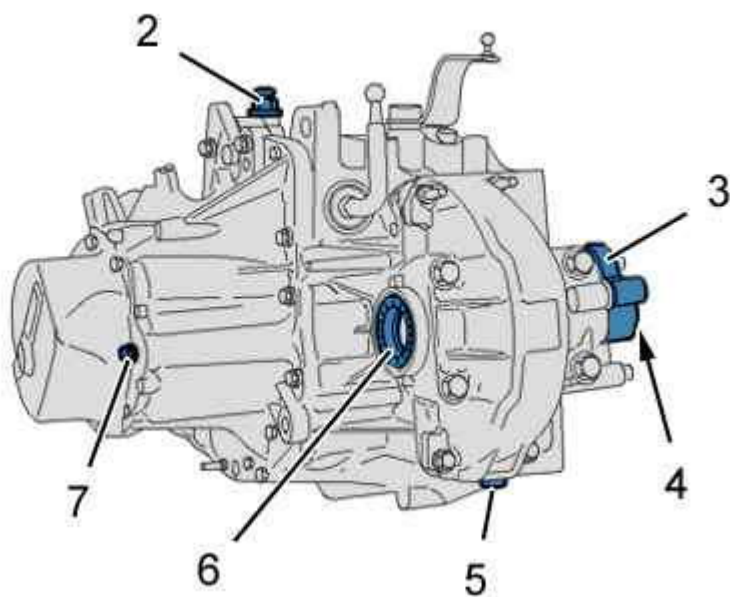


2. Removal



Pattern: B2CM0LXD

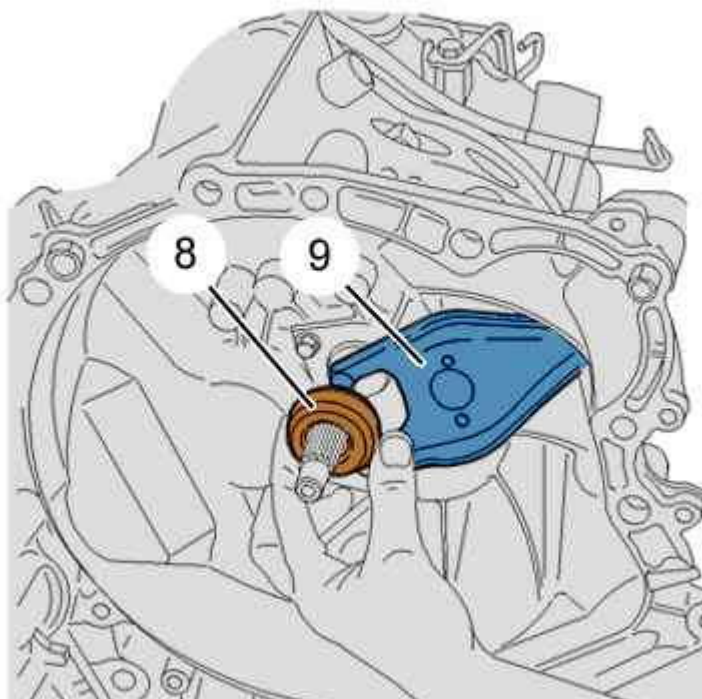
Remove the reverse gear contactor (1).



Pattern: B2CM0XGD

Remove:

- Air breather (2)
- Speed sensor drive gear support (3) (depending on equipment)
- Drive shaft seal (4)
- Drain plug (5)
- Left drive shaft oil seal (6)
- Level check plug (7)



Pattern: B2CM0XHD

Remove:

- Clutch release bearing (8)
- The clutch control fork (9)
- Clutch fork joint

2.1. 5th gear gear

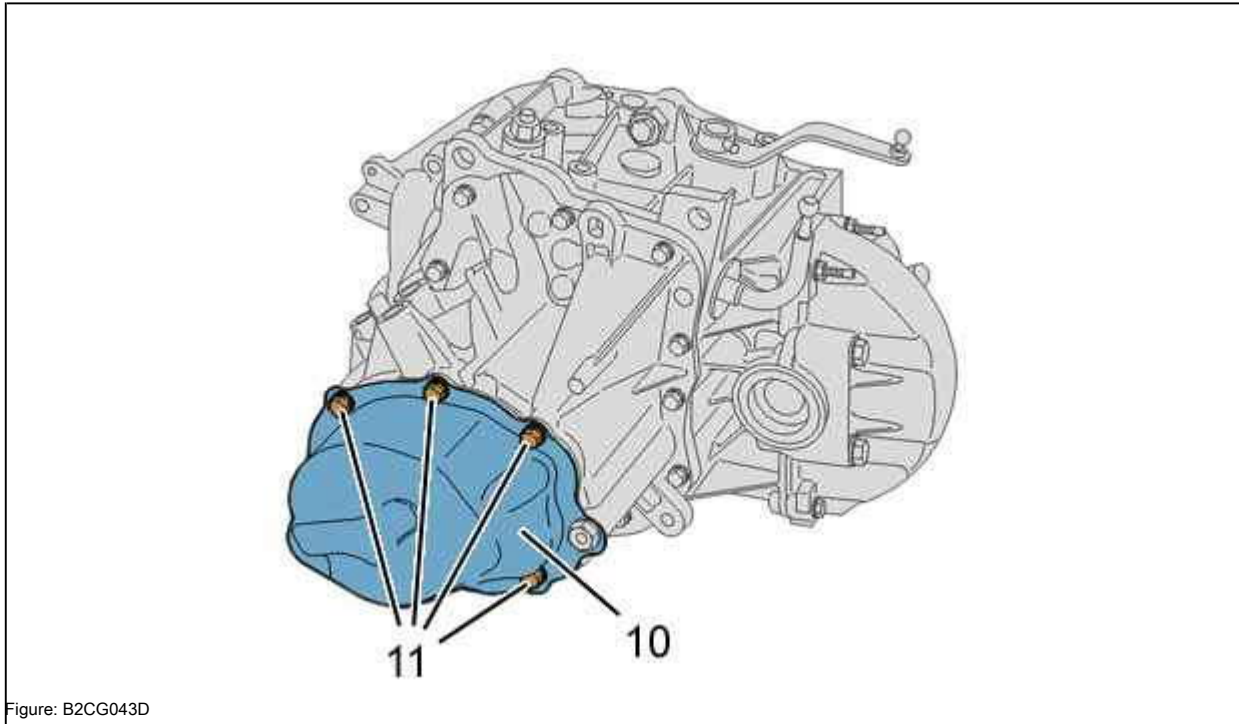
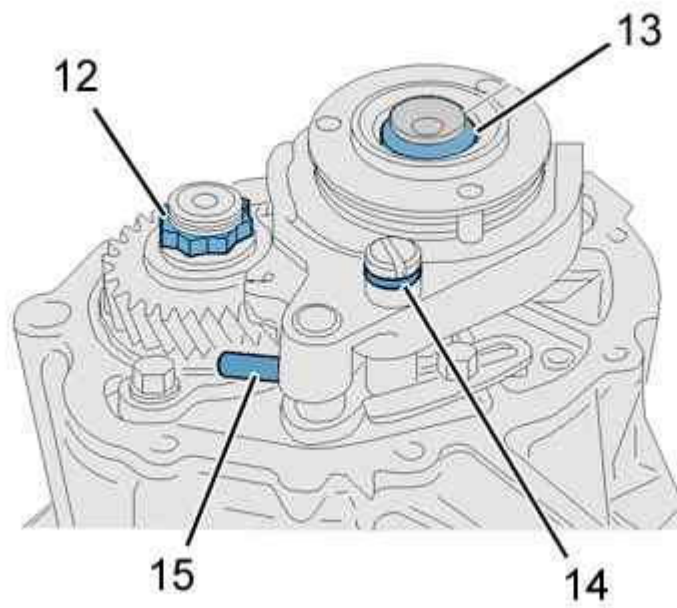


Figure: B2CG043D

Remove:

- the bolts (11)
- Cover (10)



Pattern: B2CG04ID

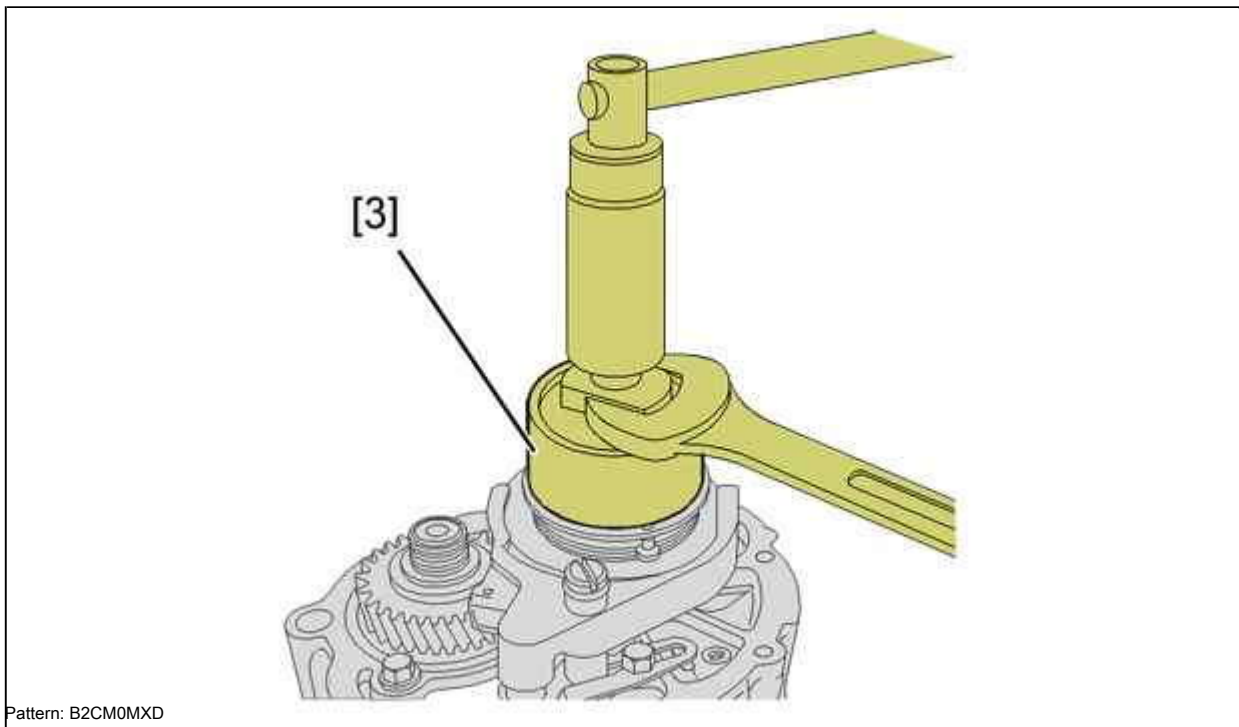
Engage 5th gear.

Remove the pin (15); using a drift. Transfer control to dead center.

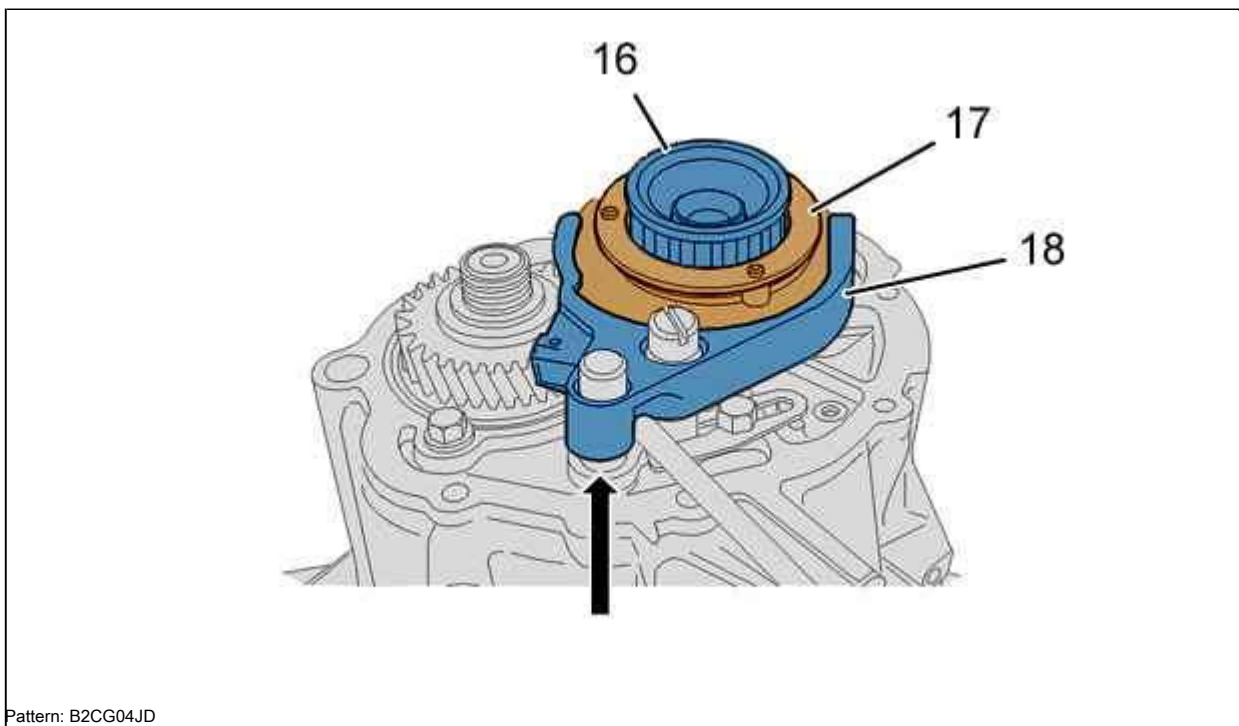
NOTE: The fork must remain in position.

Switch on another gear, blocking rotation of the shafts. Remove:

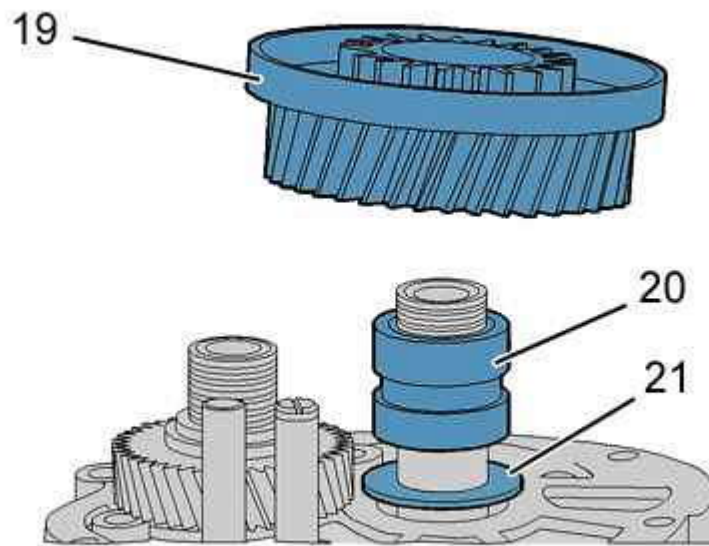
- Retaining rings (14)
- Nuts (12), (13)



Install the tool [3].
Remove the hub; Using the tool [3].



Mark the position of the hub (16) in relation to the synchronizer (17). Remove the synchronizer hub assembly (16), (17) with the yoke (18).

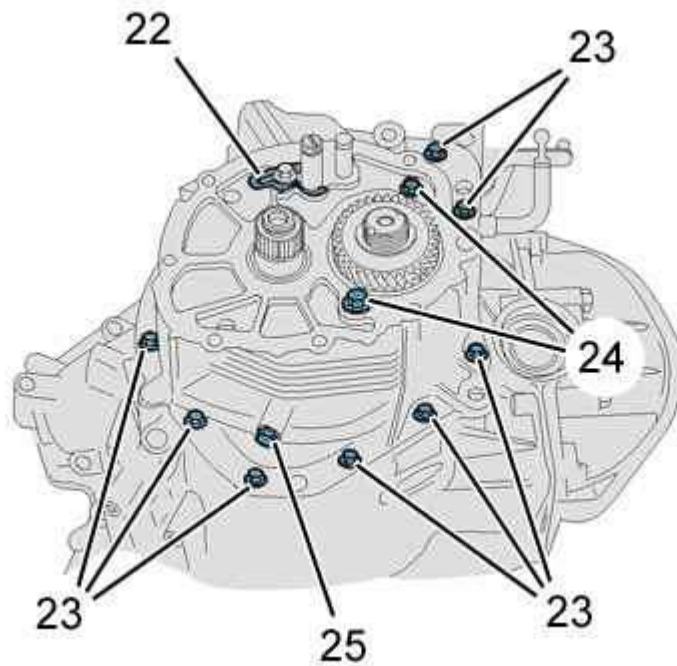


Pattern: B2CG04KD

Remove:

- 5th gear pinion (19)
- Pressure ring (20)
- Spacer (21)

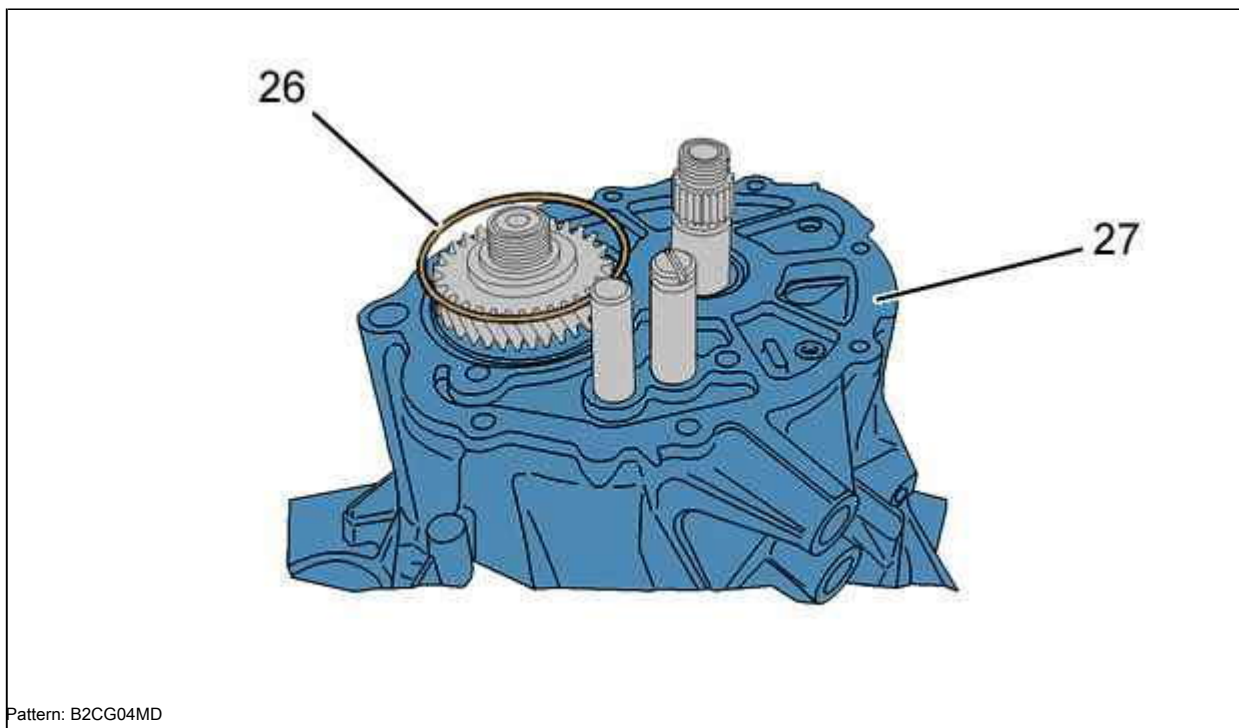
2.2. transmission case



Pattern: B2CG04LD

Remove:

- Bolts (24) for fixing the bearing of the output shaft
- Fork axle locking plate (22)
- Retaining screw (25) of the intermediate reverse gear shaft
- the bolts (23)

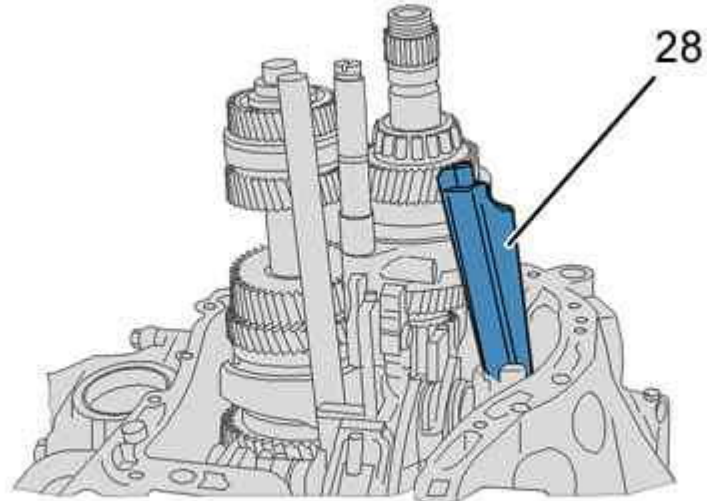


Remove:

- Retaining rings (26) (if necessary, use 2 sharp tools and raise the shaft to make it easier to disconnect)
- Transmission housing (27)

NOTE: Use a hammer to separate the crankcase from the centering rings.

2.3. Input and output shafts



Pattern: B2CG04ND

Remove the oil filler chute (28).

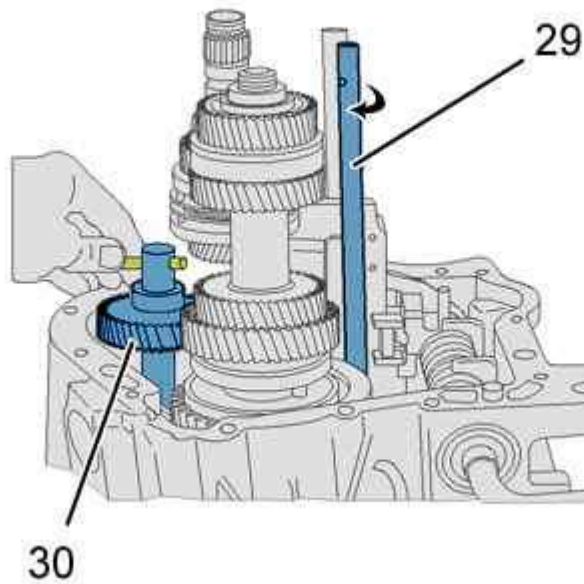
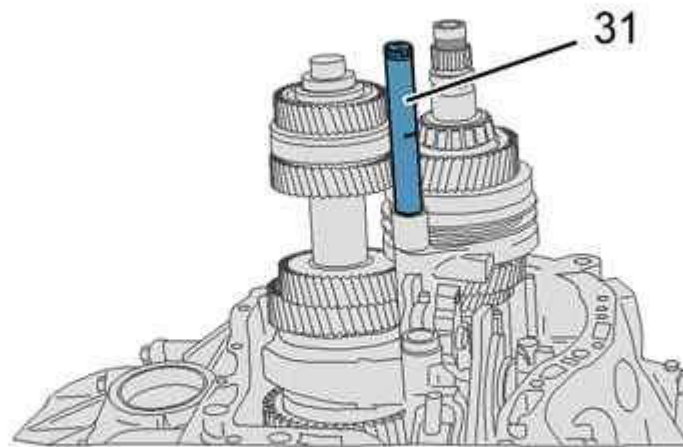


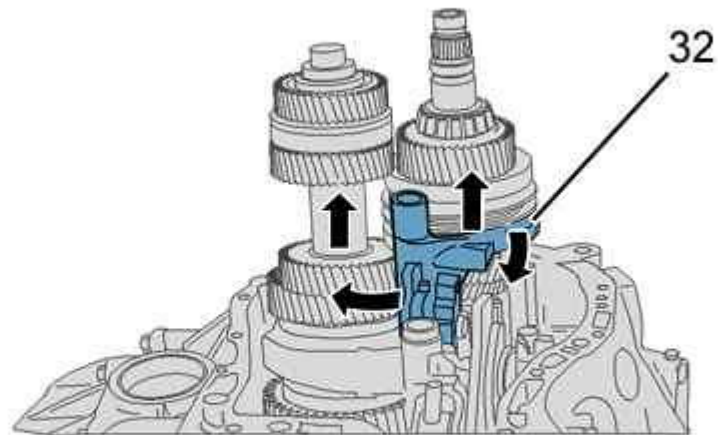
Figure: B2CG04OD

Remove the reverse slide pinion shaft (30). Turn and remove the 5th gear axle (29).



Pattern: B2CG04PD

Remove the fork shaft (31) by pulling it up.



Pattern: B2CG04QD

Turn the fork (32).

Separate the shafts a few millimeters from the clutch card (upwards). Tilt the right side of the fork down.

Remove the plug (32).

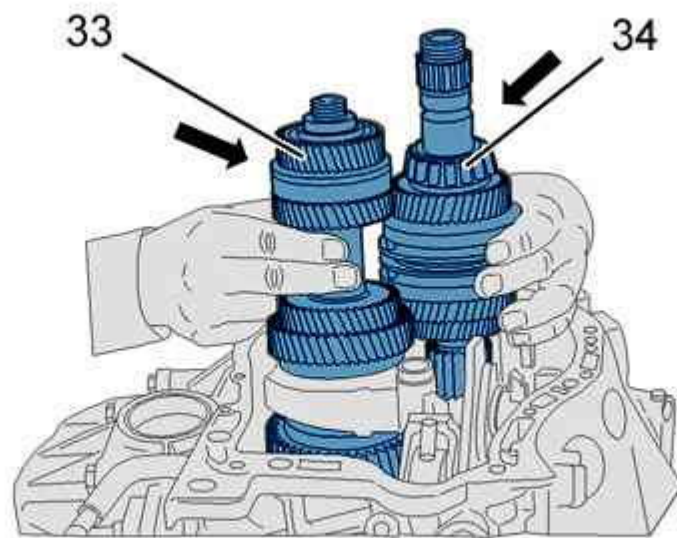
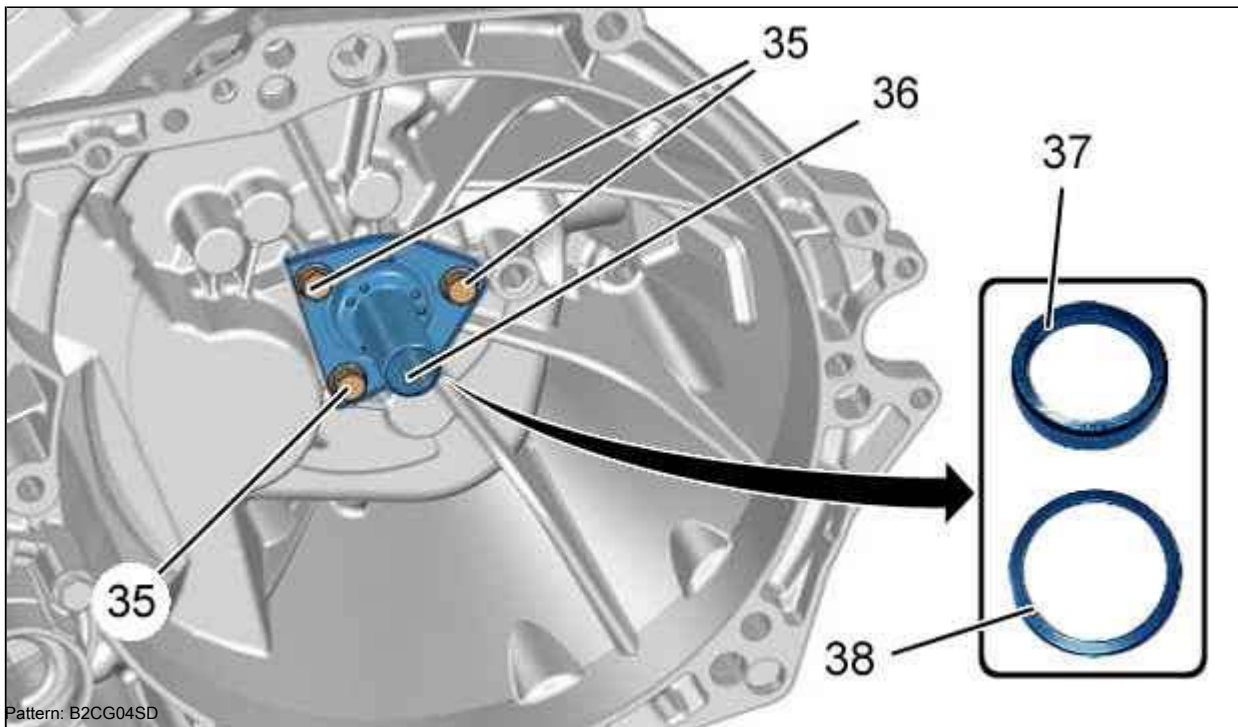


Figure: B2CG04RD

Remove: Into the primary (34) and secondary (33) shafts.



Pattern: B2CG04SD

Remove:

- 3 bolts (35)
- Release Bearing Guide (36)
- Shim (38)
- Outer Bearing Cage (37)

2.4. differential case

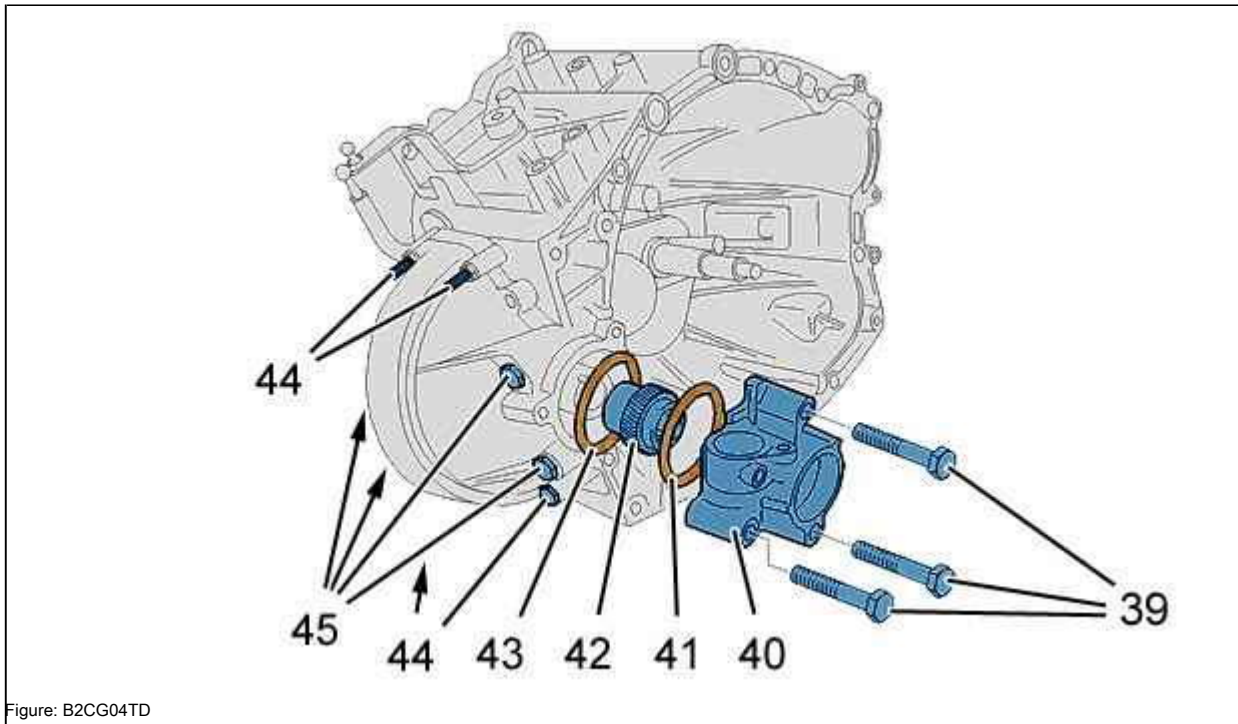


Figure: B2CG04TD

Remove:

- the bolts (39)
- Bridge Support Extension (40)

Reuse:

- Speedometer Drive Worm (42)
- O-ring (41)
- Shim (43) (if fitted)

Remove:

- the bolts (44)
- the bolts (45)

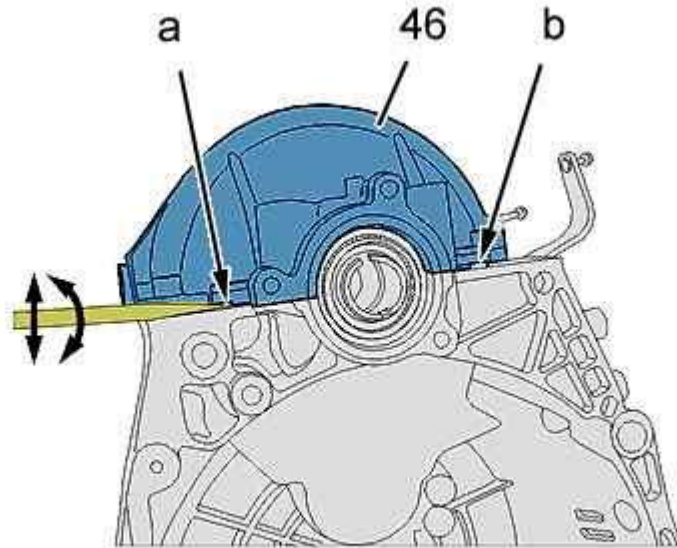


Figure: B2CG04UD

NOTE: Differential housing (46) has notches "a" and "b" for easy removal.

Insert screwdrivers into recesses "a" and "b" using them as levers.

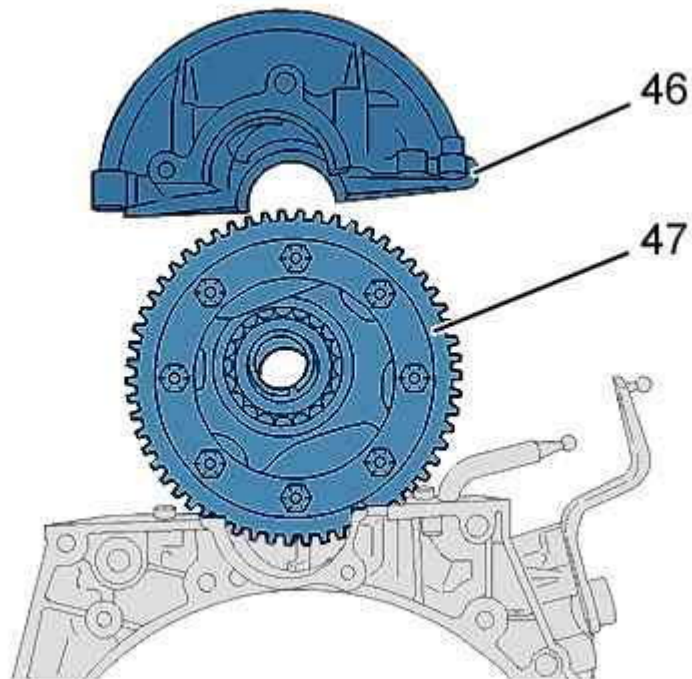


Figure: B2CG04VD

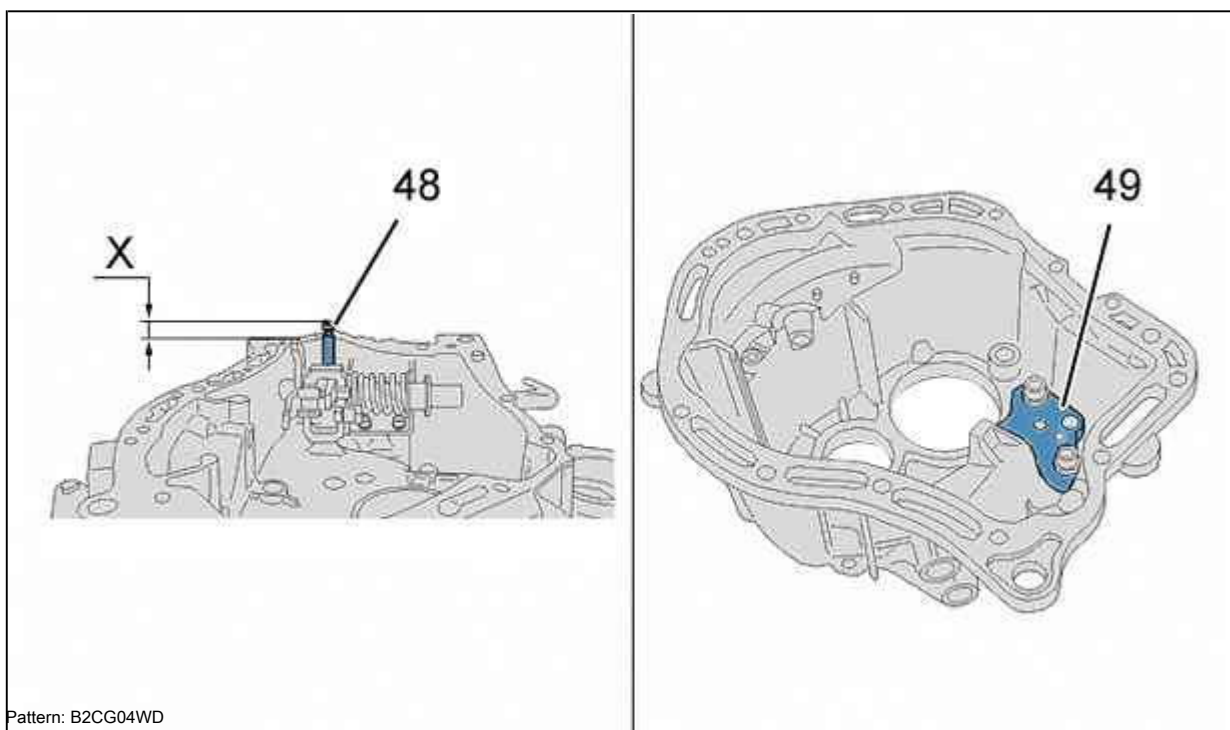
Remove:

- Differential housing (46)
- Differential block (47) with outer bearing cages

3. Gear selector

NOTE: Some BE4 / 5 gearboxes are equipped with a 5th / reverse gear inhibitor.

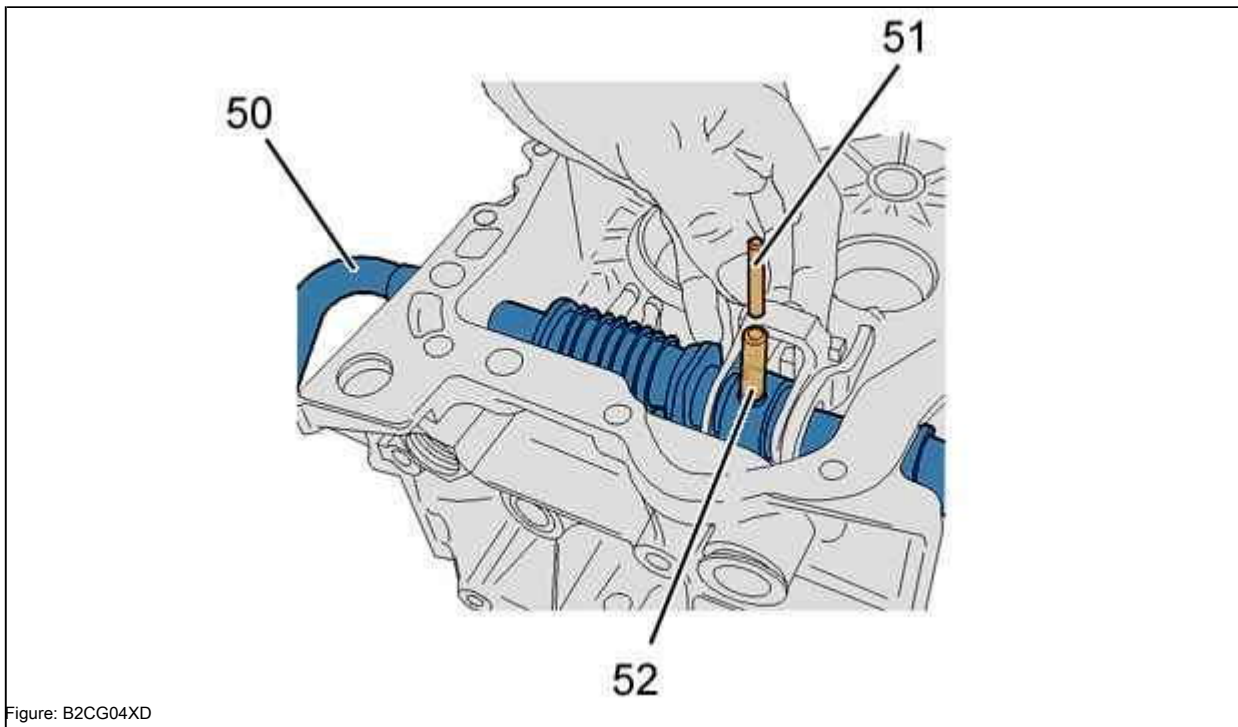
3.1. System composition



(48): Locking pin.

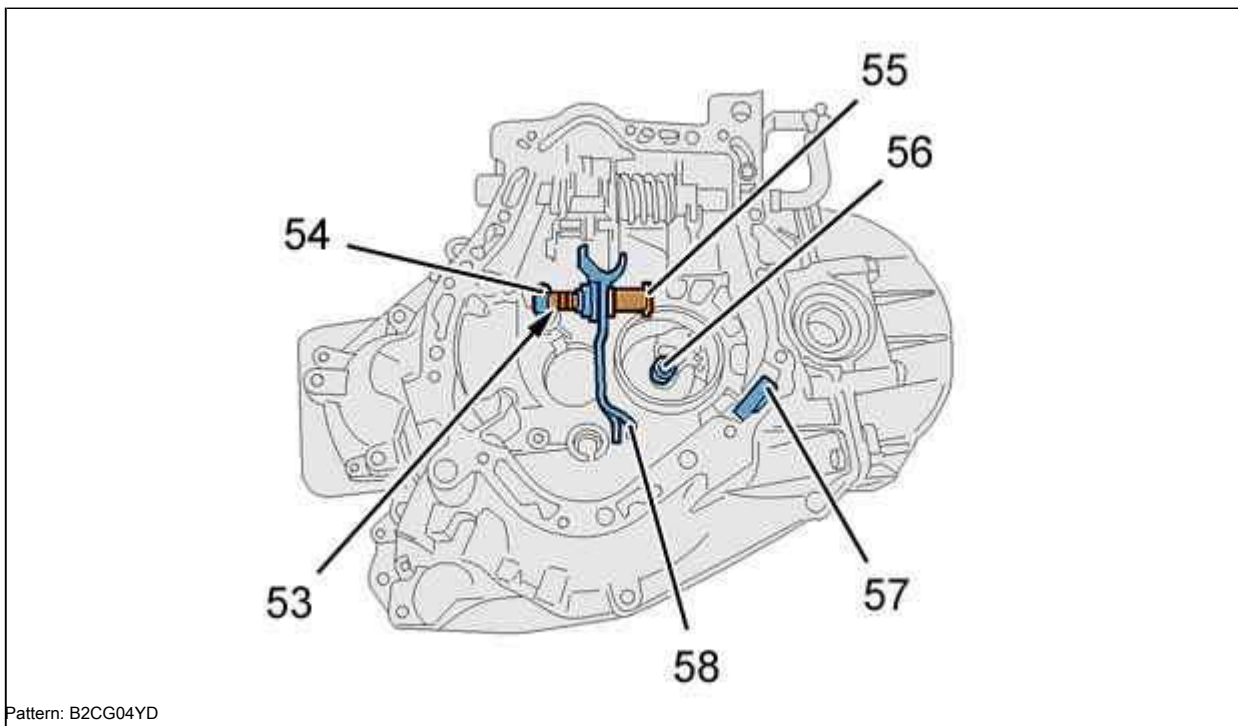
(49): The locking pin support is secured with 2 screws in the gear case.

ATTENTION : When pressing in, the pin (48) must exceed the joint plane of the clutch housing (" X " = 8 ± 0.5 mm). The use of the device [5] guarantees the given projection value.



NOTE: Gearboxes that do not have a 5th / reverse inhibit system are equipped with double locking pins (51) and (52) on the shift shaft (50).

3.2. Withdrawal



Remove:

- Reverse fork axle (55)
- Reverse gear fork (58)

- Locking pin (54) and its spring (53)
- Magnetic strip (57)
- Output shaft bushing (56)

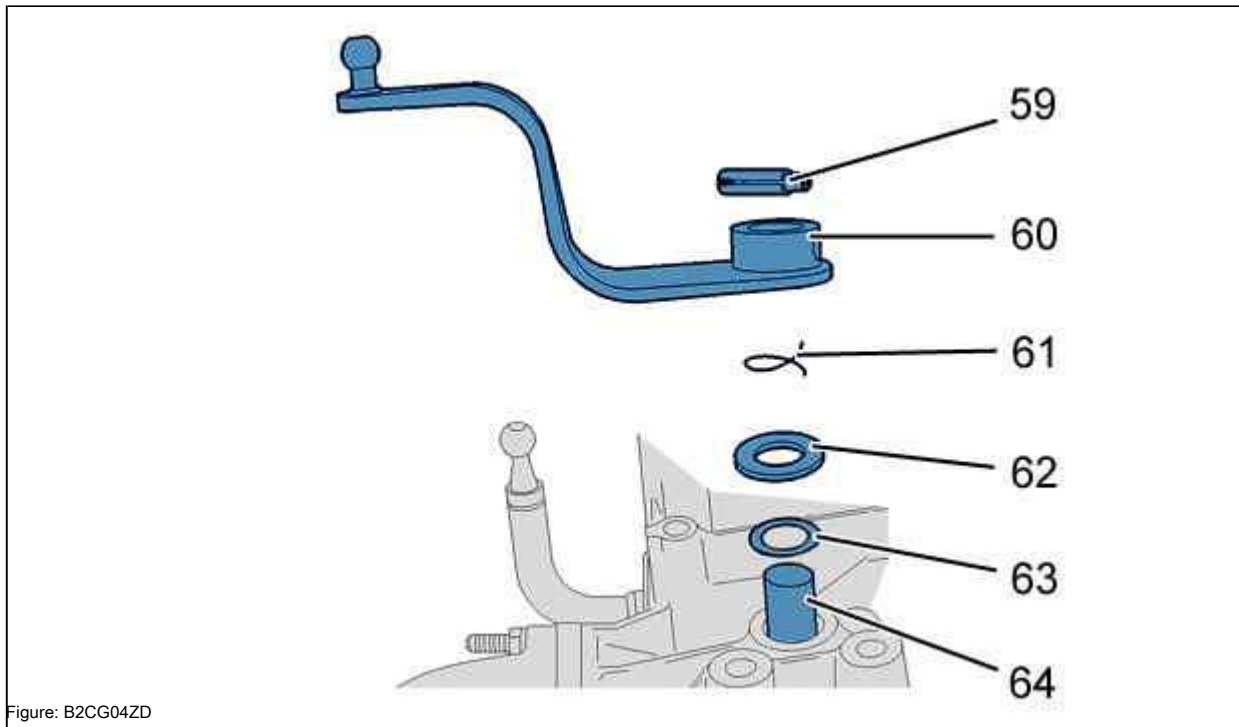
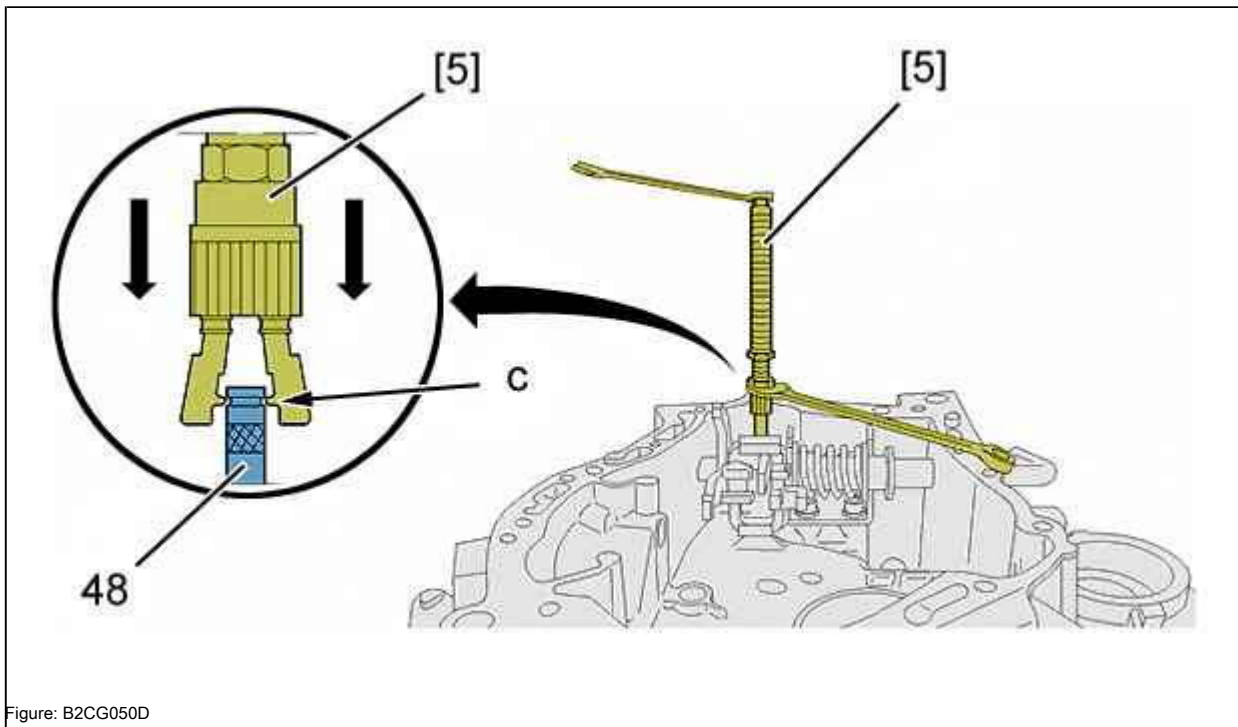


Figure: B2CG04ZD

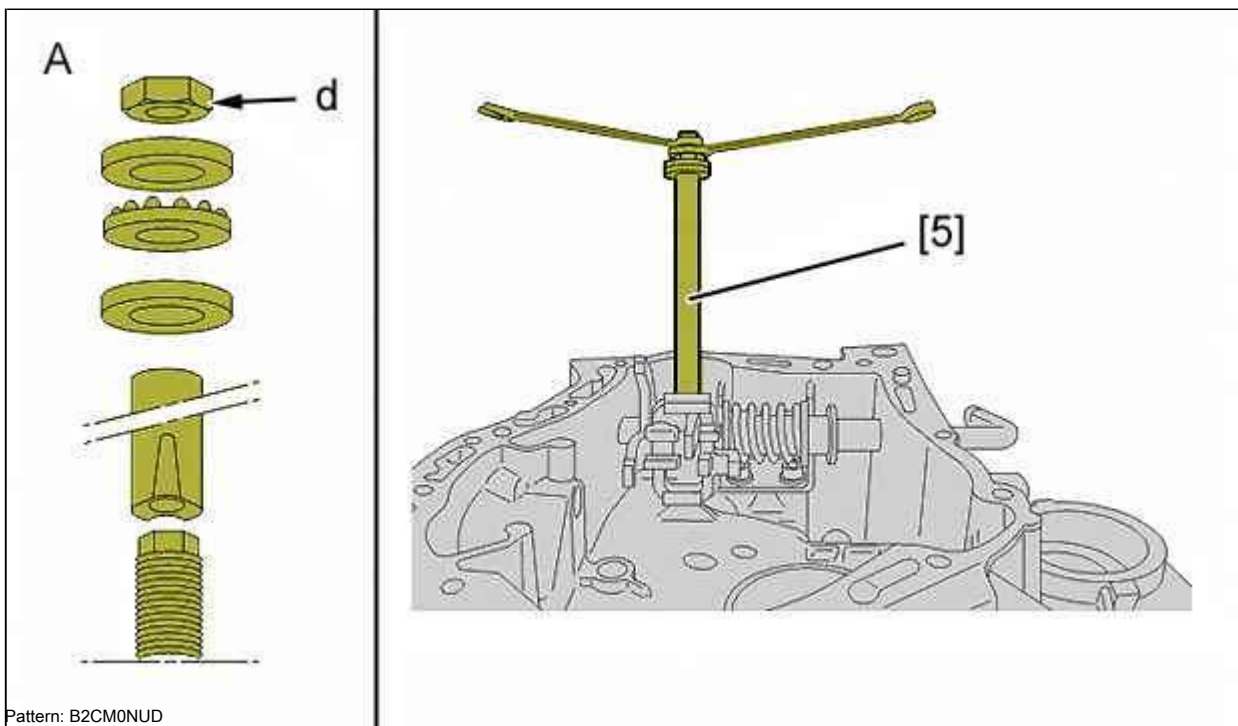
Drive out the locking pin (59); Using a drift. Remove:

- Gear selector lever (60)
- Spring (61)
- Washer (62)
- Seal (63)
- Gear selector shaft (64)

3.3. 5th gear / reverse gear inhibit



Place the grip of the tool [5] on the point of the finger (48). Clip the clips of the tool [5] into the groove of the pin (39) (in "c").



Install tool [5] following assembly order "A". Turn the nut of the tool [5] to "d" and press out the pin (48).

3.4. Gearbox without a system for prohibiting the inclusion of 5th gear / reverse gear

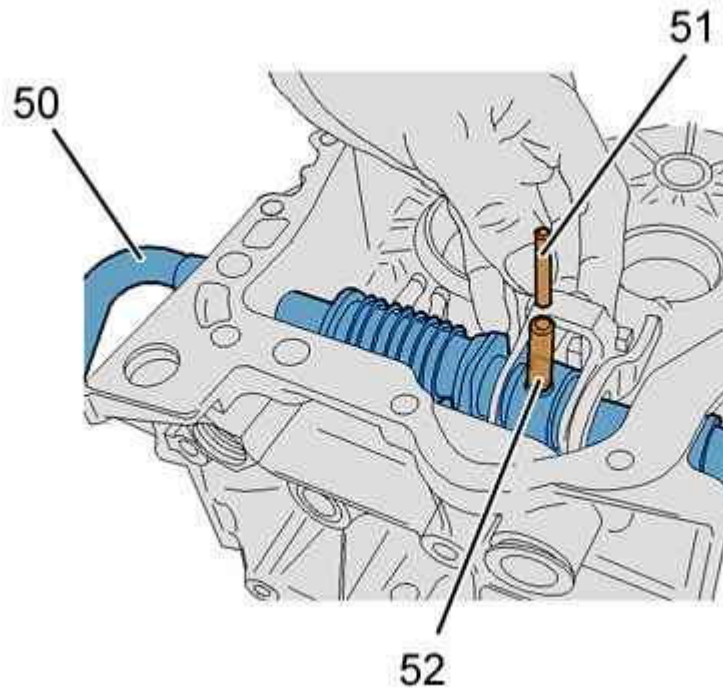


Figure: B2CG051D

Position the shift shaft (50) against the crankcase. Knock out pins (51), (52)) (Knock off pins one by one).

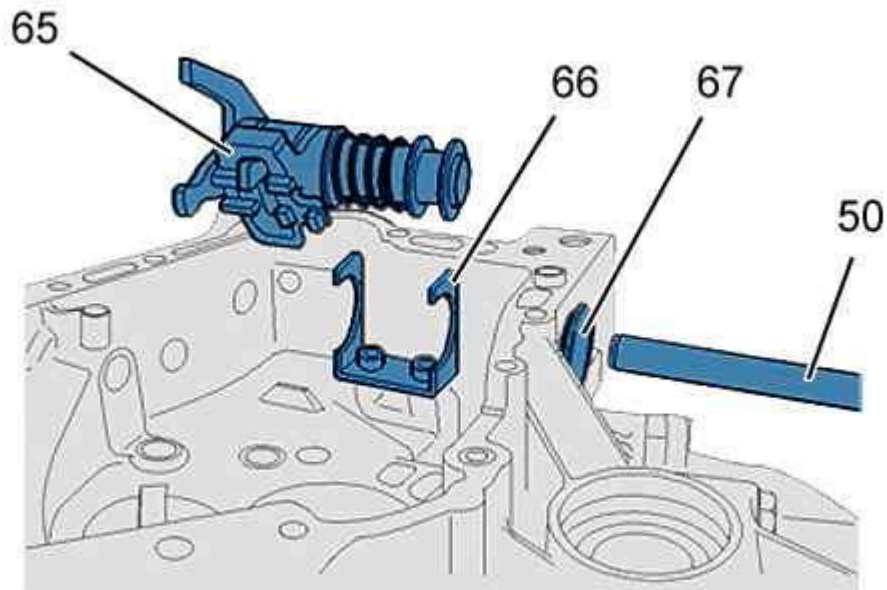


Figure: B2CG052D

Remove:

- Gear Shift Axle (50)
- Assembled cassettes (65)
- Gasket (67)
- Shift spring support (66)

NOTE: The cassette assembly must not be disassembled.

3.5. Super high-speed gearbox

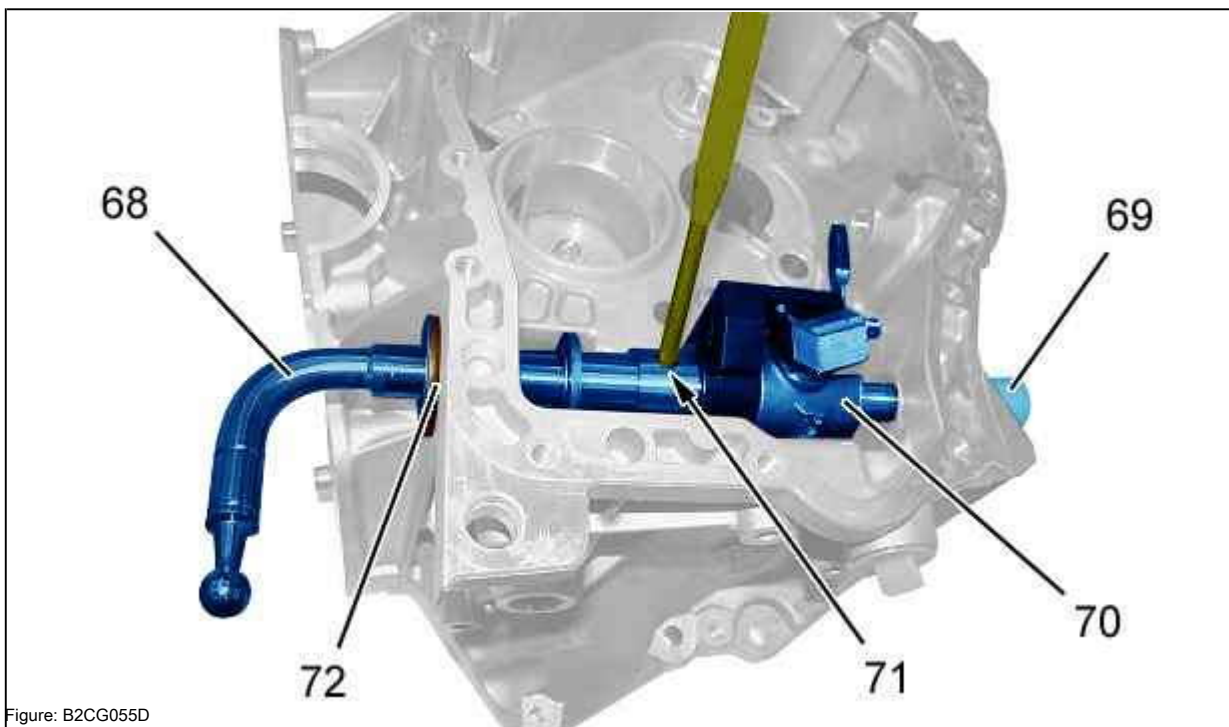
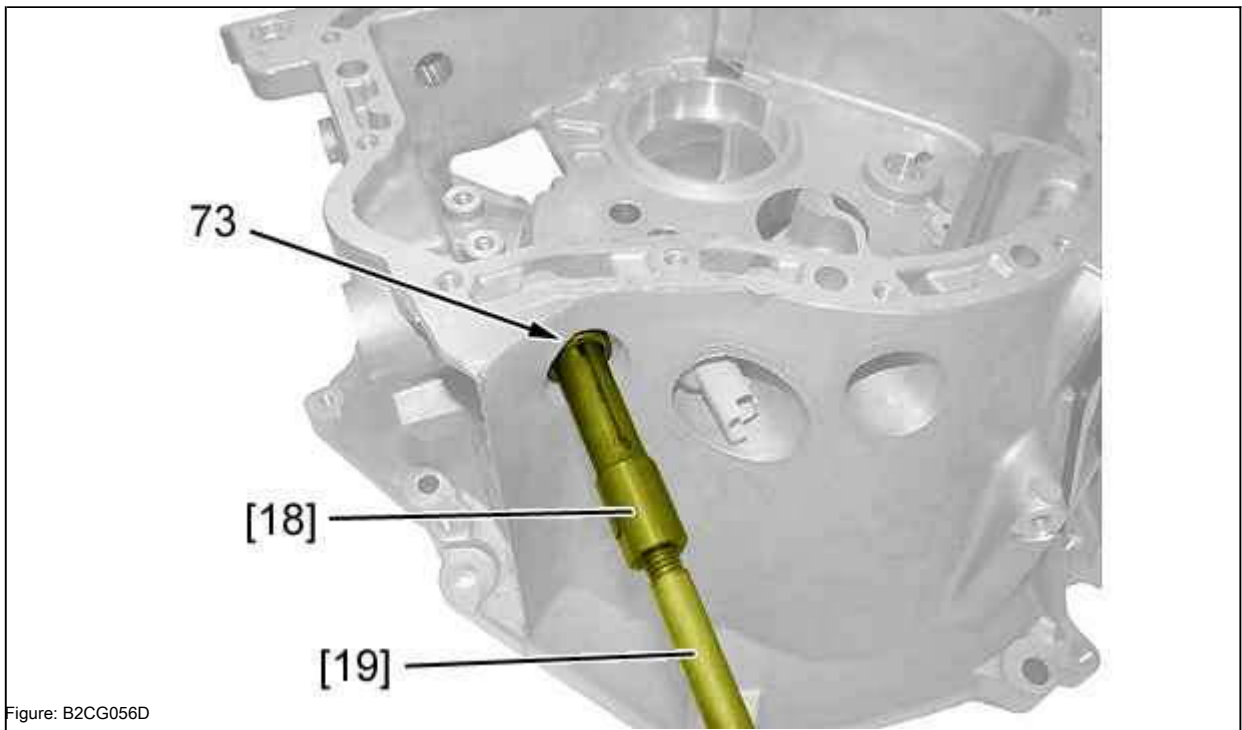


Figure: B2CG055D

Remove:

- Pin (71); with drift
- Gear Shift Axle (68)
- Assembled cassettes (70)
- Gasket (72)
- Protective cover (69)



Check the condition of the bearing (73) (replace if necessary). Remove the bearing (73); Using the tools [18], [19].

RE-INSTALLATION: MANUAL GEARBOX

MANDATORY: Observe the cleanliness and safety rules



ATTENTION: Observe the conditions for cleaning and reinstalling the gearbox.



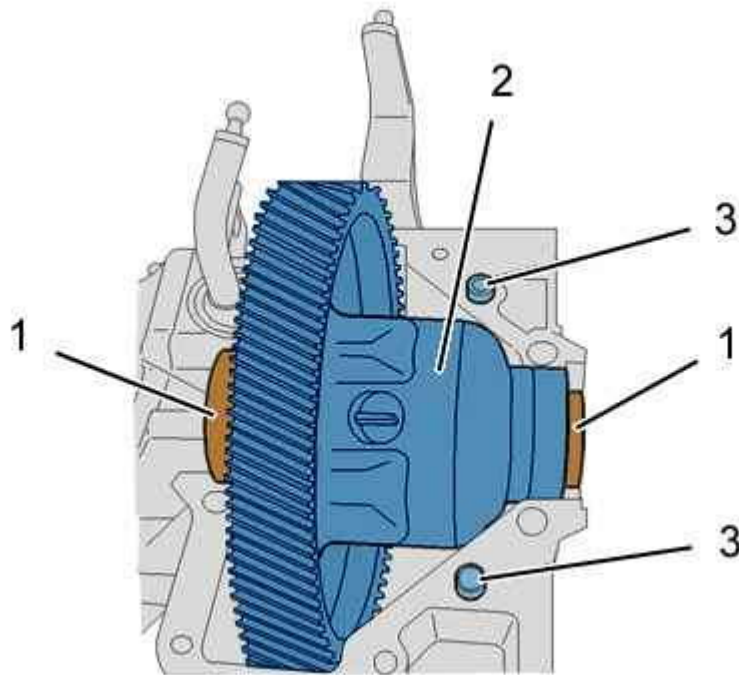
1. Recommended equipment

Presentation: **Recommended equipment** ...



2. Installation: Differential shroud

ATTENTION: Observe the required tightening torques



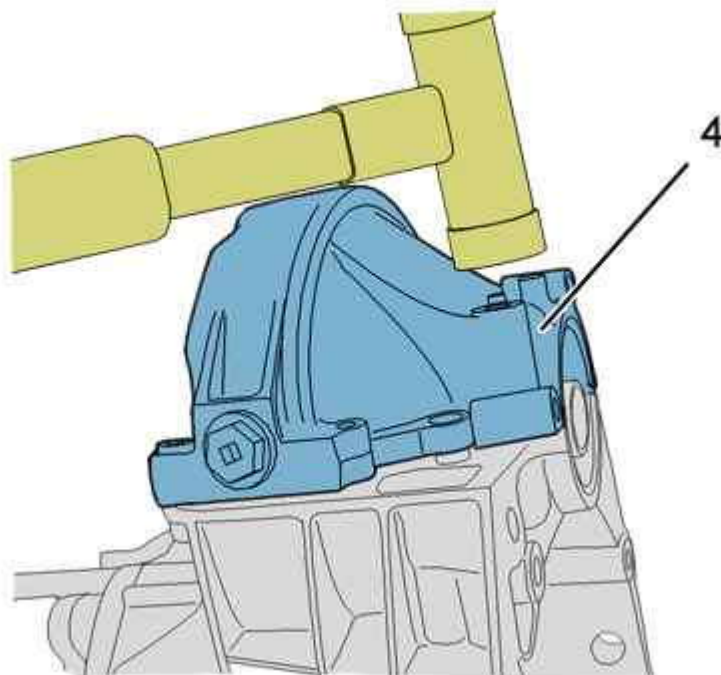
Pattern: B2CM0N5D

Verify :

- Presence of centering pins (3)
- Cleanliness of the joint surface

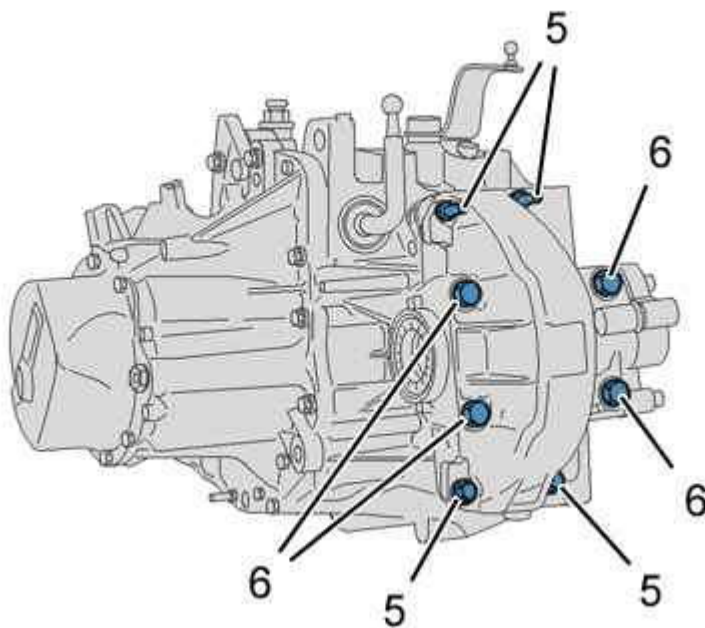
Apply a thin layer of E10 sealant on the plane of the joint (See procedure for recommended components: (depending on versions)).

Install differential (2) with outer bearing races (1) into housing.



Pattern: B2CM0N9D

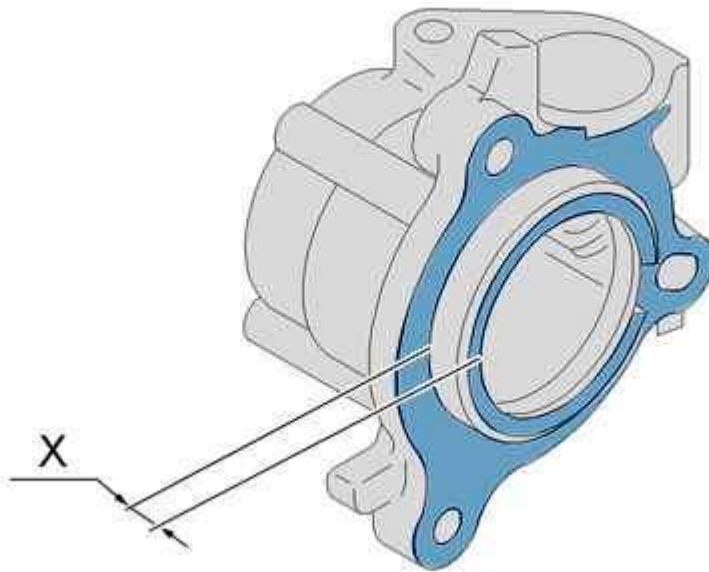
Install the differential case (4).



Pattern: B2CM0NAD

Replace the bolts (5), (6) (loose).

2.1. Adjustment of the console part of the gearbox

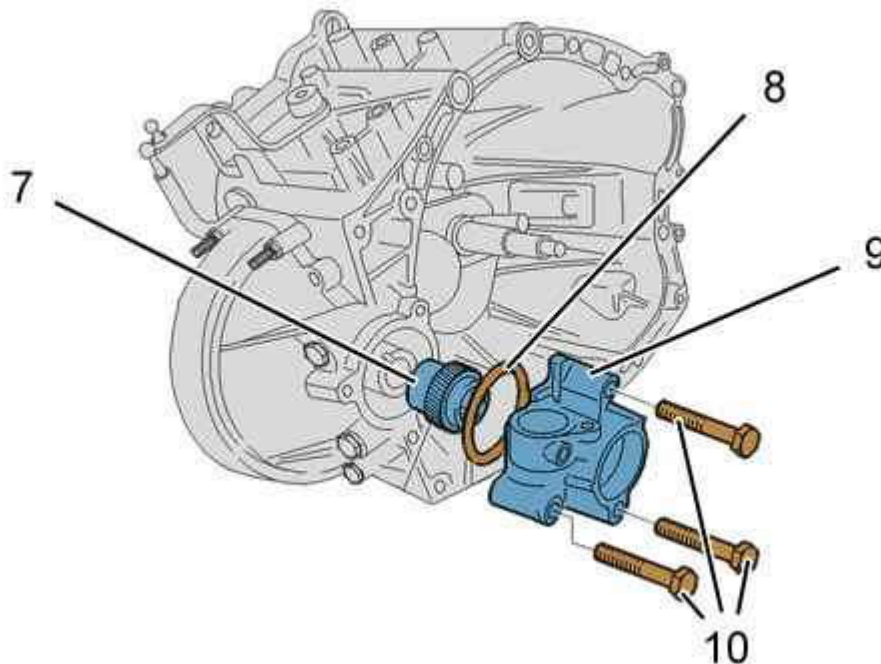


Pattern: B2CM0NCD

"X" = Console Shoulder. Measure "X" dimension.

2.2. First installation

Console shoulder: "X" = 10 mm.



Pattern: B2CM0NED

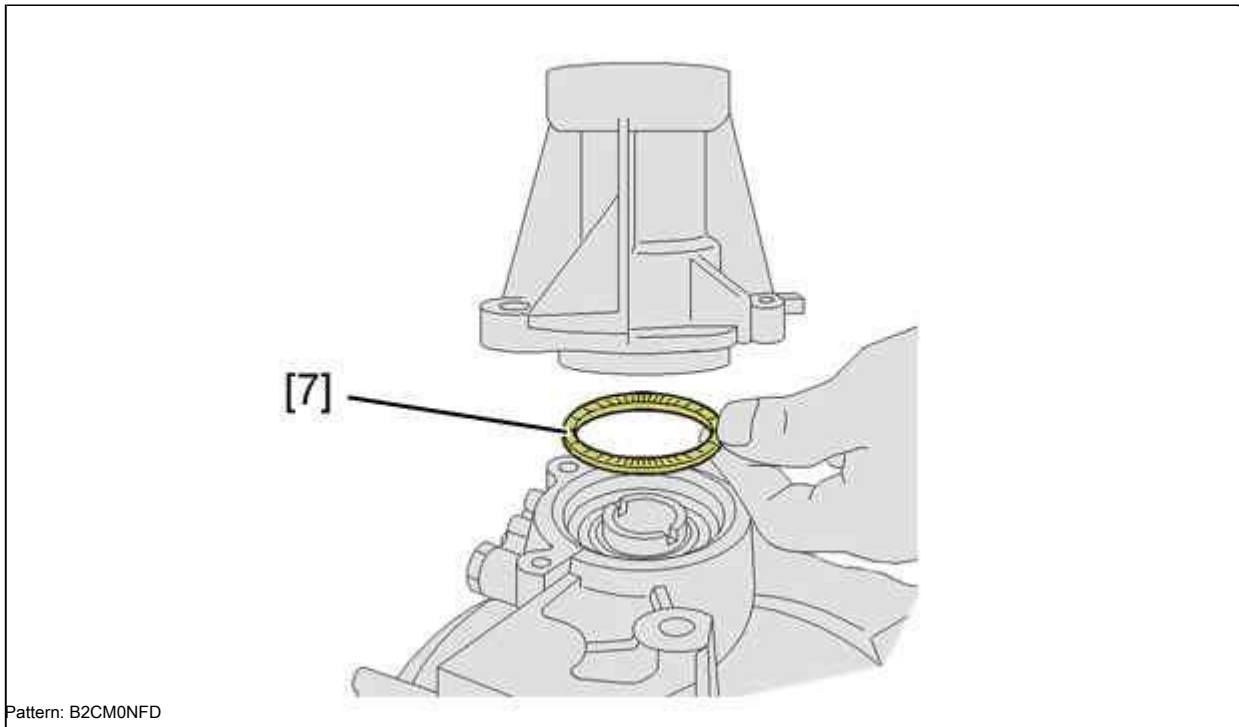
Install:

- Speedometer Drive Worm (7)
- The console part (9) has an oil seal (8) (new)

- the bolts (10)

2.3. Second installation

Cantilever shoulder "X" = 8.65mm.



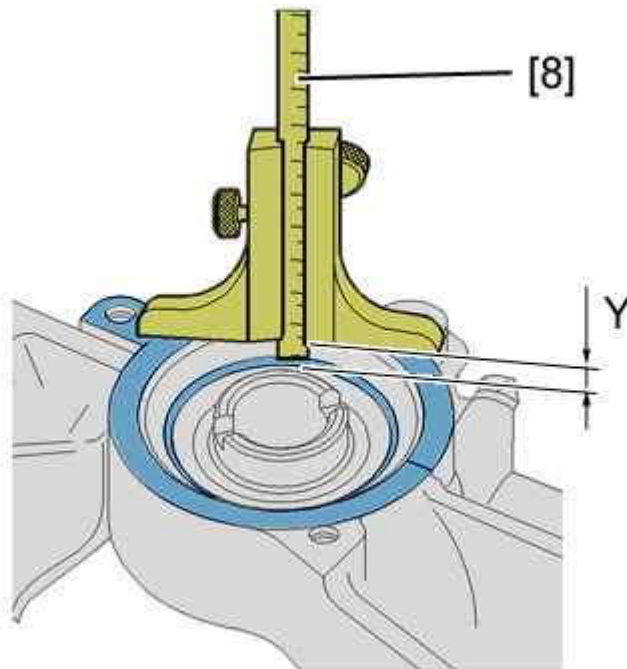
Arrange:

- Bearing shim [7] in the outer bearing ring
- Extension without O-ring

Tighten the bolts on the cantilever gradually while turning the differential to obtain the angle required to set the bearing race in the correct position.

Remove:

- Crankcase extension
- Shim (7)

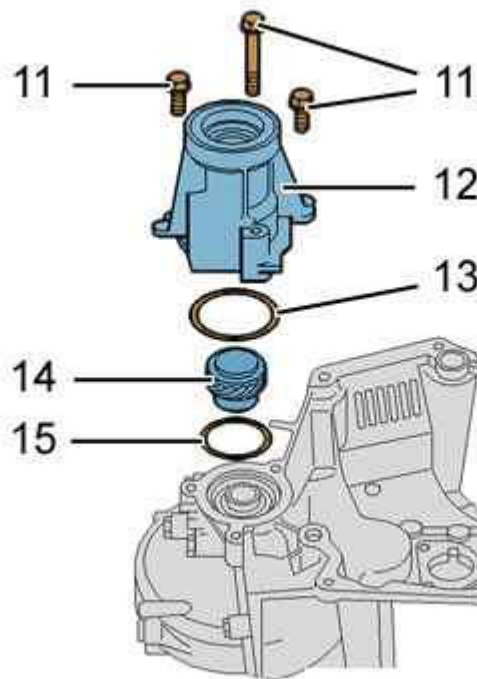


Pattern: B2CM0NGD

Using a depth gauge [8], measure the distance "Y" between the joint plane and the outer race of the bearing.

Find the thickness of the shim.

$Y \times 0.1\text{mm} = \text{Thickness of the shim.}$

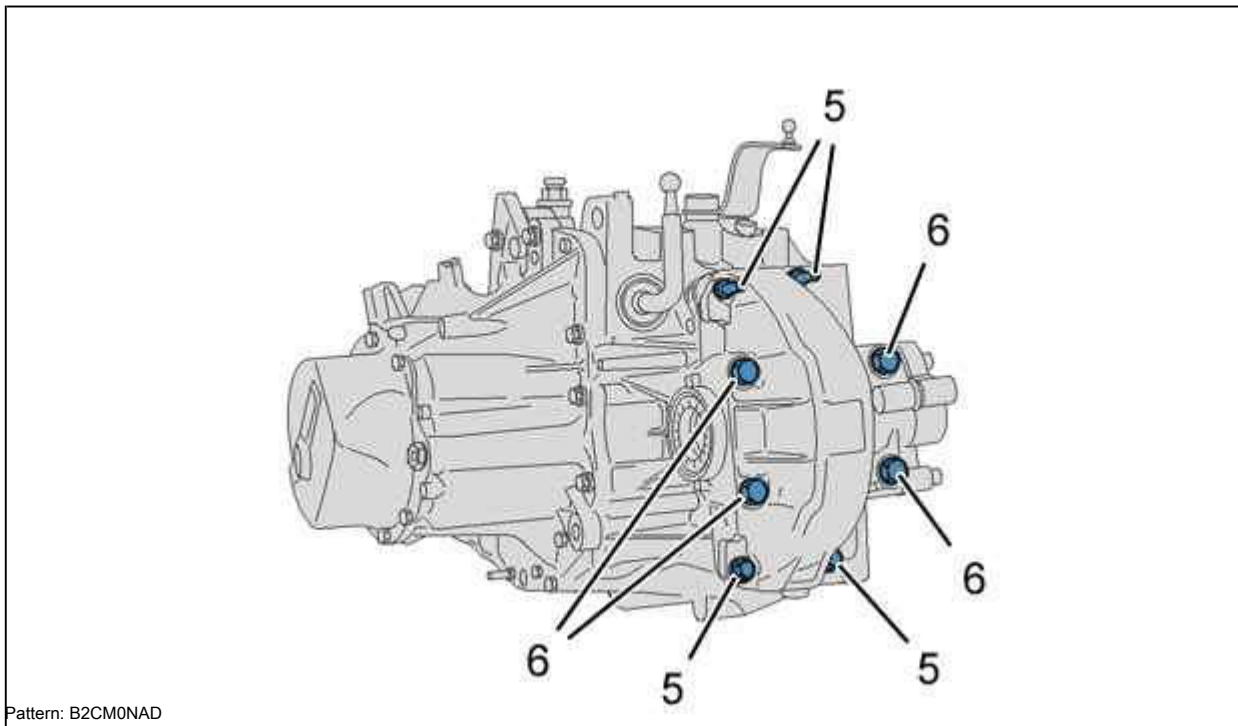


Pattern: B2CM0NKD

Install:

- Shim (15)
- Speedometer Drive Worm (14)
- Extension (12) with a new O-ring (13)

- the bolts (11)



Tighten:

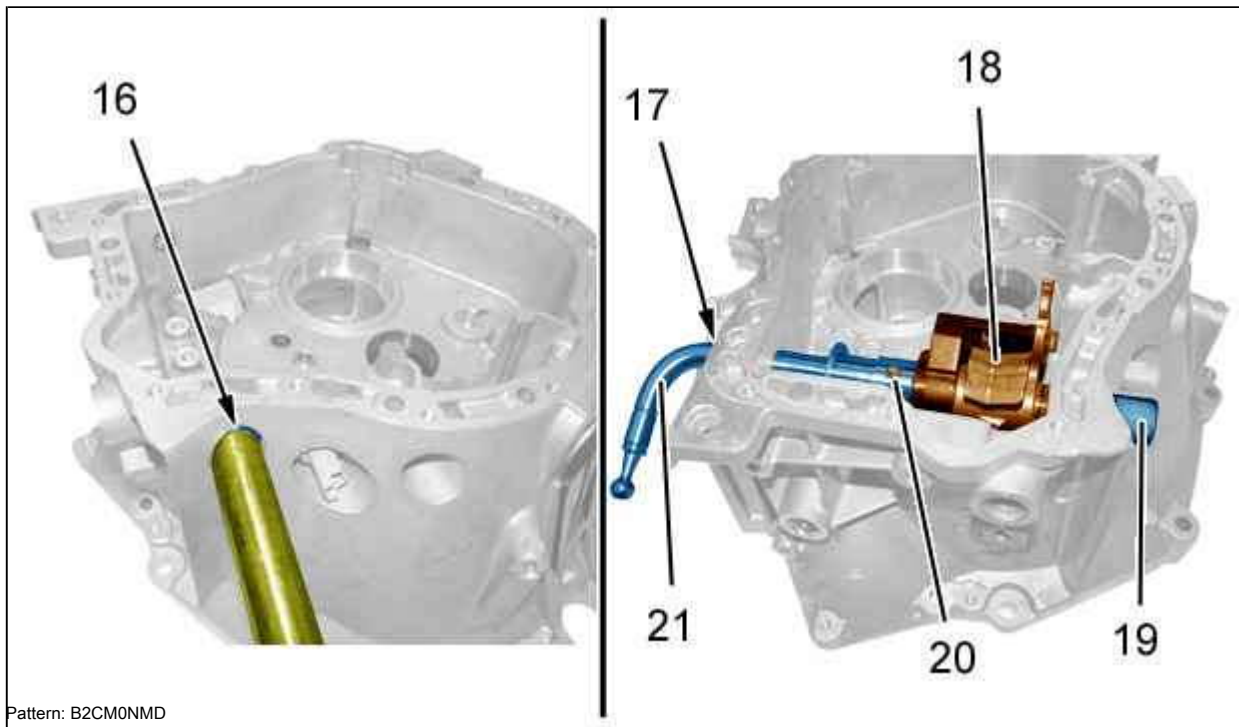
- the bolts (6)
- the bolts (5)

NOTE: This order of work ensures good alignment of the joining planes.

3. Assembly: clutch housing

ATTENTION : Replace gaskets and pins periodically.

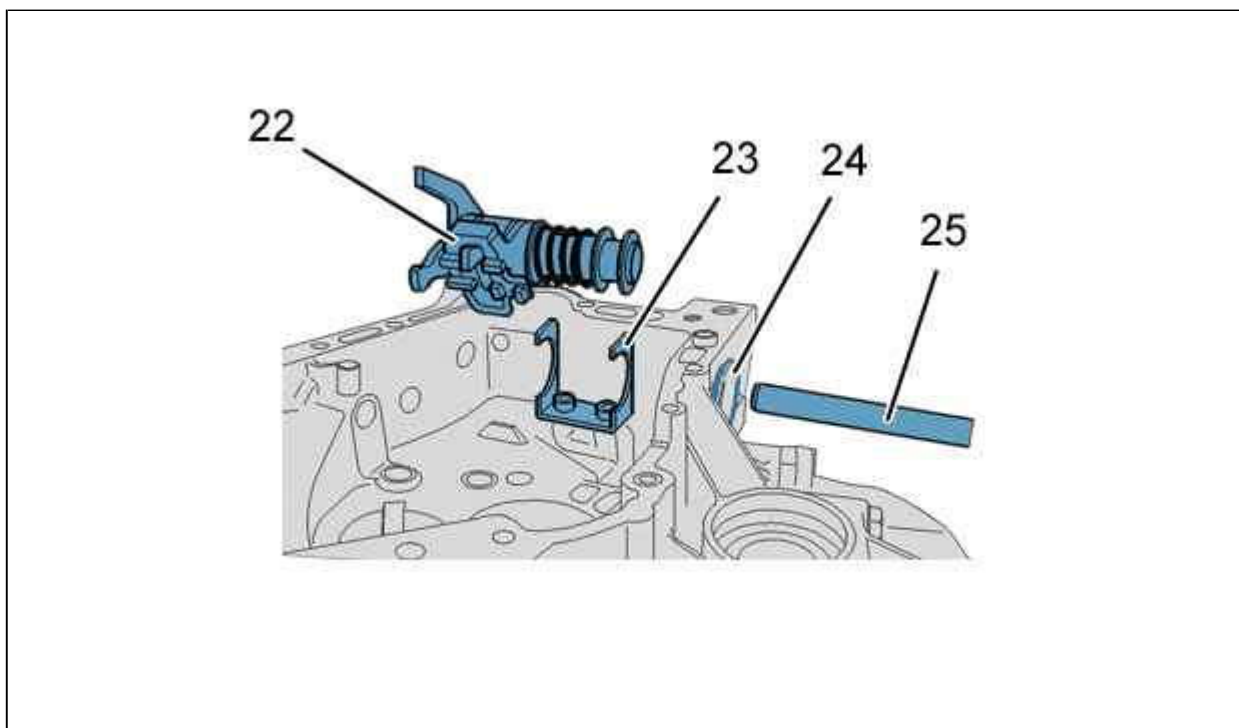
3.1. Transmission with installed higher ball lock



Install:

- Bearing (16) (new); with a bronze pin
- Gasket (17) (new)
- Assembled cassettes (18)
- Shift axle (21)
- Pin (20) (new)
- Cap (19) (new)

3.2. Disconnect the selection and shift drive ball joints

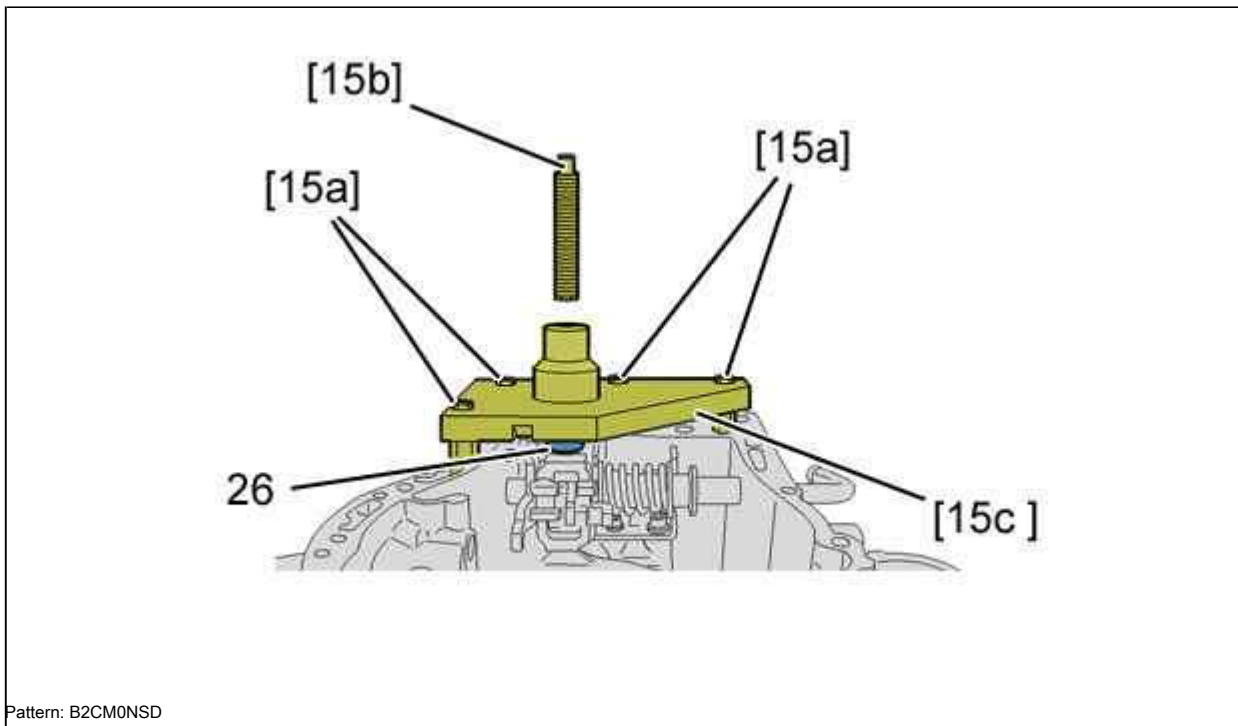


Pattern: B2CM0NQD

Install:

- Support (23)
- Seal (24) (new)
- Assembled cassettes (22)
- Shift axle (25)

3.3. 5th gear / reverse gear inhibit



ATTENTION : Follow the sequence shown.

Remove the threaded rod [15b].

Arrange:

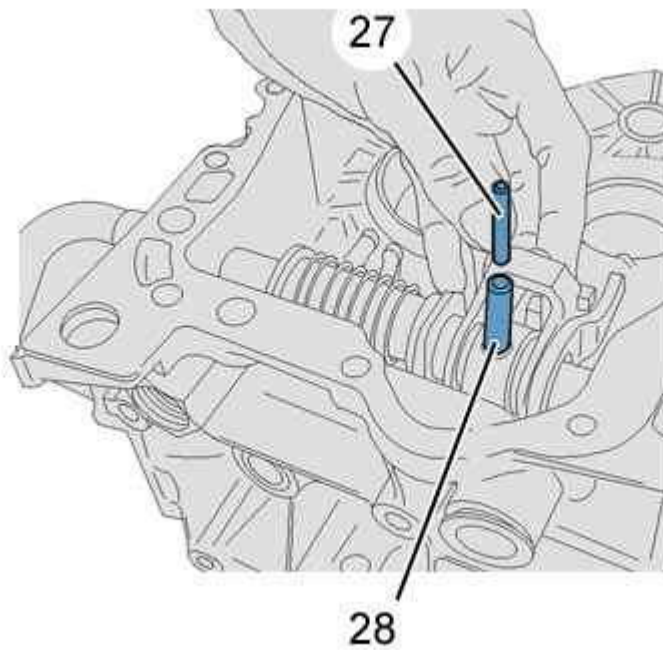
- Pin (26)
- Fixture [15c]

Tighten the 4 bolts (15a) to 1.5 da.Nm. Position: Threaded rod [15b].

Screw the threaded pin up to the stop in the area "[15b)".

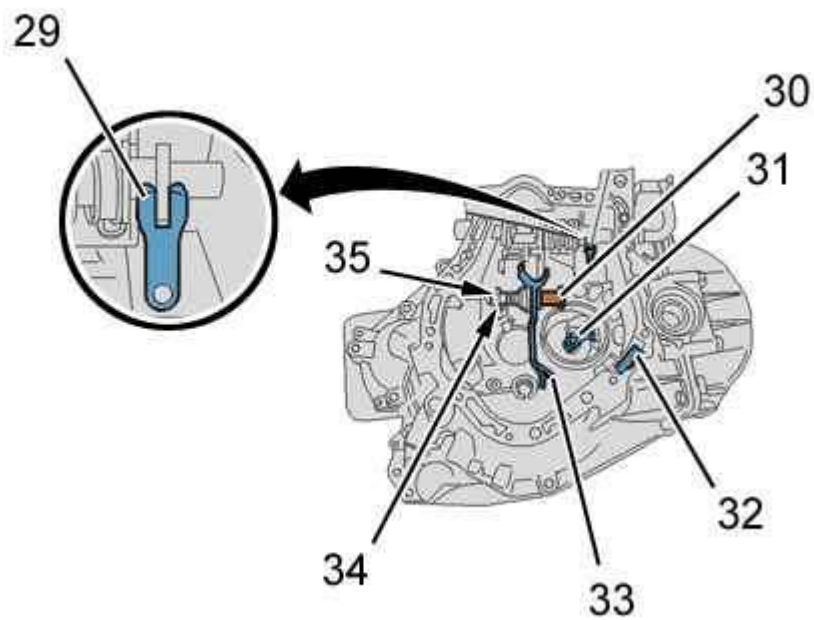
ATTENTION : Observe the correct position of the tool for the normal installation of the pin (26).

3.4. Gearbox without a system for prohibiting the inclusion of 5th gear / reverse gear



Pattern: B2CM0NTD

Install pins (28) and (27).

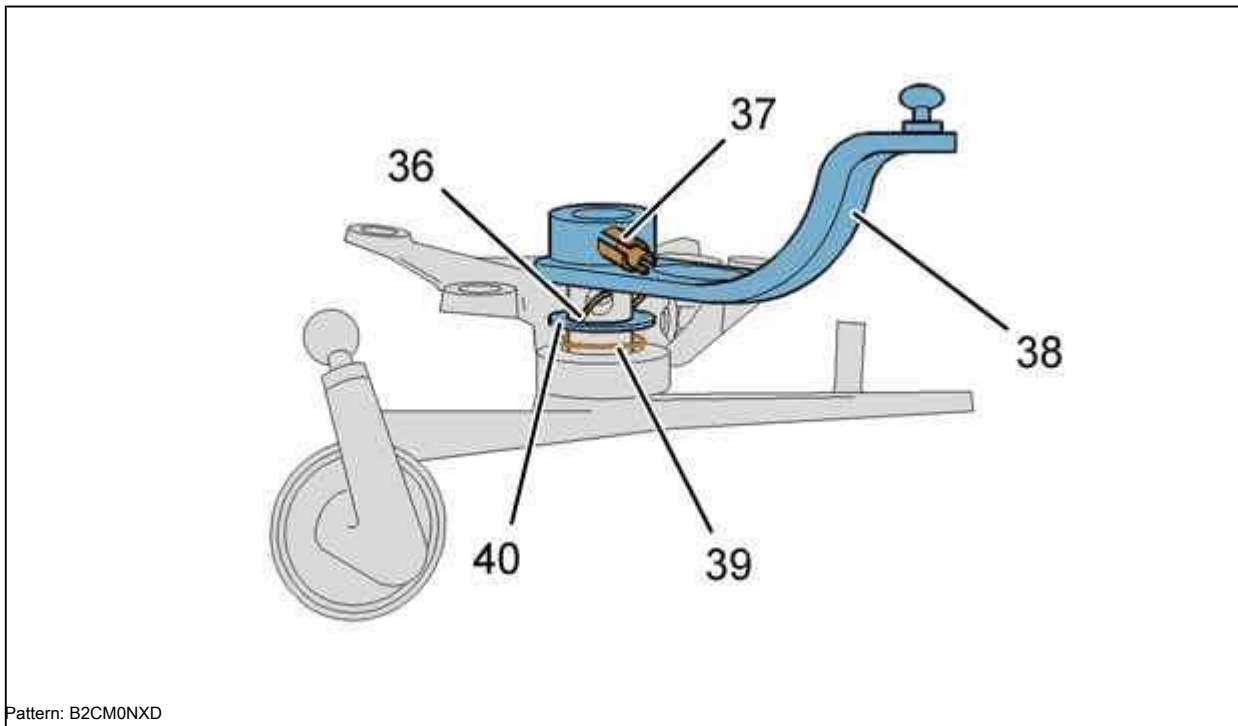


Pattern: B2CM0NVD

Install:

- Output shaft bushing (31)
- Magnet (32)
- Spring (34)
- Finger Lock (35)
- Reverse gear fork (33)
- Fork Finger (30)

- Shift axle (29)



Install:

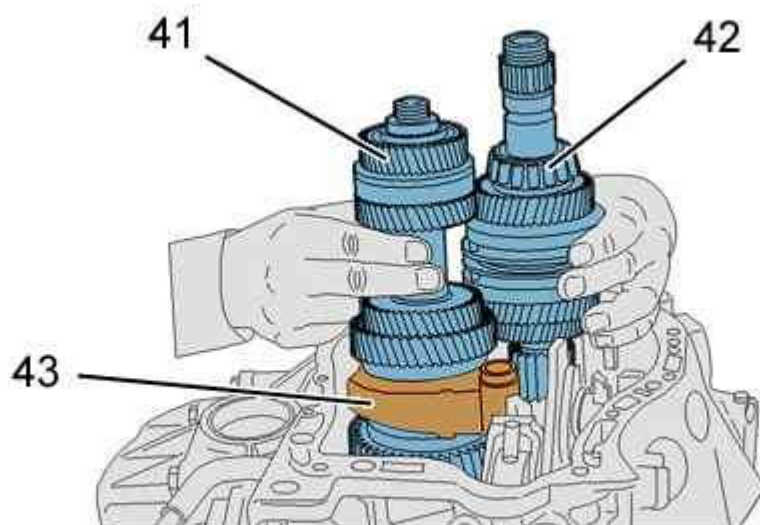
- O-ring (39) (new)
- Washer (40)
- Spring (36)
- Gear lever (38)
- Pin (37)

4. Installation

4.1. Primary and secondary shafts

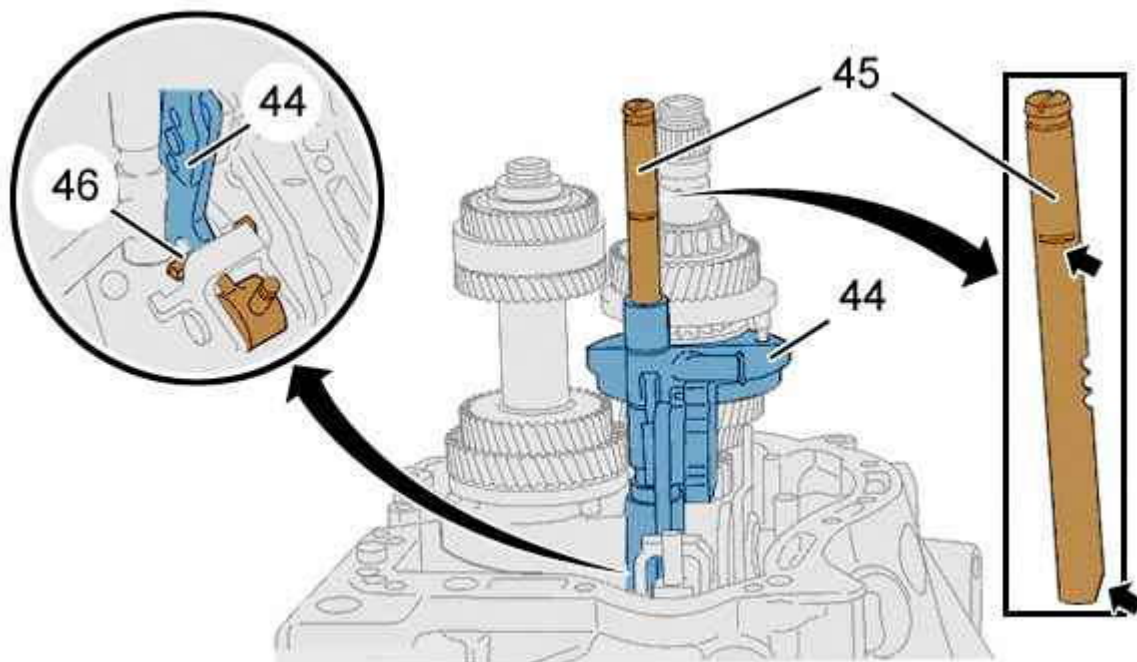
Adjust the primary shaft clearance





Pattern: B2CM0NZD

Connect the input (42) and output shaft (41) with the 1st / 2nd gear yoke (43). Install the toothed drive in the gear case.



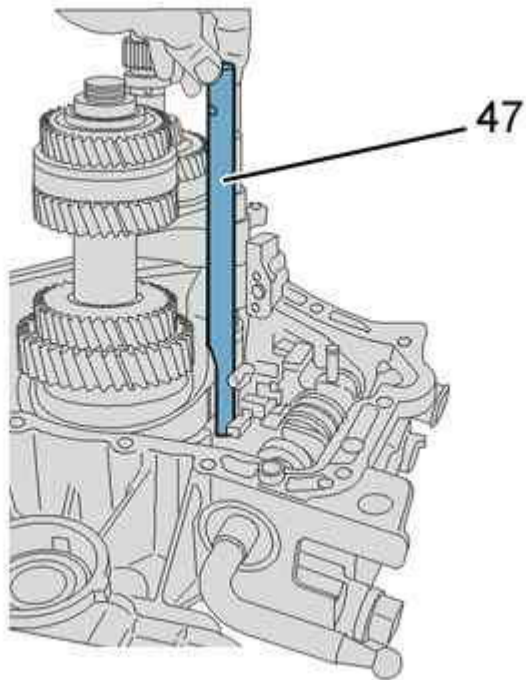
Pattern: B2CM0P0D

ATTENTION : Install the fork (44) to the selector lever (46).

ATTENTION : Observe the direction of the finger plug (45).

Install:

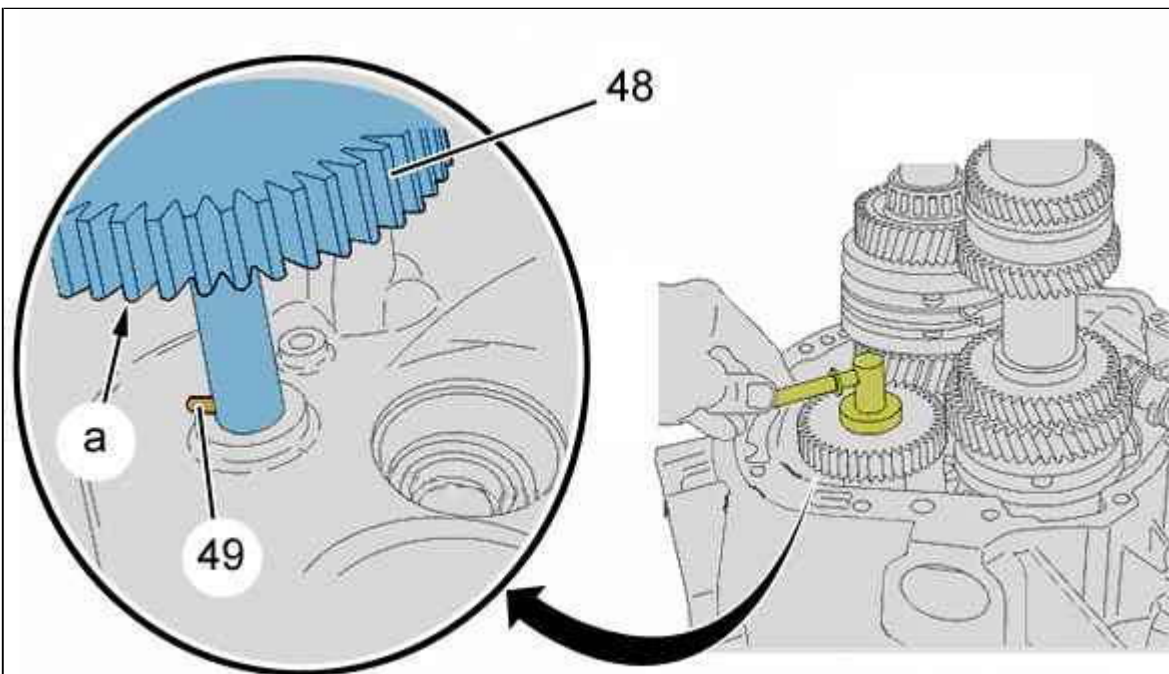
- Fork (44)
- Fork Finger (45)



Pattern: B2CM0P1D

ATTENTION : Check the position of the fingers on the selector lever.

Install the 5th gear fork axle (47).

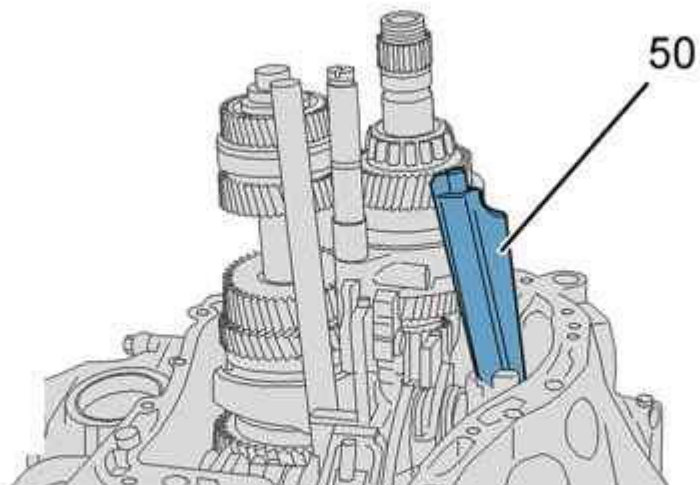


Pattern: B2CM0P2D

ATTENTION : Check the position of the pin (49) in its seat.

Replace the axle and the reverse gear pin (48).

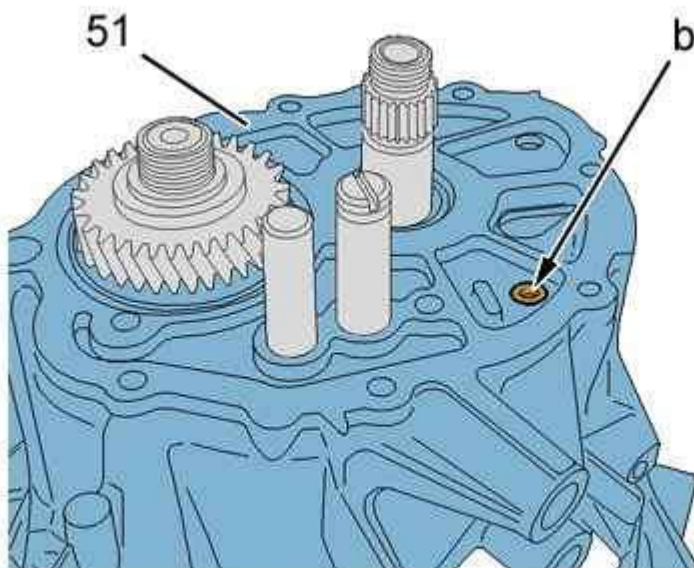
NOTE: The entry of the tines must be oriented downward (at "a").



Pattern: B2CM0P3D

Install the oil chute (50).

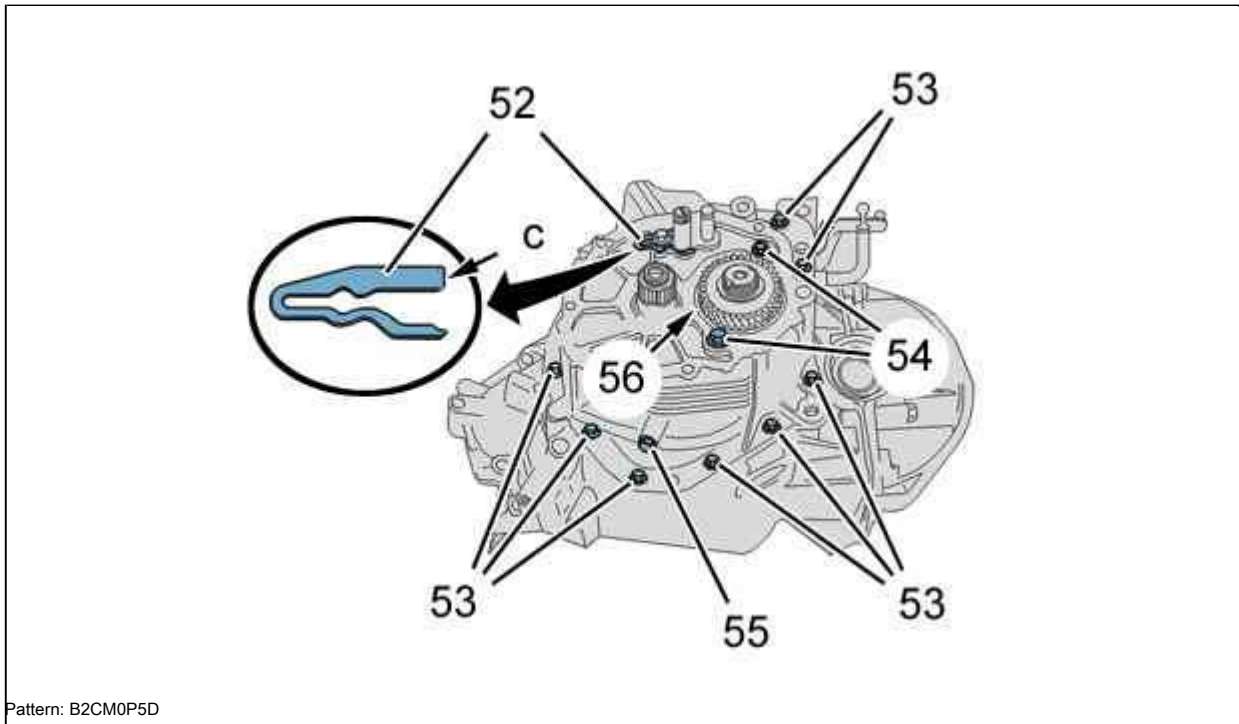
4.2. transmission case



ATTENTION : Check that the oil groove is correctly seated in the crankcase hole (in "b").

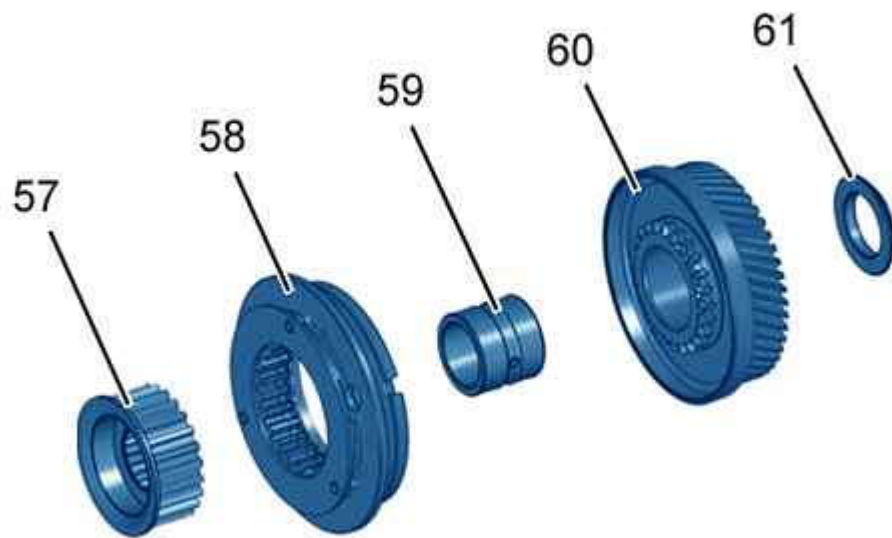
Apply sealing compound E10 to the joint plane of the bond card (See procedure for recommended components: (depending on versions)).

Install: Transmission housing (51).



Install:

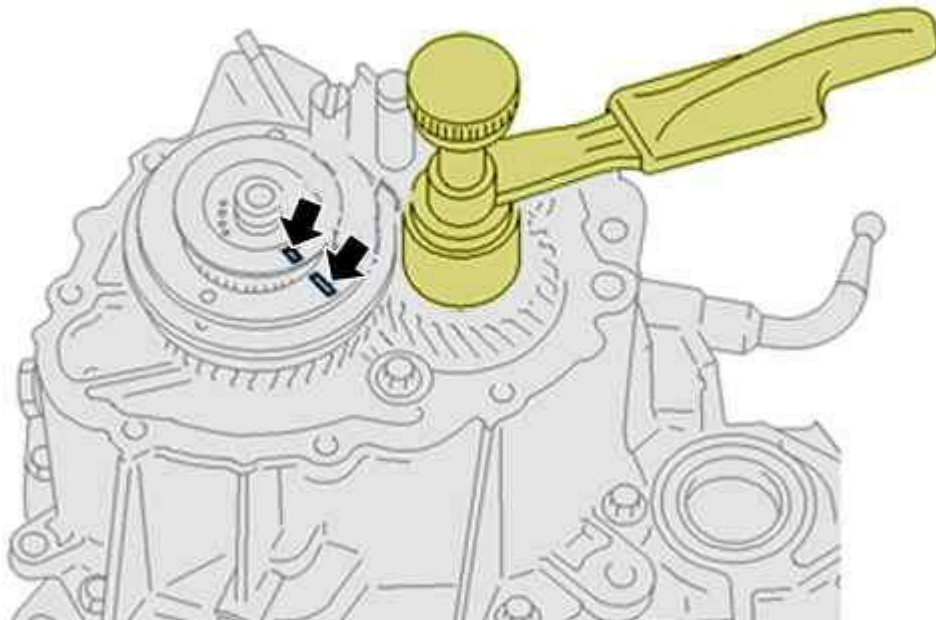
- the bolts (53)
- Bolt (55) (New washer)
- Finger lock plate (52) (Flat part in finger groove) (in "c")
- Lock plate retaining bolt
- Piston ring (new) (56) in bearing groove
- the bolts (54)



Pattern: B2CG0IOD

Install:

- Spacer washer (61) (bearing shoulder)
- 5th Gear Thrust Bushing (59)
- 5th gear pinion (60)
- Assembly: hub synchronizer (58), (57)



Pattern: B2CM0P8D

Shift in 3rd or 4th gear; using the gear selector. Engage 5th gear.

Remove the input shaft nut.

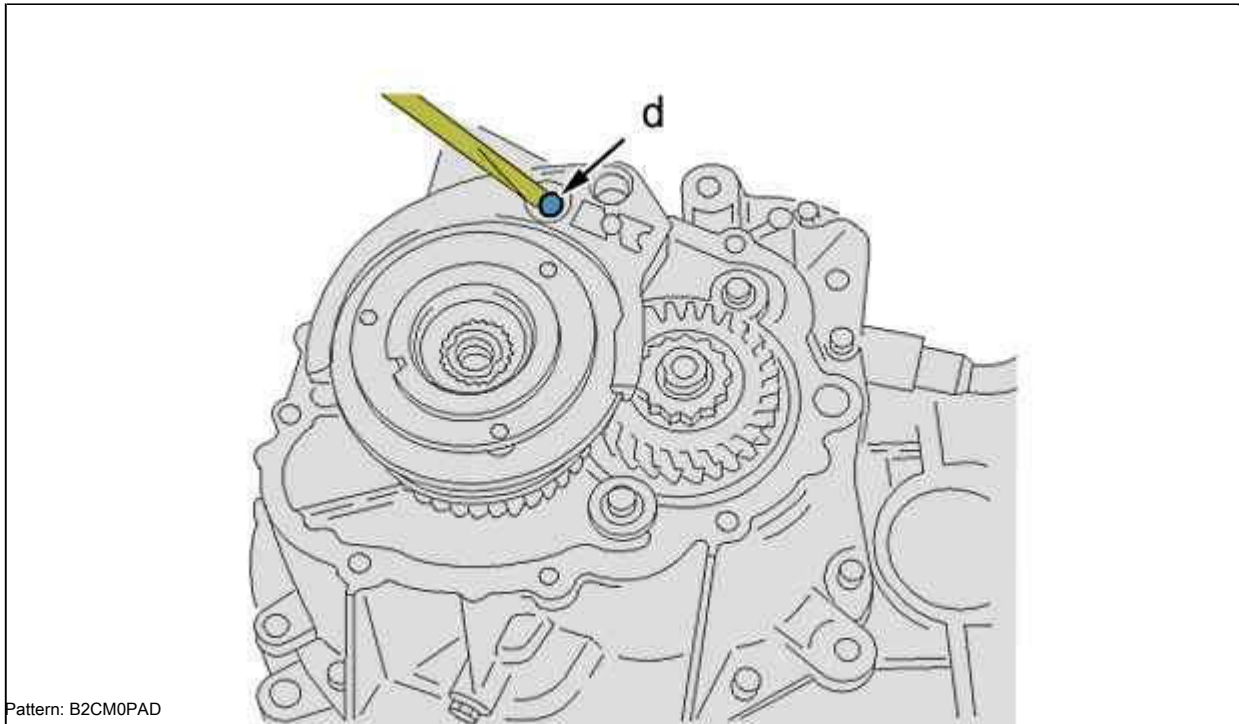
Apply the thread of the pinion shaft with E6 (See procedure for recommended components: (depending on versions)).

Remove:

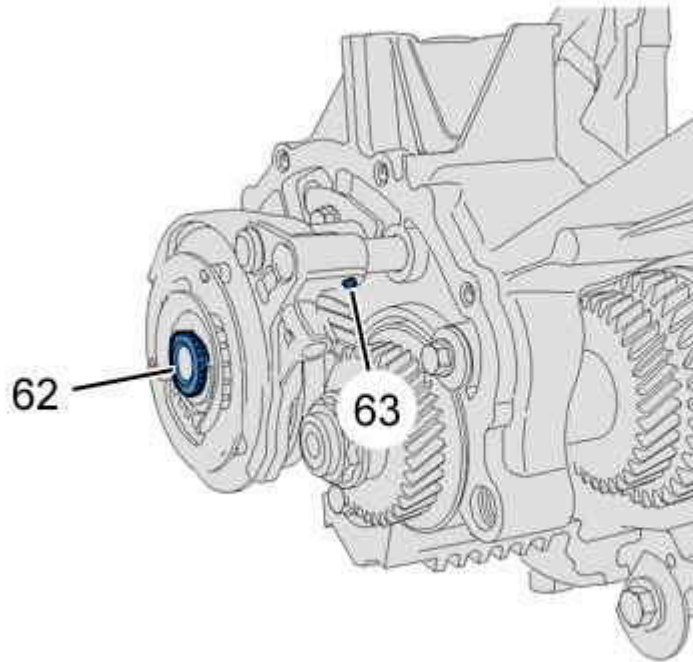
- 5th gear synchronizer hub
- 5th gear fork

Remove the 5th gear synchronizer hub assembly.

NOTE: Observe the markings made during disassembly (as shown by arrows).



Press the locking ball into its seat in area "d" while pushing in the synchronizer hub assembly.

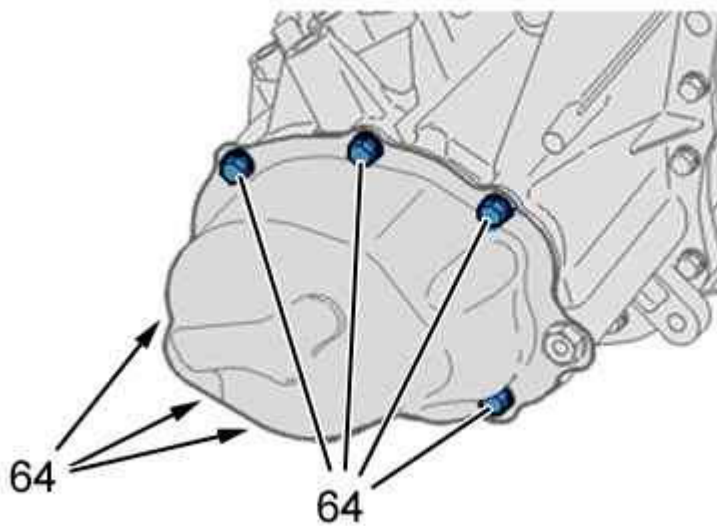


Pattern: B2CM0PBD

Shift in 3rd or 4th gear; using the gear selector. Engage 5th gear.

Apply E6 to the input shaft thread (See procedure for recommended components: (depending on versions)).

Connect the fork and finger with the pin (63) (new).



Pattern: B2CM0PCD

Apply 5th gear crankcase with E10 sealant (See procedure for recommended components: (depending on versions)).

Replace the bolts (64).

DISASSEMBLY ASSEMBLY: TRANSMISSION INTERNAL ELEMENTS

MANDATORY: Observe the cleanliness and safety rules.



ATTENTION: Observe the conditions for cleaning and reinstalling the gearbox.



ATTENTION: Mark the position of the parts before dismantling.

1. Equipment

Use recommended attachments



2. Disassembly: input shaft

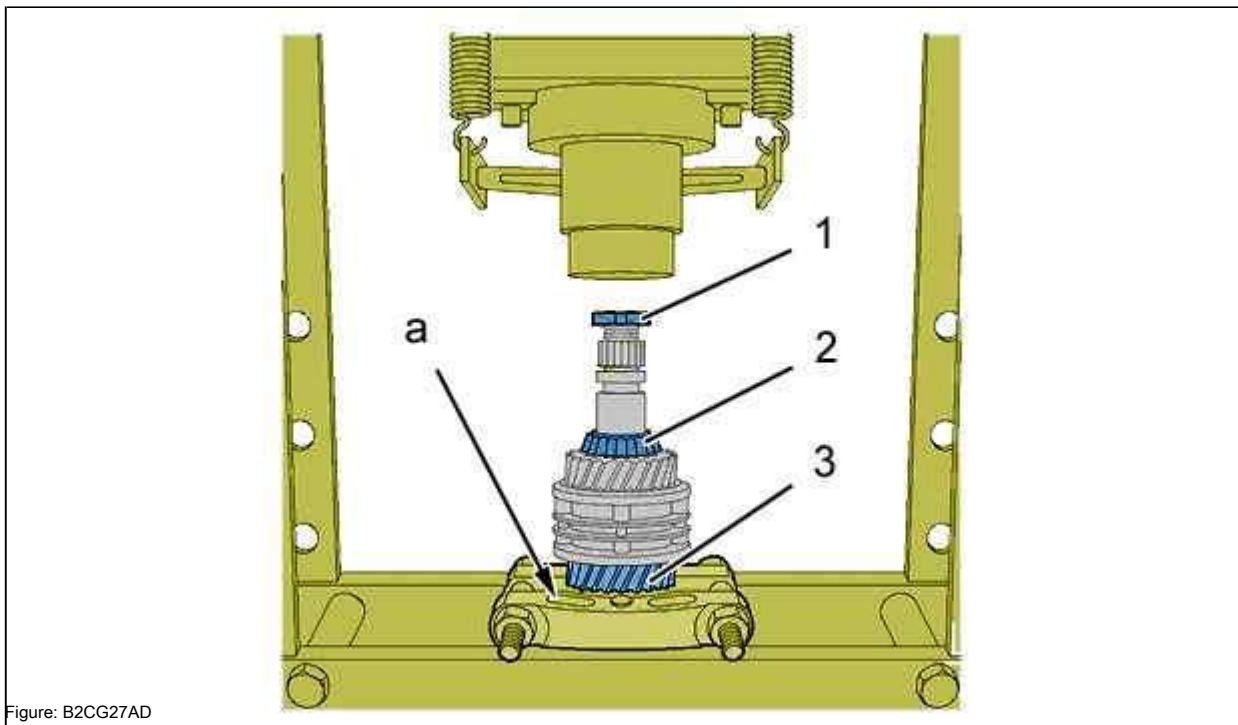
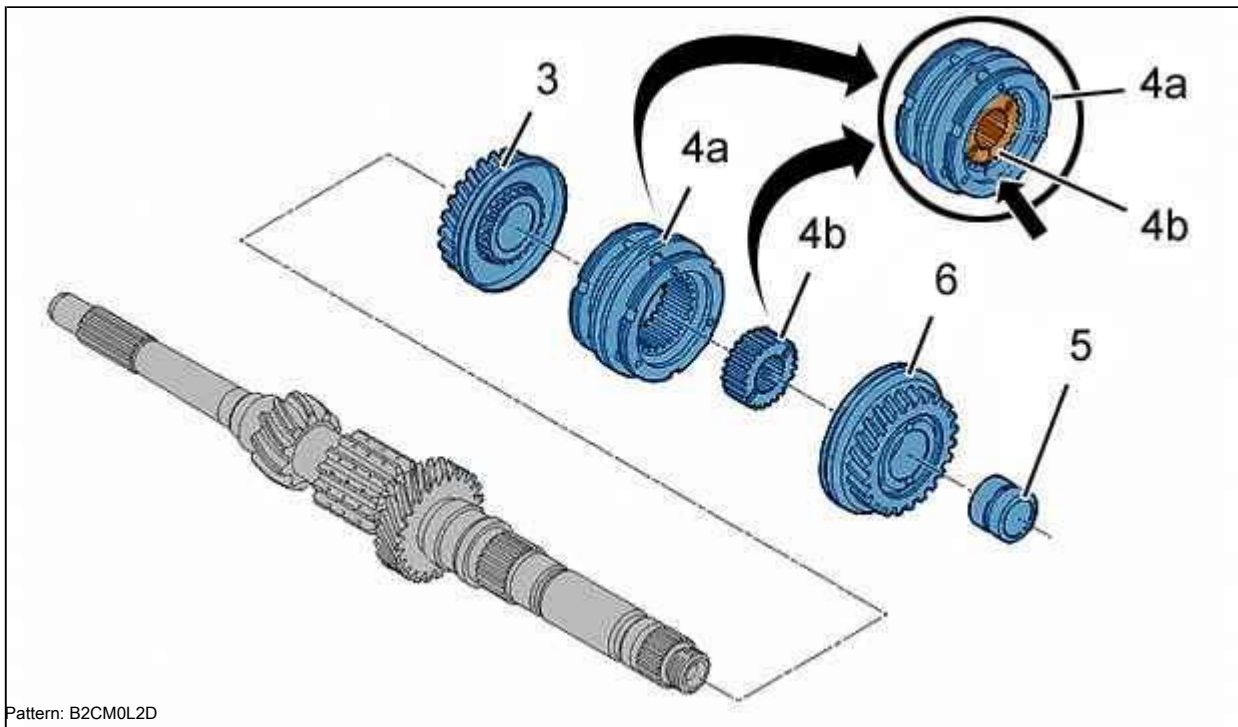


Figure: B2CG27AD

ATTENTION: The flat surface "a" of the tool must point towards the pinion so that it does not rest on the teeth.

Protect the end of the input shaft with the nut (1).

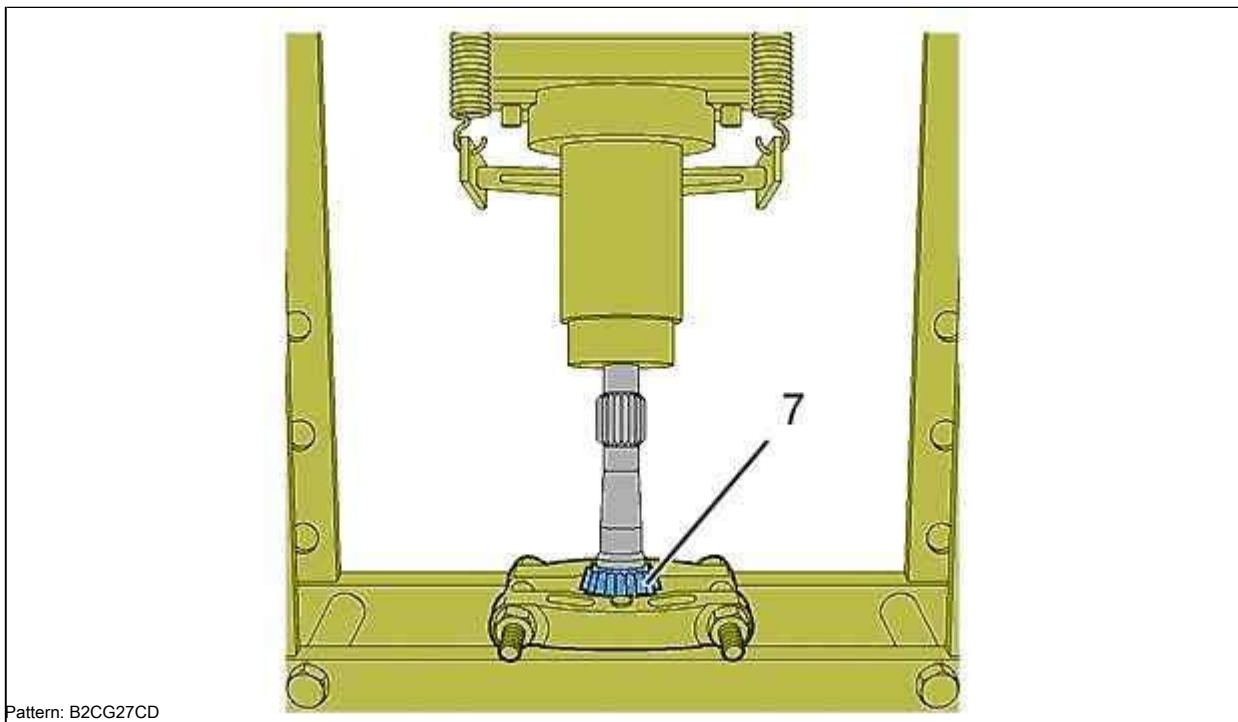
Press on the 3rd gear (3) and remove the rear bearing (2); Using a FACOM U53T tool and a press.



ATTENTION : Mark the position of the parts before dismantling.

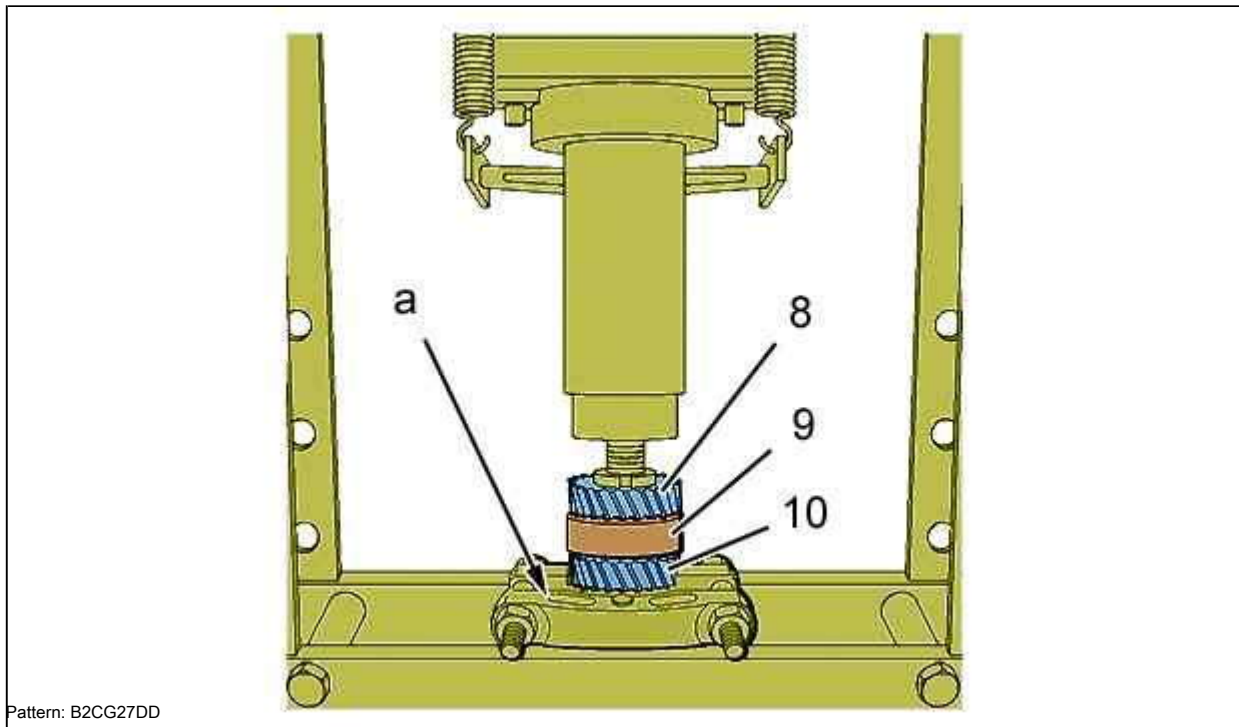
Remove:

- 4th gear pinion (6) and its retaining ring (5)
- 3rd / 4th gear synchroniser (4a) with its own hub (4b) (Mark the position of the hub in relation to the synchroniser)
- 3rd gear drive gear (3)



Remove the front bearing (7); Using the FACOM U53T tool and a press.

3. Disassembly: output shaft

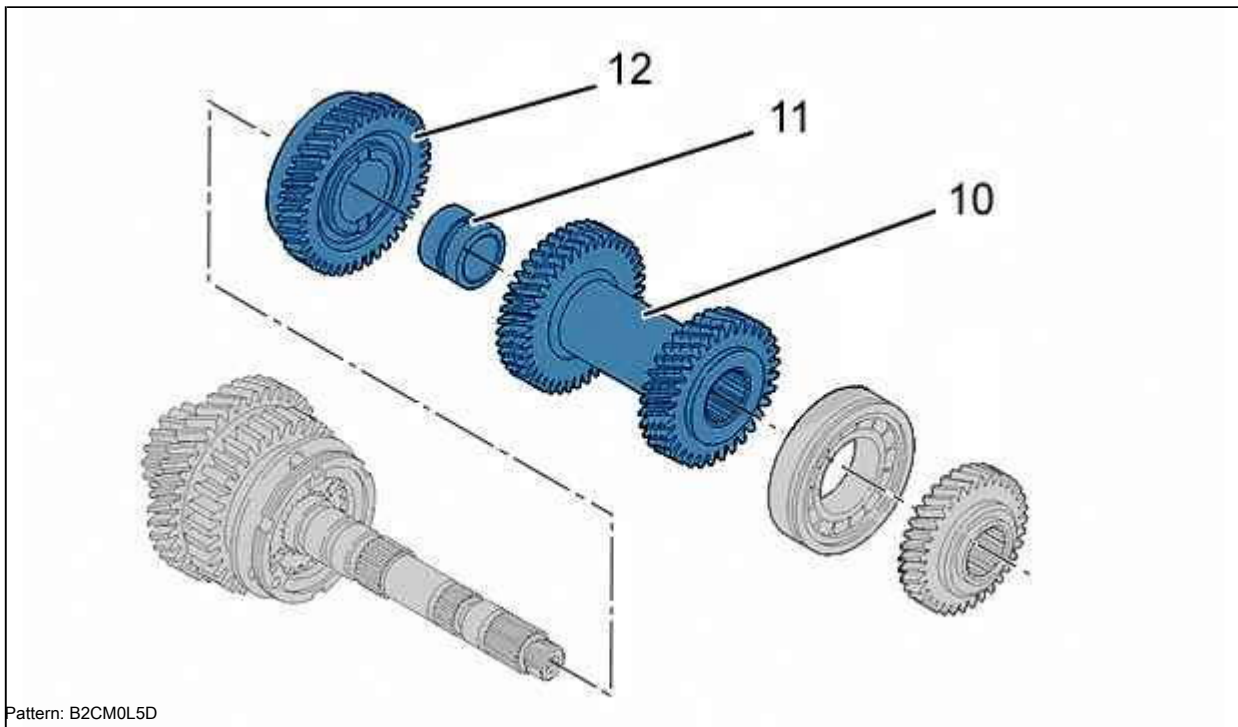


ATTENTION : Mark the position of the parts before dismantling.

ATTENTION : The flat surface "a" of the tool must point towards the pinion so that it does not rest on the teeth.

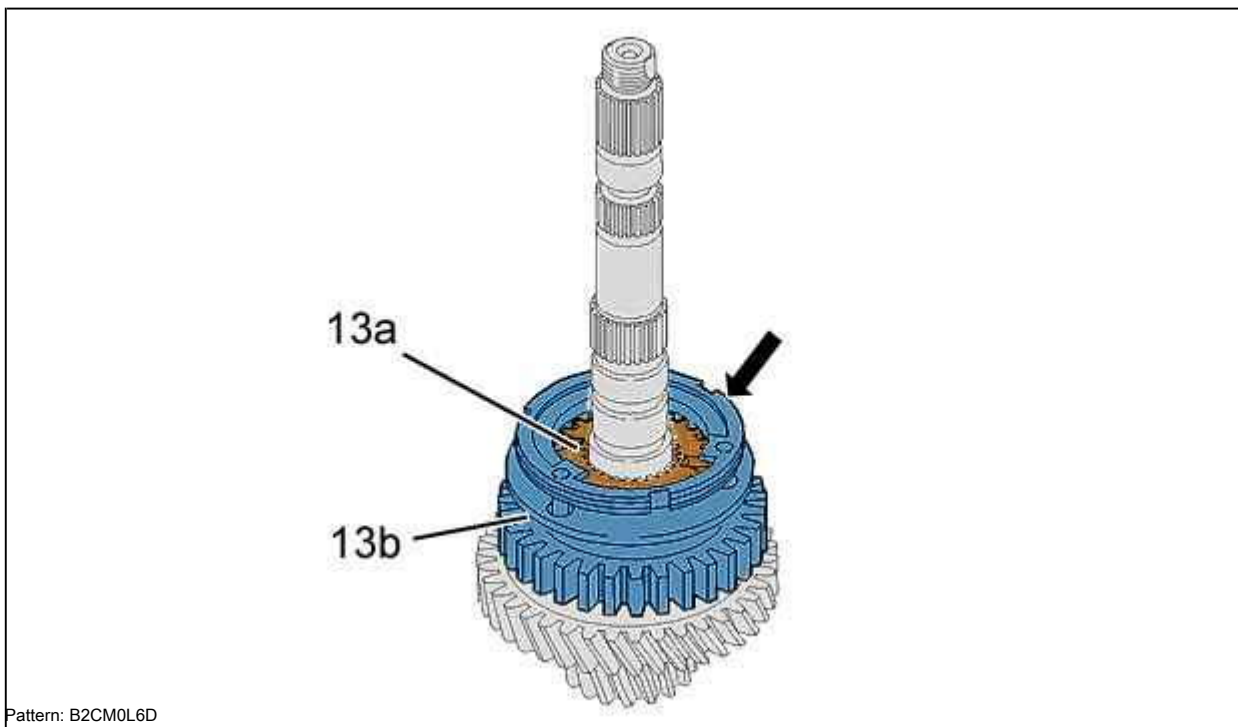
Place the stop on the 4th gear (10).

Remove: 5th driven gear (8) and bearing (9); Using FACOM U53T tool and press.



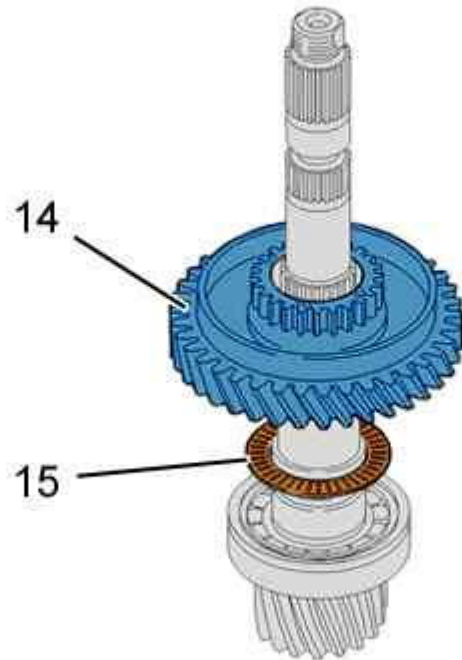
Remove:

- 4th and 3rd gear drive unit (10)
- 2nd gear driven gear (12) and its thrust sleeve (11)



ATTENTION : Mark the position of the hub in relation to the synchronizer.

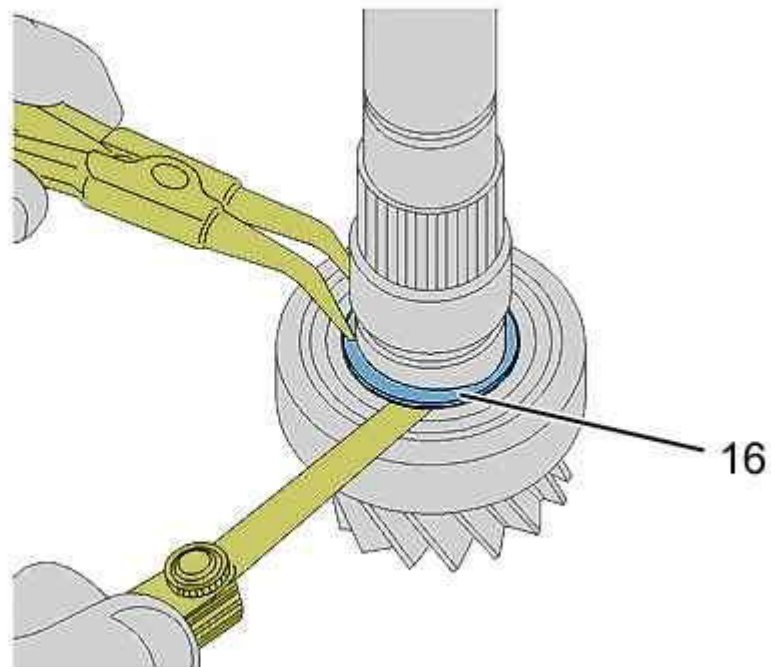
Remove: 2nd / 1st gear synchronizer (13b) and its hub (13a).



Pattern: B2CM0L7D

Remove:

- 1st gear driven gear (14)
- Arrow stop (15)



Pattern: B2CM0L8D

Remove the retaining ring (16); Using the circlip pliers (if a set of shims is required).

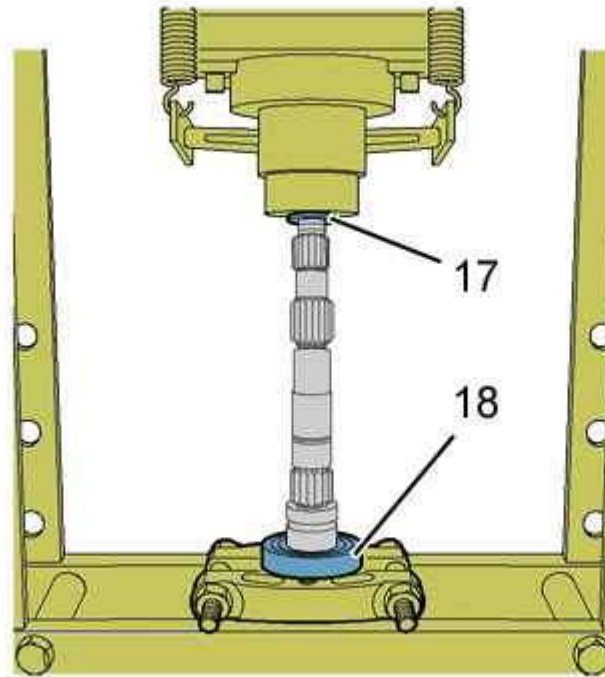
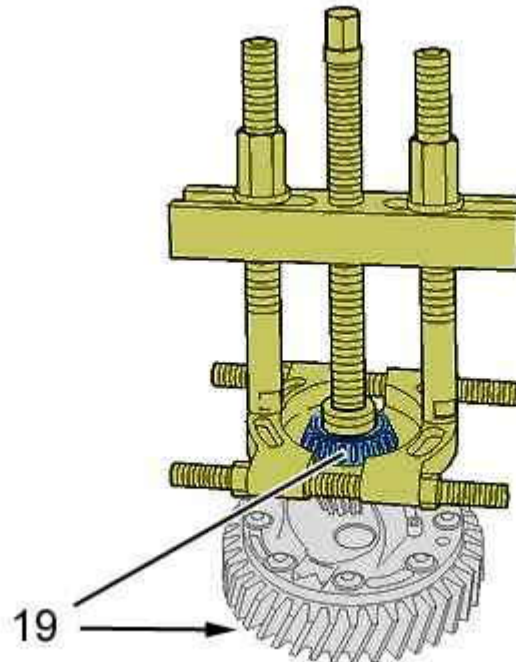


Figure: B2CG27FD

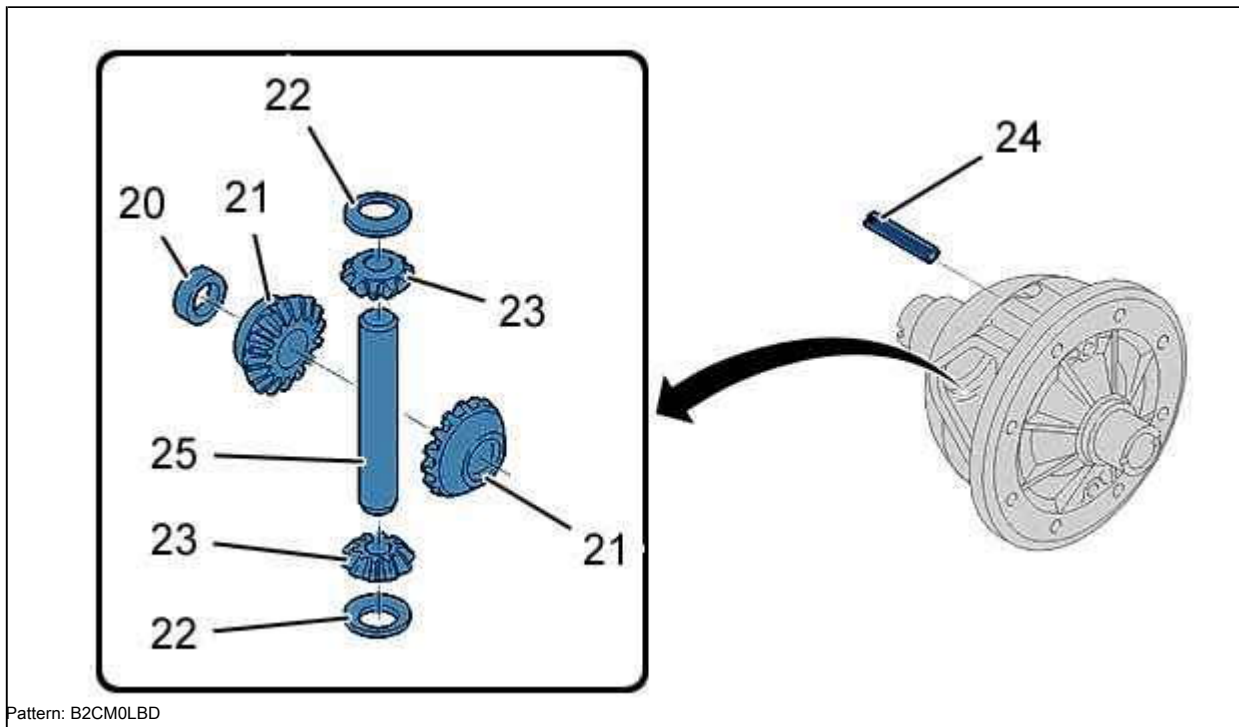
Protect the end of the pinion shaft with the nut (17).
Remove the bearing (18); Using the FACOM U53T tool and a press.

4. Disassembly: differential housing



Pattern: B2CG27GD

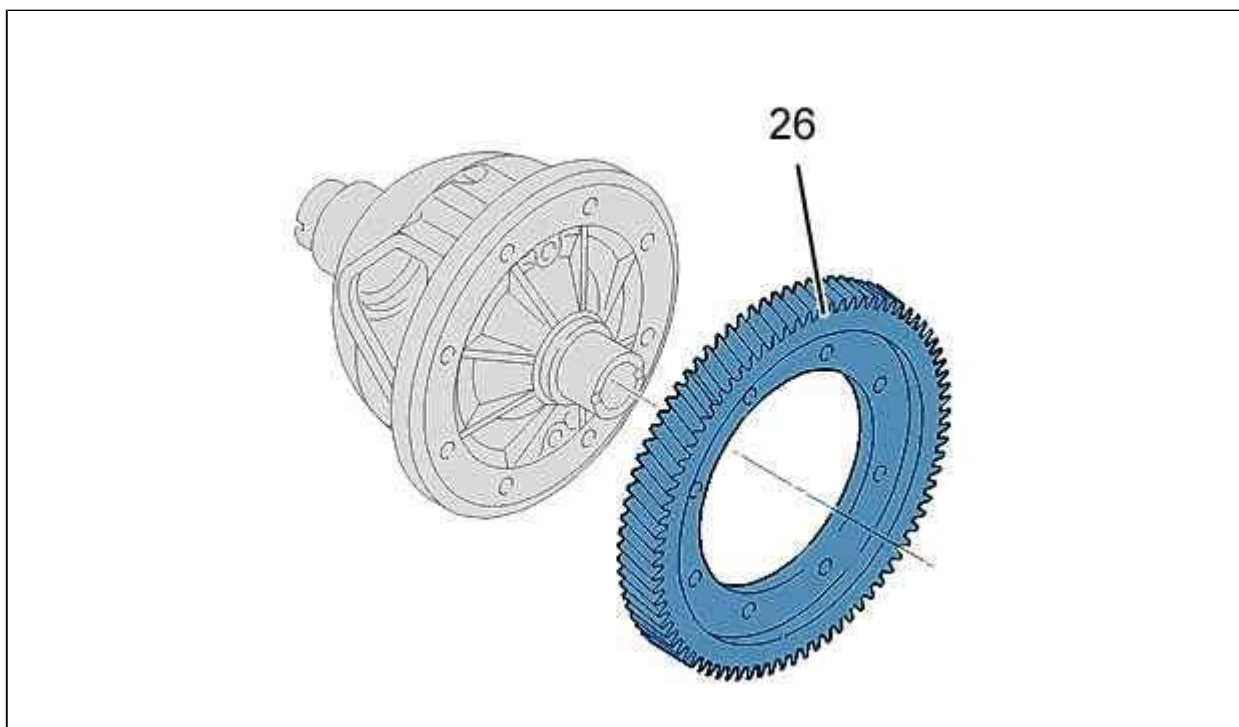
Remove bearing (19); Using FACOM U53T + 53K puller and tool [0317JZ / 4508TJ].



ATTENTION : Do not separate the planet gears from their thrust cups, as well as the planetary gears from the friction washers.

Remove:

- Locking pin (24)
- Satellites axle (25)
- Satellites (23) with their support cups (22)
- Planetary gears (21) (Opposite to the ring gear)
- Centering ring (20) (Opposite to the ring gear)

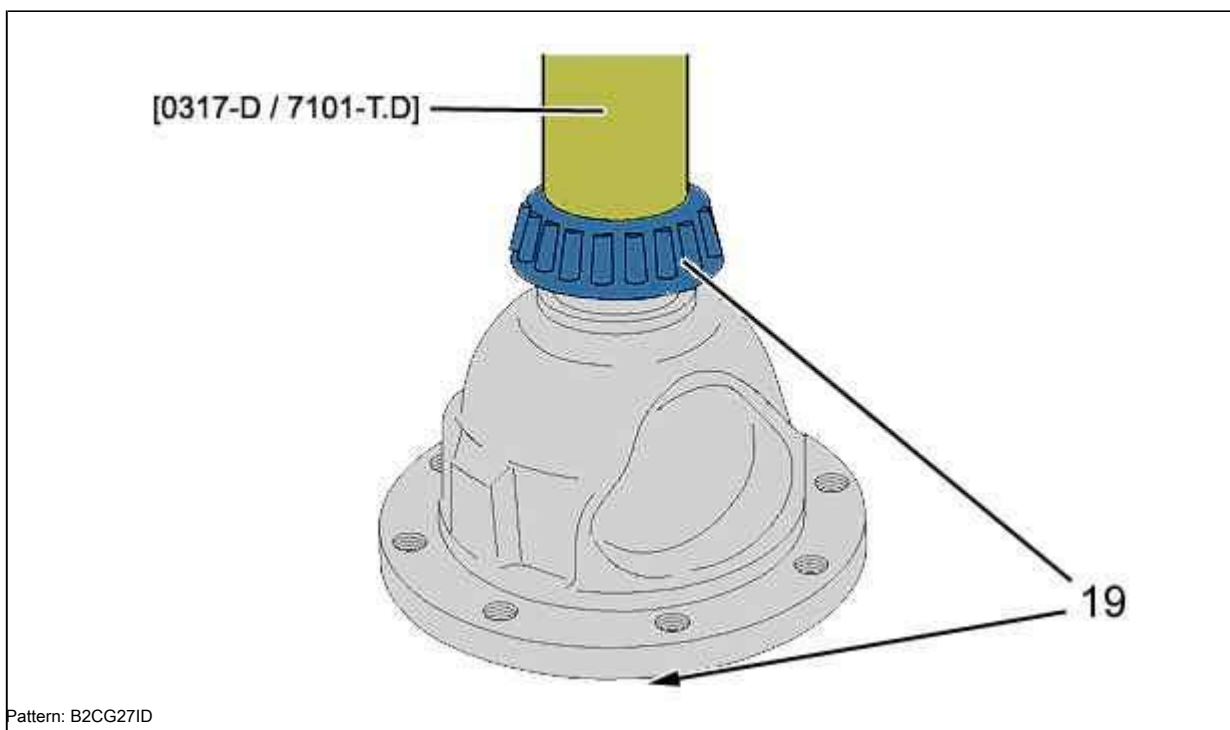


Pattern: B2CM0LCD

Remove:

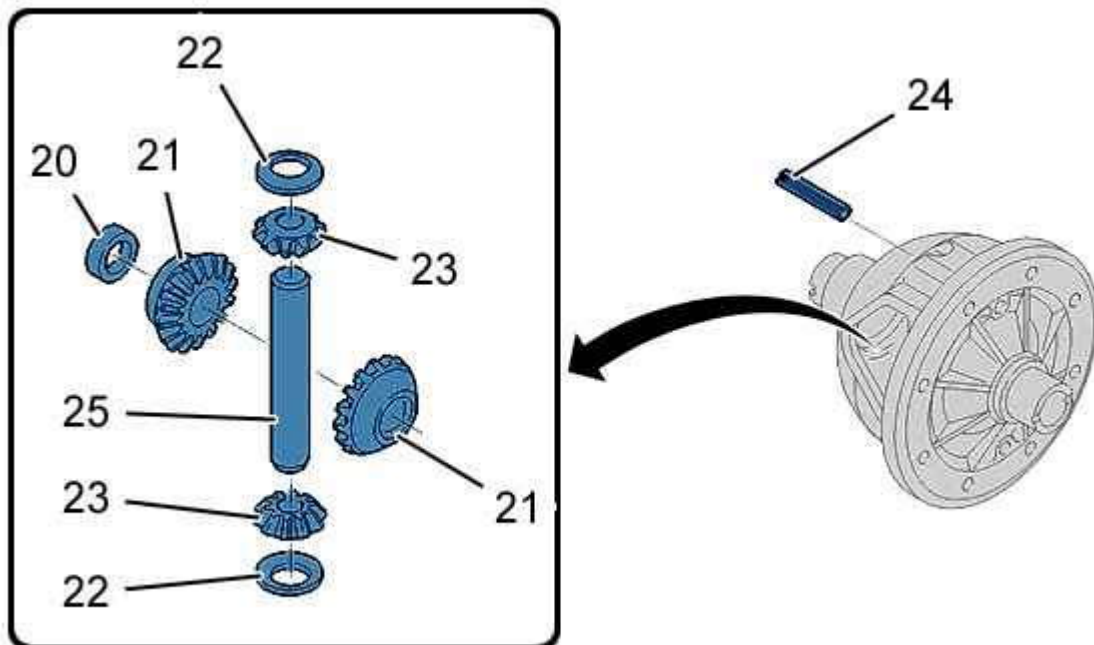
- Differential ring gear retaining bolts
- Differential cogwheel (26)

5. Assembly: differential case



Pattern: B2CG27ID

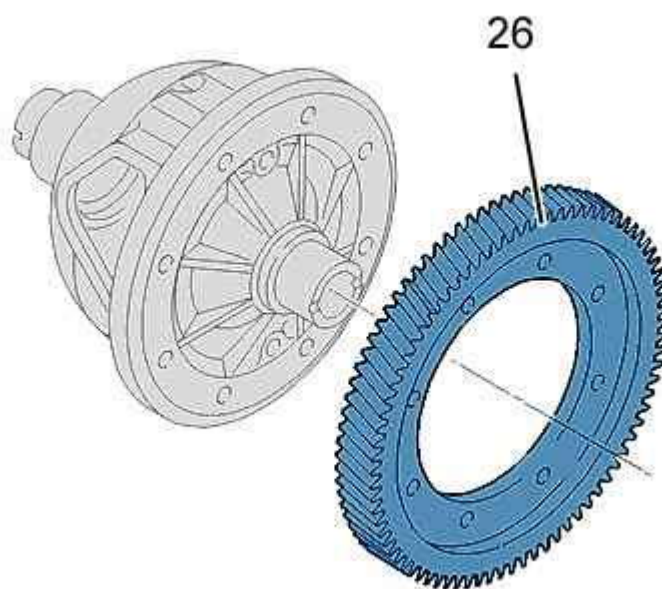
Install: Bearings (19) (new); Using tool [0317D / 7101TD] and a press.



Pattern: B2CM0LBD

Install:

- Centering ring (20), Opposite to the ring gear
- Planetary Gears (21)
- The satellites (23) and their stop cups (22) by turning them
- Satellites axle (25)
- Axle locking keys (24) (new)



Pattern: B2CM0LCD

Replace the crown (26).

NOTE: Replace regularly: Differential ring gear retaining bolts.

Bolt tightening method:

- Pre-tighten the bolts to a torque of 2 da.N, m (tightening crosswise)
- Tighten to 6 da.Nm (tightening crosswise)

6. Assembly: output shaft

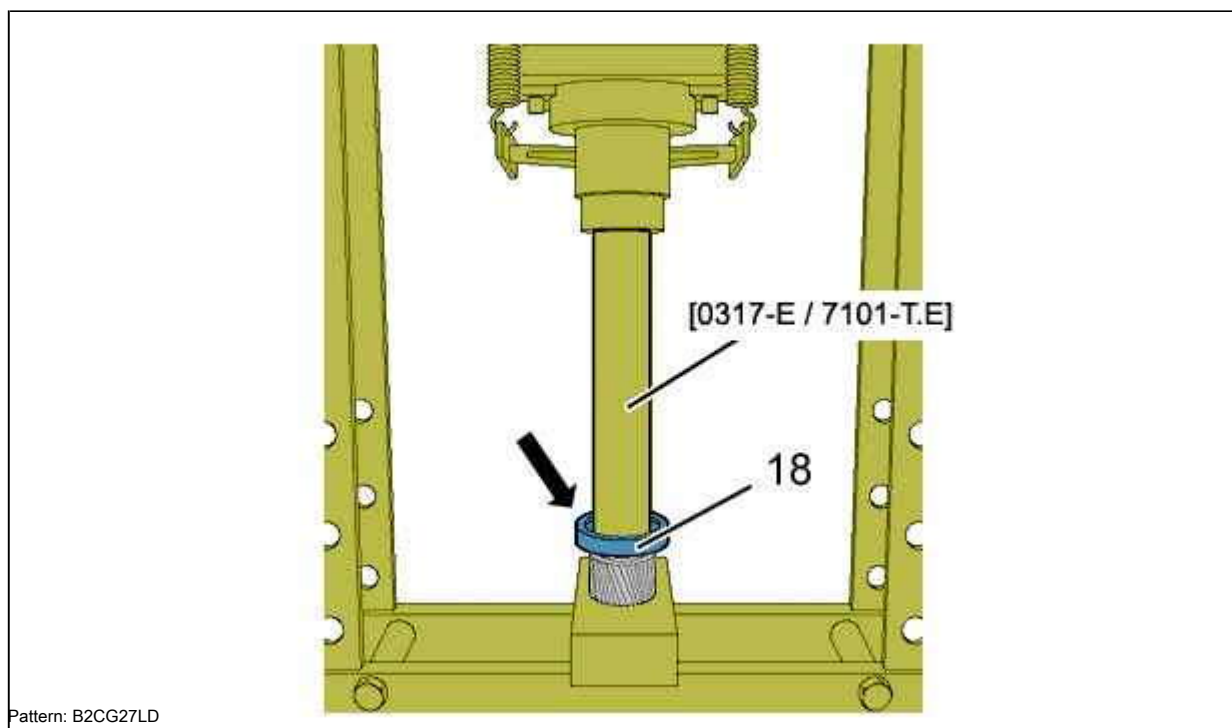
Replace systematically:

- Bearings
- Retaining rings
- Nut (18)

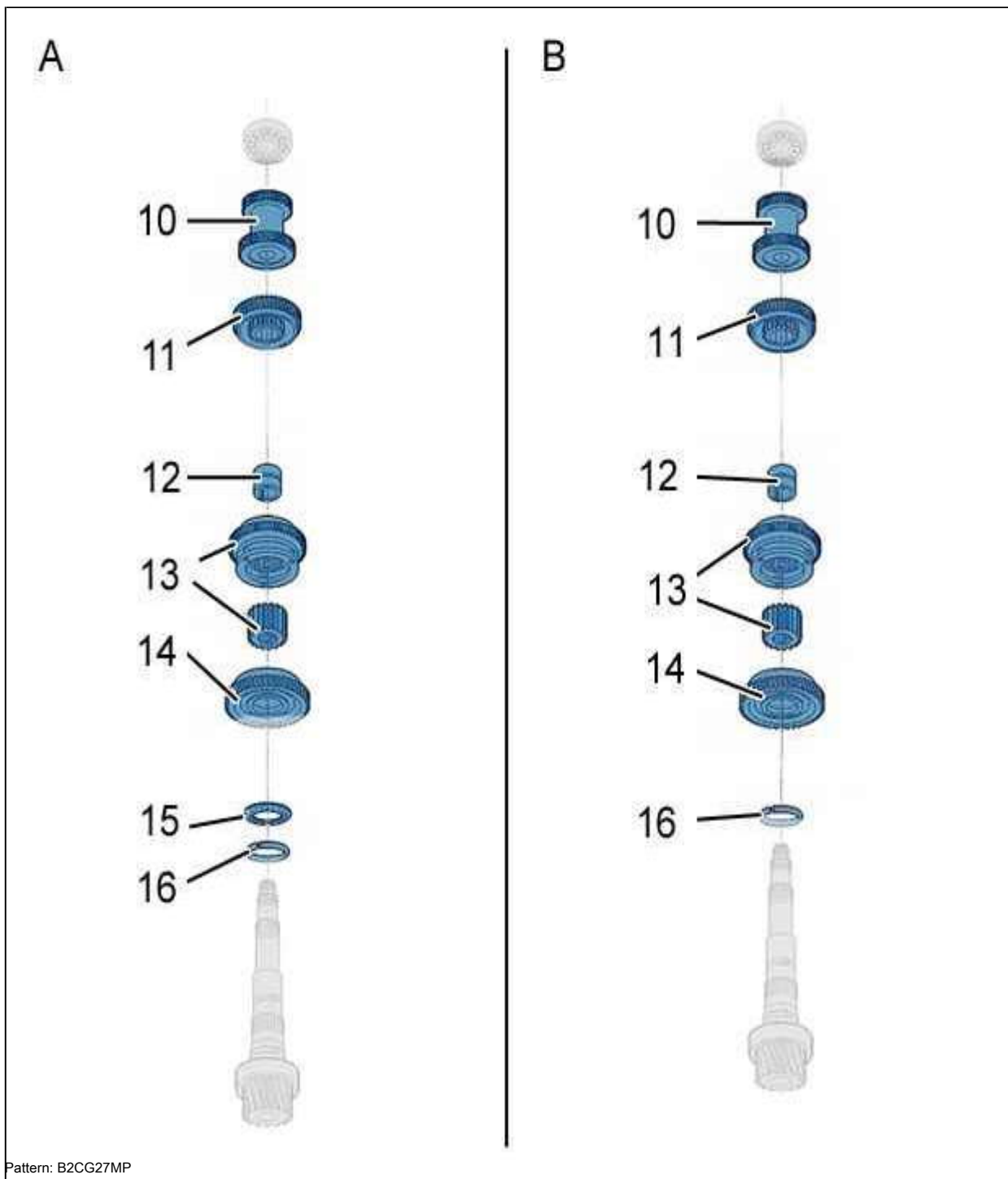
Use parts that are clean and free from defects.

Check the condition of the bulkheads, no traces of impacts and scratches are allowed. Be sure to lubricate the parts during assembly.

Observe the pairing of the parts marked during disassembly.



Install new bearing (18); Using tool [0317E / 7101TE] and a press.

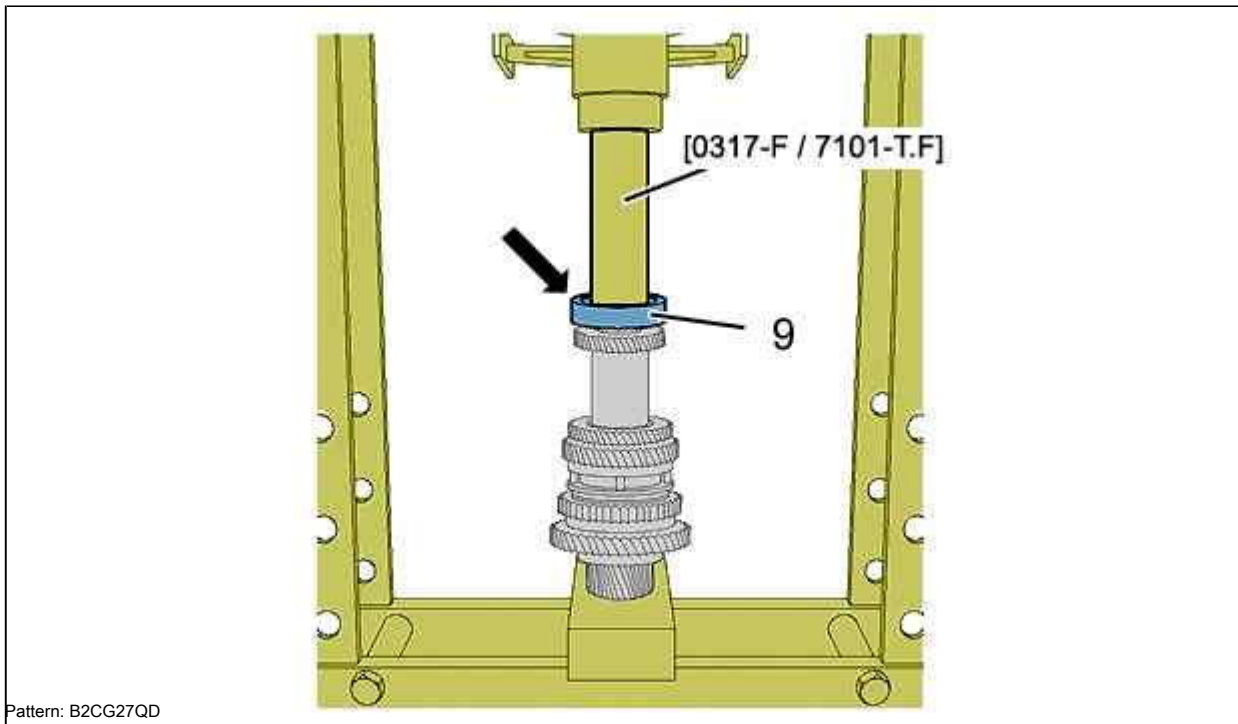


Pattern: B2CG27MP

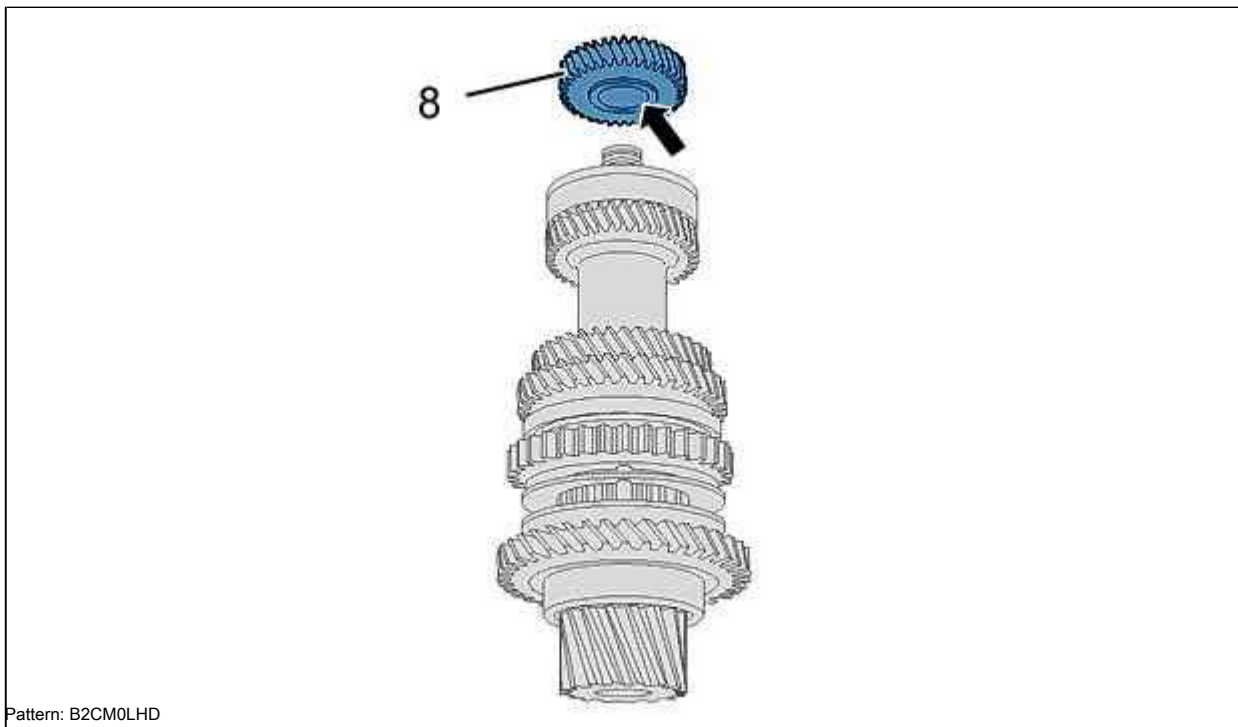
A: With release needle bearing. B: Without throwout needle bearing. Install:

- Bearing snap ring (16) (new)
- Stop with arrows (15) (according to the installation diagram) 1st gear (14)
-
- Reverse gear synchronizer (13) with its own hub (observe the marking made during disassembly)
-
- 2nd gear driven gear (11) and its thrust sleeve (12) 4th and 3rd driven gear block (10)
-

NOTE: Reverse synchromesh teeth should be oriented towards gear 2nd



Install the bearing (9) with the shoulder facing up (new); Using the tool [0317F / 7101TF] and a press.



Install the 5th gear driven gear (8); Using a press.

NOTE: The pinion collar must be on the bearing end.

7. Assembly: input shaft

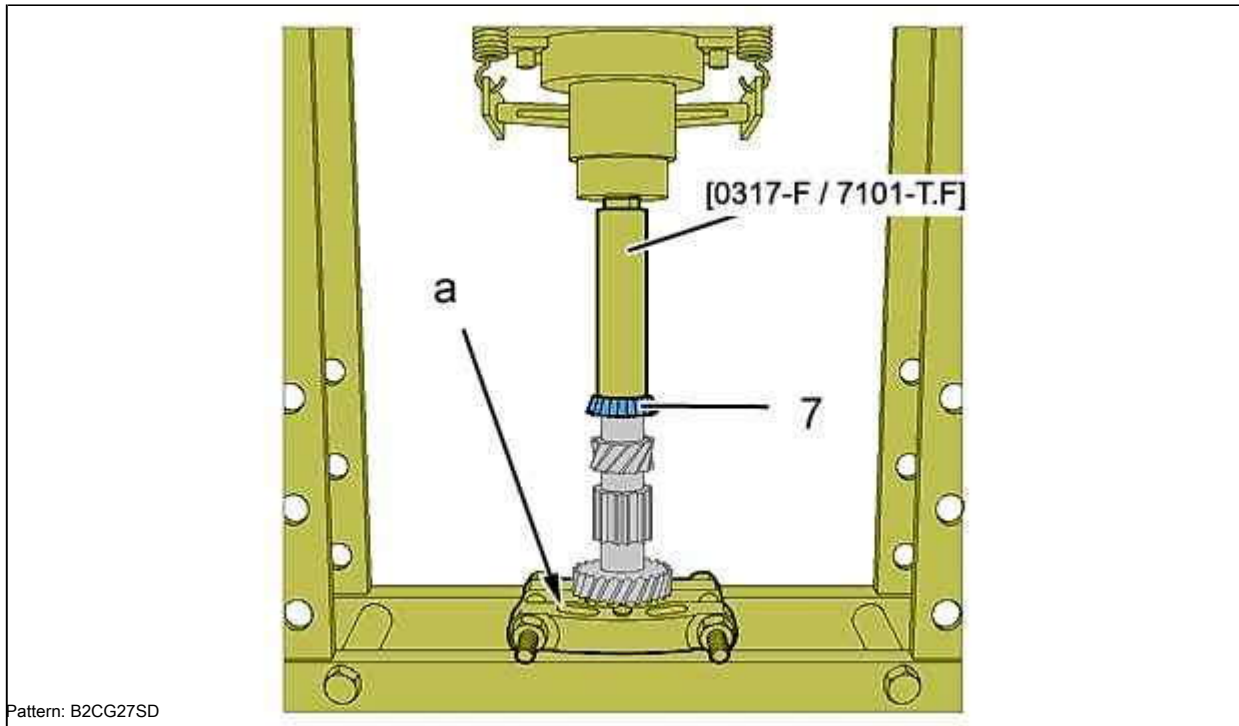
Replace systematically:

- Bearings
- Nut (1)

Use parts that are clean and free from defects.

Check the condition of the bulkheads, no traces of impacts and scratches are allowed. Be sure to lubricate the parts during assembly.

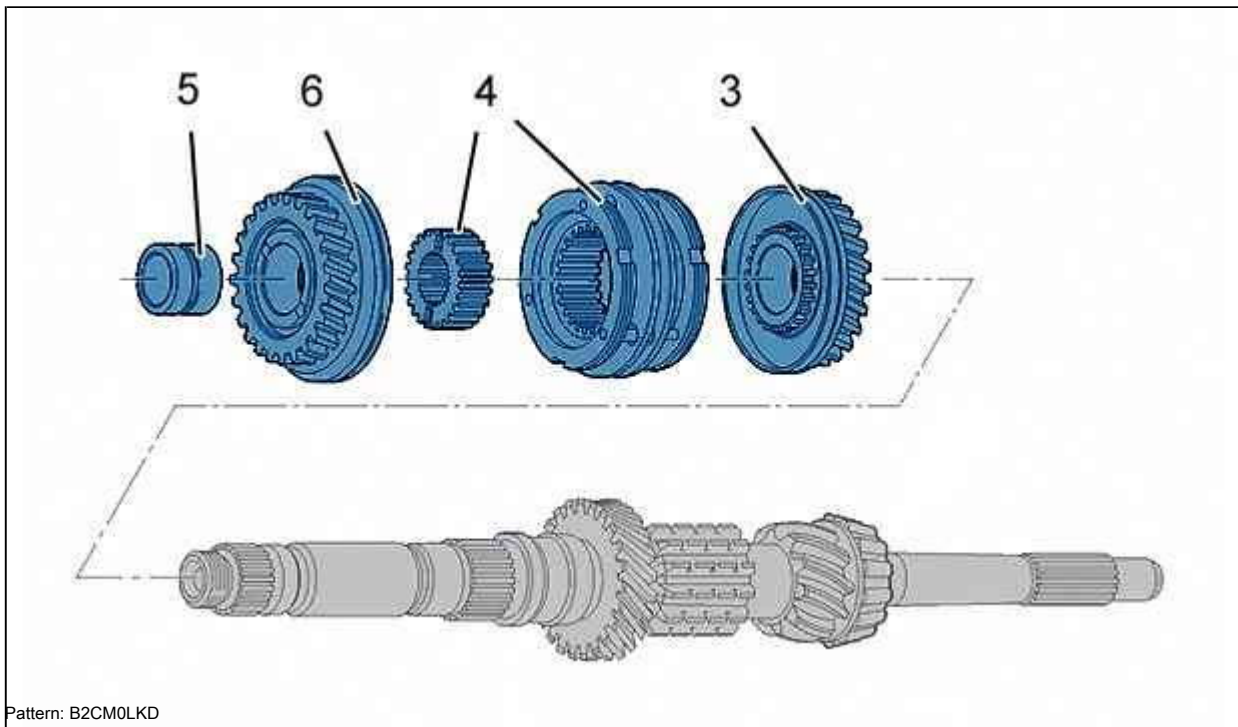
Observe the pairing of the parts marked during disassembly.



Pattern: B2CG27SD

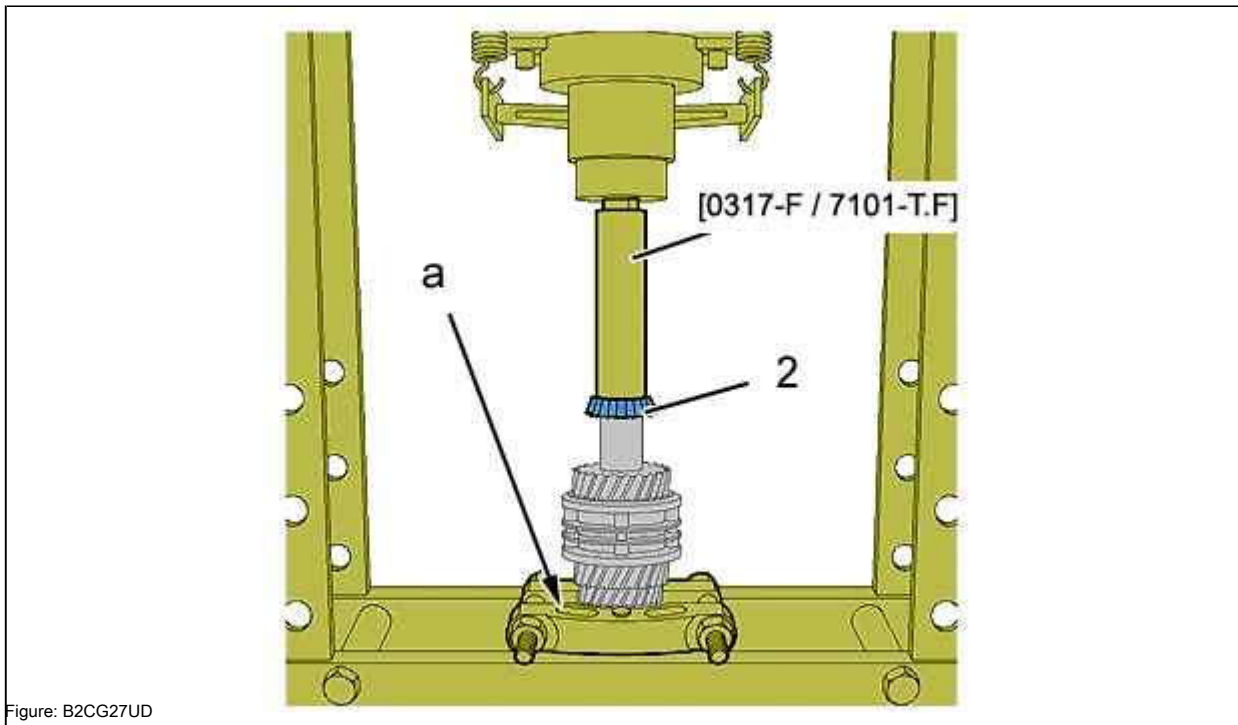
ATTENTION : The flat surface "a" of the tool must point towards the pinion so that it does not rest on the teeth.

Install the front bearing (7) (new); Using a FACOM U53T, [0317F / 7101TF] puller and a press.



Install:

- 3rd gear drive gear (3)
- 3rd / 4th gear synchronizer with its own hub (4) (observe the markings made during disassembly)
- 4th gear pinion (6) and its retaining ring (5)



ATTENTION : The flat surface "a" of the tool must point towards the pinion so that it does not rest on the teeth.

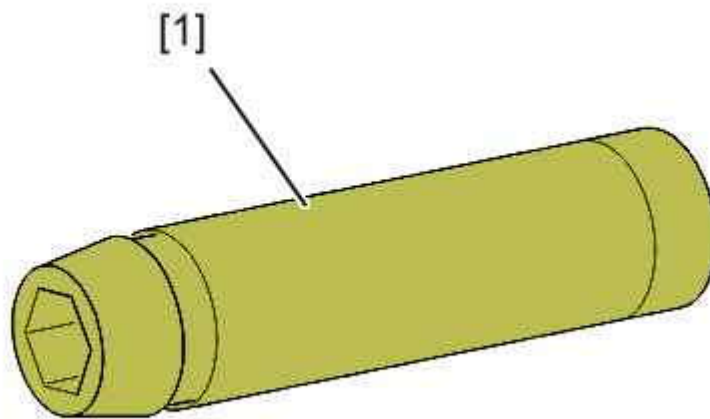
Install the rear bearing (2) (new); Using a FACOM U53T, [0317F / 7101TF] puller and a press.

REMOVAL REFITTING: TRANSMISSION

MANDATORY: Observe the cleanliness and safety rules

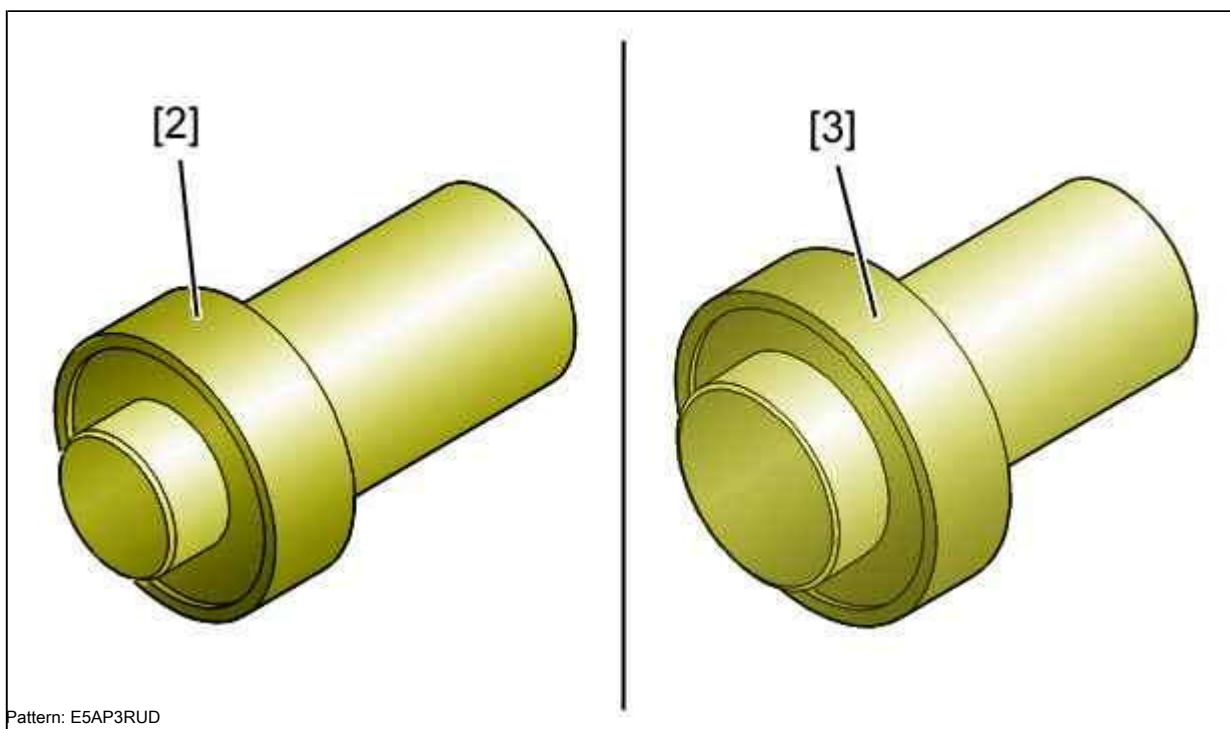


1. Recommended equipment

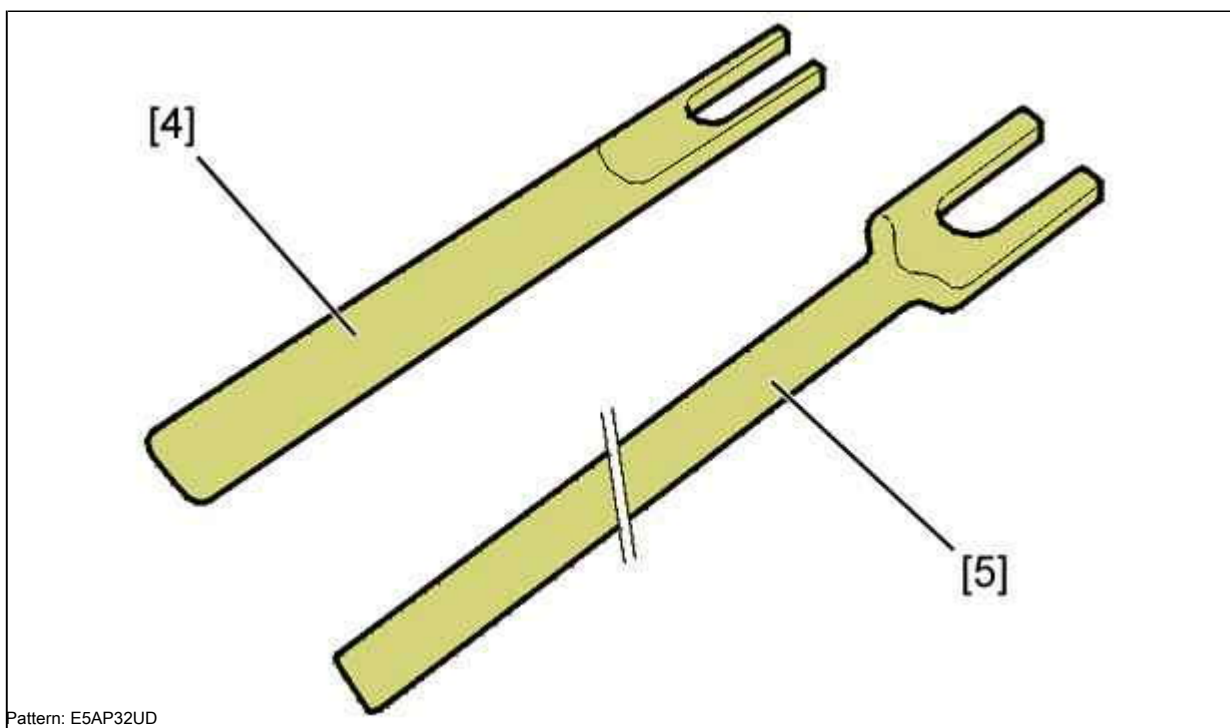


Pattern: E5AM08RD

[1] head for removing the transmission cross member (). 0317AB.



[2] Mandrel for installing the right seal at the axle exit (). 0317U / 7114TX. [3] Mandrel for installing the left seal at the axle exit (). 0317T / 7114TW.

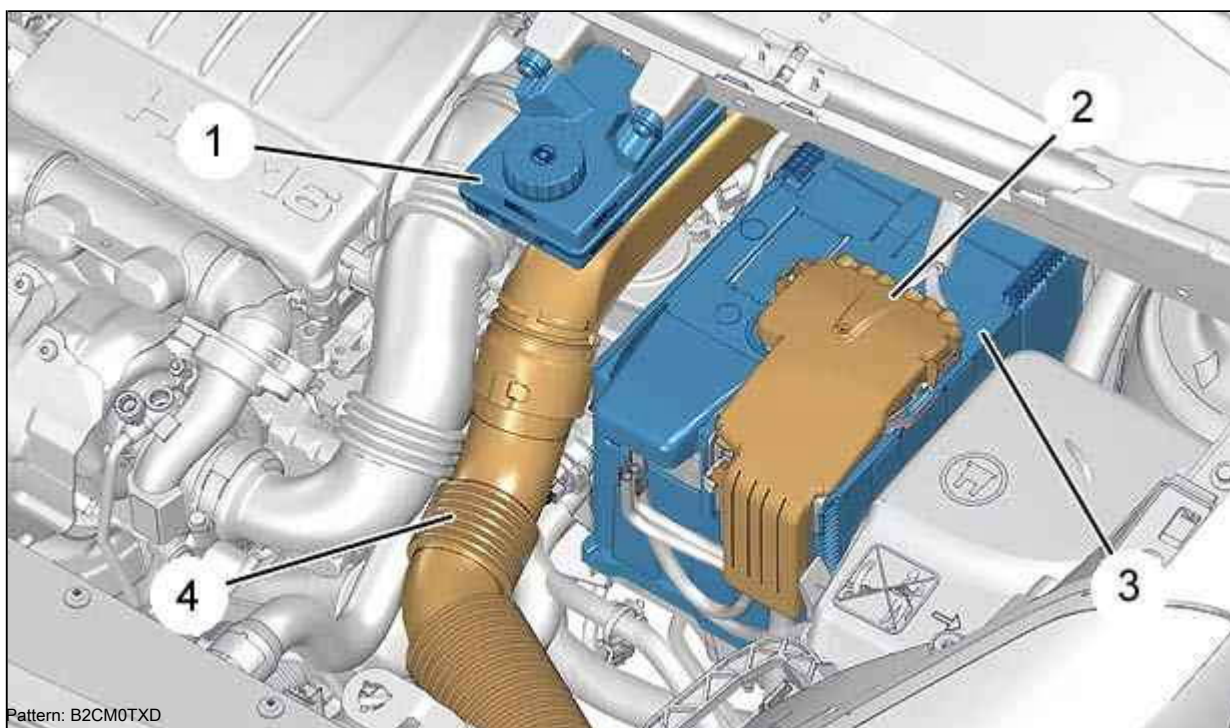


[4] Tool for detaching hinges 10 mm (). 0216G1. [5] Hinge release tool 13 mm (). 0216G2.

2. Removal

Place the vehicle on a 2 post lift.

Raise and secure the vehicle in the raised position. Disconnect the battery.



Move aside the brake fluid reservoir (1).

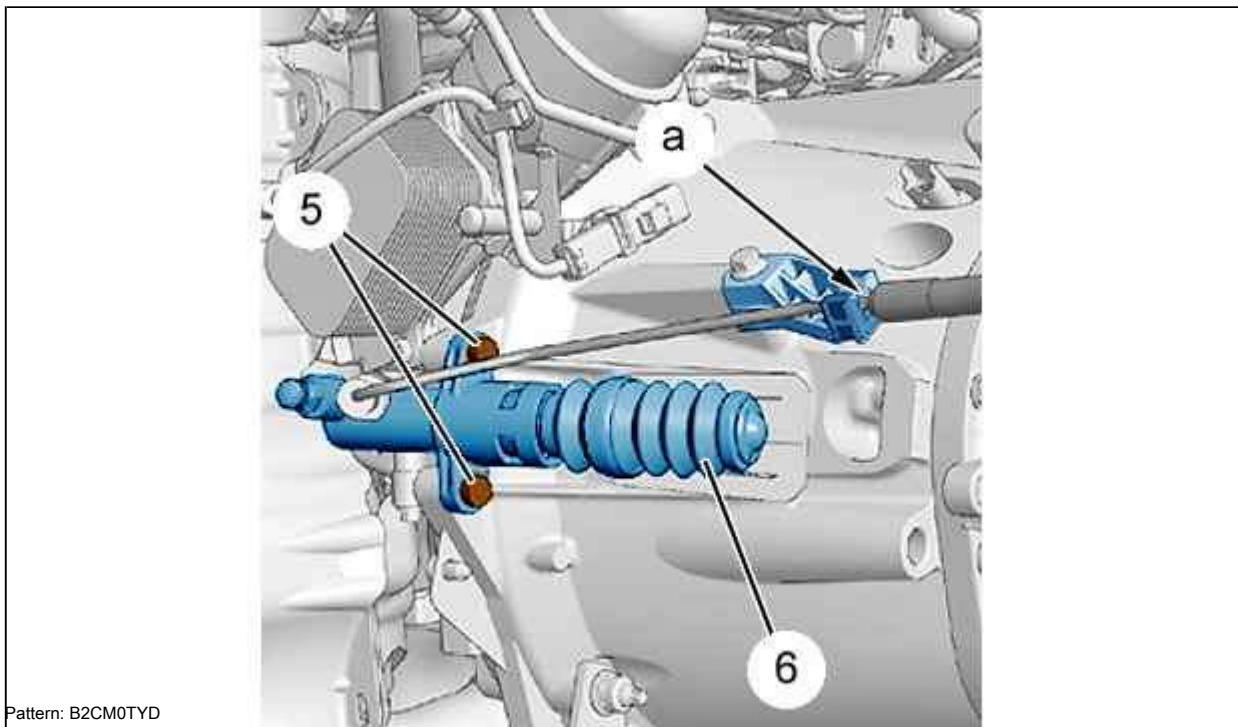
Disconnect; Move aside: Battery fuse box (2). Remove:

- Battery decorative cover (3) Battery
- Battery bracket
- Inlet (4)
- Front wheels
- Under engine guard
- Front left mudguard

Drain oil from the gearbox.

Remove the drive shafts

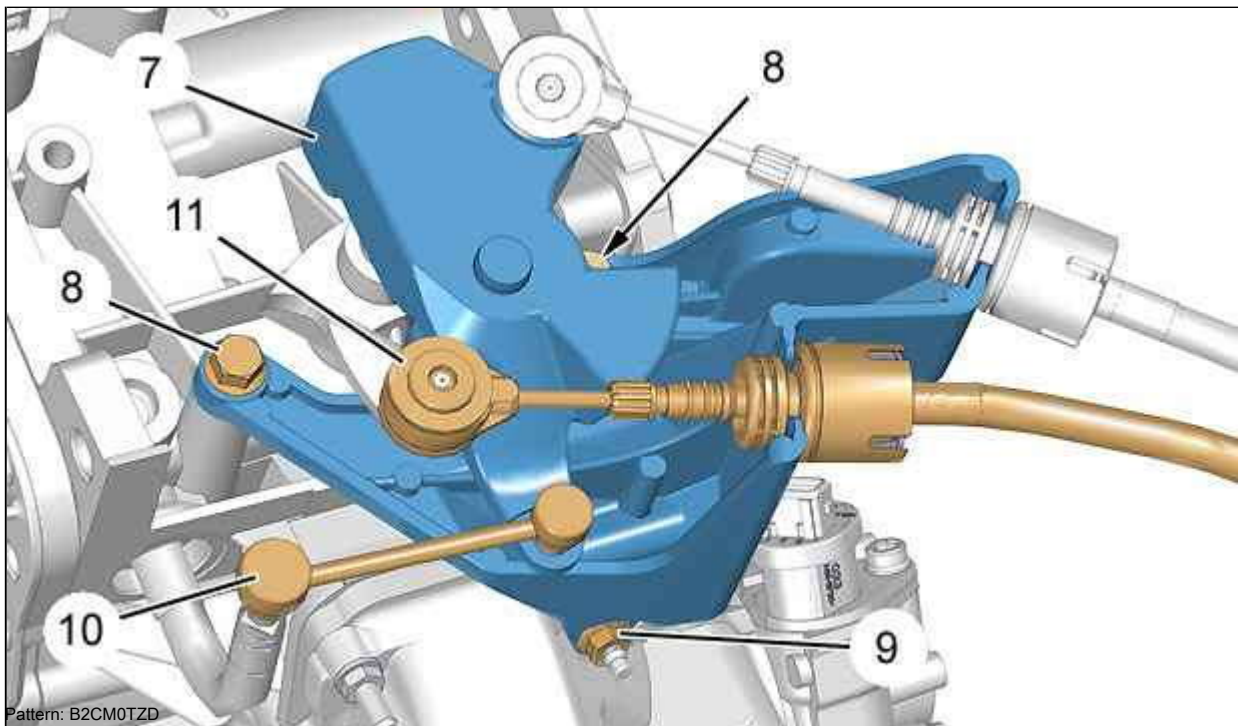




Disconnect: Clutch hydraulic pipe (at "a"). Loosen screws (5).

Move aside: Clutch slave cylinder (6). Remove Move aside: Transmission earth cable. Disconnect: Reverse track connector.

Disconnect: the brake booster hose.



Disconnect the hinges (10), (11); Using the tools [4], [5]. Remove:

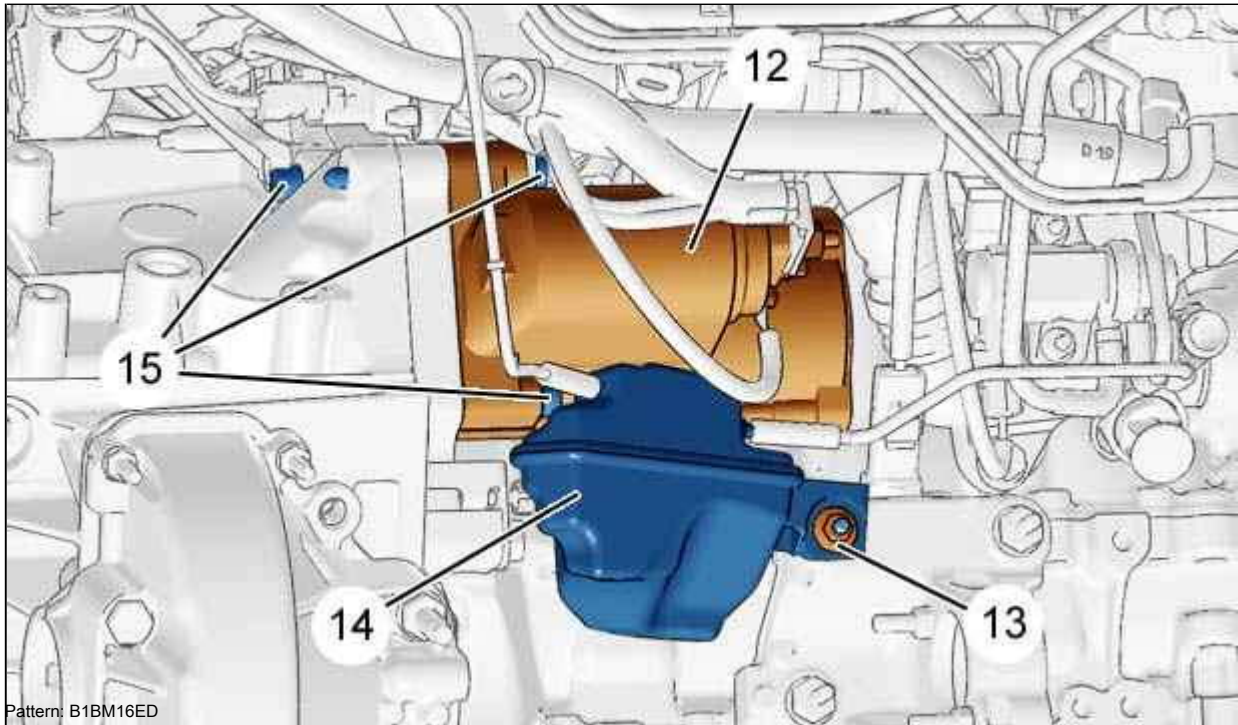
- the bolts (8)
- Nut (9)

Move aside: Shift cable bracket (7). Remove:

- **Catalytic converter**
- **Particulate filter** (depending on configuration)



Remove the stabilizer bar.

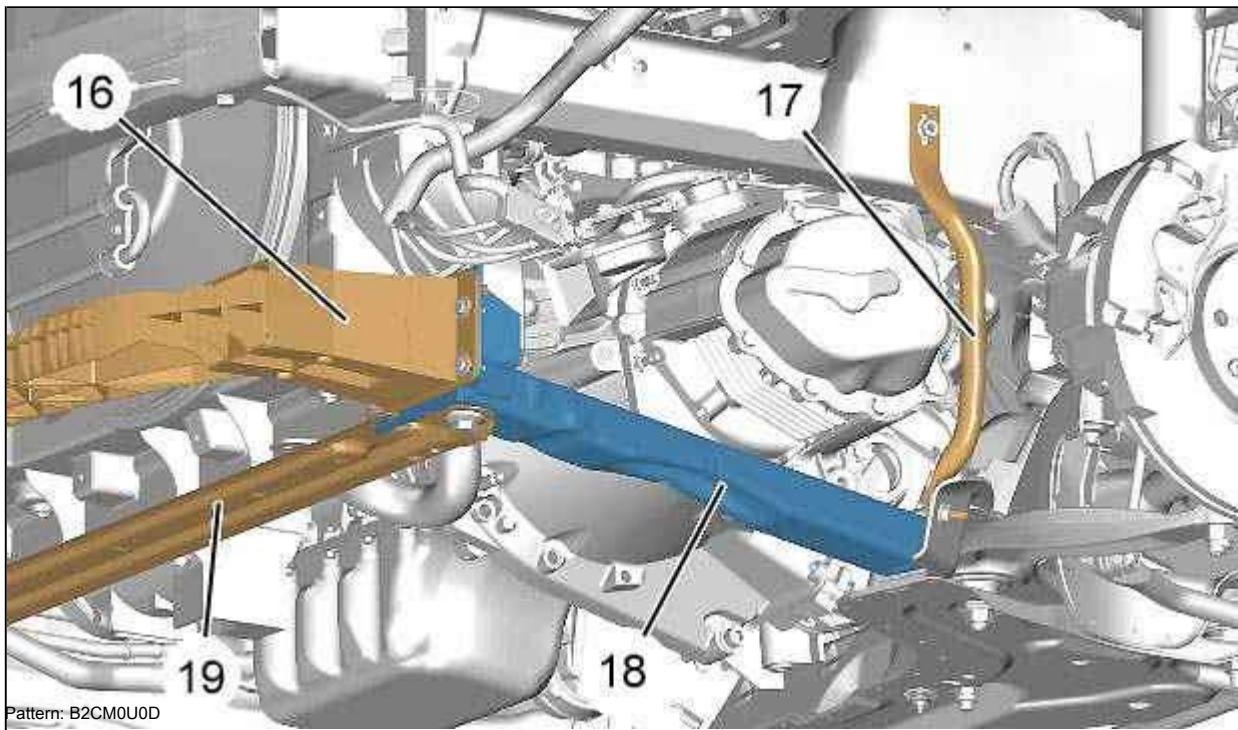


Remove:

- Nut (13) (depending on version)
- Vacuum tank (14) (depending on version)
- the bolts (15)

Move aside; Secure the starter (12) without disconnecting it.

2.1. Version: Germany UK



Remove the front bumper

Remove:

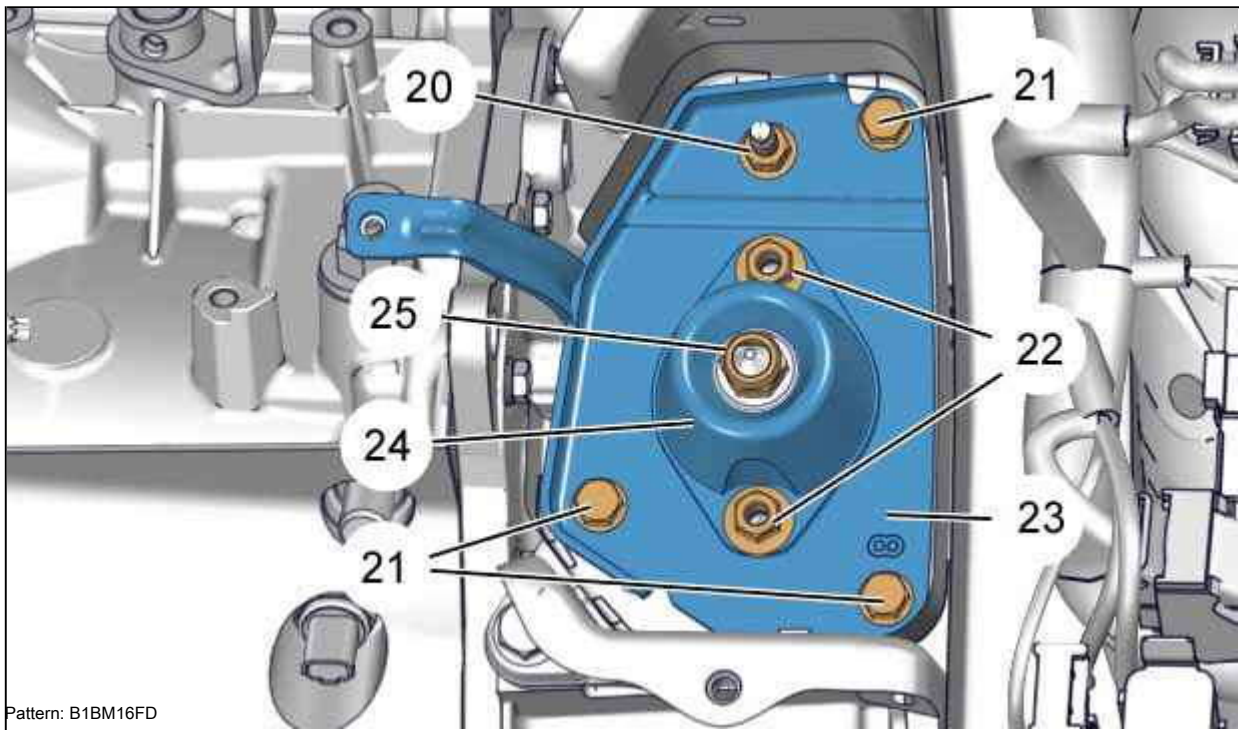


- Cross member (19)
- Impact absorber (16), in case of a pedestrian accident
- Subframe extension (18)
- Traction (17) (depending on engine type)

2.2. Removal (continued)

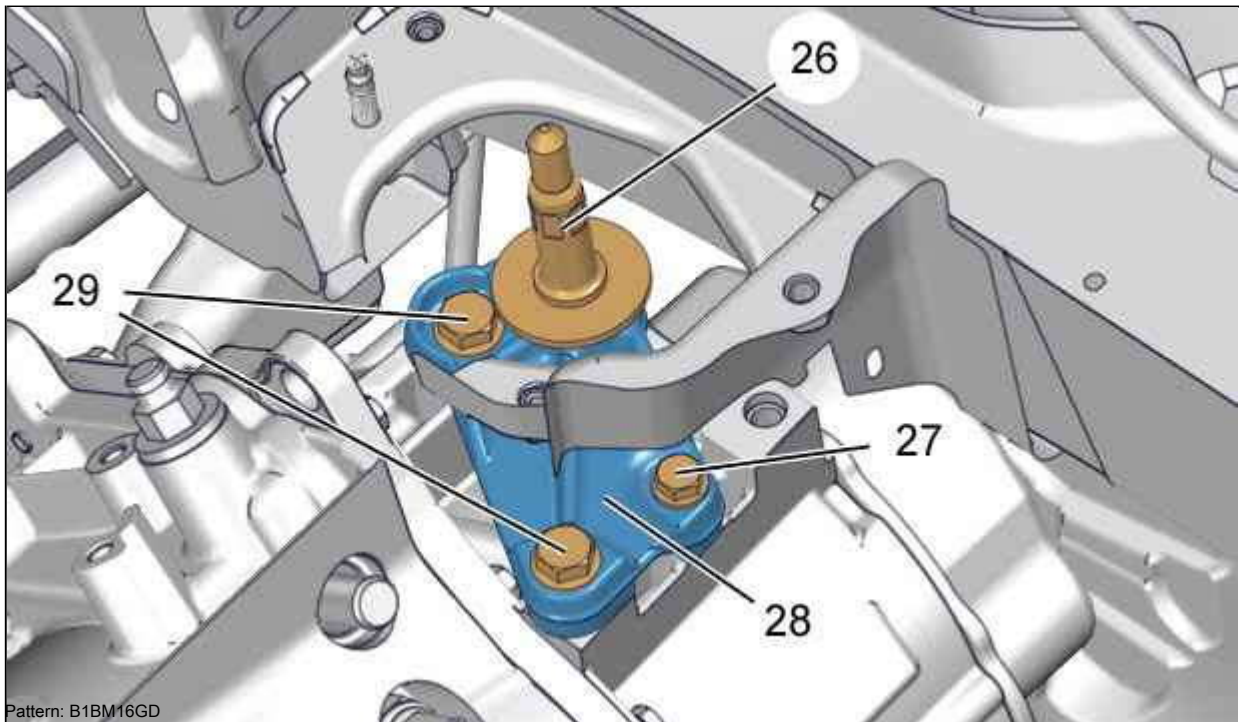
Loosen: Lower bolts of the engine / gearbox coupling (Do not remove). Maintain:

- Transmission; with crane service station
- Engine; With workshop jack



Remove:

- Elastic bearing axle nut (25)
- Elastic Spacer Nuts (22)
- Elastic pad (24)
- Board retaining bolts (20), (21)
- Plate (23)



Remove:

- The axle of the elastic support (26) and its washer; Using the tool [1]
- bolts (27), (29)
- Support (28)
- Bolts of fastening of a transmission to the engine
- Transmission

3. Installation

ATTENTION : Using mandrels, replace the seals at the bridge outlet [2], [3], after filling the space between their lips with grease.

NOTE: Check for presence of gearbox dowel pins on motor.

Verify :

- No oil leaks in the release bearing
- No oil leaks on the crankshaft oil seal
- Clutch wear rate
- Clutch release bearing wear

Restore (If necessary).

ATTENTION : Completely clean the input shaft along its entire length, completely clean the input shaft along its entire length, around its entire circumference and in all its splines.

Protect the interior of the clutch card from grease.

Apply recommended grease evenly to the release bearing guide sleeve and to the input shaft.

Lubricate the clutch control fork grips.

NOTE: Use MOLYCOTEGRAPID PLUS grease.

Wipe off excess grease with a rag from the tops of the splines and the end of the input shaft.

ATTENTION : Excessive lubrication will oil the clutch disc and cause noise when engaged in neutral, slipping or vibration when engaging the clutch.

ATTENTION : When reusing the clutch disc, remove any corrosion from the disc hub.

Clean bolt threads.

When re-installing, the stop must be on its guide and located on the winding of the clutch mechanism.

Place the transmission in neutral. Connect the transmission to the engine.

Install:

- Bolts of fastening of the gearbox to the engine; Tighten to a torque of 5.5 ± 0.5 da.Nm
- Support (28)
- The bolt (27); Tightening torque 3 ± 0.3 da.Nm
- bolts (29); Tighten to 6 ± 0.6 da.Nm
- The axle of the elastic support (26) and its washer; Using the tool [1]

Tighten the elastic support (26) to 5 ± 0.5 Nm. Install:

- Plate (23)
- Board fixing bolts (20), (21); Tightening torque 1.9 ± 1.9 2 da.Nm
- Elastic pad (24)
- Elastic gasket nuts (22); Tighten to 3 ± 0.3 da.Nm
- The axle nut of the elastic support (25); Tighten to a torque of 6.5 ± 0.6 da.Nm

Remove:

- Mobile lift
- Service station lift

3.1. Version: Germany UK

Install:

- Traction (17) (depending on the engine type); Tightening torque 1.85 ± 1.85 da.Nm
- Subframe extension (18)
- Impact absorber (16), in case of a pedestrian accident
- Lower cross member (19): Tightening torque 9.8 ± 9.8 da.Nm

Install the front bumper

3.2. Installation (continued)

Check for starter centering pin (12). Install; Clip: Starter (12).

Install:

- bolts (15); Tighten to 2 ± 0.3 da.Nm Vacuum reservoir (14)
- (depending on version)
- Nut (13); Tighten to 2 ± 0.3 da.Nm (depending on version) Diesel particulate filter (depending on equipment)
- **Catalytic converter**
- Jet Bar (/)
- Shift cable bracket (7) Nut (9); Tighten to 1.3 ± 0.2 da.Nm of the bolts (8); Tighten to 2 ± 0.2 da.Nm
-

Attach the ball joints (10), (11).

Install: Transmission earth cable. Connect: Reverse contact connector.

Connect: Quick disconnect hose of the brake booster. Install:

- Clutch slave cylinder (6)
- bolts (5); Tightening torque 2 ± 0.2 da.Nm

Clip in: Clutch hydraulic pipe (at "a").

Install the drive shafts

Fill the gearbox with oil through the air vent (1.8 ± 0.15 liters). Install:

- Front left mudguard
- Under engine guard
- Front wheels

Tighten the wheels

Install:

- Air intake pipe (4)
- Battery support (/)
- Accumulator battery
- Decorative battery cover (3)

Clip in: Battery fuse box (2). Install: The brake fluid reservoir (1).

ATTENTION : Follow the steps to follow after removing the battery.



Reconnect the battery.

REMOVAL INSTALLATION: DRIVE SHAFT OIL SEAL

MANDATORY: Observe the cleanliness and safety rules



1. Tools

tool	room (reference)	Designation
<div>[0317-T]  Figure: E5AG05IT</div>	[0317T]	holder for left transmission seals
<div>[0317-U]  Pattern: E5AG05JT</div>	[0317U]	mandrel for installing right transmission seals

2. Removal

Drain transmission oil

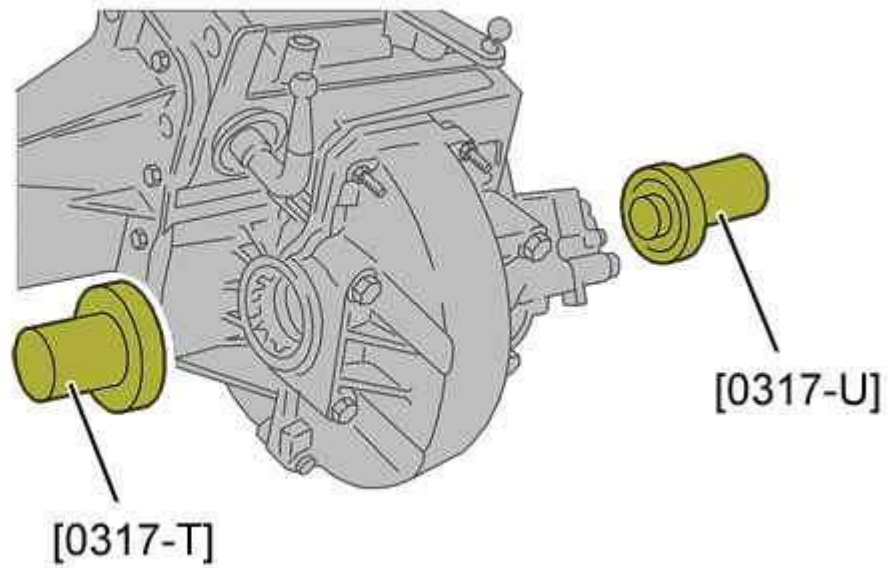
Remove:

- Drive shafts (/)
- Drive shaft seals



3. Installation

Lubricate: Drive shaft seals.



Pattern: B2CG0QFD

Replace the left drive shaft seal using the tool [0317T]. Refit the seal for the right drive shaft; Using the tool [0317U]. Fill the gap between the lips of the drive shaft seals with grease.

Install the drive shafts

Fill gearbox with oil and bring it to level




DRAIN FILL: MANUAL GEARBOX TYPE BE

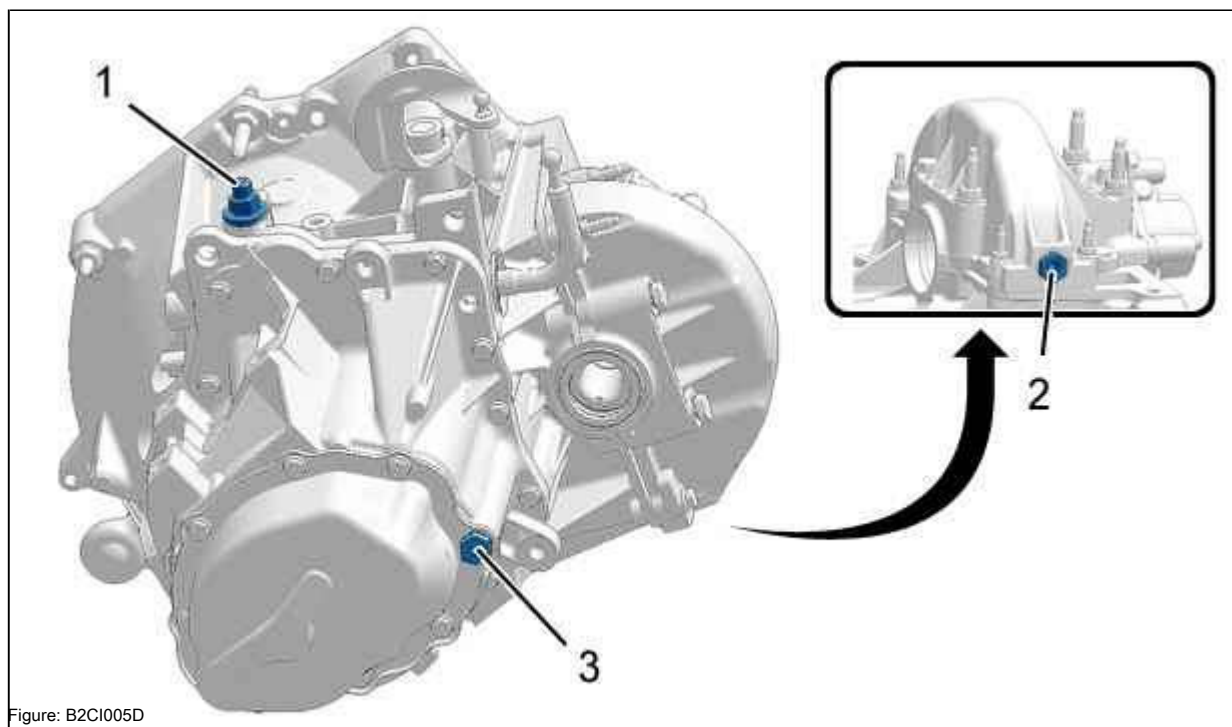
MANDATORY: Observe the cleanliness and safety rules



1. Tools

tool	Number (reference)	Designation
<div><p>[0344]</p><p>Figure: E5AI00BT</p></div>	[0344]	oil filling cylinder

2. Localization



- (1) Ventilation hole.
- (2) drain plug.

(3) Gearbox oil level plug (Depending on gearbox).

3. Draining

Remove:

- Under engine guard
- Air filter housing (depending on engine)
- Drain plug (2)

4. Oil volume

ATTENTION : It is necessary to drain the oil from the gearbox and fill in a strictly defined amount of oil in case of a leak or after a ceremony.

Empty gearbox: 1.9 liters. After discharge: 1.8 liters.

NOTE: The transmission is lubricated for the entire period of operation; Perform a visual check for leaks at every periodic maintenance.

5. Bay

ATTENTION : Observe the required tightening torques



Replace the drain plug (2). Remove:

- Air filter unit (depending on engine)
- Vent (1) or oil level plug (3) (Depending on transmission)

ATTENTION : Take the amount of oil.

Fill gearbox through vent hole (1) or oil level check hole (3) (Depending on gearbox); Using tool [0344].

Install:

- Vent (1) or oil level plug (3) (Depending on transmission)
- Air filter housing (depending on engine)
- Under engine guard

CLEANING AND RE-INSTALLATION CONDITIONS: GEARBOX

Do not use abrasives or scratching tools on the mating surfaces. Remove dirt from the threaded surfaces of the bolts and holes.

Install clean spare parts free from defects (scratches, burrs, impact marks). Lubricate spare parts as soon as they are re-installed.

Replace sequentially after deforestation:

- seals
- O-rings
- Drive shaft seals
- Pins
- Bearings
- Retaining rings
- Elastic washers
- Release bearing guide bolts (Clutch) Differential ring tightening bolts
-
- Shaft fastening nuts
- Retaining ring of the axis of the block of satellites

Observe compatibility:

- Axles and forks
- Bushings and Synchronizers

The air in the work area must be clean and free of dust. Mark the items before removing.

Protect removed parts from dust.

CHECK ADJUSTMENT: INPUT SHAFT BEARING KIT

MANDATORY: Observe the cleanliness and safety rules



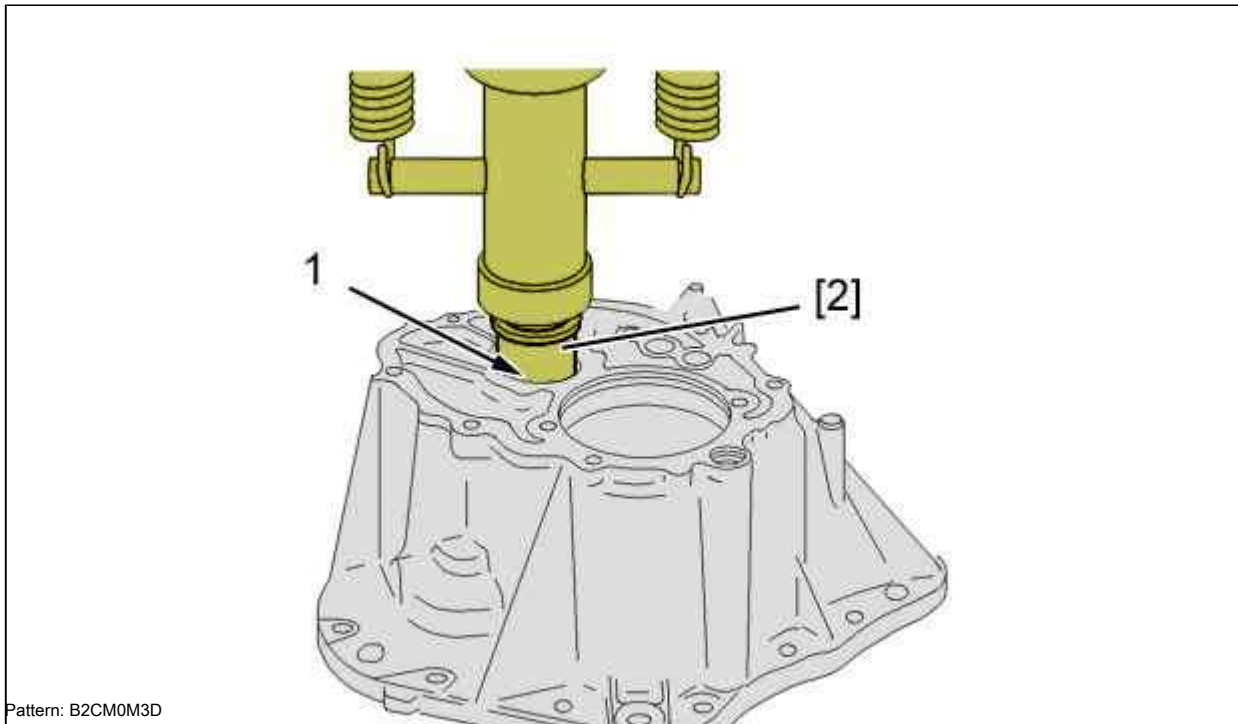
1. Recommended equipment

Presentation : Recommended fixtures



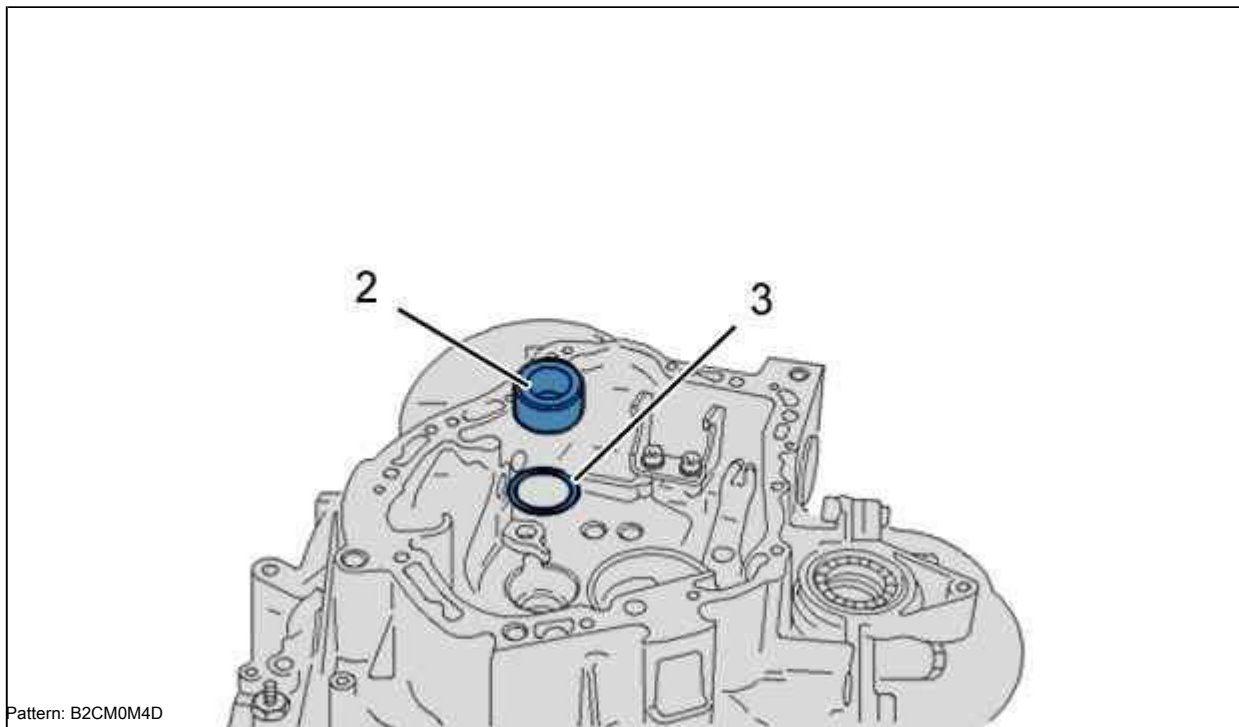
2. Removal

2.1. Outer ring bearing (side of the transmission case)



Remove the bearing outer race (1); Using the tool [2] and a press.

2.2. Outer ring bearing (side of the clutch housing)



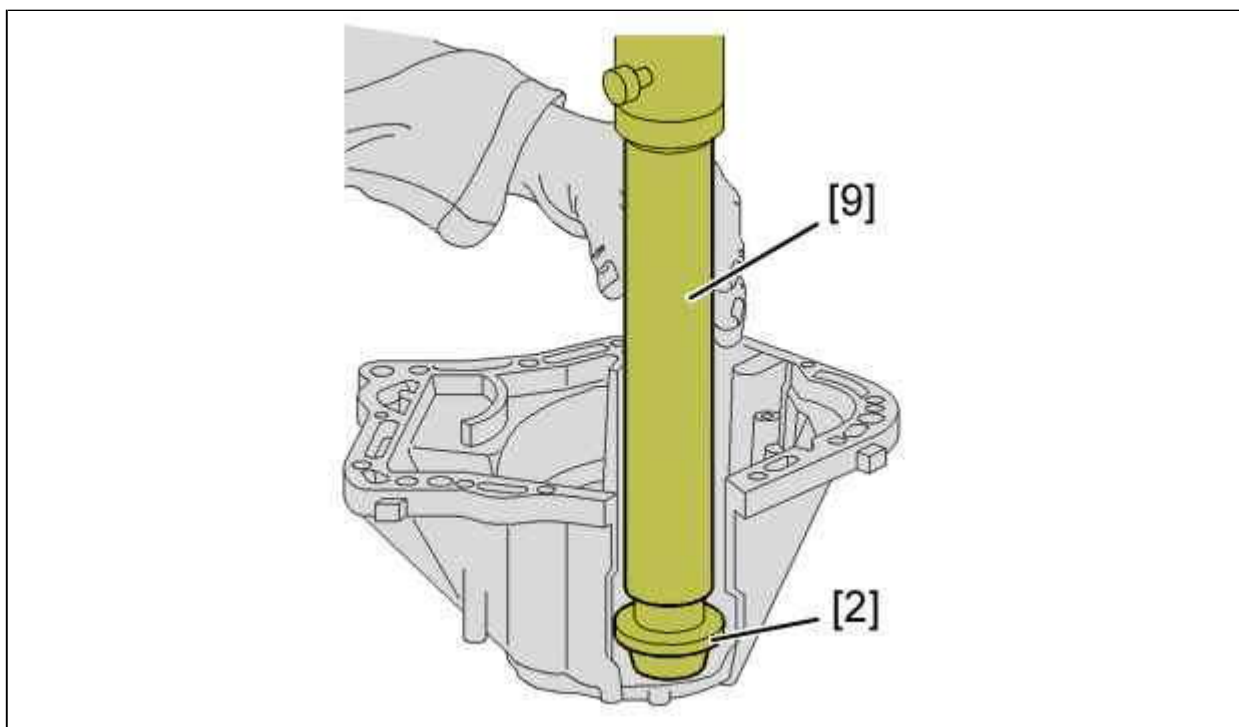
Remove:

- Bearing outer ring (2)
- Shim (3)

Measure the thickness of the shims (3).

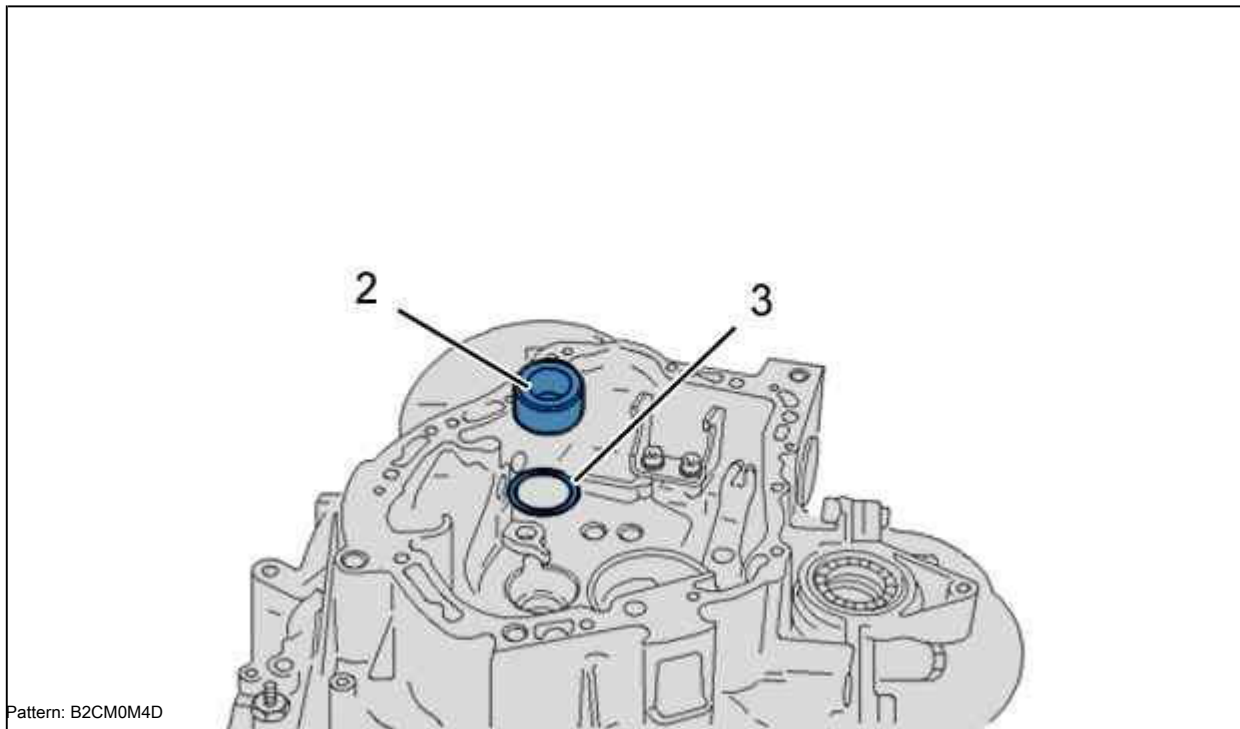
3. Installation

3.1. Outer ring bearing (side of the transmission case)



Install the bearing outer race (1) (new); Using the tool [2], [9] and a press.

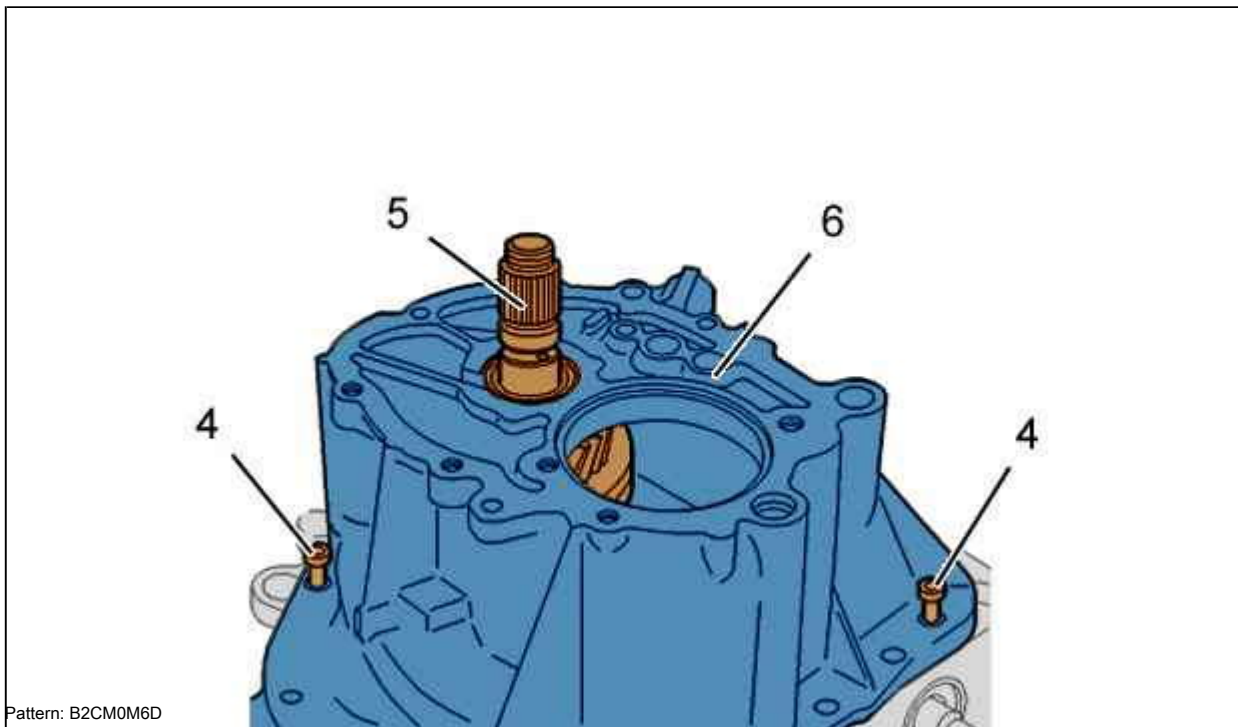
3.2. Outer ring bearing (side of the clutch housing)



ATTENTION : Install the shim (3) 0.20 mm thinner than the removed shim.

Install:

- Release bearing guide bush
- Shim (3)
- Outer ring (2) of the input shaft bearing

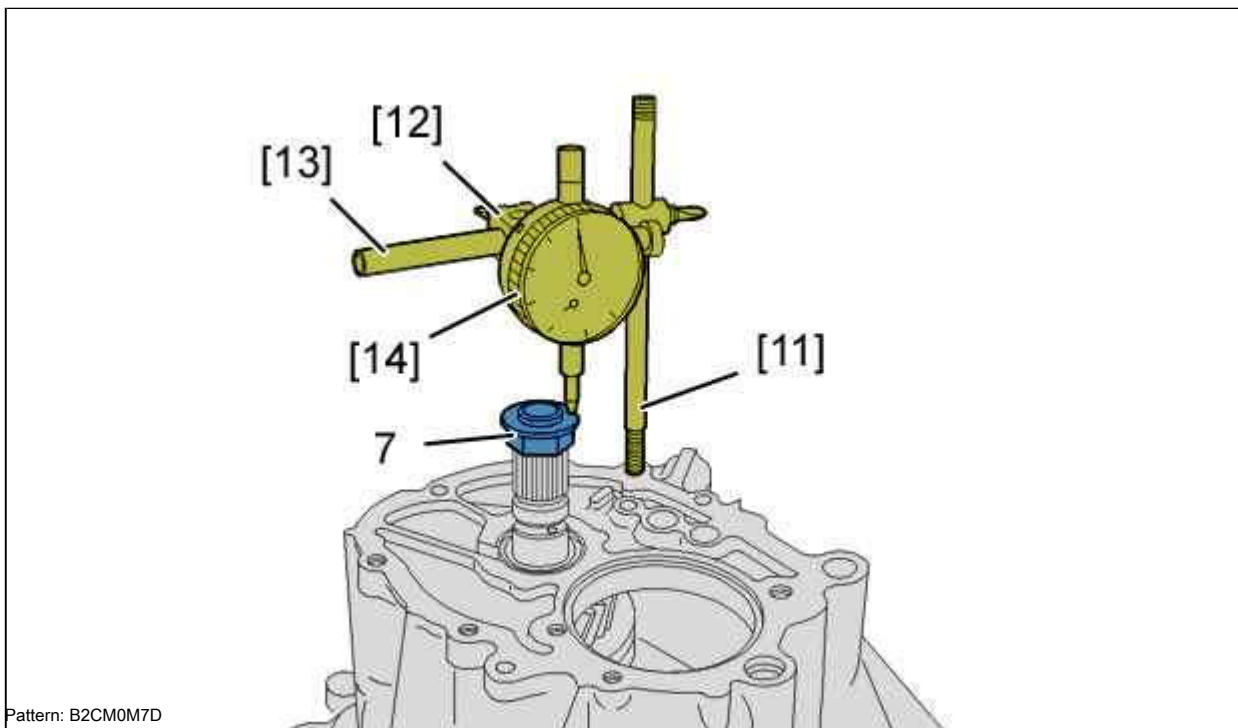


Install:

- Input shaft (5)
- Transmission housing (6)
- bolts (4) (one bolt out of two); Tighten to 1.25 da.Nm

Turn input shaft (5) a few turns.

4. Adjustment



Install the input shaft nut with the bearing surface outward (7). Tighten nut (7) lightly.

Place the indicator [14] on the brackets [11], [12] and [13]. Install the feeler nut (7).

Press the input shaft down. Install indicator [14]
nano. Pull input shaft up. Write value:

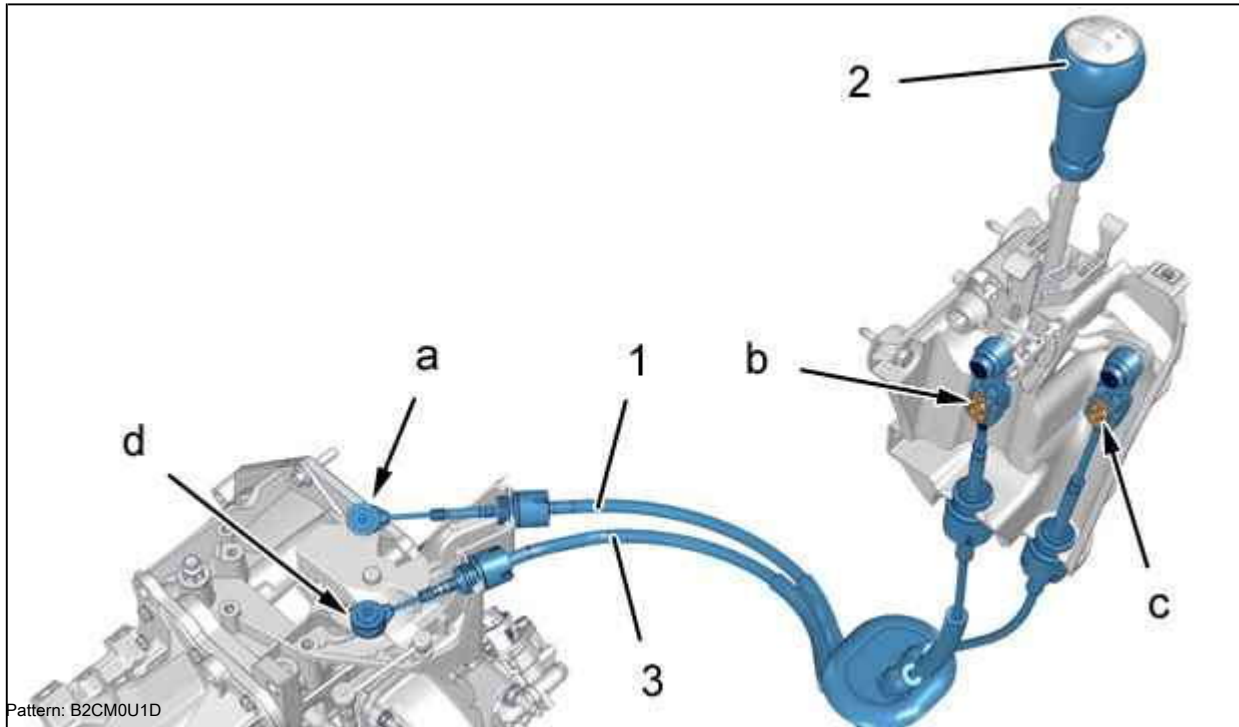
- The gap should be between 0.05 and 0.15 mm
- If the value shown by the indicator is incorrect, adjust the clearances again.

Remove:

- Indicator [14] on brackets [11], [12] and [13]
- Nut (7)
- bolts (4)
- Transmission housing (6)
- Input shaft (5)

PERFORMANCE IDENTIFICATION: BOX CONTROL ACTUATOR TRANSFERS

1. Identification



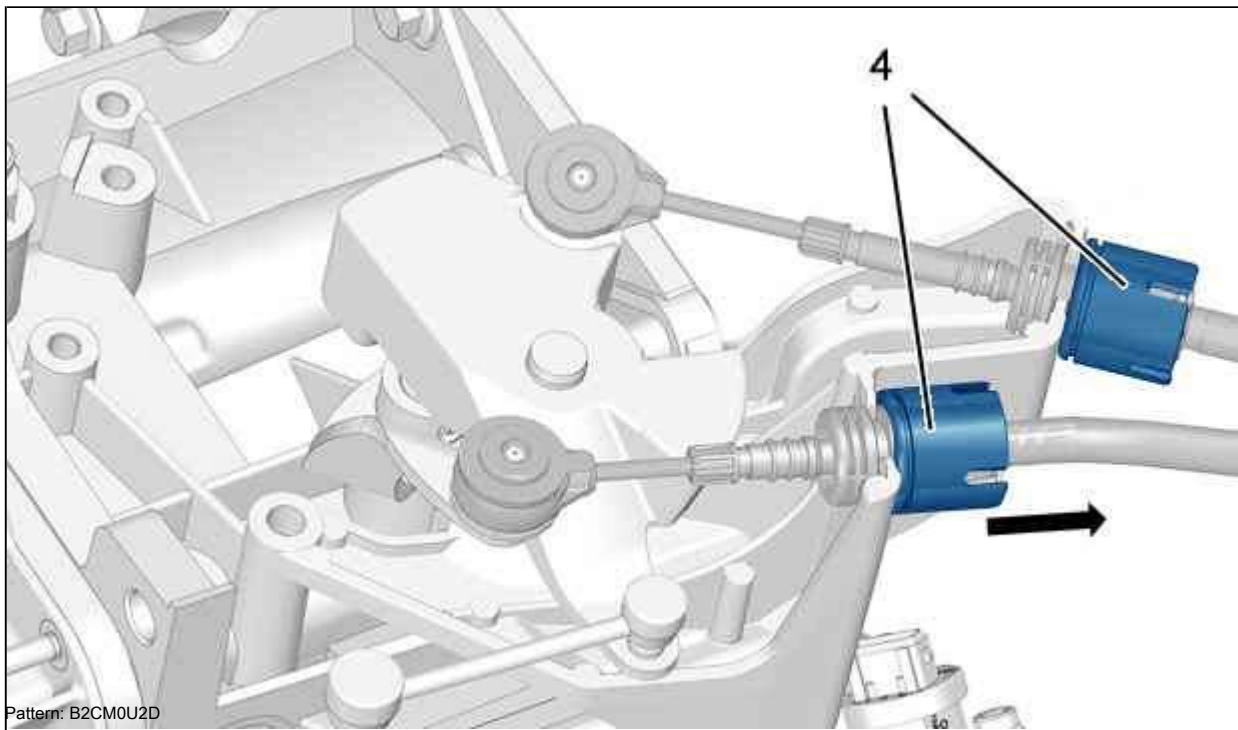
"a" Gear shift tip: Ø10 mm.

"b" Tool for adjusting the length of the shift drive cable.

"c" Tool for adjusting the length of the shift drive cable. "d" Tip for gear selection: Ø10 mm.

(1) Shift cable. (2) Gear shift lever. (3) Gear cable.

2. Characteristics



Unlocking the shell lock:

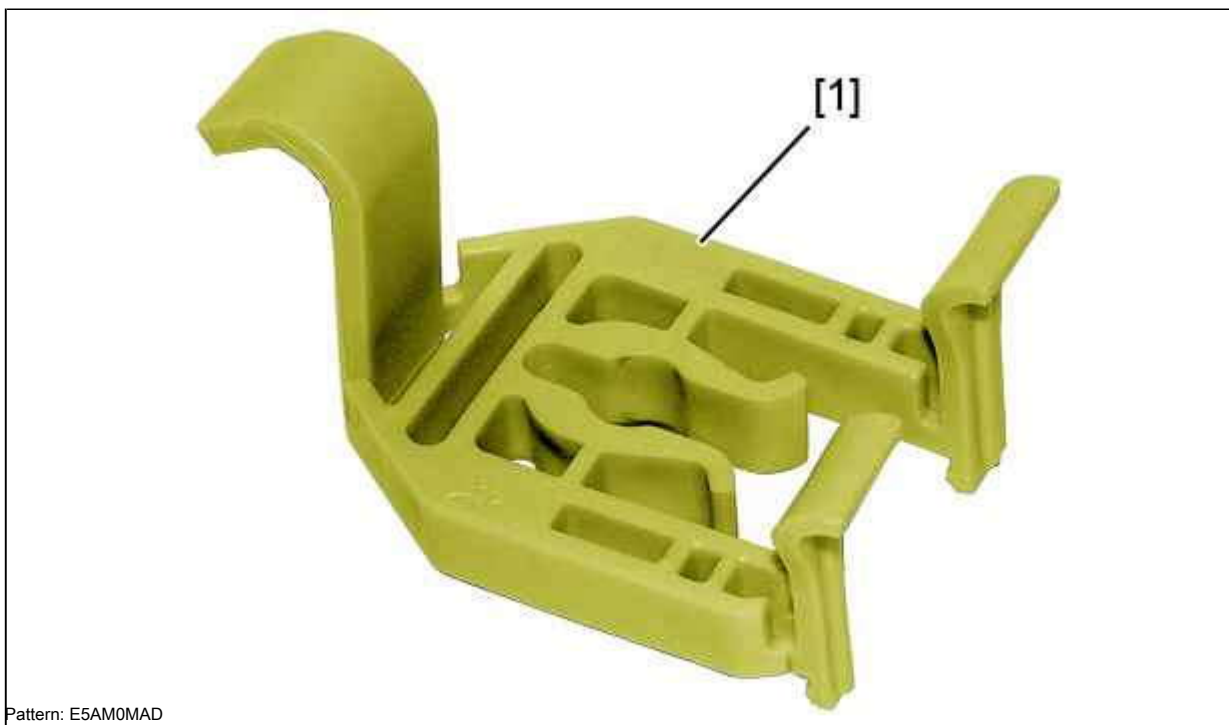
- Pull the cylinder (4) (according to the arrow)
- Detach the envelope attachment (4) from its support by pulling up

ADJUSTMENT: GEARSHIFT ACTUATOR

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



Pattern: E5AM0MAD

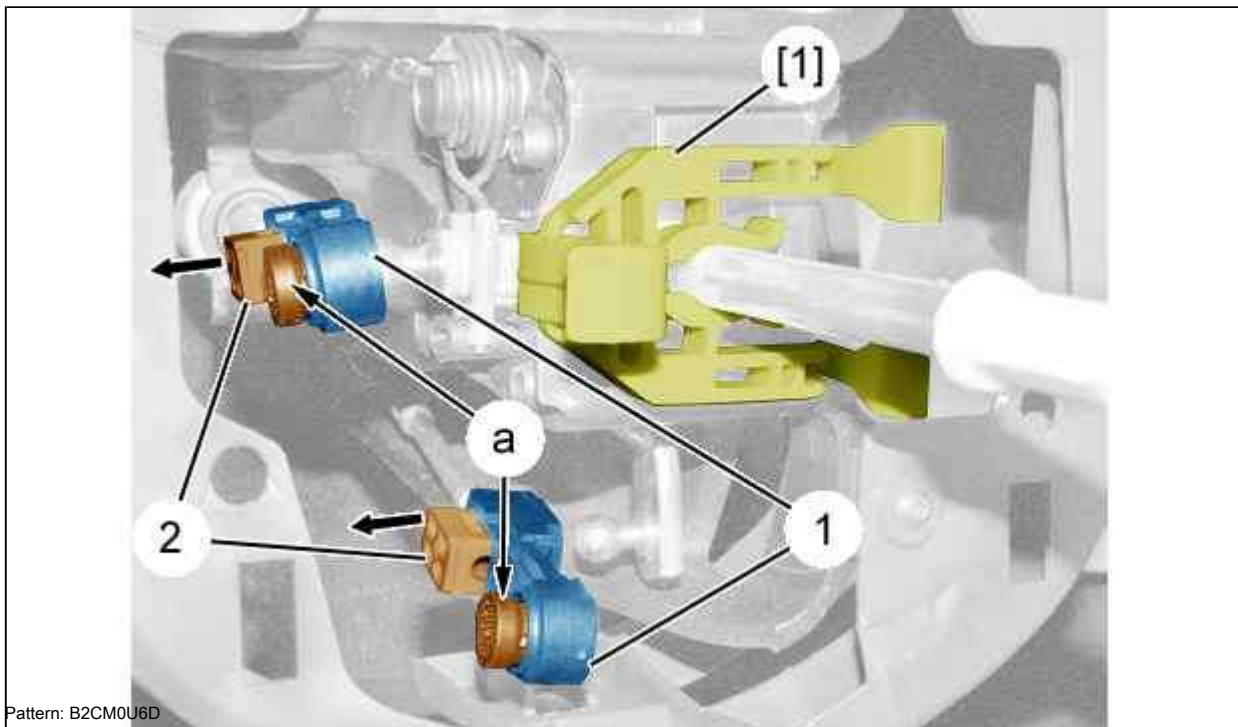
[1] gear lever positioning device () .0317AV.

2. Preliminary operations

Disconnect the battery.
Remove the headset (Gear lever).

3. Adjustment

Place the transmission lever in neutral.



Disconnect hinges 2 (1) (Press in "a"); Using screwdrivers. Connect the tool [1] to the gear shift support.

Pull the keys (2) to unlock the shift drive cables (As shown by the arrow); Using screwdrivers.

Attach the ball joints (1).

Press the keys (2) to lock the shift drive cables. Remove the tool [1].

4. Installation

Replace trim panels (Gear lever). Make sure all gears shift smoothly.

Check: the movement of the gear shift lever must be the same forward and backward and to the right and left; otherwise, repeat the adjustment.

ATTENTION : Follow the steps to follow after removing the battery.

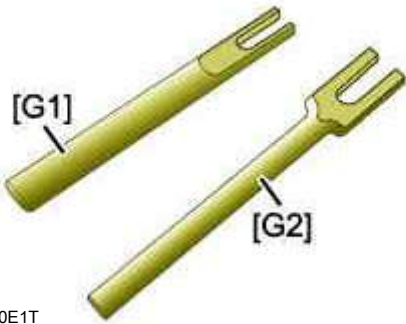
Reconnect the battery.

REMOVAL INSTALLATION: GEARSHIFT ACTUATOR

MANDATORY: Observe the cleanliness and safety rules



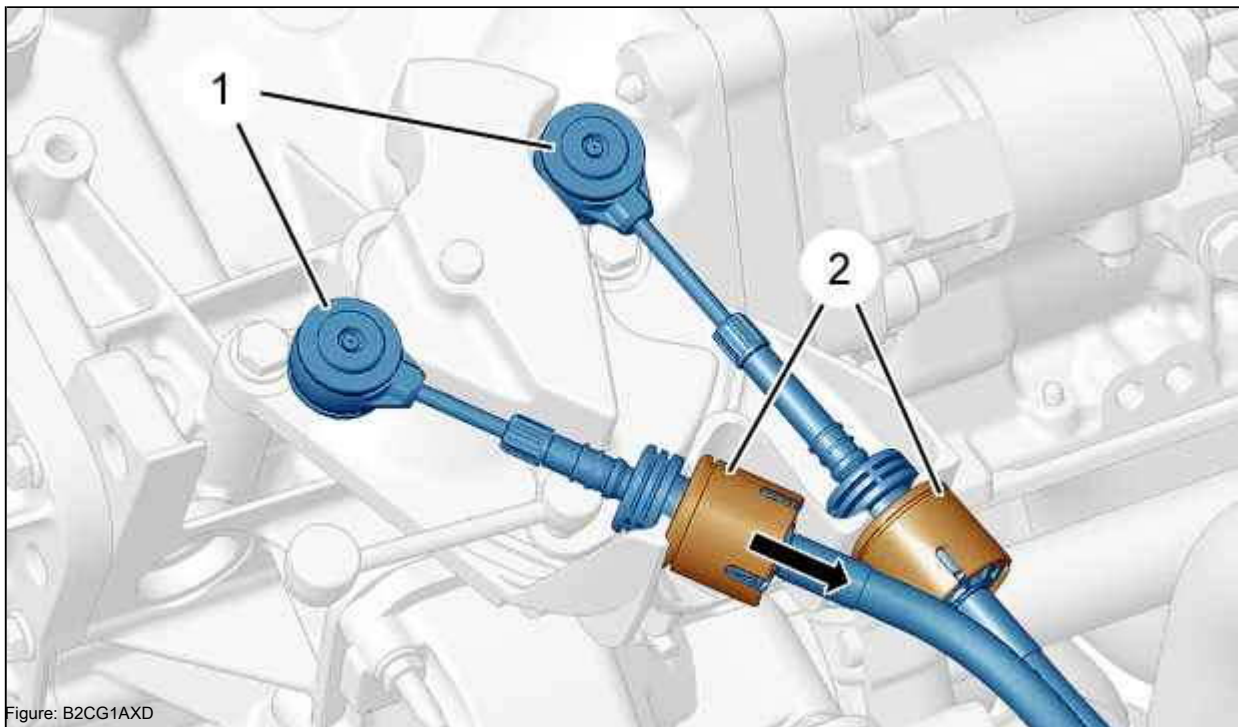
1. Tools

tool	room	Designation
<div><div>[0216]</div><div>Figure: E5AB0E1T</div></div>	(reference)	
	[0216G1]	Separator hinges Ø10 mm
	[0216G2]	Separator hinges Ø13 mm

2. Removal

Remove:

- Air intake pipe (DV engine)
- Air intake resonator housing (EP and TU engines)
- Air filter unit (TU engine)
- Accumulator battery
- Fuse box
- Battery box

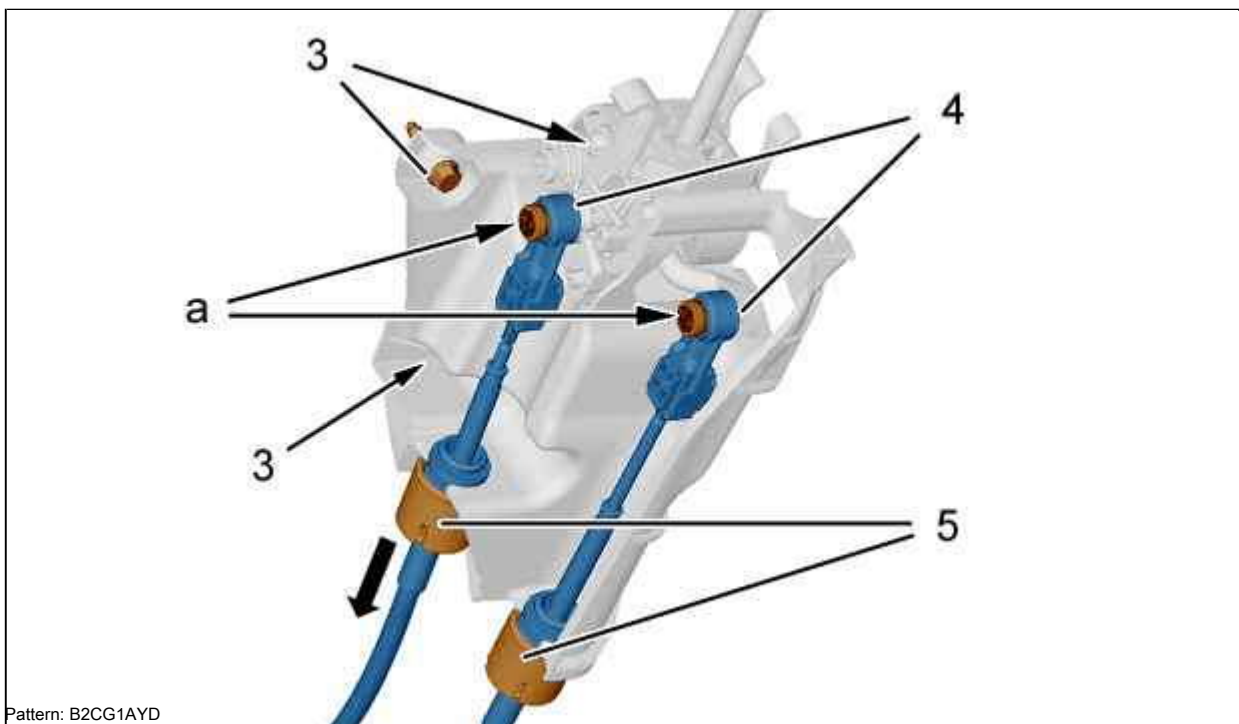


Disconnect the ball joints (1); Using the tools [0216G1], [0216G2]. Unlock the support cable jacks.

Unlocking the shell lock:

- Press the interlocking keys (2) (in accordance with the arrow)
- Release braid stoppers

Remove: Shift lever pad.



Press in area "a": Disconnect the 2 ball joints (4); Using screwdrivers.

Unlock the support cable jacks. Unlocking the shell lock:

- Press the interlocking keys (5) (in accordance with the arrow)
- Release braid stoppers

Remove:

- bolts (3)
- Shift control

Remove intermediate section of exhaust system.

Remove: Exhaust manifold heat shield (EP and TU engines).

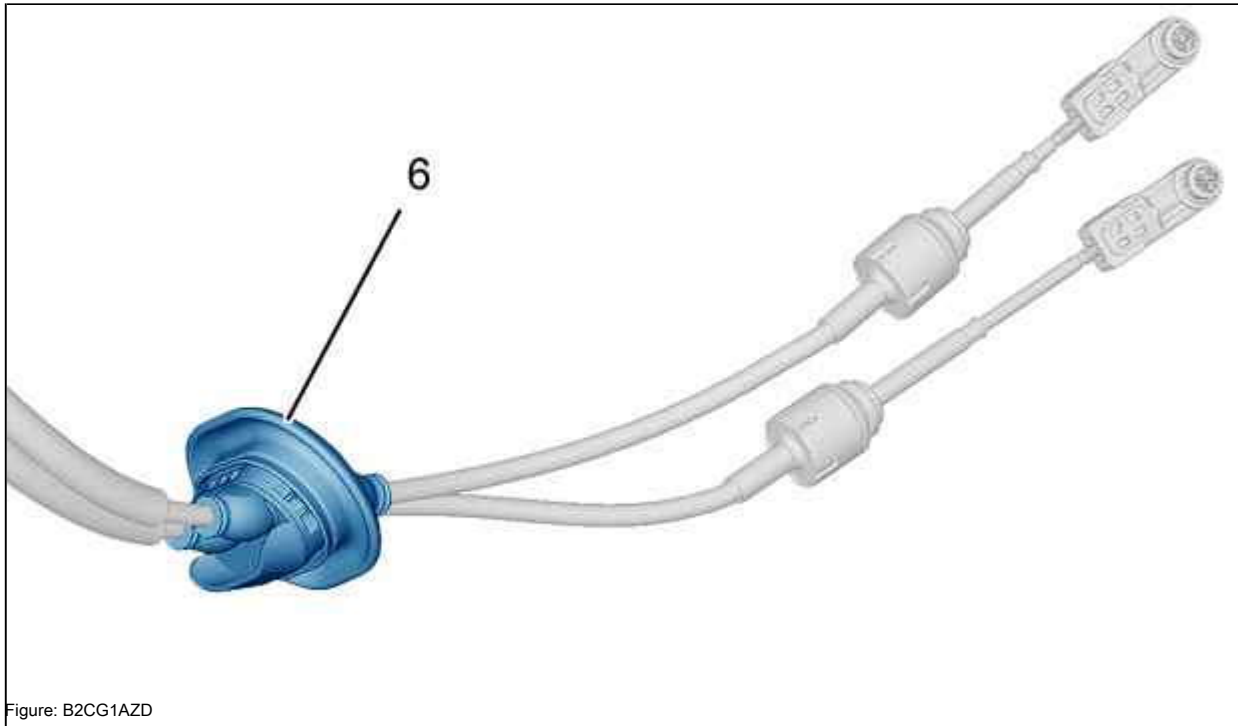


Figure: B2CG1AZD

Unfasten and remove the adapter sleeve (6) that holds the transmission control cables to the floor of the body.

Remove the cables of the transmission drive.

3. Installation

Install:

- Shift control
- bolts (3)
- shift control cable

Replace the hinges (4). Lock the lock keys (5).

Reattach the adapter sleeve (6) that holds the transmission control cables to the body floor.

Adjust the transmission control drive. Install:

- Shift lever pad
- Exhaust manifold heat shield (EP and TU engines)

Install the intermediate part of the exhaust system. Lock the lock keys (2).

Install:

- Ball joints (1)

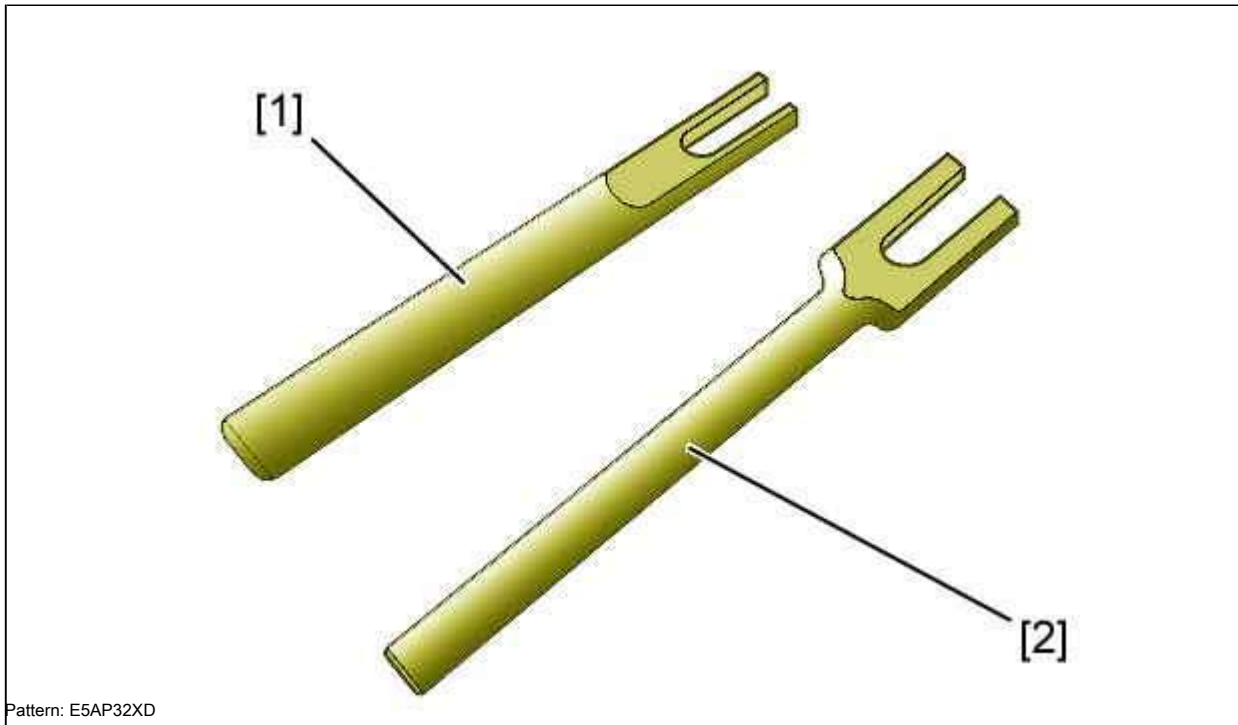
- Battery box
- Fuse box
- Accumulator battery
- Air filter unit (TU engine)
- Air intake resonator housing (EP and TU engines)
- Air intake pipe (DV engine)

REMOVAL INSTALLATION: GEARSHIFT ACTUATOR

MANDATORY: Observe the cleanliness and safety rules



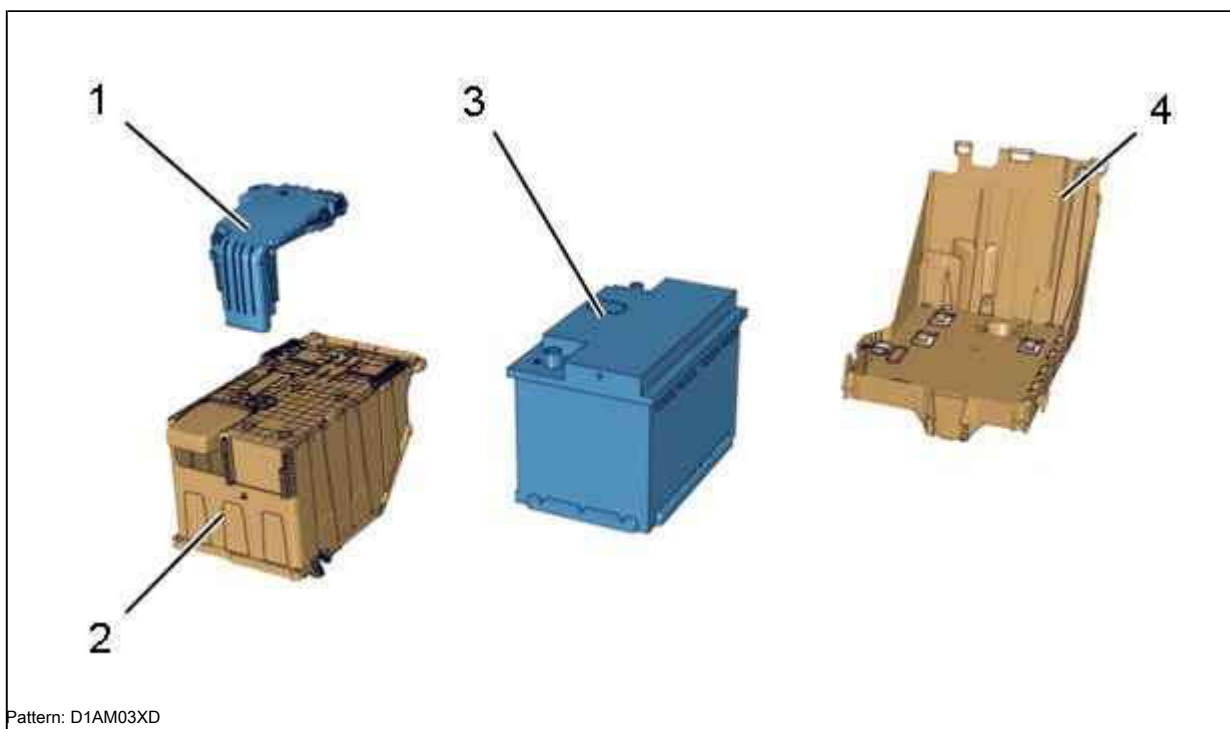
1. Recommended equipment



[1] Tool for disconnecting hinges Ø10 mm () .0216G1. [2] Tool for separating hinges Ø13 mm () .0216G2.

2. Removal

Disconnect the positive battery cable.



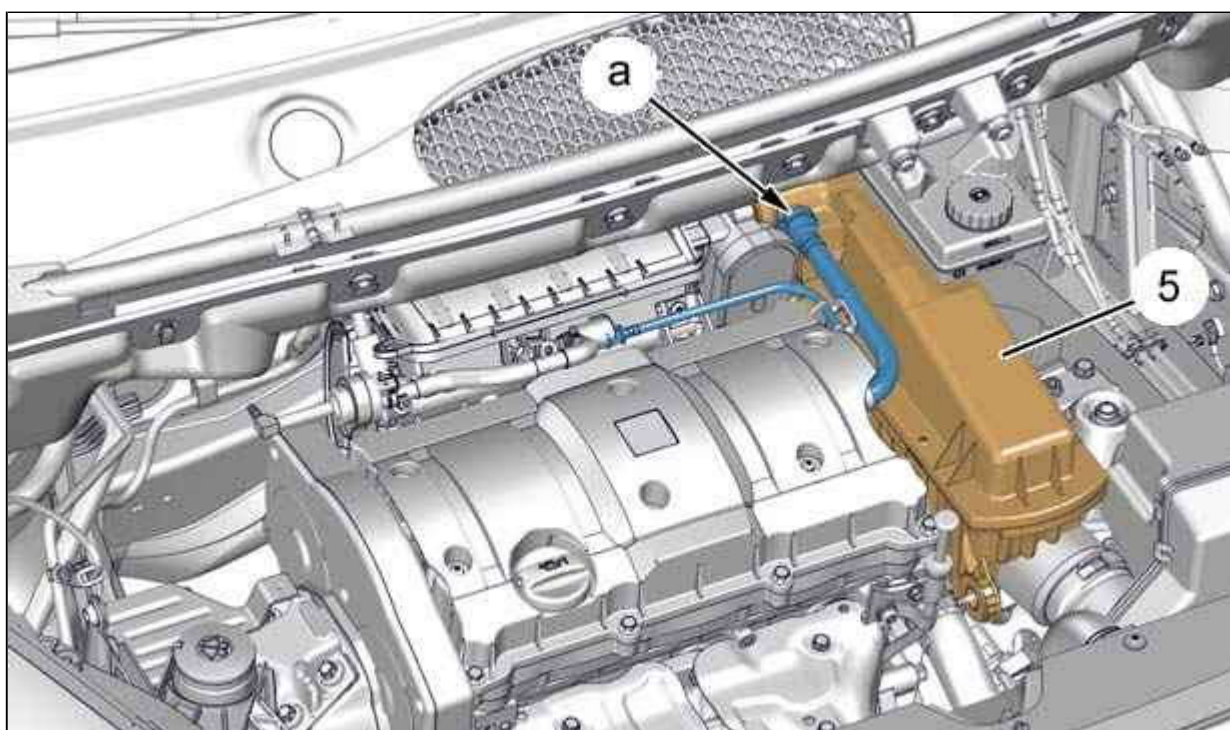
Disconnect Pull the fuse box (1) off the battery protection cover (2). Remove the battery cover (2).

Disconnect the negative battery cable. Remove:

- Battery (3)
- Battery box (4)

Unfasten the electrical harnesses associated with the battery bracket.

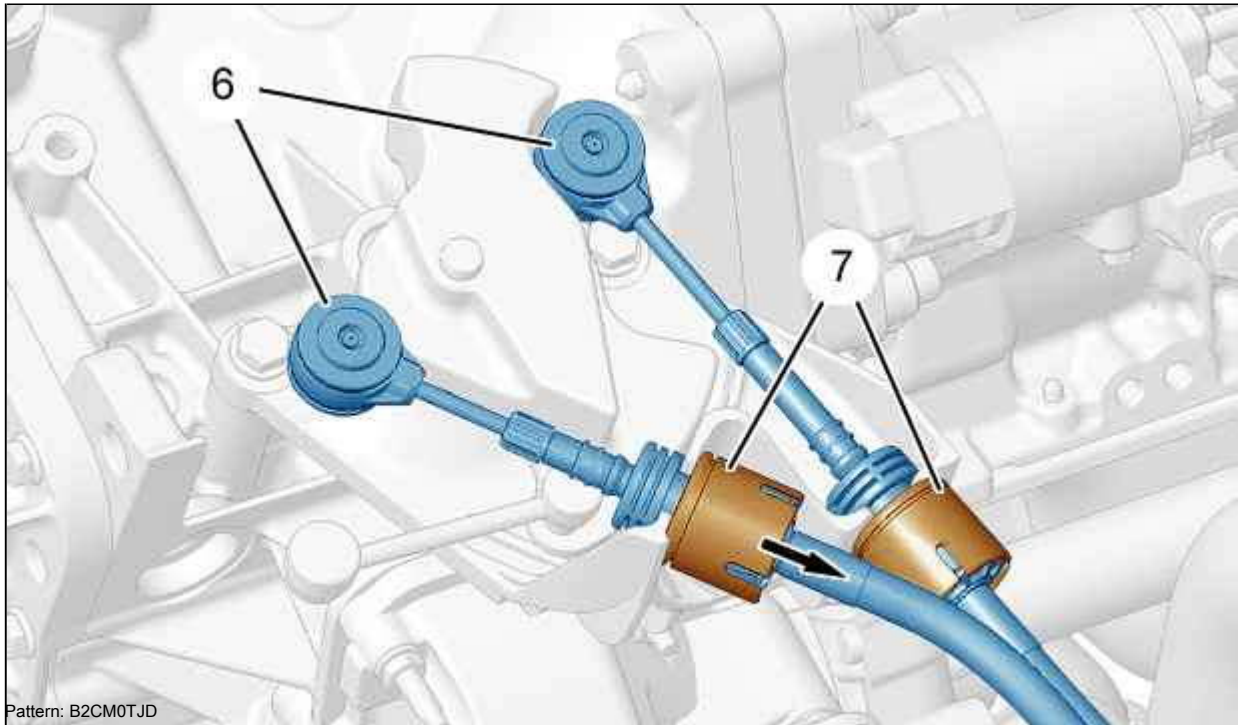
2.1. Vehicle equipped with a Tu5 engine



Pattern: B1BM168D

Disconnect: snap-on connector (at "a"). Remove: Air filter unit (5).

2.2. Withdrawal (Continued)

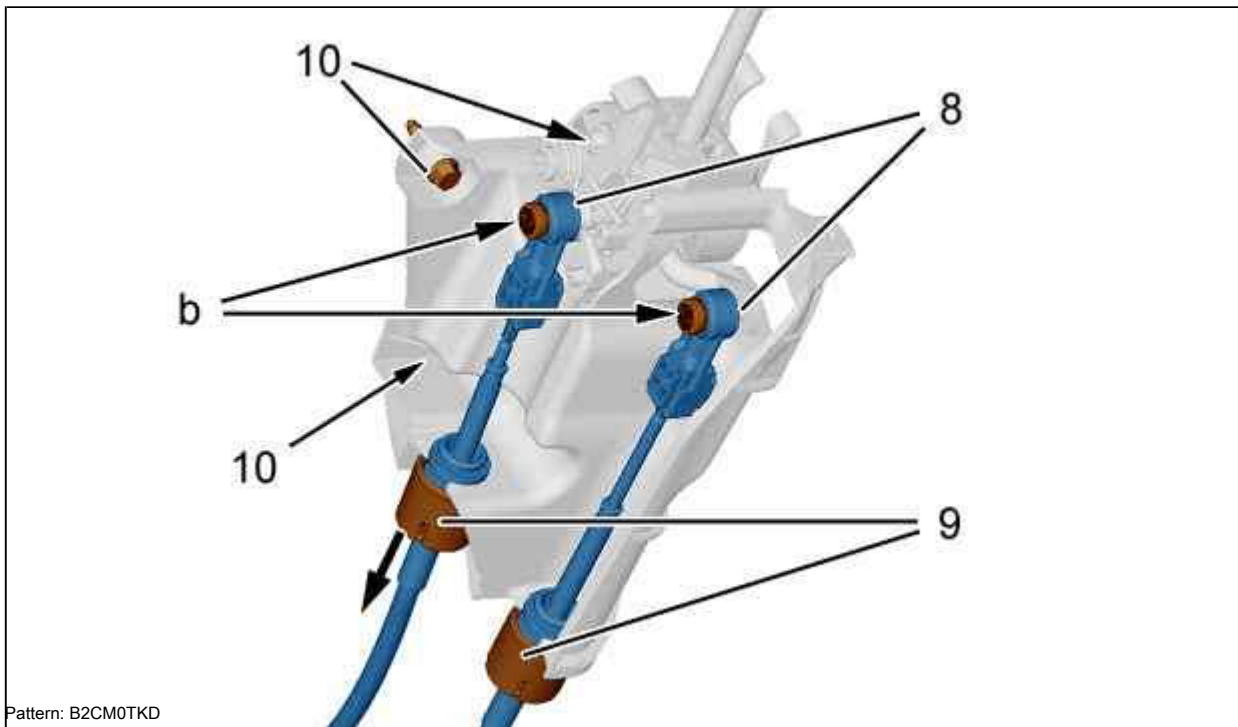


Disconnect the ball joints (6); Using the tools [1] and [2]. Unlock the support cable jacks.

Unlocking the shell lock:

- Press the interlocking keys (7) (according to the arrow)
- Release braid stoppers

Remove the headset (Gear lever).



Press in "b": Disconnect the 2 ball joints (8); Using screwdrivers. Unlock the support cable jacks.

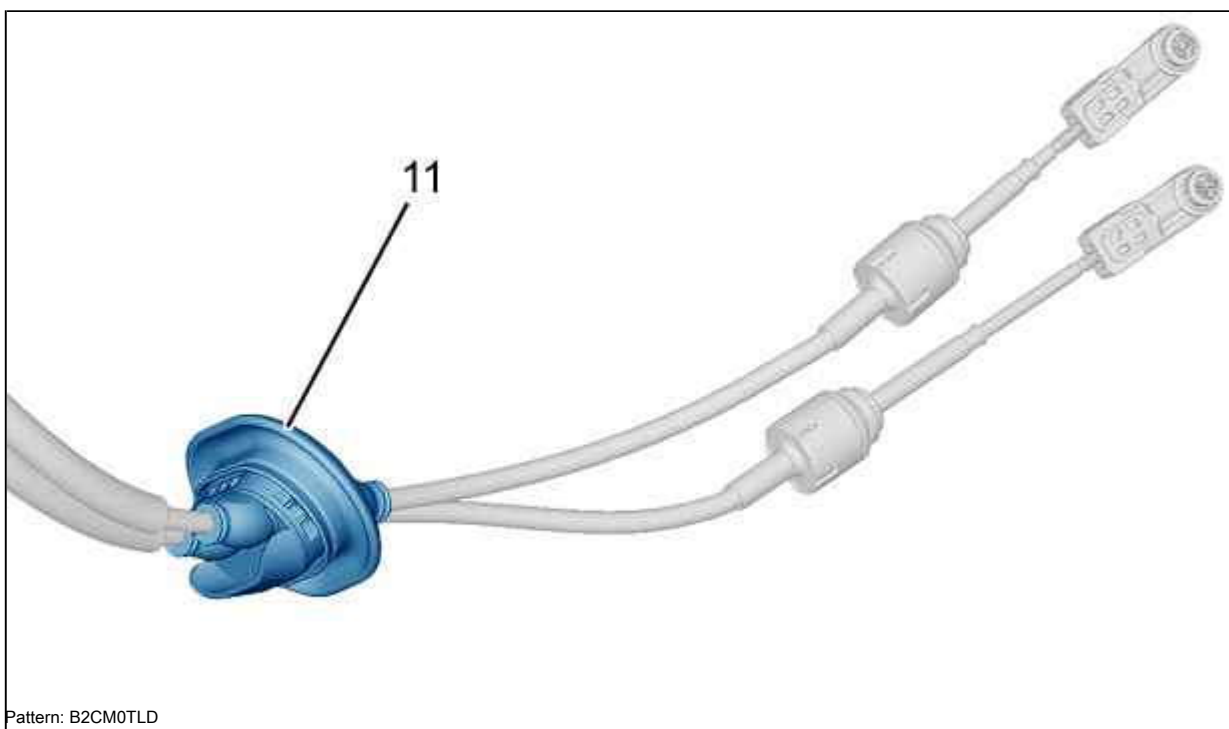
Unlocking the shell lock:

- Press the interlocking keys (9) (in accordance with the arrow)
- Release braid stoppers

Remove:

- the bolts (10)
- Shift control

Remove the front exhaust heat shield.



Separate and remove the cable strut (11) from the half-body. Remove the drive cables.

3. Installation

Install:

- Selector lever
- bolts (10); Tightening torque 1 ± 0.2 da.Nm
- Control cables

Replace the hinges (6), (8). Block the casings stoppers (7), (9).

Fasten the cable guide (11) of the chassis.

Adjust transmission control actuator

Install:

- Facing Shrouds (Gear Lever)
- Exhaust system front heat shield



Install intermediate part of exhaust system

Install:

- Battery box (4)
- Battery (3)



Install and attach electrical harnesses routed to the mountings.

3.1. Vehicle equipped with a Tu5 engine

Install the air cleaner unit.

Fasten in the catches: Snap-in fitting (in "a").

3.2. Installation (continued)

Reconnect the battery.

Replace the decorative battery cover (2). Secure the fuse box (1) to the battery cover (2).

ATTENTION : Perform the operations to be performed after removing

battery



...

Lower the vehicle to the ground.

Tighten the wheels

...



REPLACEMENT: ROOF

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

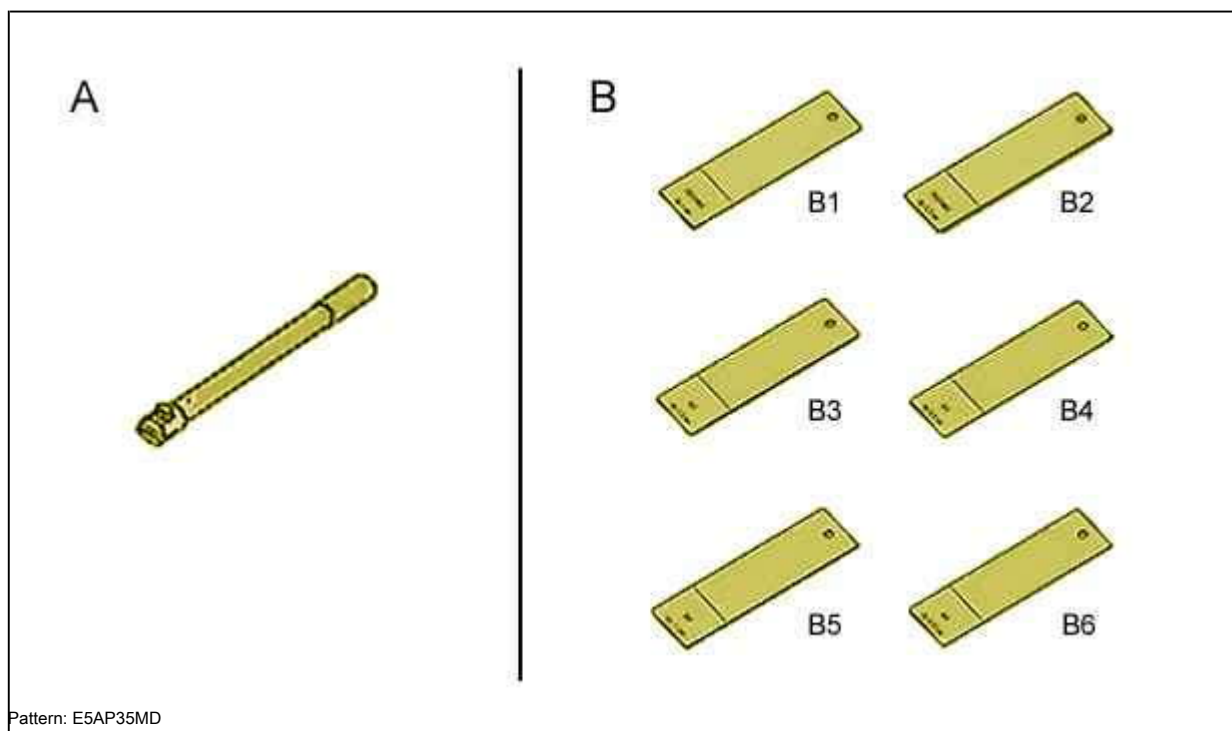
1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment

Operate using one of the following systems.



Equipment for checking the quality of electric welding points () .1366ZZ. Test gauge for the quality of electric welding dots () .1366B.

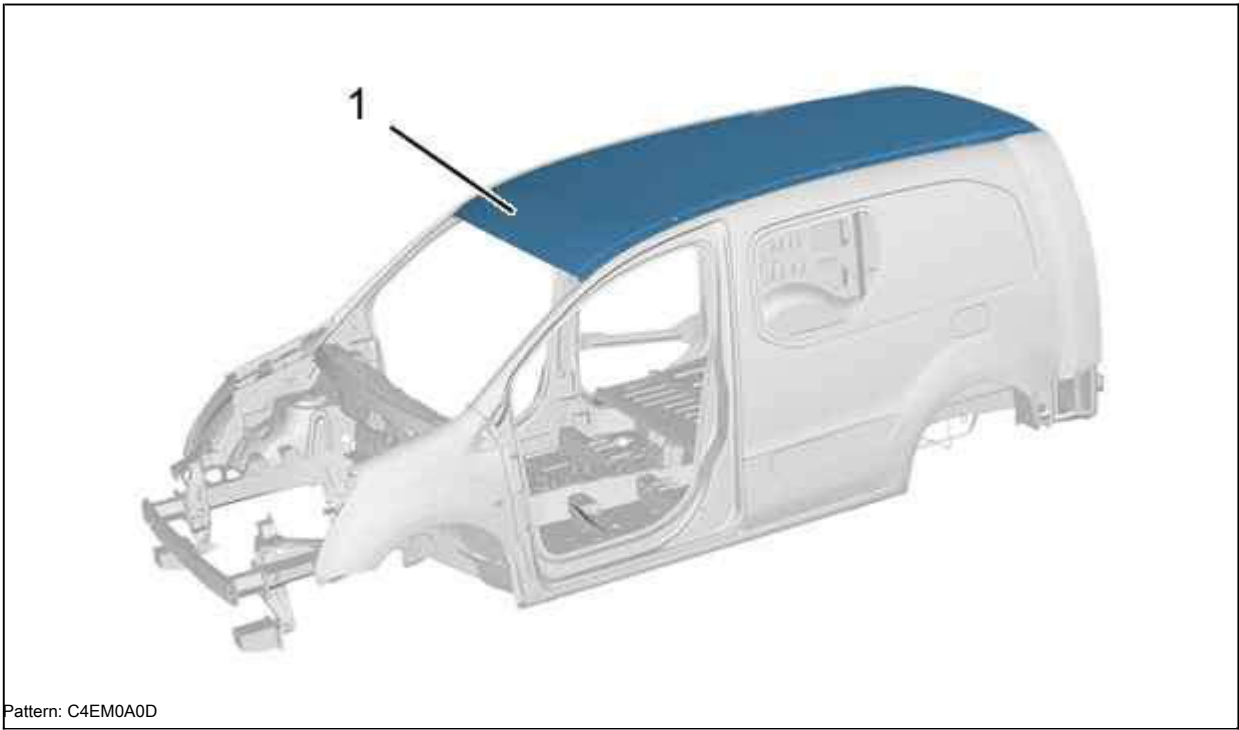
3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Roof

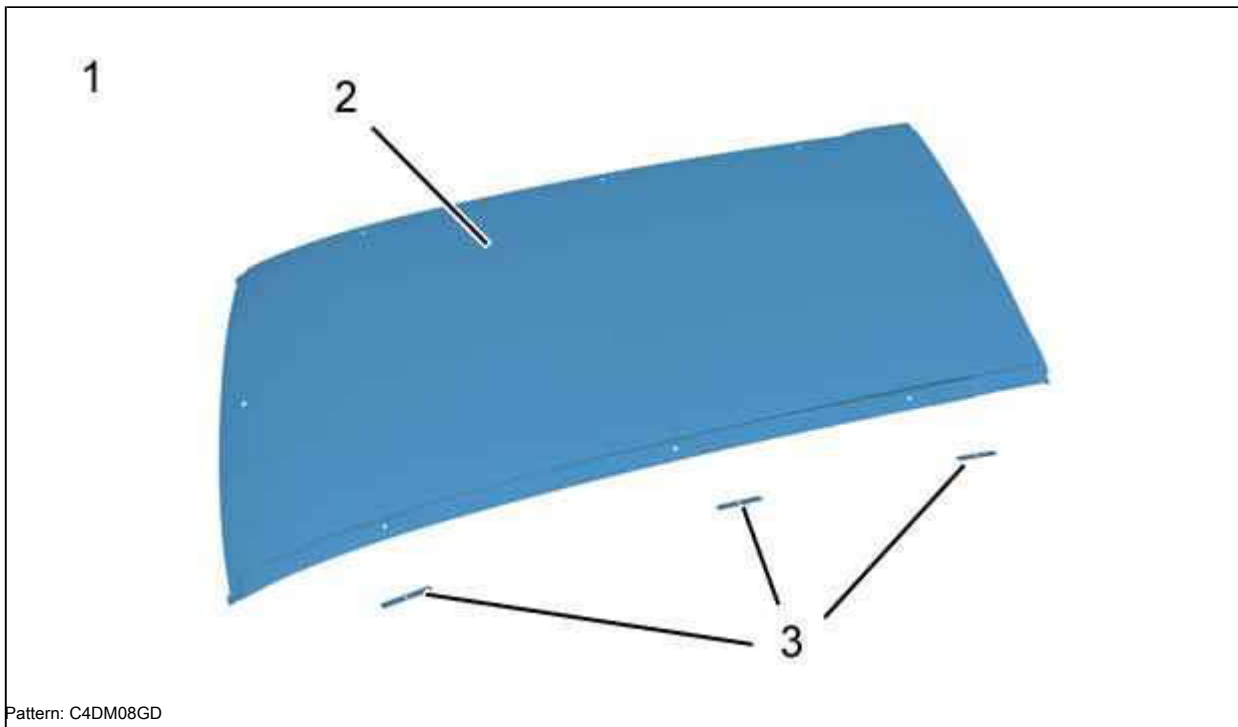


Label Designation

(1)	Roofs in the collection

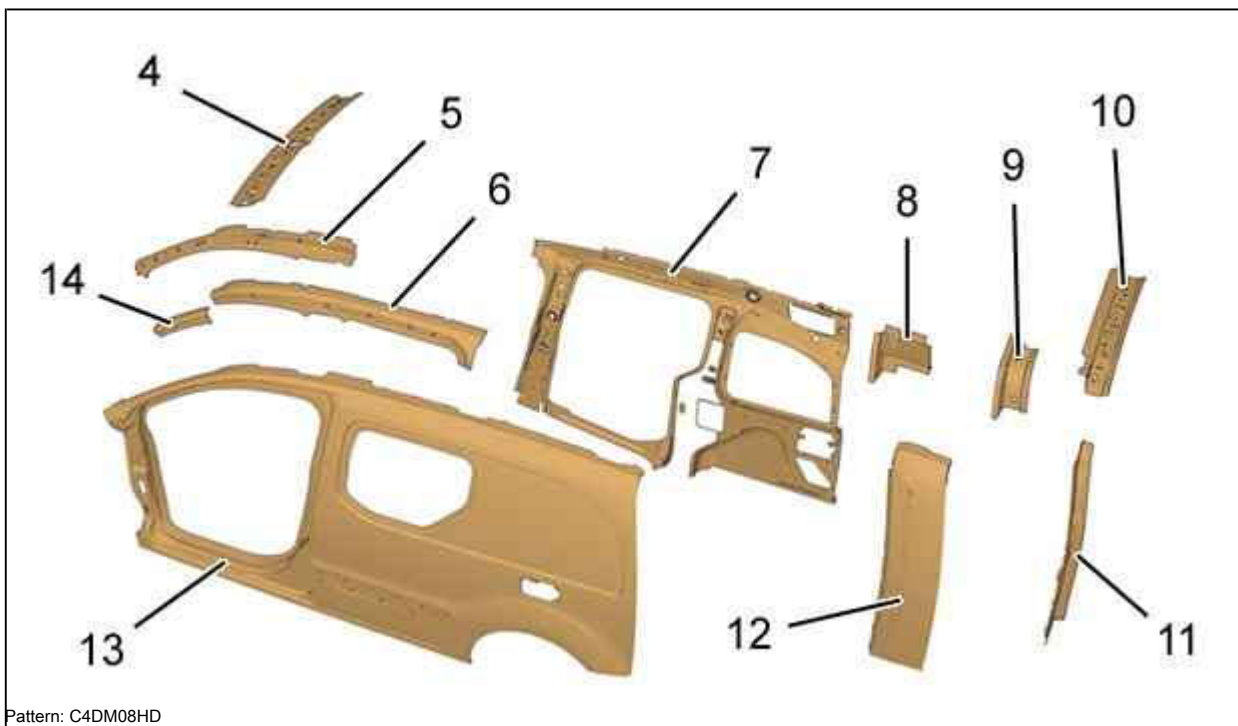
5. Identification: Roof

5.1. Identification: Roof assembly



Label Designation		Thickness	Nature / classification
(2)	Roof	(mm) 0.67	Mild steel
(3)	Reinforcing roof beams (Right and / or left 2.00 sides)		THLE (* **)

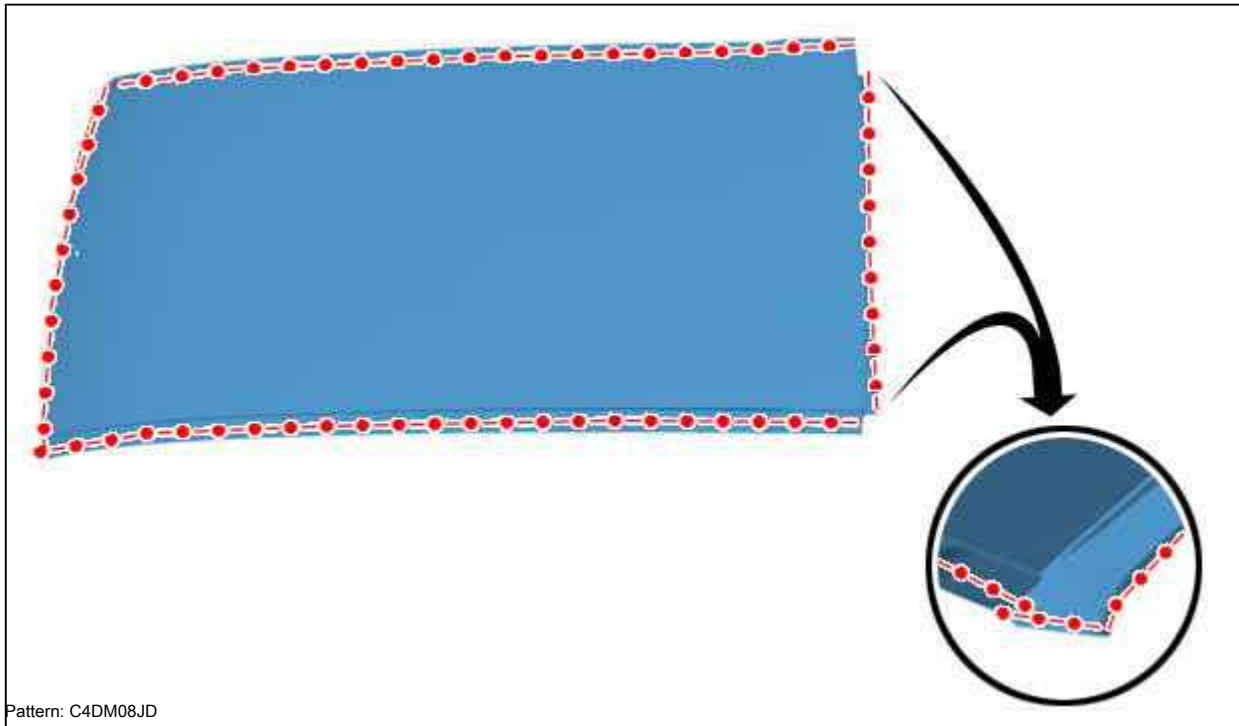
5.2. Identifying Mating Hidden Parts



Label Designation		Thickness (mm)	Nature / classification
(4)	Front roof cross member	0.97	Mild steel
(five)	Windshield pillars	1.47	UHLE (* **)
(6)	Roof arch base (Right and / or left side) Rear fender trim (Right and / or	1.17	HLE (*)
(7)	left side)	0.97	Mild steel
(eight)	Tailgate Upper Pillar Extensions (Right and / or Left Side)	1.17	HLE (*)
(nine)	Tailgate Upper Pillar (Right and Left)	1.47	HLE (*)
(ten)	Rear roof cross member	0.77	HLE (*)
(eleven)	Tailgate Strut Chute (Right and / or 0.97 Left Side)		HLE (*)
(12)	Rear Extension of Salon Sidewall (Right and / or	0.77	Mild steel
	left side)		
(13)	Passenger compartment side (Right and / or left side)	0.77	Mild steel
(fourteen)	The base of the windscreen support (Right	1.17	HLE (*)
	and / or left side)		

6. Preparation: Roof

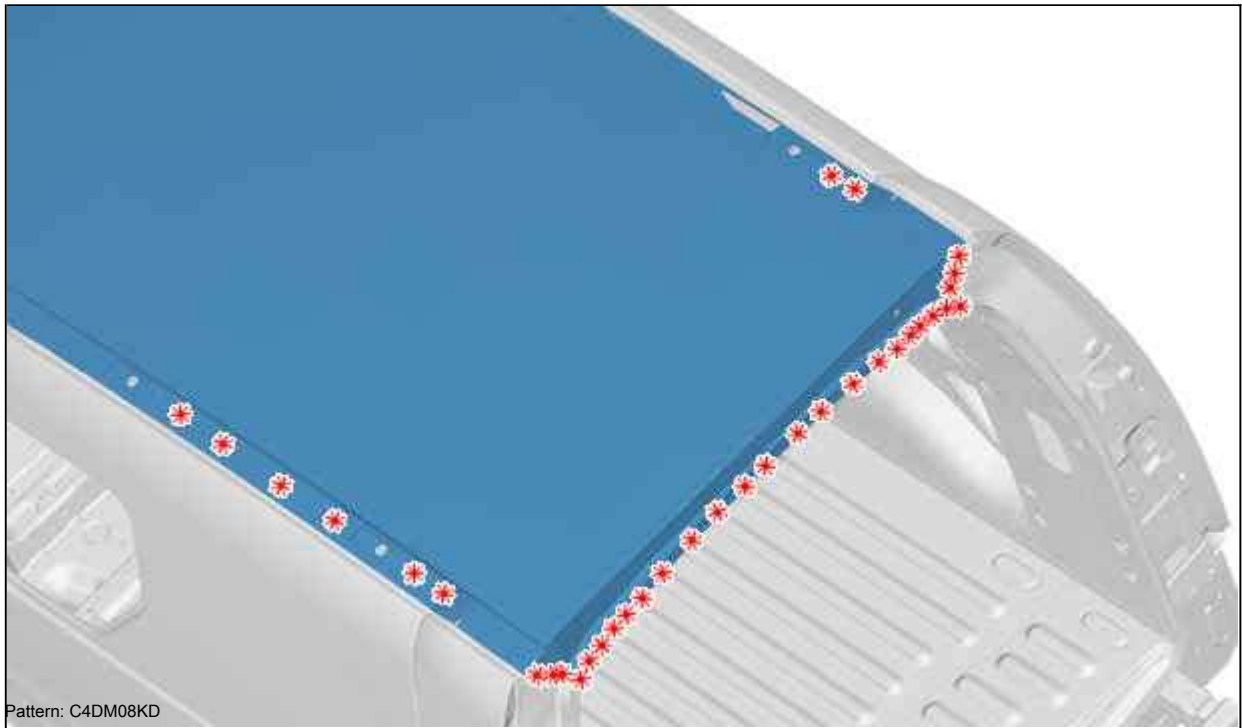
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection



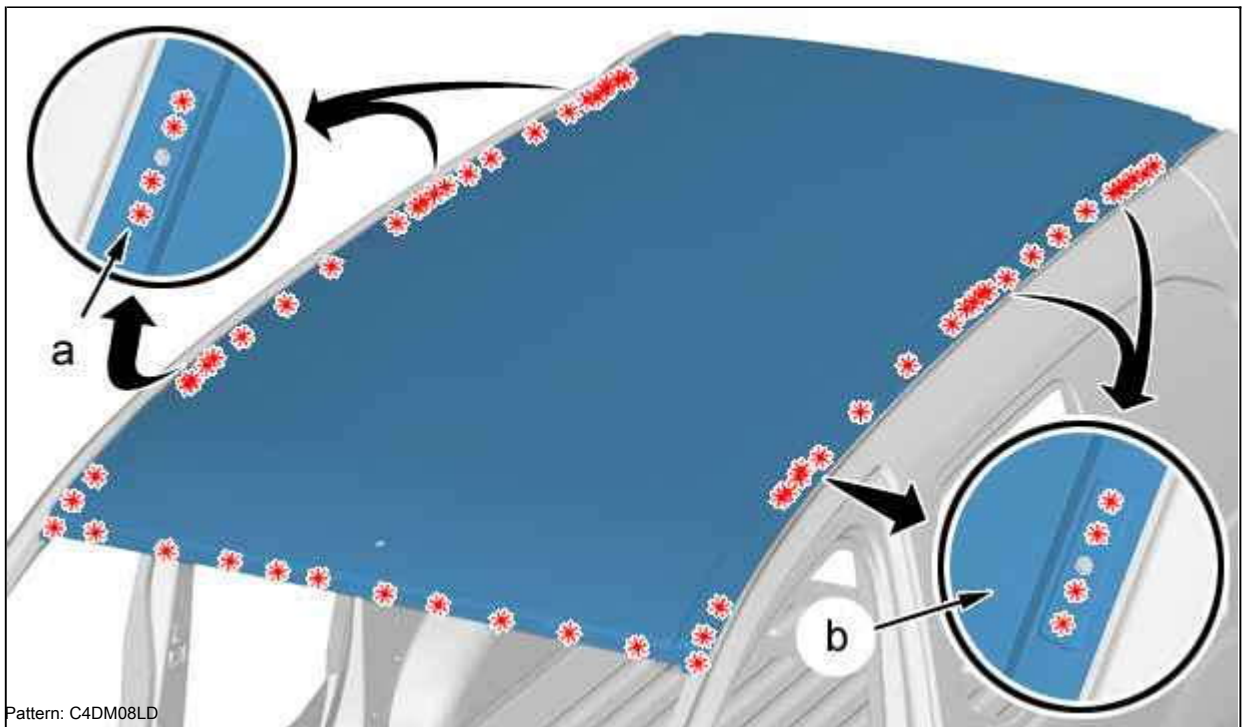
Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body

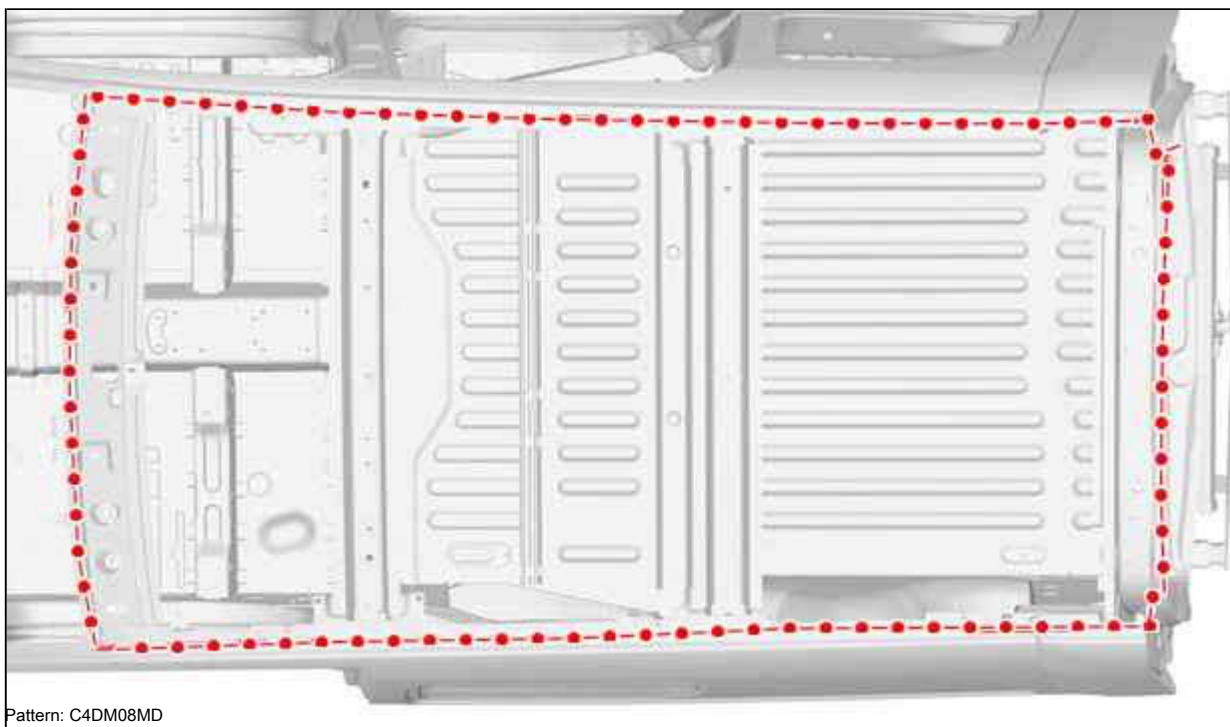


Cut weld points.



Cut points (in "a", "b") in 3 thicknesses. Cut other points at 1 thickness. Remove the roof.

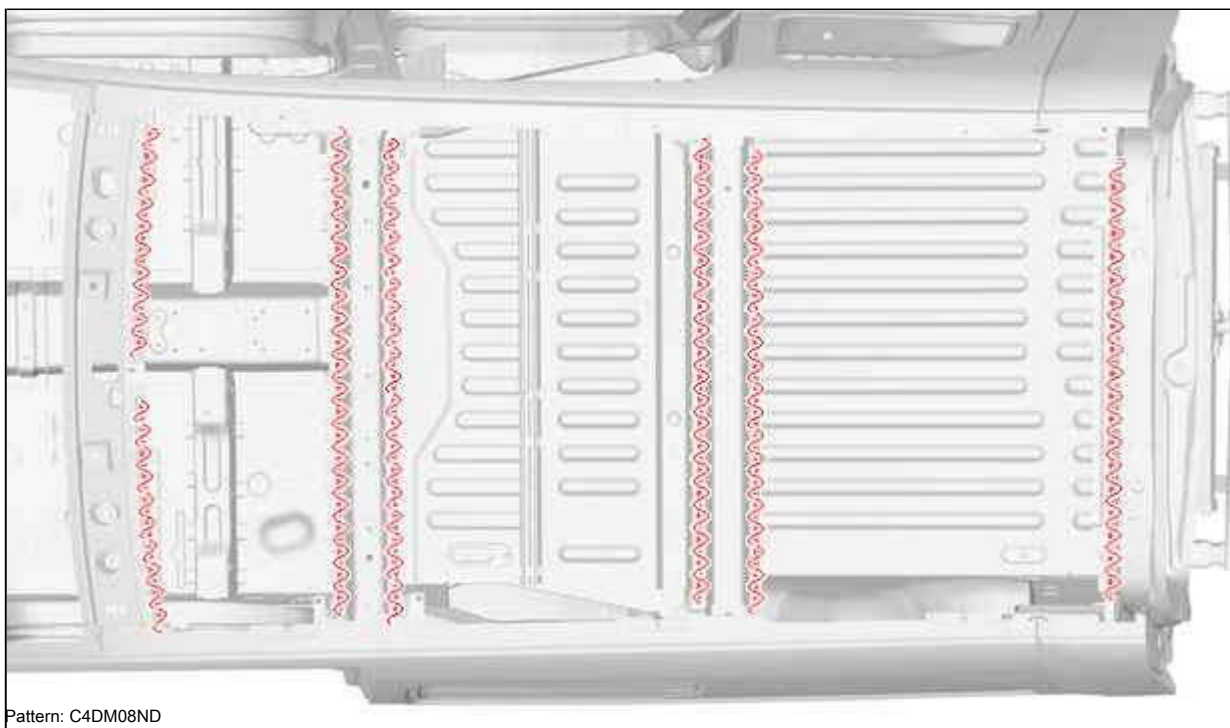
8. Cleaning and preparation of the body



Pattern: C4DM08MD

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Pattern: C4DM08ND

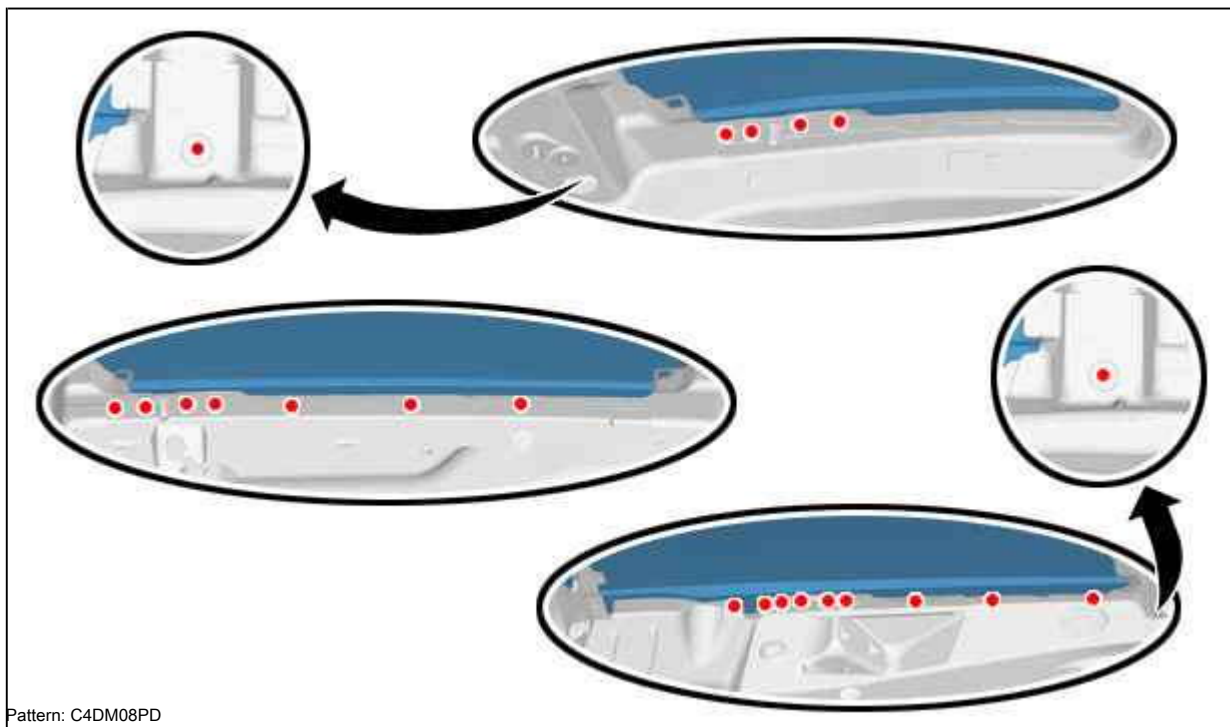
Apply fixing mastic (index "A1").

9. Fitting

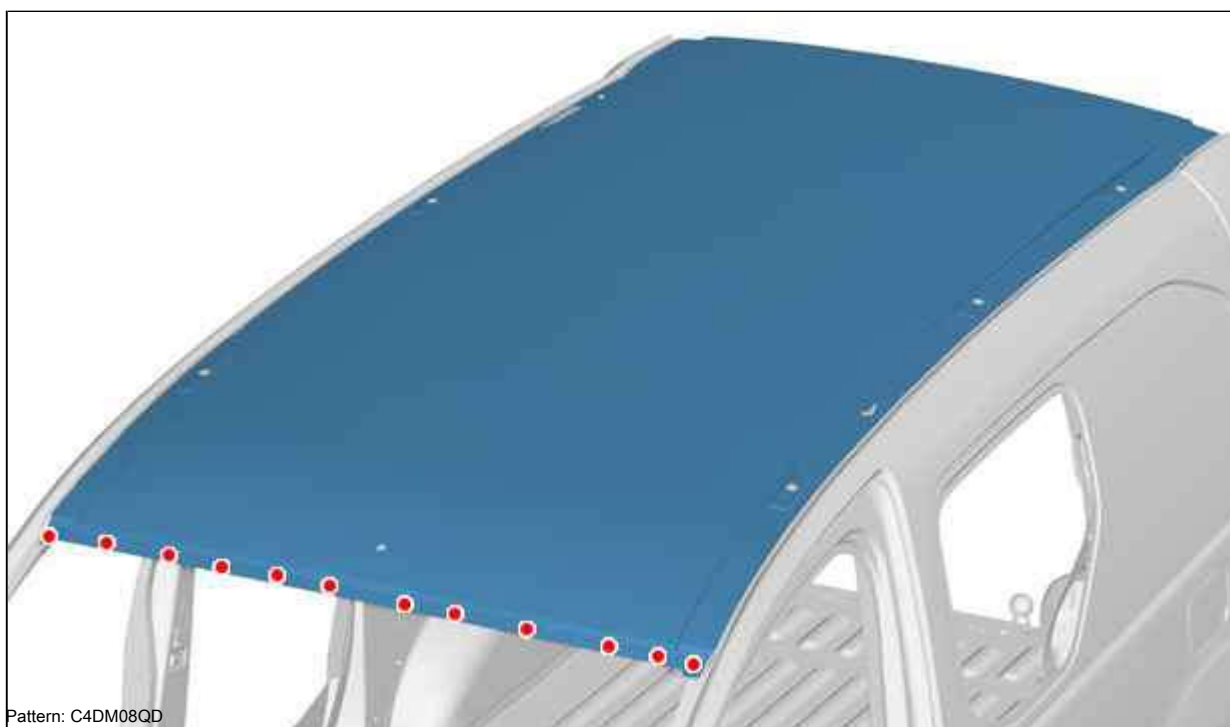
Position: Roof.

Install elements to ensure the fit.
Check clearances and alignment.
Hold the element in place.

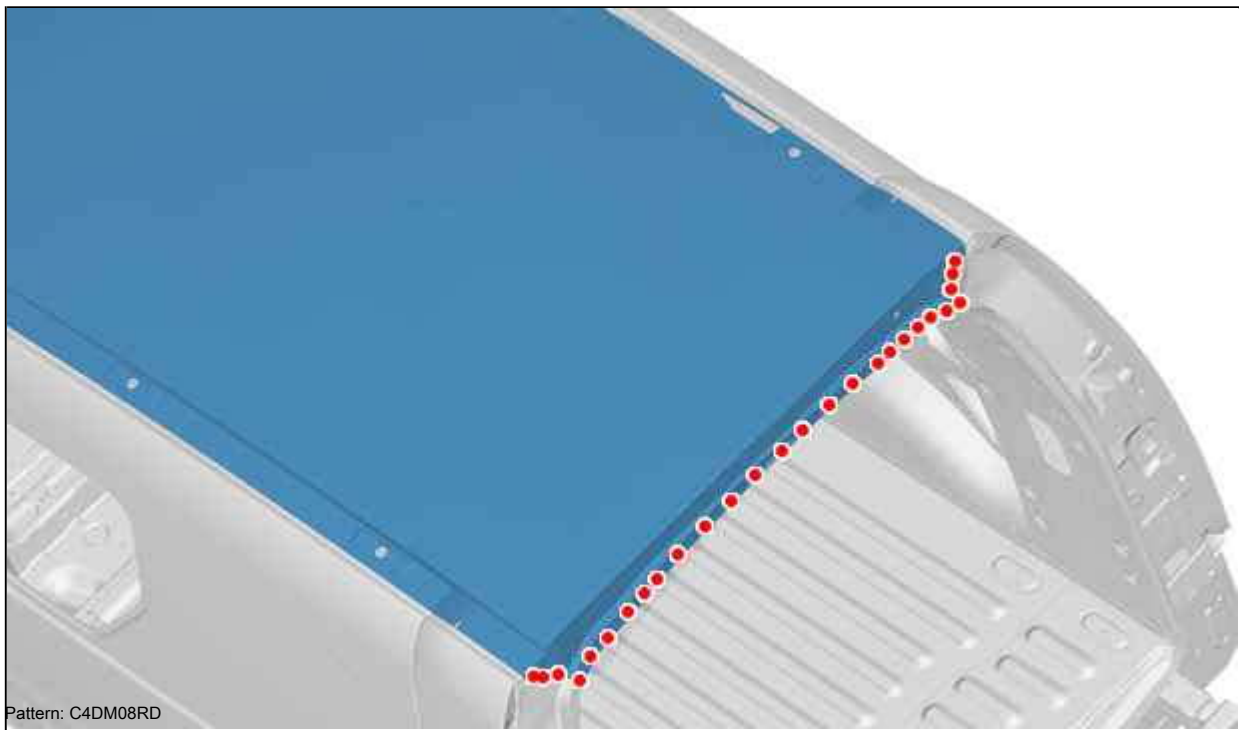
10. Welding



Weld through the holes in the MAG protective gas.

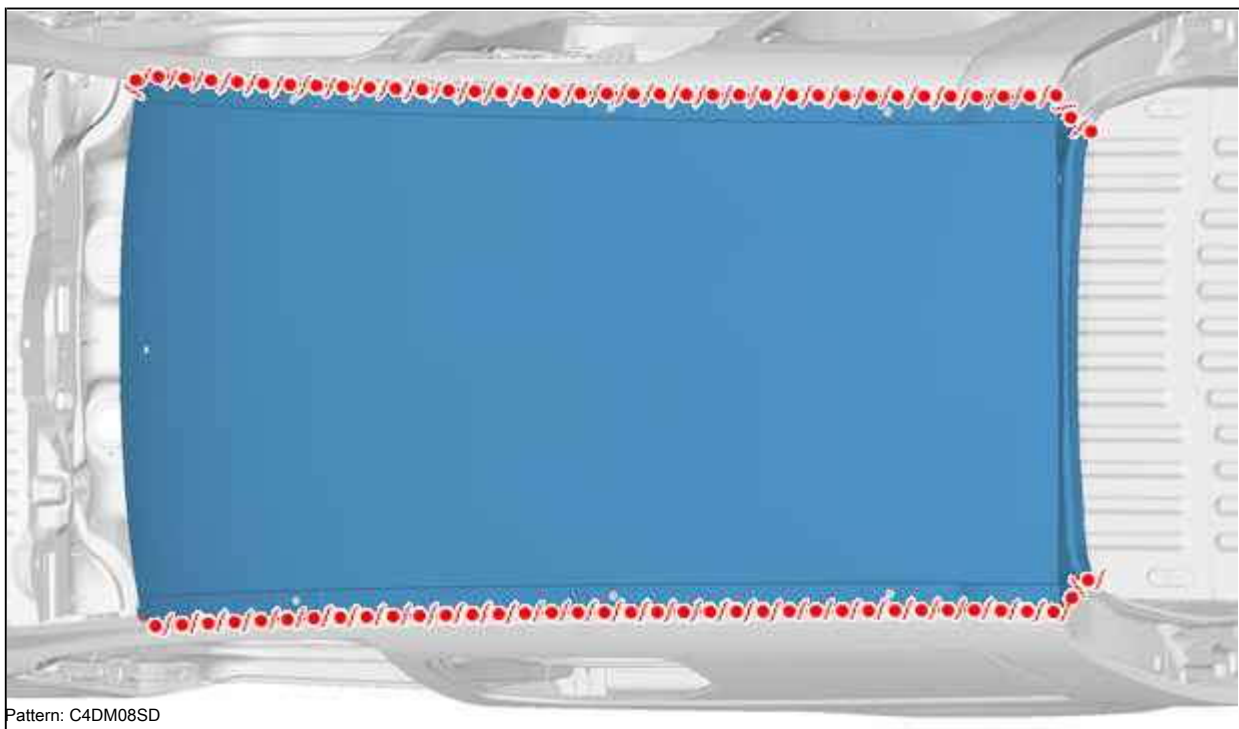


Weld with welding points.



Weld with welding points.

11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operation

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: STANDARD ROOF LENGTH

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

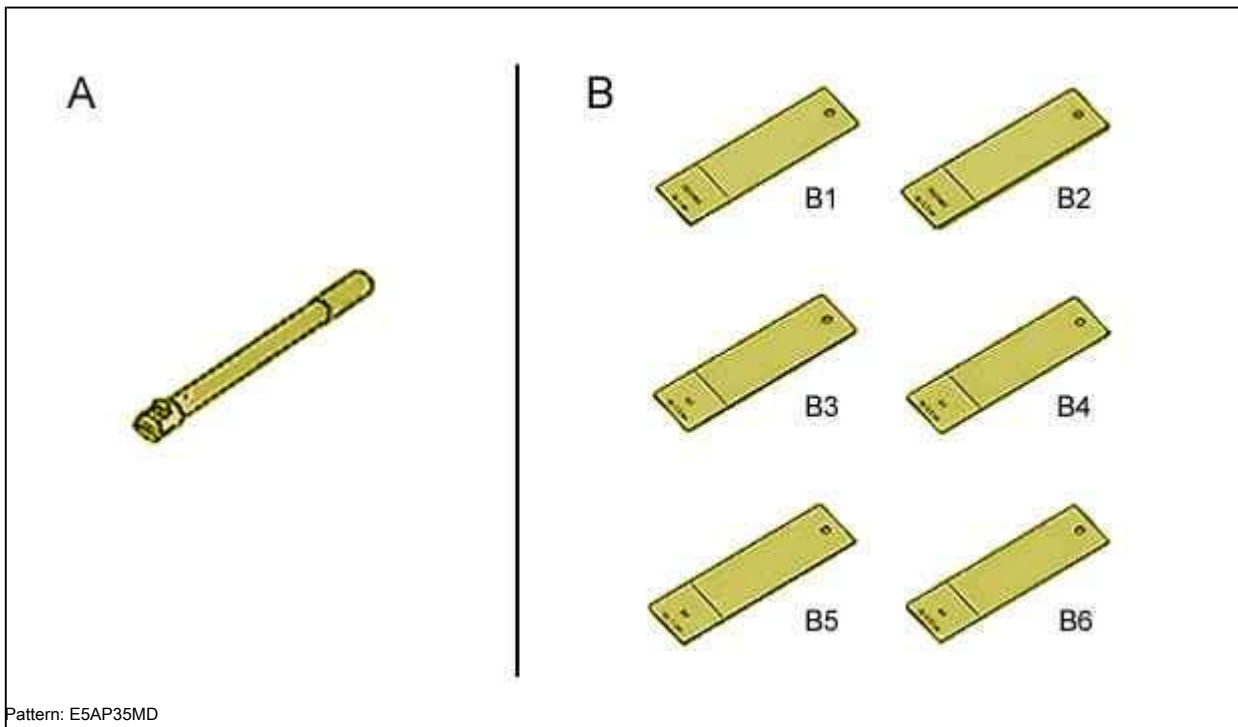
1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment

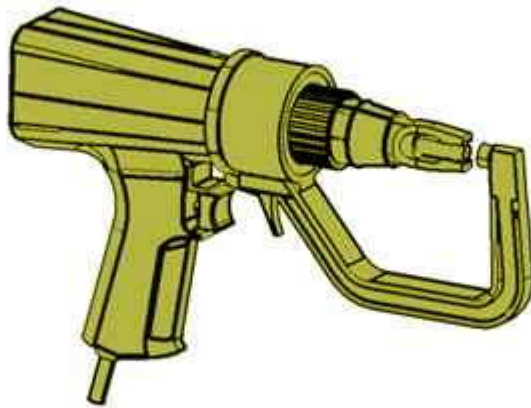
Operate using one of the following systems.



Pattern: E5AP35MD

"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

C



Pattern: E5AM0JCD

"C" S-shaped drill for drilling weld spots.

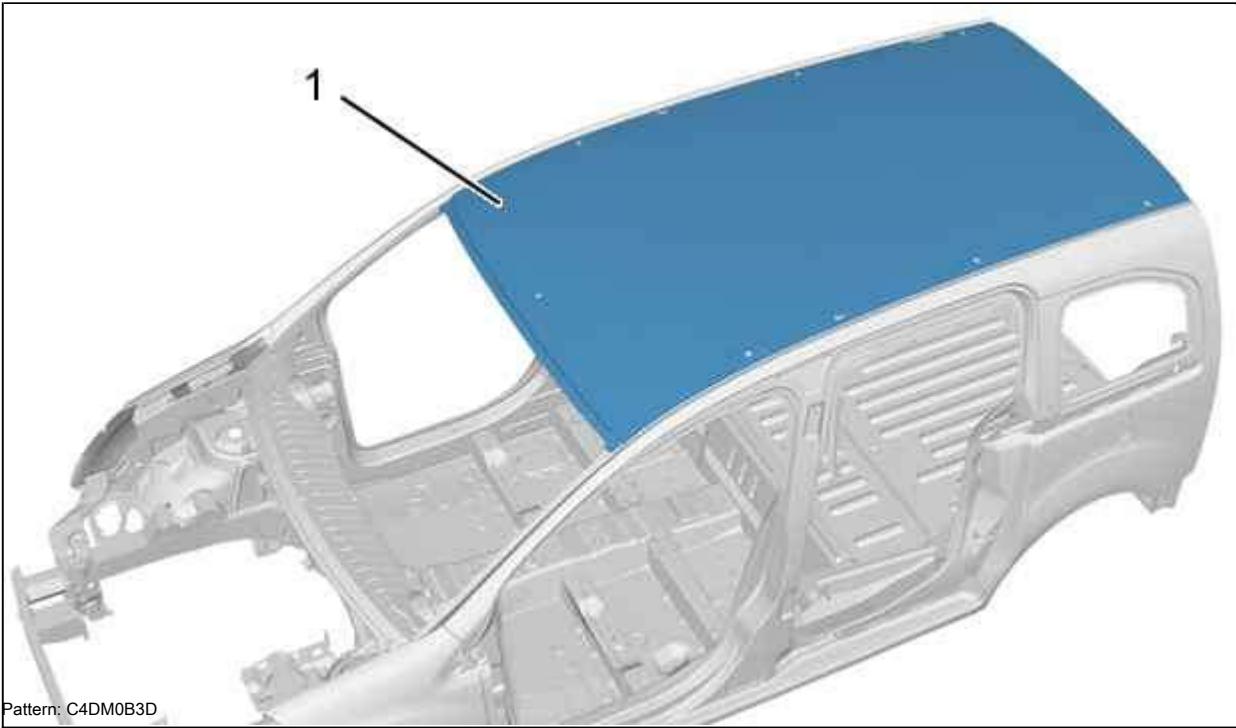
3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

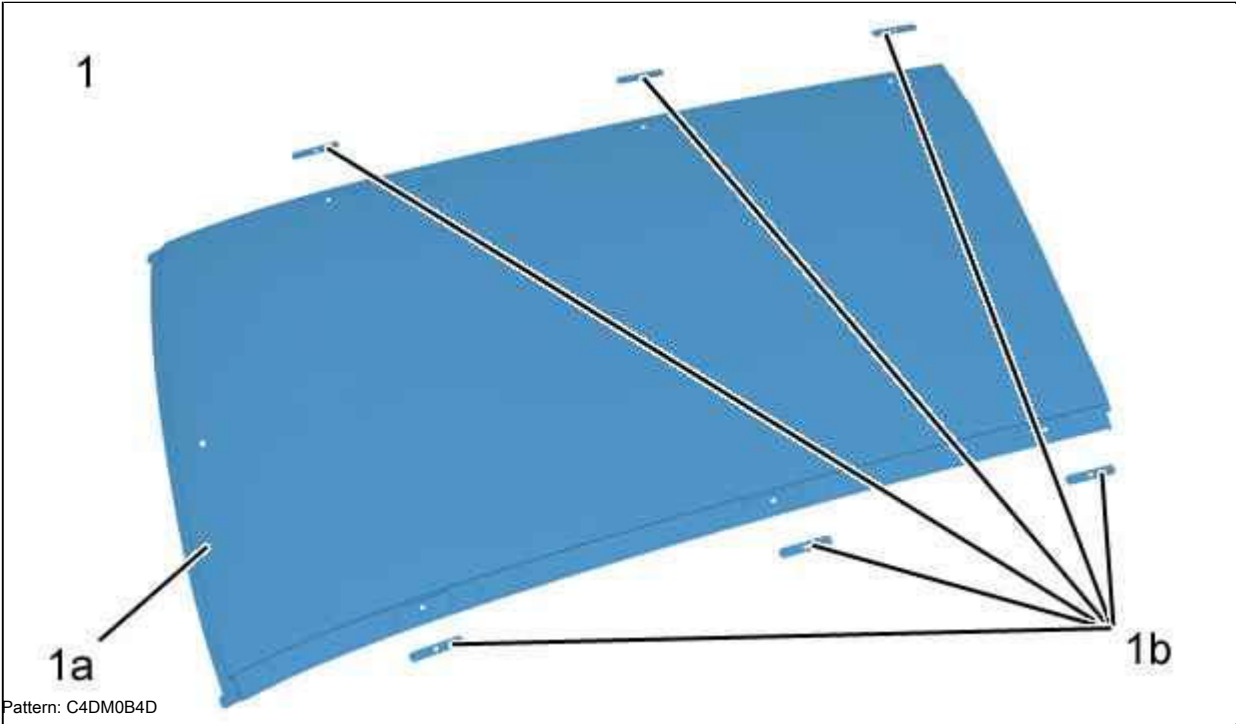
4. Localization



Label Designation

(1)	Roofs in the collection

4.1. Ingredient: Roof Panel Replacement Part

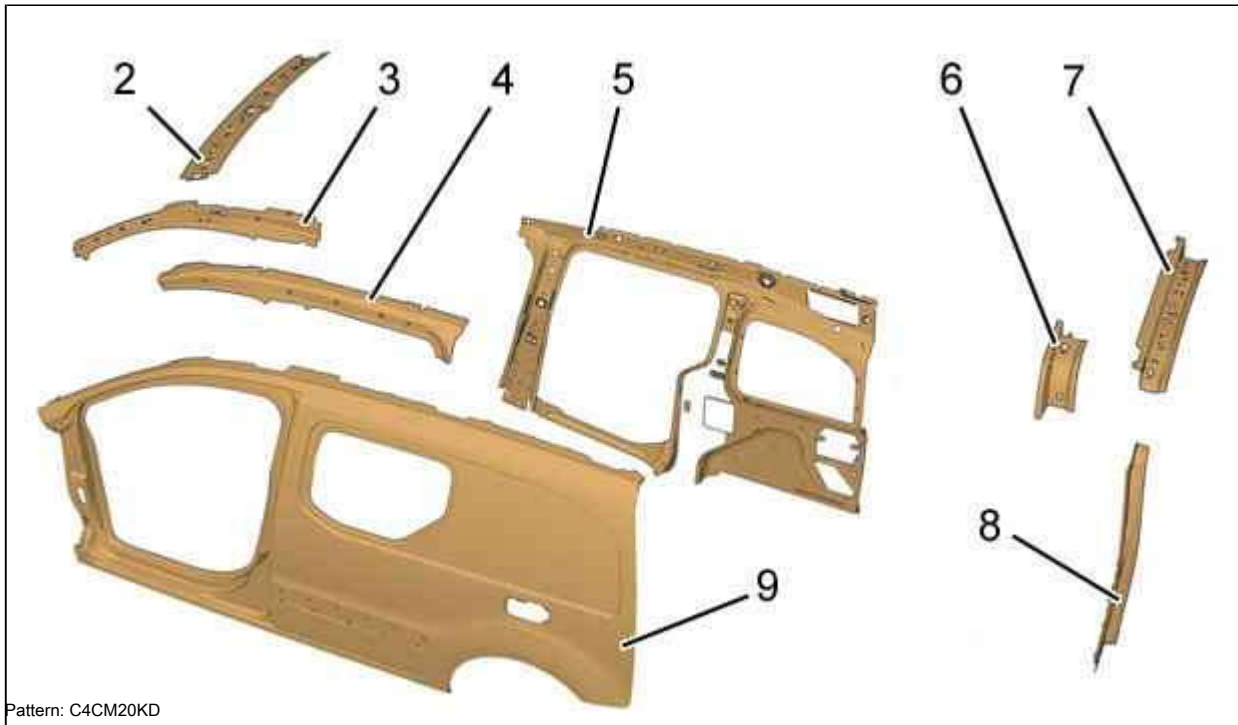


Label Designation

(1)	Roofs in the collection	Thickness (mm)	Nature / classification
		0.67	Mild steel

(1a)	Roof	0.67	Mild steel
(1b)	Reinforcement of roof beams 2		THLE

4.2. Identification of parts adjacent to the spare part



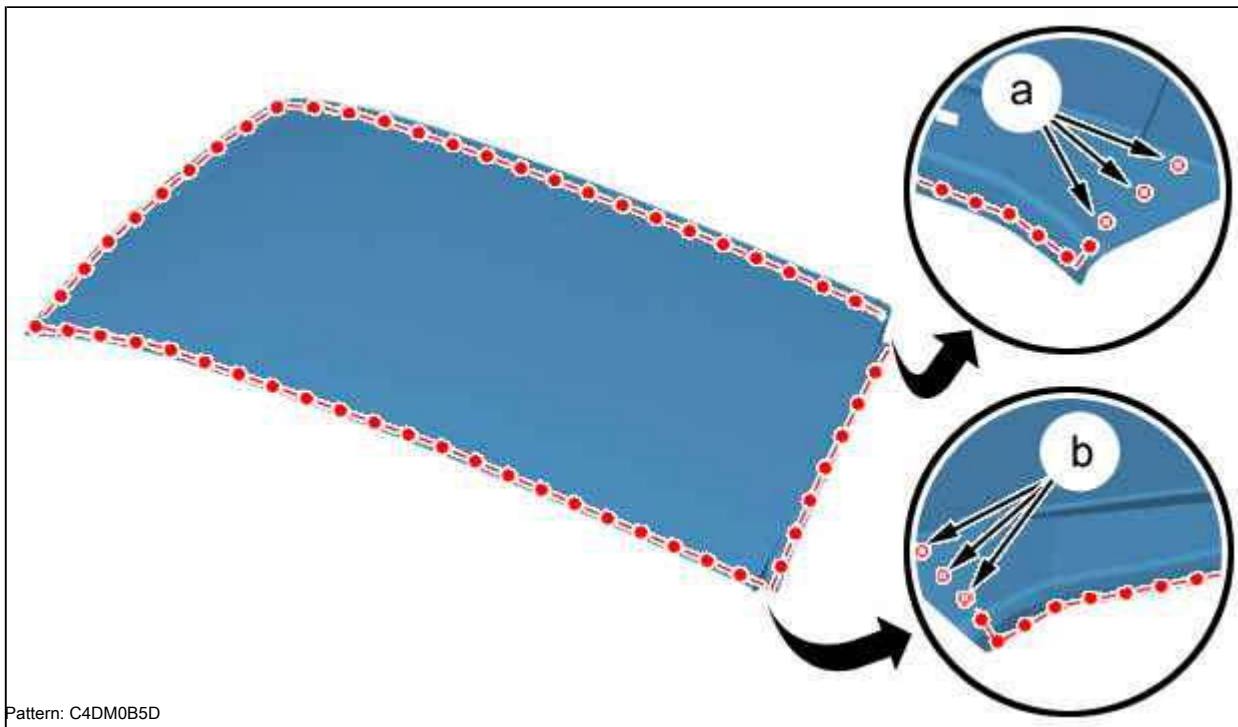
Pattern: C4CM20KD

Label Designation		Thickness	Nature / classification
		(mm)	
(2)	Front roof cross member	0.97	Mild steel
(3)	Windshield pillars	1.47	UHLE
(4)	Roof arch base (Right and / or left side) Rear fender trim (Right and / or	1.17	HLE
(five)	left side)	0.97	Mild steel
(6)	Tailgate Upper Pillar (Right and Left)	1.47	HLE
(7)	Rear roof cross member	0.77	HLE
(eight)	Tailgate Strut Chute (Right and / or 0.97 Left Side)		HLE
(nine)	Passenger compartment side (Right and / or left side)	0.77	Mild steel

ATTENTION : When adjusting the welding machine, take into account the difference in metal thickness.

5. Preparation of a spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

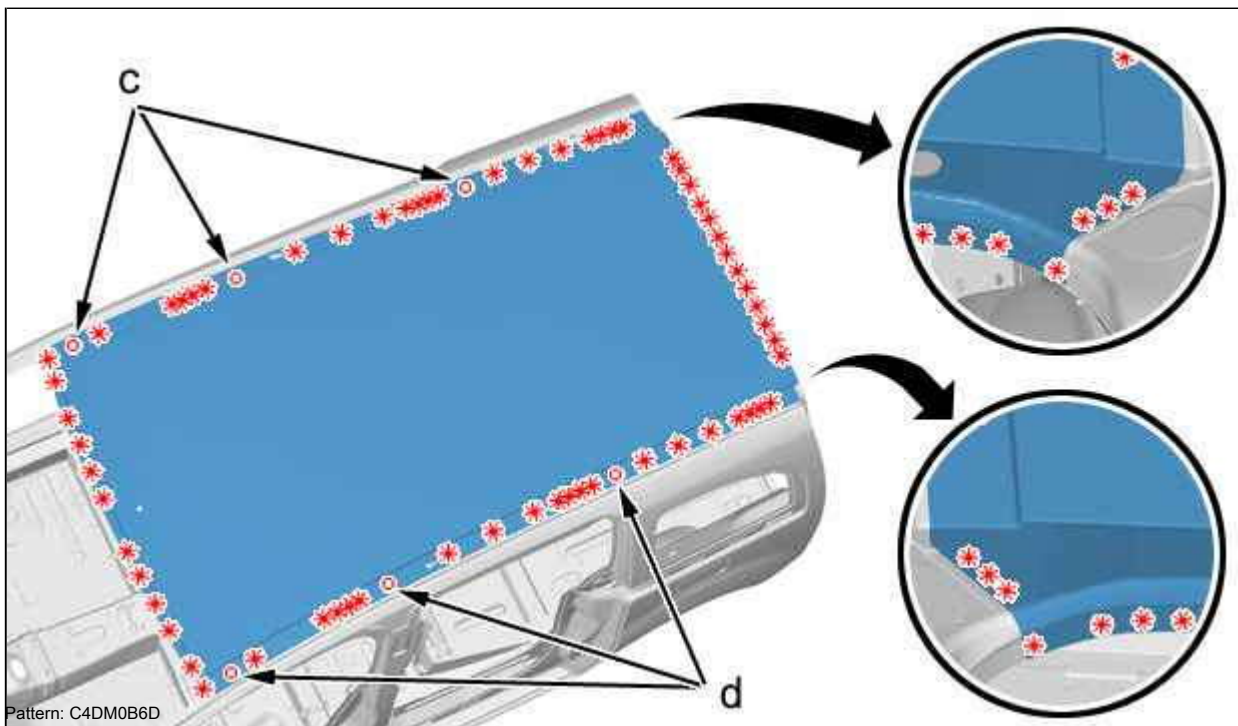


Pattern: C4DM0B5D

Mark in "a", "b", then drill with Ø6.5 drill for subsequent plug welding. Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

6. Cutting the element on the body



Pattern: C4DM0B6D

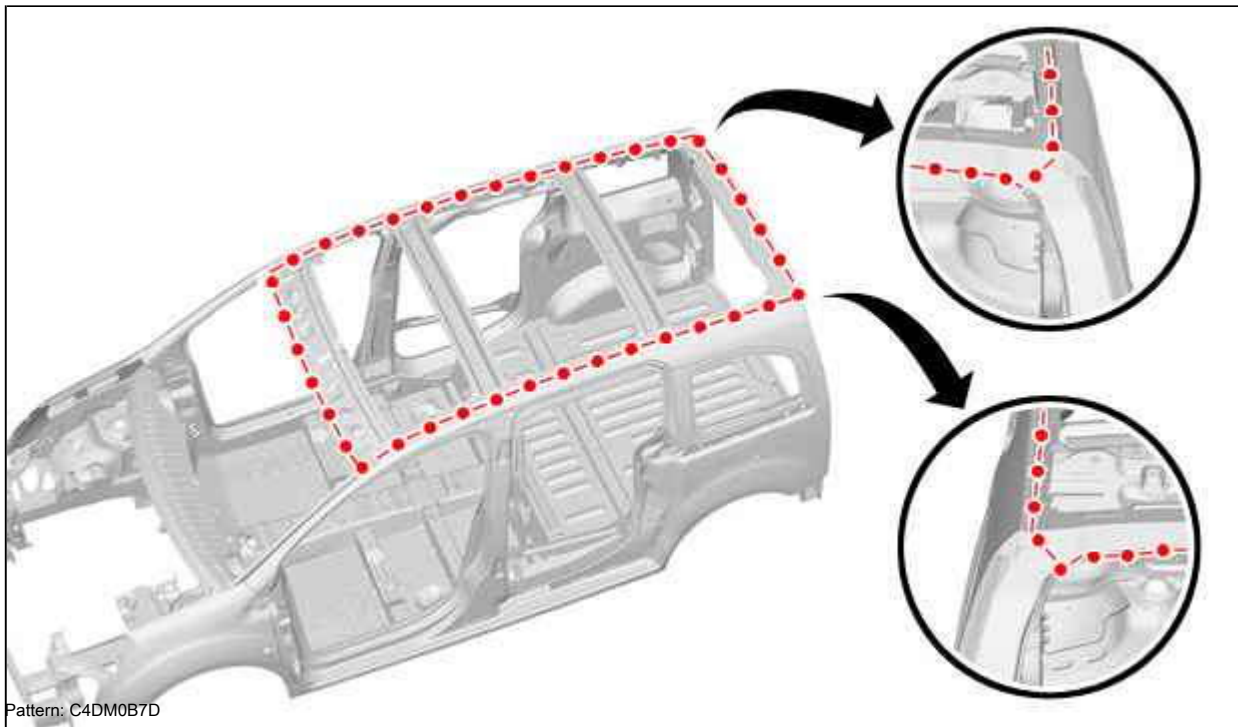
Mark, then drill with a diameter of 8 mm (in places "c", "d") 6 welding points of 3 thicknesses for subsequent welding with electric rivets.

Cut by points.

NOTE: the welding points of the roof cross member reinforcements must be drilled 2 thicknesses.

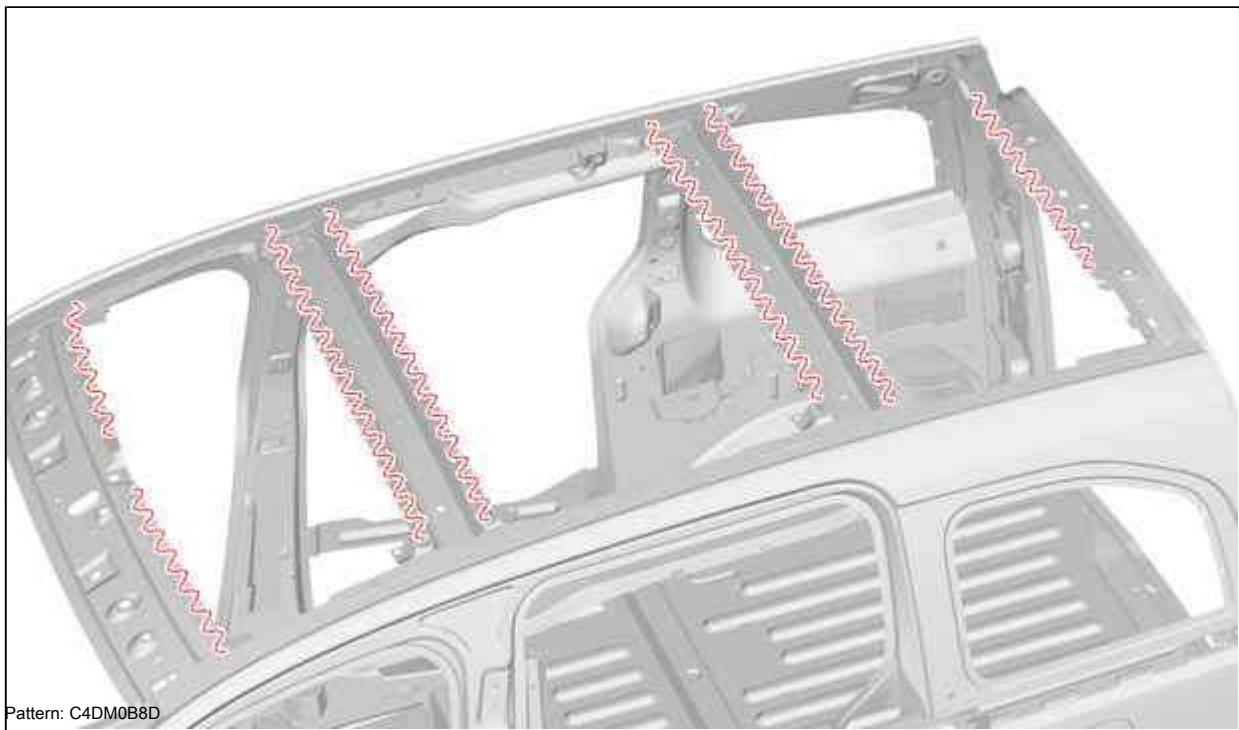
Remove the roof.

7. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Apply fixing mastic (index "A1").

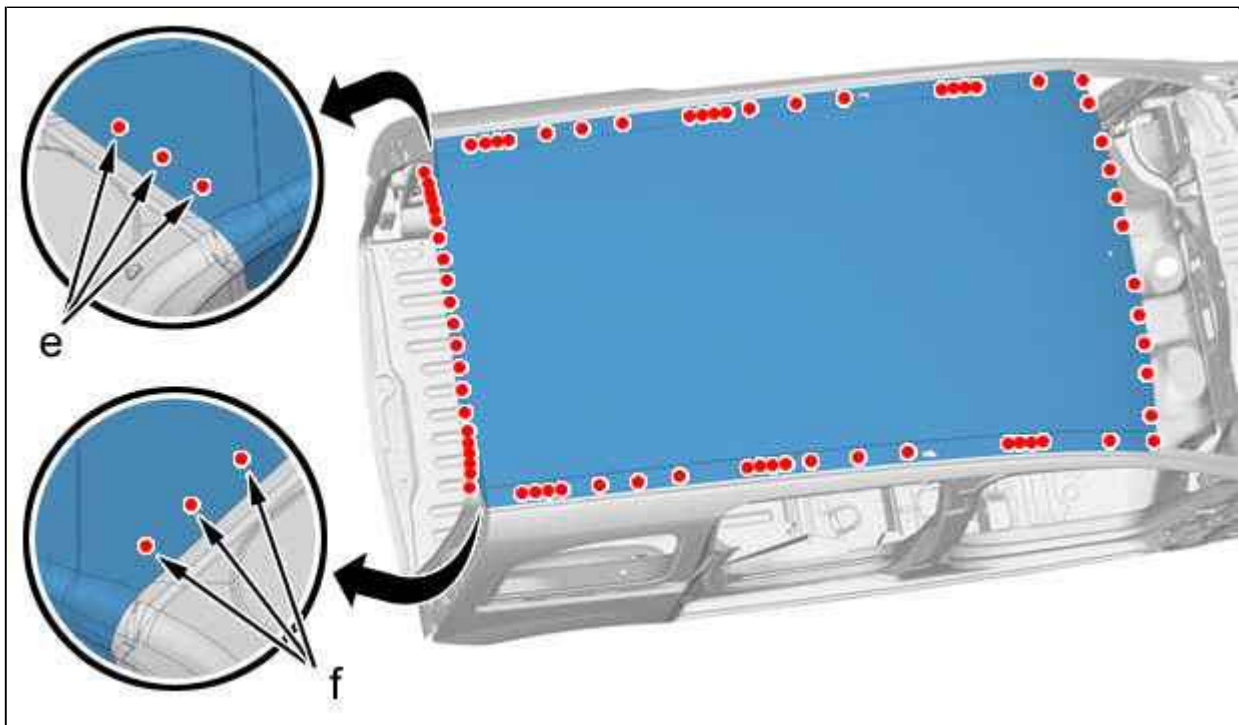
8. Fit

Position: Roof.

Install elements to ensure the fit.

Hold the element in place.

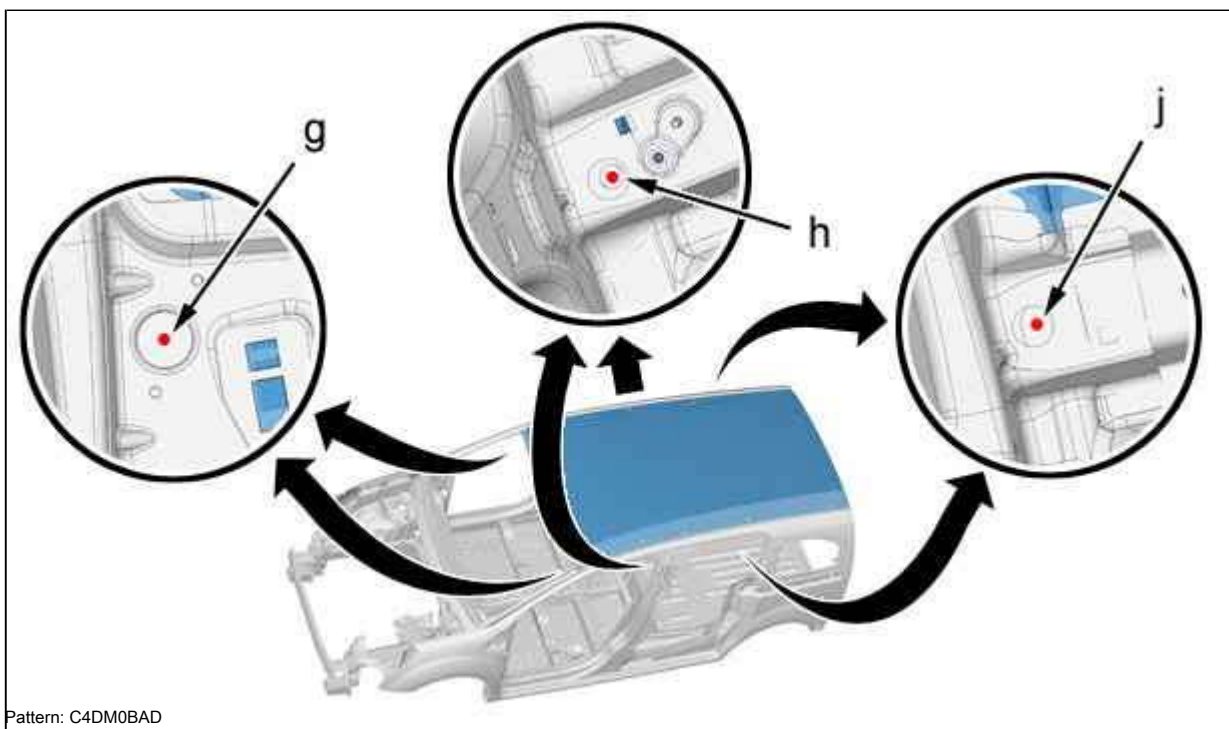
9. Welding



Pattern: C4DM0B9D

Weld through the holes in the MAG protective gas (in "e", "f"). Grind MAG welding points.

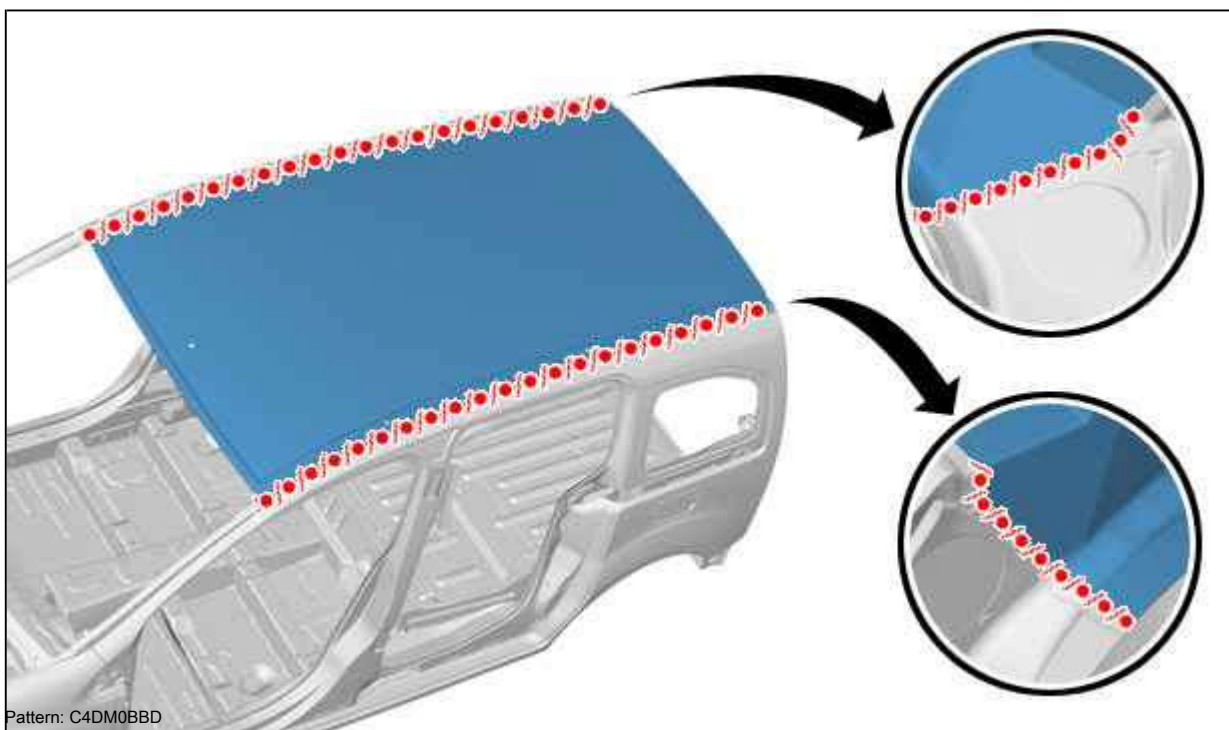
Weld with welding points.



Pattern: C4DM0BAD

Weld through the holes in the MAG protective gas (in "g", "h", "j").

10. Leakproof protection



Pattern: C4DM0BBB

Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

11. Additional operations

Remove the electrical wiring and detachable parts.

12. Reinitialization

Reconnect the battery.

ATTENTION : [Follow the steps to follow after removing the battery.](#)

REPLACEMENT: ROOF BARS AND BARS

MANDATORY: Observe the cleanliness and safety rules.



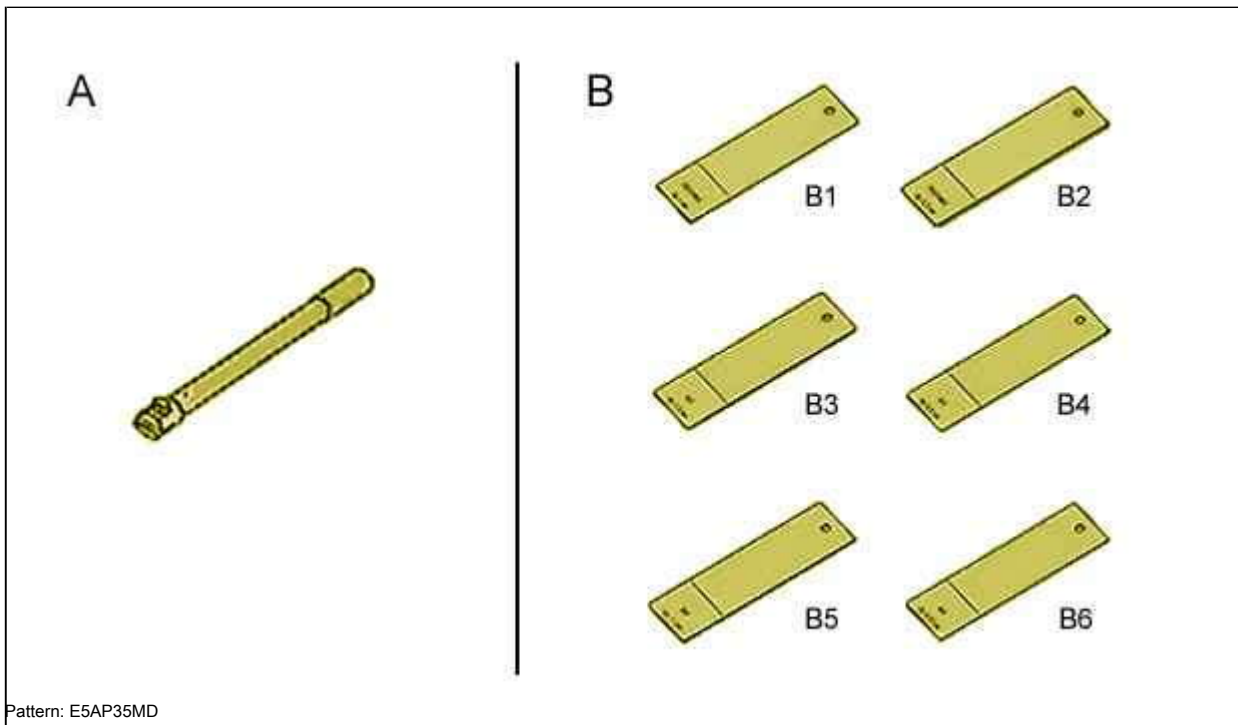
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Designation for high tensile steels used in this document. HLE: High tensile steel.

2. Recommended equipment

Operate using one of the following systems.



Equipment for checking the quality of electric welding points () .1366ZZ. Test gauge for the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Wait at least 15 minutes before performing any work (Discharge of the reserve energy of the airbag computer).

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

NOTE: When replacing the rear roof cross member on a vehicle with a lifting door

luggage compartment, you must also replace the hinge reinforcement.

Replace the roof



NOTE: Crossbars and arcs can be replaced independently of each other.

4. Localization: Roof crossbars

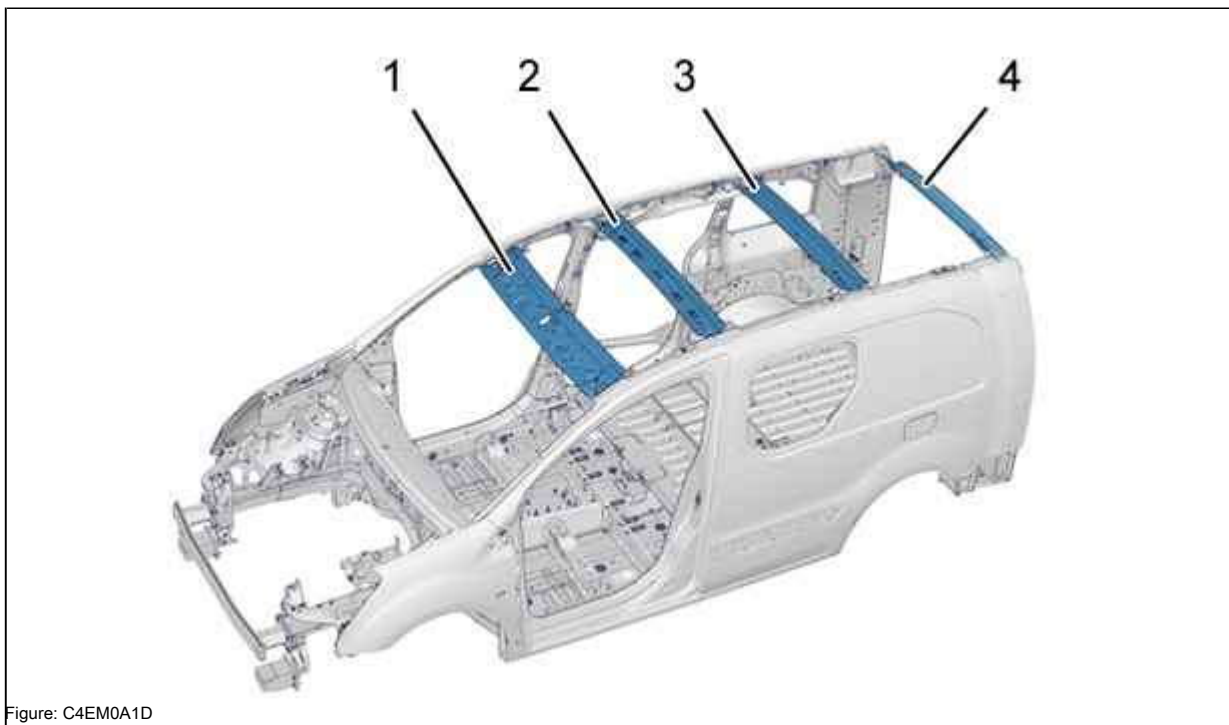
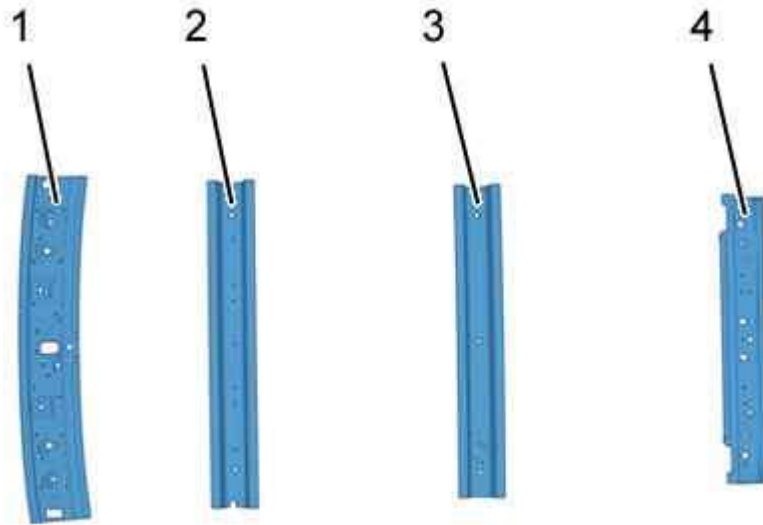


Figure: C4EM0A1D

Label Designation

(1)	Front roof cross member
(2)	Central archroof
(3)	Rear arch roof
(4)	Rear roof cross member

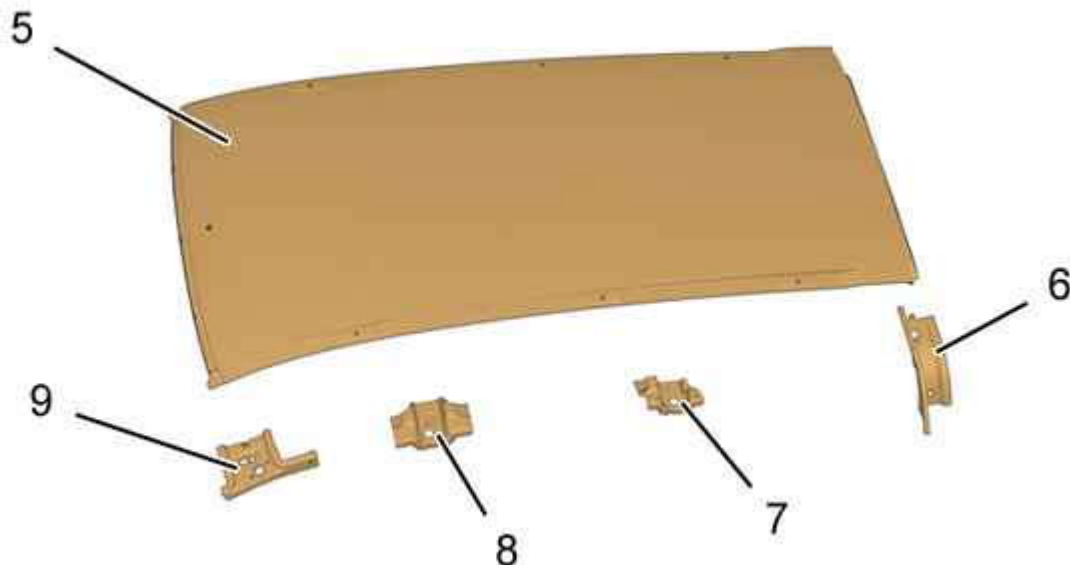
5. Identification: Roof crossbars



Pattern: C4DM08TD

Label	Designation	Thickness (mm)	Nature / classification
1	Front roof cross member	0.97	Mild steel
2	Central archroof	1.47	HLE (*)
3	Rear arch roof	1.47	HLE (*)
4	Rear roof cross member	0.77	Mild steel

6. Identification of parts adjacent to the spare part



Label Designation		Thickness (mm)	Nature / classification
(five)	Roof	0.67	Mild steel
(6)	Tailgate upper trim 1.47 A-pillar upper trim		HLE (*)
(7)		1.47	HLE (*)
(eight)	Center post top cover	1.47	HLE (*)
(nine)	Front roof cross member outer trim	1.47	HLE (*)

7. Preparation of spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

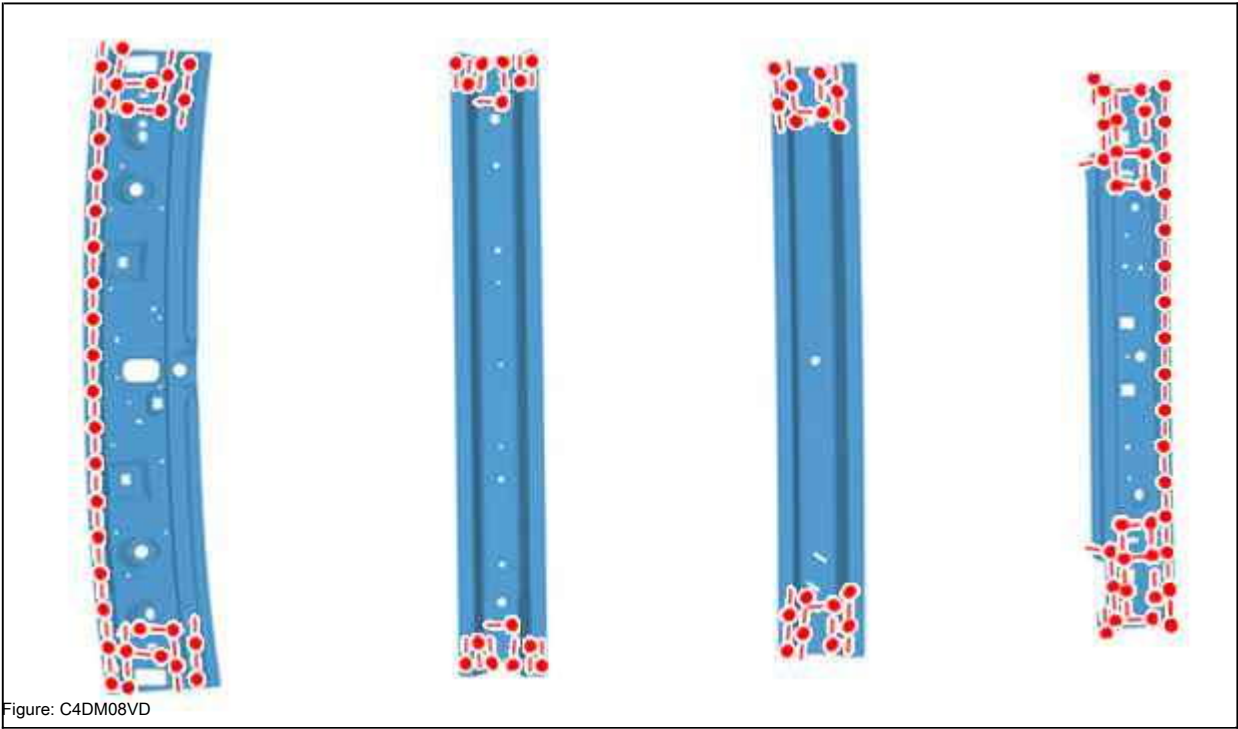
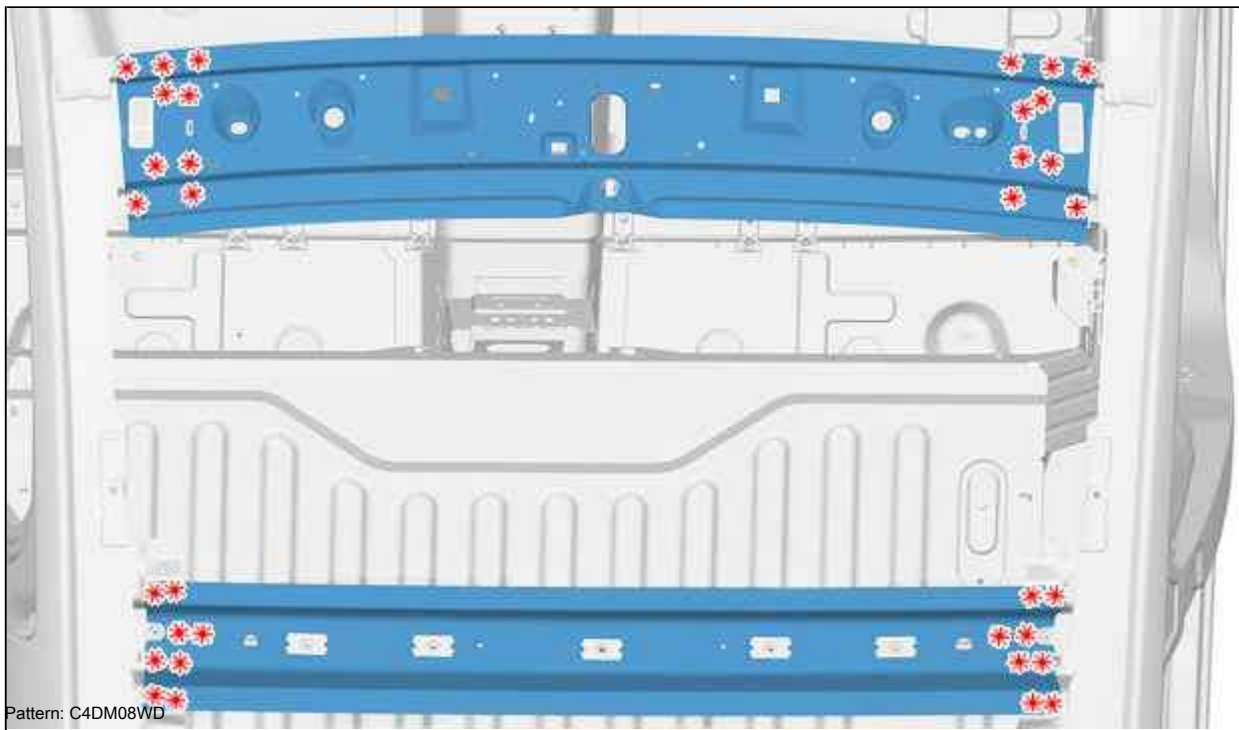


Figure: C4DM08VD

Prepare the sockets and protect them with a welding primer (index "C7").

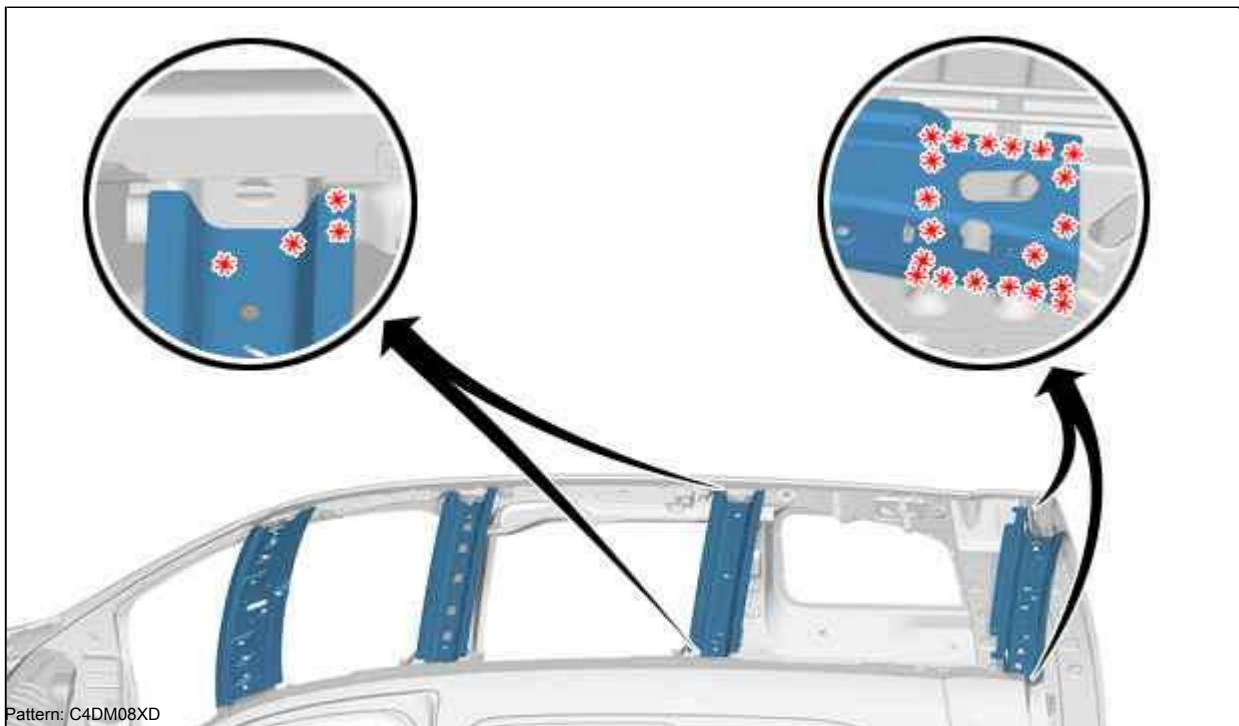
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

8. Cutting the element on the body



Cut by points.

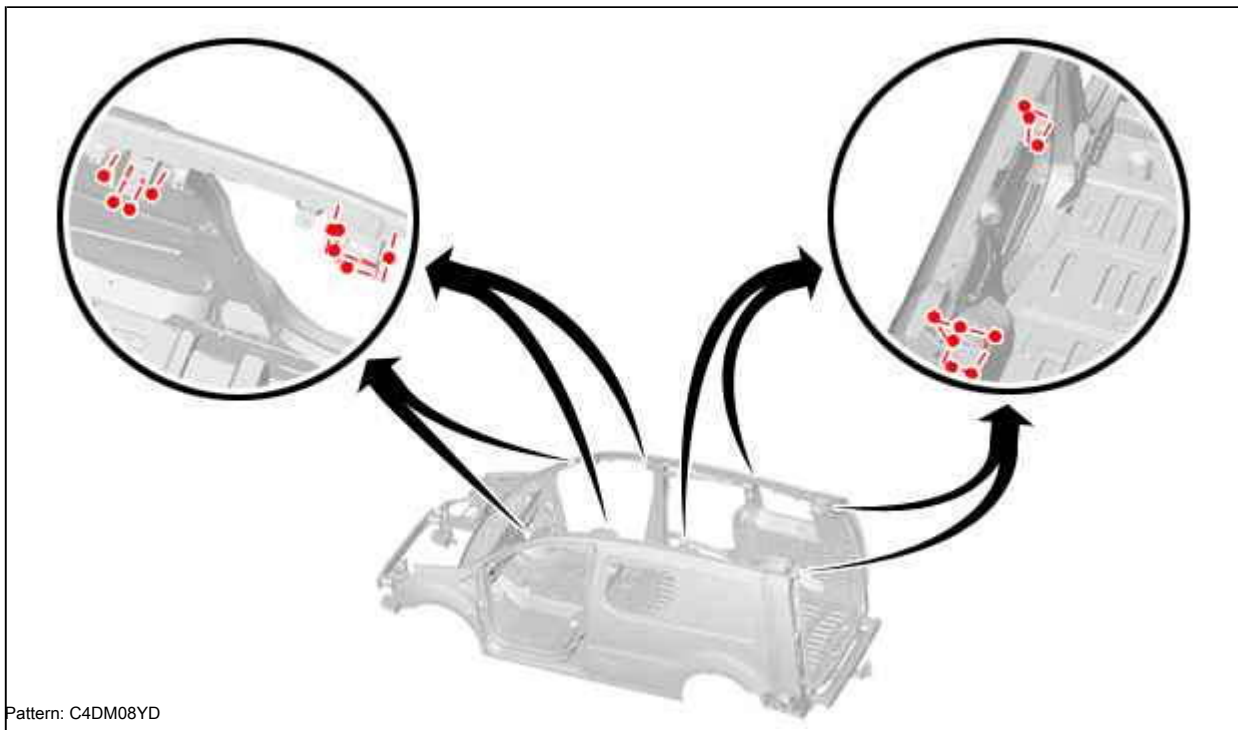
Remove: The front roof cross member and / or center roof bar.



Cut by points.

Remove: The rear roof rail and / or the rear roof cross member.

9. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

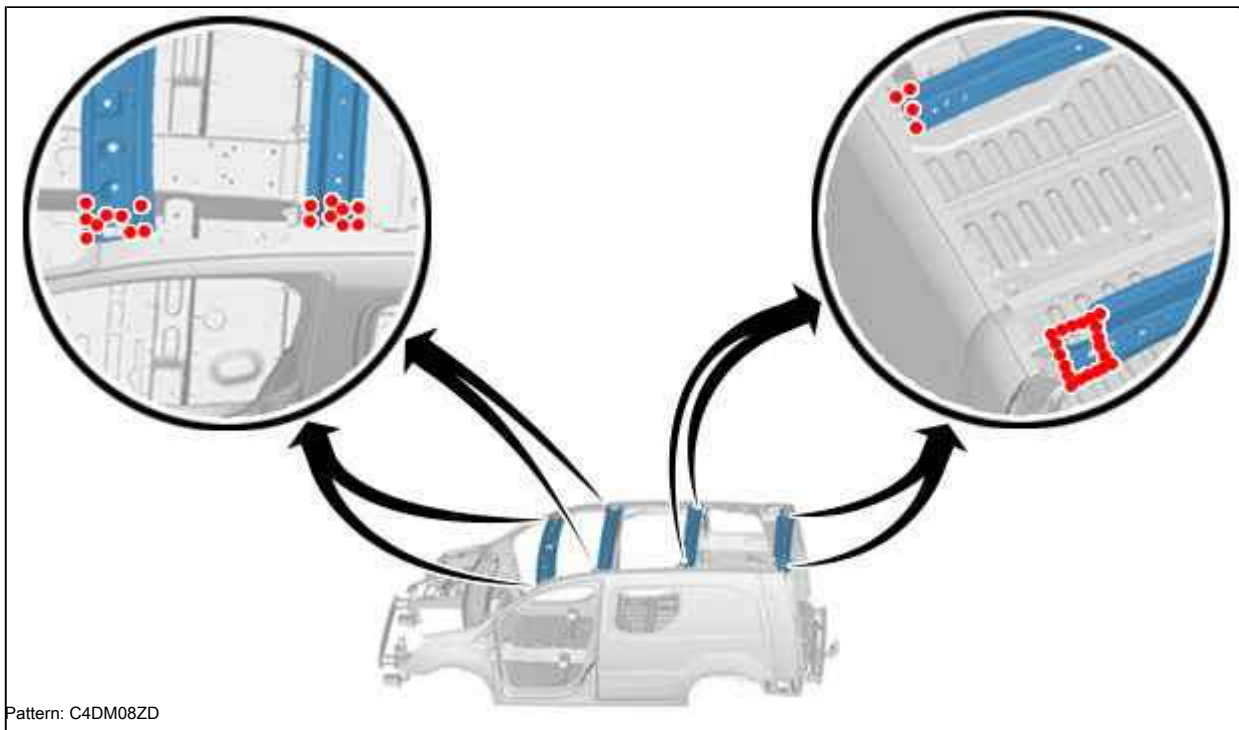
10. Fitting

Position: Roof crossbars and / or roof rails. Install elements to ensure the fit.

Check clearances and alignment.

Fix element (s) in correct position.

11. Welding



Weld with welding points.

12. Airtightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

13. Additional operations

Remove the electrical wiring and detachable parts.

14. Reinitialization

Reconnect the battery.

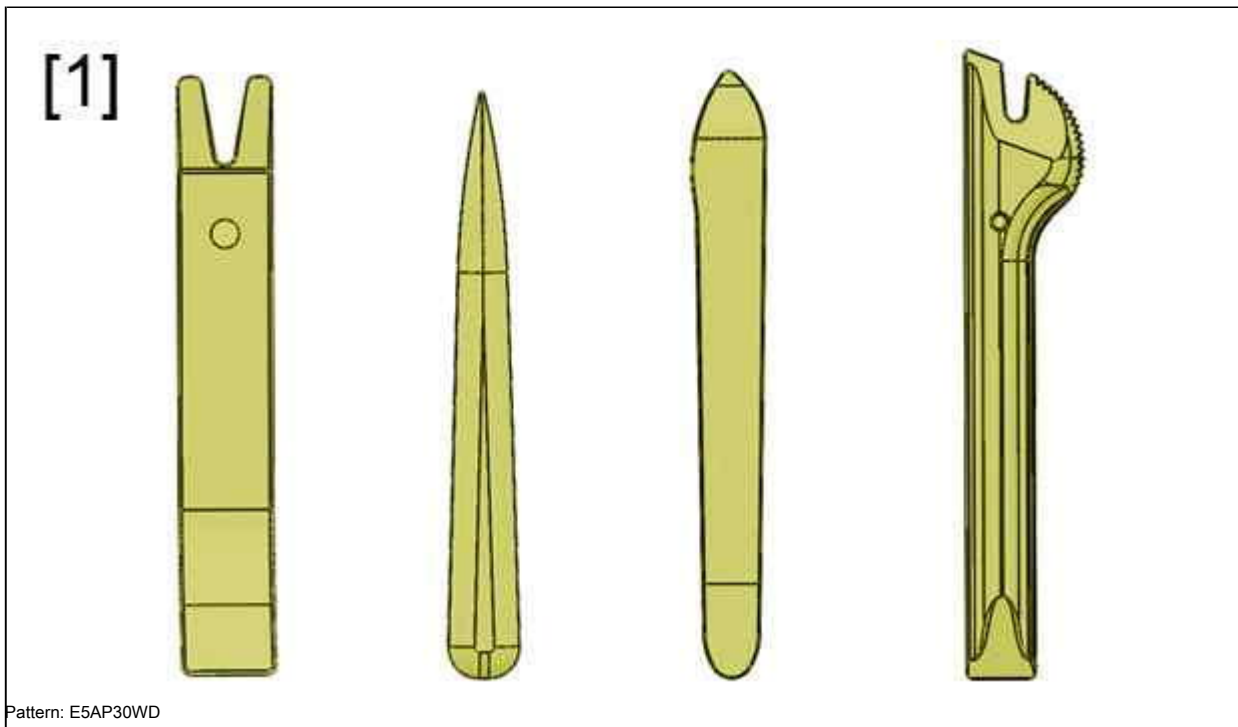
ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL REFITTING: FOLDING ROOF TRUNK

MANDATORY: Observe the cleanliness and safety rules

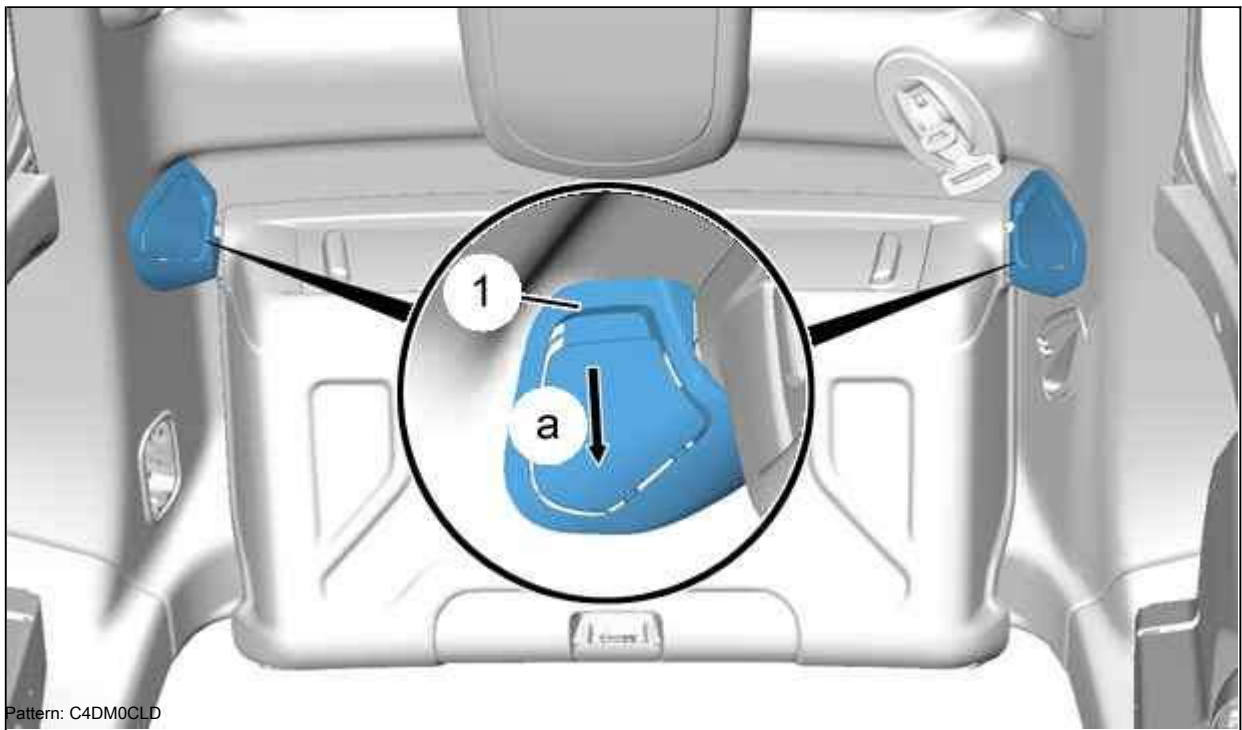


1. Recommended equipment

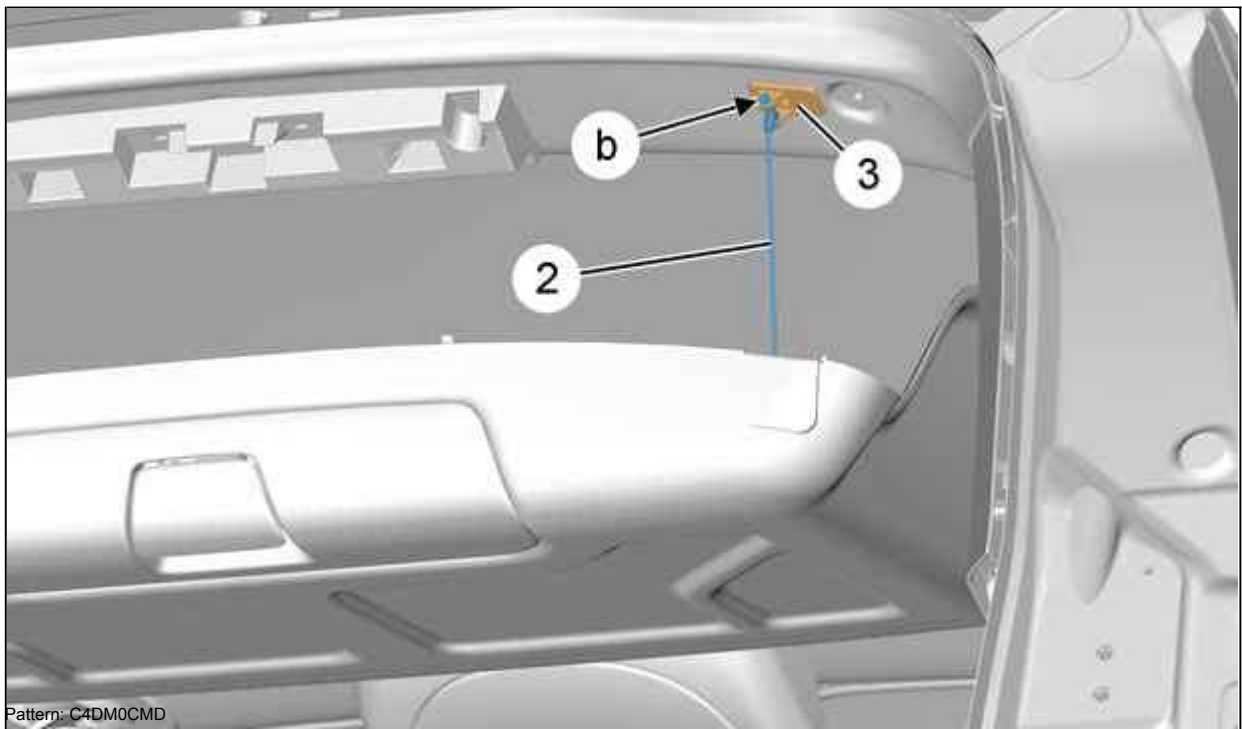


[1] Trim removal tool () .1350ZZ.

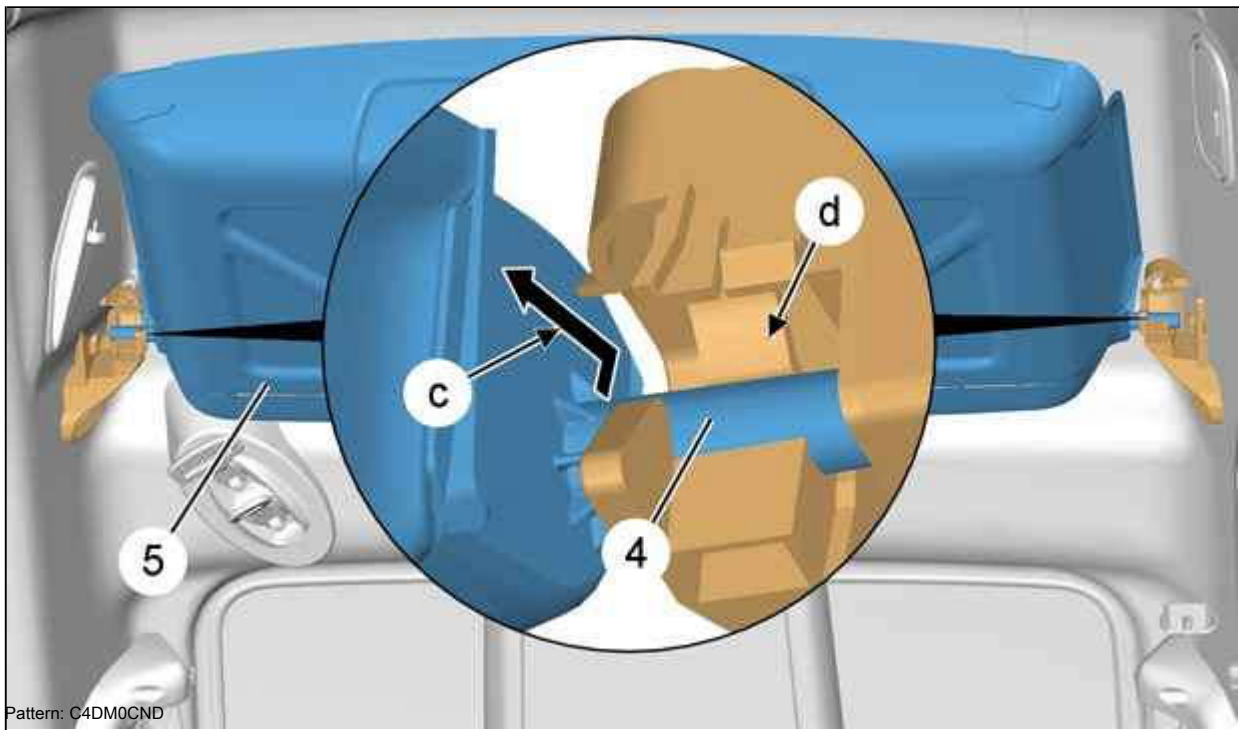
2. Removal



Separate and remove: Decorative elements (1) (as shown by arrow "a"); Using the tool [1].



Disconnect: Cord (2) from holder (3) (at "b") (on each side).



Unlock without pressing hard (in "d").

Separate: The axis of rotation (4) (as shown by the arrow "c"). Do the same on the other side. Remove: Roof rack (5).

3. Installation

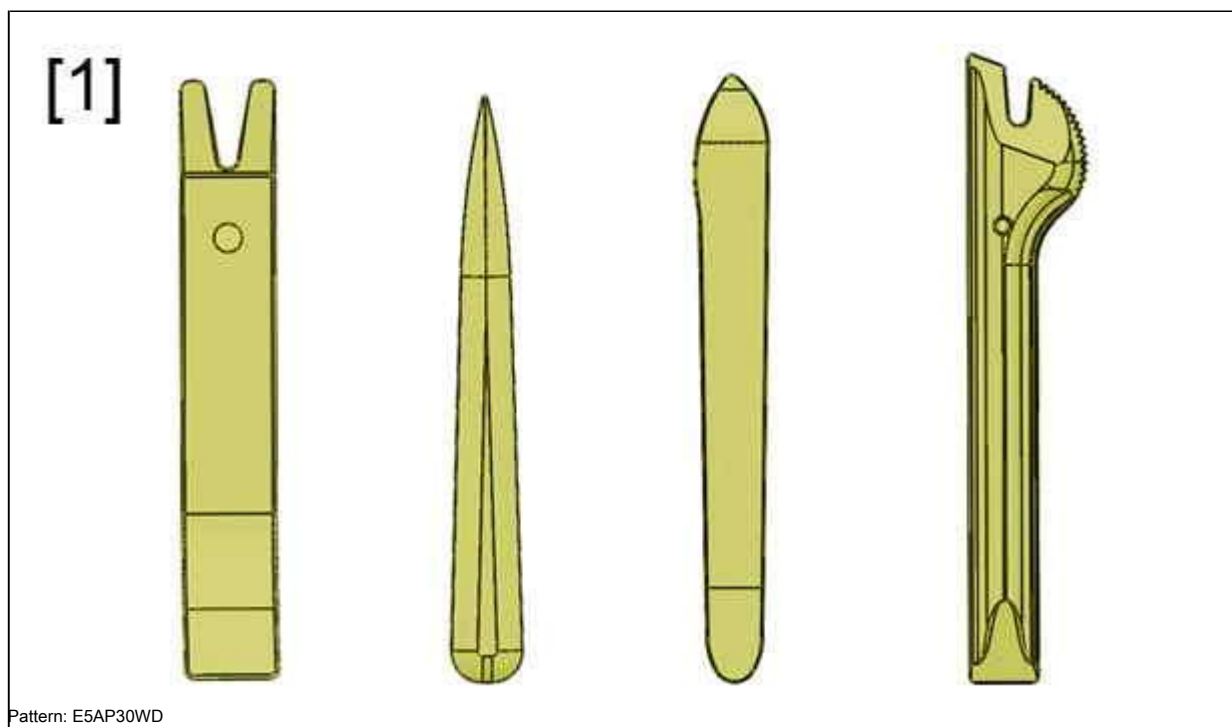
When installing, carry out the operations in the opposite order to removal. Check the operation of the removed elements.

REMOVAL INSTALLATION: UPPER CAMERA

MANDATORY: Observe the cleanliness and safety rules



1. Tools



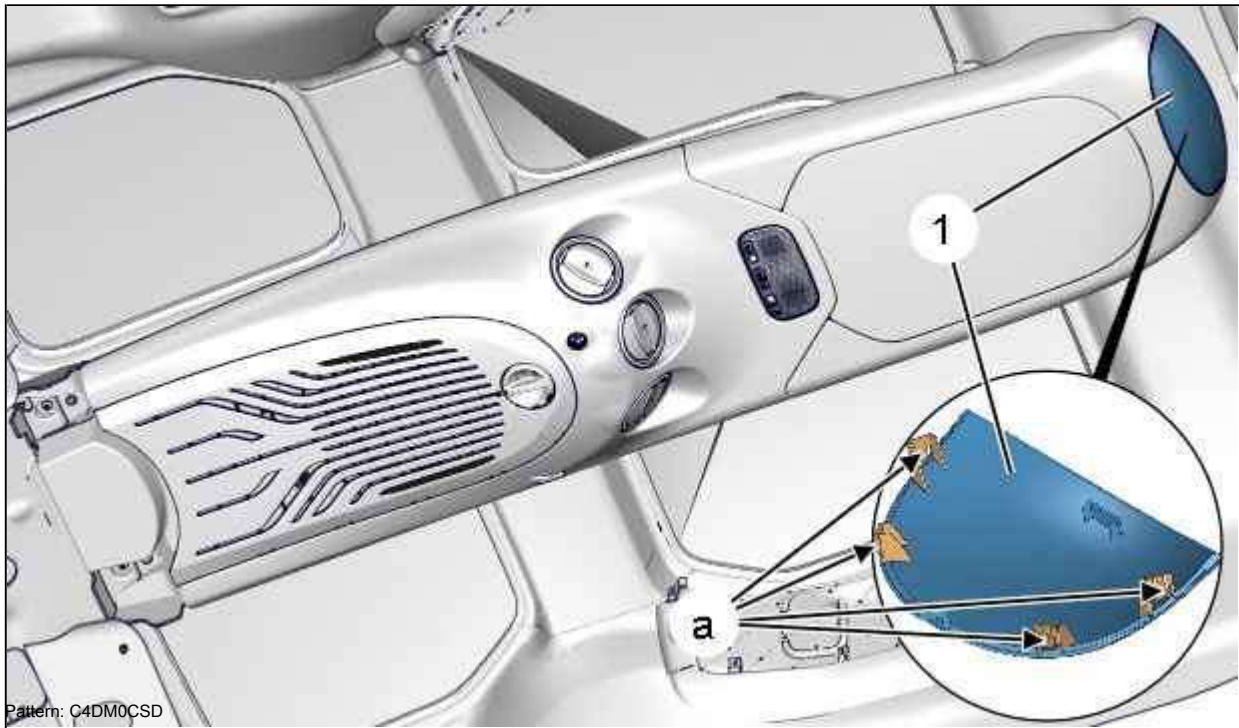
[1] Trim removal tool () .1350ZZ.

2. Preliminary operation

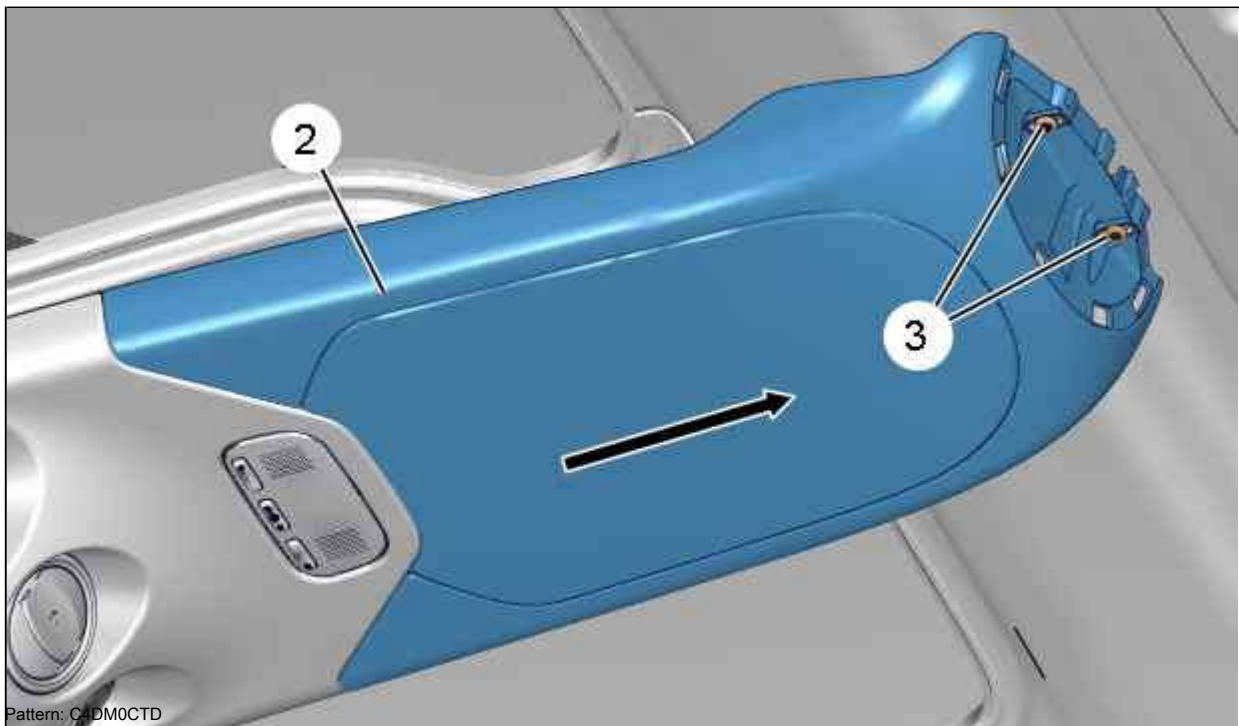
Remove: **Upper shelf**



3. Removal

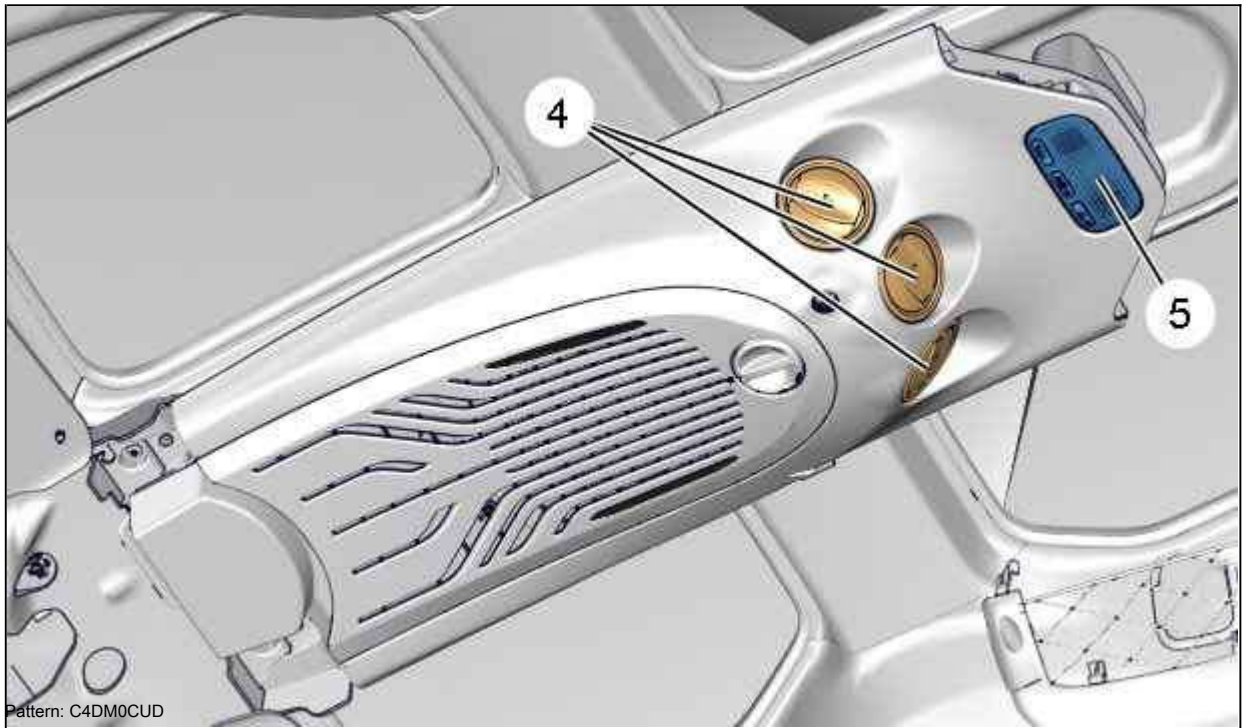


Detach the cover (1) (at "a"); Using the tool [1]. Remove crankcase (1).



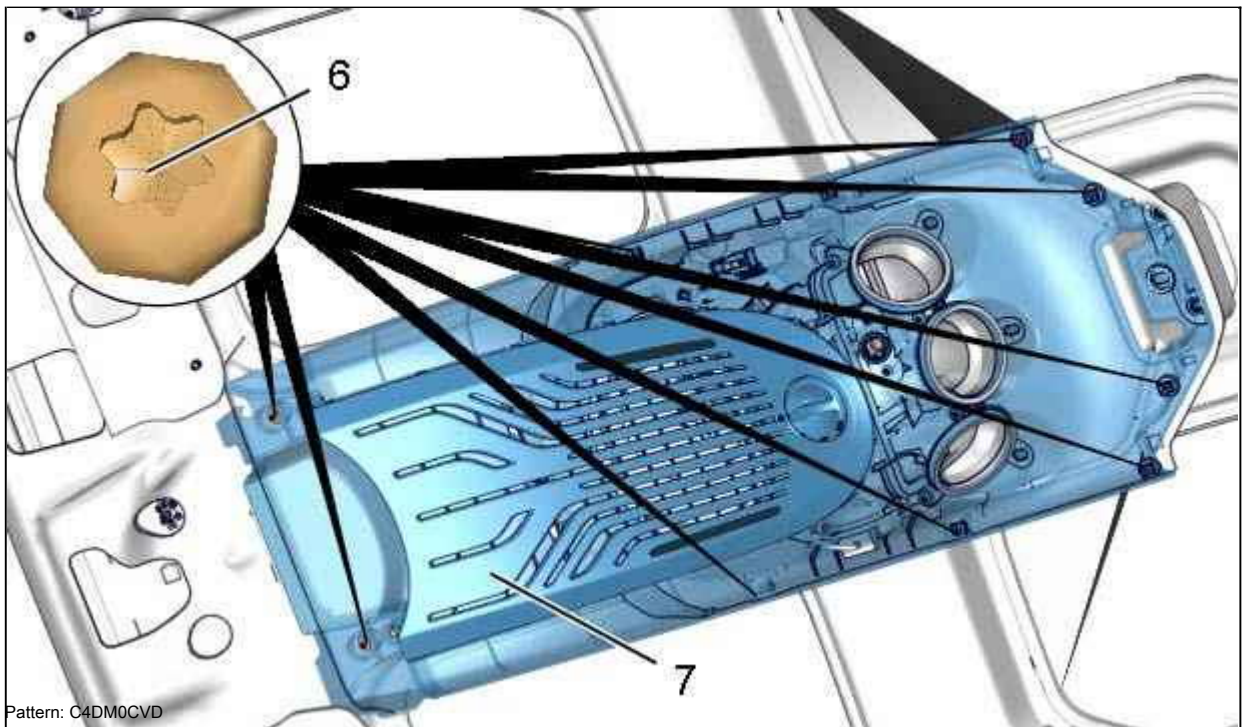
Remove:

- bolts (3)
- Top camera (2) (Rear) (As shown by the arrow)

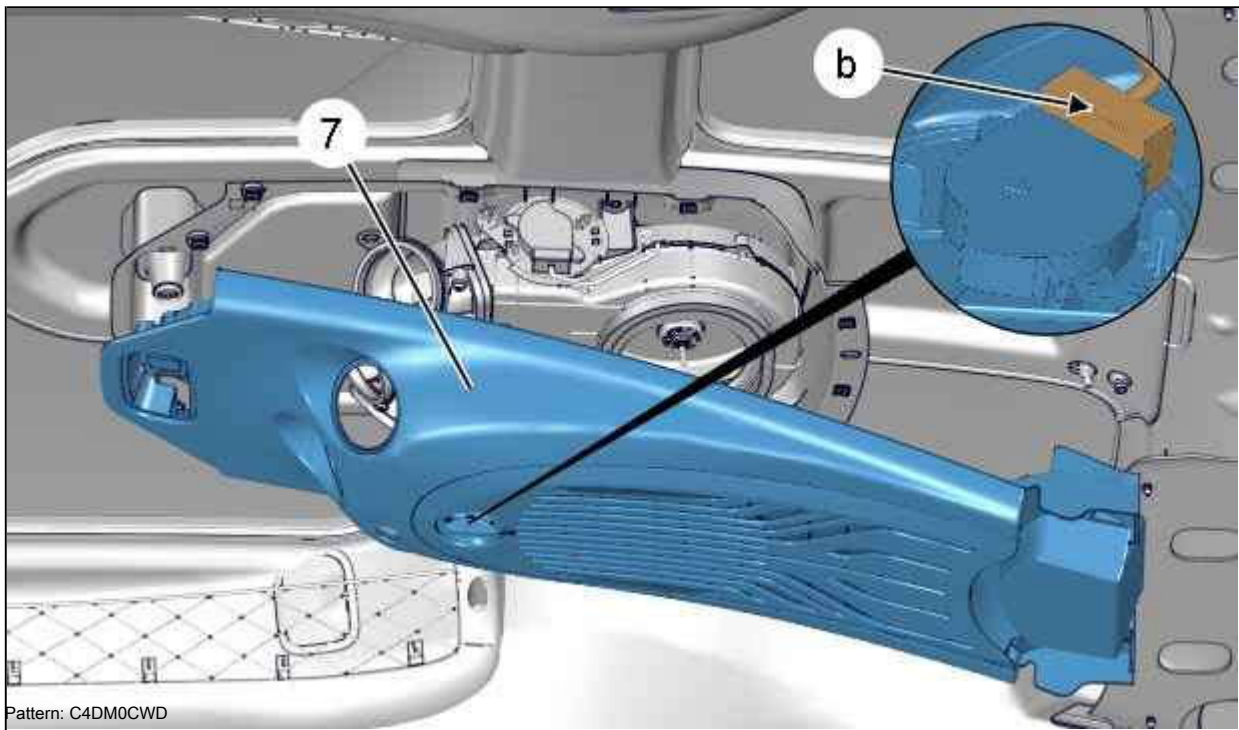


Disconnect; Disconnect: Lighting (5); Using the tool [1]. Remove: Lighting (5).

Disconnect; Remove: Ventilation grilles (4).



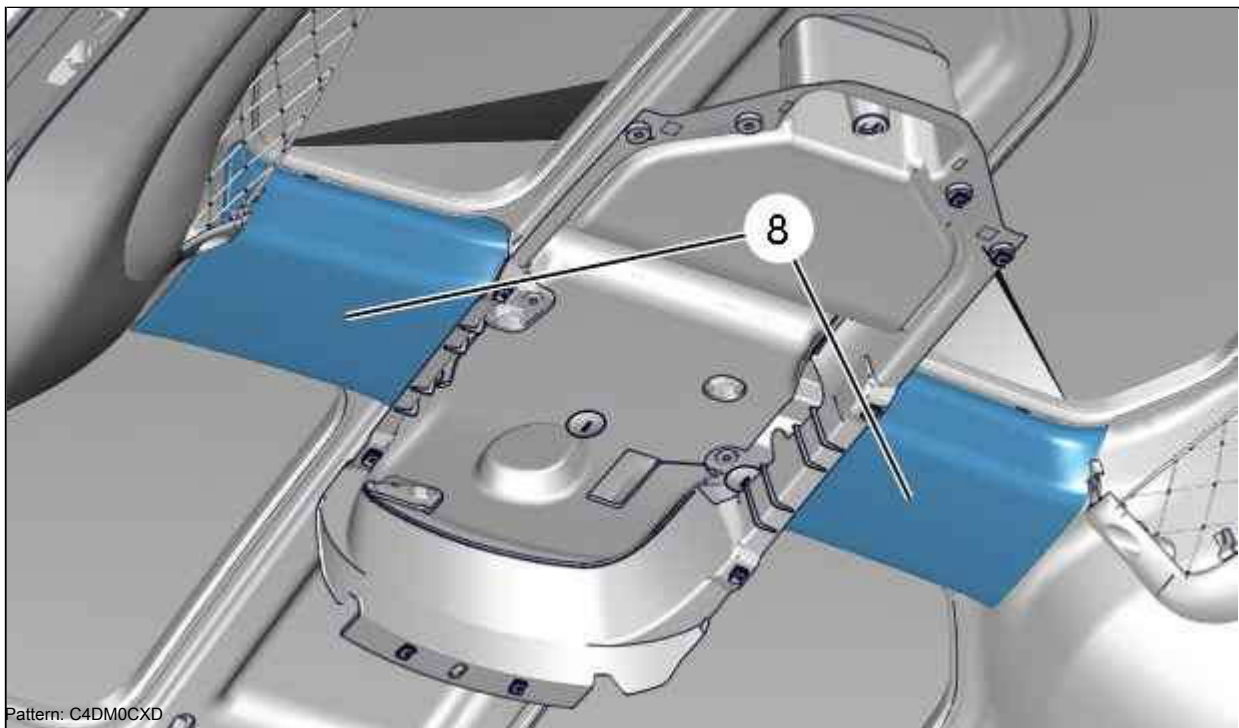
Loosen the screws (6) (Access from the top of the chamber). Separate: The central part of the chamber (7).



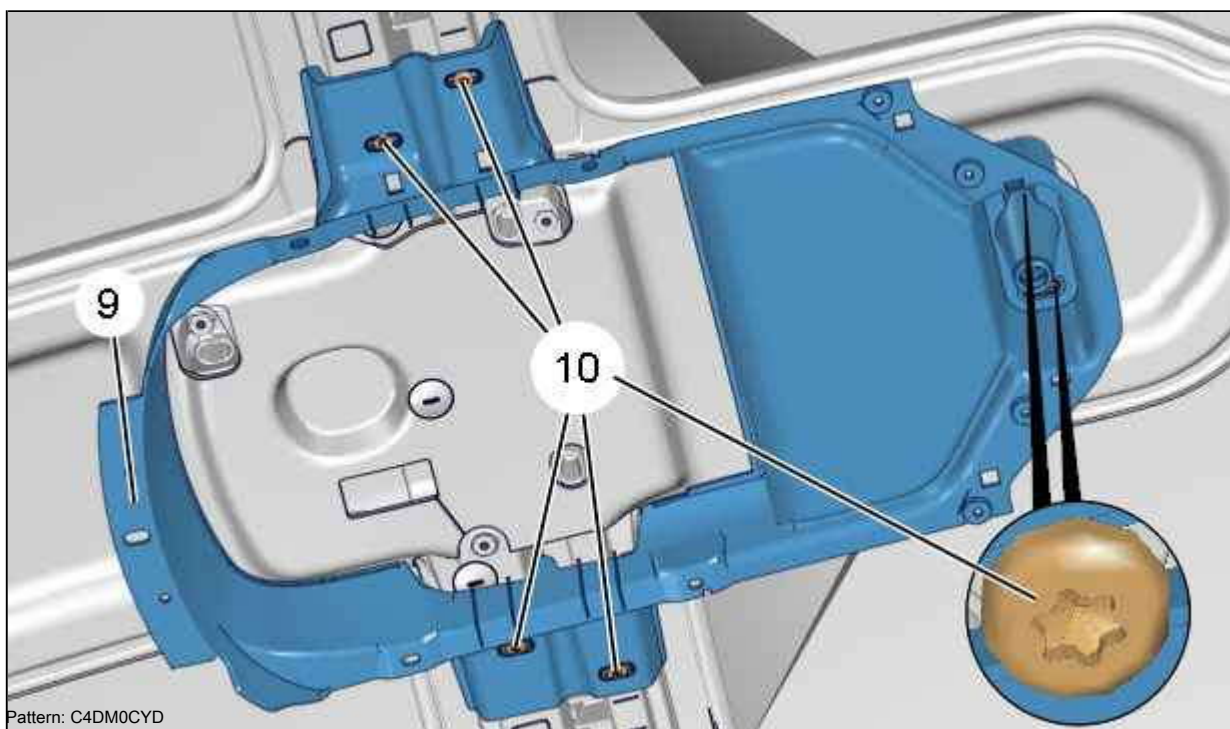
Disconnect the connector (at "b").

Remove: Center part of the chamber (7).

Remove: **Additional air fan**



Detach; remove the headset (8).



Remove:

- the bolts (10)
- Center Panel (9)

4. Installation

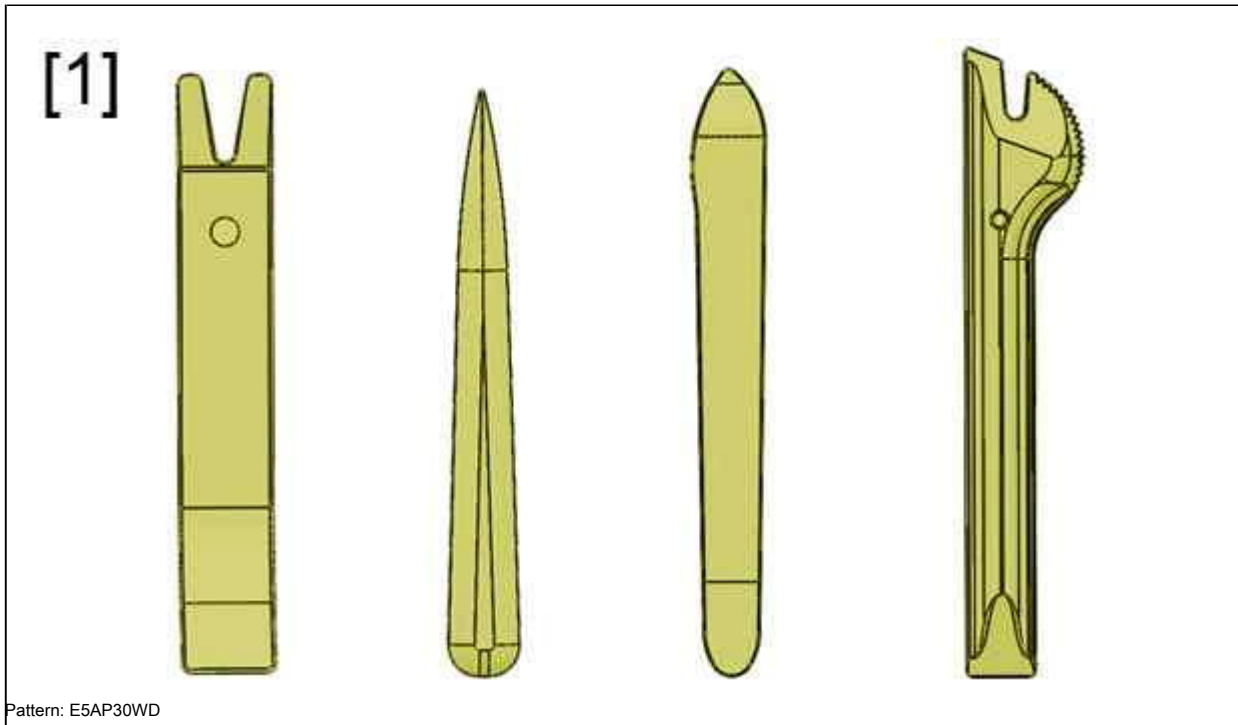
Installation is carried out by performing the removal operations in the reverse order. Check the operation of the various equipment.

REMOVAL INSTALLATION: MULTI-FUNCTIONAL ROOF

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim removal tool () .1350.

MANDATORY: For the following operations, protective gloves and goggles must be used.

Equipment for working with glass.

2. Recommended components

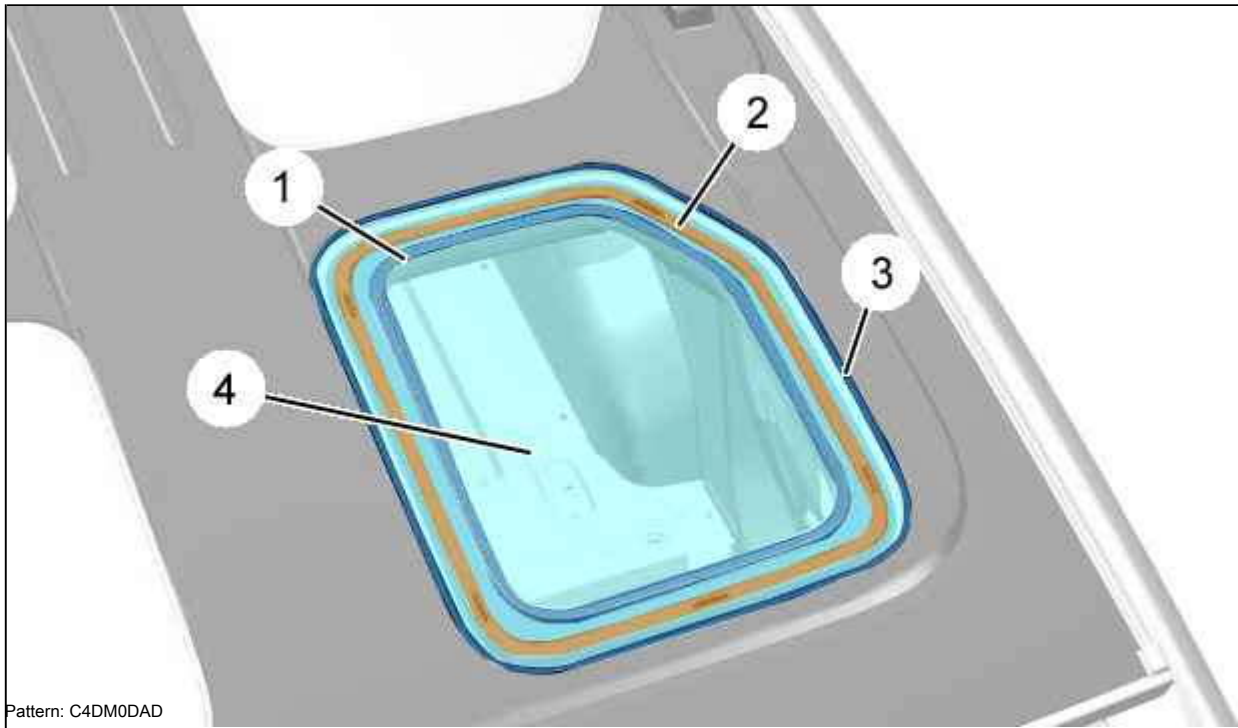
Componentswindglass



...

3. Removal

3.1. Windshield



Remove; Remove the decorative seal (1) (from the inside); Using the tool [1]. Cut off the adhesive layer (2) (from the inside); Using the tool [9b] with the cutting tool [16].

Remove the glass (4); Using the hinged suction cups [3].

NOTE: Replace the seal if it is deformed (seal (3)).

3.2. Rear glass

Proceed as described in the previous section.

4. Cleaning

4.1. Preparation: Multifunctional roof

1st time: Reuse: Multifunctional roof. Insert the blade [13] into the electric knife [9b].

Cut off the remaining adhesive seam.

Wipe off the dust with a clean cloth.

Apply primer only on the places, brushed metal

2nd time: Installation of a new glass. Degrease the edge of the glass.

Apply the roof primer provided in the bonding kit A3 Primer only on the seats, stripped metal

4.2. Groove preparation

1st time: If there is a residual adhesive seam. Insert the blade [13] into the electric knife [9b]. Cut off the remaining adhesive seam.

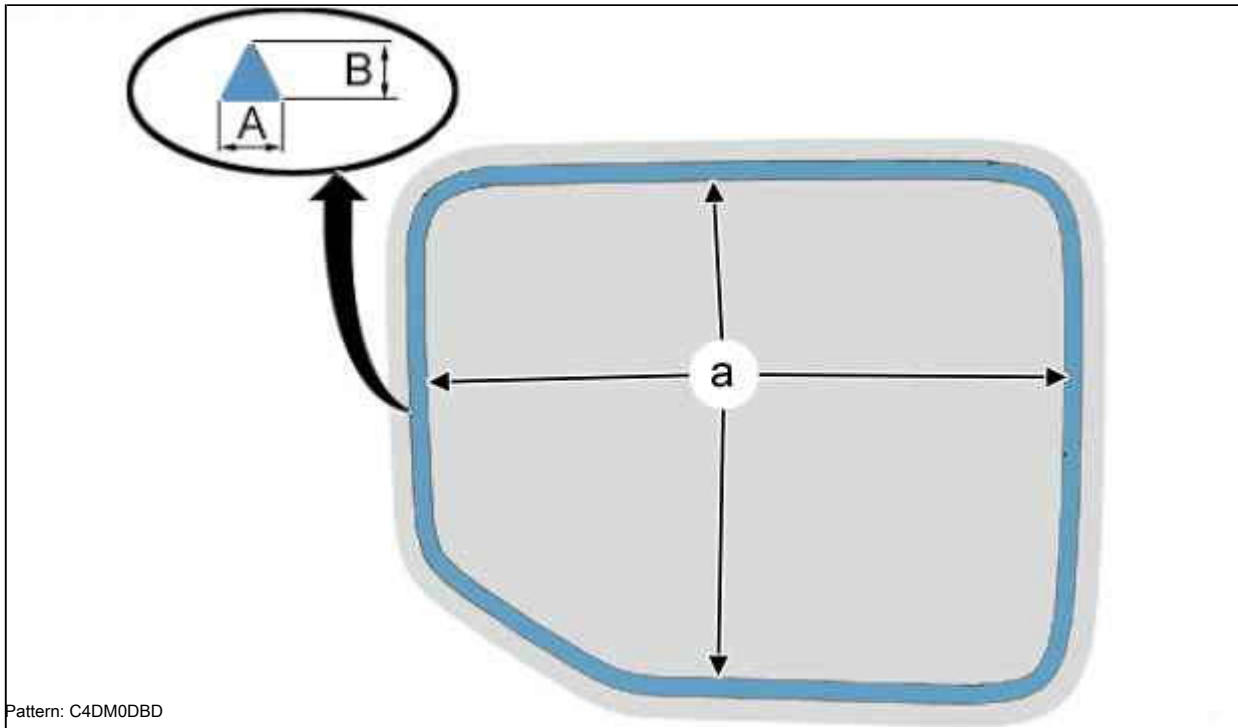
Wipe off the dust with a clean cloth.

2nd time: Nano part. Degrease the groove.

Apply the glass primer provided for bonding A3

Let dry for 10 minutes.

5. Installation



Install the gun [7] mastic mixer.

Use the supplied decal tip to apply a roll with a cross section of "A" = 8mm at height "B" = 12mm

"A" = 8 mm.

"B" = 12 mm.

Apply the sealant to form a bead (at "a").



ATTENTION : Using a two-component product: It takes 5 minutes between installing the glass on the vehicle and the start of the sealant squeezing out.

Install: Glass; Using the hinged suction cups [3].

ATTENTION : Check the position of the decorative trim along the glass contour.

Slightly press down on the perimeter of the glass.

ATTENTION : After installing the glass, wait the required time before using the vehicle, recommended by the suppliers for the formulations used.

Proceed with installation in the reverse order of removal. Check the glass tightness.

Clean the glass and the surrounding area.

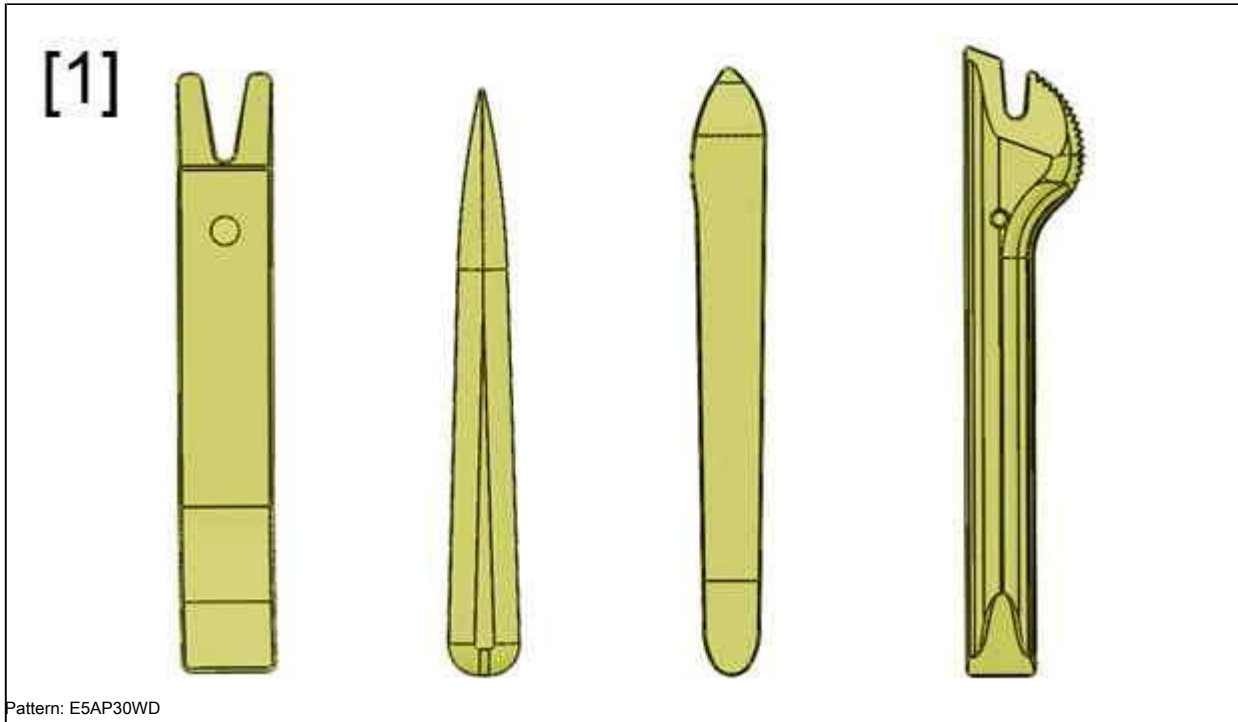
REMOVAL INSTALLATION: MULTI-FUNCTIONAL ROOF

MANDATORY: Observe the cleanliness and safety rules



1. Recommended fixtures

Equipment for glass



[1] Trim removal tool () .1350ZZ.

2. Recommended components

Componentswindglass



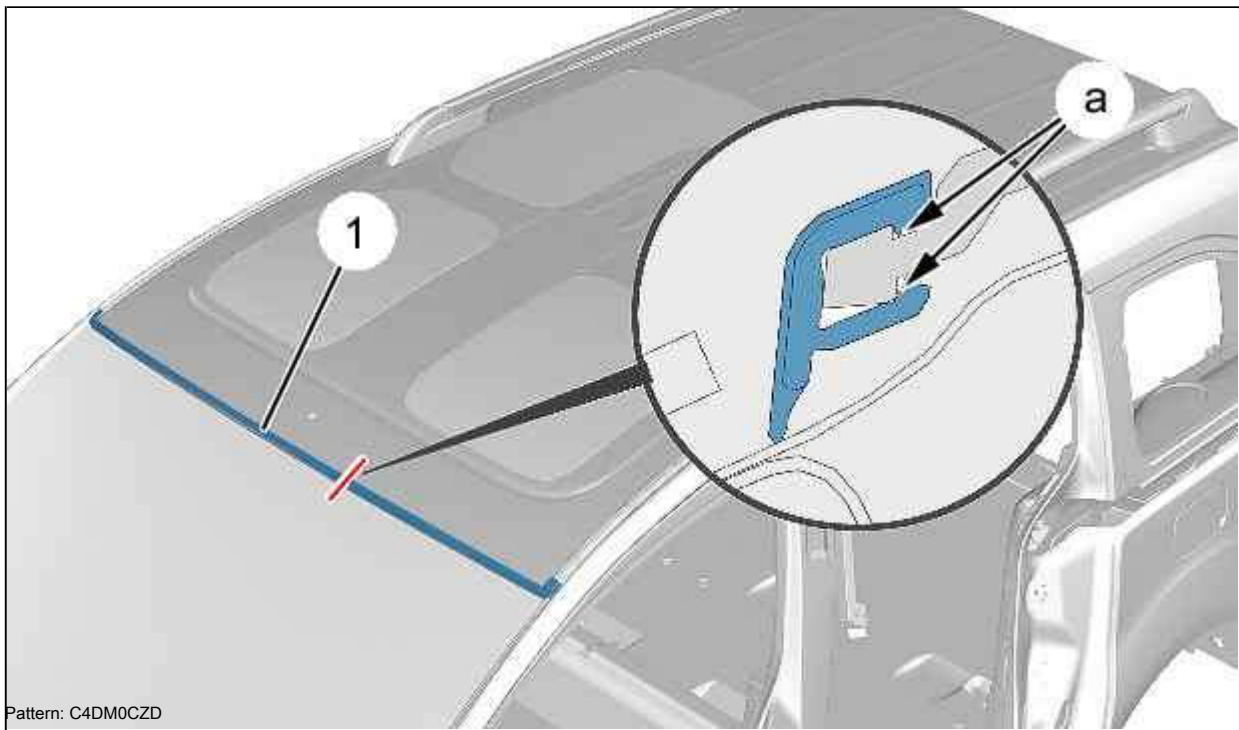
3. Preliminary operations

Remove:

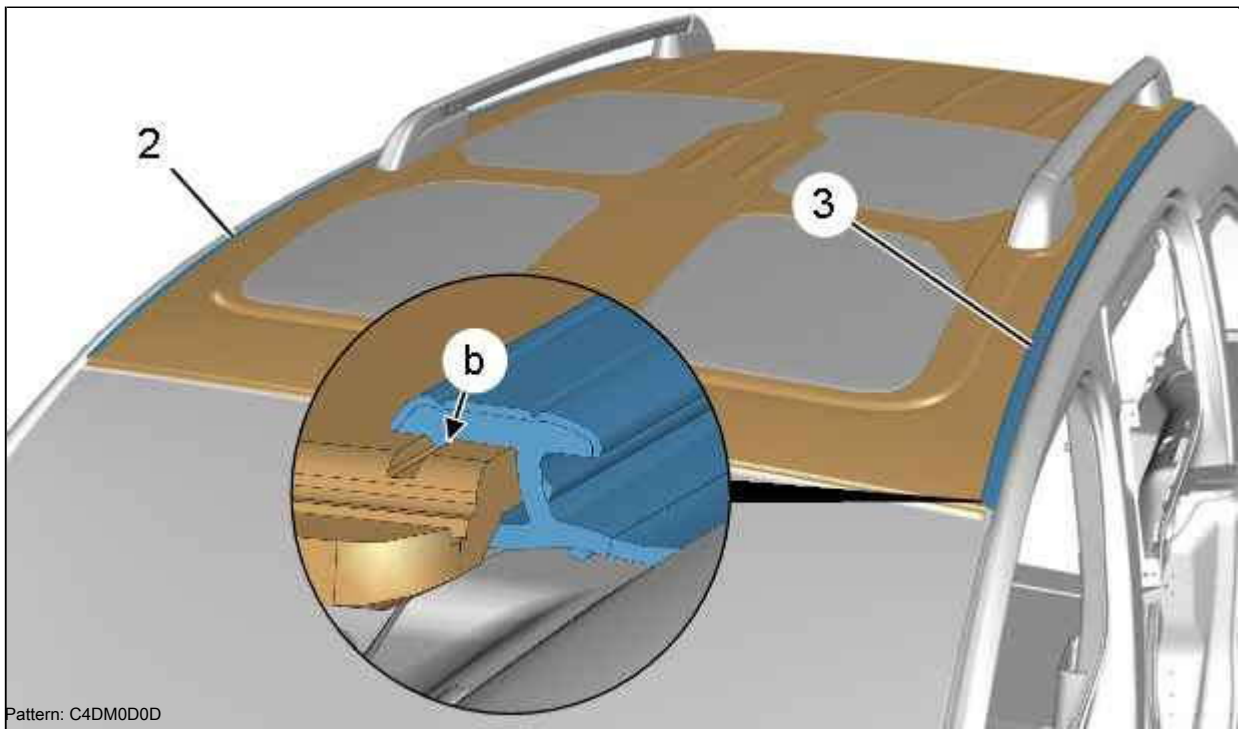
- Roof upholstery
- Car radio antenna



4. Removal

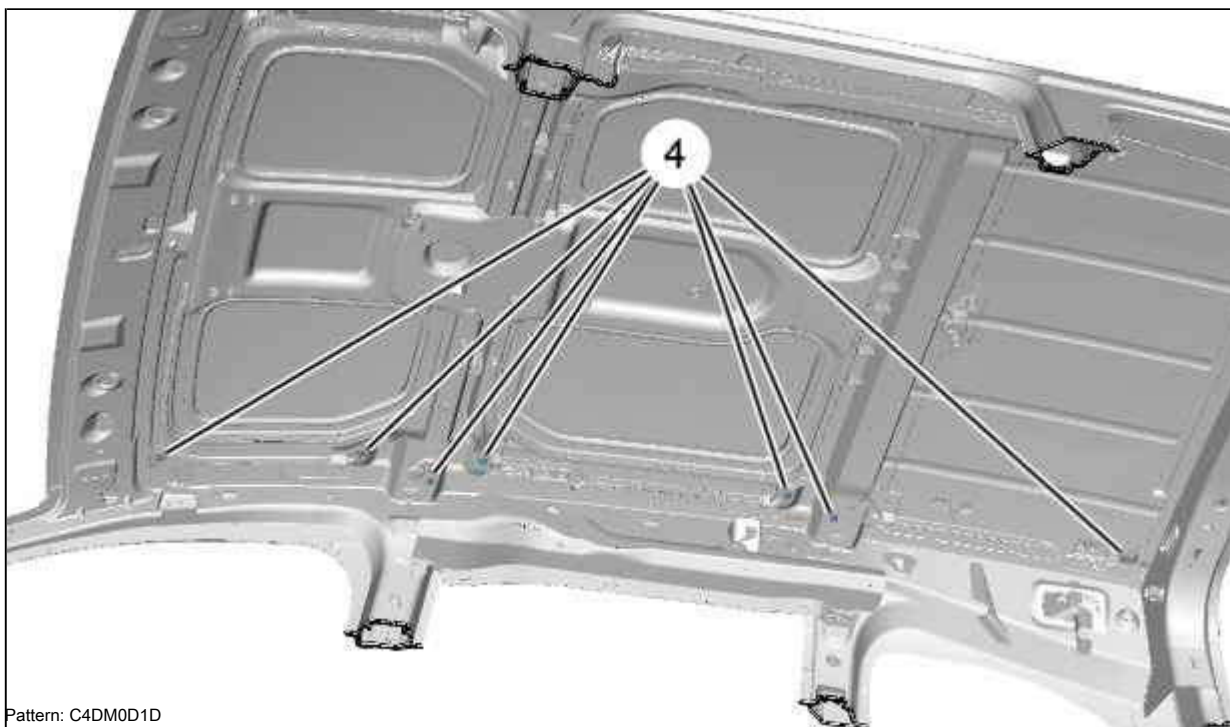


Disconnect: Front seal (1) (at "a"); Using the tool [1]. Remove: Front seal (1).



Disconnect: Side seal (3) (at "b"); Using the tool [1]. Remove: Side seal (3).

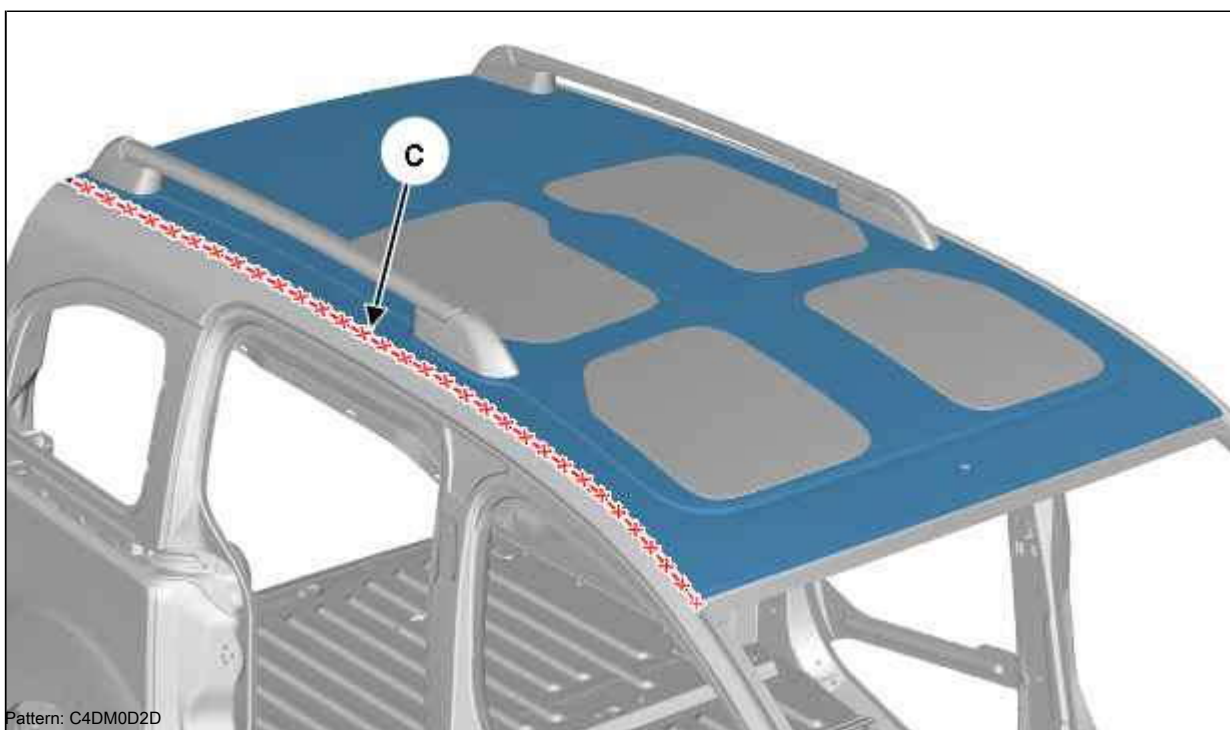
Detach: Side seal (2). Remove: Side seal (2).



Pattern: C4DM0D1D

NOTE: The operation is performed symmetrically.

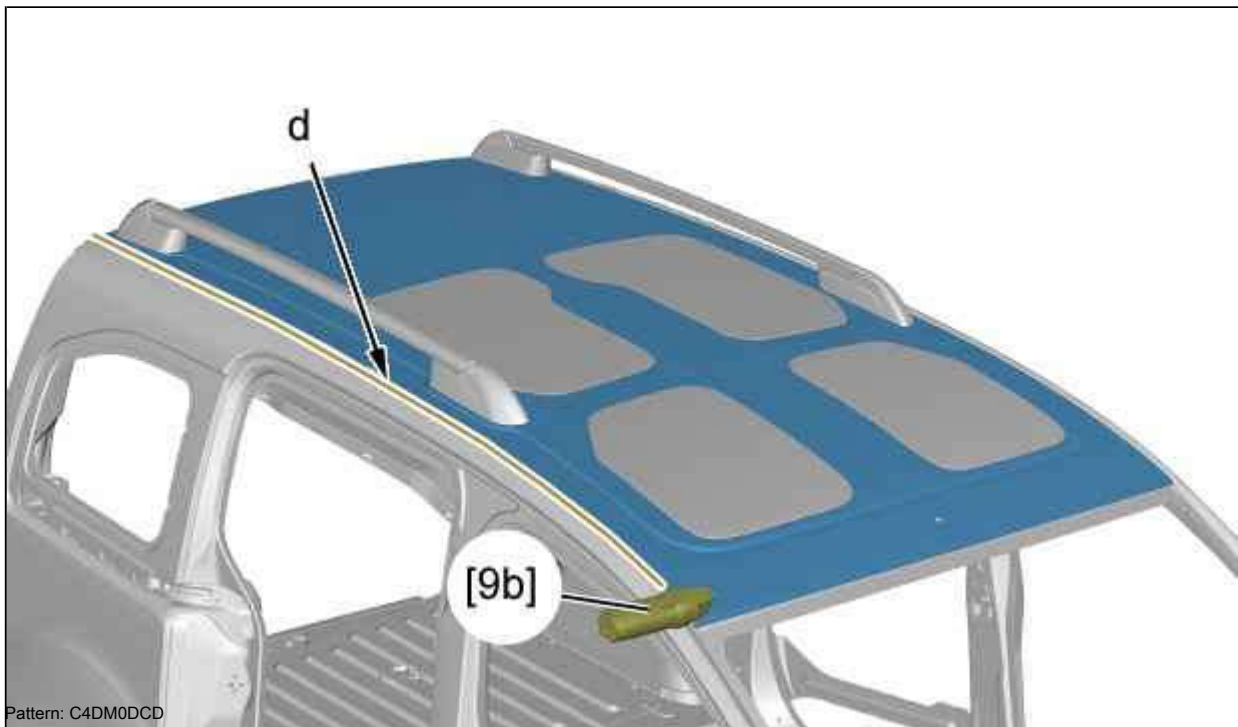
Loosen screws (4).



Pattern: C4DM0D2D

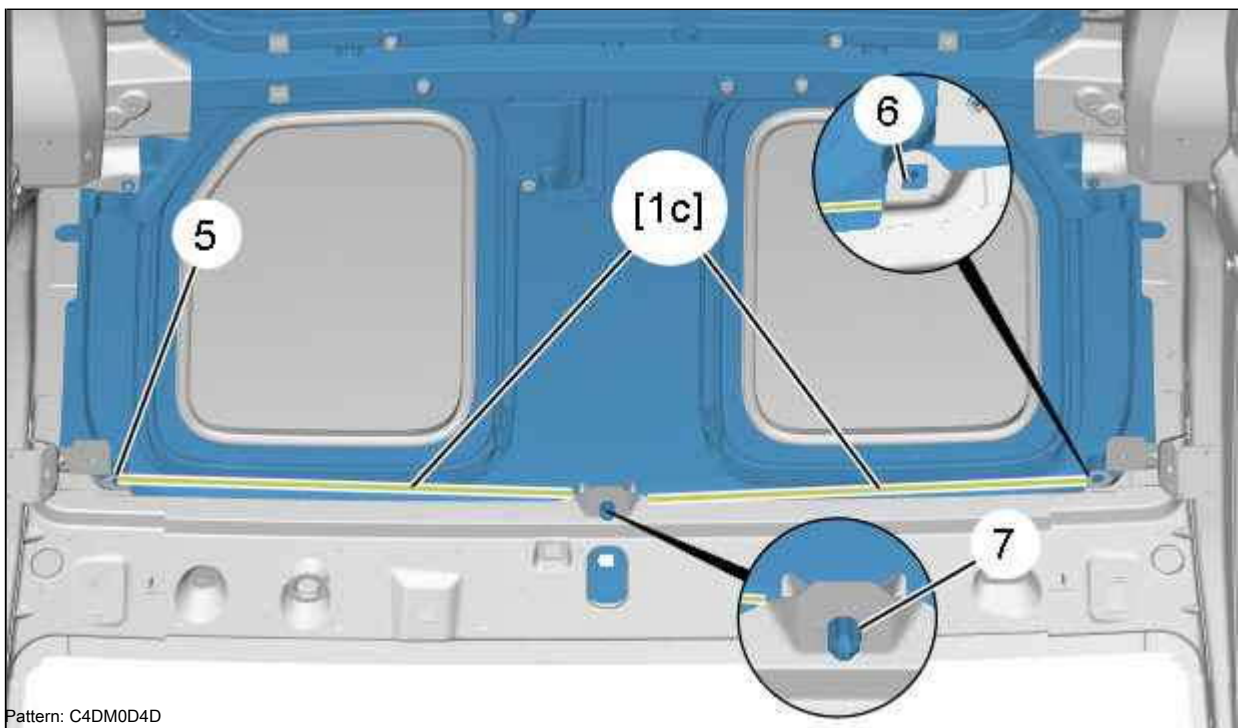
NOTE: The operation is performed symmetrically.

Protect the paint with adhesive tape (in "c").



NOTE: The operation is performed symmetrically.

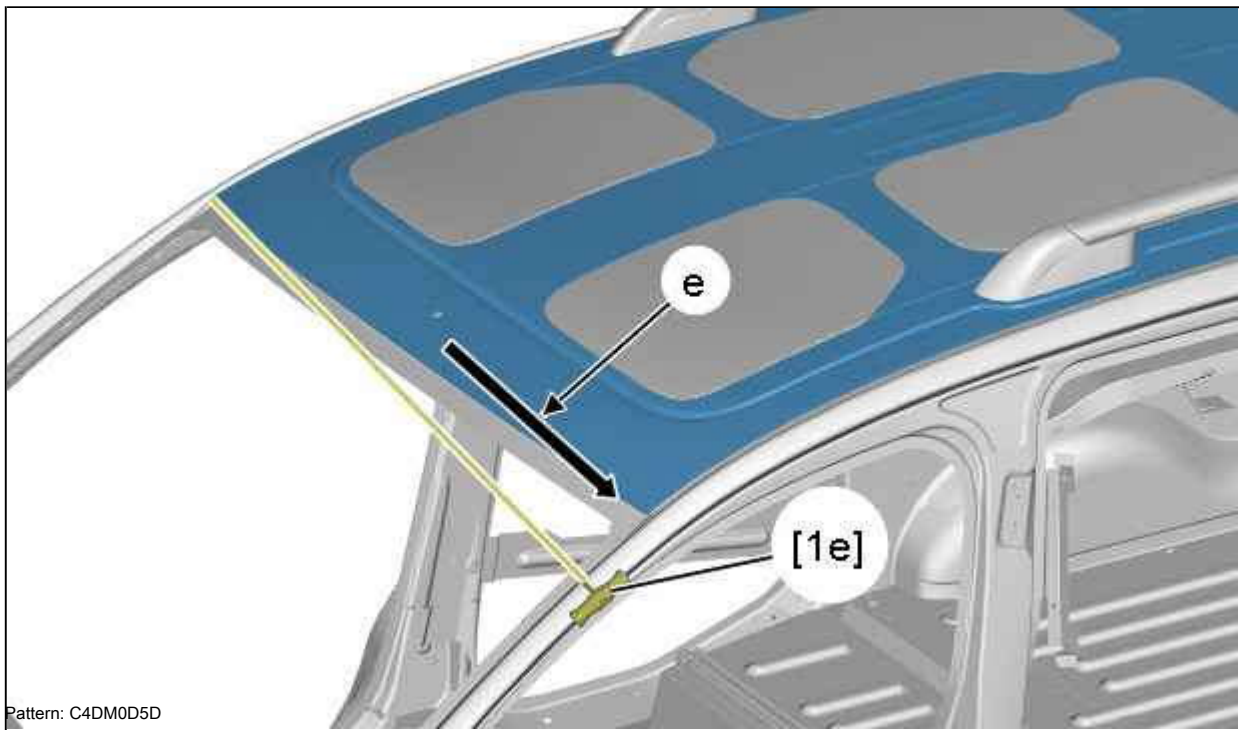
Cut off the adhesive layer using the tool [9b], into which the blade12 is inserted (in "d").



Pass the cutting wire [1c] through the pre-cut place; Using the tool [1b].

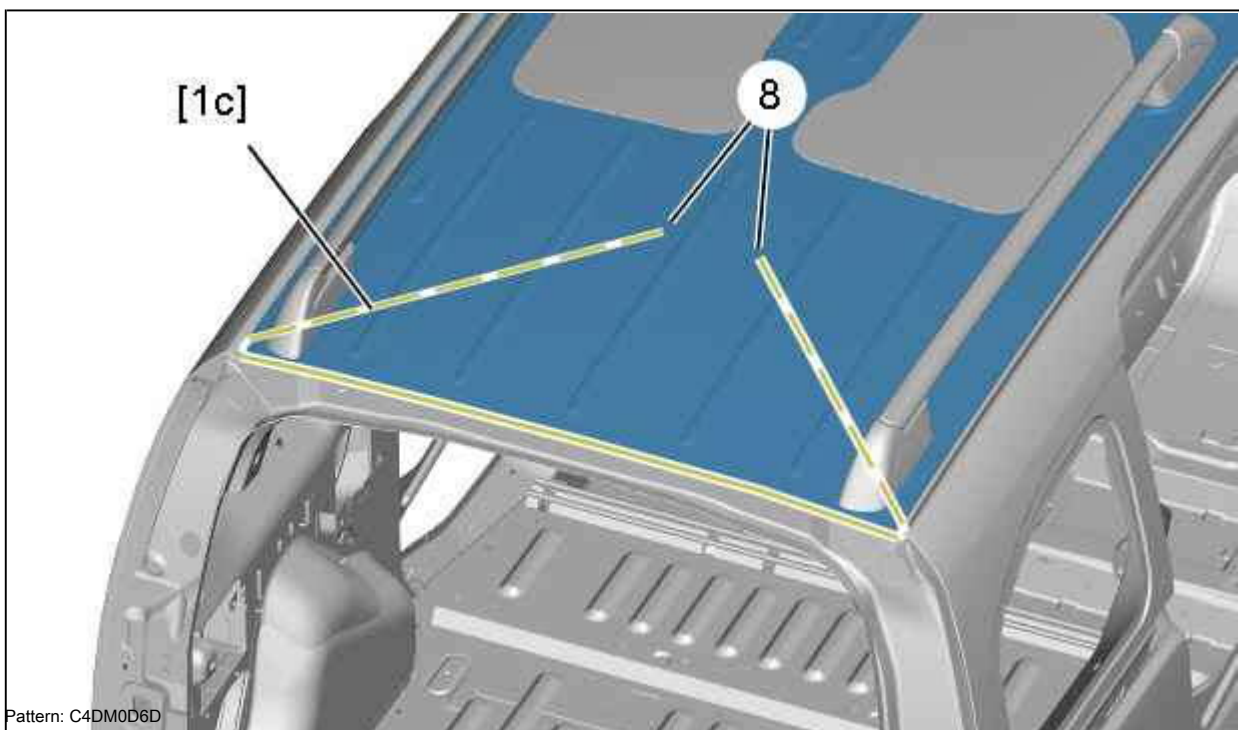
Pass the cutting wire [1c] in front of the locking pin (6). Pass the cutting wire [1c] in front of the guide pin (7).

Fasten the cutting line [1c] in the retaining clip (5); Using the screw (4).

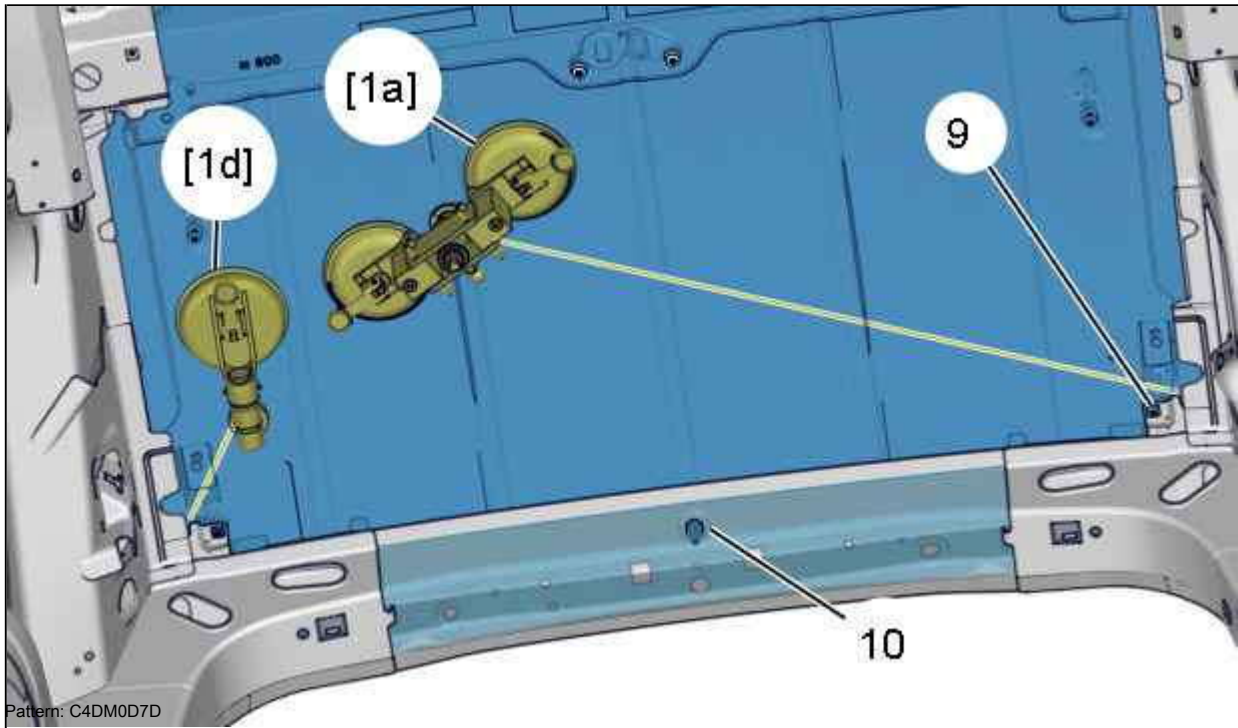


Cut the adhesive by pulling in the direction of the arrow "e" (Mid-width of the roof); Using the tool [1e].

Separate: Cutting string [1c].
Do the same on the other side.



Place the cutting line [1c] between the roof and body. Pass the ends (8) of the cutting string [1c] into the vehicle.



Install on each end of the cutting line [1c] the attachment [1d], [1a]. Pass the string with the locking pin (9); Start cutting. Continue cutting until the dowel pin (10) is seated.

Perform the same operation on the opposite side.

NOTE: 4 people are required for this operation.

Remove: Multifunctional roof.

5. Cleaning

5.1. Multifunctional roof preparation

1st time: Multifunctional roof (Reusable). Insert the blade [13] into the electric knife [9b].

Cut off the roll of adhesive.

Wipe off the dust with a clean cloth.

Apply primer only on the places, brushed metal

2nd time: Multifunctional roof (New). Degrease the bonding area.

Apply initial prep coat from sticker kit A3

5.2. Groove preparation

1st time: If there is residual adhesive seal. Insert the blade [13] into the electric knife [9b]. Cut off the roll of adhesive.

Wipe off the dust with a clean cloth.

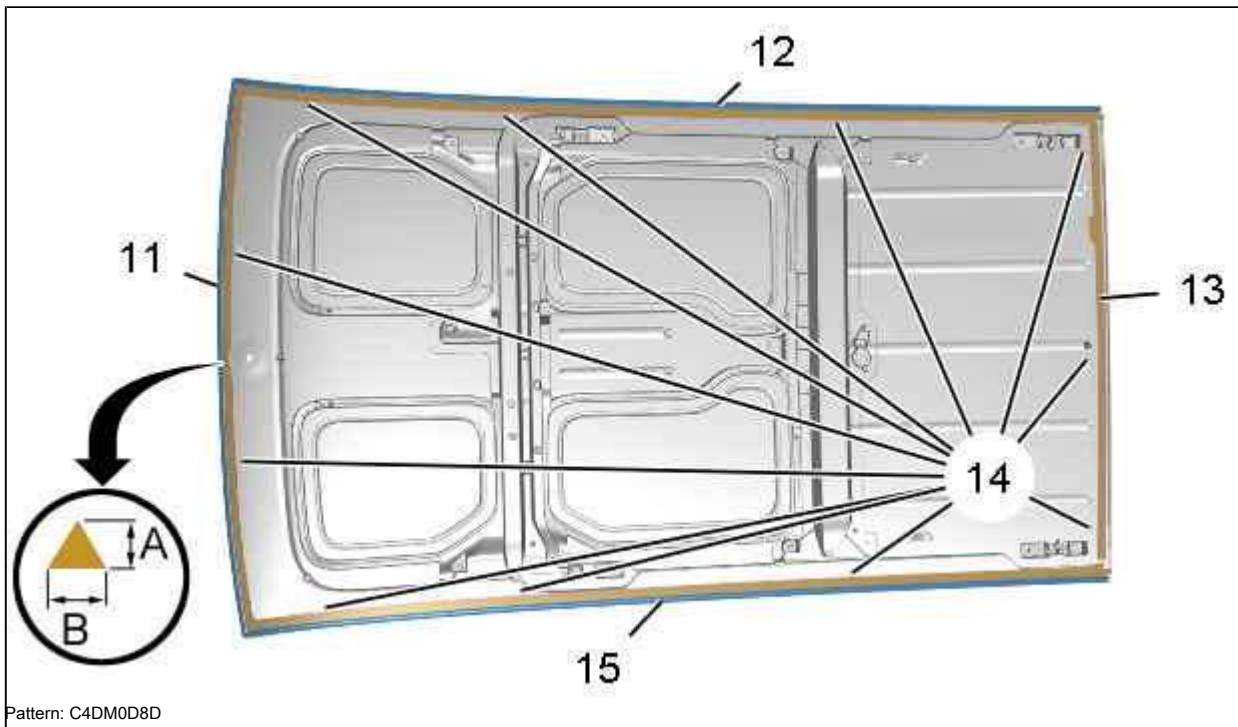
Apply primer only on the places, brushed metal

2nd time: On a new roof. Degrease the groove.

Apply the roof primer provided in the bonding kit A3

Let dry for 10 minutes.

6. Installation



Reattach in the retainer: seals (11), (12), (15). Place shims (14) on the inner edges of the sticker (13).

Size of the triangular tip to obtain a sealant bead of width "B" and height "A".

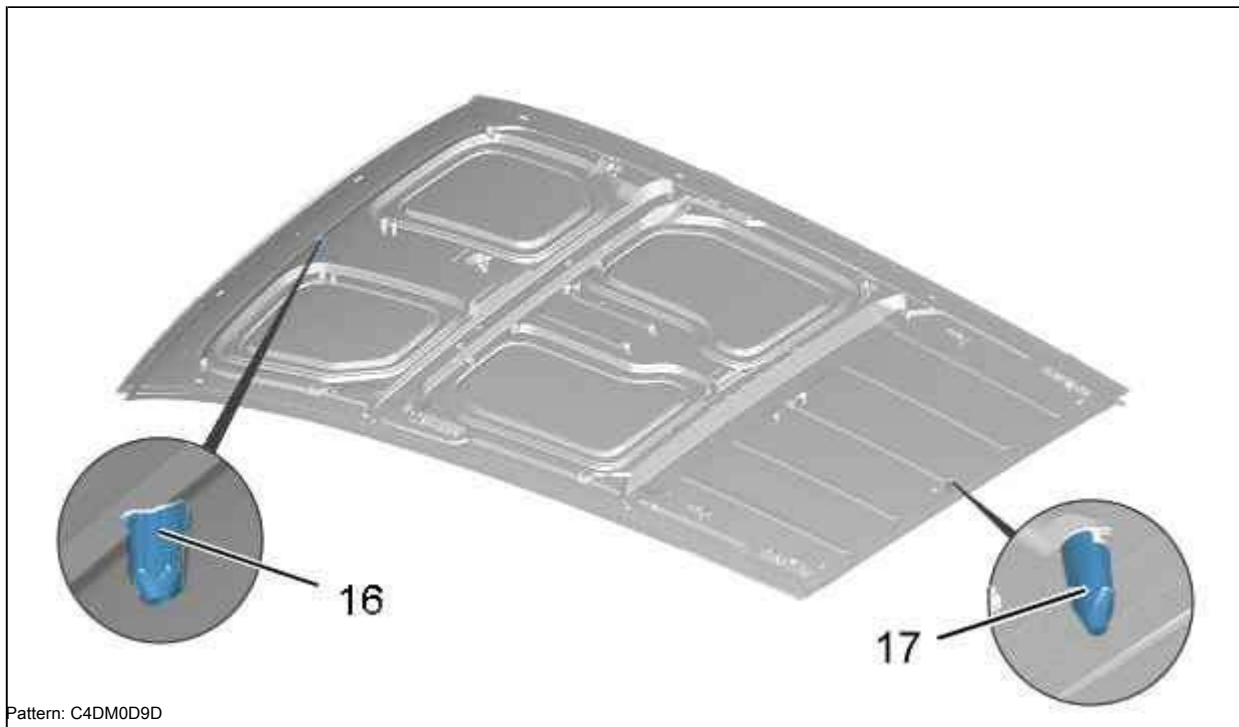
"B" = 8 mm.

"A" = 12 mm.

Apply sealant in the form of a roller around the perimeter of the roof (Do not go outside the bonding area (13)).

ATTENTION : When using a two-piece seal, there is a 5 minute pause between placing the glass panel on the vehicle and the beginning of the adhesive squeezing out.

ATTENTION : Use: Bonding kit monocomposite.



NOTE: 4 people are required for this operation.

Install: Multifunctional roof (Check that the dowel pins (16), (17) are correctly seated in their seats in the chassis).

Slightly press the roof tops against the shims (14). Replace the bolts (4).

ATTENTION : After installing the glass, observe the hardening times recommended by the supplier of the products used.

Position the seal (11) under the windscreen; Using the tool {1} or soapy water.

Check for leaks: Multifunctional roof. Clean up:

- Multifunctional roof
- Glass

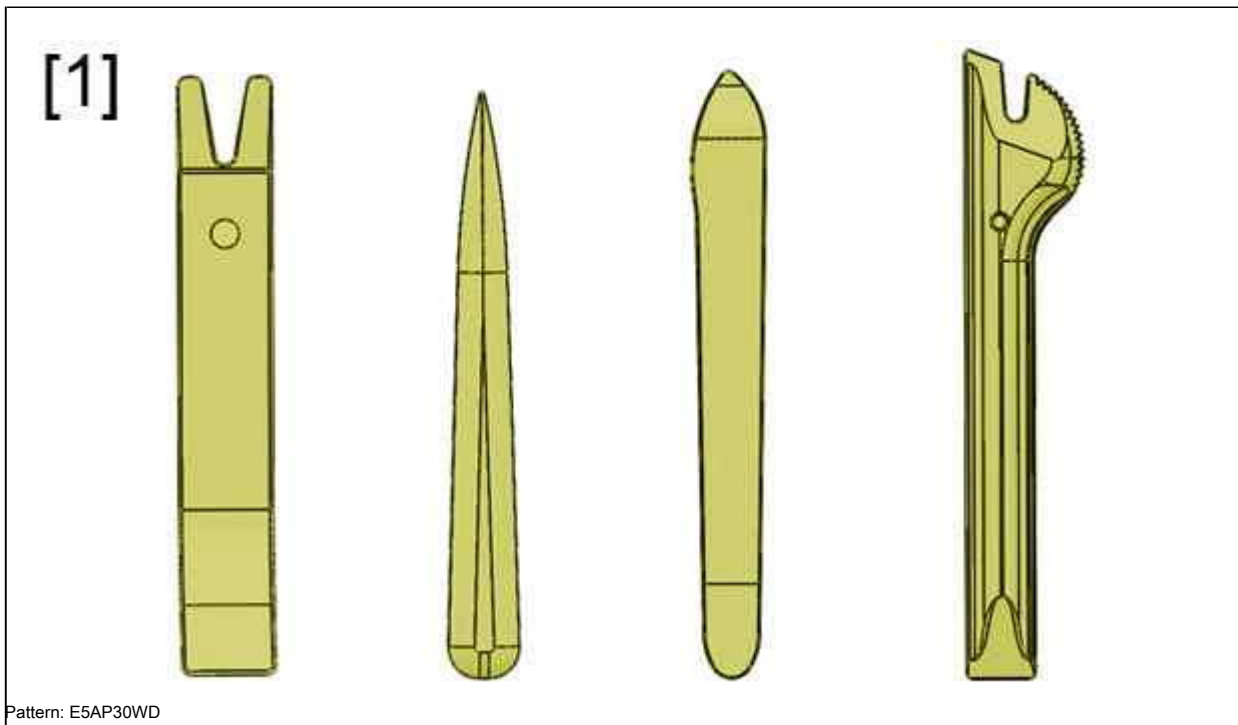
Proceed with installation in the reverse order of removal. Check the operation of the removed elements.

REMOVAL INSTALLATION: COVER

MANDATORY: Observe the cleanliness and safety rules

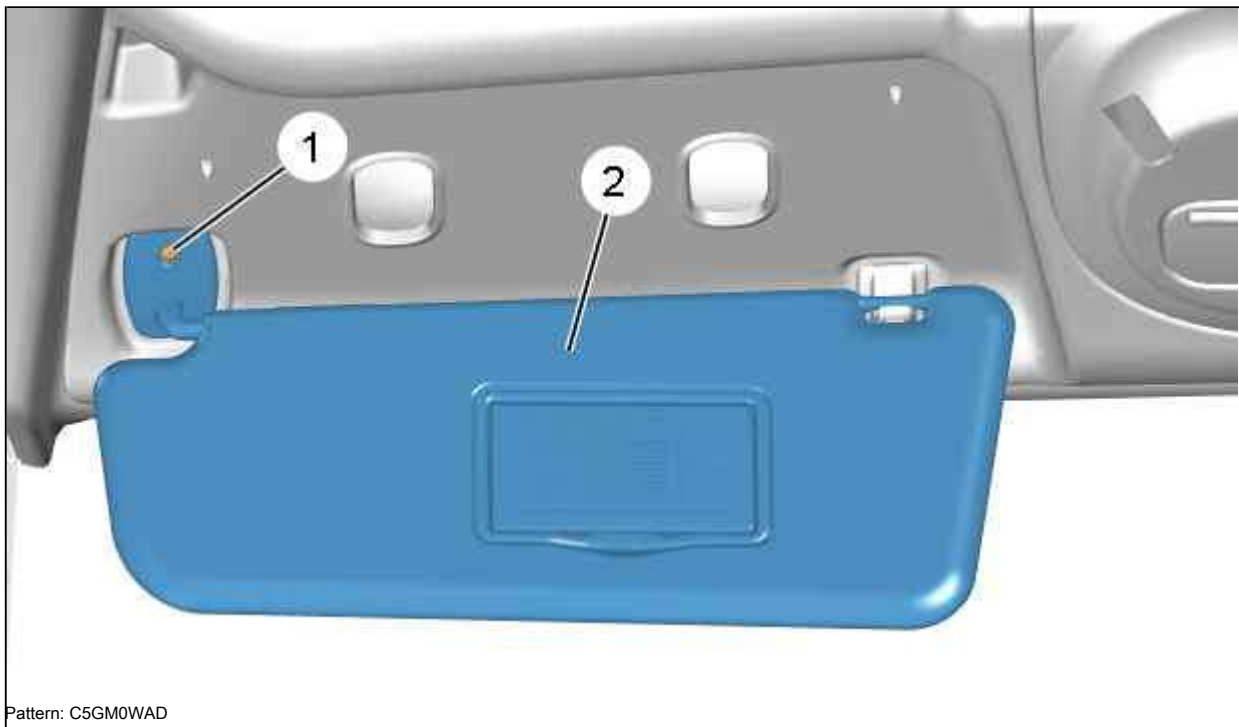


1. Recommended equipment



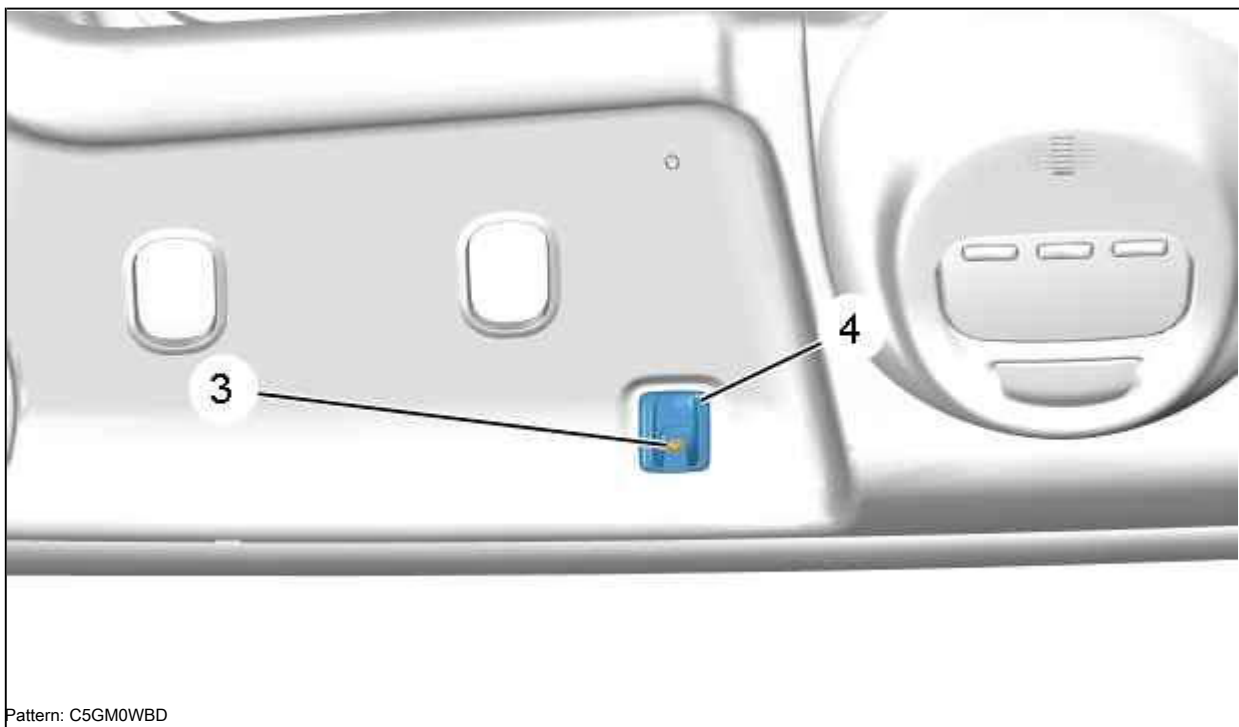
[1] Trim stripper () .1350ZZ.

2. Removal



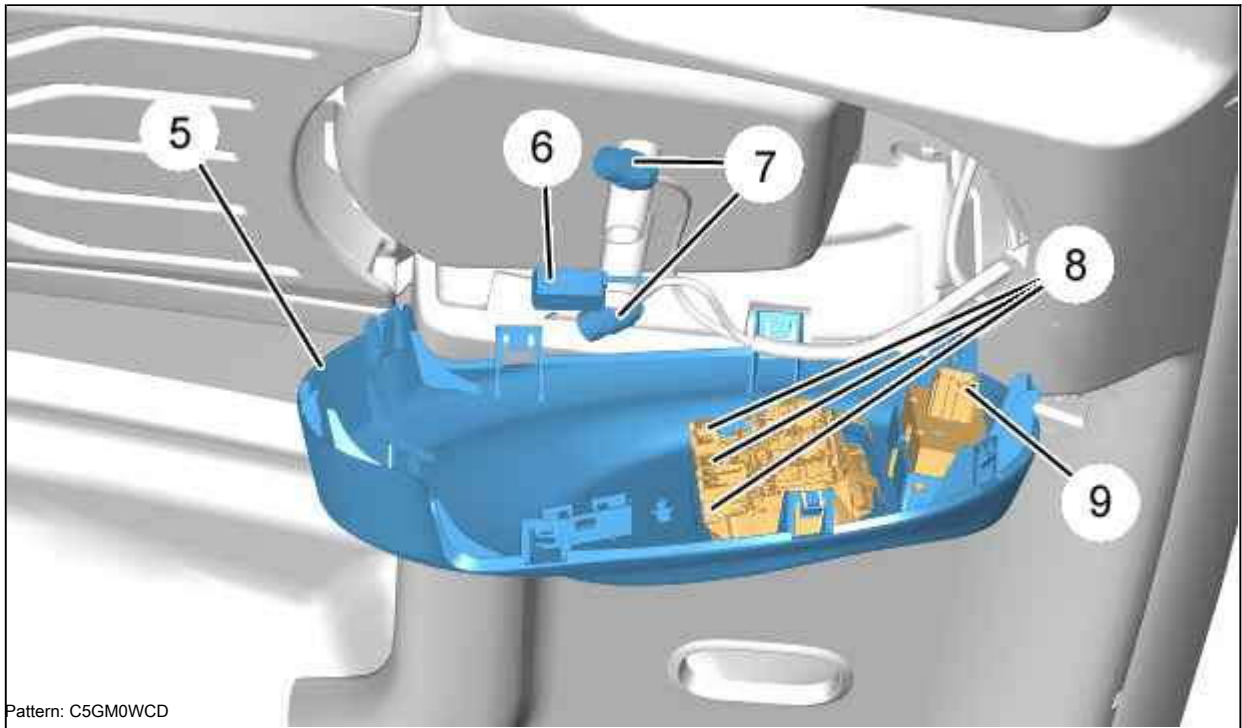
Remove:

- Bolt (1) (on each side)
- Sun visor (each side)



Remove:

- Bolt (3) (each side)
- Sunshade bracket (4) (each side)



Pattern: C5GM0WCD

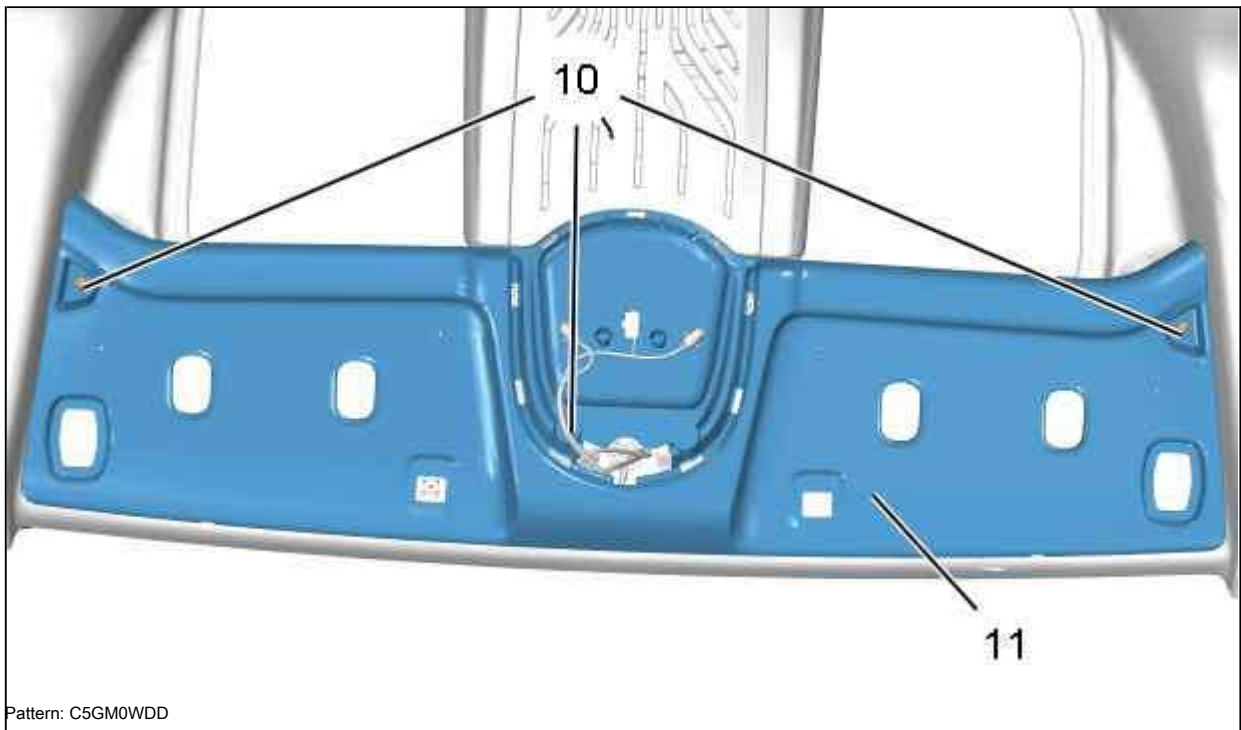
Disconnect:

- Console (5); Using the tool [1]
- Microphone (6)
- Sensors (7)

Disconnect:

- connector (8) (depending on equipment)
- Display connector (9) (depending on equipment)

Remove the console (5).



Remove:

- the bolts (10)
- Side seat backrest (11)

3. Installation

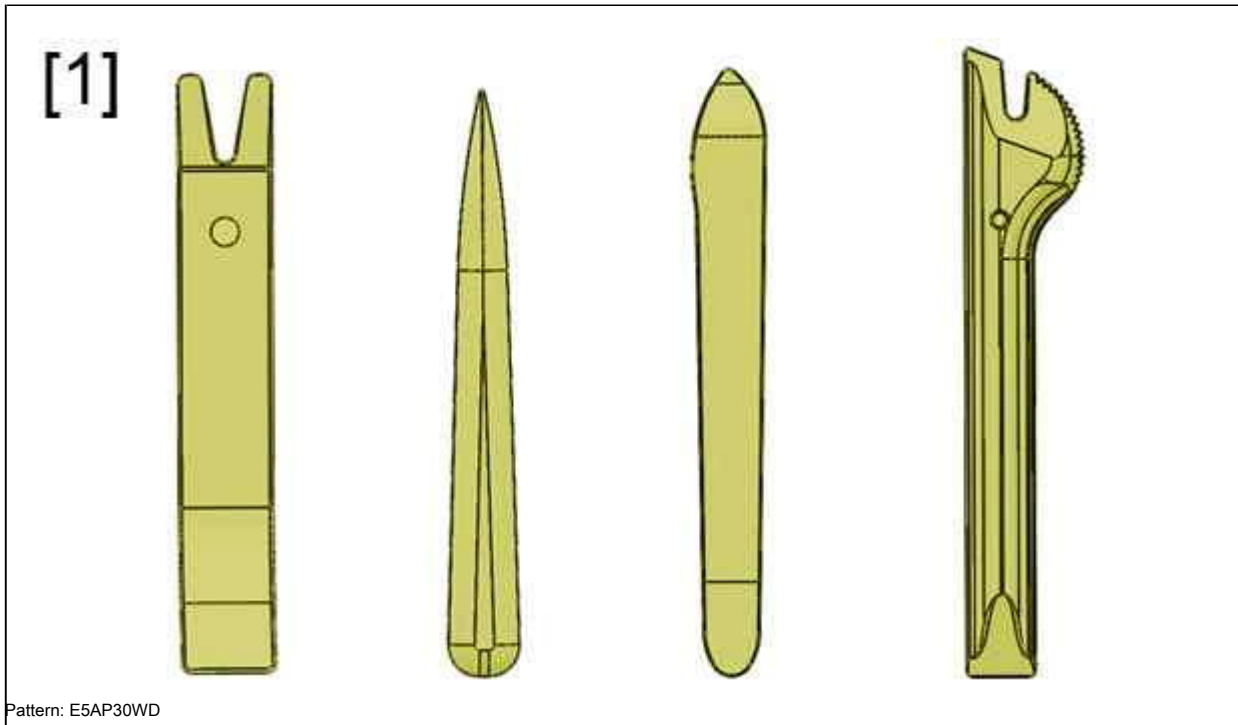
Installation is carried out by performing the removal operations in the reverse order. Check the operation of the various equipment.

REMOVAL INSTALLATION: CEILING TRIM

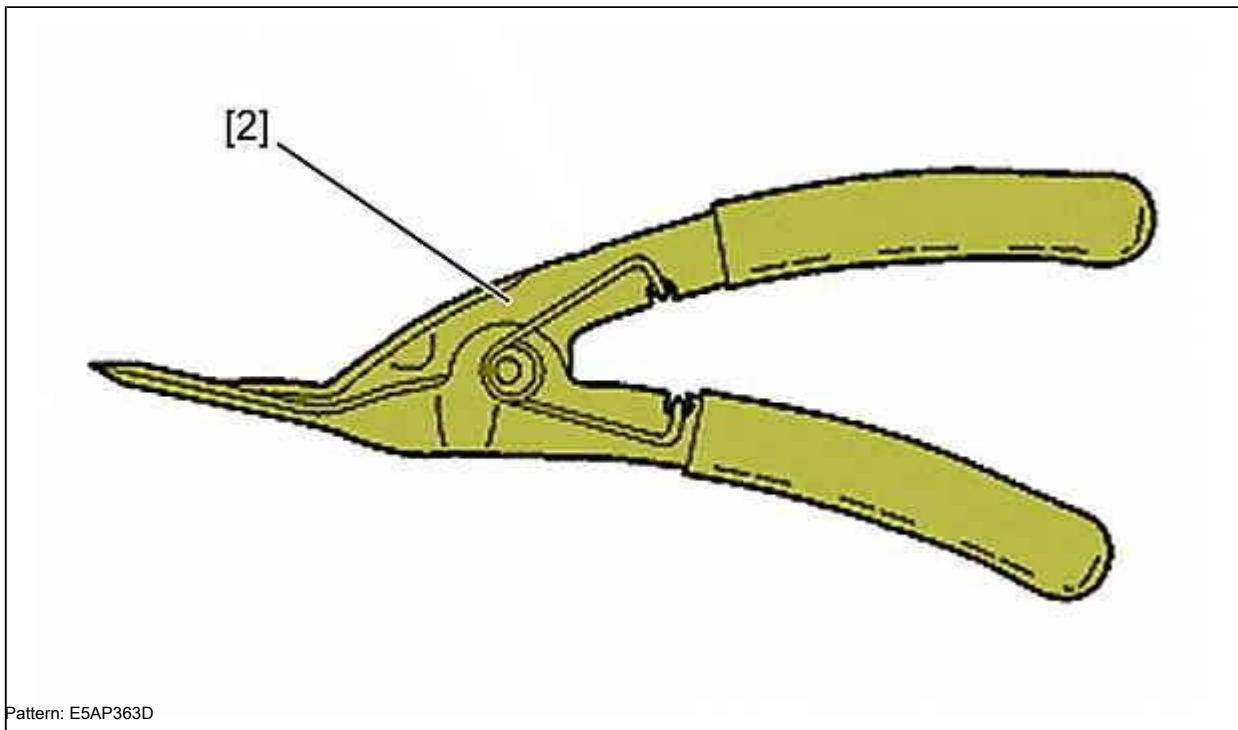
MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim removal tool () .1350ZZ.



[2] Extractor for plastic pins () .1311.

2. Preliminary operations

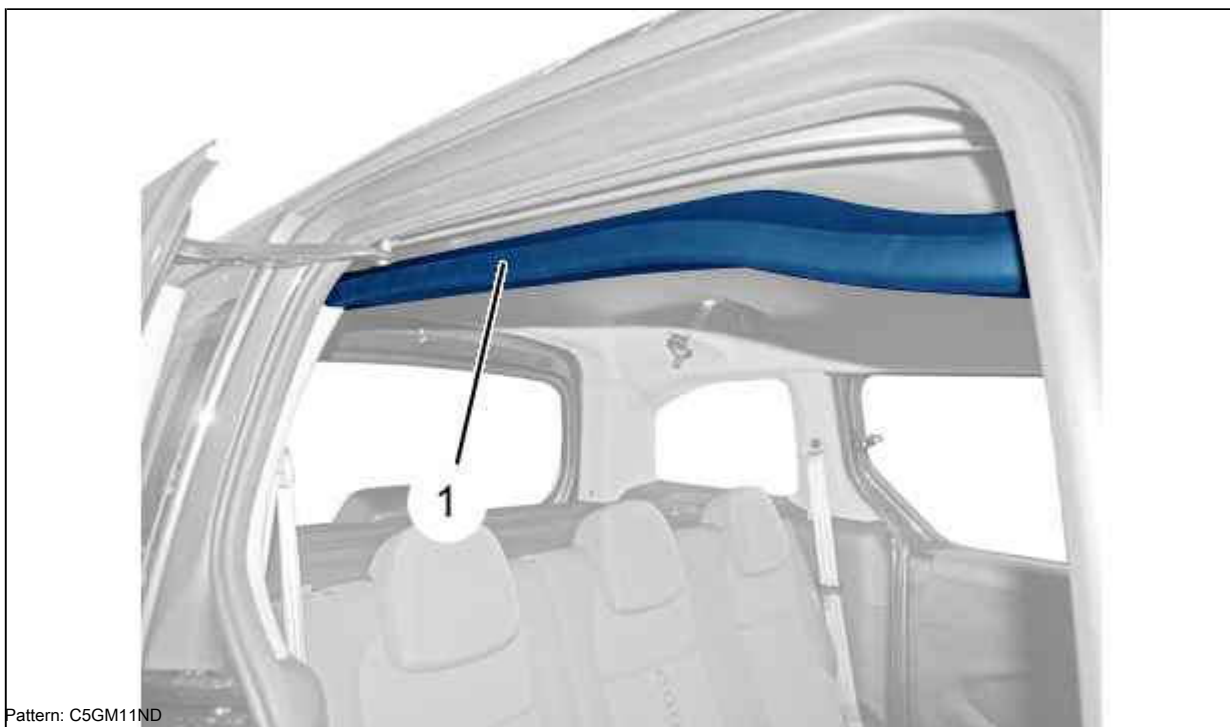
Disconnect the battery. Remove:

- **Upper shelf** (depending on configuration)
- **Upholstery of pillars of windscreen openings**
- **B-pillar upper padding**
- **Rear pillar covers**
- **Rear pillar top pads**
- Rear shelf

Partially remove:

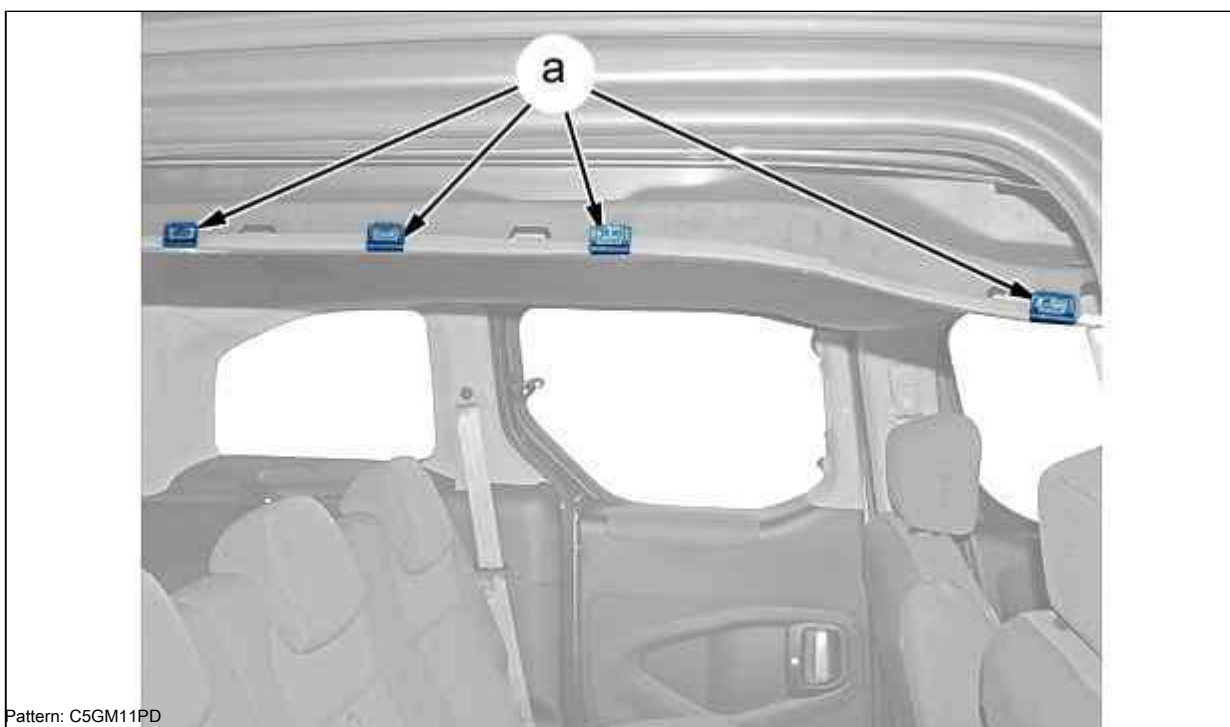
- **Boot lid seal**
- **Door seals**

3. Removal



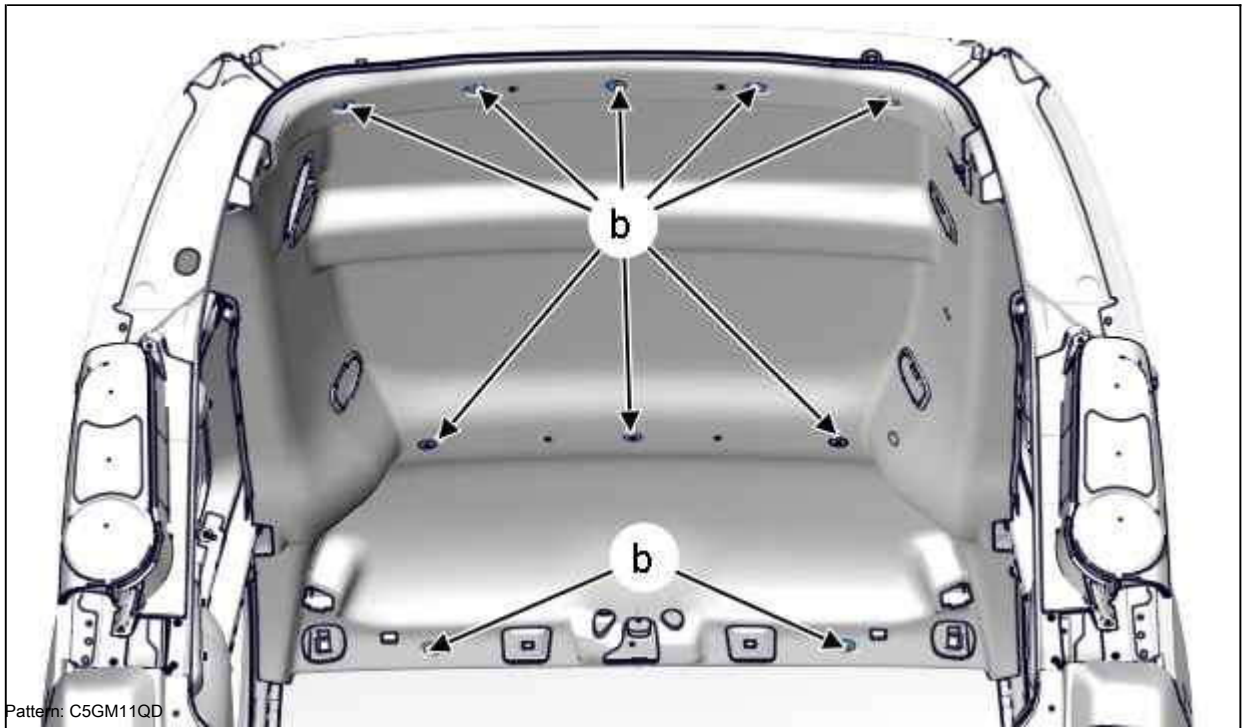
NOTE: Do the same on the other side.

Remove the seal (1).
Remove the gasket (1).

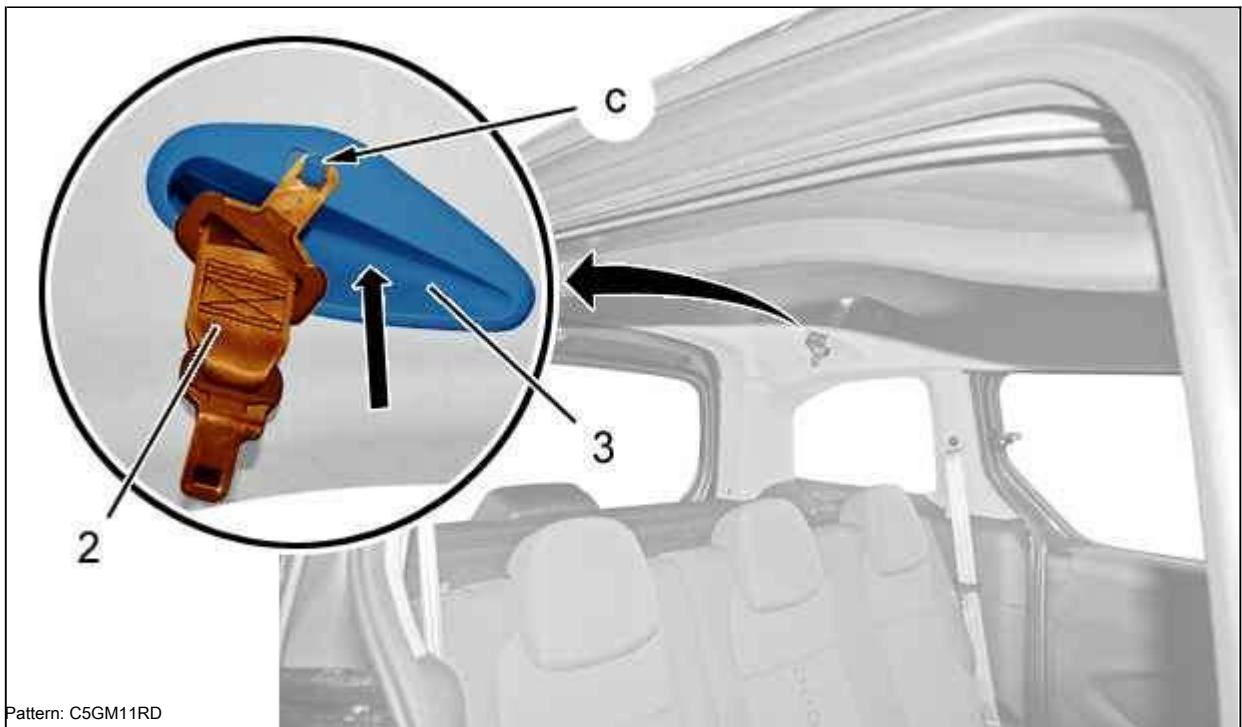


NOTE: Do the same on the other side.

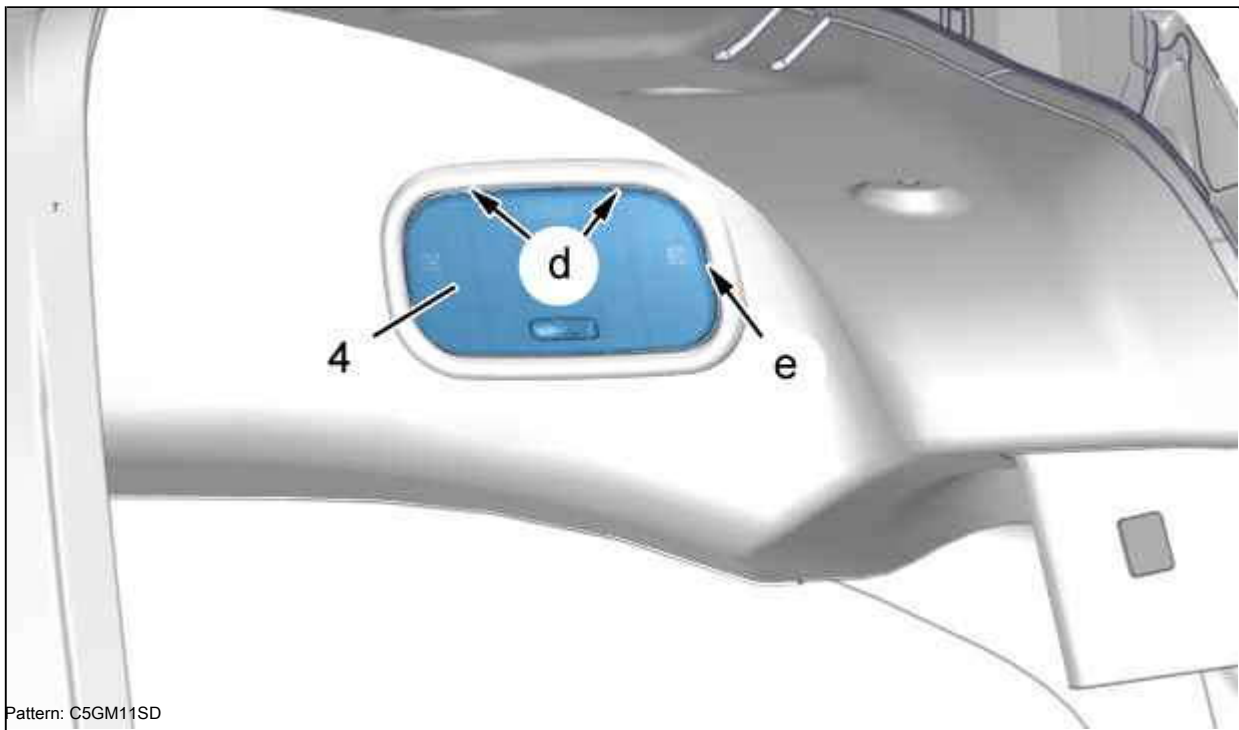
Detach Remove the fasteners (in "a"); Using the tool [1].



Disconnect: the plastic pins (at "b"); Using the tool [2].



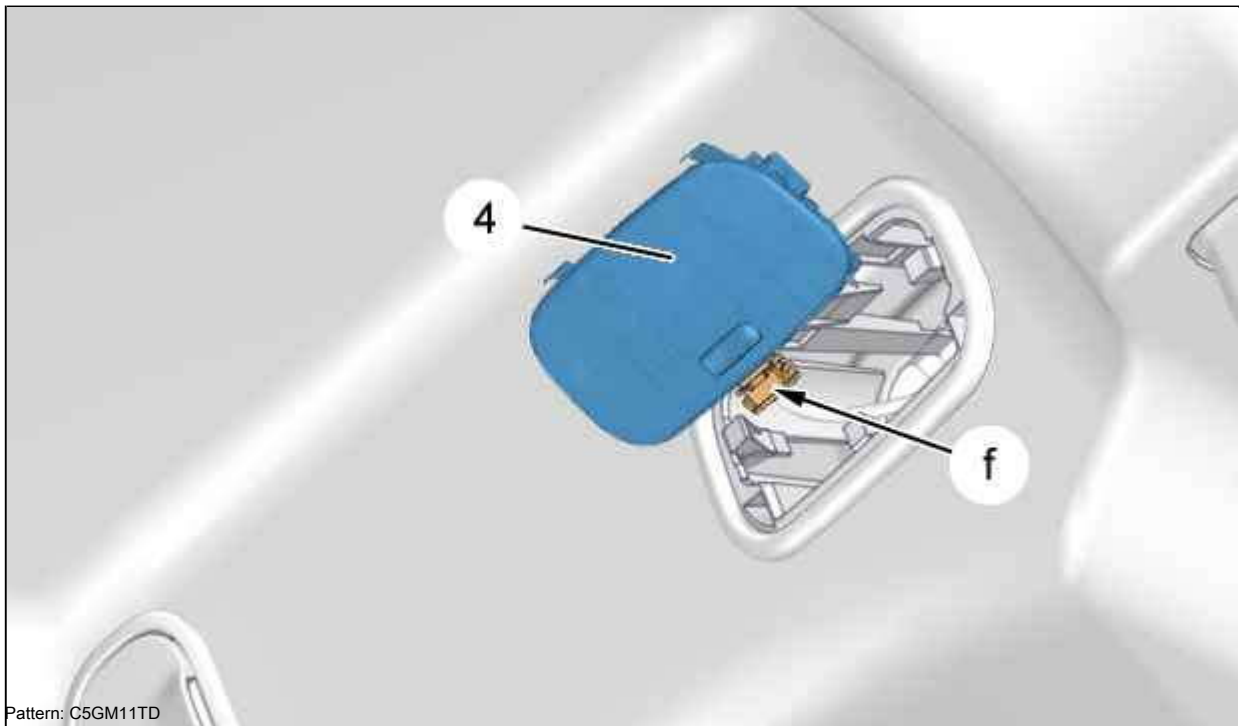
Disconnect the center seat belt (2) (at "c").
 Pass the center harness (2) through the pad (3) (As indicated by the arrow).



Disconnect:

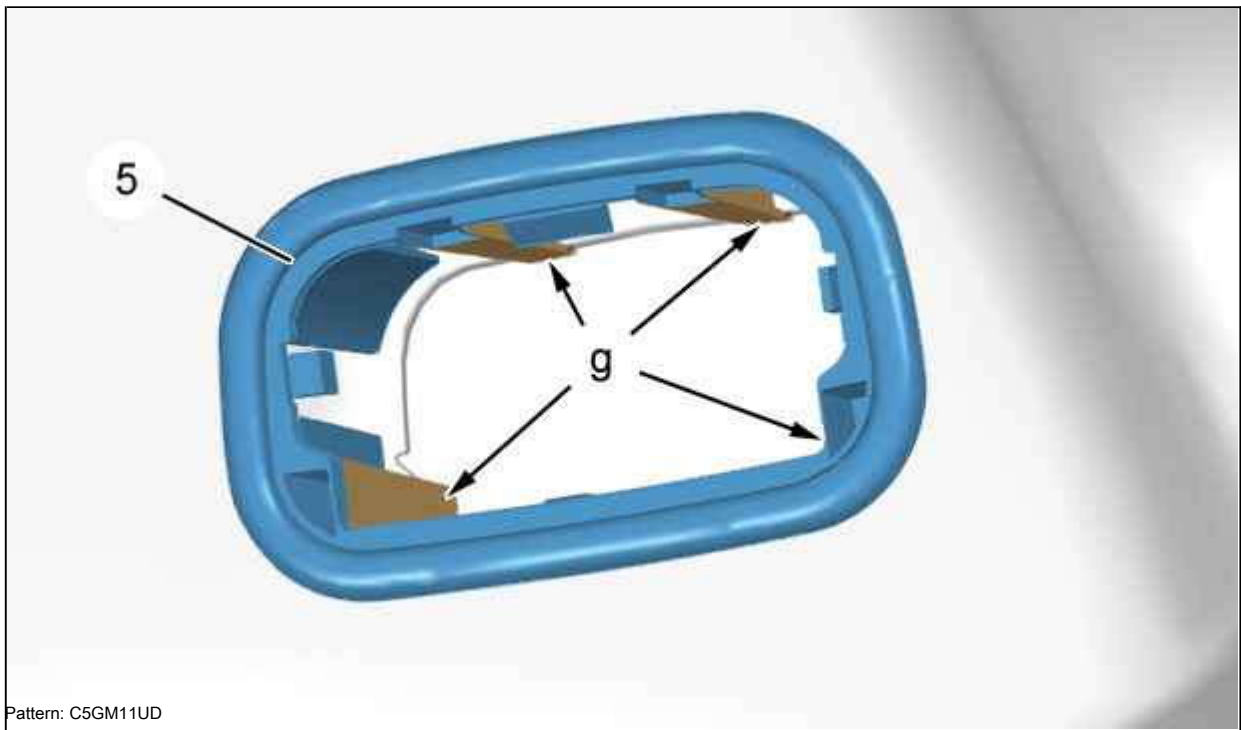
- Trunk lamp (4) (at "e"); Using the tool [1]
- Retainer spring (in "d"); Using a thin flat screwdriver

Detach the luggage compartment cover (4).

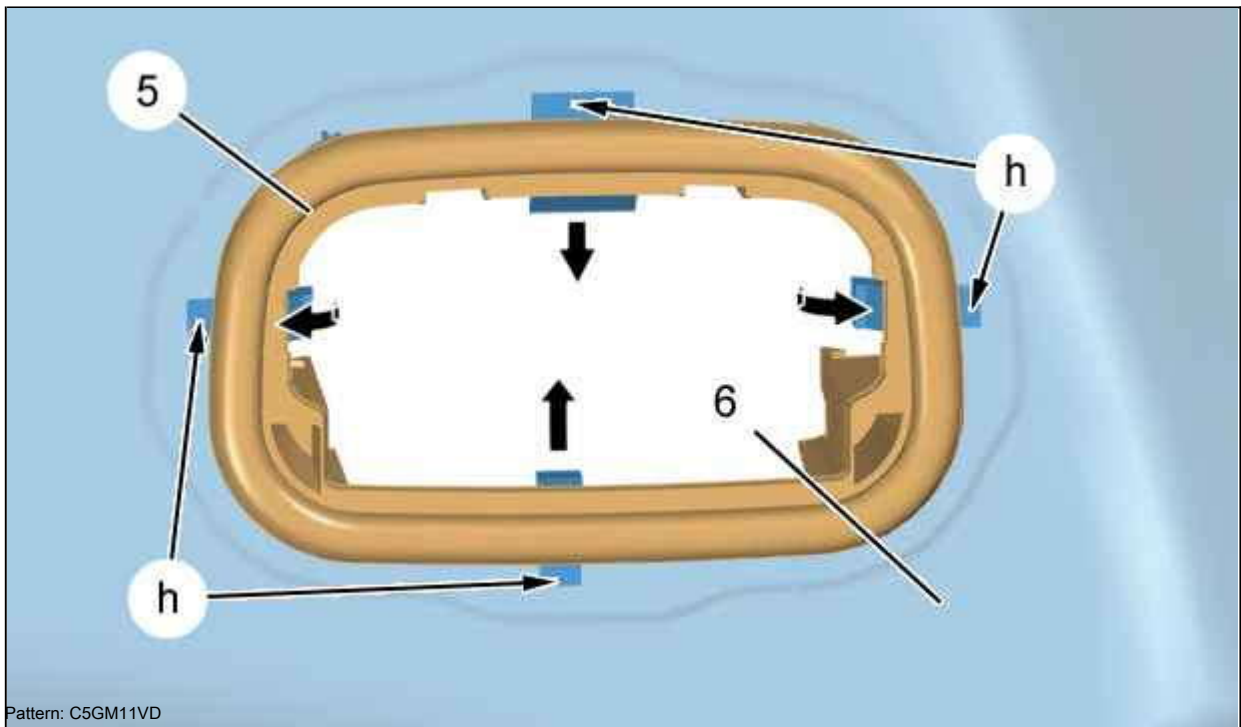


Disconnect the connector (at "f").

Remove the luggage compartment lamp (4).

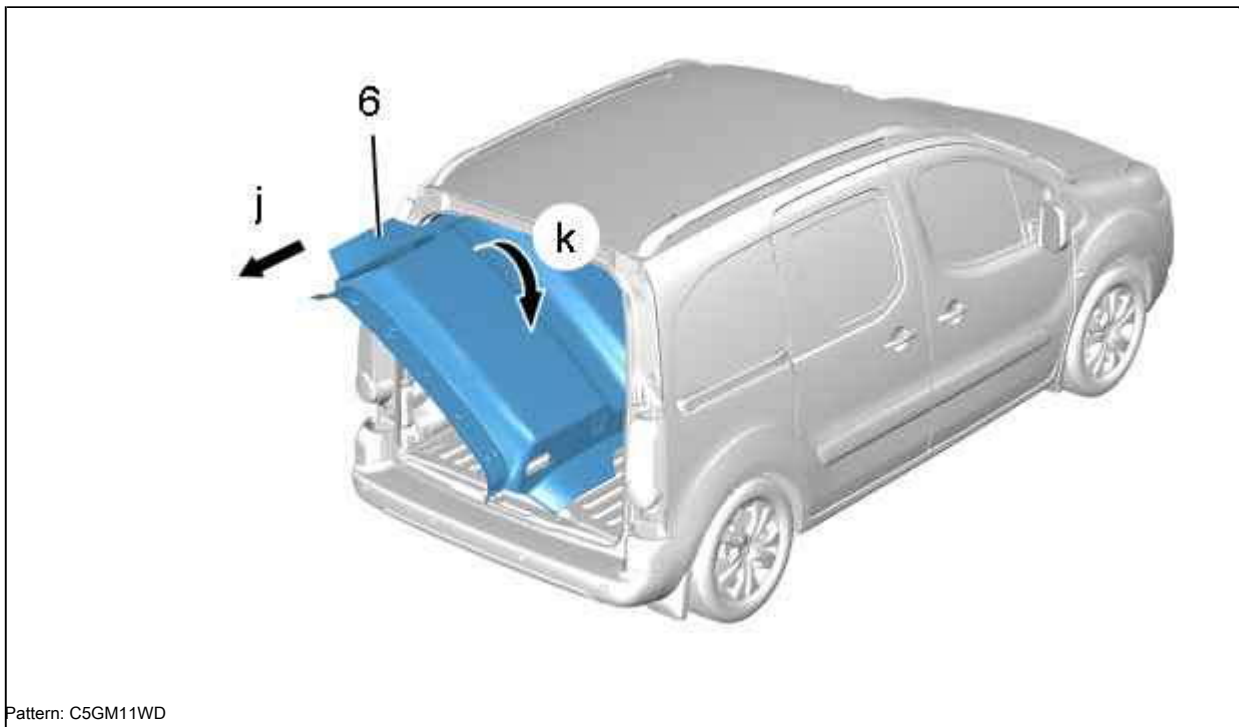


Disconnect: Luggage compartment lamp support (5) (at "g"); Using the tool [1].



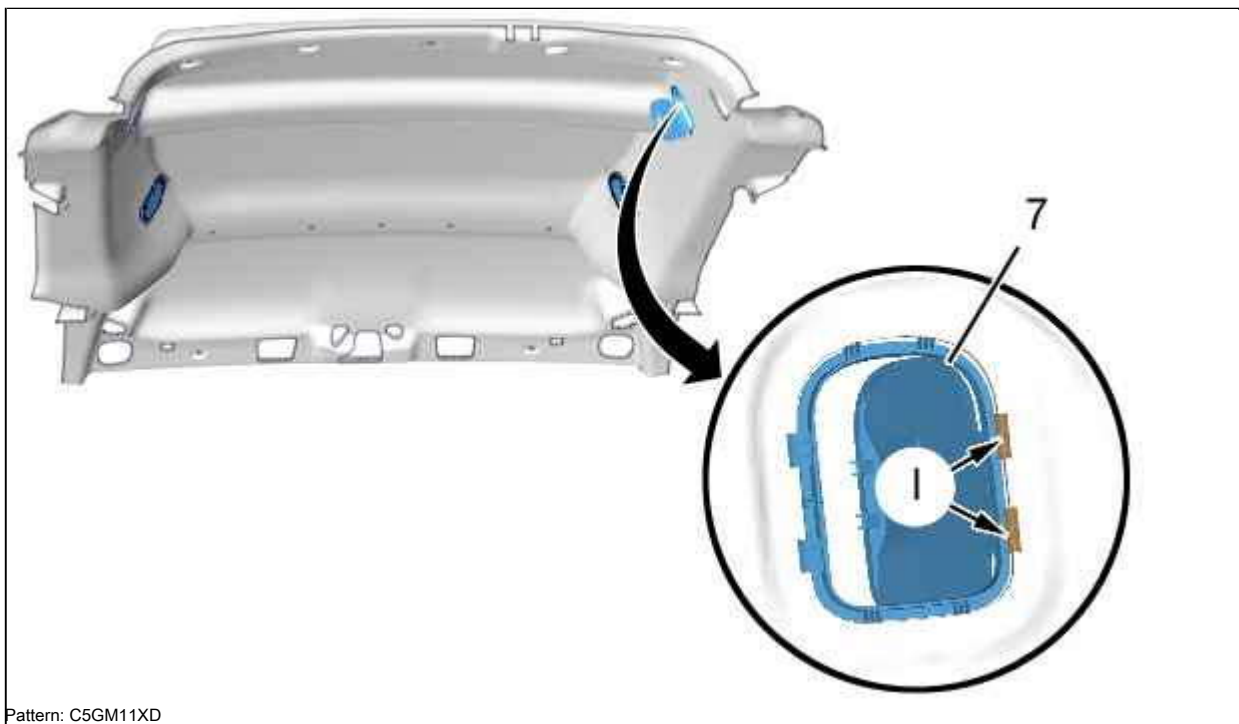
Disconnect: Luggage compartment lamp support (5) (at "h") (as shown by arrows); Using the tool [1].

Remove: Luggage compartment light support (5). Fold down the backrests (front and rear). Detach the ceiling trim (6).



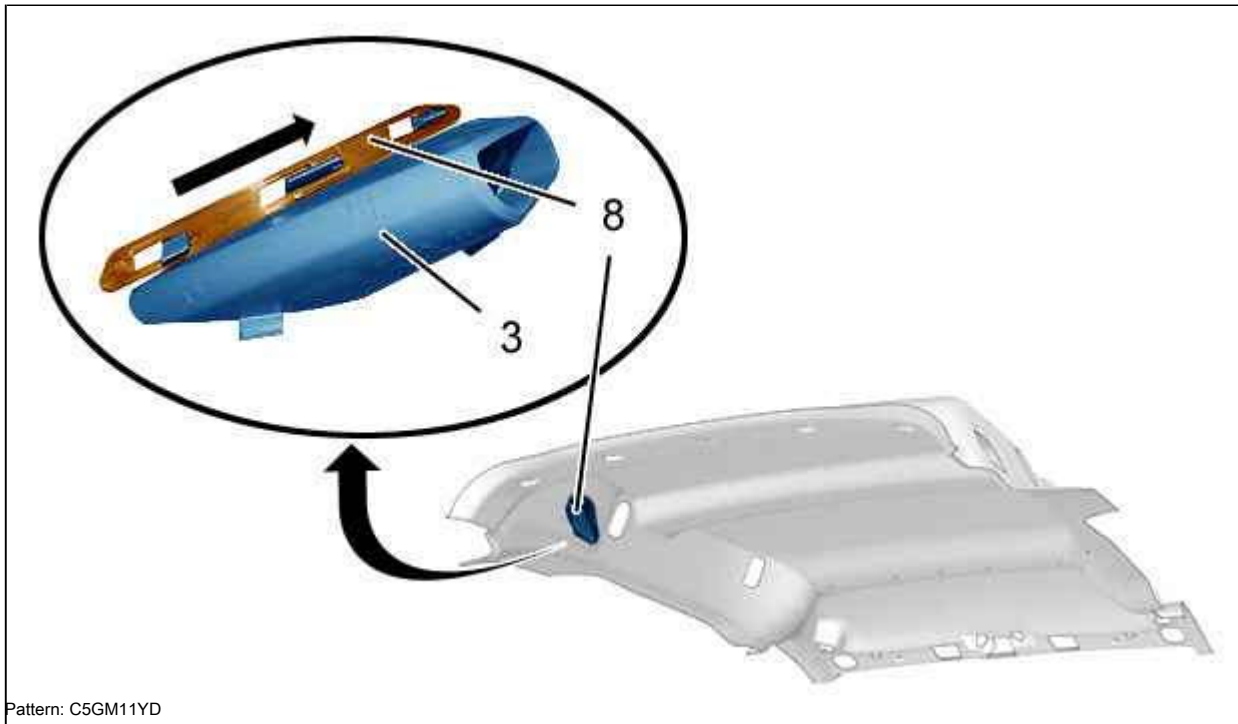
ATTENTION : In the case of removal and subsequent installation of the roof trim panel, make sure that no folds are formed or replace the upholstery in case of external defects.

Rotate the roof trim panel (6) (As shown in "k"). Peel off the ceiling trim (6) (As shown in "j"). Remove the headliner (6).



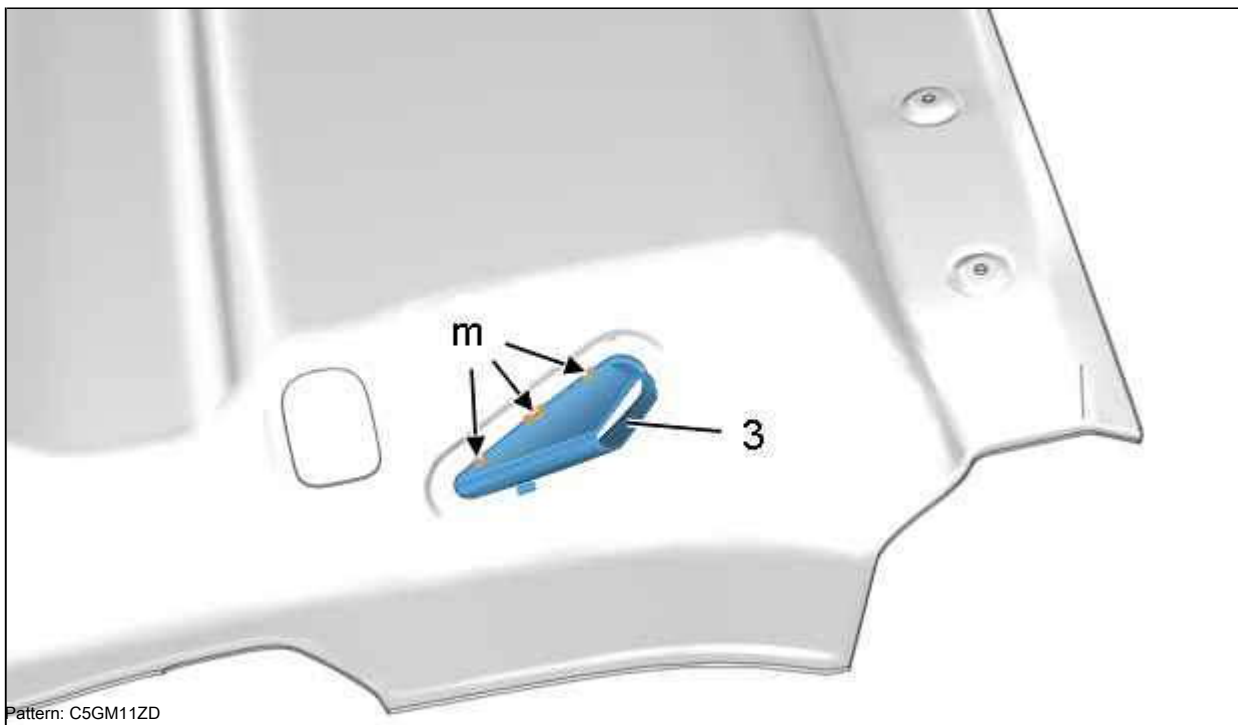
Detach the decorative strip (7) (at "l"); Using the tool [1]. Remove the decorative strip (7).

Repeat the operation for other overlays.



Pattern: C5GM11YD

Separate: Lock (8) of the trim (3) (As shown by the arrow). Remove: Retainer (8).



Pattern: C5GM11ZD

Detach: Decorative element (3) (in "m"); Using the tool [1]. Remove the decorative strip (3).

4. Installation

ATTENTION : Be sure to replace defective fasteners.

ATTENTION : The roof trim should be handled with care to protect it from damage.

ATTENTION : If damaged, always replace the roof lining.

Installation is carried out by performing the removal operations in the reverse order. Reconnect the battery.

NOTE: Clean roof trim with soap and water (if necessary).

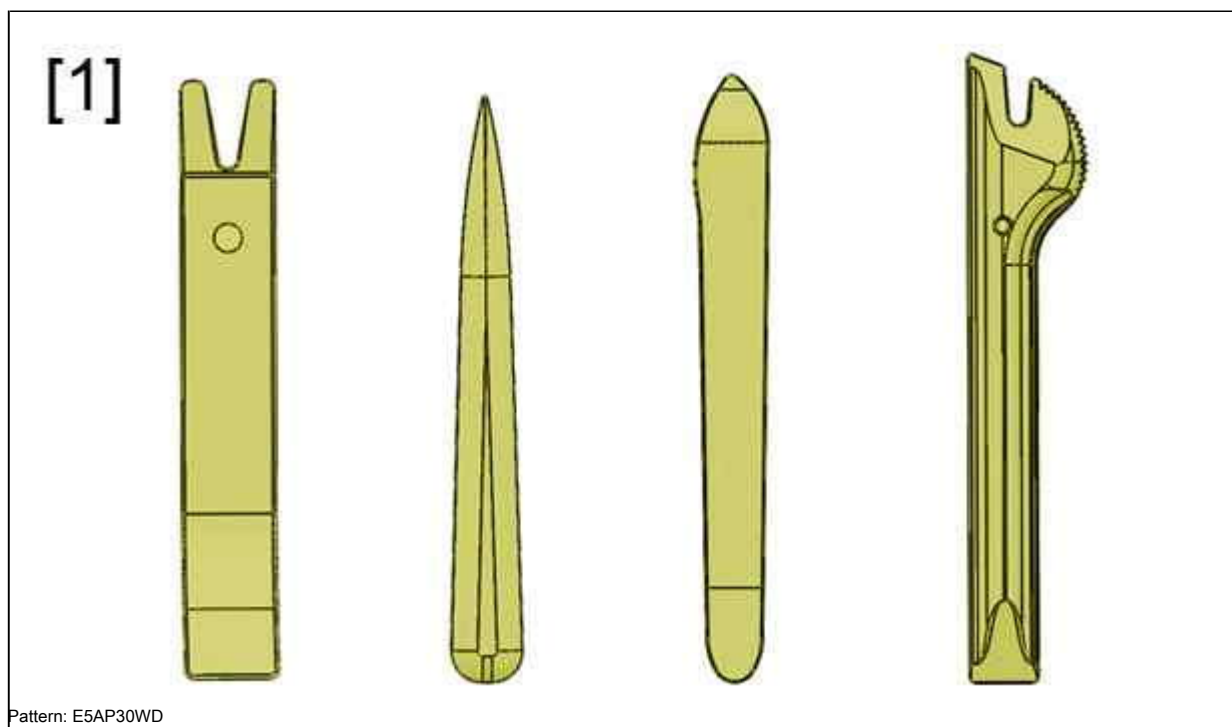
Check the operation of the various equipment.

REMOVAL INSTALLATION: CEILING TRIM (MULTI-FUNCTIONAL)

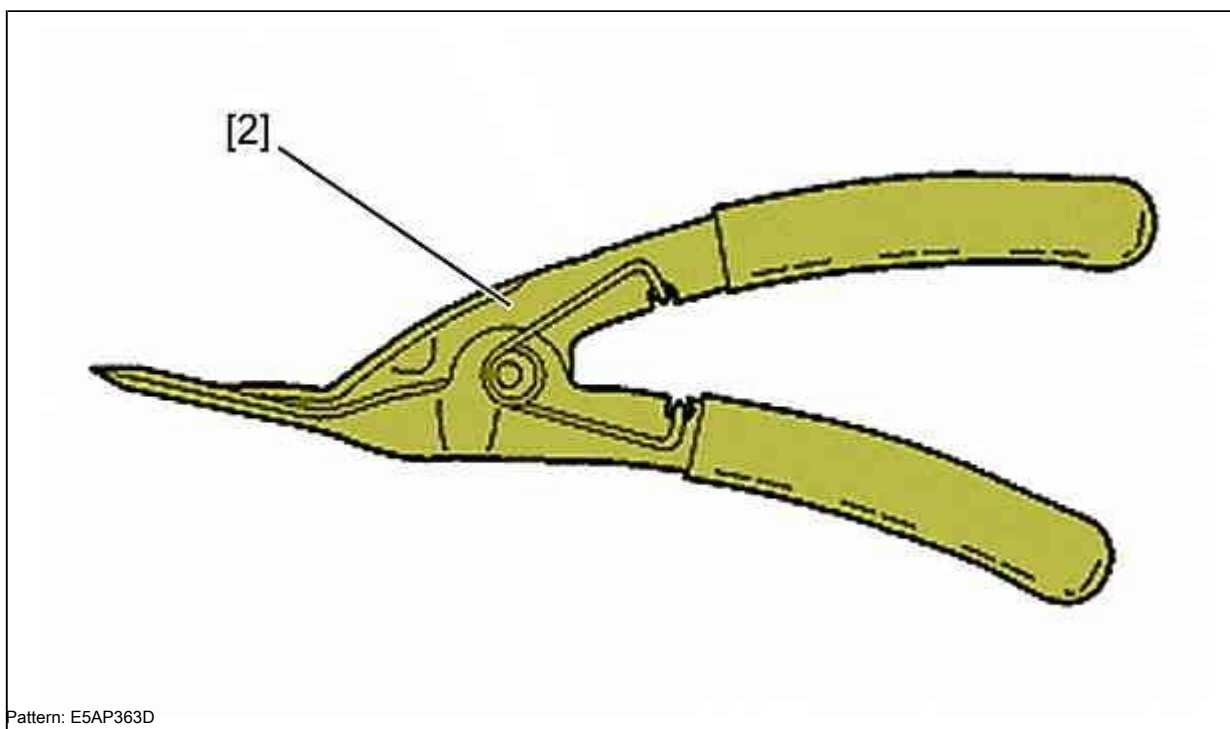
MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim removal tool () .1350ZZ.



[2] Extractor for plastic pins () .1311.

2. Preliminary operations

Disconnect the battery

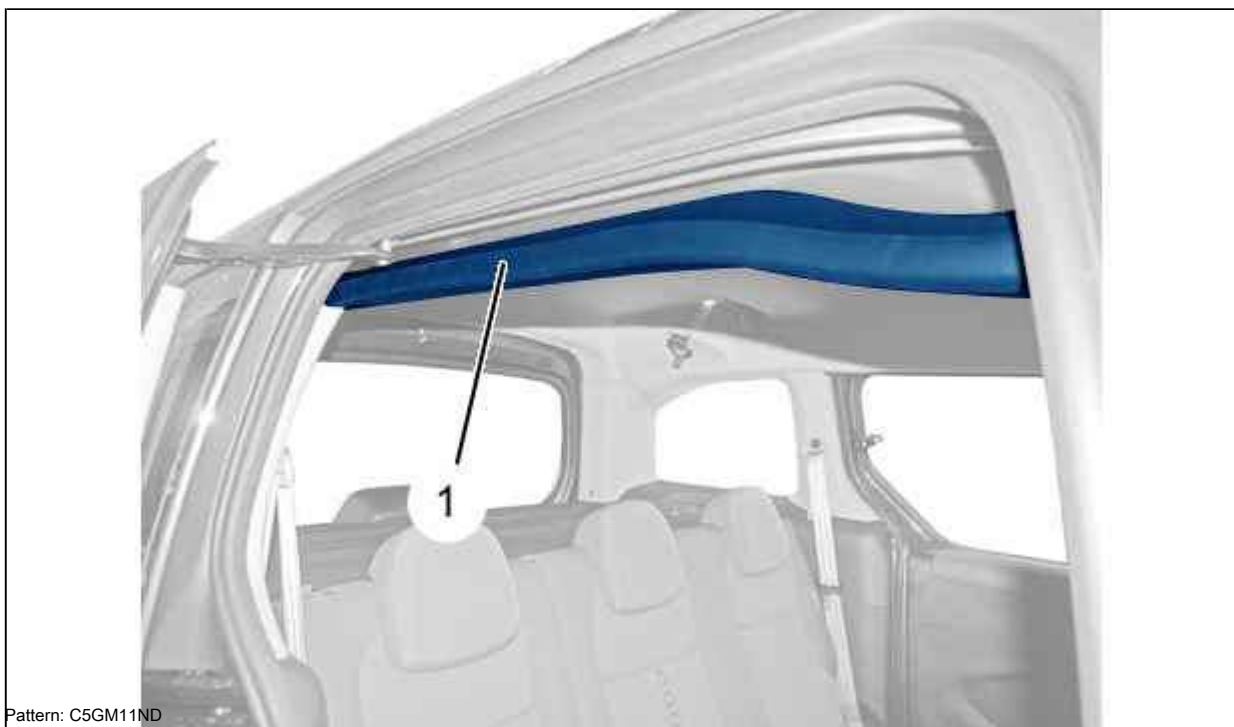
Remove:

- **Upper shelf** (depending on configuration) ...
- **Upholstery of pillars of windscreen openings**
- **B-pillar upper padding**
- **Rear pillar covers**
- **Rear pillar top pads**
- **Roof box** (Multifunctional) (depending on equipment)
- **Upper chamber**
- **Rear shelf**

Partially remove:

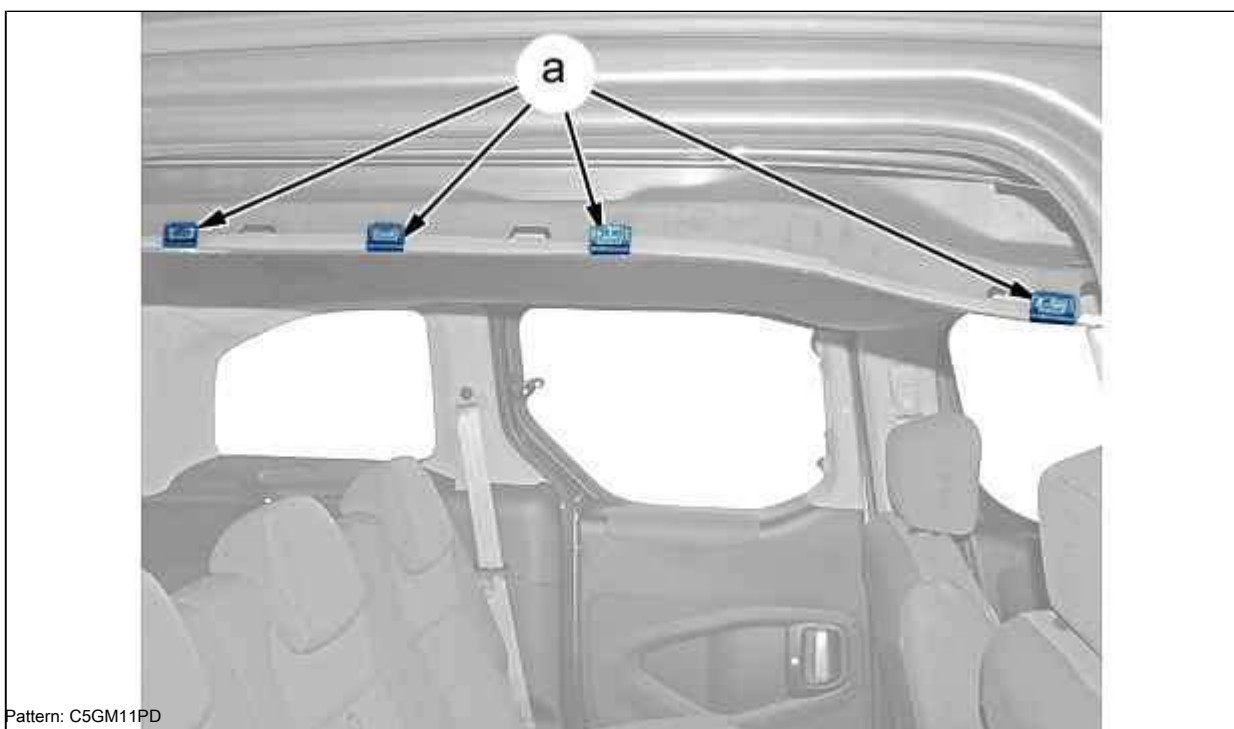
- **Boot lid seal** (Top part)
- **Door seals** (Top part)

3. Removal



NOTE: Do the same on the other side.

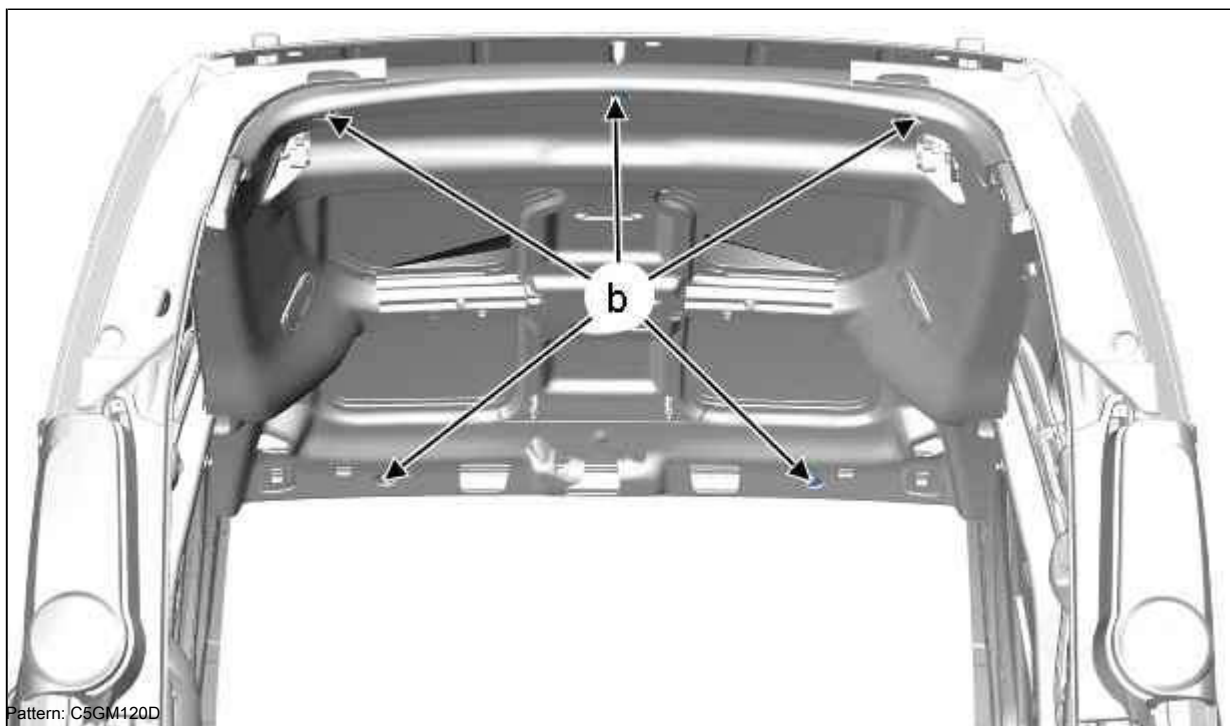
Remove the seal (1).
Remove the gasket (1).



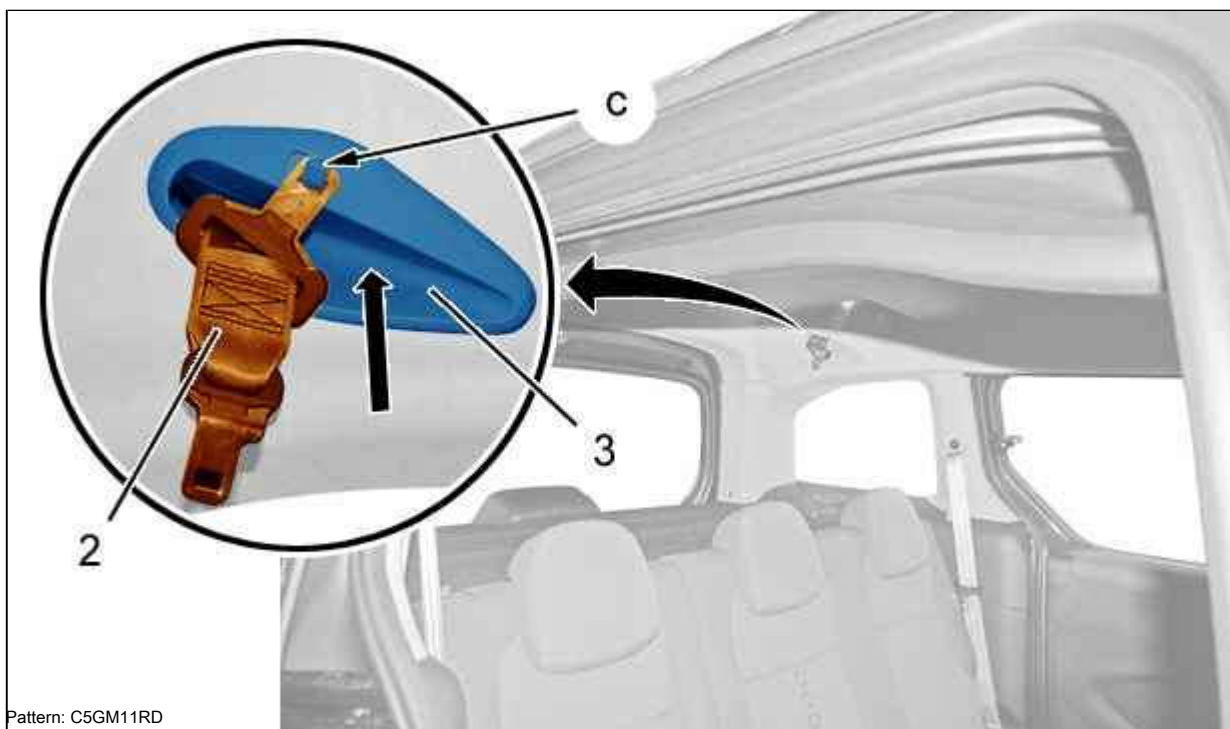
NOTE: Do the same on the other side.

Disconnect: the clips (at "a"); Using the tool [1].

Remove the fasteners.

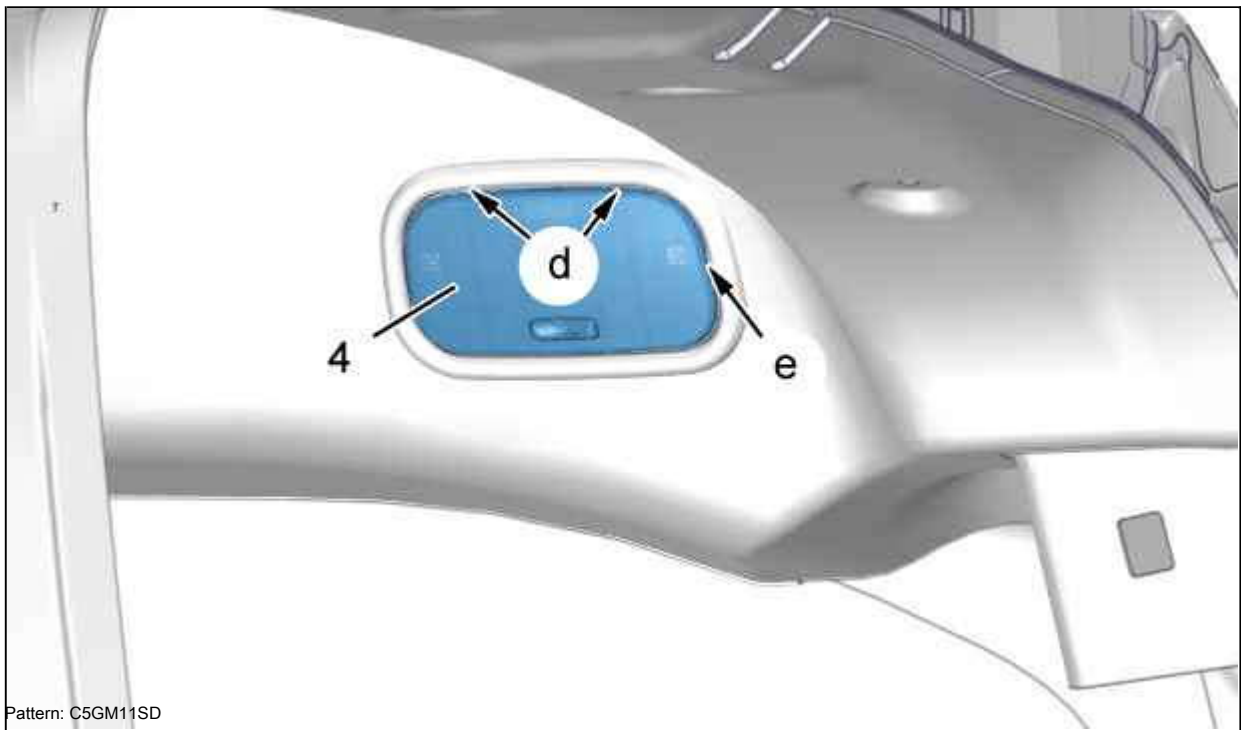


Disconnect: the plastic pins (at "b"); Using the tool [2].



Disconnect the center seat belt (2) (at "c").

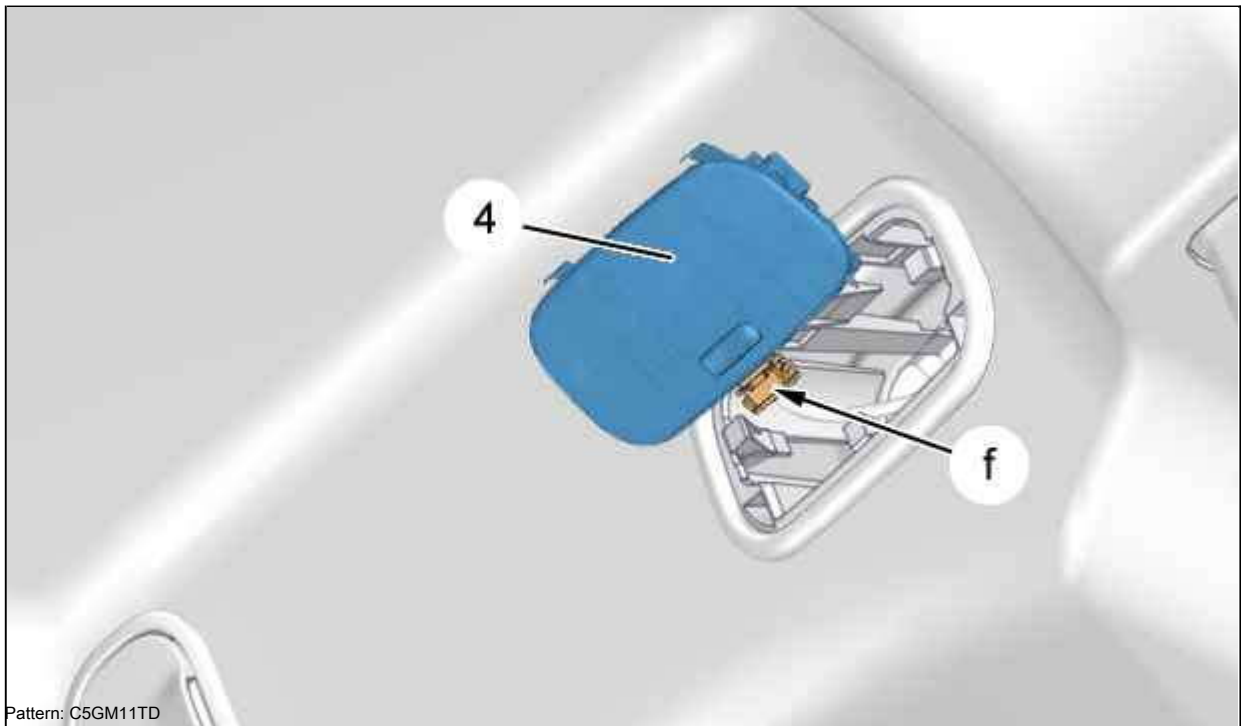
Pass the center harness (2) through the pad (3) (according to the arrow).



Disconnect:

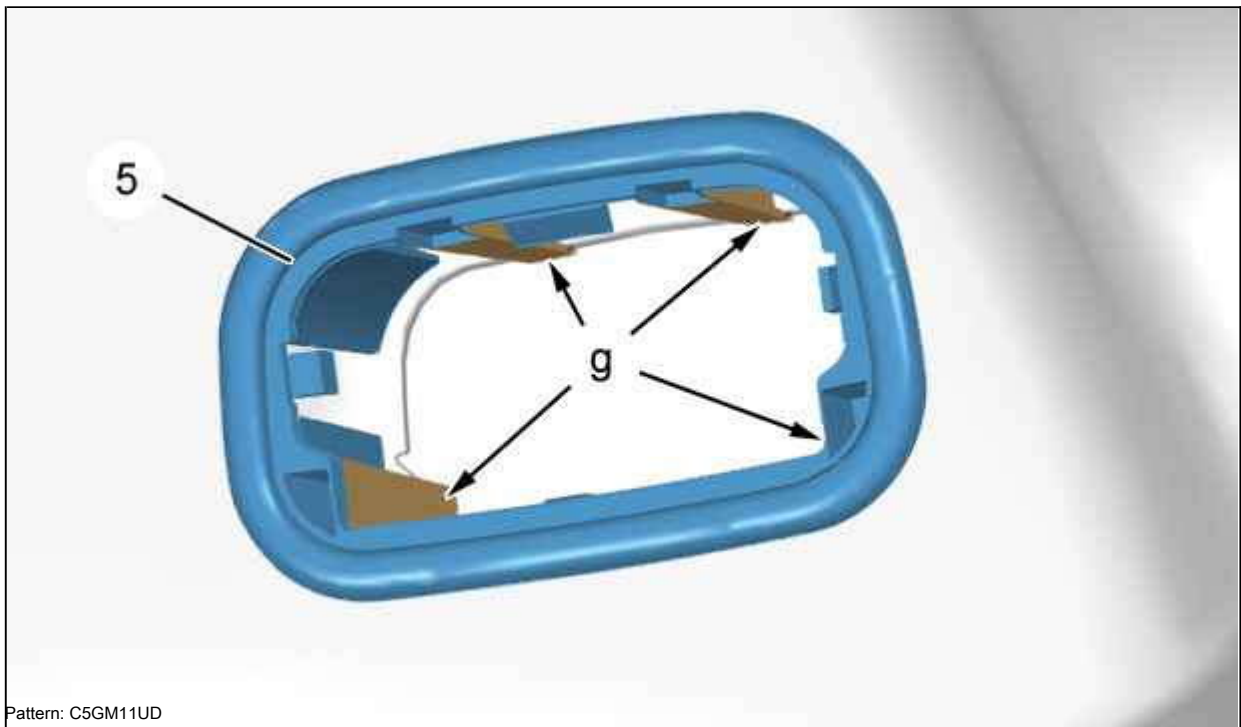
- Trunk lamp (4) (at "e"); Using the tool [1]
- Retainer spring (in "d"); Using a small thin flat screwdriver

Detach: Trunk lamp (4).

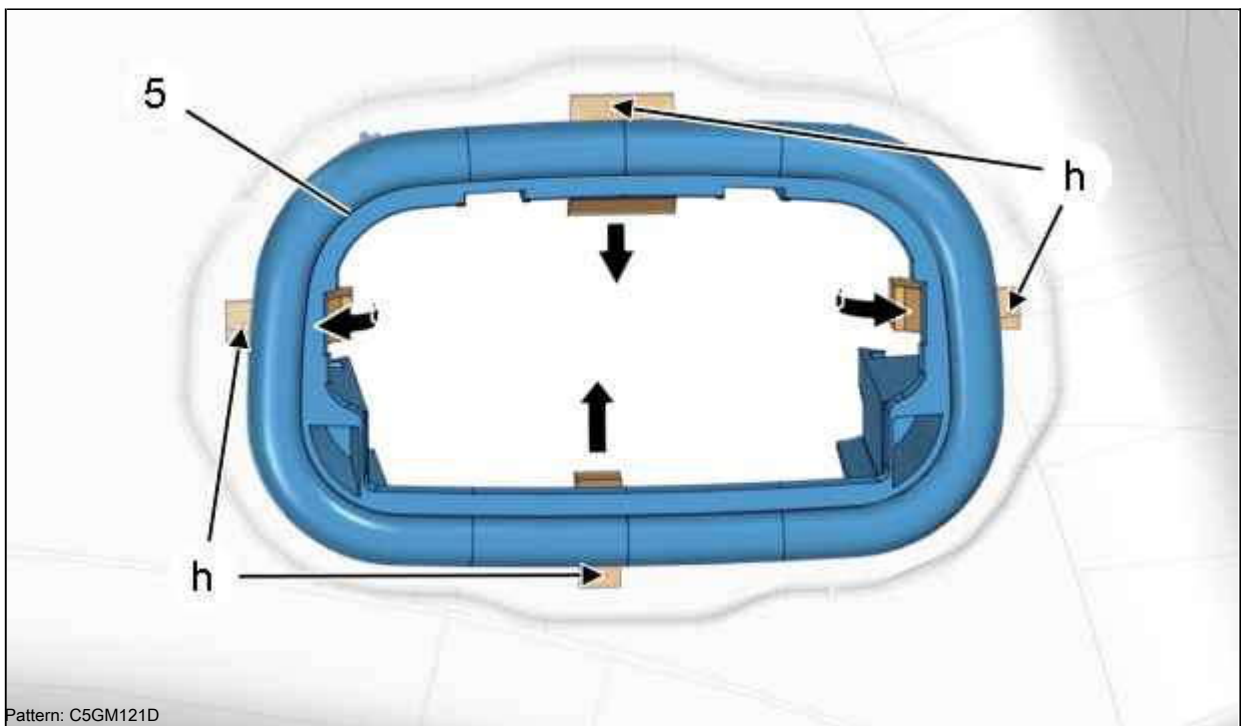


Disconnect the connector (at "f").

Remove the luggage compartment lamp (4).

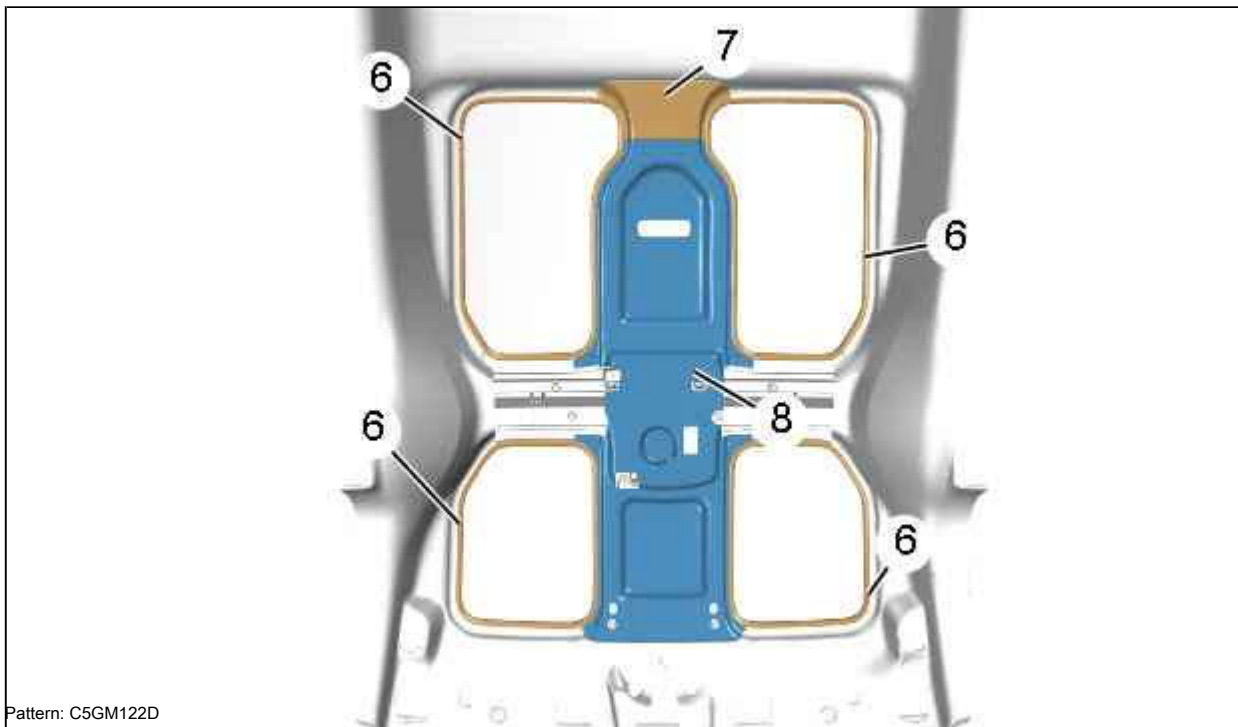


Disconnect: Luggage compartment lamp support (5) (at "g"); Using the tool [1].



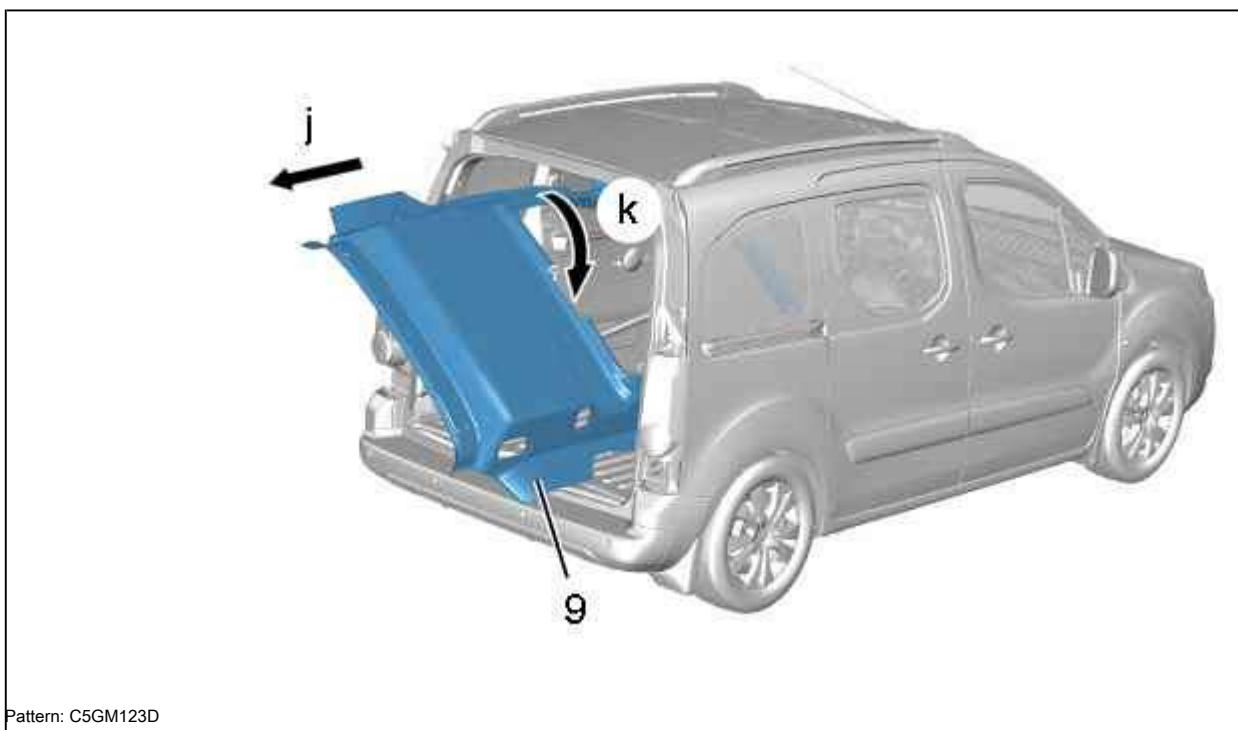
Disconnect: Luggage compartment lamp support (5) (at "h") (as shown by arrows); Using the tool [1].

Remove: Luggage compartment light support (5).



Detach Remove the decorative trim (7); Using the tool [1]. Remove: the seals (6).

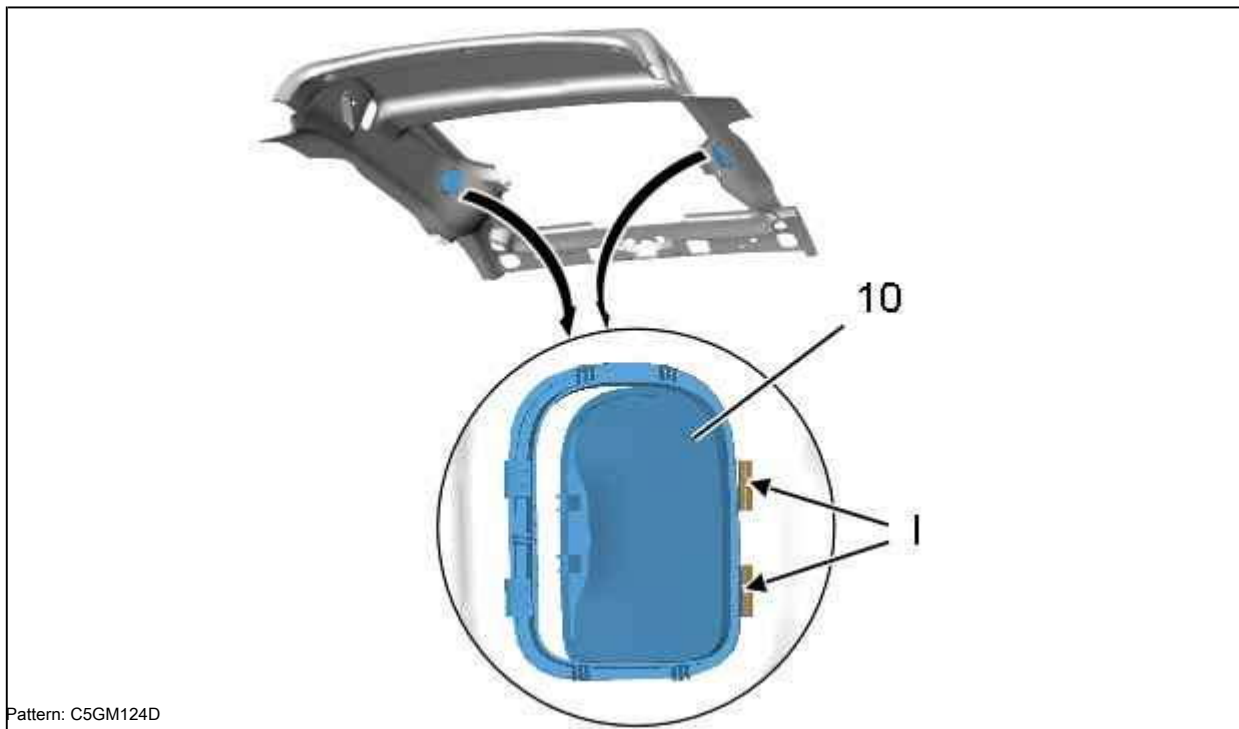
Detach Remove: Center trim (8) (Multi-function); Using the tool [1].



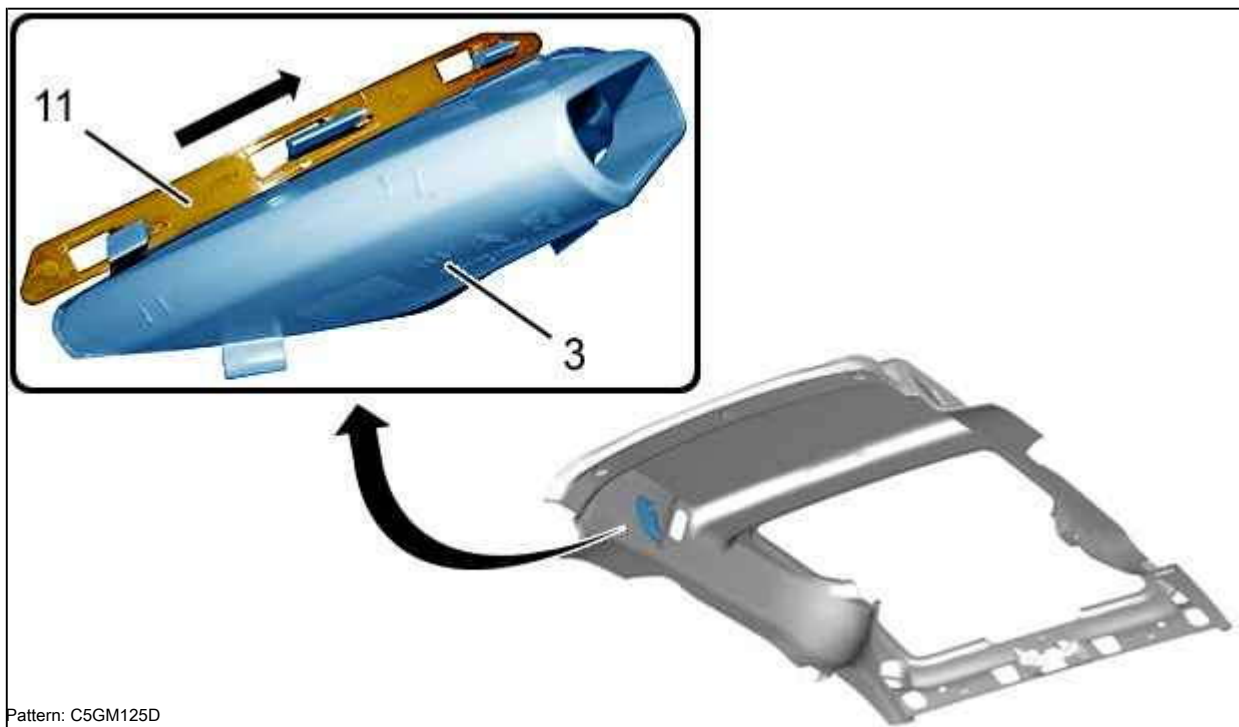
ATTENTION : In the case of removal and subsequent installation of the roof trim panel, make sure that no folds are formed or replace the upholstery in case of external defects.

Fold down the backrests (front and rear).

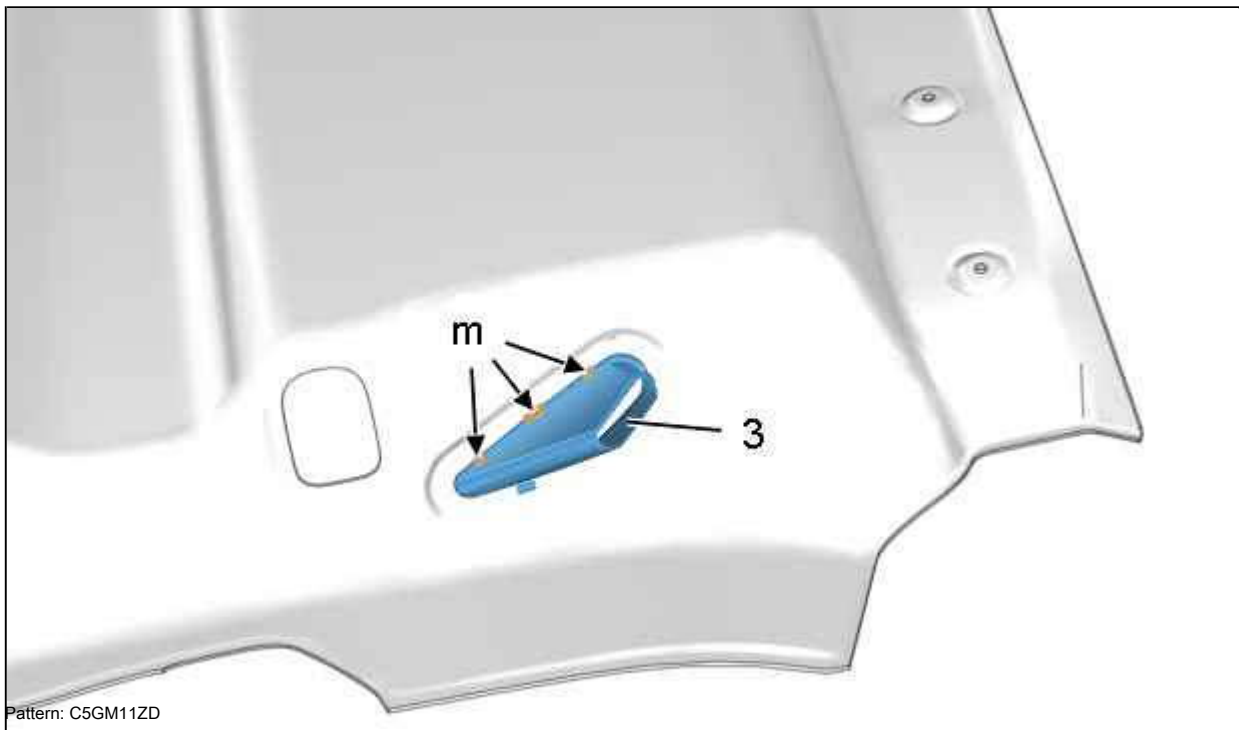
Rotate the multifunctional roof trim (9) (As shown in "k"). Separate: Multifunctional roof trim (9) (As shown in "j"). Remove: Multifunctional roof trim (9).



Detach: Decorative element (10) (at "I"); Using the tool [1]. Remove: Decorative element (10).



Separate: the lock (11) of the trim (3) (according to the arrow). Remove: Retainer (11).



Detach: Decorative element (3) (in "m"); Using the tool [1]. Remove: Decorative element (3).

4. Installation

ATTENTION : Be sure to replace defective fasteners.

ATTENTION : The roof trim should be handled with care to protect it from damage.

ATTENTION : If damaged, always replace the roof lining.

Installation is carried out by performing the removal operations in the reverse order. Reconnect the battery.

NOTE: Clean roof trim with soap and water (if necessary).

Check the operation of the various equipment.

REPLACEMENT: FRONT STAND AMPLIFIER

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

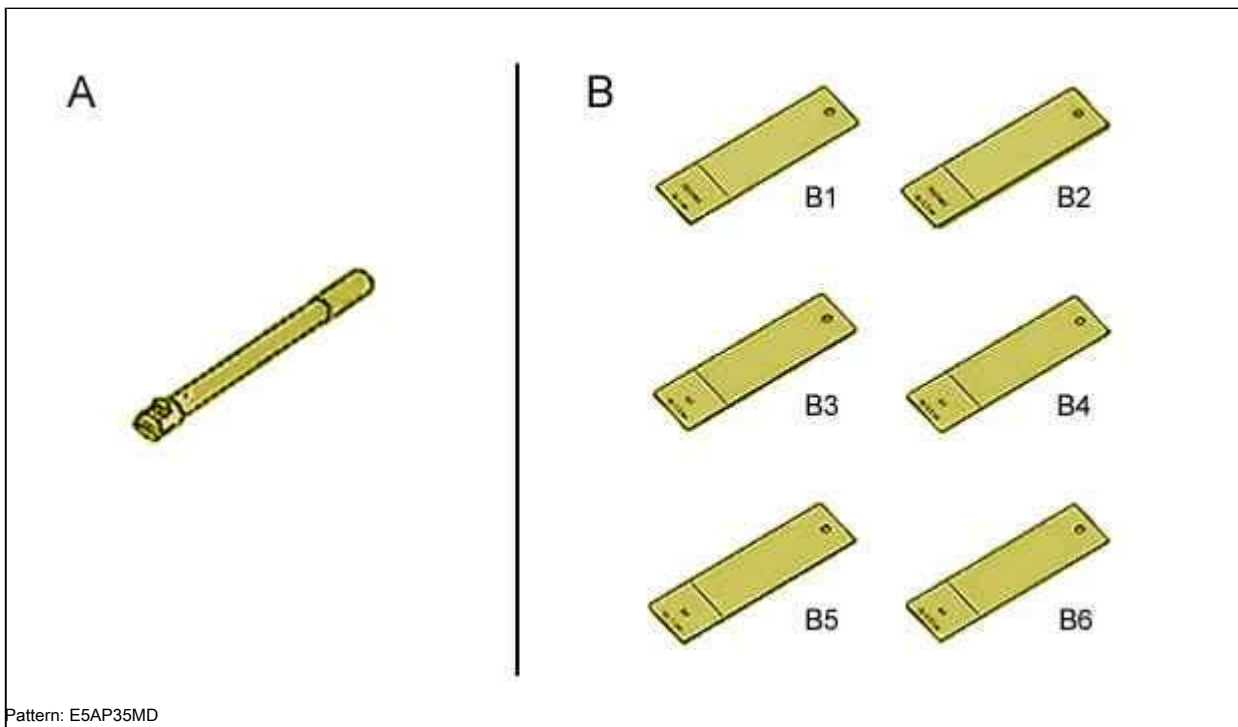
Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

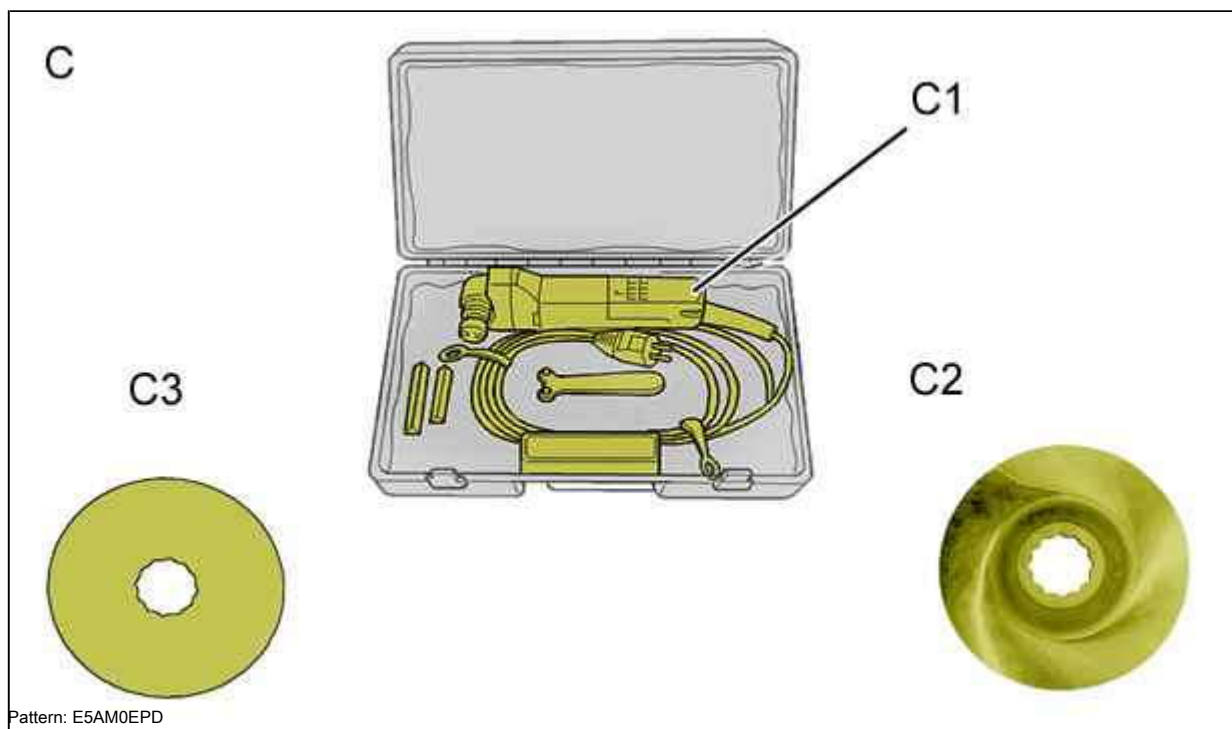
2. Recommended equipment

Operate using one of the following systems:

- Electronic measuring system
- Mechanical measuring system
- Specific head MZ (Special tool)
- Control template

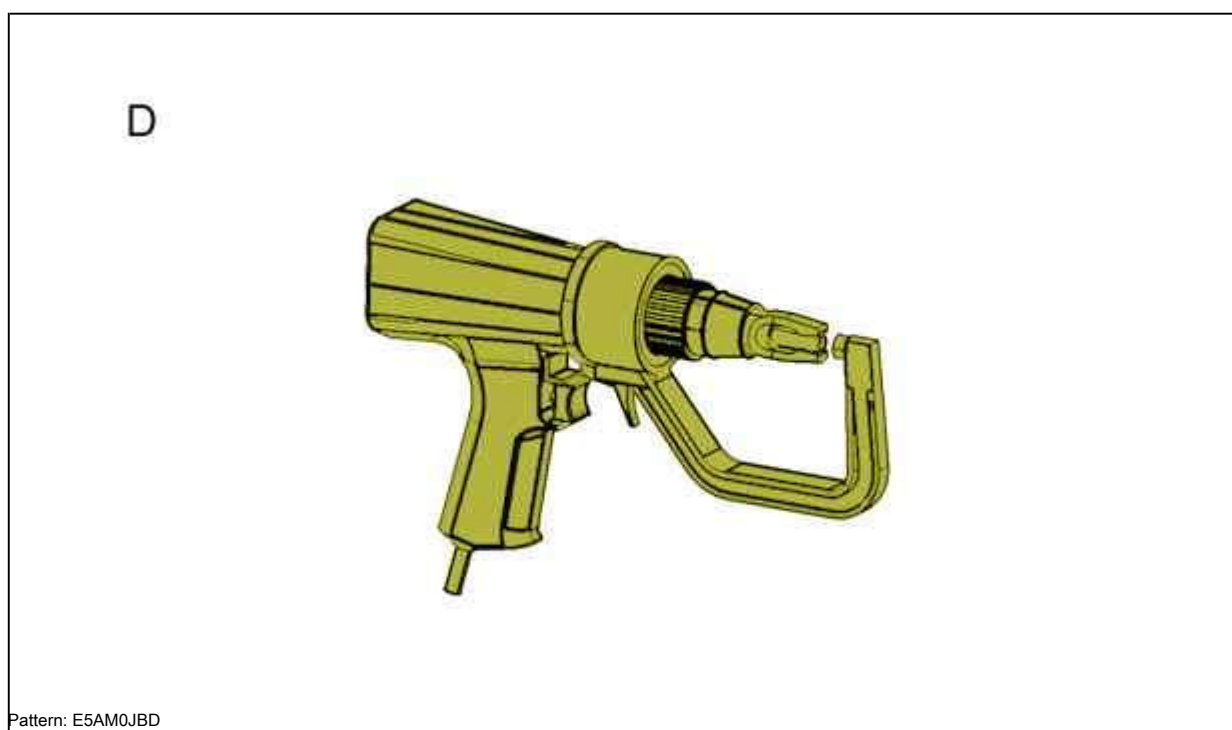


Equipment for checking the quality of electric welding points () .1366ZZ. Test gauge for the quality of electric welding dots () .1366B.



Label Number (reference)

"C"	FEIN electric cutter set
"C1"	Grindstone
"C2"	Electric knife
"C3"	radial hole nut wrench
"C4"	FEIN saw blade with removable hub (reference NC) Blade ° 103
"C5"	



"D" S-shaped drill for drilling weld spots.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace:

- Side amplifier
- From the salon



4. Localization: A-pillar amplifier

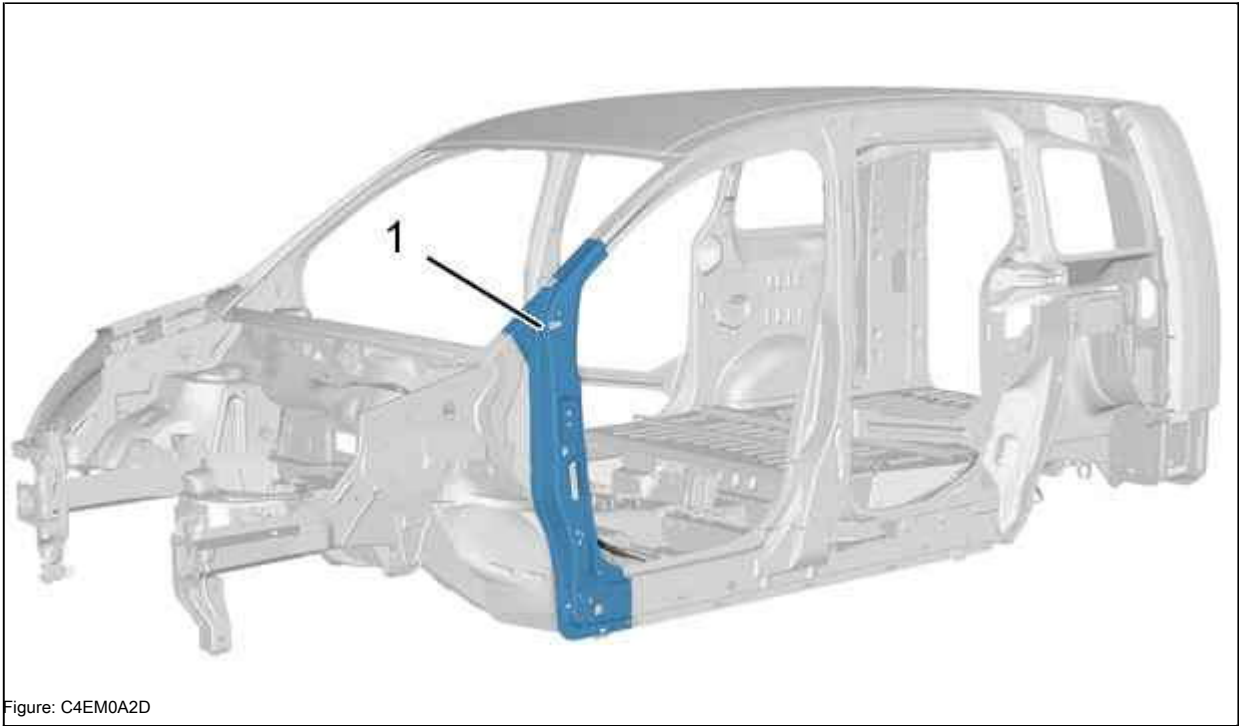
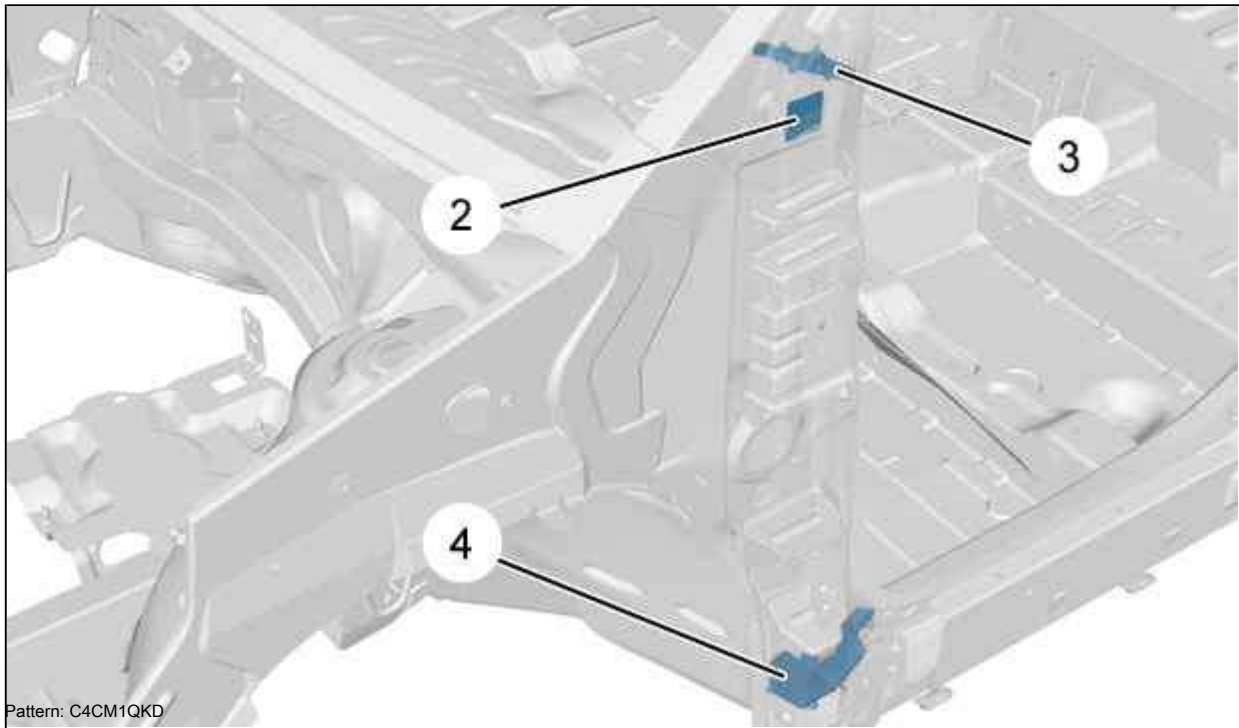


Figure: C4EM0A2D

Label Designation

(1)	Front pillar reinforcement

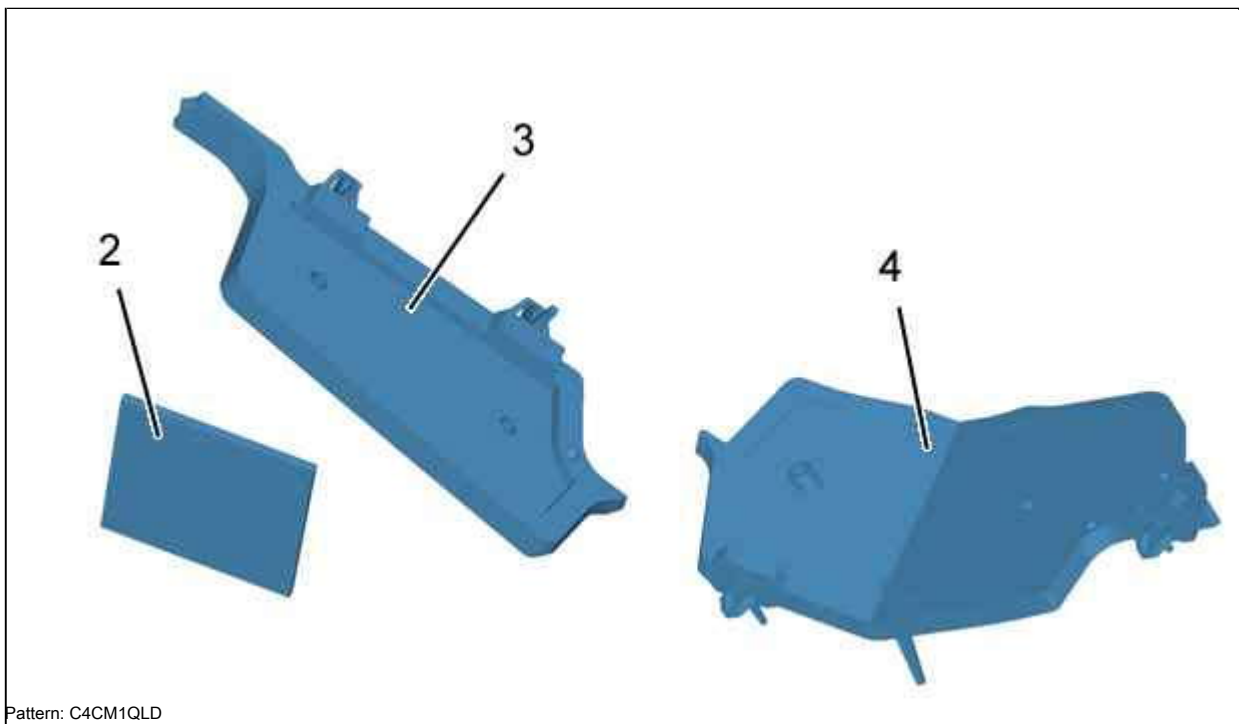
4.1. Location of foam inserts



Label Designation

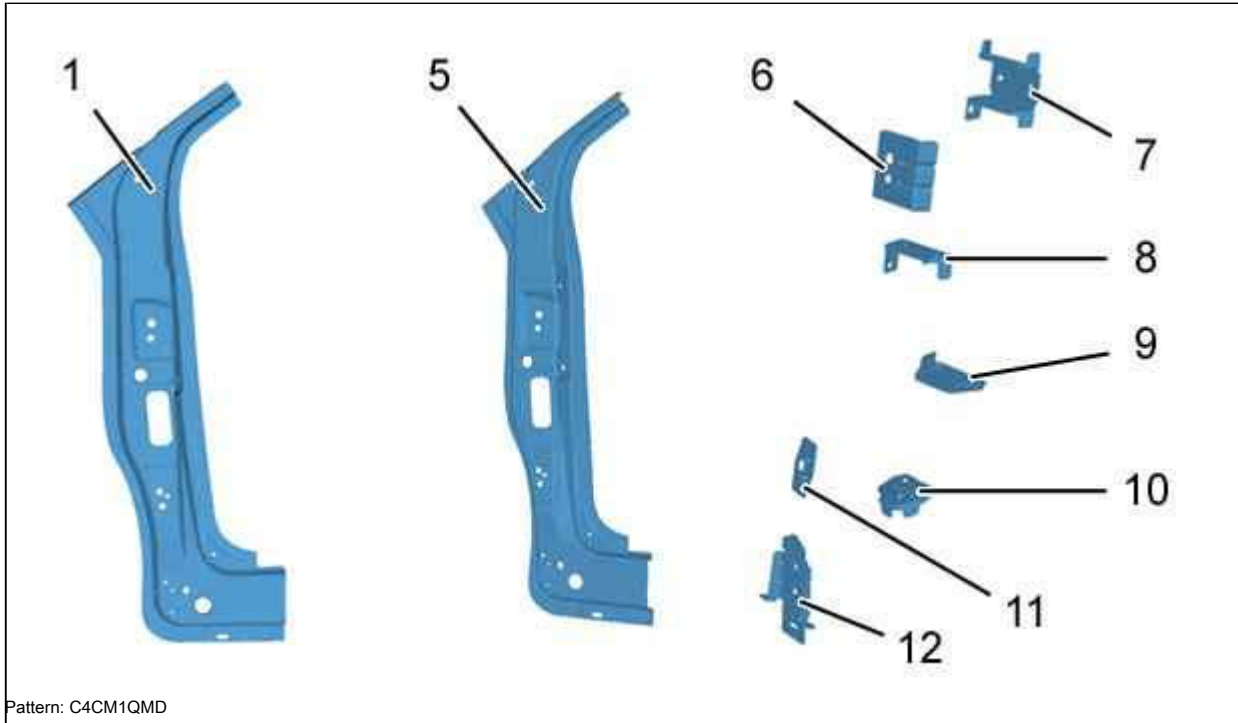
(2)	A-pillar booster top expansion insert Main wiring protection
(3)	
(4)	Foamy front pillar insert

4.2. Foam insert designation



Label Designation

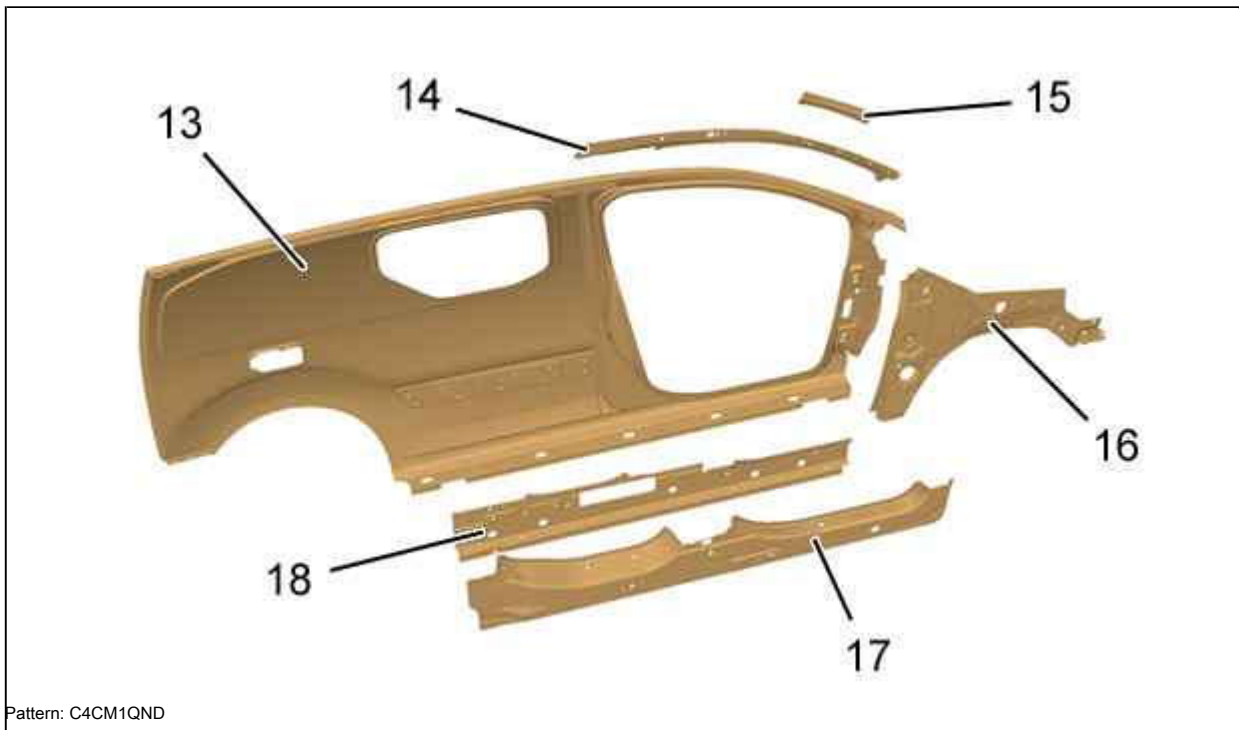
(2)	A-pillar booster top expansion insert Main wiring protection
(3)	
(4)	Foamy front pillar insert

5. Identification: A-pillar amplifier**5.1. Name of main spare parts****Label Designation****Thickness (mm) Nature / classification**

(1)	A-pillar reinforcement assembly A-pillar reinforcement		
(five)		1.45	HLE
(6)	A-pillar upper hinge reinforcement	1.85	THLE
(7)	Front pillar upper cavity amplifier partition	2.00	THLE
(eight)	Lower partition of the upper hinge	2.00	THLE
(nine)	Upper wall of the lower hinge	2.00	THLE
(ten)	Lower wall of the lower hinge	2.00	THLE
(eleven)	Reinforcement of the hinge of the front pillar	1.95	THLE
(12)	Front jack support	2.50	THLE

ATTENTION : When adjusting the welding machine, take into account the difference in metal thickness.

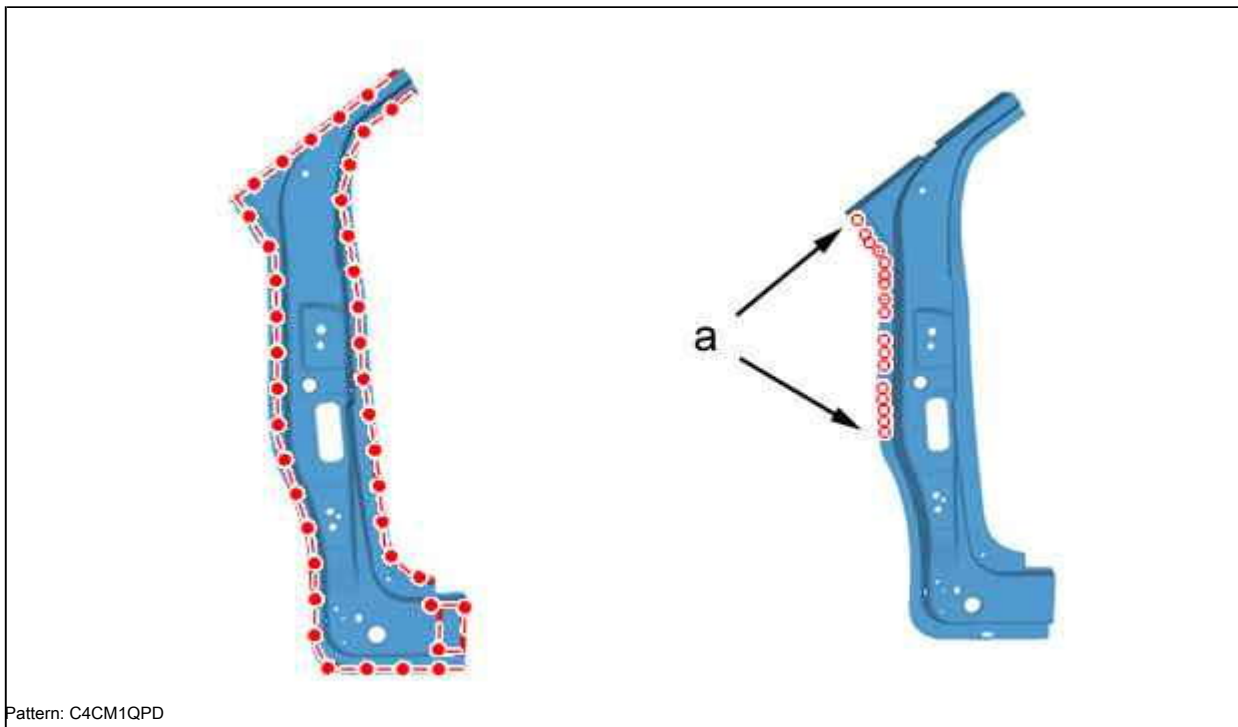
5.2. Identification of parts adjacent to the spare part



Label Designation		Thickness (mm)	Nature / classification
(13)	From the salon	0.77	Mild steel
(fourteen)	Windscreen strut pads Windshield strut base	1.74	UHLE
(fifteen)		1.17	HLE
(sixteen)	Front fender molding	1.17	HLE
(17)	Inner spar	1.74	HLE
(18)	Spar reinforcement	1.47	THLE

6. Preparation of spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

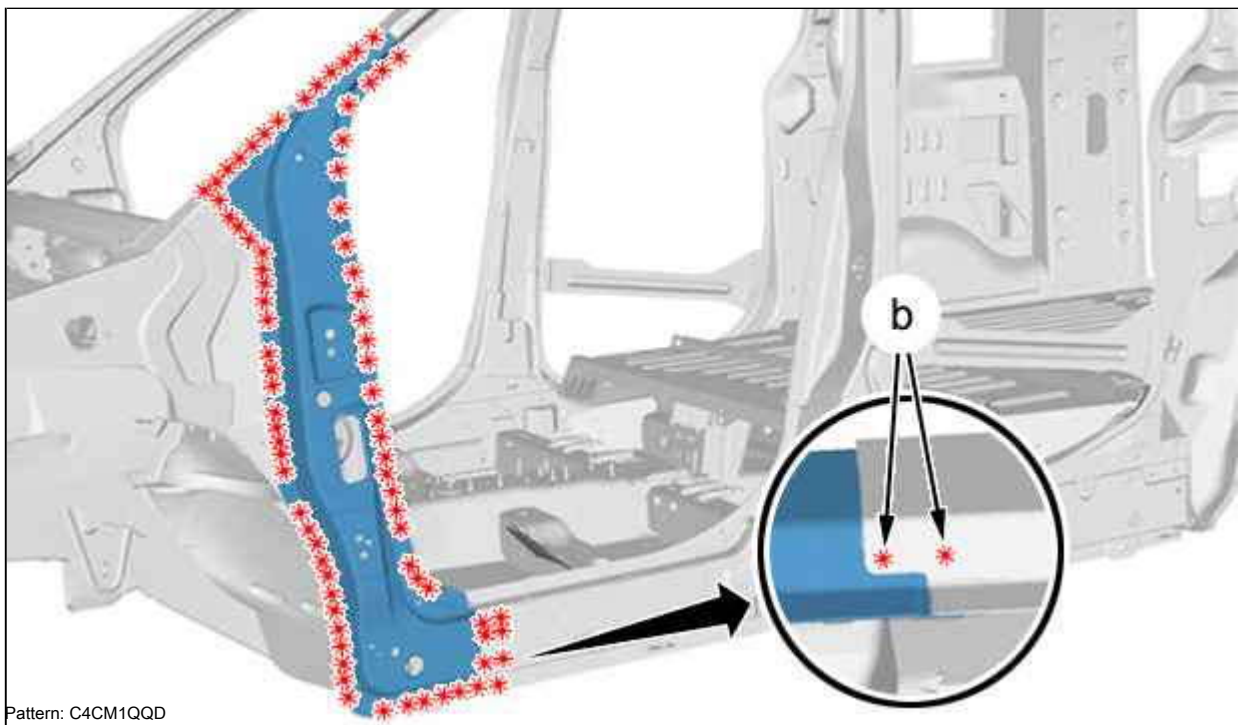


Mark and drill to a diameter of $\varnothing 6.5$ mm (at "a") (8 mm for larger thicknesses) For subsequent spot welding.

Prepare the sockets and protect them with a welding primer (index "C7").

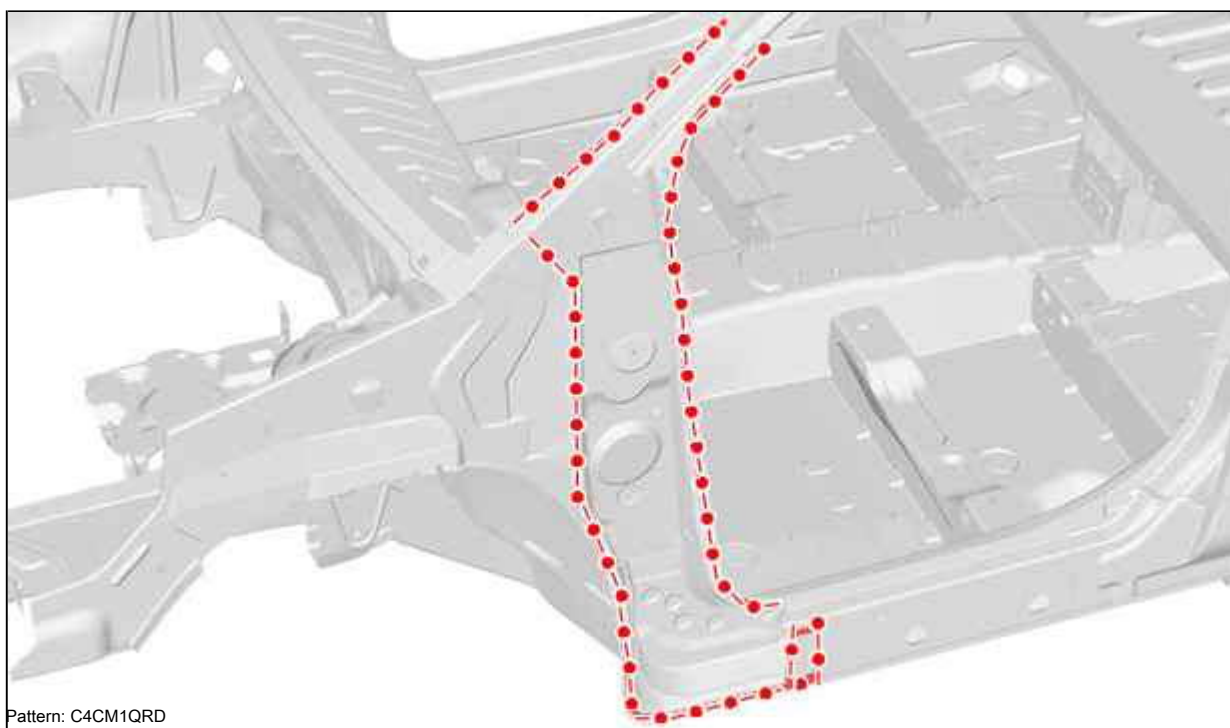
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body



Mark and cut weld points (at "b"). Remove the A-pillar amplifier.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

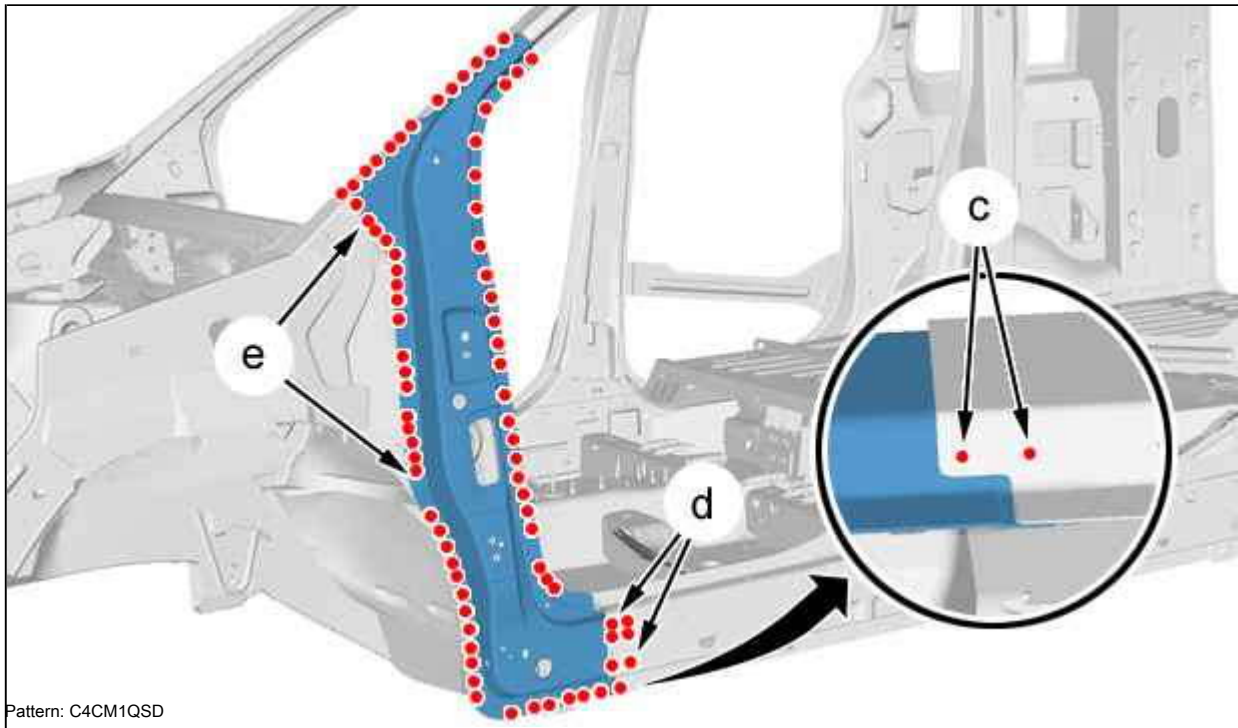
Install the expanding inserts (3), (4). Install the protection of the main wiring harness (2).

9. Fitting

Install the A-pillar reinforcement. Install elements to ensure the fit.

Check clearances and alignment.
Hold the element in place.

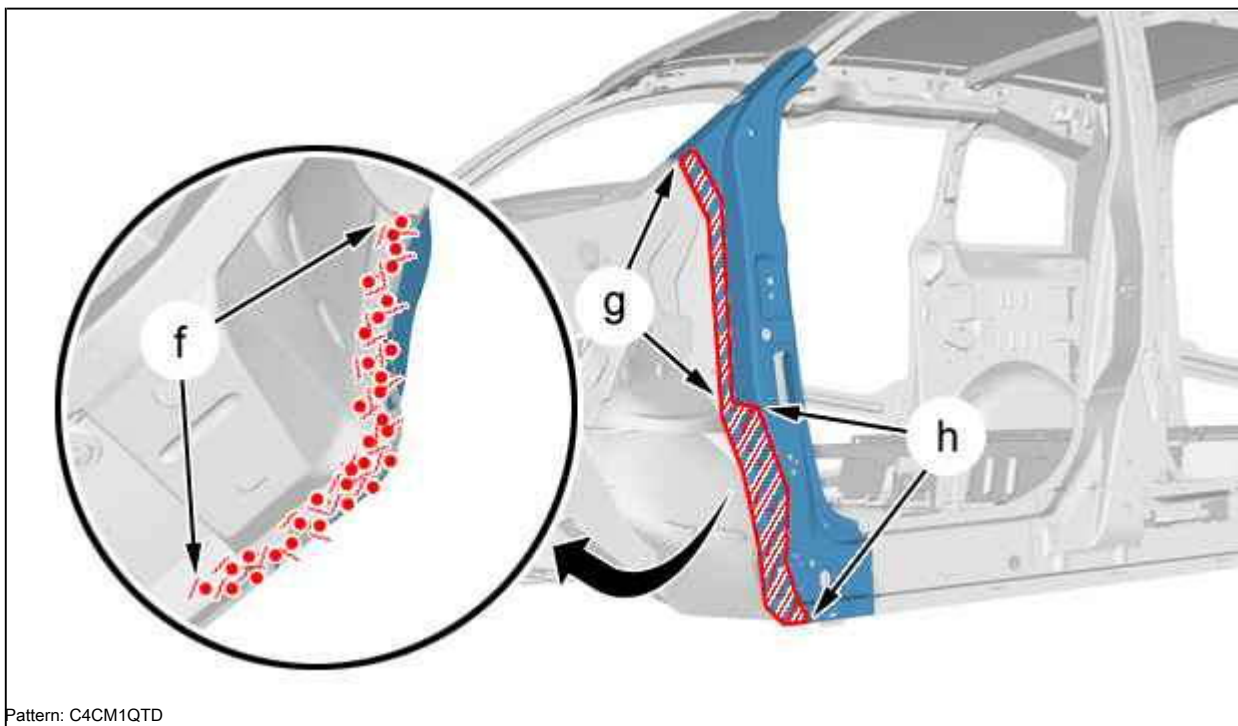
10. Welding



Weld through the holes in the MAG protective gas (in "c"). Weld through the holes in the MAG protective gas (in "d"). Weld through the holes in the MAG protective gas (in "e"). Grind MAG welding points.

Weld with welding points.

11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas. Apply sealant type "A1" (in "f").

Apply a "C4" anti-gravel coating

(in "g", "h").

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: FRONT STRUT REINFORCEMENT ASSEMBLY (PARTLY)

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

This element uses the following types of electric arc welds. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

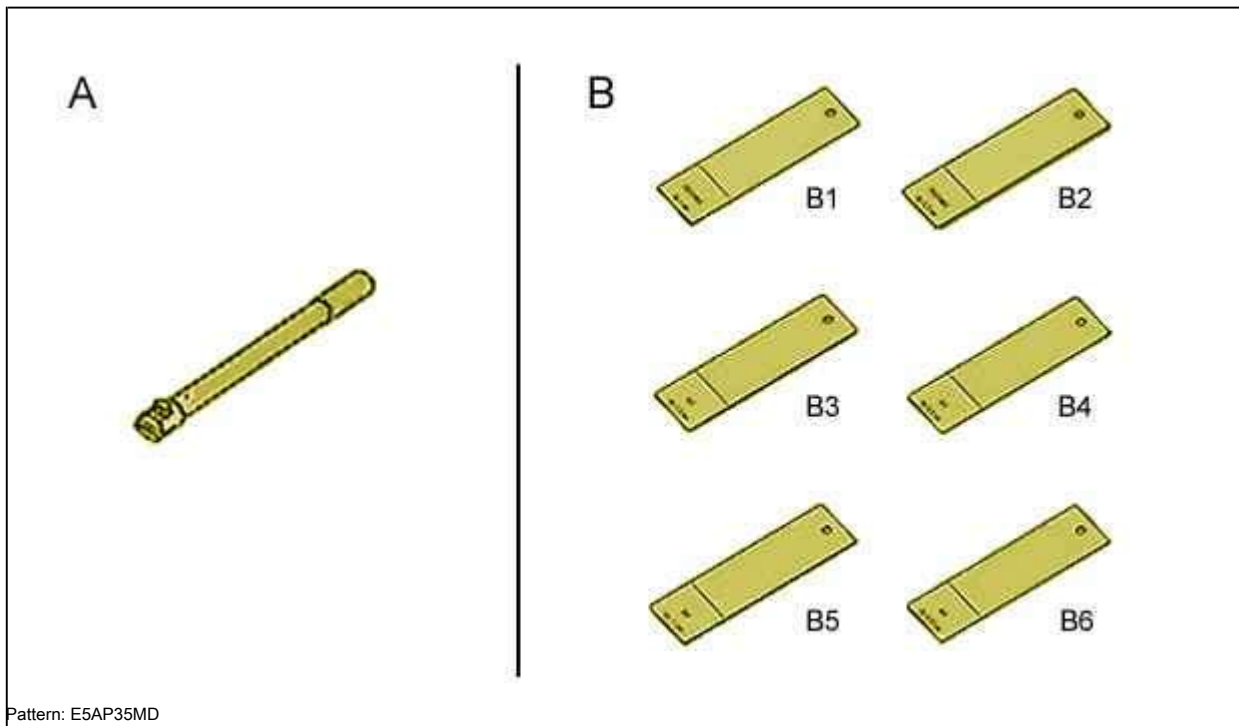
- HLE: High tensile steel
- THLE: Steel with very high tensile strength

NOTE: Partial replacement of the A-pillar reinforcement is only done with bending, any other fitting method is prohibited.

2. Recommended equipment

Works are performed using one of the following measuring systems:

- Electronic measuring system
- Positive measuring system
- Specific head MZ
- Control template
- Front wheel strut longitudinal tilt [1]
- Hot air gun



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.




3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

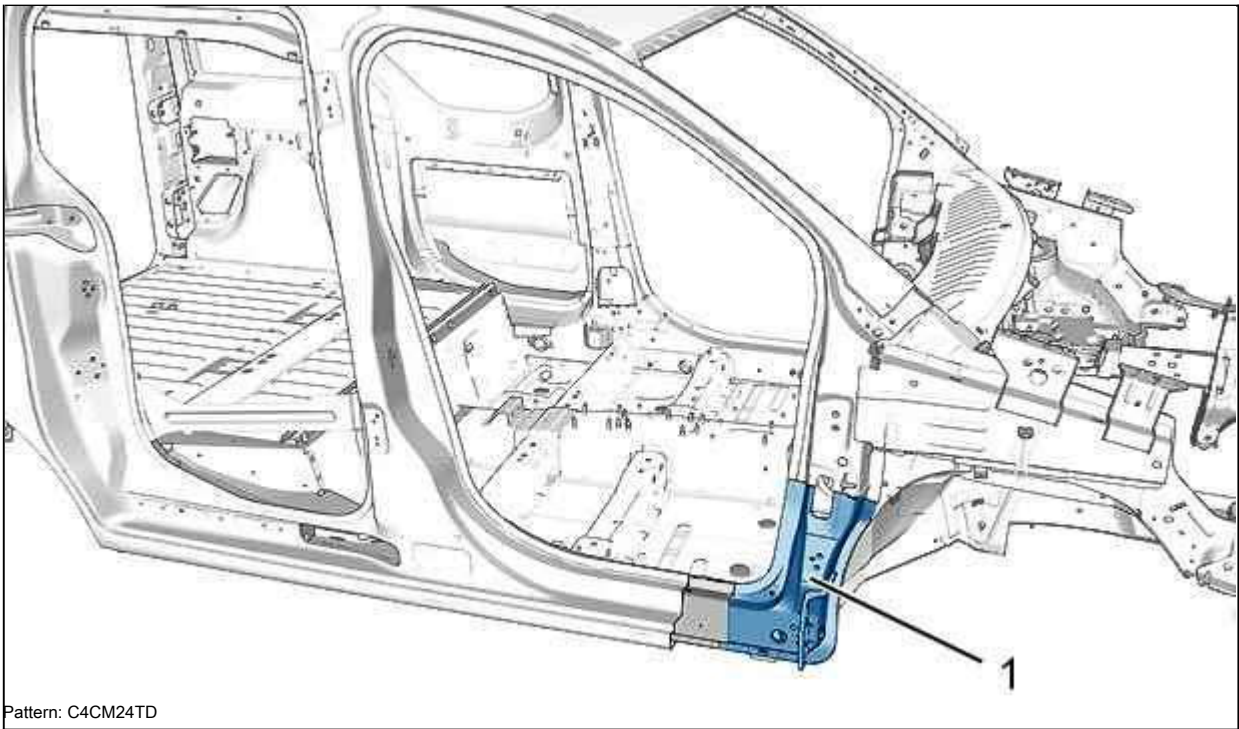
Separate the wire harnesses.

Replace the following items:

- Side panel (Fully or partially) 
- Expanding inserts 
- Spar reinforcement (in whole or in part) 

NOTE: If the A-pillar expanding insert is damaged, it must be replaced.

4. Localization: Reinforcement element of the A-pillar assembly

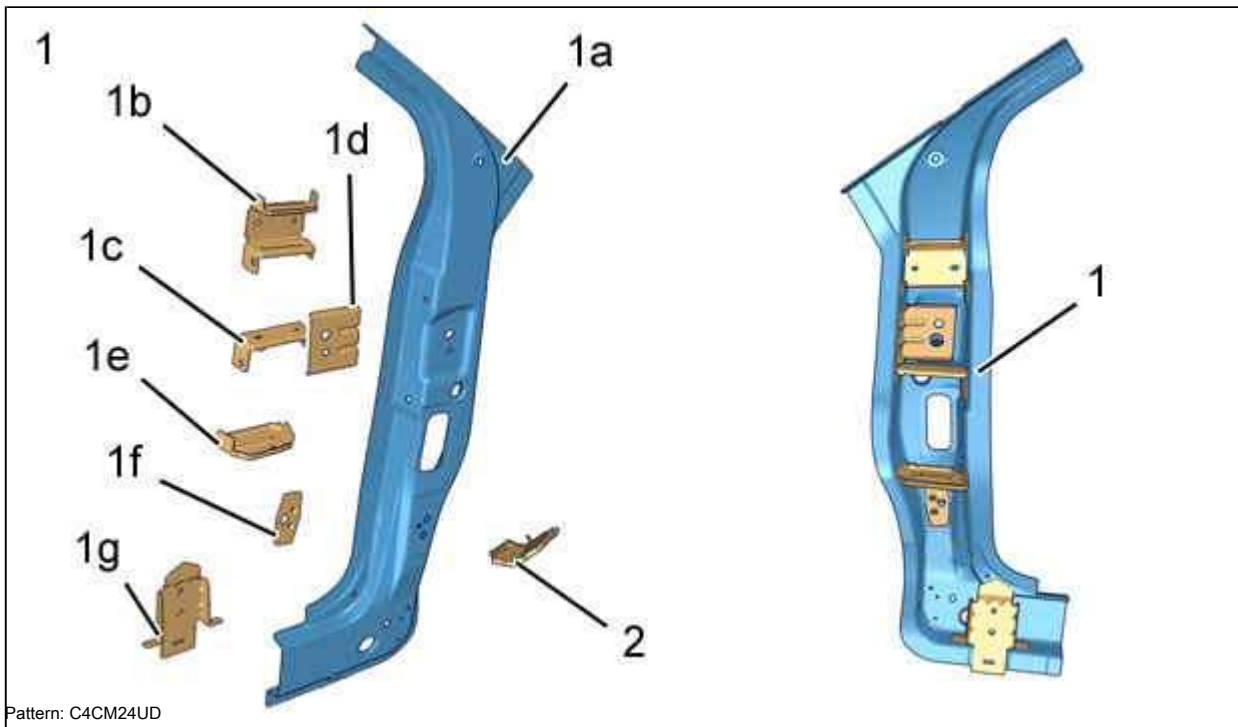


Label Designation

(1)	A-pillar reinforcement assembly

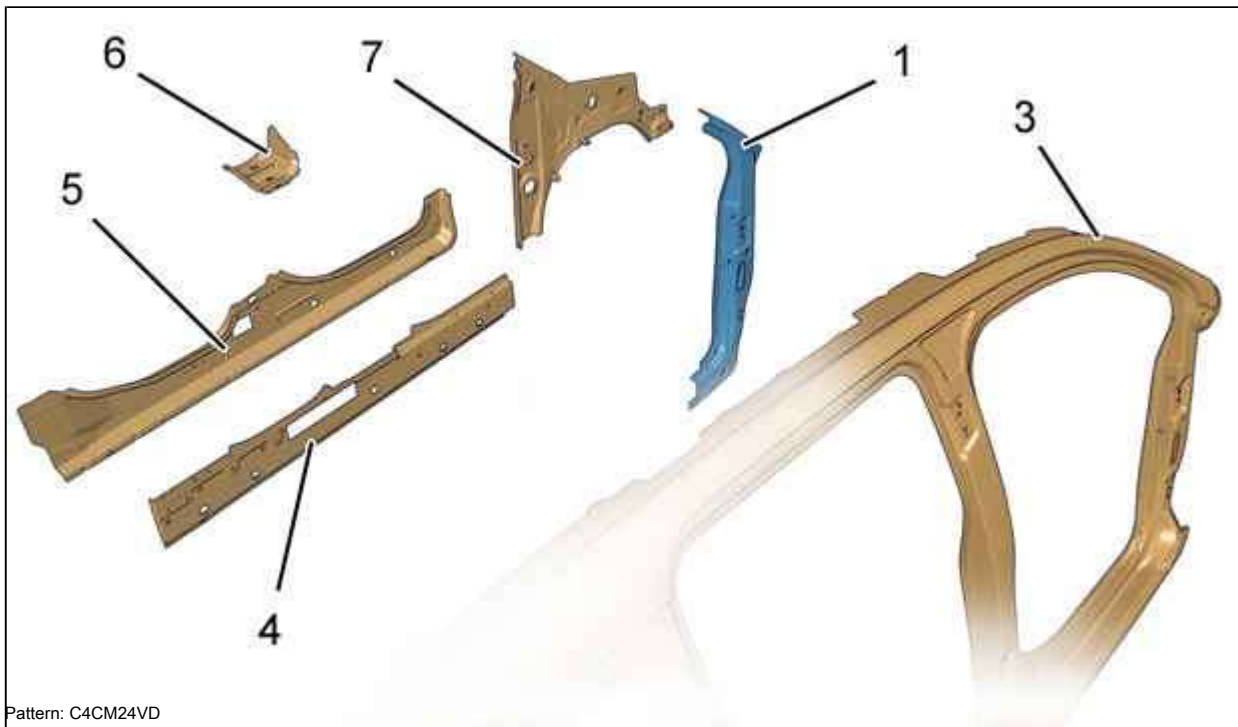
5. Identification of spare parts

5.1. Ingredient: Spare Parts



Label Designation		Thickness (mm) Nature / classification	
(1)	A-pillar reinforcement assembly A-pillar reinforcement		
(1a)		1.45	HLE
(1b)	Upper bulkhead: Upper door reinforcement A-pillar bulkhead	2	THLE
(1c)		2	THLE
(1d)	A-pillar upper reinforcement	1.85	THLE
(1e)	Upper bulkhead: Upper door hinge A-pillar hinge reinforcement	2	THLE
(1f)		1.95	THLE
(1g)	Front jack support	2.5	THLE
Label Designation			
(2)	Expanding insert : Front pillar reinforcement		
	<div> <div></div> <div></div> </div>		

5.2. Identification of adjacent parts: A-pillar reinforcement

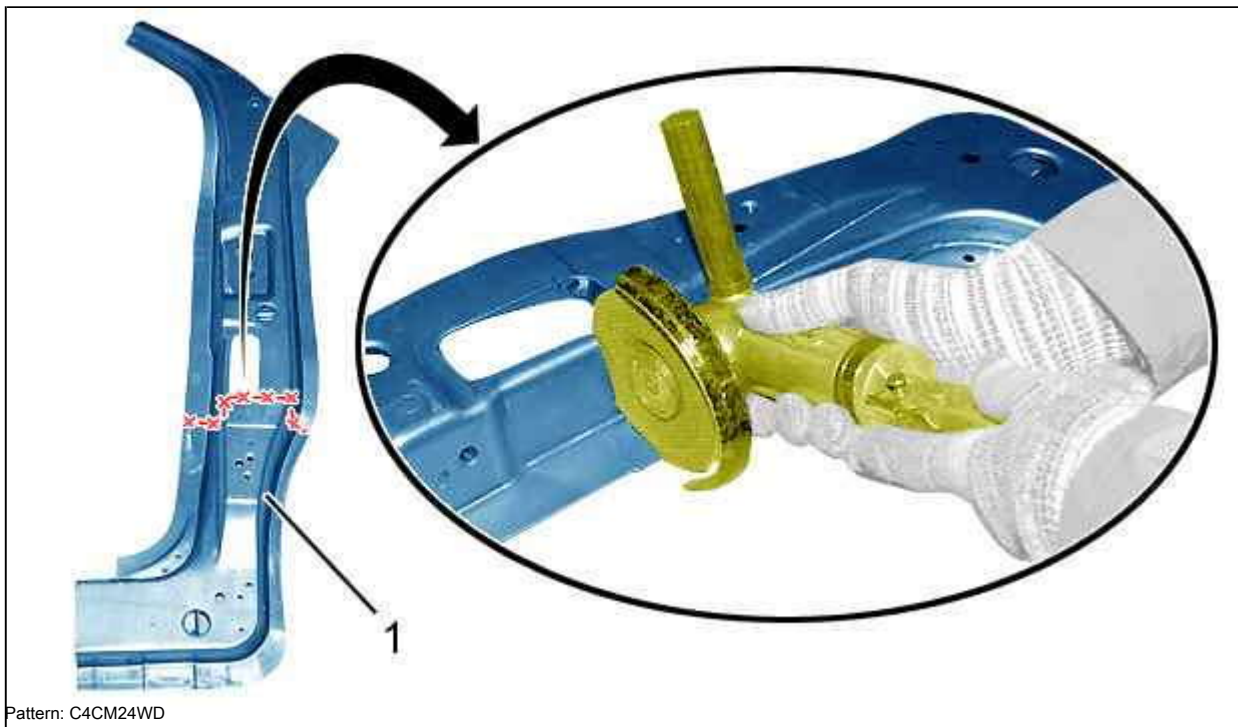


Label Designation		Thickness (mm)	Nature / classification
(1)	Front pillar reinforcement assembly From the passenger		
(3)	compartment	0.72	Mild steel
(4)	Spar reinforcement	1.17	THLE
(five)	Inner spar	1.47	HLE
(6)	Floor spar link	1.47	Mild steel
(7)	Front fender molding	1.17	HLE

6. Spare part preparation: Front pillar reinforcement (Partial)

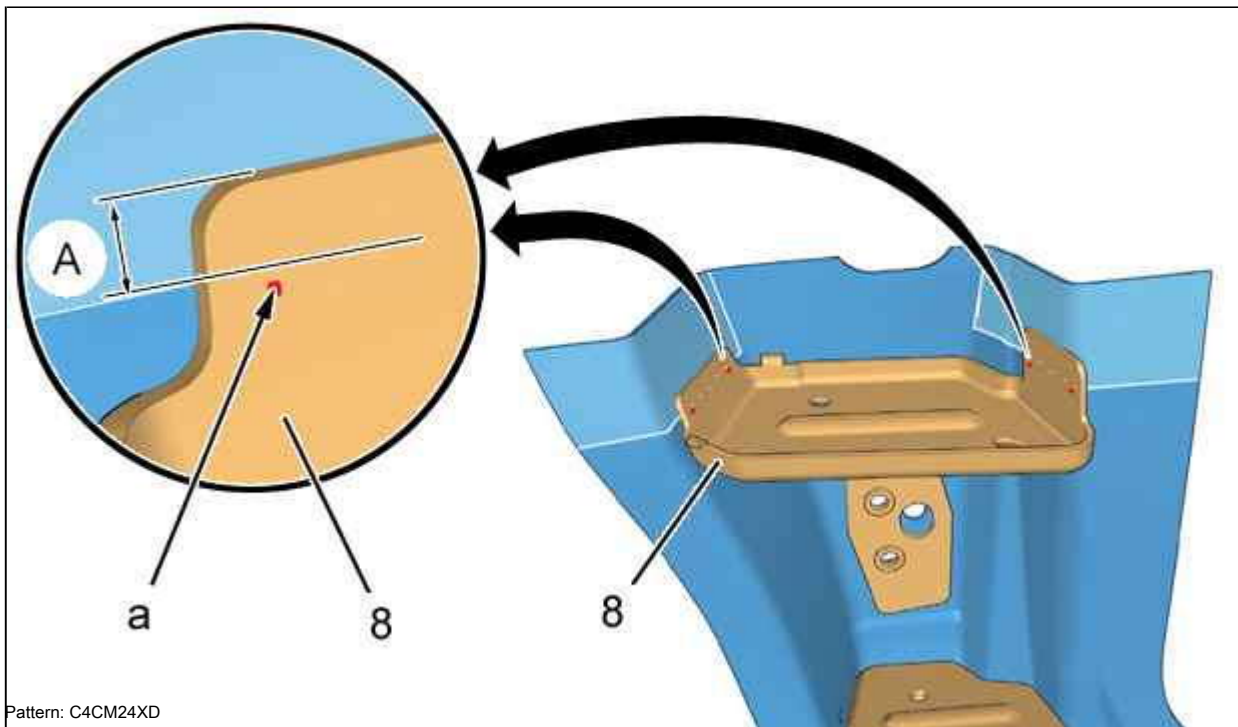
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection

6.1. Preparation: Pre-cut



Mark then cut: A-pillar reinforcement (1) (temporary cut).

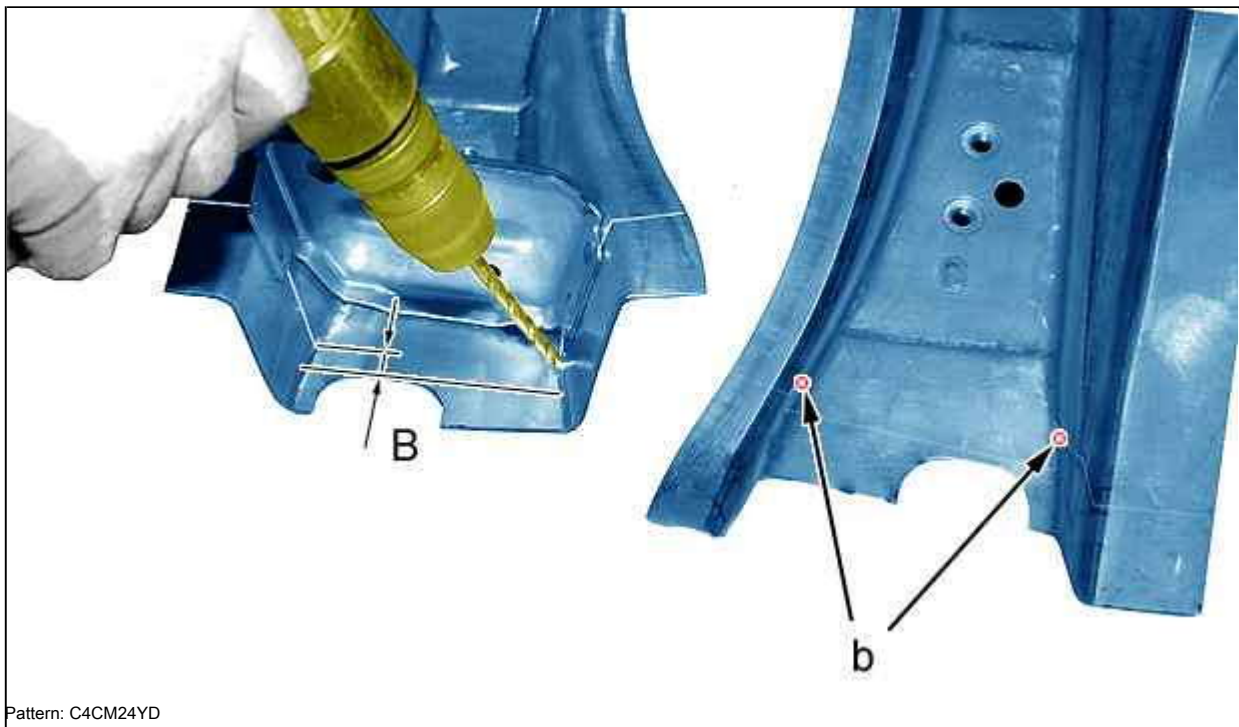
6.2. Preparing the bend (Marking)



"A" = 5 mm.

Mark the weld points of the lower wall of the upper door hinge (8) (at "a").

ATTENTION : The spot welding of the lower wall of the upper door hinge should not be destroyed.

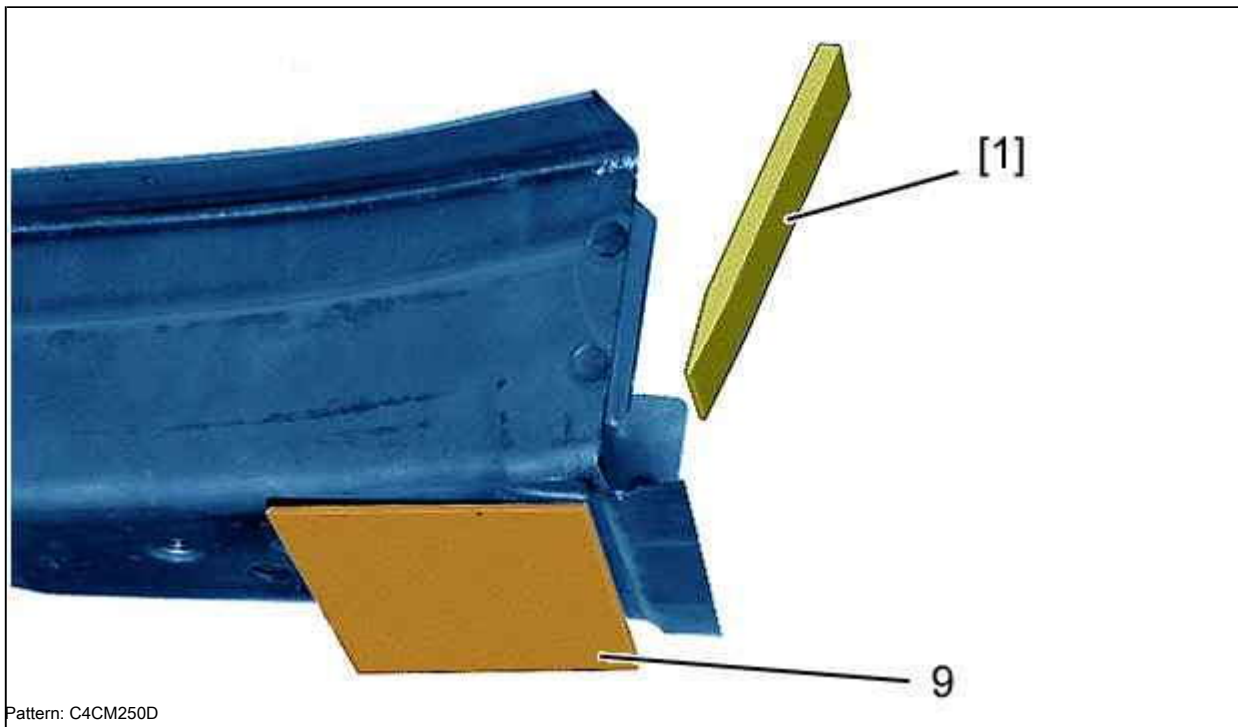


"B" = 3 mm.

Drill with a 6 mm drill bit (at "b") to avoid cracking.



Cut off the reinforcement of the lower part of the A-pillar (final cut).

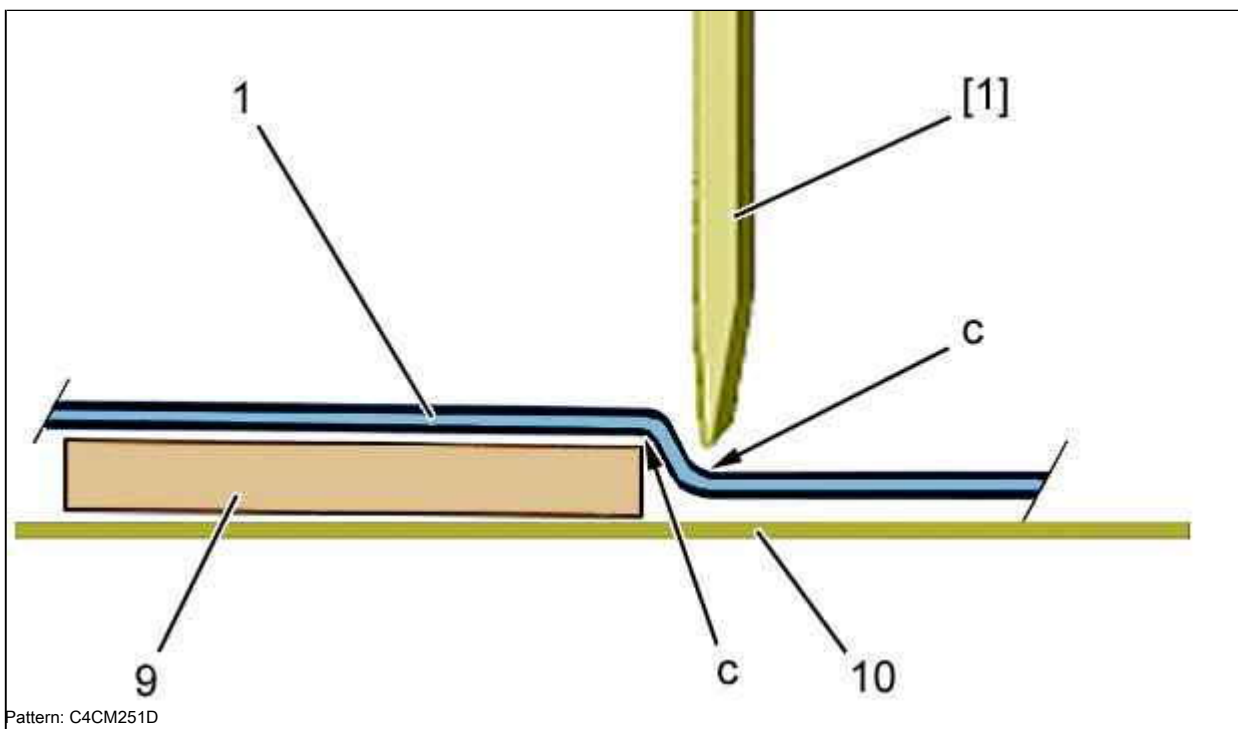


ATTENTION : The device [1] must not stop.

Place the steel panel (9) under the prepared reinforcement.

Bend the reinforcement using the tool [1] and the steel panel (9).

NOTE: The steel panel (9) must be taken from an unused portion of the A-pillar reinforcement (top) or from a 2 mm thick spot weld check kit [B].



(1) A-pillar reinforcement assembly. [1] Longitudinal tilt of front wheel strut. (9) Steel panel.

(10) established.

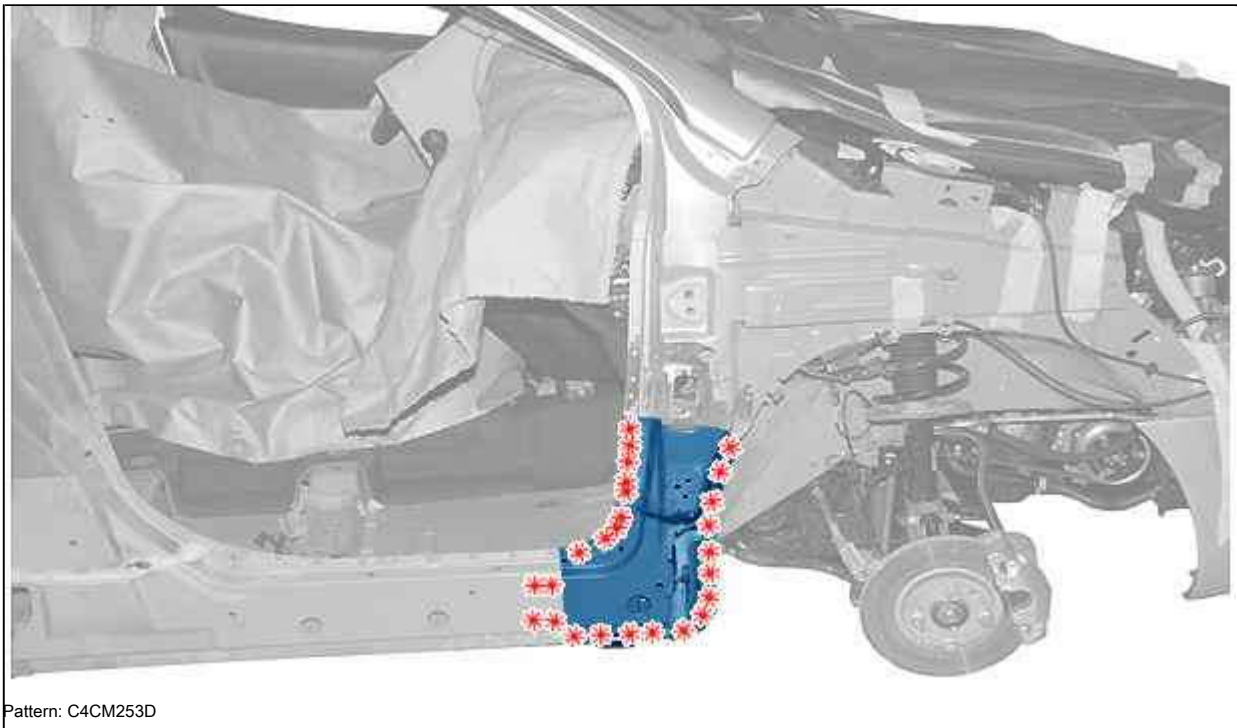
NOTE: Bending radius "c" less than 3 mm.



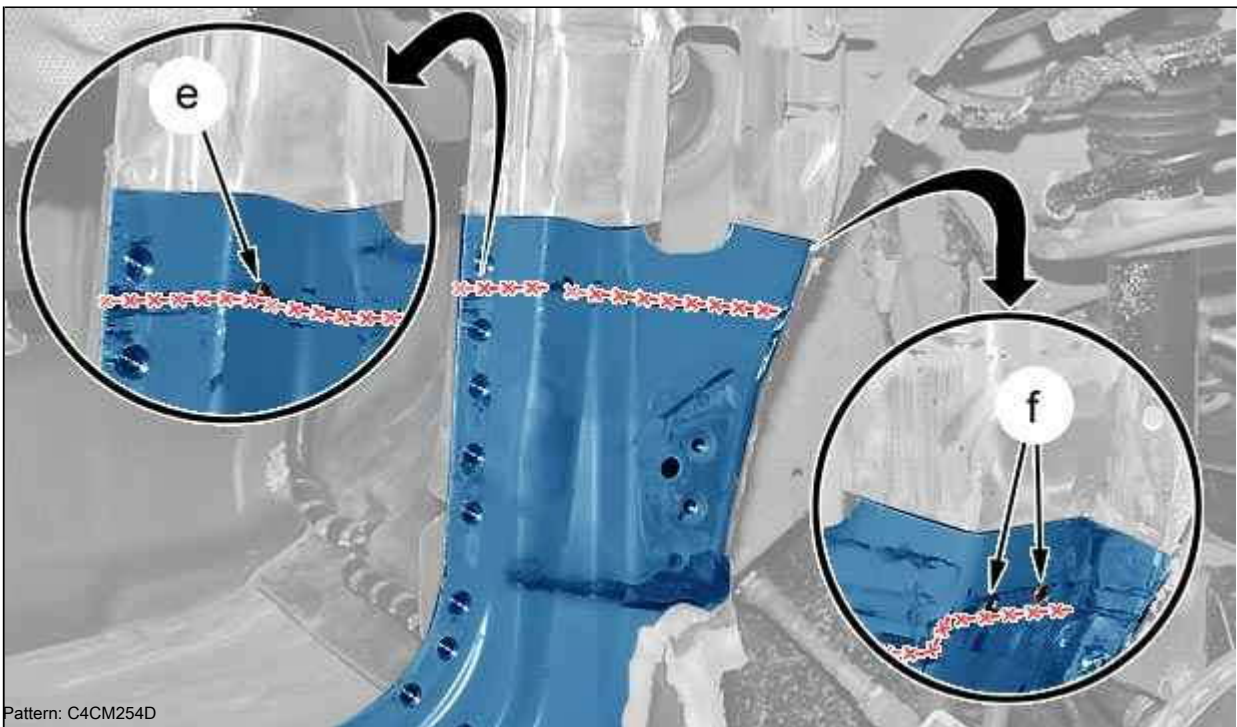
Drill 4 holes (at "d") with a 10 mm drill for subsequent MAG plug welding.

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

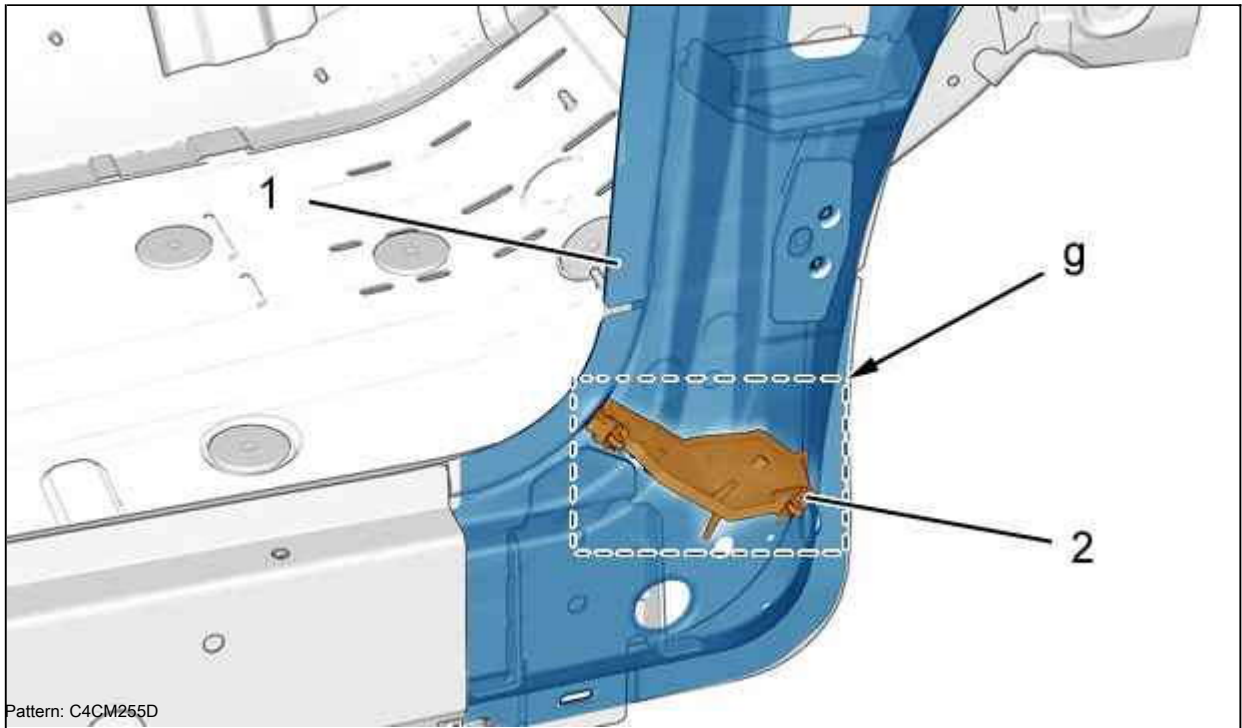
7. Cutting an element on the body



Cut the weld points of the A-pillar reinforcement



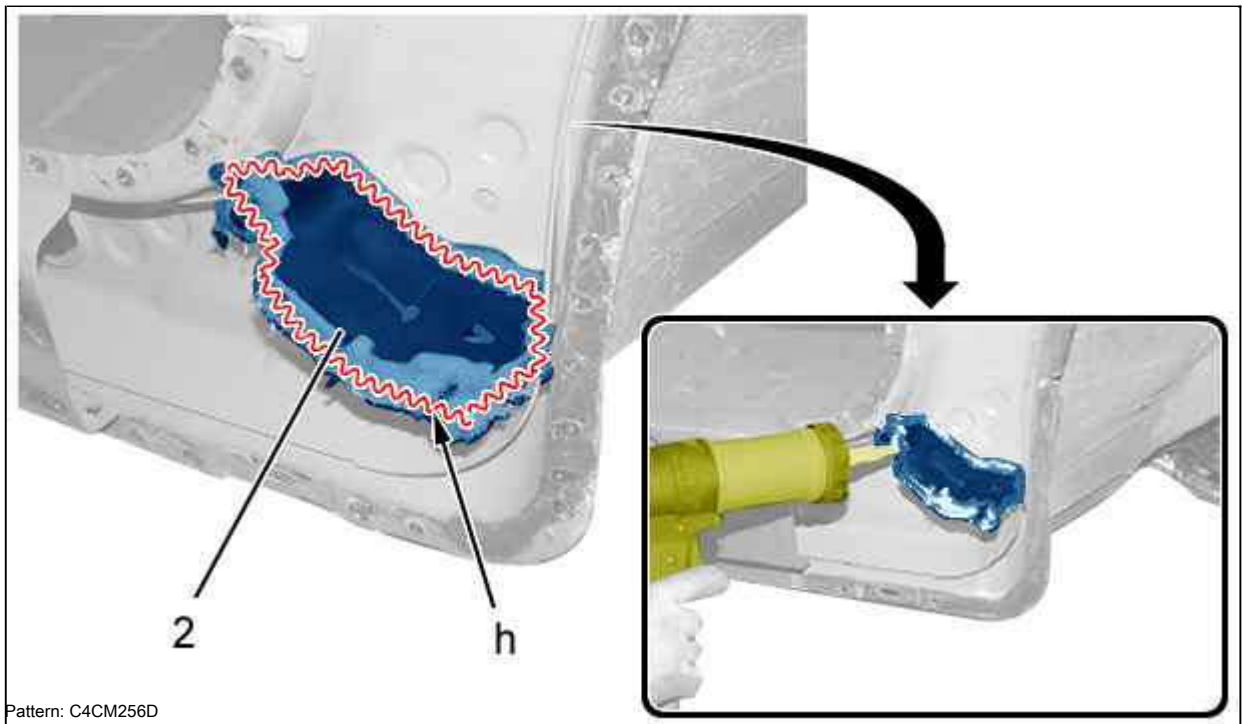
Cut out the electric welding points of the lower wall of the upper door hinge and reinforcement of the A-pillar. Mark and then cut under the electric welding points of the lower wall of the upper door hinge and of the A-pillar reinforcement (in "e", "f").



Remove: A-pillar reinforcement (lower part).

NOTE: Use a hot air gun to warm up the A-pillar reinforcement (1) (in "g") to avoid destroying the expanding A-pillar reinforcement insert (2).

8. Cleaning and preparation of the body

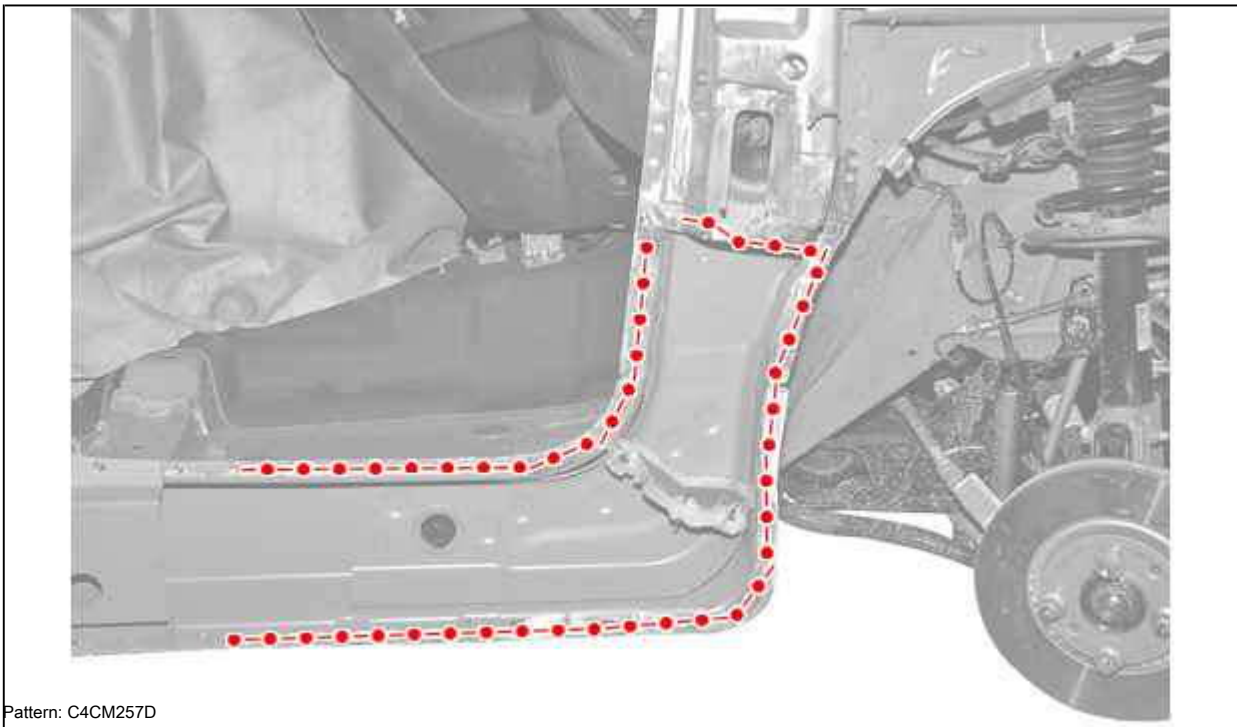


Fasten in clips: **Expanding A-pillar reinforcement insert (2)**



NOTE: Replace the A-pillar reinforcement flaring insert (2) (if broken).

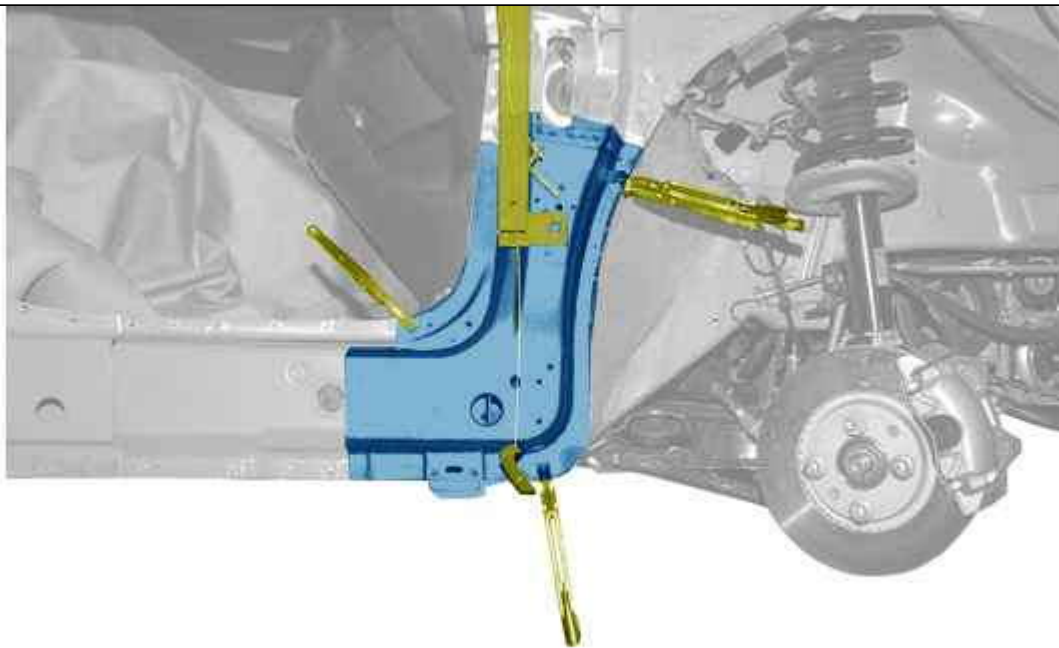
Apply sealant A1 to the outside of the insert (in "h").



Pattern: C4CM257D

Prepare the sockets and protect them with a welding primer (index "C7").

9. Fitting



Pattern: C4CM258D

Install the A-pillar reinforcement (lower part).

Check the fit of the front pillar reinforcement; Work is carried out using one of the following measuring systems:

- Electronic measuring system
- Positive measuring system
- Specific head MZ
- Control template

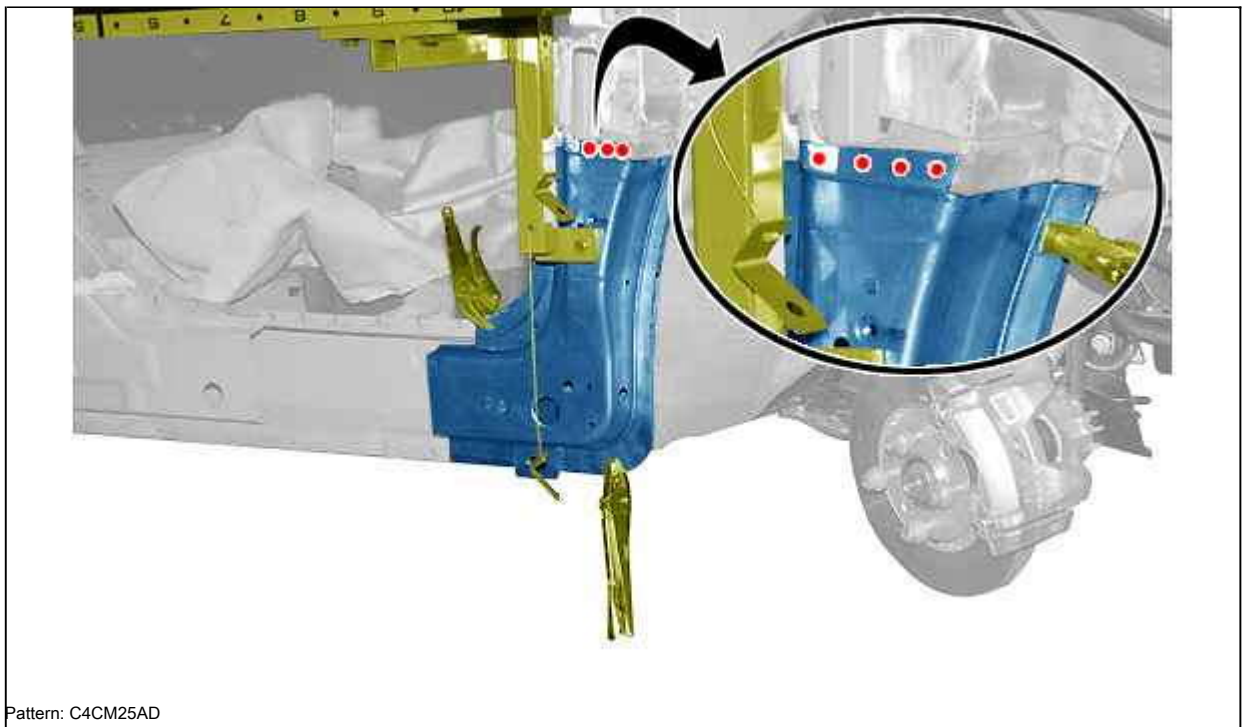
Hold the element in place.

10. Welding



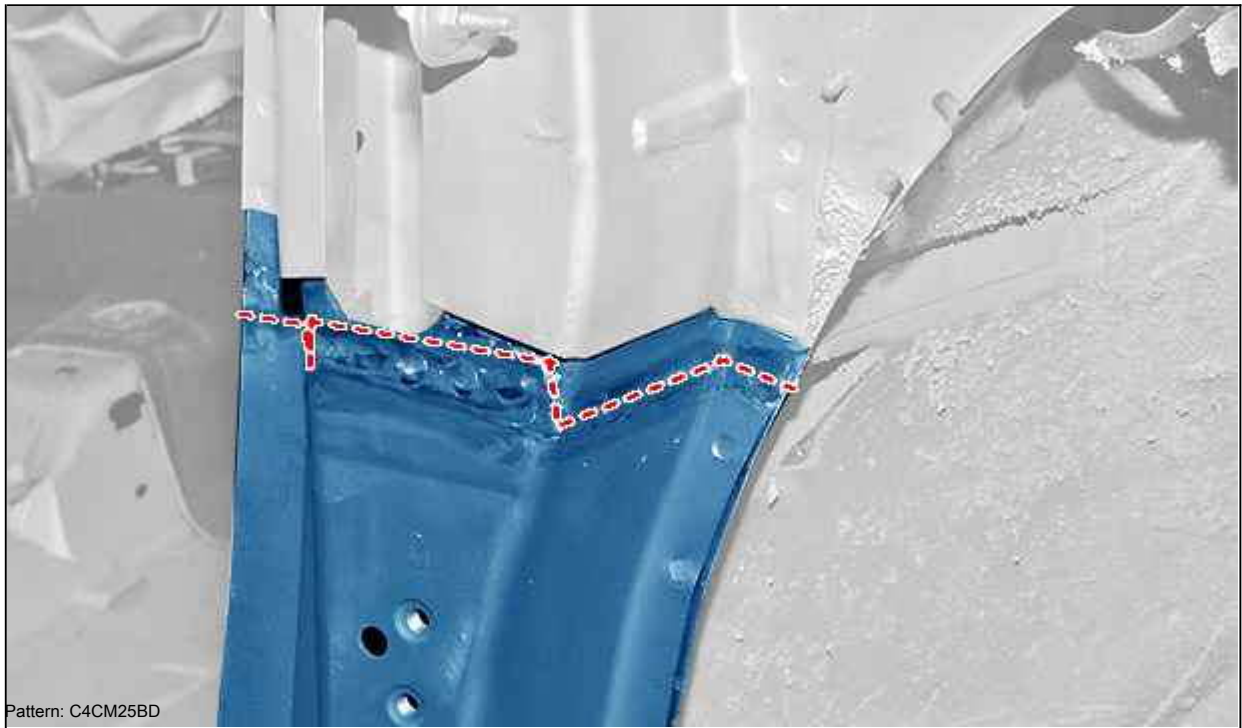
Pattern: C4CM259D

Weld with welding points.

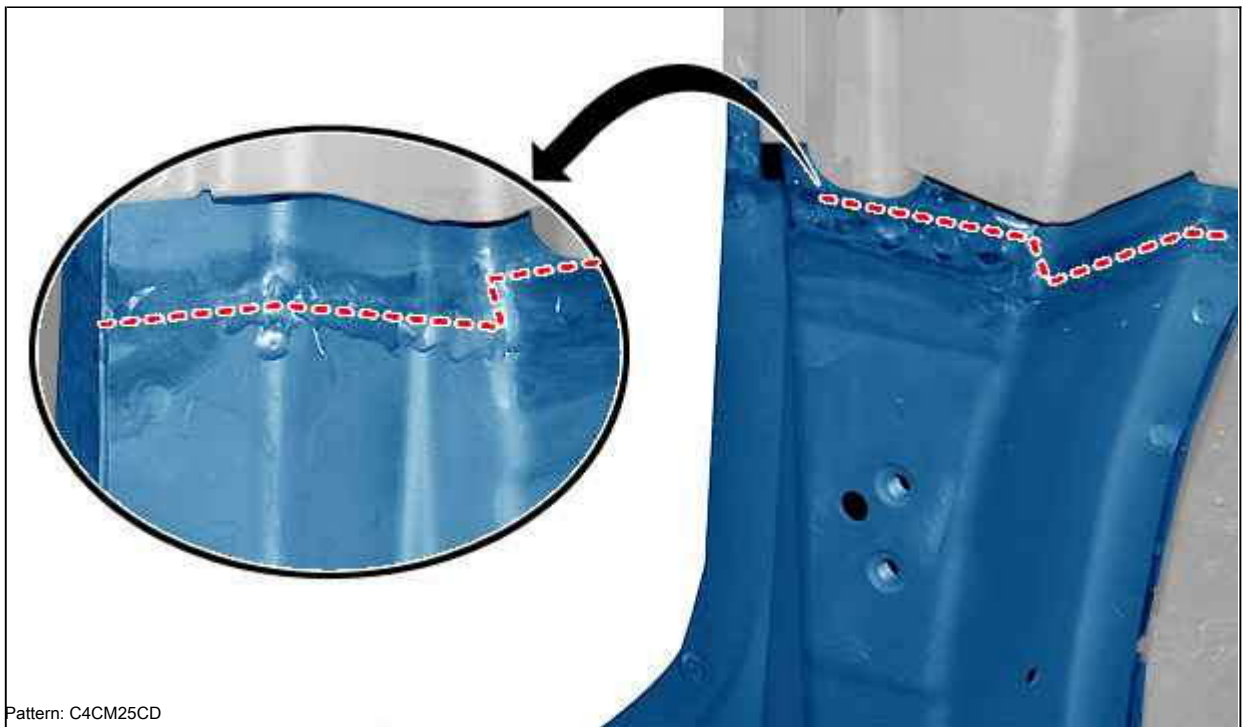


Pattern: C4CM25AD

Weld through the holes in the MAG protective gas.



Weld with successive seams using the MAG method.



Weld with successive seams using the MAG method.

NOTE: Trim off only the MAG welds that are in contact with the body side panel.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply paint and then spray paint in areas with internal cavities, which are marked with the corresponding C5 in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

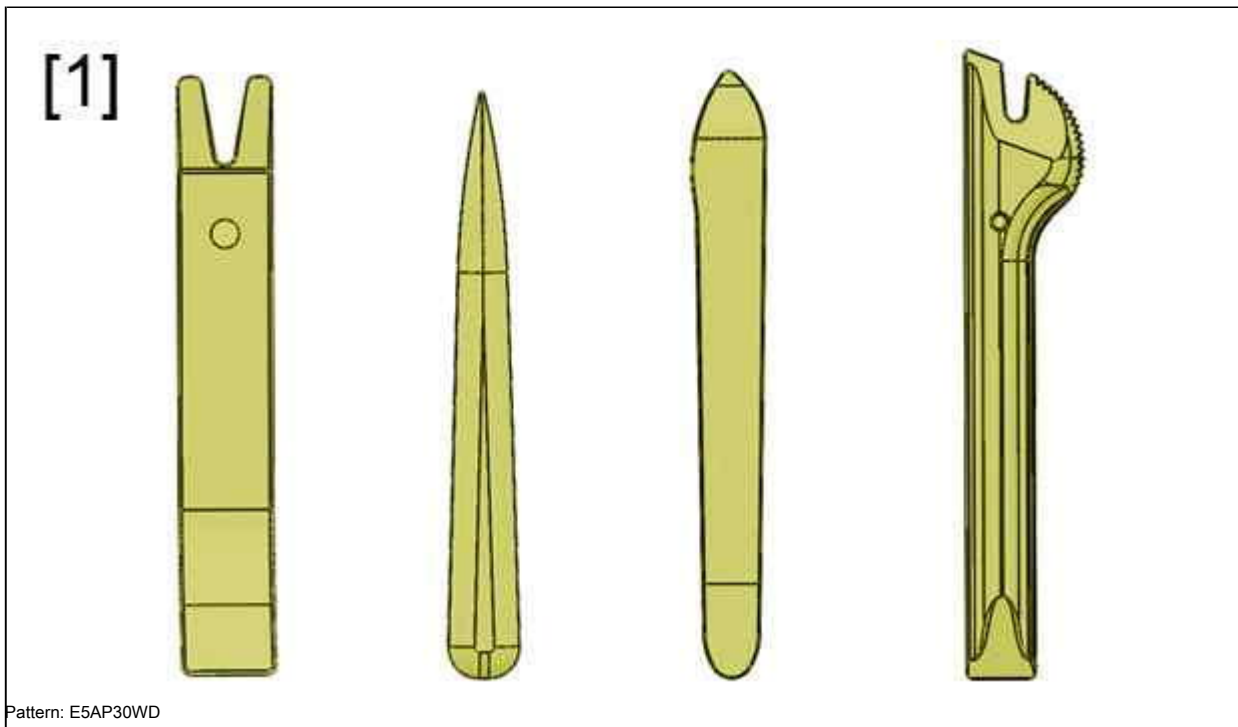
ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL INSTALLATION: THRESHOLD LINING

MANDATORY: Observe the cleanliness and safety rules



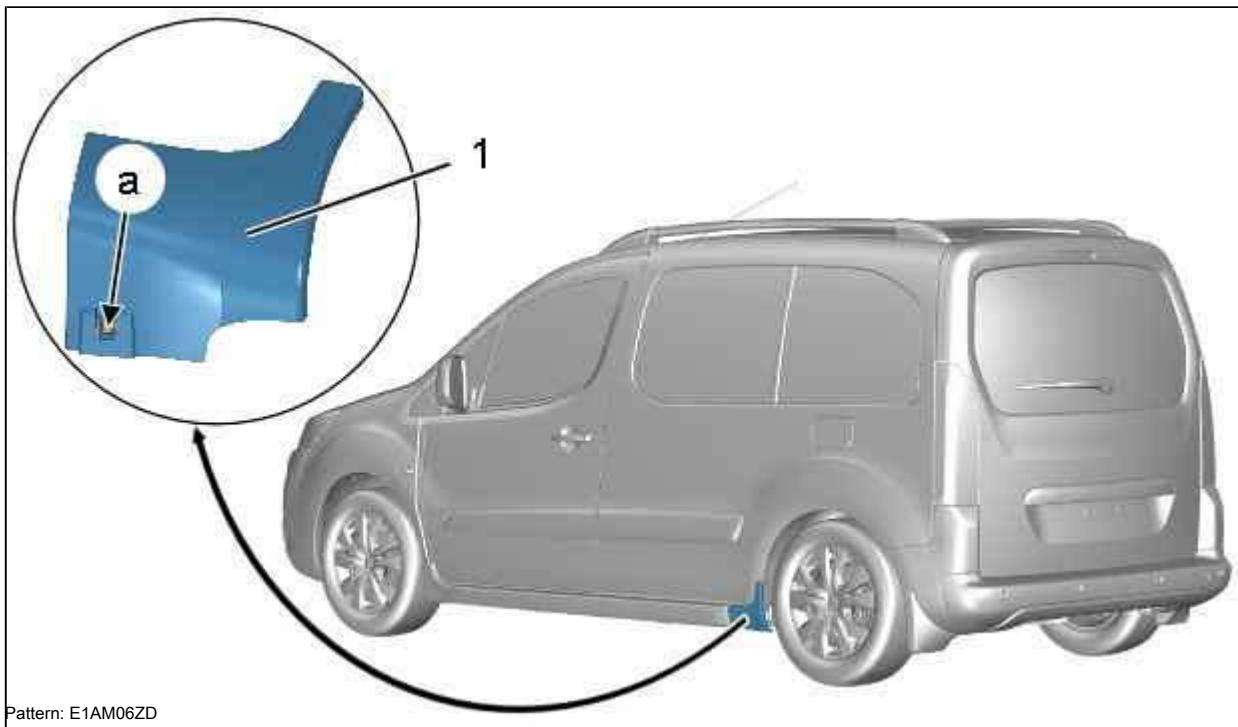
1. Recommended equipment



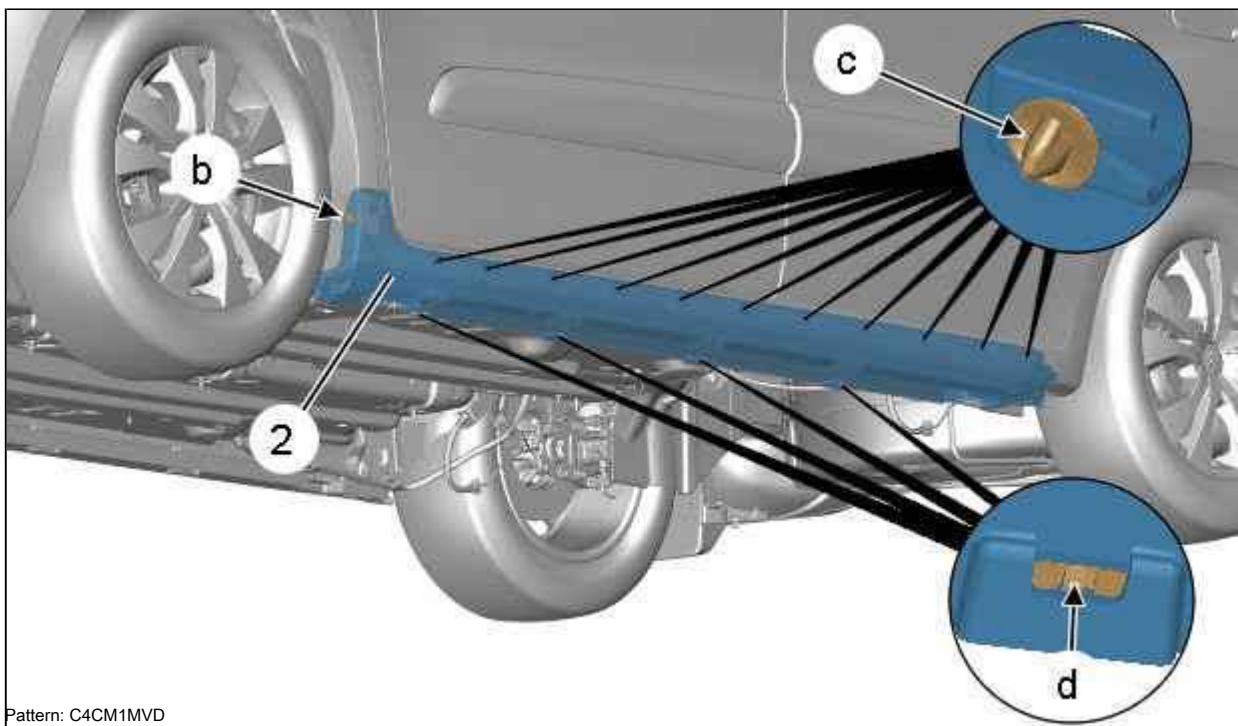
[1] Trim removal tool () .1350ZZ.

2. Removal

Place the vehicle on a 2 post lift.



Disconnect: Luggage sill trim (1) (at "a"); Using the tool [1].



Detach: Luggage sill trim (2) (in "b", "c", "d"); Using the tool [1]. Remove: The luggage compartment sill trim (2).

3. Installation

MANDATORY: Replace defective clips systematically.

Installation is carried out by performing the removal operations in the reverse order.

REPLACEMENT: CUTTING OUT THE EXTERNAL SIDEMEMBER UNDER THE DOOR (LOWKUZOVA)

MANDATORY: Observe the cleanliness and safety rules



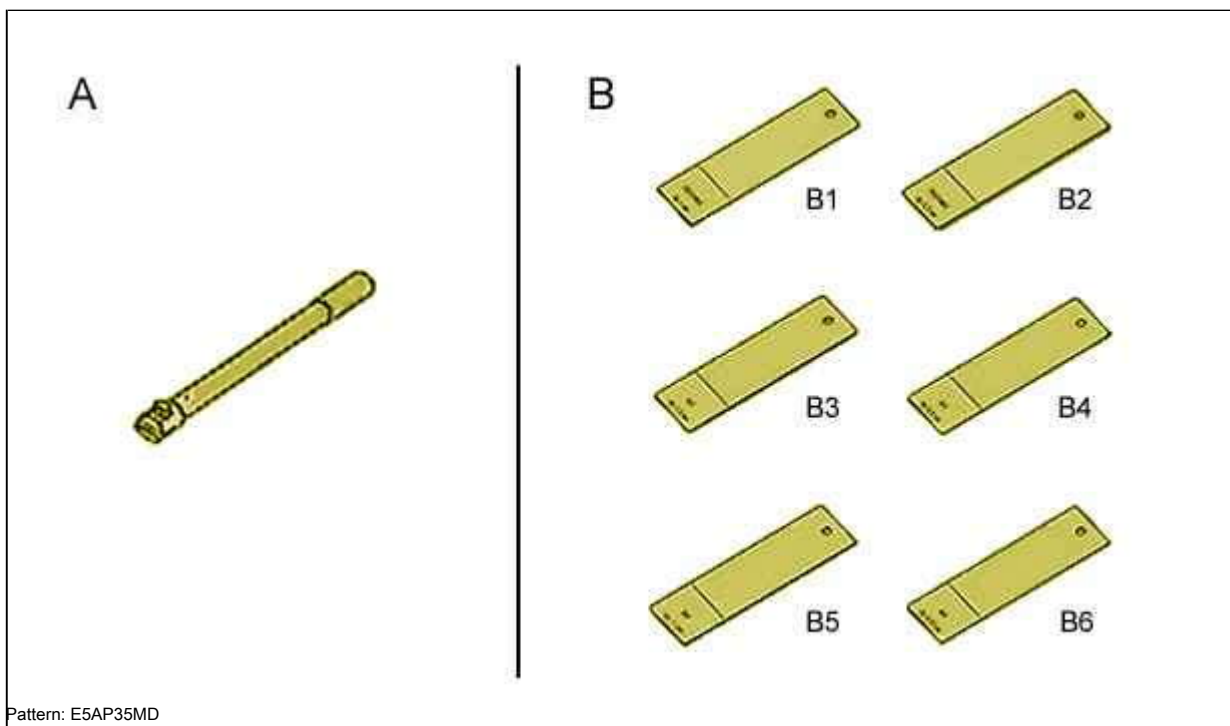
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

This element uses the following types of arc welds: MAG. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment



Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

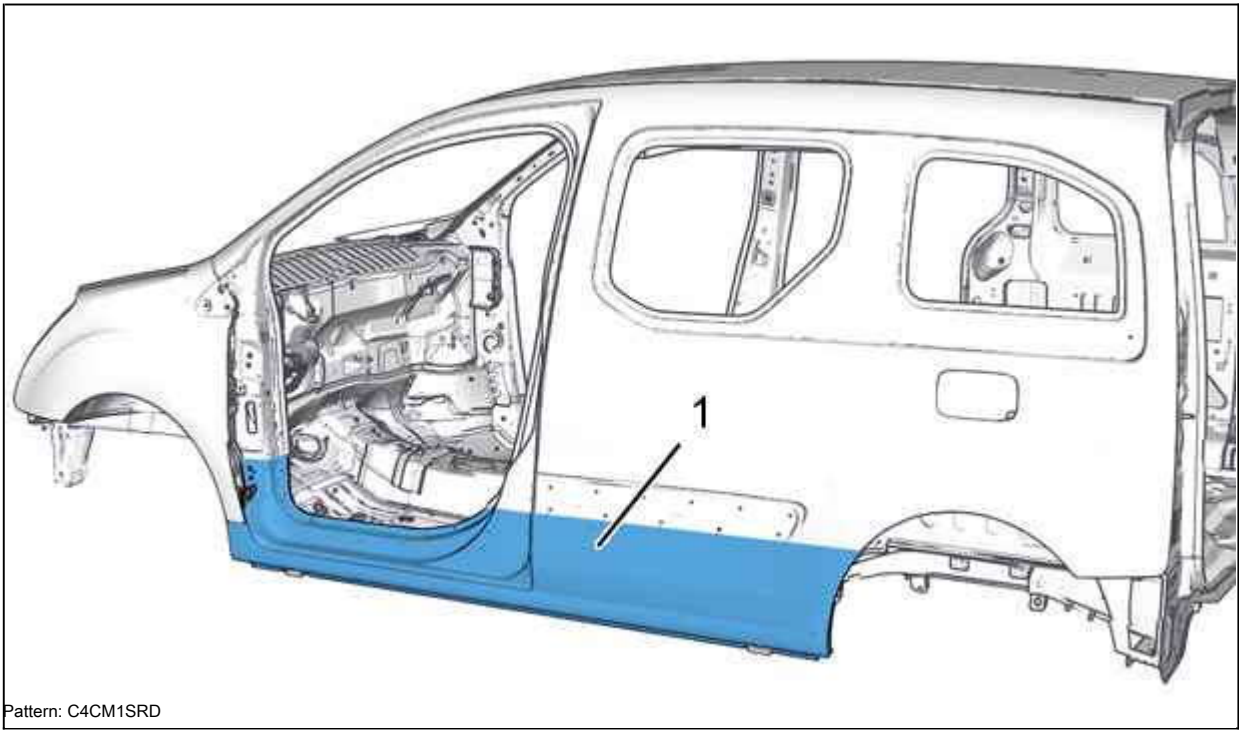
Disconnect the battery.

ATTENTION : Remove or protect items located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace outer side member plugs.

4. Localization: Outer spar



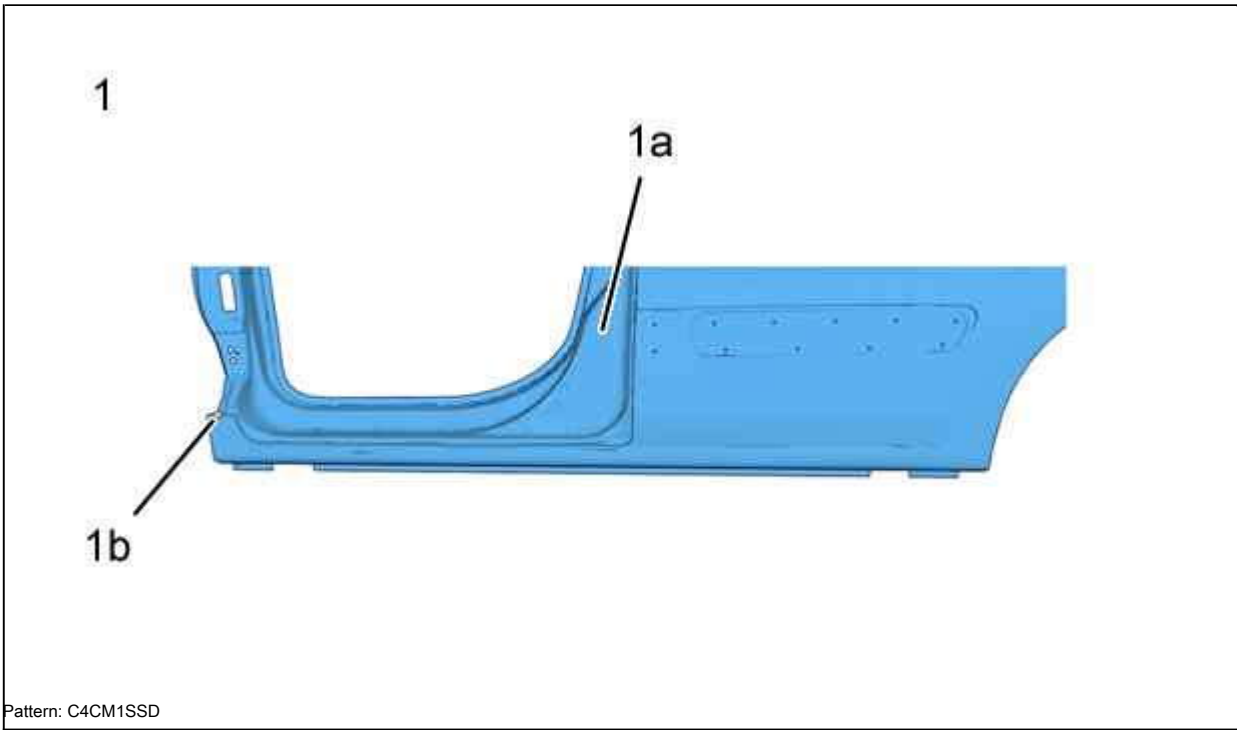
Pattern: C4CM1SRD

Label Designation

(1)	Outer side member assembly

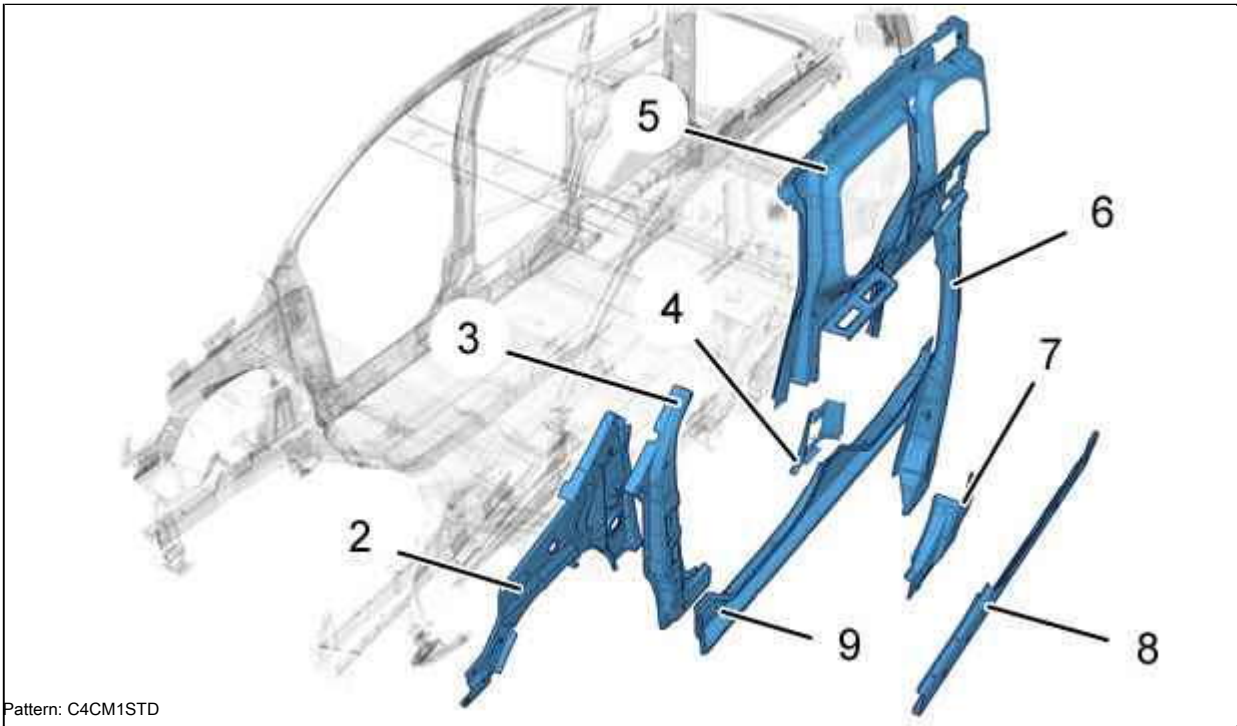
5. Identification: Outer spar

5.1. Composition: Outer spar (bottom of the body)



Label Designation		Thickness (mm)	Nature / classification
(1)	Outer spar assembly Outer spar		
(1a)		0.72	Mild steel
(1b)	Nut rolling: Front wing attachment		M6

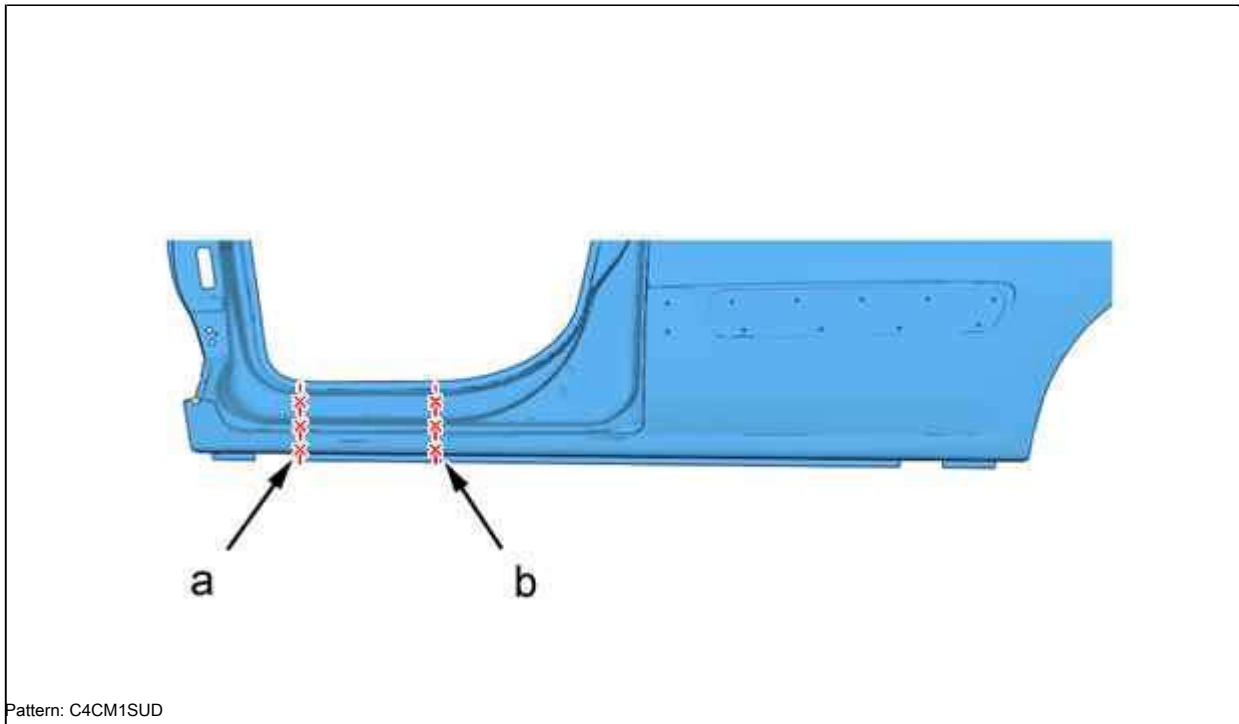
5.2. Identification of parts adjacent to the outer spar



Label Designation		Thickness (mm)	Nature / classification
(2)	Rear front fender pad	1.17	HLE
(3)	Front pillar reinforcement	1.76	HLE
(4)	Reinforcement of lining (B-pillar)	2.5	HLE
(five)		0.97	Mild steel
(6)	B-pillar reinforcement	2	UHLE
(7)	Lower center pillar reinforcement Spar reinforcement	2	THLE
(eight)		1.17	THLE
(nine)	Inner spar	1.47	HLE

6. Preparation of spare part

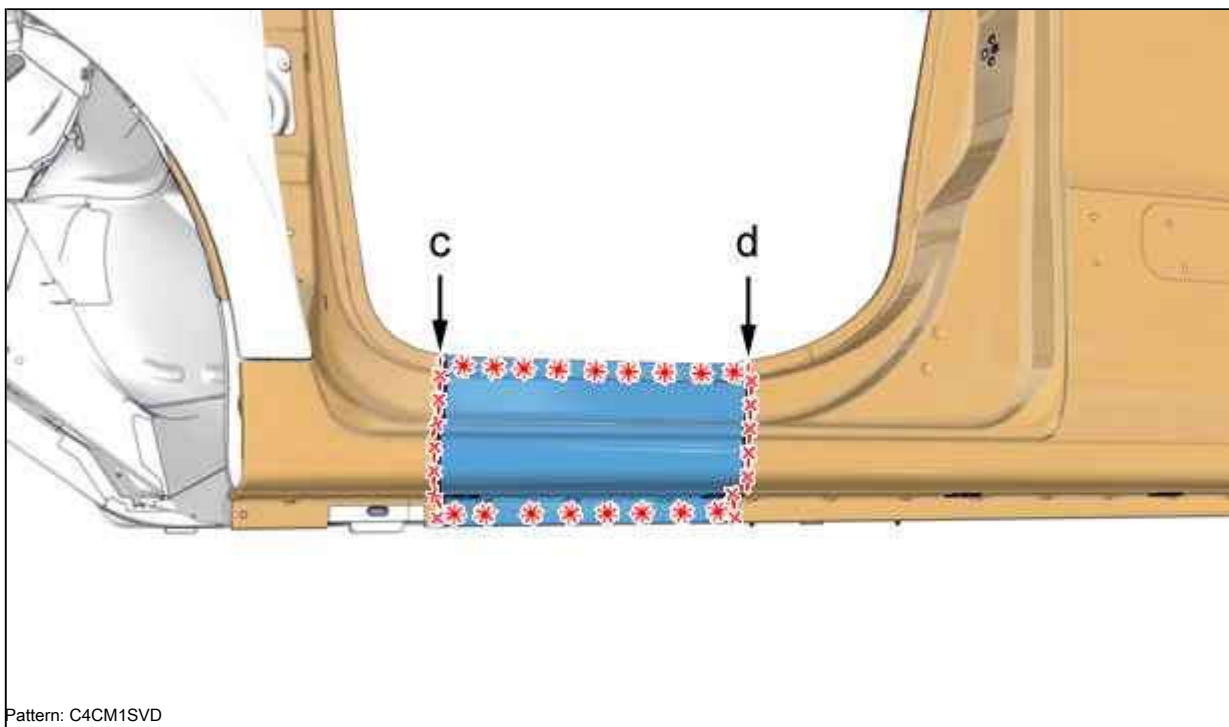
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Draw a cut line and then cut with a saw (at "a", "b").

NOTE: Cut lines "a", "b" are given for reference. Dimensions may vary depending on different situations when replacing the outer side member assembly (bottom of the body).

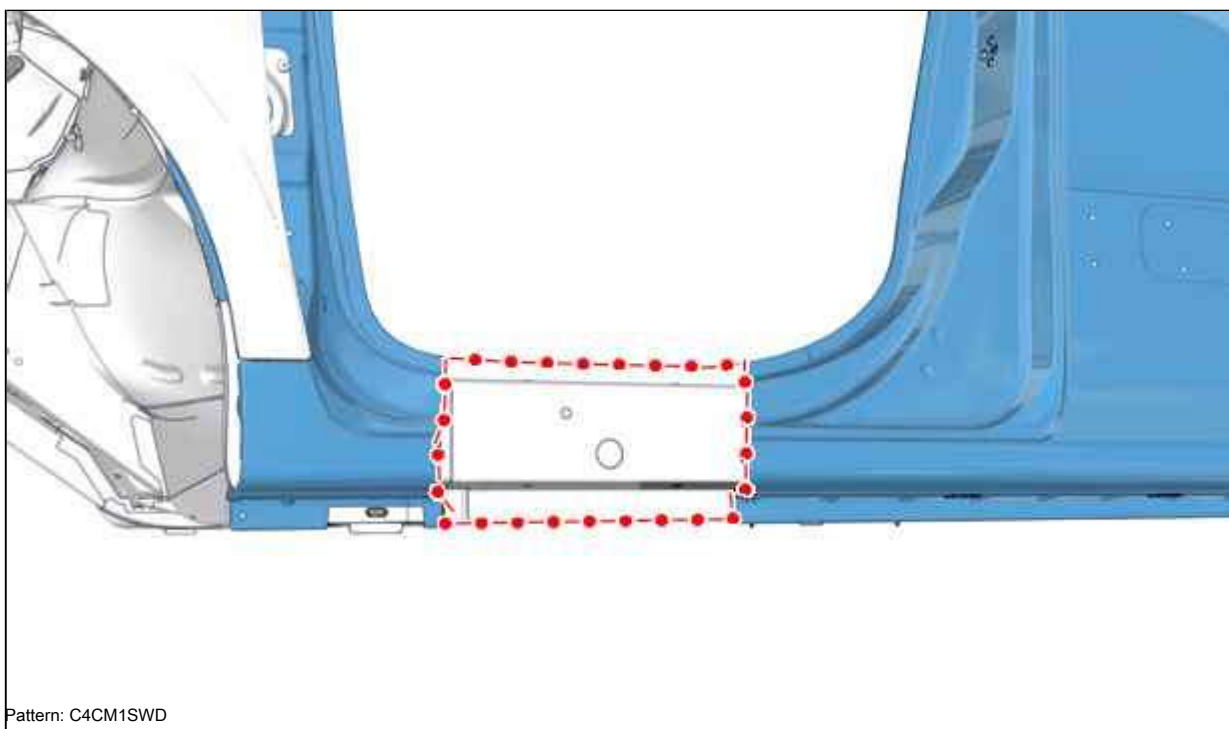
7. Cutting an element on the body



Draw a cut line and then cut with a saw (in "c", "d"). Cut by points.

Remove side member outer panel (underbody).

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer.

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

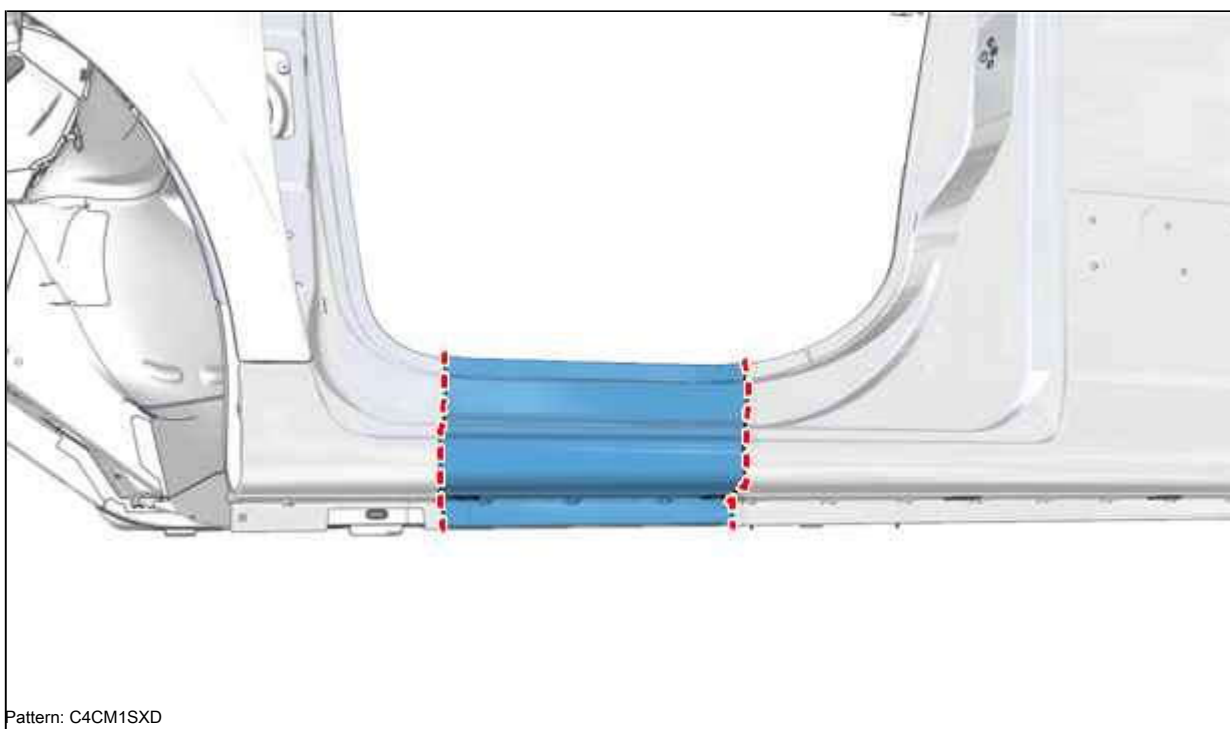
9. Fitting

Position: Outer side member (body underside). Check the fit.

NOTE: Refine the cut lines (if necessary).

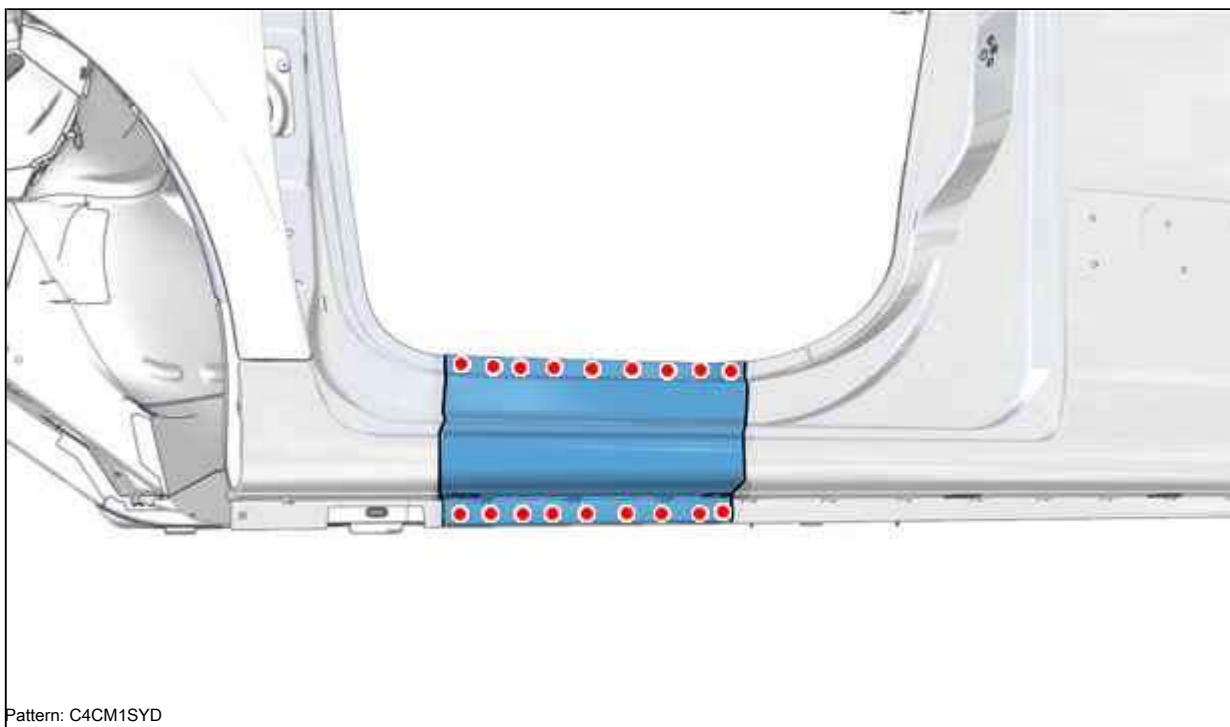
Hold the element in place.

10. Welding



Pattern: C4CM1SXD

Perform MAG welding in sequence. Grind the seams made with MAG welding.



Weld with welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply a layer of anti-gravel coating (index "C4").

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: LONGERON AMPLIFIER (PARTLY)

MANDATORY: Observe the cleanliness and safety rules



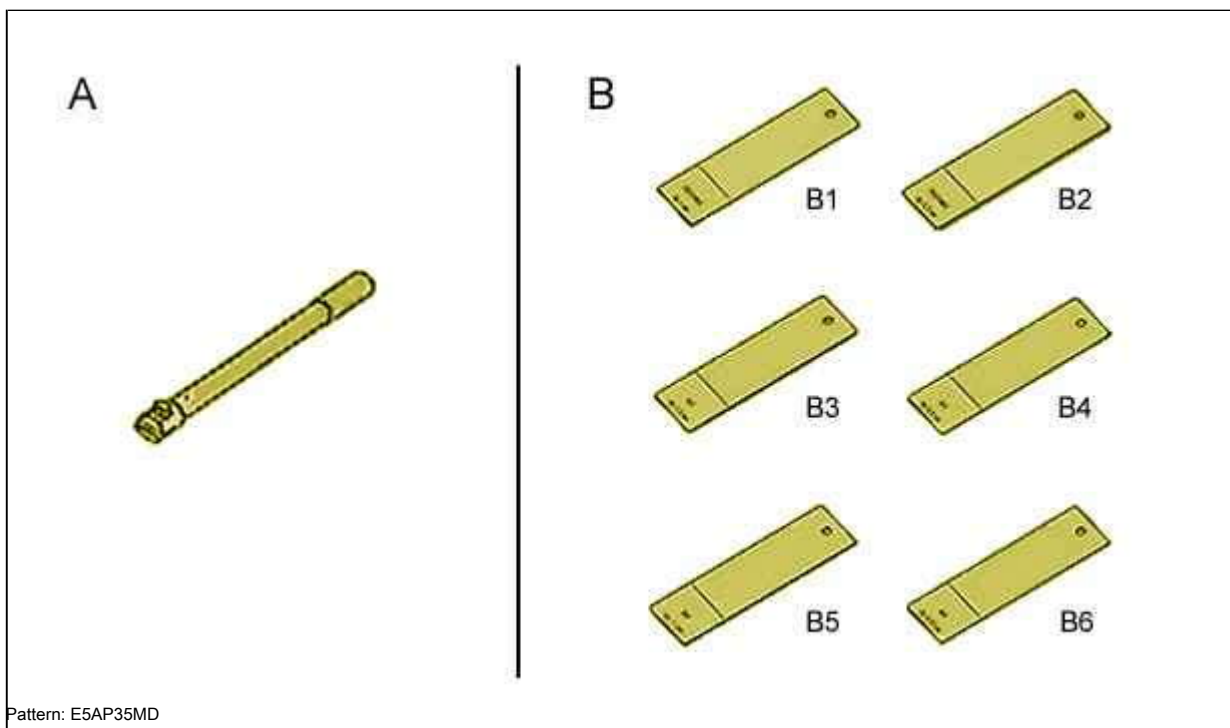
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

This element uses the following types of electric arc welds. Inert gas welding using the MIG method with a copper-aluminum electrode. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Recommended equipment



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

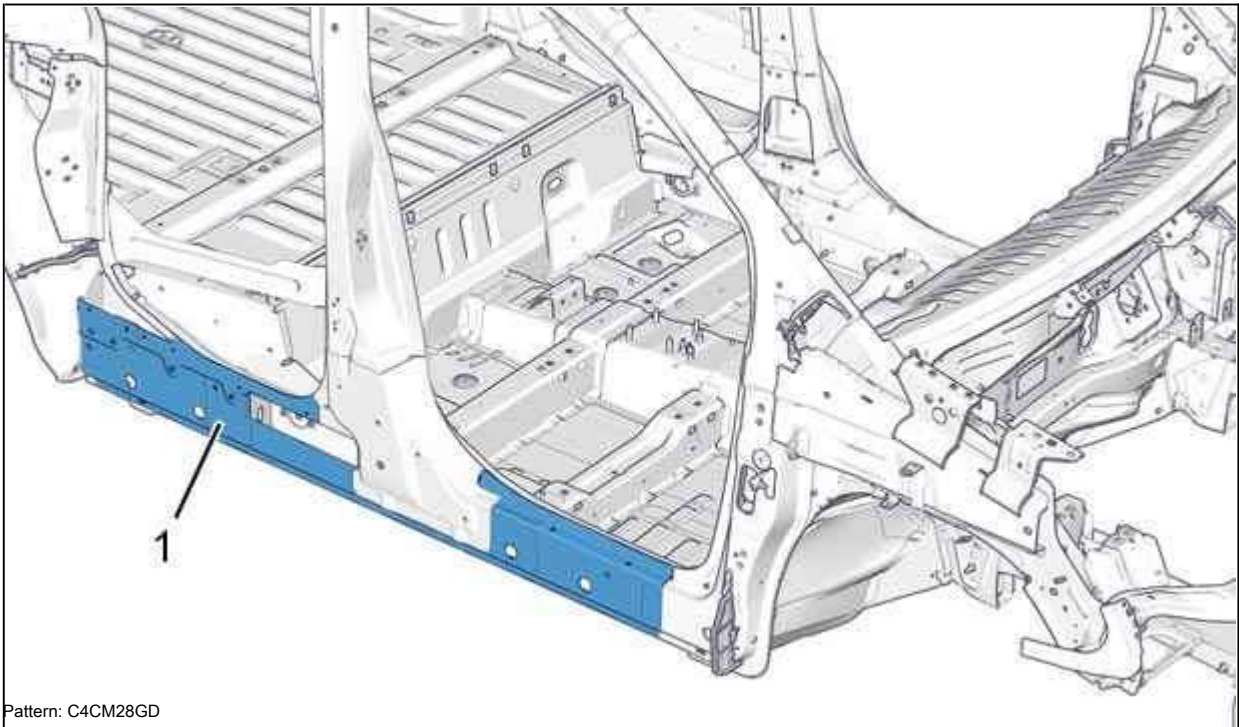
Separate the wire harnesses.

Replace: **Side panel**

(Fully or partially).



4. Spare part location:



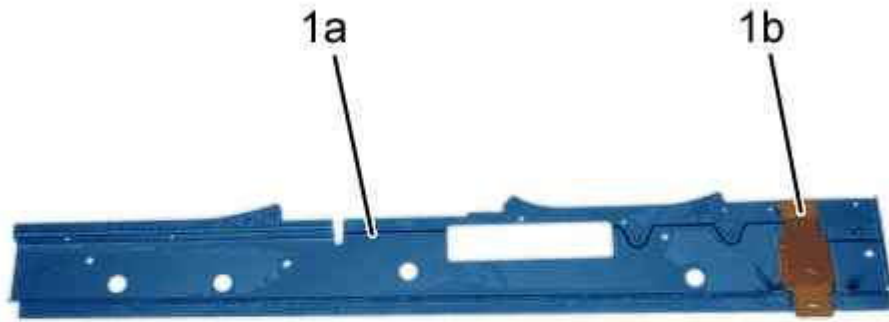
Label Designation

(1)	Spar reinforcement

5. Spare part identification: Spar amplifier

5.1. Ingredient: Spare part

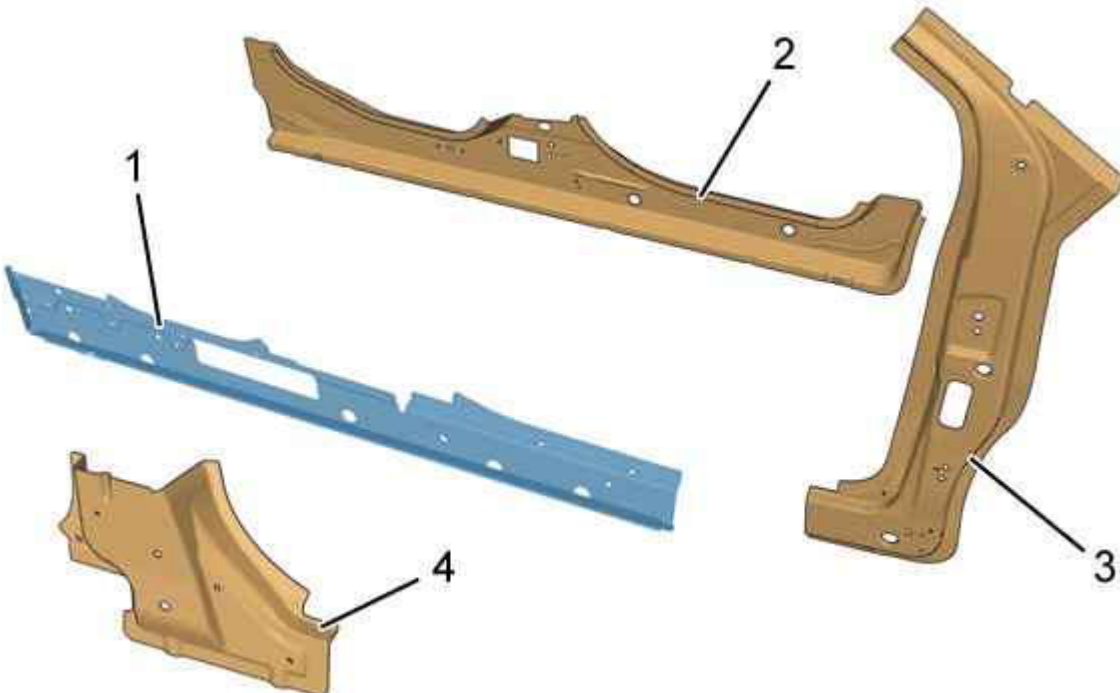
1



Pattern: C4CM28HD

Label Designation		Thickness (mm)	Nature / classification
(1)	Spar reinforcement		
(1a)	Spar reinforcement 1.17		THLE
(1b)	Rear support jack 2.5		THLE

5.2. Identification of parts adjacent to the spar reinforcement



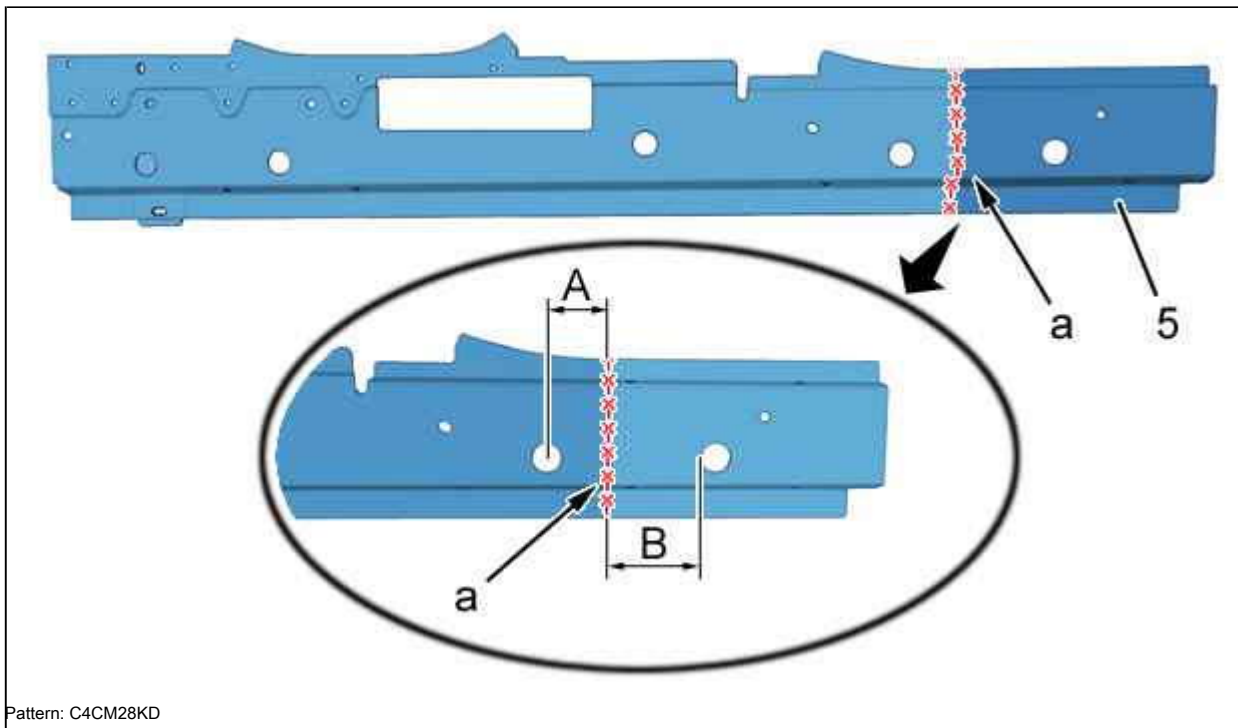
Pattern: C4CM28JD

Label Designation		Thickness (mm)	Nature / classification
(1)	Spar reinforcement		THLE
(2)	Inner spar	1.47	HLE
(3)	Front pillar reinforcement	1.76	HLE
(4)	Lower center pillar reinforcement 2		THLE

6. Spare part preparation: Spar amplifier

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

6.1. Preparation: Spar Reinforcement (Partial)

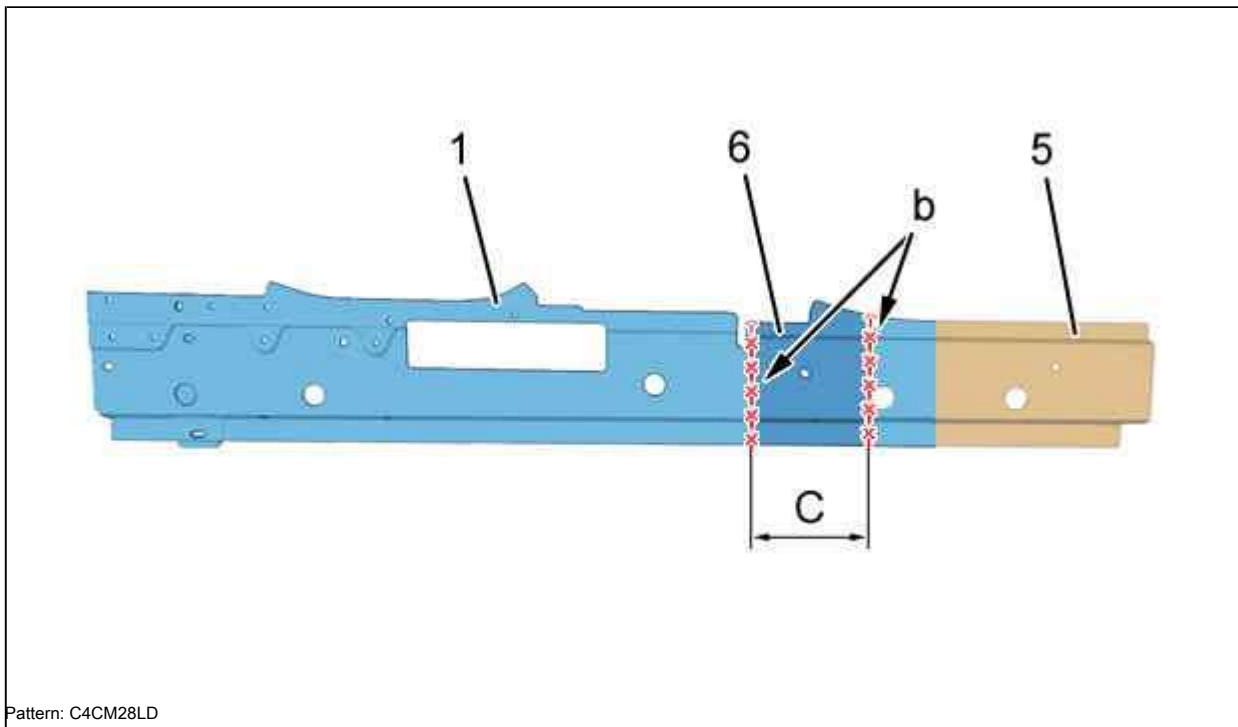


A = 55 mm.

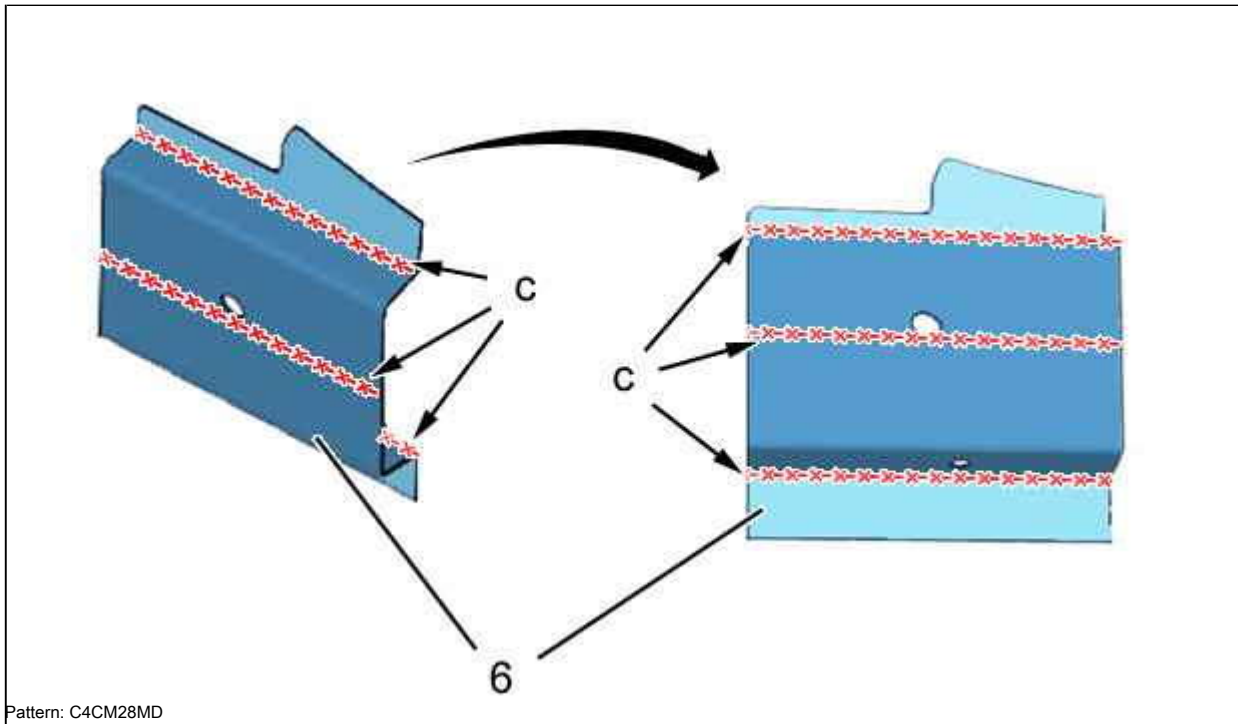
B = 111 mm.

Mark, then cut; With a saw (at "a") (Final cut). Remove side member reinforcement (5) (Partial).

6.2. Preparation: Side member reinforcement repair insert

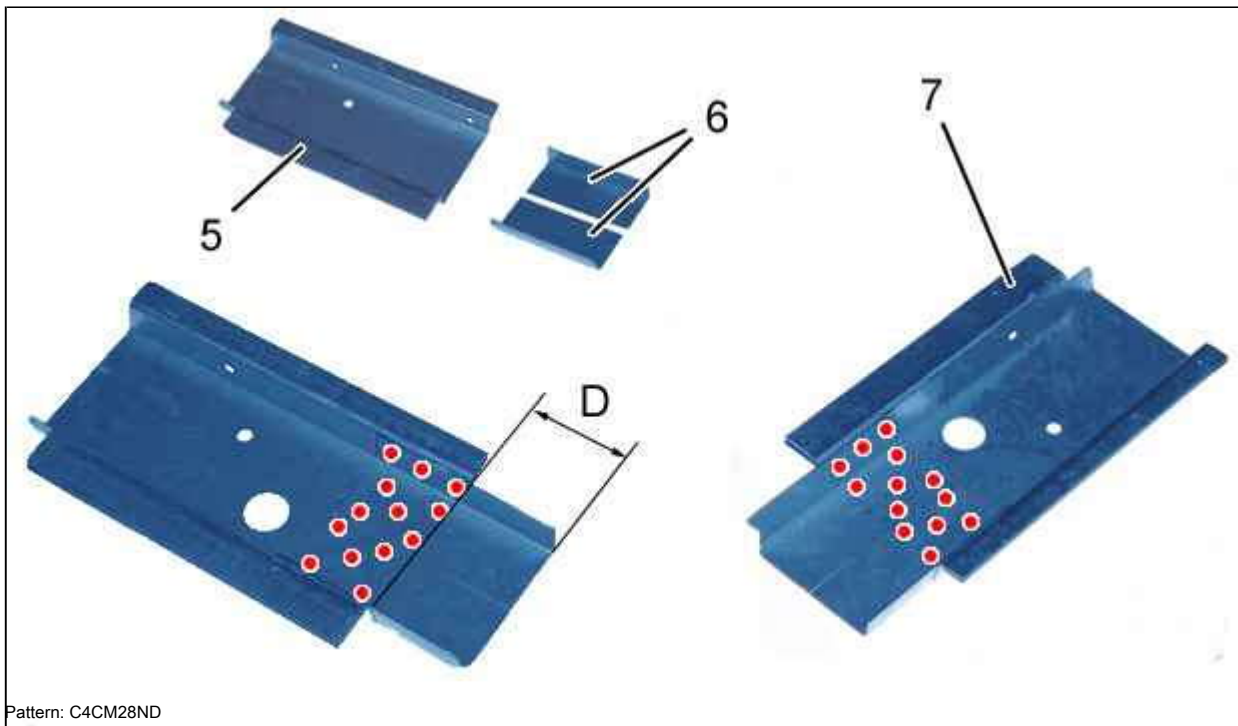


- (1) Side member reinforcement.
 - (5) Side member reinforcement (Partial).
 - (6) Side member reinforcement inserts. C = 160mm.
- Draw a cut line and then cut with a saw (at "b").
 Remove: Side member reinforcement insert (6) (Partial) (Pre-cut).



- (6) Side member reinforcement inserts (Partial).
- Draw a cut line and then cut with a saw (at "c") (Final cut).

6.3. Spar reinforcement insert assembly



(5) Side member reinforcement (Partial).

(6) Couplings (side member reinforcement).

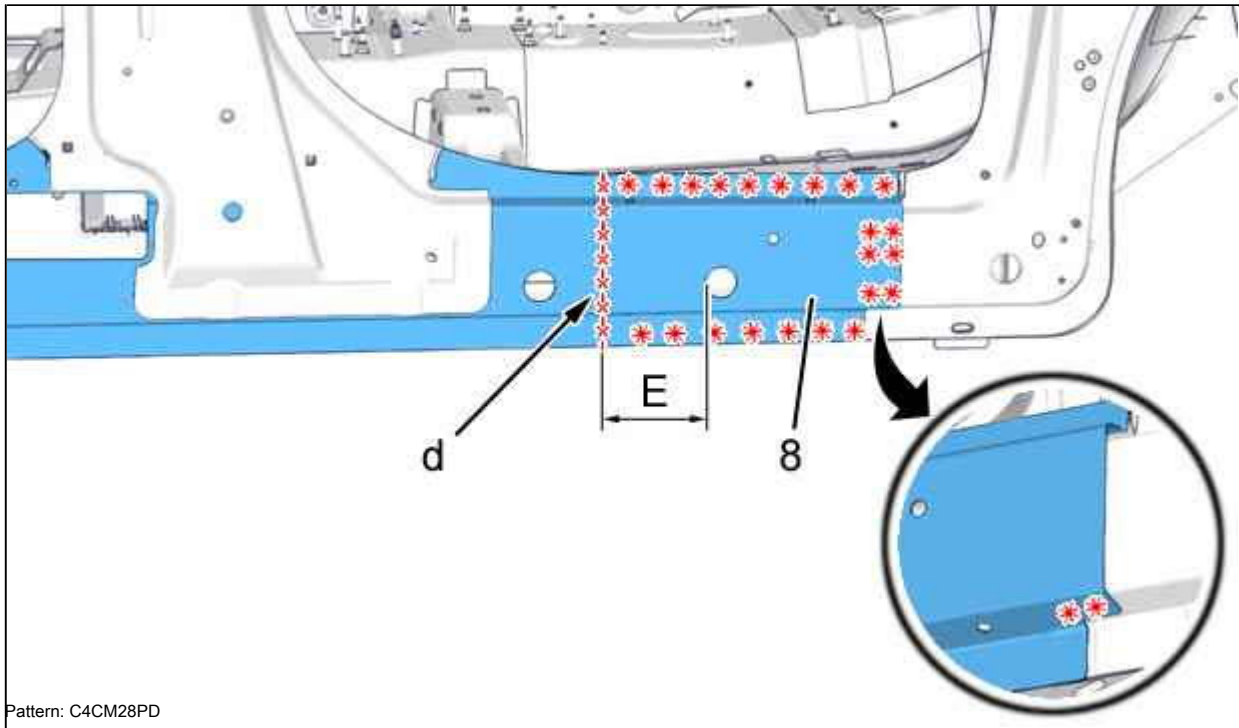
(7) Rebuilt spar booster. $D = 80$ mm.

Position the inserts (6) on the reinforcement member (5). Weld by spot electric welding.

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body

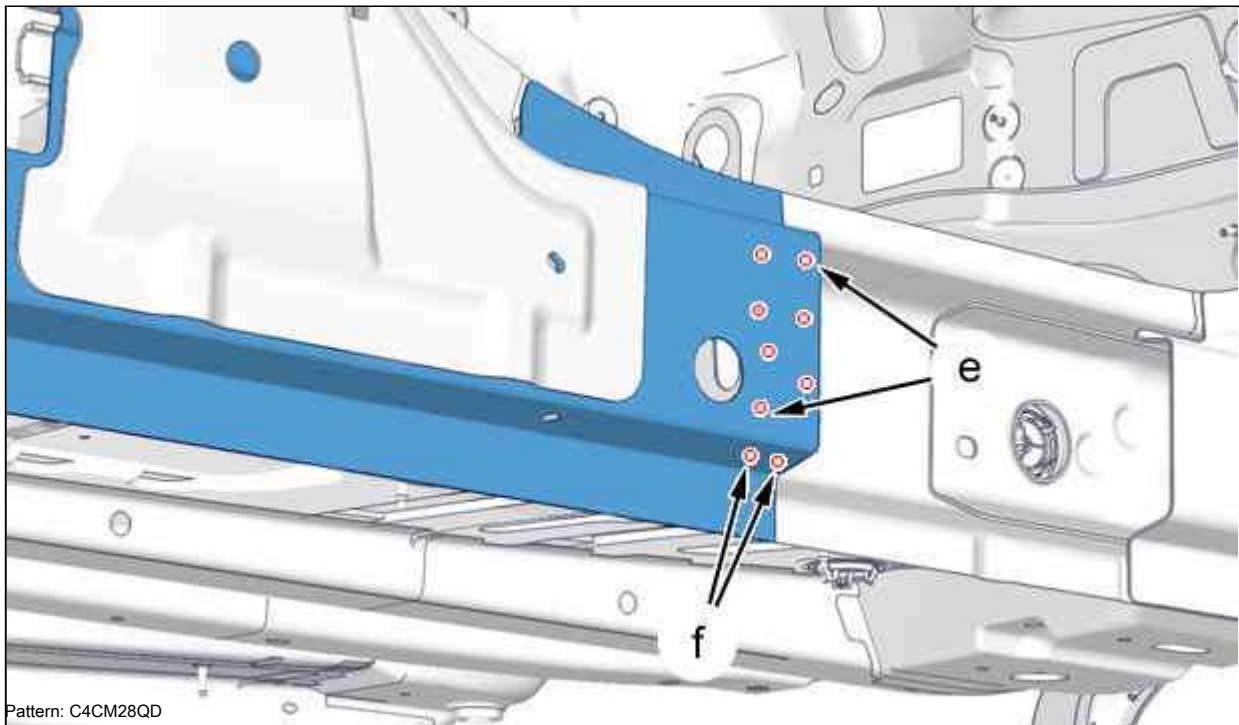


E = 111mm.

Mark, then cut (in "d"). Cut out the welding points.

Remove side member reinforcement (8) (front section).

8. Cleaning and preparation of the body



Mark, then drill with $\varnothing 10$ for subsequent MIG rivets (in "f", "g").

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

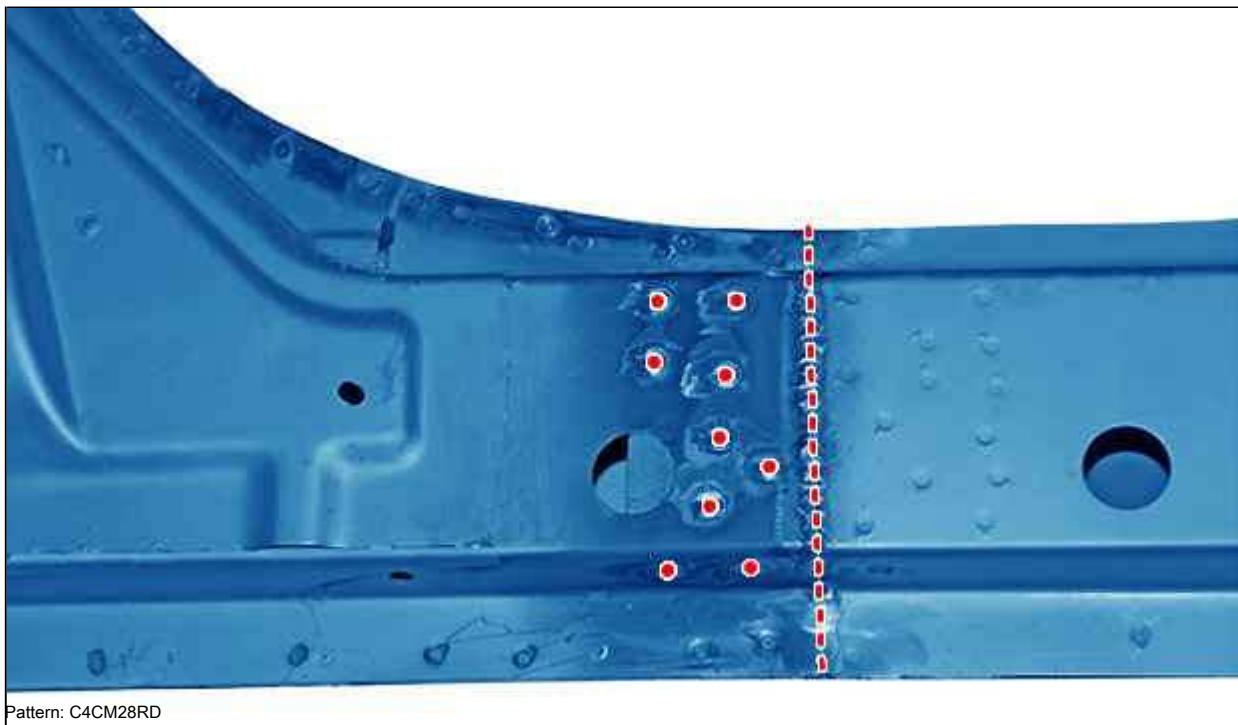
9. Fitting

Position: Side member reinforcement (7) repaired with insert. Adjust cutting (If necessary).

Hold the element in place.

10. Welding

NOTE: It is recommended to use exclusively manufacturer-certified MIG welding stations (see repair equipment catalog).



Perform a sequential MIG seam weld.

Spot weld using MIG method.

NOTE: To avoid altering the mechanical strength of the B-pillar reinforcement assembly, it is not recommended to strip MIG welds.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: BOTTOM CENTER AMPLIFIER

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

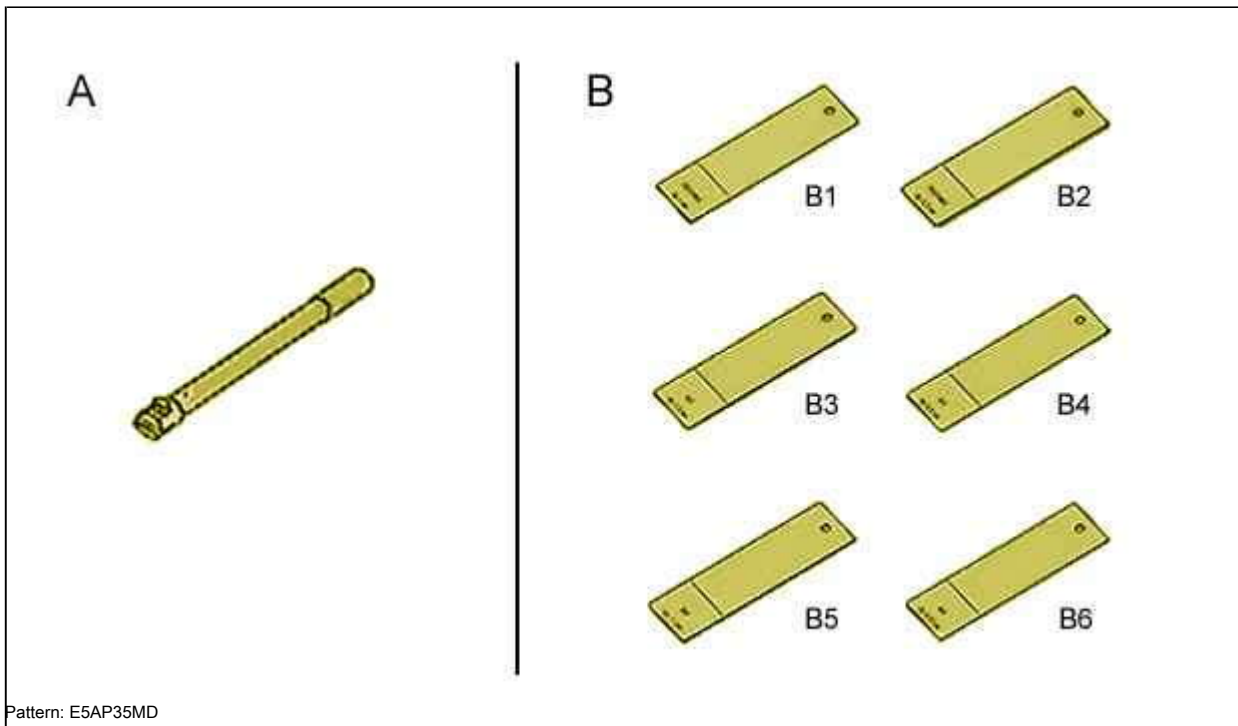
For this element, the following types of arc welds are used:

- VIG brazing with metal (copper-aluminum) deposition in inert gas
- MAG welding by depositing metal (steel) in reactive gas

The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: Very high tensile steel

2. Recommended equipment



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

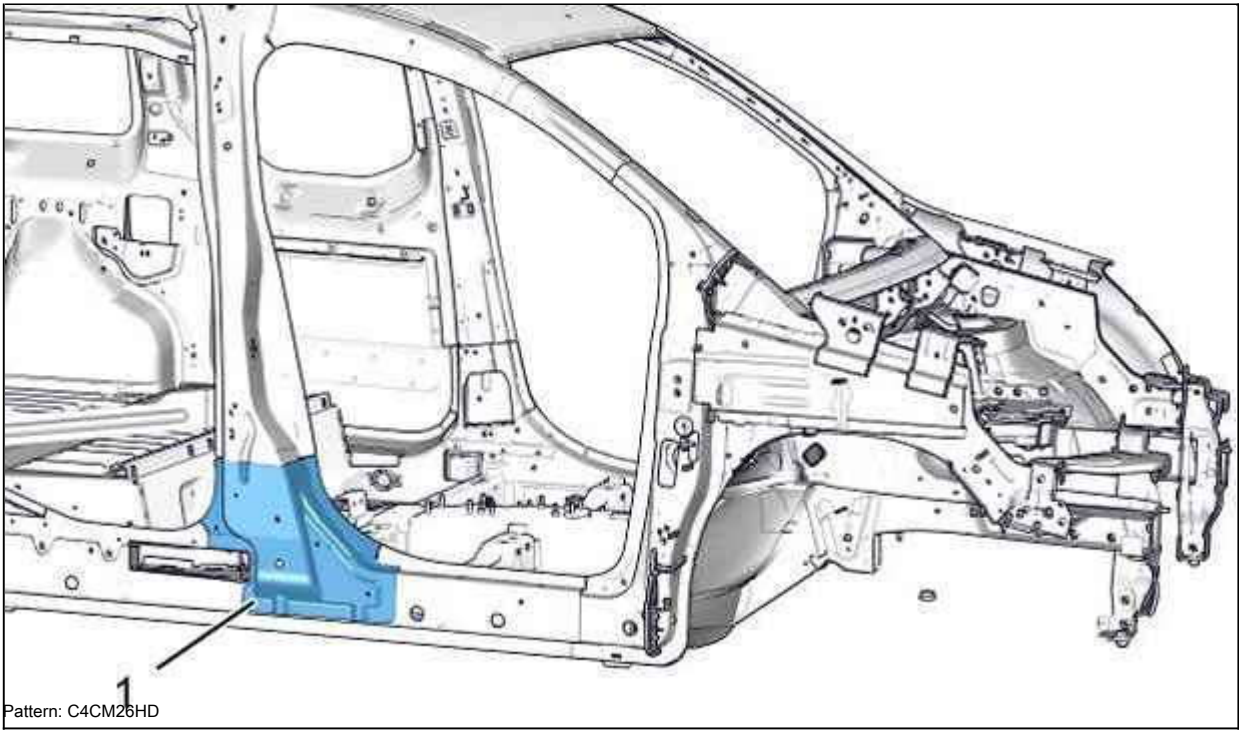
Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.
Replace: **Side panel** (Fully or partially).



4. Localization: Bottom center post amplifier

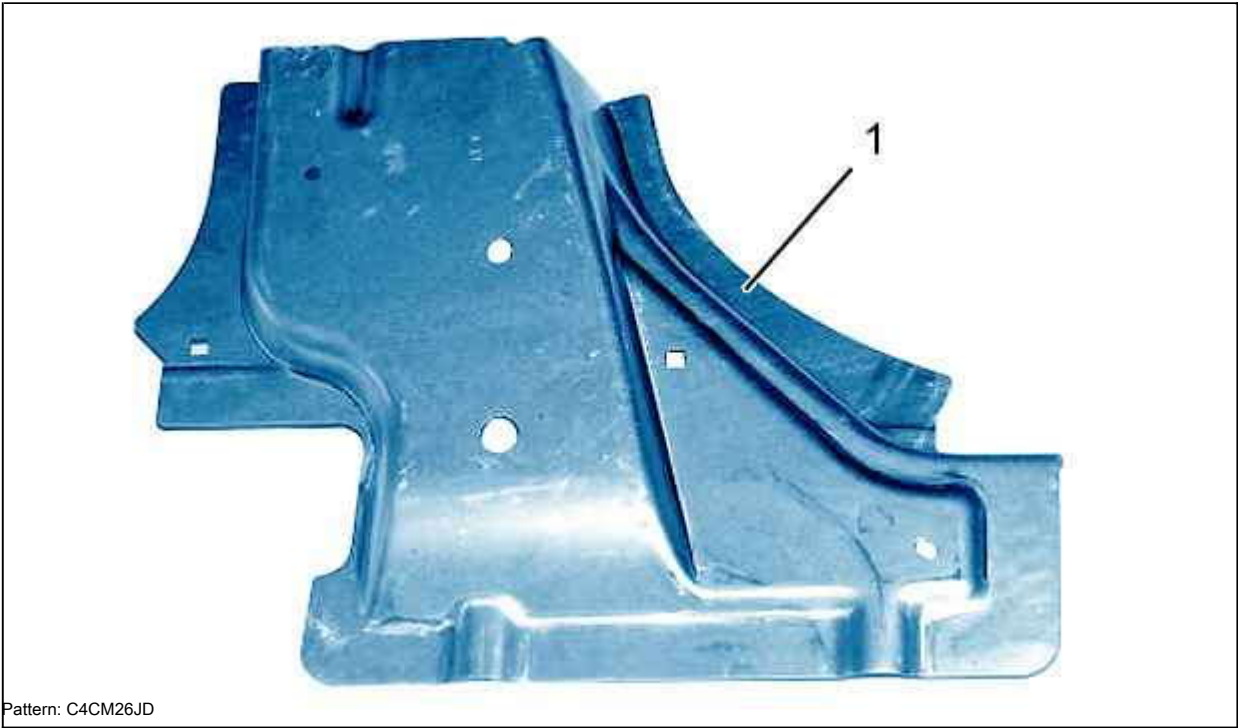


Label Designation

(1)	Lower center pillar reinforcement

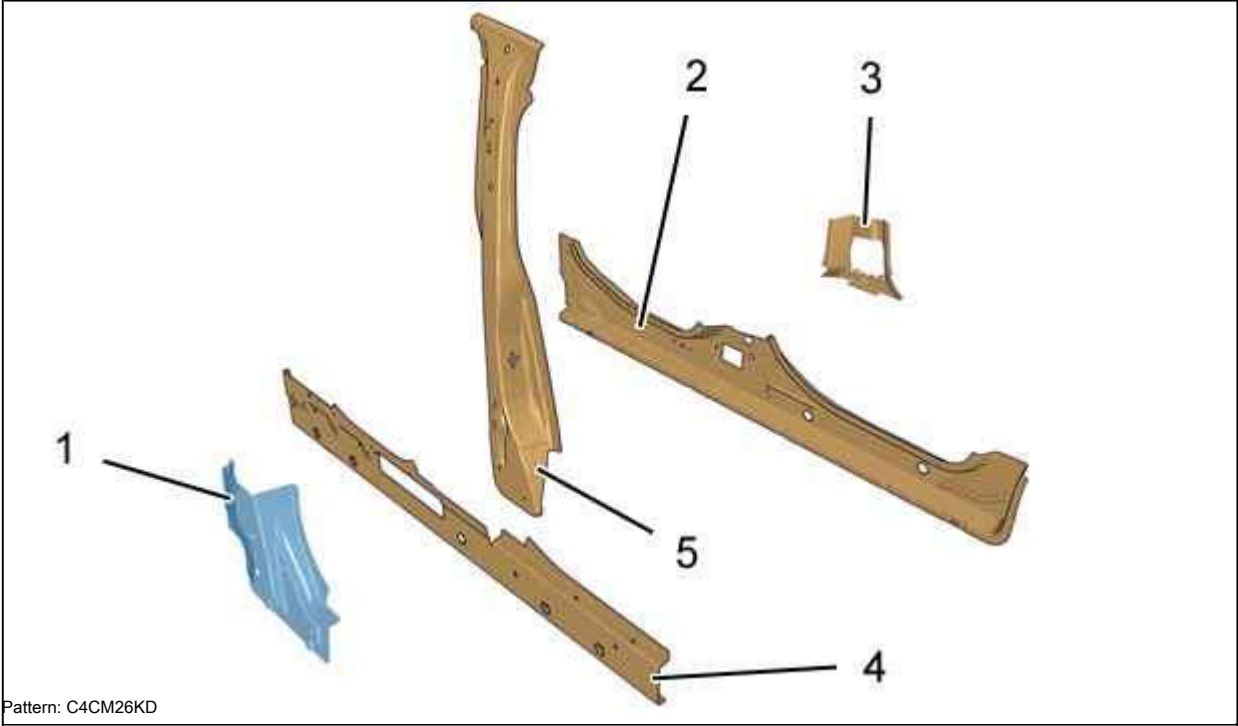
5. Identification: Bottom center stand amplifier

5.1. Ingredients: Bottom center post amplifier



Label Designation		Thickness (mm)	Nature / classification
(1)	Lower center pillar reinforcement 2		THLE

5.2. Identifying Components Adjacent to the Bottom Pillar Amplifier



Label Designation		Thickness (mm)	Nature / classification

(1)	B-pillar lower reinforcement Inner spar	2	THLE
(2)		1.47	HLE
(3)	B-pillar inner panel reinforcement 2.5 External spar reinforcement		THLE
(4)		1.17	THLE
(five)	B-pillar reinforcement	1.8	UHLE

6. Preparation of spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Place the old part on the new part using it as a template (if possible).
Mark, then drill Ø10 mm holes for subsequent MAG spot-plug welding.

NOTE: Drill holes in place and place the weld points in their original locations.

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

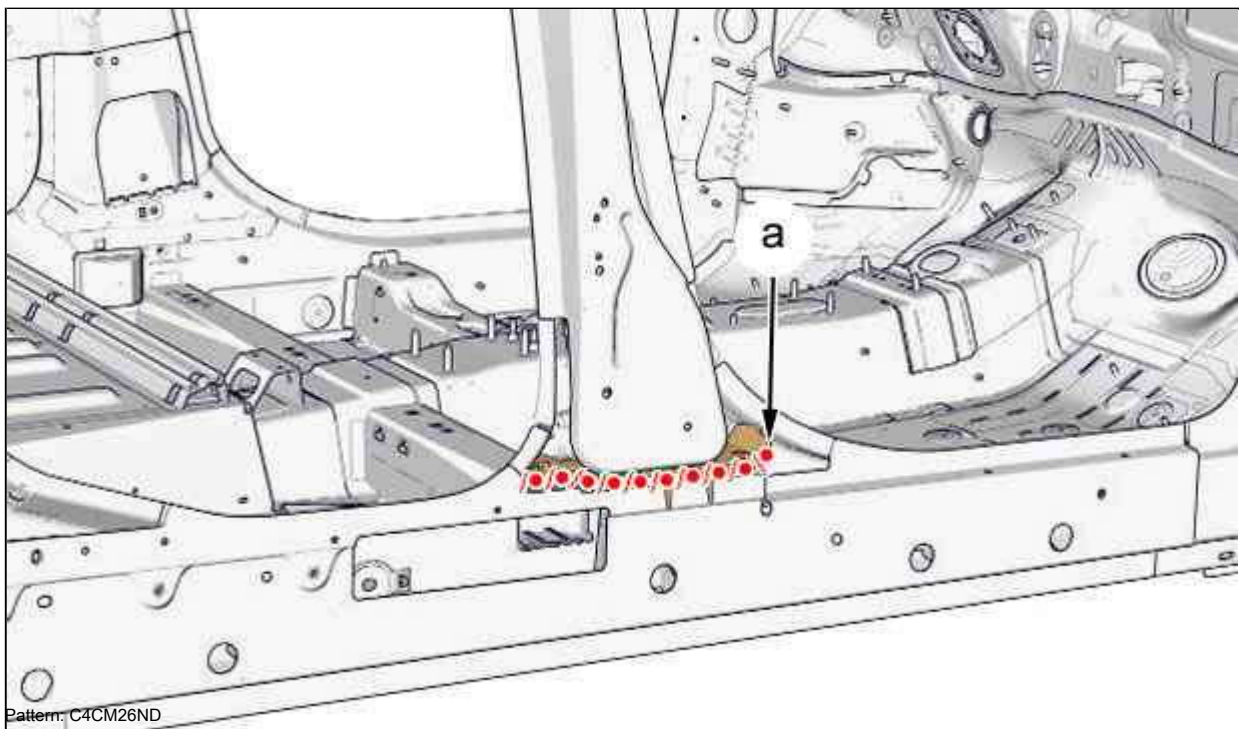
7. Cutting an element on the body



Cut by points.

Remove: B-pillar lower reinforcement.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

Apply sealant to the contour of the insert

(in "a").



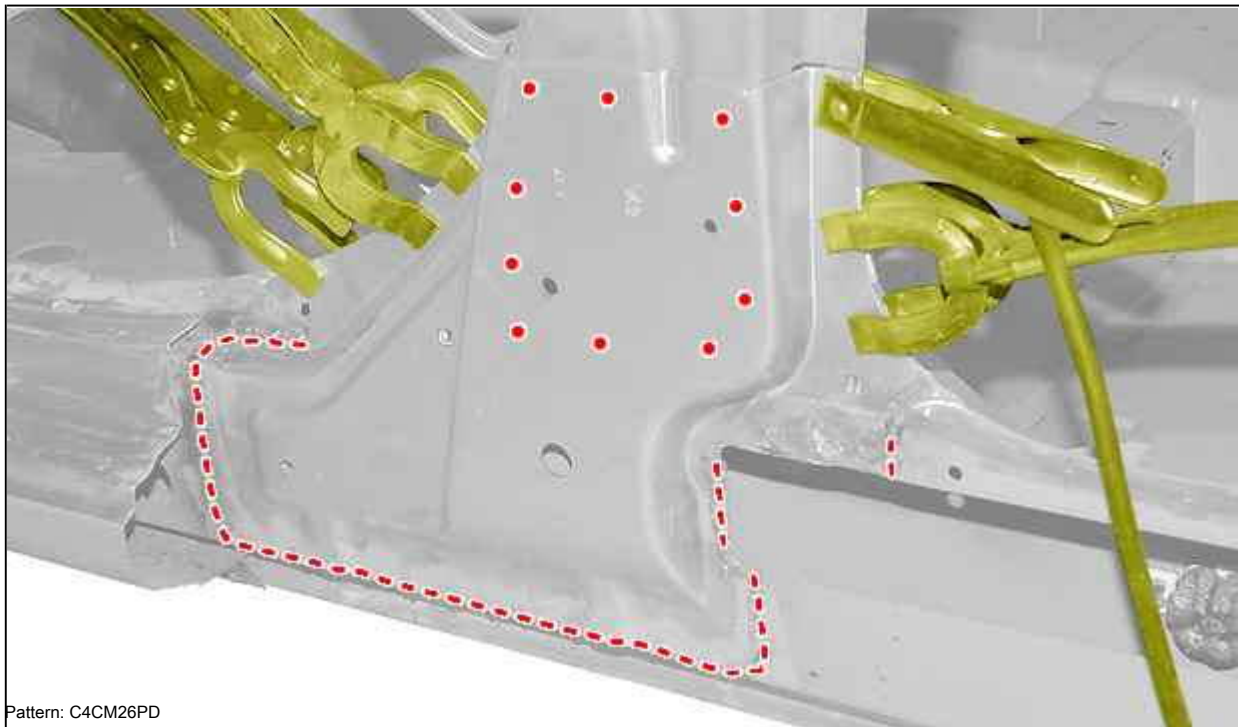
9. Fitting

Position: B-pillar lower reinforcement.

Check that the lower B-pillar amplifier is properly seated against the B-pillar amplifier.

Hold the element in place.

10. Welding



Pattern: C4CM26PD

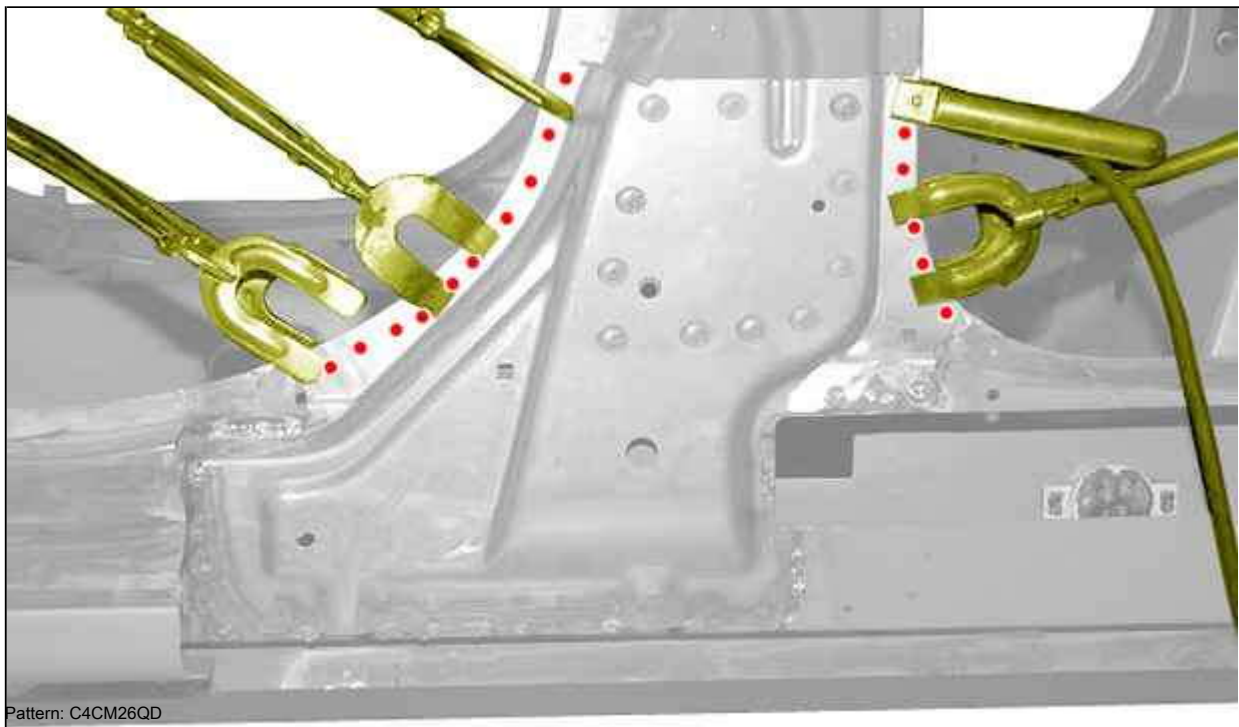
ATTENTION : MAG weld rivets can be replaced with electric weld points made with manufacturer approved welding machines (see repair equipment catalog).

The new welding spots must be strictly identical to the original welding spots.

Weld through the holes in the MAG protective gas.

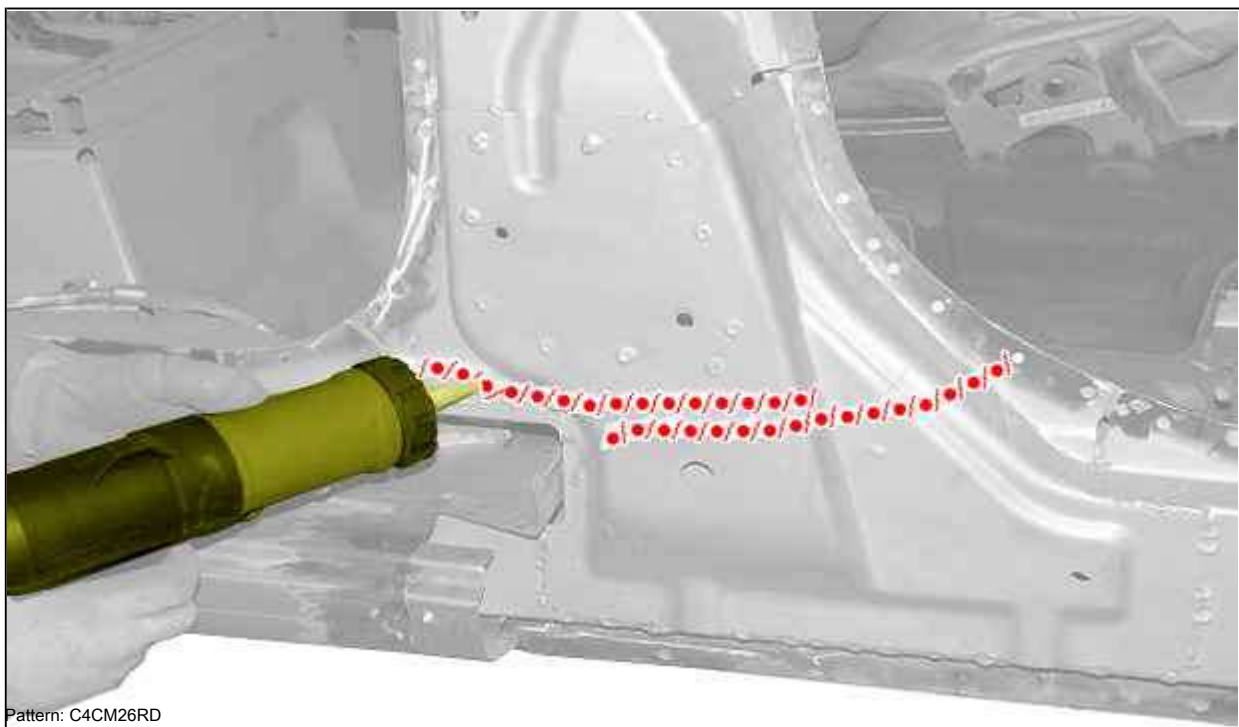
Welding is carried out with intermittent seam MIG20 mm at intervals of 30 mm.

NOTE: It is recommended to use exclusively manufacturer-certified MIG welding stations (see repair equipment catalog).



Weld with welding points.

11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas. Apply type A1 sealing mastic.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: CENTRAL POST AMPLIFIER ASSEMBLY

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

This element uses the following types of electric arc welds. Inert gas welding using the MIG method with a copper-aluminum electrode. The designation for high tensile steels used in this document:

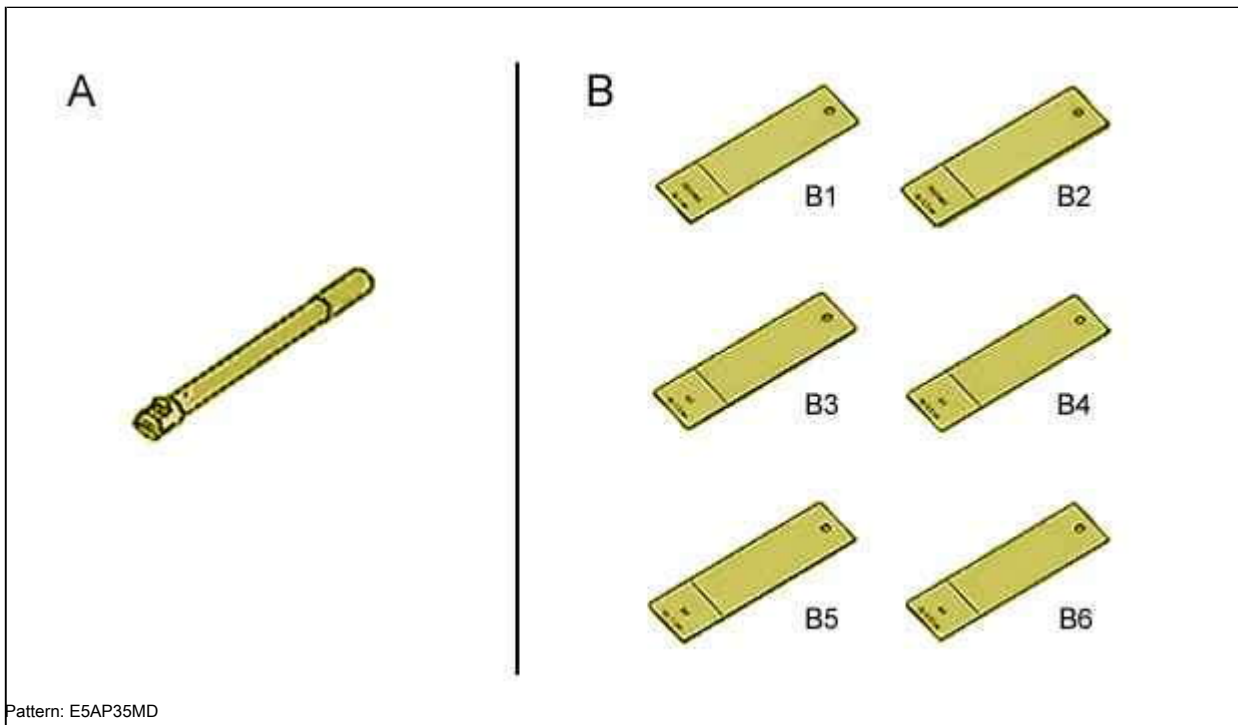
- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: Very high tensile steel

NOTE: This operation can be performed without removing the roof.

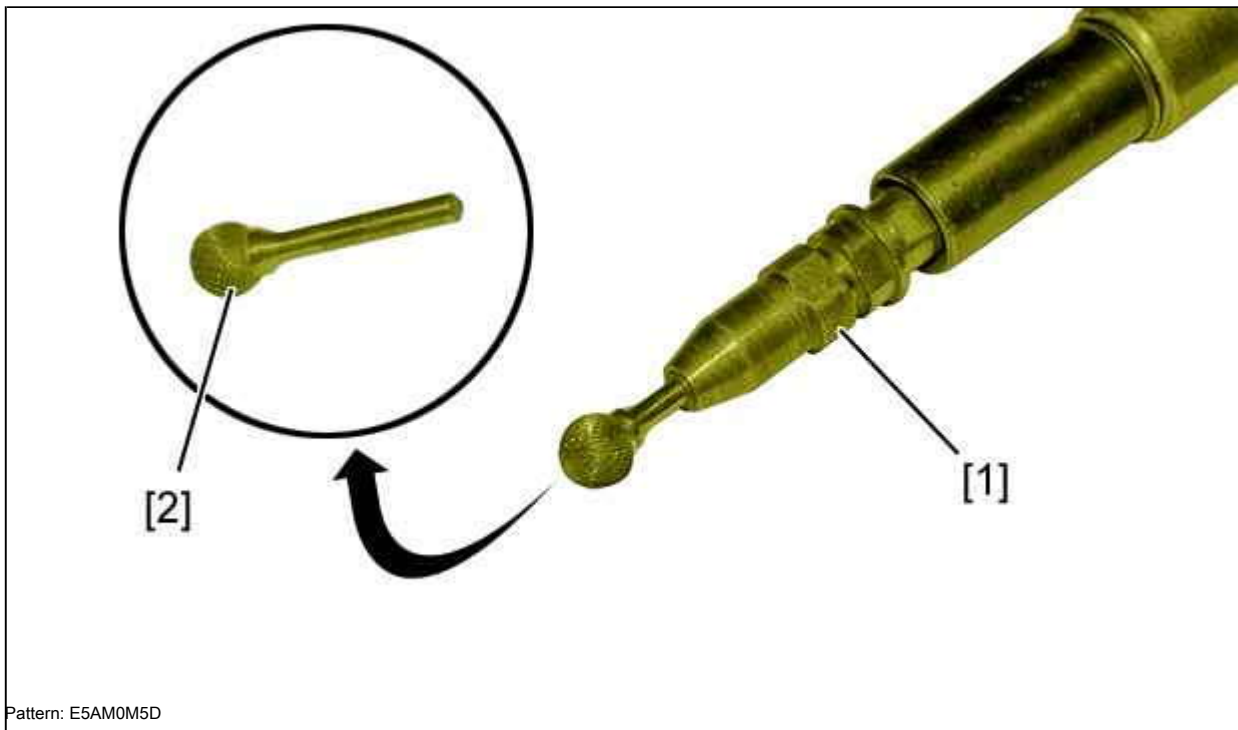
2. Recommended equipment

Works are performed using one of the following measuring systems:

- Electronic measuring system
- Positive measuring system
- Specific head MZ
- Control template



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.



- [1] Straight sander of the Facom type (Reference number: v.345).
[2] Milling cutter of tungsten carbide type Facom (Reference number: VFA.1200).

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

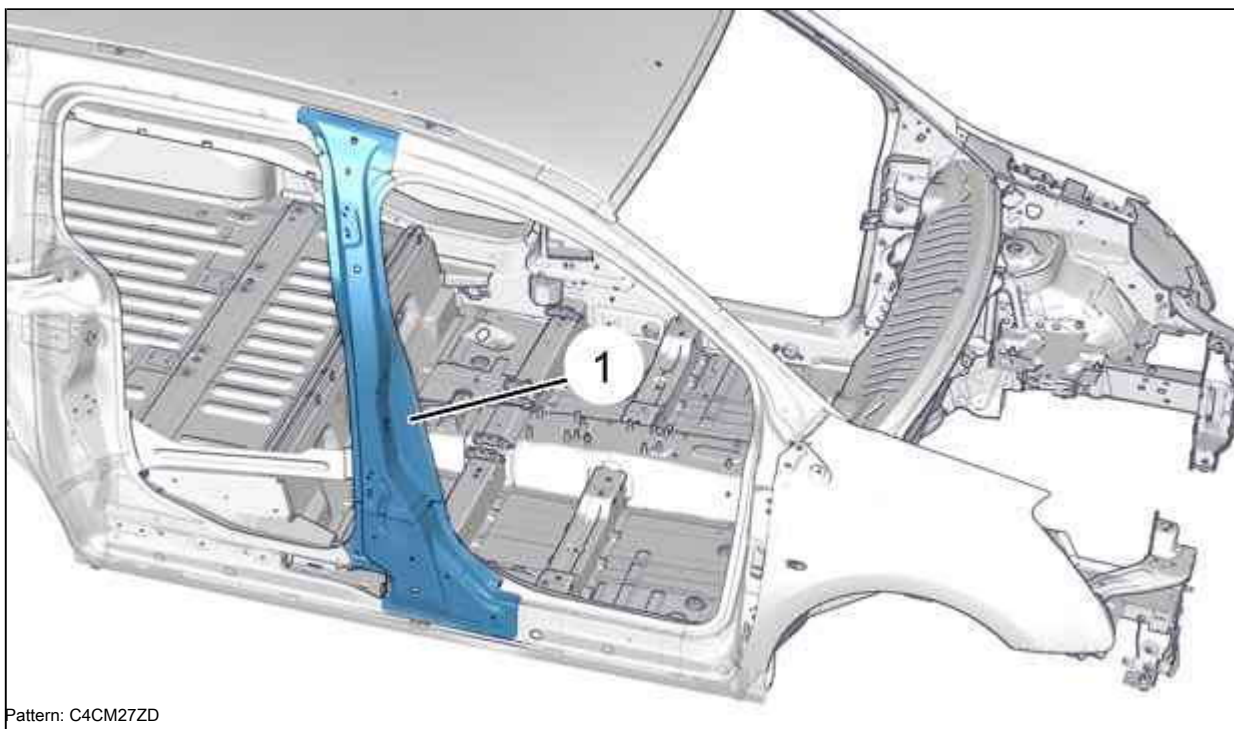
Replace: **Side panel** (Fully or partially).



NOTE: Replace: B-pillar reinforcement fill insert assy (if broken).

NOTE: The replacement of the B-pillar amplifier in the assembly can be done without replacing the roof if the roof is intact.

4. Localization: Center rack amplifier assembly

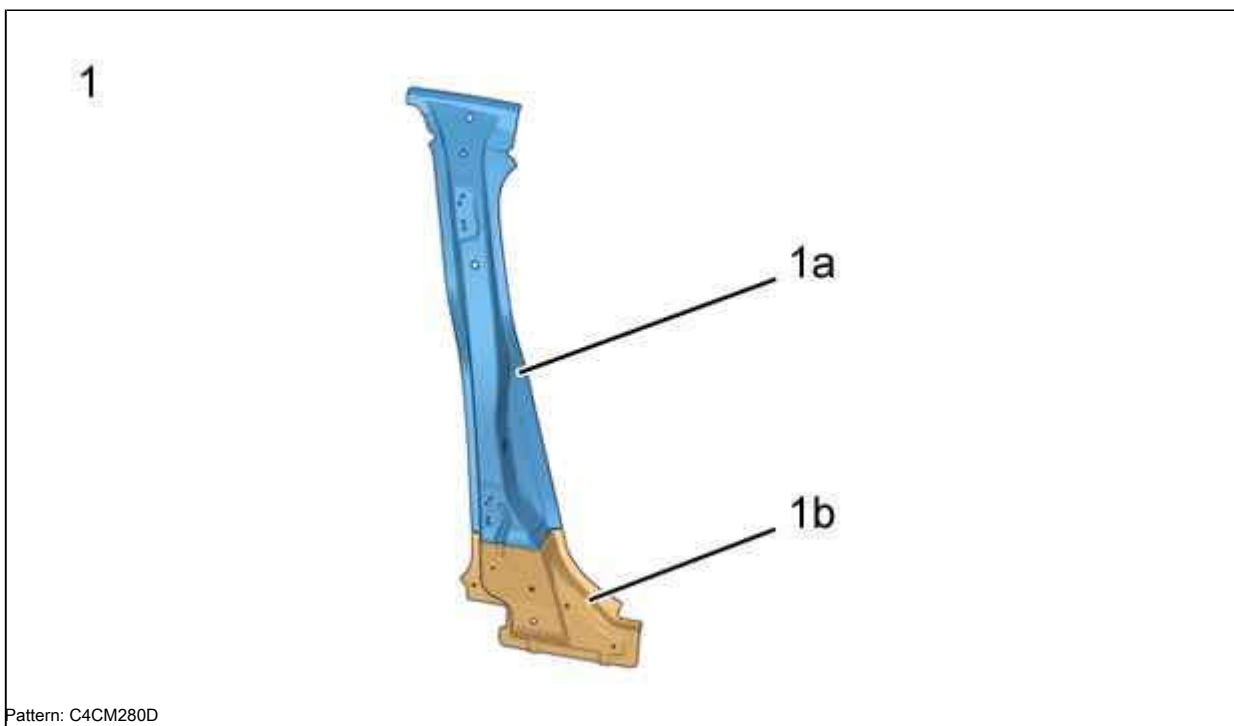


Label Designation

(1)	B-pillar reinforcement assy

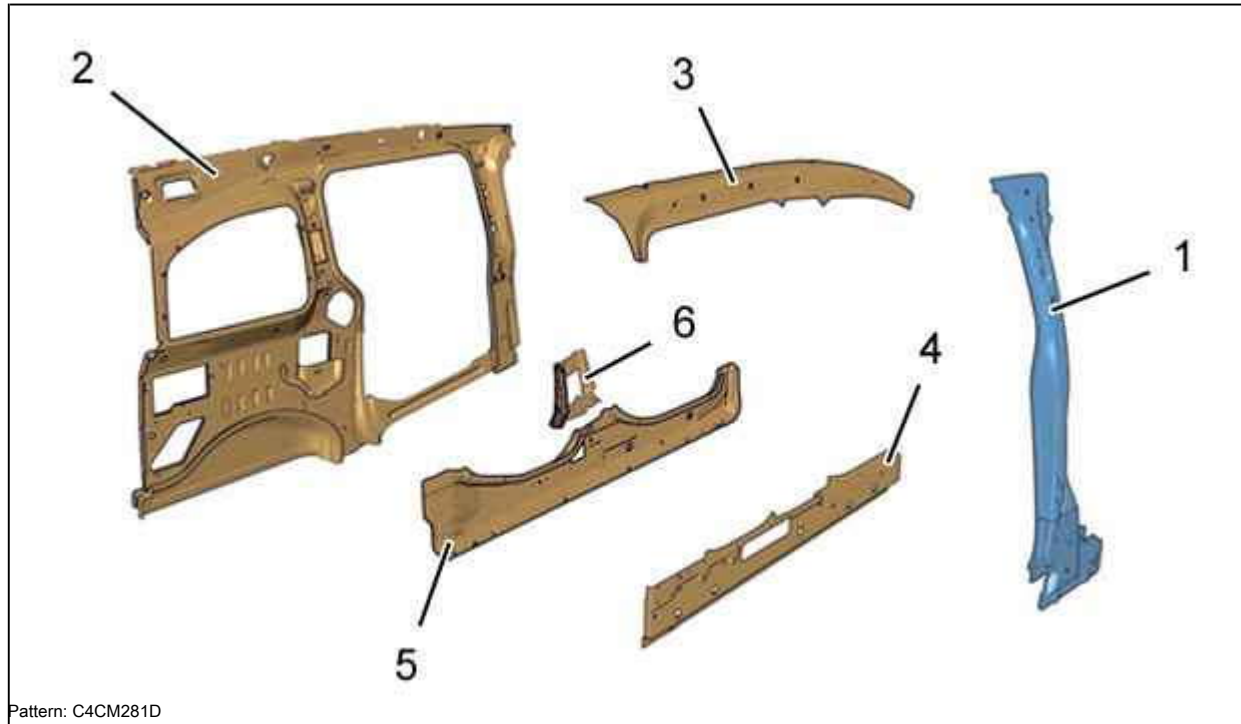
5. Identification of the spare part

5.1. Spare parts layout



Label Designation		Thickness (mm) Nature / classification	
(1)	B-pillar reinforcement assembly Upper B-pillar		
(1a)	reinforcement 2 Lower B-pillar reinforcement 2		UHLE
(1b)			THLE

5.2. Identifying parts adjacent to the center-rack amplifier

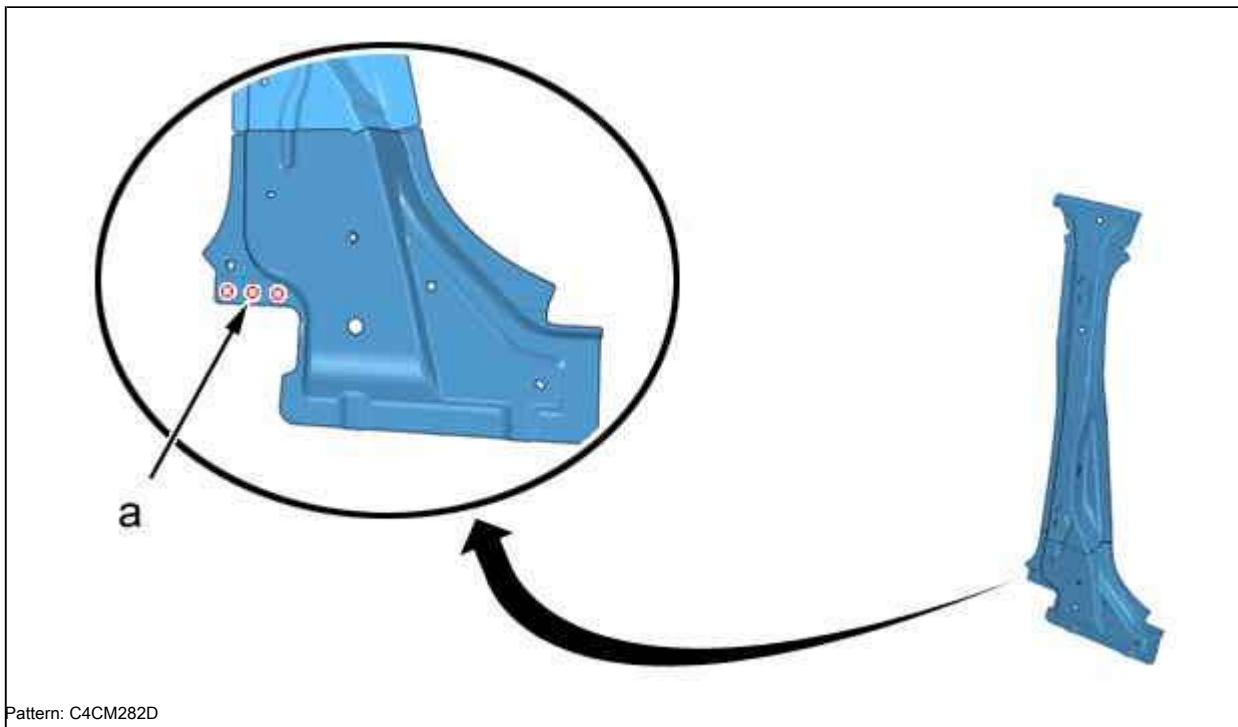


Label Designation		Thickness (mm) Nature / classification	
(1)	B-pillar reinforcement assy Rear fender cover assy	2	
(2)		0.97	Mild steel
(3)	Base of the roof arch	0.97	HLE
(4)	Spar reinforcement	1.17	THLE
(five)	Inner spar	1.47	HLE
(6)	Center pillar inner panel reinforcement 2.5		HLE

6. Spare part preparation: Centerstand amplifier assembly

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection

6.1. Bottom: Center-post amplifier assembly

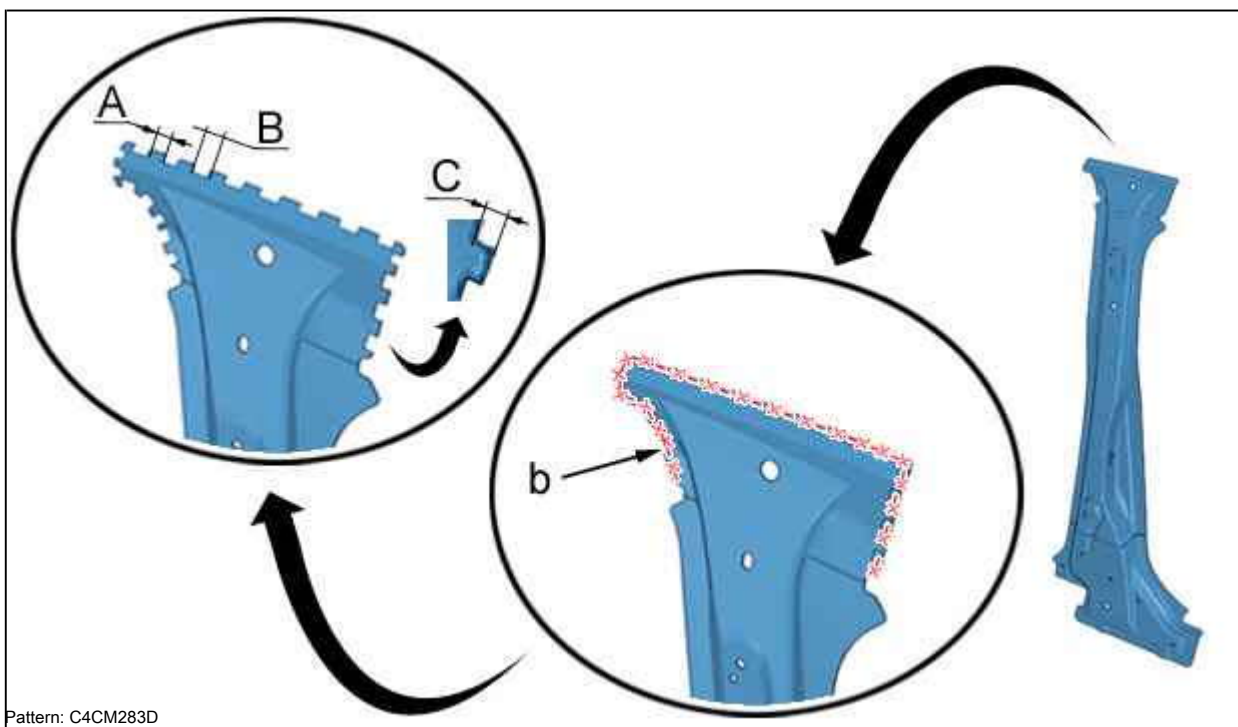


Pattern: C4CM282D

Mark, then drill with $\varnothing 10$ for subsequent MIG rivets (in "a"). Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

6.2. Upper: Center-post amplifier assembly



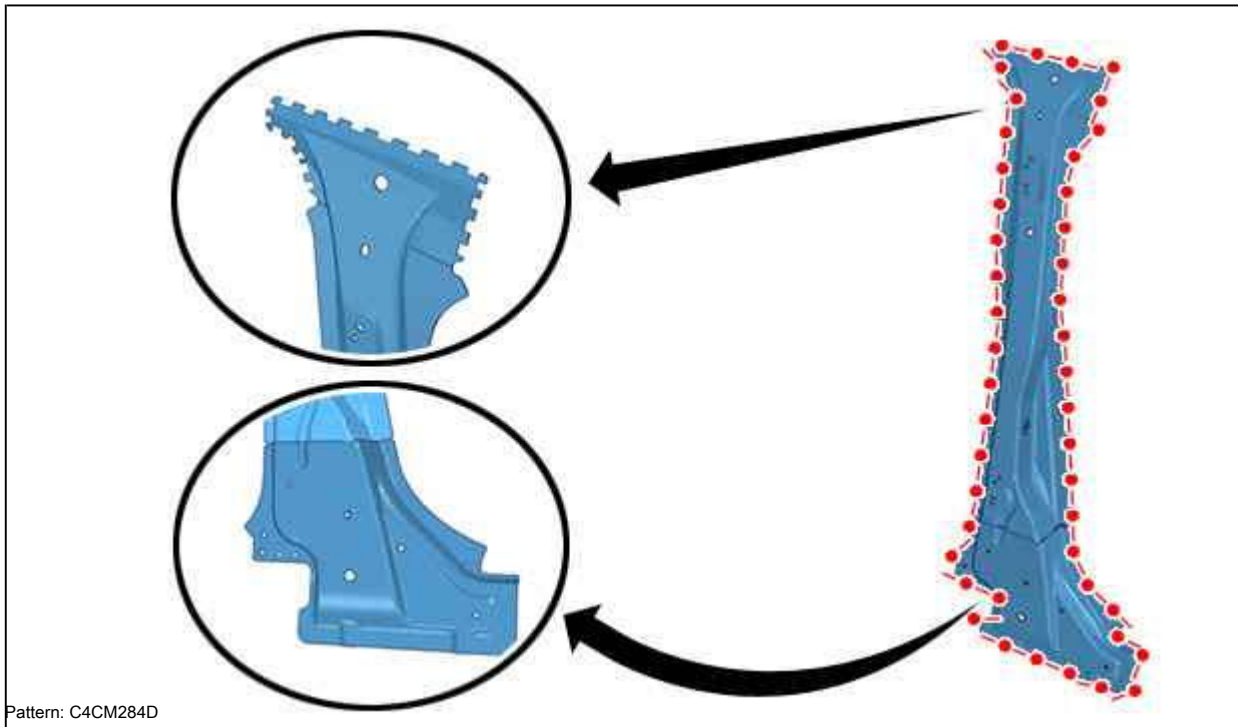
Pattern: C4CM283D

A = 20 mm.

B = 30 mm.

C = 7 mm.

Mark, then cut (at "b") with a saw for subsequent MIG continuous welding.

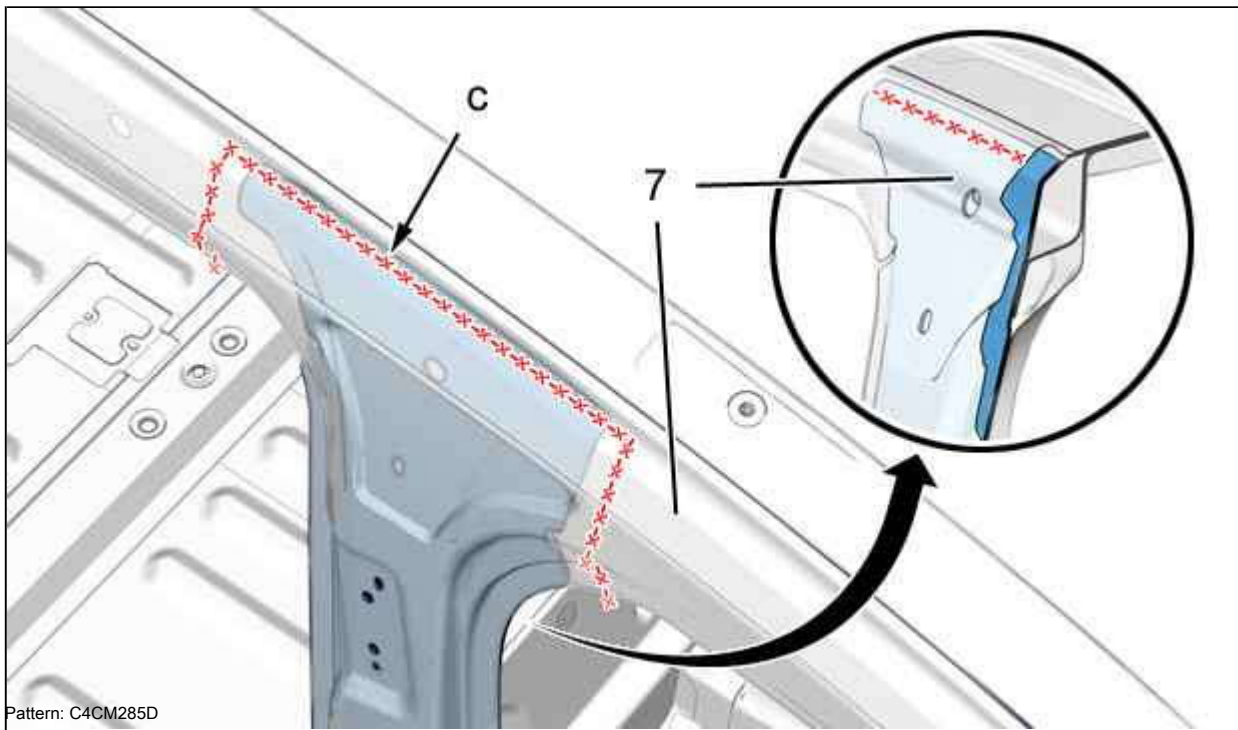


Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body

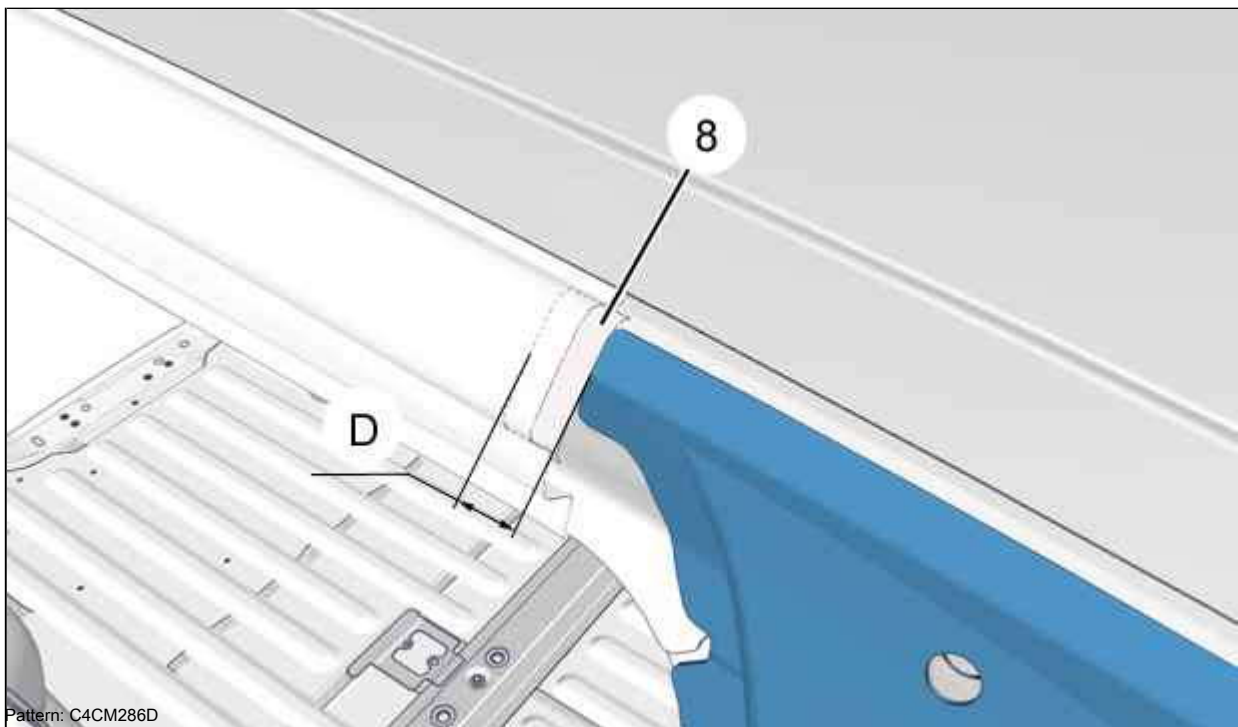
7.1. Preparation from the salon



Mark, then cut (at "c") from the passenger compartment (7) for subsequent MAG intermittent welding.

NOTE: The cutting line from the passenger compartment (7) is given for reference, it may vary depending on the specific case of replacing the B-pillar amplifier assembly or at the request of the operator.

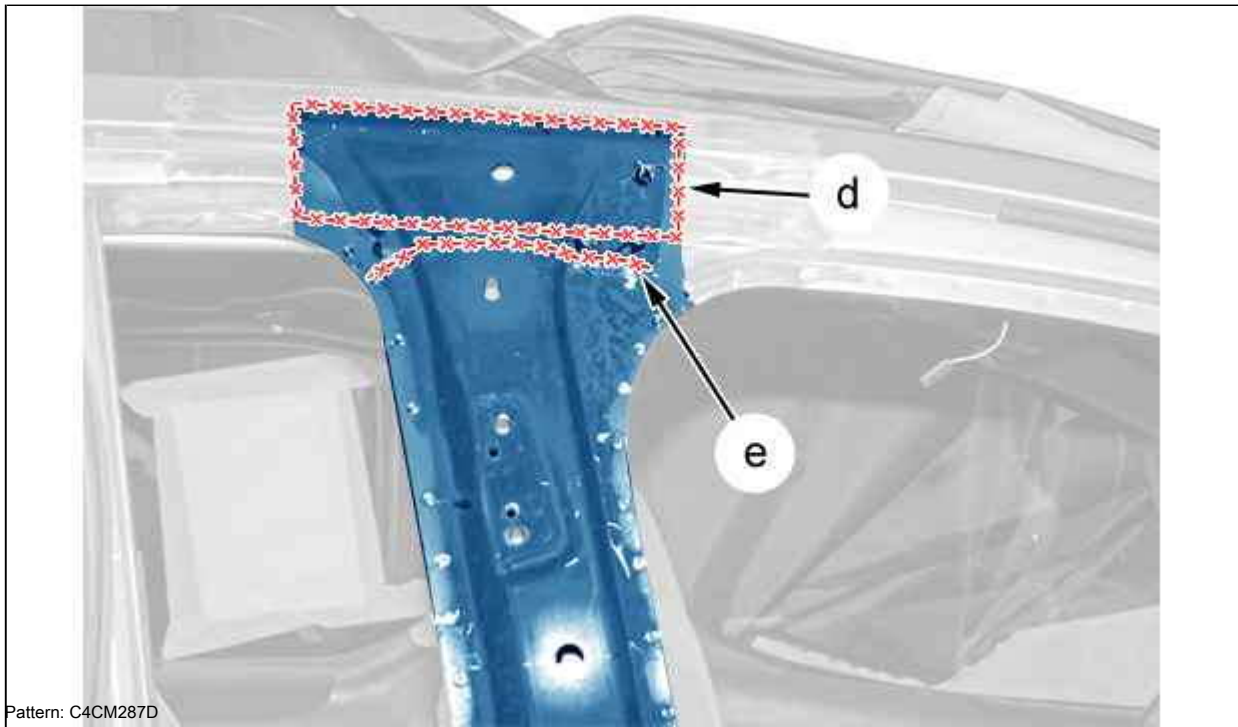
7.2. Preparation: Couplings (Side of Salon)



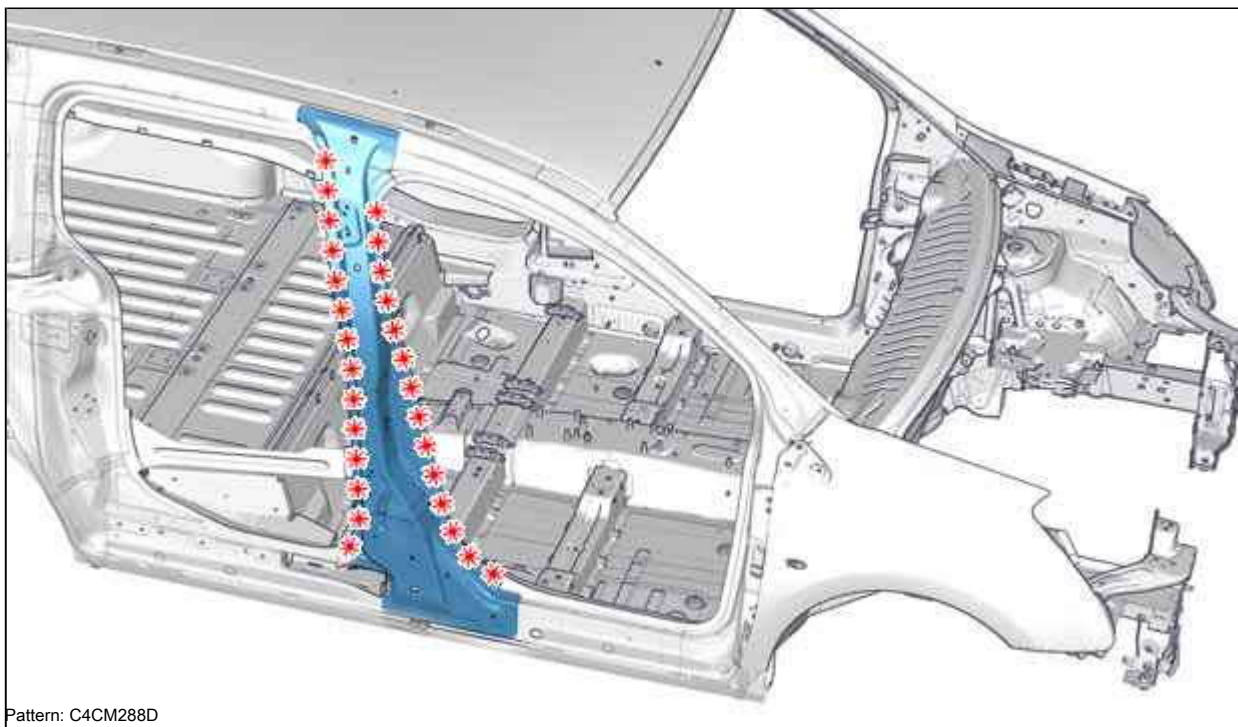
D = 60 mm.

ATTENTION : Partial replacement from the passenger compartment is carried out exclusively using linings in all cutting zones.

Make a repair plate (8) from the passenger compartment from an unused spare part.



Mark, then cut (at "e"): B-pillar reinforcement assembly. Grind the weld points (in "d"); Using the tools [1], [2].



Cut by points.

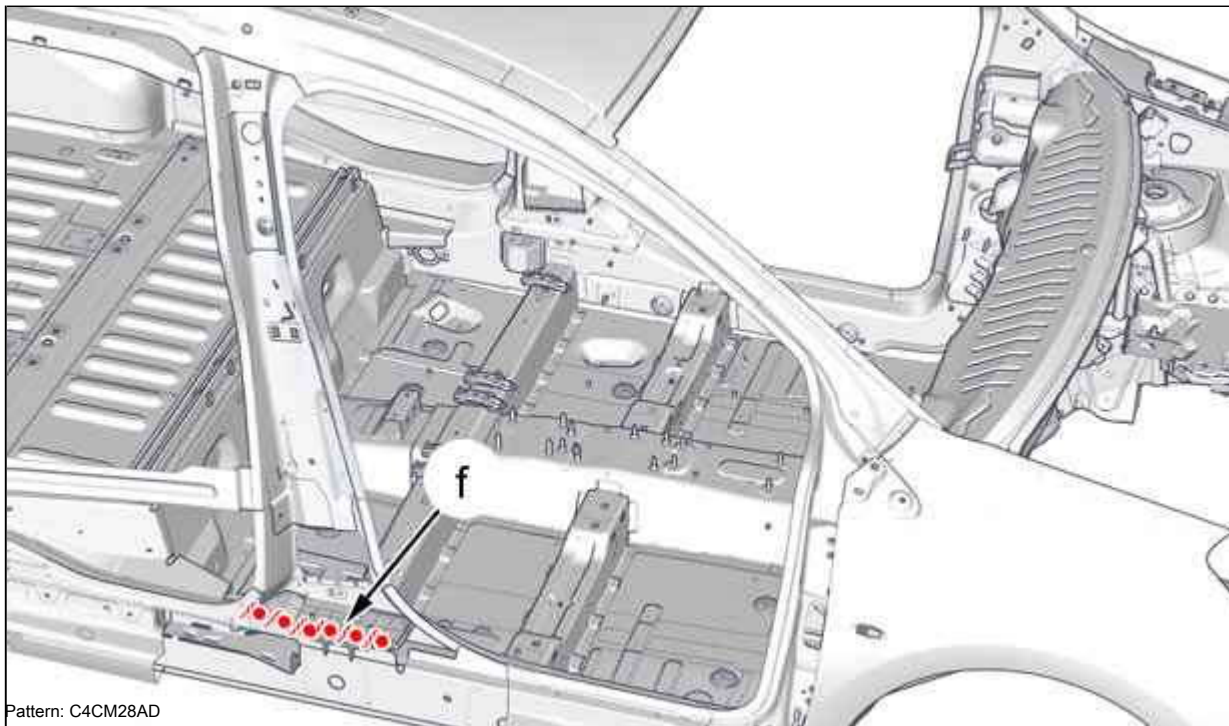


Pattern: C4CM289D

Cut by points.

Remove: B-pillar reinforcement assembly.

8. Cleaning and preparation of the body



Pattern: C4CM28AD

Prepare the sockets and protect them with a welding primer (index "C7").

Apply a layer of A1 sealant along the contour of the B-pillar reinforcement fill insert assembly

(in "f").

NOTE: Check the tightness of the B-pillar booster fill insert assembly to prevent water and dust from entering the interior of the vehicle.

9. Fitting



Position: B-pillar reinforcement assembly.

Check the fit of the B-pillar amplifier assembly using a template or a certified by the manufacturer of the electronic measuring device (see the repair equipment catalog). Hold the element in place.

10. Welding

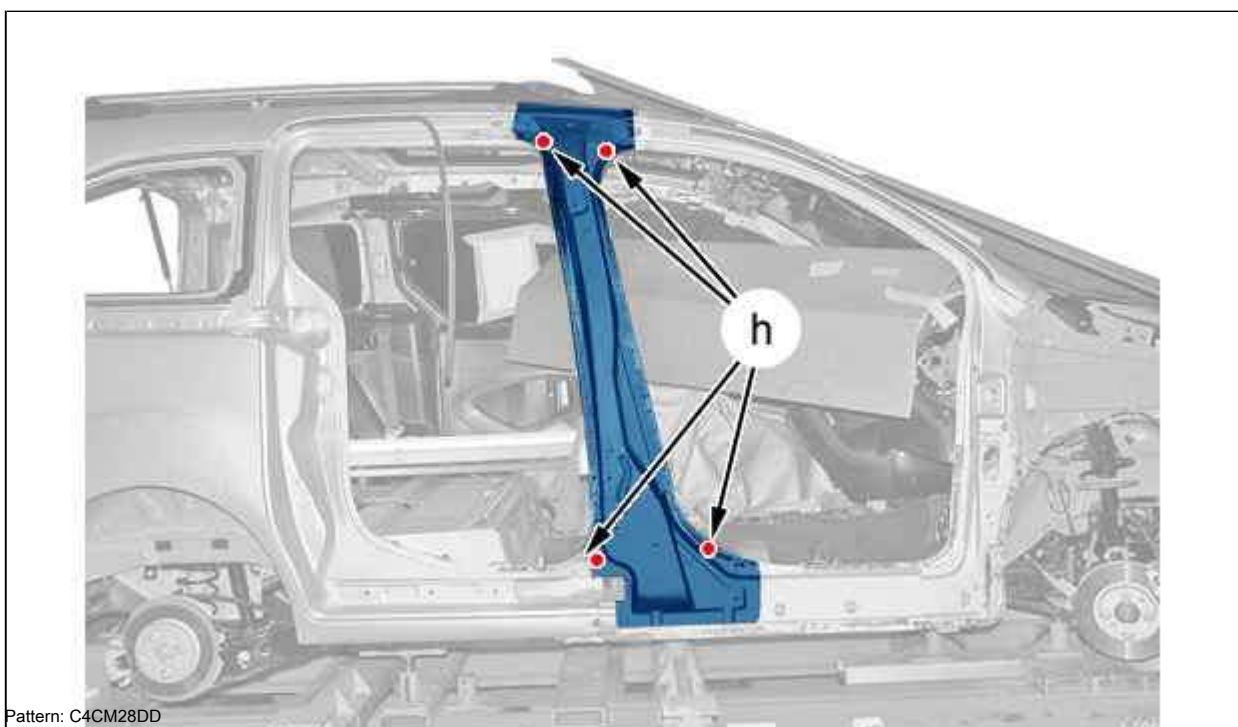
ATTENTION : It is recommended to use exclusively manufacturer-certified MIG welding stations (see repair equipment catalog).



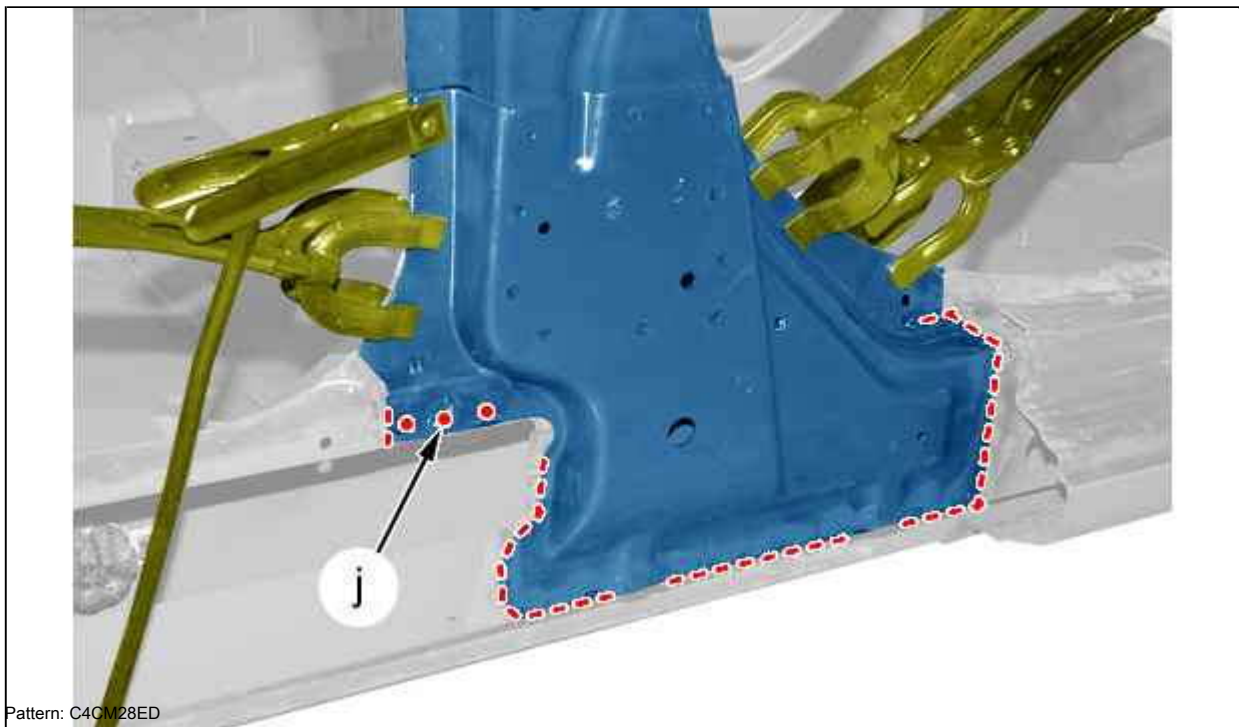


Perform a sequential MIG seam weld (in "g").

NOTE: To avoid altering the mechanical strength of the B-pillar reinforcement assembly, it is not recommended to strip MIG welds.



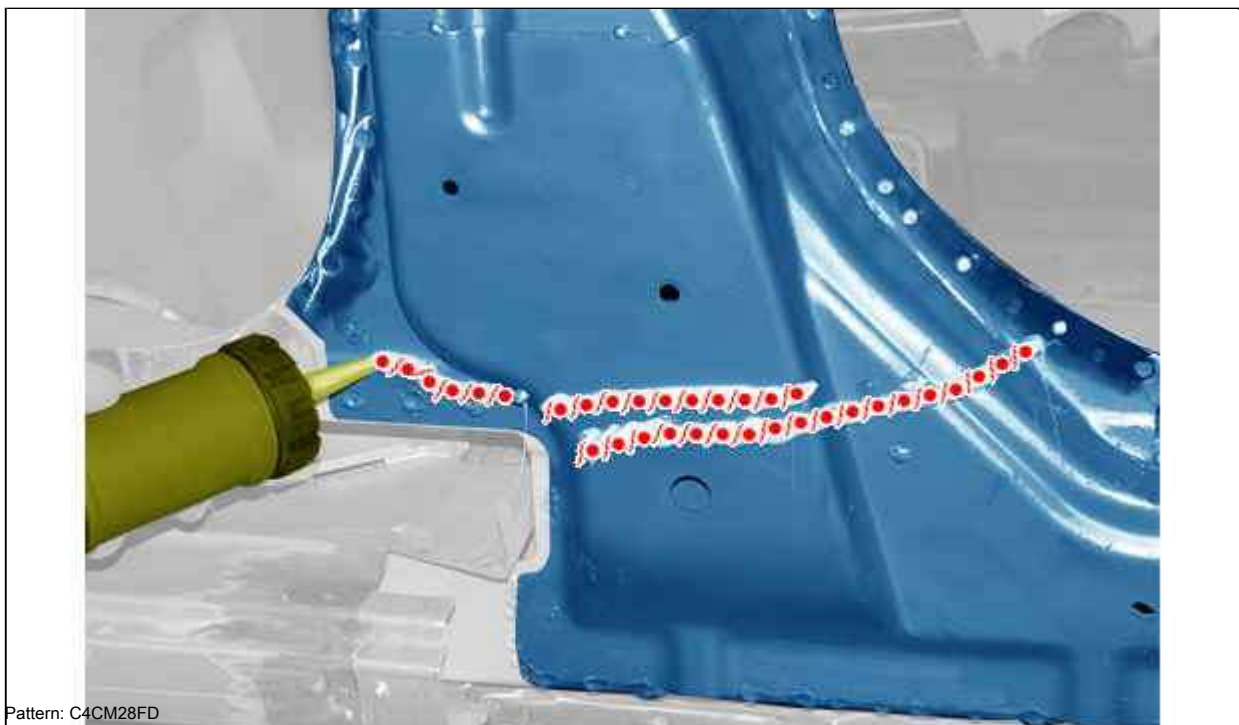
Weld with electric welding at 4 points (in "h").



Weld with MIG spot welding (in "j"). Perform a sequential MIG seam weld.

NOTE: To avoid altering the mechanical strength of the B-pillar reinforcement assembly, it is not recommended to strip MIG welds.

11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas.

Apply a layer of sealant type "A1" on the lower B-pillar reinforcement.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

NOTE: Apply a coat of sealant to the B-pillar lower reinforcement before installing and welding on the passenger side.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: PART CENTRAL POST COVER

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element. Braze welding using the VIG method with metal (copper-aluminum) deposition in an inert gas atmosphere.

NOTE: To replace the B-pillar trim; Order the rear fender trim from the Parts Department.

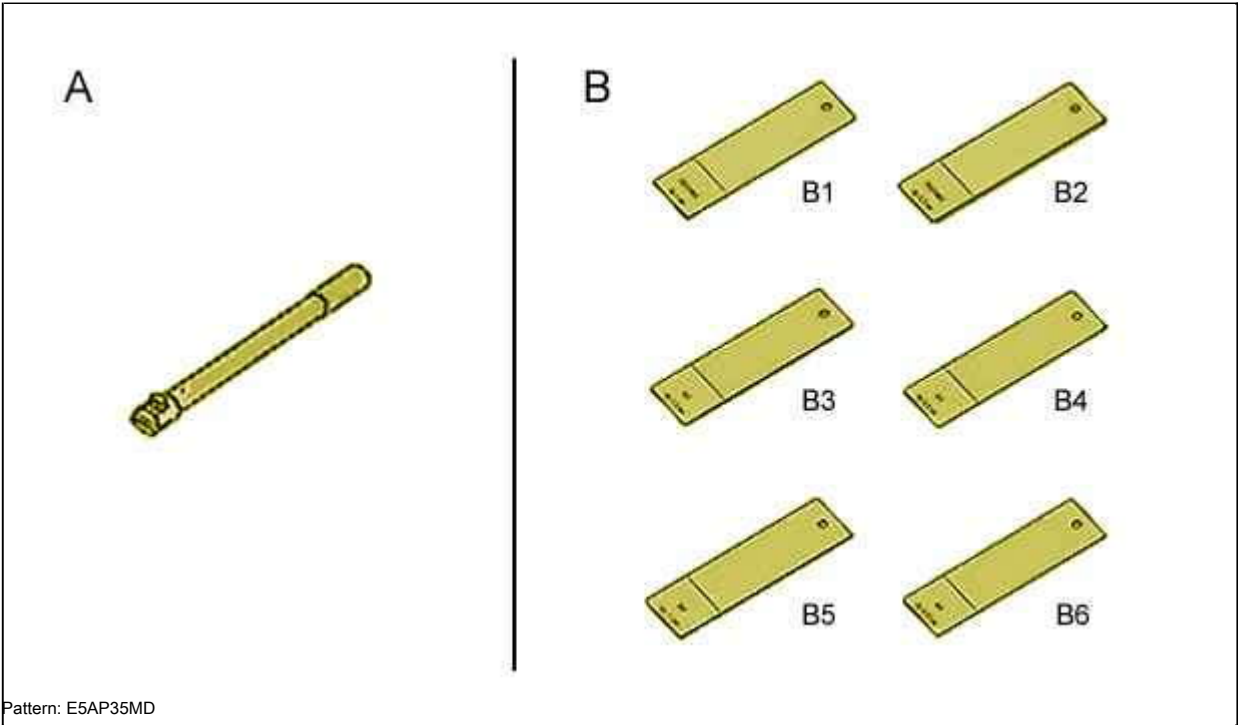
The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Recommended equipment

MANDATORY: When replacing the B-pillar trim with B-pillar reinforcement, use only

aggregates for point welding, certified manufacturer (see the catalog of equipment for repair).



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

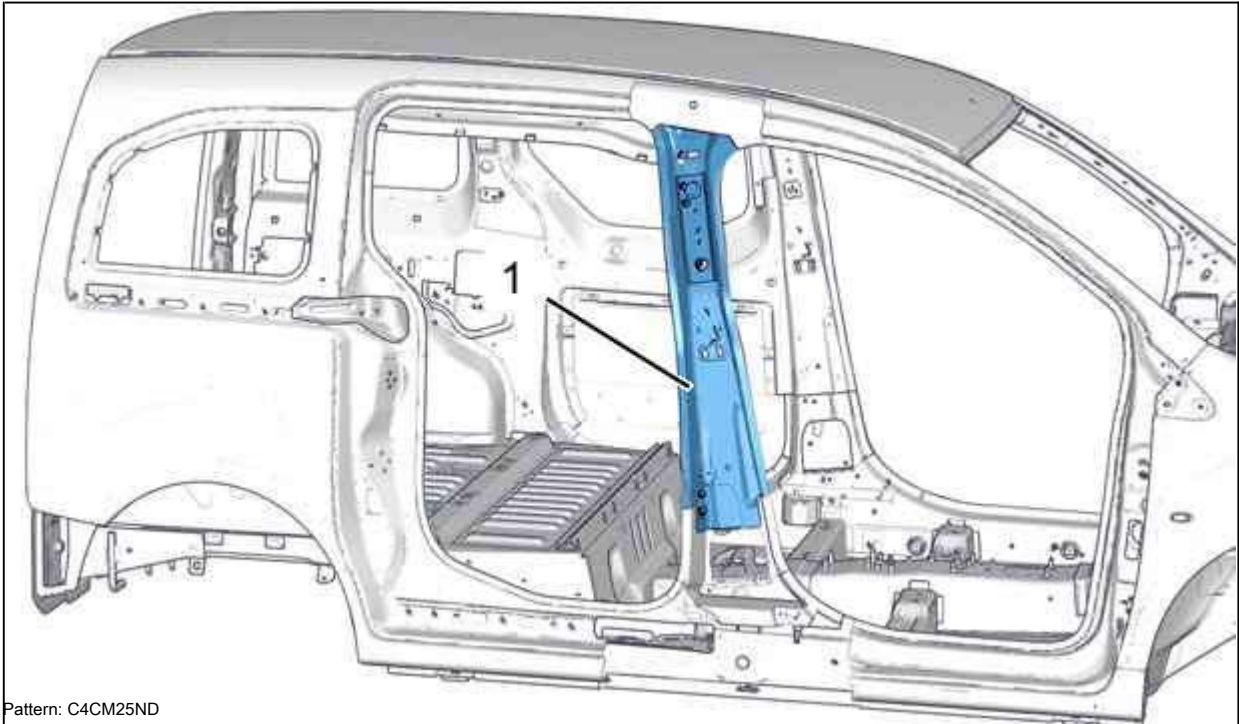
ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace: **Center rack amplifier**



4. Localization Spare part

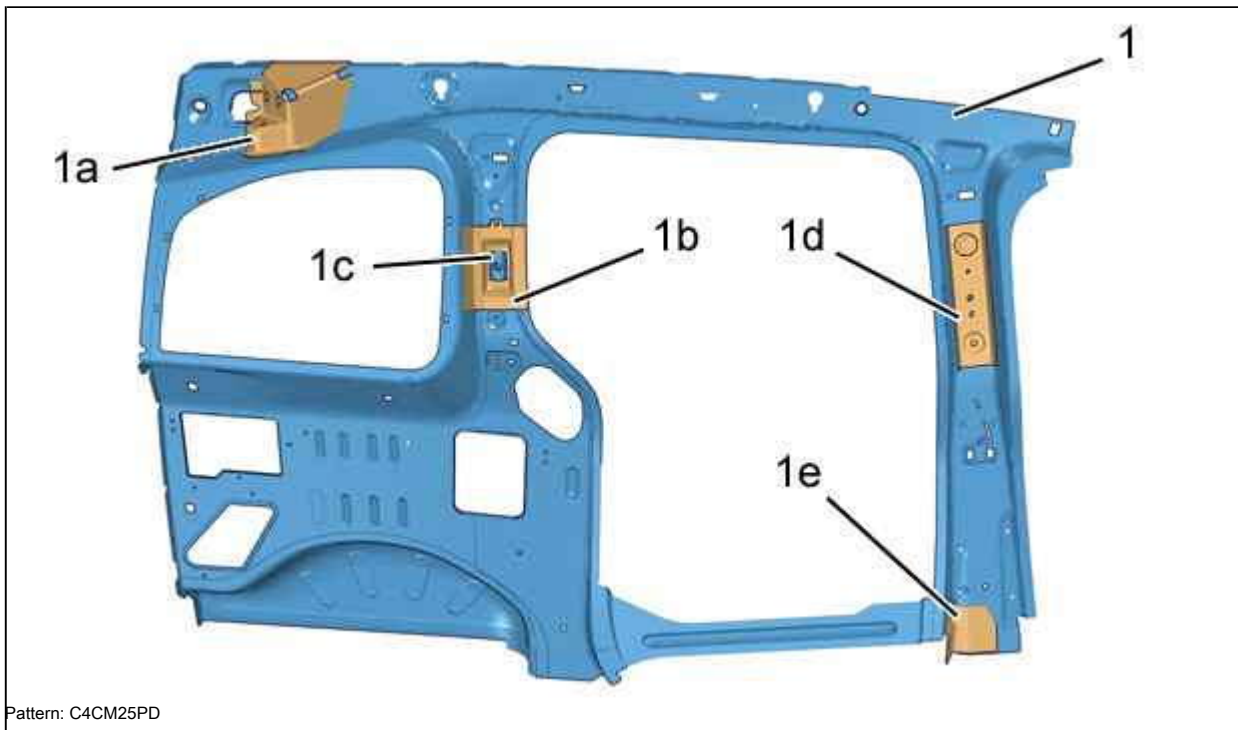


Label Designation

(1)	Rear fender trim assy / B-pillar inner panel

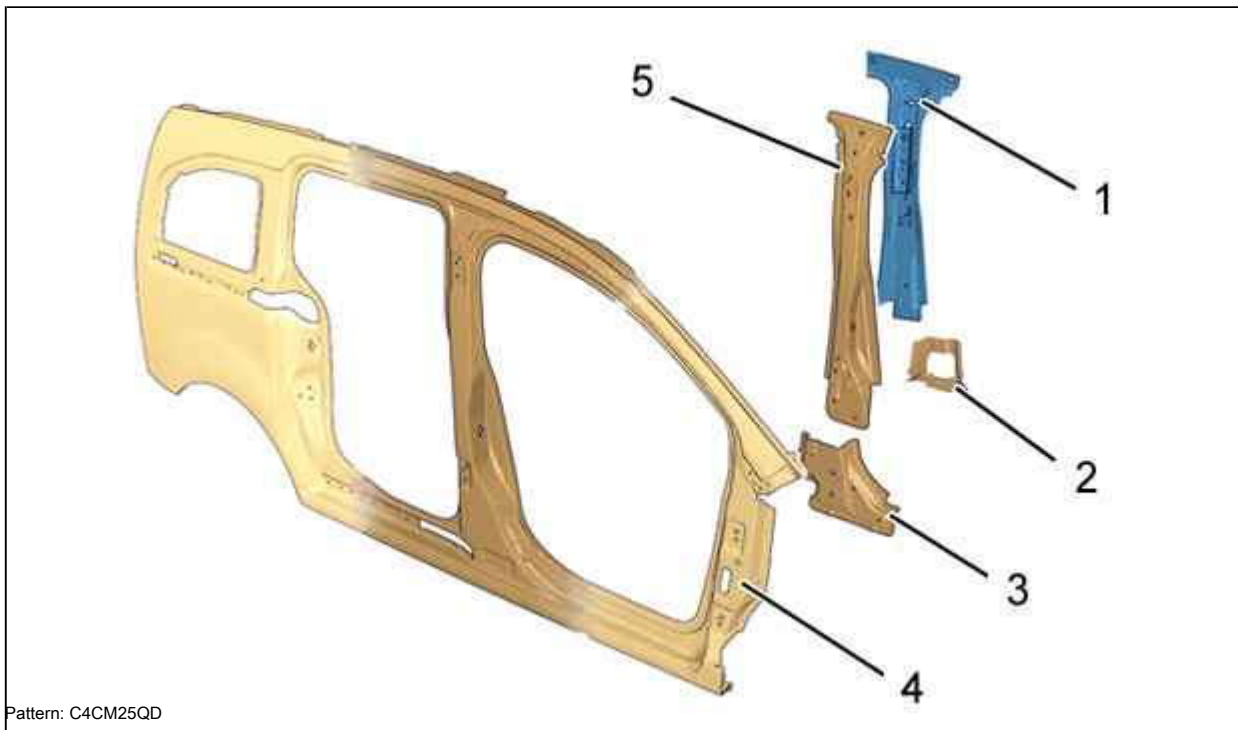
5. Identification of the spare part

5.1. Ingredient: Spare part



Label Designation		Thickness (mm) Nature / classification	
(1)	Rear fenders assy	0.97	Mild steel
(1a)	Retractable seat belt reel support	1.47	Mild steel
(1b)	Reinforcement of the rear seat belt guide 1.47 Seat belt anchorage		HLE
(1c)		M10	
(1d)	Reinforcement for seat belt adjuster 1.47 Reinforcement for rear fender liner		HLE
(1e)		1.47	HLE

5.2. Identification of parts adjacent to the spare part

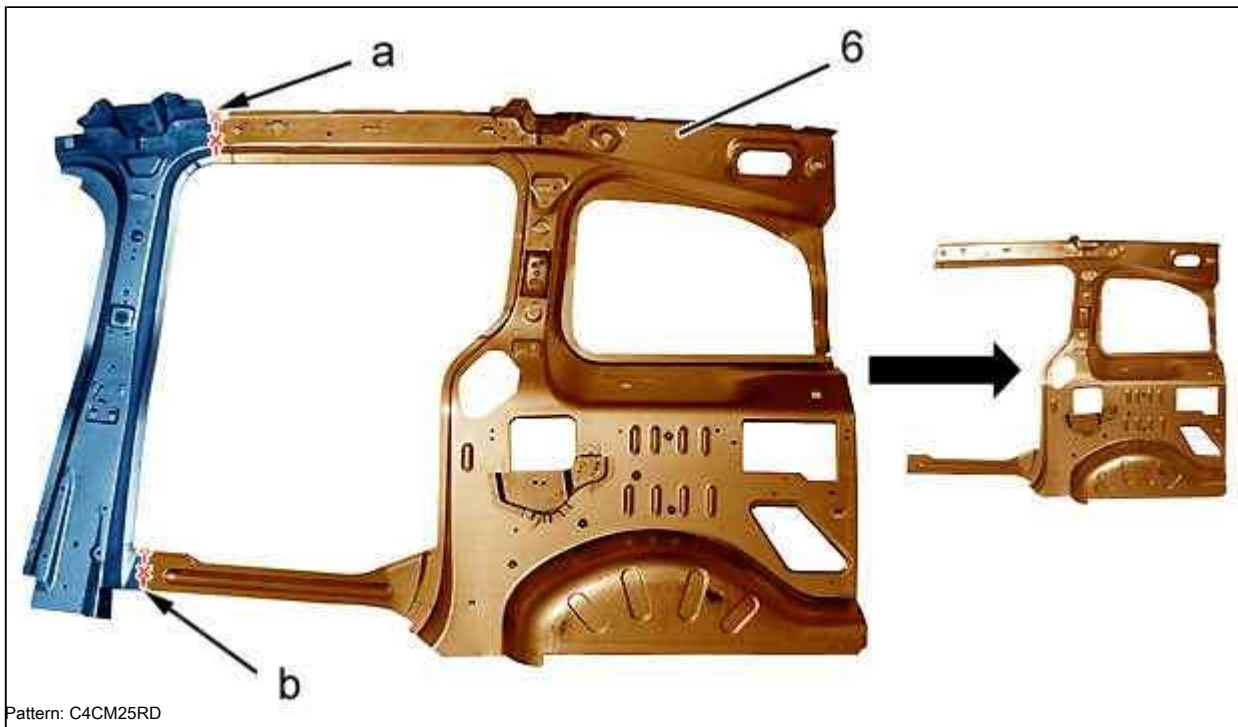


Label Designation		Thickness	Nature / classification
		(mm)	
(1)	Cover of the rear fenders with part of the B-pillar (Part)	0.97	Mild steel
(2)	B-pillar inner panel reinforcement B-pillar lower reinforcement	2.5	THLE
(3)		2	THLE
(4)	Passenger compartment side (In whole or in part) B-pillar	0.72	Mild steel
(five)	reinforcement	2	UHLE

6. Preparation of spare part

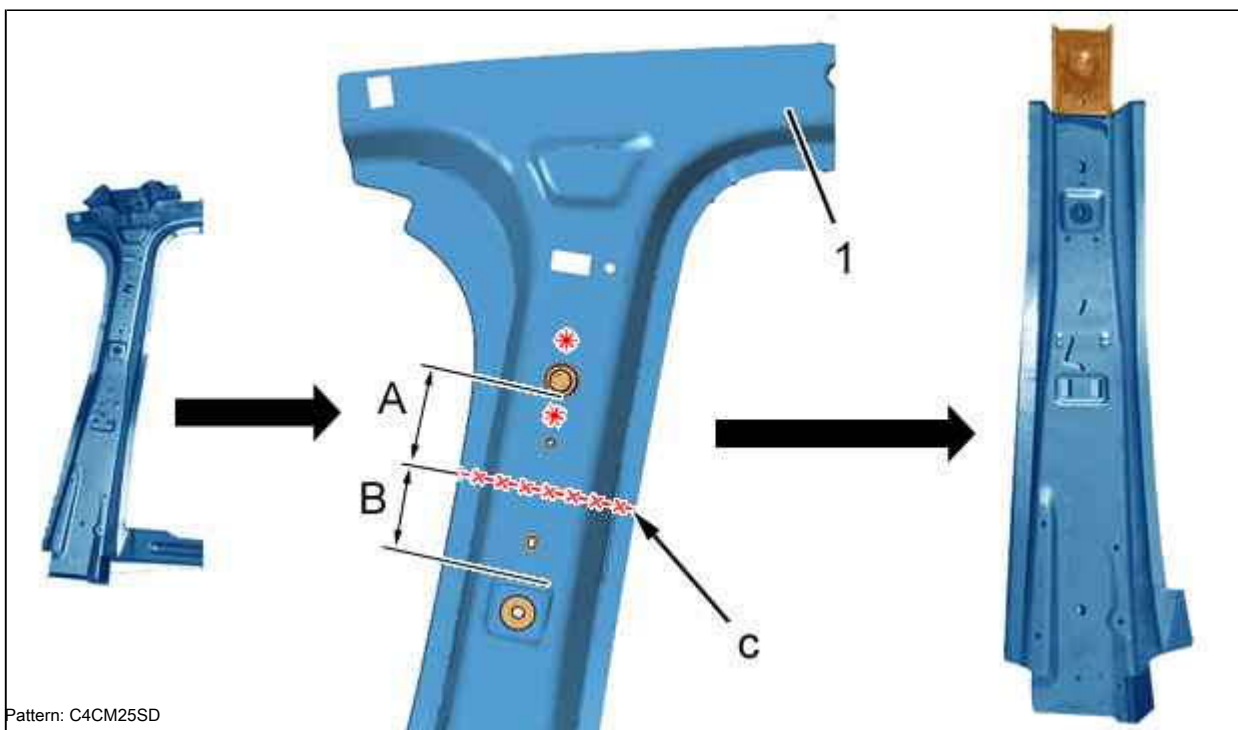
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

6.1. Pre-cutting



Mark, then cut (at "a", "b"); Rear fender trim assembly (6).

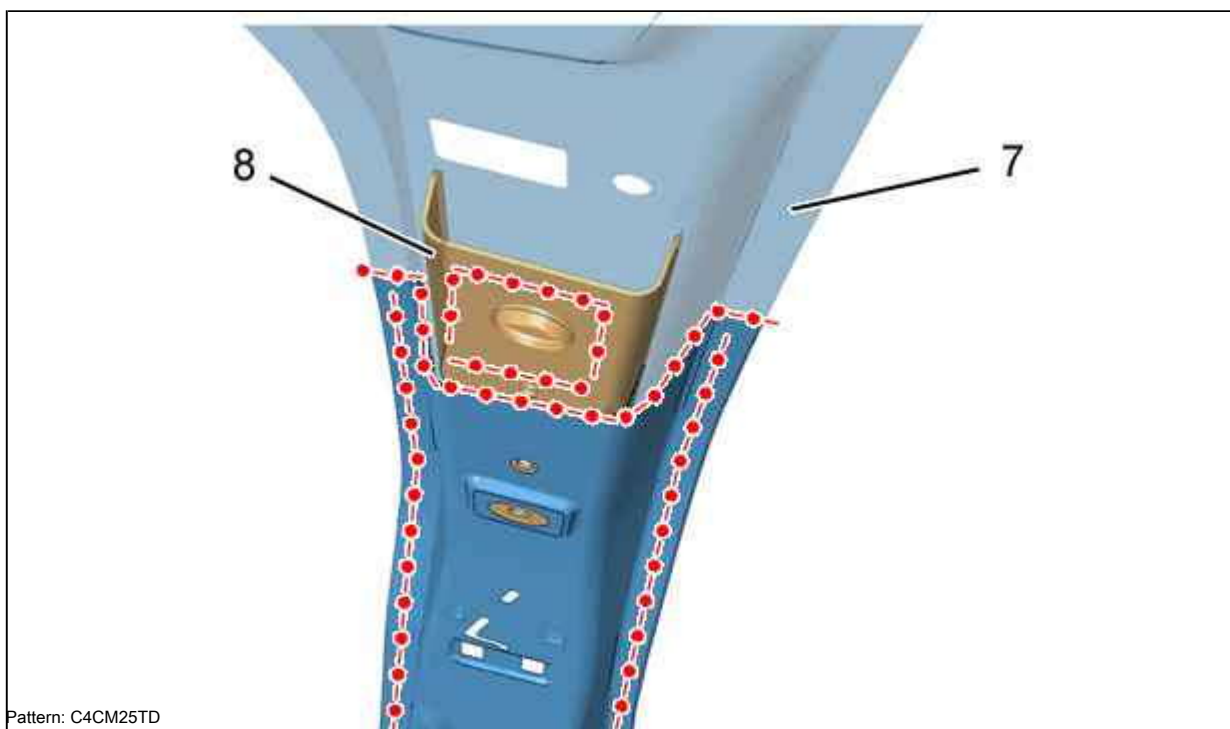
6.2. Final cutting



A = 50 mm.

B = 90 mm.

Mark at "c" the rear fender trim assembly (1) (B-pillar part). Cut: 2 electrical contacts; With a 10 mm drill.



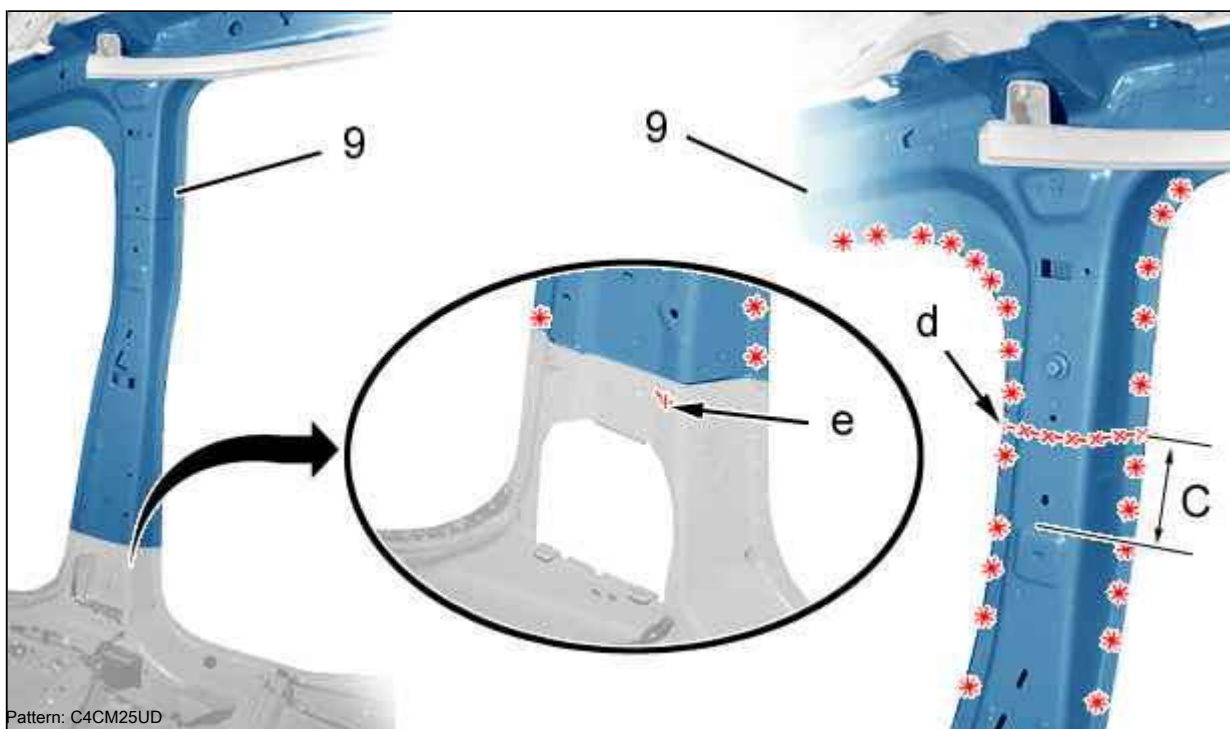
ATTENTION : During cutting; Do not damage the reinforcement of the seat belt adjuster (8).

Cut: Rear fender trim assy (B-pillar part) (as shown "c"). Remove the B-pillar trim (7) (top).

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body



C = 90mm.

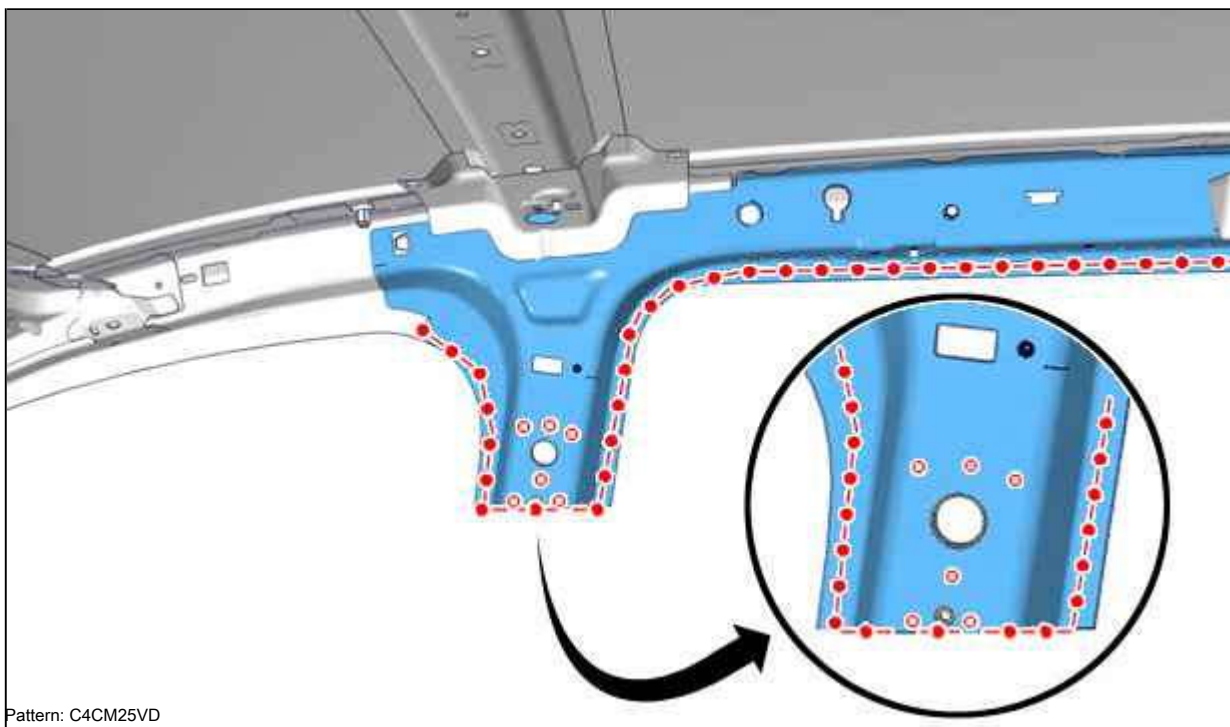
Apply marking lines, then cut in area "d"; B-pillar trim (9); Using a saw.

Cut: electrical contacts. Cut: MAG weld (in "e").

NOTE: It is recommended to cut the MAG weld bead (in "e") (outside the vehicle).

Remove the center pillar trim (9).

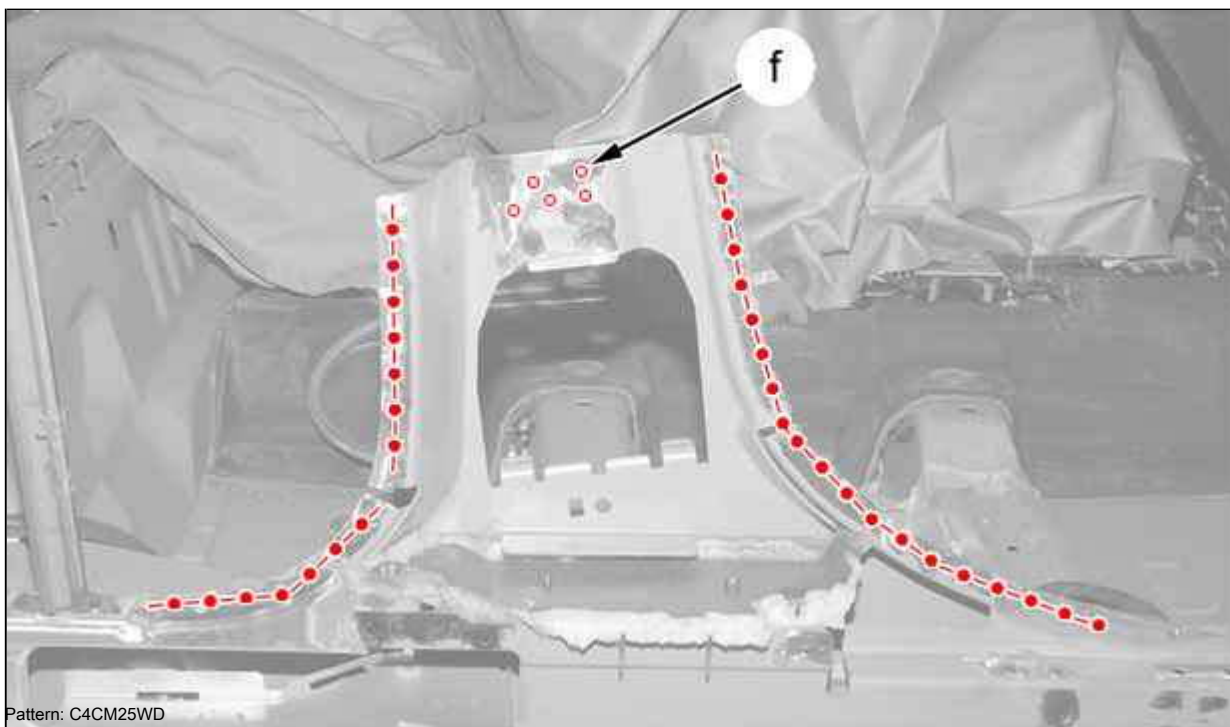
8. Cleaning and preparation of the body



Pattern: C4CM25VD

Mark, then drill with 10mm diameter for subsequent spot-plug MIG welding. Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Pattern: C4CM25WD

Mark, then drill with $\varnothing 10$ for subsequent MIG rivets (in "f"). Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Fitting

Install the following items:

- Prepared center pillar trim
- B-pillar amplifier assembly

Check the fit of the B-pillar amplifier assembly; Work is performed using one of the following measuring systems:

- Electronic measuring system
- Positive measuring system
- Specific head MZ
- Control template

Fix the B-pillar trim in the desired position. Remove the B-pillar reinforcement assembly.

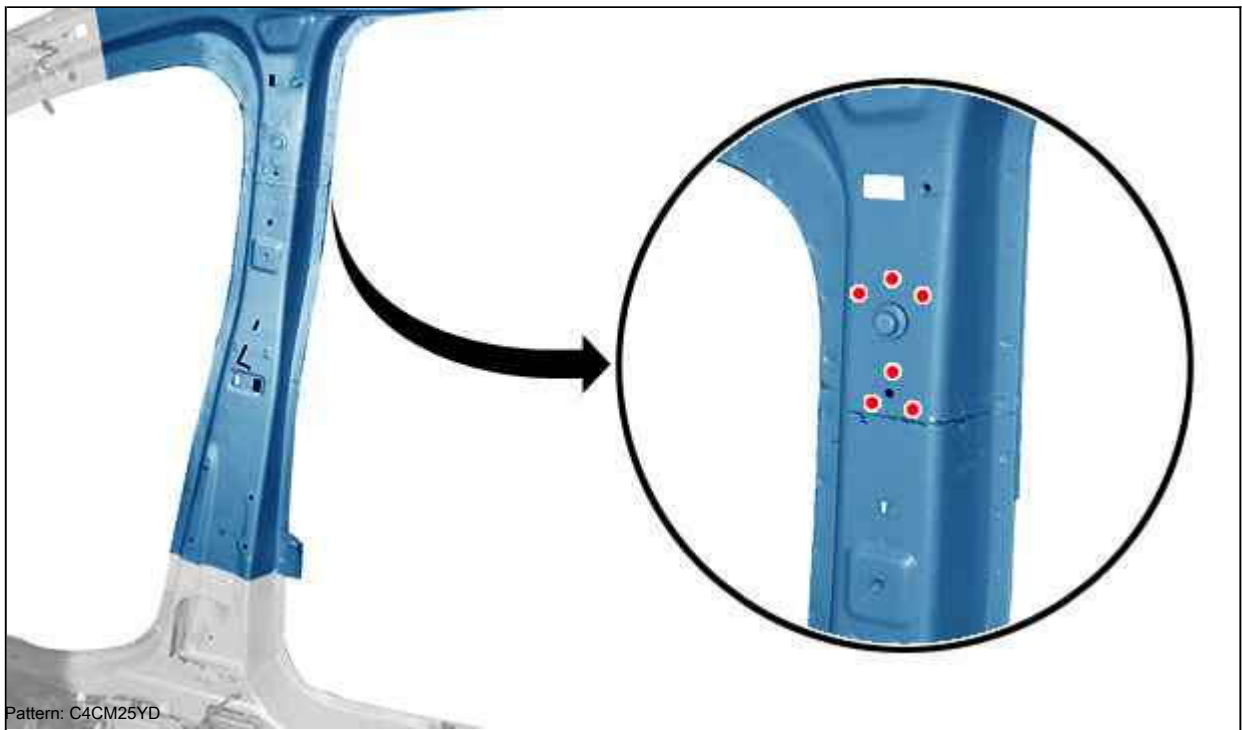
10. Welding

10.1. Welding (Bottom)

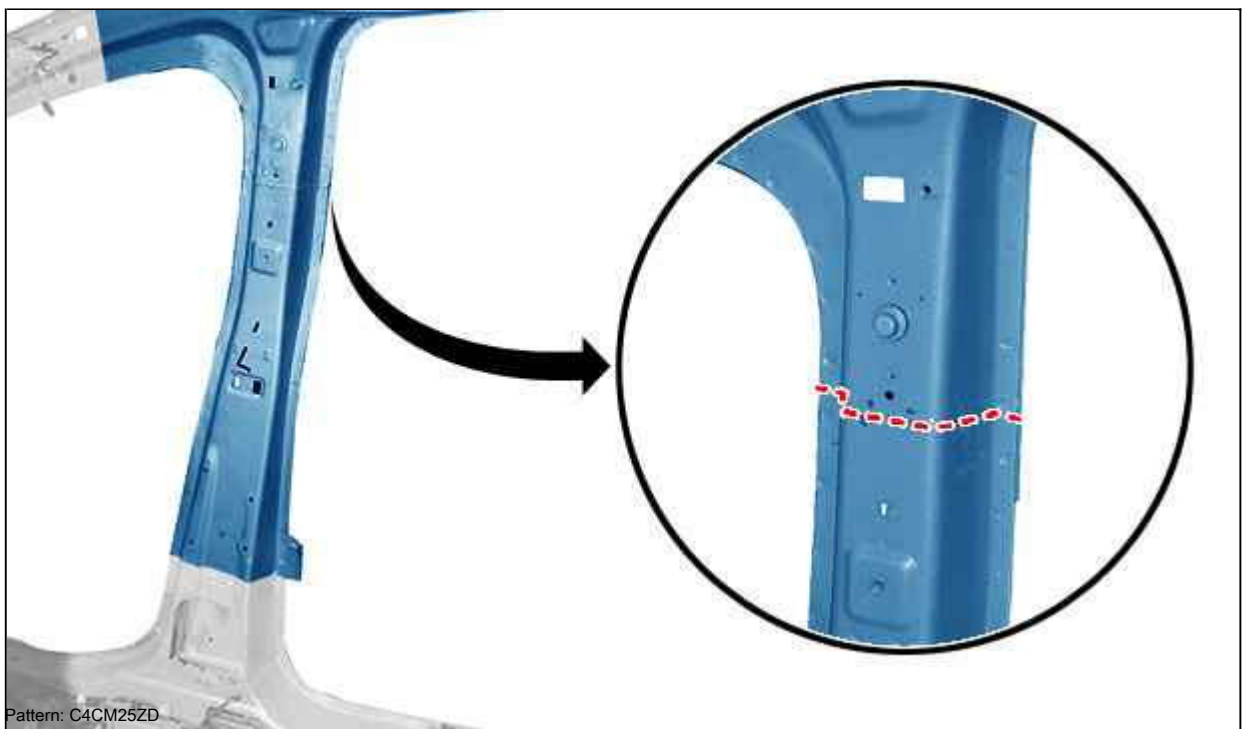


Spot weld using MIG method.

10.2. Welding (Top)

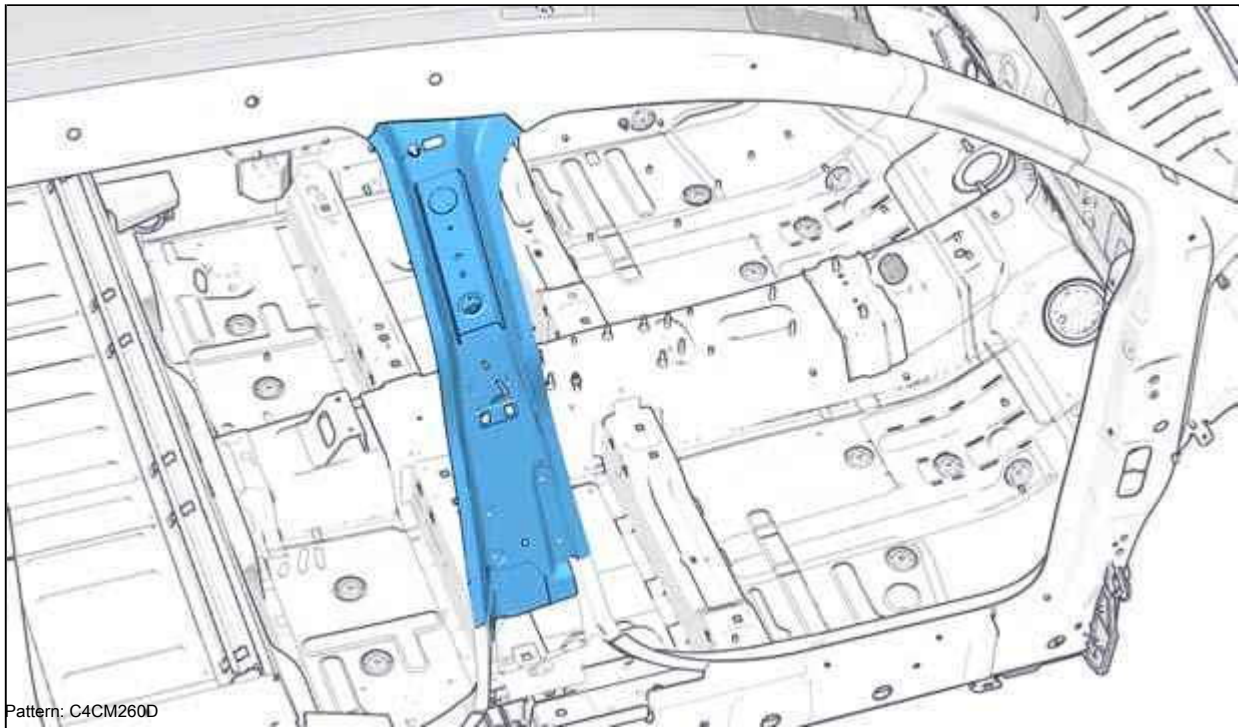


Spot weld using MIG method.



Perform a sequential MIG seam weld.

11. Tightness protection



Before installing the B-pillar amplifier; Apply a coat of phosphate primer to the cleaned areas. Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

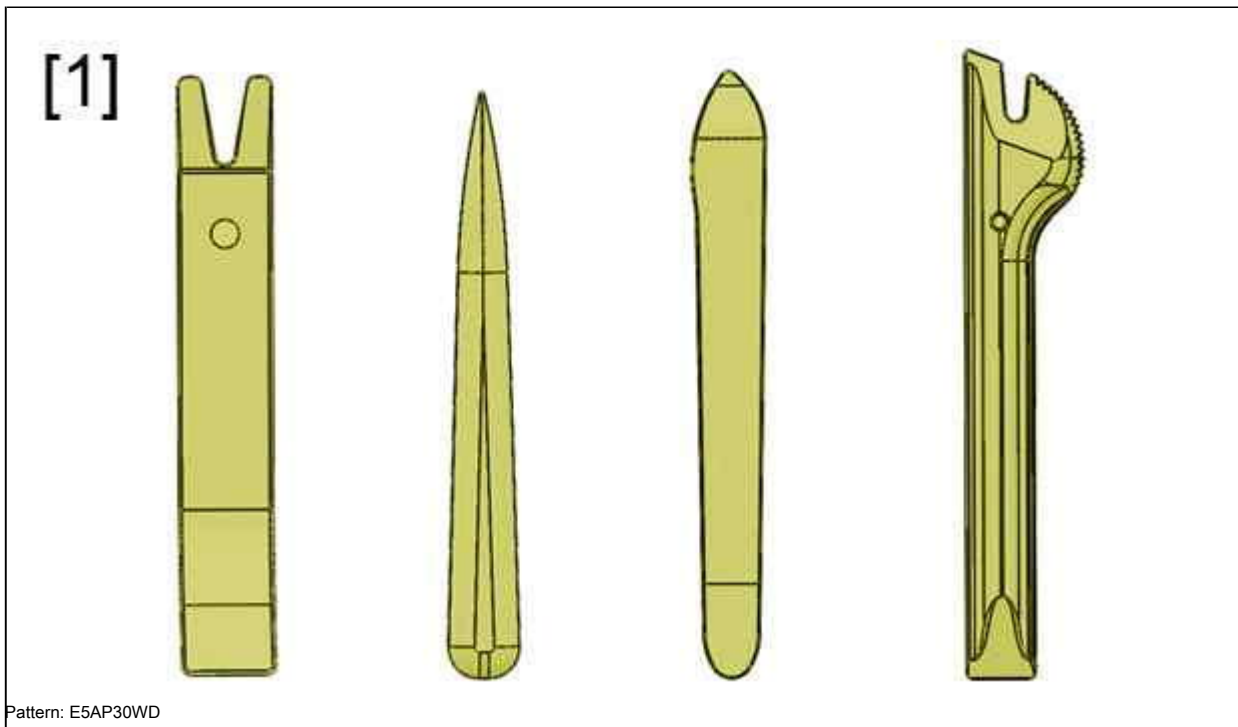
ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL INSTALLATION: INTERIOR SIDE COVER

MANDATORY: Observe the cleanliness and safety rules

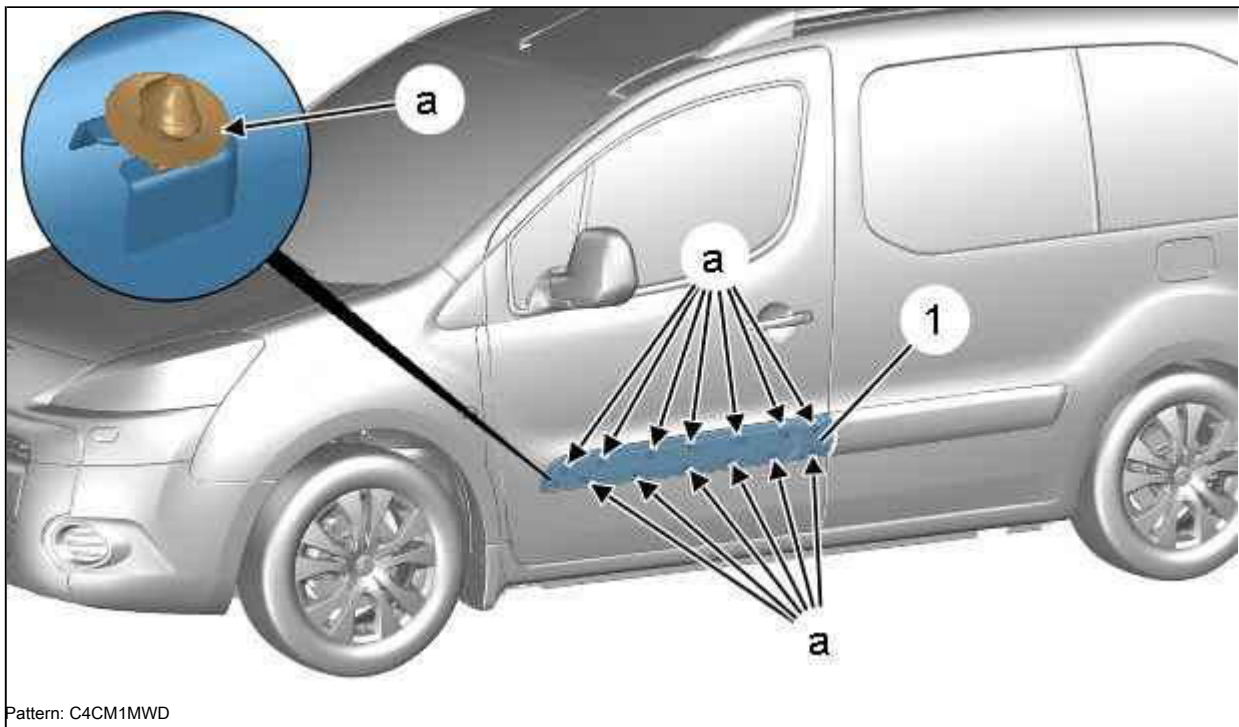


1. Recommended equipment

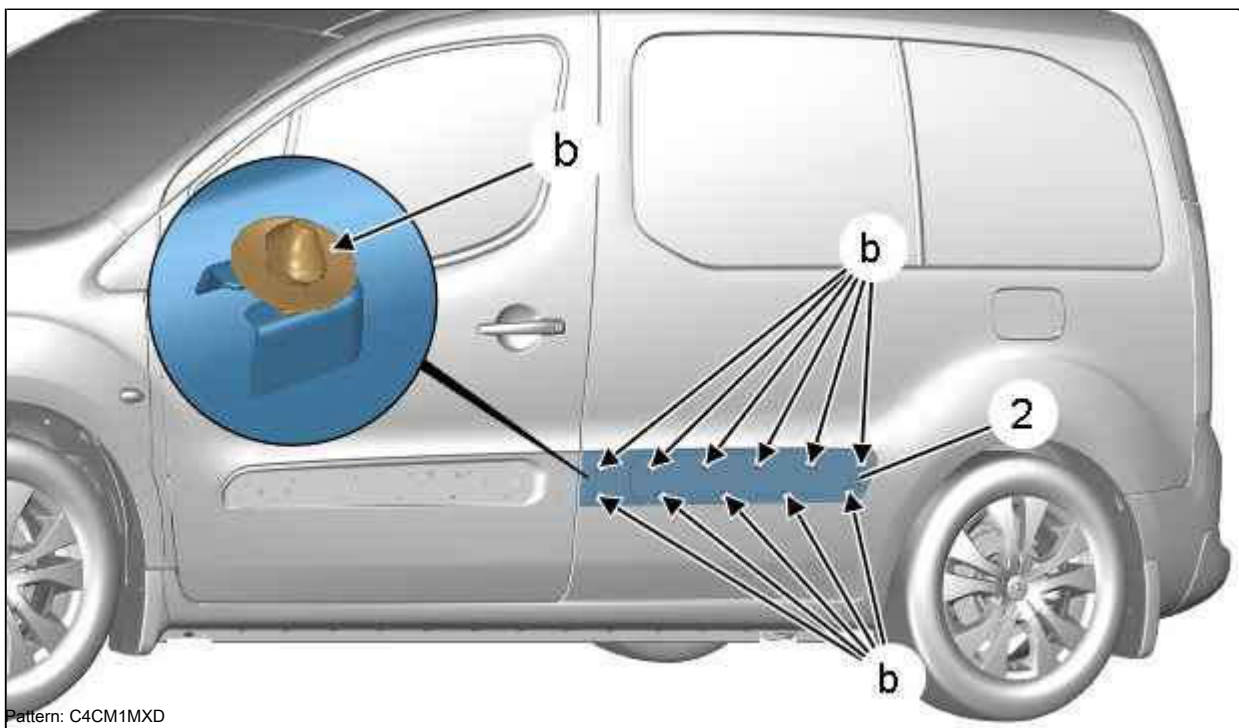


[1] Trim removal tool () .1350ZZ.

2. Removal



Disconnect: Interior side trim (1) (front) (at "a"); Using the tool [1]. Remove: The passenger compartment side trim (1) (front).



Disconnect: Interior side trim (2) (rear) (at "b"); Using the tool [1]. Remove: The passenger compartment side trim (2) (rear).

3. Installation

MANDATORY: Replace defective clips systematically.

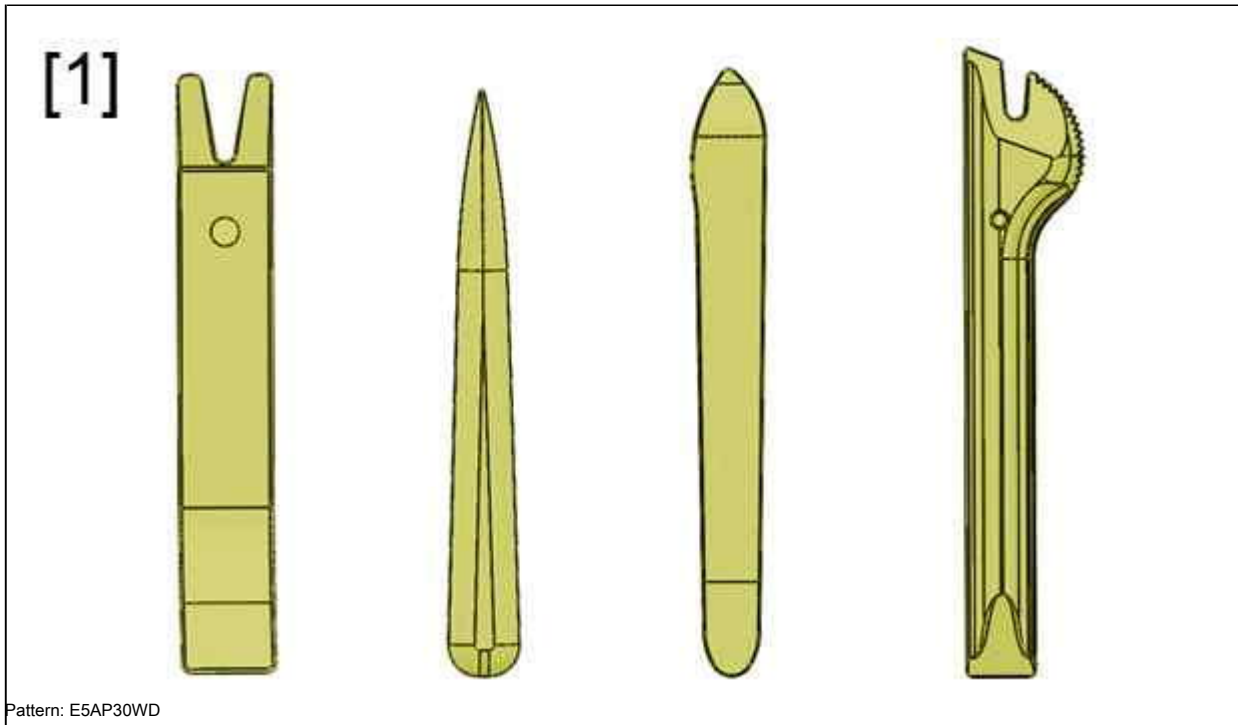
Installation is carried out by performing the removal operations in the reverse order.

REMOVAL INSTALLATION: DOOR PADDER SEALS

MANDATORY: Observe the cleanliness and safety rules



1. Tools

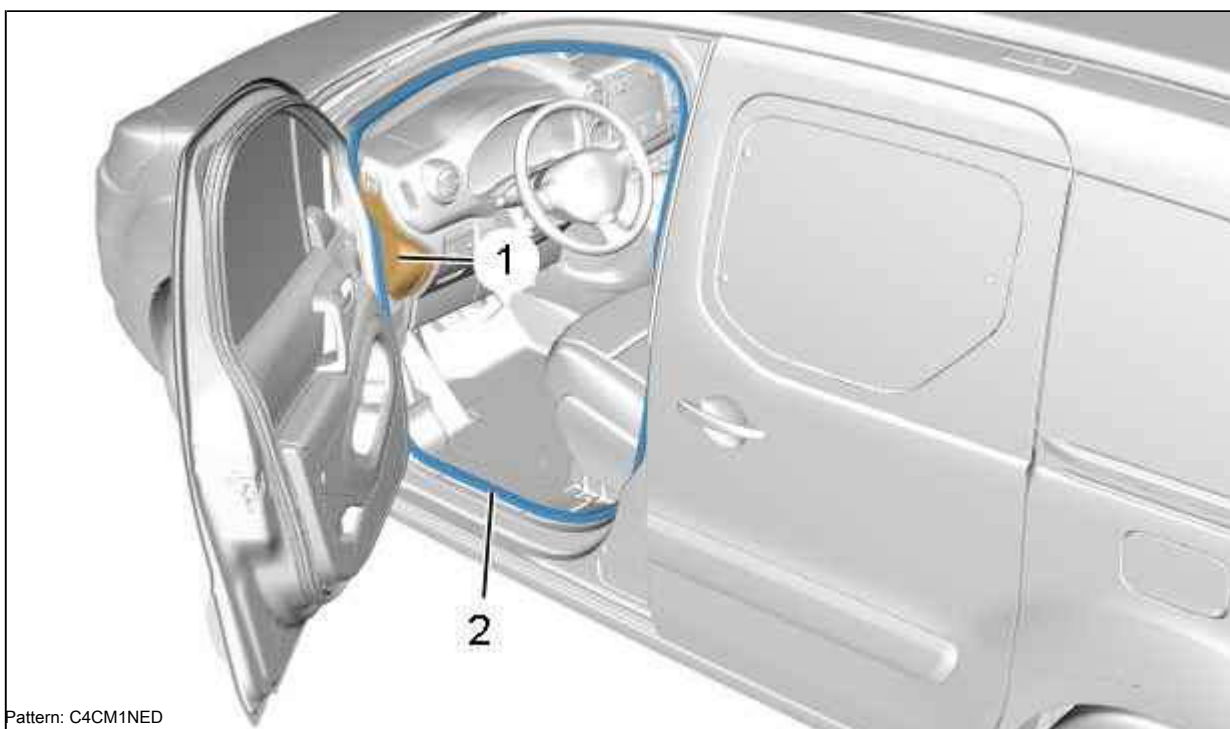


[1] Trim stripper () .1350ZZ.

2. Removal

2.1. Front door seal

Open the front door.



Pattern: C4CM1NED

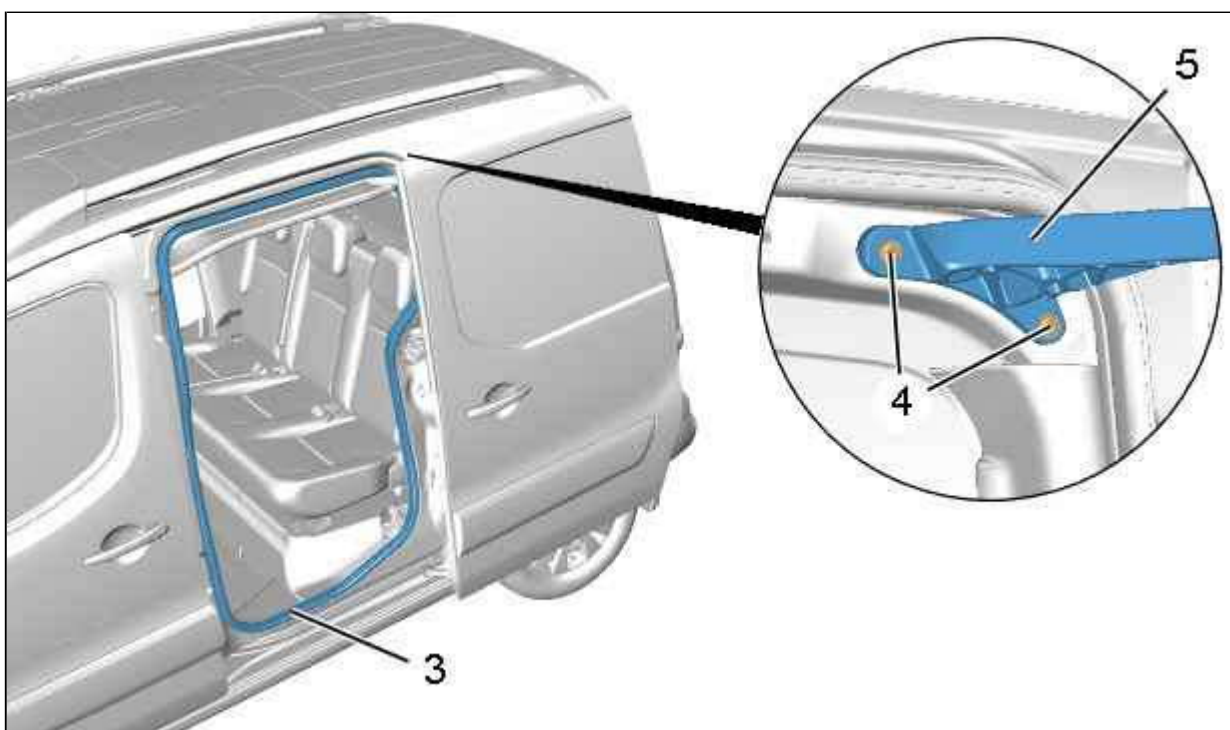
Disconnect; Remove the dashboard side trim (1); Using the tool [1]. Remove: the front door seal (2).

2.2. Side sliding door entry seal

Open the side sliding door.

NOTE: Do not remove the fastening of the bottom and center carriages so as not to re-adjust the side sliding door.

Separate: **Side sliding door wiring harness**



ATTENTION : Protect the rear wing; Place on the protective foil.

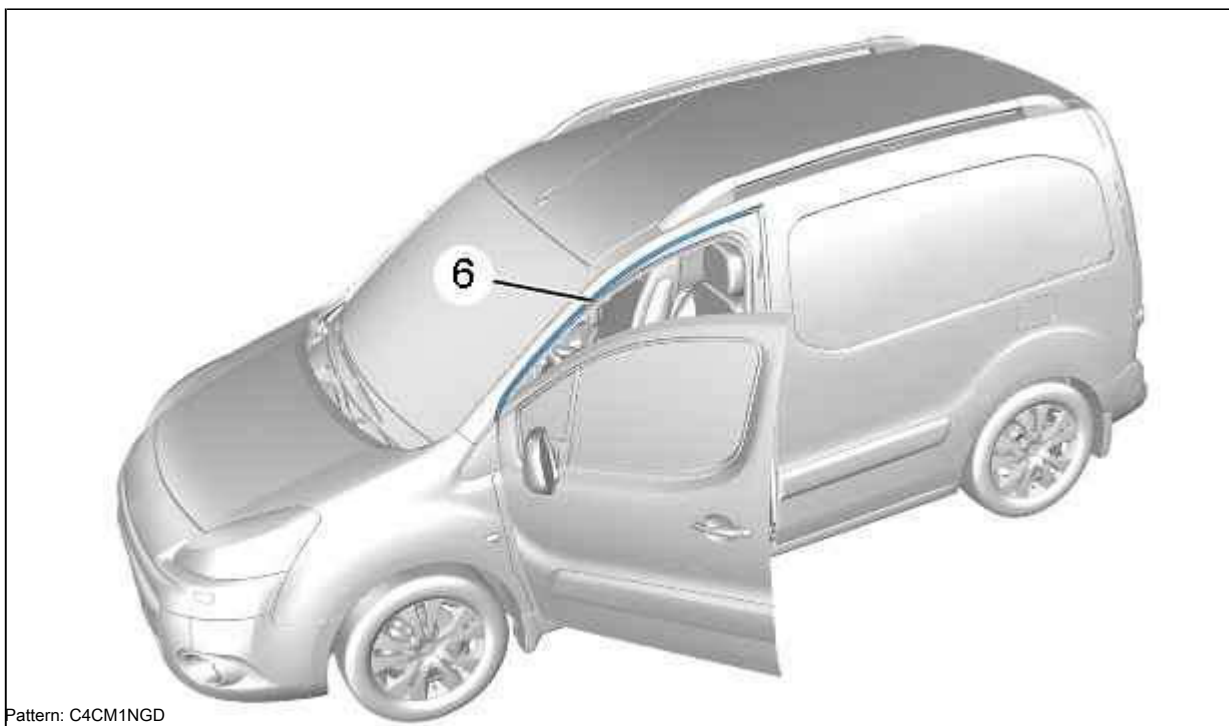
Loosen screws (4).

Separate: Side sliding door upper carriage (5).

Remove: The inlet sliding door seal (3). Install the screws (4) without tightening.

2.3. Dirt seal (Sideless sliding door)

Open the front door.

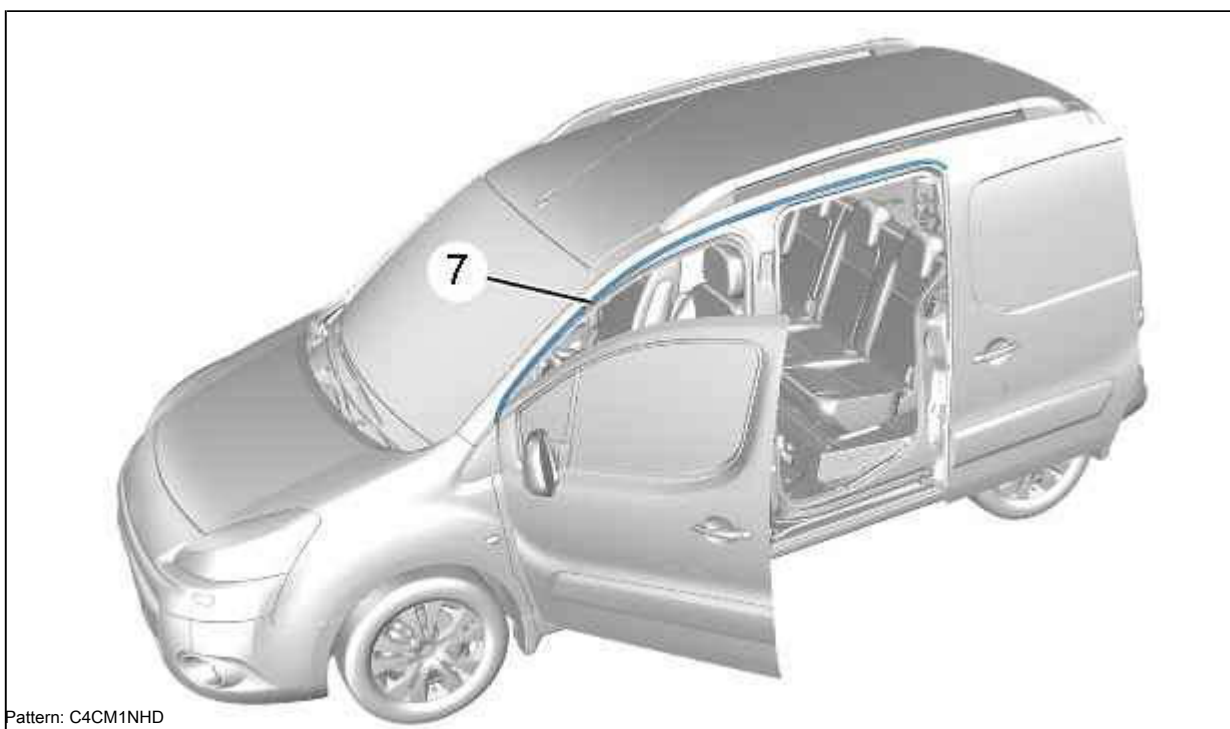


Pattern: C4CM1NGD

Separate; remove seal (6).

2.4. Dirt seal (With side sliding door)

Open the door.

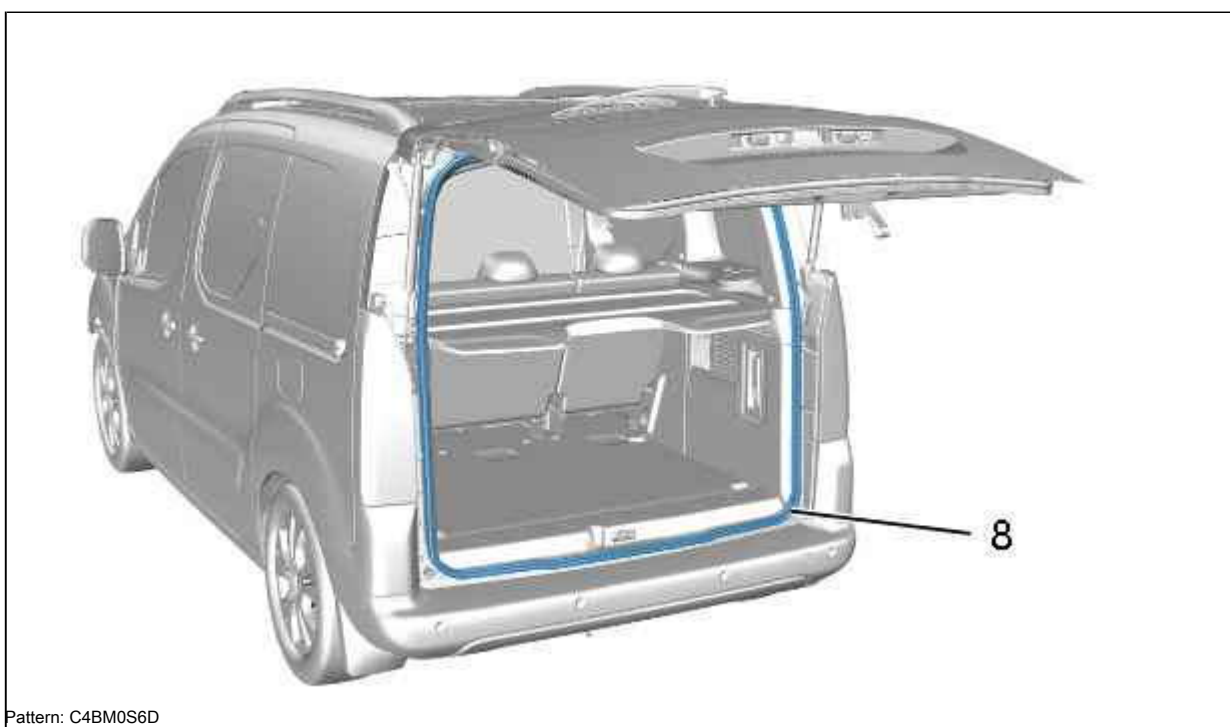


Pattern: C4CM1NHD

Separate; remove seal (7).

2.5. Trunk lid seals

Open the boot lid.



Pattern: C4BM0S6D

Remove: the trunk lid seal (8).

2.6. Rear hinged door seal

Open the rear swing doors.

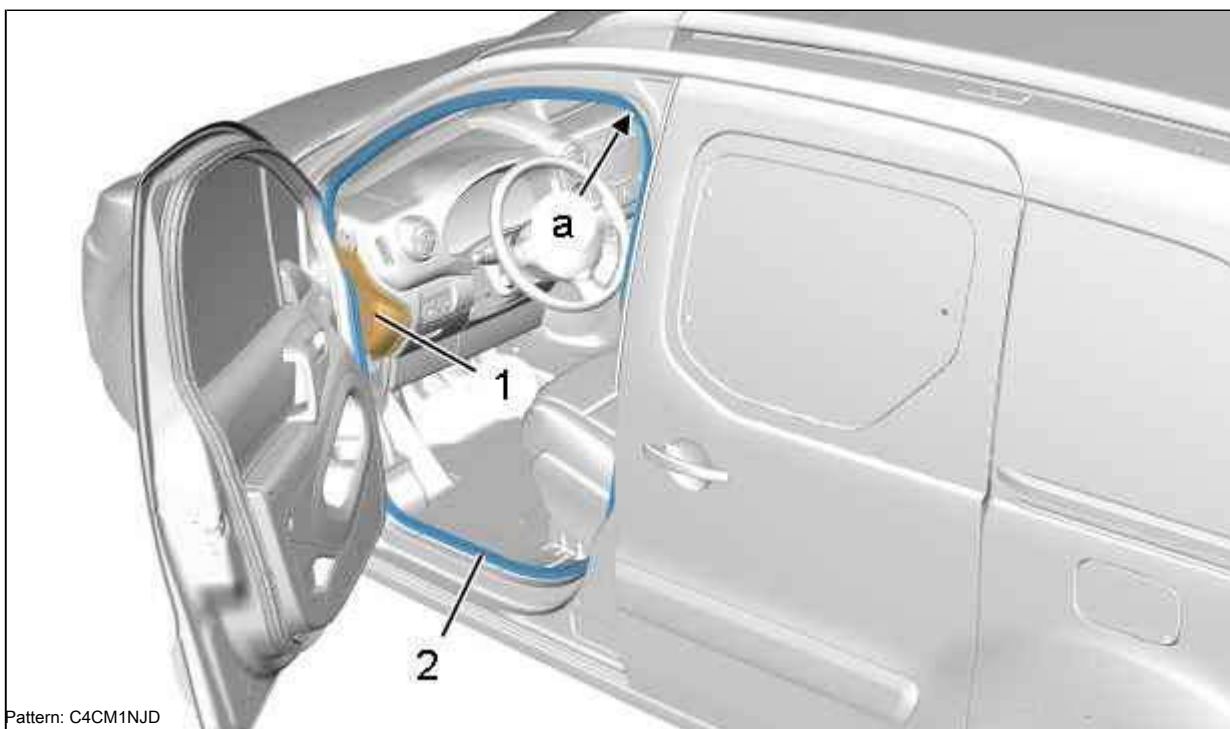


Pattern: C4BM0S7D

Remove: The luggage compartment hinged door seal (9).

3. Installation

3.1. Front door seal



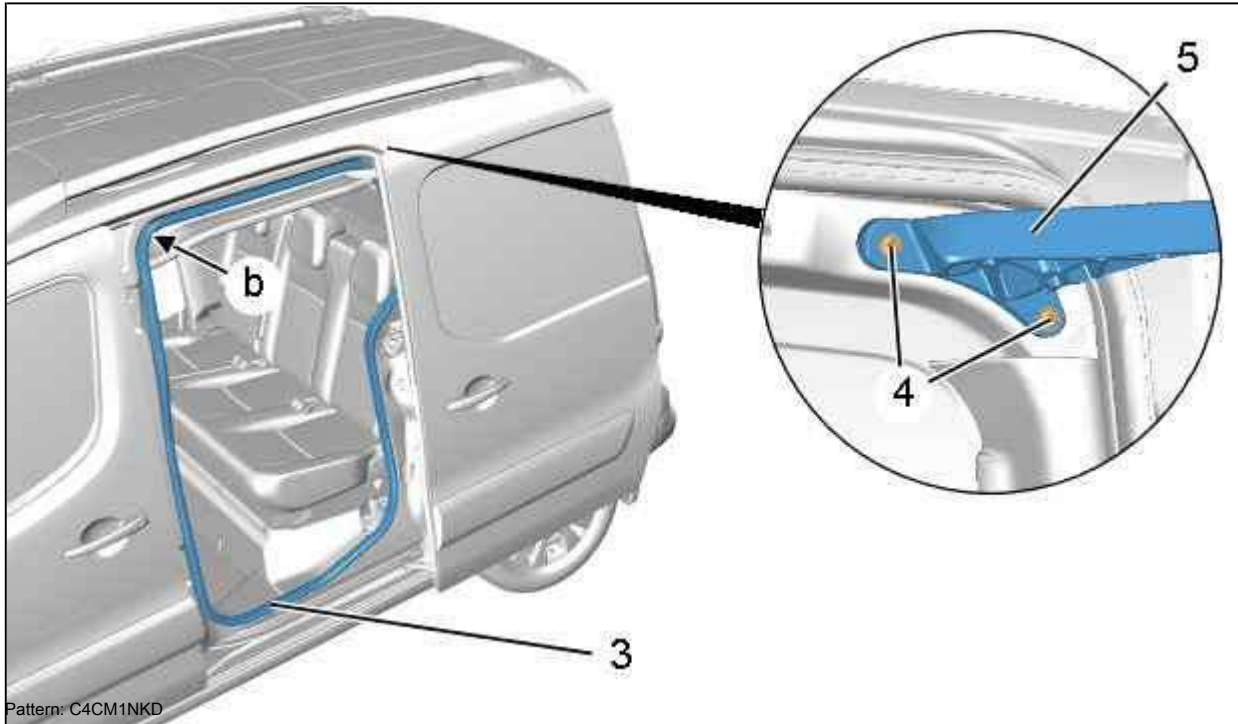
Pattern: C4CM1NJD

Position: Front door opening seal (2). Installing the front door seal (2):

- Start at the corner (at "a")
- Install the front door opening seal (2) into the front door slot; Using a plastic hammer

Install: Dashboard side trim (1).

3.2. Side sliding door entry seal



Loosen screws (4).

Position: The gasket for the entrance opening sliding door (3).

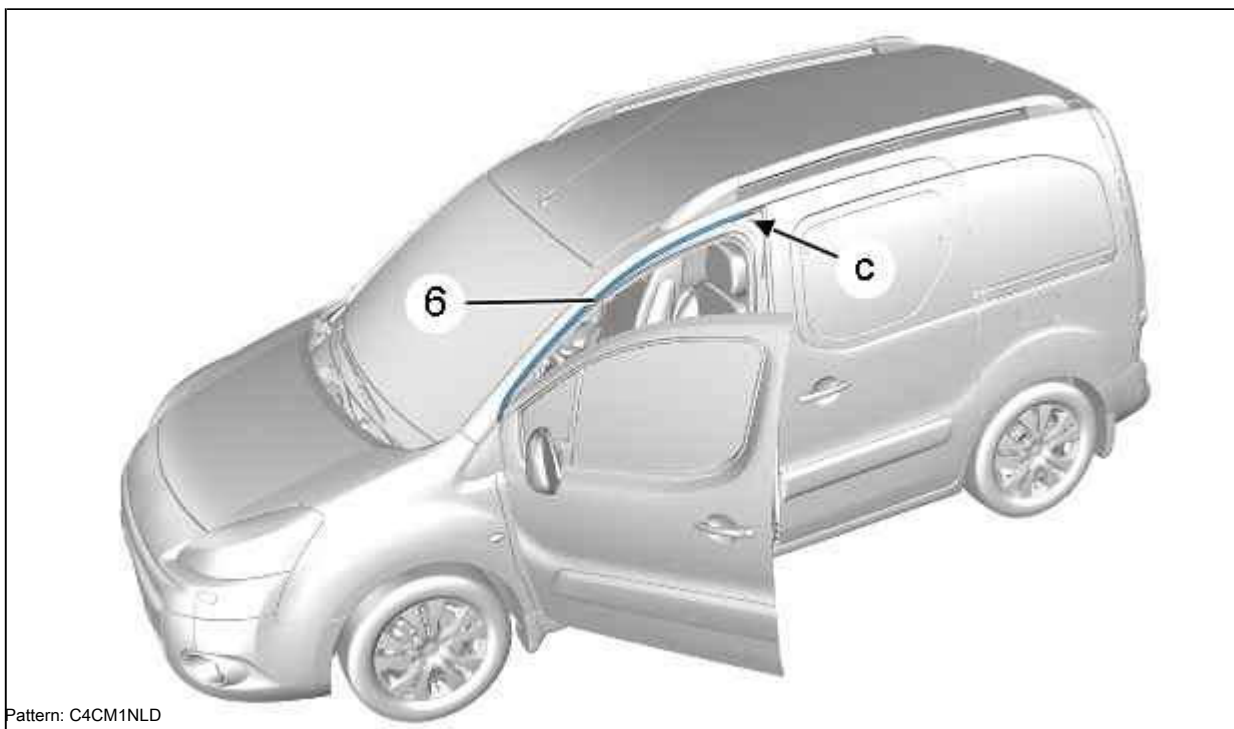
Replace the bolts (4); Tighten to 0.8 da.Nm. Installing the entrance door seal for the side sliding door (3):

- Start at the corner (at "b")
- Place the seal of the sliding door entrance (3) into the edge of the sliding door; Using a plastic hammer

Install: **Side sliding door harness** Check clearances and adjust alignment

3.3. Dirt seal (front door)



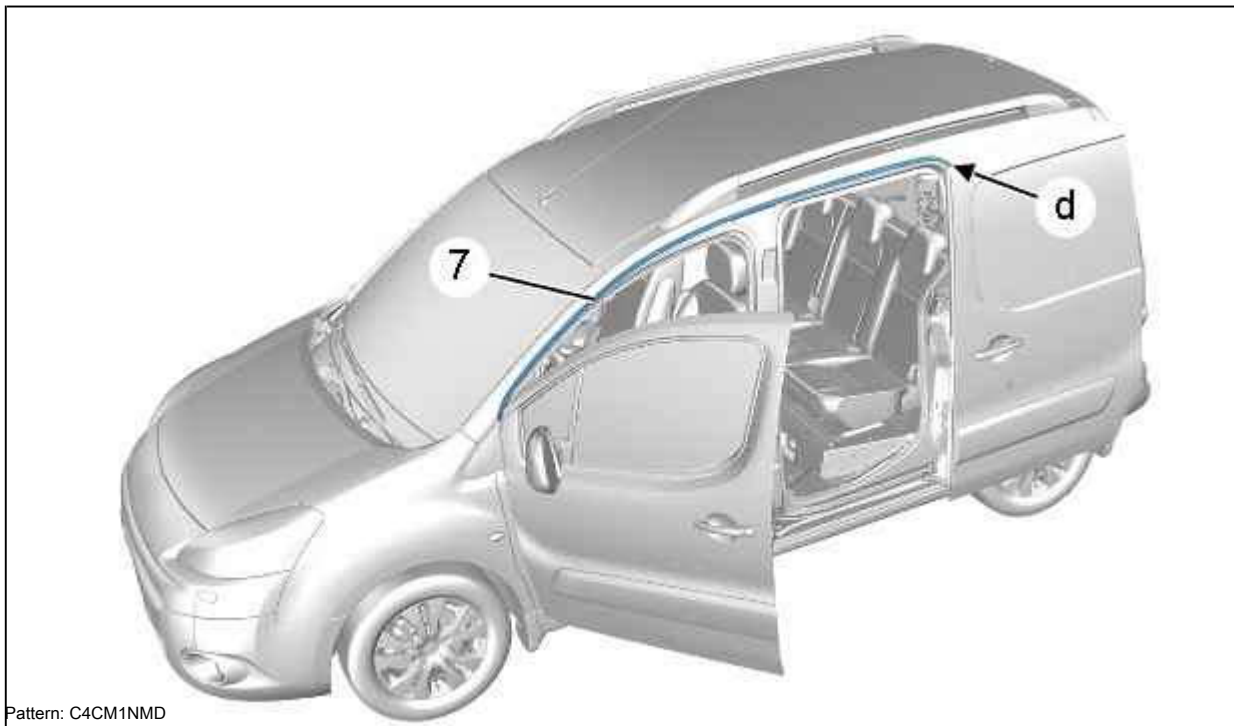


Pattern: C4CM1NLD

ATTENTION : Replace regularly: Dirt seal (6).

Degrease the bonding surfaces Using the "J1" degreaser. Install Stick: Dirt seal (6); With the mark (in "c").

3.4. Dirt seal (Front door / Side sliding door)



Pattern: C4CM1NMD

ATTENTION : Replace regularly: Dirt seal (7).

Degrease the bonding surfaces Using the "J1" degreaser. Install Stick: Dirt seal (7); Using the mark (in "d").

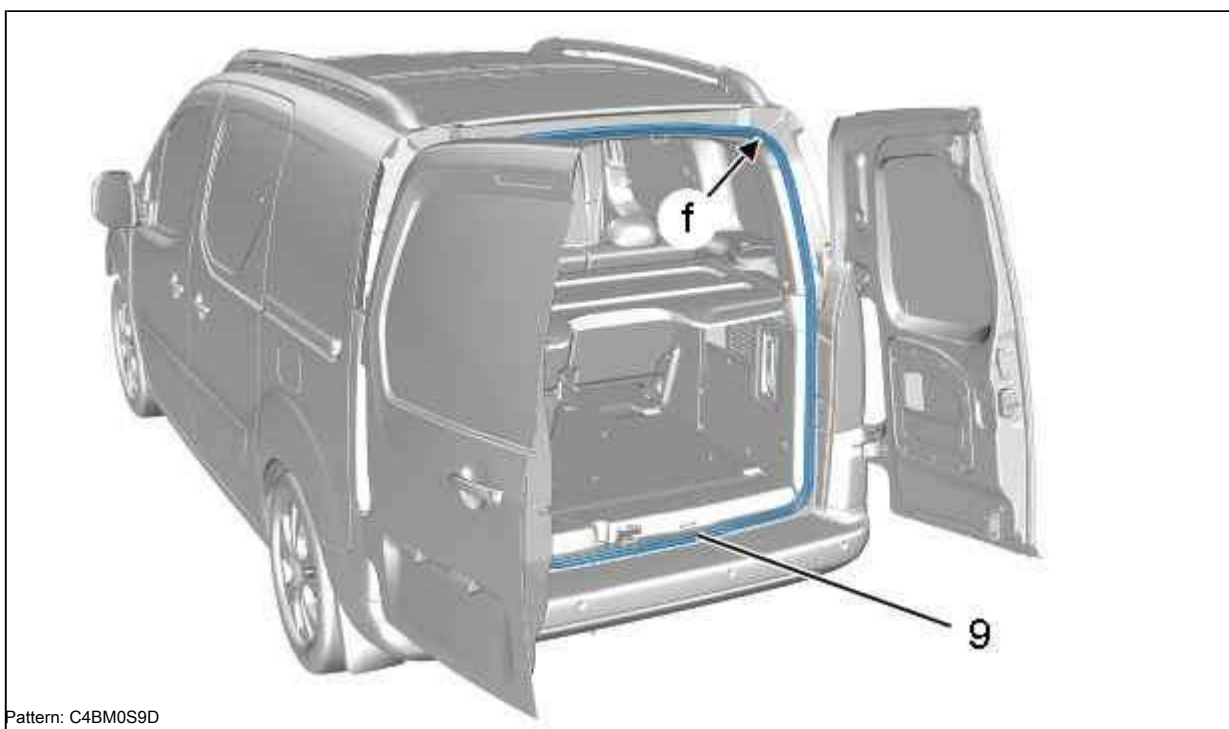
3.5. Tailgate gasket



Position: Trunk lid gasket (8). Installing the luggage compartment door seal (8):

- Start at a corner (at "e")
- Place the luggage compartment door seal (8) into the opening flange; Using a plastic hammer

3.6. Rear hinged door seal



Pattern: C4BM0S9D

Position: Luggage compartment hinged door seal (9). Installing the rear swing door seal (9):

- Start at the corner (at "f")
- Put on the seal for the rear swing doors (9) on the doorway; Using a plastic hammer

3.7. General operations

Verify :

- Closing the doors
- Leak tightness of door openings

REPLACEMENT: BODY PANELS WITH SLIDING DOOR AND 1 GLASS

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

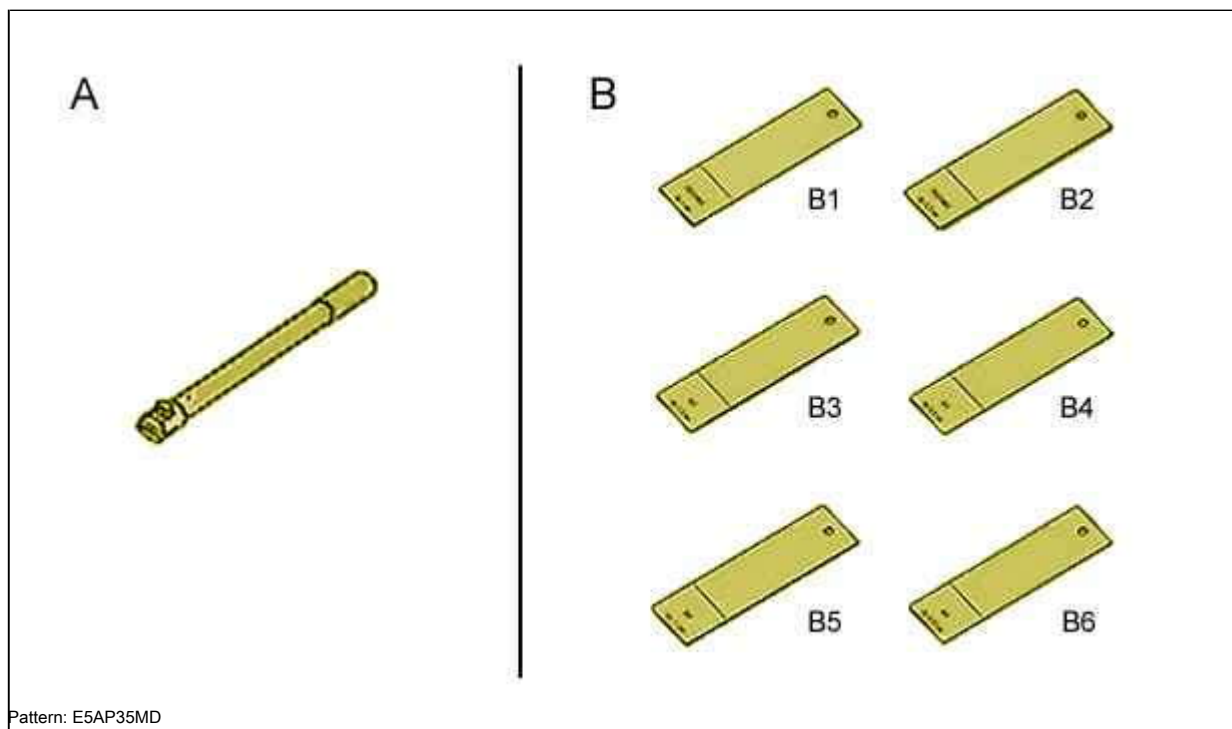
Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

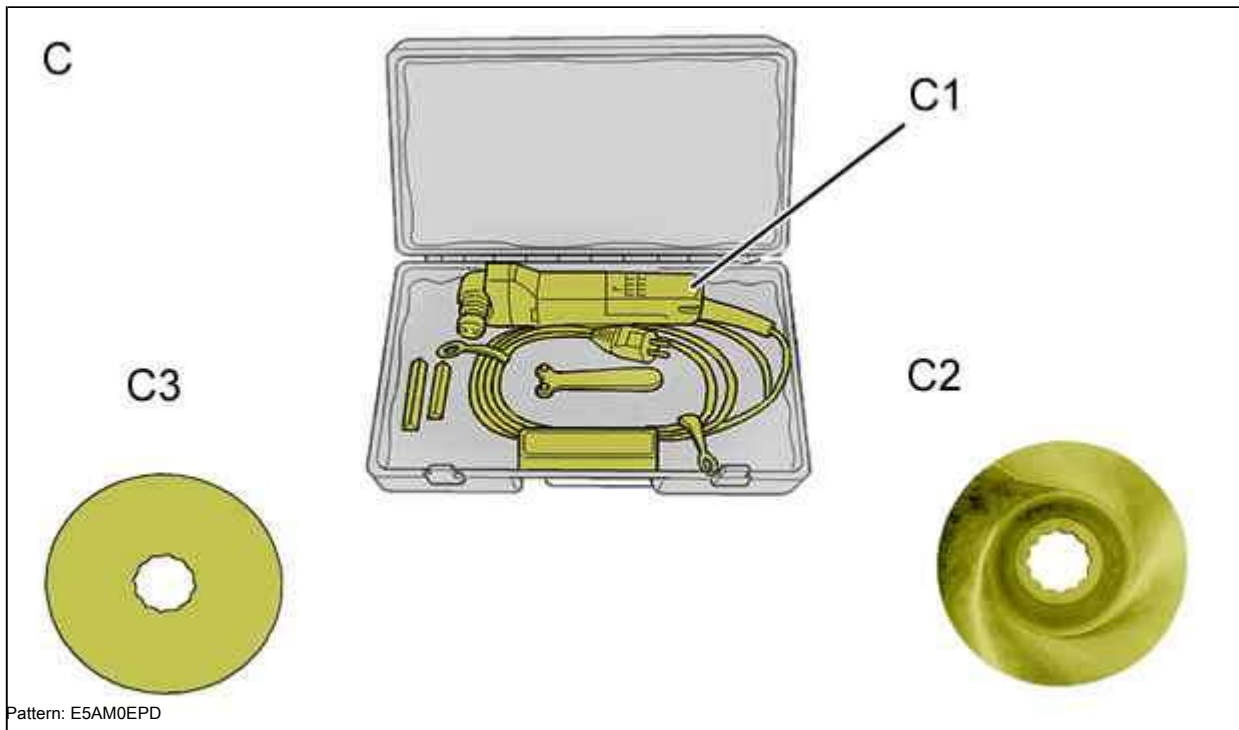
2. Recommended equipment

Operate using one of the following systems:

- Electronic measuring system
- Mechanical measuring system
- Specific head MZ (Special tool)
- Control template



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.



"C" FEIN electric cutter kit.

Label Designation

"C1"	Electric knife
"C2"	Saw blade FEIN with removable hub Blade ° 103
"C3"	



"D" S-shaped drill for drilling weld spots.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace: **Side amplifier**



4. Localization: Sidewall panel

4.1. Spare part location

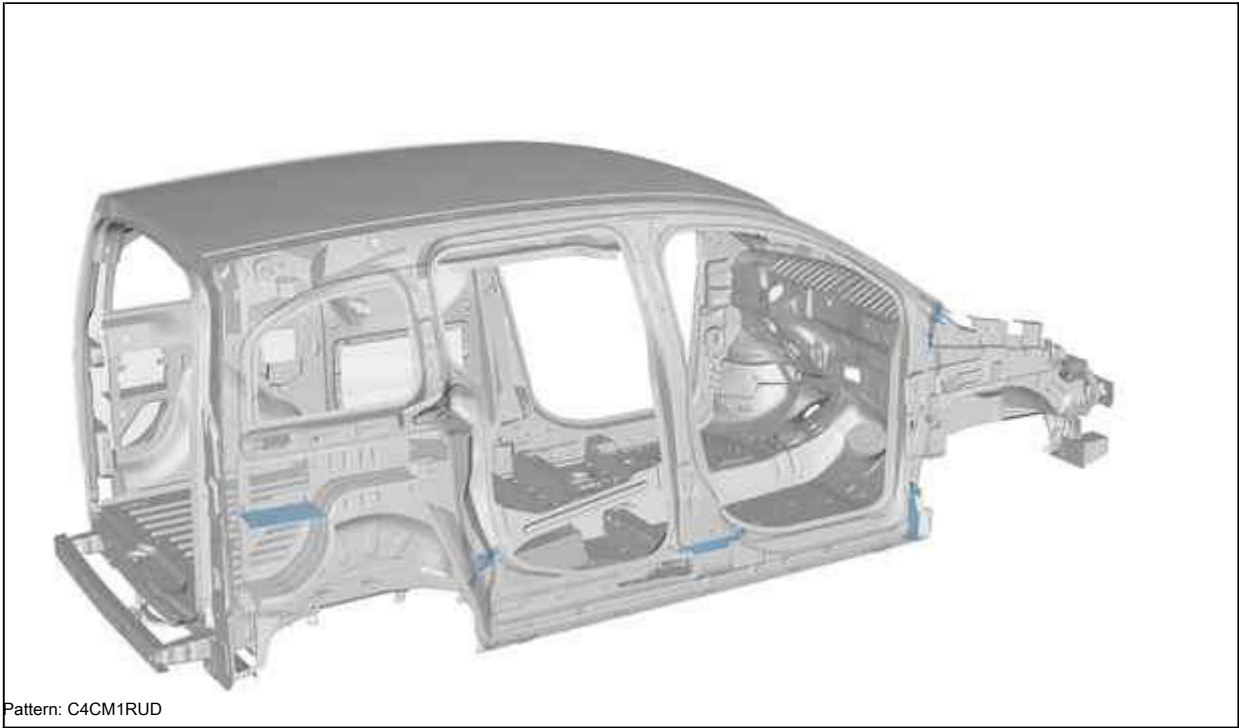


Pattern: C4CM1RTD

Label Designation

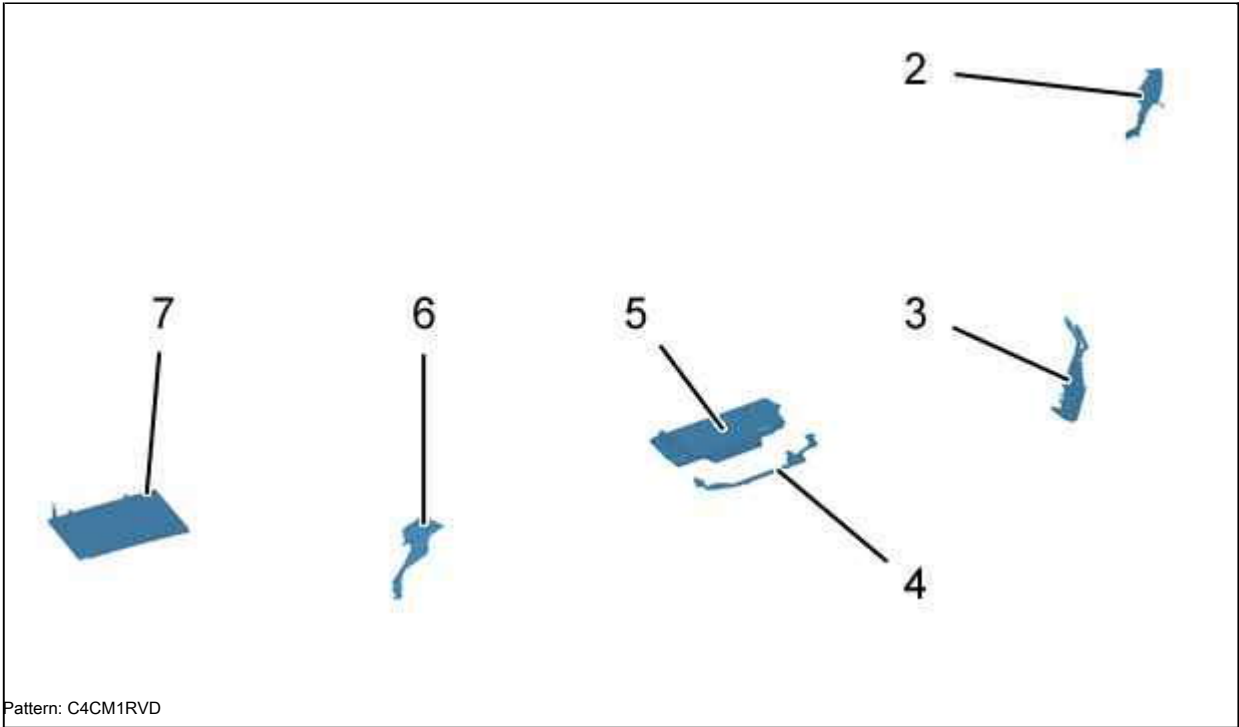
(1)	Interior side panel assembly

4.2. Location of foam inserts



The location of the foam inserts.

4.3. Foam insert designation



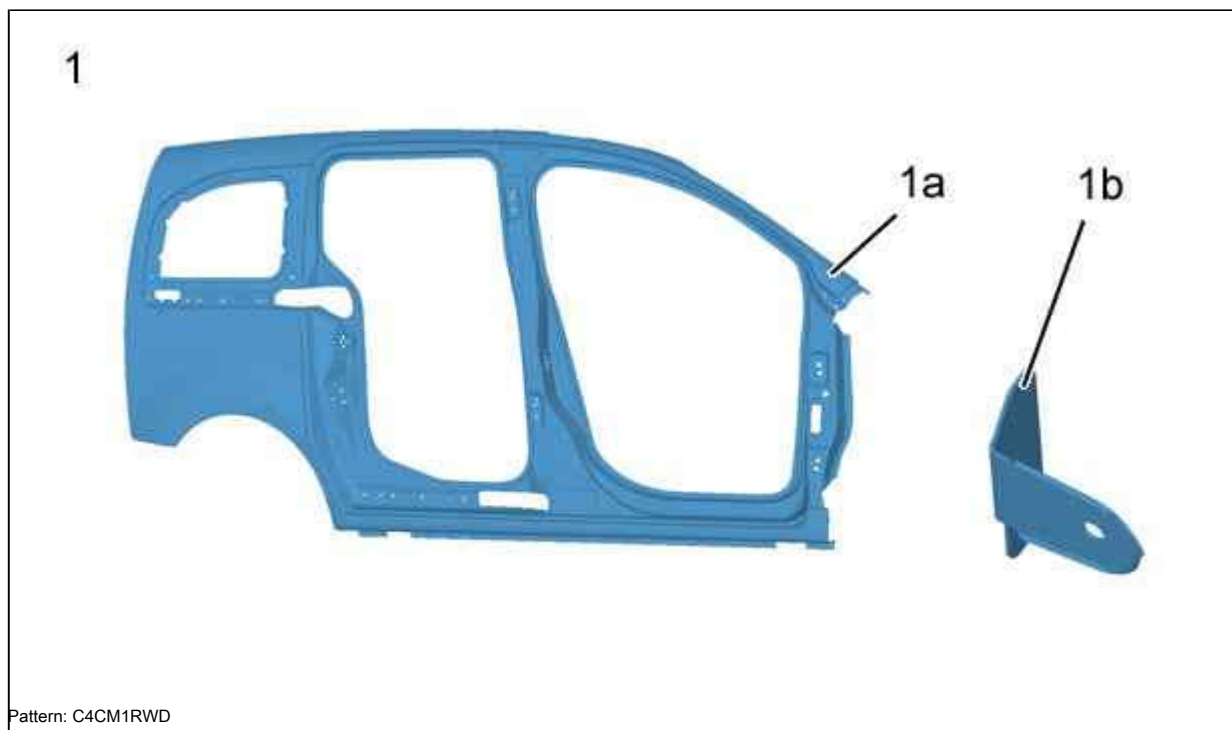
Label Designation

(2)	Tightness: Interior tank panel cover Tightness: From the
(3)	passenger compartment
(4)	Outer foam insert B-pillar

(five)	B-pillar expanding insert C-pillar expanding insert
(6)	
(7)	Expanding insert: sidewall trim

5. Identification: Interior sidewall panel complete

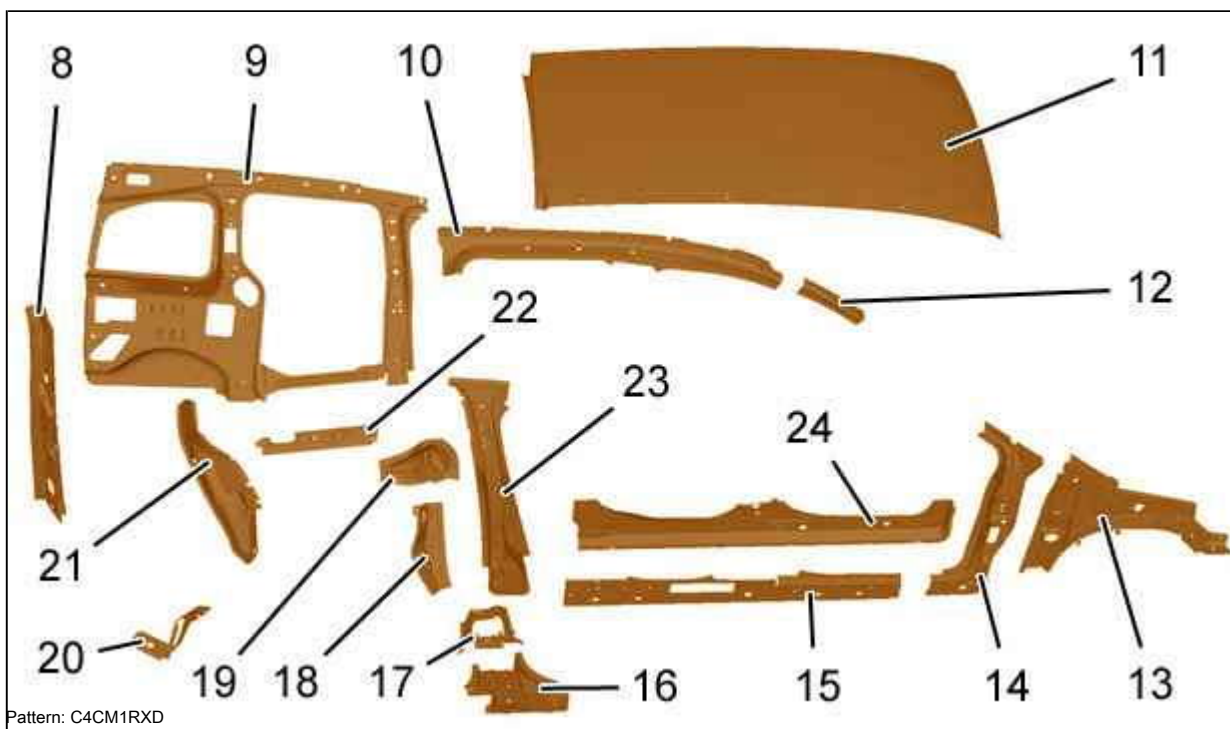
5.1. Ingredient: Sidewall Panel



Pattern: C4CM1RWD

Label Designation		Thickness (mm) Nature / classification	
(1)	Interior side panel assembly Interior side		
(1a)	panel	0.77	Mild steel
(1b)	Rear intermediate support front wing 2		HLE

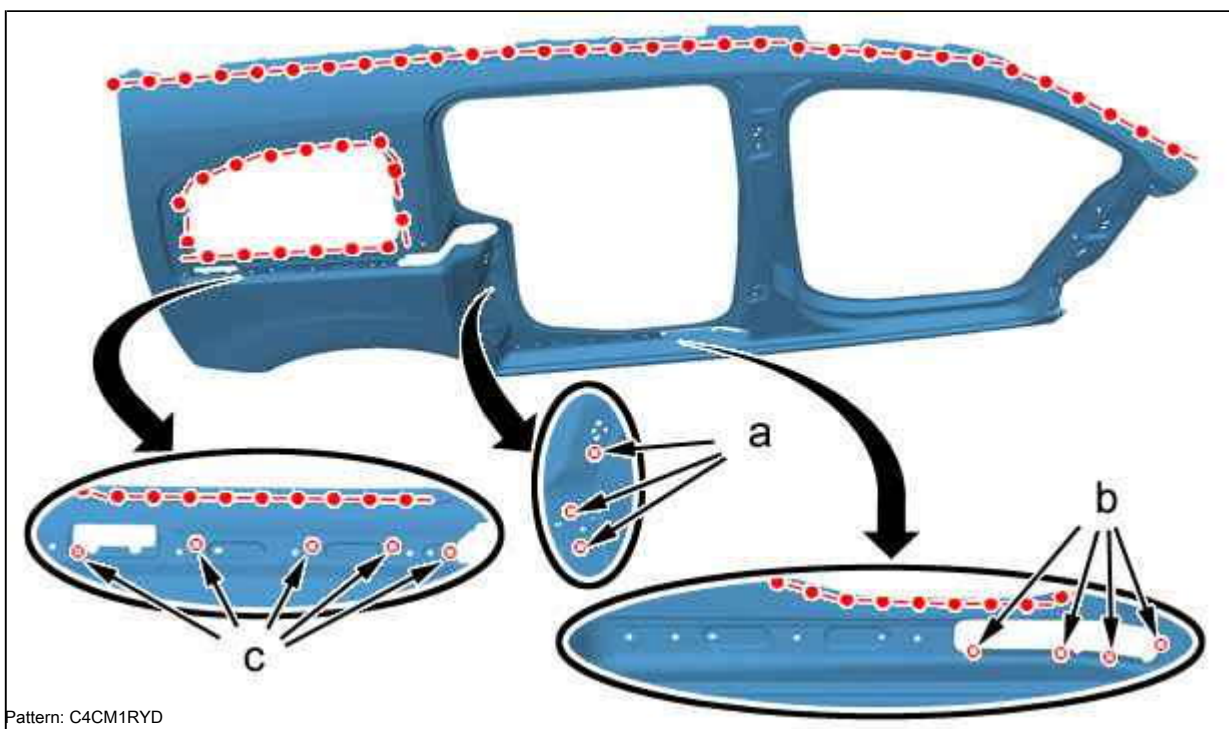
5.2. Identification of parts adjacent to the spare part



Label Designation		Thickness (mm)	Nature / classification
(eight)	Rear fender groove	0.97	HLE
(nine)	Rear wing	0.97	Mild steel
(ten)	Base of the roof arch	1.17	HLE
(eleven)	Roof	0.67	Mild steel
(12)	Base of the windscreen rack	1.17	HLE
(13)	Front fender molding	1.17	HLE
(fourteen)	Front pillar reinforcement	1.47	HLE
(fifteen)	Inner side member reinforcement Lower B-pillar	1.17	THLE
(sixteen)	reinforcement B-pillar trim reinforcement Side door bracket	2.2	THLE
(17)	reinforcement	2	THLE
(18)		1.17	Mild steel
(nineteen)	Sliding door center guide housing Rear wing lower cover	1.47	Mild steel
(20)		0.97	Mild steel
(21)	Rear wheel arch, front	0.67	Mild steel
(22)	Reinforcement bracket for fixing the central sliding door guide	1.17	Mild steel
(23)	B-pillar reinforcement	2	UHLE
(24)	Inner spar	1.47	HLE

6. Preparation of spare part

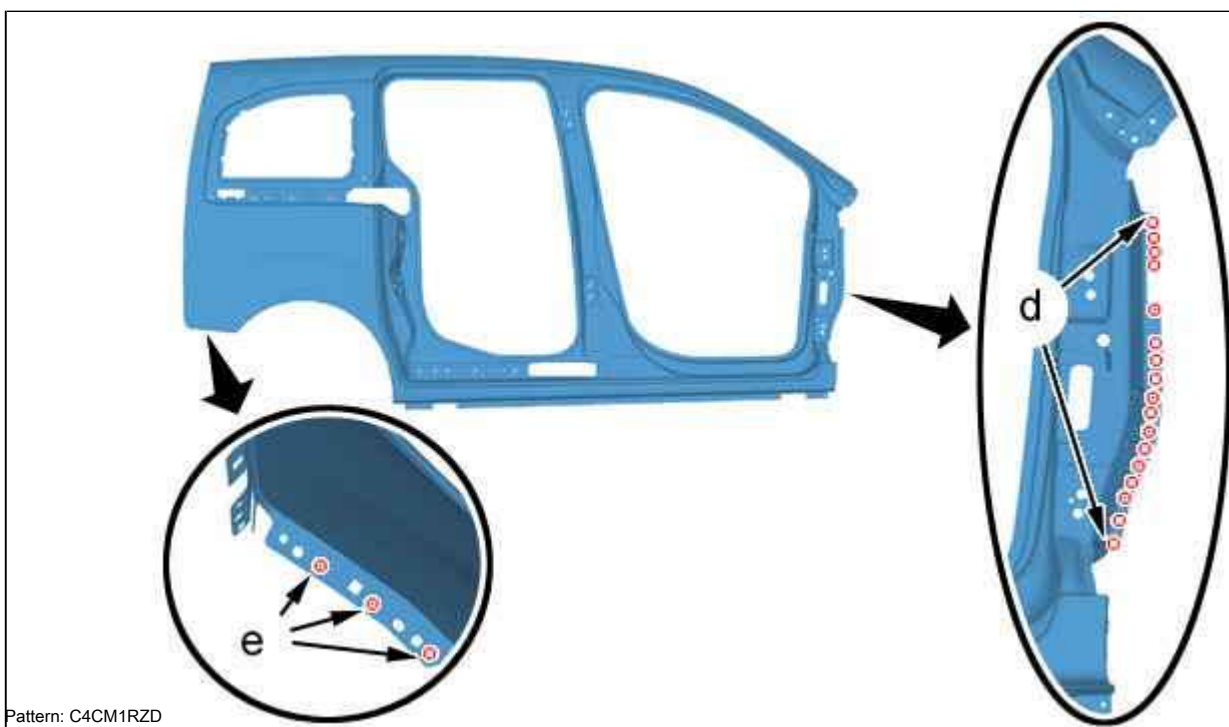
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection



Pattern: C4CM1RYD

Mark in "a", "b", "c", then drill with $\varnothing 6.5$ drill for subsequent plug welding. Prepare the sockets and protect them with a welding primer (index "C7").

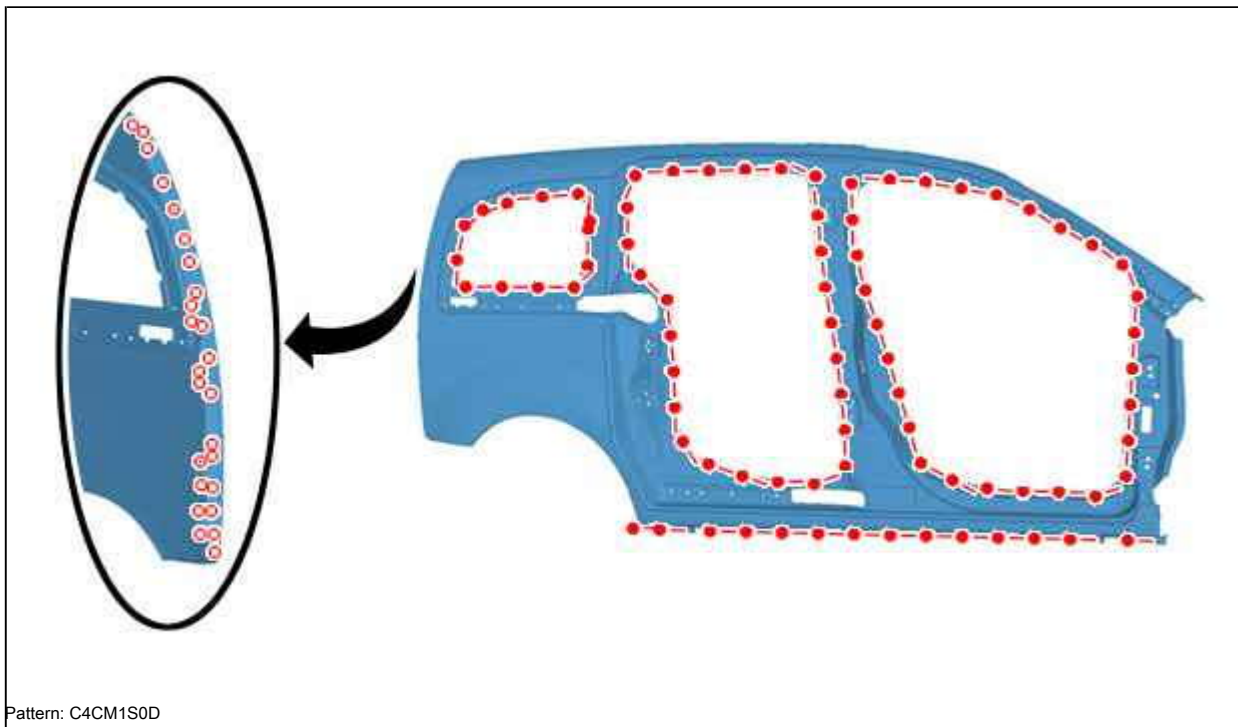
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Pattern: C4CM1RZD

Mark in "d", "e", then drill with a $\varnothing 6.5$ drill for subsequent plug welding.

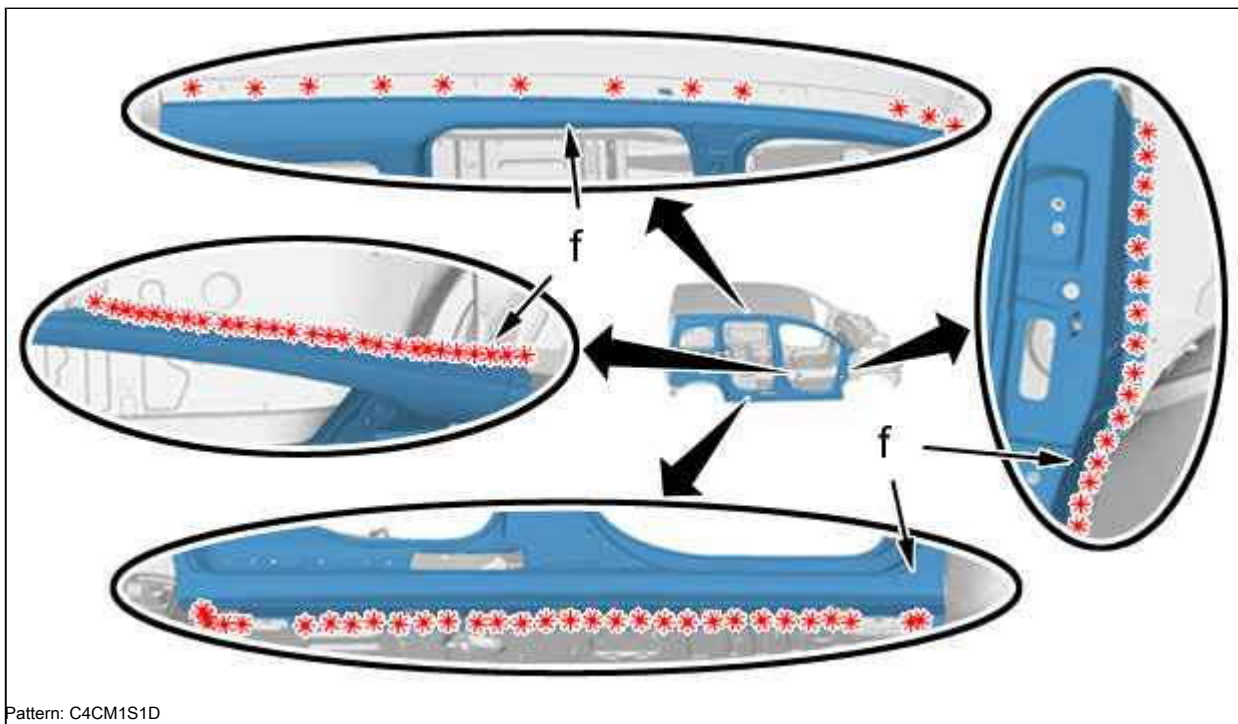
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Mark, then drill $\varnothing 6.5$ mm holes for subsequent spot-plug welding. Prepare the sockets and protect them with a welding primer (index "C7").

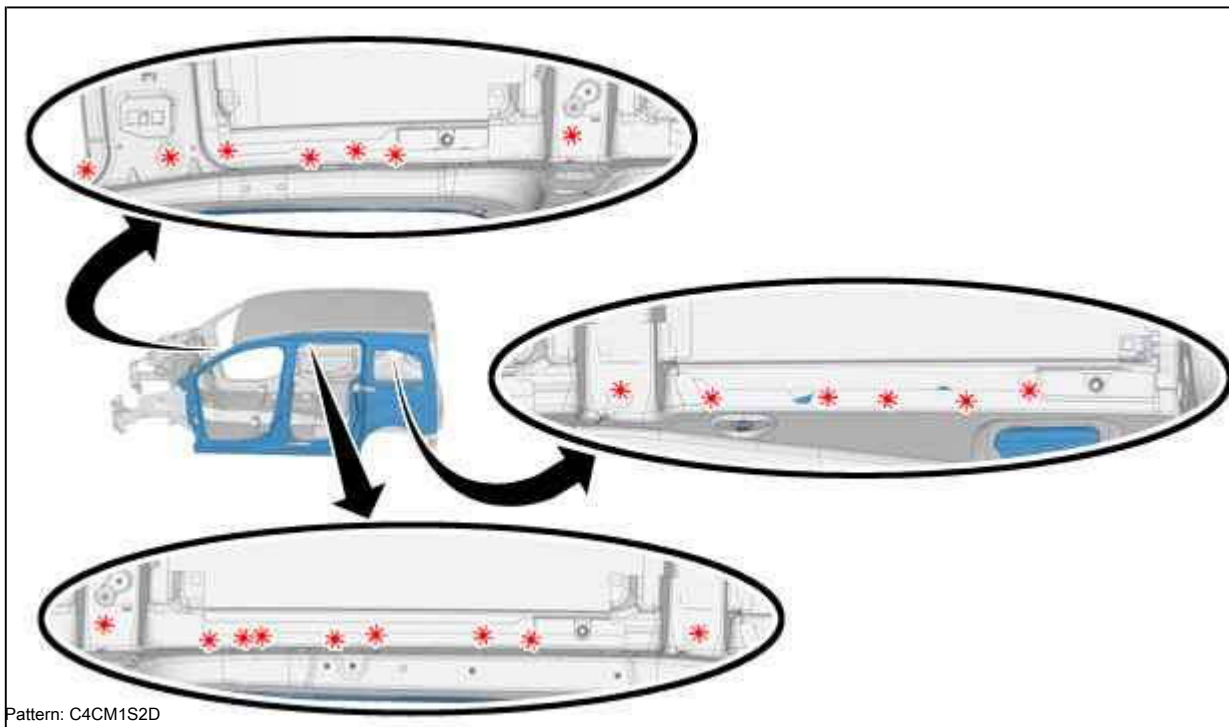
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body

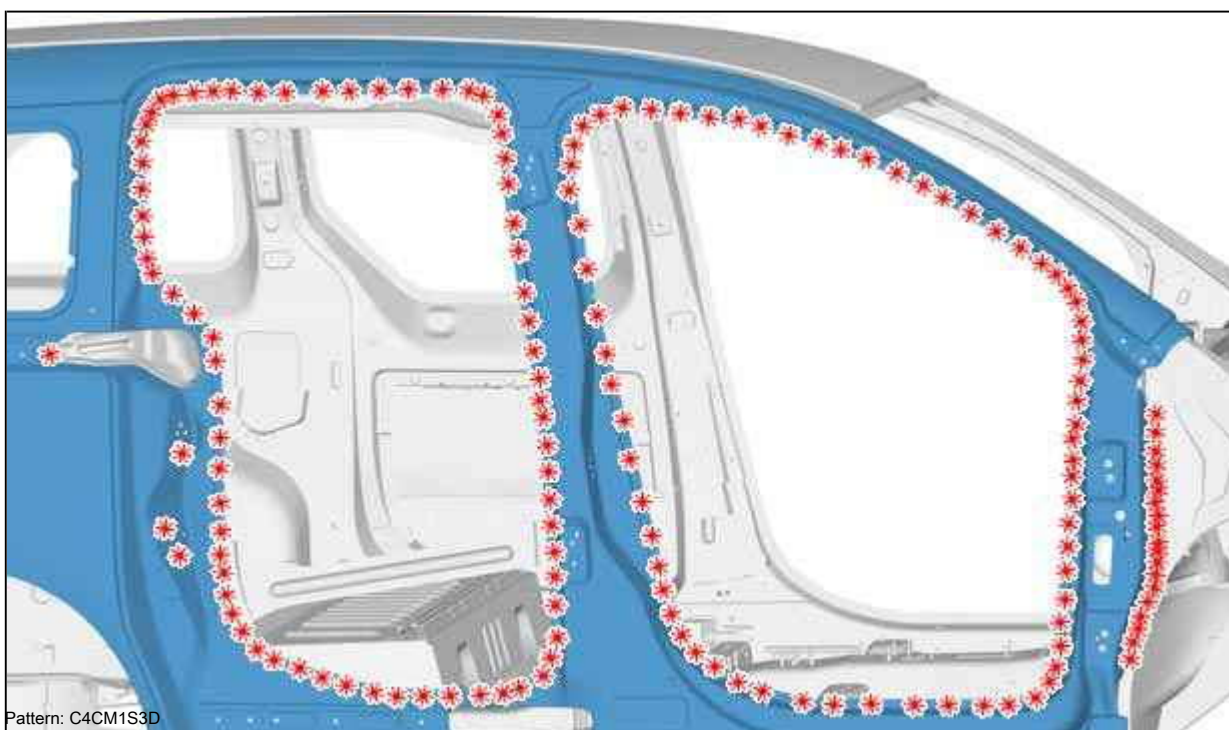


Cut by points.

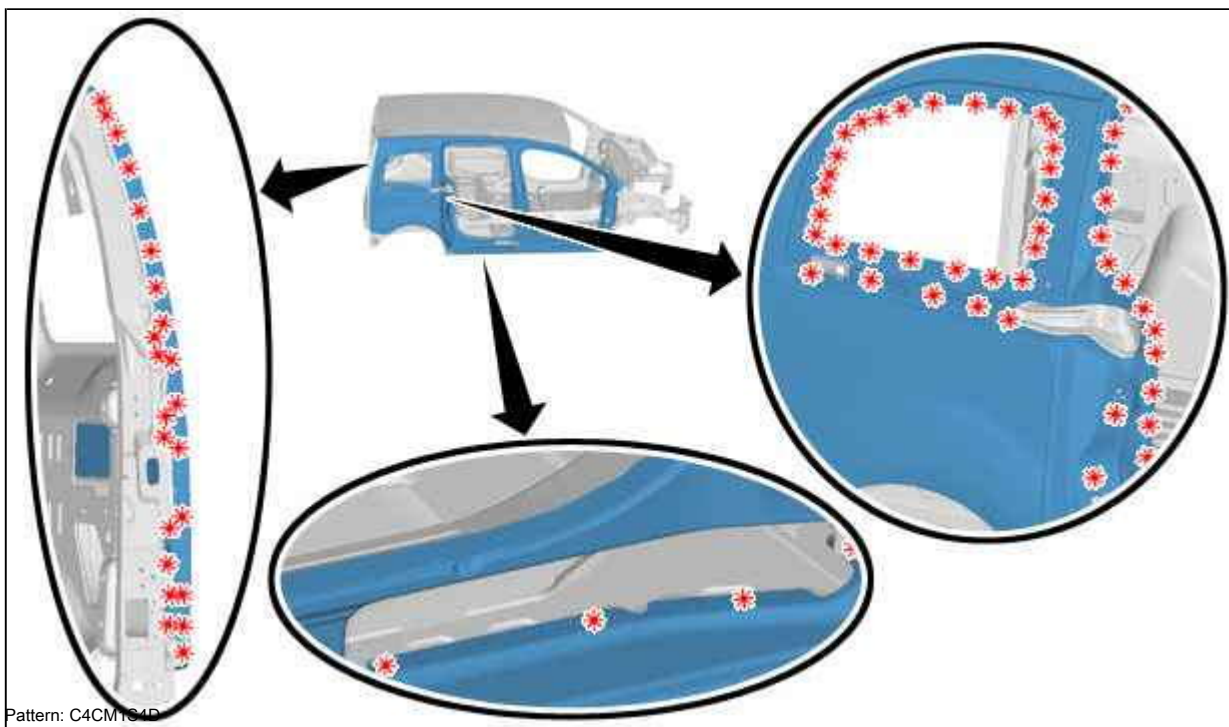
Mark at "f", then cut out the weld points. Move the edge of the roof to "f".



Cut by points.



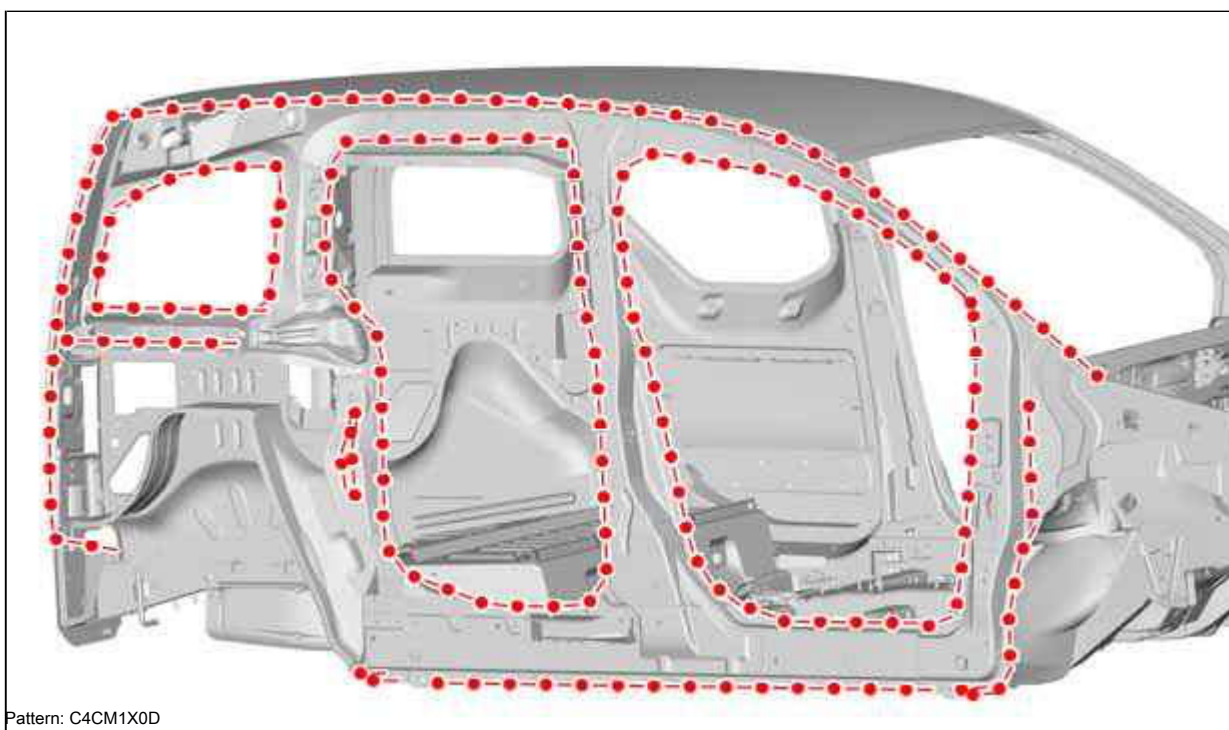
Cut by points.



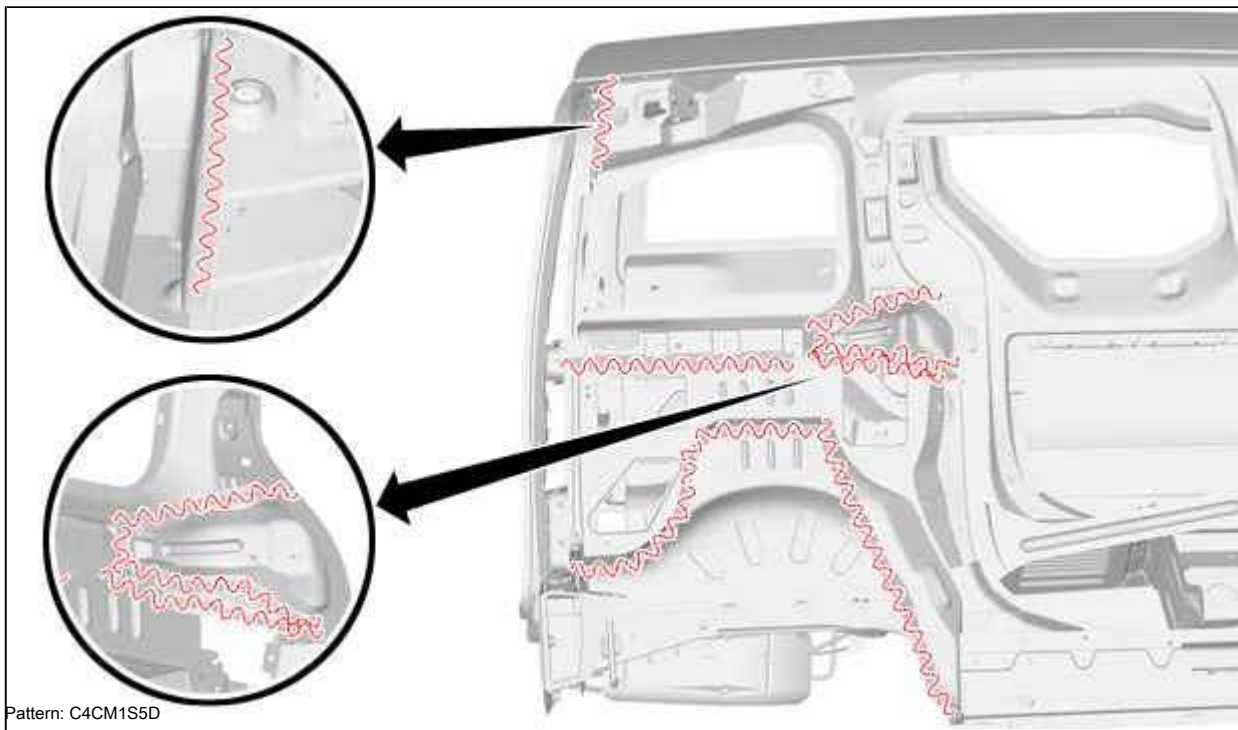
Cut by points.

Remove: Interior side panel panel.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

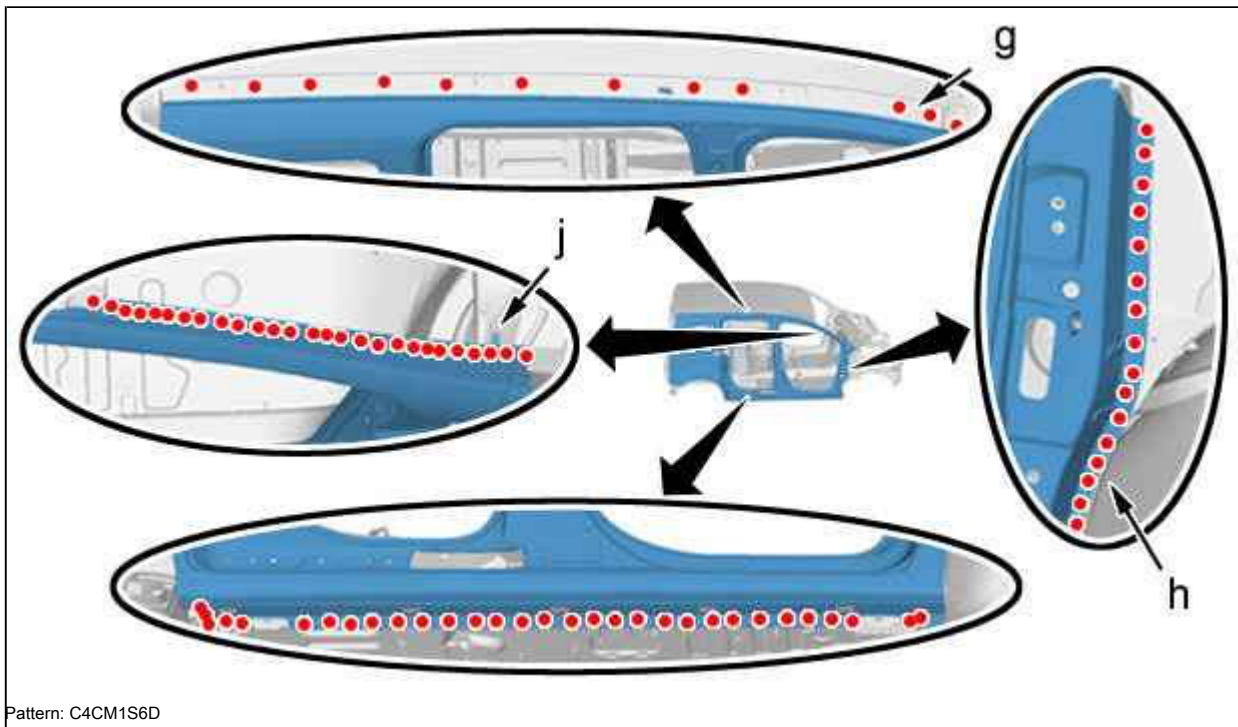


Apply fixing mastic (index "A1"). Install structural and expanding inserts.

9. Fitting

Install the passenger compartment side panel.
Install elements to ensure the fit.
Check clearances and alignment.
Hold the element in place.

10. Welding

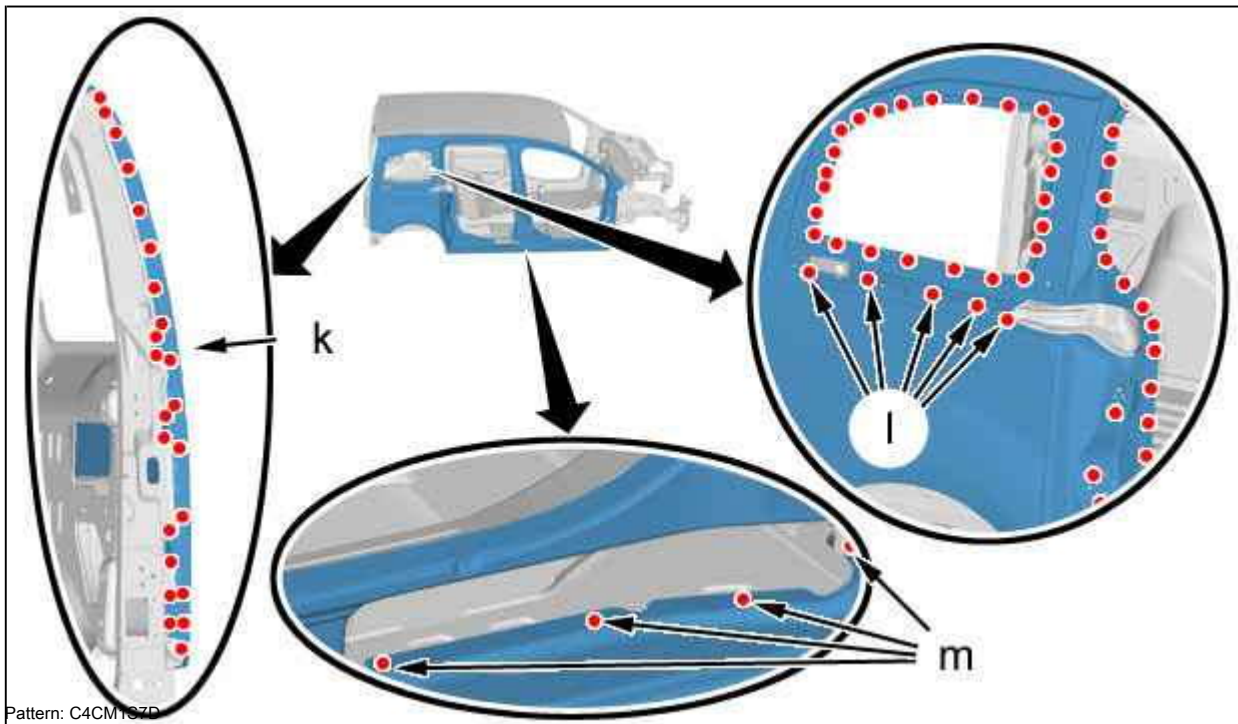


Pattern: C4CM1S6D

Spot weld using the mag method (in "g"). Grind MAG welding points.

Weld through the holes in the MAG protective gas (in "h"). Weld with welding points.

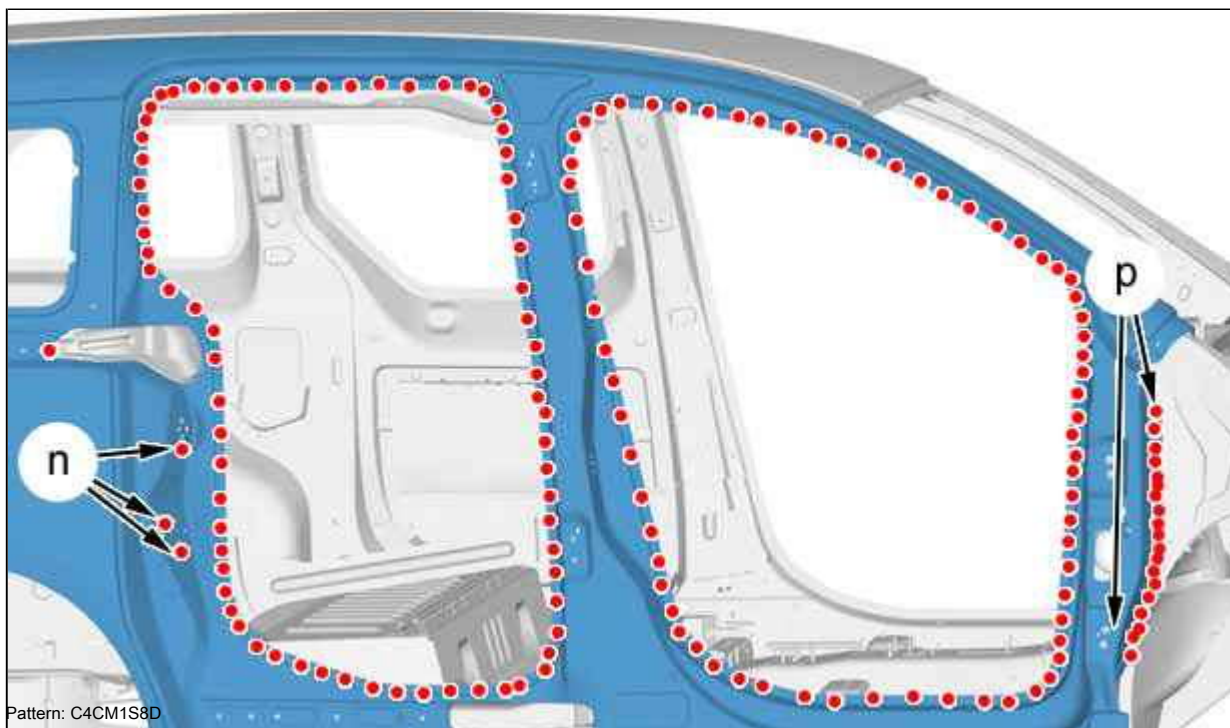
NOTE: Bend the locking lug (at "j") inward 180 °.



Pattern: C4CM1S7D

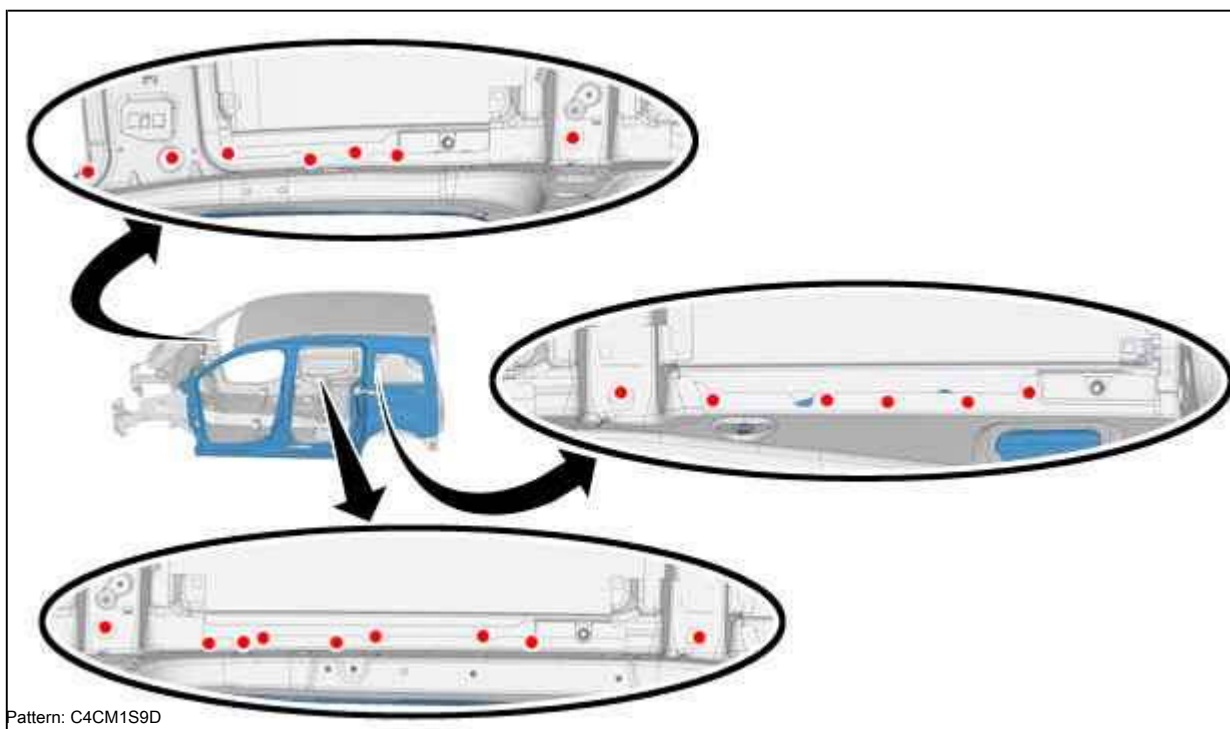
Spot weld using the mag method (in "k", "l", "m"). Grind MAG welding points.

Weld with welding points.



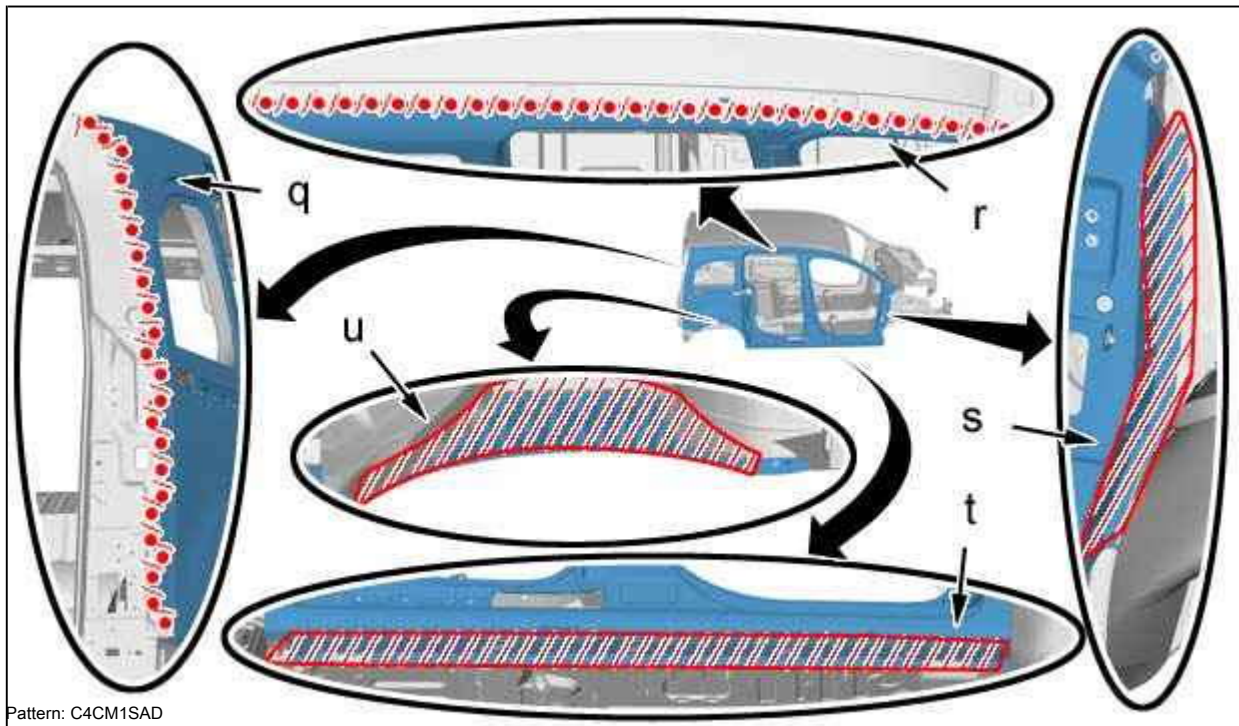
Spot weld using the mag method (in "n"). Grind MAG welding points.

Spot weld using the mag method (in "p"). Weld with welding points.



Spot weld using the mag method. Grind MAG welding points.

11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas. Apply to "q", "r" sealing mastic "A1".

Apply in "s", "t", "u" protective sealant against gravel "C4"

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: 2 GLASS SALON SIDE PANEL

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element:

- MIG brazing with copper-silicon electrode in inert gas
- MAG welding by depositing metal (steel) in reactive gas

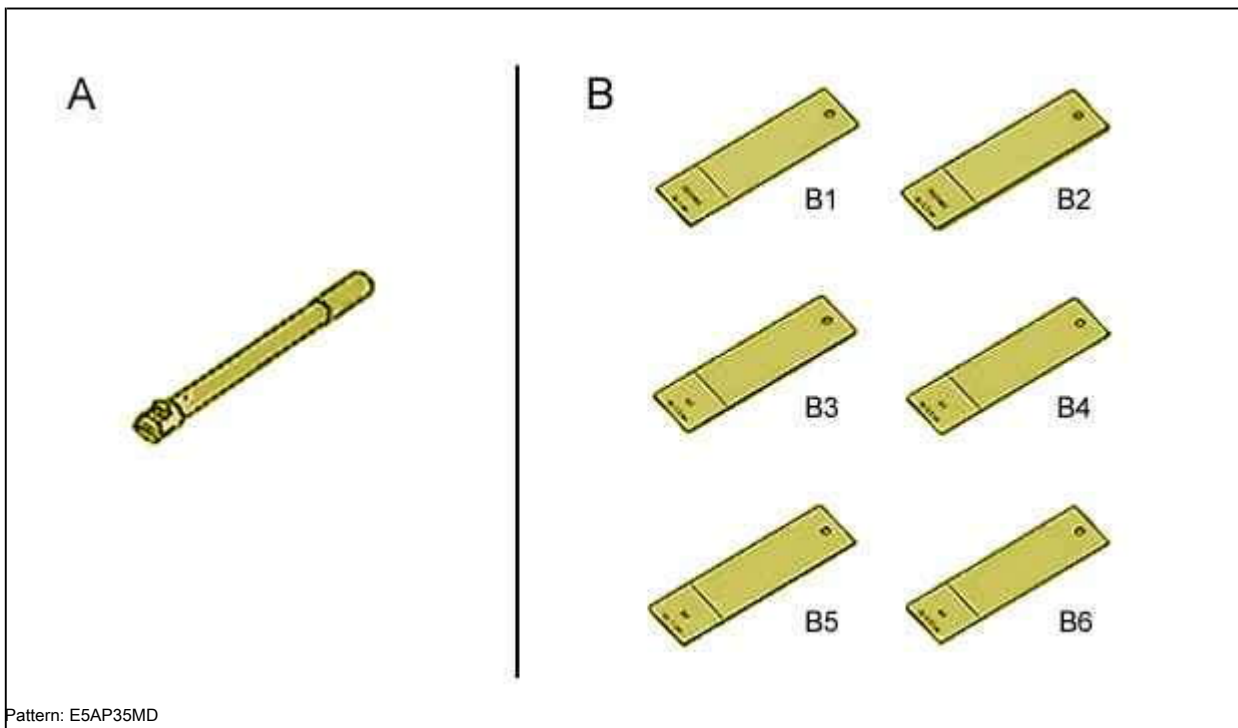
The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment

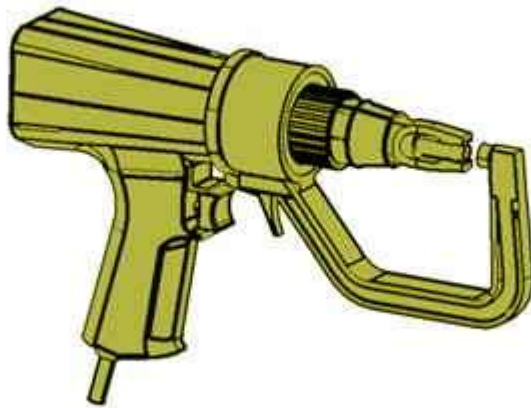
Operate using one of the following systems:

- Electronic measuring system
- Mechanical measuring system
- Specific head MZ (Special tool)
- Control template



Equipment for checking the quality of electric welding points (). 1366 ZZ. Test template for checking the quality of electric welding dots (). 1366B).

C



Pattern: E5AM0JCD

"C" S-shaped drill for drilling weld spots.

3. Additional operations

Disconnect the battery.

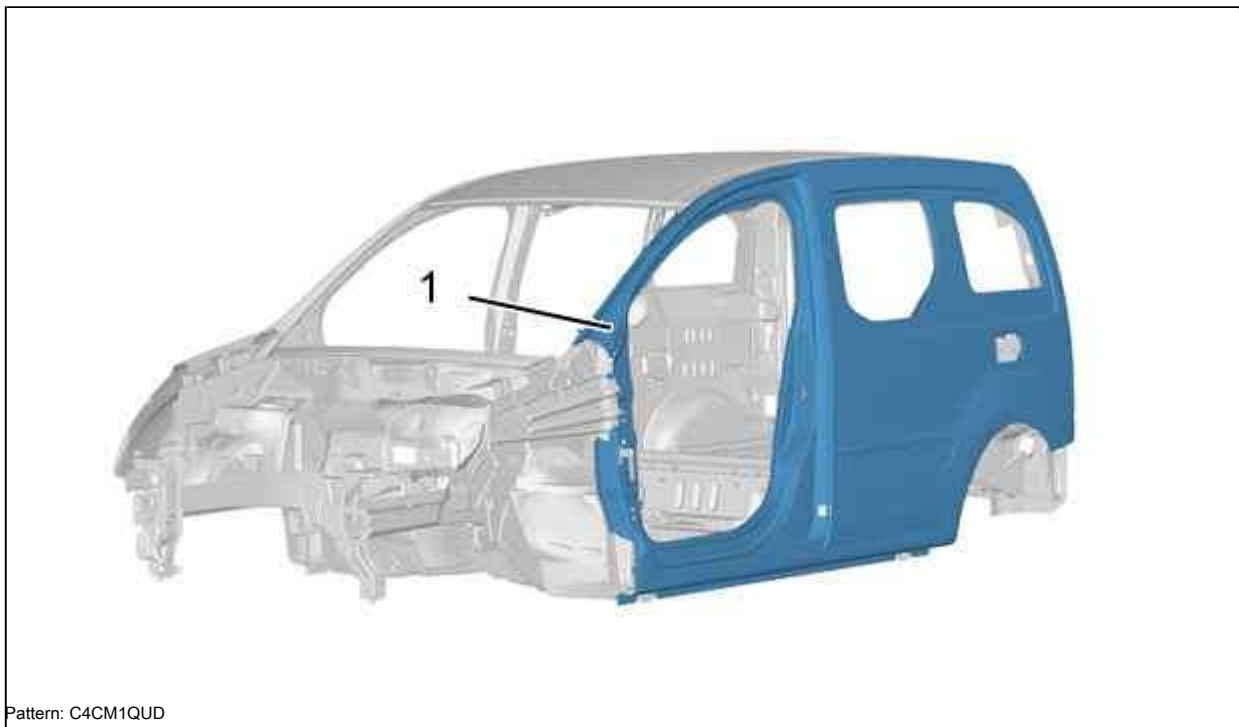
ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace: Front passenger compartment reinforcement.

4. Localization: Sidewall panel

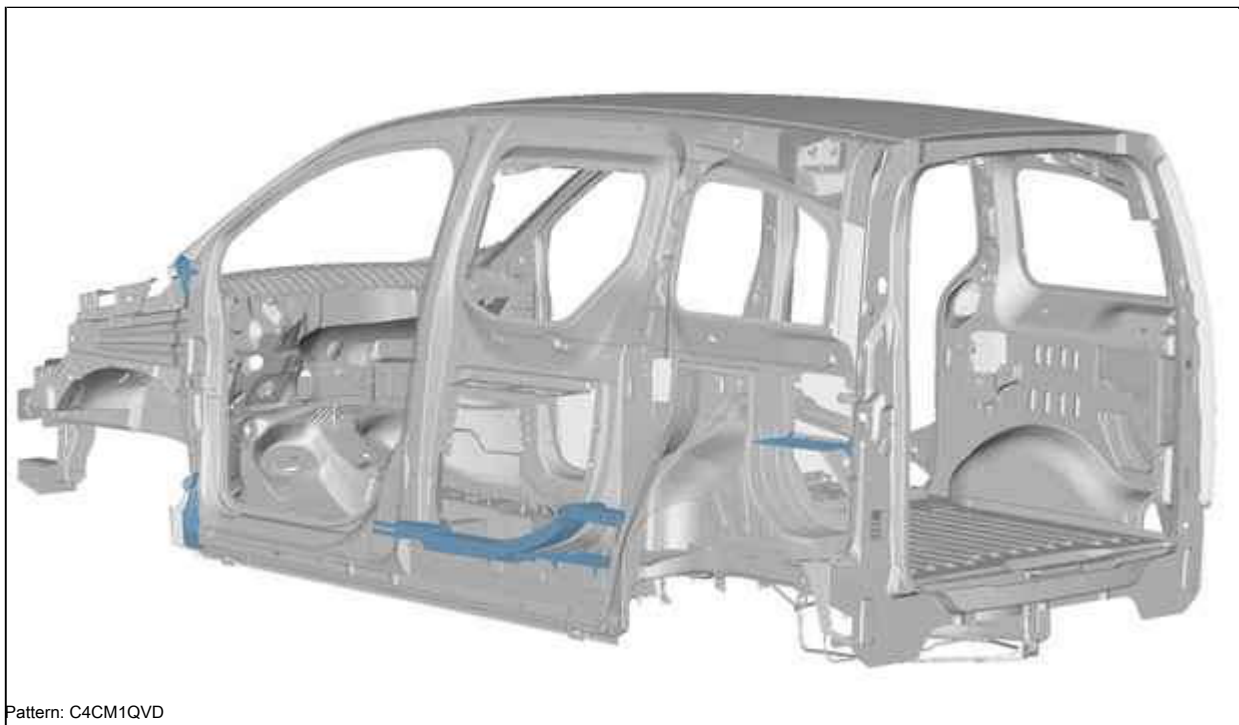
4.1. Localization: Sidewall panel



Label Designation

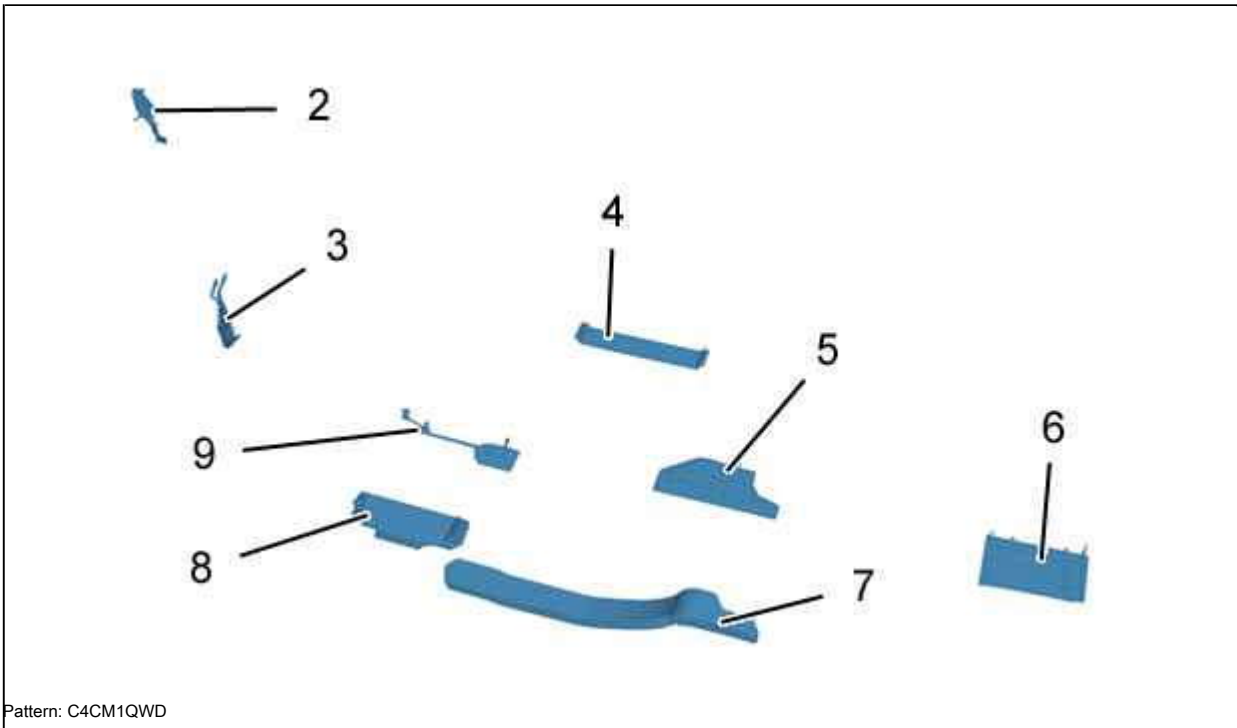
(1)	Interior side panel

4.2. Arrangement of structural and foam inserts



Expanding inserts

4.3. Identification of structural and foam inserts

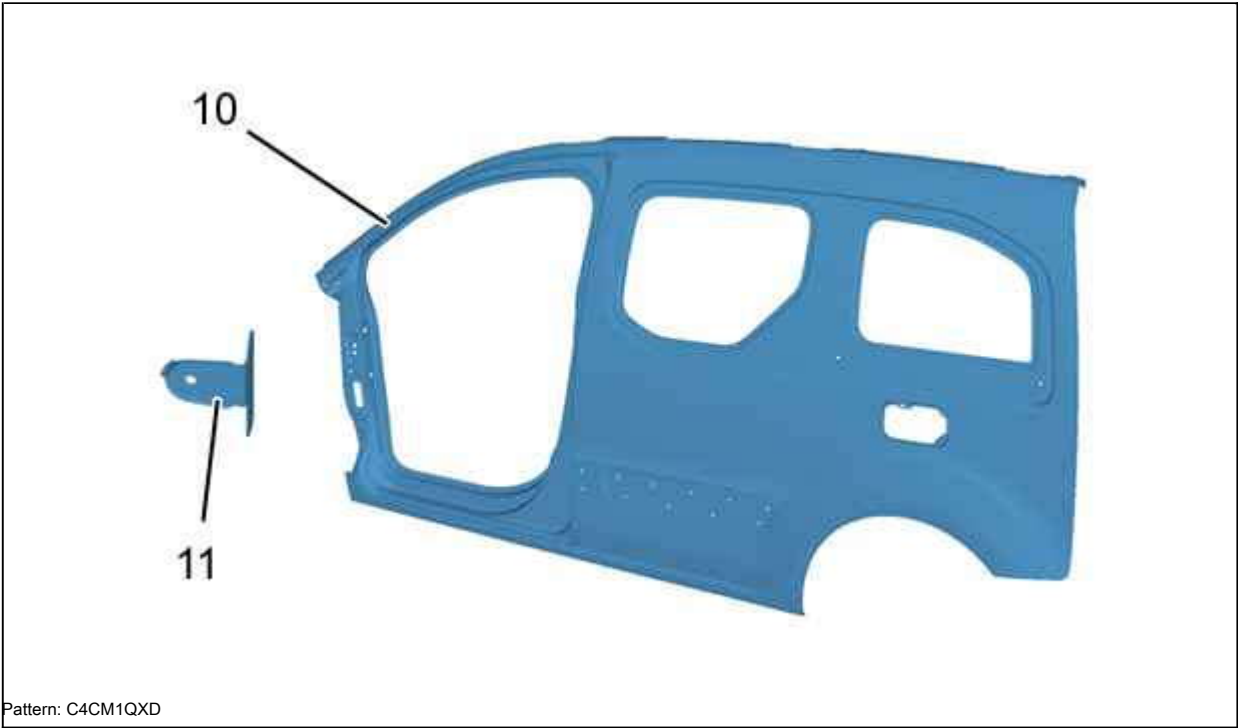


Label Designation

(2)	Closing seal (passenger side)
(3)	Tightness (from the passenger compartment)
(4)	Expanding insert: Side member reinforcement Expanding insert:
(five)	C-pillar Expanding insert: Sidewall trim
(6)	
(7)	Expanding insert: C-pillar
(eight)	Outer expanding insert: B-pillar reinforcement Outer expanding insert: B-pillar
(nine)	

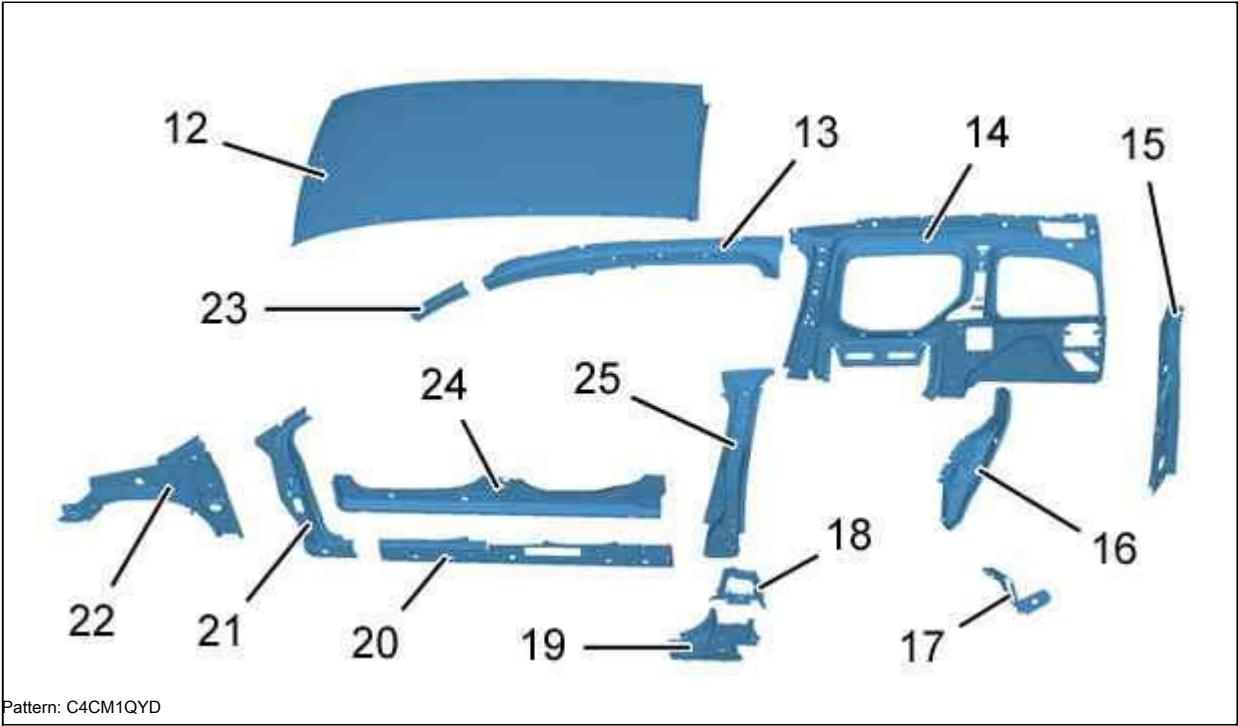
5. Identification: Interior side panel

5.1. Ingredient: Sidewall Panel



Label Designation		Thickness (mm)	Nature / classification
(ten)	Interior side panel	0.77	Mild steel
(eleven)	Rear intermediate support front wing 2		HLE

5.2. Identification of parts adjacent to the sidewall panel

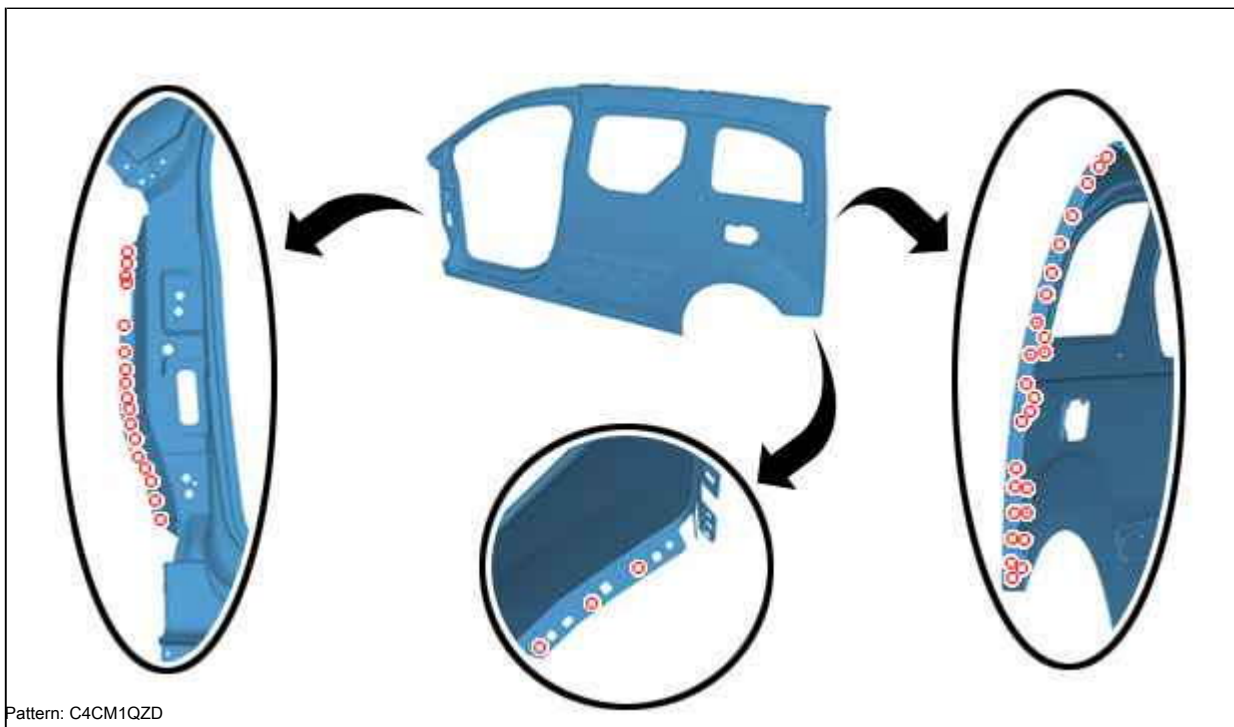


Label Designation		Thickness (mm)	Nature / classification

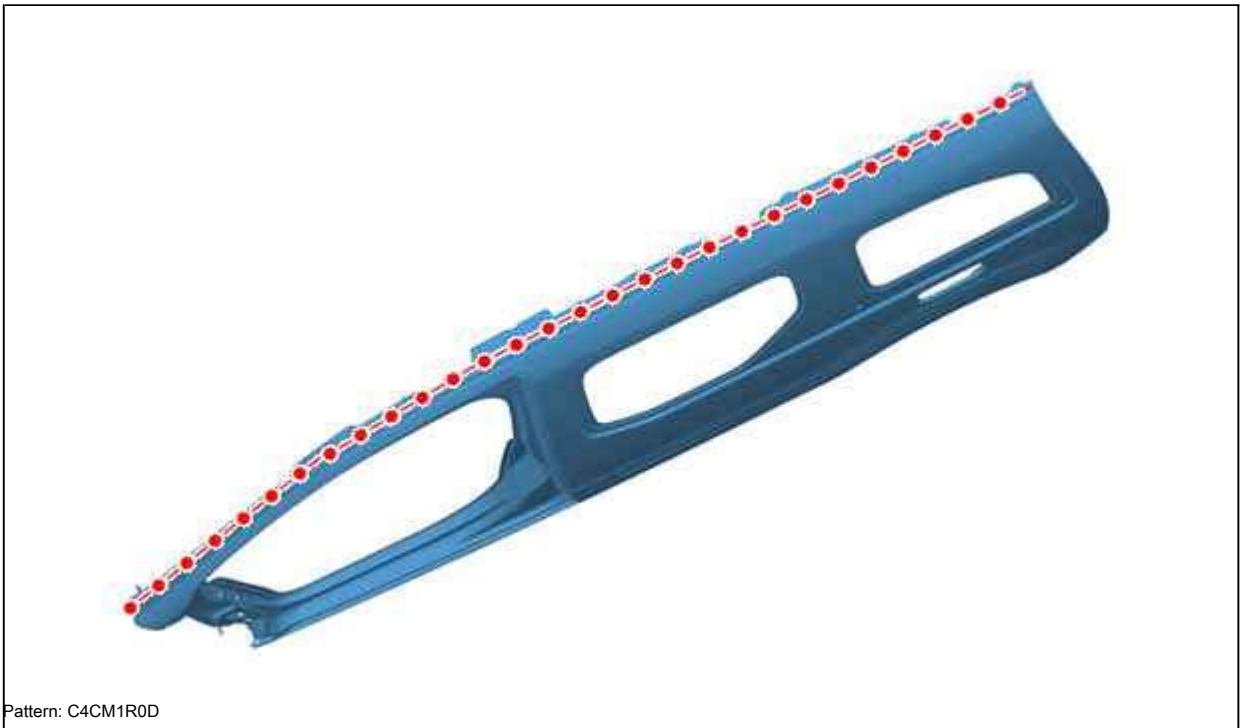
(12)	Roof	0.67	Mild steel
(13)	Base of the roof arch	1.17	HLE
(fourteen)	Rear wing	0.97	Mild steel
(fifteen)	Rear fender groove		
(sixteen)	Rear wheel arch, rear section Rear wing lower	0.67	Mild steel
(17)	cover	0.97	Mild steel
(18)	B-pillar trim reinforcement	2	THLE
(nineteen)	Lower reinforcement: B-pillar 2.2 Inner side member reinforcement		THLE
(20)	A-pillar reinforcement	1.17	THLE
(21)		1.47	HLE
(22)	Front fender molding	1.17	HLE
(23)	Base of the windscreen rack	1.17	HLE
(24)	Inner spar	1.47	HLE
(25)	B-pillar reinforcement	2	UHLE

6. Preparation: Interior side panel

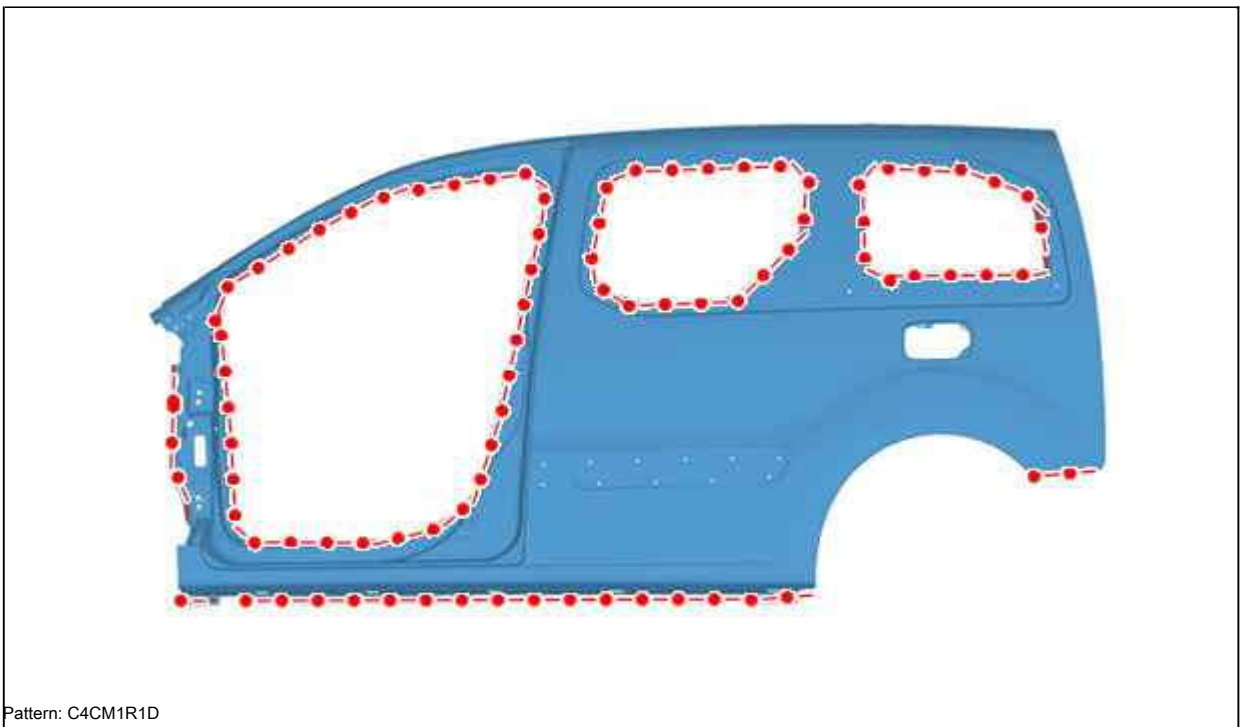
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection



Mark and drill holes Ø6.5 mm (or 8 mm for elements of significant thickness) for subsequent spot welding.

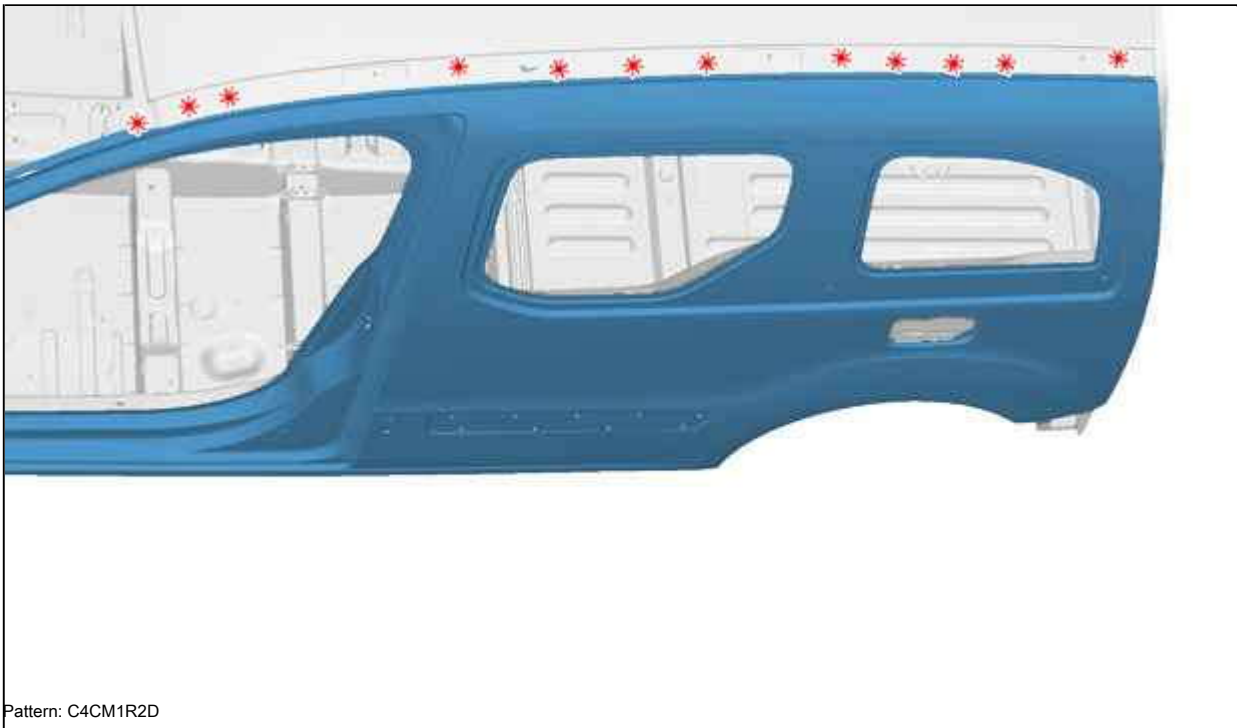


Prepare the sockets and protect them with a welding primer (index "C7").

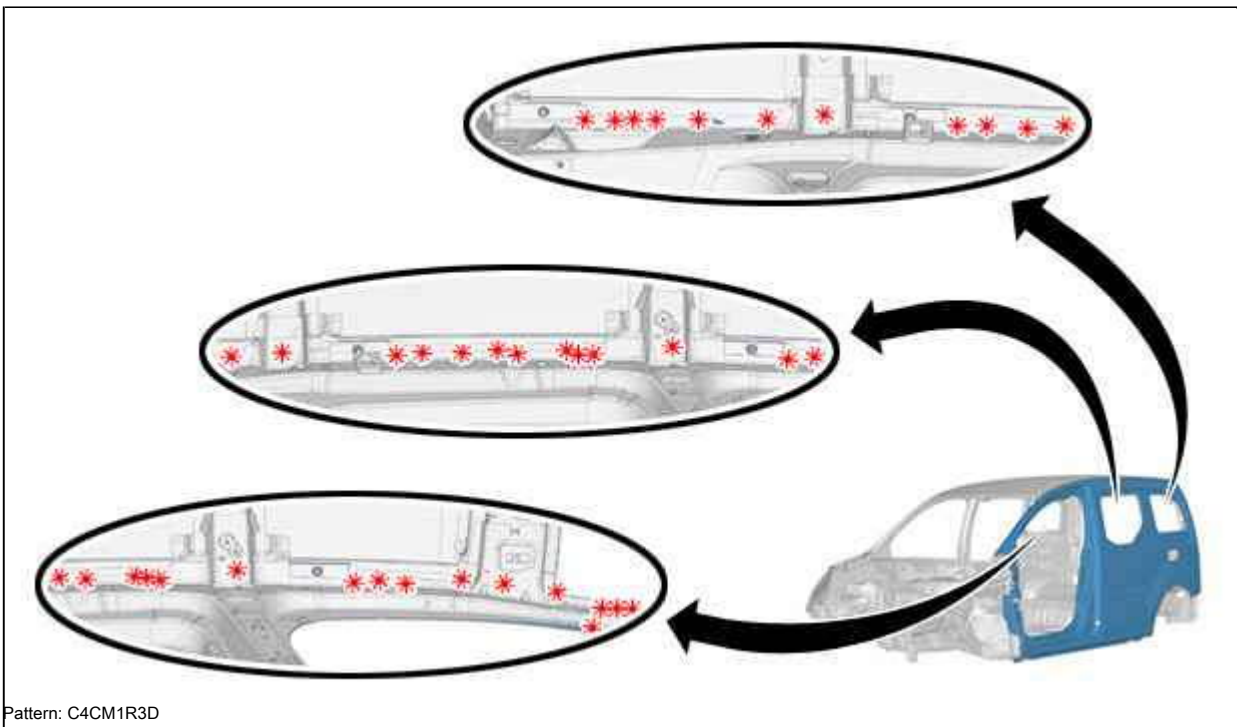


NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

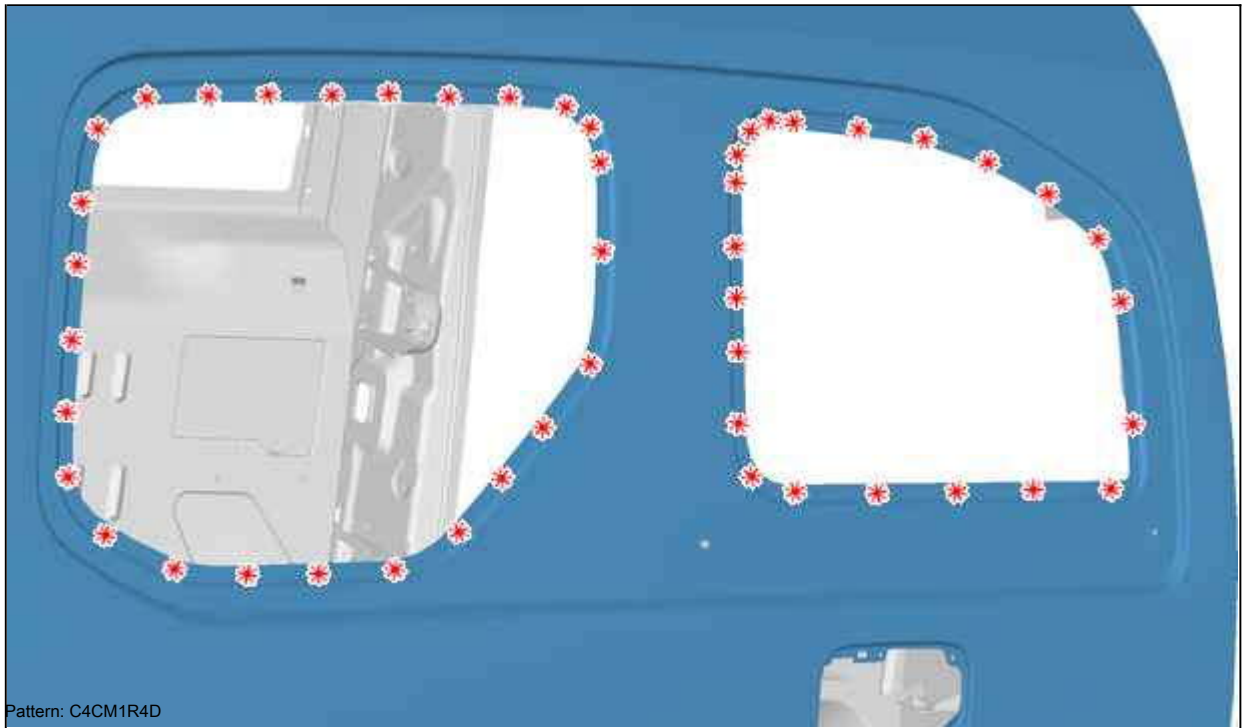
7. Cut: Salon side panel



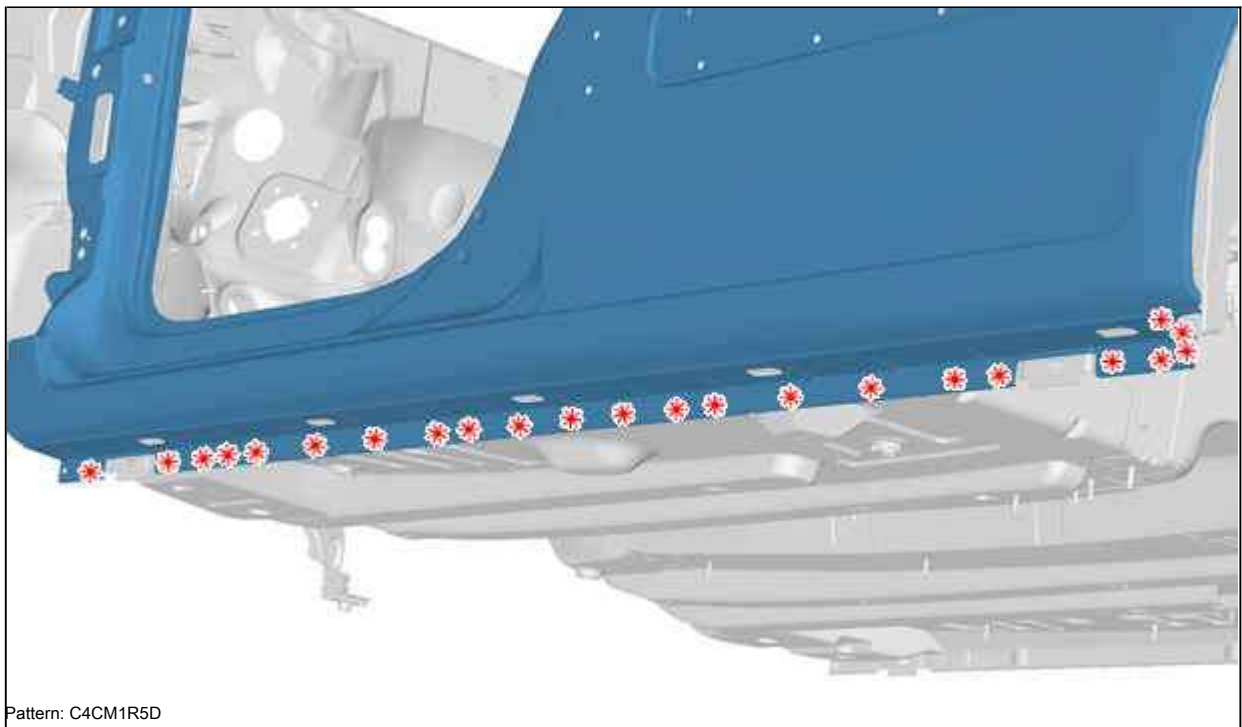
Mark out Cut by points.



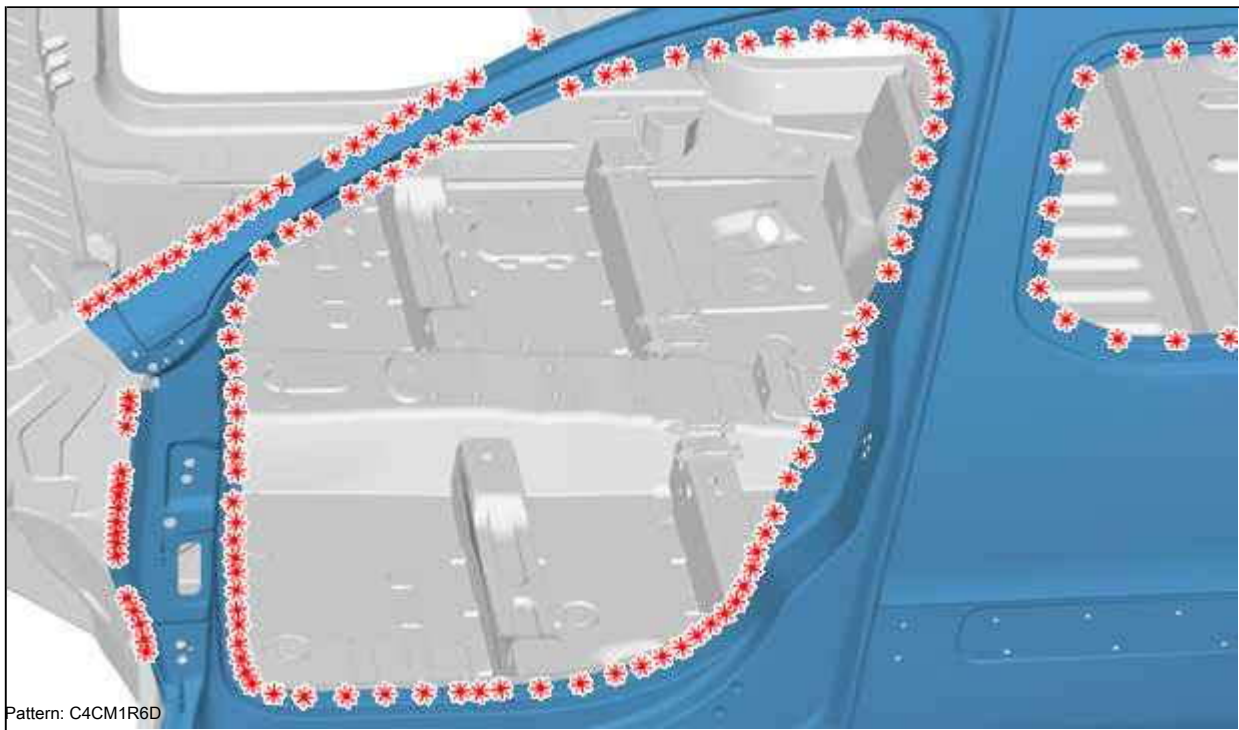
Mark out Cut by points.



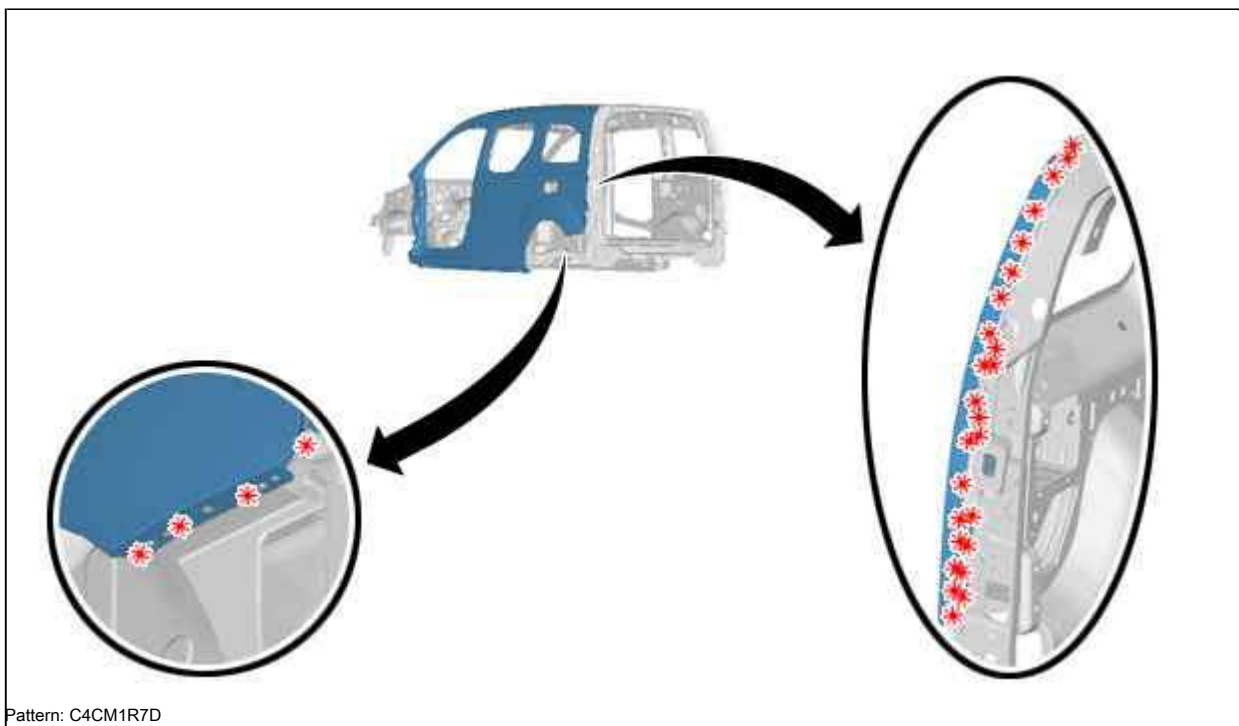
Mark out Cut by points.



Mark out Cut by points.



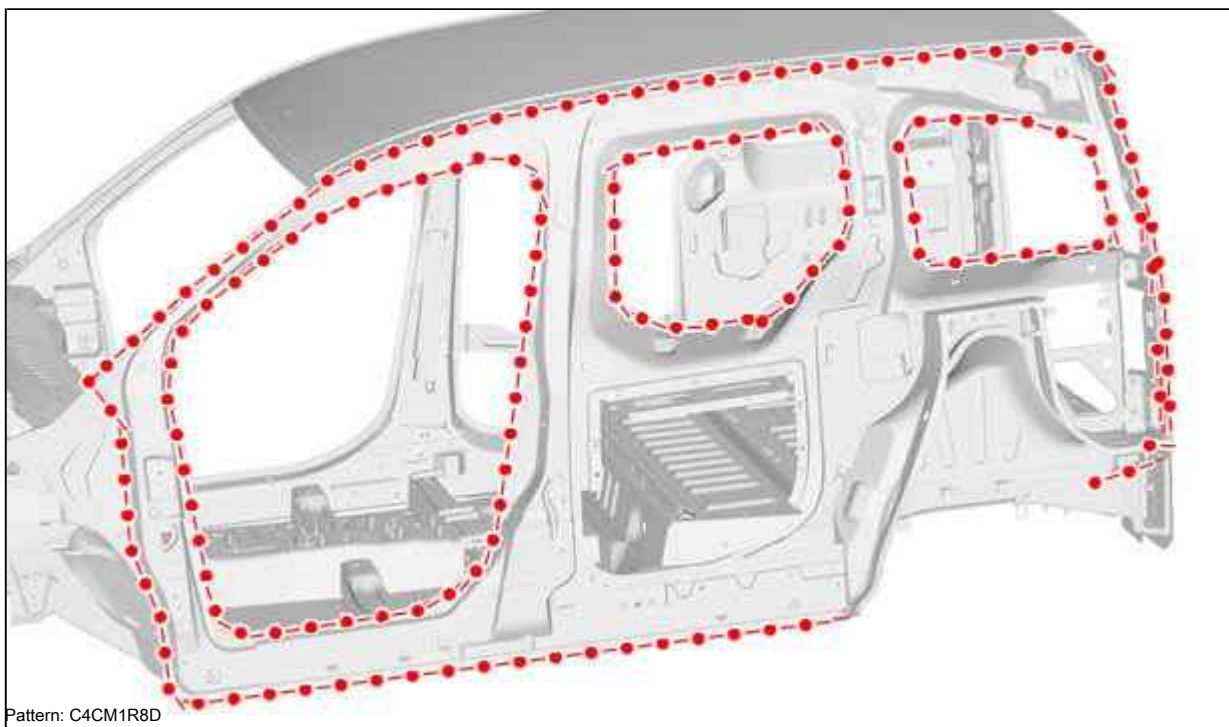
Mark out Cut by points.



Mark out Cut by points.

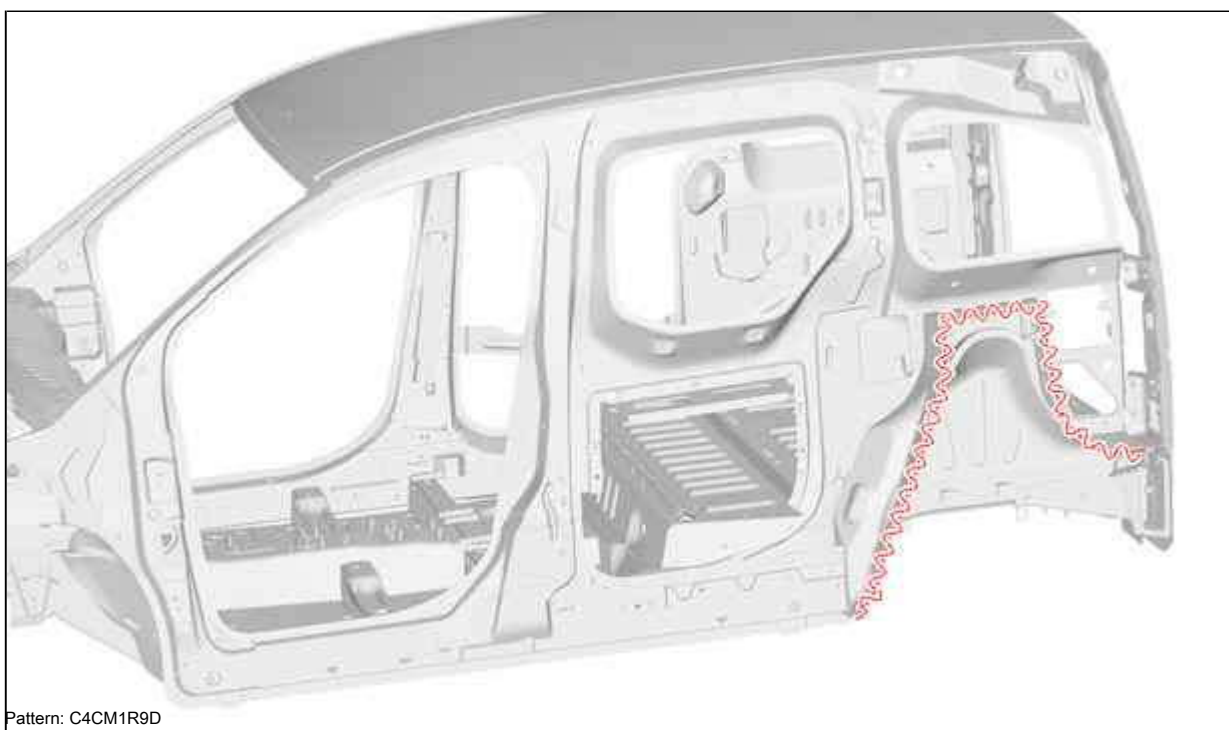
Remove: Interior side panel panel.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

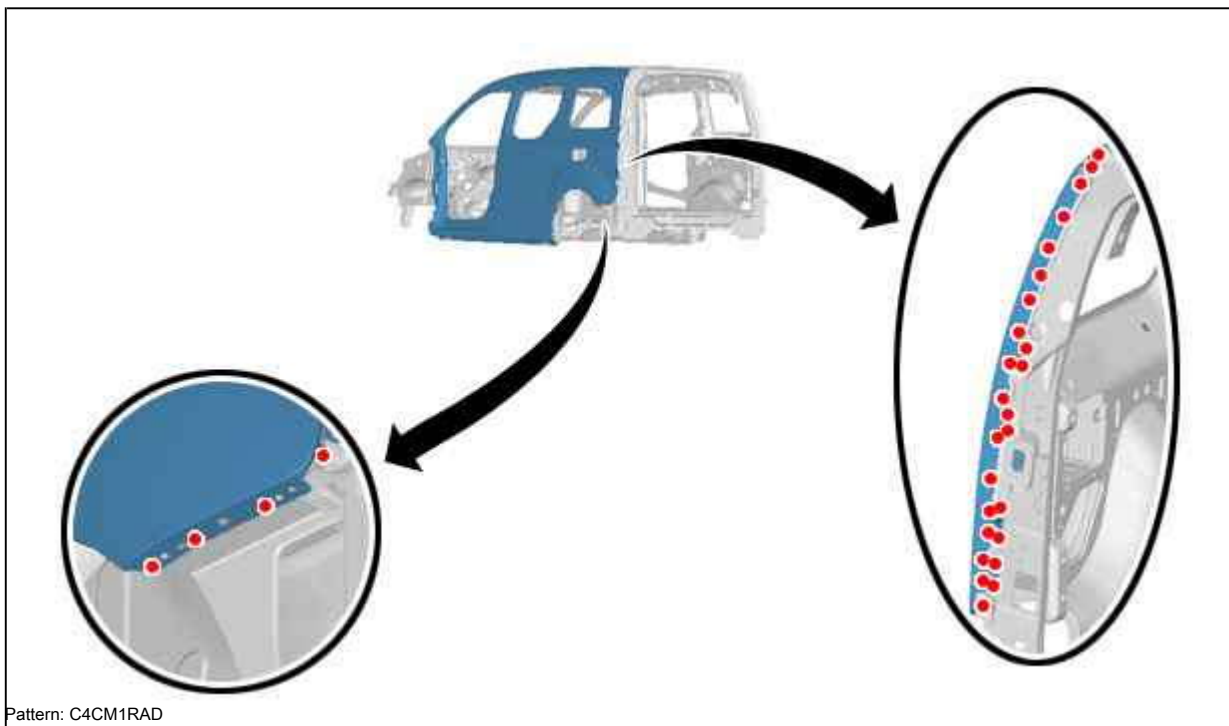


Apply fixing mastic (index "A1"). Install structural and foam inserts.

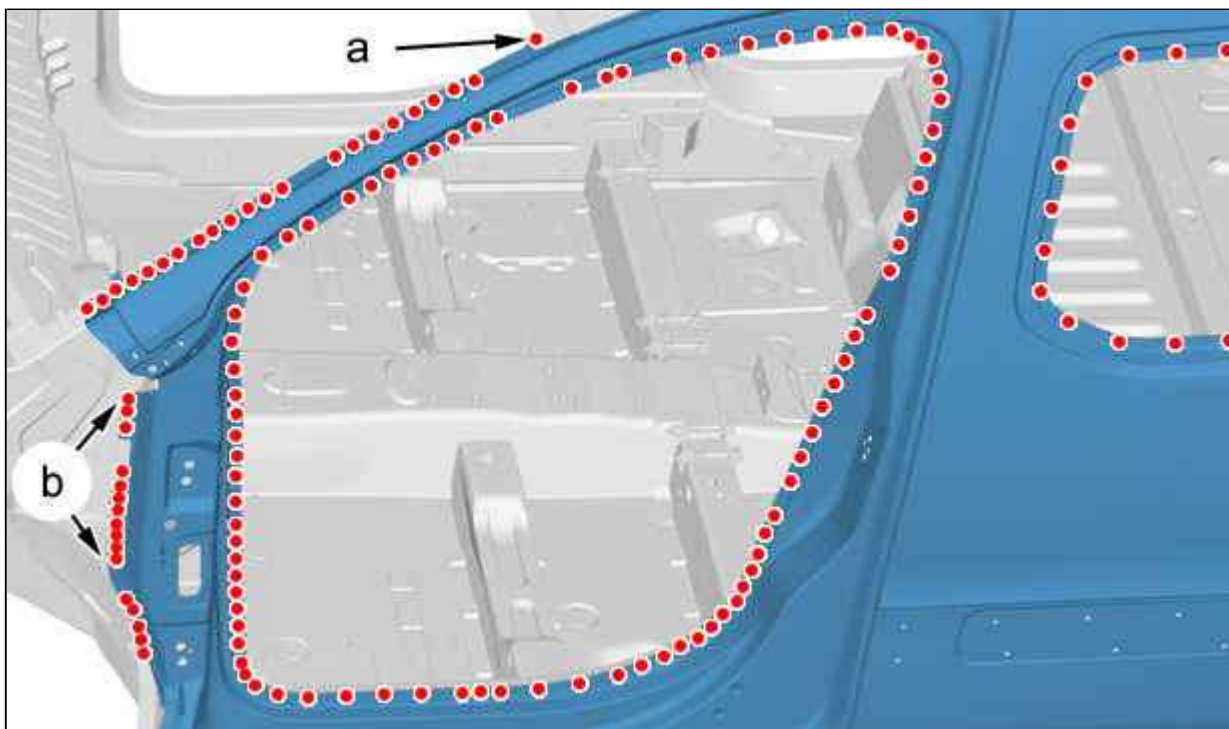
9. Fitting

Install the passenger compartment side panel.
Install elements to ensure the fit.
Check clearances and alignment.
Hold the element in place.

10. Welding

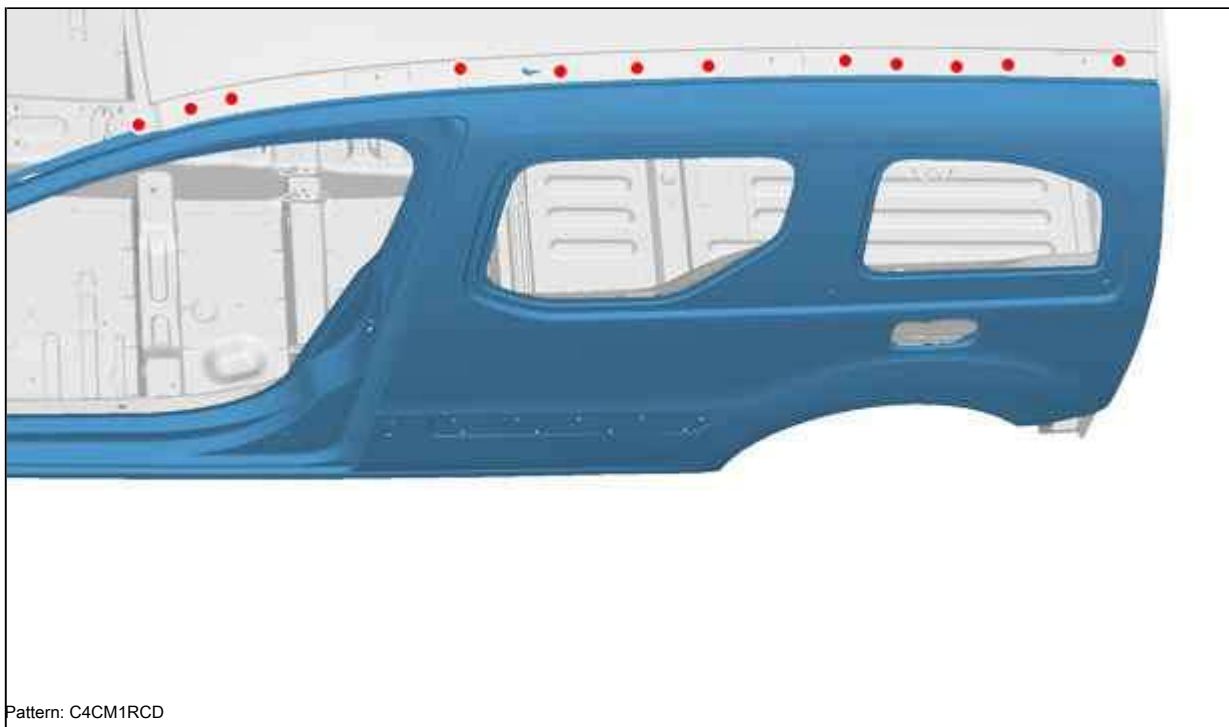


Weld through the holes in the MAG protective gas. Grind MAG welding points.

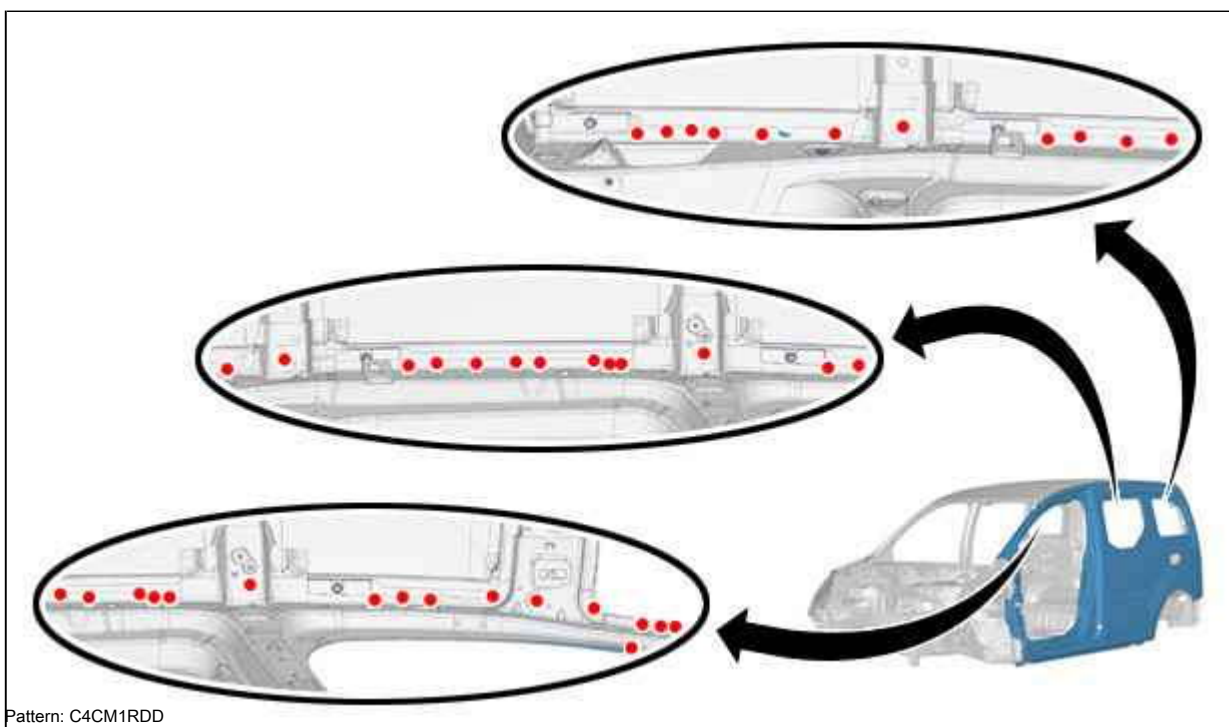


Pattern: C4CM1RBD

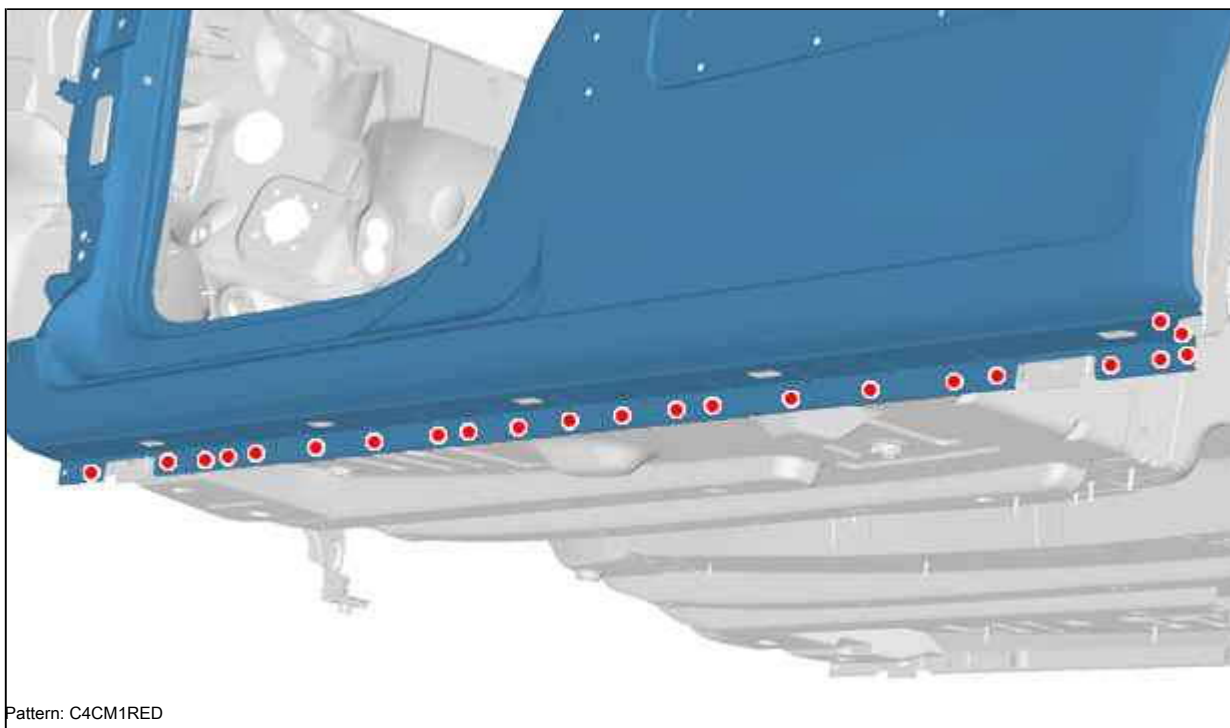
Carry out MAG spot welding (at "a").
Weld through the holes in the MAG protective gas (in "b").
Grind MAG welding points.
Weld with welding points.



Weld through the holes in the MAG protective gas. Grind MAG welding points.

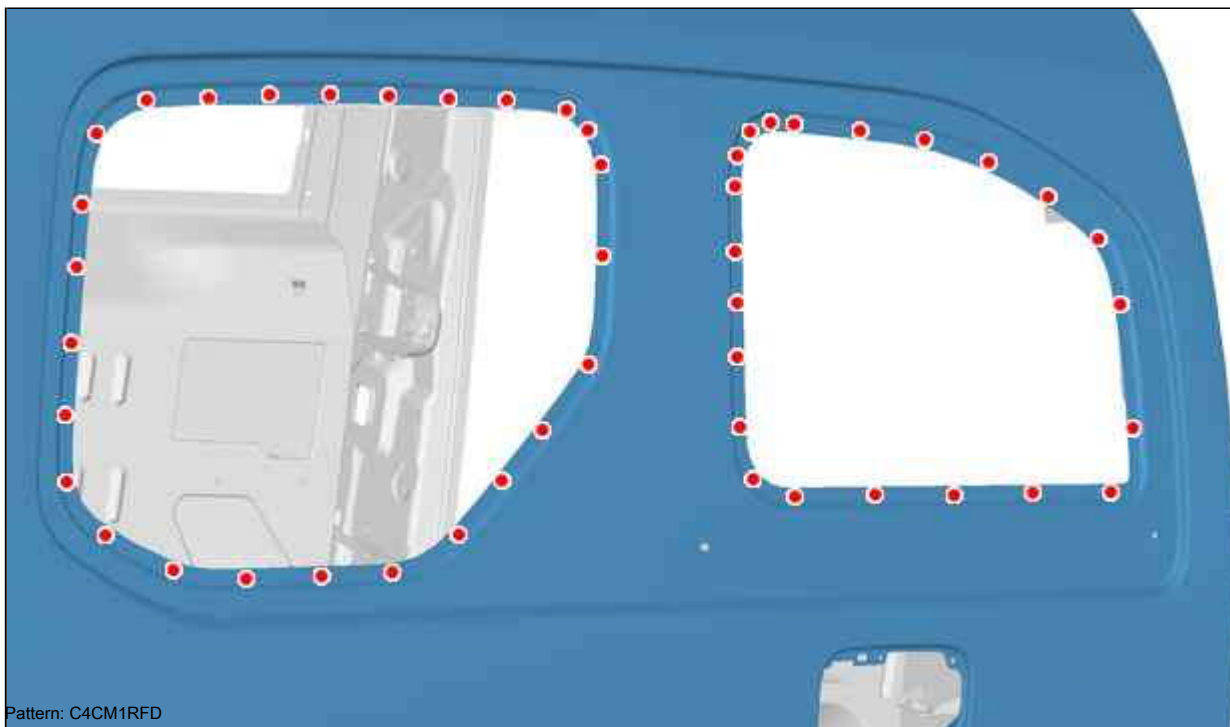


Weld through the holes in the MAG protective gas. Grind MAG welding points.



Pattern: C4CM1RED

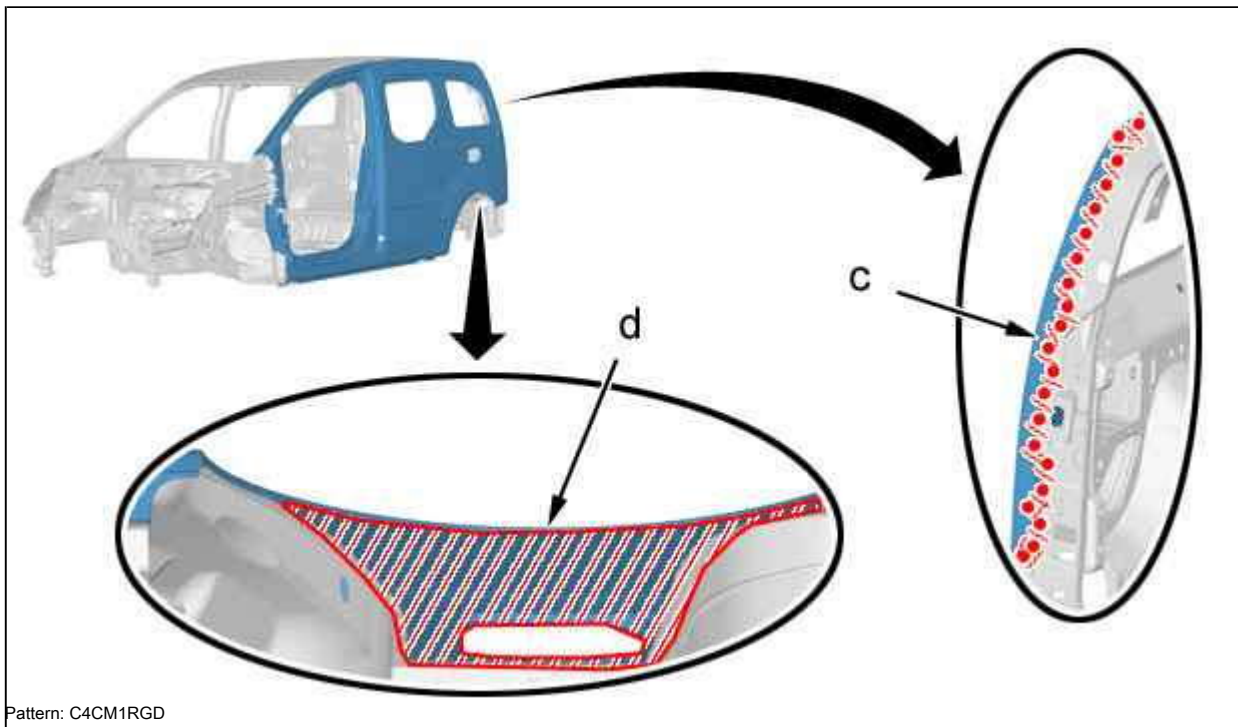
Weld with welding points.



Pattern: C4CM1RFD

Weld with welding points.

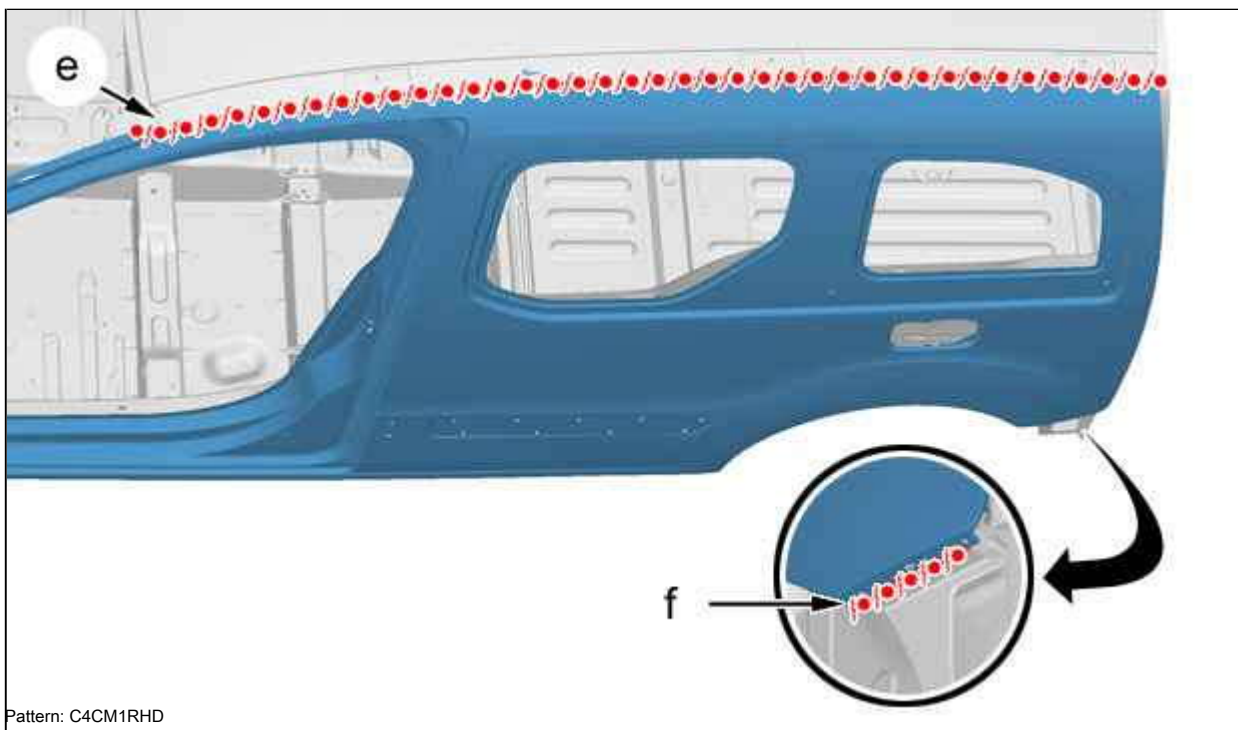
11. Tightness protection



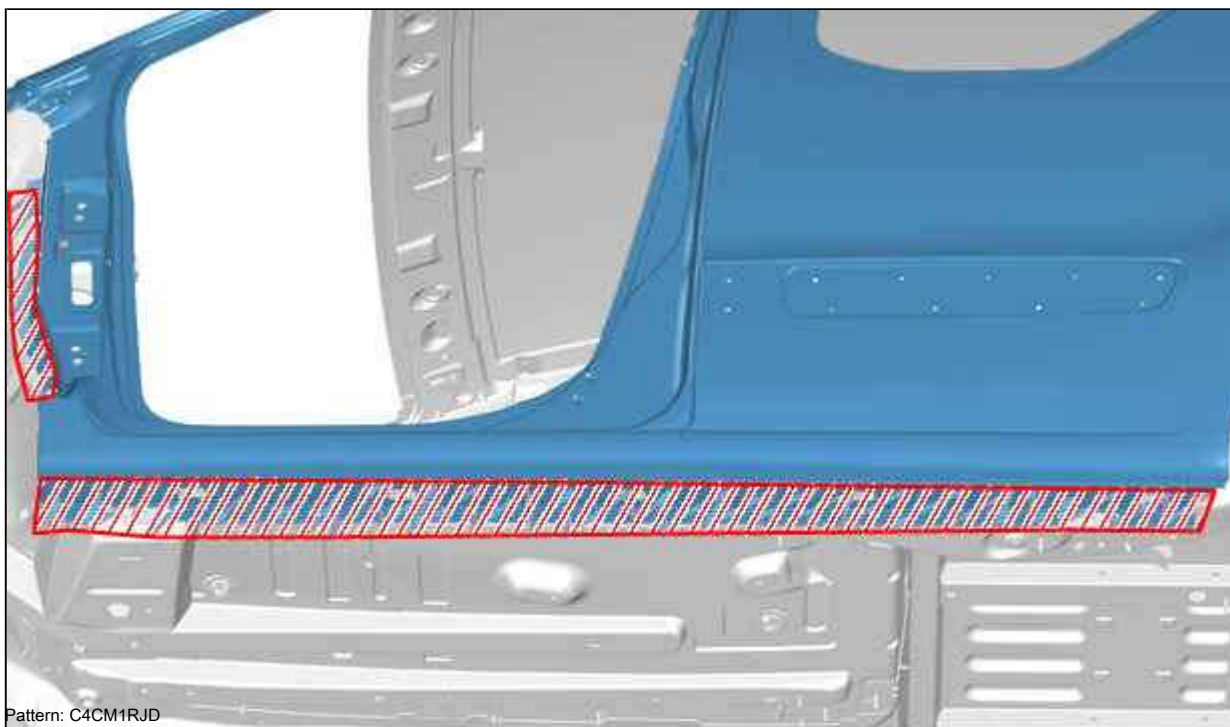
Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1") (in "c").

Apply a "C4" anti-gravel coating

(in "d").



Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1") (in "e", "f").



Apply a layer of phosphate primer to the cleaned areas.

Apply a "C4" anti-gravel coating

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: FRONT AND REAR UPPER SUPPORTS FRONT FENDER

MANDATORY: Observe the cleanliness and safety rules



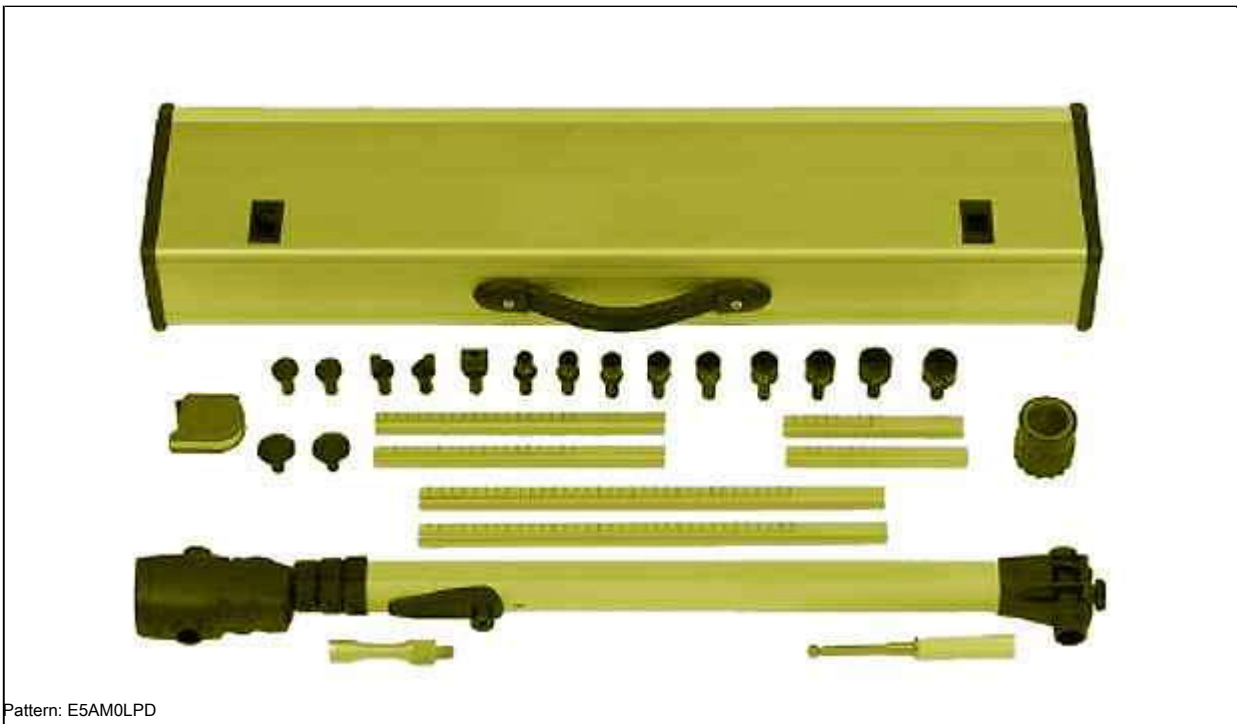
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- Mild steel

2. Recommended equipment



Pattern: E5AM0LPD

Comparative measurement system ((a device that allows you to measure and compare the positions of the lower and upper points of the body relative to the axis of symmetry)).

Car OLiner type; Reference (reference): M430 000 001.

NOTE: For more information on the comparative measurement system, refer to the original equipment catalog.

3. Additional operations

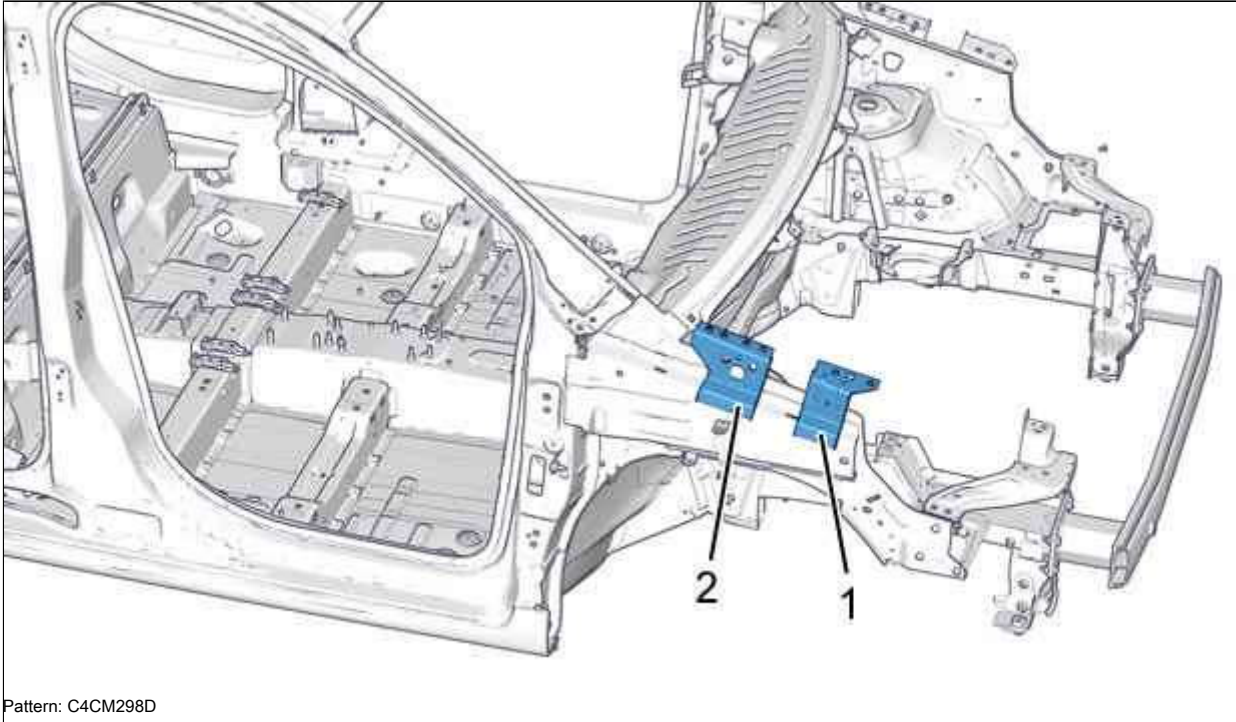
Disconnect the battery.

ATTENTION : Remove or protect items located in the repair area that could be

damaged by heat or dust.

Separate the wire harnesses.

4. Location of the spare part

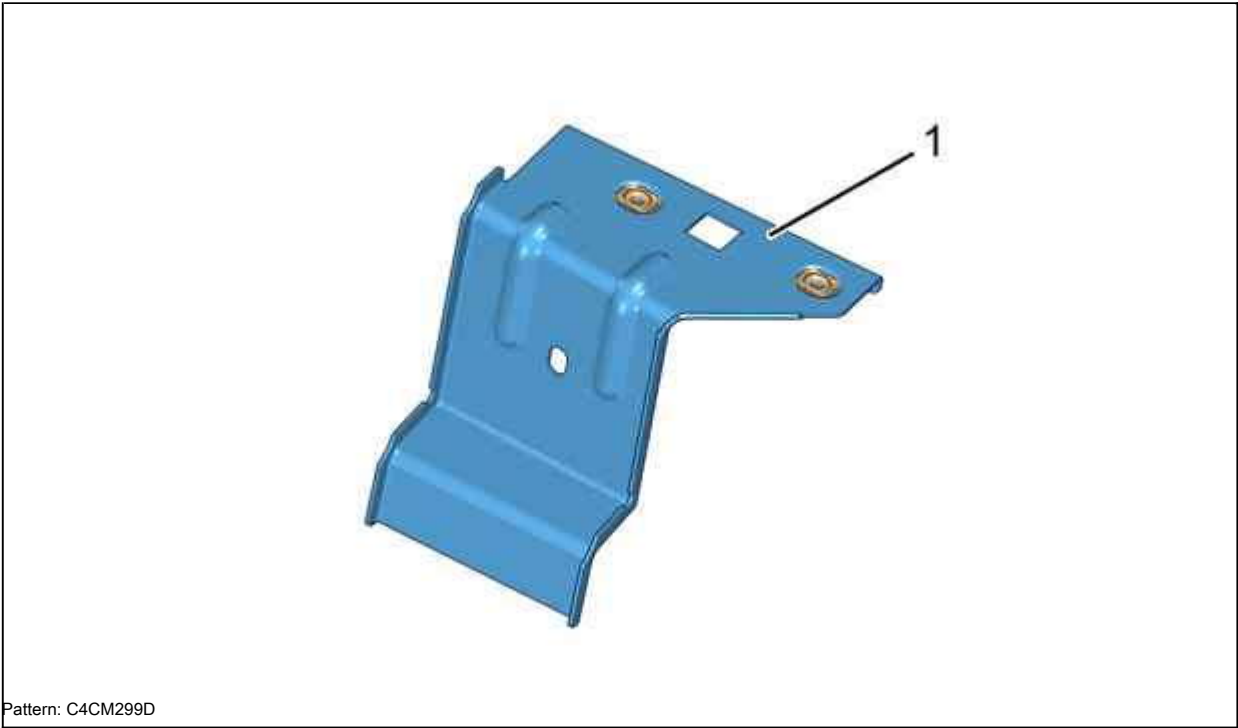


Label Designation

(1)	Front wing upper support
(2)	Rear upper front fender support

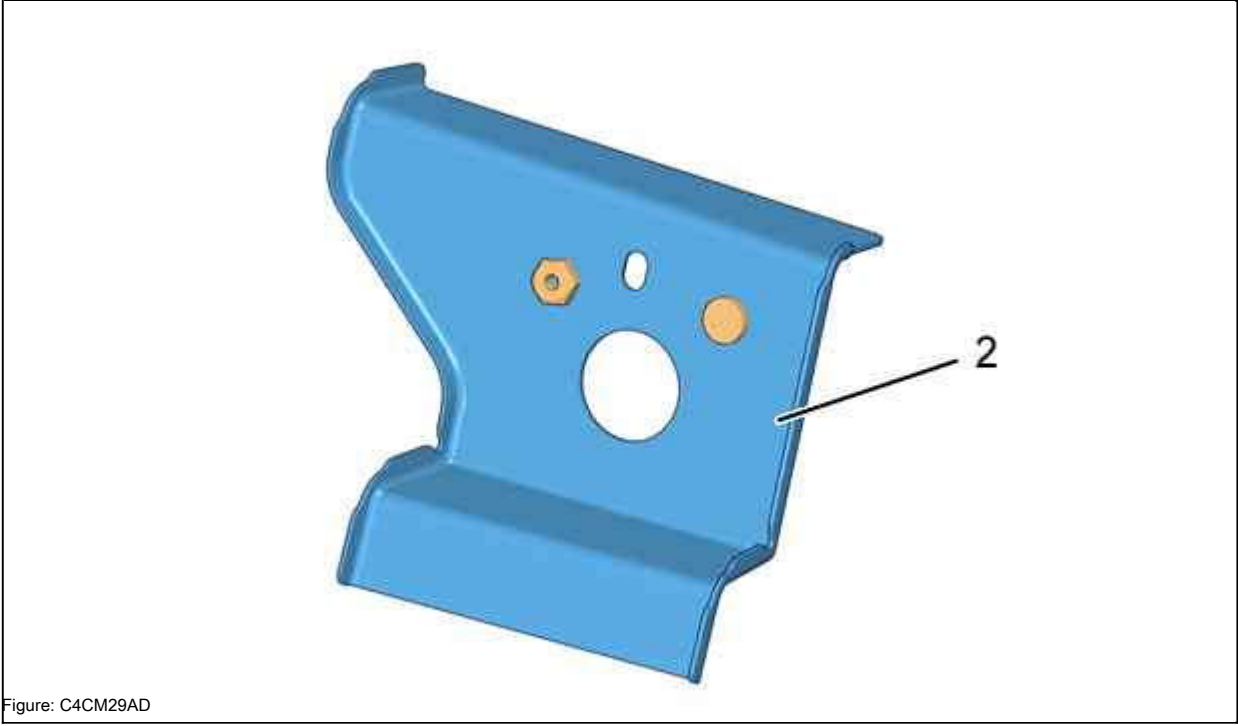
5. Identification of spare parts

5.1. Composition: Front wing upper support



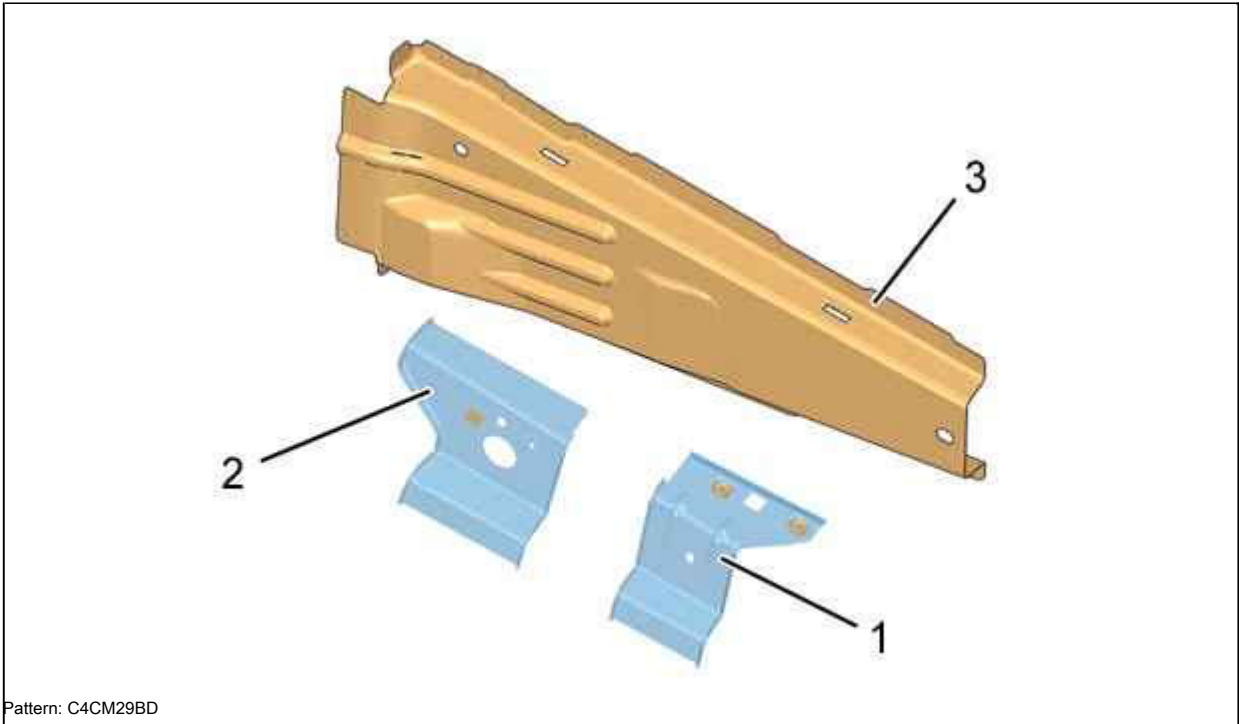
Label Designation		Thickness (mm)	Nature / classification
(1)	Upper support front wing 1.47		Mild steel

5.2. Composition: Rear Upper Front Fender Support



Label Designation		Thickness (mm)	Nature / classification
(2)	Rear upper support front fender 1.47		Mild steel

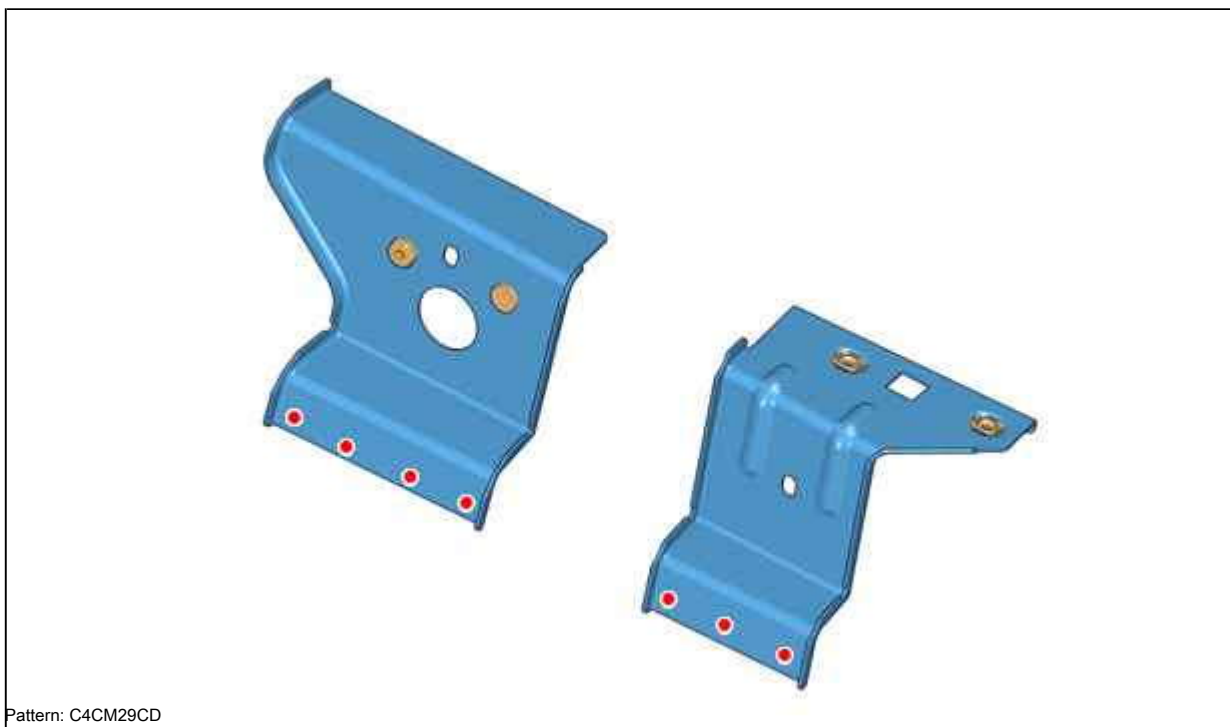
5.3. Identification of parts adjacent to a spare part



Label Designation		Thickness (mm)	Nature / classification
(1)	Front wing upper support	1.47	Mild steel
(2)	Rear upper front fender support	1.47	Mild steel
(3)	Front reinforcement on the passenger compartment 1.47		HLE

6. Preparation of spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

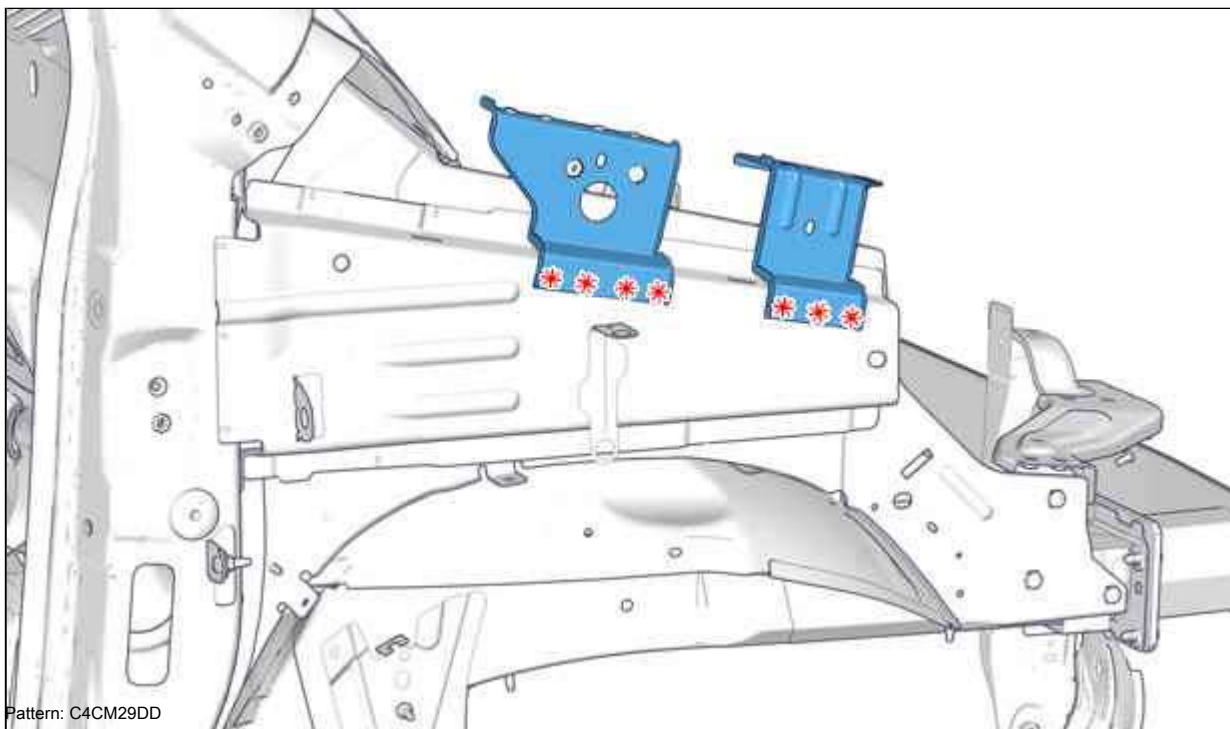


Pattern: C4CM29CD

Apply the marking lines, then drill the holes with a 8 mm drill for subsequent MAG spot welding.

Prepare the sockets and protect them with a welding primer (index "C7").

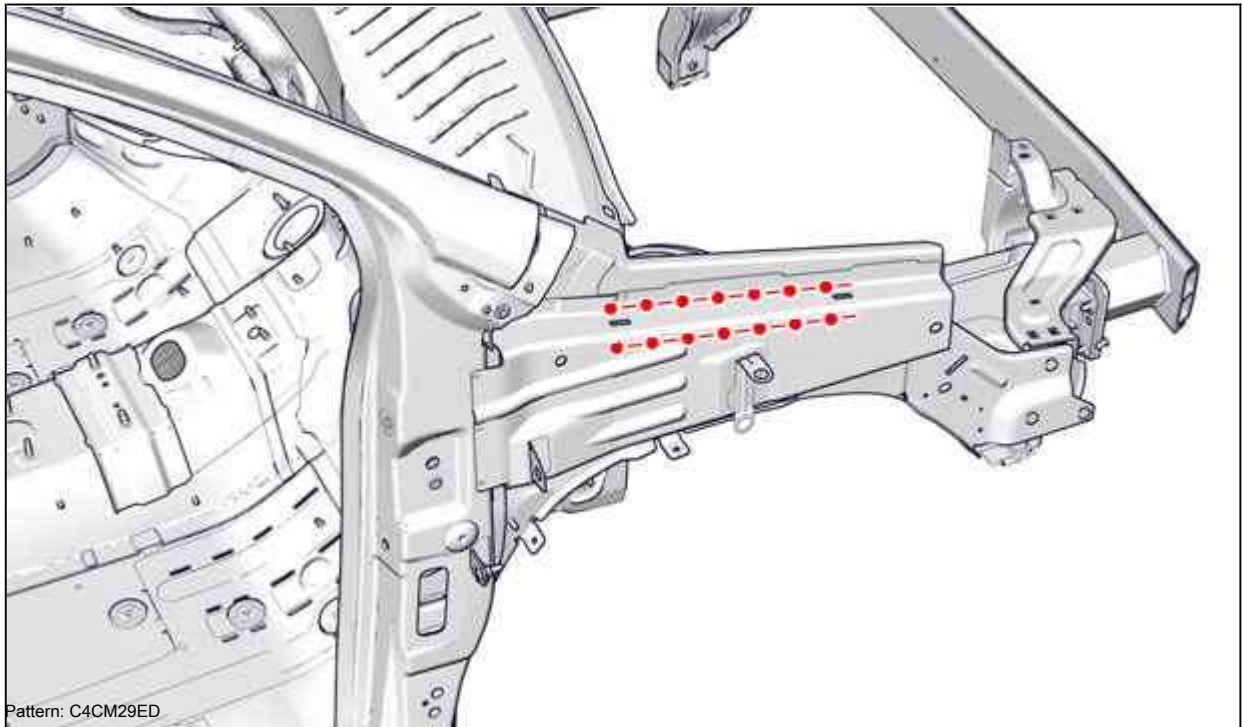
7. Cutting an element on the body



Pattern: C4CM29DD

Cut by points. Remove items.

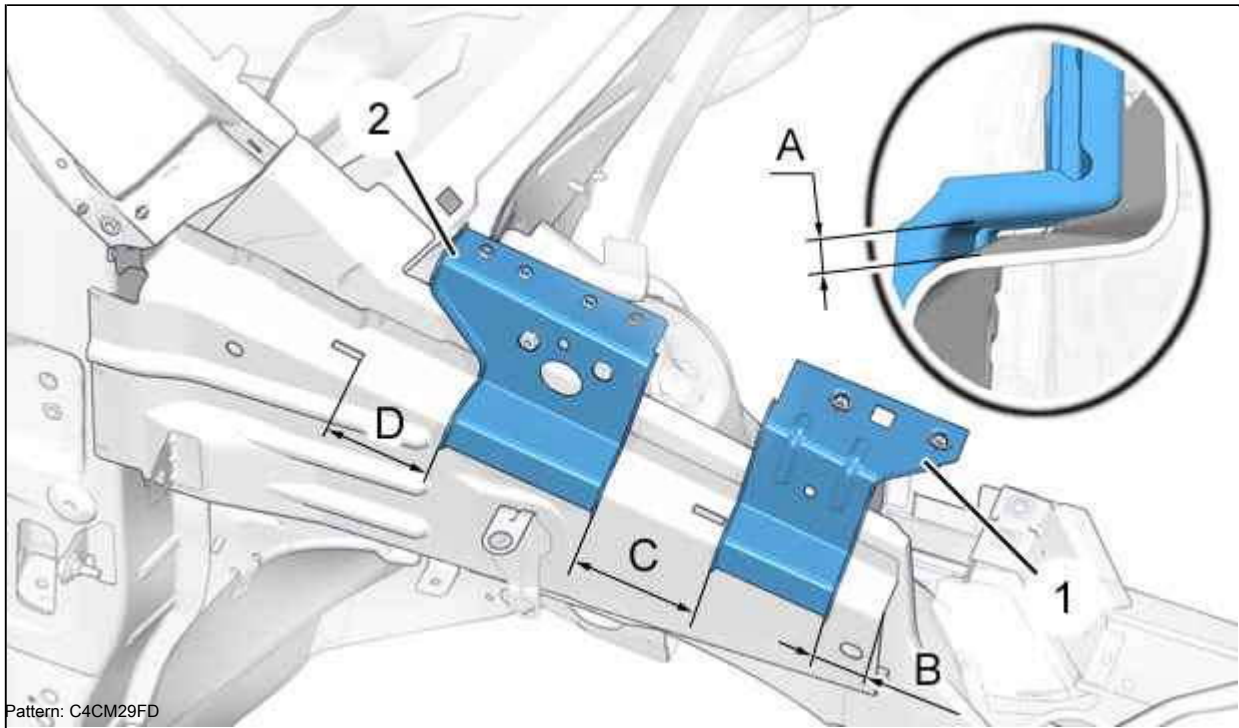
8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

9. Fitting

NOTE: Dimensions are for reference only and may change during the life of the vehicle.



"A" = 5 mm.

"B" = 37 mm.

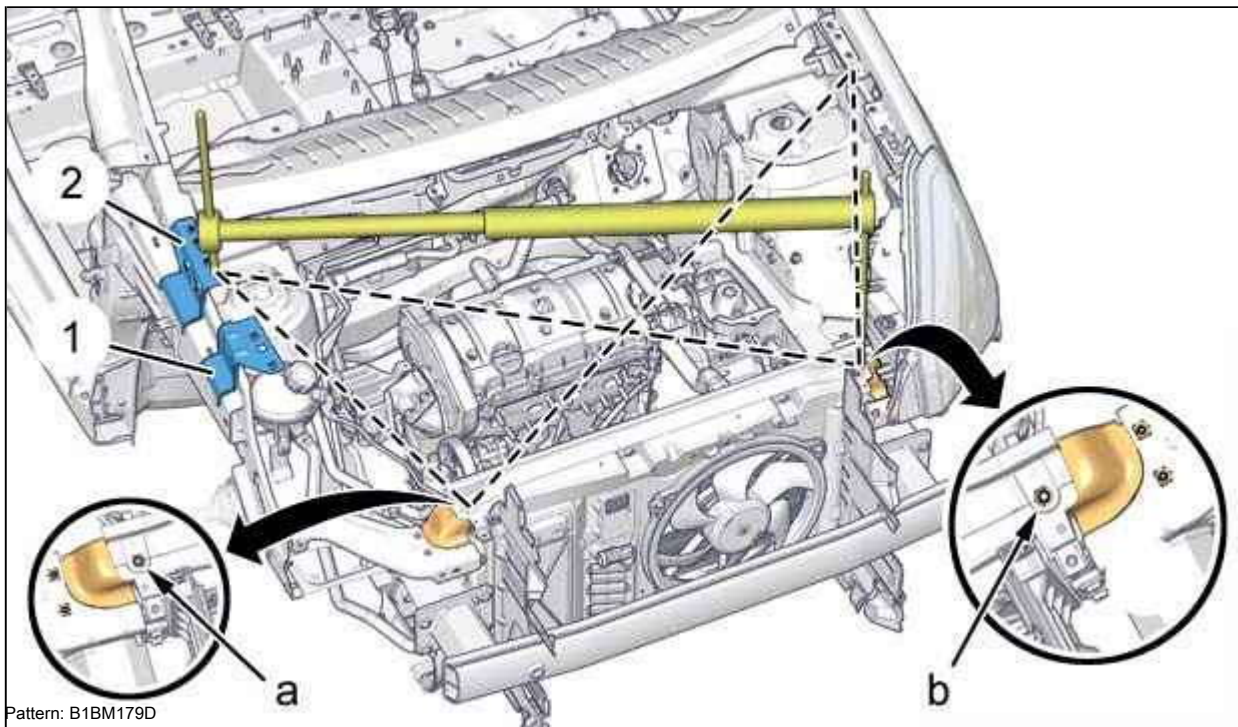
"C" = 92mm.

"D" = 82 mm.

Install the following items:

- Front wing upper support (1) (corresponding to the side of the body on which the replacement is carried out)
- Rear upper front fender support (2) (corresponding to the side of the body on which it is being replaced)

NOTE: A test body assembly with a front fender and front door can be performed to check the height of the front fender upper supports (1 and 2).

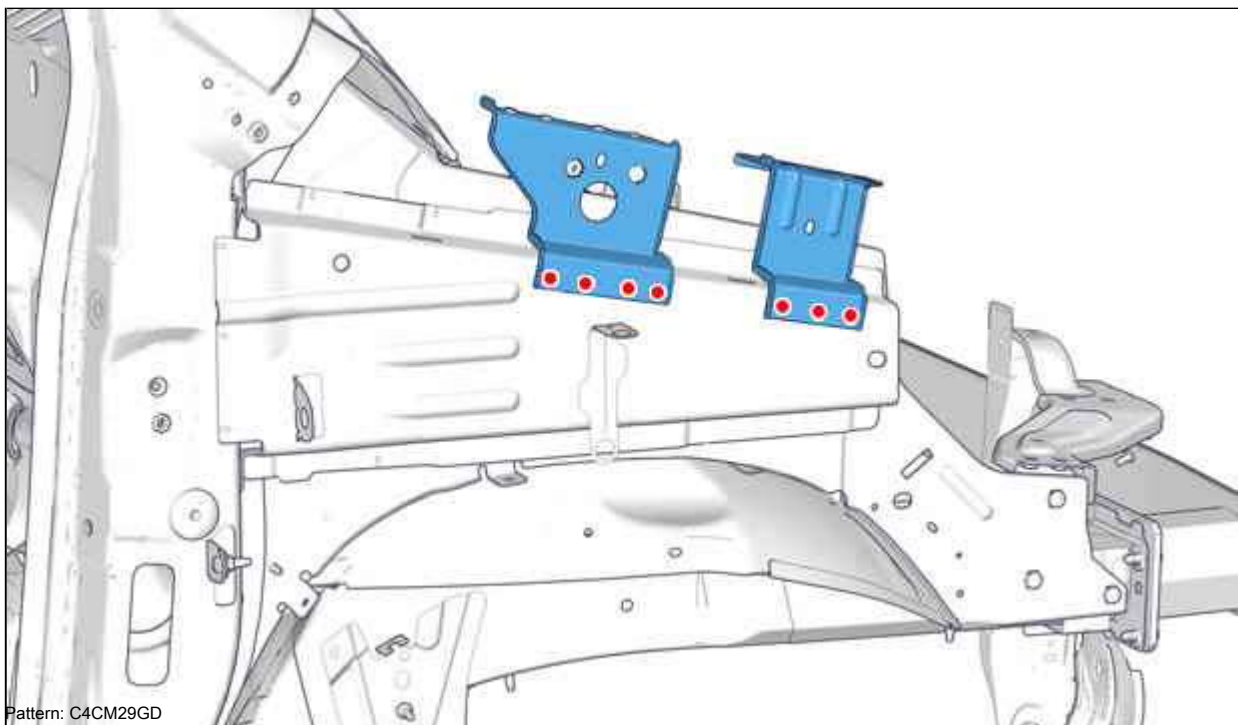


Check and adjust the symmetry of the clearances, depending on the installation of the upper supports of the front wing (1 and 2) (in "a", "b").

Hold the parts in the required position.

NOTE: The operation is carried out in the same way as for the front wing upper support (1).

10. Welding



Weld through the holes in the MAG protective gas.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : [Follow the steps to follow after removing the battery.](#)

REPLACEMENT: FRONT REINFORCEMENT SIDE

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element:

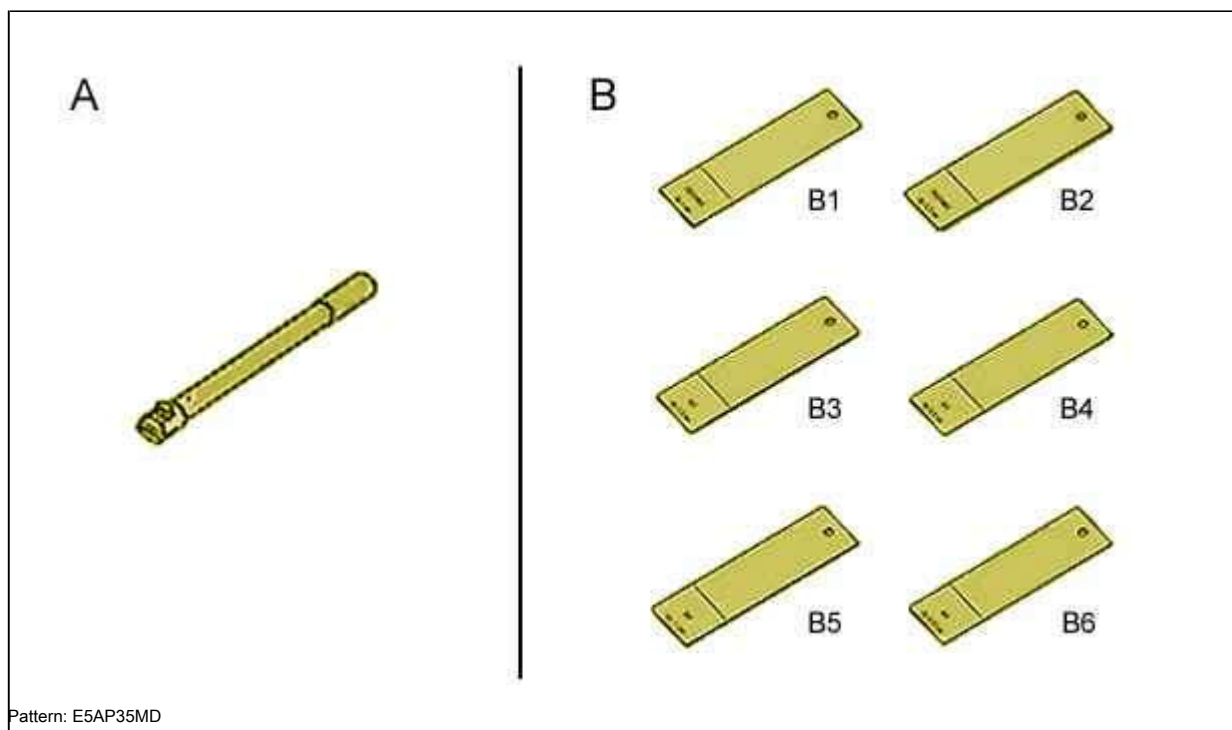
- MIG brazing with copper-silicon electrode in inert gas
- MAG welding by depositing metal (steel) in reactive gas

The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment

Operate using one of the following systems.



Equipment for checking the quality of electric welding points (). 1366 ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

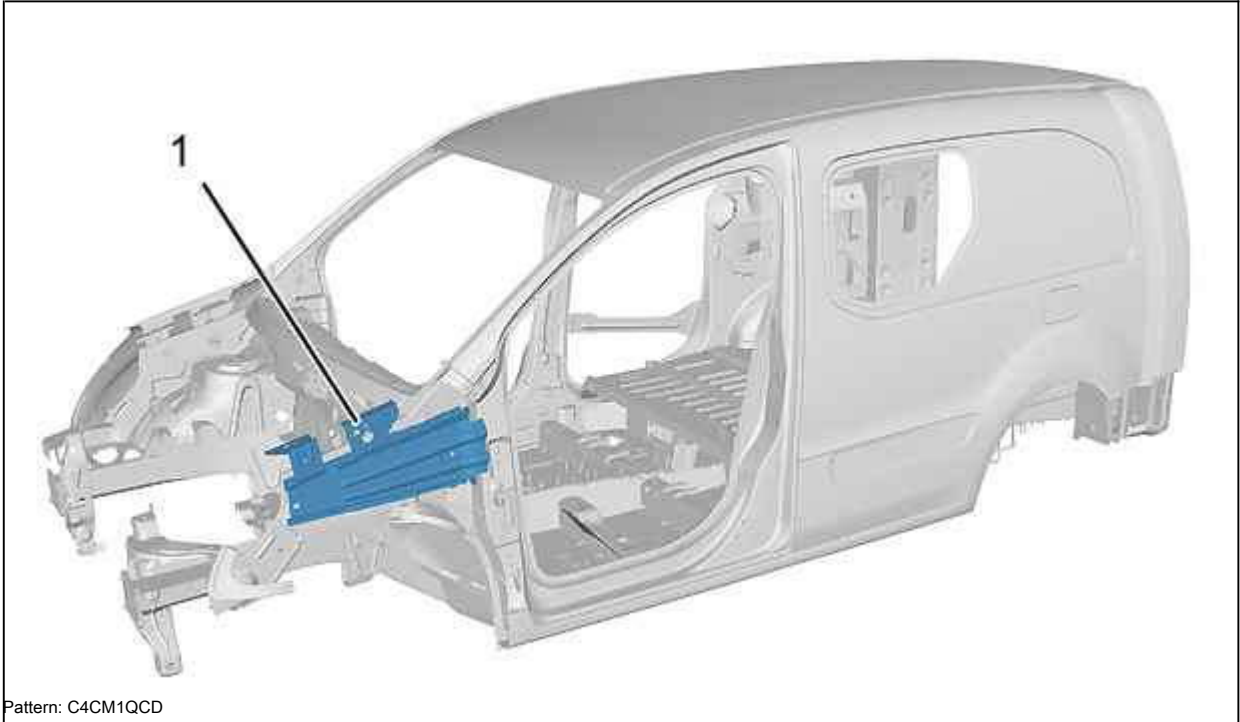
Disconnect the battery.

ATTENTION : Wait at least 15 minutes before doing any work (discharge of the computer's power reserve to the airbags).

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Car amplifier assembly



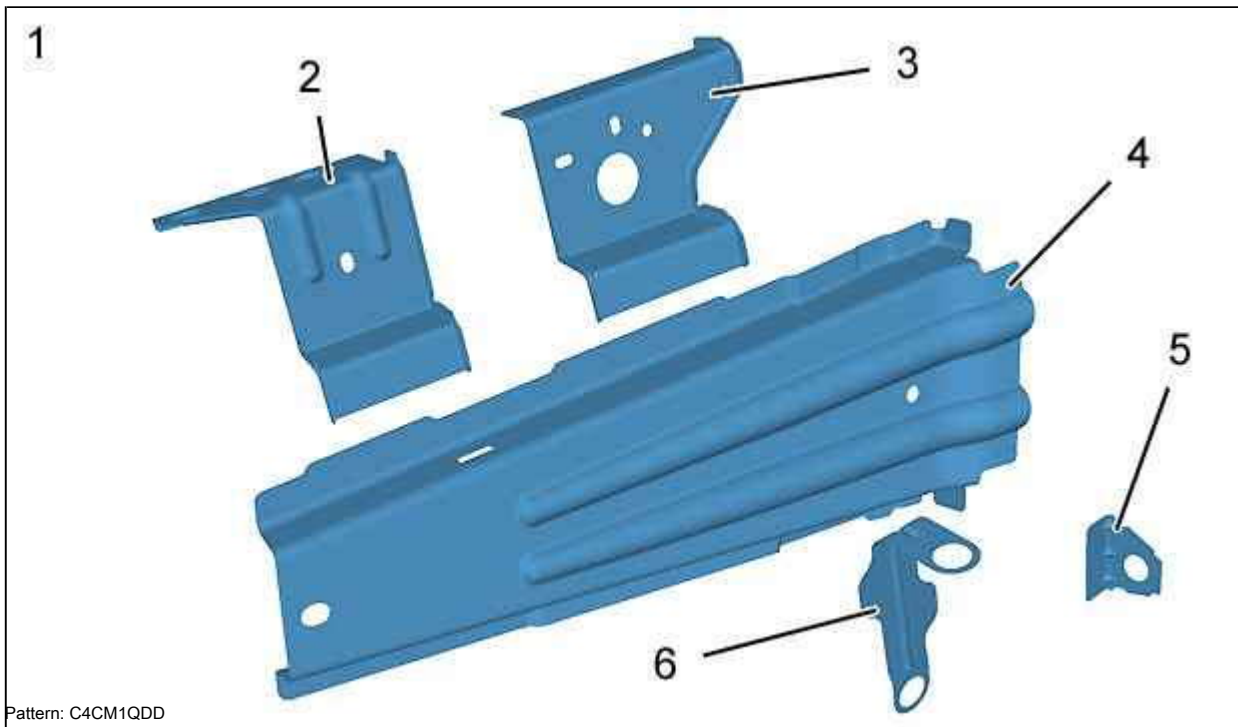
Pattern: C4CM1QCD

Label Designation

1	Salon side amplifier assembly

5. Identification: Amplifier side of the car assembly

5.1. Ingredient: Car side amplifier assembly



(1) Passenger side front support assembly.

Label Designation		Thickness (mm)	Nature / classification
(2)	Front wing upper support	1.47	Mild steel
(3)	Rear upper front fender support	1.47	Mild steel
(4)	Front reinforcement on the passenger compartment 1.47 Rear fuel		HLE
(five)	absorber support	1.47	Mild steel
(6)	Rear support for fuel sorbers	1.47	Mild steel

NOTE: The fuel adsorber vapor supports (5) and (6) are only placed to the right.

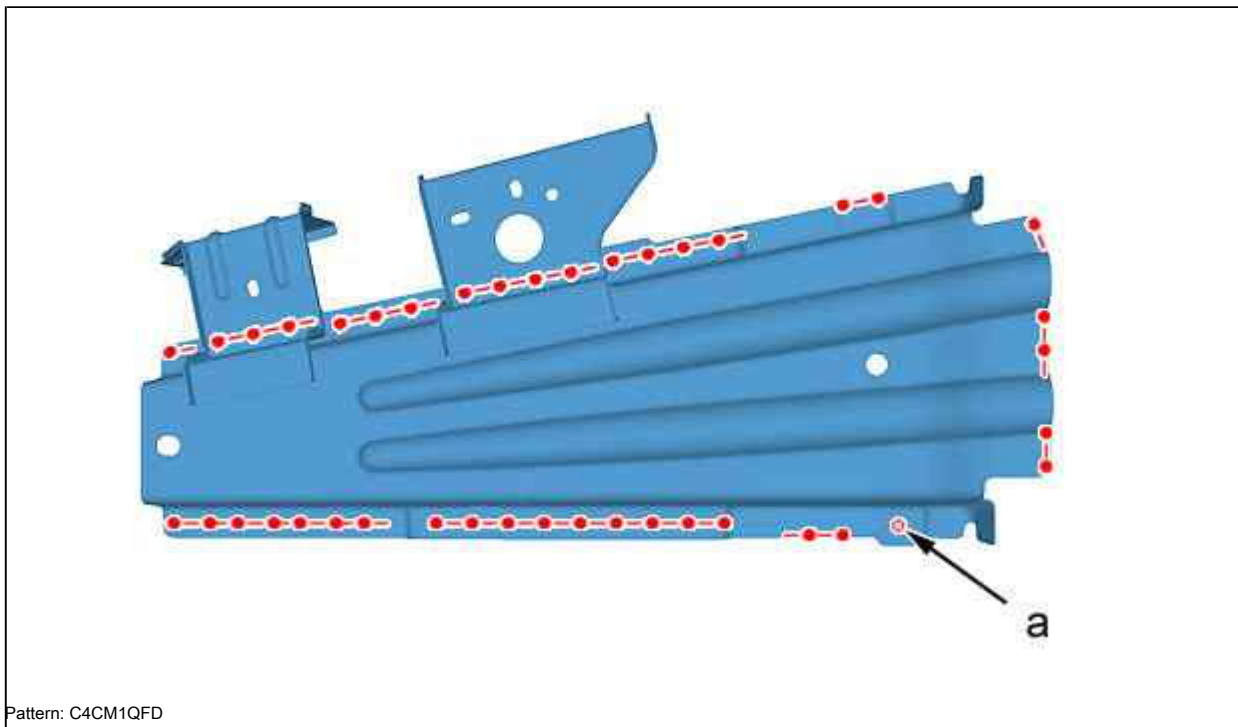
5.2. Identification of adjacent parts (Front side reinforcement)



Label Designation		Thickness (mm)	Nature / classification
(7)	Front fender molding 1.17		HLE
(eight)	From the salon	0.77	Mild steel

6. Preparation: Front reinforcement on the side of the passenger compartment

ATTENTION : When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

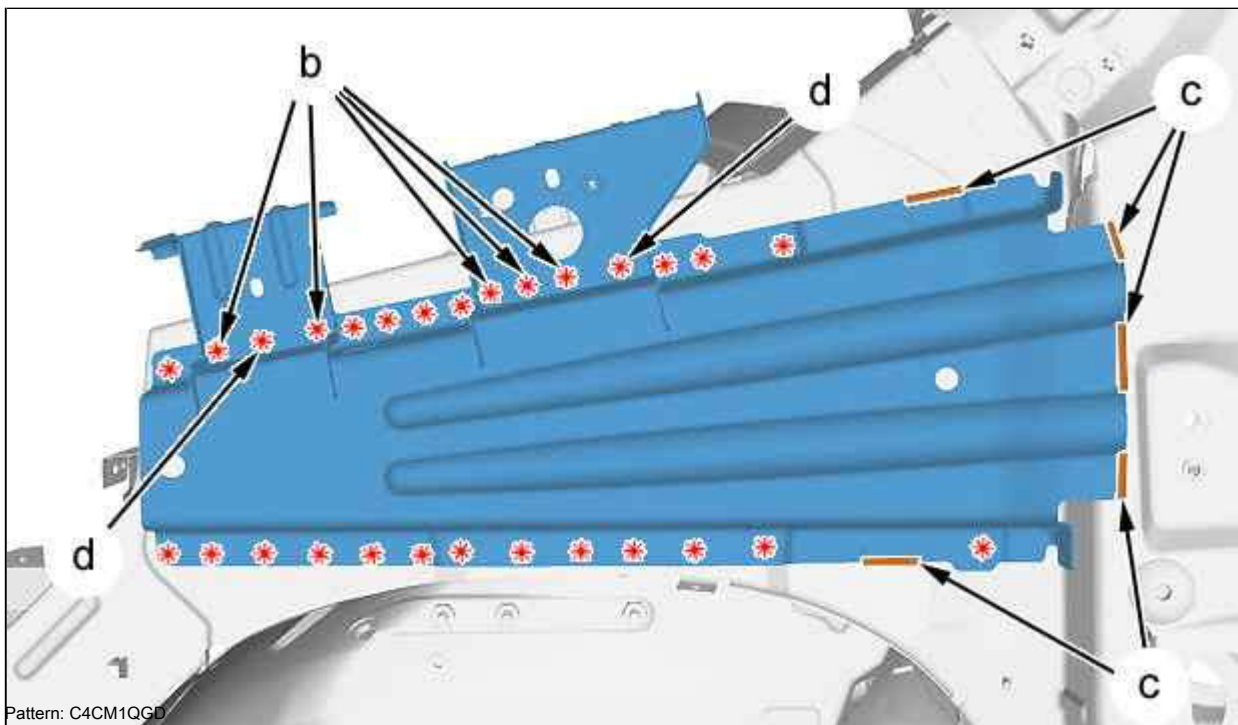


Mark, then drill $\varnothing 6.5$ mm holes for subsequent spot-plug welding (8 mm for thicker thicknesses) (at "a").

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cut: Front reinforcement on the side of the passenger compartment (On the body)

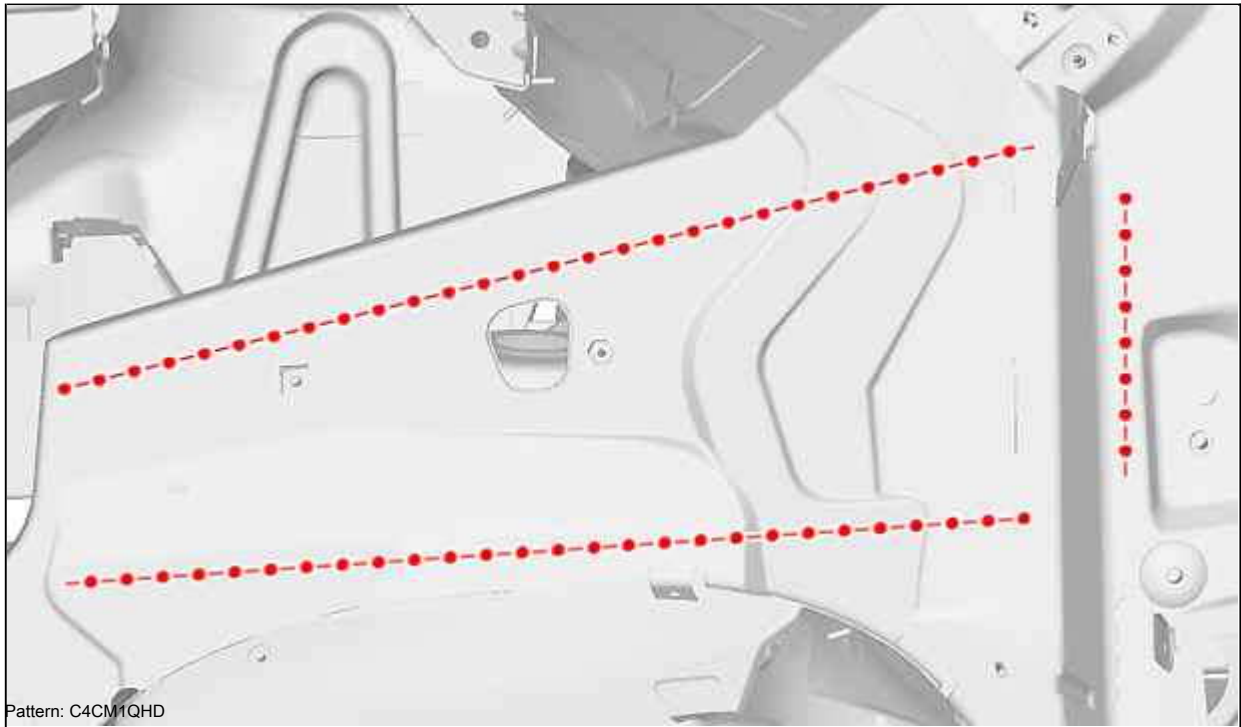


Mark and drill points on panels of 3 thicknesses (in "b"). Grind the MIG welds (in "c").

Measure and drill the remaining points at 1 thickness. Remove front passenger compartment reinforcement.

NOTE: It is not necessary to drill 2 weld points (in "d").

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

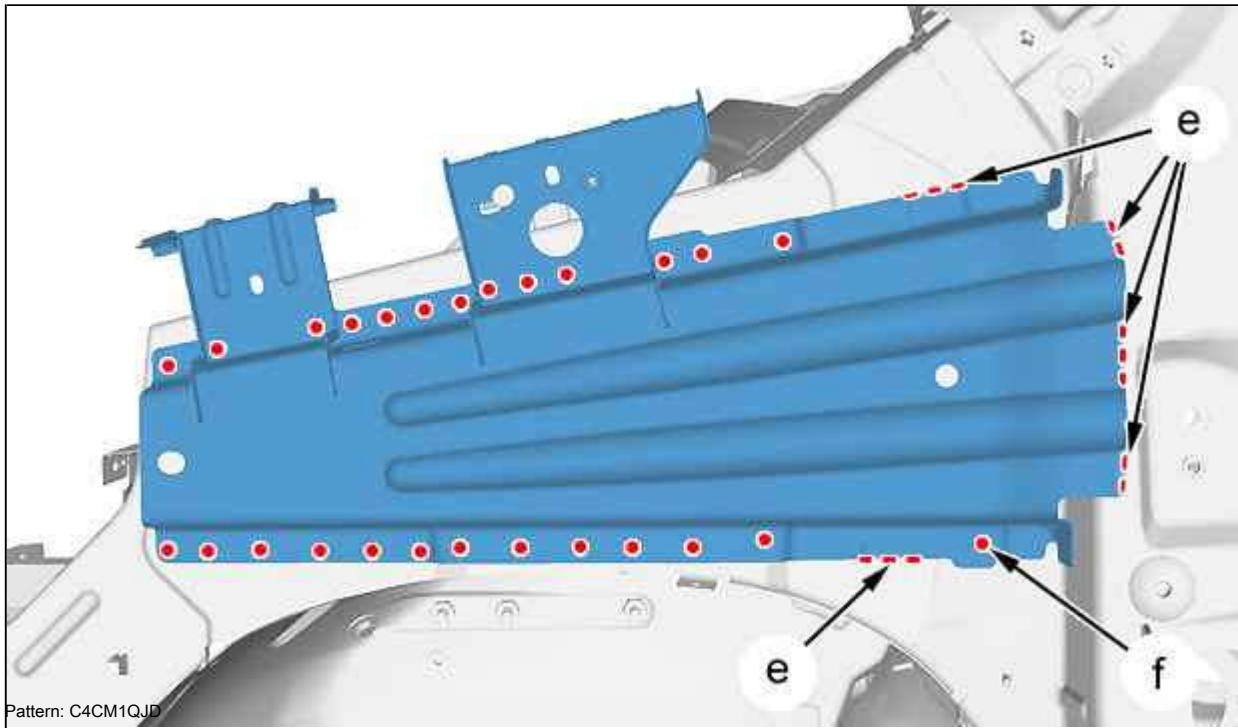
9. Fitting

Position: Front passenger compartment side reinforcement. Install elements to ensure the fit.

Check clearances and alignment.

Hold the element in place.

10. Welding



MIG welding (in "e").

Weld through the holes in the MAG protective gas (in "f"). Weld with welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Reinitialization

Perform additional operations.

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

REPLACEMENT: RIGHT PANEL INTERIOR (PARTLY) LONG BASE VERSION (WITH SIDE SLIDING DOOR)

~~MANDATORY: Observe the cleanliness and safety rules~~



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

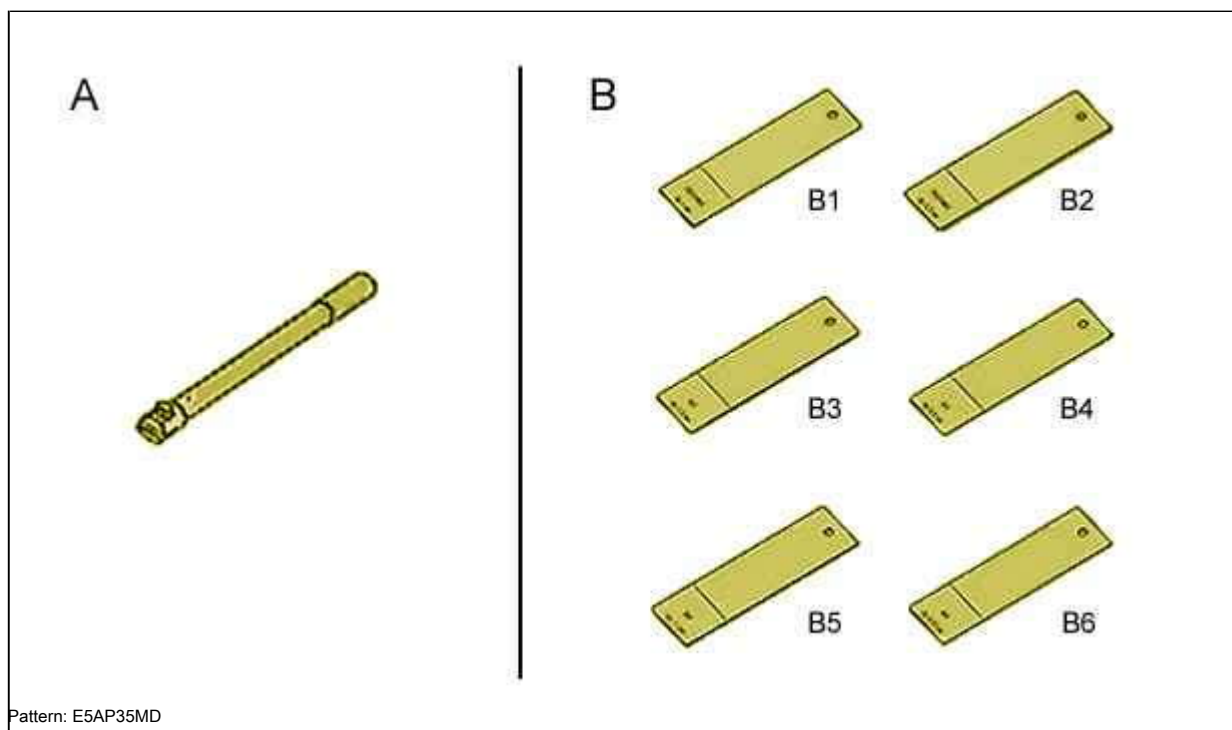
1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

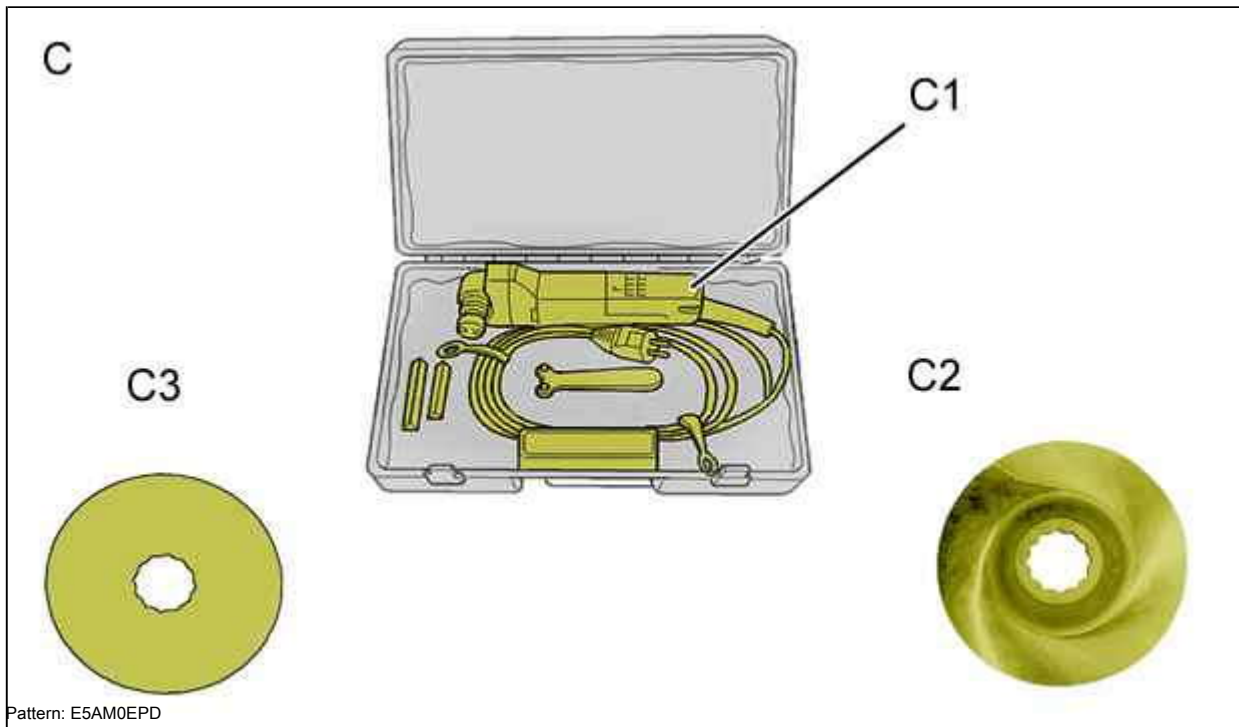
2. Recommended equipment

Operate using one of the following systems.



Pattern: E5AP35MD

Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.



Label Designation

"C"	FEIN toolbox (Reference number PR 9776.63) fein electric cutter
"C1"	
"C2"	FEIN saw blade with removable hub (Reference number NC) FEIN blade ° 103
"C3"	(Reference number PR 9769.24)

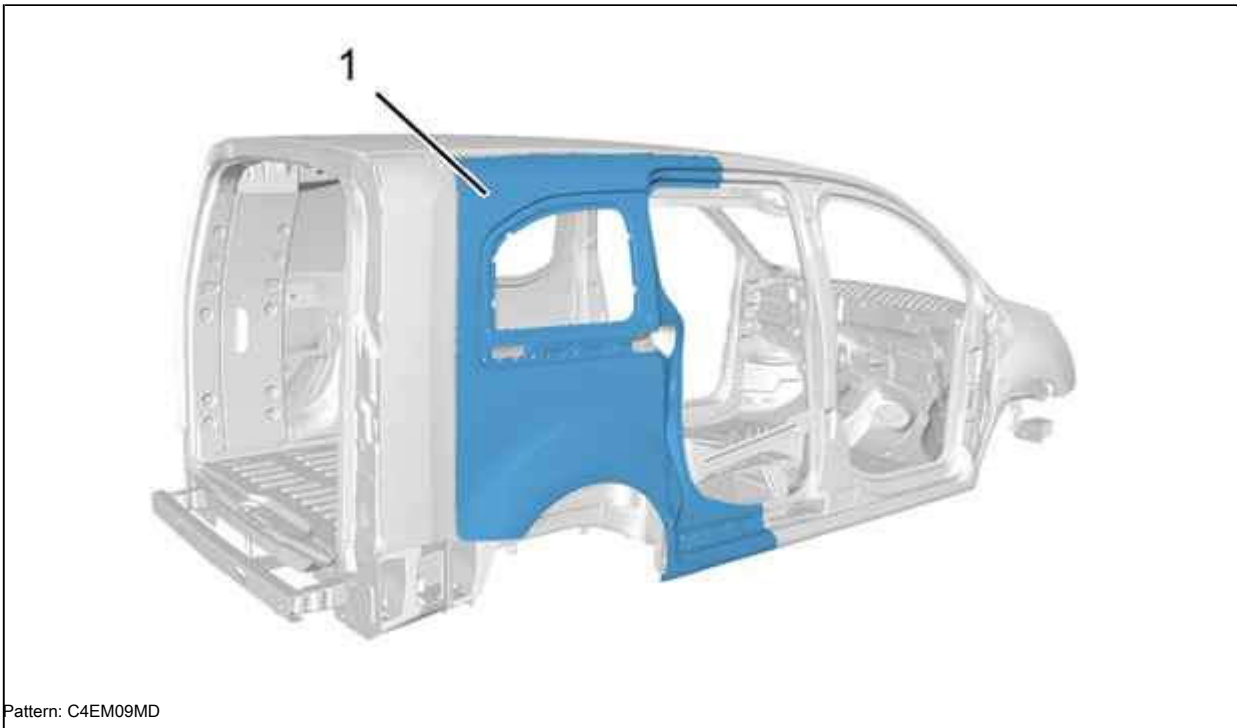
3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Sidewall panel (partially)



Label Designation

(1)	Passenger compartment side panel, right (with sliding side door)

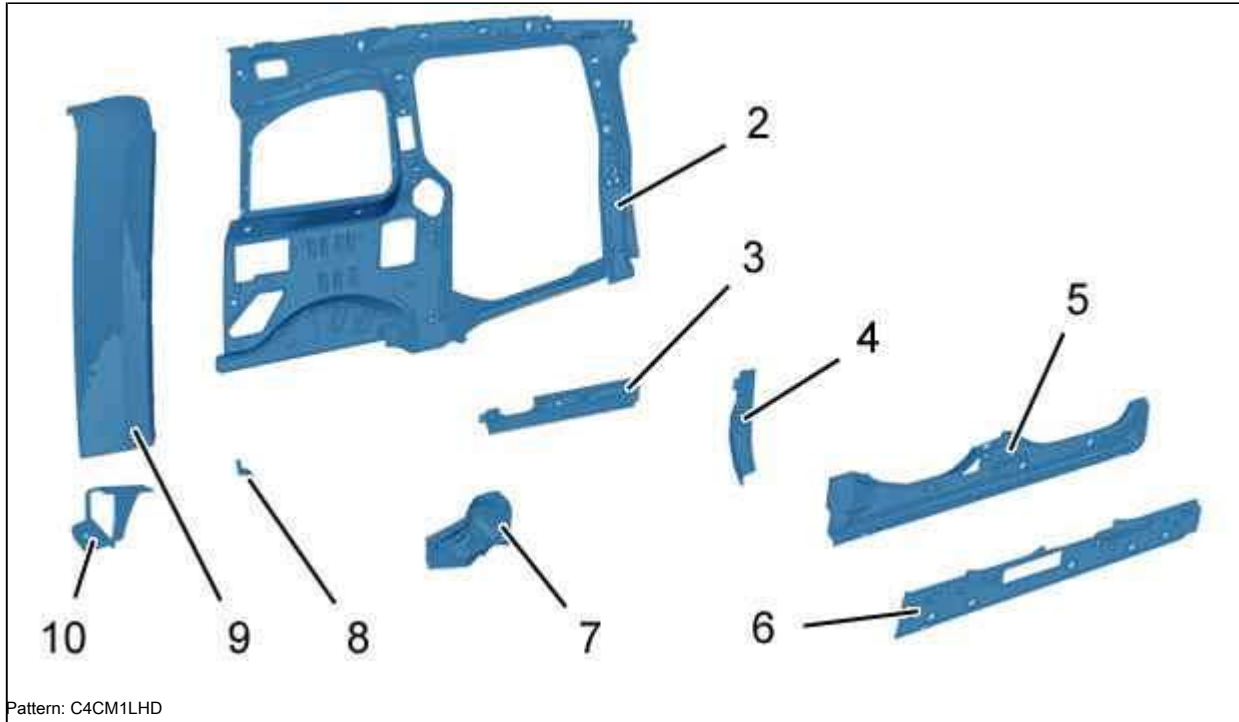
5. Identification: Interior side panel (partial)

5.1. Composition: Interior sidewall panel (partially)



Label Designation		Thickness (mm)	Nature / classification
(1)	Interior side Sliding side door Rear 0.72 part		Mild steel

5.2. Identification of parts adjacent to the spare part

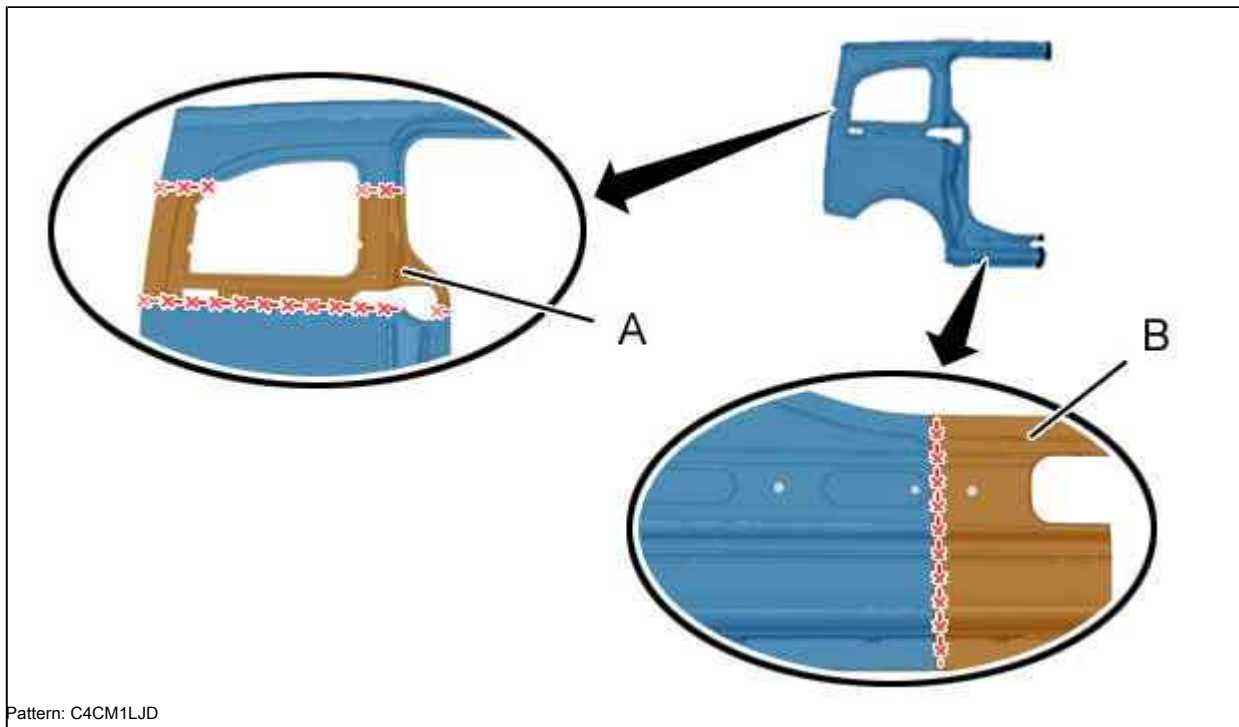


Label Designation		Thickness (mm)	Nature / classification
(2)	Rear wing	0.97	Mild steel
(3)	Reinforcement bracket for fixing the central sliding door guide	1.17	Mild steel
(4)	Side door bracket reinforcement Inner spar	1.17	Mild steel
(five)		1.47	HLE
(6)	Inner spar reinforcement element	1.17	THLE
(7)	Sliding door center guide housing Rear fender lock	1.47	Mild steel
(eight)		0.97	Mild steel
(nine)	Rear Extension of the Salon Sidewall Lower Cover	0.67	Mild steel
(ten)	of the Rear Fender	0.97	Mild steel

6. Preparation: Interior side panel (partial)

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

6.1. Section



Section "A".

Section "B".

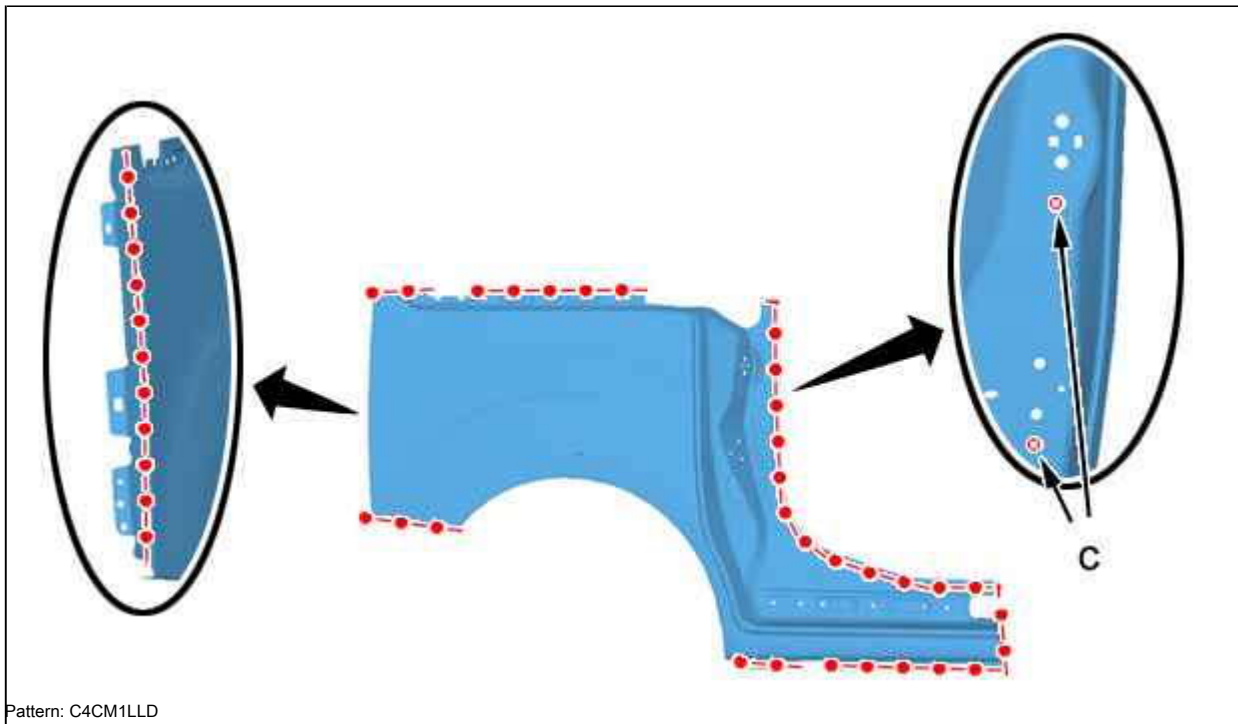
6.2. Cut line



Mark the cutting area "A" in "a", then cut; With the FEIN electric cutter. Mark in "b" the cutting area "B", then cut; With the FEIN electric cutter.

NOTE: Cut lines "a, b" are given for guidance; These lines can be changed according to

with various cases of partial replacement of the passenger compartment side panel.

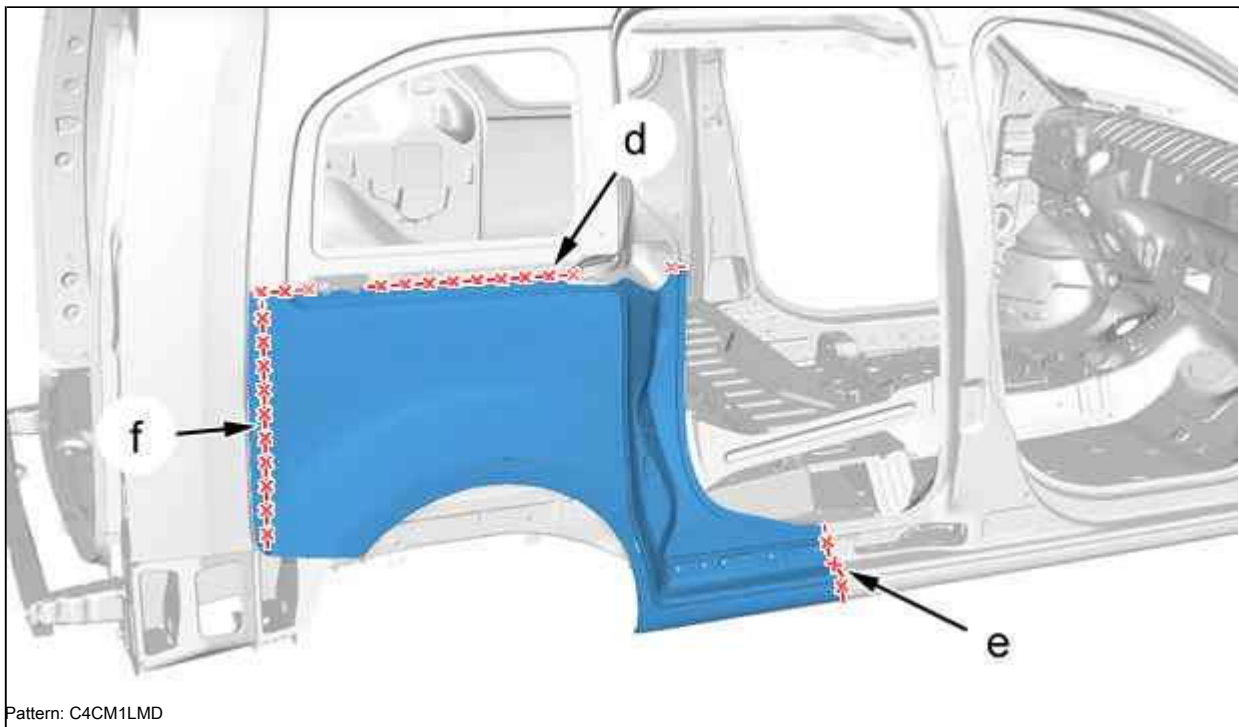


Mark (in "c"); Drill 6.5 mm holes for subsequent MAG spot welding.

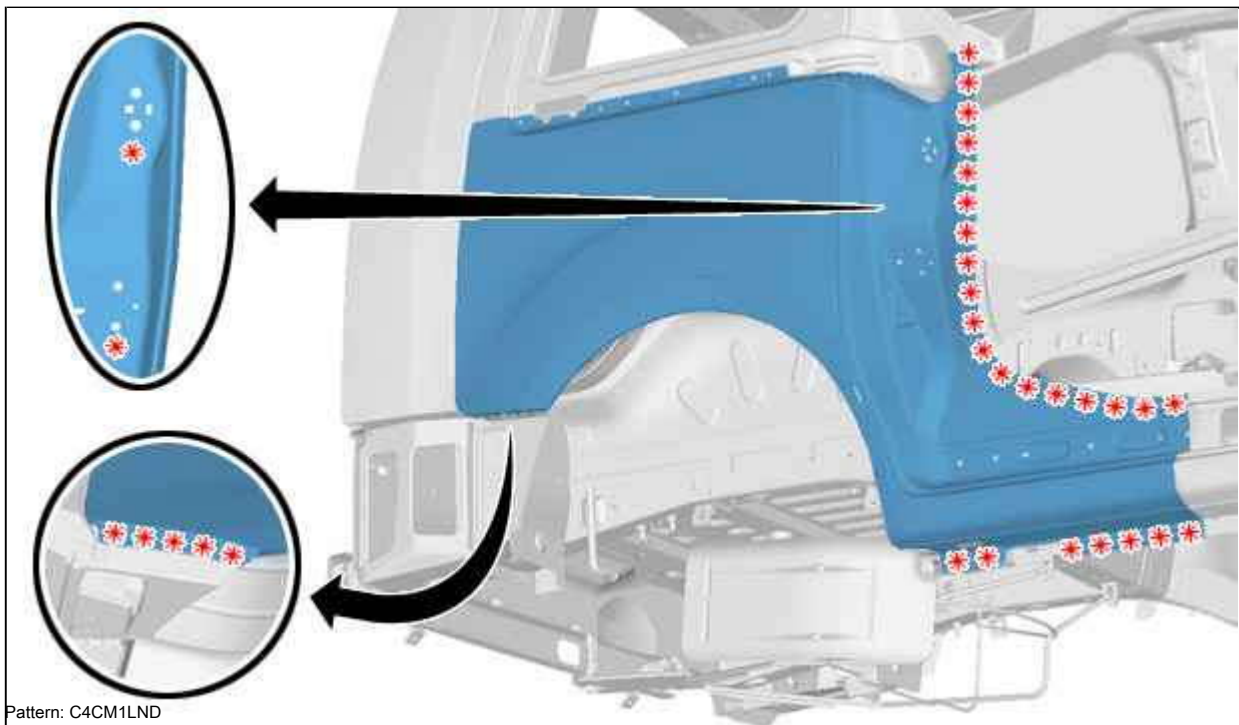
Prepare the sockets and protect them with a welding primer: code "C7".

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

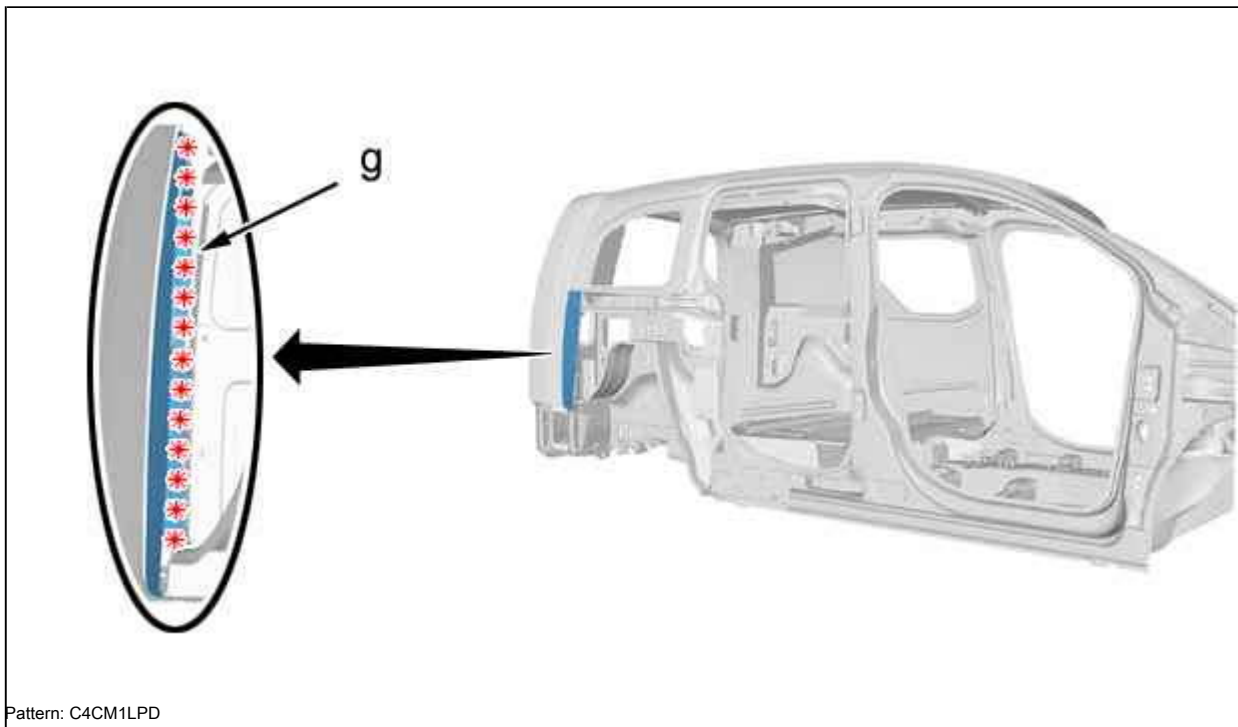
7. Cut: Salon side panel (partial)



Mark in "d" and cut with an electric cutter equipped with a cutting disc. Mark at "e" and cut with an electric cutter equipped with a cutting disc. Mark at "f" and cut with an electric cutter equipped with a cutting disc.



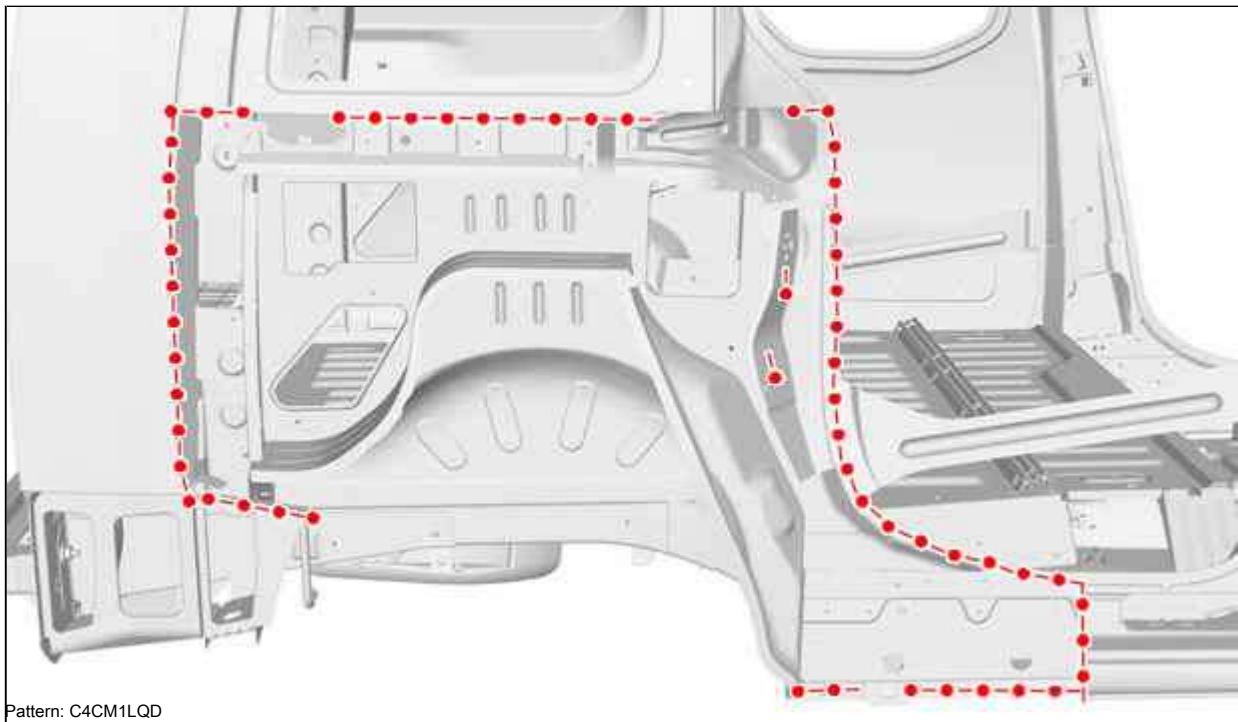
Cut by points.
Remove the side panel (partially).



Cut by points (in "g").
Remove the remainder of the body side panel section.

8. Cleaning and preparation of the body

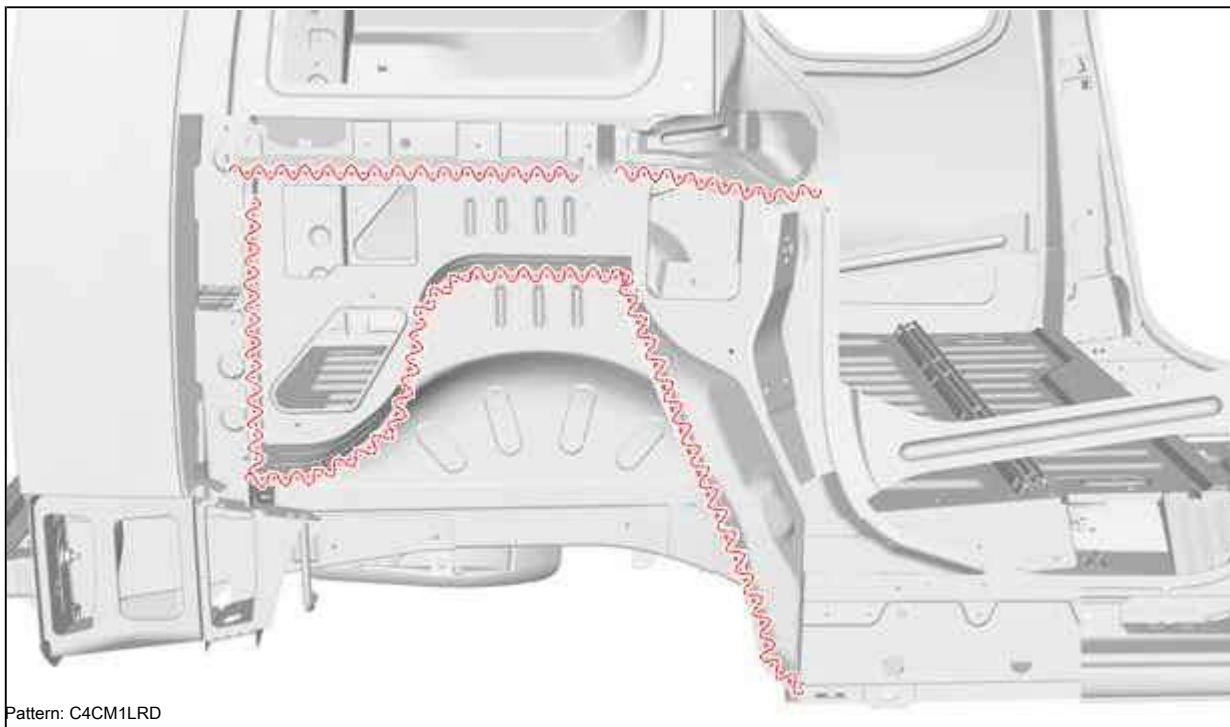
8.1. Cleaning



Prepare the sockets and protect them with a welding primer: code "C7".

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

8.2. Applying one coat of body repair adhesive



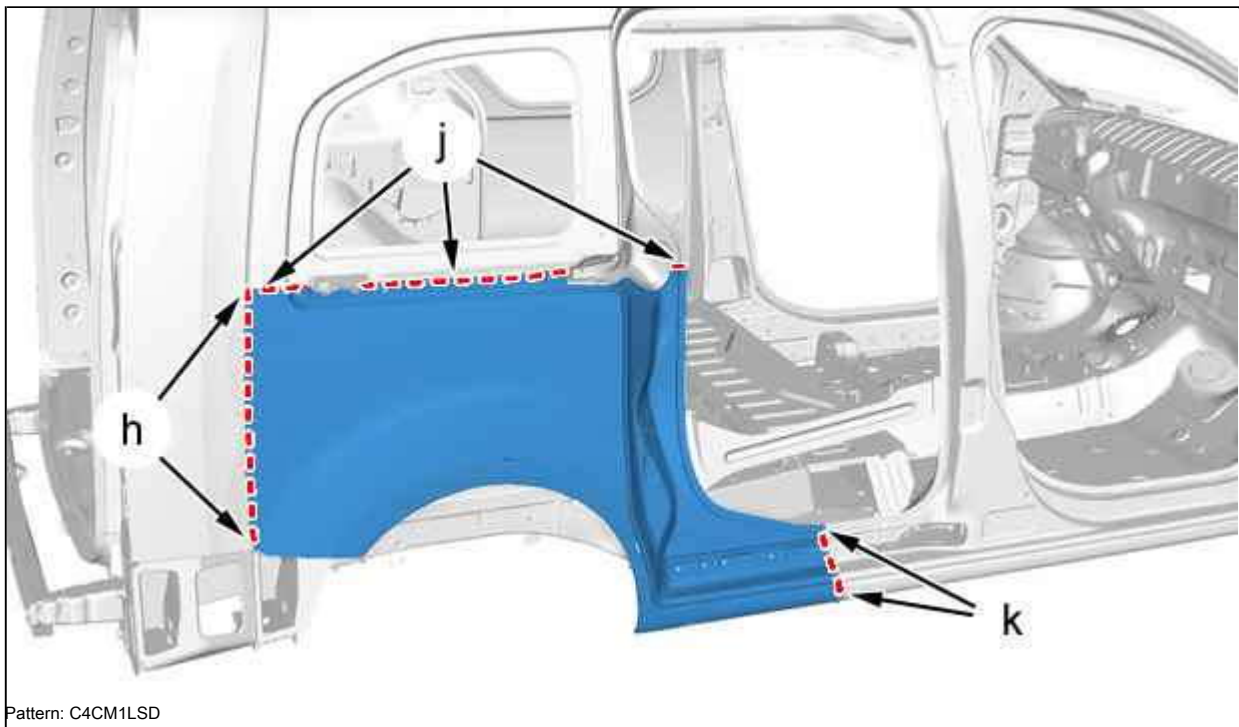
Pattern: C4CM1LRD

Prepare the joints.
Apply fixing compound "A1".

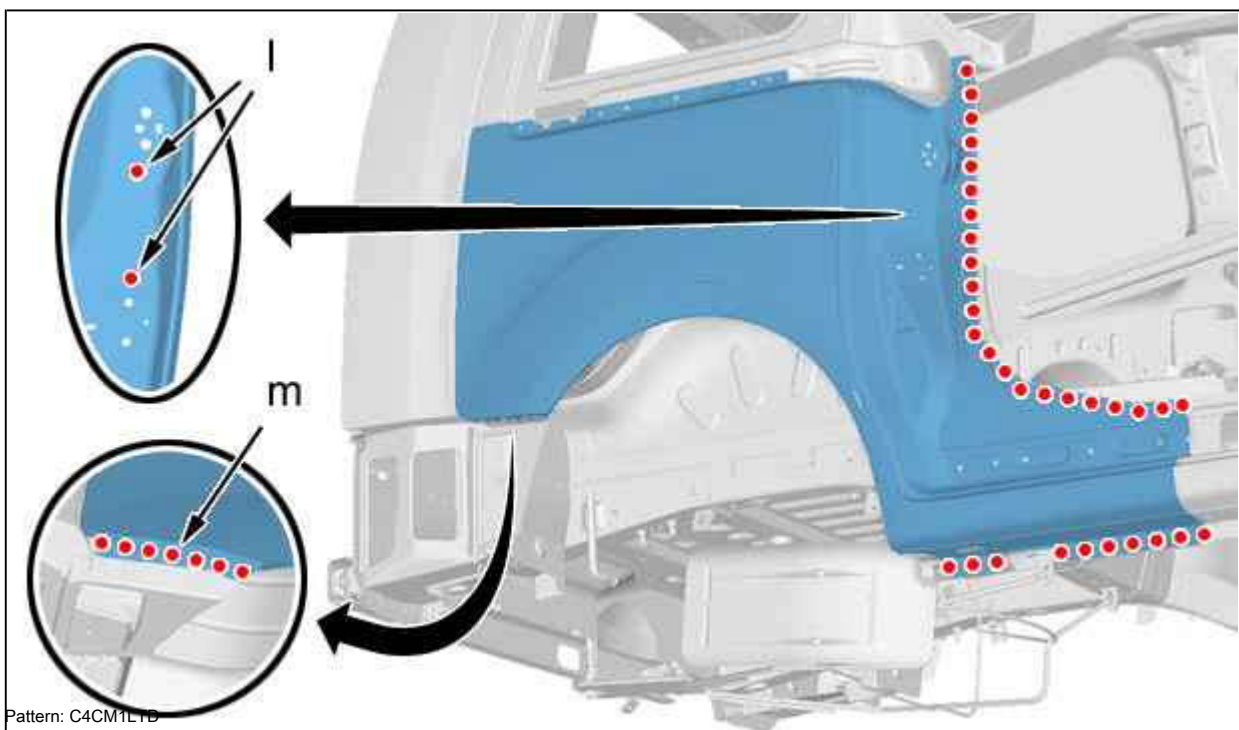
9. Fitting

Install the passenger compartment side panel (partially). Install elements to ensure the fit.
Check clearances and alignment.
Refine the cut lines (if necessary). Hold the element in place.

10. Welding

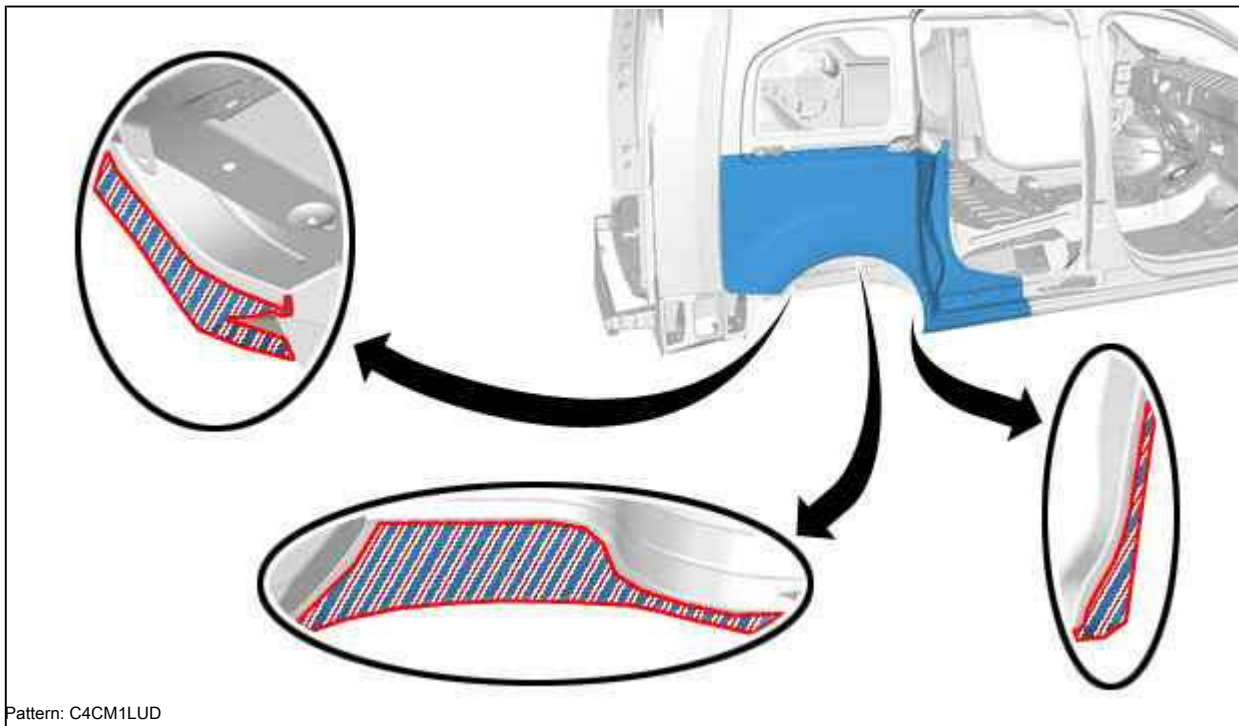


Weld with short MAG seams (in "h"). Grind short MAG weld ends (in "h").
 Perform seam welding using the MAG method (in zones "j" and "k"). Grind the MAG welds (zones "j" and "k").



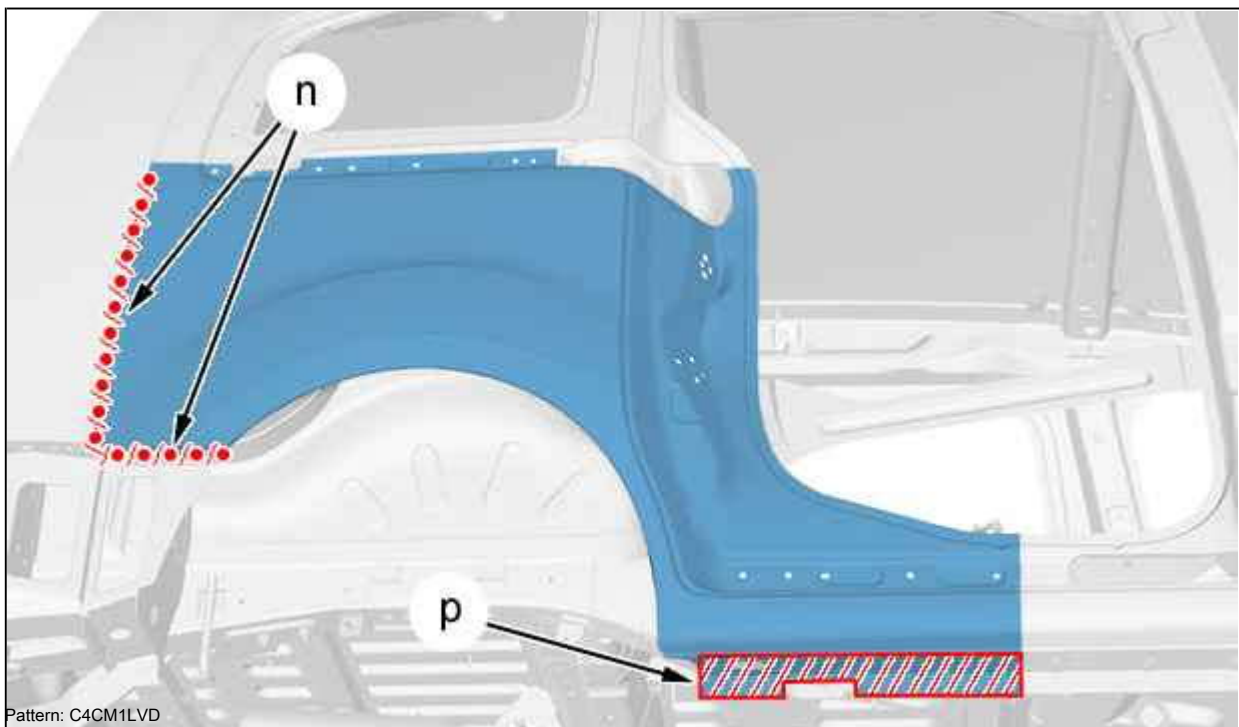
Cook using the "point-cork" method (in "l"). Grind MAG welding points.
 Weld with welding points (in "m"). Weld with welding points.

11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas.

Apply a "C4" anti-gravel coating



Apply a layer of phosphate primer to the cleaned areas. Apply sealing compound type "A1" (in "n").

Apply a "C4" anti-gravel coating

(in "p").

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL INSTALLATION: FIXED GLASS SIDE SLIDING DOORS

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment

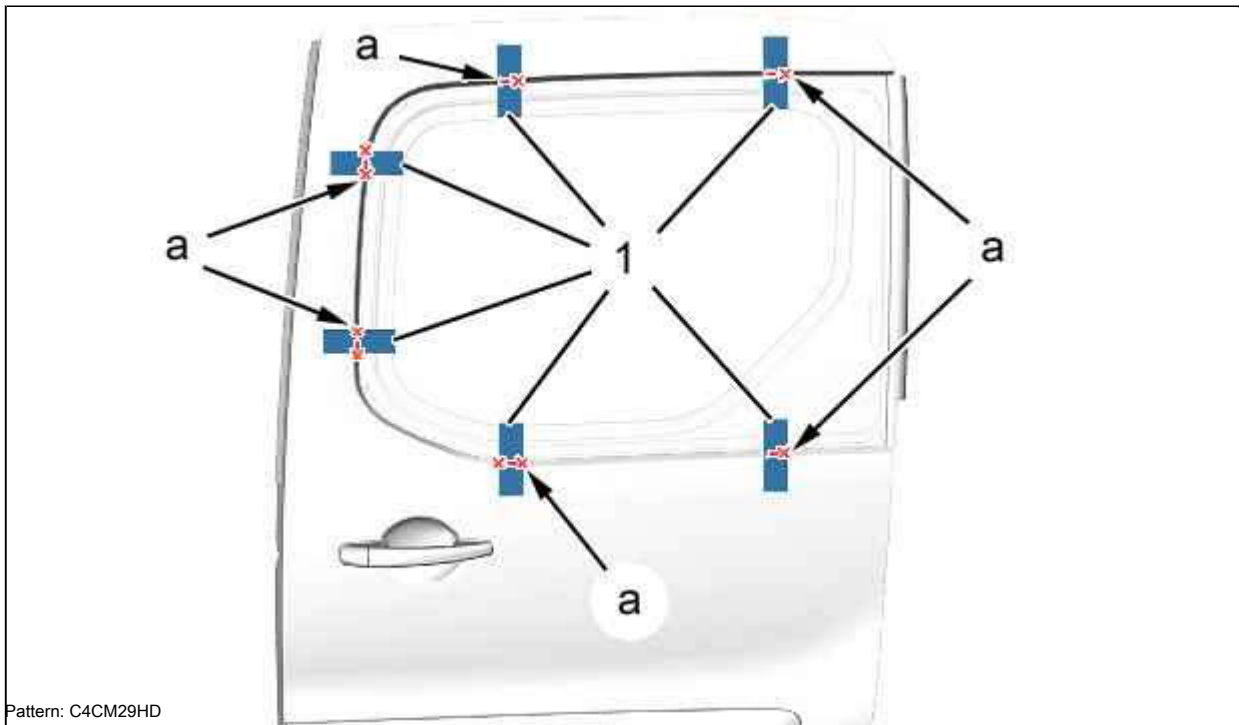
Equipment for working with glass.

2. Recommended components

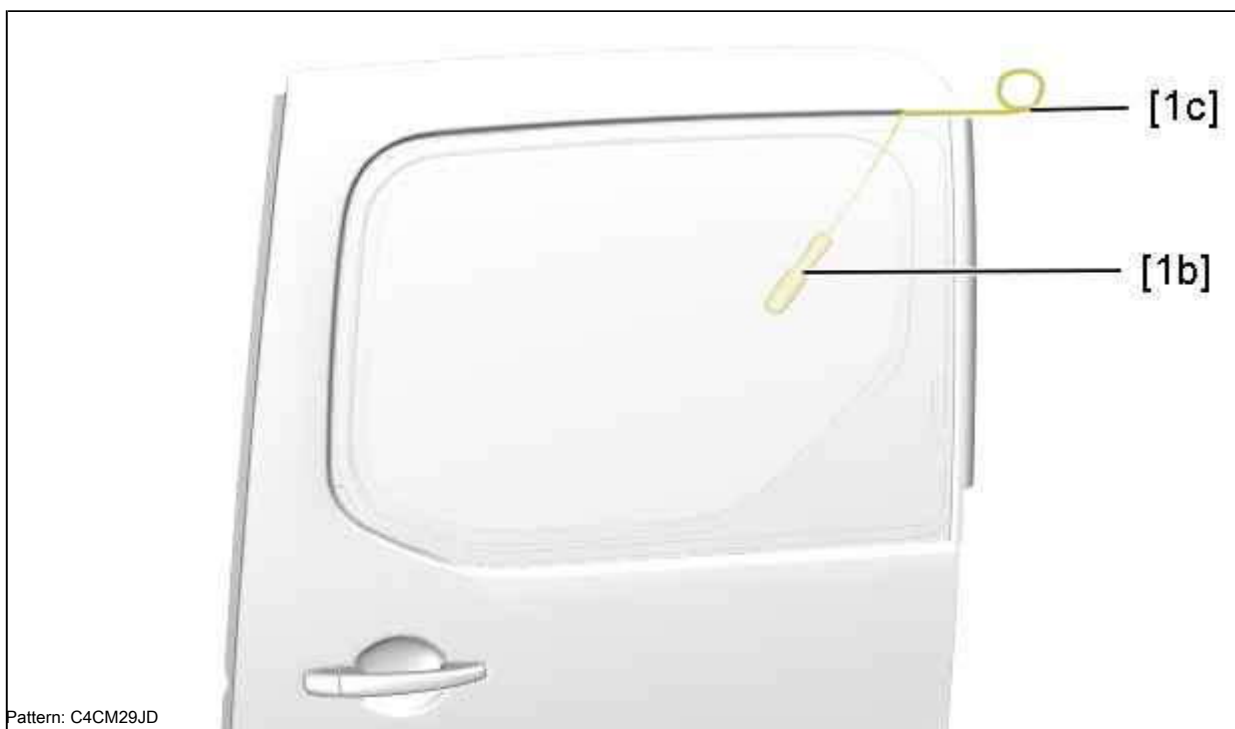
Componentswindglass



3. Removal



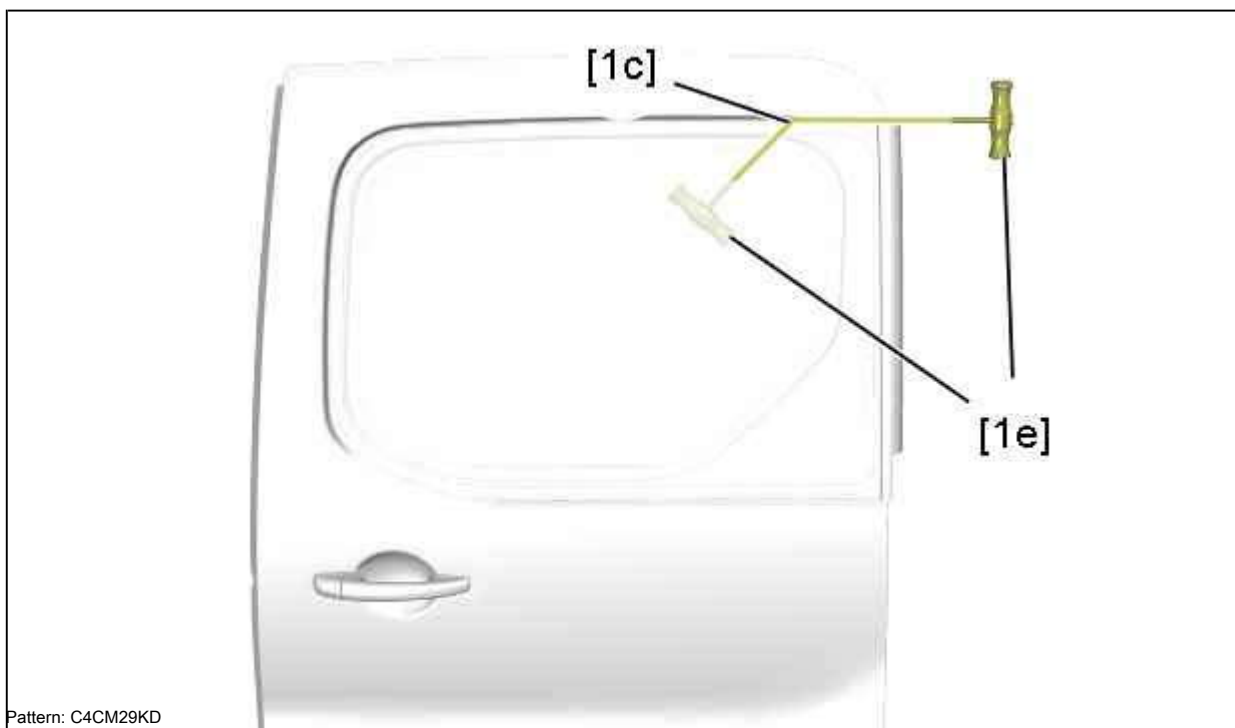
NOTE: If you intend to reuse the glass sliding door, position the pieces of adhesive tape (1) and cut them (at "a").



ATTENTION : Protect: Side sliding door; With adhesive tape.

Pass the sewn [1b] through the adhesive seal from the inside to the outside. Attach the cutting string [1c] to the bar [1b].

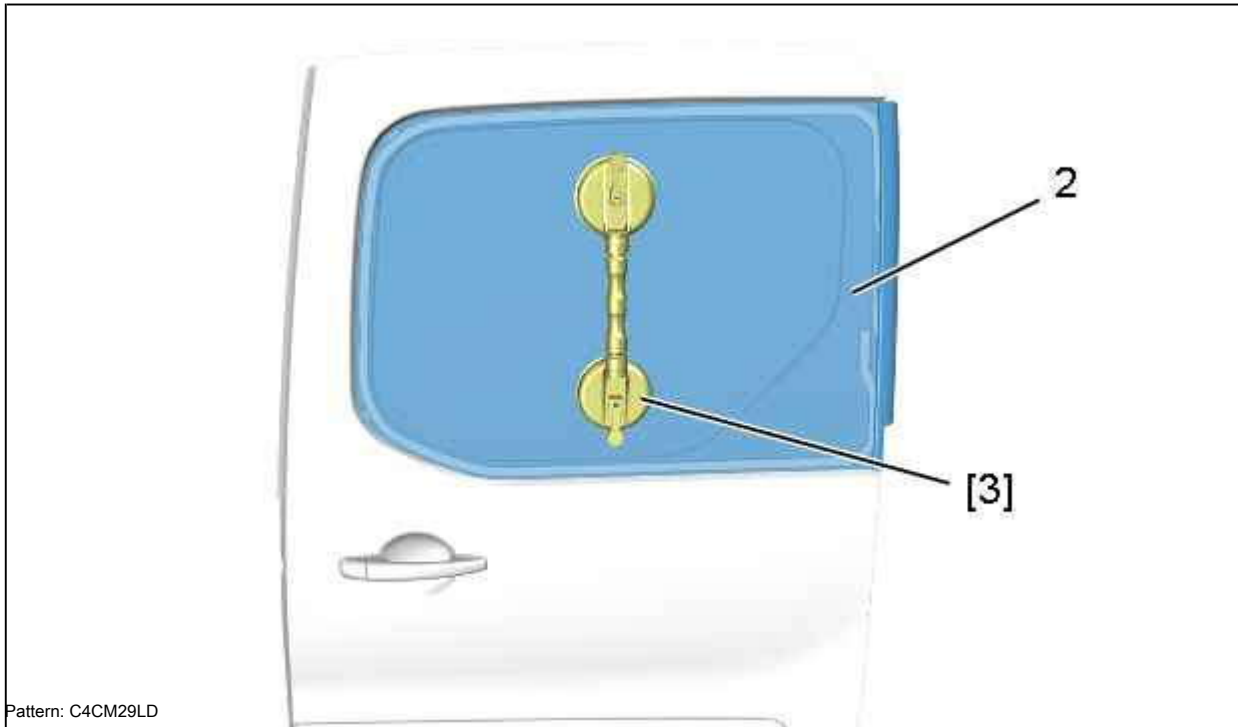
Pass the cutting string [1c] into the car; Using the awl [1b].



Install a cutting wire [1c] with handles [1e] on each side. Leave sufficient length to allow the handles [1e] to be secured.

ATTENTION : 2 people are required for the following operations.

Divide the glue by moving the string [1c] back and forth.



Remove: The fixed glass of the side sliding door (2); Using the hinged suction cups [3].

4. Cleaning


4.1. Preparation: Fixed glass sliding door

1st time: Re-use of the non-movable glass side sliding door. Insert the blade [13] into the electric knife [9b].

Cut off the remaining adhesive seam.

Wipe off the dust with a clean cloth.

Apply primer only on the places, brushed metal

2nd time: Installing a new fixed glass sliding door. Degrease the edges of the glass sliding door. 

Apply the initial prep coat from the decal kit A3 Apply primer only on the place, cleaned metal

4.2. Groove preparation

1st time: If there is a residual adhesive seam. Insert the blade [13] into the electric knife [9a]. Cut off the remaining adhesive seam.

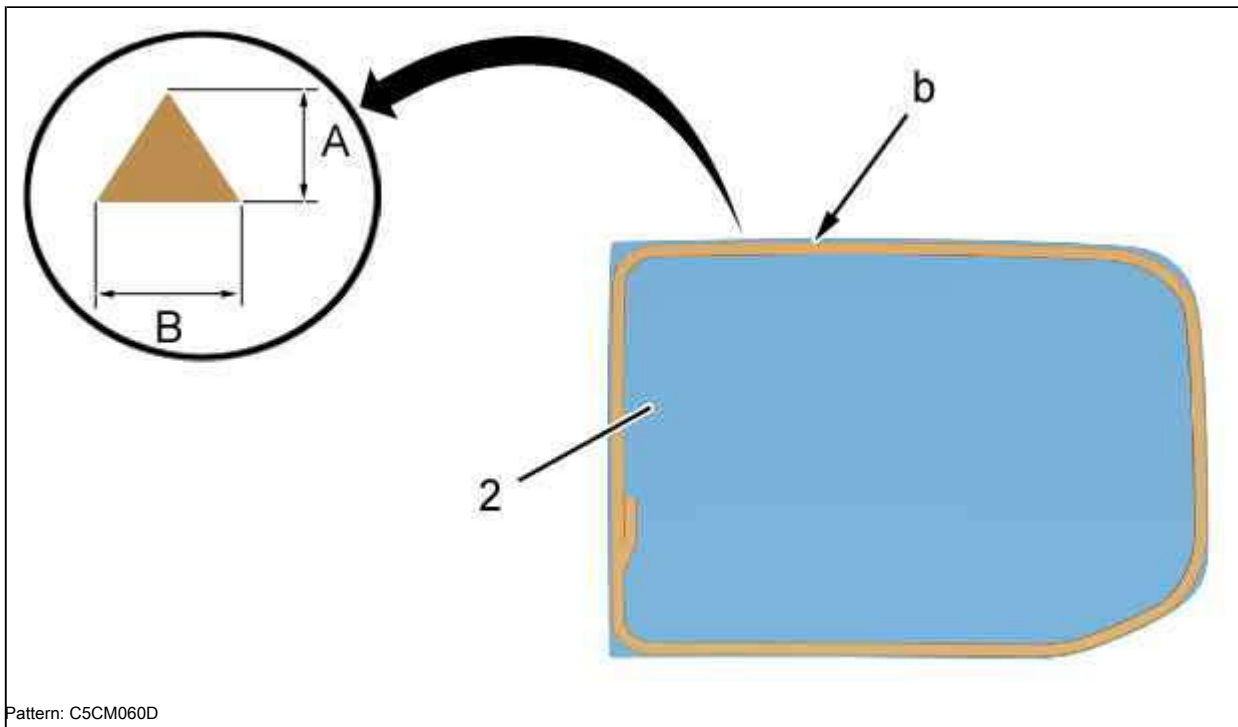
Wipe off the dust with a clean cloth.

2nd time: Nano part. Degrease the groove.

Apply initial prep coat from sticker kit A3

Let dry for 10 minutes.

5. Installation



Height "A" = 12 mm. width

"B" = 8mm.

Size of the triangular tip to obtain a sealant bead of width "B" and height "A".

1st time: Re-use of the non-movable glass side sliding door. Apply a layer of adhesive (in "b") along the edges of the glass side sliding door (2).

ATTENTION : Using a two-component product: It takes 5 minutes between installing the glass on the vehicle and the start of the sealant squeezing out.

Install the side sliding door glass:

- With articulated suction cups [3]
- With adhesive tapes (1)

Press lightly on the edge of the glass side sliding door. Clean sliding side door glass and edges.

2nd time: Installing a new fixed glass sliding door. Apply a layer of adhesive (in "b") along the edges of the glass side sliding door.

ATTENTION : Using a two-component product: It takes 5 minutes between installing the glass on the vehicle and the start of the sealant squeezing out.

Install the side sliding door glass Using the hinged suction cups [3]. Press lightly on the edge of the glass side sliding door.

Clean sliding side door glass and edges.

ATTENTION : After installing the glass, wait the required time before using the vehicle, recommended by the suppliers for the formulations used.

Proceed with installation in the reverse order of removal. Check the tightness of the glass sliding door installation.

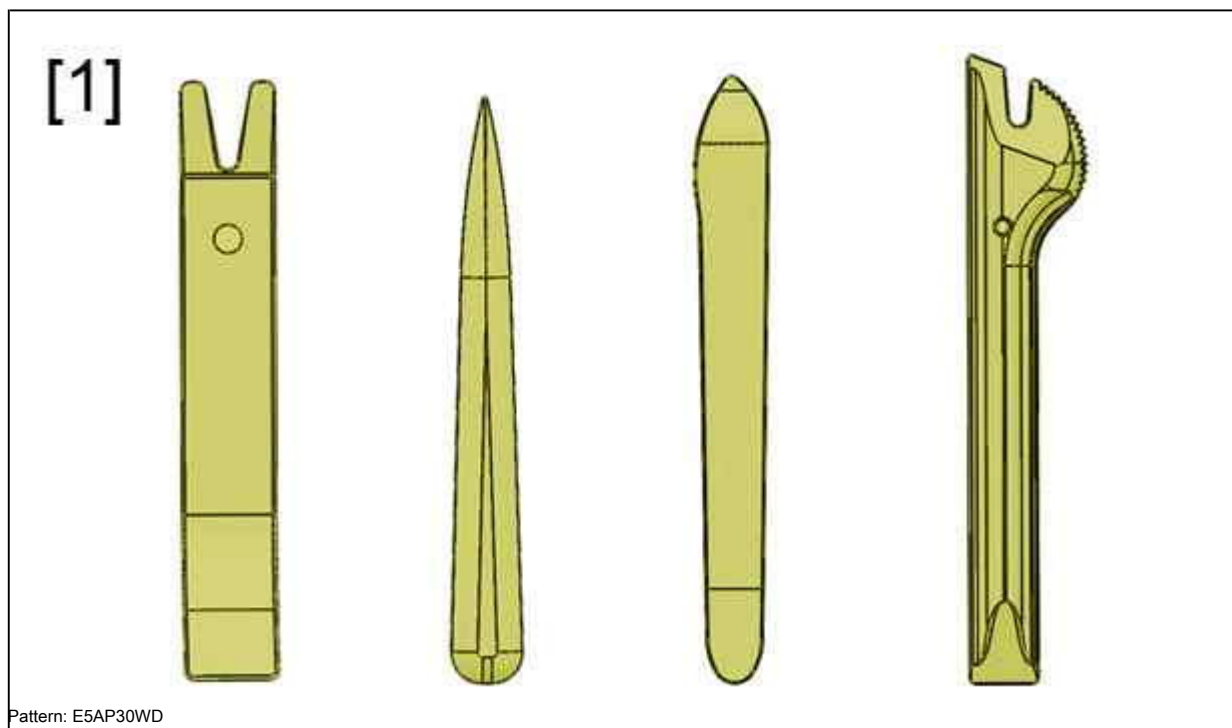
Clean sliding side door glass and edges. Check the operation of the various equipment.

REMOVAL INSTALLATION: MOVING GLASS (WITH OR NOT SIDE SLIDING DOOR)

MANDATORY: Observe the cleanliness and safety rules



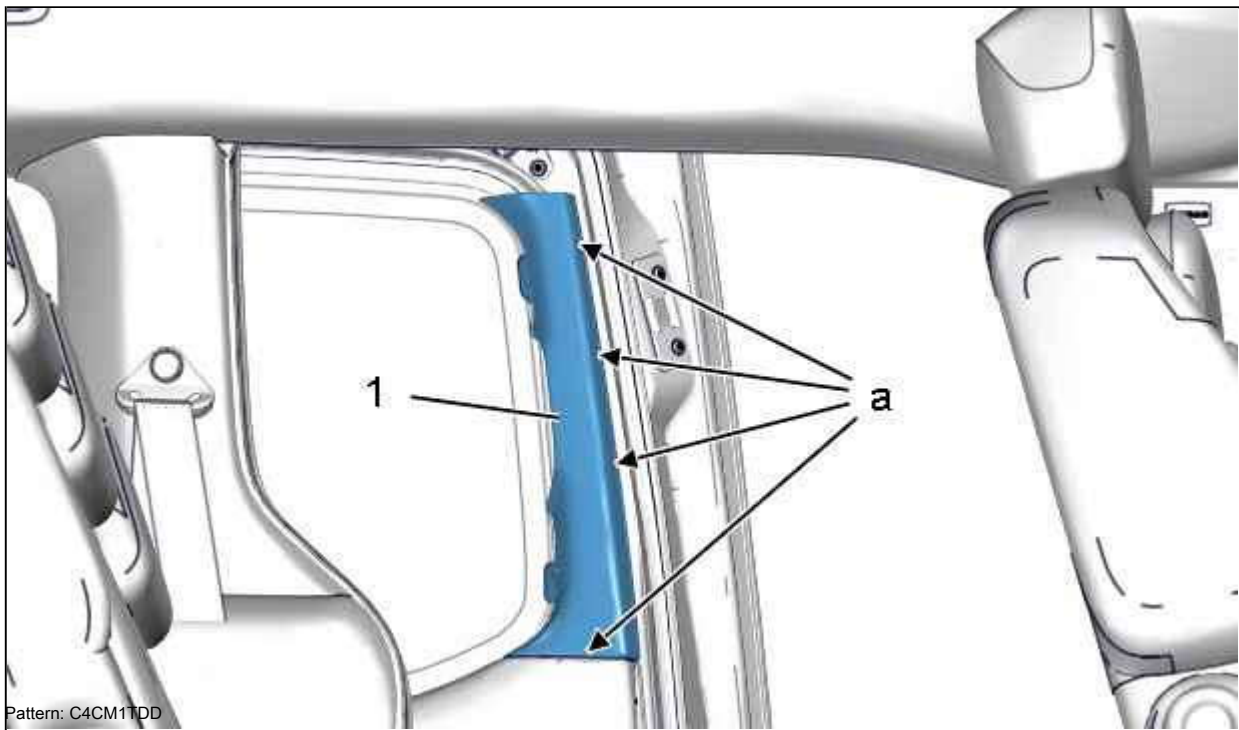
1. Tools



[1] Trim stripper () .1350ZZ.

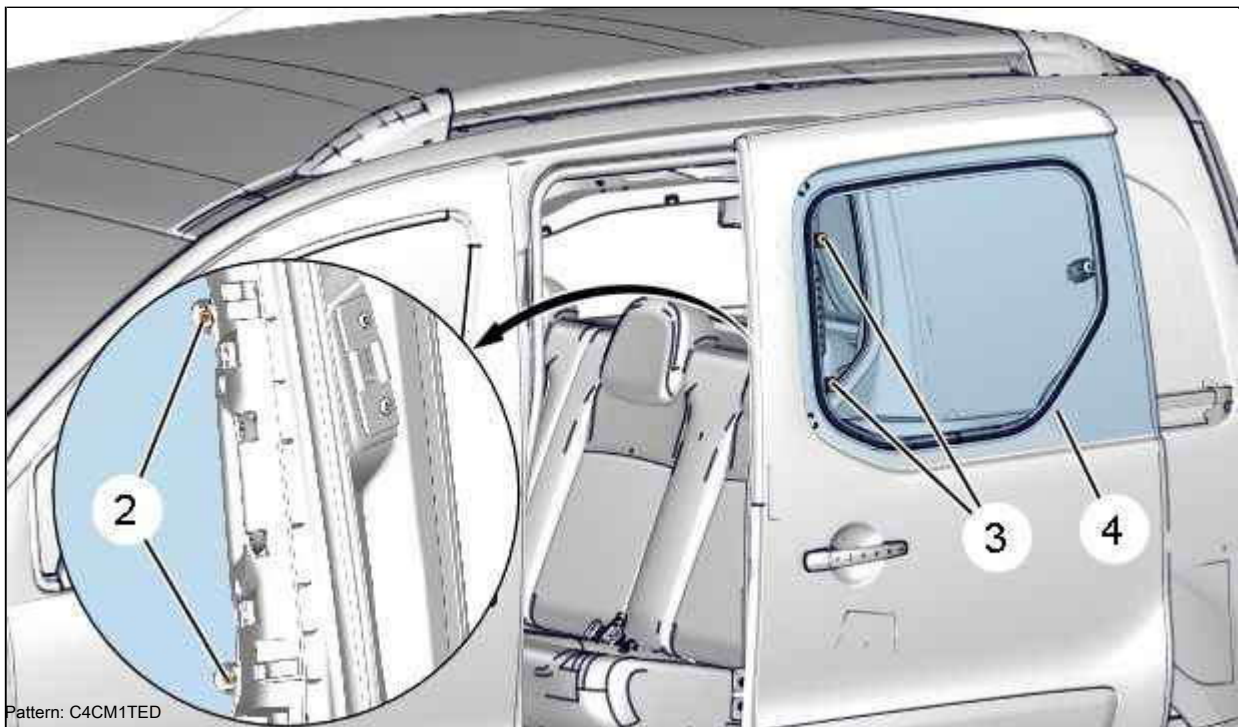
2. Removal

2.1. Moving glass (with side sliding door)



Open the side sliding door.

Detach: Sliding side door trim (1) (at "a"); Using the tool [1]. Remove: the side sliding door trim (1).

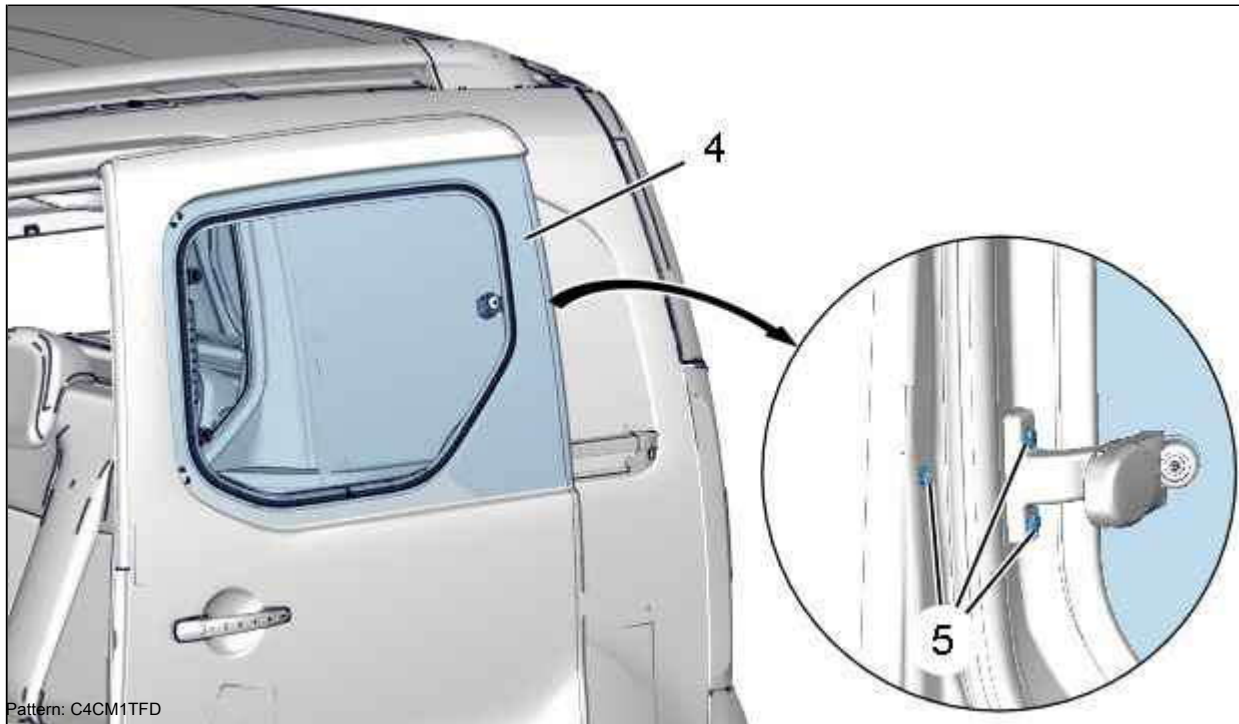


NOTE: 2 people are required for the following operations.

Remove:

- bolts (2)
- Flange nuts (3)

Hold the sliding glass of the sliding side door (4).




Remove:

- the bolts (5)
- Side sliding door glass (4)

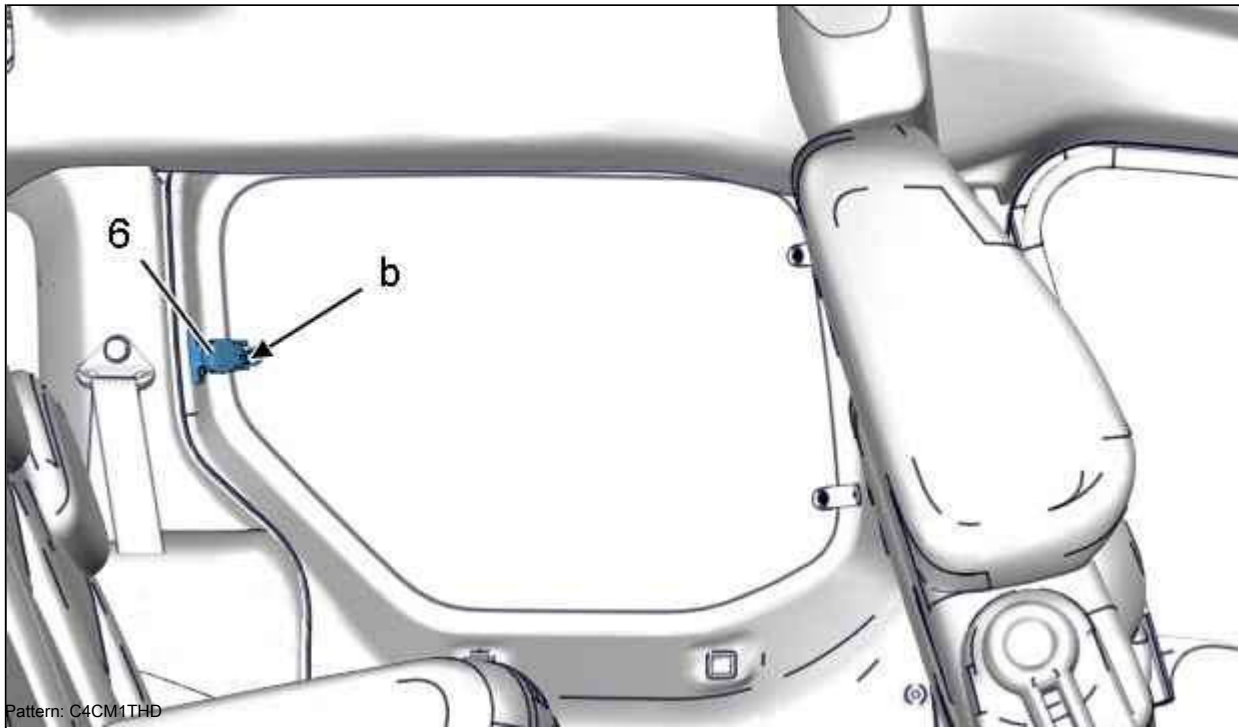
2.2. Moving glass (Sideless sliding door)

Separate: **Front seat belt A-pillar upper trim**

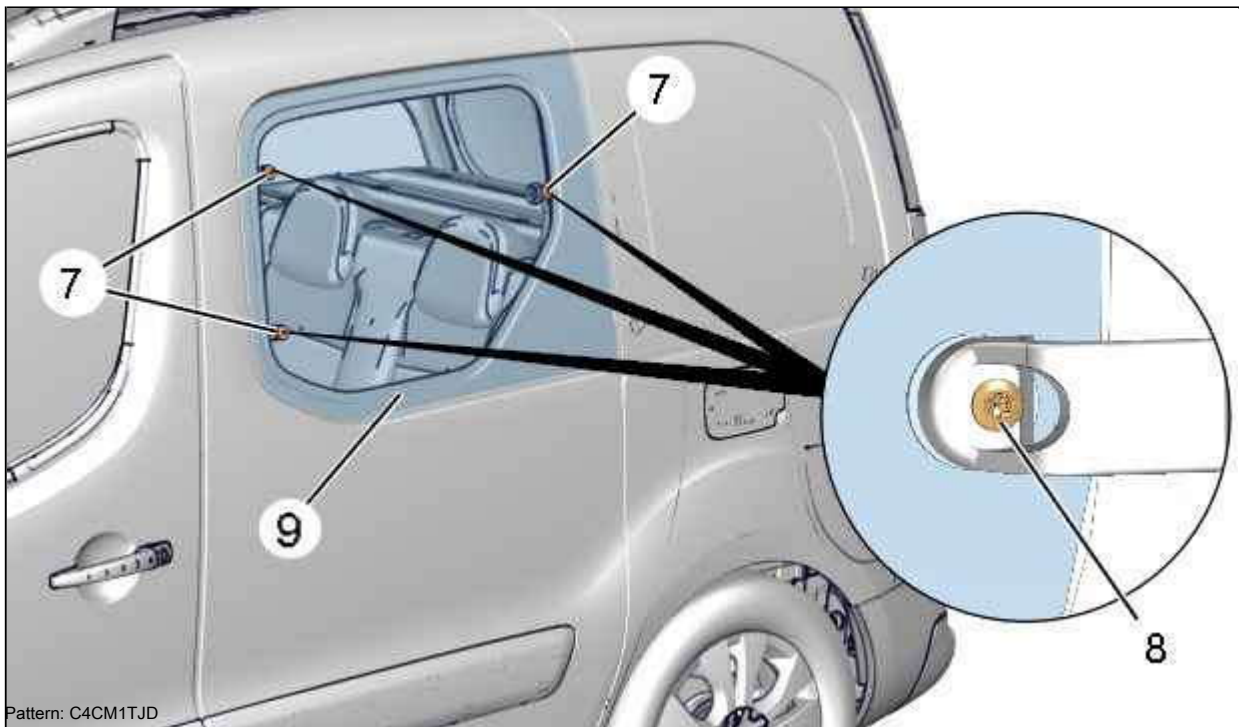
Remove the side trim panel (depending on equipment) 



...



Detach the cover of the glass retainer (6) (at "b"); Using a thin screwdriver.

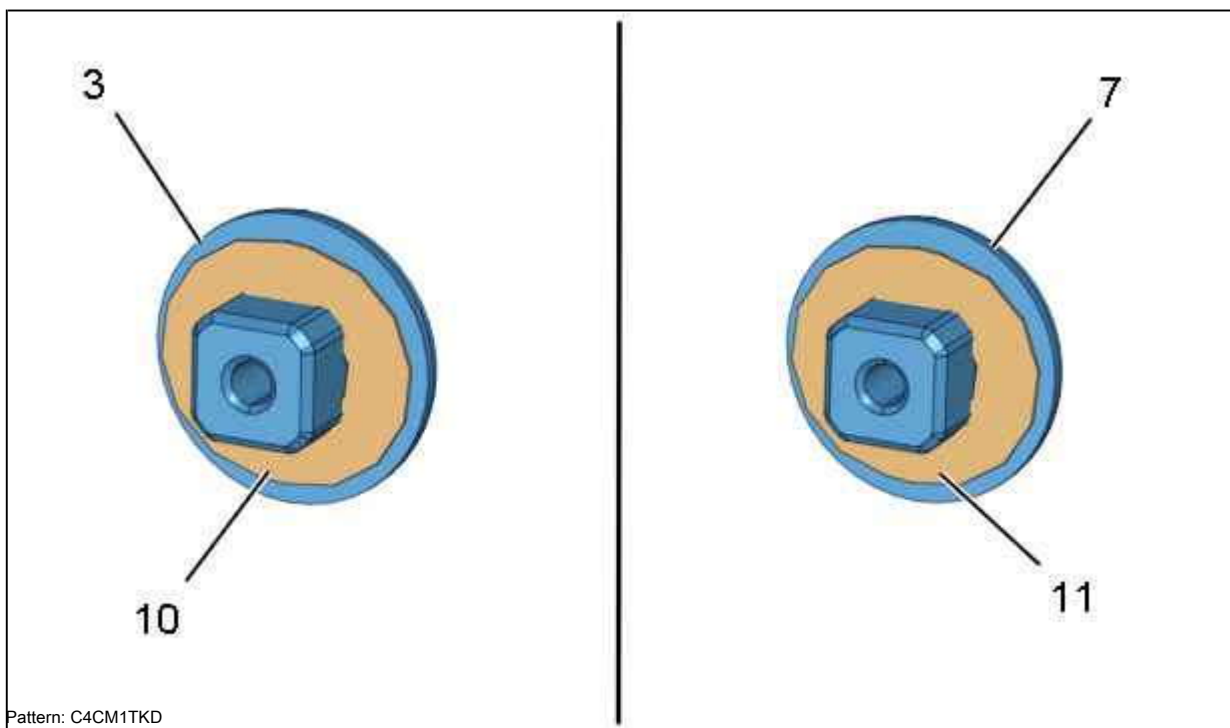


NOTE: 2 people are required for the following operations.

Remove:

- bolts (8) (Access from inside the vehicle)
- Flange nuts (7)
- Moving glass (9)

3. Installation



Check the presence of seals (10), (11) on the profile nuts (3), (7). Installation is carried out by performing the removal operations in the reverse order. Tighten the bolts (2), (5), (8) to 0.2 da.Nm.

Check the clearances and alignment of the sliding glass

Check the correct functioning of the electrical equipment.



REMOVAL REFITTING: FRONT DOOR


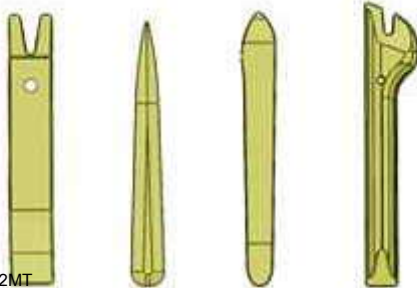
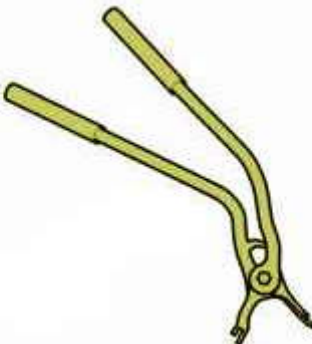
MANDATORY: Observe the cleanliness and safety rules



1. Tools

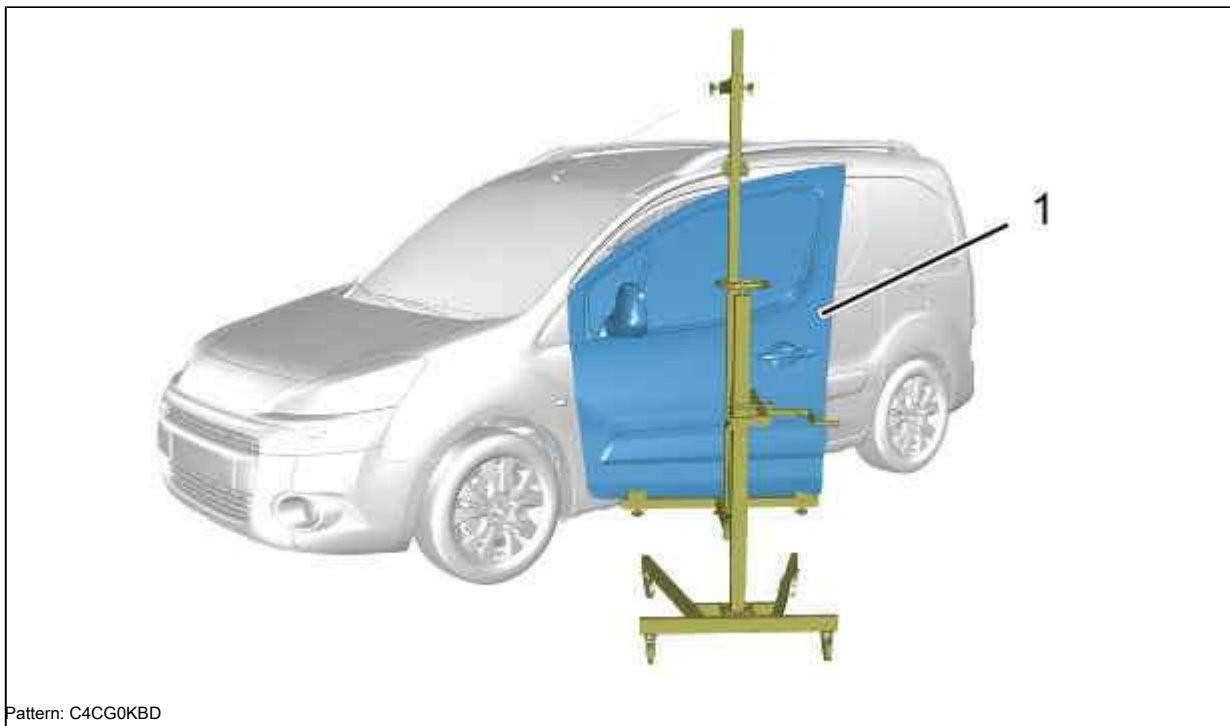
tool

Article Designation

		Facom door support (see hardware catalog)
 Pattern: E5AG03UT		
	[1350ZZ] Trim	Removal Tool
 Figure: E5AG02MT		
	[1355B] Axle puller	
 Figure: E5AG03VT		

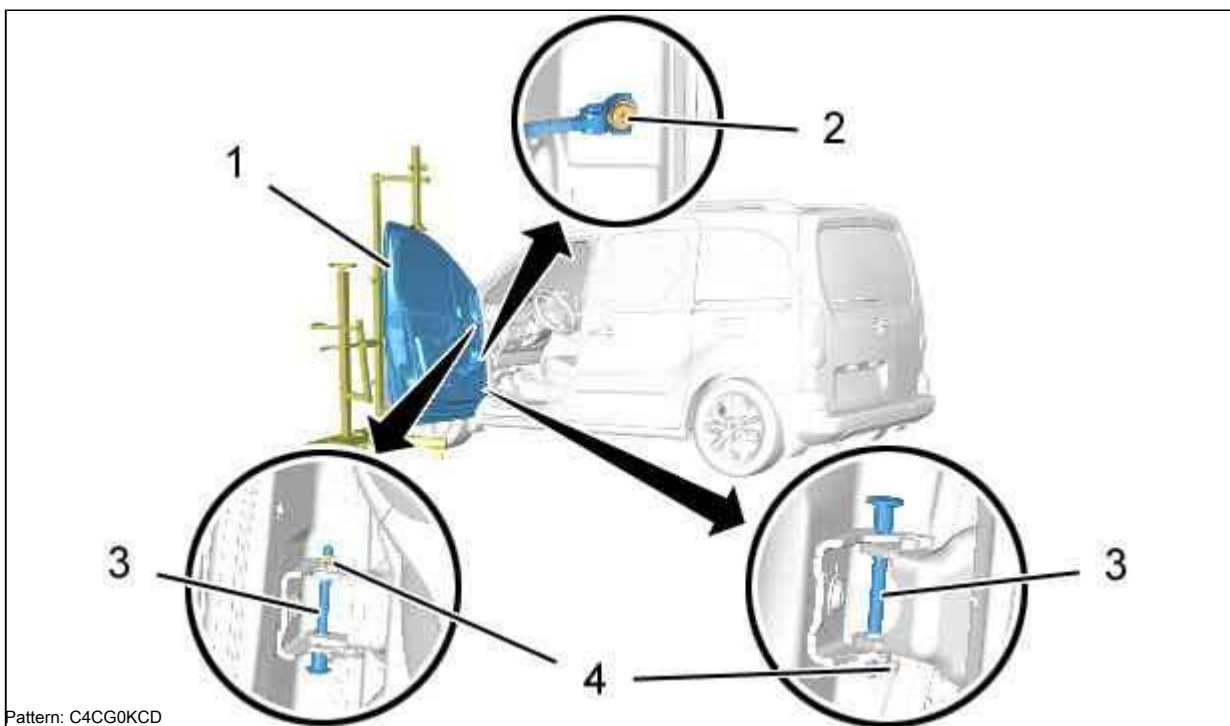
2. Removal

Disconnect the battery



Pattern: C4CG0KBD

Place the front door (1) on the support.

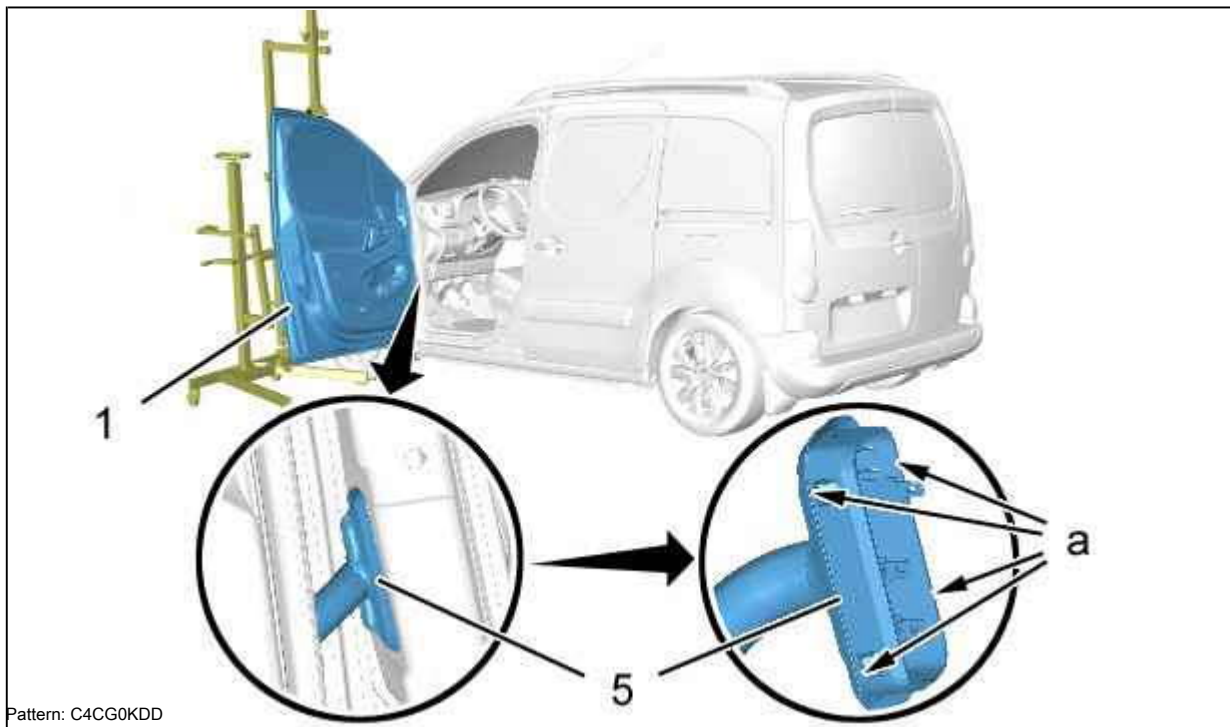


Pattern: C4CG0KCD

Remove:

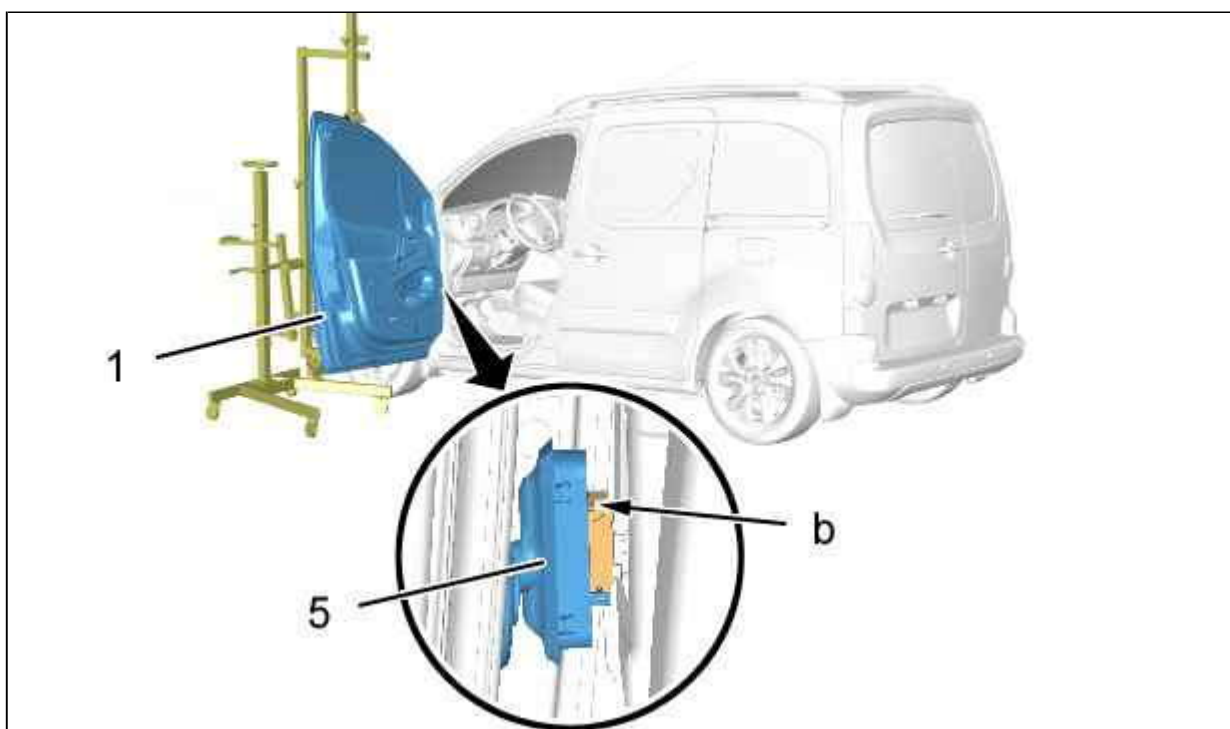
- Bolt (2)
- clamp (s) (4); With a thin screwdriver
- axle (3); Using the tool [1355B]

Free the door (1); Using the door support (Take care not to damage the front wing).



Remove the front door (1); Using the door support (Make sure not to damage the front wing). Detach the cover (5) (at "a"); Using the tool [1350ZZ].

Detach the sleeve (5).



Pattern: C4CG0KED

Move aside: Bushing (5). Disconnect the connector (at "b").
Remove door (1); Using the door support.

3. Installation

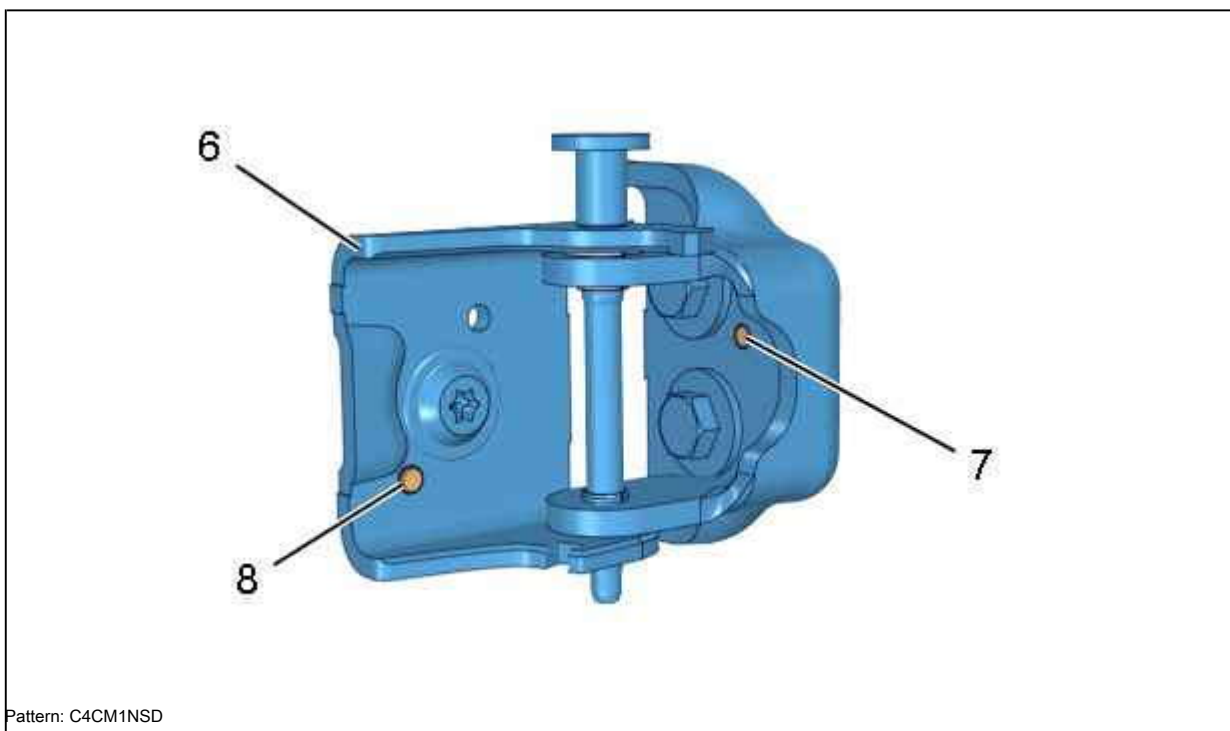
ATTENTION : Check the condition of the clamps (4).

ATTENTION : Check the location of the bushing and support (5).

Installation is carried out by performing the removal operations in the reverse order. Tighten the bolt (2) to 3 da.Nm.

4. Adjustments

Remove the mudguard
Clearance and alignment

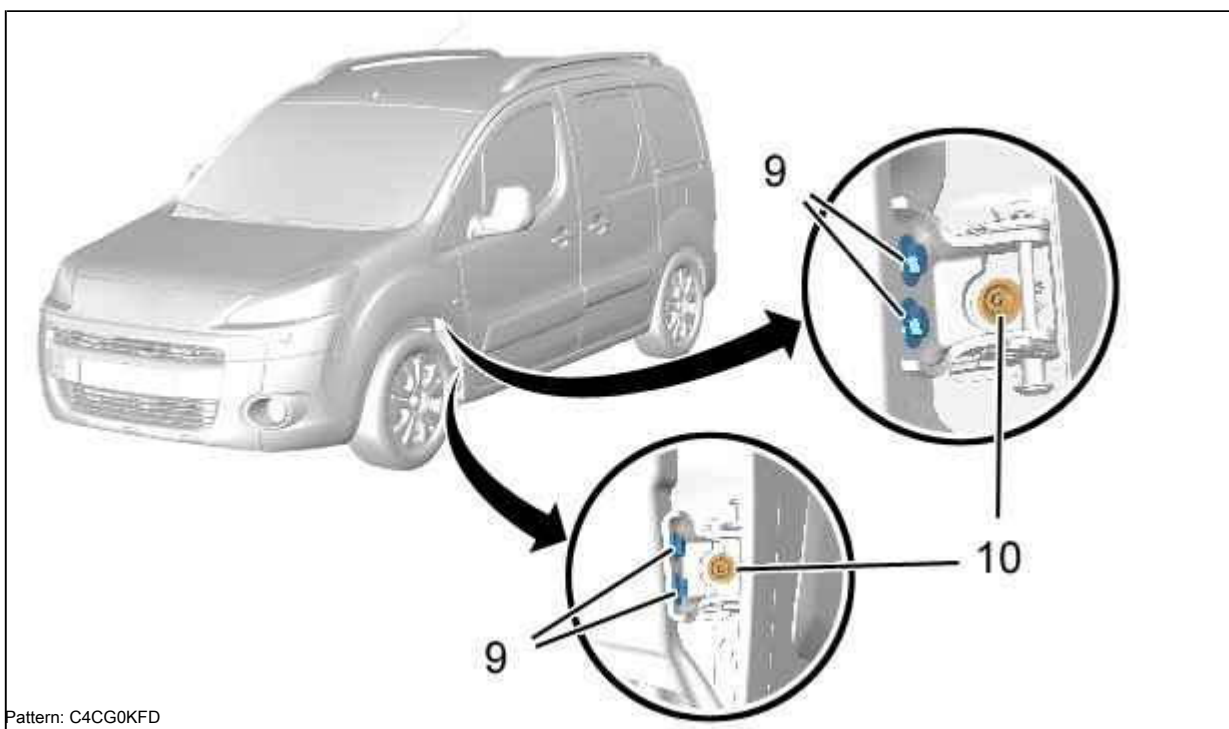


NOTE: The hinge (6) has guiding elements on the door side. The locating tabs can be removed if additional adjustment is required (Alignment).

The lower locating lug of the front door (8) is removed by knocking out; Using a punch.

NOTE: The lower door hinge (6) has a guiding element on the body side. The alignment tabs (7) can be removed if additional adjustment is required (Clearances).

The locating lug (7) is removed by knocking it out; Using a punch.



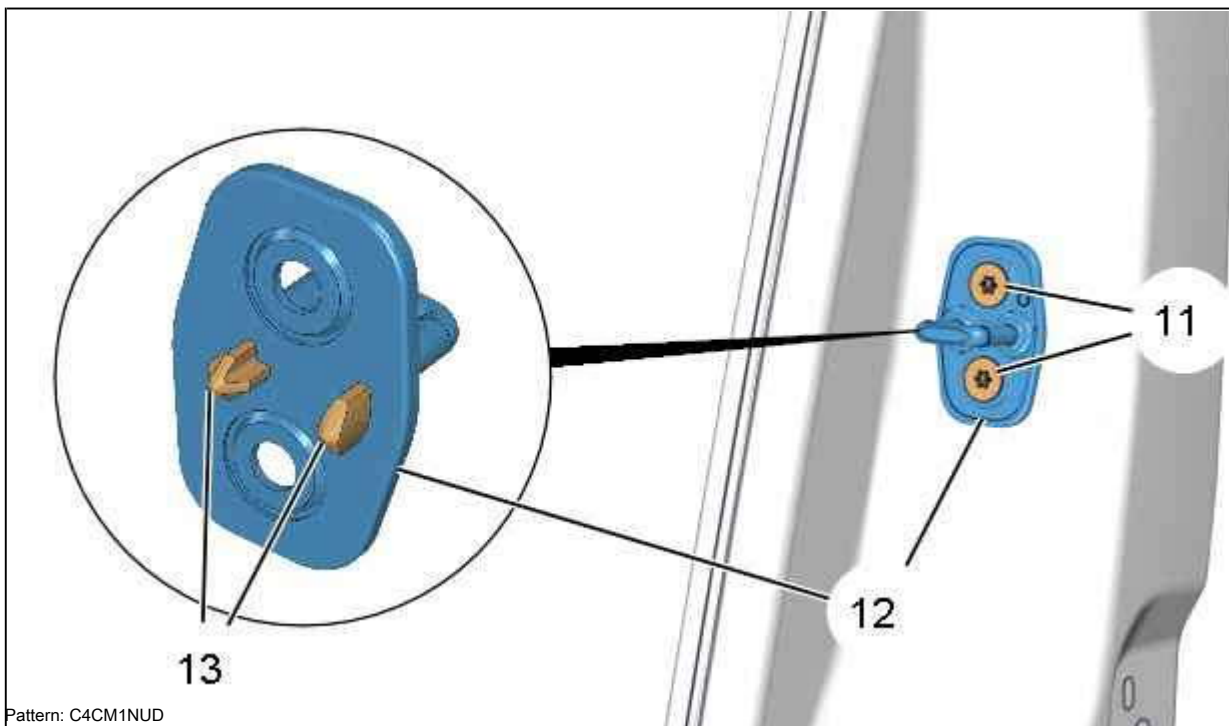
Pattern: C4CG0KFD

NOTE: The door bolts (9) can be accessed through the mudguard.

Adjust the front door clearances (bolt (9)). Tighten the screws (9) to 3 da.Nm.

Adjust alignment (bolt (10)).

Tighten the bolts (10) to 3 da.Nm.



Pattern: C4CM1NUD

Loosen the screws (11).

Detach the front door bracket (12).

Sand the marks (13).

Install:

- Scobadveri (12)
- the bolts (11) (loose)

Position the bracket (12) to adjust the door alignment. Tighten the screws (11) to 2 da.Nm.

Check gaps and adjust alignment

Reconnect the battery.

Check the operation of the various equipment.

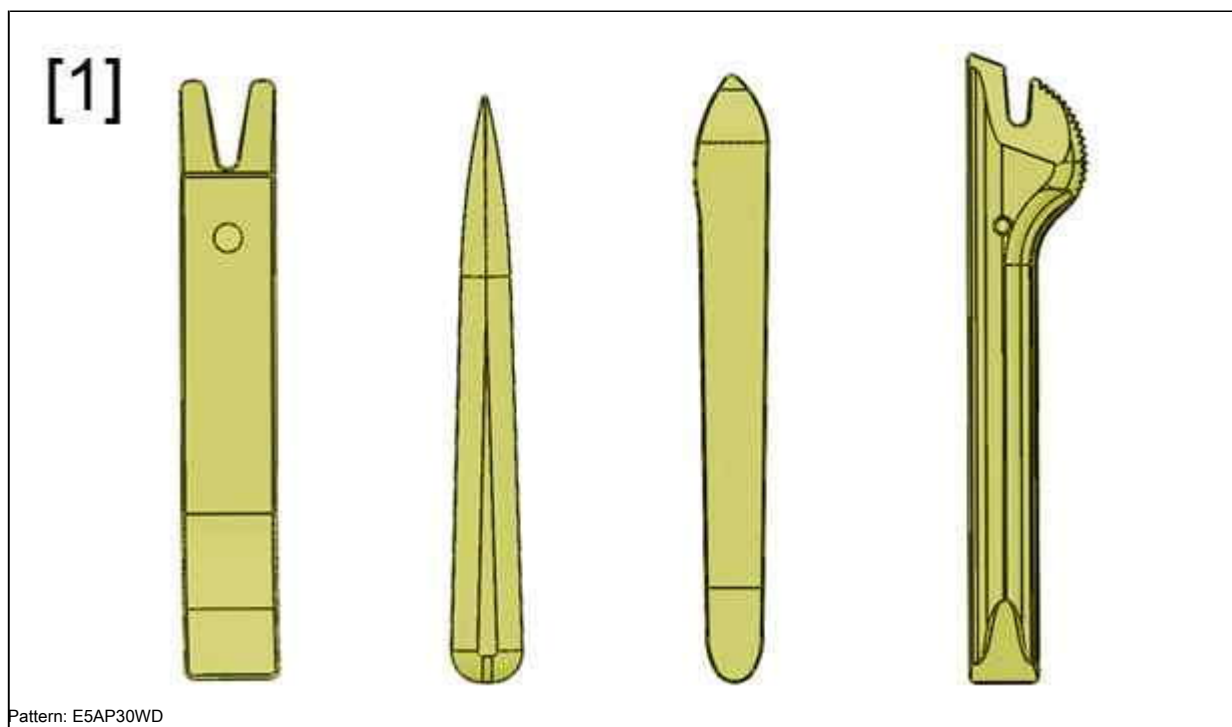


DISASSEMBLY ASSEMBLY: SIDE SLIDING DOOR

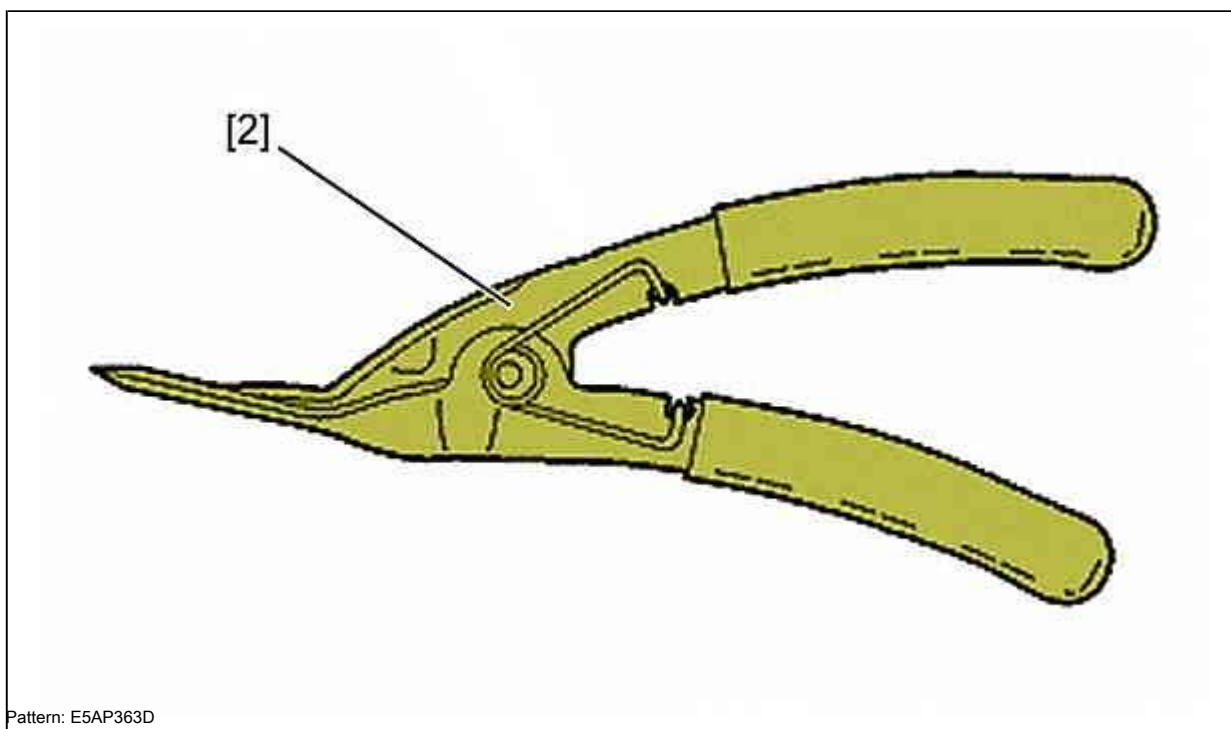
MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim removal tool () .1350ZZ.



[2] Extractor for plastic pins () .1311.

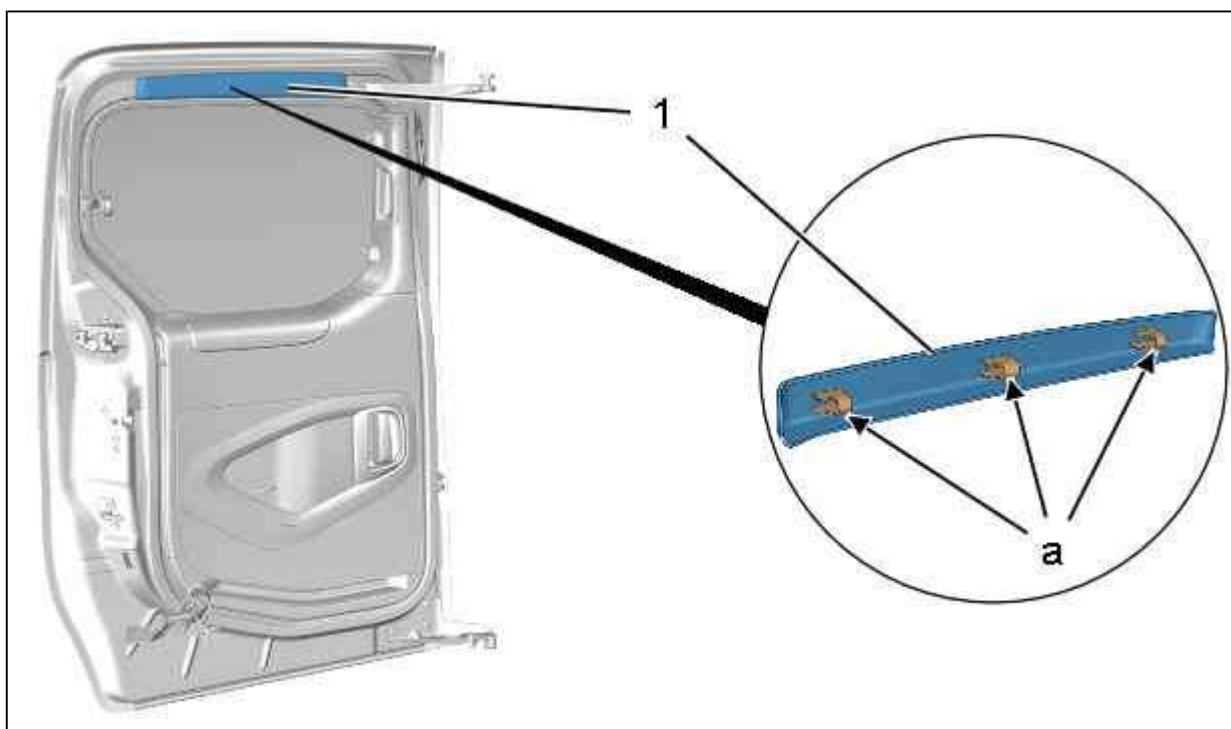
2. Preliminary operations

Remove the sliding side door



3. Disassembly

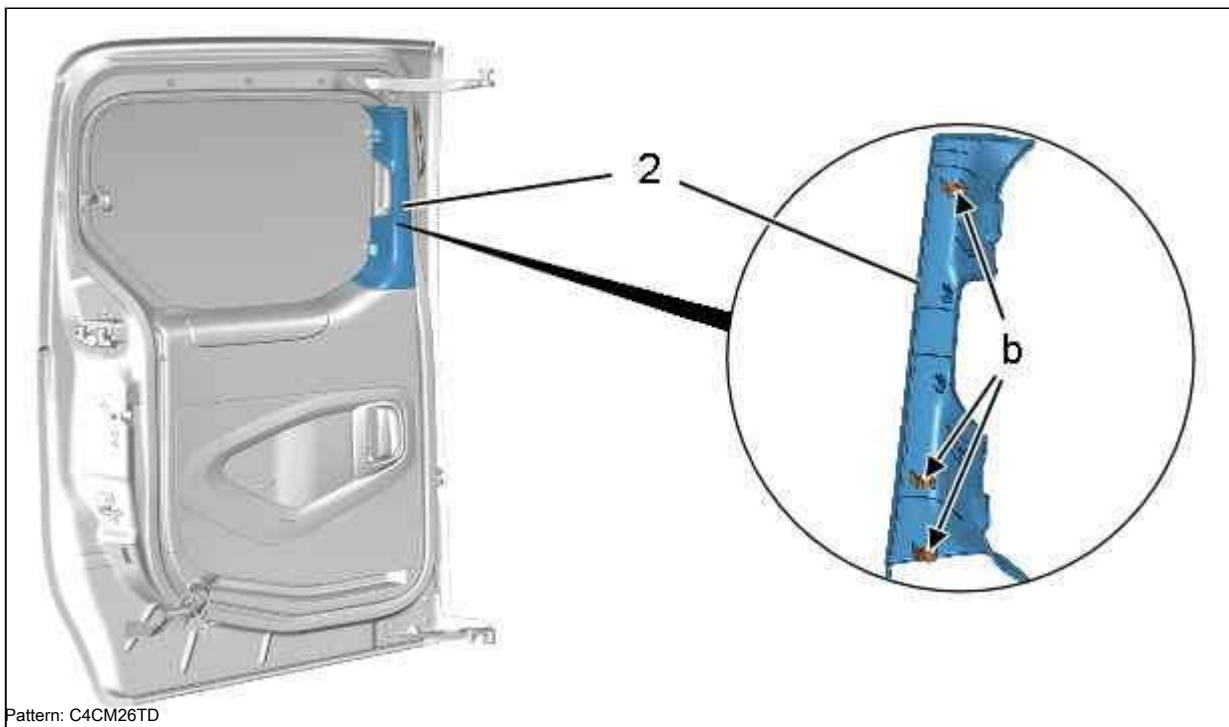
3.1. Upper door trim



Pattern: C4CM26SD

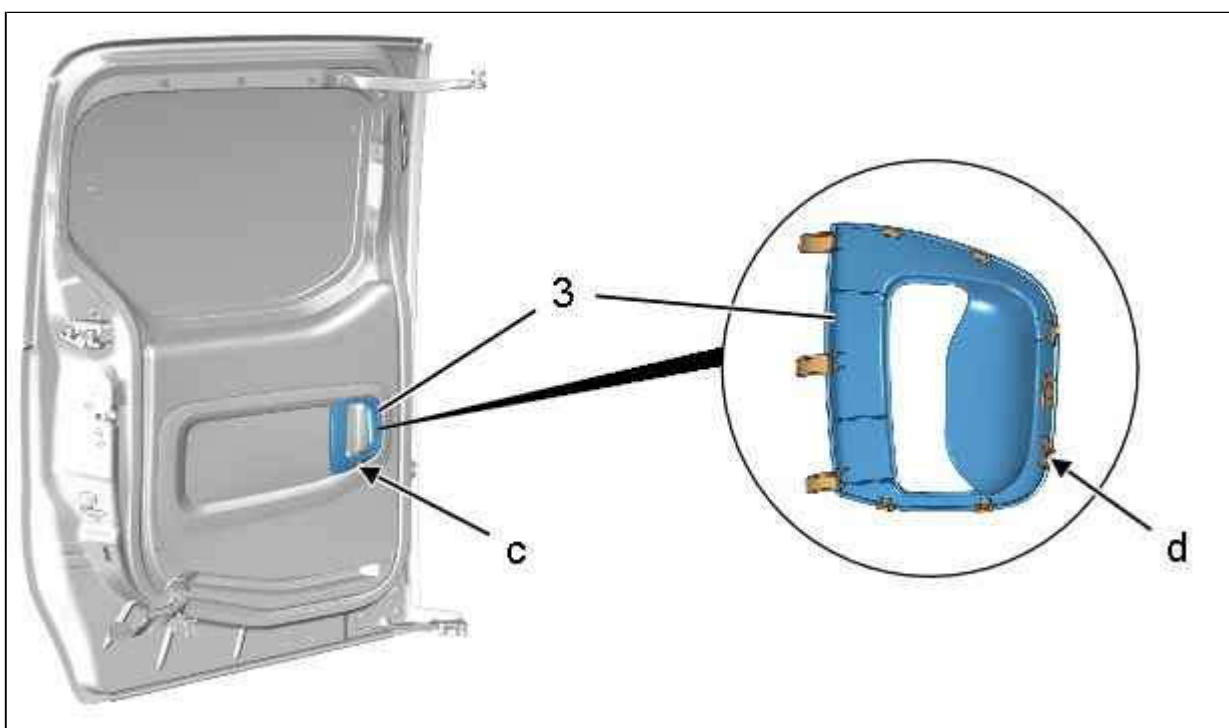
Detach: Decorative element (1) (at "a"); Using the tool [1]. Remove: Decorative element (1).

3.2. Door pillar trim



Disconnect: Door pillar trim (2) (at "b"); Using the tool [1]. Remove: the door pillar trim (2).

3.3. Door panel trim

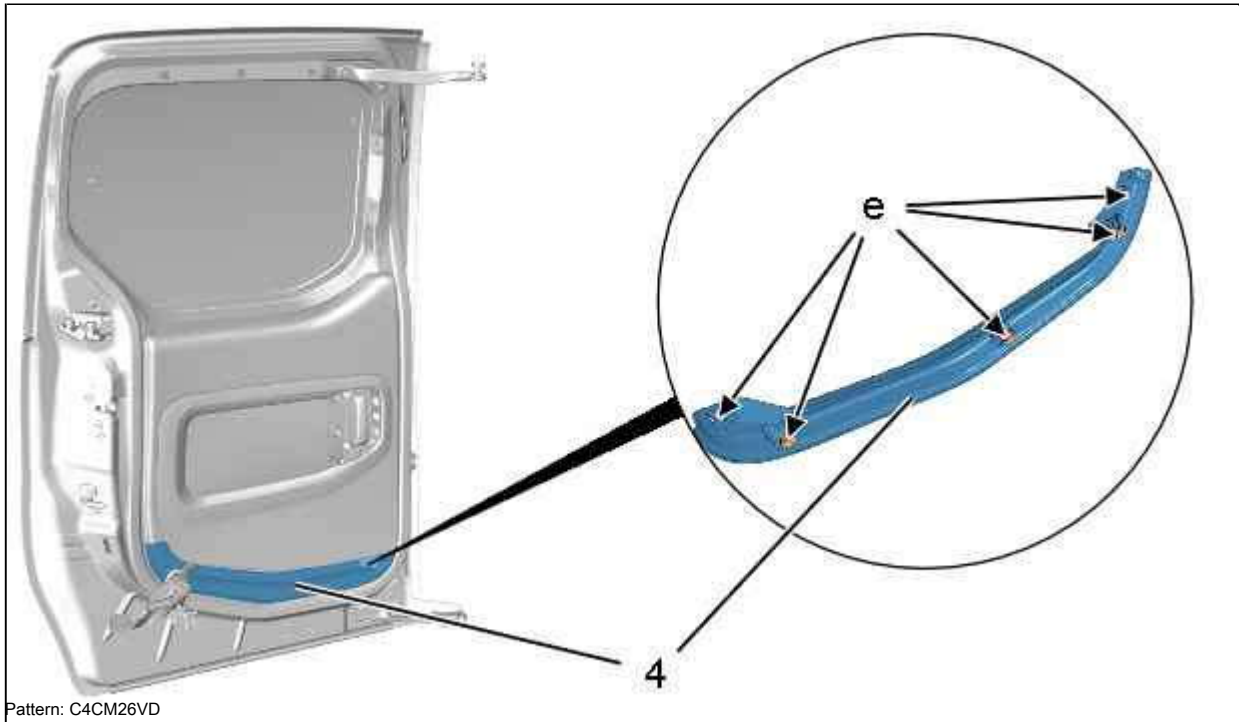


Pattern: C4CM26UD

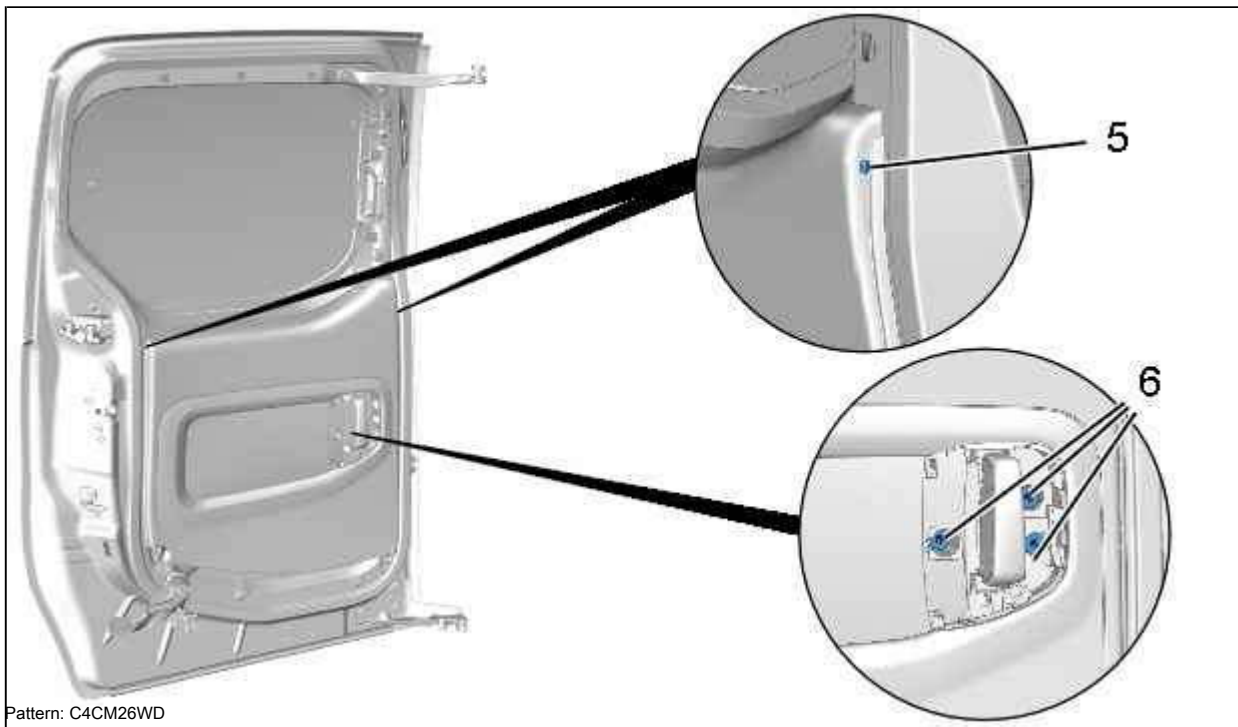
Detach: Decorative element (3) (in "c"); Using the tool [1].

NOTE: Continue this operation on all clips (in "d"); Using the tool [1] around the perimeter of the trim (3), to detach the trim (3).

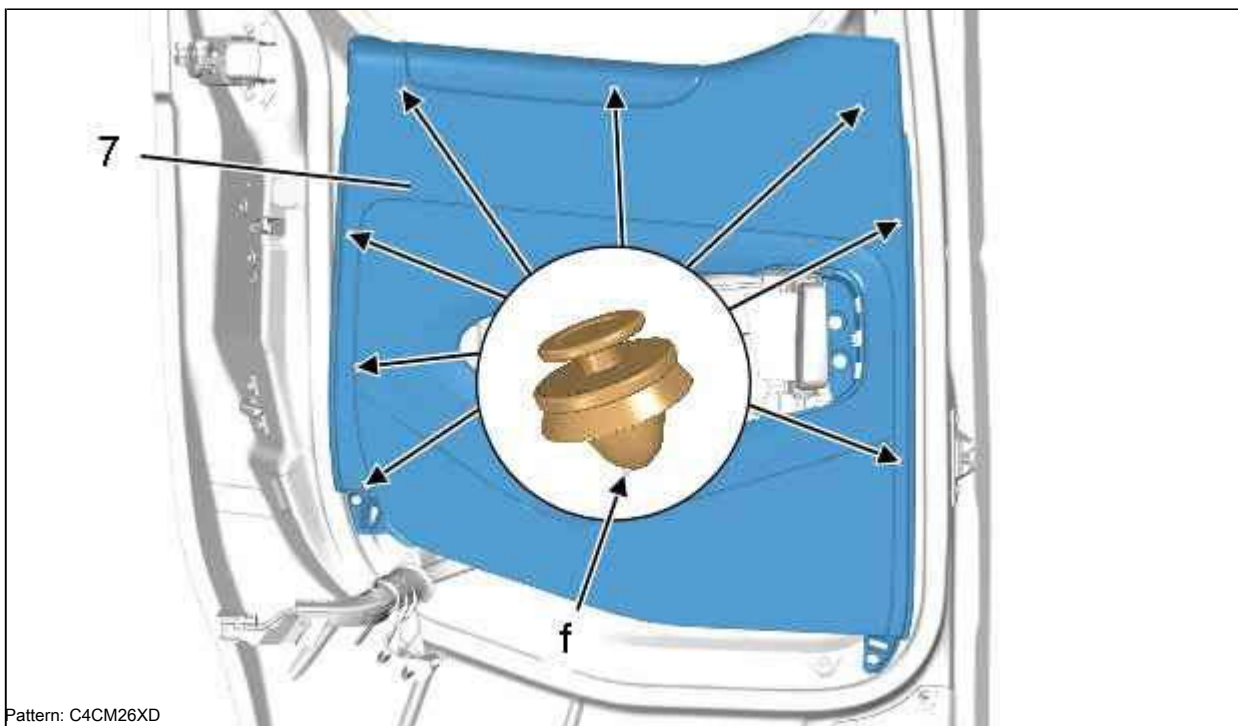
Remove: Decorative element (3).



Disconnect: Lower trim (Door panel (4)) (at "e"); Using the tool [2]. Remove: Bottom trim (Door panel (4)).

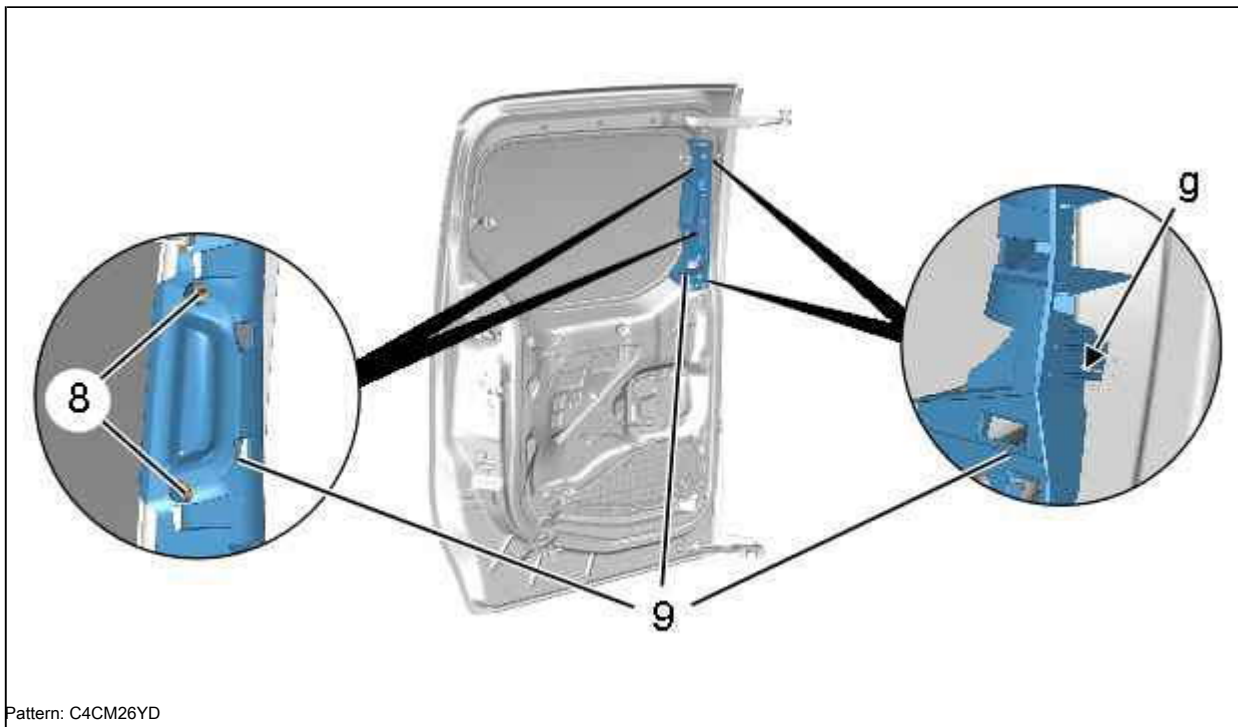


Unscrew the screws (5), (6).



Disconnect: Door trim panel (7) (at "f"); Using the tool [2]. Remove the door trim panel (7).

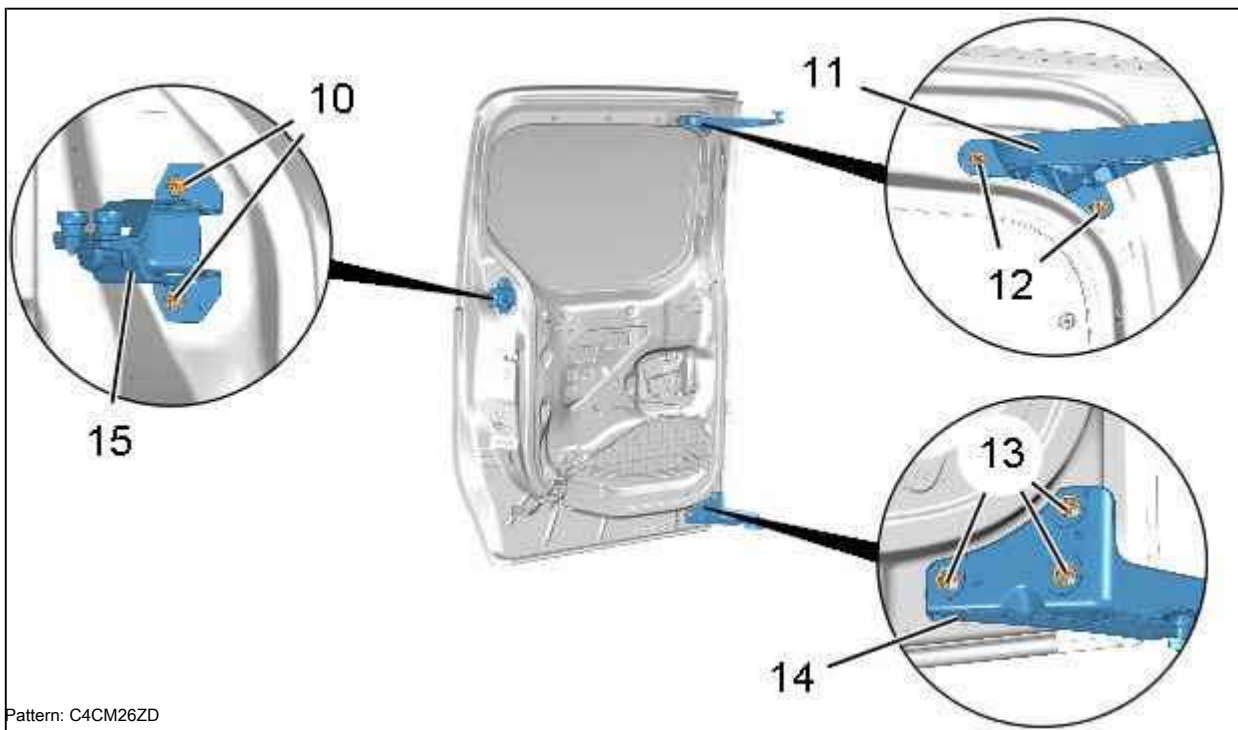
3.4. Door pillar trim support



Loosen screws (8).

Disconnect: Door pillar trim support (9) (at "g"); Using the tool [1]. Remove: Door pillar trim support (9).

3.5. Sliding side door mounts

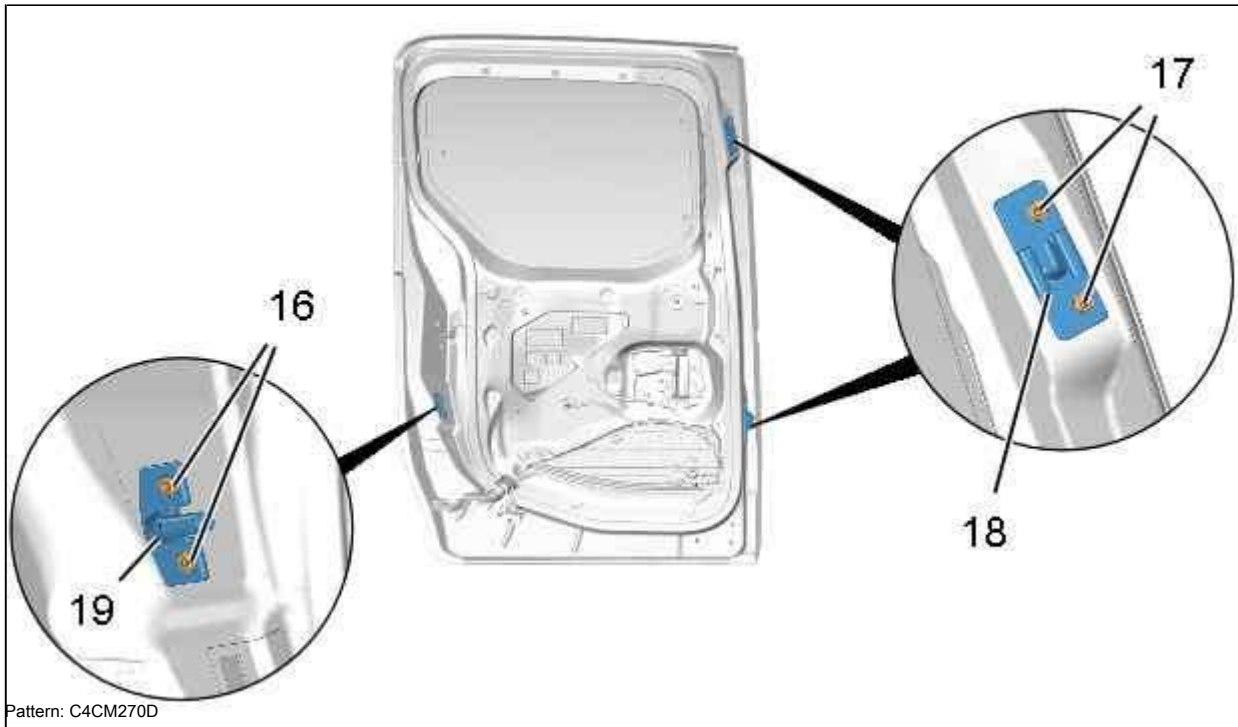


Remove:

- bolts (10), (12)
- Nuts (13)

- Carriages (11), (14), (15)

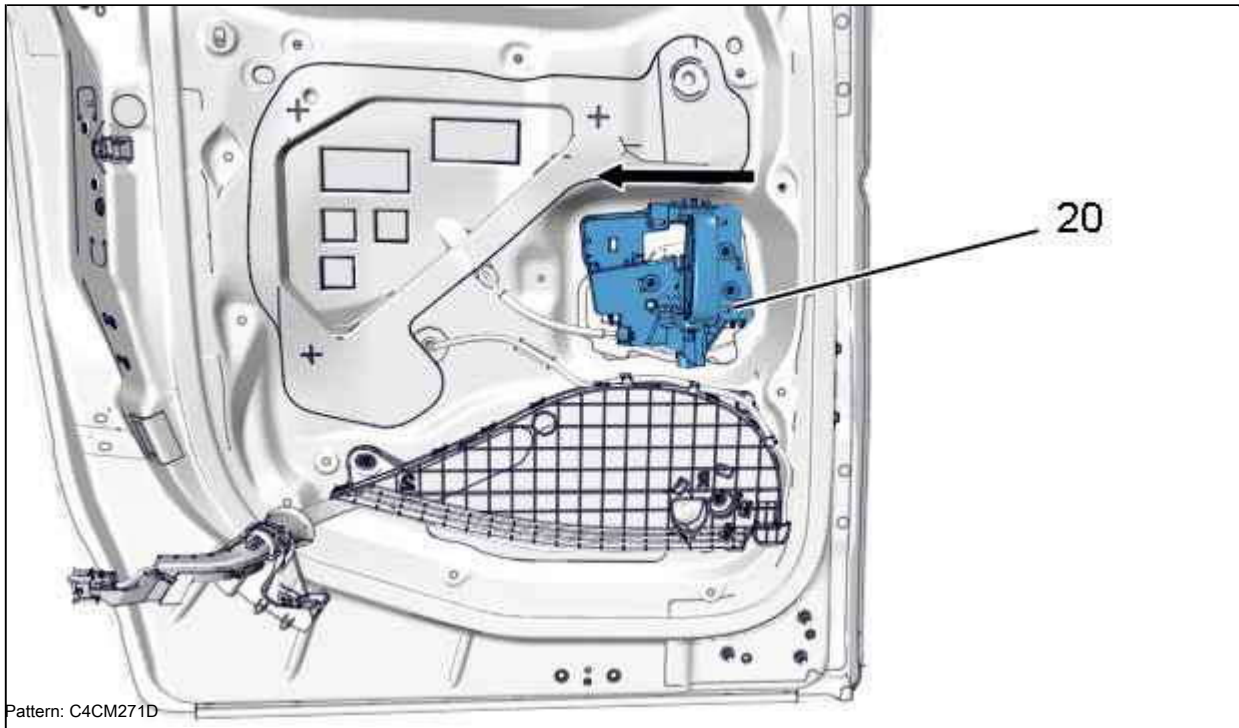
3.6. Sliding door guides / centering devices



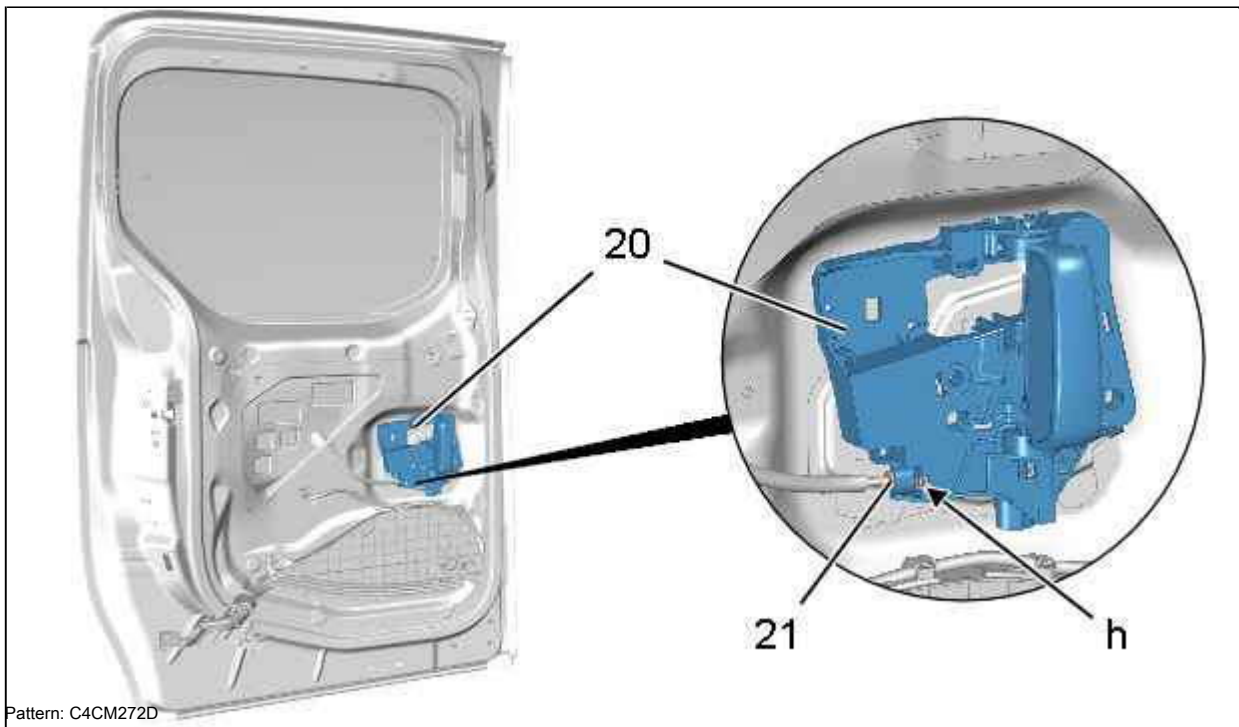
Remove:

- bolts (16), (17)
- Guides (18)
- Centering element (19)

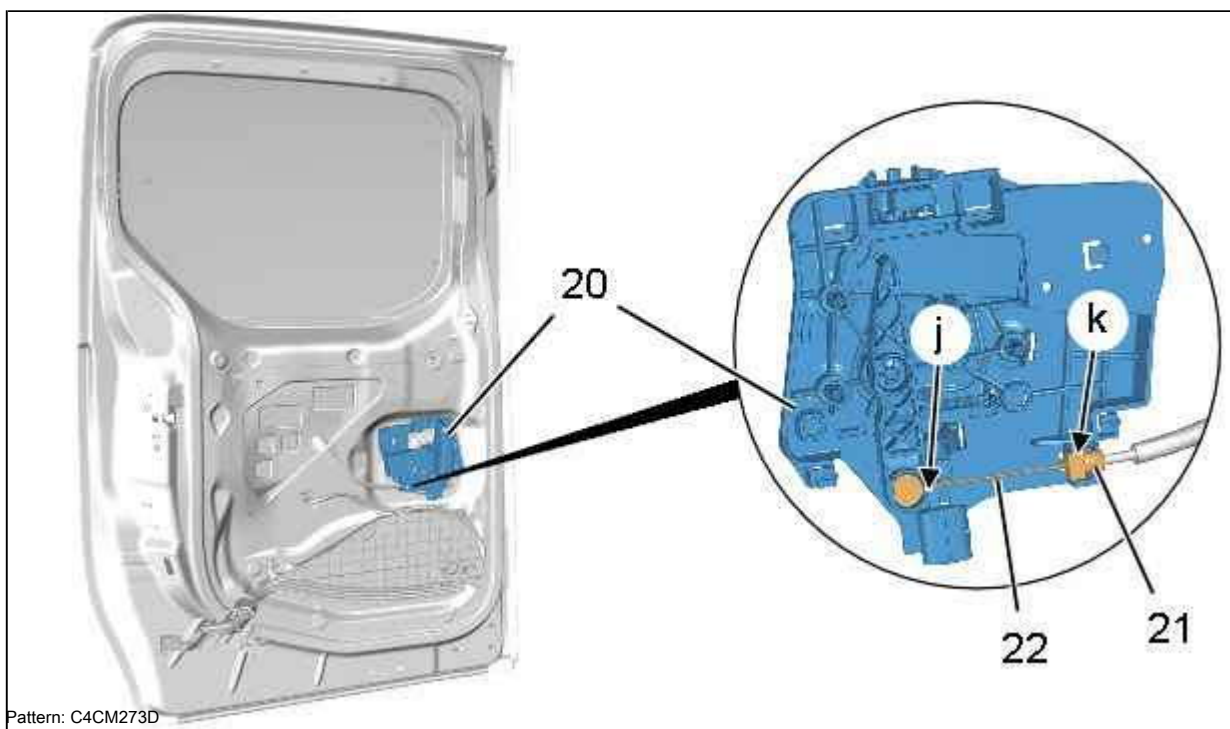
3.7. Internal button to unlock



Separate: Inner release button (20) (according to the arrow).



Unclip the shell (21) (in "h") of the drive (20) opening from the inside.

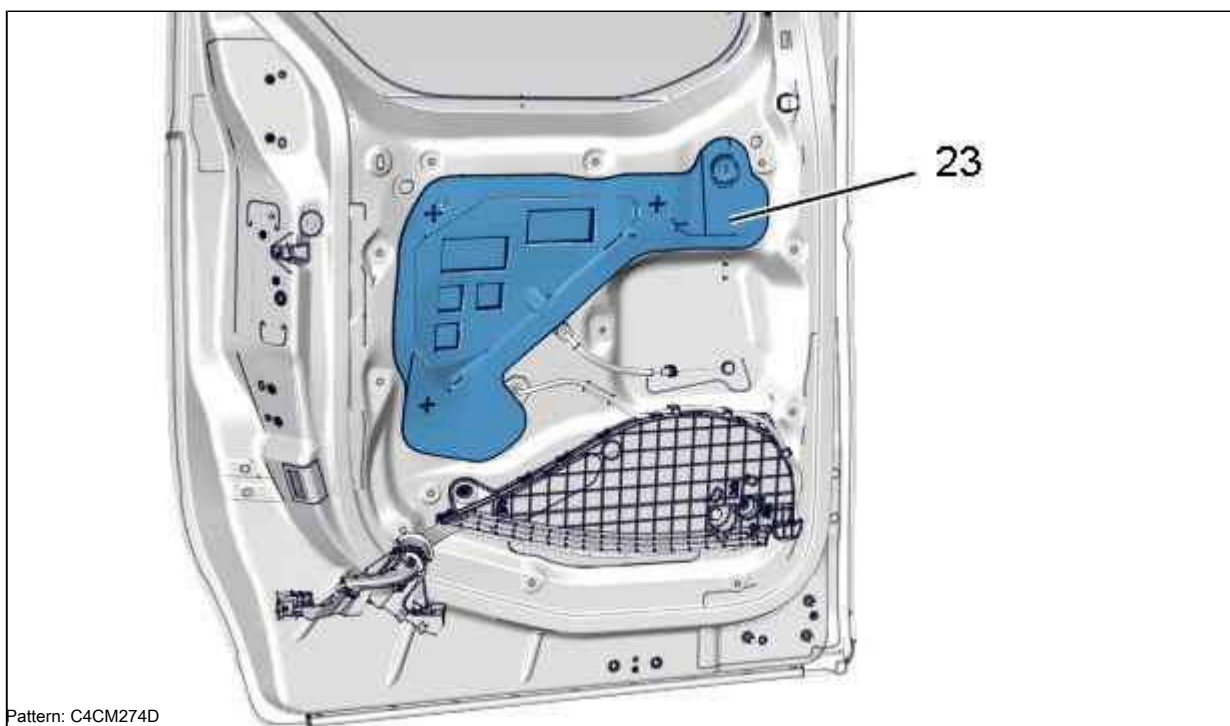


Disconnect:

- Fastening the cover of the cable drive (21) (in "k")
- End of the cable (22) (in "j")

Remove: Internal release button (20).

3.8. Sealed panel



Unstick the sealing panel (23); Using the tool [1].

NOTE: Remove all traces of adhesive from the door in the gluing area of the sealed panel using the cleaner marked "J1".

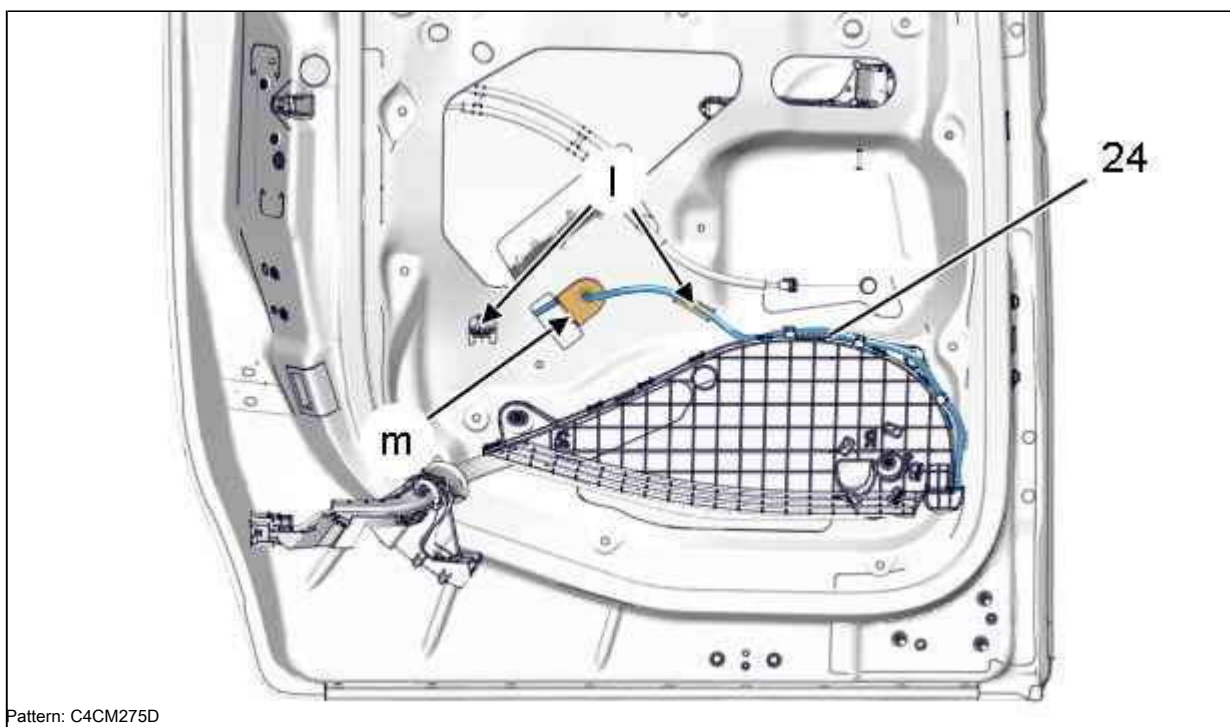
3.9. Movable glass sliding door (depending on configuration)

Remove: **Movable glass sliding door**

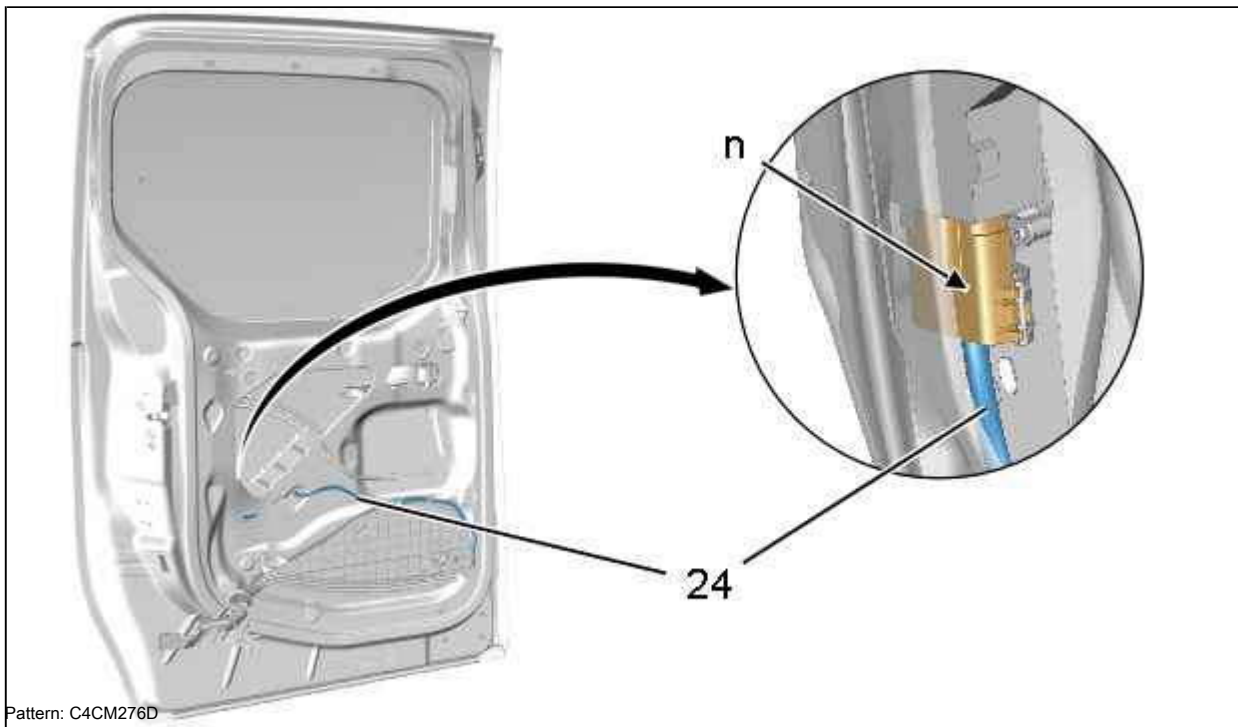
3.10. Fixed glass sliding door (depending on configuration)

Remove: **Fixed glass sliding door**

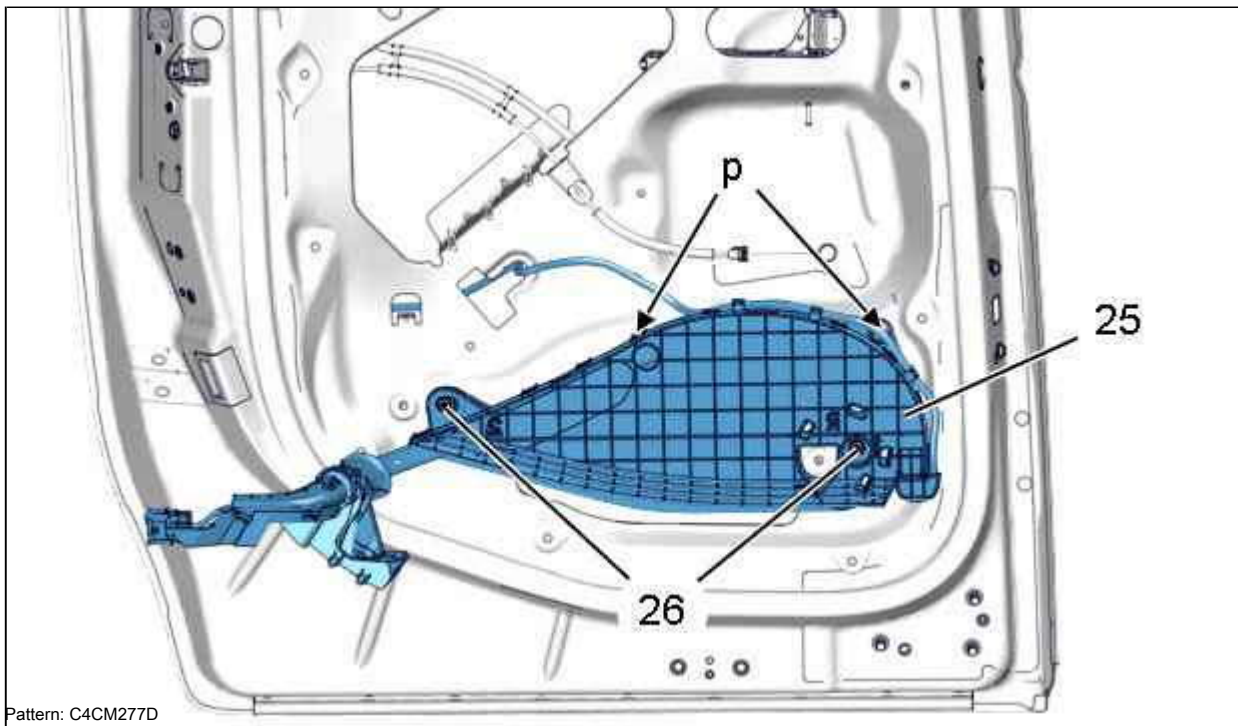
3.11. Wire Harness Winder



Disconnect: Mounting clips (at "I"); Using the tool [1]. Separate the harness (24) (in "m").



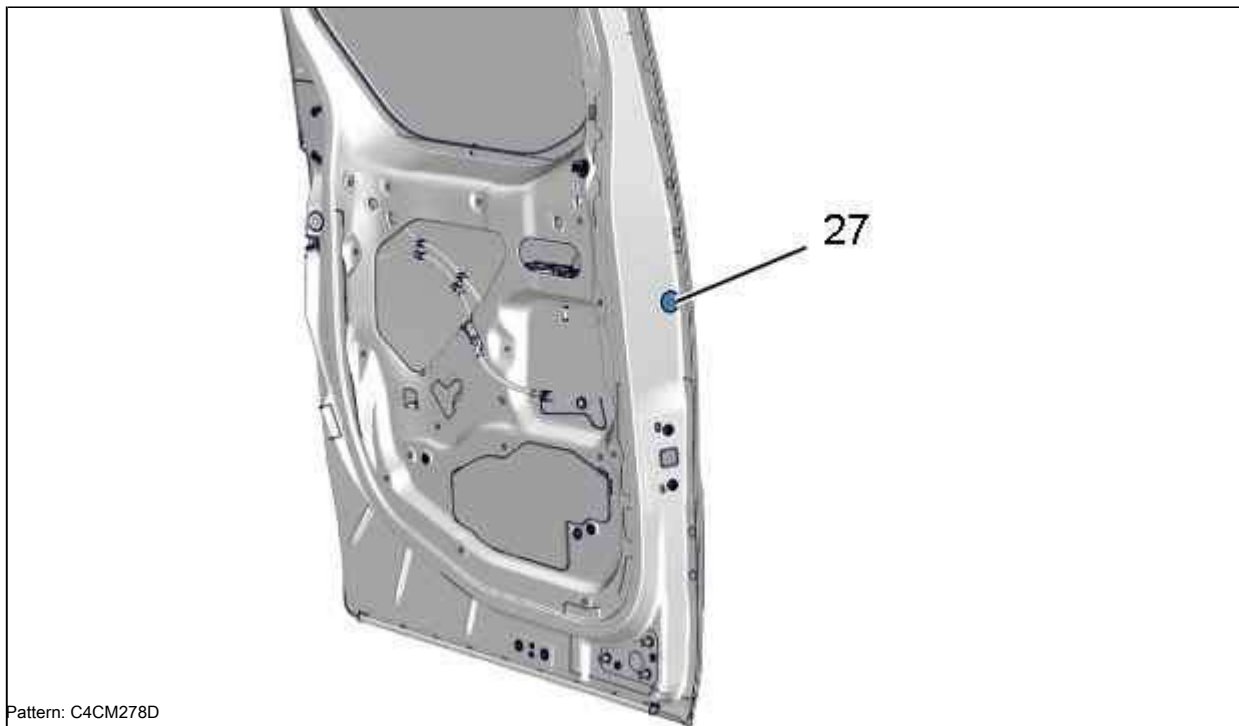
Disconnect the connector (at "n").
Separate the wire harness (24).



Disconnect (at "p"); Using the tool [1]. Remove:

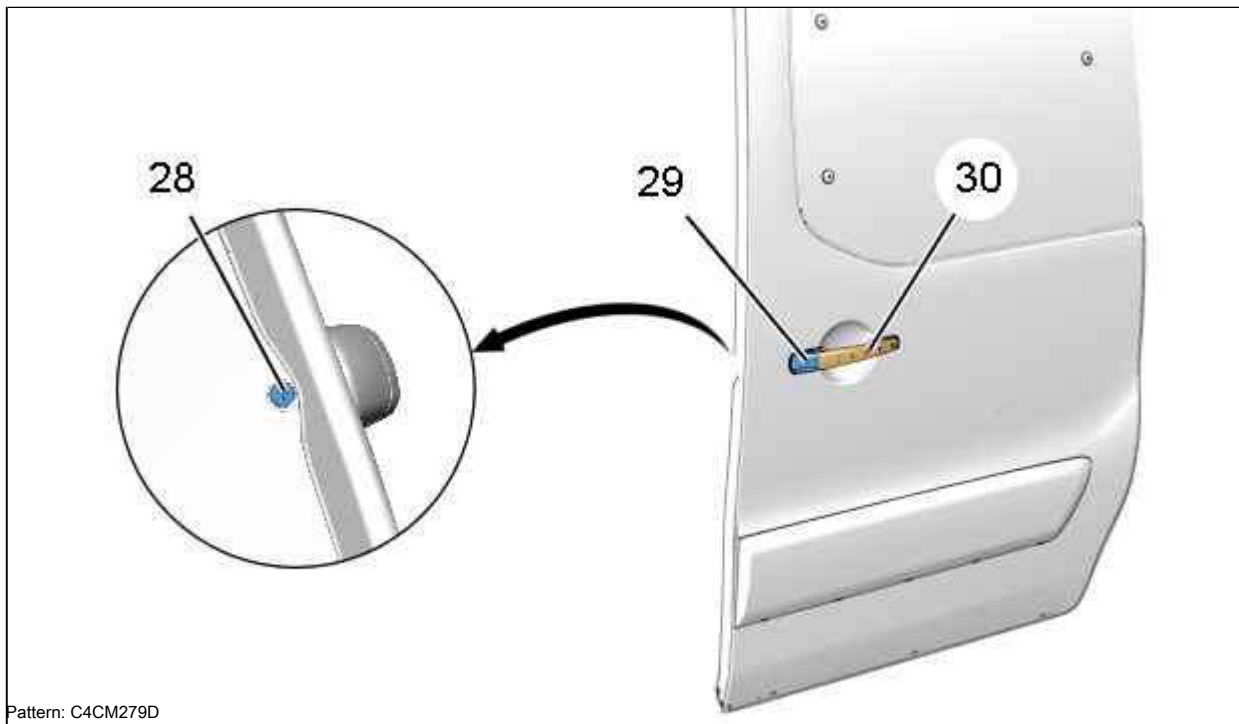
- the bolts (26)
- Wire Harness Winder (25)

3.12. Outside door opening handle



Unstick the glued strip (27).

NOTE: Remember to replace the adhesive strip (27).

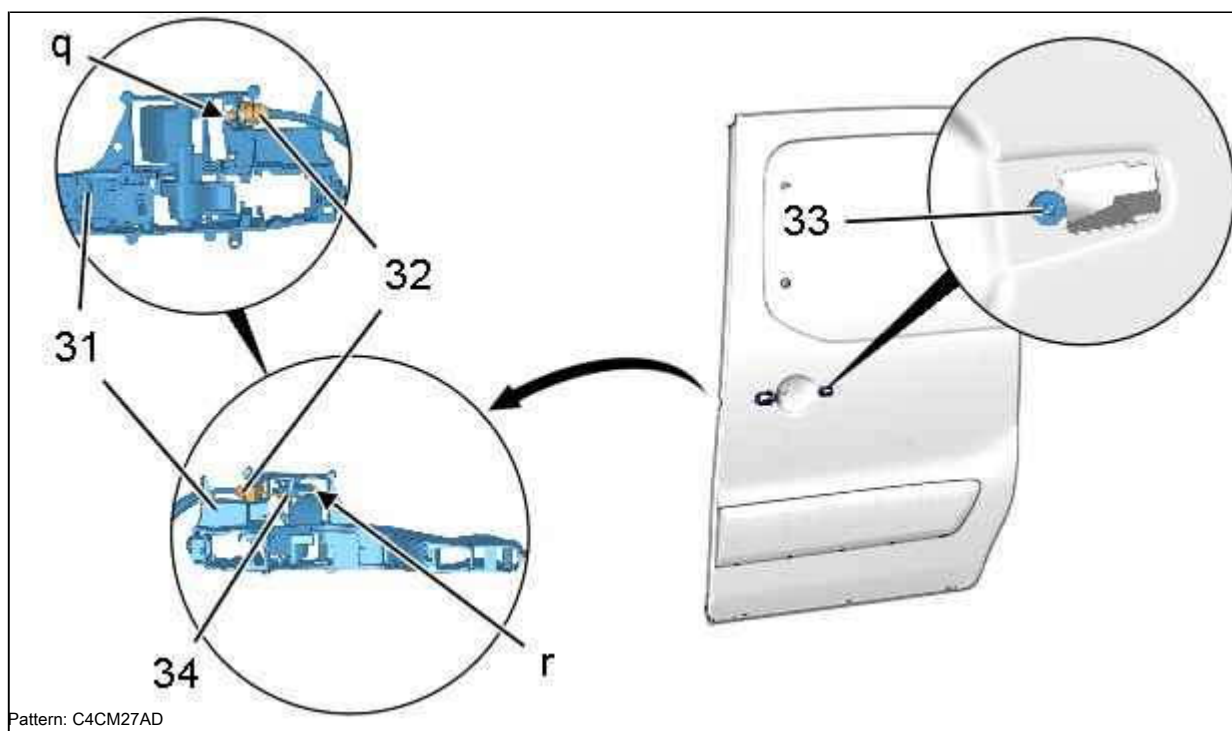


Loosen: The bolt (28) of the cover (29) (Do not remove: The bolt (28)). Separate Remove: Shroud (29).

Push the handle (30) back and free it.

Open: Handle (30) (Move handle (30) to fully open position). Remove: Handle (30).

3.13. Door handle operating mechanism



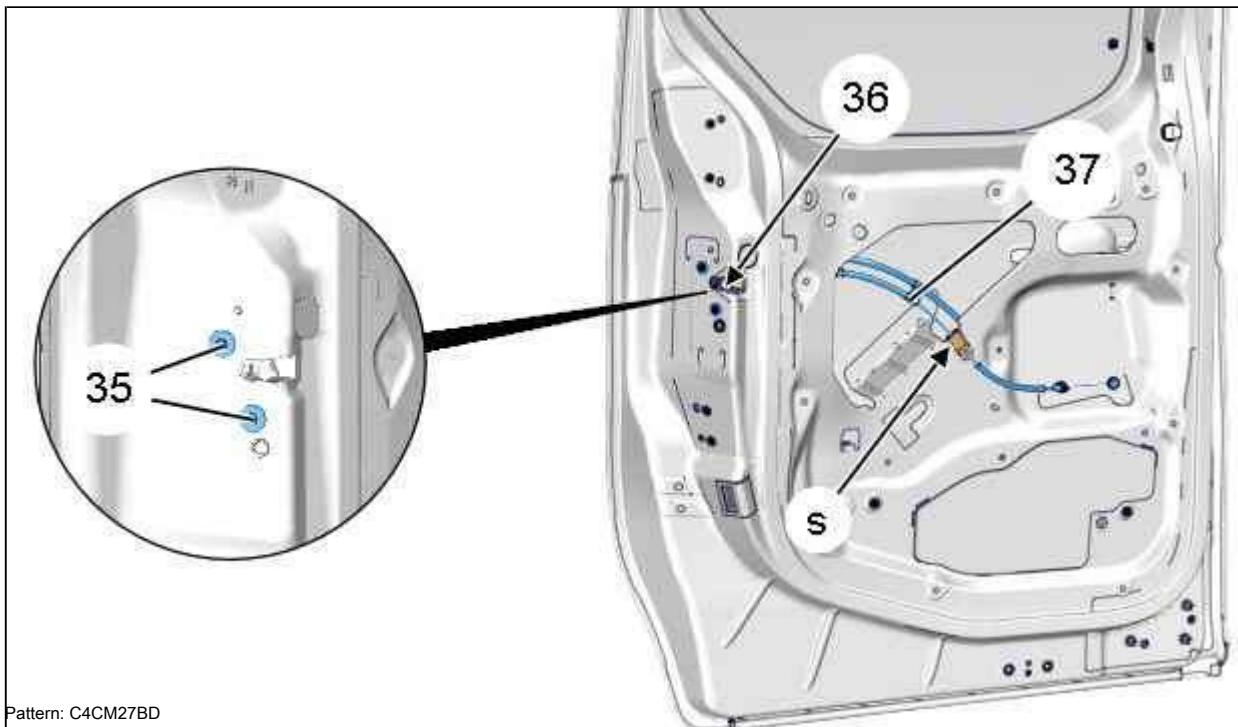
Remove bolts (33).

Disconnect the external opening control (31) from the inside of the door. Disconnect:

- Attaching the sheath of the drive cable (32) (in "q")
- End of the cable (34) (in "r")

Remove: The outside door handle actuator (31).

3.14. Lock



Pattern: C4CM27BD

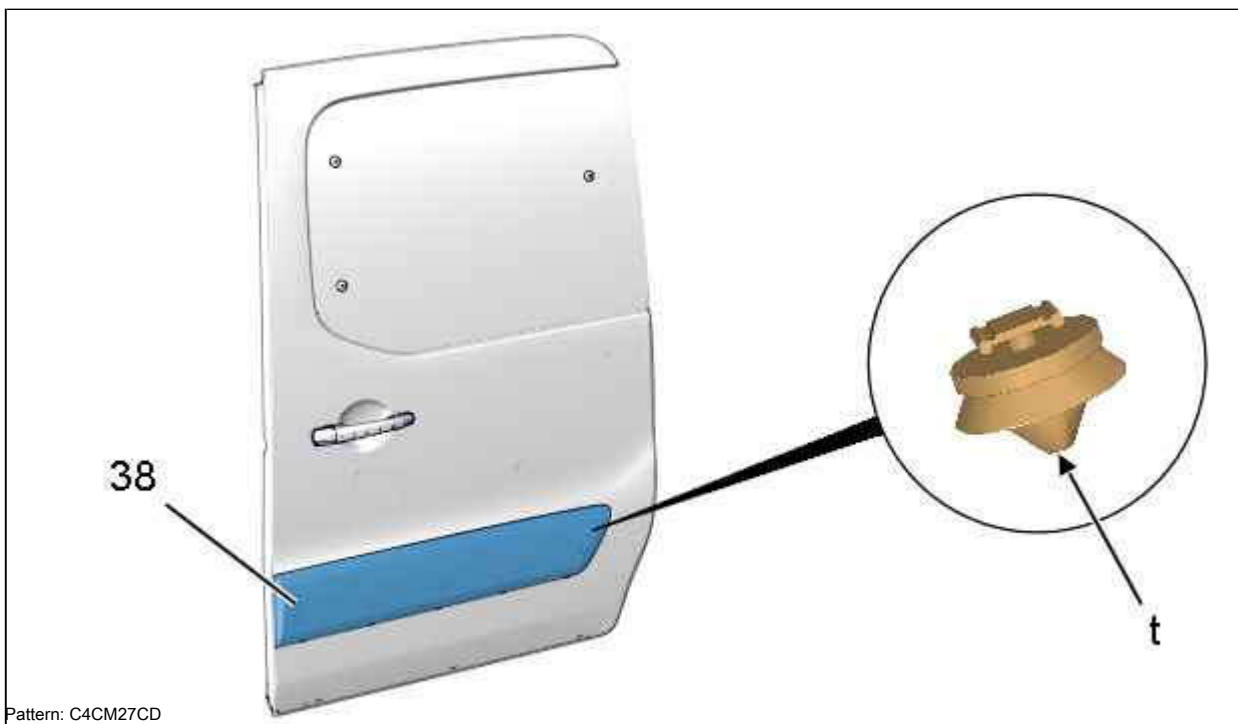
Loosen the screws (35).

Separate:

- Rope (37) (in "s")
- Lock (36) through the inner door cutout

Remove the lock (36).

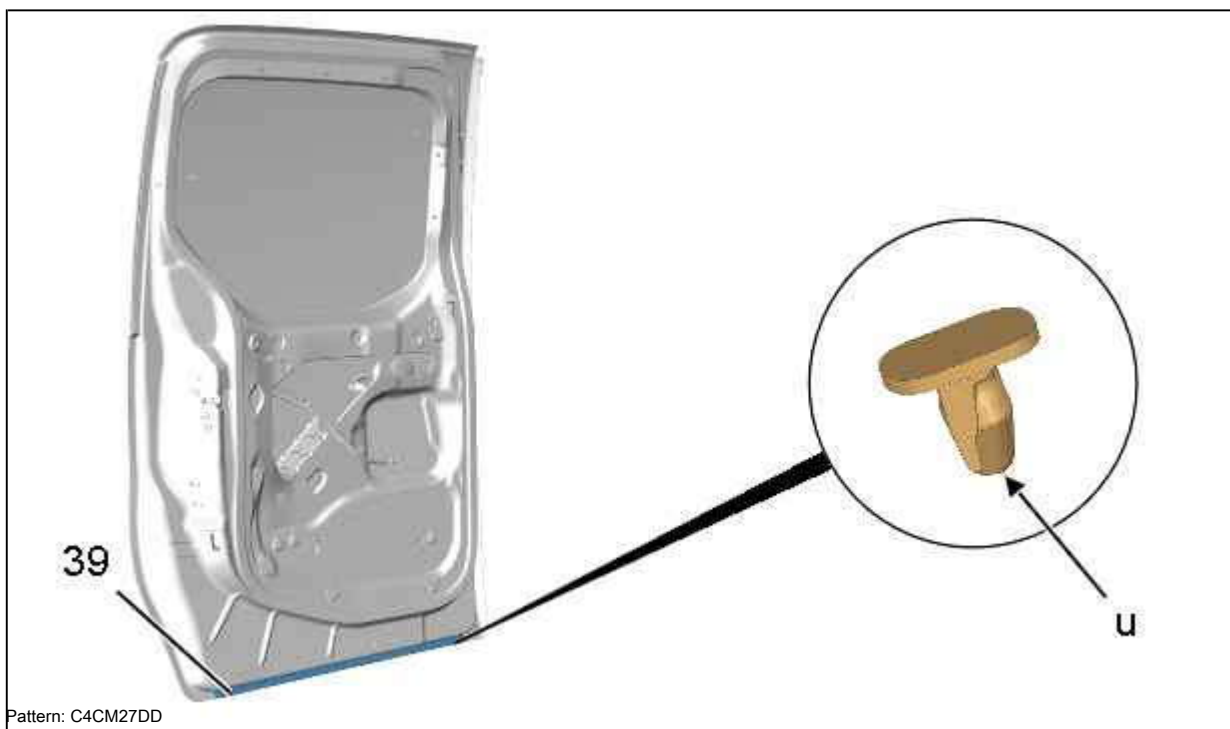
3.15. Door protection



Pattern: C4CM27CD

Detach the clips (at "t"); Using the tool [1]. Remove: Door Guard (38).

3.16. Seals



Detach the clips (at "u"); Using the tool [1]. Remove: Gasket (39).

4. Assembly

ATTENTION : Replace systematically: Defective clips.

ATTENTION : Check the operation of all mechanisms before installing the door seal sheet.

ATTENTION : Install new seals without folds or tears; Complete cleanliness of the supporting surface on the door panel is required; Roll with a roller over the pre-glued sheet; These recommendations are necessary to avoid possible penetration of water, dust or noise.

Installation is carried out by performing the removal operations in the reverse order. Tighten:

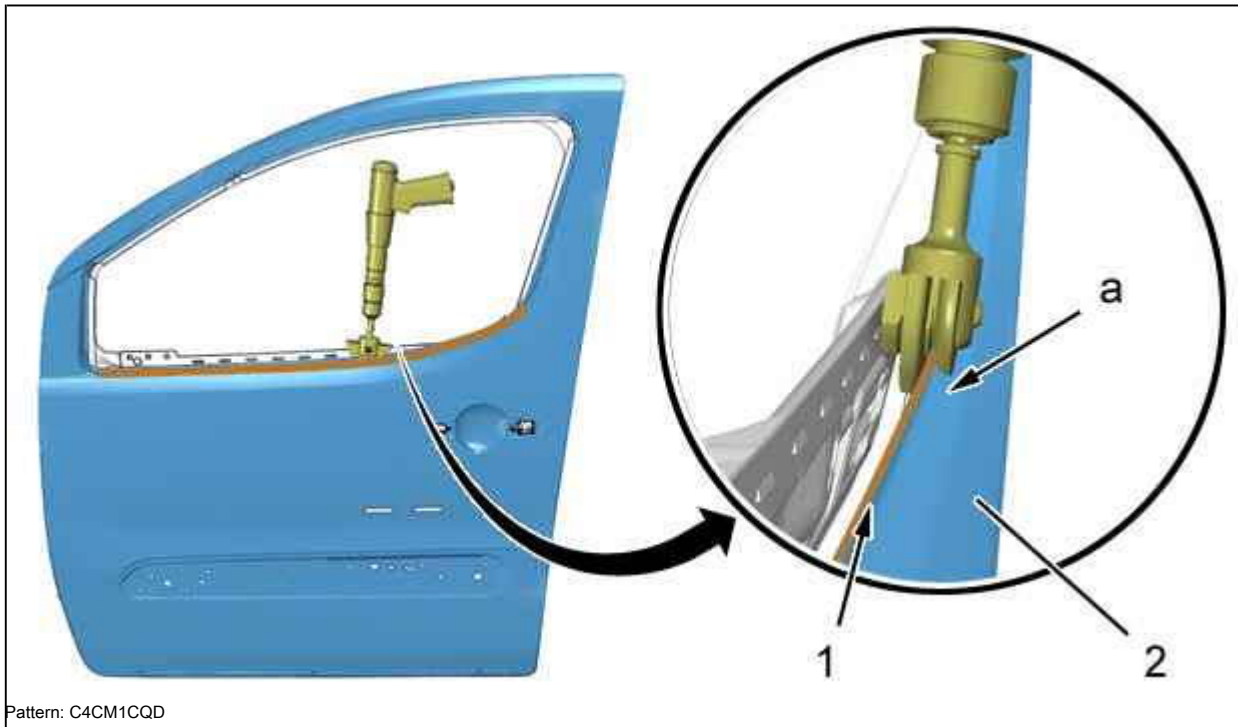
- bolts (5), (6) to a torque of 0.25 ± 0.05 da.Nm of bolts (8),
- (26) to a torque of 0.8 ± 0.2 da.Nm
- bolts (10), (12), (16), (17) torque 2 ± 0.3 da.Nm of bolts (28), (33)
- moment 0.5 ± 0.1 da.Nm Bolt (35) moment $1 \pm 0, 2$ da.Nm
-
- nuts (13) to a torque of 2 ± 0.3 da.Nm

Check the operation of the various equipment.

REPLACEMENT: FRONT DOOR OUTER PANEL

MANDATORY: Observe the cleanliness and rules of safe work.

1. Information



ATTENTION : It is imperative to use tool G.1130 when carrying out the rolling operation in the area "a" of the outer panel of the front door (2) with a horizontal door stiffener (1).

2. Recommended equipment

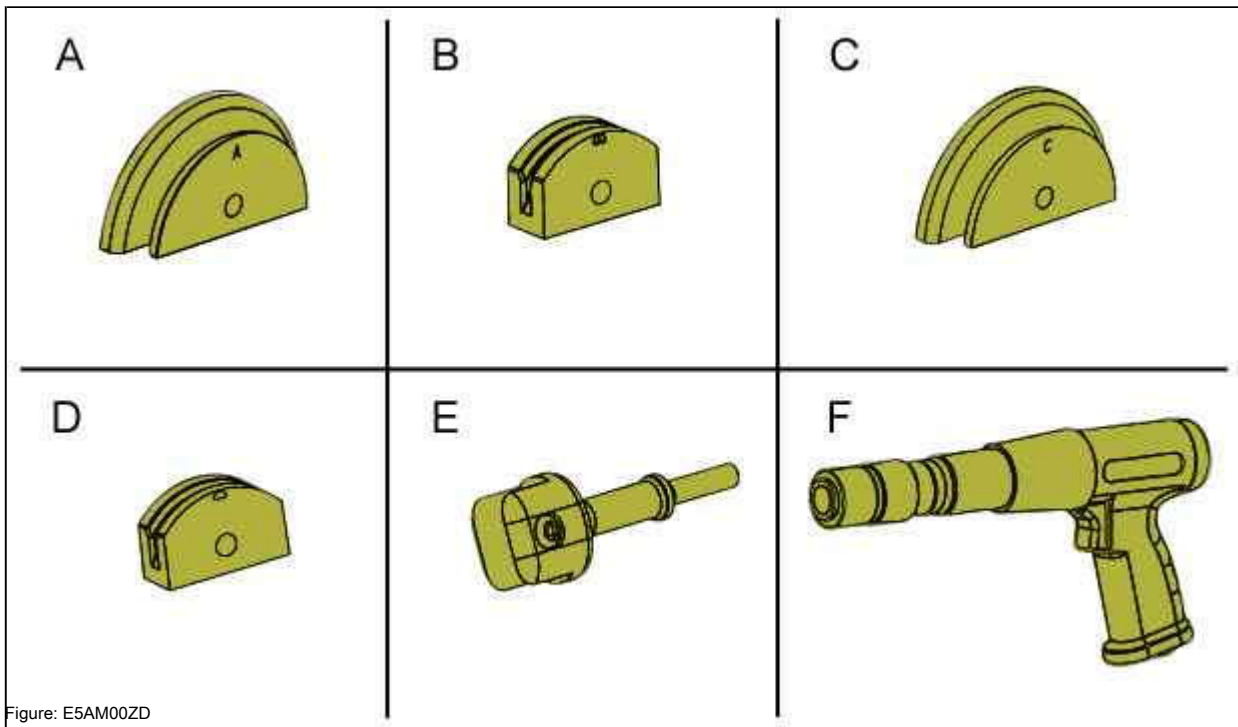


Figure: E5AM00ZD

[1] set for rolling the outer door panel. tool [1]: G.1130.

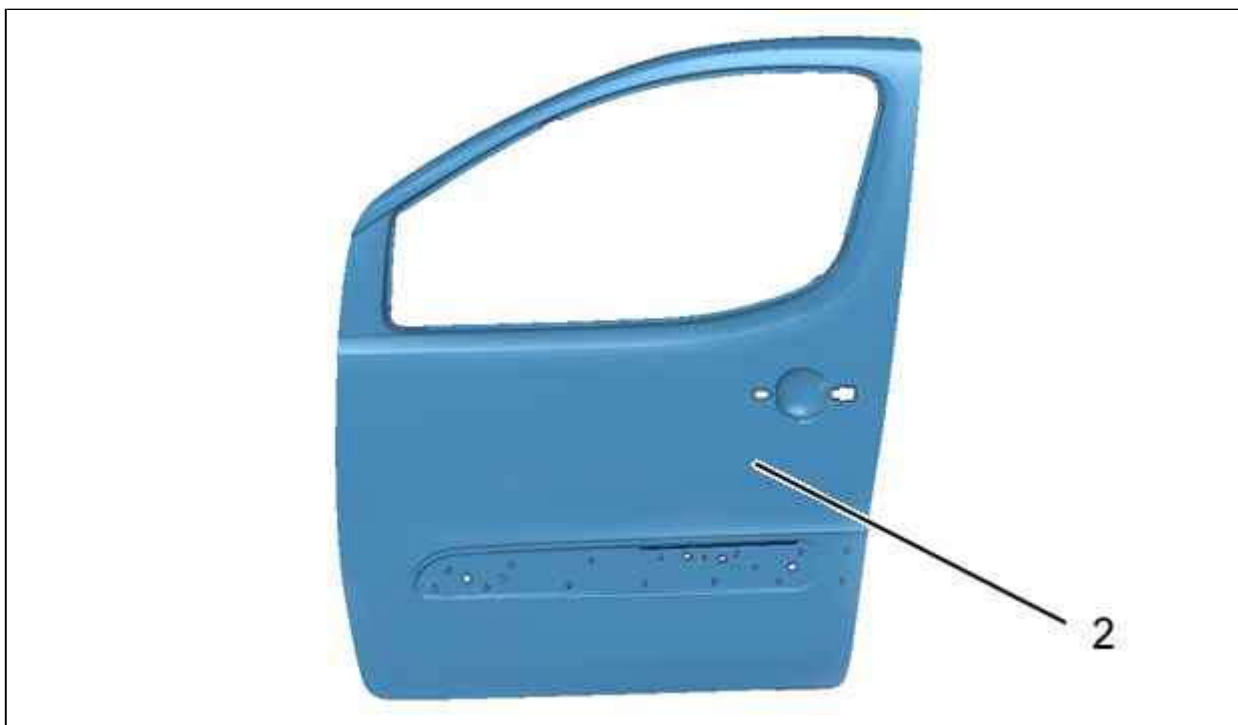
Part catalog number: 9776.EB.

3. Additional operation

Remove the front door.

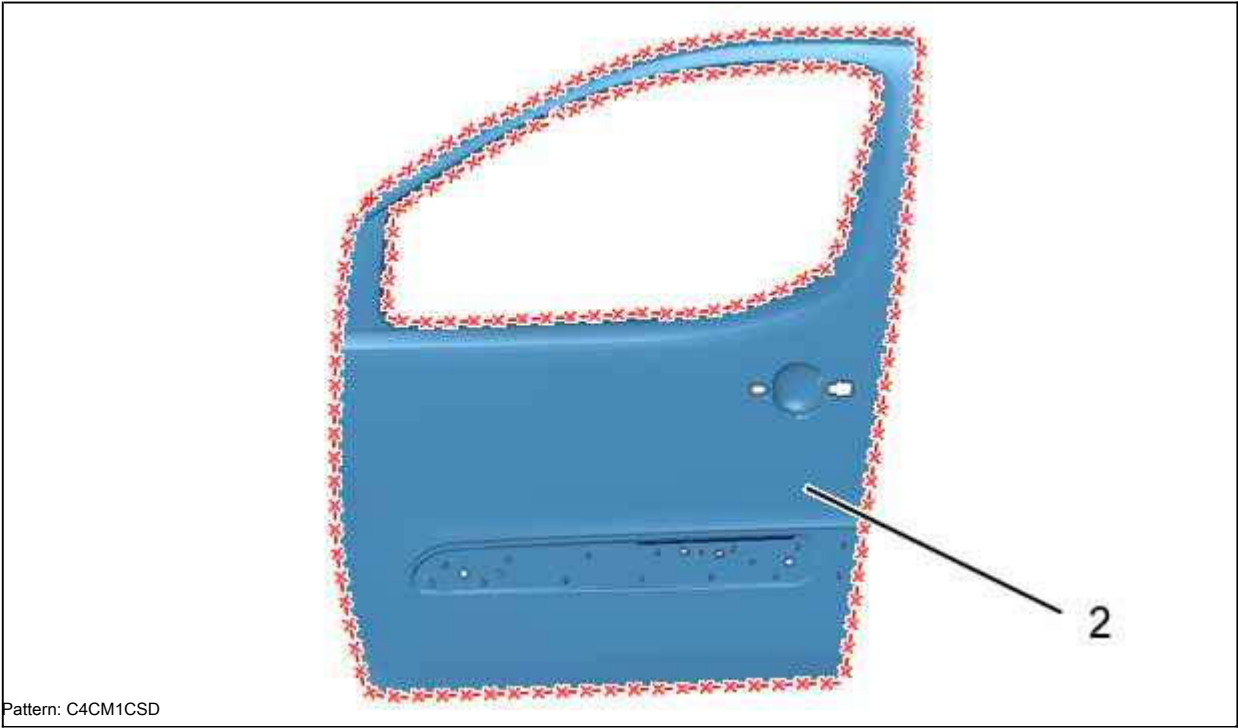
Disassemble (Partially): Front door.

4. Identification of the spare part



Label Designation		Thickness (mm)	Nature / classification
(2)	Front door outer panel 0.77 (*) ADX: mild steel		ADX (*)

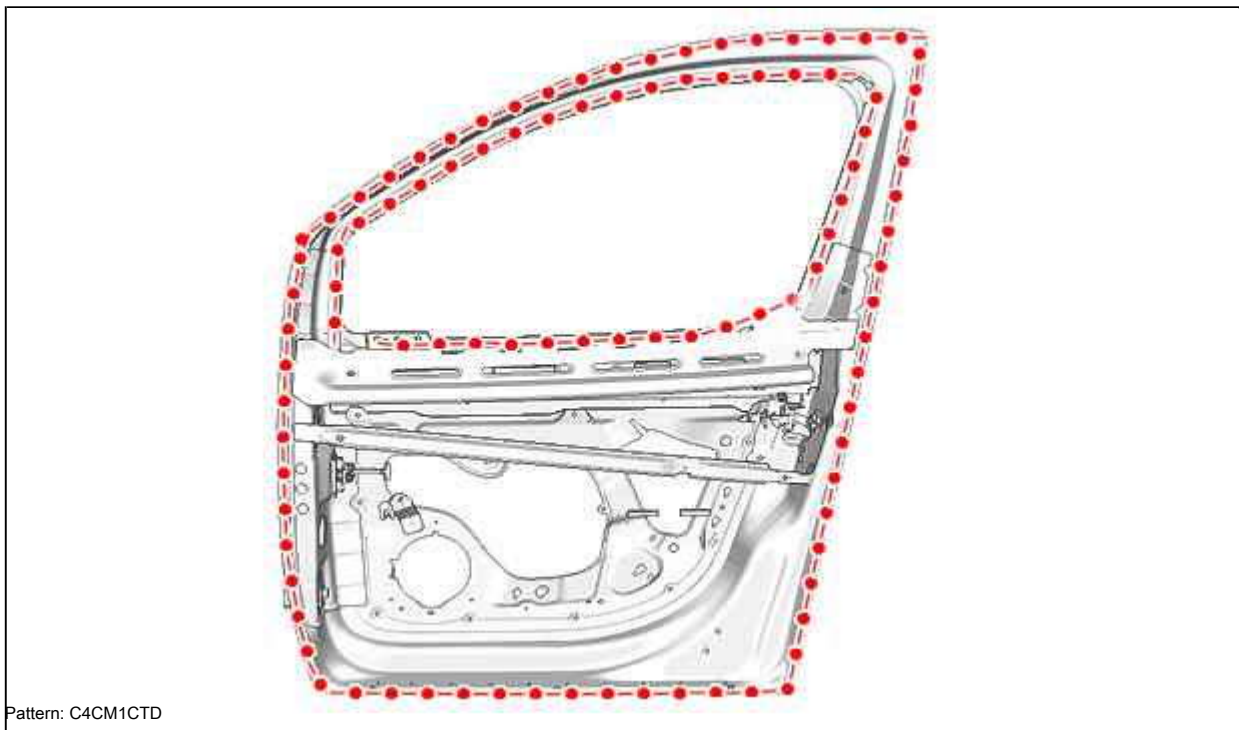
5. Disconnection



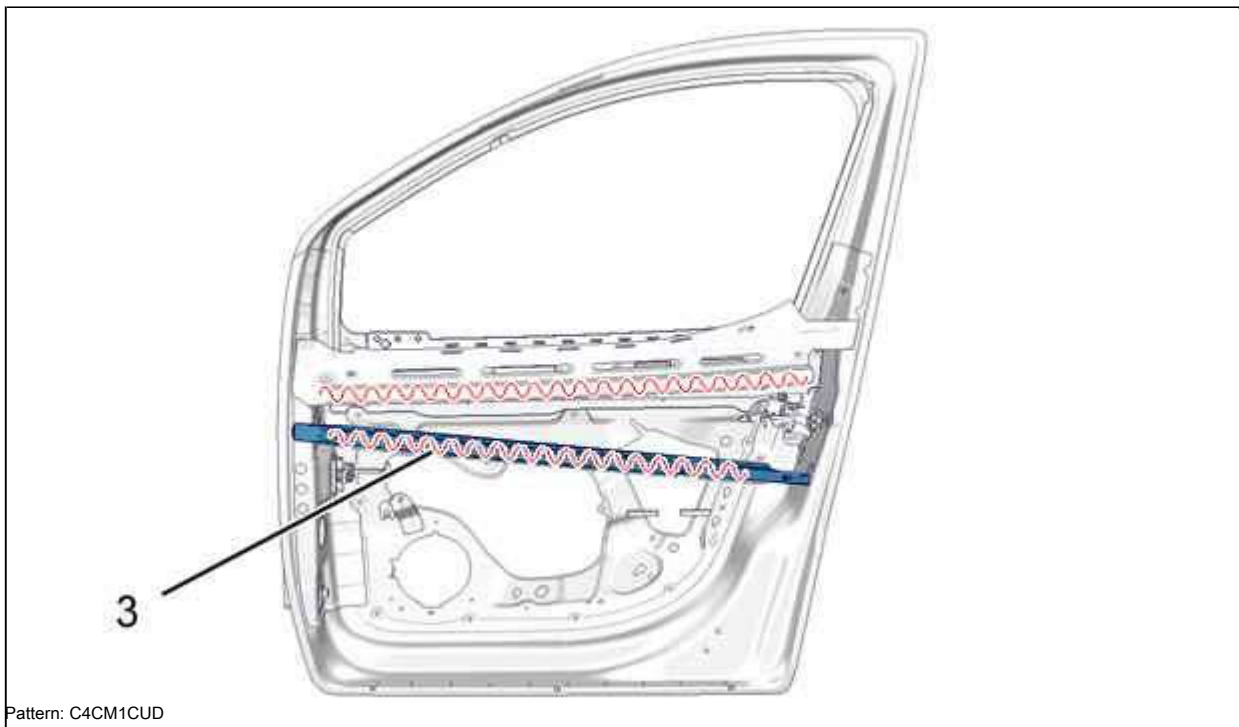
Cut: Outline of the outer door panel (Front); With floppy disk. Remove the front door outer panel (2).

NOTE: The outer door panel (2) is glued with structured adhesive, type "B8". To remove the outer door panel (2), it is necessary to warm up the circuit of the outer panel of the front door (2).

6. Cleaning and preparing the door

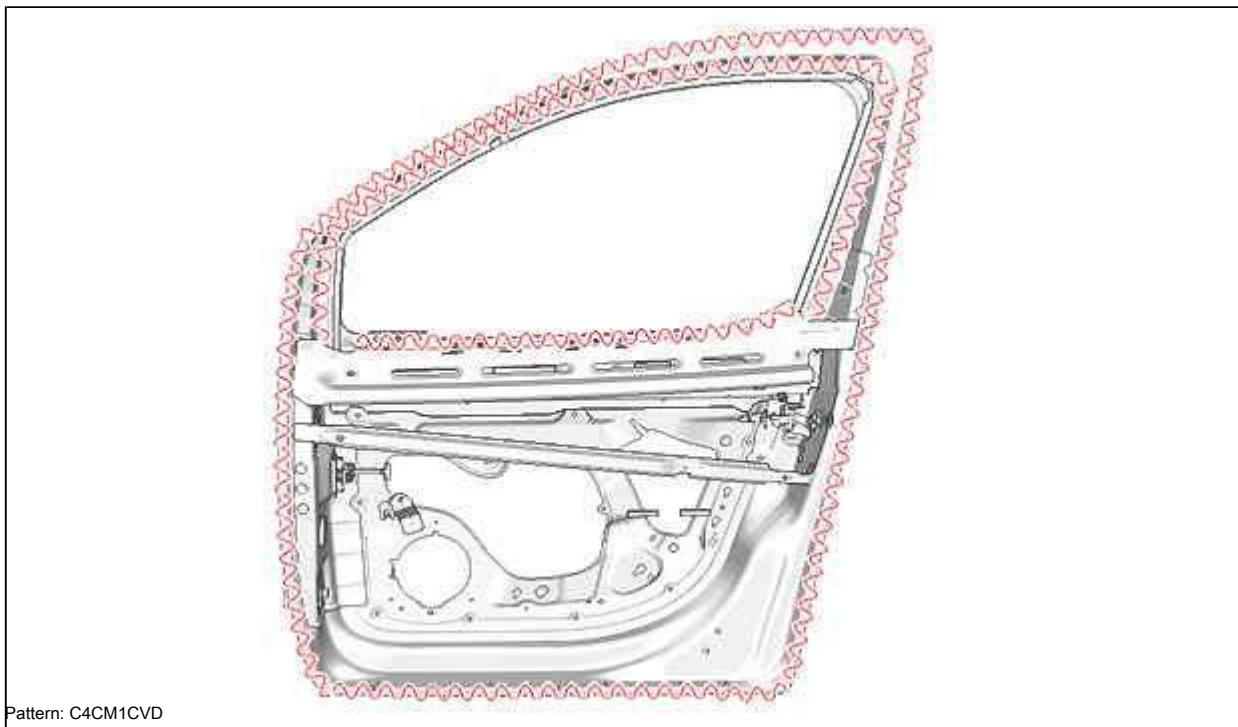


Straighten the joints and protect them with a layer of welding primer (index "C7").



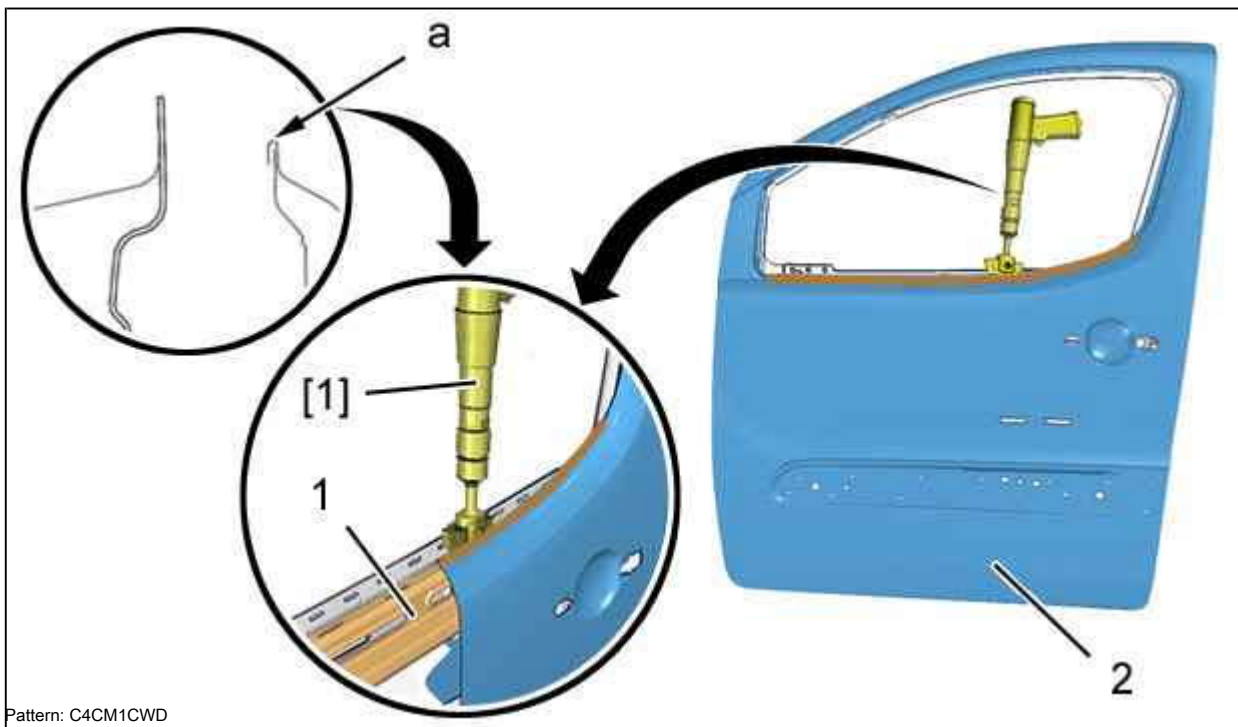
Apply fixing compound with index "A1" to the next element: Side impact protection reinforcement (3).

NOTE: The height of the adhesive bead must be at least 15 mm.



Apply "B8" structural adhesive along the contour of the front door.

7. Mandrel

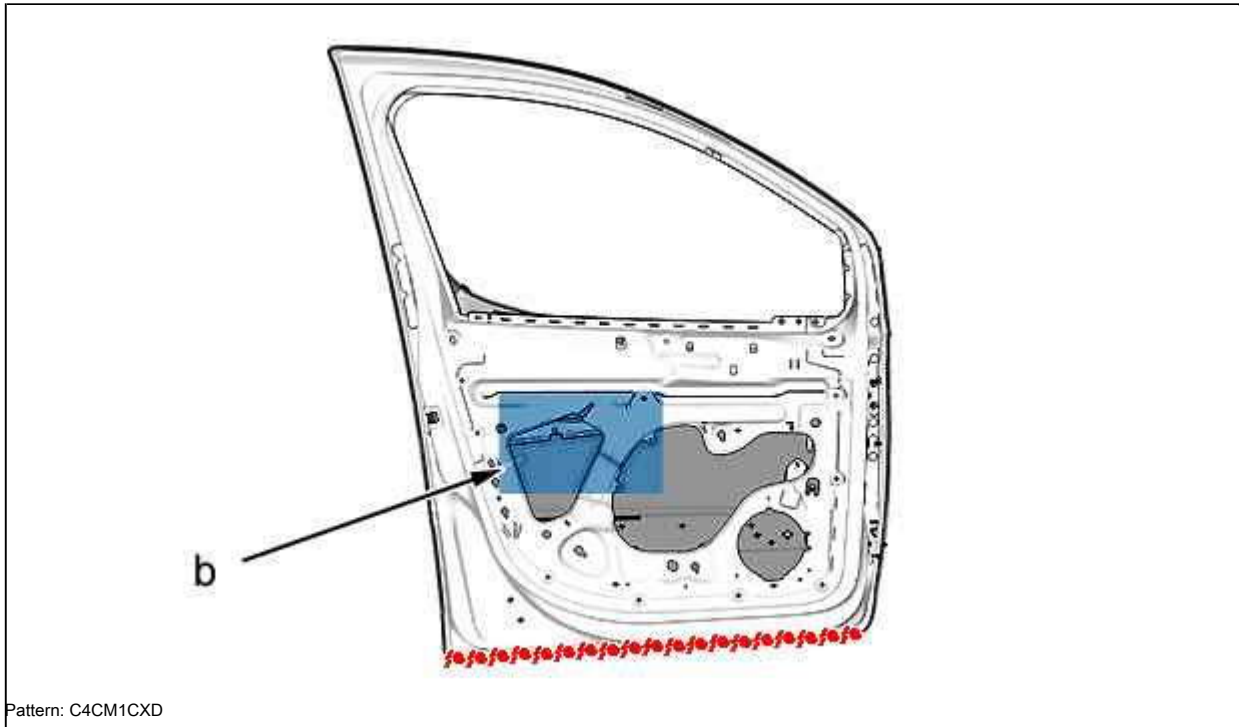


ATTENTION : It is imperative to use tool G.1130 when carrying out the rolling operation in the area "a" of the outer panel of the front door (2) with a horizontal door stiffener (1).

Install: Front door outer panel (2).

Fold in the outer panel of the front door; Using the tool [1].

8. Tightness



Apply a layer of phosphate primer to the cleaned area. Apply type A1 sealing mastic. Install: Buffer plate (at "b").

9. Protection

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

10. Reinitialization

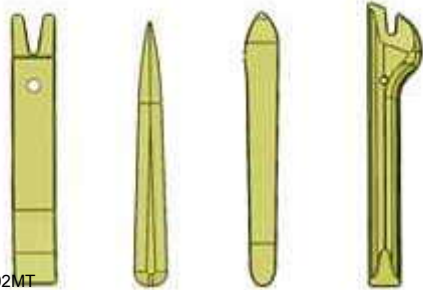
Perform additional operations.
Reconnect the battery.

DISASSEMBLY ASSEMBLY: FRONT DOOR

MANDATORY: Observe the cleanliness and safety rules

i

1. Equipment

tool	Article Designation	
	[1350ZZ] Trim	Removal Tool
<div><div>[1350-ZZ]</div><div></div><div>Figure: E5AG02MT</div></div>		

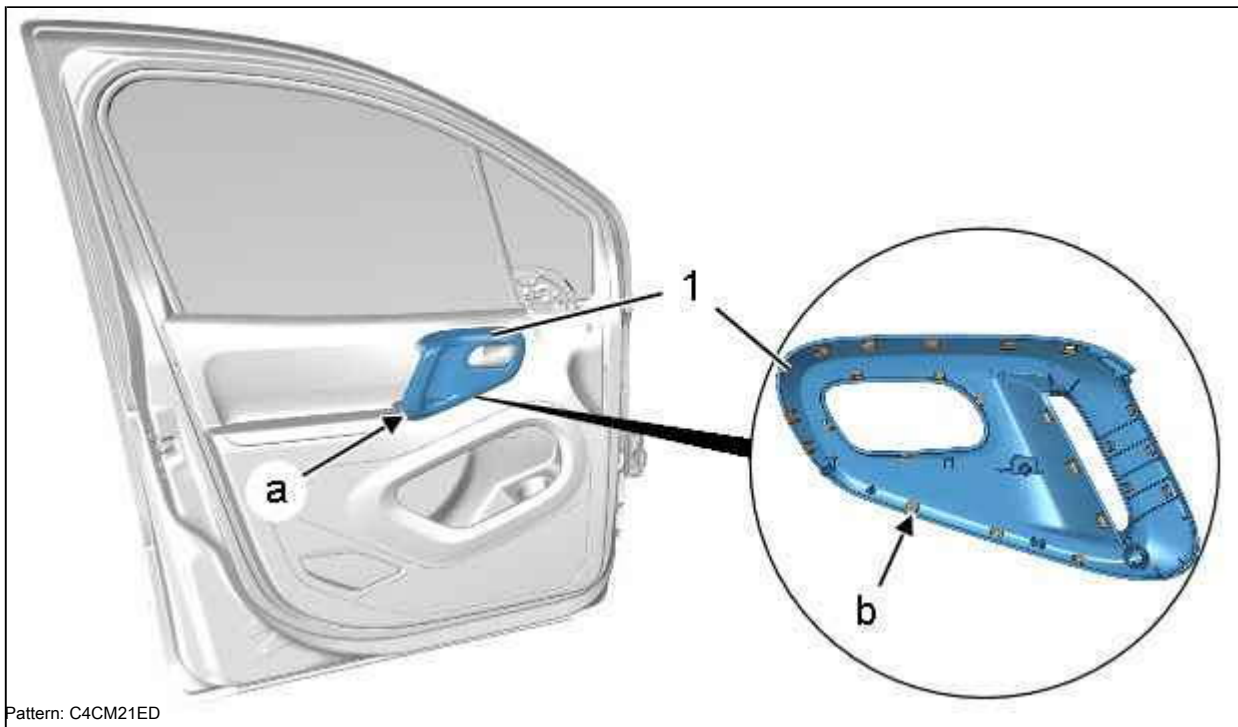
2. Preliminary operations

Remove the front door

i...

3. Disassembly

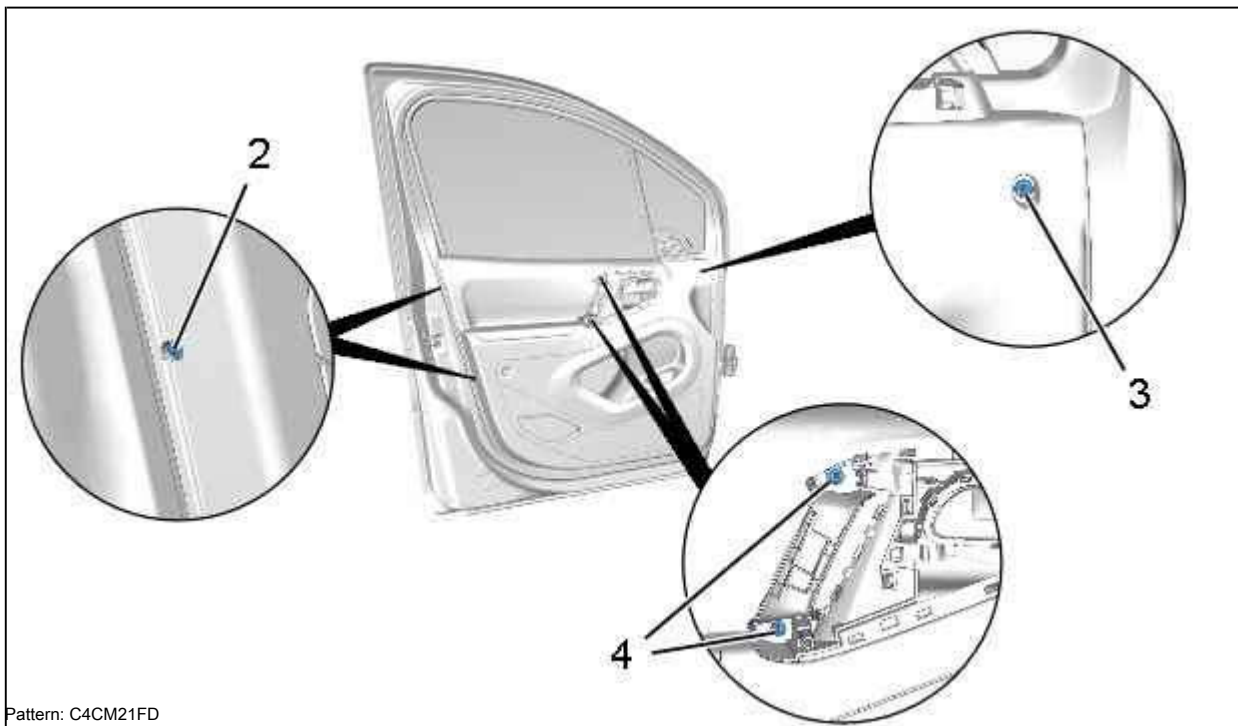
3.1. Front door panel



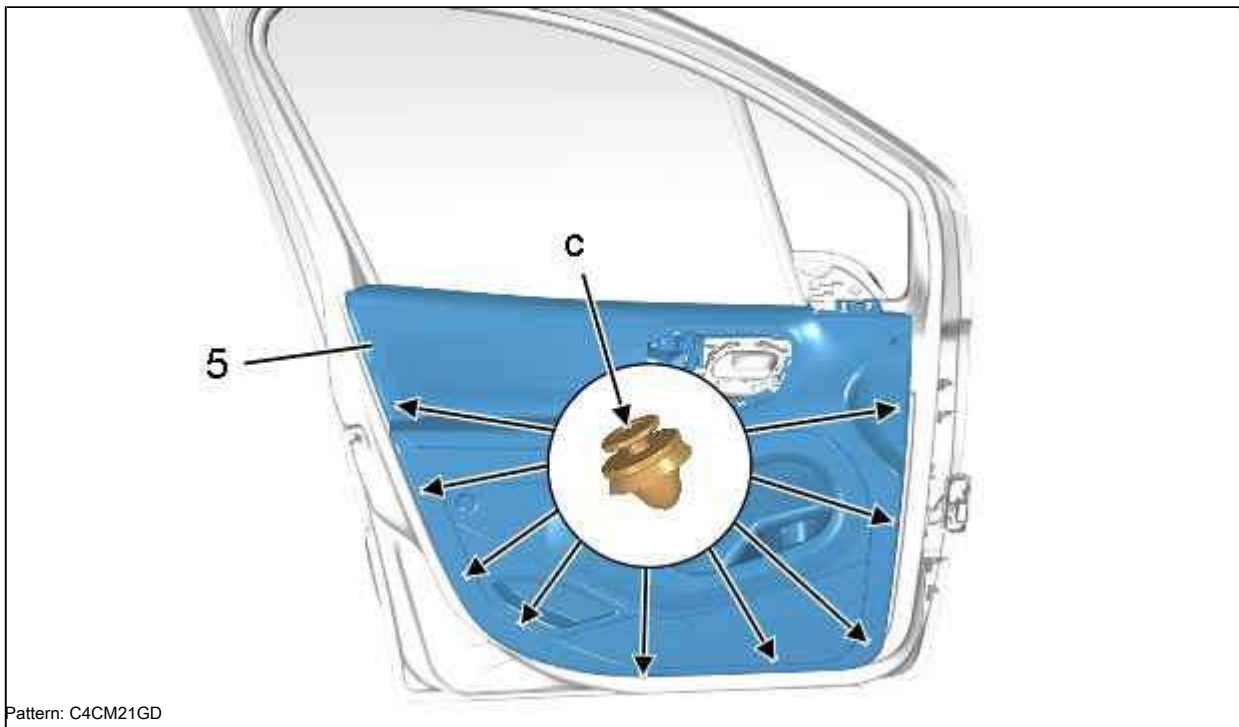
Detach decorative strip (1) (at "a"); Using the tool [1350ZZ].

NOTE: Continue this operation on all clips (in "b"); Using the tool [1350ZZ] around the trim (1), to detach the trim (1).

Remove decorative strip (1).

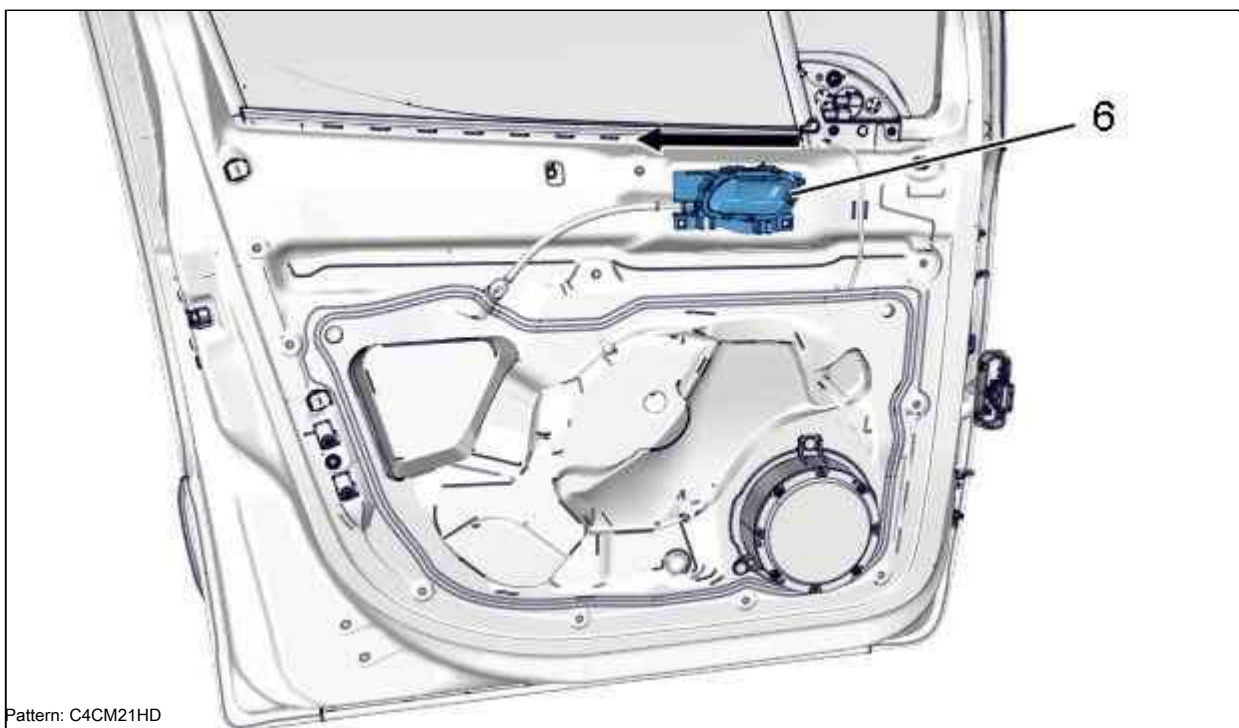


Unscrew bolts (2), (3), (4).

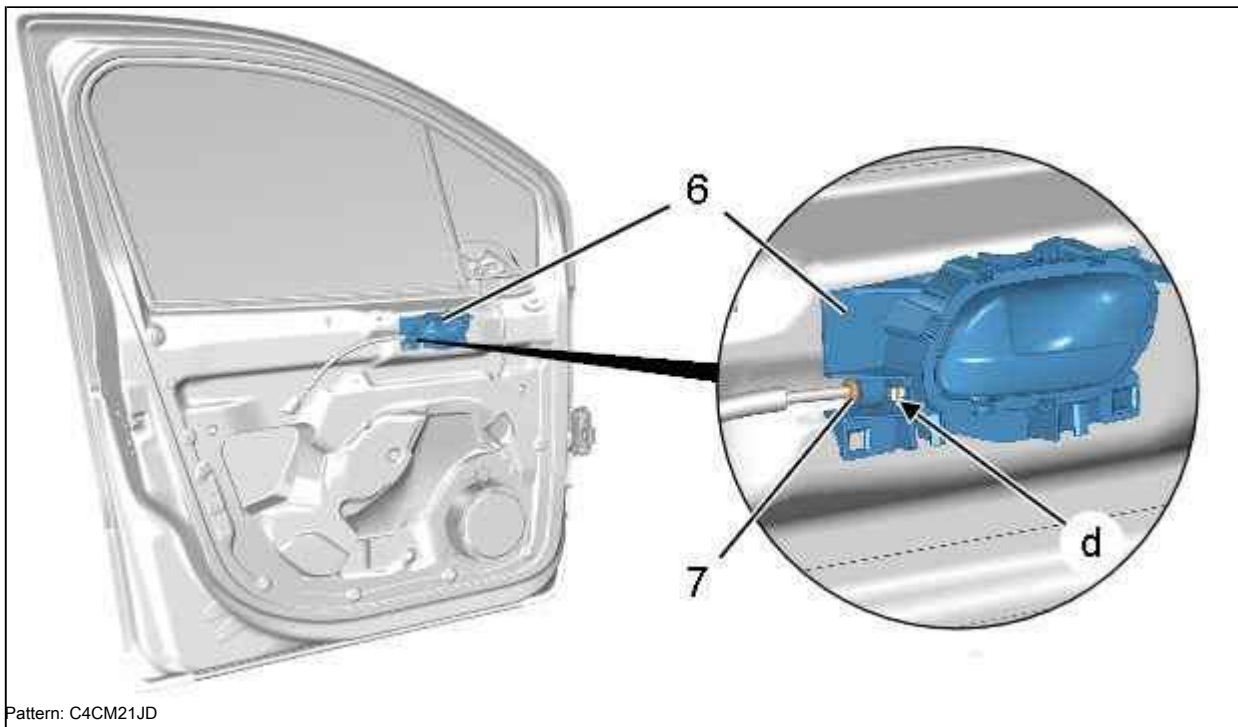


Disconnect: Front door trim panel (5) (at "c"); Using the tool [1350ZZ]. Remove the front door panel (5).

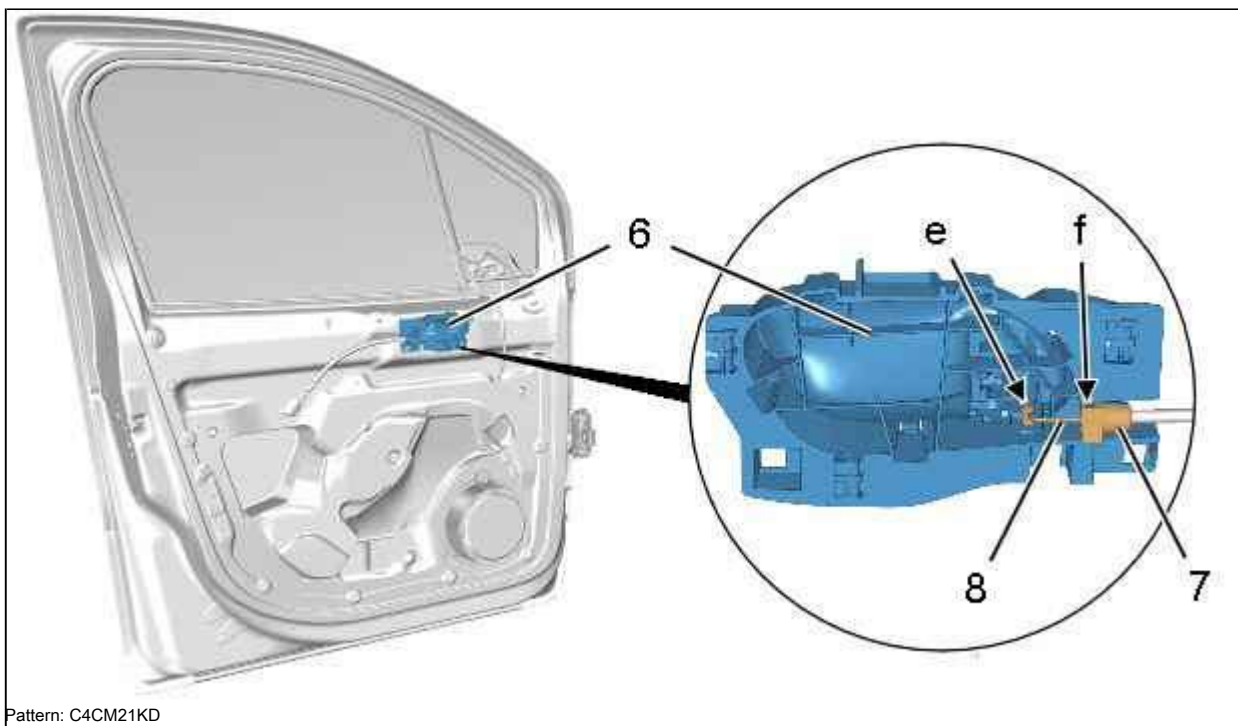
3.2. Internal button to unlock



Detach the interior opening handle (6) (in accordance with the arrow).



Unfasten the cover retainer (7) (in "d") of the drive (6) opening from the inside.



Disconnect:

- Fastening the sheath of the drive cable (7) (in "f")
- End of the cable (8) (in "e")

Remove the inner opening handle (6).

3.3. Speaker

Remove the loudspeaker from the front door



3.4. Outside rearview mirror

Shoot outside mirror



3.5. Sealed panel



Unstick the sealing panel (9); Using the tool [1350ZZ].

NOTE: Remove all traces of adhesive from the door in the gluing area of the sealed panel using the cleaner marked "J1".

3.6. Side door glass (Front)

Remove: **Glass front door**

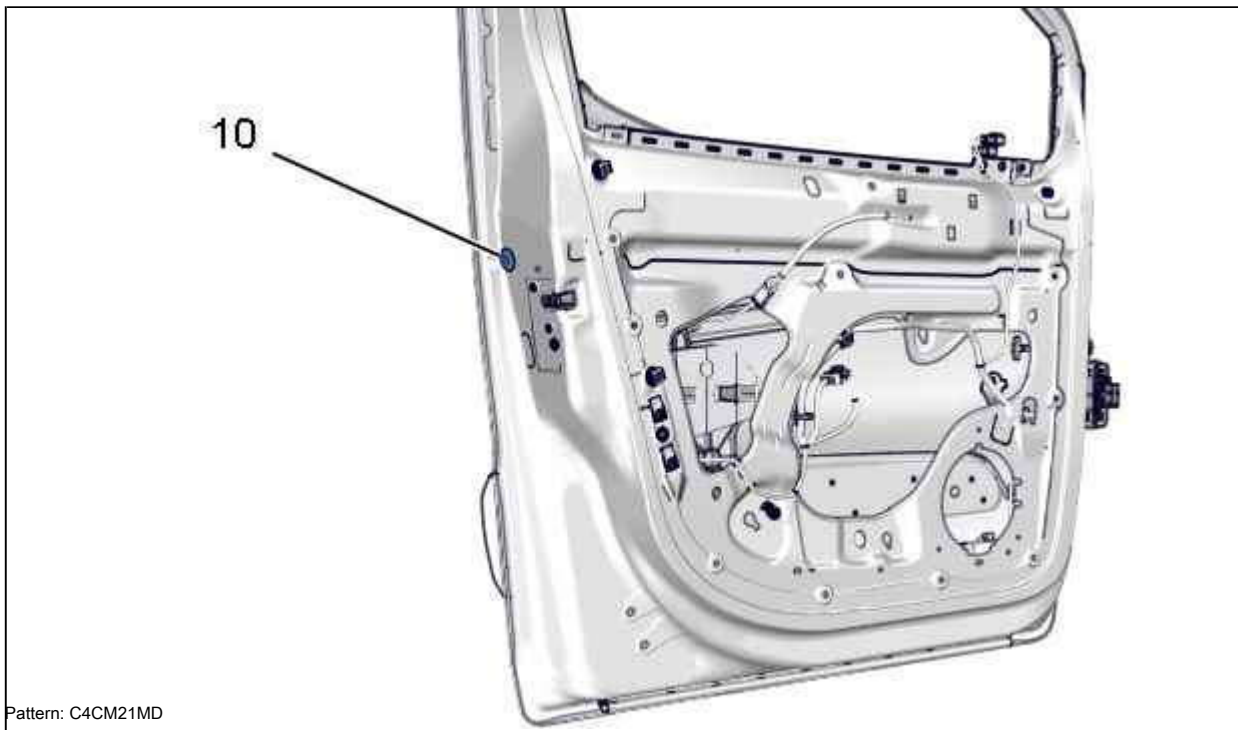


3.7. Front door window lifter

Remove: **Front door window lifter**

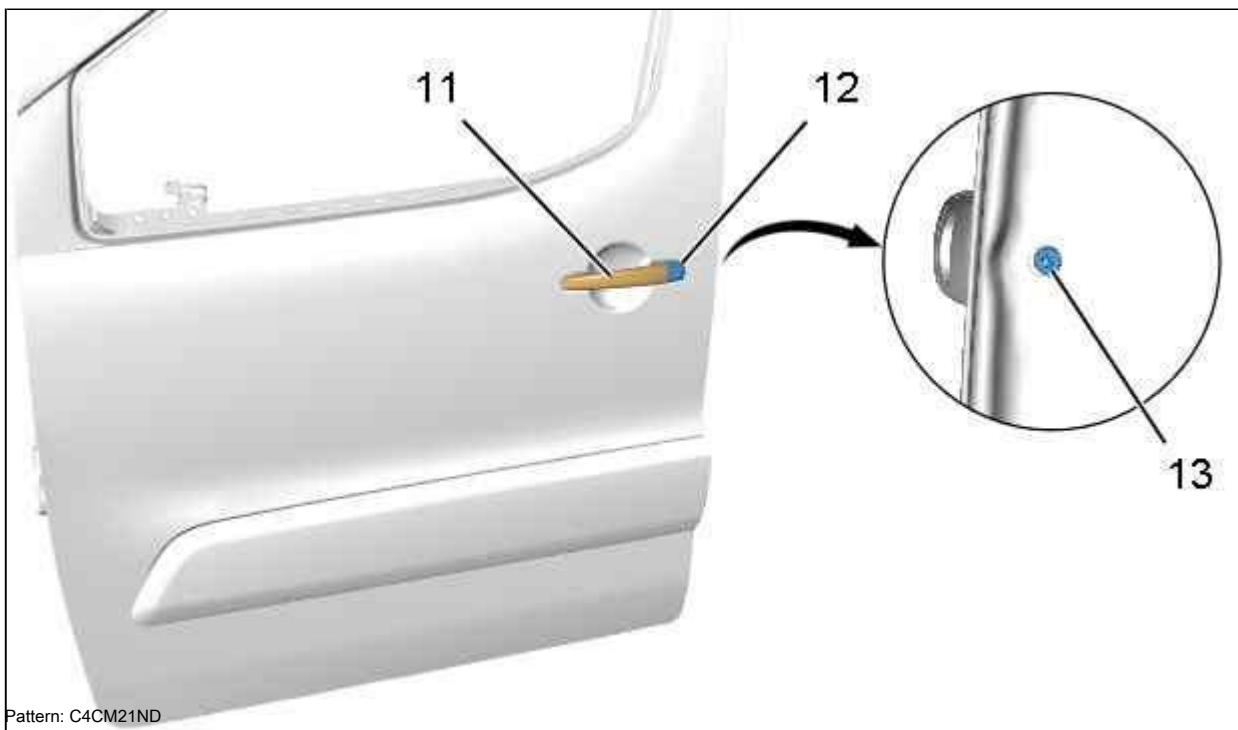


3.8. Outside door opening handle



Unstick the glued strip (10).

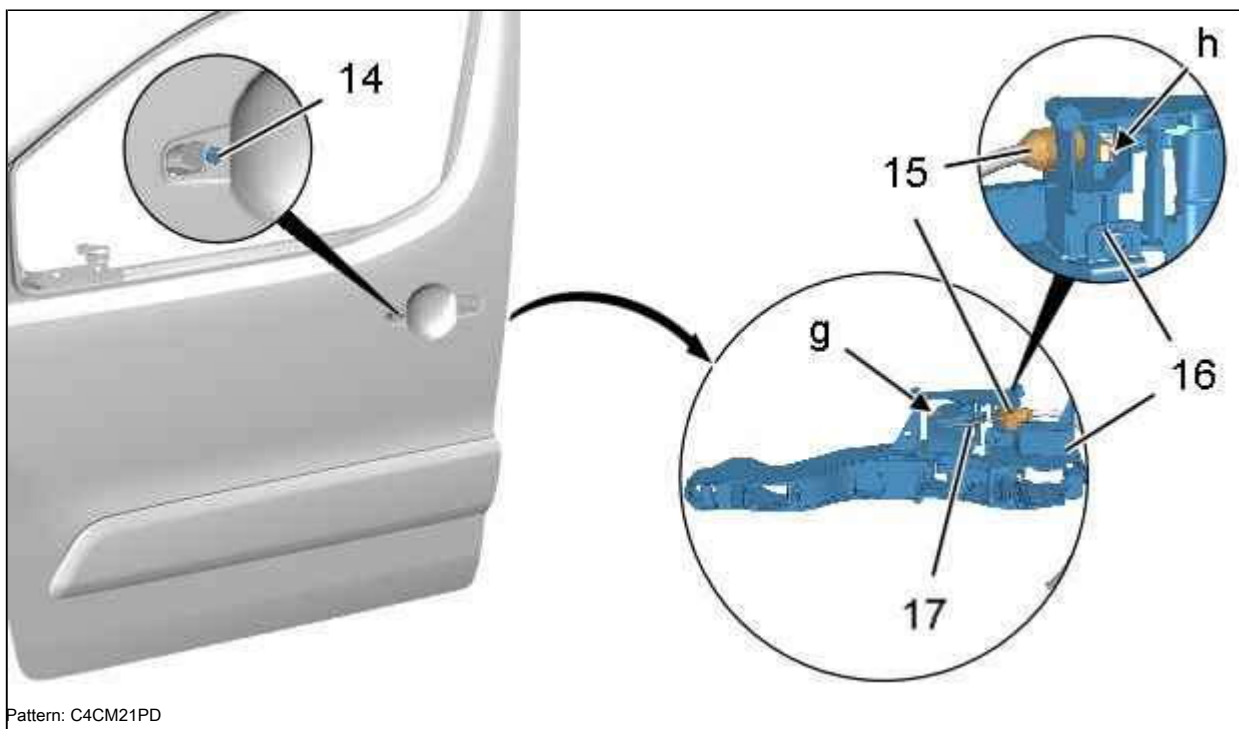
NOTE: Remember to replace the adhesive strip (10).



Loosen the bolt (13) of the front door lock (12) (Non-removable bolt (13)). Separate Remove: Lock (12).

Push the handle (11) back and free it. Open: Opening handle (11) (All the way). Remove: Opening handle (11).

3.9. Outside opening control mechanism



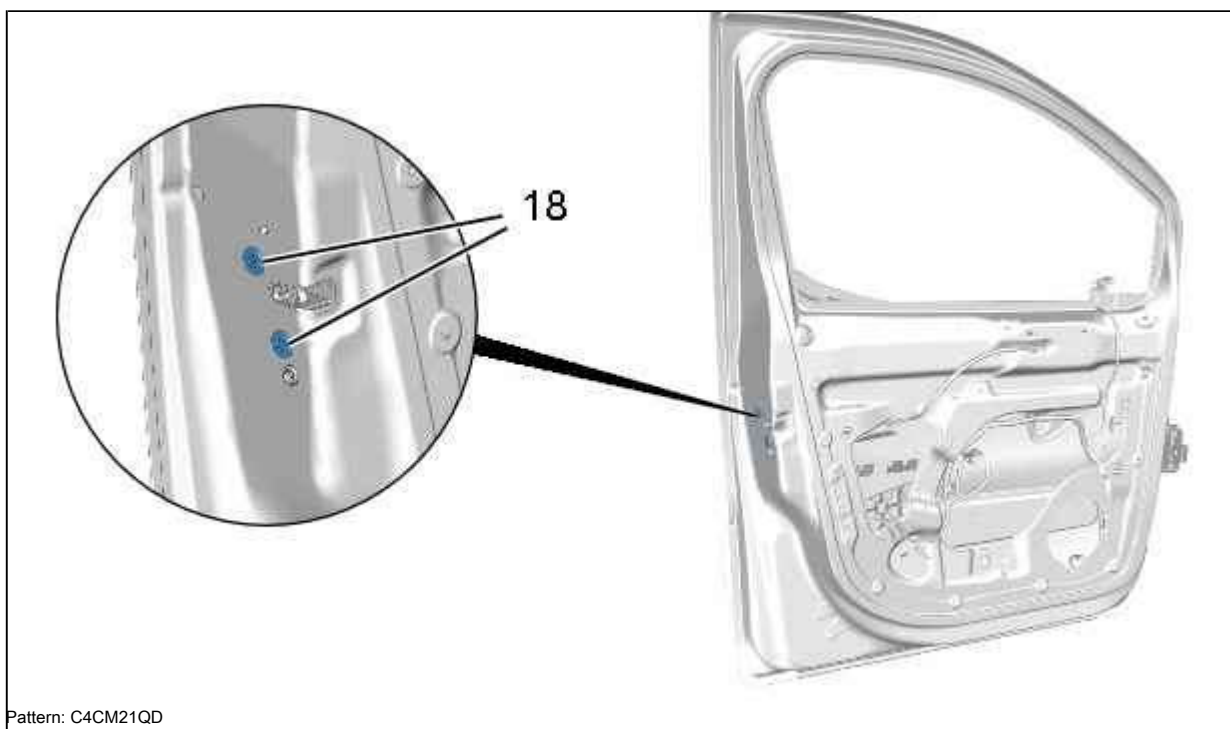
Remove the screw (14).

Disconnect the external opening control (16) from the inside of the door. Disconnect:

- Fastening the sheath of the drive cable (15) (in "h")
- End of the cable (17) (in "g")

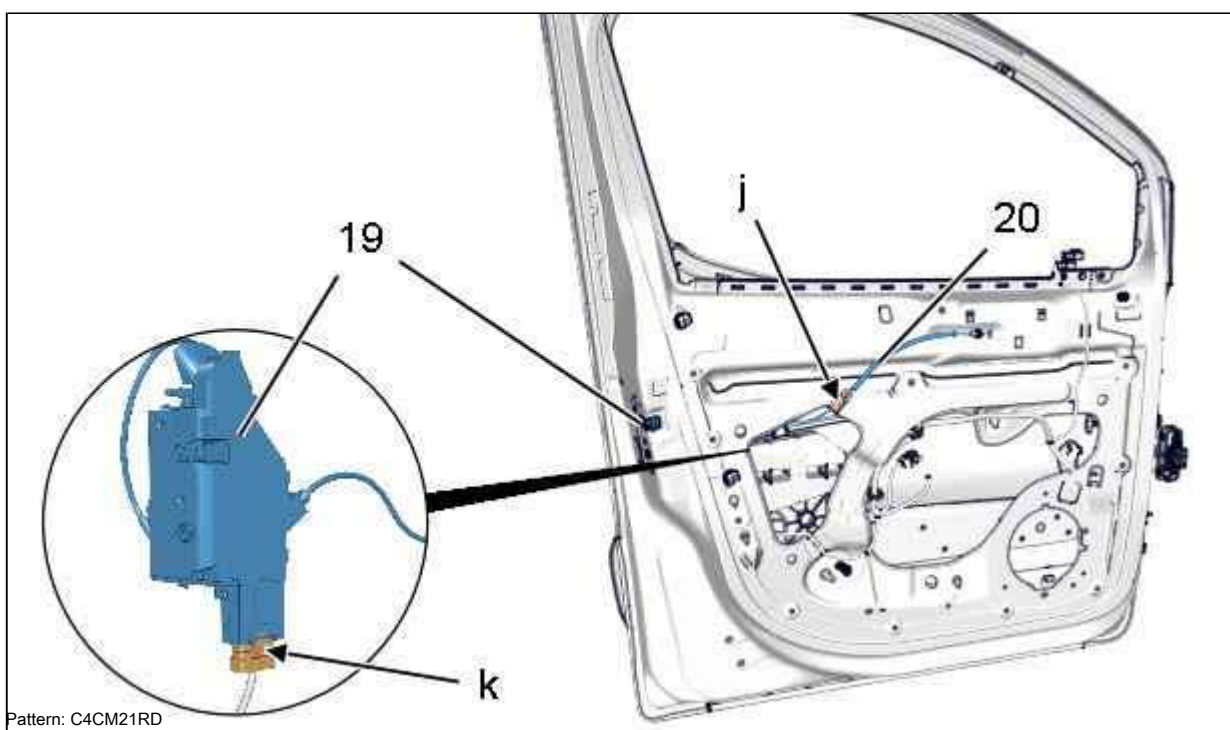
Remove the external opening control (16).

3.10. Lock



Pattern: C4CM21QD

Loosen the screws (18).



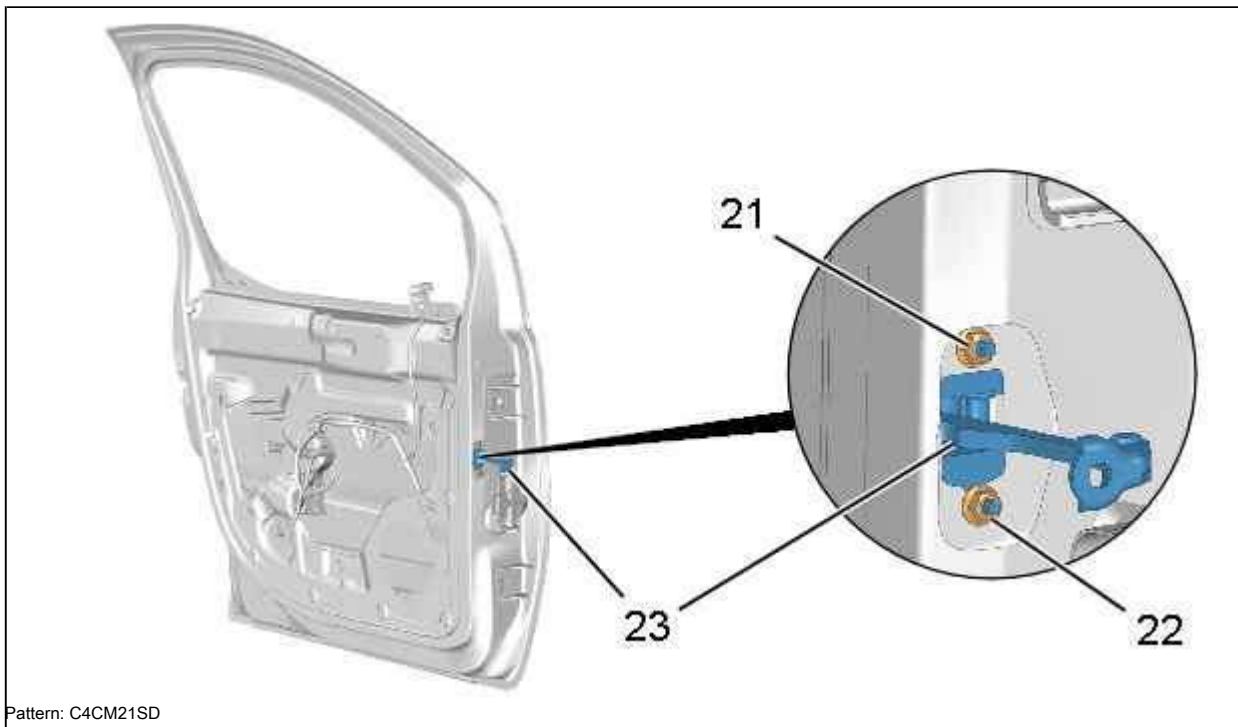
Pattern: C4CM21RD

Release the cable (20) (at "j").

Release the lock (19) through the inner opening of the door. Disconnect plug (at "k").

Remove the lock (19).

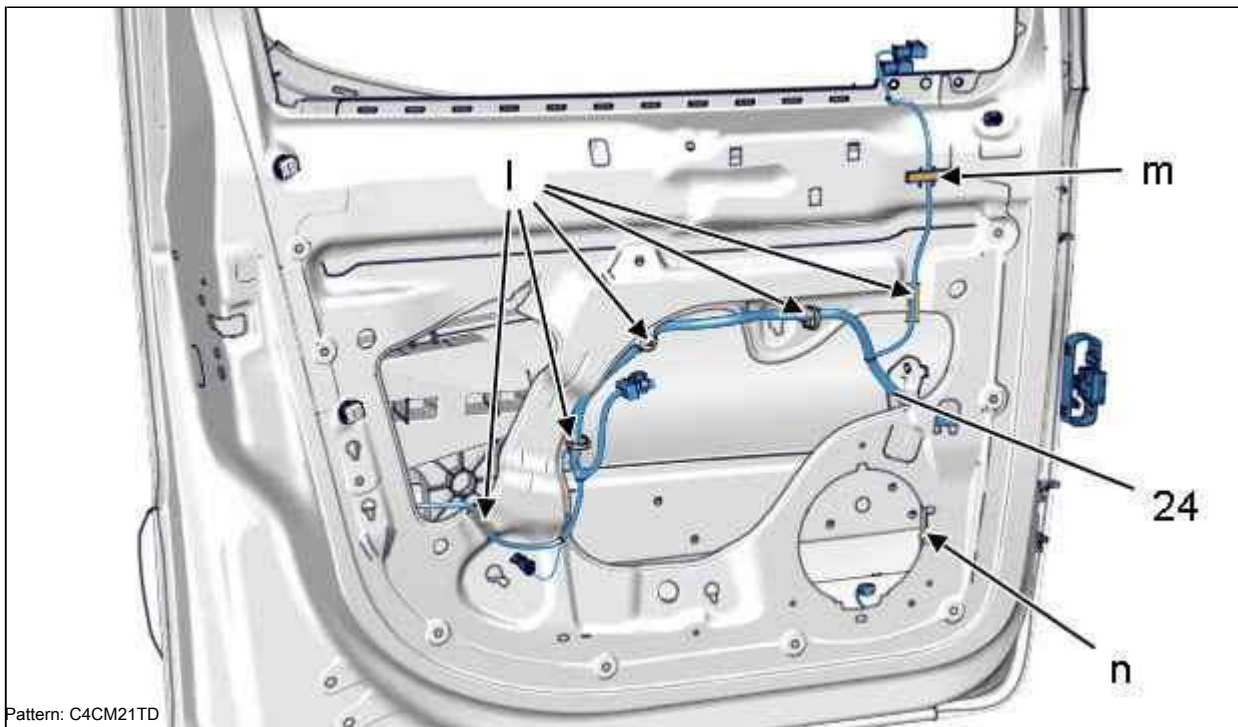
3.11. Door stop



Remove:

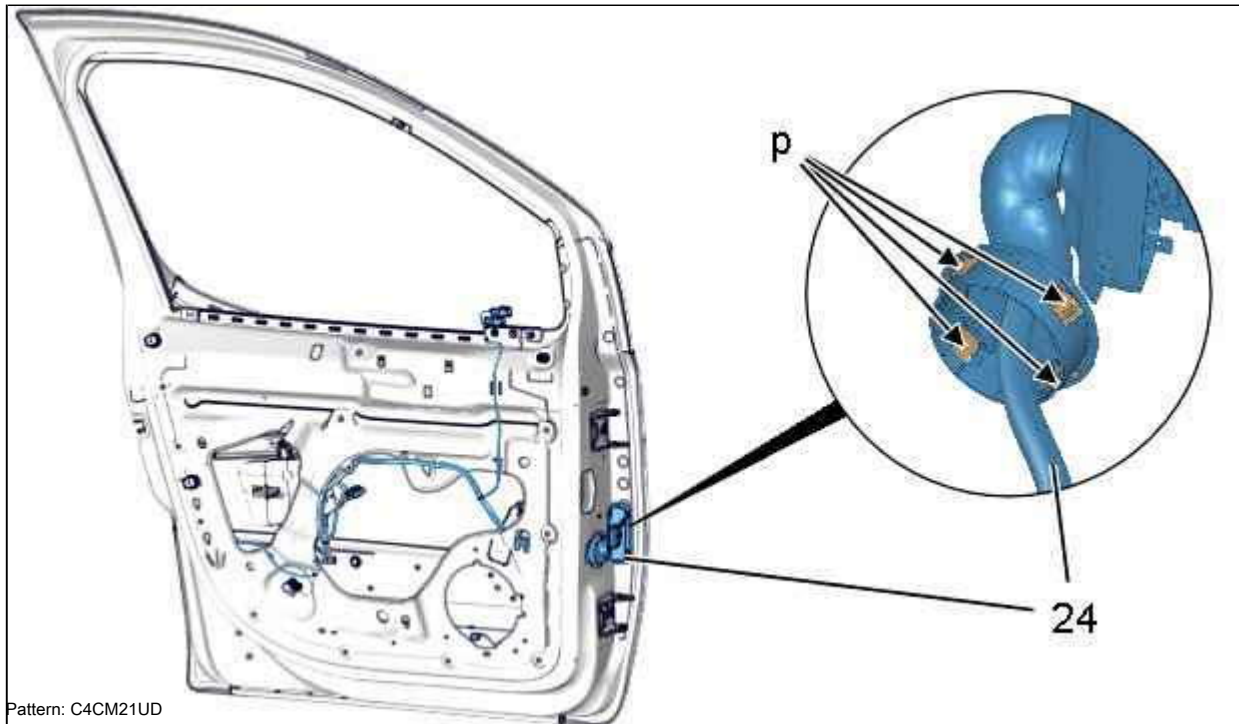
- fixing nuts (21), (22)
- Door stop (23)

3.12. Electrical harness



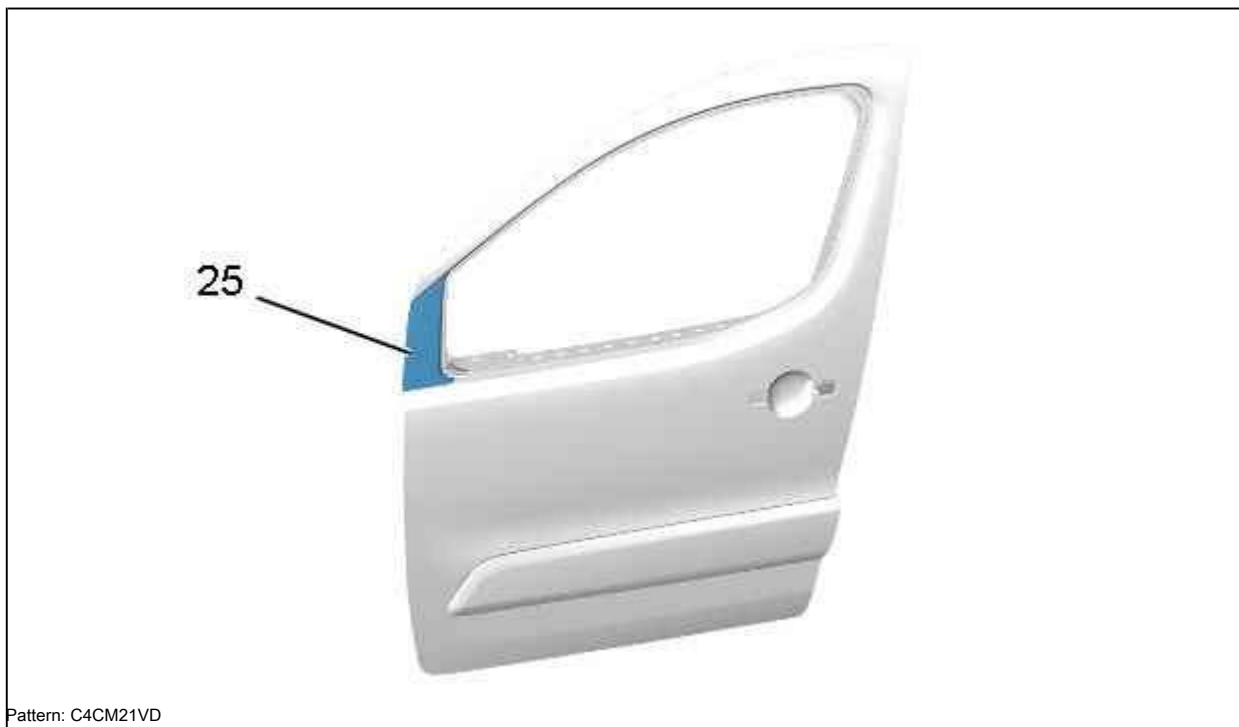
Detach the fastening clamps (in "l", "n"); Using the tool [1350ZZ]. Separate: Adhesive sponge panel (at "m").

Separate the wire harness (24).



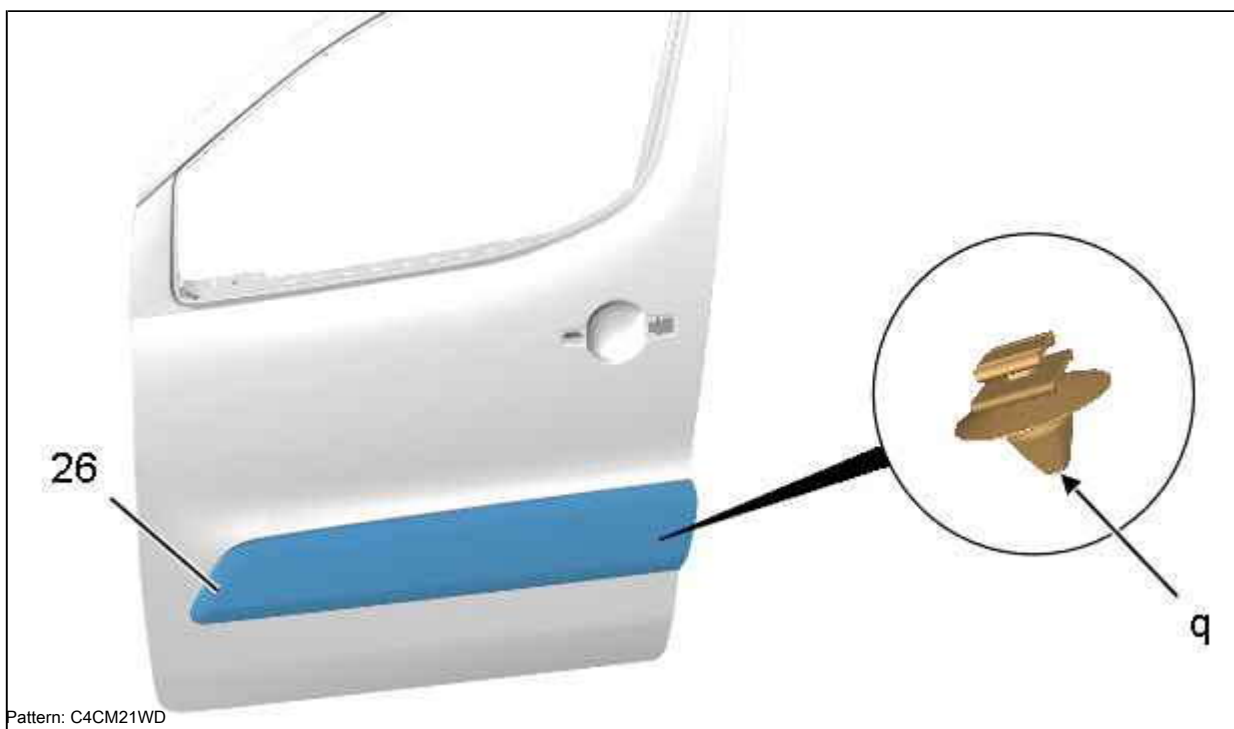
Disconnect (at "p"); Using the tool [1350ZZ]. Remove the harness (24).

3.13. Front door side self-adhesive strip



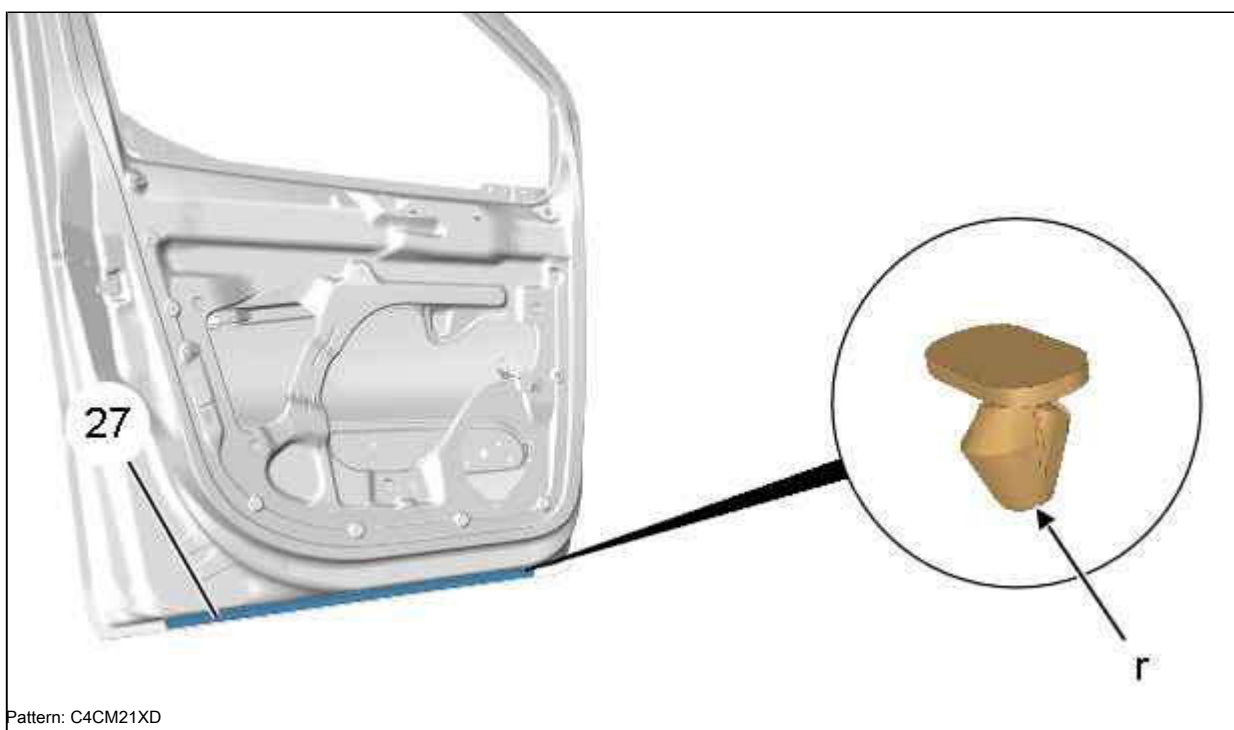
Separate Remove: Front door self-adhesive side trim (25).

3.14. Door protection



Detach the clips (at "q"); Using the tool [1350ZZ]. Remove: Door Guard (26).

3.15. Seals



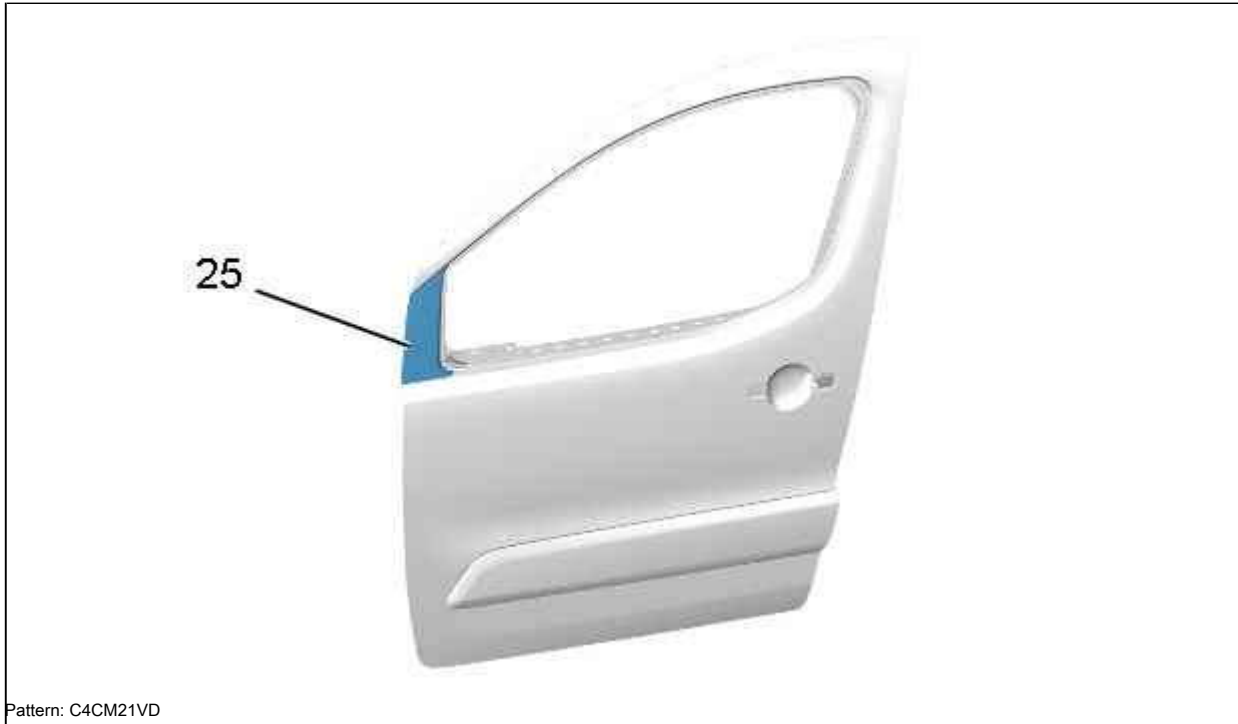
Detach the clips (at "r"); Using the tool [1350ZZ]. Remove the oil seal (27).

4. Assembly

ATTENTION : Replace systematically: Defective clips.

ATTENTION : Check the operation of all mechanisms before installing the door seal sheet.

ATTENTION : Install new seals without folds or tears; Complete cleanliness of the supporting surface on the door panel is required; Roll with a roller over the pre-glued sheet; These recommendations are necessary to avoid possible penetration of water, dust or noise.



Degrease the bonding surfaces Using the "J1" degreaser. Install Stick: Front door self-adhesive side trim (25).

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- bolts (2), (3), (4) with a torque of 0.25 ± 0.05 da.Nm
- bolts (13), (14) with a torque of 0.5 ± 0.1 da.Nm
- bolts (18) to a torque of 1 ± 0.2 da.Nm
- nuts (21), (22) to 1 da.Nm

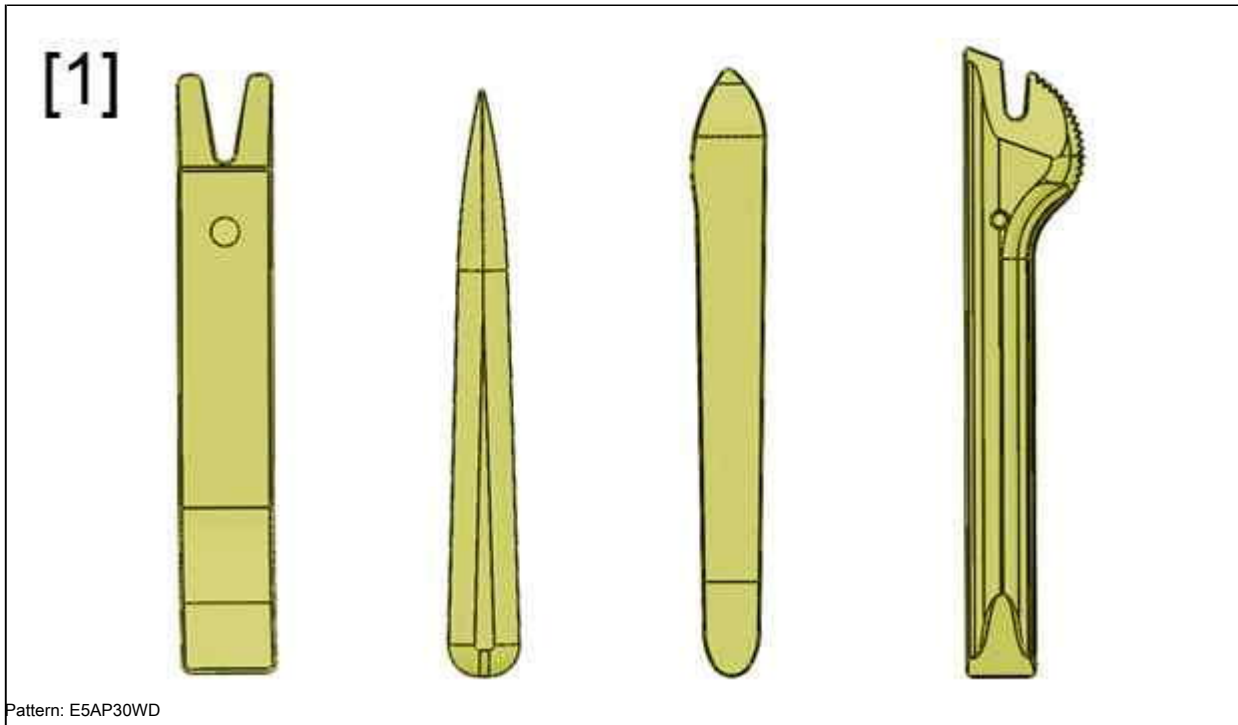
Check the operation of the various equipment.

REMOVAL REFITTING: SIDE DOOR GLASS (FRONT)

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



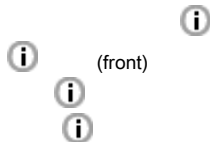
[1] Trim stripper () .1350ZZ.

2. Preliminary operations

Open the front door.

Remove:

- **Front door trim panel**
- **Outside mirror**
- **Speaker bracket**
- **Sealing sheet**



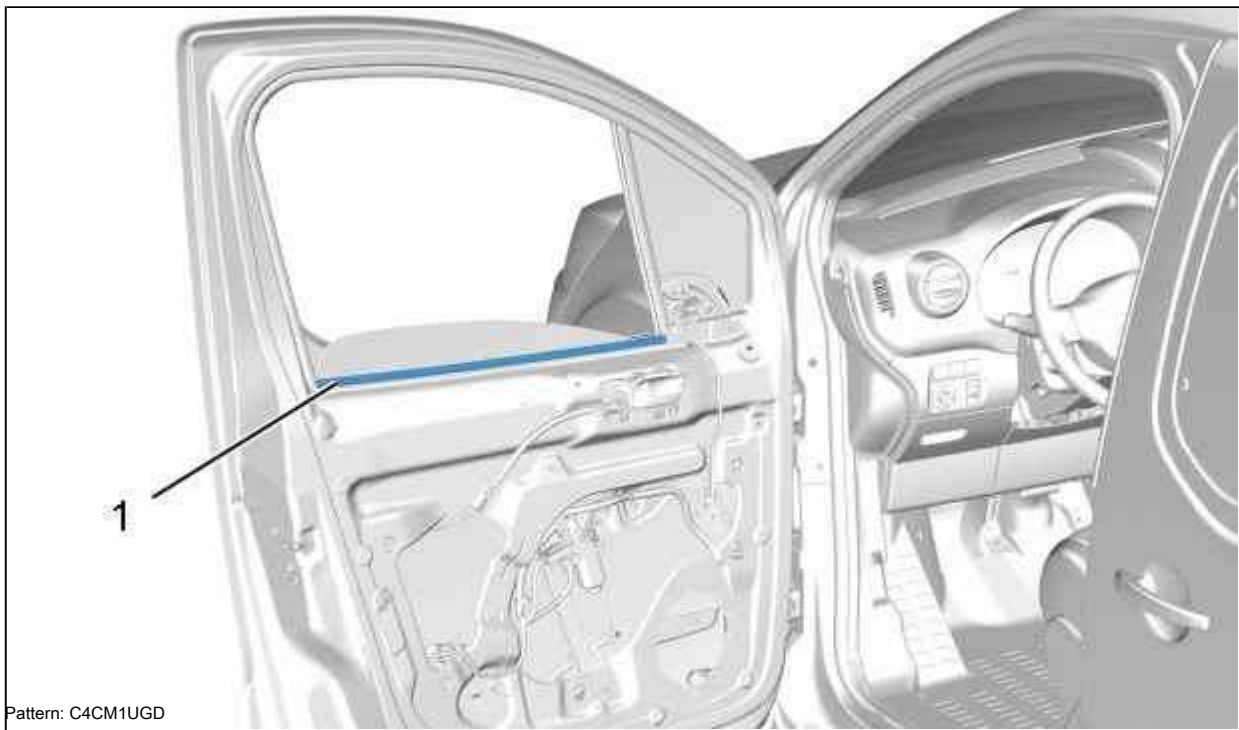
Lower the front door glass.

Disconnect the battery

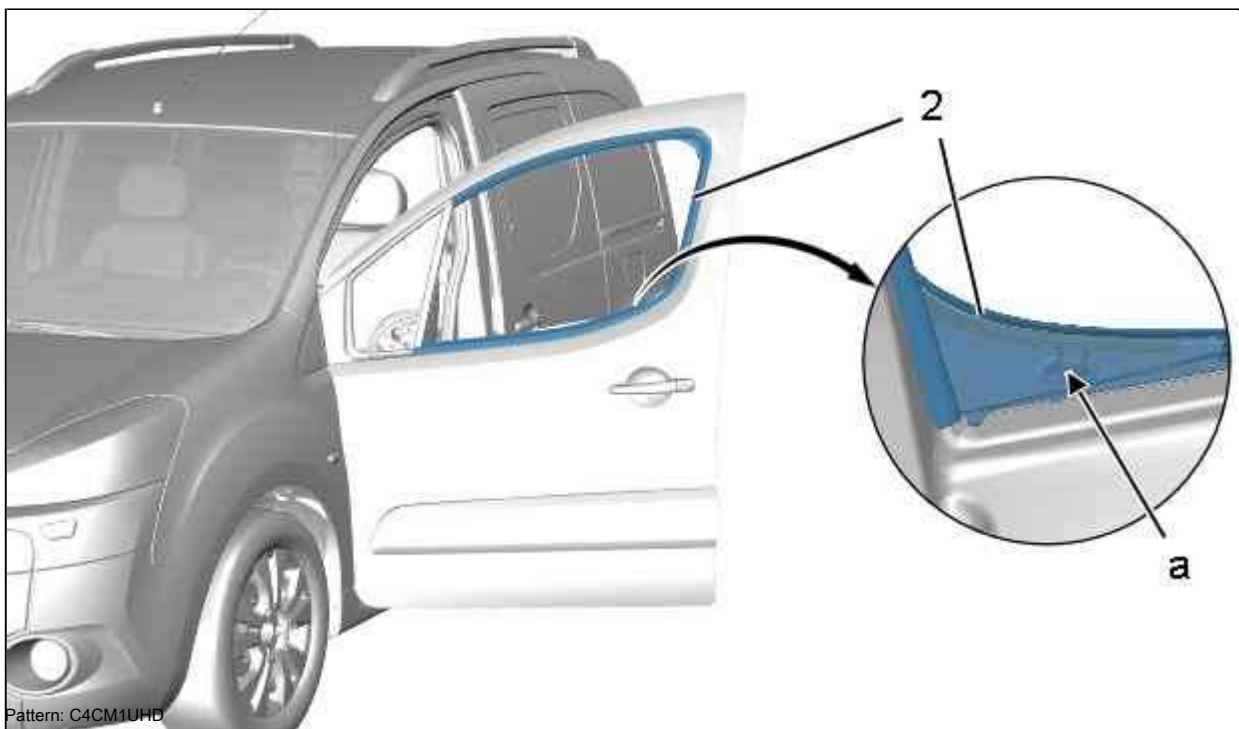


3. Removal

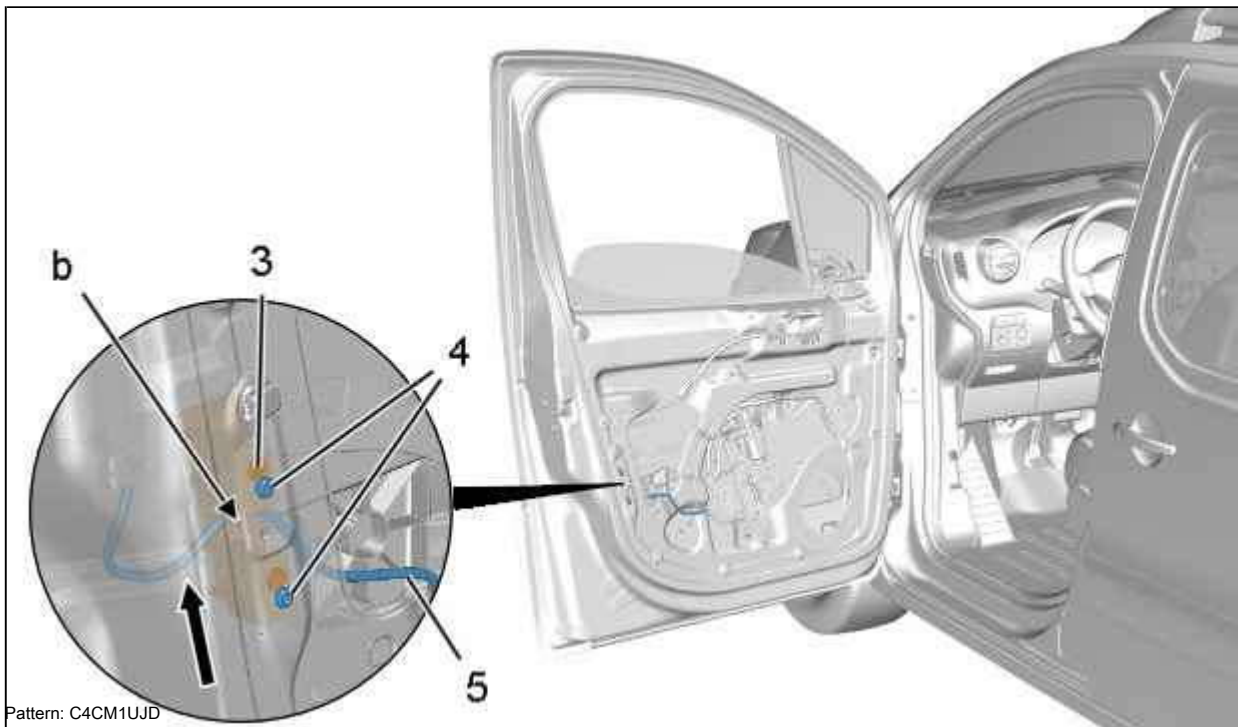
3.1. Movable glass



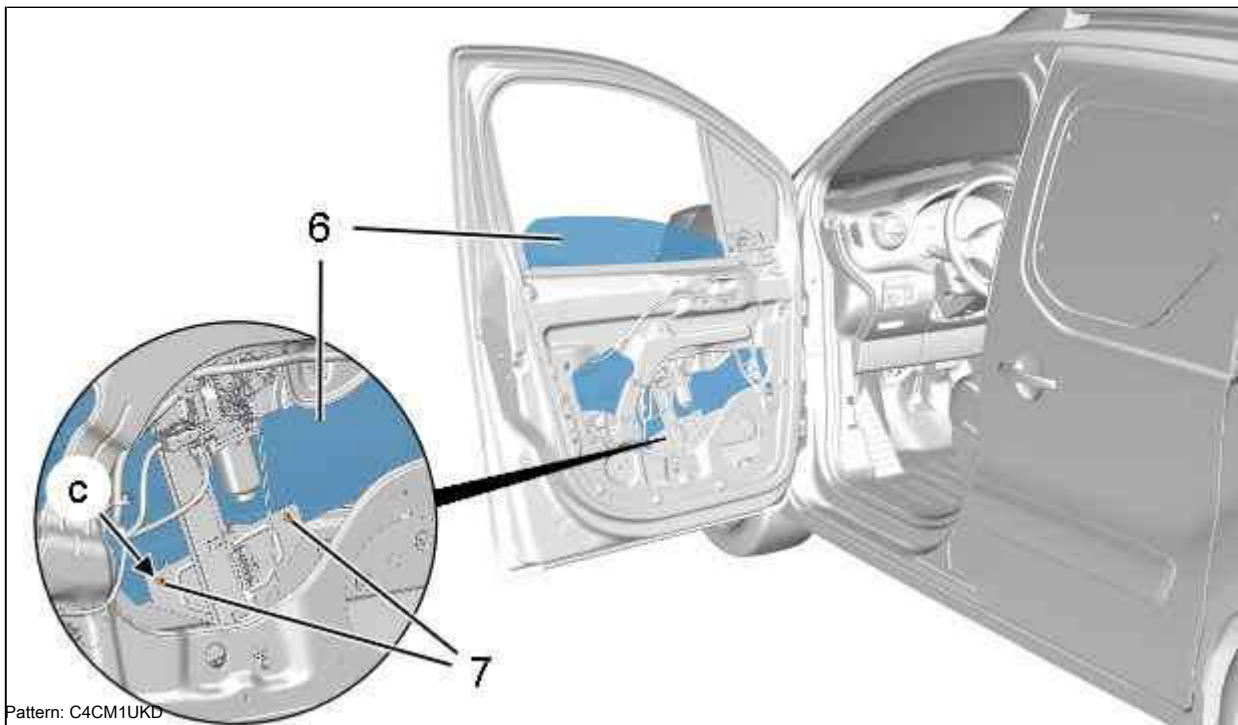
Remove: Lower glass door seal (1); Using the tool [1].




Unclip the front door window guide seal (2) (at "a"). Remove the front door glass guide seal insert (2).
Remove the front door guide glass seal (2).



Detach the wiring harness (5) (in "b"). Loosen the bolts (4) a few turns.
 Separate Remove: Guide groove (3) (in accordance with the arrow).

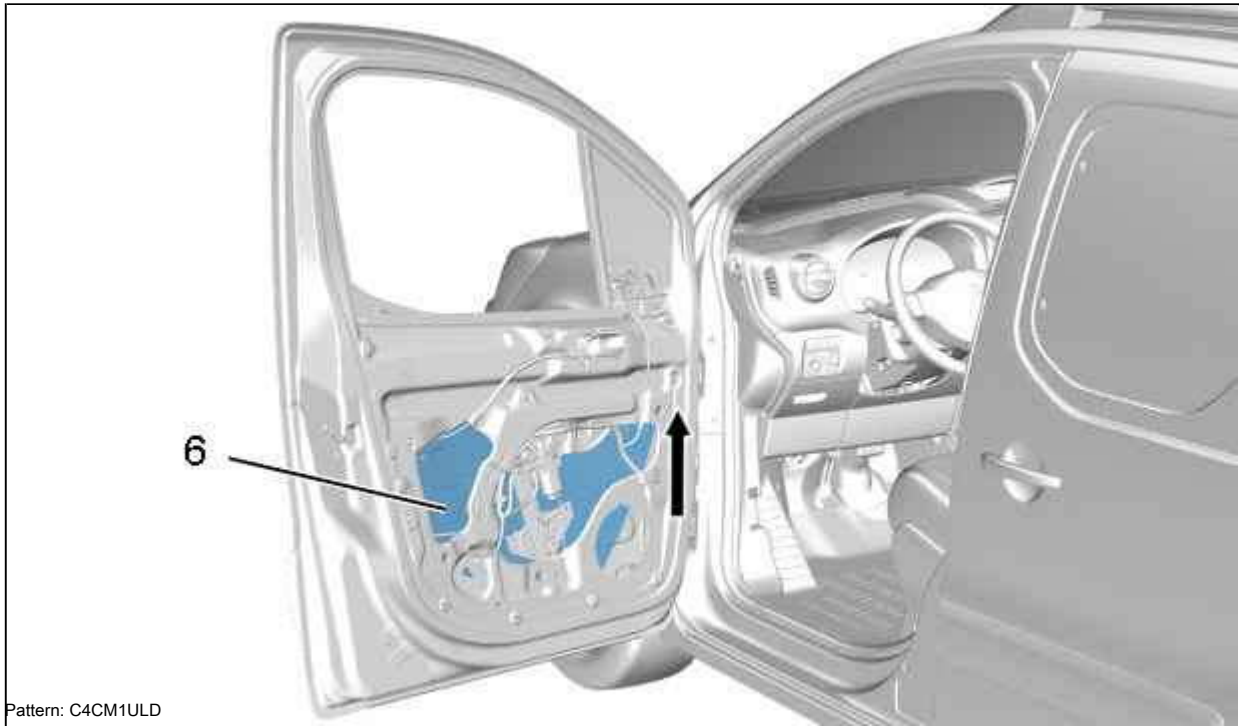


Reconnect the rechargeable battery

Lift the glass in short strokes to the indicated position (at "c"). Remove:  ...

- the bolts (7)
- Lower the front door glass (6) to the lower front door

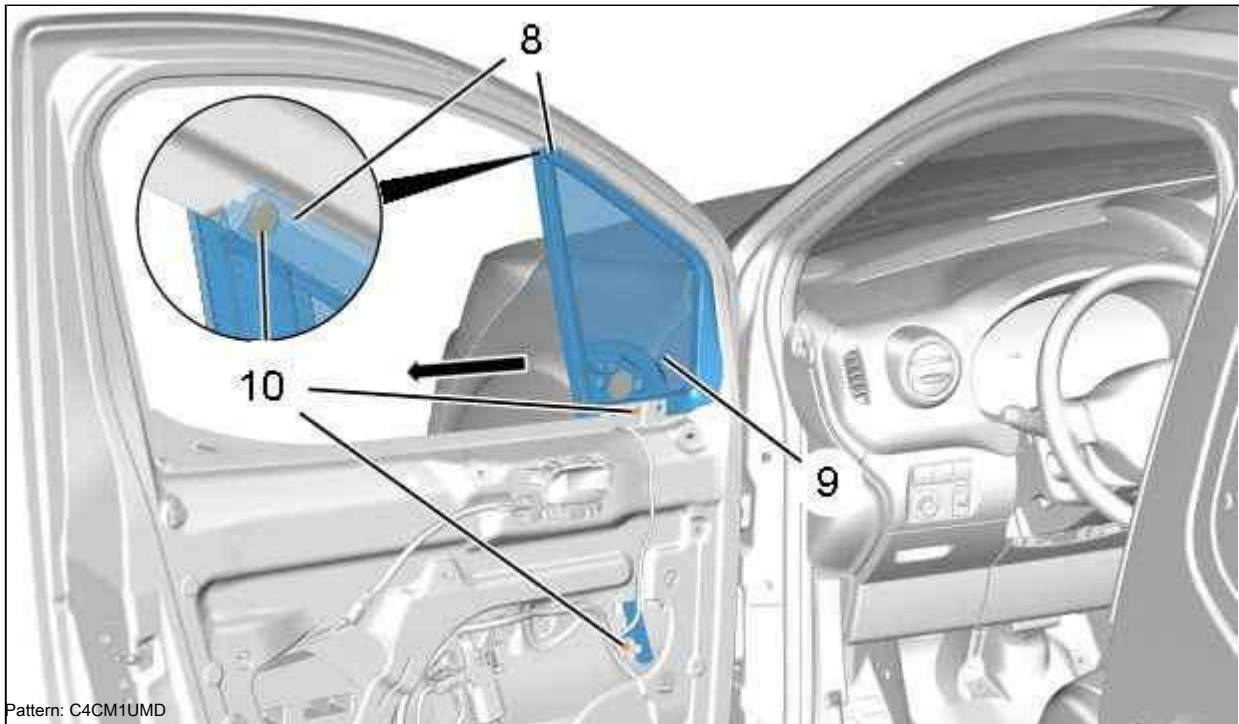
Disconnect the battery



Pattern: C4CM1ULD

Turn the front door glass (6) clockwise by a quarter of a turn. Remove the front door sliding glass (6) (in accordance with the arrow).

3.2. Fixed glass



Pattern: C4CM1UMD

Move aside: Fixed glass seal (8). Cut off the rivet shafts before drilling.

Drill out the rivet heads (10) with a Ø6 mm drill.
Remove the fixed glass (9) (in accordance with the arrow). Drill out the remaining rivets.

NOTE: Remove remnants of rivets from the bottom of the door with a vacuum cleaner.

4. Installation

MANDATORY: Install new seals without wrinkles or tears. Complete cleanliness of the supporting surface on the door panel is required. Run the roller over the pre-glued sheet. These guidelines are necessary to avoid possible ingress of water, dust or noise.

ATTENTION : Be sure to replace defective fasteners.

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- The bolt (4) to the moment 0.8 ± 0.1 da.Nm
- Bolt (7) to a torque of 0.3 ± 0.03 da.Nm

Reconnect the rechargeable battery



ATTENTION : Follow the steps to follow after removing the battery.

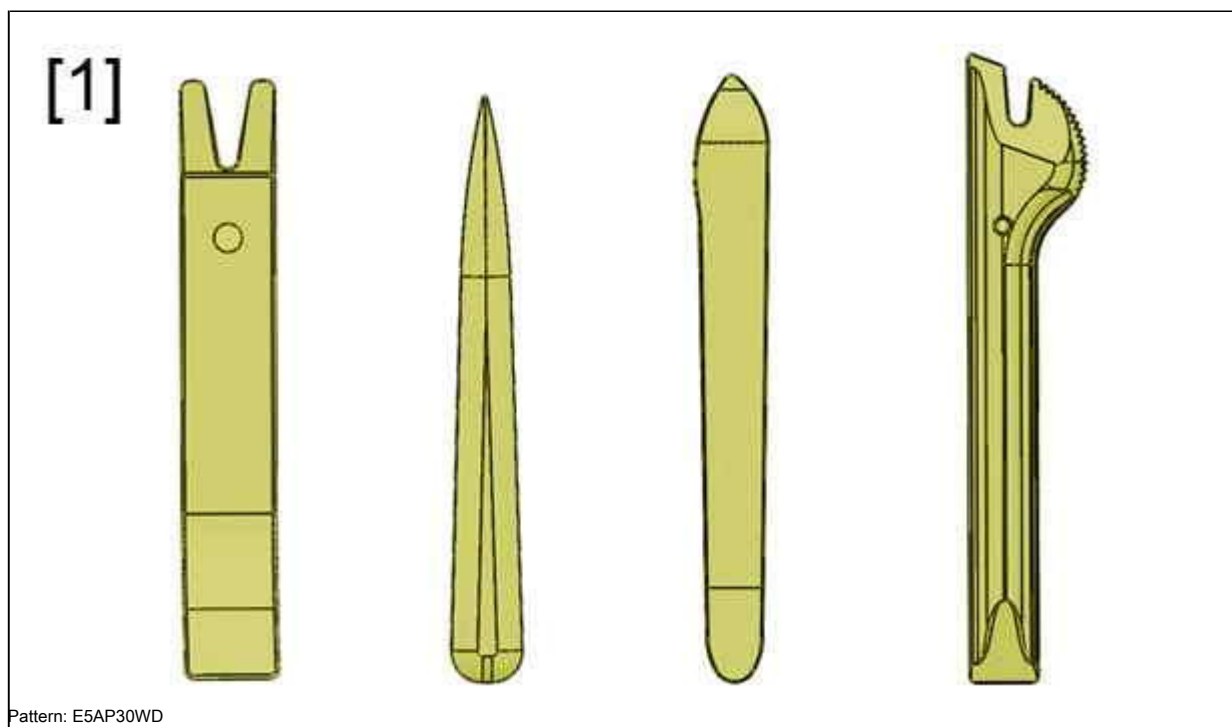
Check the correct functioning of the electrical equipment.

REMOVAL REFITTING: WINDOW REGULATOR MECHANISM (FRONT)

MANDATORY: Comply with safety and cleanliness requirements



1. Recommended equipment



[1] Trim removal tool () .1350ZZ.

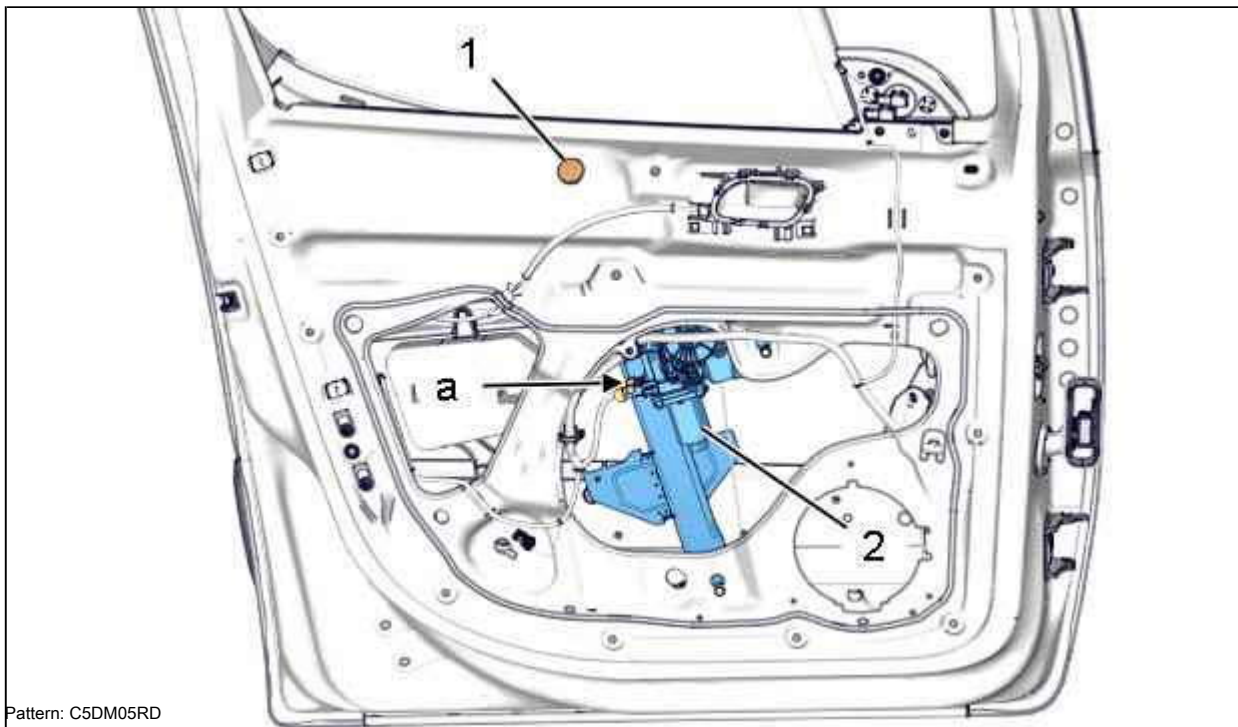
2. Preliminary operations

Remove the sliding glass front door



3. Removal

3.1. Window lifter mechanism

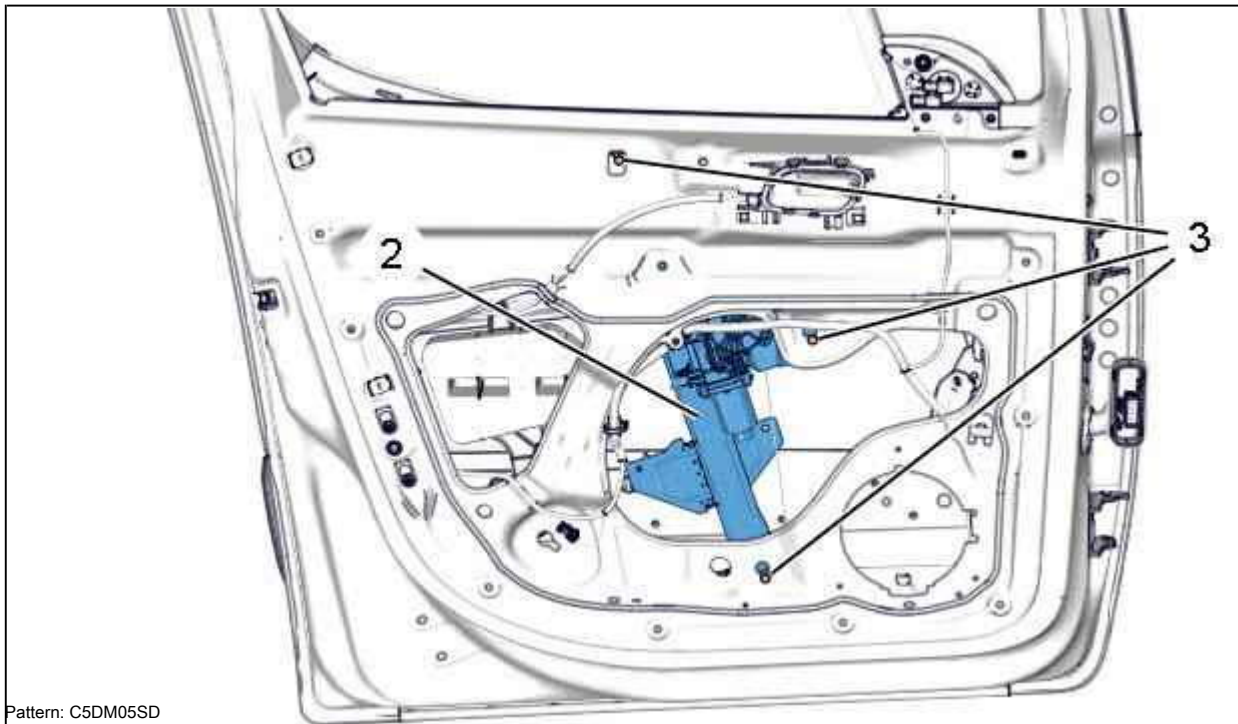


(2) Window regulator mechanism.

Unstick the glued strip (1); Using the tool [1].

NOTE: Remember to replace the adhesive strip (1).

Disconnect the connector (at "a").

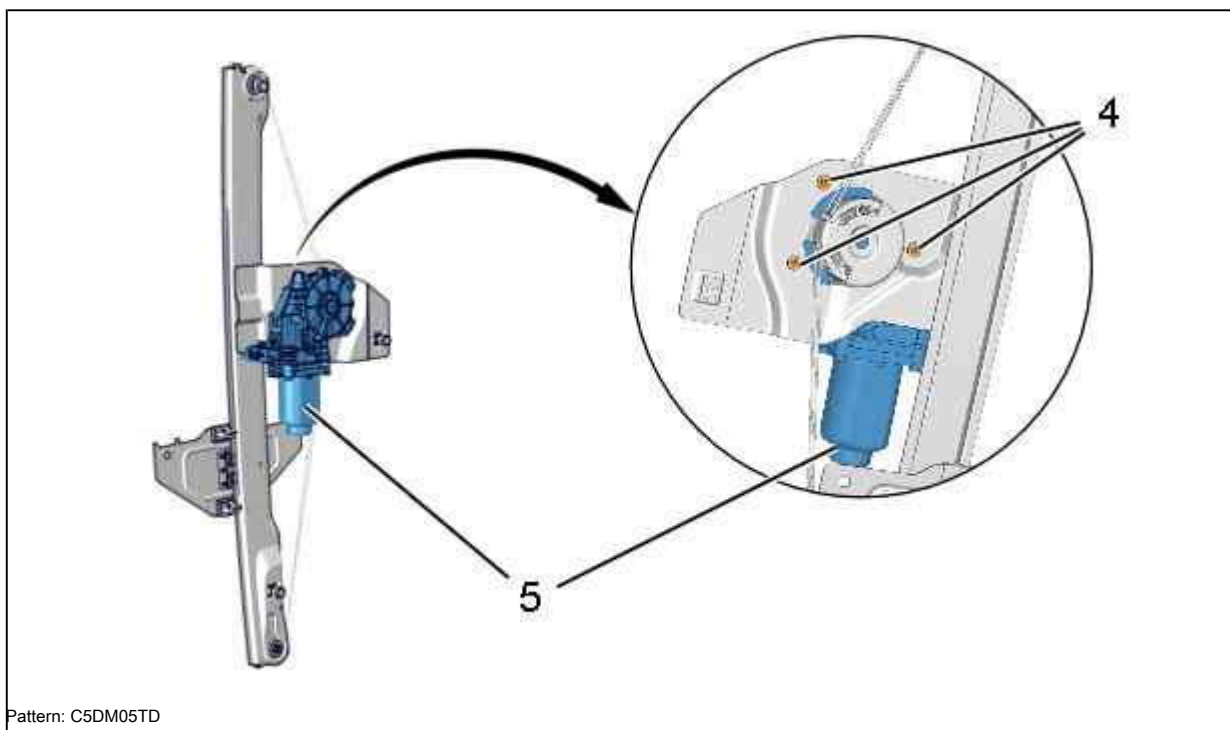


Loosen screws (3) without removing them.

Detach the power window mechanism (2) through the cutout in the inner door panel.

Remove the power window mechanism (2).

3.2. Window lifter drive



Loosen screws (4).

Remove the wiper motor (5).

4. Installation

ATTENTION : Before installing the sealing sheet, check the power window (2). as works mechanism

Installation is carried out by performing the removal operations in the reverse order. Tighten the bolts (3), (4) to a torque of 1 ± 0.2 da.Nm.

Check the functioning of the electrical equipment.

REMOVAL REFITTING: EXTERIOR REAR VIEW MIRROR

MANDATORY: Observe the cleanliness and safety rules



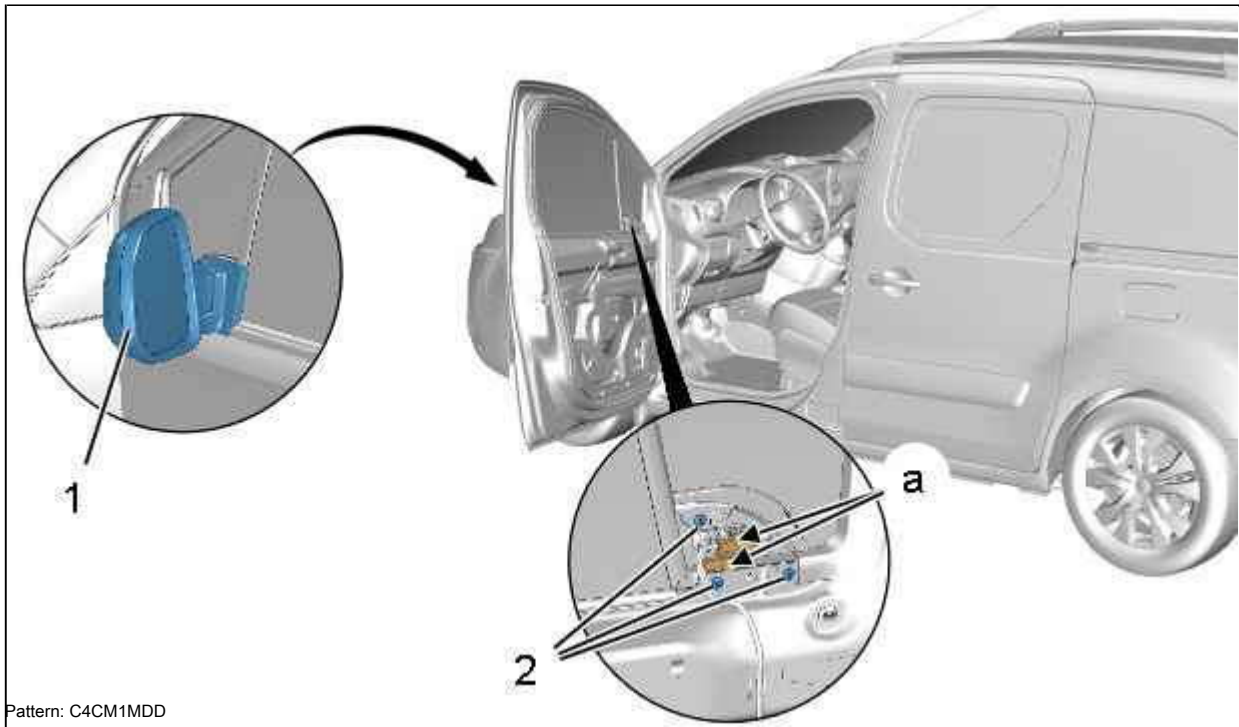
1. Preliminary operations

Remove the door panel trim



(front).

2. Removal



Pattern: C4CM1MDD

Disconnect the electrical connectors (at "a"). Remove:

- bolts (2)
- Outdoor Mirror (1)

3. Installation

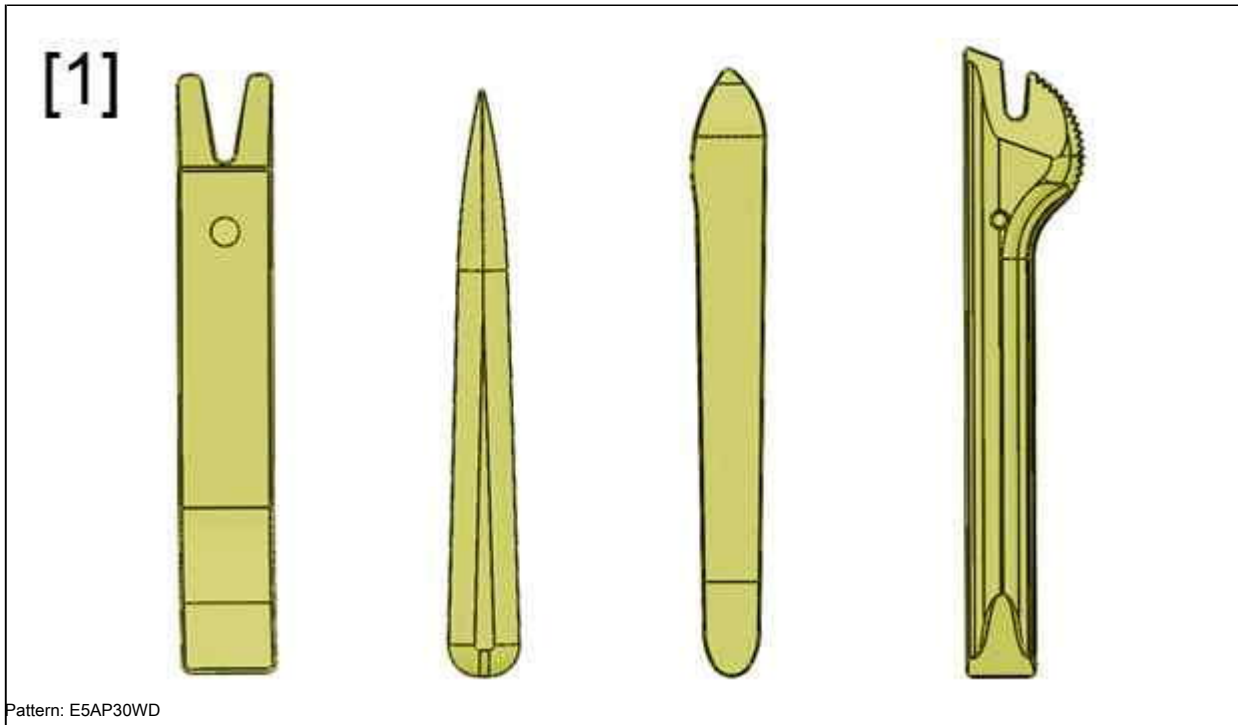
Installation is carried out by performing the removal operations in the reverse order. Check the correct functioning of the electrical equipment.

DISASSEMBLY ASSEMBLY: EXTERNAL REAR VIEW MIRROR

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim removal tool () .1350ZZ.

2. Preliminary operations

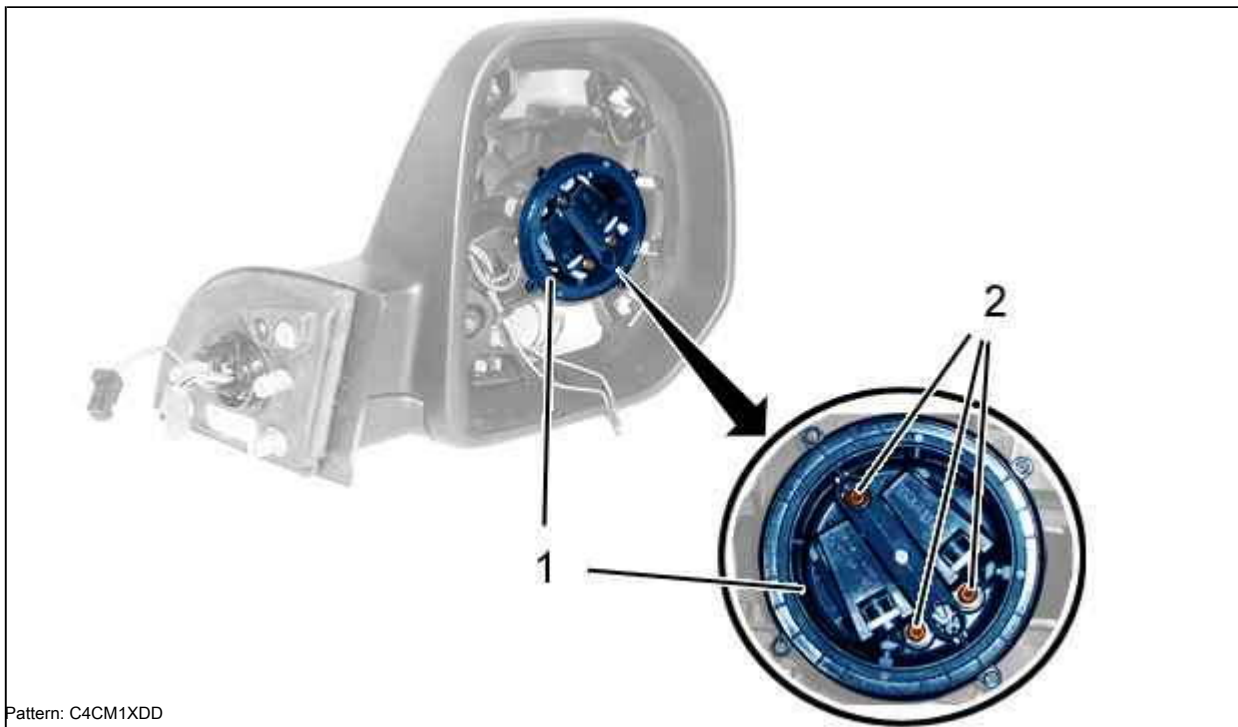
Remove:

- Outside rear view mirror
- Outside mirror

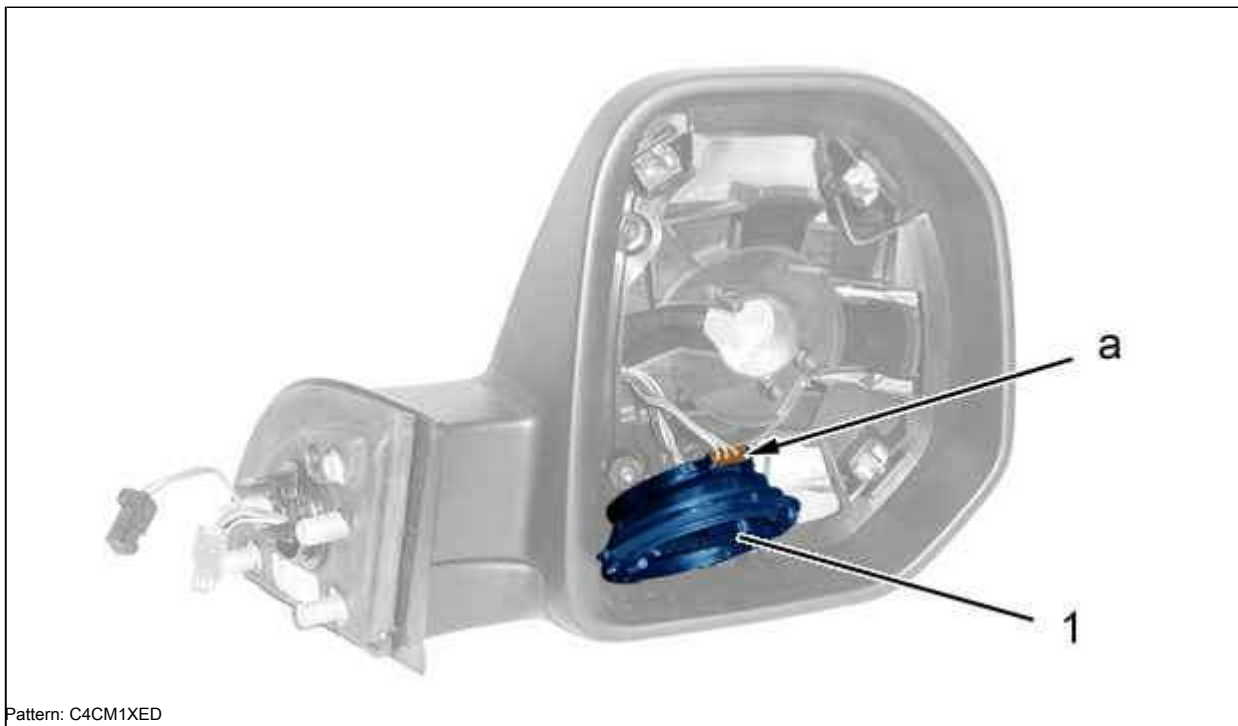


3. Disassembly

3.1. Outside rear view mirror motor



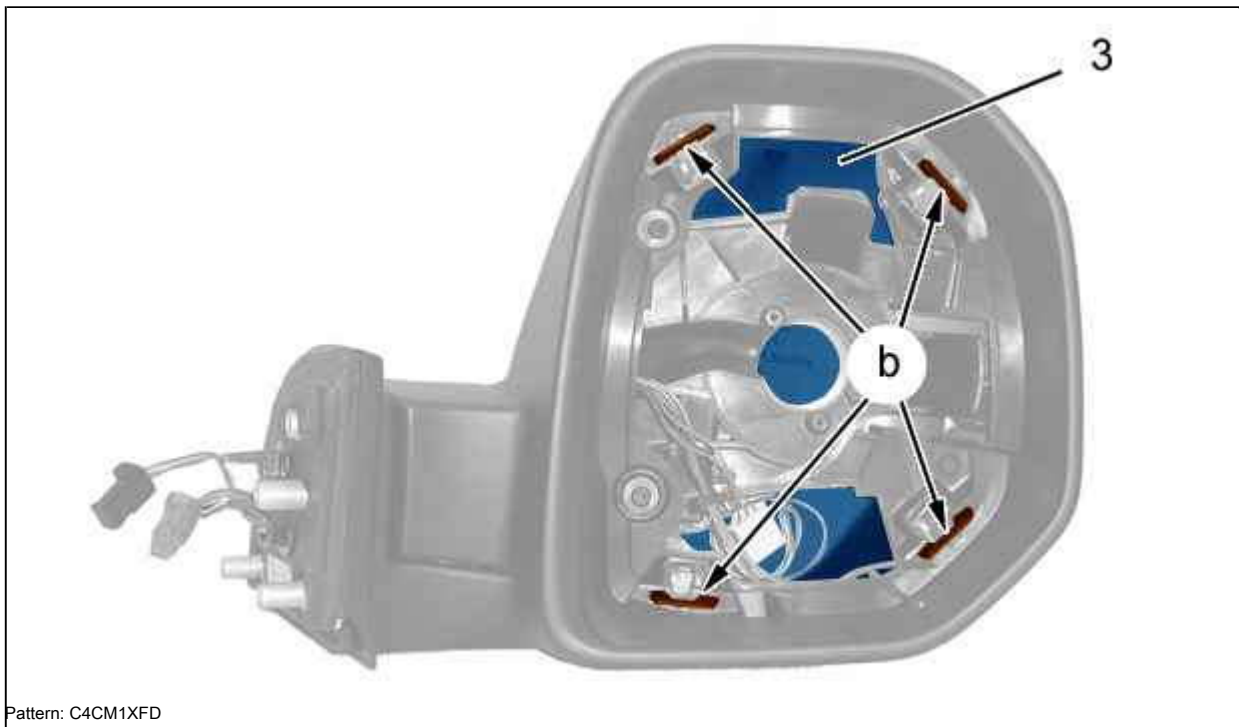
Loosen screws (2).
Disengage the door mirror drive (1).



Disconnect the electrical connector "a" by releasing one by one the mounting tabs for the motor for the outside mirror (1); Using a thin screwdriver.

Remove the outside mirror drive (1).

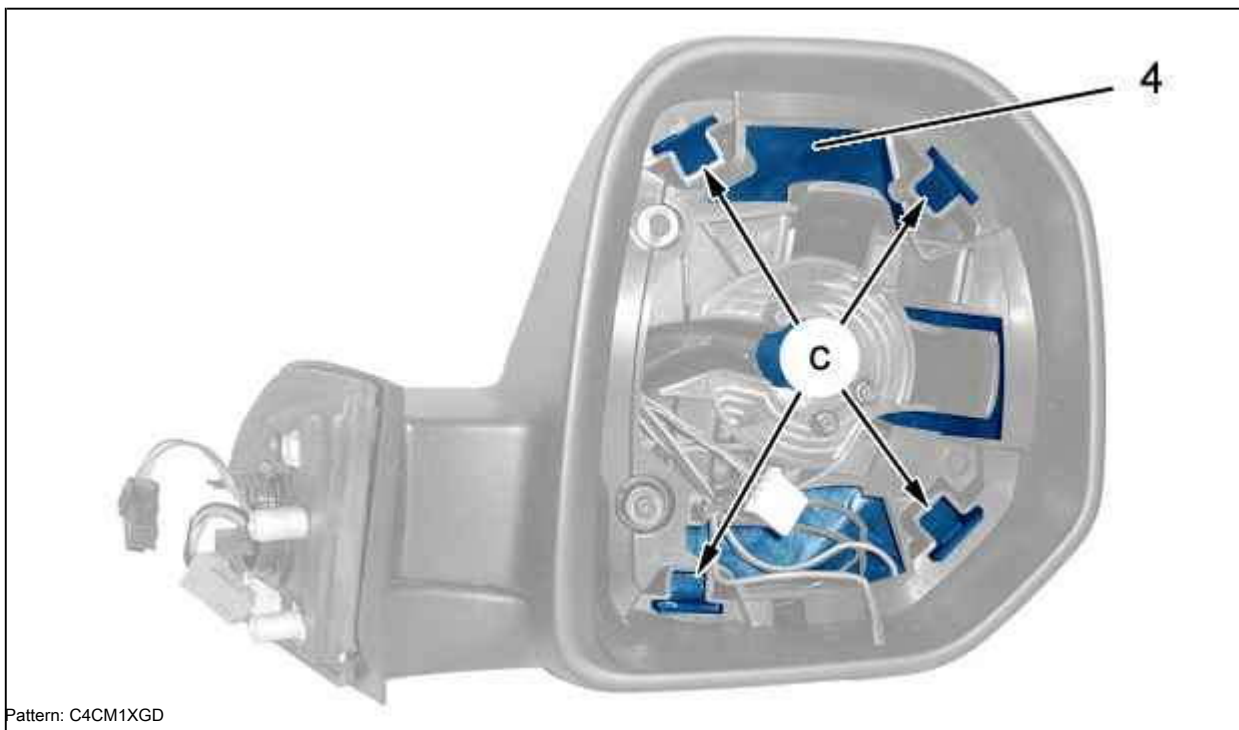
3.2. Painted door mirror housings



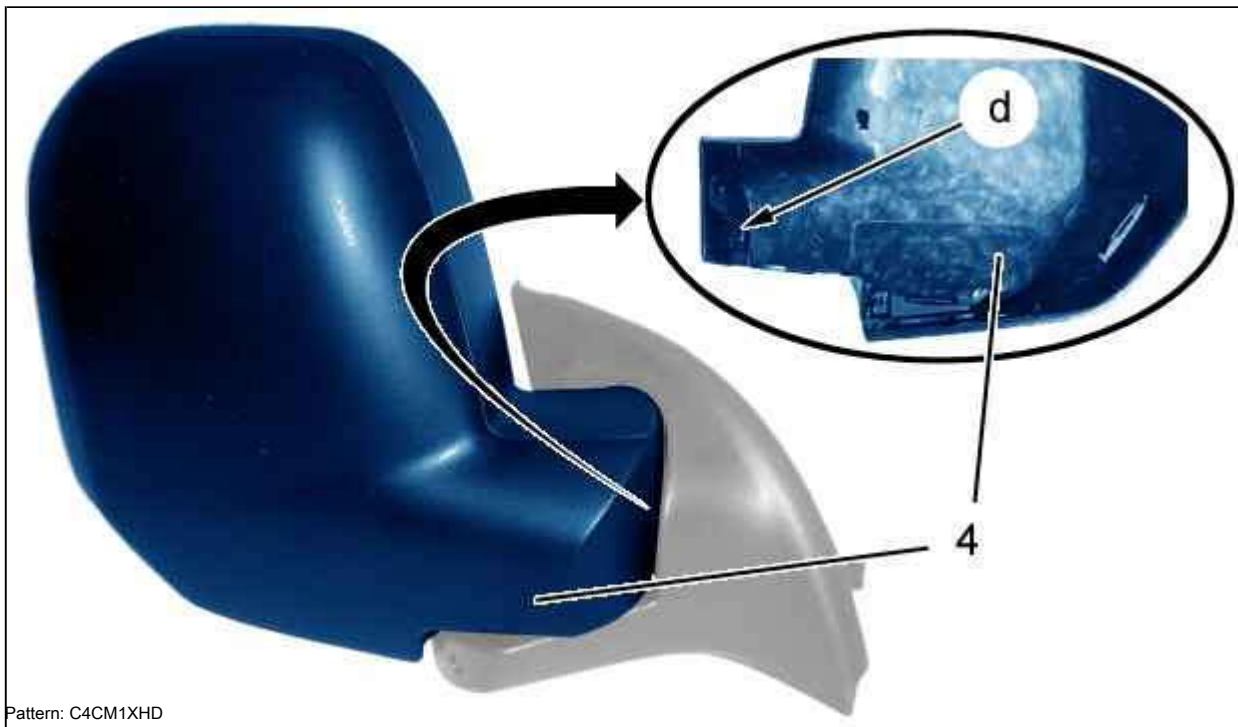
Detach the outside mirror housing (3) (at "b"); Using the tool [1]. Fold: Outside Mirror (Manual).

Remove the outside mirror housing (3).

3.3. Outdoor Mirror Body (Unpainted)



Detach the outside mirror housing (4) (at "c"); Using the tool [1].

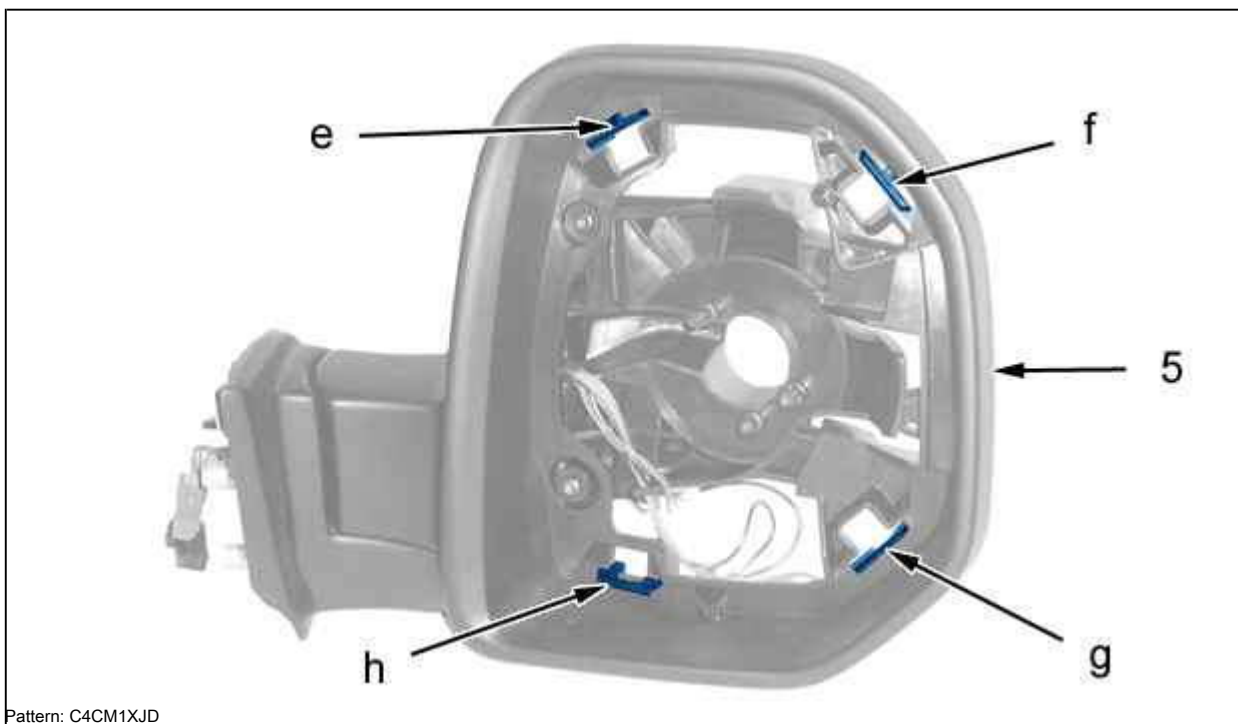


Fold: Outside Mirror (Manual).

ATTENTION : Be careful not to damage the mount (in "d").

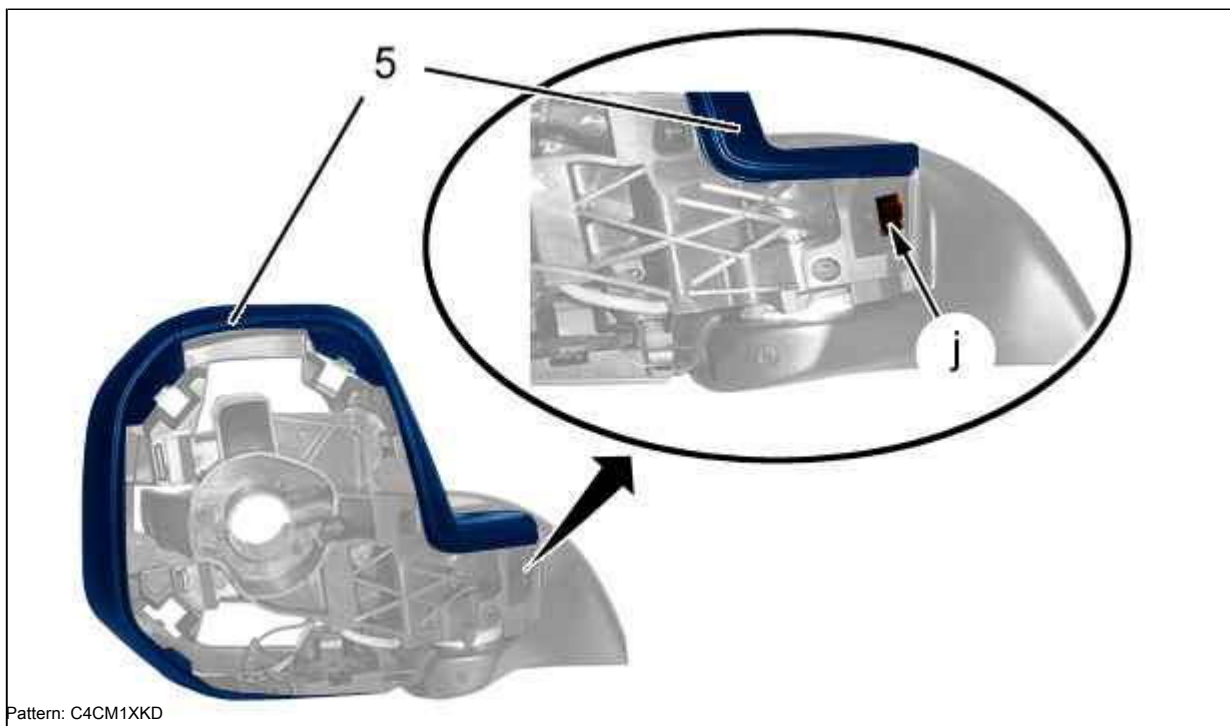
Detach the outside mirror housing (4) (at "d"); Turn slightly.

3.4. Semi-exterior mirror



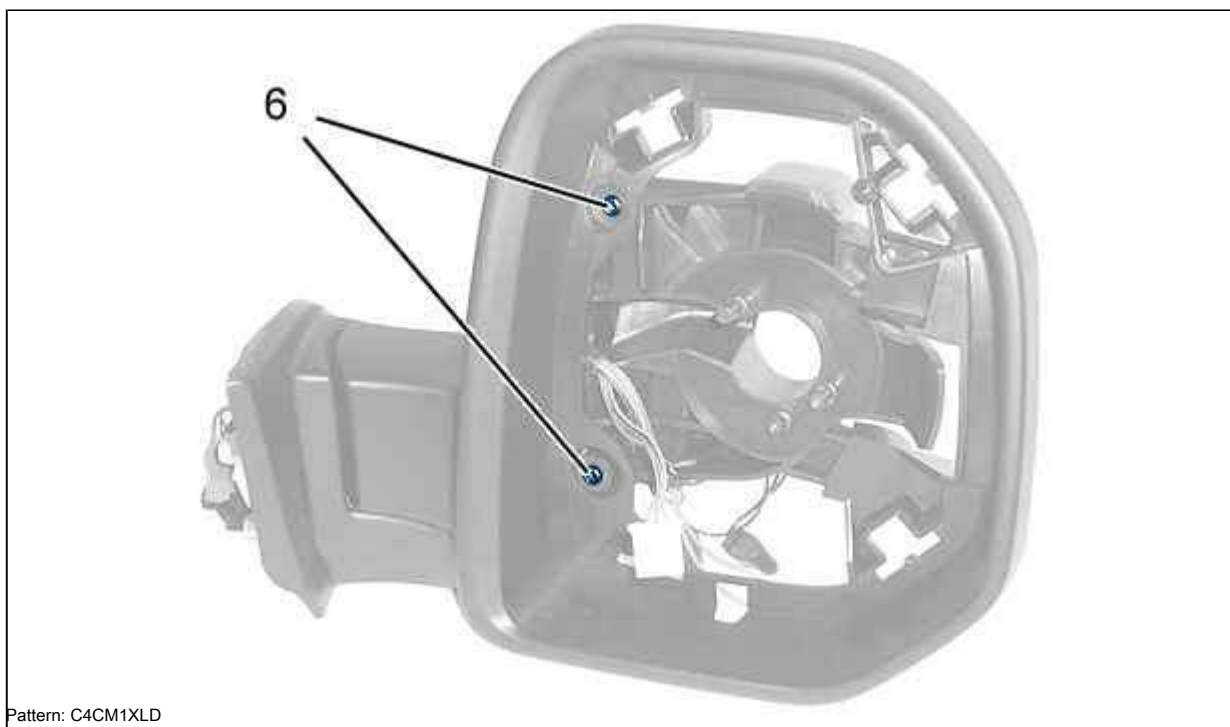
Detach: Outside mirror half-frame (5) (in "h", "g", "f", "e"); Observe release procedure

clamps (depending on the configuration).

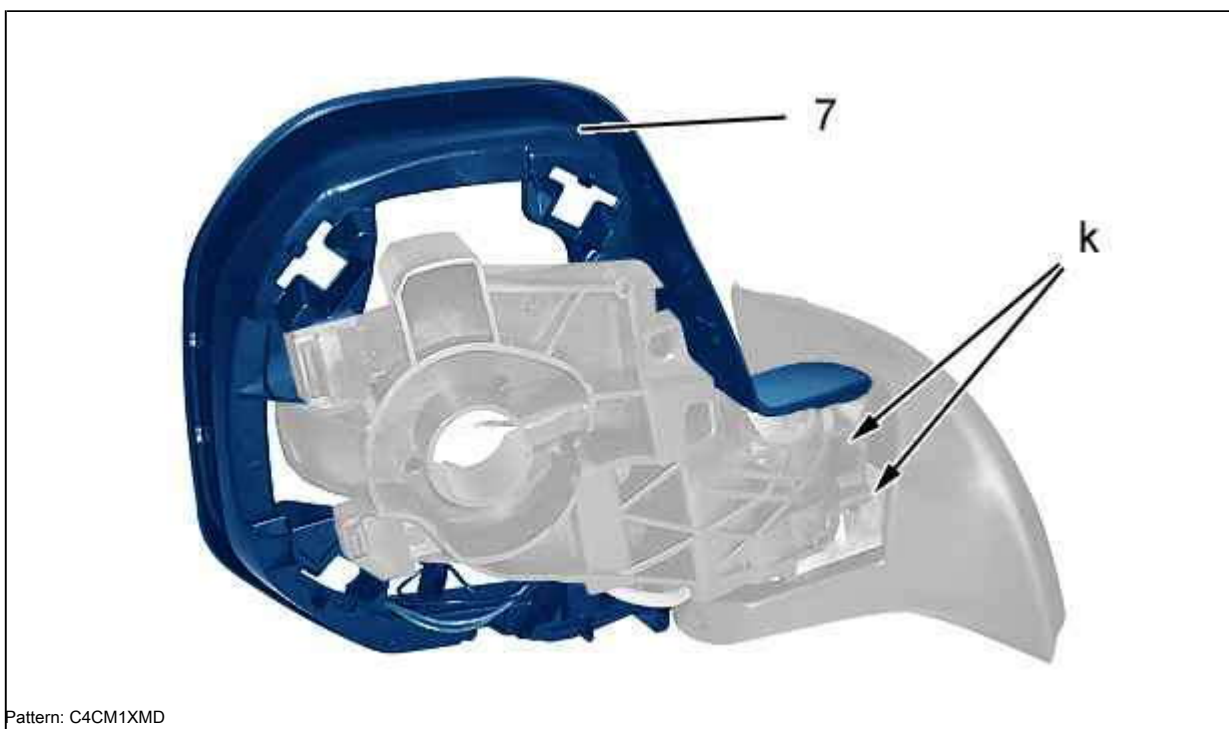


Disconnect (at "j").

Remove: Outside mirror half-frame (5) (depending on equipment).



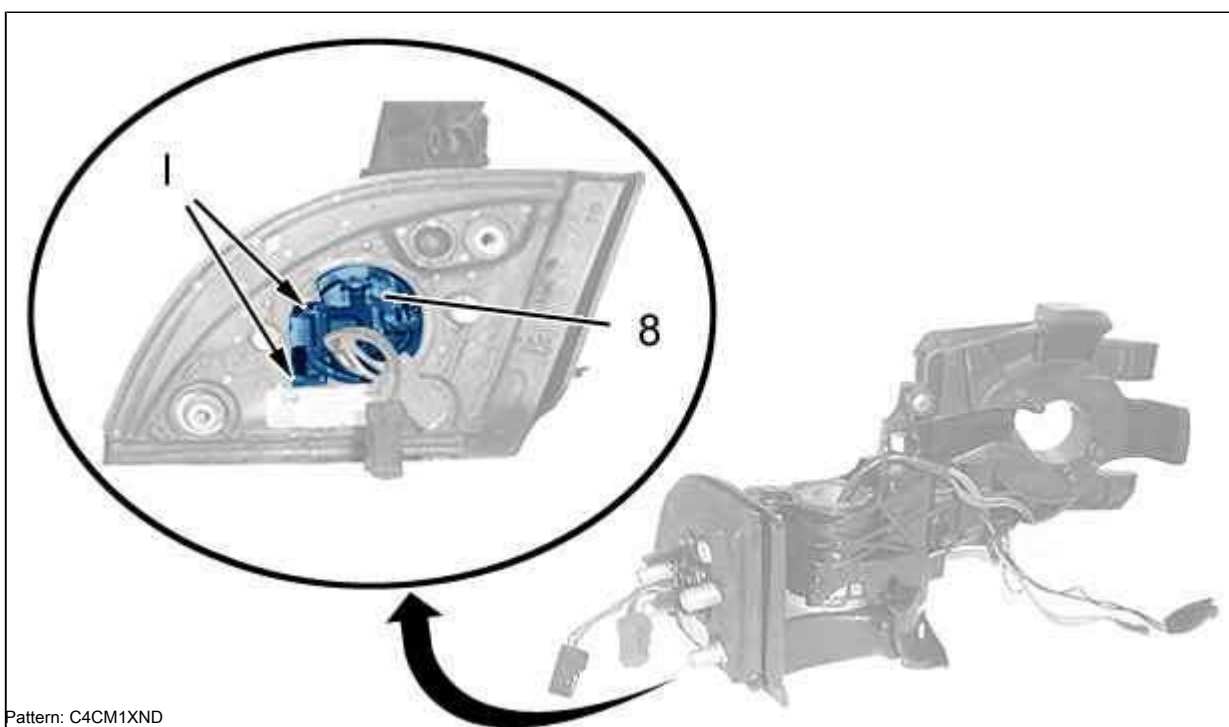
Loosen screws (6).



Disconnect (at "k").

Remove: Outside mirror half-frame (7).

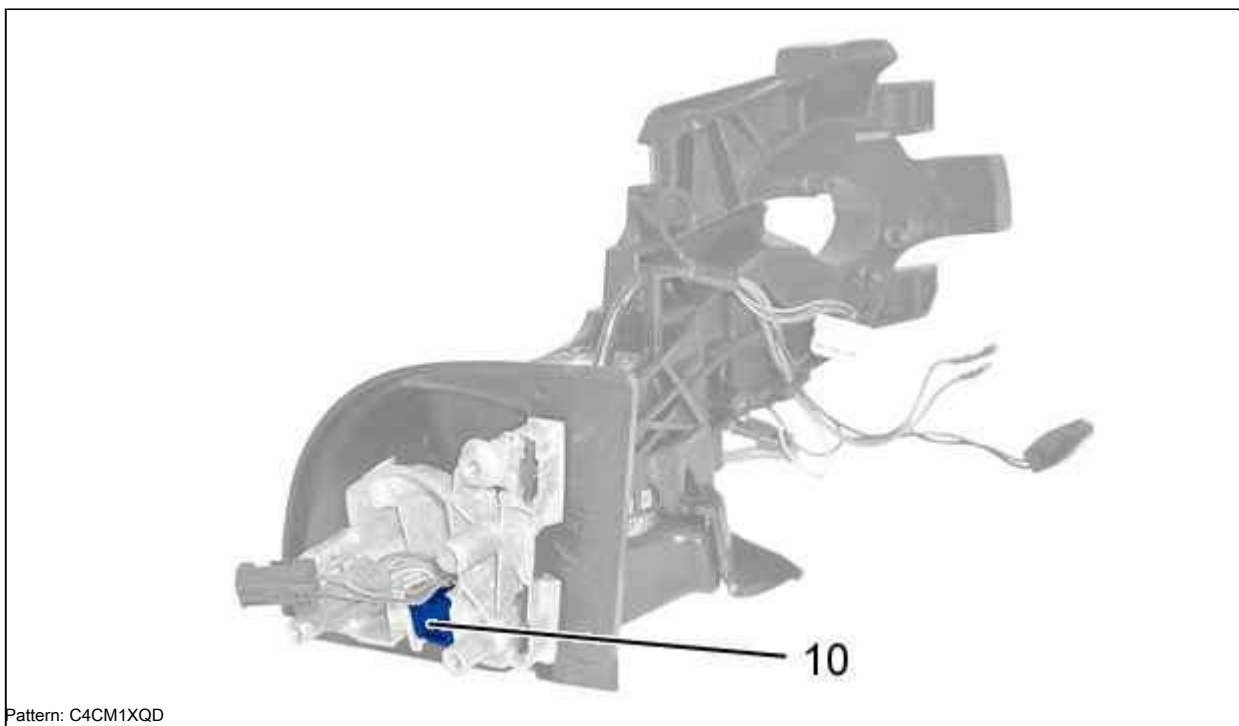
3.5. Outdoor mirror wiring harness



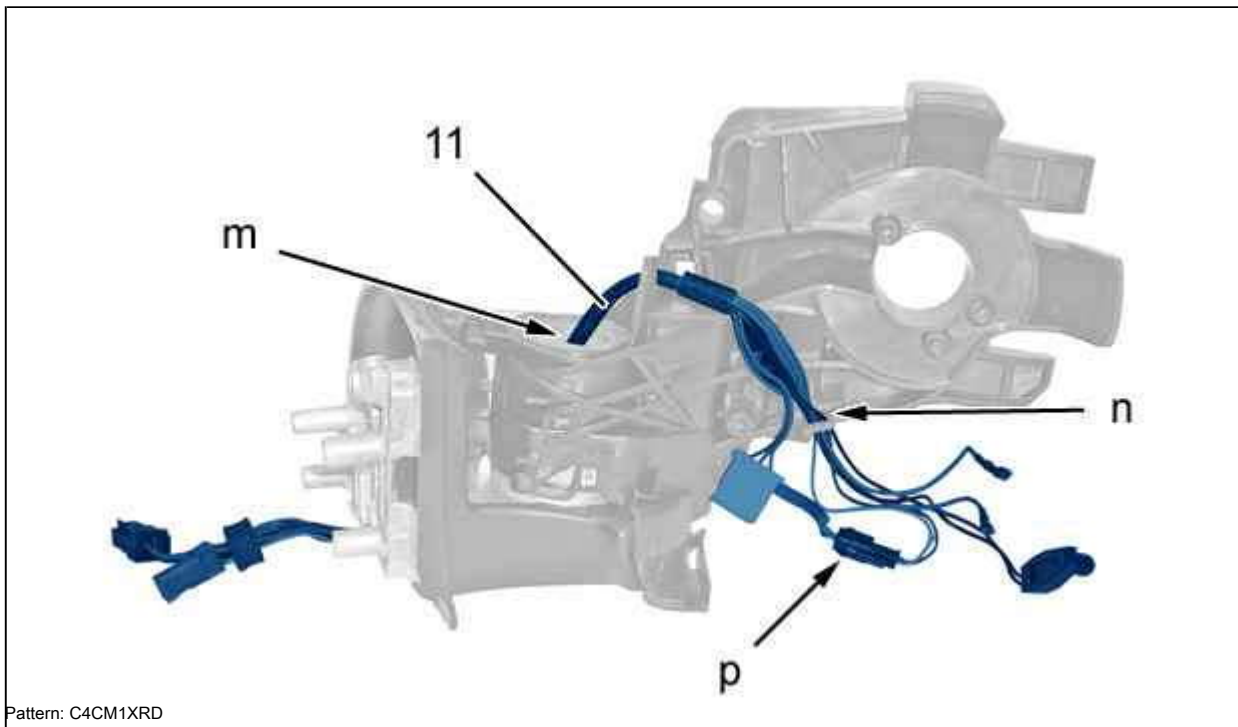
Disconnect (at "l"); Using the tool [1]. Remove the support (8).



Separate and remove the outside mirror base seal (9).



Detach Remove: Wire harness attachment (10).

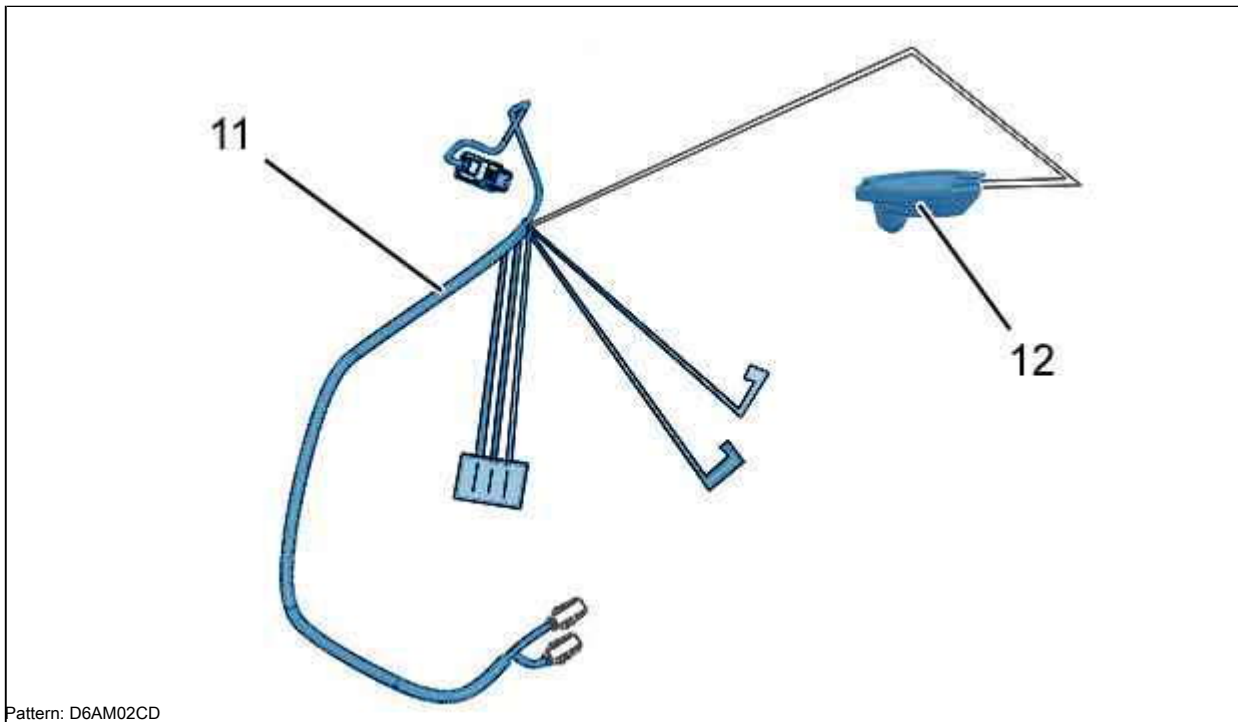


ATTENTION : Disconnection of electrical connectors must be carried out without applying force to electrical harnesses and electrical connectors
(Do not pull on electrical harnesses).

Disconnect the connector (at "p").

Detach: Outside mirror wiring harness (11) (in "n").

Remove: Outside mirror wiring harness (11); Through hole in "m" (according to arrow).



(11) Exterior mirror wiring harness.

Remove the outdoor temperature sensor (12)



...

4. Assembly

Proceed in the reverse order of disassembly.

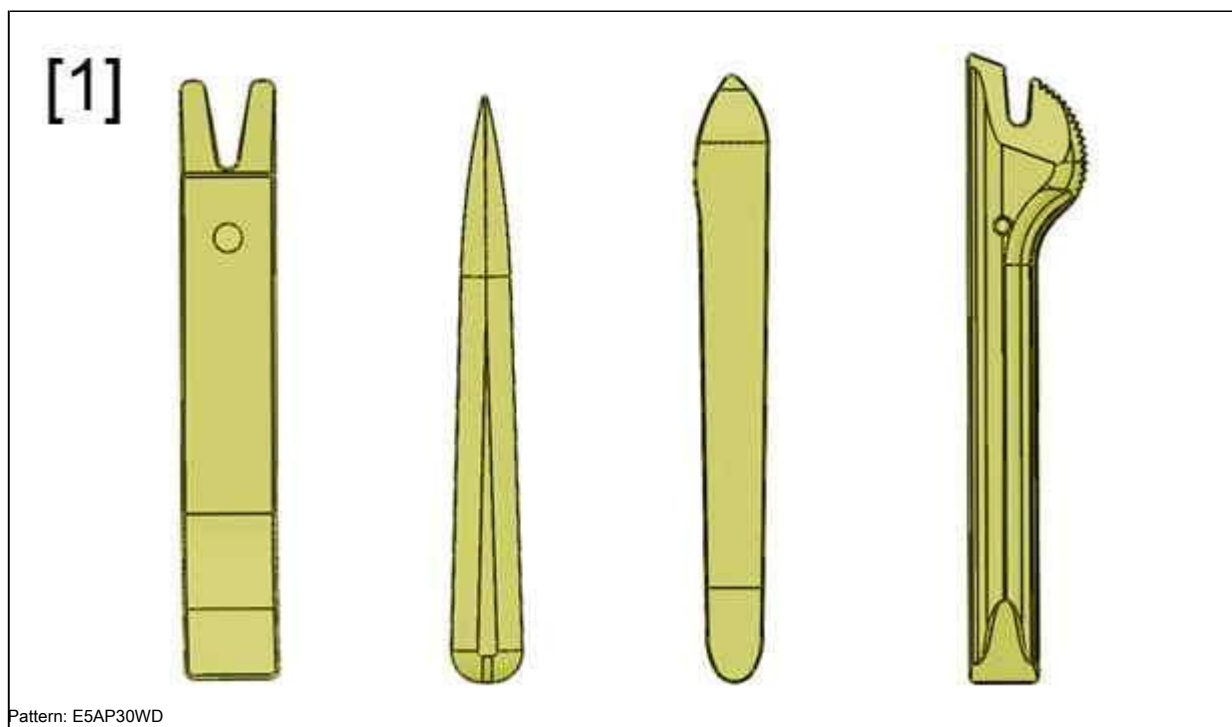
Check the electrical function of the outside rearview mirror (depending on equipment).

REMOVAL REFITTING: OUTER REAR VIEW MIRROR GLASS

MANDATORY: Observe the cleanliness and safety rules

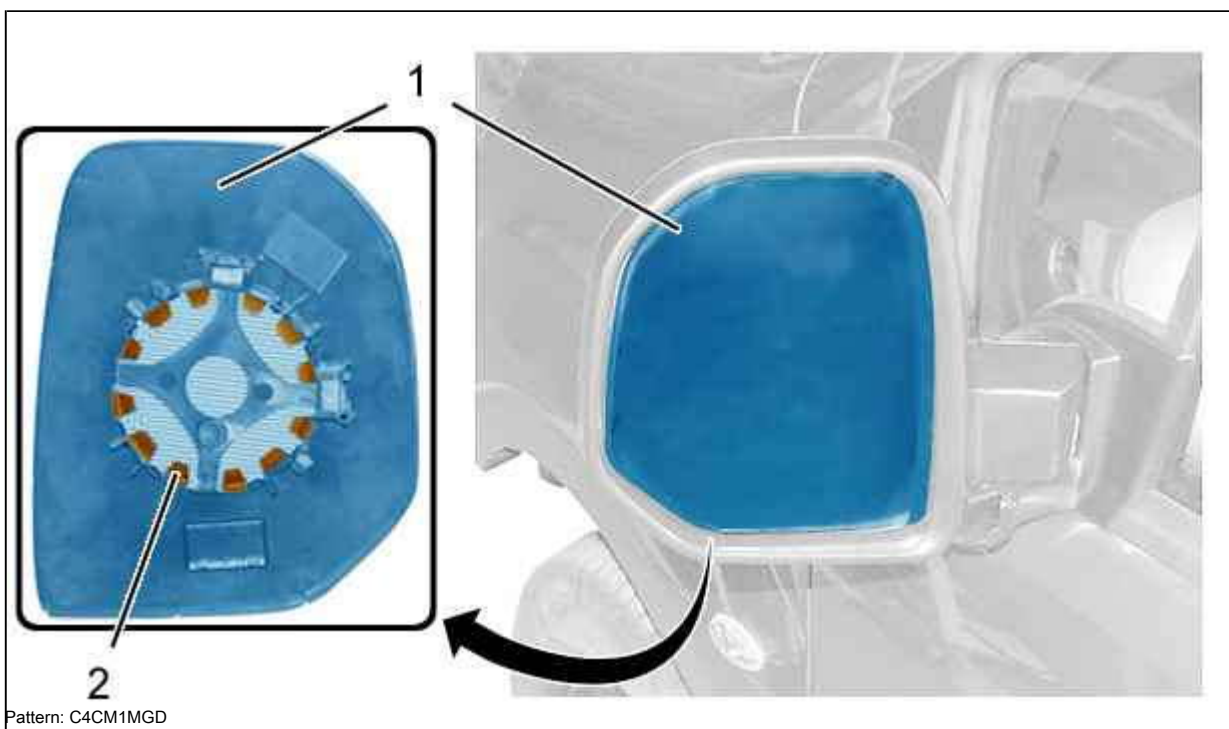


1. Recommended equipment



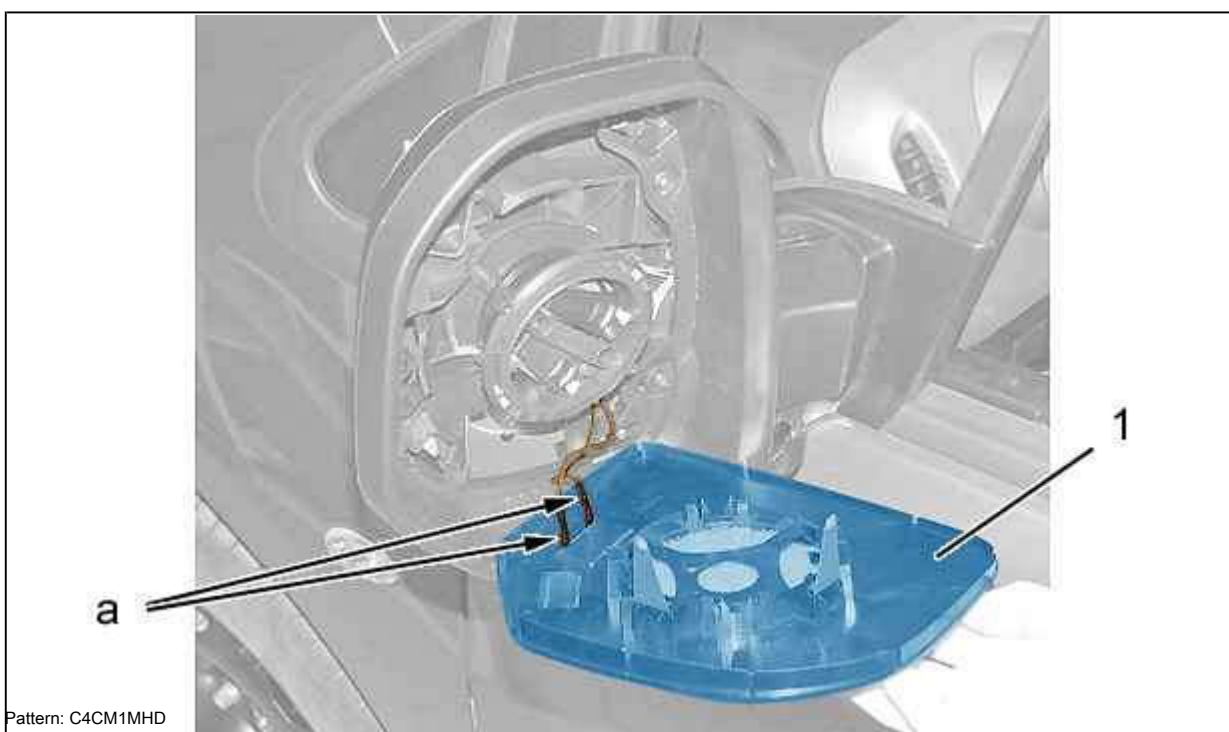
[1] Trim stripper () .1350ZZ.

2. Removal



Insert the tool [1] with the outside mirror glass (1) while pushing the tool [1].

Detach the lugs (2) from the outside rearview mirror. Move outside mirror (1).



Disconnect electrical connectors (at "a") (depending on equipment). Remove the outside mirror (1).

3. Installation

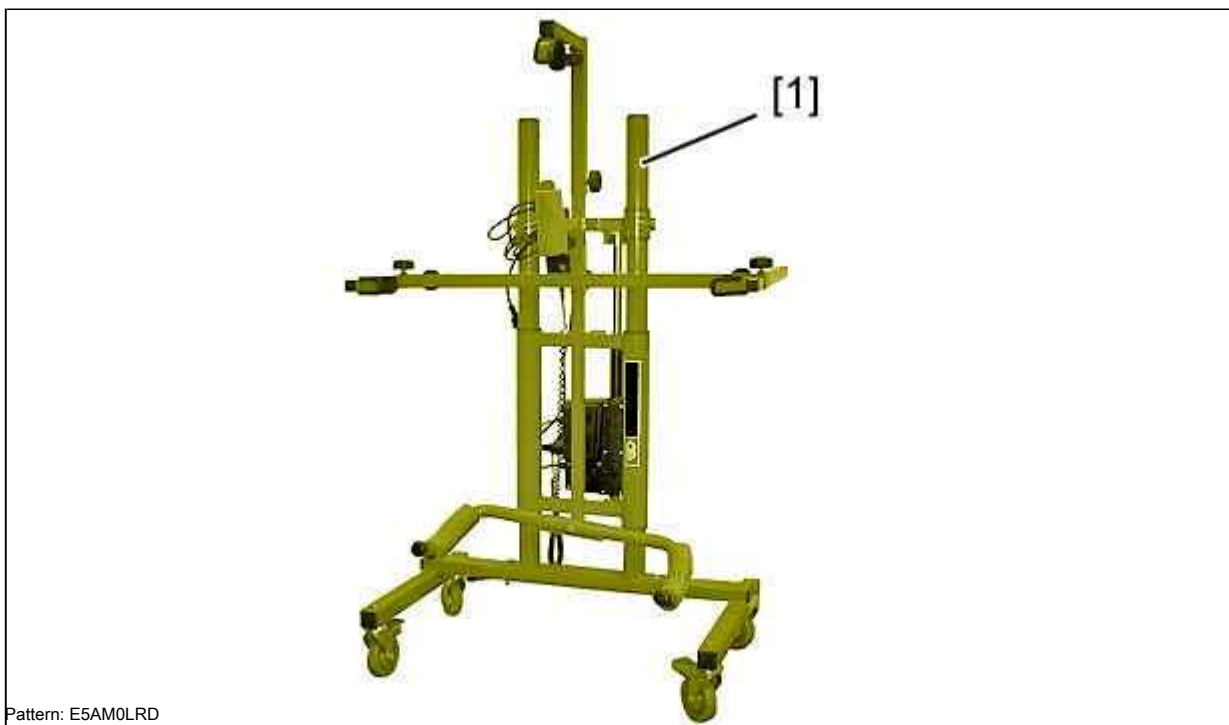
Installation is carried out by performing the removal operations in the reverse order. Check the correct functioning of the electrical equipment.

REMOVAL INSTALLATION: SIDE SLIDING DOOR

MANDATORY: Observe the cleanliness and safety rules

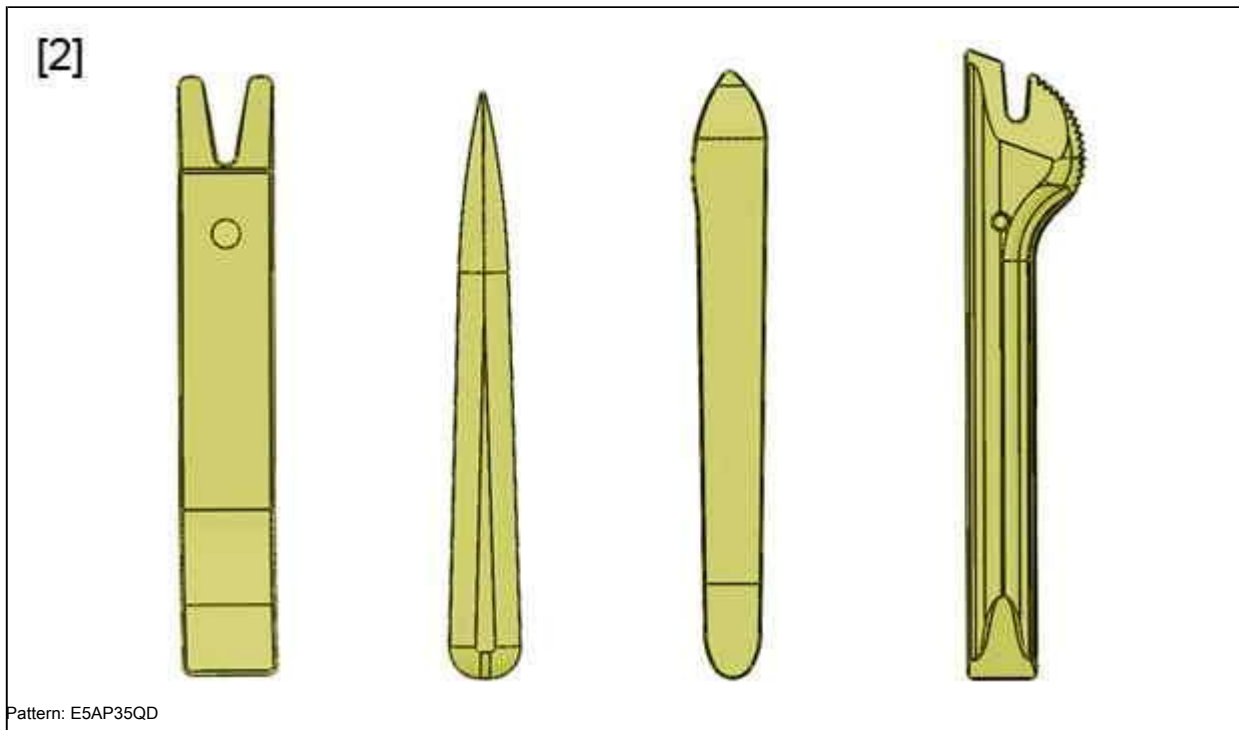


1. Tools



Pattern: E5AM0LRD

[1] Sliding support for door installation (see hardware catalog).



[2] Trim removal tools () .1350.

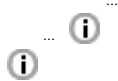
2. Preliminary operations

Open the side sliding door.

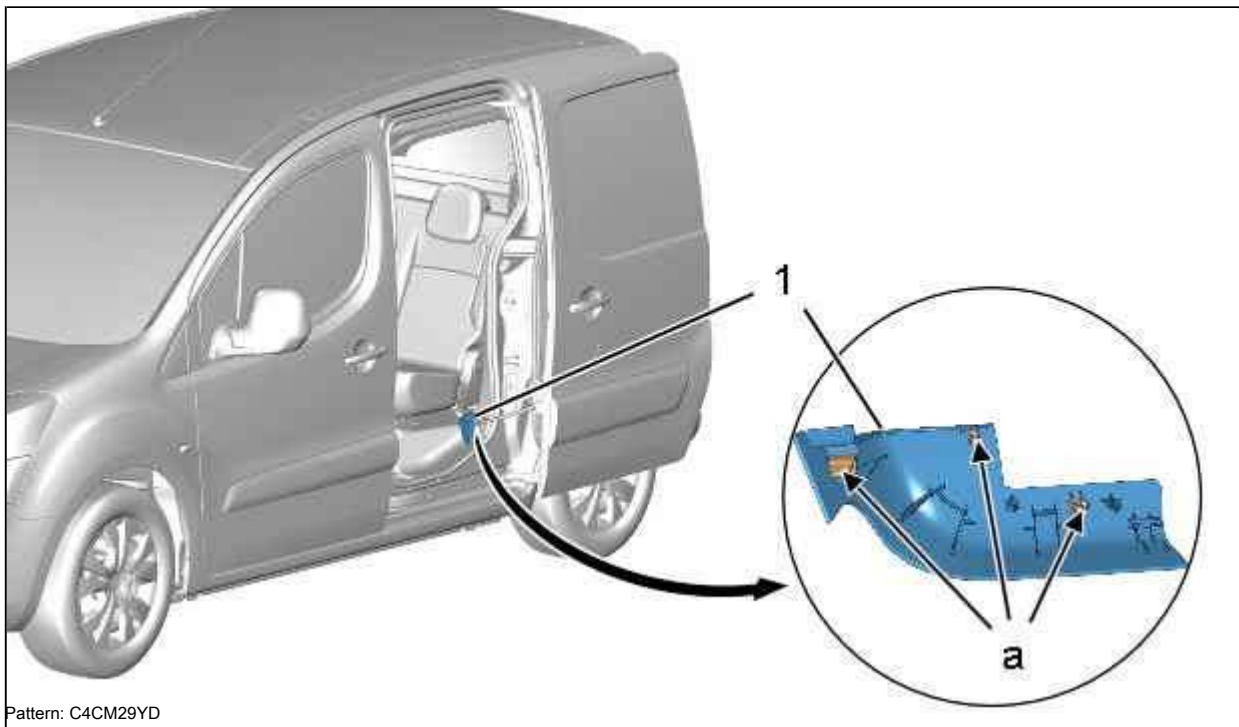
Disconnect the battery

Remove: **Rear fenders trim**

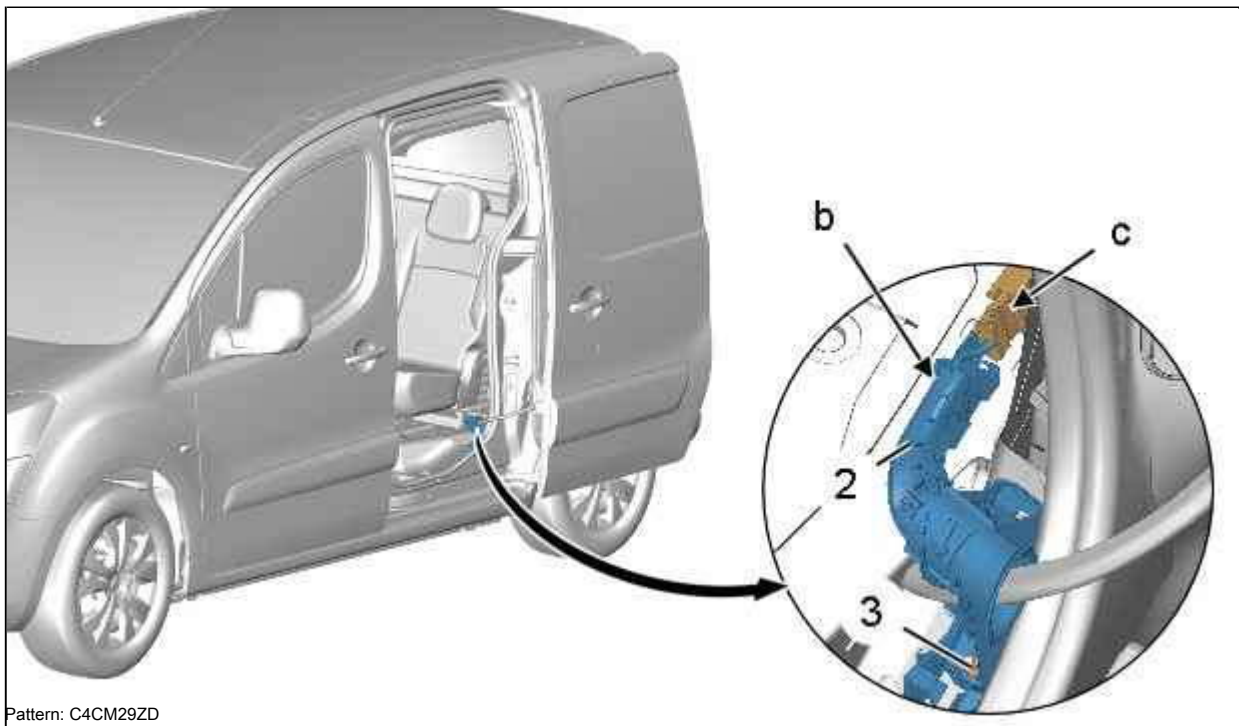
Install support [1] on the side sliding door.



3. Removal



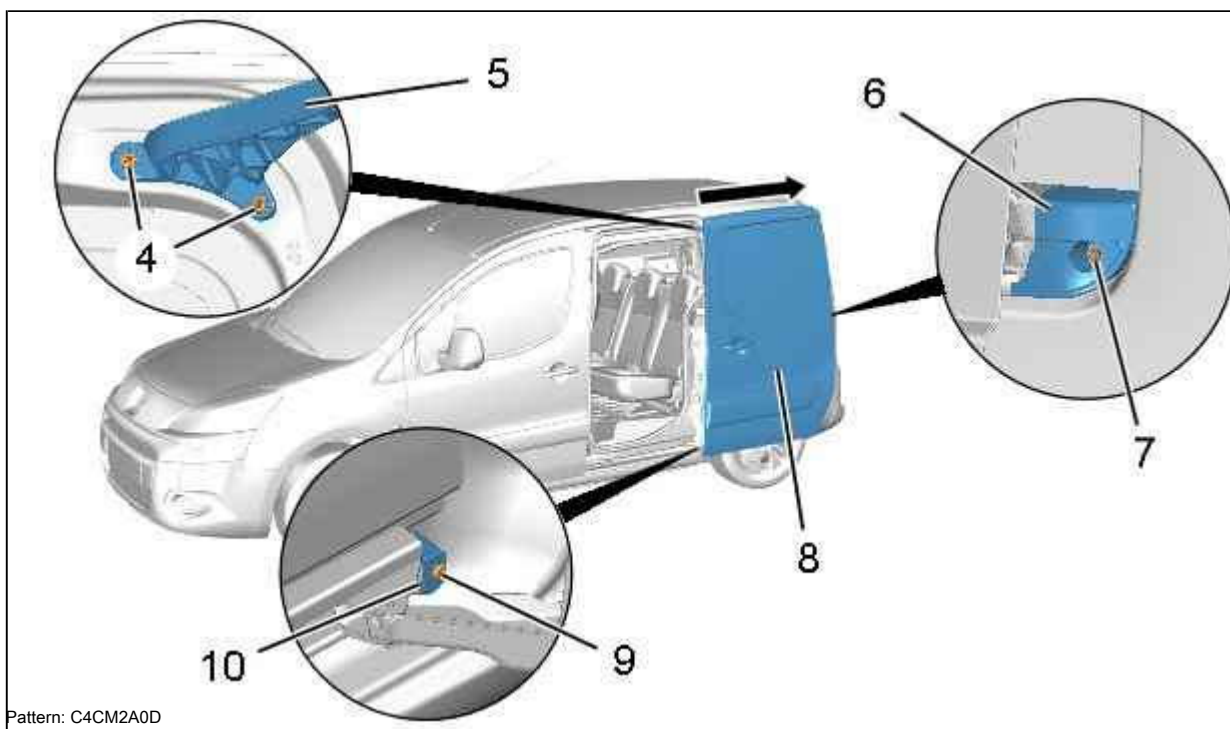
Detach the trim panel ((1)) (at "a"); Using the tool [2]. Remove the trim panel (1).



Disconnect: Wiring harness holder (2) (at "b"); Using the tool [2]. Disconnect the connector (at "c").

Release nut (3).

Detach: Wiring harness holder (2).



Loosen screws (4).

Separate: Side sliding door upper carriage (5). Remove:

- bolts (7), (9)
- stops (6), (10)

ATTENTION : Do not damage the rear wing.

Detach; Remove: Side sliding door (8) (according to arrow); Using tool [1].

4. Installation

Installation is carried out by performing the removal operations in the reverse order. Tighten:

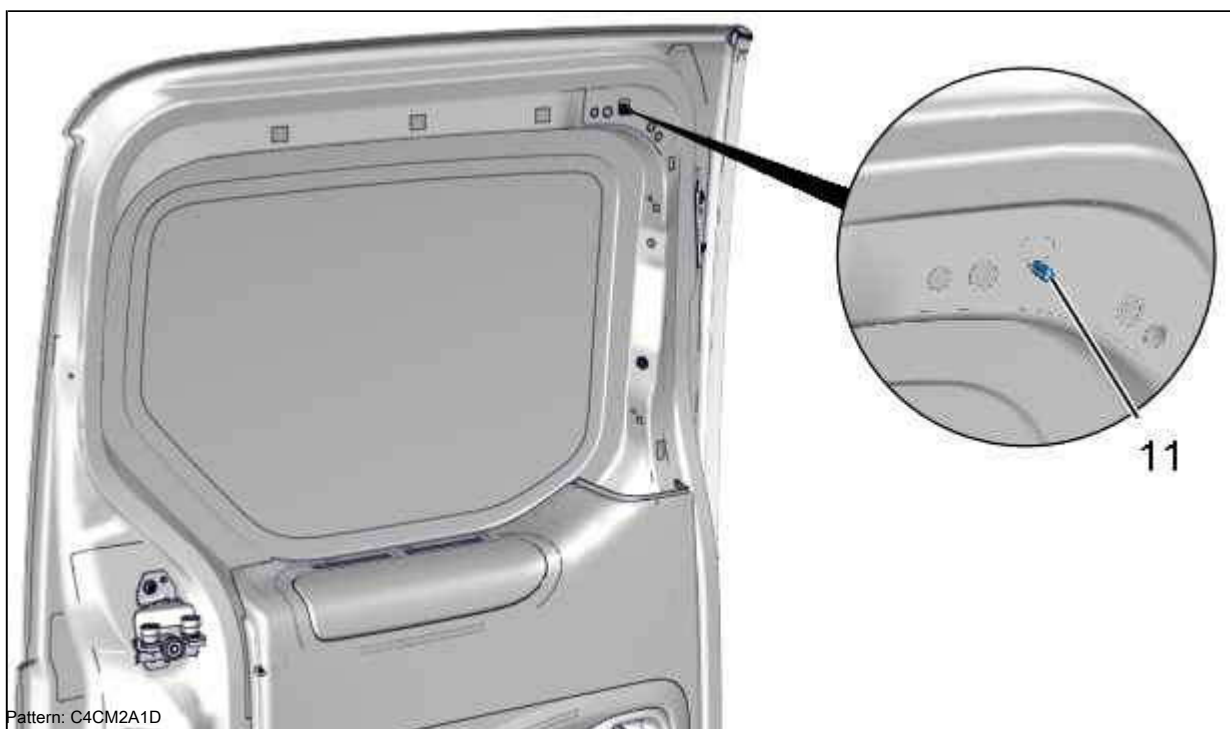
- Nuts (3) to 0.8 daNm
- Tighten the bolts (7), (9) to 0.8 da.Nm
- Tighten the bolts (4) to 2 da.Nm

5. Adjustments

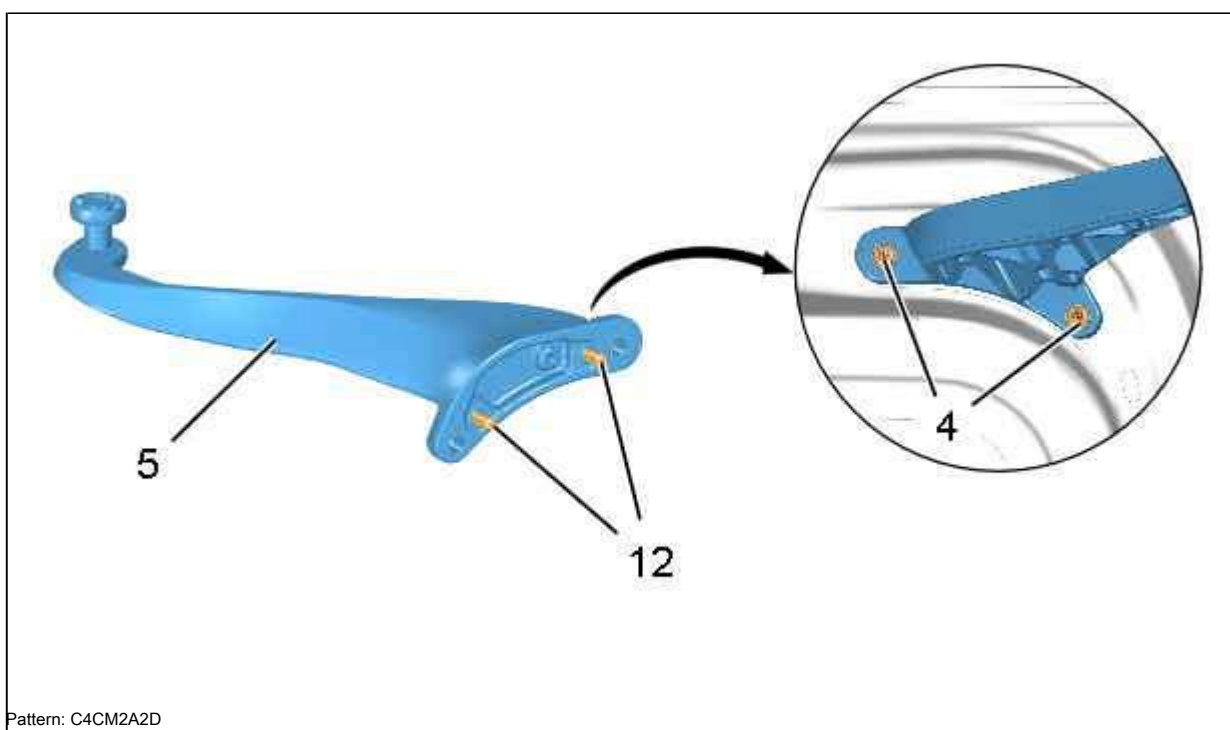
Clearance and alignment

5.1. Sliding side door mounts





Remove: Retainer (11).



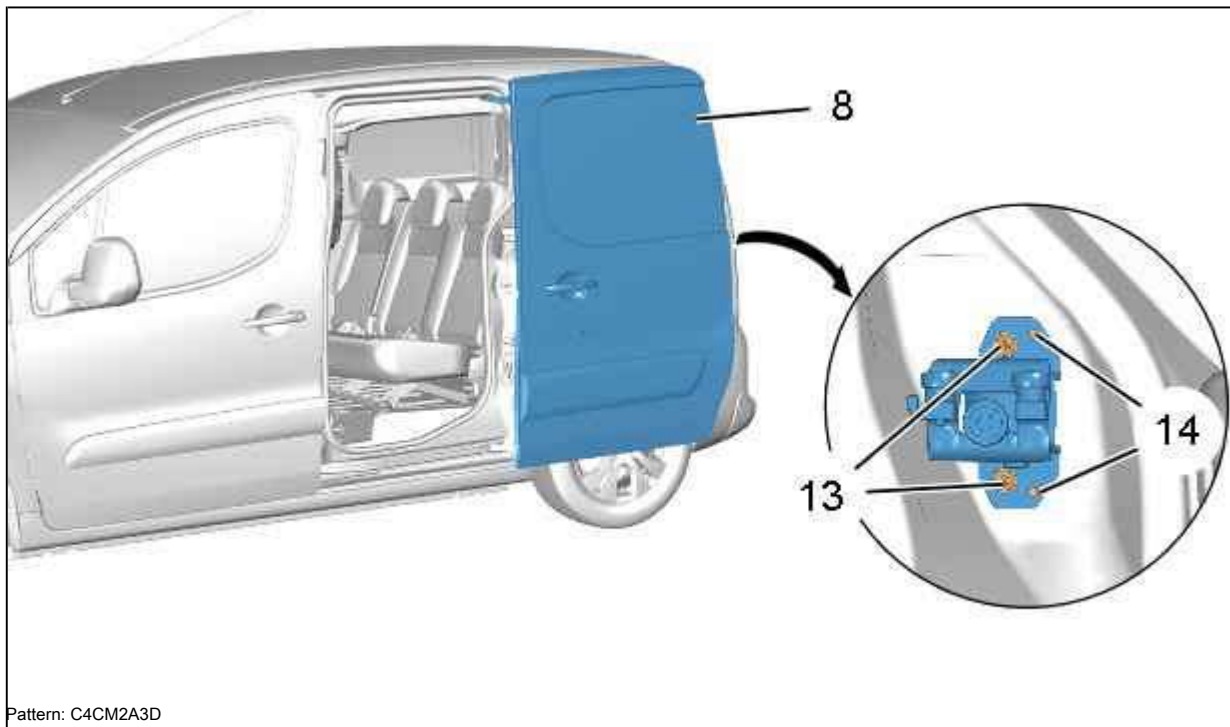
NOTE: For additional adjustment of the side sliding door clearances (8); You can grind or remove the centering pins (12).

ATTENTION : Carry out anti-corrosion treatment in the zone guide pins.

If necessary, act on the dowel pins (12); To adjust the upper

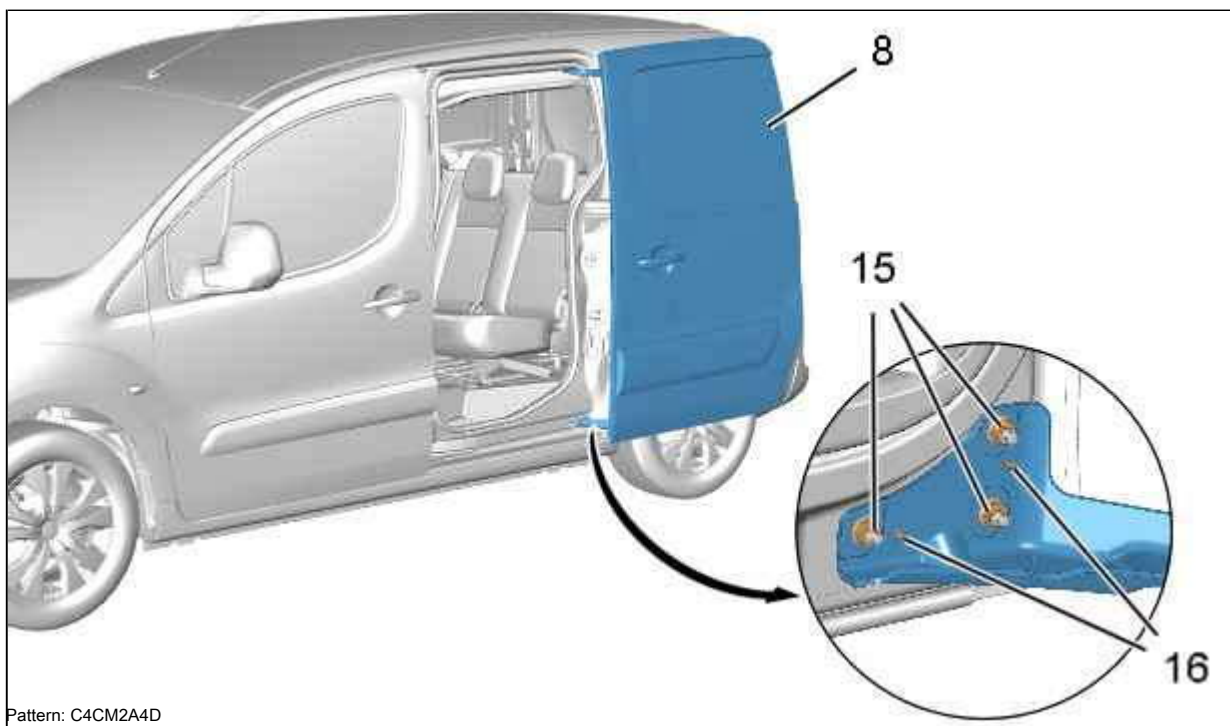
carriages.

Install: Sliding door gap (bolt (4)). Tighten the bolts (4) to 2 da.Nm.



NOTE: For additional adjustment of the side sliding door clearances (8); You can remove the dowel pins (14); Using a punch.

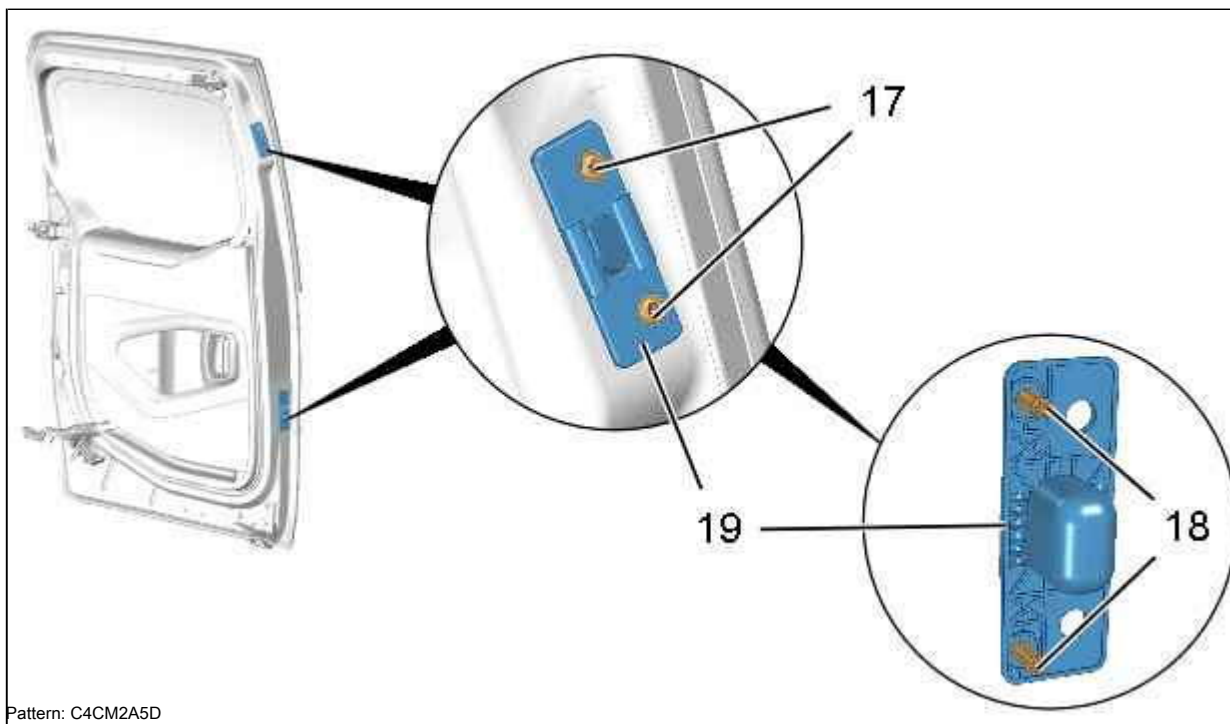
Install: Sliding door gap (bolt (13)). Tighten the screws (13) to 2 da.Nm.



NOTE: For additional adjustment of the side sliding door clearances (8); You can remove the dowel pins (16); Using a punch.

Install: Sliding door gap (nuts (15)). Tighten the nuts to a torque of (15) to 2 da.Nm.

5.2. Sliding door guides / centering devices



NOTE: For additional adjustment of the side sliding door clearances (8); The centering pins (18) can be ground or removed.

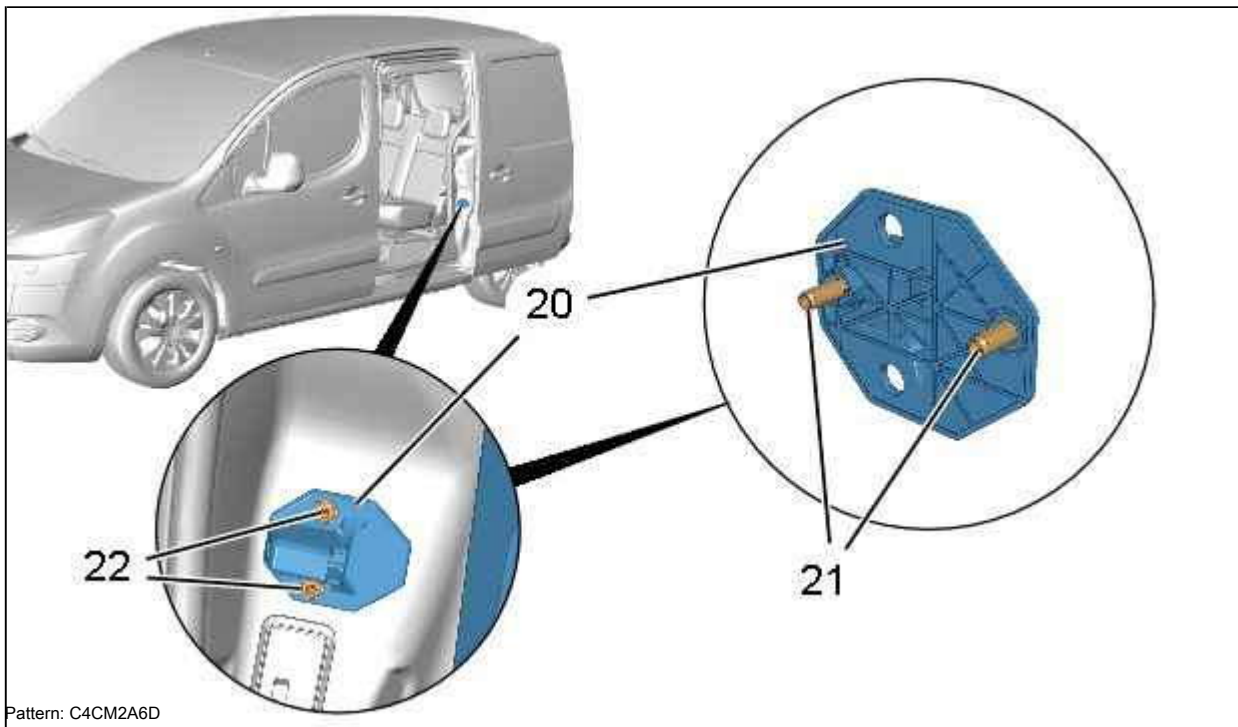
Remove:

- the bolts (17)
- centering elements (Side sliding door (19))

ATTENTION : Carry out anti-corrosion treatment in the zone guide pins.

If necessary, you can act on the dowel pins (18); To adjust the sliding door bumper.

Install: Sliding door gap (bolt (17)). Tighten the bolts (17) to 2 da.Nm.



NOTE: For additional adjustment of the side sliding door clearances (8); You can grind or remove the centering pins (21).

Remove:

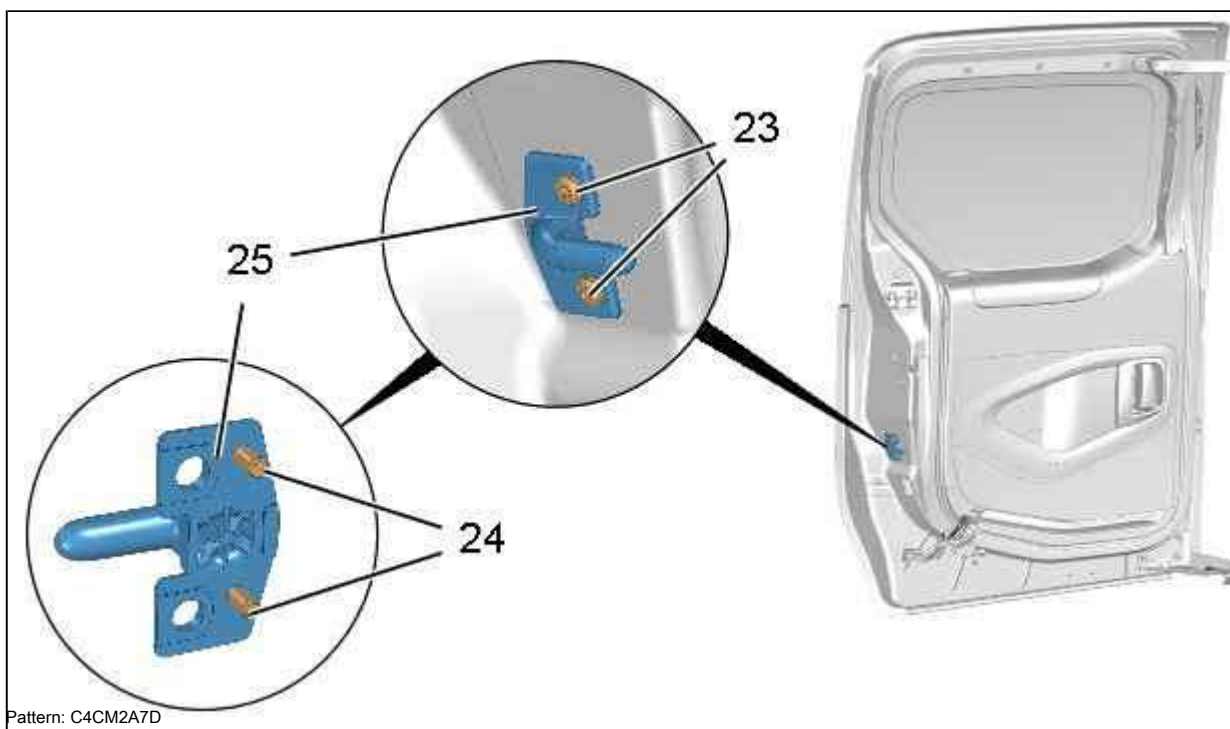
- the bolts (22)
- Sliding door bumper (20)

ATTENTION : Carry out anti-corrosion treatment in the zone guide pins.

If necessary, you can act on the dowel pins (21); To adjust the sliding door bumper.

Install: Sliding door gap (bolt (22)). Tighten the bolts (22) to 2 da.Nm.

5.3. Centering devices for sliding doors



NOTE: For additional adjustment of the side sliding door clearances (8); The centering pins (24) can be ground or removed.

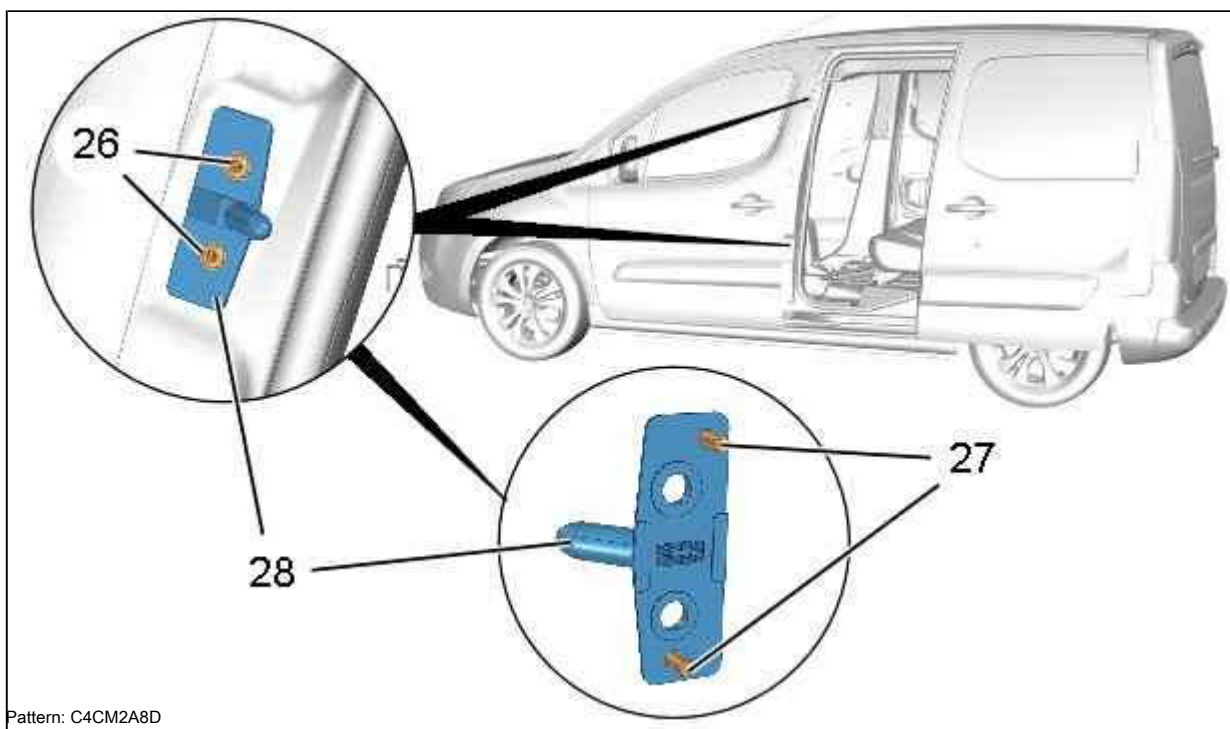
Remove:

- the bolts (23)
- Sliding door bumper (25)

ATTENTION : Carry out anti-corrosion treatment in the zone guide pins.

If necessary, act on the dowel pins (24). Install: Sliding door gap (bolt (23)).

Tighten the bolts (23) to 2 da.Nm.



Pattern: C4CM2A8D

NOTE: For additional adjustment of the side sliding door clearances (8); You can grind or remove the centering pins (27).

Remove:

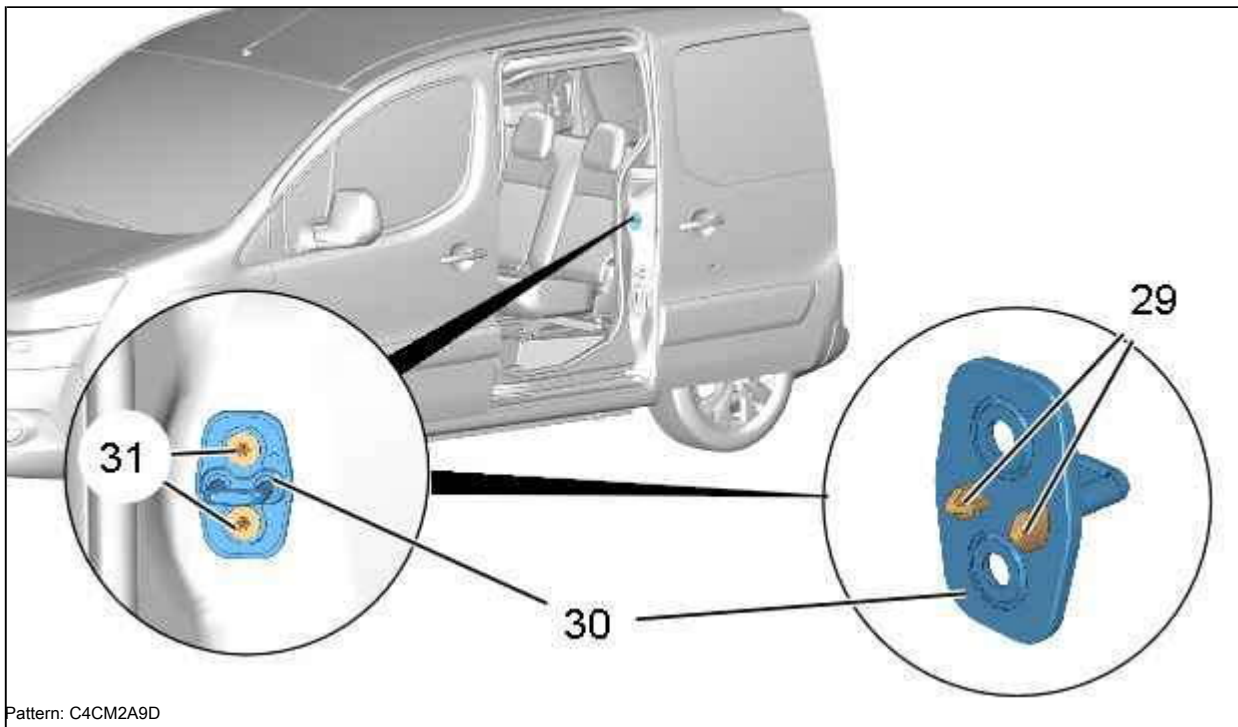
- the bolts (26)
- Side sliding door bumpers (28)

ATTENTION : Carry out anti-corrosion treatment in the zone guide pins.

If necessary, you can act on the dowel pins (27); To adjust the rails centering the side sliding doors.

Install: Sliding door gap (bolt (26)). Tighten the screws (26) to 2 da.Nm.

5.4. Sliding side door bracket



Loosen the screws (31).

Detach the Tailgate Bracket (30). Sand the marks (29).

Install:

- Scobadveri (30)
- bolts (31) (loose)

Adjust the position of the bracket (30) to adjust the alignment of the side sliding door. Tighten the screws (31) to 2 da.Nm.

6. Additional operations

Clearance and alignment

Reconnect the battery.

Check the operation of the various equipment.

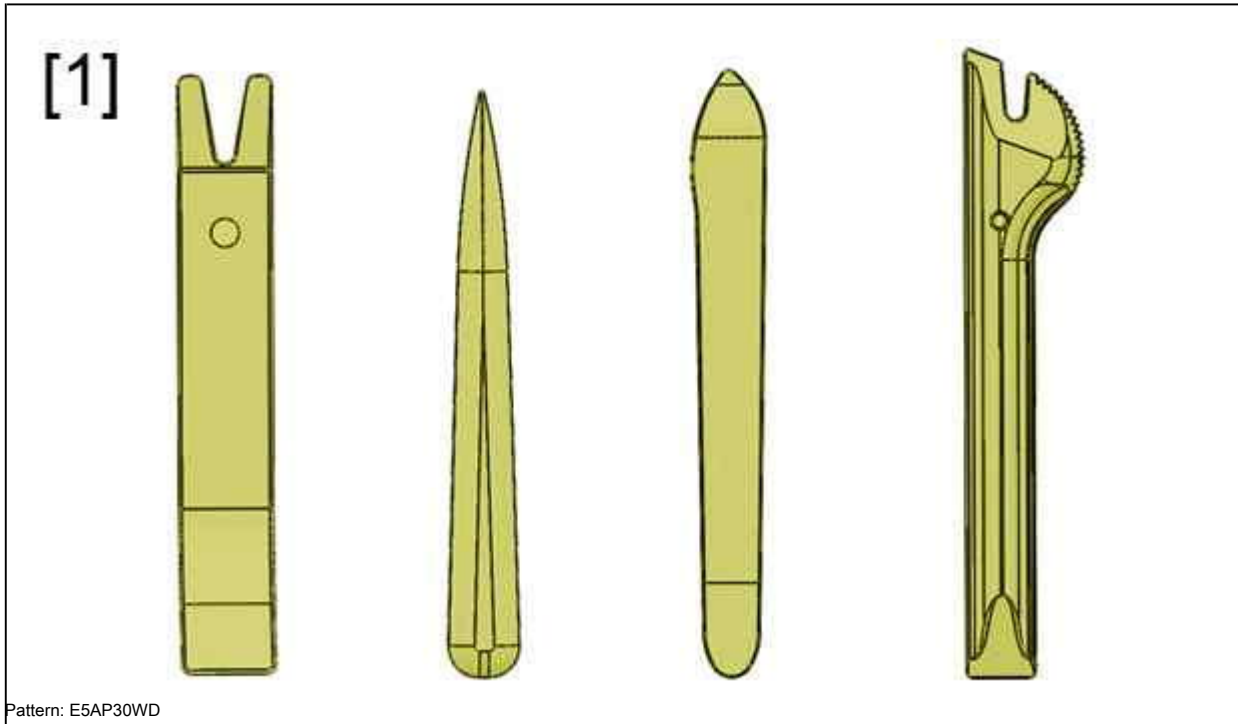


REMOVAL REFITTING: CARRIAGE AND GUIDES REAR SIDE SLIDING DOOR

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment

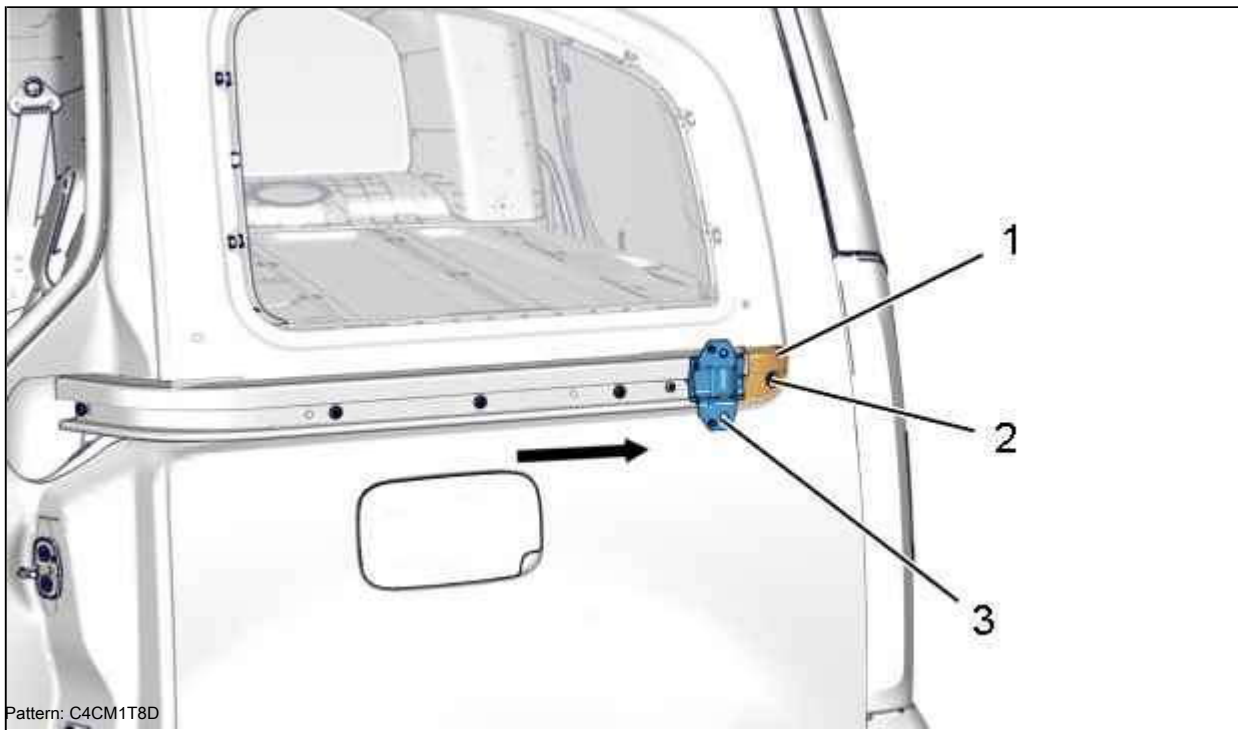


[1] Trim stripper () .1350ZZ.

2. Removal

Remove the sliding side door

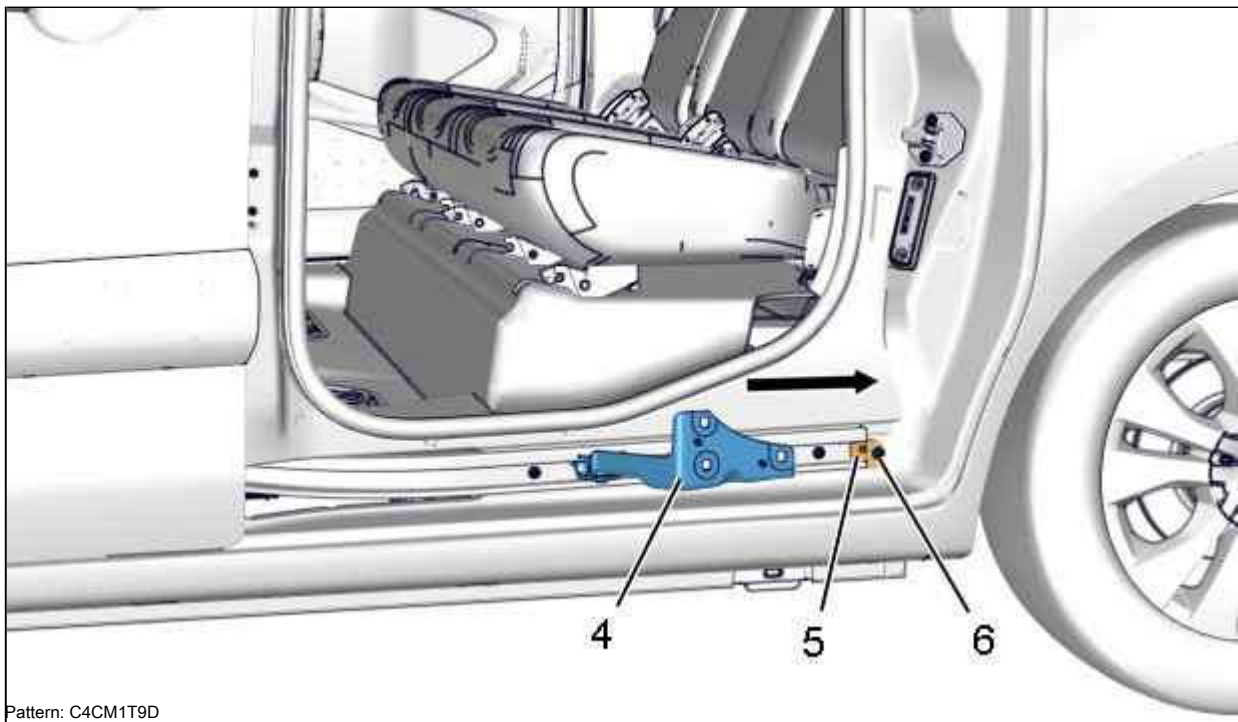
2.1. Sliding side door center carriage



Remove:

- Bolt (2)
- Stop (1)
- Side sliding door center carriage (3) (according to arrow)

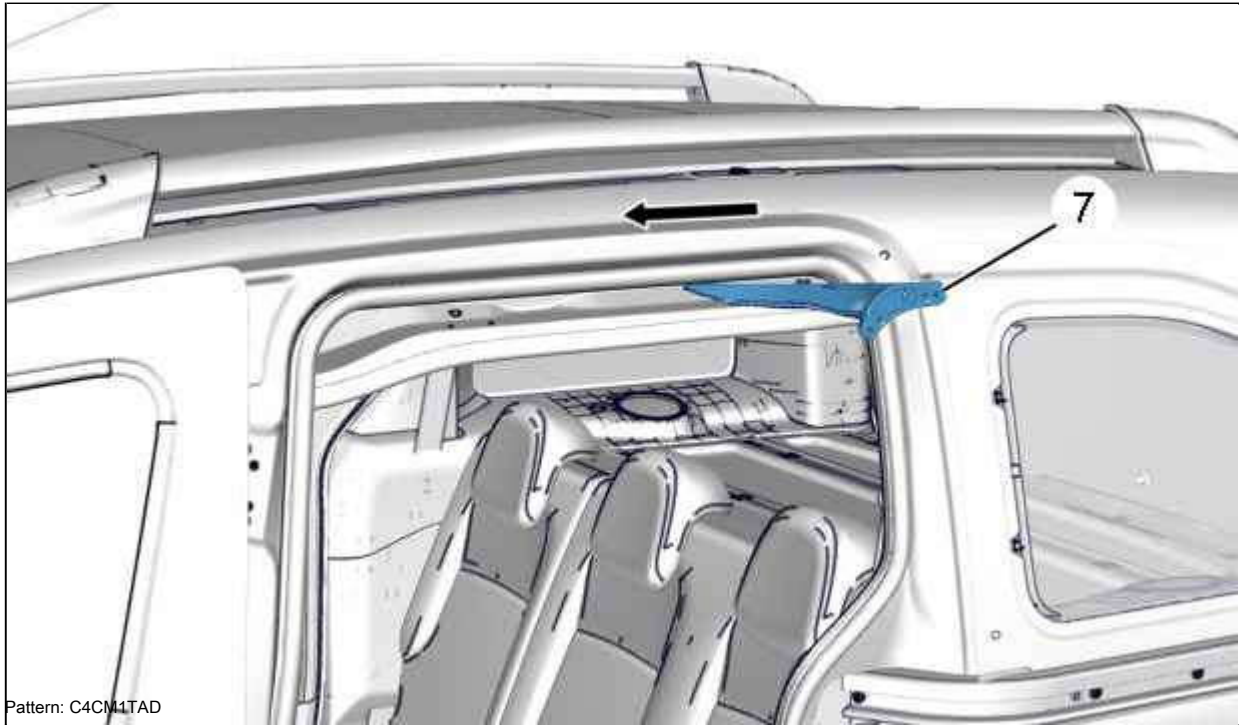
2.2. Lower carriage of side sliding door



Remove:

- Bolt (6)
- Stop (5)
- Lower carriage of the side sliding door (4) (according to the arrow)

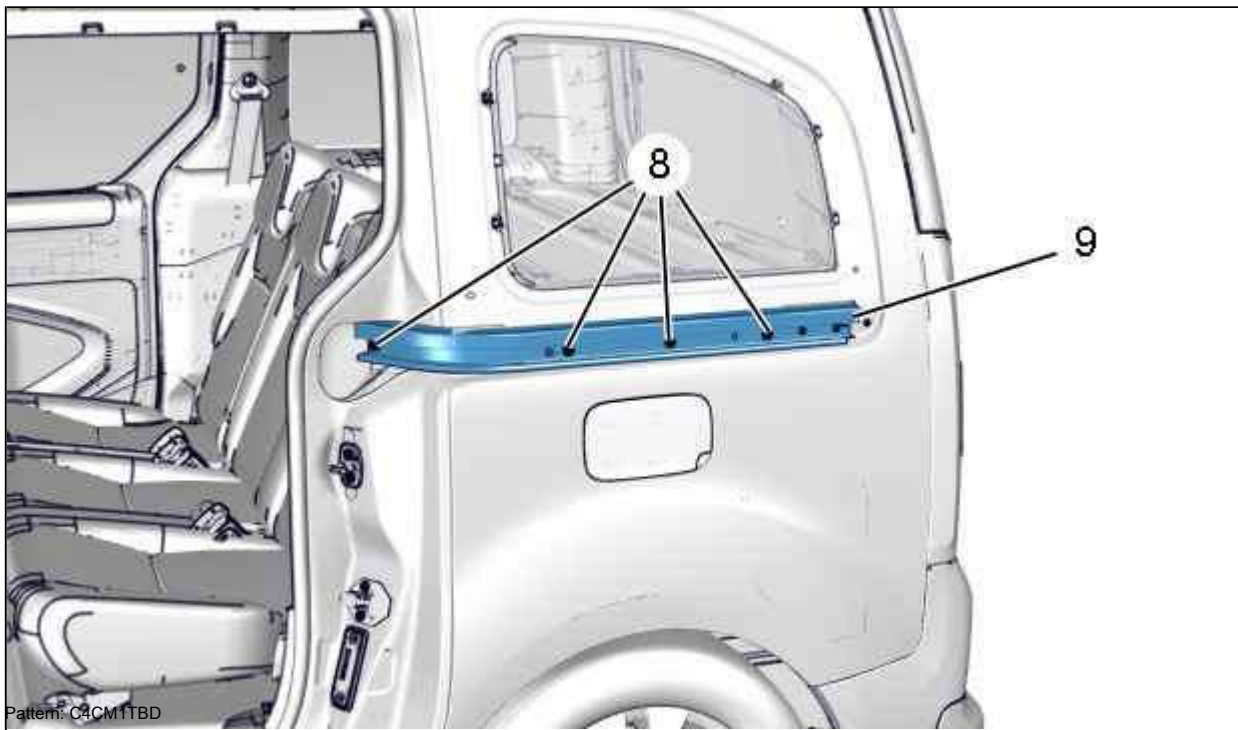
2.3. Upper carriage of side sliding door



Slide the side sliding door upper carriage (7) up to the front edge of the side sliding door track (in accordance with the arrow).

Remove: Side sliding door upper carriage (7).

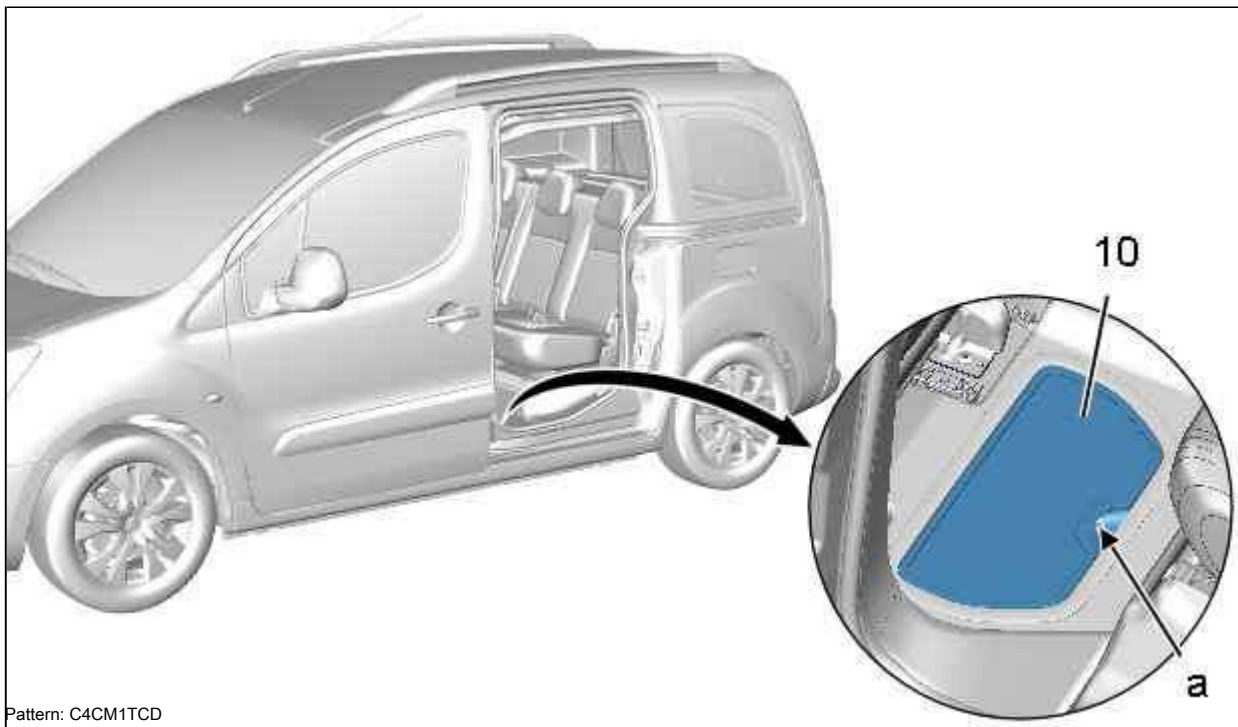
2.4. Center rail side sliding door



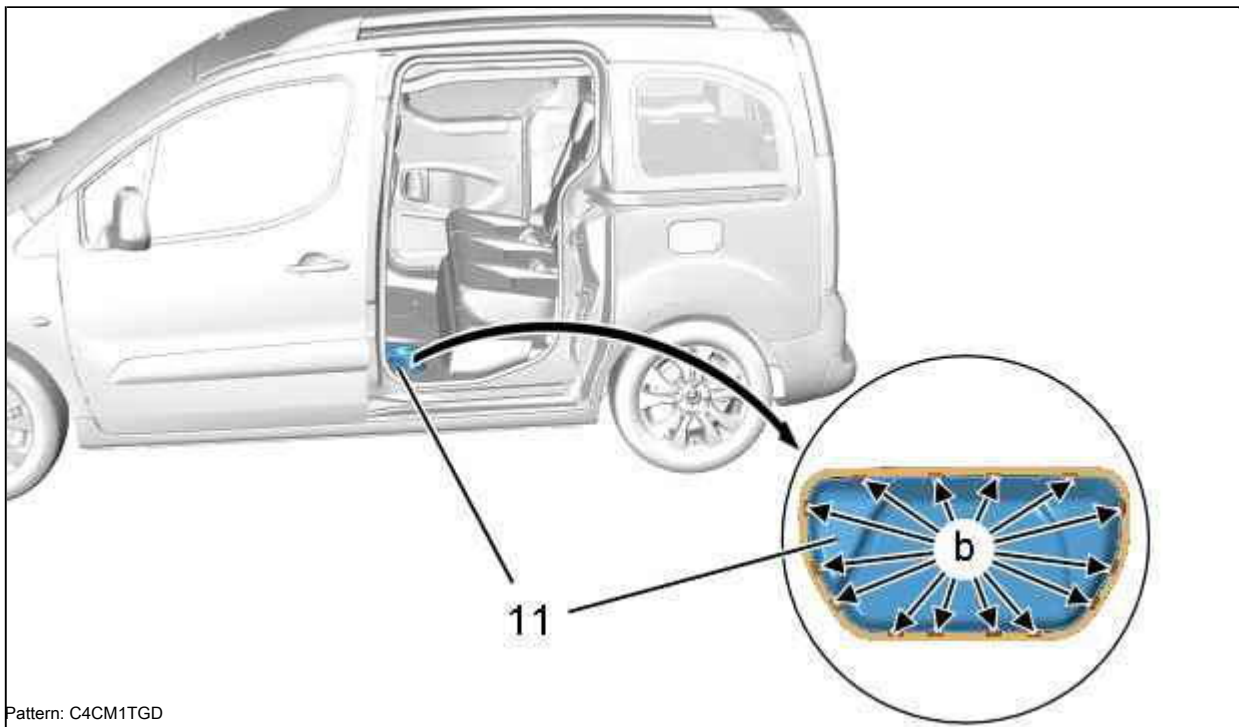
Remove:

- the bolts (8)
- Sliding door center rail (9)

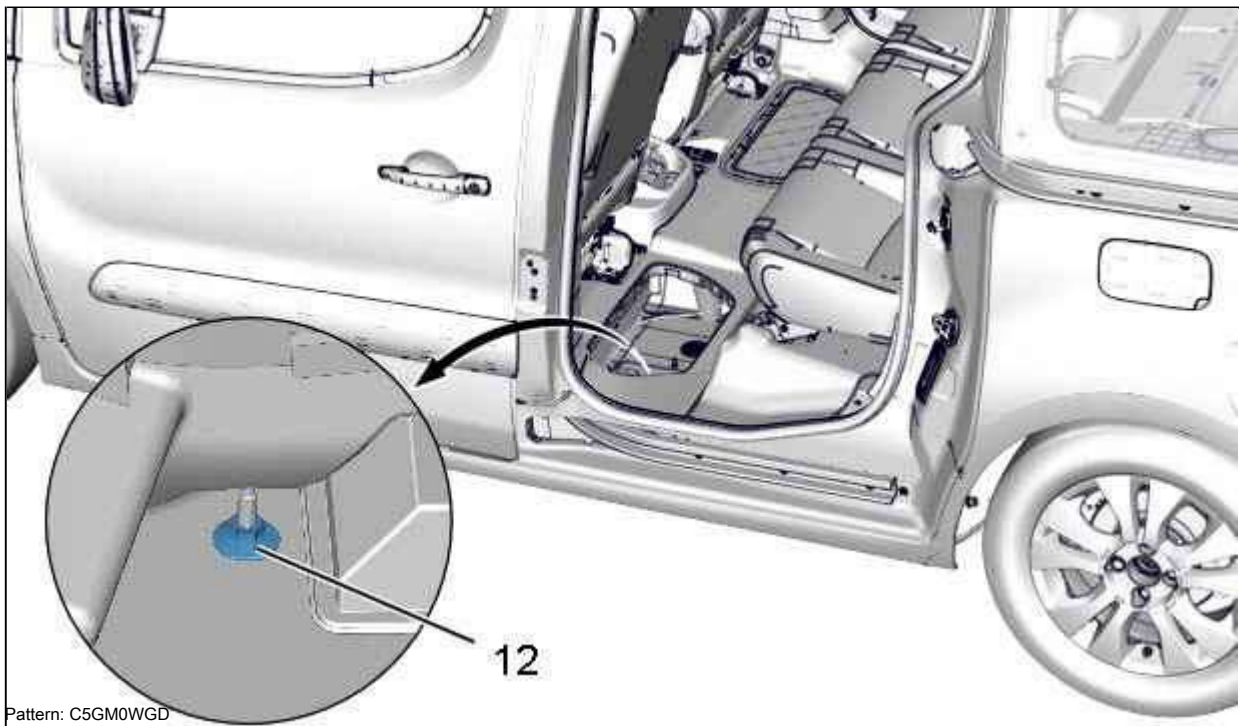
2.5. Lower rail side sliding door



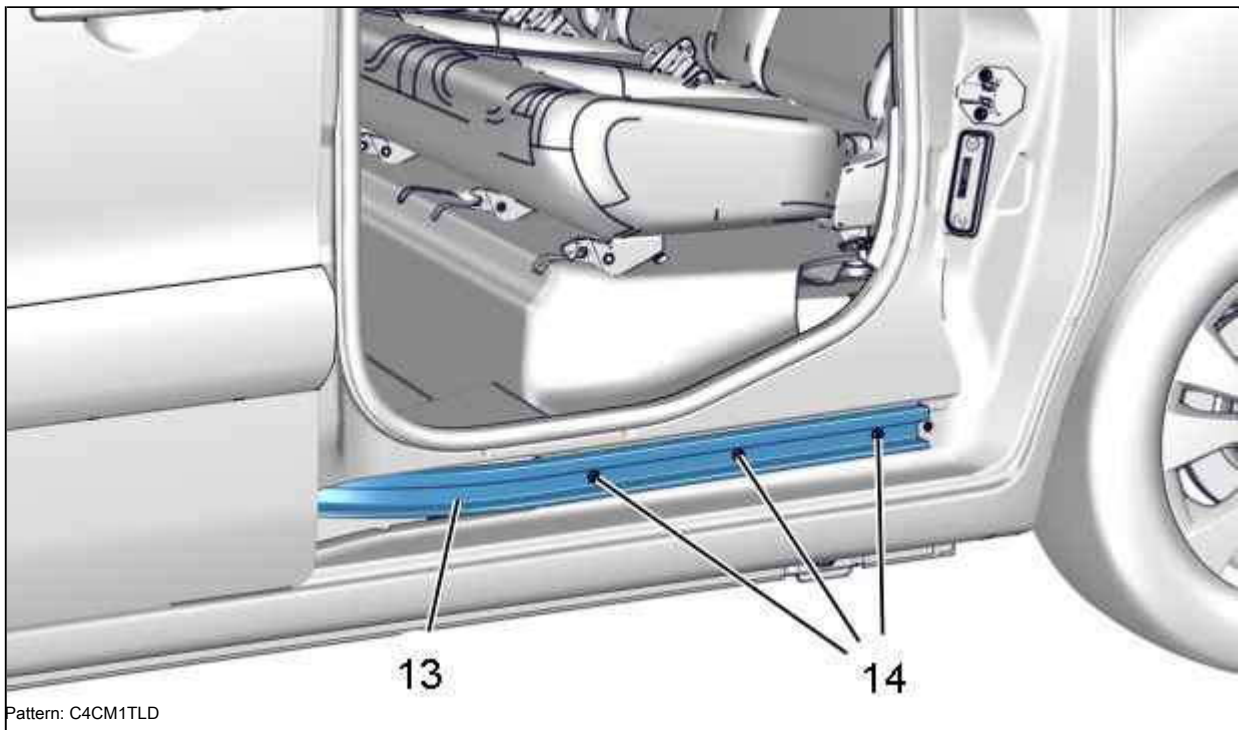
Open: Luggage compartment lid (10) (at "a"). Remove: Luggage compartment lid (10).



Disconnect: Luggage box (11) (at "b"); Using the tool [1]. Remove the cover (11).



Unscrew the nut (12).





Remove:

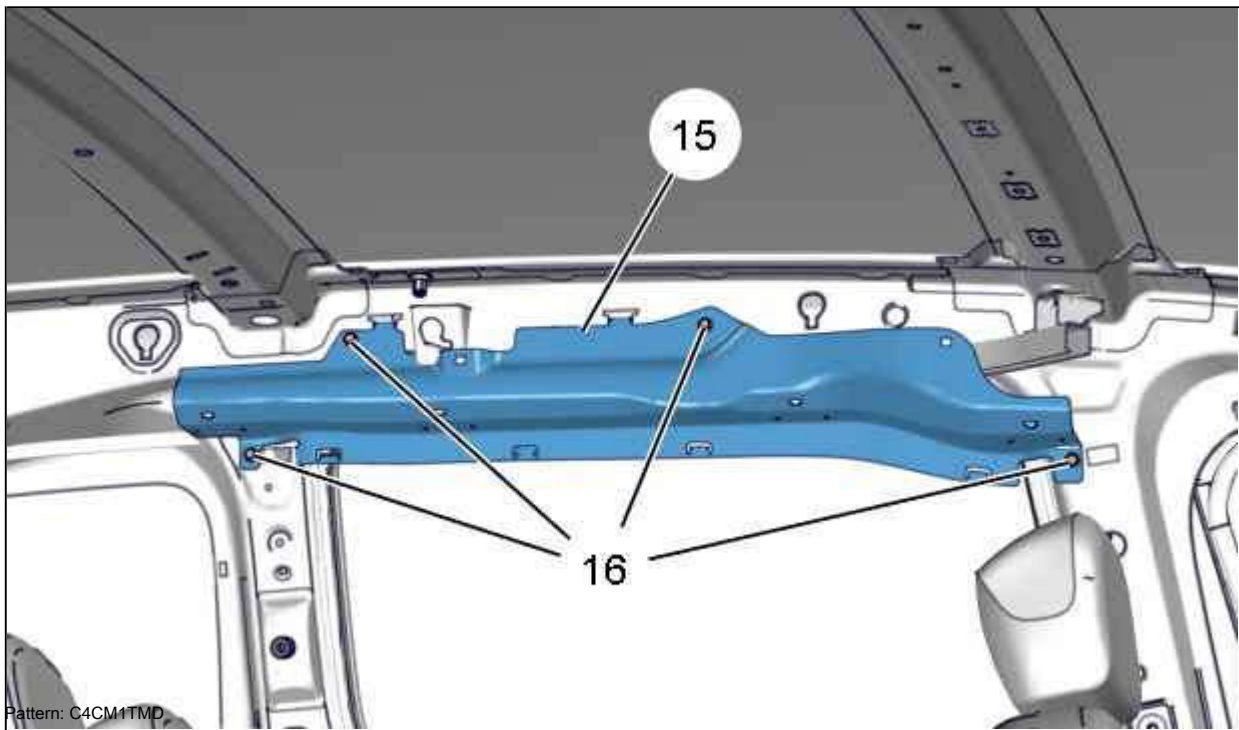
- the bolts (14)
- Sliding door lower rail (13)

2.6. Top rail side sliding door

Remove:

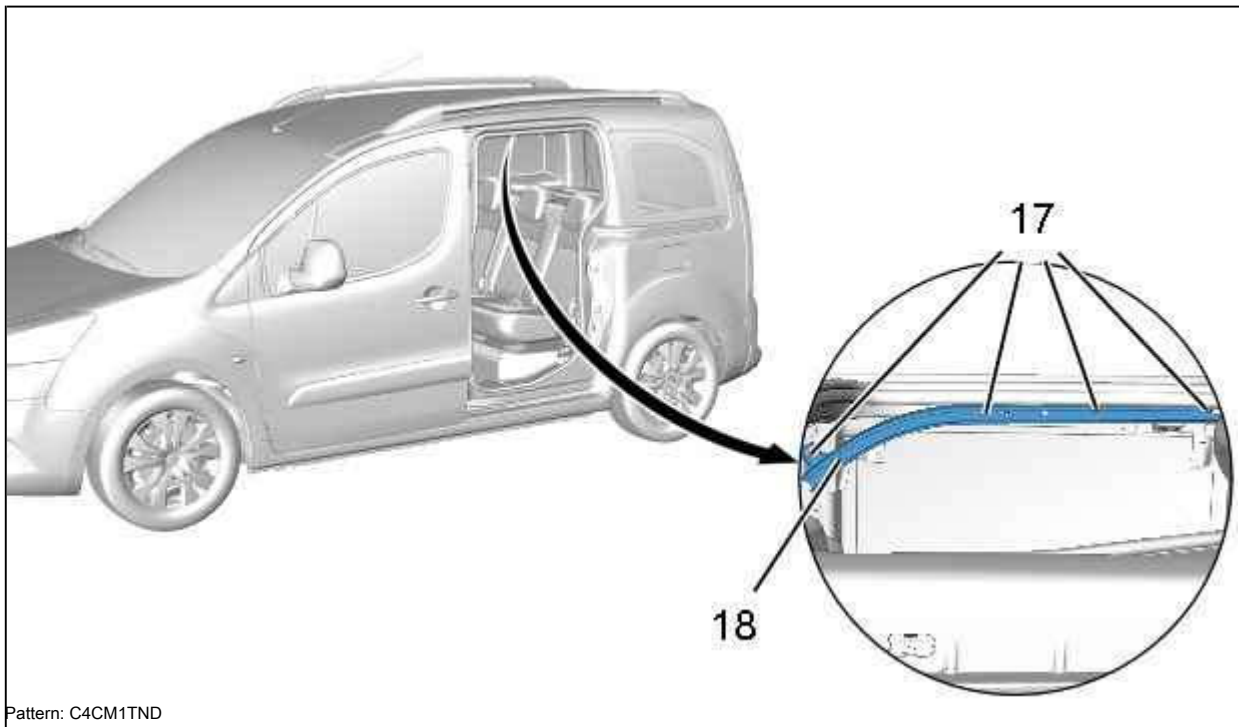
- **Roof upholstery** (no hatch)
- **Roof upholstery**  (With hatch)

Detach partially  : Roof side airbag (depending on equipment).



Remove:

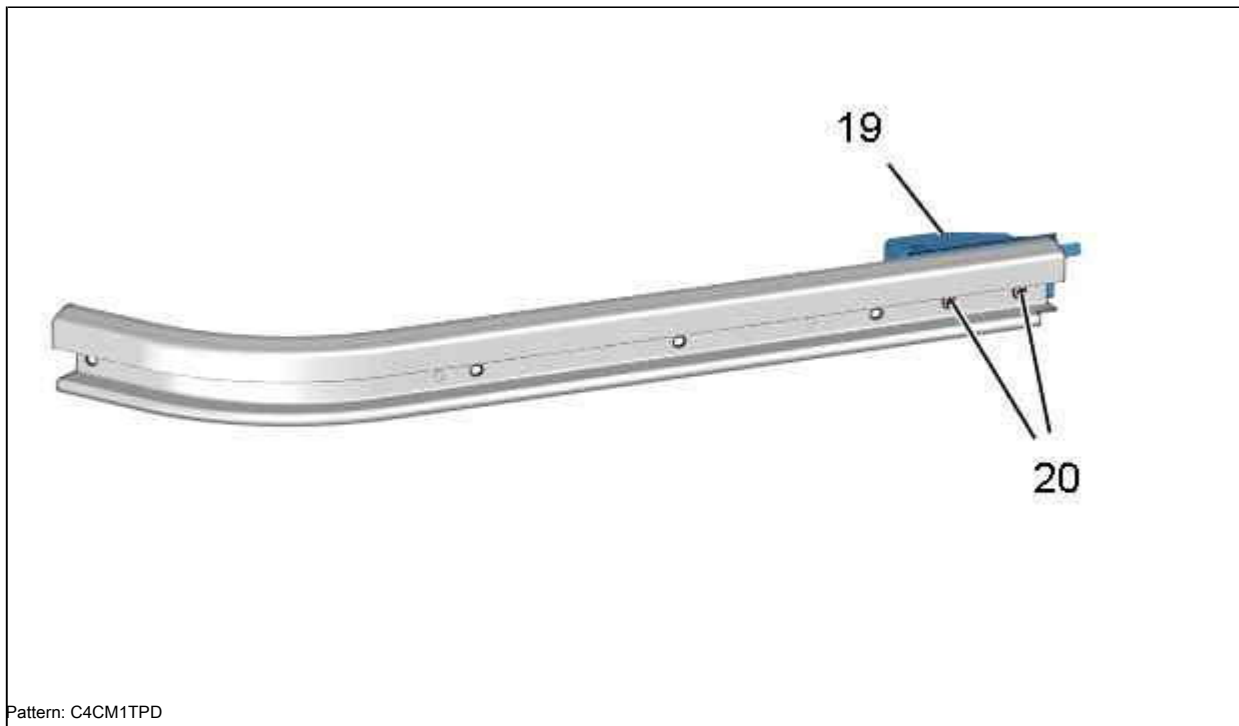
- the bolts (16)
- Center roof molding (15)



Remove:

- the bolts (17)
- Side Sliding Door Top Rail (18)

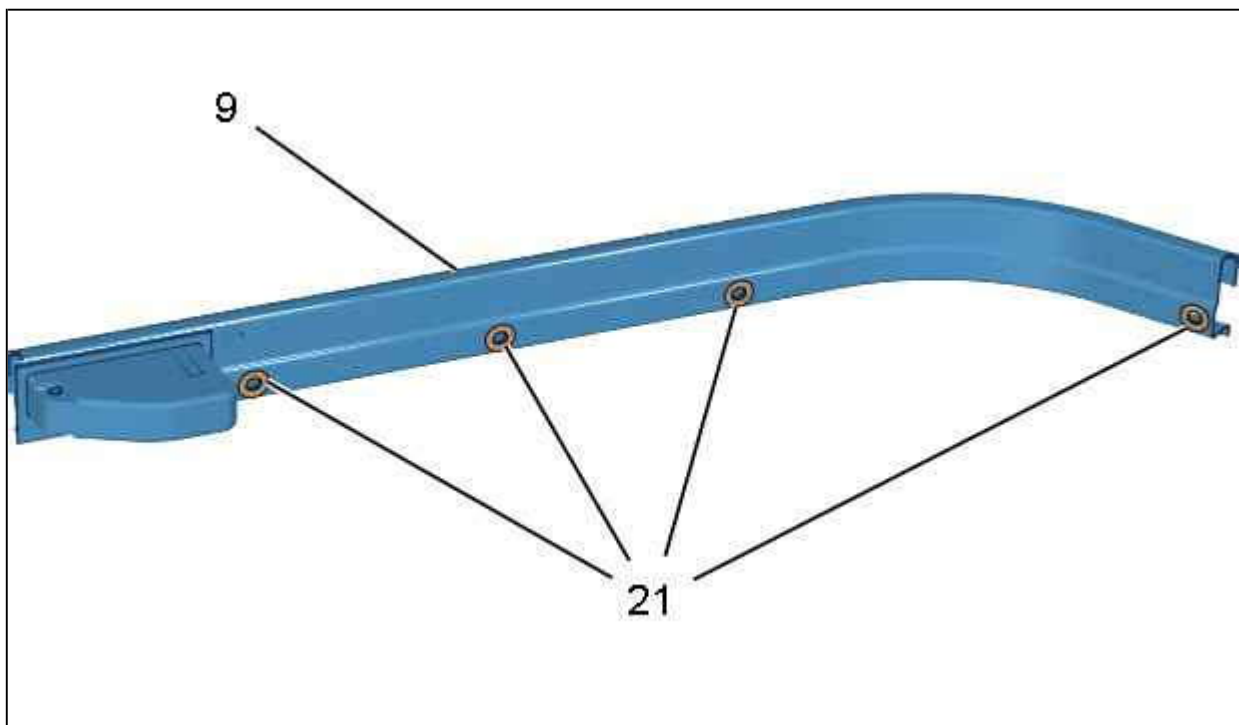
2.7. Side sliding door fixing carriage



Remove:

- the bolts (20)
- Side sliding door fixing carriage (19)

3. Installation



Pattern: C4CM1TQD

When installing the center rail side sliding door (9), do not forget to install the sealing washers (21).

Installation is carried out by performing the removal operations in the reverse order. Tighten:

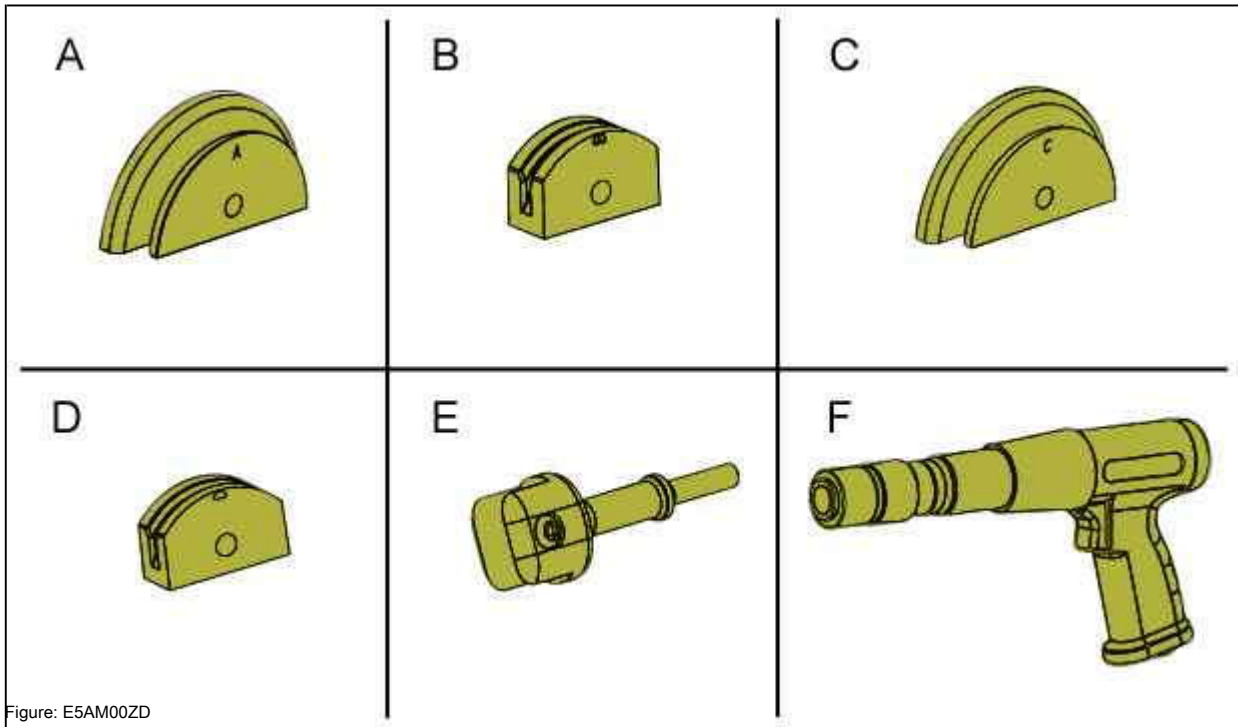
- bolts (2), (6), (8), (14), (16), (17), (20) moment 0.8 ± 0.2 da.Nm
- The nut (12) to a torque of 0.8 ± 0.2 da.Nm

Check the correct functioning of the electrical equipment.

REPLACEMENT: EXTERNAL PANEL SIDE SLIDING DOOR WITH GLASS

MANDATORY: Observe the cleanliness and rules of safe work.

1. Recommended equipment



[1] set for rolling the outer door panel. tool [1]: G.1130.

reference pr: 9776.EB.

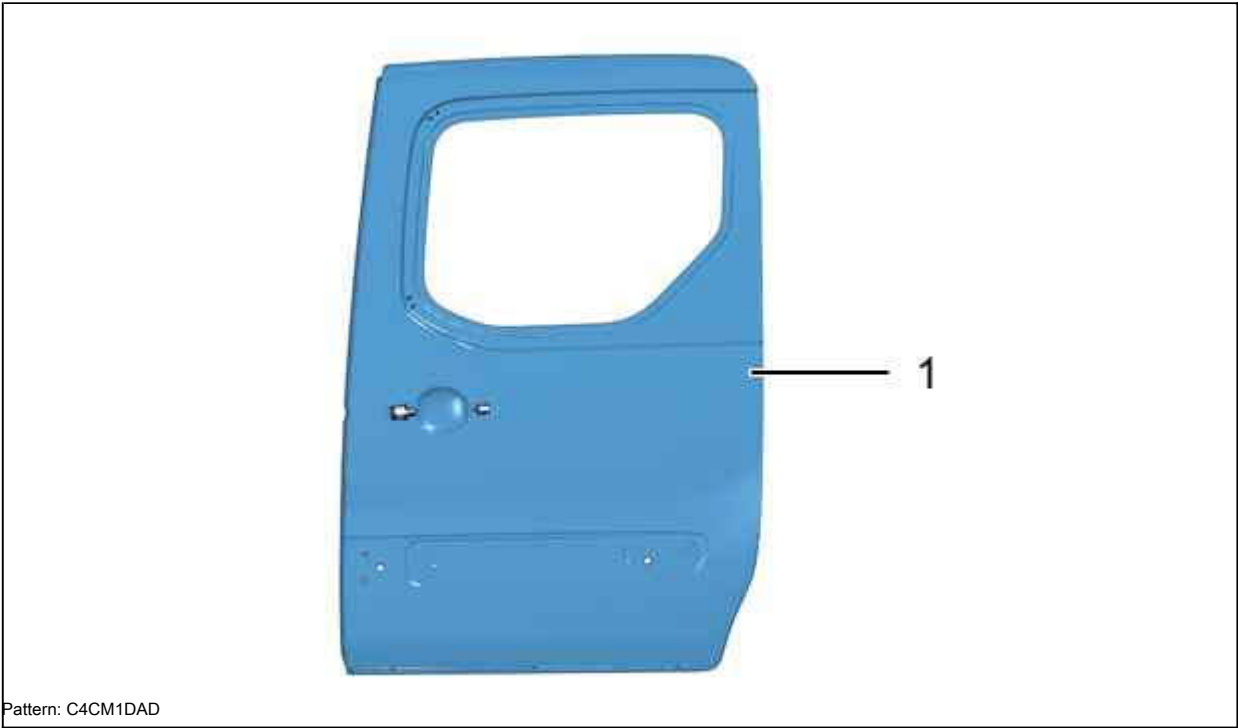
ATTENTION : It is recommended to use the G.1130 tool for rolling.

2. Additional operation

Remove the side sliding door.

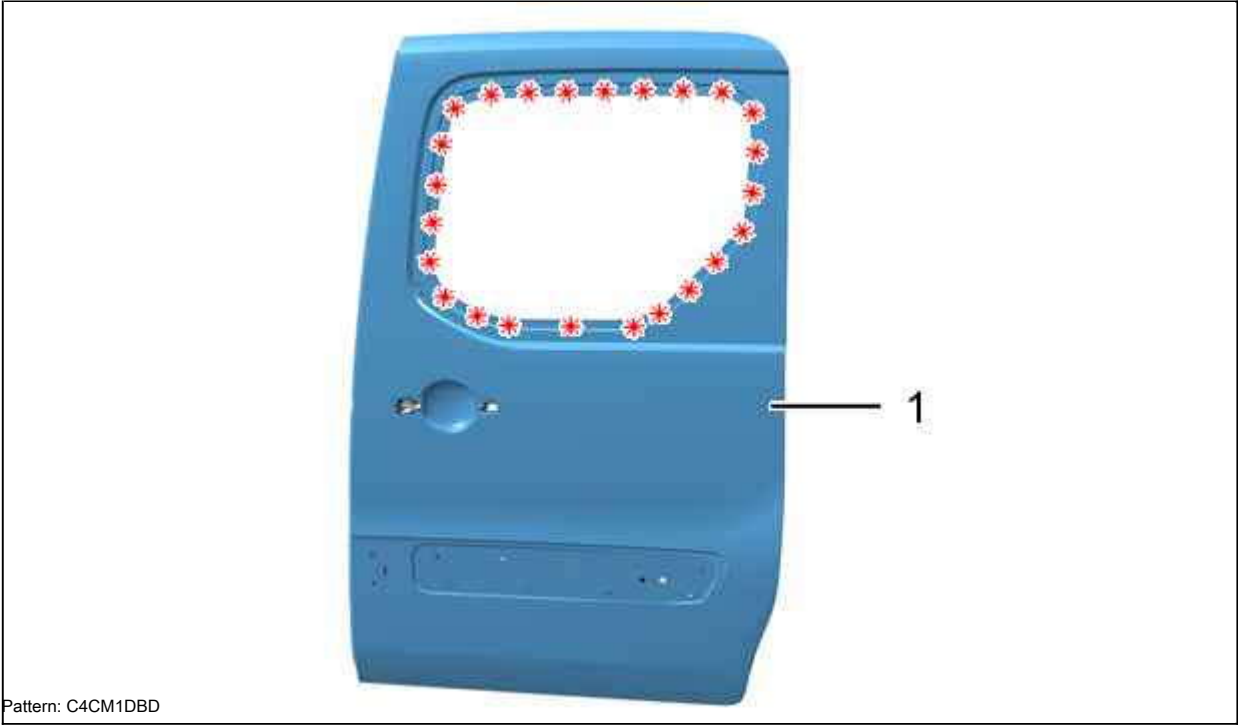
Disassemble (partially): Side sliding door.

3. Identification of the spare part



Label Designation		Thickness (mm)	Nature (character) / Classification
(1)	Sliding side door outer panel with 0.77 glass		ADX (*)
(*) ADX: mild steel			

4. Disconnection



Cut: Weld points; With a 8mm diameter cutter.

Cut: Outline of the outer door panel (rear); With floppy disk. Remove: Side sliding door outer panel (1).

NOTE: The outer panel of the side sliding door (1) is glued with structural adhesive, type "B8". To remove the outer panel of the rear door, it is necessary to warm the circuit of the outer panel of the rear door (1).

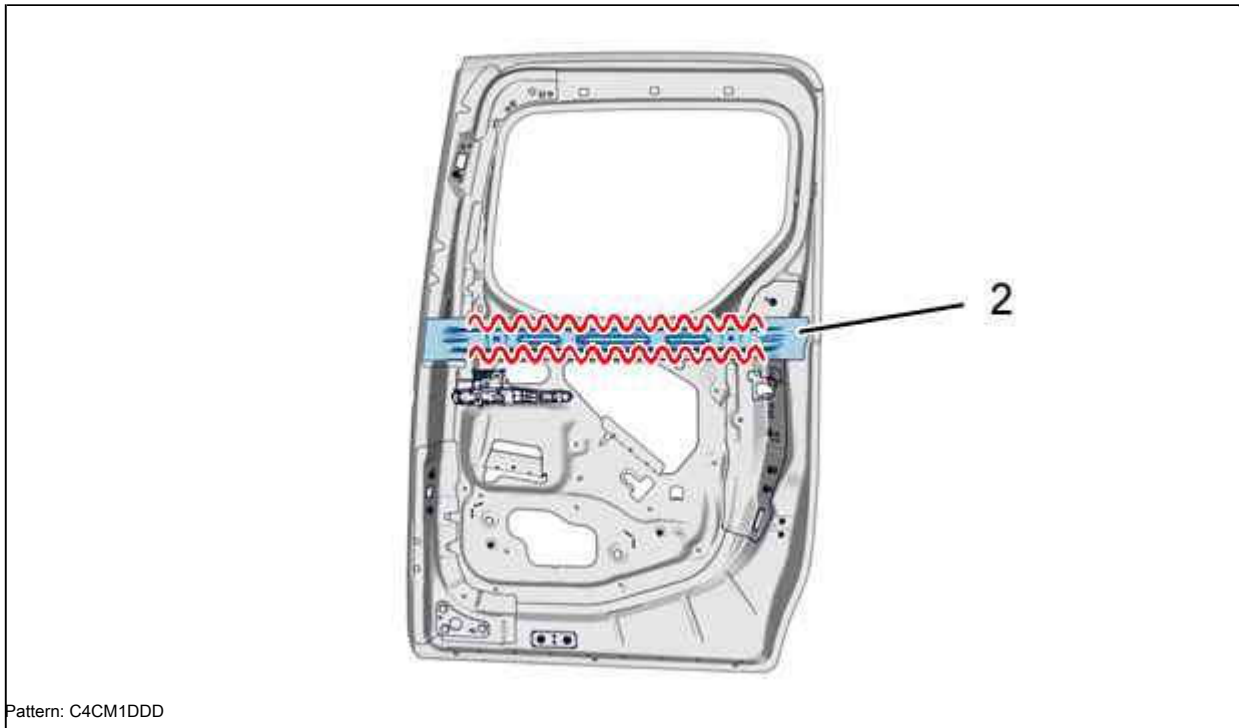
5. Cleaning and preparing the door



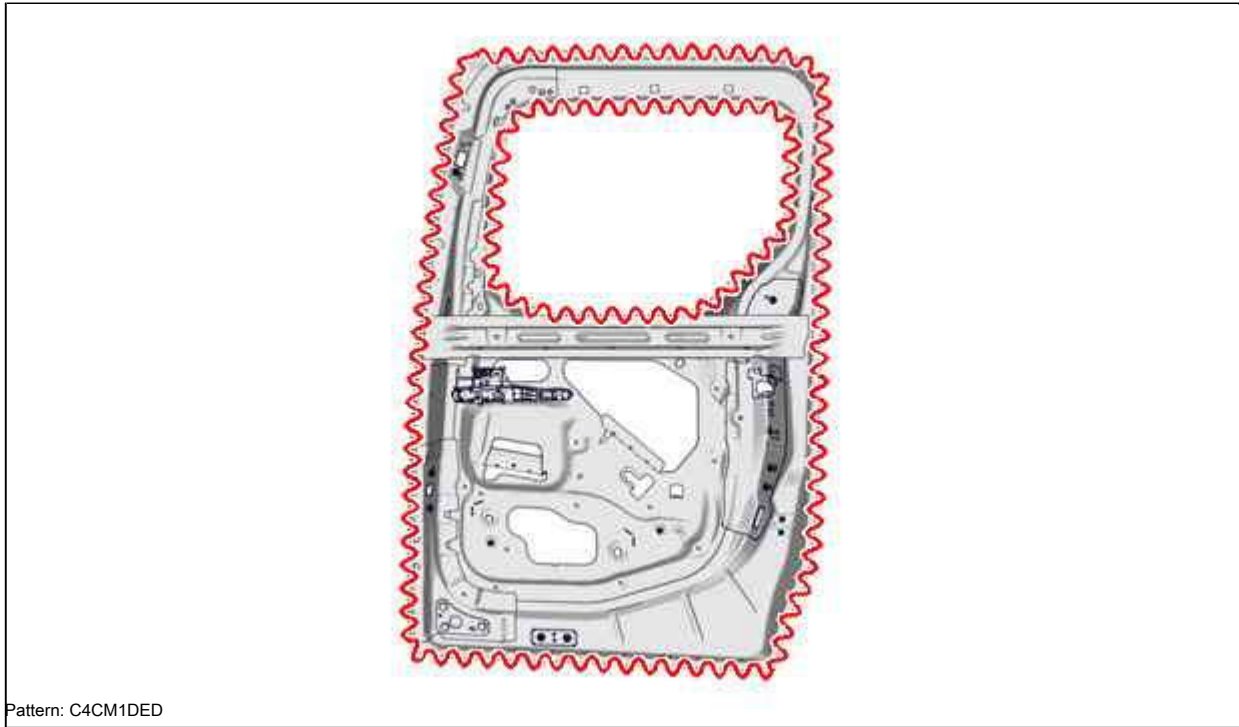
Pattern: C4CM1DCD

Perform the following operations:

- Clean and straighten the edges of the joints
- Apply "C7" welding primer

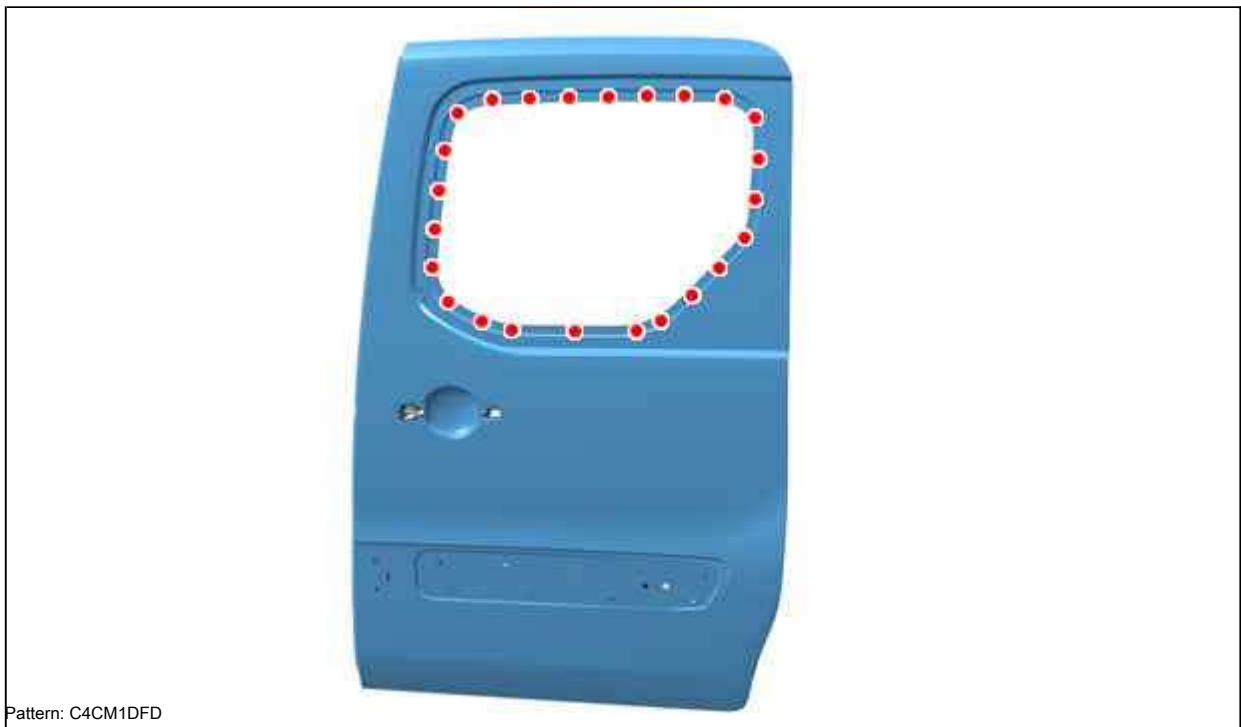


Apply fixing compound with index "A1" to the next element: Side impact protection reinforcement (2).



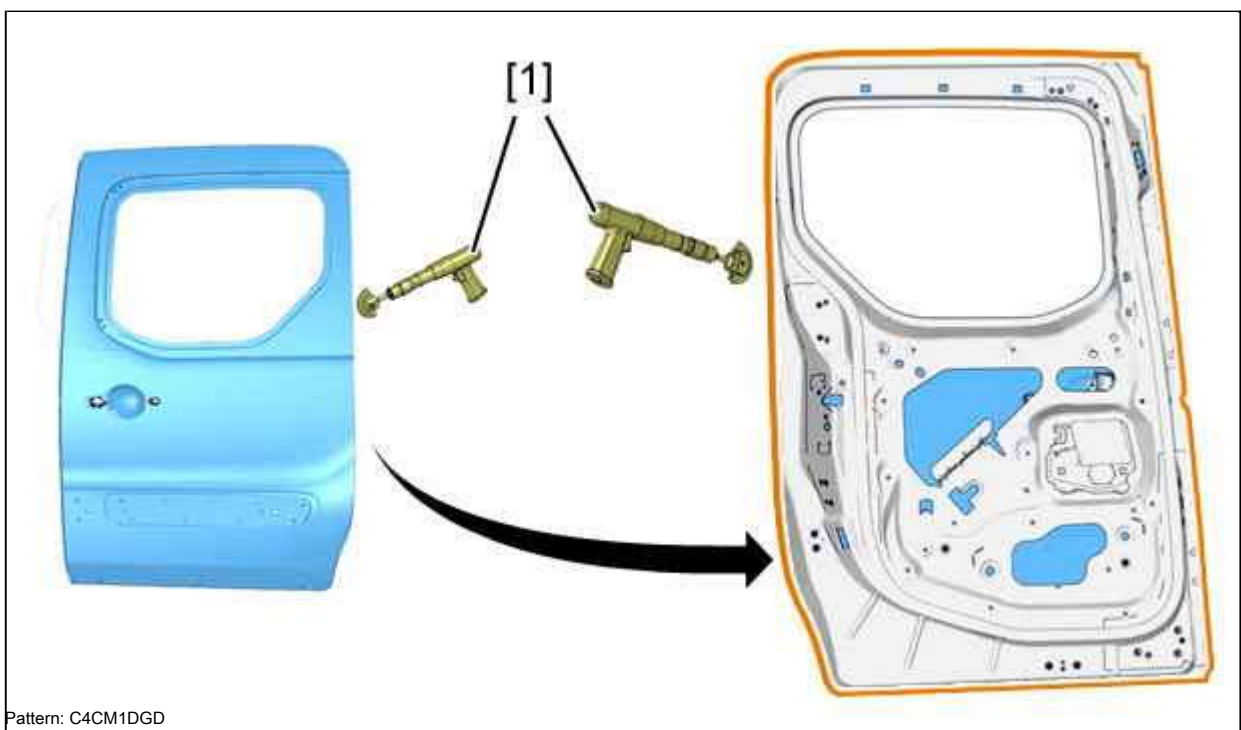
Apply structured adhesive "B8" along the contour of the sliding side door.

6. Welding



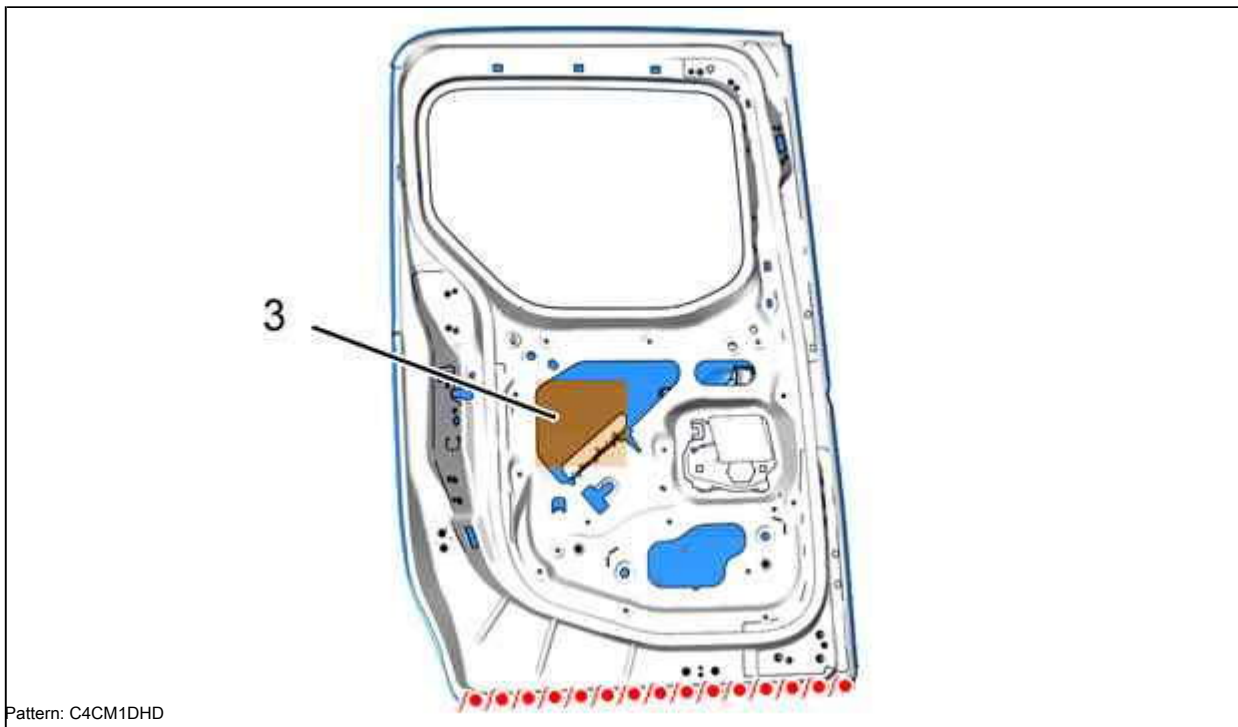
Install: Side sliding door outer panel. Weld with welding points.

7. Mandrel



Fold in the outer panel of the sliding side door using the tool [1].

8. Tightness



Apply a layer of phosphating material to cleaned areas. Apply type A1 sealing mastic.

Install a new damper plate (3) inside the sliding side door to replace the old one.

9. Protection

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

10. Reinitialization

Perform additional operations.

Reconnect the battery.

REPLACEMENT: OUTER GLASS PANEL SIDE SLIDING DOORS

MANDATORY: Observe the cleanliness and rules of safe work.

1. Recommended equipment

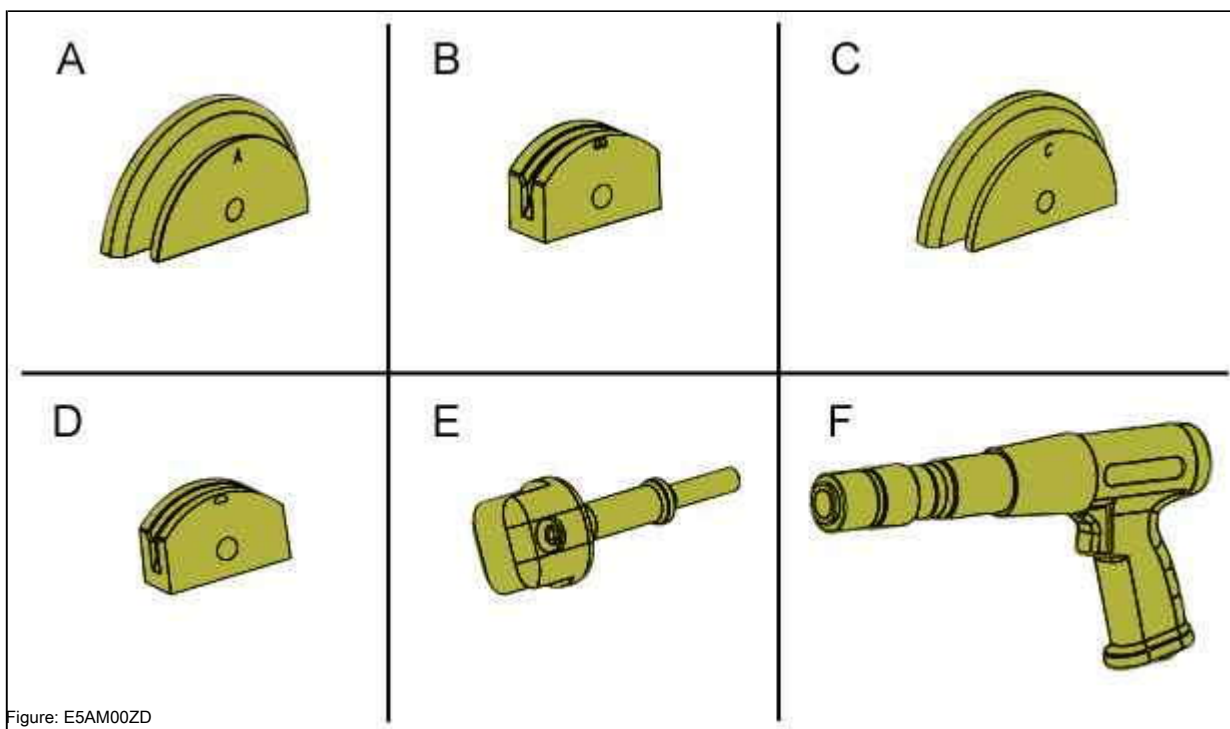


Figure: E5AM00ZD

[1] set for rolling the outer door panel. tool [1]: G.1130.

reference pr: 9776.EB.

ATTENTION : It is recommended to use the G.1130 tool for rolling.

2. Additional operation

Remove the side sliding door.

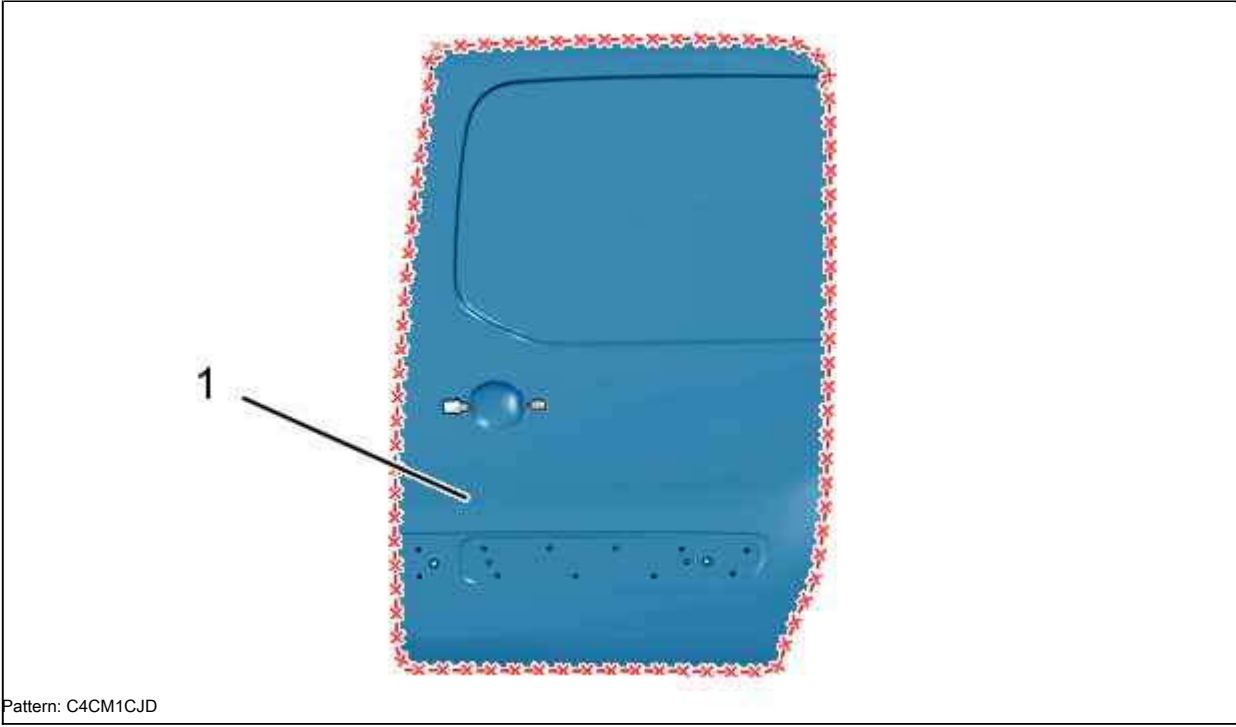
Disassemble (partially): Side sliding door.

3. Identification of the spare part



Label Designation		Thickness	Nature
(1)	Outer panel of non-glazed side sliding door	(mm) 0.77	(character) / classification ADX (*)
(*) ADX: mild steel			

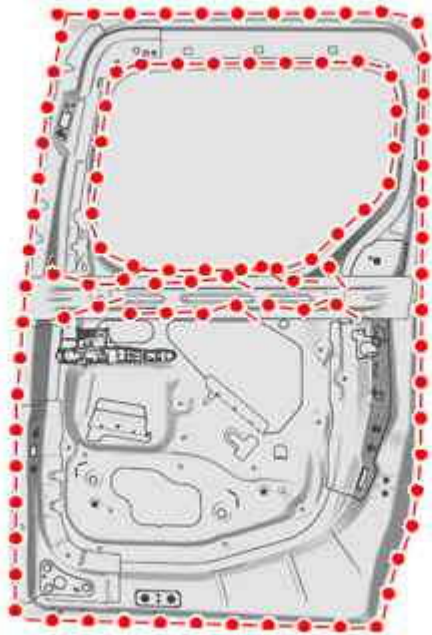
4. Disconnection



Cut: Cut out the outer panel of the side sliding door (1); Using a flexible disc. Remove: Side sliding door outer panel (1).

NOTE: The outer panel of the side sliding door (1) is glued with structural adhesive, type "B8". To remove the outer panel of the sliding side door (1), it must be heated along the circuit.

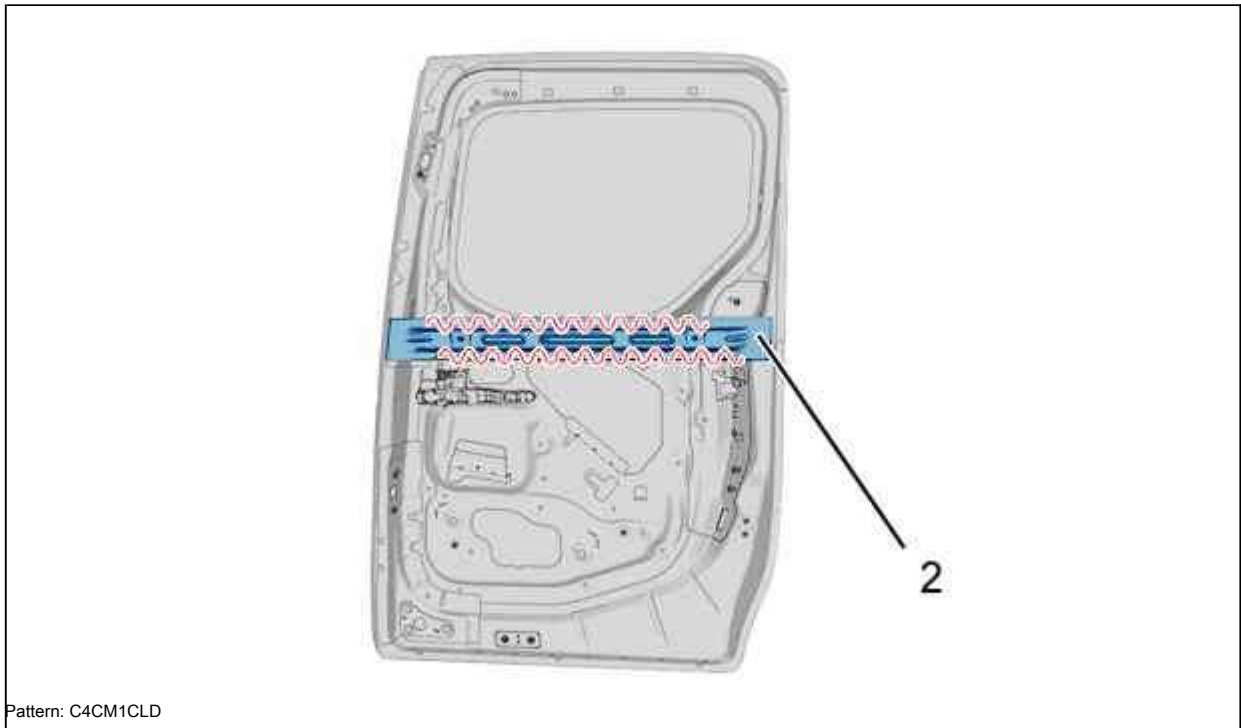
5. Cleaning and preparing the door



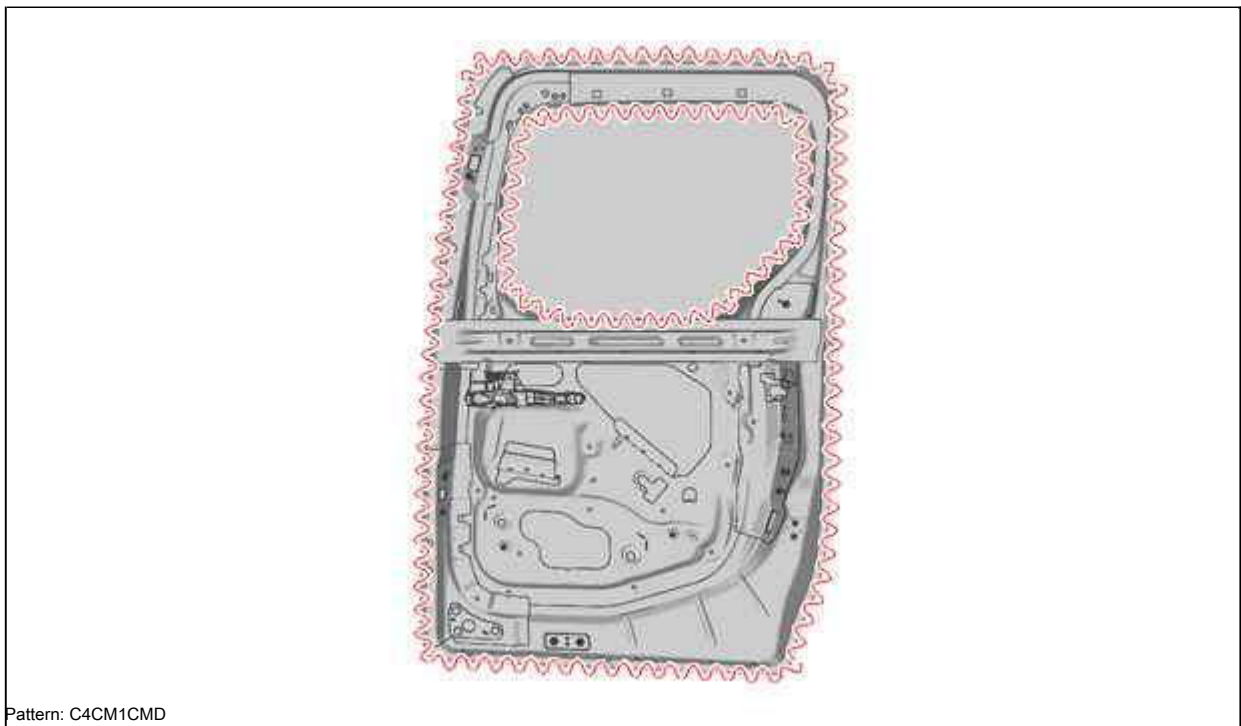
Pattern: C4CM1CKD

Perform the following operations:

- Clean and straighten the edges of the joints
- Protect the surfaces of metal elements with a welding primer index "C7"

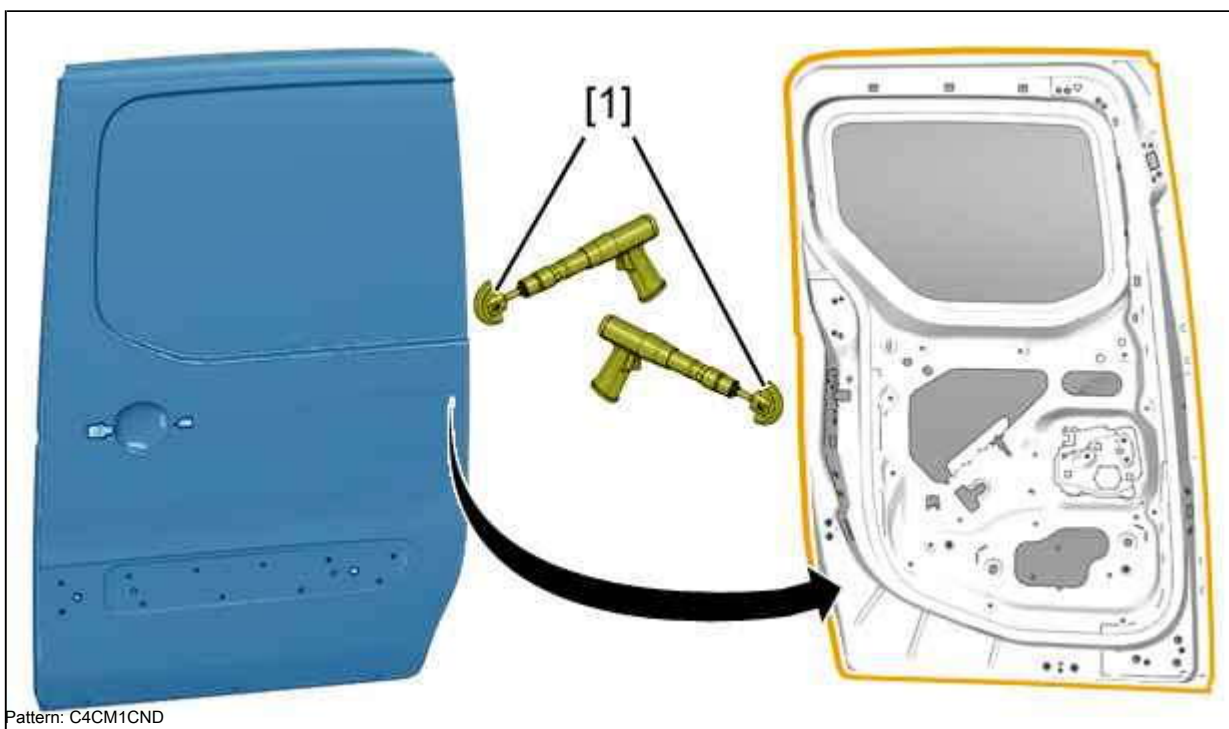


Apply fixing compound with index "A1" to the next element: Side impact protection reinforcement (2).



Apply structured adhesive "B8" along the contour of the sliding side door.

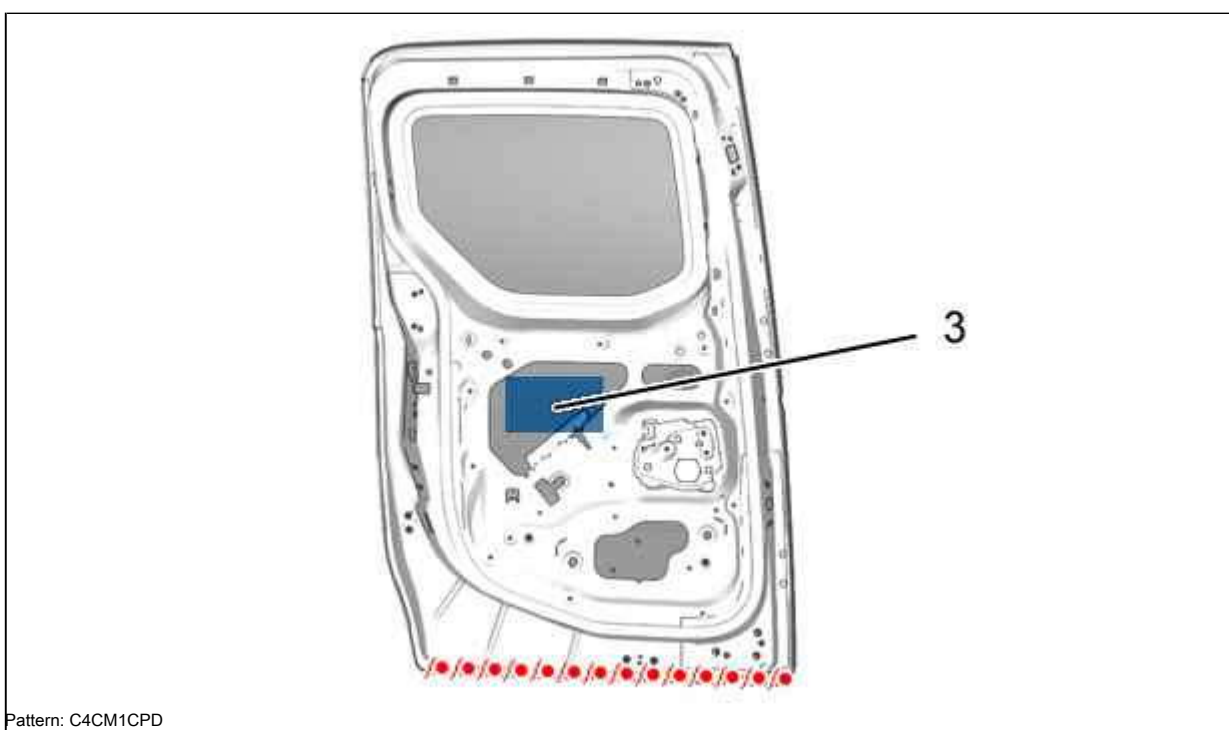
6. Mandrel



Install: Side sliding door outer panel.

Fold in the outer panel of the sliding side door using the tool [1].

7. Tightness



Apply a layer of phosphating material to cleaned areas. Apply type A1 sealing mastic.

Install a new damper plate (3) inside the sliding side door to replace the old one.

8. Protection

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

9. Reinitialization

Perform additional operations.

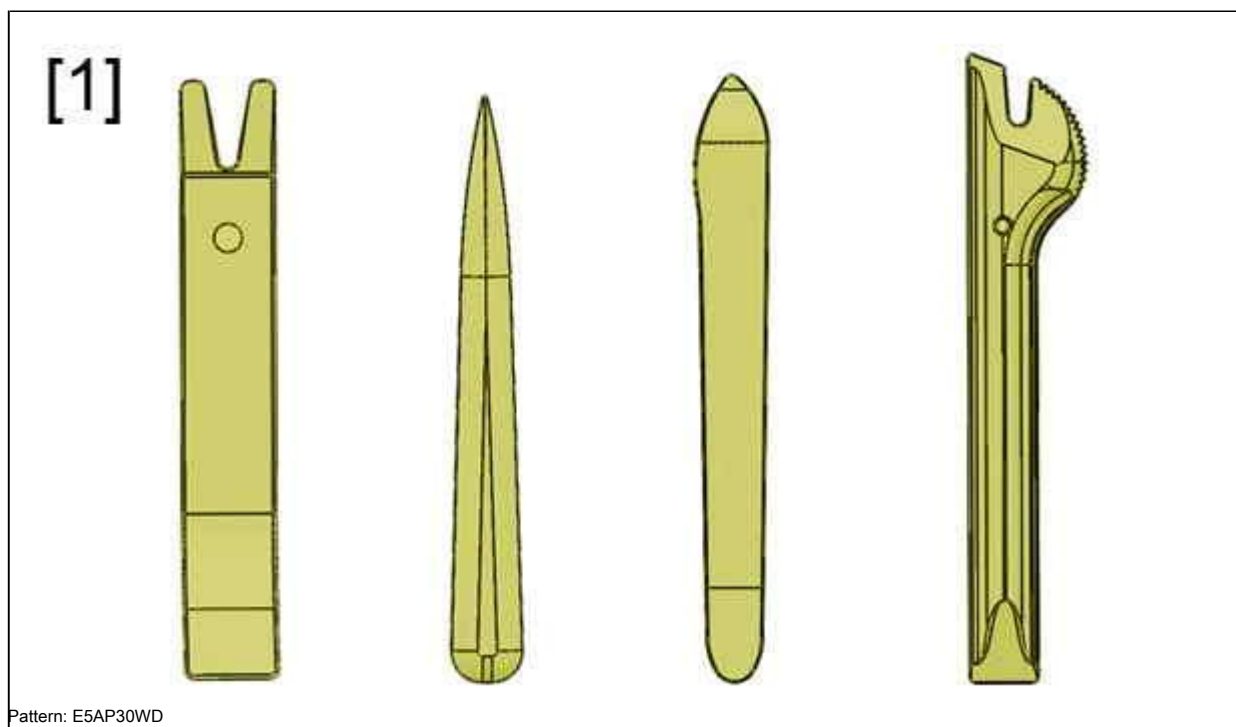
Reconnect the battery.

DISASSEMBLY ASSEMBLY: SIDE SLIDING DOOR

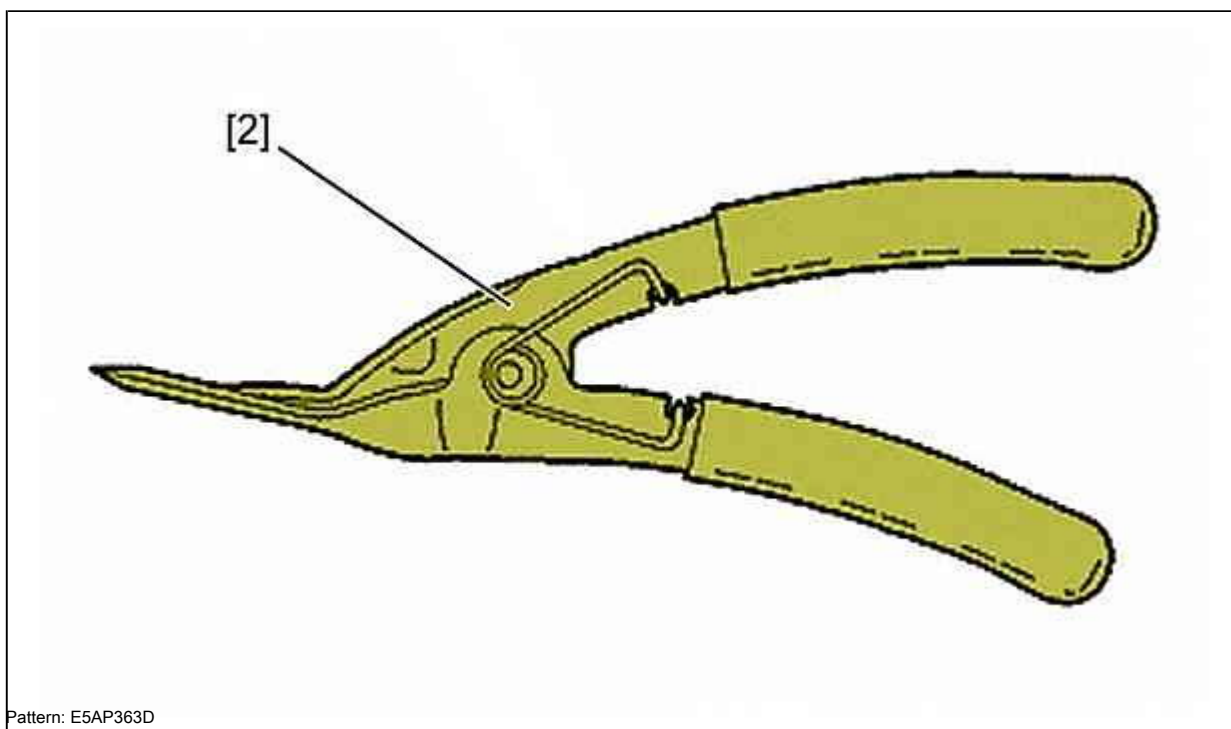
MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim removal tool () .1350ZZ.



[2] Extractor for plastic pins () .1311.

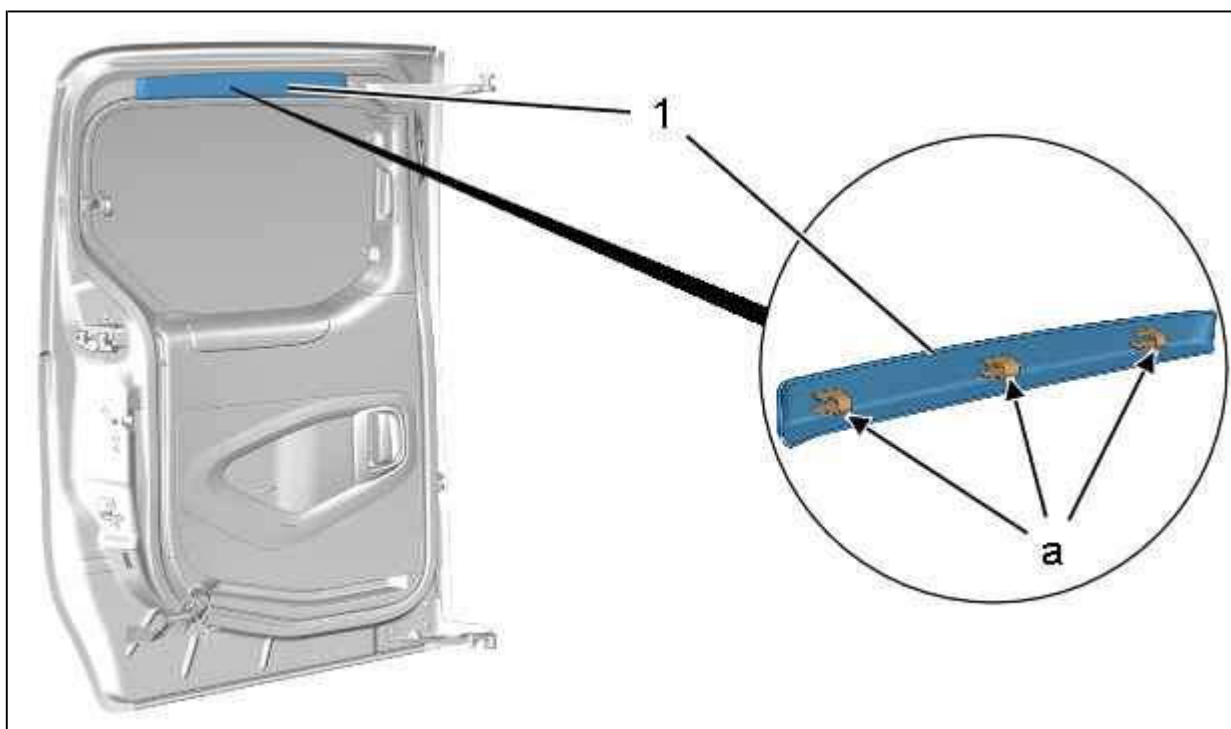
2. Preliminary operations

Remove the sliding side door



3. Disassembly

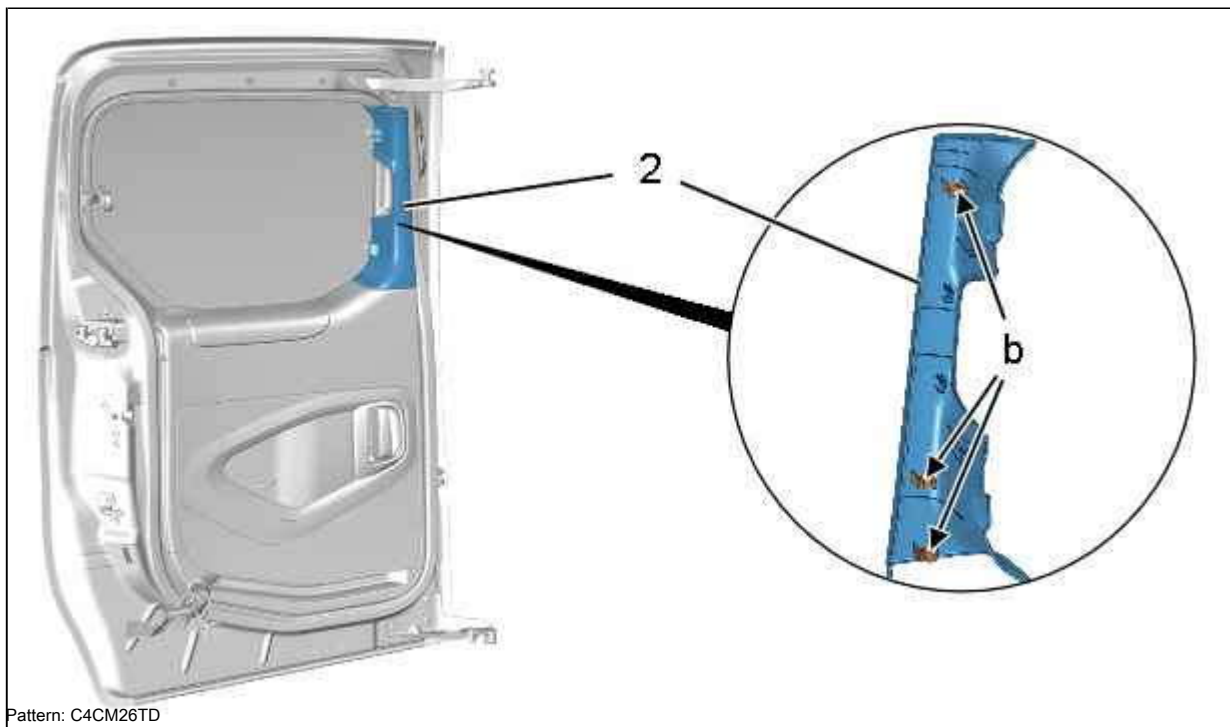
3.1. Upper door trim



Pattern: C4CM26SD

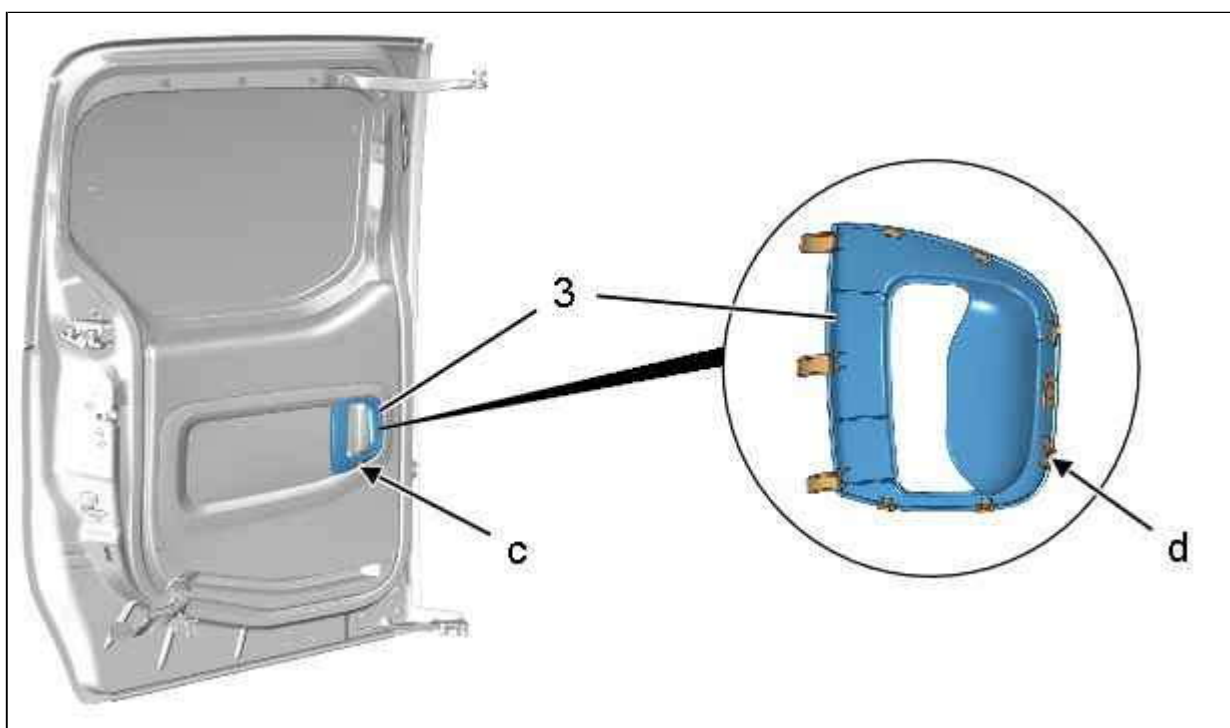
Detach: Decorative element (1) (at "a"); Using the tool [1]. Remove: Decorative element (1).

3.2. Door pillar trim



Disconnect: Door pillar trim (2) (at "b"); Using the tool [1]. Remove: the door pillar trim (2).

3.3. Door panel trim

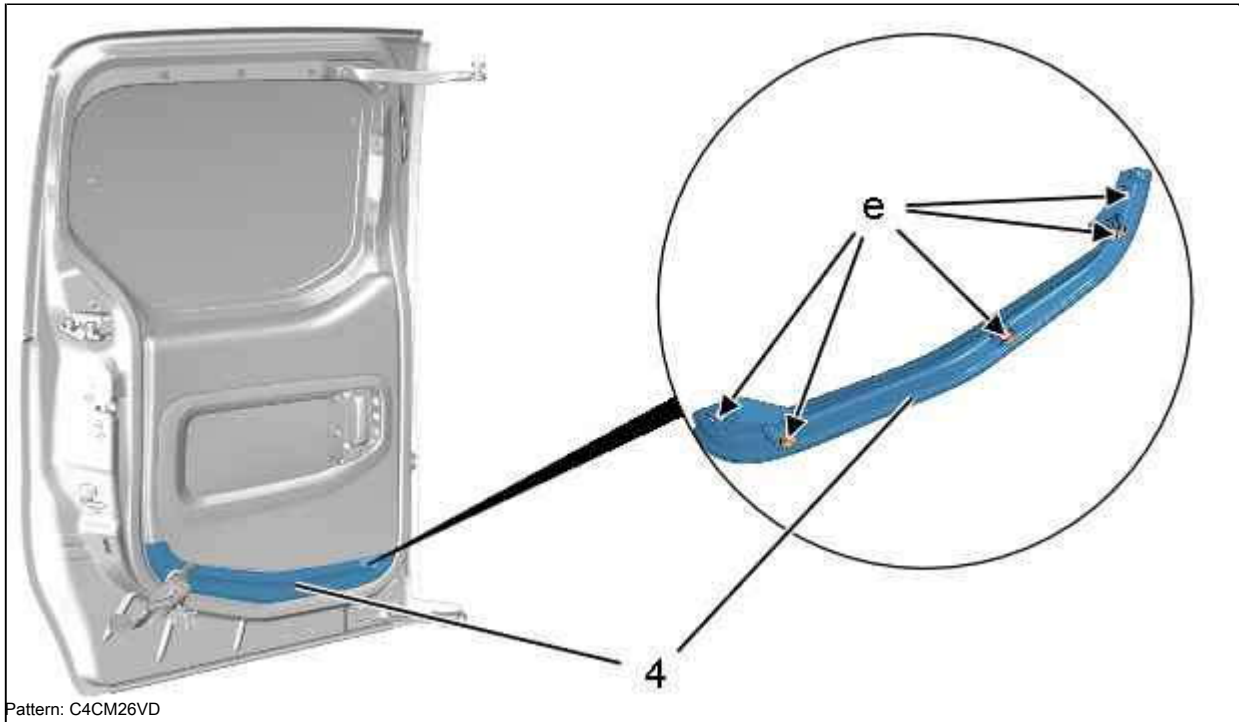


Pattern: C4CM26UD

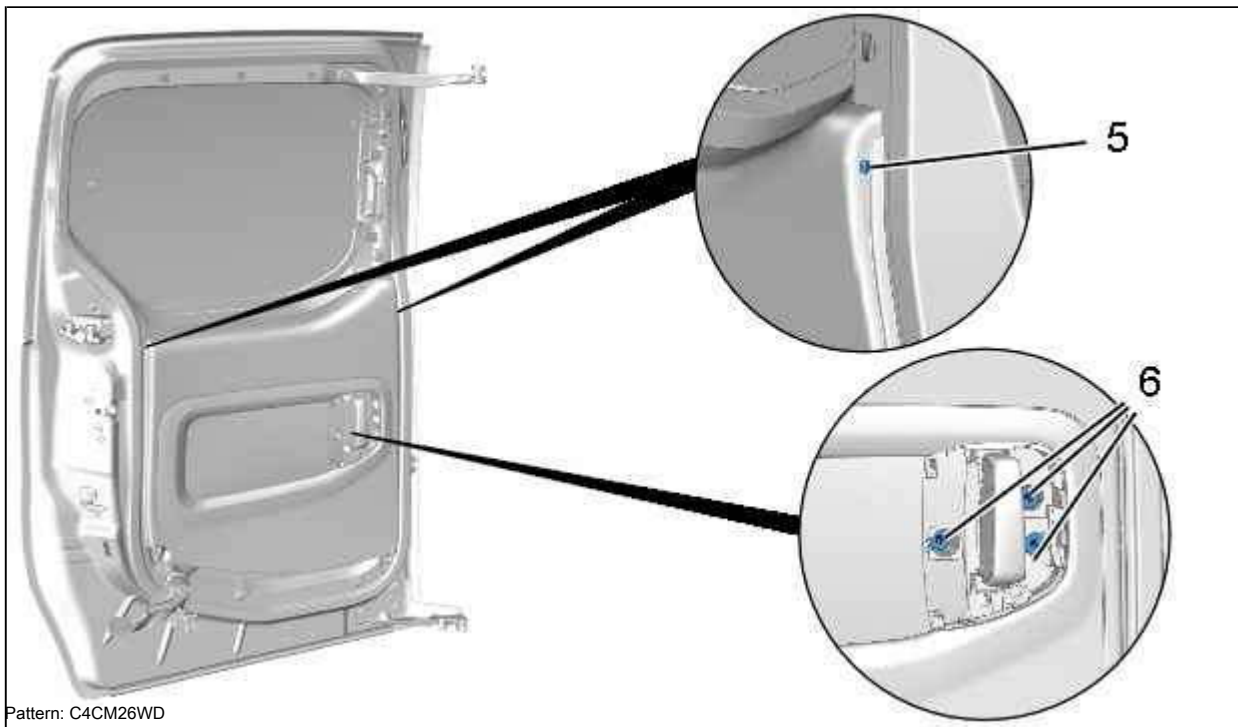
Detach: Decorative element (3) (in "c"); Using the tool [1].

NOTE: Continue this operation on all clips (in "d"); Using the tool [1] around the perimeter of the trim (3), to detach the trim (3).

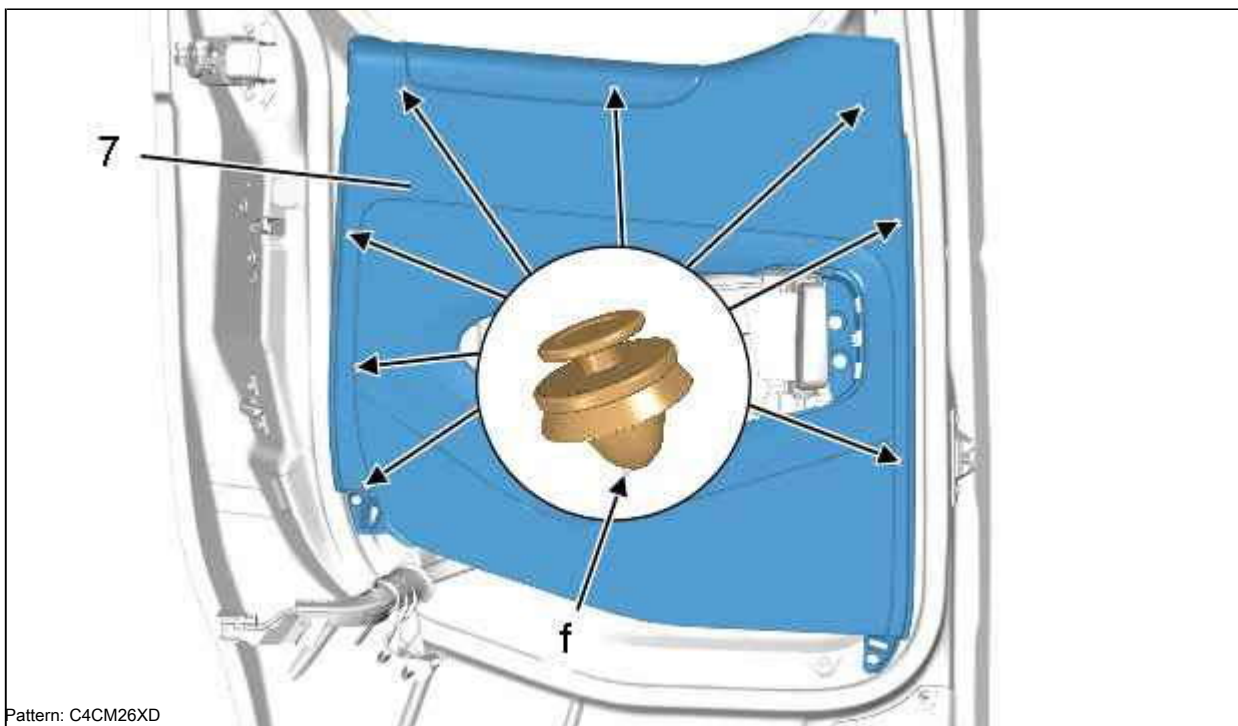
Remove: Decorative element (3).



Disconnect: Lower trim (Door panel (4)) (at "e"); Using the tool [2]. Remove: Bottom trim (Door panel (4)).

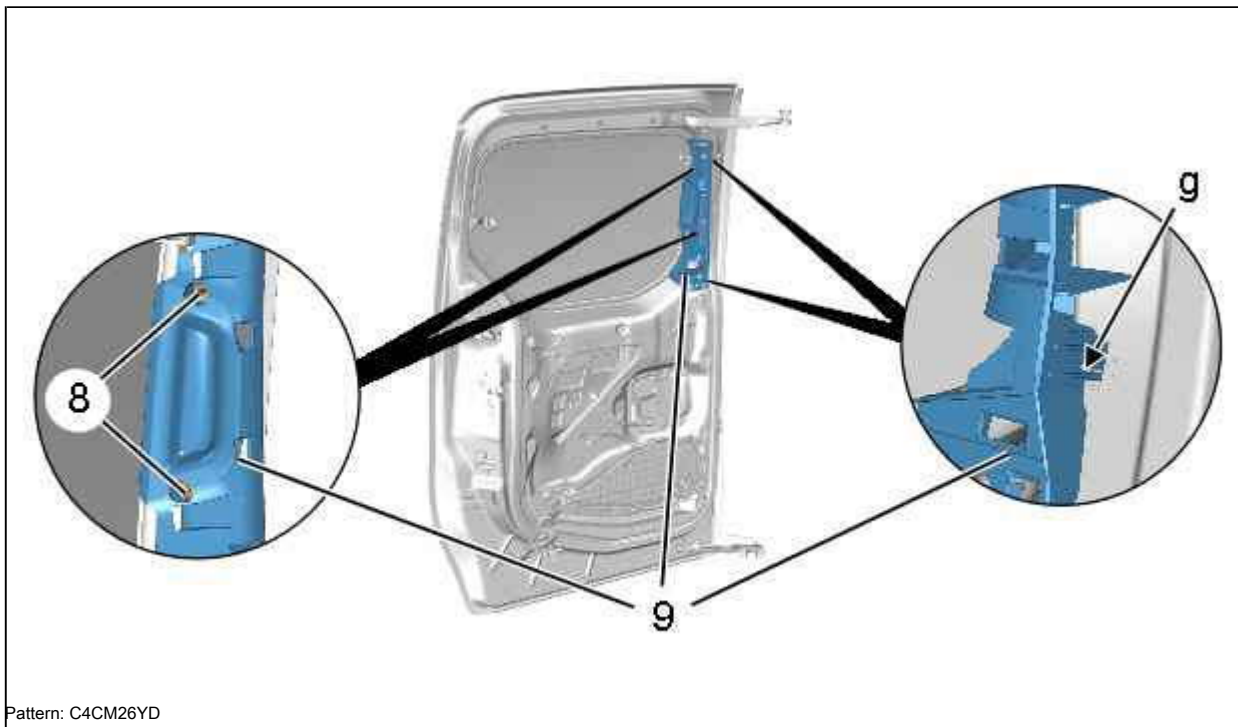


Unscrew the screws (5), (6).



Disconnect: Door trim panel (7) (at "f"); Using the tool [2]. Remove the door trim panel (7).

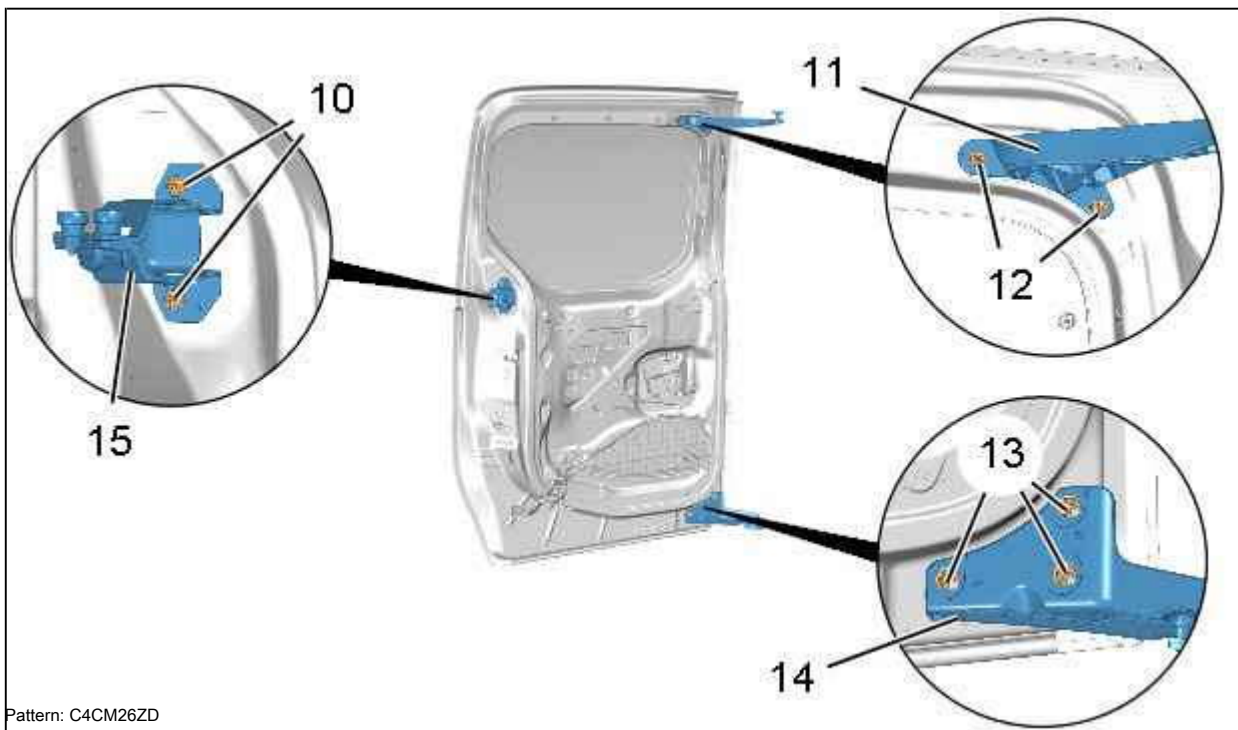
3.4. Door pillar trim support



Loosen screws (8).

Disconnect: Door pillar trim support (9) (at "g"); Using the tool [1]. Remove: Door pillar trim support (9).

3.5. Sliding side door mounts

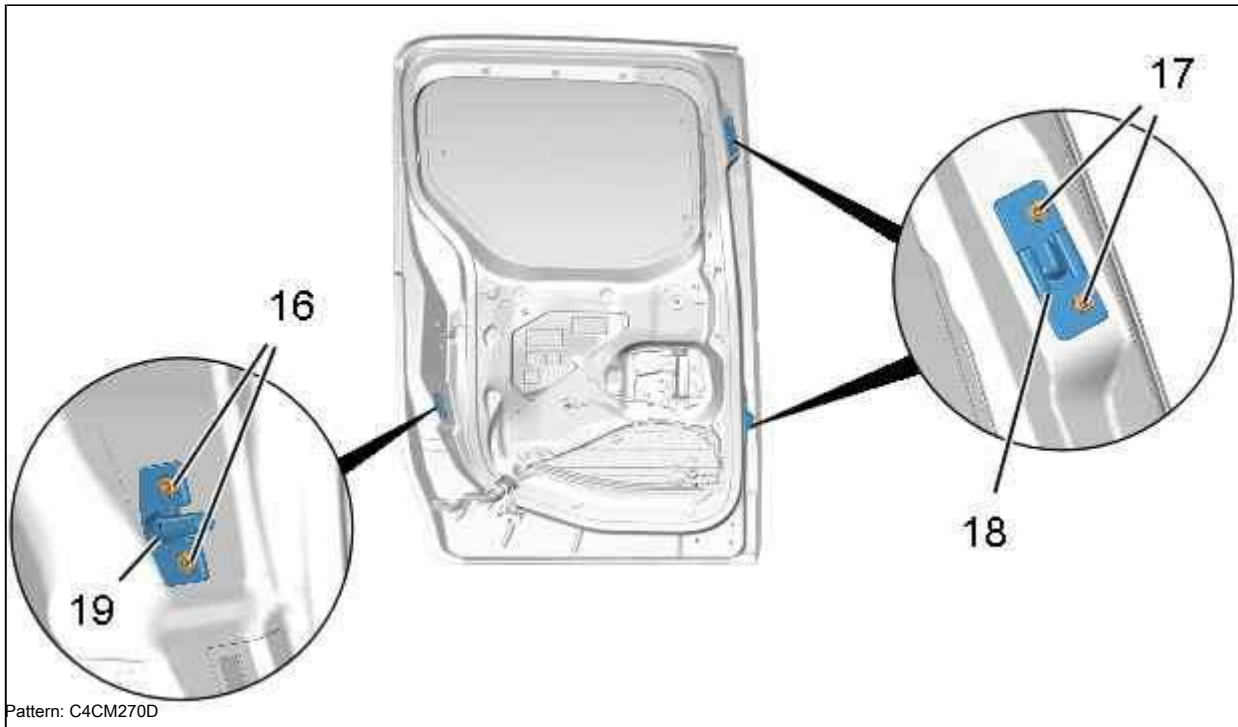


Remove:

- bolts (10), (12)
- Nuts (13)

- Carriages (11), (14), (15)

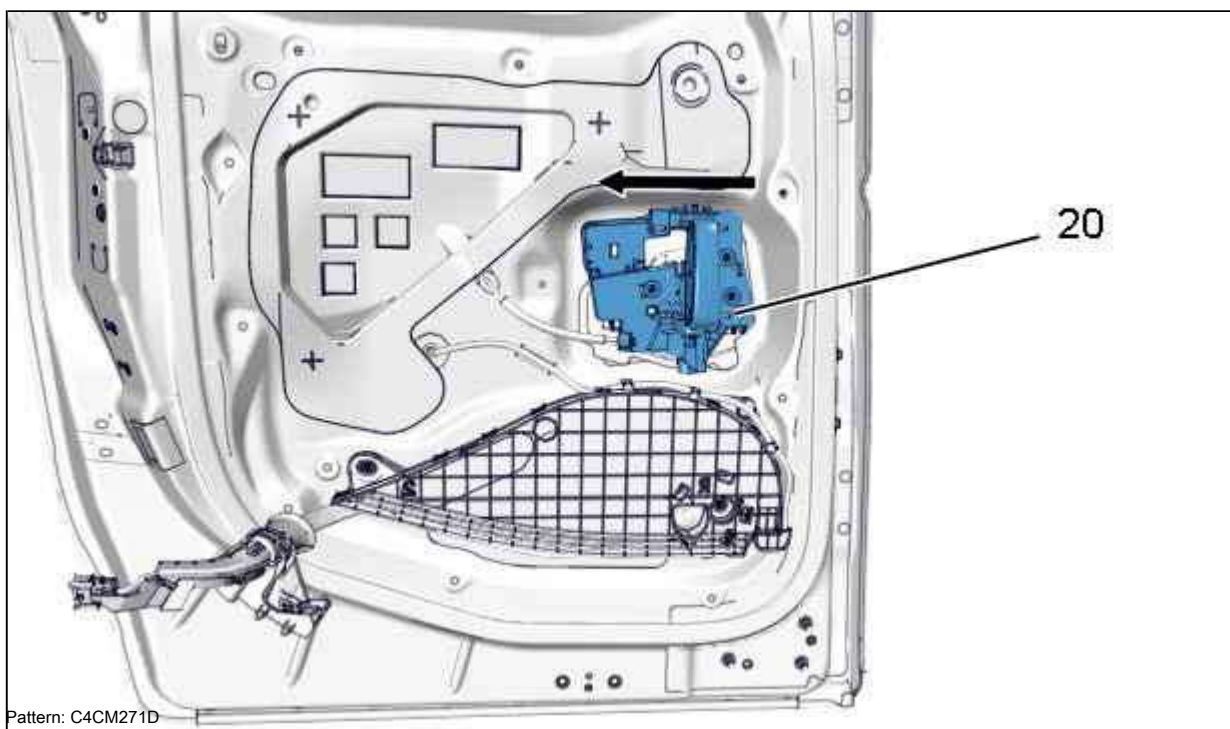
3.6. Sliding door guides / centering devices



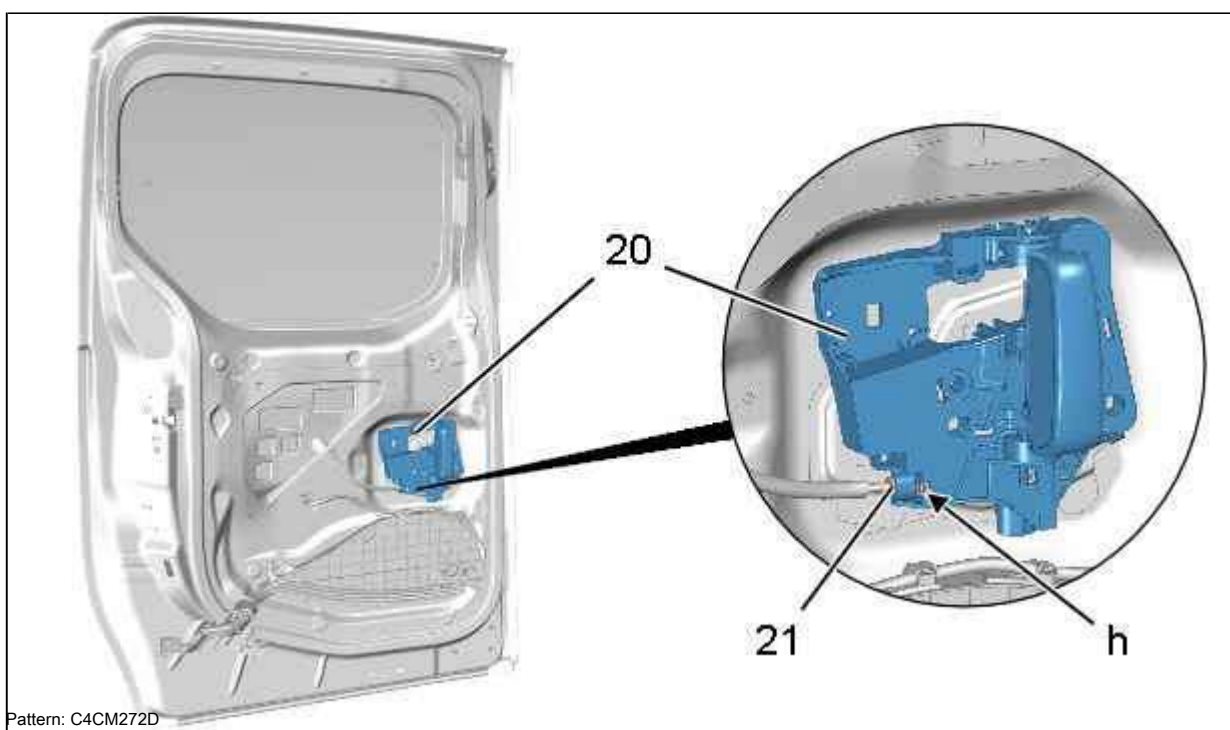
Remove:

- bolts (16), (17)
- Guides (18)
- Centering element (19)

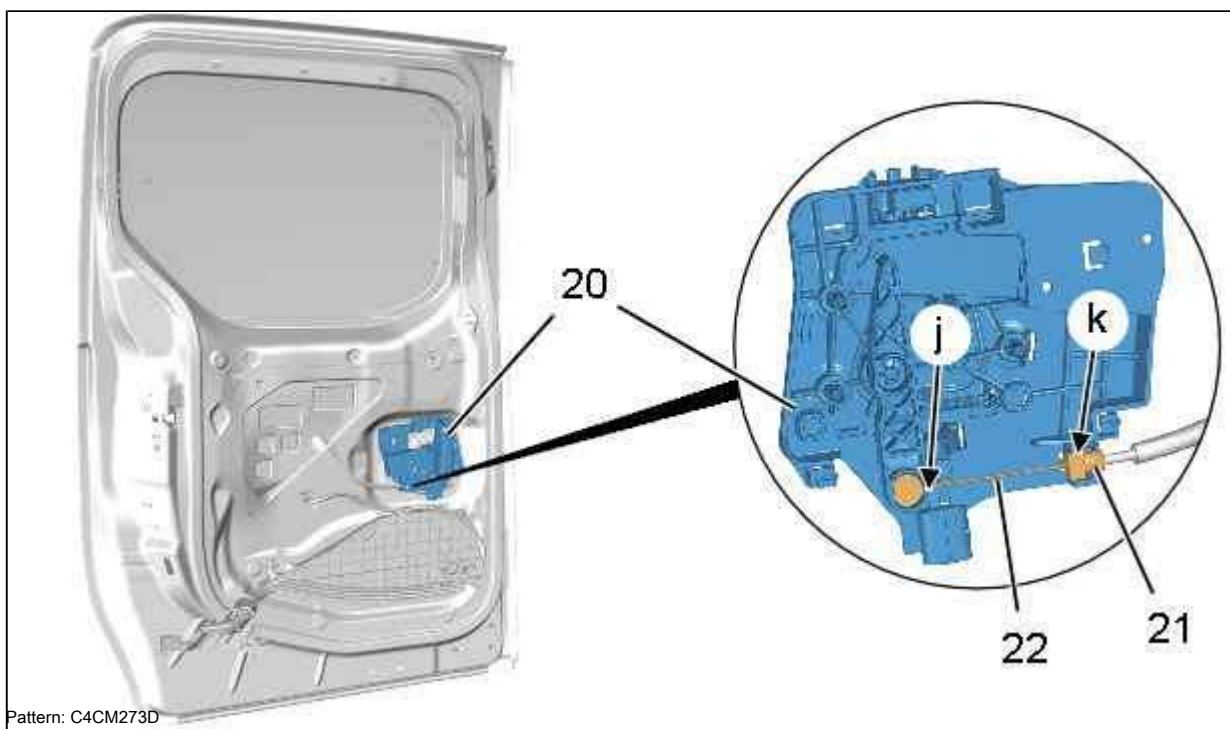
3.7. Internal button to unlock



Separate: Inner release button (20) (according to the arrow).



Unclip the shell (21) (in "h") of the drive (20) opening from the inside.

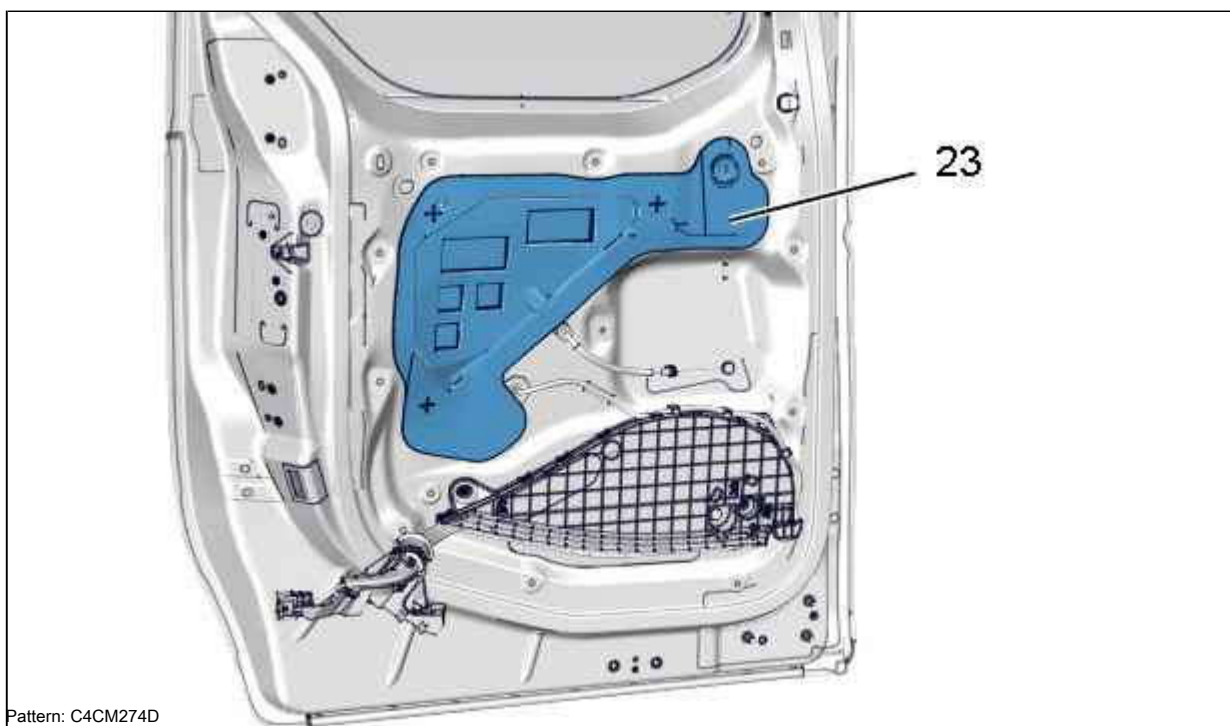


Disconnect:

- Fastening the cover of the cable drive (21) (in "k")
- End of the cable (22) (in "j")

Remove: Internal release button (20).

3.8. Sealed panel



Unstick the sealing panel (23); Using the tool [1].

NOTE: Remove all traces of adhesive from the door in the gluing area of the sealed panel using the cleaner marked "J1".

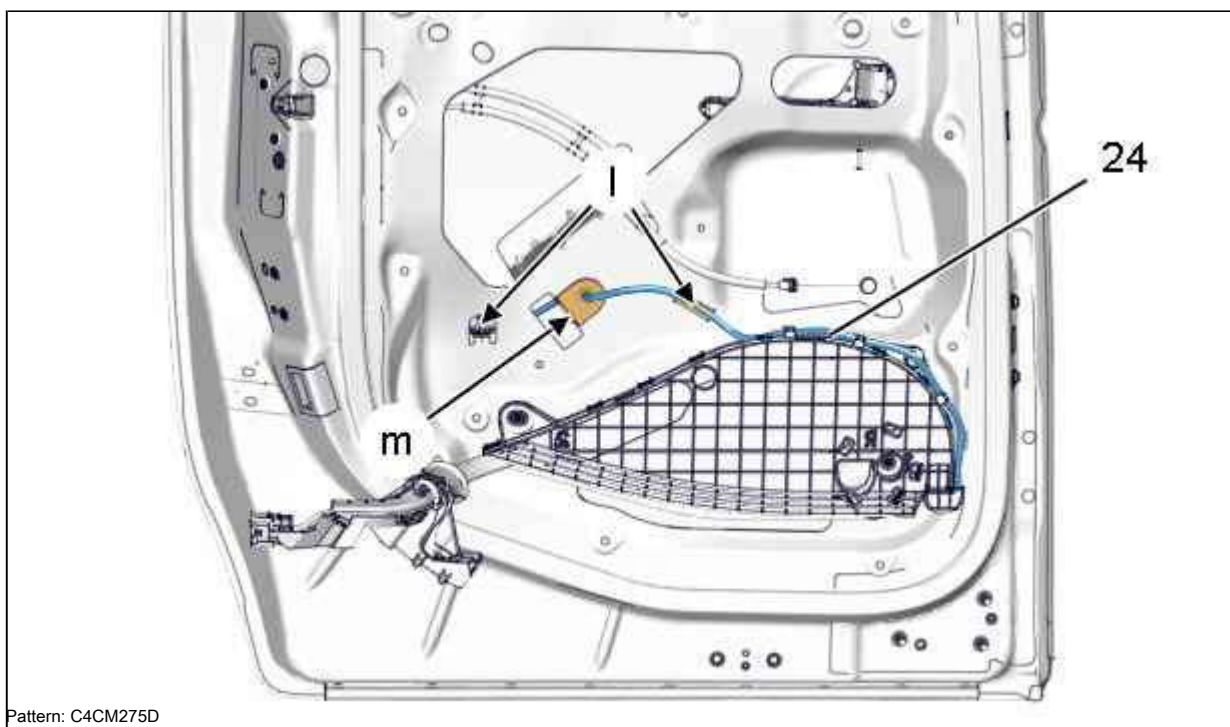
3.9. Movable glass sliding door (depending on configuration)

Remove: **Movable glass sliding door**

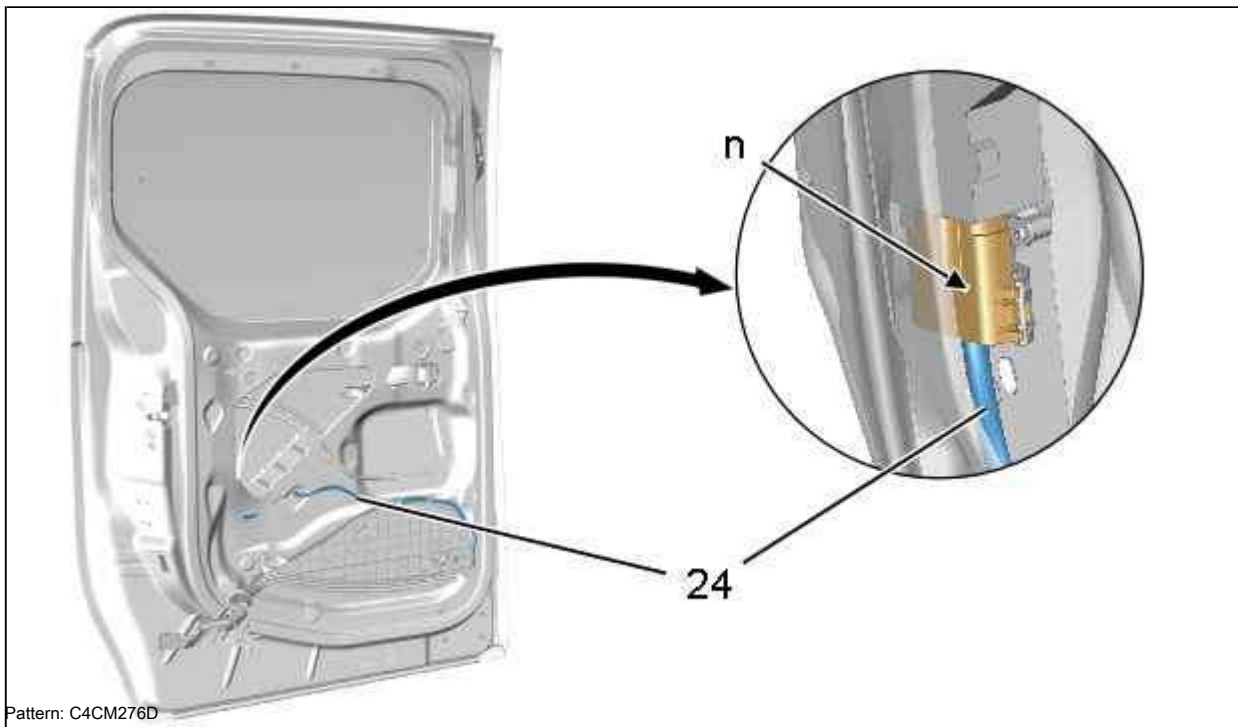
3.10. Fixed glass sliding door (depending on configuration)

Remove: **Fixed glass sliding door**

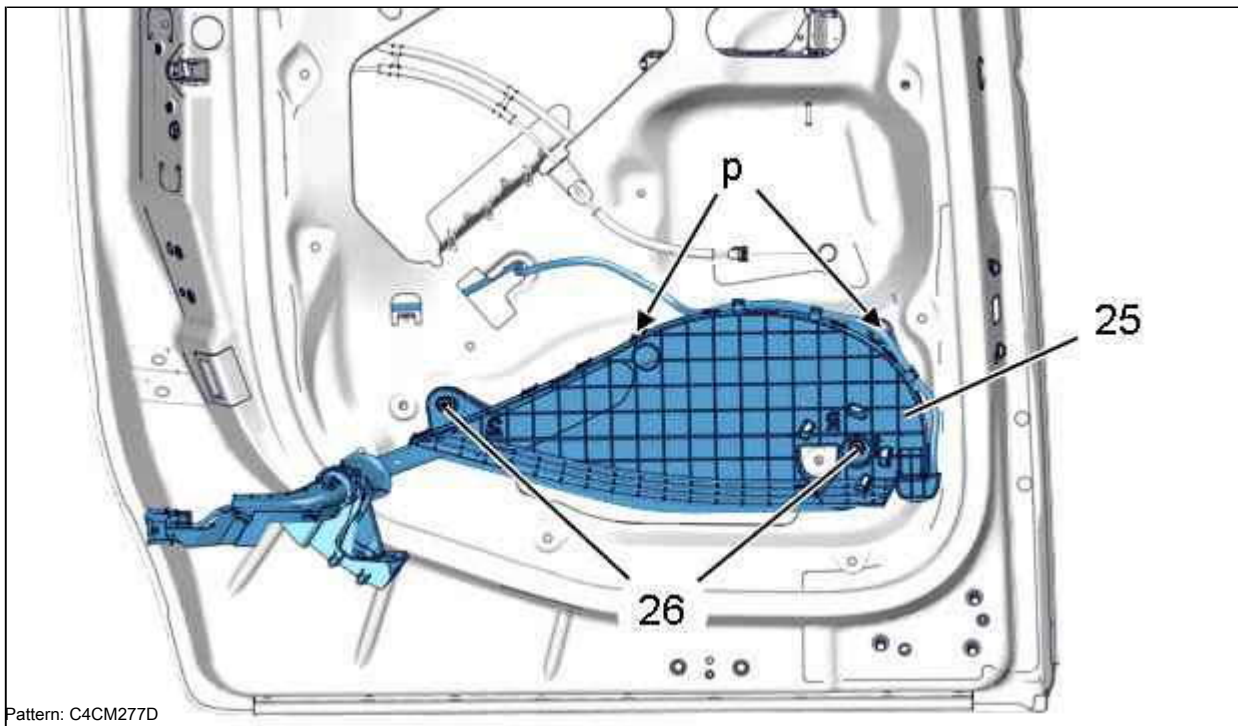
3.11. Wire Harness Winder



Disconnect: Mounting clips (at "I"); Using the tool [1]. Separate the harness (24) (in "m").



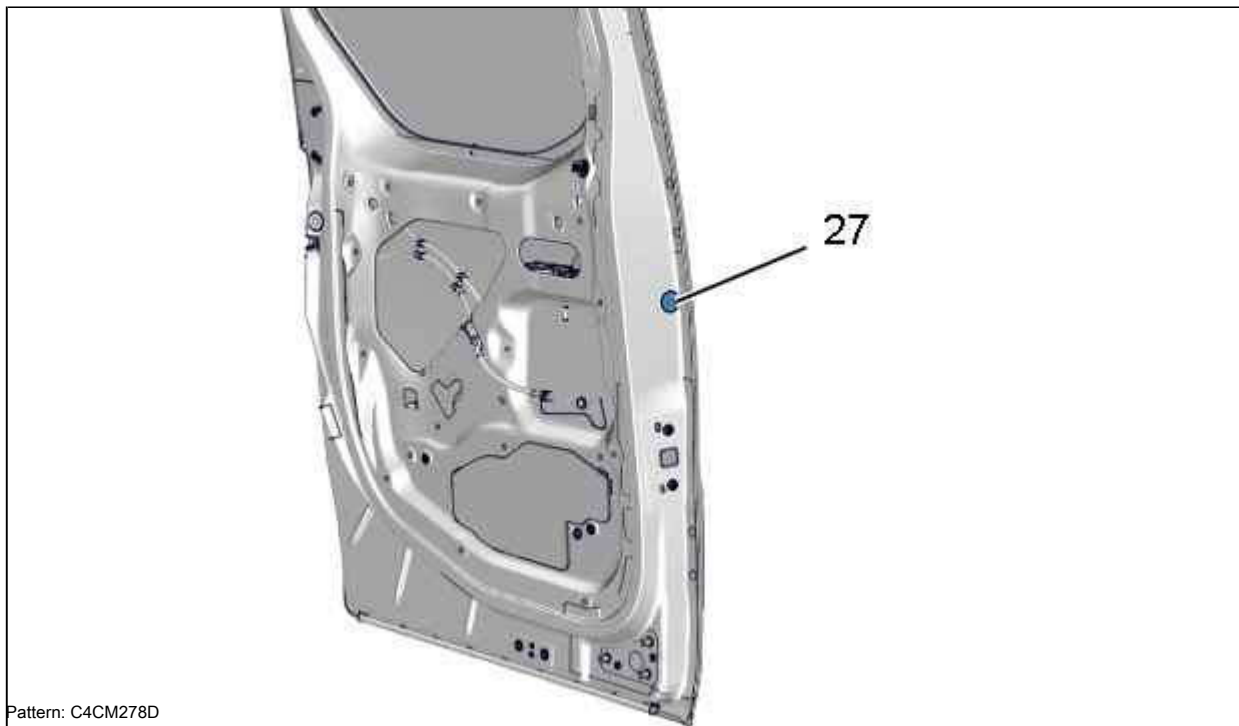
Disconnect the connector (at "n").
Separate the wire harness (24).



Disconnect (at "p"); Using the tool [1]. Remove:

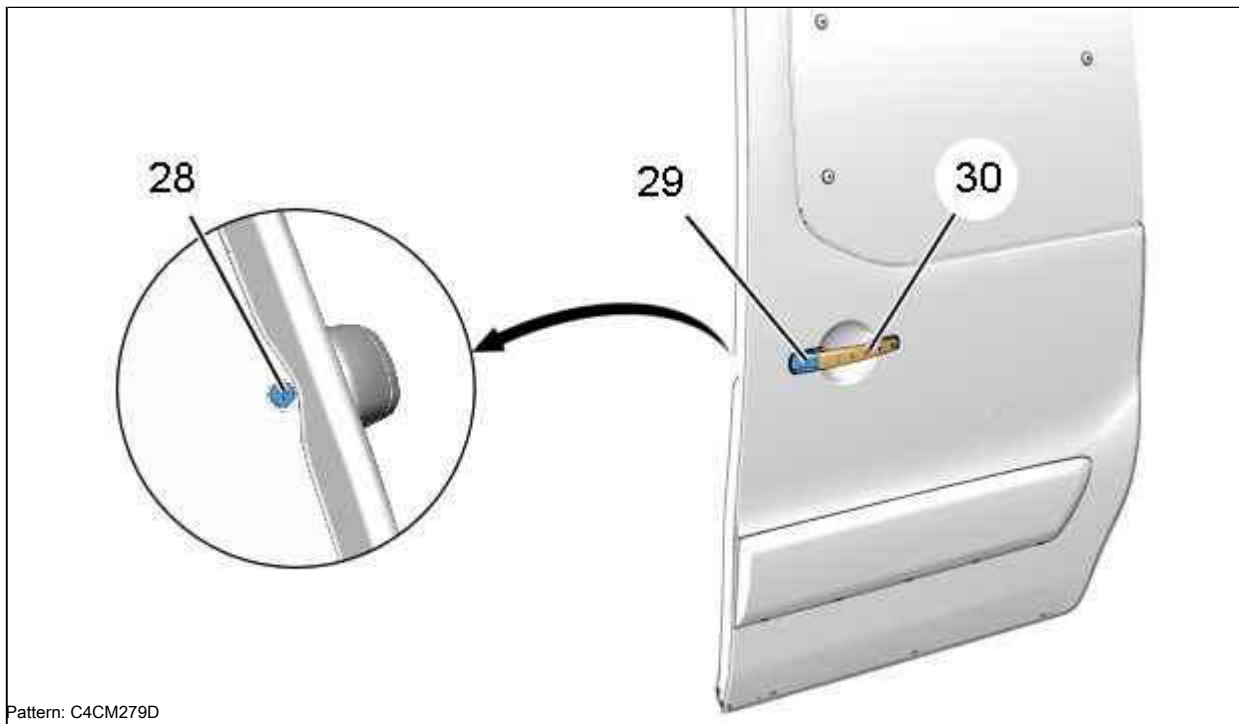
- the bolts (26)
- Wire Harness Winder (25)

3.12. Outside door opening handle



Unstick the glued strip (27).

NOTE: Remember to replace the adhesive strip (27).

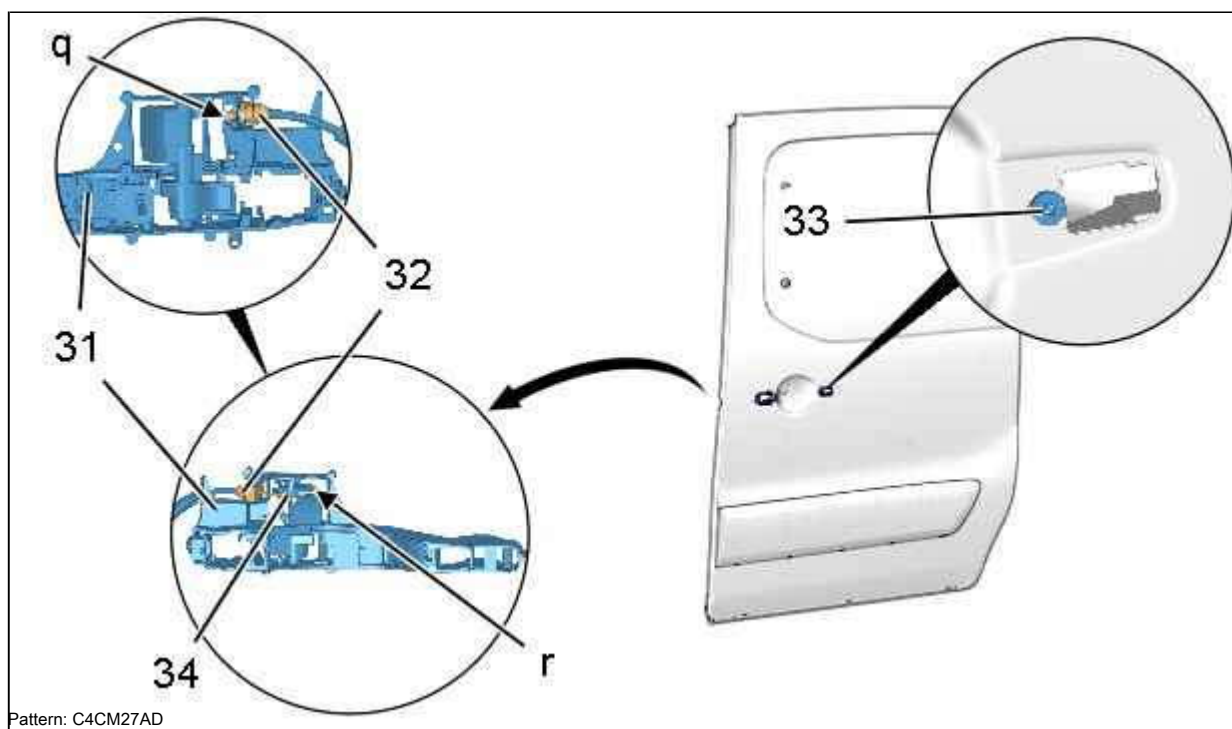


Loosen: The bolt (28) of the cover (29) (Do not remove: The bolt (28)). Separate Remove: Shroud (29).

Push the handle (30) back and free it.

Open: Handle (30) (Move handle (30) to fully open position). Remove: Handle (30).

3.13. Door handle operating mechanism



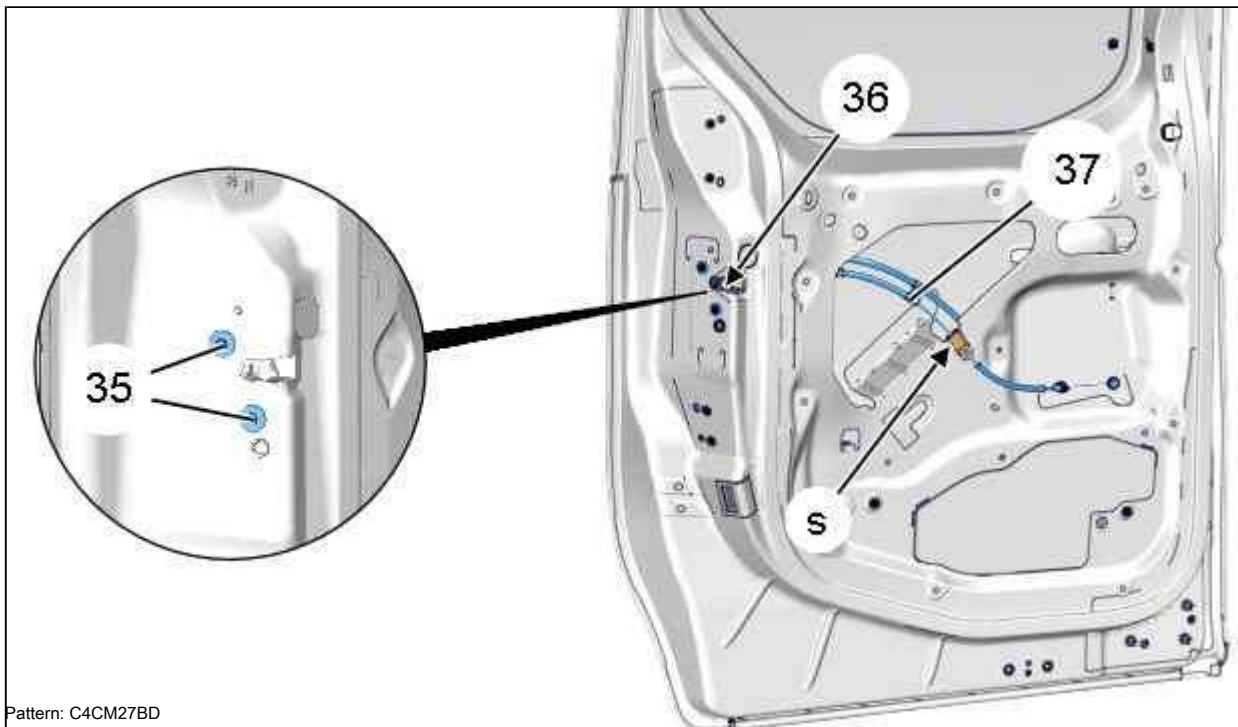
Remove bolts (33).

Disconnect the external opening control (31) from the inside of the door. Disconnect:

- Attaching the sheath of the drive cable (32) (in "q")
- End of the cable (34) (in "r")

Remove: The outside door handle actuator (31).

3.14. Lock



Pattern: C4CM27BD

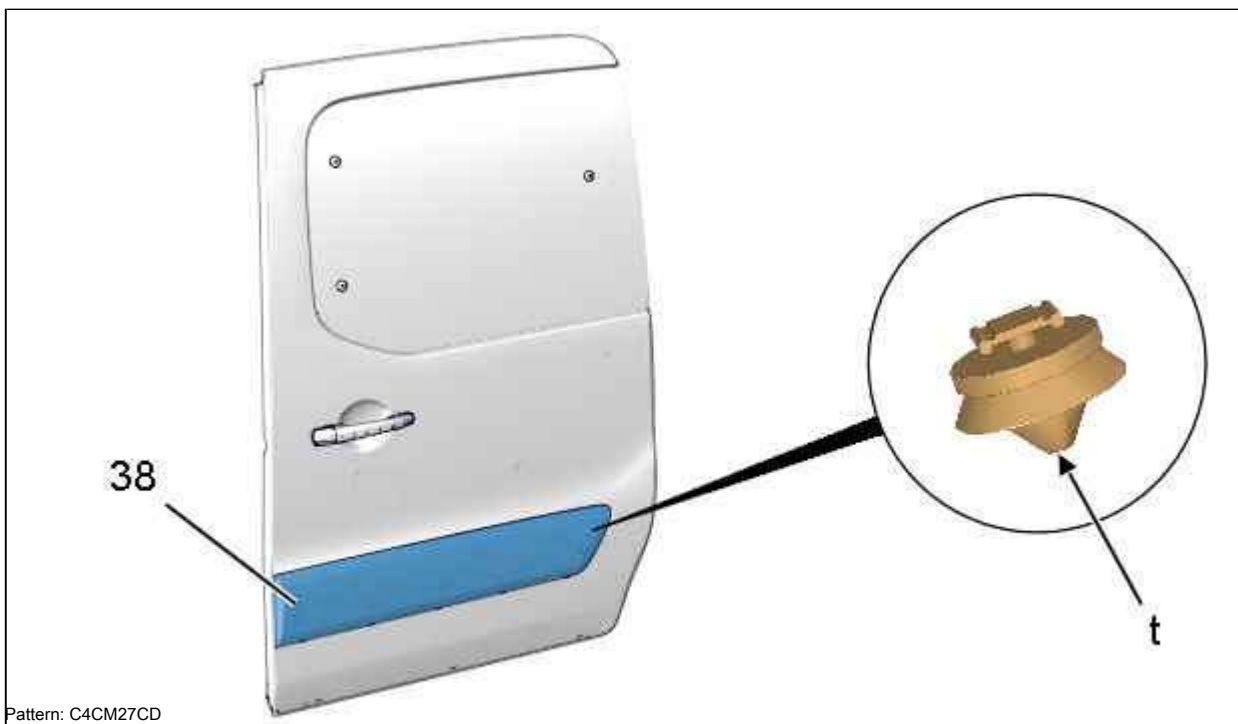
Loosen the screws (35).

Separate:

- Rope (37) (in "s")
- Lock (36) through the inner door cutout

Remove the lock (36).

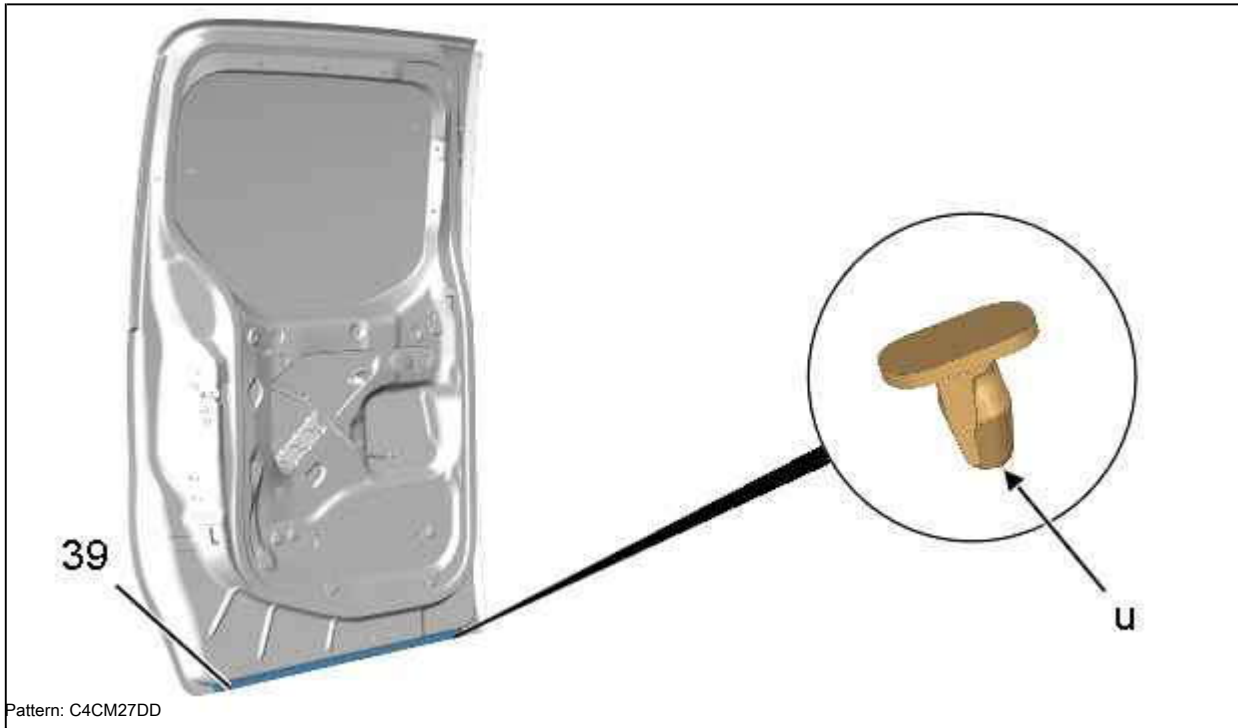
3.15. Door protection



Pattern: C4CM27CD

Detach the clips (at "t"); Using the tool [1]. Remove: Door Guard (38).

3.16. Seals



Detach the clips (at "u"); Using the tool [1]. Remove: Gasket (39).

4. Assembly

ATTENTION : Replace systematically: Defective clips.

ATTENTION : Check the operation of all mechanisms before installing the door seal sheet.

ATTENTION : Install new seals without folds or tears; Complete cleanliness of the supporting surface on the door panel is required; Roll with a roller over the pre-glued sheet; These recommendations are necessary to avoid possible penetration of water, dust or noise.

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- bolts (5), (6) to a torque of 0.25 ± 0.05 da.Nm of bolts (8),
- (26) to a torque of 0.8 ± 0.2 da.Nm
- bolts (10), (12), (16), (17) torque 2 ± 0.3 da.Nm of bolts (28), (33)
- moment 0.5 ± 0.1 da.Nm Bolt (35) moment $1 \pm 0, 2$ da.Nm
-
- nuts (13) to a torque of 2 ± 0.3 da.Nm

Check the operation of the various equipment.

REMOVAL REFITTING: LUGGAGE DOOR GLASS

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment

Equipment for working with glass.

2. Recommended components

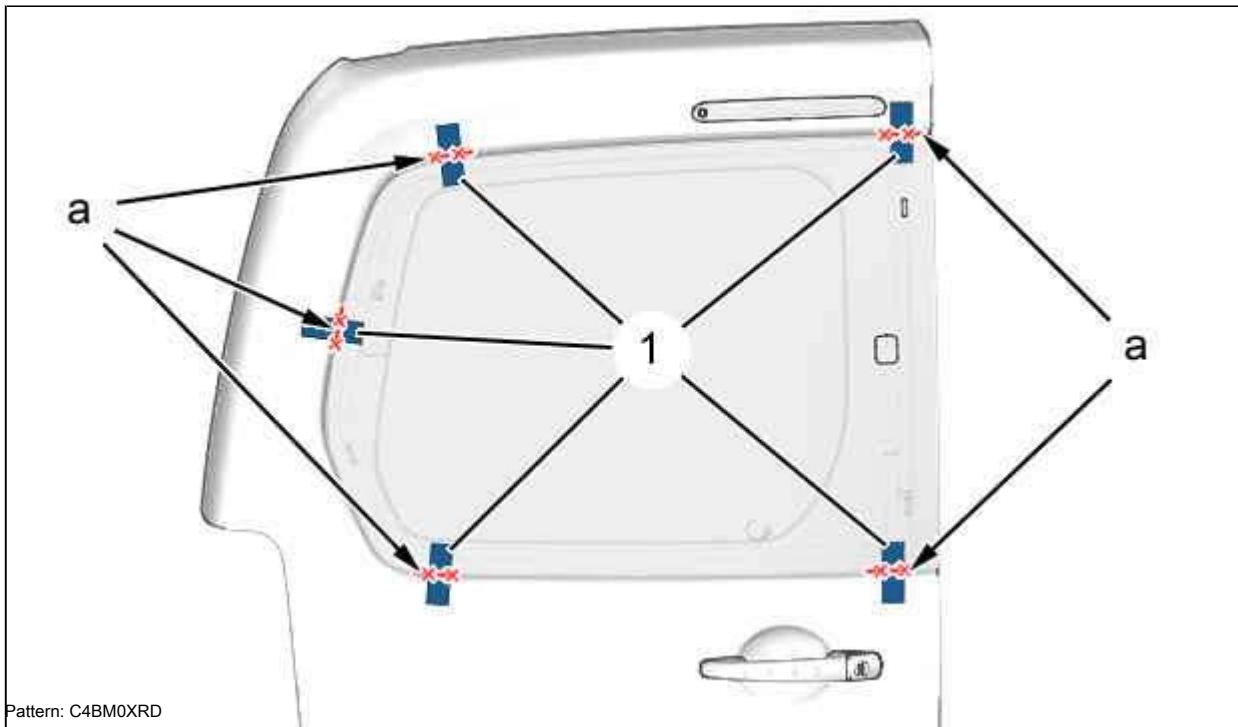
Components windglass



3. Removal

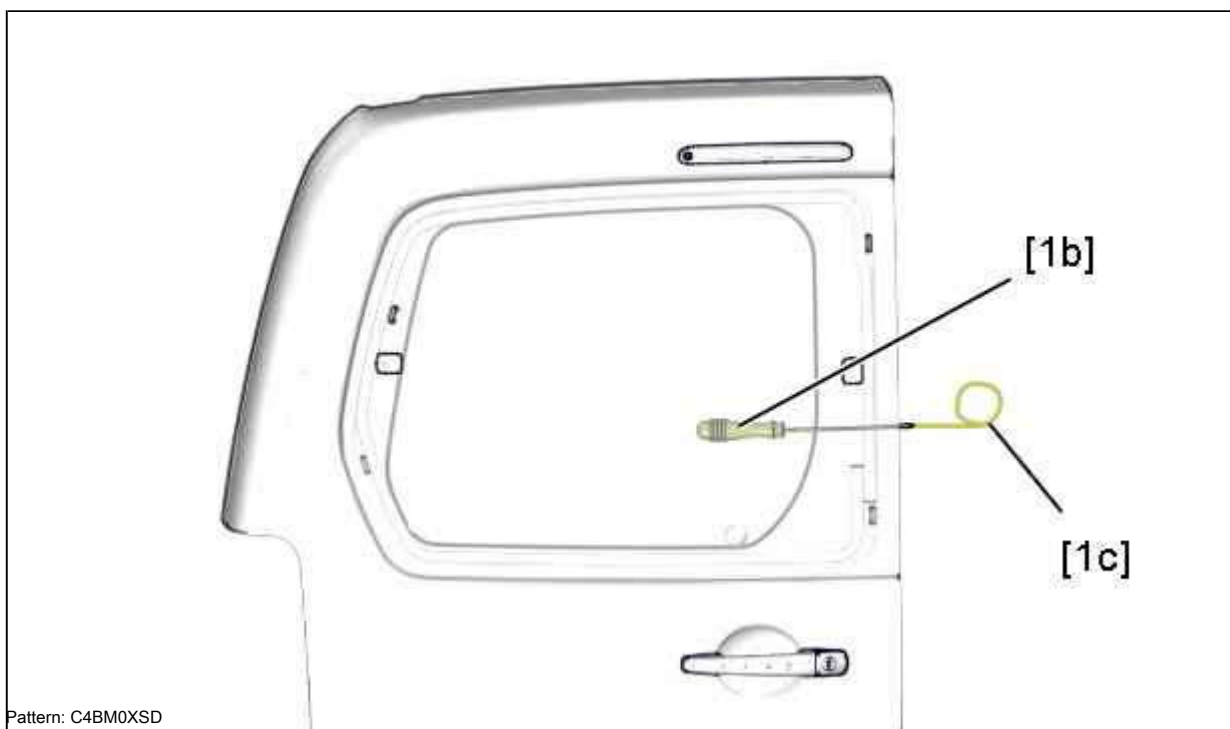
Remove the rear wiper motor

(depending on the configuration).



NOTE: When reusing the rear door glass, position the pieces of adhesive tape (1) as shown in the figure and cut them (at "a").

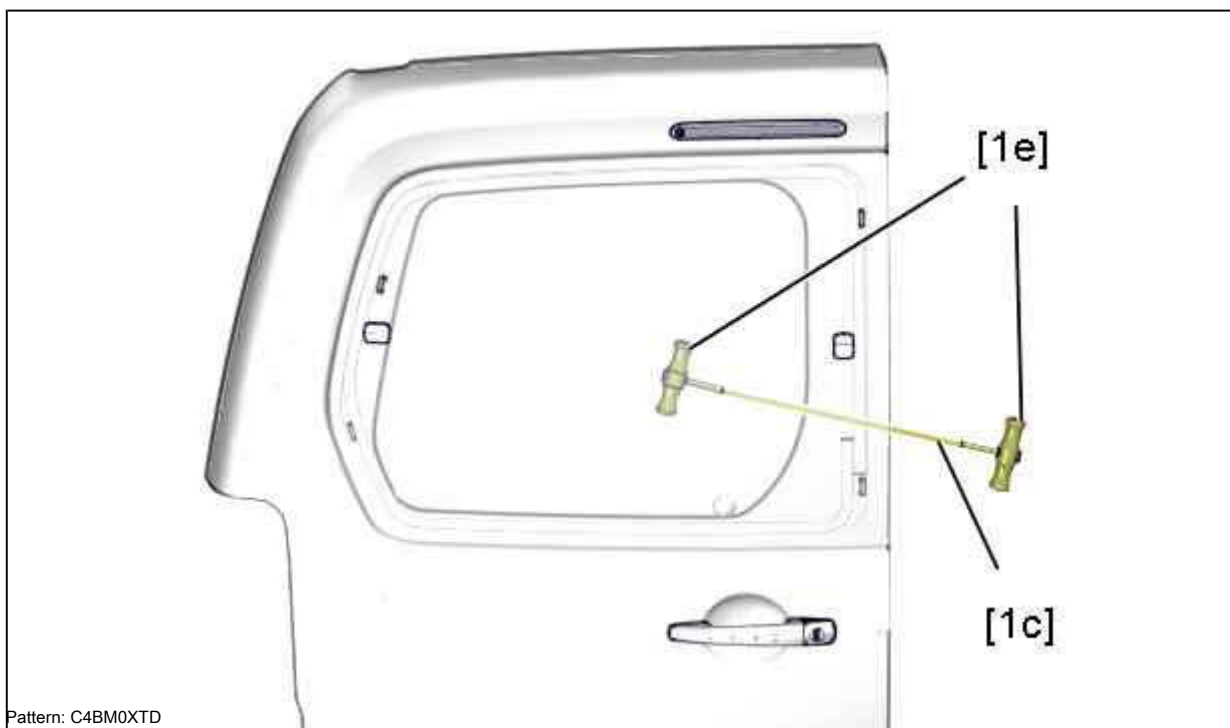
Disconnect: 2 defrost connectors (Tailgate glass).



ATTENTION : Protect: Back door; With adhesive tape.

Pass the sewn [1b] through the adhesive seal from the inside to the outside. Attach the cutting string [1c] to the bar [1b].

Run the leading string [1c] into the vehicle.

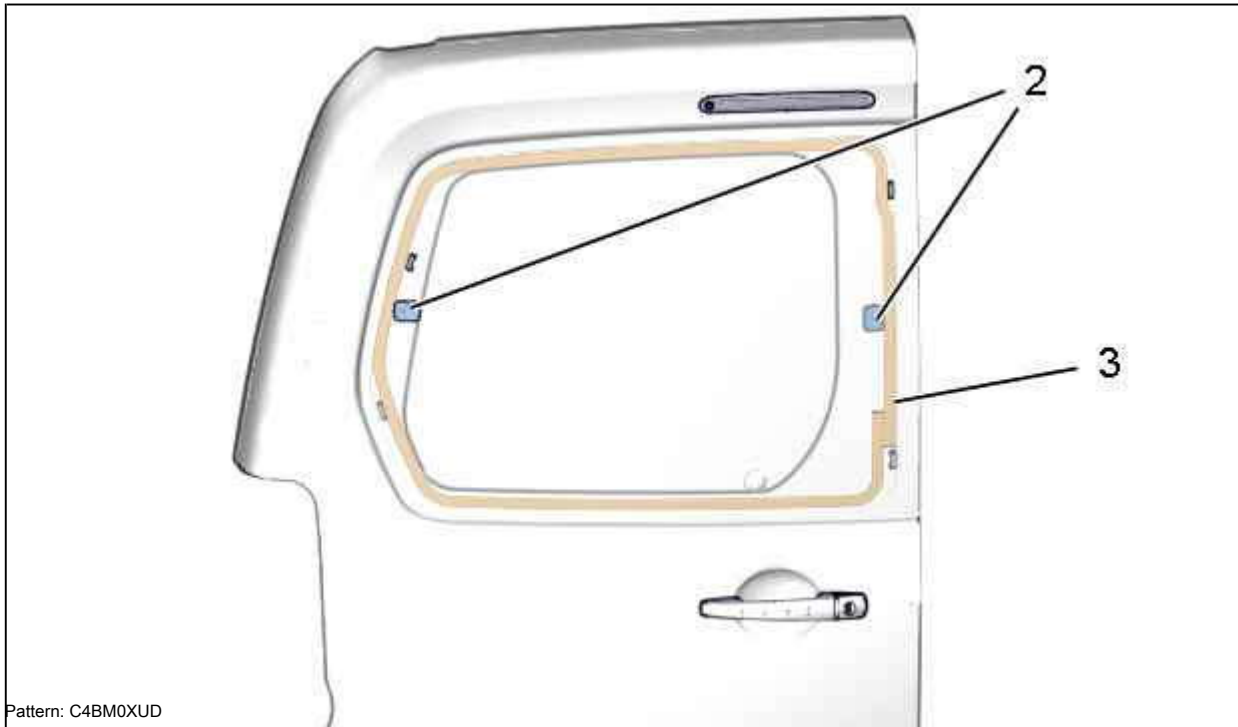


Install a cutting wire [1c] with handles [1e] on each side. Pass the cutting string [1c] as shown in the figure.

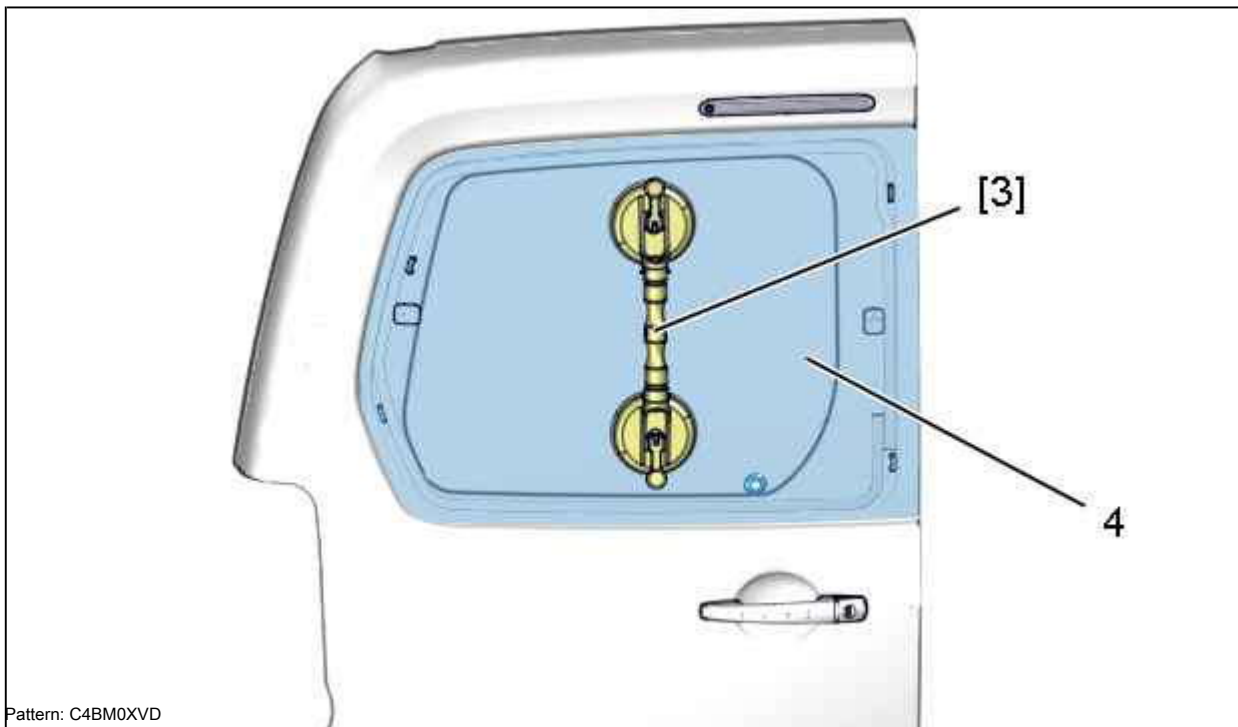
Leave sufficient length to allow the handles [1e] to be secured.

ATTENTION : 2 people are required for the following operations.

Cut the adhesive layer with the backward motion of the cutting string [1c].



When cutting, cut off the centering pins (2). Finish cutting the adhesive seam (3).



Remove: Tailgate glass (4); Using the hinged suction cups [3].

4. Cleaning

4.1. Preparation: Glass back door

1st time: Prepare the rear door glass. Insert the blade [13] into the electric knife [9b]. Cut off the remaining adhesive seam.

Wipe off the dust with a clean cloth.

Apply primer only on the places, brushed metal

2nd time: Installing a new rear door glass. Degrease rear door glass edges.

Apply the initial prep coat from the decal kit A3 Apply primer only on the place, cleaned metal

4.2. Groove preparation

1st time: If there is a residual adhesive seam. Insert the blade [13] into the electric knife [9b]. Cut off the remaining adhesive seam.

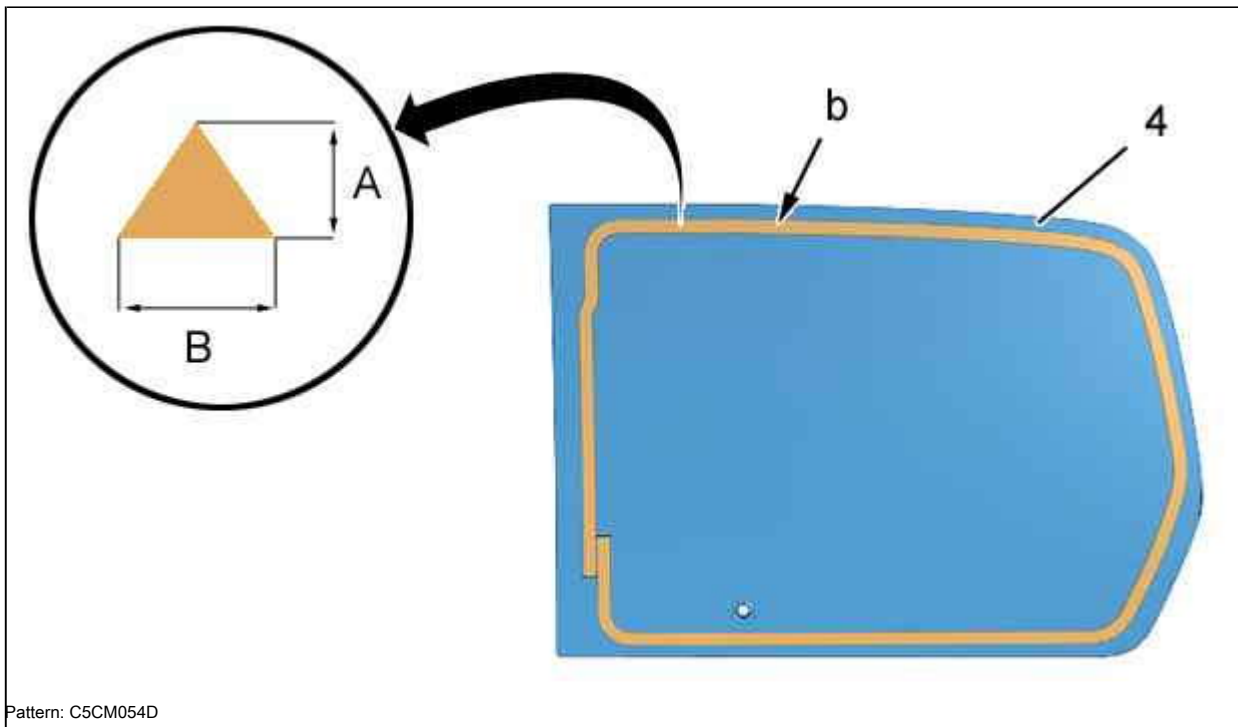
Wipe off the dust with a clean cloth.

2nd time: Nano part. Degrease the groove.

Apply initial prep coat from sticker kit A3

Let dry for 10 minutes.

5. Installation



Height "A" = 12 mm. width

"B" = 8mm.

Size of the triangular tip to obtain a sealant bead of width "B" and height "A".

1st time: Prepare the rear door glass.

Apply a bead of glue to the rear door glass (4) (in "b").

ATTENTION : Using a two-component product: Between installing the glass on the vehicle and

when the sealant is squeezed out, it takes 5 minutes

Install the rear door glass:

- With articulated suction cups [3]
- With adhesive tapes (1)

Press lightly onto edge of rear door glass. Clean the rear door glass and the edge of the window.

2nd time: Installing a new rear door glass. Apply a bead of glue to the rear door glass (at "b").

ATTENTION : Using a two-component product: It takes 5 minutes between installing the glass on the vehicle and the start of the sealant squeezing out.

Install the rear door glass; Using the hinged suction cups [3]. Press lightly onto edge of rear door glass.

Clean the rear door glass and the edge of the window.

ATTENTION : After installing the glass, wait the required time before using the vehicle, recommended by the suppliers for the formulations used.

Proceed with installation in the reverse order of removal. Check the rear door glass for leaks.

Clean the rear door glass and the edge of the window.

Check the correct functioning of the electrical equipment.

REMOVAL REFITTING: REAR BUMPER

MANDATORY: Observe the cleanliness and safety rules



1. Removal

1.1. General operations

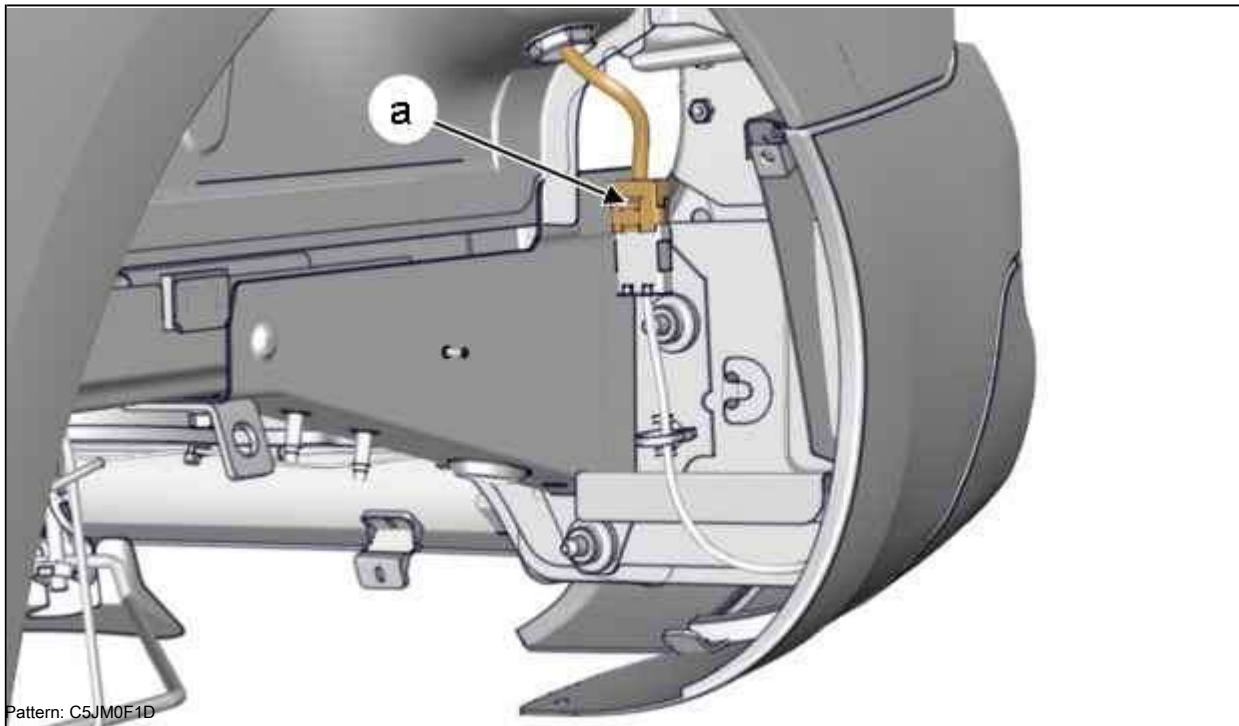
Place the vehicle on a two-post lift.

Remove the rear wheel arch liner

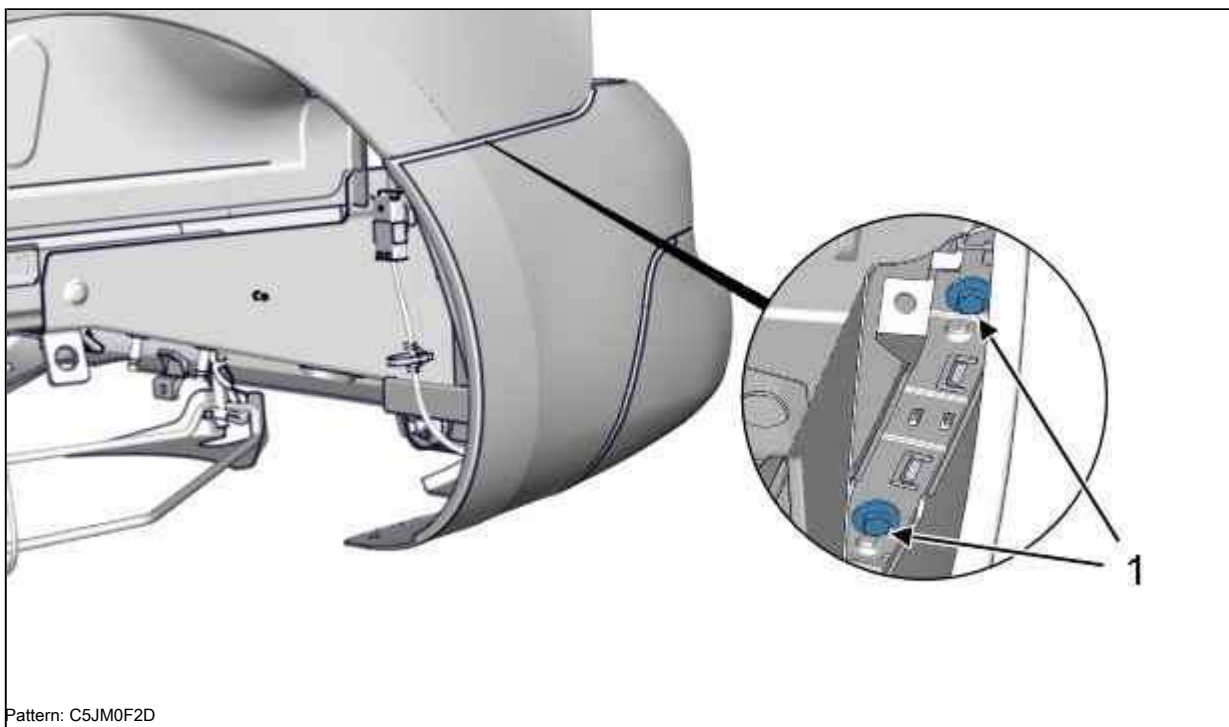
1.2. Hinged luggage compartment doors

Open the rear doors.

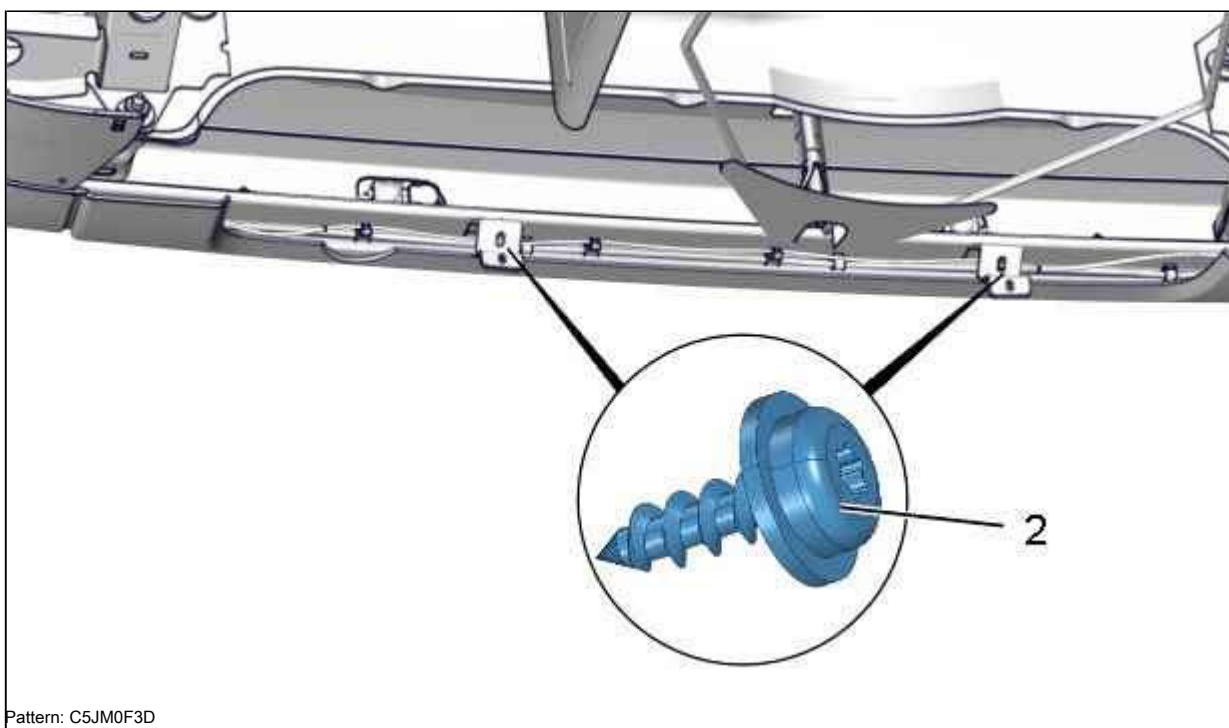
Remove: The luggage compartment hinge door seal (lower section).



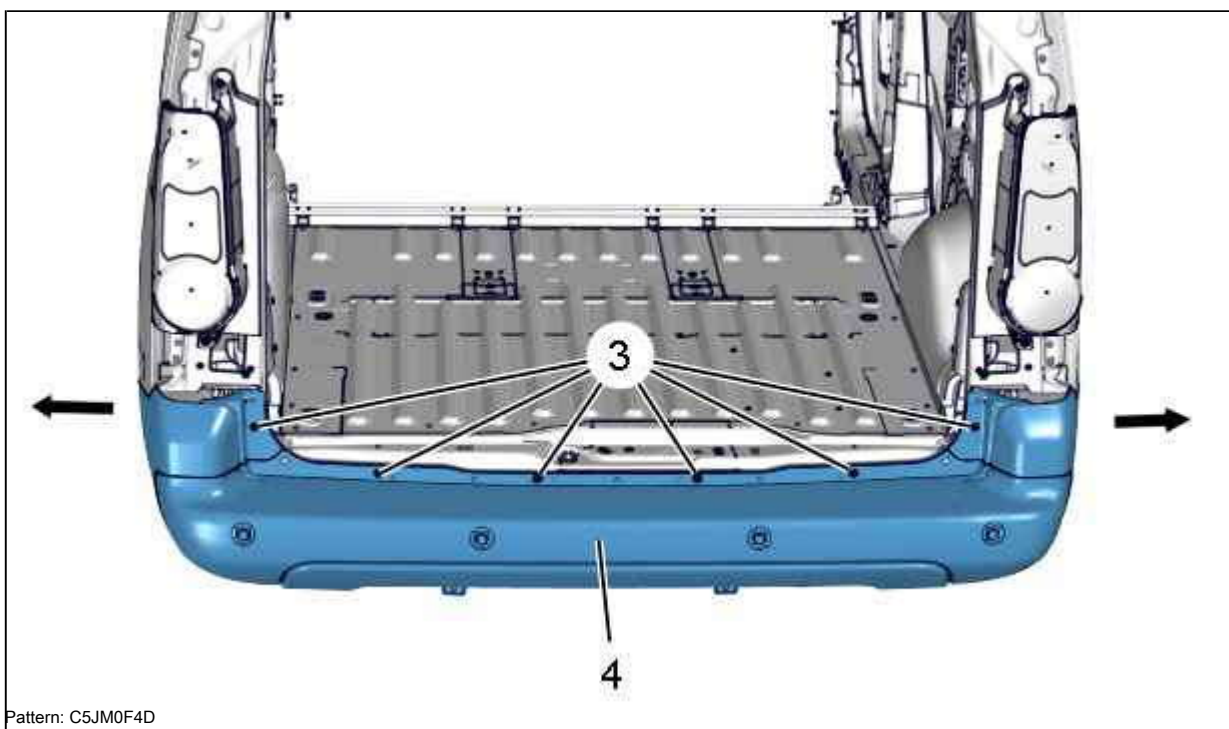
Disconnect the connector (at "a").



Loosen screws (1) (on each side).

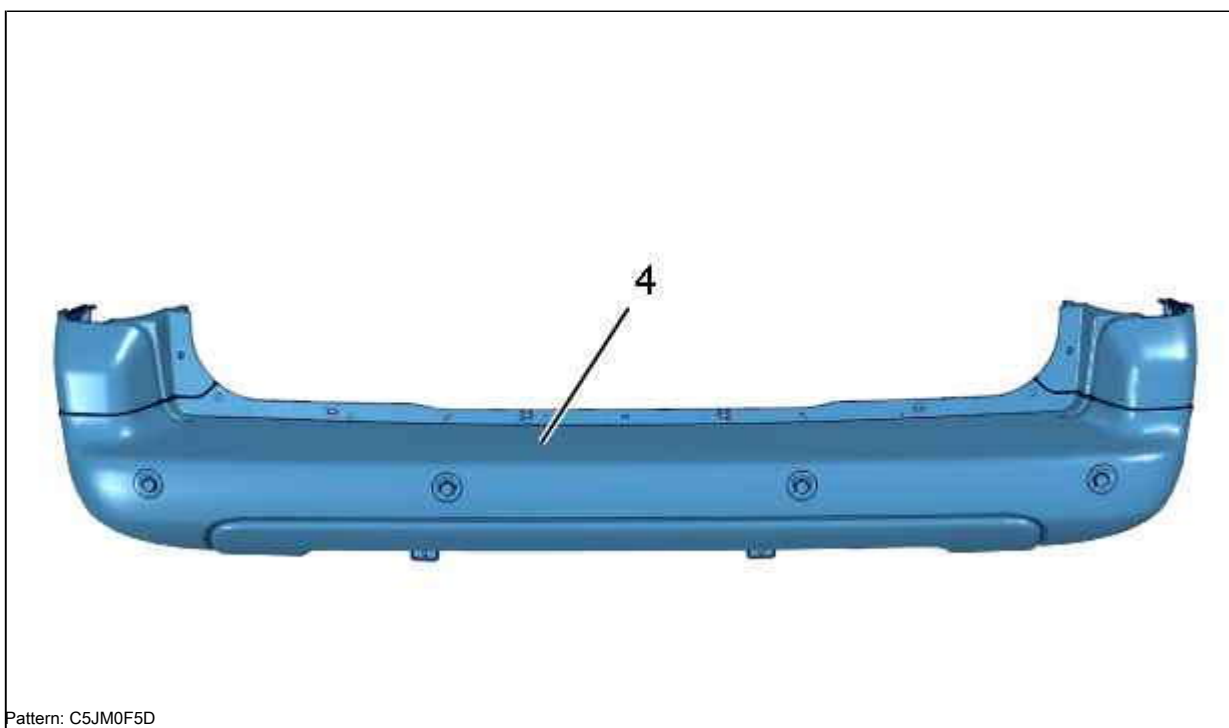


Loosen screws (2).



Loosen screws (3).

Loosen rear bumper (4) (in accordance with arrow).



NOTE: The following operation must be carried out by 2 mechanics.

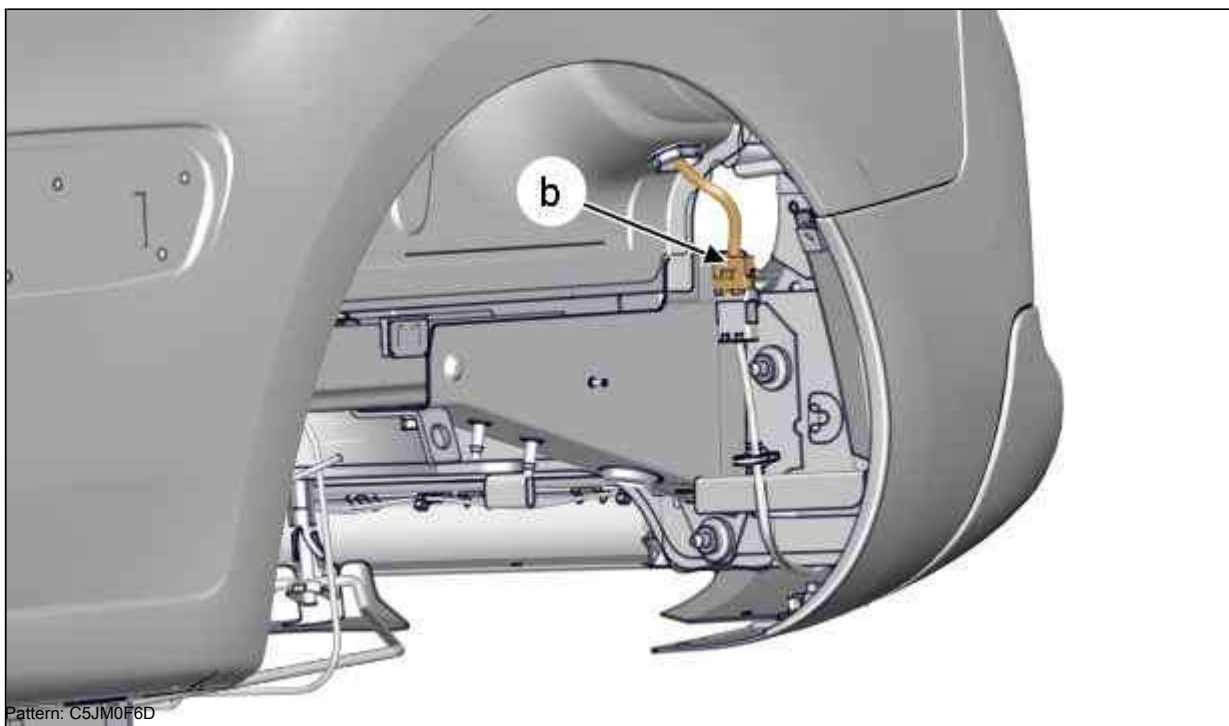
Remove the rear bumper (4).

1.3. Car with luggage compartment door

Open the boot lid.

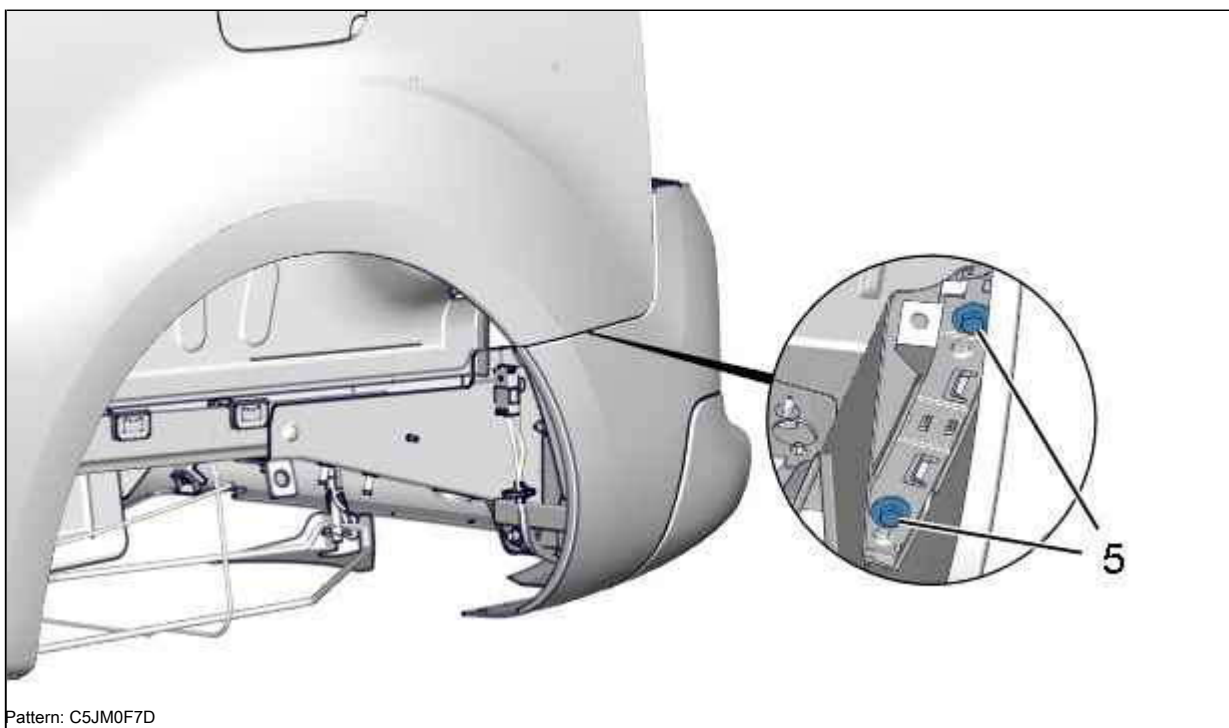
Remove: Trunk lid seal (lower part).

Remove taillights



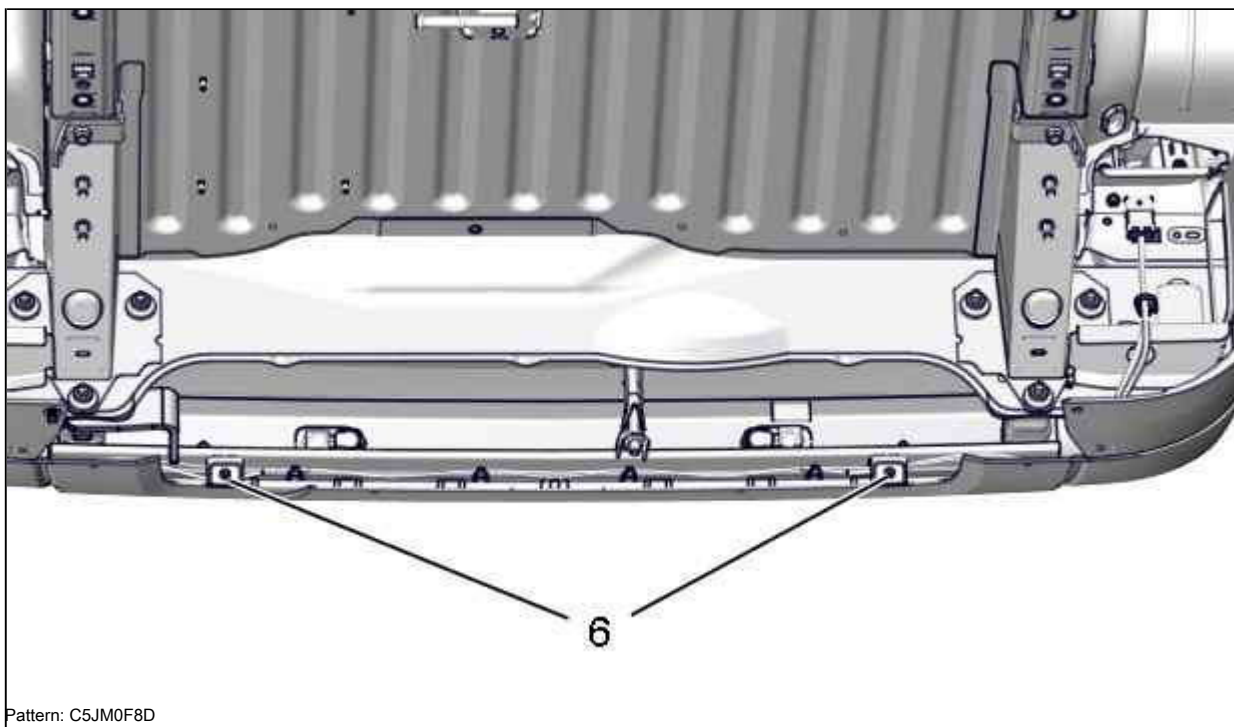
Pattern: C5JM0F6D

Disconnect the connector (at "b").

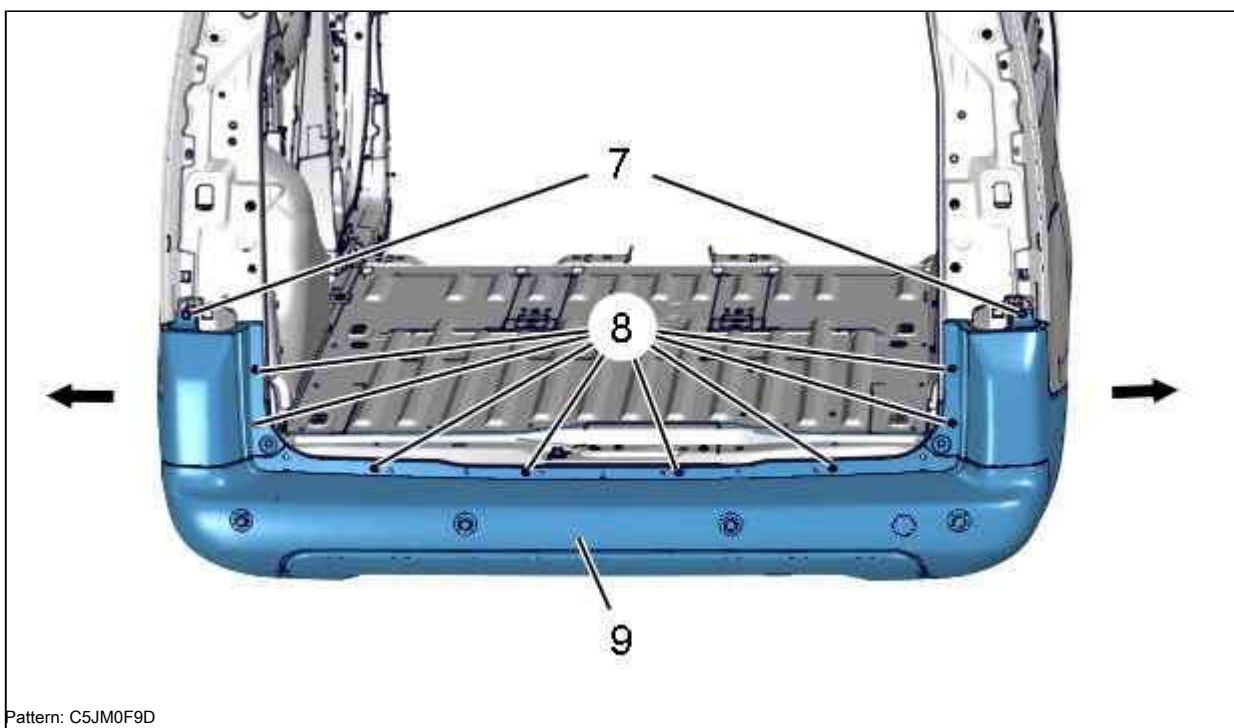


Pattern: C5JM0F7D

Loosen screws (5) (on each side).

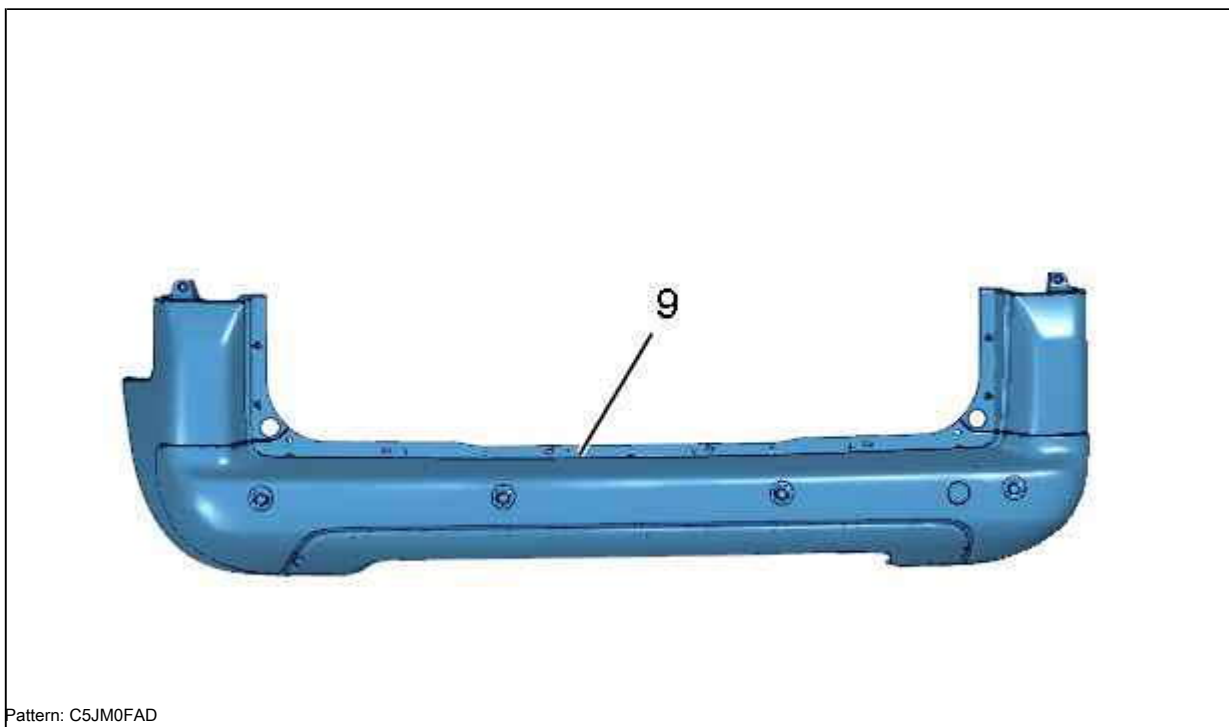


Loosen screws (6).



Unscrew the screws (7), (8).

Loosen the rear bumper (9) (in accordance with the arrow).



NOTE: The following operation must be carried out by 2 mechanics.

Remove the rear bumper (9).

2. Installation

2.1. Hinged luggage compartment doors

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- bolts (1) to a torque of 0.85 ± 0.15 da.Nm
- bolts (2), (3) with a torque of 0.25 ± 0.05 da.Nm

2.2. Car with luggage compartment door

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- bolts (5), (7) with a torque of 0.85 ± 0.15 da.Nm
- bolts (6), (8) with a torque of 0.25 ± 0.05 da.Nm

2.3. General operations

Install rear mudguard

Check the operation of the various equipment.



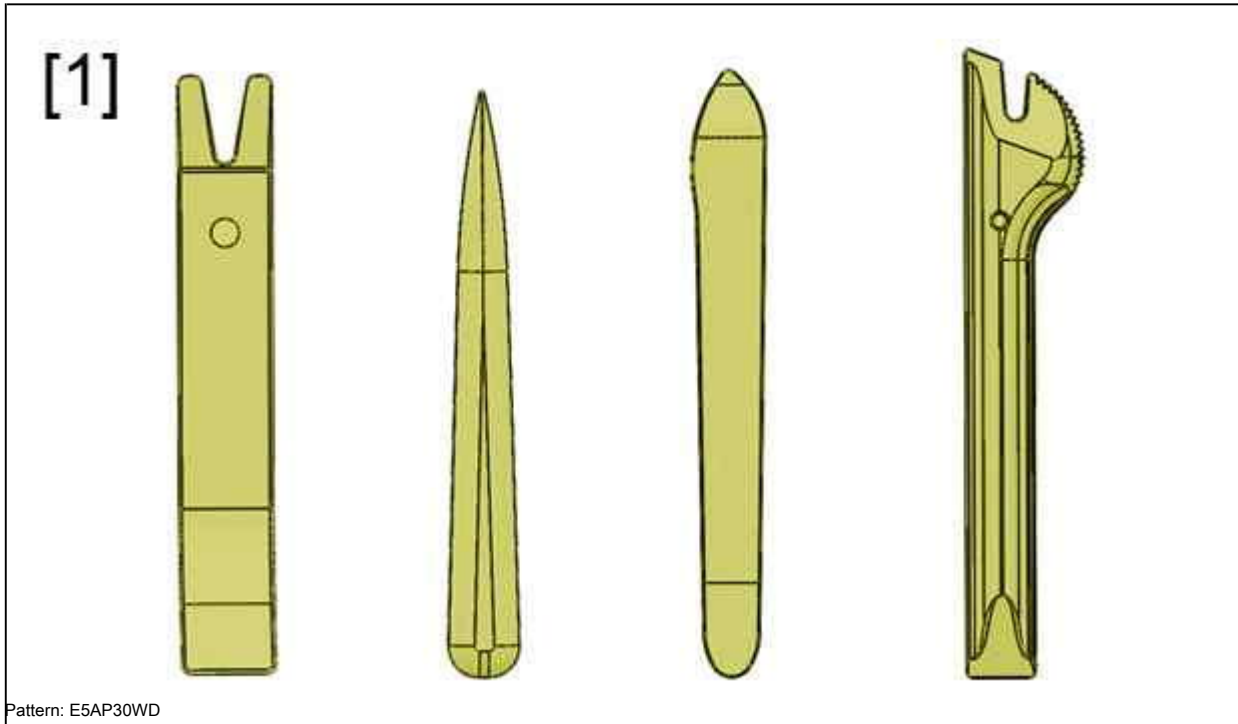
REMOVAL REFITTING: REAR PARKING AID SENSOR

MANDATORY: Observe the cleanliness and safety rules



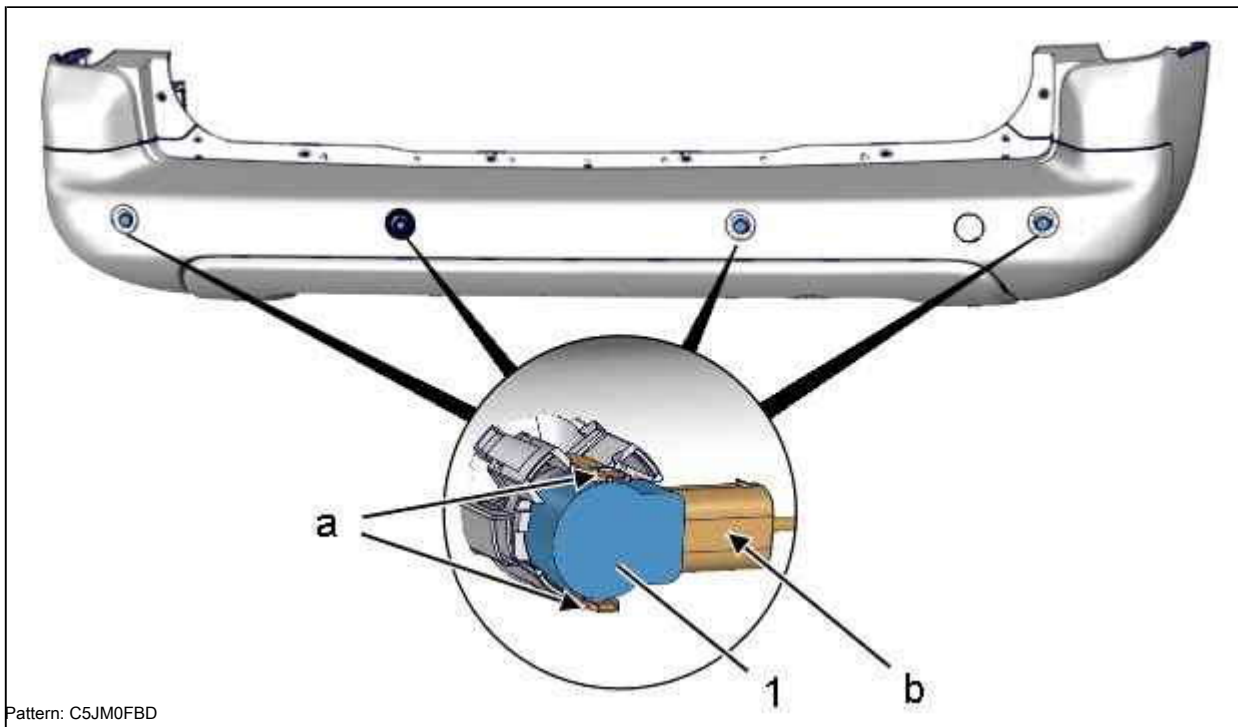
NOTE: This operation does not require removing the rear bumper.

1. Recommended equipment



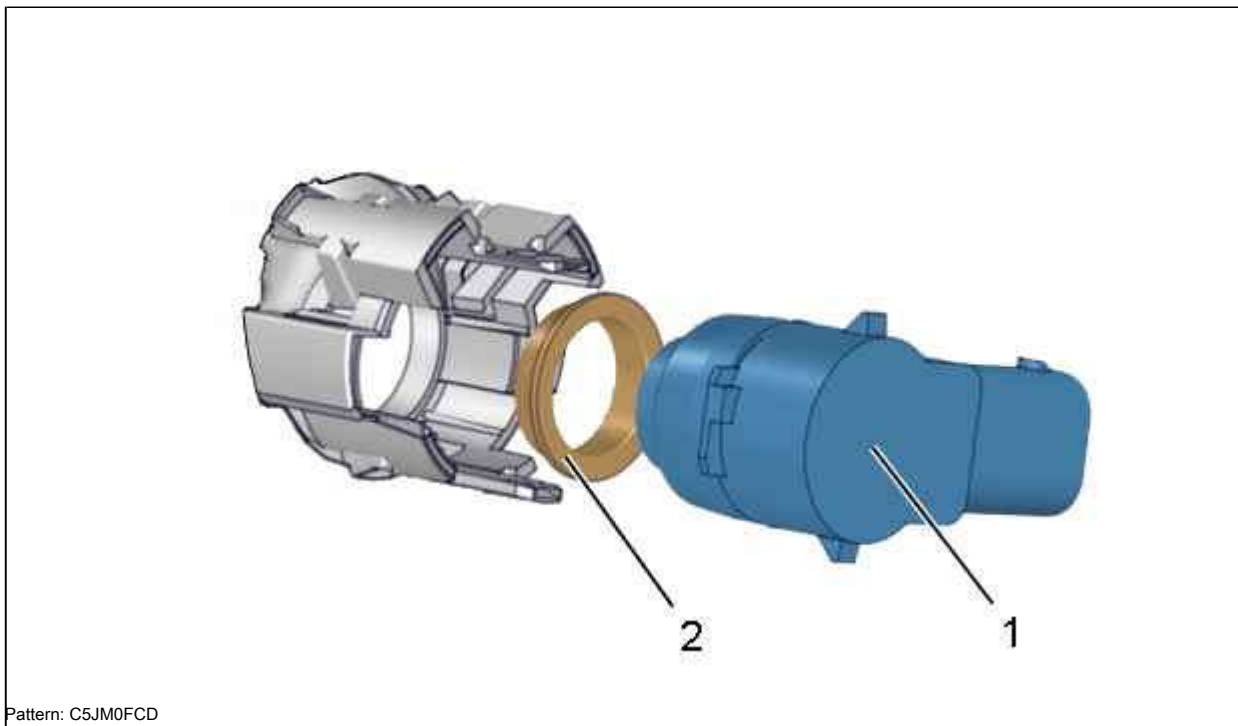
2. Removal

NOTE: When performing the following operations, proceed in the same way for all 4 obstacle sensors.



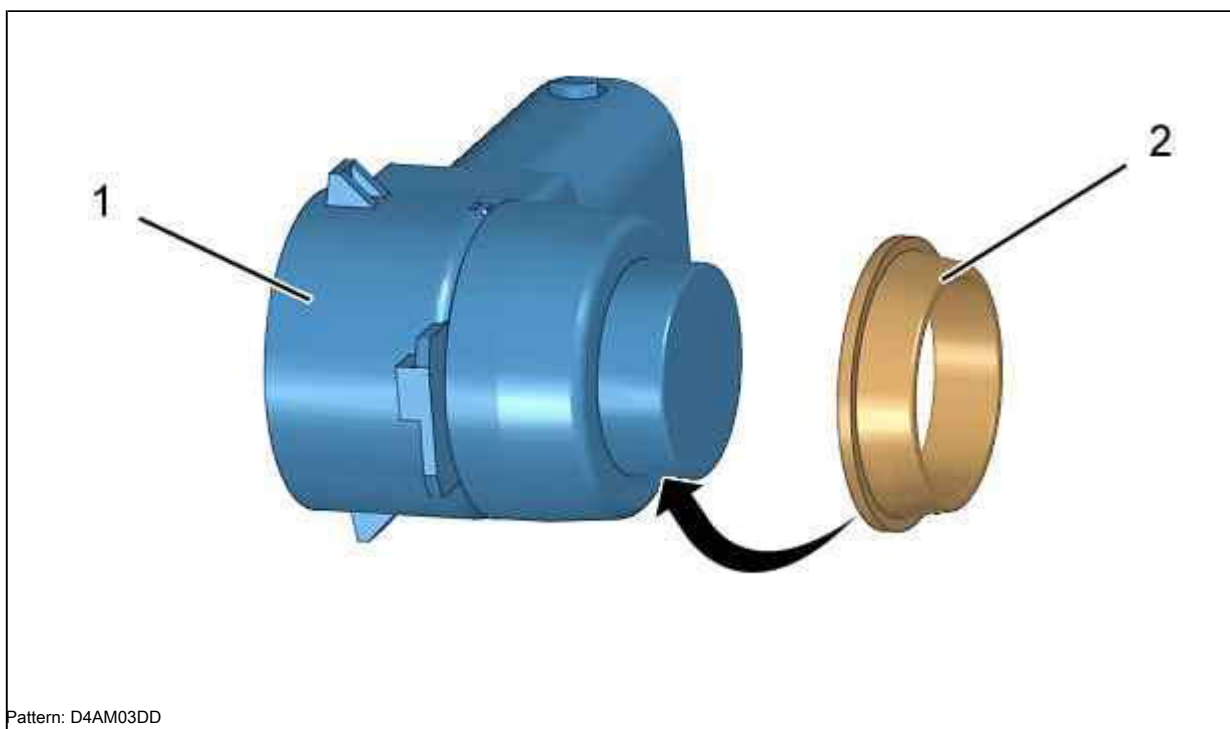
Disconnect the connector (at "b").

Disconnect: Sensor (1) (at "a"); Using the tool [1].

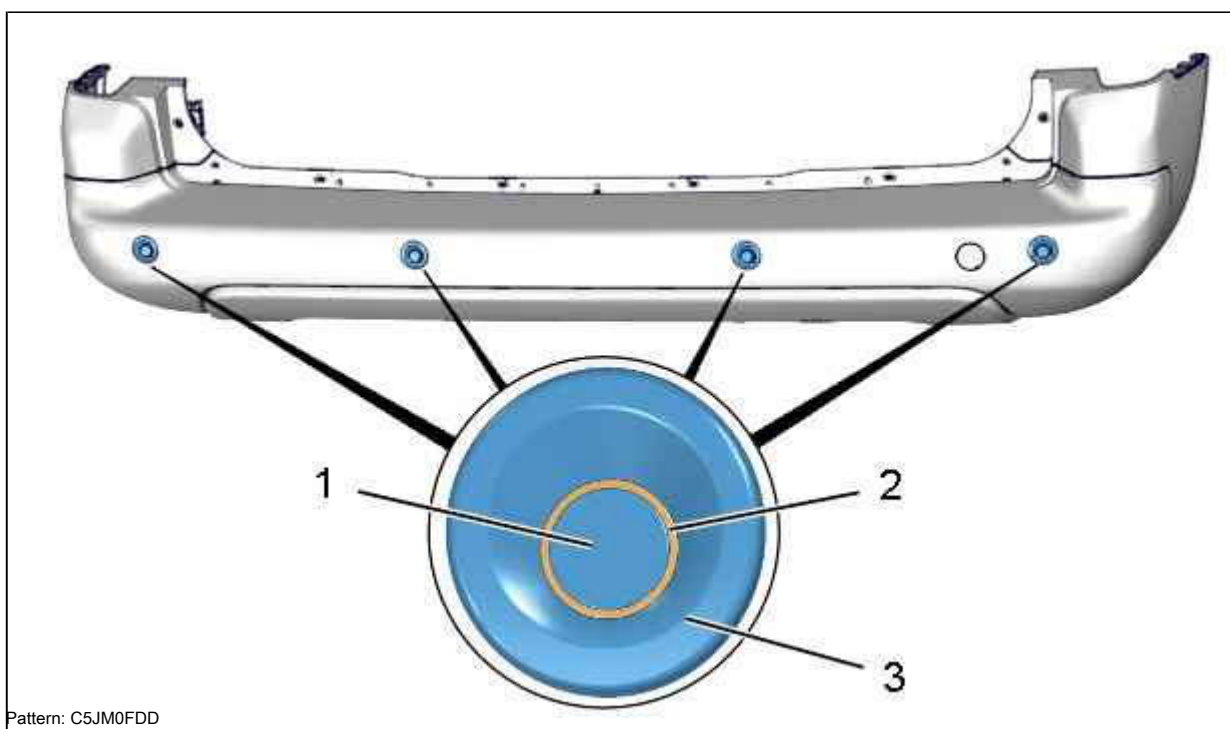


Separate and remove: Sensor (1) with retaining ring (2).

3. Installation



ATTENTION : Check for the presence of the retaining rings (2) on the sensors (1).



Replace the sensor (1).

ATTENTION : Check that the ring (2) is correctly positioned over the obstacle sensor (3).

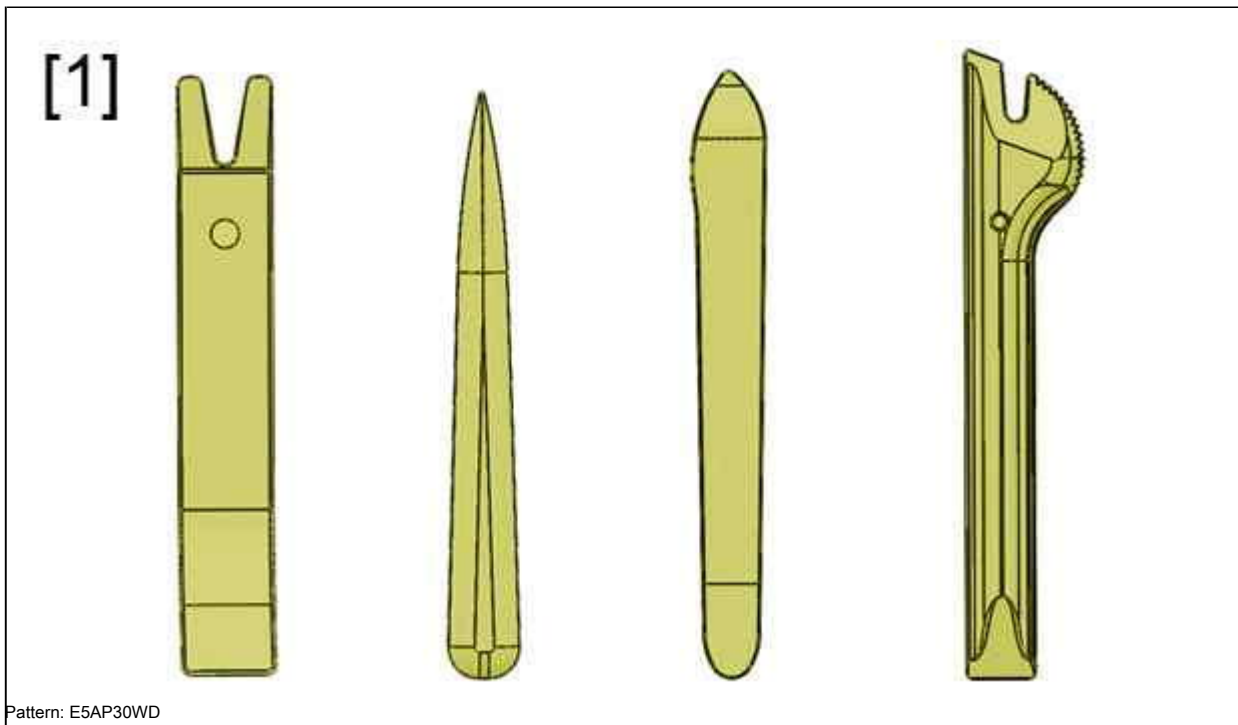
Installation is carried out by performing the removal operations in the reverse order. Check the operation of the various equipment.

DISASSEMBLY ASSEMBLY: REAR BUMPER

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



Pattern: E5AP30WD

[1] Trim removal tool () .1350ZZ.

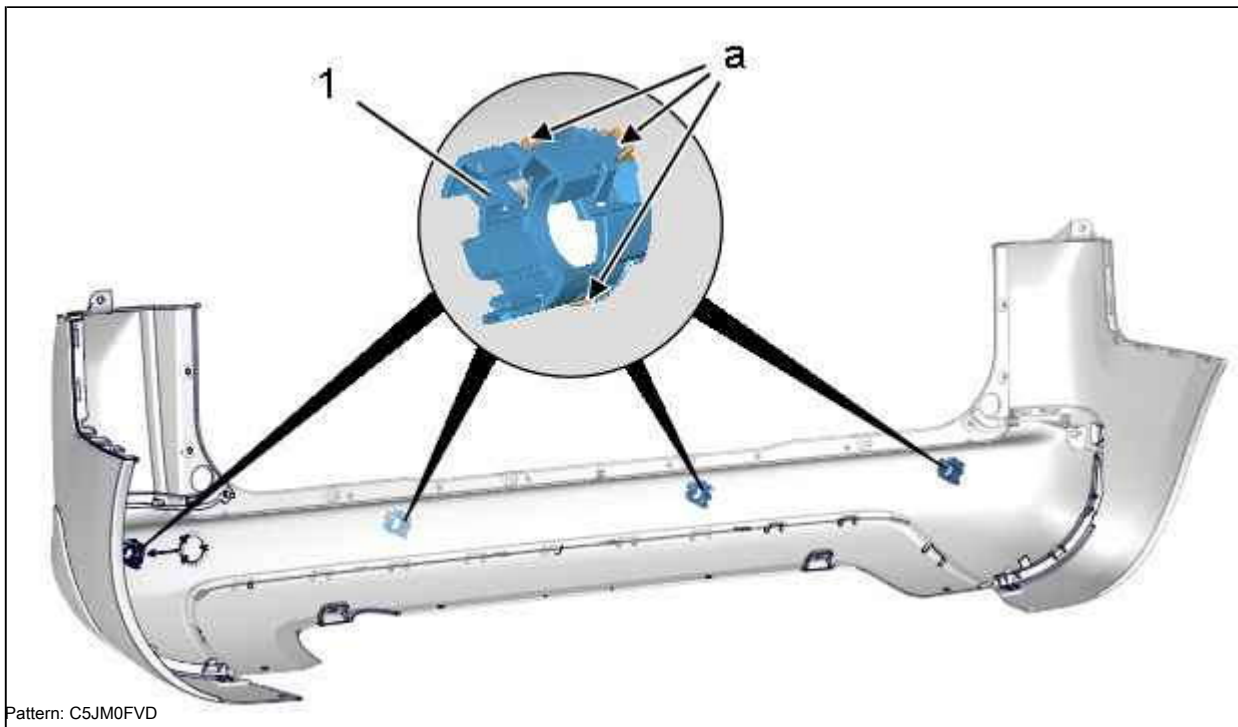
2. Removal

Remove:

- **Rear bumper**
- **Obstacle sensors**  (depending on configuration)
- **Rear bumper wire harness**  (depending on configuration)



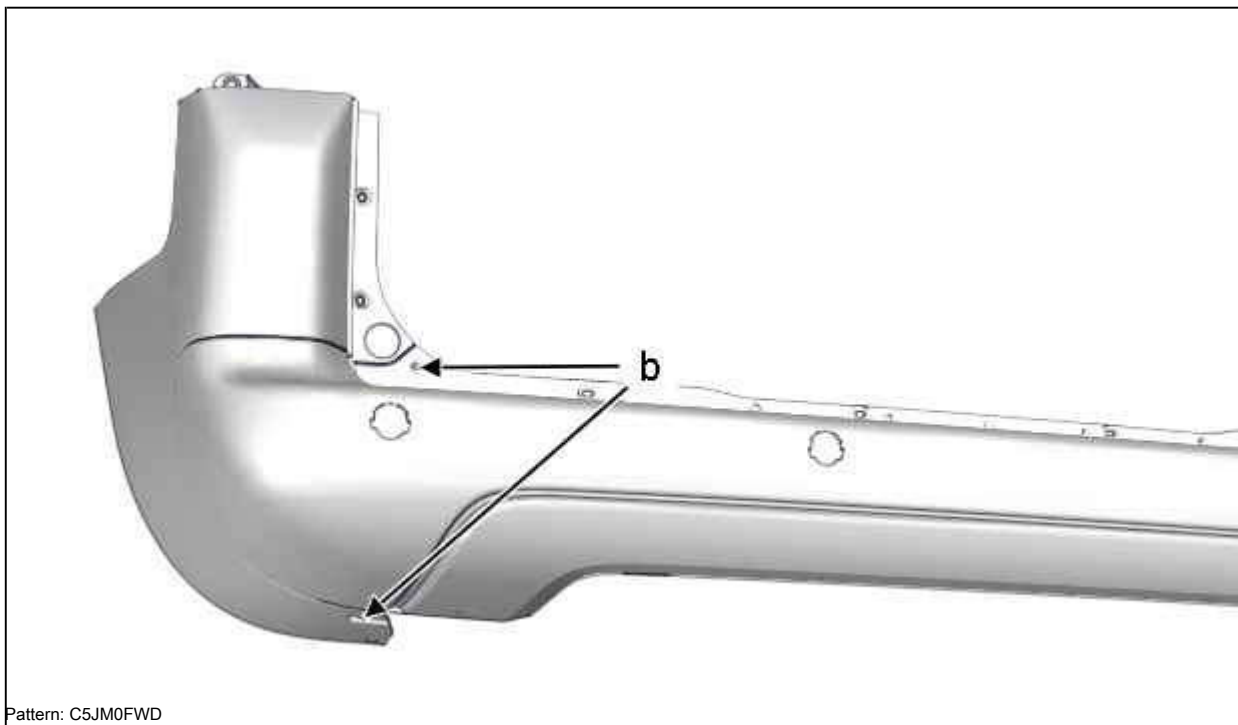
2.1. Supports for obstacle sensors (depending on equipment)



Disconnect: Obstacle sensor supports (1) (at "a"). Remove: Obstacle sensor supports (1).

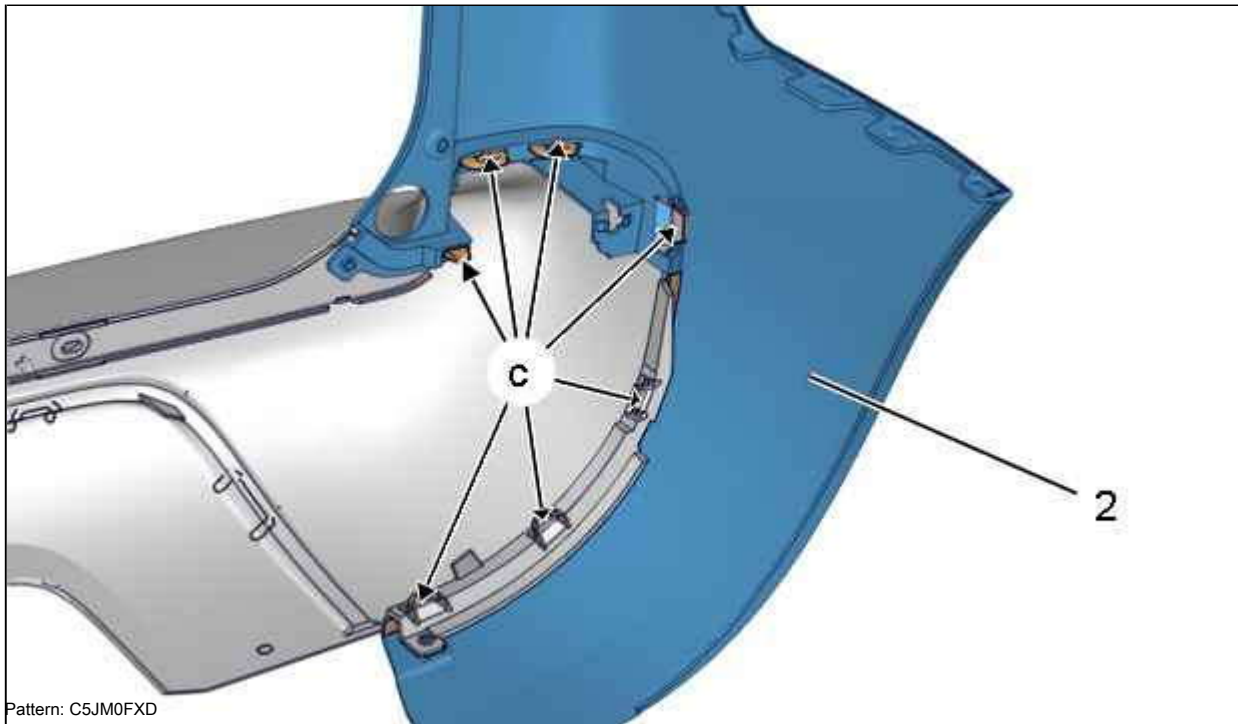
2.2. Side moldings

NOTE: The operations are performed symmetrically.



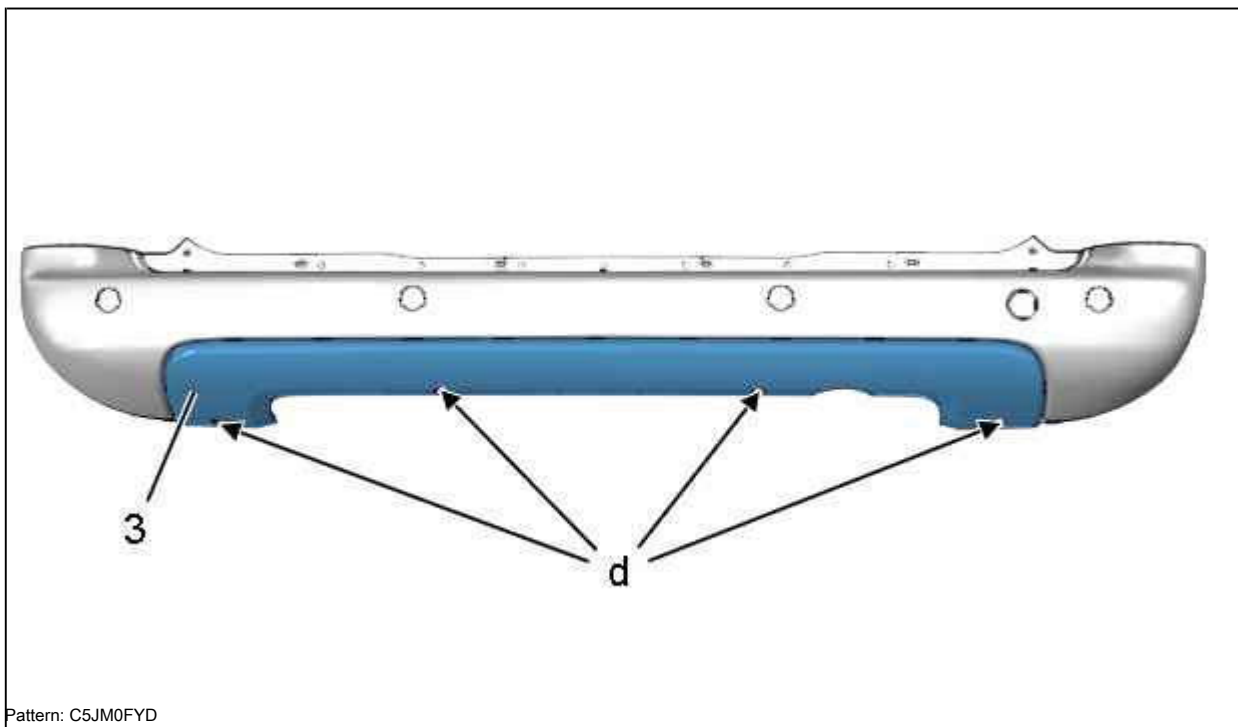
Cut off the rivet shafts before drilling. Drill out the rivet heads (in "b"); with a 5mm drill.

Drill out the remaining rivets.

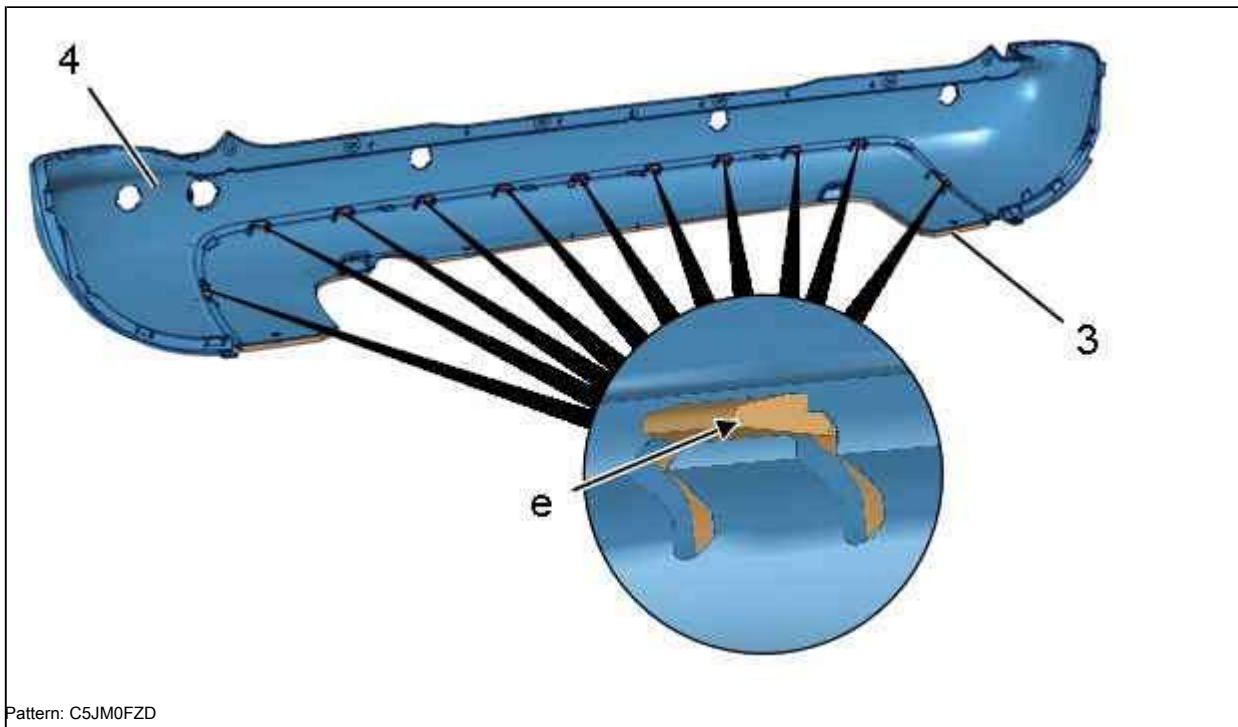


Unfasten the fasteners (in "c"); Using the tool [1]. Remove: Side panel (2).

2.3. Bottom pad (depending on equipment)



Remove the clips (at "d") from the side panel (3).



Unfasten the fasteners (at "e"); Using the tool [1]. Remove:

- Lower bumper strip (3)
- Rear bumper (4) (Center section)

3. Installation

Proceed in the reverse order of removal. Check the functioning of the electrical equipment.

REPLACEMENT: BACK PANEL

MANDATORY: Observe the cleanliness and safety rules.

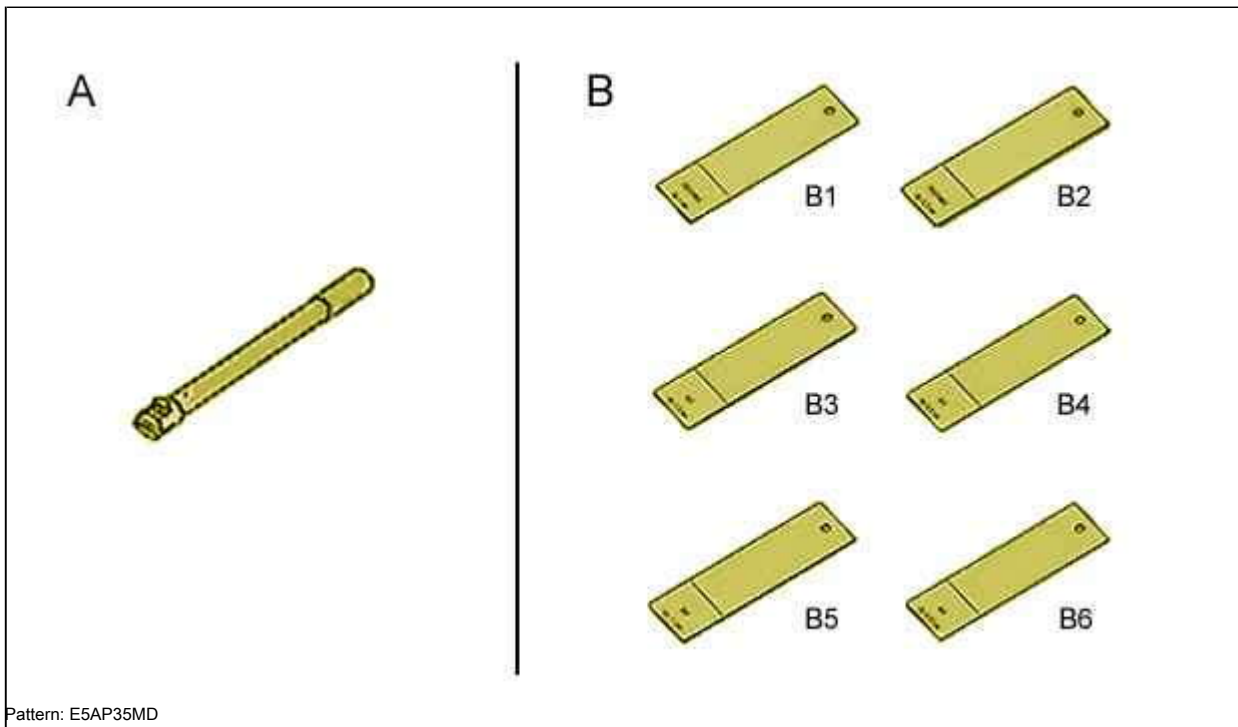


ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types used for making electric arc welds. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas.

2. Recommended equipment



Equipment for checking the quality of electric welding points (G1366ZZ). Electric Welding Dots Quality Checker (G1366B).

3. Additional operations

ATTENTION : Wait at least 15 minutes before performing any work (Discharge of the reserve energy of the airbag computer).

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Back panel

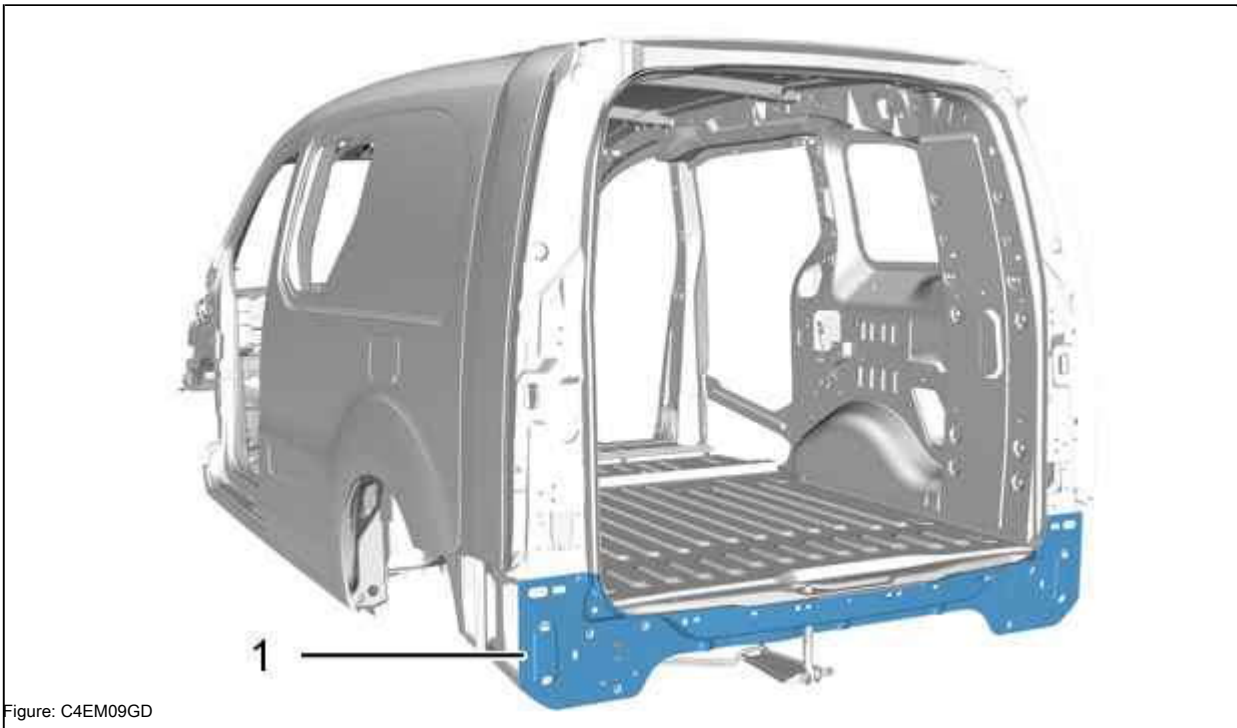
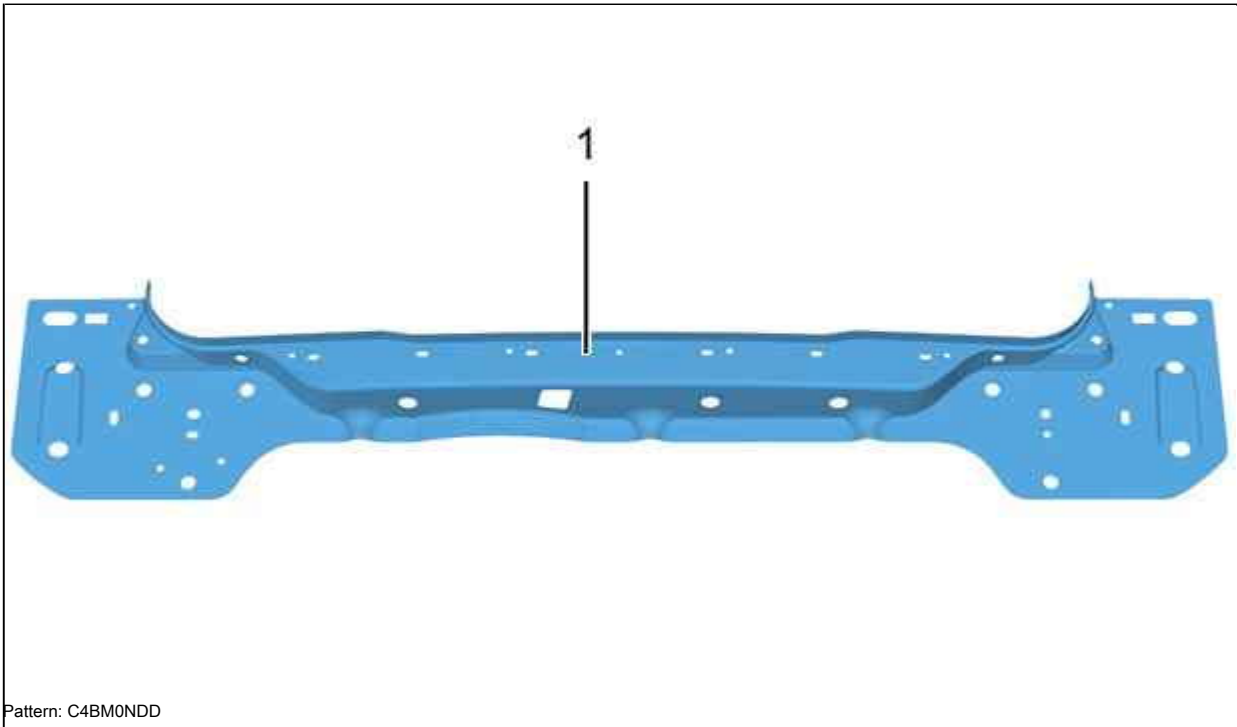


Figure: C4EM09GD

(1) Rear panel.

5. Identification: Rear panel

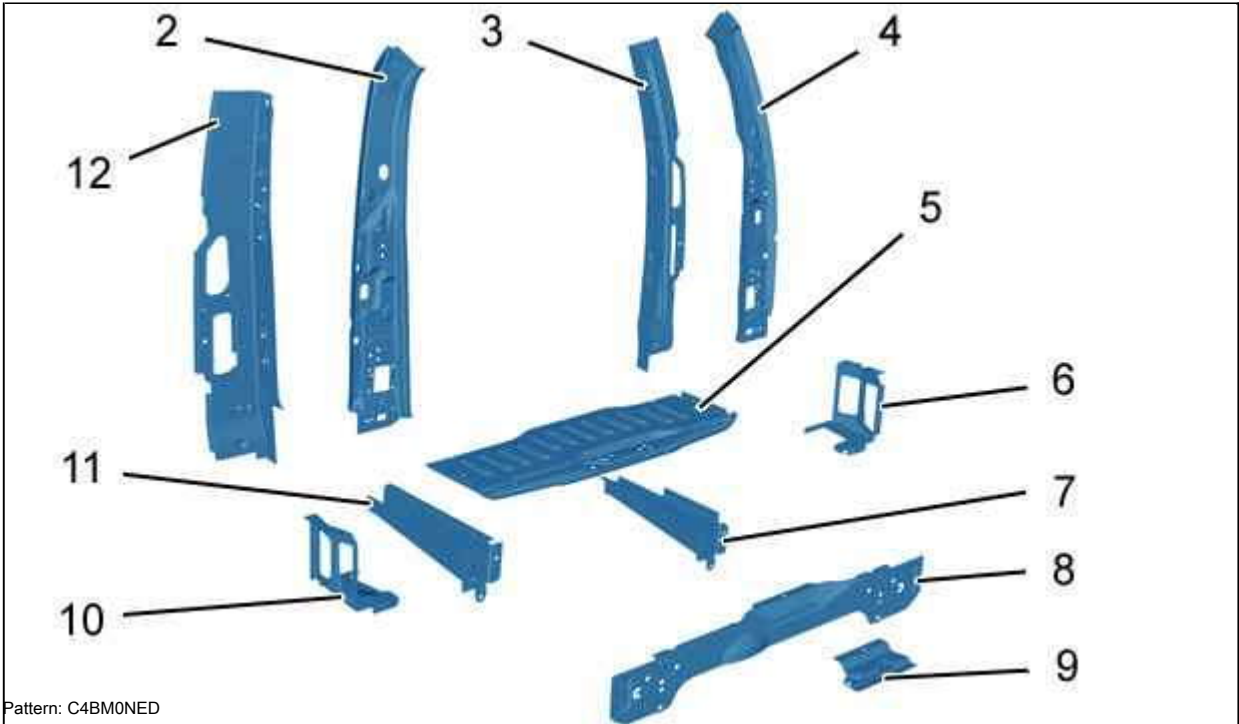
5.1. Ingredient: Back Panel



Pattern: C4BM0NDD

Label Designation Thickness (mm) Nature / Classification (1)			
	Rear panel 0.87		Mild steel

5.2. Identification of parts adjacent to the spare part

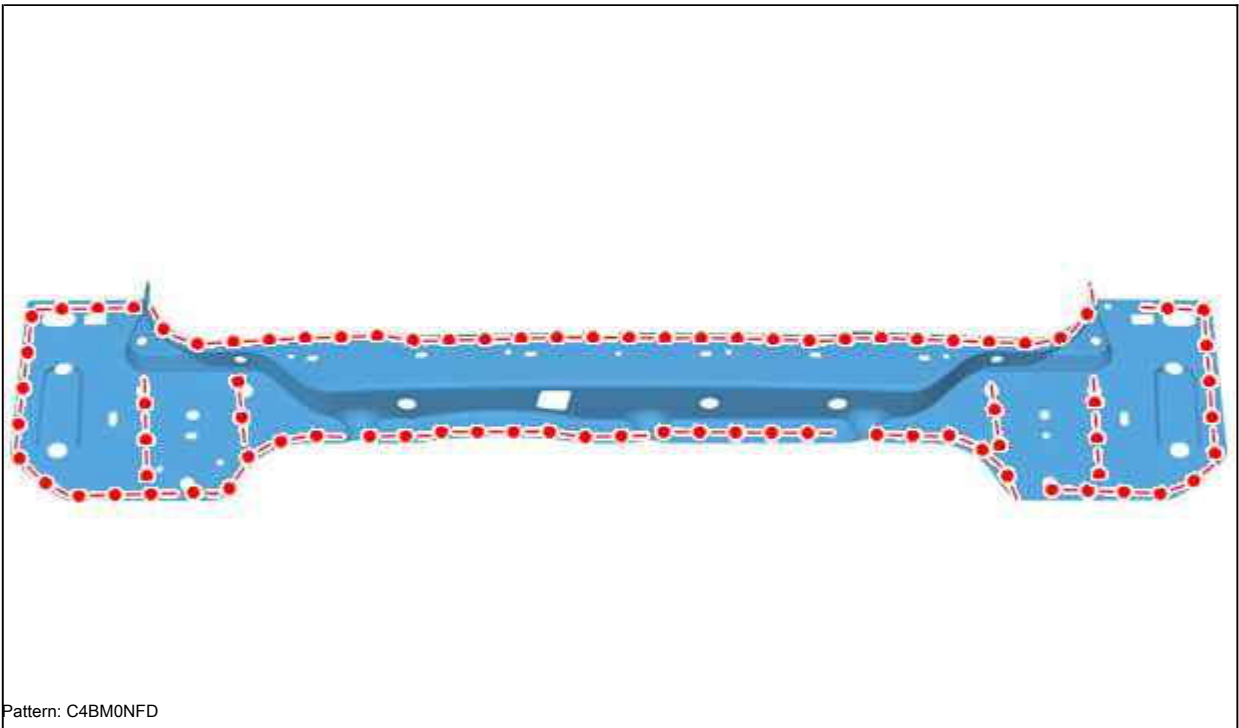


Pattern: C4BM0NED

Label Designation		Thickness (mm)	Nature / classification
(2)	Fender Chute (Rear Left)	0.87	HLE (*)
(3)	Rear pillar (Rear right)	0.77	HLE (*)
(4)	Fender Chute (Rear Right)	0.87	HLE (*)
(five)	Rear luggage compartment extension	0.77	HLE (*)
(6)	Lower Cover Extension (Rear Right Fender)	0.97	Mild steel
(7)	Side member extension (Right) (Long wheelbase version)	1.80	THLE (**)
(eight)	Rear panel upholstery	0.87	Mild steel
(nine)	Reinforcement for fastening the lock	1.47	HLE (*)
(ten)	Lower Cover Extension (Rear Left Fender)	0.97	Mild steel
(eleven)	Side member extension (Left) (Long wheelbase version)	1.80	THLE (**)
(12)	Rear pillar (Rear left)	0.77	HLE (*)
(*) HLE: Steel with a high elastic limit (**) THLE: Steel with a very high elastic limit			

6. Preparation: Rear panel

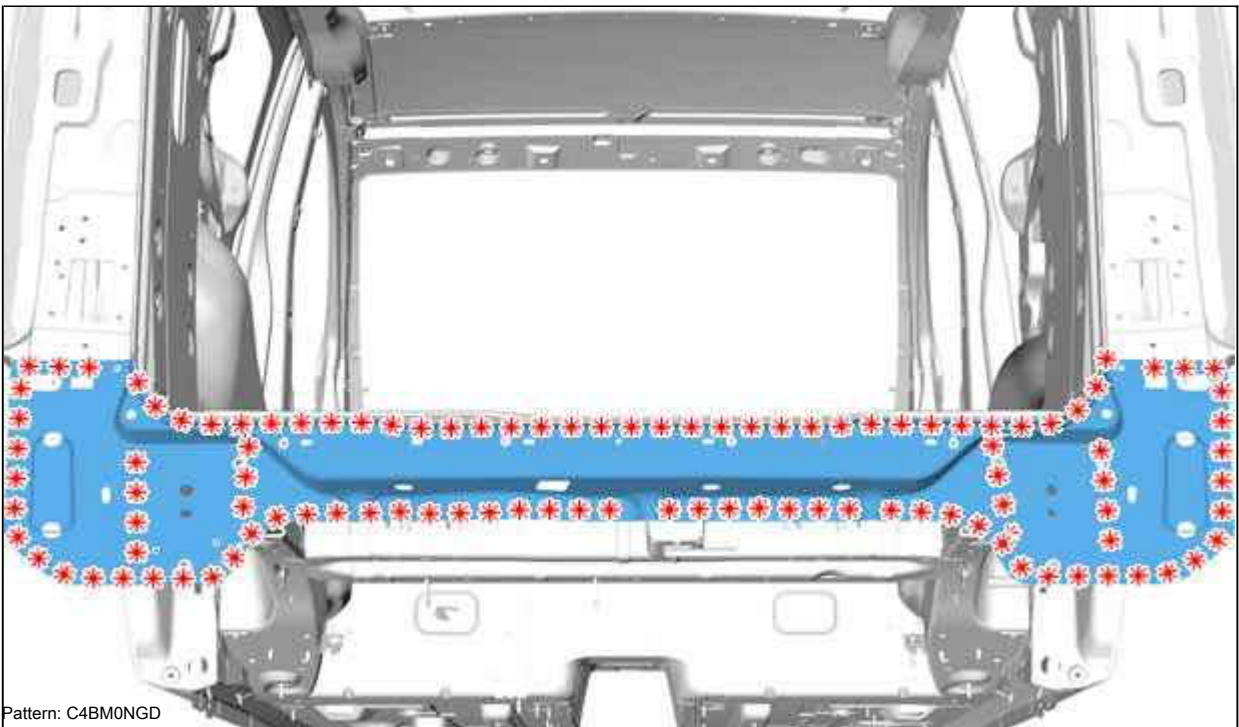
ATTENTION : When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

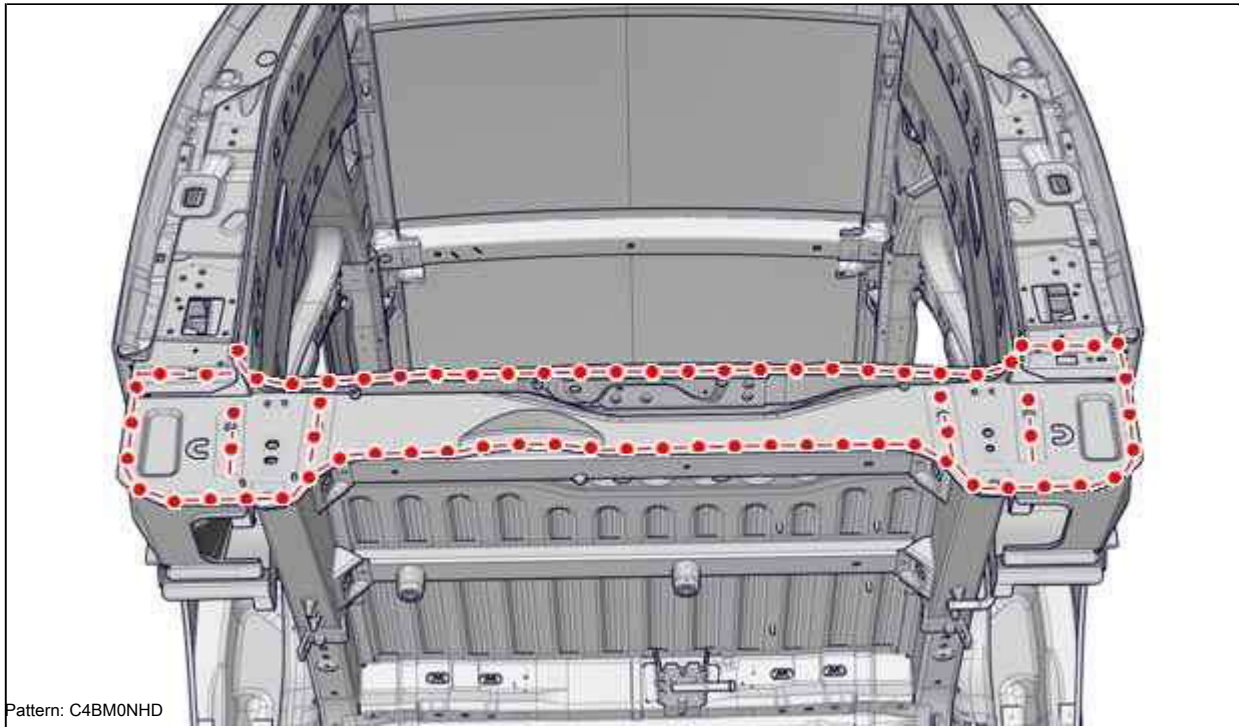
7. Cutting an element on the body



Cut by points.

Remove the rear panel.

8. Cleaning and preparation of the body



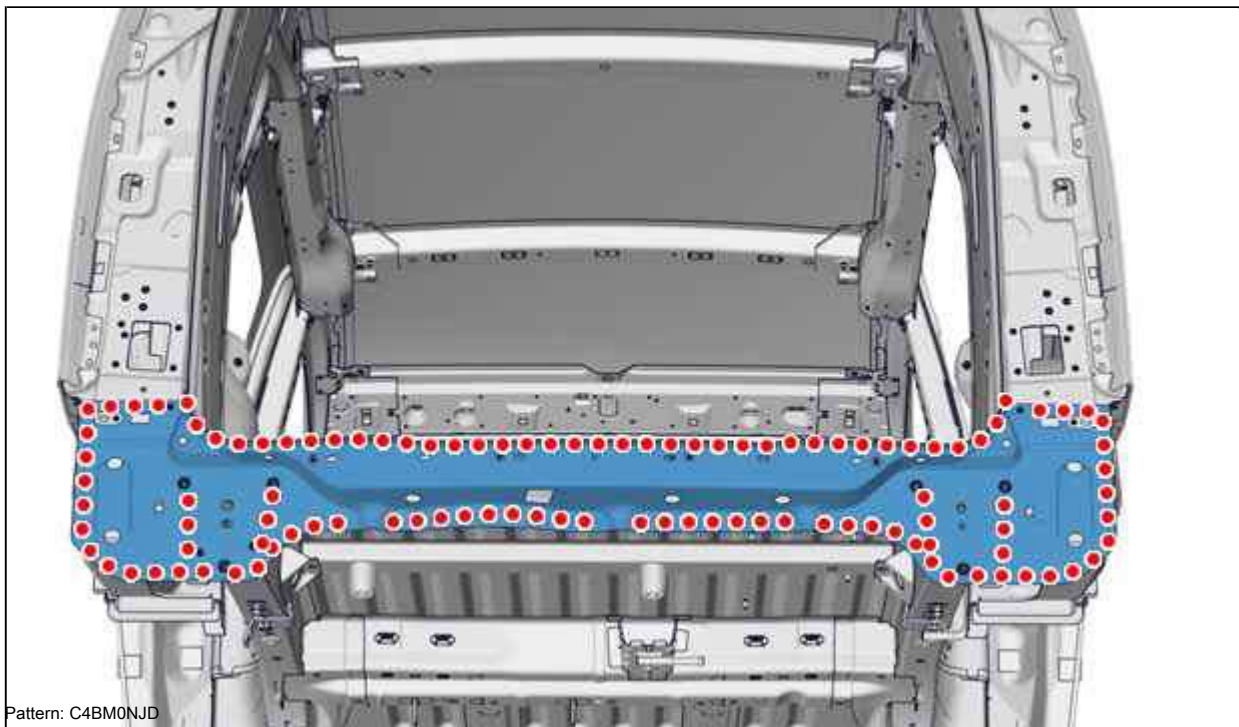
Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Installation Fit

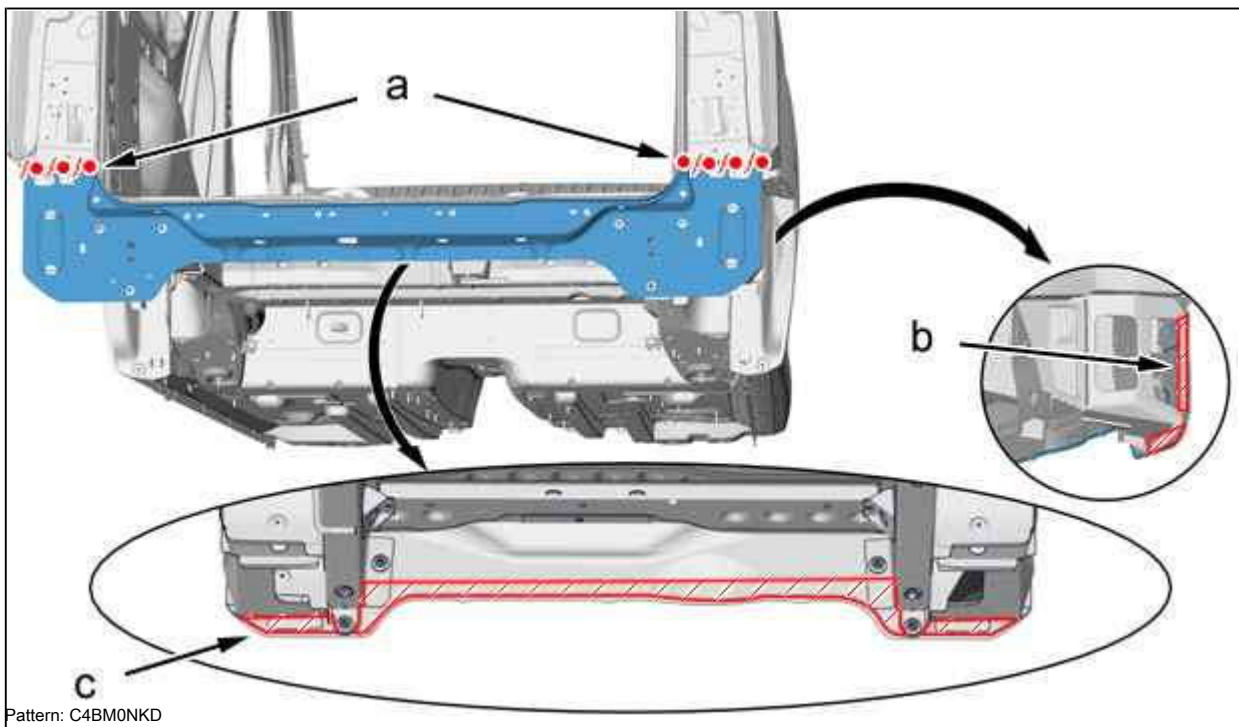
Position: Back panel. Hold the element in place.

10. Welding



Weld with welding points.

11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1") (in "a").

Apply an anti-gravel coating (index "C4") (in "b") (The operation is performed symmetrically). Apply an anti-gravel coating (index "C4") (in "c").

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

12. Reinitialization

Perform additional operations.

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

REPLACEMENT: REAR REAR SEAT CROSS SIDE ASSEMBLY (7 SEATS MODIFICATION)

~~MANDATORY: Observe the cleanliness and safety rules~~



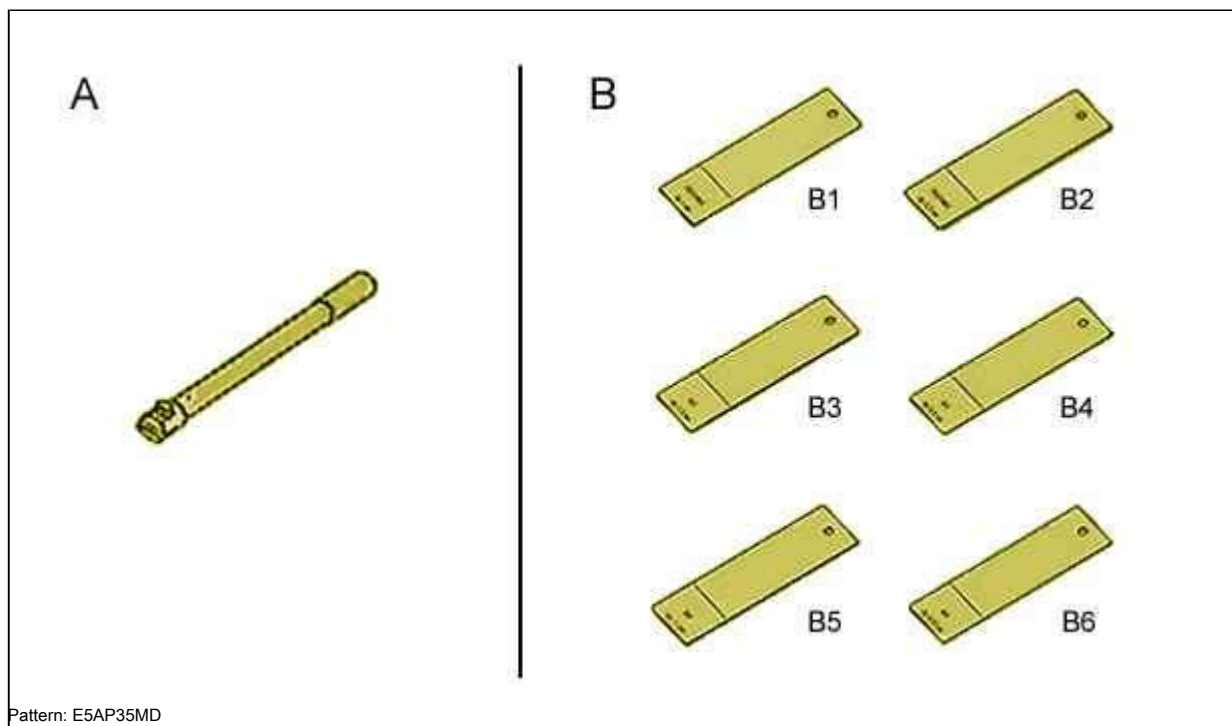
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Tools



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery. Remove:

- Customized rear seats (see operating instructions)
- **Interior decoration**

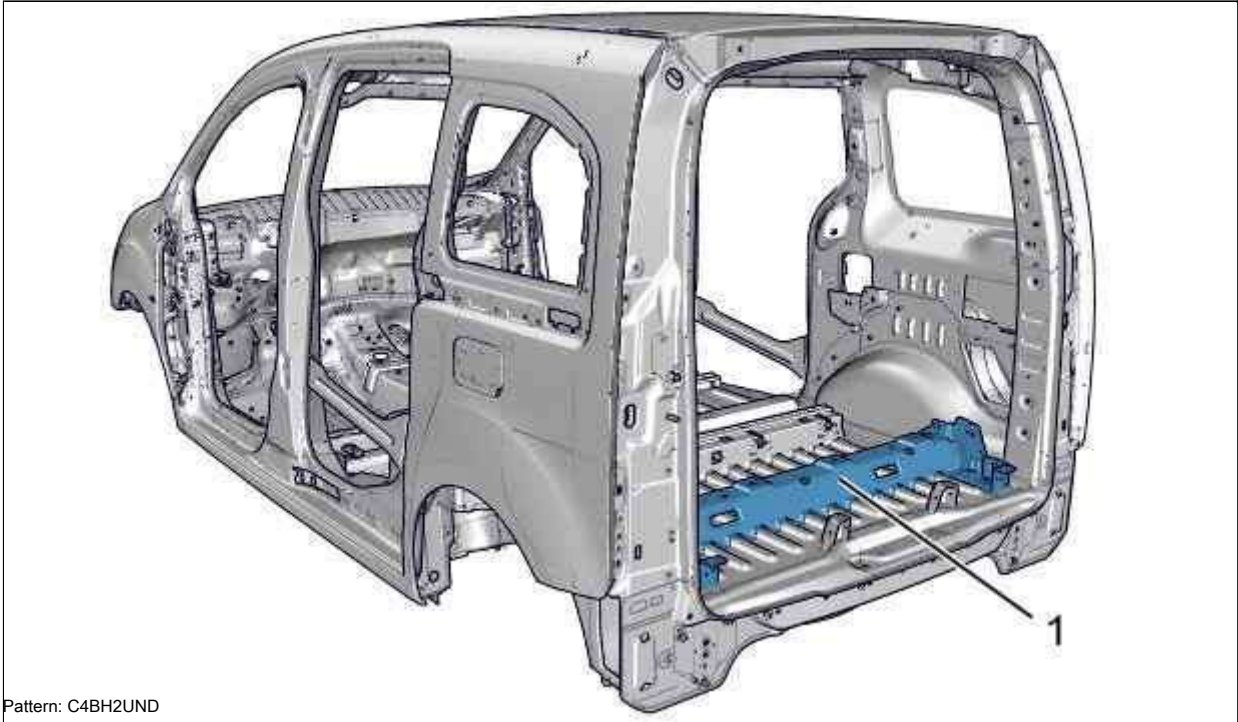


ATTENTION : Remove or protect items located in the repair area that could be

damaged by heat or dust.

Separate the wire harnesses.

4. Location of the spare part

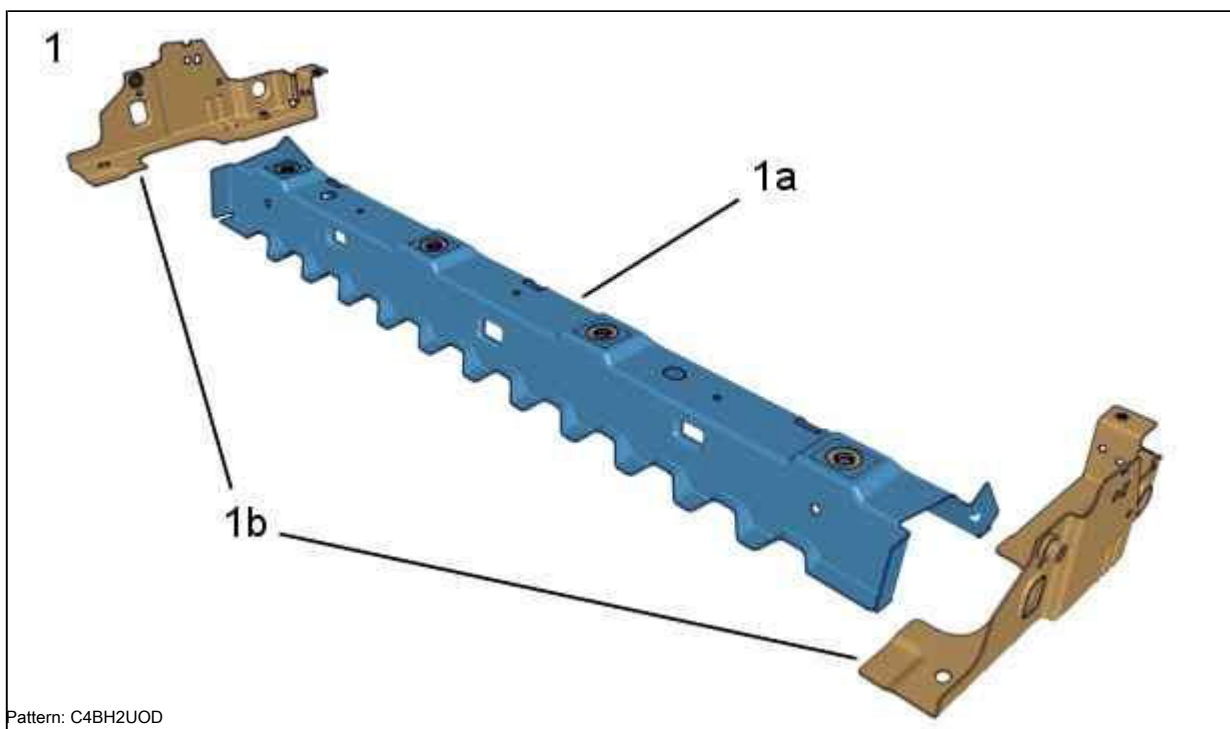


Label Designation

(1)	Rear seat cross member: Assy.

5. Identification of the spare part

5.1. Contents: Rear seat cross member (Complete)

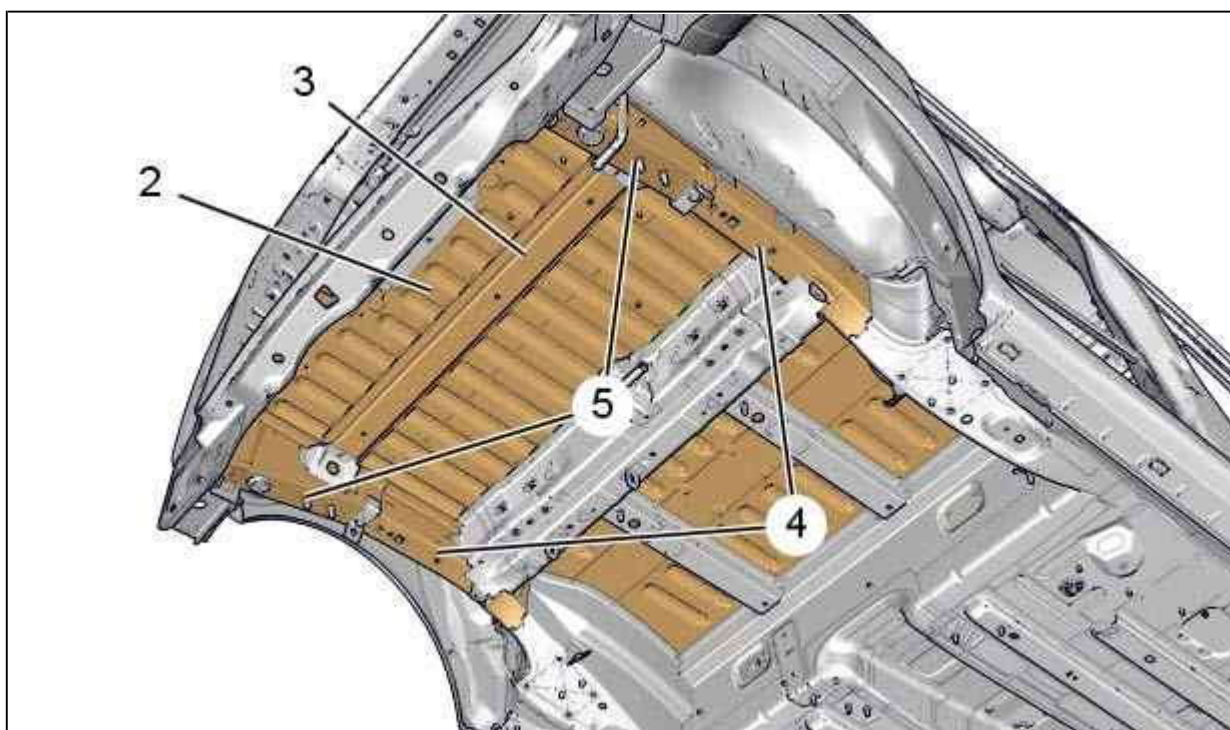


Label Designation

Thickness nature / classification

(1)	Rear cross member, rear seat: Sub-assembly Rear cross		
(1a)	member, rear seat	1.47 mm	HLE
(1b)	Support: Retractable reel of rear seat belt 1.8 mm		THLE

5.2. Identification of parts adjacent to the spare part

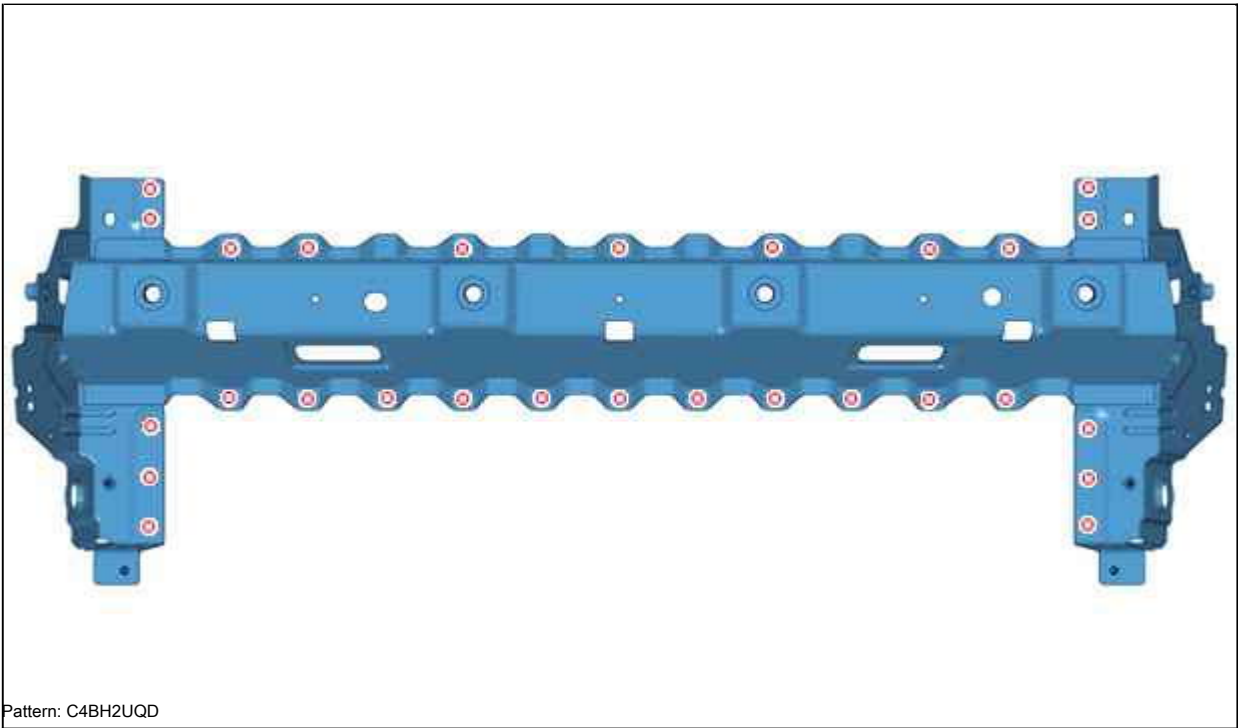


Pattern: C4BH2UPD

Label Designation		Thickness nature / classification	
(2)	Load compartment floor	0.7 mm	HLE
(3)	Cross member, luggage compartment 1.17 mm Front side		HLE
(4)	member (Rear)	1.95 mm	HLE
(five)	Extension: Front spar	1.8 mm	THLE

6. Preparation of spare part

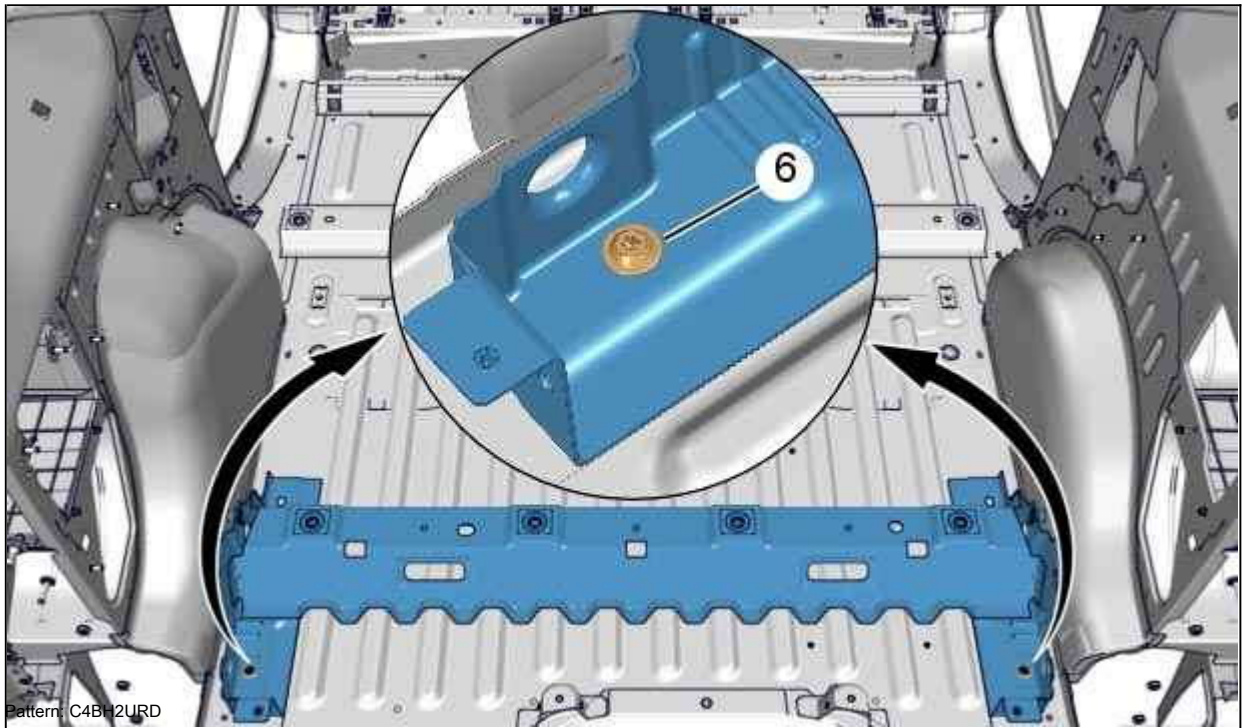
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



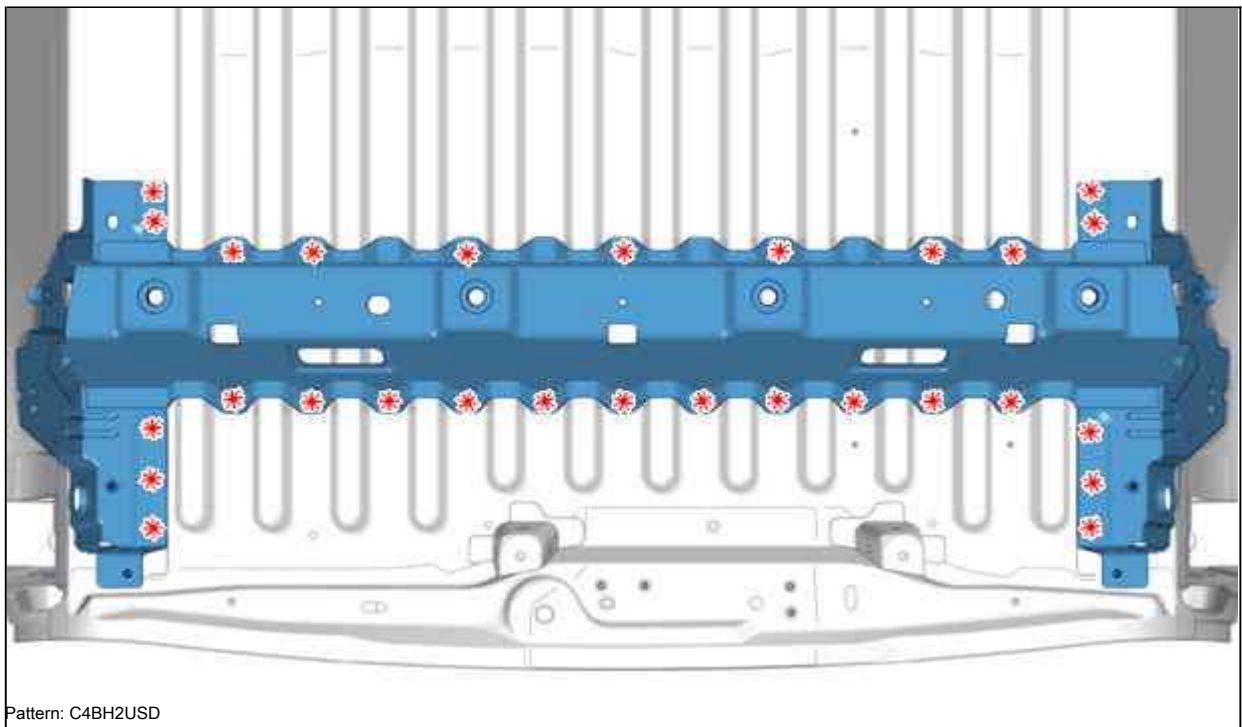
Mark and then drill Ø6.5 for subsequent spot welding. Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body

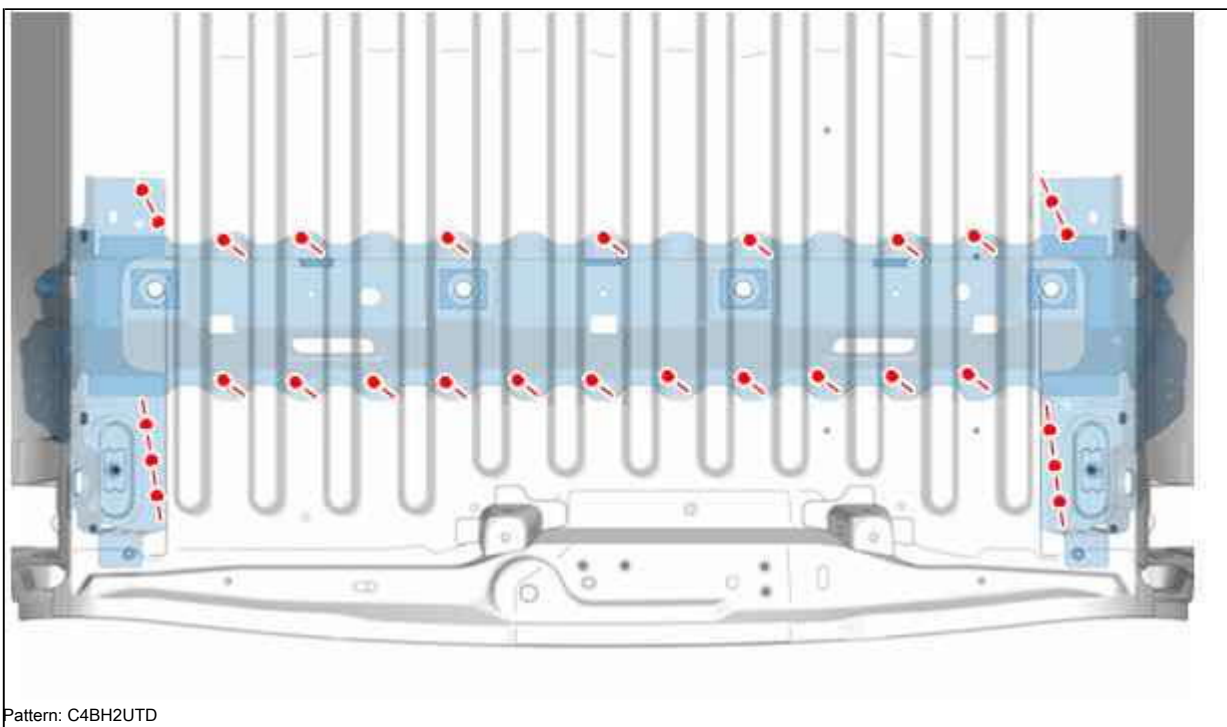


Loosen screws (6).



Cut by points.
Remove: Rear seat cross member (Assembly).

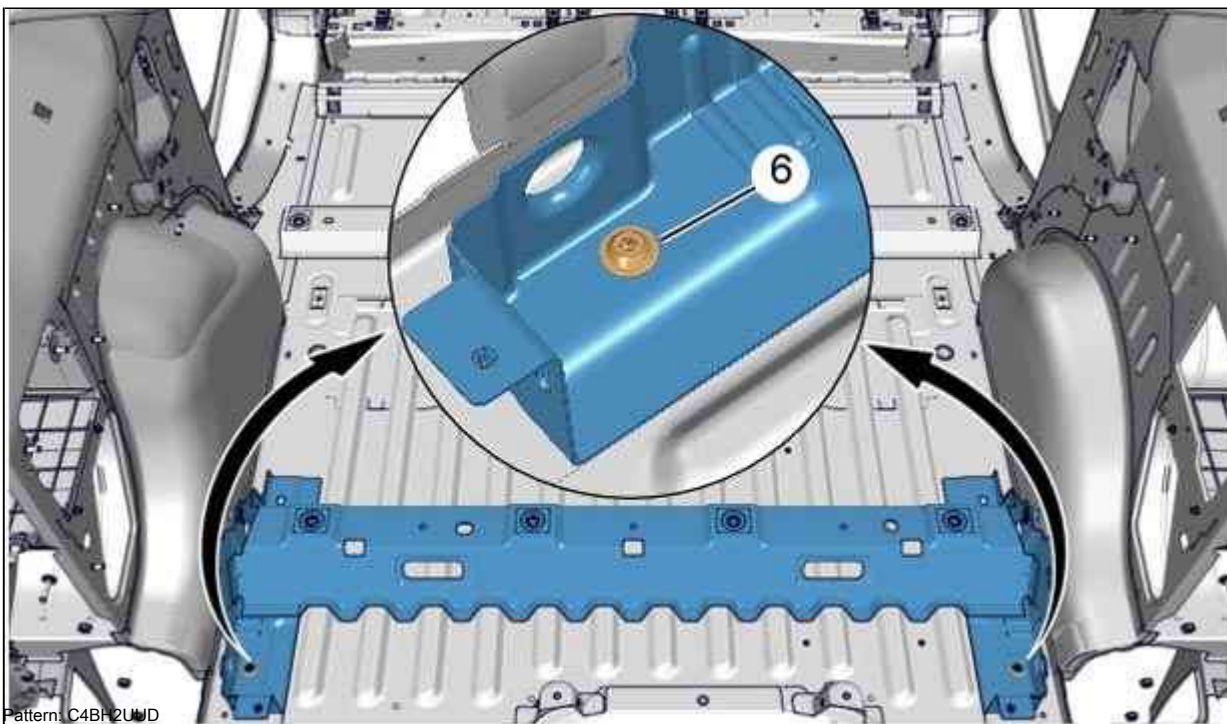
8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

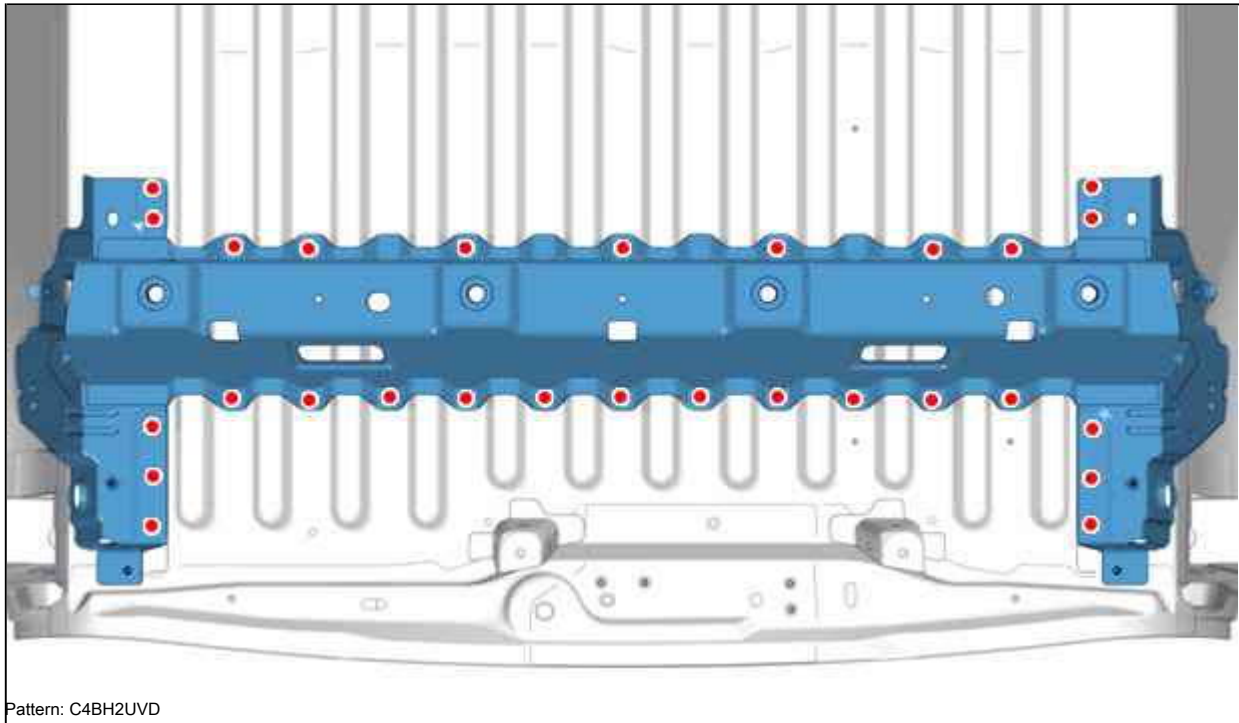
9. Fitting



Position: Rear seat cross member (Assembly).

Replace the bolts (6). Hold the element in place.

10. Welding



Weld through the holes in the MAG protective gas. Grind MAG welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.
Apply paint and then spray paint in areas that have internal cavities that are appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

REPLACEMENT: TRUNK FLOOR ASSEMBLY (7 SEATS MODIFICATION)

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element:

- MAG welding by depositing metal (steel) in reactive gas
- VIG brazing with metal (copper-aluminum) deposition in inert gas

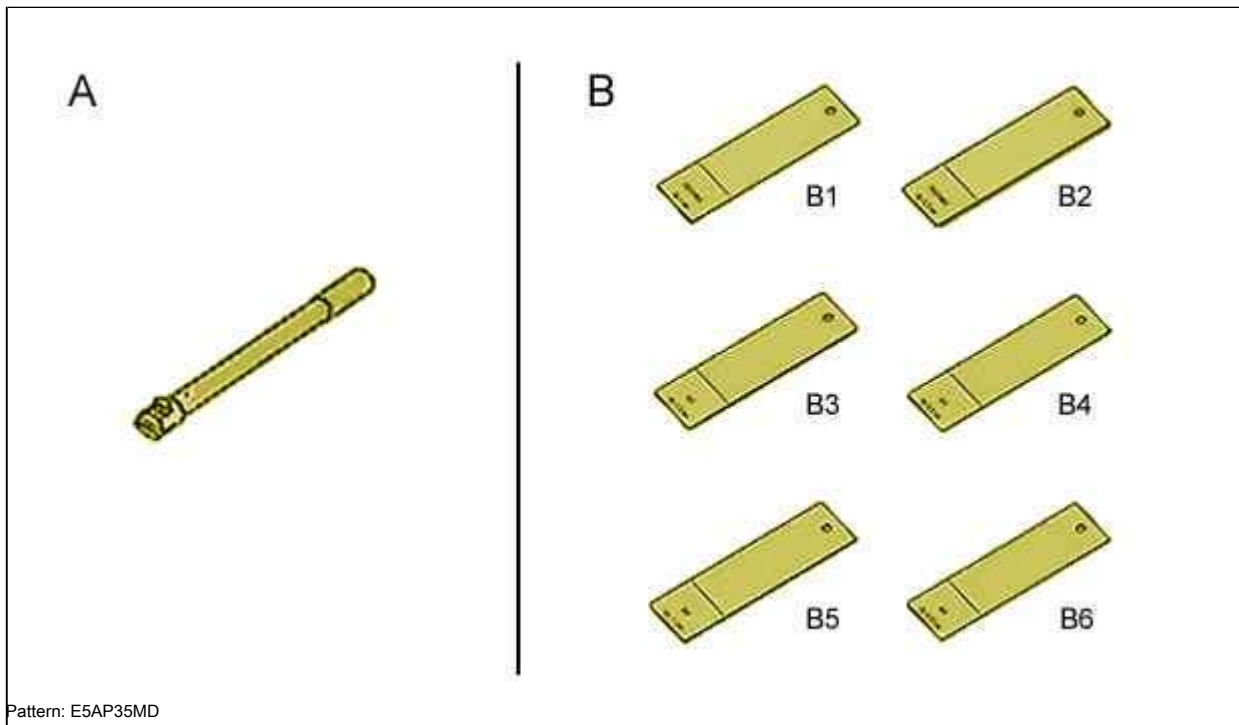
The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Tools

Operate using one of the following systems:

- Electronic measuring system
- Mechanical measuring system
- Specific head MZ () E0875305
- Control template



"A" Equipment for checking the quality of electric welding points () 1366ZZ. "B" Test gauge for the quality of the electric welding points () 1366B.

3. Additional operations

Disconnect the battery. Remove:

- Customized Rear Seats (See Owner's Manual)
- Interior decoration



ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace: Rear seat cross member; Complete (7-seat modification).

4. Location of the spare part



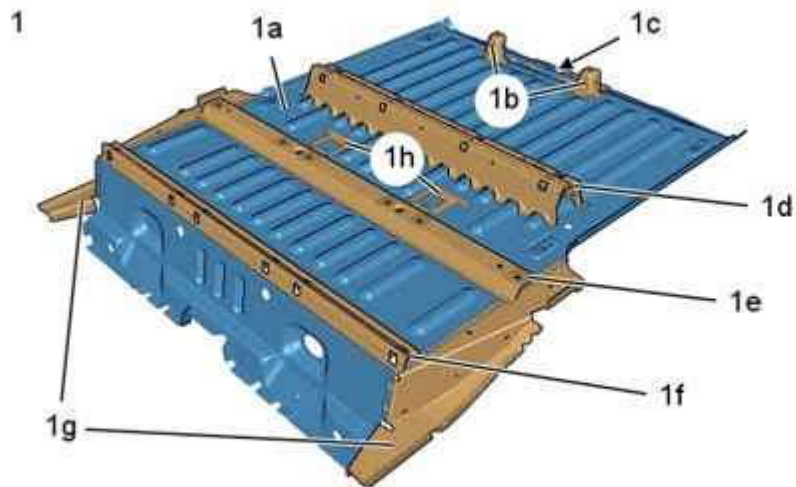
Pattern: C4EH00ND

Label Designation

(1)	Half-trunk assembly

5. Identification of the spare part

5.1. Composition: Half-trunk assembly



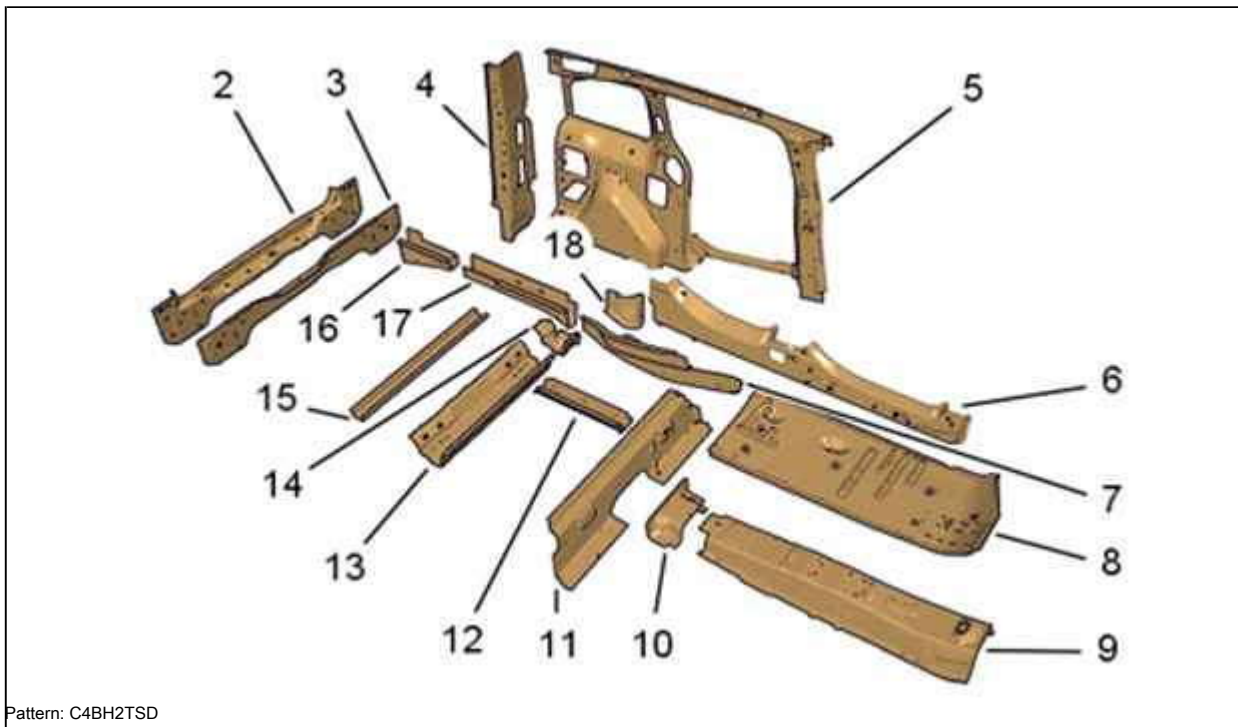
Pattern: C4BH2TRD

Label Designation

Thickness nature / classification

Label Designation		Thickness nature / classification	
(1)	Half-trunk assembly		
(1a)	Load compartment floor	0.77 mm	HLE
(1b)	Support reinforcement: Center sill trim panel	0.97 mm	Mild steel
(1c)	Reinforcement for the lock bracket Front cross member:	1.47 mm	HLE
(1d)	Rear seat Rear seat cross member	1.47 mm	HLE
(1e)		1.47 mm	HLE
(1f)	Seat cross	1.47 mm	HLE
(1g)	Closing the load floor	1.47 mm	Mild steel
(1h)	Caulking panel: Load compartment floor	0.77 mm	Mild steel

5.2. Identification of parts adjacent to the spare part



Label Designation		Thickness nature / classification	
(2)	Back panel	0.87 mm	Mild steel
(3)	Rear panel upholstery	0.87 mm	Mild steel
(4)	Trunk lid	0.77 mm	HLE
(five)	Rear wing	0.97 mm	Mild steel
(6)	Inner spar	1.47 mm	HLE
(7)	Front side member: Front section Front floor	1.95 mm	HLE
(eight)		0.67 mm	Mild steel
(nine)	Tunnel	1.47 mm	HLE
(ten)	Corrugated floor reinforcement	1.47 mm	HLE
(eleven)	Corrugated floor cross member	0.87 mm	HLE
(12)	Intermediate spar: Traverse front of rear axle	0.97 mm	THLE
(13)		1.47 mm	Mild steel
(fourteen)	End of rear axle cross member Load floor cross	1.47 mm	HLE
(fifteen)	member	1.17 mm	HLE
(sixteen)	Side member extension (Front)	1.8 mm	THLE
(17)	Front side member: Rear section Front side member:	1.95 mm	HLE
(18)	Center section	1.95 mm	HLE

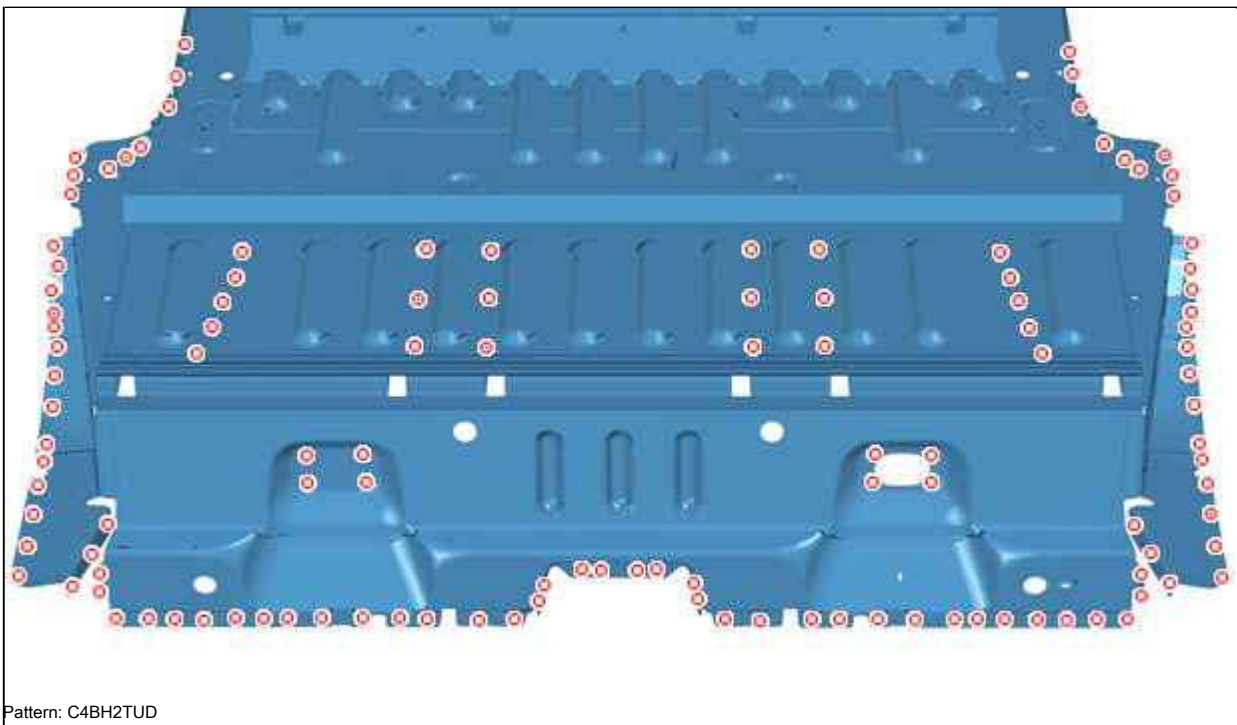
6. Preparation of spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Mark and then drill $\varnothing 6.5$ for subsequent spot welding. Prepare the joints and protect them with a welding primer (index C7).

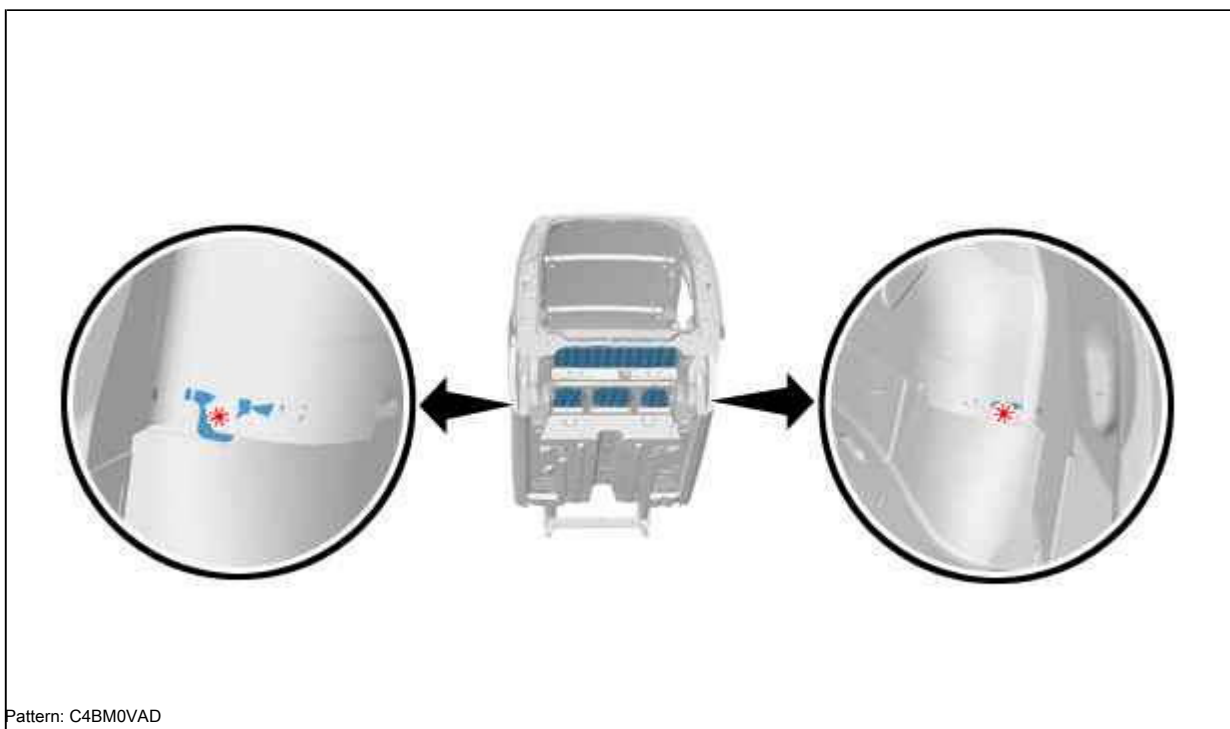
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Mark and then drill $\varnothing 6.5$ for subsequent spot welding. Prepare the joints and protect them with a welding primer (index C7).

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

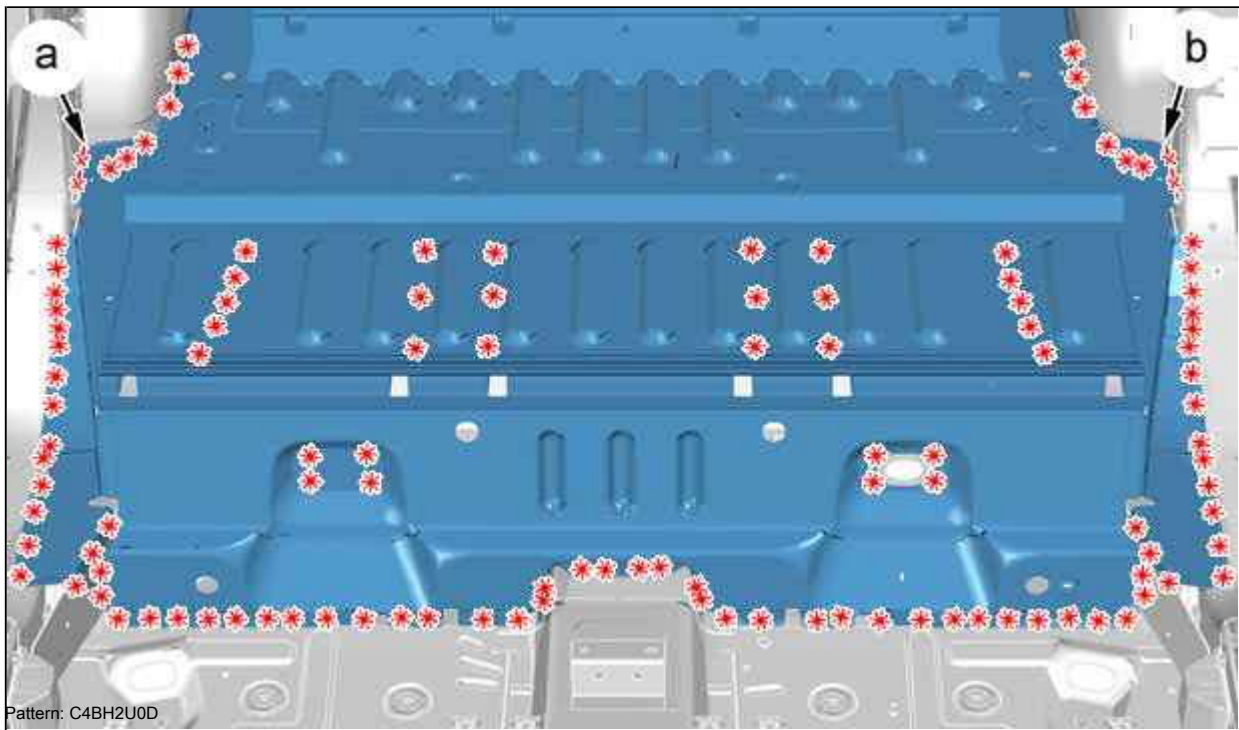
7. Cutting an element on the body



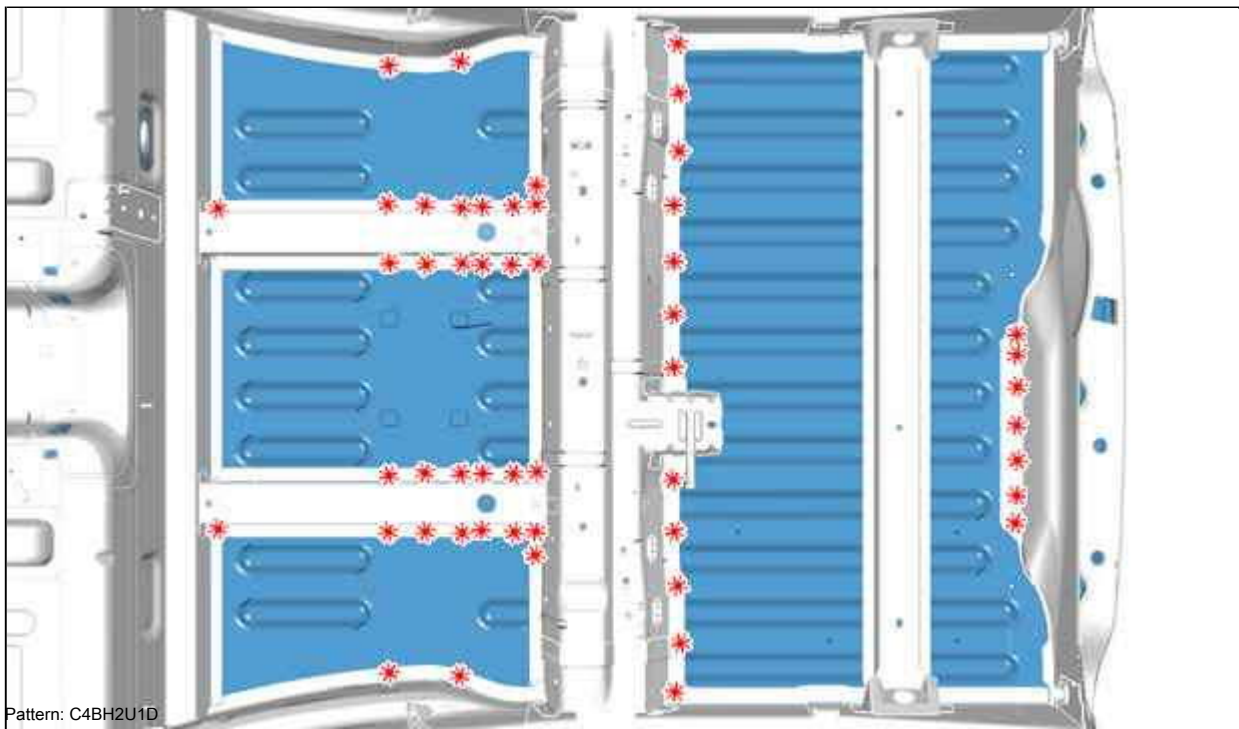
Cut by points.



Cut by points.

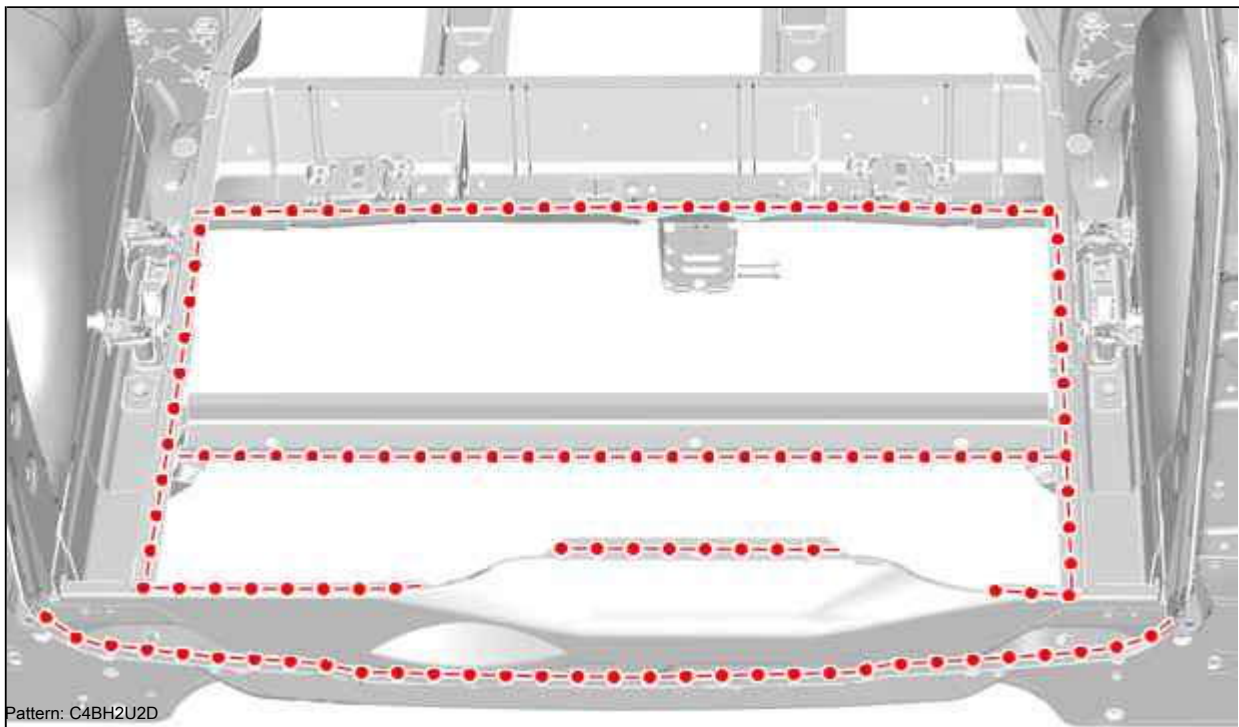


Cut by points.
Cut off MIG welds (in "a, b").



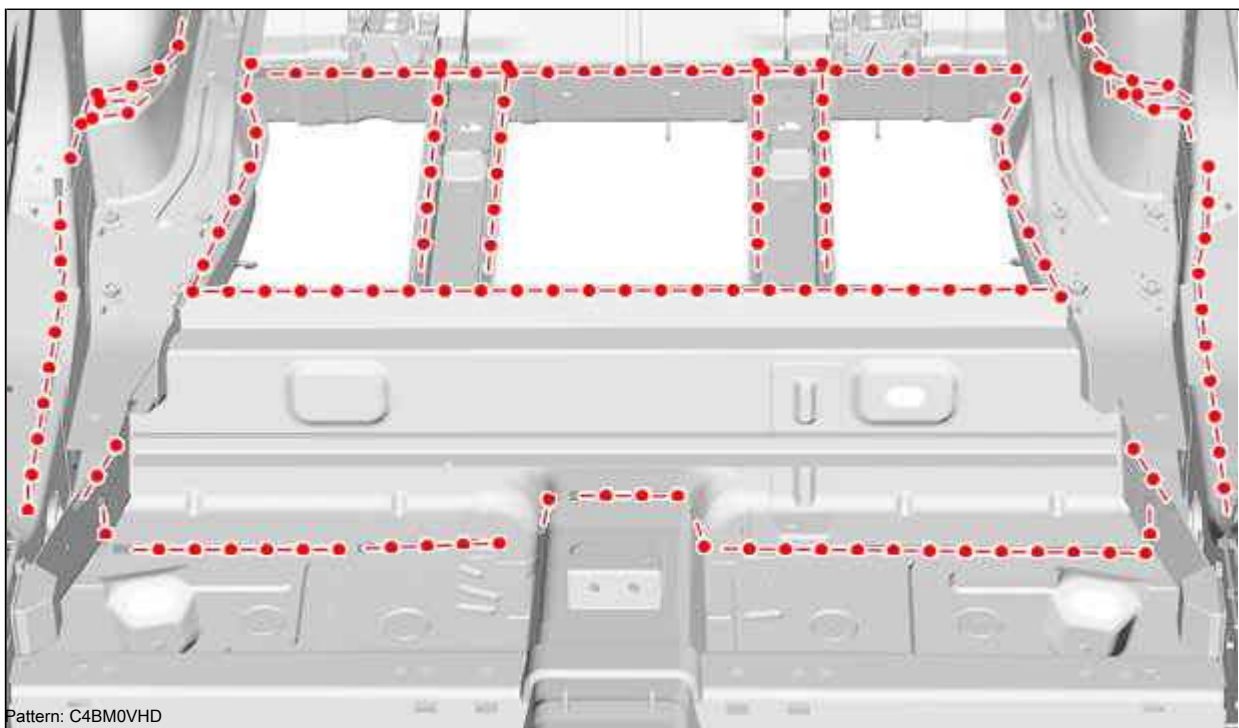
Cut off by points (Dnischekuzova). Remove the trunk floor assembly.

8. Cleaning and preparation of the body



Prepare the joints and protect them with a welding primer (index C7).

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Prepare the joints and protect them with a welding primer (index C7).

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Fitting

Position: Load compartment floor (Assembled). Check clearances and alignment.

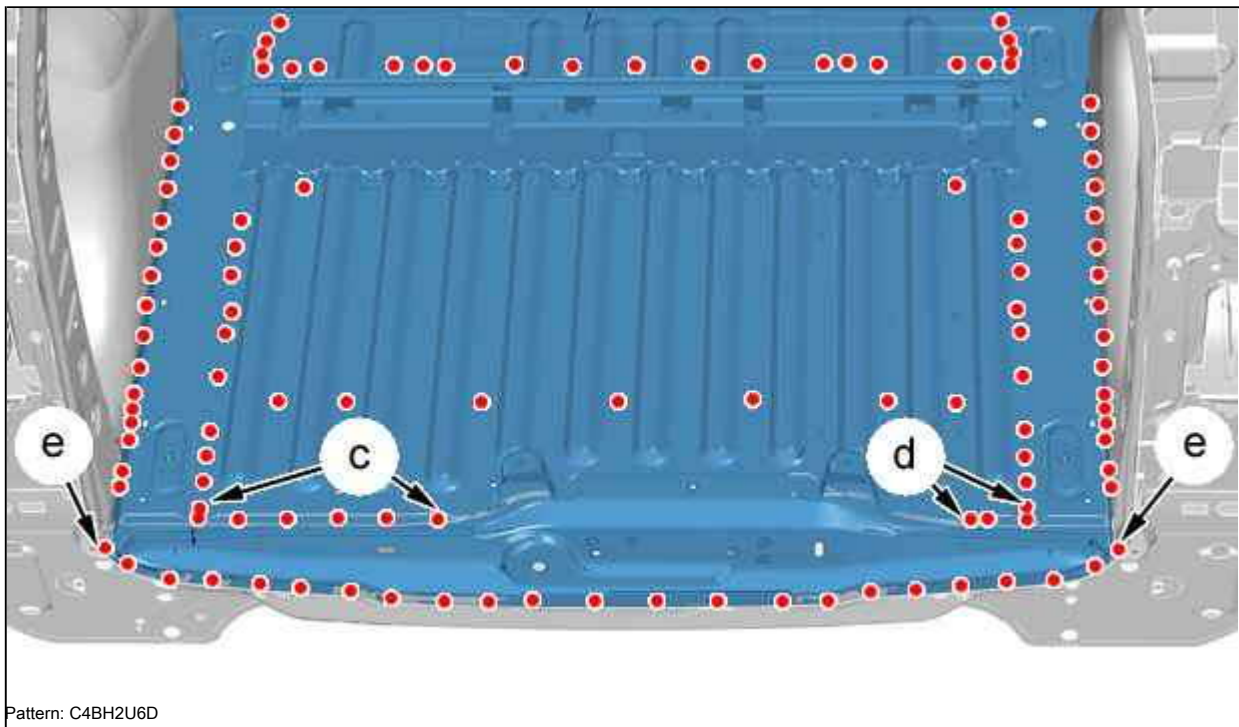
Hold the element in place.

10. Welding

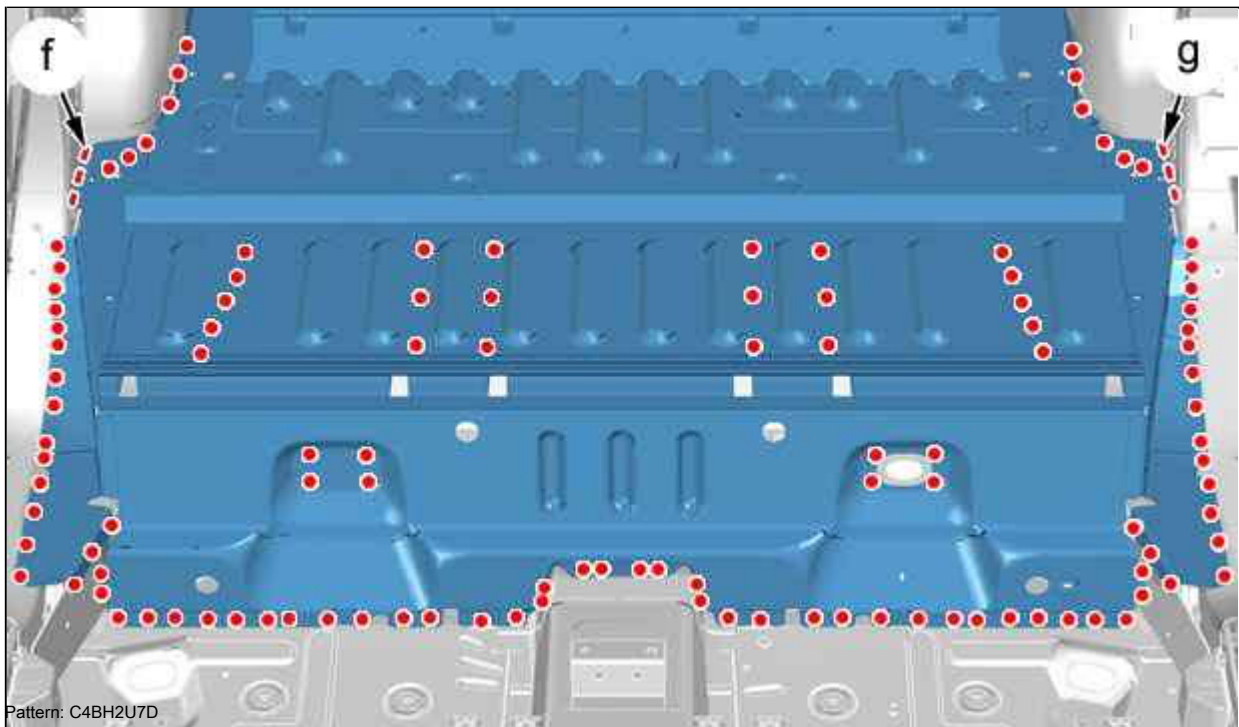


Pattern: C4BH2U5D

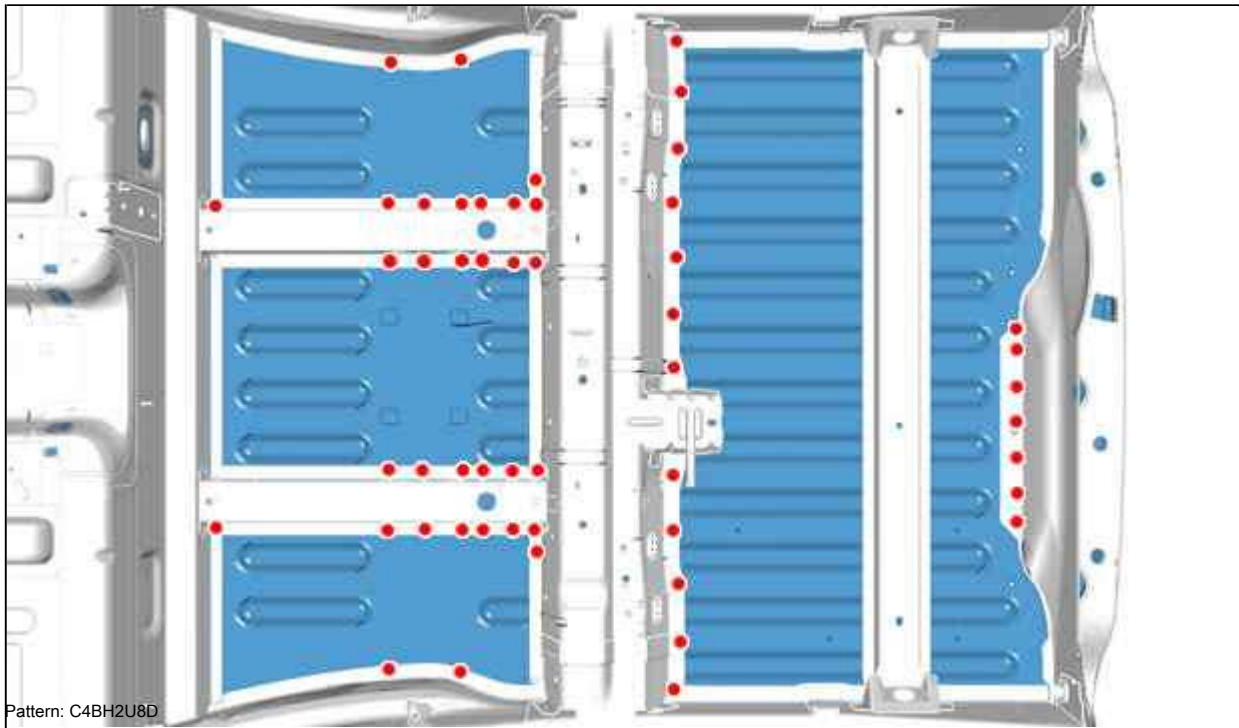
Weld through the holes in the MAG protective gas. Grind MAG welding points.



Weld through the holes in the MAG protective gas. Grind MAG welding points.
Weld with weld points (in "c", "d", "e").

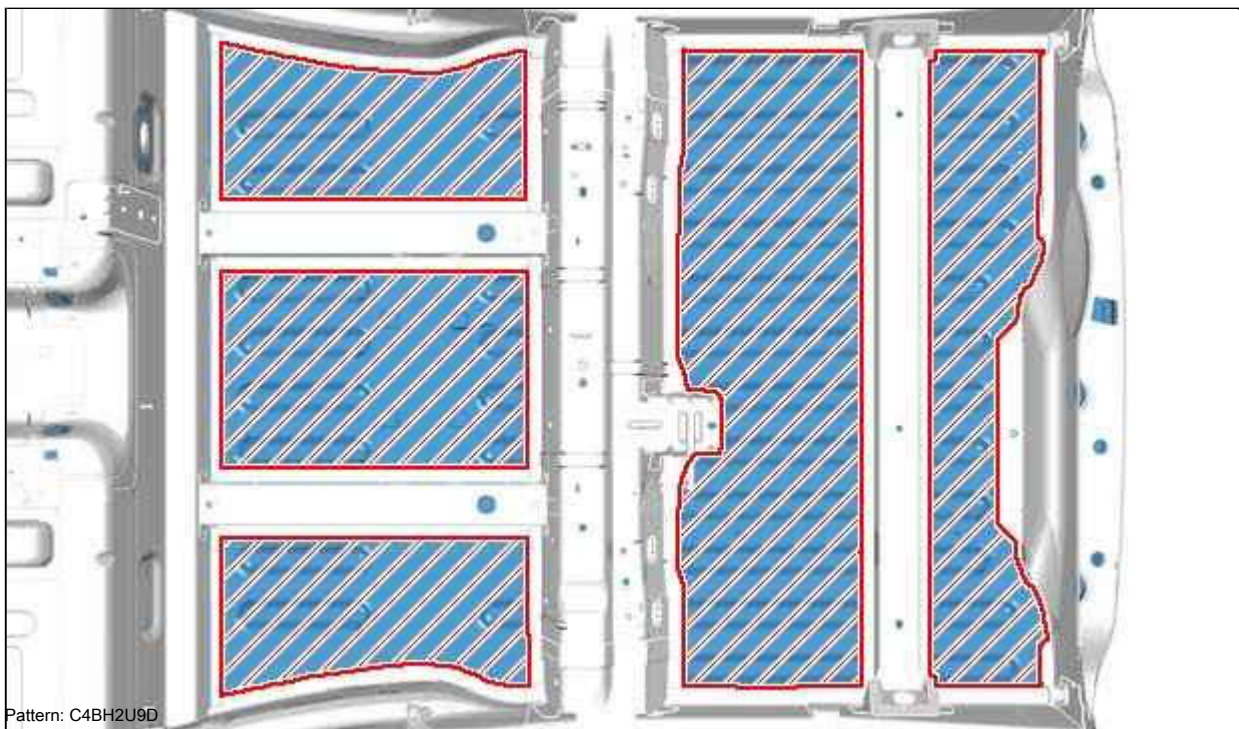


Weld through the holes in the MAG protective gas. Grind MAG welding points.
Make a weld seam using the MIG method (in "f", "g").



Weld through the holes in the MAG protective gas. Grind MAG welding points.

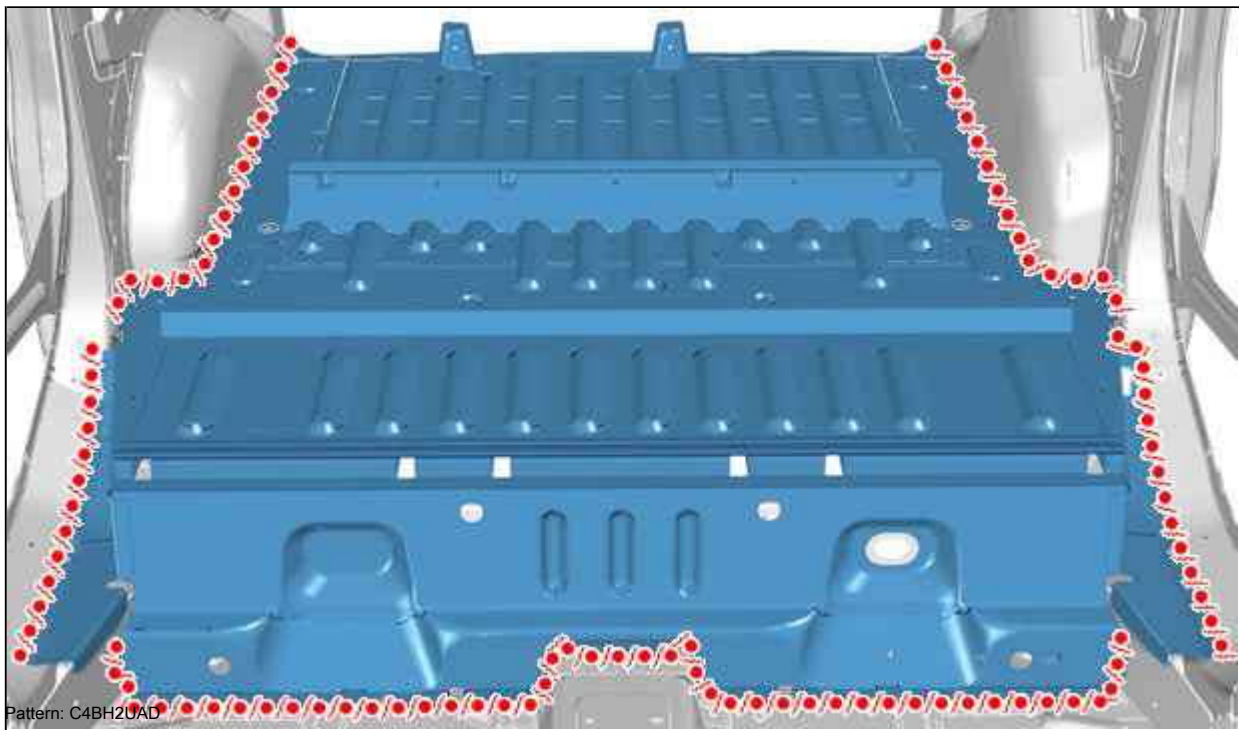
11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index A1).

Apply: **Anti-gravel protection under the body**





Pattern: C4BH2UAD

Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index A1).

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: BACK PANEL COVER

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

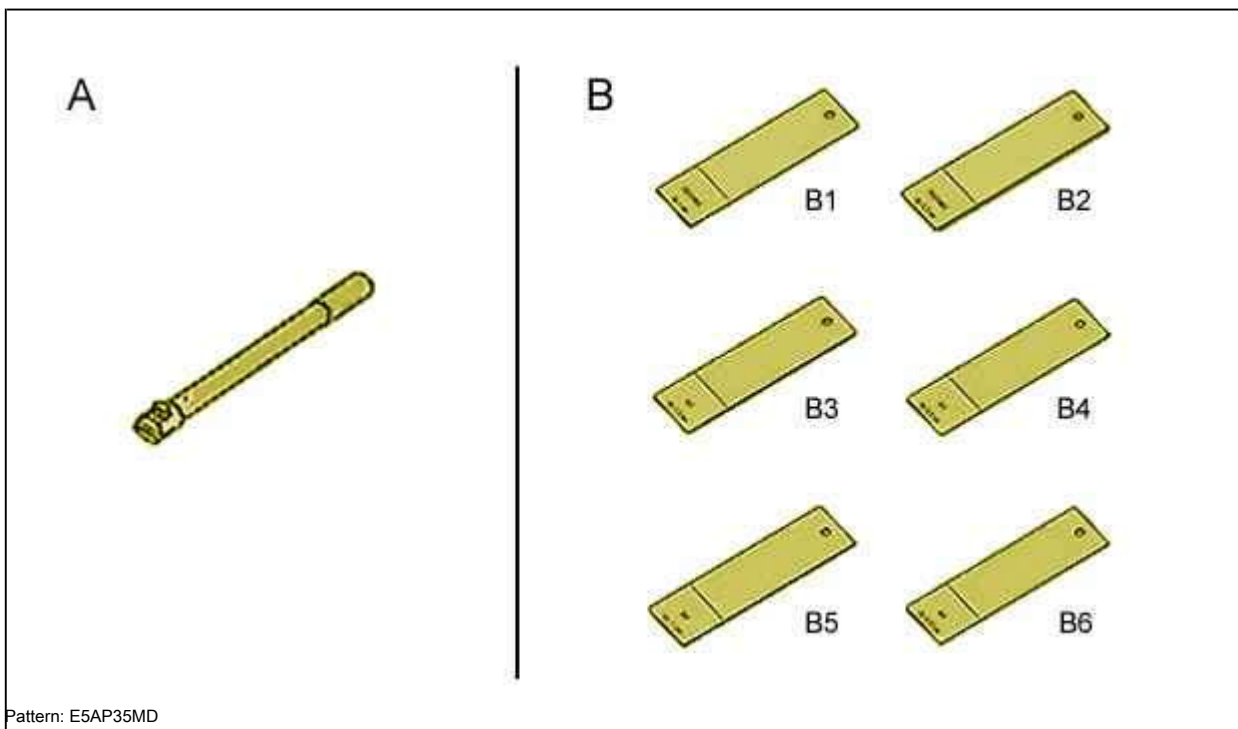
1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment

Operate using one of the following systems.



Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Wait at least 15 minutes before doing any work (discharge of the computer's power reserve to the airbags).

ATTENTION : Remove or protect items located in the repair area that could be

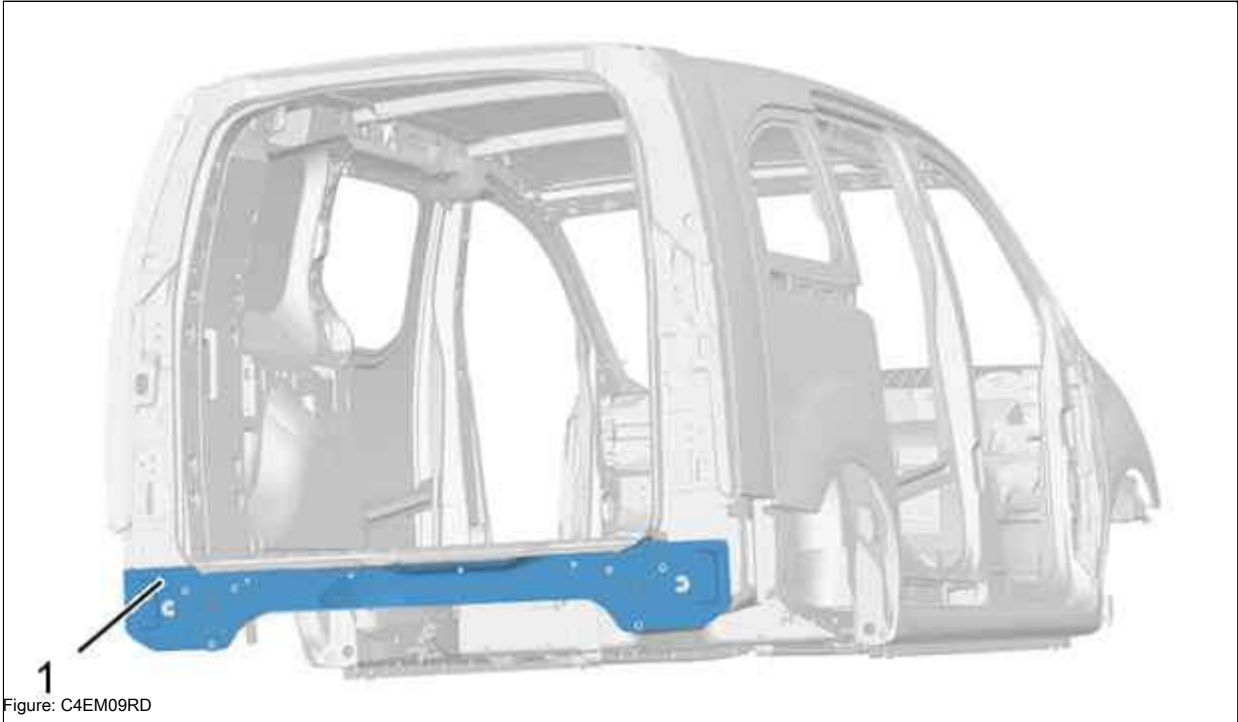
damaged by heat or dust.

Separate the wire harnesses.

Replace: **Back panel**



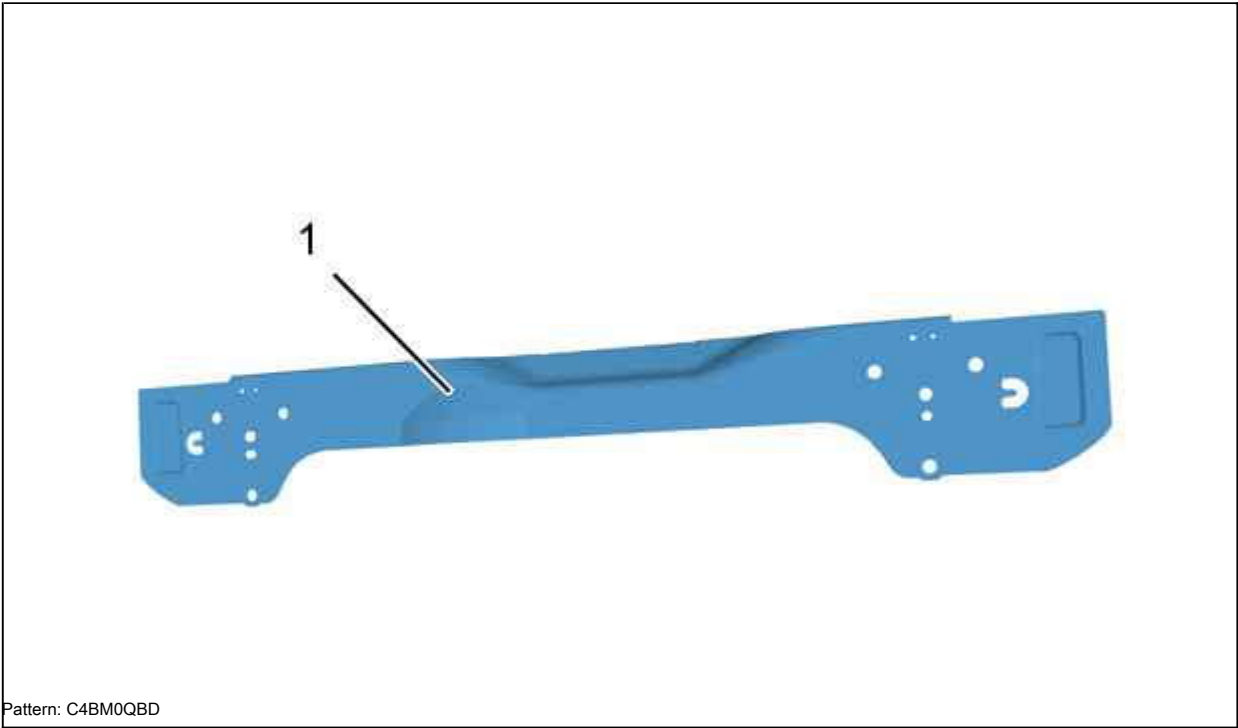
4. Localization: Rear panel upholstery



Label Designation

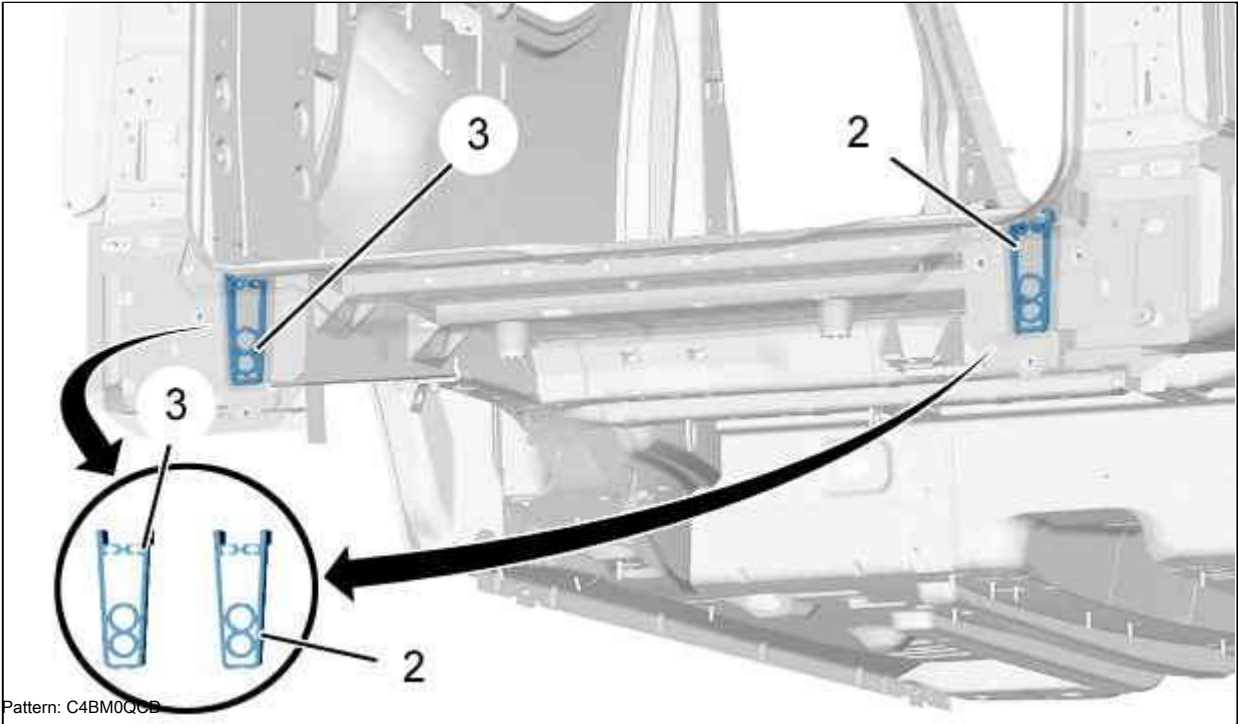
(1)	Rear panel upholstery

5. Identification: Rear panel upholstery



Label Designation		Thickness (mm)	Nature / classification
(1)	Rear panel upholstery 0.87		Mild steel

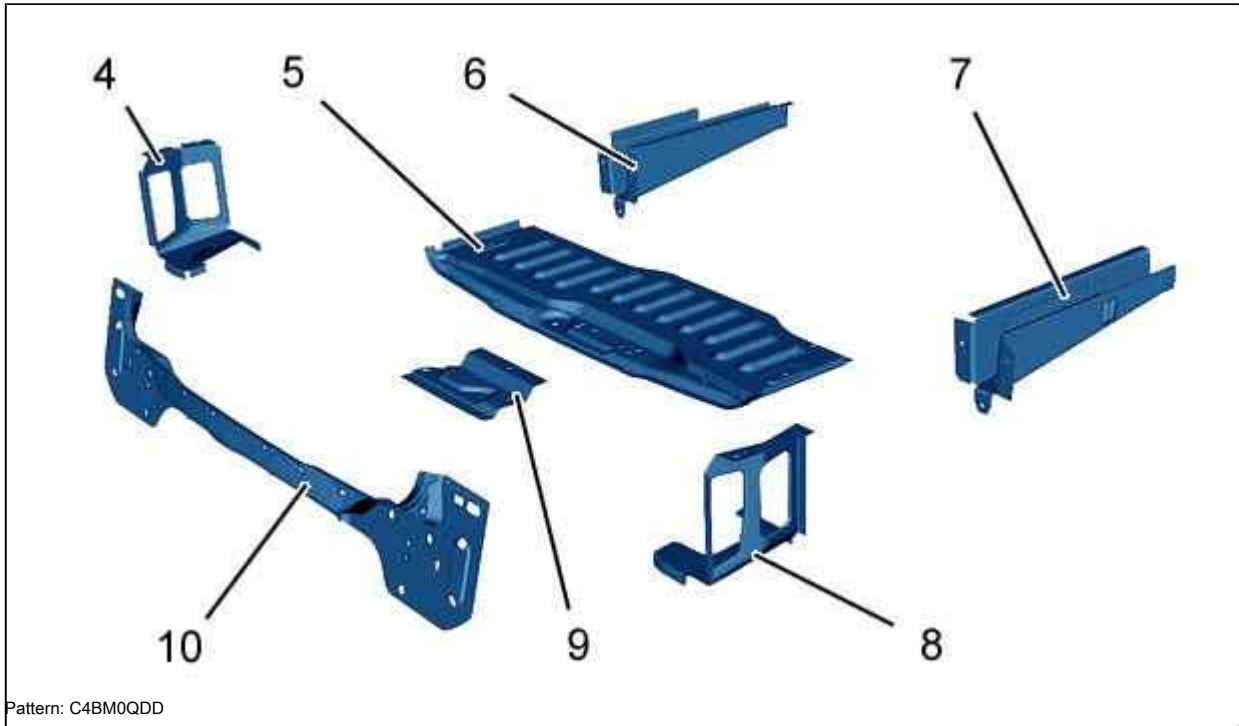
5.1. Foam insert designation



Label Designation	
(2)	Spar Extension Expanding Insert (Right)

(3) Side member extension flare (left)

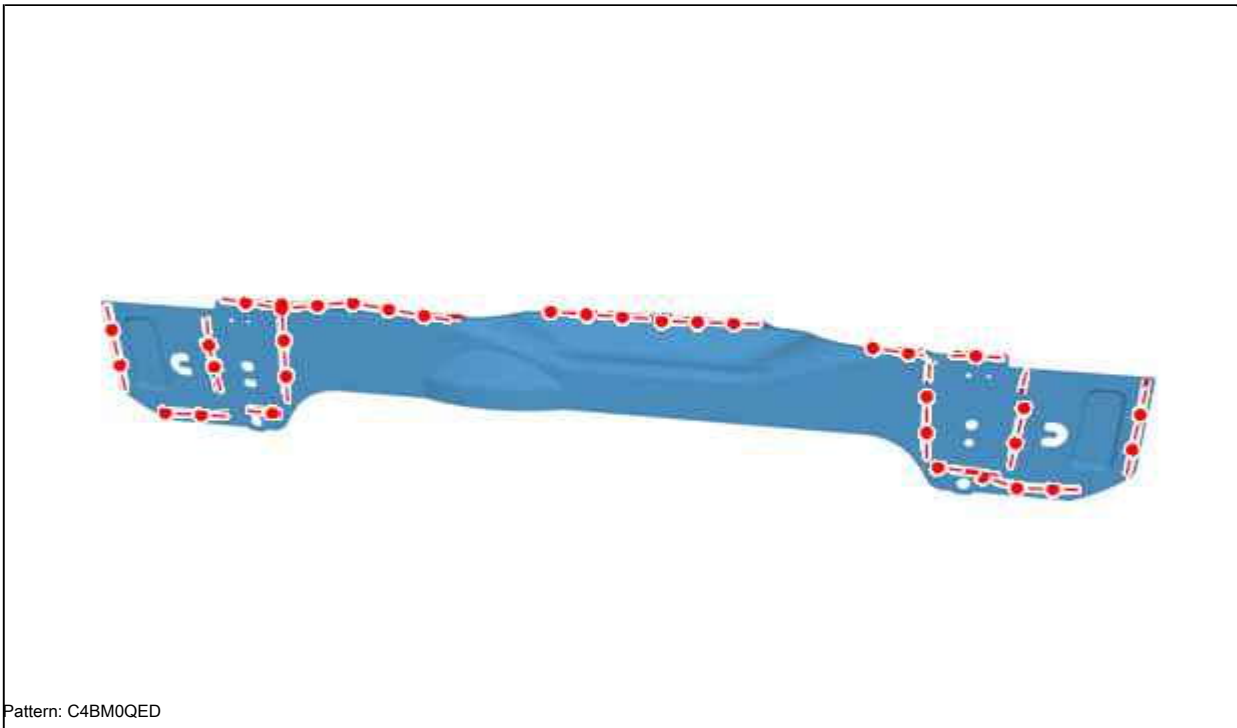
5.2. Identification of parts adjacent to the spare part



Label Designation		Thickness (mm)	Nature / classification
(4)	Lower Cover Extension (Rear Left Fender)	0.97	Mild steel
(five)	Rear luggage compartment extension	0.77	HLE
(6)	Side member extension (left) (Long wheelbase version)	1.80	THLE
(7)	Side member extension (right) (Long wheelbase version)	1.80	THLE
(eight)	Lower Cover Extension (Rear Right Fender)	0.97	Mild steel
(nine)	Reinforcement for fastening the lock bracket	1.47	HLE
(ten)		0.87	Mild steel

6. Preparation of spare part

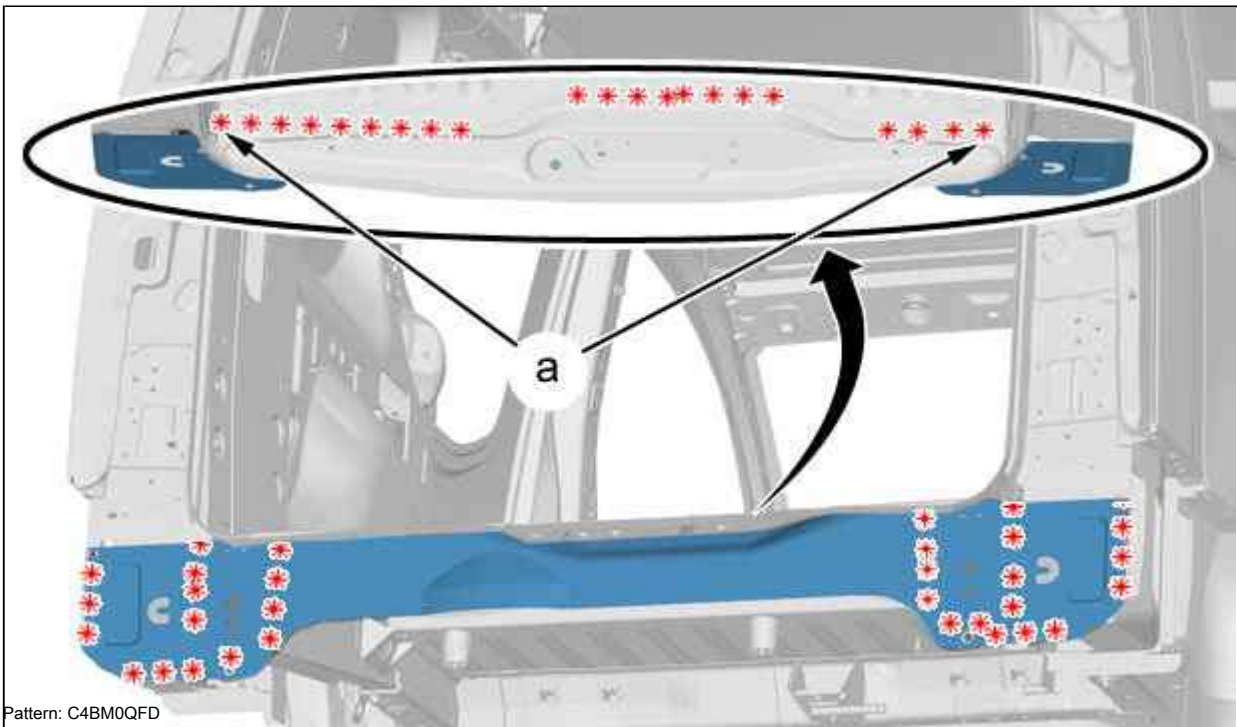
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Prepare the sockets and protect them with a welding primer: code "C7".

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

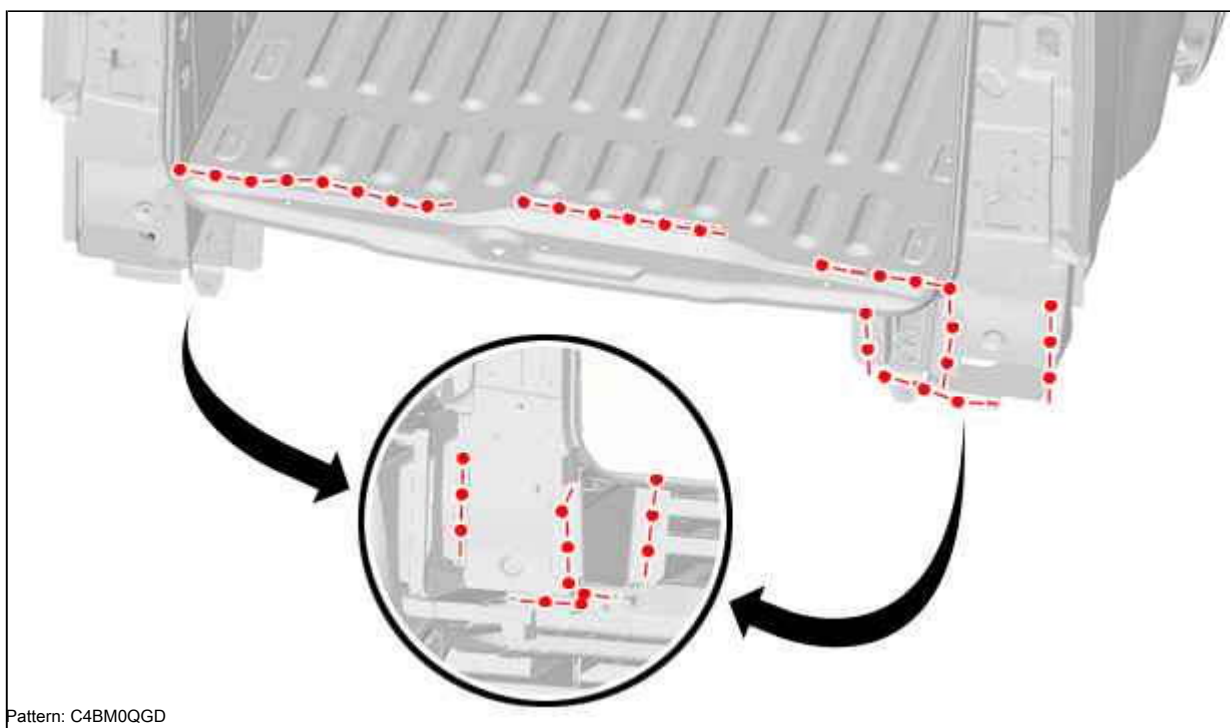
7. Cutting an element on the body



Mark out in "a", then cut out points in 1 thickness.

Cut by points.
Remove and then cut out the inner rear panel trim.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer: code "C7".

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

Install structural and flared inserts (2), (3) (if necessary).

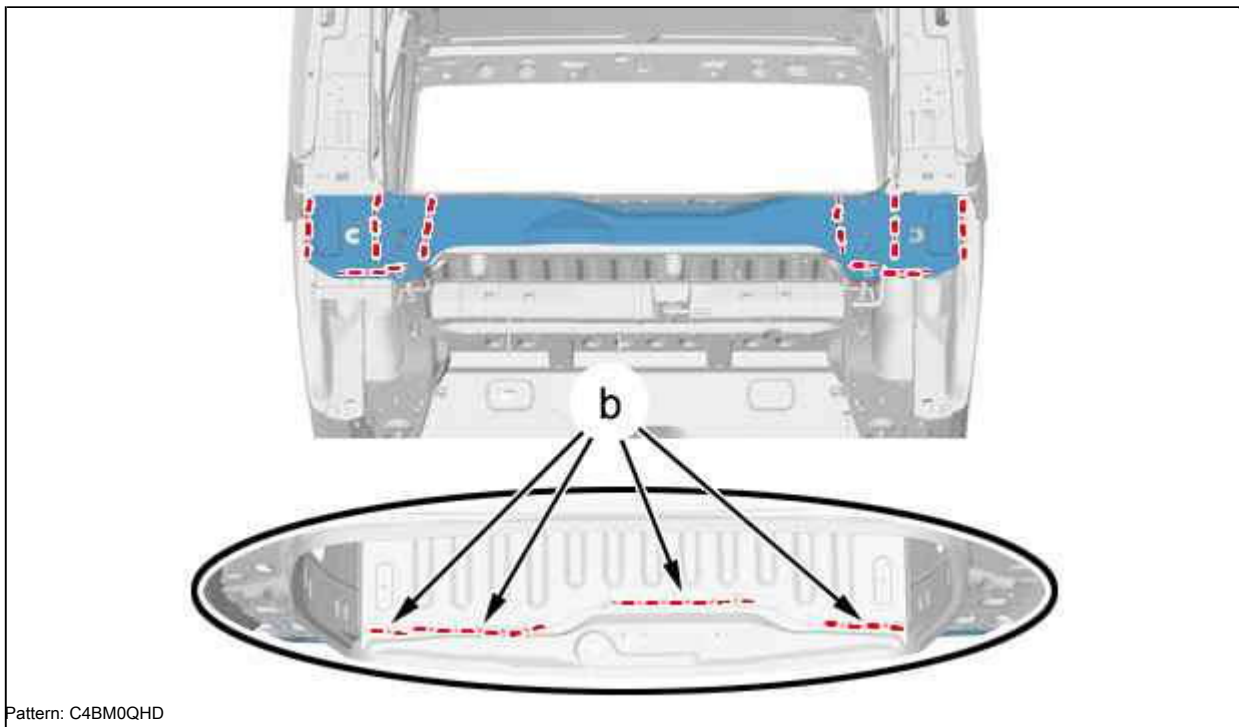
9. Fitting

Position: Rear apron inner panel. Install elements to ensure the fit.

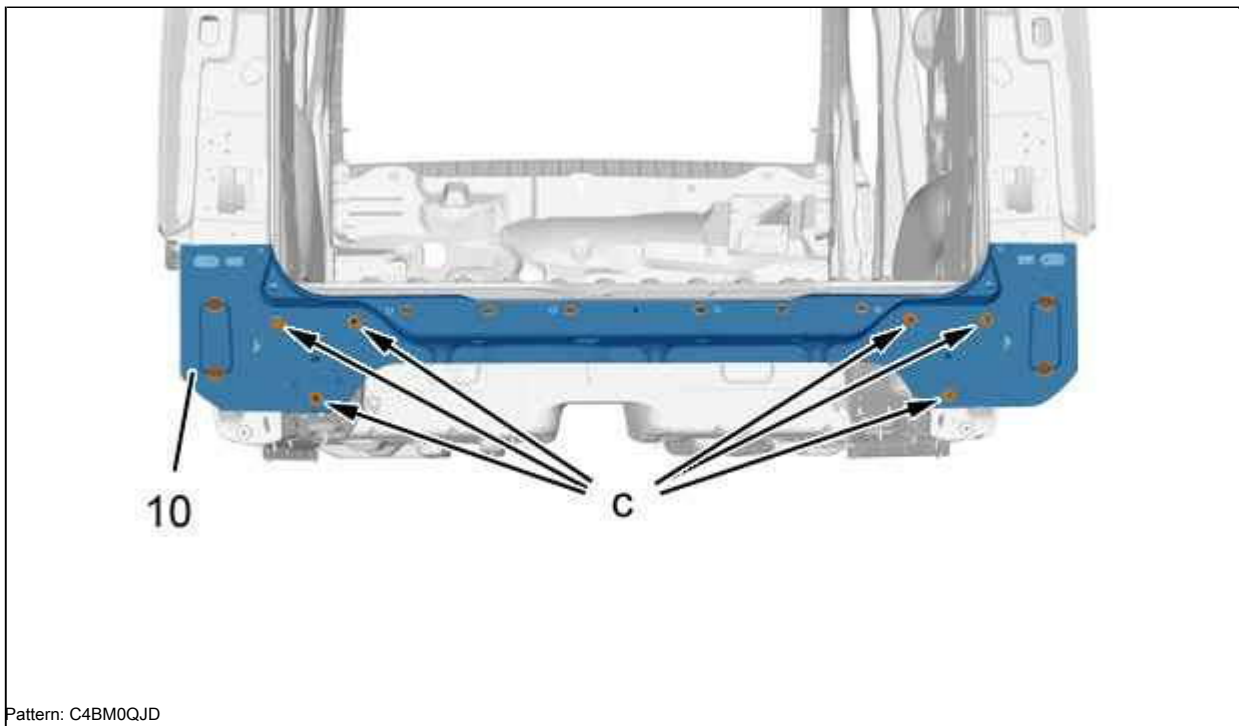
Check clearances and alignment.

Hold the element in place.

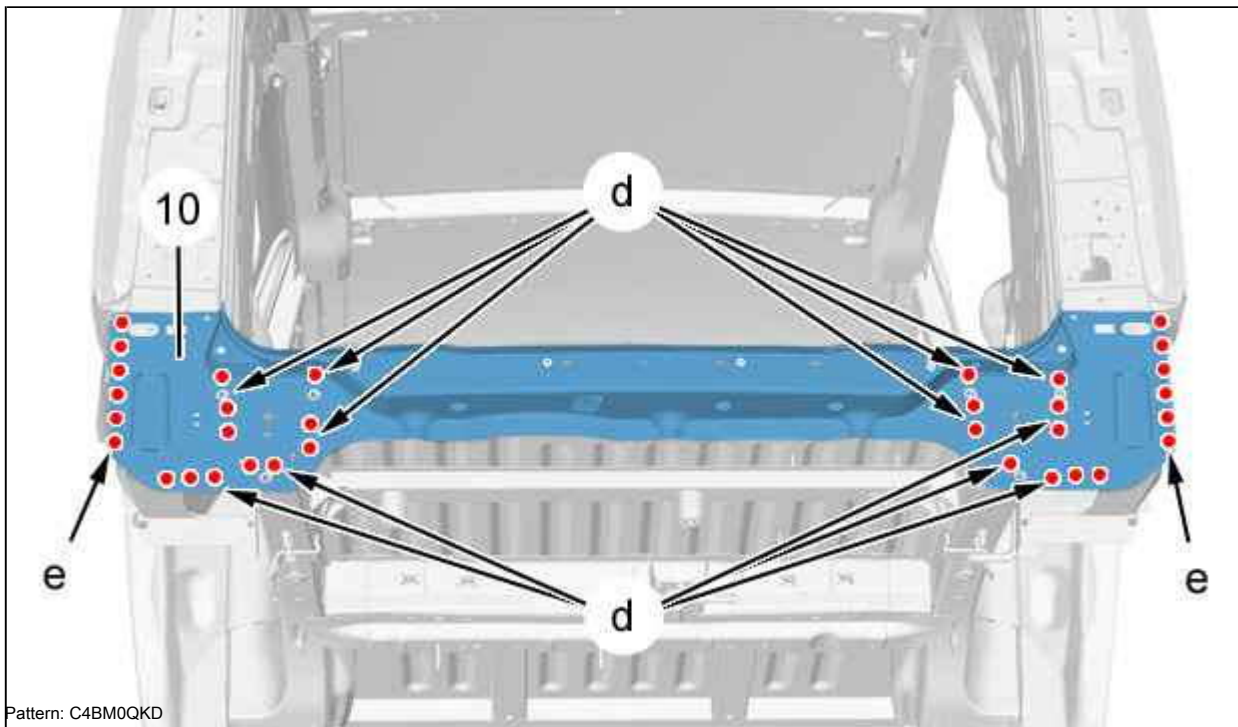
10. Welding



Weld through the holes in the MAG protective gas (in "b"). Grind MAG welding points.



Position and adjust the rear panel (10) after the preparation, fix with the bolts of the rear bumper cross member (at "c").



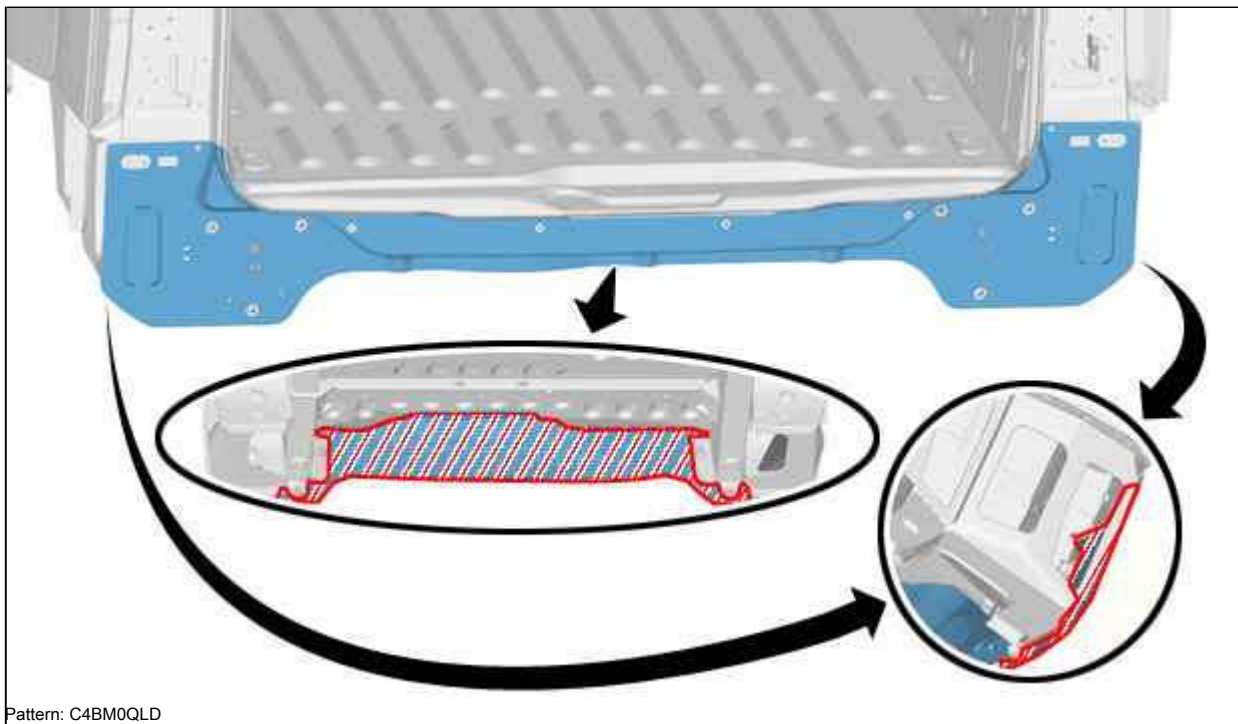
NOTE: It is necessary to install the rear panel (10) for joint welding of the panel overlay (1), the rear panel (10) and the side member extensions (6) and (7) in 3 thicknesses (in "d").

Perform spot welding with a thickness of 3 layers (in "d", "e").

Finish Welding Rear Panel (10)



11. Tightness protection



Apply a layer of phosphate primer to the cleaned areas.

Apply a "C4" anti-gravel coating

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: REAR SEAT FRONT CROSS SIDE ASSEMBLY (7 SEATS MODIFICATION)

~~MANDATORY: Observe the cleanliness and safety rules~~



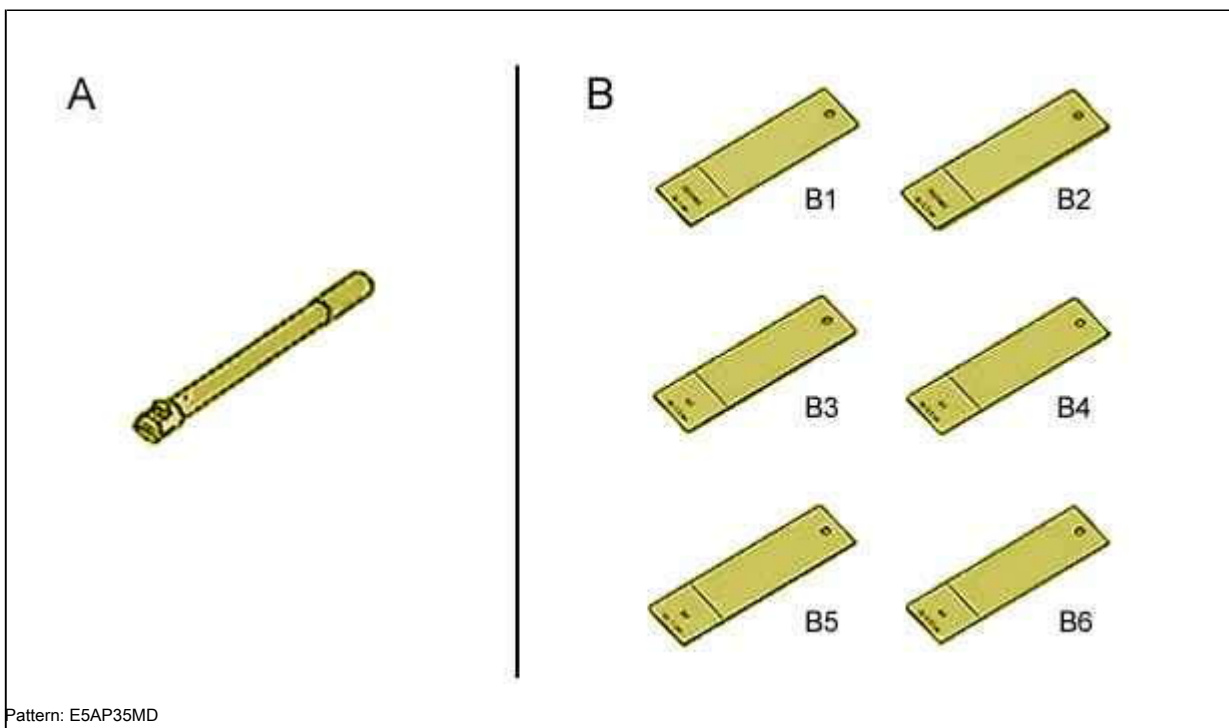
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Tools



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery. Remove:

- Customized Rear Seats (See Owner's Manual)
- **Interior decoration**

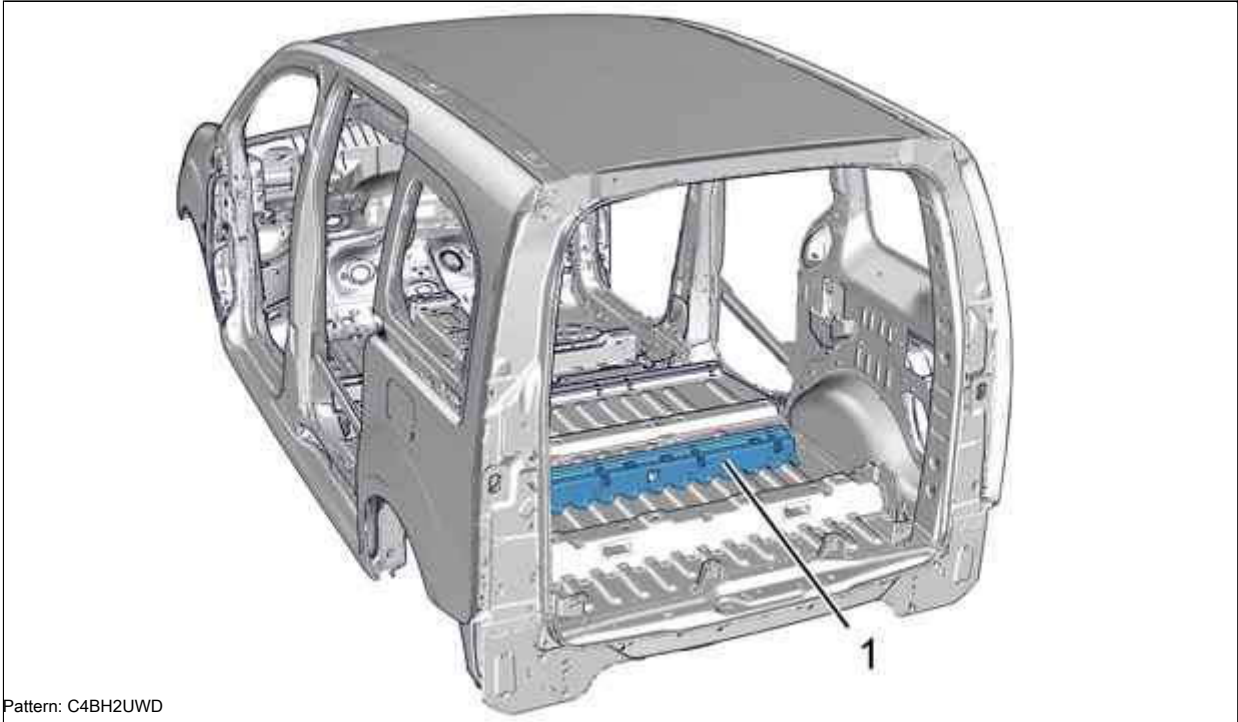


ATTENTION : Remove or protect items located in the repair area that could be

damaged by heat or dust.

Separate the wire harnesses.

4. Location of the spare part

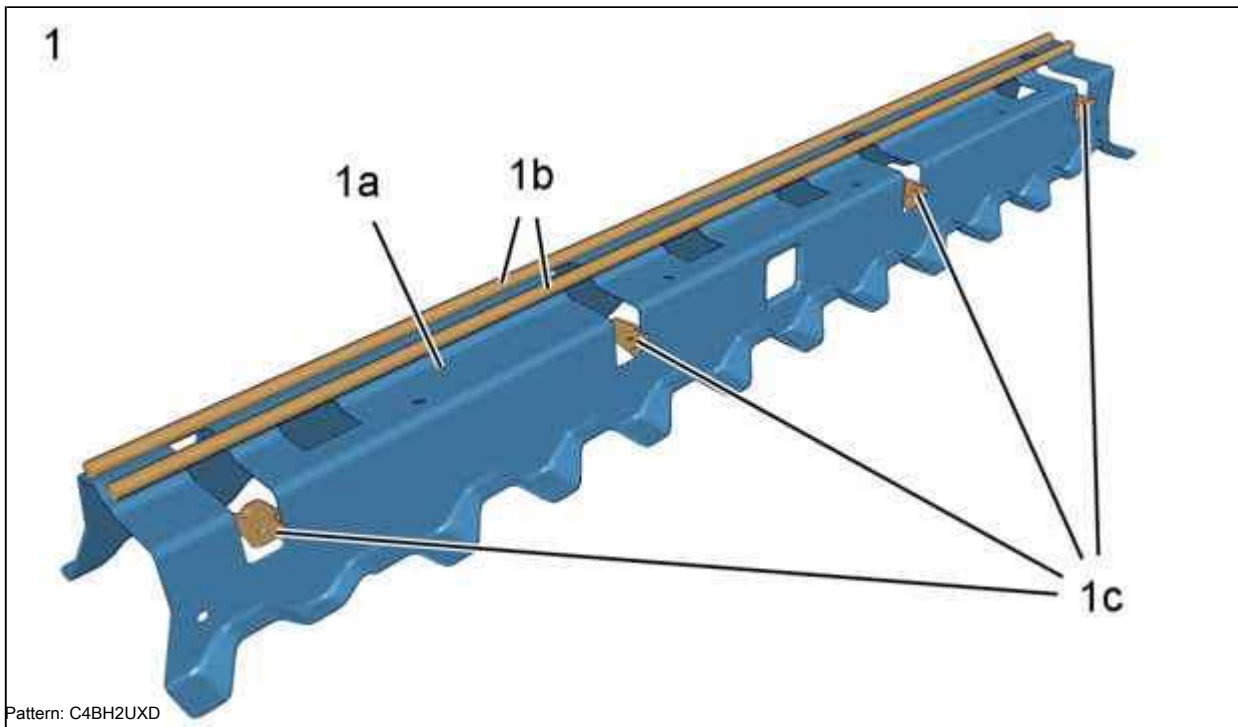


Label Designation

(1)	Front cross member, rear seat: Assy.

5. Identification of the spare part

5.1. Contents: Front seat cross member (Complete)

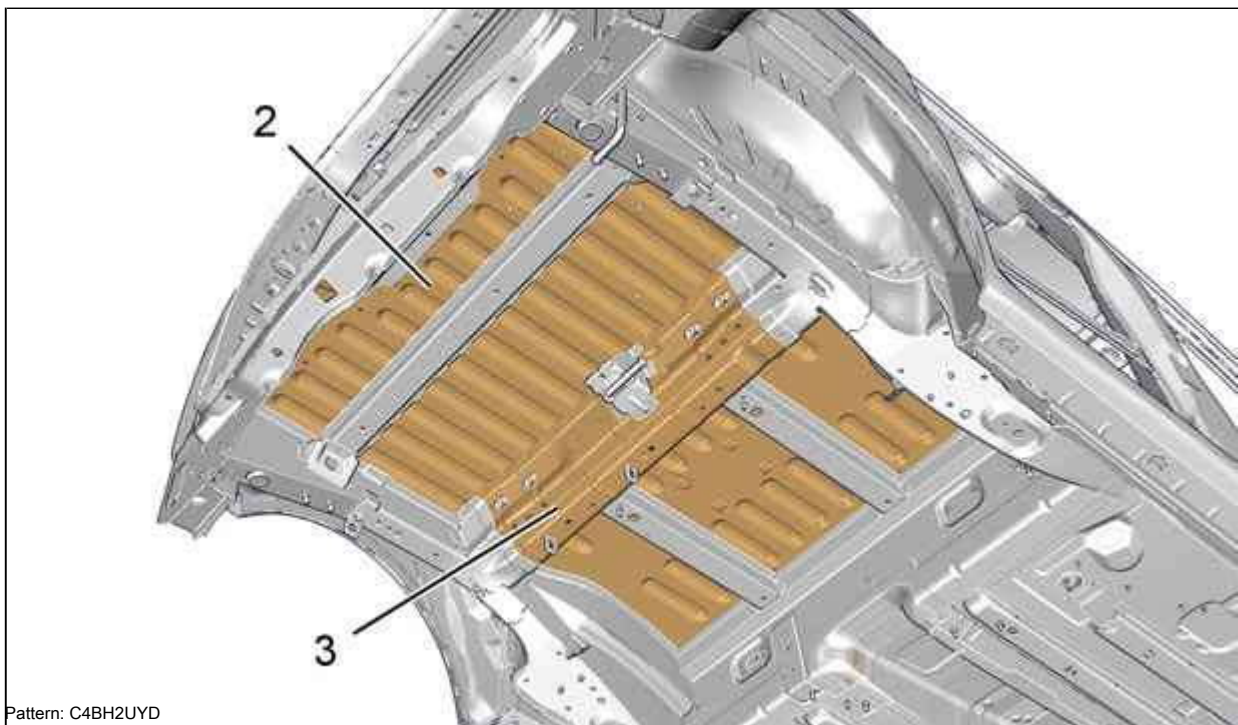


Label Designation

Thickness nature / classification

(1)	Front cross member, rear seat: Assembly Front cross member, rear		
(1a)	seat	1.47 mm	HLE
(1b)	Bracing seat		
(1c)	Seat support bracket	0.97 mm	Mild steel

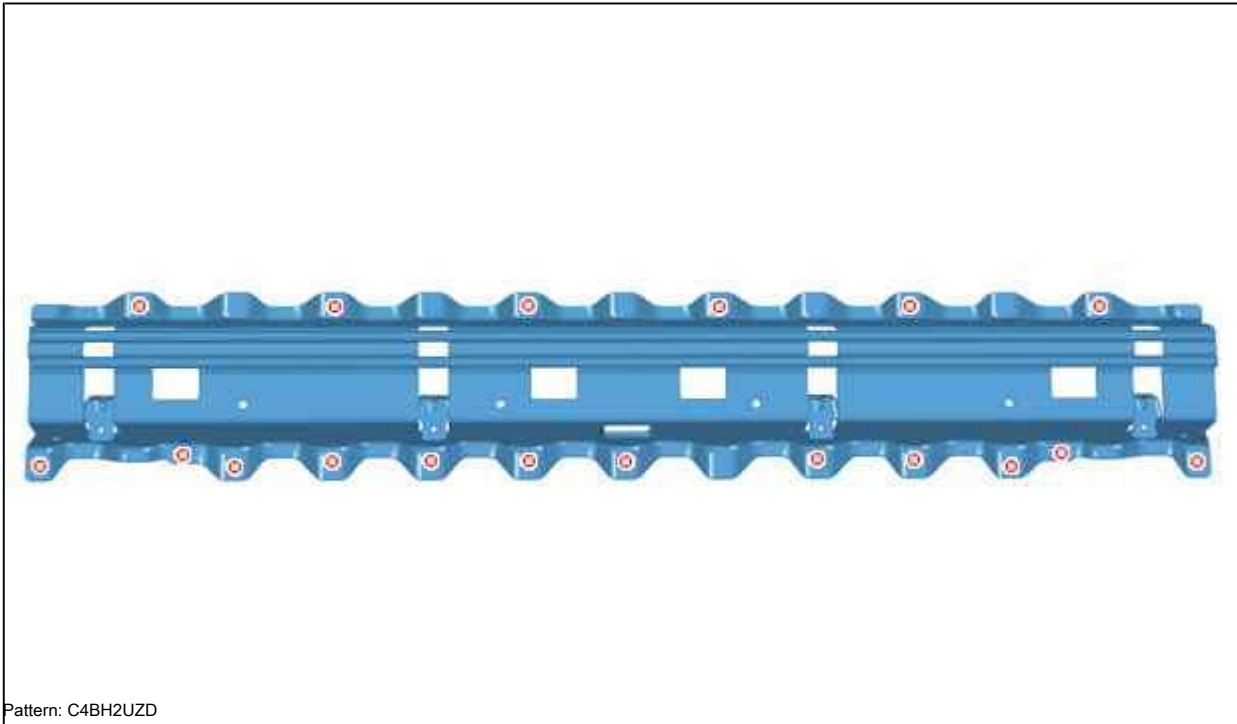
5.2. Identification of parts adjacent to the spare part



Label Designation		Thickness nature / classification	
(2)	Load compartment floor 0.7 mm Rear axle		HLE
(3)	traverse	1.47 mm	HLE

6. Preparation of spare part

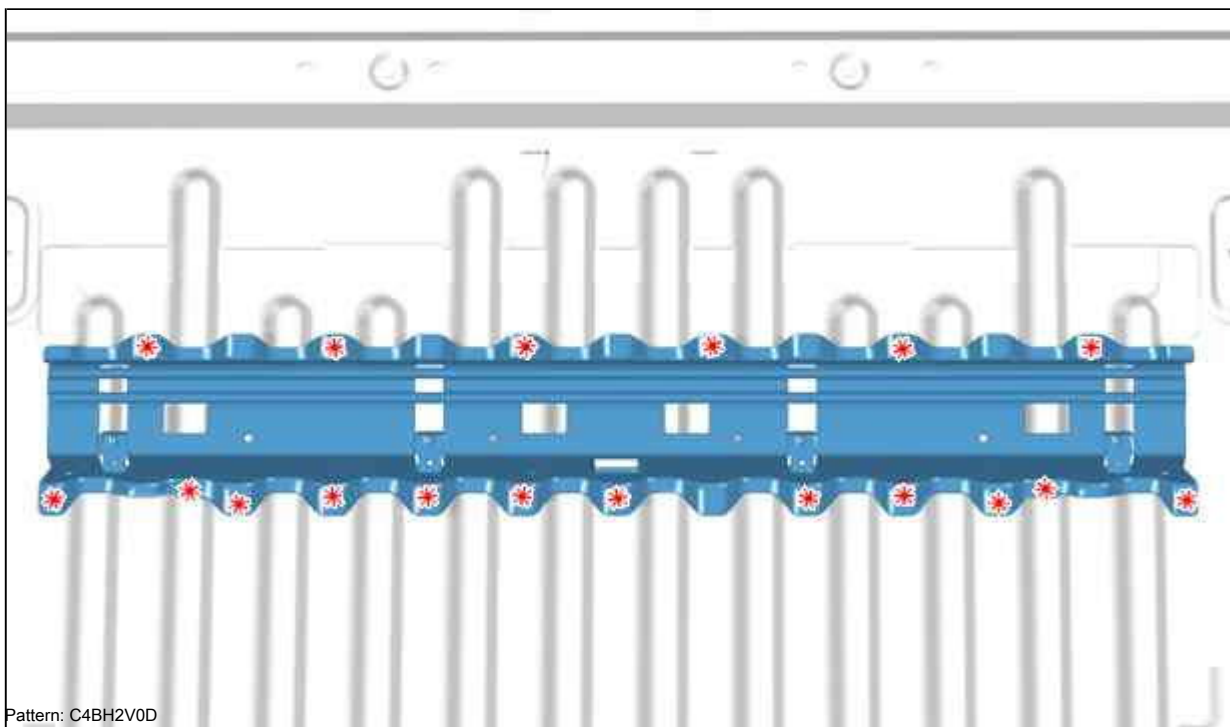
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Mark and then drill Ø6.5 for subsequent spot welding. Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

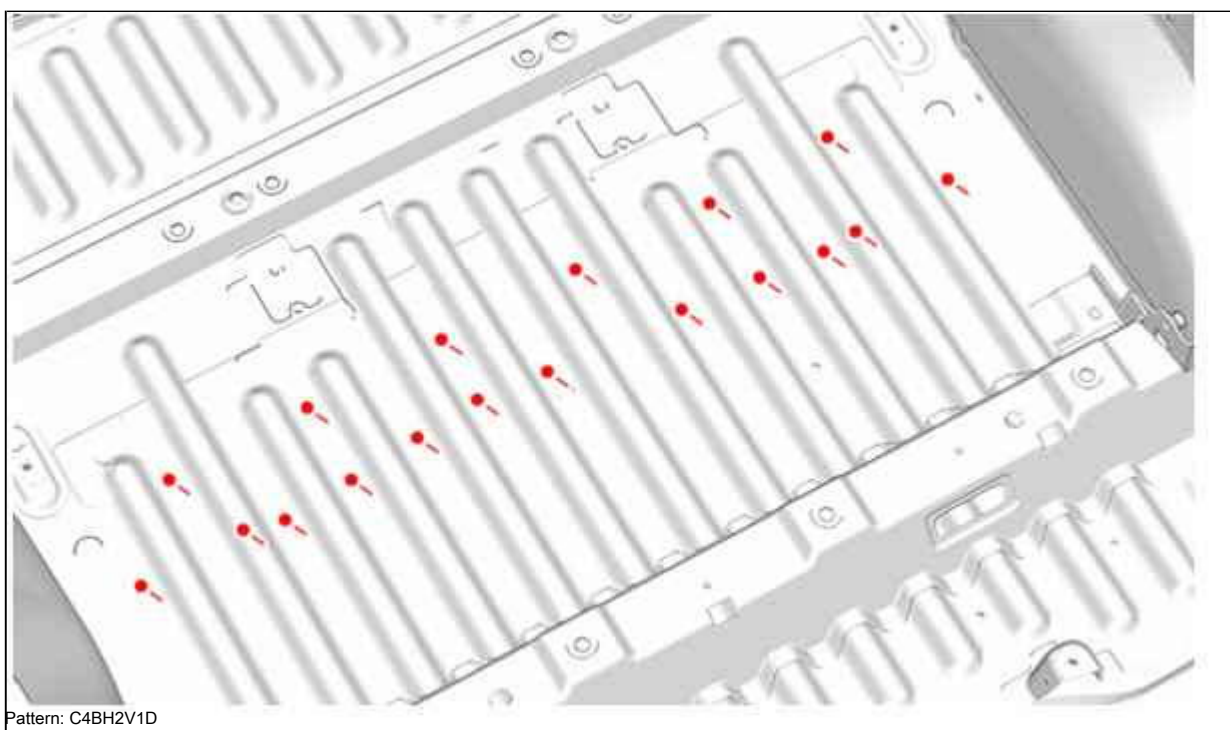
7. Cutting an element on the body



Cut by points.

Remove: Front seat cross member (Assembly).

8. Cleaning and preparation of the body



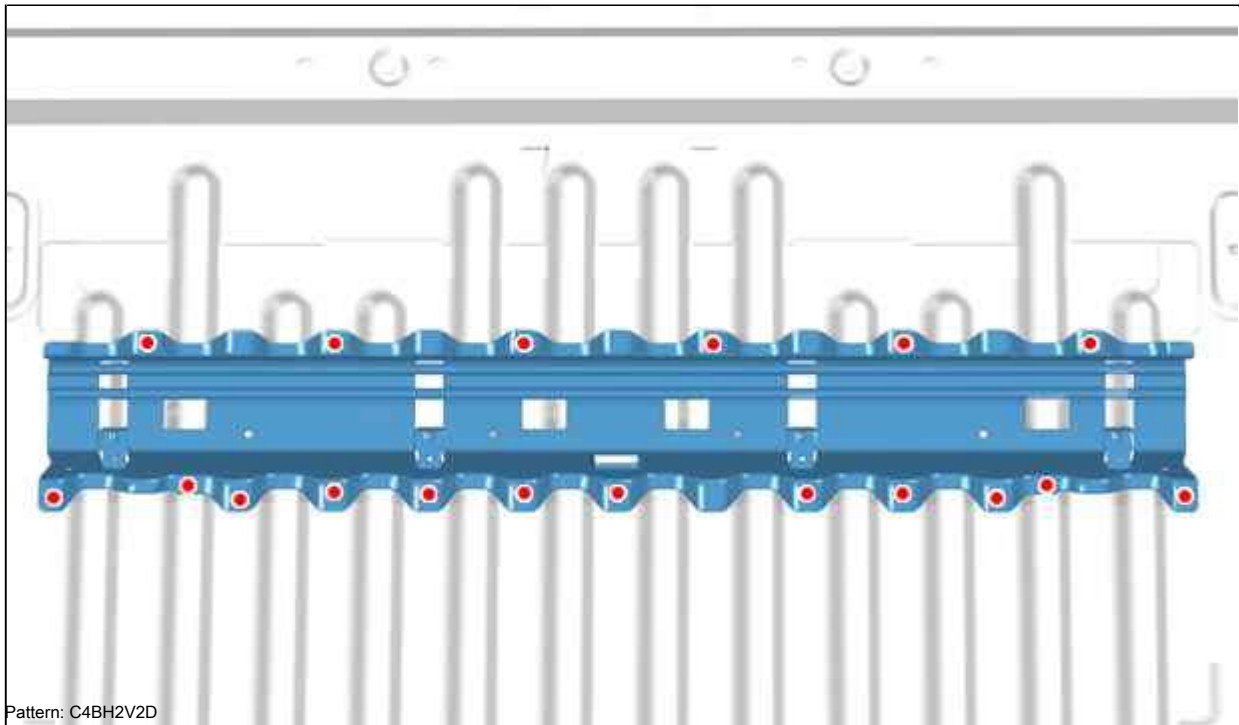
Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Fitting

Position: Front seat cross member (Assembly). Hold the element in place.

10. Welding



Weld through the holes in the MAG protective gas. Grind MAG welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: LOAD COMPARTMENT FLOOR (SHORT)

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element:

- MIG brazing with copper-silicon electrode in inert gas
- MAG welding by depositing metal (steel) in reactive gas

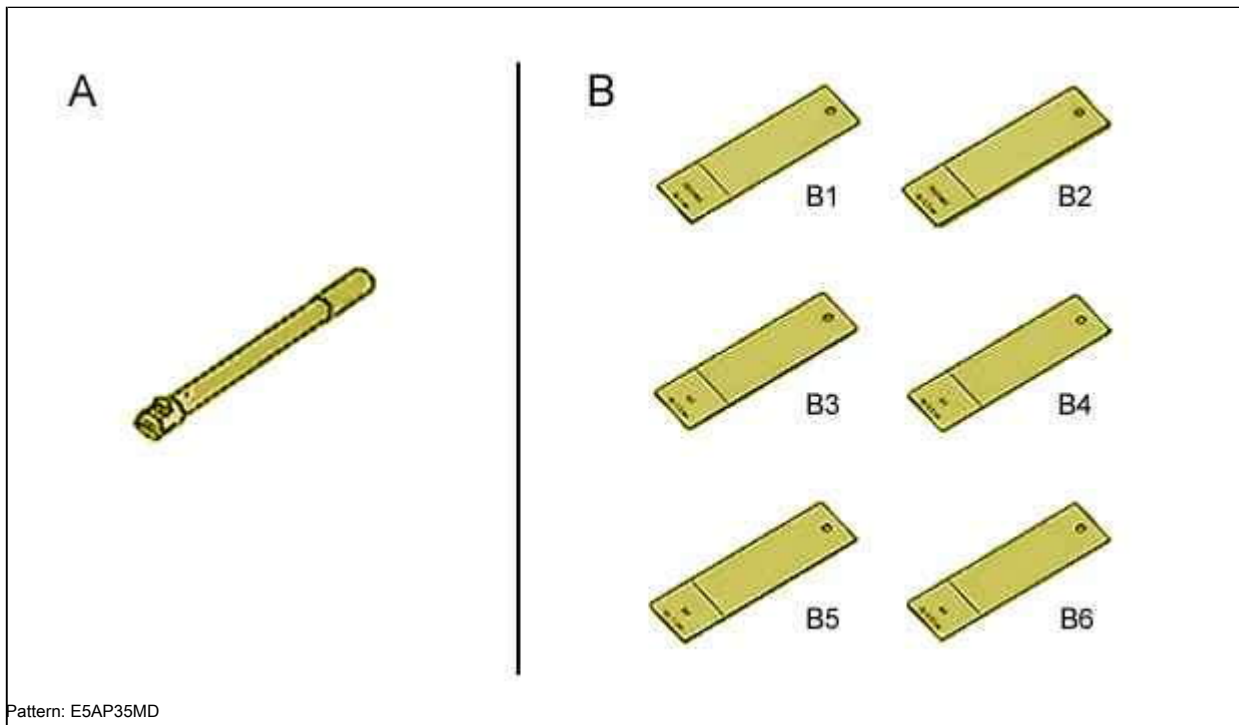
The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Recommended equipment

Operate using one of the following systems:

- Electronic measuring system
- Mechanical measuring system
- Specific head MZ (Special tool)
- Control template



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

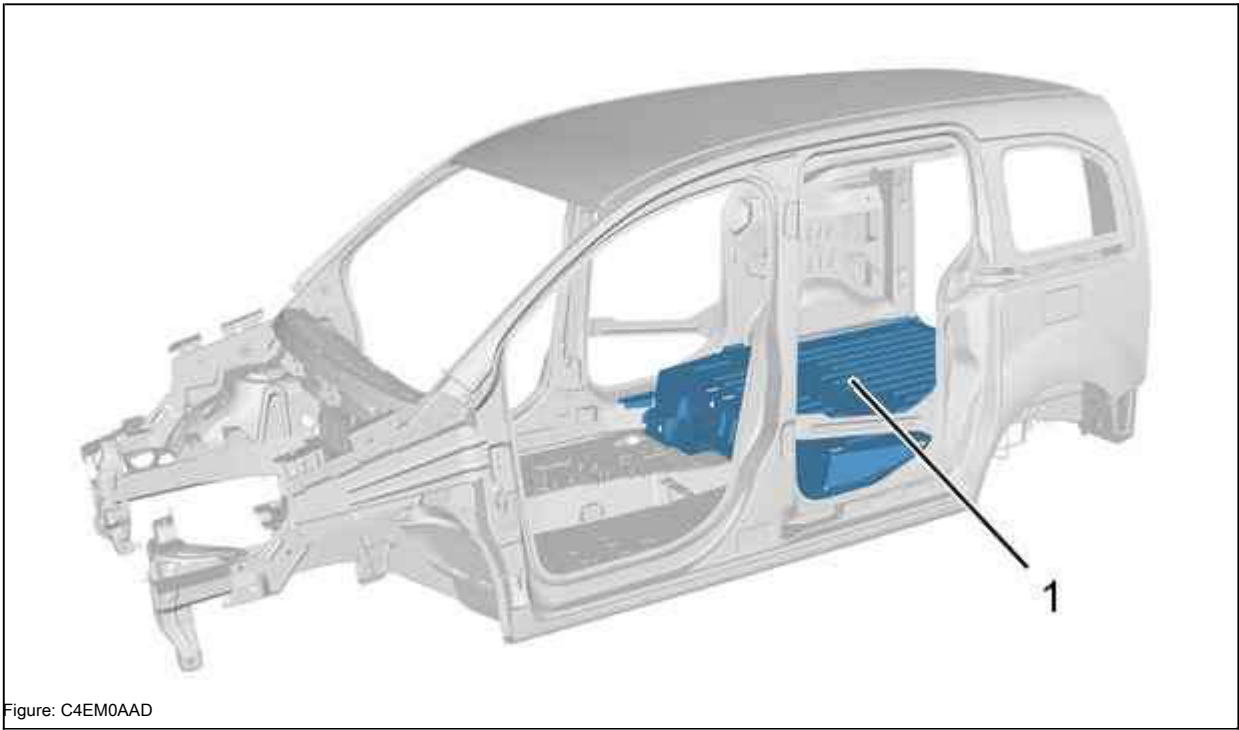
3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Floor of the cargo compartment

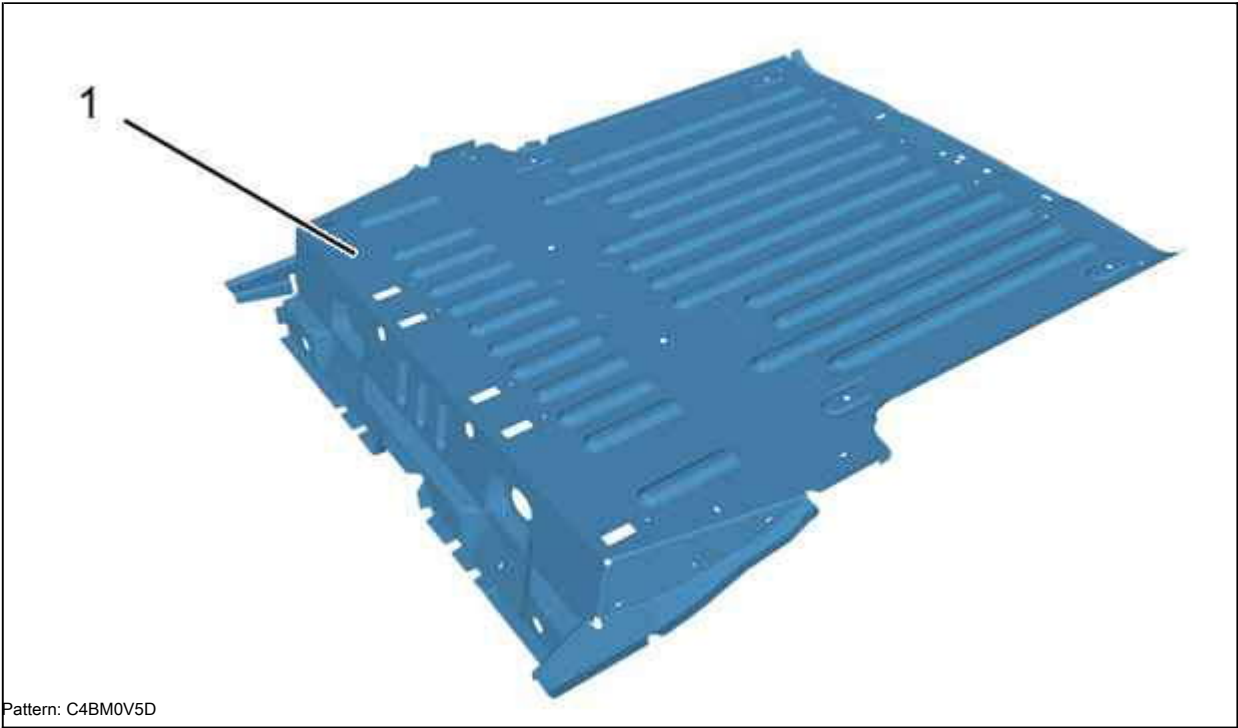


(1) Floor of the load compartment.

Label Designation

(1)	Load compartment floor

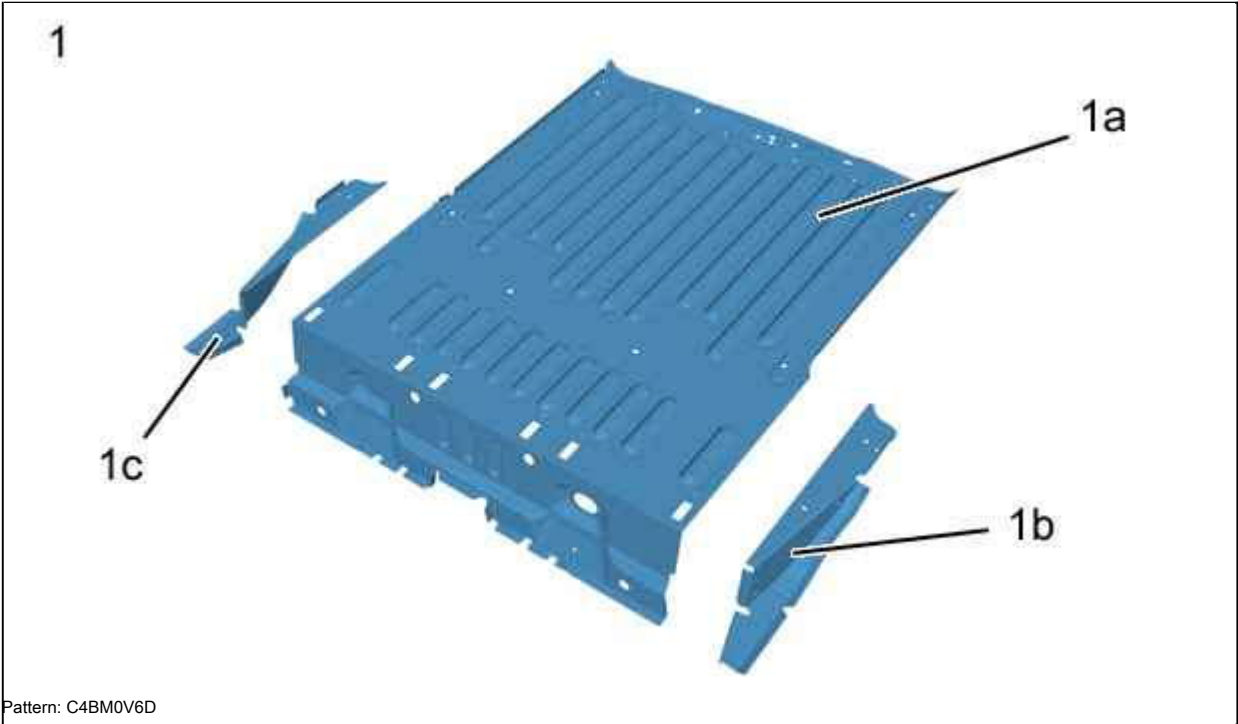
5. Identification: Floor of the cargo compartment



Label Designation

(1)	Half-trunk assembly

5.1. Composition: Floor of cargo compartment

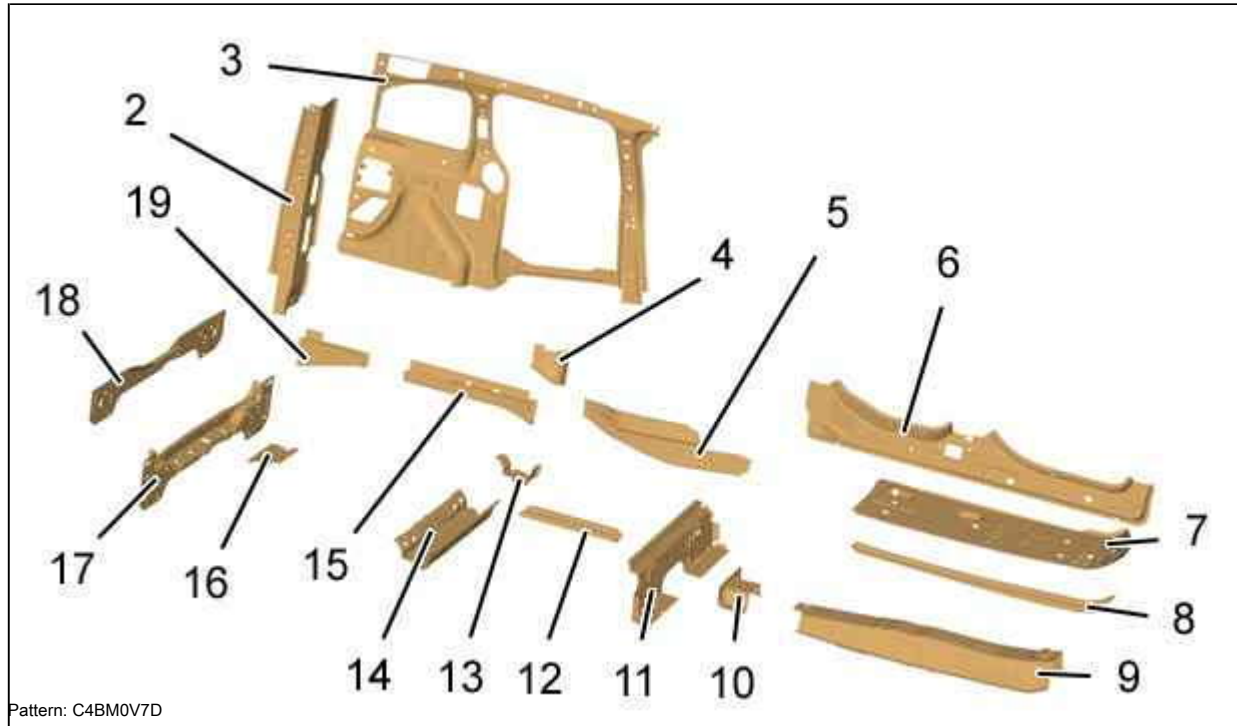


Label Designation

(1)	Half-trunk assembly	Thickness (mm) Nature / classification	

(1a)	Load compartment floor	0.77	Mild steel
(1b)	Left side load compartment floor 1.47 Right side load compartment		Mild steel
(1c)	floor 1.47		Mild steel

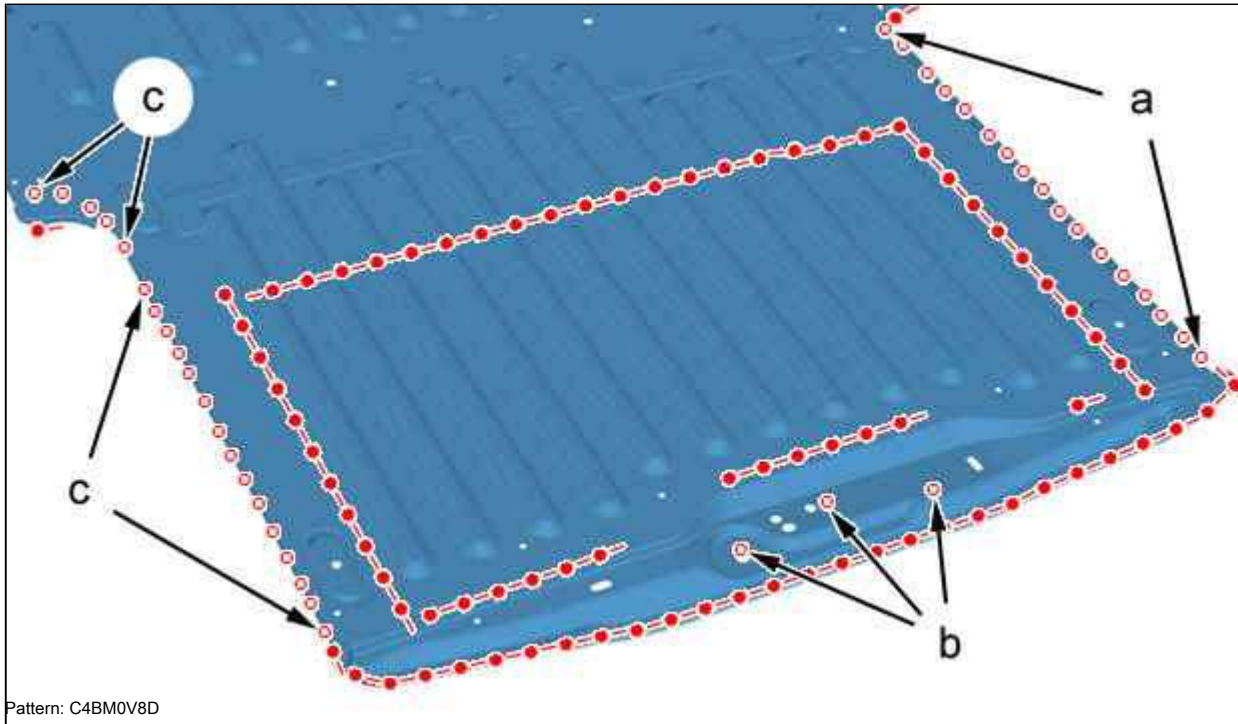
5.2. Identification of parts adjacent to the spare part



Label Designation		Thickness (mm) Nature / classification	
(2)	Trunk lid	0.77	HLE
(3)	Rear wing molding (left and right)	0.97	Mild steel
(4)	Front side member (center section) (right and left)	1.95	HLE
(five)	Front spar (front) (left and right)	1.95	HLE
(6)	Inner spar (right and left) Front floor (right and left)	1.47	HLE
(7)		0.67	Mild steel
(eight)	Inner spar (right and left) Tunnel	2	HLE
(nine)		1.47	HLE
(ten)	Corrugated floor reinforcement	1.47	HLE
(eleven)	Corrugated floor cross member	0.87	HLE
(12)	Intermediate spar Front	0.97	THLE
(13)	Rear axle cross member (right and left)	1.47	HLE
(fourteen)	Crossbar of the rear axle	1.47	Mild steel
(fifteen)	Front side member (rear) (left and right)	1.95	HLE
(sixteen)		1.47	HLE
(17)	Rear panel upholstery	0.87	Mild steel
(18)	Back panel	0.87	Mild steel
(nineteen)	Side member extension (front)	1.80	THLE

6. Preparation of spare part

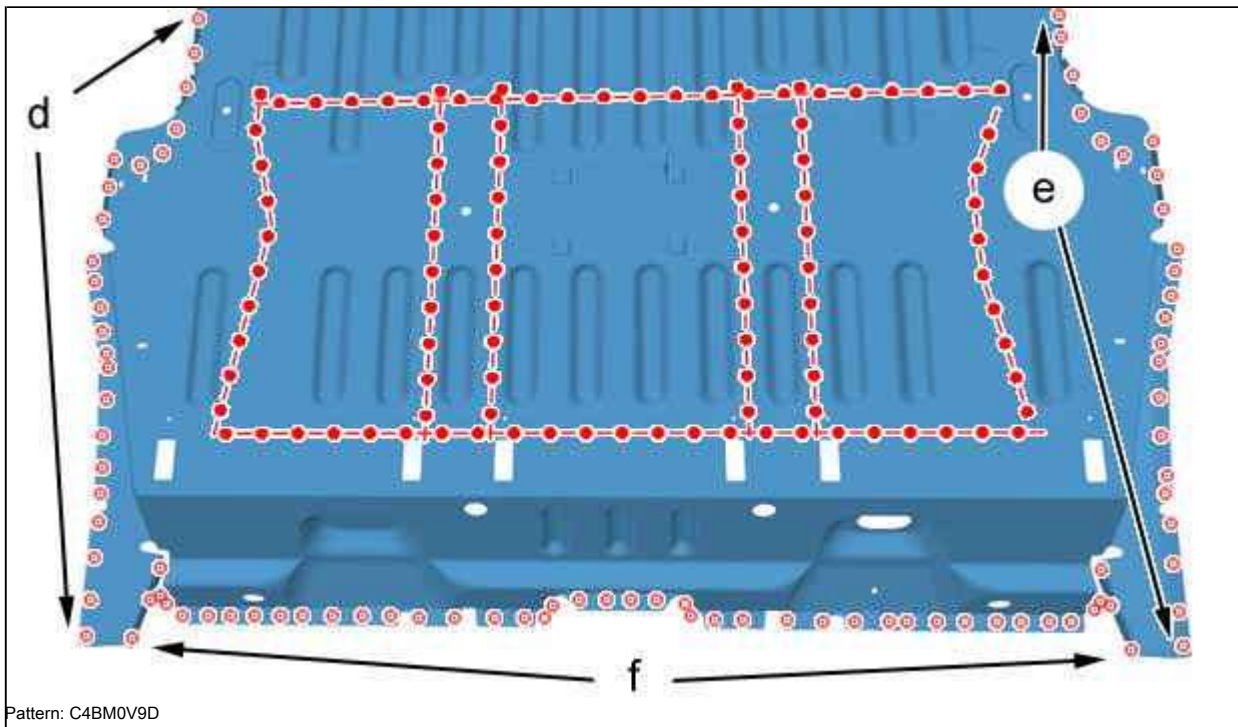
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Mark and drill holes $\varnothing 6.5$ mm (or 8 mm for elements of significant thickness) for subsequent spot welding (in "a", "b", "c").

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

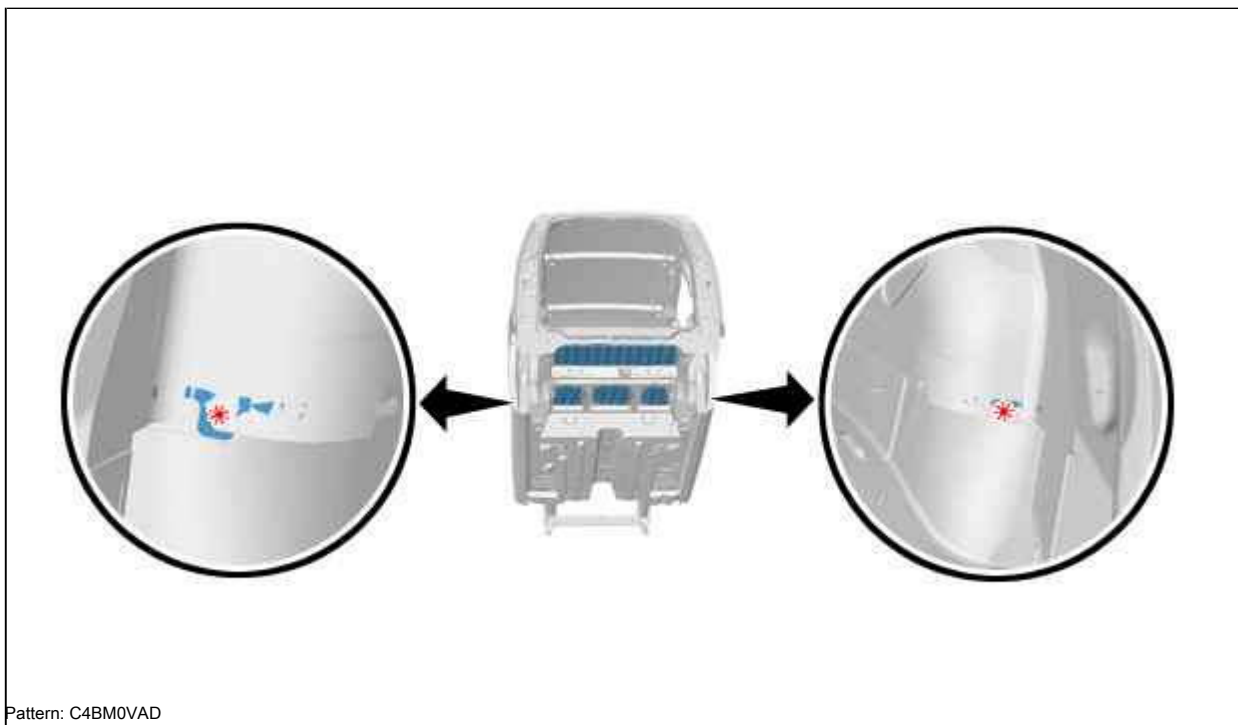


Mark and drill holes $\varnothing 6.5$ mm (or 8 mm for elements of significant thickness) for subsequent spot welding (in "d", "e", "f").

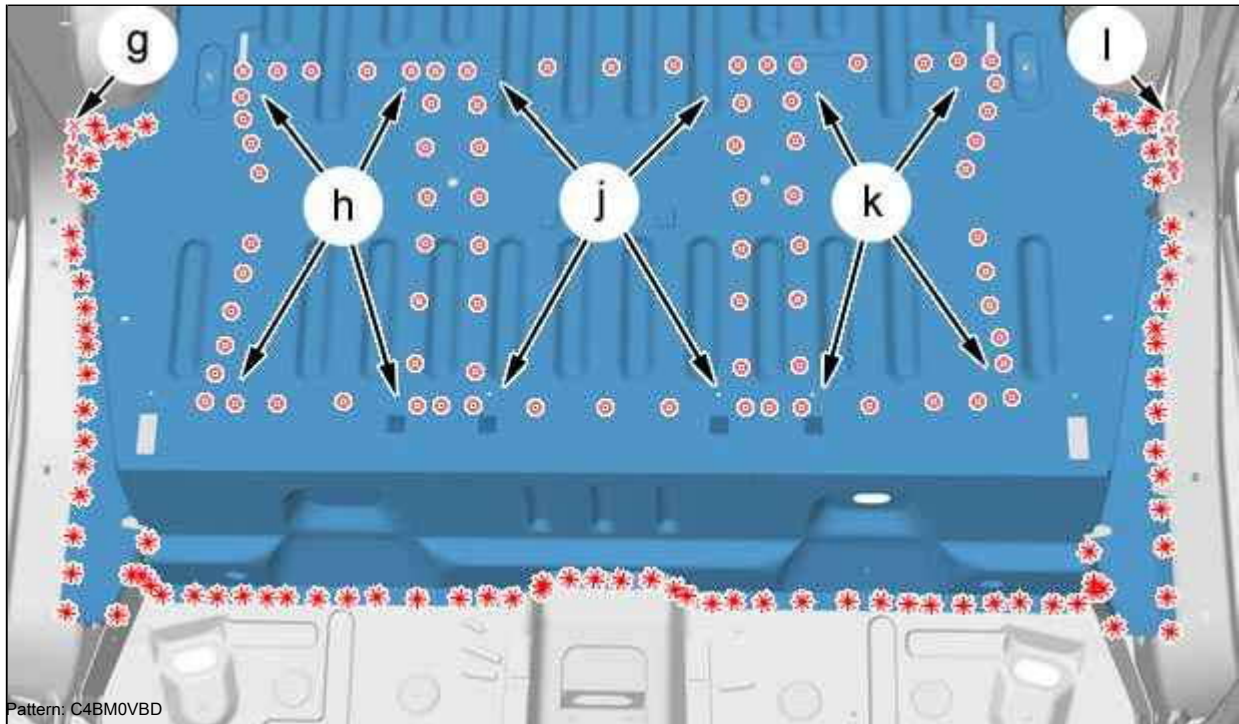
Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting off the floor of the cargo compartment from the body



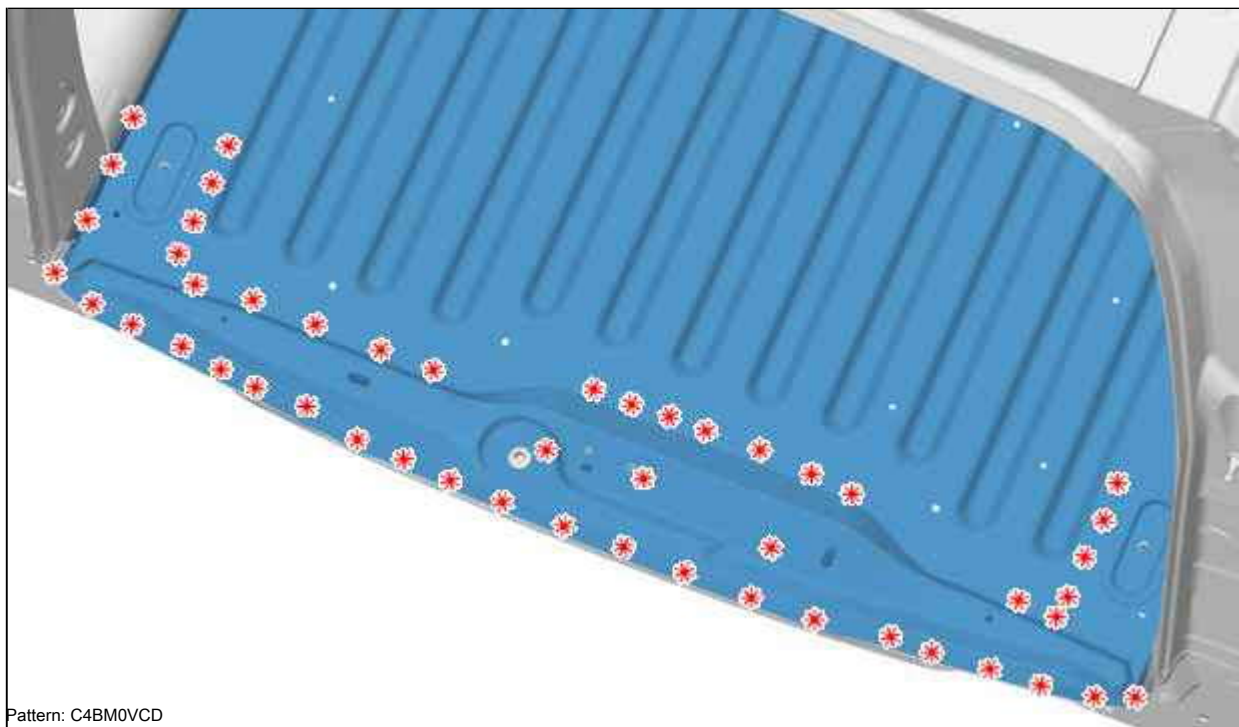
Drill out points in 2 thicknesses for subsequent plug welding.



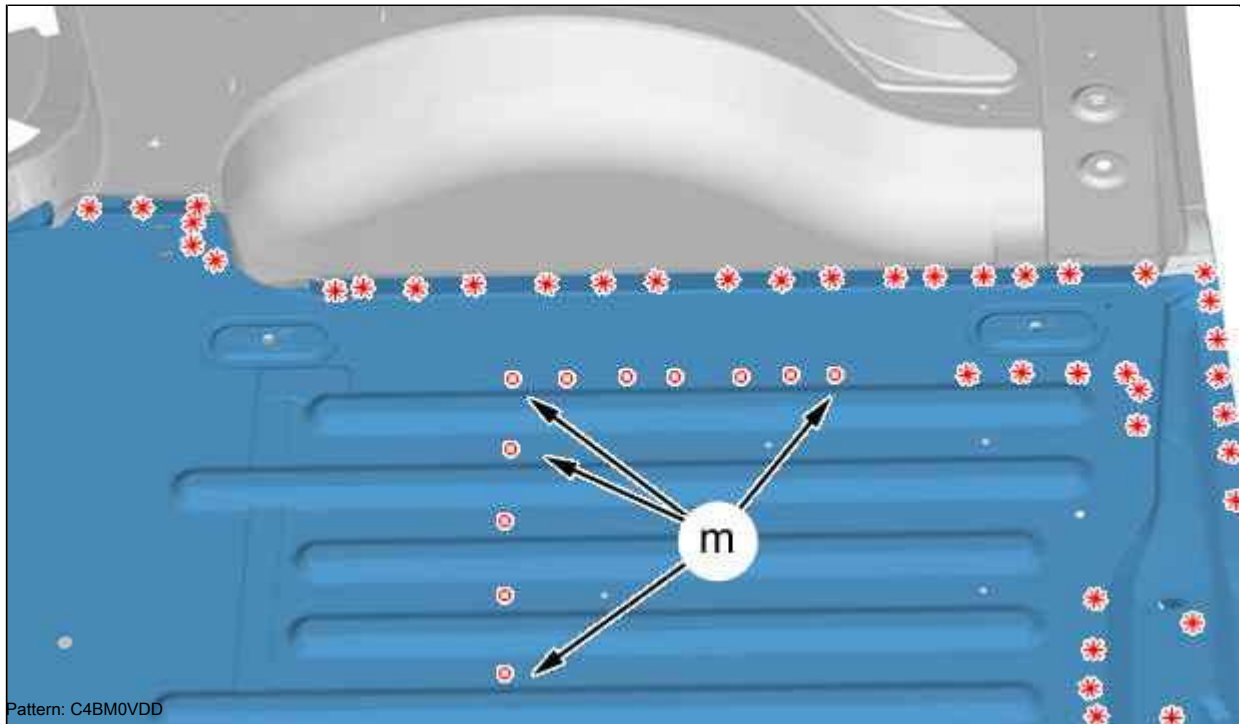
Drill out 86 electric welding points in 2 thicknesses for further plug welding from the bottom of the vehicle (in "h", "j", "k").

NOTE: The number of welding points is provided as a guide and is subject to change.

Grind MIG welds (in "g," l ") Cut other points at 1 thickness.



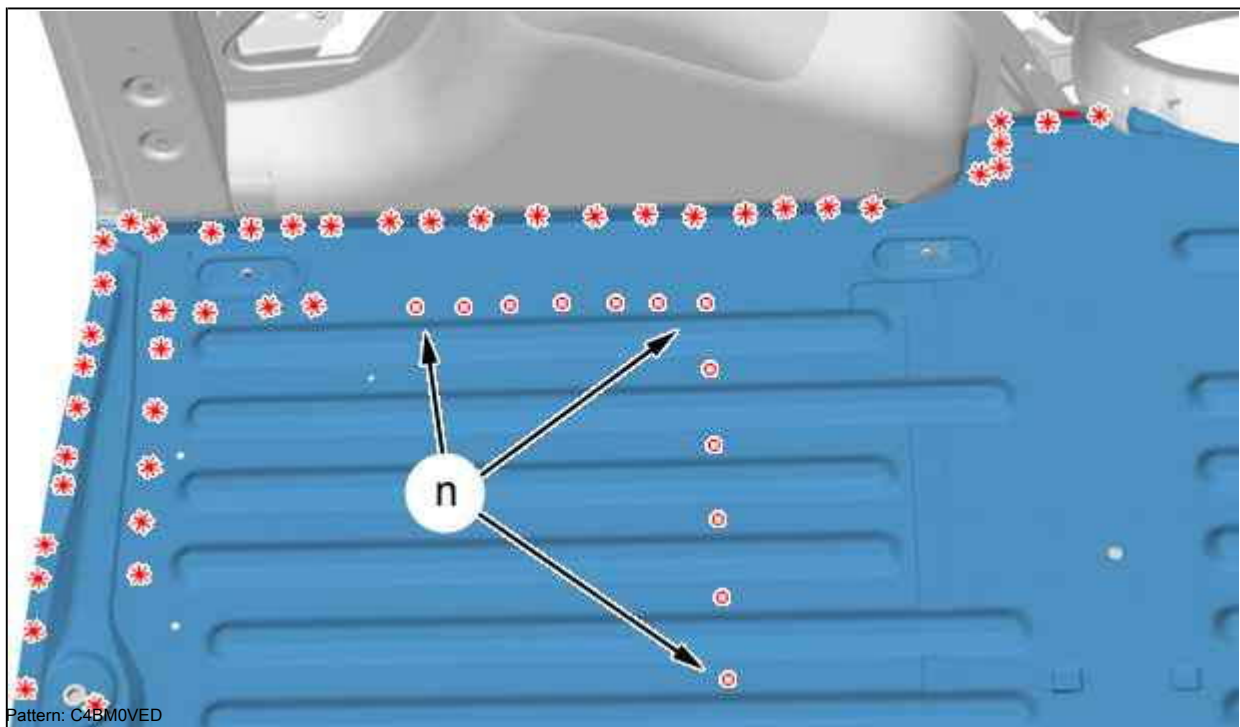
Drill out points in 1 thickness.



Drill (in "m") 11 points in 2 thicknesses for further plug welding from the bottom of the vehicle.

NOTE: The number of welding points is provided as a guide and is subject to change.

Cut other points at 1 thickness.

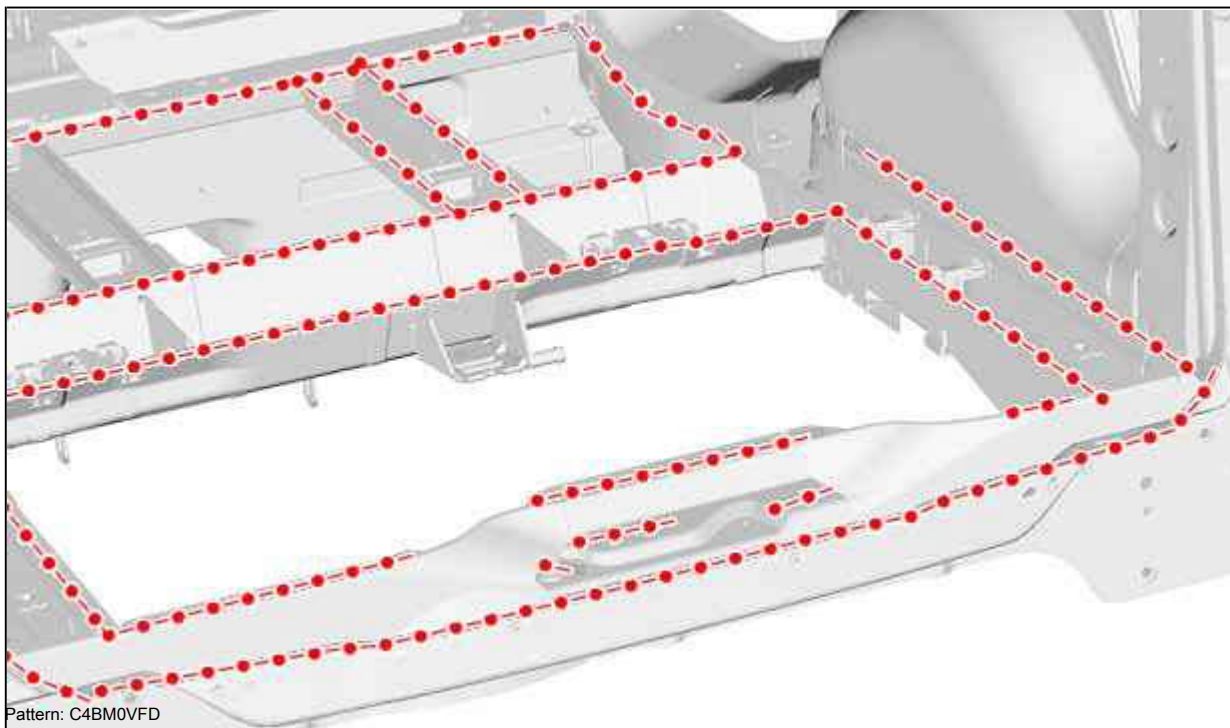


Drill (in "n") 12 points in 2 thicknesses for further plug welding from underneath the vehicle.

NOTE: The number of welding points is provided as a guide and is subject to change.

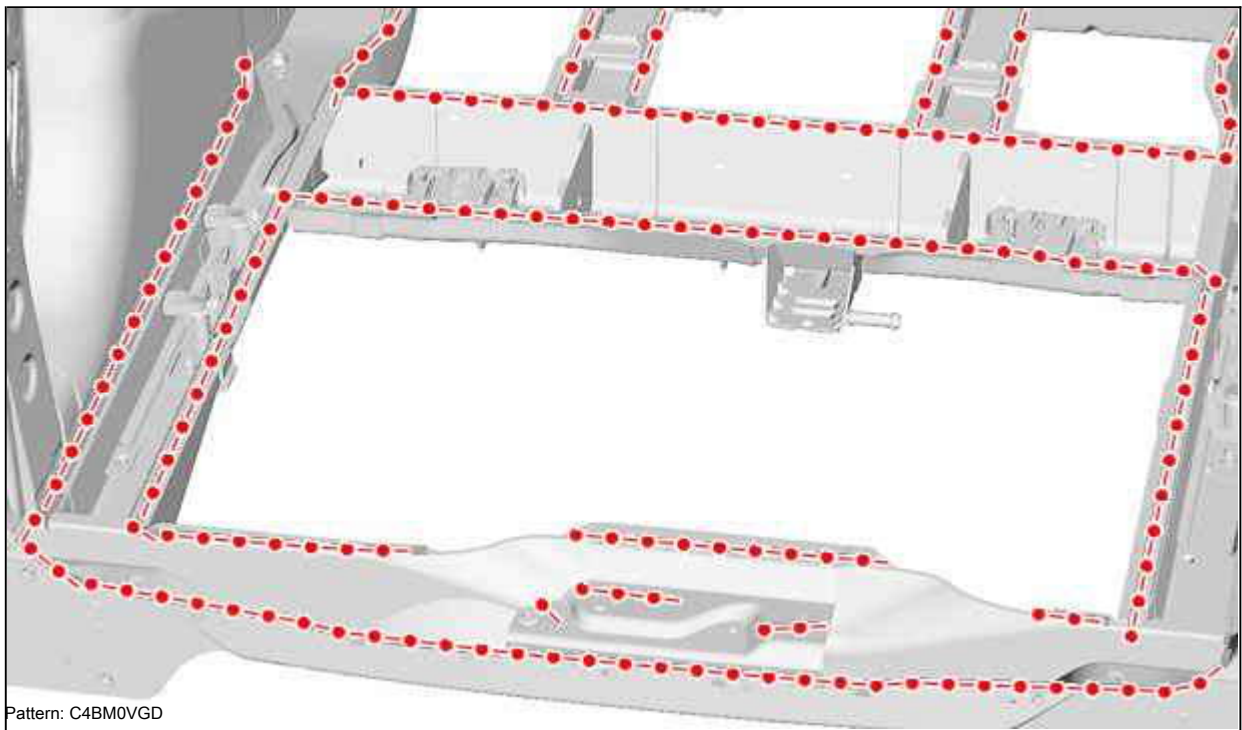
Cut other points at 1 thickness. Remove load compartment floor.

8. Cleaning and preparation of the body



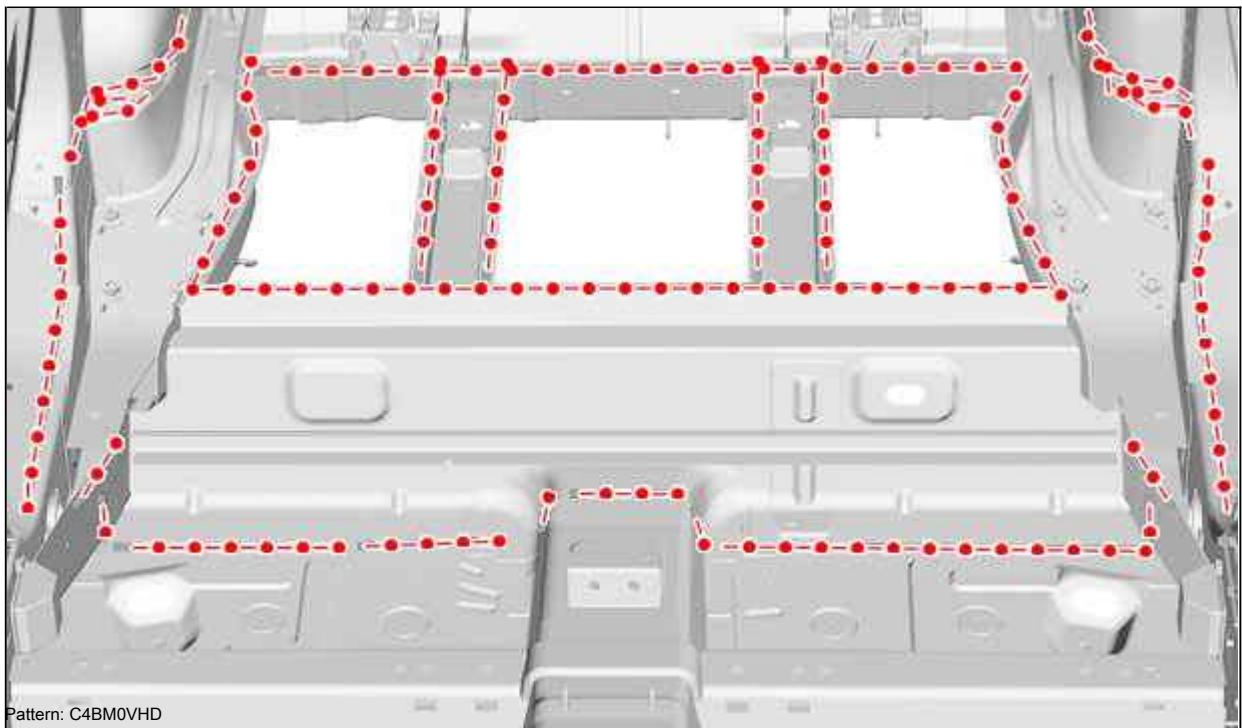
Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

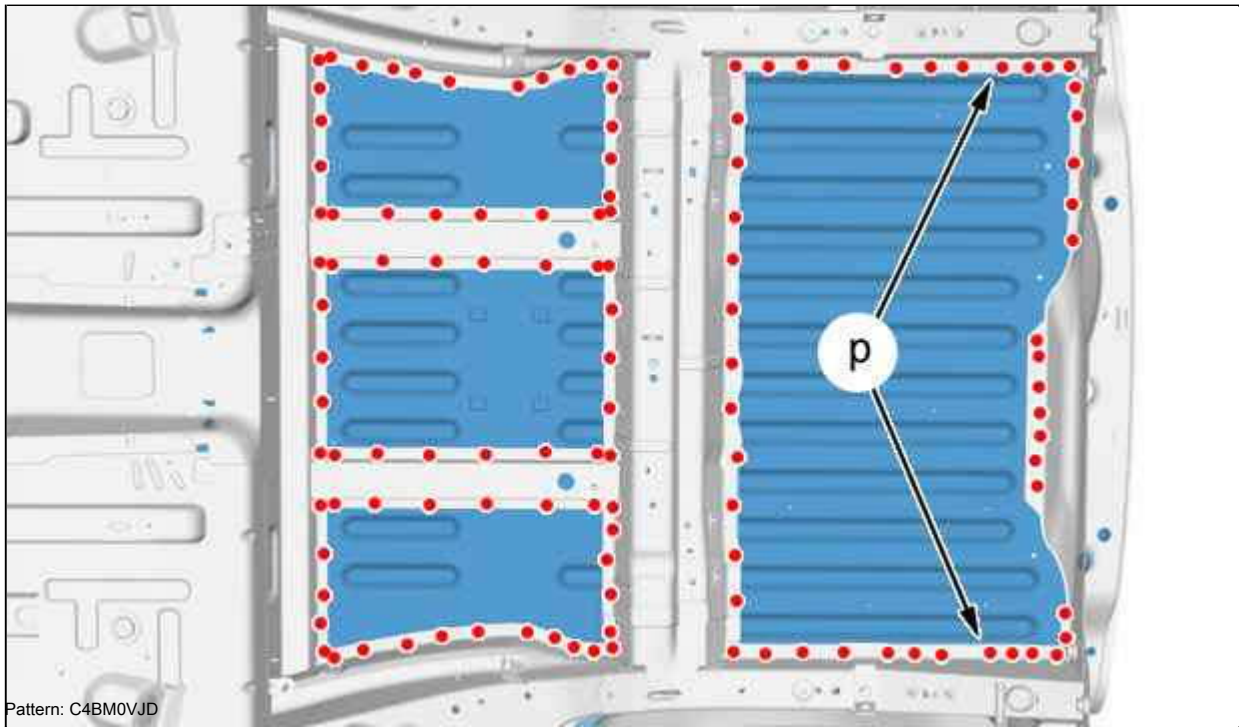
9. Fitting

Arrange: Half a trunk.

Install elements to ensure the fit.

Hold the element in place.

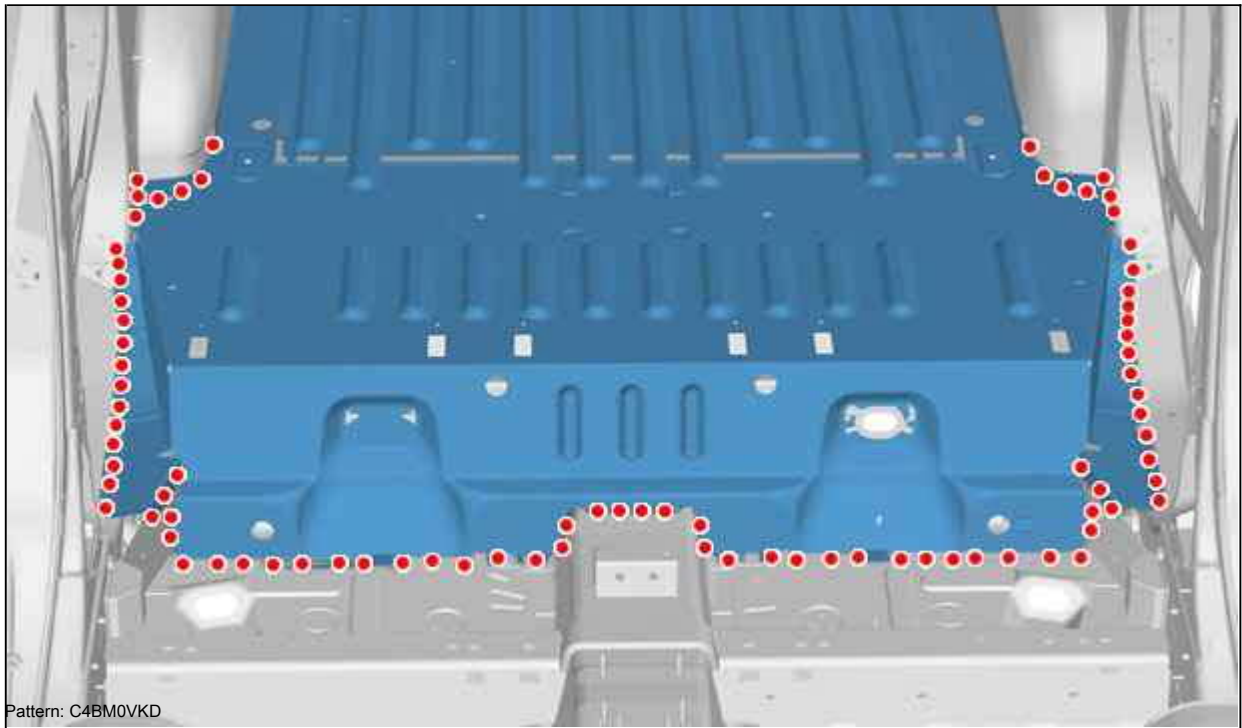
10. Welding



Perform spot welding using the MAG method.

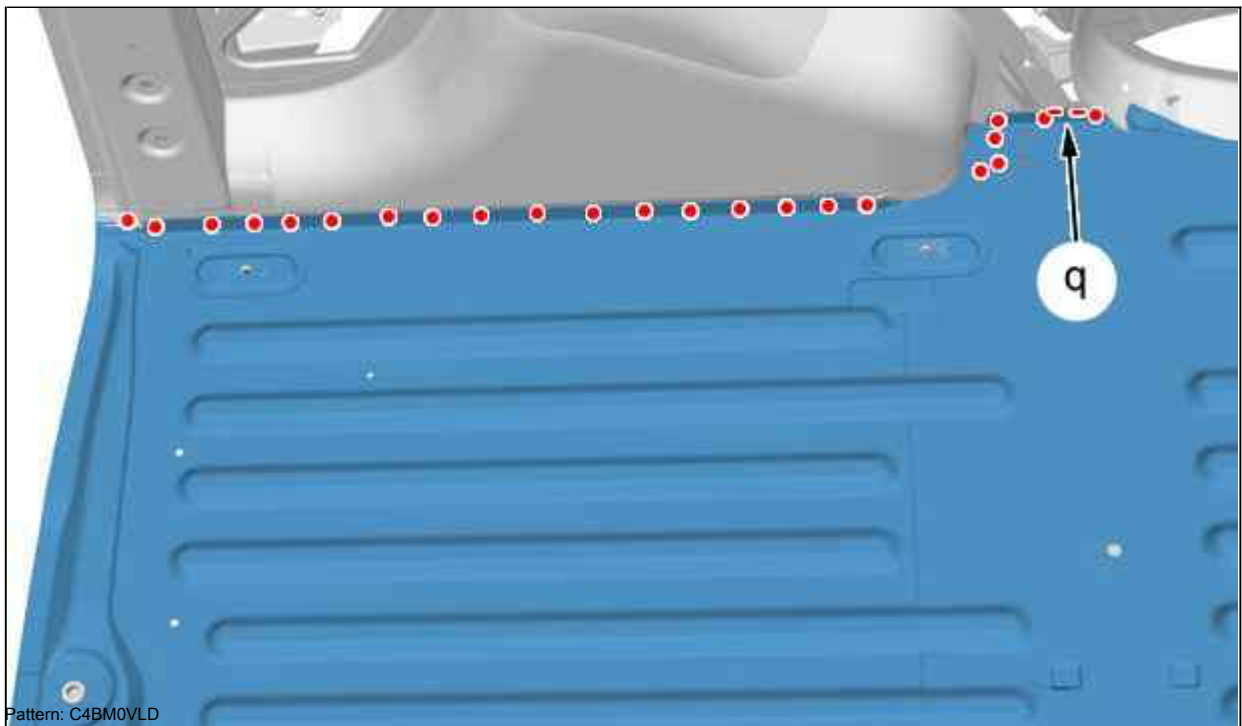
Weld 22 points with electric spot welding (in "p").

NOTE: The number of welding points is provided as a guide and is subject to change.



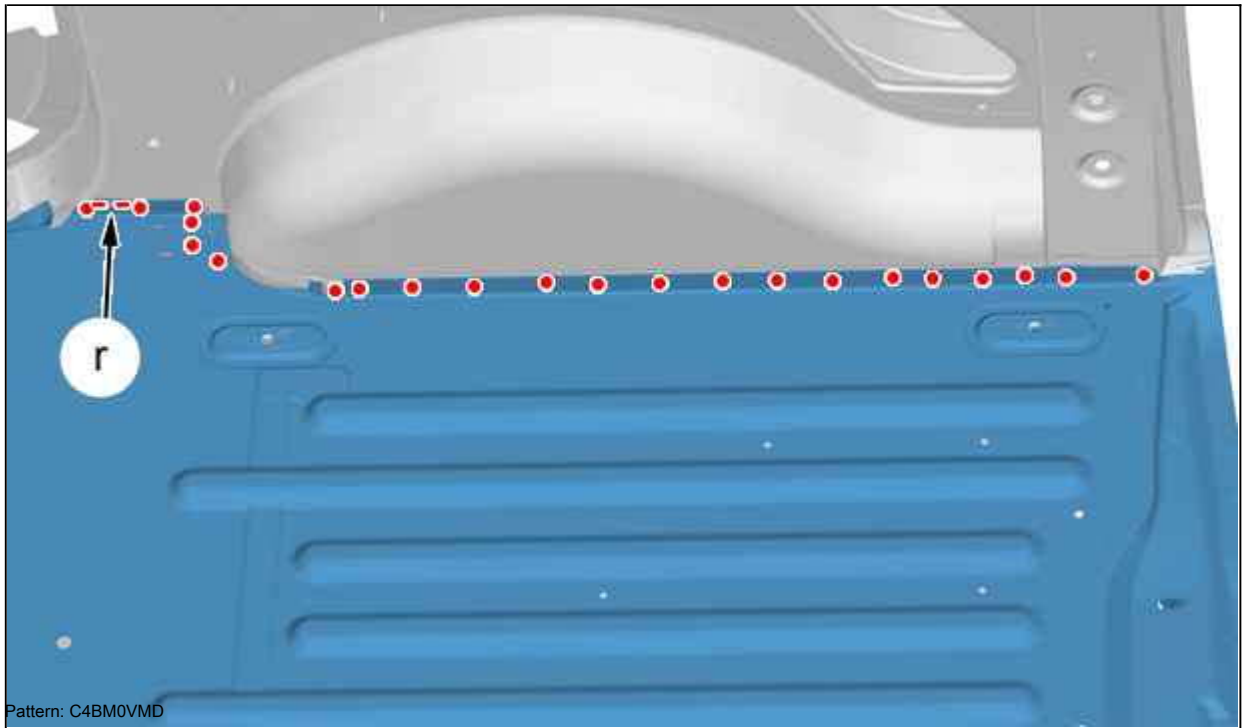
Pattern: C4BM0VKD

Weld through the holes in the MAG protective gas. Grind MAG welding points.

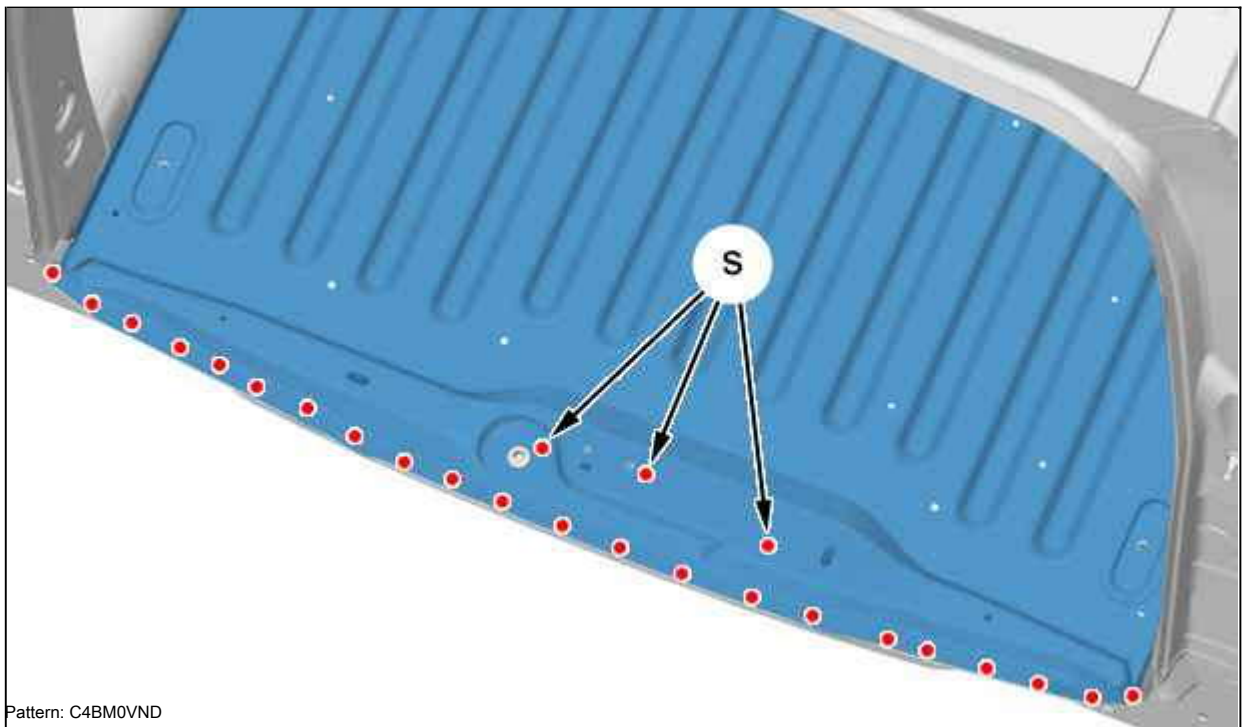


Pattern: C4BM0VLD

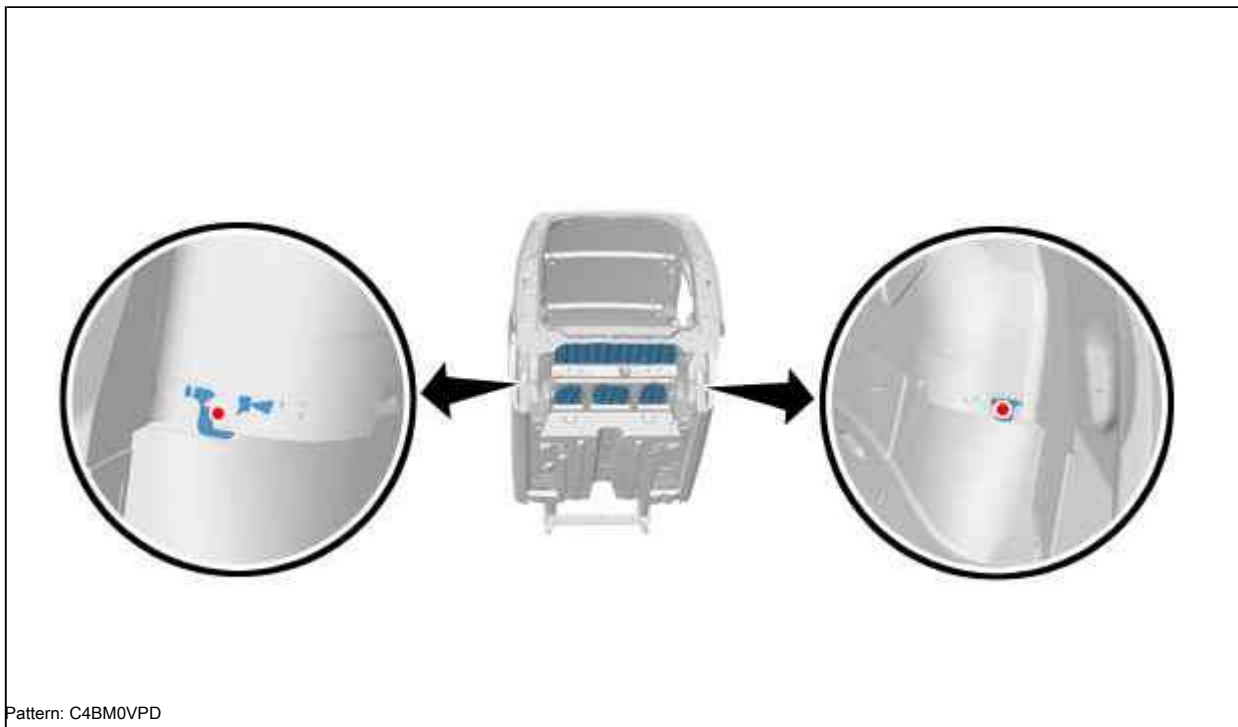
Weld through the holes in the MAG protective gas. Grind MAG welding points.
Apply MIG weld seam (in "q").



Weld through the holes in the MAG protective gas. Grind MAG welding points.
 Apply MIG weld seam (in "r").

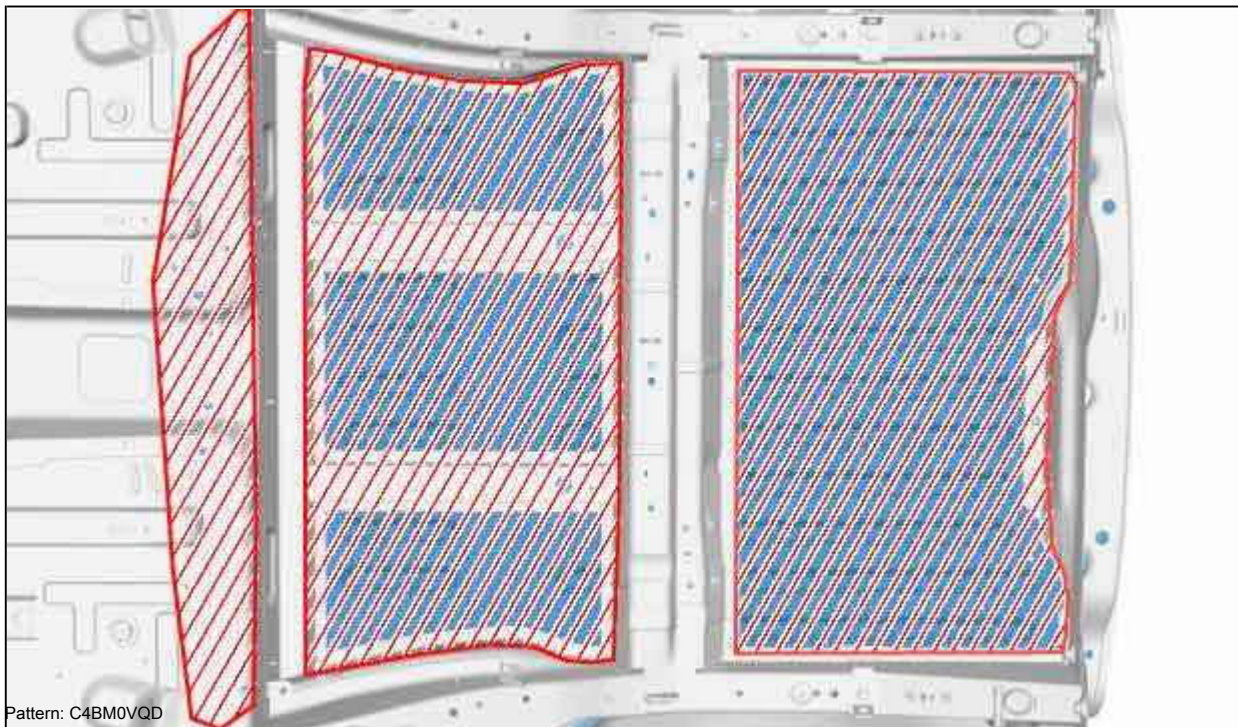


Weld through the holes in the MAG protective gas (in "s"). Grind MAG welding points.
 Weld with welding points.



Weld through the holes in the MAG protective gas.

11. Tightness protection

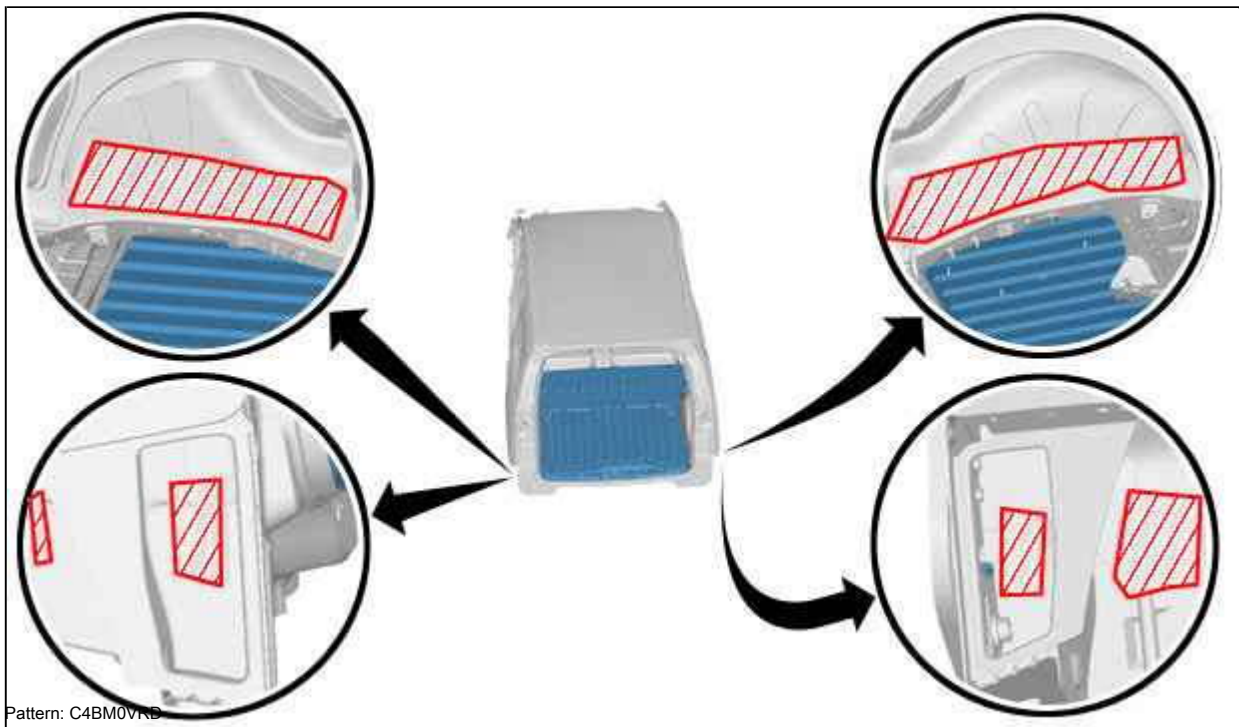


Apply a layer of phosphate primer to the cleaned areas.

Apply a "C4" anti-gravel coating

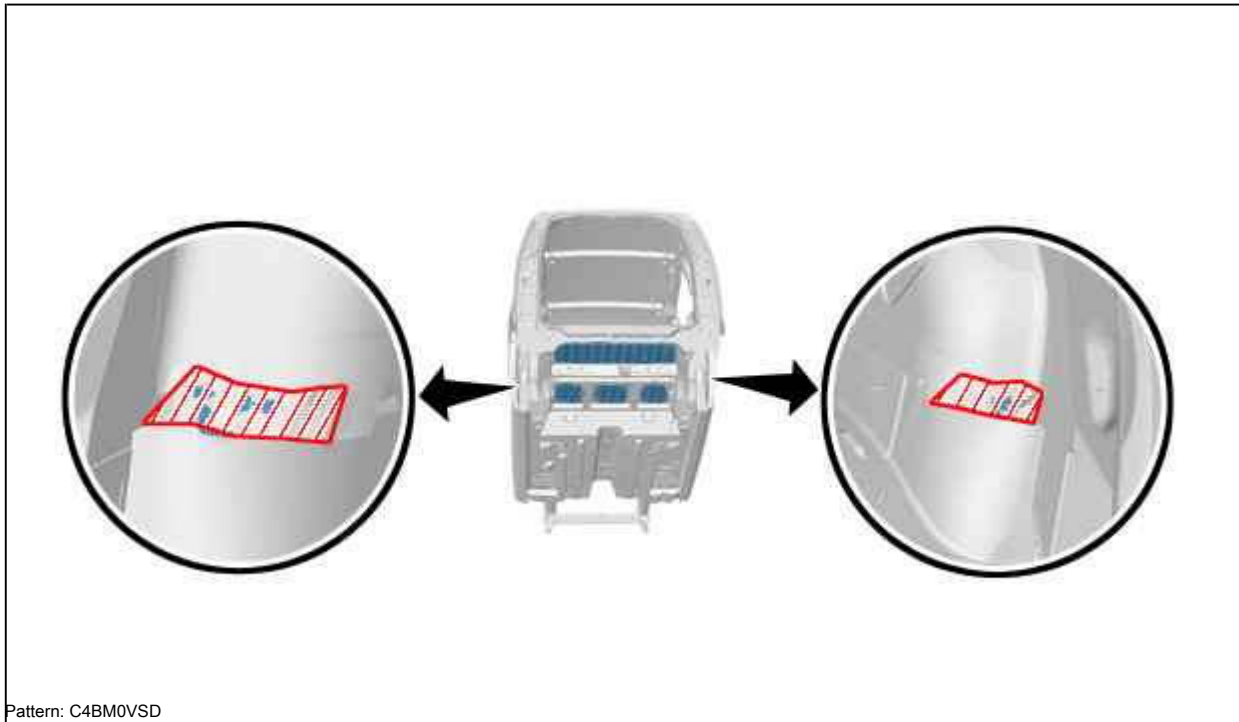


...



Apply a layer of phosphate primer to the cleaned areas.

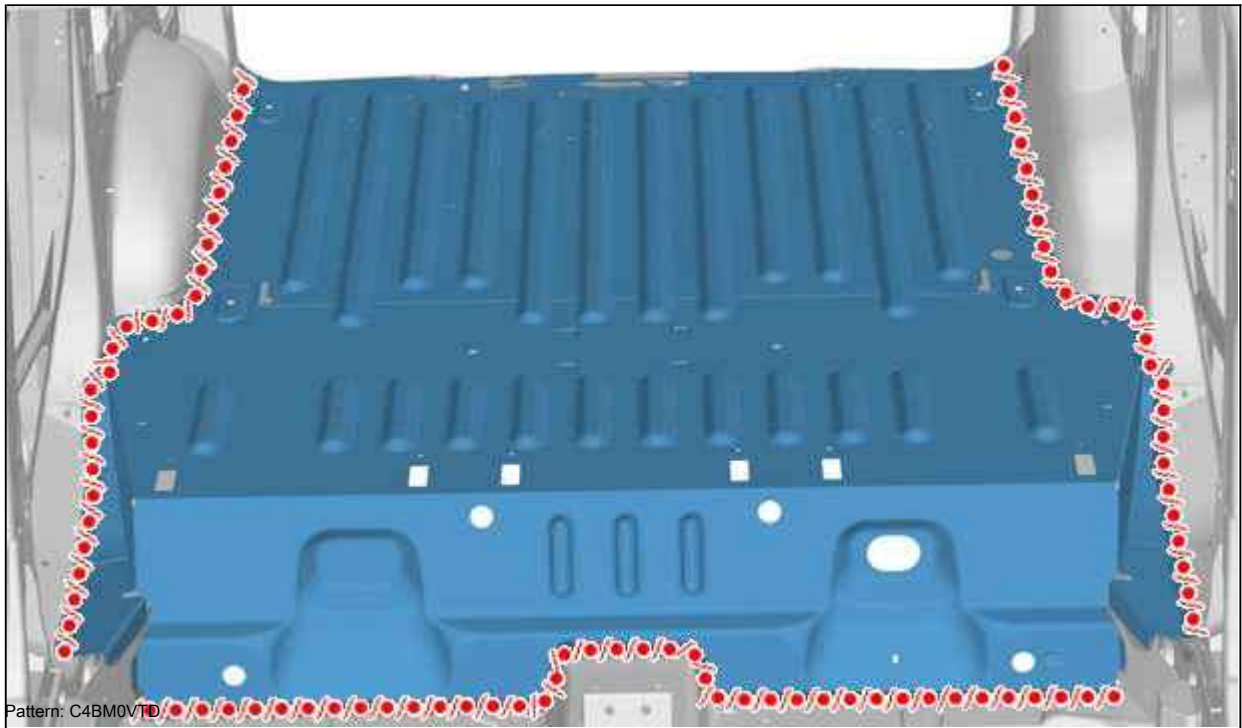
Apply a "C4" anti-gravel coating



Apply a layer of phosphate primer to the cleaned areas.

Apply a "C4" anti-gravel coating





Pattern: C4BM0VTD

Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: LOAD FLOOR EXTENSION

MANDATORY: Observe the cleanliness and safety rules



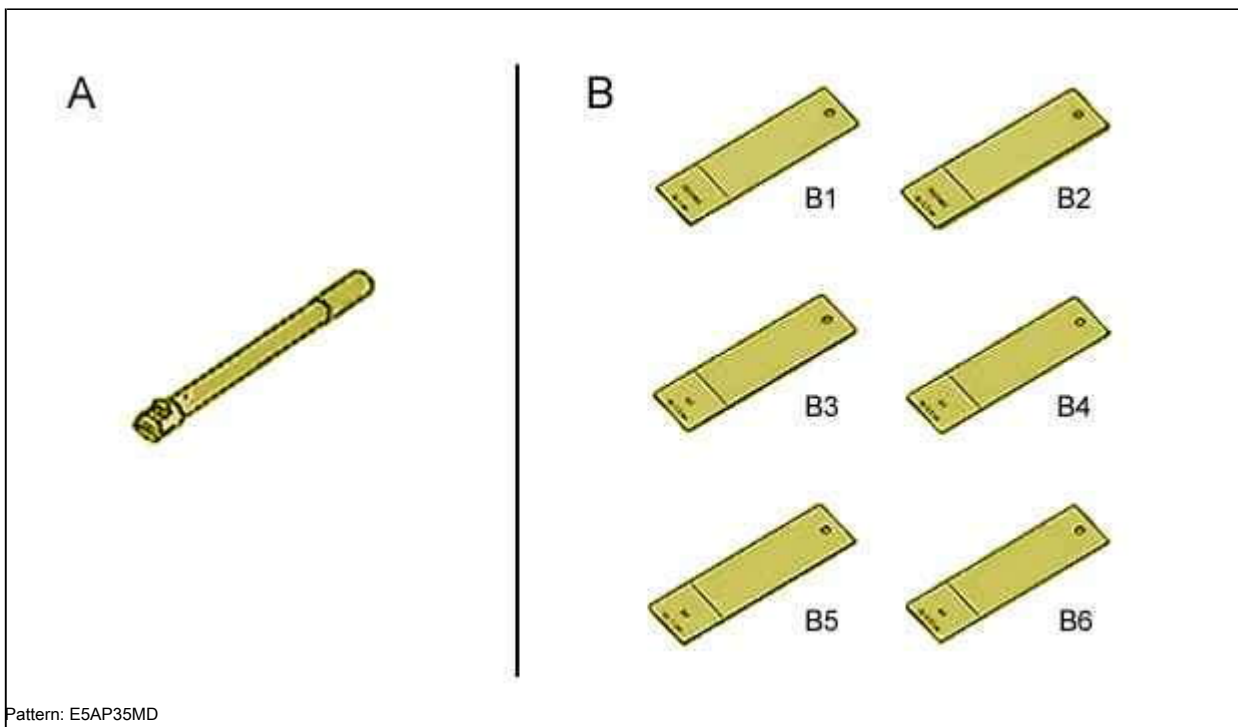
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- Ultra high yield strength (UHLE) steel elements

2. Recommended equipment



Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Wait at least 15 minutes before doing any work (discharge of the computer's power reserve to the airbags).

ATTENTION : Remove or protect items located in the repair area that could be

damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Cargo floor extension

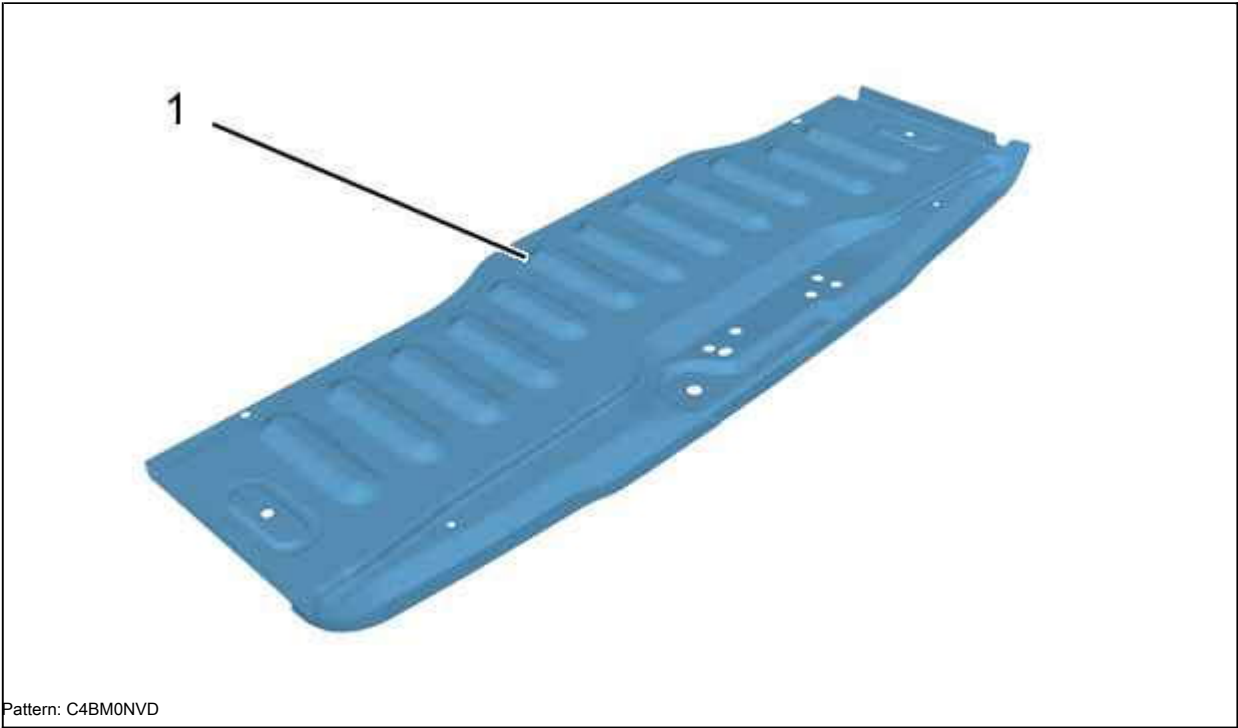


Label Designation

(1)	Load floor extension

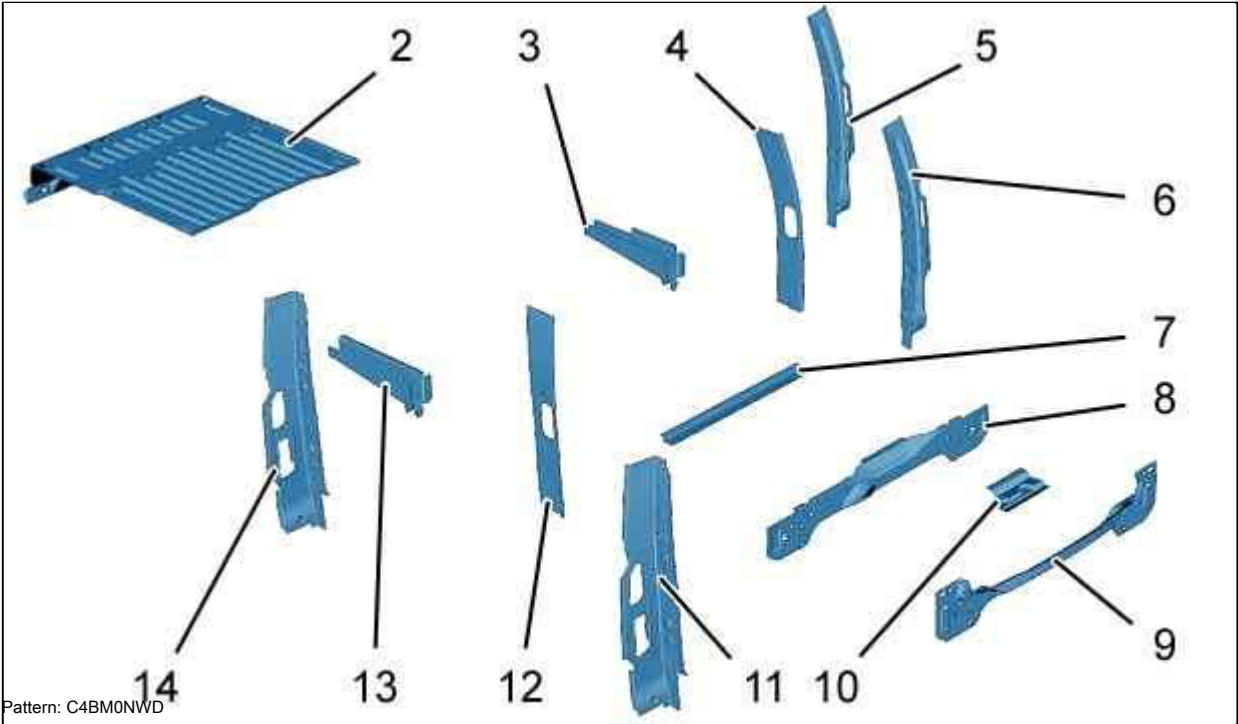
5. Identification: Cargo floor extension

5.1. Ingredient: Cargo floor extension



Label Designation		Thickness (mm)	Nature / classification
(1)	Cargo floor extension 0.77		HLE

5.2. Identification of parts adjacent to the spare part

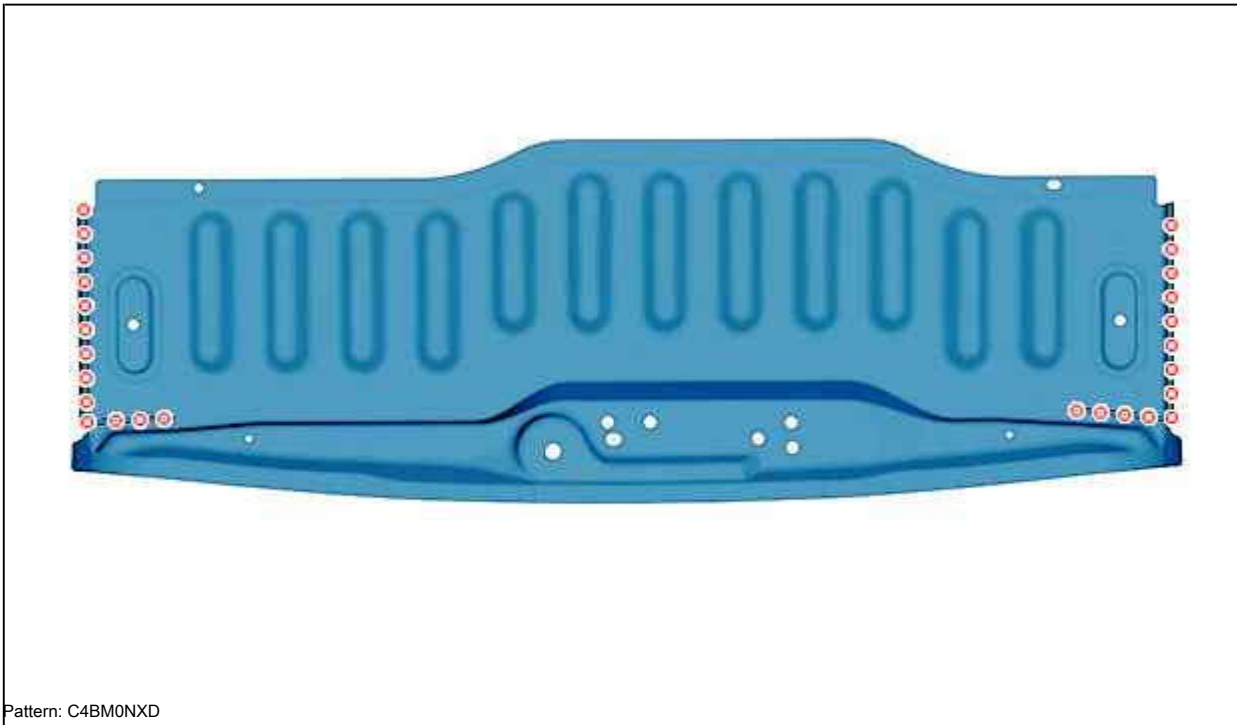


Label Designation		Thickness (mm)	Nature / classification

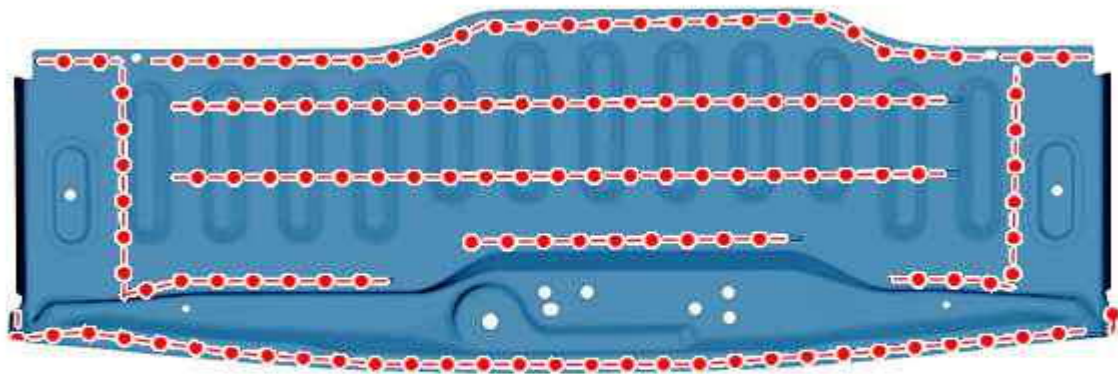
(2)	Load compartment floor	0.77	HLE
(3)	Side member extension (right) (Long wheelbase version)	1.80	THLE
(4)	Connection: Rack at tailgate (right)	0.77	Mild steel
(five)	Trunk lid strut (right) (short) Trunk lid strut (right) (long)	0.77	HLE
(6)	Crossbars Cargo space floor extensions Rear panel trim	0.77	HLE
(7)		1.17	HLE
(eight)		0.87	Mild steel
(nine)	Back panel	0.87	Mild steel
(ten)	Reinforcement element for fastening the lock bracket Trunk lid	1.47	HLE
(eleven)	strut (left) (long) Connection: Rear door strut (left)	0.77	HLE
(12)		0.77	Mild steel
(13)	Side member extension (left) (Long wheelbase version)	1.80	THLE
(fourteen)	Trunk lid strut (left) (short)	0.77	HLE

6. Preparation: Cargo Floor Extension

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection



Mark, then drill a Ø6.5 mm hole for subsequent spot welding.

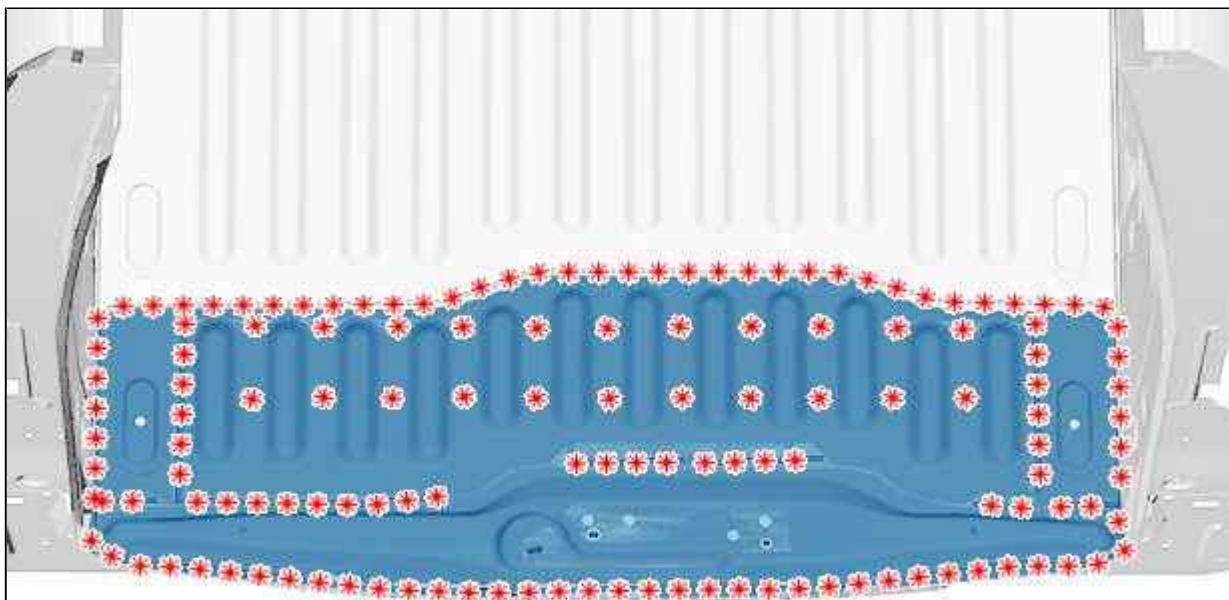


Pattern: C4BM0NYD

Prepare the sockets and protect them with a welding primer ("C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cut: Cargo floor extension



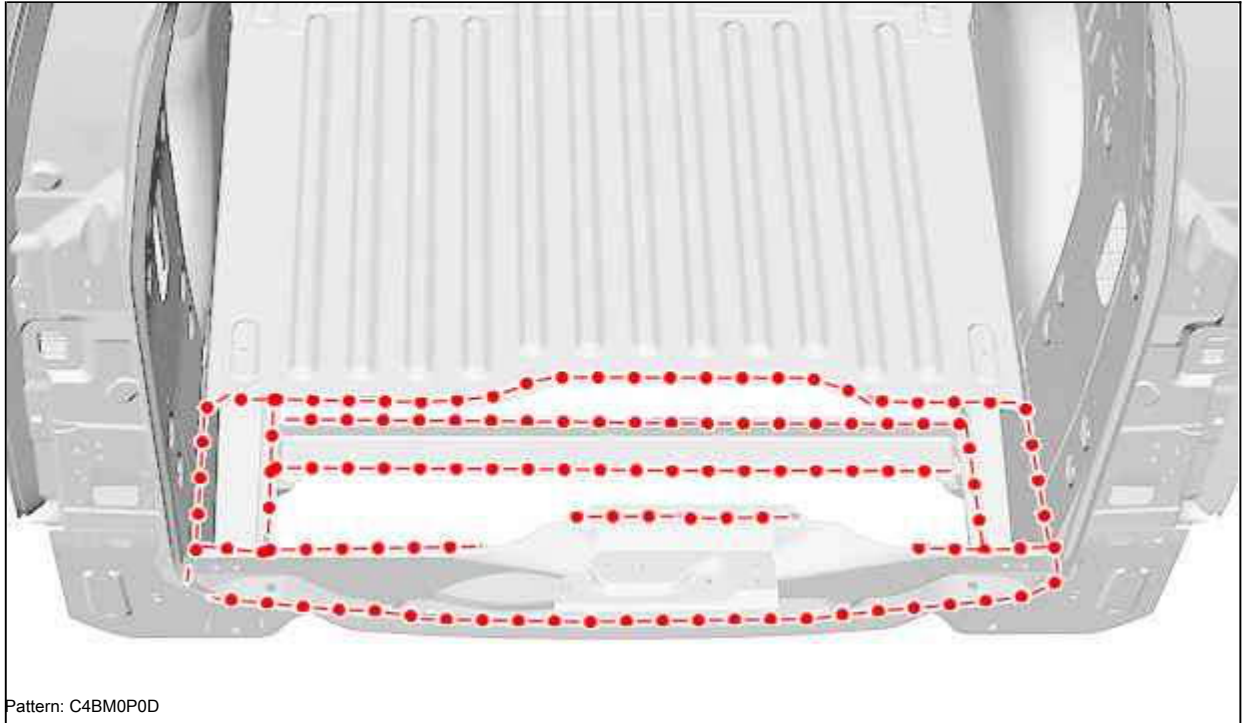
Pattern: C4BM0NZD

Cut by points.

Remove: Rear luggage compartment extension.

8. Cleaning and preparation of the body

8.1. Body preparation



Prepare the sockets and protect them with a welding primer ("C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

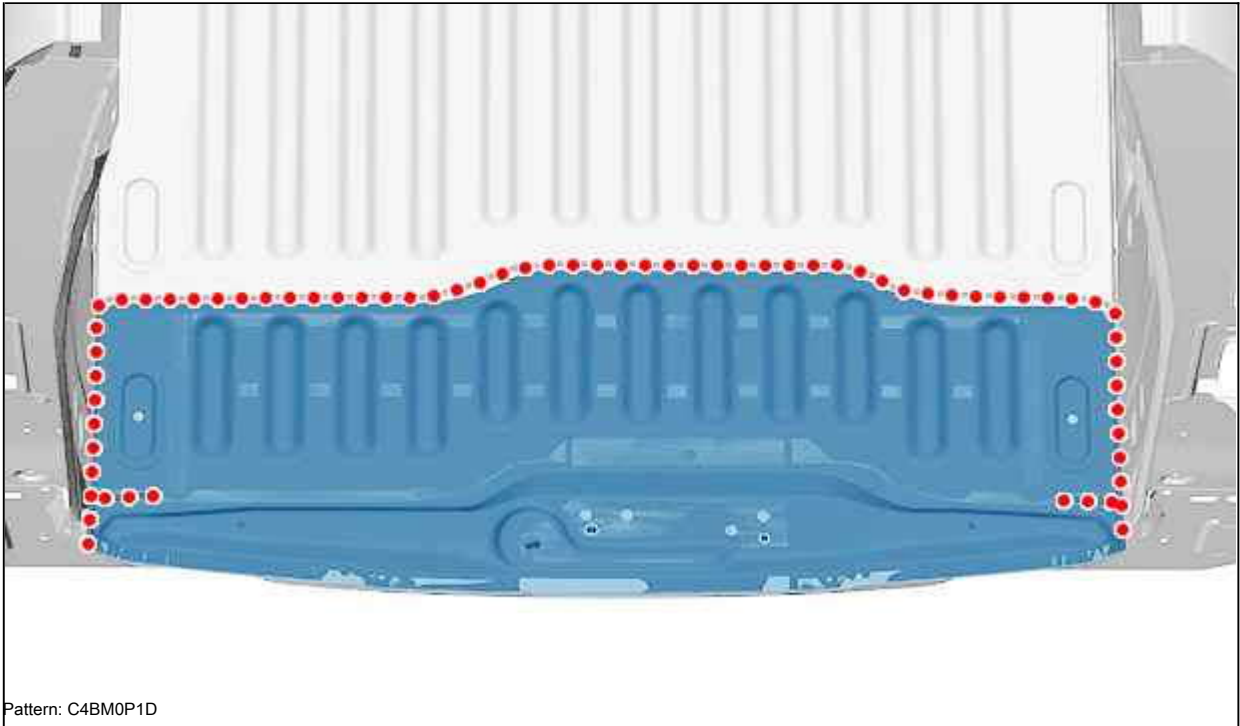
8.2. Fit

Position: Rear luggage compartment extension. Install elements to ensure the fit.

Hold the element in place.

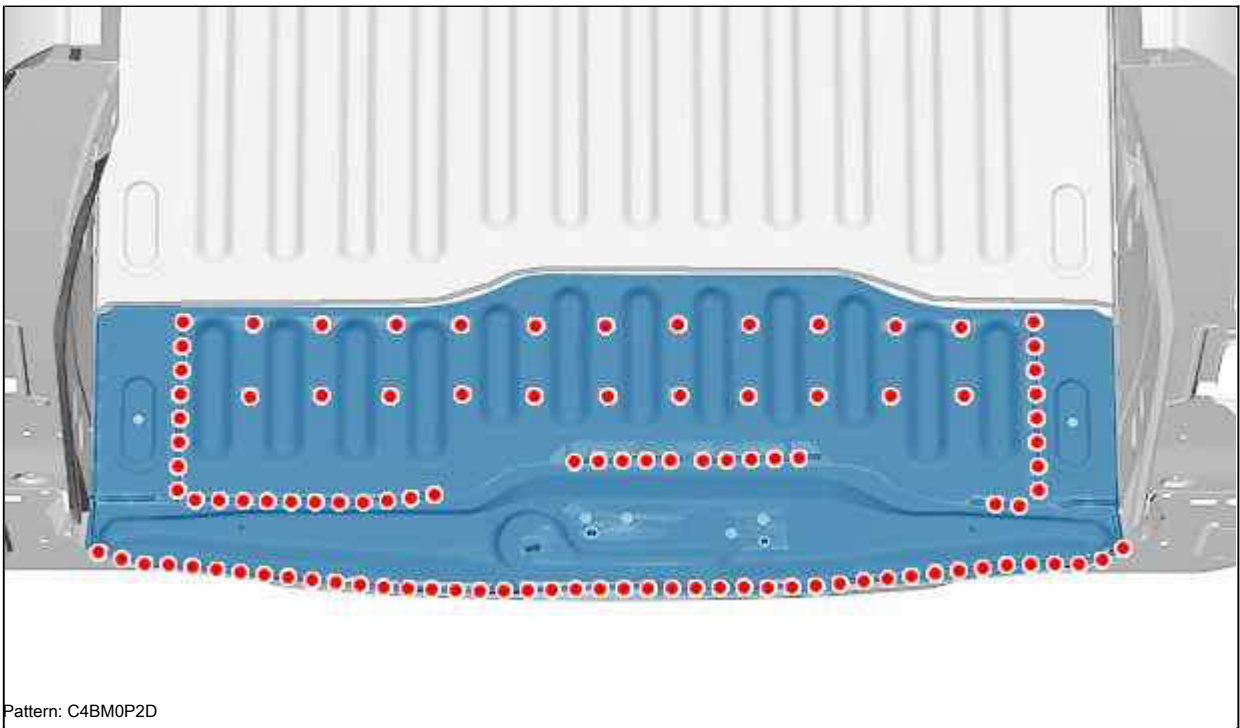
9. Welding

9.1. MAG welding



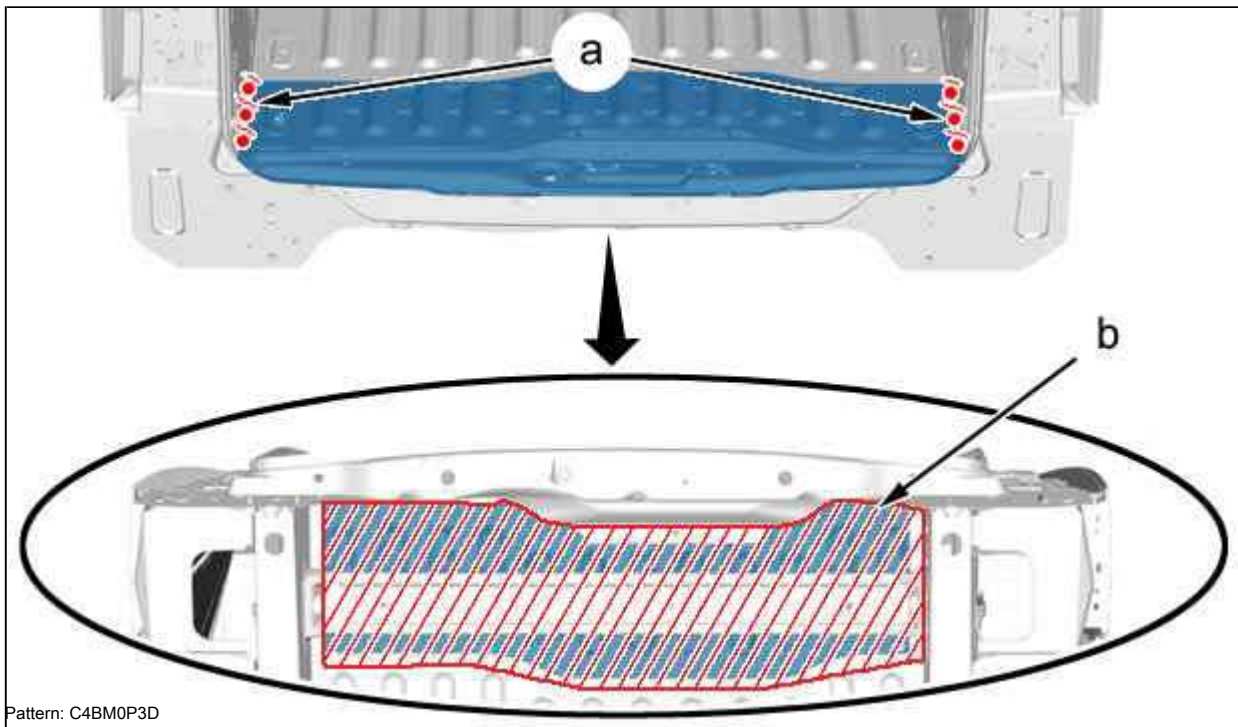
Weld through the holes in the MAG protective gas. Grind MAG welding points.

9.2. Electric spot welding



Weld with welding points.

10. Leakproof protection



Apply a layer of phosphate primer to the cleaned areas. Apply sealant (Index: A1) (in "a").

Apply an anti-gravel coating of category "C4" (in "b").

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

11. Additional operations

Remove the electrical wiring and detachable parts.

12. Reinitialization

Reconnect the battery.

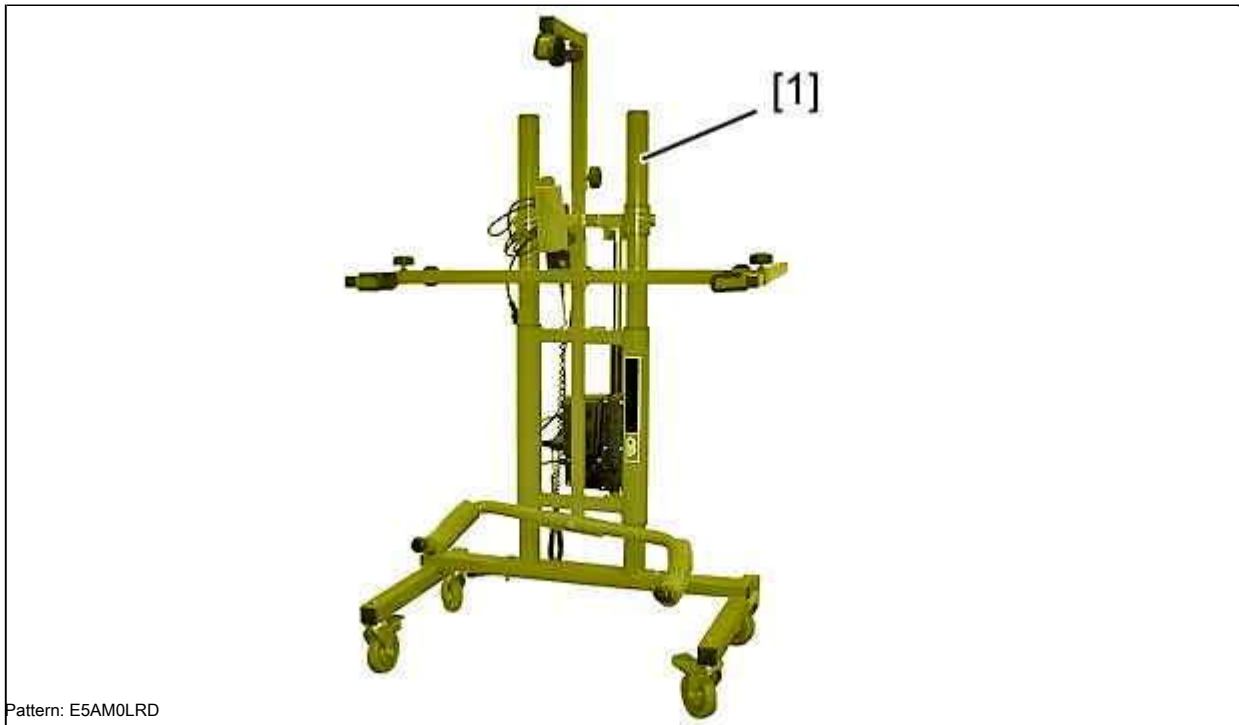
ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL REFITTING: REAR SWING DOORS

MANDATORY: Observe the cleanliness and safety rules



1. Tools



[1] movable support for door positioning (see equipment catalog).

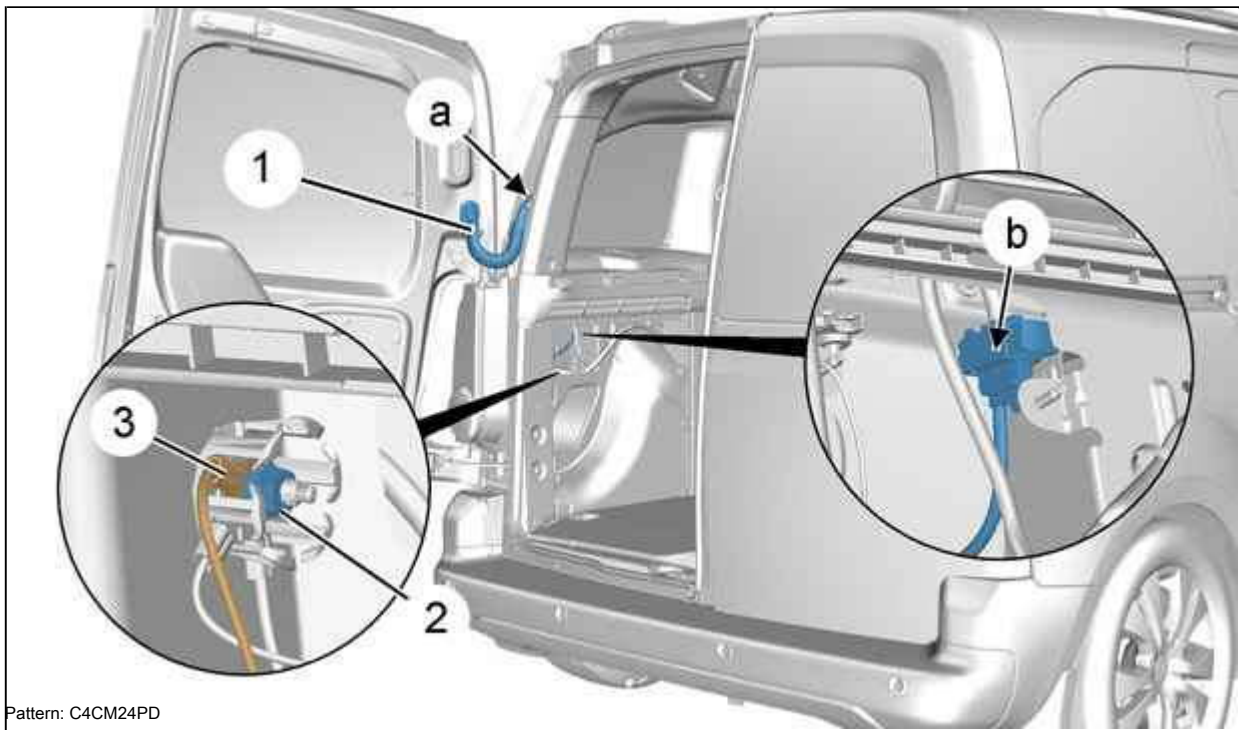
2. Removal

Disconnect the battery



2.1. Rear left swing door

Open: Rear hinged door (left).



Pattern: C4CM24PD

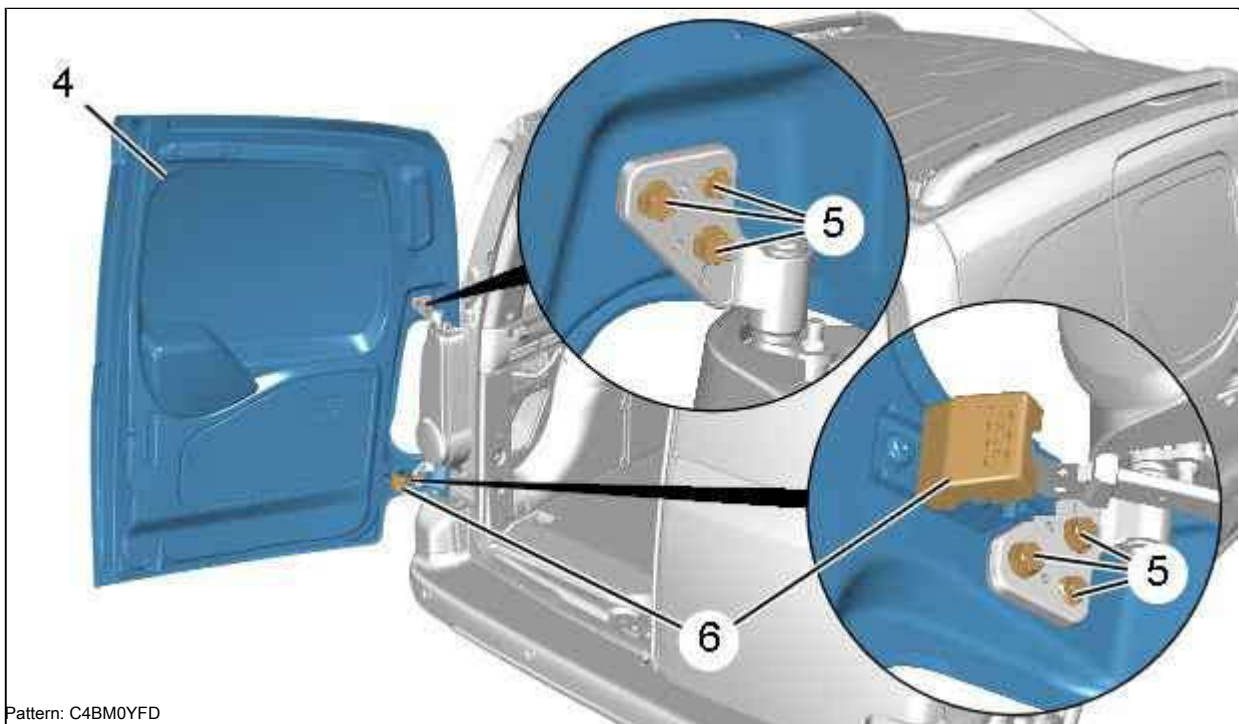
Trunk side trim

Release nut (2).

Detach: Ground wire (3).

Disconnect Disconnect the connector (at "b"). Separate:

- Bushing (1) (in "a"); Using a thin screwdriver
- Rear swing door wiring harness



Pattern: C4BM0YFD

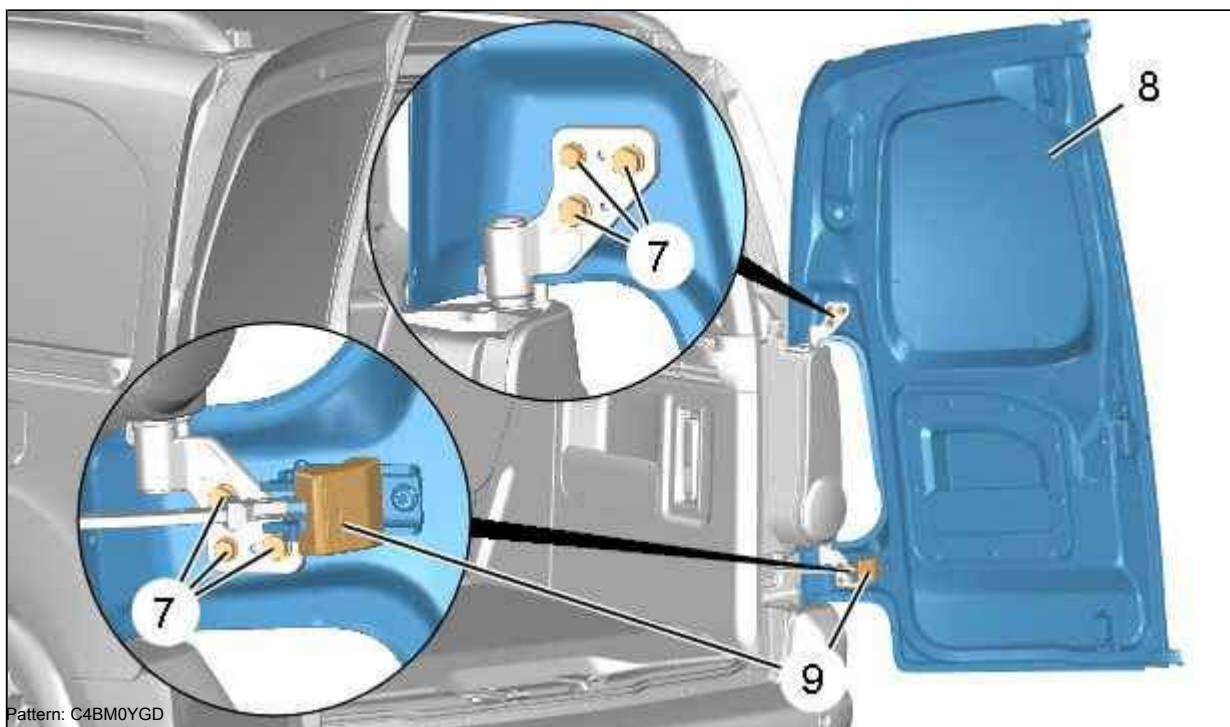
Fix the rear hinged door (4) (left); Using the tool [1]. Unlock the rear swing door rod (6) (4) (left).

Disconnect the pull rod release drive (6) from the rear door (4) (left). Remove:

- the bolts (5)
- Rear hinged door (4) (left)

2.2. Rear swing door

Open the Rear hinged door (right).



Fix the rear hinged door (8) (right); Using the tool [1]. Unlock the rear swing door rod (9) (8) (right).

Disconnect the pull rod release drive (9) from the rear door (8) (right). Remove:

- the bolts (7)
- Rear hinged door (8) (right)

3. Installation

Installation is carried out by performing the removal operations in the reverse order.

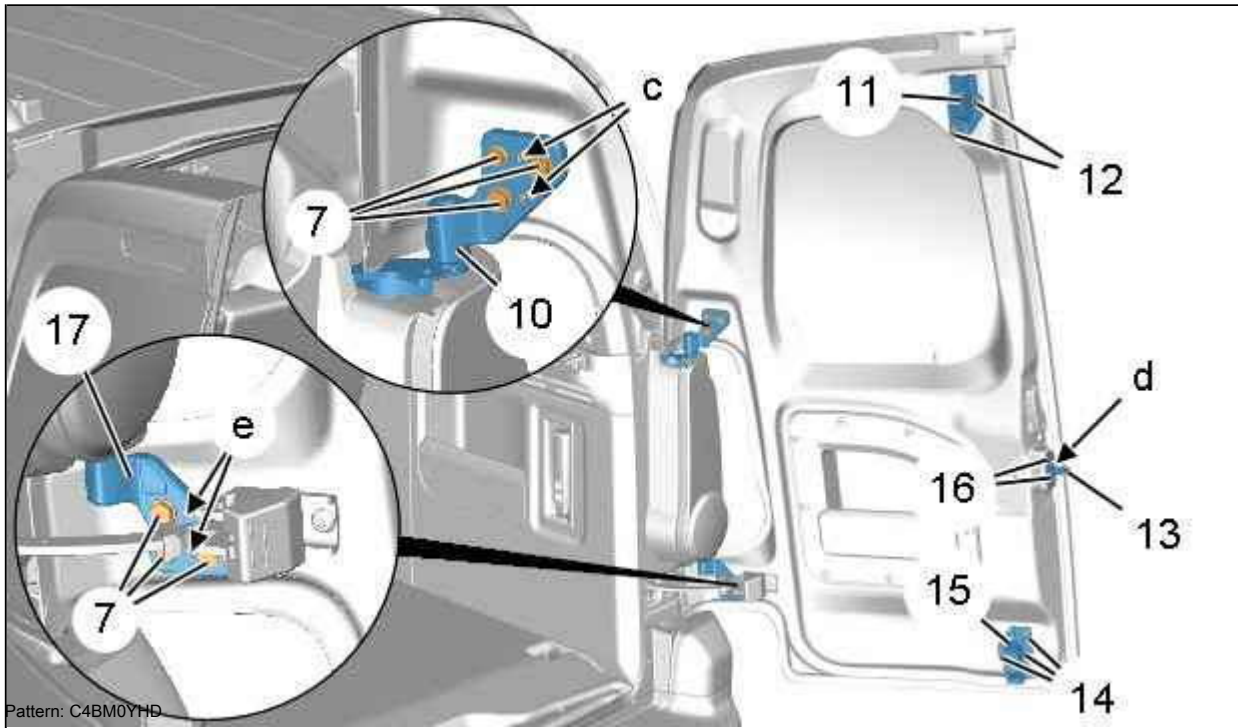
Reconnect the rechargeable battery

Check the functioning of the electrical equipment.



4. Adjustments

4.1. Rear swing door



NOTE: Door hinges (10), (17) have locating protrusions on the door side; The door bracket (13) is indexed (On the door side).

NOTE: However, it is possible to remove the locating lugs if additional adjustment is required (in "c", "d", "e"); Using a punch.

Loosen:

- Door hinge screws (7) (10), (17)
- Top mechanism screws (11)
- Screws (16) door brackets (13)
- Lower mechanism screws (14) lock (15)

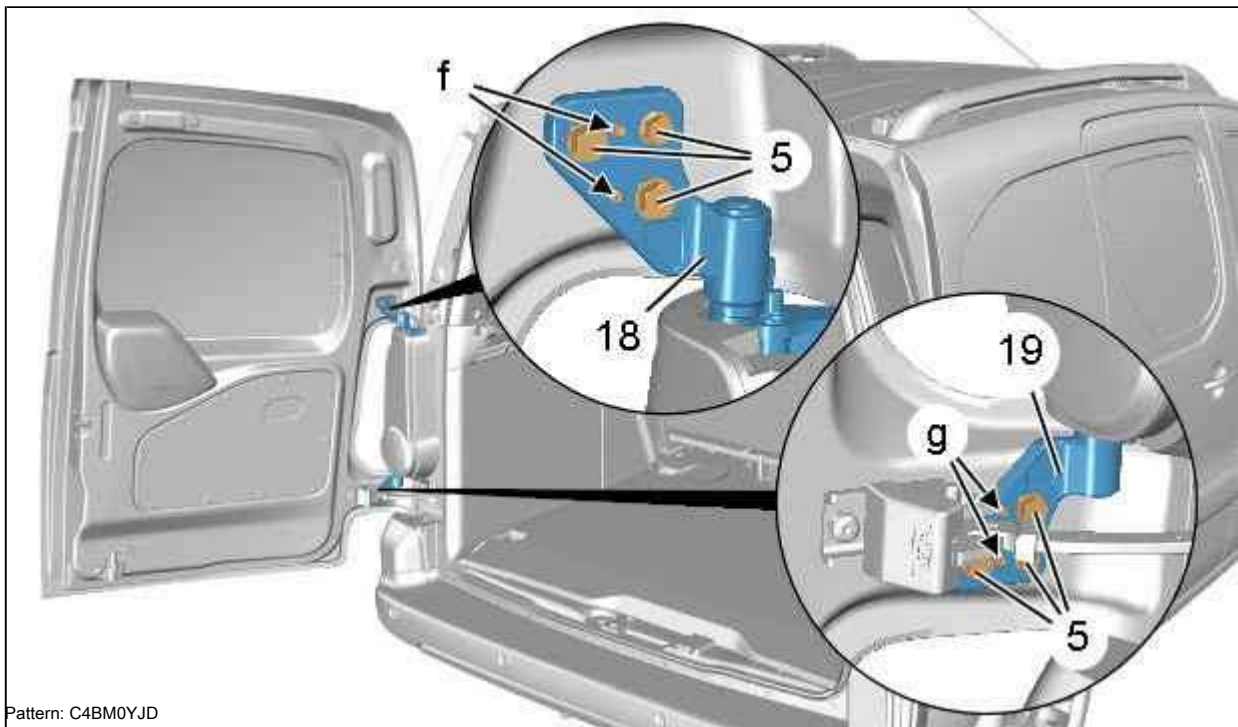
Adjust clearances and fit of right hinged door

Tighten:

- Screws (7) of the door hinges (10), (17) with a torque of 2.6 da.Nm
- Screws (12) of the upper locking mechanism (11) with a torque of 2 da.Nm
- Screws (16) of the door bracket (13) with a torque of 2 da.Nm
- The screws (14) of the lower locking mechanism (15) with a torque of 2 da.Nm



4.2. Rear left swing door



Pattern: C4BM0YJD

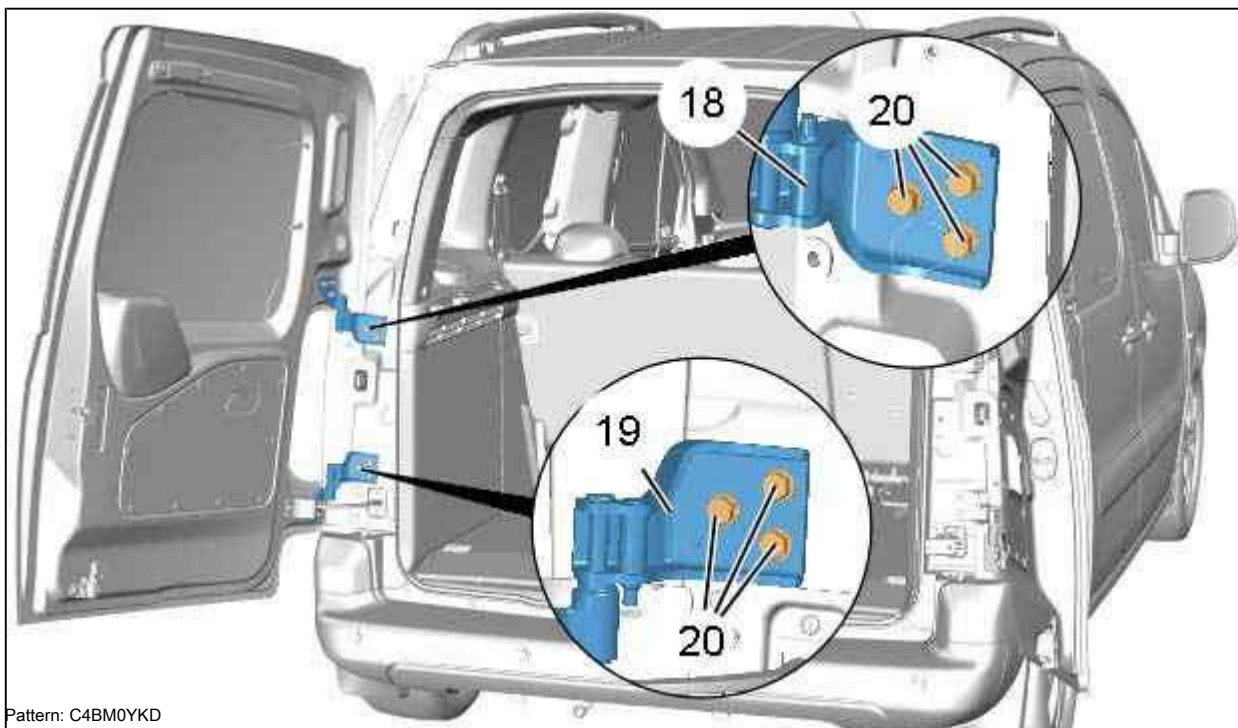
NOTE: The door hinges (18), (19) have locating protrusions on the door side.

NOTE: However, it is possible to remove the locating lugs if additional adjustment is required (in "f", "g"); Using a punch.

Loosen: Screws (5) of door hinges (18), (19).

Adjust the clearances and fit of the left swing door

Tighten: The screws (5) of the door hinges (18), (19) to a torque of 2.6 da.Nm.



Pattern: C4BM0YKD

NOTE: If additional adjustment is required.

Remove taillights



NOTE: The operation is symmetrical for the hinge screws (10), (17) (Rear swing door) (right).

Loosen: Screws (20) of door hinges (18), (19).

Adjust the clearances and fit of the rear swing doors

Tighten: The screws (20) of the door hinges (18), (19) with a torque of 2.6 da.Nm.

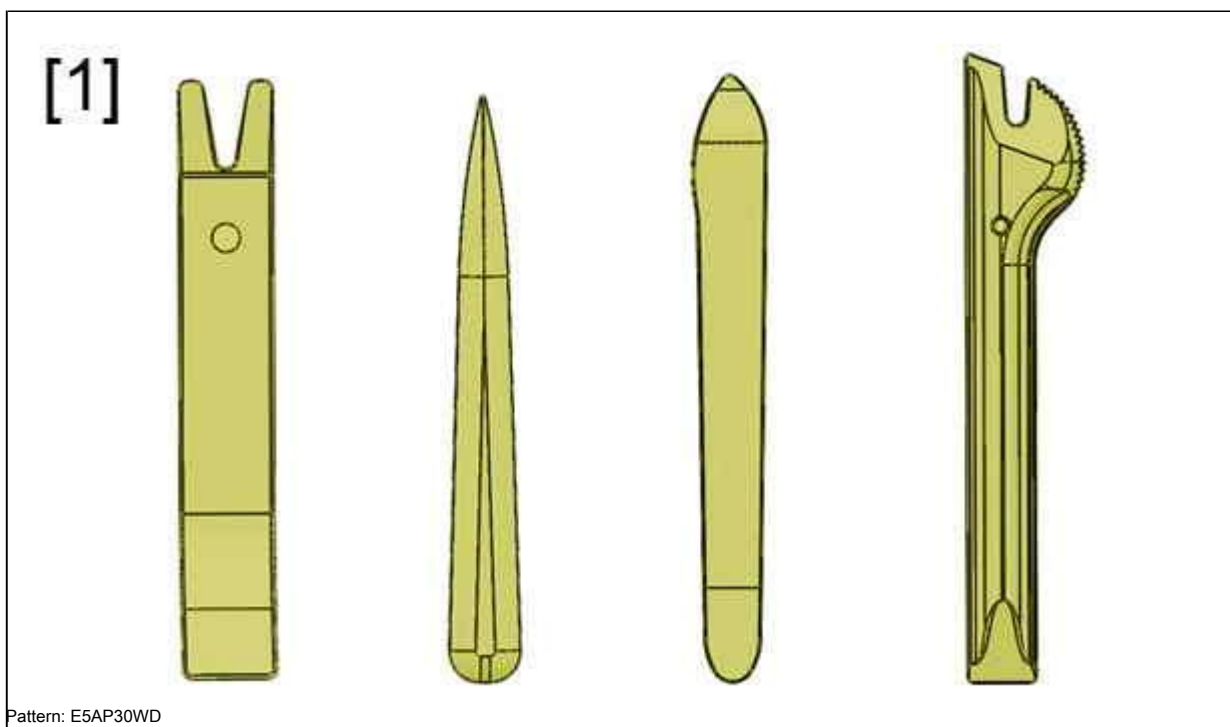


REMOVAL INSTALLATION: INTERIOR LINING

MANDATORY: Observe the cleanliness and safety rules



1. Tools



Pattern: E5AP30WD

[1] Tool for removing the trim () 1350ZZ.

2. Preliminary operations

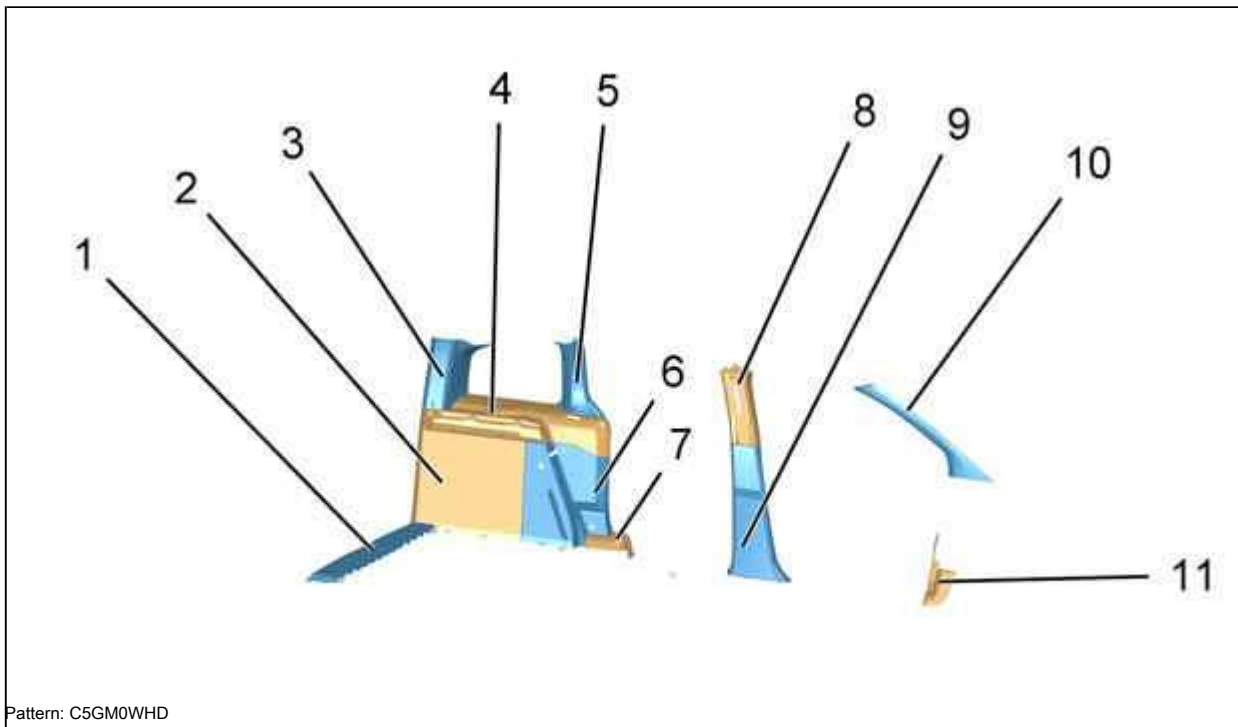
Remove:

- **Front seat belt** (partially)
- **Rear seat belt** (partially)
- Rear shelf
- Door seal (front) (Partial)
- Door seal (rear) (Partial)



Trunk opening seal (Partial).

3. Presentation

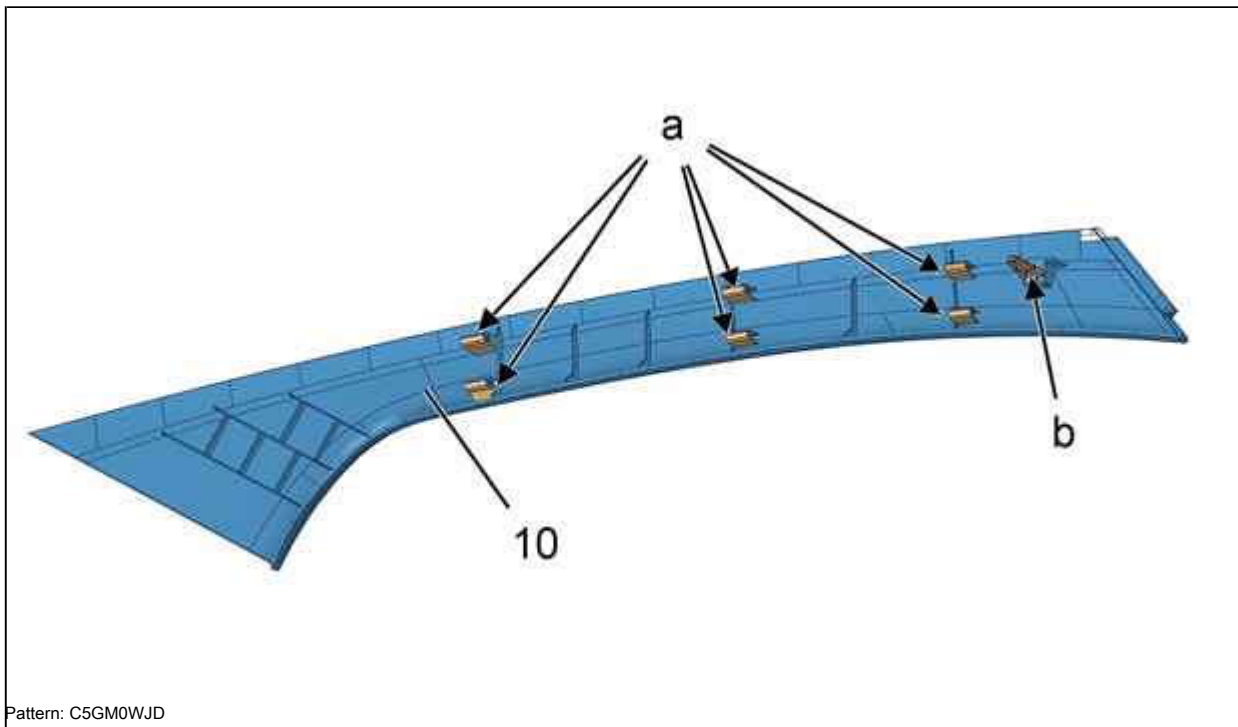


- (1) Trunk sill trim.
- (2) Luggage side trim. (3) Rack finishes (Rear). (4) Support racks.
- (5) C-pillar top trim panel. (6) Rear wheel arch trim.
- (7) Protective trim for door wiring harness. (8) Center pillar top trim. (9) Center pillar bottom trim. (10) Windscreen pillar trim. (11) A-pillar trim panel.

4. Removal

Remove:

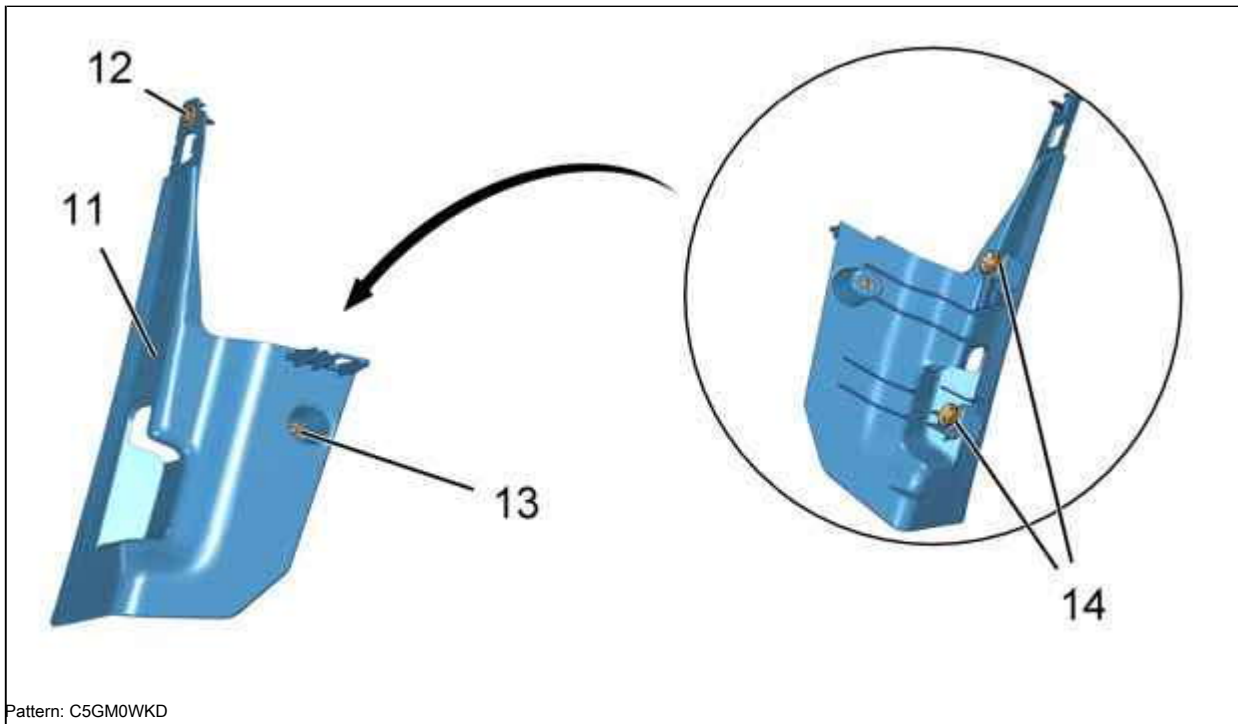
- Front seat belt (partial)
- Rear seat belt (partial)
- Rear shelf
- Door seal (front) (Partial)
- Door seal (rear) (Partial)
- Luggage compartment seal (Partial)



Disconnect the windshield pillar trim (10) (at "a"); Using the tool [1]. Separate:

- Dowel pin (at "b")
- Upper ceiling trim

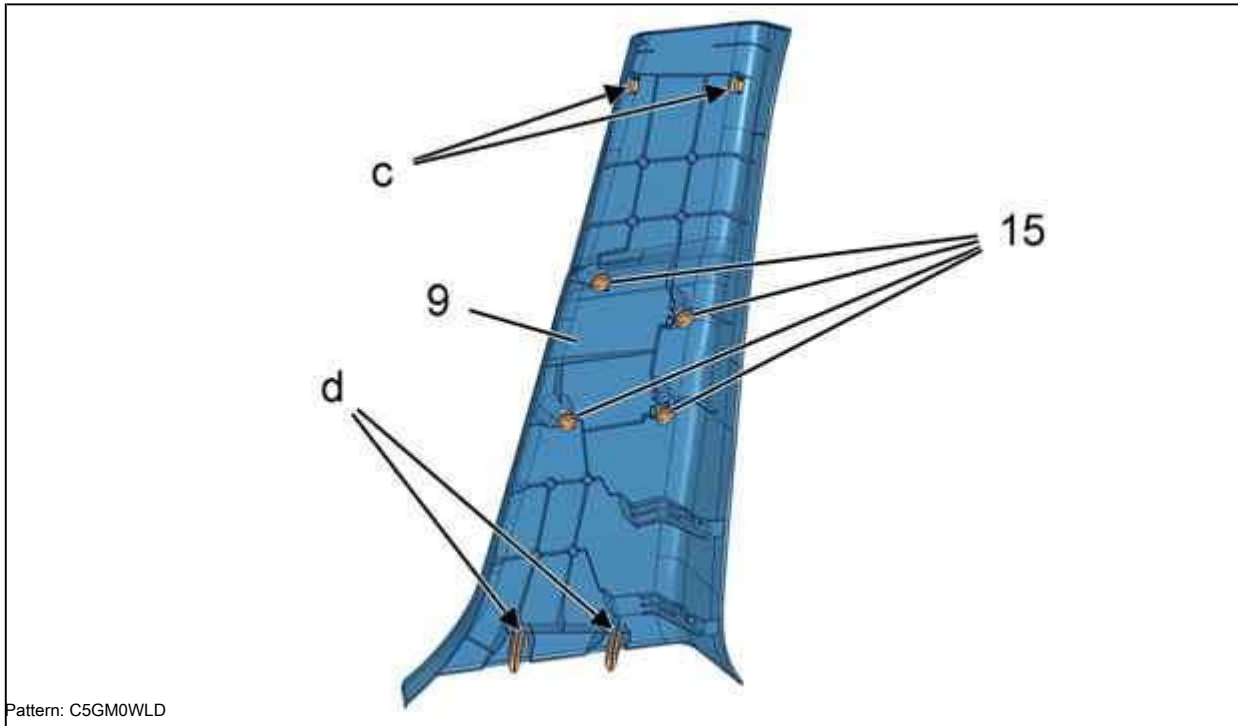
Remove the pillar trim (10).



NOTE: Pre-remove the sides and lower dashboard trim

Remove:

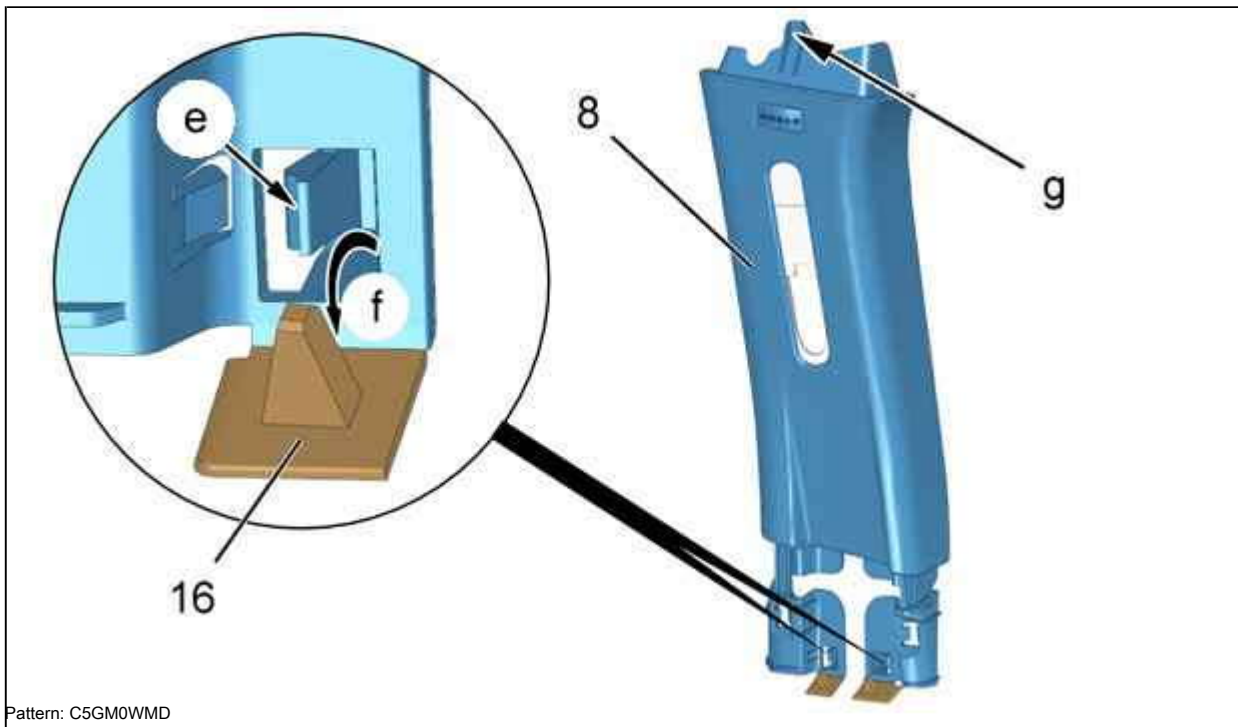
- The bolt (12)
- Nut (13)
- Detach the clips (14); Using the tool [1]
- Separate trim (11) hood opening handle
- Remove: A-pillar lower trim (11)



Disconnect in the following order; Using the tool [1]:

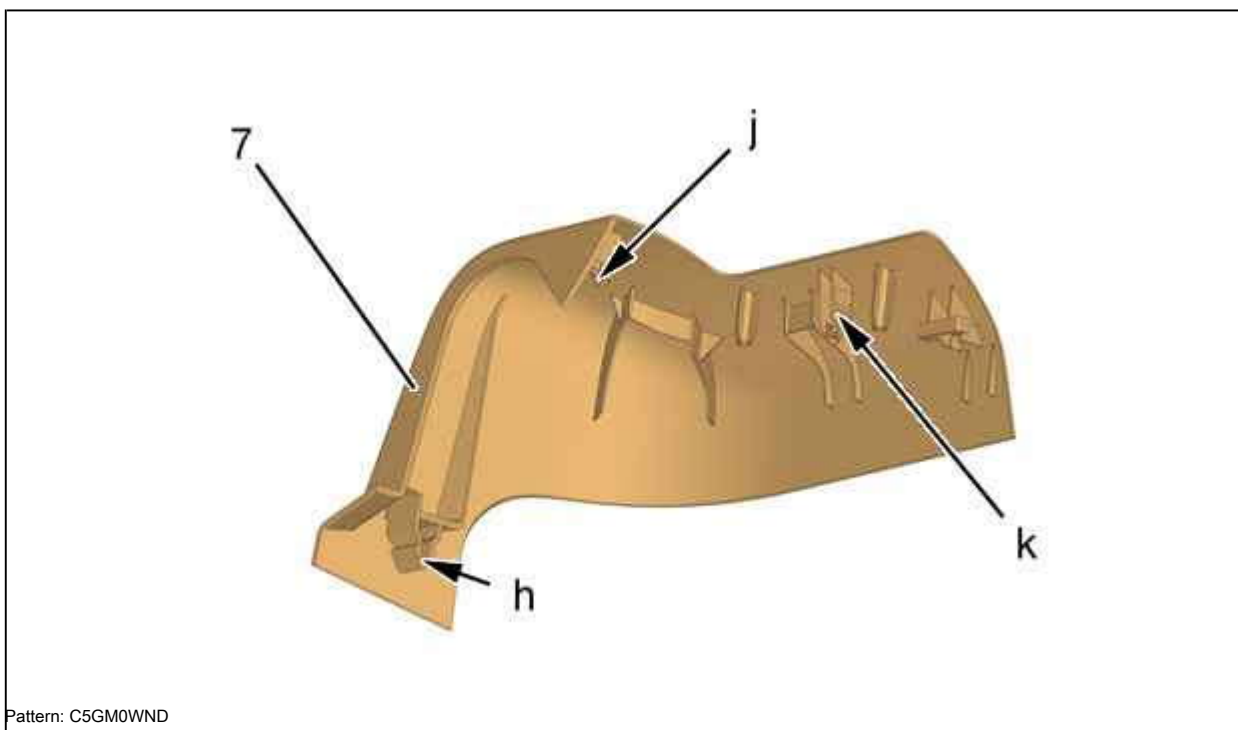
- protrusions (in "c")
- clips (15)

Separate the tabs from their slots (at "d"). Remove the trim panel (9).

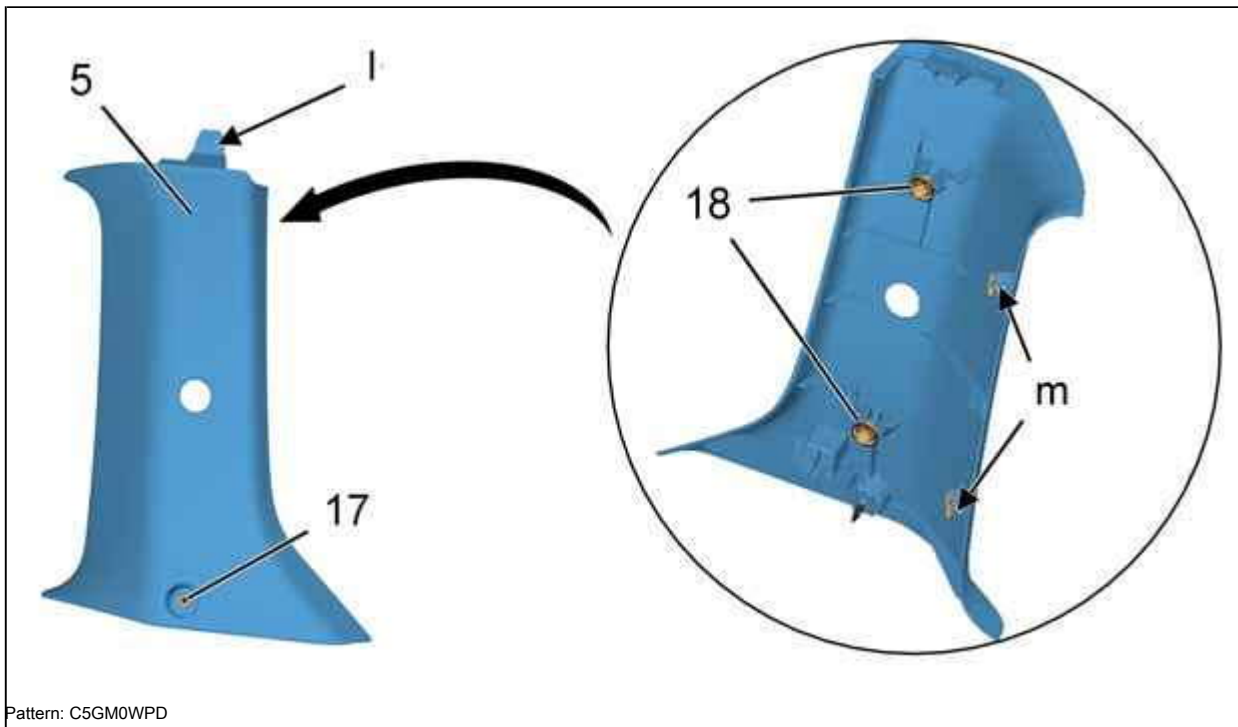


Open the lock cover (16) (As shown by the arrow (at "f")) (on each side). Unlock: Mount (at "e") (on each side).

Detach the bottom trim (8), then the guides (in "g"). Remove the trim panel (8).

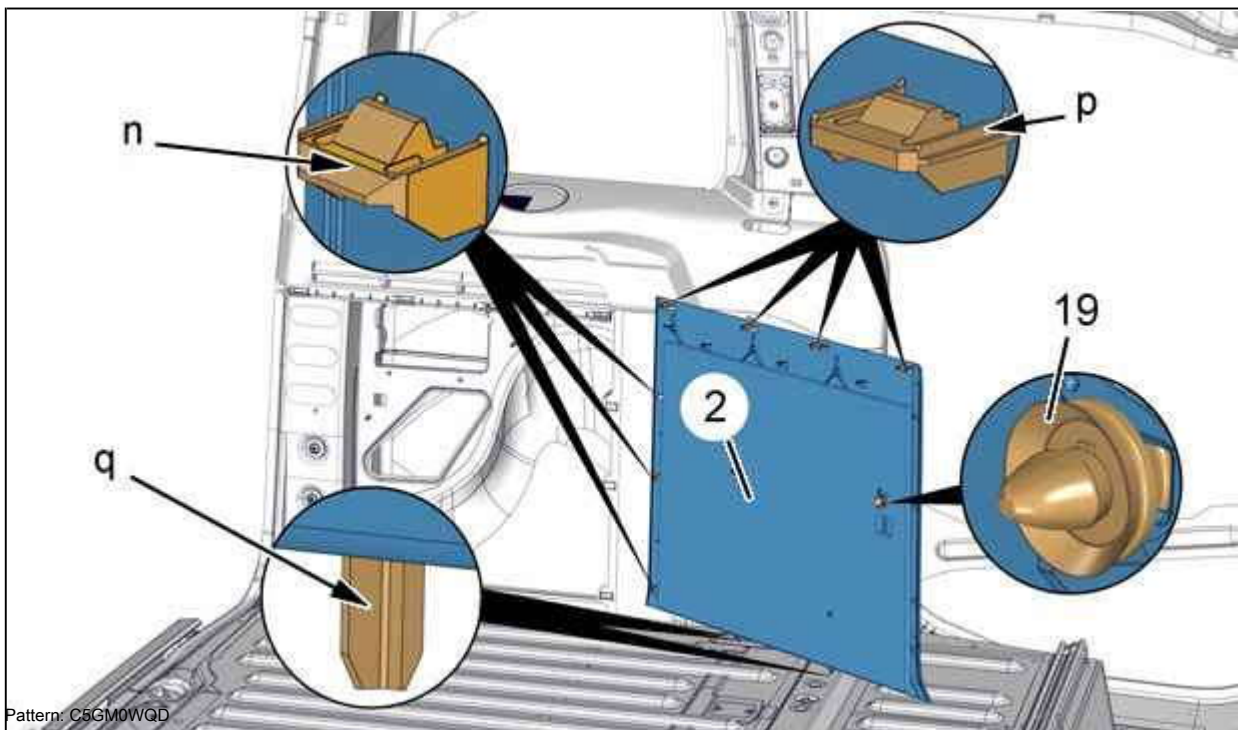


Disconnect in sequence (in "h", "j", "k"); Using the tool [1]. Remove: the door harness trim (7).



Remove bolts (17).

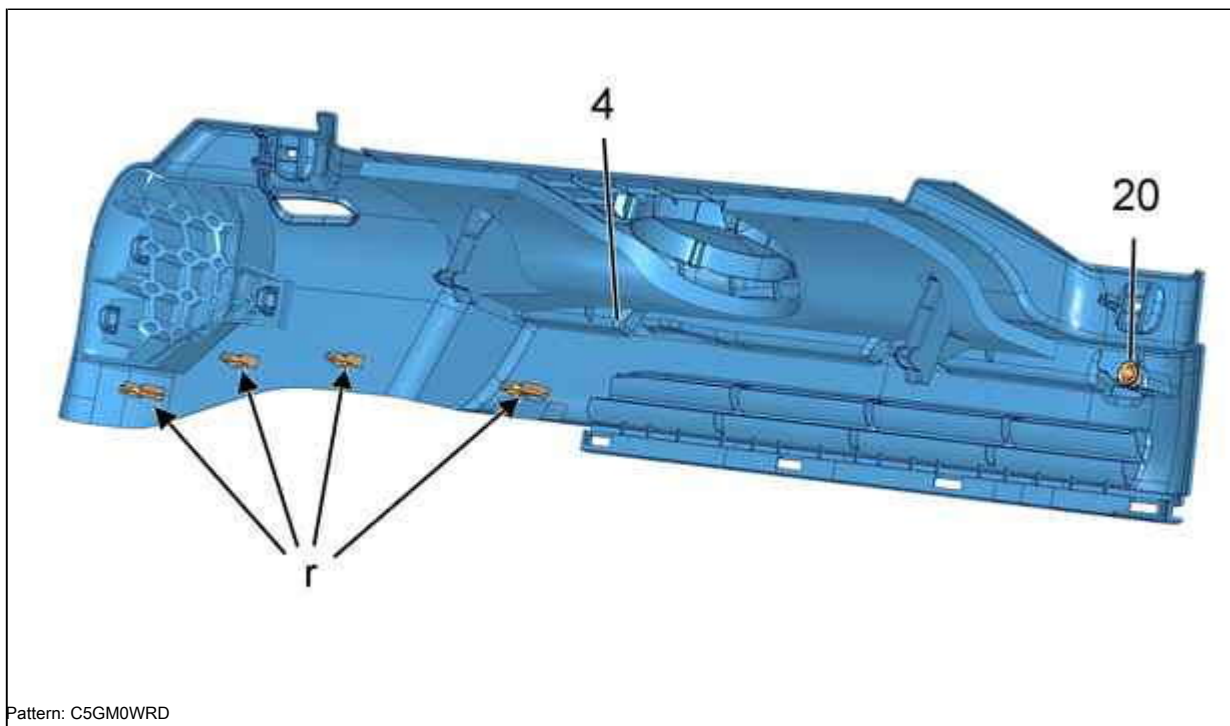
Detach the clips (18); Using the tool [1]. At the end, disconnect (at "m"); Using the tool [1]. Separate the retaining tab from its socket (at "l"). Remove: C-pillar upper trim panel (5).



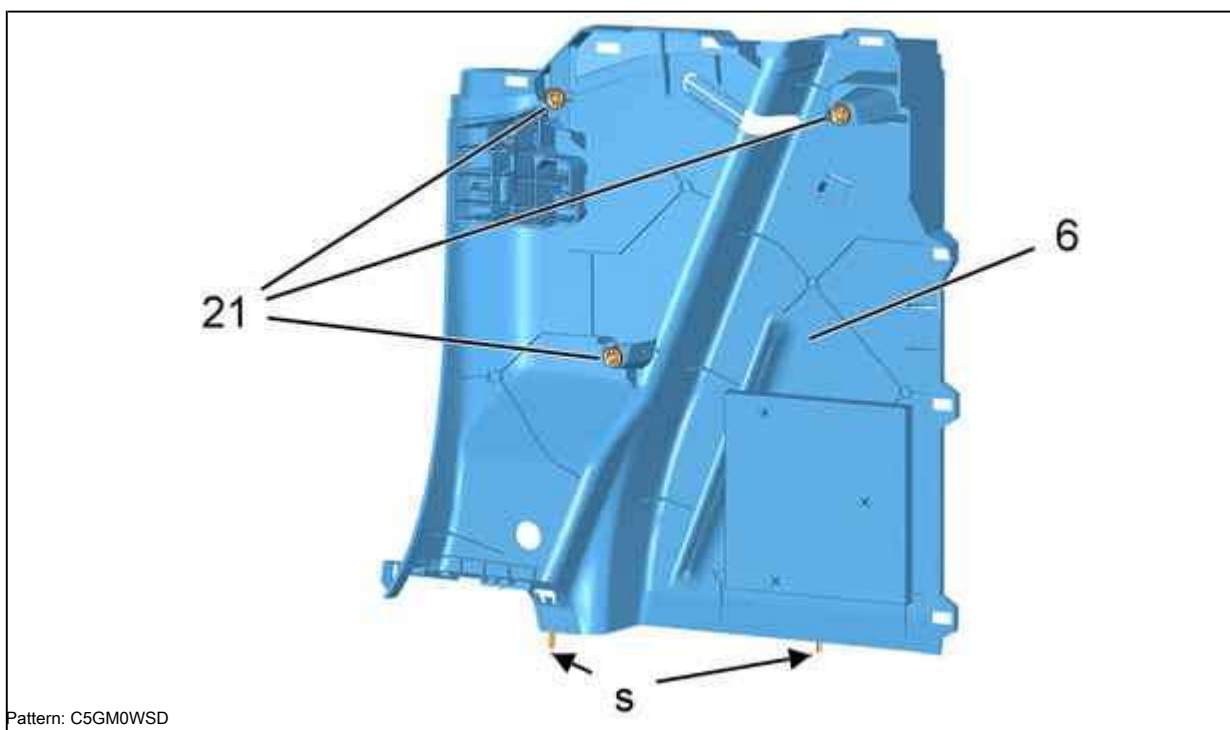
Detach the retainer (19); Using the tool [1].

Disconnect Unlock at the same time the clips (B "p" and "n"); Using the tool [1]. Separate the tabs from their sockets (at "q").

Remove: Trunk side trim (2).

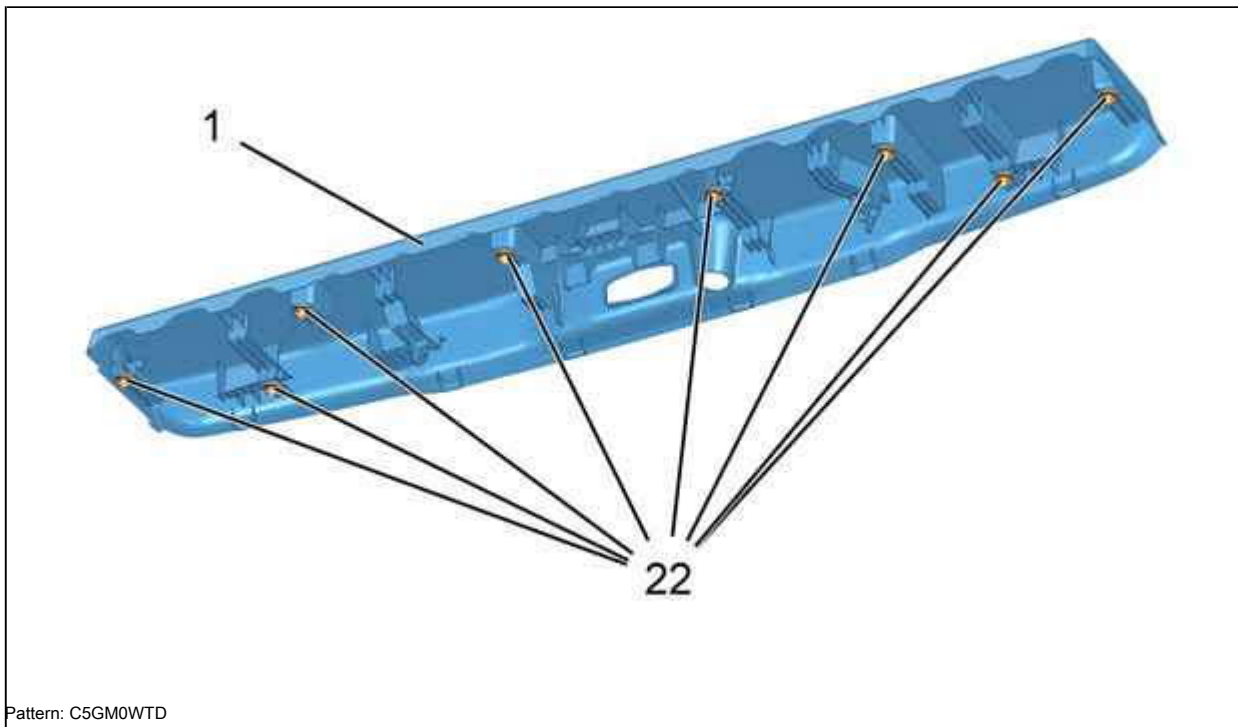


Detach the retainer (20); Using the tool [1]. Unlock Disconnect (at "r"); Using the tool [1]. Remove: Table holder (4).



Detach the clips (21); Using the tool [1]. Separate the protrusions from their nests (at "s").

Remove: the rear wheel arch trim (6).



Disconnect the clips (22); Using the tool [1]. Remove the trunk sill trim (1).

5. Installation

ATTENTION : Replace any damaged retainer.

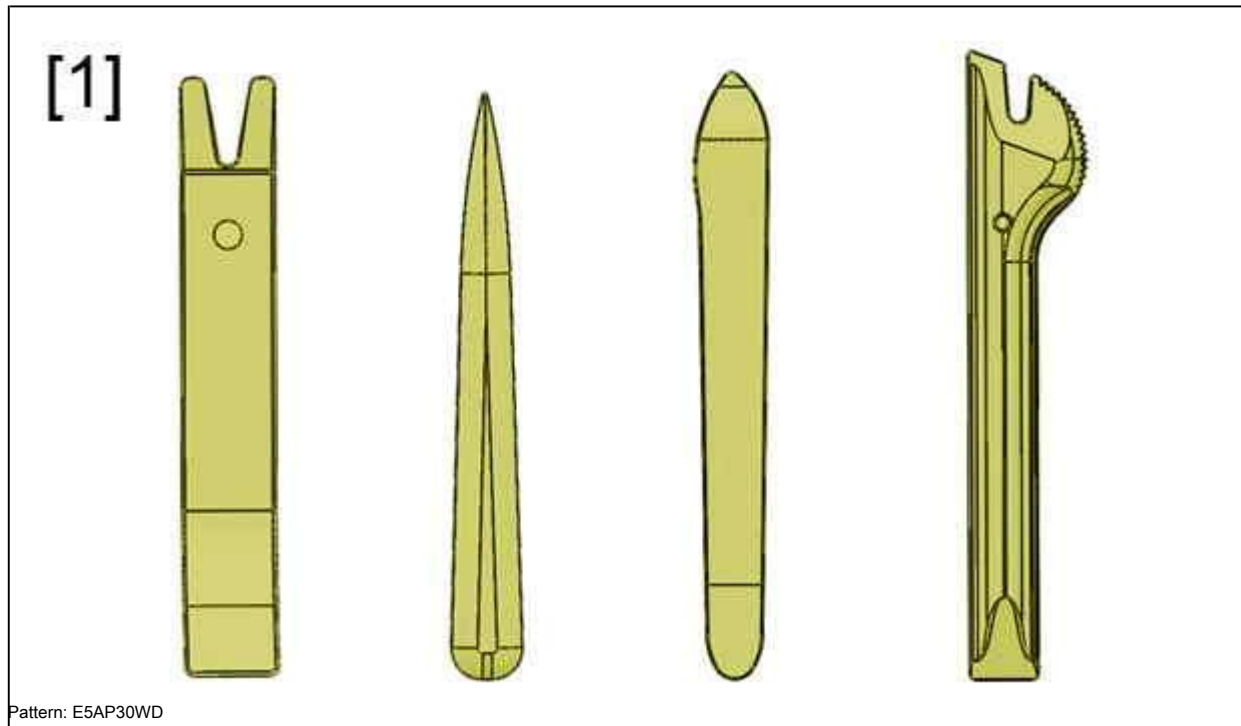
Perform the sequence of operations in the reverse order of removal. Check the operation of the removed elements.

REMOVAL INSTALLATION: INTERIOR LINING (7PERSONS MODIFICATION)

~~MANDATORY: Observe the cleanliness and safety rules~~

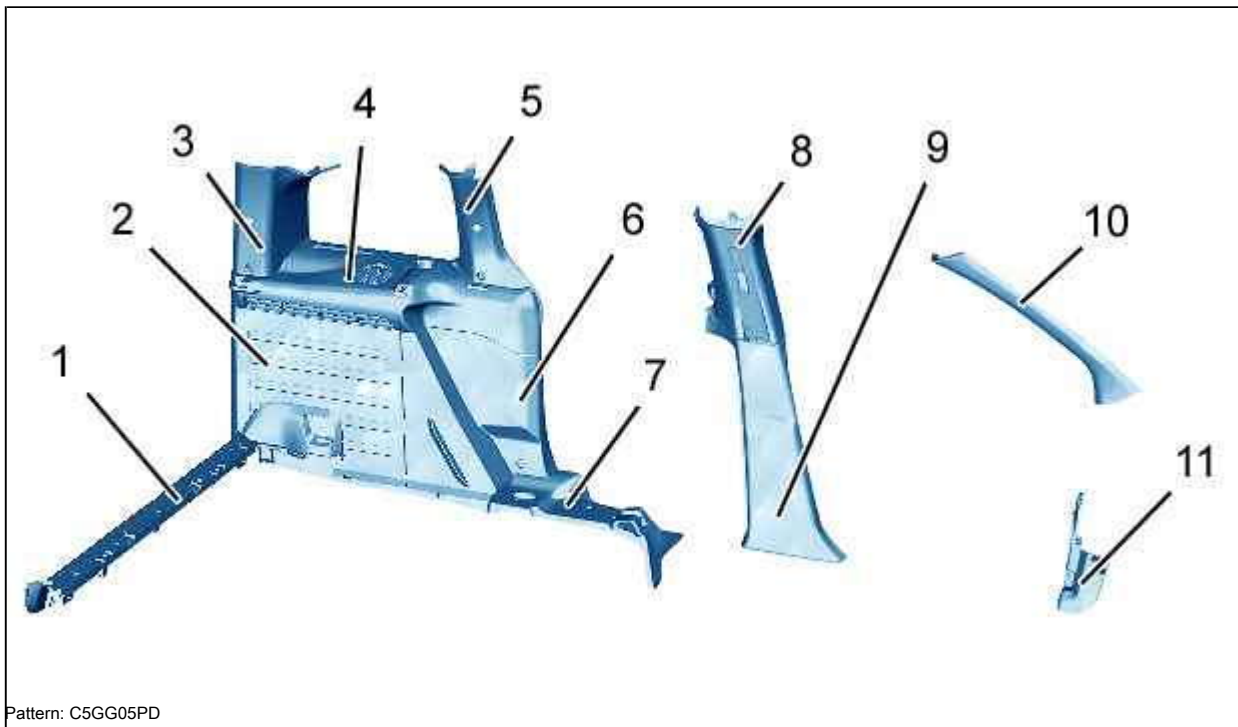


1. Tools



[1] Trim removal tool (). 1350.

2. Presentation



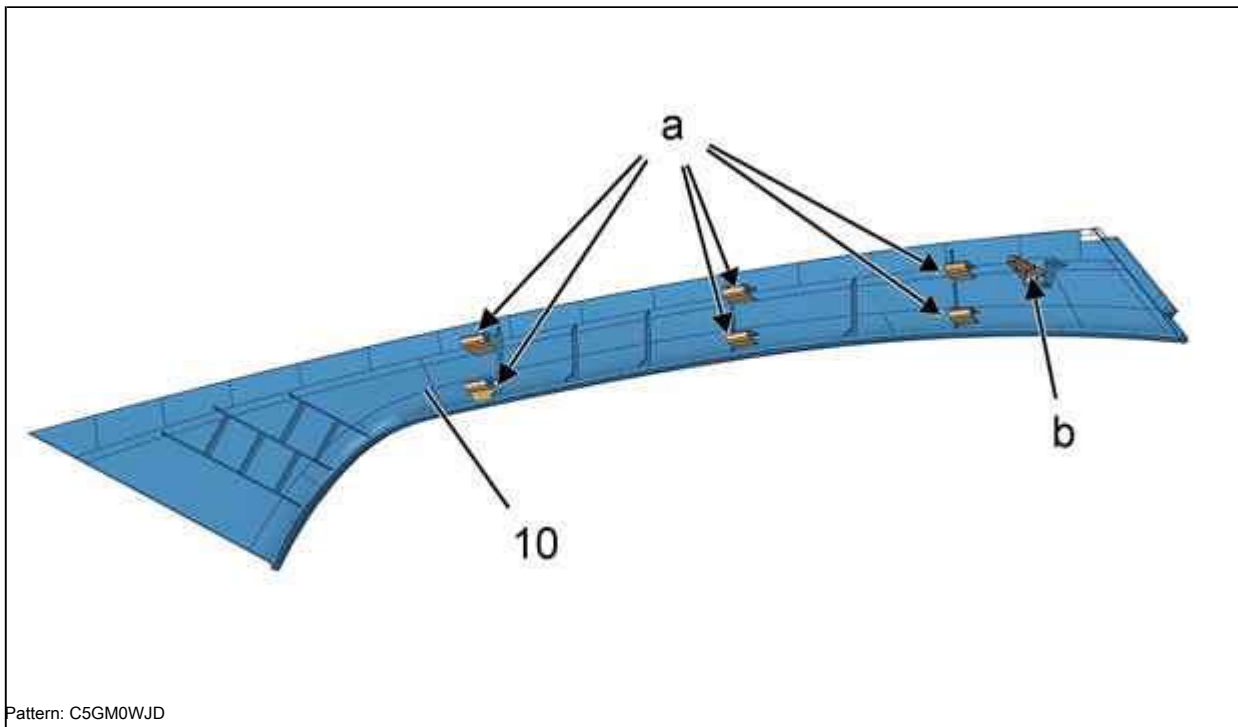
- (1) Trunk sill trim.
 (2) Luggage side trim. (3) Rear pillar trim.
 (4) Support racks.
 (5) C-pillar top trim panel. (6) Rear wheel arch trim. (7) Doorway trim: Side.
 (8) Center pillar top trim. (9) Center pillar bottom trim. (10) Windscreen pillar trim. (11) A-pillar trim panel.

3. Removal

Remove:

- **Disconnect the battery**
- Rear seats (Row 2/3) (See Owner's Manual)
- **Front seat belt** (partially)
- **Rear seat belt** (partially)
- **Rear seat belt** (Row 3) (partially)
- Door seal (front) (Partial)
- Door seal (rear) (Partial)

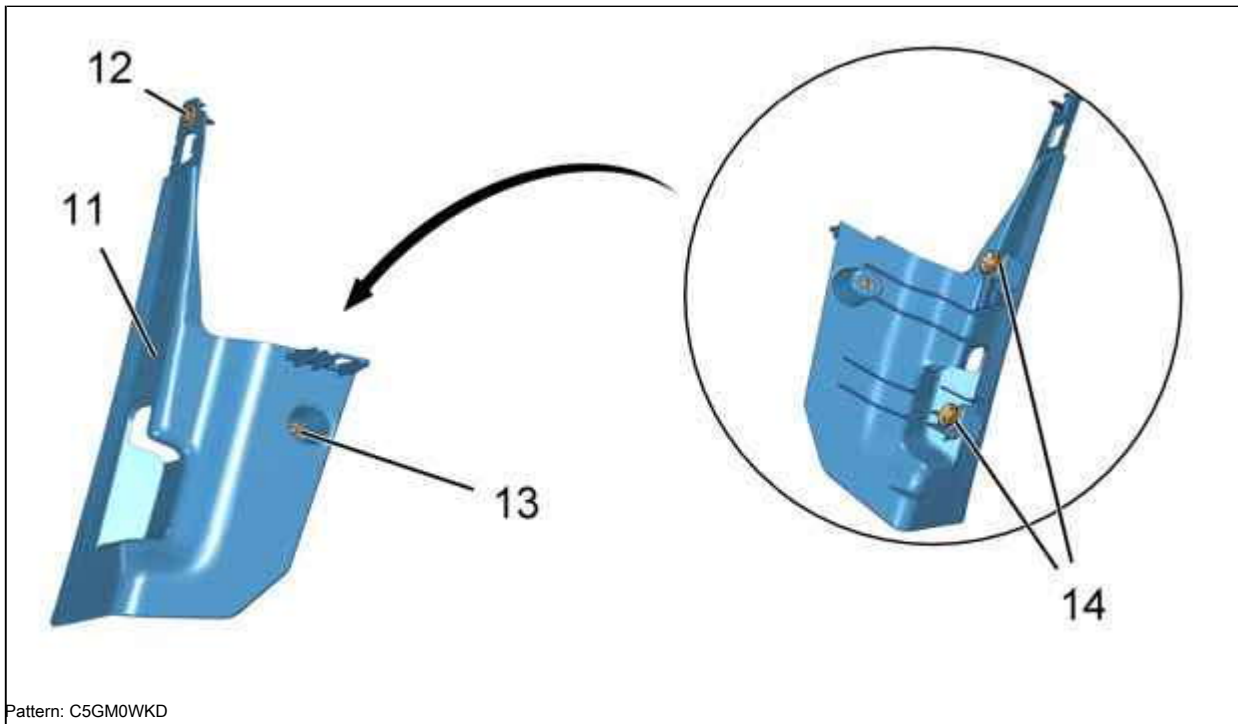
Trunk opening seal (Partial).



Disconnect the windshield pillar trim (10) (at "a"); Using the tool [1]. Separate:

- Dowel pin (at "b")
- Upper ceiling trim

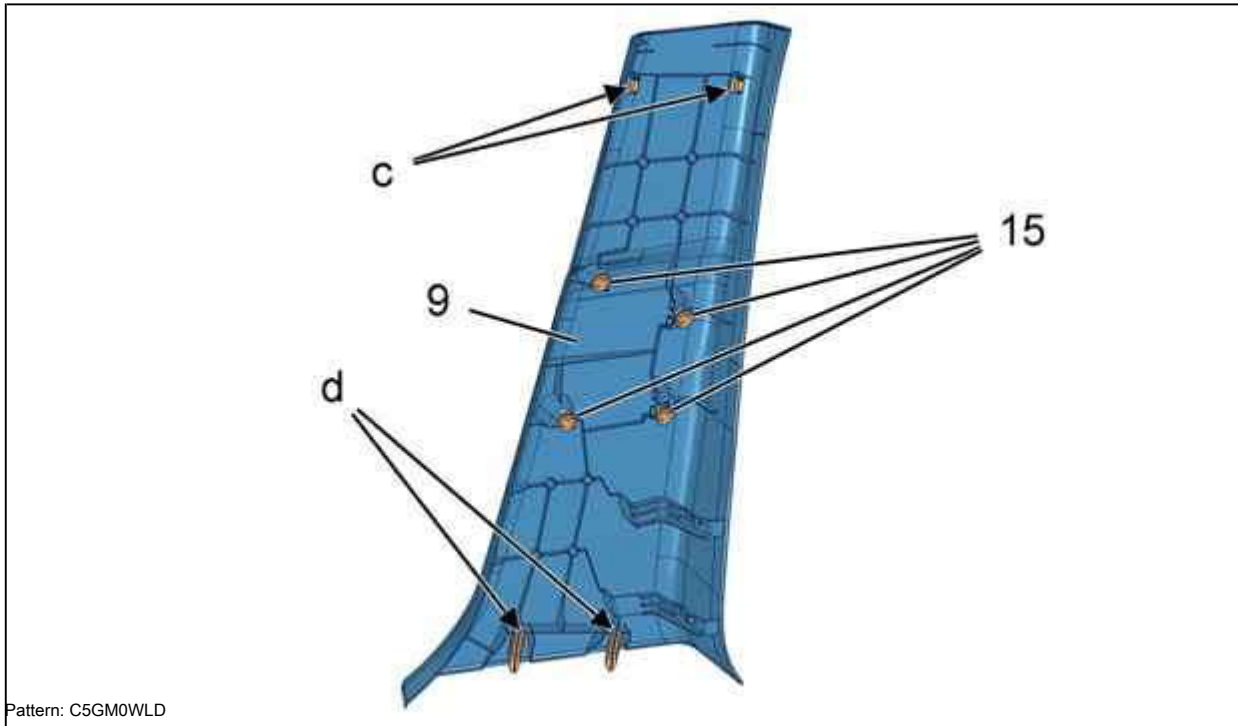
Remove the pillar trim (10).



NOTE: Pre-remove the sides and lower dashboard trim

Remove:

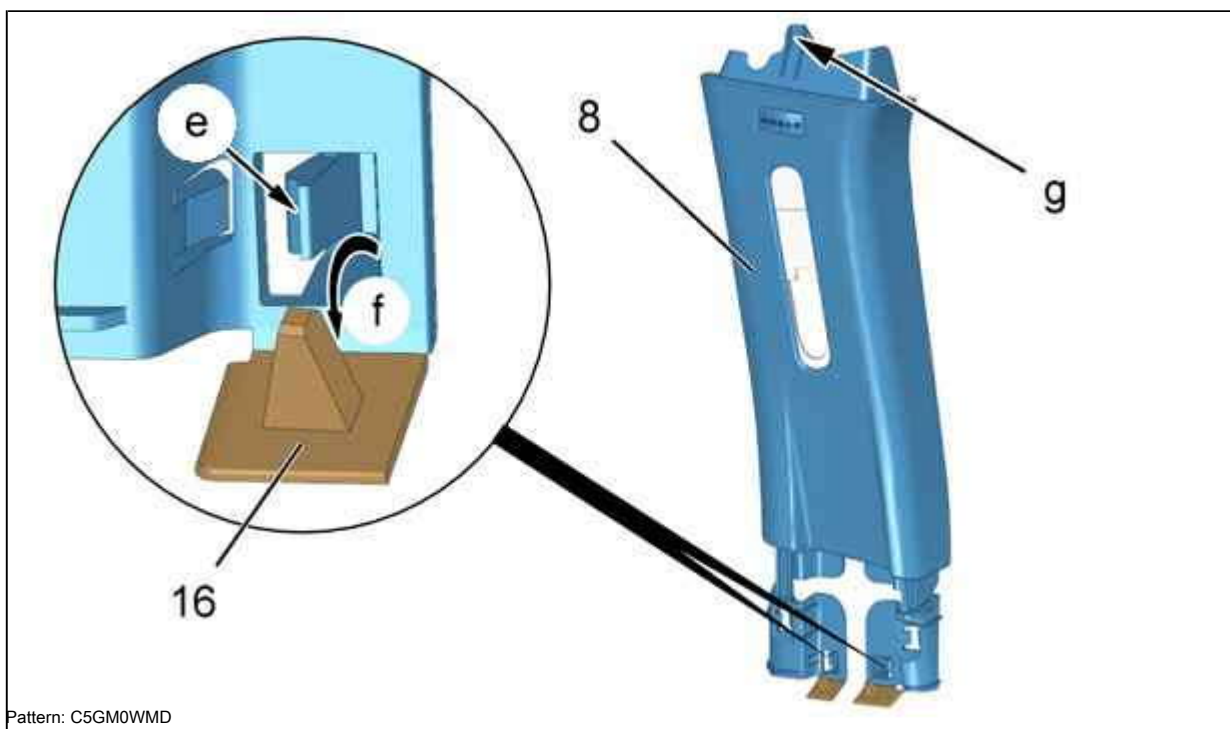
- The bolt (12)
- Nut (13)
- Detach the clips (14); Using the tool [1]
- Separate trim (11) hood opening handle
- Remove: A-pillar lower trim (11)



Disconnect in the following order; Using the tool [1]:

- protrusions (in "c")
- clips (15)

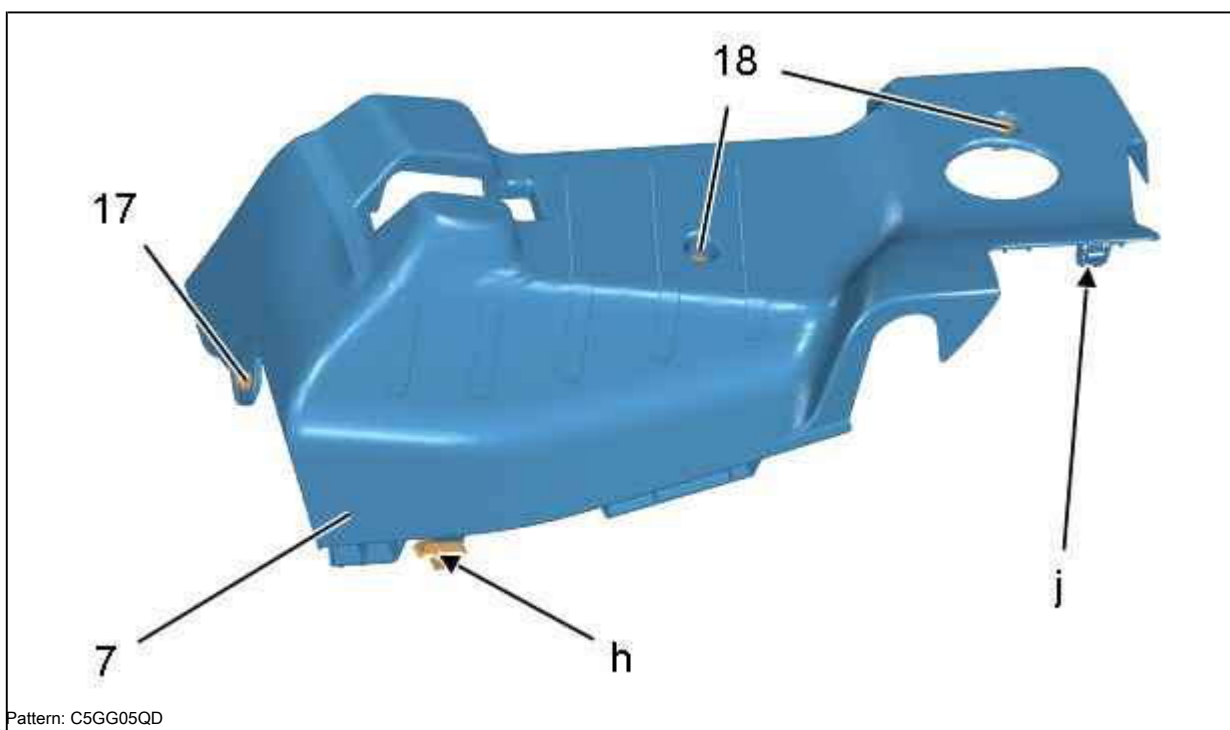
Separate the tabs from their slots (at "d"). Remove the trim panel (9).



Pattern: C5GM0WMD

Open the lock cover (16) (as shown by arrow "f") (on each side). Unlock: Mount (at "e") (on each side).

Detach the bottom trim (8), then the guides (in "g"). Remove the trim panel (8).

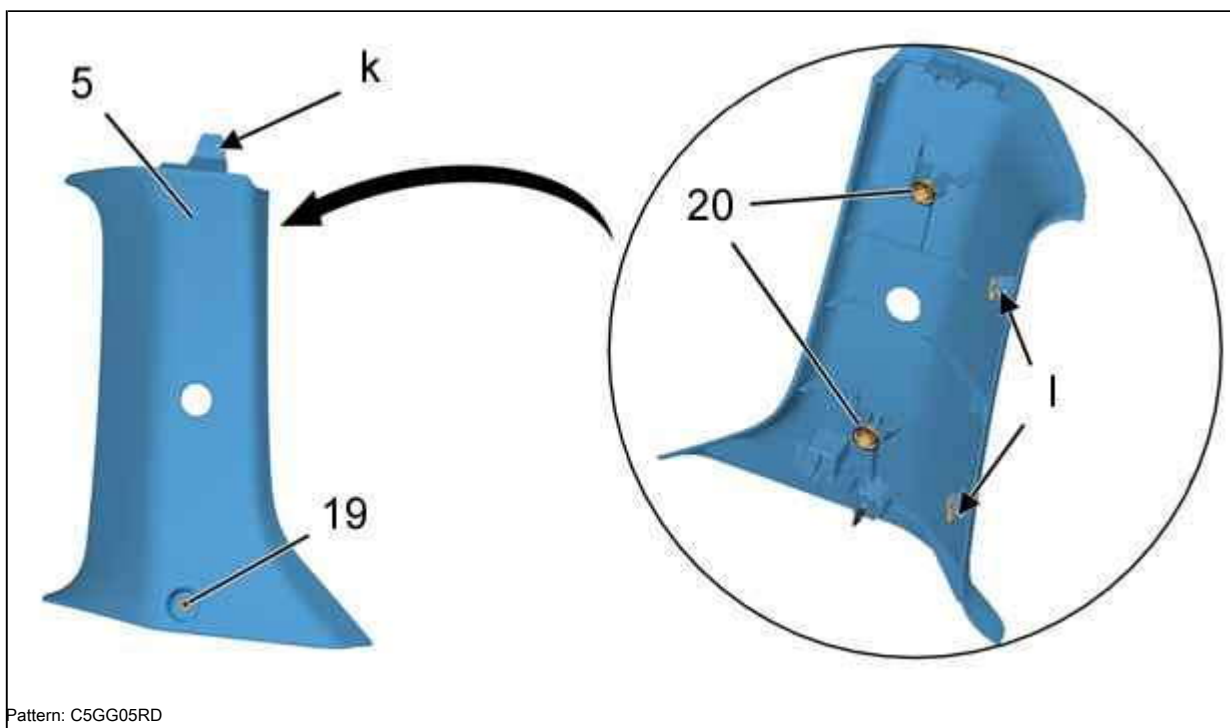


Pattern: C5GG05QD

Remove:

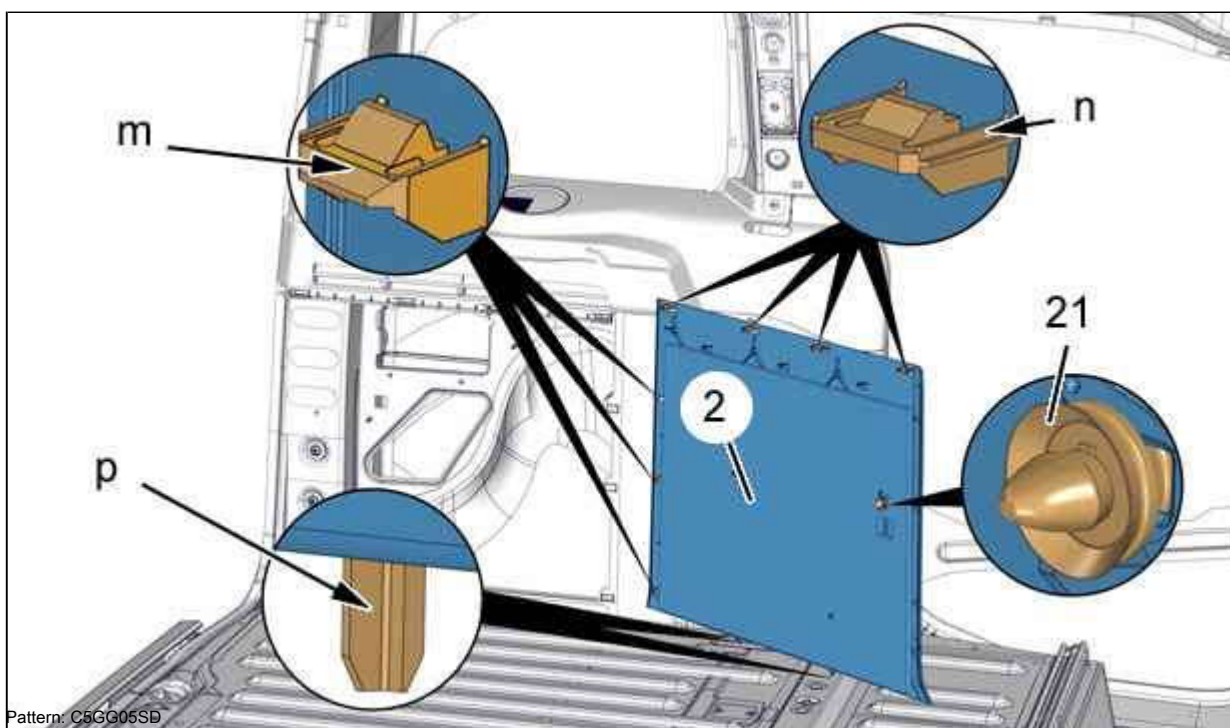
- Nut (17)
- Bolts (18)

Disconnect in sequence (in "j" et "h"); Using the device [1]. Remove: Door sill trim (7) (Side).



Remove bolts (19).

Disconnect the clips (20); Using the tool [1]. At the end, disconnect (at "l"); Using the tool [1]. Separate the retaining tab from its socket (at "k"). Remove: C-pillar upper trim panel (5).



Detach the retainer (21); Using the tool [1].

Disconnect Unlock at the same time the clips (B "n" and "m"); Using the tool [1]. Separate the protrusions from their nests (at "p").

Remove: Trunk side trim (2).

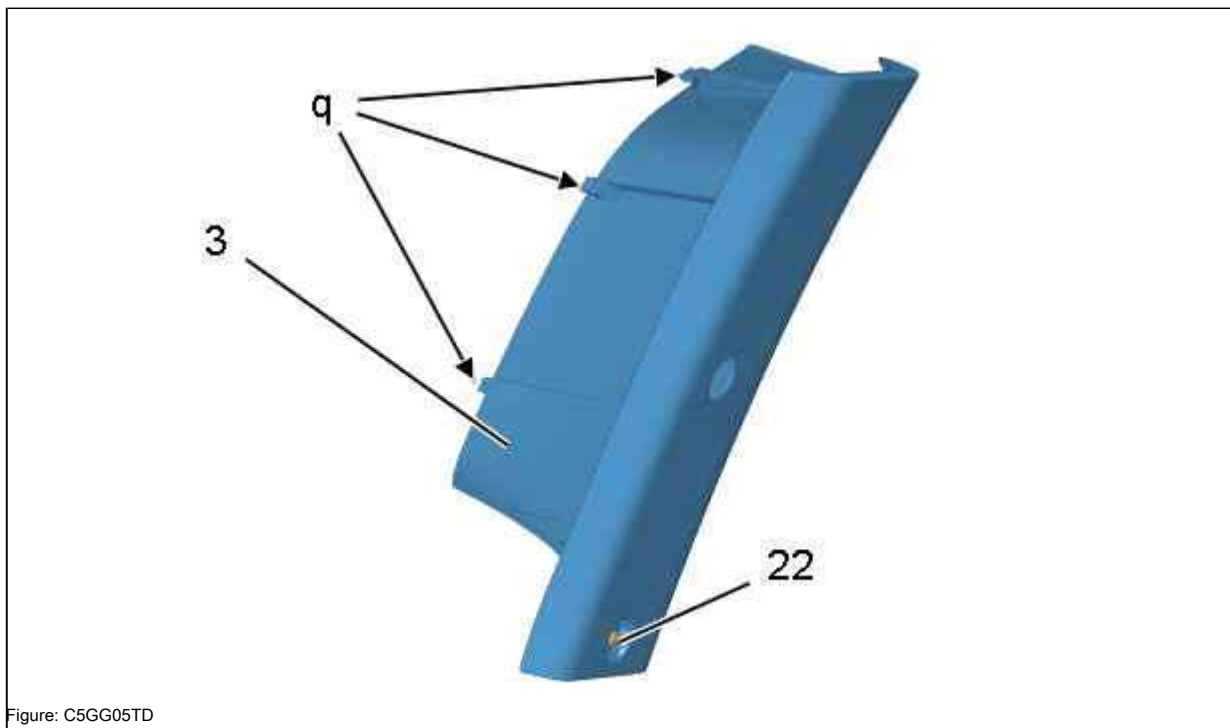
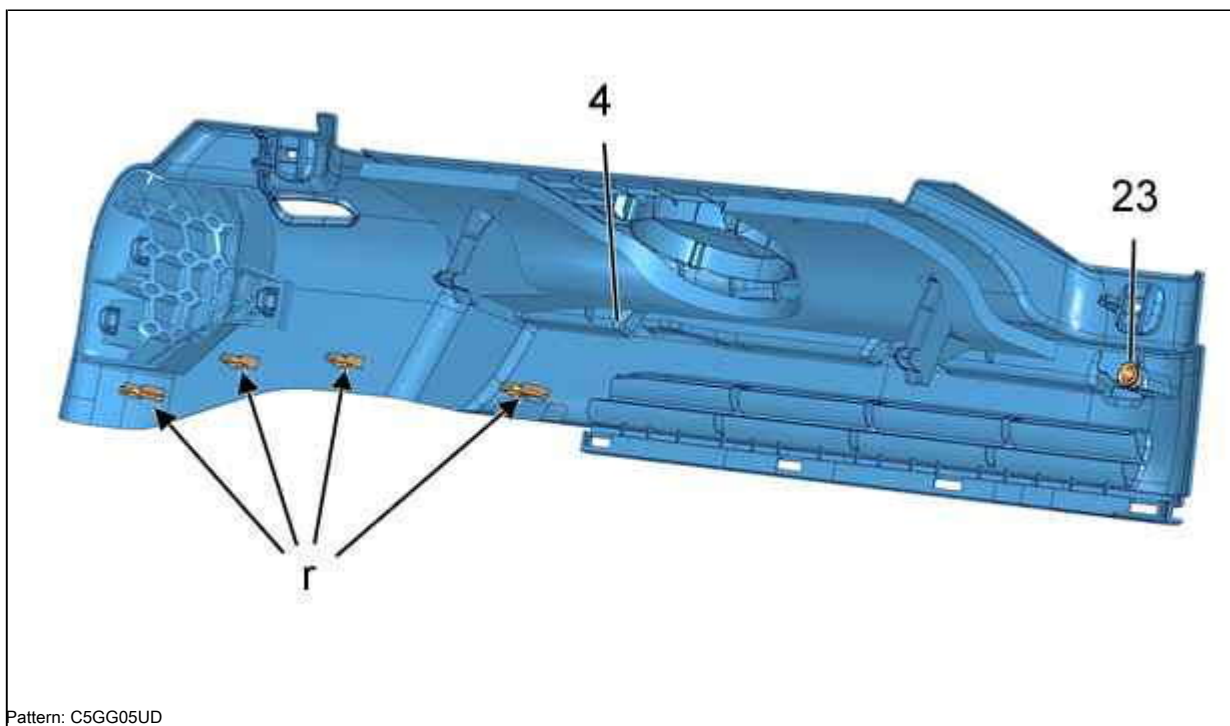


Figure: C5GG05TD

Remove bolts (22).

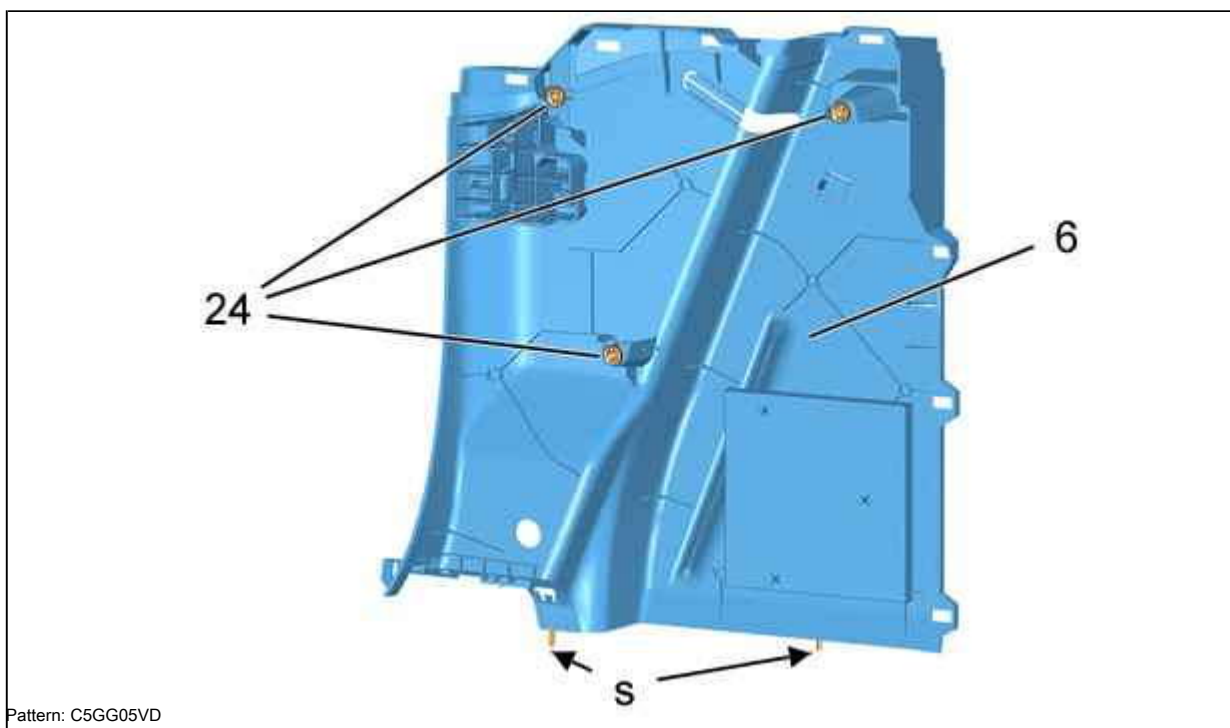
Disconnect: C-pillar trim (3) (at "q"); Using the tool [1].



Pattern: C5GG05UD

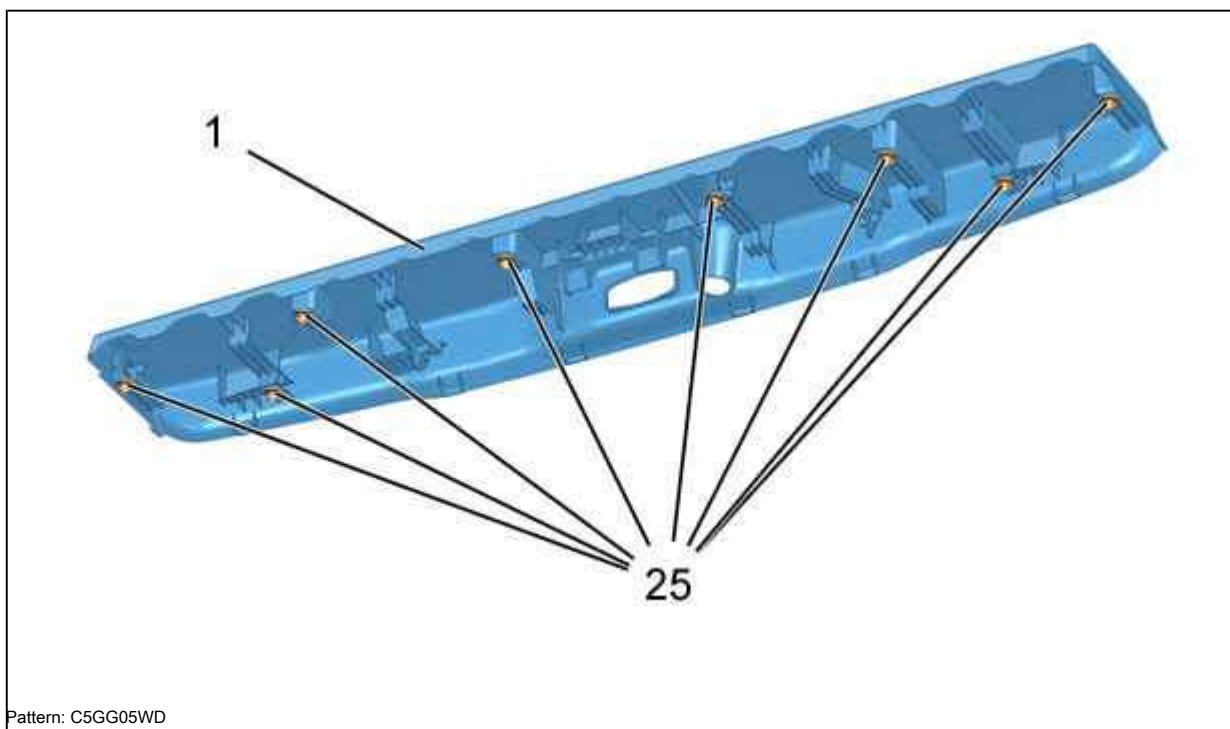
Detach the retainer (23); Using the tool [1].

Unlock Disconnect (at "r"); Using the tool [1]. Remove: Table holder (4).



Disconnect the clips (24); Using the tool [1]. Separate the protrusions from their nests (at "s").

Remove: the rear wheel arch trim (6).



Disconnect the clips (25); Using the tool [1]. Remove the trunk sill trim (1).

4. Installation

ATTENTION : Replace any damaged retainer.

Perform the sequence of operations in the reverse order of removal. Reconnect the battery.

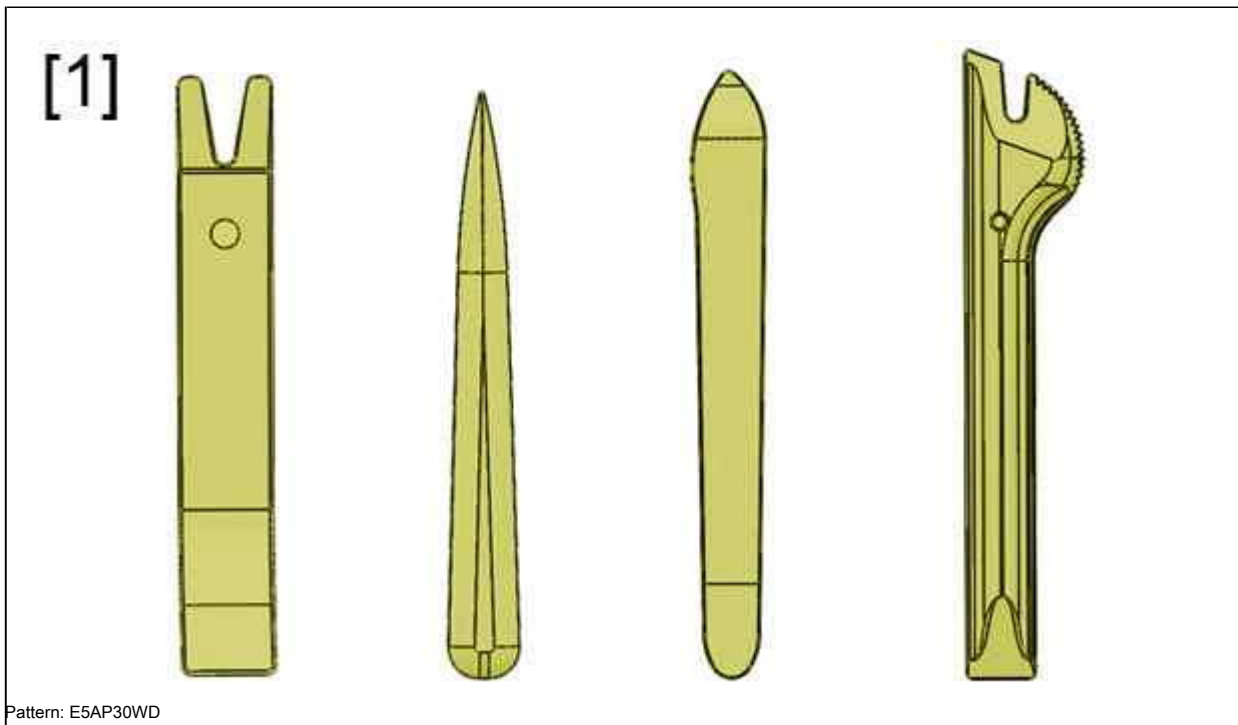
Check the operation of the removed elements.

REMOVAL REFITTING: TRUNK LID LOCK

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim removal tool () .1350ZZ.

2. Preliminary operations

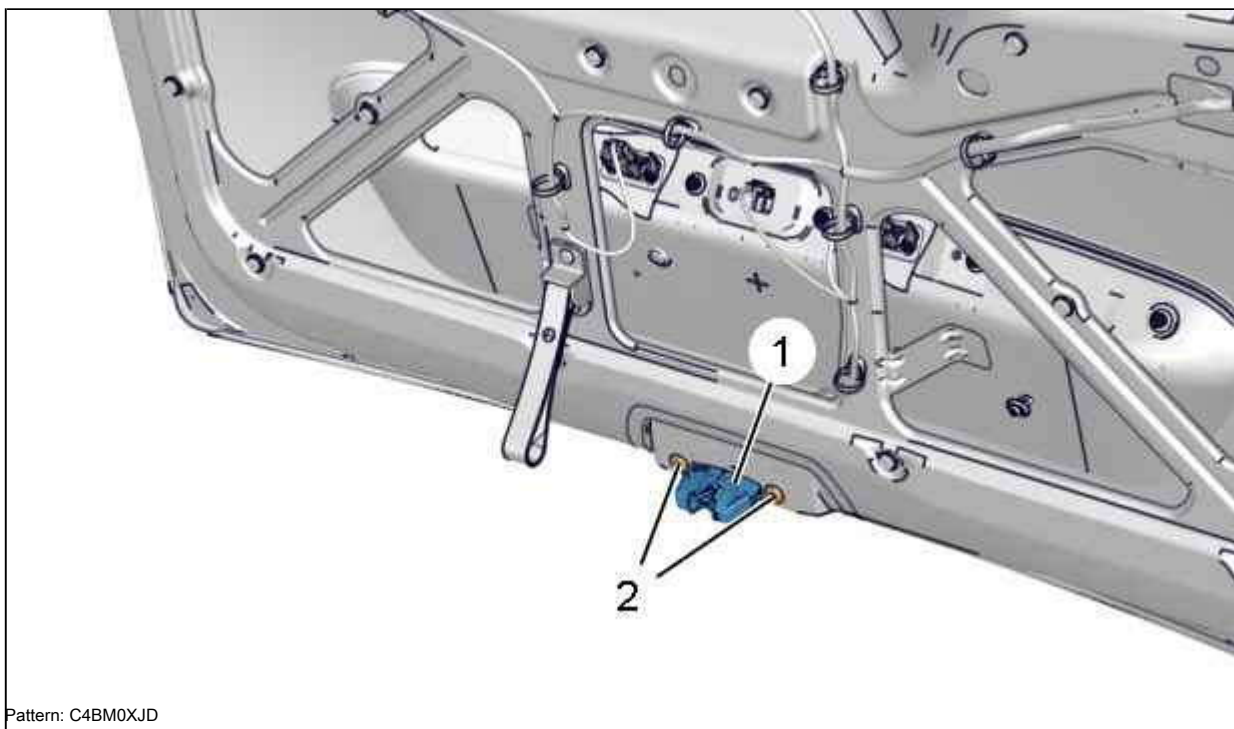
Open the boot lid.

Disconnect the battery

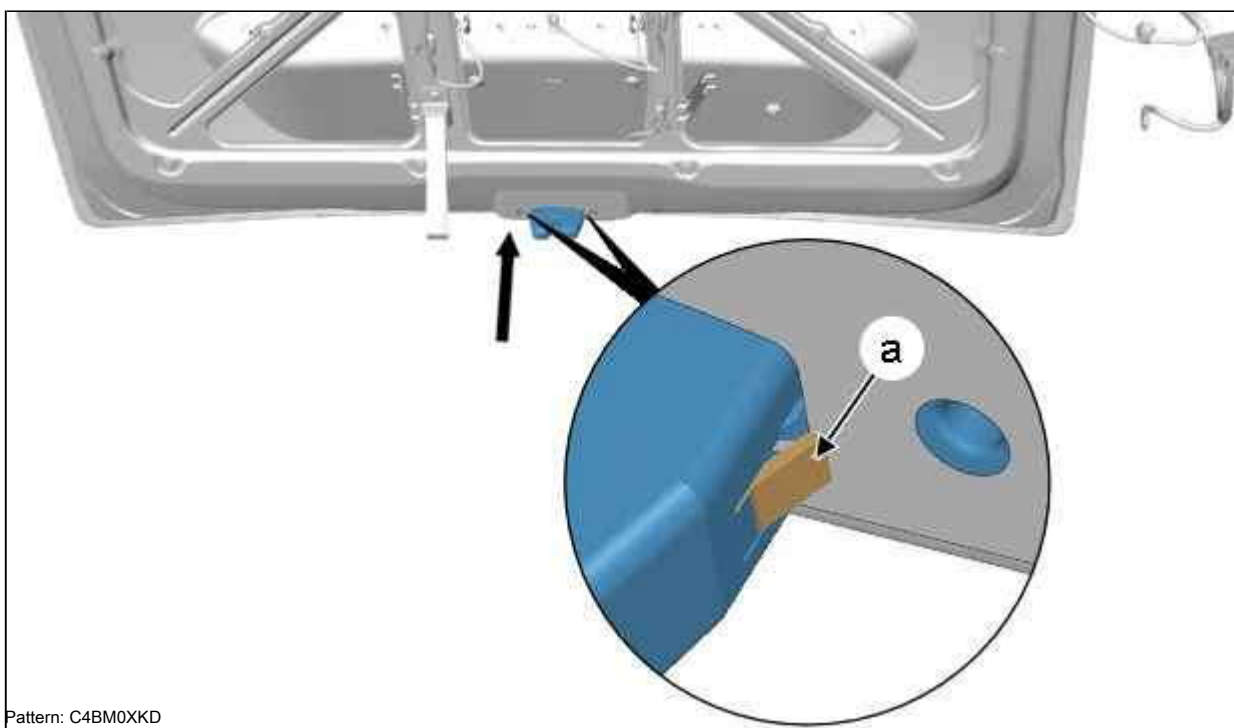
Remove the trim for the tailgate



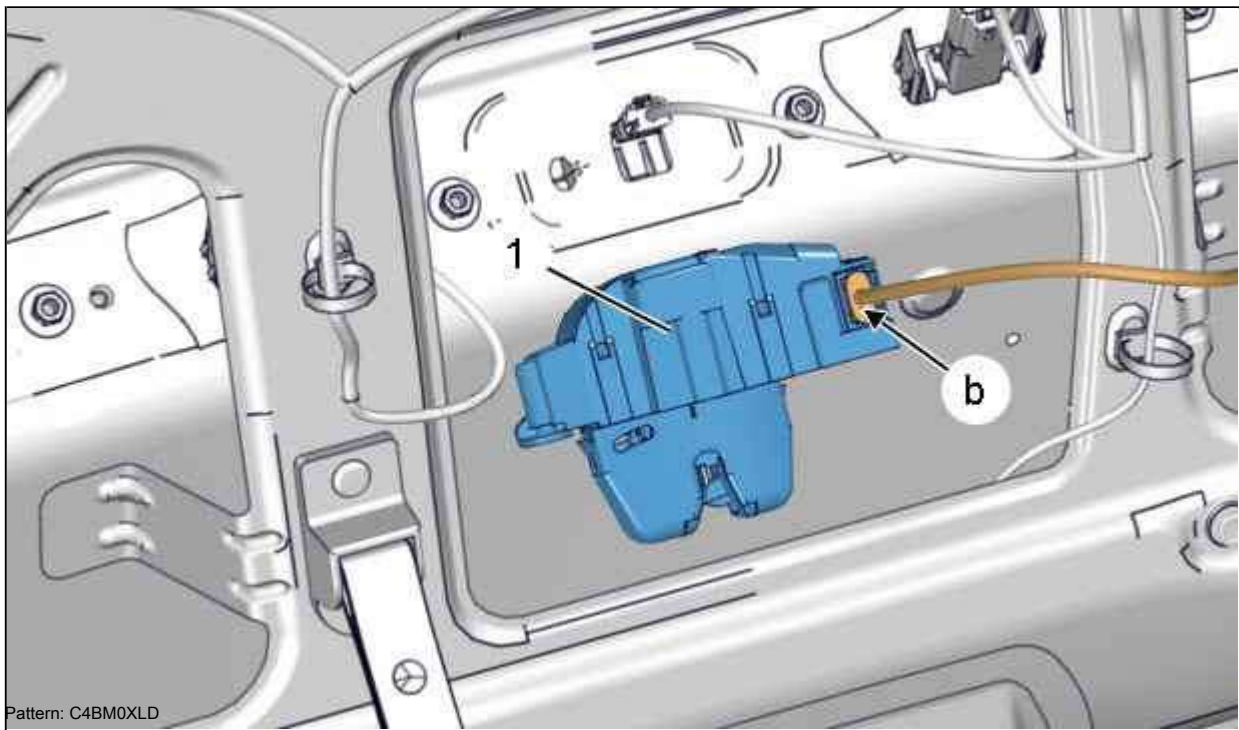
3. Removal



Remove: The screws (2) from the luggage compartment door (1).



Disconnect: Tailgate lock (1) (at "a"); Using the tool [1]. Remove the tailgate lock (1) (in accordance with the arrow).



Pattern: C4BM0XLD

Disconnect the connector (at "b").

Remove: Tailgate lock (1).

4. Installation

Installation is carried out by performing the removal operations in the reverse order. Tighten the bolts (2) to 0.8 ± 0.2 da.Nm.

Reconnect the rechargeable battery



NOTE: Check the operation of the tailgate lock (1) before installing the tailgate trim.

Install: **Luggage compartment lid trim**

Check the functioning of the electrical equipment.

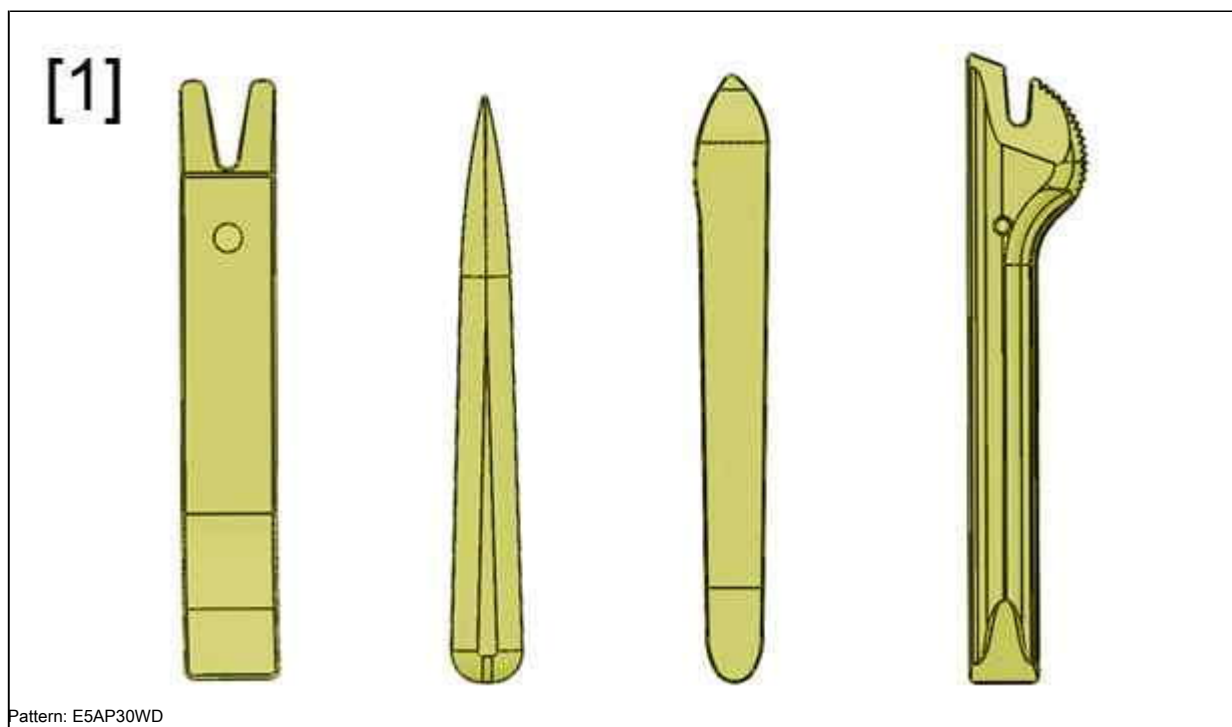


REMOVAL REFITTING: LUGGAGE COMPARTMENT COVER

MANDATORY: Observe the cleanliness and safety rules



1. Tools



[1] Trim stripper () .1350ZZ.

2. Preliminary operations

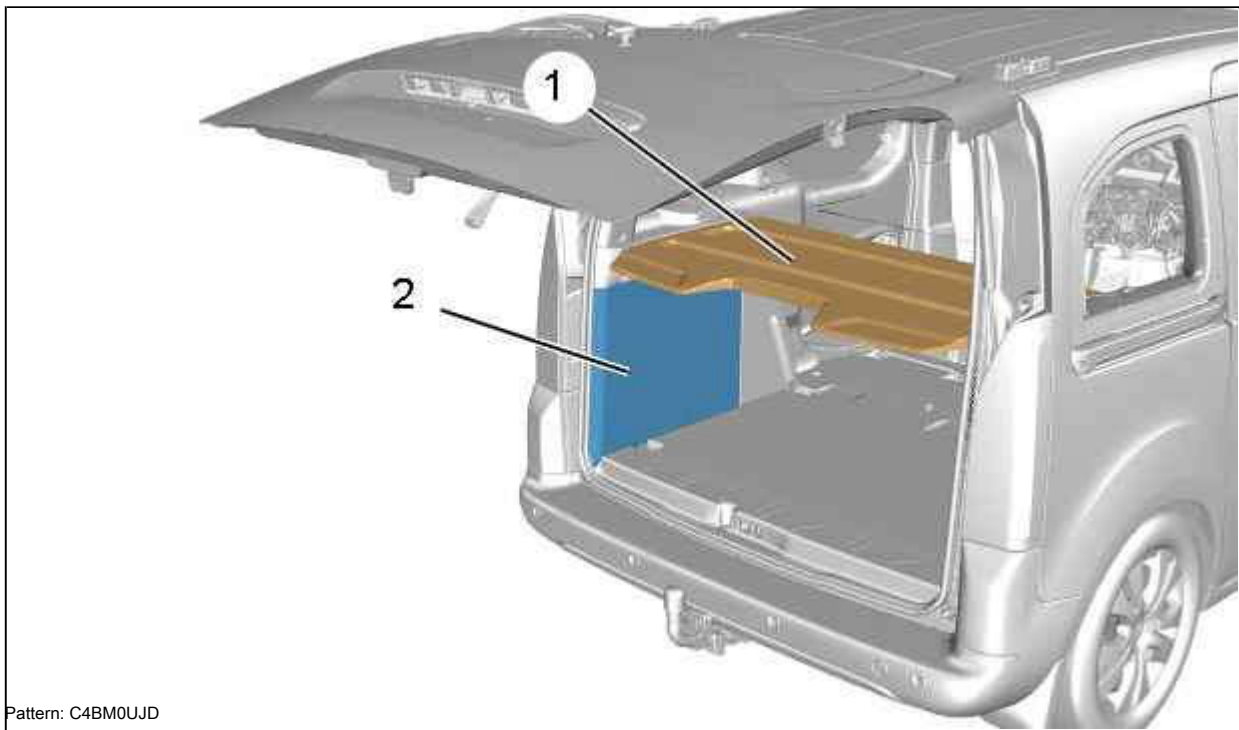
Open the luggage compartment door. Lock the lock in the closed position.

Disconnect the battery



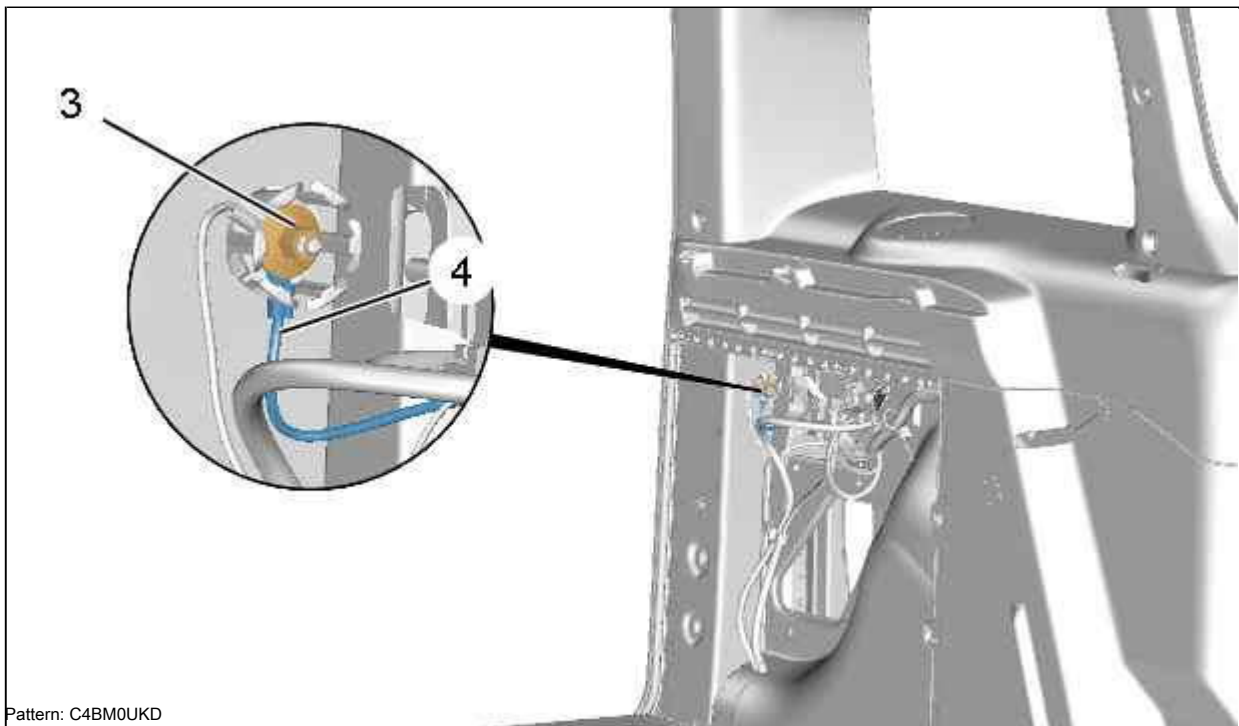
...

3. Removal



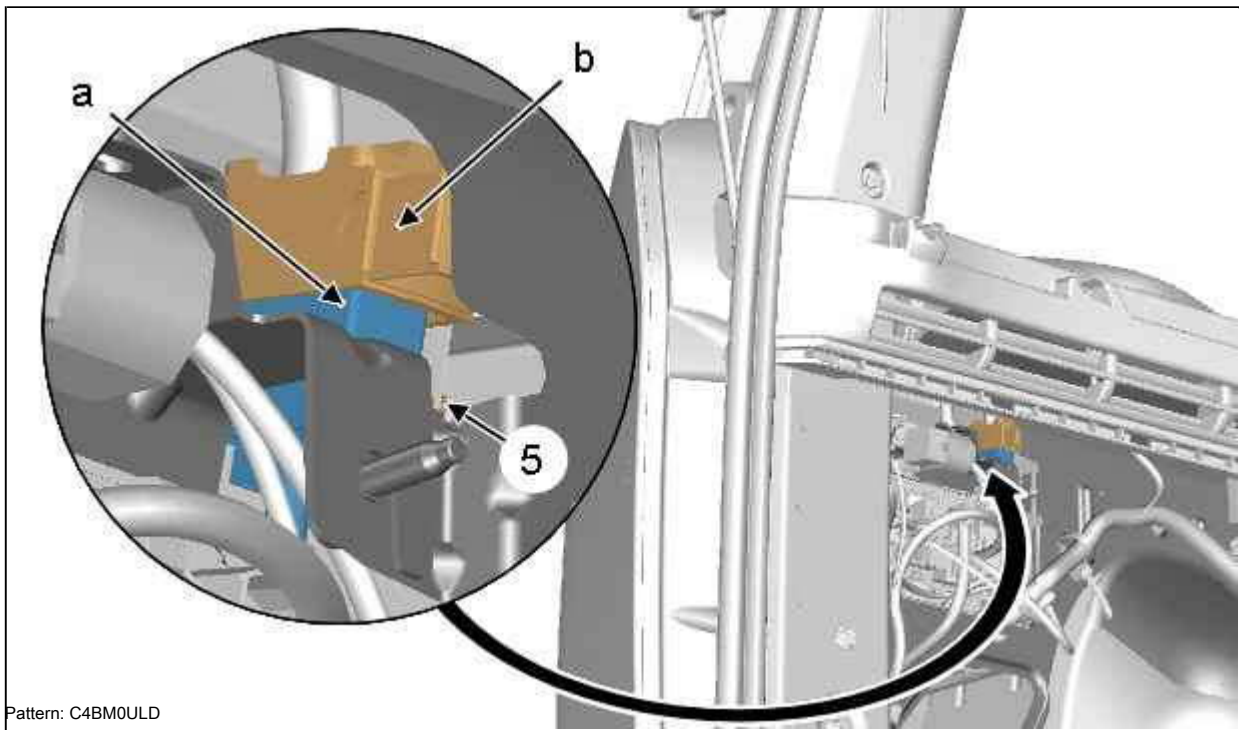
Remove: Rear shelf (1).

Loosen and remove the rear panel trim (2); Using the tool [1].



Remove:

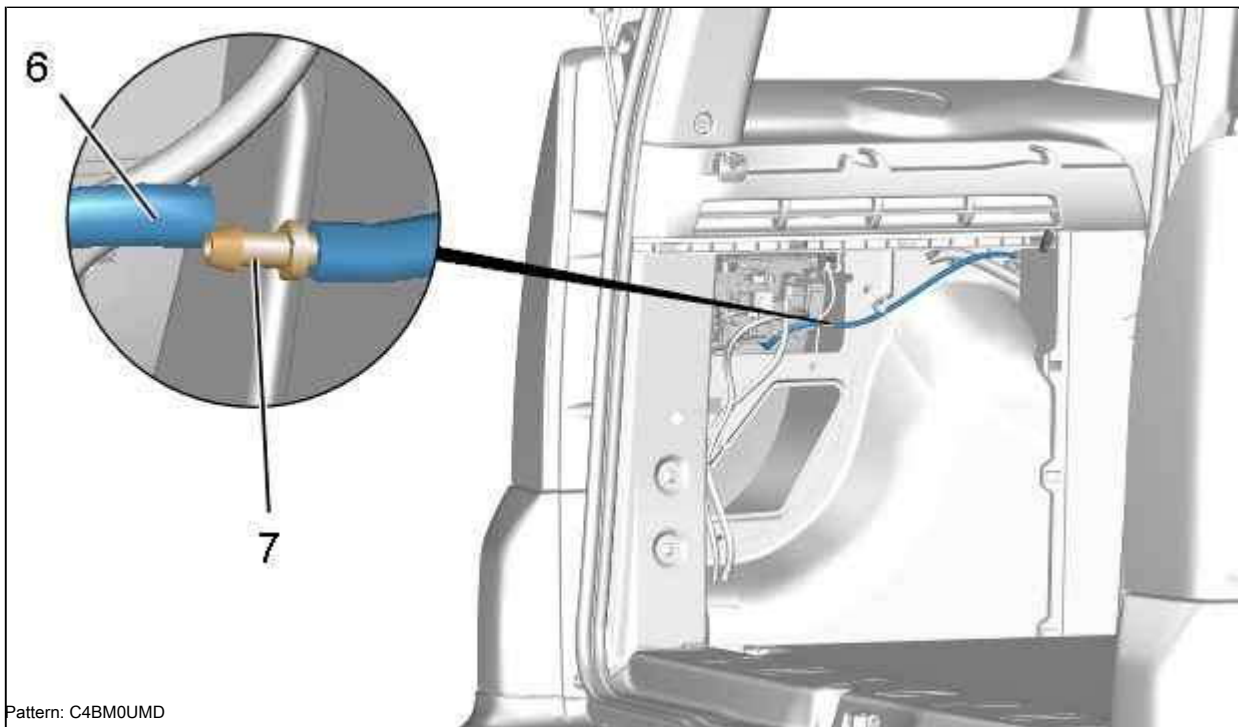
- Nut (3)
- Ground wire (4)



Pattern: C4BM0ULD

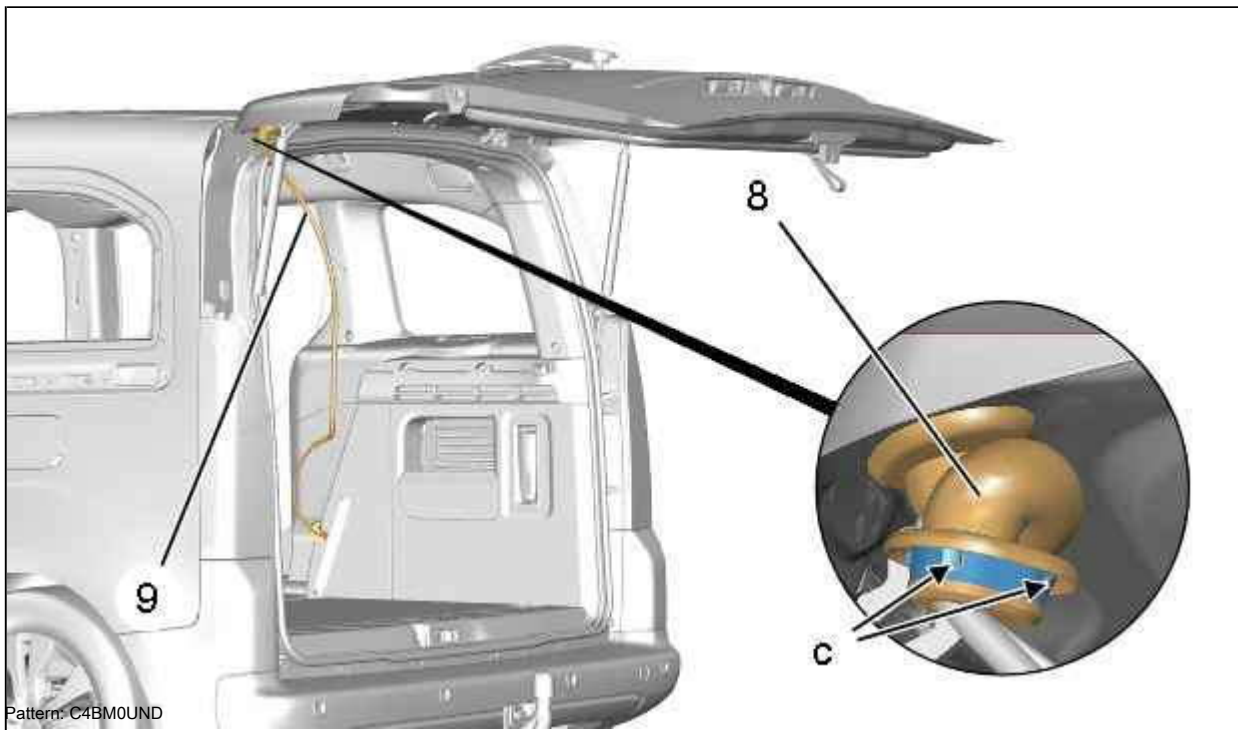
Unfasten the connector (at "b").

Detach the retainer (5); Using the tool [1]. Disconnect the connector (at "a").

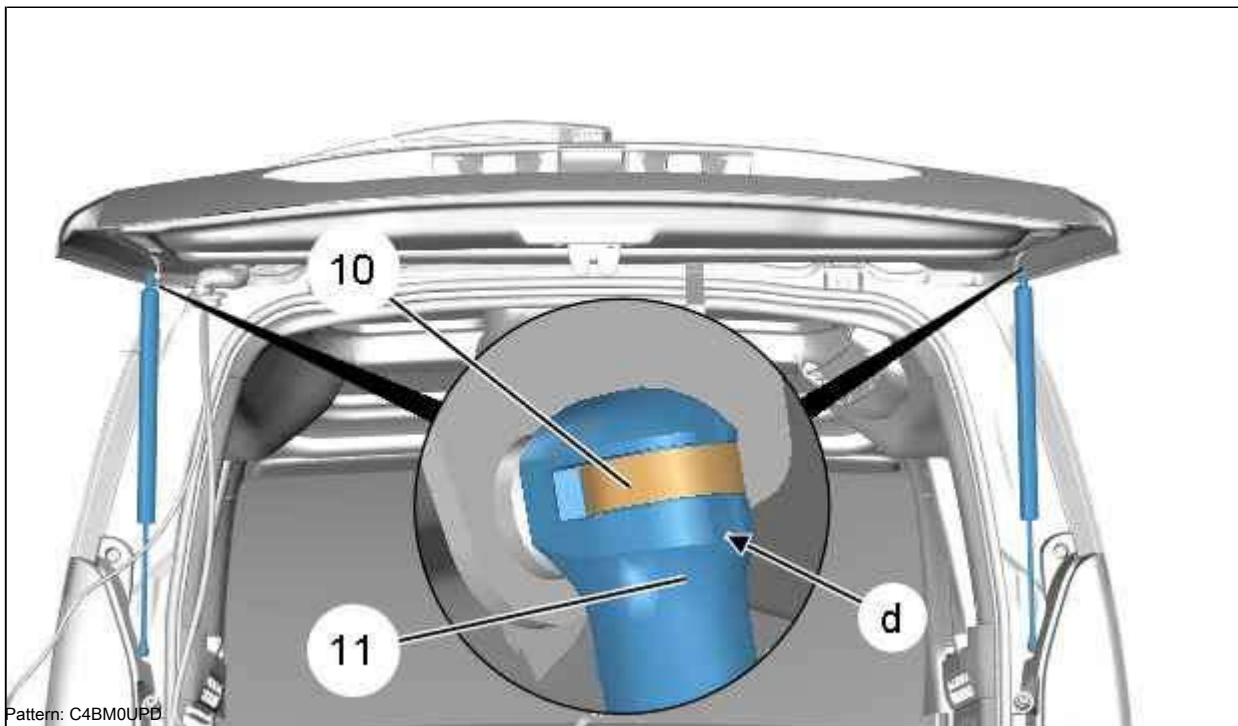


Pattern: C4BM0UMD

Disconnect the washer pipe (6) from the union (7).



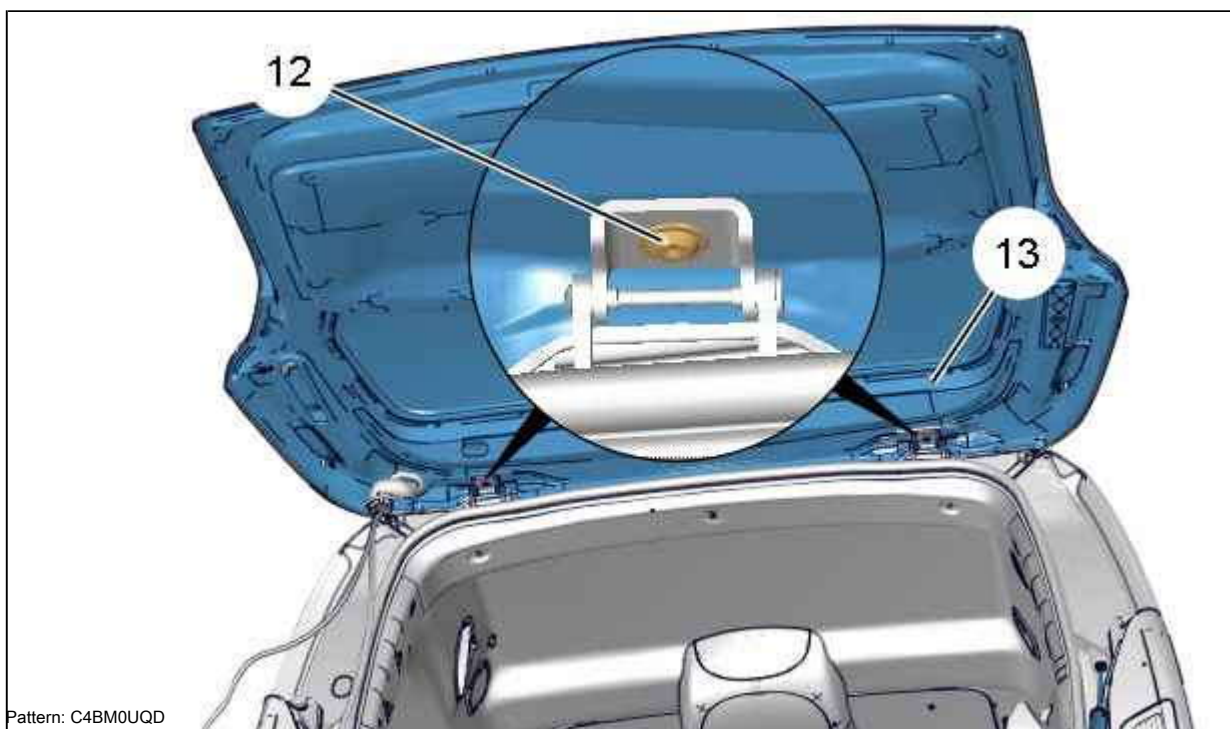
Unfasten the casing fasteners (8); Using the tool [1] (in "c") (on each side). Separate the harness case (8) and wire harness (9) from the C-pillar.



NOTE: This operation requires two mechanics.

Detach the retaining ring (10) without removing it (at "d") (on each side); Using a small flat-blade screwdriver.

At the same time, separate the shock absorber (11) from its joint (on each side).



Remove:

- the bolts (12)
- The trunk lid (13)

4. Installation

Perform the sequence of operations in the reverse order of removal.

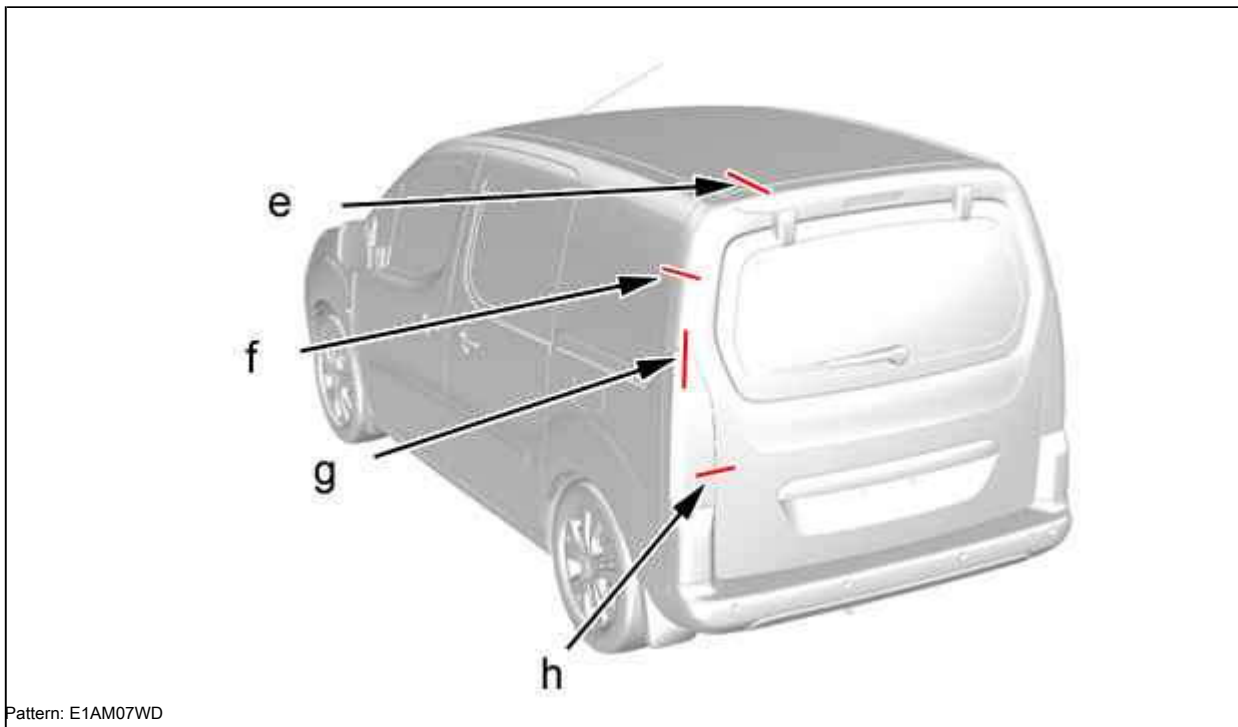
Reconnect the rechargeable battery



ATTENTION : Follow the steps to follow after removing the battery.

Unlock the lock.

5. Adjustment



5.1. Trunk lid with movable glass

Tighten the bolts (12) first.

Adjust clearances and alignment

"f", "g", "h".

; Using the bolts (12) and boot lid stops "e"



If necessary, in addition to adjusting the trunk lid, you can adjust its hinges

Open the luggage compartment door. Tighten the bolts (12) to 1.5 da.Nm. Check the operation of the removed elements.

5.2. Trunk lid with sliding glass

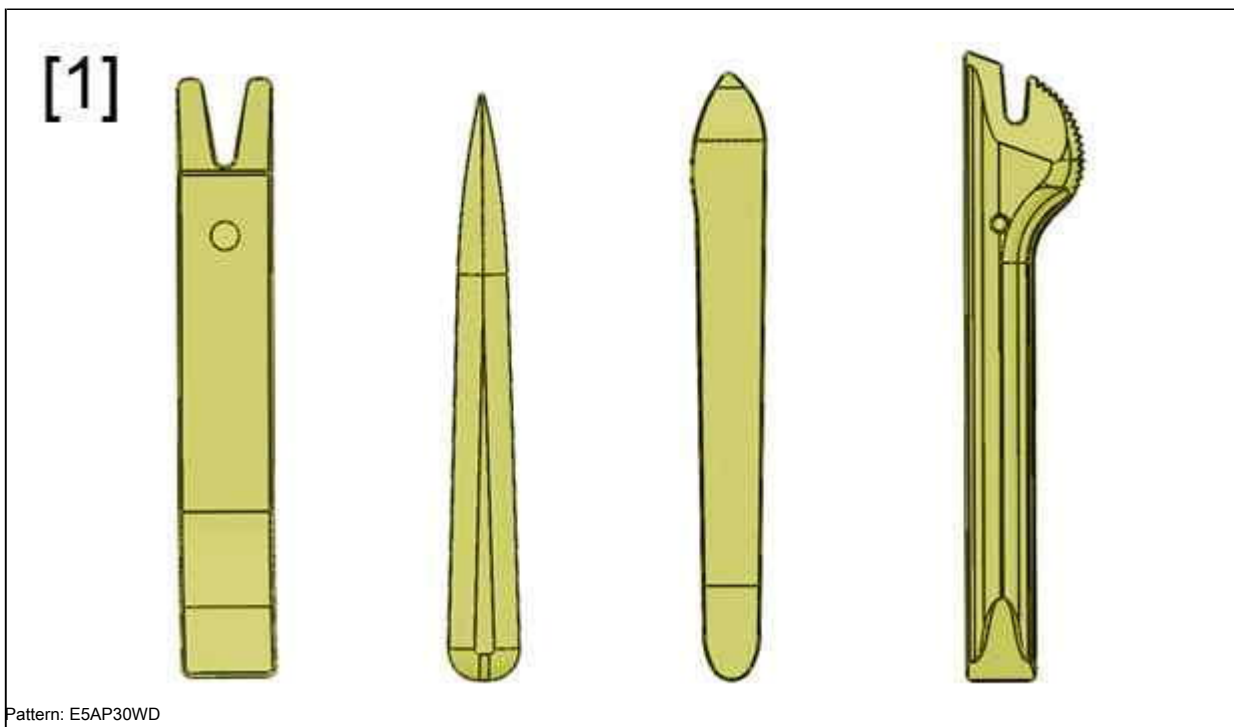
Proceed in the same way to install the tailgate with movable glass.

REMOVAL REFITTING: TRUNK LID MOVING GLASS

MANDATORY: Observe the cleanliness and safety rules



1. Tools



[1] Trim removal tool () .1350ZZ.

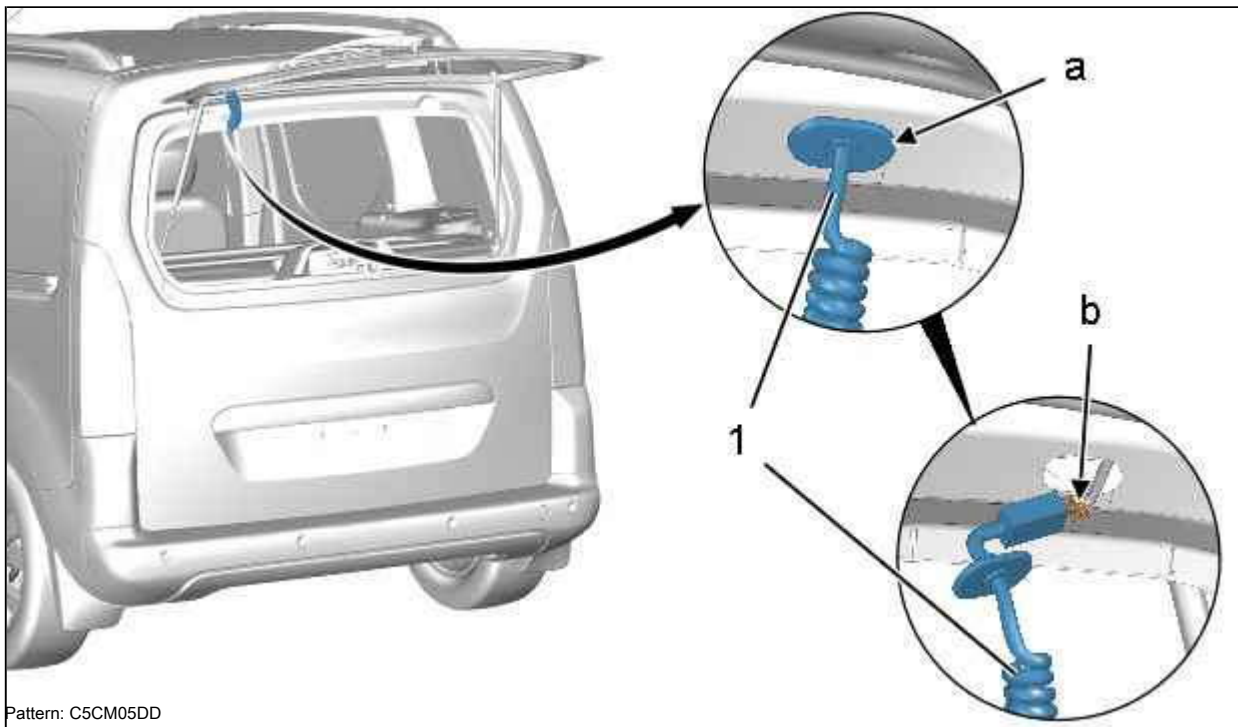
2. Removal

Open: Tailgate sliding glass.

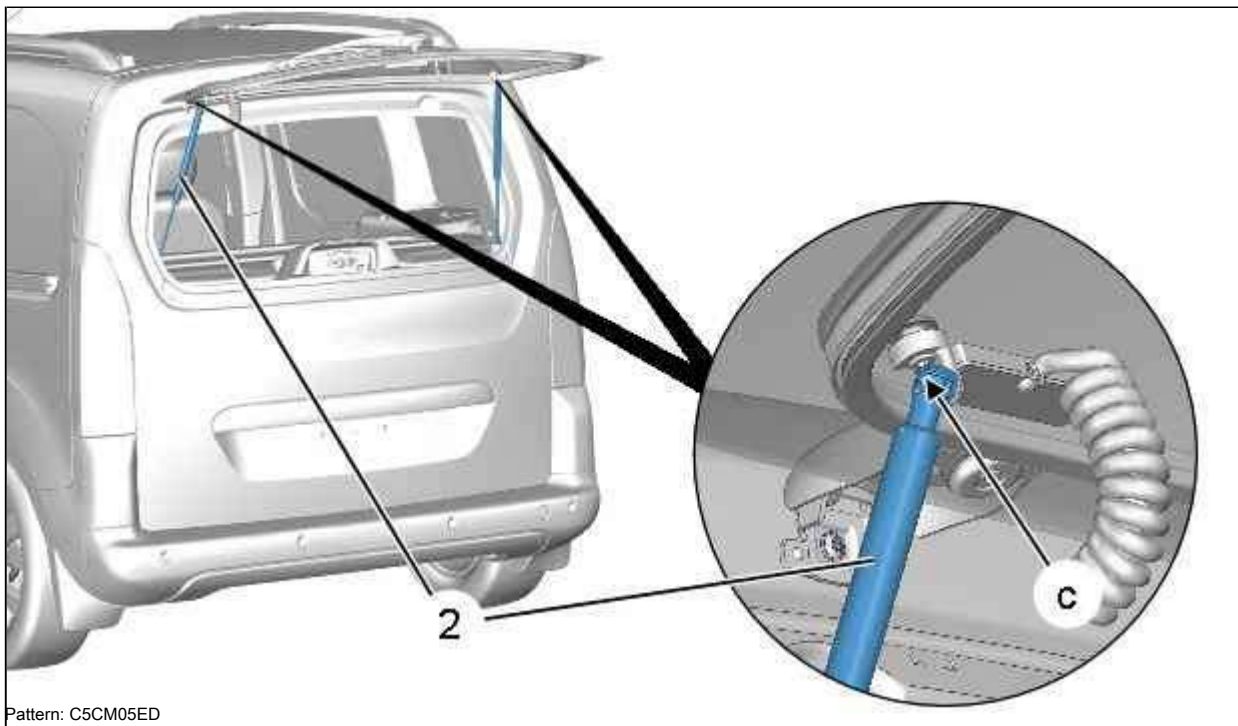
Disconnect the battery

2.1. Movable trunk lid



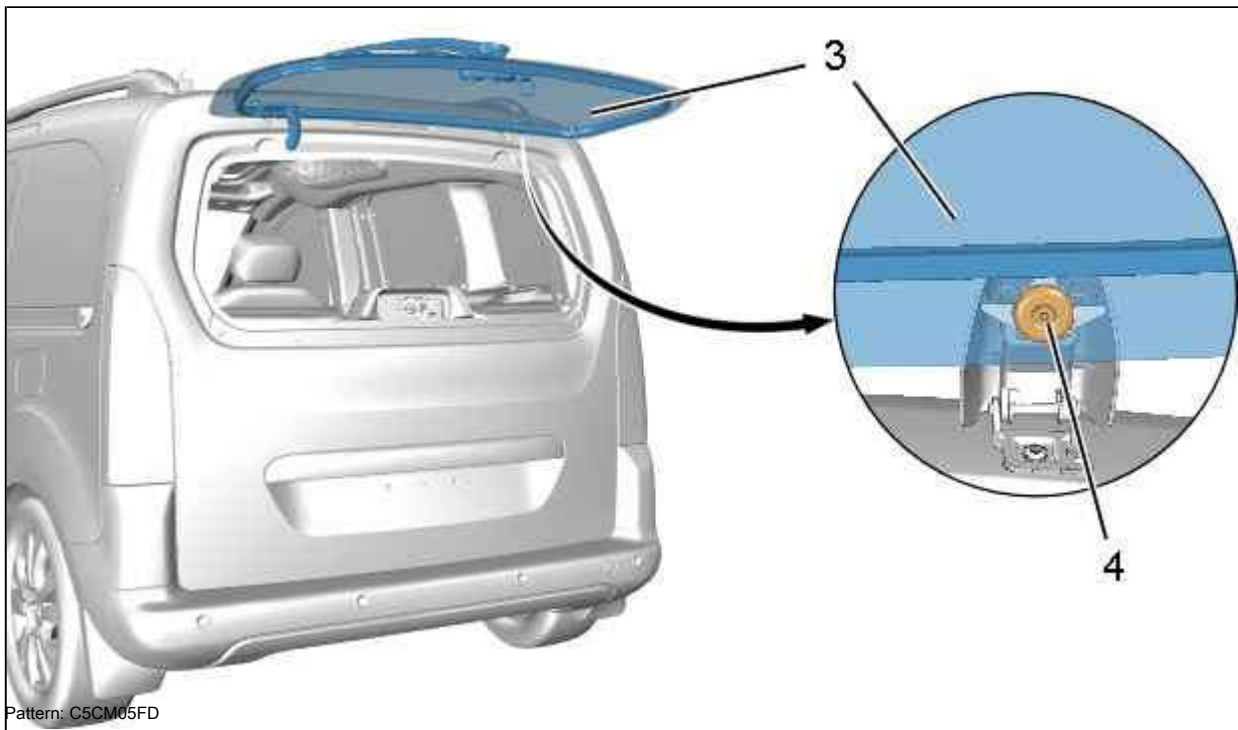


Detach the wiring harness (1) (at "a"); Using the tool [1]. Disconnect the connector (at "b").



NOTE: 2 people are required for the following operations.

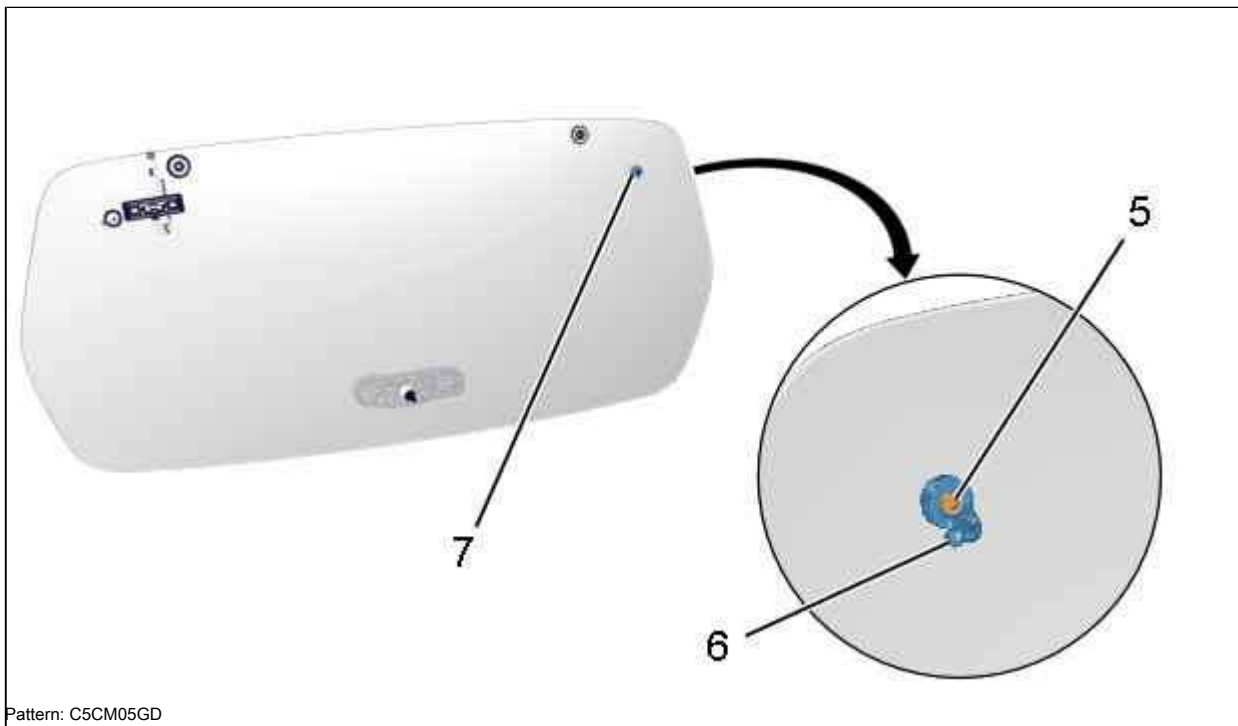
Hold the sliding glass in the tailgate in the open position; Using the support. Unfasten: Shock absorber (2) (at "c") (Operation is symmetrical).



NOTE: 2 people are required for the following operations.

Remove:

- Bolt (4) (Operation is symmetrical)
- Tailgate sliding glass (3)



Remove the rear wiper arm

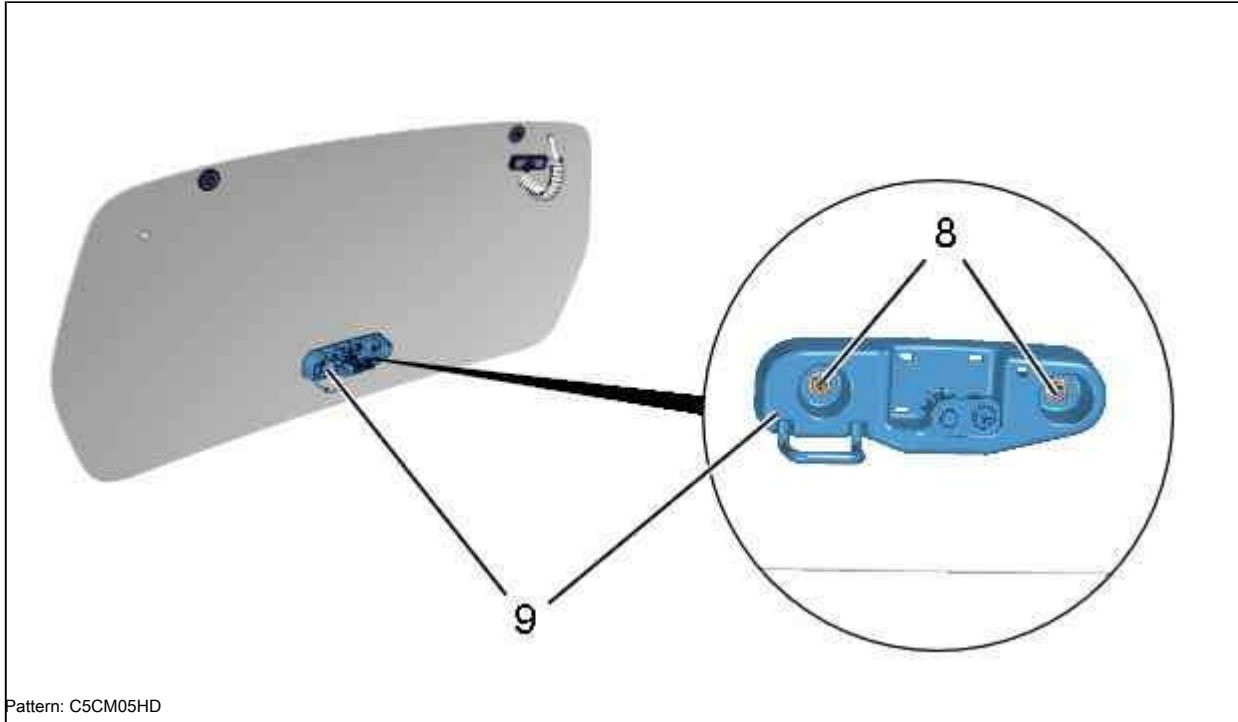
Remove:



- Bolt (5)
- Shock absorber mount (6)

Remove the gusset nut (7).

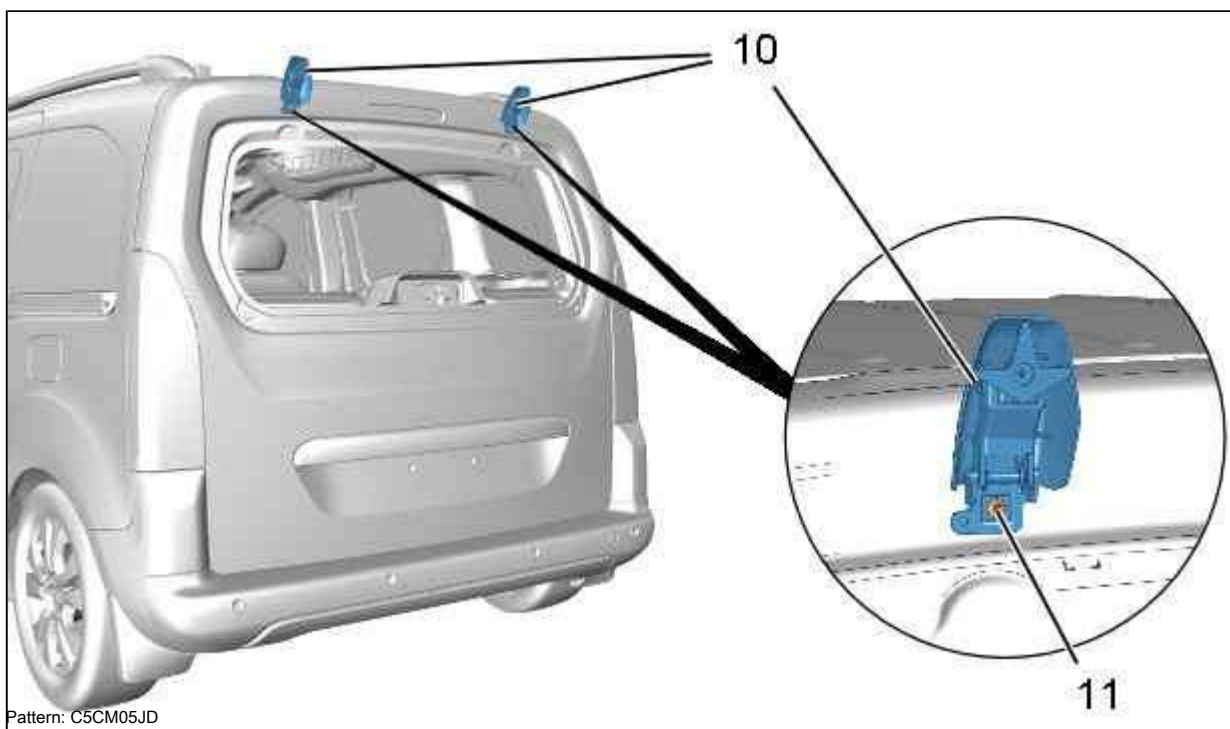
NOTE: Do the same on the other side.



Remove:

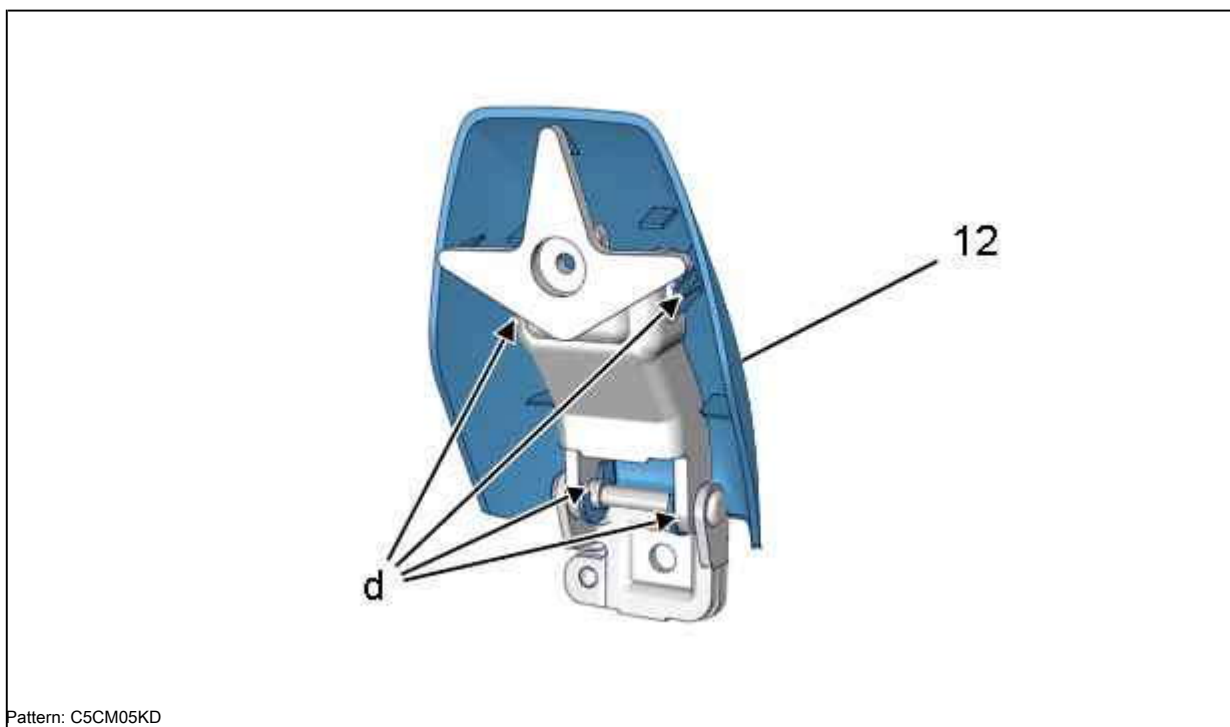
- Nuts (8)
- Rear wiper bearing (9)

2.2. Tailgate sliding glass hinges



Remove:

- the bolts (11)
- Luggage compartment sliding glass hinges (10)



Disconnect and remove: Luggage compartment door hinge trim (12) (in "d"); Using the tool [1].

NOTE: Do the same on the other side.

3. Installation

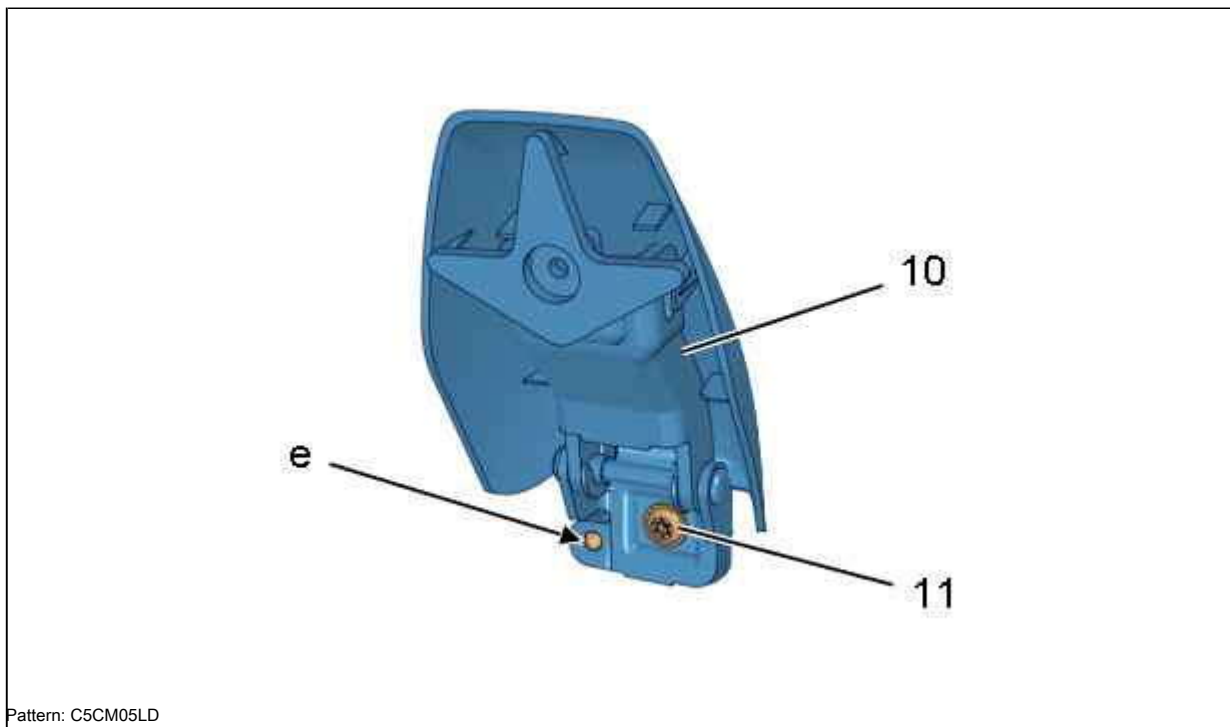
Installation is carried out by performing the removal operations in the reverse order. Tighten:

- Tighten the bolts (5) to 0.8 da.Nm
- nuts (8) to a torque of 1 da.Nm

Check gaps and adjust alignment
Reconnect the rechargeable battery




4. Adjustments

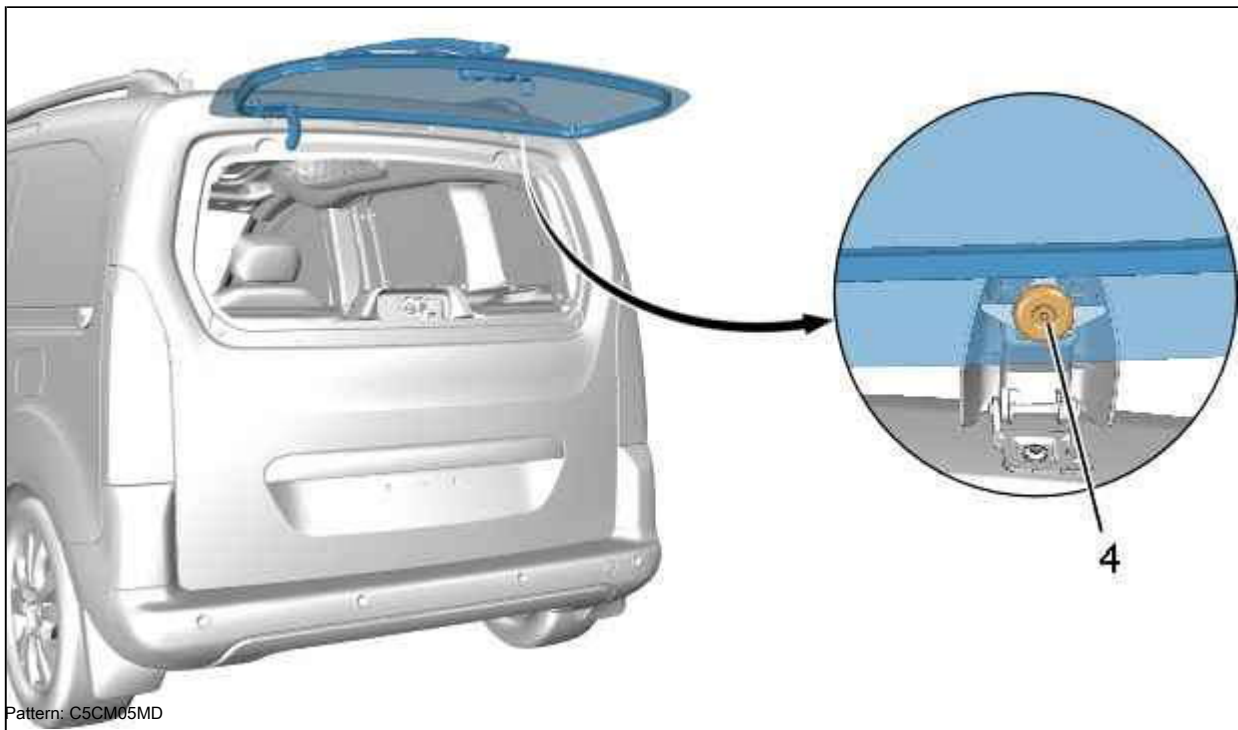


On the hinges of the sliding glass door of the luggage compartment (10), the locating tabs can be removed (at "e").

NOTE: In this case, the adjustment lugs can be removed if additional adjustment (leveling of surfaces) is required by removing the hinges.

Adjust clearances and alignment

 ; With bolts (11).



Adjust clearances and alignment

; With bolts (4).

Tighten:

- Tighten the bolts (4) to 0.9 da.Nm
- Tighten the bolts (11) to 0.8 da.Nm

Check the tightness of the movable glass trunk lid (3). Check the operation of the various equipment.

REMOVAL REFITTING: TRUNK LID LOCK BRACKET

MANDATORY: Observe the cleanliness and safety rules

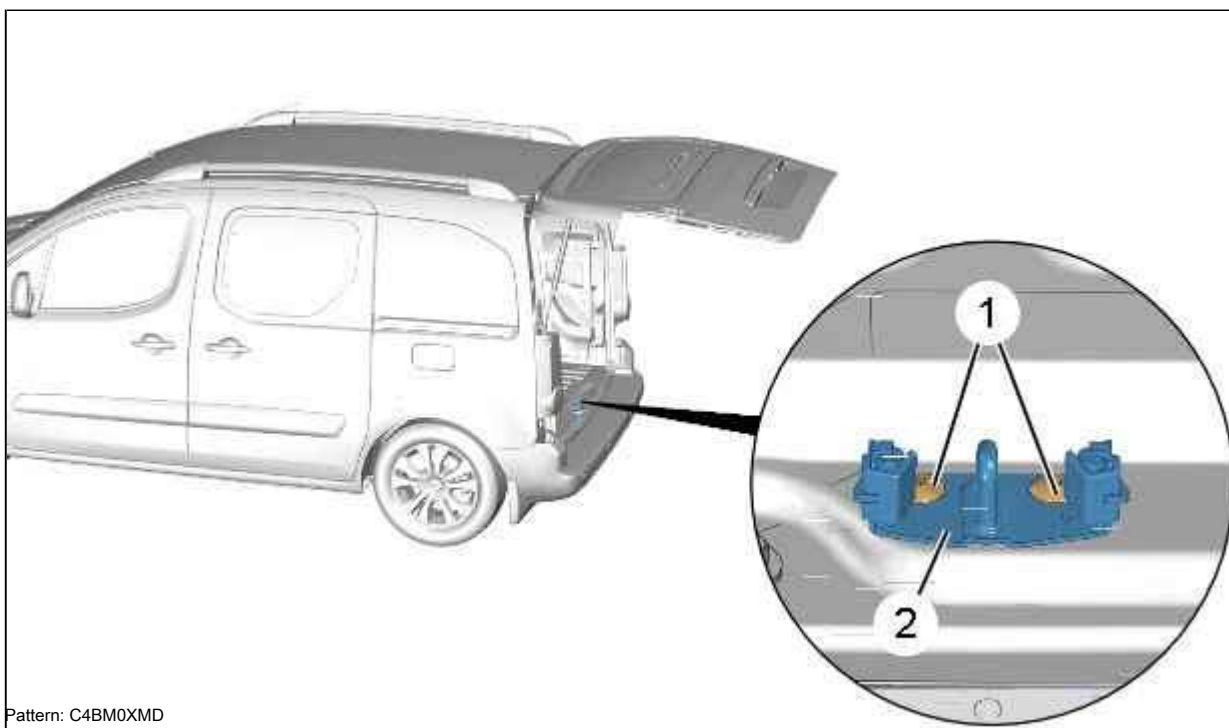


1. Preliminary operations

Remove: Trunk lid seal (Lower part).

2. Removal

Remove the luggage compartment sill trim



Pattern: C4BM0XMD

Remove:

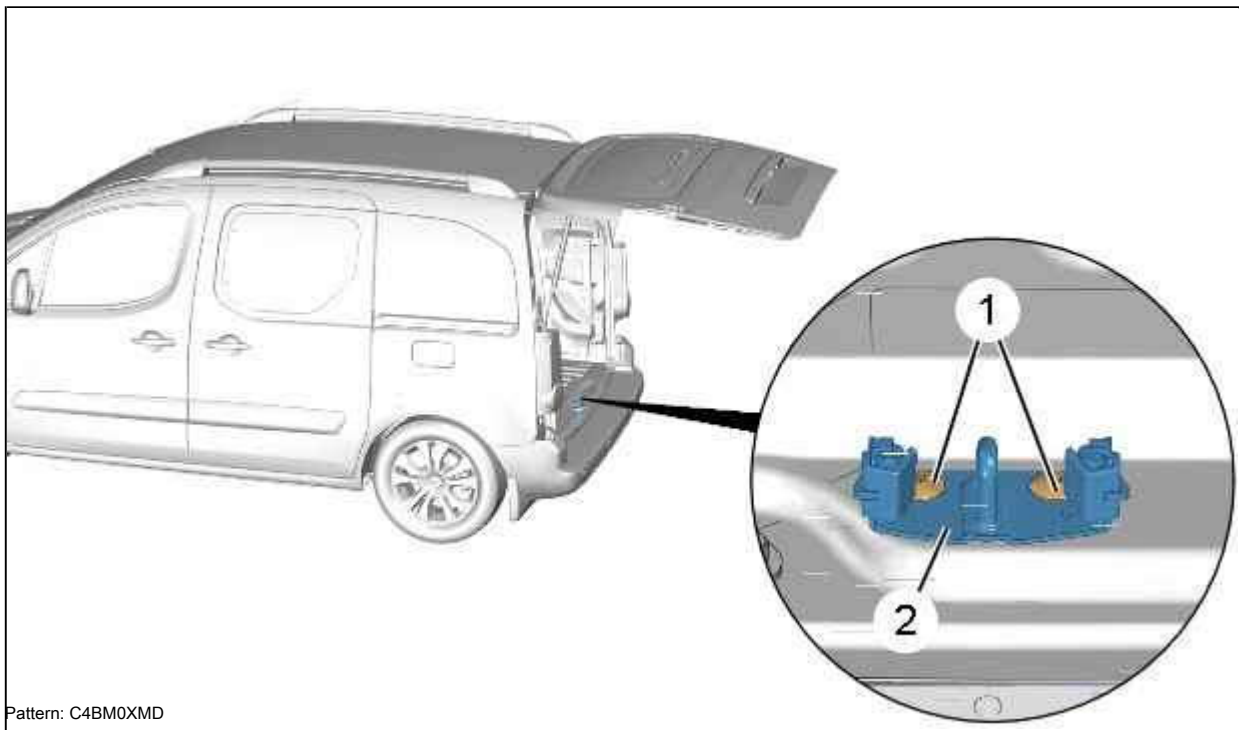
- bolts (1)
- Trunk lid lock (2)

3. Installation

Install:

- Trunk lid lock (2)
- bolts (1)

4. Adjustment



Pattern: C4BM0XMD

Place the tailgate lock bracket (2) in the extreme upper position. Tighten and loosen 1/4 turn of the bolt (1).

5. Additional operations

Move: Trunk seal. Close the trunk lid.

Adjust clearances and alignment

Open the boot lid.

Tighten the bolts (1) to 0.8 da.Nm.

Install: **Trunk opening trim**

Check the functioning of the electrical equipment.



...



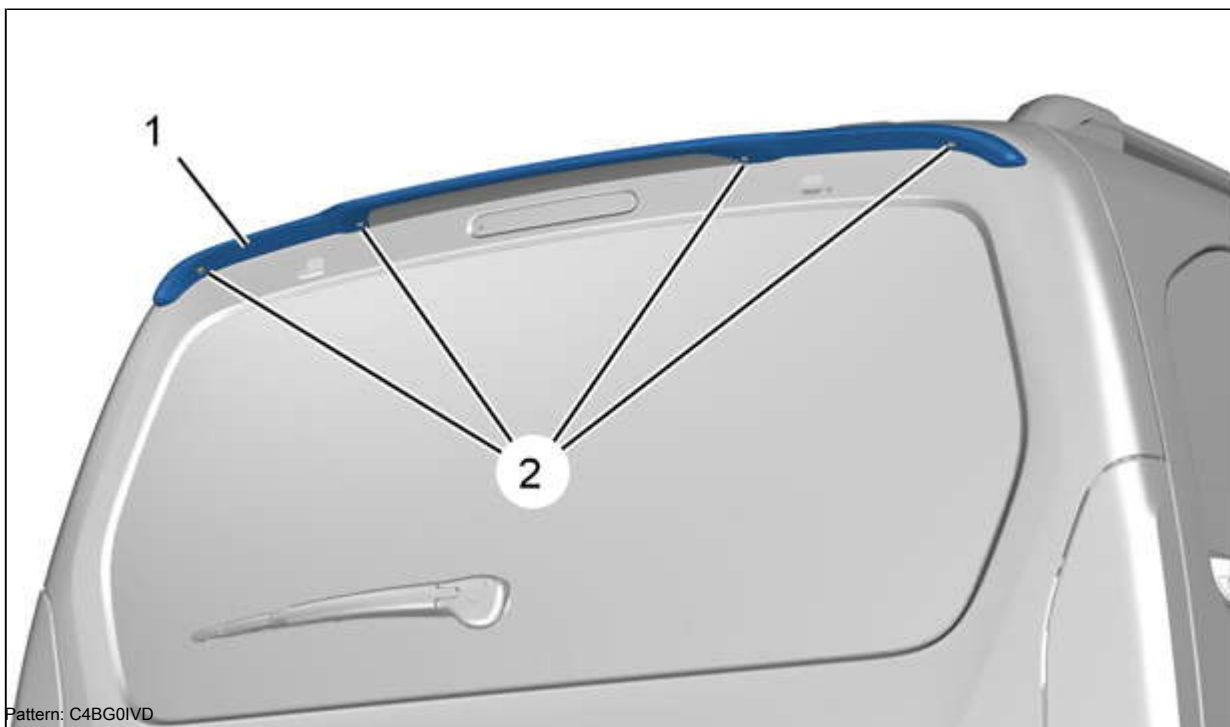
...

REMOVAL REFITTING: TRUNK LID SPOILER

MANDATORY: Observe the cleanliness and safety rules



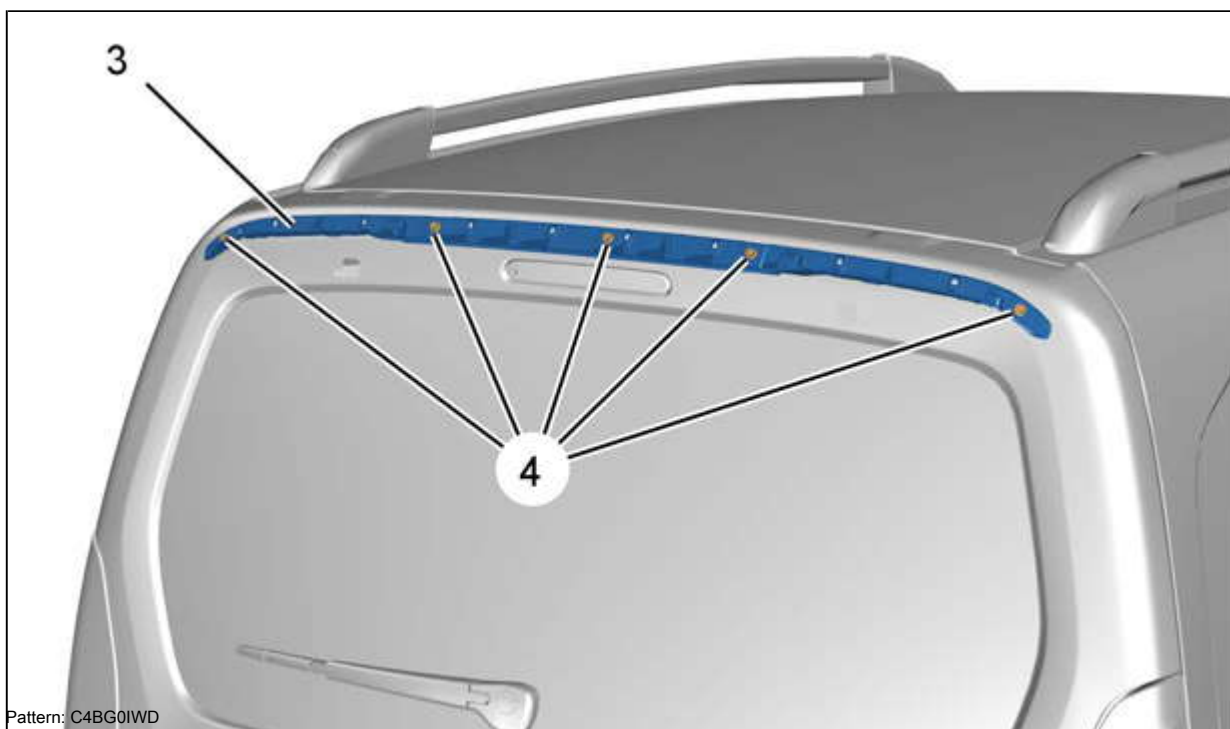
1. Removal



Pattern: C4BG0IVD

Remove:

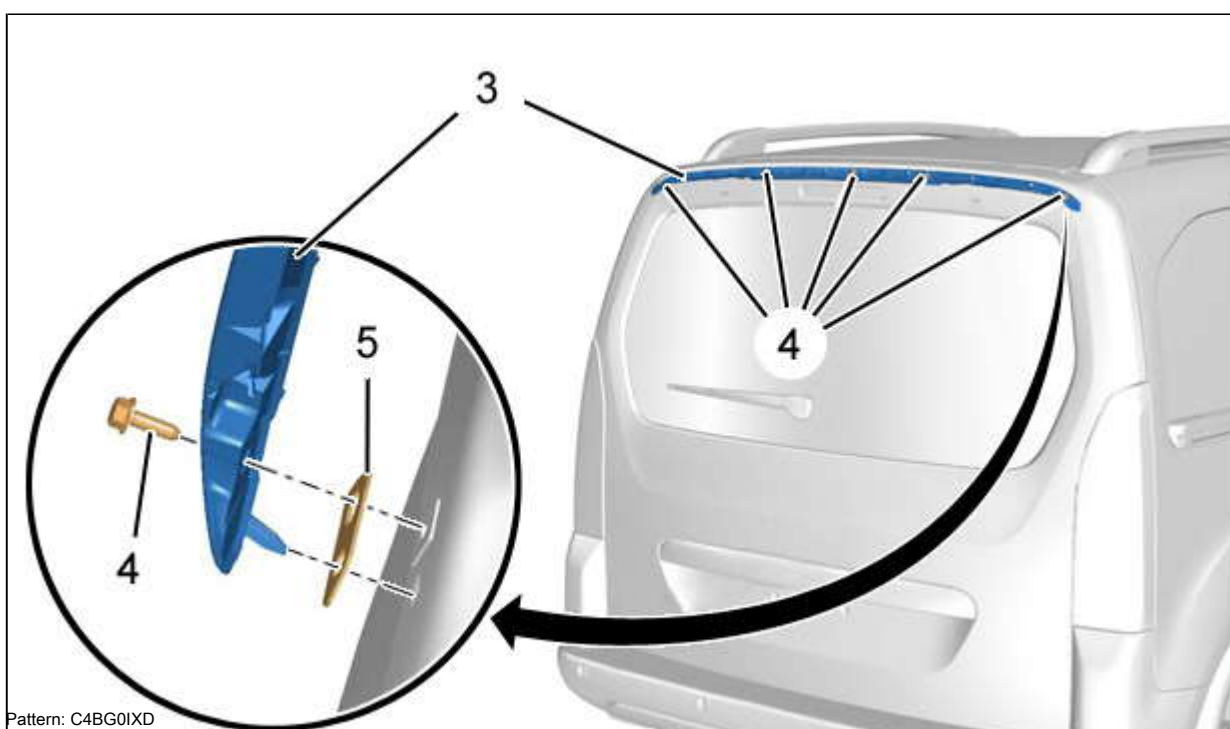
- bolts (2)
- Tailgate spoiler (1)



Remove:

- bolts (4)
- Rear spoiler bracket (3)

2. Installation



MANDATORY: Observe the order of installation of the rear spoiler bracket (3); Position the strips

(5) between the rear spoiler bracket (3) and the tailgate.

Installation is carried out by performing the removal operations in the reverse order. Tighten the bolts (4) to 0.4 da.Nm.

Check the functioning of the electrical equipment.

REMOVAL REFITTING: TRUNK LID GLASS

MANDATORY: Observe the cleanliness and safety rules



1. Recommended fixtures

Equipment for glass



2. Recommended components

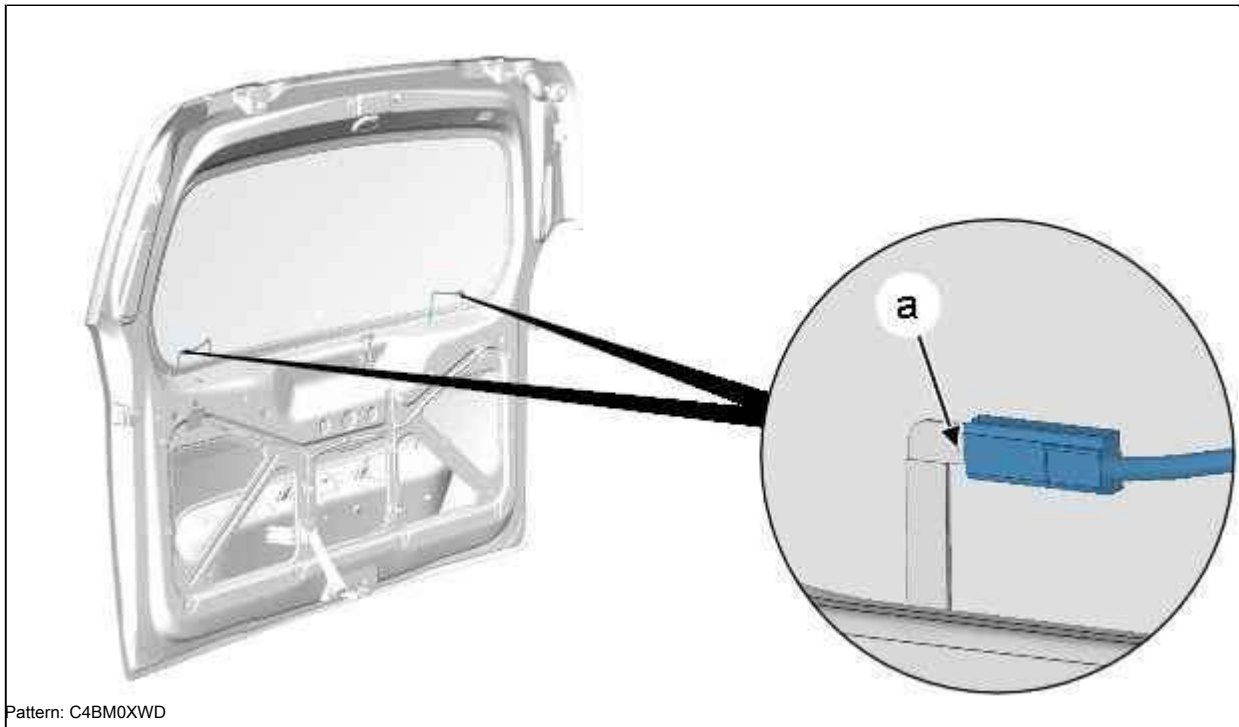
Componentswindglass



3. Removal

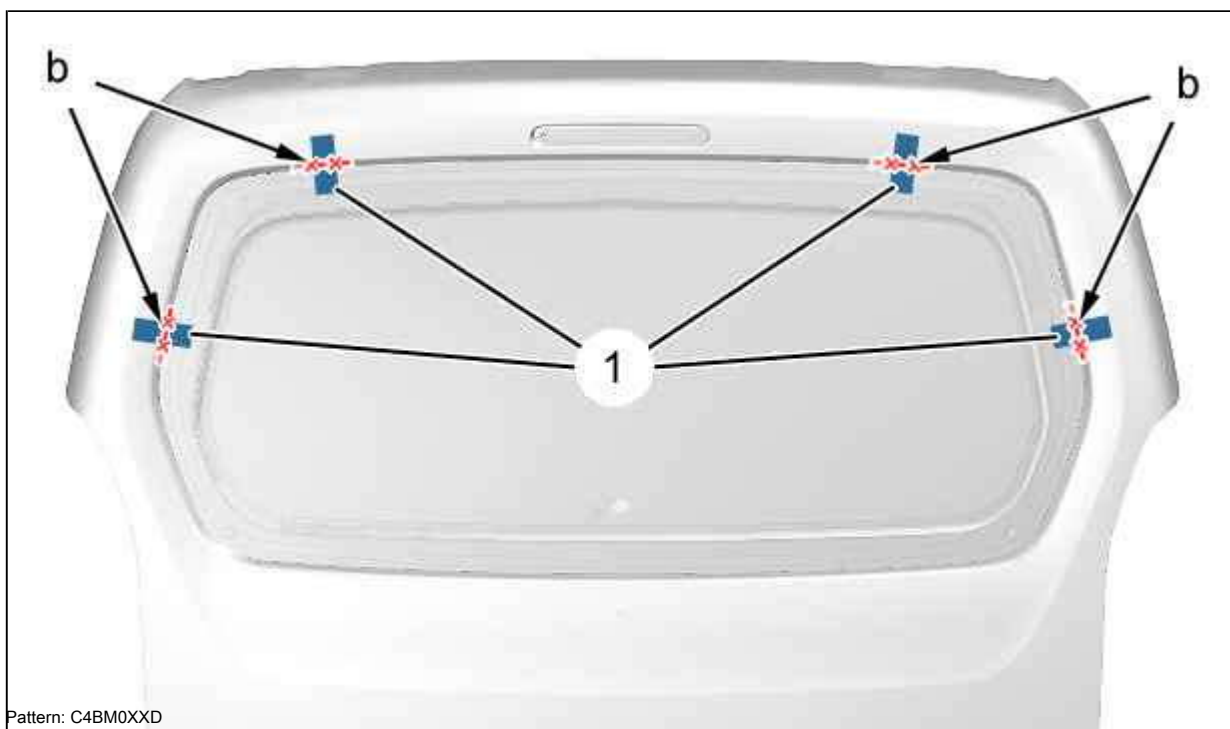
Remove the wiper mechanism

(back).

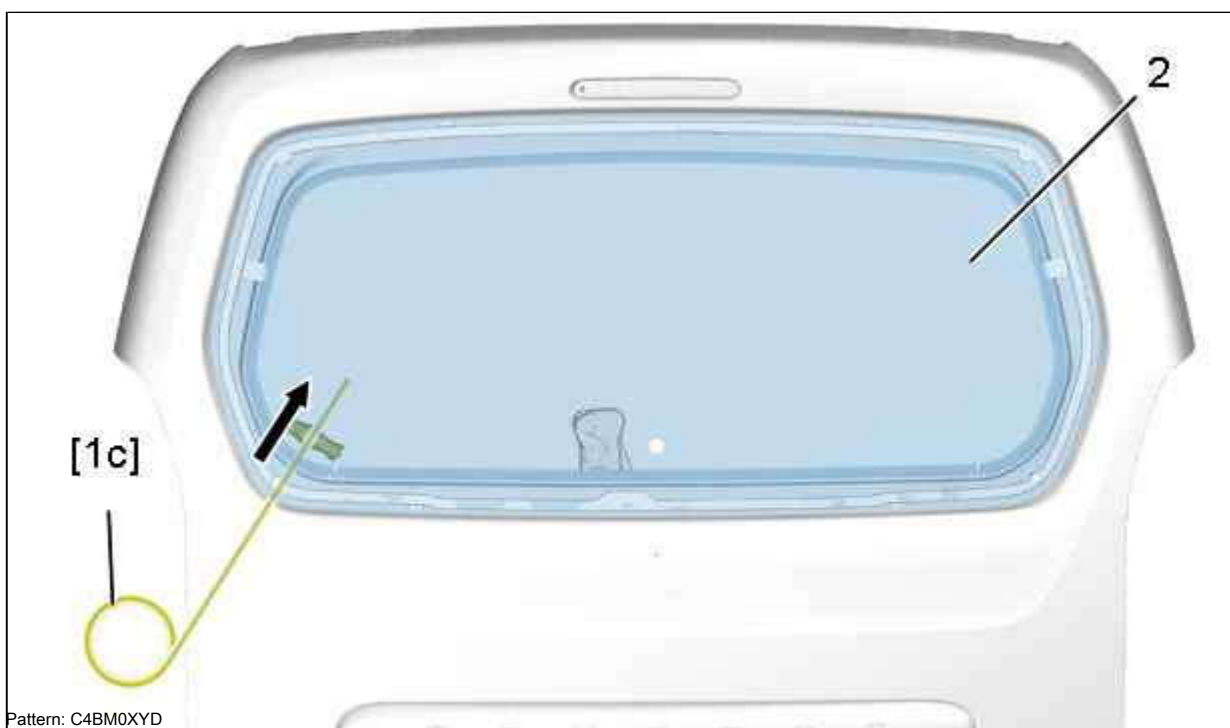


Pattern: C4BM0XWD

Disconnect: 2 defrost connectors (at "a") (Tailgate glass).



NOTE: If you are reusing the rear window, place the pieces of adhesive tape (1) and cut them (As shown above) (in "b").

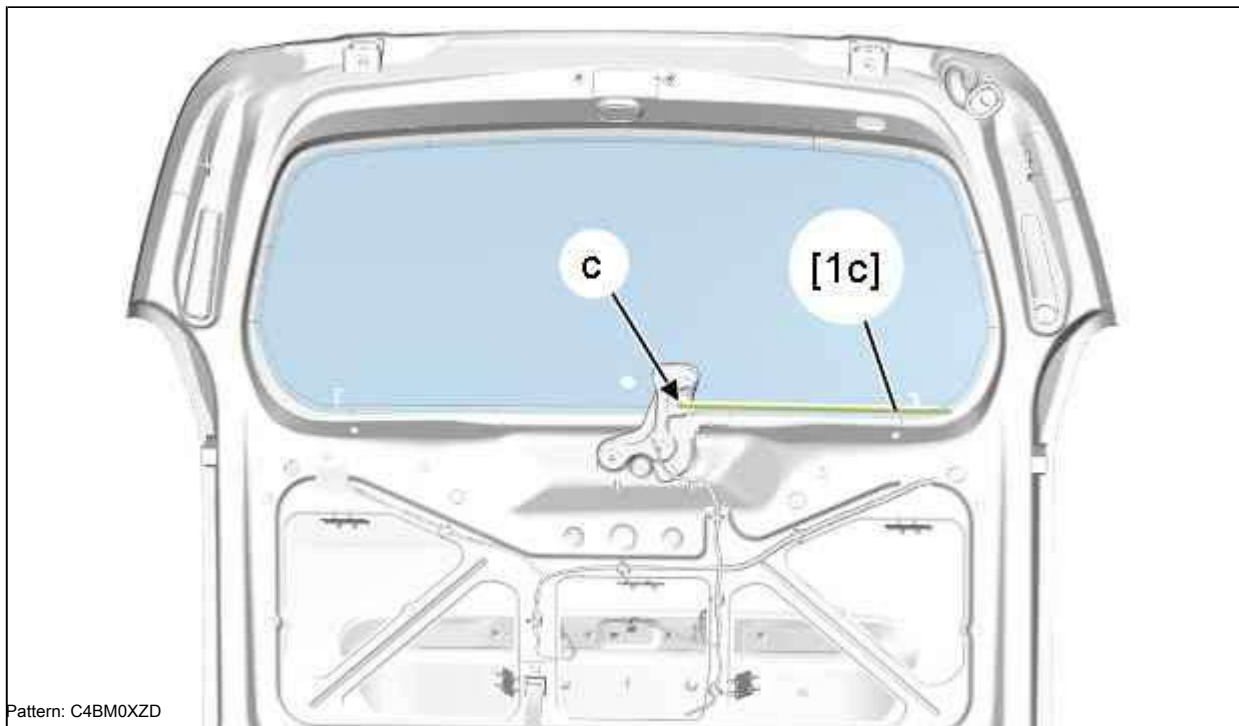


ATTENTION : Protect the perimeter of the glass (Luggage compartment lid (2)); With adhesive tape.

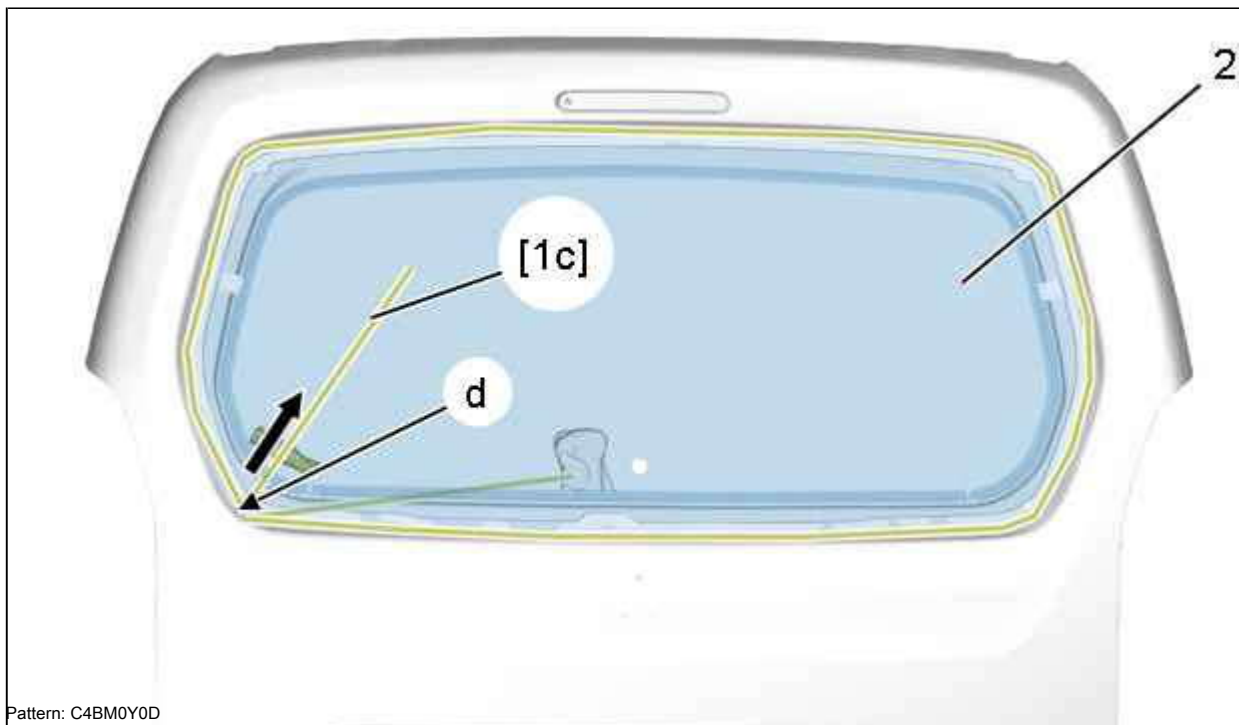
Tie a layer of glue from the inside to the outside with an erection awl.

Pass the leading string [1c] into the sewing hole (according to the arrow).

Pull up the end of the string [1c] from the inside of the car. Uninstall.



Clip the end of the string [1c] onto the rear wiper (at "c").

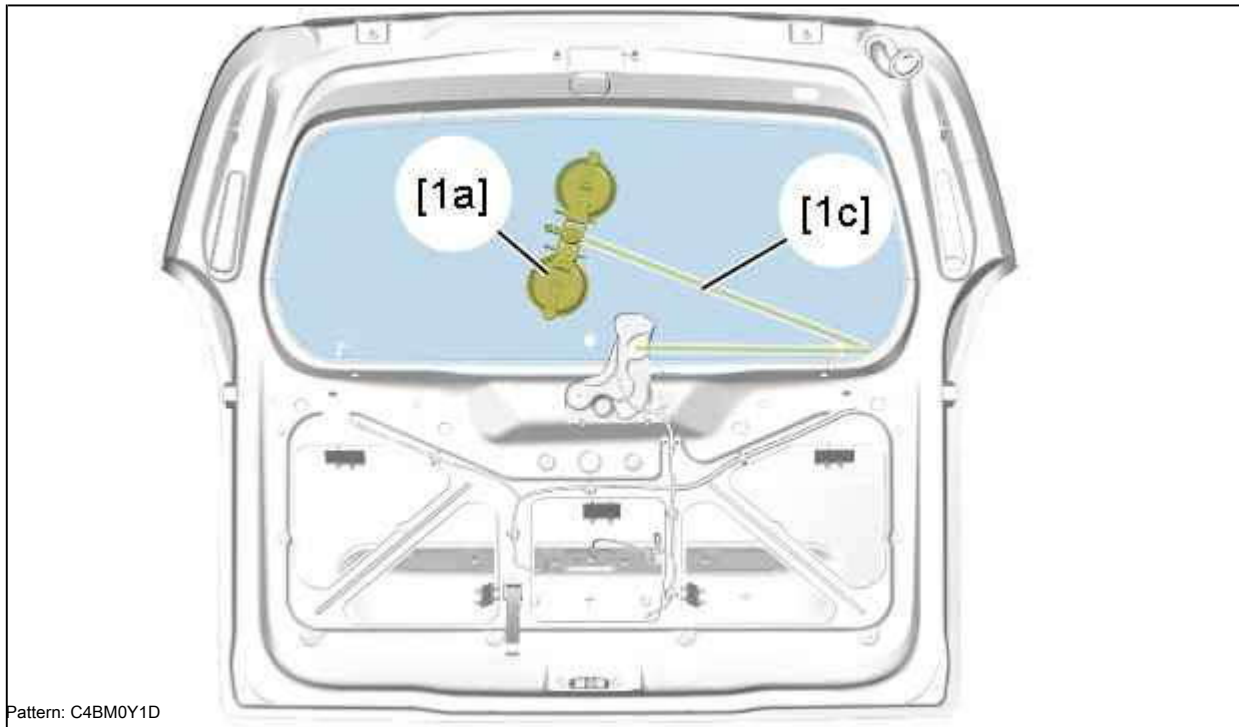


Pass the cutting wire [1c] under the tailgate glass (2).

NOTE: Leave enough length to pass the string [1c] inside the vehicle (About 600mm) (in "d").

Tie a layer of glue from the inside to the outside with an erection awl.

Pass the leading string [1c] into the sewing hole (according to the arrow). Uninstall.



Pattern: C4BM0Y1D

Attach the end of the cutting string [1c] to the rewinder with the roller [1a].

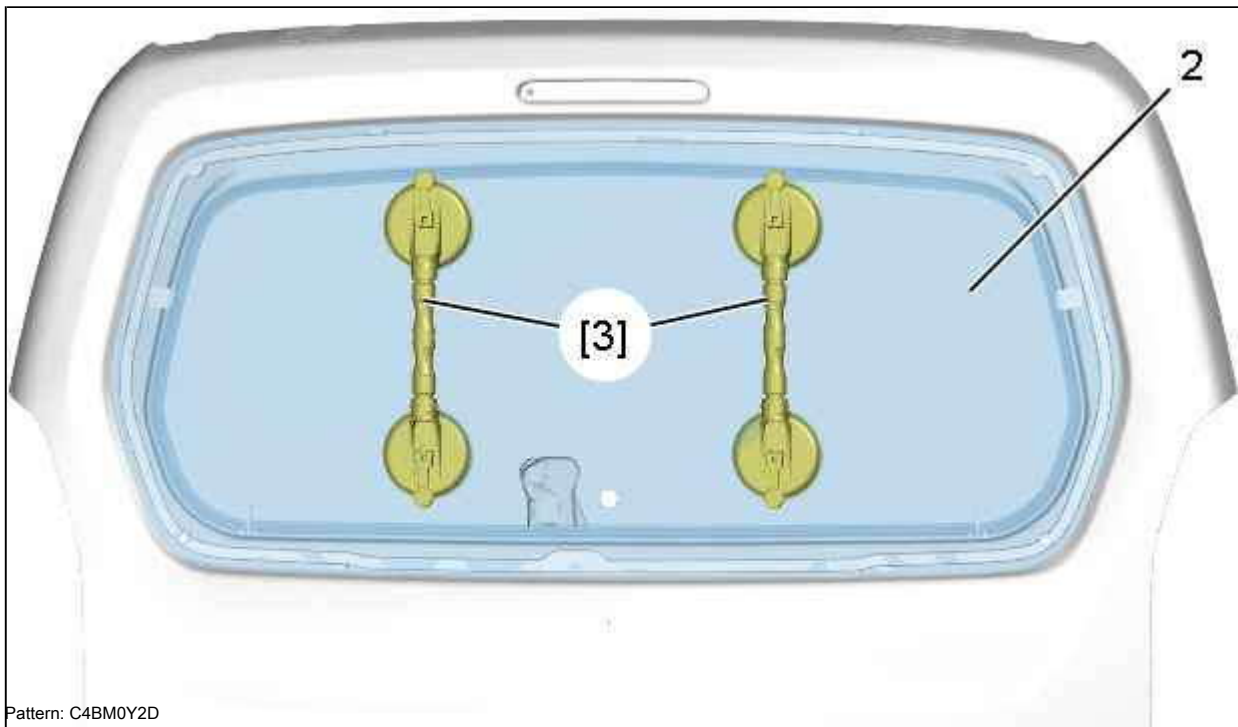
NOTE: 2 people are required for the following operations.

Cut off and move the tool [1a] along the contour of the adhesive seal.

NOTE: If there is less resistance during cutting, loosen the cutting string tension [1c].

Help the cutting string [1c] pass through resistances (thrust pads, increased glue thickness of the sealant or panel joints).

Finish cutting the adhesive seam.



Remove the boot lid glass (2); Using the two suction grips [3].

4. Cleaning

4.1. Glass preparation

1st time: Reuse the trunk lid (2):

- Insert the blade [13] into the electric knife [9b]
- Cut off the glass residual adhesive
- Wipe off the dust with a clean cloth
- **Apply primer only on the places, brushed metal**



2nd time: Installing a new glass trunk lid (2):

- Degrease the edge of the trunk lid (2)
- **Apply initial prep coat from sticker kit A3**
- **Apply primer only on the places, brushed metal**
- Let dry for 10 minutes



4.2. Groove preparation

1st time: If there is a residual adhesive seam:

- Insert the blade [13] into the electric knife [9b]
- Cut off the glass residual adhesive
- Wipe off the dust with a clean cloth

2nd time: Nano part:

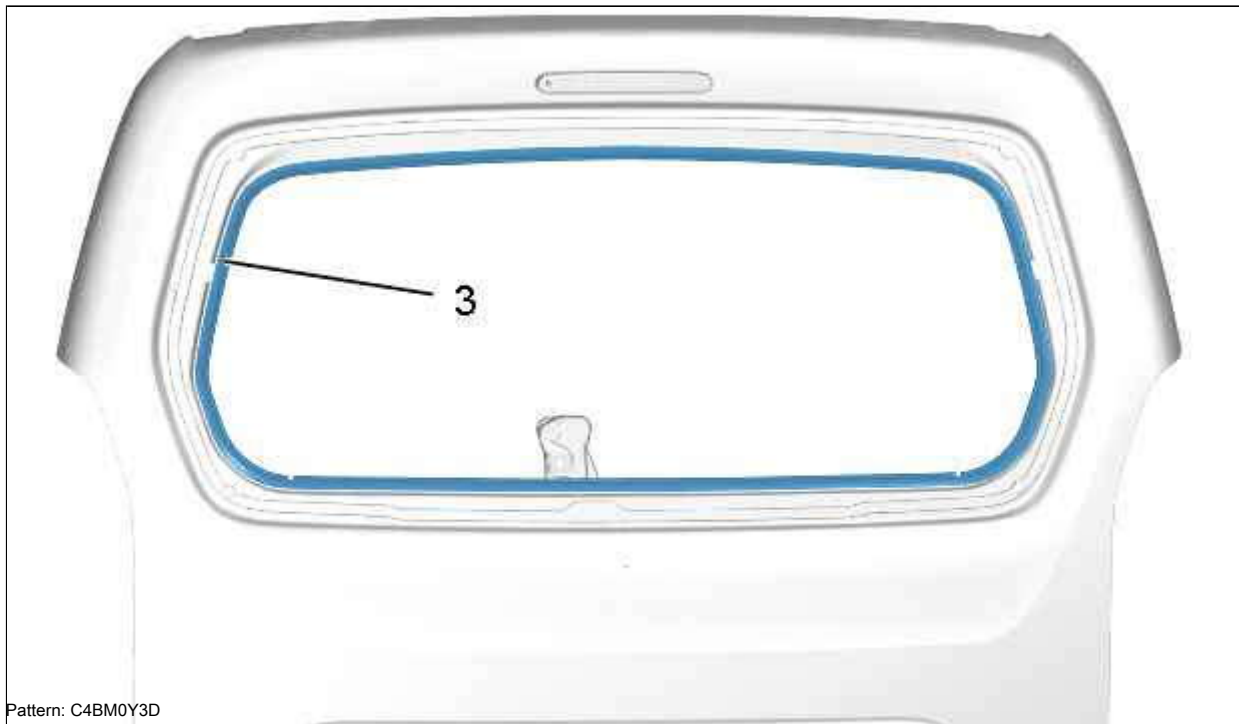
- Degrease the groove
- **Apply initial prep coat from sticker kit A3**
- Let dry for 10 minutes



5. Installation

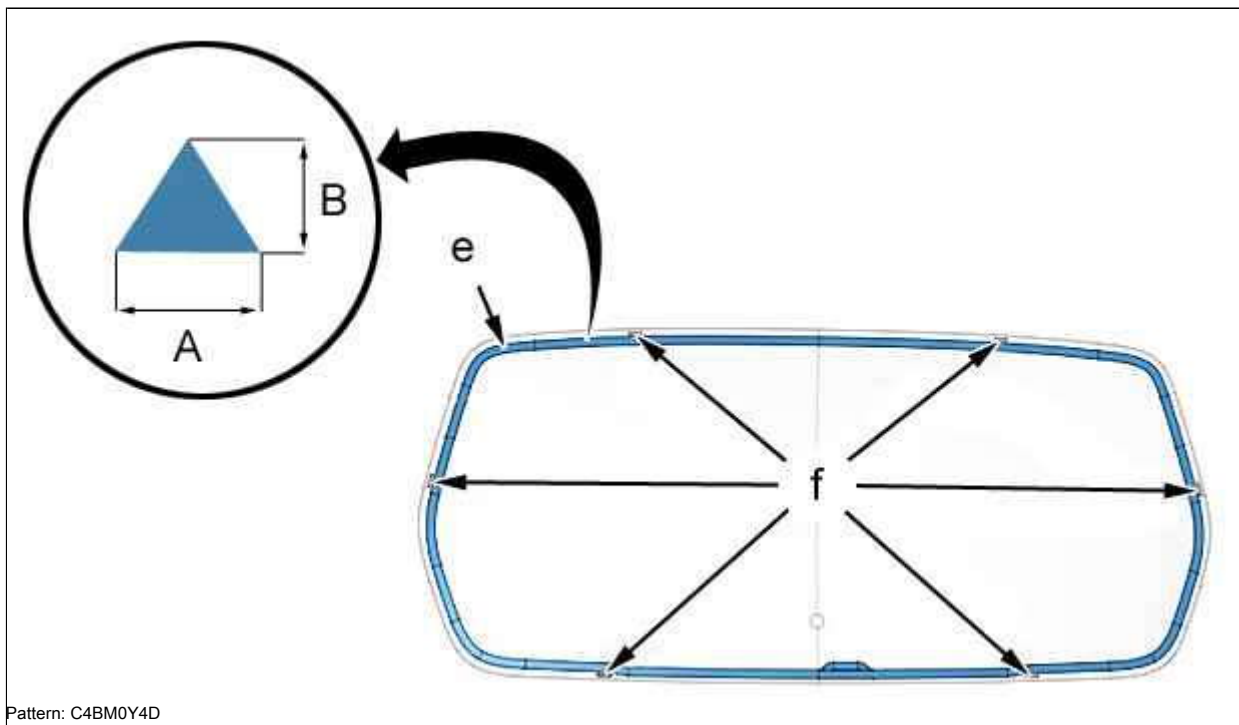
ATTENTION : Using a two-component product: Between installing the glass on the vehicle and

when the sealant is squeezed out, it takes 5 minutes



Replace the seal (3) (if necessary).

ATTENTION : Replace systematically: Shims.



width "A" = 8 mm. Height "B"
= 12 mm.

Size of the triangular tip to produce a sealant bead of width "A" and height "B".

Install the luggage compartment door liners (2) (at "f"). 1st time: Reuse the trunk lid glass (2). Apply an adhesive seam around the perimeter of the tailgate glass (2) (at "e"). Install the boot lid glass (2):

- With articulated suction cups [3]
- With adhesive tapes (1)

Press lightly on the perimeter of the trunk lid glass (2). Clean the boot lid glass (2) and the surrounding area. 2nd time: Installing a new glass trunk lid:

- Apply an adhesive seam around the perimeter of the tailgate glass (at "e")
- Install the tailgate glass; Using the hinged suction cups [3]
- Press lightly on the perimeter of the trunk lid glass
- Clean the tailgate glass and the surrounding area

6. General operations

ATTENTION : After installing the glass, wait the required time before using the vehicle, recommended by the suppliers for the formulations used.

Proceed with installation in the reverse order of removal. Check the boot glass for leaks.

Clean the rear lid glass and the surrounding area. Check the functioning of the electrical equipment.

REMOVAL REFITTING: TRUNK LID HINGES

MANDATORY: Observe the cleanliness and safety rules



1. Removal

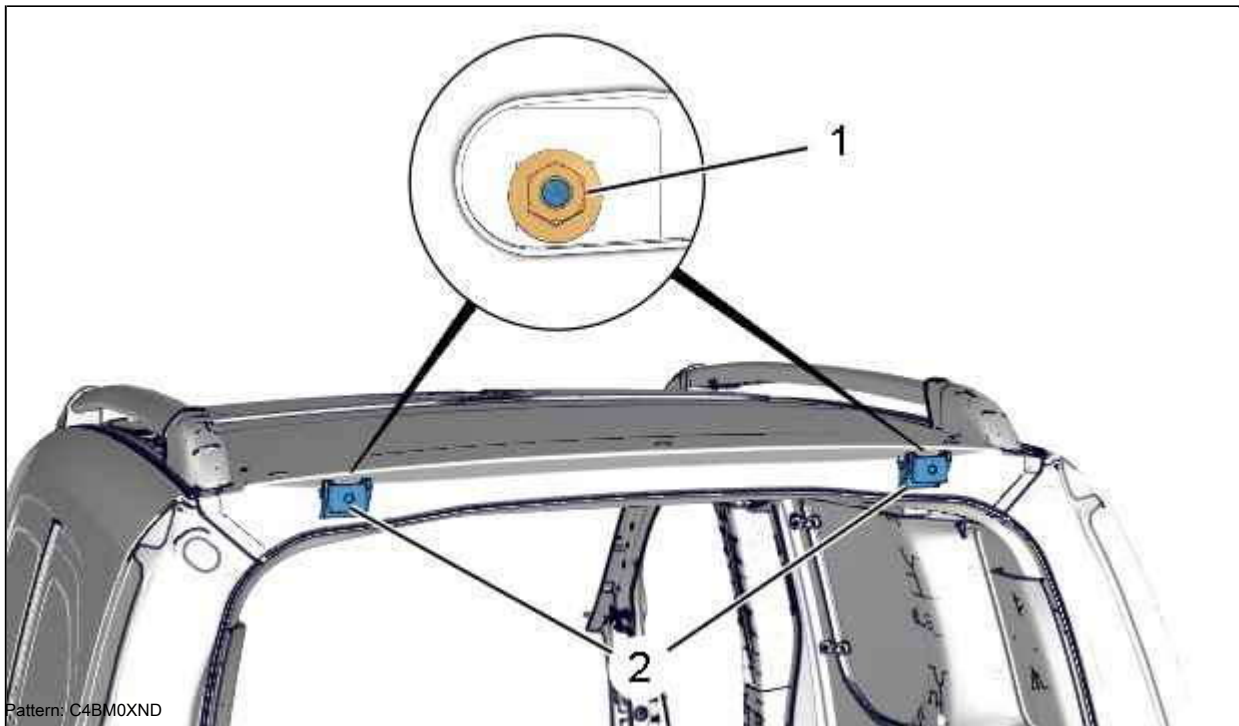
Roof upholstery

(depending on the configuration).

Roof upholstery

(depending on the configuration).

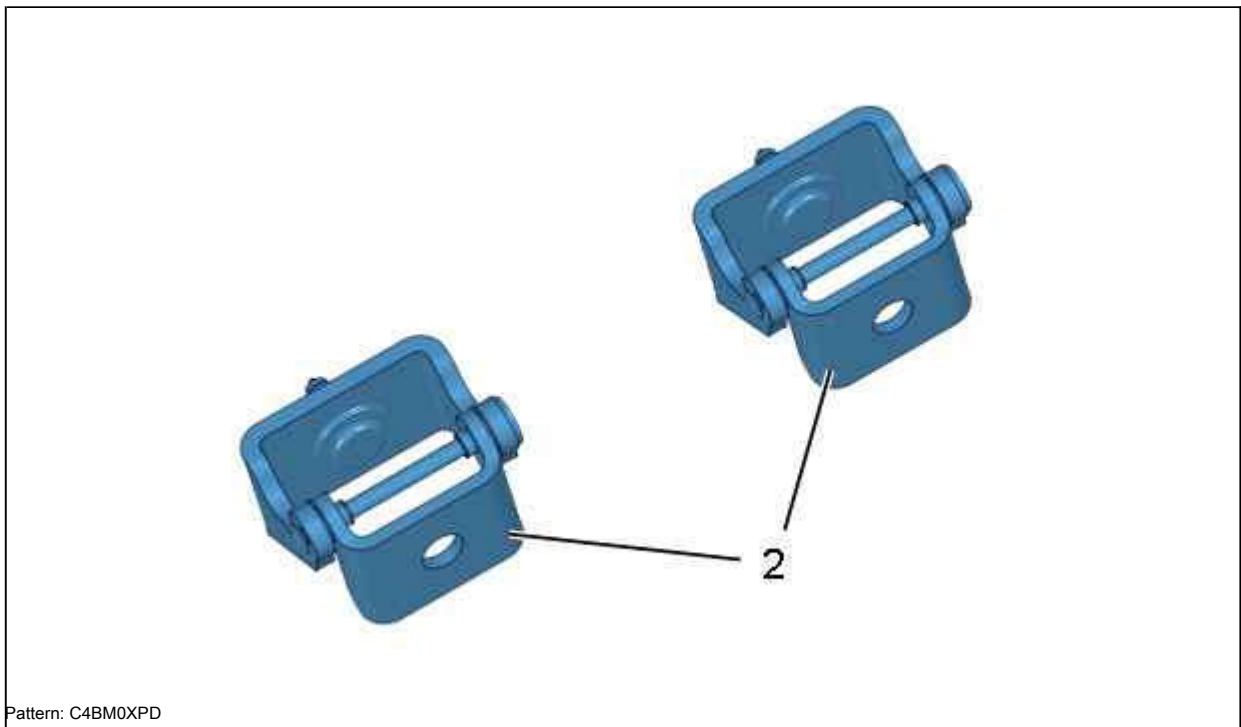
Remove the trunk lid



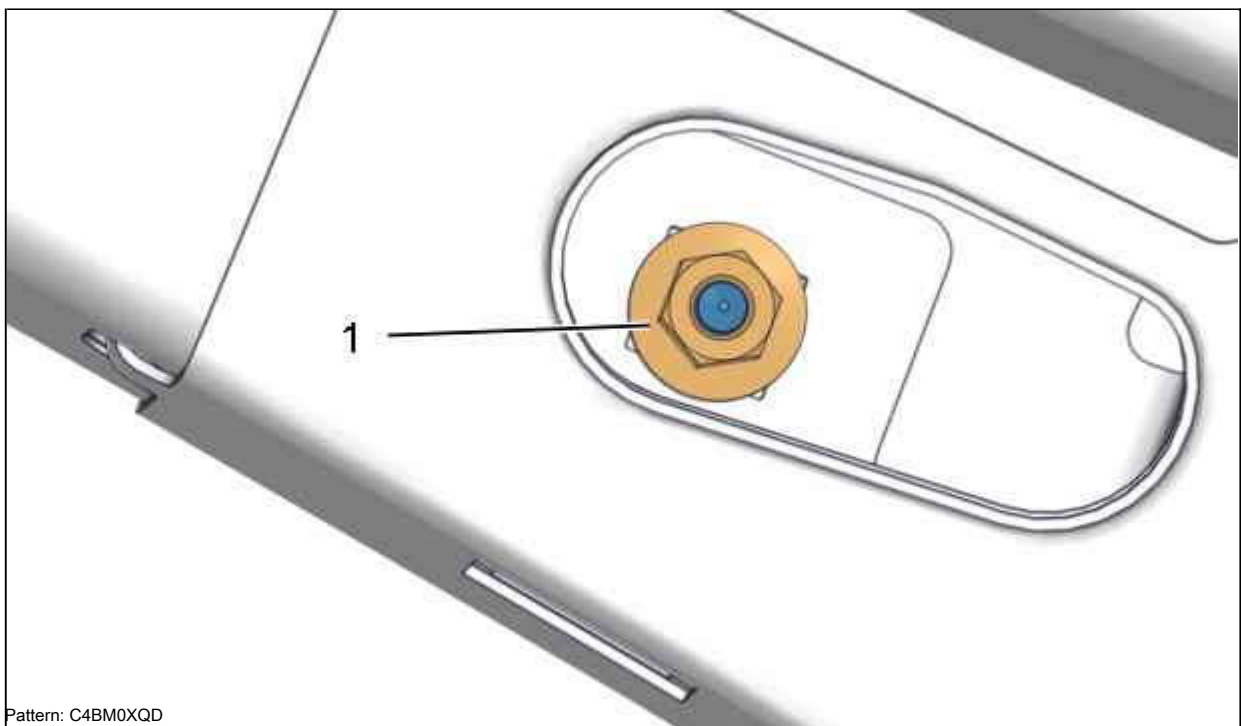
Remove:

- Nuts (1)
- Trunk lid hinges (2)

2. Installation



Install the tailgate hinges (2).



Install:

- Nuts (1) (Loose)
- **Trunk lid**



Adjust tailgate clearance and fit

Tighten the nuts to a torque of (1) to 2 da.Nm.



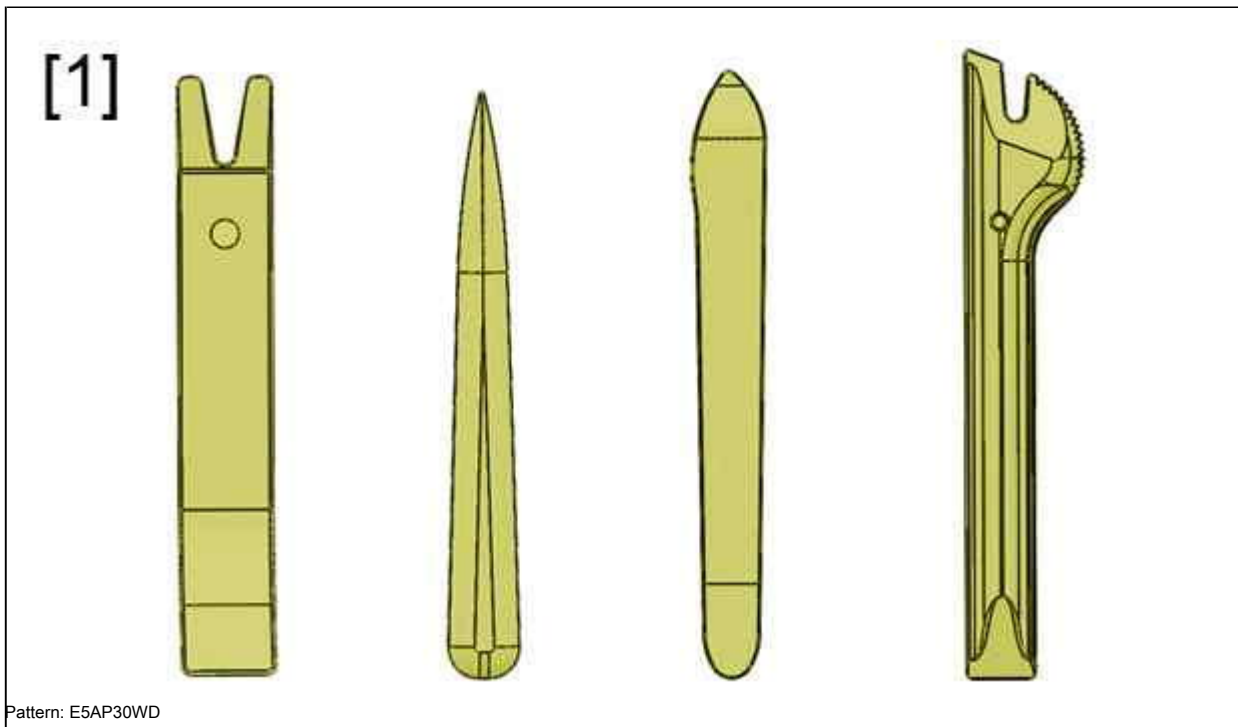
Installation is carried out by performing the removal operations in the reverse order. Check the operation of the various equipment.

DISASSEMBLY ASSEMBLY: REAR SWING DOORS

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Equipment for trimming () .1350ZZ.

2. Preliminary operations

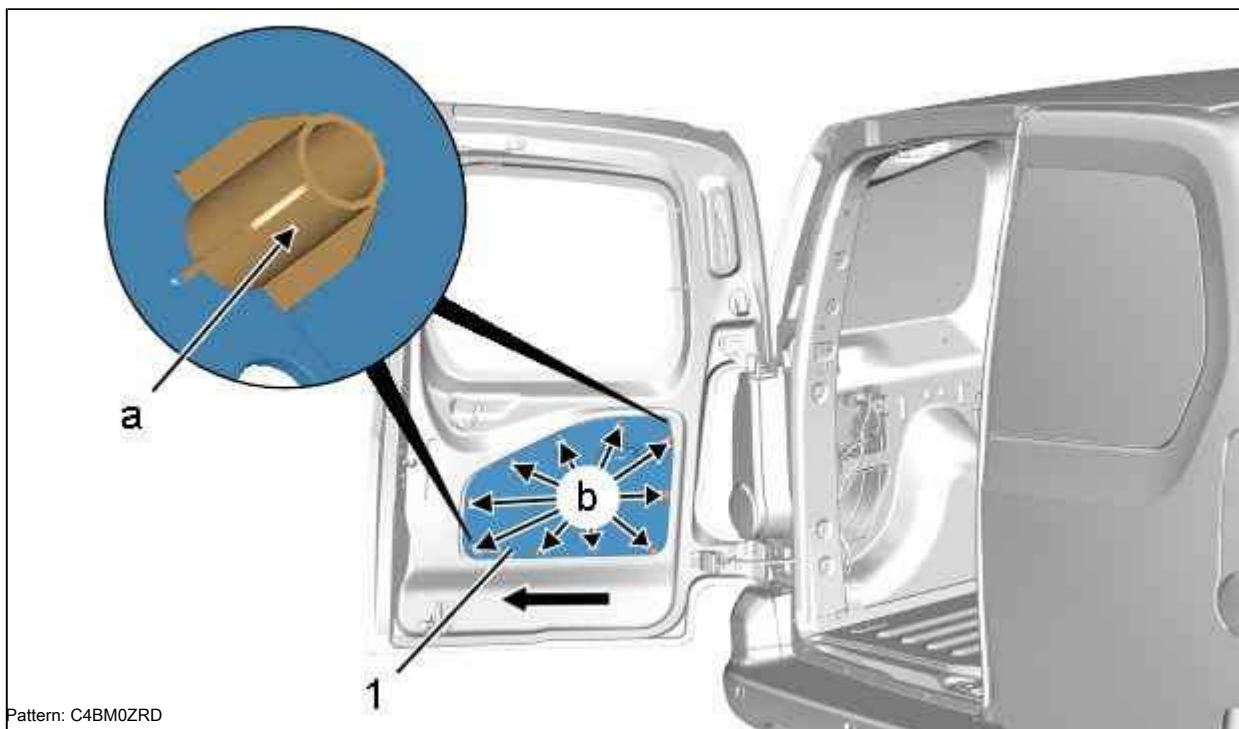
Disconnect the battery. Remove:

- Rear swing door wiper drive
- Glass-back swing door
- 3rd brake light



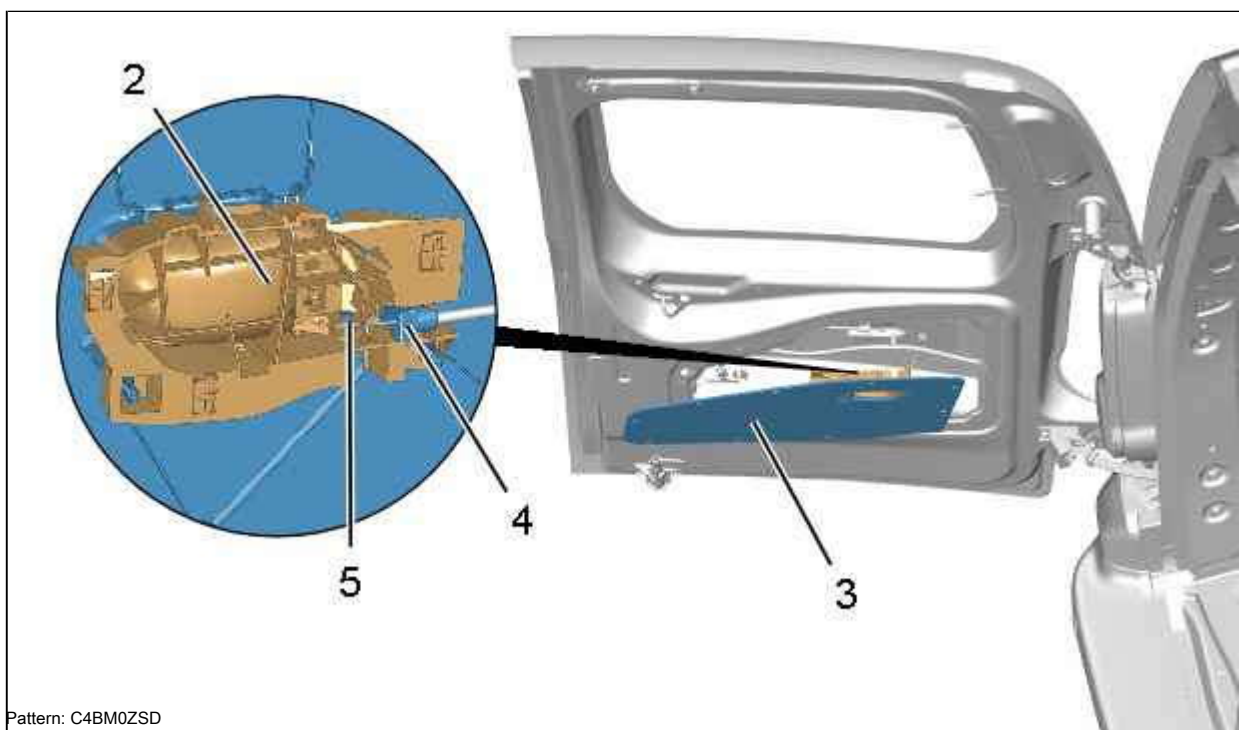
3. Disassembly

3.1. Rear left swing door



Unfasten the fasteners (at "b"); Using the tool [1]. Separate:

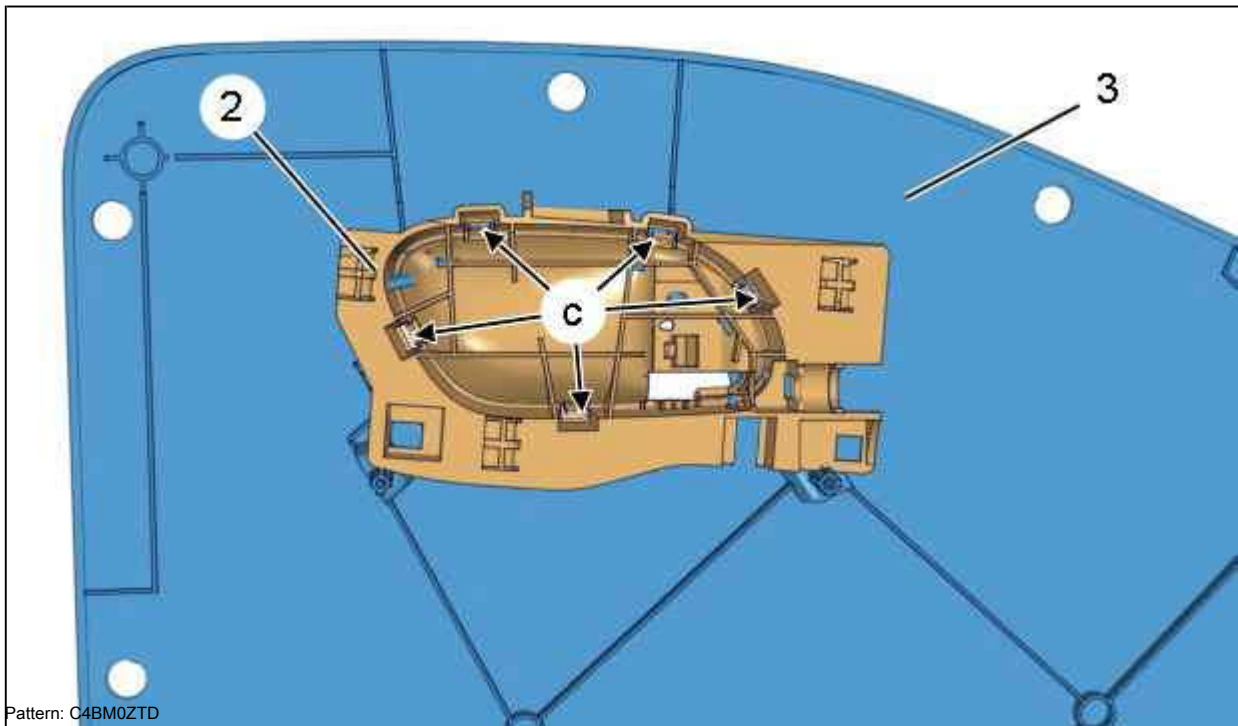
- Door panel assy with inner opening handle (1) (in "a")
- Door panel assy with inner opening handle (1) (in accordance with the arrow)



Separate:

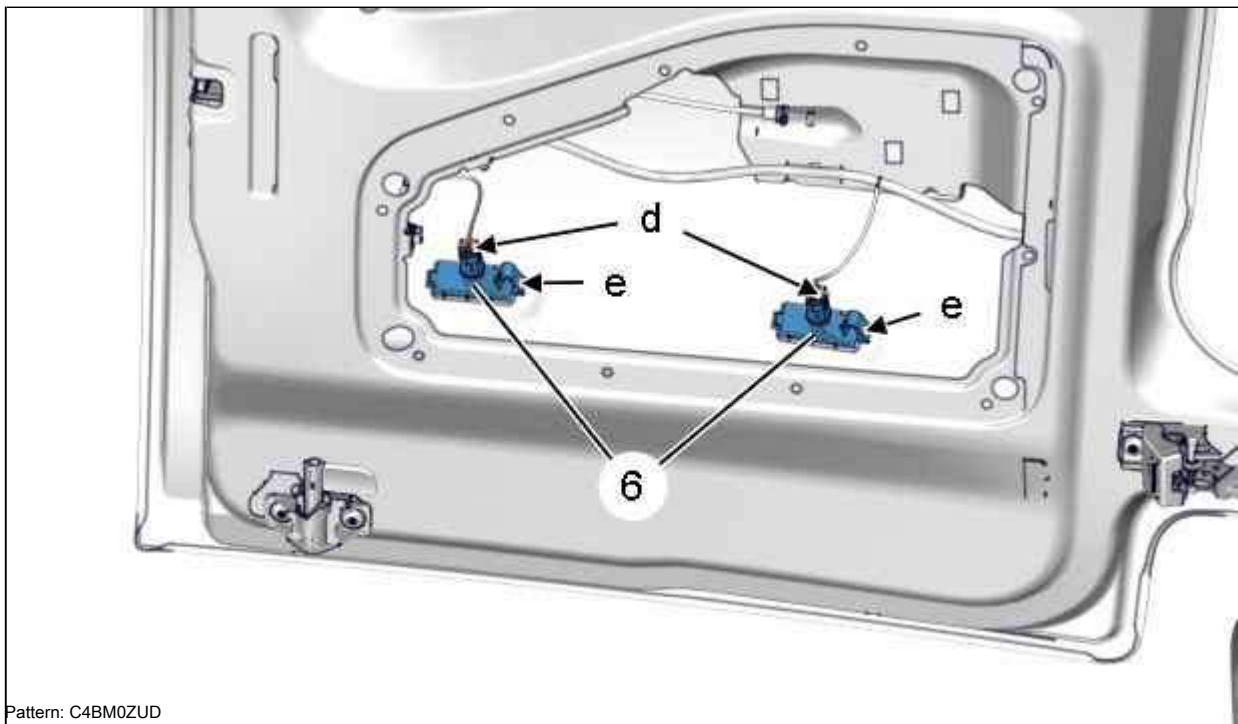
- Fastening the cover of the cable drive (4)
- End of control cable (5)

- Door panel inner opening handle (2) assembled with door panel (3)



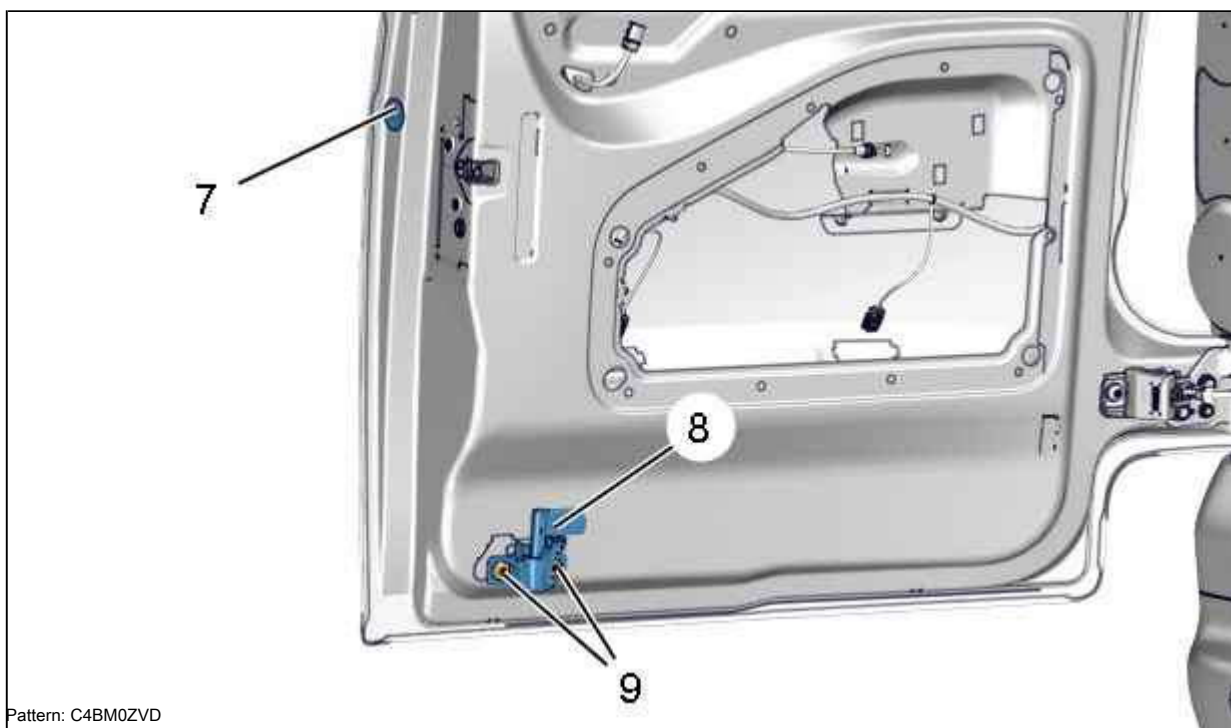
Disconnect: Interior opening handle (2) (at "c"); Using a thin screwdriver. Remove:

- Interior opening handle (2)
- Door panel (3)



Disconnect: License plate lamps (6) (in "d").

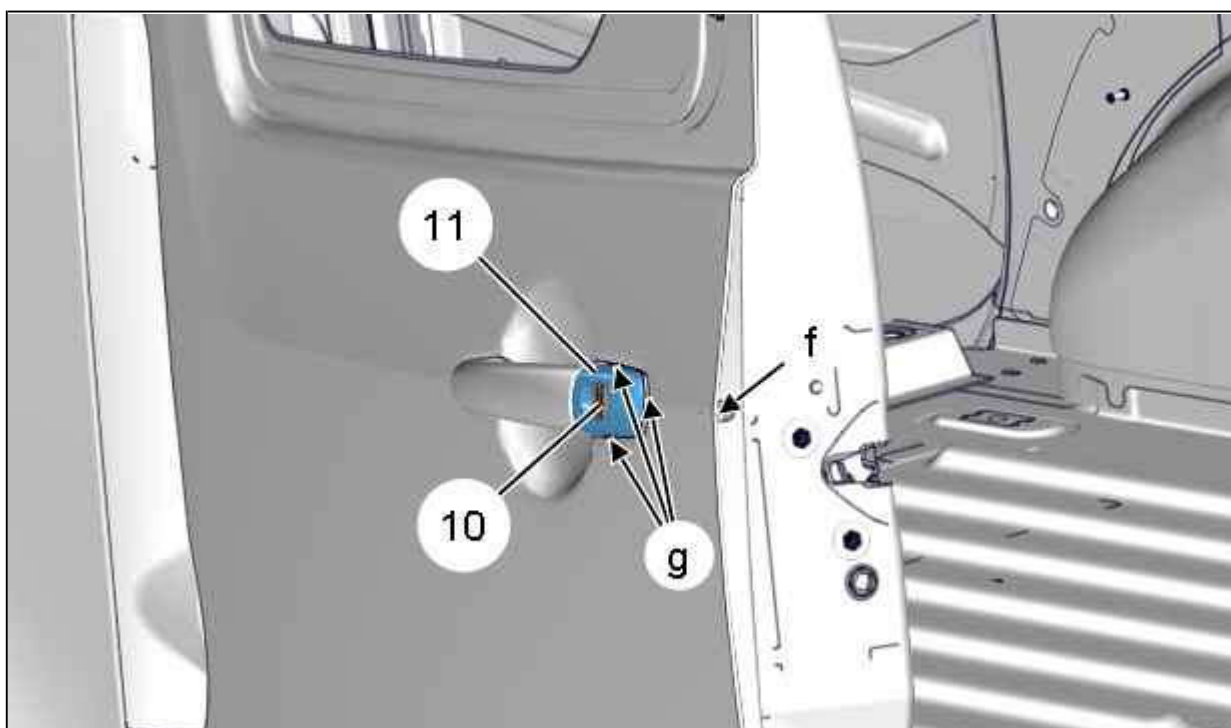
Disconnect the license plate lamps (6) (at "e"); Using the tool [1]. License plate lamp remover (6) (Outside door).



NOTE: Do not forget to replace the adhesive strip (7).

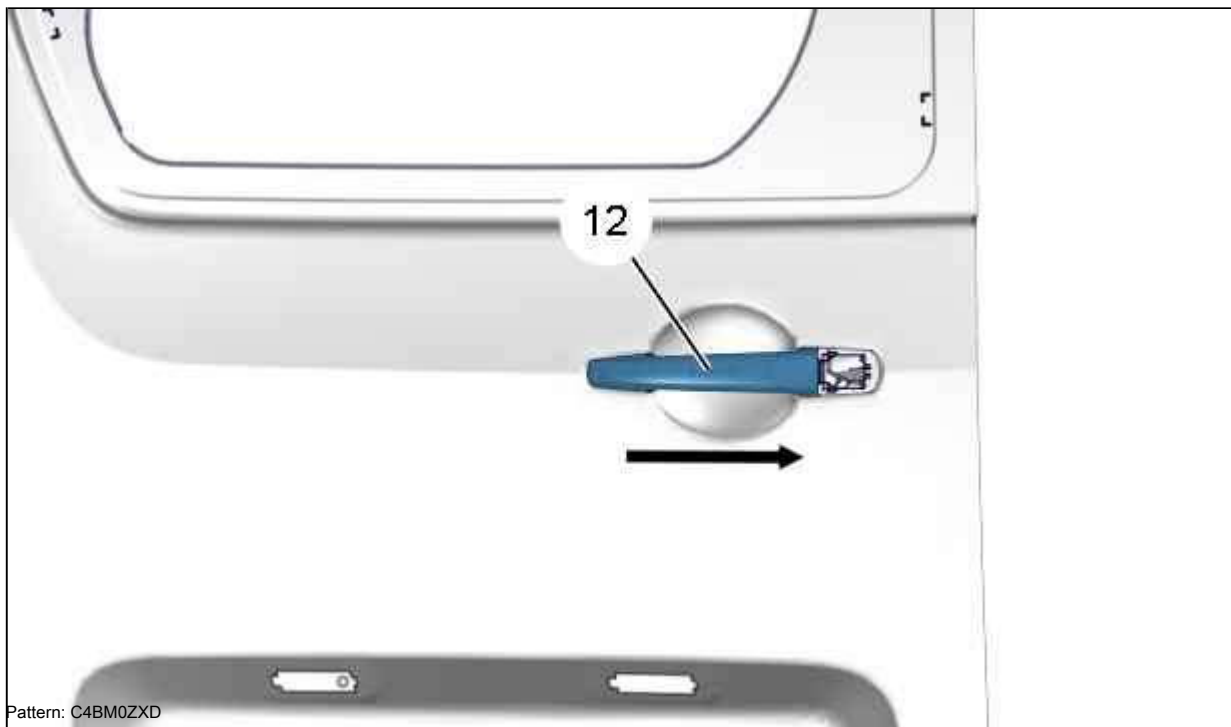
Remove:

- Sticker (7)
- the bolts (9)
- Lower lock (8)

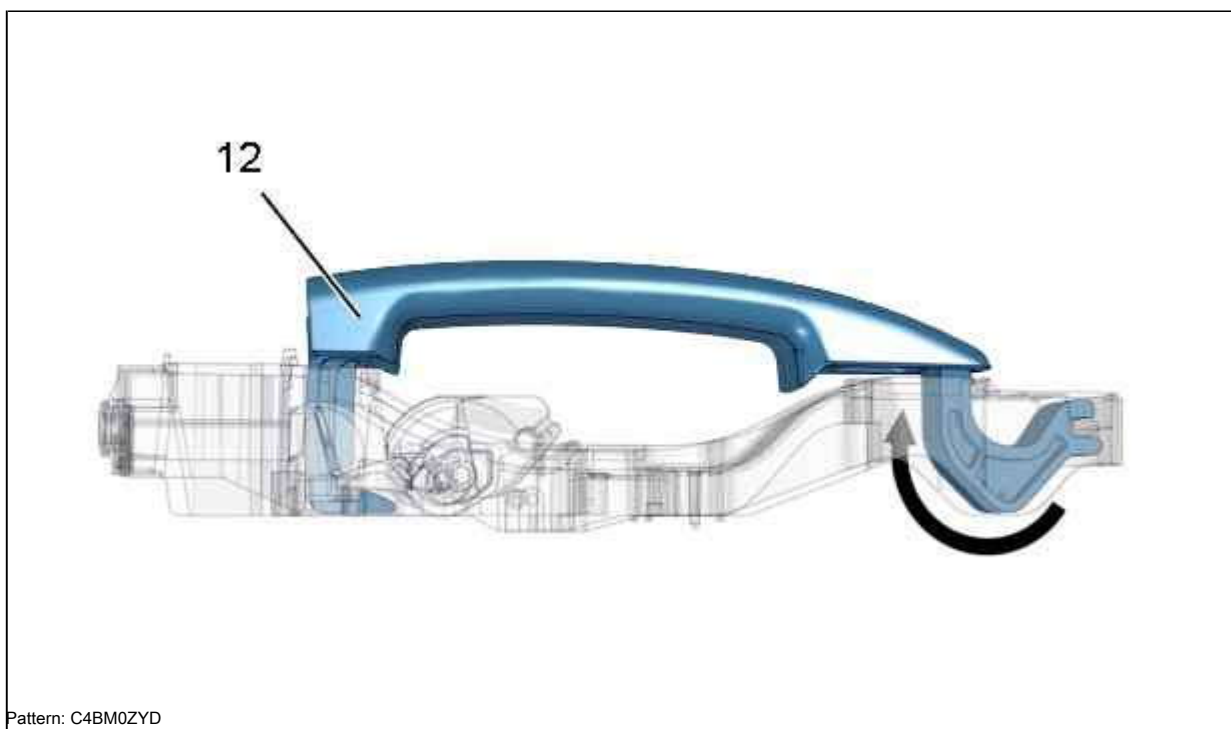


Pattern: C4BM0ZWWD

Loosen the bolt (at "f") (not removing it).
Detach decorative strip (11) (in "g"); Using the tool [1].
Remove the decorative strip (11). Loosen and
remove the door lock (10).

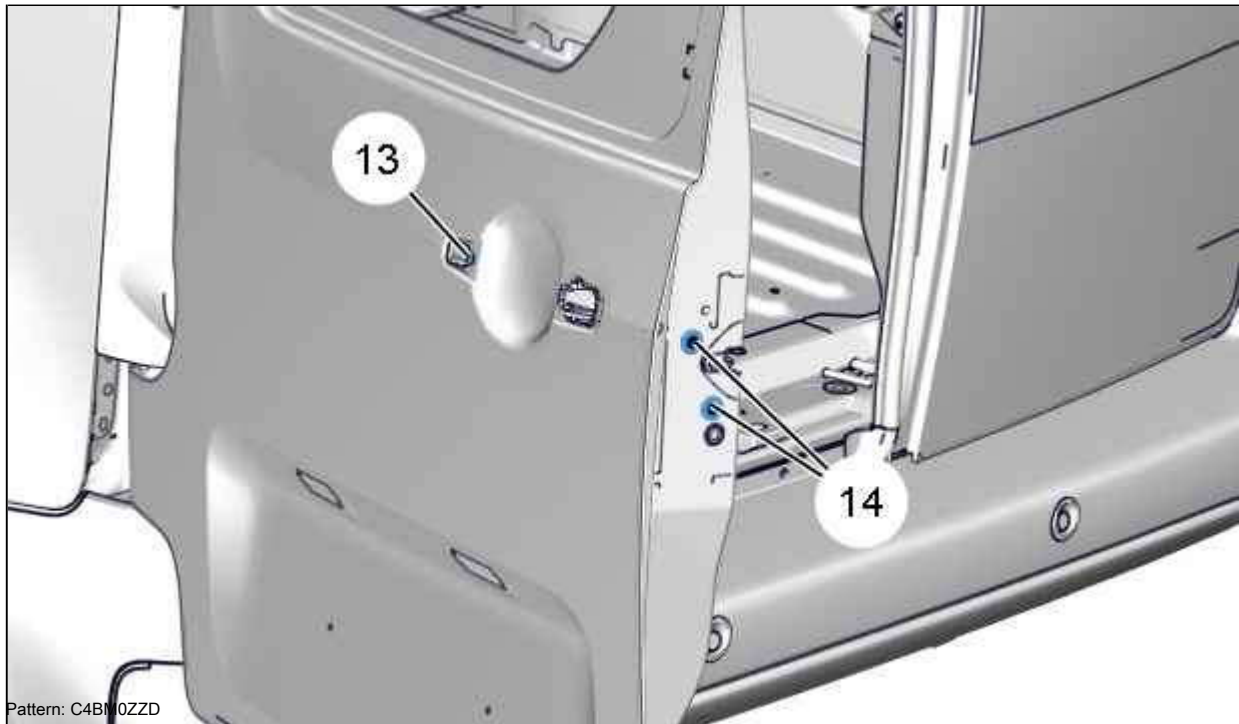


Release the outer handle (12) (in accordance with the arrow).



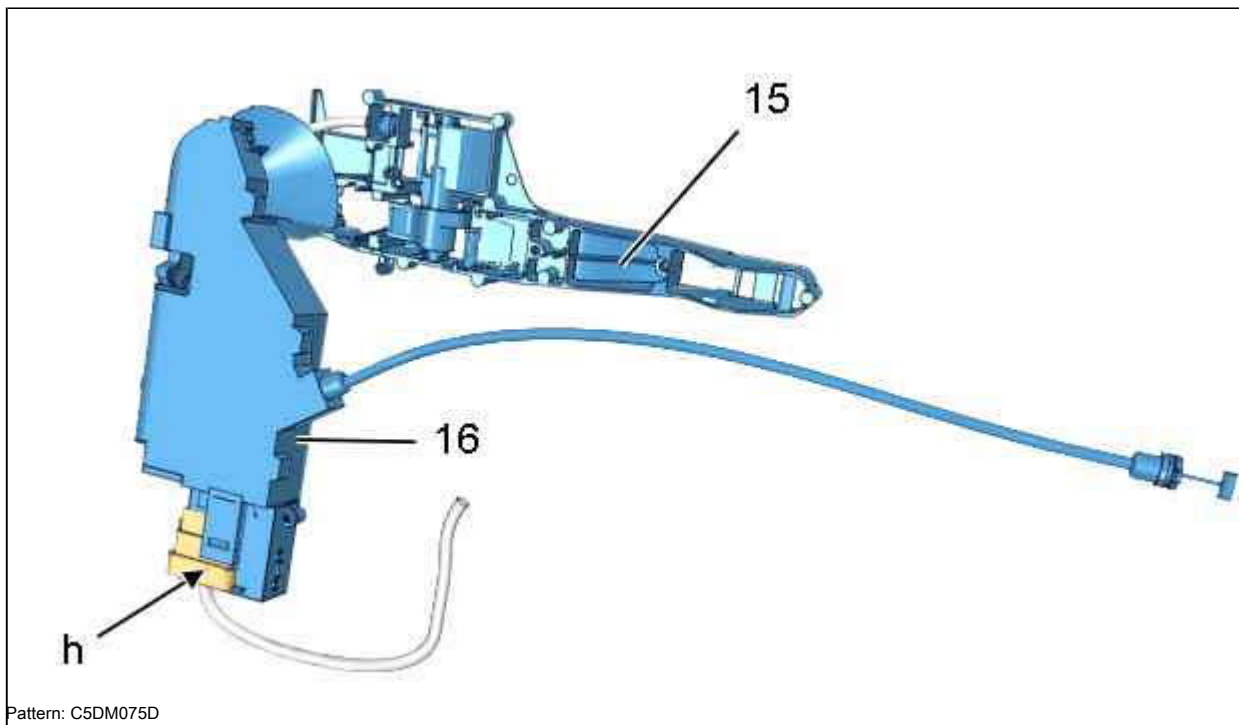
Release the outer handle (12) (in accordance with the arrow).

Remove the outer handle (12).



Loosen the screw (13).

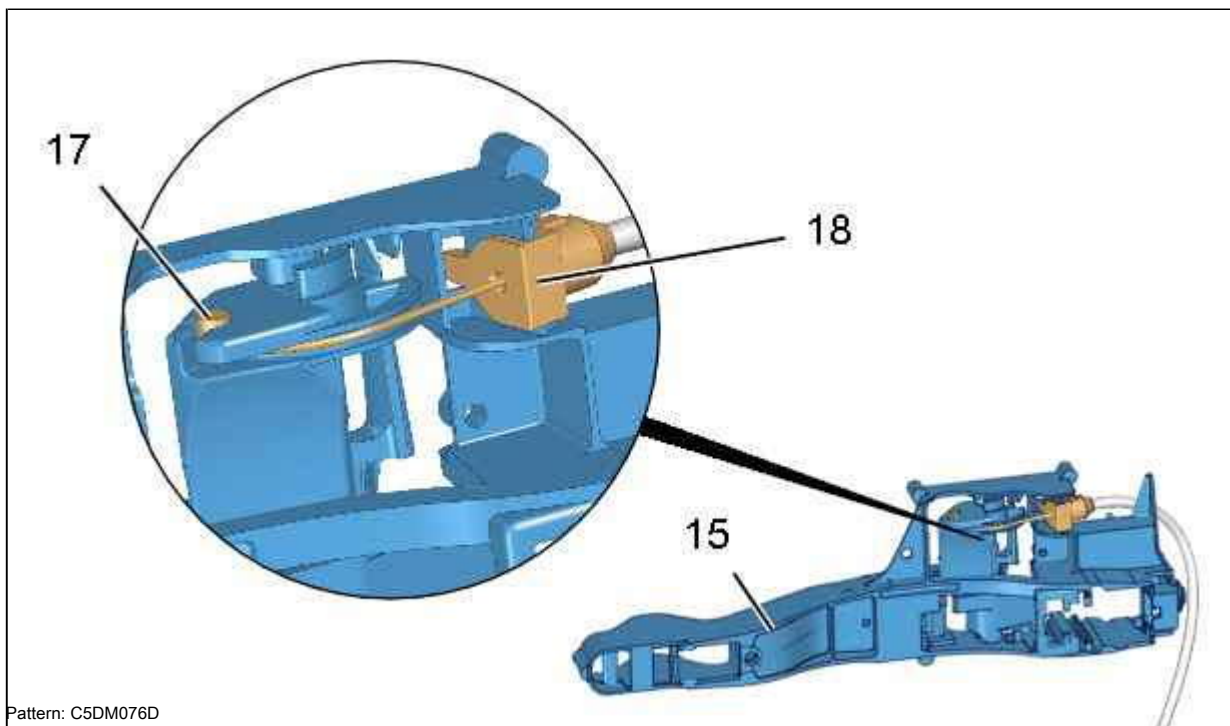
Loosen the screws (14).



Separate (Through the inner hole of the door):

- Door lock mechanism (16)
- Outside Door Handle Mechanism (15)

Disconnect the connector (at "h").



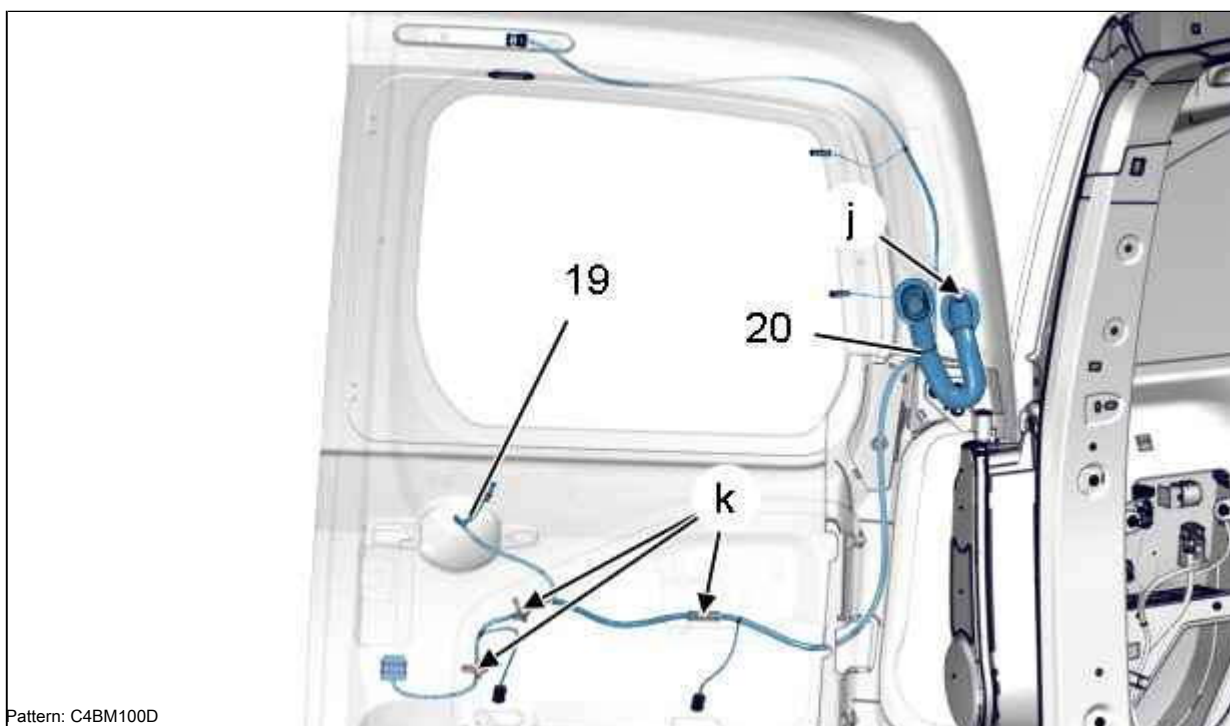
Pattern: C5DM076D

Detach the braid mount (18).

Detach the end of the control cable (17).

Remove:

- Outside Door Handle Mechanism (15)
- Door lock mechanism (16)



Pattern: C4BM100D

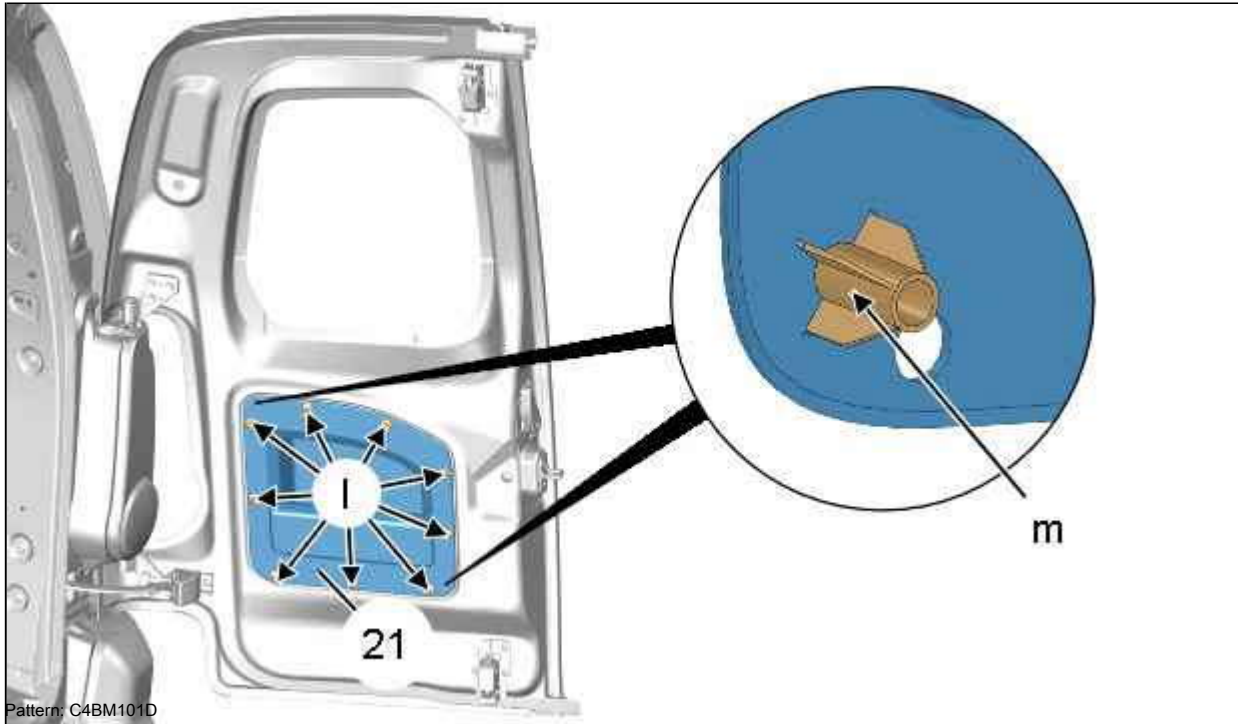
Separate: **Rear swing door wiring harness**

Disconnect:

- Electrical harness (19) (in "k")
- Sleeve (20) (in "j")

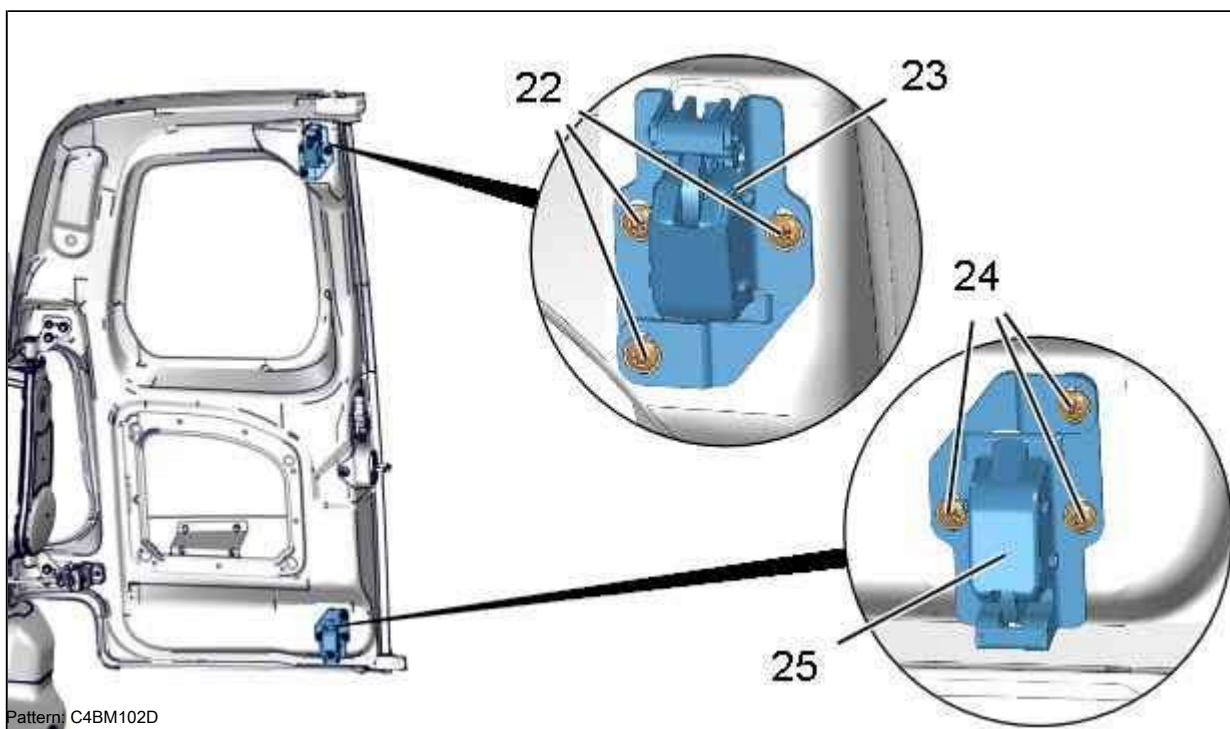
Separate: Hinged door harness (19). Remove the harness (19).

3.2. Rear swing door



Pattern: C4BM101D

Unfasten the fasteners (at "l"); Using the tool [1]. Detach the door panel (21) from the guides (at "m"). Remove: Door panel (21).



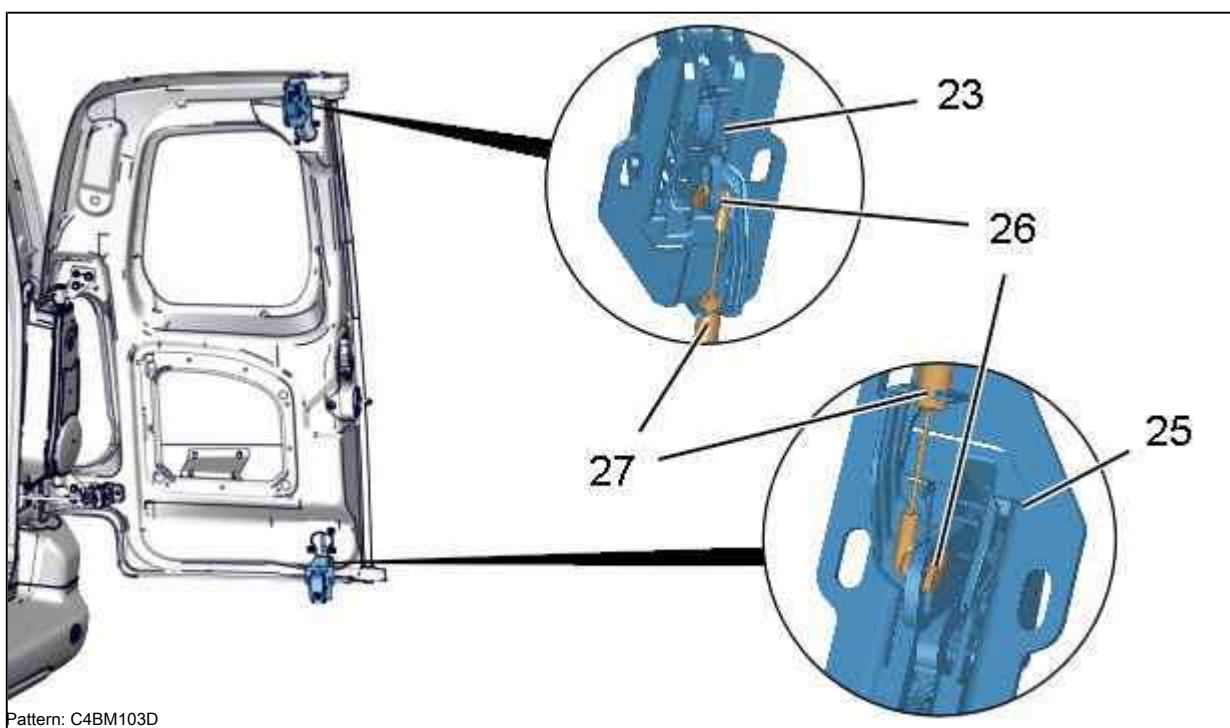
Pattern: C4BM102D

Remove:

- the bolts (22)
- the bolts (24)

Separate:

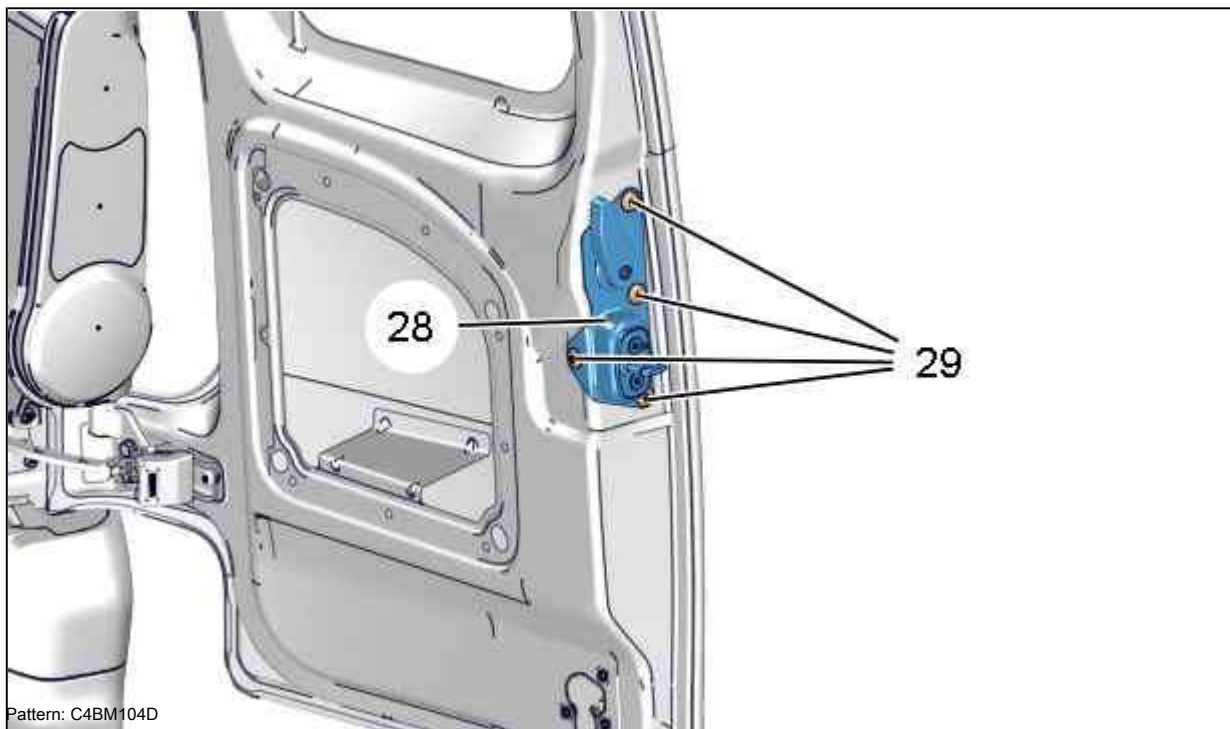
- Top closure (23)
- Bottom closure (25)



Pattern: C4BM103D

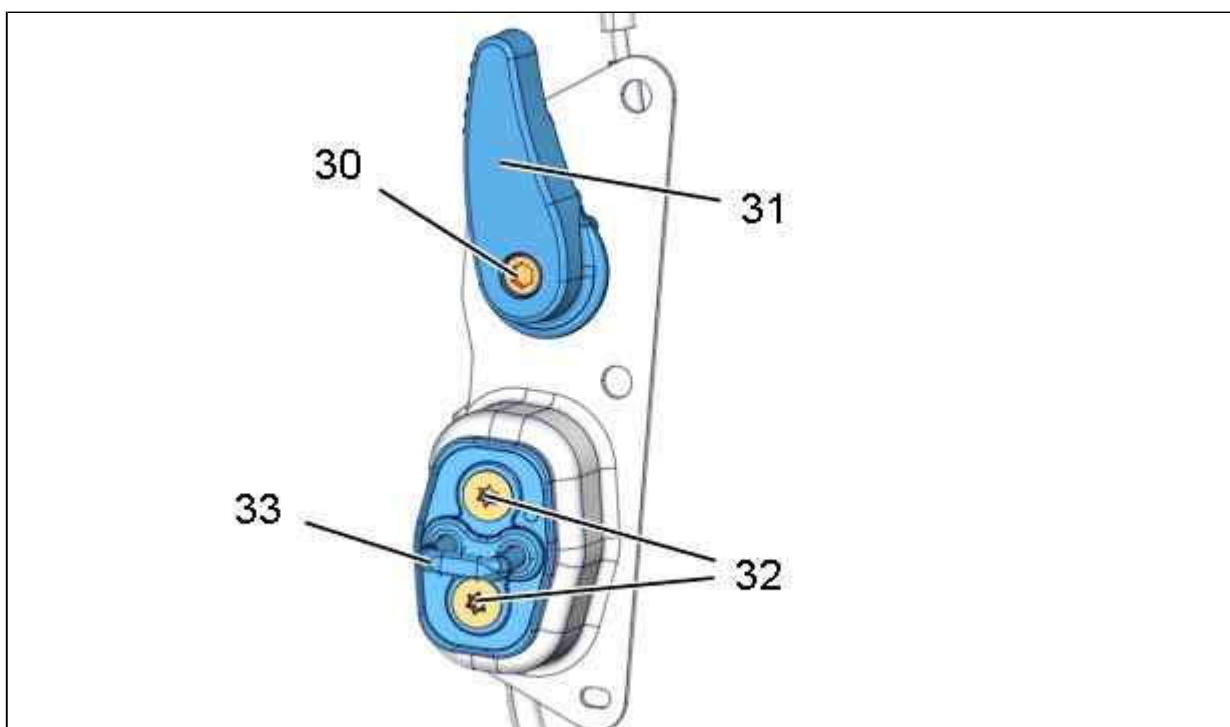
Disconnect: Braid holder (27). Separate: The ends of the control cables (26). Remove:

- Top closure (23)
- Bottom closure (25)



Remove:

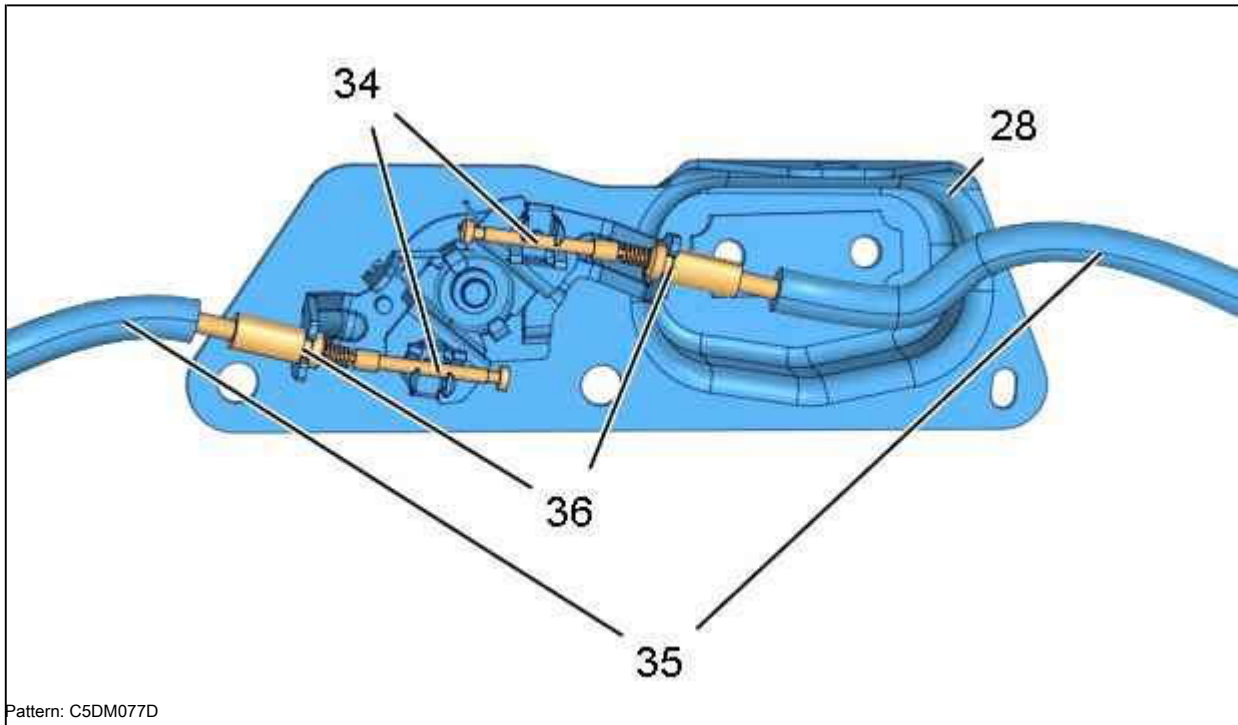
- the bolts (29)
- Central closing mechanism support (28)



Pattern: C4BM105D

Remove:

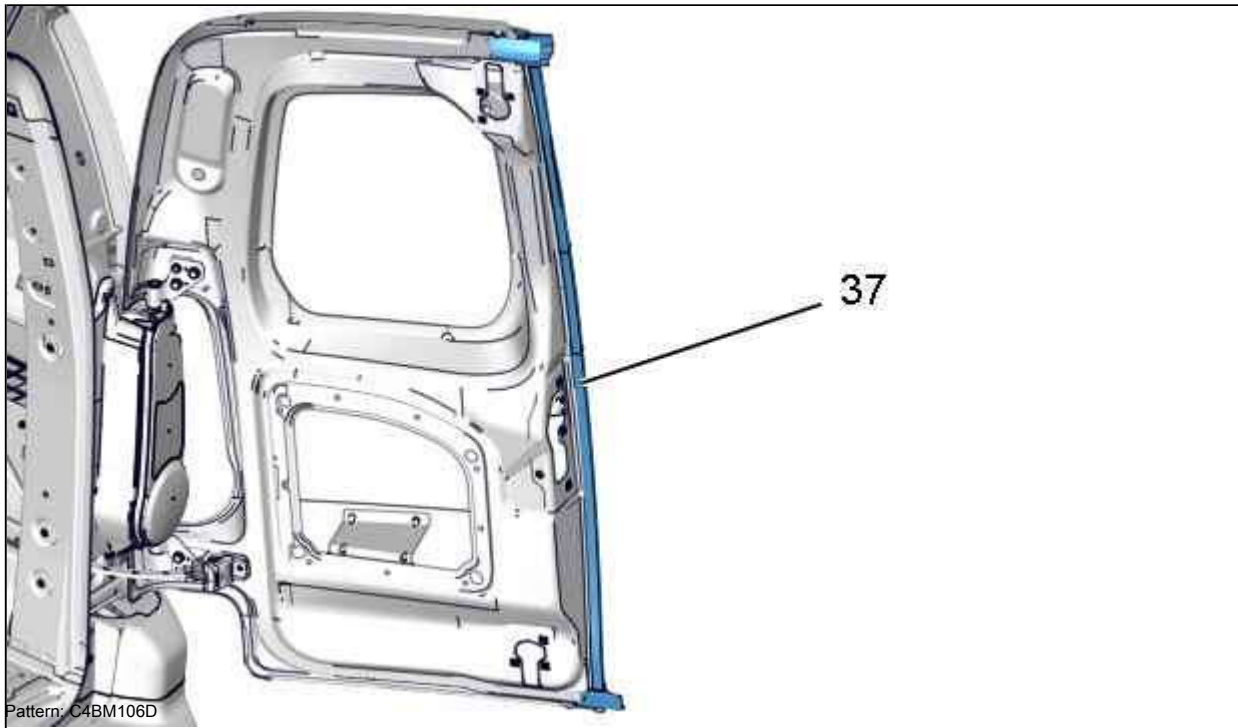
- Bolt (30)
- Handle (31)
- the bolts (32)
- Brace (33)



Detach the braid mount (36).

Separate: The ends of the control cables (34). Remove:

- Central closing mechanism support (28)
- Control cables (35)



Remove the seal (37).

4. Assembly

MANDATORY: Check the condition of the clips, replace if necessary.

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- bolts (9) to a torque of 2 ± 0.3 da.Nm
- The bolt (13) to a torque of 0.5 ± 0.1 da.Nm (in "P")
- bolts (14) to a torque of 1 ± 0.5 da.Nm
- bolts (22), (24), (29) with a torque of 2 ± 0.3 da.Nm
- The bolt (30) to a torque of 1 ± 0.1 da.Nm
- bolts (32) to a torque of 2 ± 0.3 da.Nm

Adjust the closing mechanism (23), (25) and the clip (33)

Reconnect the battery.

Check the operation of the various equipment.



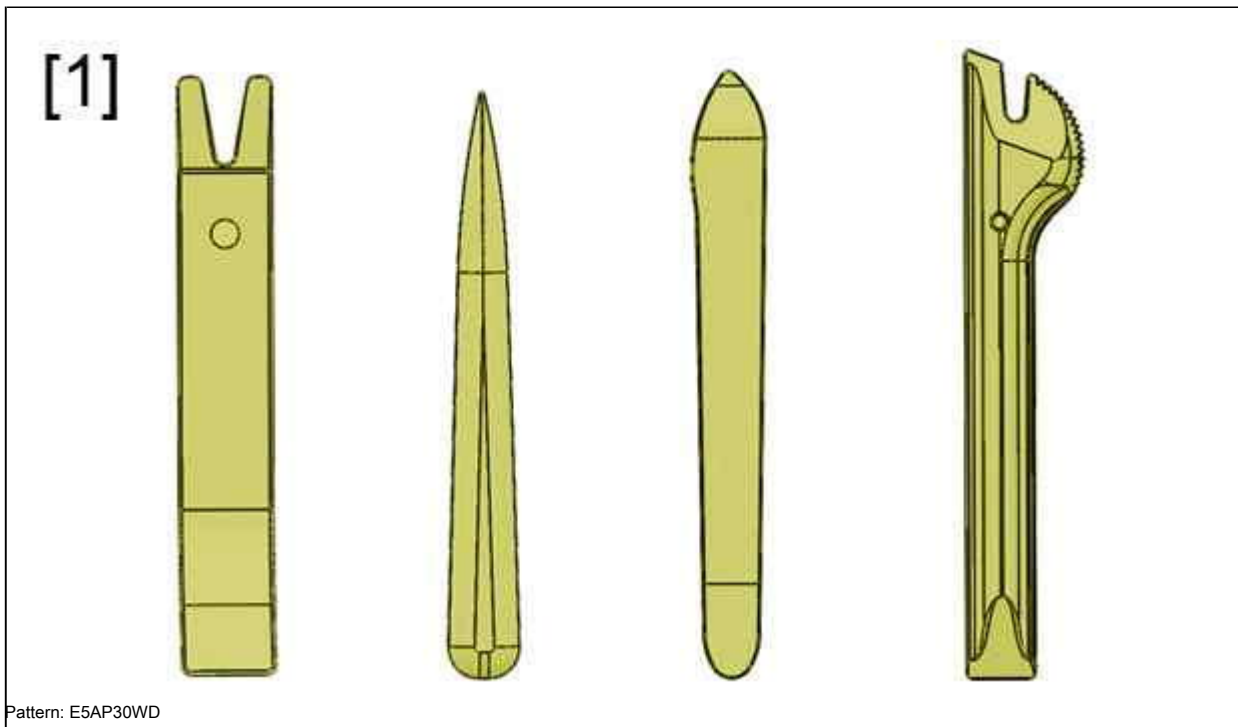
...

DISASSEMBLY ASSEMBLY: LUGGAGE COMPARTMENT COVER

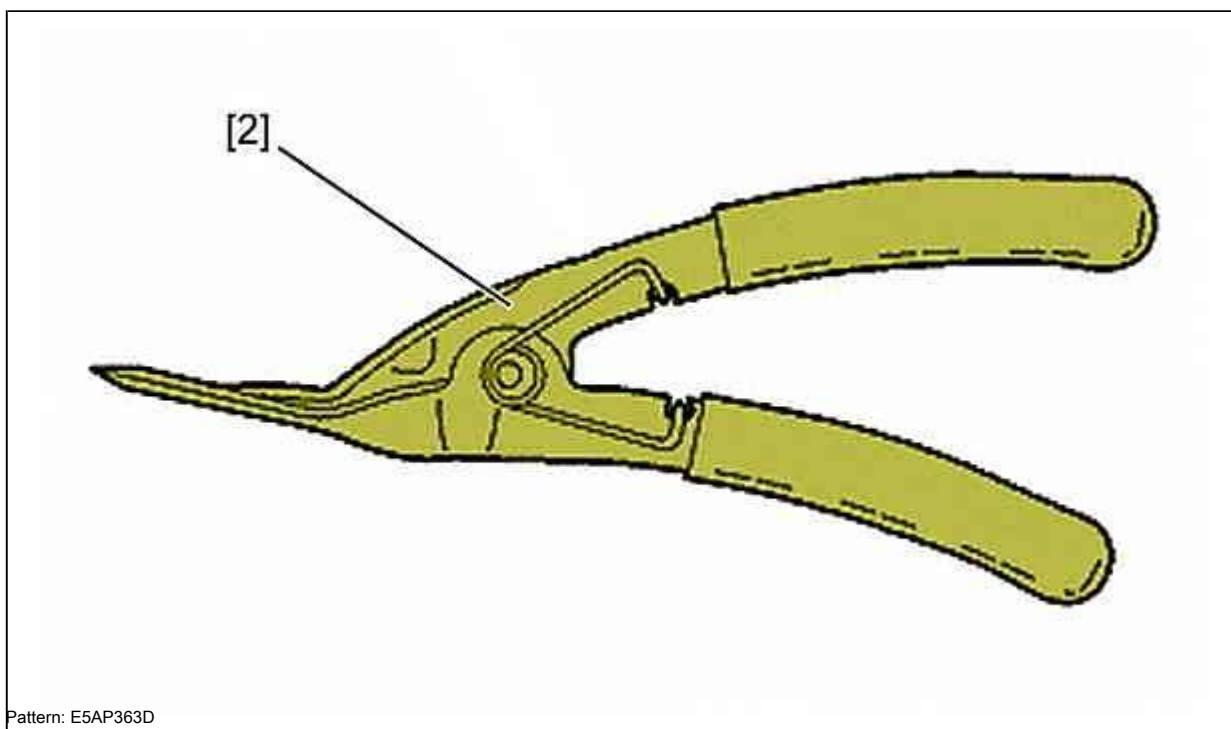
MANDATORY: Observe the cleanliness and safety rules



1. Tools



[1] Trim stripper () .1350ZZ.



Pattern: E5AP363D

[2] Extractor for plastic pins () .1311.

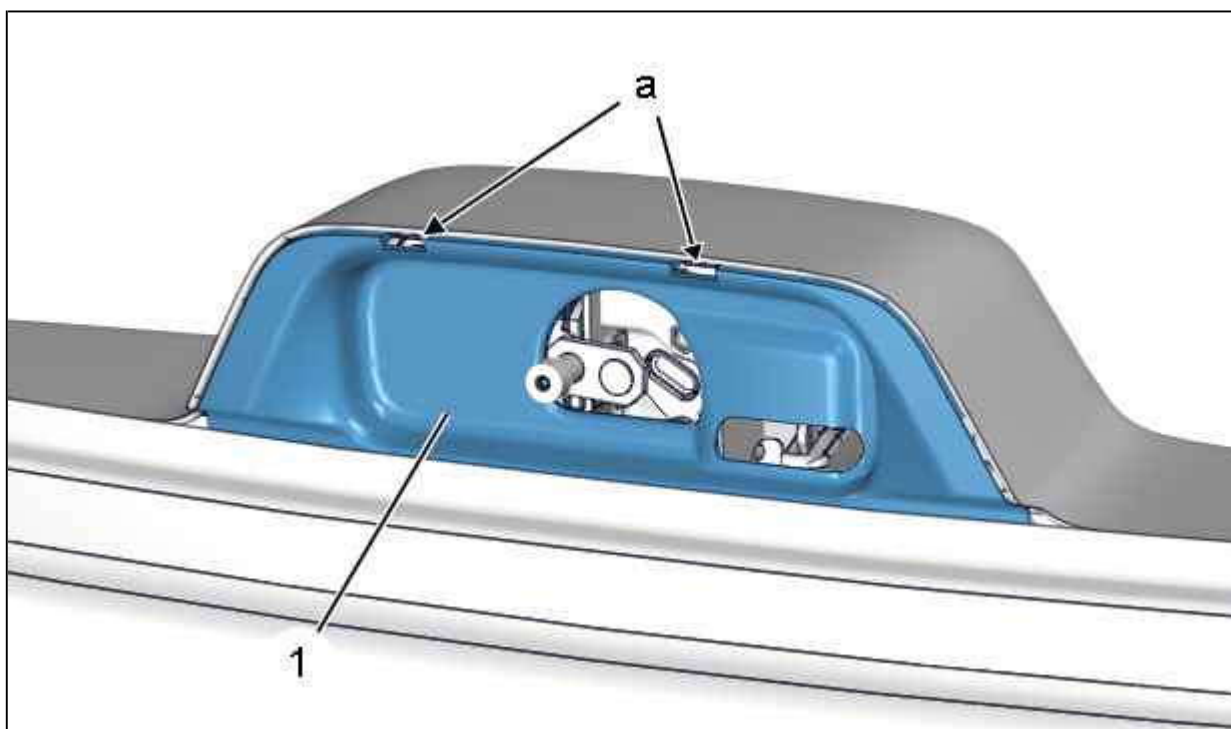
2. Preliminary operations

Remove the trunk lid



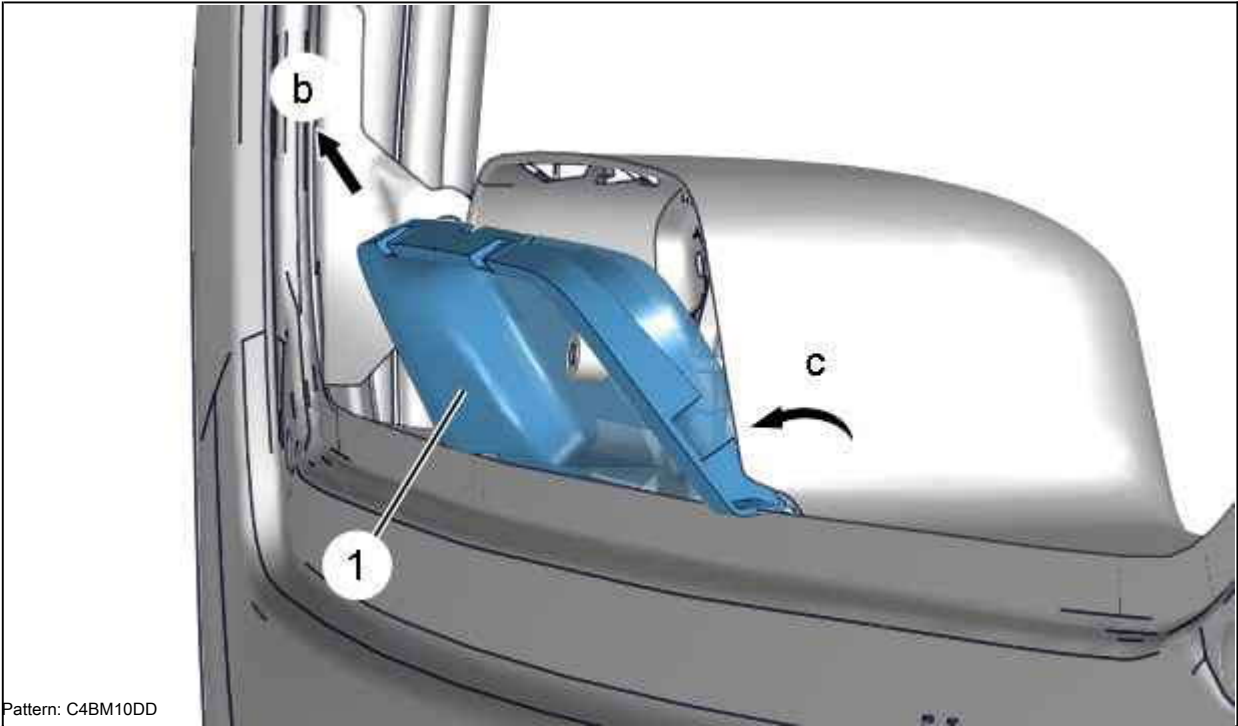
3. Disassembly

3.1. Trunk lid trim (rear)

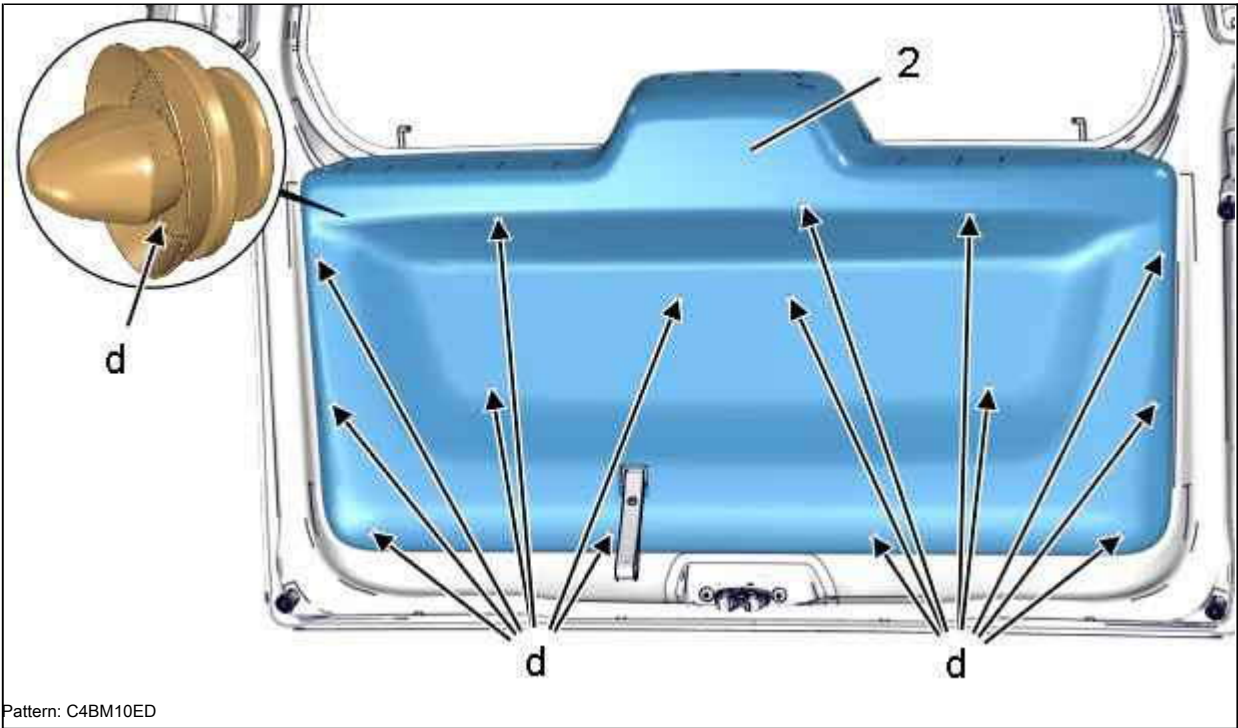


NOTE: Depending on the configuration.

Detach the cover (1) (at "a"); Using the tool [1].

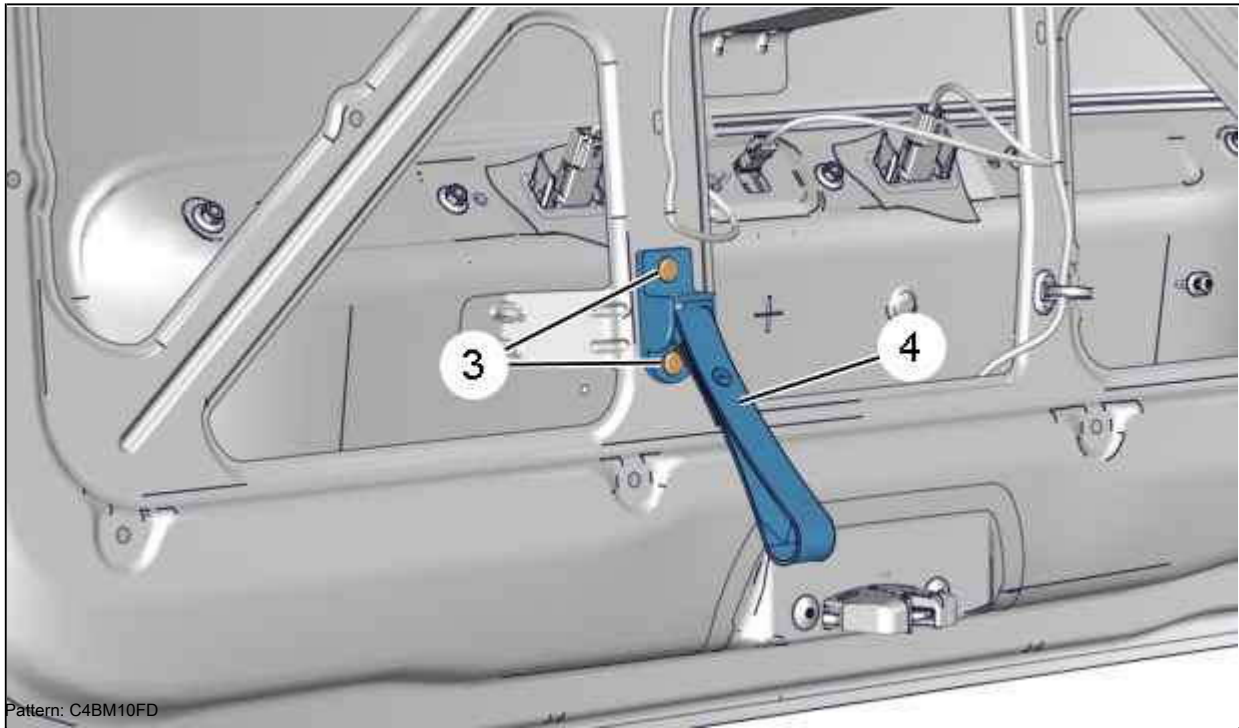


Tilt the cover (1) (As shown in "c"). Loosen trim (1) (As shown in "b").
Remove the cover (1).



Detach the clips (in "d"); Using the tool [2]. Separate; Remove trim (2) for tailgate.

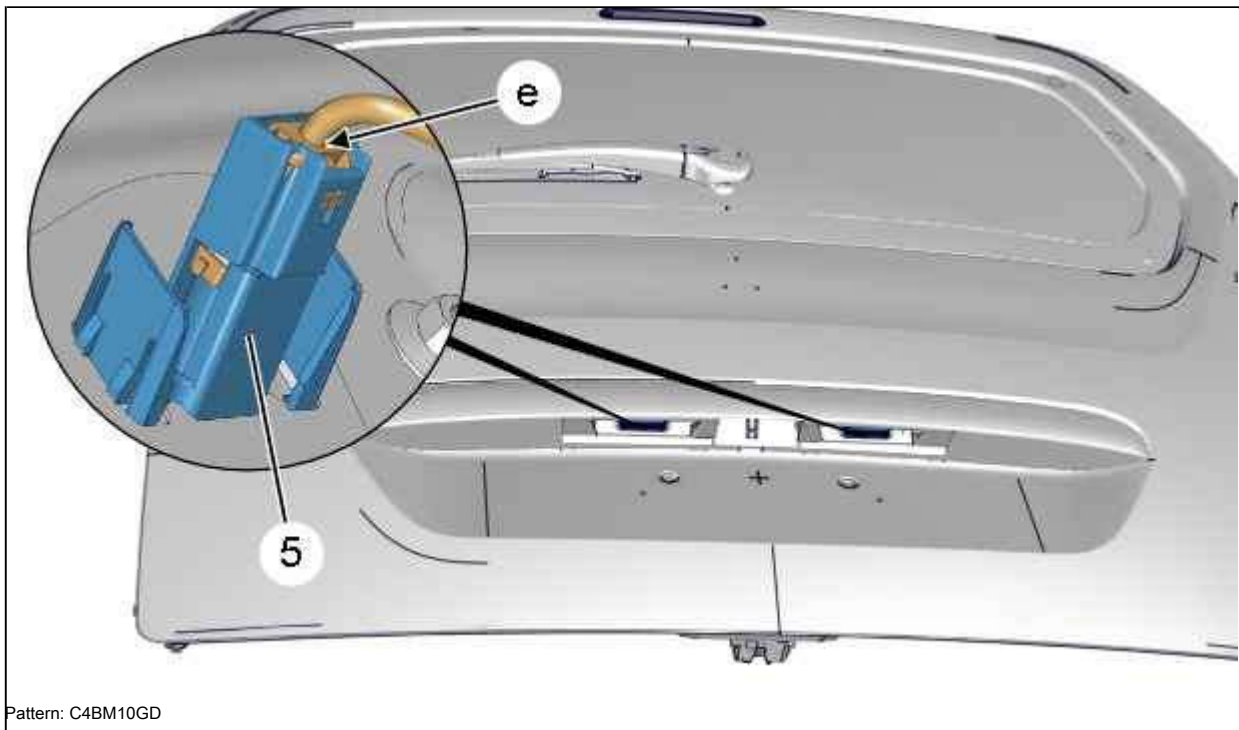
3.2. Tailgate handle



NOTE: Cut off the rivet shafts before drilling.

Using a drill with a 4 mm drill bit, drill out the rivets (3). Remove: Trunk lid handle (4).

3.3. License plate illumination lamp



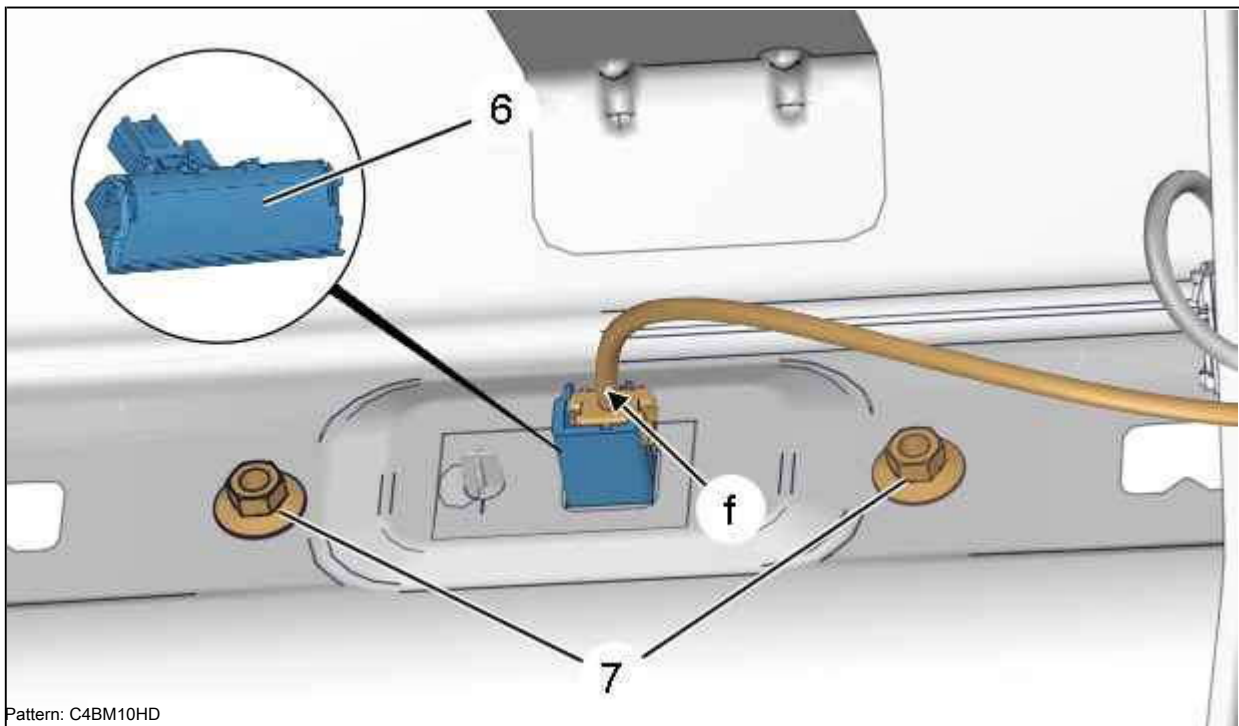
Pattern: C4BM10GD

Disconnect the connector (at "e").

Detach; remove the license plate light (5).

NOTE: The operation is performed symmetrically.

3.4. Trunk lid opening button



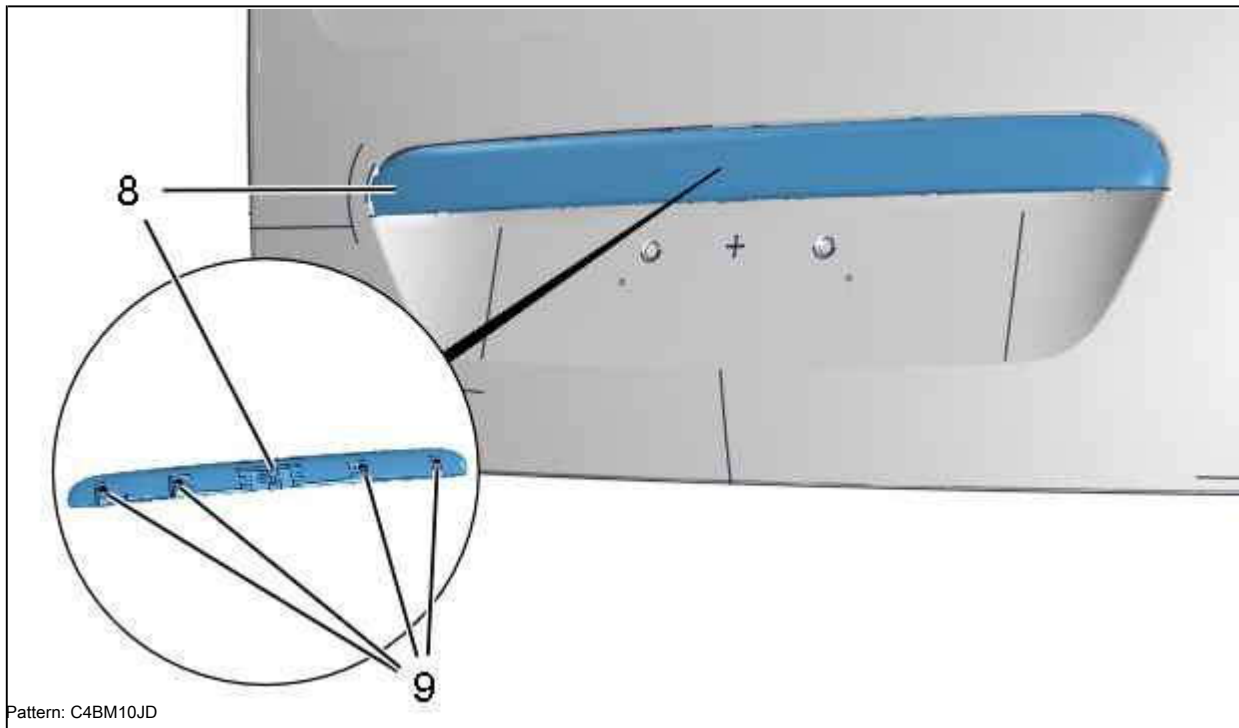
Pattern: C4BM10HD

Disconnect the connector (at "f").

Remove nuts (7).

Separate; Remove the boot lid release button (6).

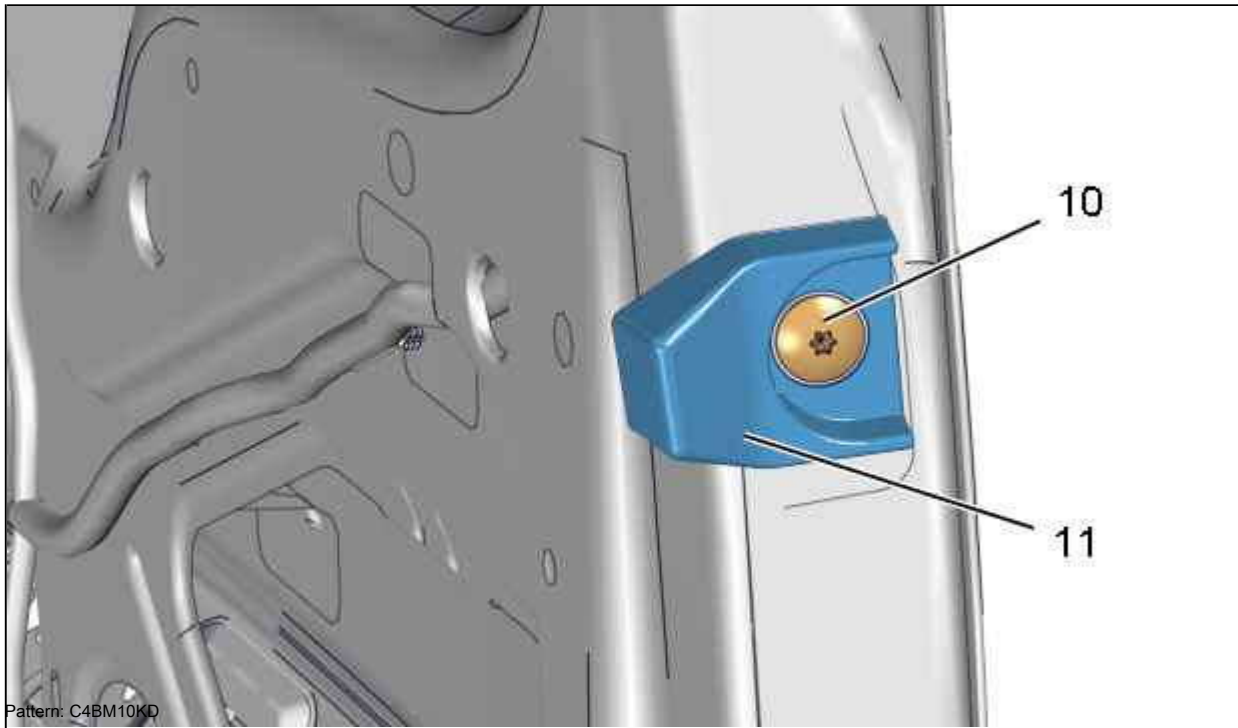
3.5. License plate decorative element



Remove:

- Nuts (9)
- Decorative frame (8) license plate

3.6. emphasis



Remove:

- Bolt (10)
- Top stop (11)

NOTE: The operation is performed symmetrically.

3.7. Third brake light, luggage compartment door

Remove: **Third brake light, luggage compartment door**

3.8. Trunk lid lock

Remove: **Tailgate lock**

3.9. Tailgate wiper mechanism

NOTE: Depending on the configuration.

Remove: **Tailgate wiper mechanism**

3.10. Fixed trunk lid

NOTE: Depending on the configuration.

Remove: **Fixed trunk lid**

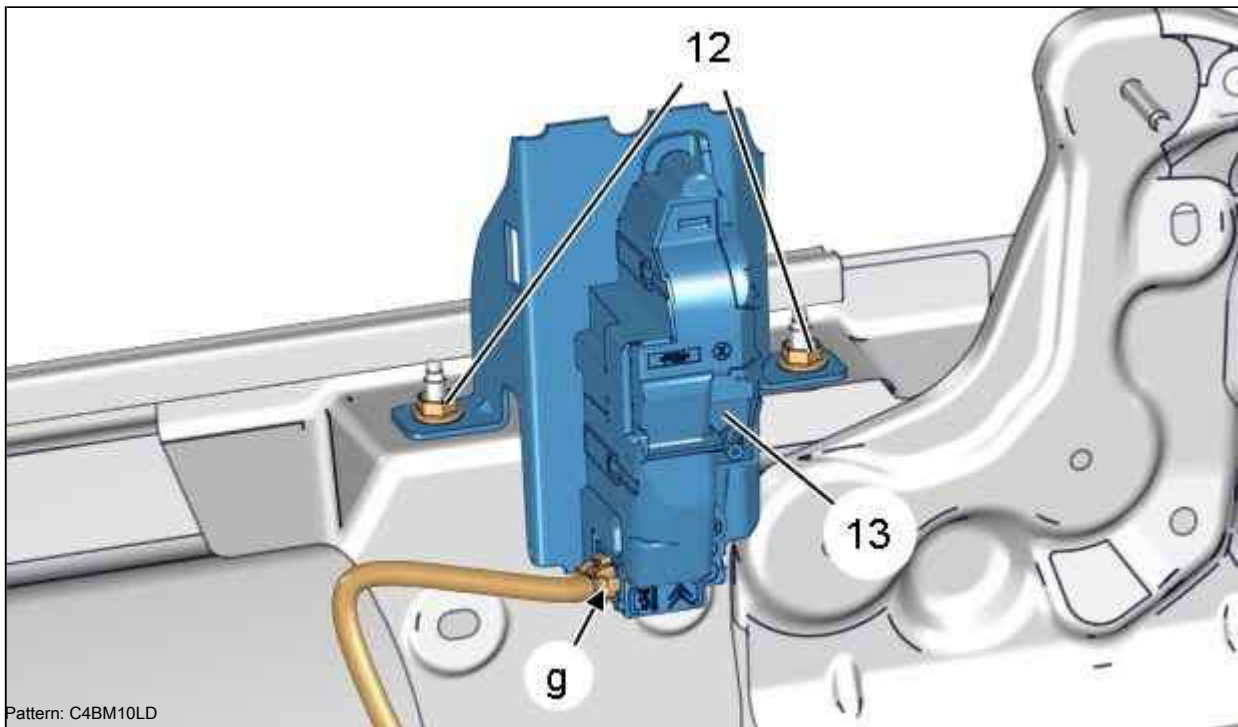
3.11. Movable trunk lid

NOTE: Depending on the configuration.

Remove: **Movable trunk lid**

3.12. tailgate glass lock

NOTE: Depending on the configuration.



Disconnect the connector (at "g").

Remove:

- Nuts (12)
- Luggage compartment window opening lock (13) (With bracket)

3.13. Tailgate sliding glass hinges

NOTE: Depending on the configuration.

Remove: **Tailgate sliding glass hinges**

3.14. Monogram on the trunk lid

Remove: **Monogram luggage compartment door**

3.15. Electrical harness (Trunk lid)

Remove: **Electrical harness**

(Luggage compartment cover).

4. Assembly

ATTENTION : Replace defective clips systematically.

Installation is carried out by performing the removal operations in the reverse order. Tightening torques:

- nuts (7), (12) to 1 da.Nm
- Tighten the bolts (10) to 0.5 da.Nm

5. Additional operations

Install the trunk lid

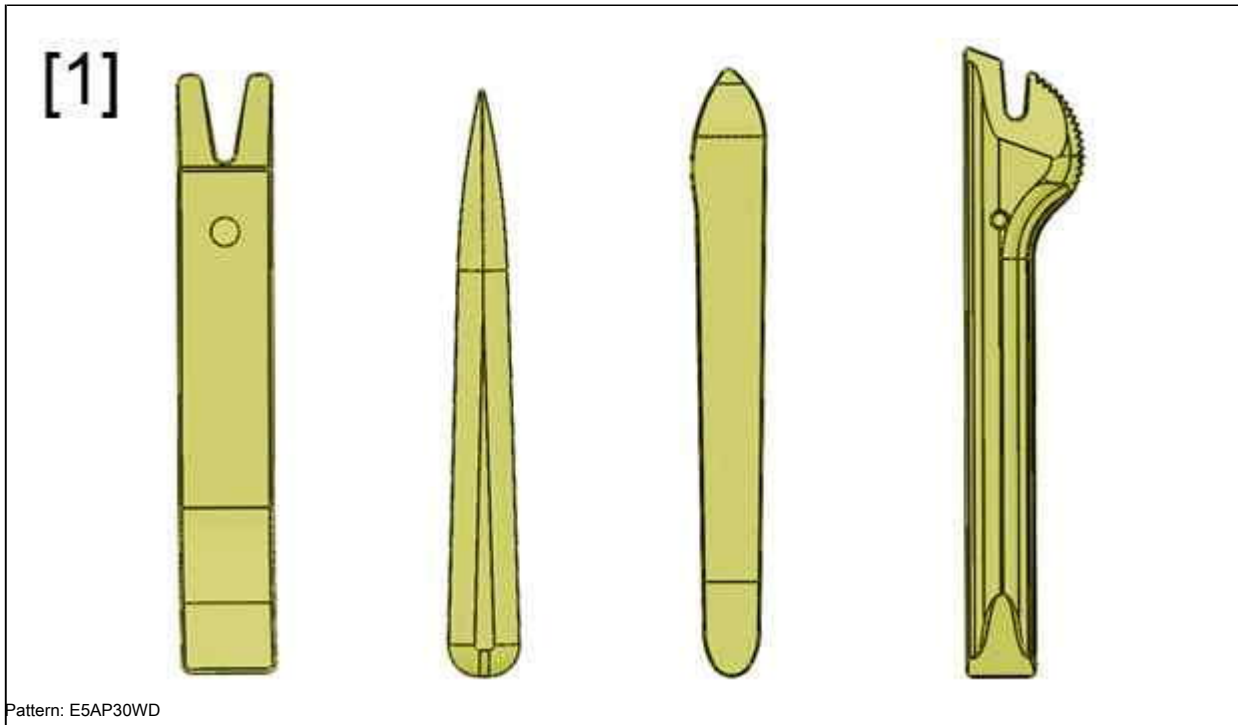
Check the operation of the various equipment.

REMOVAL REFITTING: REAR MUDGUARD

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



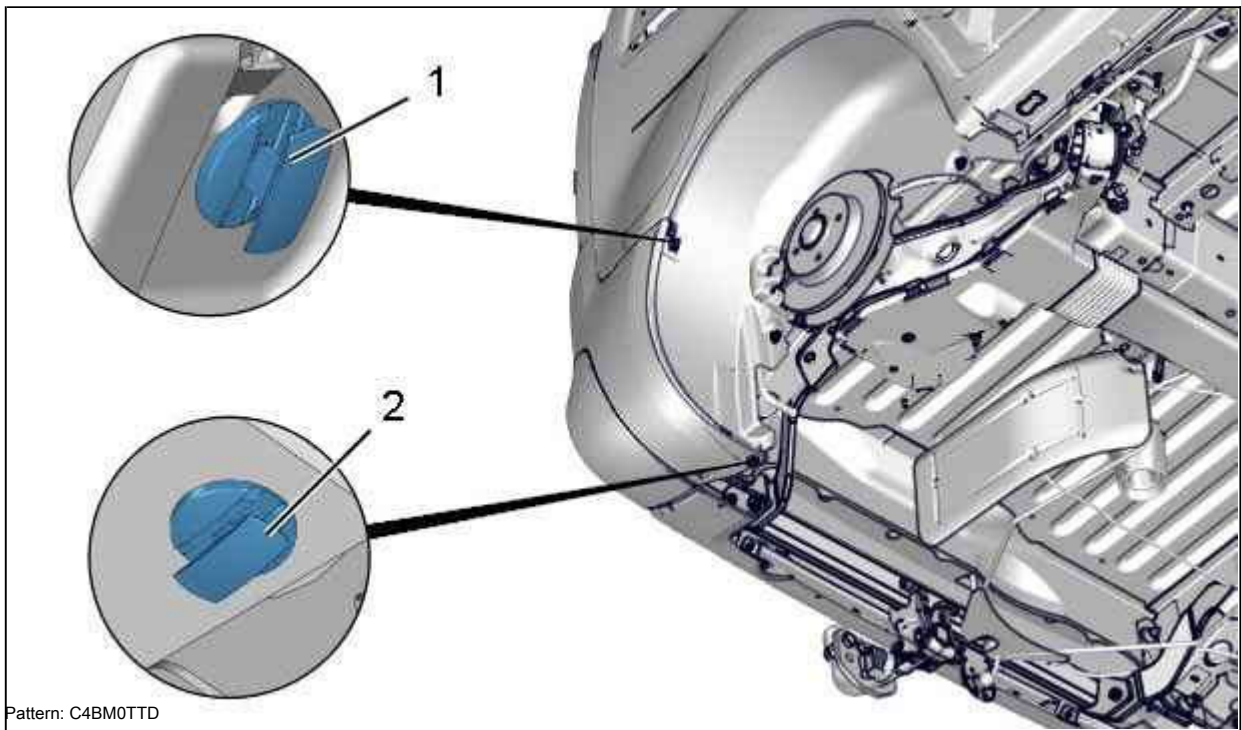
[1] Trim stripper () .1350ZZ.

2. Preliminary operations

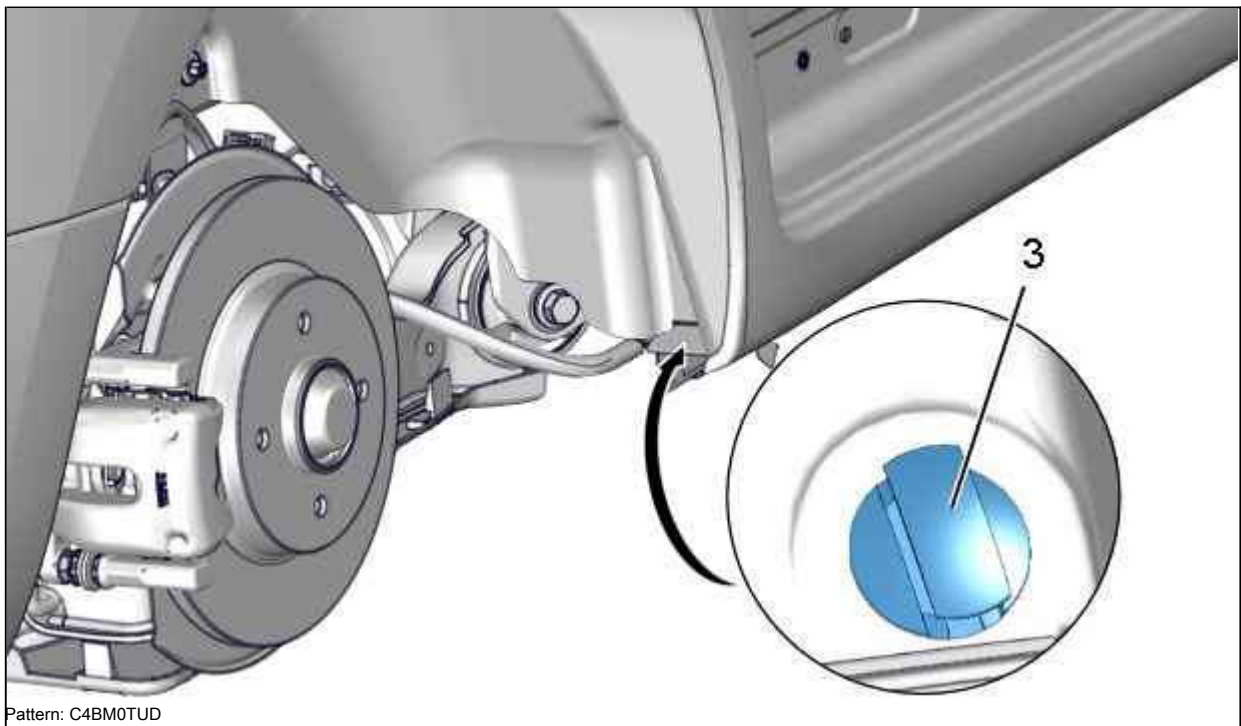
Take off the rear wheel.

NOTE: Install a two-post lift vehicle (to facilitate work).

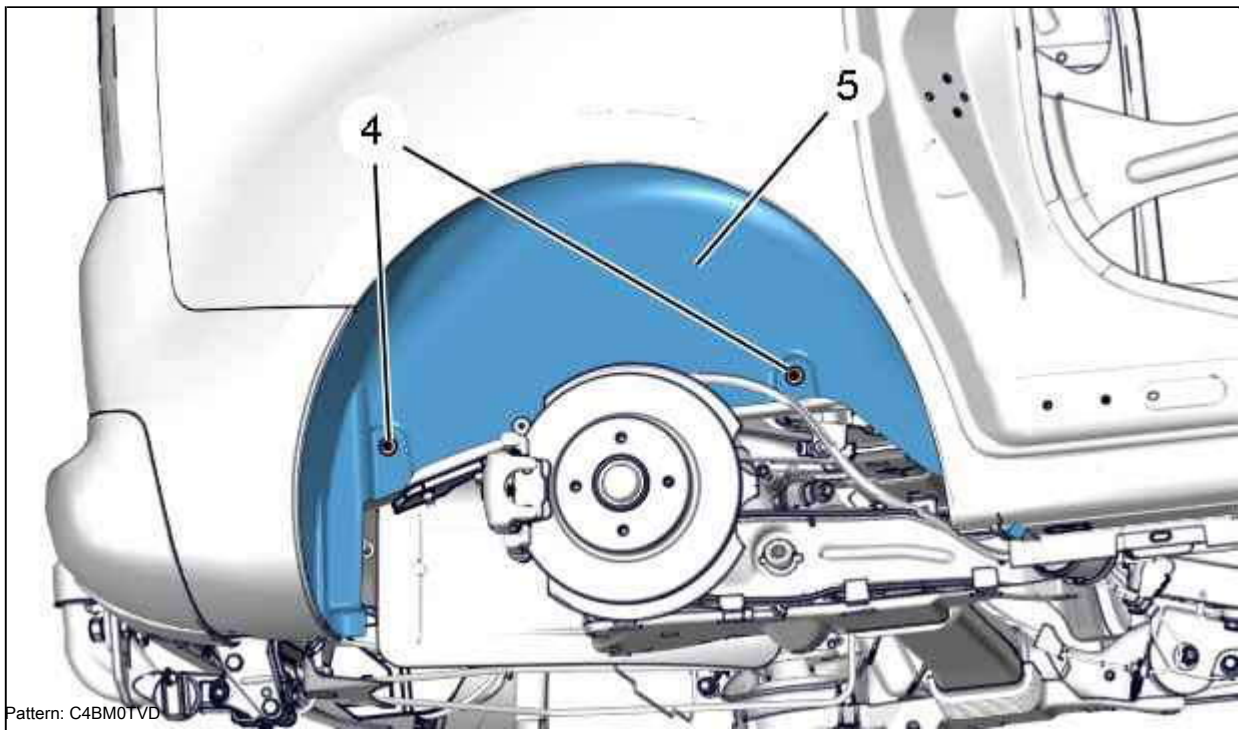
3. Removal



Unlock: the clips (1), (2); Using the tool [1]. Remove the clips (1), (2).



Open the lock ((3)); Using the tool [1]. Remove the retainer (3).



Remove nuts (4).

Release the rear mudguard (5); Using the tool [1]. Remove the rear mudguard (5).

4. Installation

MANDATORY: Replace defective brackets periodically.

Installation is carried out by performing the removal operations in the reverse order. Lower the vehicle to the ground.

Tighten the wheel bolts:

- Aluminum rim: Tightening torque 9 ± 9.2 da.Nm
- Stamped steel wheel rim: Tightening torque 10 ± 10.2 da.Nm

REPLACEMENT: REAR WING GUTTER

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

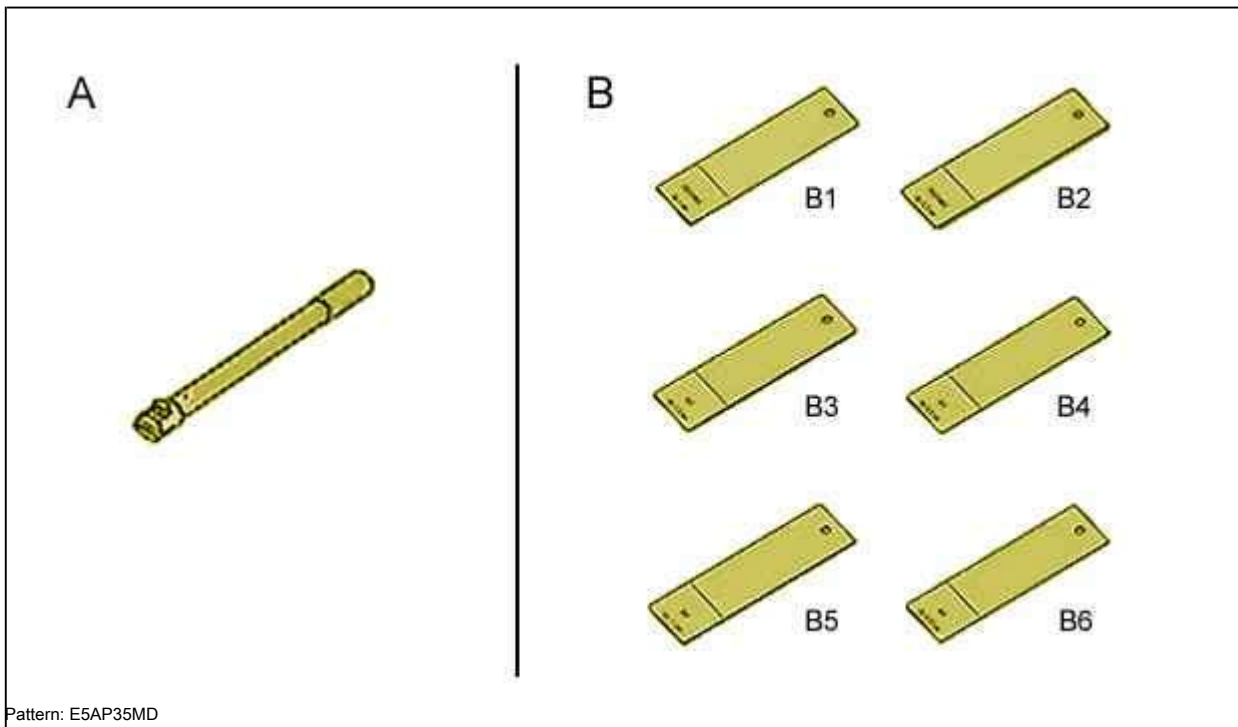
1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment

Operate using one of the following systems.



Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Gutters of the rear wing

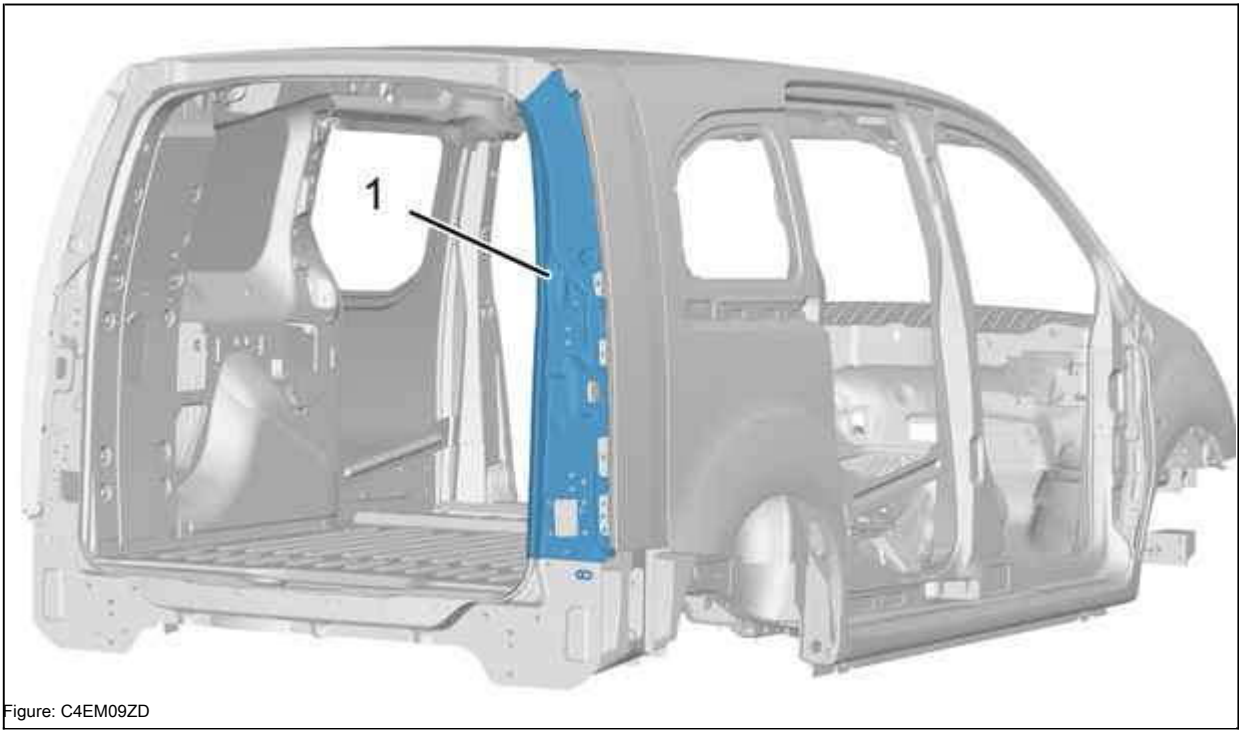


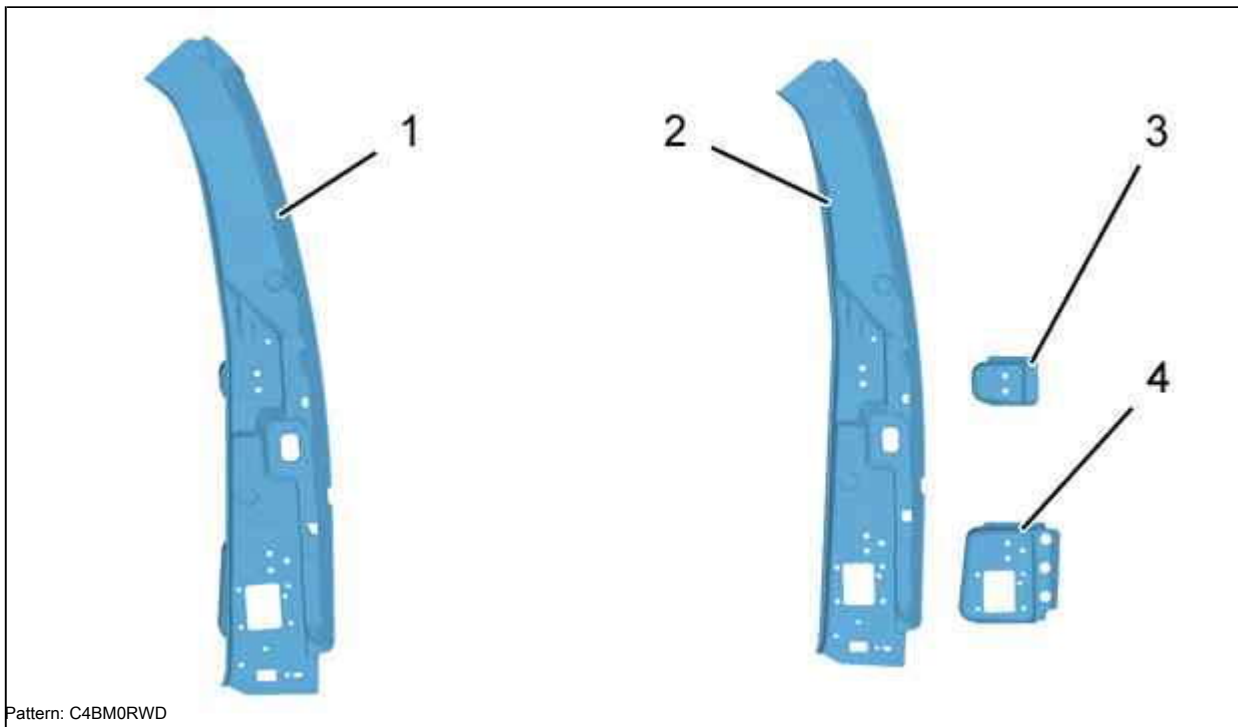
Figure: C4EM09ZD

Label Designation

(1)	Rear fender groove

5. Identification: Gutter

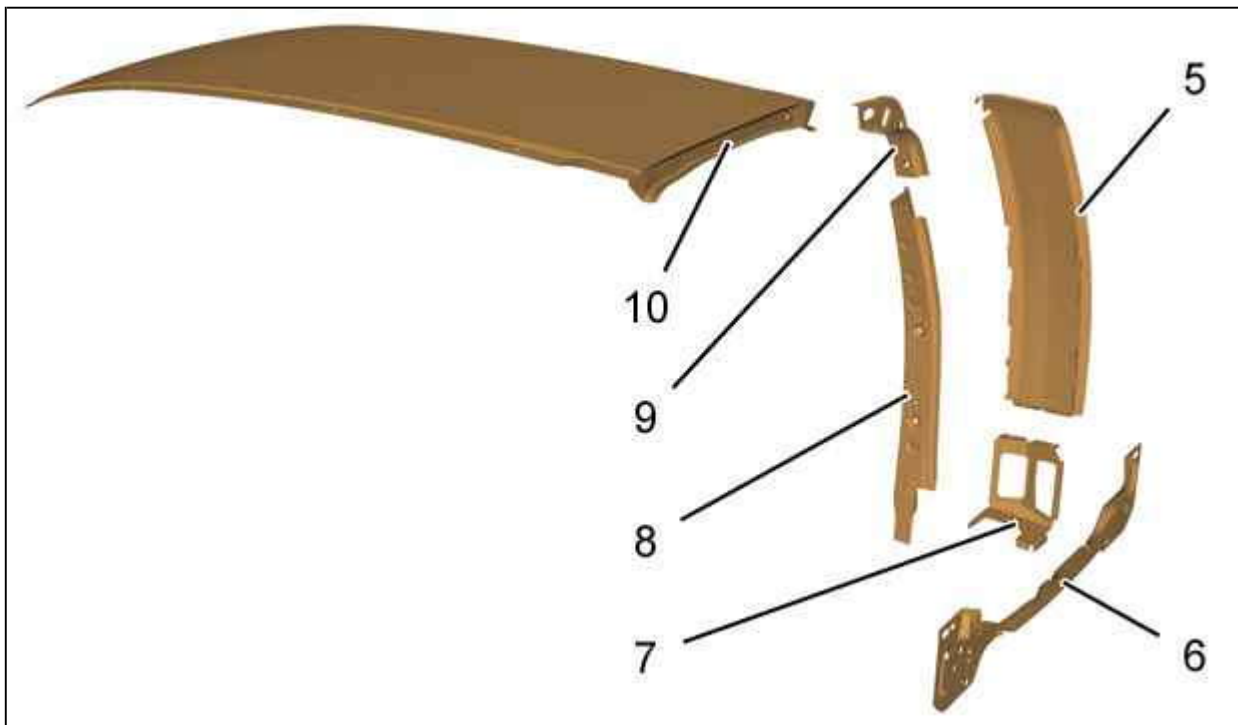
5.1. Composition: Gutter



(1) Rear fender chute assy.

Label Designation		Thickness (mm)	Nature / classification
(2)	Rear fender groove	0.77	HLE (*)
(3)	Reinforcement for the upper swing door hinge 2.00 Reinforcement for		THLE (* *)
(4)	the lower swing door hinge 2.00		UHLE (* * *)

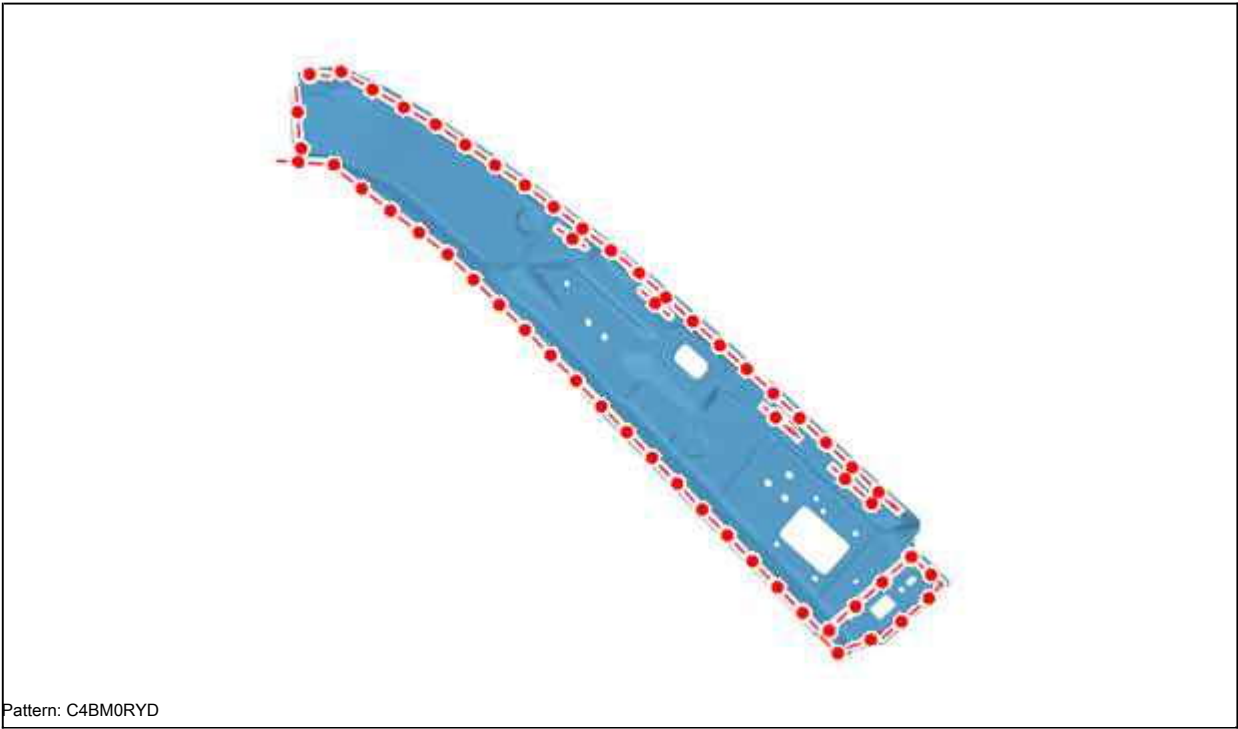
5.2. Identification of adjacent parts



Label Designation		Thickness (mm) Nature / classification	
(five)	Panel extension, passenger compartment Rear	0.67	Mild steel
(6)	panel	0.87	Mild steel
(7)	Rear Fender Inner Panel Extension Boot Lid	0.97	Mild steel
(eight)		0.77	HLE (*)
(nine)	Tailgate upper pillar trim 1.47 Roof		HLE (*)
(ten)		0.67	Mild steel

6. Preparation: Gutter

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection

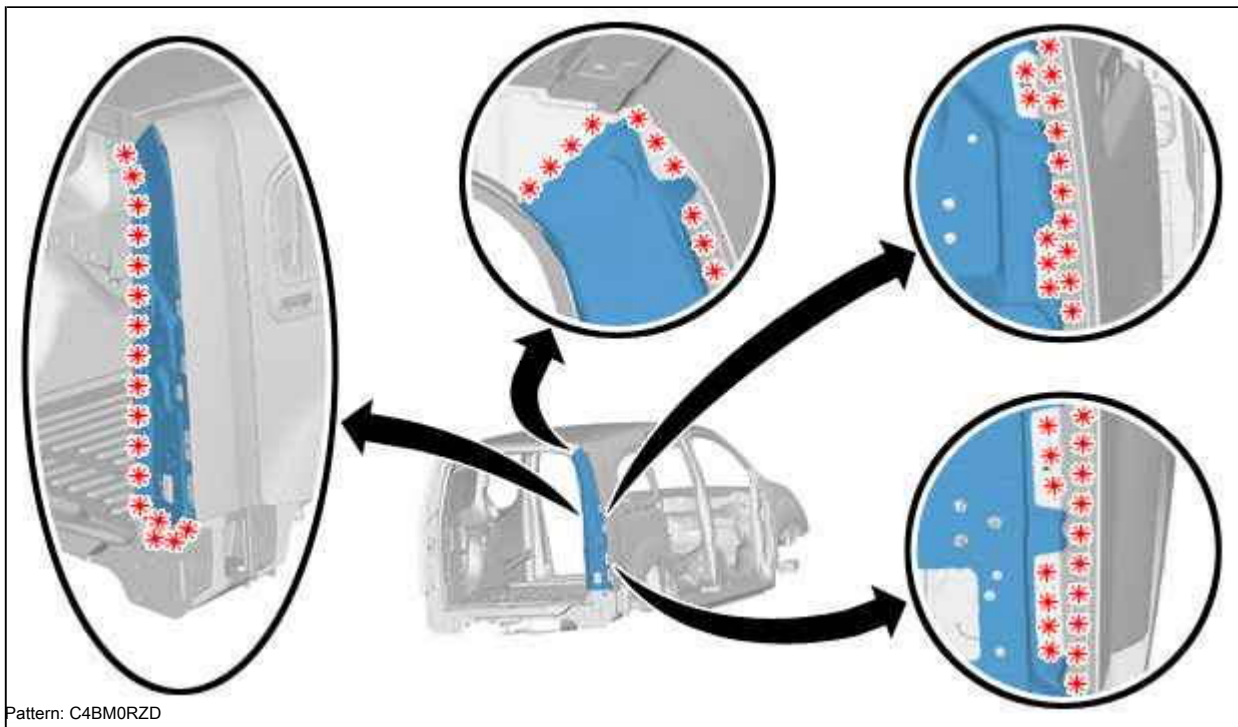


Pattern: C4BM0RYD

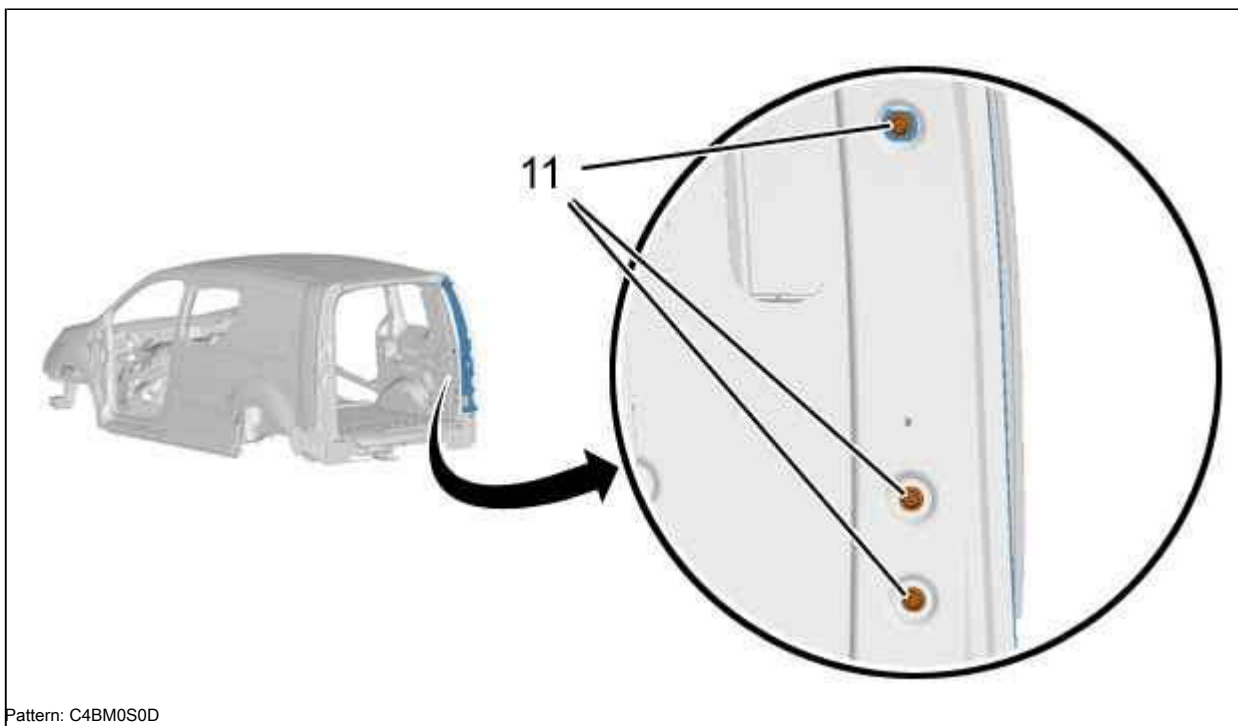
Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body

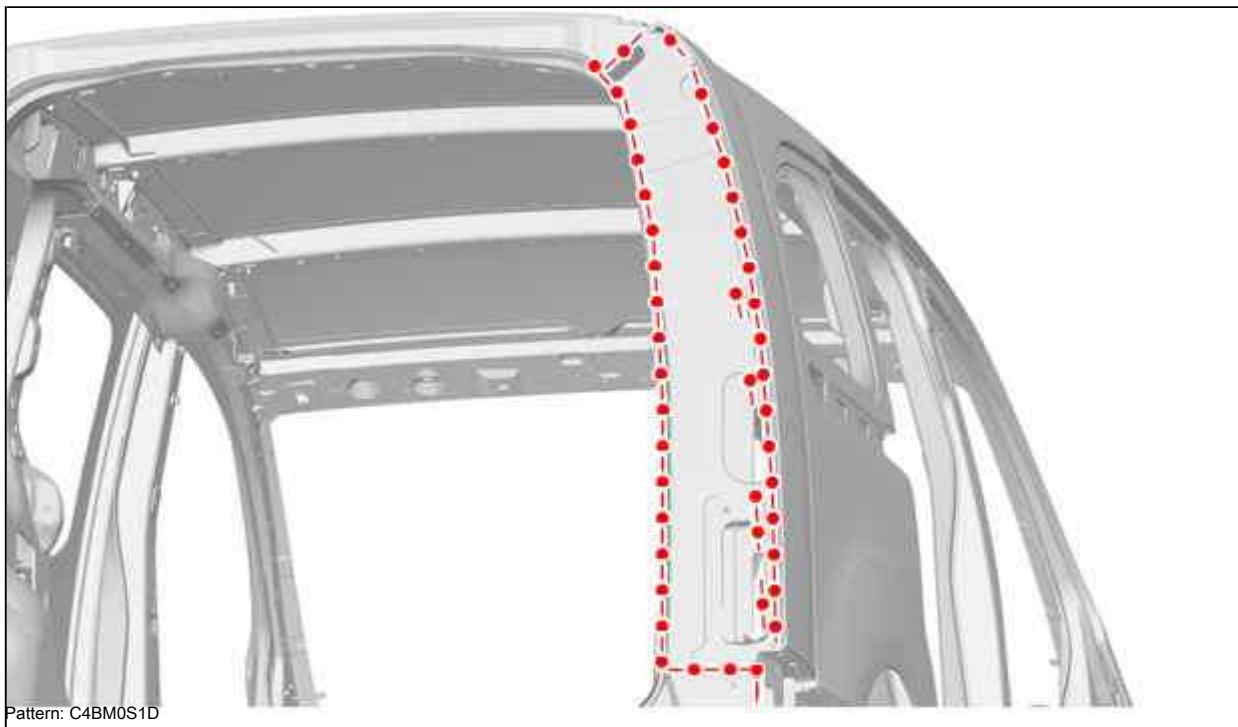


Mark and cut weld points.



Remove: the 3 screws (11) securing the upper and lower hinge amplifiers. Remove: Rear fender groove.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Fitting

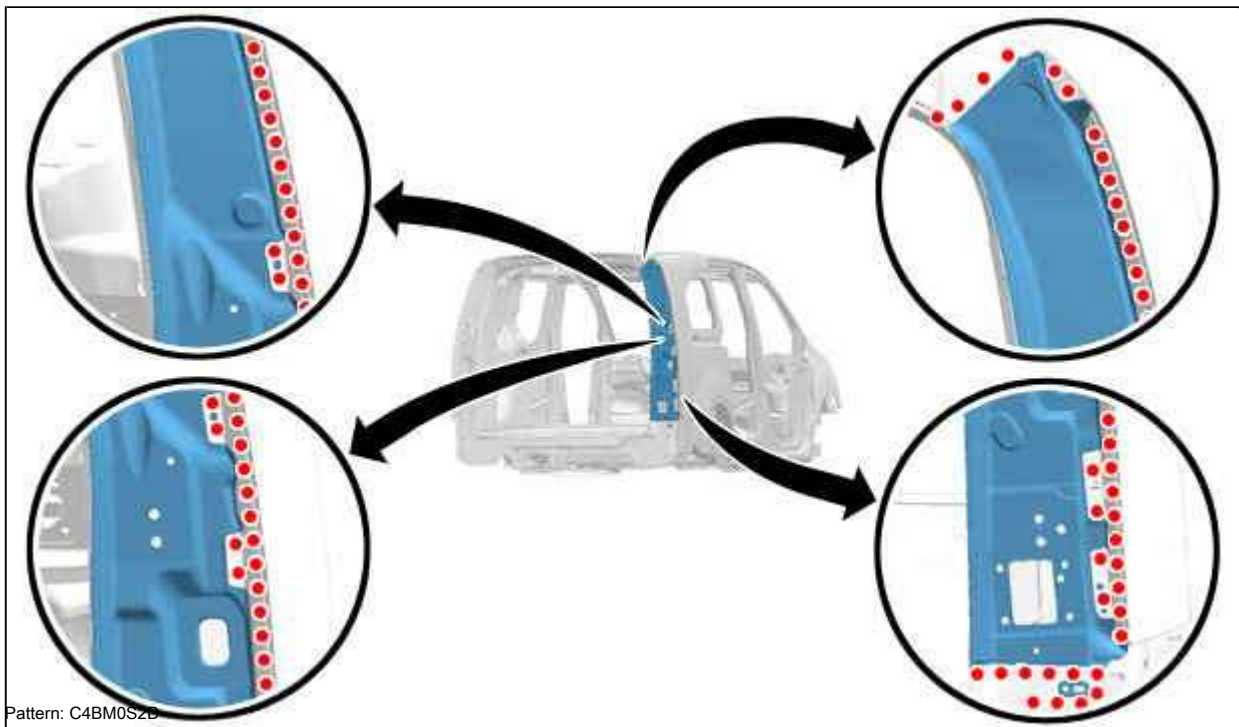
Position: Rear wing groove.

Install: the 3 screws (11) securing the upper and lower hinge amplifiers. Install elements to ensure the fit.

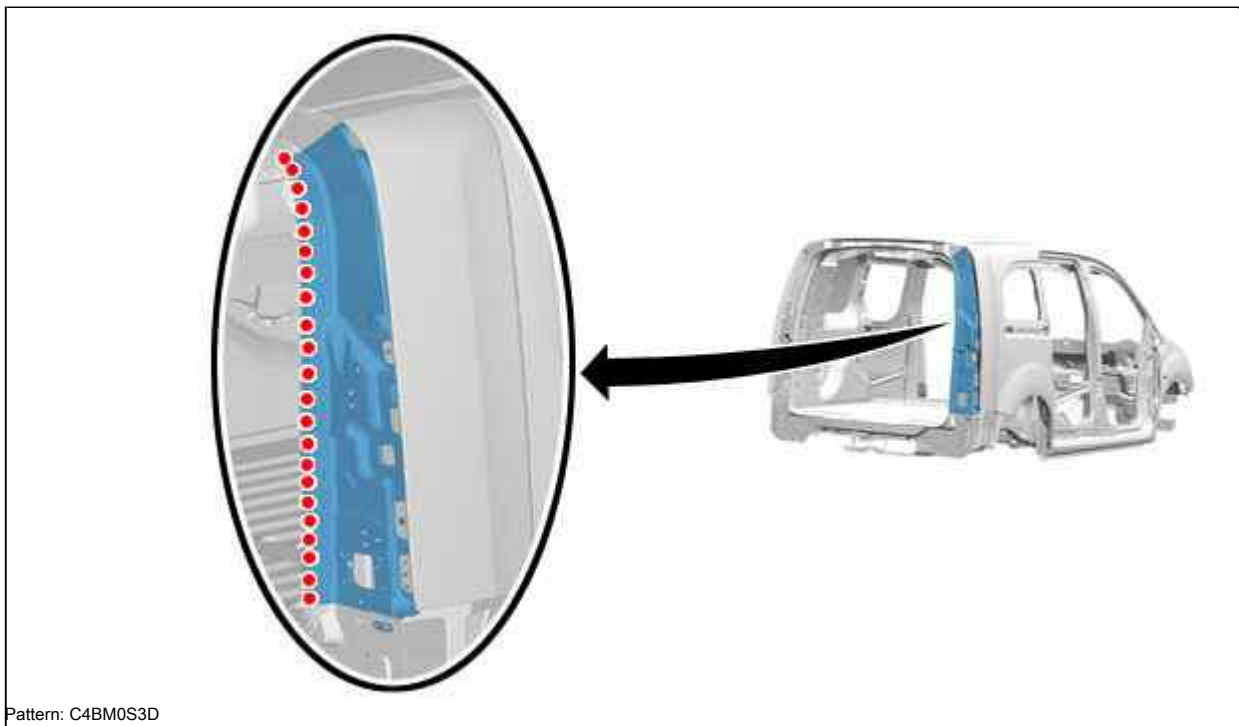
Check clearances and alignment.

Hold the element in place.

10. Welding



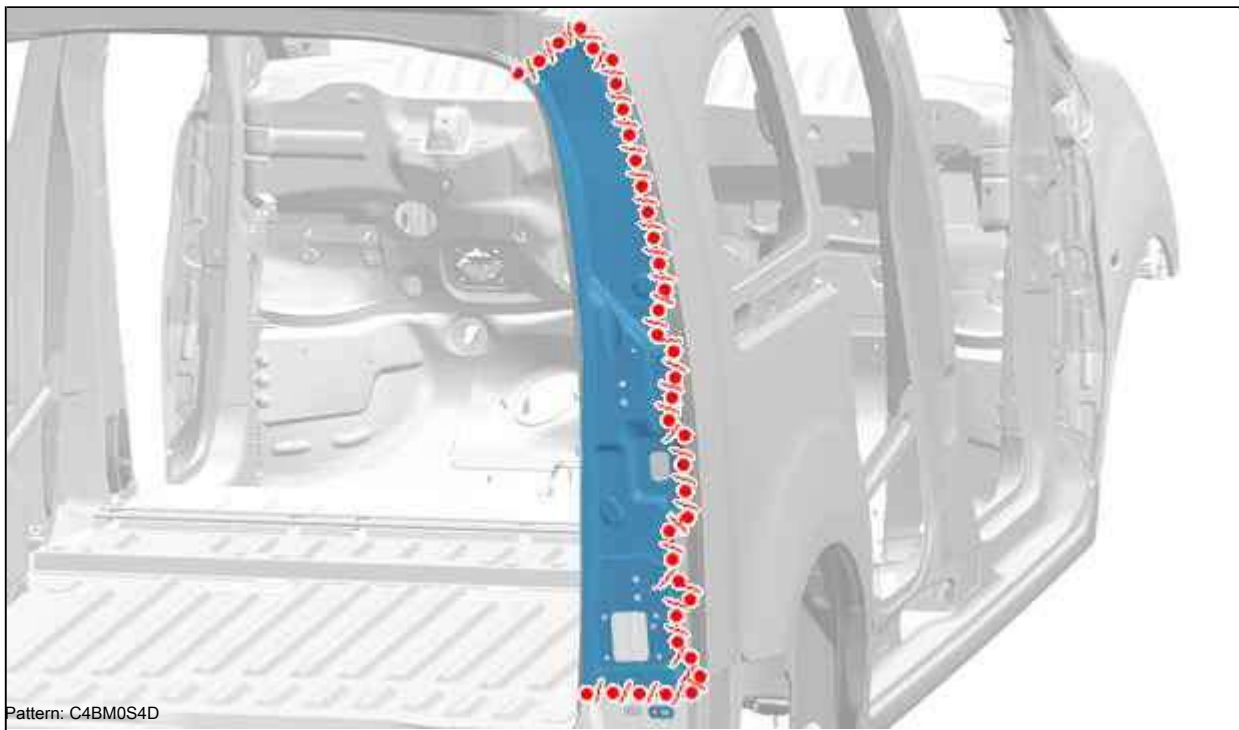
Weld through the holes in the MAG protective gas. Grind MAG welding points.



Weld with welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.



Apply sealant (index "A1").

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

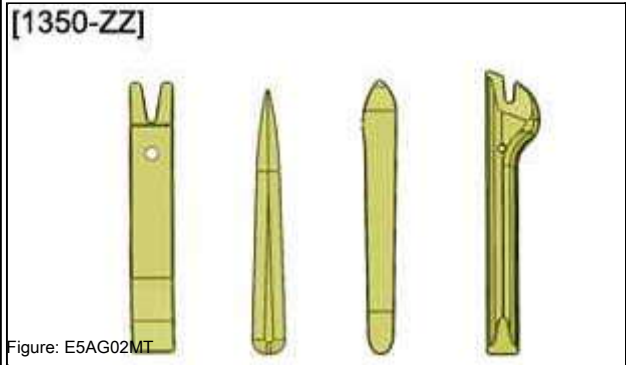
REMOVAL INSTALLATION: GLASS SIDE

MANDATORY: Observe the cleanliness and safety rules

i

MANDATORY: For the following operations, protective gloves and goggles must be used.

1. Equipment

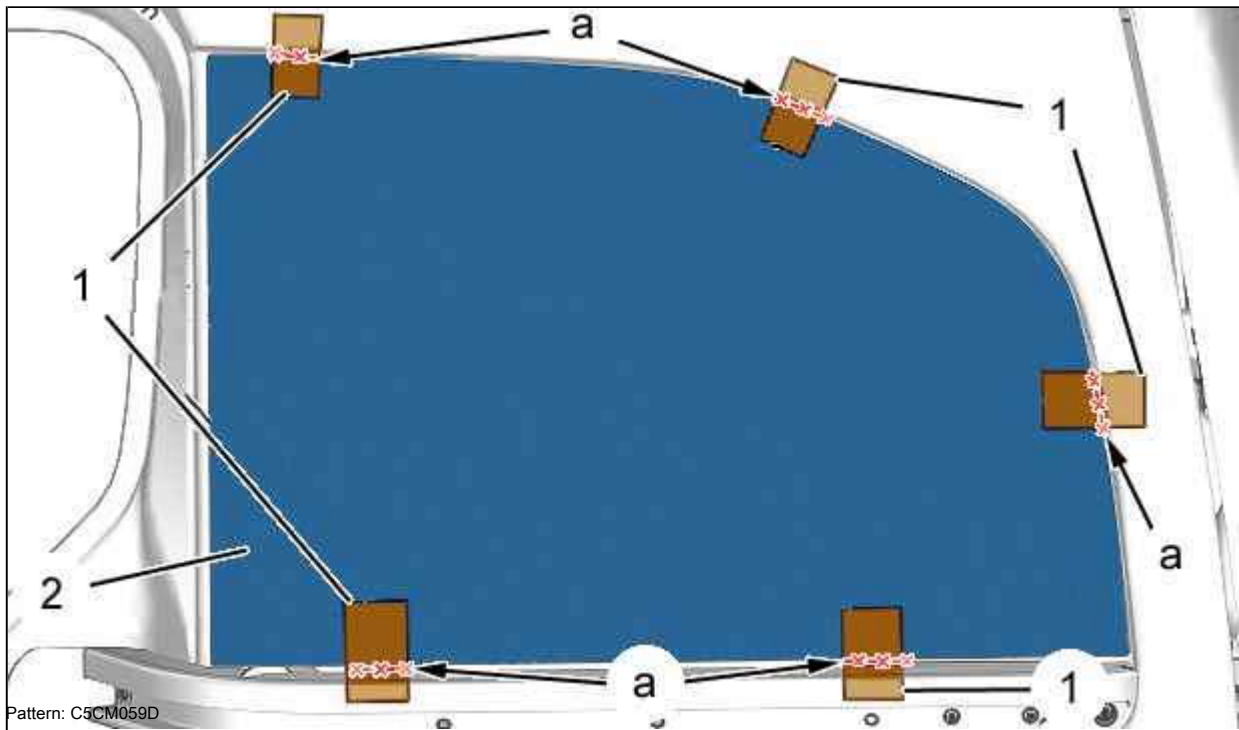
tool	room (reference)	Designation
<div><div>[1350-ZZ]</div><div></div><div>Figure: E5AG02MT</div></div>	[1350ZZ]	Removal tools plating

- Presentation:
- Equipment for working with glass
 - **Componentswindglass**

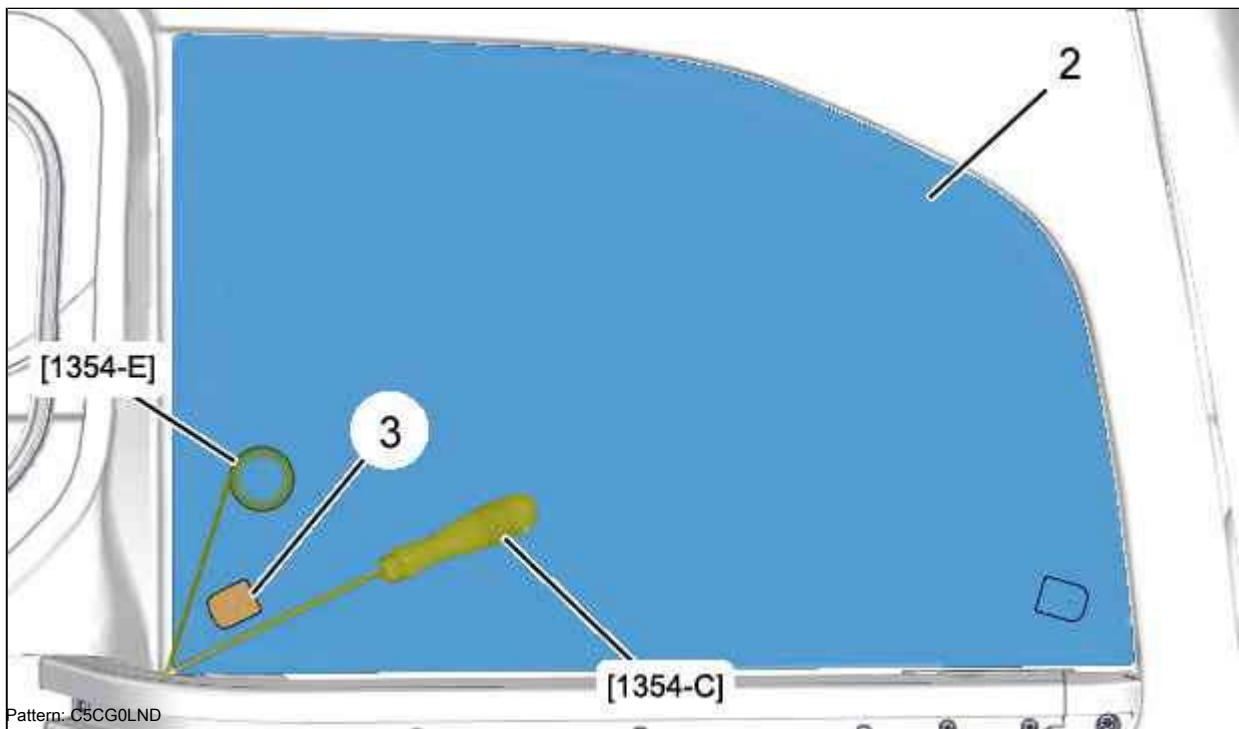


2. Removal

Open the side sliding door.



NOTE: When reusing the rear side glass (2), apply pieces of adhesive tape (1) and cut them (As shown above) (in "a").

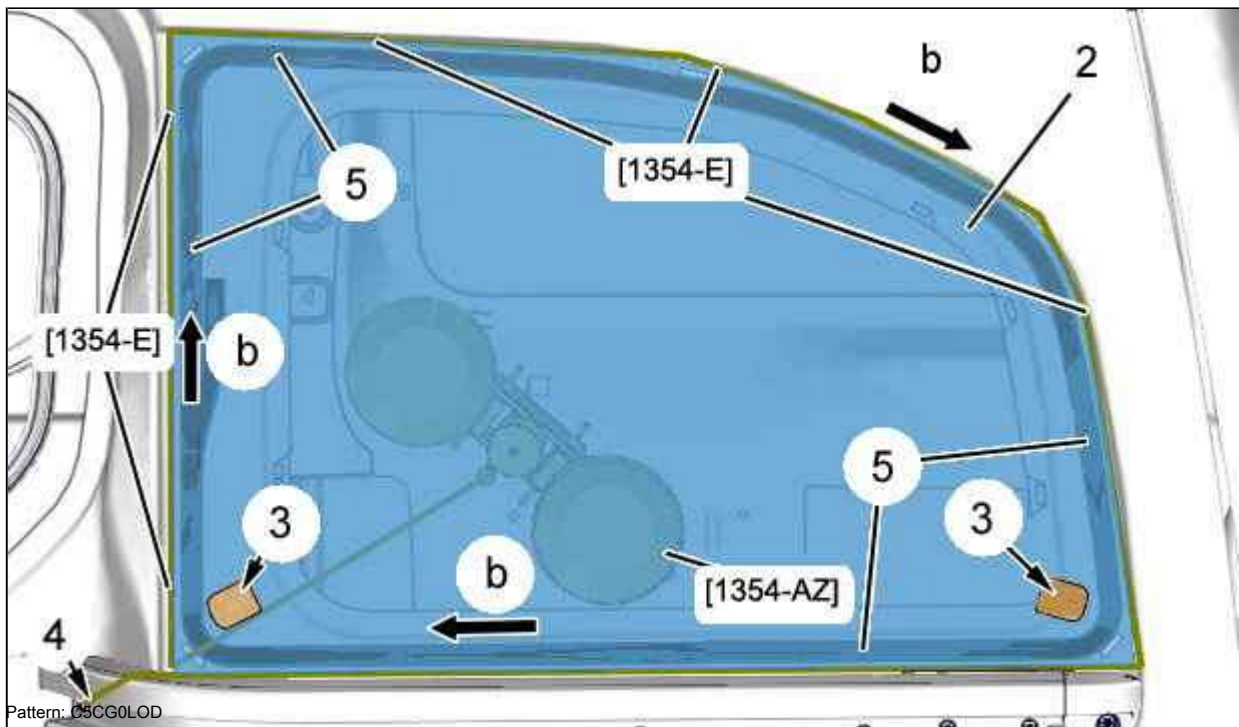


Pass the sewer [1354C] through the sidewall sealant (2) from the inside out. Insert the cutting string [1354E] and sew in [1354C].

Run the leading string [1354E] into the vehicle.

Leave sufficient length to allow the reel-roll attachment.

NOTE: Bend around the index lug (3).



Pass the leading string [1354E] under the rear side panel glass seal (2) (As shown in "b").

NOTE: Leave sufficient length to secure the cutting string [1354E] to the retainer (4). Protect the pressure point between the cutting wire [1354E] and the sliding side rail.

Cut off the cutting wire [1354E].

Attach the other end of the cutting string [1354E] to the vehicle interior on the reel with roller [1354AZ].

ATTENTION : Protect the cutout point for sealant (5) between the linings and the cutting wire [1354E].

ATTENTION : When pulling on the cutting wire [1354E], make sure the cutting wire [1354E] is positioned under the sealant (5) of the glass sidewall (2).

NOTE: If there is less resistance while cutting, loosen the tension on the cutting string [1354C]. Help the cutting wire [1354C] to get around the obstacle (Shims, allowance adhesive sewing the joint of the plates).

NOTE: Use the Idler Roller [1354BZ] to help cut the sealant (5) in the corners.

Cut and move tools [1354AZ] and [1354BZ] to re-cut the sealant layer (5).

NOTE: When cutting, it is necessary to separate the dowel pins (3).

Remove: Side glass (2); Using the hinged suction cups [KIT1VENT].

3. Cleaning

3.1. Sidewall glass preparation


1st time: Saving the glass sidewall (2):

- Insert into the electric knife [FEIN400E] blade No. 146
- Cut off adhesive material (5)
- **Apply a primer to the cleaned areas**
- Let dry for 10 minutes



NOTE: Apply the primer only in place, stripped to metal.

2nd time: New window panes:

- Degrease the edge of the glass side
- **Apply the glass primer provided in the bonding kit**
-  dry for 10 minutes

NOTE: Apply the primer only in place, stripped to metal.

NOTE: Remove all dirt from the rear window and the groove of the opening; Using compressed air.

3.2. Groove preparation

1st time: Remains of the glue layer of the seal (5):

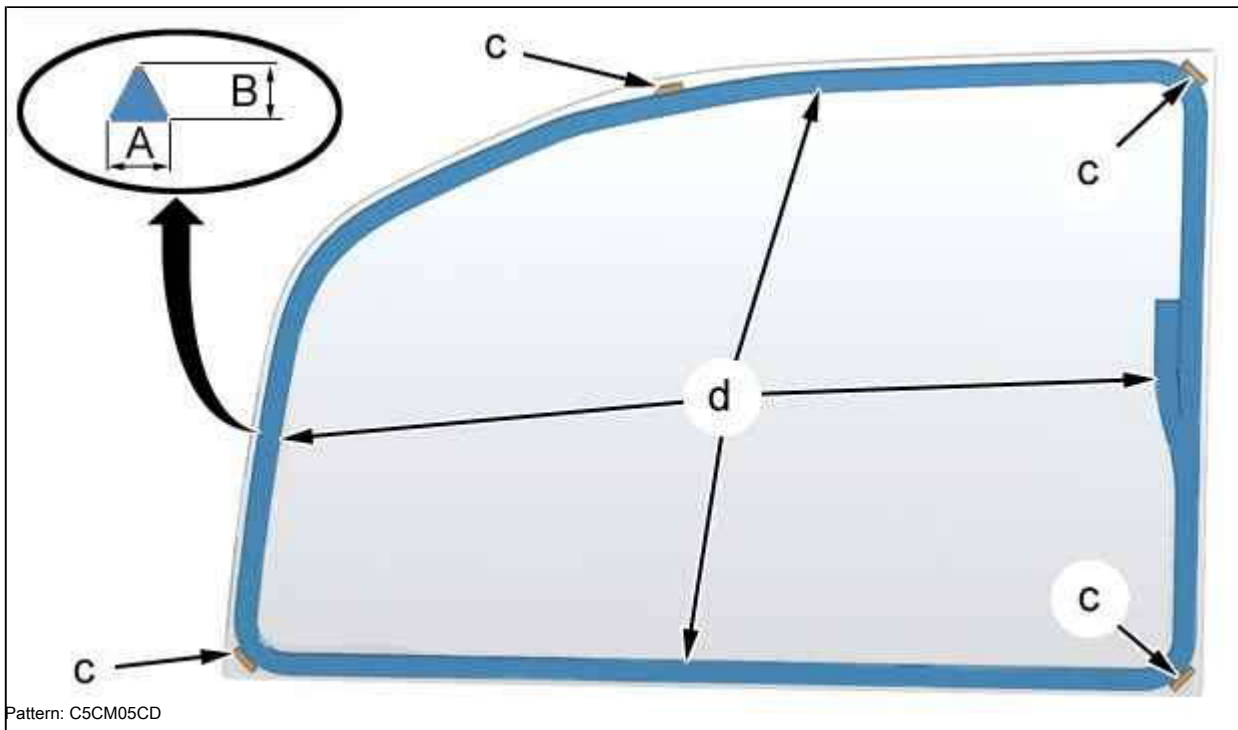
- Insert into the electric knife [FEIN400E] blade No. 146
- Cut off adhesive material (5)

2nd time: Nano part:

- Degrease the groove
- Restore anti-corrosion coating
- Apply the glass primer provided in the bonding kit
- Let dry for 10 minutes

NOTE: Remove all dirt from the rear window and the groove of the opening; Using compressed air.

4. Installation



Size of the triangular tip to produce a sealant bead of width "A" and height "B".

"A" = 8 mm.

"B" = 12 mm.

ATTENTION : It is imperative to replace damaged thicknesses.

Install the glass side liners (2) (in "c"). Install a mastic mixer gun.

Apply a layer of glue in zone "d" along the perimeter of the glass sidewall (2).

ATTENTION : Using a two-component product: It takes 5 minutes between installing the glass on the vehicle and the start of the sealant squeezing out.

Replace the side window glass (2); Using the hinged suction cups [KIT4VENT]. Check the clearances and adjust the alignment.

Press lightly around the perimeter of the glass sidewall (2).

ATTENTION : After installing the glass, wait the required time before using the vehicle, recommended by the suppliers for the formulations used.

Proceed with installation in the reverse order of removal. Check the tightness of the glass sidewall (2).

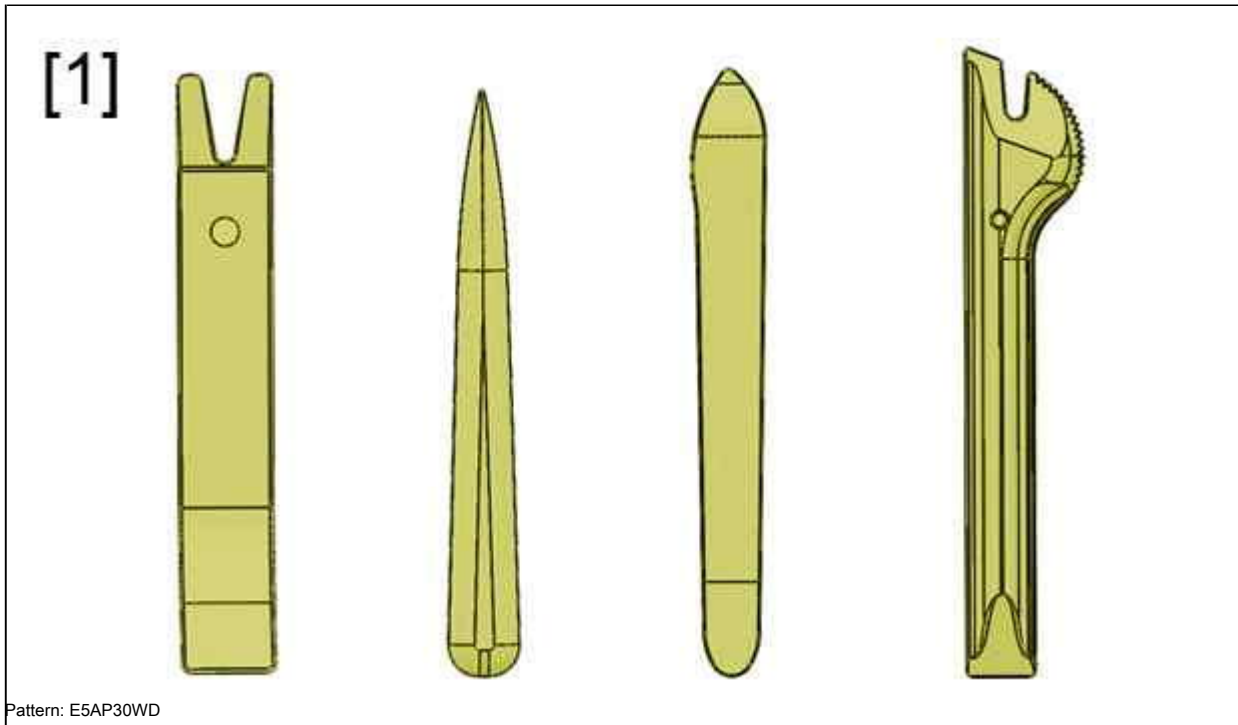
Clean the side glass and the surrounding area.

REMOVAL INSTALLATION: REAR FLOOR CARPET

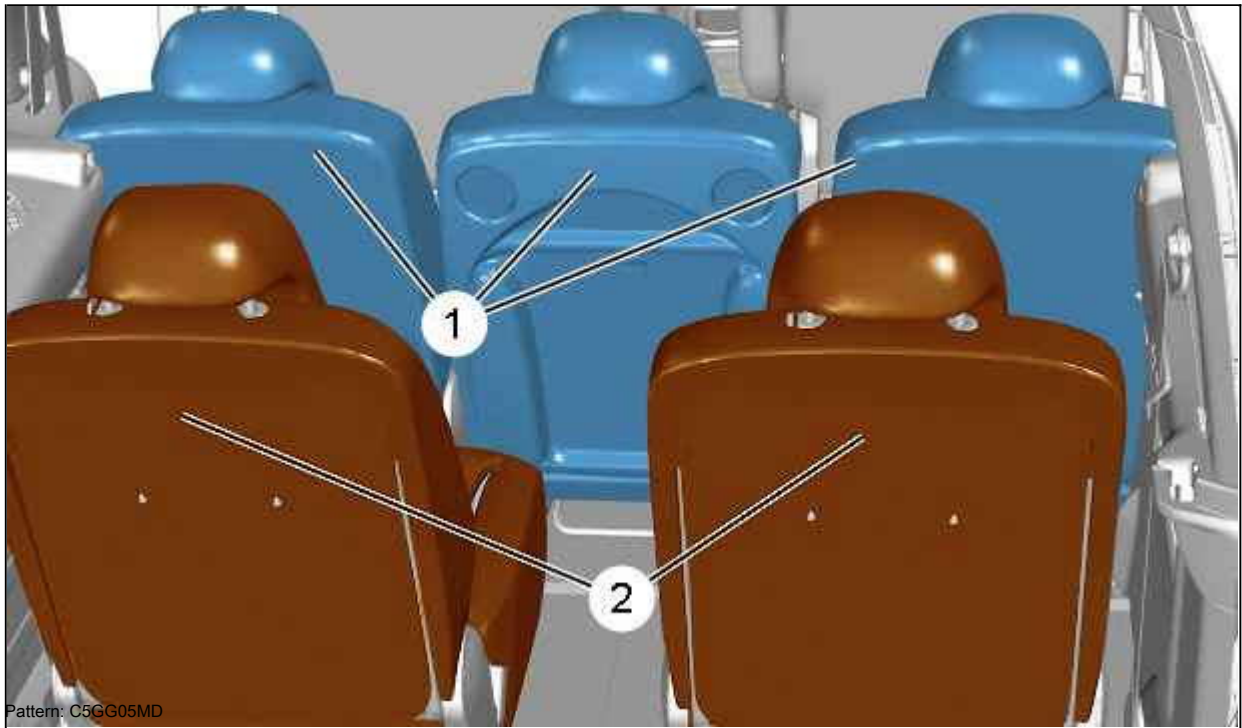
~~MANDATORY: Comply with safety and cleanliness requirements~~



1. Tools

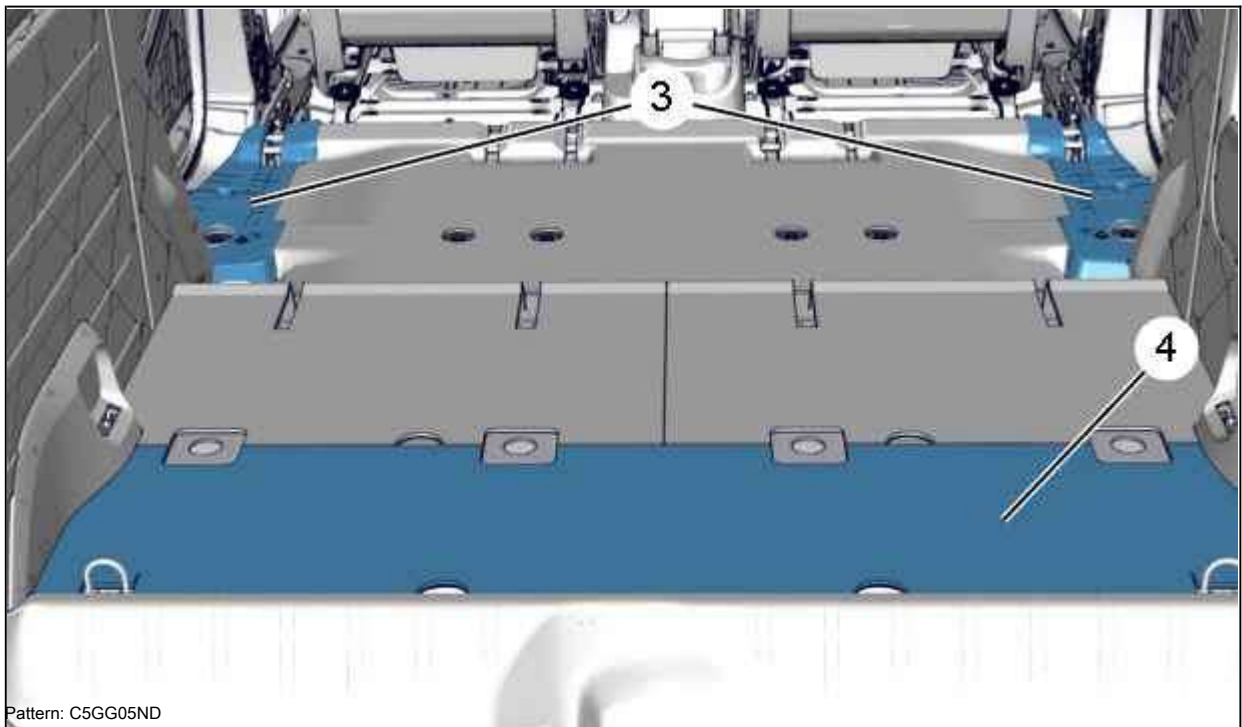


2. Removal



Remove:

- Rear seats (1) (Row 2) (See Owner's Manual)
- Rear seats (2) (Row 3) (See owner's manual) (Depending on version)

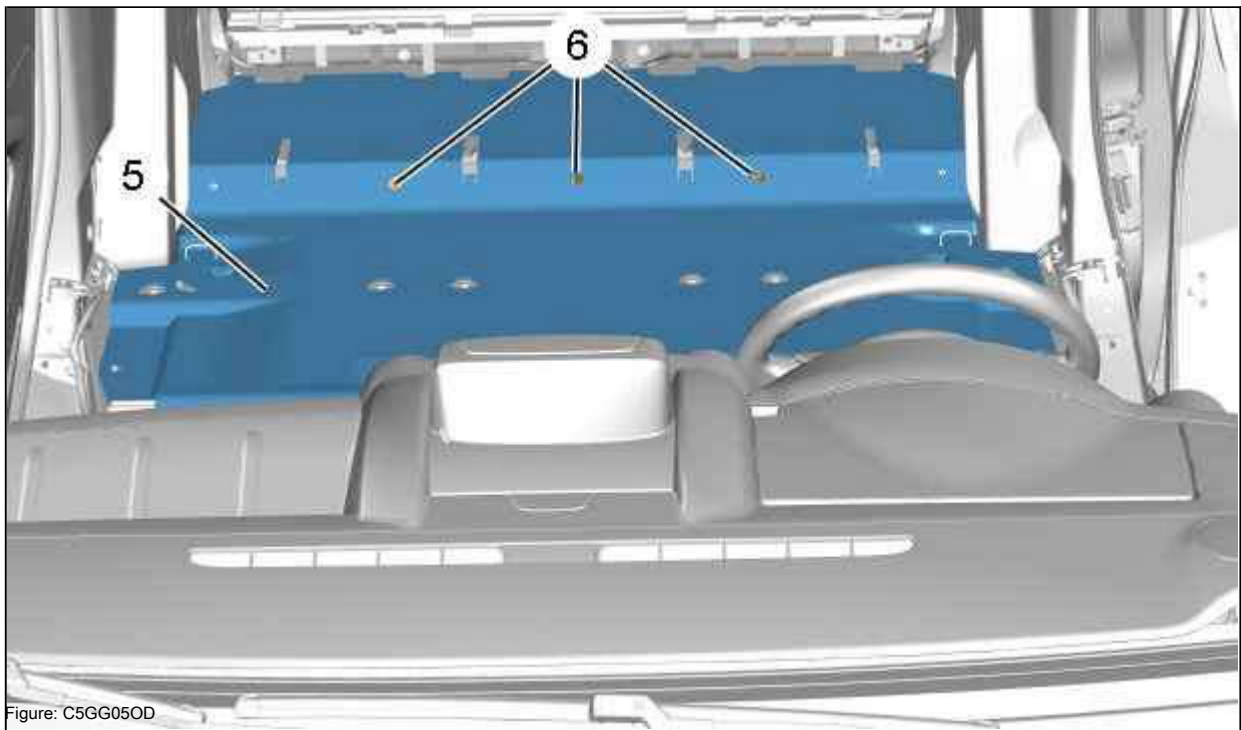


Remove:

- **Door sill trim panels**
- Mat: Back (4)

: Side (3)





Remove:

- clips (6); Using the tool [1]
- The back of the mat (5)

3. Installation

ATTENTION : Replace damaged clips.

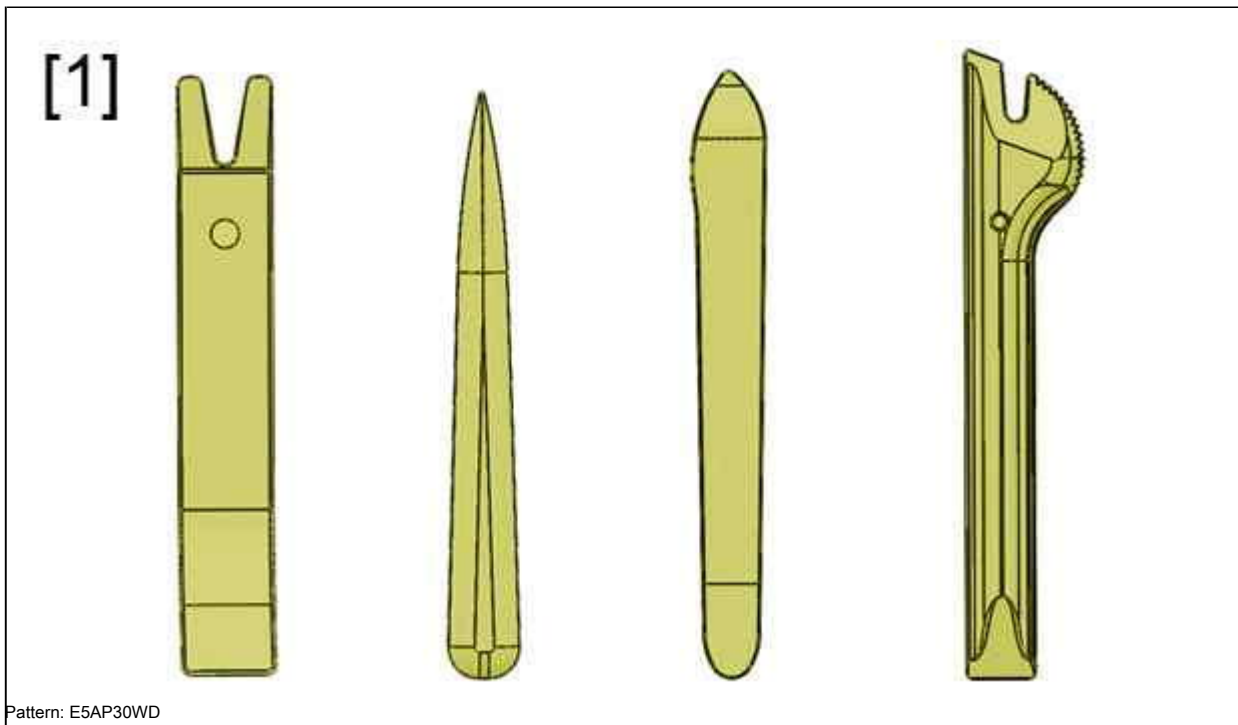
Installation is carried out by performing the removal operations in the reverse order. Check the functioning of the electrical equipment.

INSTALLATION: MONOGRAM

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim removal tool () .1350ZZ.

2. Removal

2.1. Luggage compartment lid

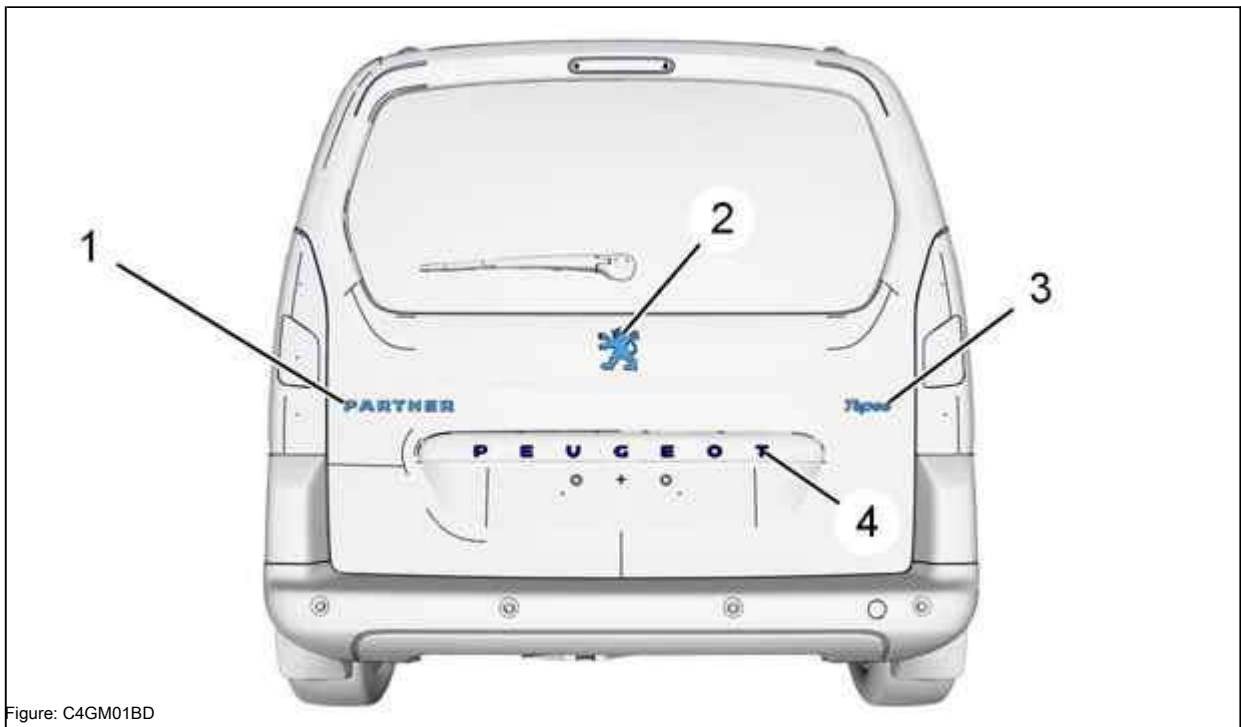


Figure: C4GM01BD

Separate monograms (1), (2), (3), (4); Using the tool [1].

2.2. Hinged doors

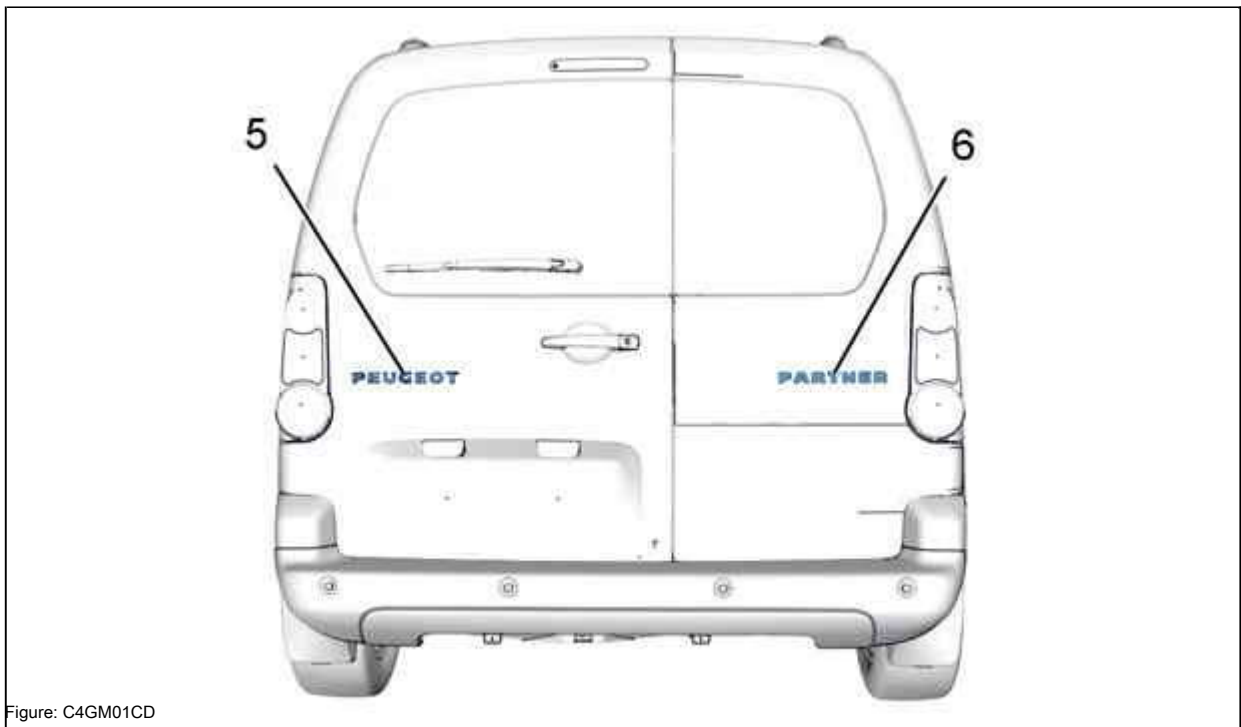
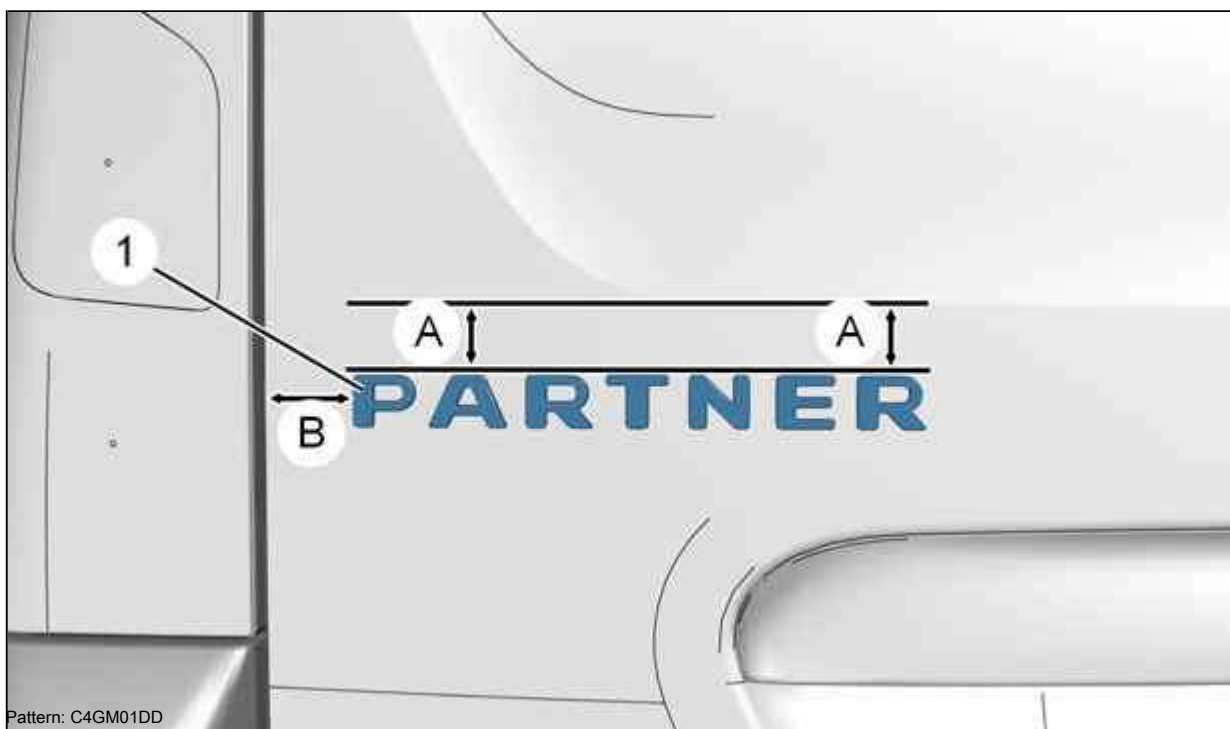


Figure: C4GM01CD

Separate monograms (5), (6); Using the tool [1].

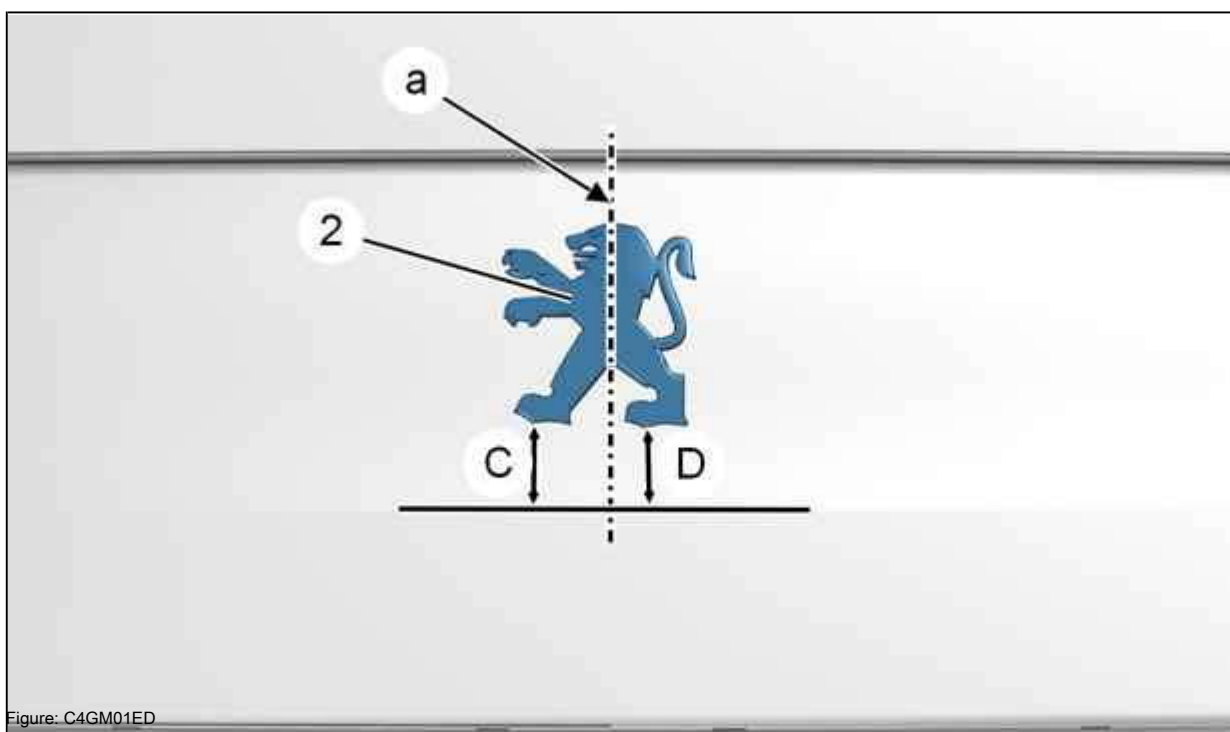
3. Installation

3.1. Luggage compartment lid



Degrease the bonding surfaces Using the degreasing agent, index "J1". Install and apply monogram (1).

"A" = 35 ± 2 mm. "B"
= 46 ± 2 mm.

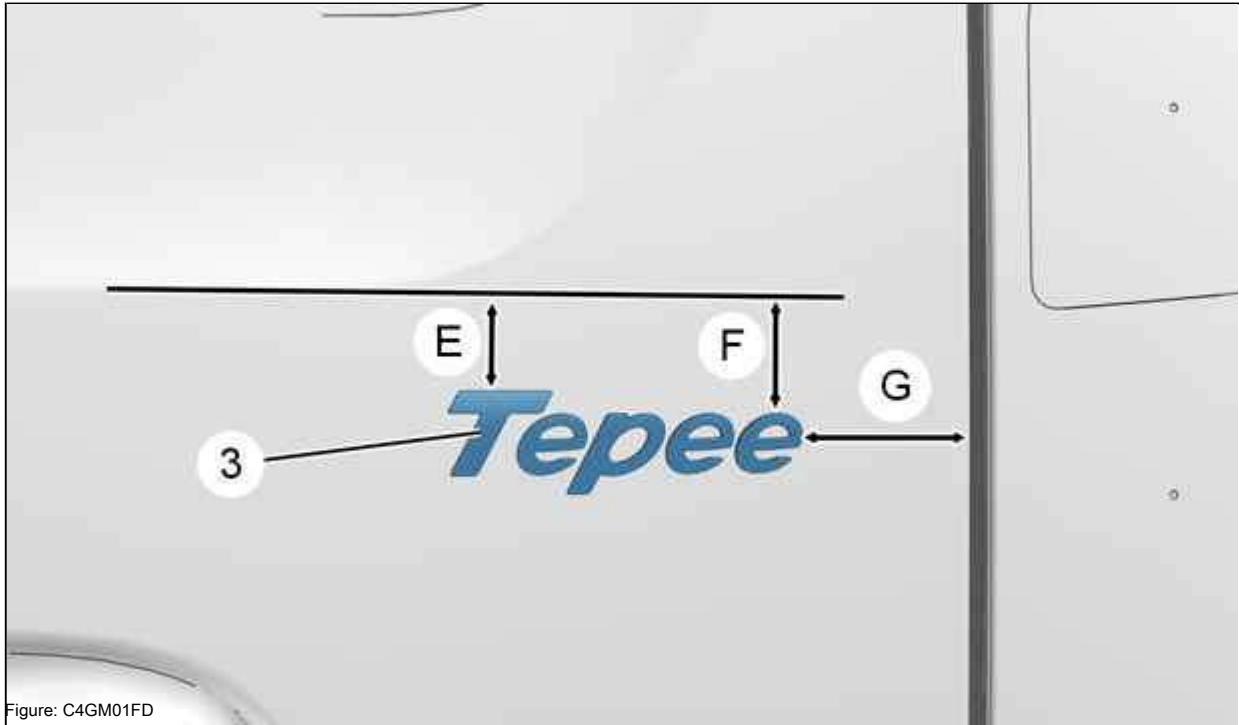


ATTENTION : Locate the tailgate axis of symmetry to locate the monogram (2).

"a" Axis of symmetry (Luggage compartment cover).

Degrease the bonding surfaces Using the degreasing agent, index "J1". Install and stick the monogram (2) (Along the "a" axis).

"C" = 40 ± 1.5 mm. "D" =
 38 ± 1.5 mm.



Degrease the bonding surfaces Using the degreasing agent, index "J1". Install and affix the monogram (3).

"E" = 40 ± 2 mm. "F" =
 45 ± 2 mm. "G" = $62 \pm$
2 mm.



Figure: C4GM01GD

Degrease the bonding surfaces Using the degreasing agent, index "J1". Install and stick the monogram (4).

"H" = 160 ± 2 mm. "J" =
 18 ± 2 mm.

3.2. Hinged doors

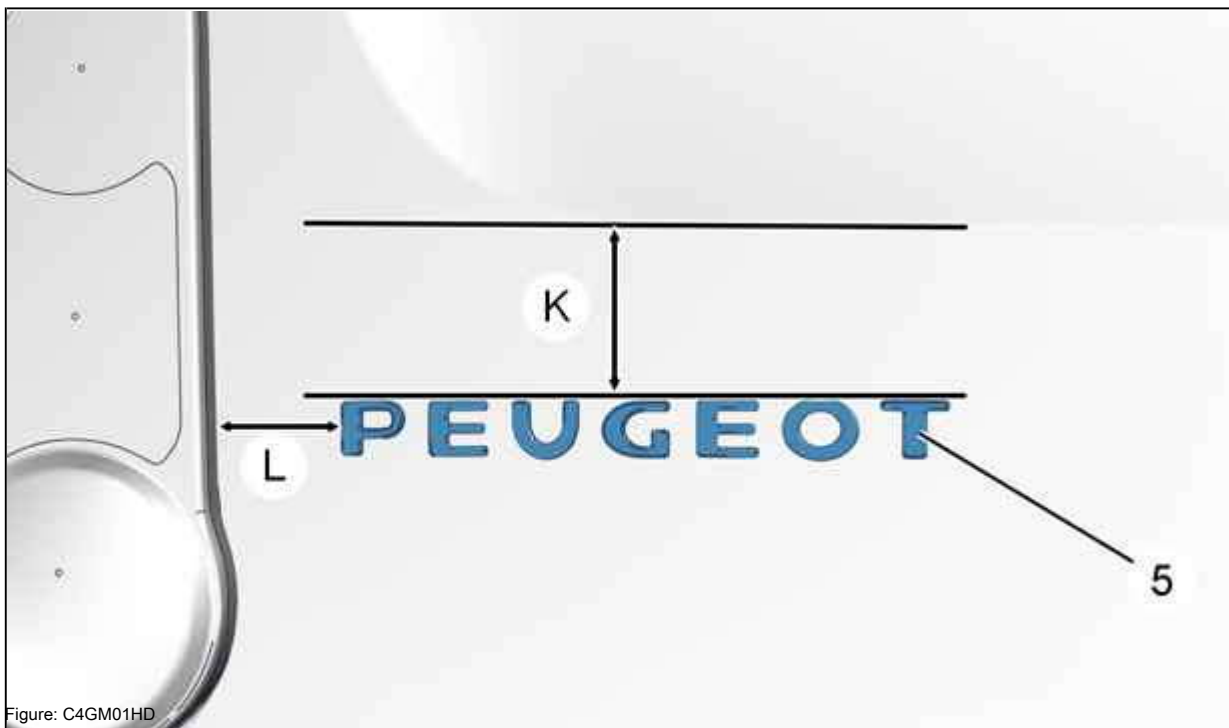
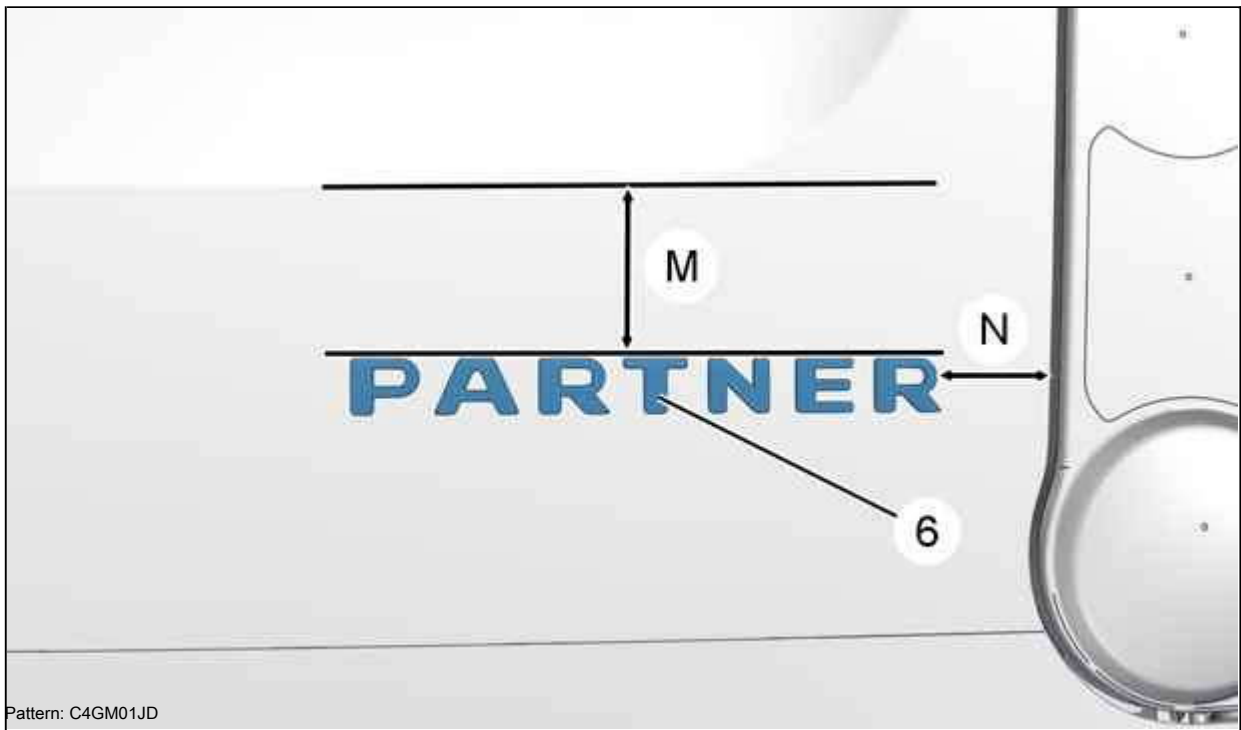


Figure: C4GM01HD

Degrease the bonding surfaces Using the degreasing agent, index "J1". Install and stick the monogram (5).

"K" = 75 ± 2 mm. "L" =
 53 ± 2 mm.



Degrease the bonding surfaces Using the degreasing agent, index "J1". Install and stick the monogram (6).

"M" = 59 ± 2 mm. "N"

= 49 ± 2 mm.

REMOVAL REFITTING: FRONT BUMPER

MANDATORY: Observe the cleanliness and safety rules







1. Preliminary operations

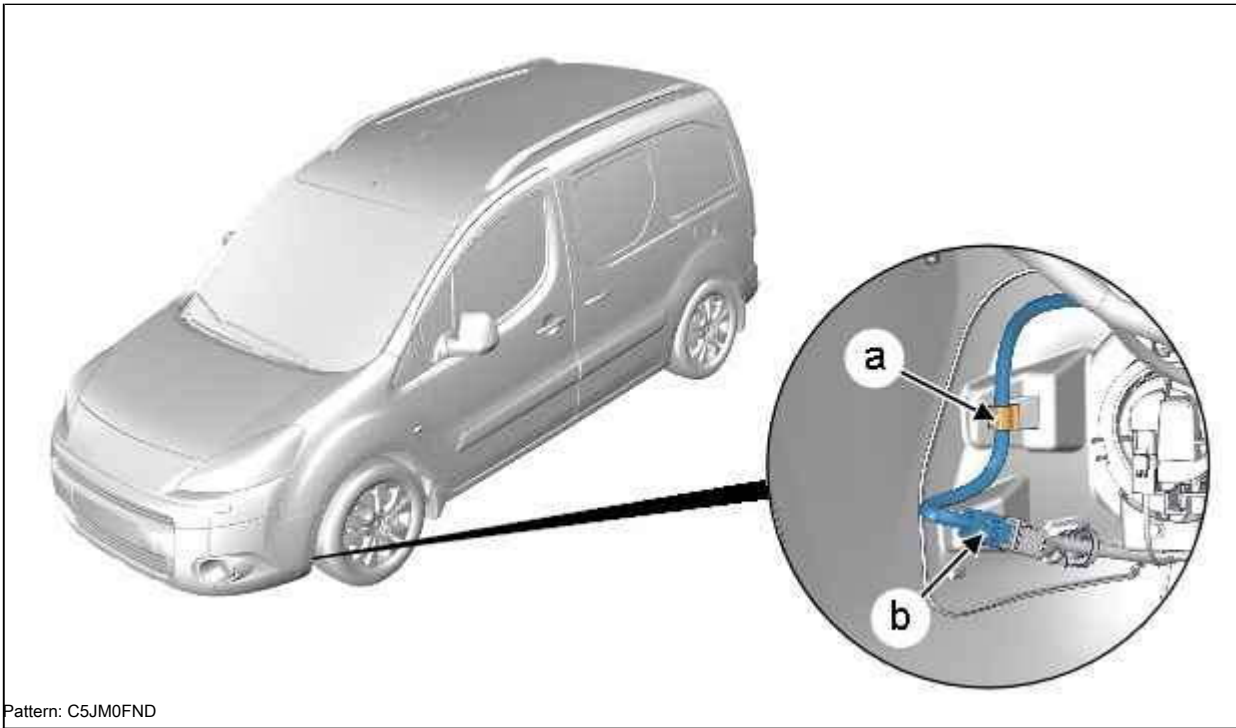
Place the vehicle on a 2 post lift.

Disconnect the battery

Remove:

- **Under motor protection guard**  (depending on configuration)
- **front mudguards** (partially) 
- **Headlamp washer covers**  (depending on configuration) 

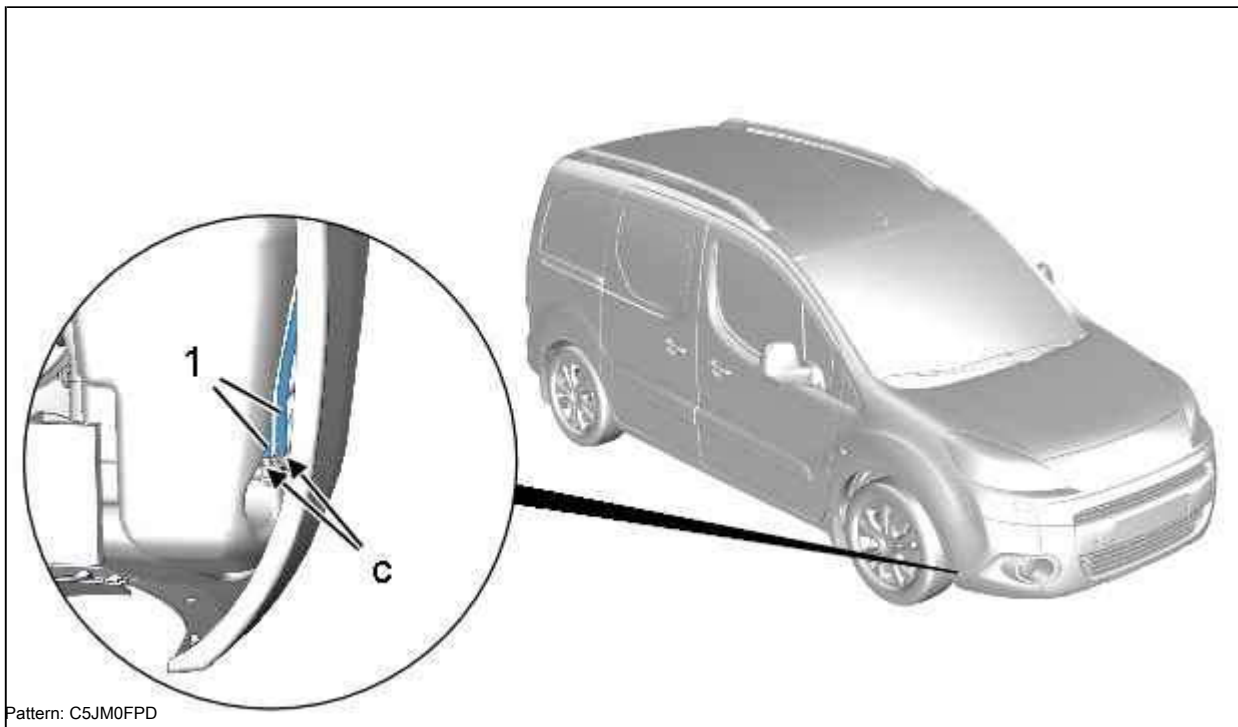
2. Removal



Pattern: C5JM0FND

NOTE: Depending on the configuration.

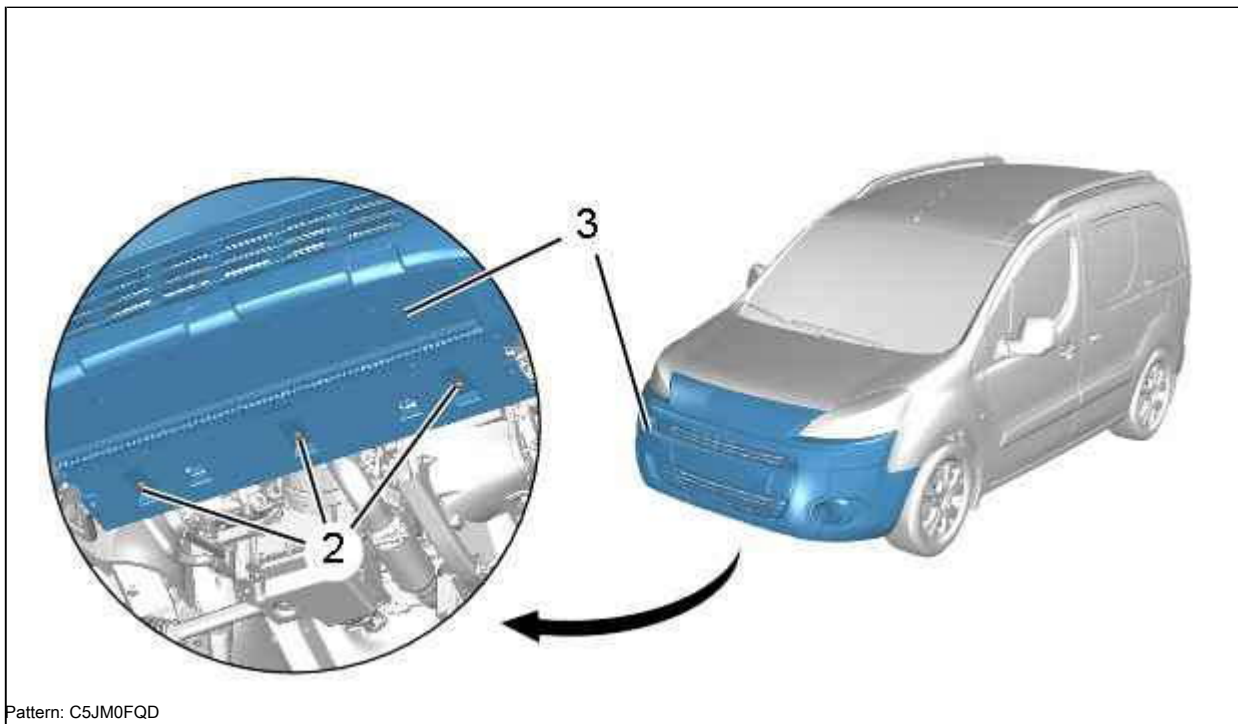
Separate the harness (at "a"). Disconnect the connector (at "b").



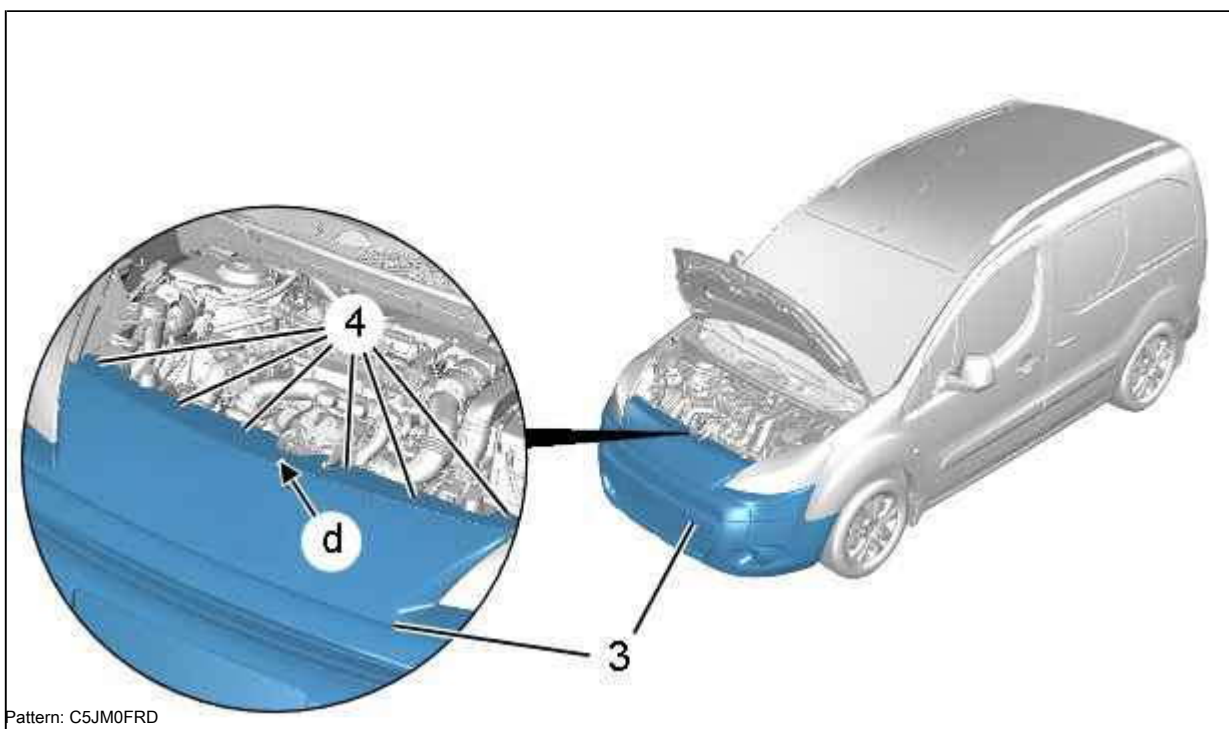
NOTE: Depending on the configuration.

Disconnect: The headlight washer pipes (1) (in "c").

NOTE: Muffle: Headlight washer pipes.



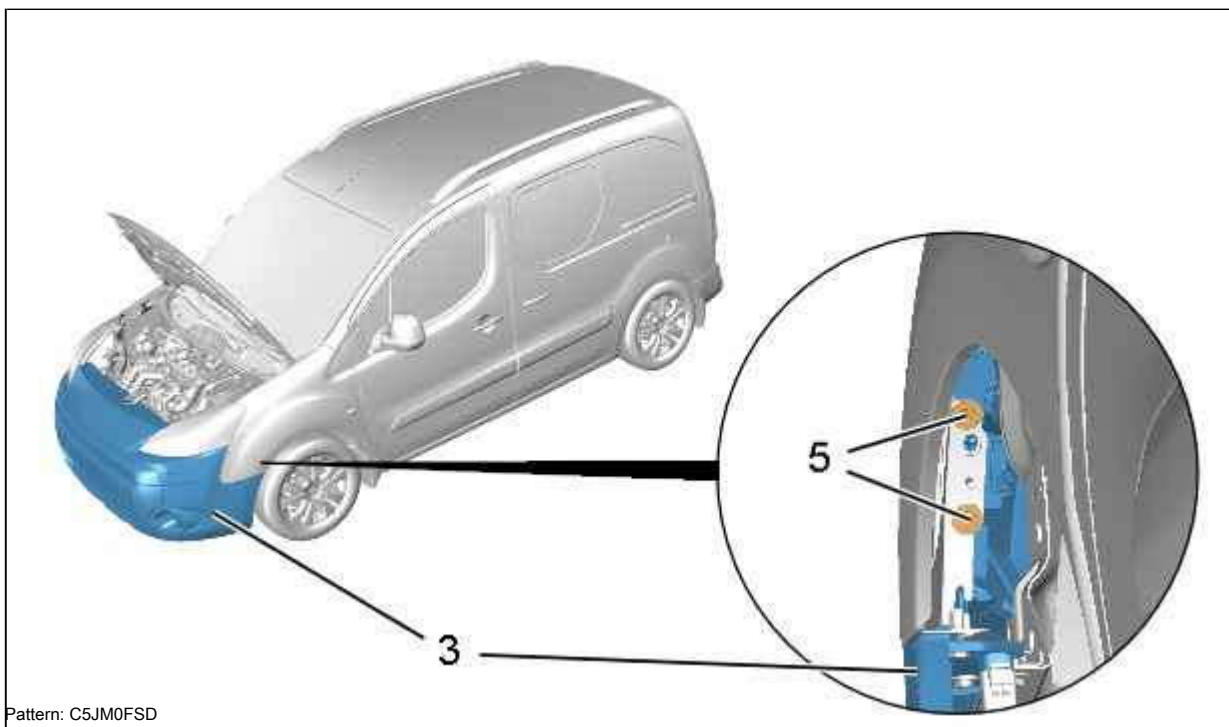
Remove the bolts (2) of the front bumper (3).



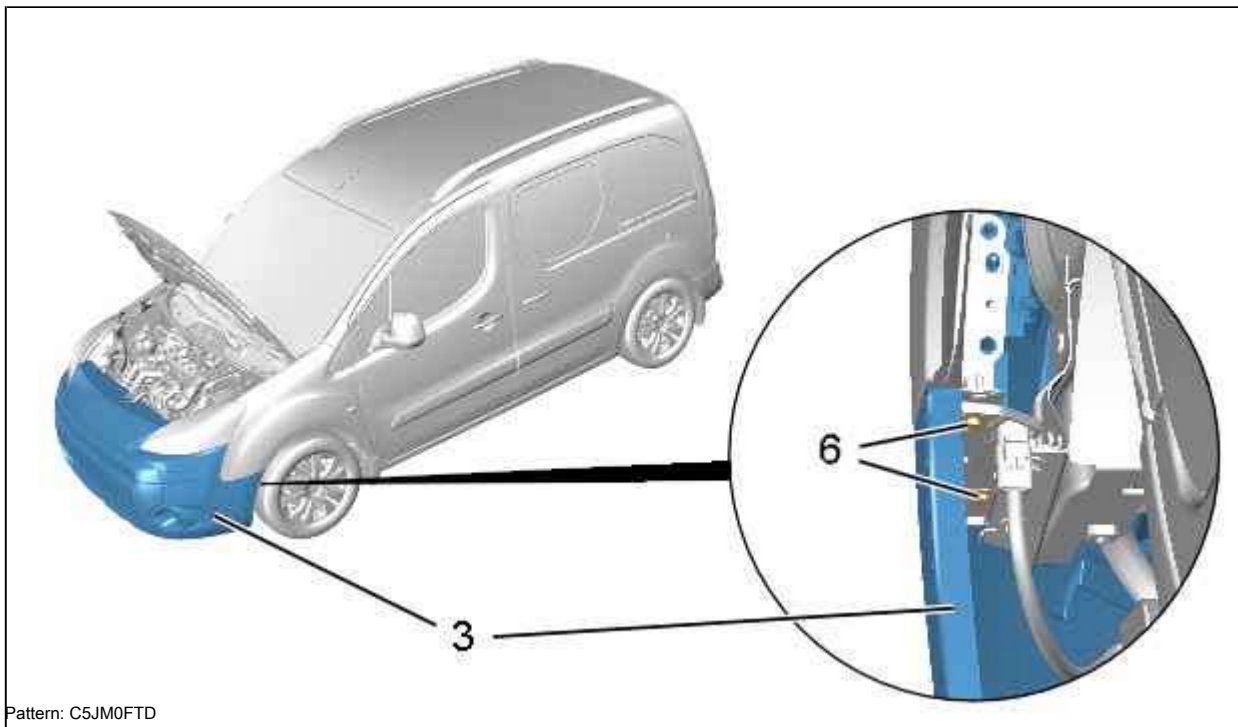
Open the hood.

Remove the bolts (4) of the front bumper (3).

Pull out the upper section of the front bumper (3) (in "d").

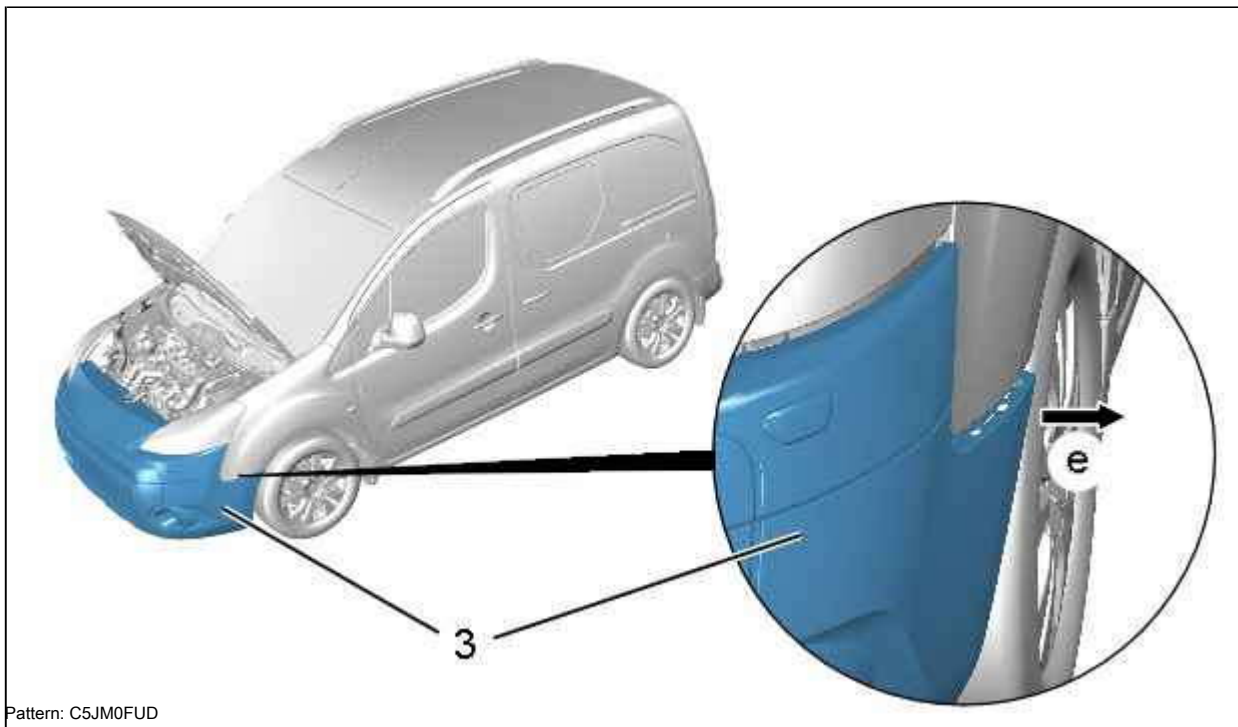


Remove the bolts (5) of the front bumper (3) (The operation is symmetrical).



Pattern: C5JM0FTD

Unscrew the bolts (6) a few turns (Do not remove) (The operation is symmetrical).



Pattern: C5JM0FUD

NOTE: Two people are needed.

on each side: Detach the front bumper (3) from the side (As shown in "e"). Release the front bumper (3) by pulling it forward.
Remove the front bumper (3).

3. Installation

Installation is carried out by performing the removal operations in the reverse order.

Reconnect the rechargeable battery

Adjust clearances and alignment

Tighten the bolts (5), (6) to a torque of 1 ± 0.2 da.Nm.

Check the correct functioning of the electrical equipment.



REPLACEMENT OF: PYROTECHNICAL ELEMENTS (AFTER THE AIRBAGS AND PYROTECHNICAL SEAT BELT PRE-TENSIONER OPERATION); RECOMMENDATIONS FOR REPLACING THE DEFECTIVE PARTS AND SERVICEABILITY HARNESS

Replace (In case of impact and after each operation):

- Gas generator connectors (In case of breakdown)
- Centralized control unit
- Items listed below (depending on equipment)

1. Required parts

Whatever the reason for the activation of the pyrotechnic elements (impact or accidental activation), the activation unit of these elements (or the airbag control unit) must be replaced.

ATTENTION : Specific connectors on gas generators must be replaced if damaged.

1.1. Impact triggering

Pyrotechnic devices	Replacement is required	Replacing a wish
worked		
airbag	Airbag module Steering wheel Contact ring / Control	Steering column
driver	lever under the steering wheel	
Airbag	Airbag module Instrument Check fittings, clearances, panels	
passenger under the skin upholstery or sheeting		alignment and condition surrounding details (Replace defective details)
Inflatable curtain	Ceiling trim Impact side: Satellite Impact side: Seal (satellite)	Airbag module; Doors; Taps;
security	Wood-look trim panels (Windshield rack Upper center-pillar trim Folding-out trim Sidewall adjustment Handles passengers sun visors) Pyrotechnic winder branch pretensioner or not	Various parts that were damaged in belt that are held in place
Airbag	Impact side: Satellite (satellite); Seat assembly	Impact side: Adjustment
lateral chest protection front cells (In sight or safety and slide position similarity)	(including belt buckle sensor) Pyrotechnic pretensioner winder branch or not	belt; Inertial
Airbag	Impact Side: Satellite; Airbag Module; Door Panel;	Impact Side: Glass; Seal; Drive
side rear protection chest in the panel similar doors (Firing simultaneously front airbag chest)	Door	window lifter; harness door wiring and other damaged parts
Airbag	Airbag module; Instrument steering column shrouds; panels	
driver at knee level (Firing simultaneously with a safety cushion driver and passenger)		Internal elements dashboard
ASA (System preventing	Airbag module	Frame and trim if damaged; When

diving active)		needs surrounding parts (mats, connector, crankcase, etc.)
Tension loop	Seat belt buckle with	Seat belt buckle with pyrotechnic
(Simultaneous functioning of cushions driver and passenger)	pyrotechnic belt tensioner (If the belt was worn: Inertia reels; Drive adjustment)	pretensioner (If belt was worn: Drive branch) winder; adjustment
Pyrotechnic reel	Pyrotechnic reel	If the belt was worn: destruction) If the
(Simultaneous functioning of cushions driver and passenger)	Drive adjustment (If the belt was worn: Rewinder branch)	Brace (In case belt needs to be replaced safety was not worn, not pyrotechnic)
Returning the belt to reel	Belt rewinder and return (If the belt has been worn: Drive adjustment; Buckle)	If the seat belt is not was worn, not required replace the lock
Returning the seat belt	Belt rewinder and return (If the belt has been worn: Drive adjustment; Buckle)	If the seat belt has not been worn, not required replace the lock
Active bonnet for protection pedestrian collision	Pedestrian collision sensor, pedestrian collision accelerometer, pedestrian collision system computer, actuators,	Check harness and connectors
	hinges, hinge covers (depending on equipment)	
Roll bars (Coupe cabriolet)	Cassette lock; unit reset	

NOTE: If the vehicle is equipped with 2 satellites (front and rear), replace the 2 satellites even if one module fails.

1.2. Accidental triggering

Pyrotechnic devices triggered	Replacement is required	Replacing a wish
airbag driver	Airbag Module Slip Ring / Steering Wheel Control Lever	
Airbag passenger under the skin upholstery or sheeting	Airbag module In the case of an airbag located under the leather upholstery: Dashboard In the case of an airbag with tape: Check the installation, clearances and alignment, condition of the dashboard; If there is no fault, you can save control panel	Check the installation, clearances, alignment and condition surrounding parts (Replace faulty parts)
Inflatable curtain security	Ceiling decoration (Operation side: Satellite that triggered the deployment; Airbag module; Wood-look trim panels (Strut Windshield Upper B-pillar trim Sidewall trim Sun visors))	Triggering side: Door gasket; couplers; damaged when Various details that were unfolding; passengers; belt adjustment The pens that will hold
Front side airbag, protecting chest a cage on kind or similar	Triggering side: The satellite, which Triggering side: The armature triggered the triggering; Airbag module safety; Upholstery and seat foam (if under upholstery)	
Rear side cushion	Triggering side: Satellite, which Triggering side:	

protect security chest in side-trimmed Airbag	triggered; sidewalls seats with airbag Triggering side: Satellite, which	Door seal; wheel arch trim (in case of destruction) triggered the triggering; Airbag module
side rear protection chest in the panel similar doors	Security: Door Panel	Door seal; door wire drive and others window regulator; harnesses elements (In case of destruction) Check the installation, clearances and
Airbag driver at knee level	Airbag module	alignment (Without faults: Absence dashboard replacement) Surrounding elements damaged
ASA (System preventing diving active)	Airbag module	Frame and trim, if they are surrounding damaged; if necessary, connector, crankcase, parts (rugs, etc.)
Tension loop	Seat belt buckle with	If the belt is not worn, no winders;
Pyrotechnic reel	pyrotechnic belt tensioner (If belt has been put on: winder branch; drive adjustment) Pyrotechnic reel branch (If belt was worn: Brace; Drive adjustment)	branches need to be replaced drive If the belt is not worn, no winders;
Returning the belt to reel	Belt rewinder and return (If the belt If the seat belt has not been worn: Adjusting the drive; Brace	branches need to be replaced drive
Returning the seat belt	castle) Replacing a broken element (If the belt If the seat belt has not been worn: Adjust the drive; Brace	put on, no need to replace the lock
Active bonnet for pedestrian protection collisions	castle) Executive mechanisms, computer collisions with a pedestrian, hinges, hinge covers (depending on configuration)	put on, no need to replace the lock Check the wiring harnesses and connectors, collision sensor with pedestrian, accelerometer collision with a pedestrian
Roll bars (Coupe cabriolet)	Cassette lock; Block if triggered with using a pyrotechnic lock	In the case of mechanical the actuation of the arch can be operable condition

2. Methods for visualizing triggered elements

2.1. Seat belt reel (s)

The rewinder operation is signaled by:

- Activating the side airbag visual indicator on the instrument panel
- Error code recorded and read out with the diagnostic tool
- The characteristic noise of the balls, which is heard after the reel

2.2. Passenger airbag neutralization switch



Pattern: C5JM0C3D

The passenger airbag neutralization switch switches the system to on or deactivates the system to off using the ignition key:

- The on position enables deployment of the front airbag in the event of a frontal impact
- The visualization of this function is enhanced by illuminating the warning lamp on the instrument panel.

3. Recommendations for parts

Replaced parts will be triggered in the following cases:

- Parts that should be destroyed
- Parts containing an expired shelf life

ATTENTION : As a consequence, any part requiring replacement under warranty must be returned unworked.

4. Conditions of transportation of pyrotechnic elements

These parts must be shipped in packaging that allows them to be refitted during replacement.

5. Maintainability of the wire harness

Repair of all wiring harnesses is only permitted with the use of RAYCHEM type connecting welding sleeves and all instructions for their use are followed.

Required Repairs: Materials (RAYCHEM).

ATTENTION : Repair of wires should be carried out using hot-melt connecting bushings and sheaths (Tool box () .1228).

Replace the generator (gas) wiring harness if the connector is damaged after If the module is supplied with a wiring harness, the entire assembly must be replaced.

6. Post-ceremony check

MANDATORY: After any repairs to the centralized airbag system, carry out

reading errors with a diagnostic tool.

REPAIR: PLASTIC ELEMENTS BY WELDING

MANDATORY: Observe the cleanliness and safety rules



1. Equipment

NOTE: See tool catalog.

Repair kit for plastic parts.

Designation	Material
PP	Polypropylene
PA	Polyamide
PPEPDM or P / E Ethylene	propylene diene
ABS	Acrylonitrile butadiene styrene

2. Preparation of the repair area

Rinse the part to be repaired with a pressure cleaner, then dry.

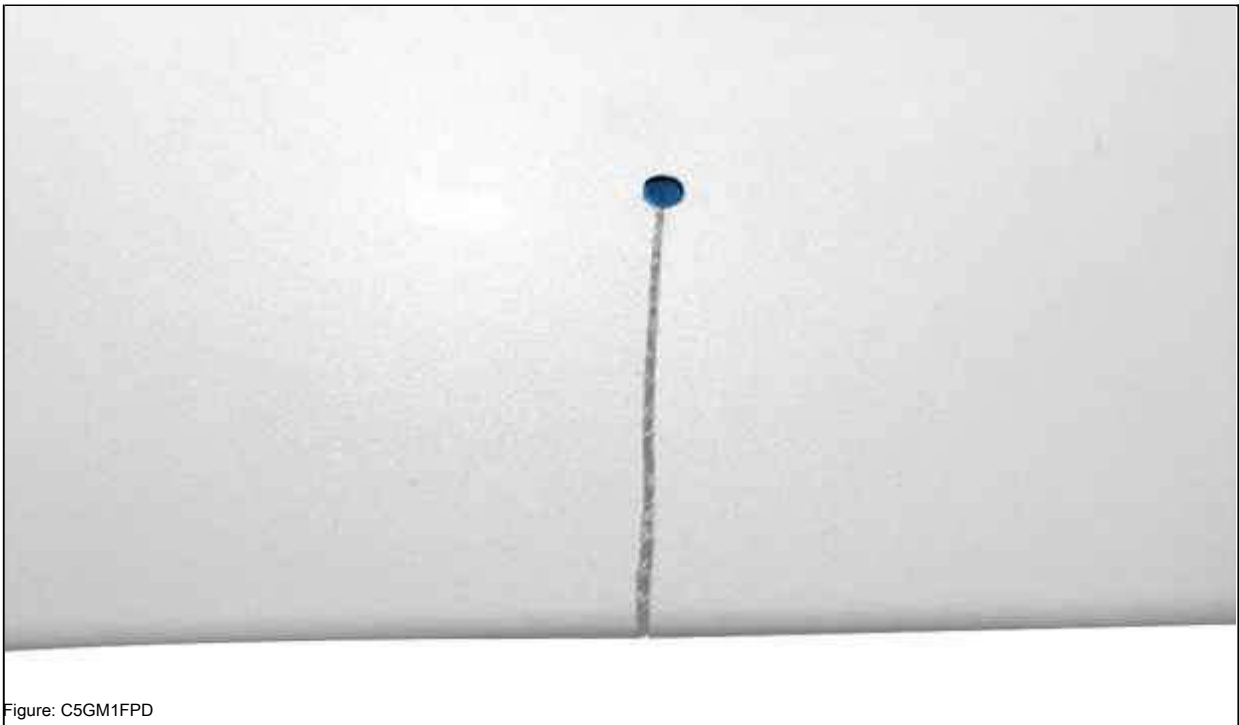
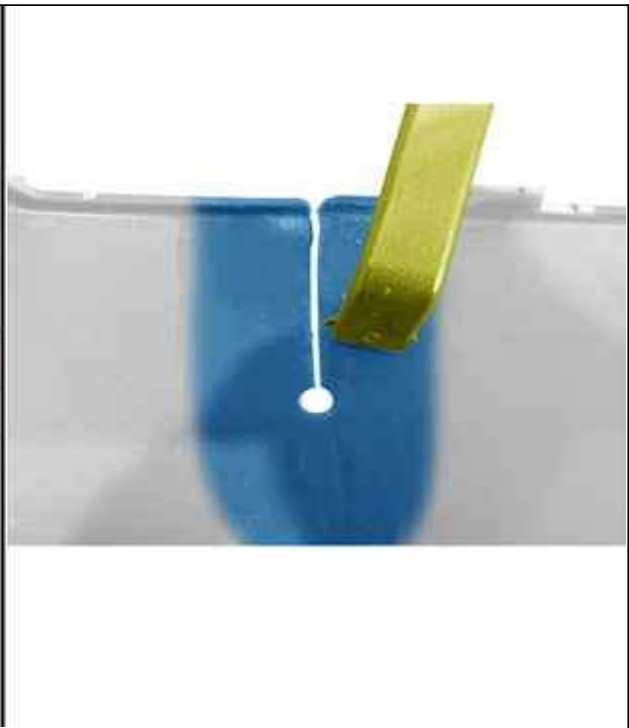
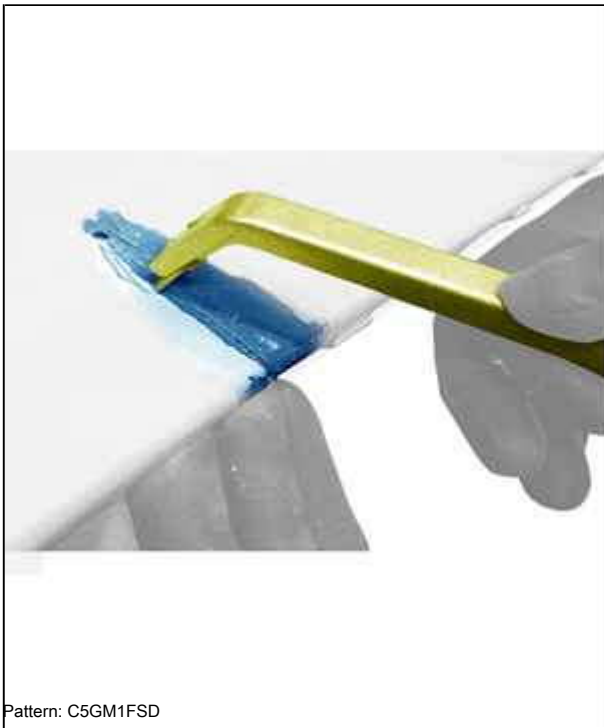
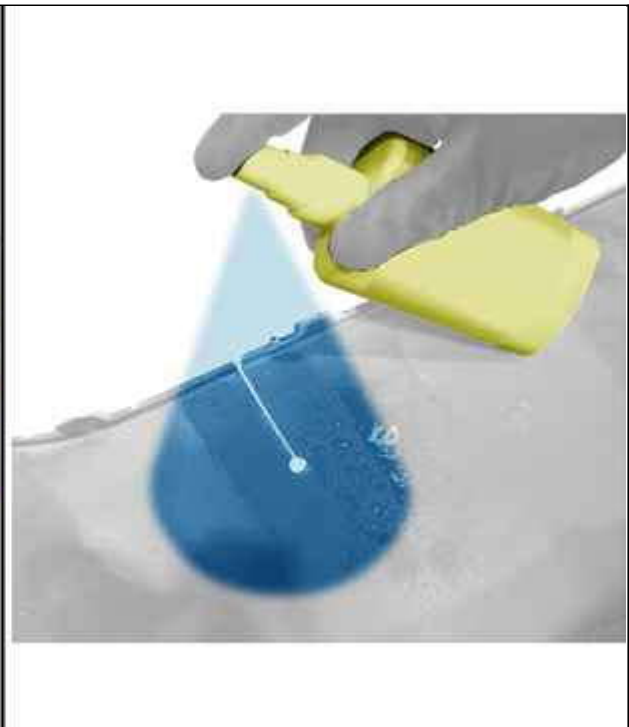


Figure: C5GM1FPD

Stop the development of cracks; using a drill with a diameter of 4 mm.



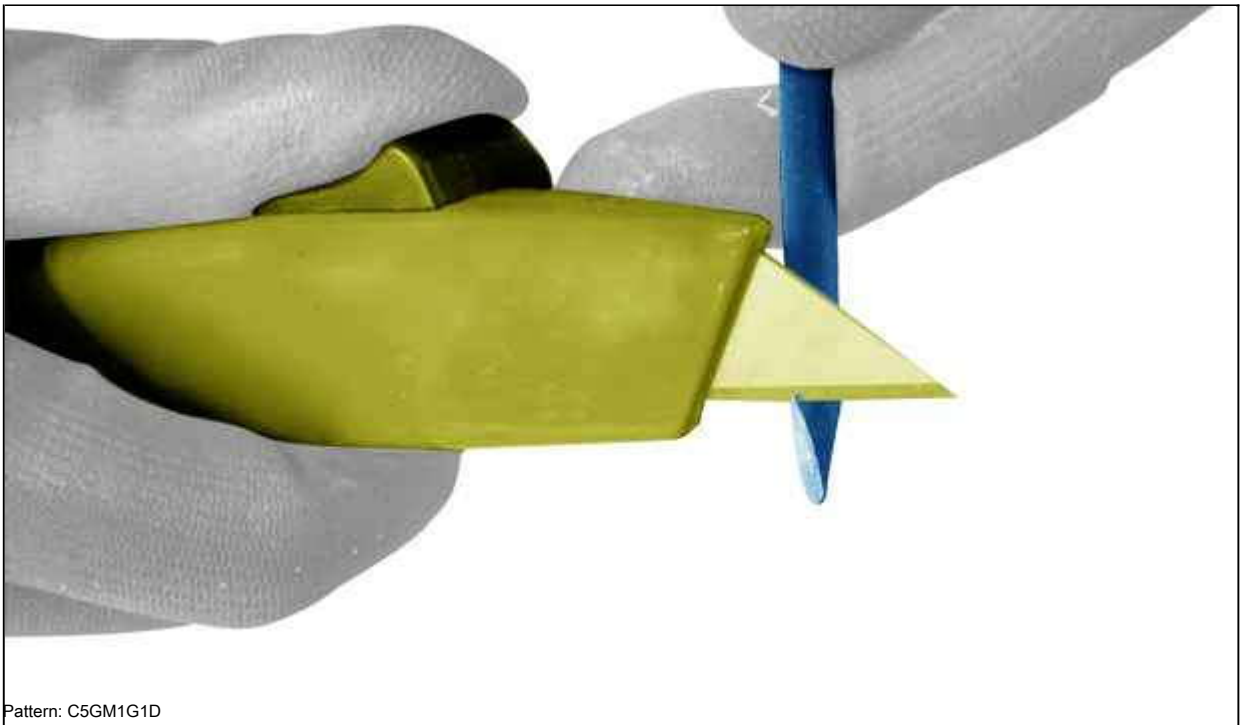
Sand the paint along the crack until clear plastic appears on the inside and outside; Using a scraper.



Degrease the repaired place from the inside and outside; Using a special degreaser (see the operating instructions).

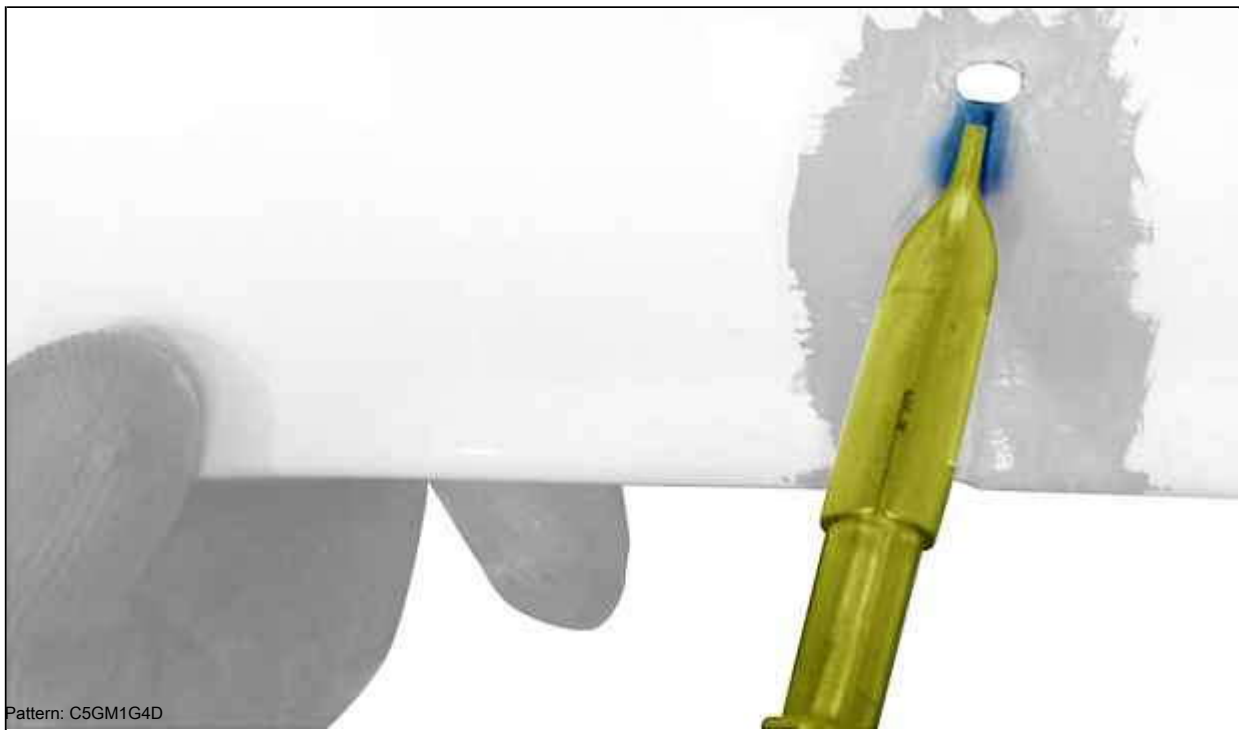


Determine the nature of the repaired plastic "P / E" (see the designation table).

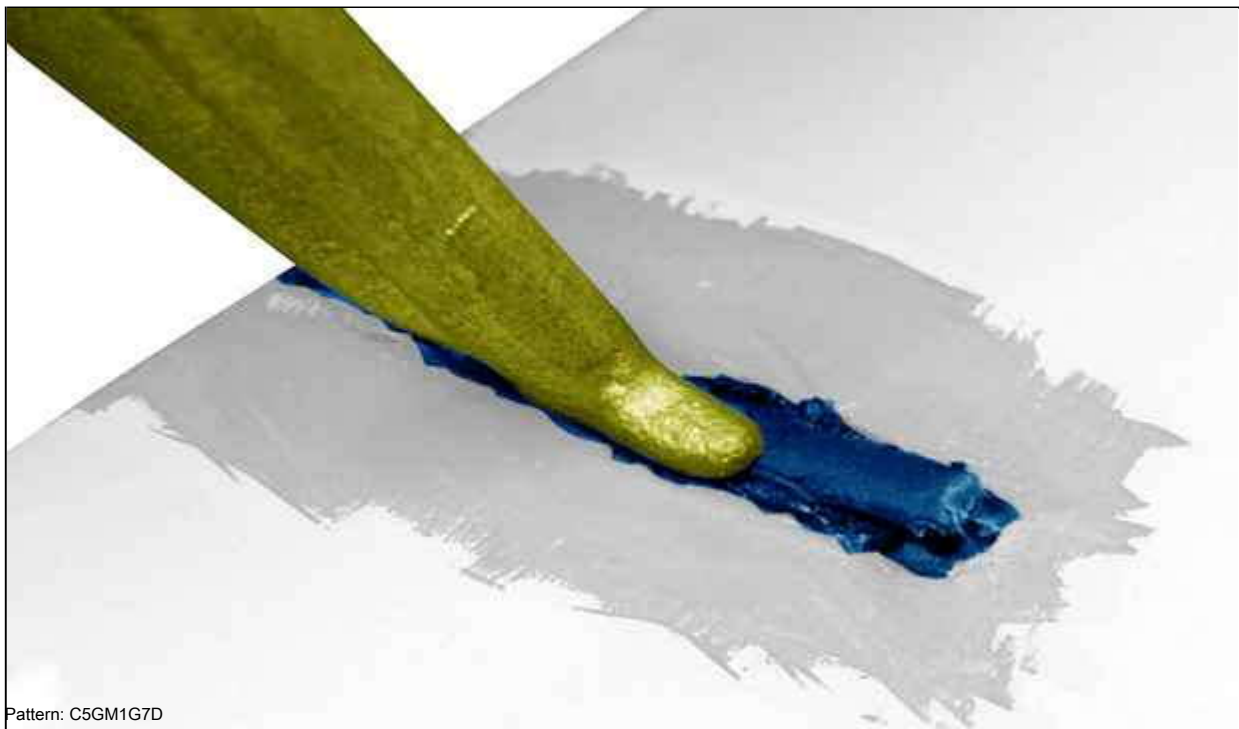


Bevel the end of the stick corresponding to the material being repaired; Using a cutting tool.

3. Welding



Carry out one welding pass to solidify the crack and heat the plastic; Using a gun equipped with a temperature control nozzle (see operating instructions).



NOTE: Use a welding rod suitable for the type of plastic (see operating instructions).

Equip the hot air gun with a welding nozzle.
Insert the stick into the welding nozzle (Beveled end first).

NOTE: Move from the point of drilling to the outer end along the length of the crack Move gradually to start the wand in the support.

Weld (beveled point in crack).

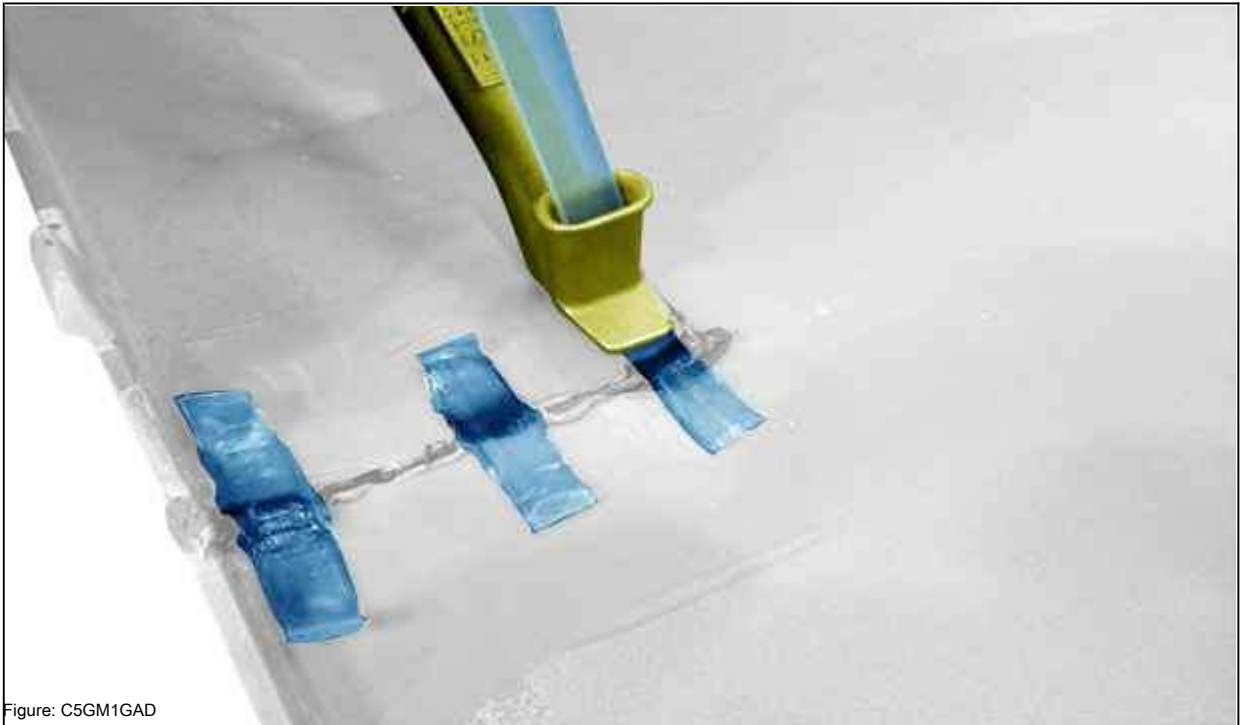


Figure: C5GM1GAD

NOTE: Use a flat stick corresponding to the type of plastic (see instructions for use).

Apply reinforcement from the inside; Using a flat stick and reinforcement nozzle.



Grind the repaired surface with an abrasive; Using an orbital sander.



A dark blue, textured, irregular shape resembling a stylized head or profile, set against a light blue background. The shape has a rough, almost crystalline texture and is positioned in the upper half of the frame. The background is a solid, light blue color. The overall composition is minimalist and abstract.

Grind the finishing mastic to the original shape of the part. Use a plastic primer (see instructions for use).
Go to painting details.

REPAIR: PLASTIC GEARS

MANDATORY: Observe the cleanliness and safety rules



1. Equipment

NOTE: See tool catalog.

Repair kit for plastic parts.

Designation	Material
PP	Polypropylene
PA	Polyamide
PPEPDM or P / E Ethylene	propylene diene
ABS	Acrylonitrile butadiene styrene

2. Preparation of the repair area

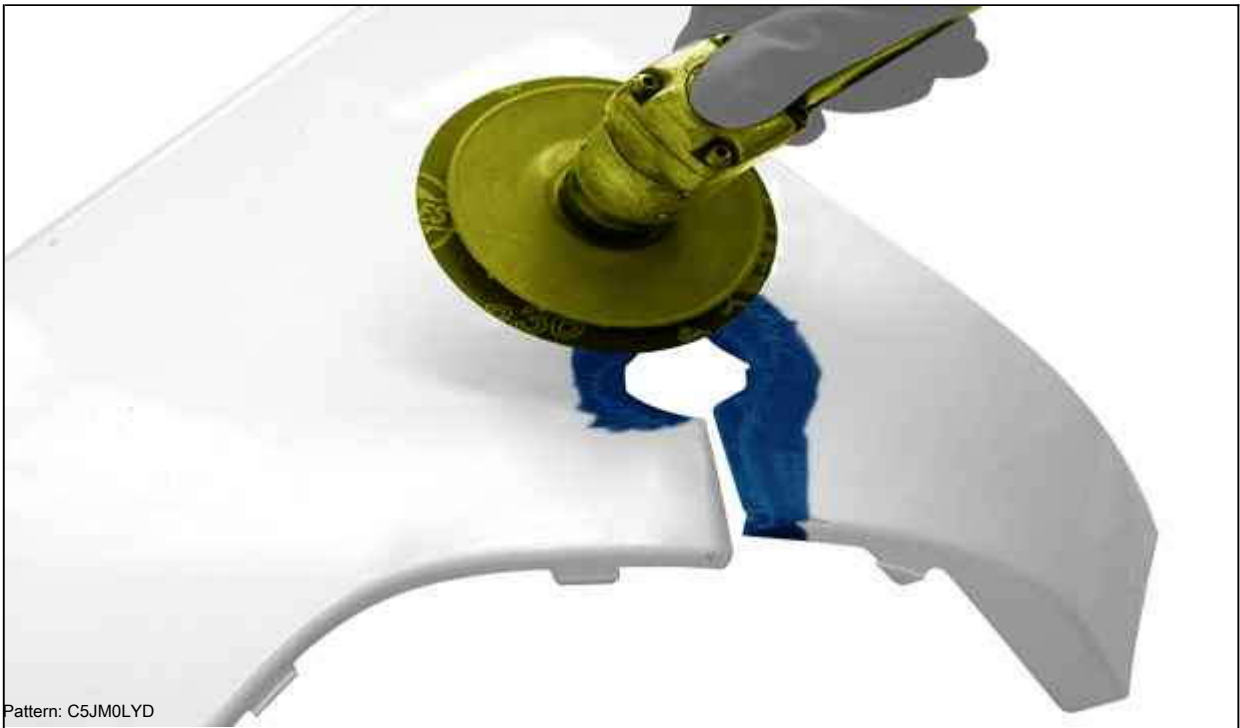


Pattern: C5JM0LVD

Clean up:

- Part to be repaired with a high pressure cleaner followed by drying
- Repair area inside and outside with a cleaner; with a clean cloth (see operating instructions)

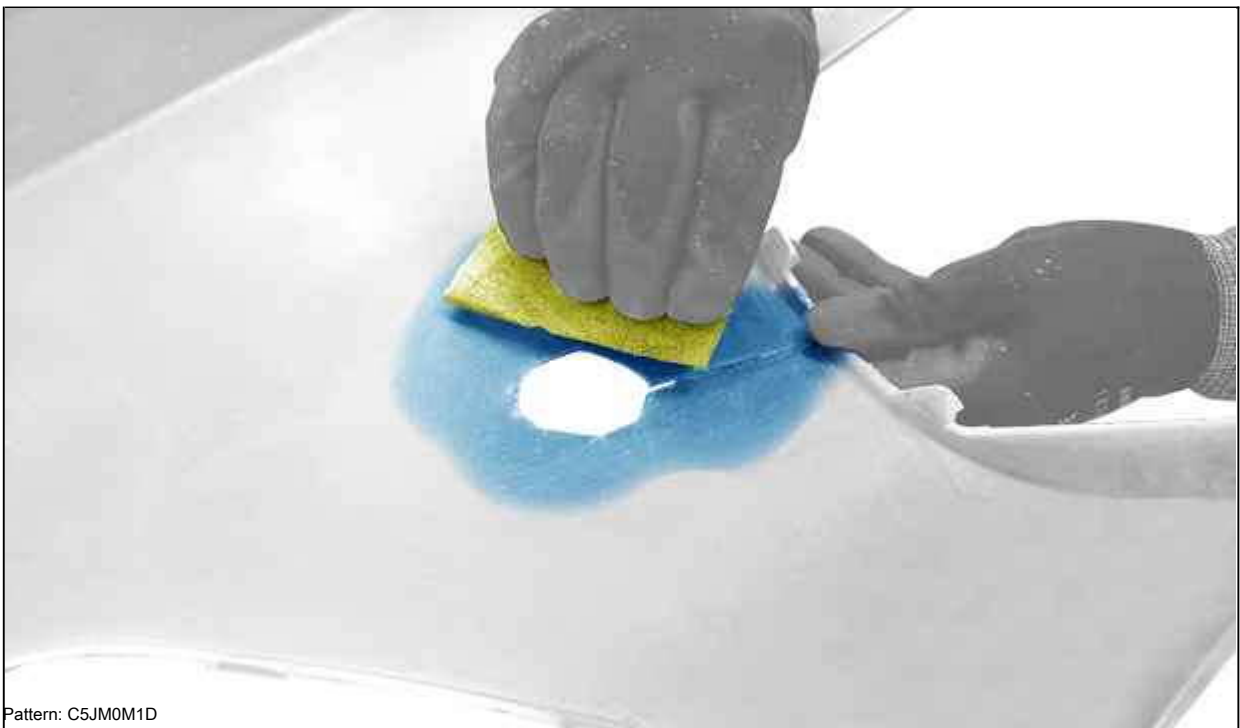
Wait for the cleaner to evaporate completely (about 5 minutes).



Pattern: C5JM0LYD

Process the outer edges of the repaired area by 1 to 2 cm; Using a disk tool.

NOTE: Start spinning at low speed.



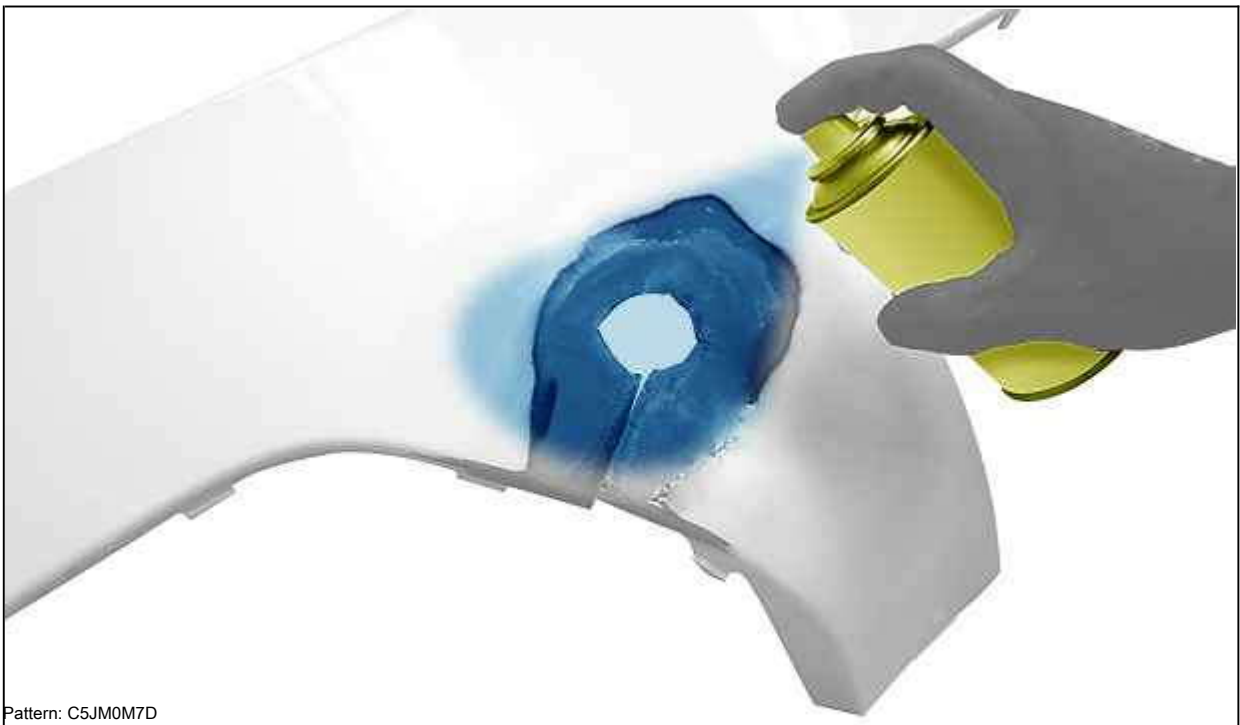
Pattern: C5JM0M1D

Sand the repair area inside and out.



Clean the repair area inside and outside with a cleaner; with a clean rag.

3. Application

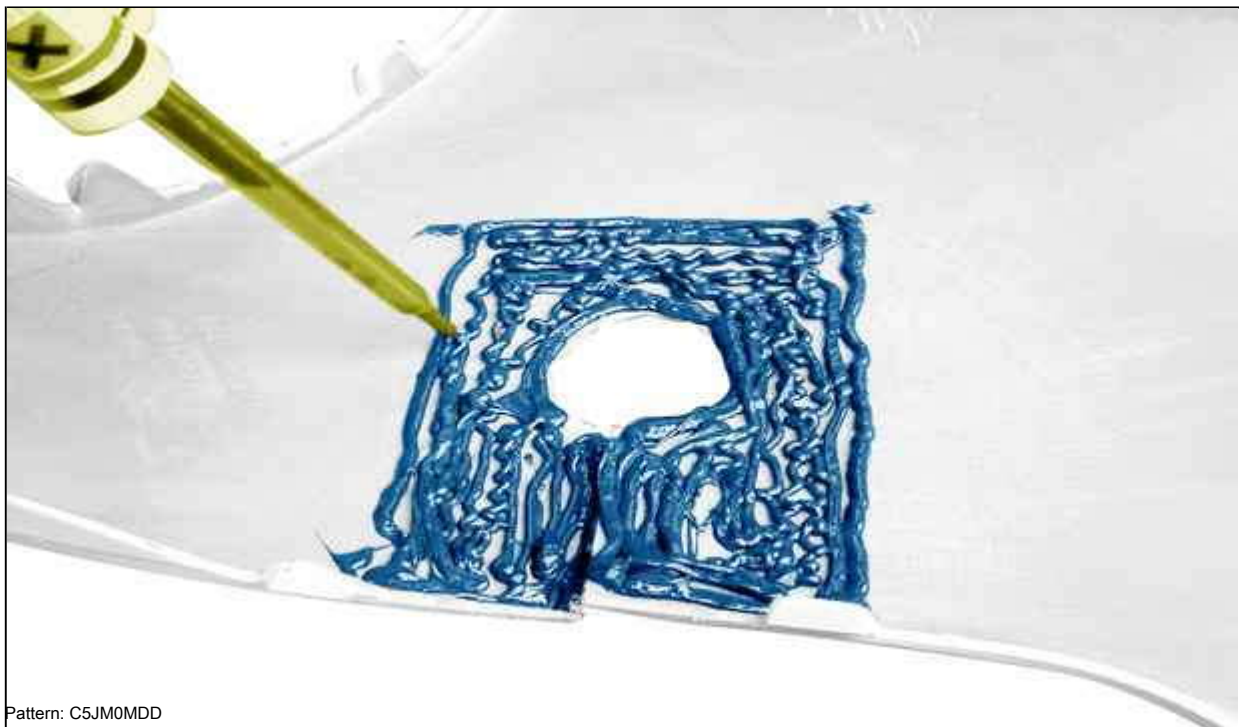


ATTENTION : When applying a primer: Do not overload the repair area.

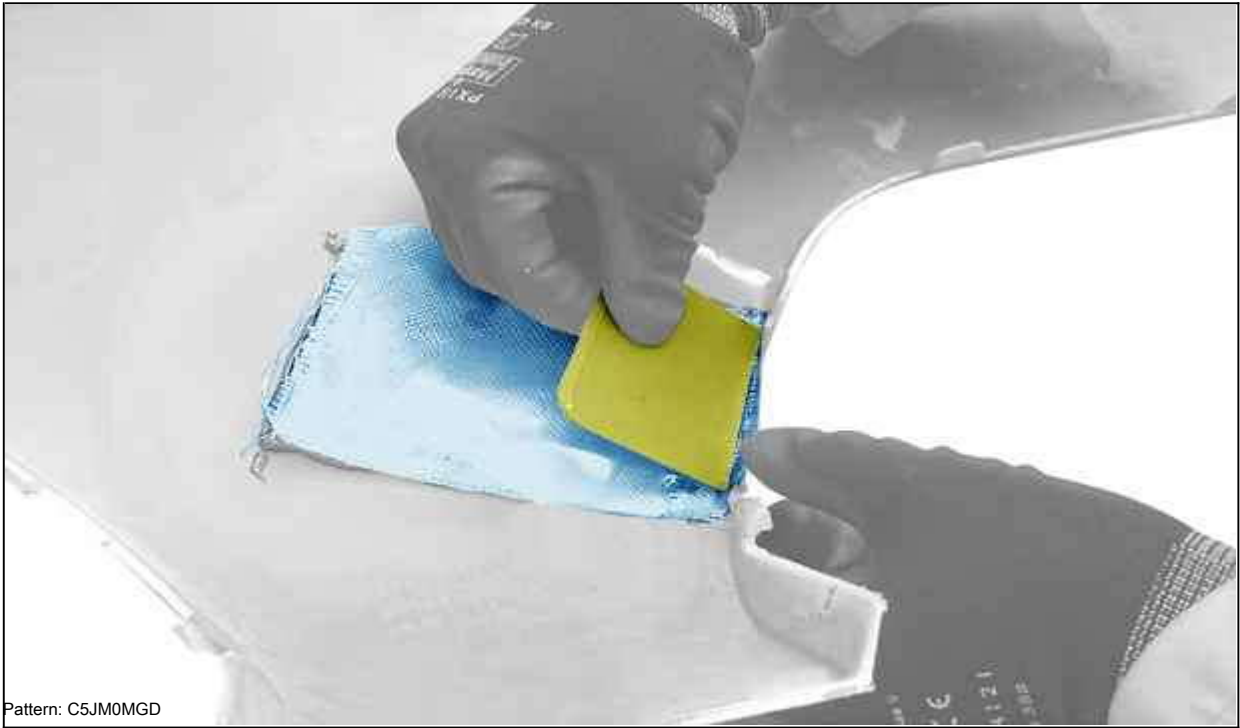
Apply a very thin layer of primer on the inside and outside of the repair area. Leave to dry for 10 minutes at room temperature.



Prepare a fiberglass backing to more than cover the repair area.

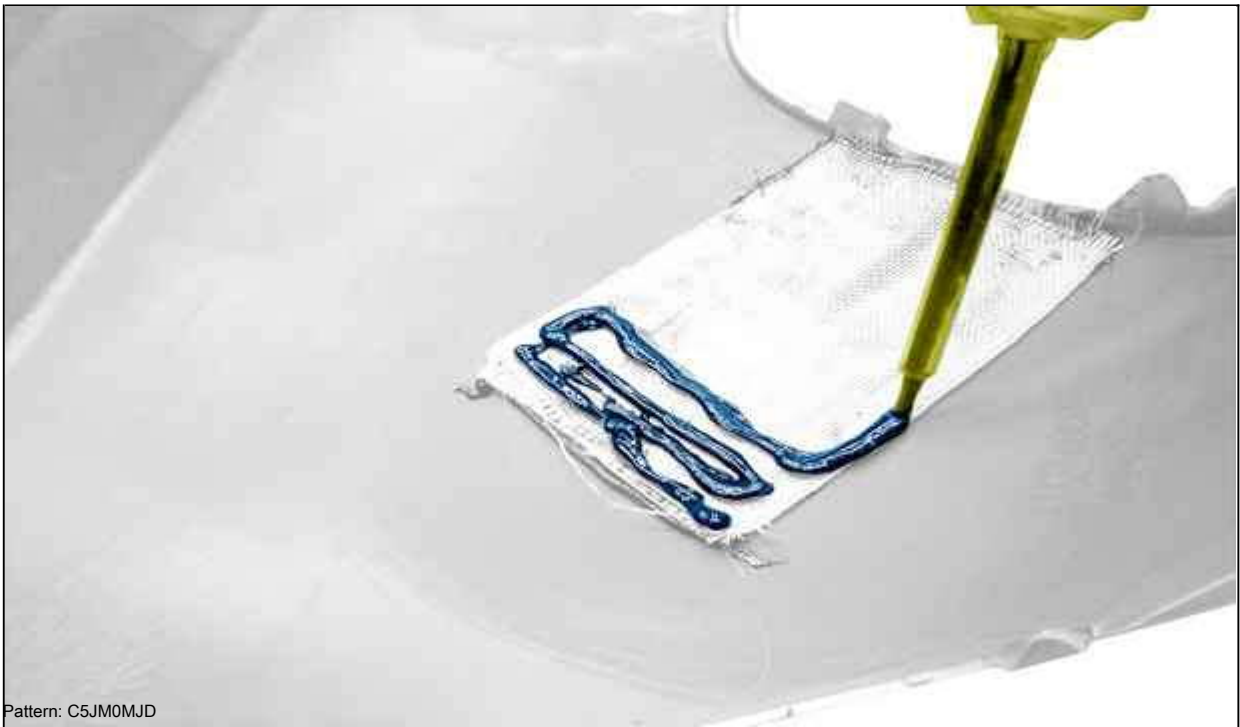


Apply a layer of polymer compound to the inside of the repair area in the same size as the fiberglass backing.



Pattern: C5JM0MGD

Apply fiberglass backing; With a plastic spatula.



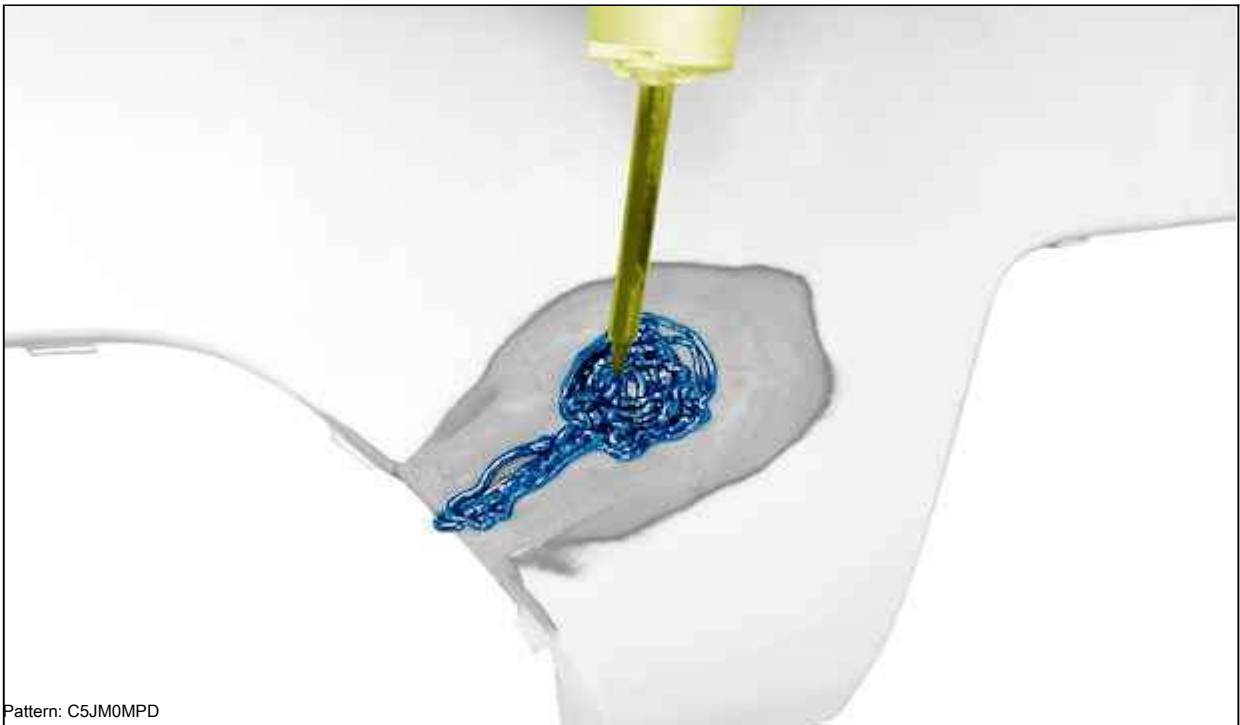
Pattern: C5JM0MJD

Apply a layer of resin on the fiberglass lining; With a gun.



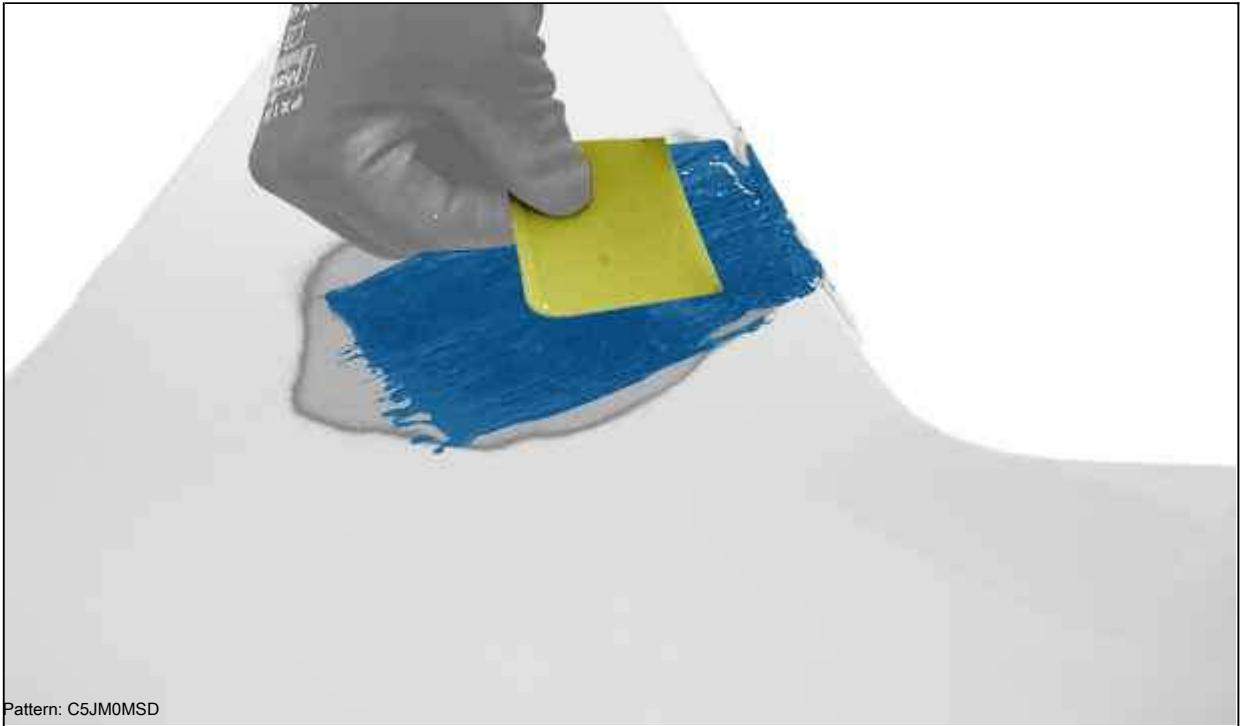
Pattern: C5JM0MMD

Smooth out the resin; with a plastic spatula.



Pattern: C5JM0MPD

Apply resin to the outside; with a gun.



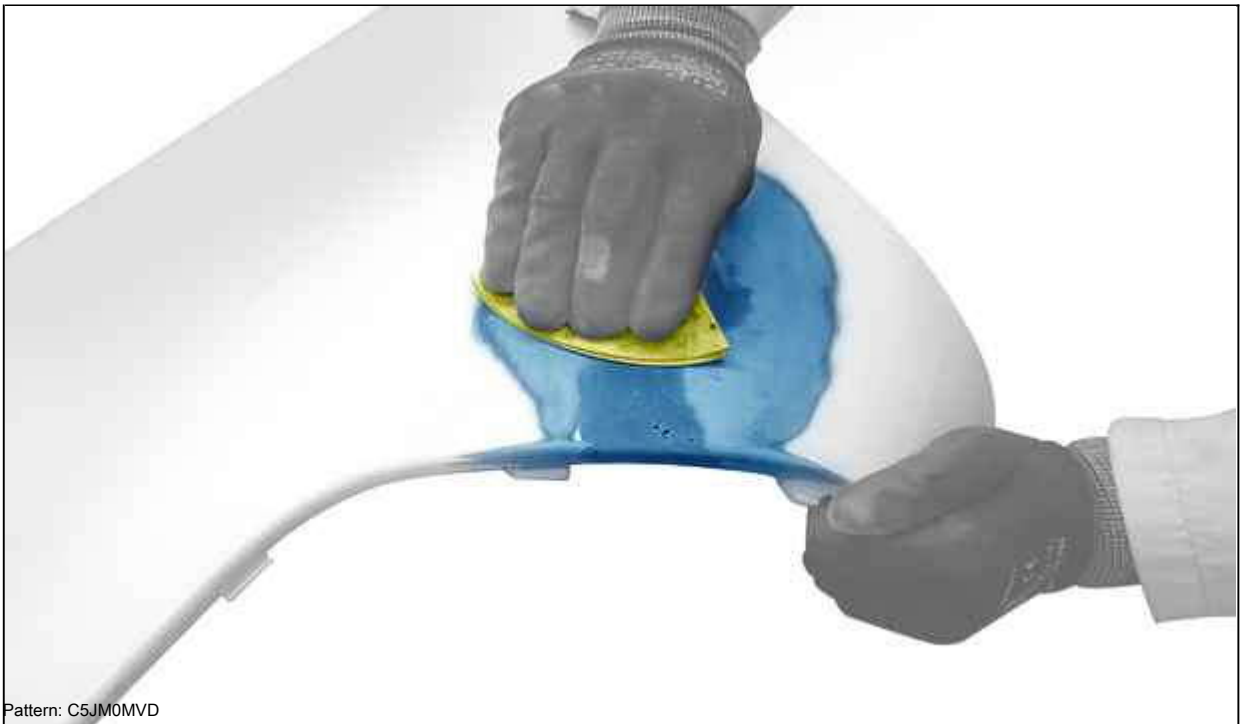
Pattern: C5JM0MSD

NOTE: Leave a slightly thicker layer of resin.

Smooth out the resin; with a plastic spatula.

Wait for polymerization; Using an infrared lamp (depending on the type of resin used) (see the instruction manual).

4. Finishing



Pattern: C5JM0MVD

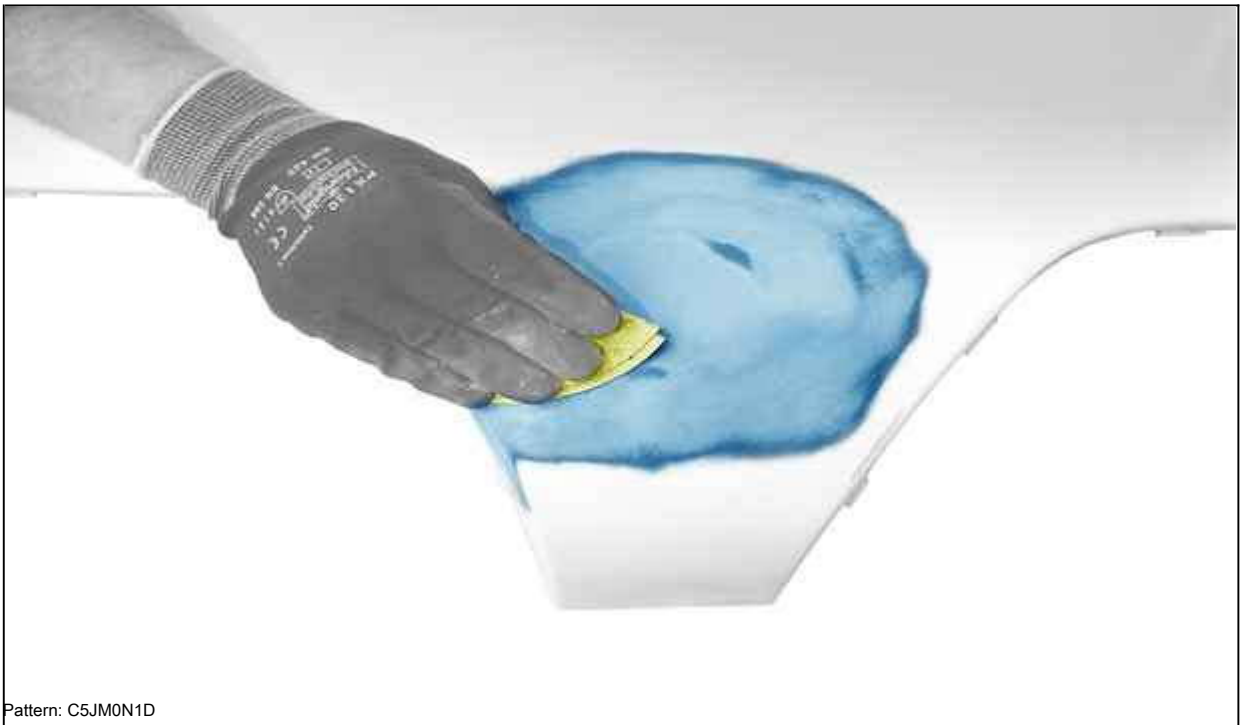
NOTE: Remove all scratches or small marks.

Sand by removing excess resin to get the original shape.



Pattern: C5JM0MYD

Apply finishing mastic to the entire surface to be repaired; Using a plastic spatula.



Pattern: C5JM0N1D

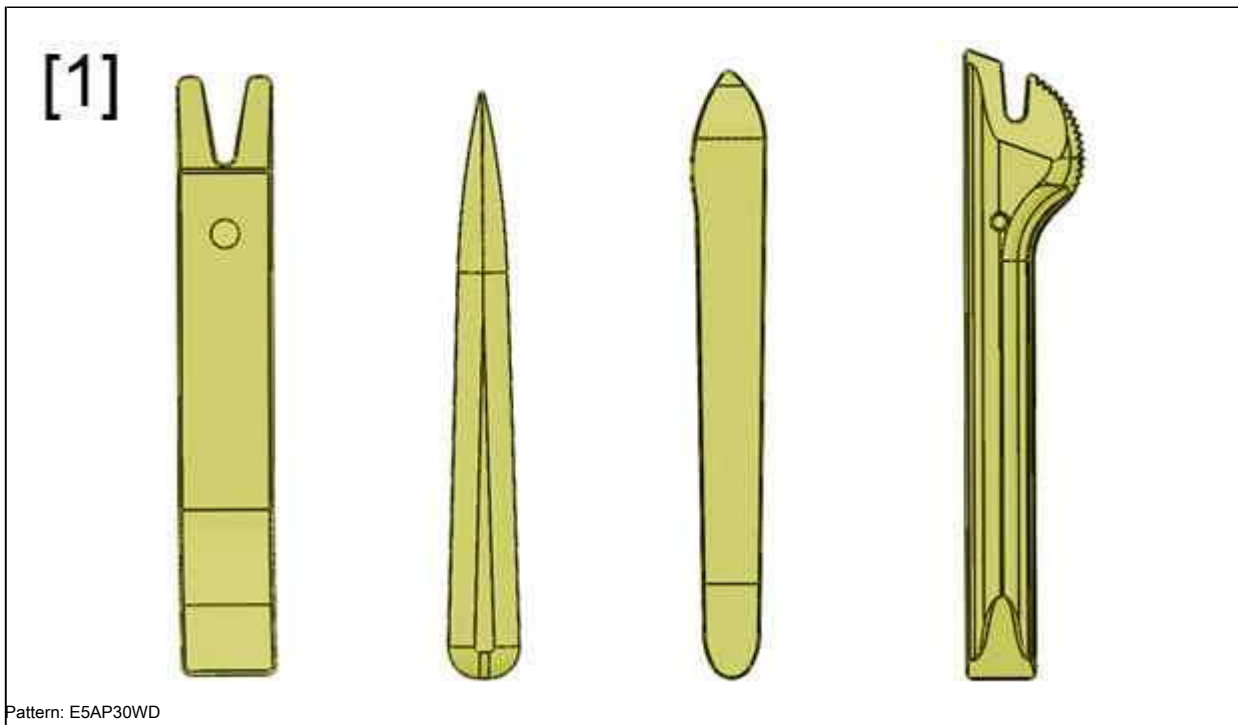
Sand the finishing mastic.
Go to painting details.

DISASSEMBLY ASSEMBLY: FRONT BUMPER

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim stripper () .1350ZZ.

2. Preliminary operation

Remove the front bumper



3. Disassembly

3.1. Headlight washer

NOTE: Depending on the configuration.

Remove headlight washers



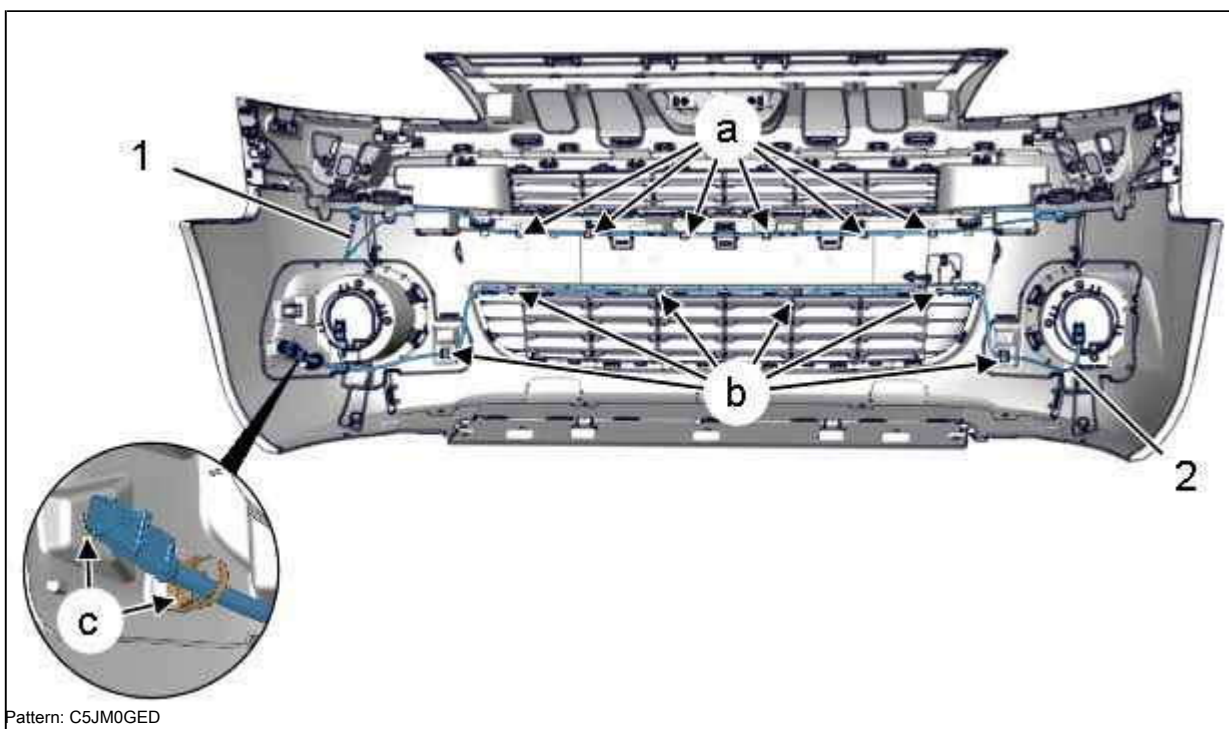
3.2. Front fog lamp

NOTE: Depending on the configuration.

Remove the front fog lamps

3.3. Electrical harness Washer harness Headlights

NOTE: Depending on the configuration.

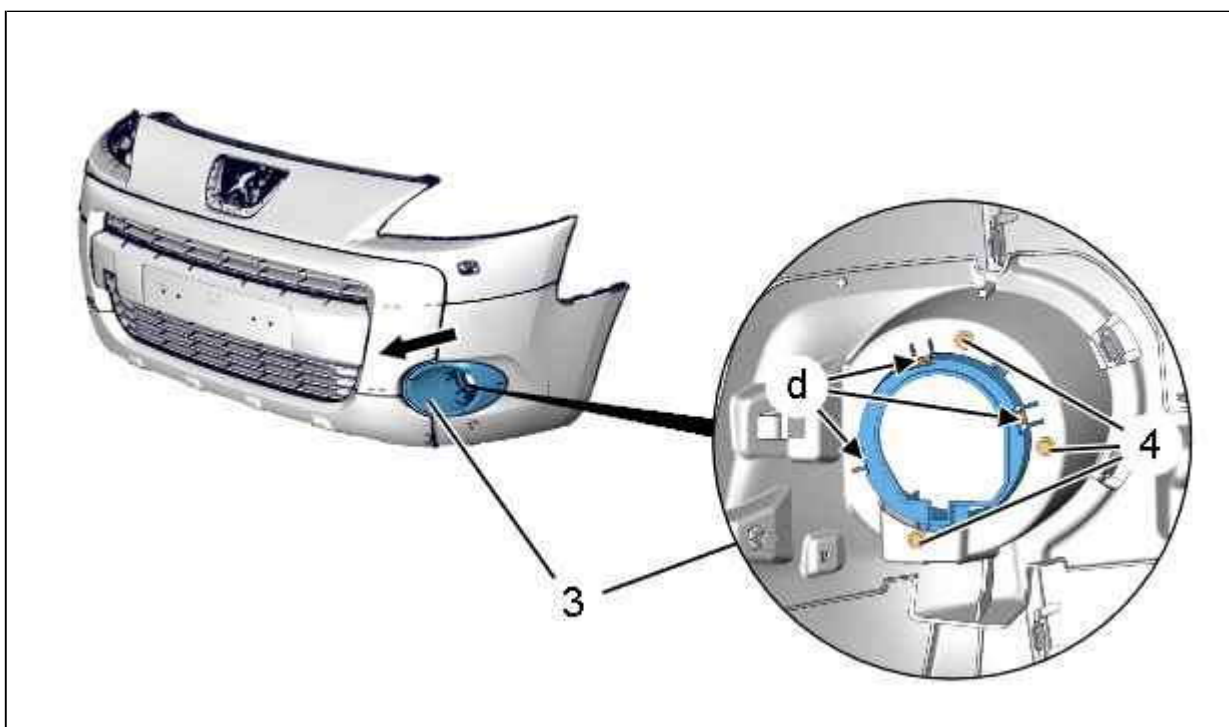


Separate: the retainers (at "a"). Remove: The headlight washer pipes (1). Detach the clips (at "c"); Using the tool [1]. Separate: the retainers (in "b").

Remove the harness (2).

3.4. Fog lamp bracket

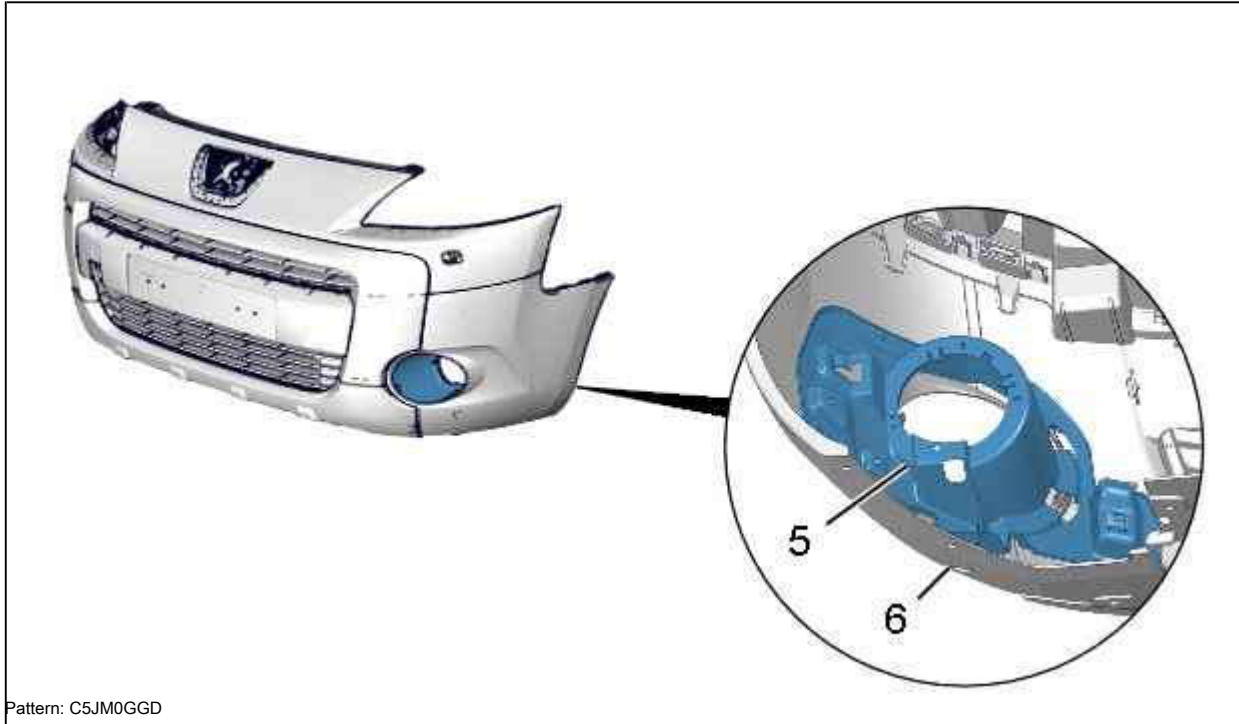
NOTE: Depending on the configuration.



Pattern: C5JM0GFD

Operations are performed symmetrically:

- Remove the screws (4)
- Detach decorative strip (3) (in "d"); Using the tool [1]
- Separate; Remove the decorative strip (3) (according to the arrow)

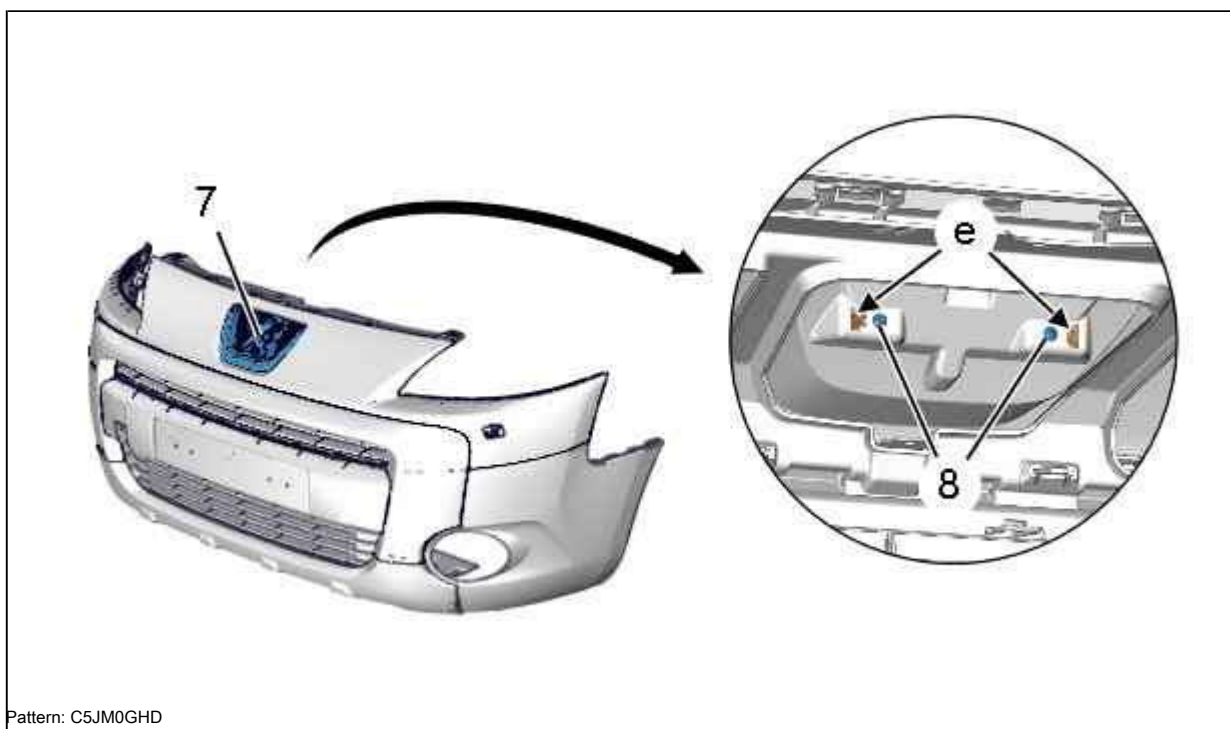


Pattern: C5JM0GGD

Operations are performed symmetrically:

- Cut the rivet shafts before drilling.
- Drill the rivet head (6) with a Ø4 mm drill
- Remove: Fog lamp bracket (5)
- Drill out the rest of the rivets

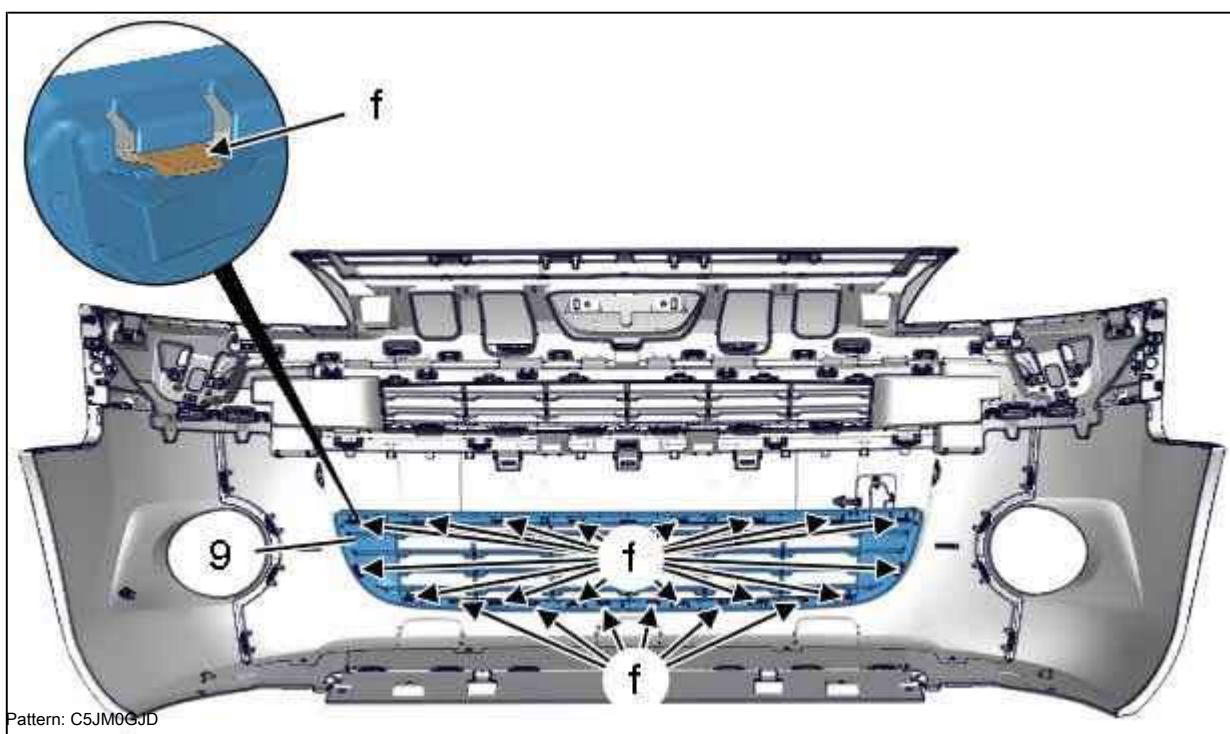
3.5. Brand emblem



Loosen screws (8).

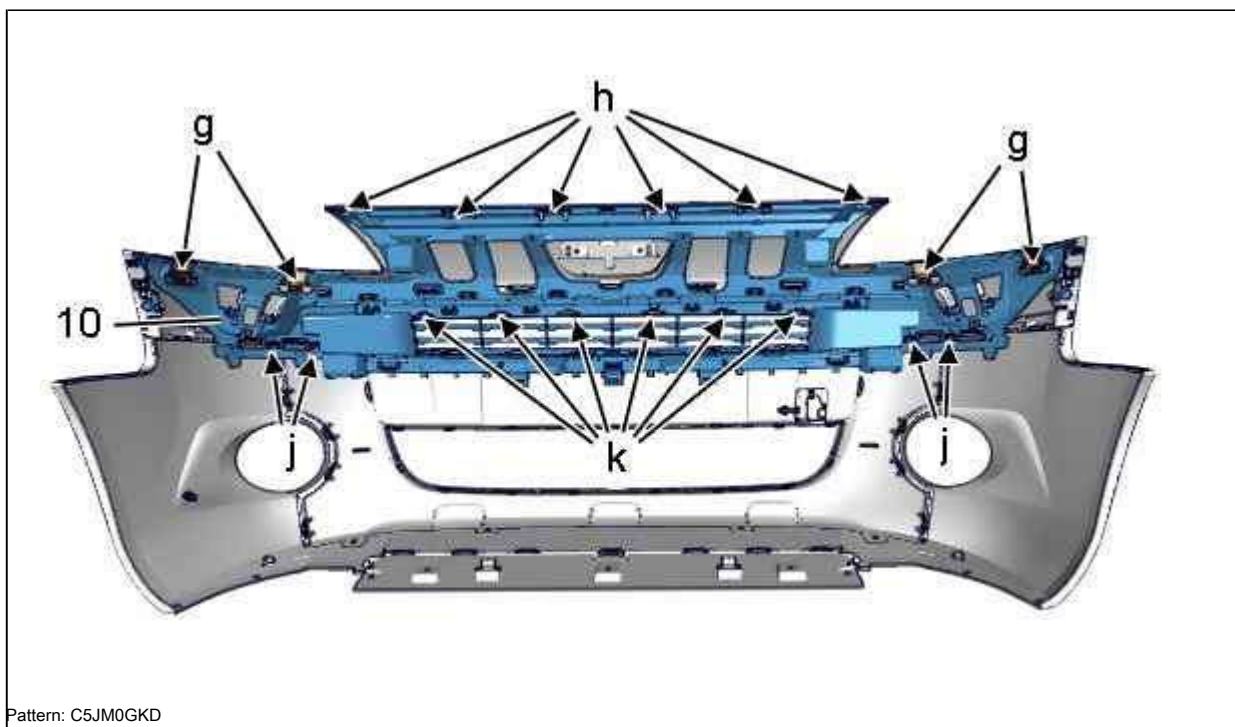
Detach the brand badge (7) (at "e"). Remove the company logo (7).

3.6. Front bumper lower grill



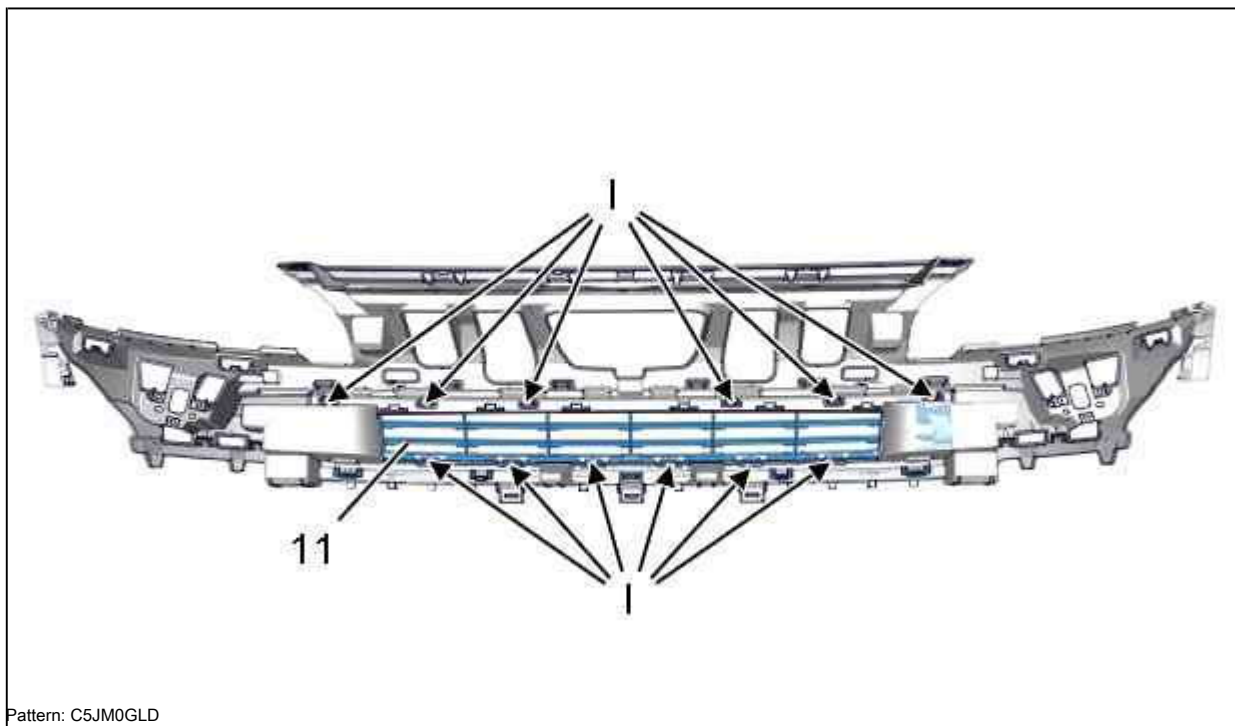
Disconnect: the clips (at "f"); Using the tool [1]. Remove the lower front bumper grill (9).

3.7. Bumper grille bracket (front)



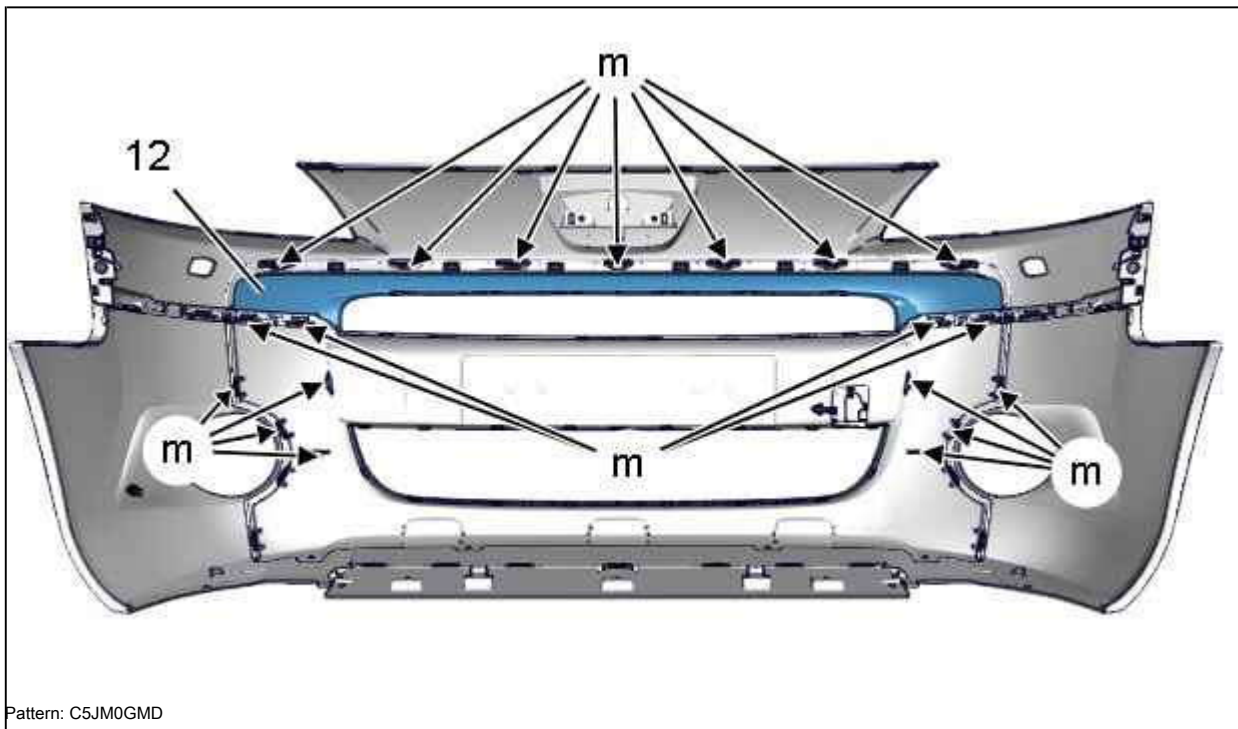
Disconnect: the clips (in "g", "j", "k", "h"); Using the tool [1]. Remove: Grille bracket assembly (10).

3.8. Front bumper upper grill



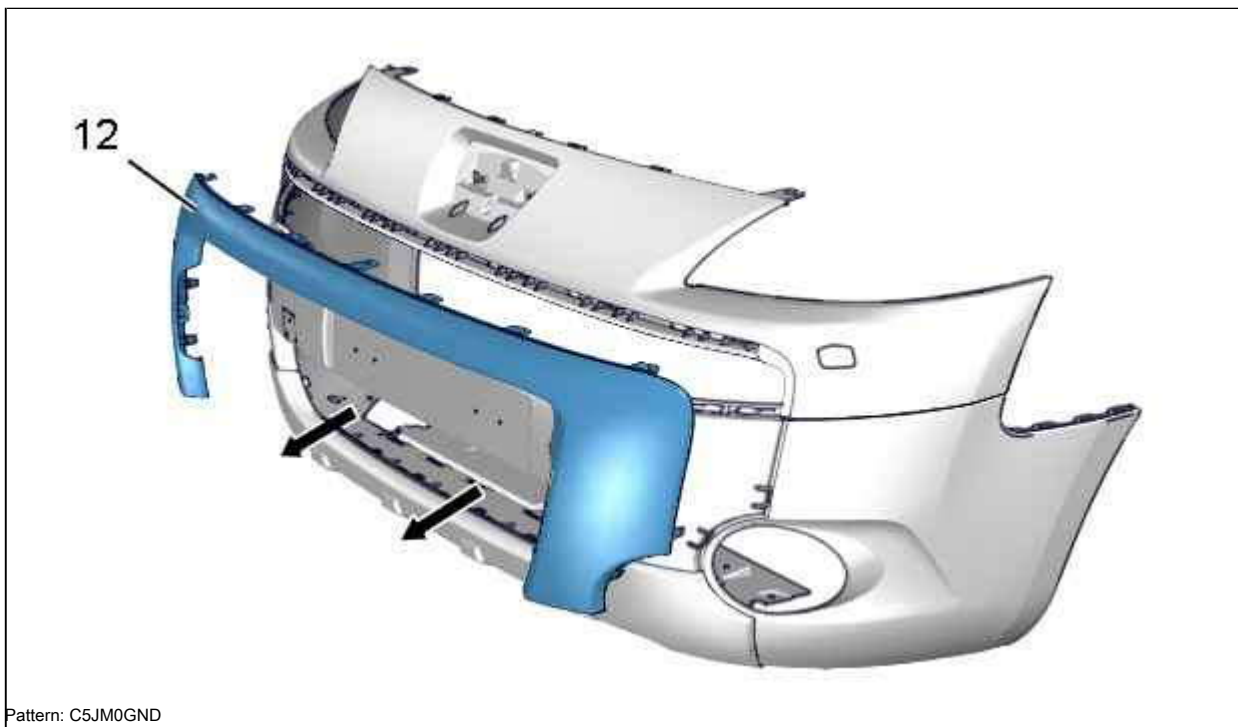
Disconnect: the clips (at "l"); Using the tool [1]. Remove the front bumper upper grill (11).

3.9. Upper decorative element of the front bumper (depending on equipment)



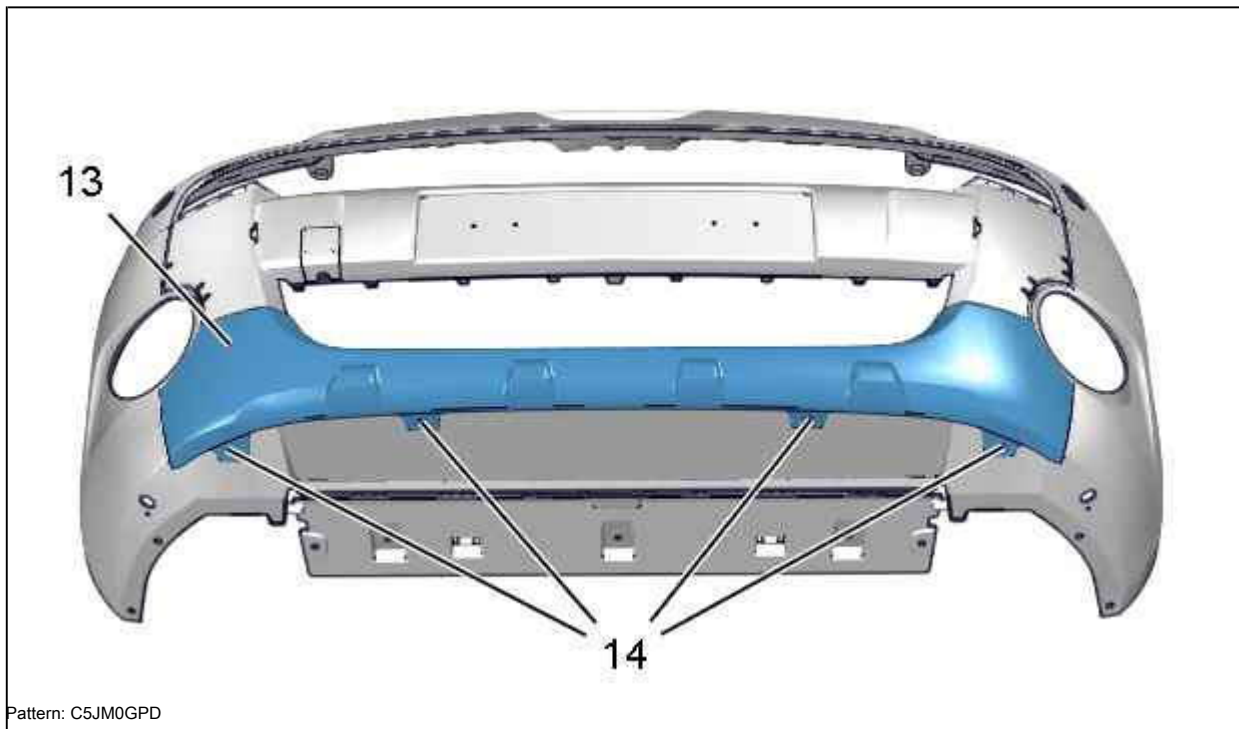
Detach: Upper bumper trim (12) (Front) (at "m"); Using the tool [1].

Separate: Upper bumper trim (12) (Front).



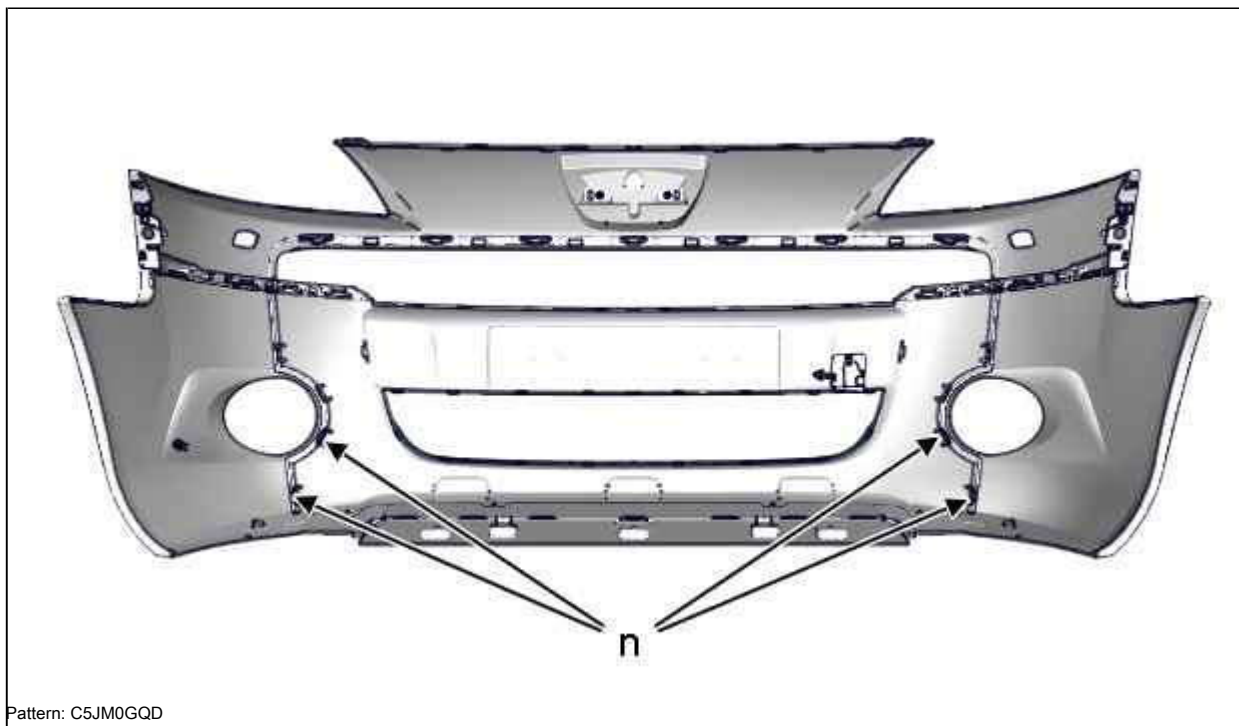
Remove: Upper bumper trim (12) (Front) (as shown by arrows).

3.10. Lower decorative element of the front bumper (depending on equipment)

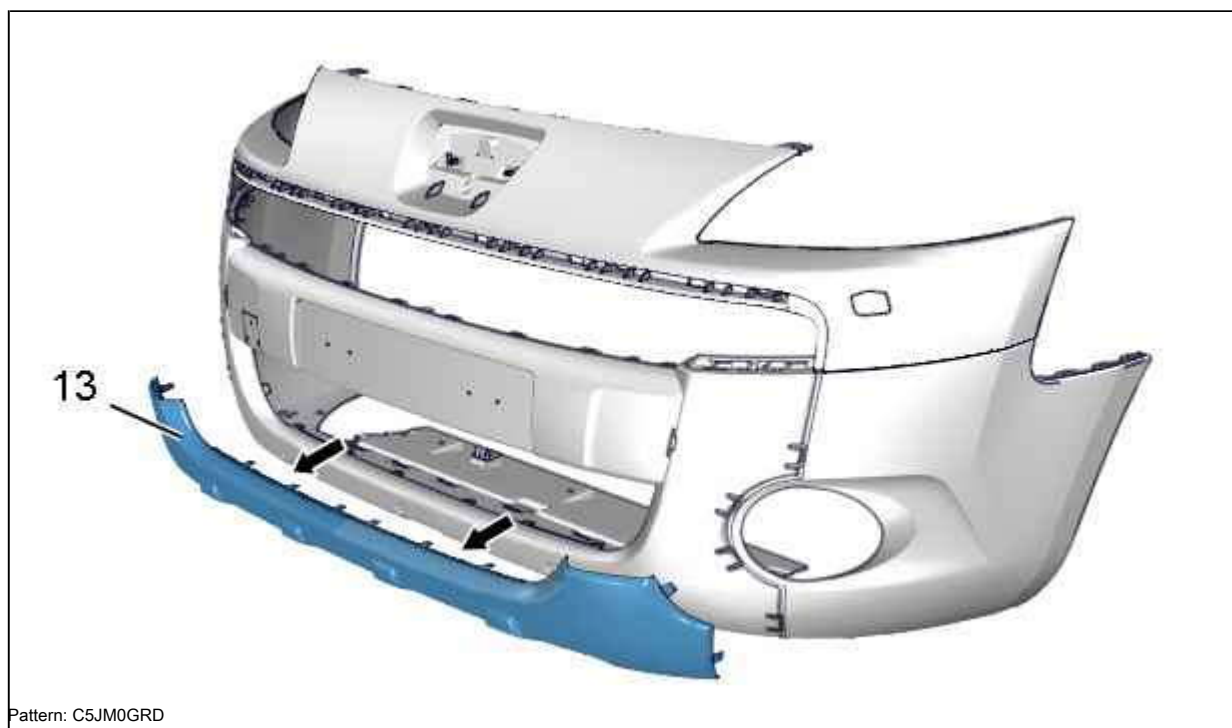


Cut off the rivet shafts before drilling. Drill the rivet head (14) with a Ø4 mm drill.

Separate: Lower bumper trim (13) (Front). Drill out the remaining rivets.

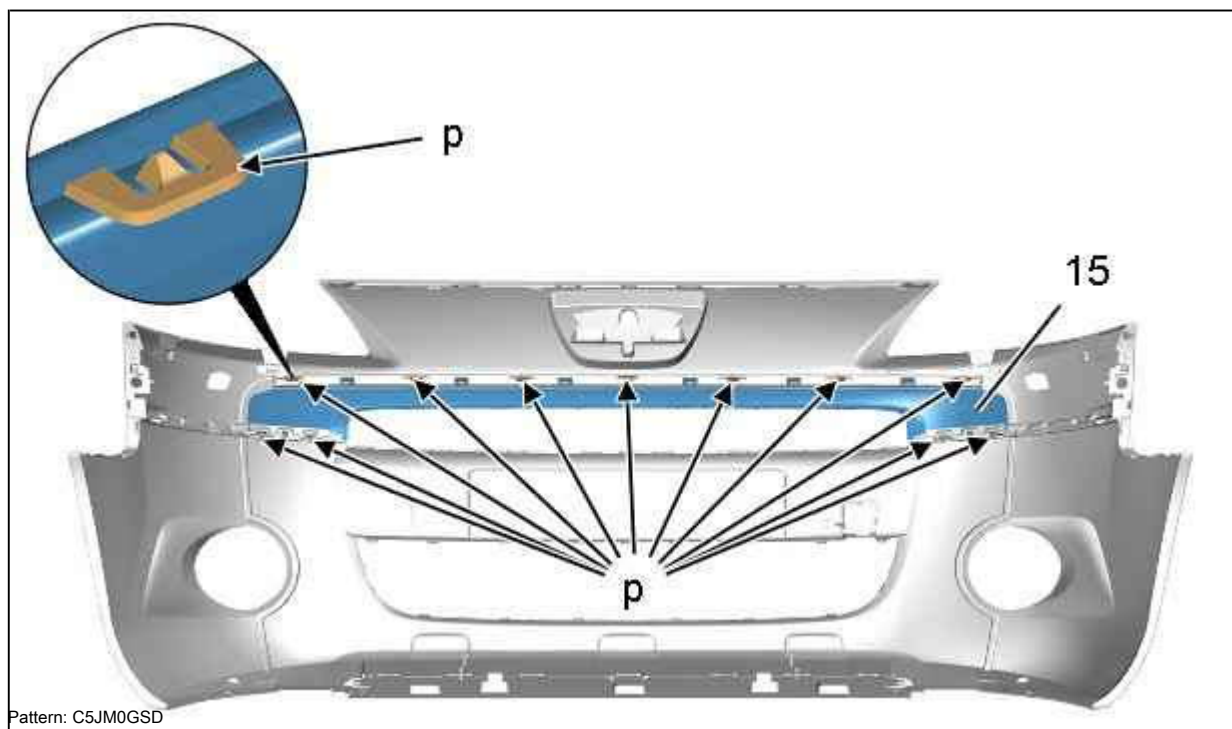


Disconnect: Lower bumper trim (13) (Front) (at "n"); Using the tool [1]. Separate: Lower bumper trim (13) (Front).

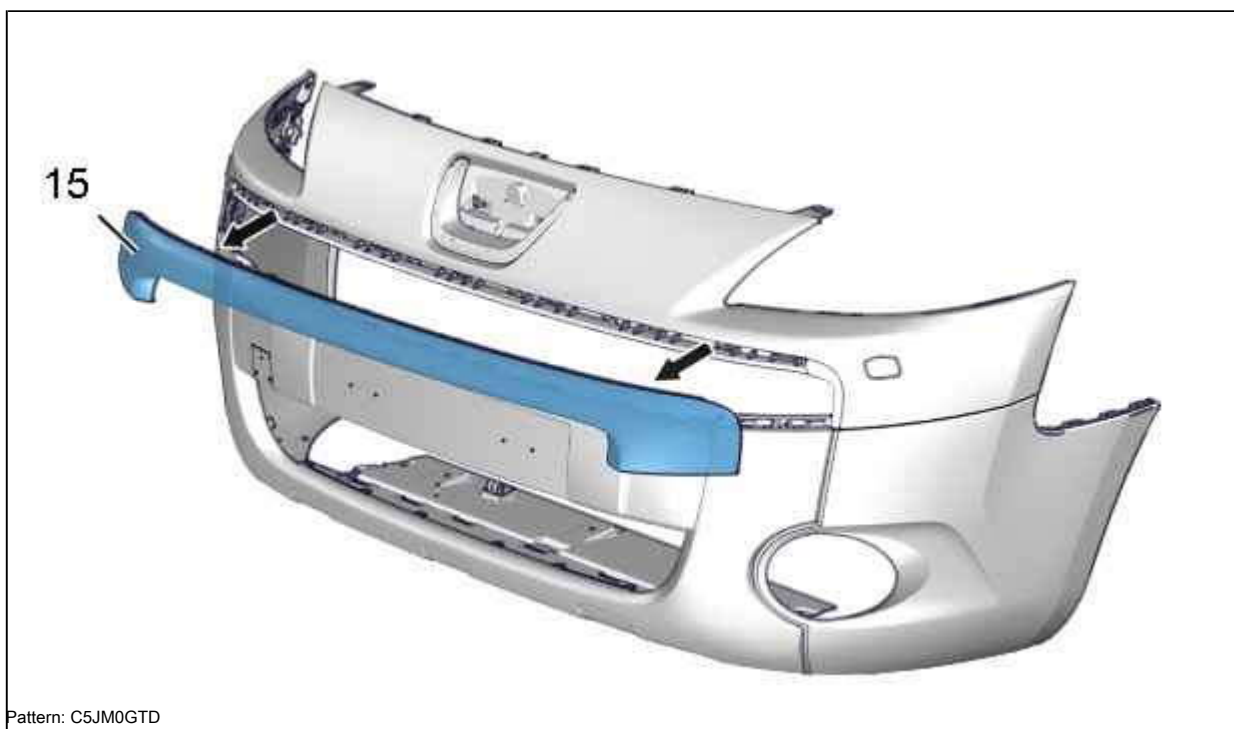


Remove: Lower bumper trim (13) (Front) (as shown by arrows).

3.11. Front bumper trim (depending on equipment)

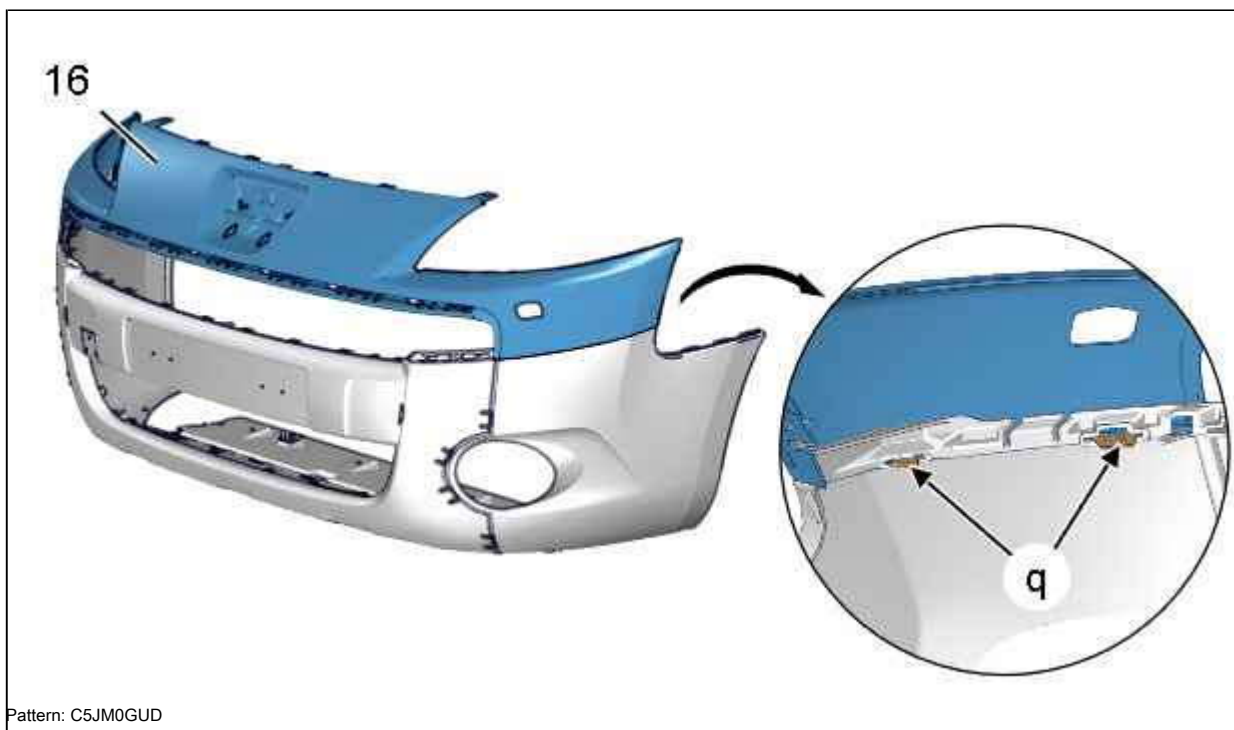


Disconnect: Bumper strip (15) (Front) (at "p"); Using the tool [1]. Separate: Bumper trim (15) (Front).



Remove: Bumper trim (15) (Front) (as shown by arrows).

3.12. Radiator cover

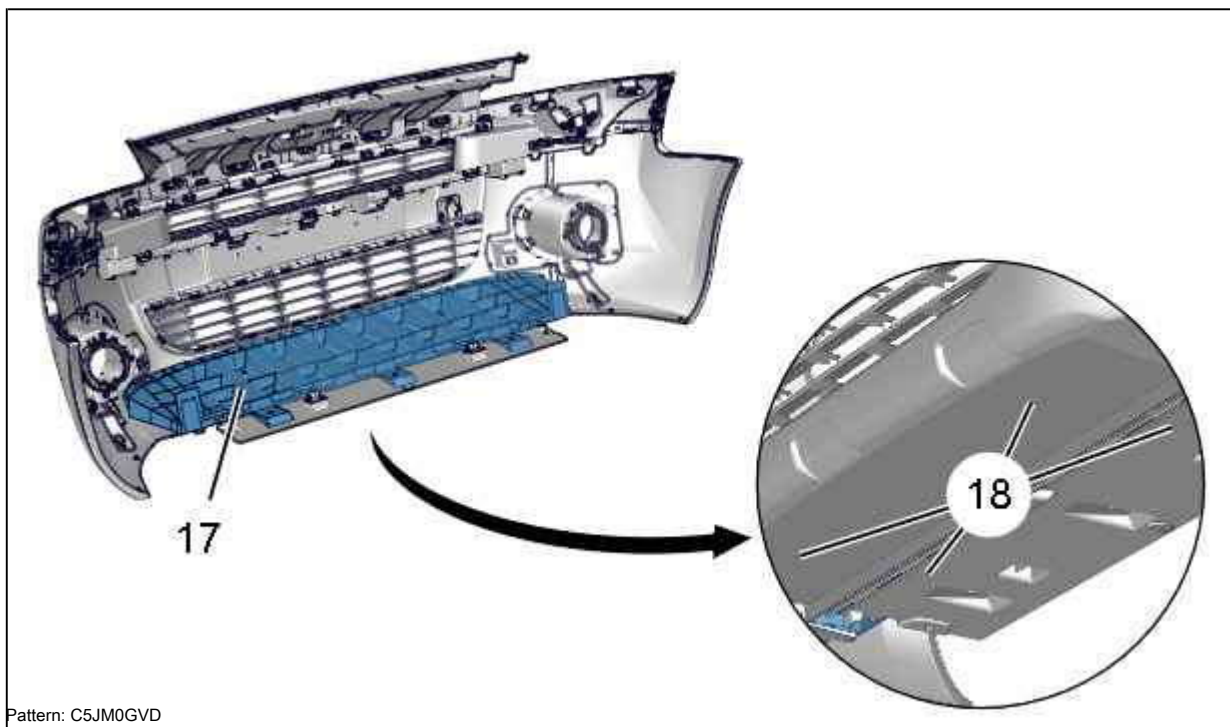


NOTE: The operation is performed symmetrically.

Detach: Radiator trim (16) (at "q"); Using the tool [1]. Remove: Radiator trim (16).

3.13. Bumper Reinforcement (Front) (depending on equipment)

NOTE: Do not remove the front bumper to remove the amplifier (17).



Cut off the rivet shafts before drilling. Drill the rivet head (18) with a Ø4 mm drill. Remove: Bumper reinforcement (17) (Front). Drill out the remaining rivets.

4. Assembly

MANDATORY: Replace defective clips systematically.

MANDATORY: Make sure the clips are in the correct position.

Proceed in the reverse order of disassembly. Check the functioning of the electrical equipment.

REPLACEMENT: UNIT FRONT PANEL SUPPORT ASSEMBLY

ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

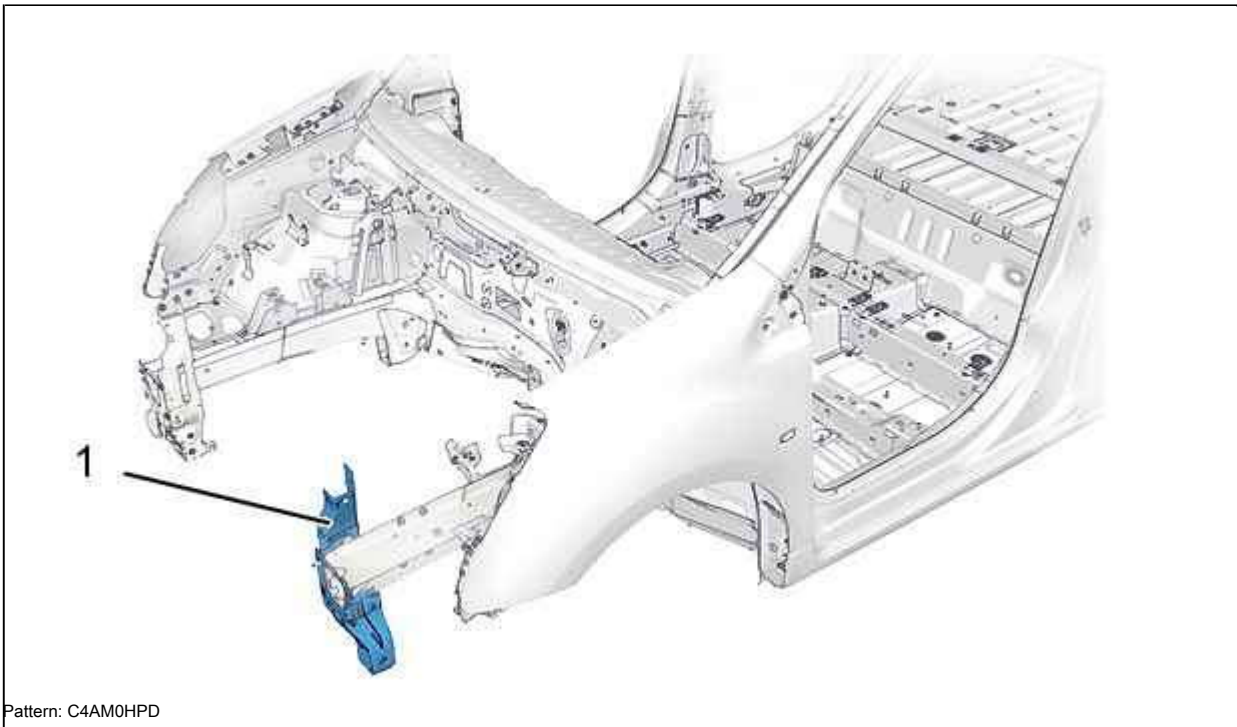
MANDATORY: Observe basic hygiene and safety rules (wear a filter mask for organic vapors - work in a ventilated area).

1. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect items located in the repair area that could be damaged by heat or dust.

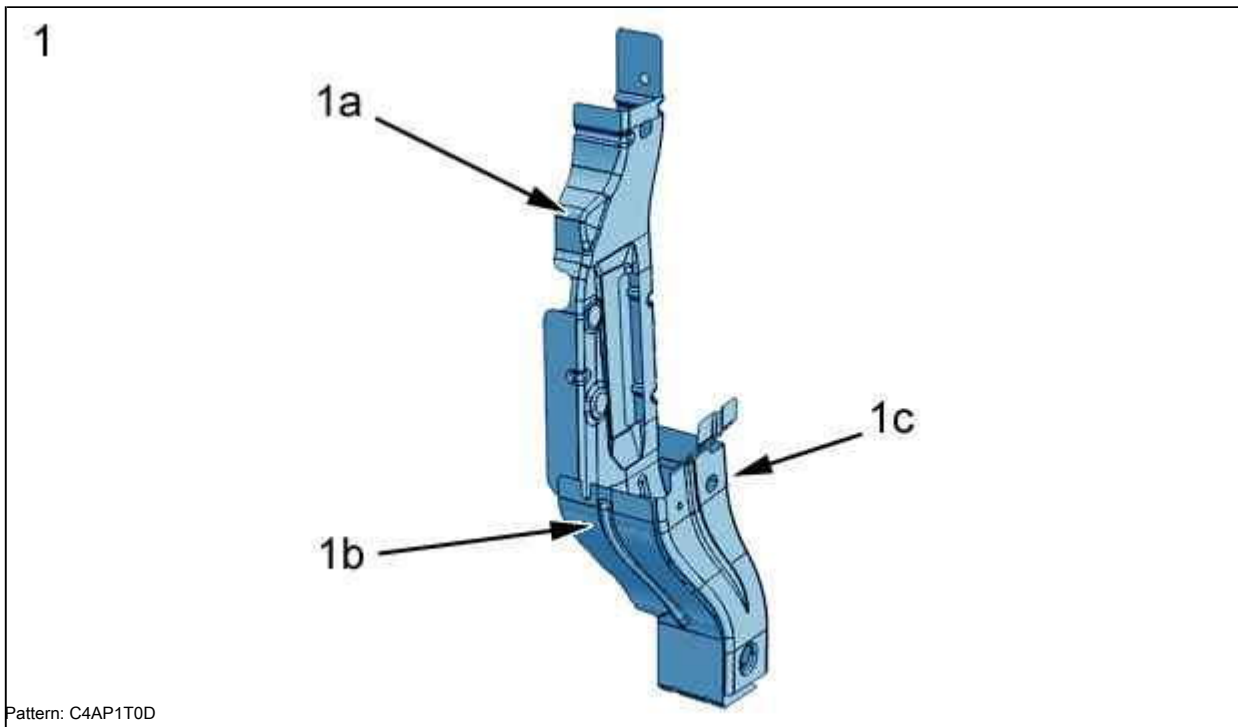
2. Location of the spare part



Label Designation

(1)	Front panel support assembly

3. Spare part

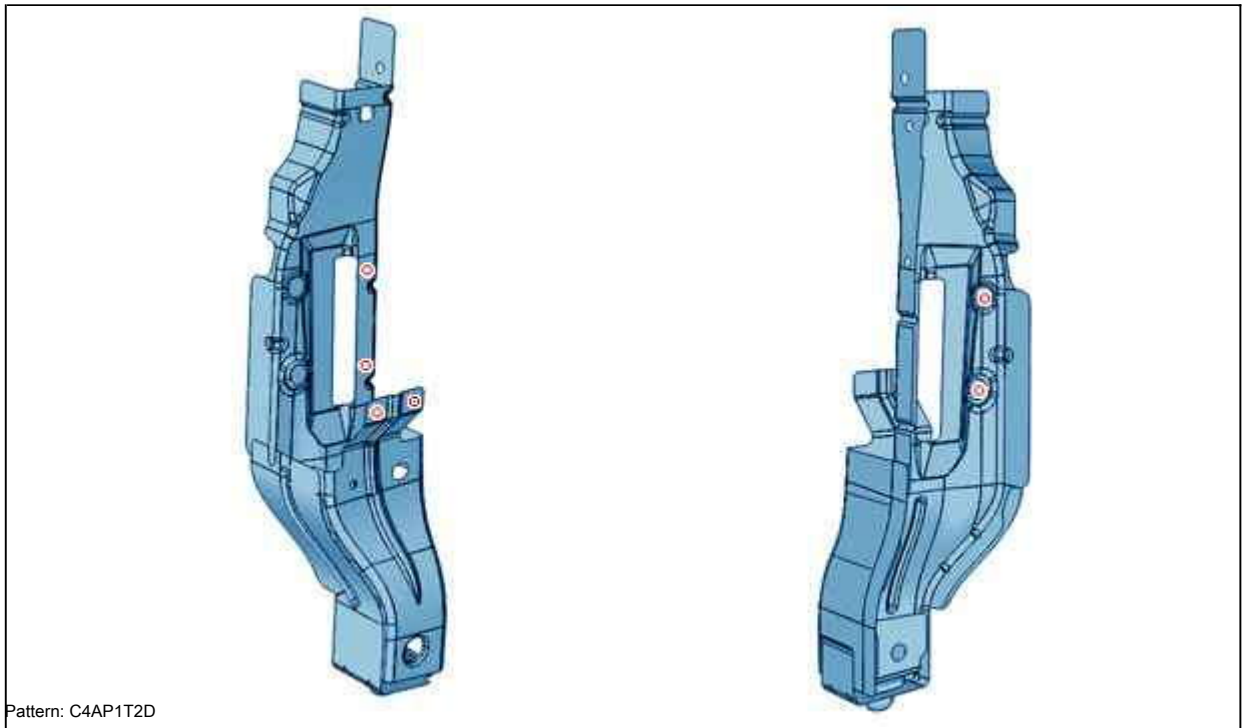


Label Designation

Thickness nature / classification

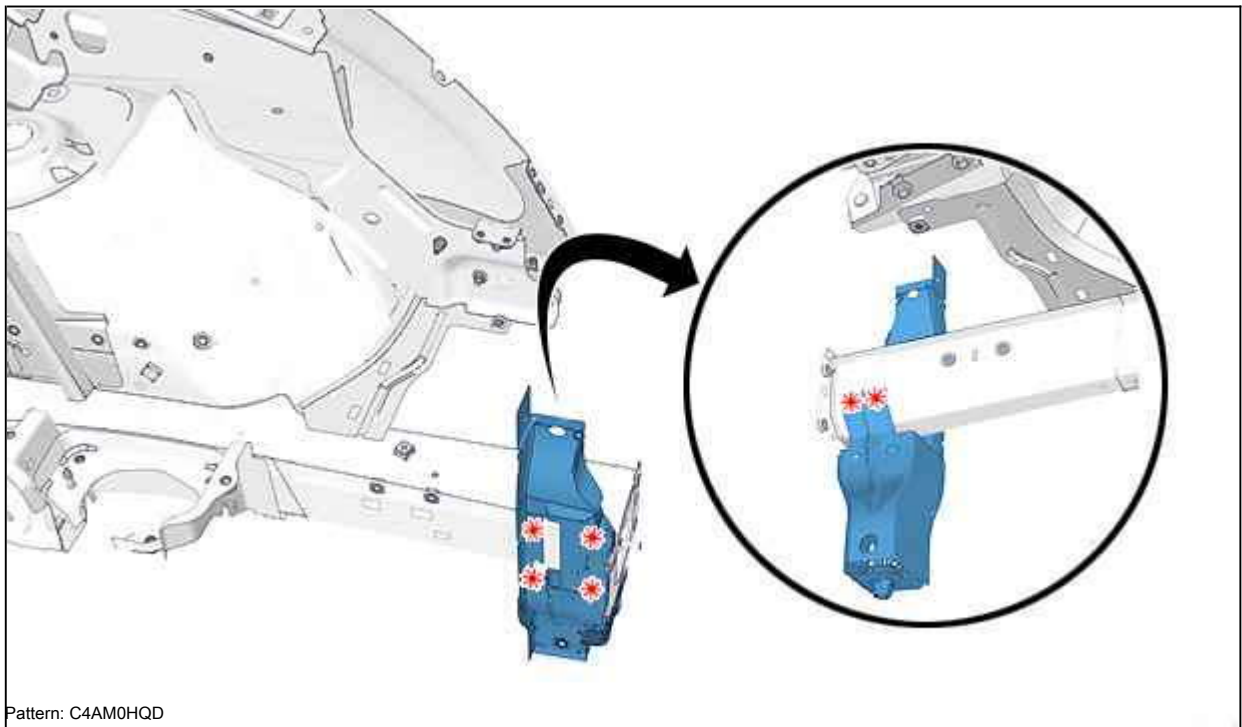
(1)	Unit front panel support assembly Front panel		
(1a)	support unit	1.95	THLE (*)
(1b)	Unit front panel support bracket 1.95 Unit front panel support		THLE (*)
(1c)	reinforcement 1.95		THLE (*)
(*) THLE: Steel with very high yield strength.			

4. Preparation of spare part



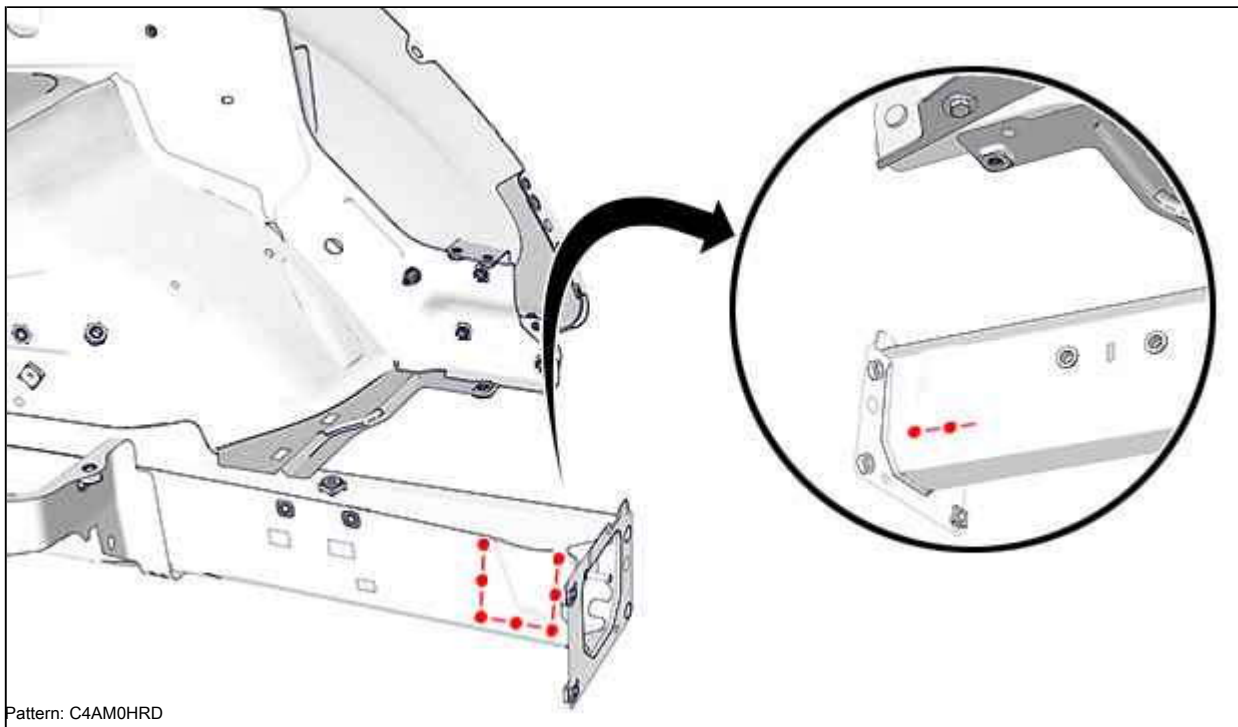
Mark, then drill 6 holes Ø8 mm for subsequent spot-plug welding.

5. Cutting



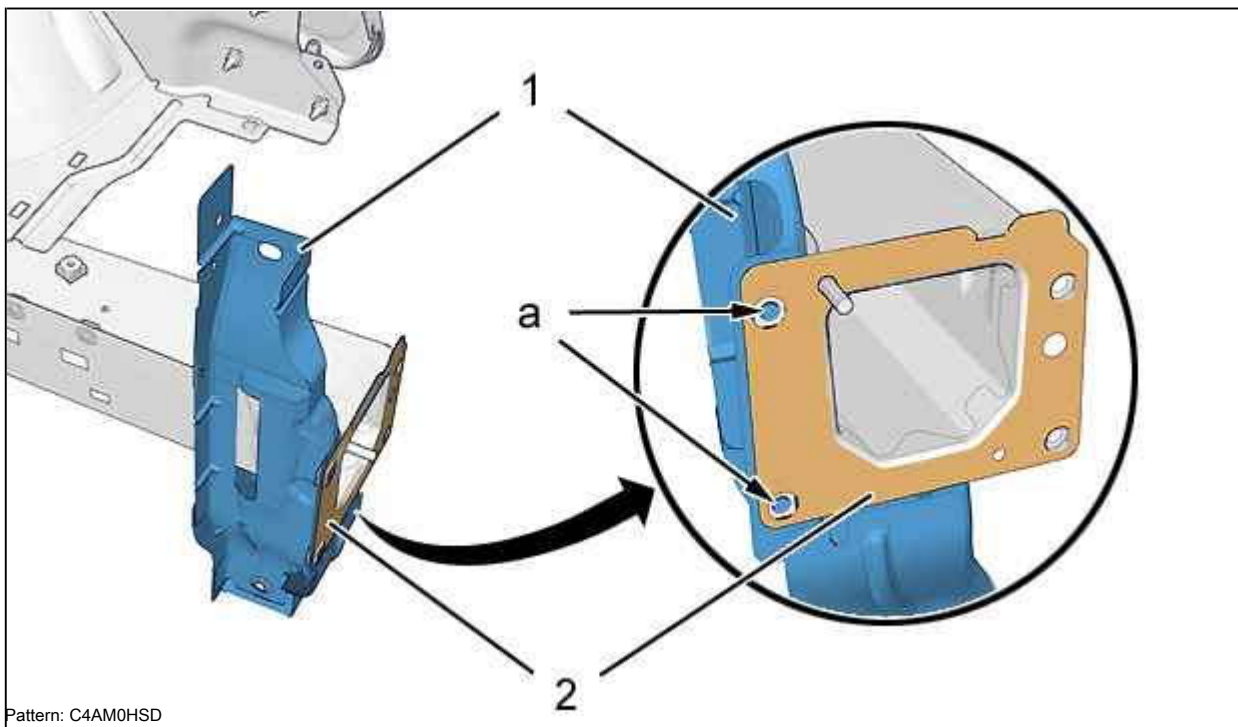
Cut by points; Using a cutter. Remove the assembly front panel support.

6. Cleaning - body preparation



Prepare the sockets and protect them with a welding primer (index "C7").

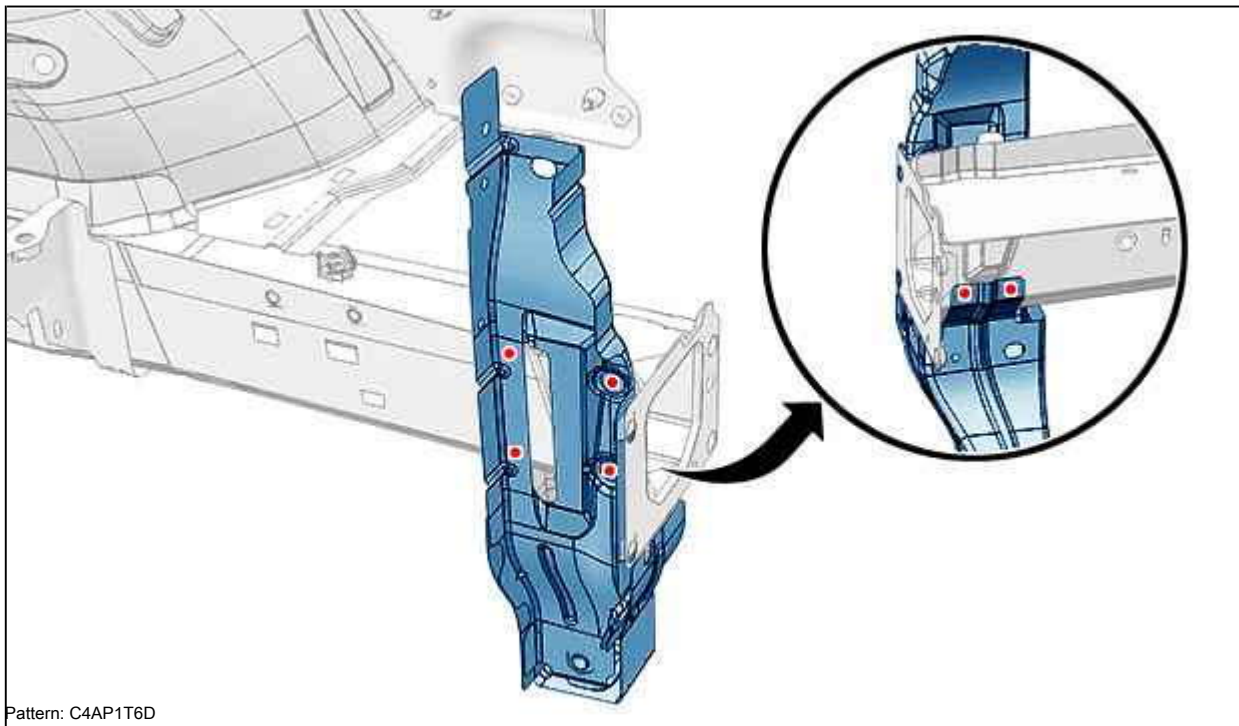
7. Fit



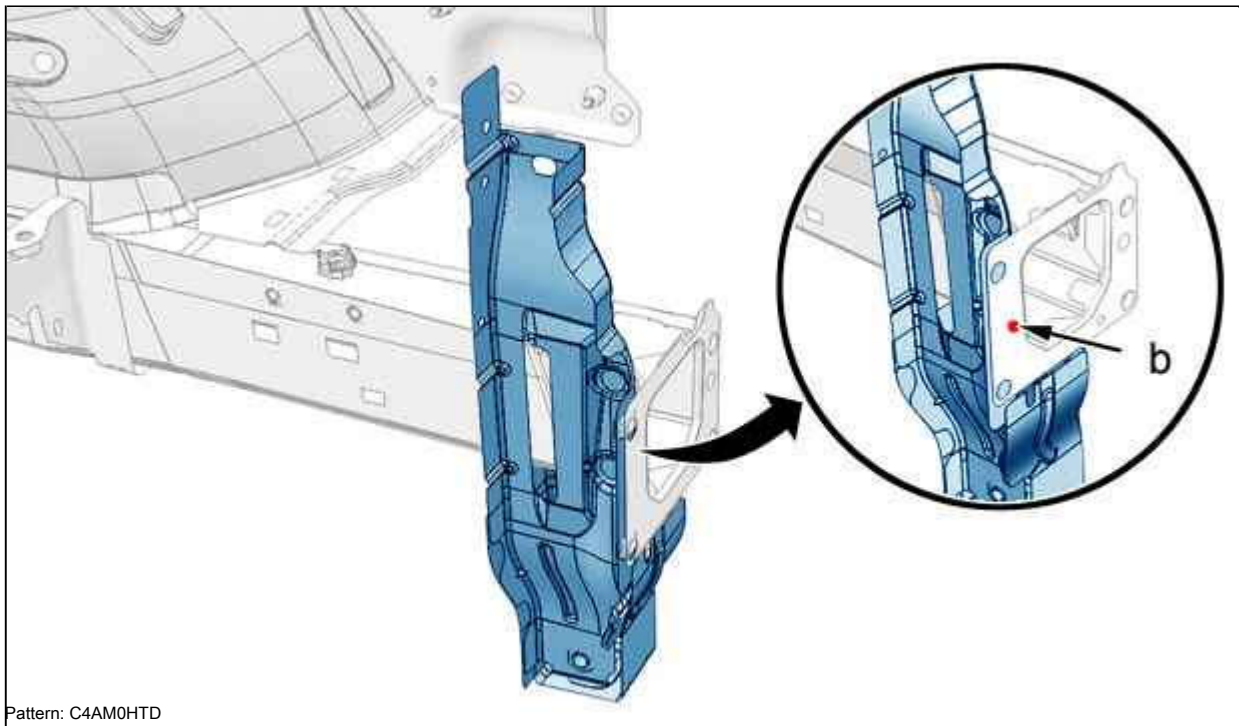
Install the block front panel support assembly (1) on the spar end (2).

NOTE: Check the adherence of the support of the front panel of the assembly (1) to the end member of the side member (1) in "a" for the subsequent installation of the bumper beam assembly.

8. Welding



Weld through the holes in the MAG protective gas. Grind MAG welding points.



Weld with weld points (in "b").

9. Leakage protection

Apply a layer of phosphate primer to the cleaned area.

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

10. Reinitialization

Perform additional operations.

ATTENTION : Follow the steps to follow after removing the battery.

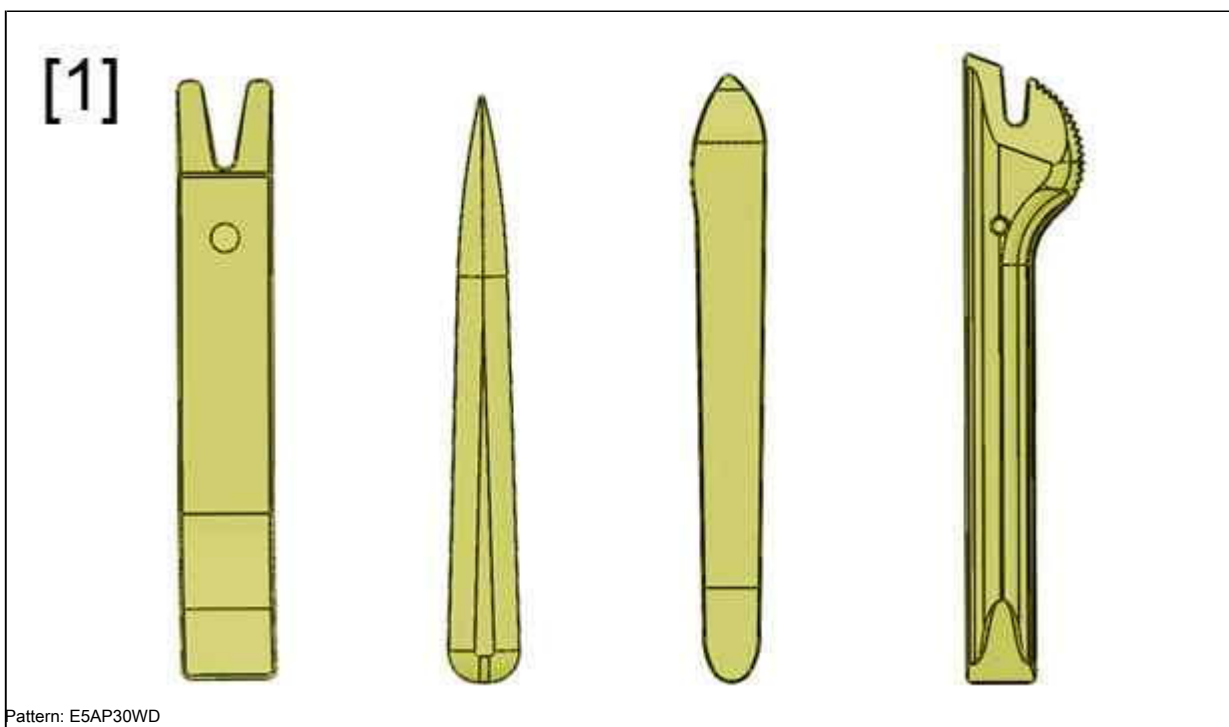
Reconnect the battery.

REMOVAL REFITTING: FRONT FENDER

MANDATORY: Observe the cleanliness and safety rules



1. Tools



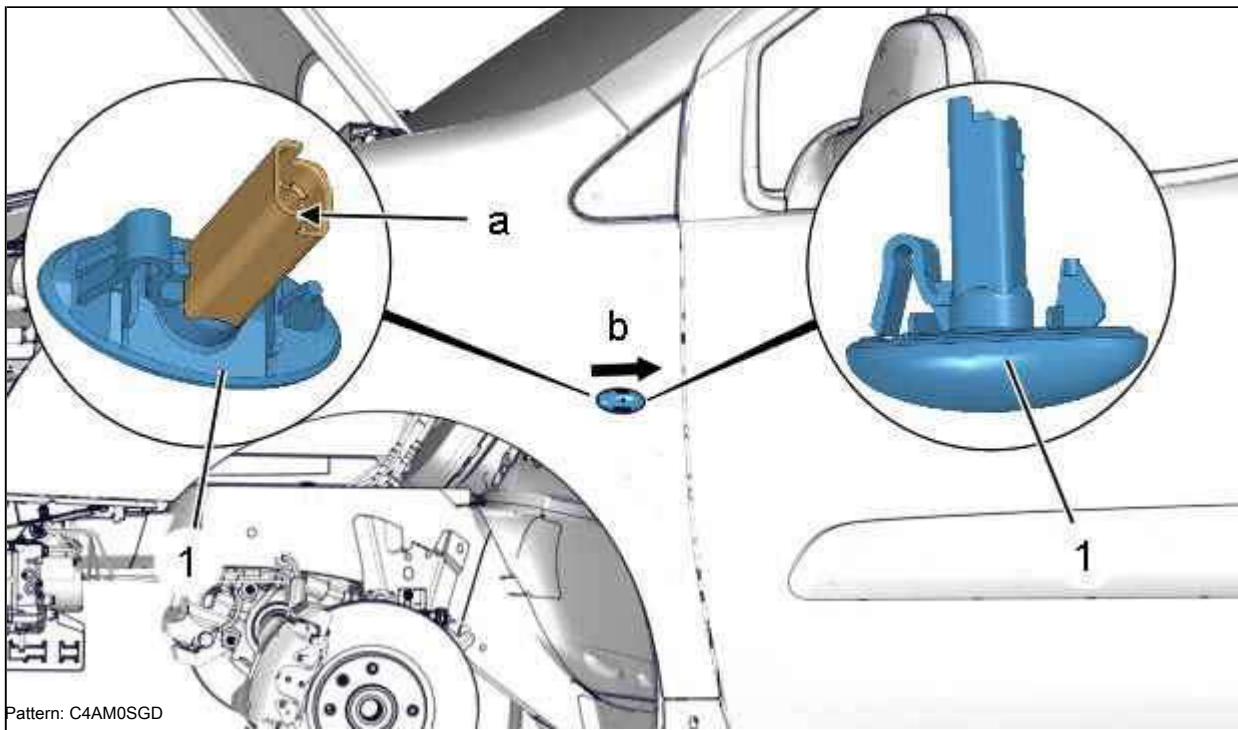
[1] Trim stripper () .1350ZZ.

2. Removal

Remove the front bumper

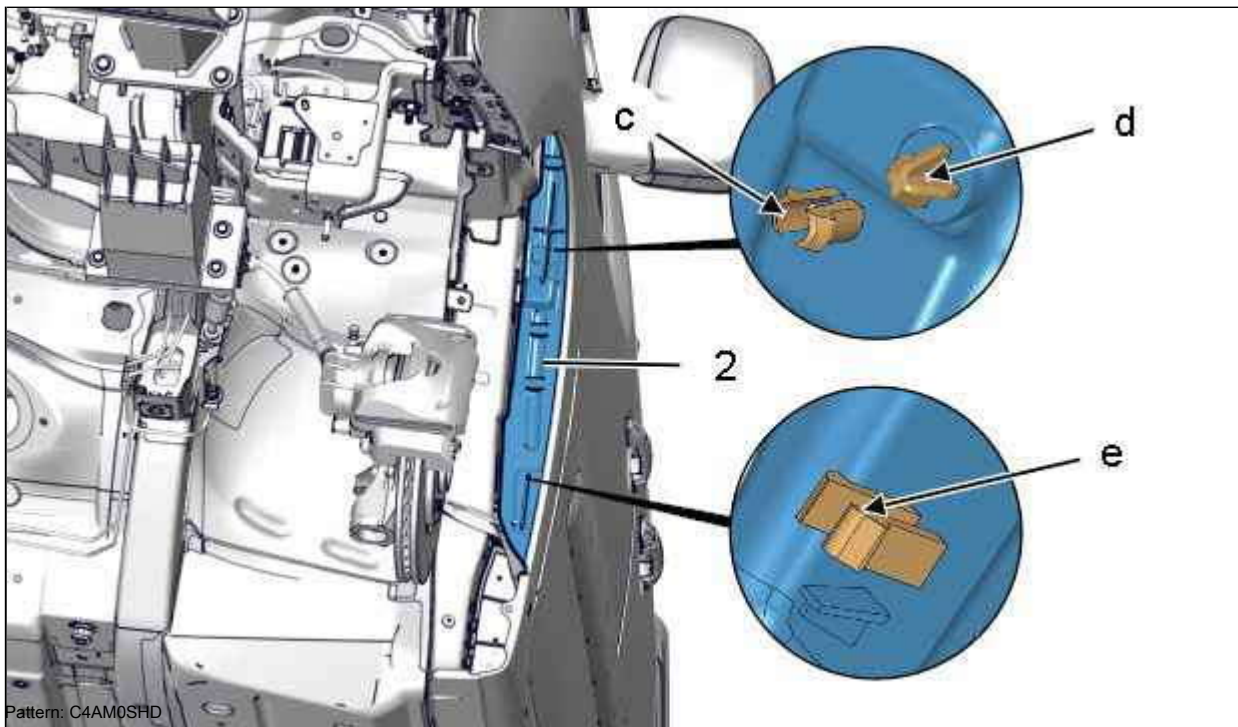
Take off the headlight ...





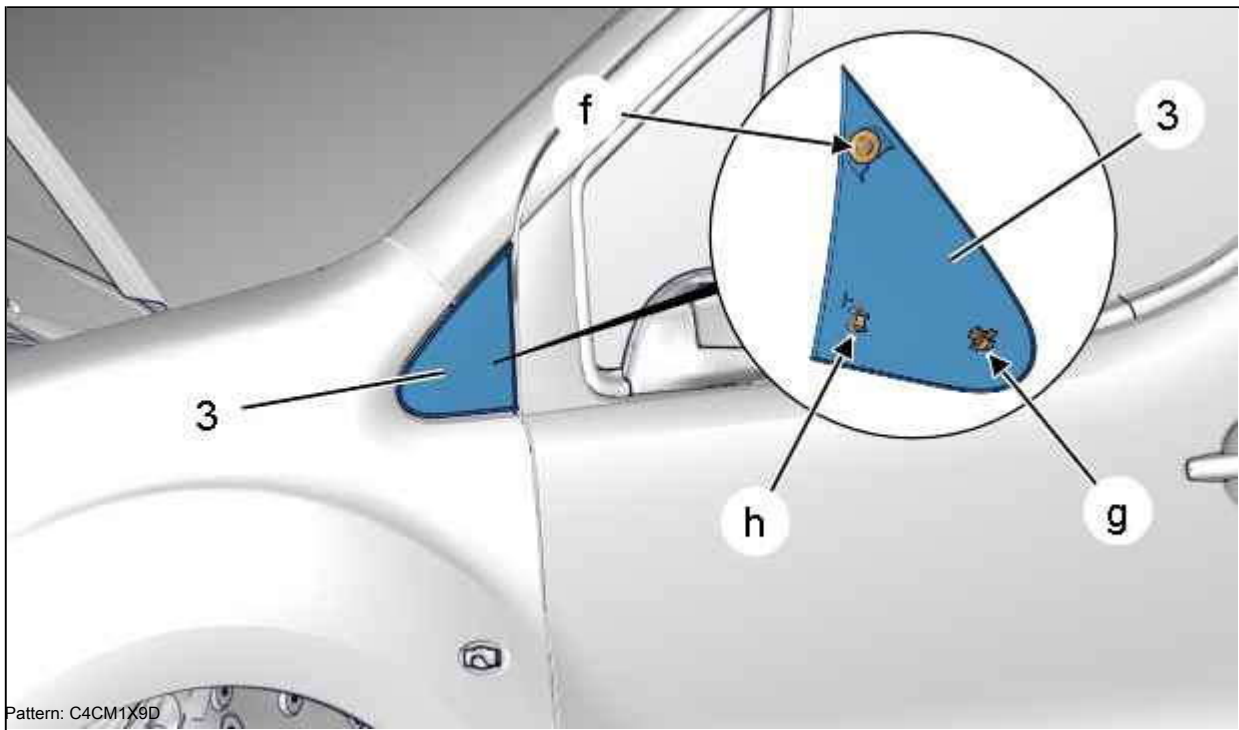
Detach and remove: Front wing flasher (1) (as shown "b"). Disconnect the connector (at "a").

Remove: Front wing turn indicator follower (1).

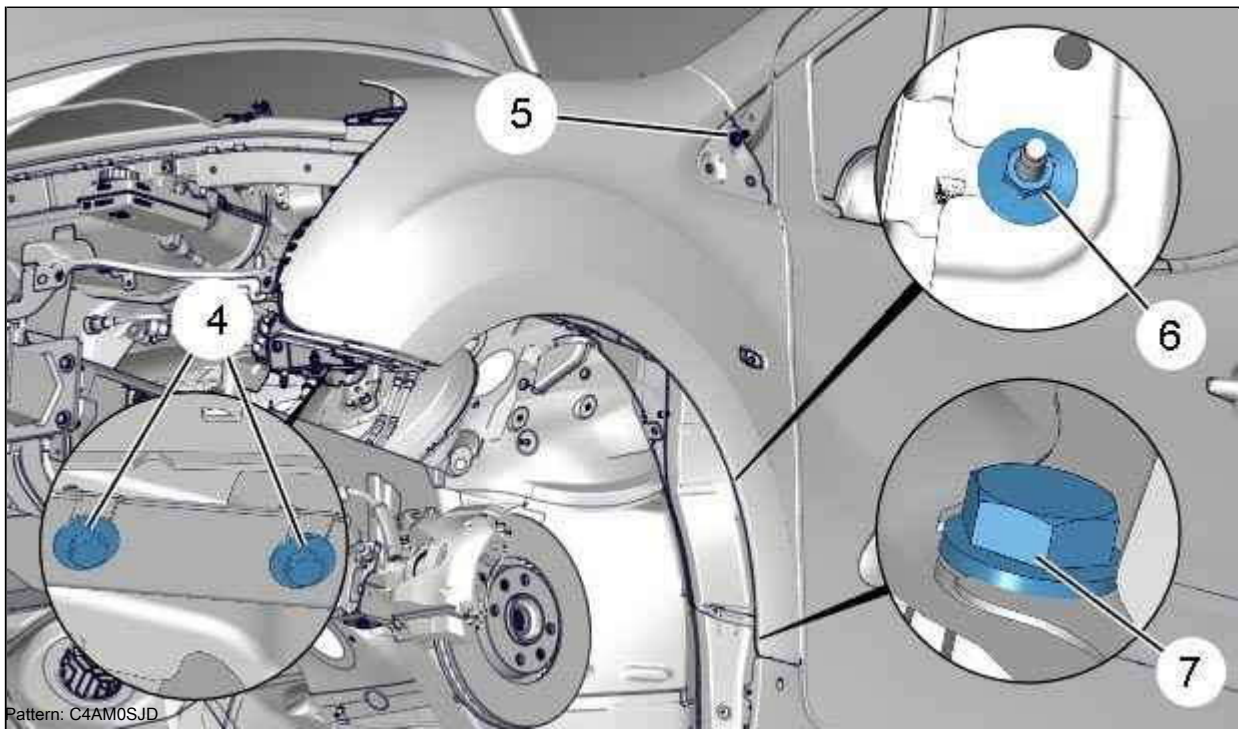


Unclip by pulling downwards: Catches on the front wing acoustic trim (2) (in "c", "d", "e"). Remove: the wing soundproofing (2) (front).

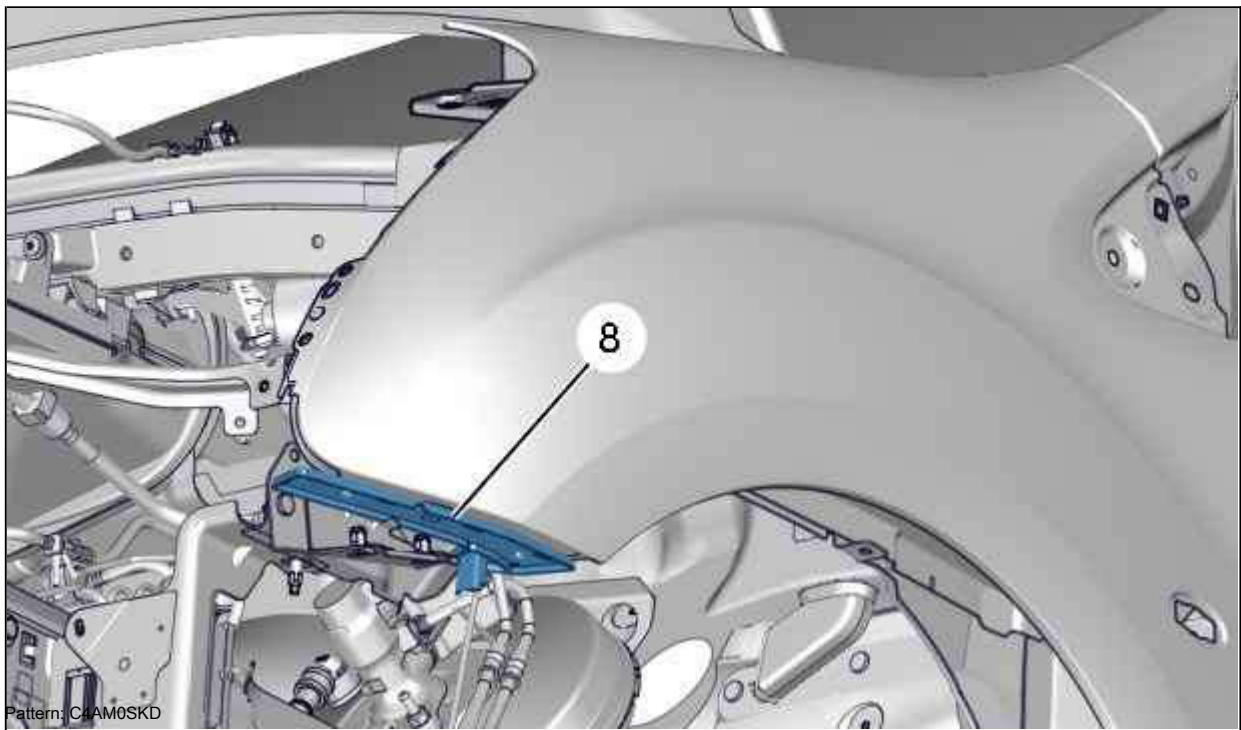
NOTE: If damaged during removal, replace the front wing acoustic trim (2).



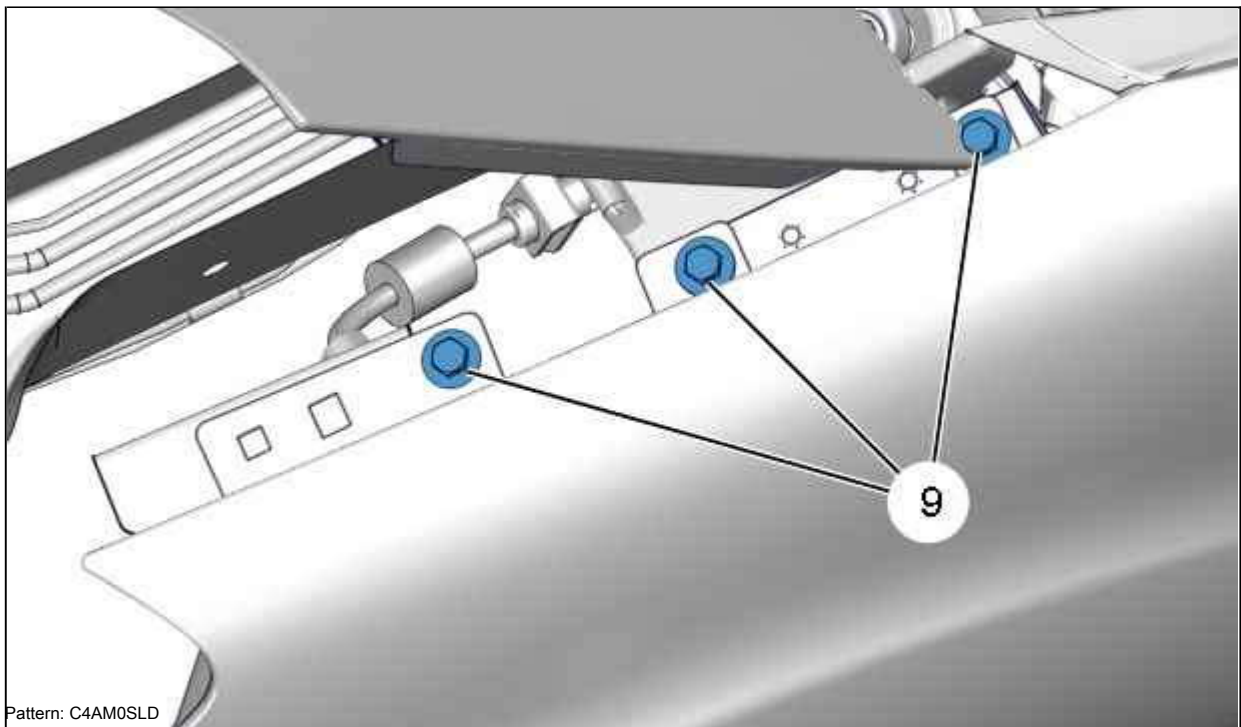
Detach decorative strip (3) (in "f", "g", "h"); Using the tool [1]. Remove the decorative strip (3).



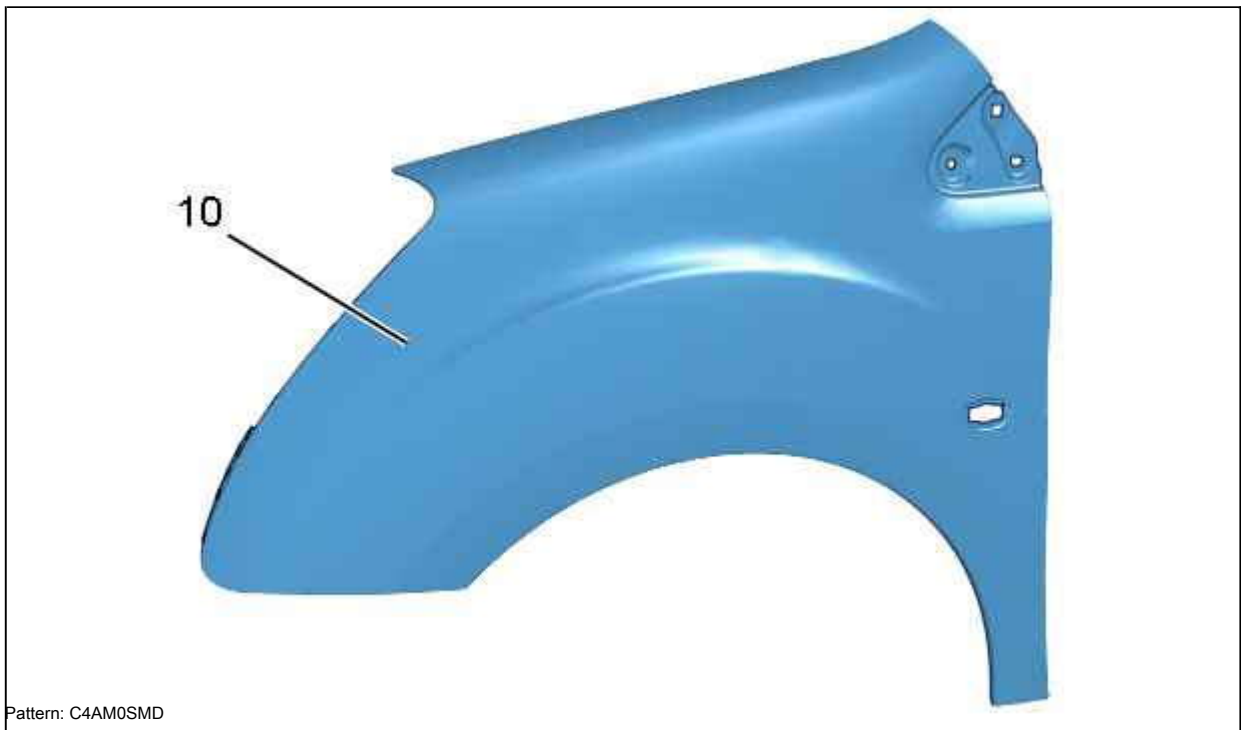
Unscrew the screws (4), (5), (7).
Loosen nut (6) a few turns.



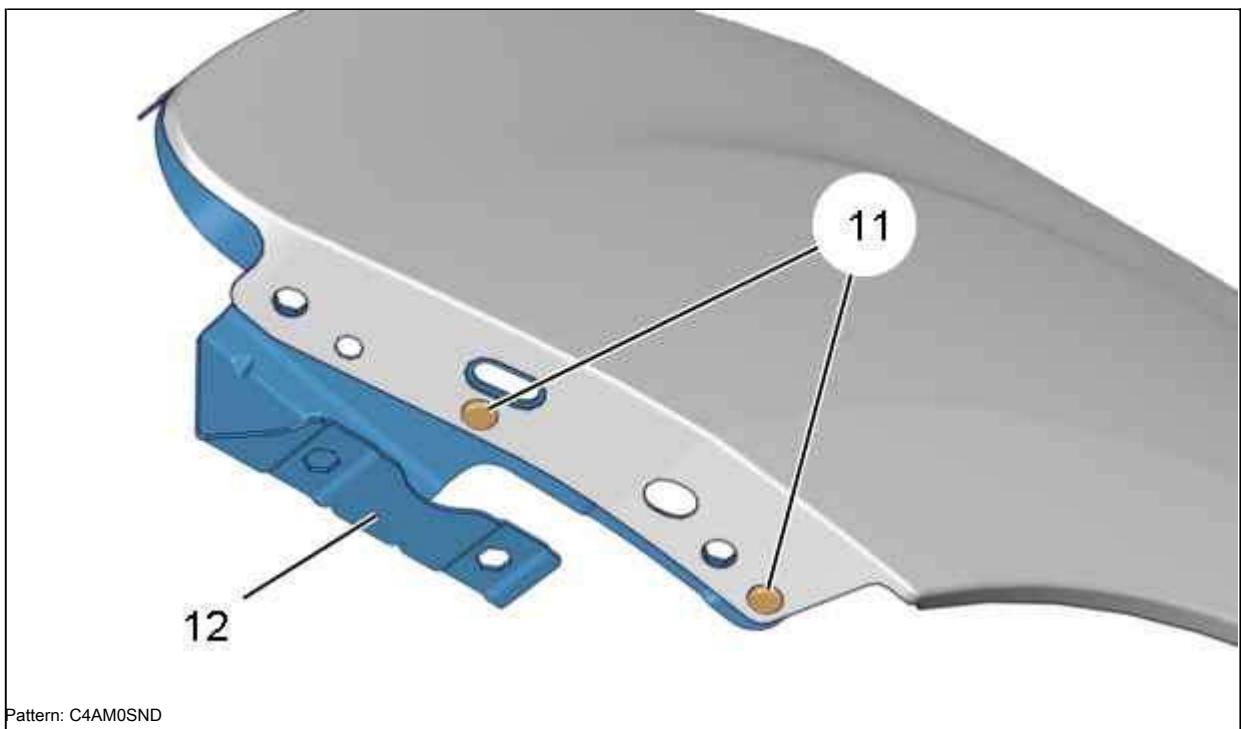
Disconnect Remove: Support (8) (if necessary).



Loosen screws (9).



Remove the front fender (10).



NOTE: Cut off the rivet shafts before drilling.

In case of replacement: Remove the rivets (11); Using a drill with a 4 mm drill bit. Remove: Intermediate support (12).

3. Installation

ATTENTION : Be sure to replace defective fasteners.

Installation is carried out by performing the removal operations in the reverse order.

Adjust clearances and alignment

Tighten:

- Tighten the bolts (4), (5), (7), (9) to 1 da.Nm
- Nuts (6) to 1 daNm



...

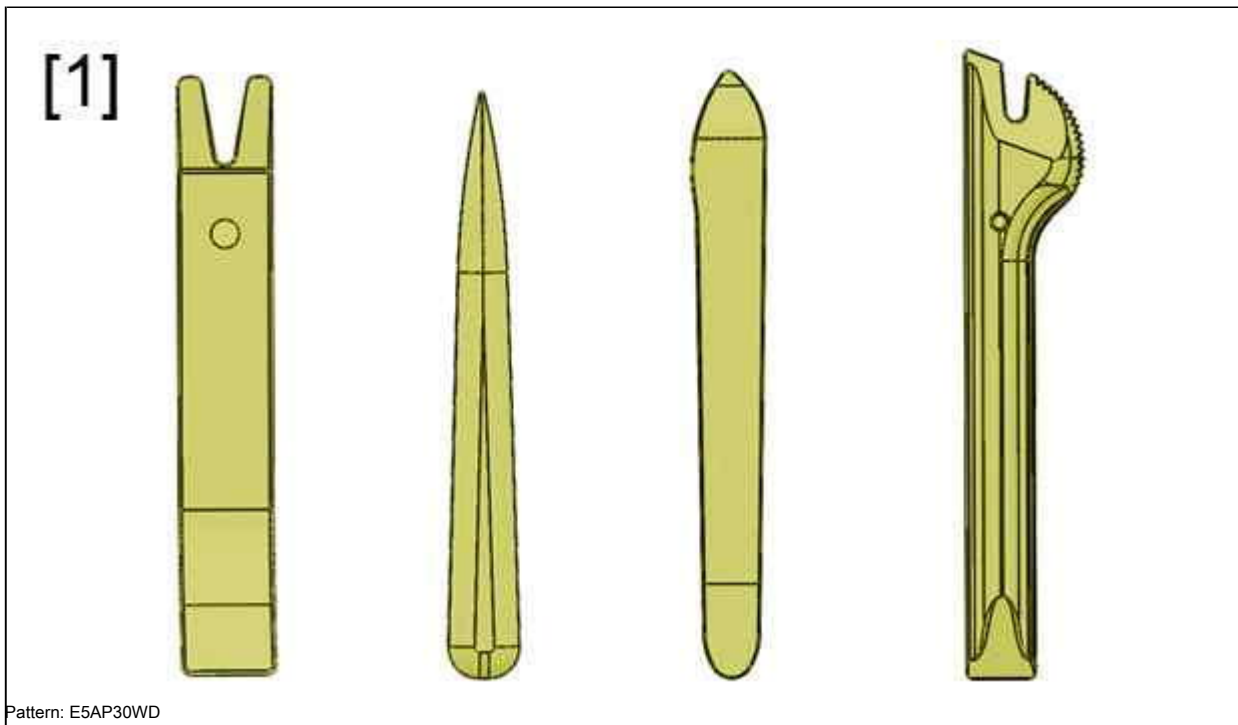
Check the operation of the various equipment.

REMOVAL INSTALLATION: FRONT DIRT SHIELD

MANDATORY: Observe the cleanliness and safety rules



1. RECOMMENDED TOOL

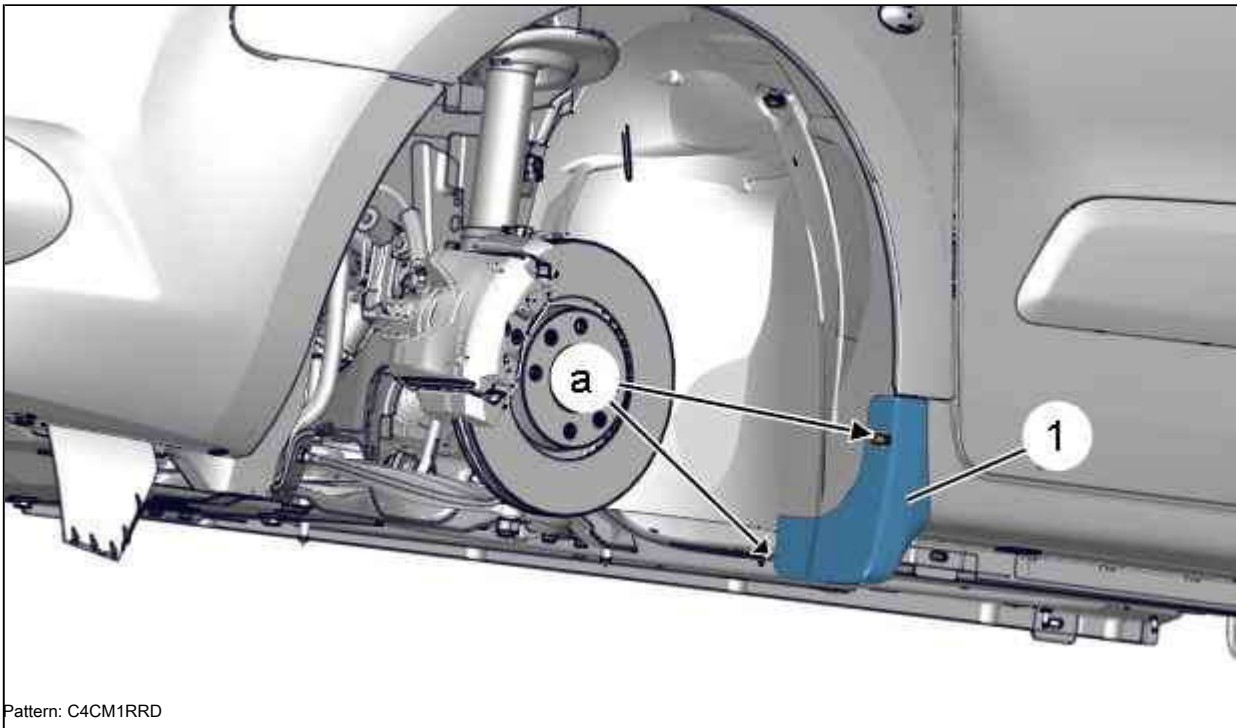


[1] Trim stripper () .1350ZZ.

2. Removal

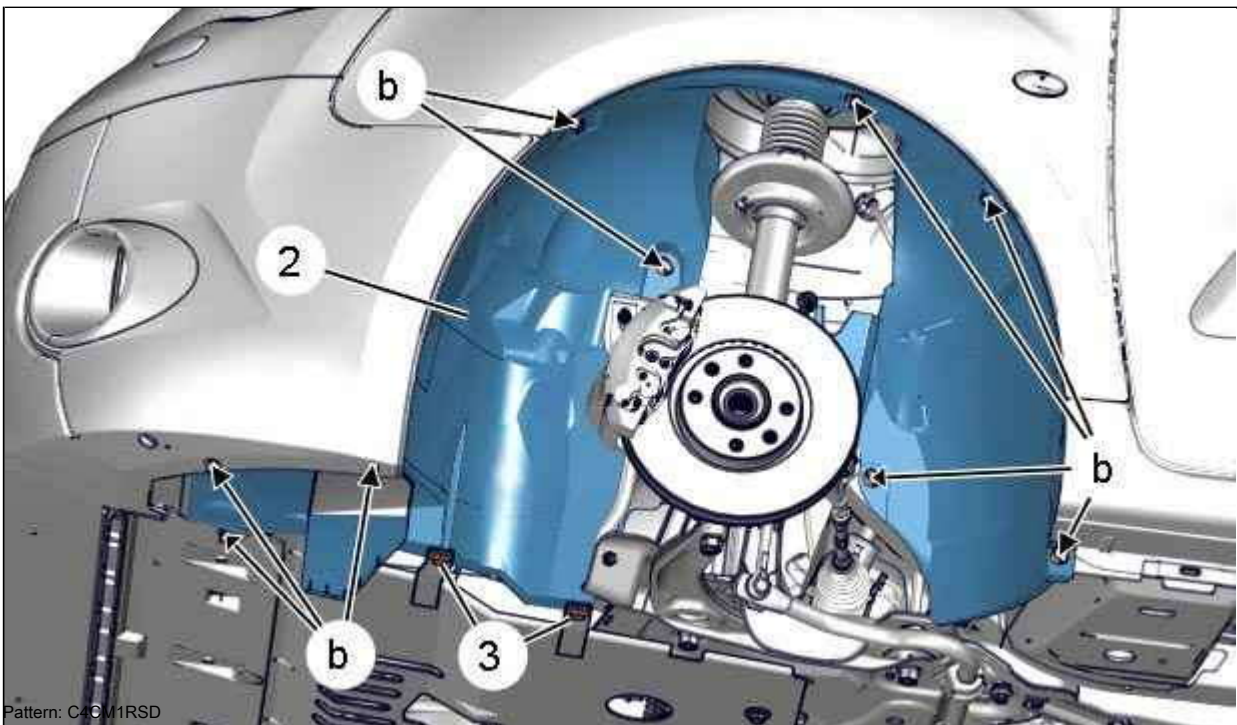
Place the car on a lift.

Remove the wheel.



NOTE: Depending on the configuration.

Detach the clips (at "a"); Using the tool [1]. Remove decorative strip (1).



Detach the clips (at "b"); Using the tool [1]. Remove:

- bolts (3)
- Front wheel arch liner (2)

3. Installation

MANDATORY: Replace damaged clips.

Install:

- Front wheel arch liner (2)
- the bolts (3); Tighten to a torque of 1.8 ± 0.4 da.Nm of the
- clips (in "b")
- Decorative element (1)
- clips (in "a") Wheel
-

Lower the vehicle to the ground.

Tighten the wheel bolts:

- Aluminum rim: Tightening torque 9 ± 2 da.Nm
- Stamped steel wheel rim: Tightening torque 10 ± 2 da.Nm

REPLACEMENT: FRONT WHEEL ARCH

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

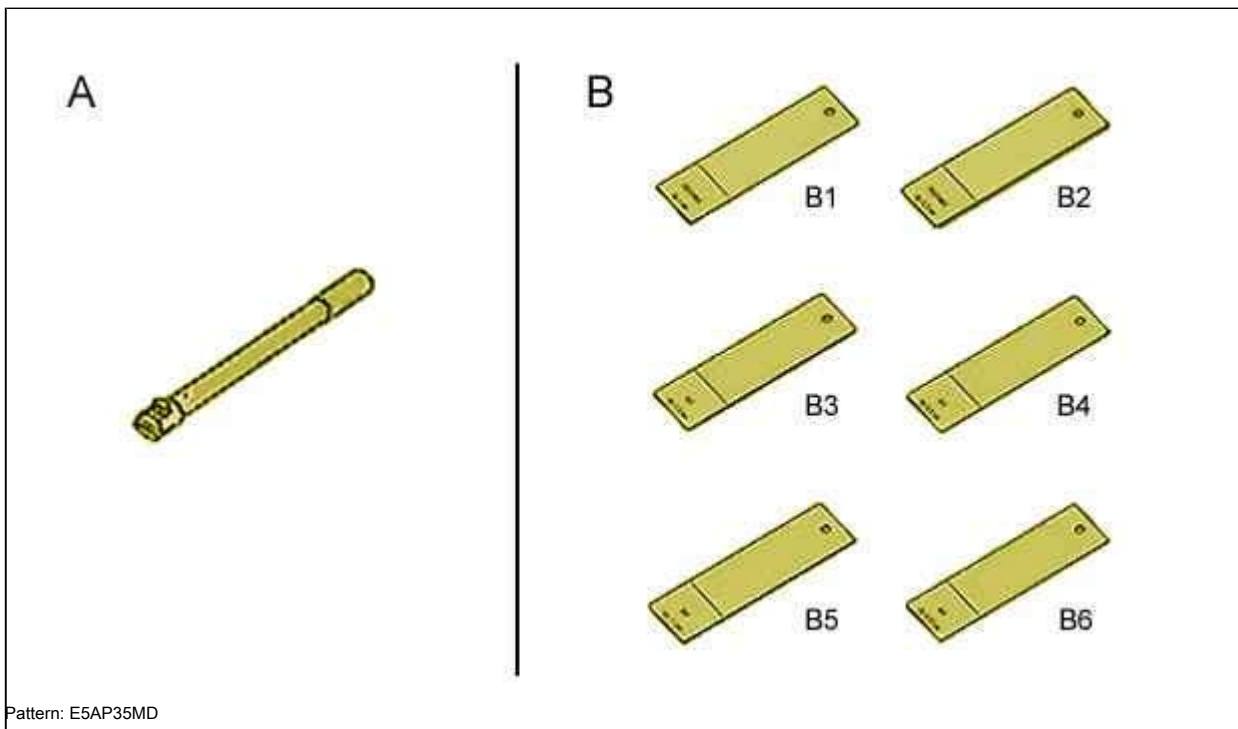
1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. Designation for high tensile steels used in this document. HLE: High tensile steel.

2. Recommended equipment

Works are performed using one of the following measuring systems:

- Electronic measuring system
- Positive measuring system
- Specific head MZ
- Control template



Pattern: E5AP35MD

"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

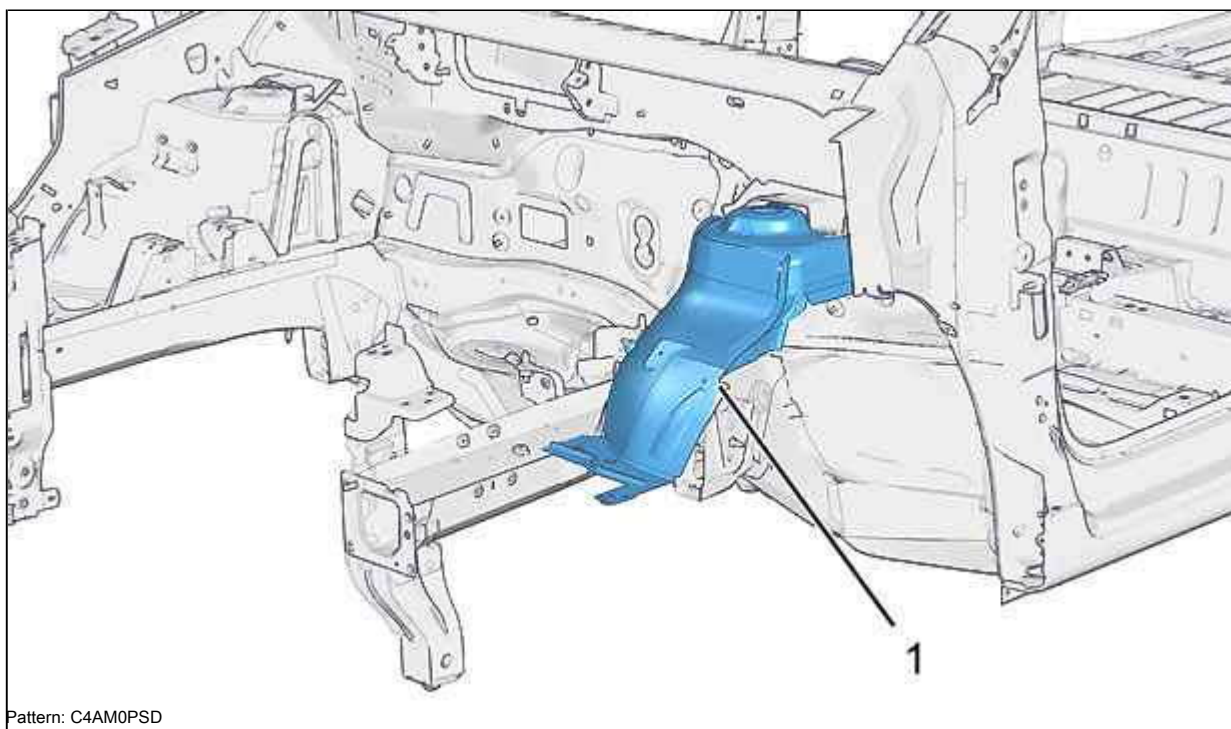
ATTENTION : Remove or protect items located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace: **Front wing upholstery**



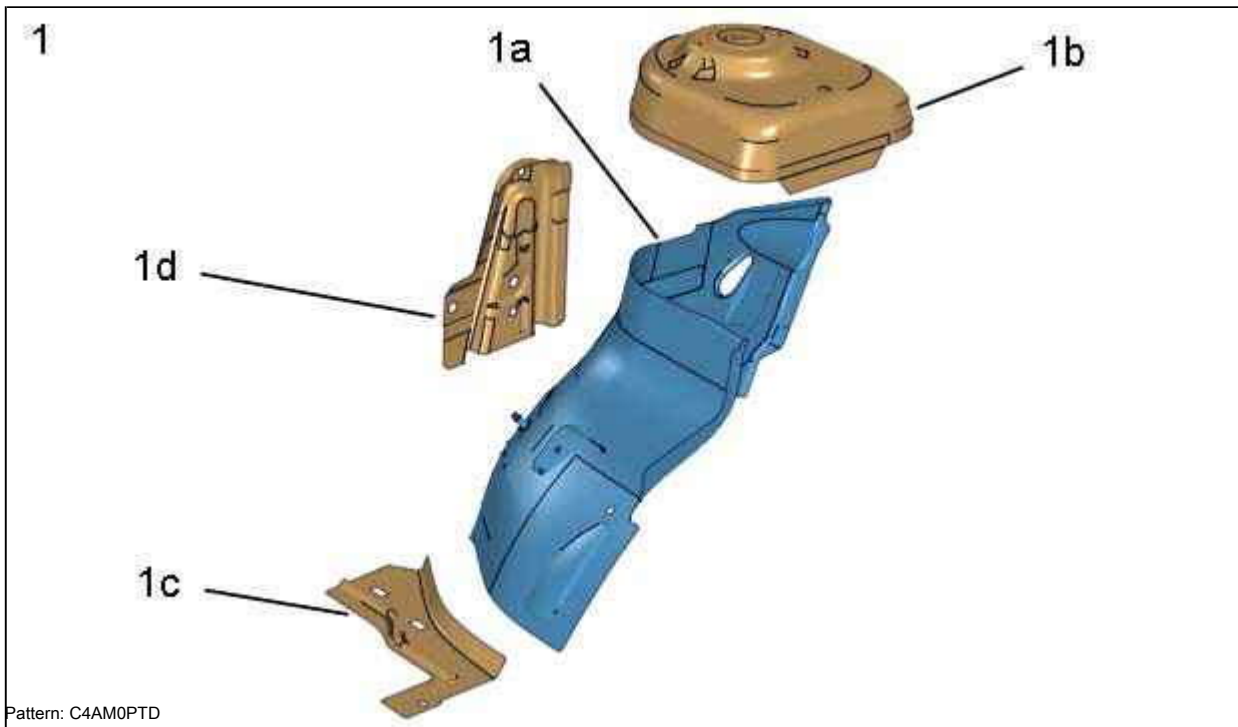
4. Location of the spare part



Label Designation

(1)	Front wheel arch assy

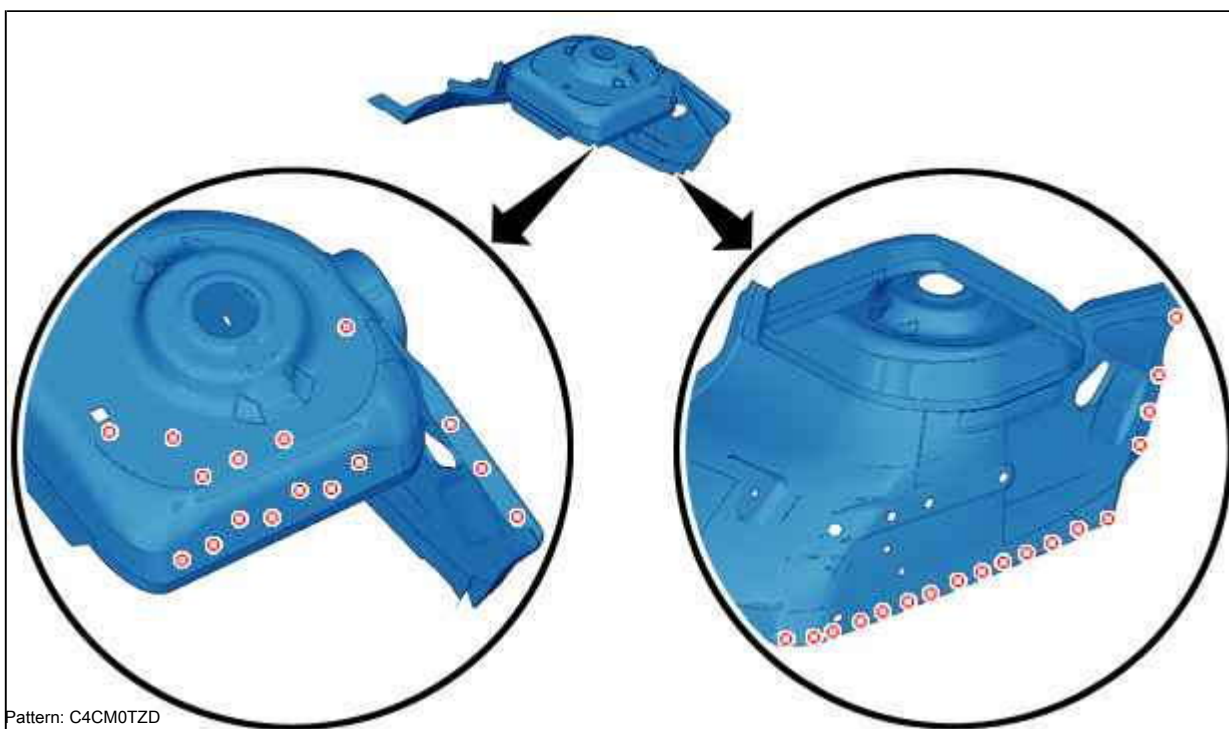
5. Identification of the spare part



Label Designation		Thickness (mm) Nature / classification	
(1)	Front wheel arch assy		
(1a)	Front wheel arch	1.17	Mild steel
(1b)	Front suspension support	2.5	HLE
(1c)	Front part of the front wheel arch 1.17 Front wheel arch		Mild steel
(1d)	reinforcement	0.87	Mild steel

6. Preparation of spare part

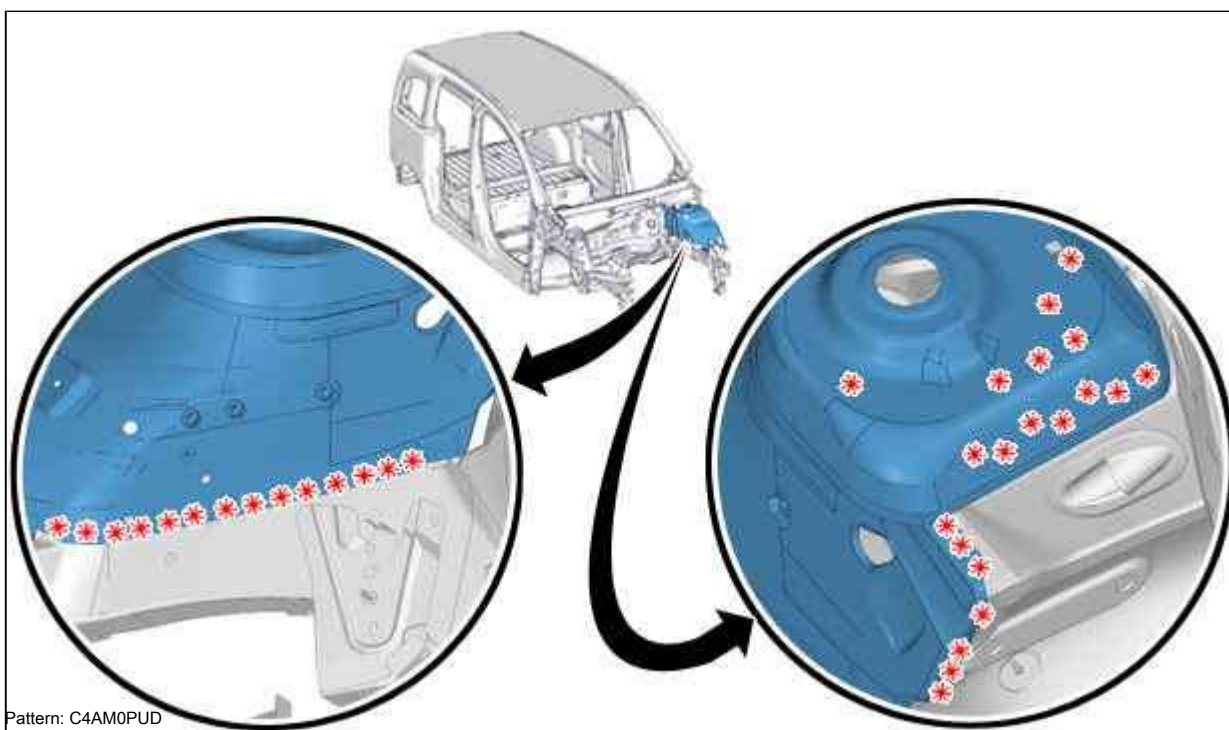
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Pattern: C4CM0TZD

Mark, then drill $\varnothing 8$ mm holes for subsequent spot-plug welding. Prepare the sockets and protect them with a welding primer (index "C7").

7. Cut



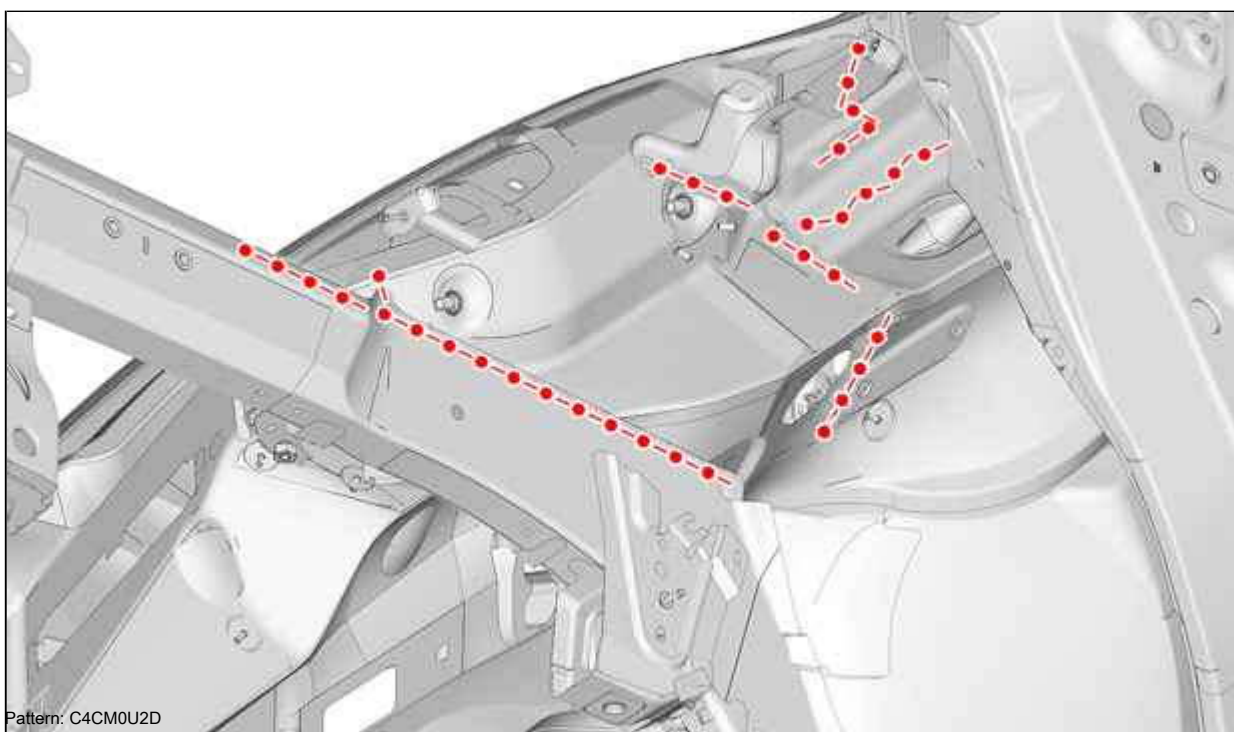
Pattern: C4AM0PUD

Cut by points.



Cut by points.
Remove the front wheel arch.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

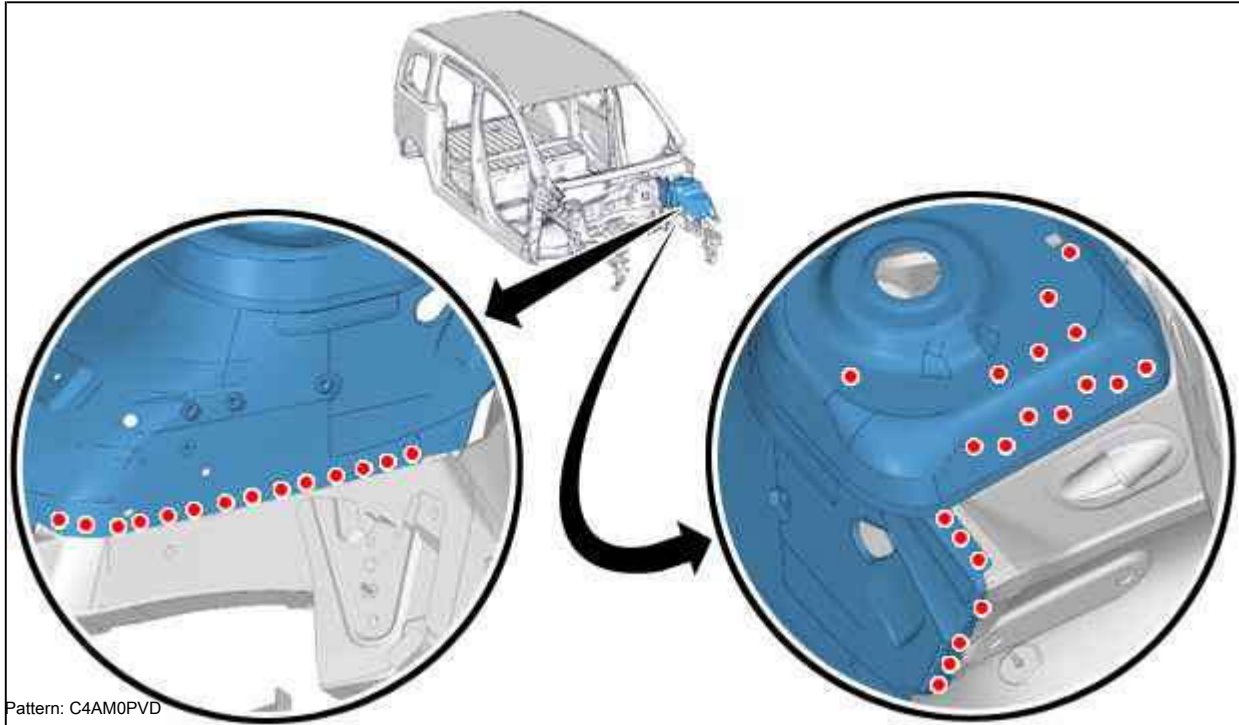
9. Fitting

Position: front wheel arch.

Install elements to ensure the fit.

Check the position of the front wheel arch on the bench. Hold the element in place.

10. Welding



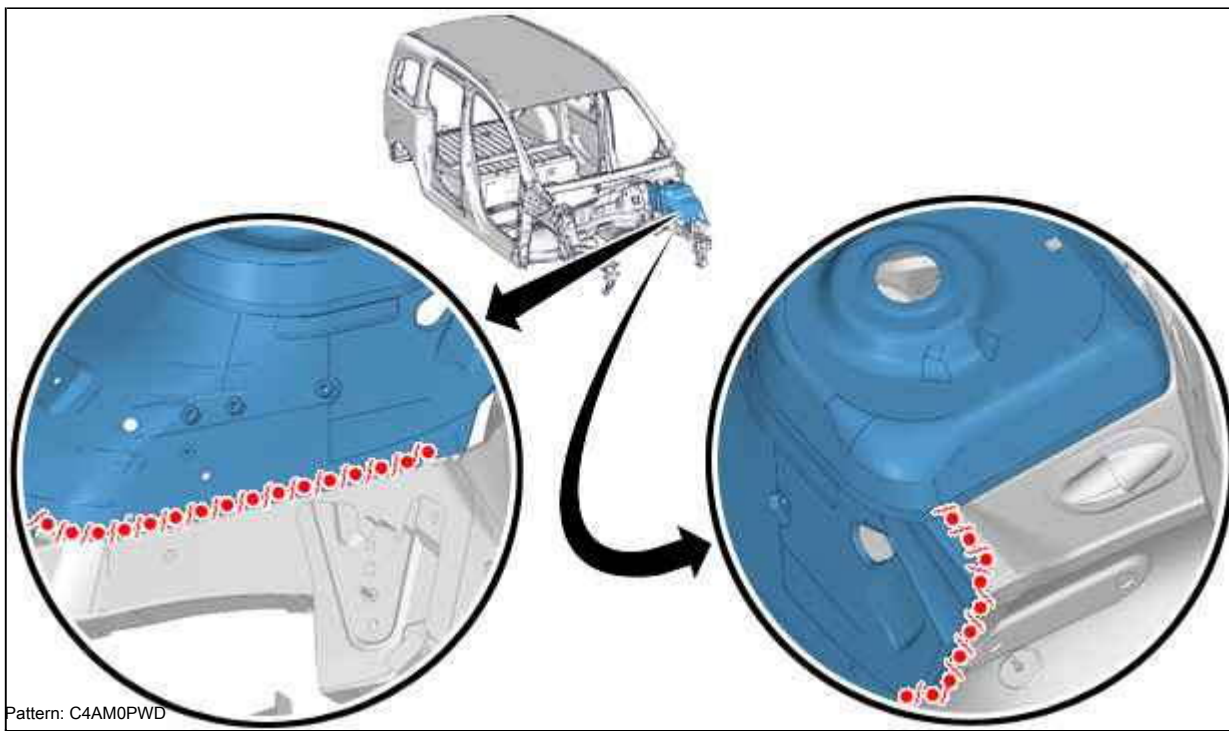
Weld through the holes in the MAG protective gas. Grind MAG welding points.



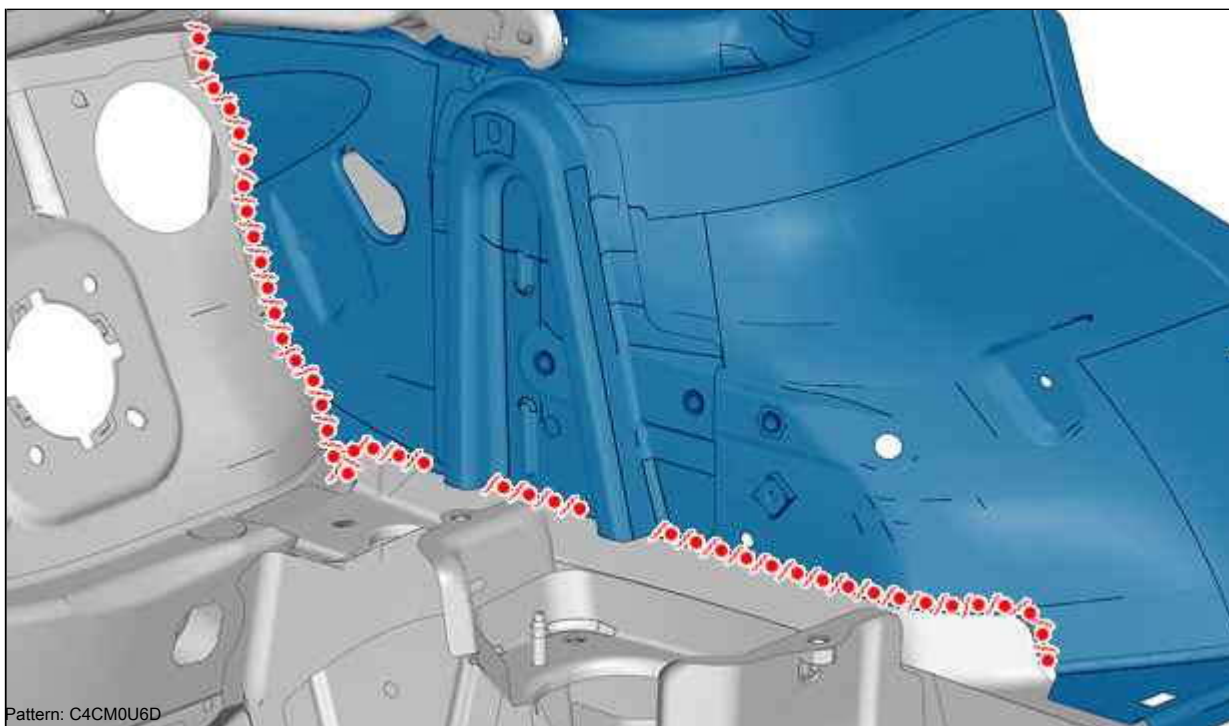
Pattern: C4CM0U4D

Weld with welding points.

11. Tightness protection




Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").



Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").

Apply a "C4" anti-gravel coating

Painting, then spraying into the cavity with a C5 index in the ceremonial area.  ...

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : [Follow the steps to follow after removing the battery.](#)

REPLACEMENT: KITCHEN

MANDATORY: Observe the cleanliness and safety rules.



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

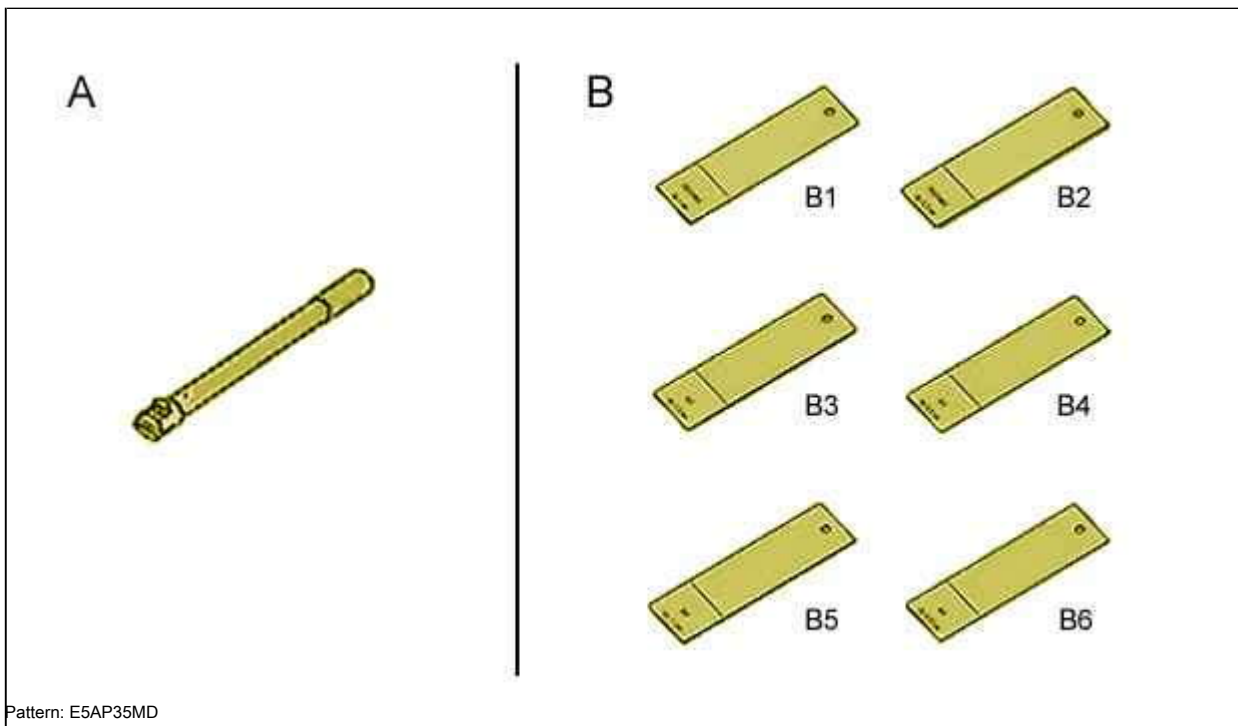
1. Information

Types of welds used with an electric arc welded element:

- VIG brazing with metal (copper-aluminum) deposition in inert gas
- MAG welding by depositing metal (steel) in reactive gas

Designation for high tensile steels used in this document. HLE: High tensile steel.

2. Recommended equipment



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace:

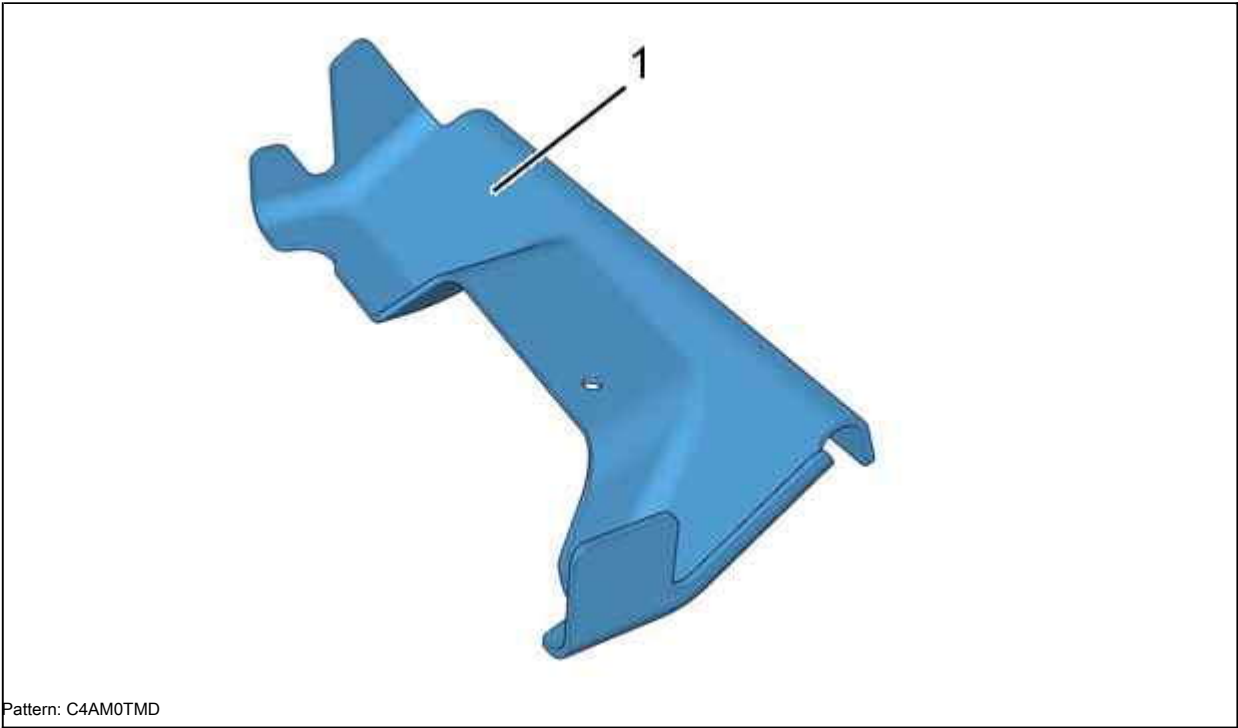
- Spar assembly



-

(1)	Klondike

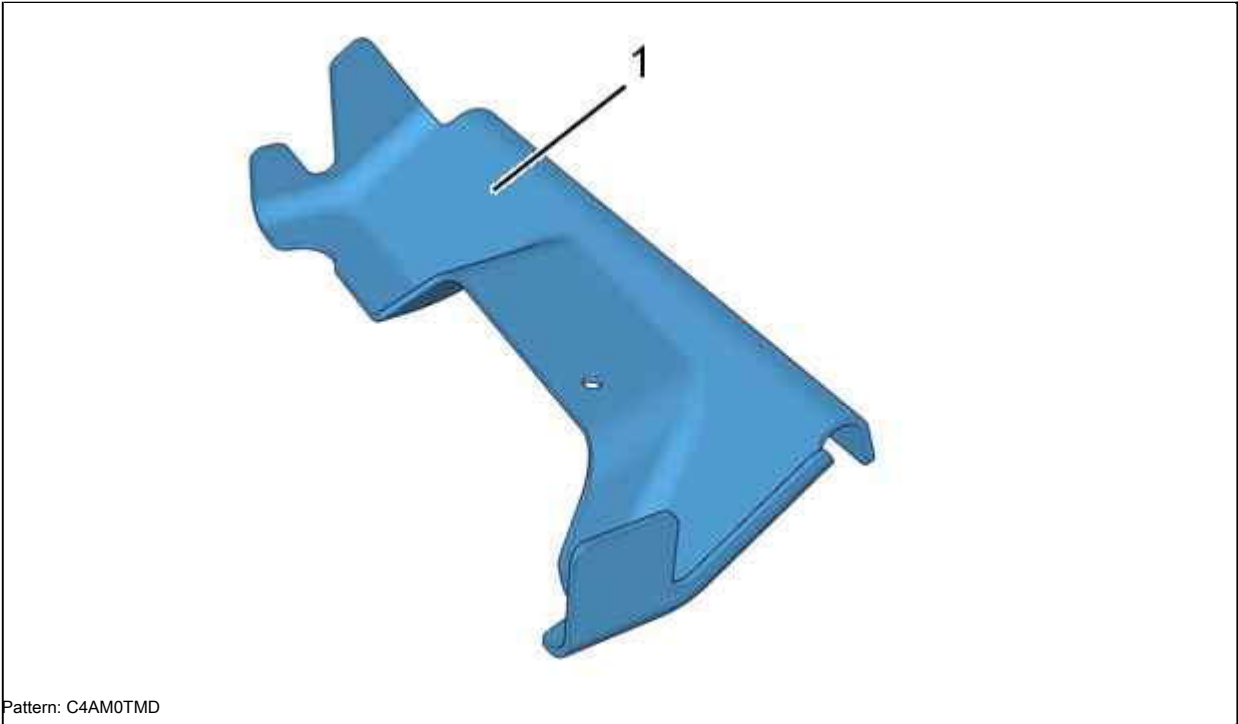
5. Identification of the spare part



Label Designation

(1)	Klondike

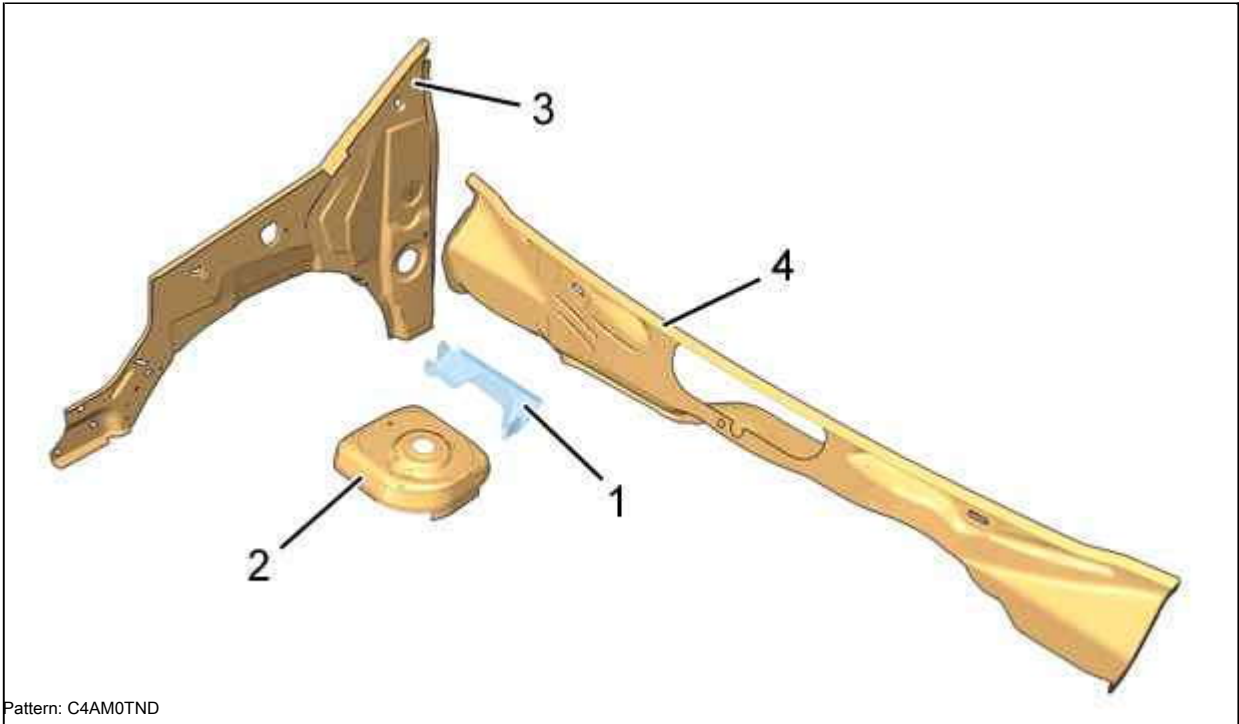
5.1. Composition: Spare part: Klondike



Label Designation Thickness (mm) Nature / Classification (1)

	Klondike	2.44	HLE

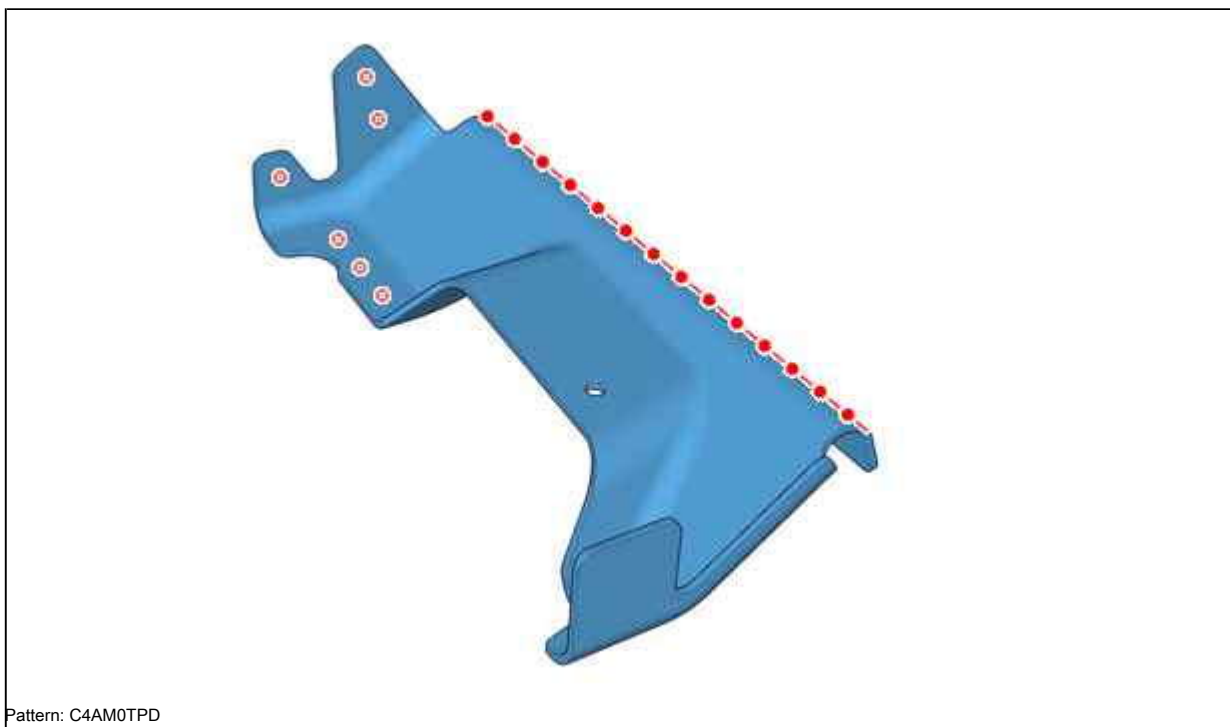
5.2. Identification of adjacent parts: Gusset



Label Designation		Thickness (mm)	Nature / classification
(1)	Klondike	2.44	HLE
(2)	Front suspension support	2.5	HLE
(3)	Front fender molding	1.17	HLE
(4)	Bottom overlay for windscreen 1.17		Mild steel

6. Spare part preparation: Gusset plate

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Pattern: C4AM0TPD

With a drill: Drill 10 mm holes for subsequent MAG spot welding.

Prepare the sockets and protect them with a welding primer (index "C7").

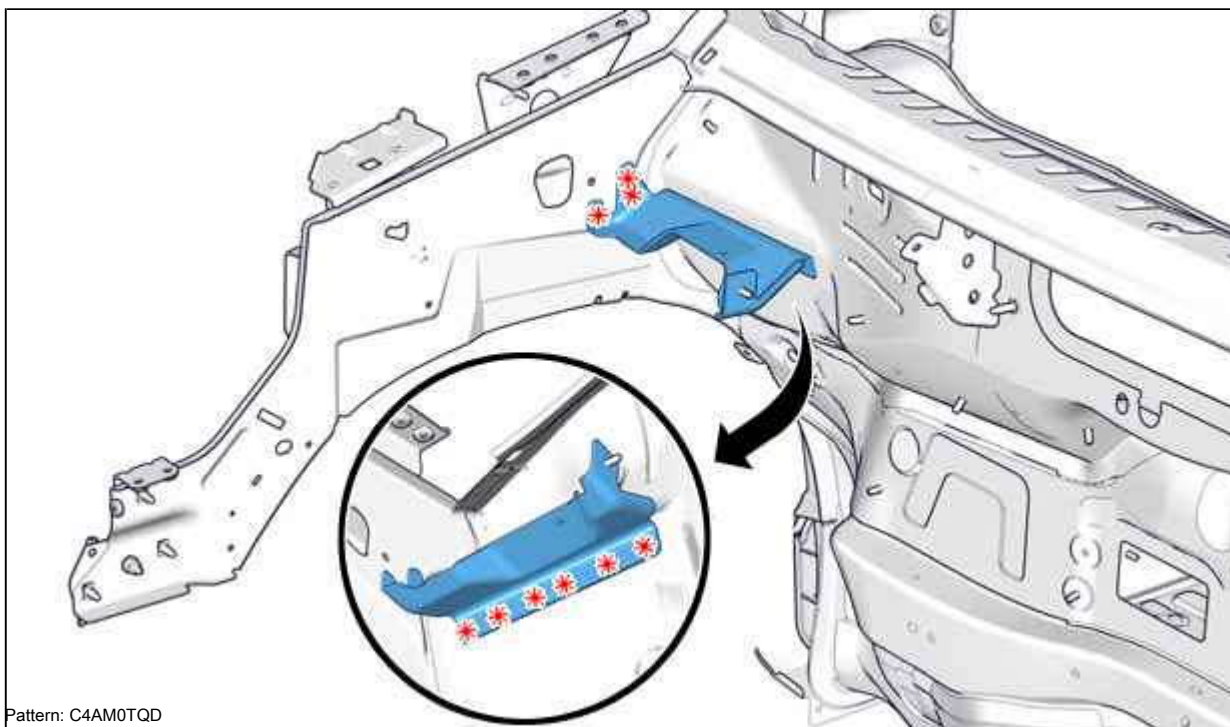
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body

Remove:

- **Spar assembly**
- or
- **Front wheel arch assembly**

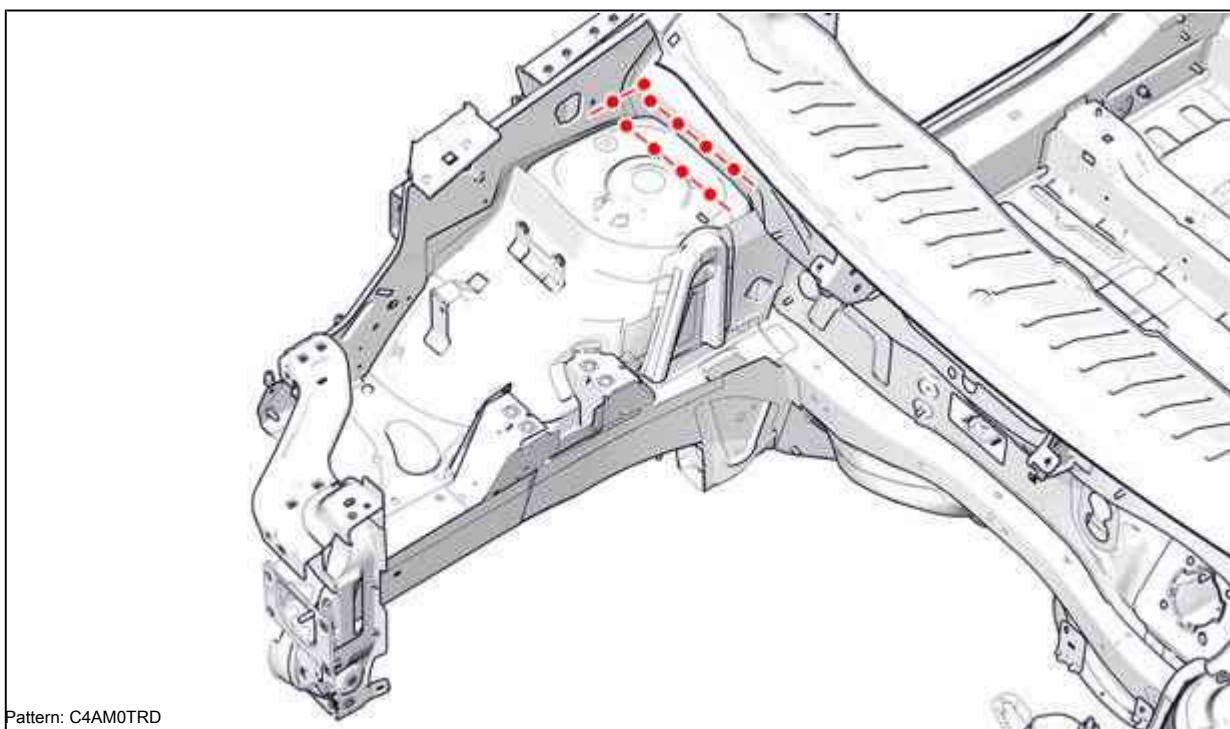




Pattern: C4AM0TQD

Cut out the welding points.

8. Cleaning and preparation of the body



Pattern: C4AM0TRD

Install and weld:

- **Spar assembly**
- or
- **Front wheel arch assembly**



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

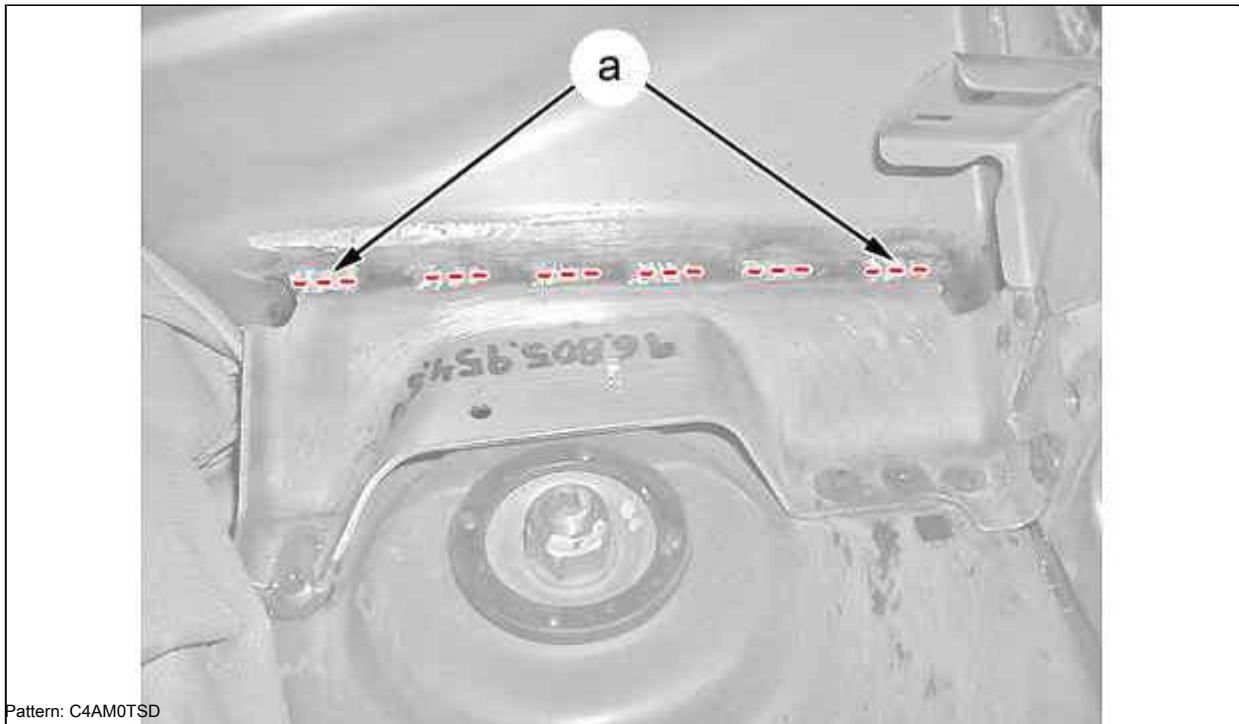
9. Fitting

Install the gusset plate on top.

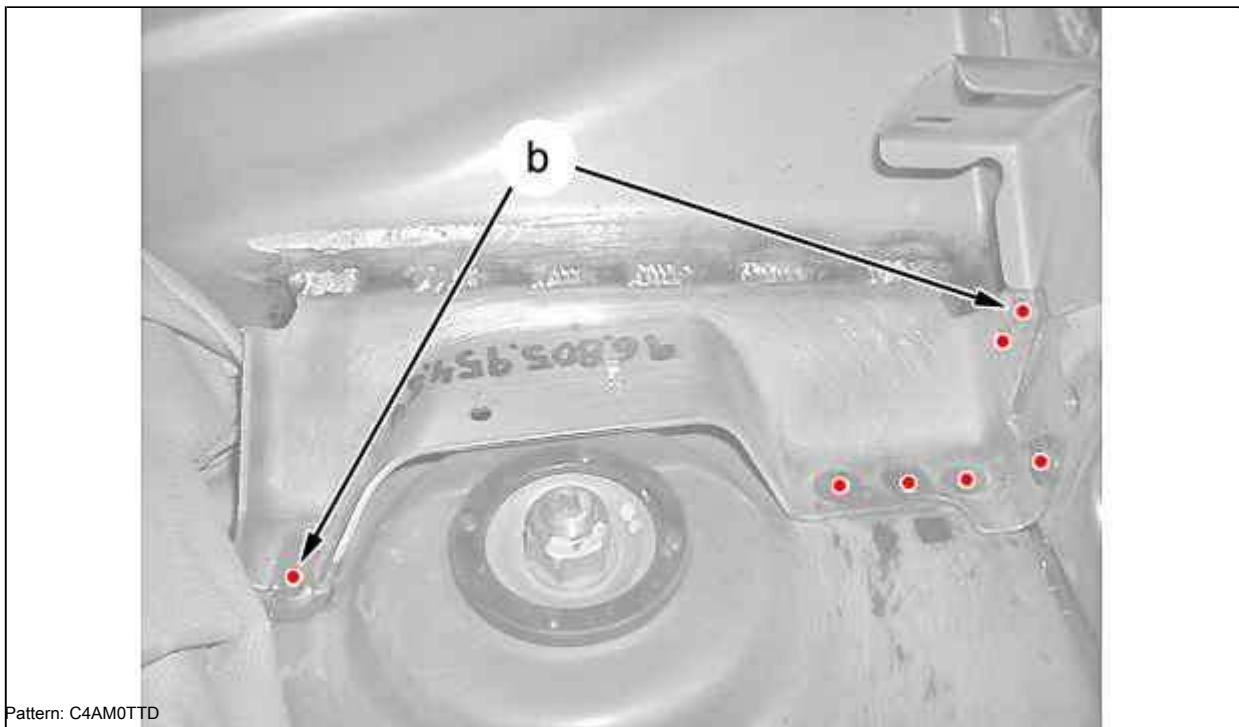
Install elements to ensure the fit.

Check the fit with the front fender pad and wheel arch assembly. Hold the element in place.

10. Welding



MIG welding (in "a").



Weld through the holes in the MAG protective gas (in "b"). Grind MAG welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: FRONT FENDER COVER

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

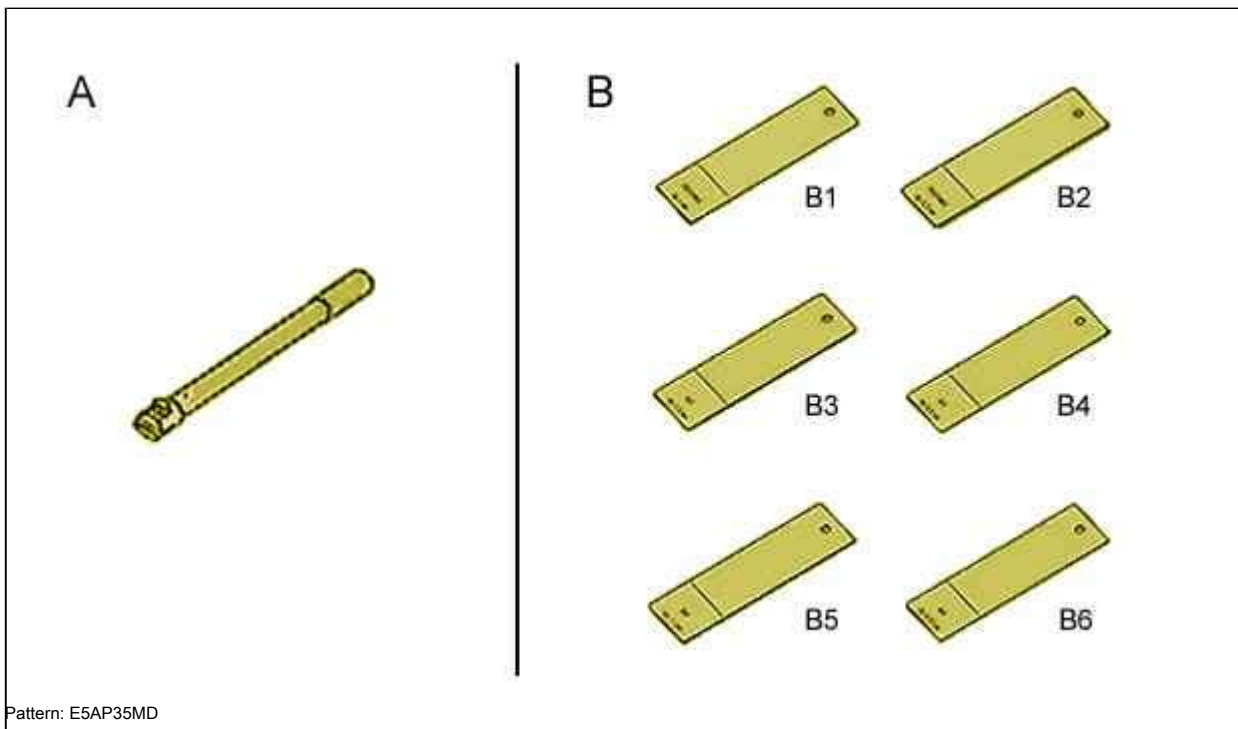
1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. Designation for high tensile steels used in this document. HLE: High tensile steel.

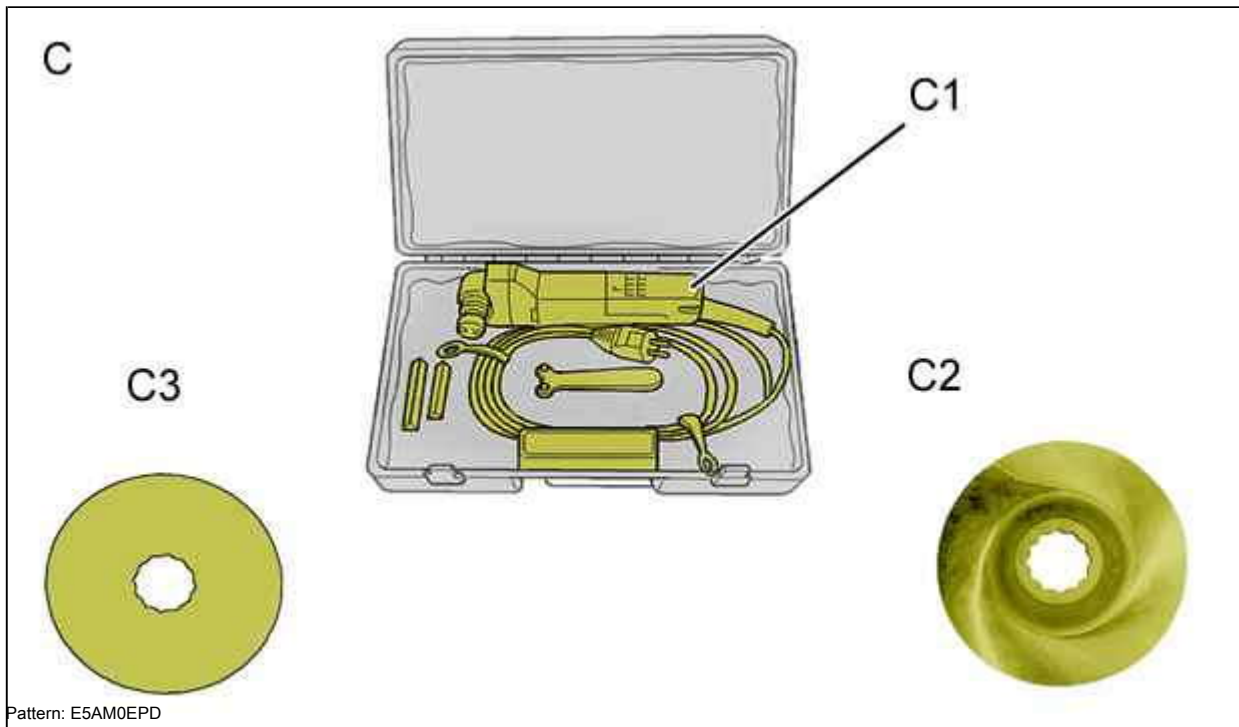
2. Recommended equipment

Operate using one of the following systems:

- Electronic measuring system
- Mechanical measuring system
- Specific head MZ (Special tool)
- Control template



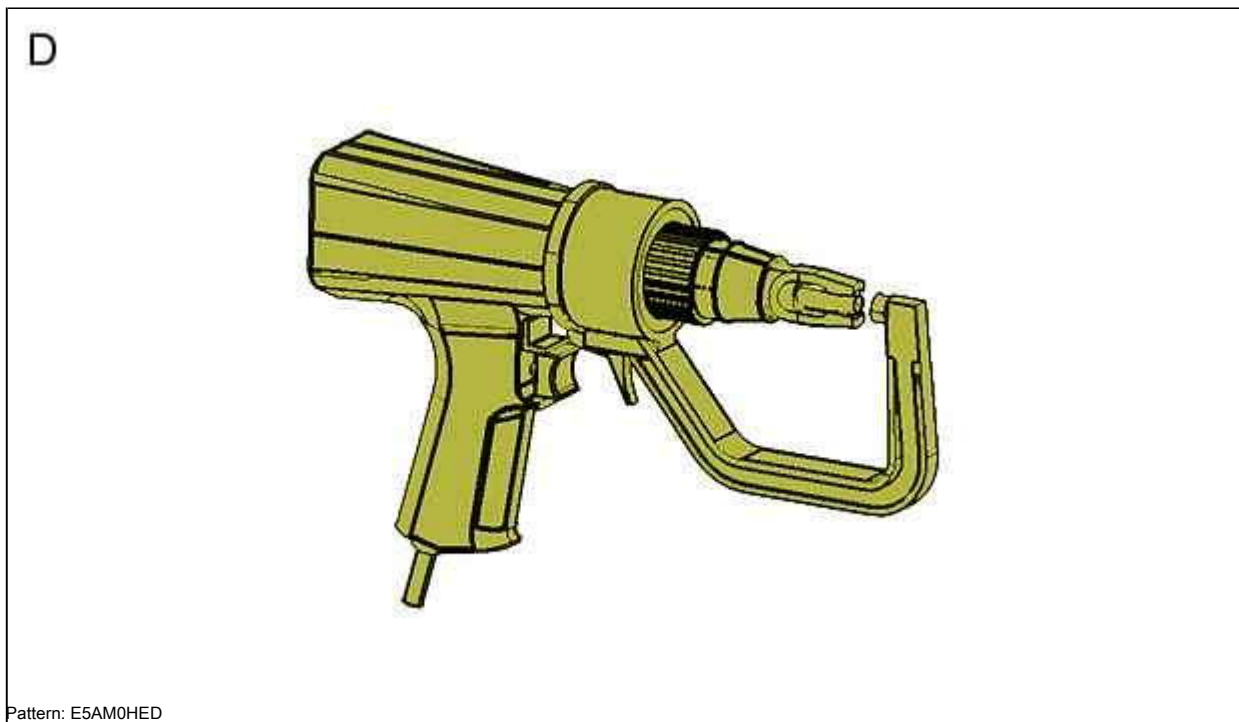
"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.



"C": FEIN electric cutter kit.

Label Designation

"C1"	Electric knife
"C2"	FEIN saw blade with removable hub
"C3"	Blade ° 103



"D": S-shaped drill for drilling weld spots.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace.

Front reinforcement on the side of the passenger compartment



4. Localization: Front wing molding

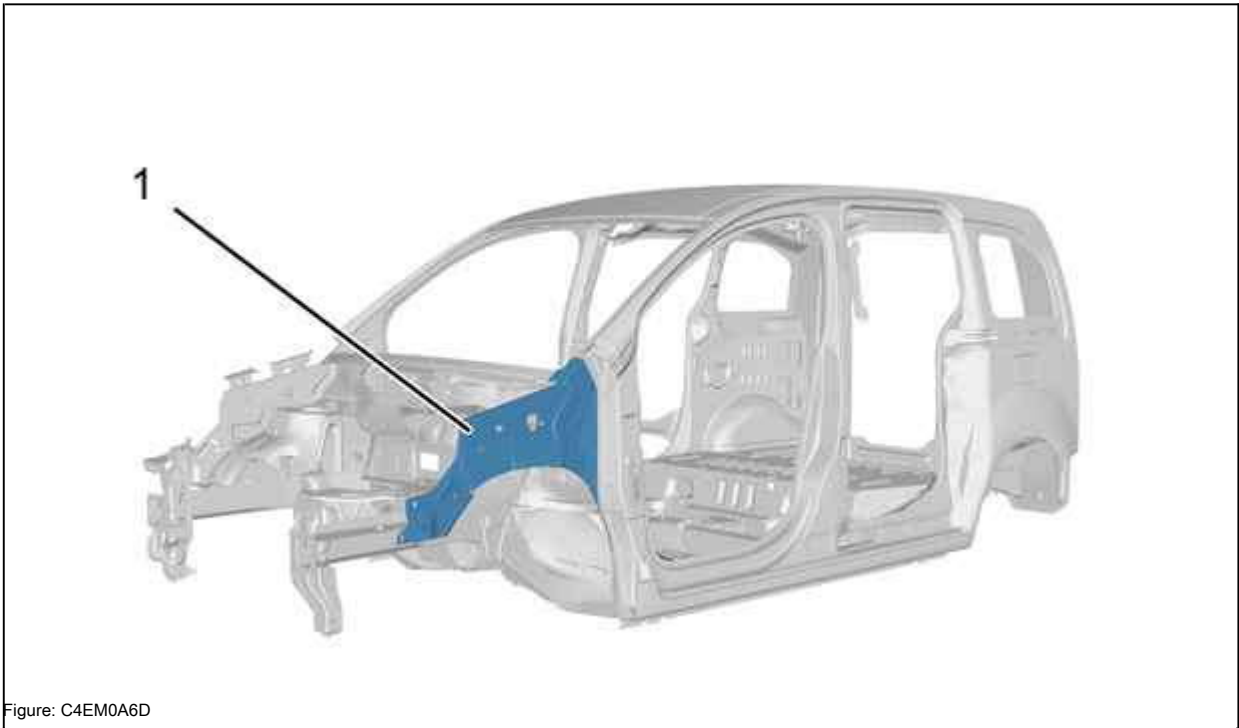


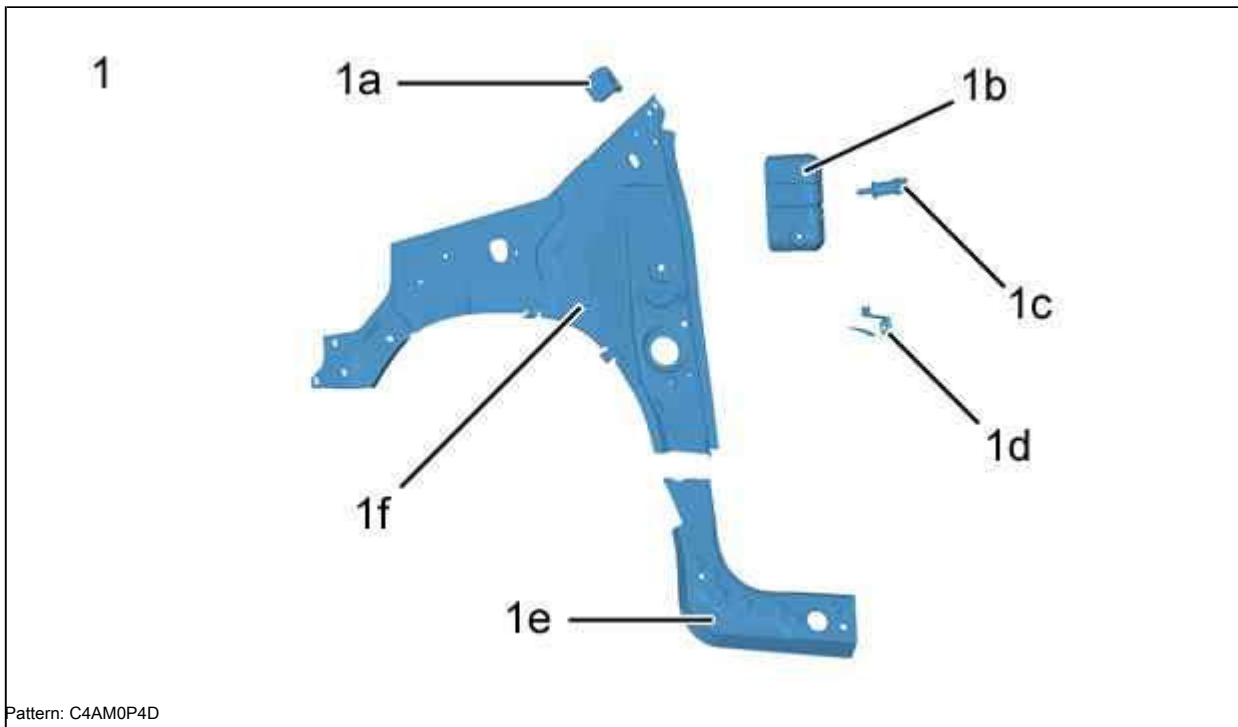
Figure: C4EM0A6D

Label Designation

(1)	Cover, front fenders assy

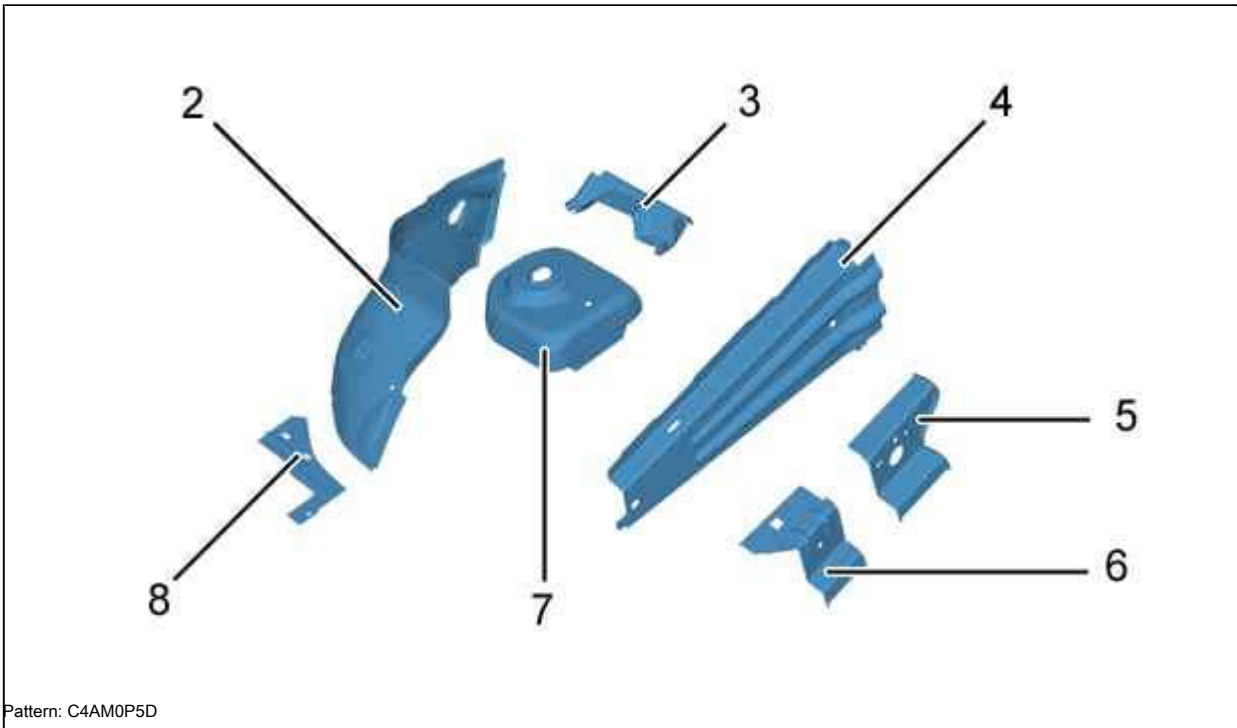
5. Identification: Fender molding

5.1. Identification



Label Designation		Thickness (mm) Nature / classification	
(1)	Cover, front fenders assy		
(1a)	Wiper arm	1.47	Mild steel
(1b)	Dashboard side bracket A-pillar upper spacer NC Mounting	2.04	Mild steel
(1c)	BSI		NC
(1d)		1.17	Mild steel
(1e)	A-pillar lower trim	1.95	HLE
(1f)	Front fender molding	1.17	HLE

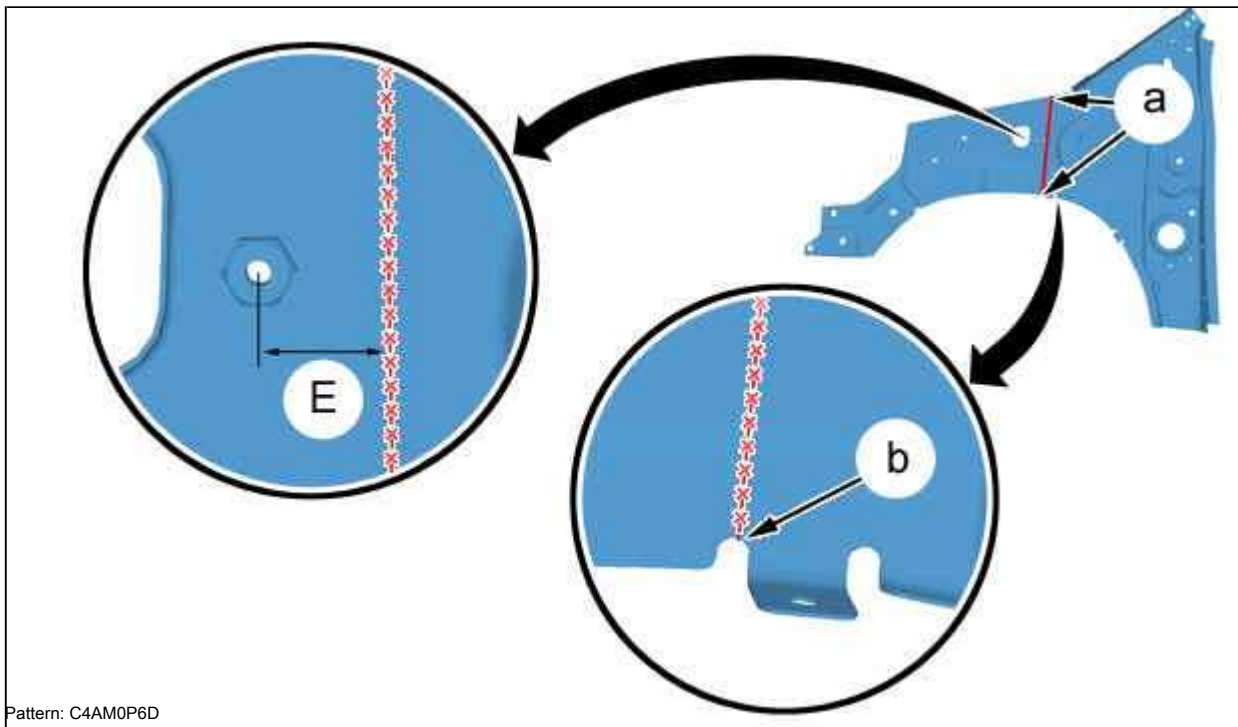
5.2. Identification of parts adjacent to the spare part



Label Designation		Thickness (mm)	Nature / classification
(2)	Front wheel arch	1.17	Mild steel
(3)	Klondike	1.17	HLE
(4)	Front reinforcement, passenger compartment 1.47 Rear upper front		HLE
(five)	fender support	1.47	Mild steel
(6)	Front wing upper support	1.47	Mild steel
(7)	Front suspension support	2.50	HLE
(eight)	Wheel arch front	1.17	Mild steel

6. Preparation of spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



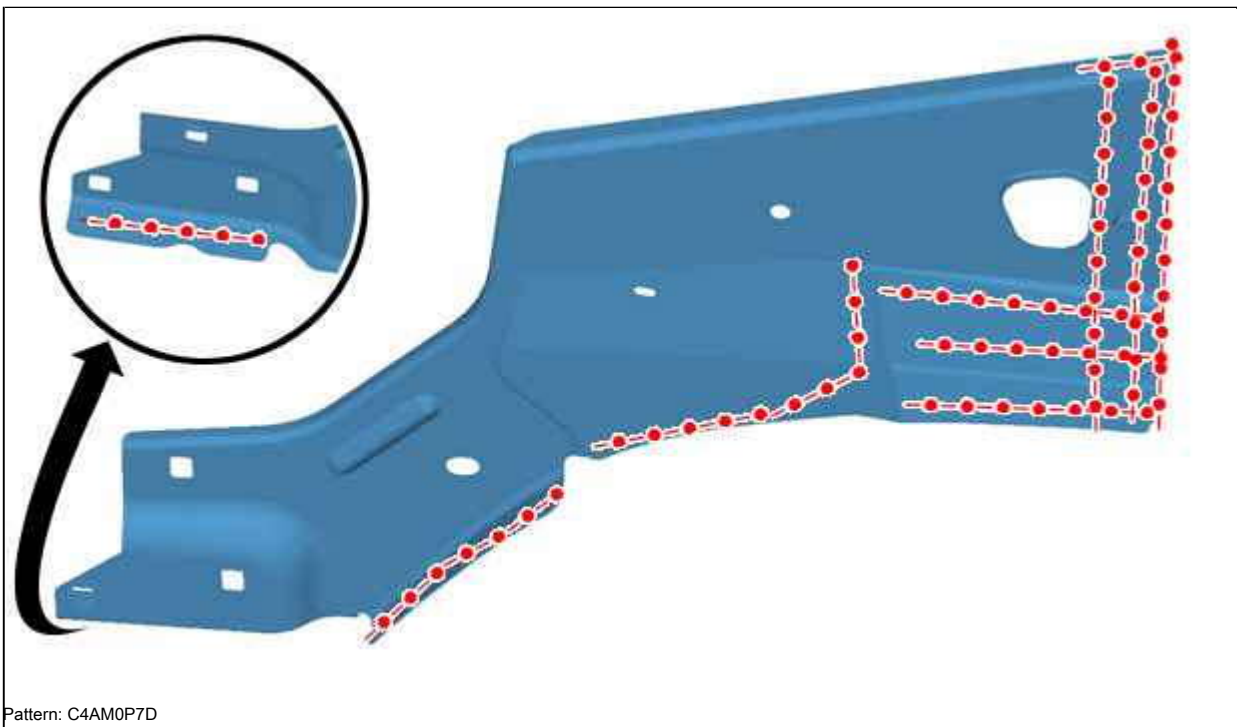
Pattern: C4AM0P6D

"E" = $21 \pm 2\text{mm}$.

NOTE: Use the middle of the cutout "b" as a reference.

Mark the cutting line (at "a"), respecting the dimension "E" (at "b") and make the cut.

NOTE: Dimension "E" is for reference and may vary depending on the conditions for partial replacement of the front fender liner.

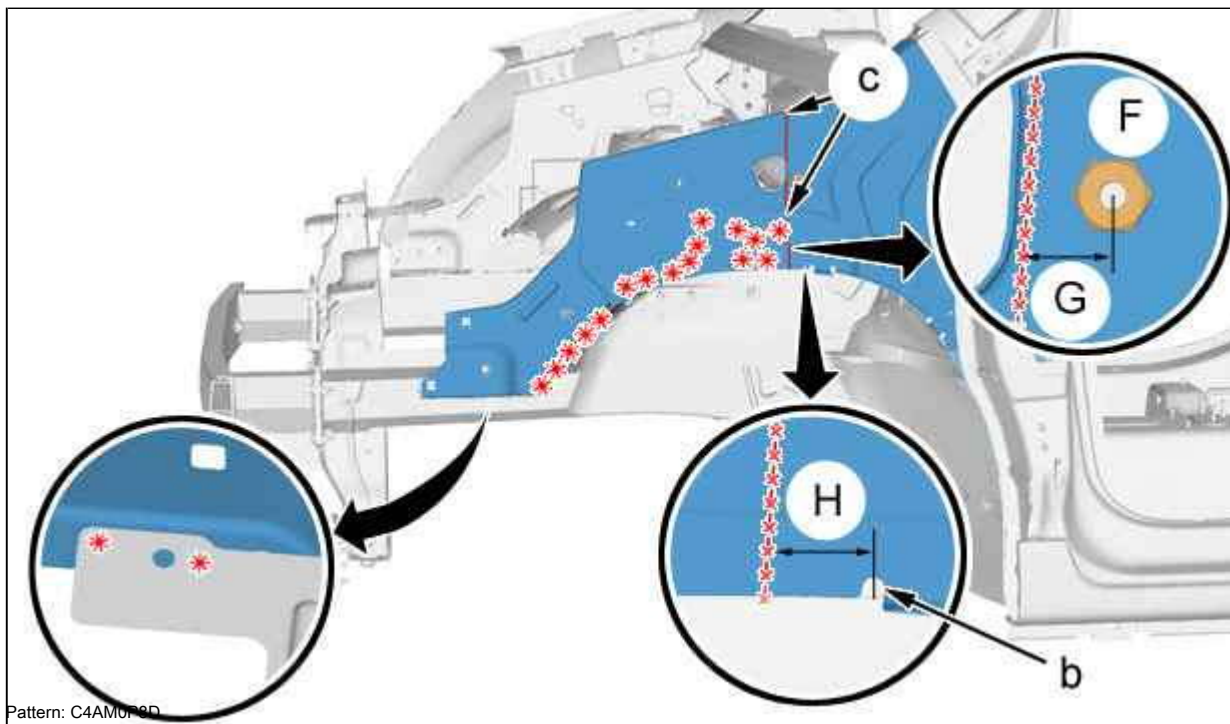


Pattern: C4AM0P7D

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting an element on the body



"G" = 17 ± 2 mm.

"H" = 34 ± 2 mm.

NOTE: Use the middle of the cutout "b" as a reference.

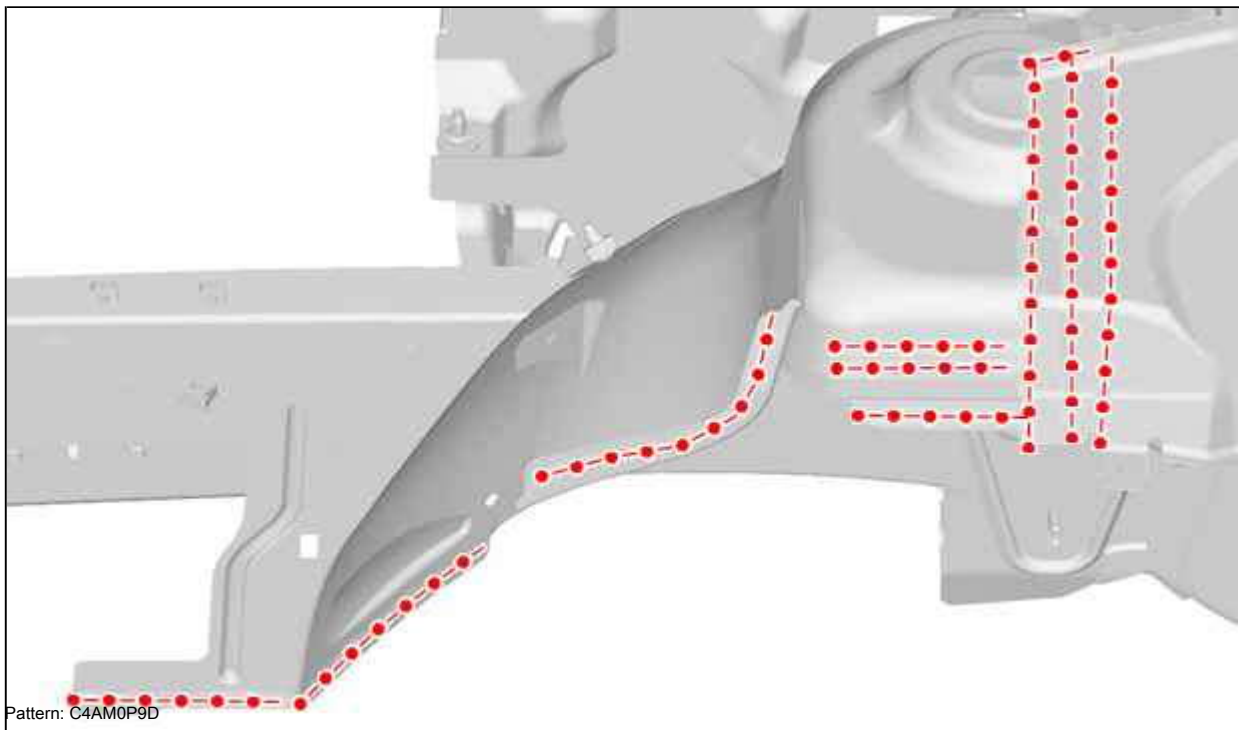
Mark the cutting line (at "c") according to the dimensions "G" and "H" and make the cut with the "Fein" cutter.

Cut by points.

Remove the front fender trim.

Remove the nut "F" on the remaining body of the panel.

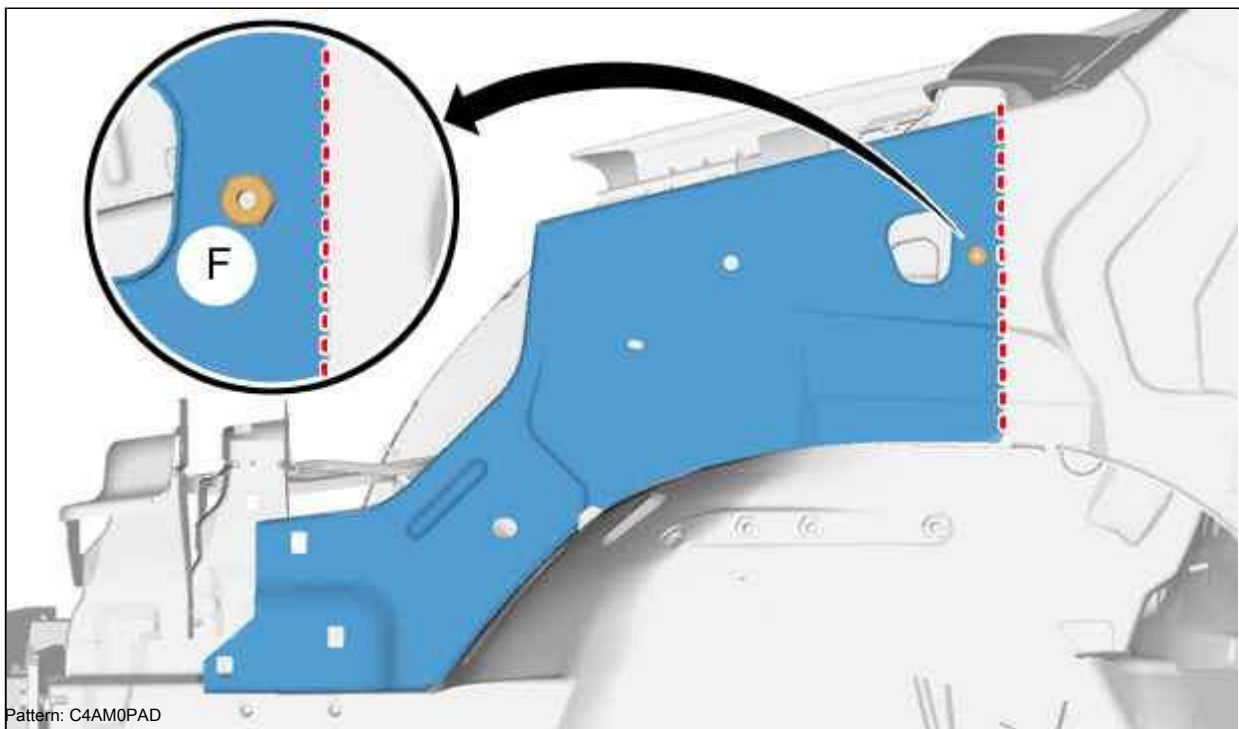
8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Fitting

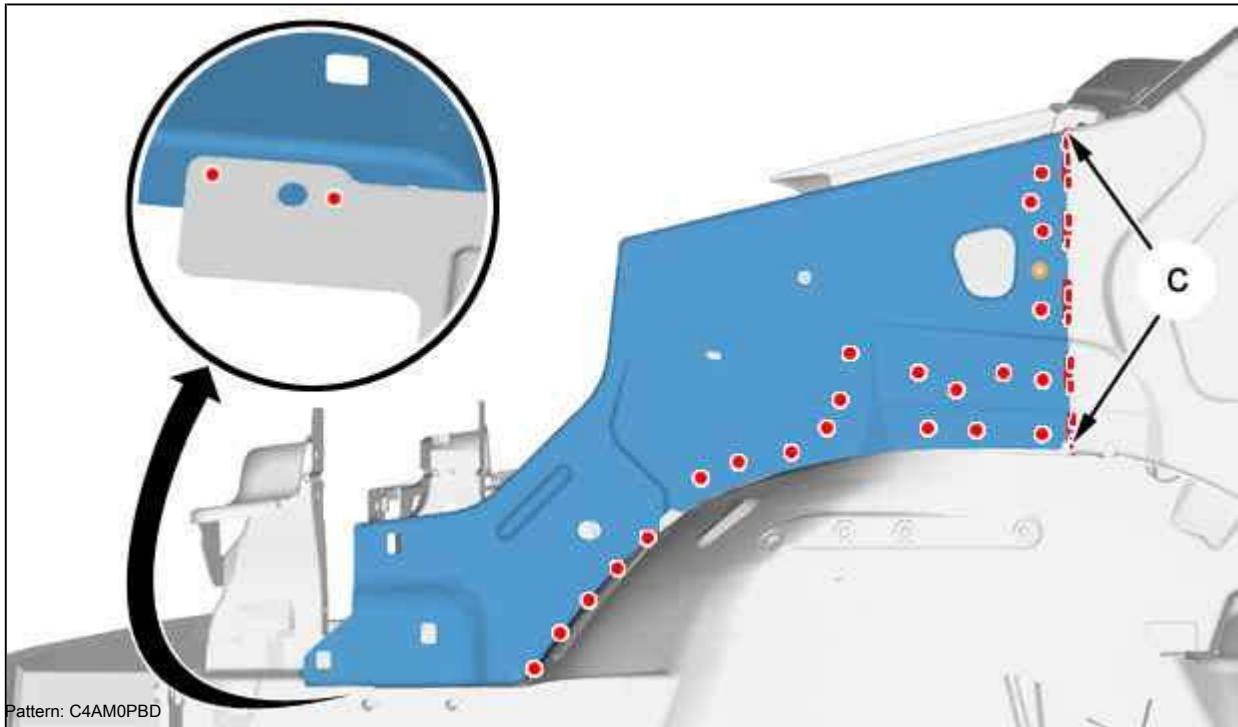


Position: Front wing trim.

Install elements to ensure the fit.
Adjust cutting (If necessary). Hold the element in place.

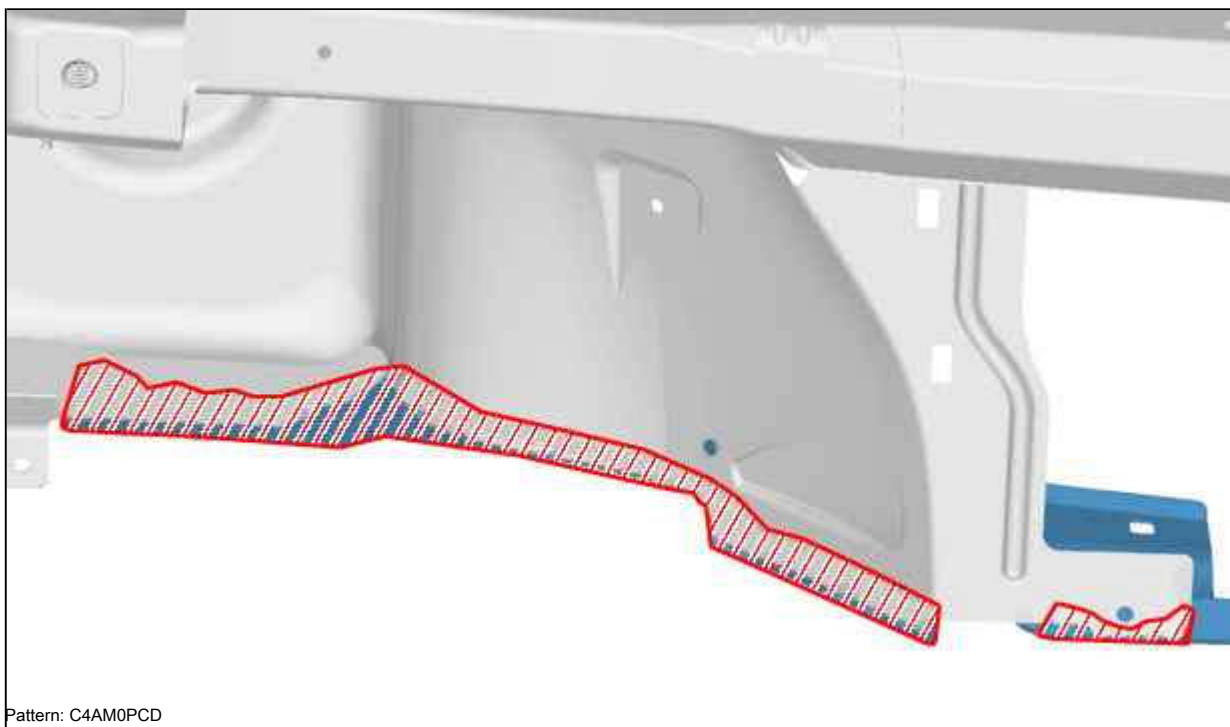
NOTE: Adjust: Front fender trim; With nut; Weld "F".

10. Welding



Weld with MAG welding along the cut line (in "c"). Grind the seams made with MAG welding.
Weld with welding points.

11. Tightness protection

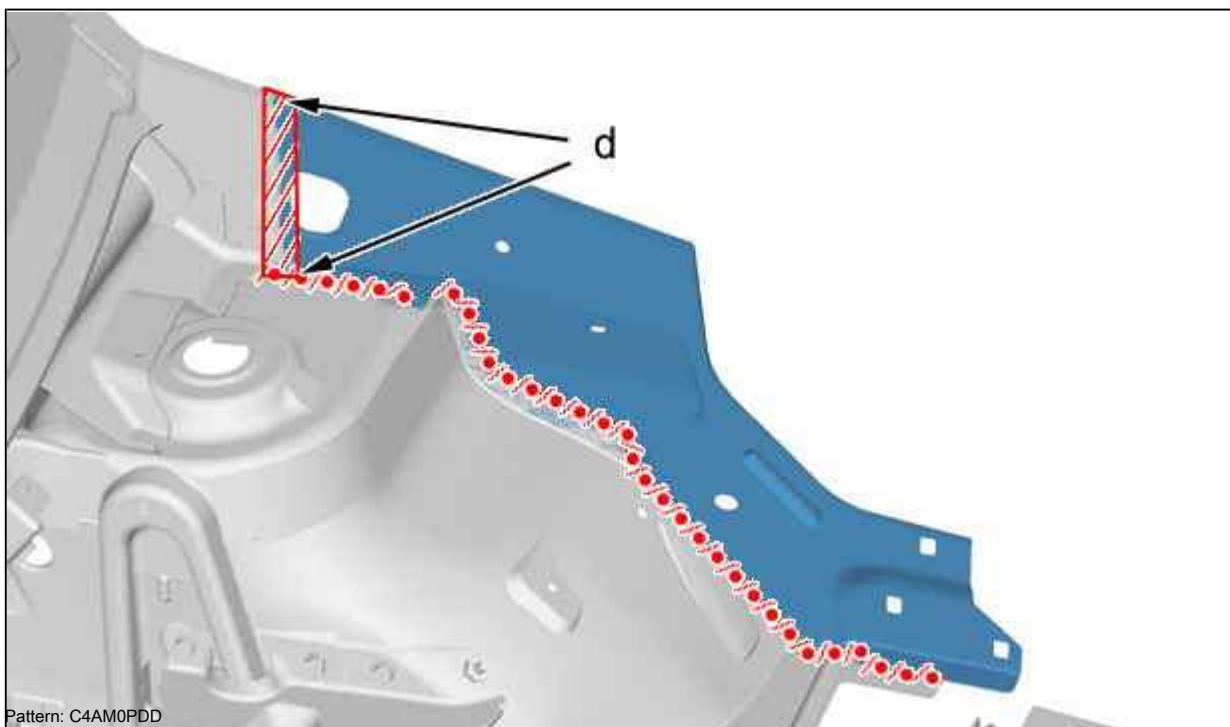


Pattern: C4AM0PCD

Apply a layer of phosphate primer to the cleaned areas.

Apply an anti-gravel coating

(index "C4").



Pattern: C4AM0PDD

Apply a layer of phosphate primer to the cleaned areas.

Apply an anti-gravel coating

(index "C4") (in "d").

Apply sealant (index "A1").



Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: FRONT FENDER COVER

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element:

- MIG brazing with copper-silicon electrode in inert gas
- MAG welding by depositing metal (steel) in reactive gas

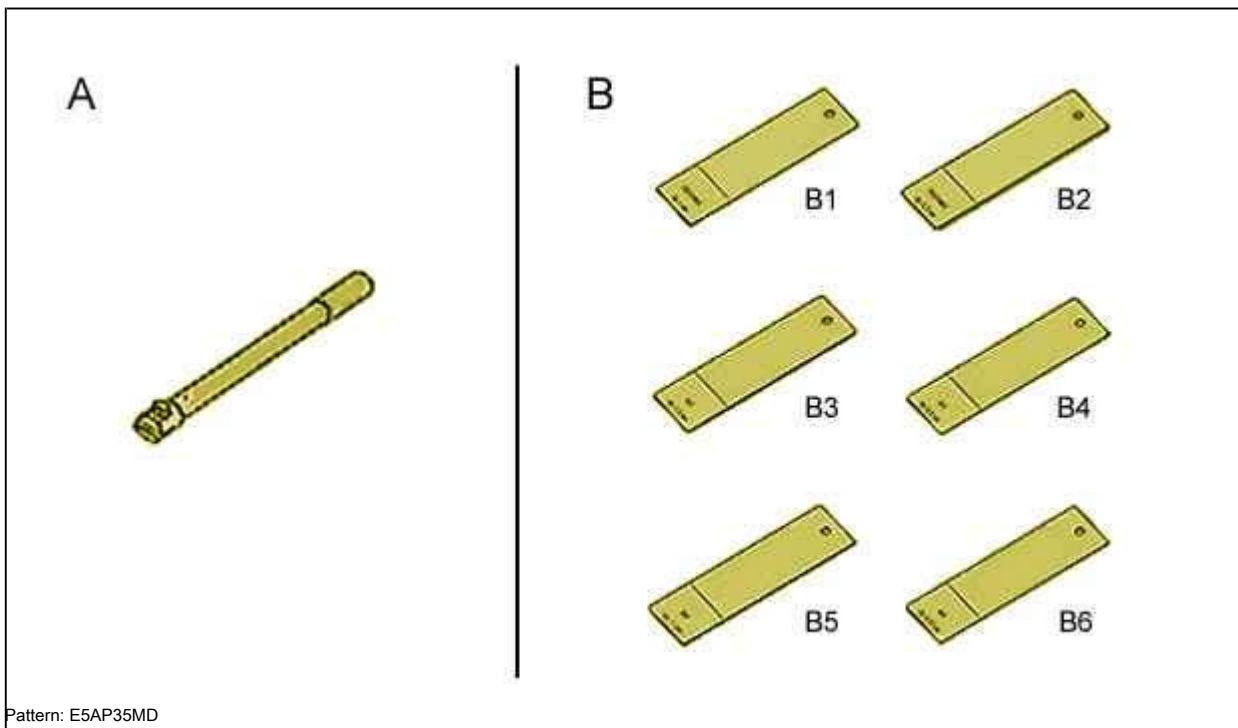
The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment

Operate using one of the following systems:

- Electronic measuring system
- Mechanical measuring system
- Specific head MZ (Special tool)
- Control template



Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

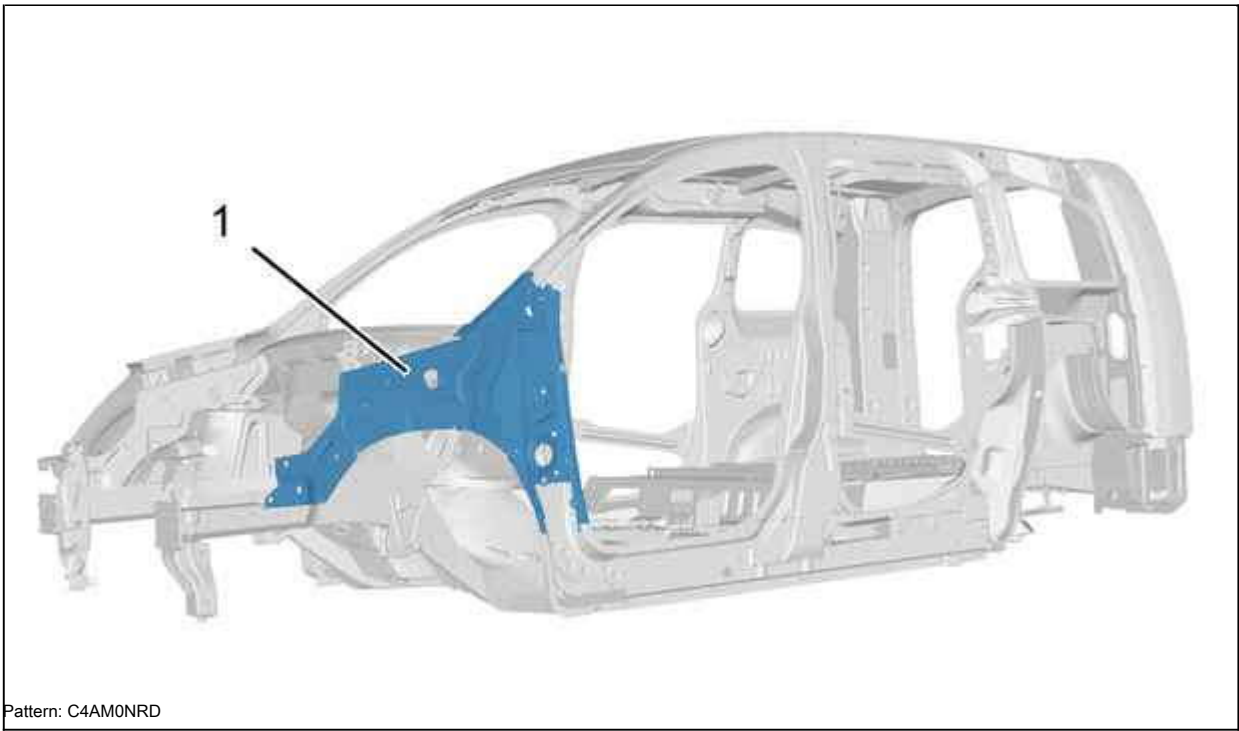
Separate the wire harnesses.

Replace:

- Front reinforcement on the side of the passenger compartment
- From the salon
- Front pillar reinforcement



4. Localization: Front wing molding



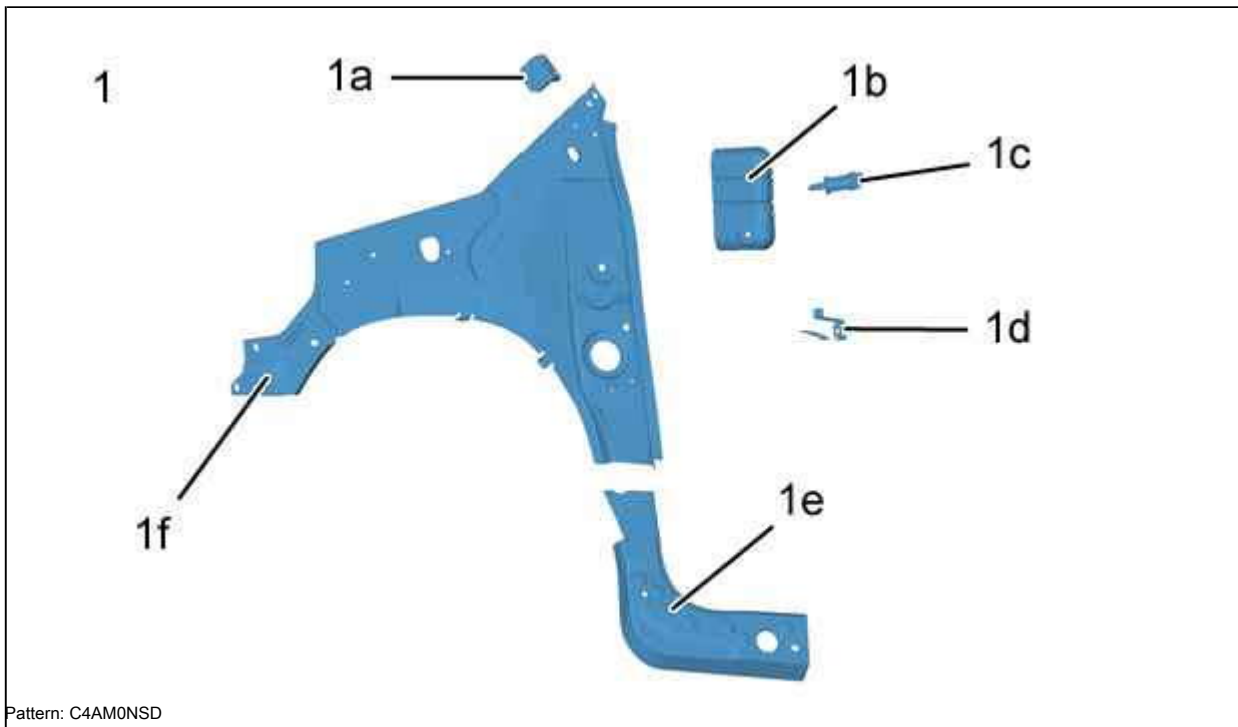
Pattern: C4AM0NRD

Label Designation

(1)	Cover, front fenders assy

5. Identification: Fender molding assembly

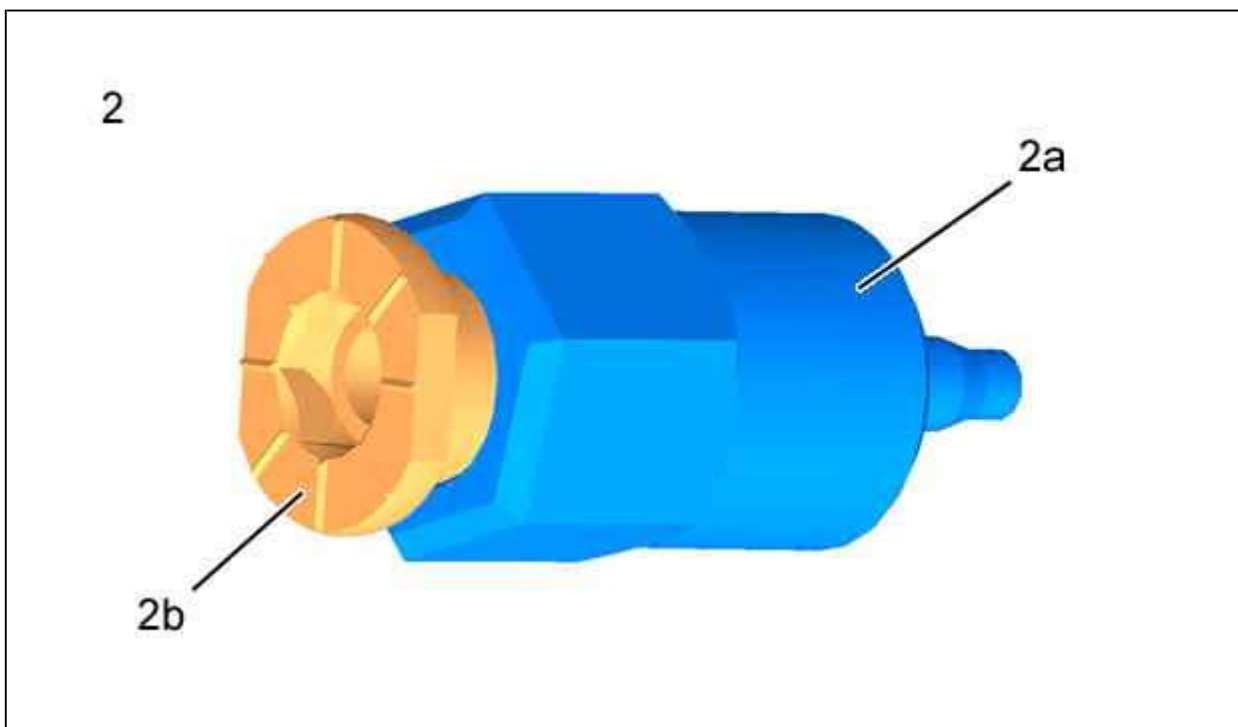
5.1. Includes: Front fender pad assembly



Label Designation

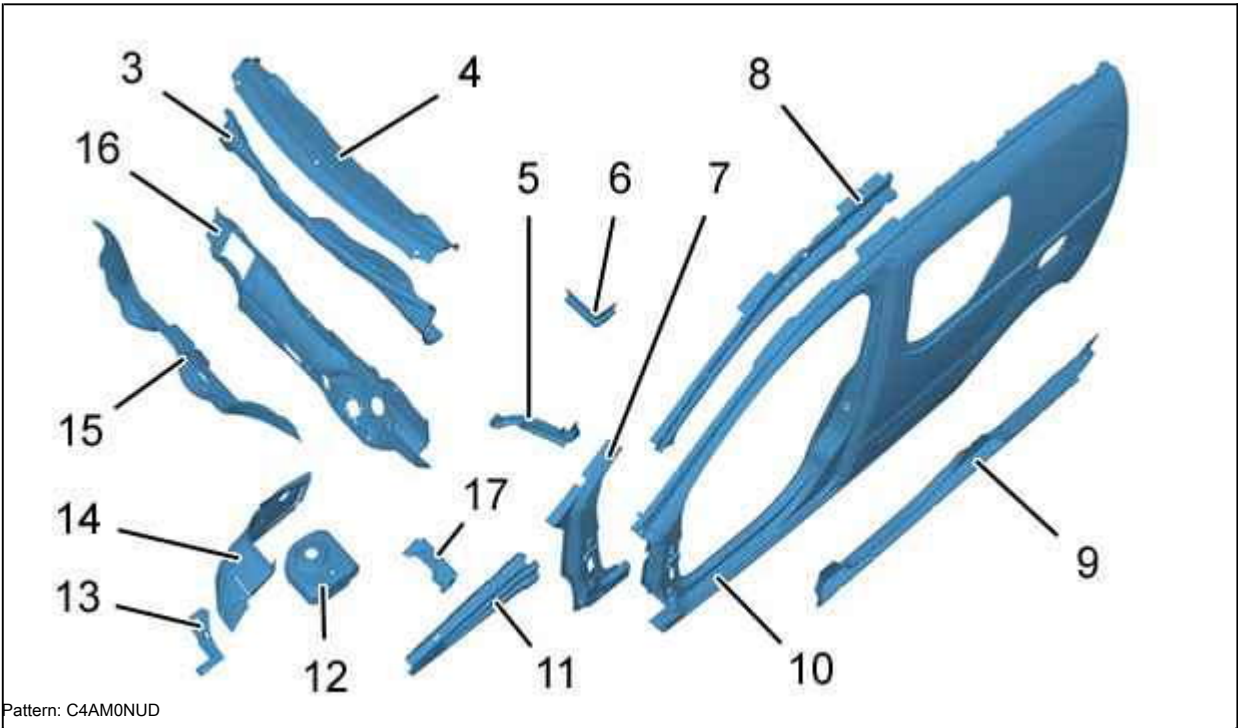
Thickness (mm) Nature / classification

(1)	Cover, front fenders assy		
(1a)	Wiper arm	1.47	Mild steel
(1b)	Dashboard side bracket A-pillar upper spacer NC Mount BS	2.44	Mild steel
(1c)			NC
(1d)		1.17	Mild steel
(1e)	A-pillar lower trim	1.95	HLE
(1f)	Front fender molding	1.17	HLE



ATTENTION : To adjust the installation depth of the spacer (2), remove it and loosen the nut (2b), then reinstall the spacer before proceeding with further installation and welding; The nut (2b) has 2 threads, 1 internal thread serves to fix the door hinge, and 1 external thread (turning to the left) serves to adjust the spacer. The strut is adjusted when installing and adjusting the A-pillar amplifier.

5.2. Identification of the elements adjacent to the front wing molding

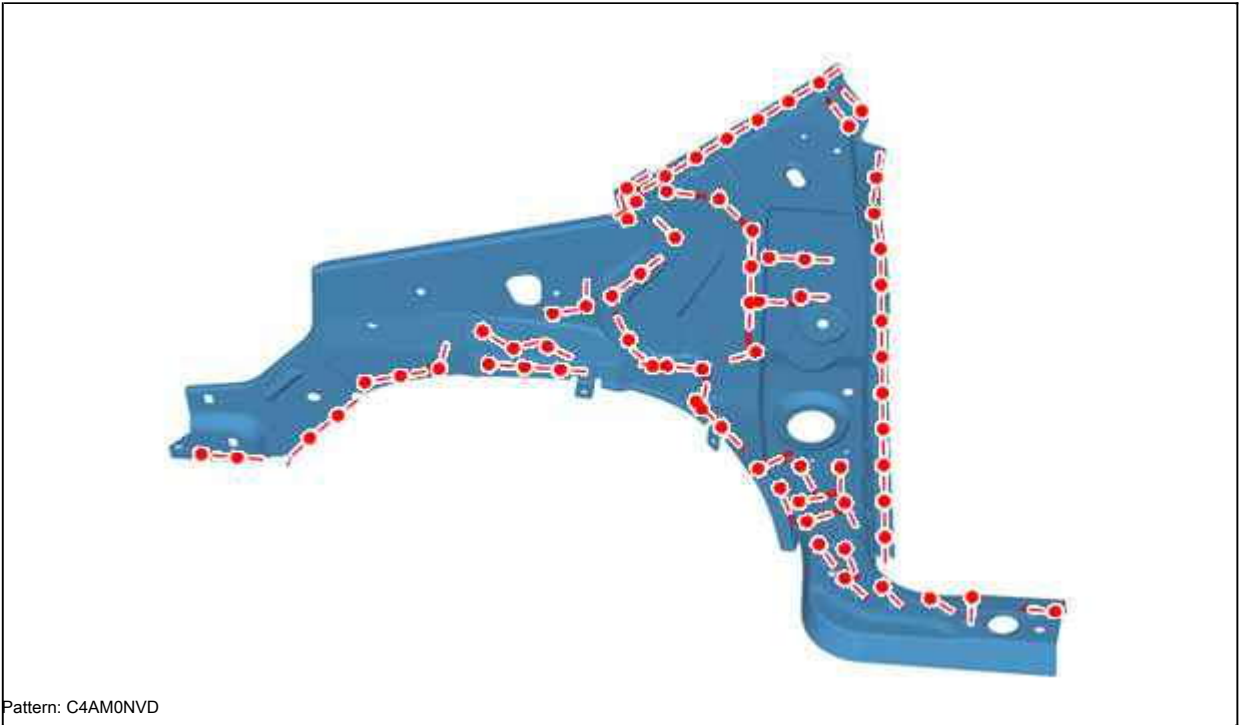


Pattern: C4AM0NUD

Label Designation		Thickness (mm) Nature / classification	
(3)	Upholstery of the lower cross member of the windscreen 1.17		Mild steel
(4)	Bottom cross member of windscreen	0.77	Mild steel
(five)	Side shelf bracket	2.20	THLE
(6)	Dashboard side bracket reinforcement 2.00 Front pillar reinforcement		THLE
(7)		1.47	HLE
(eight)	Windshield pillars	1.47	UHLE
(nine)	Inner spar	1.47	HLE
(ten)	From the salon	0.77	Mild steel
(eleven)	Front reinforcement, passenger compartment	1.47	HLE
(12)	Front suspension support	2.50	HLE
(13)	Wheel arch front	1.17	Mild steel
(fourteen)	Front wheel arch	1.17	Mild steel
(fifteen)	Bottom shield	0.77	Mild steel
(sixteen)	Upper shield	1.17	Mild steel
(17)	Klondike	1.17	HLE

6. Preparation: Fender molding

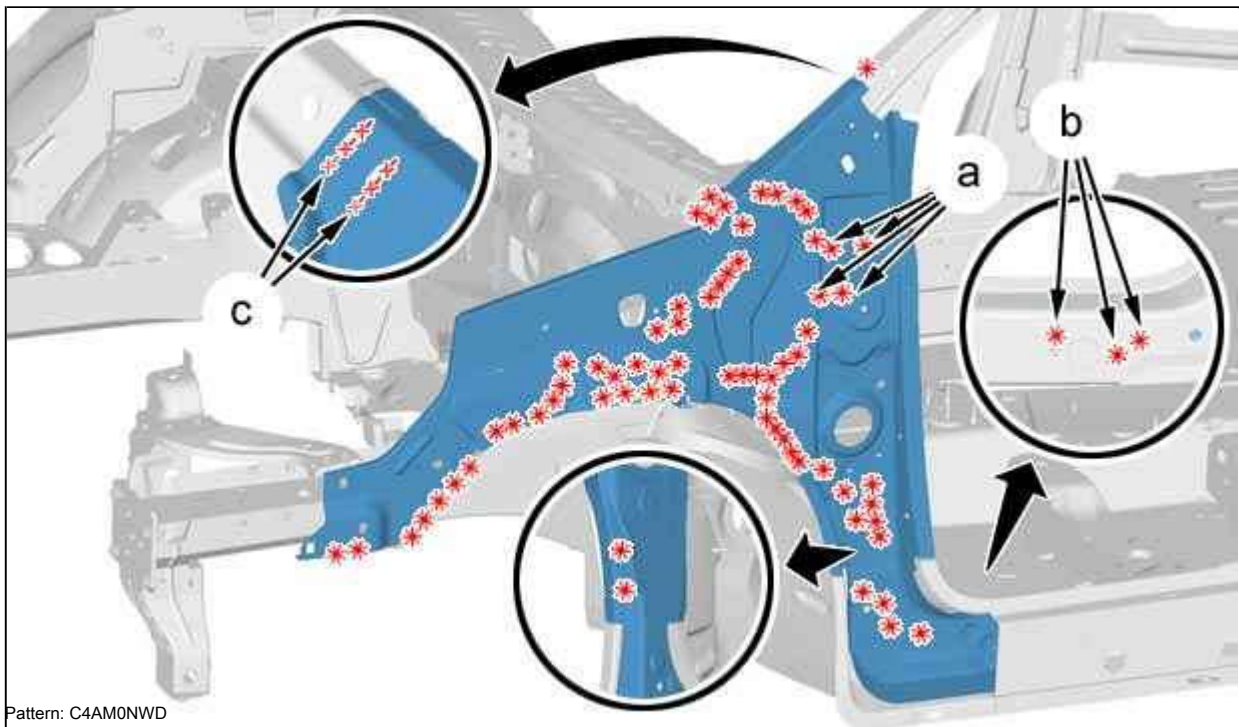
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

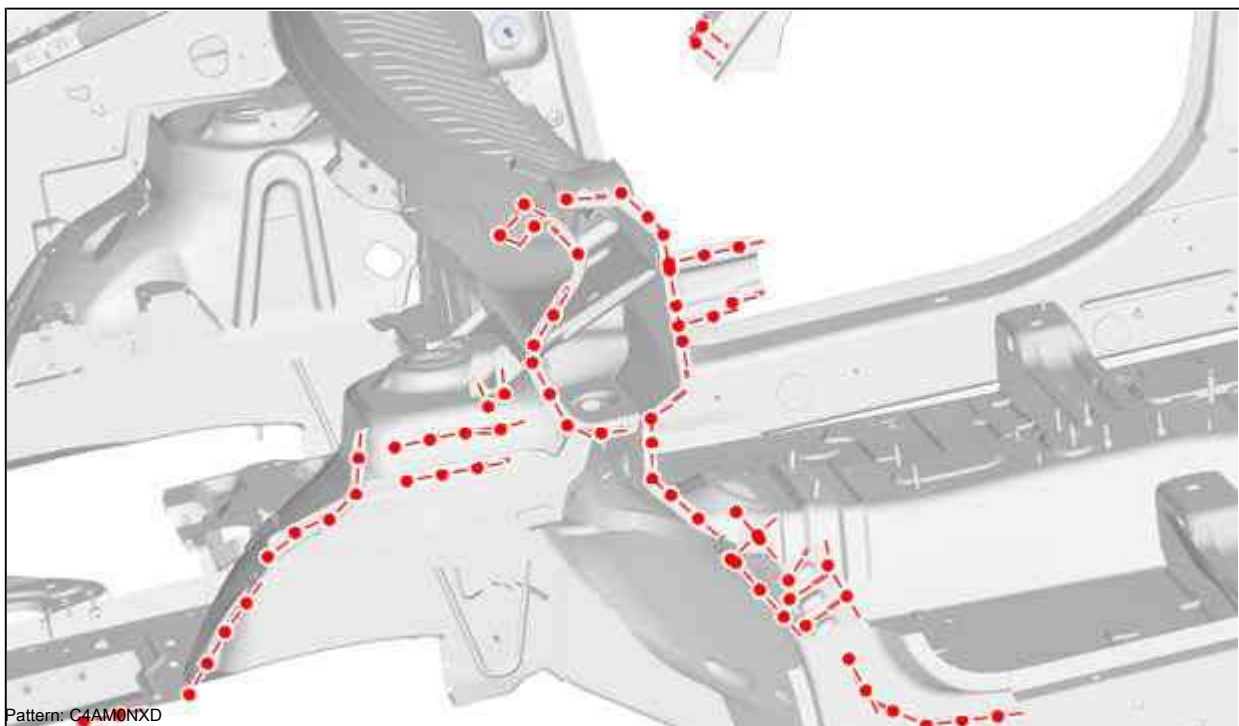
7. Cut: Front fender trim (On body)



Mark (at "a") and then drill out points from the inside of the vehicle. Mark (at "b") and then drill out points from the inside of the vehicle. Grind the MIG welds (in "c").

Cut: Electrical contacts. Remove the front fender trim.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Fitting

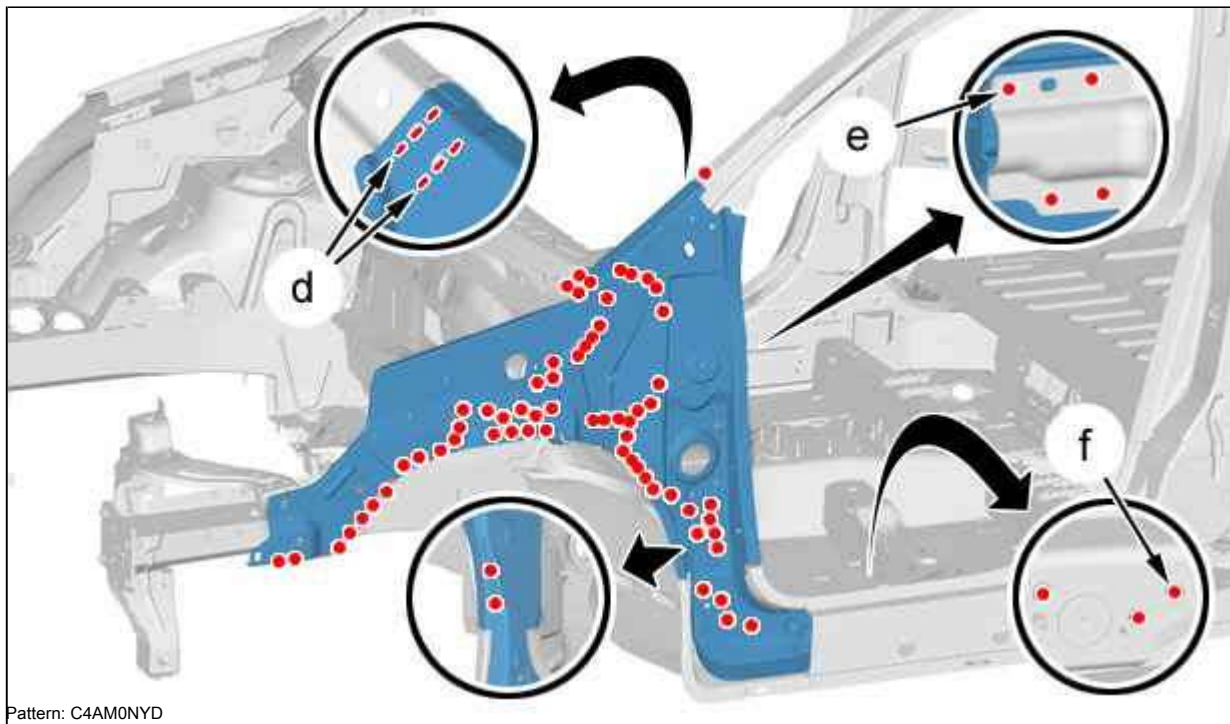
Position: Front wing trim.

Install elements to ensure the fit.

Check clearances and alignment.

Hold the element in place.

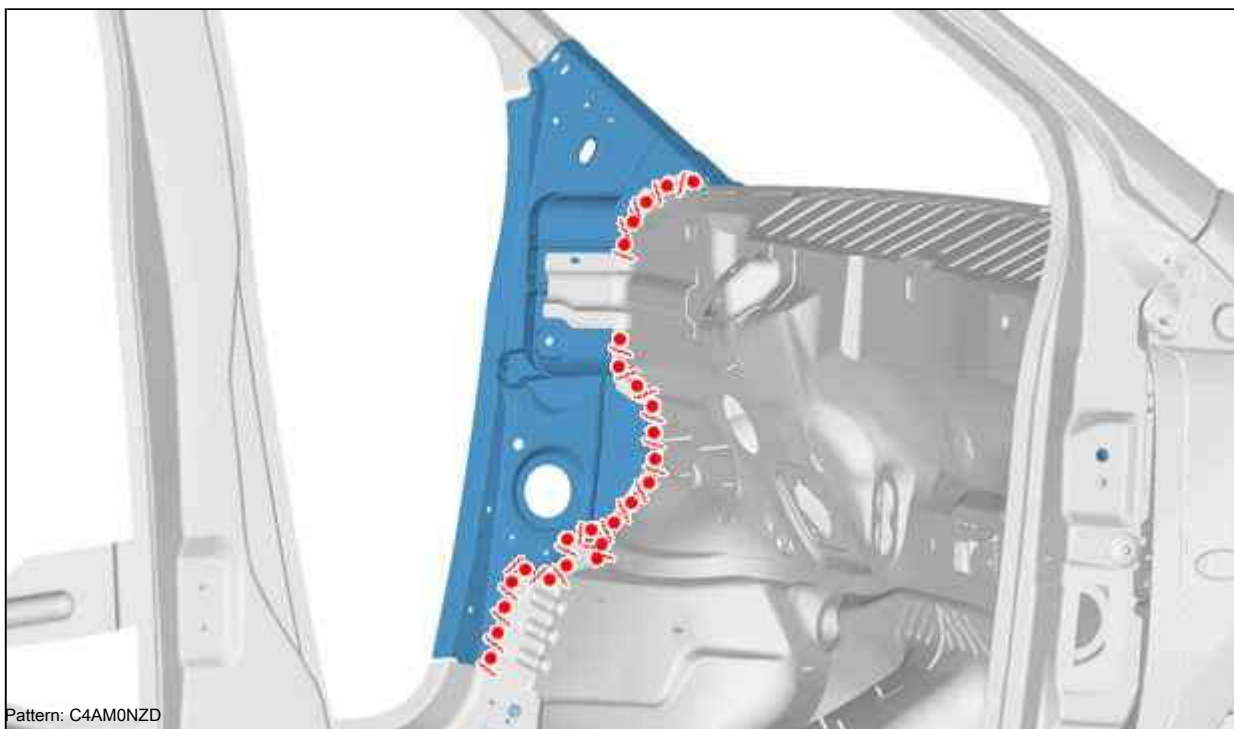
10. Welding



MIG welding (in "d").

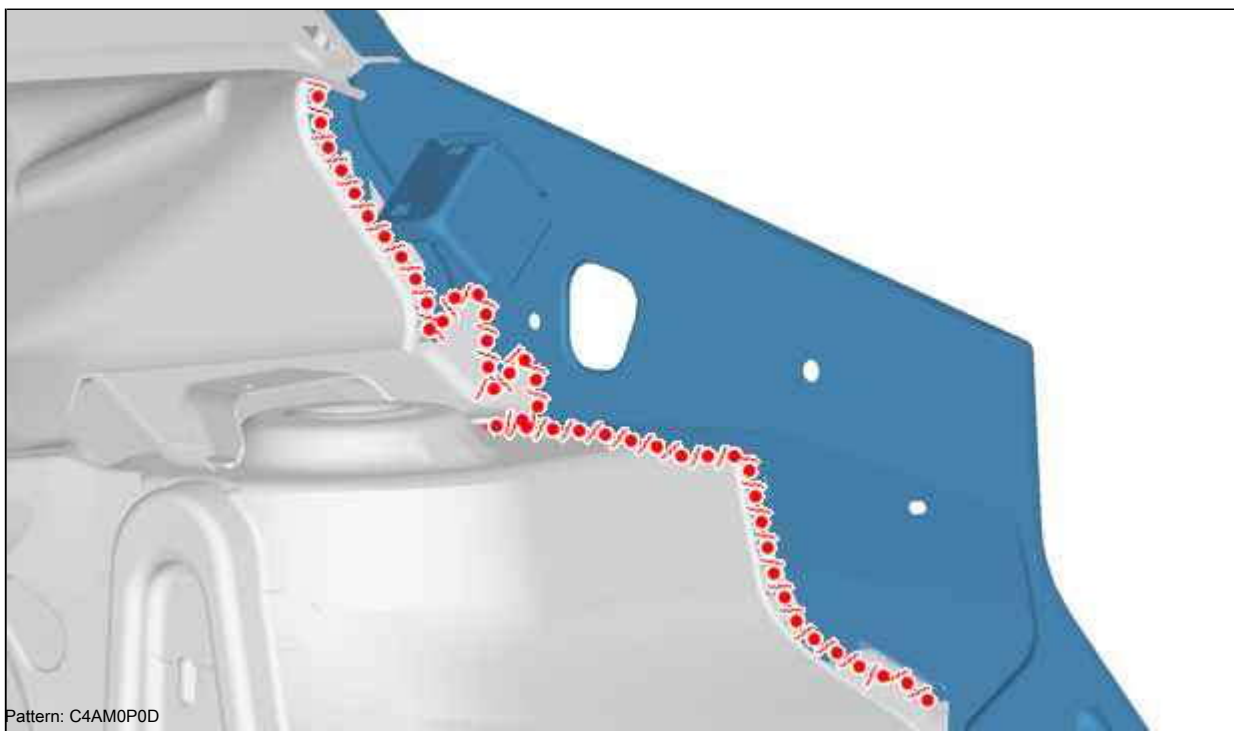
Weld through the holes in the MAG protective gas (in "e", "f"). Weld with welding points.

11. Tightness protection



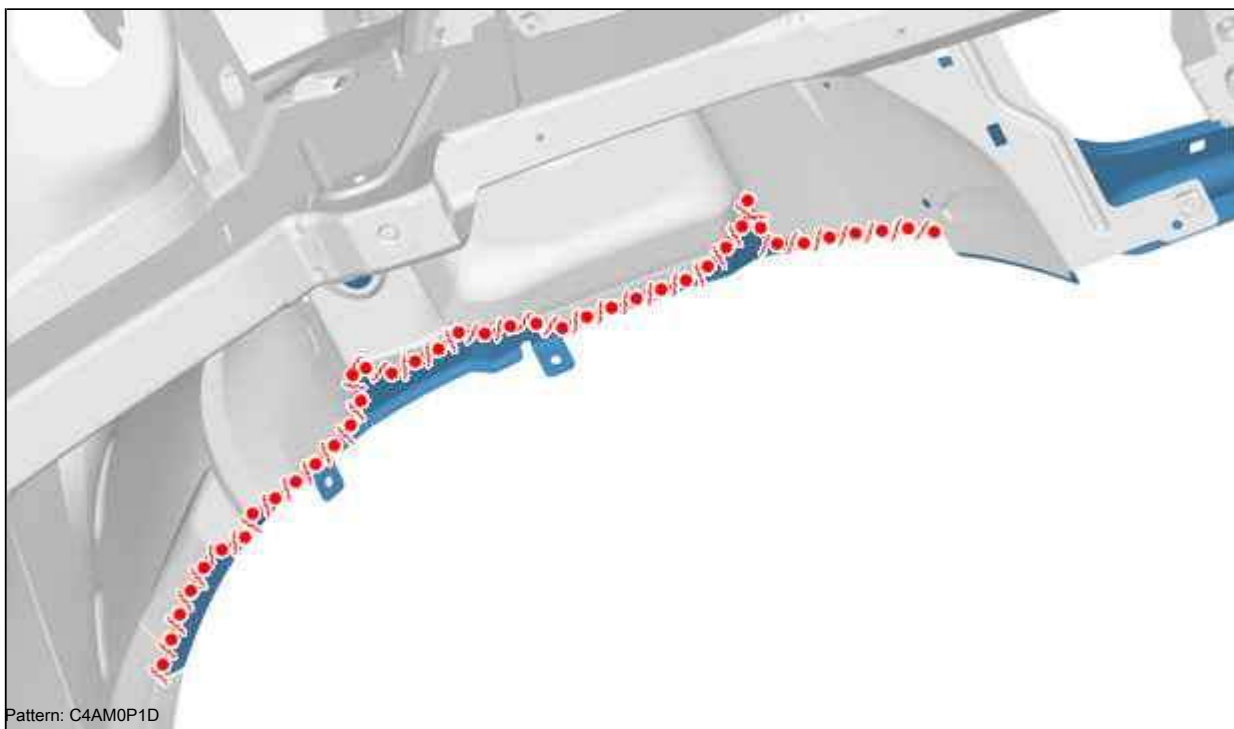
Pattern: C4AM0NZD

Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").

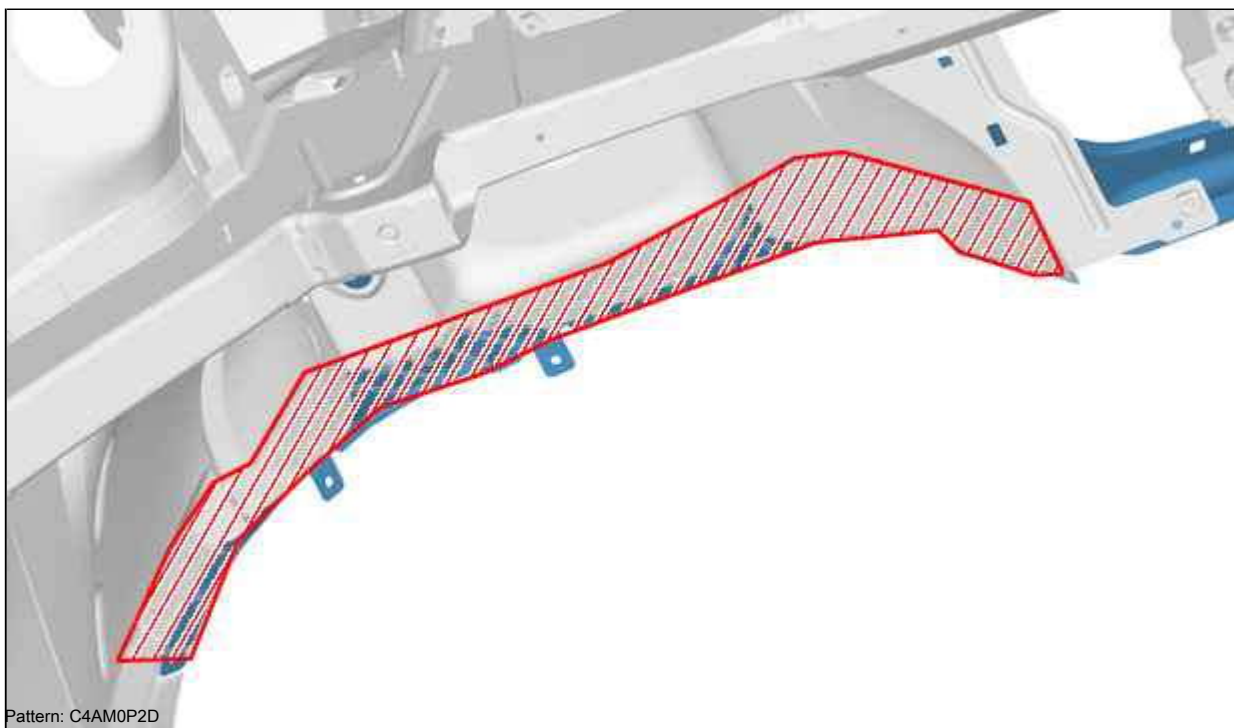


Pattern: C4AM0P0D

Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").



Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").



Apply a layer of phosphate primer to the cleaned areas.

Apply an anti-gravel coating (index "C4").

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL REFITTING: ENGINE HOOD

MANDATORY: Observe the cleanliness and safety rules

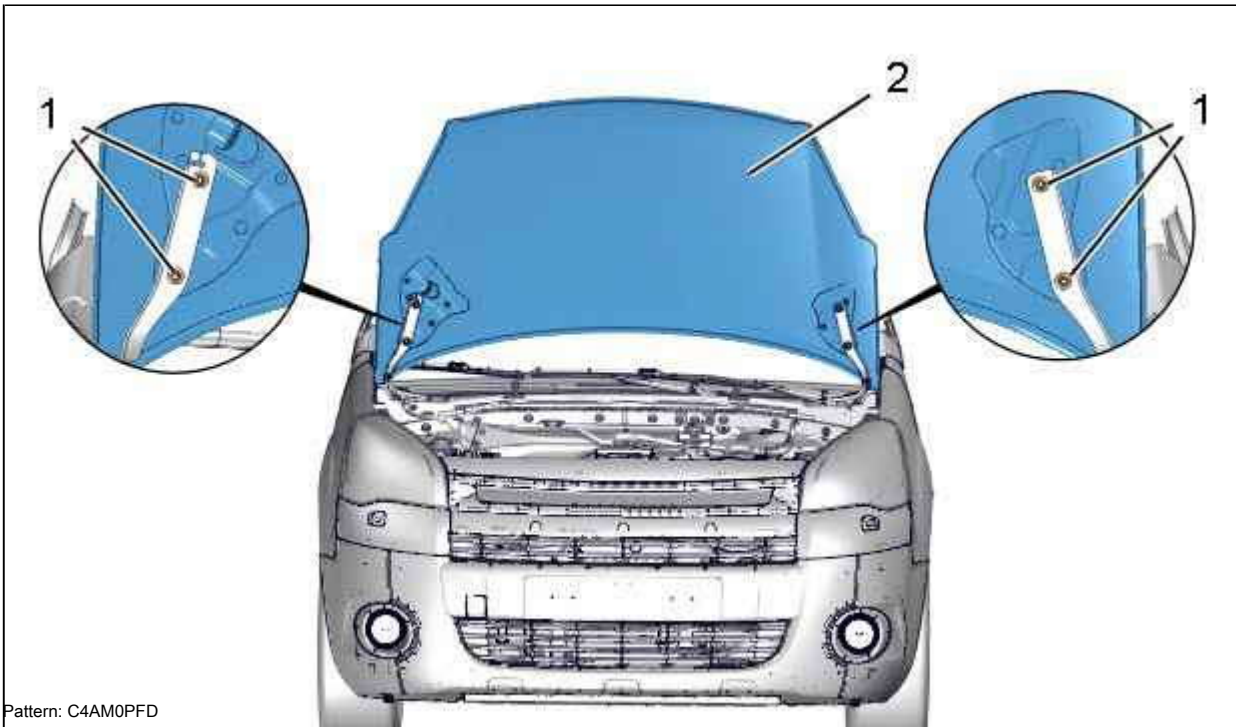


1. Removal

1.1. Engine hood

Open the hood.

Disconnect: Washer pipe.

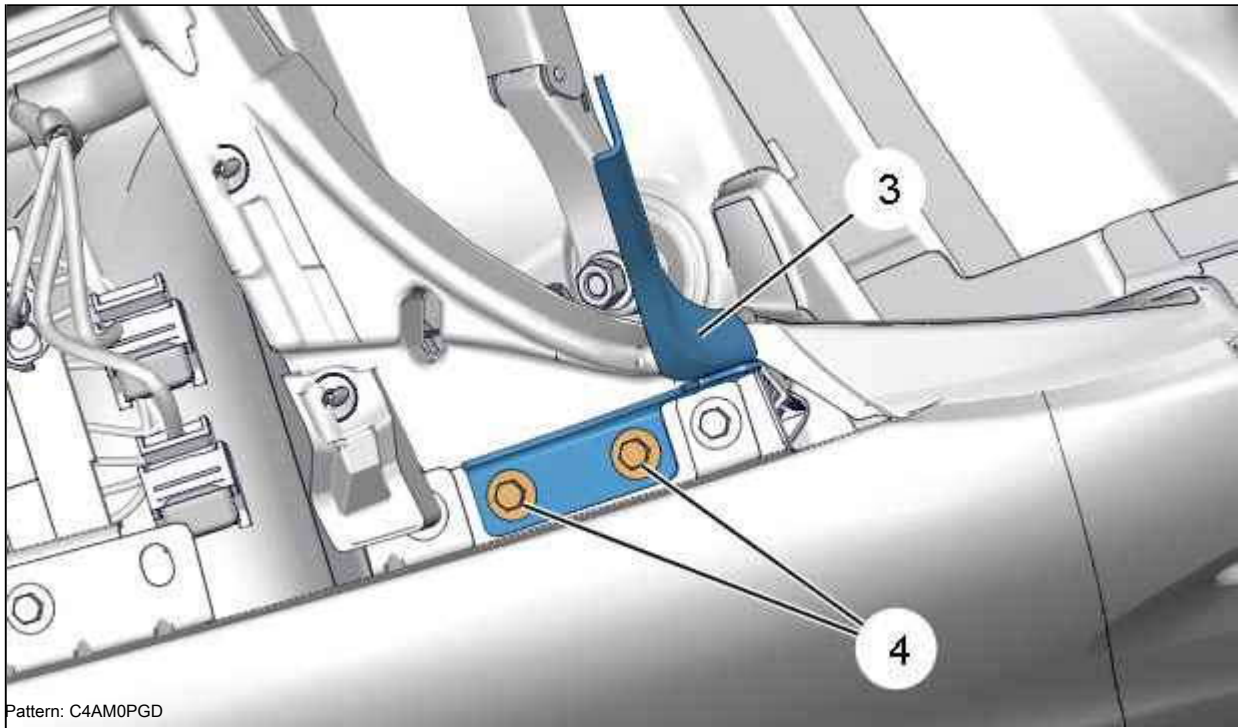


NOTE: The next step requires two workers.

Remove:

- Nuts (1)
- Hood (2)

1.2. Bonnet hinge lever



Remove (each side):

- bolts (4)
- Hood hinge arm (3)

2. Installation

2.1. Bonnet hinge lever

Install (on each side):

- Hood hinge arm (3)
- bolts (4); Tighten to 2.5 da.Nm

2.2. Engine hood

NOTE: The next step requires two workers.

Install:

- Hood (2)
- Nuts (1)

Tighten nuts (1) and loosen them by a quarter of a turn. Close the engine hood.

Carry out clearance and alignment adjustments

Open the hood.

Tighten the nuts to a torque of (1) to 1 da.Nm. Connect:

The washer pipe.

Close the engine hood.

Check the functioning of the electrical equipment.

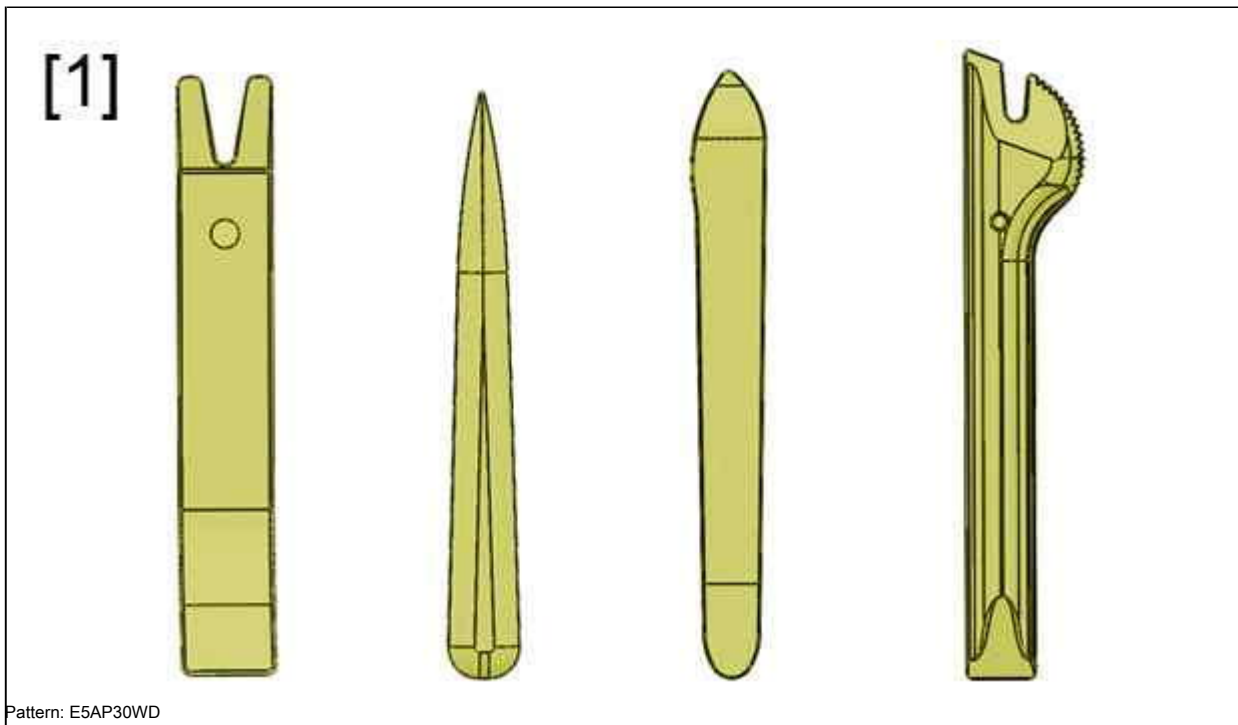


DISASSEMBLY ASSEMBLY: ENGINE HOOD

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim stripper () .1350ZZ.

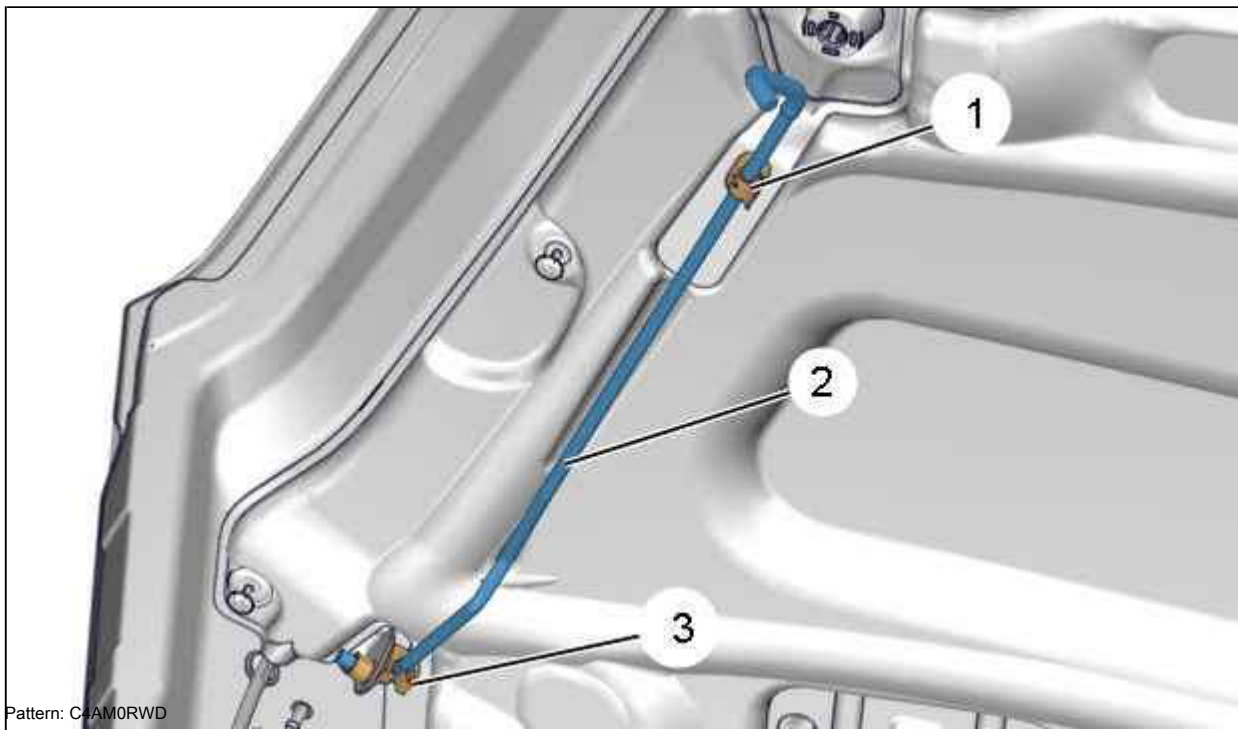
2. Preliminary operations

Remove the hood ...



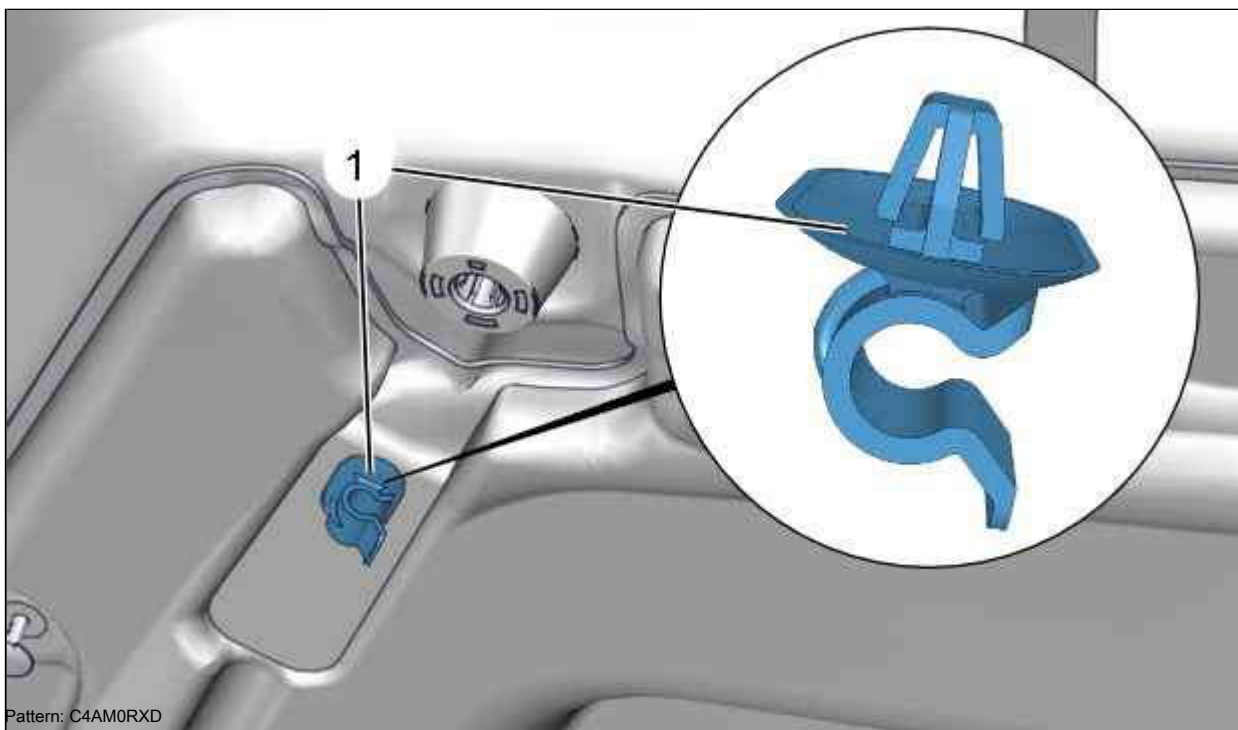
3. Disassembly

3.1. Hood strut



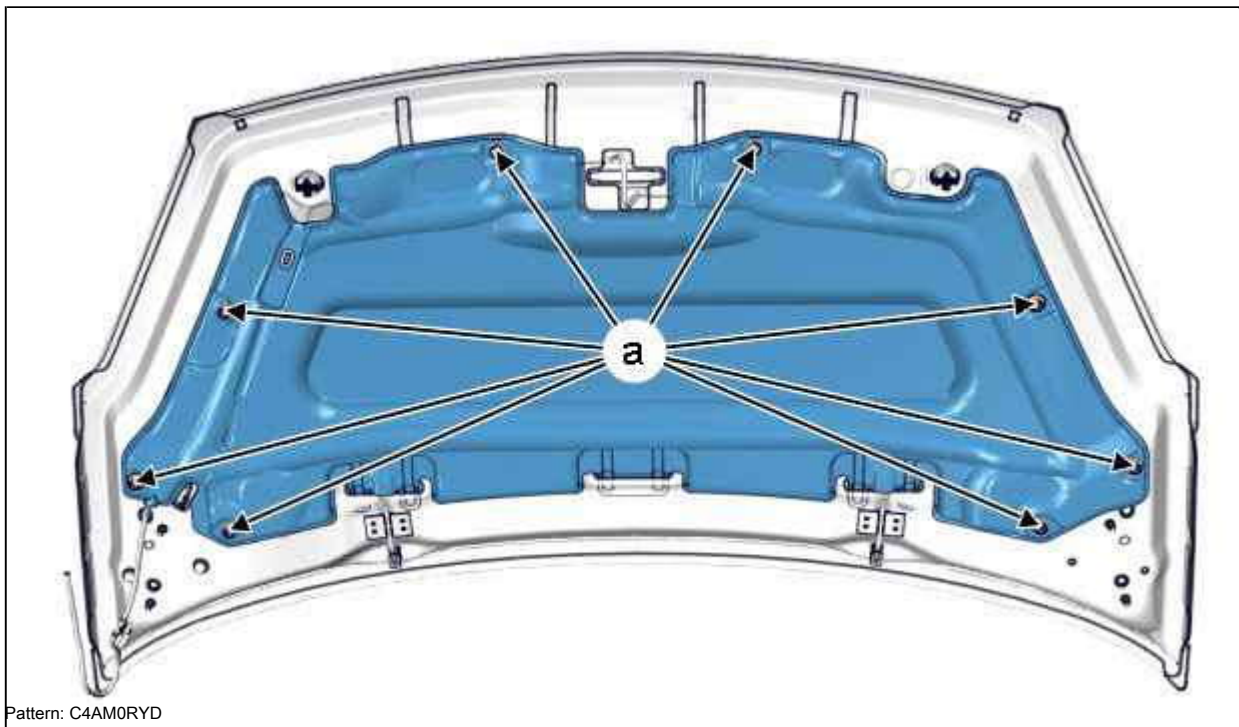
Release the bonnet strut (2) from the fasteners (1), (3). Remove:

- Hood stand (2)
- Mount (3)

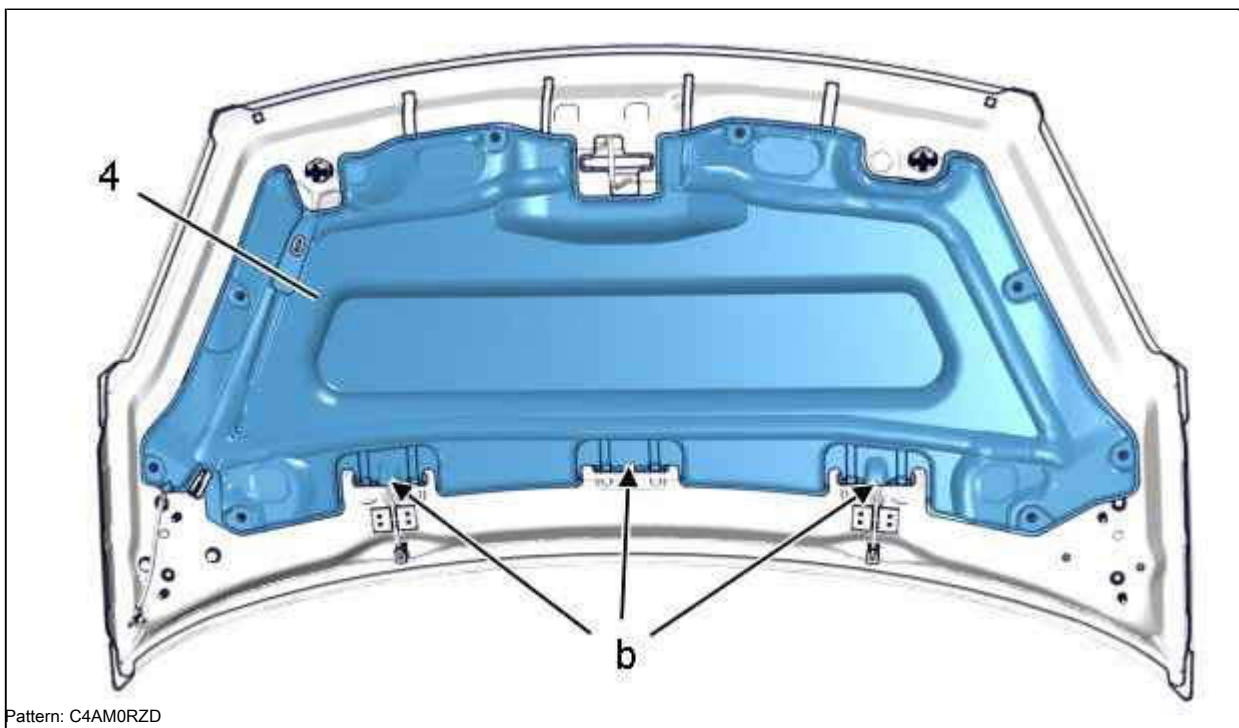


Detach the retainer (1); Using the tool [1]. Remove the mount (1).

3.2. Soundproofing

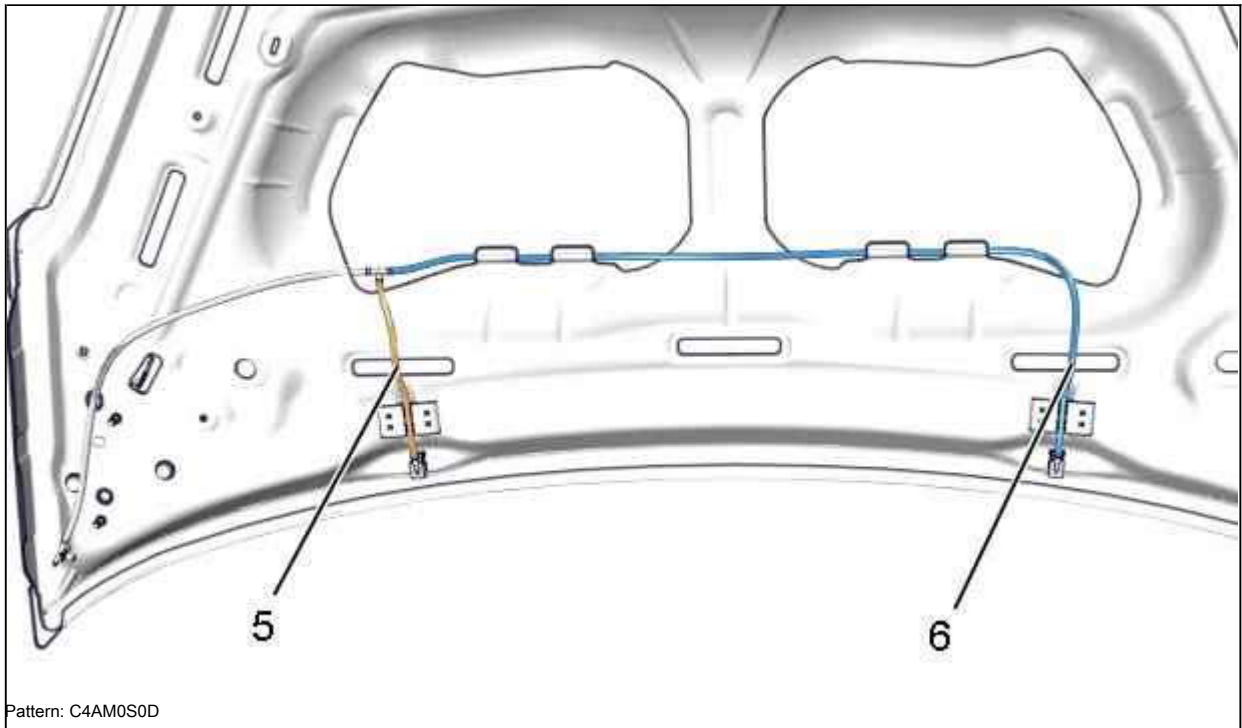


Detach the clips (at "a"); Using the tool [1]. Remove the fasteners.

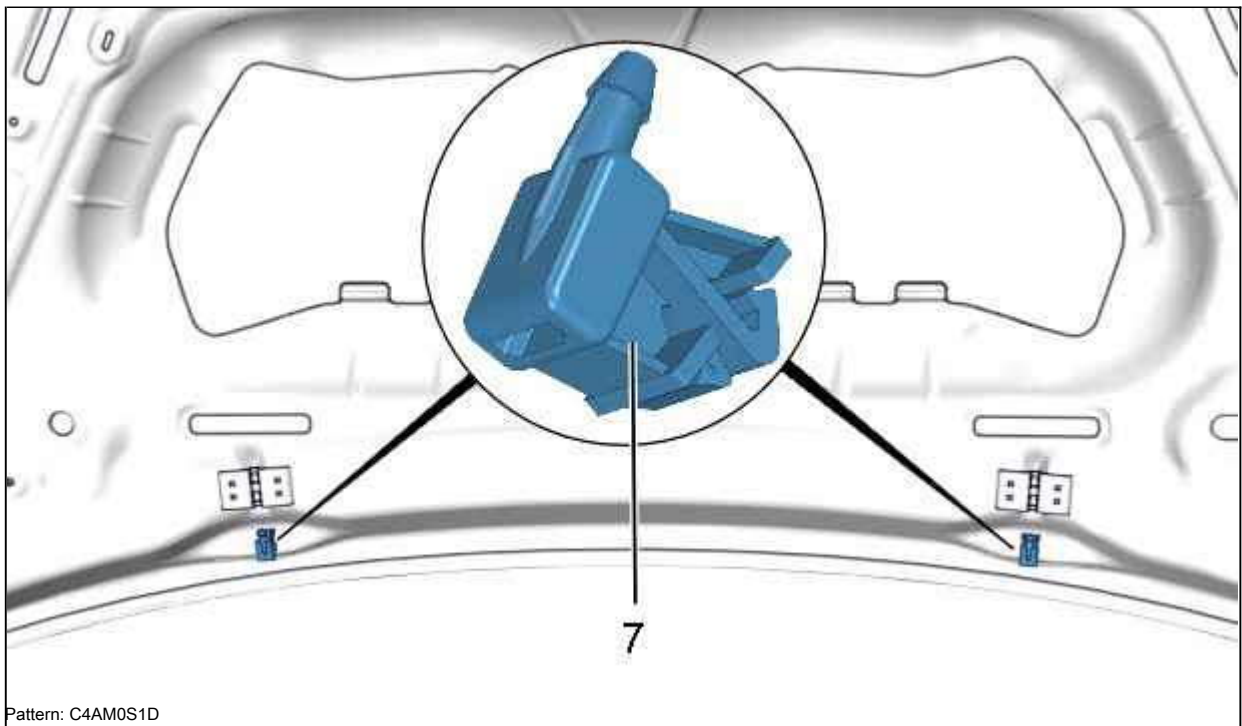


Separate: Bonnet sound insulation (4) (in "b"). Remove: the bonnet sound insulation (4).

3.3. Windscreen washer jets

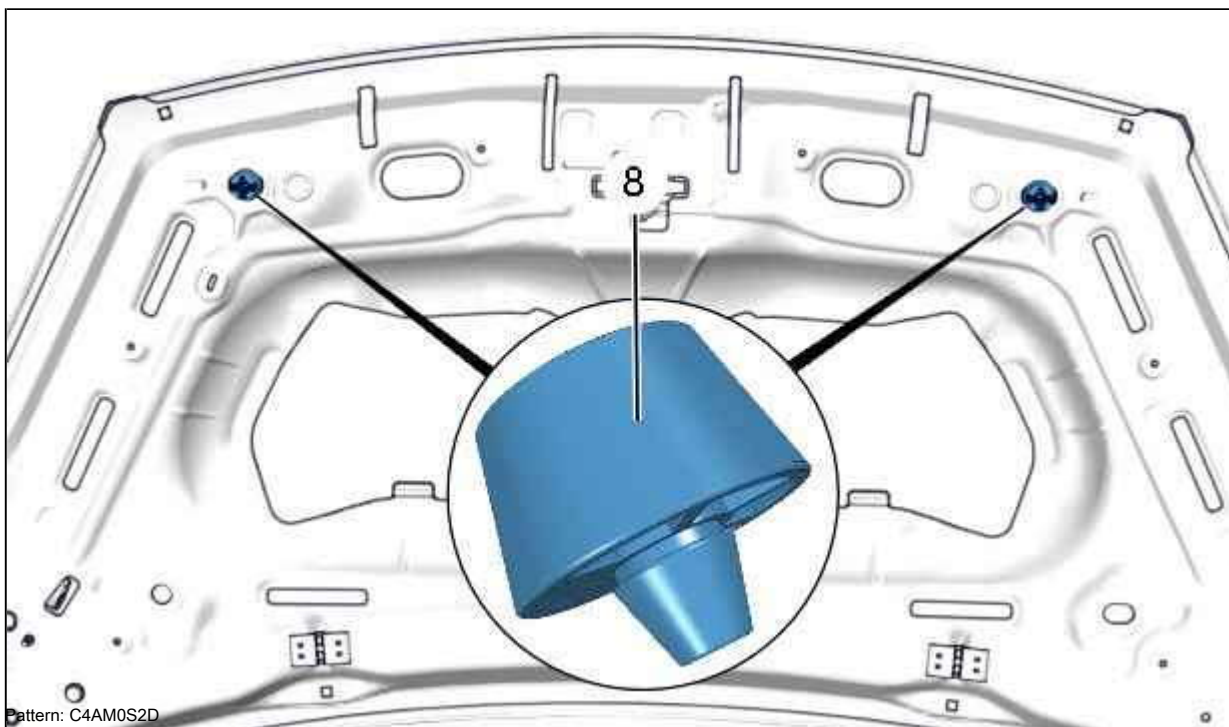


Disconnect tubes (5), (6). Remove tubes (5), (6).



Disconnect the washer jets (7); Using the tool [1]. Remove the washer jets (7).

3.4. Perspiration



Disconnect: Bonnet stops (8). Remove:
Bonnet stops (8).

4. Assembly

ATTENTION : Replace defective clips systematically.

4.1. Perspiration

Install: Bonnet stops (8).

4.2. Windscreen washer jets

Install:

- Windscreen washer jets (7)
- tubes (6), (5)

4.3. Soundproofing

Insert: Bonnet sound insulation (4) (in "b"). Install:

- Bonnet soundproofing (4)
- clips (in "a")

4.4. Hood strut

Install:

- Mount (3)
- Mount (1)
- Hood stand (2)

5. Additional operations

Install the hood

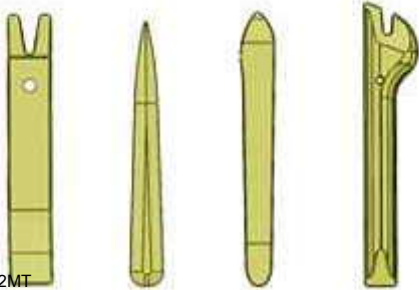
Check the operation of the various equipment.

REMOVAL INSTALLATION: WINDSHIELD

MANDATORY: Observe the cleanliness and safety rules



1. Tools

tool	Article Designation	
	[1350ZZ] Trim	removal tool
<div><div>[1350-ZZ]</div><div></div><div>Figure: E5AG02MT</div></div>		

Presentation:

- Equipment for working with glass
- **Components**windglass

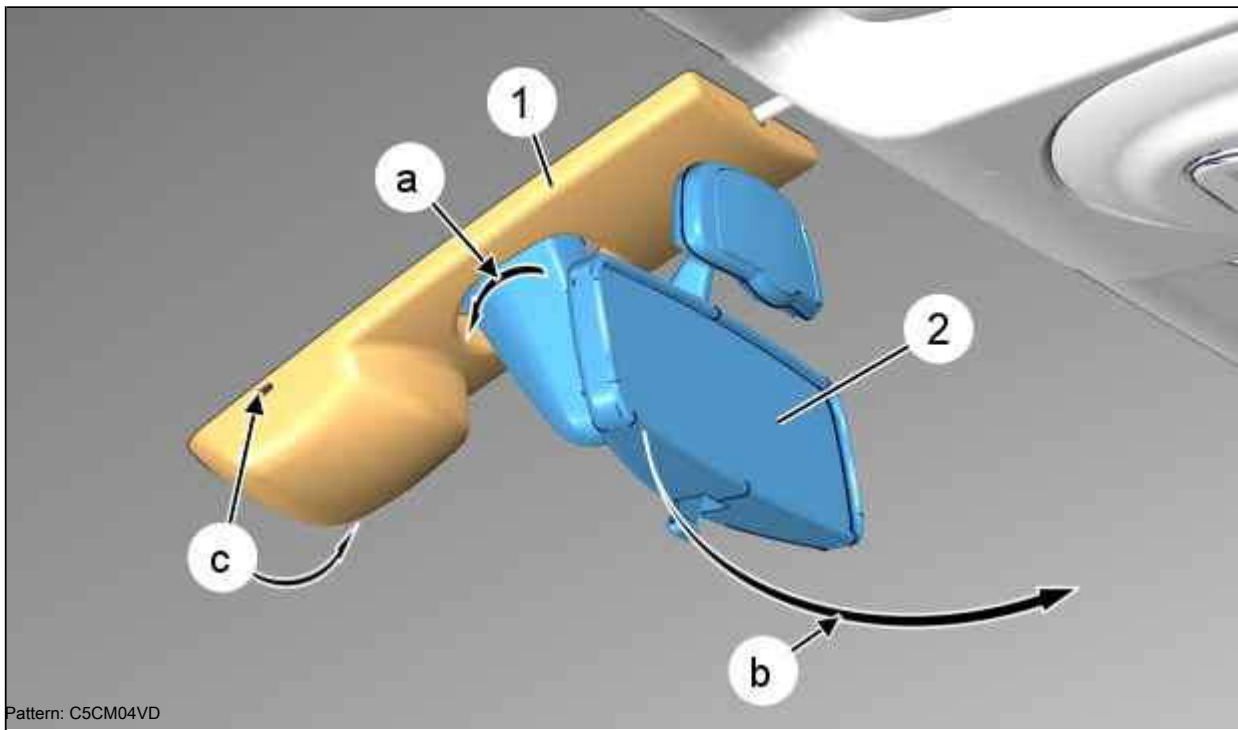


2. Removal

Disconnect the battery



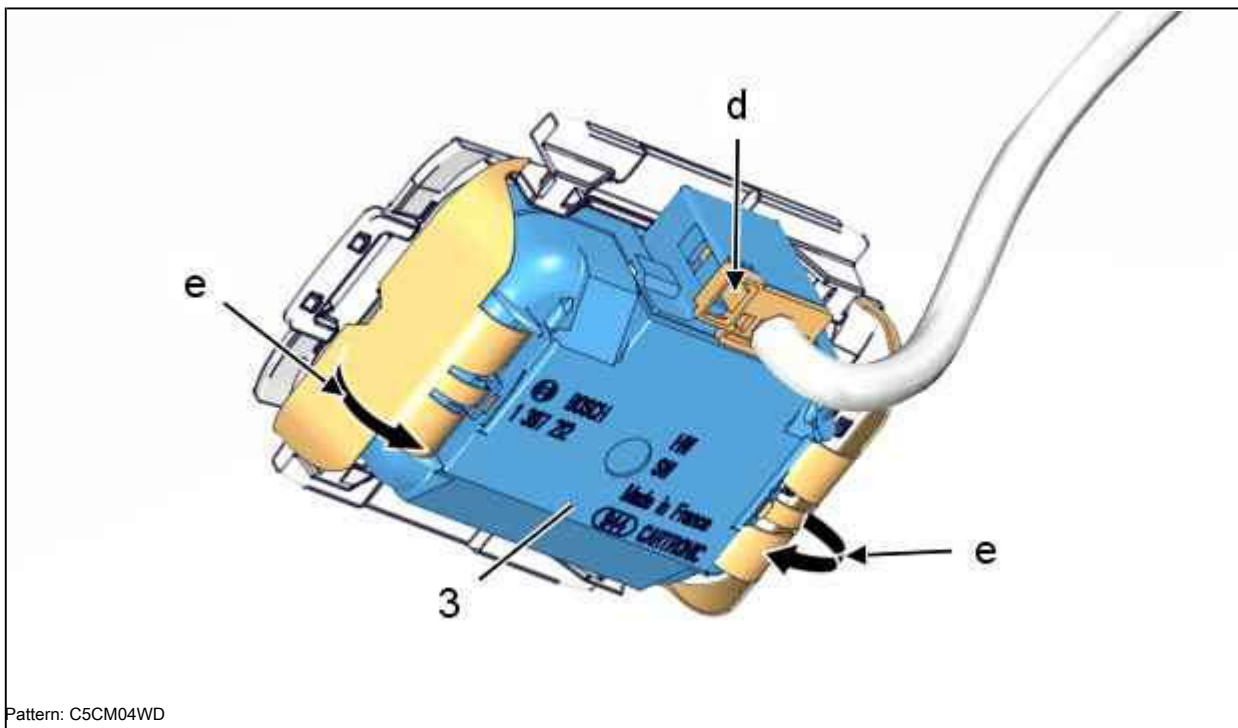
...



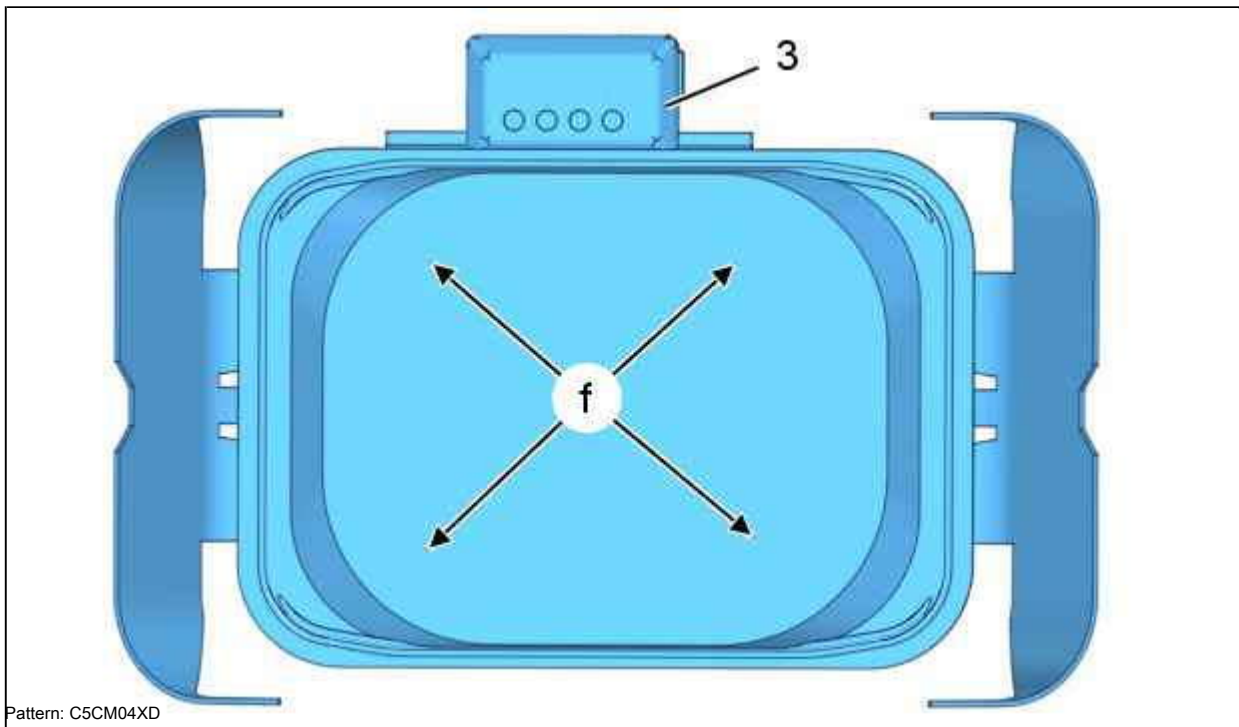
Detach the rear view mirror (2) by turning it 1/4 turn (As shown in "a") (counterclockwise direction).

Separate Remove the outside mirror (2) (As shown in "b").

Disconnect: Double sensor cover (at "c"); Using the tool [1350ZZ].



Disconnect: Dual sensor connector (3) (at "d"); Using the tool [1350ZZ]. Disconnect: Double sensor (3) (As shown in "e"); Using the tool [1350ZZ].

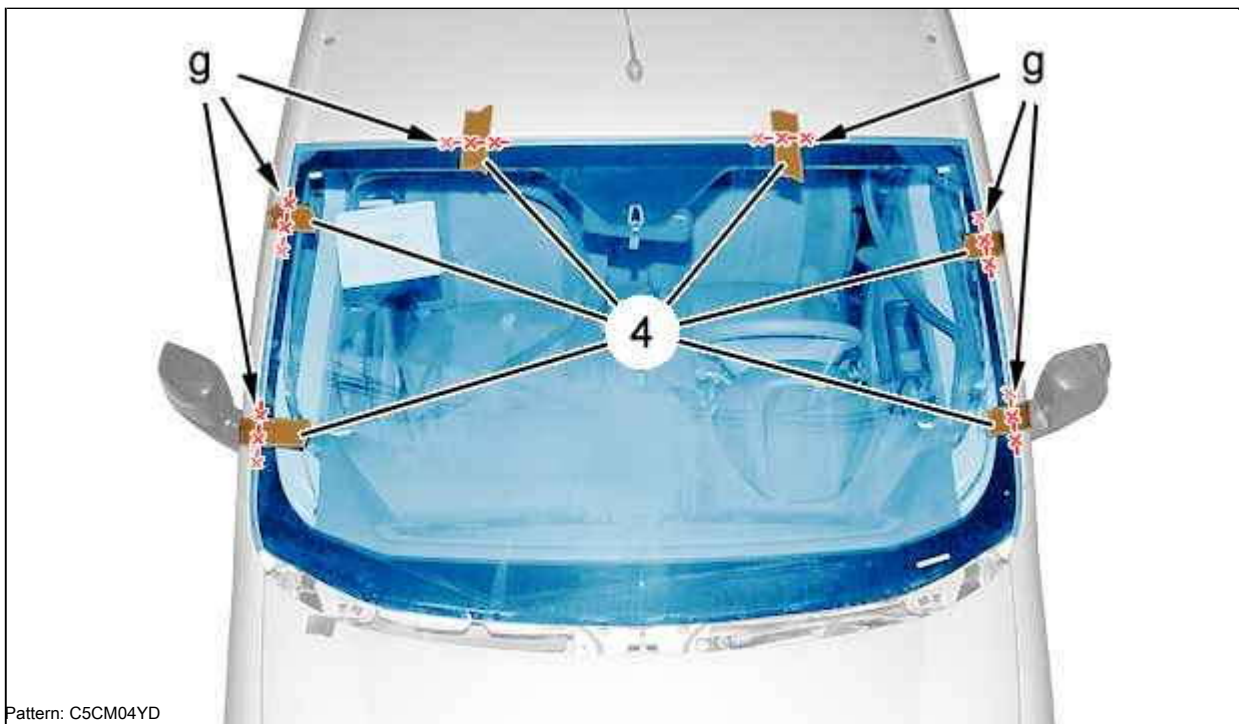


Pattern: C5CM04XD

Remove the dual light and rain sensor (3).

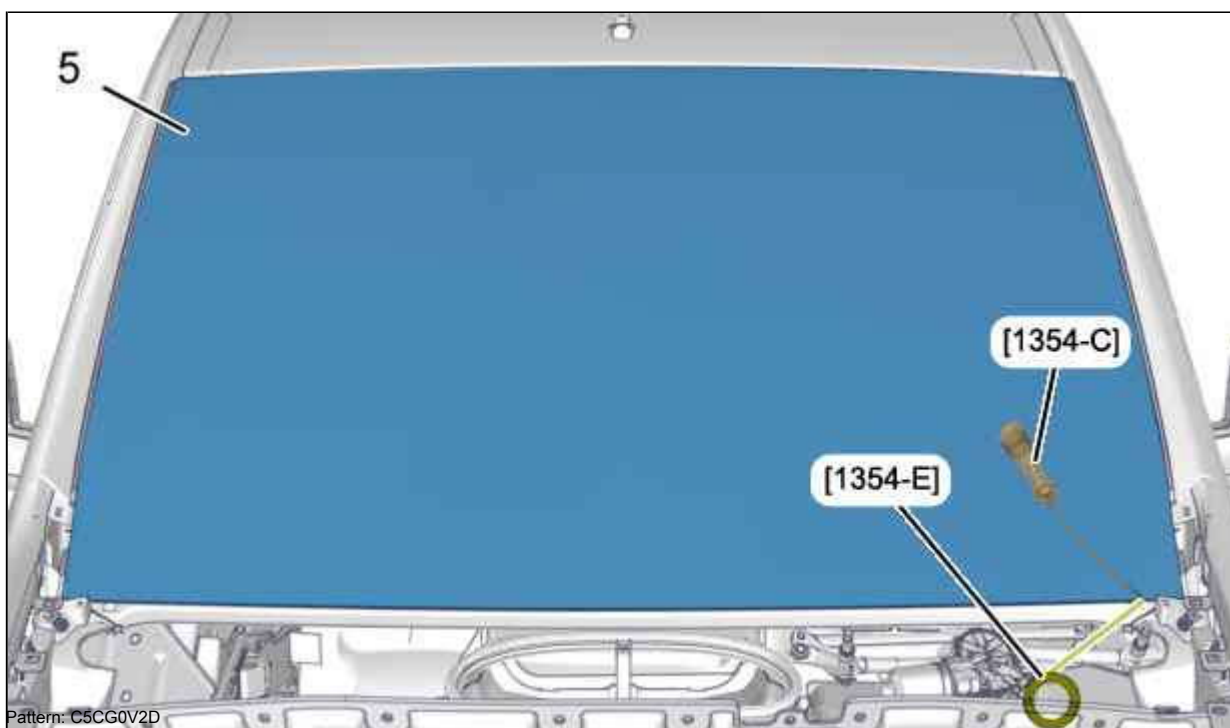
ATTENTION : Protect the seat of the double sensor (3) (at "f"); With adhesive tape (To avoid contamination).

Remove the trim of the windscreen frame strut Remove the air intake grille

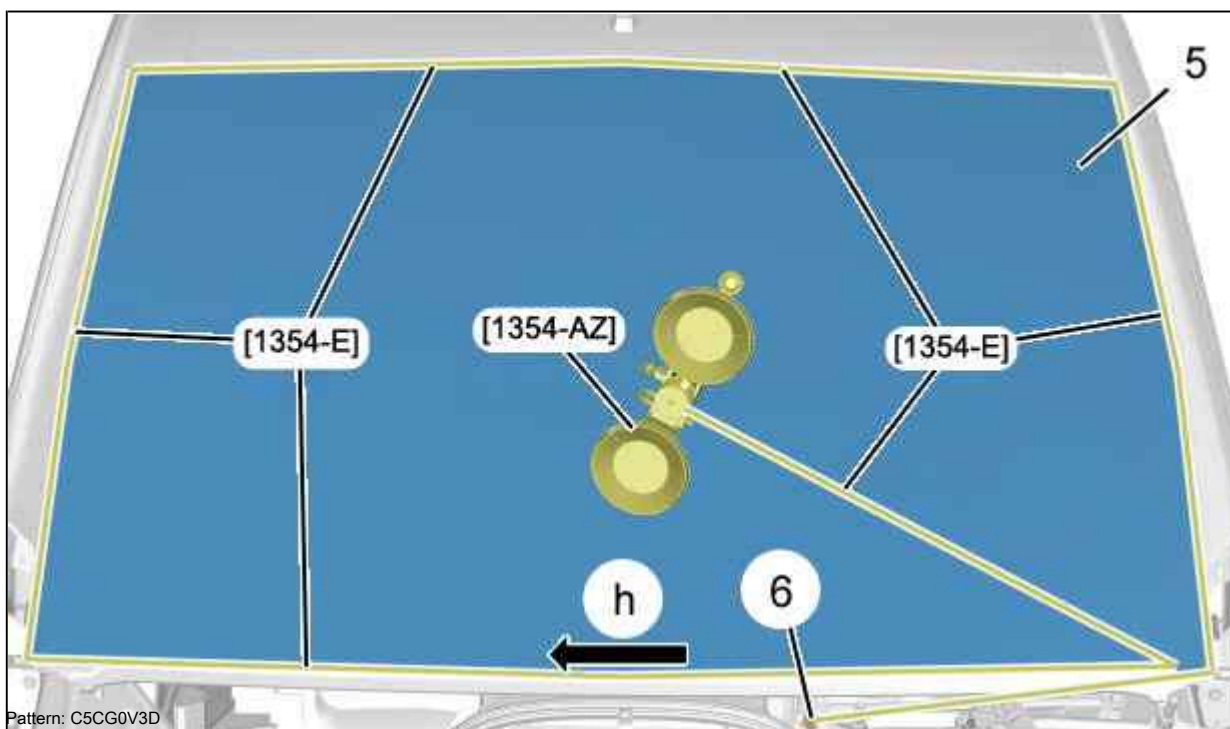


Pattern: C5CM04YD

NOTE: When reusing the windscreen: Stick on the adhesive tapes (4) and cut them (in "g").



Pass the mounting shim [1354C] through the adhesive seam from the inside to the outside of the windscreen (5). Insert the cutting string [1354E] sewn in [1354C] and pass it inside. Leave sufficient length to be able to be secured in the winder.



Pass the cutting wire [1354E] over the bonding point of the windscreen ("h") along the entire contour of the windscreen (5); Using a soap solution.

Cut off the cutting wire [1354E], leaving sufficient length to secure the wire to the attachment (6) of the windscreen wiper mechanism.

Attach the other end of the wire [1354E] inside the winder [1354AZ].

ATTENTION : Protect the seam cut area between control panel and string [1354E].

When tensioning the cutting wire, check the correct position of the wire under the windscreen seal.

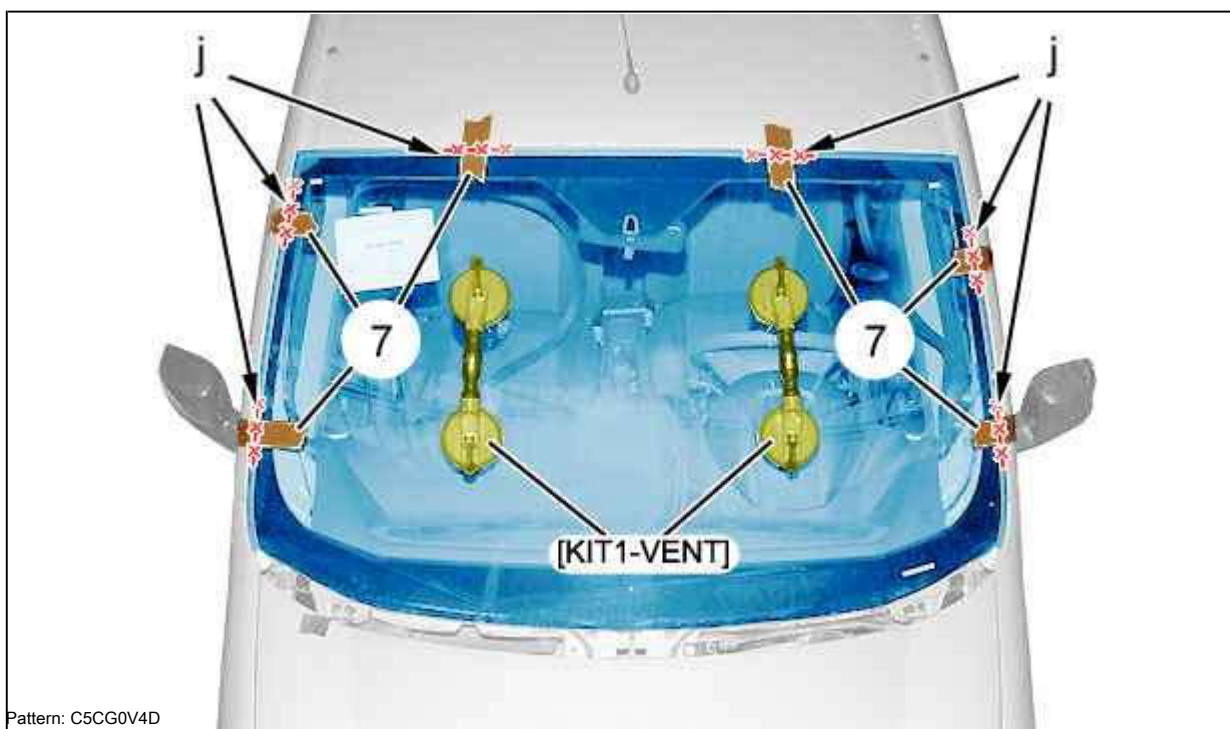
NOTE: If even the slightest resistance appears, loosen the wire and help it pass through the obstacle (Shims, adhesive seam allowance or plate joint).

Remove the windscreen (5); Using the two [KIT1VENT] suction cups.

3. Installation

3.1. Preparation: Groove

Equip the electric cutter [FEIN400E] with a # 128 blade. Place adhesive strips on windshield and groove.



Pattern: C5CG0V4D

When replacing the windshield, center the glass and secure with adhesive strips (7) as shown in the illustration, then cut from it (at "j").

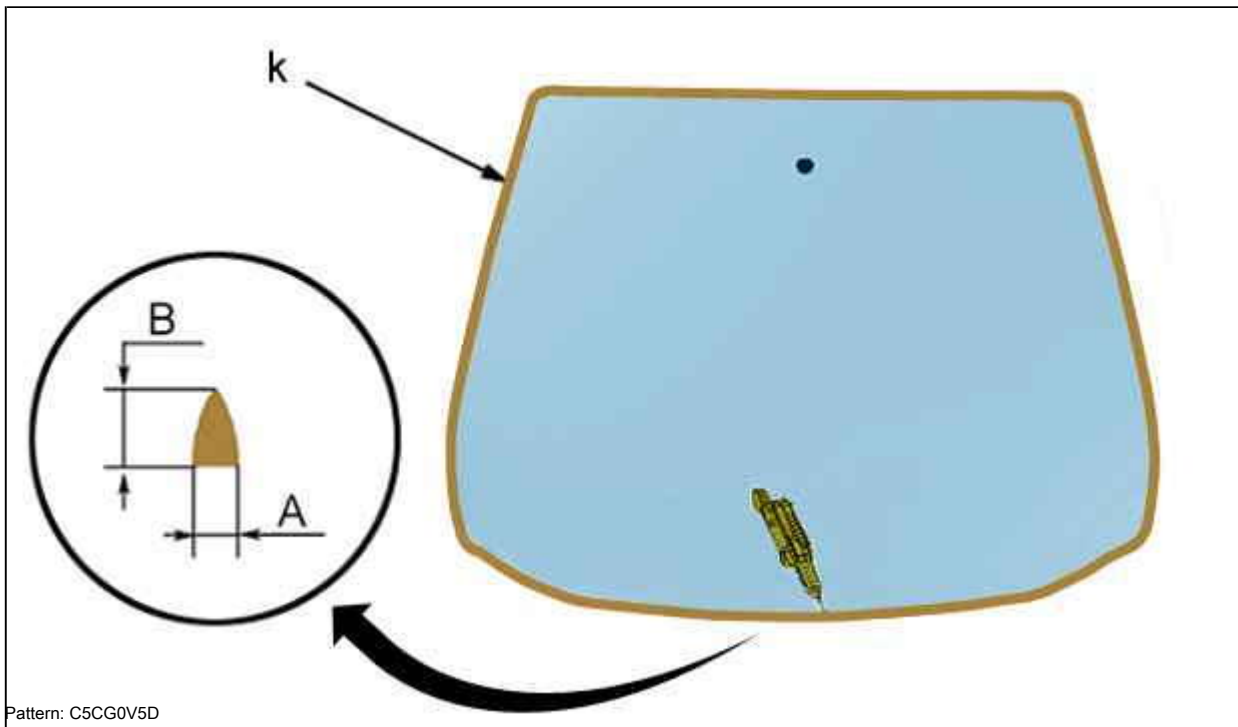
Remove the windscreen.

Restore anti-corrosion coating.

Degrease the groove with the degreaser supplied with the adhesive kit. Let dry for 10 minutes.

3.2. Pasting

ATTENTION : Replace regularly: Gaskets and damaged mounting gaskets.



Install a mastic mixer gun.

Use the nib supplied with the sticker kit or another nib that will produce a roll with a diameter of "A" = 8 with a roll height of "B" = 13mm.

1st time: Restoring the windscreen:

- No need to apply a primer
- Wipe off any dirt from the sealant on which the compound is applied; using compressed air

2nd time: This method is used when installing a new windshield:

- Degrease the front windshield with the adhesive from the adhesive kit
- Some glasses are supplied pre-primed
- No need to reapply primer on top of the primer applied during production "J"; Allow to dry for 10 minutes

ATTENTION : The time between applying the mastic on the glass and installing the glass on the car should not exceed 8 minutes (For quick-setting stickers).

Apply a bead of adhesive along the center line of the primed strip (As shown in "k").



Position the windscreen according to the adhesive tape marks (7). Check for clearances and alignment of windshield. Apply pressure around the entire perimeter of the glass. Hold the glass with the suction cups [KIT2VENT].

Wait 30 minutes for the adhesive to cure before any further action. Check the windscreen for leaks.

Install: Dual sensor (3).

Connect the connector to the dual sensor (3). Install:

- Dual sensor cover (2)
- Rearview mirror (1) (Position and turn 1/4 turn clockwise)

4. Additional operations

Install: **Door pillar trim panels**

Air intake grille in front of windshield Reconnect battery

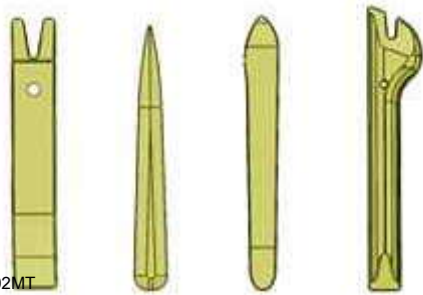
Check the functioning of the electrical equipment.

REMOVAL REFITTING: LIGHT AND RAIN SENSOR

MANDATORY: Observe the cleanliness and safety rules

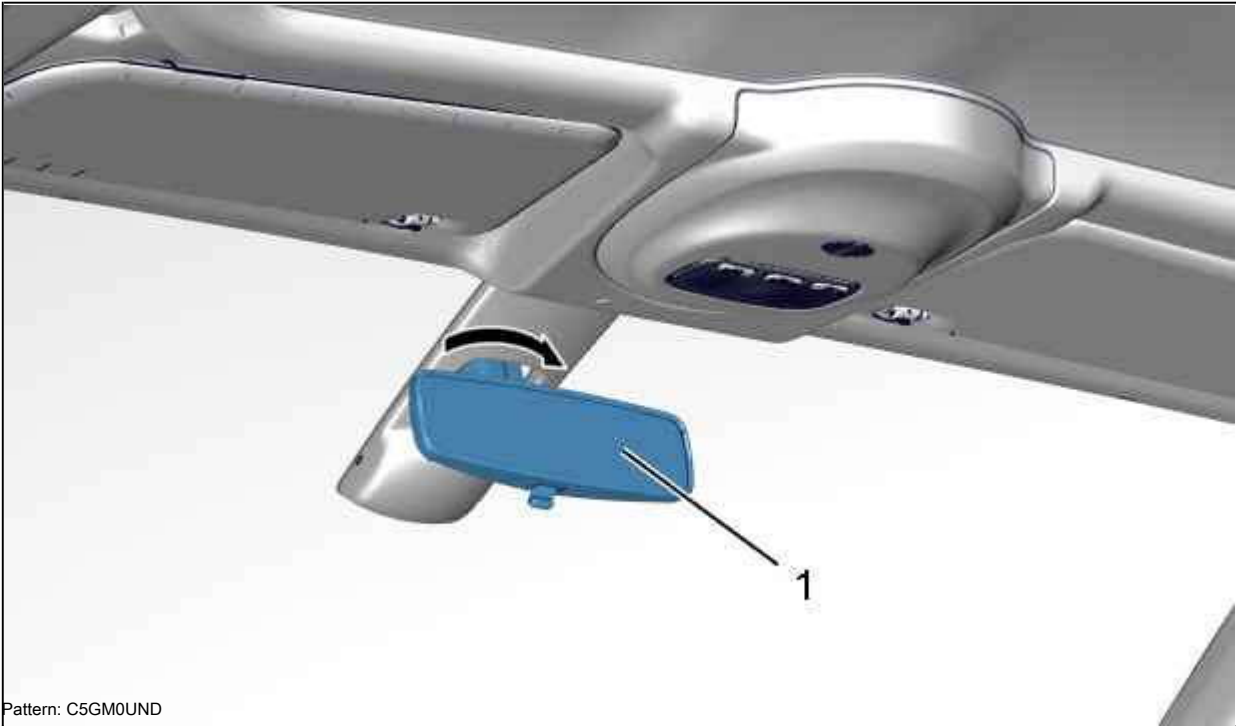


1. Tools

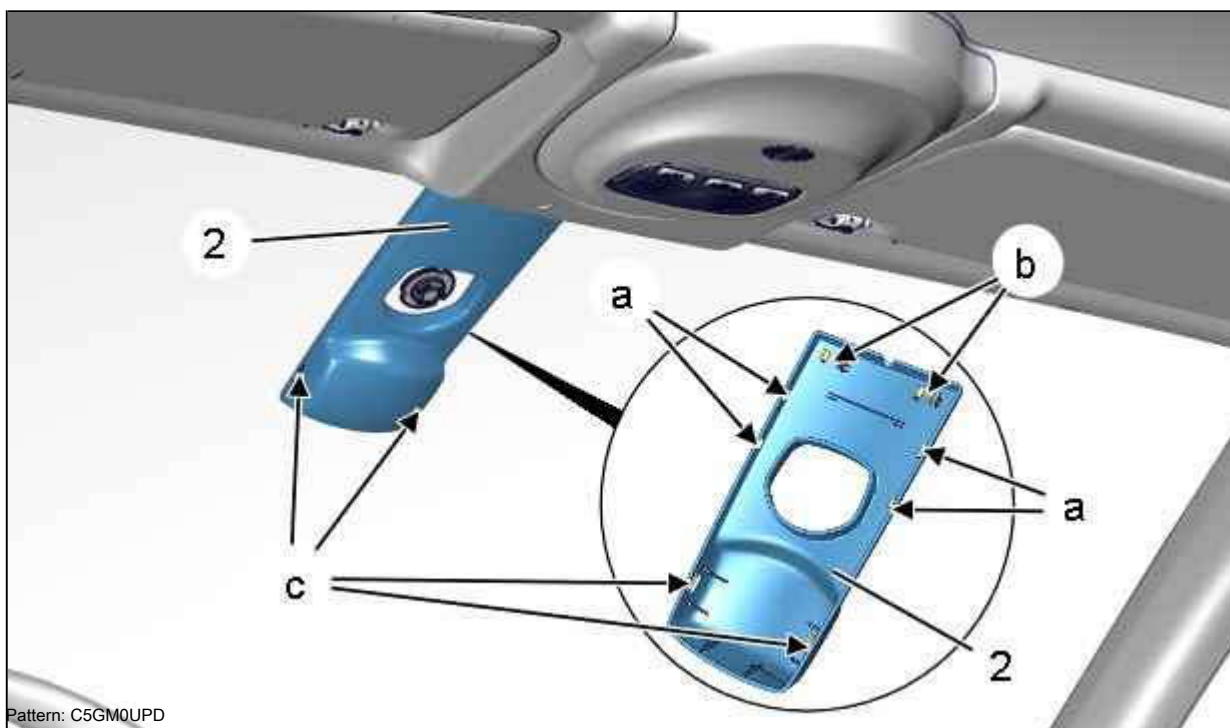
tool	room (reference)	Designation
<div><div>[1350-ZZ]</div><div>Figure: E5AG02MT</div></div>	[1350ZZ]	Removal tools plating

2. Removal

Disconnect the battery.



Remove the interior rearview mirror (1) from the base (Turn it a quarter turn) (in accordance with the arrow).



Pattern: C5GM0UPD

Disconnect:

- Decorative element (2) (in "c"); Using a thin screwdriver
- Decorative element (2) (in "a", "b"); Using the tool [1350ZZ]

Remove decorative strip (2).

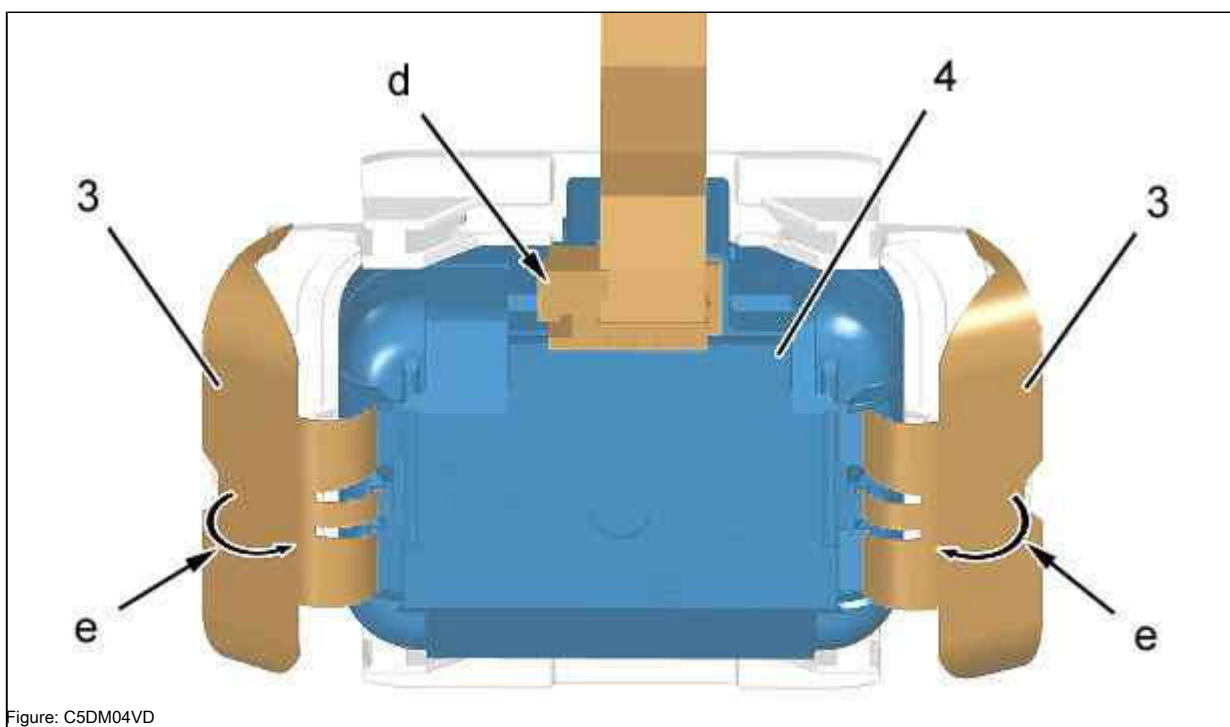


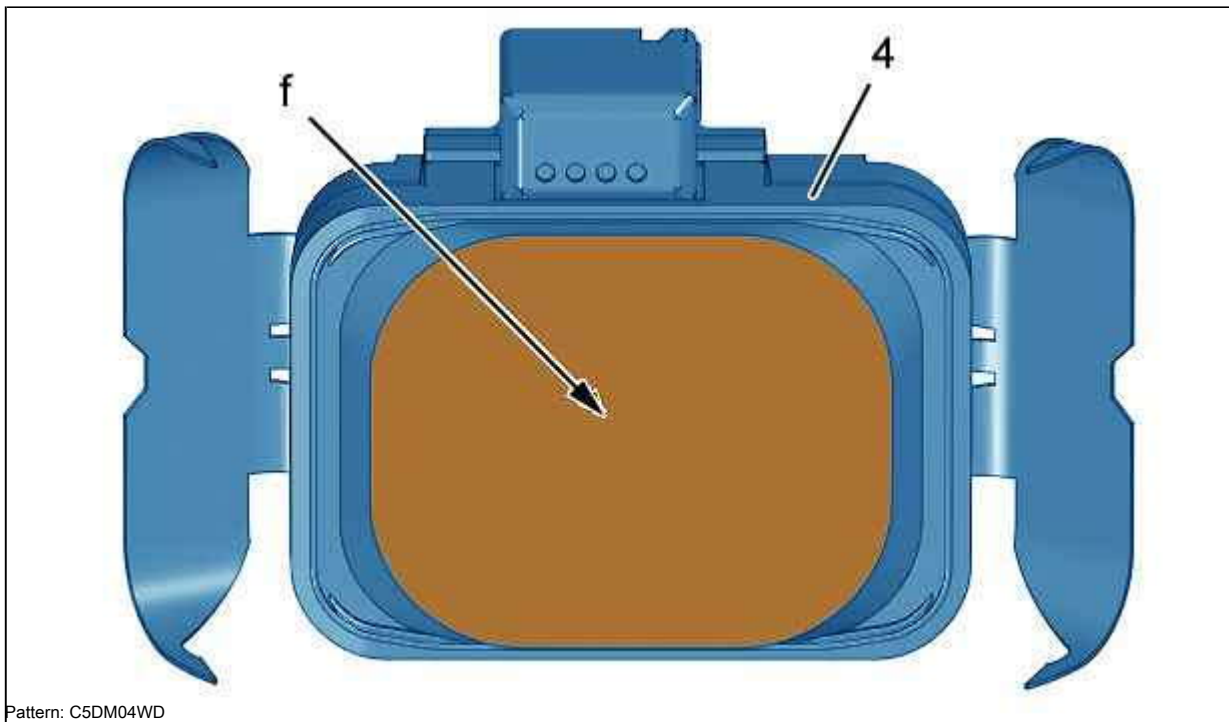
Figure: C5DM04VD

Disconnect the dual light and rain sensor connector (4) (at "d").

Set the springs (3) to the 45 ° pre-blocking position (as shown "e"); Using the tool [1350ZZ].

Remove the light and rain sensor (4) by hand from its base (perpendicular to the windscreen).

NOTE: If necessary, pass the tool [1350ZZ] between the base and the light and rain sensor (4) (on the spring side) and lift it simultaneously on each side.



ATTENTION : Protect the double rain and light sensor connection pad (4) with transparent adhesive tape (at "f") Place the double rain and light sensor (4) in an envelope.

Remove the dual light and rain sensor (4).

3. Installation

ATTENTION : The cleanliness of the dual light and rain sensor (4) for the windscreen is independent of the functioning of the system. Do not touch the surface of the contact pad with your fingers or any objects (in "f"). Do not use chemical solvents. Clean the windshield and the inside of the sensor socket of all dirt, glue and other particles; using a lint-free paper towel and glass cleaning solvent.

3.1. New dual light and rain sensor

Remove the protective cap.

ATTENTION : Install light and rain sensor (4) without effort. Make sure there are no air bubbles between the sensor and the windshield.

Install the light and rain sensor (4) in its base. Lock the springs (3) at the same time.

Connect the connector (at "d").

Replace decorative element (2).

3.2. Reusable dual light and rain sensor

ATTENTION : It is not necessary to replace this type of sensor every time it is removed.

Remove the transparent self-adhesive tape (in "f").

ATTENTION : Clean the surface of the contact pad with transparent self-adhesive tape.

NOTE: The springs (3) must be in the 45 ° pre-locking position.

ATTENTION : Install light and rain sensor (4) without force. Make sure there are no air bubbles between the sensor and the windscreen.

Install the light and rain sensor (4) in its base. Lock the springs (3) at the same time.

Connect the connector (at "d").

Replace decorative element (2).

3.3. General operations

Install: Interior rearview mirror (1).

4. Checks

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Turn the ignition key to the "+ APC" position.

Activate the "allumage automatique des feux" function (automatic light on).

NOTE: The following message appears on the multifunction display: "Automatic headlights on".

Engine starting.

Cover the light and rain sensor in the windscreen. Check the automatic switching on of lighting devices.

Activate the "essuie vitres avant automatique" function (automatic activation of the windscreen wiper).

NOTE: Activation of the automatic system is confirmed with a single sweep of the front wiper blades.

NOTE: The following message appears on the multifunction display: "essuie vitre automatique activé" (automatic wiper switch active).

Spray water over the area of the light and rain sensor. Test the automatic wiper operation.

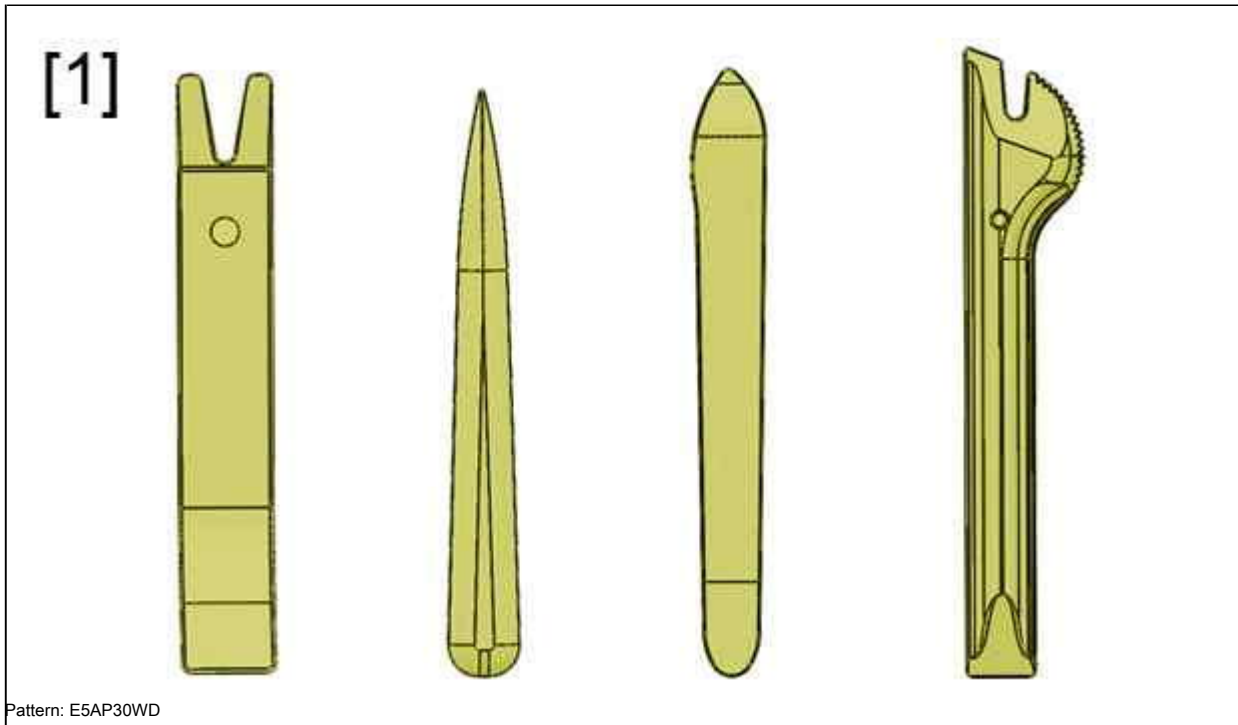
Set the wiper switch to "0". Stop the engine.

REMOVAL INSTALLATION: AIR INTAKE GRILLE

MANDATORY: Observe the cleanliness and safety rules



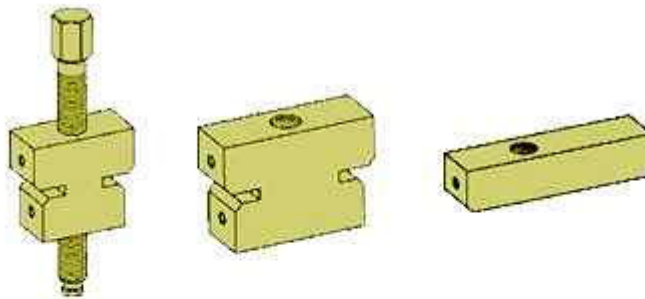
1. Recommended equipment



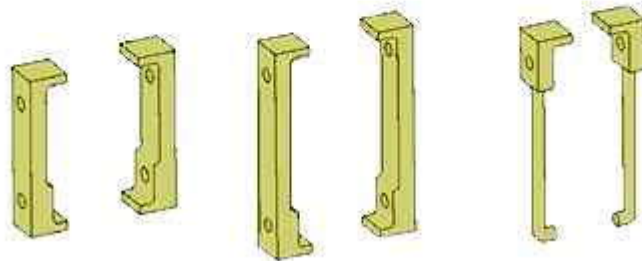
[1] Trim removal tool () .1350.

[2]

A



B



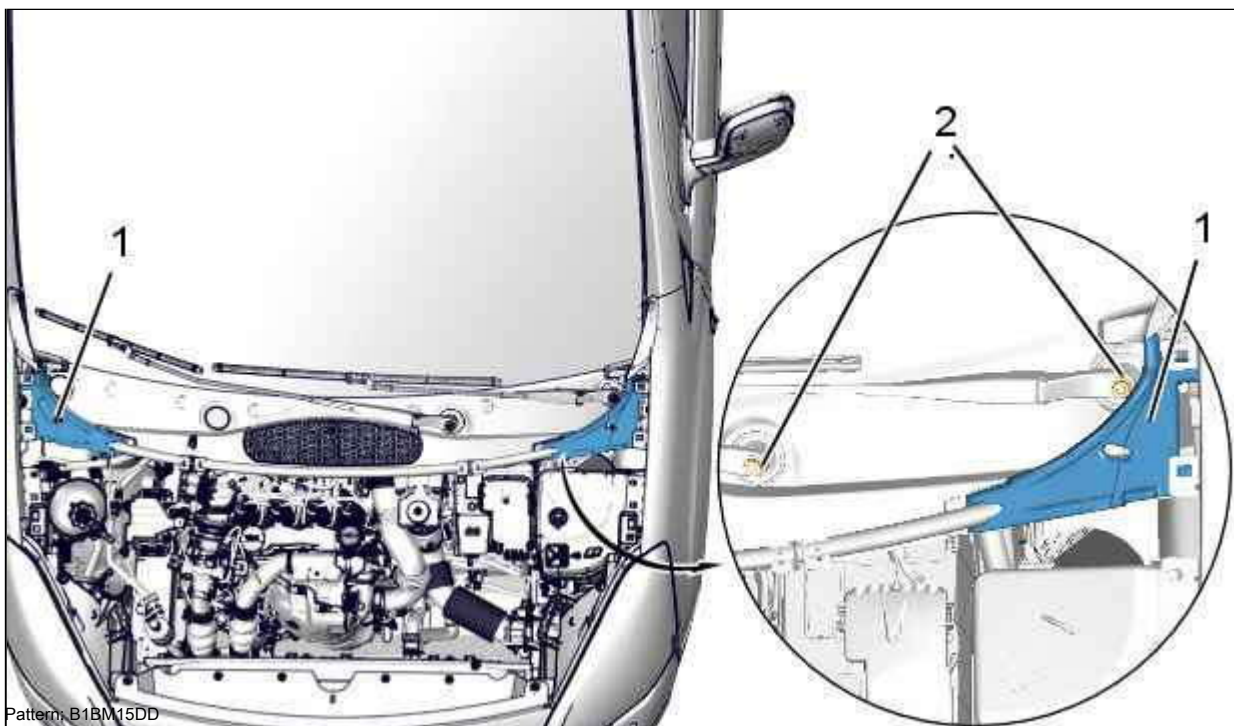
Pattern: E5AM0LHD

/ 2 / puller for wiper arms () .1373.

2. Removal

MANDATORY: Check the off position of the wiper switch

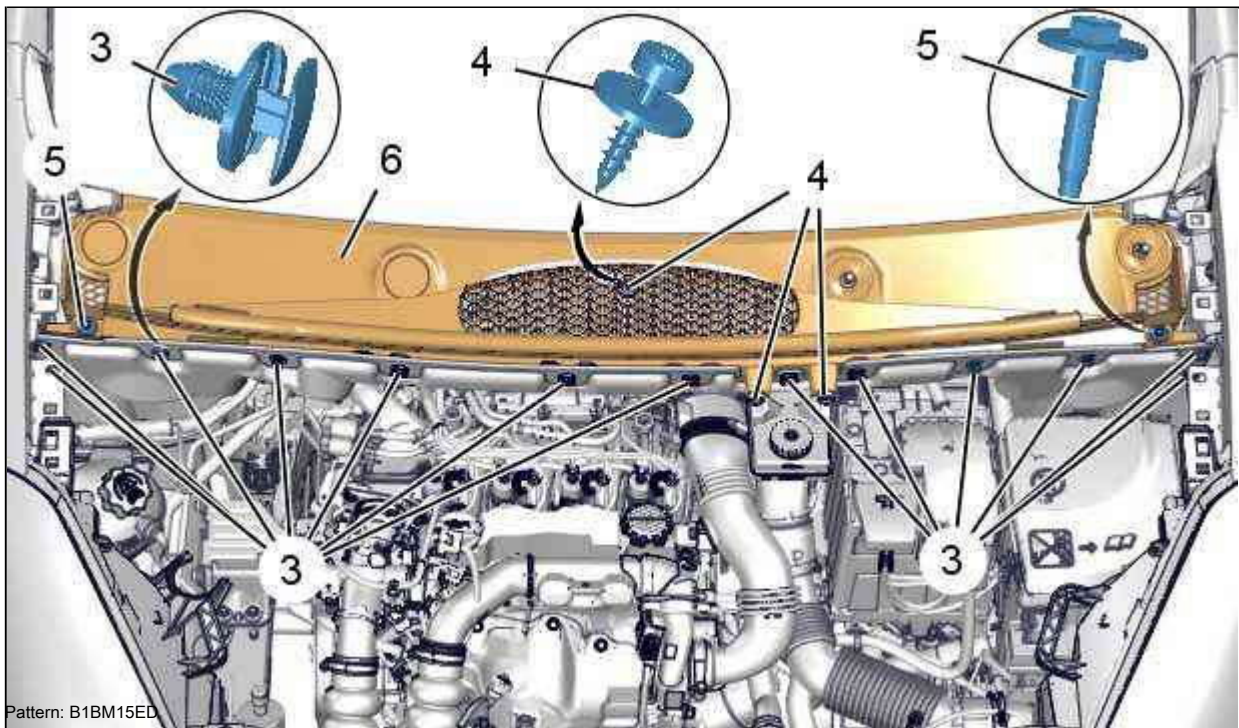
Open the hood.



Pattern: B1BM15DD

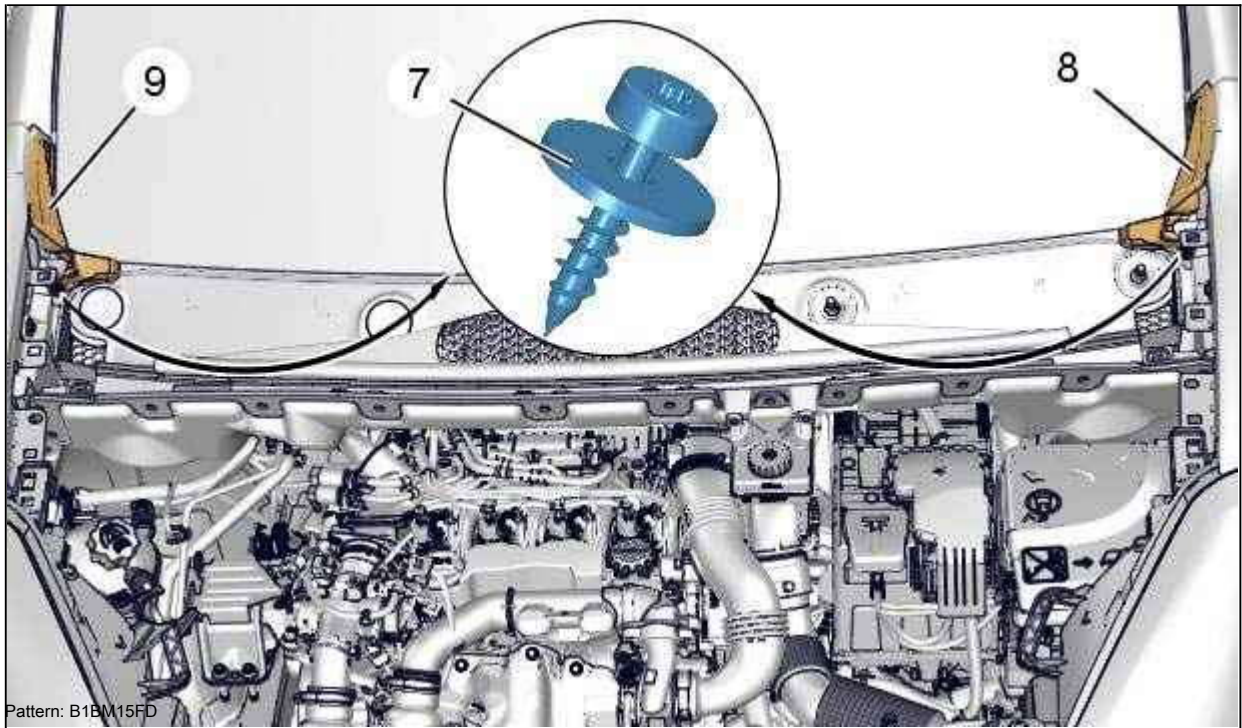
Remove:

- Foam side seals (1)
- Wiper arm mounts (2)
- Wiper arms; Using the tool [2]

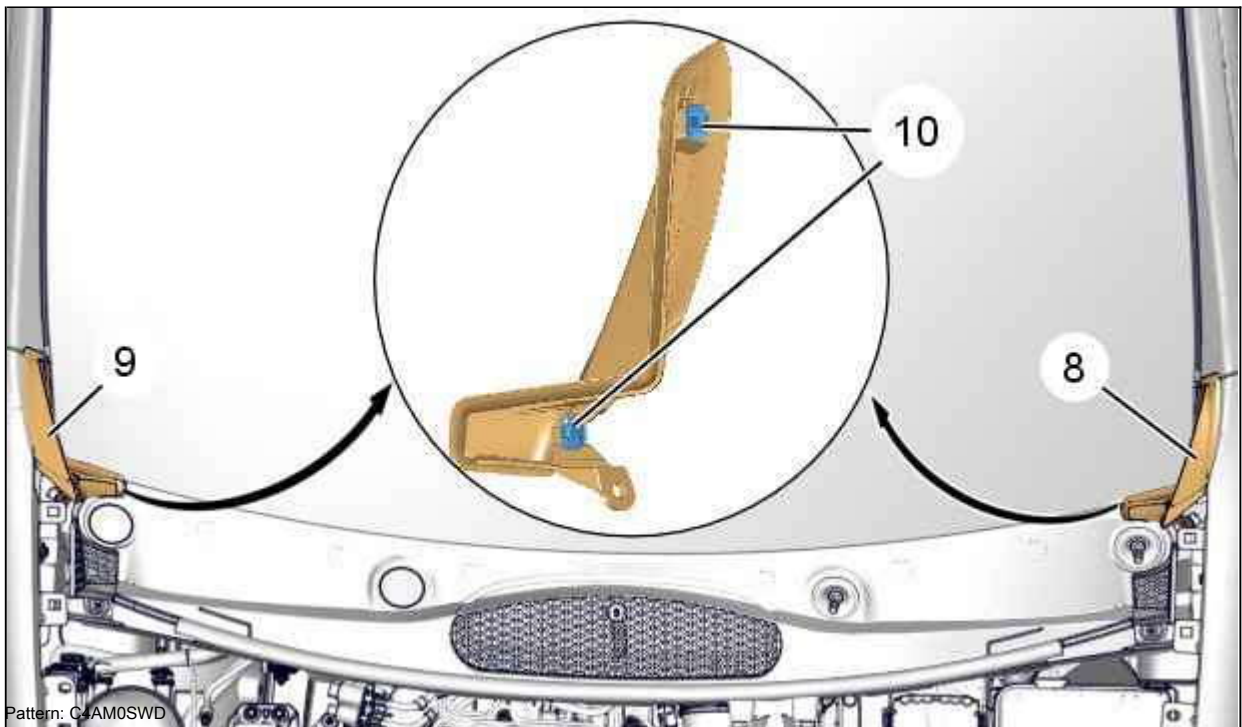


Remove:

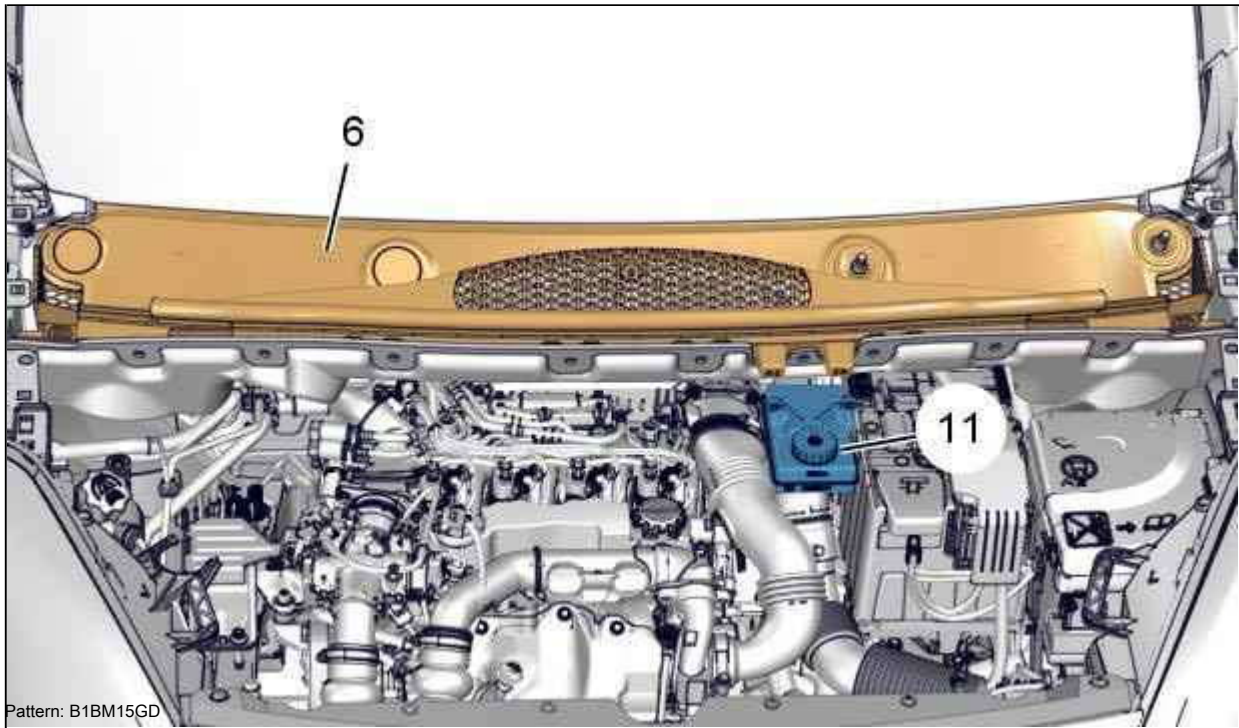
- Mounts (3) for engine noise insulation; Using tool [1]
- Screws (4) for the air intake grille (6)
- bolt (4) brake fluid reservoir
- Screws (5) for the air intake grille (6)



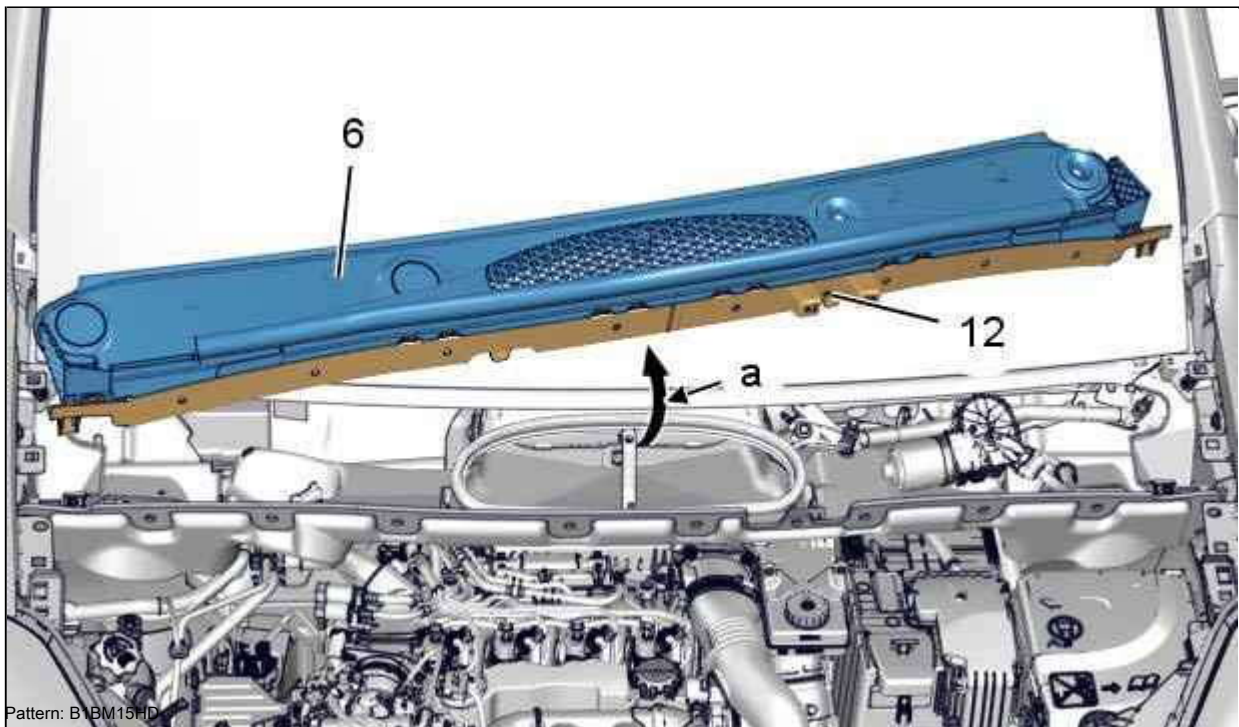
Remove the screws (7) of the side air intake grilles (8), (9).



Release the clips (10) of the side air intake grilles (8), (9).



Move the brake reservoir (11) away from the air intake grille (6).

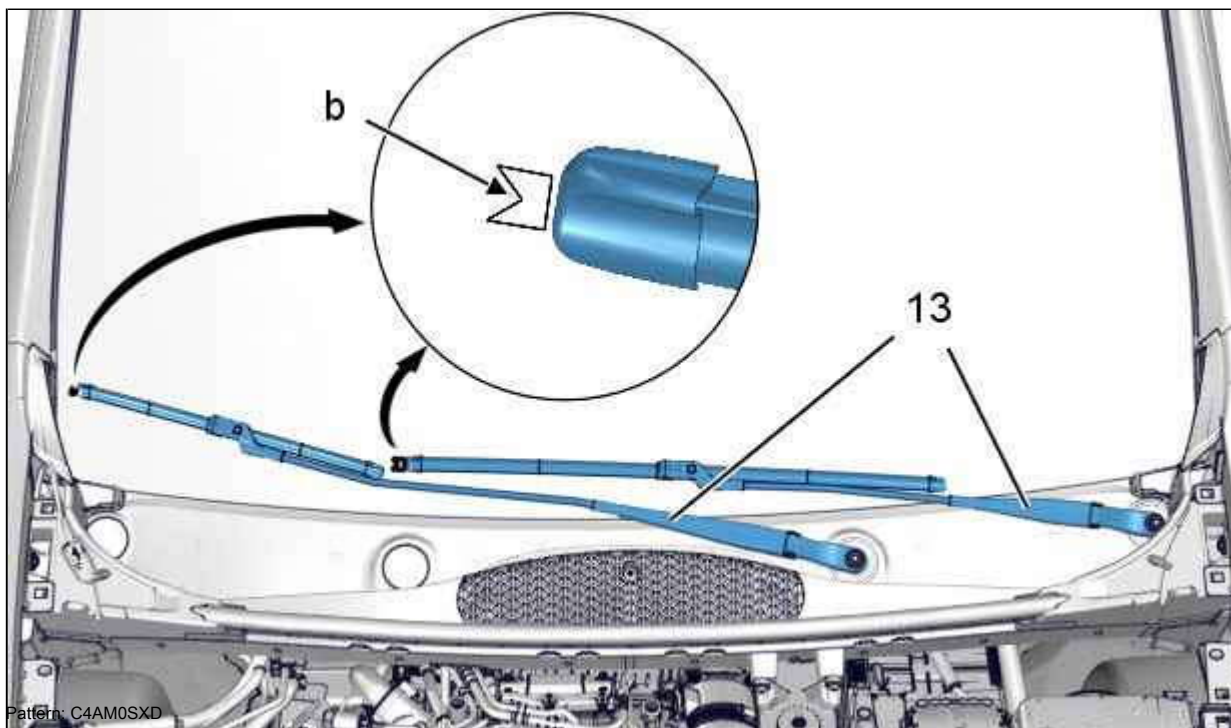


Move aside the air intake grille (6) with base (12) (as shown "a"). Remove the air intake grille (6).

3. Installation

MANDATORY: Be sure to replace defective fasteners.

Installation is carried out by performing the removal operations in the reverse order.



Install:

- Wiper arms (13)
- Wiper blades

Install the front wiper blades against the marks on the windscreen (in "b"). Tighten the nuts (2) to a torque of 1 ± 0.25 da.Nm.

Check the functioning of the electrical equipment.

REMOVAL INSTALLATION: SUB-FRAME

MANDATORY: Observe the cleanliness and safety rules



1. Tools

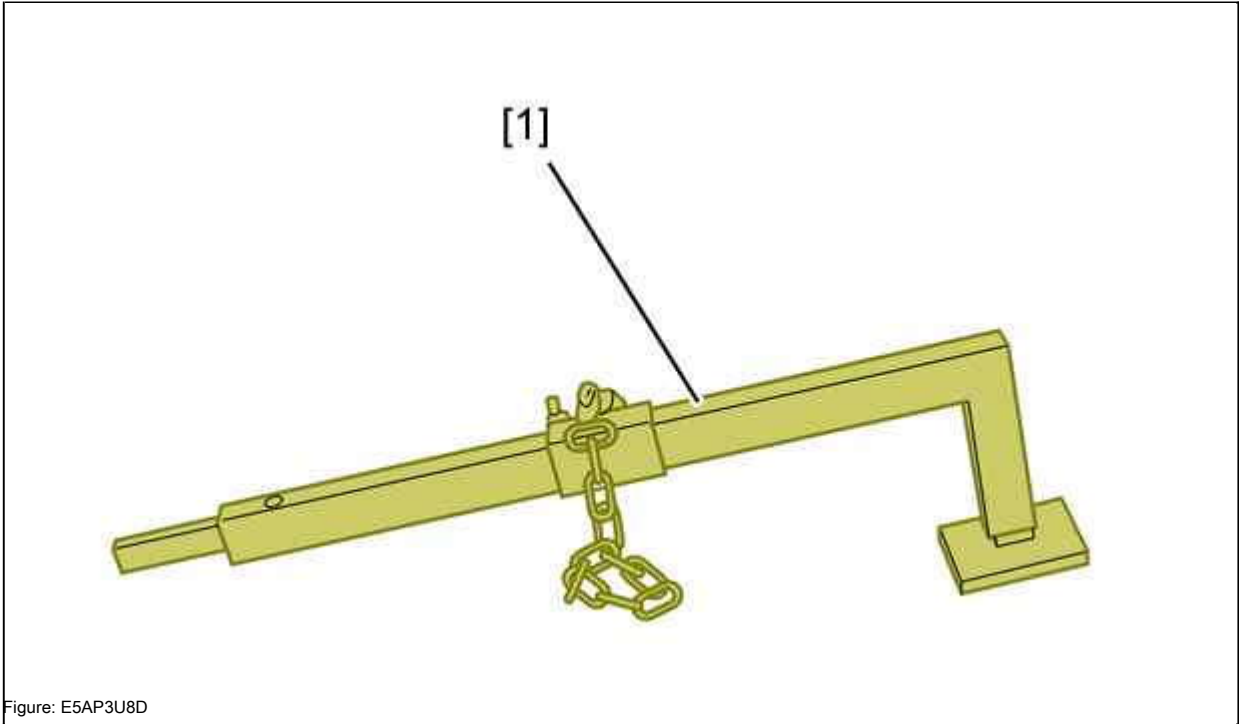


Figure: E5AP3U8D

Label Designation		Number (reference) Number (reference)	
[1]	[1] lever for disconnecting the ball joints of the steering knuckle	9509T	() .0622

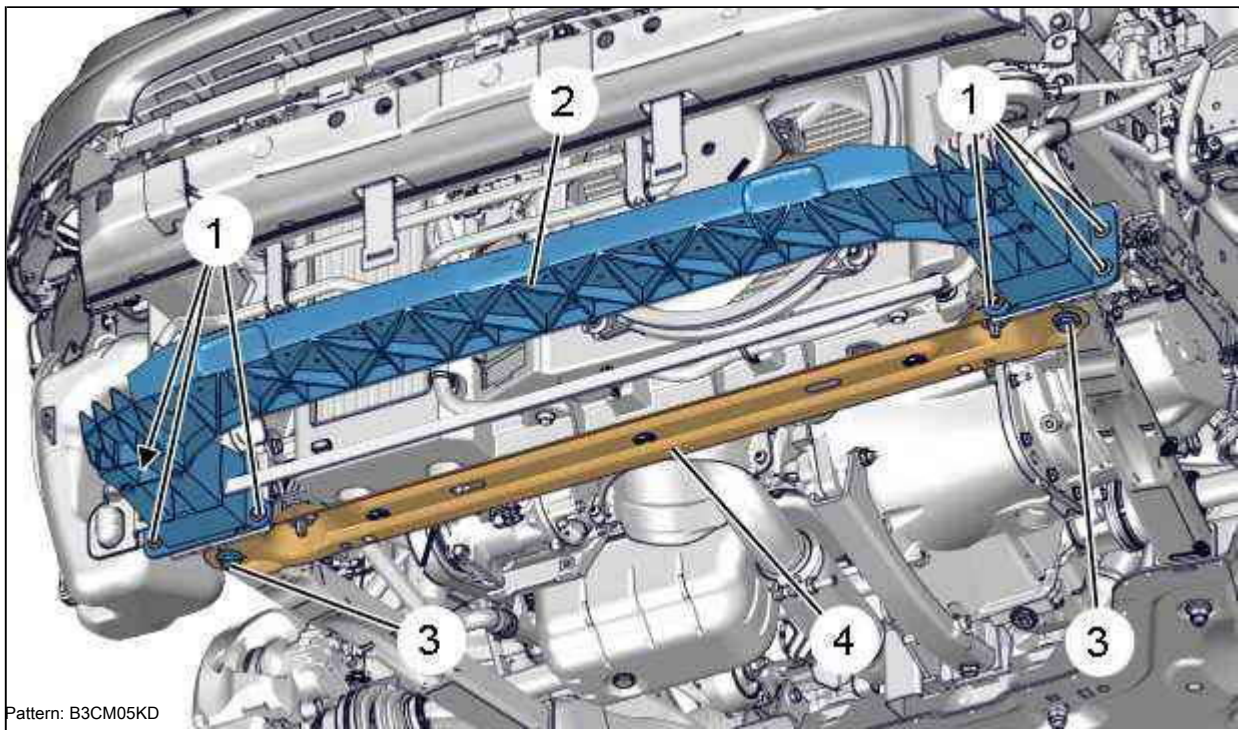
2. Removal

Unlock the front wheel bolts.
Raise and secure the vehicle by hanging the front wheels. Remove:

- Front wheel bolts
- Front wheels
- Protective shield under the engine (I)

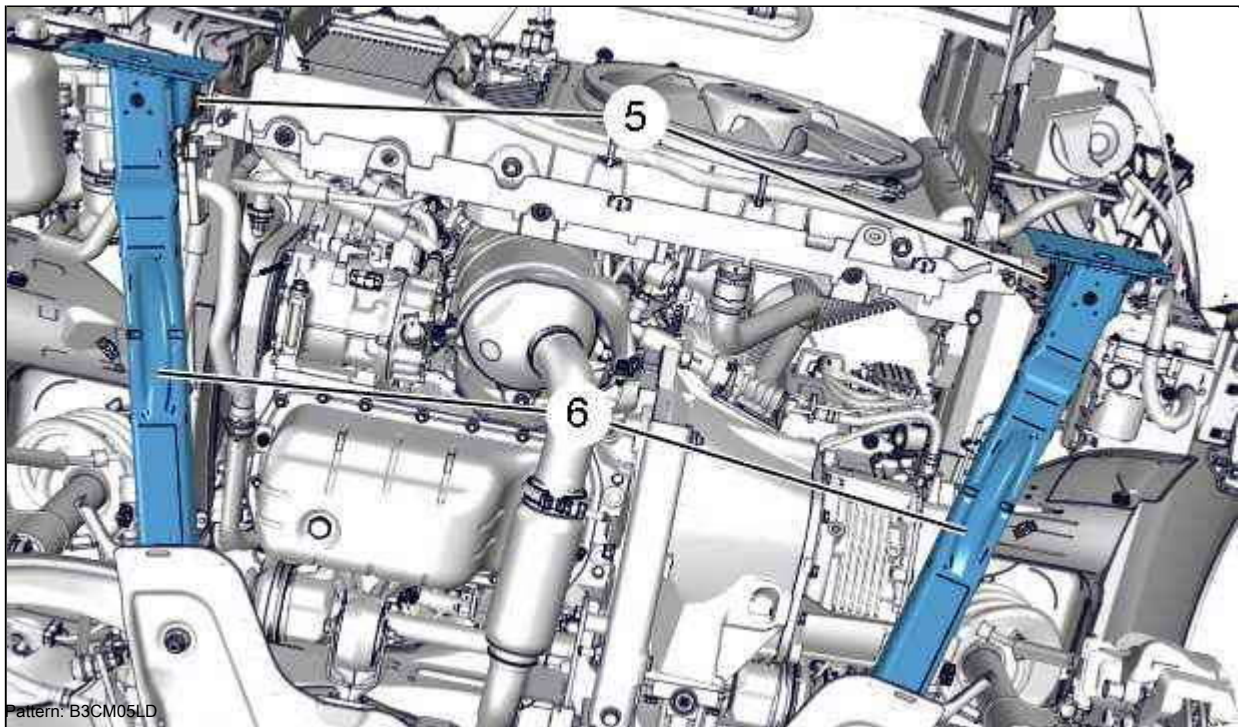
2.1. Cars with front subframe extenders

Remove the front bumper.



Remove:

- bolts (1)
- Front impact absorber (2)
- bolts (3)
- Crossbar (4)

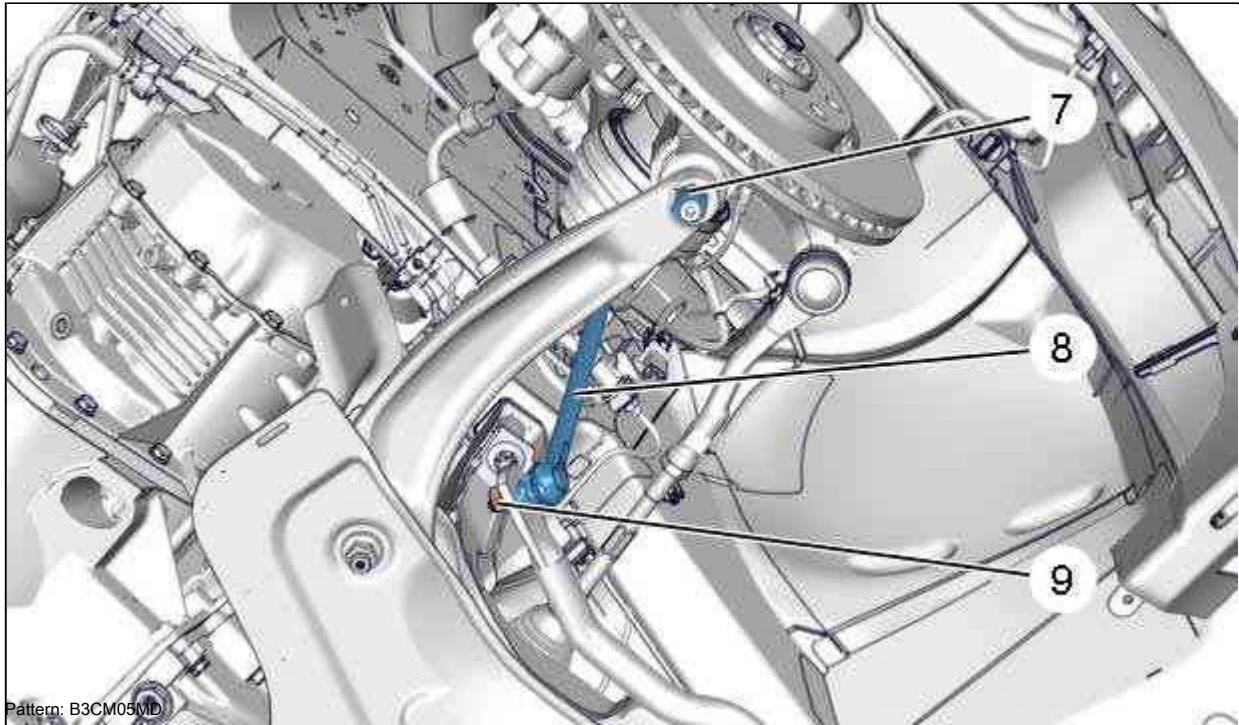


Remove:

- the bolts (5)

- Platforms (6) cross members

2.2. Removal (continued)



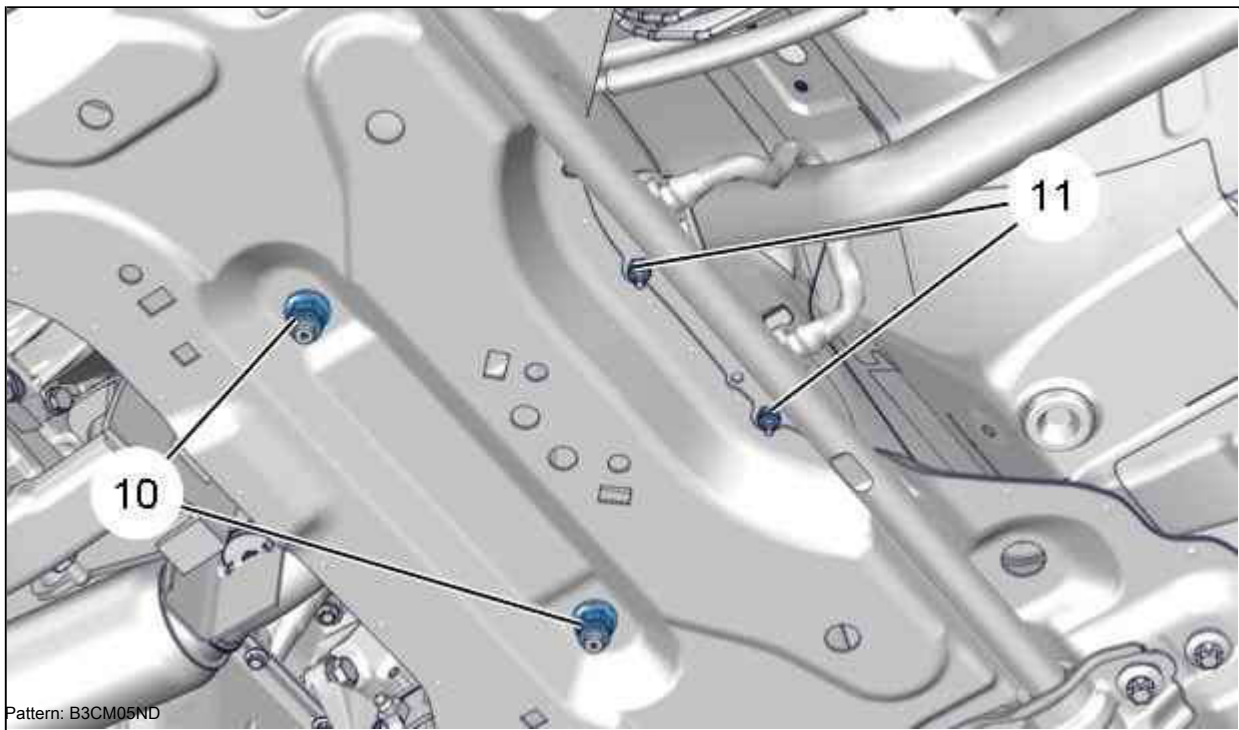
from each side :

- Unscrew the nut (9)
- Disconnect: Anti-roll bar (8)
- Unscrew the nut (7)

ATTENTION : Take care not to damage the protective cover of the lower suspension arm.

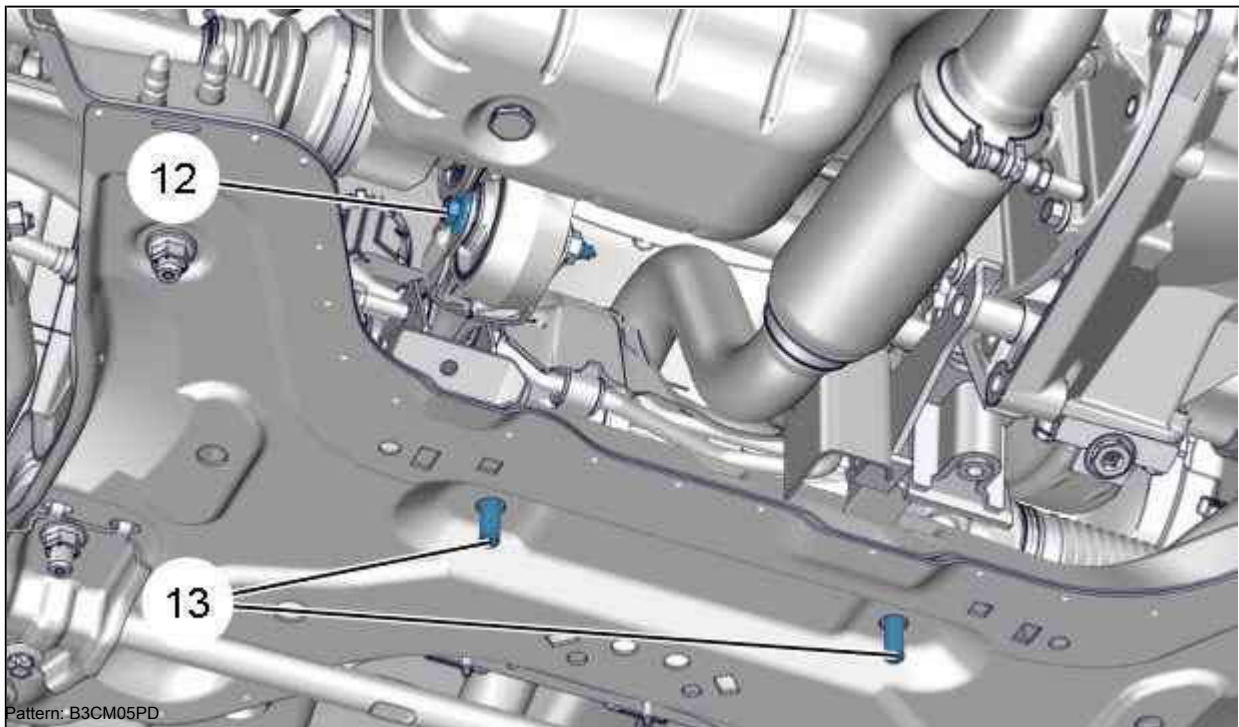
ATTENTION : When releasing the steering knuckle, keep the axle shaft in the differential.

Disconnect the steering knuckle ball from the lower arm; Using the tool [1] (on each side).



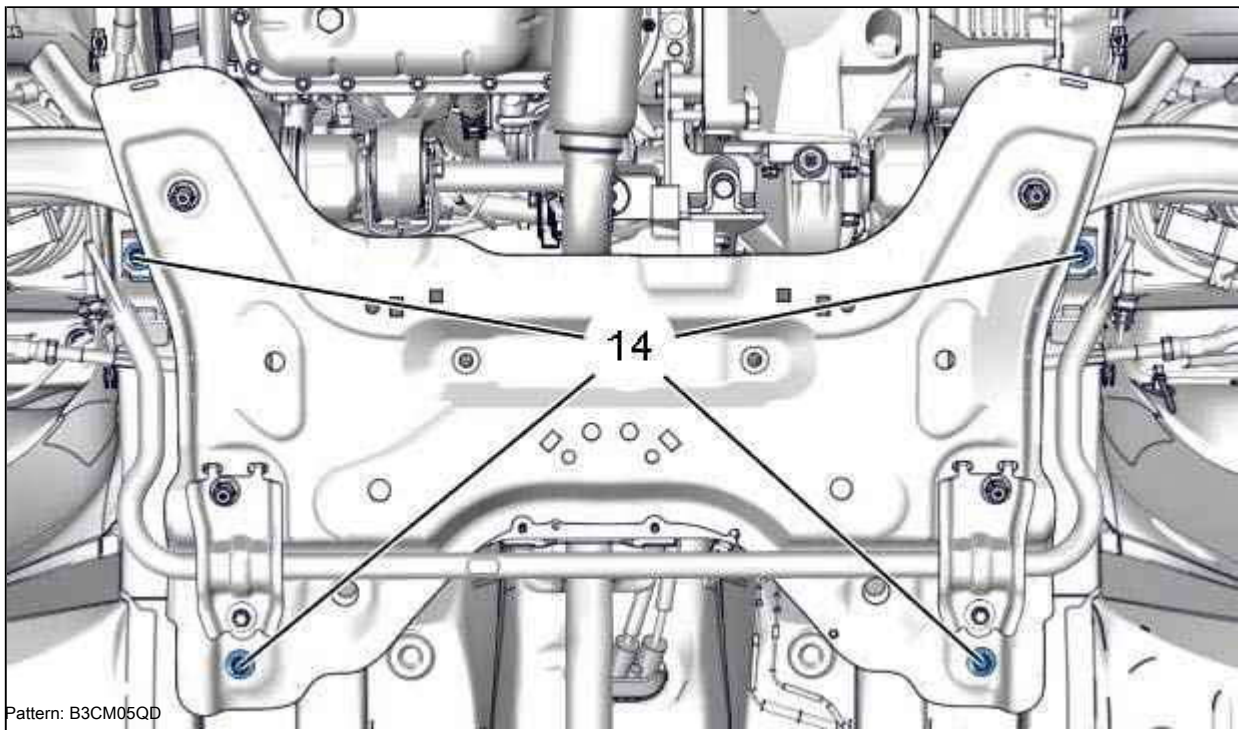
Remove:

- Nuts (10)
- Nuts (11)



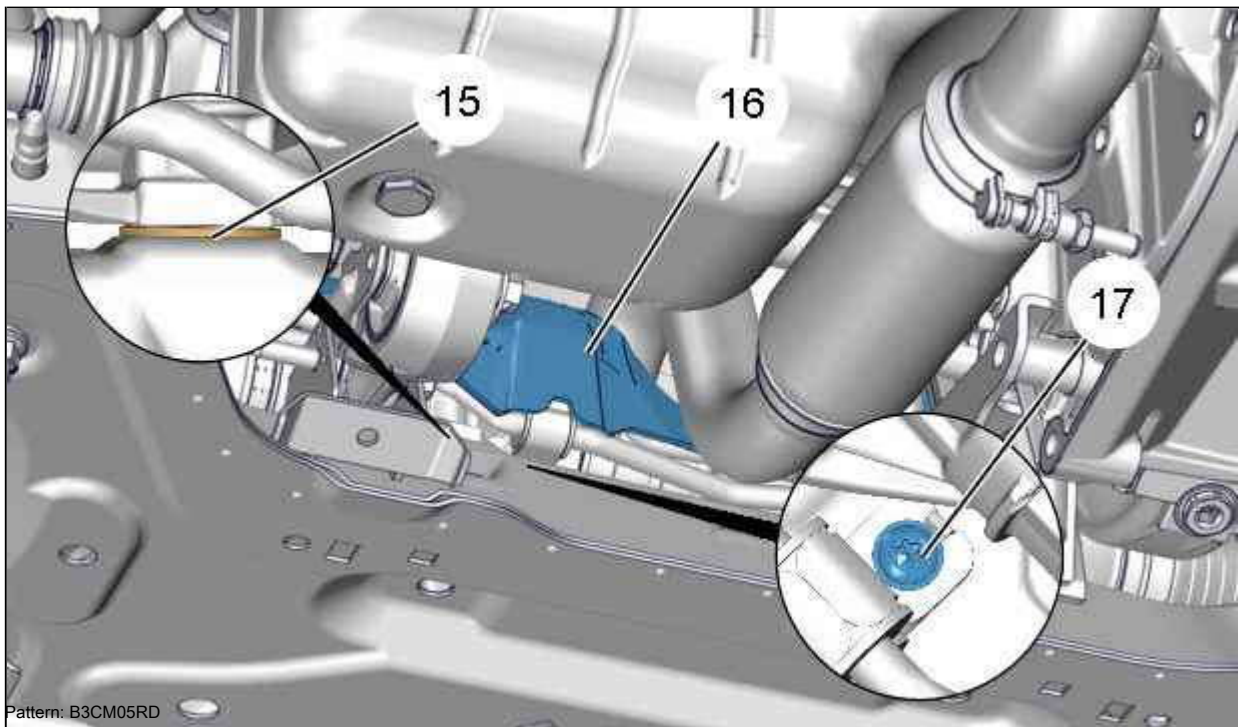
Remove:

- The bolt (12)
- hairpins (13)



Install a lifting device to support the subframe. Loosen the screws (14).

Move the body subframe a few centimeters.



Remove: Washer (15) (on each side). Move aside: Thermal protector for steering box (16). Remove:

- Power steering pipe bracket retaining bolt (17)
- Sub-frame

3. Installation

ATTENTION : Observe the required tightening torques.

Tightening torques:

- **Stretcher**
- **Steering**



ATTENTION : Replace Nilstop nuts after each removal.

Position the front subframe under the vehicle a few centimeters from the body. Install:

- Power steering pipe bracket retaining bolt (17)
- Thermal steering gear (16)
- Shim (15) (each side)

Replace the sub-frame. Install:

- the bolts (14)
- hairpins (13)
- Nuts (10)
- The bolt (12)
- Nuts (11)

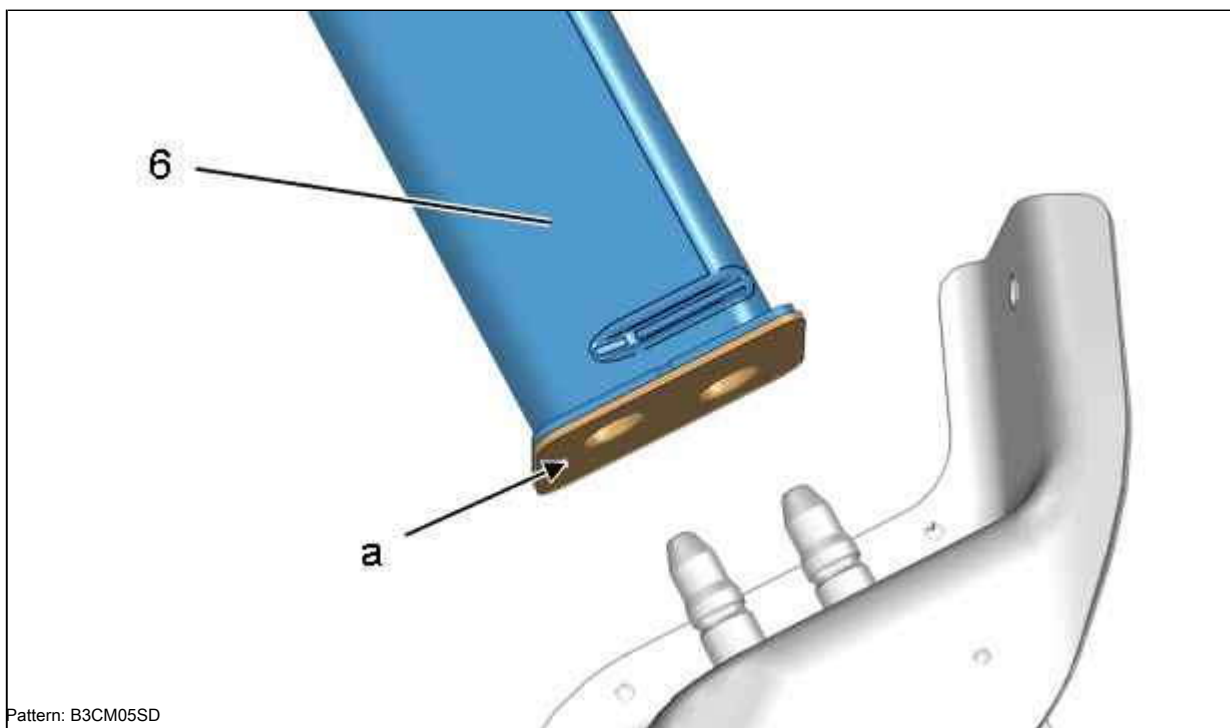
ATTENTION : Be careful not to damage the cover of the lower arm.

Attach the steering knuckle ball in the lower arm; Using the tool [1] (on each side).

Replace nut (7) (on each side).

Attach the anti-roll bar (8) (on each side). Replace nut (9) (on each side).

3.1. Cars with front subframe extenders



Check the condition of the following parts:

- Rubber gasket (in "a")
- Front subframe extensions (6)

Replace defective parts.

Install:

- Platforms (6) cross members
- bolts (5) (loose)
- Crossbar (4)
- bolts (3)

Tighten down screws (5).

Install:

- Front impact absorber (2)
- bolts (1)
- Front bumper

3.2. Removal (continued)

Install:

- Protective shield under the engine (/)
- Front wheels
- Front wheel bolts
- A car on its wheels

Tighten the wheel bolts

Check and adjust the cam rate.



REPLACEMENT: FRONT PANEL HALF SUPPORT (FRONT)

MANDATORY: Observe the cleanliness and safety rules



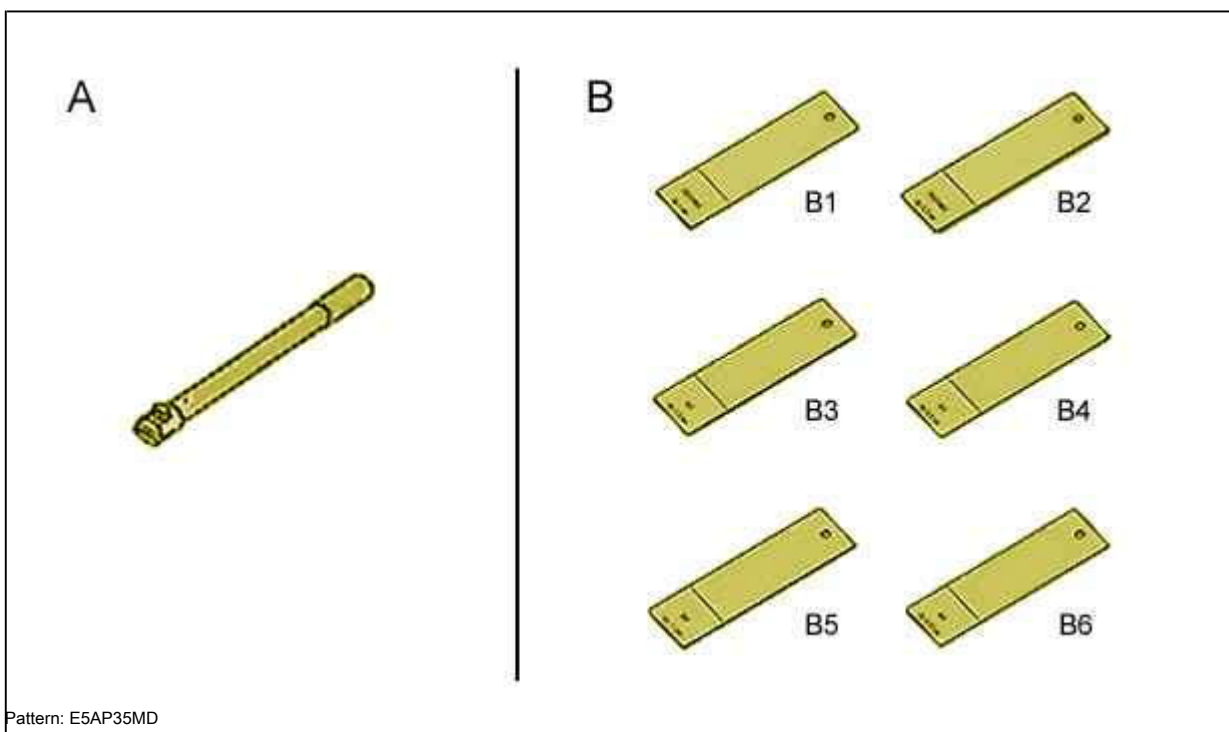
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

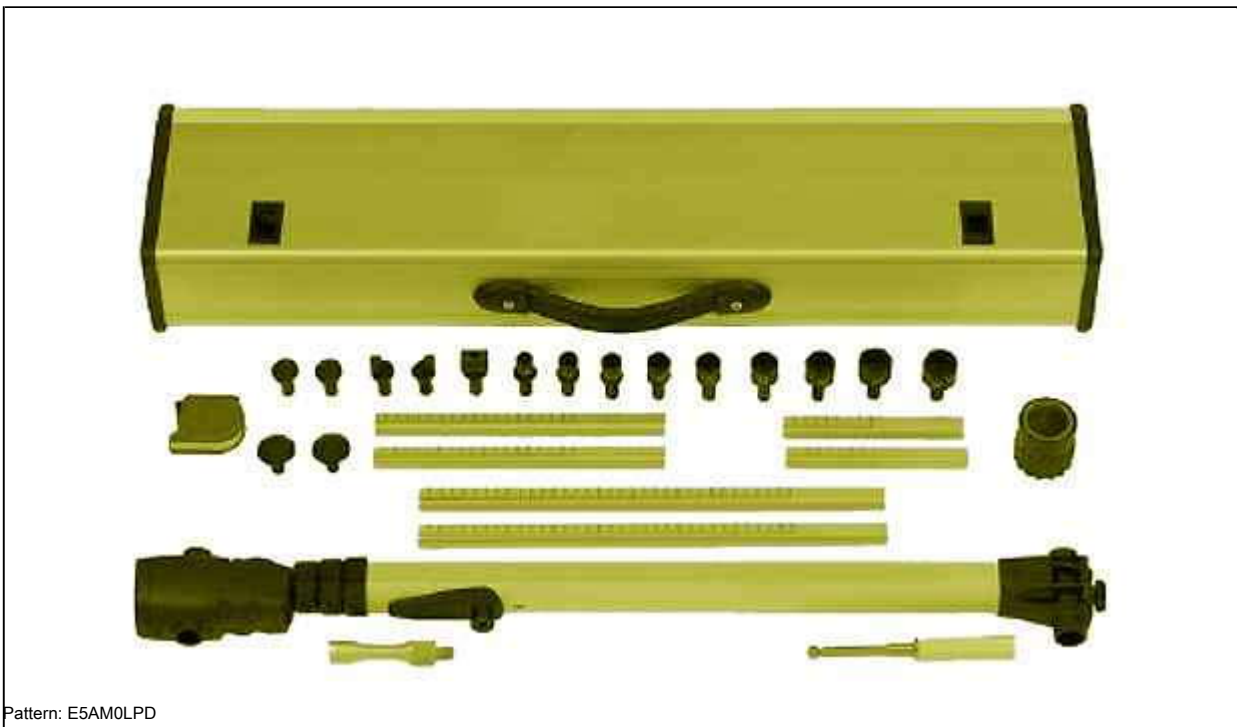
The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Recommended equipment



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.



Pattern: E5AM0LPD

Comparative measurement system ((a device that allows you to measure and compare the positions of the lower and upper points of the body relative to the axis of symmetry)).

Car OLiner type; Reference: M430 000 001.

NOTE: For more information on the comparative measurement system, refer to the original equipment catalog.

3. Additional operations

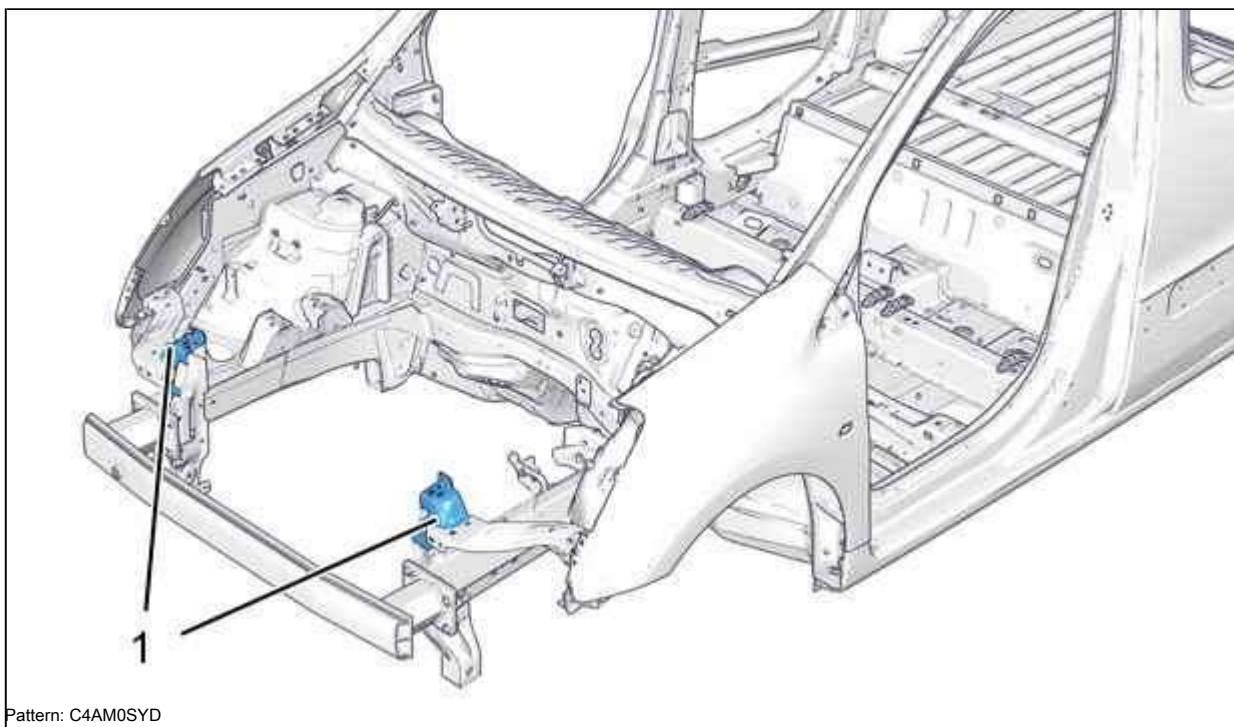
Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

Replace: Front panel half (/).

4. Location of the spare part

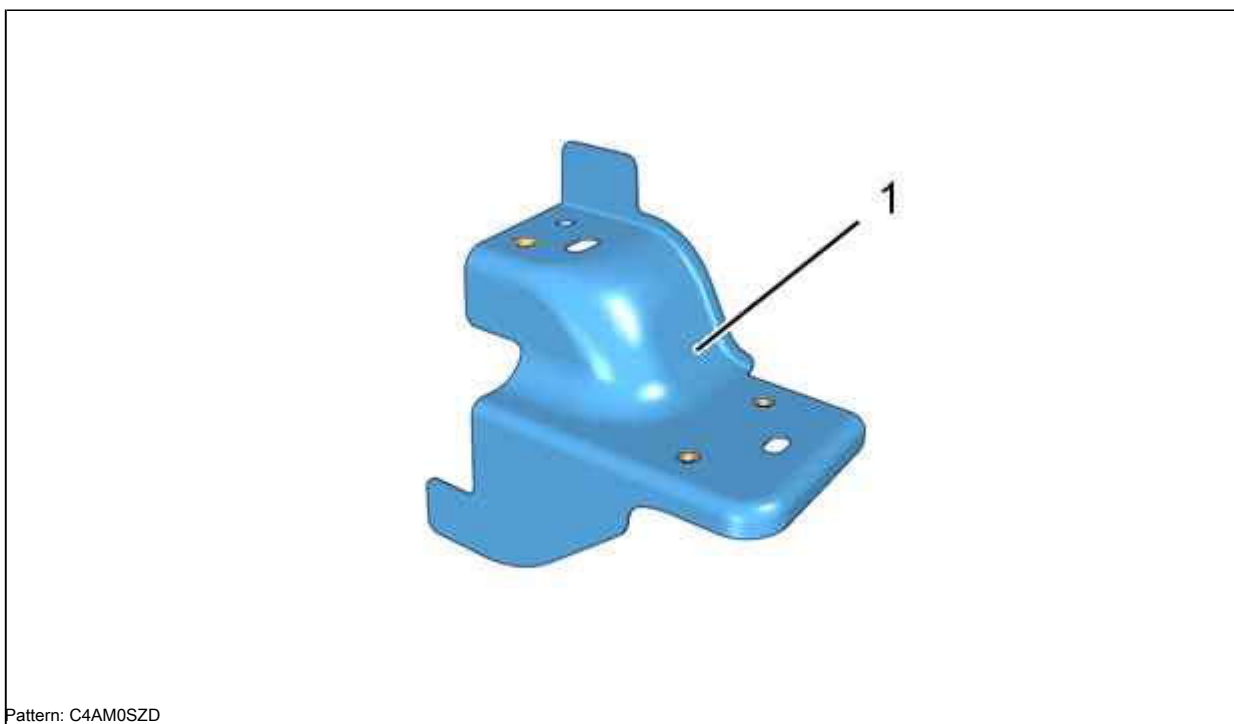


Label Designation

(1)	Front half support (front)

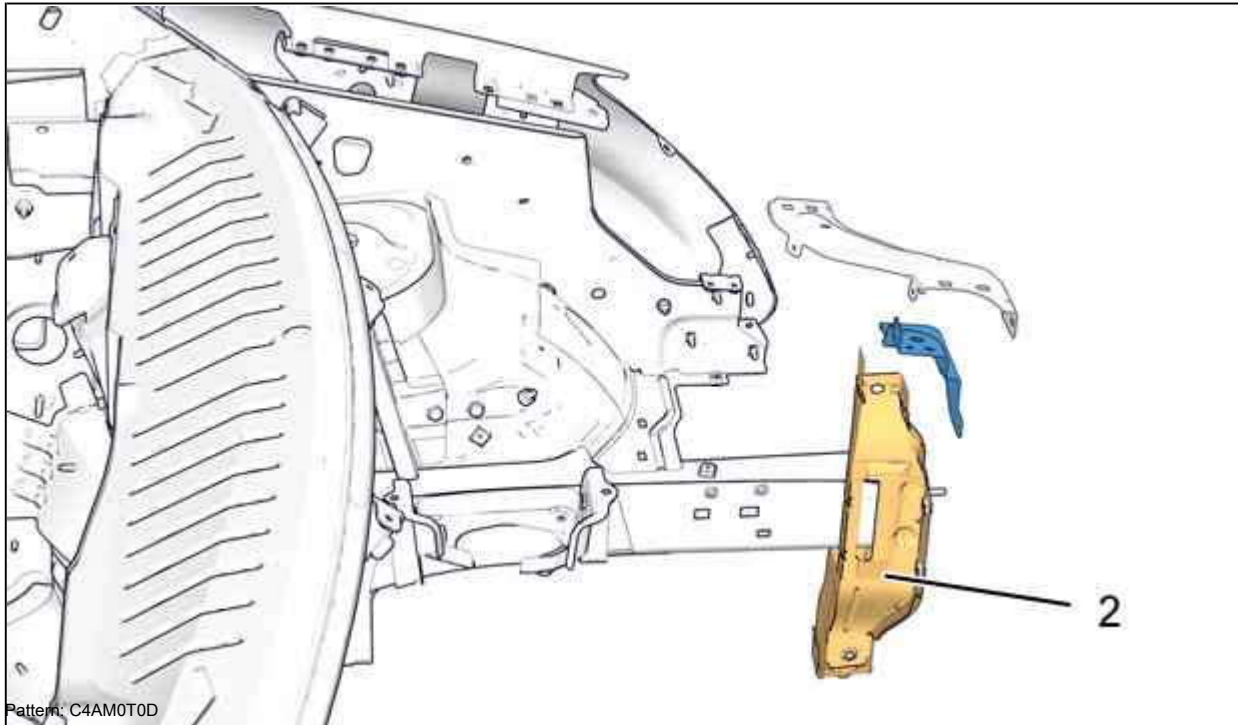
5. Identification of the spare part

5.1. Includes: Half Front Panel Support (Front)



Label Designation		Thickness (mm) Nature / classification	
(1)	Front half support (front) 1.17		HLE

5.2. Identification of parts adjacent to the spare part



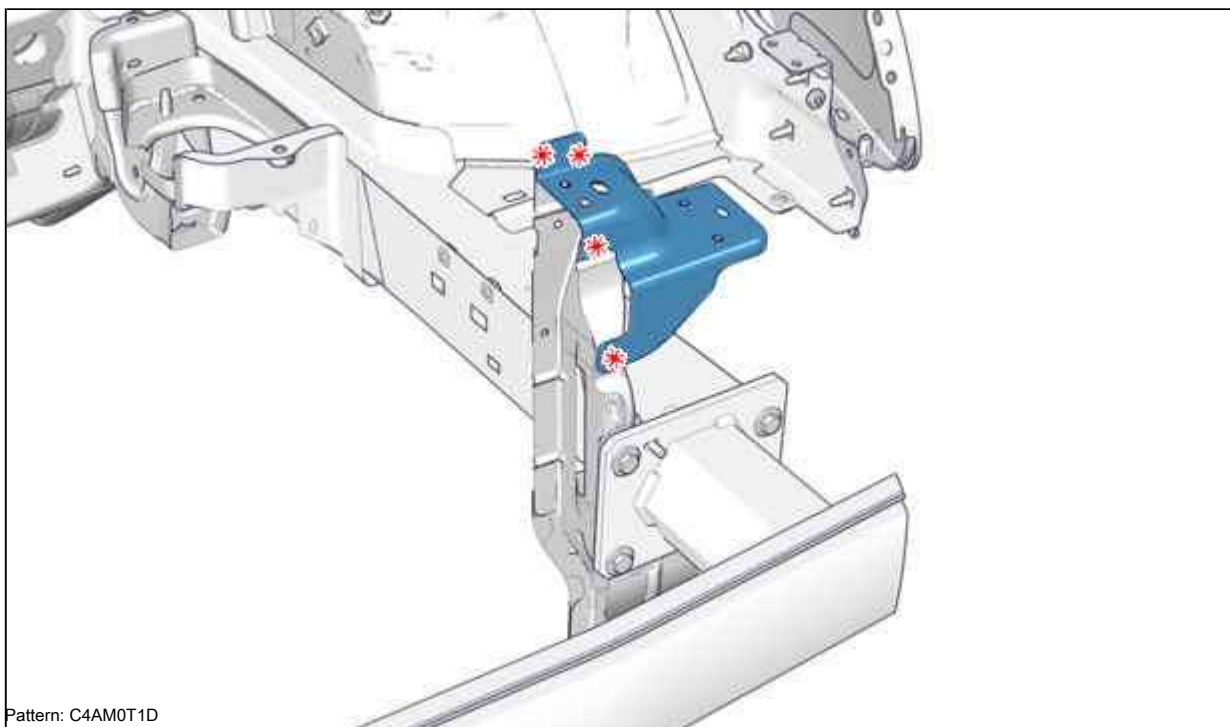
Label Designation		Thickness (mm) Nature / classification	
(2)	Front panel support assembly 1.95		THLE

6. Preparation of spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

Prepare the sockets and protect them with a welding primer (index "C7").

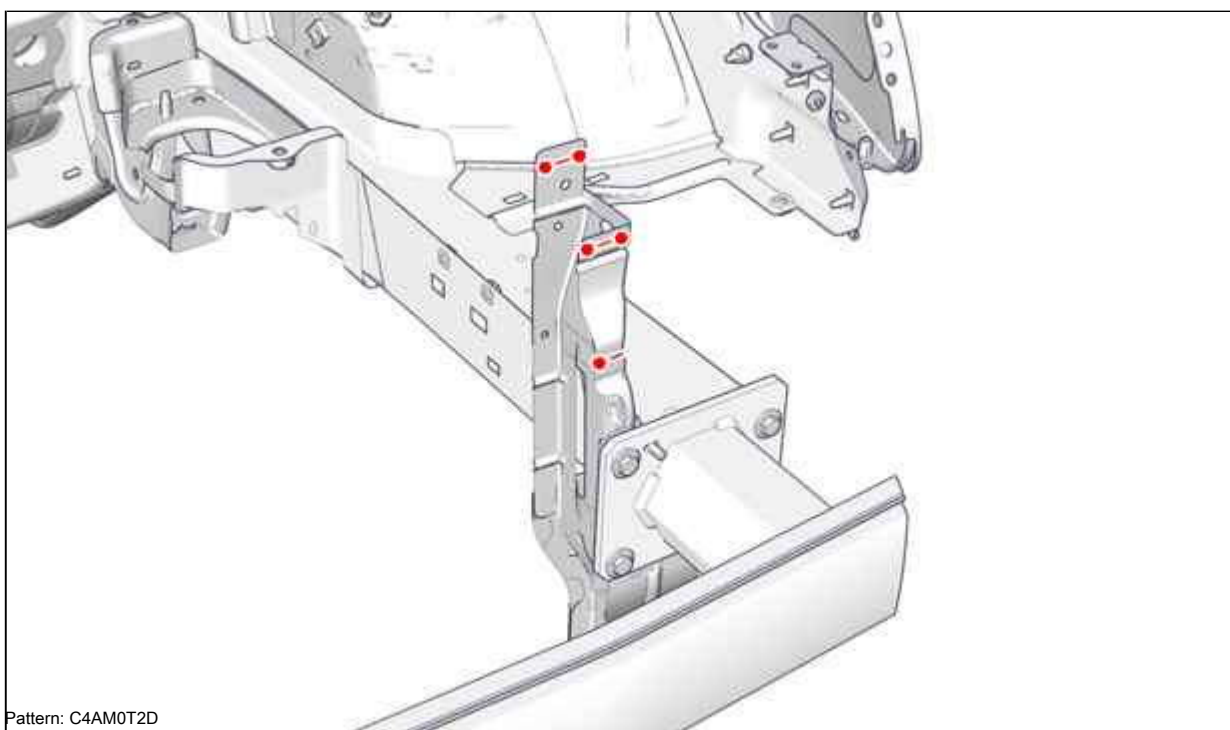
7. Cutting an element on the body



Cut by points.

Remove: Front panel support of front half-unit (/).

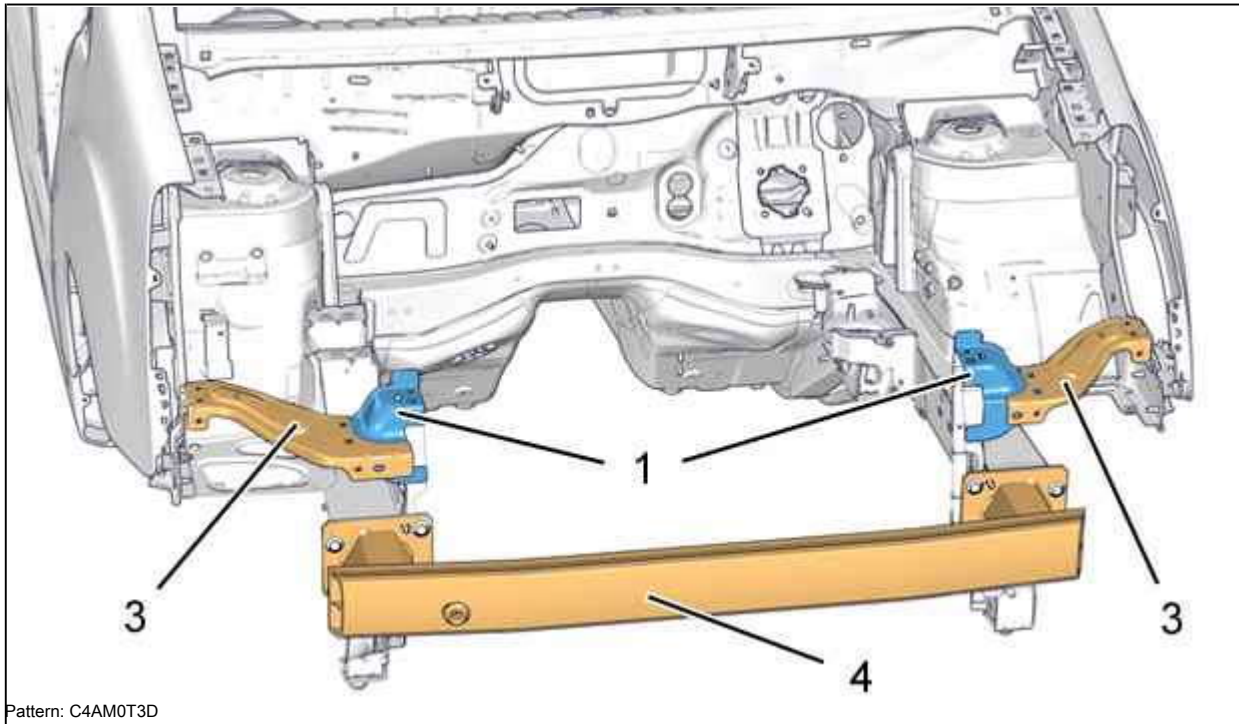
8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

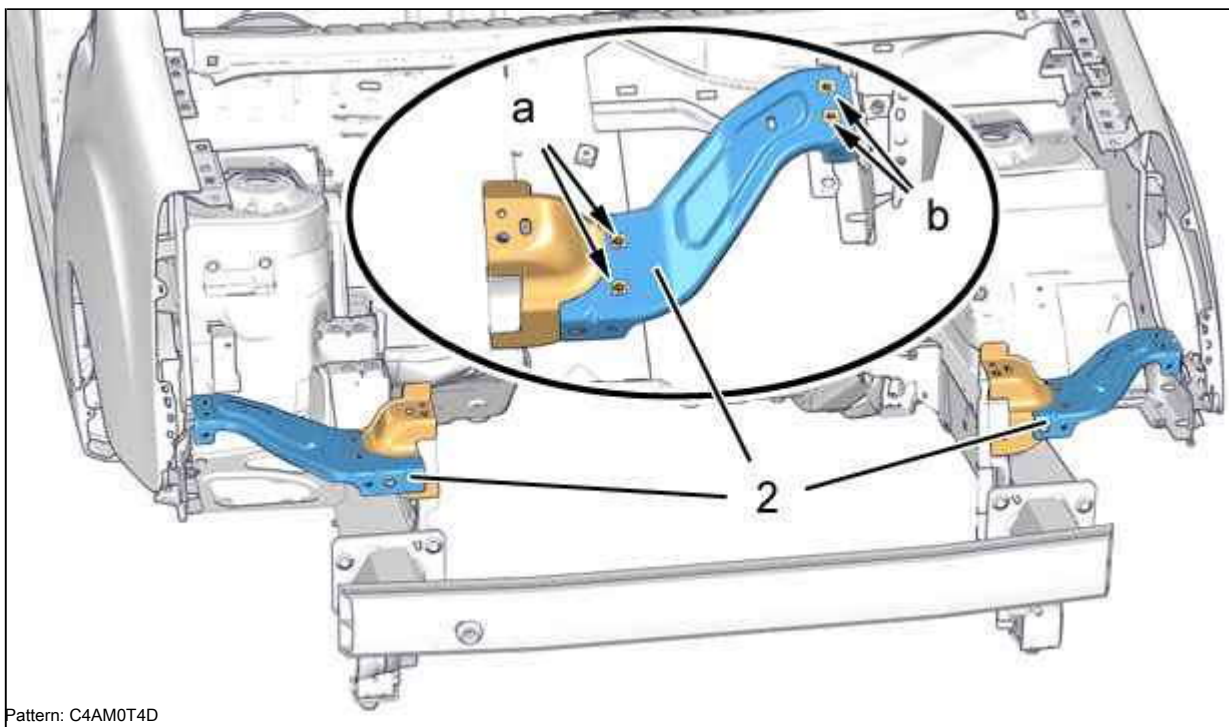
9. Fitting



Install the following items:

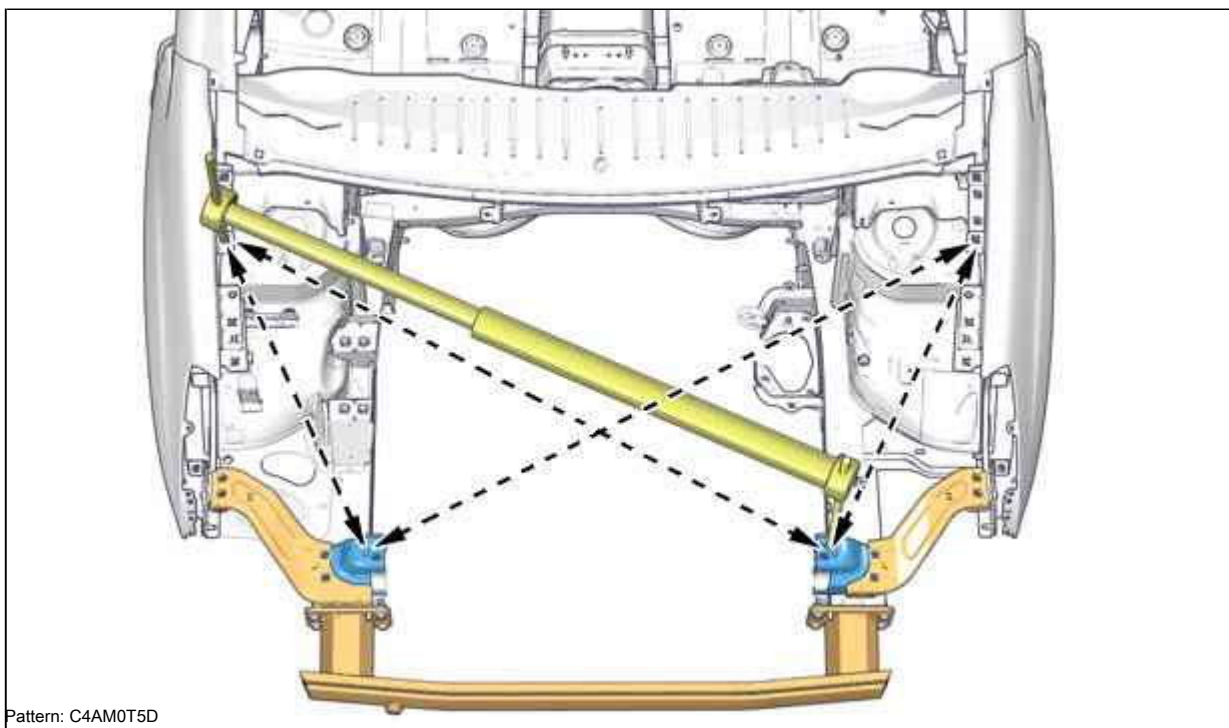
- Support for the front panel of the front half-block (1) (corresponding to the side of the body on which the replacement is performed)
- Front panel half (3) (corresponding side of the body on which you are replacing)
- Front bumper upper reinforcement (4)

NOTE: It is possible to carry out a test installation of the headlight to check the height of the front panel support of the front half-block.



Pattern: C4AM0T4D

Check and symmetrically distribute the installation clearances of the front panel of the front half-block (2) (in "a", "b").



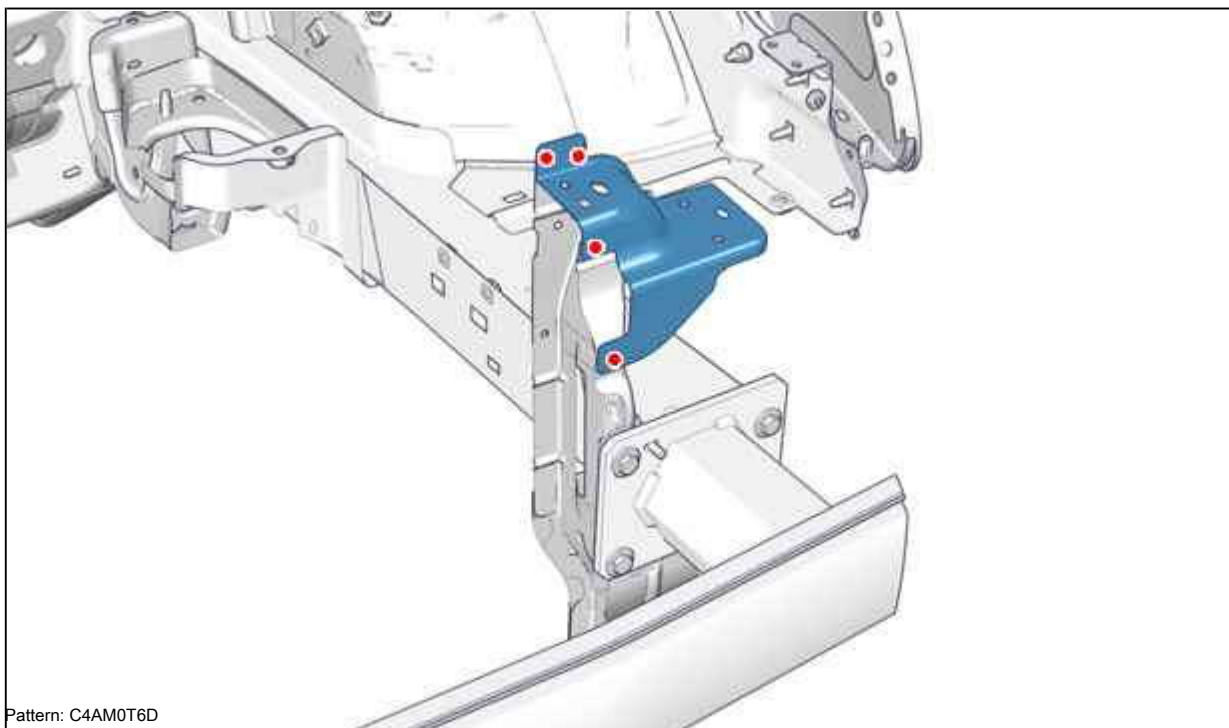
Pattern: C4AM0T5D

Check the symmetry of the diagonals using the recommended comparative measurement system (see the repair equipment catalog).

Hold the element in place.

Remove half of the front bezel.

10. Welding



Weld with welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: FRONT SIDEMEMBER (PARTY) (FRONT)

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

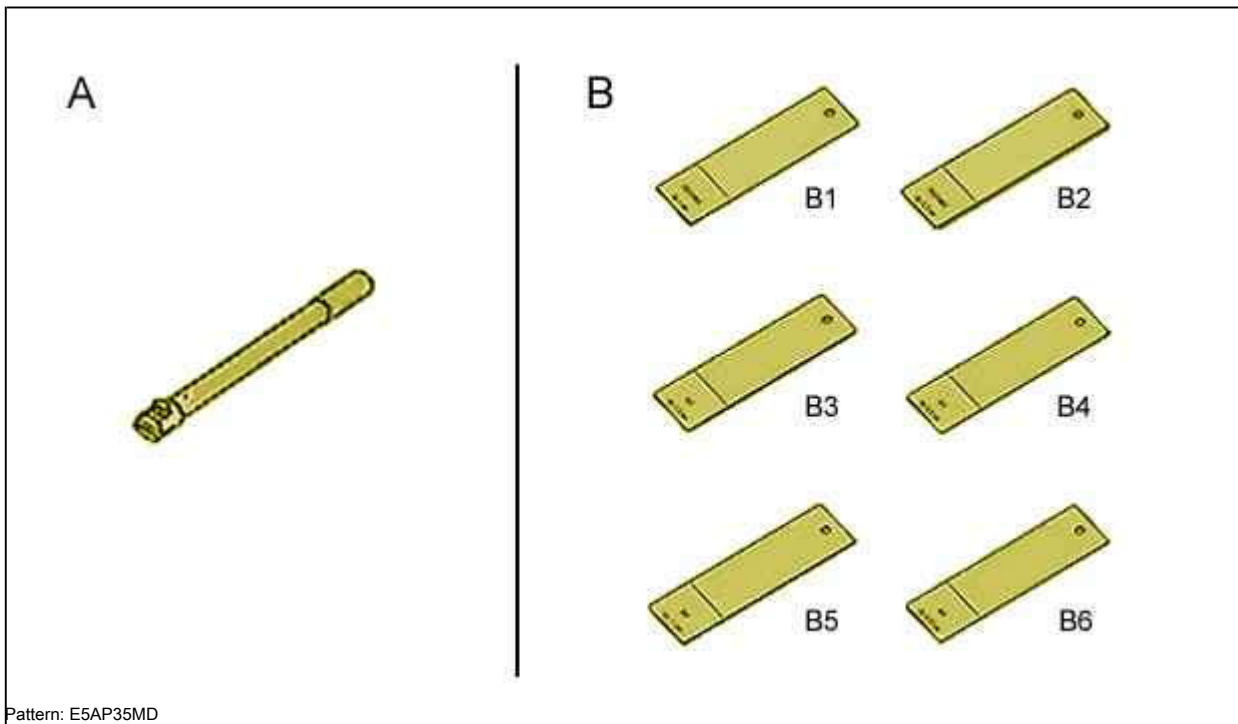
This element uses the following types of electric arc welds. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Recommended equipment

Works are performed using one of the following measuring systems:

- Electronic measuring system
- Positive measuring system
- Specific head MZ
- Control template



Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect items located in the repair area that could be

damaged by heat or dust.

Separate the wire harnesses.

Replace: Upper panel half support.

4. Location of the spare part

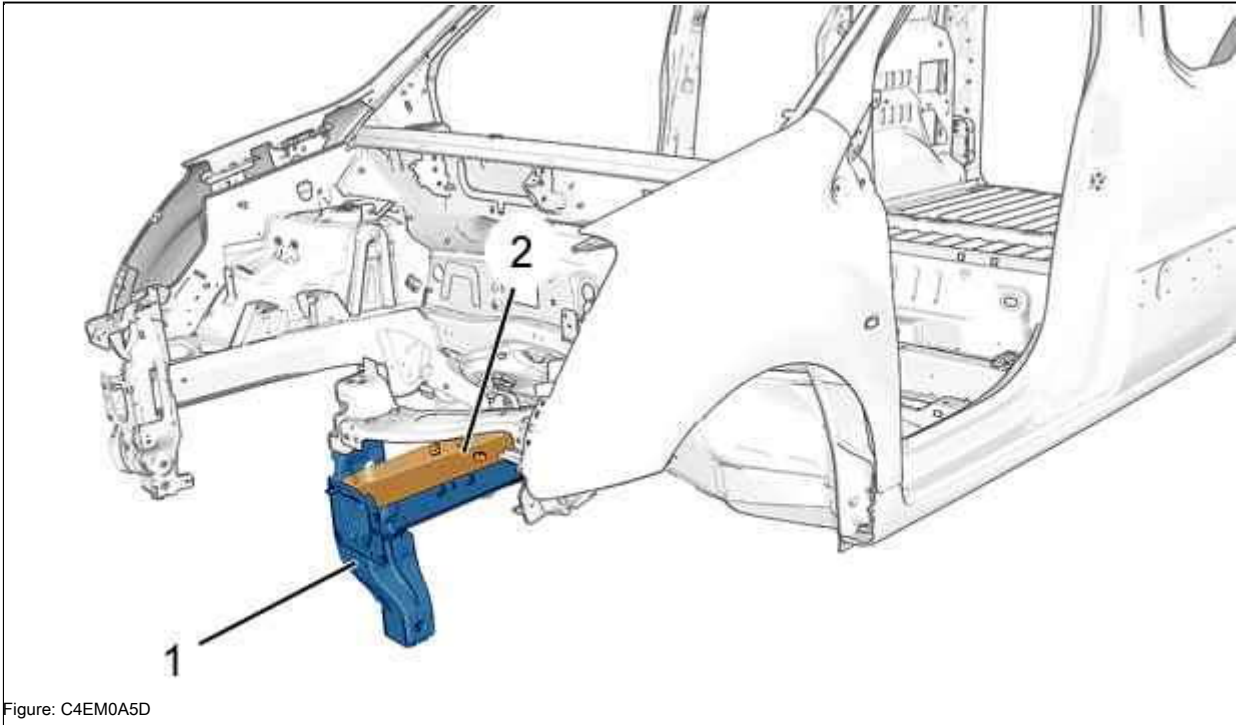
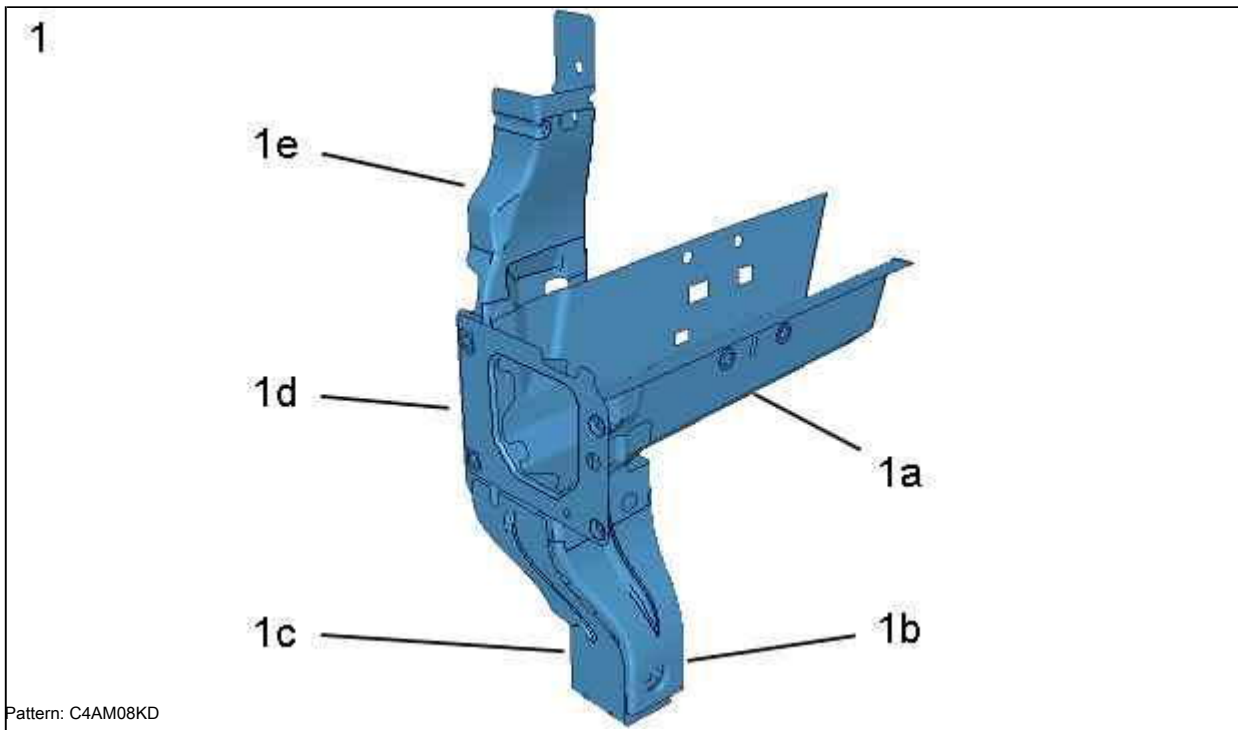


Figure: C4EM0A5D

Label Designation

(1)	Front side member assembly Front
(2)	side member support

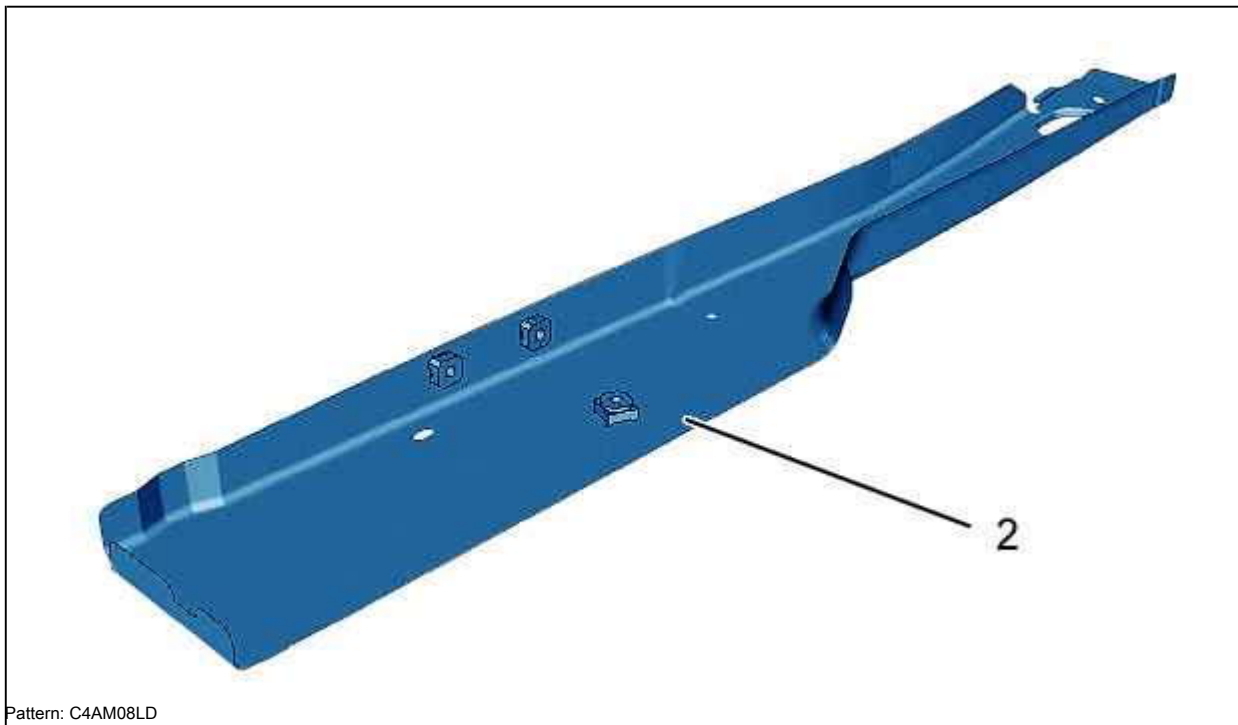
5. Identification of spare parts



Label Designation

Thickness (mm) Nature / classification

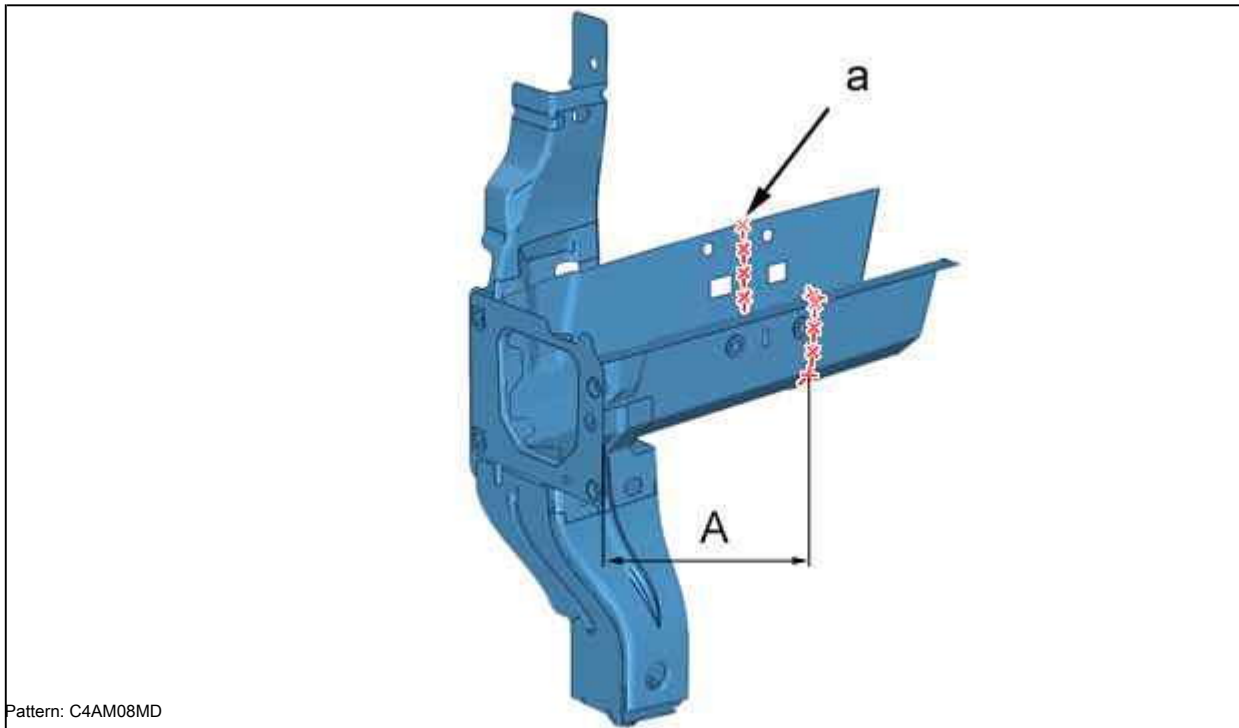
(1)	Front side member assembly Front		
(1a)	side member	1.76	Mild steel
(1b)	Unit Front Panel Support Amplifier 1.95 Front Panel Bracket		THLE
(1c)		1.95	THLE
(1d)	Spar front end	3	THLE
(1e)	Front panel bracket	1.95	THLE



Label Designation		Thickness (mm)	Nature / classification
(2)	Front spar support 1.8		HLE

6. Preparation of spare parts

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.

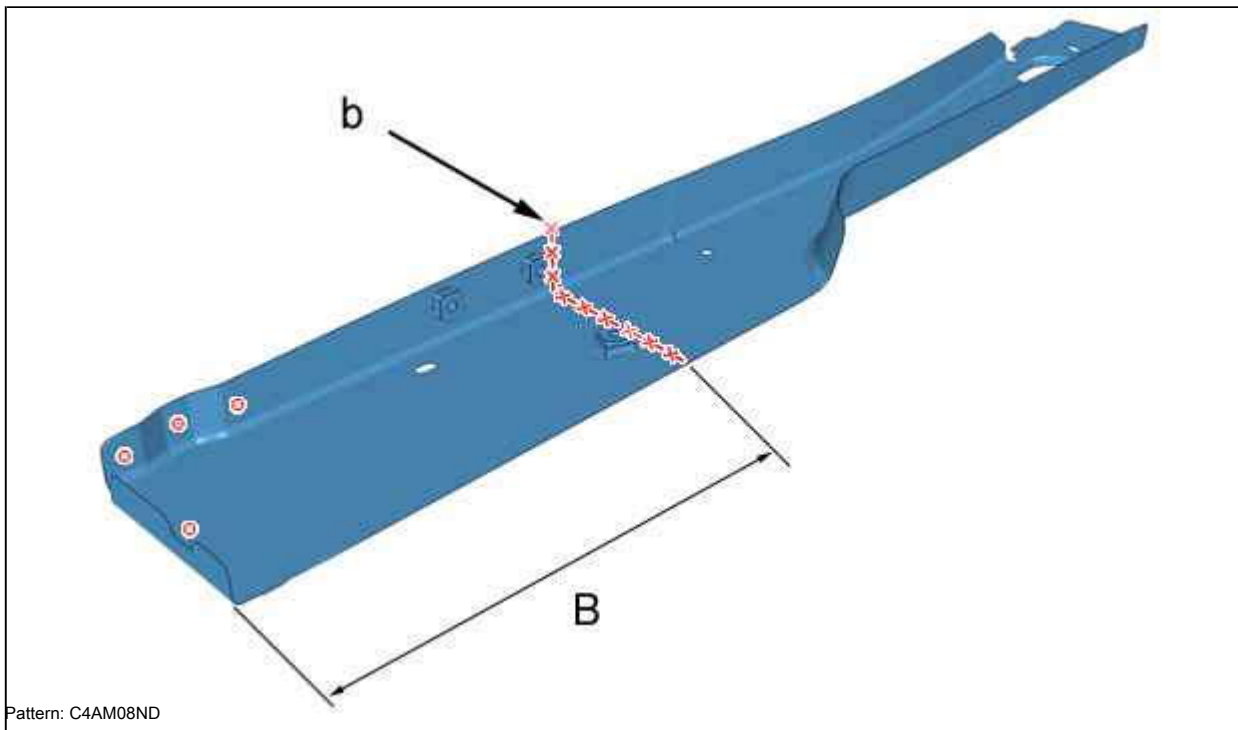


"A" = 230 mm.

Mark, then cut (at "a").

Prepare the sockets and protect them with "C7" welding primer.

NOTE: The "A" dimension is for reference only. The size may vary in different cases of replacement of the front side member assembly. Apply on the inner surfaces of the welded elements with welding primer.



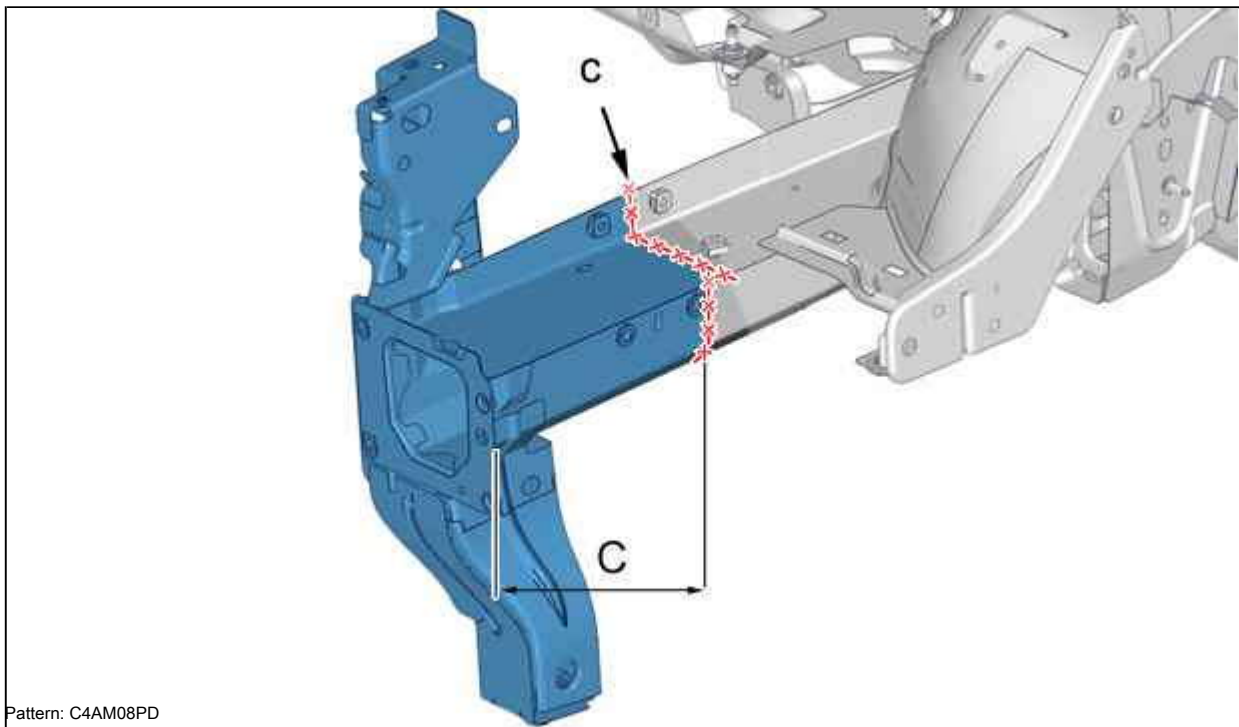
"B" = 270 mm.

Mark, then cut (at "b").

Mark, then drill Ø8 mm holes for subsequent spot-plug welding. Prepare the sockets and protect them with "C7" welding primer.

NOTE: Dimension "B" is for reference only. The size may vary in different cases of replacement of the front side member assembly. Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cut

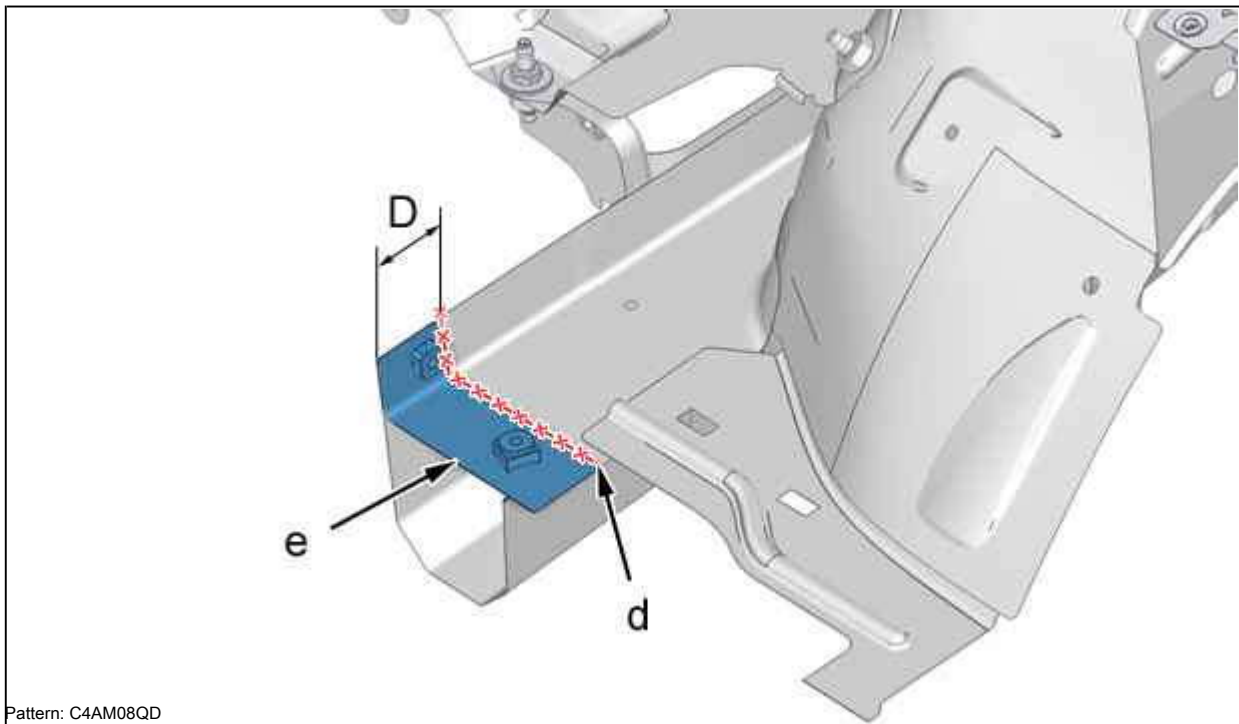


"C" = 230mm.

Mark, then cut (in "c").

Remove: Front side member (Front section).

NOTE: Dimension "C" is for reference only. The size may vary in different cases of replacement of the front side member assembly.

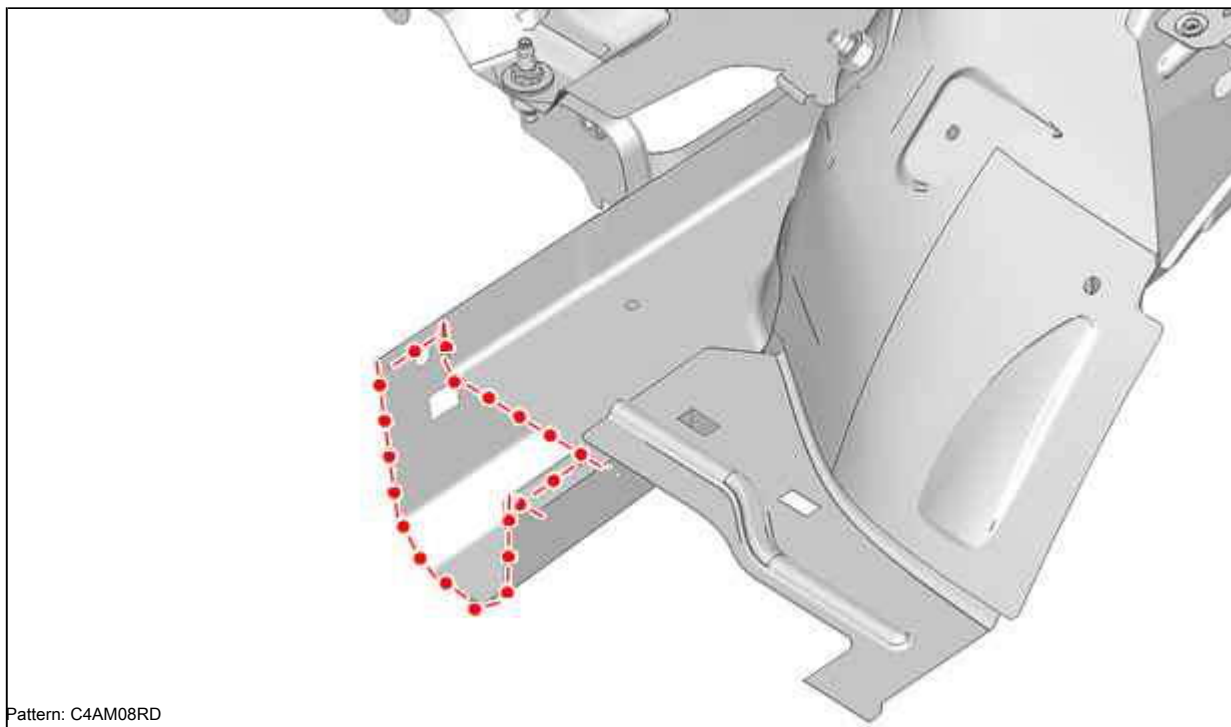


"D" = 40 mm.

Mark, then cut (in "d").

Remove part of support for front side member "e".

8. Cleaning - body preparation



Prepare the sockets and protect them with "C7" welding primer.

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Fitting

NOTE: We recommend checking the position of the complete spar (front) on a measuring stand certified by the manufacturer.

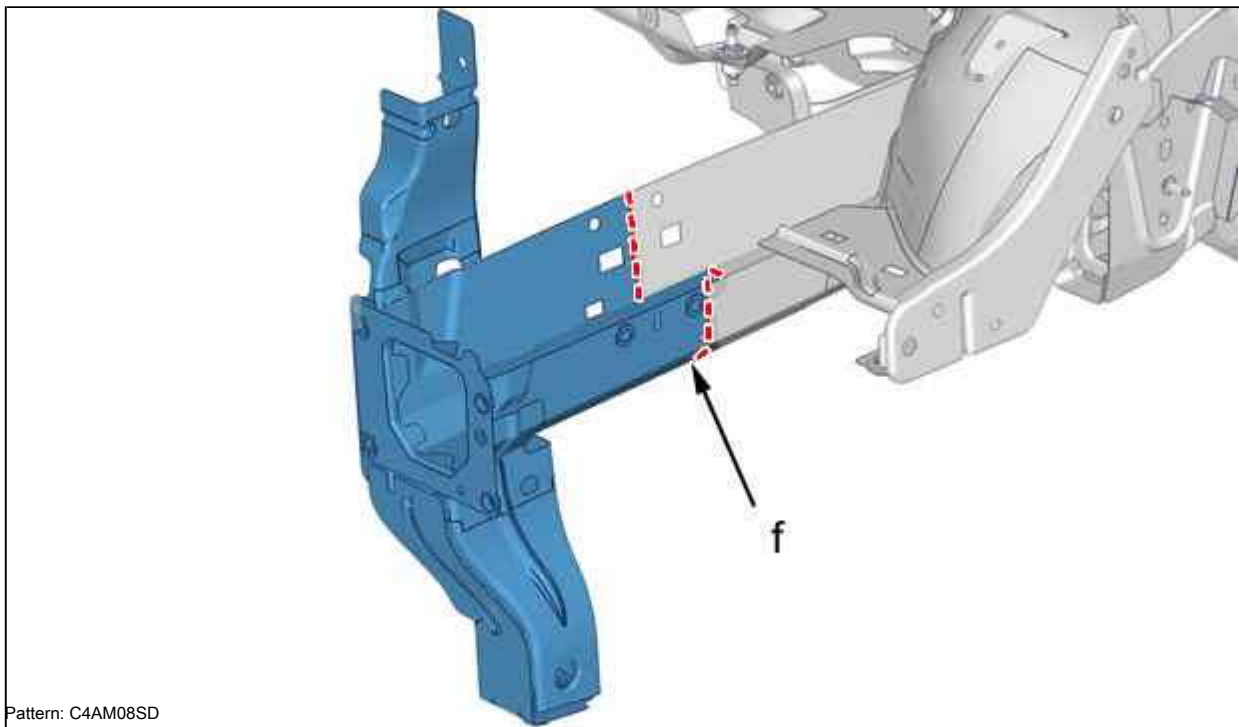
Install elements to ensure the fit.

Hold the parts in the required position.

Remove: Front side member support (front).

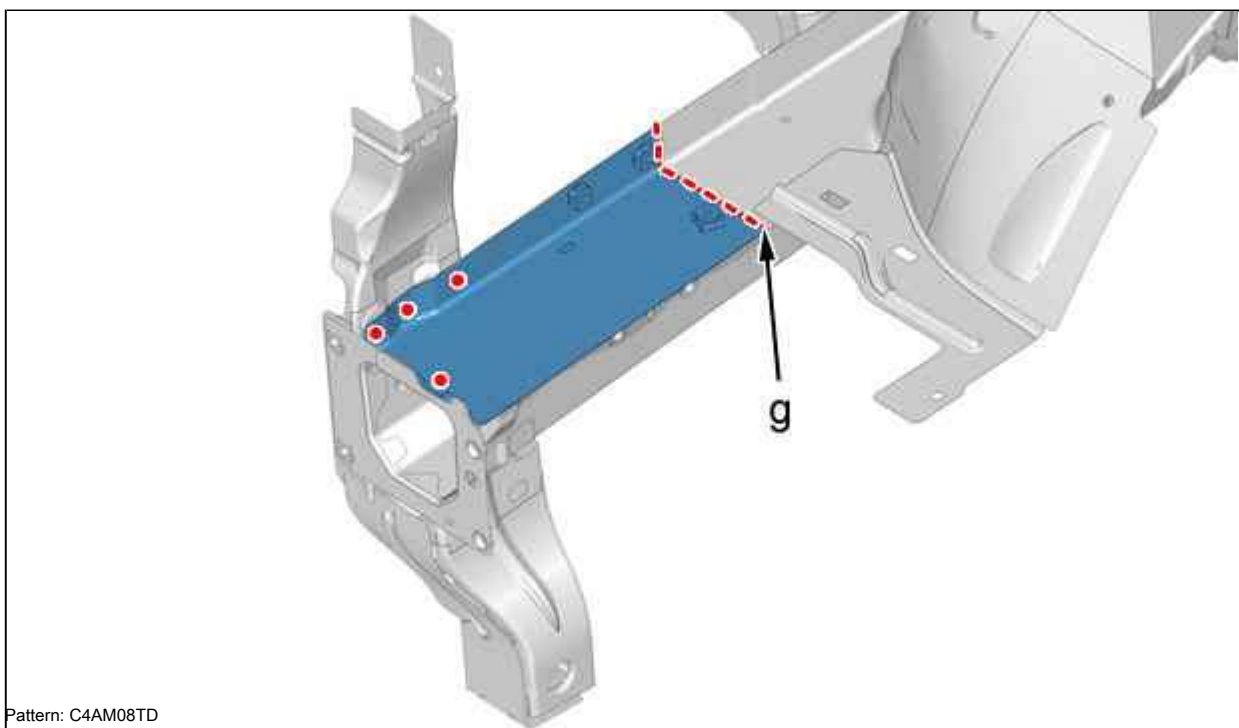
10. Welding

10.1. Welding side member assembly (Front)



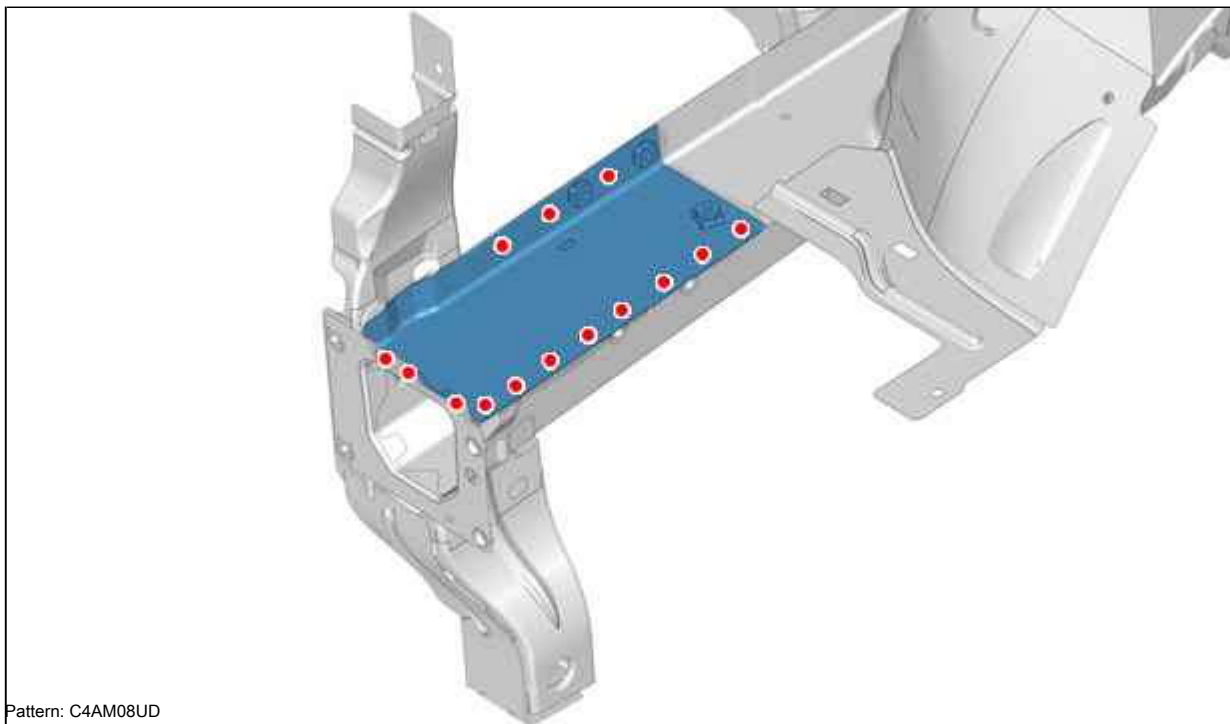
Carry out MAG welding (at "f"). Grind the seamMAG.

10.2. Welding: Front spar support (Front)



Position: Front side member support (Front section). Carry out MAG welding (in "g"). Grind the seamMAG. Weld through the holes in the MAG protective gas.

Grind MAG welding points.



Weld with welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned area.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: FRONT SIDEMEMBER ASSEMBLY

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

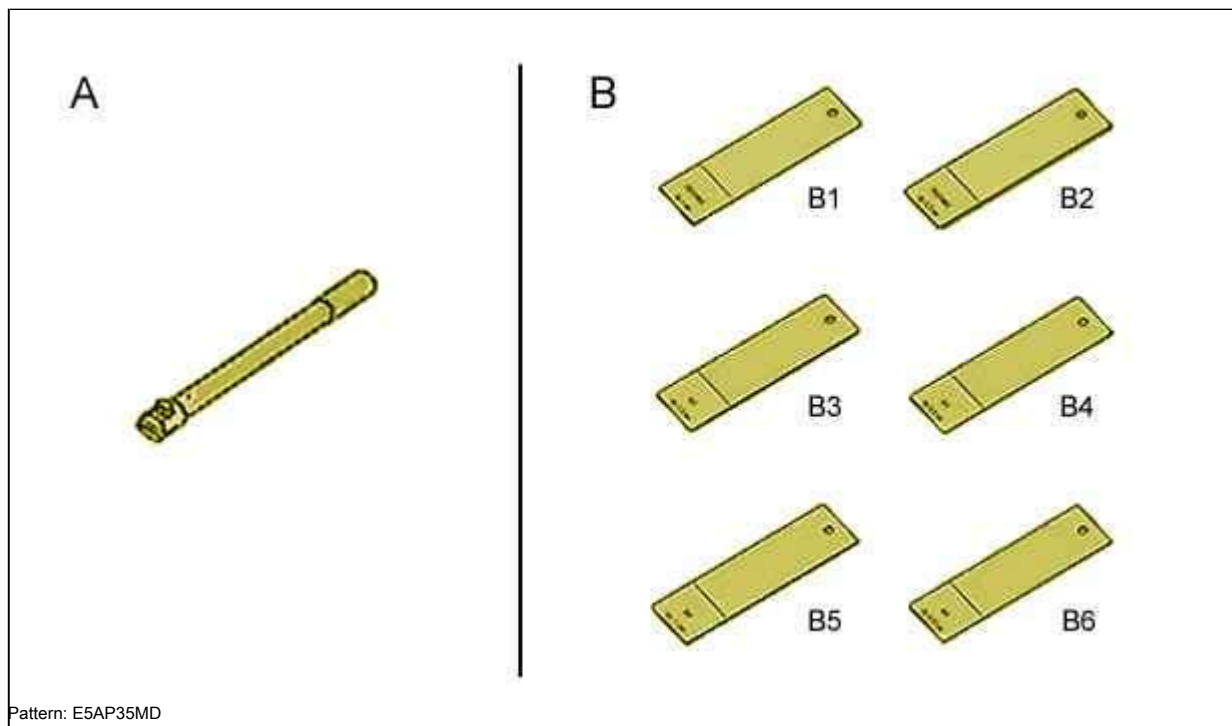
The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- UHLE: ultra high yield strength steel

2. Recommended equipment

Operate using one of the following systems:

- Electronic measuring system
- Positive measuring system
- Specific head MZ
- Control template



A Equipment for checking the quality of electric welding points () .1366ZZ. B Test gauge for the quality of electric welding dots () .1366 B.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect items located in the repair area that could

be damaged by heat or dust.

Separate the wire harnesses.

4. Location of the spare part

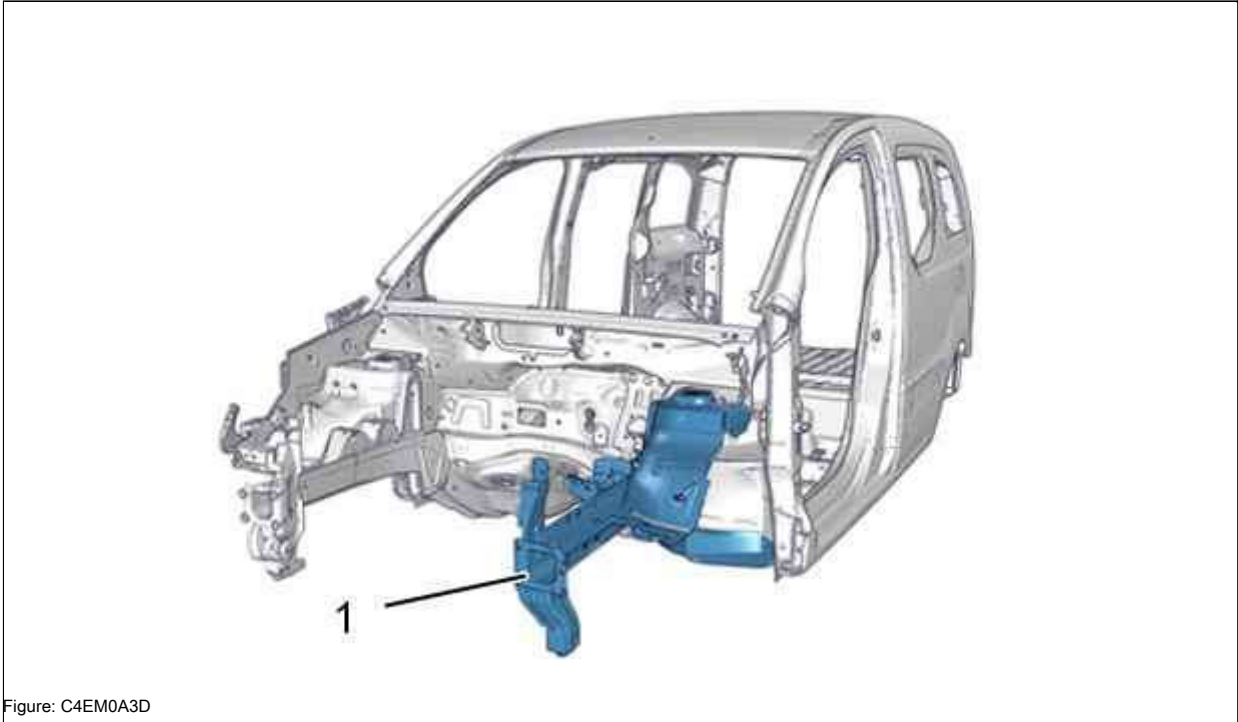
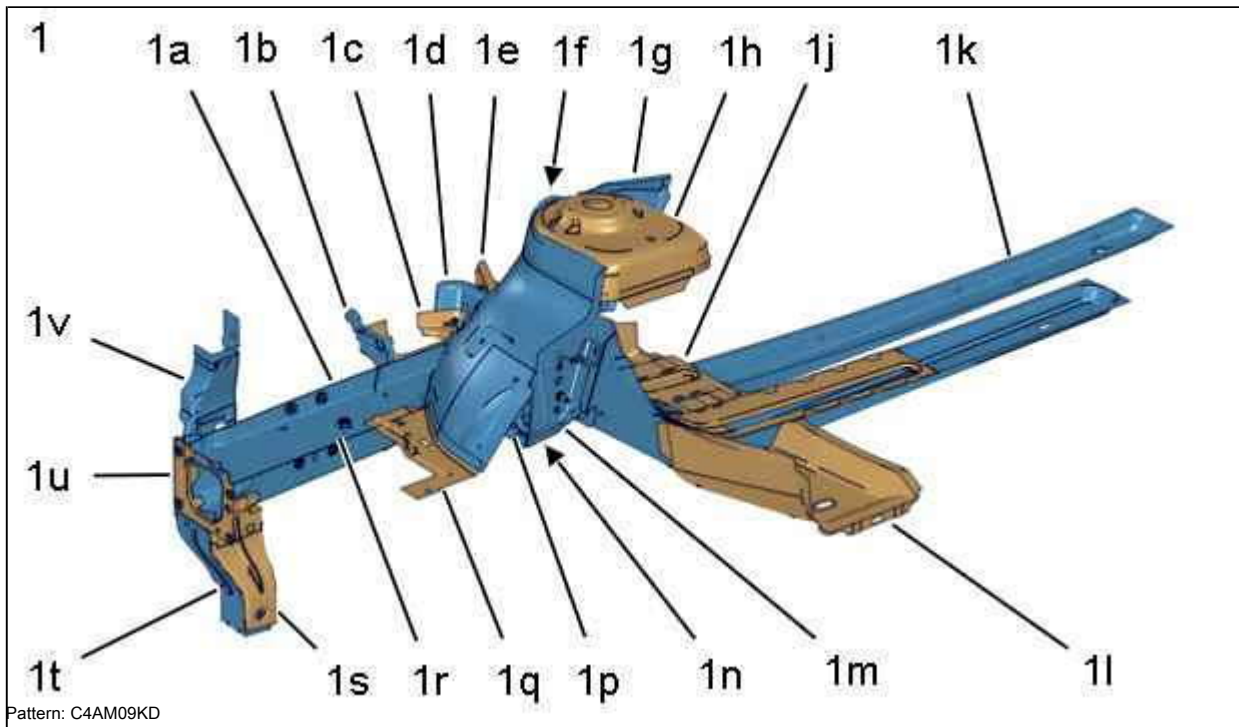


Figure: C4EM0A3D

Label Designation

(1)	Front side member assembly

5. Identification of the spare part



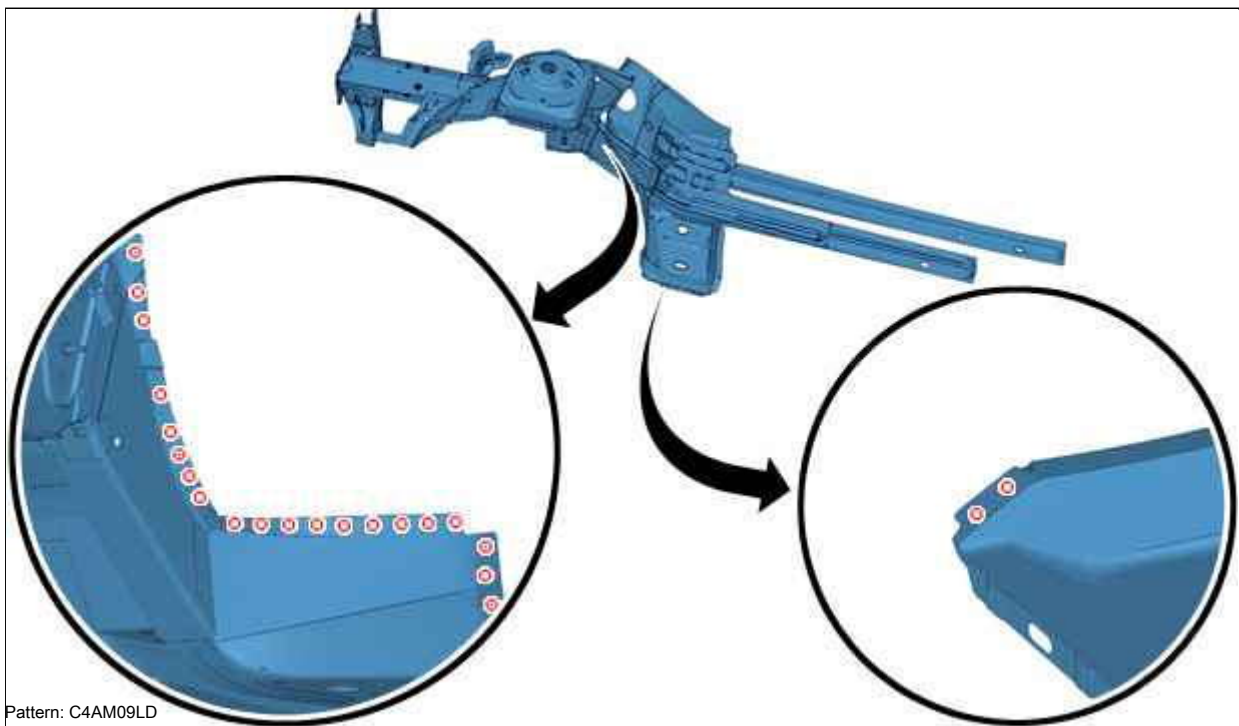
Label Designation

Thickness (mm) Nature / classification

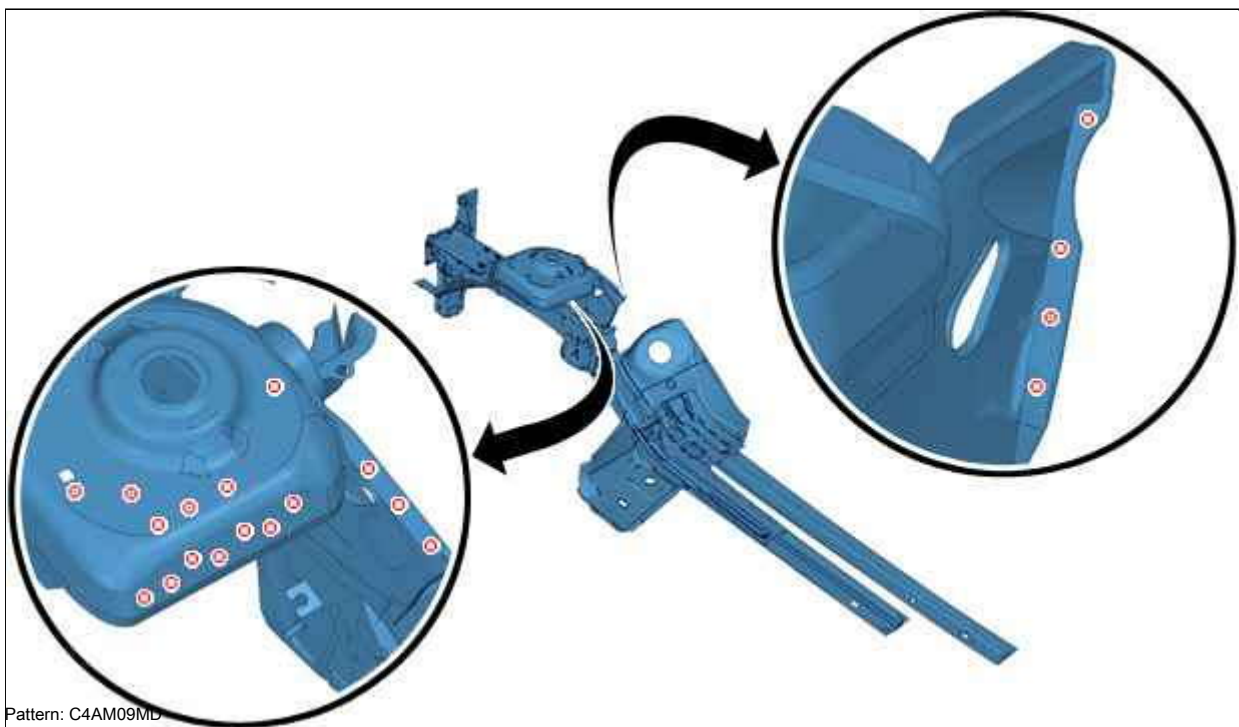
(1)	Front side member assembly Front		
(1a)	side member	1.76	ADX: Mild steel HLE
(1b)	Front reinforcement: Gearbox mount	2.5	
(1c)	gearbox stand	3	HLE
(1d)	Reinforcement (Rear): Gearbox Mounting Spar to Tunnel	2.5	HLE
(1e)		1.17	ADX: Mild Steel ADX: Mild
(1f)	Front wheel arch reinforcement Front wheel	0.87	Steel ADX: Mild Steel HLE
(1g)	arch	0.87	
(1h)	Front suspension support	2.5	
(1j)	Rear support spar	1.95	THLE
(1k)	Inner spar	2	HLE
(1l)	Floor spar link	1.47	ADX: Mild steel HLE
(1m)	Outer engine subframe mounting flange	1.95	
(1n)	Front reinforcement: support (engine subframe)	1.95	HLE
(1p)	Inner engine subframe mounting flange Front wheel arch	1.95	HLE
(1q)		1.17	ADX: Mild steel HLE
(1r)	Front support spar	1.8	
(1s)	Amplifier: Front panel bracket Front panel bracket	1.95	THLE
(1t)		1.95	THLE
(1u)	Spar front end	3	THLE
(1v)	Front panel bracket	1.95	THLE

6. Preparation of spare part

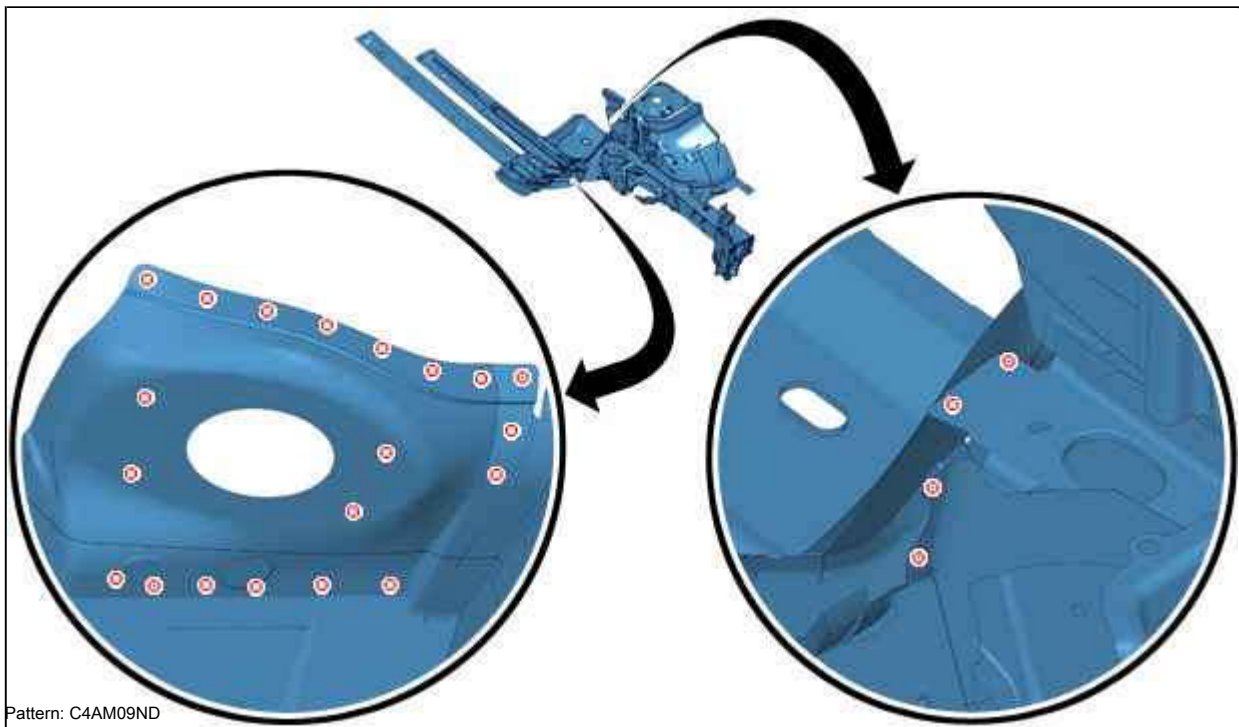
MANDATORY: Use a solvent to clean the edges of the joints to avoid damage.



Mark, then drill Ø8 mm holes for subsequent spot-plug welding. Prepare the sockets and protect them with "C7" welding primer.

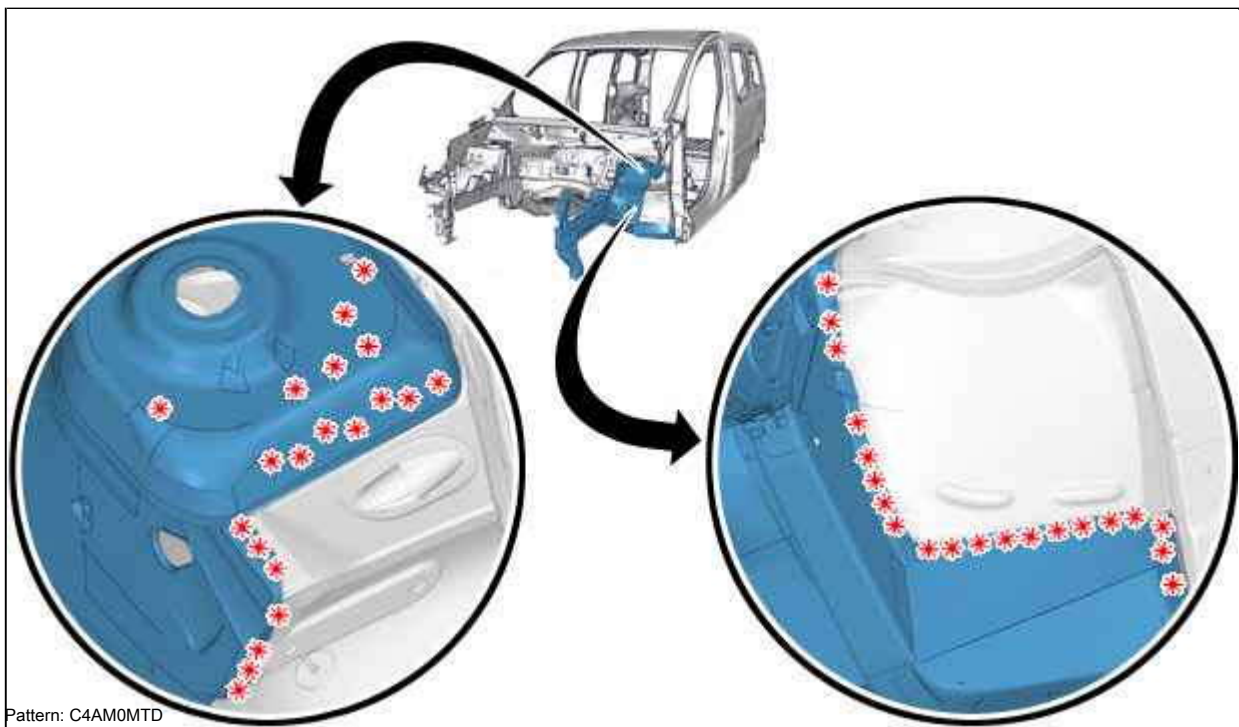


Mark, then drill Ø8 mm holes for subsequent spot-plug welding. Prepare the sockets and protect them with "C7" welding primer.

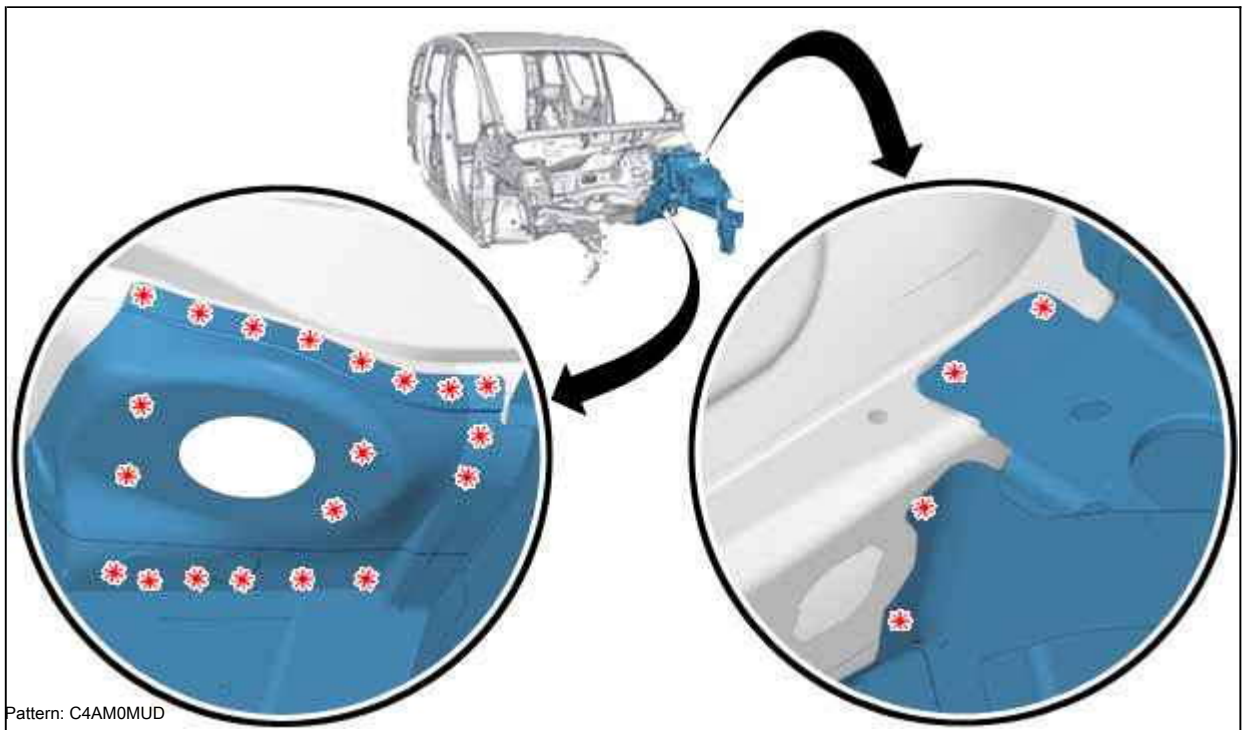


Mark, then drill Ø8 mm holes for subsequent spot-plug welding. Prepare the sockets and protect them with "C7" welding primer.

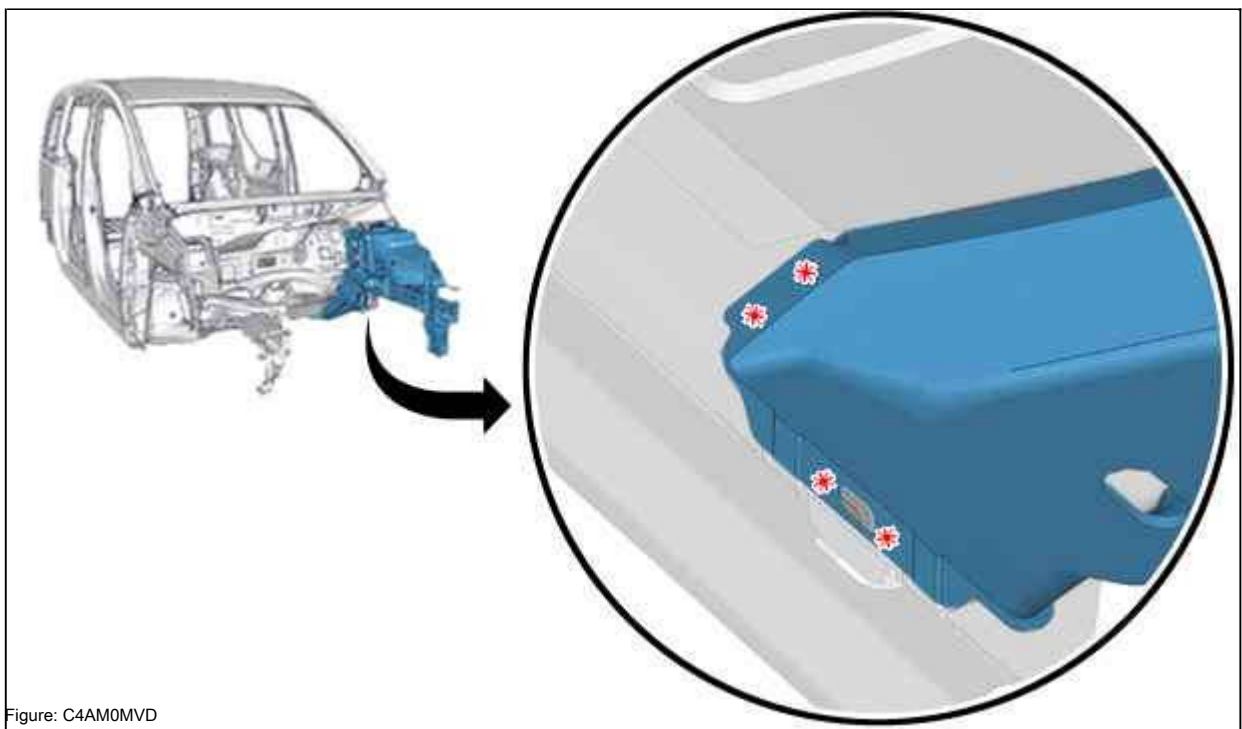
7. Cutting the spar assembly from the body



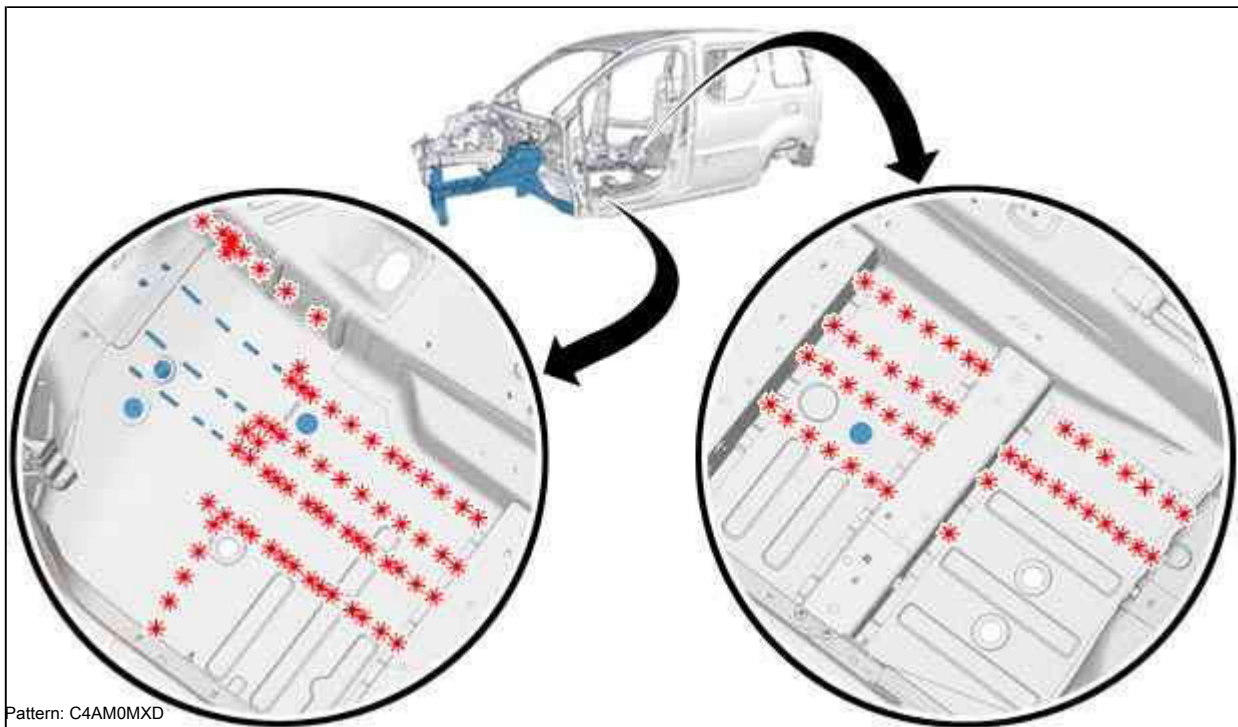
Cut by points.



Cut by points.



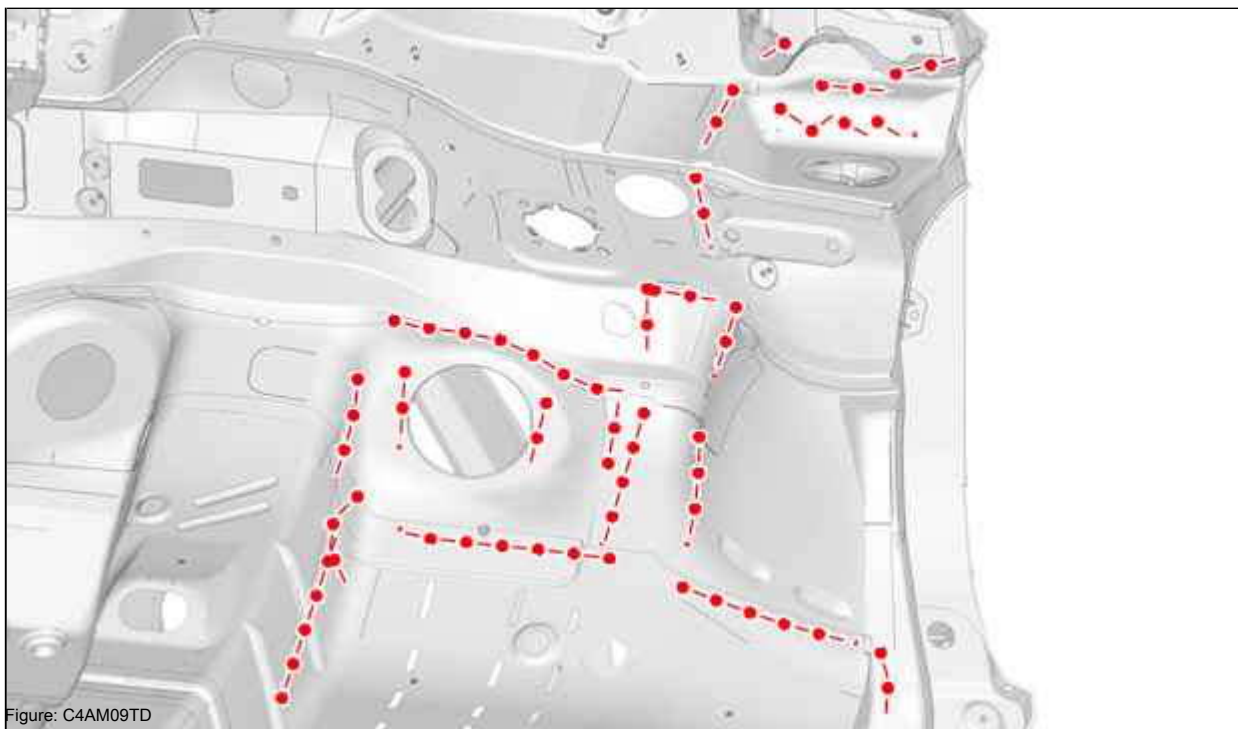
Cut by points.



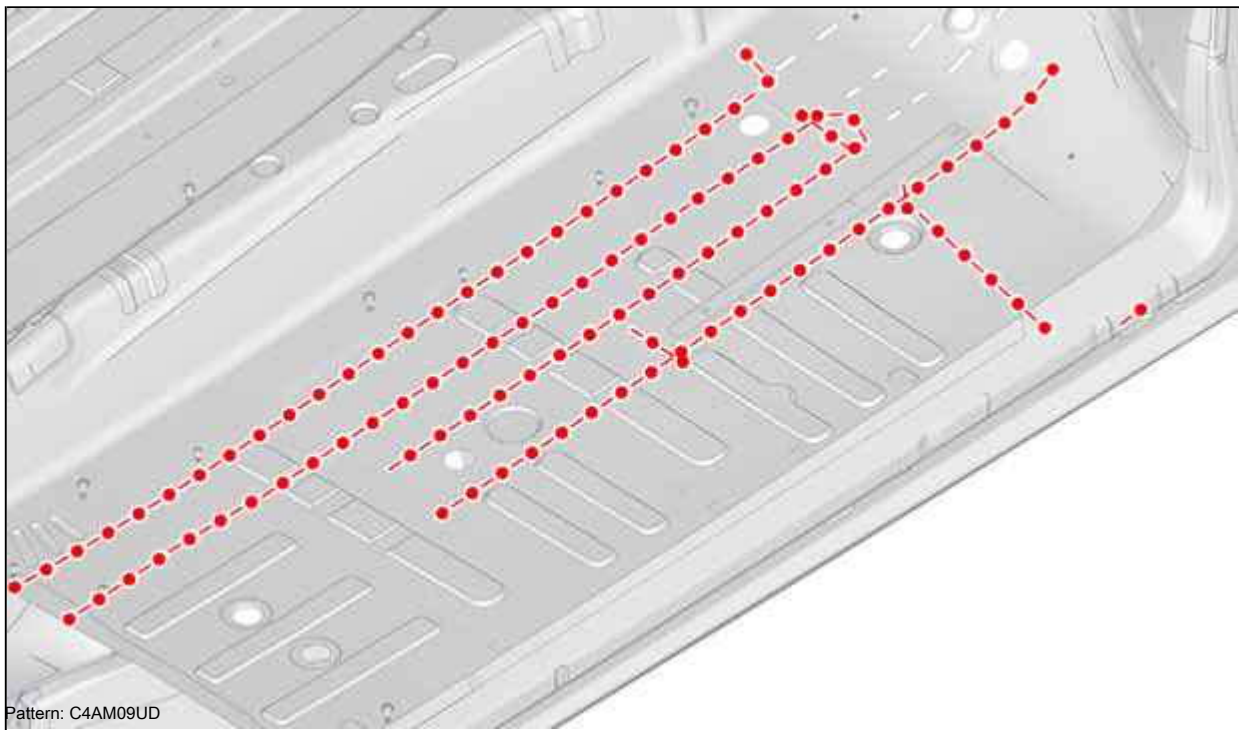
Cut by points.

Remove: Front side member (complete).

8. Cleaning - body preparation



Prepare the sockets and protect them with "C7" welding primer.



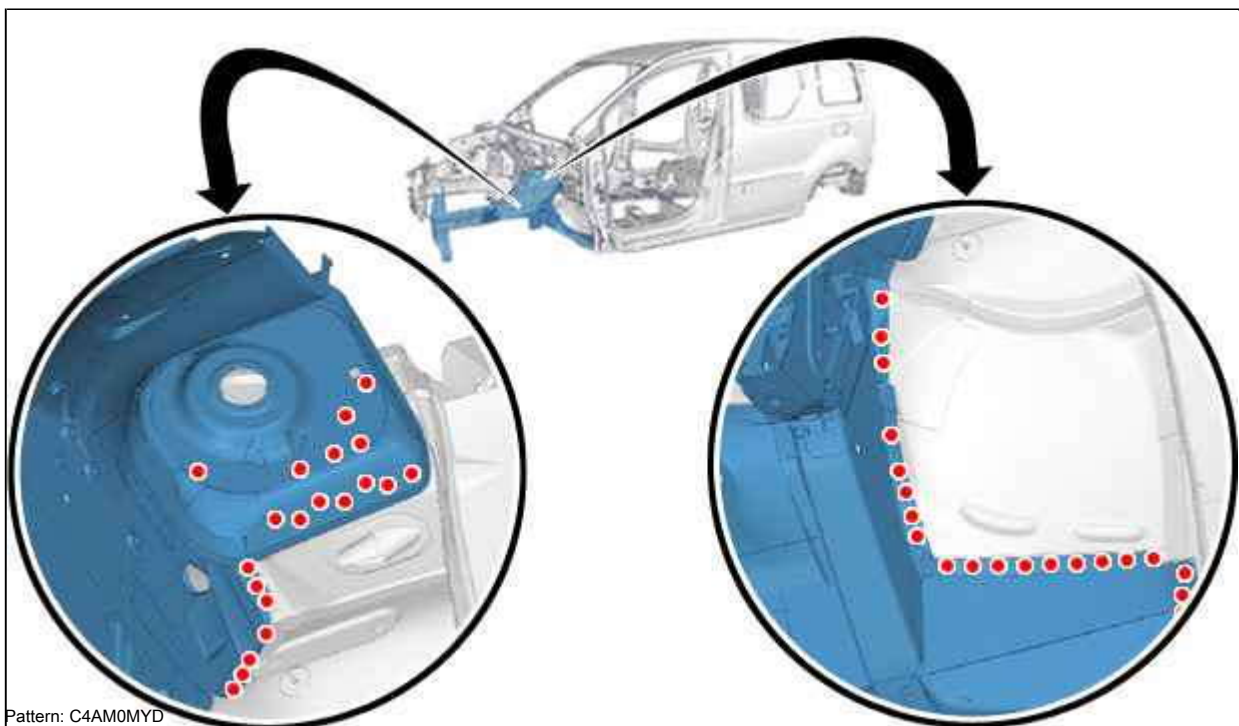
Prepare the sockets and protect them with "C7" welding primer.

9. Fitting

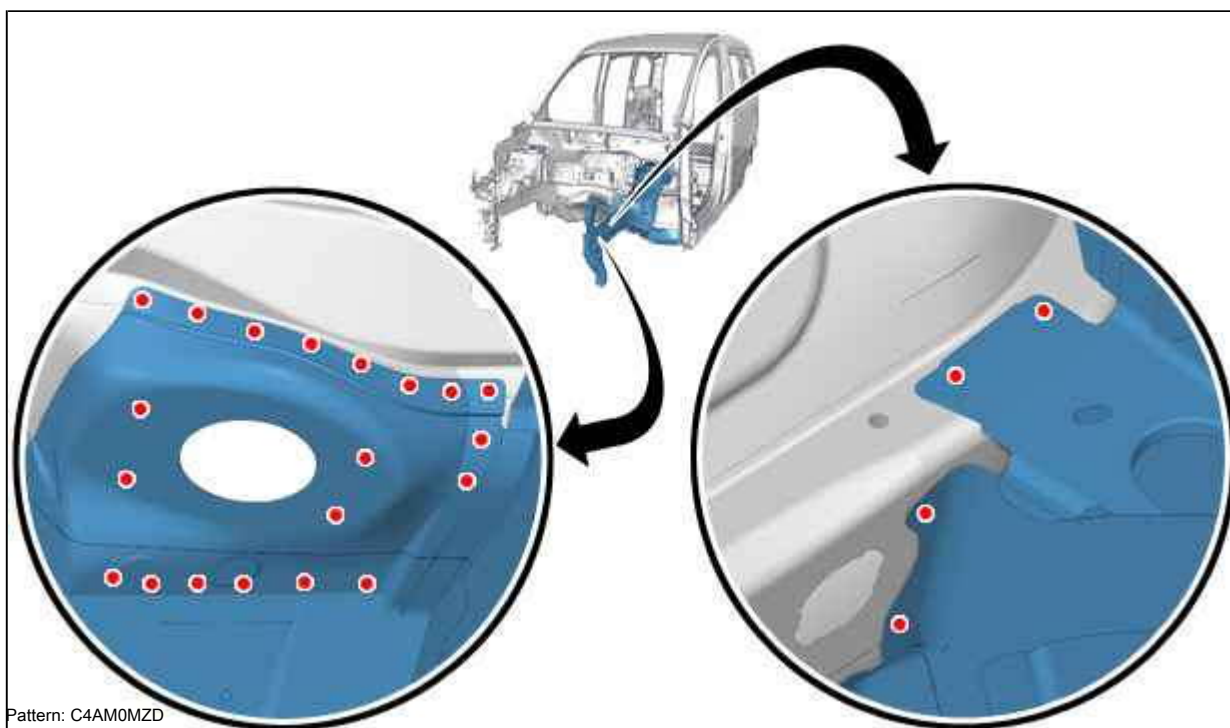
Position: Front side member (complete).

Check the position of the front side member with a measuring stand.

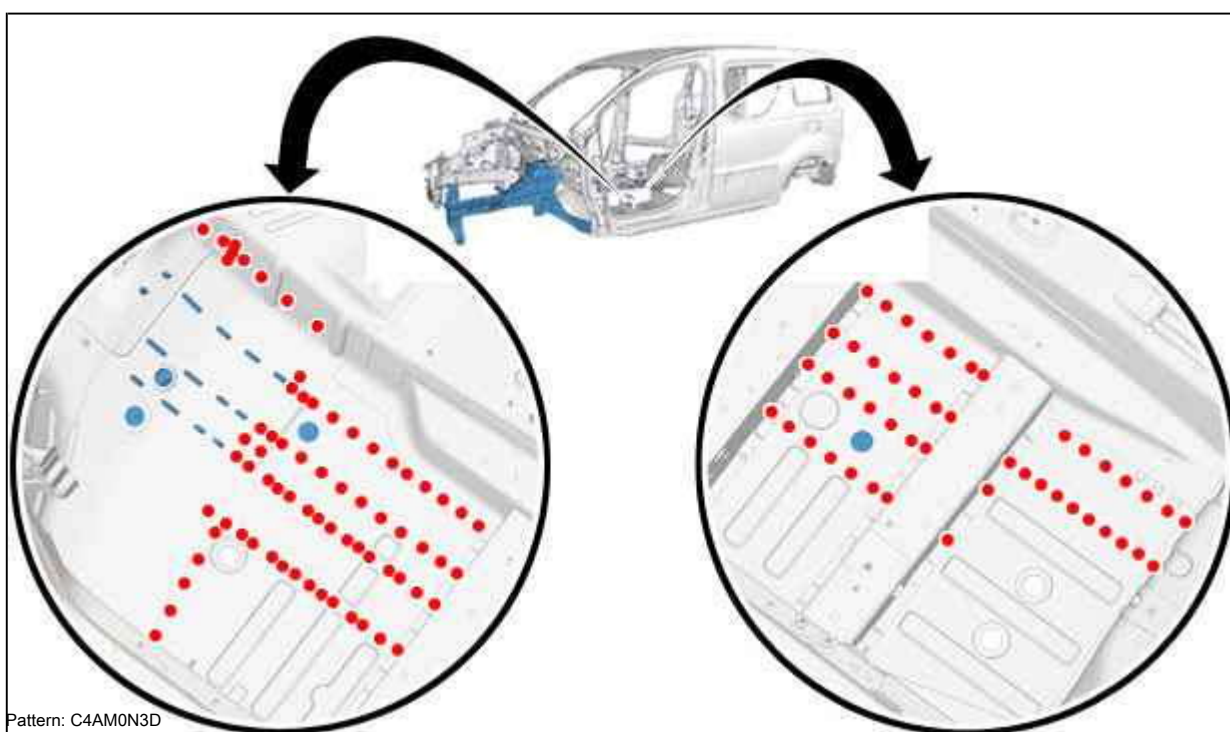
10. Welding



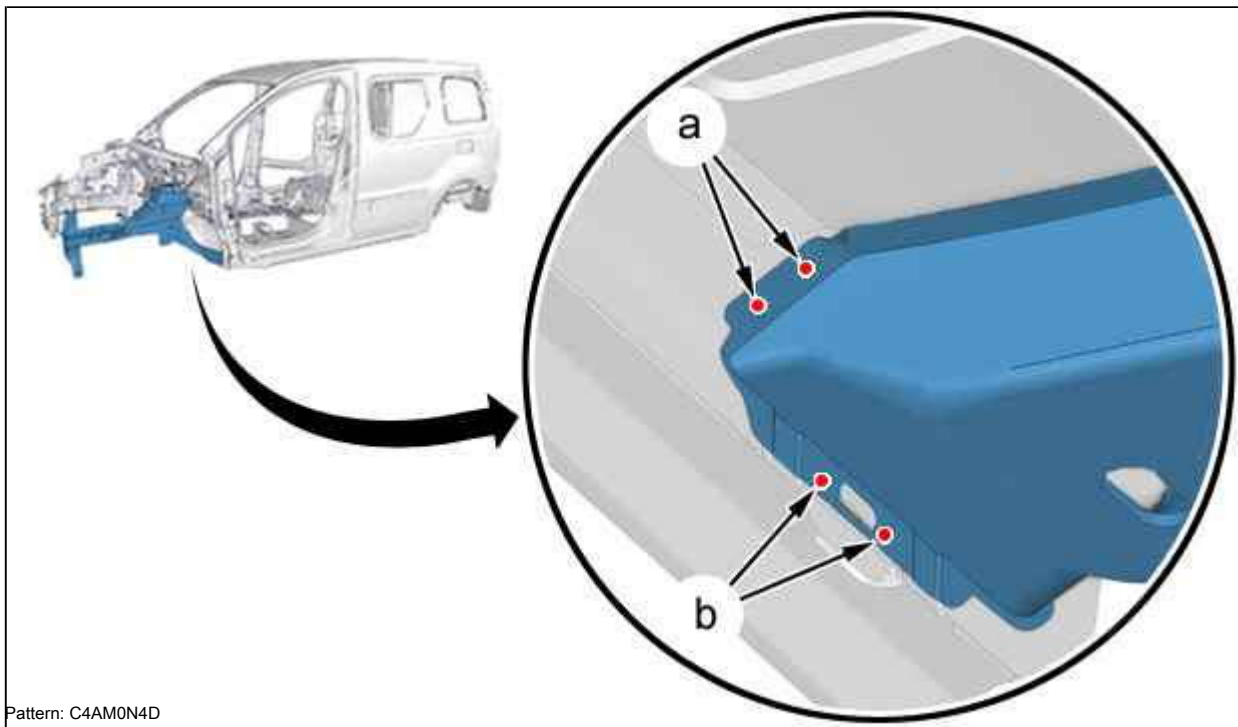
Weld through the holes in the MAG protective gas. Grind MAG welding points.



Weld through the holes in the MAG protective gas. Grind MAG welding points.

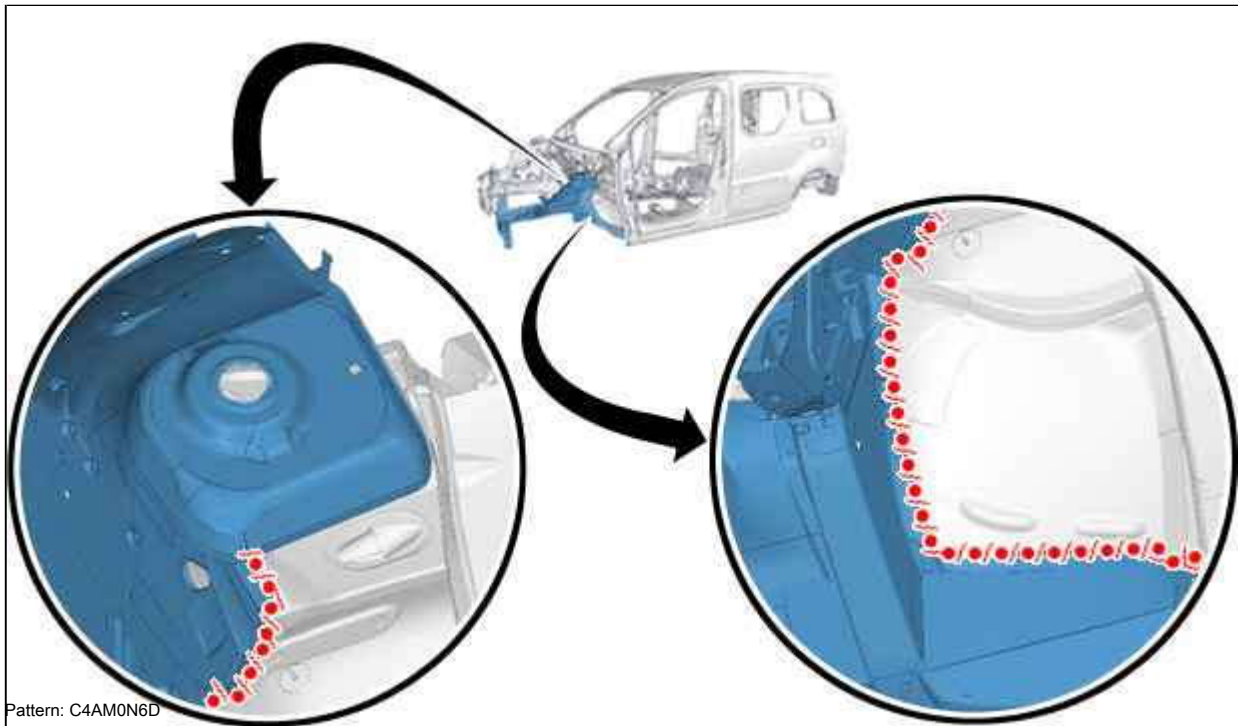


Weld through the holes in the MAG protective gas. Grind MAG welding points.

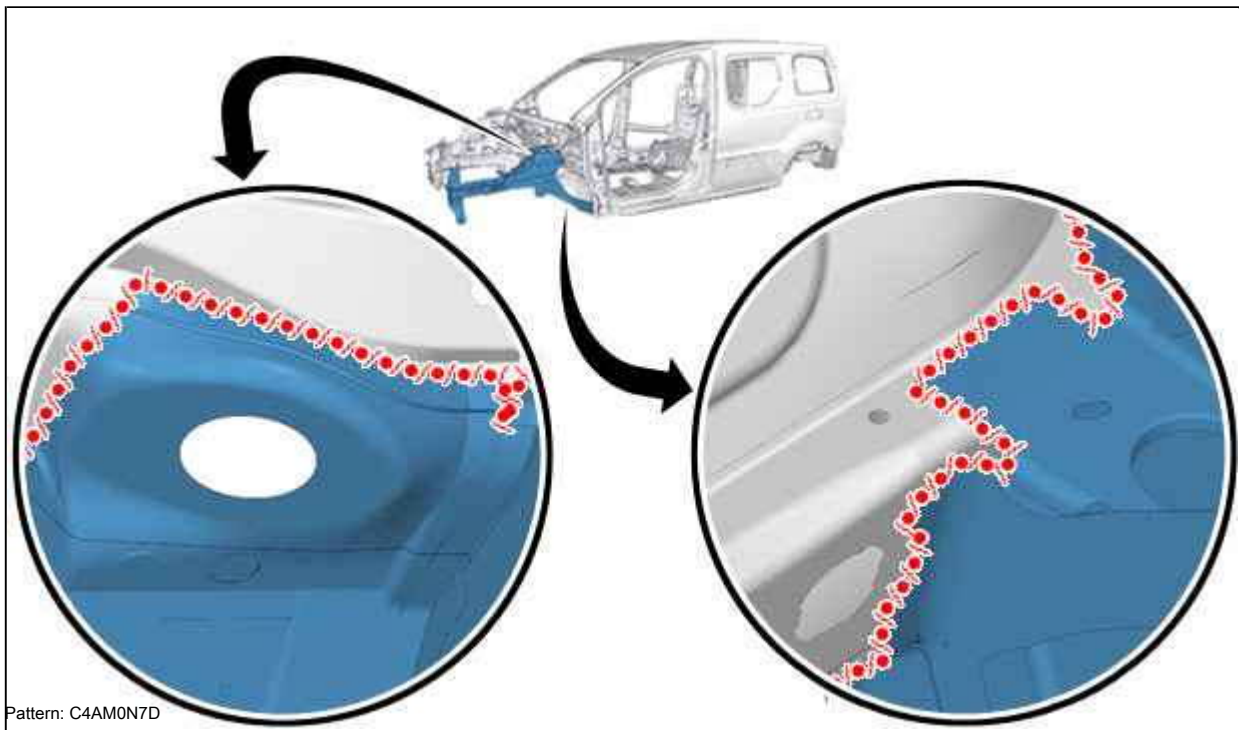


Weld through the holes in the MAG protective gas (at "a"). Grind MAG welding points.
Weld with weld points (in "b").

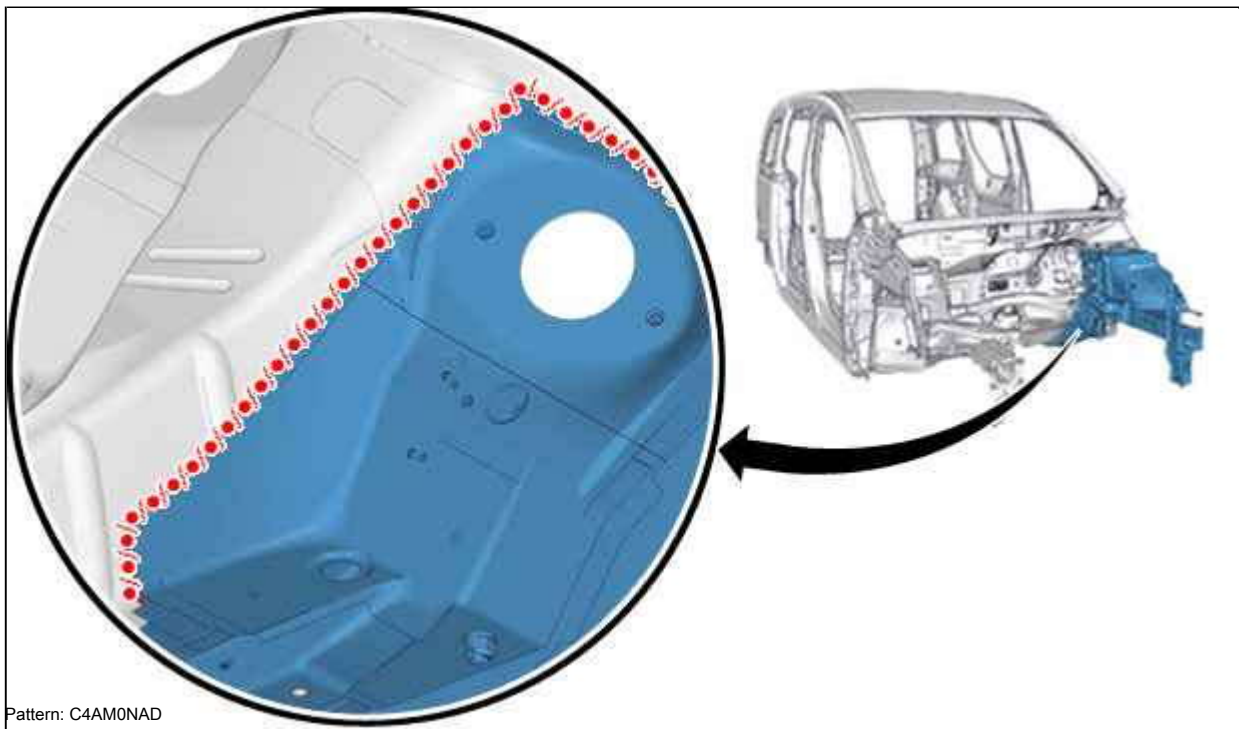
11. Tightness protection



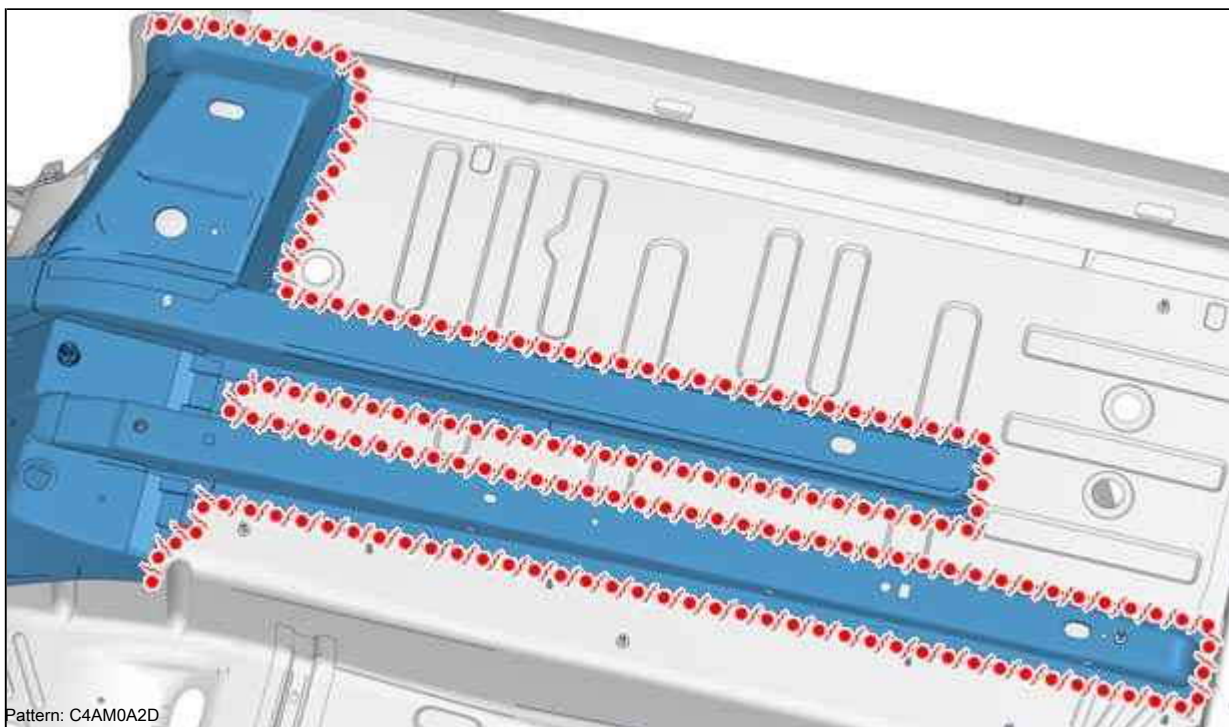
Apply a layer of phosphate primer to the cleaned area. Apply sealant "A1".



Apply a layer of phosphate primer to the cleaned area. Apply sealant "A1".



Apply a layer of phosphate primer to the cleaned area. Apply sealant "A1".



Apply a layer of phosphate primer to the cleaned area. Apply sealant "A1".

Apply an anti-gravel coating (index "C4").

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: FRONT LONGERON END

MANDATORY: Observe the cleanliness and safety rules



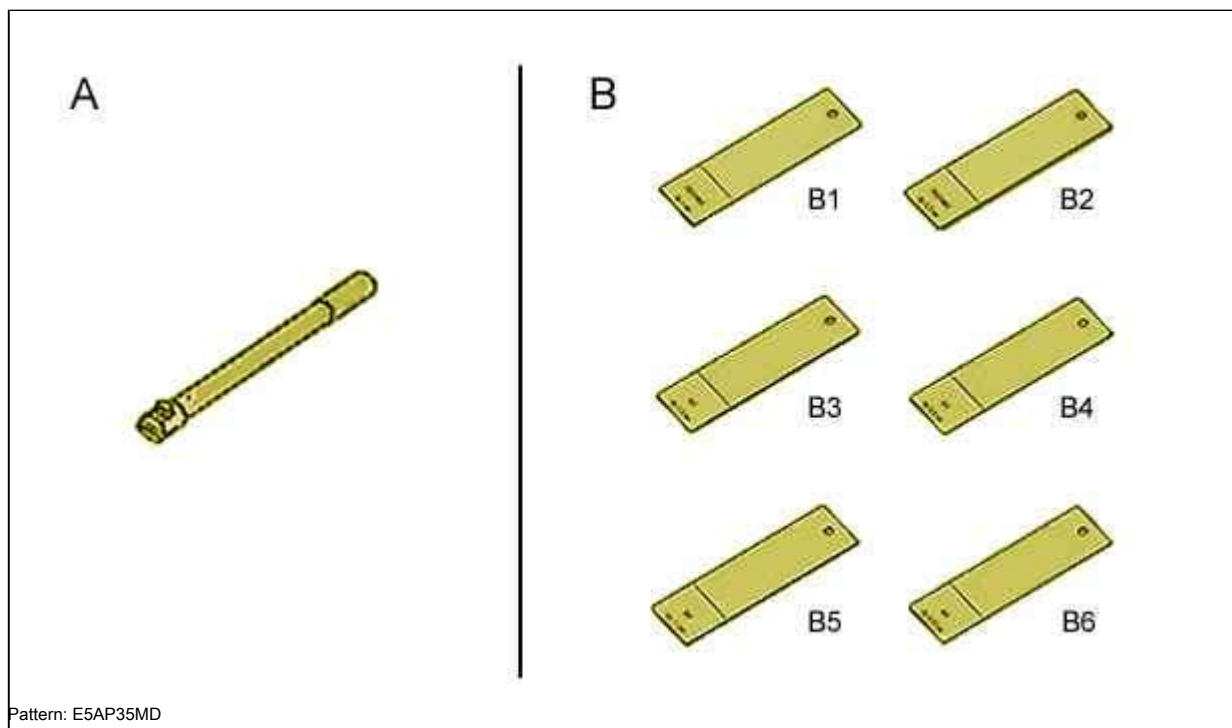
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Recommended equipment



Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Location of the spare part

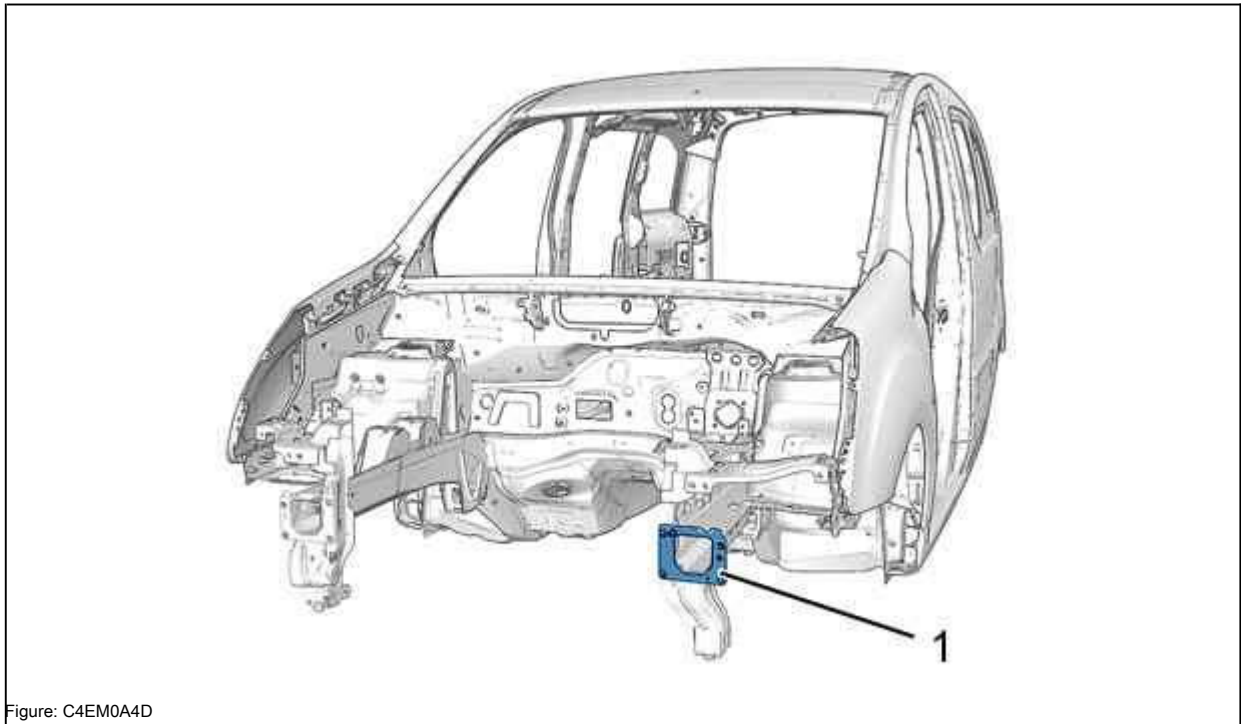


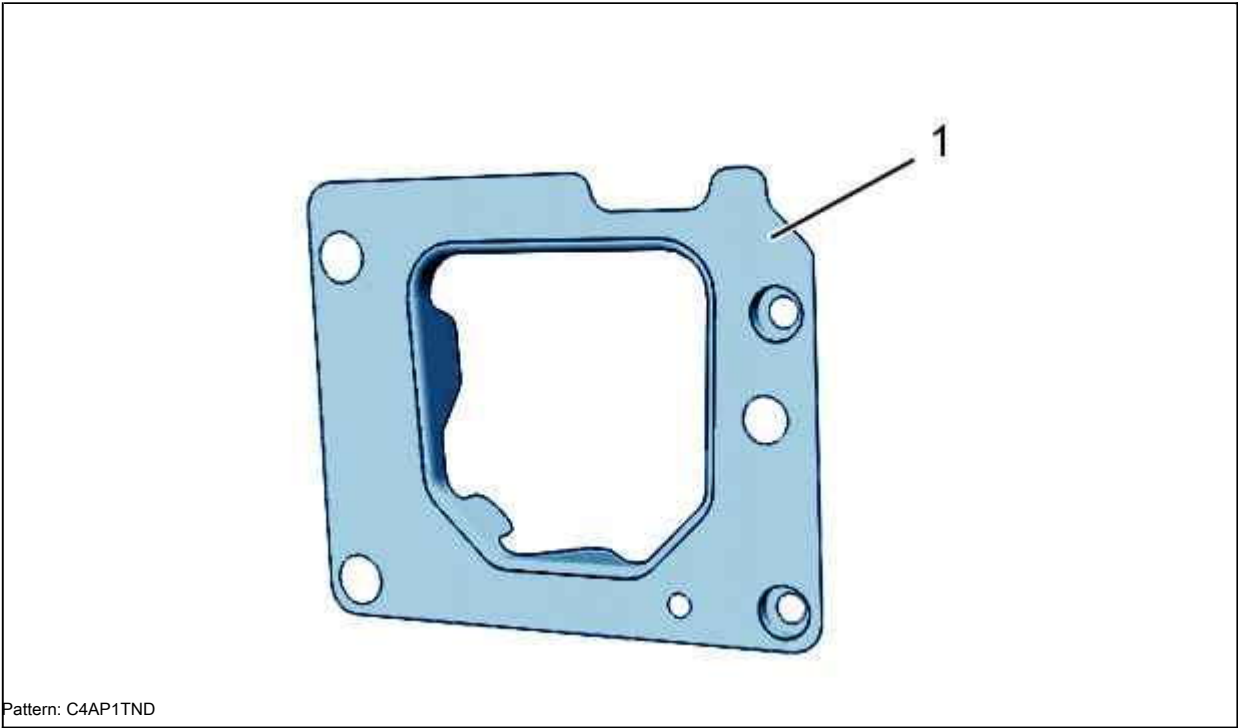
Figure: C4EM0A4D

Label Designation

(1)	Spar front end

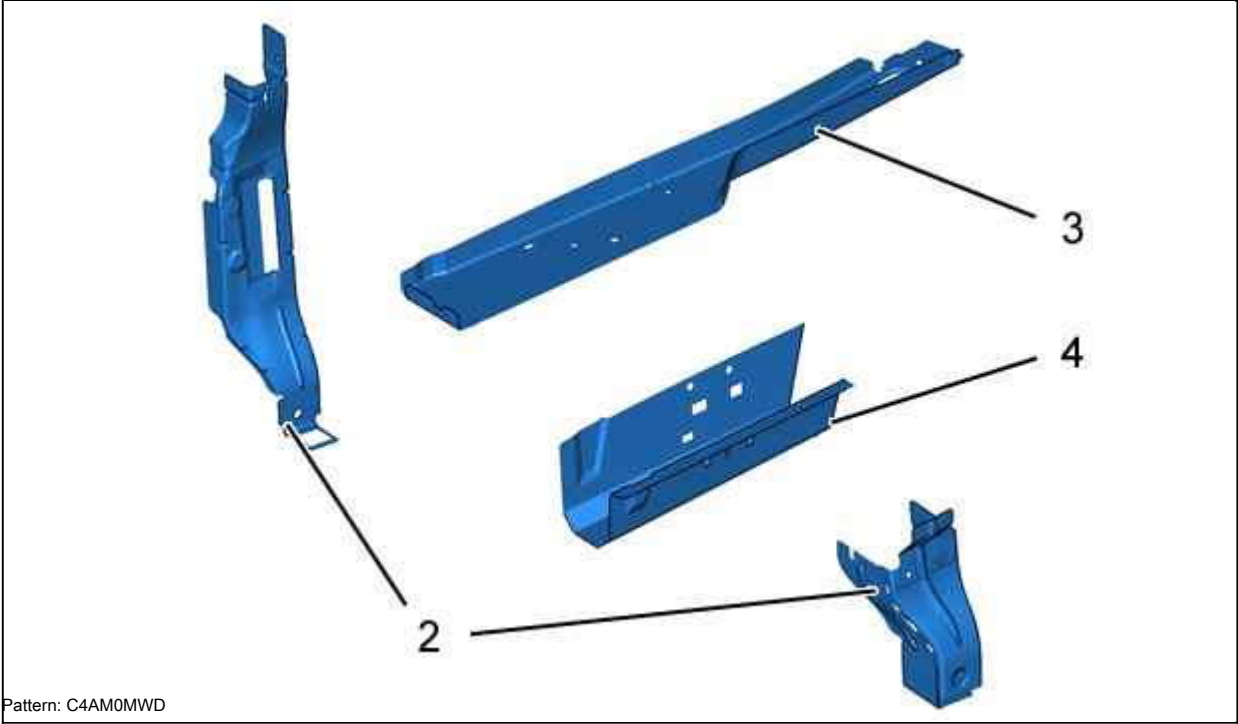
5. Identification of the spare part

5.1. Composition: Front spar end



Label Designation		Thickness (mm)	Nature / classification
(1)	The front end of the longitudinal member 3		THLE

5.2. Identification of parts adjacent to the spare part

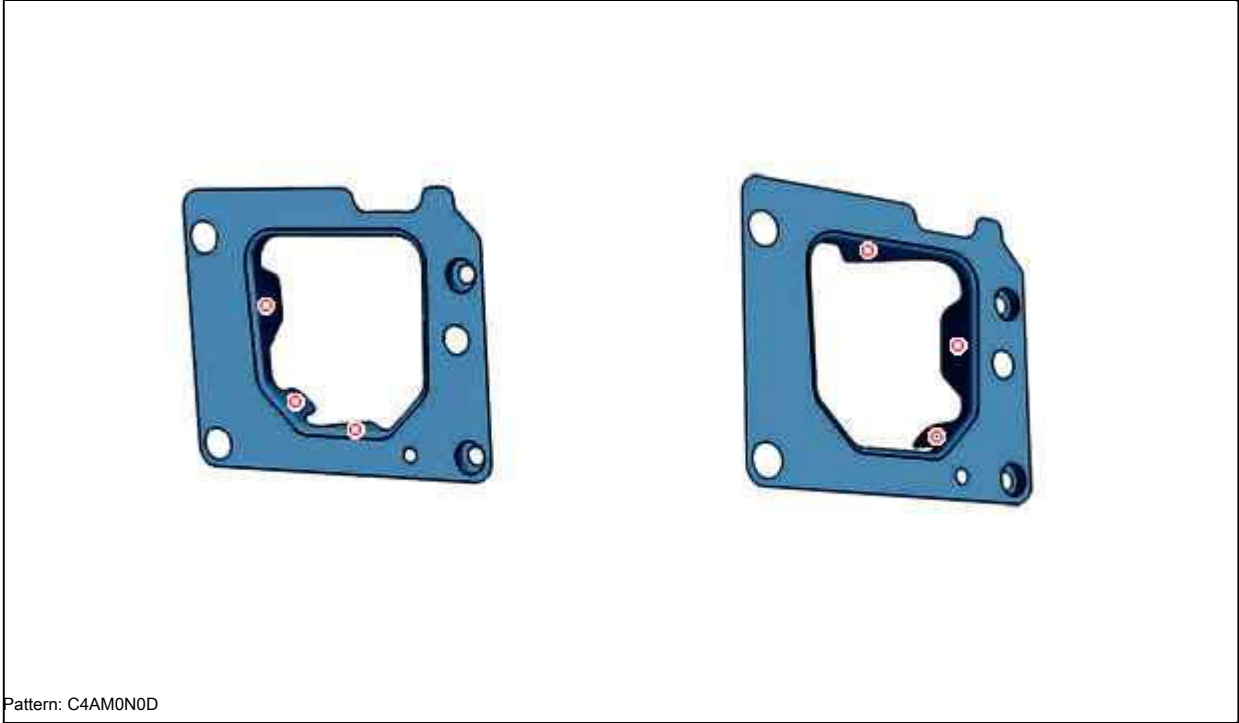


Label Designation		Thickness (mm)	Nature / classification
(2)	Front panel bracket 1.95		THLE

(3)	Front support spar 1.80		HLE
(4)	Spar (Front) 1.76		Mild steel

6. Preparation: Front end of the side member

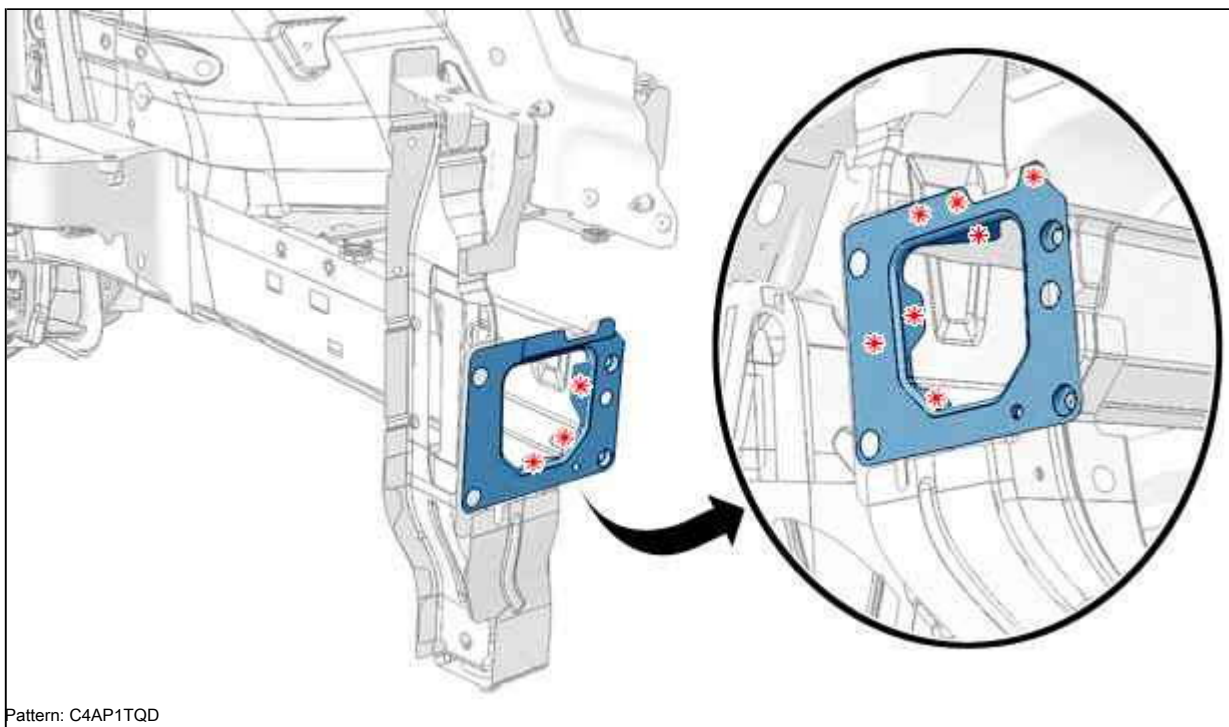
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Mark, then drill a Ø10 mm hole for subsequent spot welding. Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

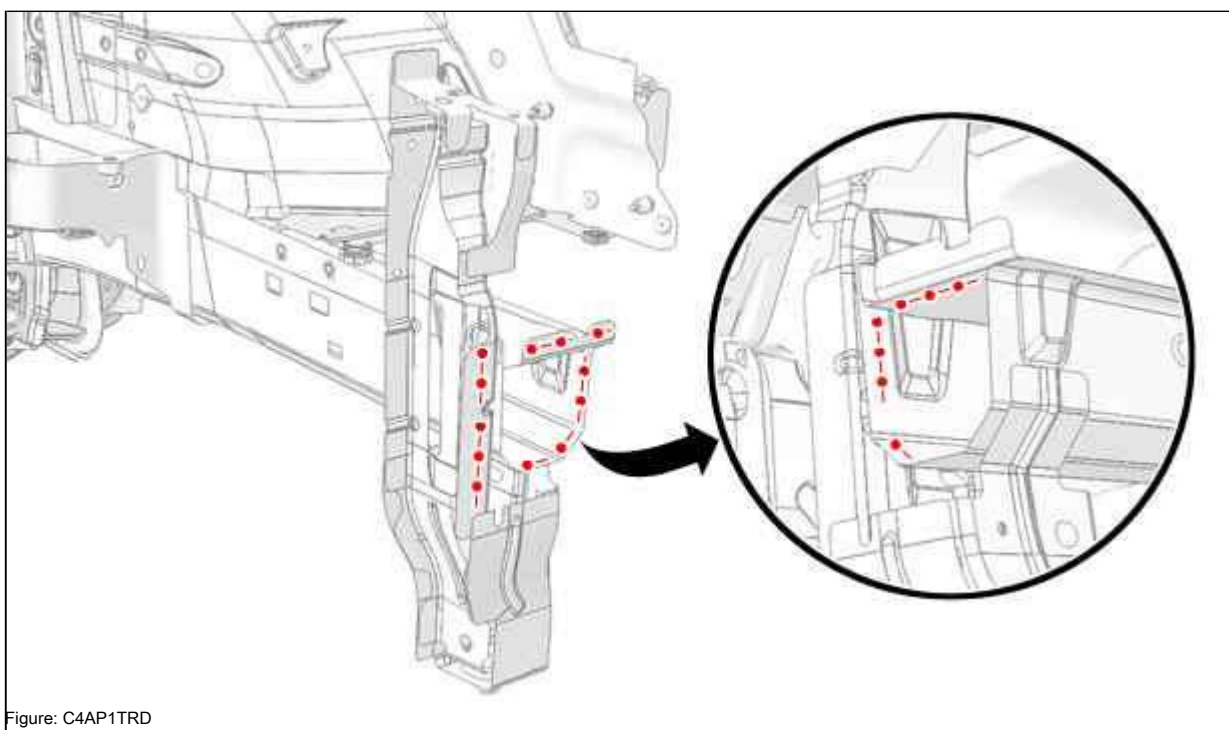
7. Cut: Front spar tip (On body)



Cut by points.

Remove: Side member end (Front).

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

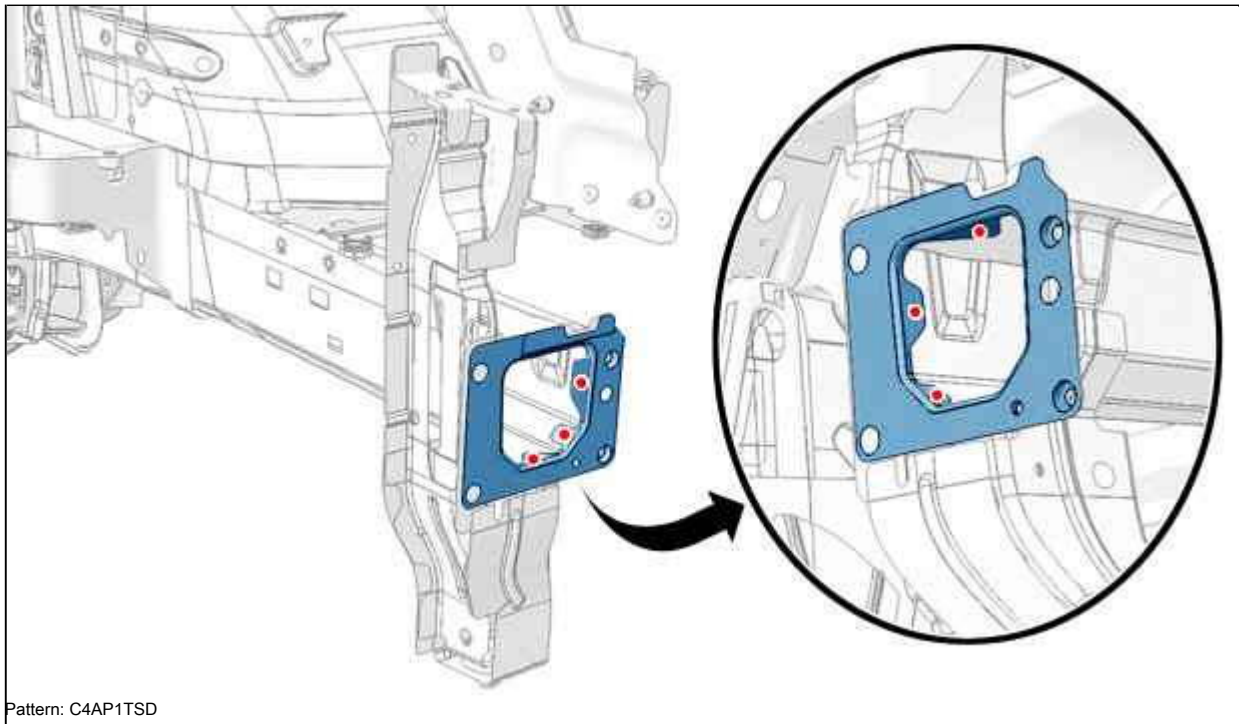
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

9. Fitting

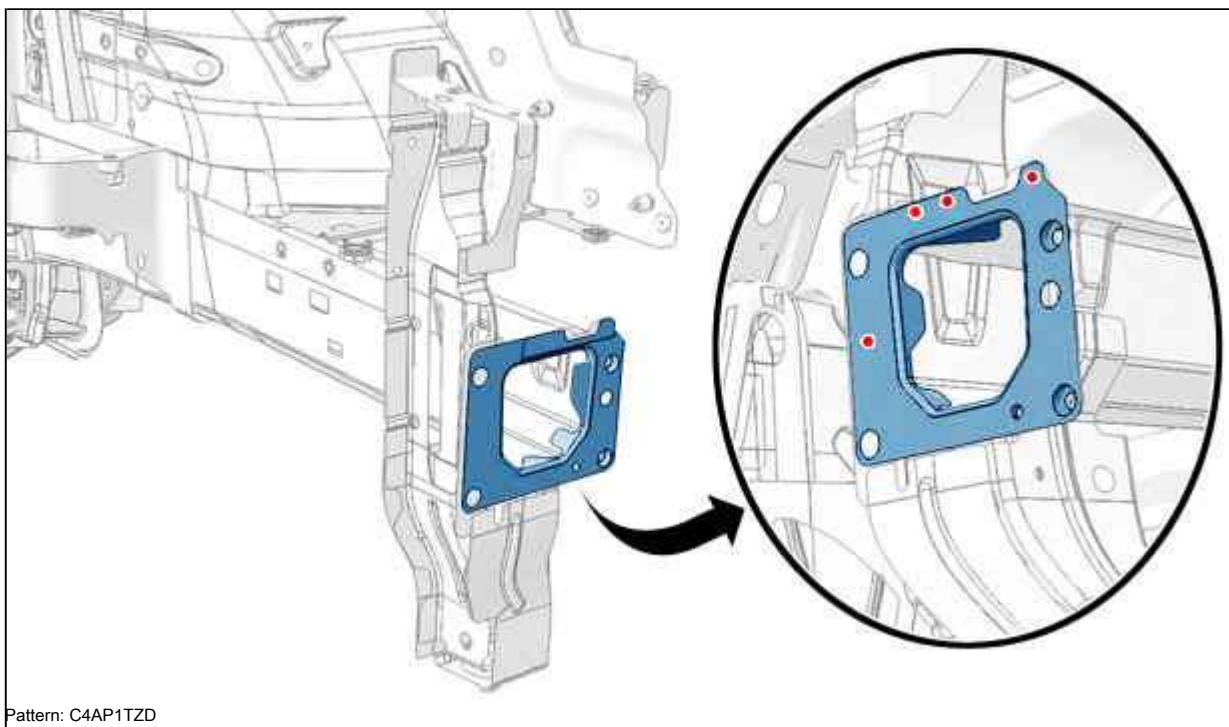
Position: Side member end (Front). Install elements to ensure the fit.

Hold the element in place.

10. Welding



Weld through the holes in the MAG protective gas. Grind MAG welding points.



Weld with welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

--

REPLACEMENT: FRONT AND REAR FRONT SEAT CROSS BARS

MANDATORY: Observe the cleanliness and safety rules



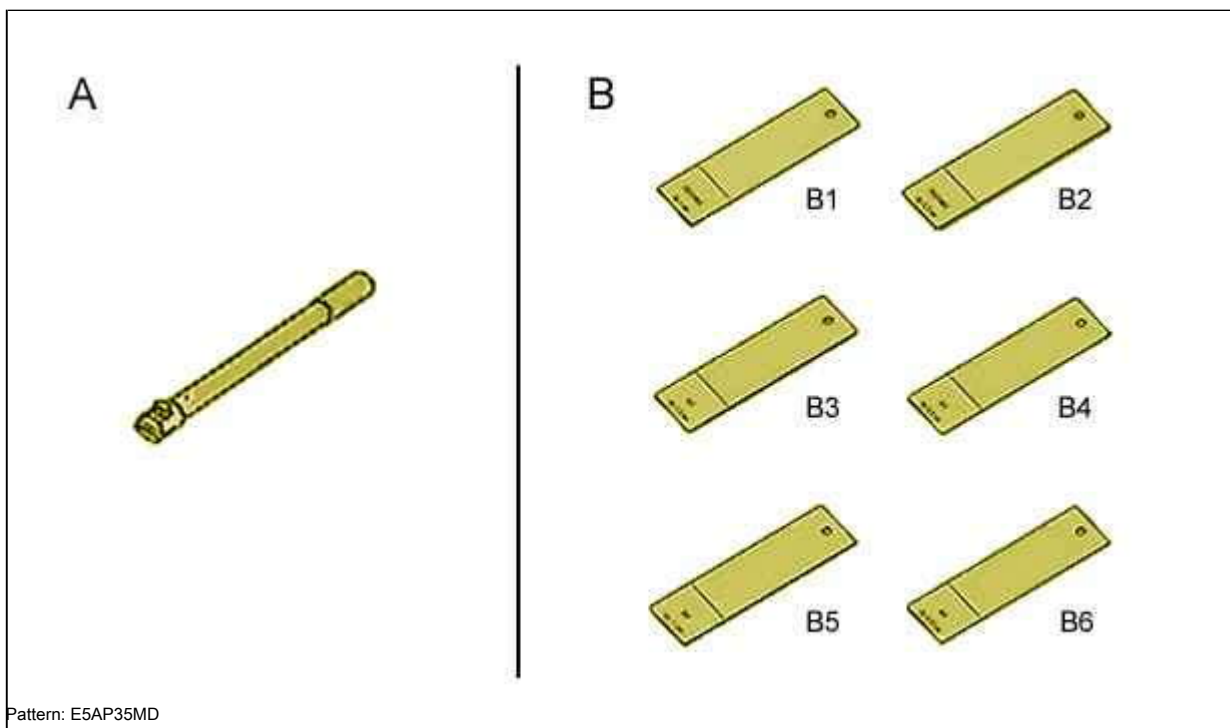
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Recommended equipment



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

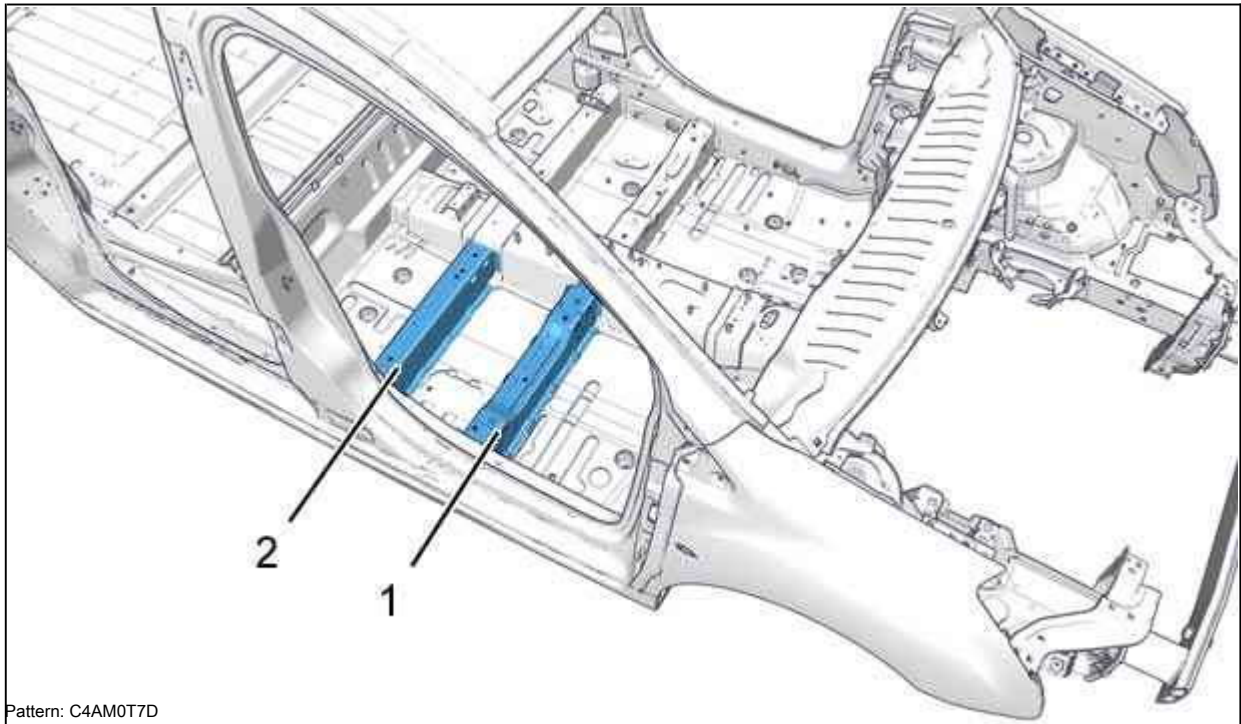
3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Location of the spare part

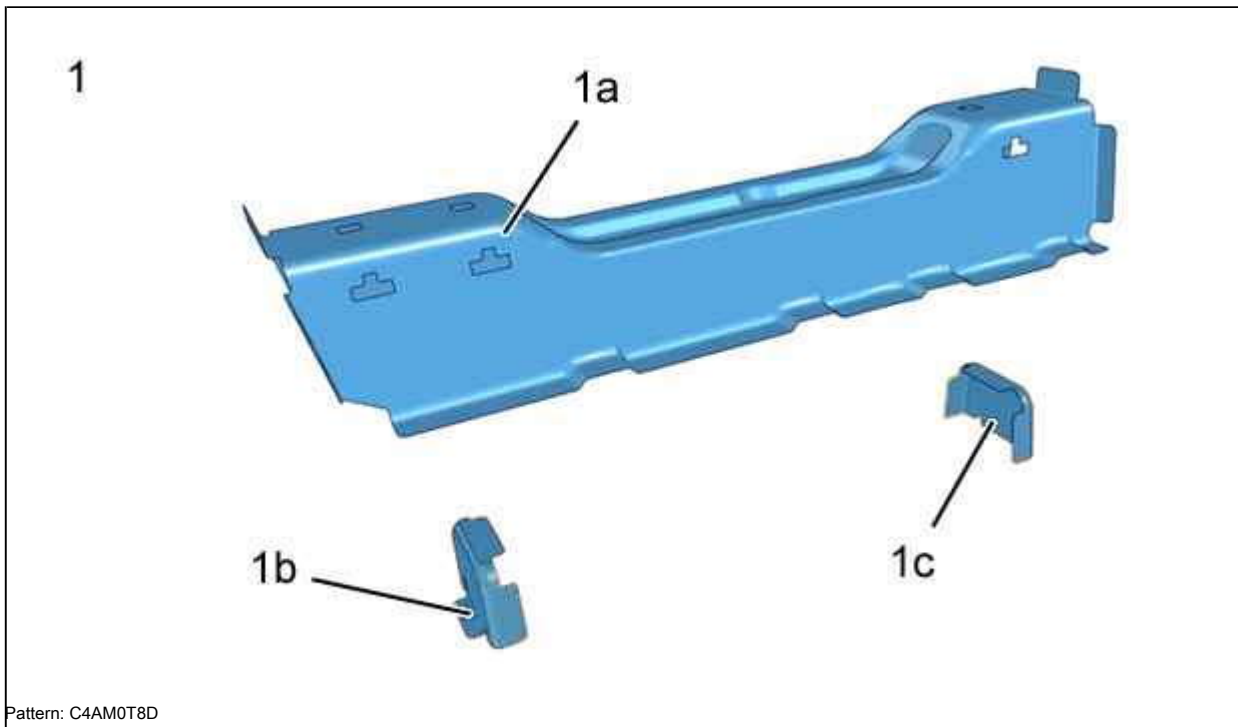


Label Designation

(1)	Front cross member, front seat
(2)	Rear cross member, front seat

5. Identification of spare parts

5.1. Composition: Front seat cross member

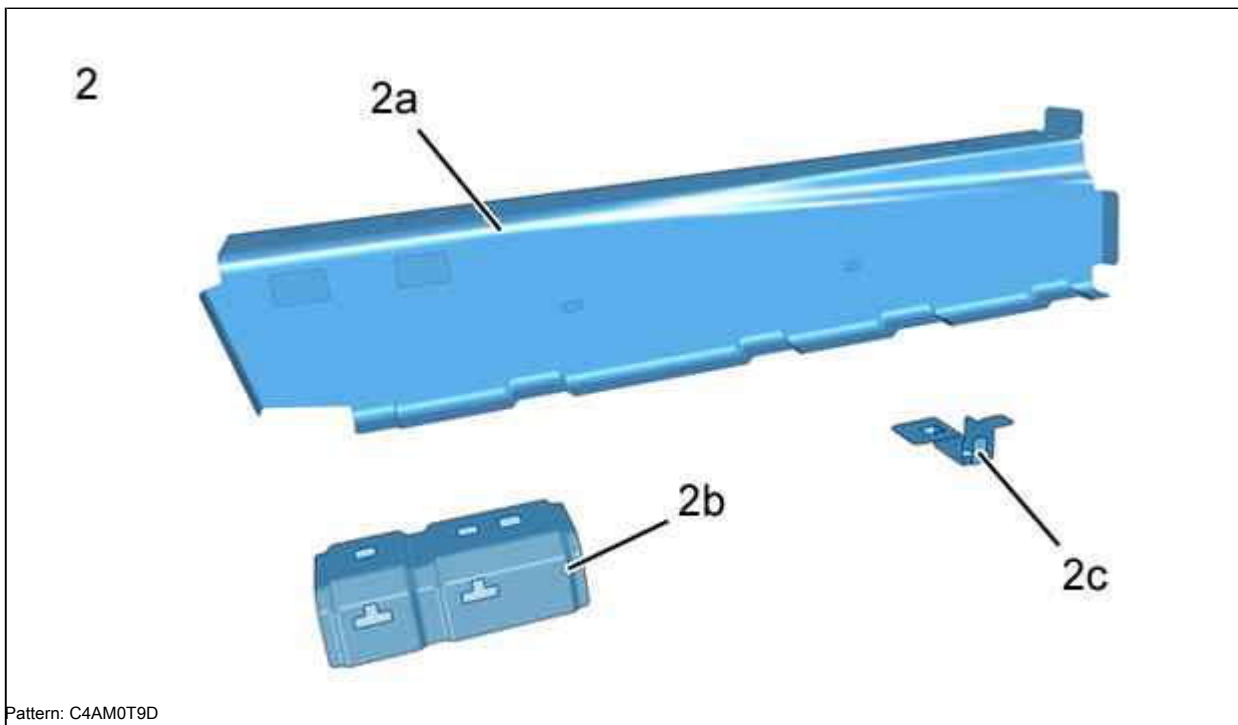


Label Designation

Thickness (mm) Nature / classification

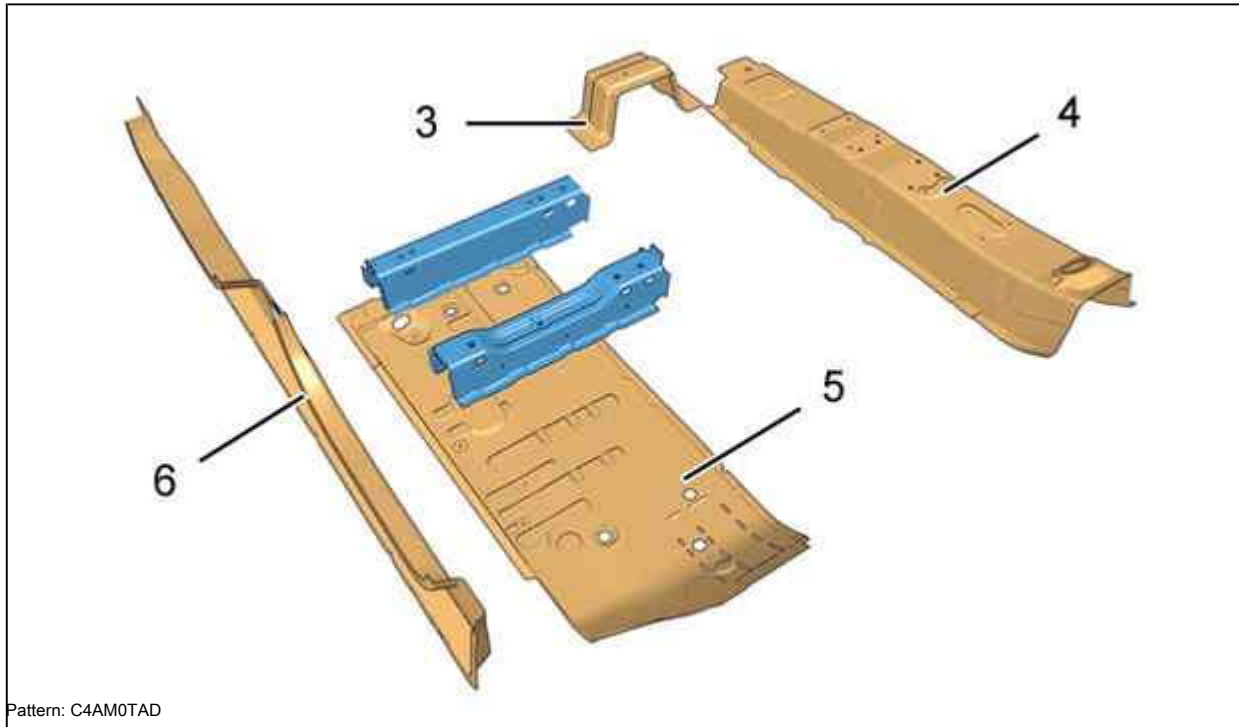
(1)	Front cross member, front seat		
(1a)	Front cross member, front seats	1.37	HLE
(1b)	Front cross member reinforcement, front seats 1.37	Front cross member	HLE
(1c)	reinforcement, front seats 1.37		HLE

5.2. Composition: Front seat rear cross member



Label Designation		Thickness (mm) Nature / classification	
(2)	Rear cross member, front seat		
(2a)	Rear cross member, front seats	1.47	HLE
(2b)	Rear booster, front seat	2	THLE
(2c)	Seat rail retainer nut 0.67		Mild steel

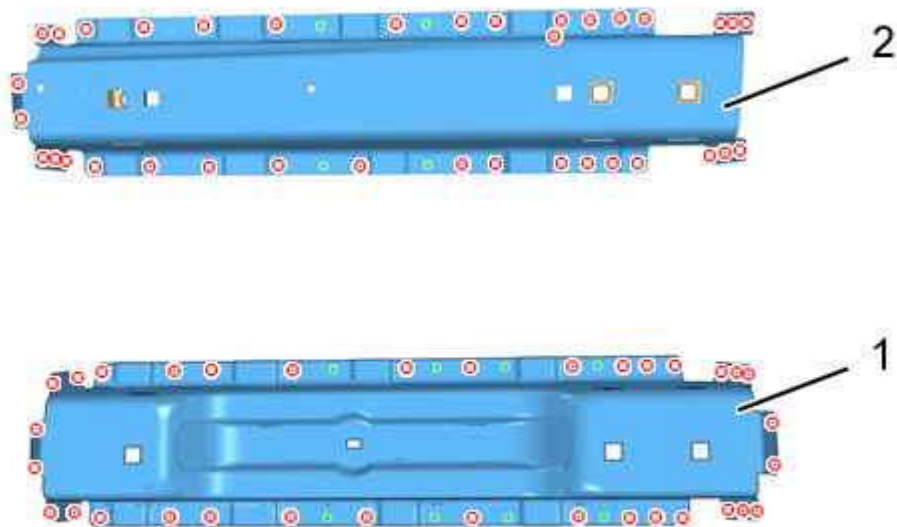
5.3. Identification of parts adjacent to the spare part



Label Designation		Thickness (mm) Nature / classification	
(3)	Rear front floor rigidity 1.47 Tunnel		HLE
(4)		1.47	HLE
(five)	Front floor	0.97	Mild steel
(6)	Inner spar	1.47	HLE

6. Preparation of spare part

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Pattern: C4AM0TBD

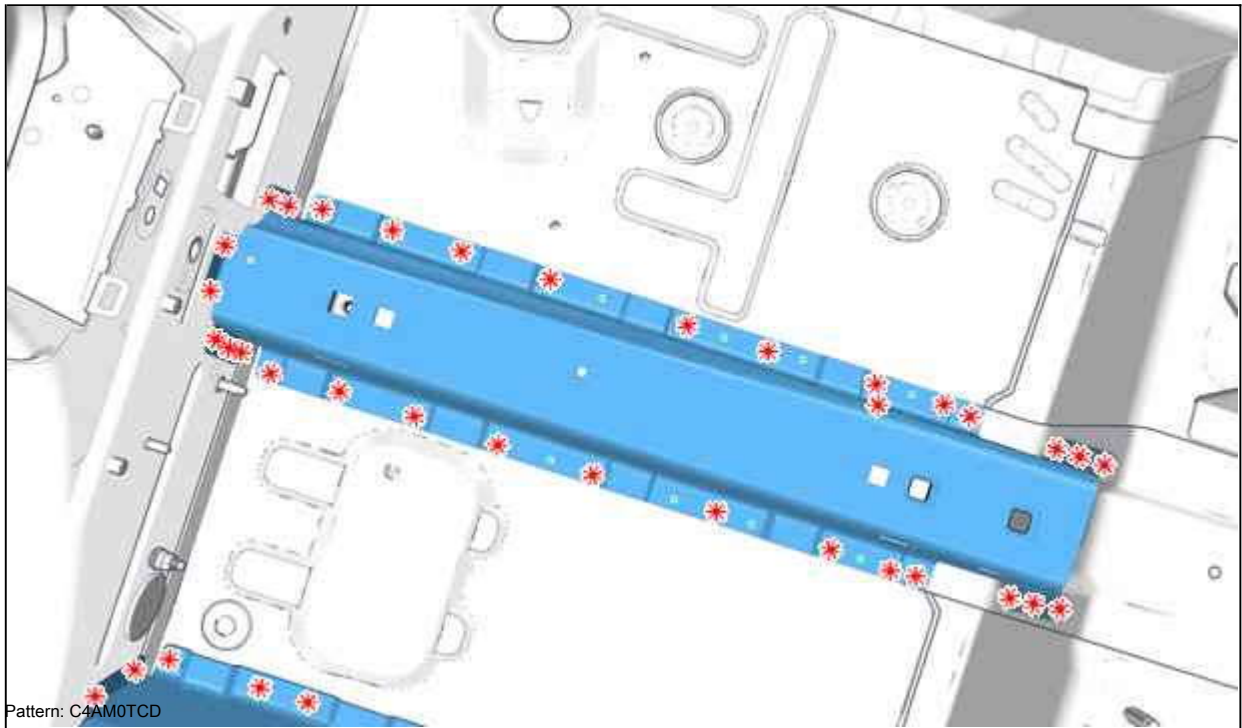
Mark and then drill Ø8 for subsequent spot welding. The following items:

- Front cross member, front seat (1)
- Rear cross member, front seat (2)

Prepare the sockets and protect them with a welding primer (index "C7").

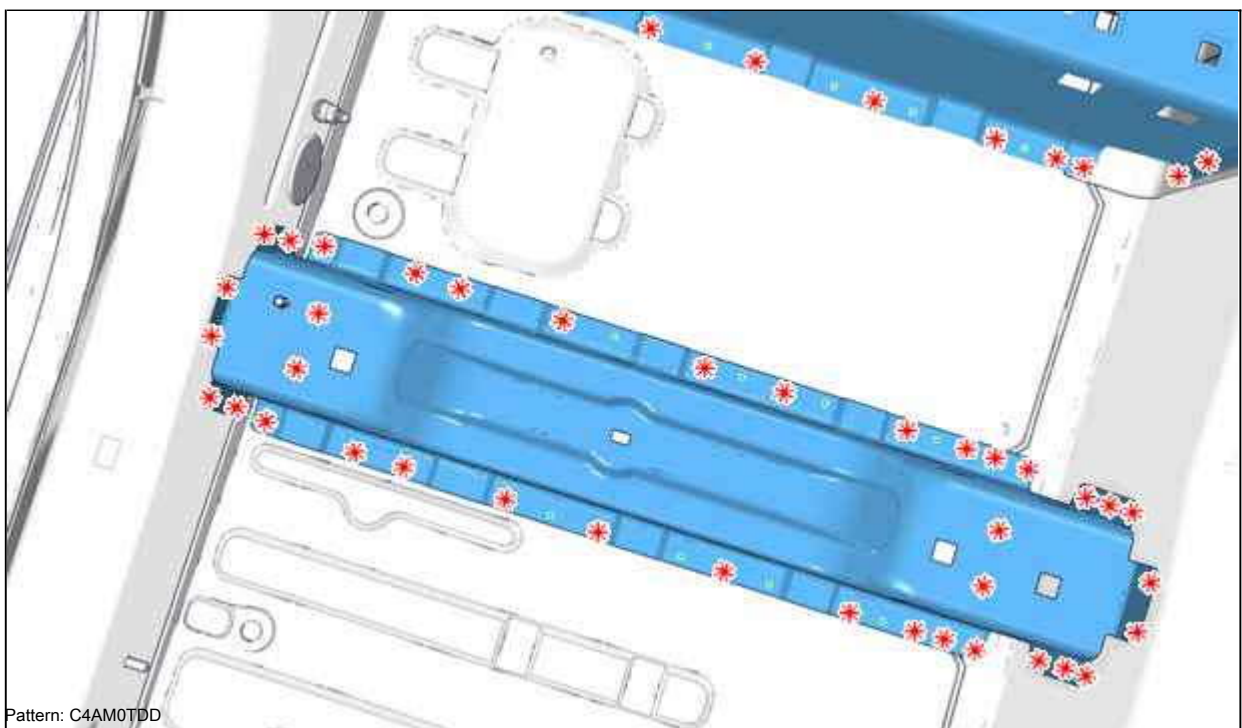
7. Cutting body parts

7.1. Cut: Front Seat Cage



Cut by points. Take it off.

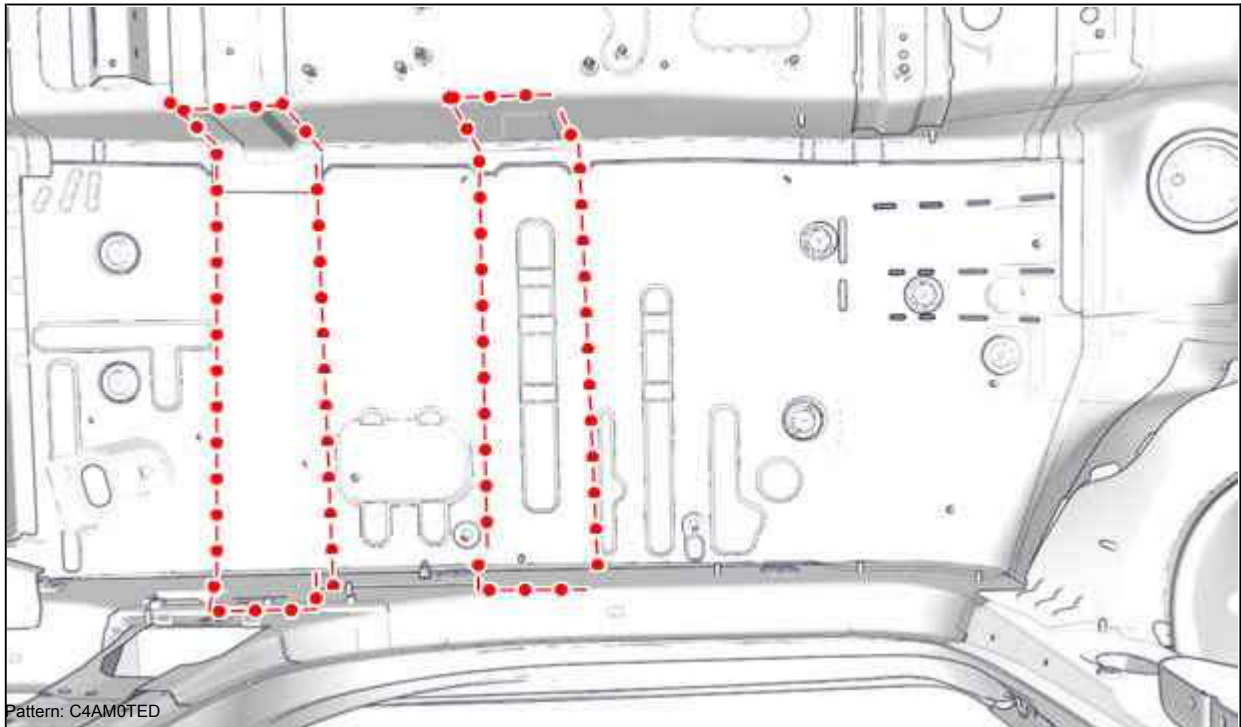
7.2. Cut: Front seat cross member



Cut by points.

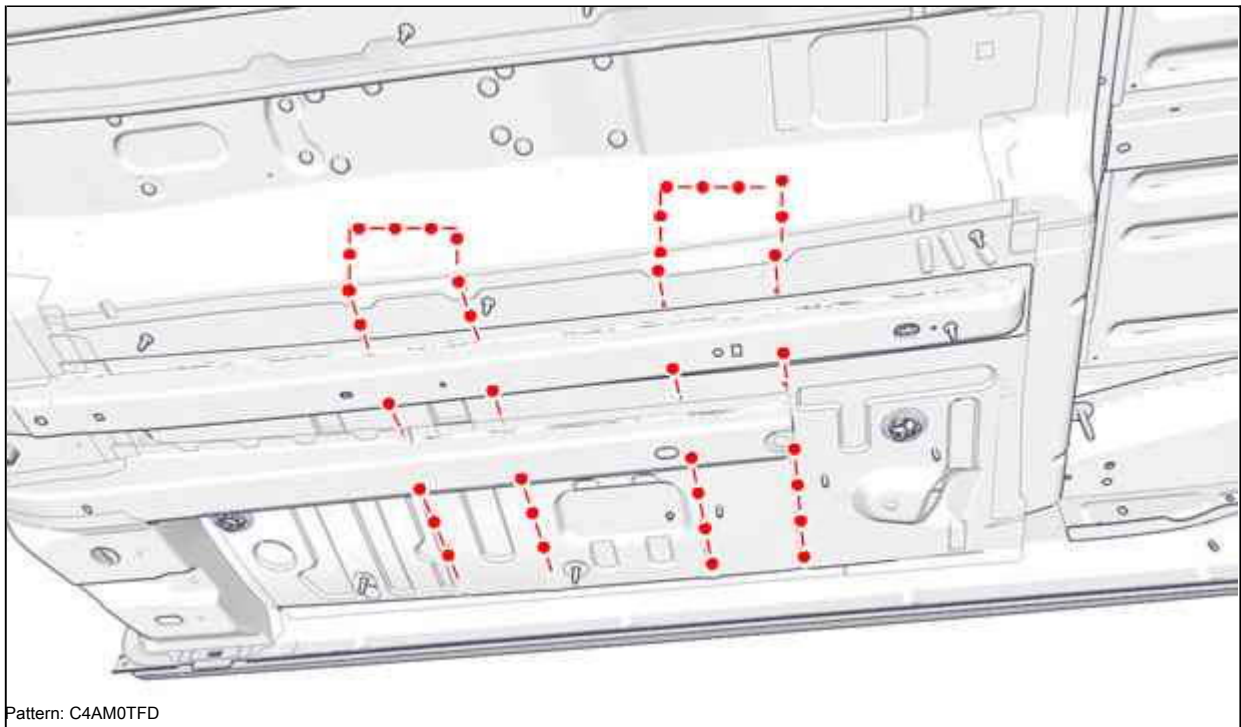
Remove: Front seat rear cross member assembly.

8. Cleaning and preparation of the body



Prepare the sockets and protect them with a welding primer (index "C7").

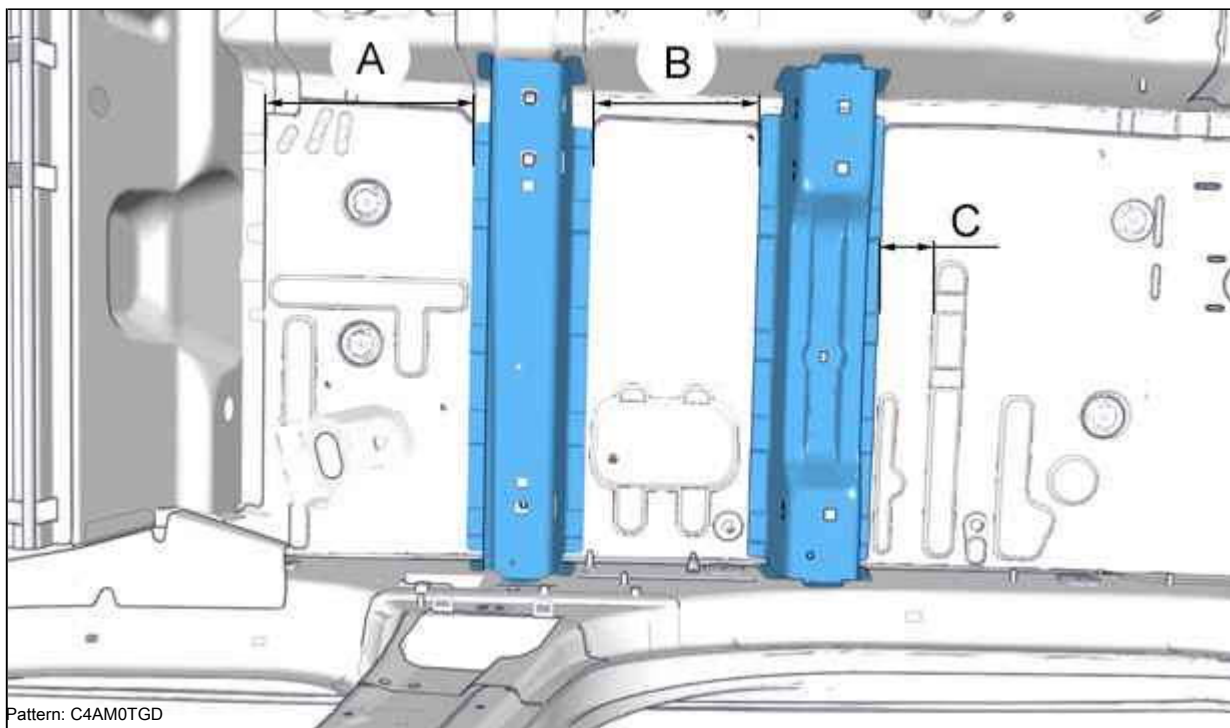
NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: To avoid the risk of ignition of the underbody protective compound, strip the edges of the joining panels 25 mm on both sides and use only MAG spot welding.

9. Fitting



"A" = 254 mm.

"B" = 210 mm.

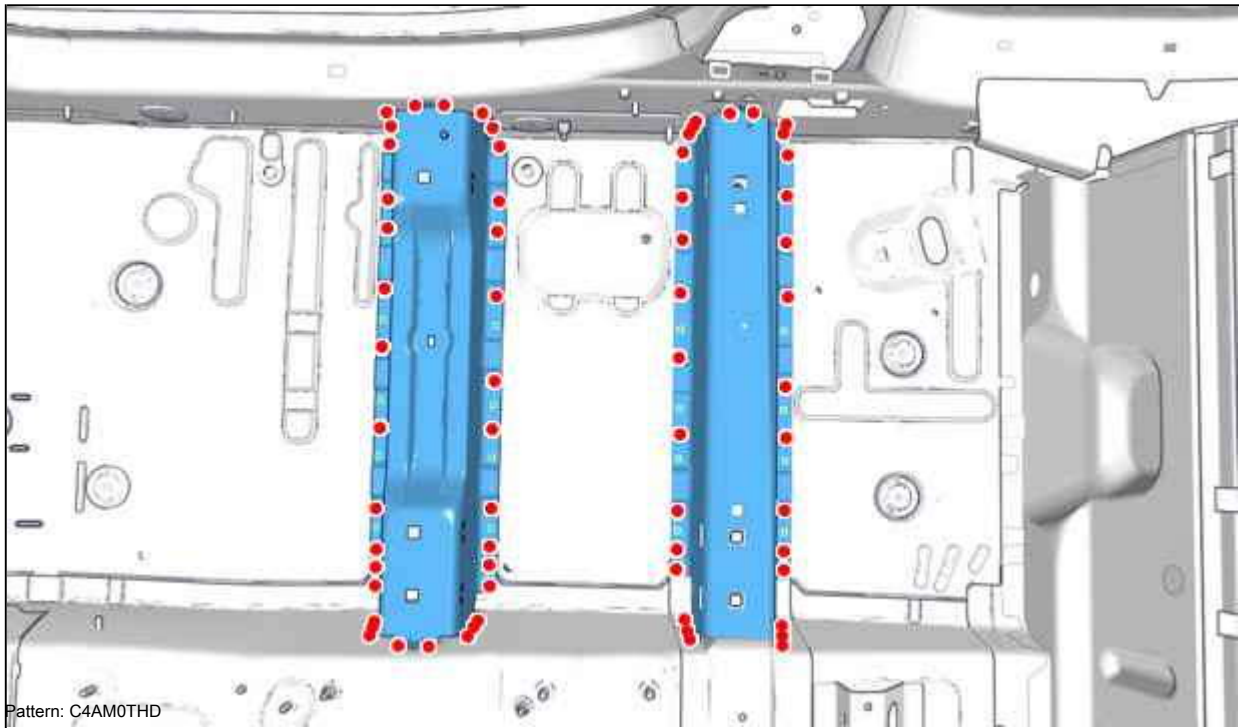
"C" = 70mm.

Position the front and rear crossmember in the front seat assembly. Check fit; Sizes "A", "B", "C".

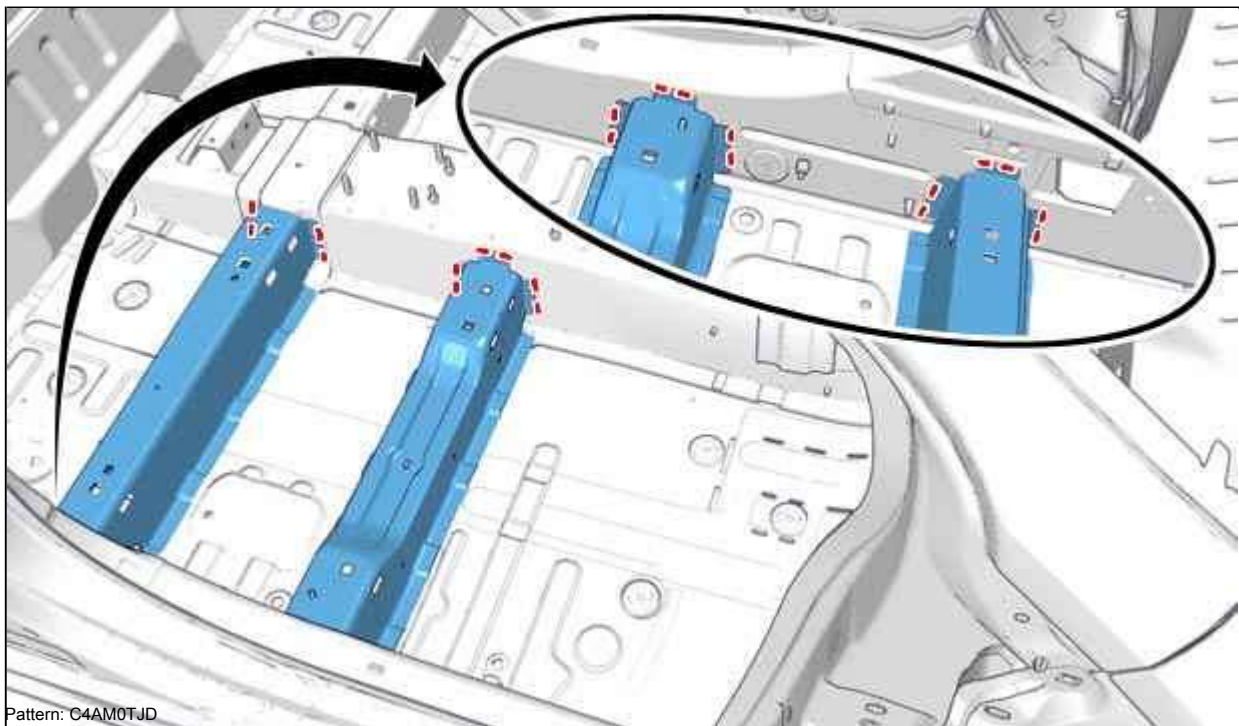
NOTE: Check the position of the front and rear cross members of the front seat in relation to the seat rails.

Hold the element in place.

10. Welding



Weld through the holes in the MAG protective gas. Grind MAG welding points.



Perform MAG welding.
Grind MAG welding points.

11. Tightness protection

Apply a layer of phosphate primer to the cleaned areas.

Apply a "C4" anti-gravel coating

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: LOAD COMPARTMENT FLOOR (SHORT)

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element:

- MIG brazing with copper-silicon electrode in inert gas
- MAG welding by depositing metal (steel) in reactive gas

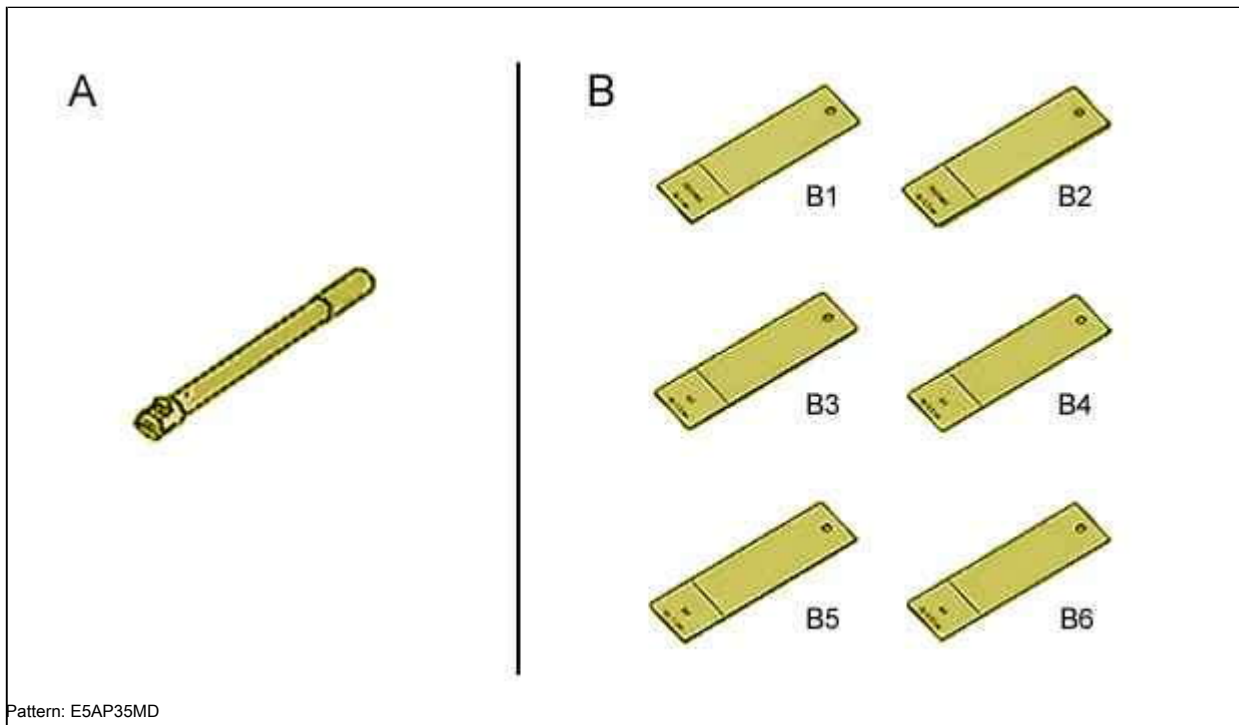
The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength

2. Recommended equipment

Operate using one of the following systems:

- Electronic measuring system
- Mechanical measuring system
- Specific head MZ (Special tool)
- Control template



"A" Equipment for checking the quality of electric welding points () .1366ZZ. "B" Test template for checking the quality of electric welding dots () .1366B.

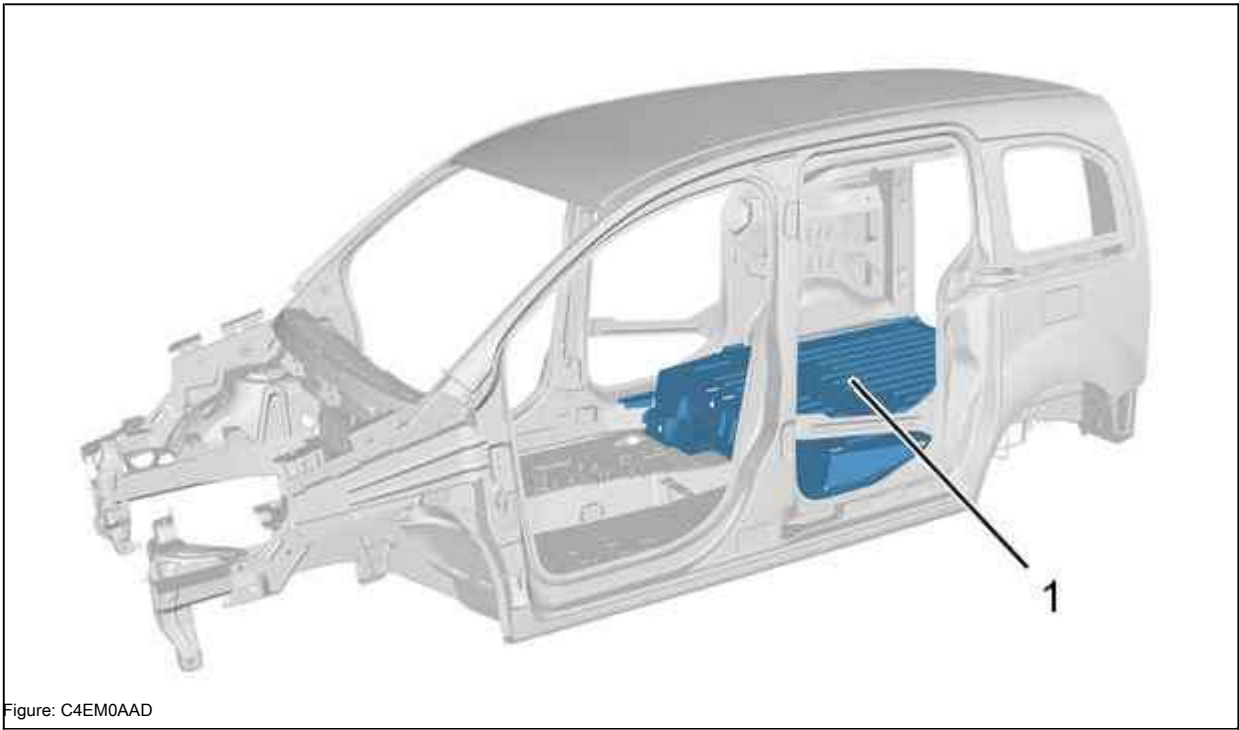
3. Additional operations

Disconnect the battery.

ATTENTION : Remove or protect parts located in the repair area that could be damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Floor of the cargo compartment

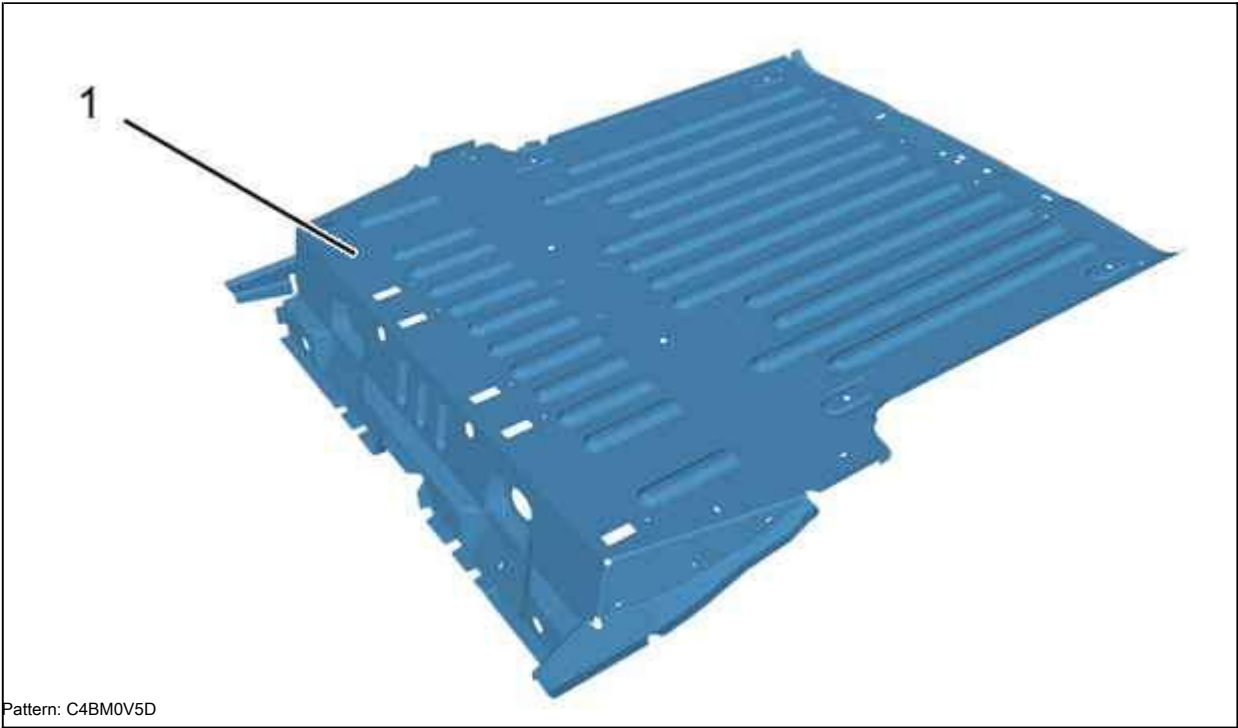


(1) Floor of the load compartment.

Label Designation

(1)	Load compartment floor

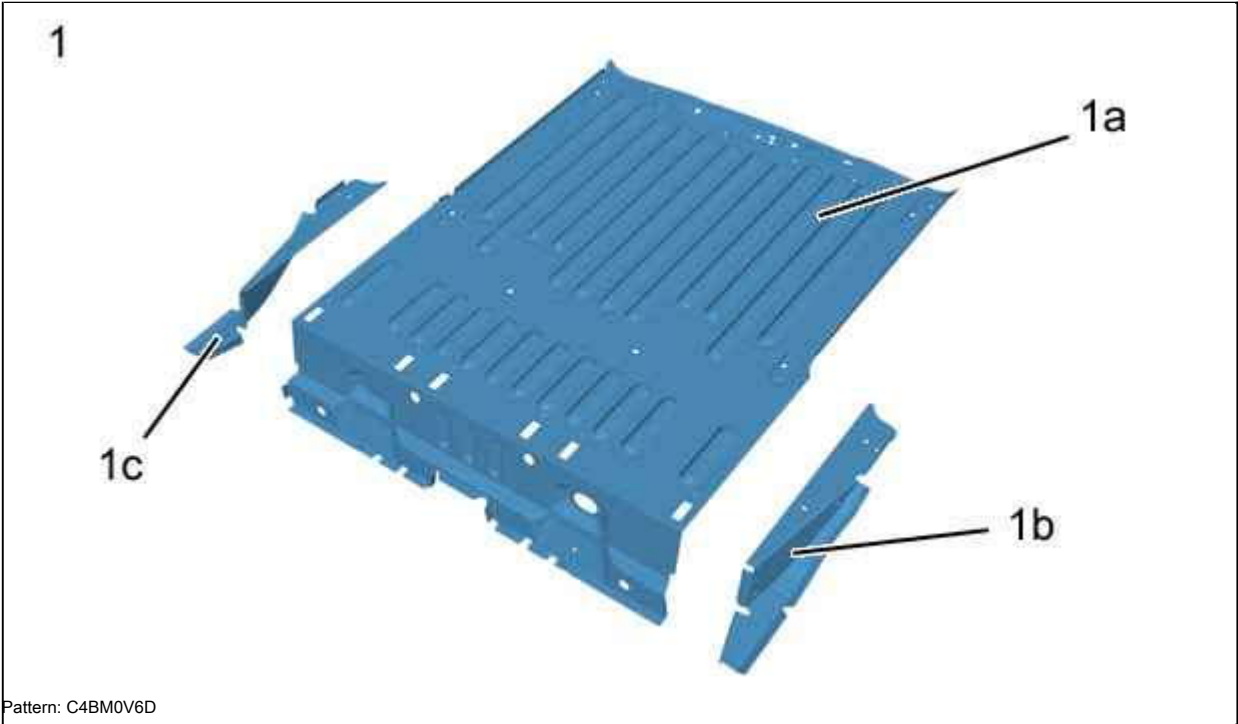
5. Identification: Floor of the cargo compartment



Label Designation

(1)	Half-trunk assembly

5.1. Composition: Floor of cargo compartment

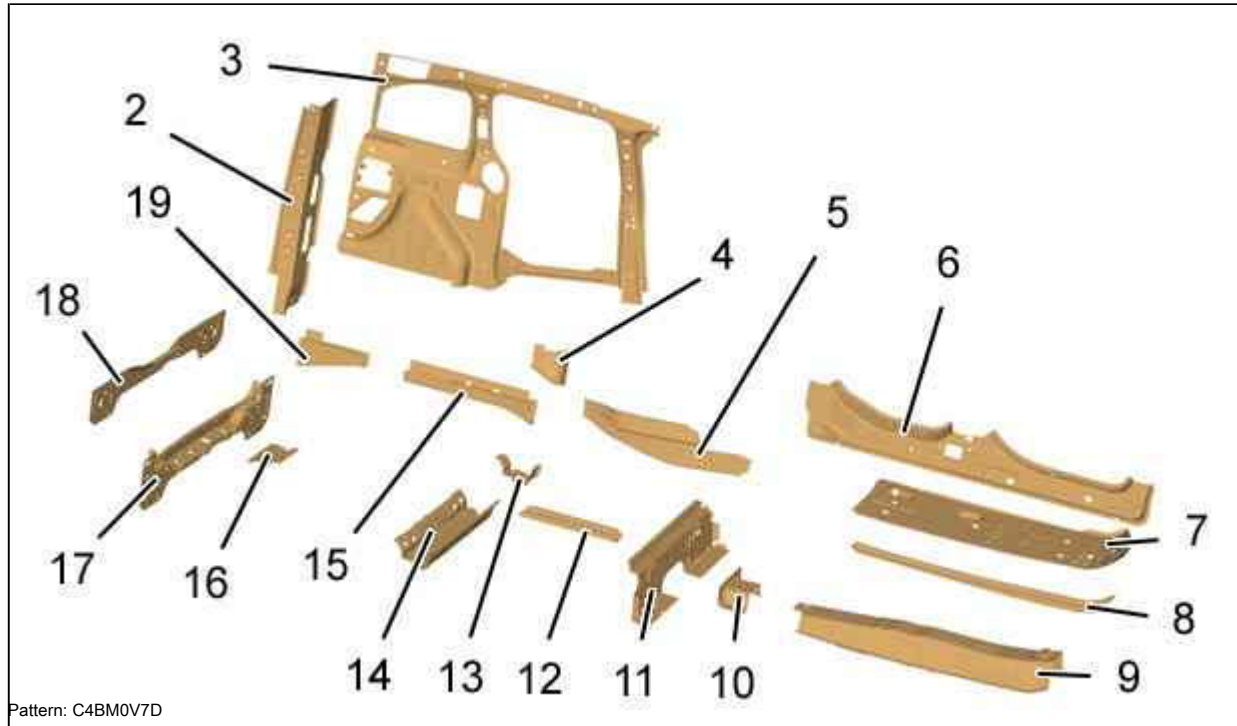


Label Designation

(1)	Half-trunk assembly	Thickness (mm) Nature / classification	

(1a)	Load compartment floor	0.77	Mild steel
(1b)	Left side load compartment floor 1.47 Right side load compartment		Mild steel
(1c)	floor 1.47		Mild steel

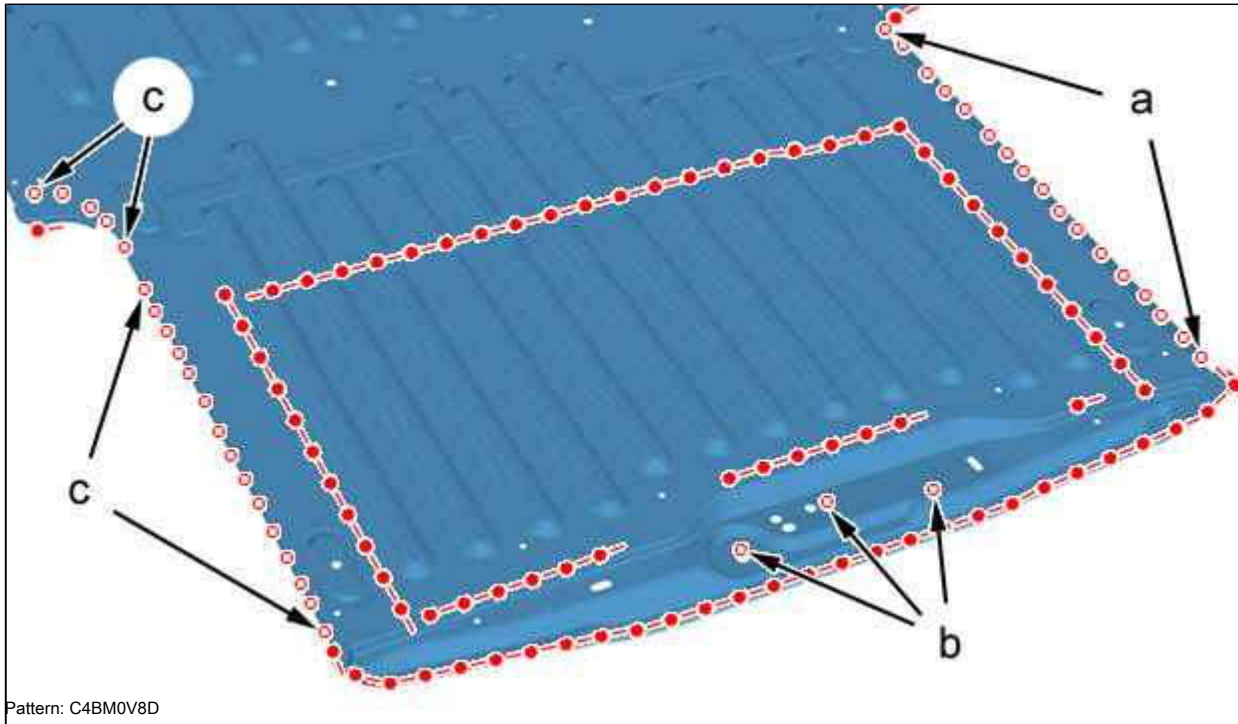
5.2. Identification of parts adjacent to the spare part



Label Designation		Thickness (mm) Nature / classification	
(2)	Trunk lid	0.77	HLE
(3)	Rear wing molding (left and right)	0.97	Mild steel
(4)	Front side member (center section) (right and left)	1.95	HLE
(five)	Front spar (front) (left and right)	1.95	HLE
(6)	Inner spar (right and left) Front floor (right and left)	1.47	HLE
(7)		0.67	Mild steel
(eight)	Inner spar (right and left) Tunnel	2	HLE
(nine)		1.47	HLE
(ten)	Corrugated floor reinforcement	1.47	HLE
(eleven)	Corrugated floor cross member	0.87	HLE
(12)	Intermediate spar Front	0.97	THLE
(13)	Rear axle cross member (right and left)	1.47	HLE
(fourteen)	Crossbar of the rear axle	1.47	Mild steel
(fifteen)	Front side member (rear) (left and right)	1.95	HLE
(sixteen)		1.47	HLE
(17)	Rear panel upholstery	0.87	Mild steel
(18)	Back panel	0.87	Mild steel
(nineteen)	Side member extension (front)	1.80	THLE

6. Preparation of spare part

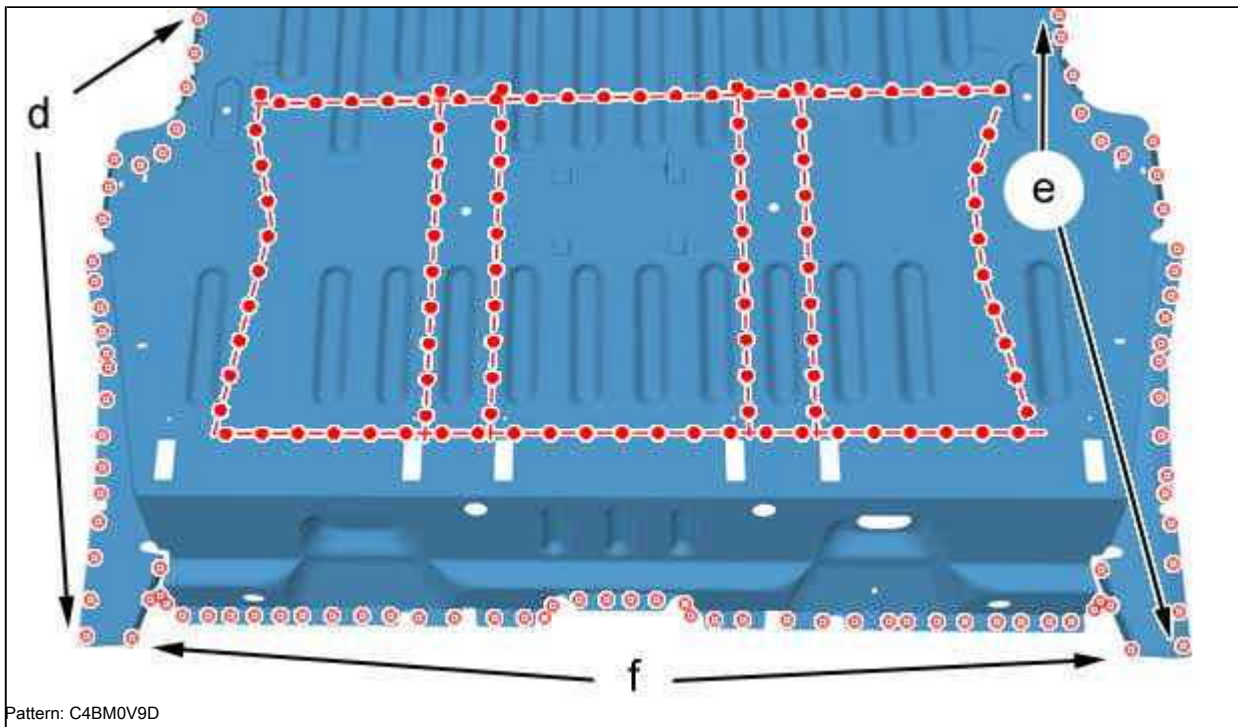
MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection.



Mark and drill holes $\varnothing 6.5$ mm (or 8 mm for elements of significant thickness) for subsequent spot welding (in "a", "b", "c").

Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

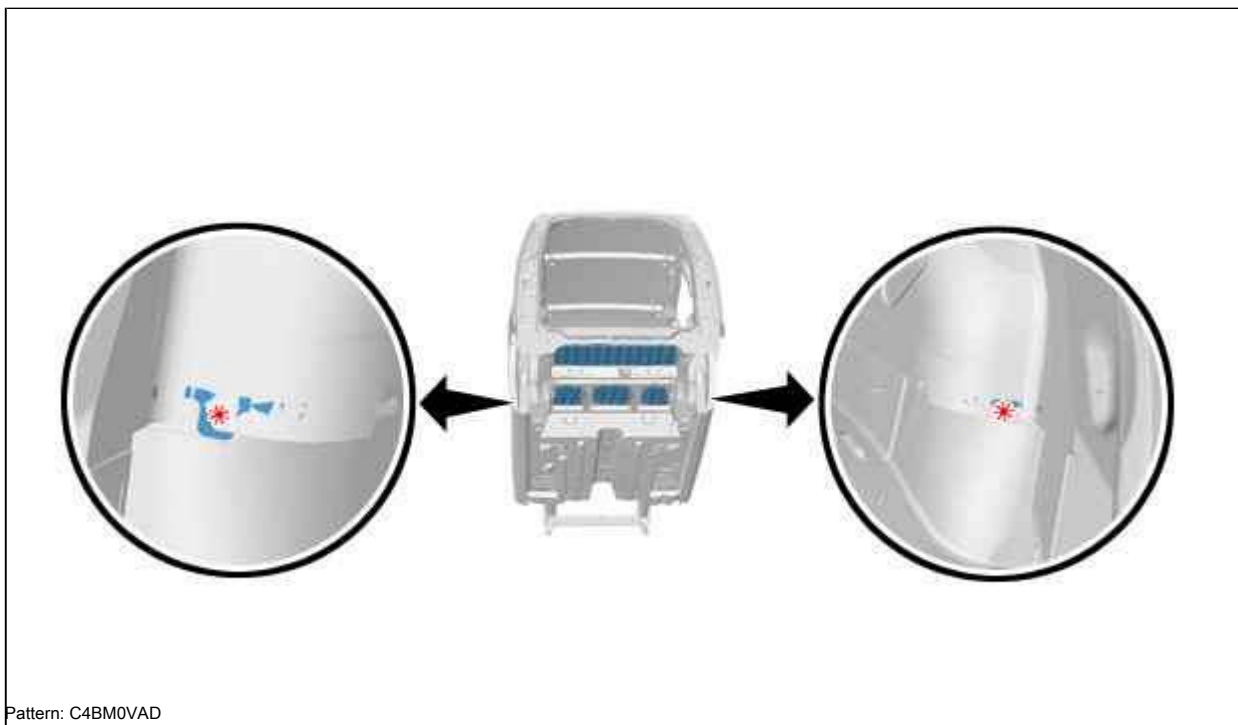


Mark and drill holes $\varnothing 6.5$ mm (or 8 mm for elements of significant thickness) for subsequent spot welding (in "d", "e", "f").

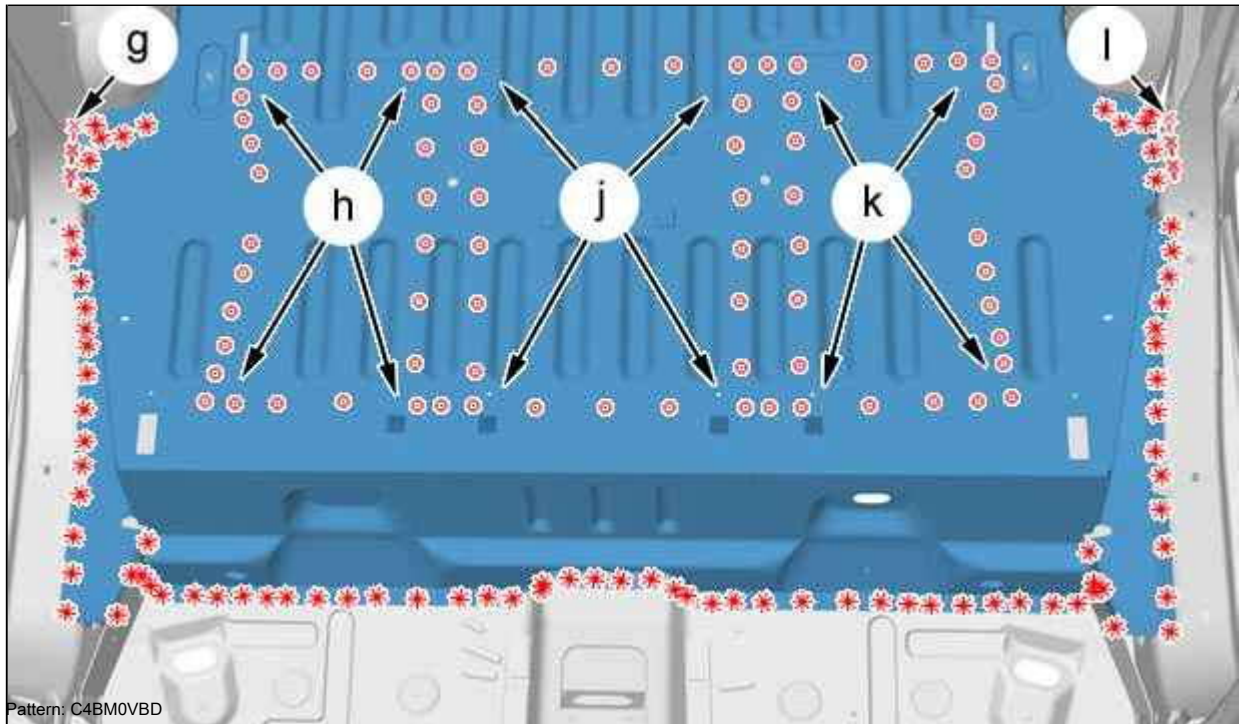
Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cutting off the floor of the cargo compartment from the body



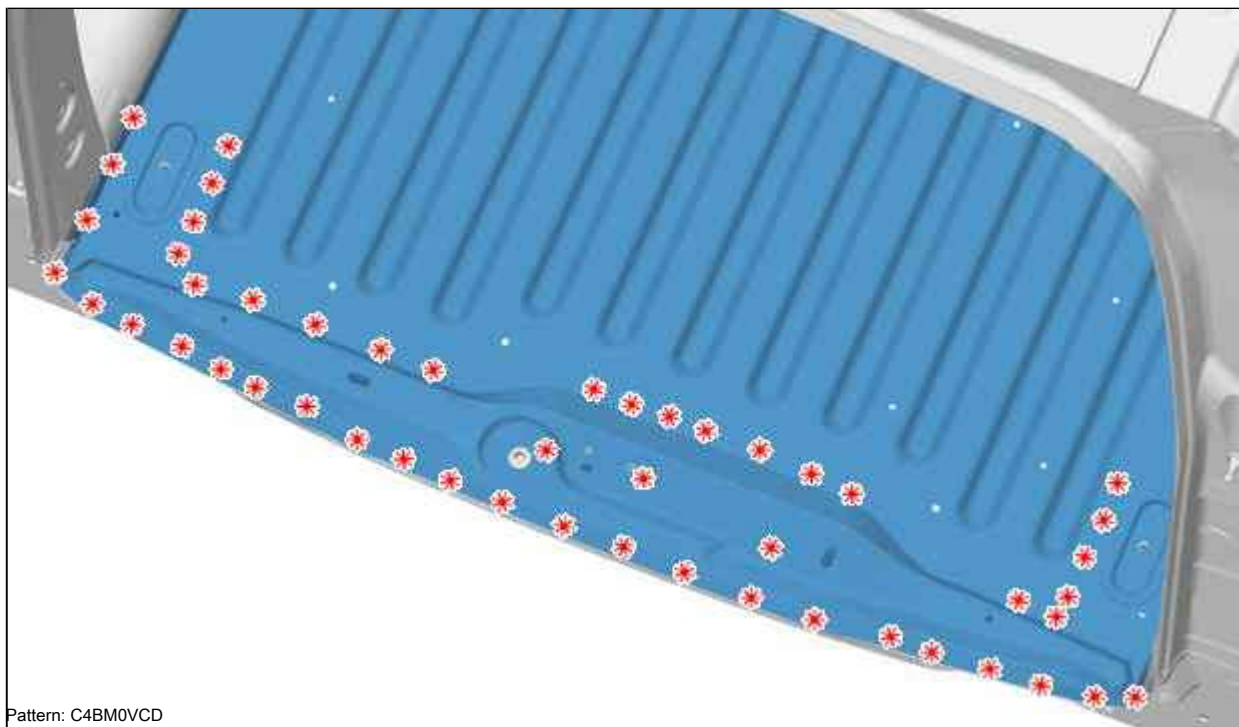
Drill out points in 2 thicknesses for subsequent plug welding.



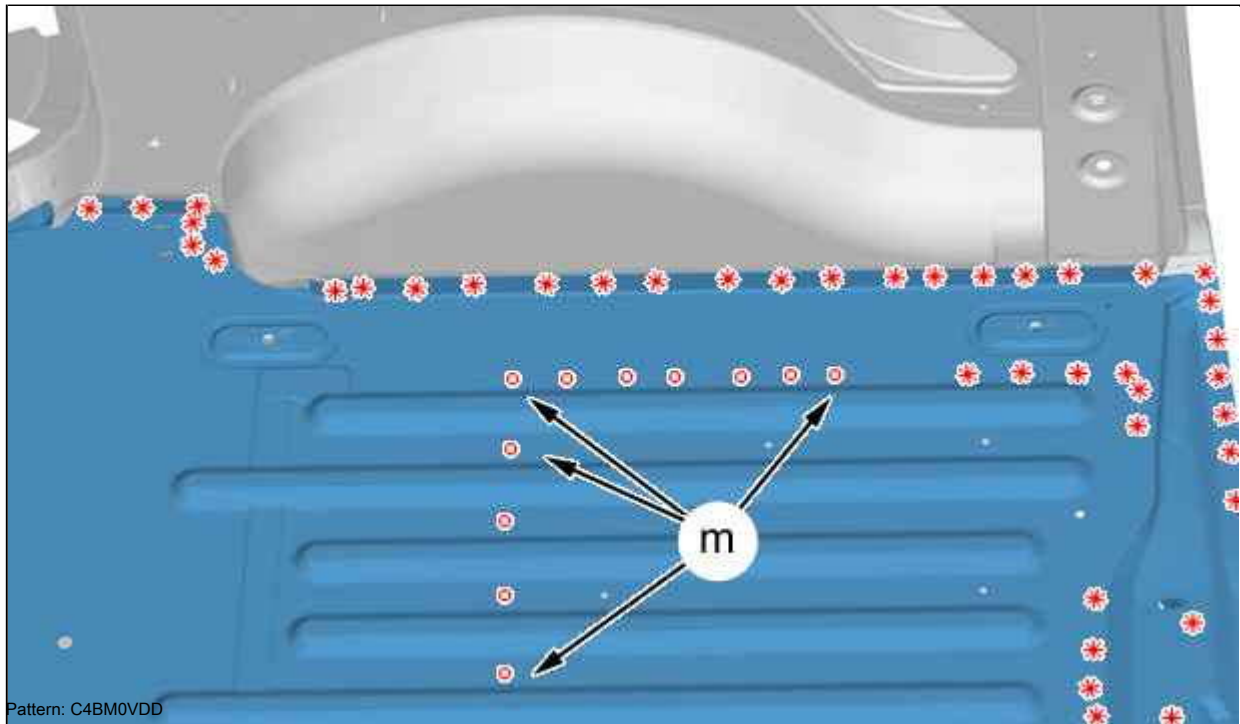
Drill out 86 electric welding points in 2 thicknesses for further plug welding from the bottom of the vehicle (in "h", "j", "k").

NOTE: The number of welding points is provided as a guide and is subject to change.

Grind MIG welds (in "g," l ") Cut other points at 1 thickness.



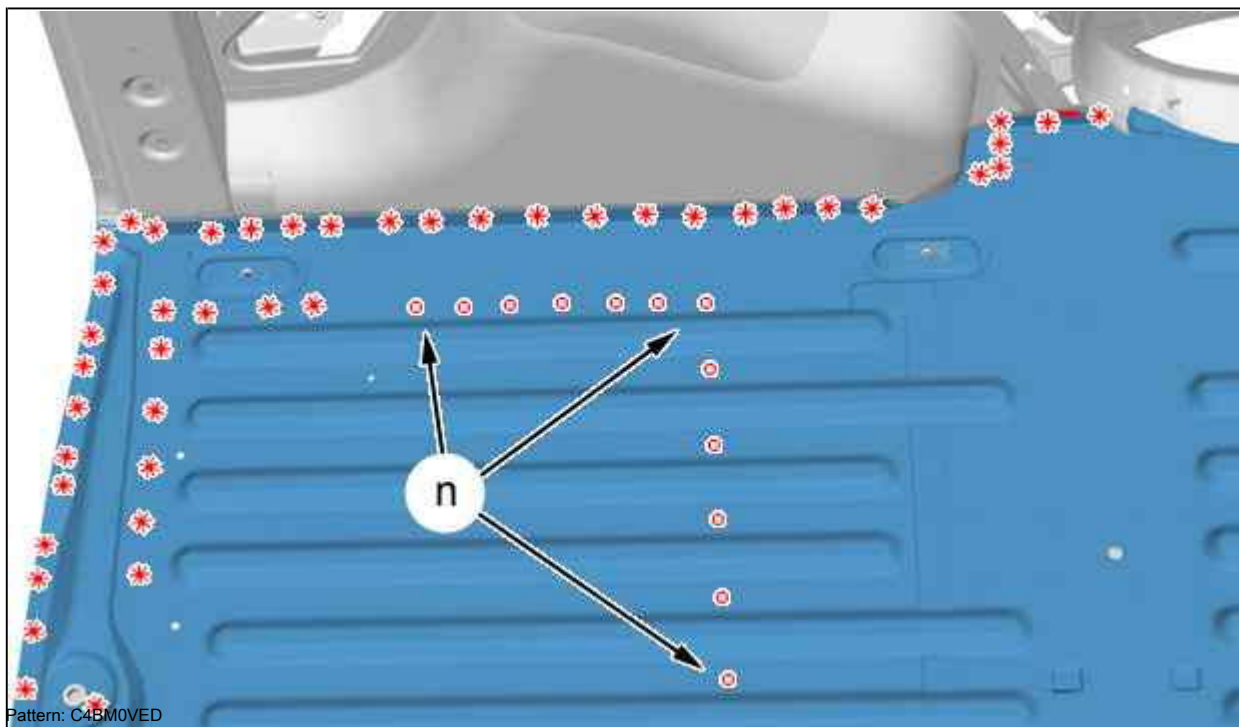
Drill out points in 1 thickness.



Drill (in "m") 11 points in 2 thicknesses for further plug welding from the bottom of the vehicle.

NOTE: The number of welding points is provided as a guide and is subject to change.

Cut other points at 1 thickness.

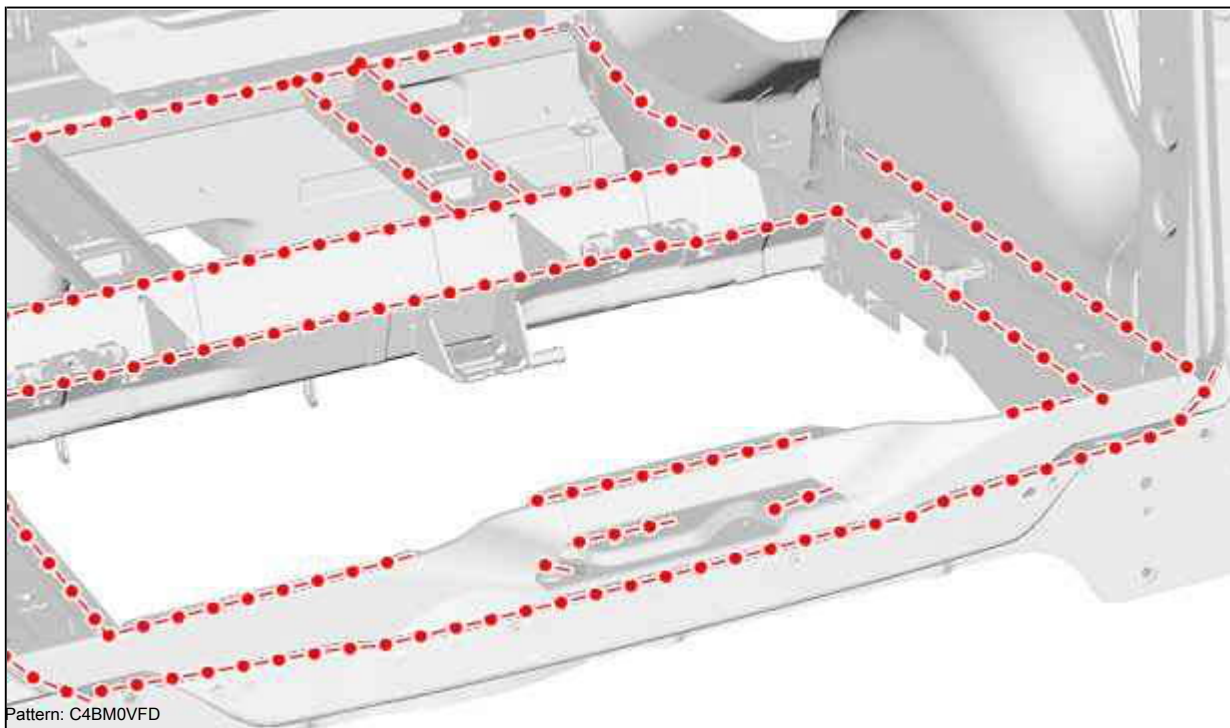


Drill (in "n") 12 points in 2 thicknesses for further plug welding from underneath the vehicle.

NOTE: The number of welding points is provided as a guide and is subject to change.

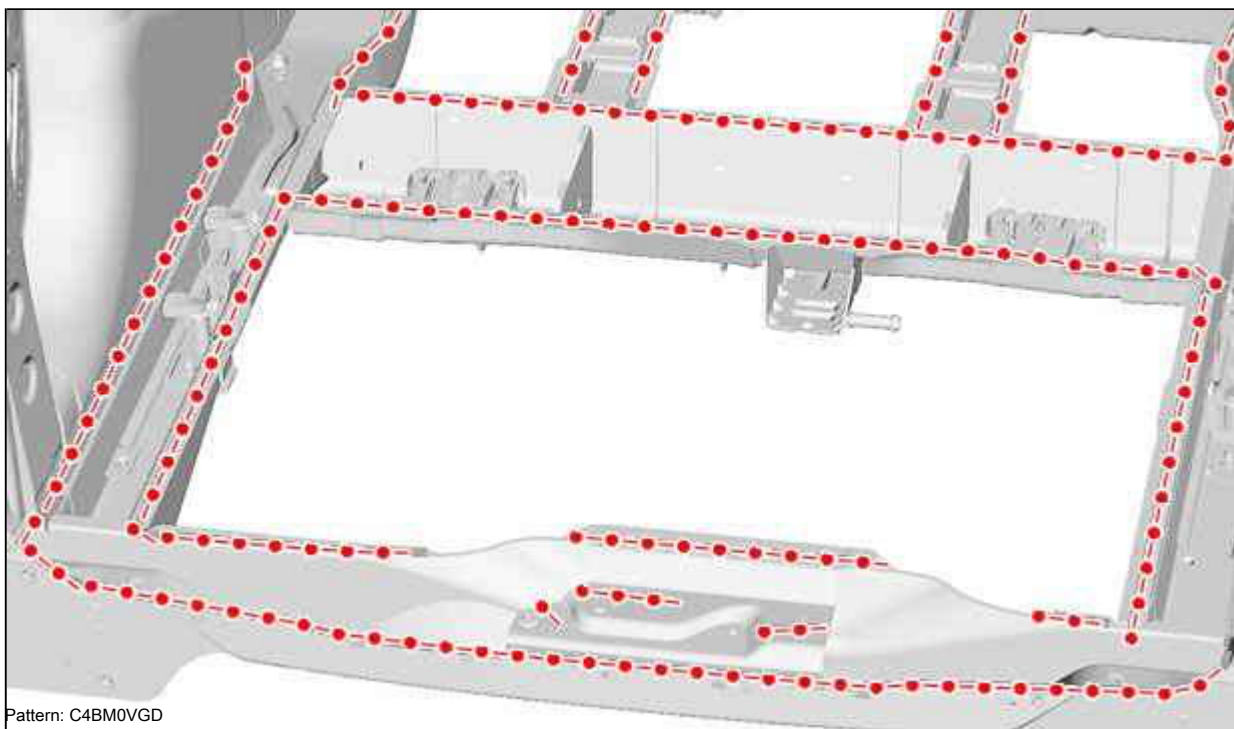
Cut other points at 1 thickness. Remove load compartment floor.

8. Cleaning and preparation of the body



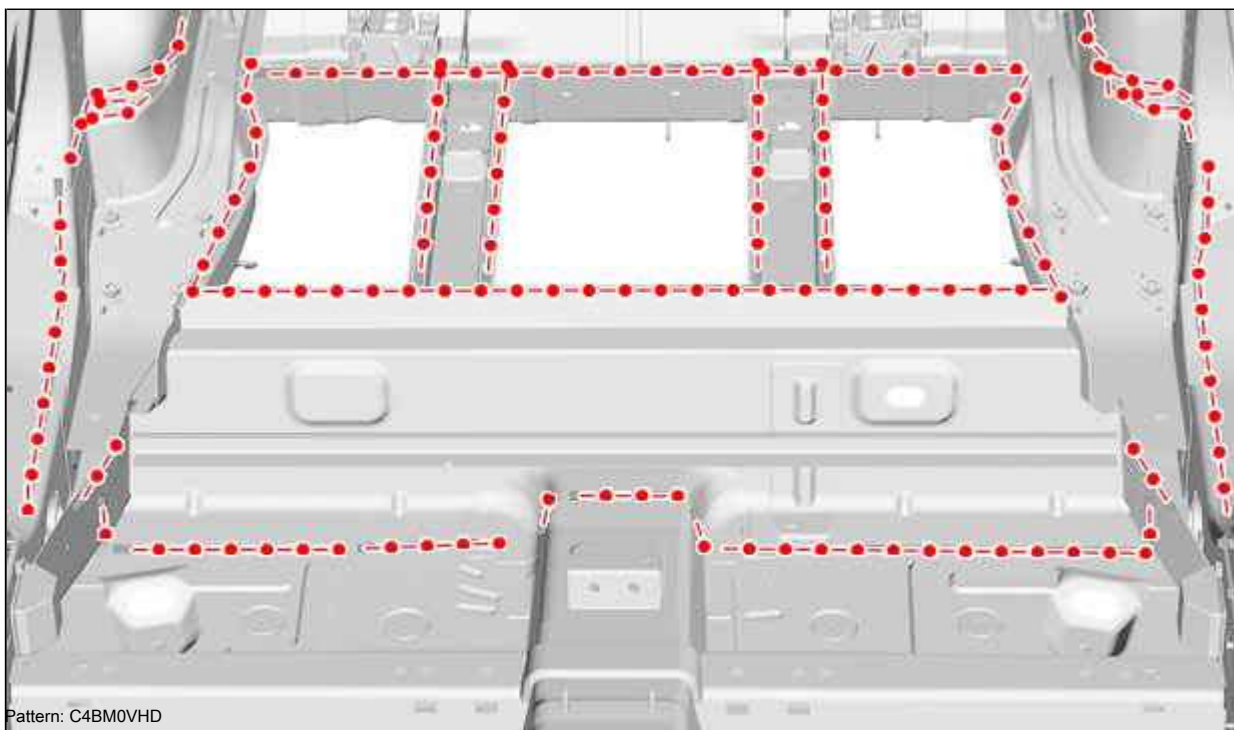
Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.



Prepare the sockets and protect them with a welding primer (index "C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

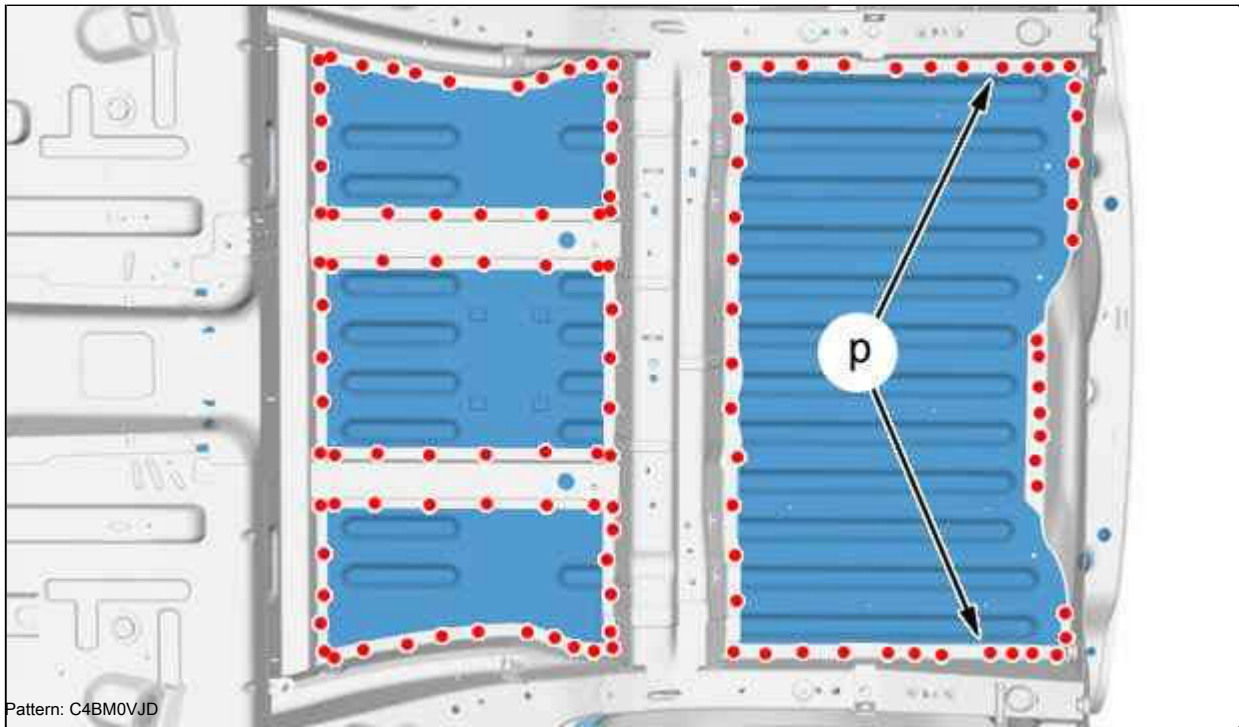
9. Fitting

Arrange: Half a trunk.

Install elements to ensure the fit.

Hold the element in place.

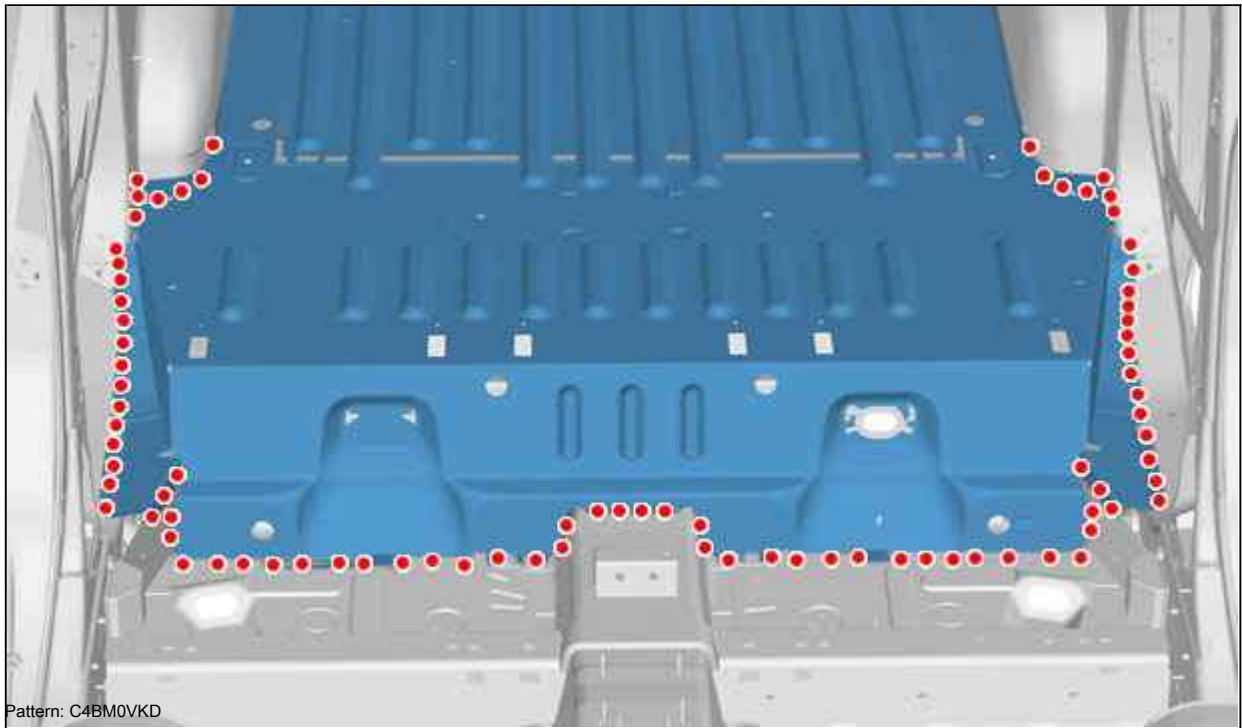
10. Welding



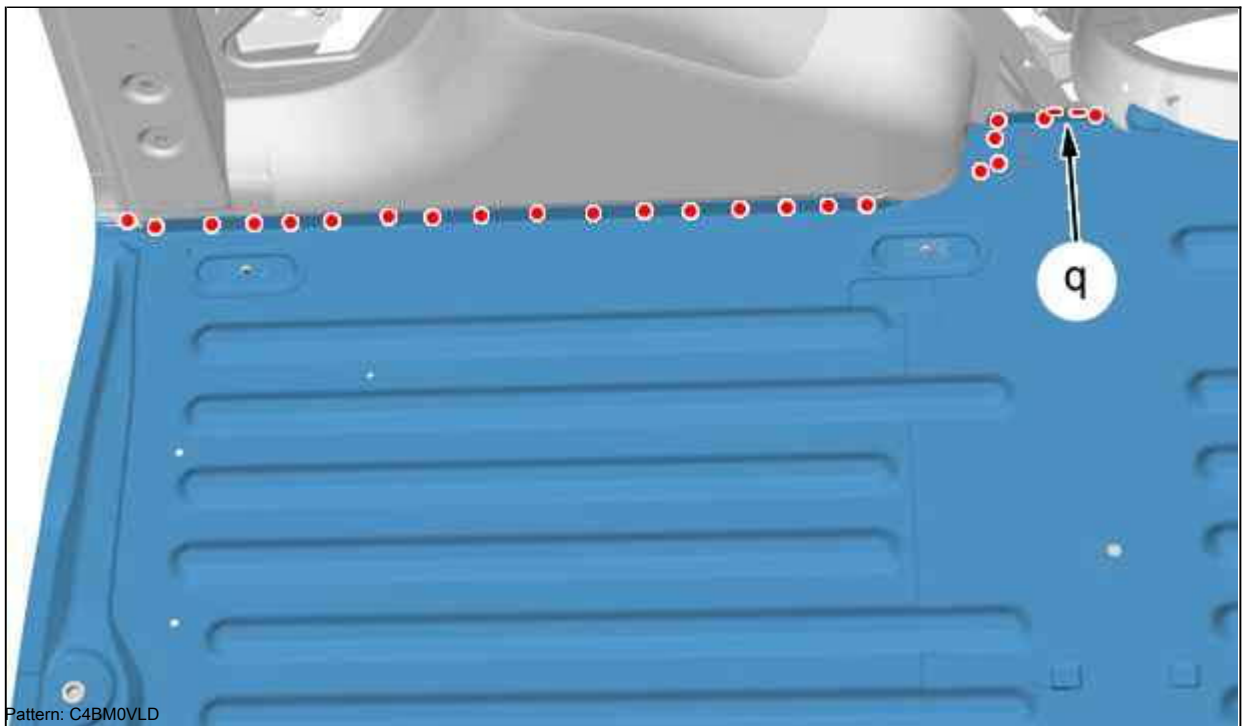
Perform spot welding using the MAG method.

Weld 22 points with electric spot welding (in "p").

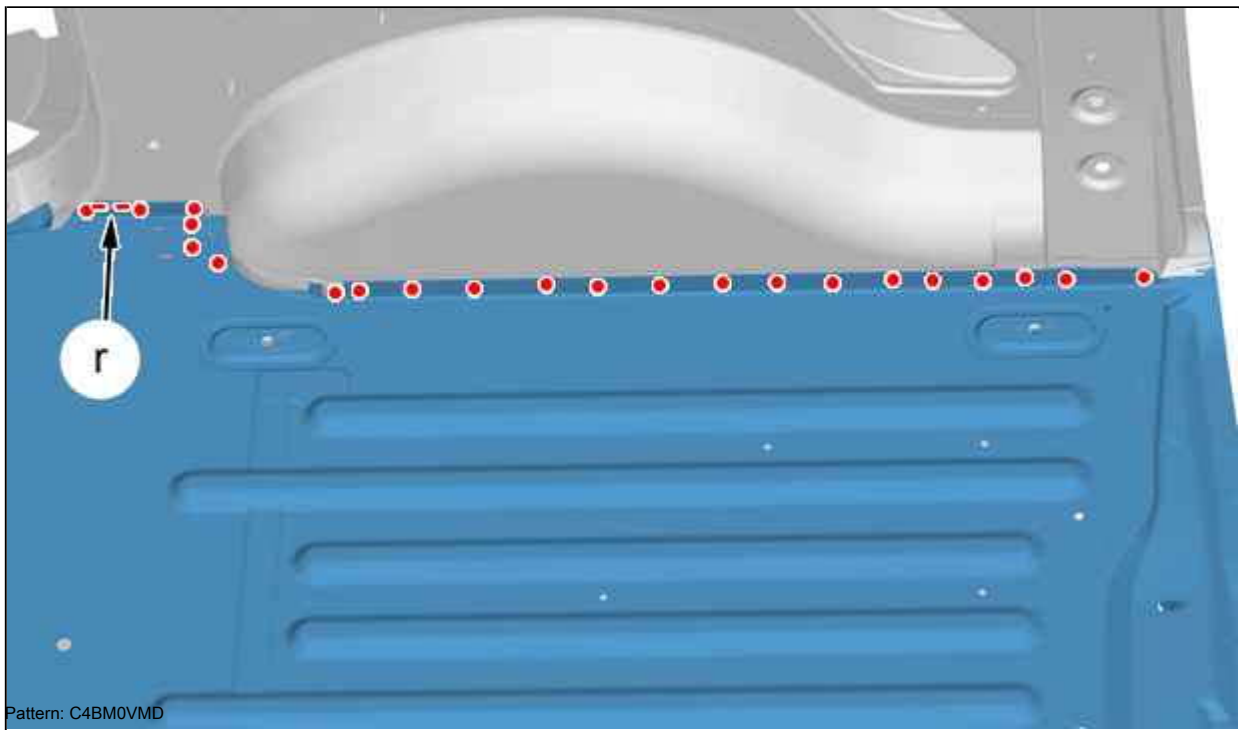
NOTE: The number of welding points is provided as a guide and is subject to change.



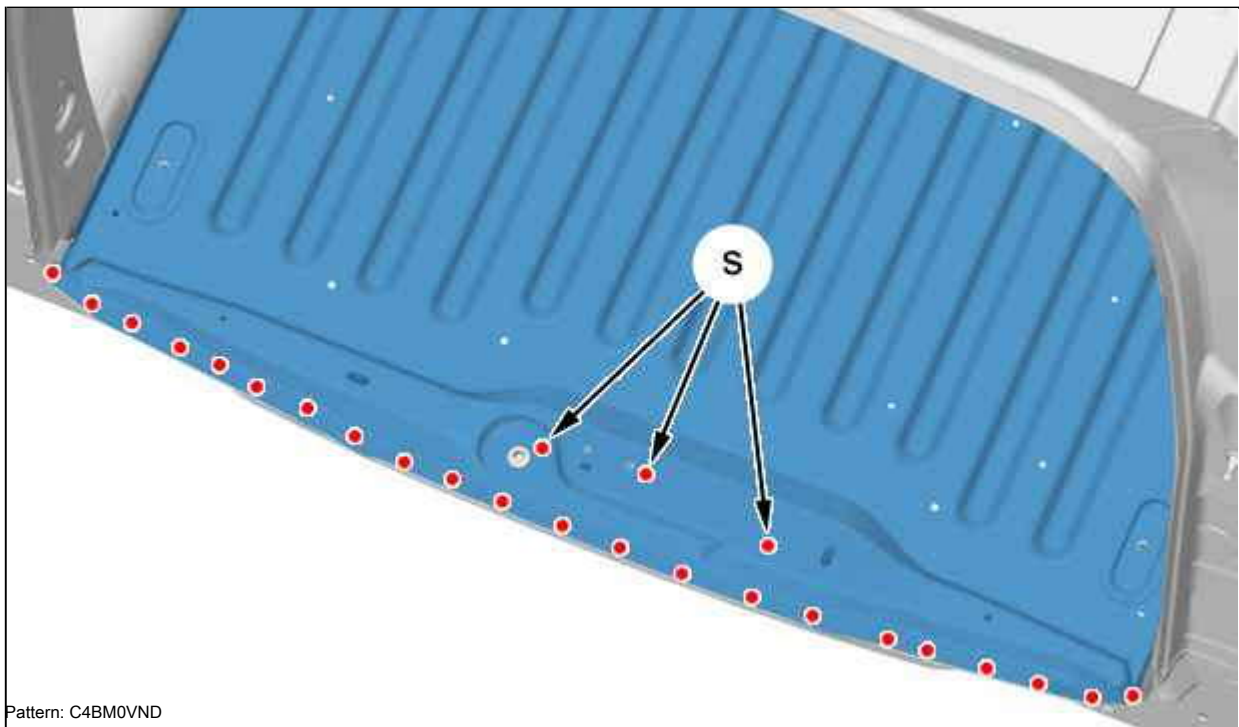
Weld through the holes in the MAG protective gas. Grind MAG welding points.



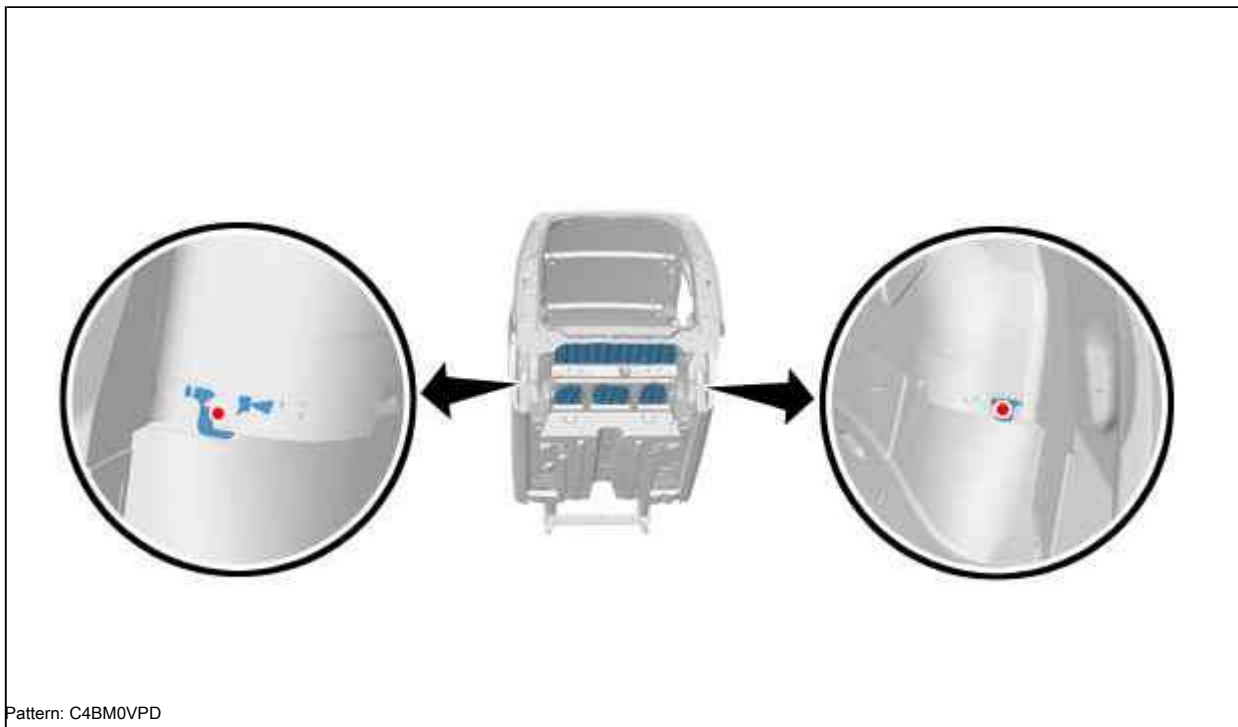
Weld through the holes in the MAG protective gas. Grind MAG welding points.
Apply MIG weld seam (in "q").



Weld through the holes in the MAG protective gas. Grind MAG welding points.
 Apply MIG weld seam (in "r").

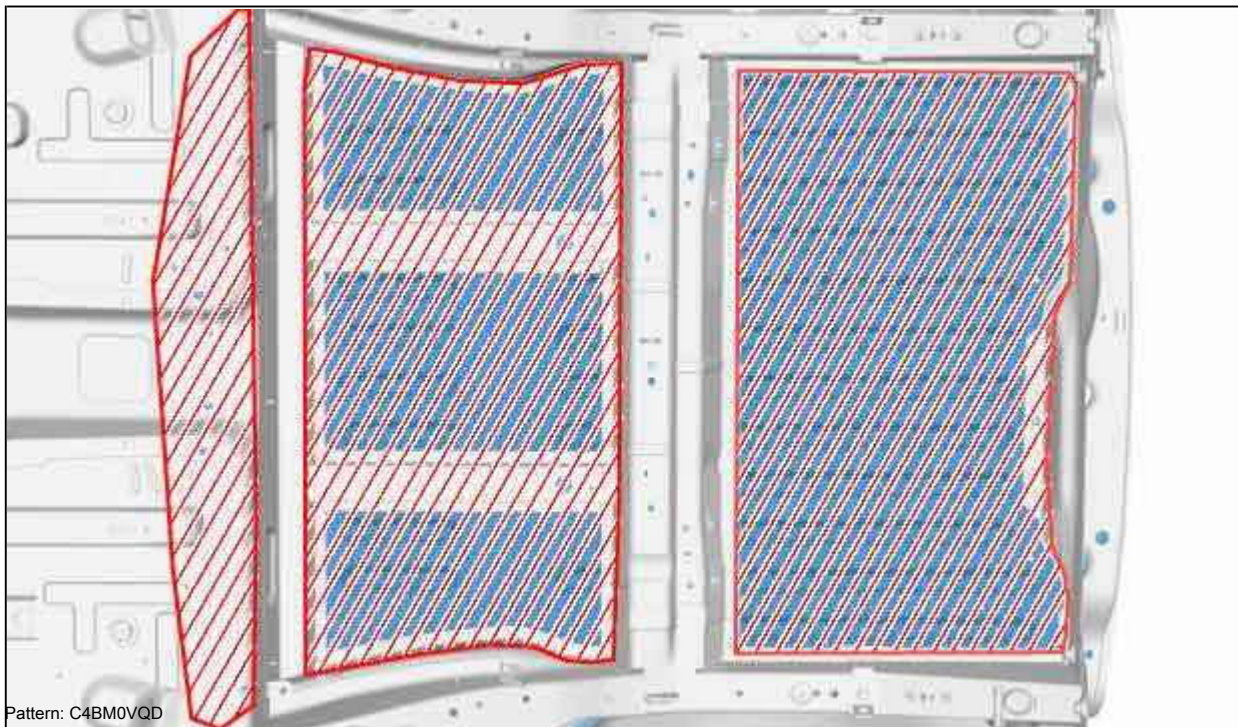


Weld through the holes in the MAG protective gas (in "s"). Grind MAG welding points.
 Weld with welding points.



Weld through the holes in the MAG protective gas.

11. Tightness protection

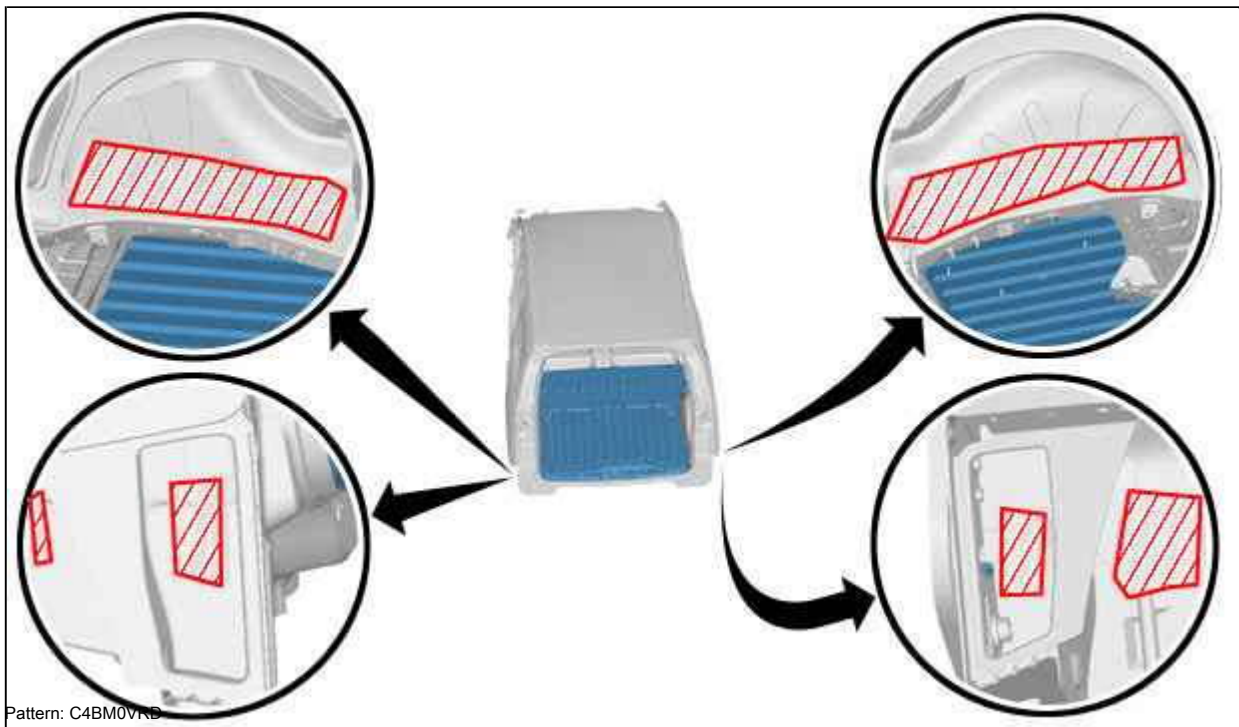


Apply a layer of phosphate primer to the cleaned areas.

Apply a "C4" anti-gravel coating

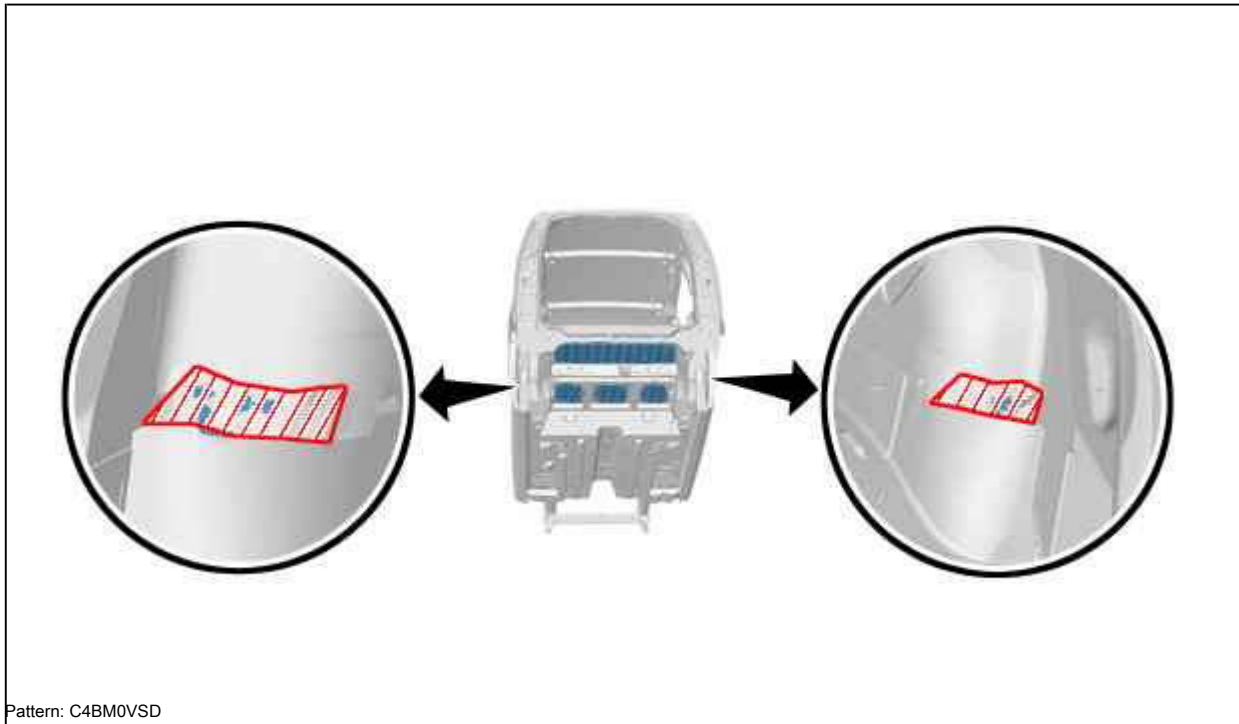


...



Apply a layer of phosphate primer to the cleaned areas.

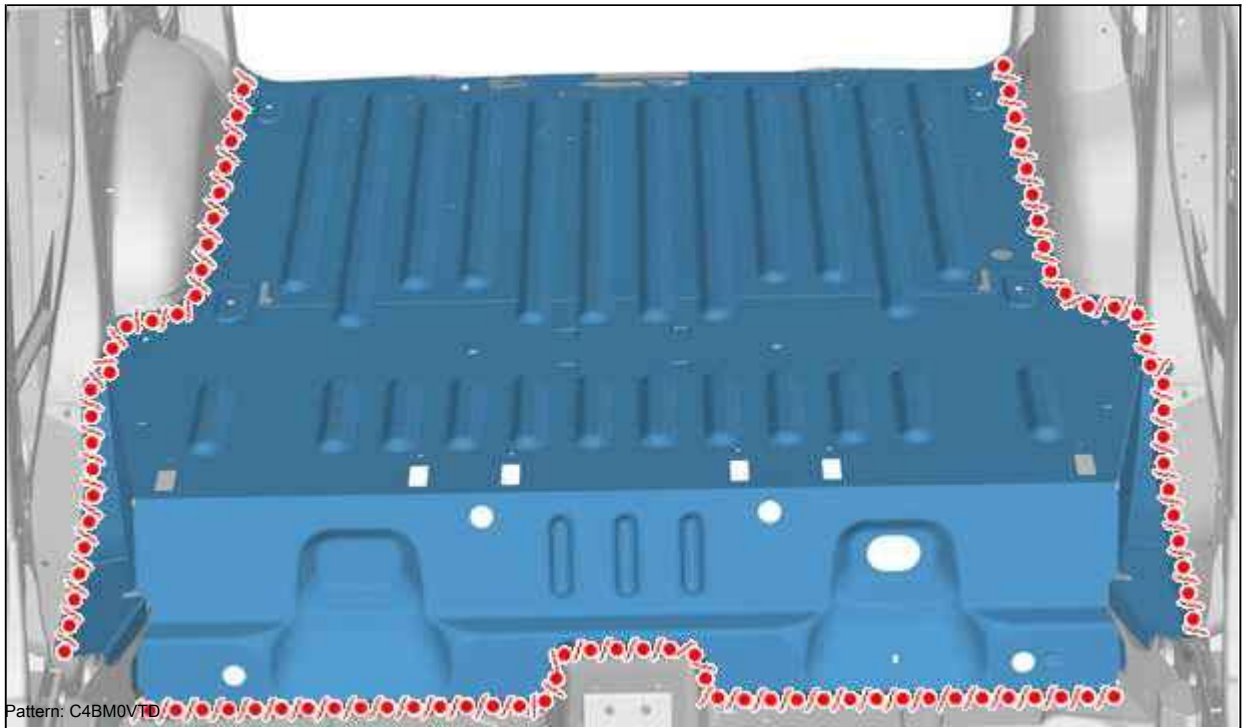
Apply a "C4" anti-gravel coating



Apply a layer of phosphate primer to the cleaned areas.

Apply a "C4" anti-gravel coating





Pattern: C4BM0VTD

Apply a layer of phosphate primer to the cleaned areas. Apply sealant (index "A1").

Painting, then spraying into the cavity with a C5 index in the ceremonial area.

12. Additional operations

Remove the electrical wiring and detachable parts.

13. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

REPLACEMENT: LOAD FLOOR EXTENSION

MANDATORY: Observe the cleanliness and safety rules



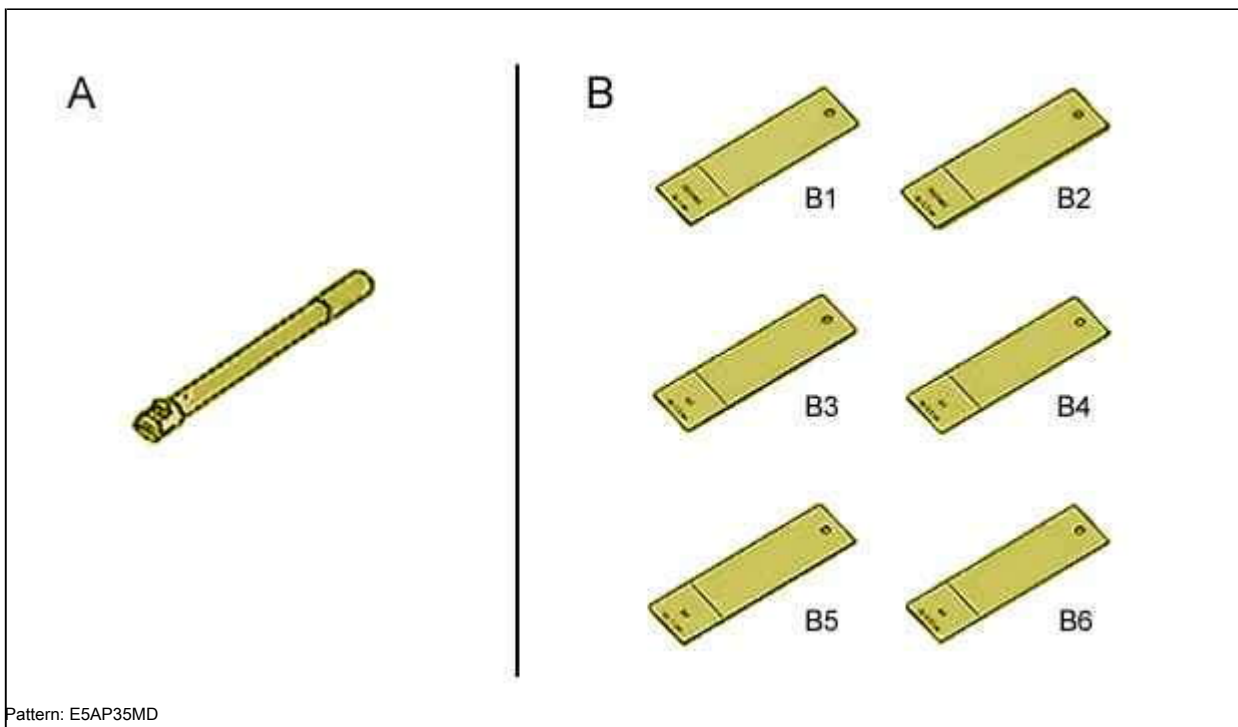
ATTENTION : All cleaned surfaces must be protected by a suitable electrolytic galvanizing process.

1. Information

Types of welds used with an electric arc welded element. Welding with the MAG method by applying metal (steel) in an atmosphere of active gas. The designation for high tensile steels used in this document:

- HLE: High tensile steel
- THLE: Steel with very high tensile strength
- Ultra high yield strength (UHLE) steel elements

2. Recommended equipment



Equipment for checking the quality of electric welding points () .1366ZZ. Test template for checking the quality of electric welding dots () .1366B.

3. Additional operations

Disconnect the battery.

ATTENTION : Wait at least 15 minutes before doing any work (discharge of the computer's power reserve to the airbags).

ATTENTION : Remove or protect items located in the repair area that could be

damaged by heat or dust.

Separate the wire harnesses.

4. Localization: Cargo floor extension

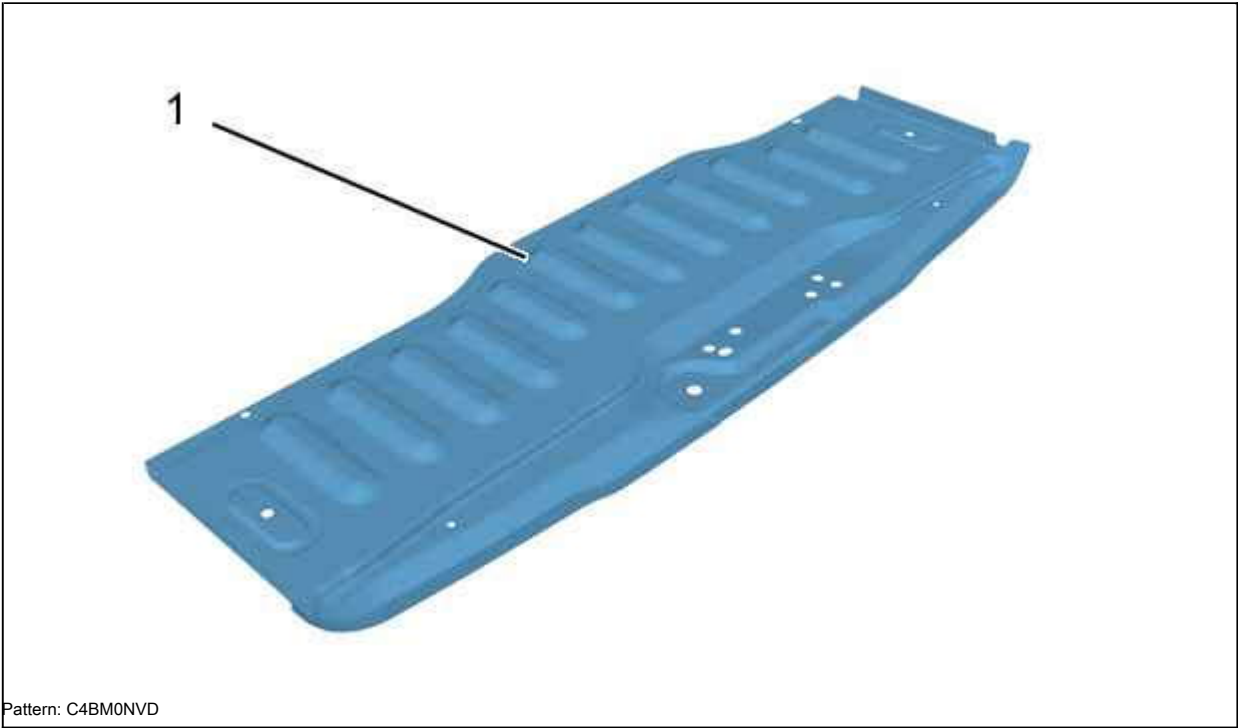


Label Designation

(1)	Load floor extension

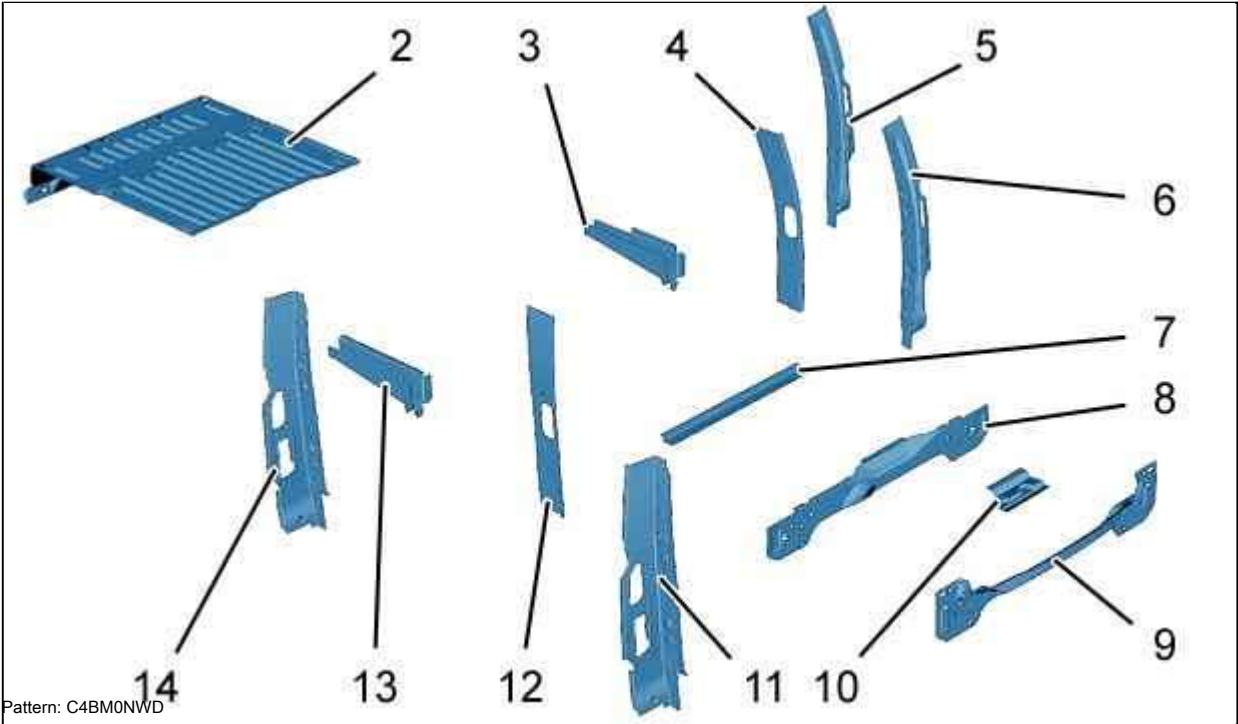
5. Identification: Cargo floor extension

5.1. Ingredient: Cargo floor extension



Label Designation		Thickness (mm)	Nature / classification
(1)	Cargo floor extension 0.77		HLE

5.2. Identification of parts adjacent to the spare part

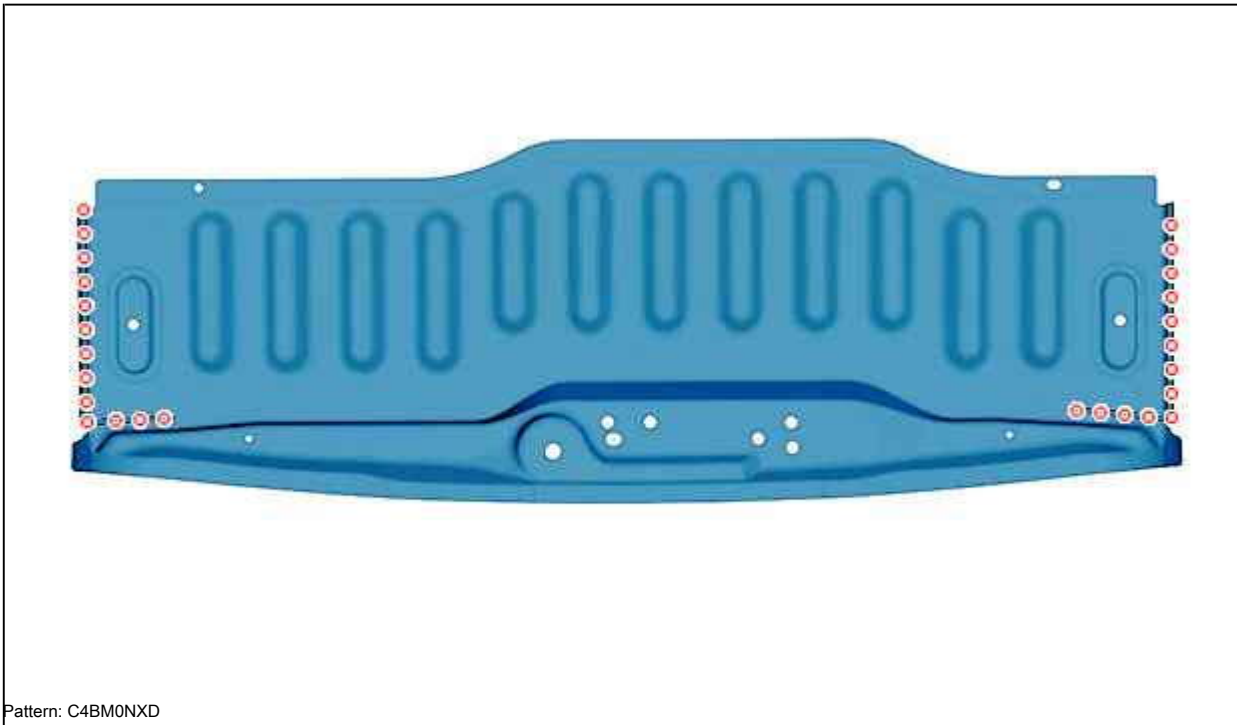


Label Designation		Thickness (mm)	Nature / classification

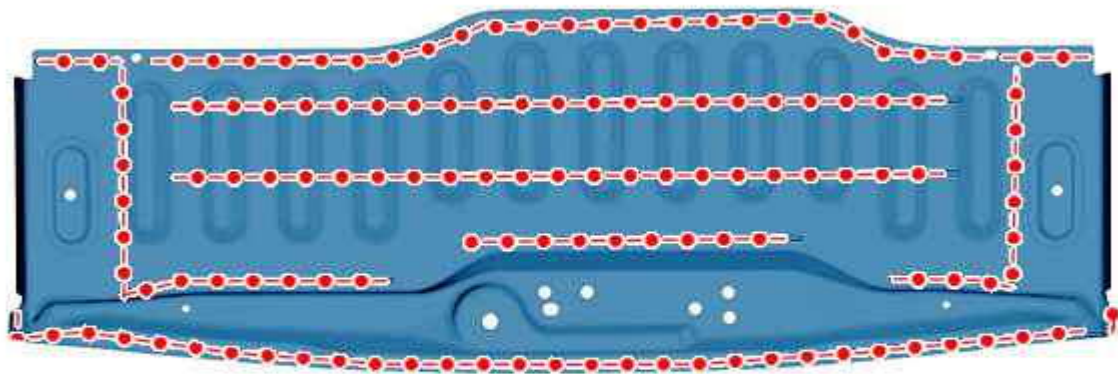
(2)	Load compartment floor	0.77	HLE
(3)	Side member extension (right) (Long wheelbase version)	1.80	THLE
(4)	Connection: Rack at tailgate (right)	0.77	Mild steel
(five)	Trunk lid strut (right) (short) Trunk lid strut (right) (long)	0.77	HLE
(6)	Crossbars Cargo space floor extensions Rear panel trim	0.77	HLE
(7)		1.17	HLE
(eight)		0.87	Mild steel
(nine)	Back panel	0.87	Mild steel
(ten)	Reinforcement element for fastening the lock bracket Trunk lid	1.47	HLE
(eleven)	strut (left) (long) Connection: Rear door strut (left)	0.77	HLE
(12)		0.77	Mild steel
(13)	Side member extension (left) (Long wheelbase version)	1.80	THLE
(fourteen)	Trunk lid strut (left) (short)	0.77	HLE

6. Preparation: Cargo Floor Extension

MANDATORY: When cleaning the edges of the joints, use a solvent to avoid damaging the corrosion protection



Mark, then drill a Ø6.5 mm hole for subsequent spot welding.

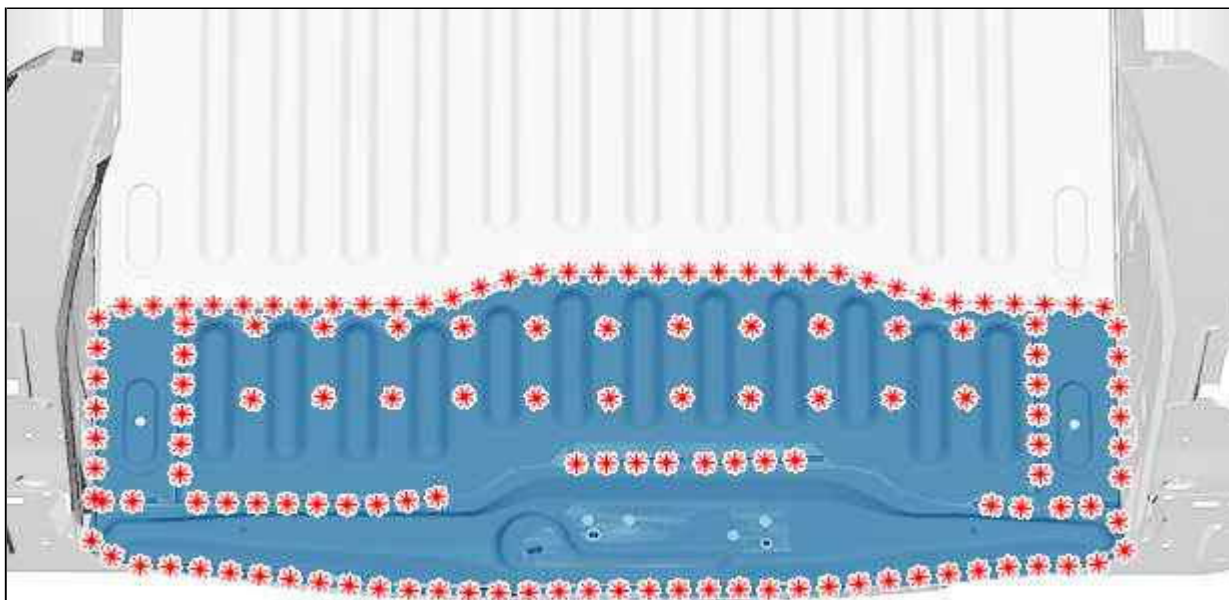


Pattern: C4BM0NYD

Prepare the sockets and protect them with a welding primer ("C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

7. Cut: Cargo floor extension



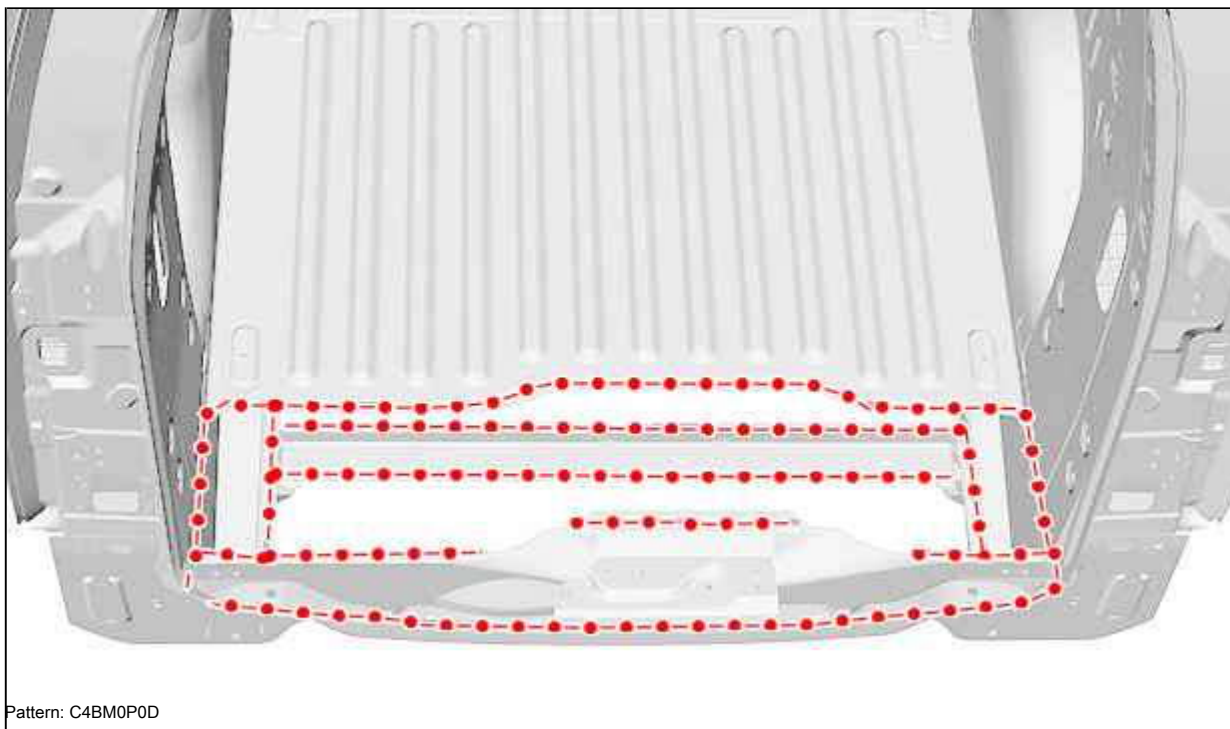
Pattern: C4BM0NZD

Cut by points.

Remove: Rear luggage compartment extension.

8. Cleaning and preparation of the body

8.1. Body preparation



Prepare the sockets and protect them with a welding primer ("C7").

NOTE: Apply a welding primer to the inner surfaces of the elements to be welded.

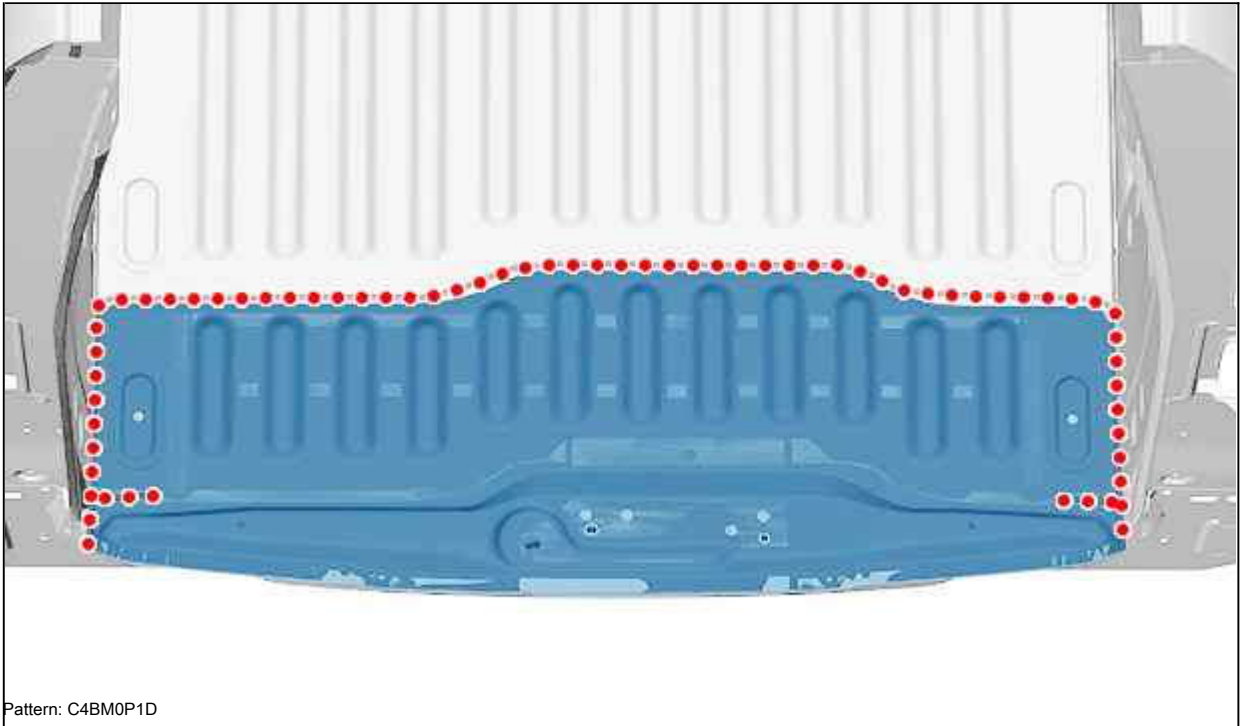
8.2. Fit

Position: Rear luggage compartment extension. Install elements to ensure the fit.

Hold the element in place.

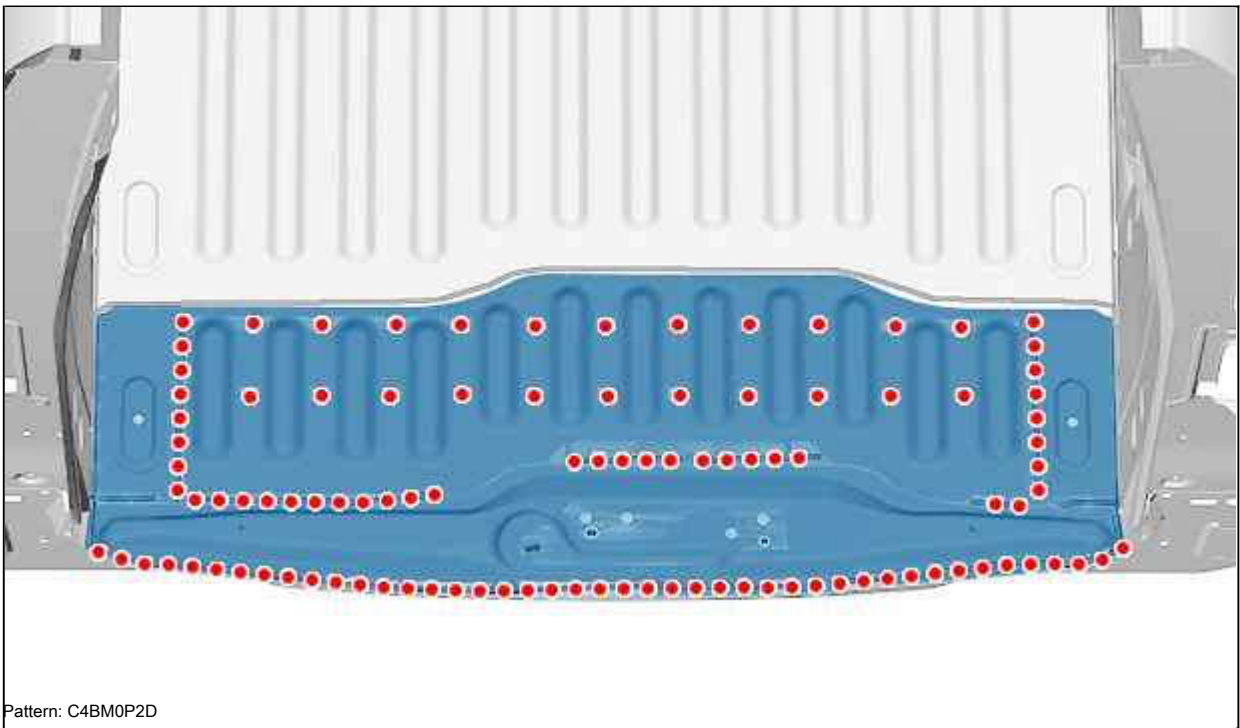
9. Welding

9.1. MAG welding



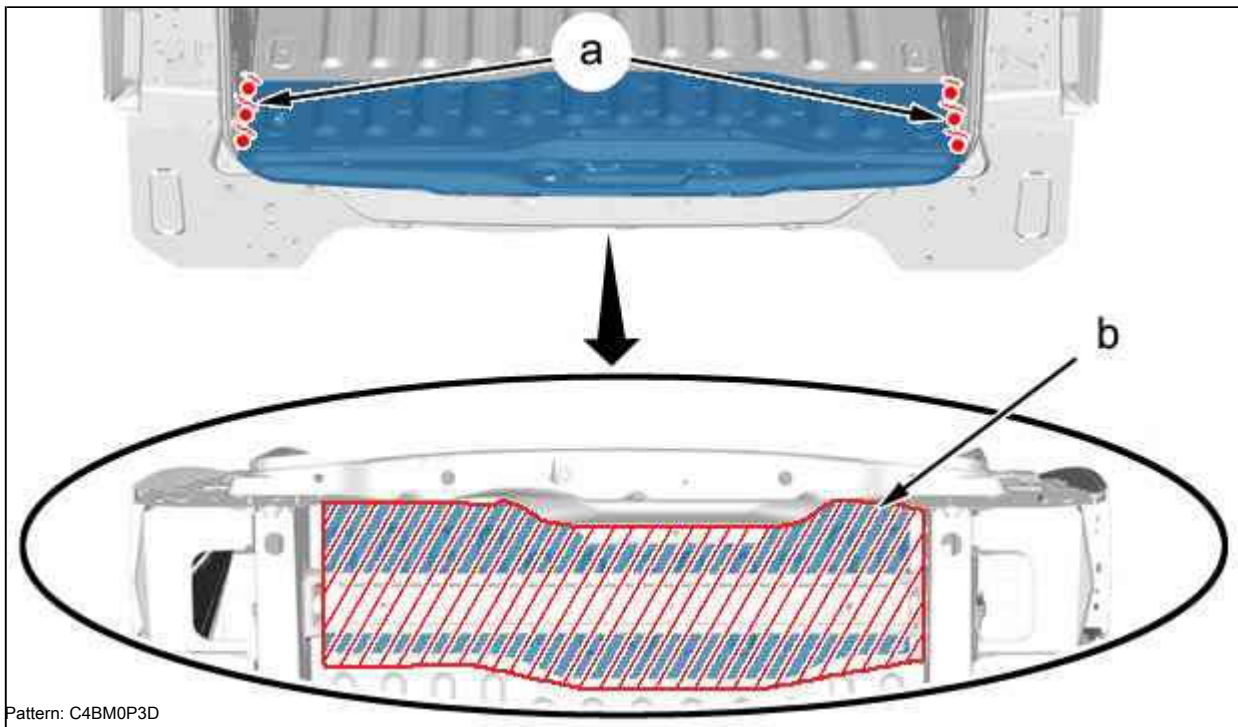
Weld through the holes in the MAG protective gas. Grind MAG welding points.

9.2. Electric spot welding



Weld with welding points.

10. Leakproof protection



Apply a layer of phosphate primer to the cleaned areas. Apply sealant (Index: A1) (in "a").

Apply an anti-gravel coating of category "C4" (in "b").

Apply paint and then spray paint in areas with internal cavities, which are marked appropriately "C5" in the repair area.

11. Additional operations

Remove the electrical wiring and detachable parts.

12. Reinitialization

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

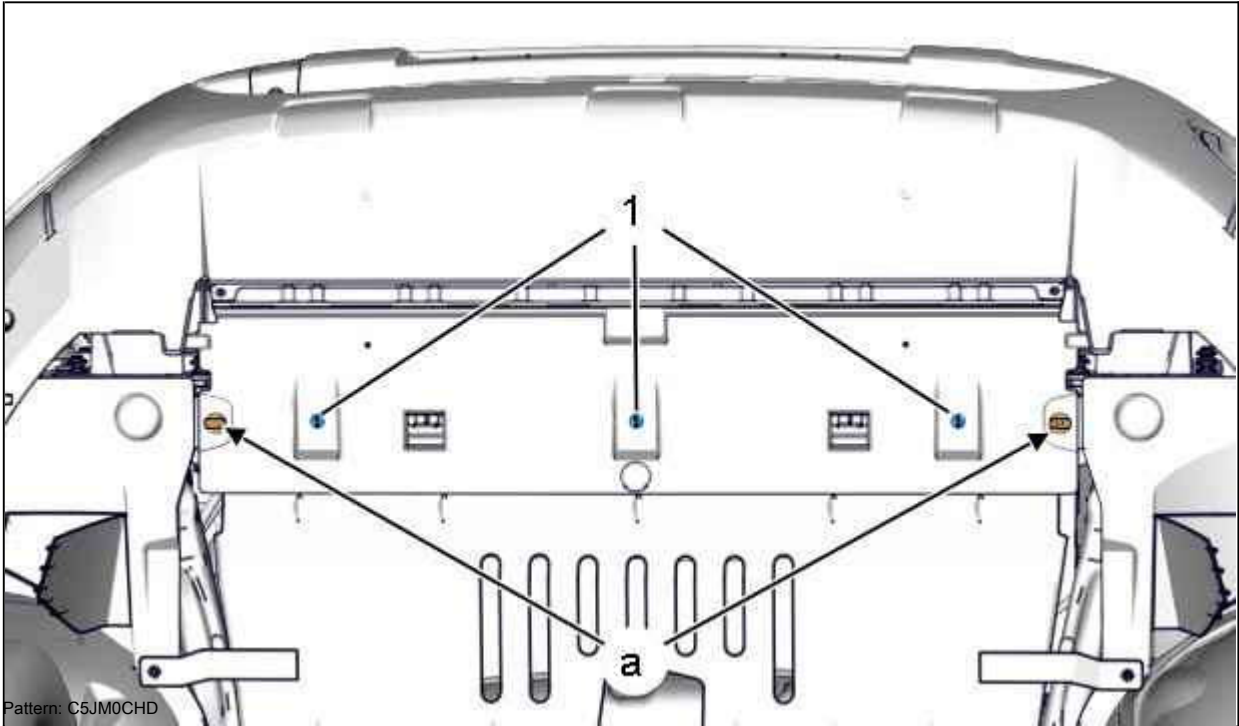
REMOVAL REFITTING: PROTECTIVE PANEL UNDER THE ENGINE

MANDATORY: Observe the cleanliness and safety rules

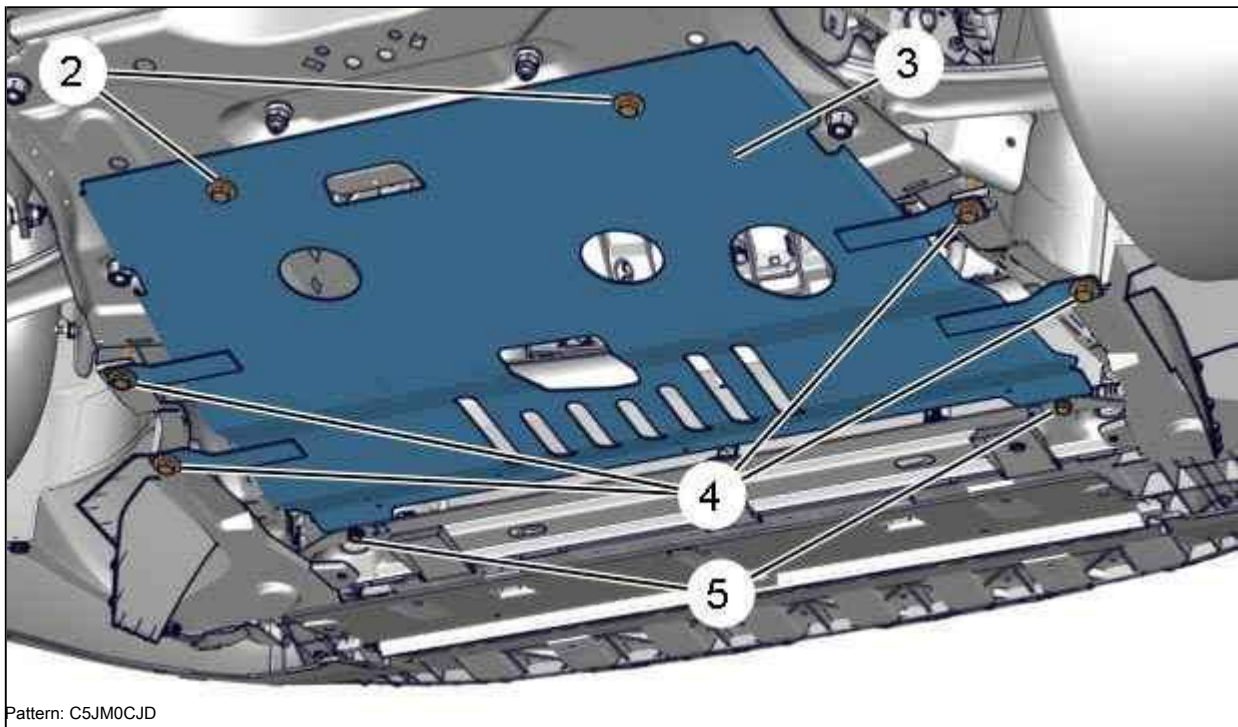


1. Removal

Place the car on a lift.



Detach the clips (at "a"). Loosen screws (1).



Remove:

- the bolts (5)
- bolts (4)
- bolts (2)

Separate and remove: Engine guard (3).

2. Installation

MANDATORY: Replace damaged clips.

Install:

- Under engine guard (3)
- bolts (2); Tighten to 1.8 ± 0.4 da.Nm of bolts (5); Tighten to
- 1.8 ± 0.4 da.Nm of bolts (4); Tighten to 1.8 ± 0.4 da.Nm of
- bolts (1)
-
- clips (in "a")

Lower the car to the ground.

REPRESENTATION OF MECHANICAL UNITS: CAR

1. (depending on versions): Engine

1.1. gasoline engine

Sales versions	1.6l 16v (90 HP)	1.6l 16v (110 hp)
Engine serial number	NFR (TU5JP4B)	NFU (TU5JP4)
Displacement (cm ³)	1584	1587
Bore x stroke (mm) Compression ratio	78.5 x 82 11/1	78.5 x 82 11/1
Power (ISO or CEE) (kW rpm) Max. power (DIN) (hp rpm)	665500 90 5500	80 5800 110 5800
Max. torque (ISO or CEE) (da.Nm 13.2 2500 rpm)		14.7 4000
Fuel	Super, unleaded AI Super, unleaded AI	95
Toxicity standards	E4	E4
Injection system provider	Multipoint injection BOSCH	Multipoint injection BOSCH
A type	ME7.4.5	ME7.4.5
Computer requires telebooting	Yes	Yes

1.2. diesel engine

EngineDV6 Diesel Particulate Filter

Sales versions	1.6 HDI (75 HP)	1.6 HDI (90 HP)
Engine serial number	9HT (DV6BTED4 DV6BUTED4) 9HX (DV6AT	ED4 DV6AUTED4)
Displacement (cm ³)	1560	1560
Bore x stroke (mm) Compression ratio	75 / 88.3 18/1	75 / 88.3 18/1
Power (ISO or CEE) (kW rpm)	554,000	66 4000
Max. power (DIN) (hp rpm) 754,000		90 4000
Max. torque (ISO or CEE) (da.Nm rpm)	18.5 1750	21.5 1750
Fuel	Diesel fuel	Diesel fuel
Toxicity standards	E3 E4	E3 E4
Injection system	HDI (hautepression diesel injection) - high pressure diesel fuel injection system	
provider	BOSCH	BOSCH
A type	EDC 16C34	EDC 16C34
Computer requires telebooting	Yes	Yes

Engine DV6 with particulate filter (FAP)

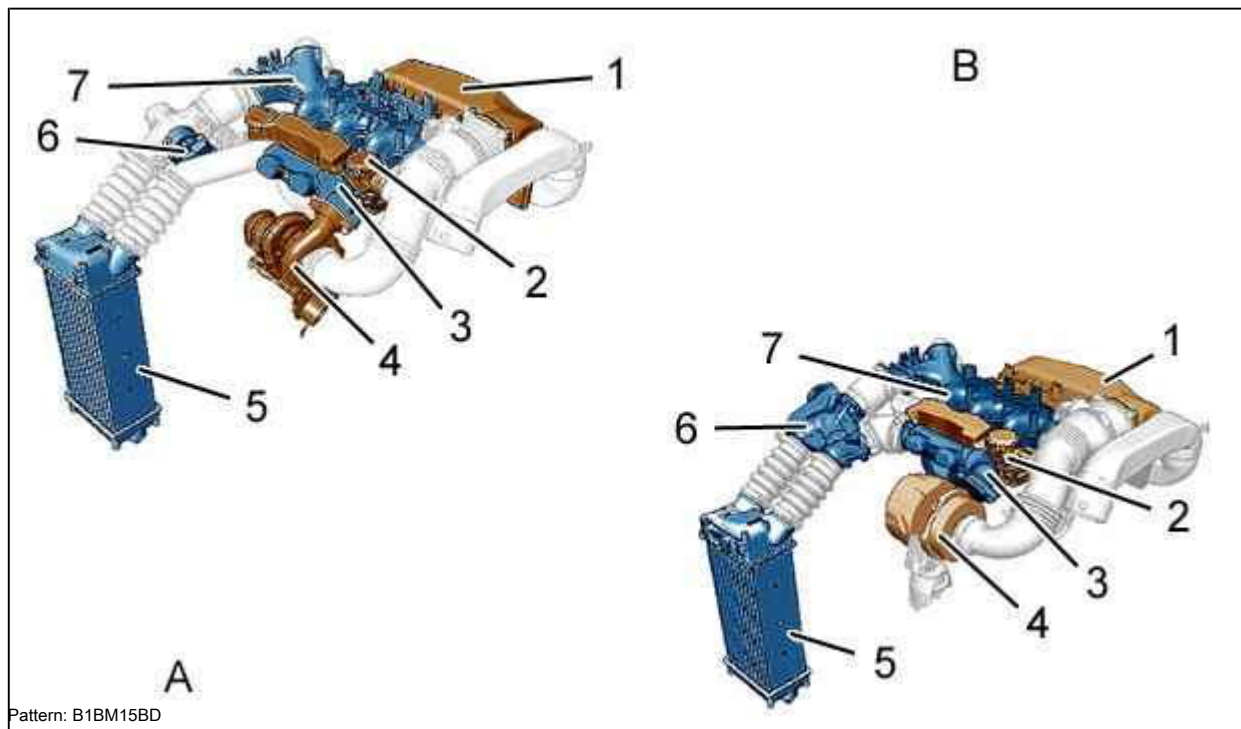
Sales versions	1.6 HDI (90 HP)	1.6 HDI (110 HP)
Engine serial number	9HV (DV6TED4B)	9HZ (DV6TED4 Particulate filter) 1560
Displacement (cm ³)	1560	
Bore x stroke (mm)	75 / 88.3	75 / 88.3

Compression ratio	18/1	18/1
Power (ISO or CEE) (kW rpm)	66 4000	804000
Max. power (DIN) (hp rpm) 90 4000		110 4000
Max. torque (ISO or CEE) (da.Nm rpm)	21.5 1750	24 2000
Fuel	Diesel fuel	Diesel fuel
Toxicity standards	E3 E4	E3 E4
Injection system	HDi (hautepression diesel injection) - high pressure diesel fuel injection system	
provider	BOSCH	BOSCH
A type	EDC 16C34	EDC 16C34
Computer requires telebooting	Yes	Yes

MANDATORY: A new ECM must be initialized with a coded confidential client card and scan tool.

2. Nutrition

2.1. Air supply circuit



Motors type DV6:

- "A" Air supply circuit Simple air intake meter
- "B" Air supply circuit Double air dosing unit at inlet

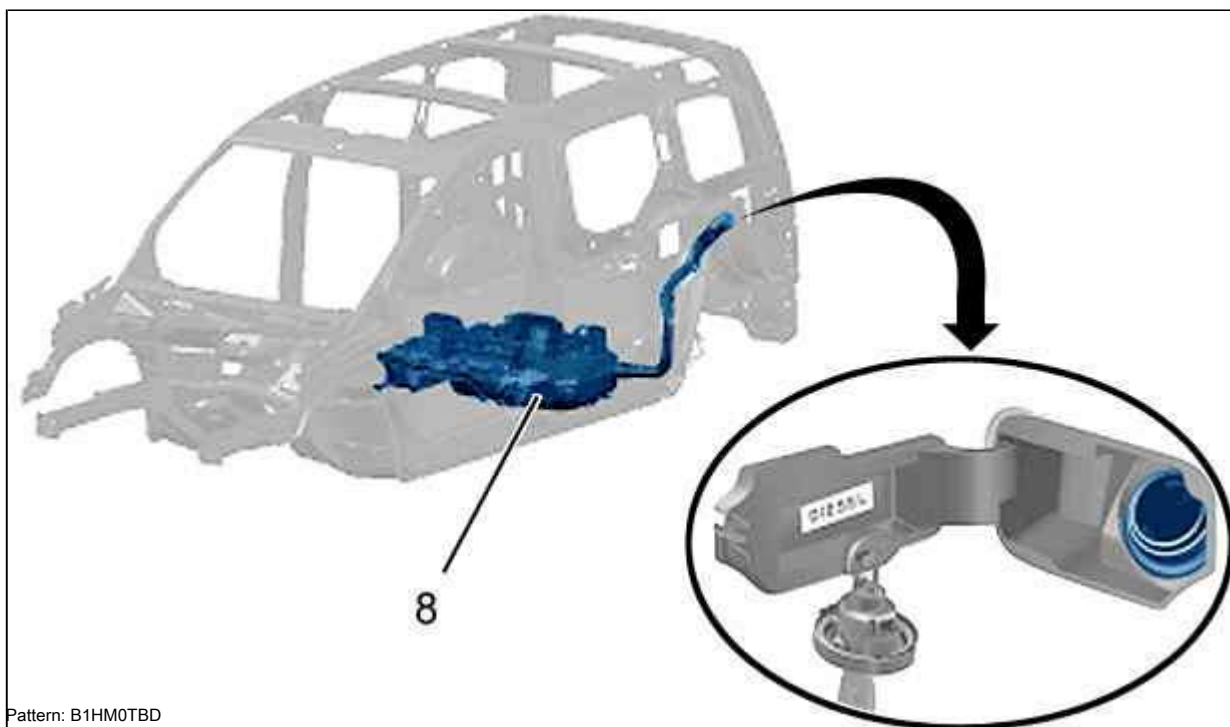
(1) Air filter assembly. (2) Oil separator.

(3) Turbocharger resonance damper. (4) turbocharger.

(5) Air-to-air heat exchanger.

(6) Simple air inlet meter / Air meter with two flaps. (7) Inlet air distributor.

2.2. Fuel tank



Pattern: B1HM0TBD

(8) Fuel tank capacity: 60 liters (petrol or diesel). Monoblock fuel tank.

NOTE: The lack of a sensor socket makes it necessary to remove the fuel tank to access the sensor / pump module.

3. Exhaust system

An exhaust system adapted to the regulations in force in the country of sale.

3.1. Characteristics

gasoline engine:

- Cancellation of the front exhaust swivel replaced by a flex.
- 2 oxygen sensors, upper and lower

diesel engine:

- DV6 with particulate filter: Catalytic converter and particulate filter separated by a yoke, flexible pipe, intermediate pipe and rear muffler
- DV6 Solids Free: Catalytic converter, flexible pipe, intermediate pipe and rear muffler

3.2. Particulate filter

Diesel engines:

- Extended Life Particulate Filter (FAP)
- Exhaust Gas Regeneration System: Sensor 2

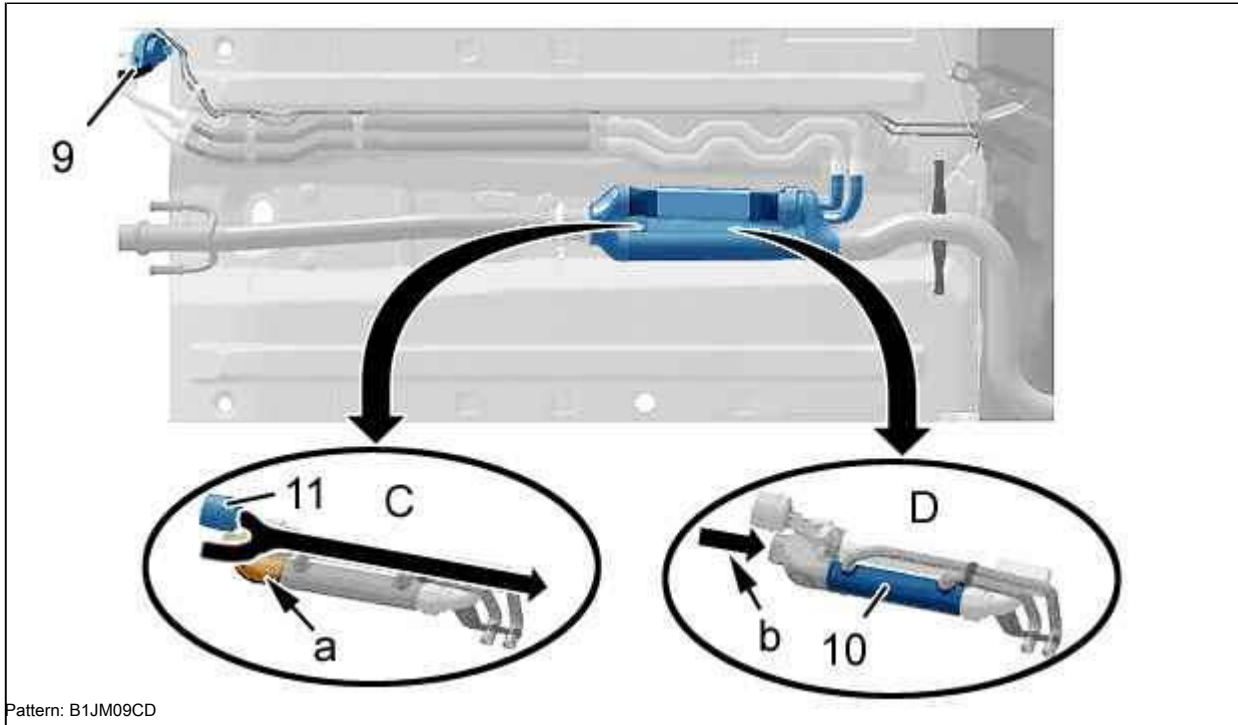
3.3. Thermal Exhaust Gas Recovery (RTE)

Thermal Exhaust Gas Recovery System:

- Improves interior thermal comfort
- Installed on diesel engines in countries with cold climates

RTE allows heat exchange between exhaust gases and coolant. The electric water pump circulates the cooling system and only runs when the engine is warming up.

The control solenoid valve is activated by the engine control computer.



"C" Exhaust gas recovery closed. "D" Flue gas recovery is open. "a" 3-way valve.

"b" Exhaust gases.

(9) Electric liquid pump. (10) heat exchanger.

(11) Control chamber for the directional valve.

4. Drive shafts

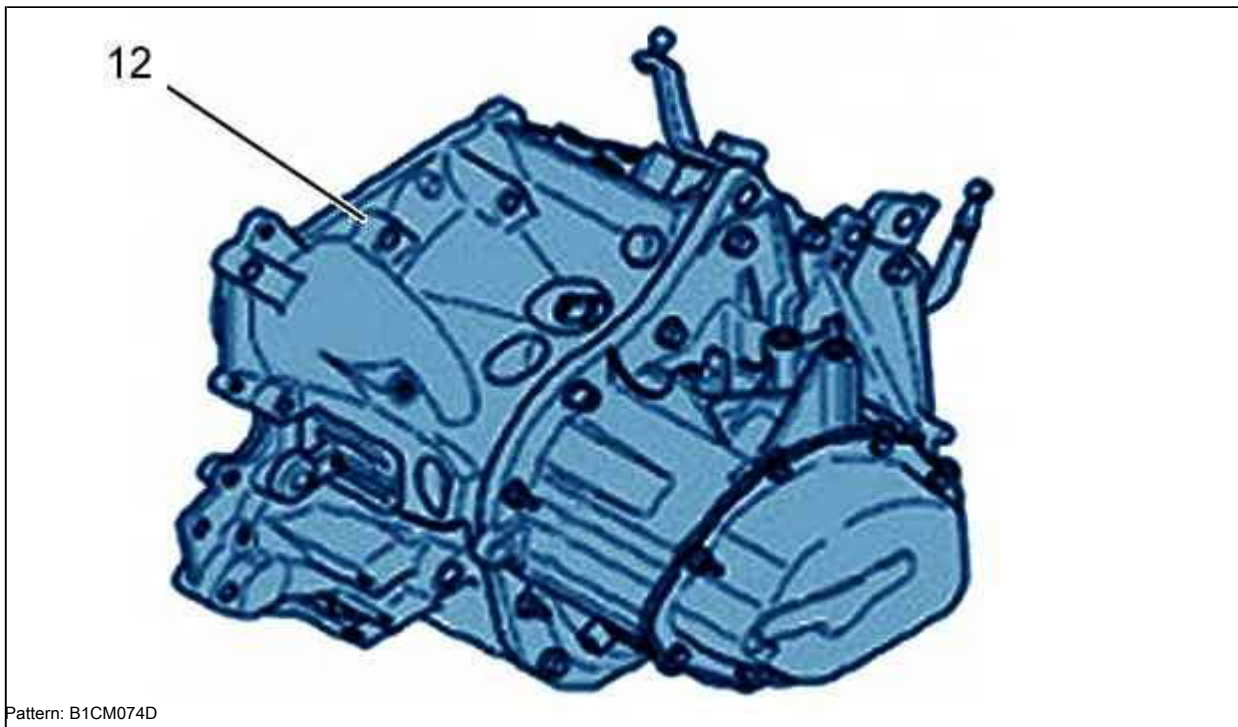
4.1. Clutch

All vehicle types have a hydraulic clutch drive.

4.2. Gear boxes

Installs only one gearbox.

Gear ratios of the gearbox and axle may vary according to the needs of the user.



(12) Manual 5-speed transmission type BE4.

4.3. Tubular drive shaft

The left and right drive shafts are tubular with a diameter of 36 mm (All types of motors).

4.4. Suspension

MANDATORY: Observe the cleanliness and rules of safe work.

4.5. Recommendations for precautions

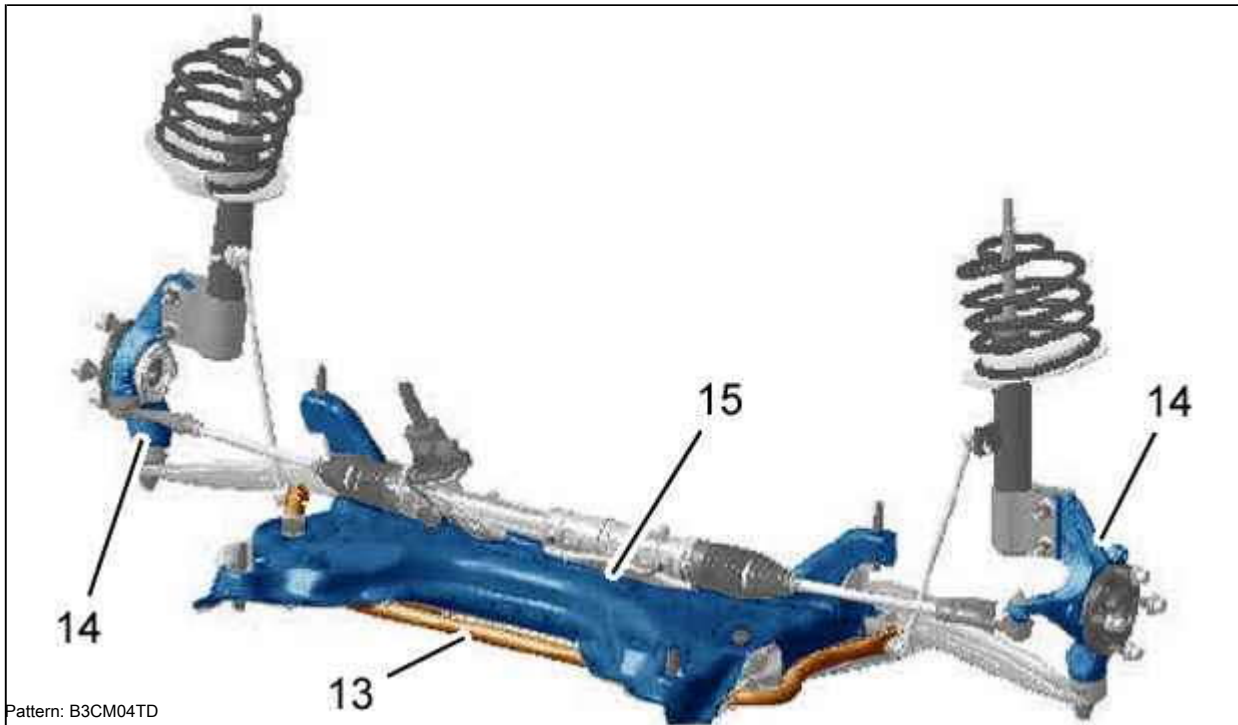
MANDATORY: Check the presence and condition of the protective rubber caps on the fixed and movable spring cups.

MANDATORY: Any contact of the suspension spring with metal objects or equipment is prohibited.

MANDATORY: Check the condition of the suspension springs (no signs of impacts, scratches or corrosion). The paint coat on the suspension springs must not be damaged so that bare metal is visible.

4.6. Front axle

The front axle is of the "pseudo Mac Pherson" type with independent front wheels.



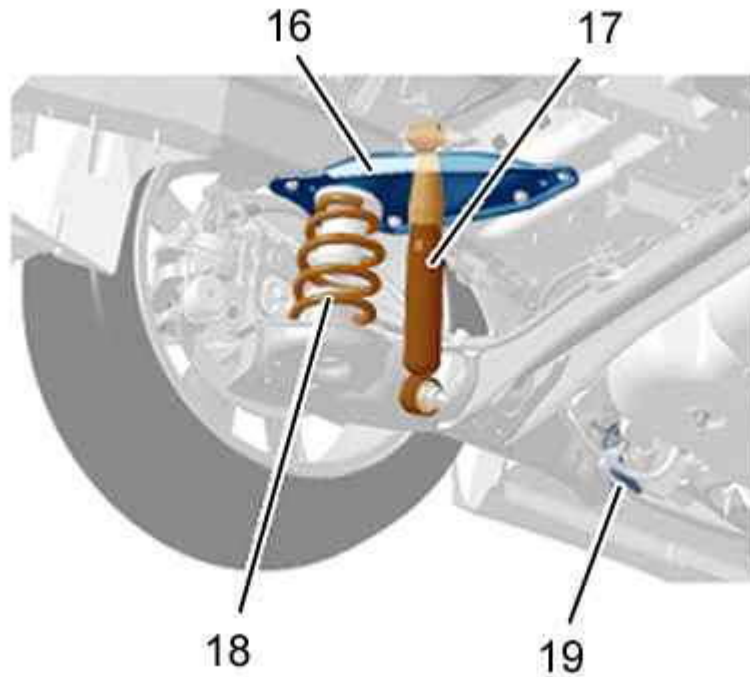
All types of engines:

- (13) anti-roll bar
- (14) Compressed knuckle
- (15) Mechanically welded painted subframe
- Adopted double row ball bearing with integrated magnetic wheel (48 polar pairs)

- Lower removable ball joint of the steering knuckle
- Subframe mounted on the body using locating lugs Subframe extensions seated on the two subframe locating pins
- Subframe extensions bolted to the lower beam and to the front of the body
-

4.7. Rear axle

Rear axle, made by mechanical welding method, type of extendible arms with deformable axle cross member.



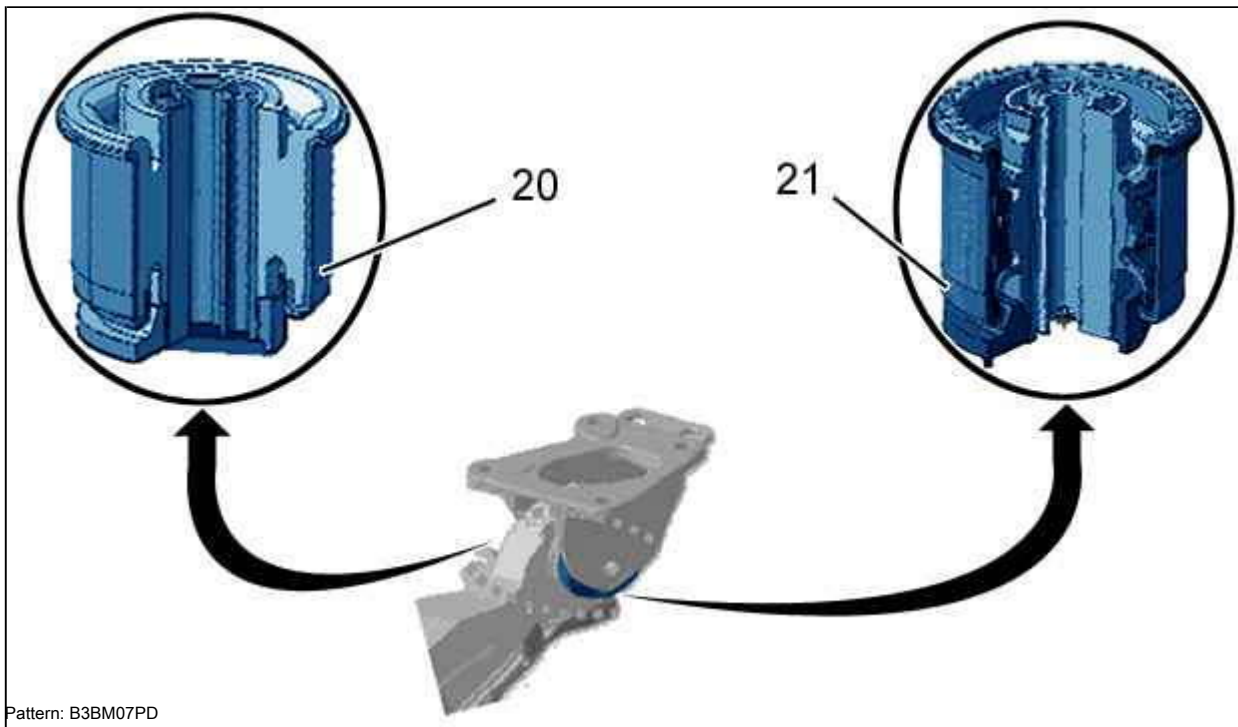
Pattern: B3DM05XD

- (16) Shock absorber cup.
- (17) shock absorber.
- (18) Metal suspension spring.
- (19) Hydraulic ball joint (Rubber ball joint for CRD version).

NOTE: CRD = for difficult road conditions.

All types of engines:

- Anti-roll bar
- Staples of the rear axle to the body
- Rear axle shank, 4 bolts
- Anti-roll bar located in the rear bulkhead
- The anti-roll bar is not demountable, its ends are welded to the rear axle bulkhead



The characteristics of the shock absorbers are adapted to the conditions of use of the vehicle:

- Passenger cars (except CRD) are equipped with hydraulic supports (20) for improved driving characteristics and a smooth ride
- Commercial vehicles are equipped with split bearings (21) to accommodate more severe driving conditions

The chassis type CRD (for heavy road conditions) is used in some versions and in countries where it is needed.

Elements modified for CRD version chassis:

- Front ground clearance increased by 7 mm
- Rear ground clearance increased by 10 mm by changing the rear lower spring mounts
- Front and rear shock absorbers (performance is the same, but the housings and inner parts have been modified to provide the same compression and rebound damping despite the changes in vehicle ride height)
- Rear axle bushings are mandatory in two materials (Also: Commercial vehicle)

4.8. Bridge geometry

The geometry of the bridges is checked when the load is set to the working height.

Front axle geometry	Rear axle geometry
Parallelism of wheels: Adjustable	Parallelism of wheels: Not adjustable
Camber: Unregulated	Camber: Unadjustable No object
Front wheel strut longitudinal tilt: Not adjustable	
Steering knuckle tilt: Non-adjustable	Without object

5. Steering

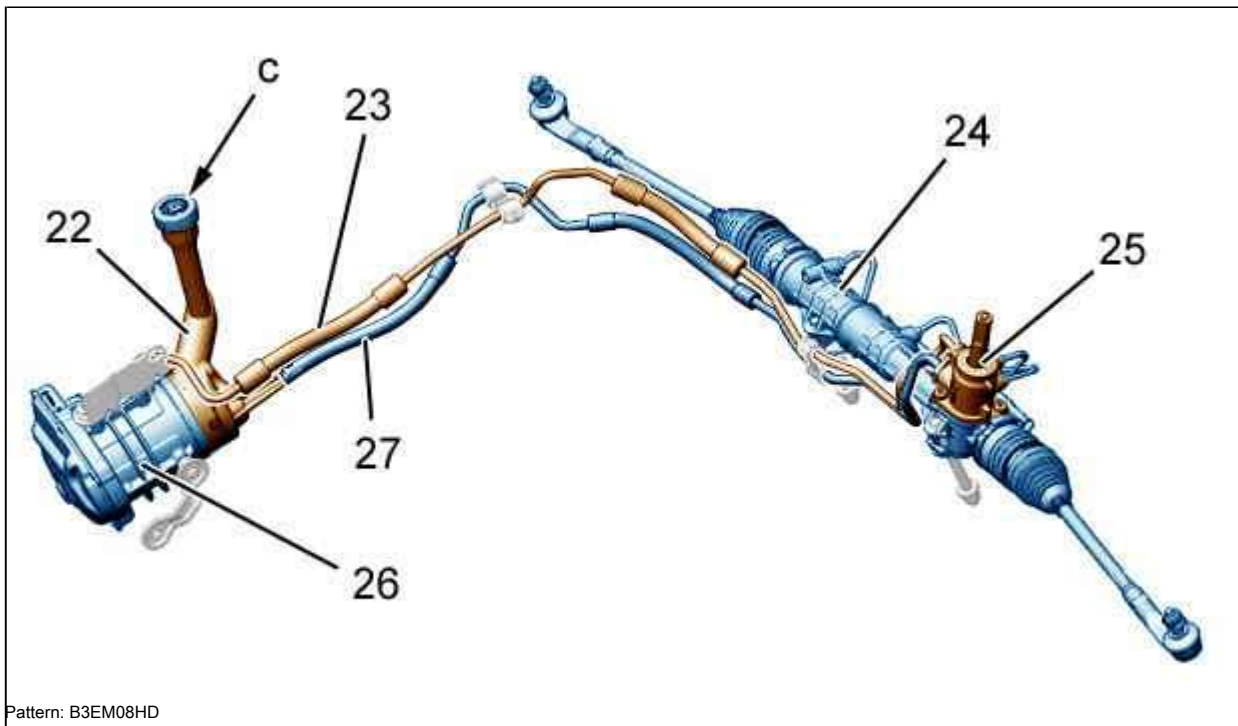
5.1. Steering with electrohydraulic power steering

The electric pump assembly creates additional torque added to the torque that the driver applies to the steering wheel.

The electro-hydraulic power steering works according to the signals of the controlled electric pump unit.

The electric pump unit allows you to change the gain depending on the following parameters:

- Vehicle speed
- Steering wheel speed
- Power steering fluid temperature LDS



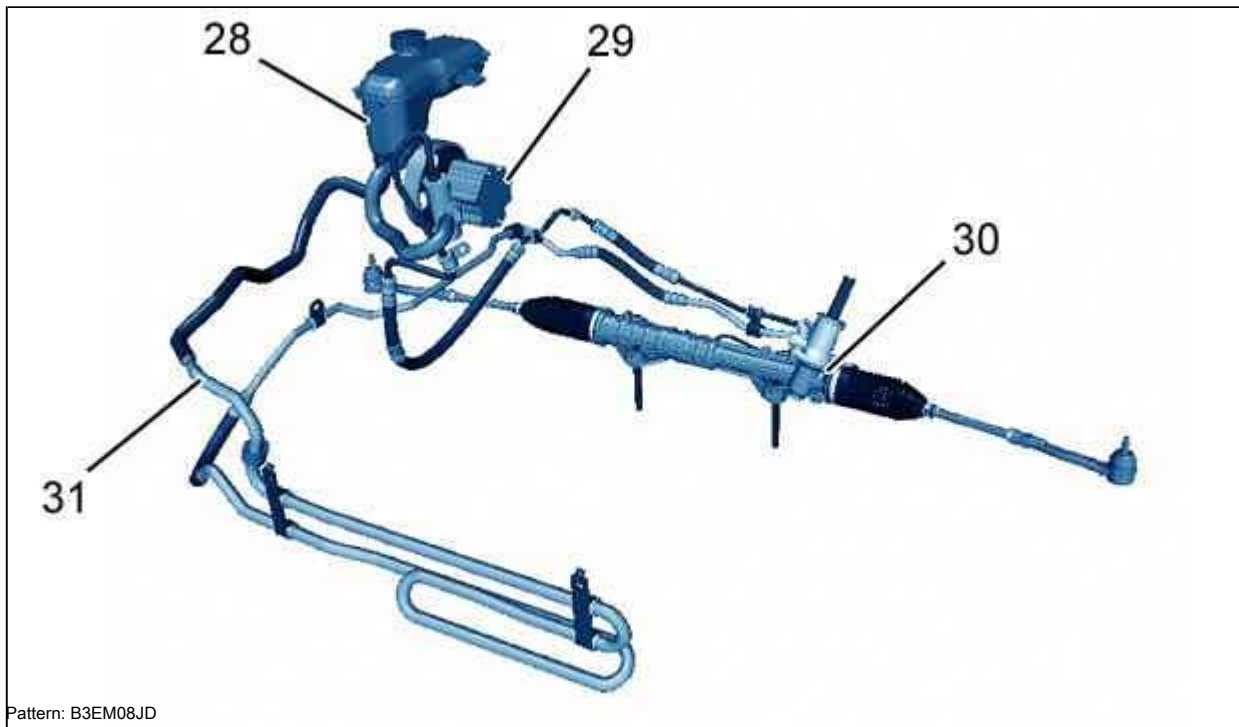
The electro-hydraulic power steering system consists of the following components:

- (22) Power steering fluid reservoir (23) High pressure pipe
-
- (24) Power steering mechanism with integral hydraulic cylinder (25) Power steering valve
-
- (26) Power steering booster assembly installed in front right side member (27) Low pressure pipes
-

The control of the fluid level in the power steering is carried out using the cover with the dipstick in "c".

NOTE: The electric pump group is found in all vehicles equipped with a particulate filter.

5.2. Power Steering (Integrated Power Steering Pump)



The power steering system consists of the following elements:

- (28) Steering hydraulic reservoir
- (29) Installed pump
- (30) Steering gear with hydraulic cylinder and hydraulic valve of traditional design
- (31) Line with hydraulic fluid cooler

6.brakes

6.1. Brake system

Brake circuit.

The functions of the compensator and brake force limiter of the main brake system are provided

ABSREF system:

- REF = electronic brake force regulator
- ESP = Electronic Stability Program

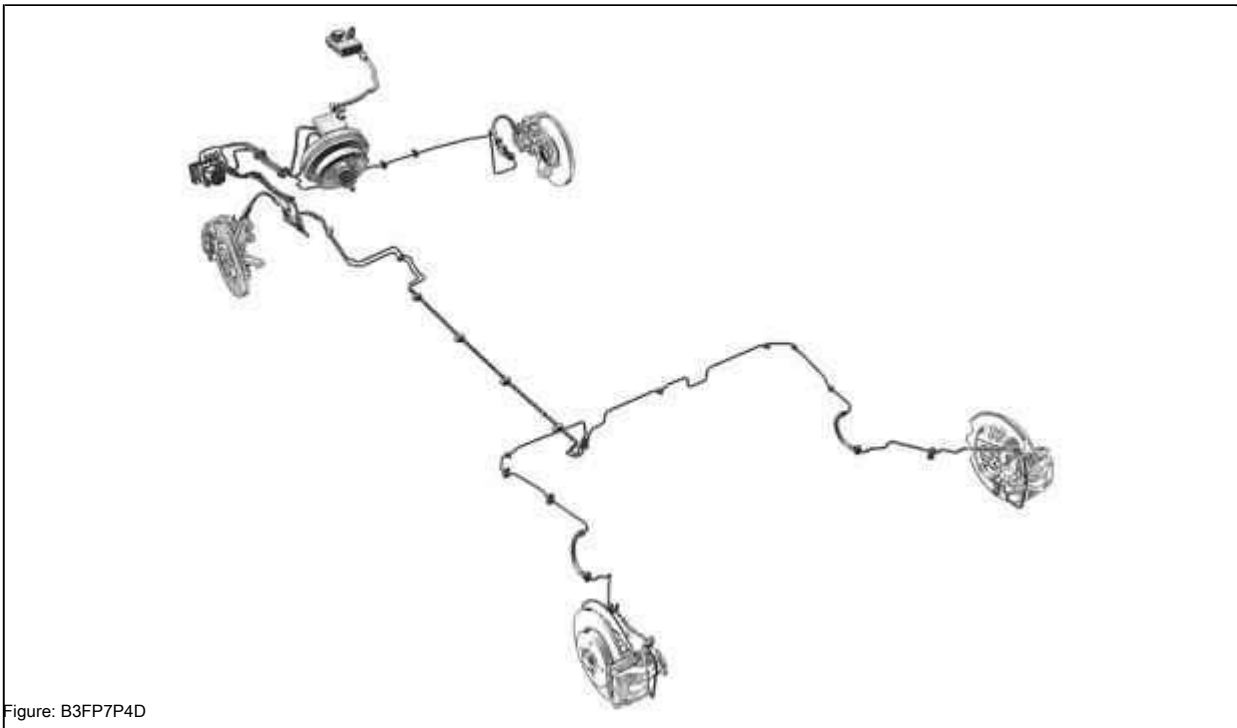


Figure: B3FP7P4D

6.2. Brake control

Assembly of the master cylinder and brake booster:

- Petrol engines: 10.5 inches
- Diesel engines: 10 inches

The brake fluid reservoir consists of 2 parts:

- Main tank equipped with a liquid level detector
- Remote tank

6.3. Front brake discs

The front brake discs are ventilated. Diameter and thickness of front brake discs: 283 mm x 26 mm.

6.4. Front brake caliper

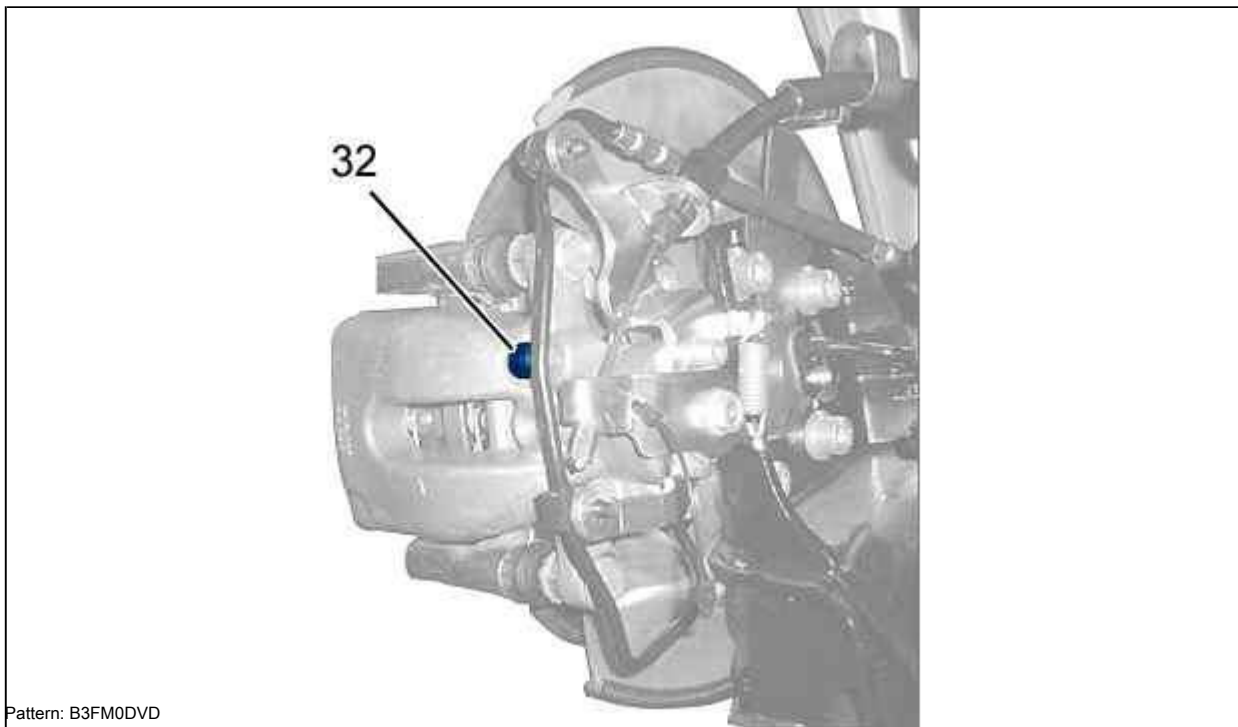
Front caliper piston diameter: 60 mm.

6.5. Rear brake discs

Rear brake discs are not ventilated.

Rear brake disc diameter: 268x12 mm.

6.6. Rear brake caliper



Pattern: B3FM0DVD

(32) Caliper bleed screw.

Rear caliper piston diameter: 38 mm.

6.7. Hydraulic block for ABS / ESP

The ABS / ESP8.1 unit controls the following elements (In addition to the basic functions of the ABS / ESP systems):

- Start-up assist on slope (Maintain hydraulic pressure for approx. 2 seconds)
- Anti-roll strategy

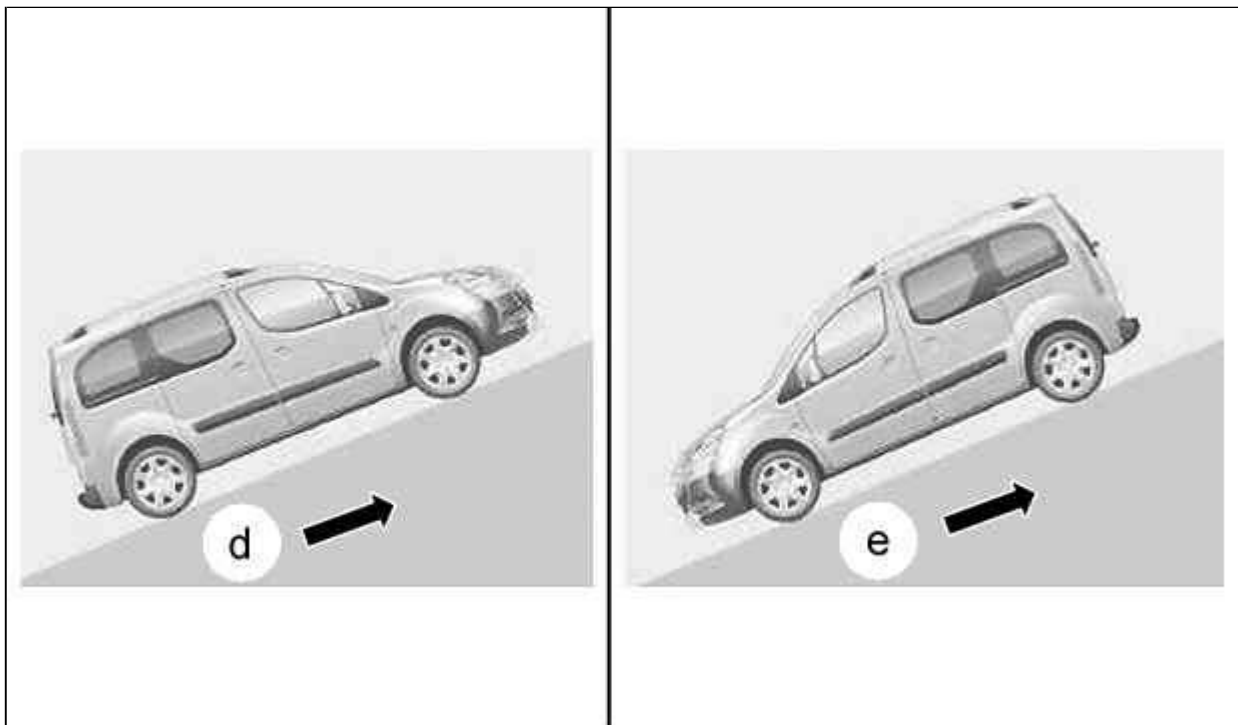


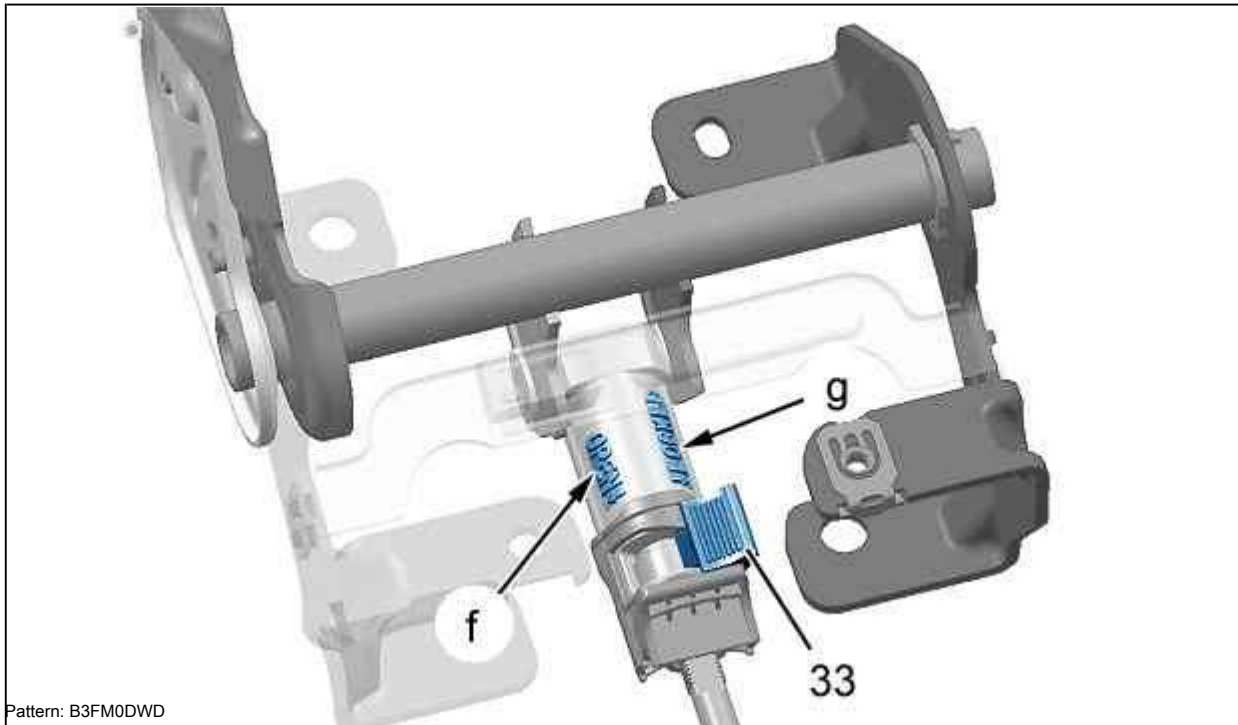
Figure: E1AM08TD

The Science Start System does not automatically engage when the brake pedal is pressed and the following conditions are met:

- The slope is greater than 5%
- "d" Up: The transmission must be in neutral or reverse when reversing
- "e" Lowering: Reverse gear engaged

6.8. Parking brake with gap compensator

The parking brake is equipped with a built-in backlash compensator system, which guarantees the tension of the cable and therefore the effectiveness of the parking brake.



"f" Position "OPEN" (active system). "g" Position "LOCKED" (system active).

ATTENTION : To avoid damaging the backlash spring, do not tighten the parking brake lever more than the first detent position of the lever travel without moving the button (33) to the LOCKED position.

After working with one of the elements of the brake system, the first pull of the parking brake cable must be performed.

7. Tires

7.1. Size

Possible sizes:

- 195/65 R15
- 205/65 R15
- 195/70 R15
- 215/55 R16
- 205/65 R15 (All road types)
- 215/50 R17

7.2. Spare wheel

Standard spare wheel:

- A car (*)
- Short wheelbase commercial vehicle (van)
- Long wheelbase commercial vehicle (van)

Tire repair kit: Passenger car (*).

NOTE: (*) Depending on the country of sale + Option.

REPRESENTATION OF EQUIPMENT: AUTOMOBILE PEUGEOT PARTNER

1. Management of electricity consumption

Battery types:

- L1 300 A
- L2 400 A

The battery type depends on the following parameters:

- engine's type
- Optional equipment
- Country of destination

2. Electrical architecture

2.1. Multiplexing

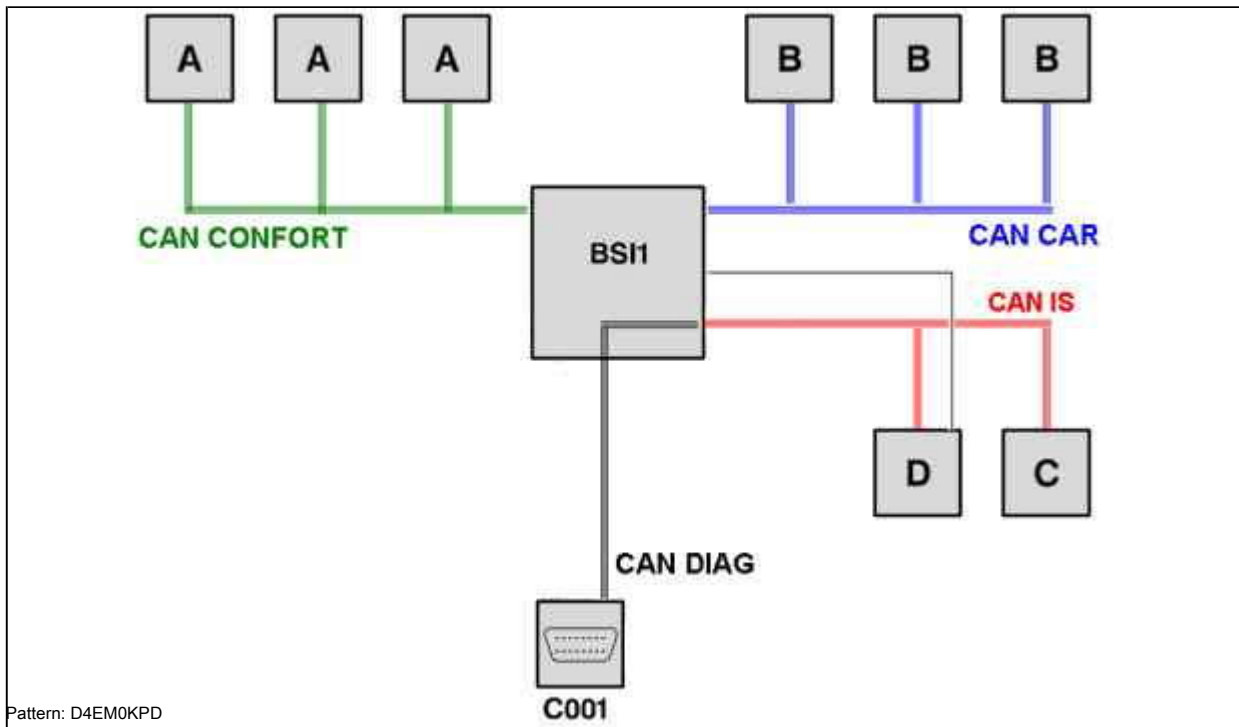
The electrical architecture of the vehicle provides the following services:

- Communication and functioning of various system elements
- Diagnostics, telecoding or telebooting of computers

The electrical architecture consists of the following networks:

- CAN IS connecting the powertrain and chassis control units
- CAN CAR, which connects bodies included in the CAN CAR network (rain sensor, alarm), with security systems
- CAN confort, which implements a human interface with comfort equipment (telematics, air conditioning, etc.)
- CAN DIAG, which allows the telebooting of some computers of the CAN LIN network (Computer for additives in diesel fuel)
- DIAGON CAN, which allows for teleloading, telecoding and diagnostics of vehicle systems

2.2. Structural scheme



Label	Designation
BSI1	Intelligent switching unit
C001	Diagnostic connector
A	CAN CONFORT computers CAN CAR
B	computers CAN IS computers
C	
CAN DIAG	NetworkCAN DIAG
D	CAN IS computers connected to remote control wake-up line (RCD)

2.3. Locations of computers (CAN Is)

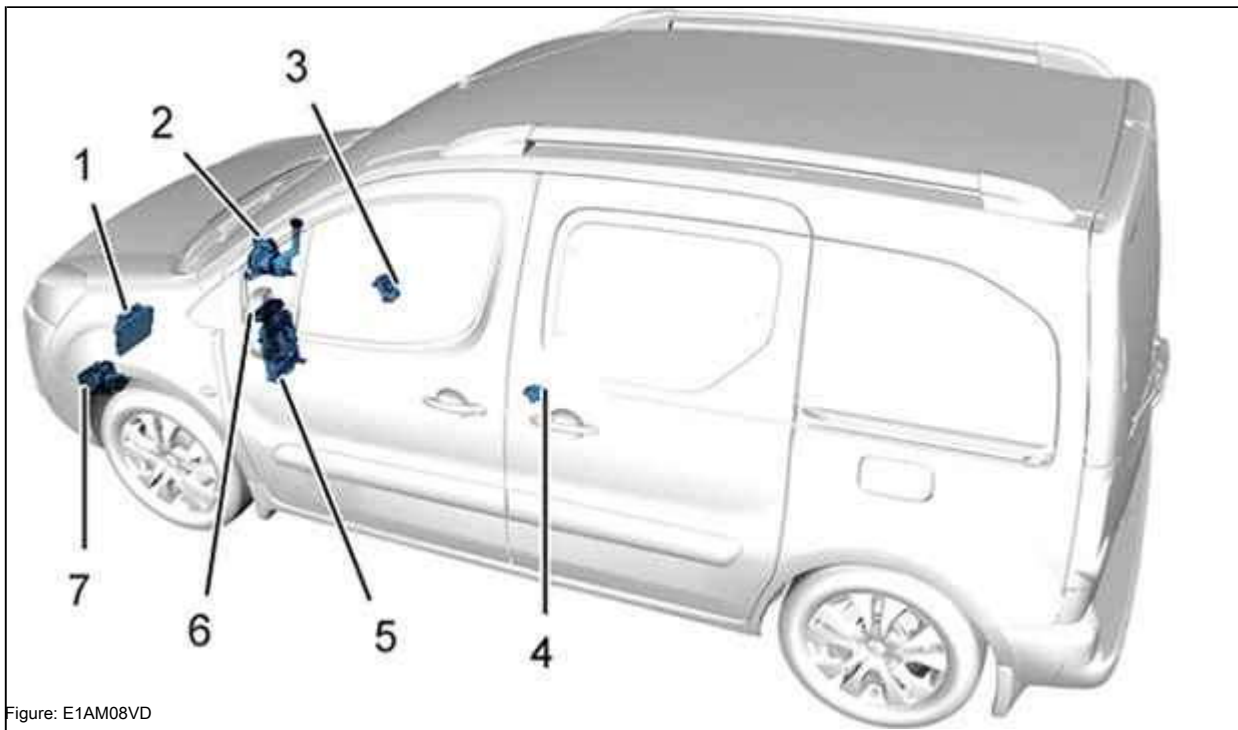
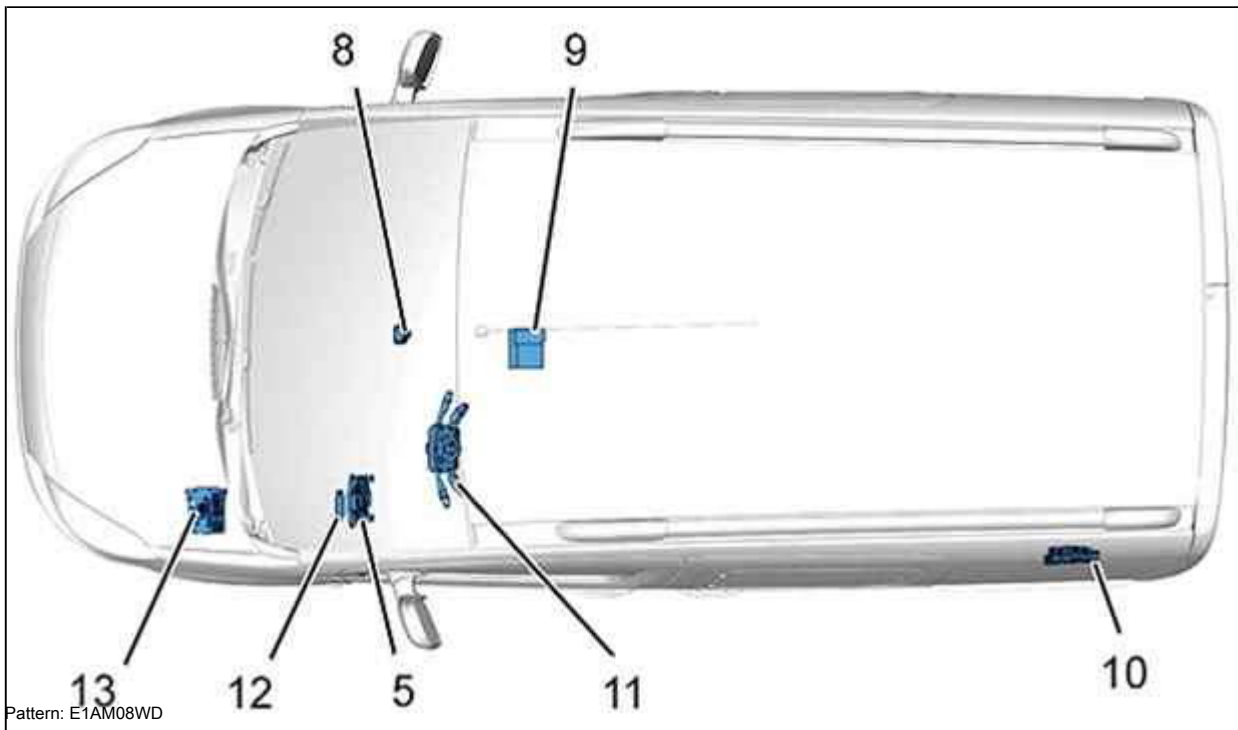


Figure: E1AM08VD

Label Designation

(1)	Engine control computer
(2)	Power steering pump unit Steering wheel angle sensor
(3)	
(4)	Dual Sensor Gyrometer & Accelerometer (Dynamic Stability Control) Intelligent Junction Box
(five)	
(6)	Tire pressure drop detection computer
(7)	ESP computer or anti-lock braking computer (7020)

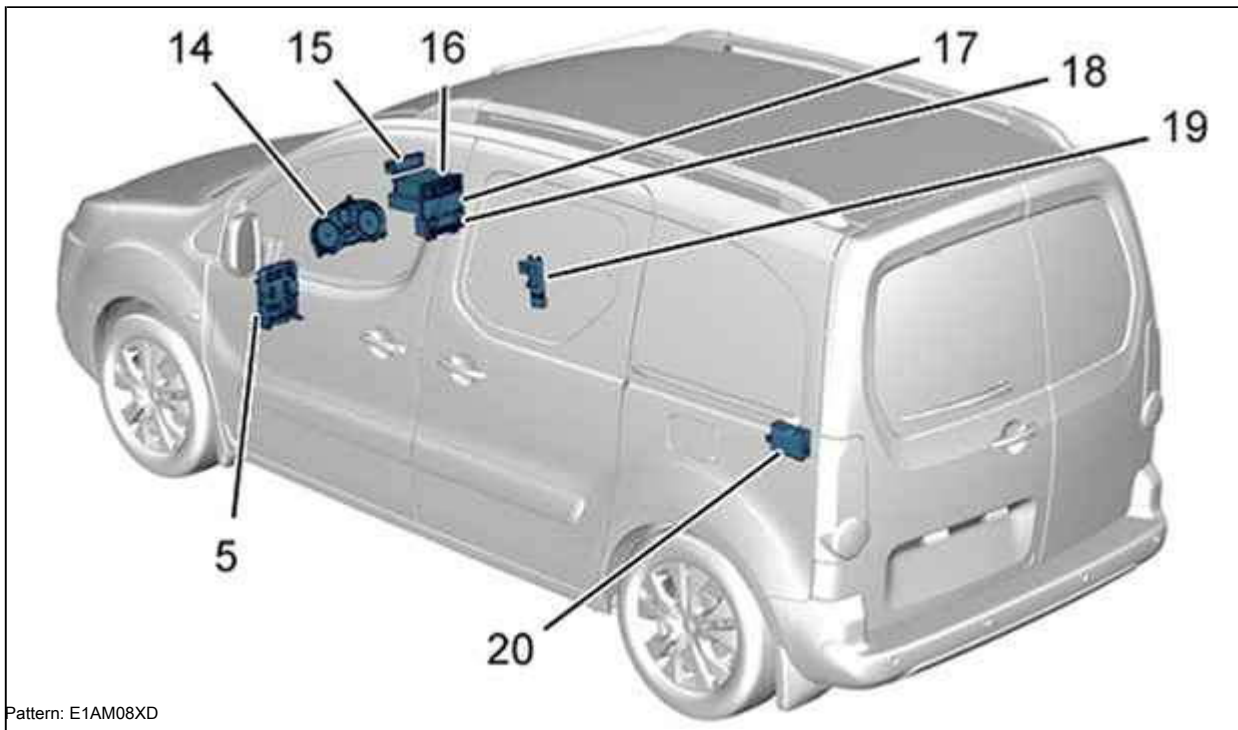
2.4. Location of computers (CAN BODY)



Label Designation

(five)	Intelligent switching unit
(eight)	Ambient light / rain sensor Airbag computer
(nine)	
(ten)	Trailer Service Module / Body Transformation Unit (Depending on option) Steering column switch unit
(eleven)	
(12)	Burglar alarm computer
(13)	Connector plate Fuse box Engine compartment (PSF1)

2.5. Locations of computers Multiplex signal

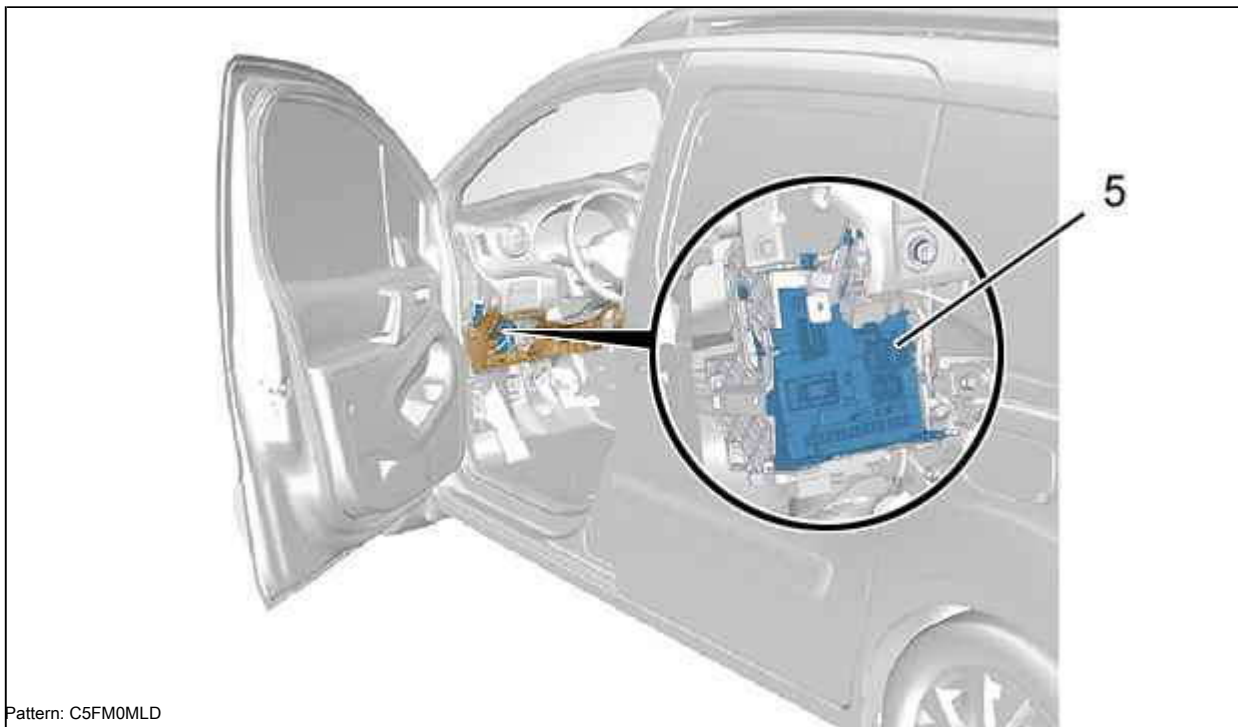


Pattern: E1AM08XD

Label Designation

(five)	Intelligent switching unit
(fourteen)	Dashboard
(fifteen)	Multifunction display
(sixteen)	Car radioRD4
(17)	CD changer (depending on option)
(18)	COMPUTER AIR CONDITIONING SYSTEMS
(nineteen)	Set "free hands"
(20)	Parking aid computer

2.6. Intelligent switching unit

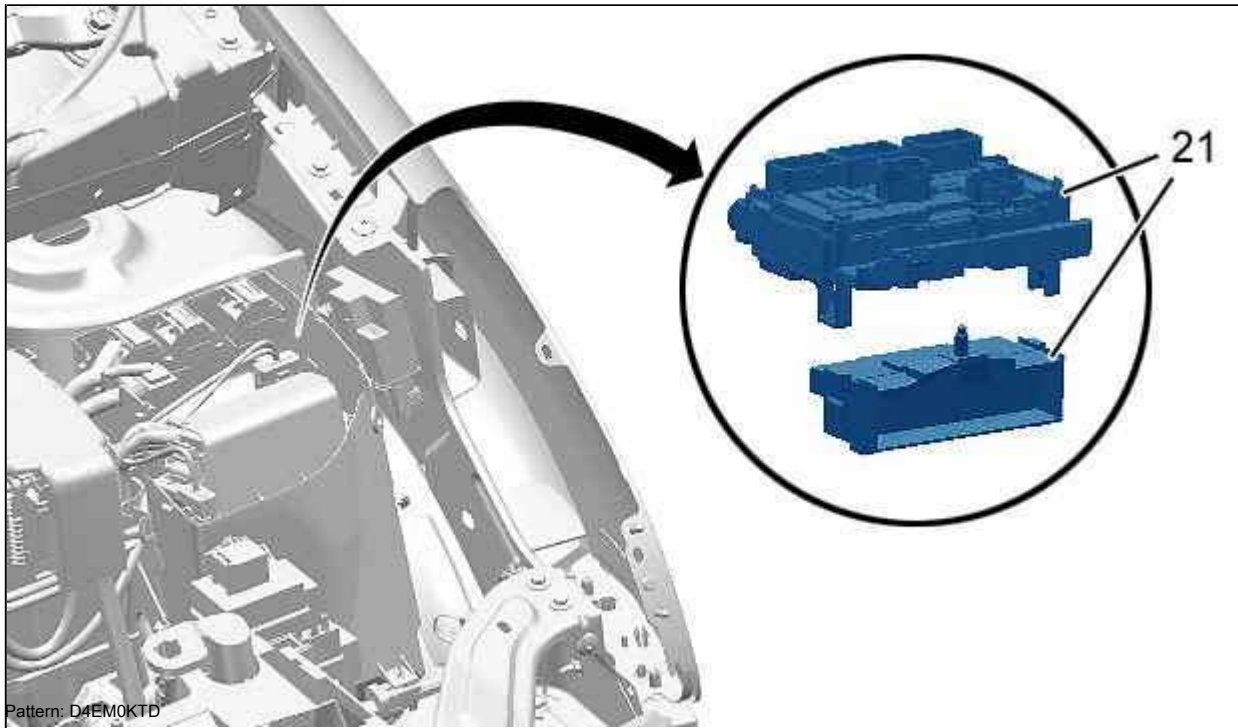


The intelligent switching unit (5) is the heart of the multiplex system. The intelligent switching unit consists of a mechanical interface, an electronic card based on microcontrollers, and a software interface that performs the following functions:

- Gateway functions for various multiplexed networks
- Gateway functions for wired and multiplexed communications
- Diagnostic functions
- Receiving information from sensors
- Power distribution and protection of devices connected to the BSI1 unit
- Multiplexed Dialogue Protocol Management (CAN)

NOTE: There may be a fuse box in the passenger compartment, depending on the equipment level. The fuse box is located in the BSI area, to the left on the BSI support.

2.7. Engine switch box



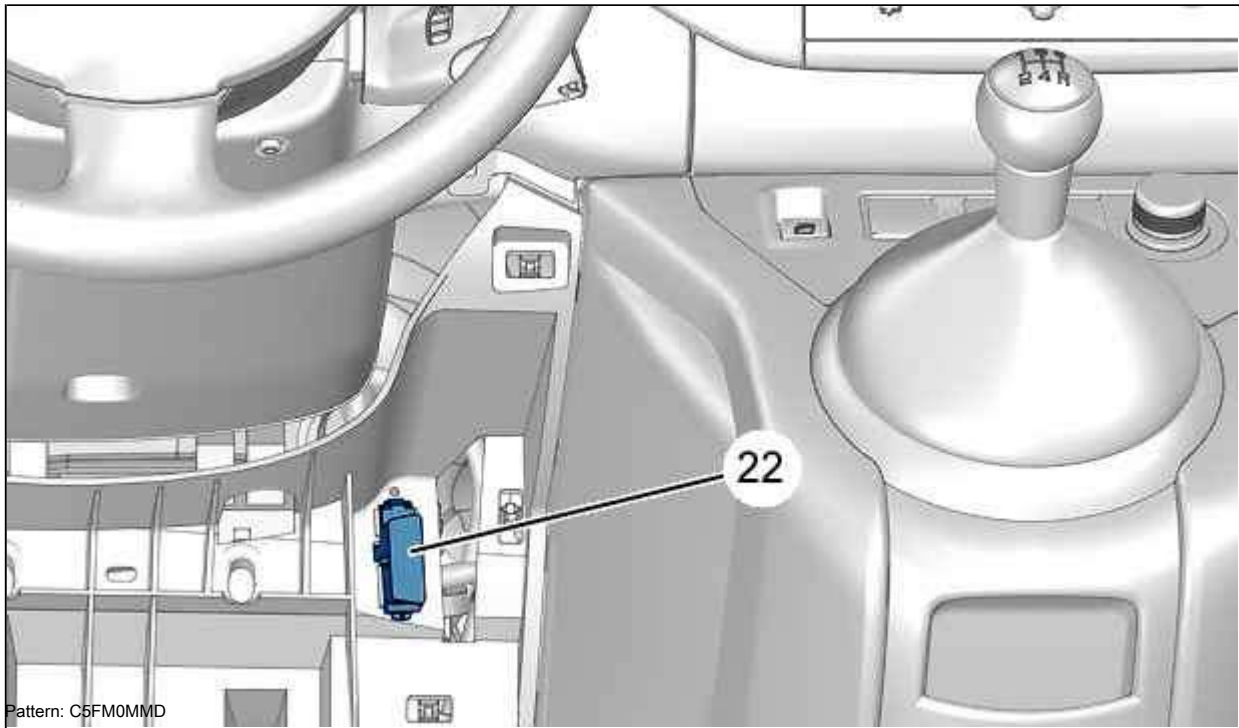
The Motor System Interface Unit protects and distributes power to the various components via relays, conventional fuses and fuses rated for maximum amperage. The engine switching unit (21) consists of two combined modules:

- Module 2: Module including electronics board, fuses and relays
- Module 3: Module containing high current fuses

The main functions of the motor commutation block are as follows:

- Power distribution between different systems in the engine compartment
- Activation of certain actuators in the engine compartment
- Provide voltage transfer to the passenger compartment fuse box and to the intelligent switch box
- Implementation of communication functions in multiplex communication system CAN CAR
- Receiving signals from sensors operating in the engine compartment

2.8. Connector for diagnostic device

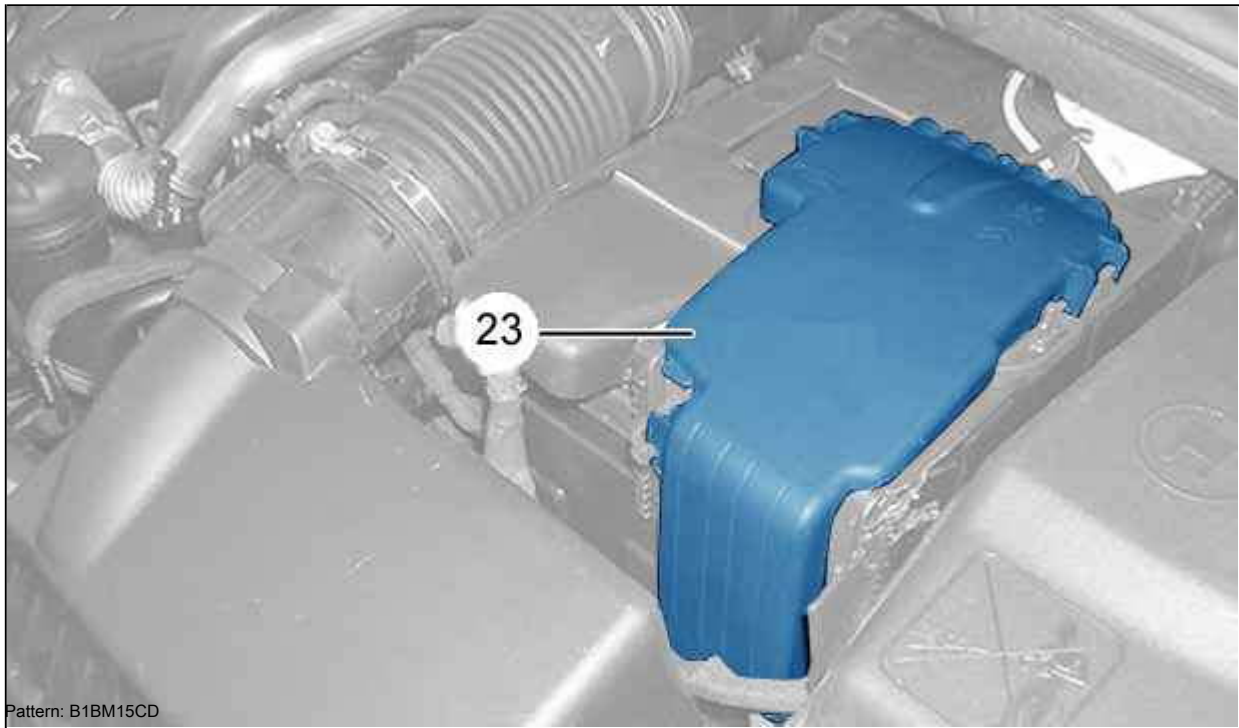


(22) Connector for diagnostic device.

The diagnostic socket is integrated under the lower dash trim (Left side of the vehicle). By connecting a diagnostic device to the diagnostic socket, you can perform the following operations:

- Reading current trouble codes
- Reading parameters
- Actuator and input test
- Remote download and programming of computers

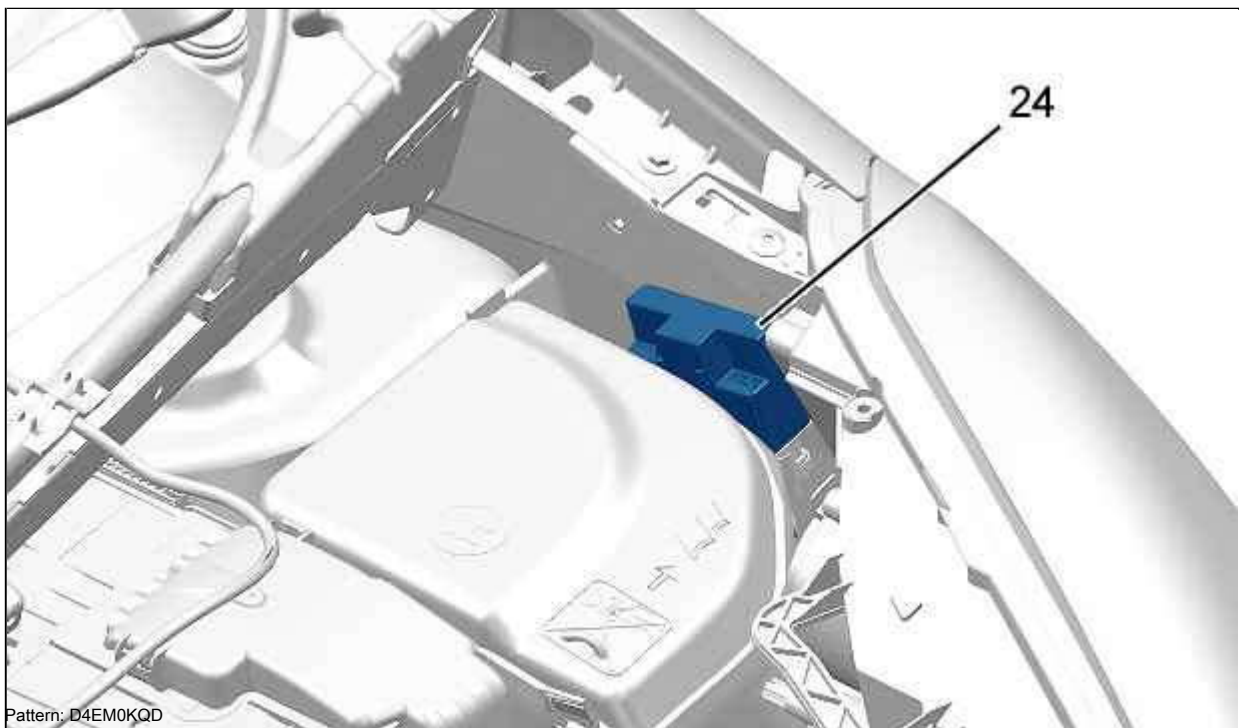
2.9. Starter Battery Fuse Block (BFDB)



(23) The battery outlet fuse box transfers voltage and provides electrical protection to the equipment in the engine compartment.

NOTE: Removing the battery does not require disconnecting the battery outlet fuse box from the mains, it can be left to the side of the battery.

2.10. Power switching unit



The power junction box is located on the inner fender panel (Left side of the vehicle). The power switch box controls the activation of the 3 air heater resistors in the cab at the request of the switch box in the engine compartment or the engine management computer.

NOTE: Fuses cannot be replaced individually.

2.11. Body transformation unit

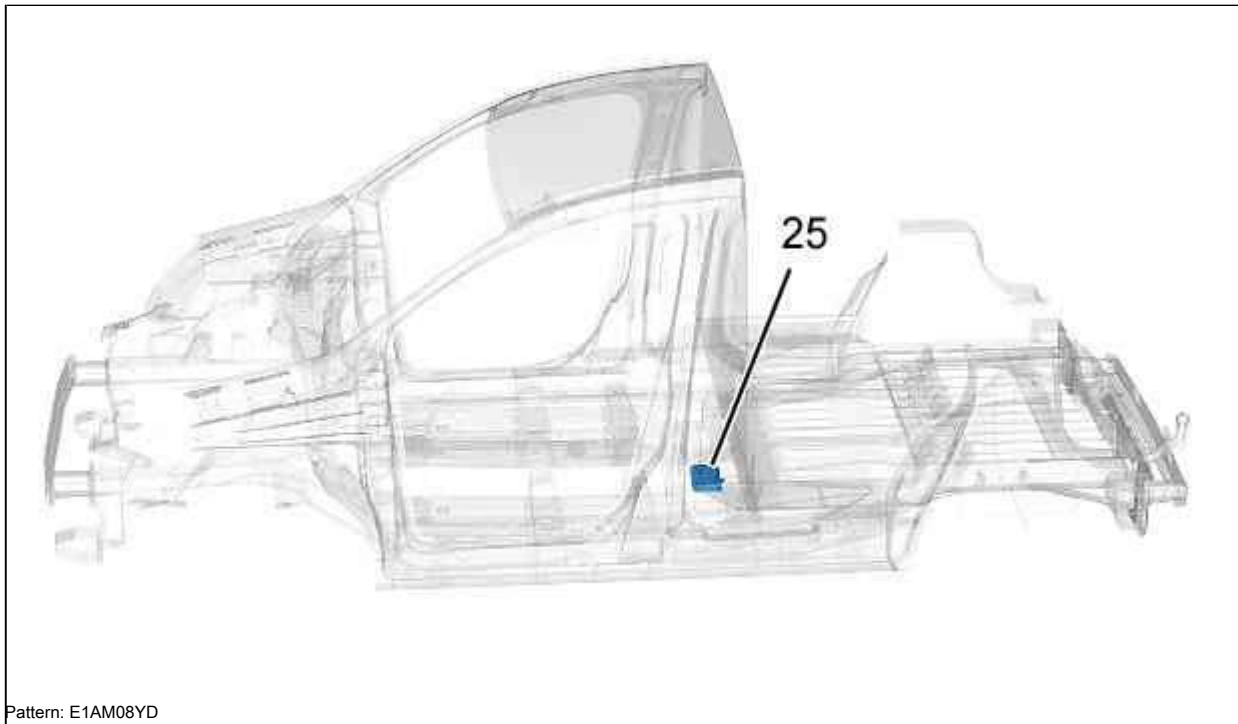
Body transformation block allows you to perform the following operations:

- Risk-free connection for vehicle equipment
- Controlling the distribution of energy between different energy consuming devices
- Build in the functions of an existing trailer switch box

The body transformation unit originating from the trailer switching unit is not equipped with an EPROM for storing defects, therefore the diagnostics have been transferred to the BSI unit defect log. Main faults:

- Back lighting
- Trailer lights
- Power transformer circuit

In the event of a power or mains failure, the body transformer retains the emergency lighting.



Cab platform version: The body transformation unit (25) is located under the load floor extension, in the driver's seat.

Car version for personal use: Body transformation unit with the left side lining of the luggage compartment.

NOTE: The body transformation unit ensures the functioning of the trailer towing system.

3. Electronic anti-theft system

3.1. Role

The system with a transponder recognizes the ignition key, which is necessary for authorization

unlocking the electronic circuit of the engine control unit.

The system with a transponder controls the locking and unlocking of the coded immobilizer.

3.2. Work

Functional elements of the coded immobilizer system:

- "Smart" switching unit (BSI)
- Engine control computer
- Transponder located in the keys

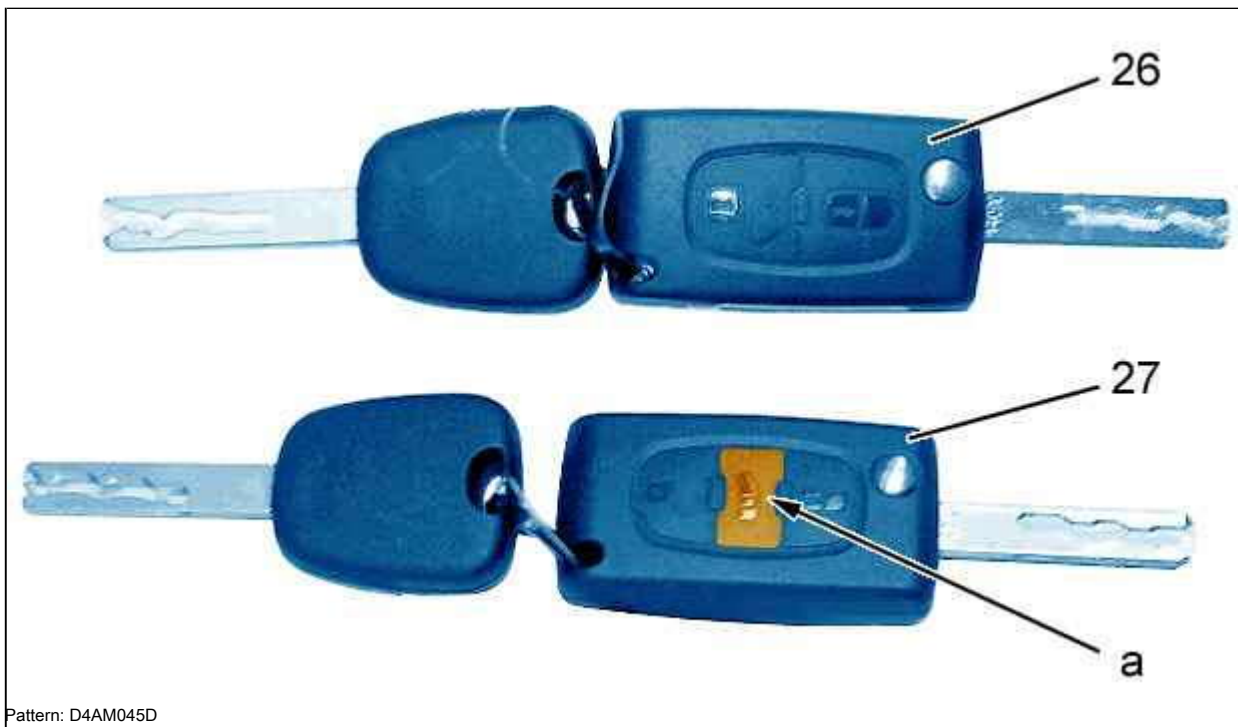
The intelligent switching unit (BSI 1) ensures the inviolability of the system (prohibition of unlocking the engine control unit) by exchanging (setting + checking) encrypted codes with the transponder and the engine control unit (setting up to work together is possible by changing the engine control unit).

The second generation immobilizer (ADC2) immobilizes the vehicle by electronically locking the engine control unit:

- Fuel injection and ignition control not possible (petrol engines)
- Control of fuel injection, ignition timing and power supply of the stop coil in the case of using a distribution pump is not possible (diesel engines)

NOTE: In any case, the engine computer is locked 6 seconds after the ignition is turned off.

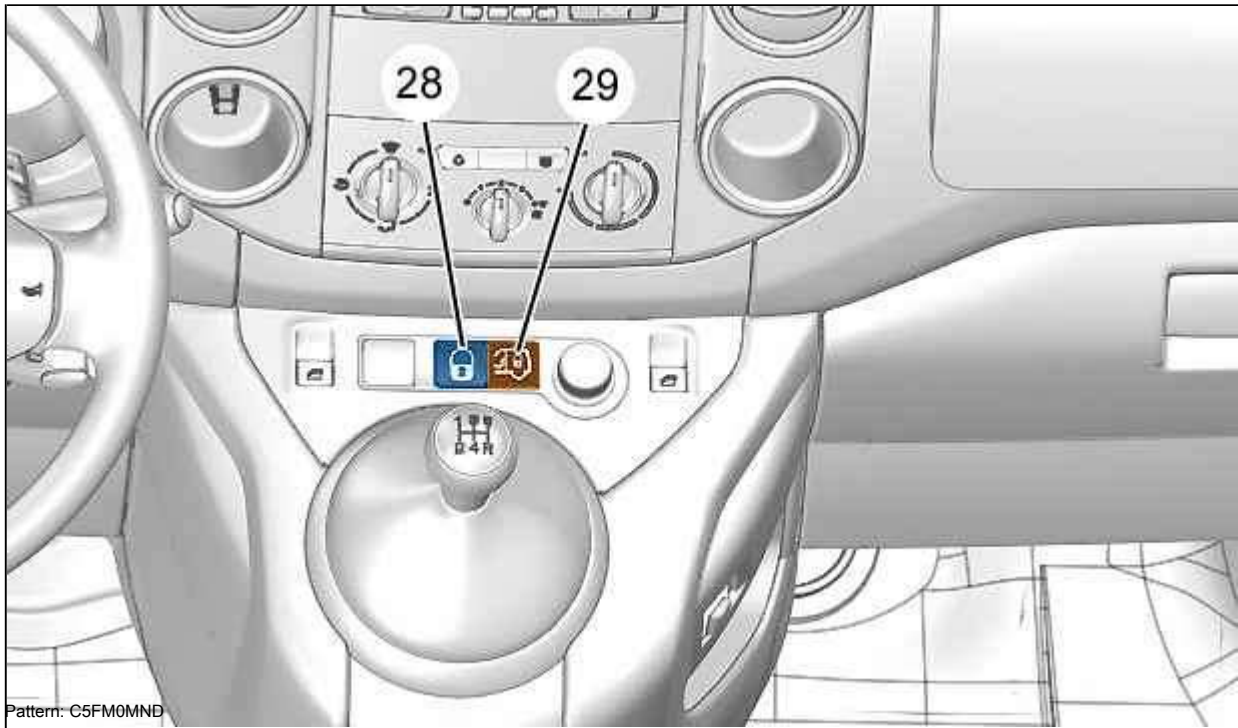
4. Pulse repeater



"a" Unlocks the door and luggage compartment locks.

(26) Key with transponder (Car version for personal use). (27) Key with transponder (Commercial vehicle version).

Pressing this button "a" will unlock all cargo compartment doors.



The centralized locking / unlocking button (28) is integrated into the left key bar on the center console of the control panel.

A long press on the button (28) activates the locking of the front hinged doors, side sliding doors and rear hinged doors (Or the luggage compartment lid, as specified).

A second press of the key will unlock the doors and turn on or off the alarm to warn the client about the action being taken.

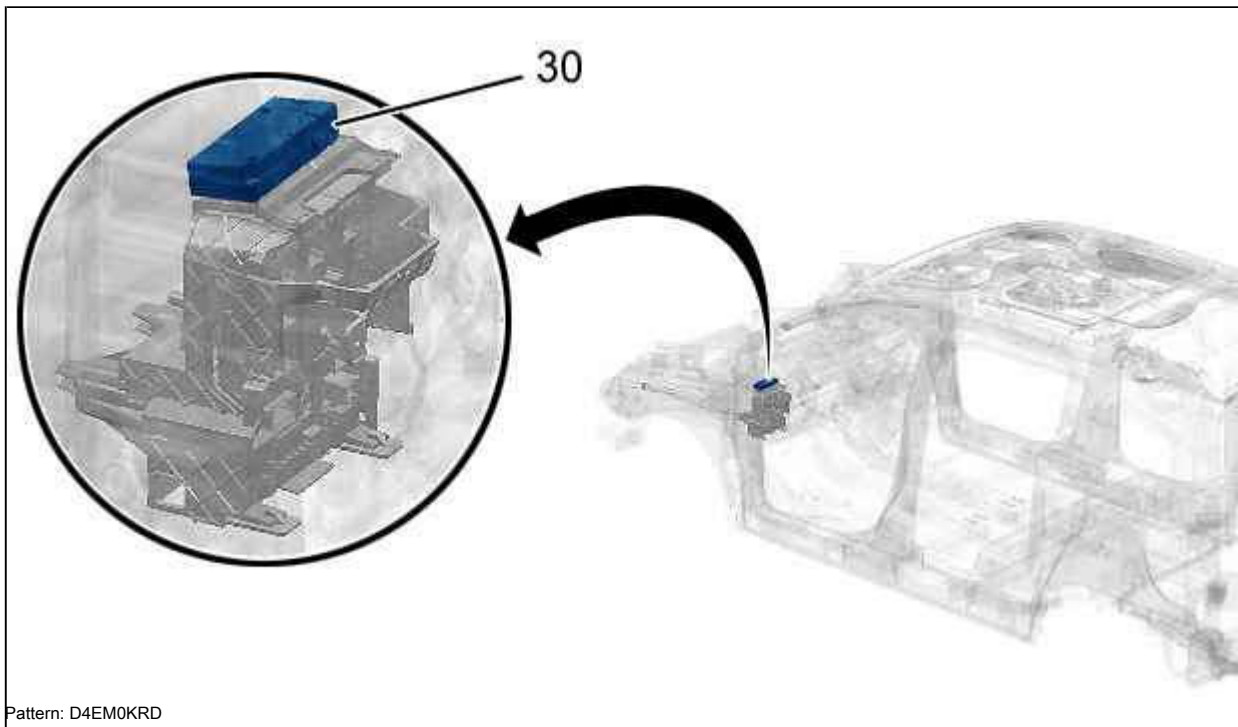
Automatic blocking in motion occurs when the vehicle speed reaches 10 km / h (6 mph).

ATTENTION : The button is not activated if the car is locked with the remote control or the key from outside.

Pressing the button (29) for a long time locks or unlocks the loading seasons, regardless of the state of the cab doors.

NOTE: The system is designed to unlock the doors, including the rear door, in the event of an impact.

5. Determination of the pressure drop in the tires (DSG)



(30) Electronic unit for detecting air pressure drop. The pressure drop detection unit is located above the BSI unit.

5.1. Role

The Tire Pressure Loss Detection System warns the driver of abnormal tire pressures in the vehicle, which reduces the risk of road traffic accidents (loss of stability, bursts).

5.2. Work

supplier: JCAE.

If the pressure in the tires is less than a certain value, the BSI unit turns on the alarm and informs driver's tire pressure status multifunction display.

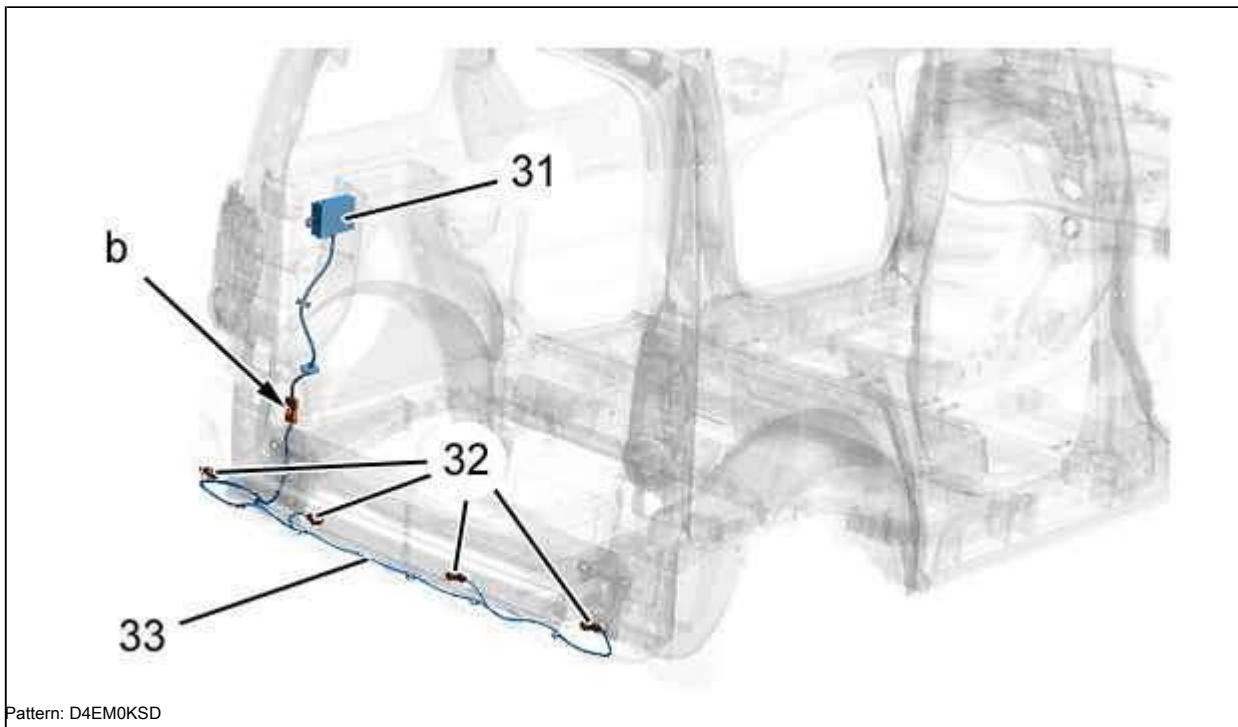
The signals from the wheel pressure sensors are received by a high-frequency antenna built into the tire pressure drop detection harness.

Tire pressure transmitters can be mounted on aluminum and steel rims.

MANDATORY: Each time the wheel transmitter module is removed, the valve and bolt must be replaced.

NOTE: The transmitter module is not installed on the spare wheel.

6. Parking Assist System (AAS)



Vehicle equipped with parking assist (rear) (depending on version):

- (31) Parking aid computer (AAS)
- (32) Reverse parking aid sensors
- (33) Parking aid wiring harness located above bumper
- "b" Connector

6.1. Role

During reversing maneuvering, the park assist system informs the driver when he is approaching obstacles by emitting modulated acoustic signals.

6.2. Work

The Reverse Parking Assist system emits an audible signal from the frequency of which the driver can judge the proximity of an obstacle if it is within the system's sensitivity zone.

The audio signal comes from the speakers of the audio system or (in the absence of the audio system) from the steering column switch unit.

6.3. Parking assistance when reversing

When reversing, the sensors (32) measure the distance from the rear bumper to a possible obstacle (wall, curb).

6.4. Parking aid computer

(31) The parking aid computer is located under the left-hand side trim in the luggage compartment.

7. Vehicle speed control (cruise control) (RVV)

7.1. Role

The automatic vehicle speed control device maintains the speed at the level programmed by the driver.

ATTENTION : The device is triggered when the vehicle speed is over 40 km / h (24.8 mph) with at least 4th gear in the manual transmission.

7.2. Work

The driver can do the following:

- Select or deny the selected vehicle speed control
- Adjust value up or down when vehicle speed control is active
- Activate vehicle speed to a value equal to the instantaneous vehicle speed Activate vehicle speed to the value entered in memory
- Deactivate vehicle speed
- Exceed the programmed speed by acting on the accelerator pedal

8. Vehicle speed limiter (LVV)

8.1. Role

The speed limiter allows you to stay at the speed programmed by the driver.

ATTENTION : The device is triggered when the vehicle speed is over 40 km / h (24.8 mph) with at least 4th gear in the manual transmission.

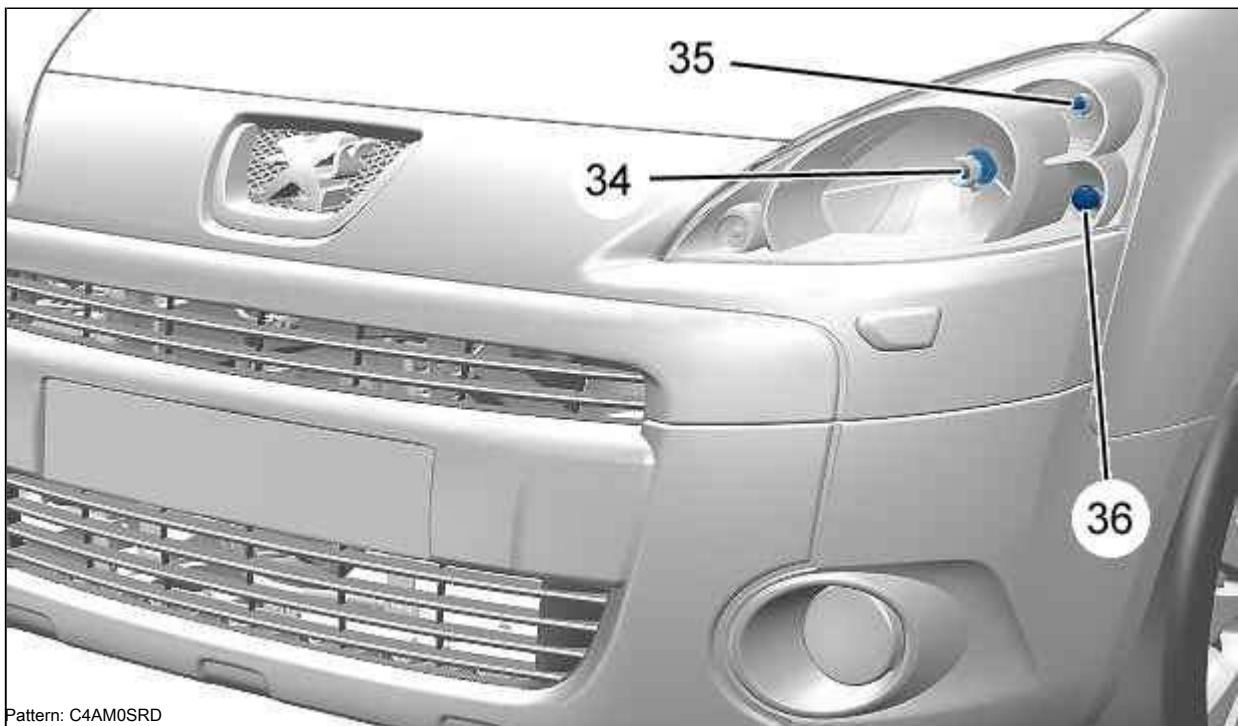
8.2. Work

The driver can do the following:

- Choose or opt out of the vehicle speed limit
- Adjust the value up or down before activating the vehicle speed limiting function
- Adjust the setpoint up or down when vehicle speed limiting is active
- Activate vehicle speed limitation to the set value entered in memory Deactivate vehicle speed limitation
- Exceed the programmed speed by acting on the accelerator pedal

9. Lighting Alarm

9.1. Front lighting



Pattern: C4AM0SRD

(34) high / low beam headlights (H4 55 W). (35) Front marker lamp (W5W 5 W).
(36) turn signal lamp (PY21W 21 W).

9.2. Back lighting

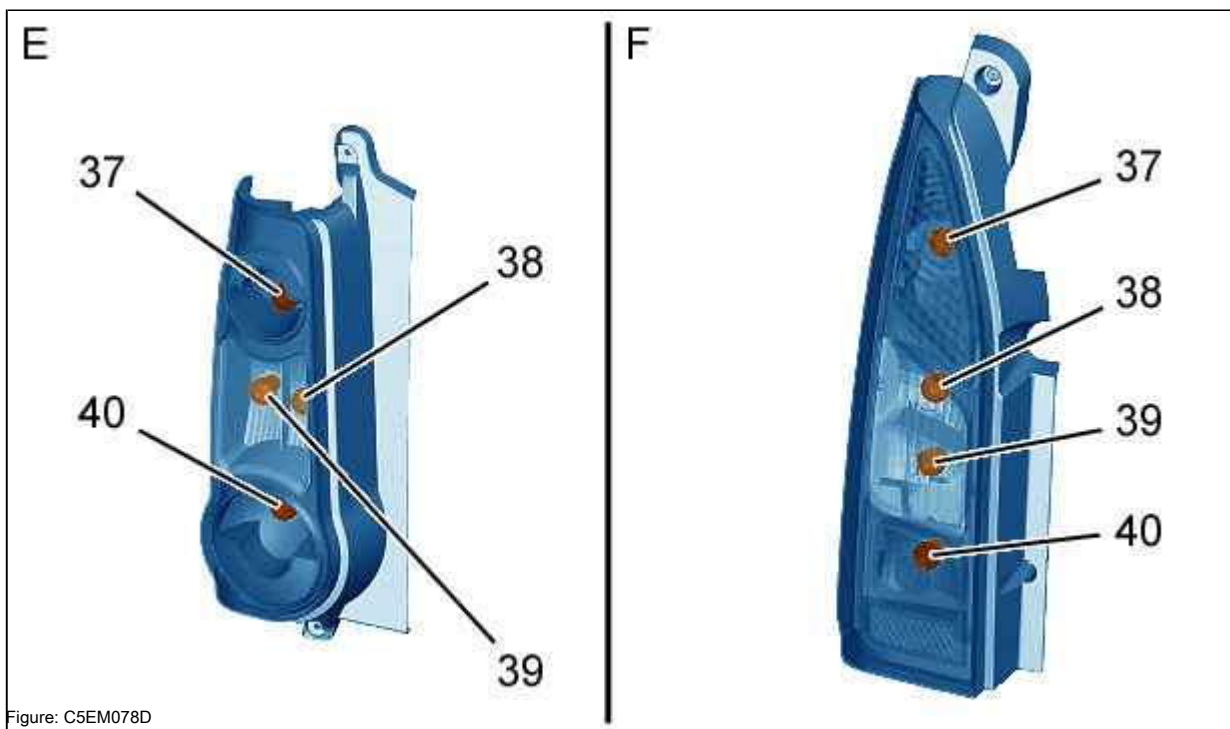


Figure: C5EM078D

"E": Tail lights (Version with hinged rear doors). "F": Tail lights (Tailgate version). (37) Brake lights / parking lights (P21 5 W / 21 5 W). (38) turn signal lamp (PY21W 21 W).

(39) reversing light (P21W 21 W). (40) Fog lamp (P21W 21 W).

9.3. Headlight washer

Telescopic headlight washers are installed as an option on vehicles with halogen headlights, as well as in all cases when required by the legislation of the countries of sale.

In working order, the washers slide out and supply water under pressure, at rest they are hidden in special holes on the bumper fit into the overall style of the car.

10. Car radio Radiotelephone

10.1. Radiotelephone



2 types of audio systems are installed:

- (41) RD4: Car radio with CD player Monotuner Compatible with MP3 format
- (42) RNEG: Audio system with CD player and navigation system GPS

NOTE: The RNEG version has an RCA socket located in the glove compartment for connecting portable audio devices of the user.

RNEG Car Radio Specifications:

- 1 GPS navigation system with map display in flat (2D) and volumetric (3D) and SD maps (by country). Maps of Europe supplied by after-sales service 1 Access to TMC traffic information
-
- 1 Autoradio with three tuners
- Built-in set for connecting a "HandsFree" phone via Bluetooth interface 7 "color display
-
- CD and MP3 player

NOTE: The RNEG audio system does not have an emergency call function.

Optional equipment:

- Hands-free bluetooth headset
- CD changer (5 CD changer)
- RCA socket in the glove compartment

NOTE: The Hands Free Phone Kit is located behind the front pillar trim (passenger side).

10.2. Safety

The radio systems (RD4 and RNEG) are protected by a code corresponding to the last 8 digits of the VIN:

- When the ignition is switched on, the BSI unit checks the agreement with the radio system
- If there is no match, the radio system is muted

10.3. Standard pre-preparation

Basic equipment vehicles have the following pre-preparation:

- Speakers and tweeters
- Car radio
- Roof antenna and coaxial cable for connection to receiver

11. Vehicle speed information

For the installation of accessories such as a navigation system or a taximeter, the vehicle speed signal can be taken from wire 6739.

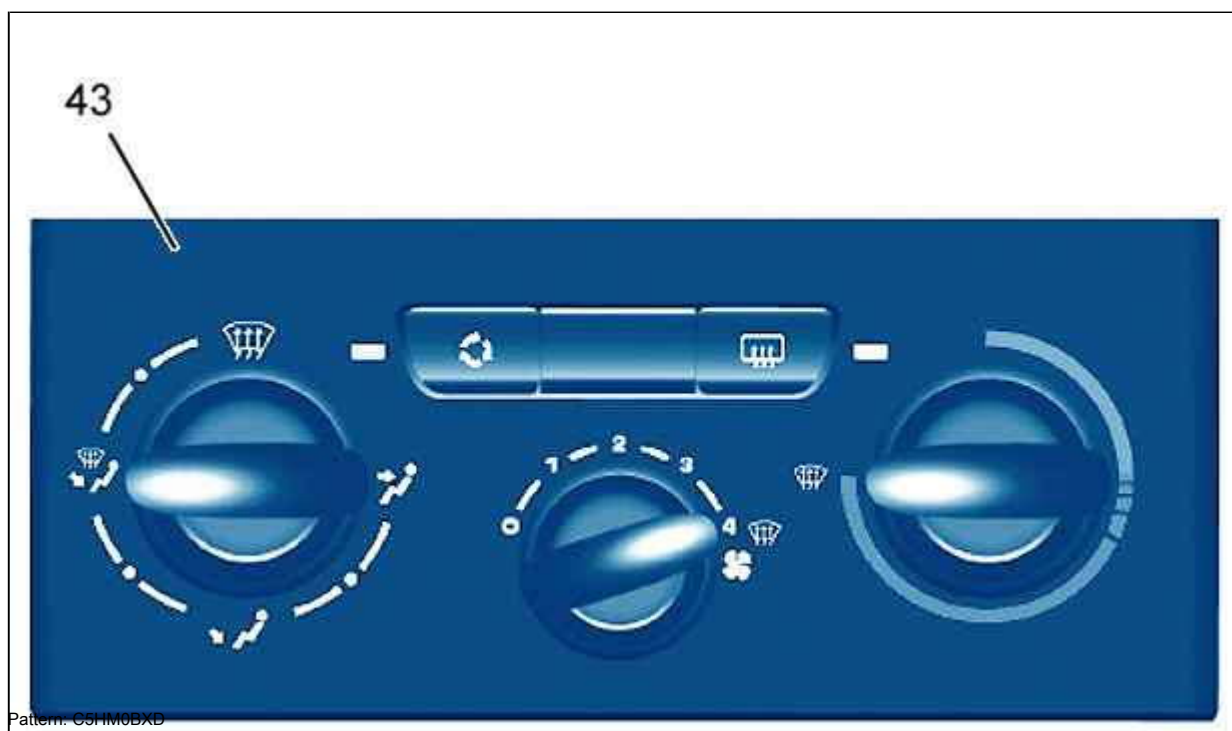
The vehicle speed information is transmitted via terminal 6 of the 10-pin connector located in the zone of the BSI unit.

12. Air conditioner

12.1. Role

The air conditioning system allows the user to set and maintain a comfortable temperature in the passenger compartment upon request.

12.2. Work



Pattern: C5HM0BXD

(43) Cab heater panel.



(44) Front panel of the basic air conditioner. Simple air conditioning system:

- The temperature and air distribution are controlled manually
- The temperature and air distribution regulators on the front panel of the air conditioner are mechanically connected to the mixing and distribution dampers of the heater block
- The air conditioning compressor is turned on in the air cooling mode by pressing the corresponding button



(45) Automatic air conditioning system (Dual-zone). The automatic air conditioning system provides automatic temperature control at the user's choice.

The climate control system regulates the following parameters:

- Air flow
- Passenger compartment air distribution (air distribution)
- Air recirculation

The desired temperature is achieved by mixing:

- Warm air from the engine cooling system
- Cold air produced by a classic air conditioner using an evaporator
- DC Motor Airflow (Interior Blower)
- Air distribution, air intake and mixing is controlled by dampers controlled by stepper motors

13. Dashboard Multifunctional displays

13.1. Role

The instrument panel allows you to inform and warn the driver about the general condition of the vehicle systems using dial gauges, visual indicators and the central display of the panel devices.

Information and alarms are complemented by messages displayed on the multifunction display in the instrument panel (depending on version).

13.2. Work

The instrument panel is located on the vehicle control panel. The instrument panel is a CAN CONFORT network device. The instrument panel consists of the following elements:

- Pointers (Speedometer; tachometer; Coolant temperature; Fuel level)
- Indicators and annunciators
- Liquid crystal display (depending on version)
- Adjustment contactors (Screen brightness; Partial mileage reset; Driving assistance information display)

The dashboard communicates with other computers in the CAN CONFORT network and has self-diagnostic functions.

Ability to perform the following operations; Using diagnostic tools:

- Reading data
- Data recording
- Final element test and output control
- Clearing some information

13.3. Multifunctional displays

Various types of multifunction displays (depending on version):

- Monochrome display type A
- Monochrome display type C
- Color display 7 ", 16/9

14. Alarm

14.1. Role

The anti-theft ultrasonic system with volumetric sensors detects movement inside the passenger compartment and around the outer perimeter of the vehicle.

14.2. Work

Locking the vehicle with the remote control activates the anti-theft alarm.

The following elements are required for the anti-theft alarm to work:

- Ultrasonic Alarm Sensor Trunk Lock
-
- Door locks
- Burglar alarm computer
- Siren
- Hood contactor for burglar alarm
- Security switch with interior protection function

The anti-theft alarm is deactivated by a switch located on the dashboard to the left of the steering wheel (by pressing one second after the ignition is switched off). In this case, the red LED turns on (on, not blinking), when the outer perimeter is armed, this LED starts blinking.

Disabling the alarm while maintaining the outer perimeter guard function may be necessary, for example, if you leave an animal in your car.

The security system is available as an option for right-hand drive vehicles and as an accessory for left-hand drive vehicles.

NOTE: After-sales telecoding enables automatic arming of the security alarm after two minutes after closing

the last opening element of the body with the engine off and no key in the ignition lock.

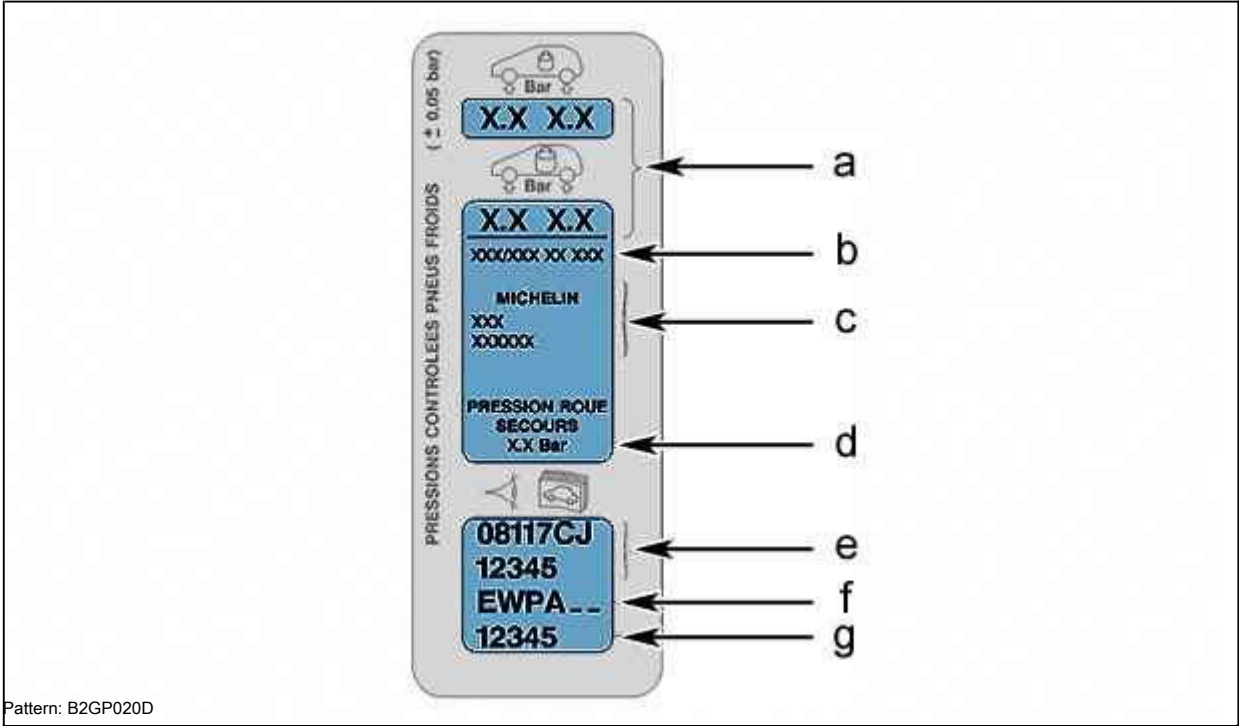
**PRESENTATION: AFTER-SALES LABEL AND
SUPPLY SPARE PARTS**

1. Presentation

Legend:

- OPR = number in the system of spare parts
- DAM = number according to the start of the modification
- APVPR = after-sales spare parts system number

The "APVPR" (former DAM) number and paint code are indicated on the sticker on the recommended tire pressures. This sticker is referred to as the "APVPR" identification label. The identification plate "APVPR" is glued to the B-pillar on the driver's side.



"a": Recommended tire pressures (no load and no load). "b": Characteristics of the tires.

"c": Bus type.

"d": Recommendations for the need to maintain the specified air pressure in the spare wheel (*). "e": Part number.

"f": Body color code reference.

"g": Sequence number (for internal plant needs). (*) Depending on the configuration.

2. Part number

2.1. Example

From 1st to 5th character OPR number 6th and 7th

characters	Factory code
8th character	Assembly line number
9th to 12th character	serial production number

2.2. Factory code

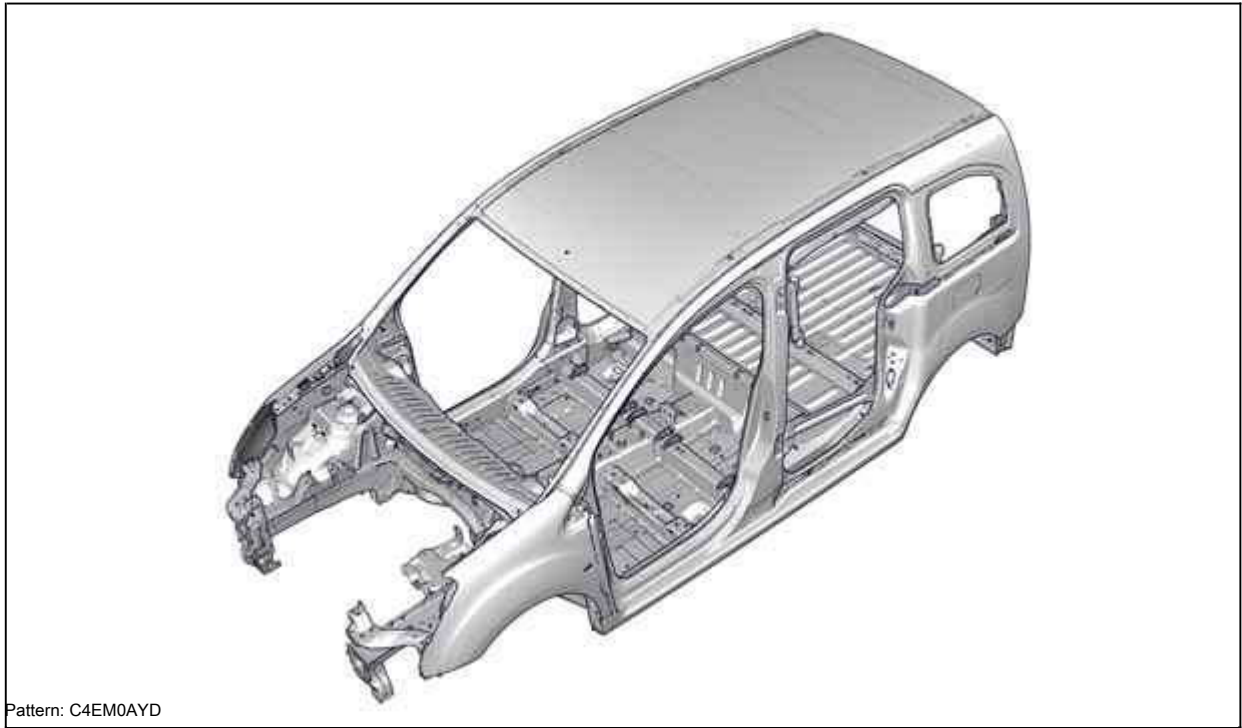
Factory code Plants manufacturers

CA	Aulnay sousBois
CJ	RennesLaJanais
FL	MANGUALDE
FV	VIGO
U4	Dangel
U7	Heul iez
U8	Sevel Sud Val di Sangro
U9	SEVEL NORD
78	PORTOREAL
81	POISSY
82	VILLAVERDE
83	RYTON
88	MULHOUSE
89	Sochaux

BODY PRESENTATION: PEUGEOT PARTNER CAR

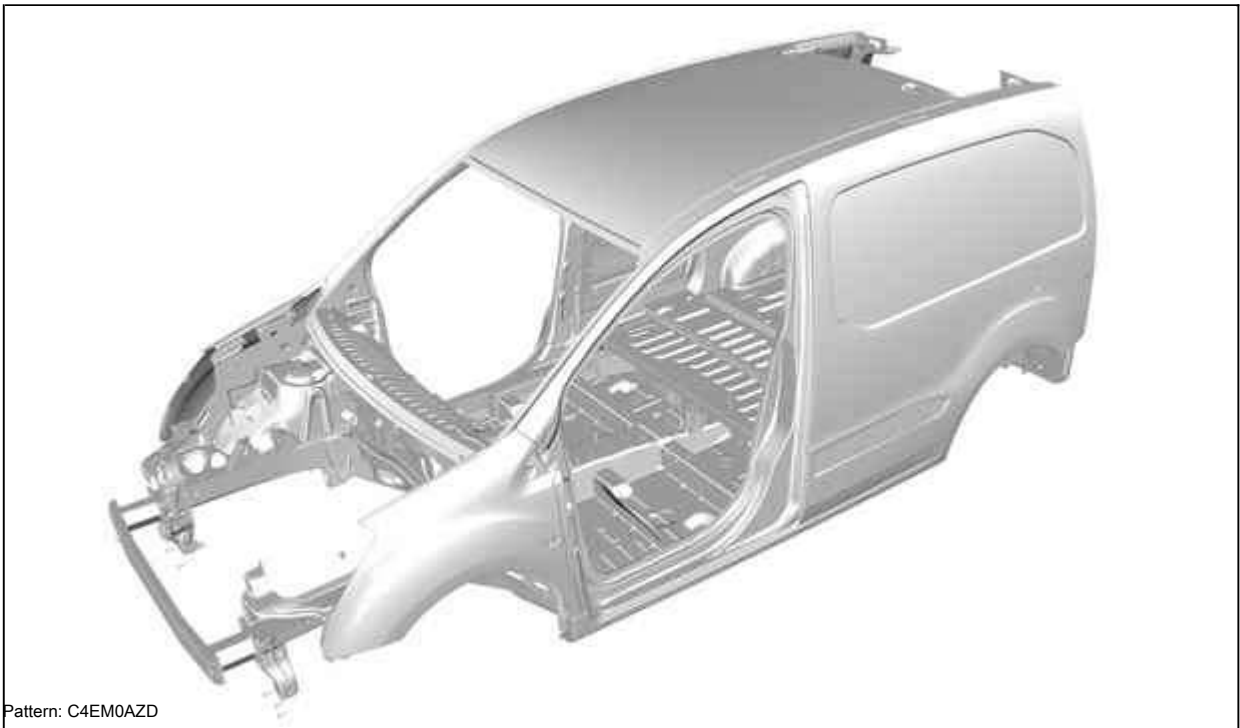
1. Frame

1.1. A car

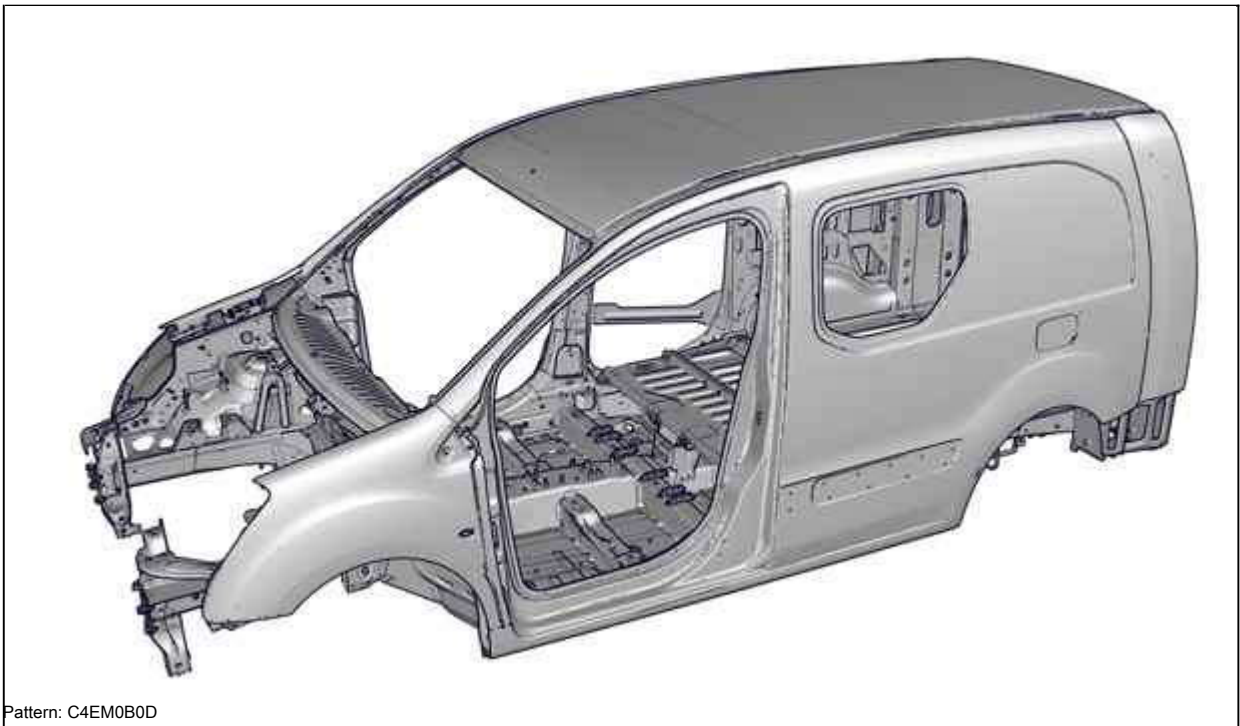


Pattern: C4EM0AYD

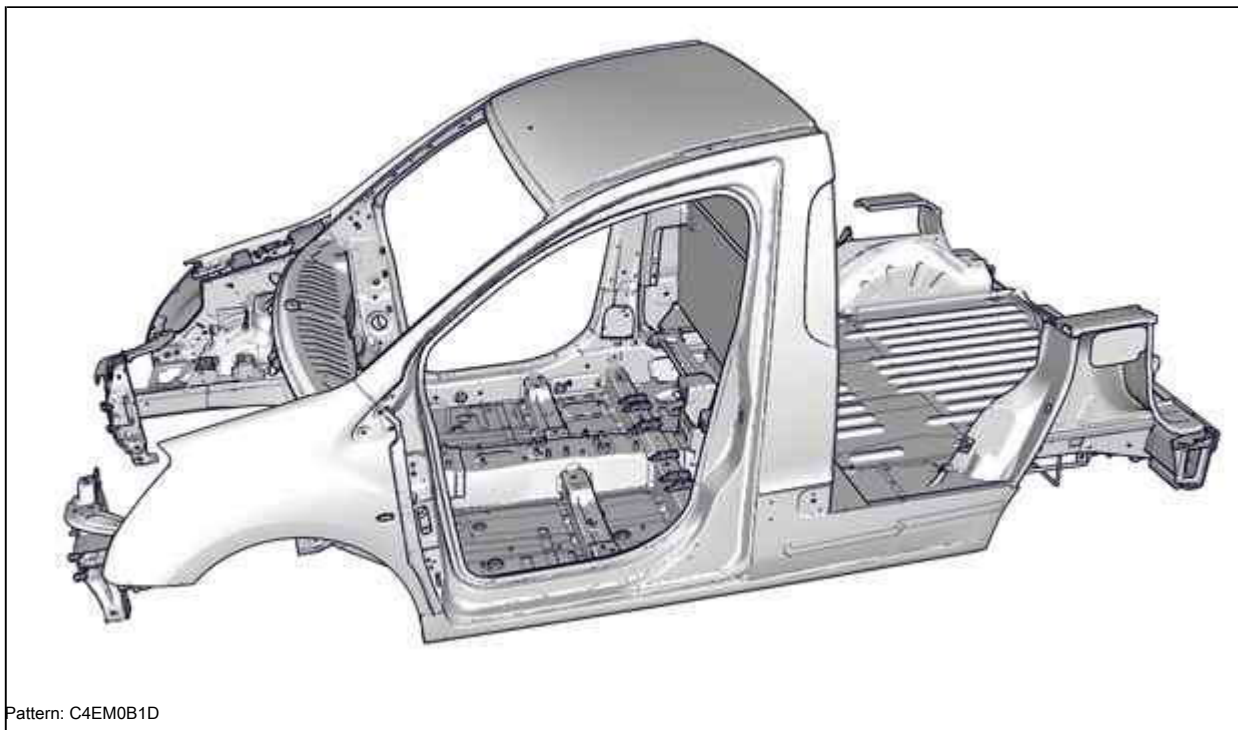
1.2. Commercial vehicle (van) fast base



1.3. Commercial vehicle (van) with long base



1.4. Scab platform



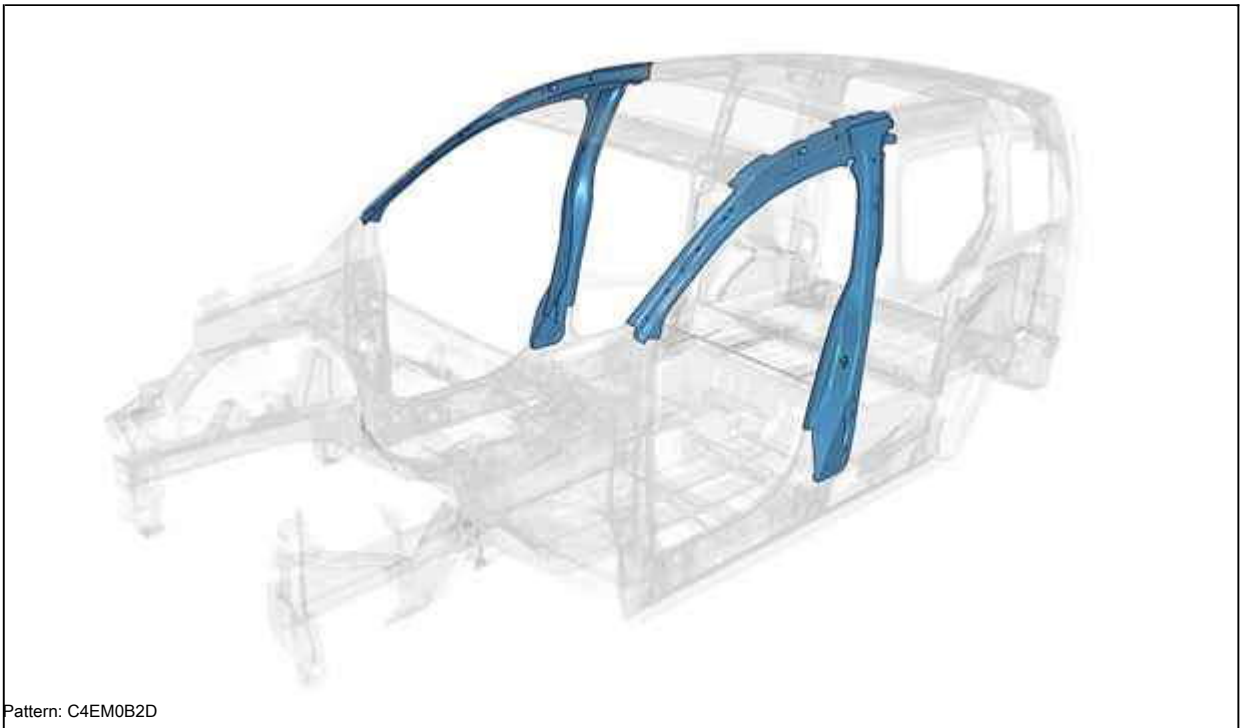
Possible options

option	Passenger	Commercial	Commercial
	car: Short	car (van) with short base	car (van) with long base
1 Side sliding door	X	X	X
2 sliding side doors Luggage compartment lid	X	X	X
Luggage compartment lid: X	X	X	
With opening glass		X	
Rear hinged doors (glazed)	X	X	X
Rear hinged doors (glassless panels)		X	X
Rear roof hatch Multi-purpose roof	X	X	
	X		
Opening side glass (Row2)	X	X	
Fixed glass (Row2)	X	X	X
Fixed glass (Row 3)	X	X	

The frame of this vehicle meets the most stringent requirements for impact resistance at the front and rear. The body consists of reinforced zones and zones of programmable deformation, which reduces the risk of injury for those in the car.

The body panels are made of steel with the use of high-strength (THLE) and ultra-high-strength (UHLE) steels in some places:

- Upper center pillar reinforcement
- Opening pillars



NOTE: The structure is developed on a platform2 of the lower end of the mid-range car segment.

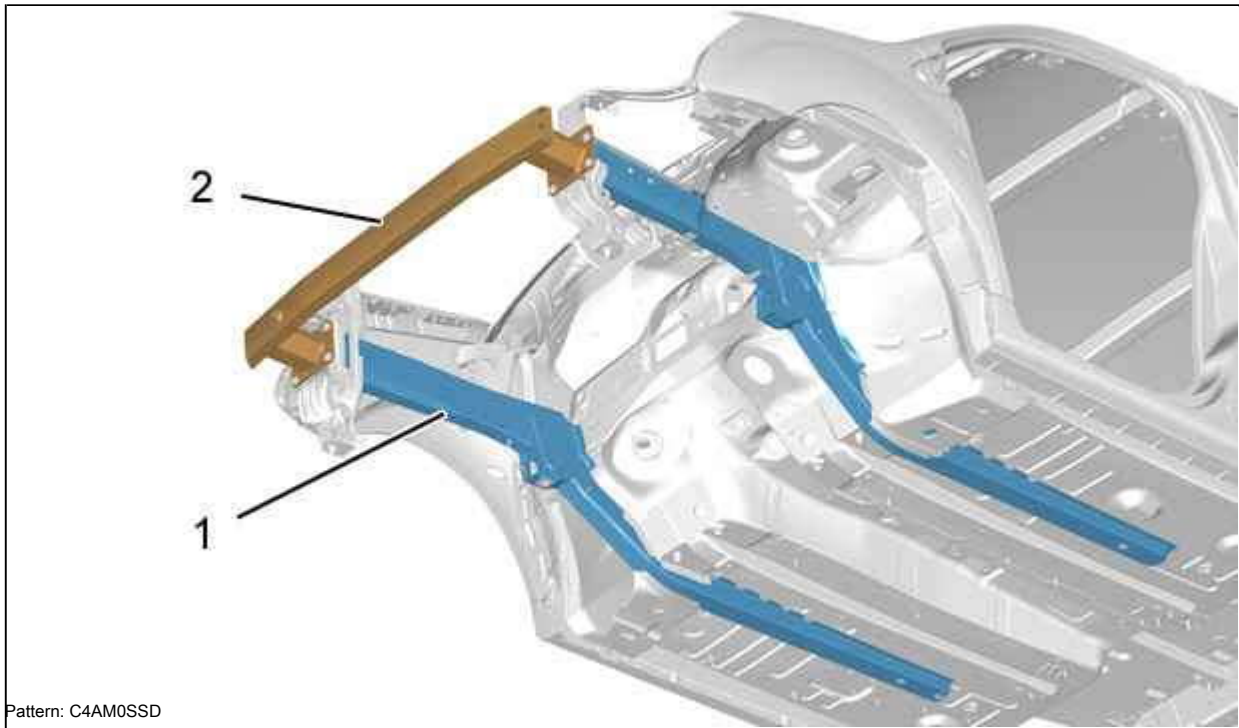
2. Front

The structure is designed taking into account the calculated distribution of impact energy.

To ensure the maximum level of safety, up to 3 zones of shock energy absorption are provided (depending on the country of sale):

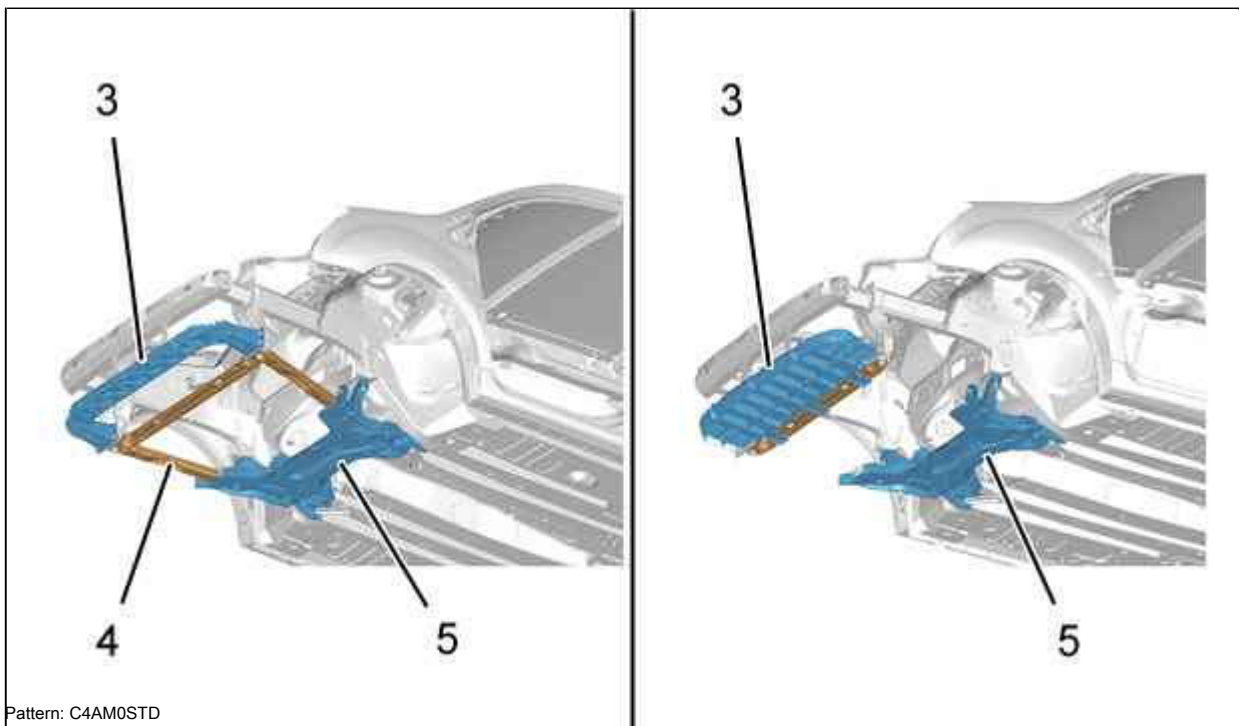
- Maximum protection of the salon and those who are in it
- Reducing the impact of a collision with a pedestrian
- Facilitate repair

2.1. Main energy absorption zone or upper zone



- (1) Front side rails.
- (2) Top outside cross member (aluminum alloy).

2.2. Lower energy absorption zone

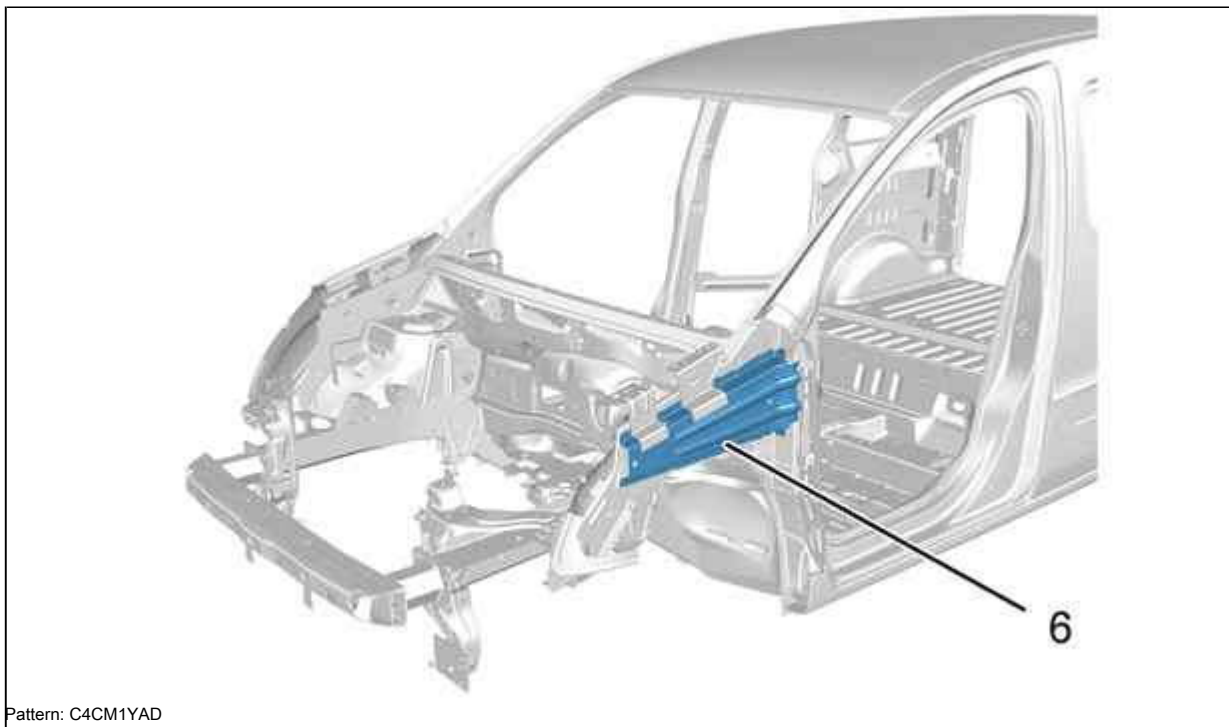


- (3) Lower front cross member (Pedestrian protection).
- (4) Subframe extensions (aluminum alloy) (*). (5) Front subframe.

NOTE: (*) Depending on the country of sale, the vehicle may be equipped with subframe extensions.

Subframe extensions absorb some of the impact energy in a low-speed collision.

2.3. Third zone of energy absorption

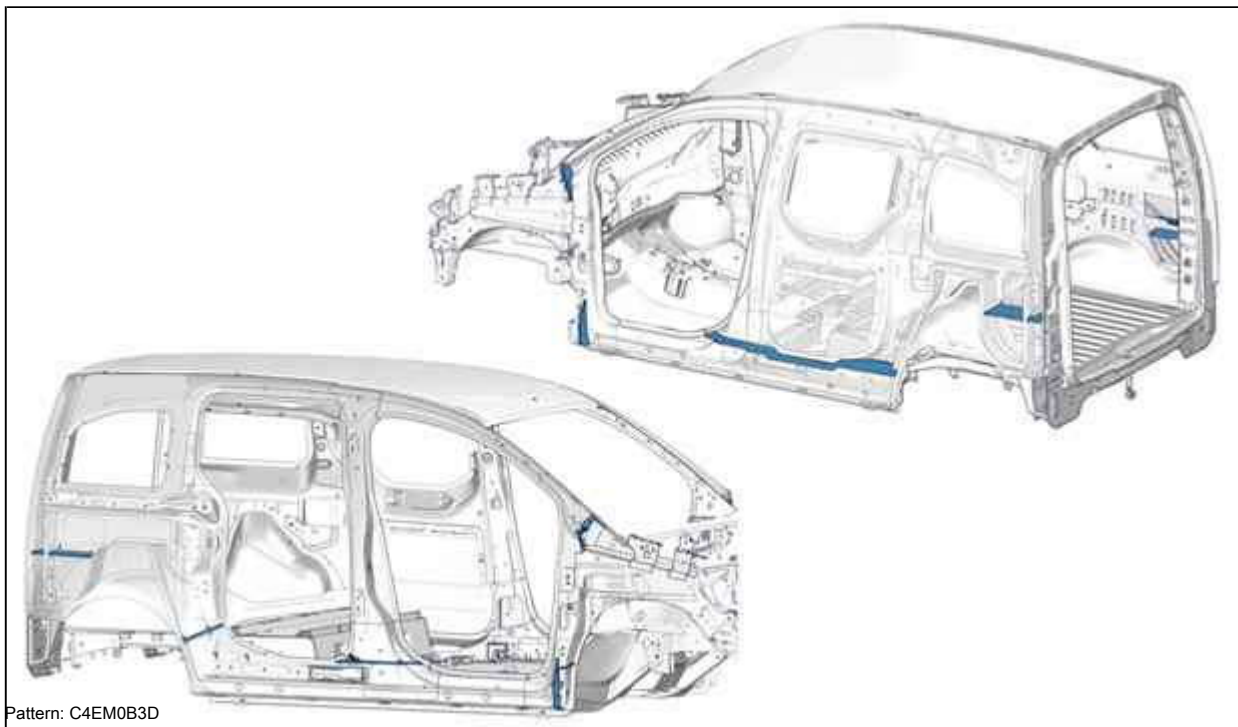


(6) Interior sidewall reinforcement.

The third zone of impact energy absorption is formed by the cab side reinforcements (6), which are located above the front wheel arches and reach the windshield pillars and the rigid elements of the doorways.

This amplifier is critical for protection against high speed impact, limiting deformation with intrusion of foreign bodies into the cab.

3. Location of foam inserts



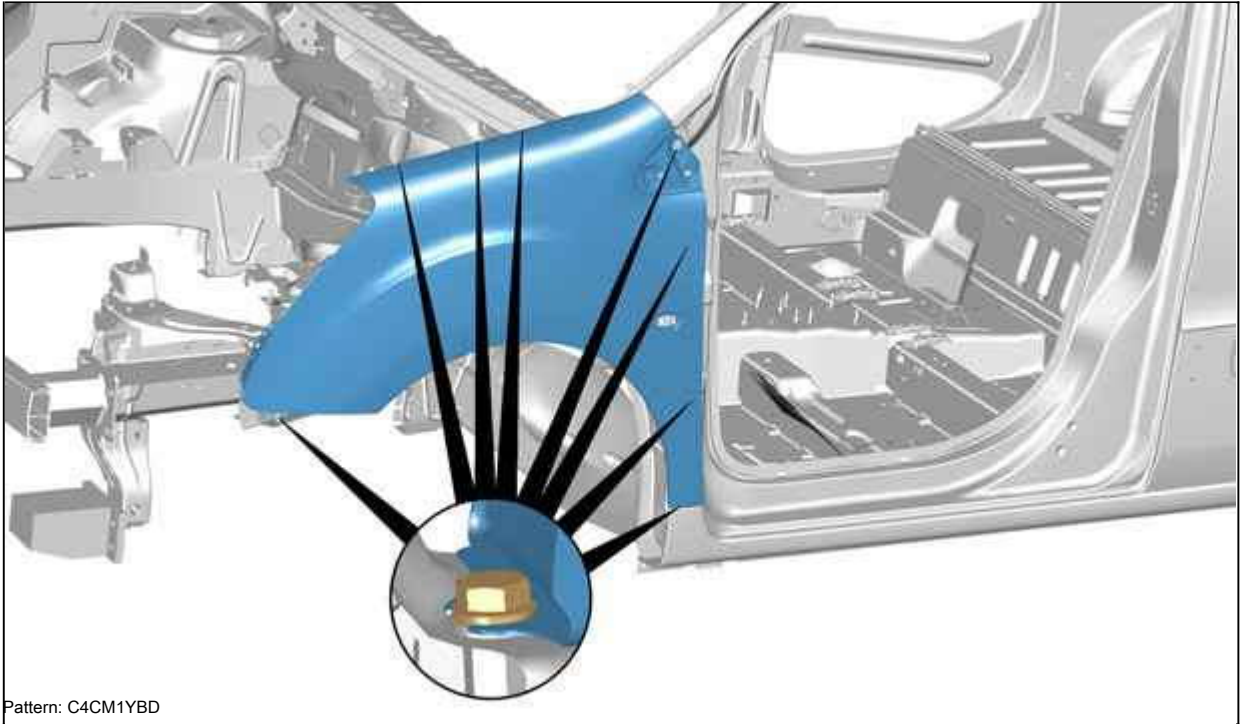
Location of foam inserts / Possible options

Designation	Automobiles	Automobiles	FROM	Without	Properties
	short base	long base	PLC	PLC	
Foam insert for side panel X		X	X	X	Partition
Foam insert for A-pillar	X	X	X	X	Partition
Tightness: Side of Salon	X	X	X	X	Partition
Expanding insert: Amplifier X		X	X	X	Partition
front pillar (right)					
Outside expanding insert	X	X	X		Partition
(Center rack)					
Expanding insert	X	X	X	X	Partition
center pillar					
Expanding back insert	X	X	X		Partition
racks					
Outer expanding insert: Reinforcement center	X	X		X	Partition
rack (right)					
Expanding insert: side member reinforcement	X	X		X	Partition
Expanding insert: Side member reinforcement	X	X		X	Partition
(Right)					
Expanding insert Gutter	X	X	X	X	Partition
rear wing					
Expanding insert: Sidewall trim	X	X	X	X	Partition
Expanding insert: Trunk lid strut		X	X	X	Partition
PLC = sliding side door					

NOTE: For more information: See operation principle description: **Designation**
foam inserts

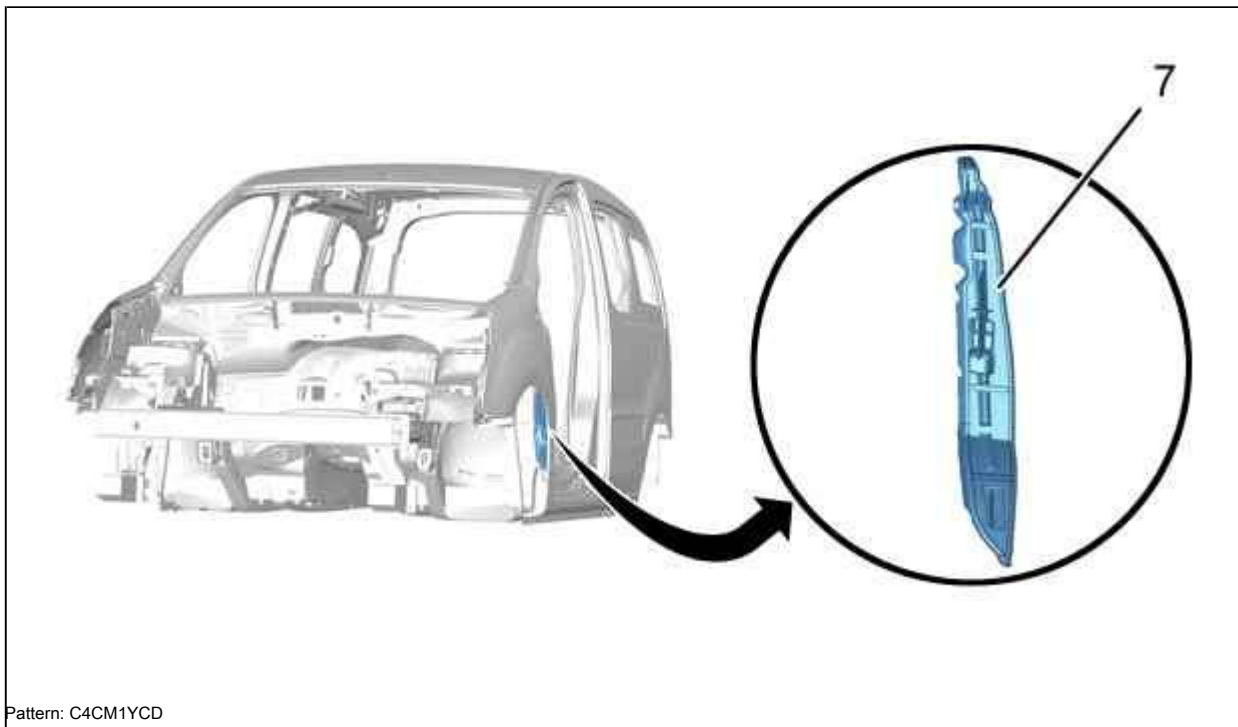


4. Forewing



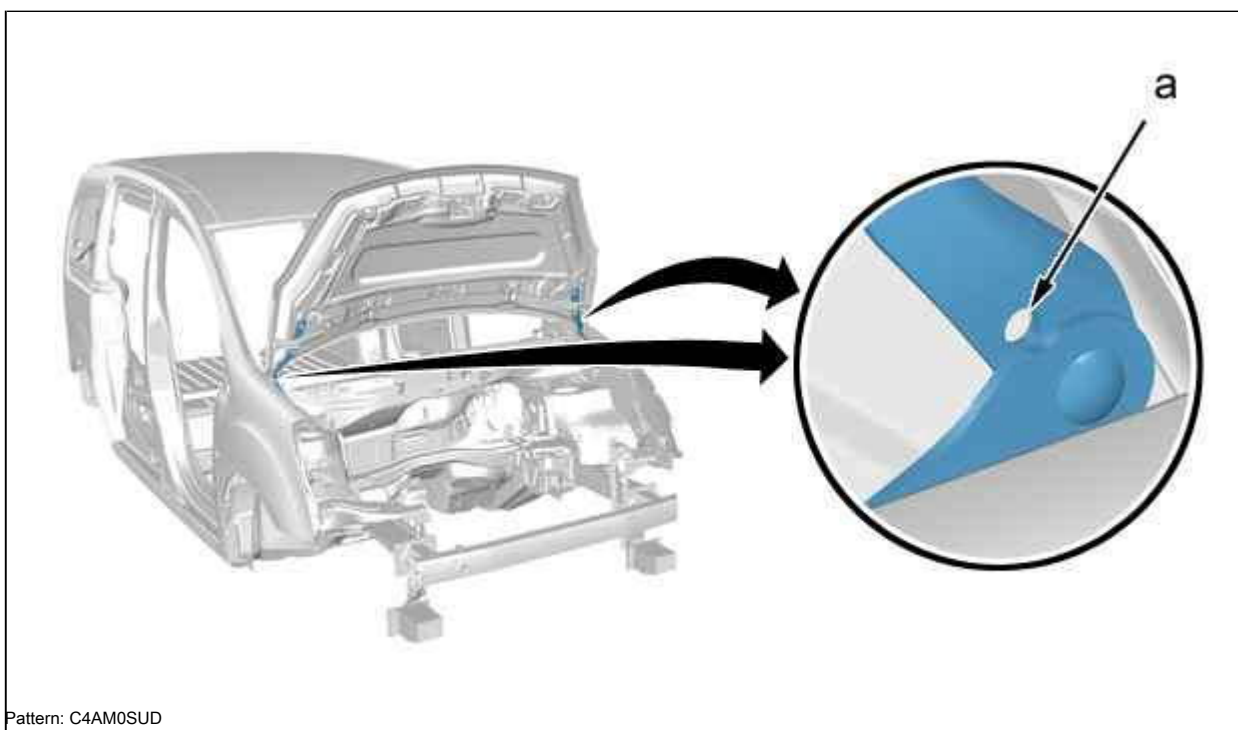
Front fenders fixed with screws (Fenders made of sheet material):

- 1 bolt (Under the pad)
- 3 bolts (top)
- 3 Bolts (Rear Bottom)
- 2 bolts (Inner front)



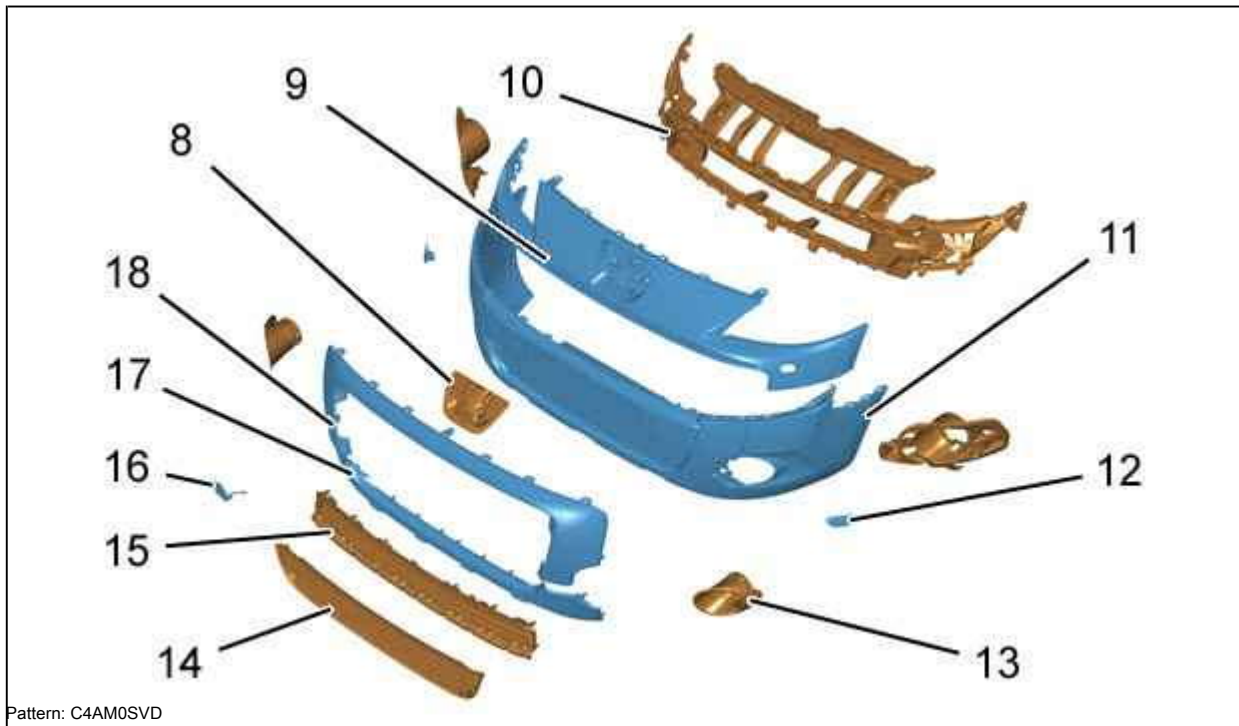
The wing joint is equipped with an independent acoustic pad (7).
 The acoustic pads of the front fenders are fastened with clips (from the wheel arch side).

5. Engine hood



The bonnet hinges allow the bonnet to be locked in the raised position for repair by inserting a pin (at "a").

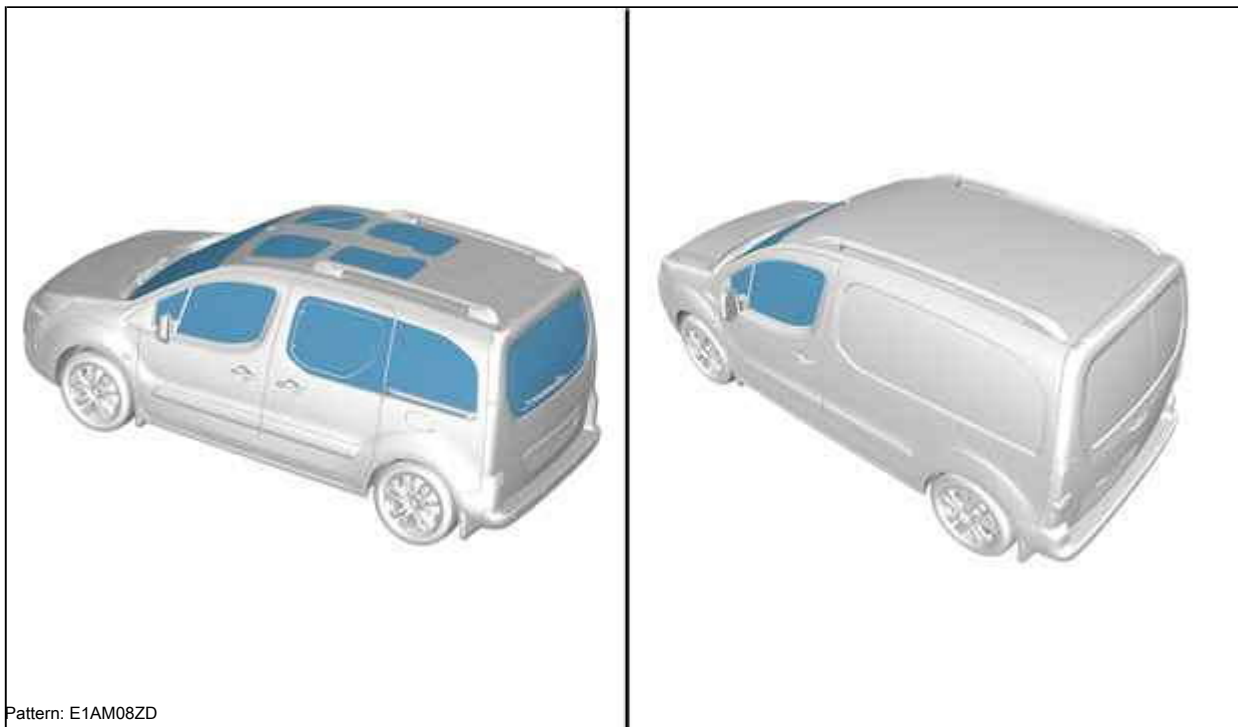
6. Front bumper



All of the following parts can be detached from the tube after dismantling:

- (8) Chrome trim (Emblem) (9) Radiator trim
-
- (10) Reinforcement: Front bumper trim (11) Front bumper trim
-
- (12) Headlight washer flap
- (13) Fog lamp trim (14) Front bumper lower grille
-
- (15) Front bumper upper grill
- (16) Key cover for towing eyelet (17) Front bumper lower trim (18) Front bumper upper trim
-
-

7. Glazing



7.1. windshield

The VIN number is marked on the lower left side of the windshield. option:

- windscreen (with rain and light sensor)
- windscreen (without rain and light sensor)

7.2. Rear door glazing

Rear door glazing options:

- Trunk lid with fixed glass
- Luggage compartment lid with movable glass
- Rear swing doors (glazed)

NOTE: For vehicles with hinged rear doors or glazed rear doors, tinted glass can be ordered.

7.3. Side windows

Side glass options:

- Fixed or opening glass panes of tier 2
- Only fixed glasses at level 3

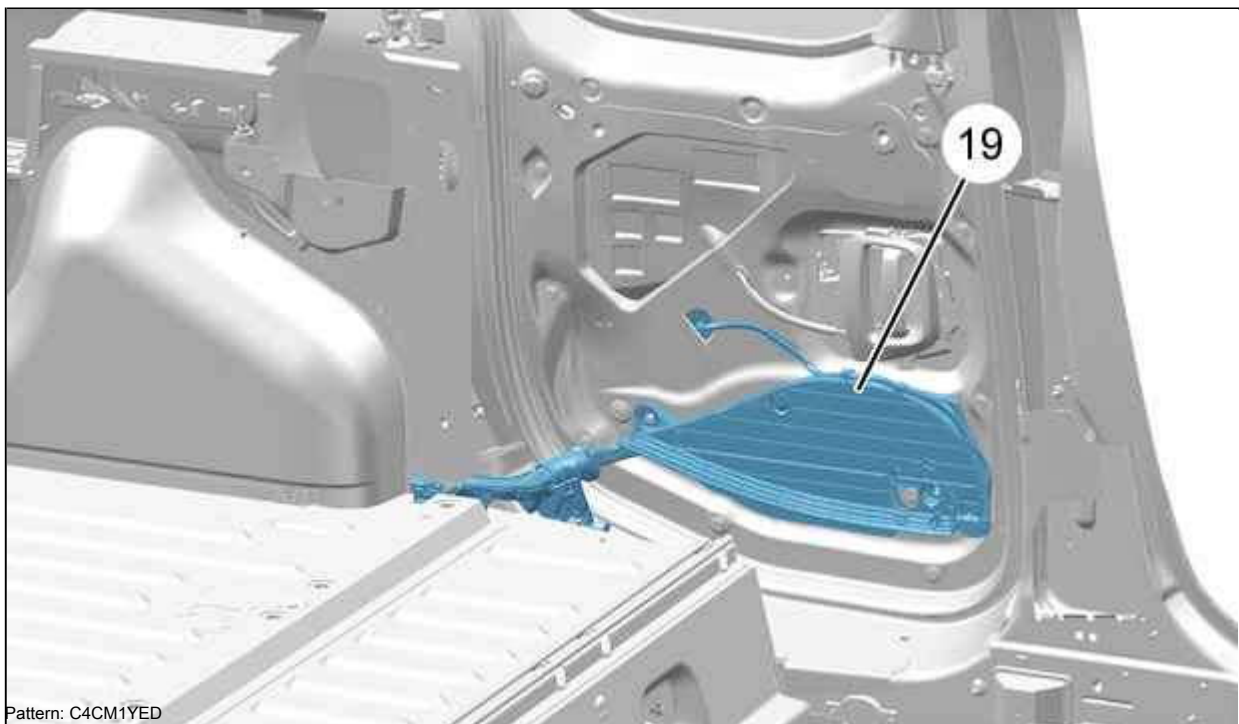
NOTE: Only for vehicles with 2 sliding side doors, tinted windows can be ordered.

8.front door



The doors and their covers are made of steel. The doors have window frames.
 Rolling of door panels requires the use of special equipment (). 1130 (Part catalog number: 9776.EB).

9. Side sliding door



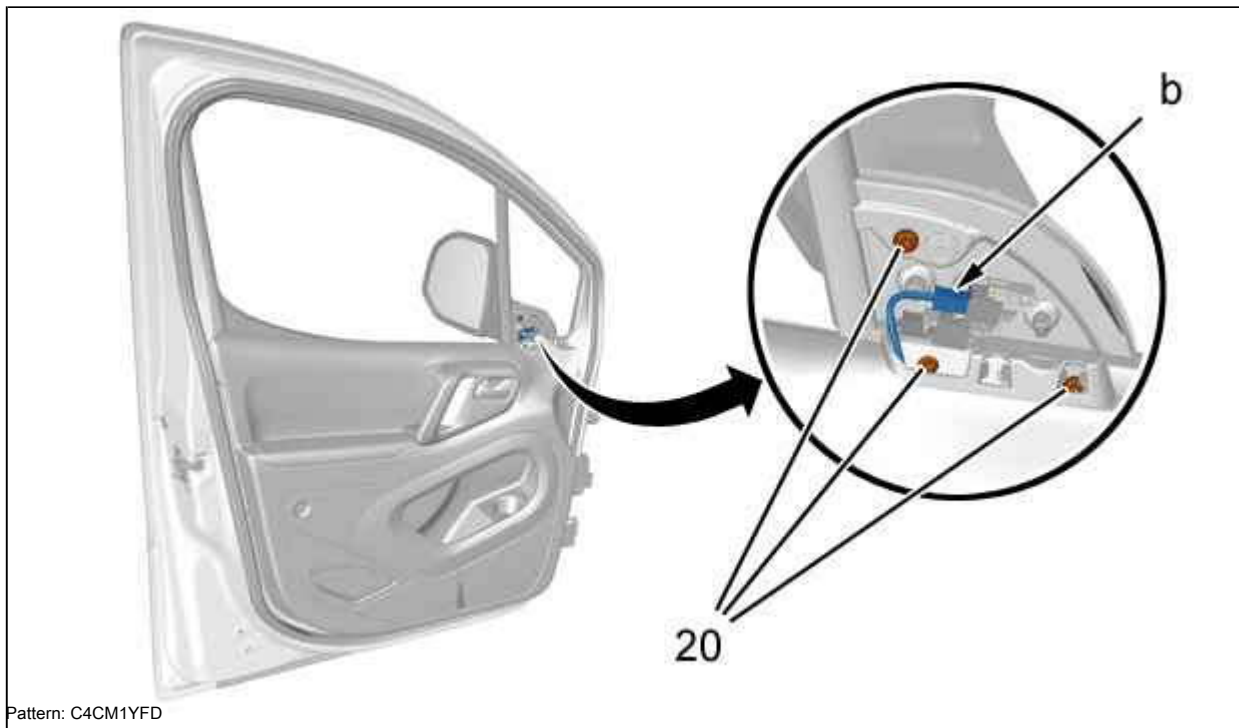
Electrical voltage is constantly applied to the sliding side door.

To ensure a constant supply of current when the sliding door is opened and closed, a coil (19) is provided around which the wire is wound.

The side sliding door is held open by a resistance point located on the center rail.

10. Rear view mirrors

10.1. Outside rearview mirror



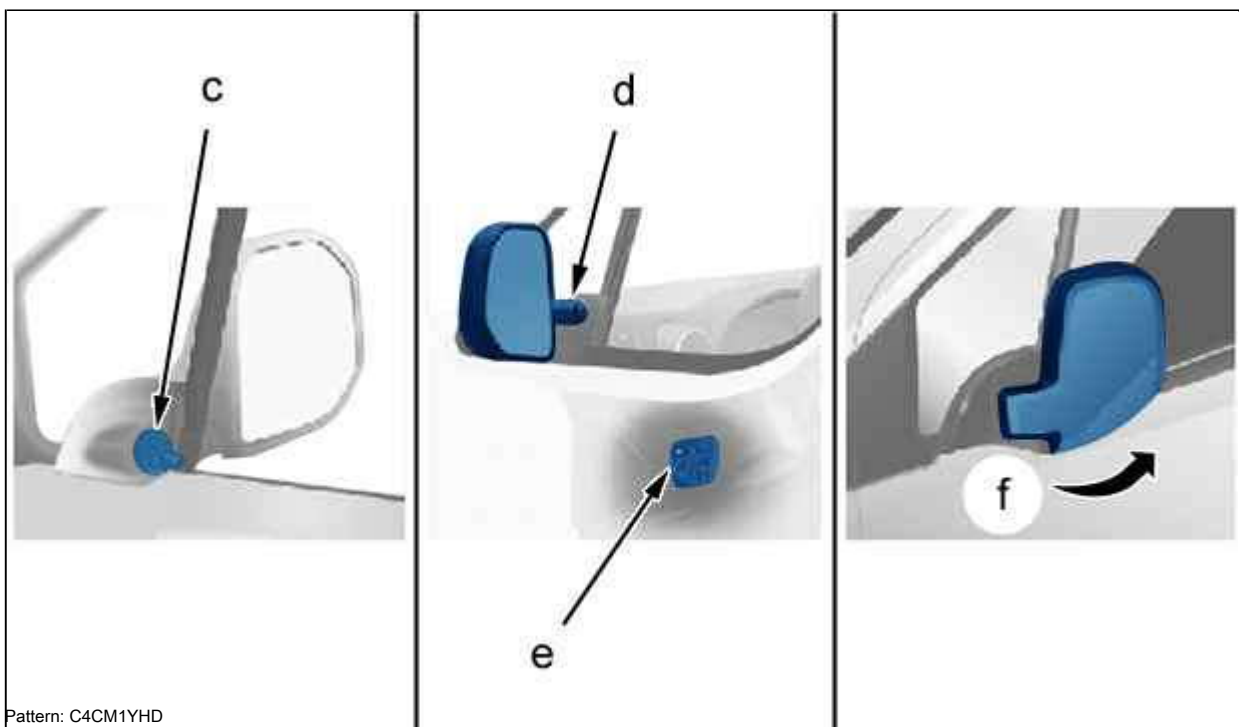
(20) Mirror base mounting bolts. "b" Rear view mirror motor connector.

NOTE: Removing the outside mirror requires removing the inner door panel.

The outside temperature sensor, which is located to the right of the rearview mirror, can be replaced using the RAYCHEM heat seal repair kit.



ATTENTION : To remove the rear view mirror housing, the mirror must be removed.



Functions of the exterior mirrors (depending on equipment):

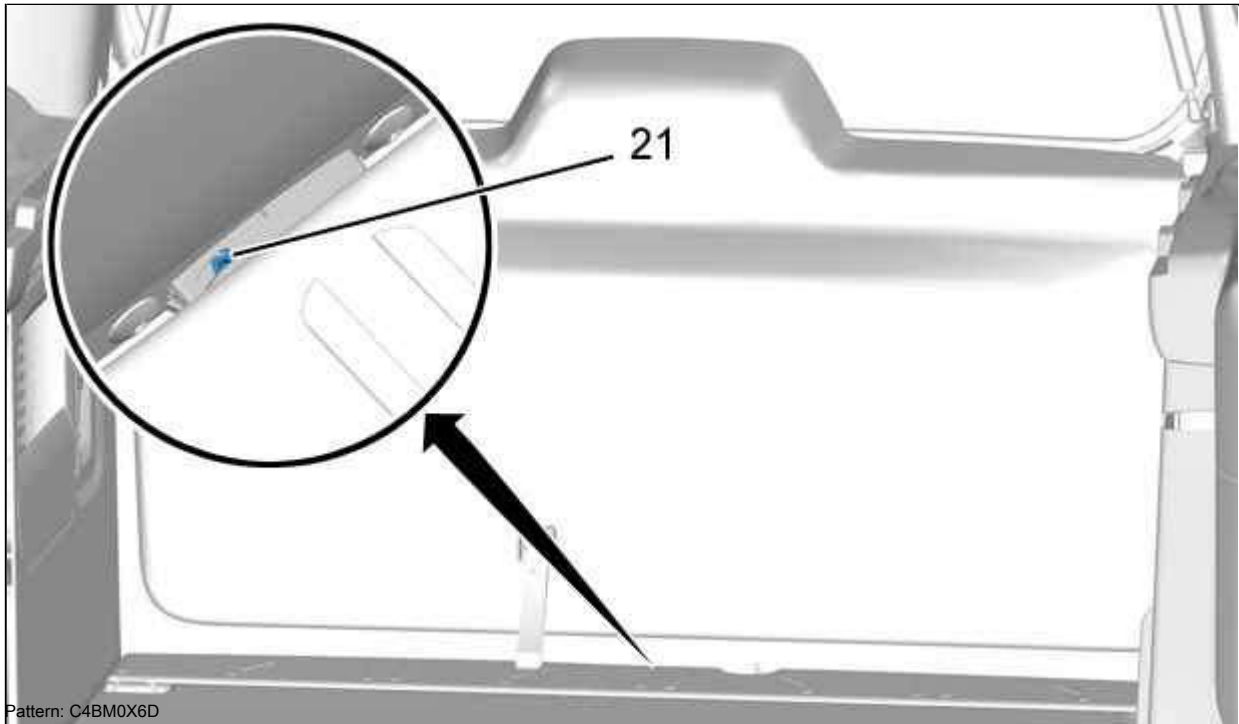
- "c" Manual adjustment
- "d" Electrical adjustment
- "e" Defrost command activated by the defrost function of the rear window
- "f" The electric folding mirrors are manually activated by pressing the button built into the control panel for the rear-view mirrors

10.2. Inner mirror rear view



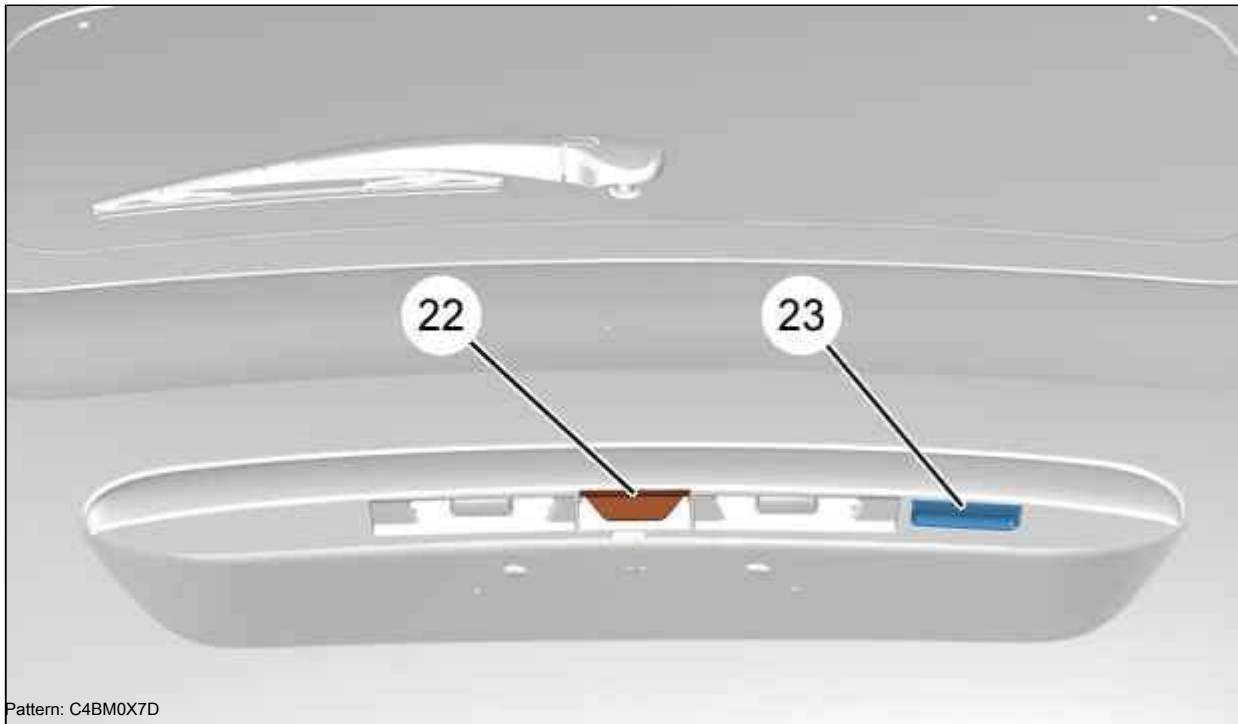
"g" Interior rearview mirror with day / night function (anti-glare).

11. Luggage compartment lid



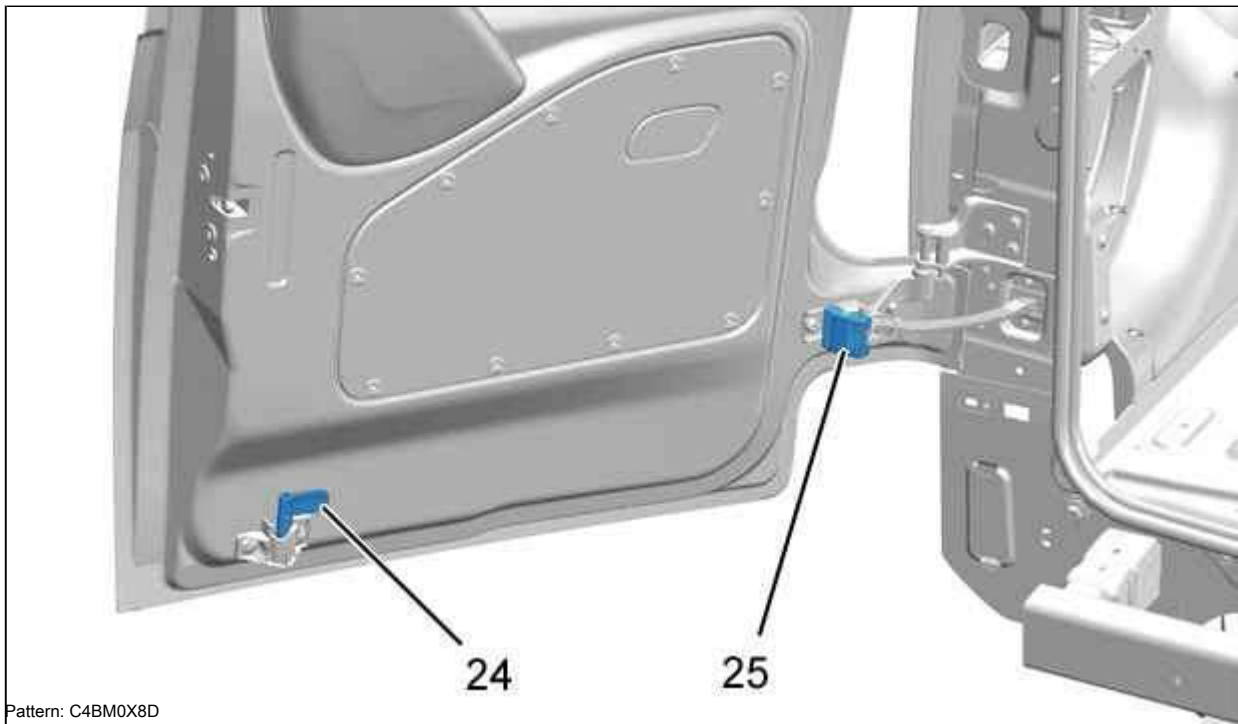
In the event of a malfunction or disconnection of the battery: The tailgate can be unlocked manually from the inside by inserting a rod into the hole located on the left and below

lock (21).



- (22) Tailgate opening button.
- (23) Rear door glass open button.

12.Rear swing doors



Hinged rear doors made of sheet steel or glazed (depending on version). Hinged rear doors are equipped with windscreen wipers.

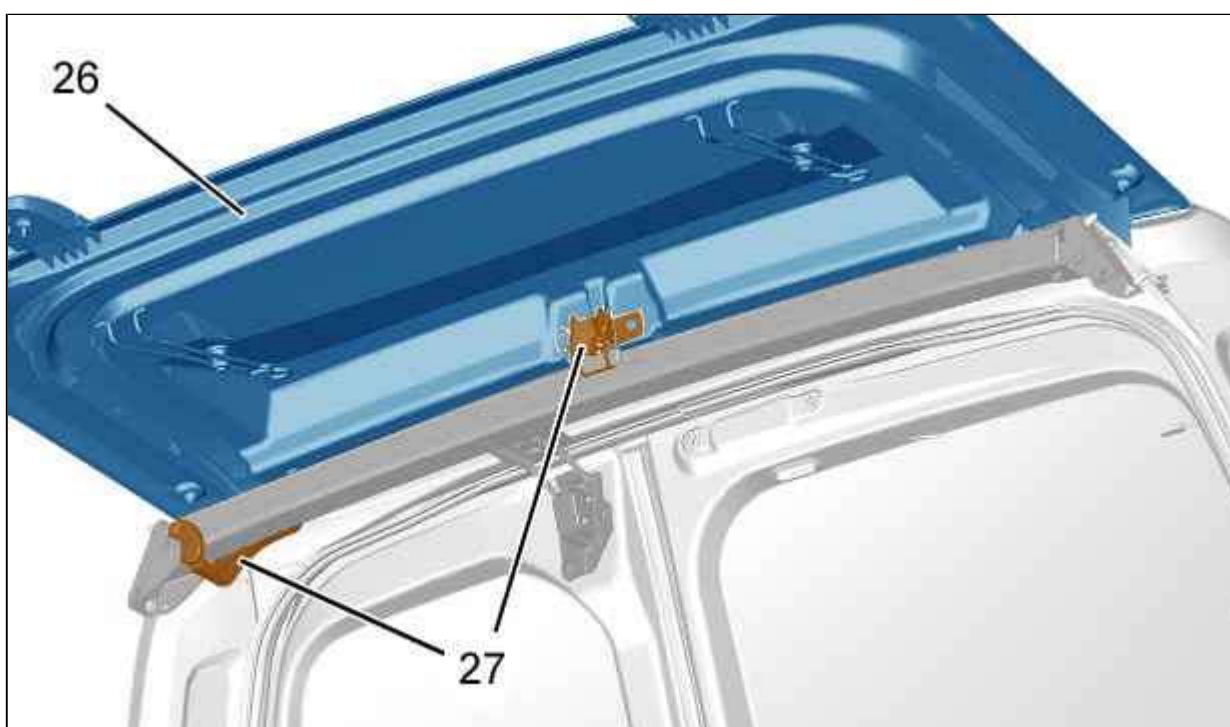
The latch (24) allows you to keep the left hinged door closed and the right open. The control element (25) allows the swing doors to be opened at an angle of about 180 °.

13. Multifunctional roof



Removing the multifunctional roof requires no special tools. Installation of the multifunctional roof is carried out from above (Panoramic glass roof).

14. Hatch at the rear of the roof

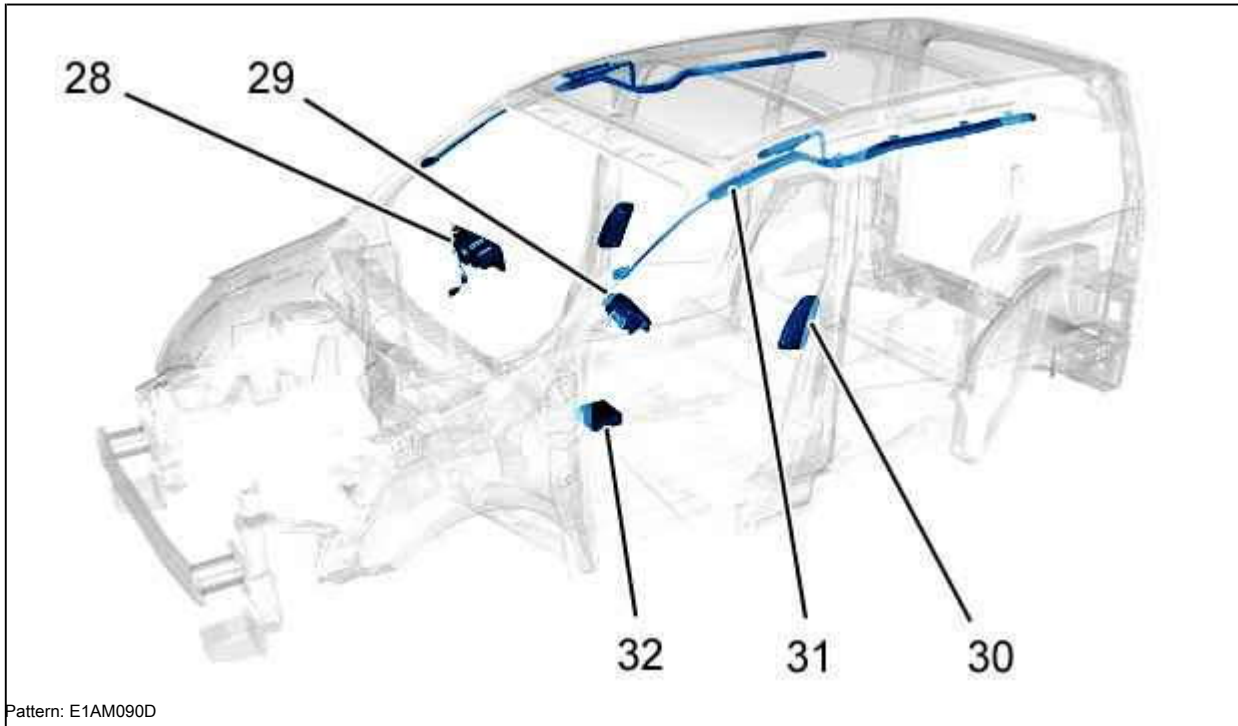


Pattern: C4BM0X9D

(26) Rear roof hatch.

(27) Controls for locking / unlocking the rear sunroof.

15. Airbags



15.1. Presentation

The composition of the airbag system (depending on the version and country of delivery):

- (28) front airbags (passenger)
- (29) Driver's front airbag (driver)
- (30) Front side airbags integrated in the front seat backrests
- (31) Windowbags
- (32) Airbag computer located under the center console

15.2. frontal airbags

Frontal airbags for driver and front passenger have one gas generator. The front airbags deploy in a frontal impact.

Airbag volume:

- driver's airbag: 65 liters
- Passenger airbag: 110 liters

To access the front passenger airbag, the lower glove box must be removed. The deployment strategy for the front airbags is determined in the airbag control unit according to the nature of the impact.

15.3. Front side airbags

The front side airbags are designed to provide protection in the event of a severe side impact. The front side airbags are integrated in the driver's and front passenger's seats (under the casing).

Side airbags reduce the risk of injury to the abdomen and chest.

15.4. safety shutters

Safety curtains increase side impact safety.

Safety curtains, located under the headliner on each side of the vehicle, operate from the front and rear to protect the driver and passengers sitting by the windows.

Safety curtains reduce the risk of head and chest injury.

NOTE: The side airbags and curtains of one side always deploy simultaneously.

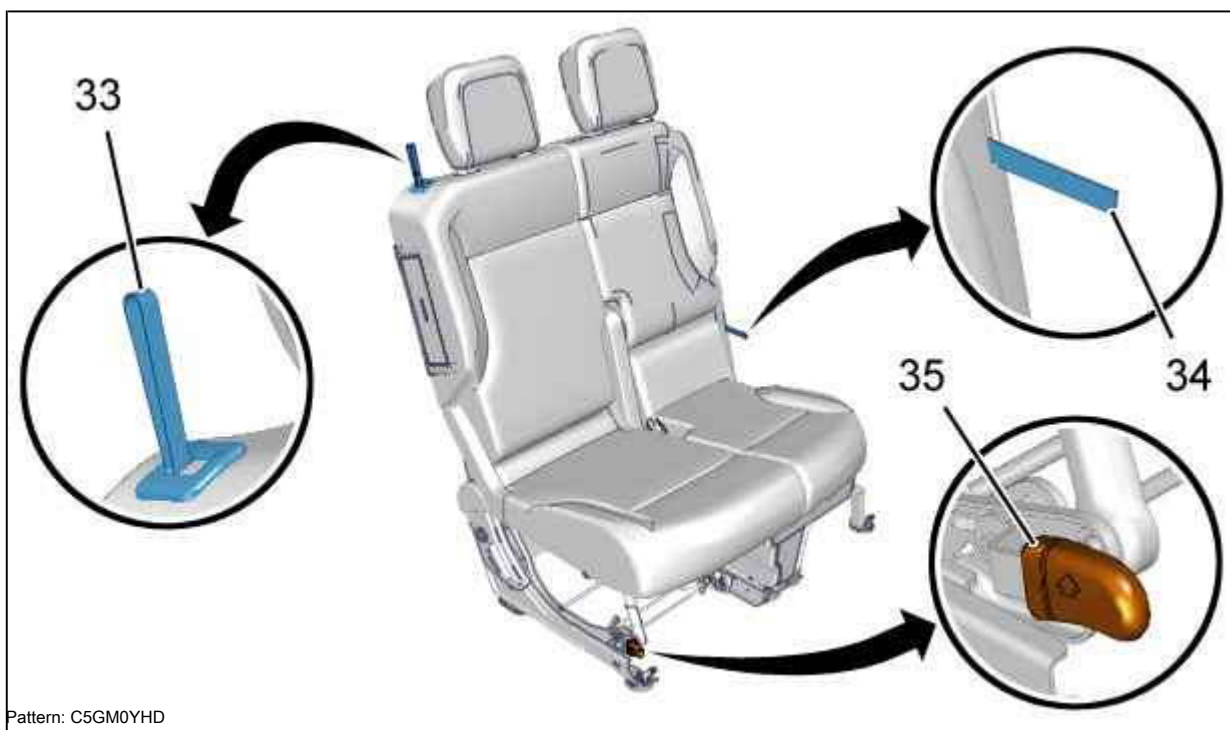
15.5. Side acceleration sensors

The 2 side airbag sensors are located at the base of the B-pillars and the seat belt pretensioners on each side of the vehicle.

The 2 side airbag sensors continuously measure the lateral deceleration and send the information to the airbag control unit.

16. Seats

16.1. Front sofa seat



A lever (33) allows you to tilt the backrest of the front passenger seat for transporting long items. A lever (34) allows the front passenger seat to be raised to carry tall items and also to facilitate access to the on-board instrument.

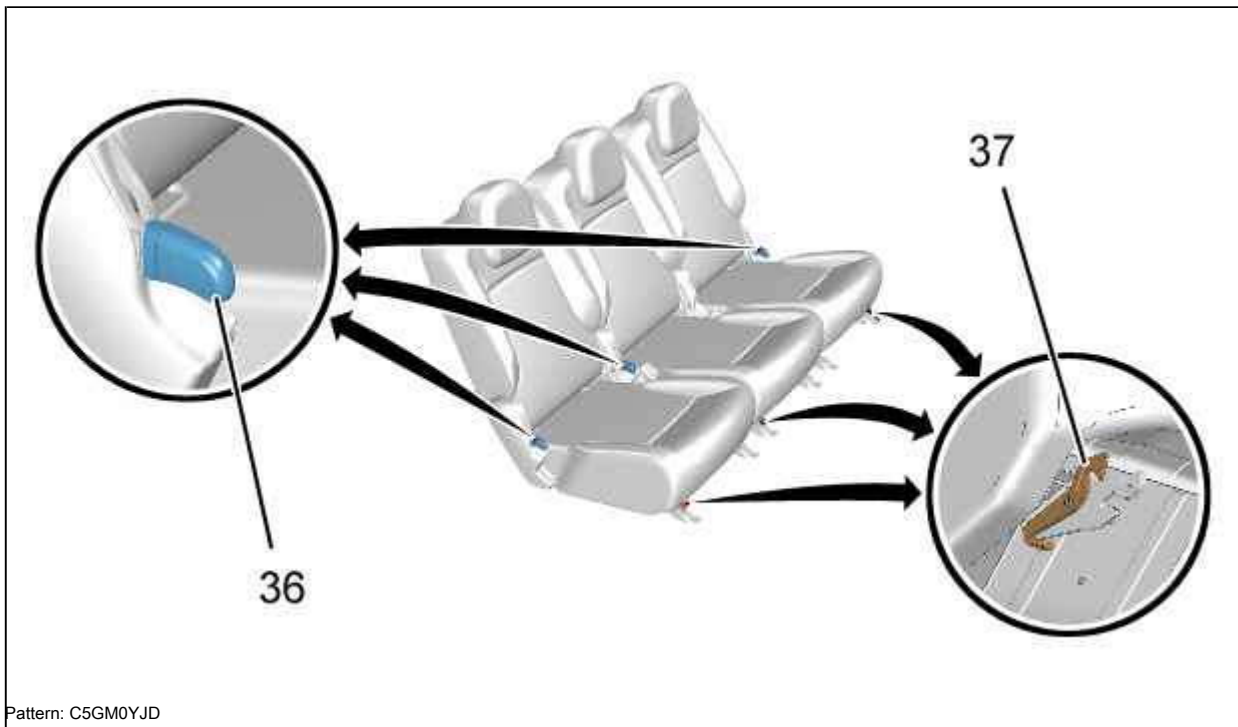
A lever (35) allows you to tilt the backrest of the center seat for use as an armrest or table.

16.2. Rear seats (Row2)

There are 2 options available:

- 3Independent rear seats
- Rear bench seat 1/3 2/3

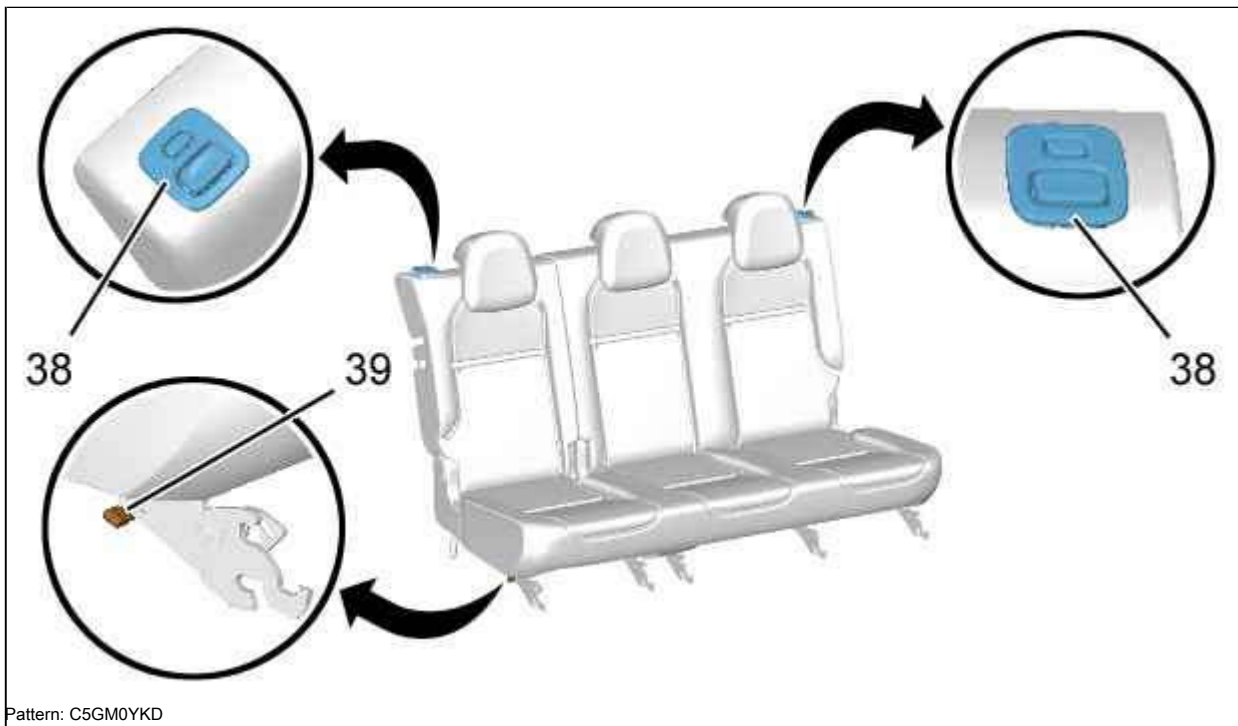
Both the independent rear seats and the sectional (1/3 2/3) rear seats can be folded in and out.



3Independent rear seats:

- (36) Lever for folding the rear seat
- (37) Lever for removing the seat

NOTE: 2 side rear seats are equipped with ISOFIX mountings.



Rear bench seat 1/3 2/3:

- (38) Rear seat folding lever

- (39) Lever for removing the seat

16.3. Rear seats (Row 3)

Starting from OPR 11767.



2Independent rear seats:

- Lever for folding rear seat
- Lever for removing the seat
- Raised floor with lids covering the storage boxes

17. Anti-corrosion protection (12 years)

Sheet steel, pre-treated, galvanized or 95% galvanized. Cathaphoresis.

Protecting the following elements with gravel shields:

- Dnischekuzova
- Engine oil pan

RECOMMENDED CONSUMABLES: YEAR 2011

1. Applicable norms

The classification of engine oils has been established by the following authoritative organizations:

- SAE: Society of Automotive Engineers
- API: American Petroleum Institute (American Petroleum Institute regulations are completely inconsistent with current European ACEA regulations and have been removed from PSA lubricants documentation)
- ACEA: Association des Constructeurs Européens d'Automobiles (Association of European Automobile Manufacturers)

NOTE: In addition to these standards, PSA PEUGEOT CITROËN has developed a specific regulation for motor oils that can be used on vehicles.

these brands.

2. Standards S.AE

Recommended engine oil viscosity grades.

The choice of different grades of viscosity is related to operation in accordance with the type of climate, determined by the diagram below.

For example, the use of the 10W40 is limited to countries with temperatures (17 °C to + 37 °C) or hot climates.

NOTE: For any other application, the brand should be selected depending on the climatic zone of the country of operation.

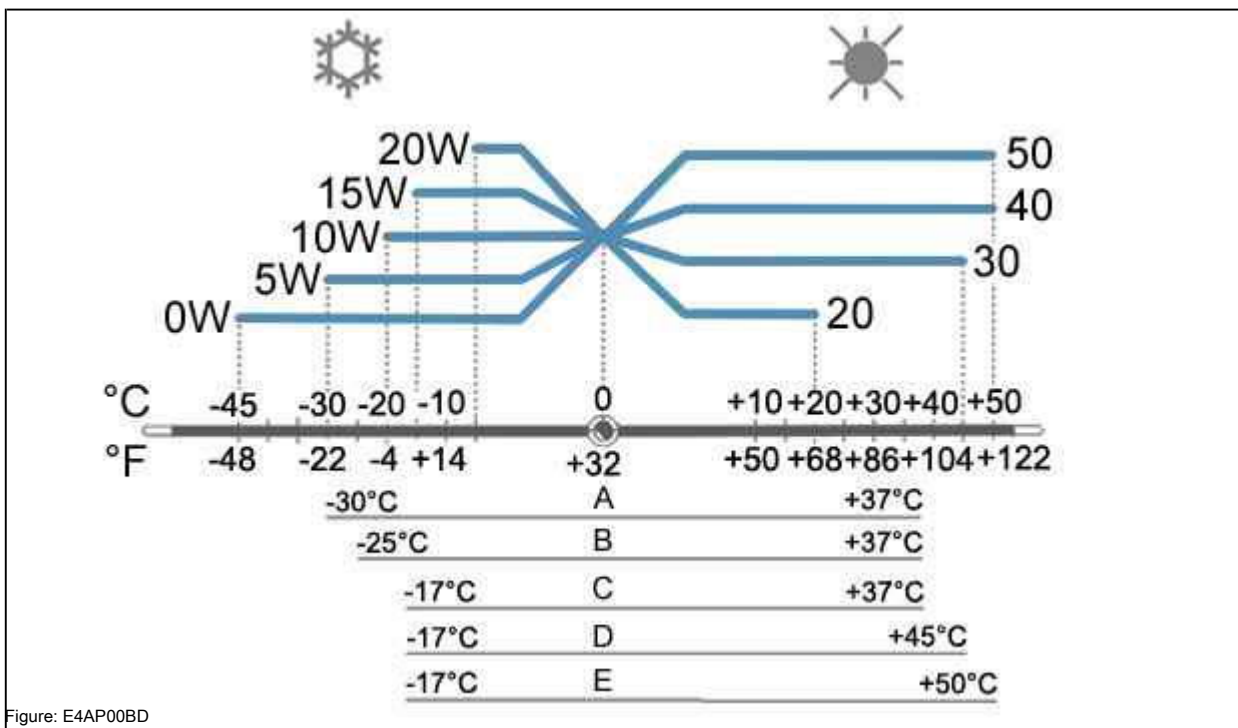


Figure: E4AP00BD

- "A" Very cold.
- "B" Cold.
- "C" Moderate.
- "D" Warm.
- "E" Very warm.

3. Standards ACEA

3.1. Mixed use oils for gasoline and diesel engines are specified by PSA PEUGEOT CITROËN

Examples:

- ACEA A3 / B4: Special Mixed Oils for Selected Direct Injection Diesel Engines
- ACEA A5 / B5: Very high performance blended oils for engines that reduce fuel consumption

The value of the first letter has not changed, it still corresponds to the engine type:

- A = Gasoline and dual-fuel gasoline / GPL (LPG)
- B = Diesel engines

The following letter has changed to correspond to the following oil type:

- 2 = Mineral oils
- 3 = High performance oil
- 4 = Special oils for some direct injection diesel engines
- 5 = Very high performance oil that helps to reduce fuel consumption

ATTENTION : Since 2004, ACEA has been installing oils for mixed use: A2 / B2; A3 / B3; A3 / B4; A5 / B5. So, all lubricants specified by "PSA PEUGEOT CITROËN" are mixed use; there are no more special oils for gasoline or diesel engines.

3.2. The introduction of oils with a low ash content (LOW SAPS)

Low ash content oils can reduce the ash content in the exhaust gases and thus increase the life of the particulate filter.

The sol content ranges from 1.6% for existing oils to 0.8% for these new oils (maximum allowable values).

NOTE: LOW SAPS (Sulfated Ash Phosphorus Sulfur - sulfated ash phosphorus pyrite).

New ACEA specifications:

- C3: Moderate salt content
- C2: Moderate ash content and reduced fuel consumption
- C1: Very low ash content and reduced fuel consumption
- C4: Very low ash content and reduced fuel consumption

Oil "C2" is a mixed gasoline and diesel engine oil that reduces fuel consumption, more adapted for engines with a particulate filter.

4. Standards PSA PEUGEOT CITROËN

ACEA minimum specifications do not meet all PSA PEUGEOT CITROËN requirements. This applies in particular to characteristics related to the following Euro 5 standards:

- CO2 emission
- Biofuel compatibility
- Resistance to oil and oxidation
- Particulate filter service life

Below is a table of correspondences which must be observed without fail when servicing vehicles of the PSA PEUGEOT CITROËN range from OPR no.

ATTENTION : Observe the correspondences given in the following table when servicing vehicles in the PSA PEUGEOT CITROËN range starting from OPR 11788.

Oil type	Viscosity	Standards PSA PEUGEOT
	SAE	CITROËN

Mineral	15W 40	B71 2295
Semi-synthetic	10W 40	B71 2300
Synthetic	5W 40	B71 2296
Synthetic	0W 30	B71 2296
Synthetic, fulfilling the norms	5W 30	B71 2290
toxicity		

When adding oil between two scheduled maintenance operations, the following oils of the ACEA standard are permitted:

- A3 / B4: Engines without particulate filter
- C2 / C3: Engines with particulate filter

5. Engine oils complying with PSA Peugeot Citroën standards

5.1. Recommended engine oils: Total

PSA PEUGEOT Degree	SAE viscosity	Oil type	Means responding
CITROËN			Norms
B71 2295	15W 40	Mineral	TOTAL ACTIVA 5000
			15W40 et 20W50 TOTAL QUARTZ 5000 15W40 et 20W50
B71 2300	10W 40	Semi-synthetic	TOTAL ACTIVA 7000
			10W40 TOTAL ACTIVA DIESEL 7000 10W40 TOTAL ACTIVRAC 10W40 TOTAL QUARTZ 7000 10W40 TOTAL QUARTZ DIESEL 7000 10W40
B71 2296	5W 40	Synthetic	TOTAL ACTIVA 9000
			5W40 TOTAL QUARTZ 9000 5W40
B71 2296	0W 30	Synthetic	TOTAL ACTIVA 9000
			0W30 TOTAL QUARTZ 9000 0W30
B71 2290	5W 30	Synthetic performing	TOTAL ACTIVA INEO
		toxicity standards	ECS TOTAL QUARTZ INEO ECS

5.2. Other engine oils complying with PSA PEUGEOT CITROËN

Engine oils BPCASTROL.

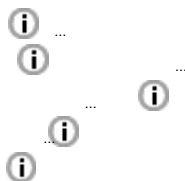
Engine oils **MOBIL**

MOTUL engine oils

YACCO CIPELIA engine oils

BP SHELL engine oils

FUCHS engine oils



6. Recommendations

Use only one of the following oils:

- TOTAL ACTIVA
- TOTAL QUARTZ 7000
- TOTAL QUARTZ 9000

- TOTAL QUARTZ ACTIVA INEOECS
- Or any other PSA PEUGEOT CITROËN oil (see table of limitations)

NOTE: The properties of these oils are superior to those defined by ACEA standards.

One of the following low ash oils is recommended for diesel vehicles equipped with a particulate filter:

- TOTAL ACTIVA
- TOTAL QUARTZ INEOECS
- Or any other PSA PEUGEOT CITROËN B71 2290 oil

NOTE: The properties of these oils are superior to those defined by the ACEA C2 standards.

ATTENTION : The use of additives in engine oil is prohibited.

6.1. France (Activa... ..) EUROPE (QUARTZ....)

Gasoline and diesel engines		
Recommended oil (*)	Description	Standards PSA PEUGEOT
TOTAL ACTIVA INEO ECS TOTAL	Synthetic, fulfilling the norms	CITROËN B71 2290
QUARTZ INEO ECS	toxicity 5W30	
TOTAL ACTIVA 9000 0W30 TOTAL	Synthetic 0W30	B71 2296
QUARTZ 9000 0W30		
TOTAL ACTIVA 9000 5W40 TOTAL	Synthetic 5W40	B71 2296
QUARTZ 9000 5W40		
TOTAL ACTIVA 7000 10W40 TOTAL	Semi-synthetic 10W40	B71 2300
ACTIVA DIESEL 7000 10W40		
TOTAL ACTIVRAC 10W40		
TOTAL QUARTZ 7000 10W40 TOTAL		
QUARTZ DIESEL 7000 10W40		
TOTAL ACTIVA 5000 15W40 and 20W50 (*)	Mineral 15W40; 20W50	B71 2295
) TOTAL QUARTZ 5000 15W40 et 20W50 (*)		
(*) : Or any other PSA PEUGEOT CITROËN oil (**): Only for 384F engines (3-cylinder petrol engines)		

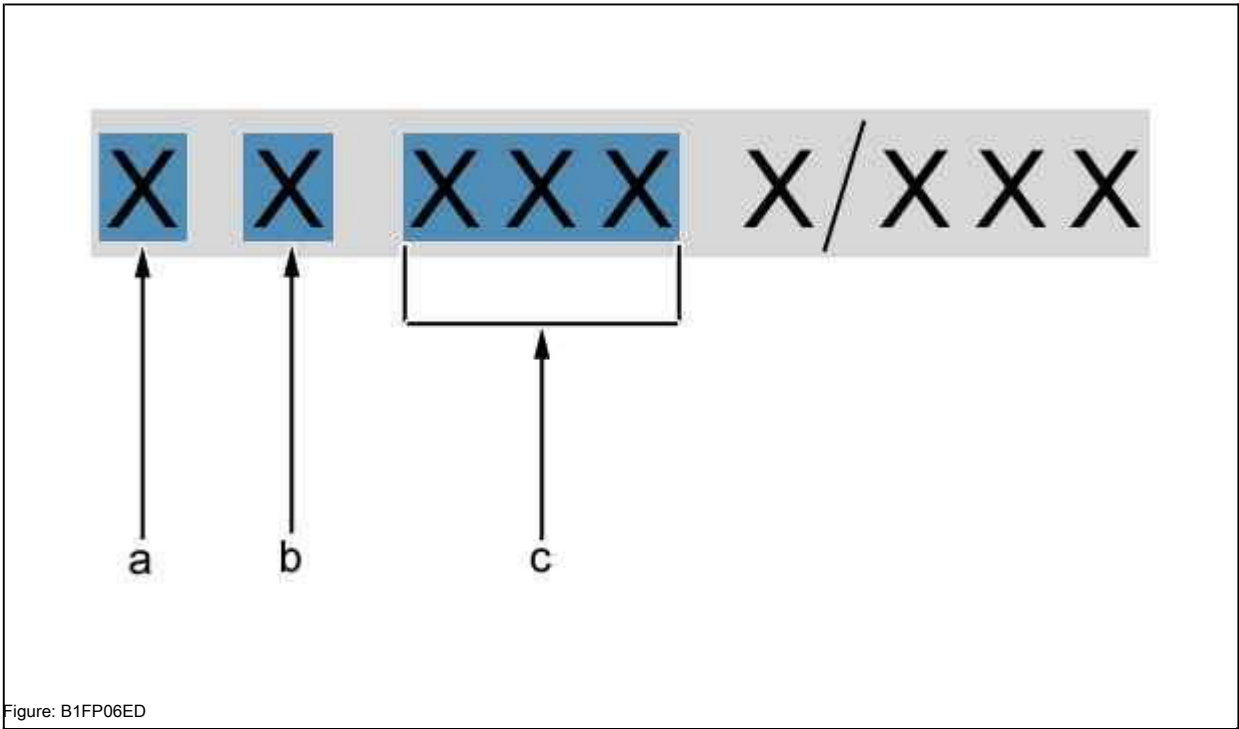
6.2. All countries (excluding France and Europe)

Gasoline and diesel engines		
Recommended oil (*)	Description	Standards PSA PEUGEOT
TOTAL QUARTZ INEO ECS	Synthetic, fulfilling the norms	CITROËN B71 2290
	toxicity 5W30	
TOTAL QUARTZ 9000 0W30 TOTAL	Synthetic 0W30	B71 2296
QUARTZ 9000 5W40 TOTAL QUARTZ	Synthetic 5W40	B71 2296
7000 10W40	Semi-synthetic 10W40	B71 2300
TOTAL QUARTZ 5000 15W40 20W50 (* *)	Mineral 15W40 20W50	B71 2295
(*) : Or any other oils with characteristics equivalent to the specified oil grades (* *) : Only for engines of type 384F (3-cylinder petrol engines)		

7. Limitations

NOTE: Reading engine characteristics.

When receiving vehicle identification data using its commercial name. Read the approved engine type on the vehicle identification plate indicated by the 3m, 4m and 5m signs.



"a" A family of cars.
 "b" Silhouette of the car.
 "c" Motor (Permitted type).
 Using the approved engine type and country of service, read the engine oil recommendations.

ATTENTION : Oil category ACEA 5W30 C2 must not be used on engines manufactured earlier than model year 2000 (7/99).

NOTE: The restrictions associated with the use of 15W50 oil are the same as for 10W40 oil.

7.1. Engine TU / ET

Engine type	Engine label	Oil	Oil	Oil	Oil
		5W40	10W40	0W30	5W30
TU1 / TU1A	HFX / HFY / HFZ / HFV	OK	OK	OK	OK
TU3 / ET3 /	KFW / KfV / K6D / K6E / KFU / K6F / KFX / K6C /	OK	OK	OK	OK
TU3A	KFS / KFT				
TU5	NFV / NFS / NFU / N6A / NFT / N6B / NFR OK		OK	OK	OK

7.2. EngineEW

Engine type	Engine label	Oil 5W40	Oil 10W40	Oil 0W30	Oil 5W30

EW7J4	6FZ	OK	OK	OK	OK
EW7A	6FY	OK	OK		
EW10J4	RFN / RFM / RFP / RFR OK RFJ /		OK	OK	OK
EW10A	RFH	OK			
EW10J4S	RFK	OK			
EW12J4	3FZ	OK	OK		
EW12E4	3FY	OK	OK		

7.3. ES engine

Engine type Engine mark Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30 ES9J4

	XFW / XFZ / XFX OK XFU /	OK	OK	OK
ES9A	XFV	OK	OK	OK

7.4. XU engine

Engine type Engine mark Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30 XU10J4RS

	RFS	OK			

7.5. TOYOTA Engine

Engine type Engine mark Oil 15W40 Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30 384F

	CFA / CFB	OK	OK	OK	OK	OK

7.6. Engine MITSUBISHI

Engine type Engine mark Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30

2.4MMC	SFZ / SFY	OK	OK	OK	OK
2.0MMC	AFZ	OK	OK	OK	OK

7.7. EngineEP

Engine type Engine mark Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30 EP 3

	8FS			OK	OK
EP 3C	8FP / 8FR / 8FN			OK	OK
EP 6	5FW / 5FP			OK	OK
EP 6C	5FS / 5FK			OK	OK
EP 6DT	5FX / 5FT			OK	OK
EP 6DTE	5FR			OK	OK
EP 6DTS	5FY / 5FF / 5FD			OK	OK
EP 6CDT	5FN / 5FV / 5F2			OK	OK
EP 6CDTX	5FU			OK	OK
EP 6CDTM	5FE / 5FC / 5FM			OK	OK

7.8. EngineDV

engine's type

Label

Oil

Oil

Oil

Oil

	engine	5W40	10W40	0W30	5W30
DV4C	8HR				OK
DV4TD	8HT / 8HZ / 8HX OK 8HS		OK	OK	OK
DV4TED		OK	OK	OK	OK
DV4TED4	8HV / 8HY	OK	OK	OK	OK
DV6ATED4 / DV6AUTED4	9HX	OK	OK	OK	OK

DV6TED4	9HY	OK	OK	OK	OK
DV6BTED4 / DV6BUTED4	9HW / 9HT	OK	OK	OK	OK
DV6TED4 with particulate filter 9HZ		OK	OK		OK
DV6UTED4	9HU	OK	OK	OK	OK
DV6TED4BU with soot filter	9HS	OK	OK		OK
DV6TED4B with soot filter	9HV	OK	OK		OK
DV6C / DV6CU	9HR / 9HG / 9HM				OK
DV6C M	9HG	OK			
DV6D / DV6DU	9HP / 9HF				OK
DV6D M	9HE	OK			
DV6E	9HN				OK
DV6E M	9HK	OK			

7.9. EngineDW

engine's type	Engine label	Oil 5W40	Oil 10W40	Oil 0W30	Oil 5W30
DW10TD	RHY / RHV / RHU	OK	OK	OK	OK
DW10ATED	RHZ	OK	OK	OK	OK
DW10ATED4	RHW	OK	OK	OK	OK
DW10ATED with soot filter	RHS	OK	OK		OK
DW10ATED4 with soot filter	RHT / RHM	OK	OK		OK
DW10BTED	RHX	OK	OK	OK	OK
DW10BTED4 with soot filter	RHR / RHL / RHJ	OK	OK		OK
DW10BTED4 euro5 with particulate filter	RHF	OK	OK		OK
DW10UTED4	RHK	OK	OK	OK	OK
DW10UTED4 with soot filter	RHG	OK	OK		OK
DW10CTED4	RHE / RHH / RHD / AHY / AHZ / RHB				OK
DW12BTED4 with soot filter	4HP / 4HR / 4HS / 4HT	OK	OK		OK
DW12C	4HL				OK
DW12UTED	4HY	OK	OK	OK	OK
DW12TED4 with soot filter	4HW / 4HX / 4HZ	OK	OK		OK
DW12MTED4 with soot filter	4HN	OK	OK		OK
DW12MTED4 with soot filter	4HK				OK
DW8	WJZ	OK	OK	OK	OK
DW8B	WJY / WJX	OK	OK	OK	OK

7.10. DT engine

Engine type Engine mark Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30 DT17

	UHZ	OK	OK		OK
DT20	X8Z				OK

7.11. EnginePUMA

Engine type Engine mark Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30 P22DTE

	4HV / 4HU / 4HM OK		OK	OK	OK

7.12. Engine SOFIM

Engine type Engine label F28DT

Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30

	8140.43S / 8040.23	OK	OK	OK	OK
F28DTGV	8140.43 N	OK	OK	OK	OK
F30	F1CE0481D / F1CE381N OK		OK	OK	OK

7.13. FIAT engine

Engine type Engine mark Oil 5W40 Oil 10W40 Oil 0W30 Oil 5W30

1.3 HDi 75	FHZ				OK

8. Motor oils offered in the commercial network

8.1. All countries (Except: China Iran)

Various grades for all engines without packaging

France, metropolis TOTAL ACTIVA	VRAC (S.AE Standards: 10W40 A3 / B4)

TOTAL ACTIVA / QUARTZ

TOTAL ACTIVA / QUARTZ diesel

Oils for all 5000 15W40 and 20W50 engines	Oils specific for diesel engines
7000 10W40 and 15W50 9000 5W40 9000 0W30 INEO ECS5W30	7000 10W40 and 15W50
INEOECS5W30: Low ash oils for all engines help to save fuel, reduce environmental pollution and extend the life of particulate filters	

8.2. China

TOTAL QUARTZ

TOTAL QUARTZ

Oils for all engines	diesel
	Oils specific for diesel engines
INEO ECS5W30 / 9000 0W30 / 9000 5W40 / 7000 10W40 / 5000 10W40 / 5000 7000 10W40 and 15W50 / 20W50 / 7000 15W50 / 7000 5W30 (only for gasoline engines)	5000 15W40
INEOECS5W30: Low ash oils for all engines help to save fuel, reduce environmental pollution and extend the life of particulate filters	

8.3. Iran

TOTAL QUARTZ

TOTAL QUARTZ diesel

Oils for all engines	Diesel oils engines
INEO ECS5W30 / 9000 0W30 / 9000 5W40 / 7000 10W40 / 7000 7000 10W40 and 15W50 / 10W40 / 5000 20W50	5000 15W40
INEOECS5W30: Low ash oils for all engines help to save fuel, reduce environmental pollution and extend the life of particulate filters	

9. Oil for transmission

Transmission type	Country	Oil type
Manual transmission and mechanical automated transmission	Everything	TOTAL TRANSMISSION BV 75W80 (Reference PR: 9730 A2)
	country	Special oil (Reference PR: 9736 41)
MCP gearbox drive	Everything	Special oil (Reference PR: 9979 A4)
Gearboxes (Type MMT)	country	Special oil 75W (Reference PR: 9730 A8)
	Everything	TOTAL FLUIDEAT 42
Automatic transmission MB3	country	Special oil (Reference PR: 9730 A6)
	Everything	Special oil (Reference PR: 9736 22)
Automatic transmissions 4HP20 and AL4 Automatic transmission AM6 Automatic transmission AM62 AT6 Transfer	country	Special oil (Reference PR: 9980 D4)
	Everything	Special oil (Reference PR: 9734 R7)
case Rear axle	country	TOTAL TRANSMISSION X4 (Reference PR: 9730 A7)
	Everything	Special oil (Reference PR: 9735 EF)
Continuously variable CVT transmission	country	Special oil (Reference PR: 9734 S2)
Mechanical automated transmission Everything	country	Special oil (Reference PR: 9979 A7)
DCT Reducer (CITROËN CŽéro / PEUGEOT Ion)	country	
	Everything	
	country	

10. Oil for power steering

Power steering	Country	Oil type
All vehicles up to CITROËN C5 and PEUGEOT 307 (except 206 with GEP)	All countries	TOTAL ATX Fluid: DEXRON Special Oil II / GM 6137M
All vehicles from CITROËN C5 and PEUGEOT 307 (incl. 206 from electrohydraulic unit)	All countries	TOTAL FLUIDEDA: Special oil: Type LDS
Sound signaling device (beeper) / Nemo Boxer III / All countries JUMPER III		Special oil (Ref. PR: 9735 EX)
All cars	Countries with very cold climate	TOTAL FLUIDEDA: Special oil: Type LDS

11. Engine coolant

Country	GLYSANTIN G33 packaging	REVKOGEL 2000	Long service life
All countries	2 liters	Reference PR: 9979 70 Reference PR: 9979 72 Reference PR: 9735 K1	Reference PR: 9979
	5 liters	71 Reference PR: 9979 73 Reference PR: 9735 K0	
	20 liters Ref. PR: 9979 76 Ref. PR: 9979 74 Ref. PR: 9735 J9		
	210 liters Reference PR: 9979 77 Reference PR: 9979 75 Reference PR: 9735 J8		
Liquid with protection: 35 ° c			

12. Engine coolant (Shared vehicles)

Country	Applies to the car	Packaging	Articles	Remarks
Everything	C1 / 107 gasoline engine	1 liter	SLLC	Using any other
country		5 liters	Reference PR: 9735 Y5 SLLC	means prohibited
			Reference PR: 9735 Y6 SLLC	
	CCrosser / 4007	1 liter	SLLC	Using any other
	Gas engine		Reference PR: 9979 A5 SLLC	means prohibited
	CZéro / ION	5 liters	Reference PR: 9979 A6	

13. Brake fluid (Synthetics)

Country	Brake fluid	Packing	ReferencePR
All countries	Brake fluid: DOT4 CLASSE 4 0.5 liter	9980 E3 / 4699 34	
		1 liter	9980 E4
		5 liters	4699 35

14. Hydraulic system

ATTENTION : TOTAL FLUIDE LDS oil is immiscible with TOTAL LHM PLUS.

All countries	Norm	Packing	ReferencePR
TOTAL FLUIDE LDS	Orange 1 liter Green		9979 A3
TOTAL LHM PLUS		1 liter	9979 A1
TOTAL LHM PLUS for countries with cold climates Green color		1 liter	9979 A2

15. Air conditioner oil compressor

Country	Applies to the vehicle	Packaging	Part numbers
All countries	CZéro / ION	100 ml	MA 68 EV
			Reference PR: 9979 A8

16. Windscreen washer fluid

Country	Packaging	ReferencePR	ReferencePR
All countries	Concentrated: 250 ml	9980 Q4	9722 E5
	Ready-to-use liquid: 1 liter 9980 76 Ready-to-use liquid: 5 liters	9980 77	9722 F0
			9722 F1

17. Lubrication

Country	A type	NLGI standards (*)
All countries	Lubrication TOTAL MULTIS2	2
	TOTAL for small mechanisms	
(*) NLGI: National Lubricating Grease Institute		

18. Additives for particulate filter

EolysDPX 42		Eolys176	
Reference PR: 9736 65 (Canister 1 liter)		Reference PR: 9736 85 (Canister 1 liter)	
Reference PR: 9979 95 (Canister 5 l)		Reference PR: 9736 86 (Canister 3 L)	
EolysPOWERFLEX		InfineumF995	
Reference PR: 9736 A0 (Canister 1 liter)		Reference PR: 9736 98 (Canister 1 liter)	
Reference PR: 9979 A1 (Canister 3 l)		Reference PR: 9736 97 (Canister 3 l)	

TECHNICAL REMINDER: SPECIAL FEATURES OF THE ENGINE MANAGEMENT ECU

1. Engine control computer

After performing the following operations:

- Erasing errors from computer memory
- Disconnecting or replacing a computer
- Teleloading computer
- Disconnecting the battery

A short-term violation of the normal behavior of the car on the road may be the result of erasing self-settings from memory.

To eliminate these unpleasant driving sensations, follow these initialization procedures.

Engine control computer initialization procedure

Engine control computer	Procedure Performed
Magneti marelli g5	1 + 4 + 9
BoschA2.2 BoschMA3.0 BoschM1.2 BoschMP3 BoschMP3.2 BoschMP5.1 MagnetiMarelli G6 (without vehicle speed sensor) 1 + 2 + 4 + 9 MagnetiMarelli 8P (Manual transmission) MagnetiMarelli AP	
MagnetiMarelli G6 (With vehicle speed sensor) 1 + 2 + 3 + 4 + 9 MagnetiMarelli 8P (automatic transmission)	
Bosch MP5.1.1, MP5.2, MP7.2, MP7.3 Sagem4GJ	1 + 2 + 6 + 9
	1 + 2 + 9
SagemSL96 / Sagem2000	1 + 2 + 8 + 9
BoschMP3.2	1 + 6 + 9
BoschMP5.2 BoschMP7.0 BoschMP7.4.4 BoschMA3.1 BoschMA1.7 MagnetiMarelli 1AP	1 + 2 + 7 + 9
Siemens (Fenix): ALL TYPES	1 + 5 + 9
MagnetiMarelli 4.8 / 4MP2 / 6LP	ten
BoschME7.4.6	eleven
SiemensSirius81	12

Procedure 1:

- Erase fault codes
- Check for a defect code in computer memory
- If an error is recorded there, handle the specified error

Procedure 2 (Self-tuning of the stepper motor):

- Turn off the ignition for 10 seconds
- Turn on the ignition for 10 seconds
- Engine starting

Procedure 3 (Recognizing gears engaged):

- Engage 1st gear: Start driving and increase the engine speed to 3500

rpm

- Engage 2nd gear: Start driving and increase the engine speed to 3500 rpm
- Wait until the engine speed decreases and go into first gear
- Perform these operations for other transfers

Procedure 4 (Self-regulation of the mixture composition):

- Hot engine (turning on the electric fan)
- Perform road tests for at least 15 minutes, constantly changing engine speed, especially in the range from 2500 to 3500 rpm, including idle and full load (urban traffic)

Procedure5:

- Warm engine (electric fan turned on at least once) Switch off ignition
- Switch on ignition
- Erase the fault from the computer memory Switch off the ignition
- Disconnect, and then reconnect the computer (Computer initializes auto-adaptive functions)
- Turn on the ignition for 10 seconds

Attachments disconnected (air conditioning, etc.):

- Starting the engine (Not pressing the accelerator pedal)
- If the car has an automatic transmission, stop the car, tighten the parking brake lever and move the selector lever to the [D] (DRIVE) position.
- Let the engine run idle for 2 3 minutes To detect idle (pedal released position)

Check the idle throttle position with a scan tool in parameter reading mode:

- Correct indication: Pos.pap. (flap position): IDLE
- If this is not the case, start over
- Perform procedure 4

Procedure6:

- Warm engine (electric fan turned on at least once) Switch off ignition
- Engine starting
- Let the engine idle for a few minutes
- Carry out a road test for 5 minutes, varying engine speed and load Perform at least one deceleration (longer than 5 seconds) from engine speed greater than 4000 rpm

Procedure 7 (Position Recognition: Pedal pressed to stop):

- Warm engine (electric fan turned on at least once)
- Drive the car accelerate by pressing the accelerator pedal until it stops for 2 seconds

Procedure 8 (Recognition of included gears):

- Drive the car and engage each gear for at least 50 meters between each gear change
- Check the condition of the gearbox (in the measurement results)

Procedure 9 (Final control):

- Read errors. If the engine diagnostics indicator does not light up and there are no error codes: Operation completed
- If error code (s) are present (s), process them Start initialization over again

Procedure 10.

After booting the computer, carry out the initialization of the self-settings using the diagnostic tool:

- Computer Consulting & Services

- Computer test
- Engine / automatic gearbox / transmission
- Select the engine of the corresponding vehicle
- In the menu select "initialization ou apprentissage des autoadaptatifs" (initialization or "learning" of self-adjustments)

Procedure 11 (Initializing the Motorized Throttle Valve)

The motorized throttle body, accelerator pedal position sensor, teleloading or telecoding of the engine management computer must be "taught" to the motorized throttle body and accelerator pedal position.

Procedure 11a ("learning" the motorized throttle position values):

- Turn on the ignition for 10 seconds (Without starting the engine)
- Do not press the accelerator pedal
- Switch off the ignition and leave it off for 10 seconds

Procedure 11b (Accelerator Pedal Position Sensor):

- Switch on the ignition (Do not press the accelerator pedal)
- Press the accelerator pedal all the way
- Release the accelerator pedal
- Start the engine without pressing the accelerator pedal

Procedure 12.

After replacing the engine control computer or after working on the control system or after booting, the engine control computer must be reinitialized:

- Switch on the ignition, wait 20 seconds
- Start and idle the engine without pressing the accelerator pedal, deactivating the energy consumption systems, air conditioning, as long as the motor fan group is on
- Ride at light load, alternating all gears
- Press the accelerator pedal several times to move the vehicle at an engine speed of 3500 to 1500 rpm
- Switch off ignition
- Wait 1 minute before starting the engine (Wait until the engine cooling fans have come to a complete stop)
- Reinitialization procedure completed

2. Procedure for initializing the service pending indicator

Procedure for resetting the maintenance indicator.

Any vehicle with a maintenance indicator "spanner" Except for Jumper and Boxer (U5):

- With the ignition off, press the odometer reset button.
- The display will start to count down; at the end of the countdown, the maintenance "wrench" is reinitialized for the programmed interval (usually between 20,000 and 30,000 km, depending on the model and version of the vehicle and engine)
- To modify the service interval the diagnostic tool must be used

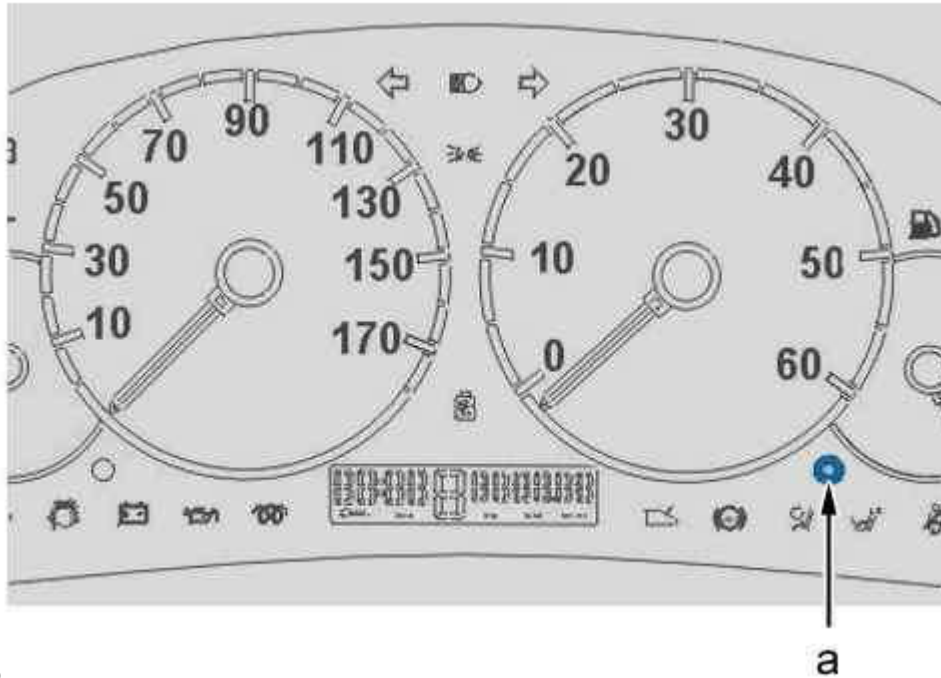


Figure: C5FA055D

Jumper and Boxer cars (U5):

- The procedure for setting parameters is to select the optimal intervals between periodic maintenance for the operating conditions of the vehicle, among other parameters programmed on the instrument panel.
- This action is performed by telecoding
- Turn the ignition key to the "MAR" position Wait until the key indicator stops
- flashing Press the button to "a" for 5 seconds
-
- The symbol "cfg1cfg2cfg3" appears, the operation was successful
- Briefly press the button in "b" to select the desired configuration ("cfg 1 cfg 2 cfg 3") Press the button in "b" for 5 seconds to
- memorize the selected configuration

TECHNICAL REMINDER: CAR / TELEPHONE / TELEMATICS

1. Button abbreviations

1.1. Car radio and display

Key	Function
ADDR BOOK	Phone Menu Button
Help	Support Call Button
AUDIO / AUD	Adjustable bass, treble, volume and sound distribution (available depending on equipment)
BAND AST	Selectable frequency bands FM1, FM2, Fmast, AM
BLS	Blank skip switch
	Skip blanks for more than 4 seconds (cassette / CD)
BND / AST	Selecting frequency bands (FM / FMI / FMII / FMIII / AM) or
	Pressing for more than 2 seconds: Automatic storage of stations (self-storage)
BNR / NL	Dolby: Noise reduction (cassette)
CPS / APC	Automatic ProgramControl / Music Search Sensor or
MSS	Search for empty spaces: (minimum 4 seconds)
CL	Clear: Erase
DARK	First press: Displays the top track Second press: Blanks the screen completely
	(black screen) Third press: Returns to the displayed function
DCS	Digital cellular system according to standard GSM = 1800MHz
DX	Maximum sensitivity when searching for stations Discard key
EJECT	
EON	EnhancedOther Network
	Traffic information transmitter network
ESC	Cancel current operation
EXM / SCN / PS	Scanning, Preset Scan
	Using memorized settings (radio application or CD)
FMT / MA / AST / SAM	Autostore
	Automatic transmitter memory system
GEO	Left and Front Rear Speaker Balance Adjustment General Packet Radio Service
GPRS	
GPS	Global Positioning System
GSM	Global System for Mobilecommunication (RNIS)
ISDN	Interrogation ServiceDigital Network
LD / LOUD	Loudness
	Improving sound quality at low volume (cassette)
LIST REFRESH	Local station or CD track output
LO	Local: The car radio automatically tunes to the strongest station
MAN	Manual / automatic station search
Media	Audio or video source selection button Bring up main
Menu	menu screen
Mode	Selecting a sound source (radio, tape recorder, CD player)
	Menu for adjusting front / rear balance, left left, treble and bass
	Selecting the data output mode on the display

MOST	MediaOriented SystemsTransport bus
MP3	Mpeg audio layer 3
MTL / MECR	Select metal / chrome cassettes or conventional cassettes
MUSIC	
Mute	Mute the sound
NAV	Navigation mode selection button (short press)
ON / VOL	Move / Switch off the car radio / Adjust the volume
PHONE	Call list
	or Phone button
PRG	Selecting special functions by pressing successively
PTY	Program Type: Selects stations transmitting the selected program type
RAM	RandomAccessMemory
	Random Access Storage
RDM / RND	Random: Plays a random chunk of a CD Radio DataSystem
RDS	
RDS / AF	AlternativeFrequencies (RDS = Radio DataSystem) Automatic transmitter selection
Reg	Regional Program
	Station transmitting local program
RM	RadioMonitor
	Listening to the radio while rewinding an audio tape
RNIS	Digital Function Integration Network
ROM	ReadOnly Memory
	Persistent storage devices
RPT / REP	Repeat
	Automatically replay the same portion of the recording (cassette / CD)
SC	Scanning
	Stop at 5 each radio station
SCN / SCAN	Listening to the beginning of each section automatically (CD)
SEL / SRC	Changing the sound source without removing the cassette / Selecting the sound source (radio, tape recorder, CD player)
SETUP	Key "MENU" for setting parameters Subscriber
SIM	Identificationmodule
SMS	Short MessageService
Source	Sound source selection (radio, tape recorder, CD player) Tuner Mode: Manual or
T.MD or TM or	automatic station search
MAN	
TA	Traffic Alarm: Searching for traffic information stations Adjusting the voices, front / rear balance, left speaker
TON	
TP	If a station can broadcast traffic information, the (TP) indicator lights up on the display.
TMC	Traffic MessageChannel
TRAFFIC	Traffic information button
TTS	Text To Speech
WAP	WirelessApplication Protocol

1.2. Symbols

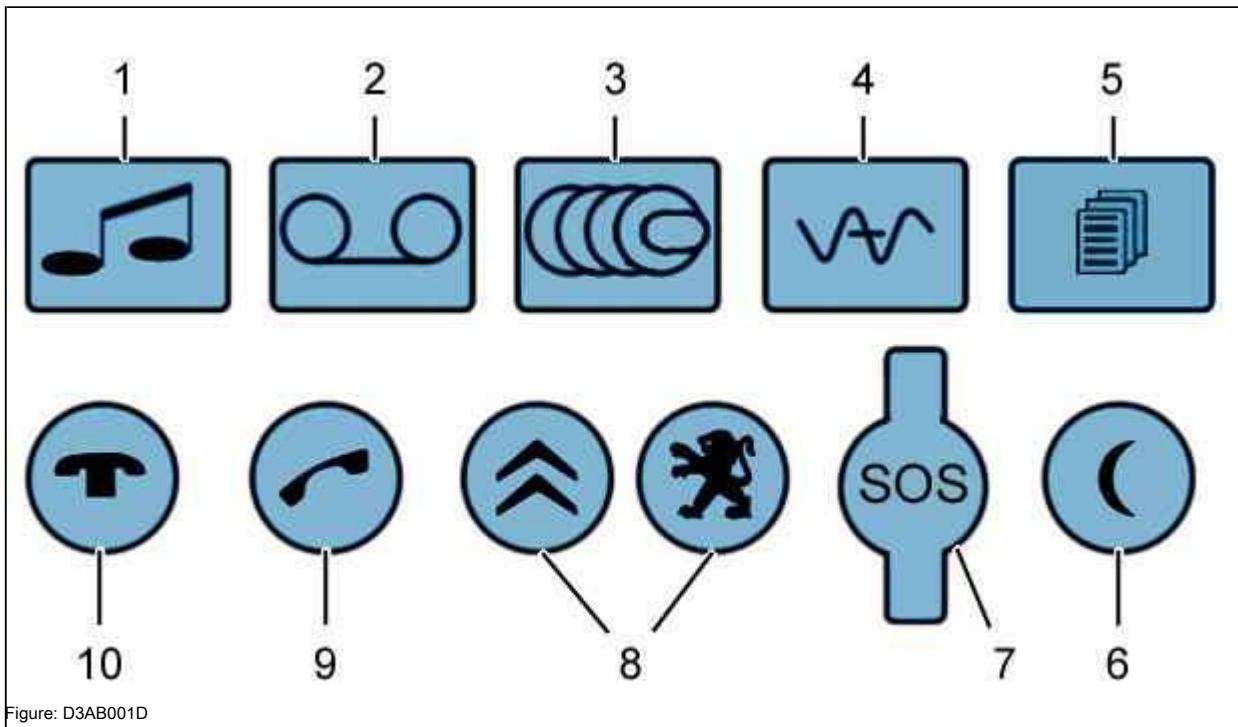


Figure: D3AB001D

1 Adjusting the tones, front / rear balance, left speaker

2	Select "cassette" audio source, change cassette playback direction Press for more than 2 seconds
3	"CD changer" sound source selection program, pressed for more than 2 seconds: Random play
4	Frequency band selection FM1, FM2, Fmast, AM or
five	Pressing for more than 2 seconds: Automatic storage of stations (self-storage) Constantly changing the output (Name of the station Frequency of the station Artist name ...)
6	Access the screen brightness adjustment menu Long press:
7	Urgent call
eight	Access to the manufacturer's service menu: Repair, search for addresses, route determination (depending on the country)
nine	Answer key
ten	Hang up key

2. Identification of devices for dismantling car radio

2.1. Gadgets

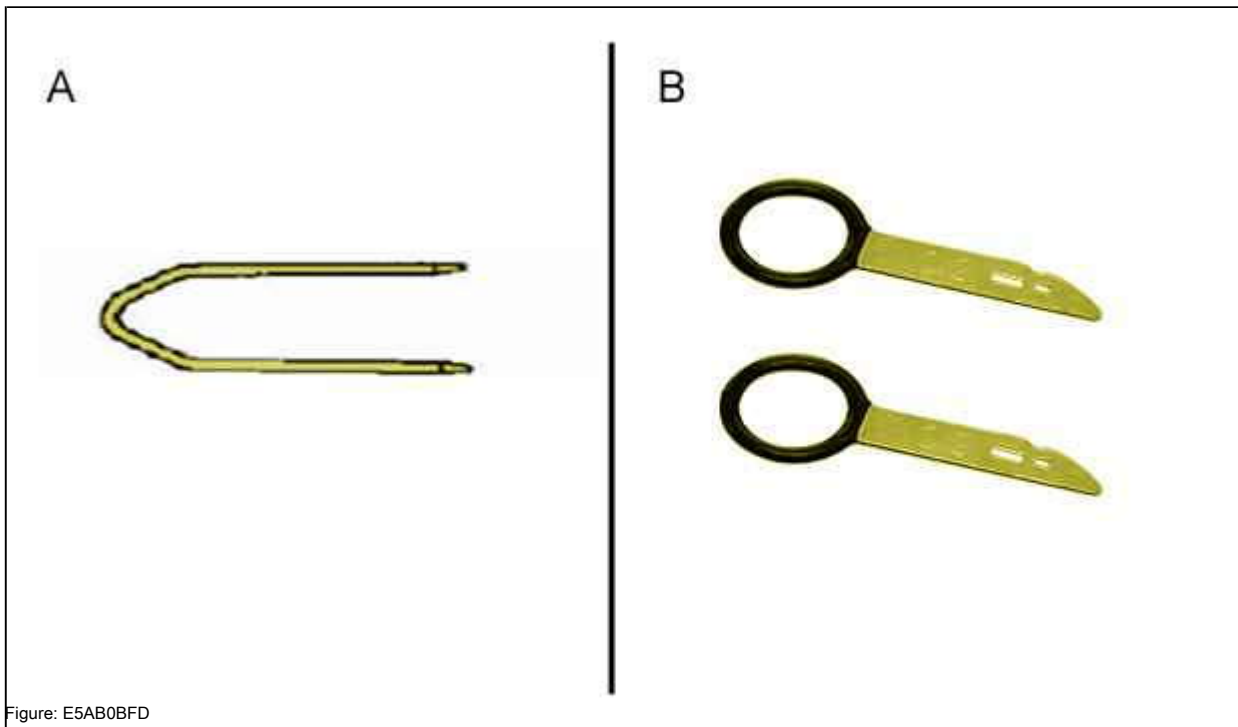


Figure: E5AB0BFD

2.2. Identification: Multimedia systems

The keys may differ depending on the vehicle.

The error reading is carried out using a diagnostic tool connected to the vehicle diagnostic connector.

When disconnecting the battery, the VIN number is remembered.

Installing the aftermarket car radio: Refer to the accessories documentation.

3. Block of an autonomous telecommunication system



Figure: D3AB003D

4. RB3 system

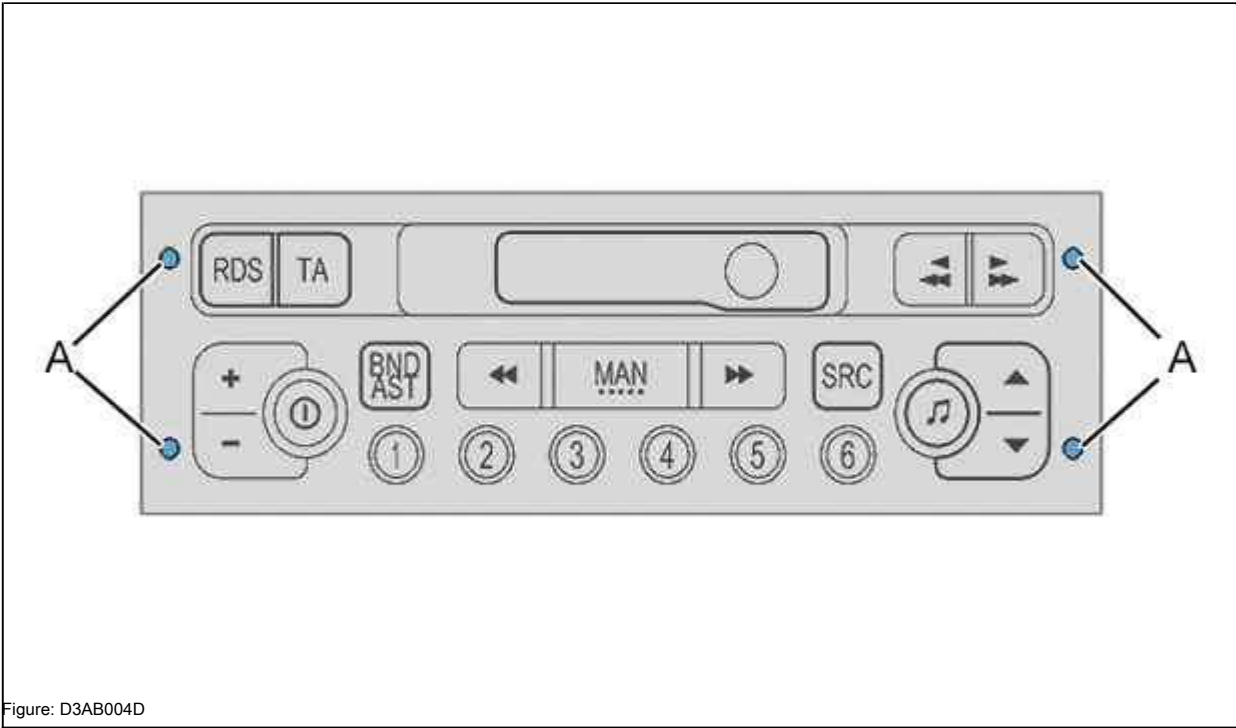


Figure: D3AB004D

5. RD3 system

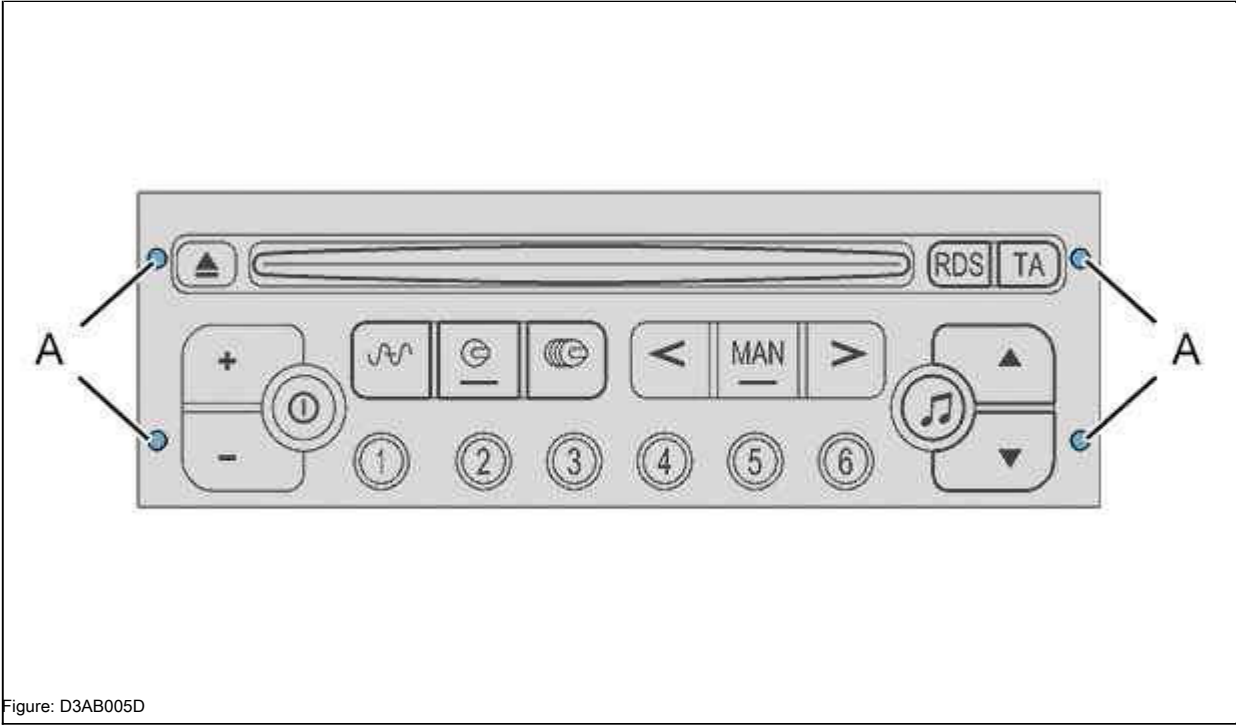




Figure: D3AB005D

6. RDE



The diagram shows a car stereo unit with a digital display. The display shows "LOU REED/JOH-12" and "SONGS FOR DREL". There are four blue dots indicating mounting points, each labeled with a line pointing to the letter "A". The dots are located at the top-left, top-right, bottom-left, and bottom-right corners of the unit's faceplate.

Figure: D3AB00FD



The diagram shows a car stereo unit with a digital display. The display shows "28.2", "AUTOROUT", "103.5 MHz", and "RFO". There are four blue dots indicating mounting points, each labeled with a line pointing to the letter "A". The dots are located at the top-left, top-right, bottom-left, and bottom-right corners of the unit's faceplate.

Figure: D3AB00GD

Figure: D3AB00FD



Figure: D3AB00GD

7. RT3 / RT4 / RT5 system



Figure: D3AB006D



Figure: D3AB007D

8. RD4 / RD45 system



9. RNEG systems

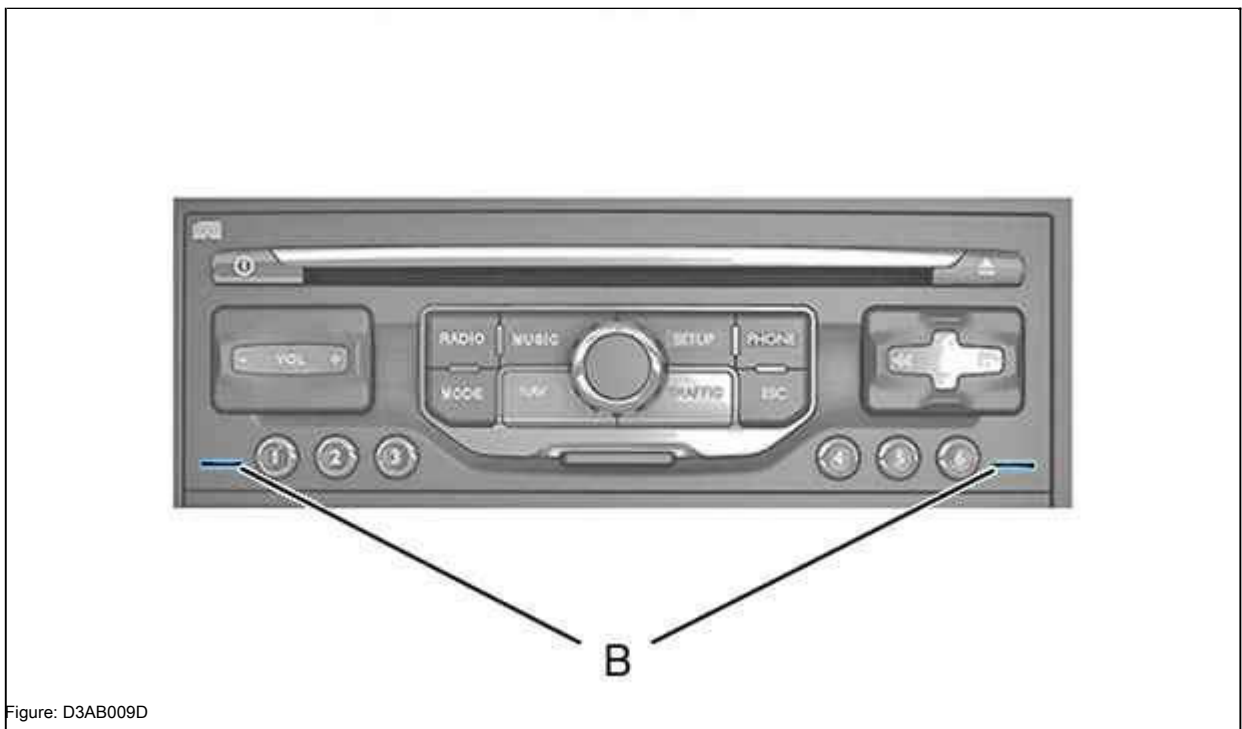




Figure: D3AB00AD



Figure: D3AB00BD

10. System RD5



Figure: D3AB00CD



Figure: D3AB00DD

11. Systems NG4



Figure: D3AB00ED

TECHNICAL REMINDER: PRECAUTIONS MULTIPLEX (E) CAR (S)

1. Disconnecting the battery

1.1. Vehicle battery located in the engine compartment

Operations performed:

- Switch off ignition (Wait for the instrument panel to turn off)
- Wait 15 minutes for the BSI block to "sleep"
- Wait until the engine cooling fans have come to a complete stop
- Disconnect the battery

1.2. Cars with a storage battery located in the passenger compartment

Operations performed:

- Remove the battery cover
- Lower the front door glass as much as possible
- Switch off ignition
- Close the door
- Wait 15 minutes
- Disconnect the battery

1.3. Cars with a battery located in the trunk

Operations performed:

- Open trunk
- Wait 15 minutes
- Open the trunk lid before disconnecting the battery (electrically operated lock)
- Disconnect the battery

2. Reconnecting the battery

Operations performed:

- Reconnect the battery
- Wait 2 minutes
- Start engine

Items requiring re-initialization after disconnecting the ACB:

- Engine control computer
- Wall lifters and sunroof
- Automatic air conditioning control (807C8)
- Electrically operated side sliding door

3. Engine control computer

Before any removal of the engine control computer:

- Wait until the engine cooling fans have come to a complete stop
- Wait at least 3 minutes
- Disconnect the battery
- After work and connection of the AKB

TECHNICAL REMINDER: TAPS

1. Electrical measurements using a C.1247 coupler of motor control computers with 128 channels (BOSCH ME7.4.6 ...)

Black 48 pin connector

Contacts Terminals		Contacts Terminals		Contacts Terminals		Contacts Terminals	
connector computer	taps connector	computer	taps connector	computer	taps connector	computer	taps
A1	001	A2	013	A3	025	A4	037
B1	002	B2	014	B3	026	B4	038
C1	003	C2	015	C3	027	C4	039
D1	004	D2	016	D3	028	D4	040
E1	005	E2	017	E3	029	E4	041
F1	006	F2	018	F3	030	F4	042
G1	007	G2	019	G3	031	G4	043
H1	008	H2	020	H3	032	H4	044
J1	009	J2	021	J3	033	J4	045
K1	010	K2	022	K3	034	K4	046
L1	011	L2	023	L3	035	L4	047
M1	012	M2	024	M3	036	M4	048

Brown 48 pin connector

Contacts Terminals		Contacts Terminals		Contacts Terminals		Contacts Terminals	
connector computer	taps connector	computer	taps connector	computer	taps connector	computer	taps
A1	049	A2	061	A3	073	A4	085
B1	050	B2	062	B3	074	B4	086
C1	051	C2	063	C3	075	C4	087
D1	052	D2	064	D3	076	D4	088
E1	053	E2	065	E3	077	E4	089
F1	054	F2	066	F3	078	F4	090
G1	055	G2	067	G3	079	G4	091
H1	056	H2	068	H3	080	H4	092
J1	057	J2	069	J3	081	J4	093
K1	058	K2	070	K3	082	K4	094
L1	059	L2	071	L3	083	L4	095
M1	060	M2	072	M3	084	M4	096

Gray 32-pin connector

Contacts Terminals		Contacts Terminals		Contacts Terminals		Contacts Terminals	
connector computer	taps connector	computer	taps connector	computer	taps connector	computer	taps
A1	097	A2	105	A3	113	A4	121
B1	098	B2	106	B3	114	B4	122
C1	099	C2	107	C3	115	C4	123
D1	100	D2	108	D3	116	D4	124
E1	101	E2	109	E3	117	E4	125
F1	102	F2	110	F3	118	F4	126
G1	103	G2	111	G3	119	G4	127
H1	104	H2	112	H3	120	H4	128

2. Electrical measurements using a C.1248 coupler of engine control computers with 112 channels (MAGNETI MARELLI 4.8P / Sirius81 ...)

Black 32 pin connector CLM1 = Electrical connection

Contacts Terminals		Contacts Terminals		Contacts Terminals		Contacts	Terminals
connector	taps connector	computer	taps connector	computer	taps connector	computer	taps
A1	001	A2	009	A3	017	A4	025
B1	002	B2	010	B3	018	B4	026
C1	003	C2	011	C3	019	C4	027
D1	004	D2	012	D3	020	D4	028
E1	005	E2	013	E3	021	E4	029
F1	006	F2	014	F3	022	F4	030
G1	007	G2	015	G3	023	G4	031
H1	008	H2	016	H3	024	H4	032

Black 32 pin connector CLM1 = Electrical connection

Contacts Terminals		Contacts Terminals		Contacts Terminals		Contacts	Terminals
connector	taps connector	computer	taps connector	computer	taps connector	computer	taps
A1	081	A2	089	A3	097	A4	105
B1	082	B2	090	B3	098	B4	106
C1	083	C2	091	C3	099	C4	107
D1	084	D2	092	D3	100	D4	108
E1	085	E2	093	E3	101	E4	109
F1	086	F2	094	F3	102	F4	110
G1	087	G2	095	G3	103	G4	111
H1	088	H2	096	H3	104	H4	112

Brown 48 pin CLC1 = Electrical body connection

Contacts Terminals		Contacts Terminals		Contacts Terminals		Contacts	Terminals
connector	taps connector	computer	taps connector	computer	taps connector	computer	taps
A1	033	A2	045	A3	057	A4	069
B1	034	B2	046	B3	058	B4	070
C1	035	C2	047	C3	059	C4	071
D1	036	D2	048	D3	060	D4	072
E1	037	E2	049	E3	061	E4	073
F1	038	F2	050	F3	062	F4	074
G1	039	G2	051	G3	063	G4	075
H1	040	H2	052	H3	064	H4	076
J1	041	J2	053	J3	065	J4	077
K1	042	K2	054	K3	066	K4	078
L1	043	L2	055	L3	067	L4	079
M1	044	M2	056	M3	068	M4	080

3. Intelligent switching unit Electrical measurements with C1240 coupler

Selection depending on the number of terminals for measurement

BSI connector color 12-pin Connector terminal numbers Selection of wire harness test Blue		
	1	1
	2	2

yellow color	3	3
	4	4
	five	five
	6	6
	7	7
	eight	eight
	nine	nine
	ten	ten
	eleven	eleven
	12	12
	1	13
Brown	2	fourteen
	3	fifteen
	4	sixteen
	five	17
	6	18
	7	nineteen
	eight	20
	nine	21
	ten	22
	eleven	23
	12	24
	13	25
	fourteen	26
	fifteen	27
	sixteen	28
	17	29
	18	thirty
	nineteen	31
	20	32
	21	33
	22	34
	23	35
	24	36
	25	37
	26	38
	1	39
	2	40
	3	41
	4	42
	five	43
	6	44
	7	45
	eight	46
	nine	47
	ten	48
	eleven	49
	12	50

4. Intelligent switching unit Electrical measurements with C1241 coupler

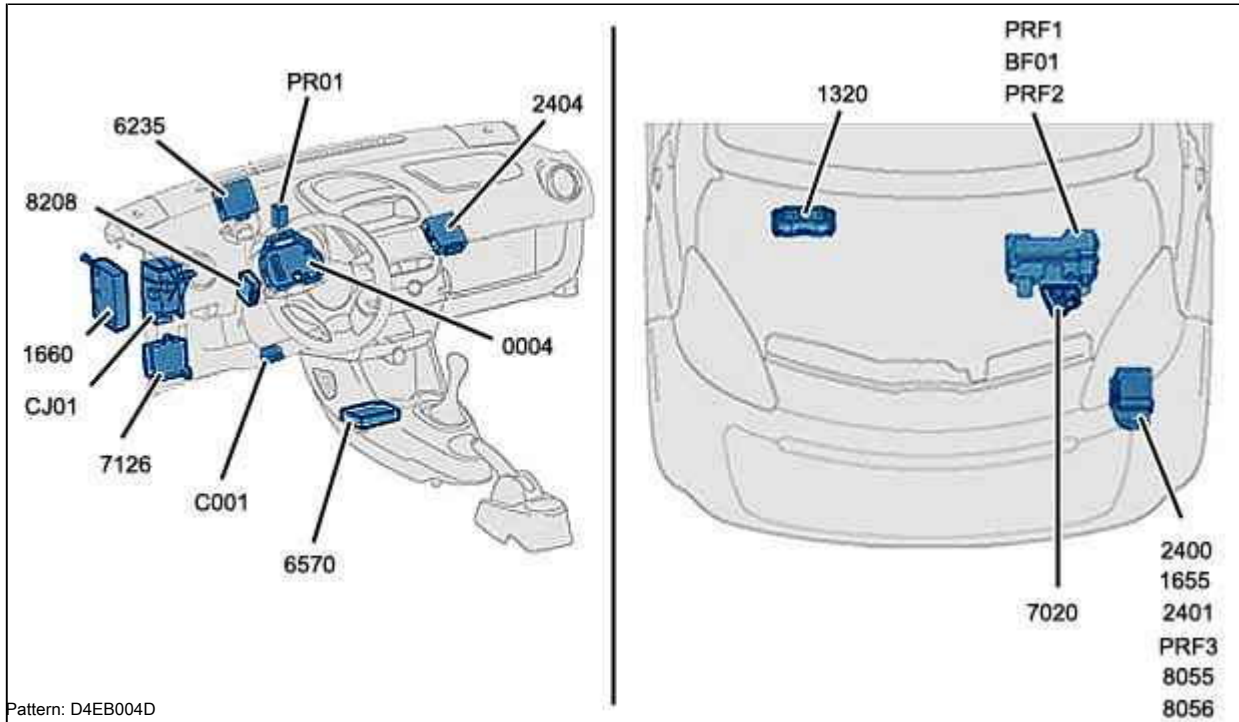
Selection depending on the number of terminals for measurement

Tap-off C1241 Connector Terminal Numbers Wire Harness Test Selection Blue		
	1	3
	2	4

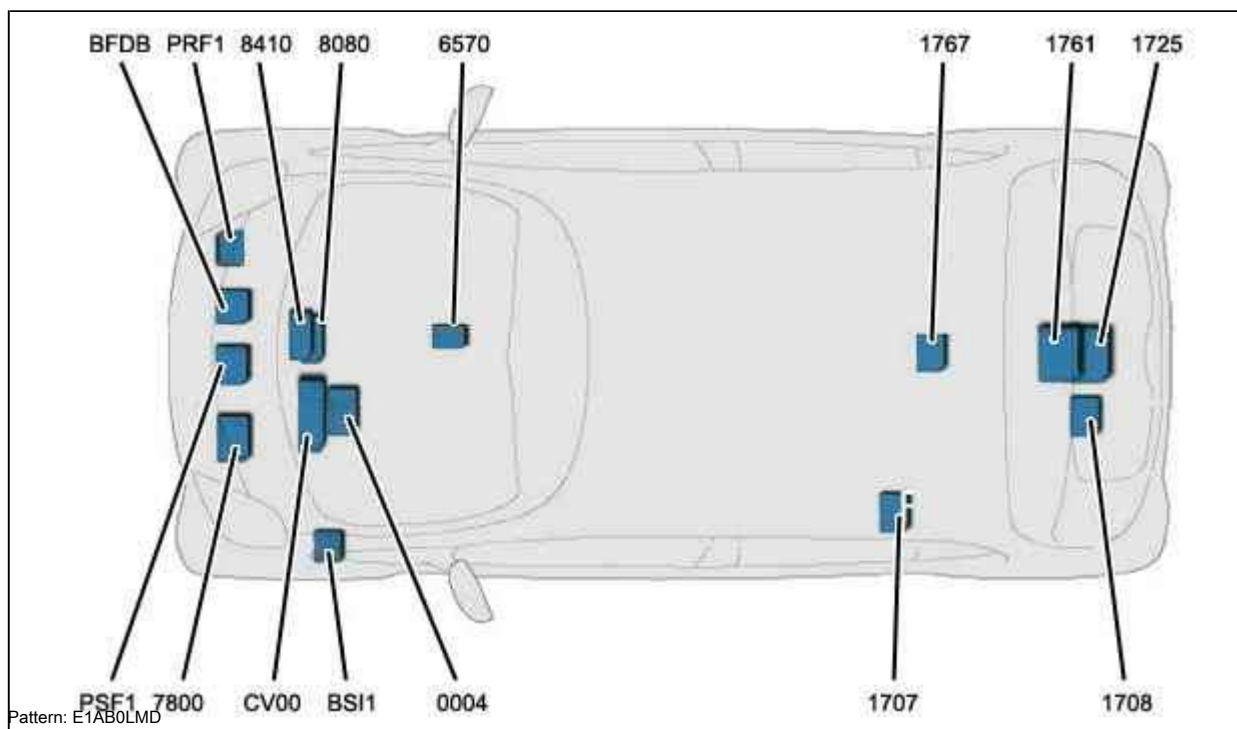
The black	3	five
	4	6
	five	7
	6	eight
	7	nine
	eight	ten
	nine	eleven
	ten	12
	eleven	13
	12	fourteen
	13	fifteen
	fourteen	sixteen
	fifteen	17
	sixteen	18
	17	nineteen
	18	20
	nineteen	21
	20	22
	21	23
	22	24
	23	25
	24	26
	25	27
	26	28
	1	29
Green	2	thirty
	3	31
	4	32
	five	33
	6	34
	7	35
	eight	36
	nine	37
	ten	38
	eleven	39
	12	40
	13	41
	fourteen	42
	fifteen	43
	sixteen	44
	1	45
	2	46
	3	47
	4	48
	five	49
	6	50
	7	51
	eight	52
	nine	53
	ten	54
	eleven	55
	12	56
	13	57
	fourteen	58
	fifteen	59
	sixteen	60

TECHNICAL REMINDER: COMPUTER LOCATIONS

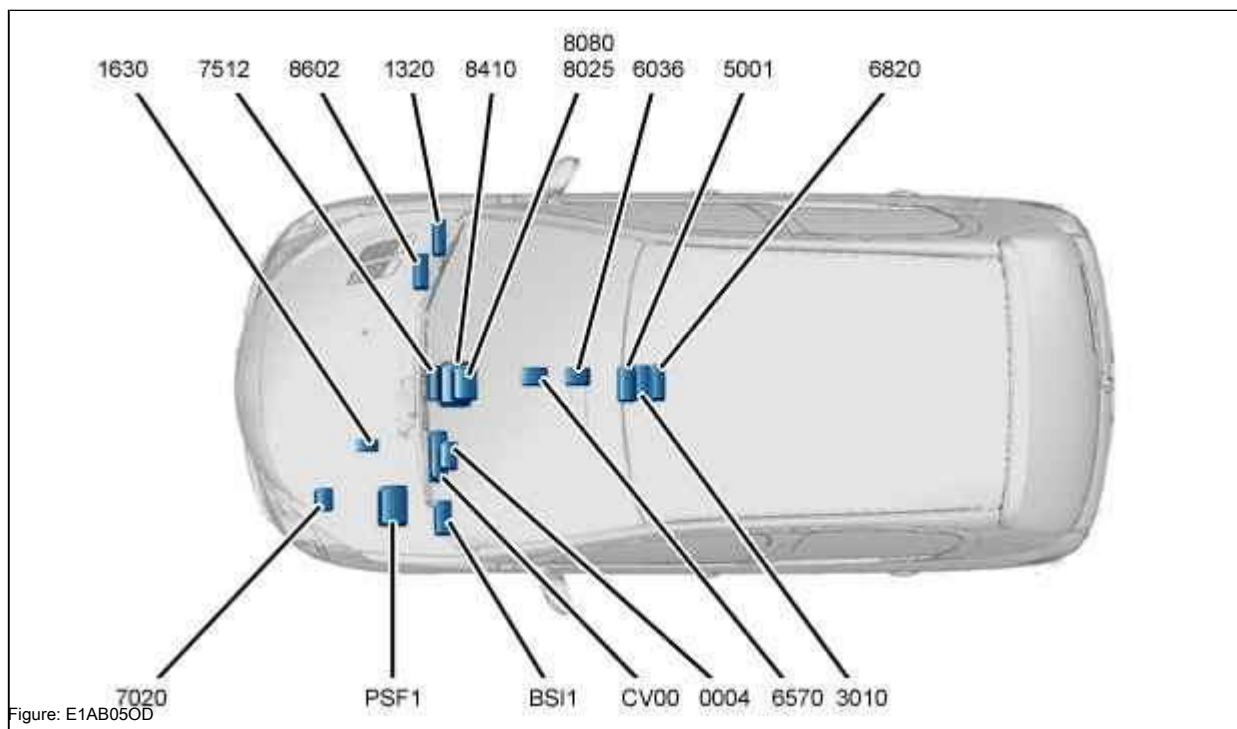
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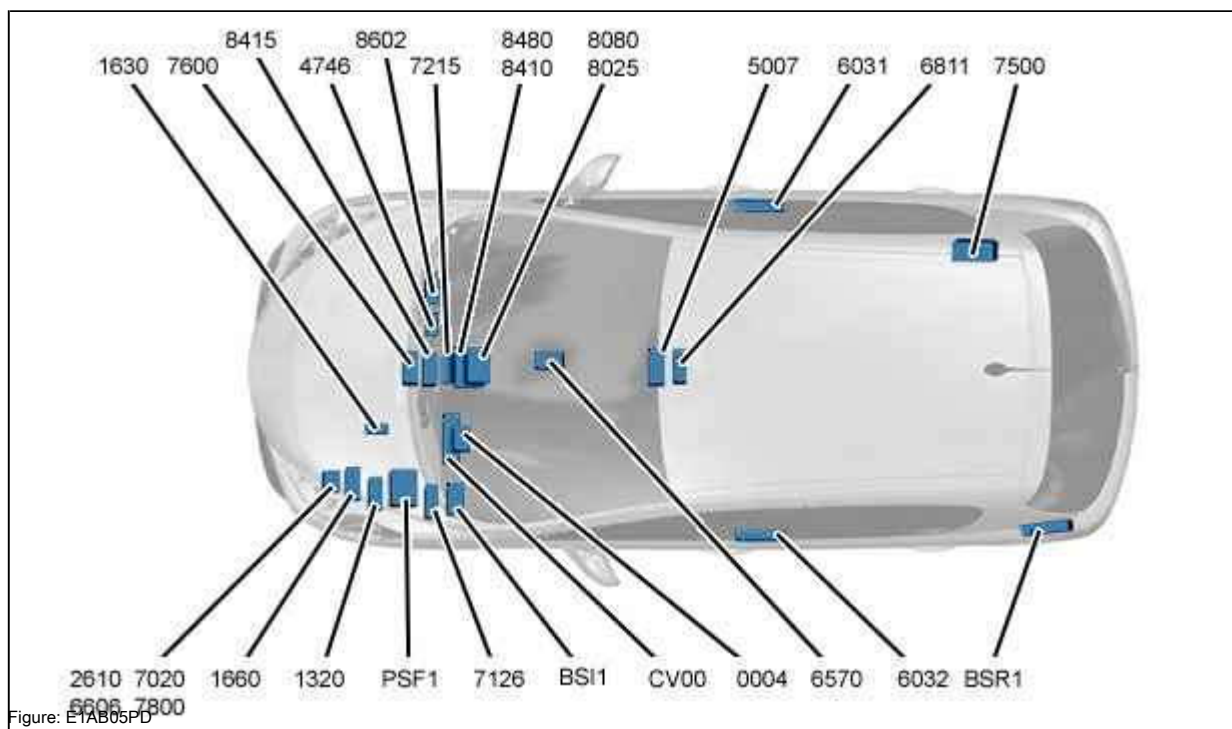
2. Ion



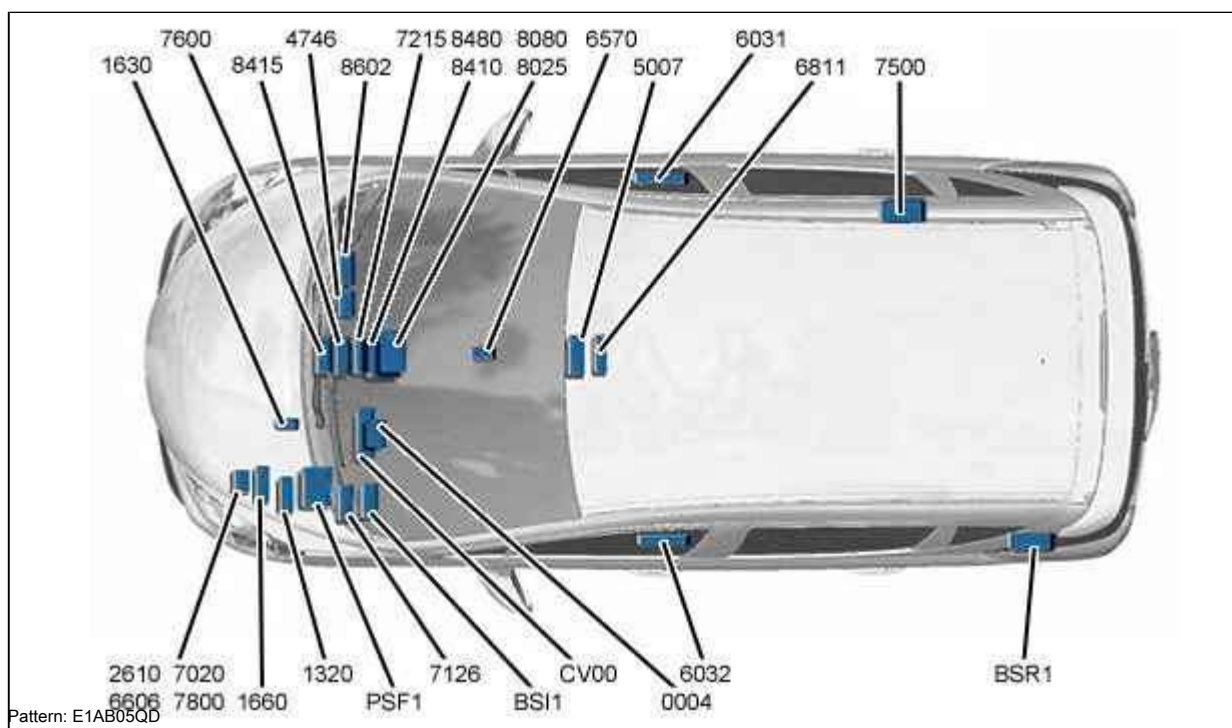
3.206+ (T3E) / 207 (T3)



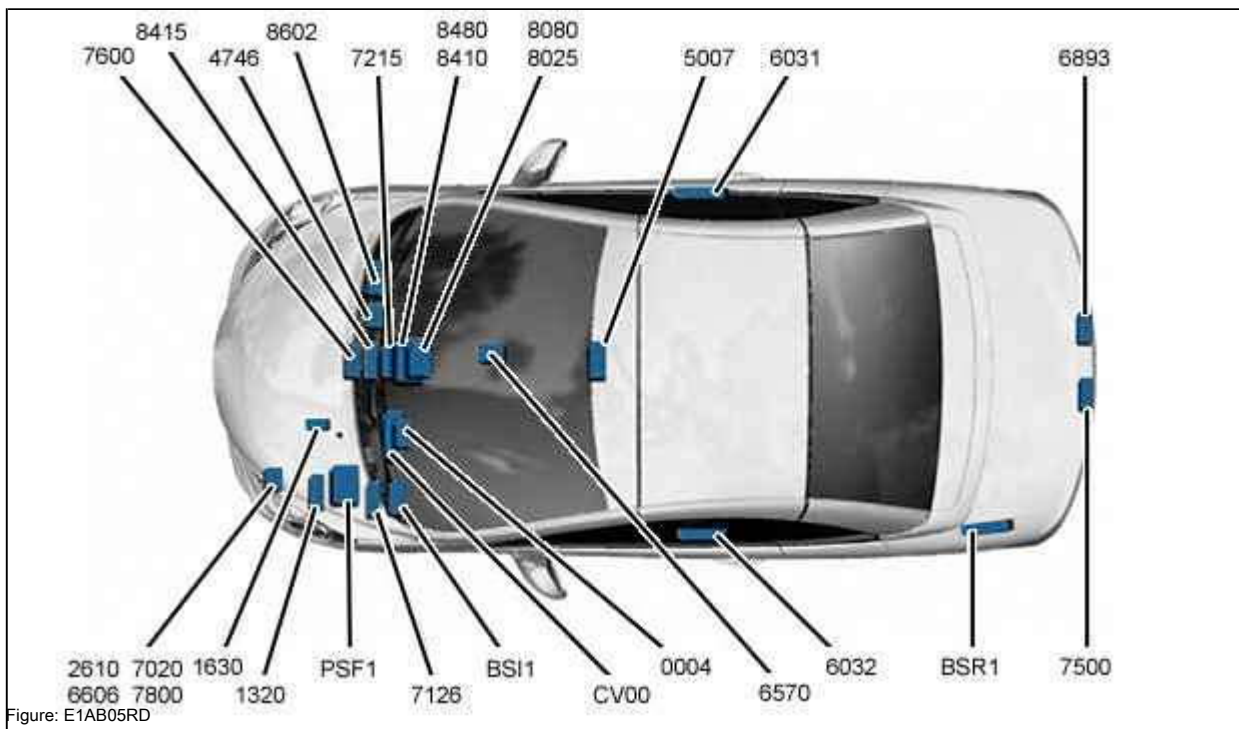
4.207 (Sedan with 3 or 5 doors)



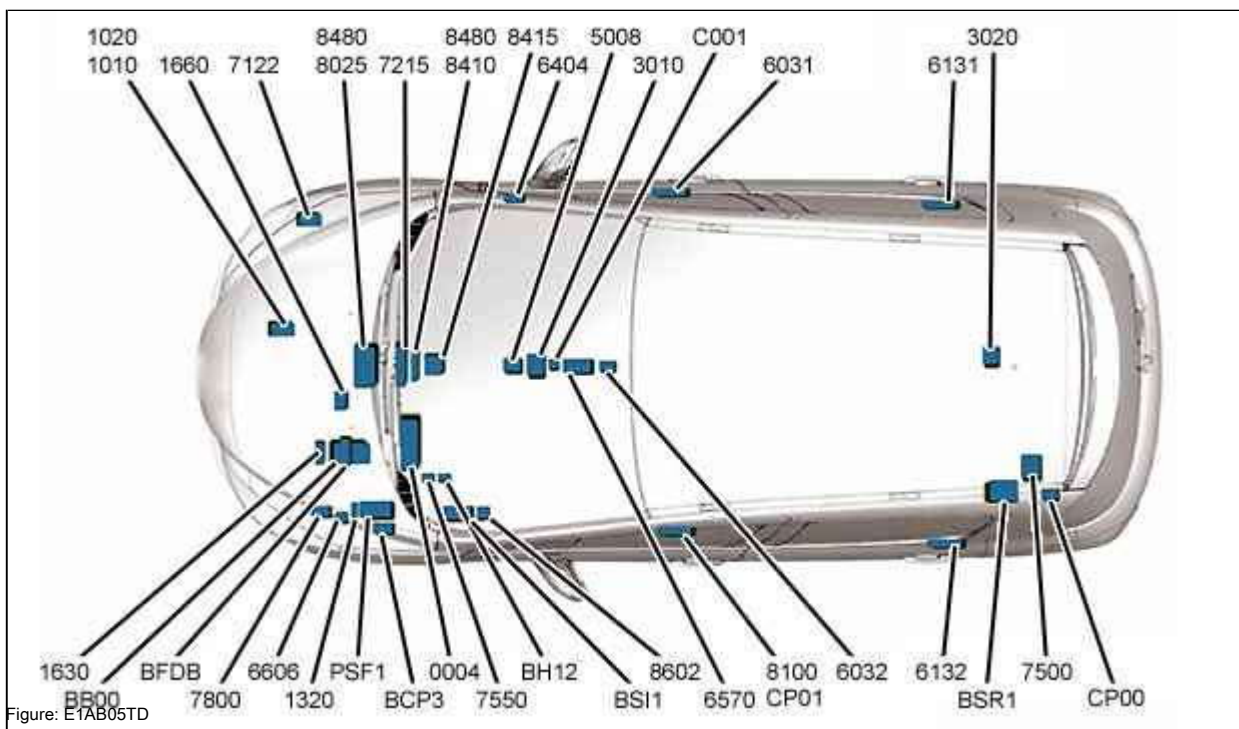
5.207 station wagon / SW



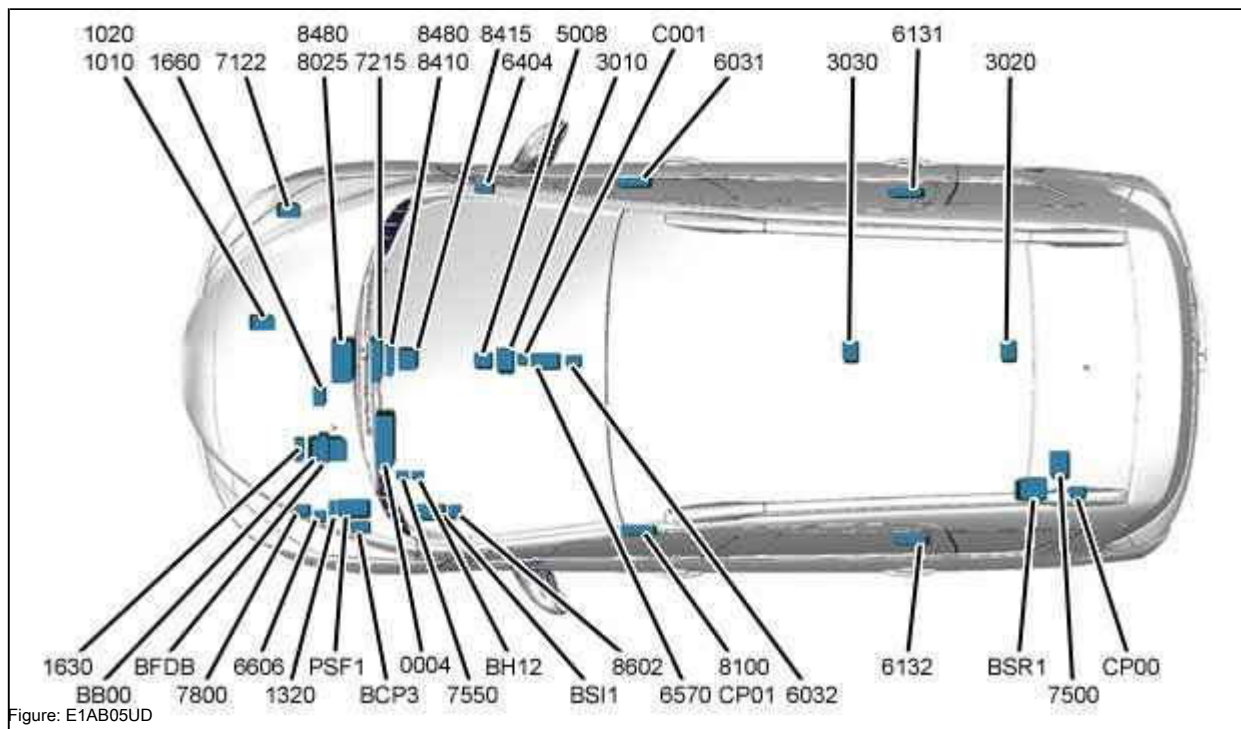
6.207 coupe / convertible



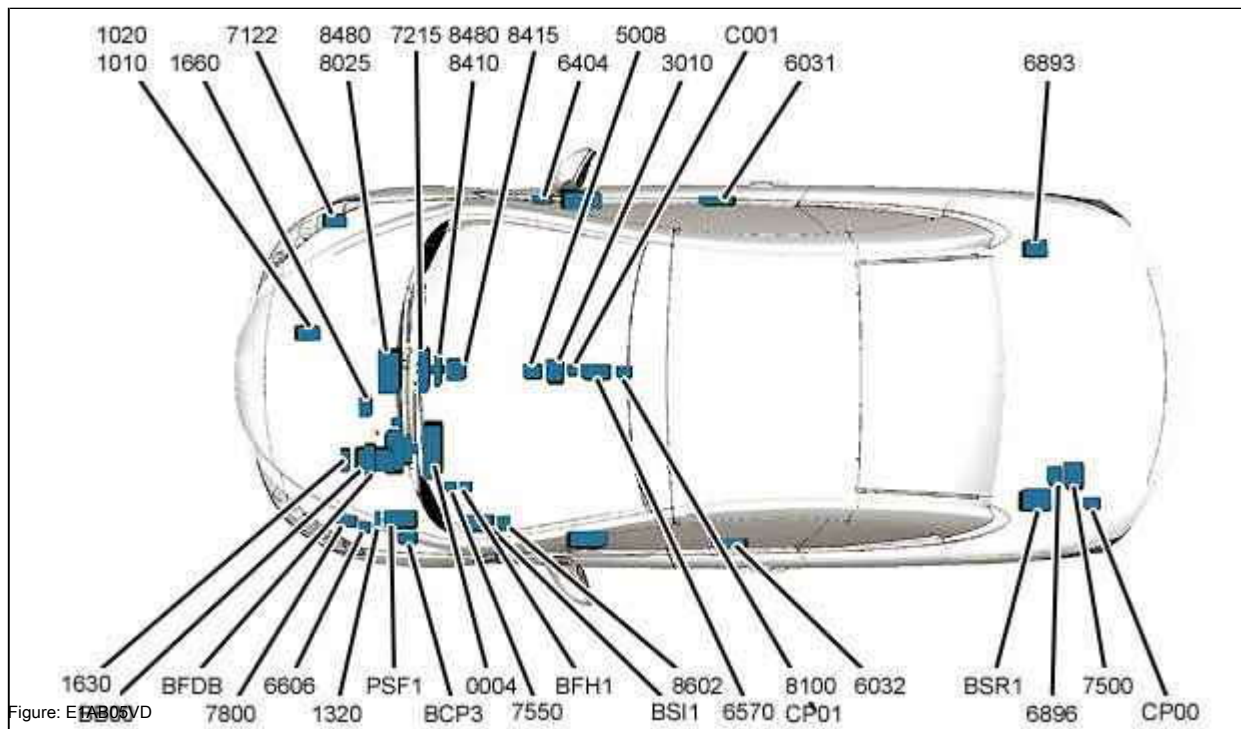
7.308 (Sedan with 3 or 5 doors)



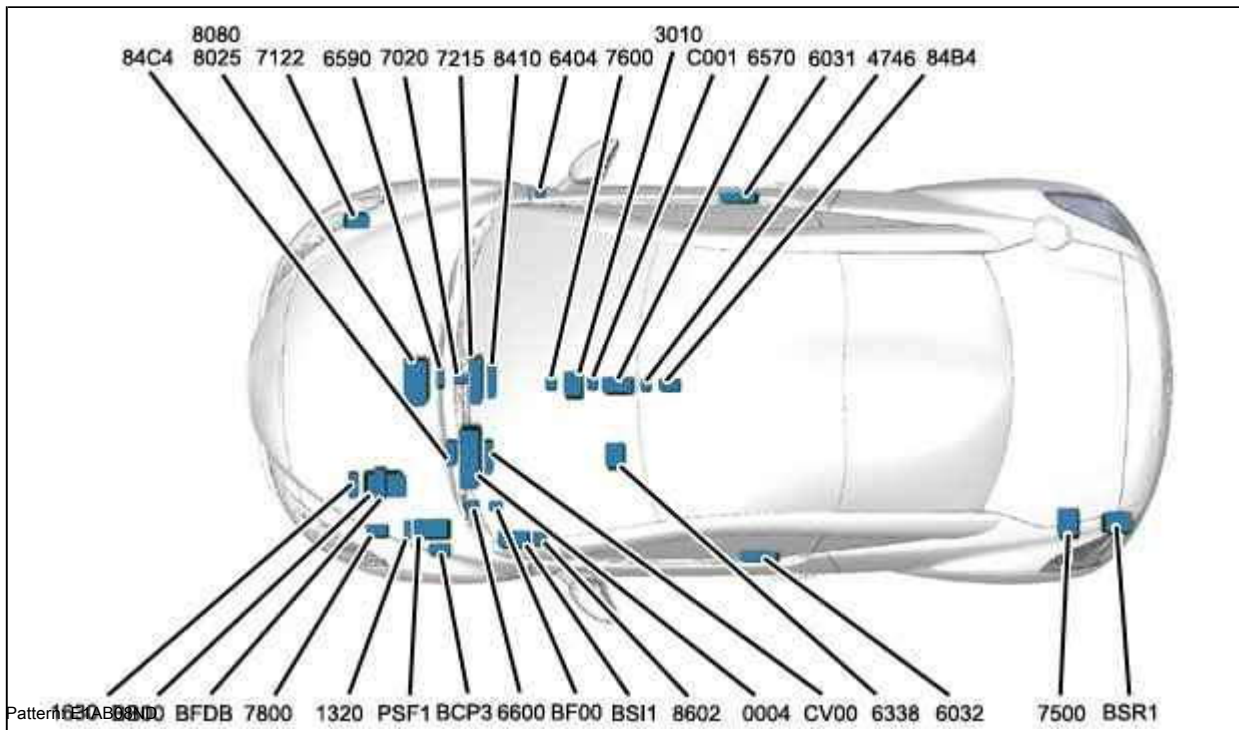
8.308 SW



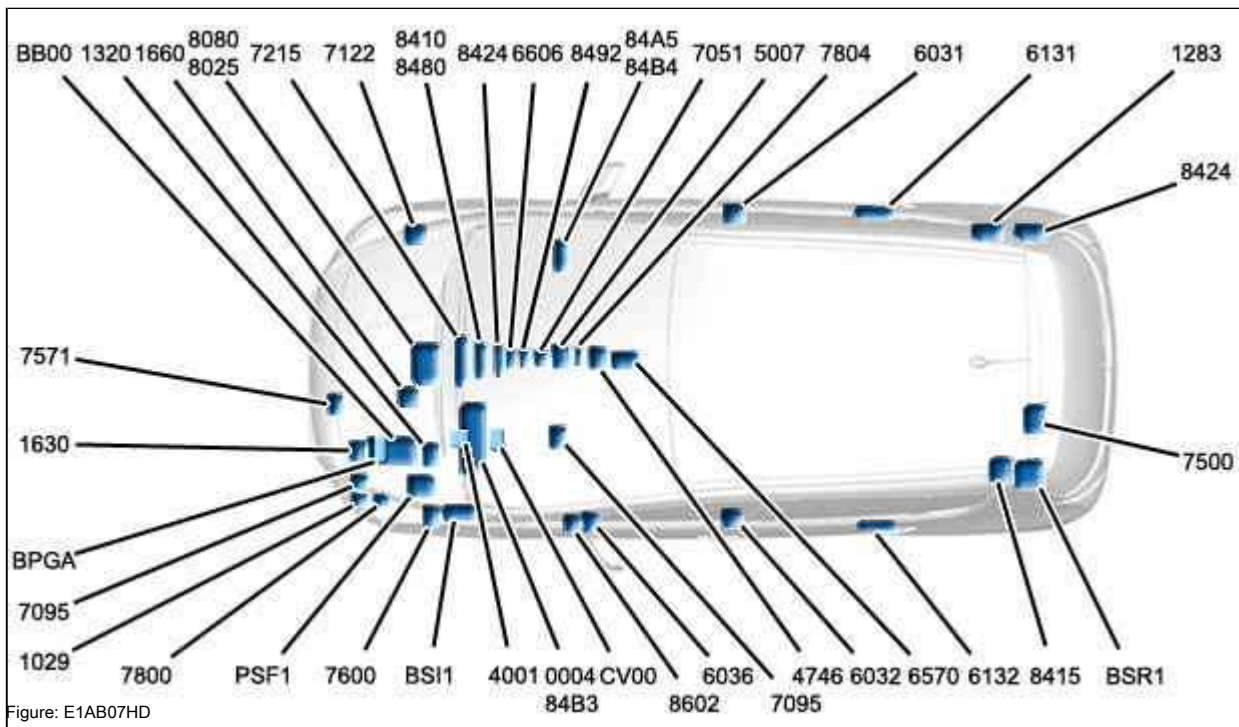
9.308 coupe / convertible



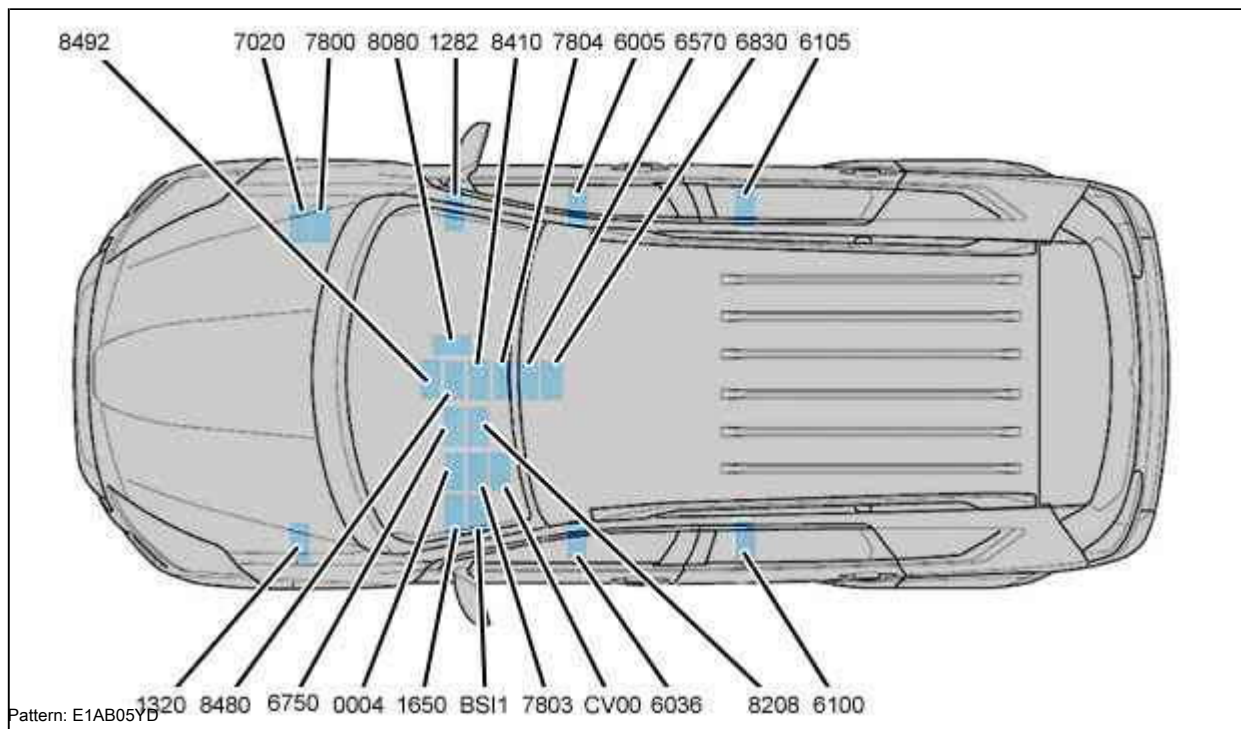
10. RCZ



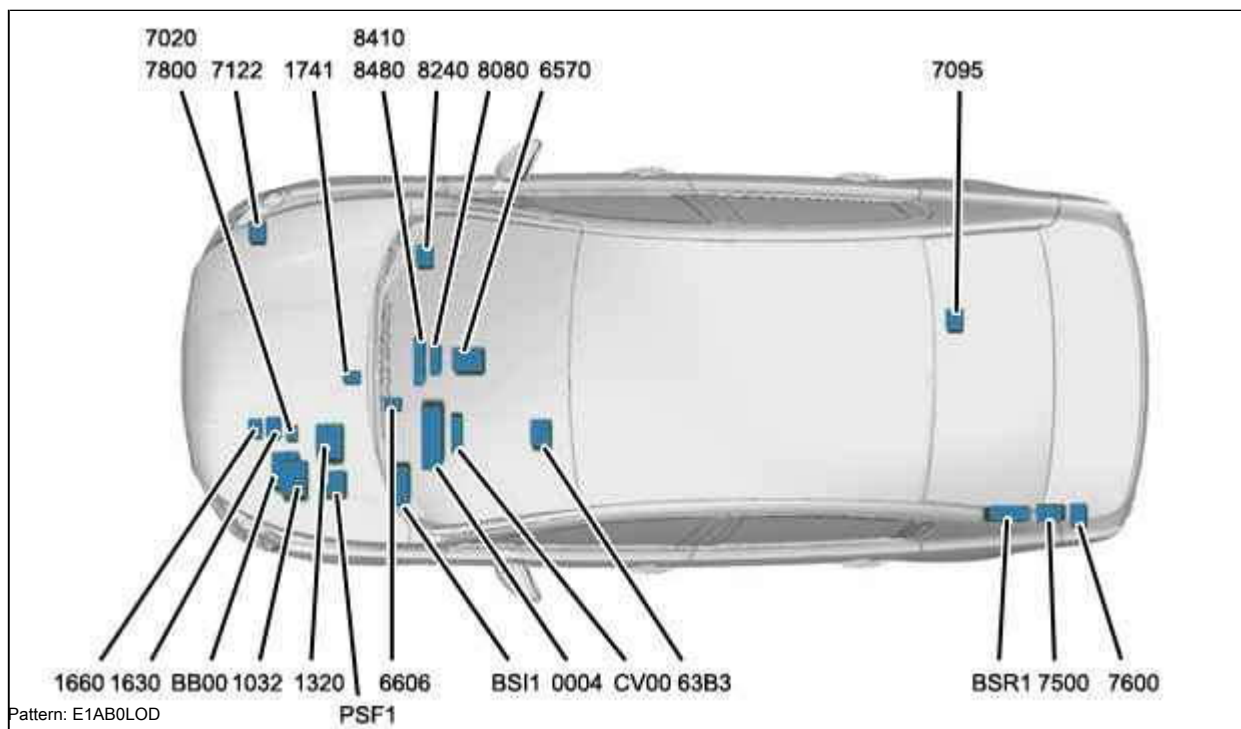
11.3008 / 5008



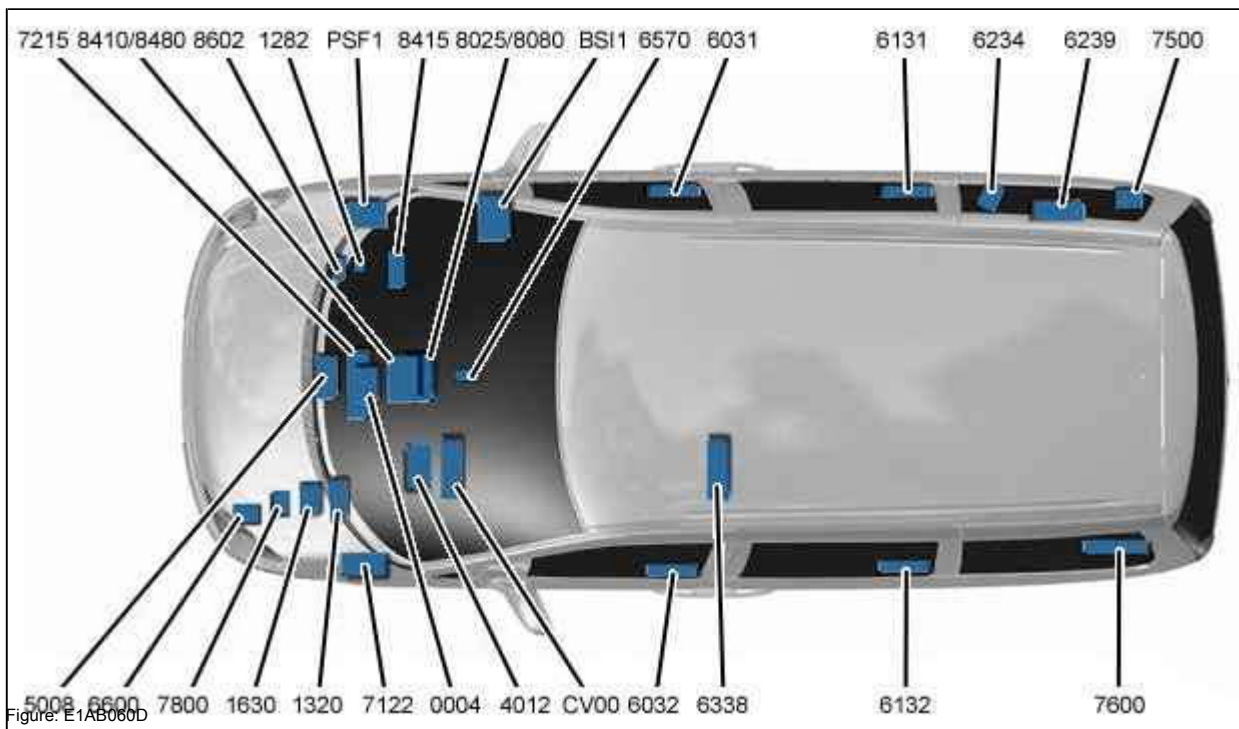
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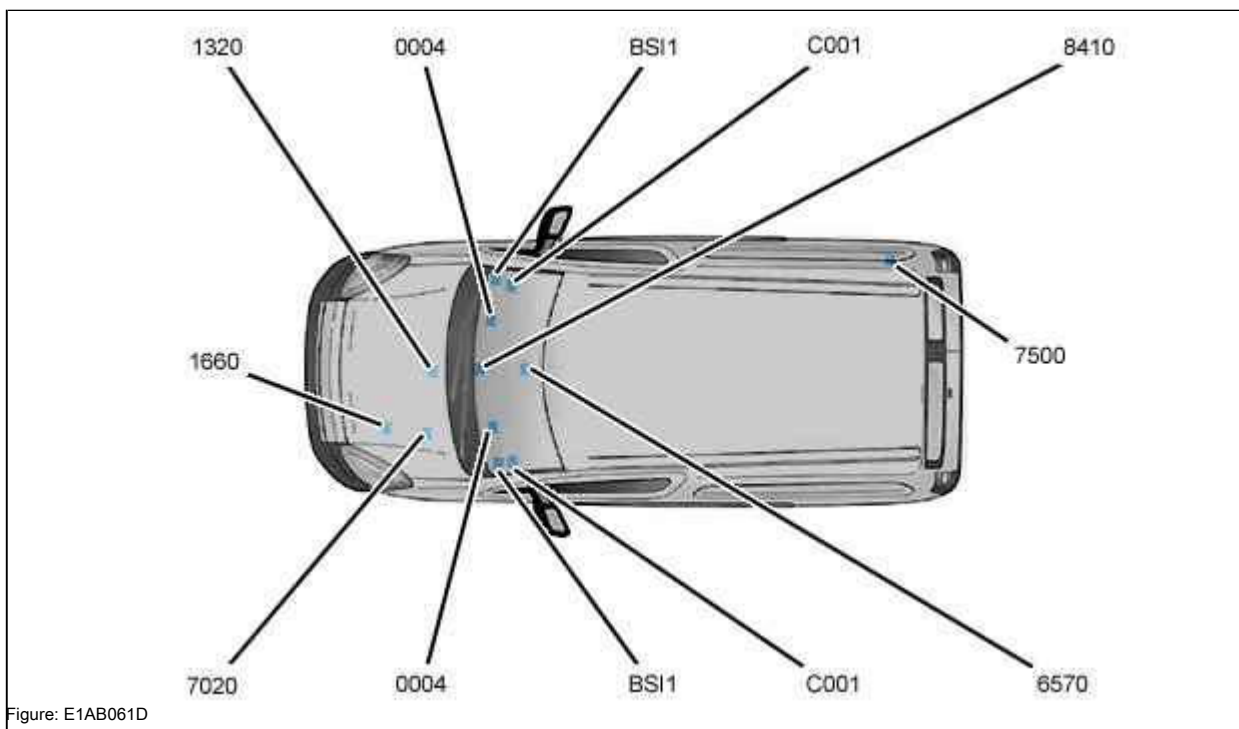
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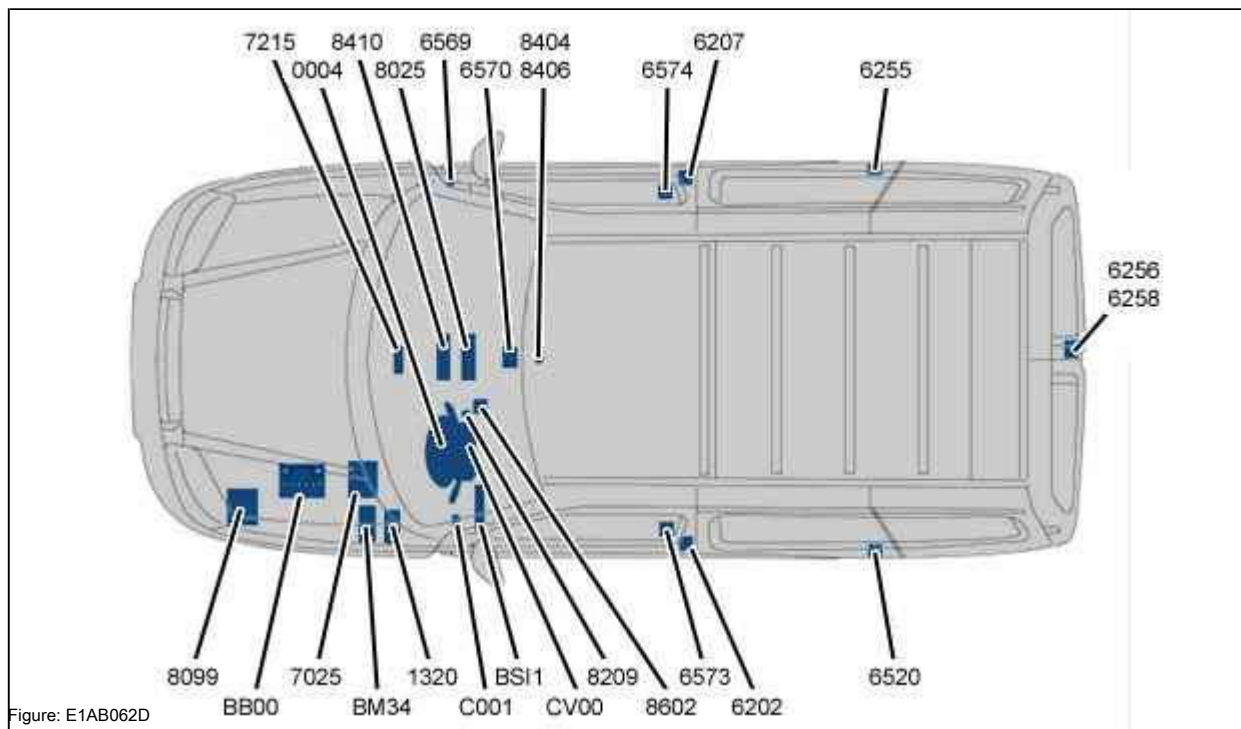
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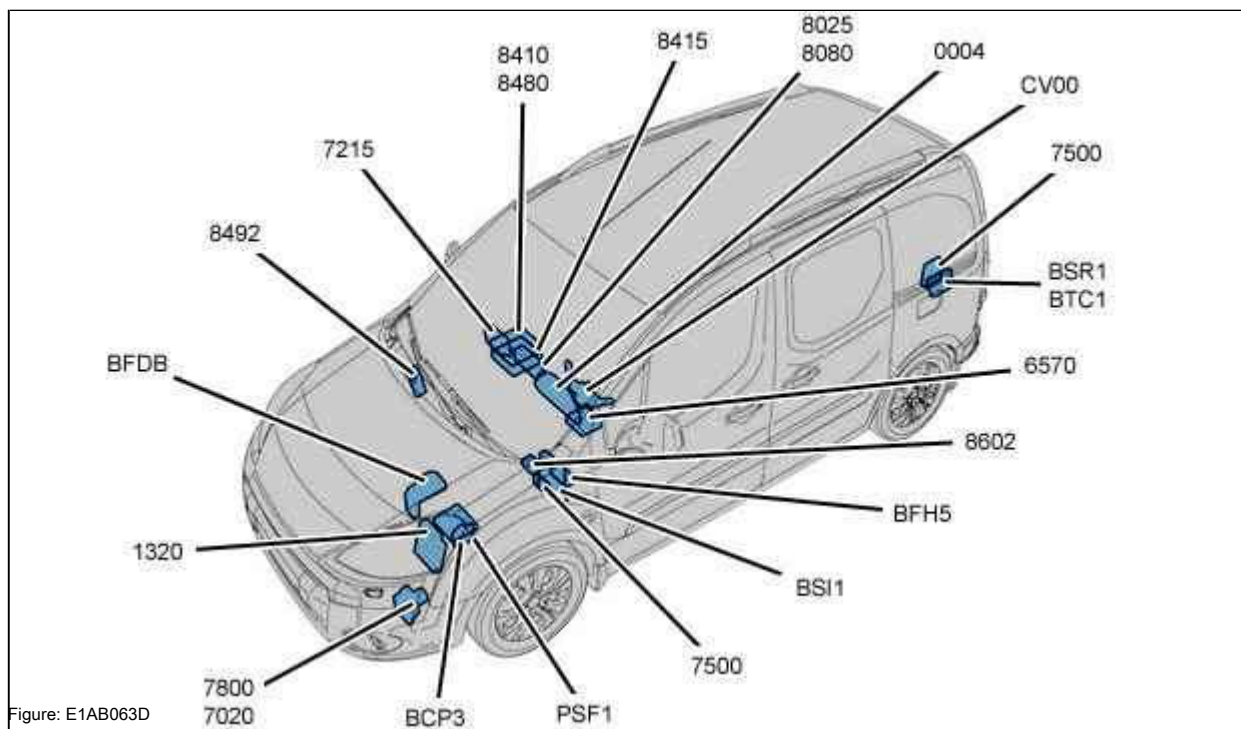
15. Bipper (B9)



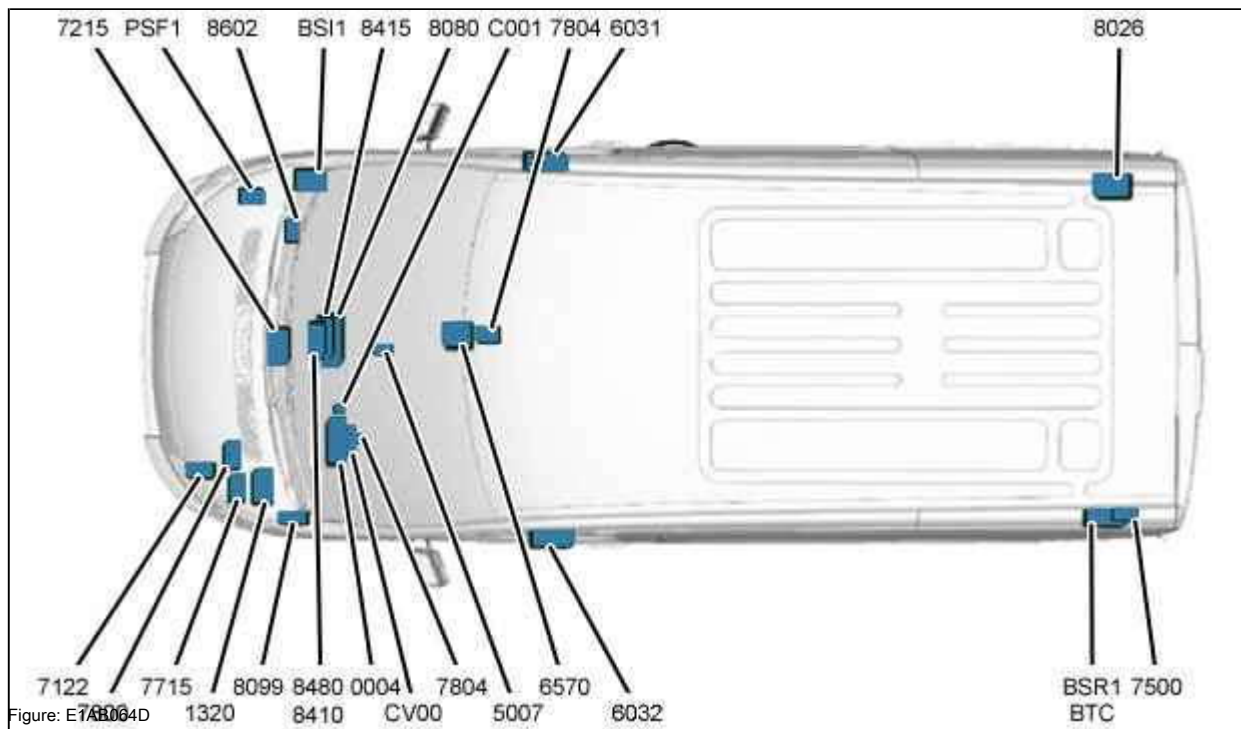
16. Partner (M59)



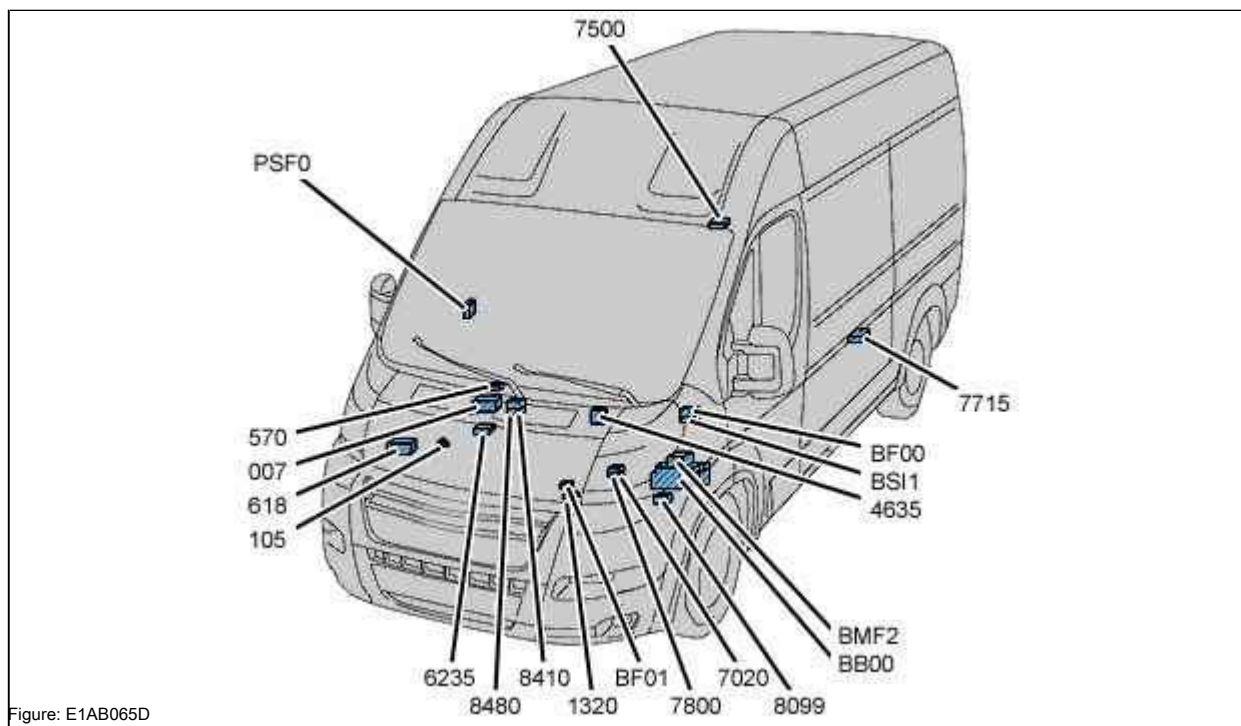
17. Partner (B9)



18. EXPERT (G9)



19. BOXER (U9)



TECHNICAL REMINDER: ENCLOSURE PROTECTION WINDOWS

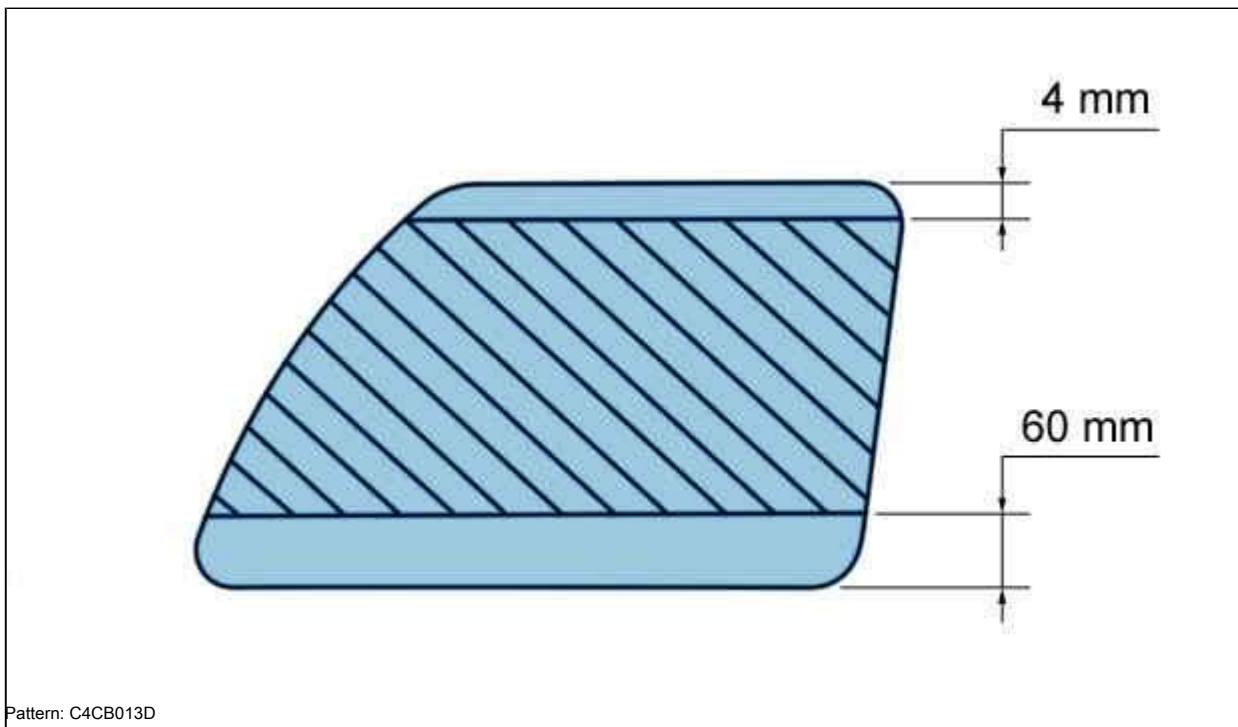
1. Disconnecting the Pinch Protection System

Procedure:

- 5 seconds after detecting the obstacle, lower the glass in manual mode to the stop (1 mark) and continue to press for a few seconds
- After 2 seconds, lift the glass manually

NOTE: The anti-pinch system is automatically activated when the power window switch is released.

2. Initialization of power windows



Initialization allows the engine computer to "memorize" the open and close extreme positions of the windows to activate the anti-pinch function.

(This operation must be performed in the following cases):

- After each disconnection of the battery (glass open)
- Replacing the window regulator
- Anti-pinch protection malfunction

Initialization procedure (Cars with door pillar):

- Set the window lifter to the upper stop position (At 50 mm intervals)
- Hold the power switch on for 3 seconds
- Lower the glass all the way
- Hold the power switch on for 3 seconds
- Lift the glass in automatic mode
- Anti-pinch system initialized

Initialization procedure (Vehicles without door pillar):

- Close the doors
- Move the window regulator to the upper stop position (In 50 mm intervals) Hold the switch on the stop for 3 seconds
- Lower the glass all the way
- Hold the switch down for 3 seconds Raise the glass in automatic mode
- Anti-pinch protection is initialized
-

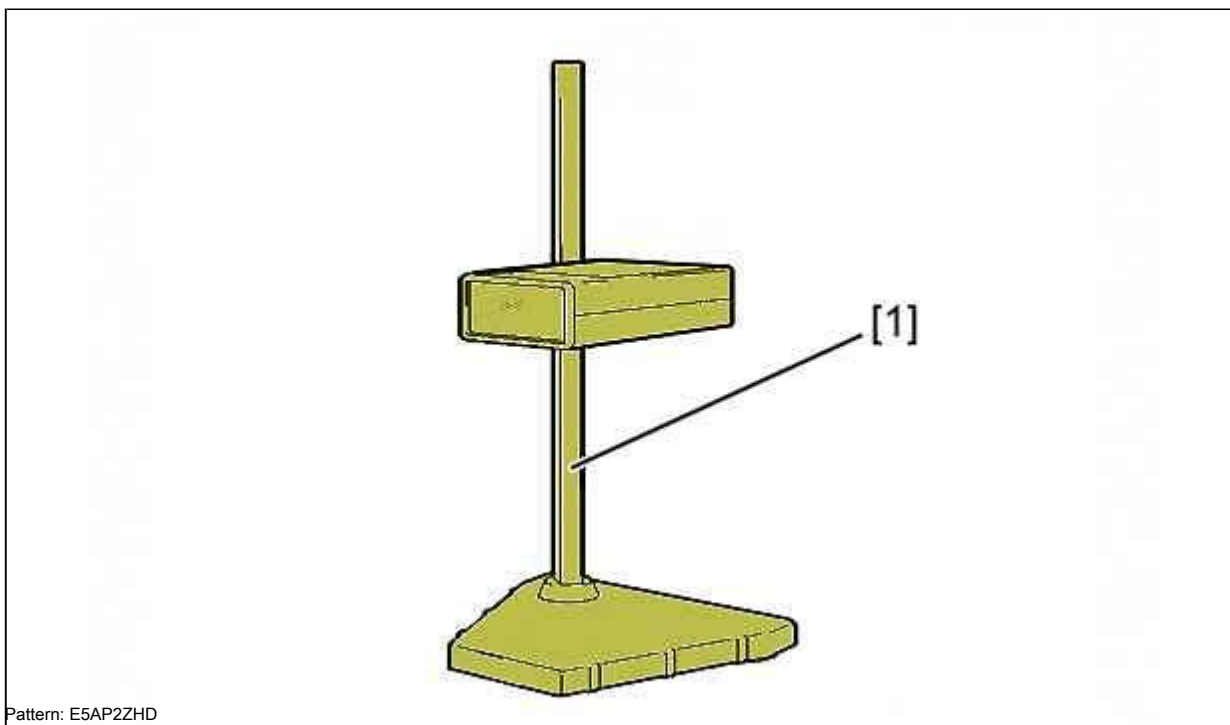
NOTE: To avoid overheating of the engine, the electronic system monitors its operating time.

CHECK ADJUSTMENT: HEADLIGHT

MANDATORY: Observe the cleanliness and safety rules



1. Tools



[1] optical headlight adjustment:

- FACOM LUX 200L
- MULLER 664 LASER
- TECNOTEST 432 / PM

2. Verification

2.1. Prerequisites for testing

Unload the vehicle.

Curb vehicle (empty vehicle, fully fueled and completed).

Clean up large build-ups of dirt, snow or ice as these may change the reference body height above the ground.

Check the pressures of tires that should be inflated to the manufacturer's specified pressure for normal road conditions.

Park the vehicle on a level surface by turning the steering wheel to the Wheel Straight position. Turn on the headlights and check the efficiency of the headlight beam height corrector depending on the load by turning the control wheel, and then set it to the normal load position O.

2.2. Control procedure

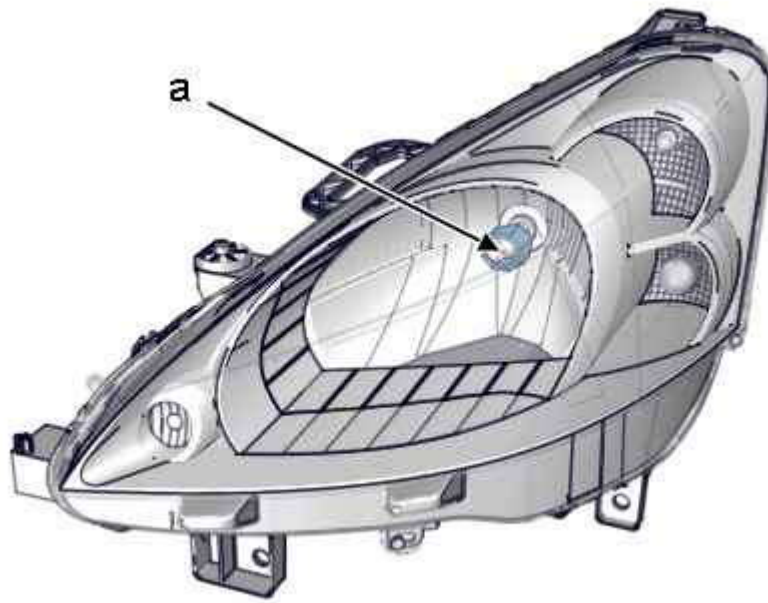


Figure: C5EM07FD

Start the engine.

Align the reflector [1] with the vehicle in accordance with the instrument's instructions. Align the center of the lens of the regloscope [1] with the optical center of the headlight (center of the curtain) (at "a"); Using the laser beam of the regloscope or using the pull of the regloscope.

Turn on the low beam headlights.

Continue the control procedure, following the instructions for the device used [1].

3. Adjustment

Apply the headlamp adjustment procedure in accordance with the instrument manual [7].

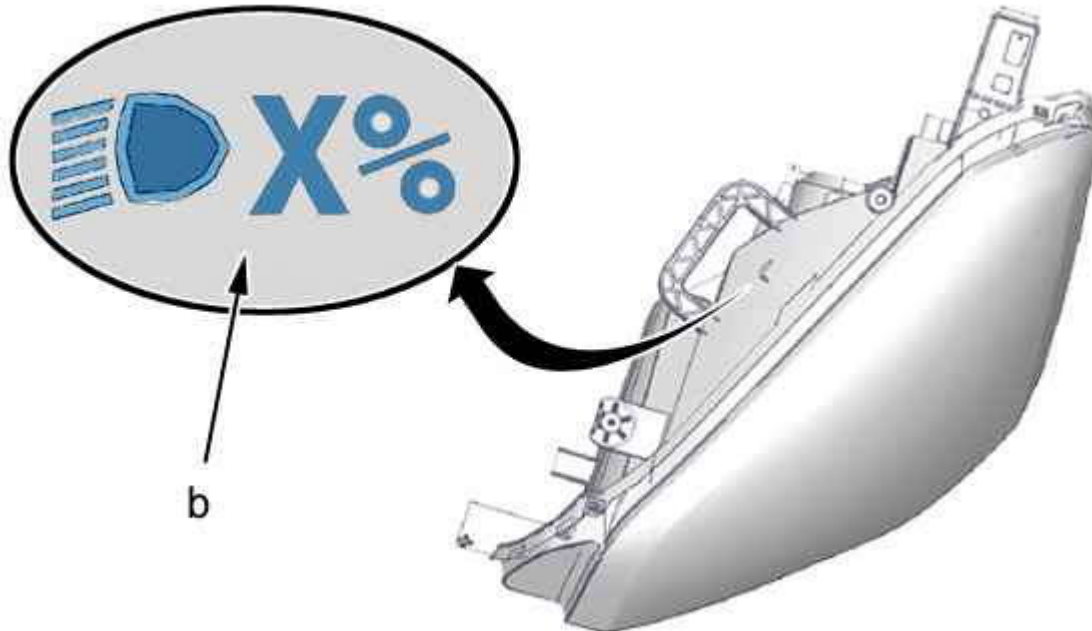
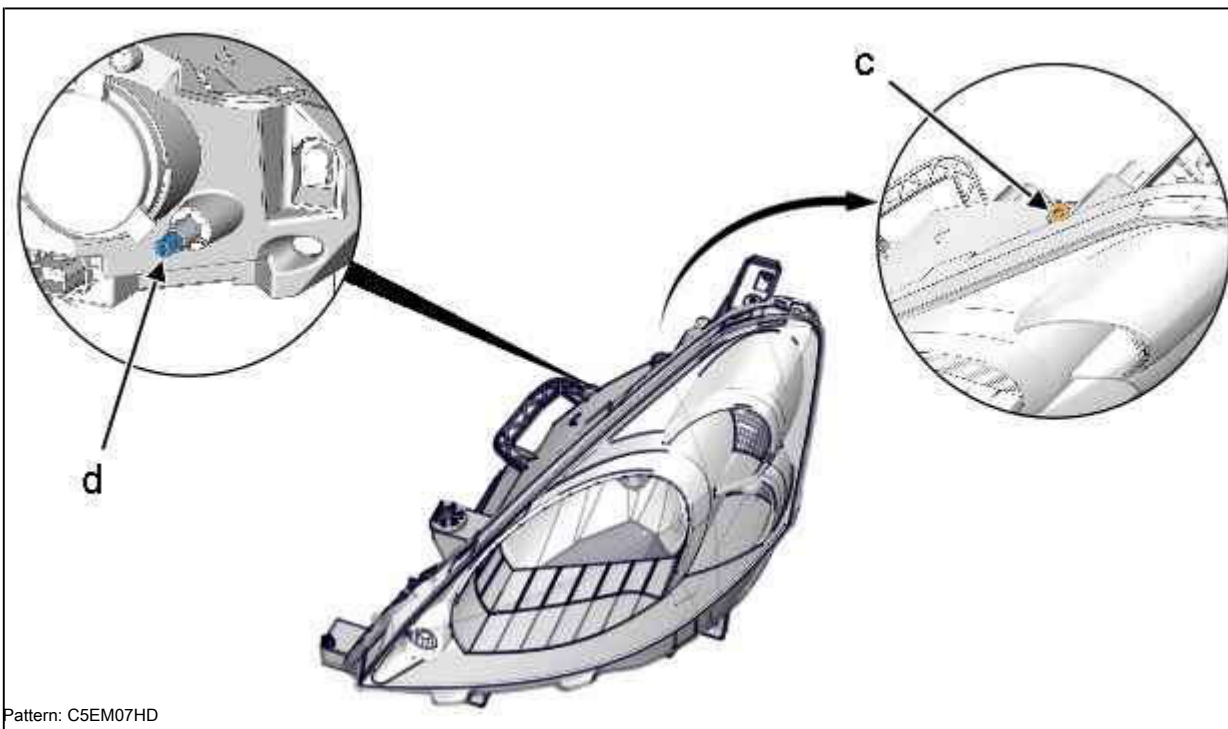


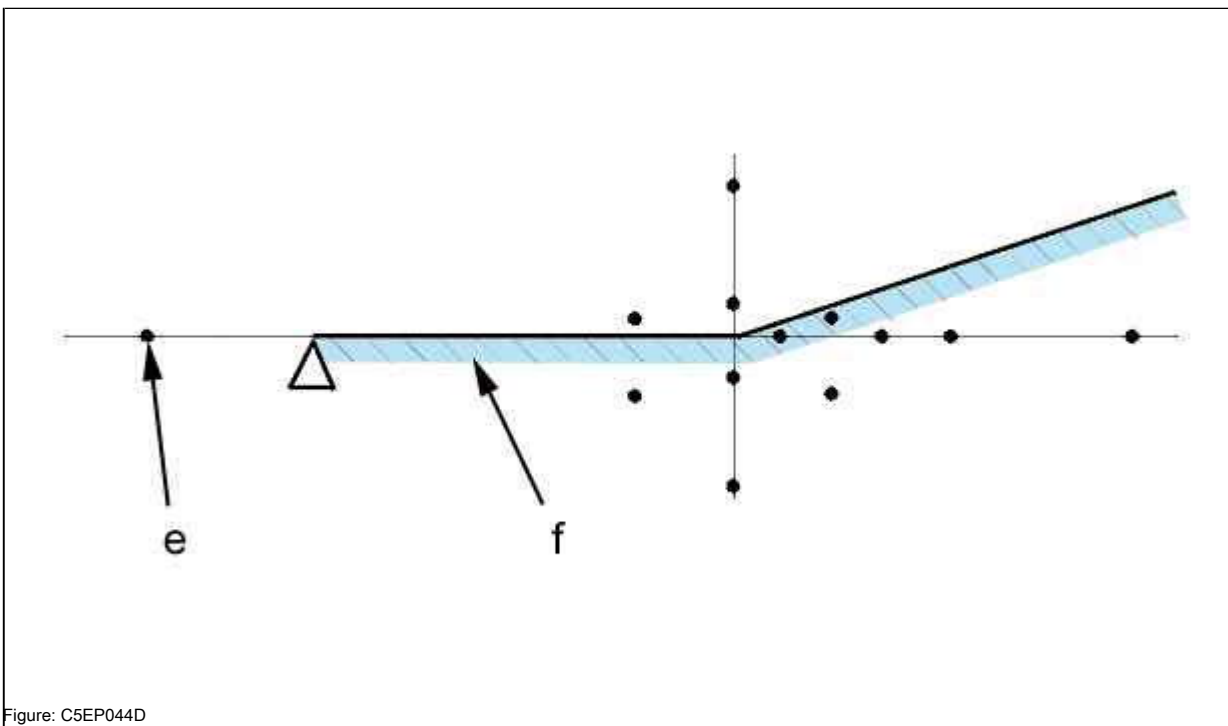
Figure: C5EM07GD

Measure the tilt of the light beam (in "b").

Determine the metered parameter according to the type of instrument used.



Correct the headlamp vertical alignment (light beam height) with the bolt (at "c"). Correct the horizontal headlight alignment (azimuth) with the bolt (in "d").



Shine headlight beam "f" slightly below marking line "e".

NOTE: After adjusting the dipped beam headlamp, the high beam is automatically adjusted.

Adjustment completed.

REMOVAL INSTALLATION: SYSTEM UNIT "HANDSFREE"

MANDATORY: Observe the cleanliness and safety rules



1. Removal

Disconnect the battery

Remove the dashboard side trim

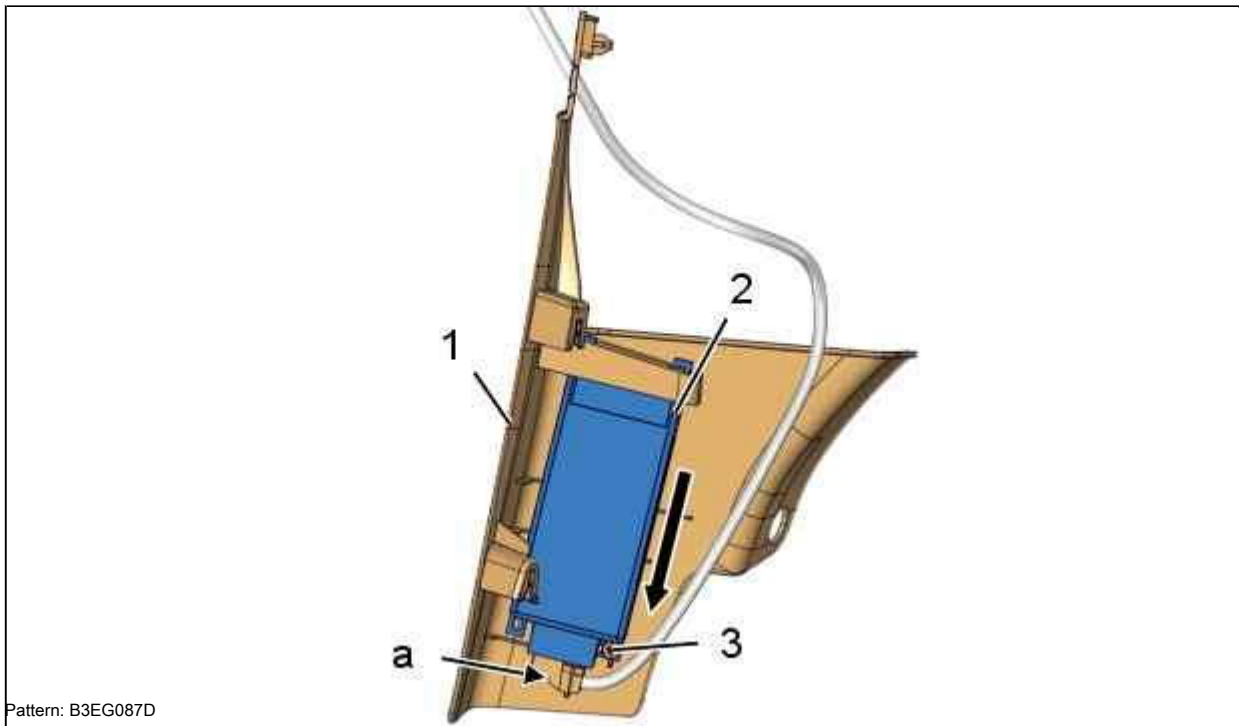
Separate: **A-pillar lower trim**



...

(Passenger side).

(Passenger side).



Pattern: B3EG087D

Disconnect the connector (at "a").

Remove the bolts (3).

Detach: Hands-free headset unit (2) (As indicated by the arrow). Remove:

- Handsfree headset unit (2)
- A-pillar lower trim (1)

2. Installation

Installation is carried out by performing the removal operations in the reverse order.

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

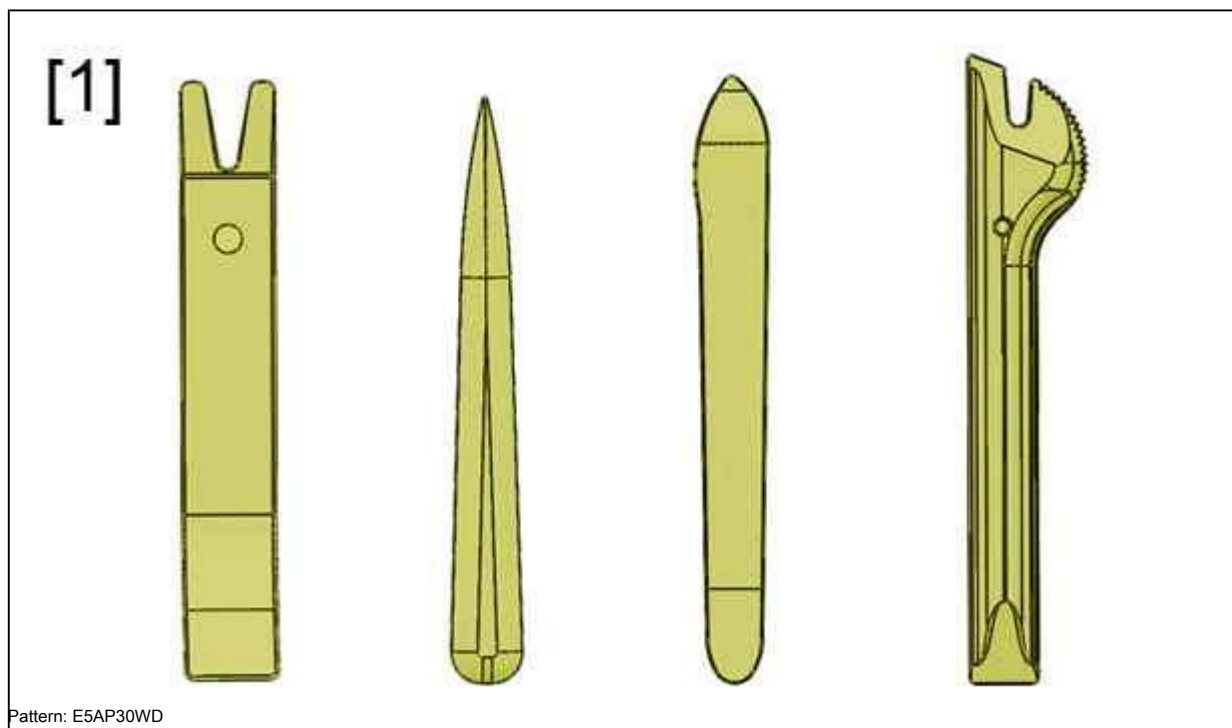
Check the functioning of the electrical equipment.

REMOVAL REFITTING: REAR LAMP (VEHICLE FOLDING LUGGAGE DOORS)

~~MANDATORY: Observe the cleanliness and safety rules~~

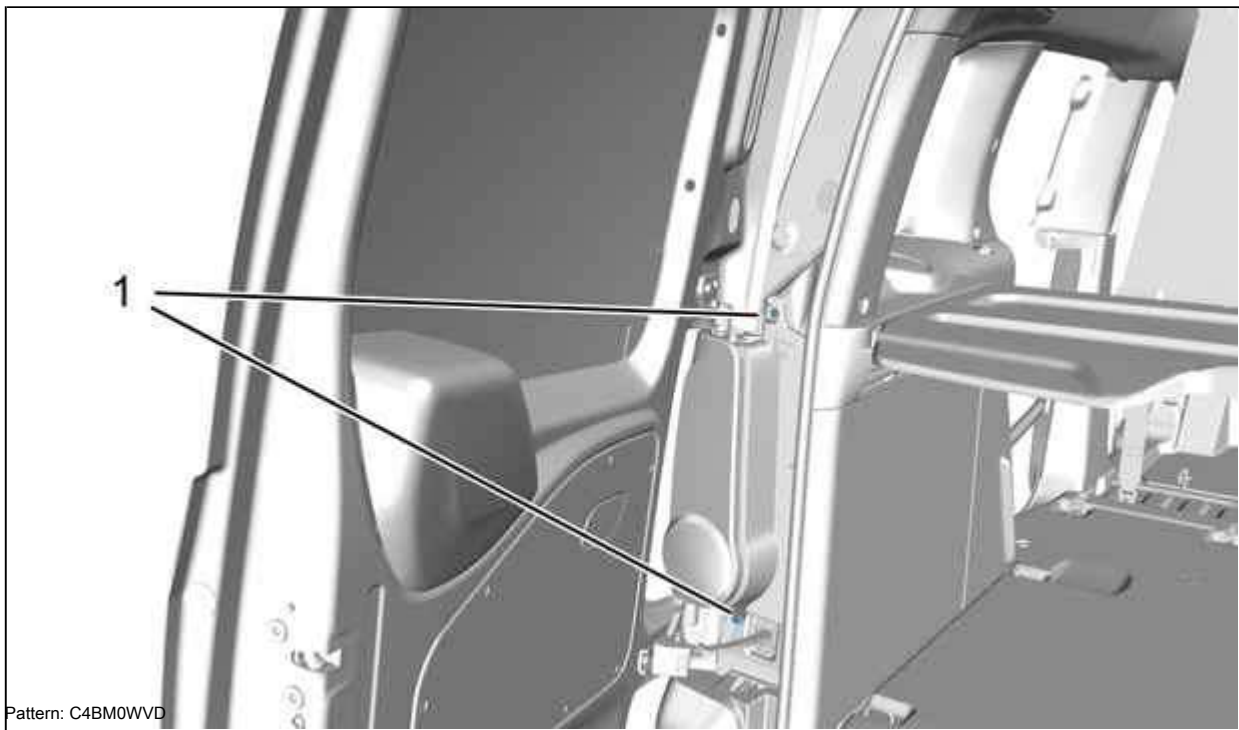


1. Recommended equipment

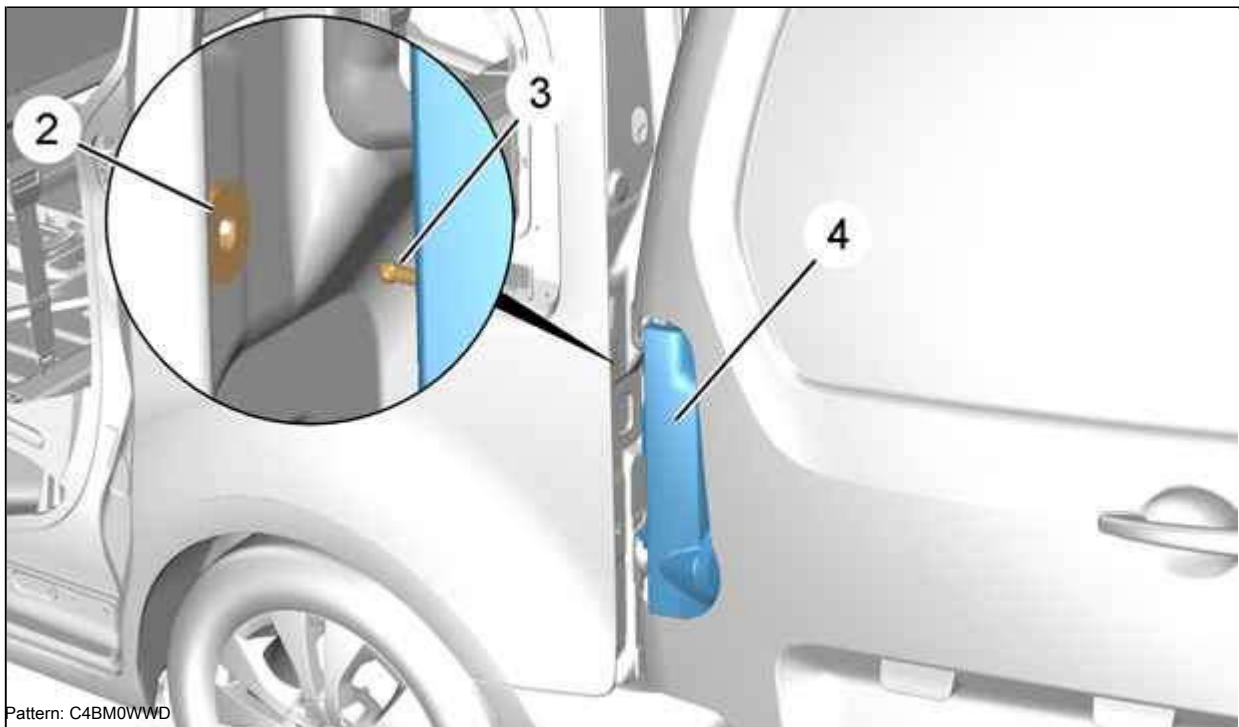


[1] Trim stripper () .1350ZZ.

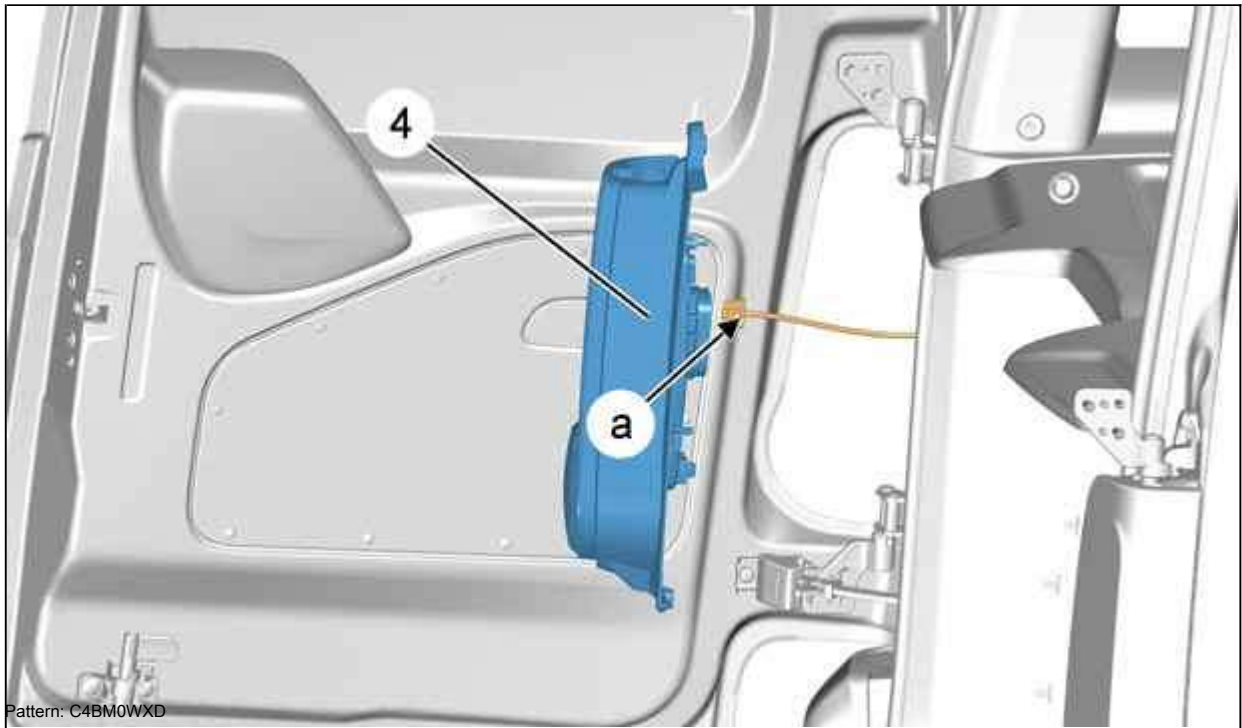
2. Removal



Loosen screws (1).



Disconnect the pin (3) from its support (2); Using the tool [1]. Detach: Rear light (4).



Unlock Disconnect the connector (at "a"). Remove: Rear light (4).

3. Installation

Reconnect the connector (at "a"). Check the operation of all shades.

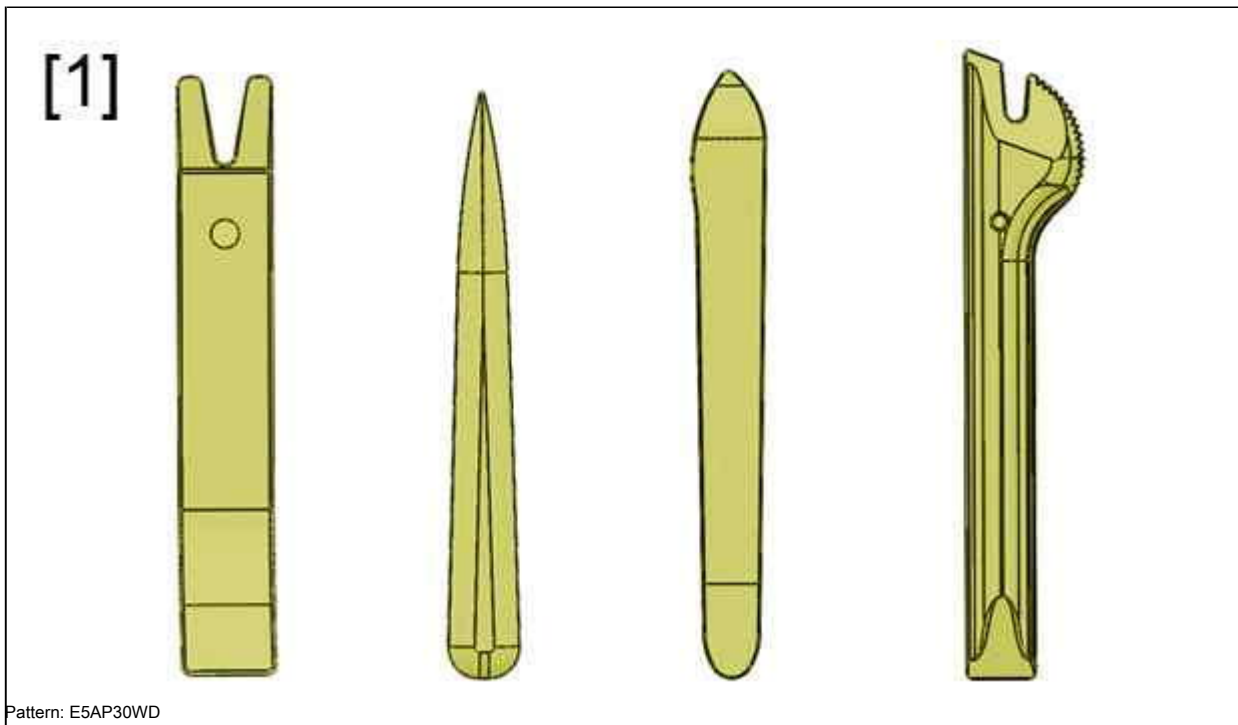
Installation is carried out by performing the removal operations in the reverse order.

REMOVAL REFITTING: REAR LAMP (VEHICLE WITH LEAF)

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim stripper () .1350ZZ.

2. Removal

Open the boot lid.

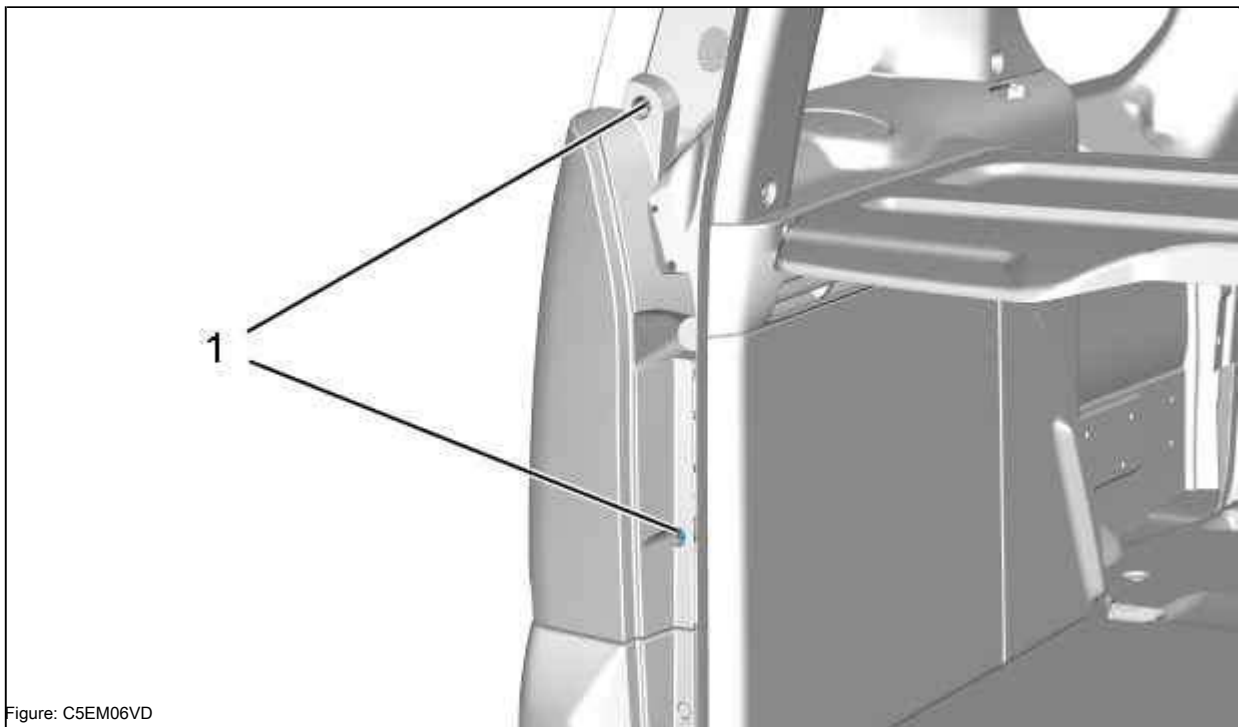


Figure: C5EM06VD

Loosen screws (1).

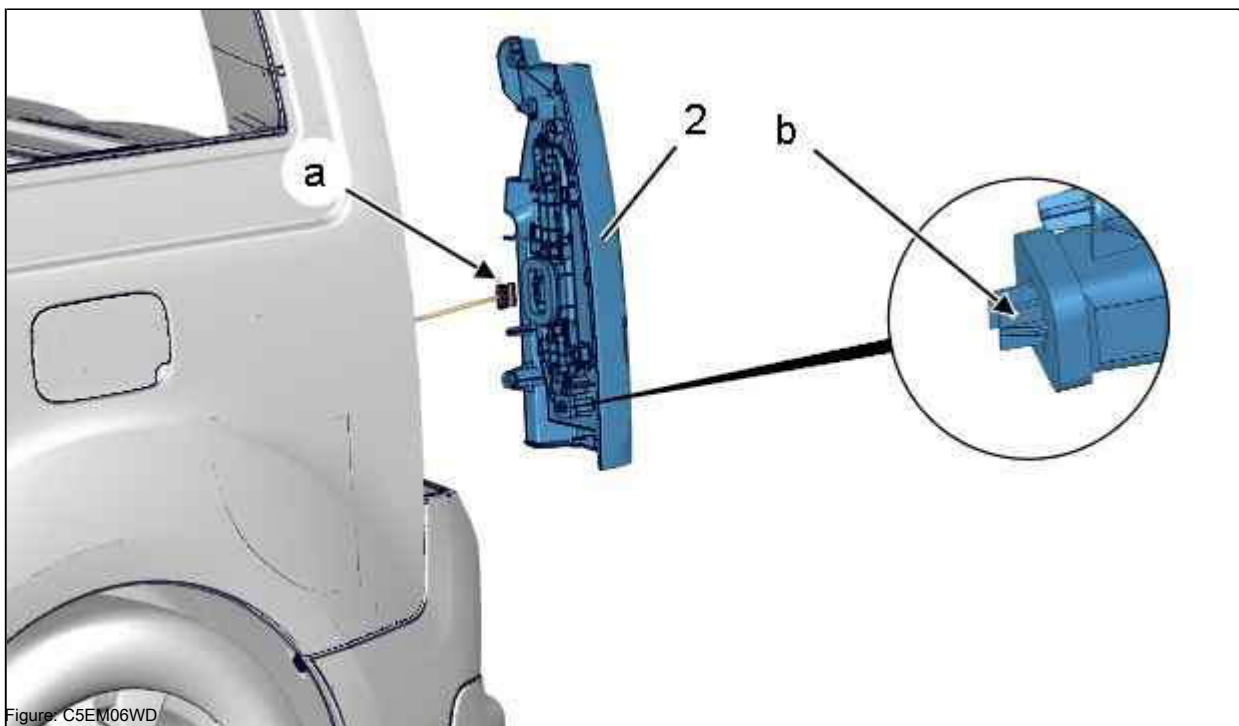


Figure: C5EM06WD

Disconnect (at "b"); Using the tool [1]. Detach the rear light (2).

Unlock Disconnect the connector (at "a"). Remove the tail light (2).

3. Installation

Reconnect the connector (at "a"). Check the operation of all shades.

Installation is carried out by performing the removal operations in the reverse order.

REMOVAL REFITTING: FRONT FOG LAMP

MANDATORY: Observe the cleanliness and safety rules

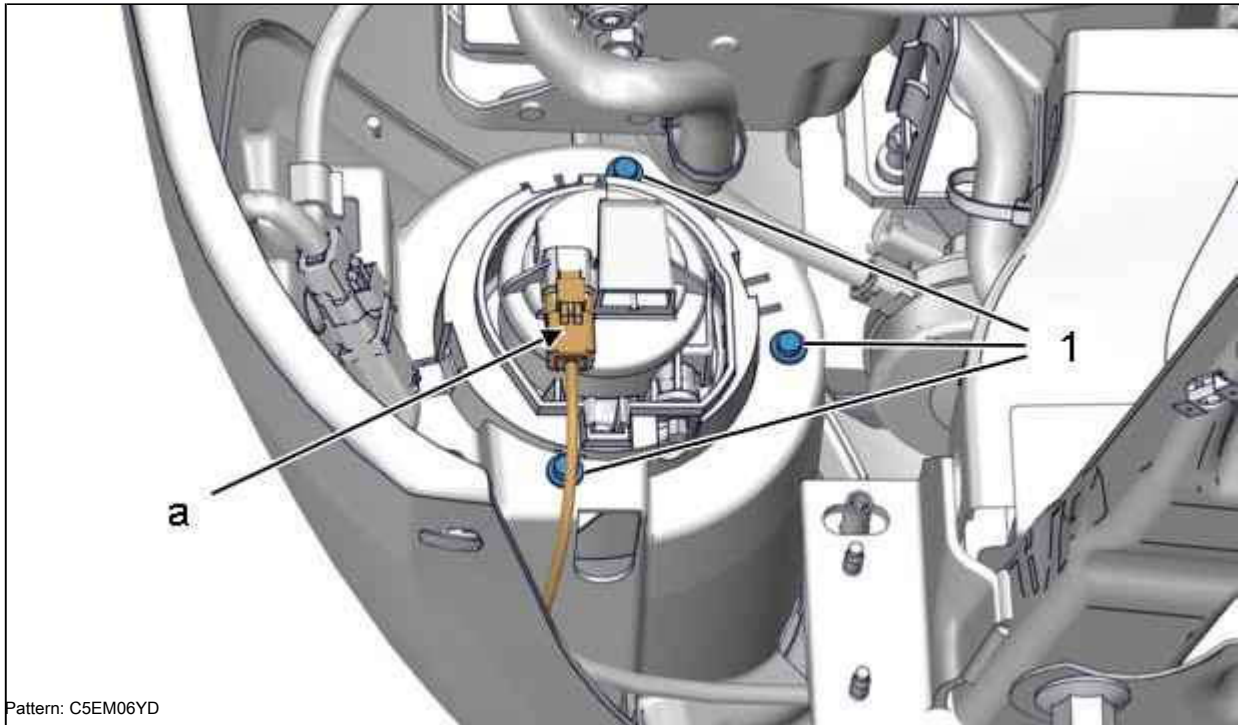


1. Removal

Remove the front mudguard



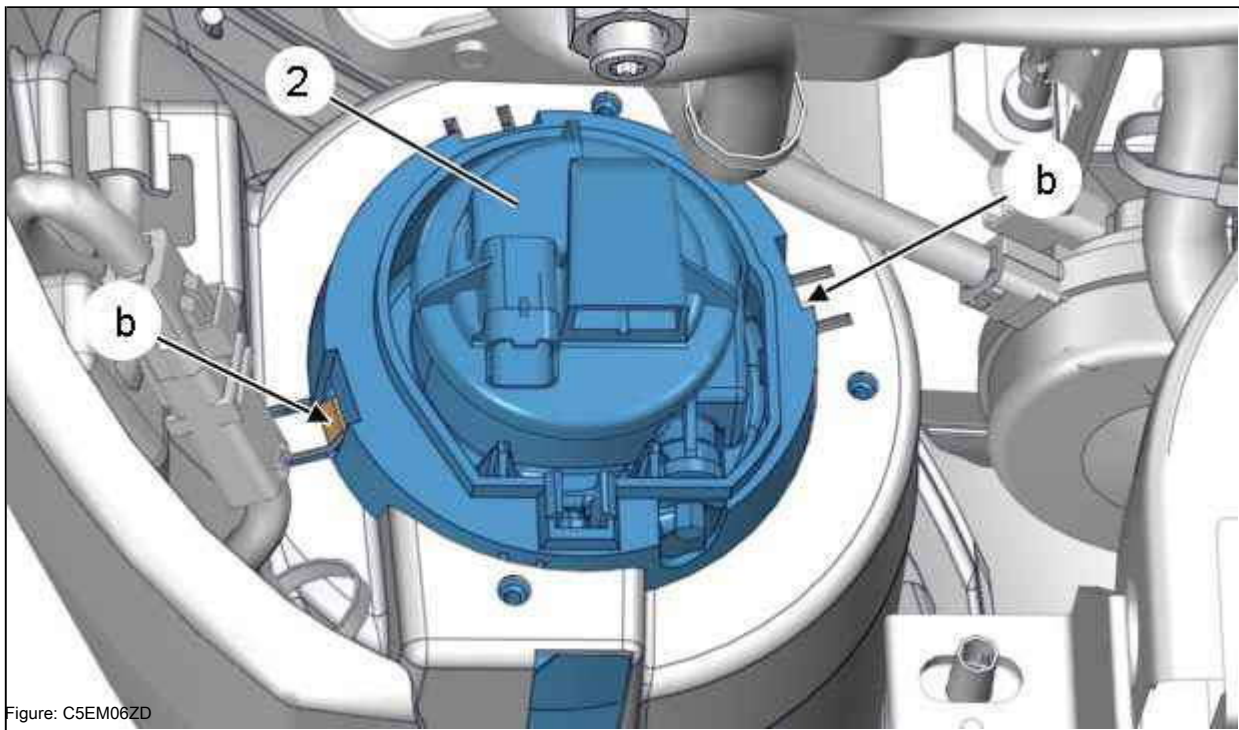
(partially).



Pattern: C5EM06YD

Disconnect the connector (at "a").

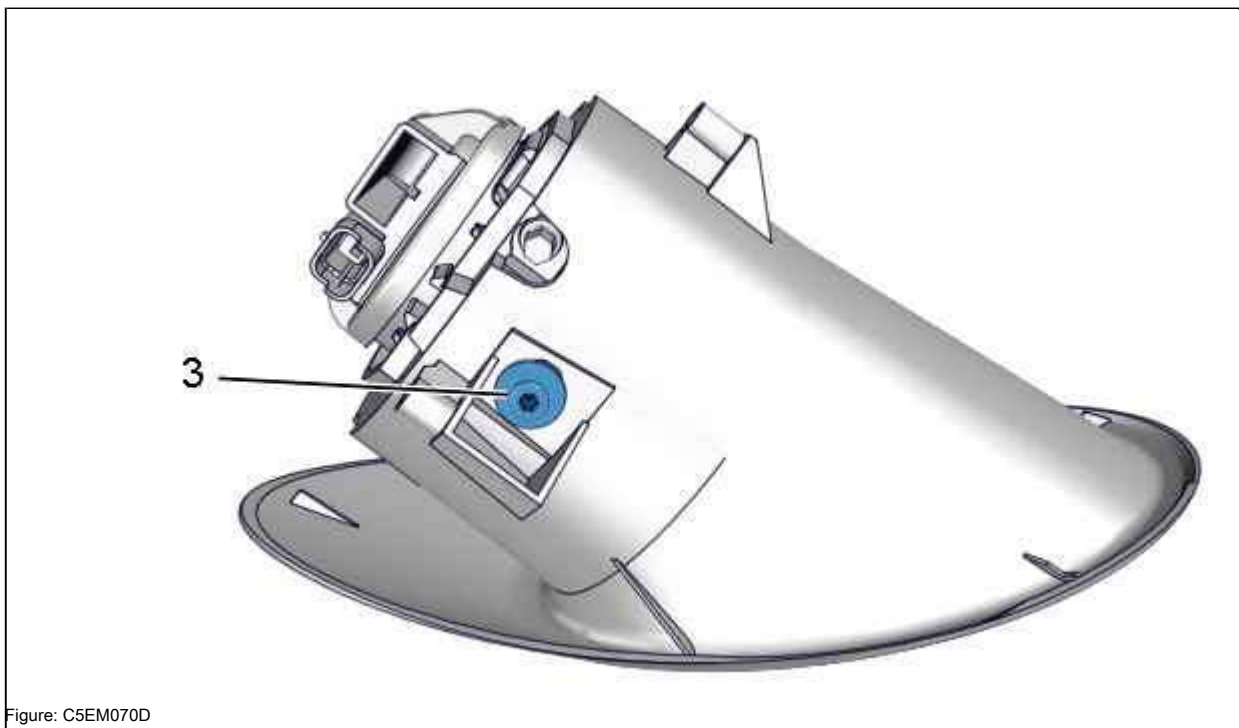
Loosen screws (1).



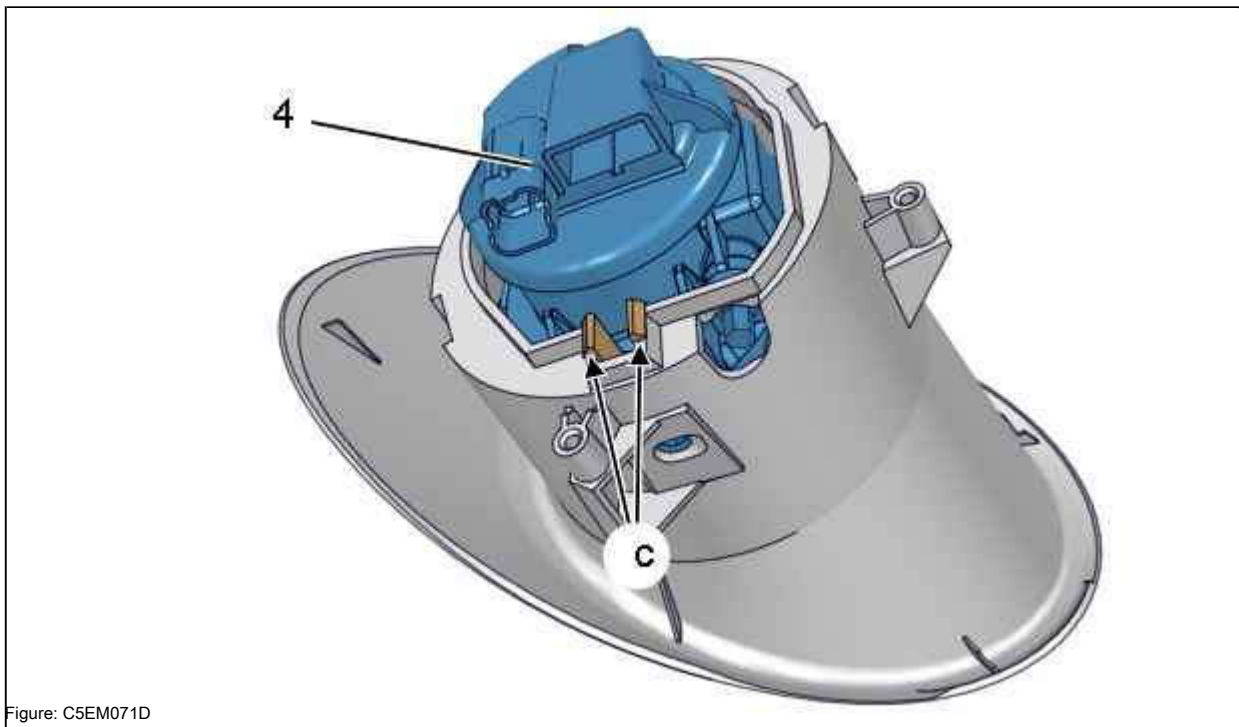
Separate:

- clips (in "b")
- Front fog lamp assembly (2) (forward)

Remove: Front fog lamp assembly (2).

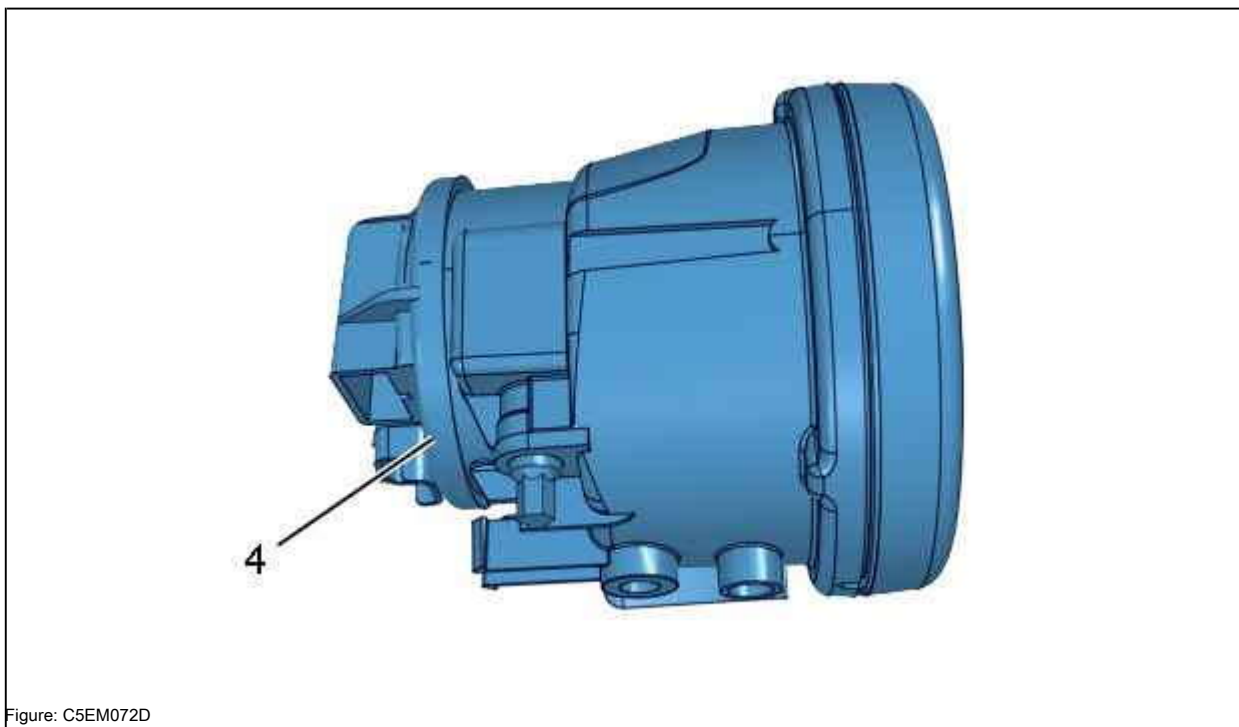


Remove the screw (3).



Separate:

- clamps (in "c")
- Fog lights (4)

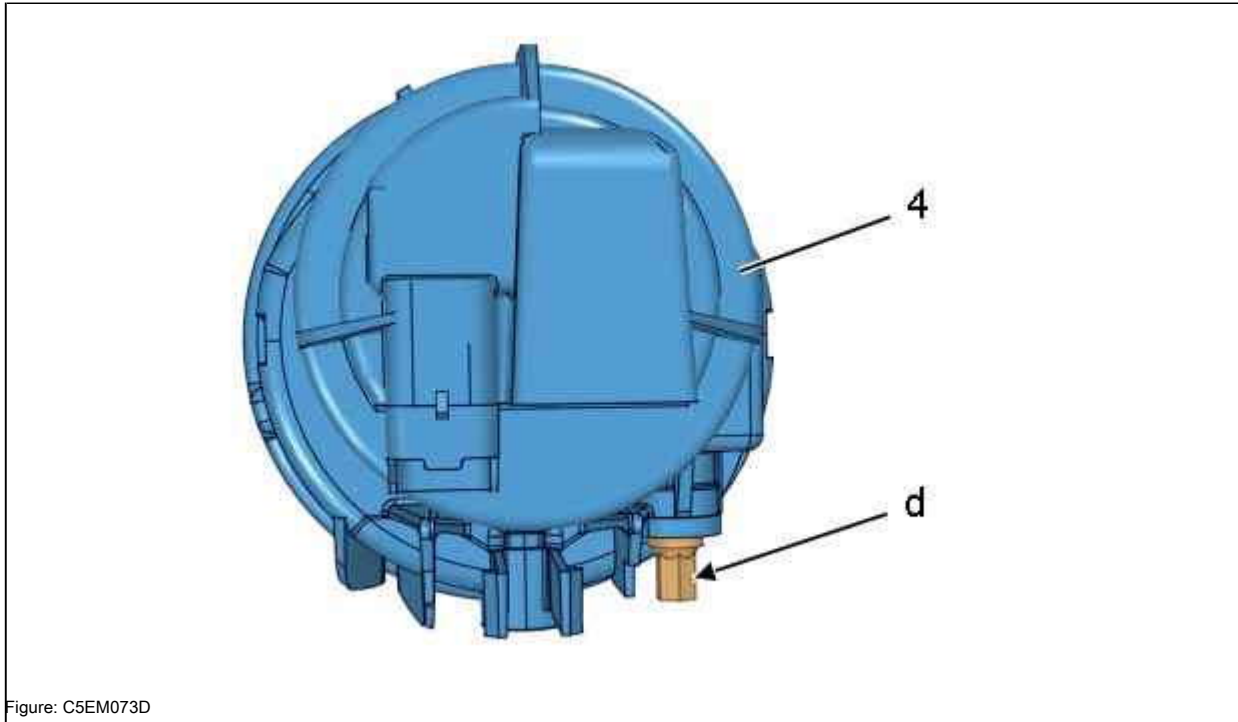


Remove the front fog lamp (4).

2. Installation

Installation is carried out by performing the removal operations in the reverse order.

Tighten the bolts to a torque of (3) to 0.2 ± 0.02 da.Nm.



When replacing the front fog lamp (4); Adjust the front fog lamps; Using the adjusting bolt (in "d").

Check the operation of the various equipment.

REMOVAL REFITTING: STEERING STEERING SWITCH

MANDATORY: Observe the cleanliness and safety rules.



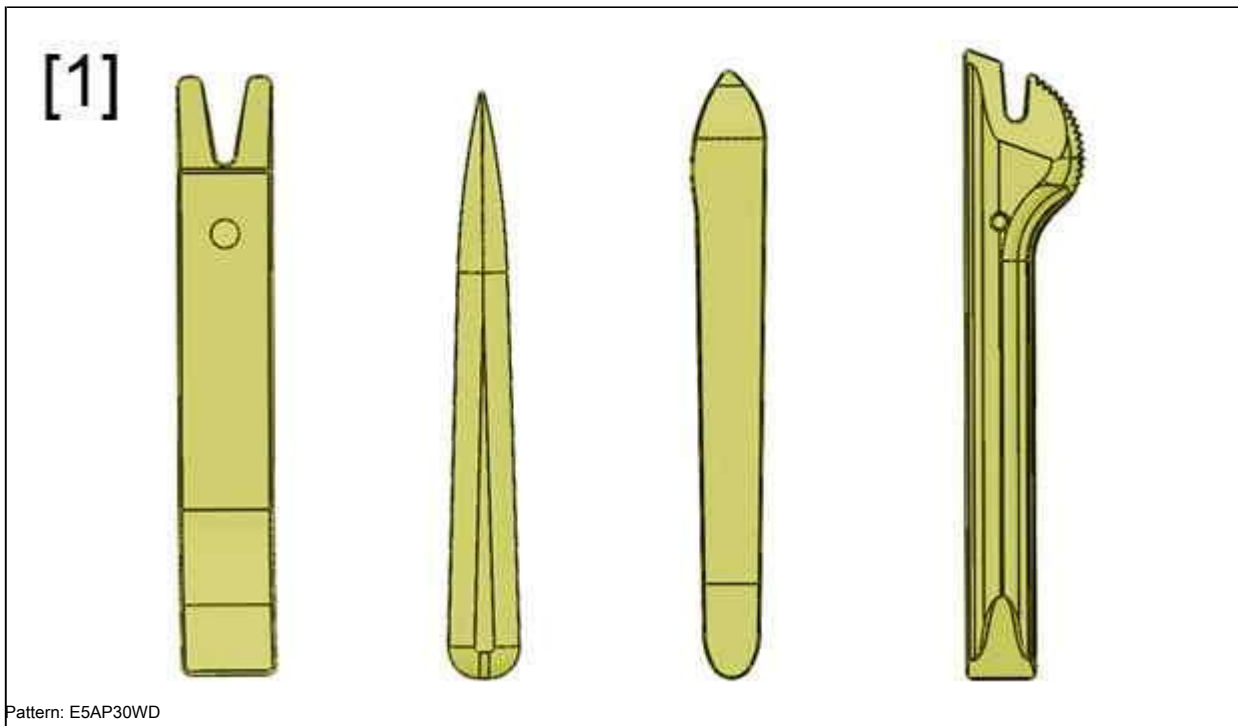
ATTENTION : Before carrying out any work: Align the wheels in a straight line.

ATTENTION : When carrying out all work involving disconnecting the steering wheel and wheels (steering wheel, steering column switch, steering column, steering rack ...), ensure that the slip ring of the steering column switch is locked.

ATTENTION : When disconnecting, observe the normal unlocking of the electrical connectors; When connecting, observe the correct installation and fastening of the electrical harnesses.

ATTENTION : Disconnection of electrical connectors must be carried out without applying force to electrical harnesses and electrical connectors (Do not pull on electrical harnesses).

1. Recommended equipment



[1] Trim removal tool () .1350ZZ.

2. Preliminary operations

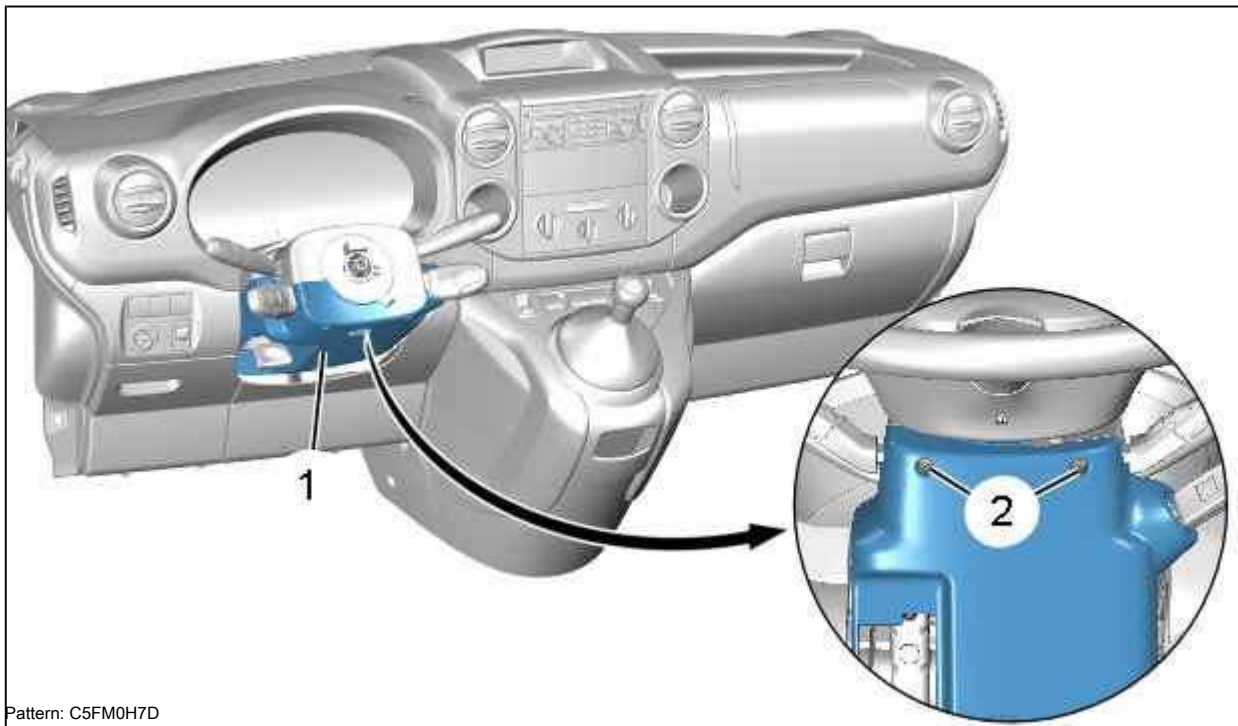
NOTE: The operation is carried out in the same way with left or right steering.

Disconnect the battery. Remove:

- Driver airbag
- Steering wheel

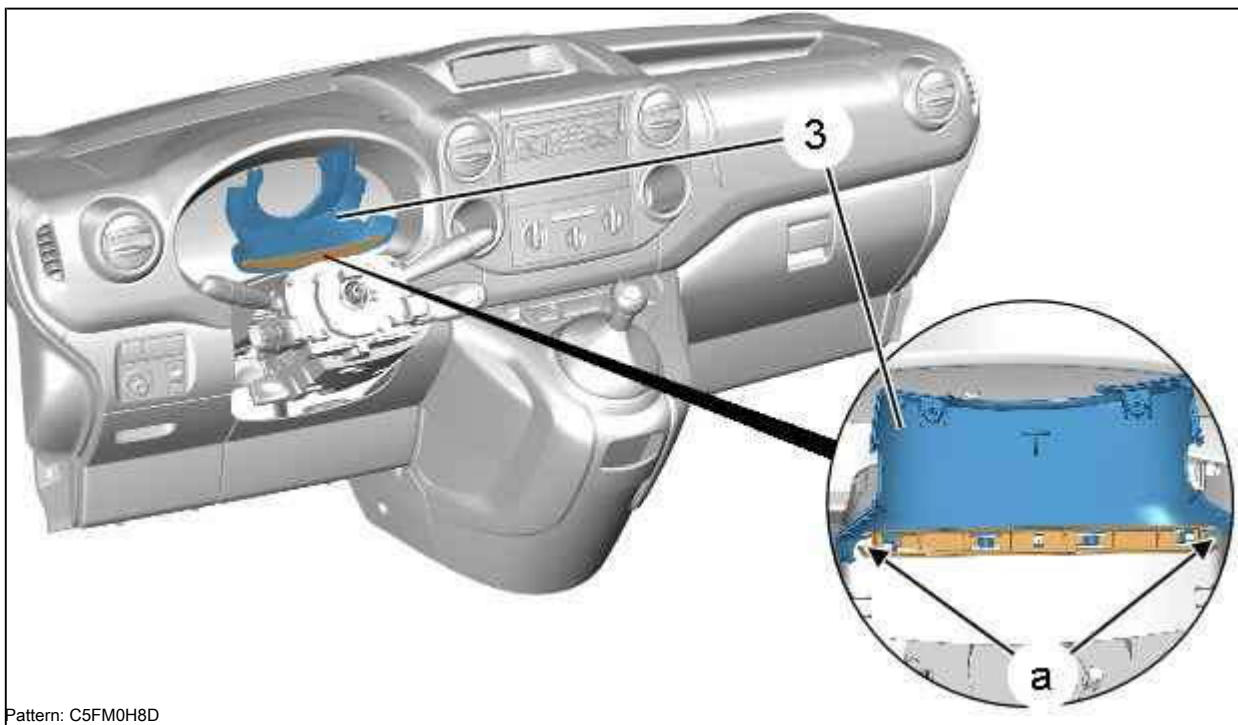


3. Removal

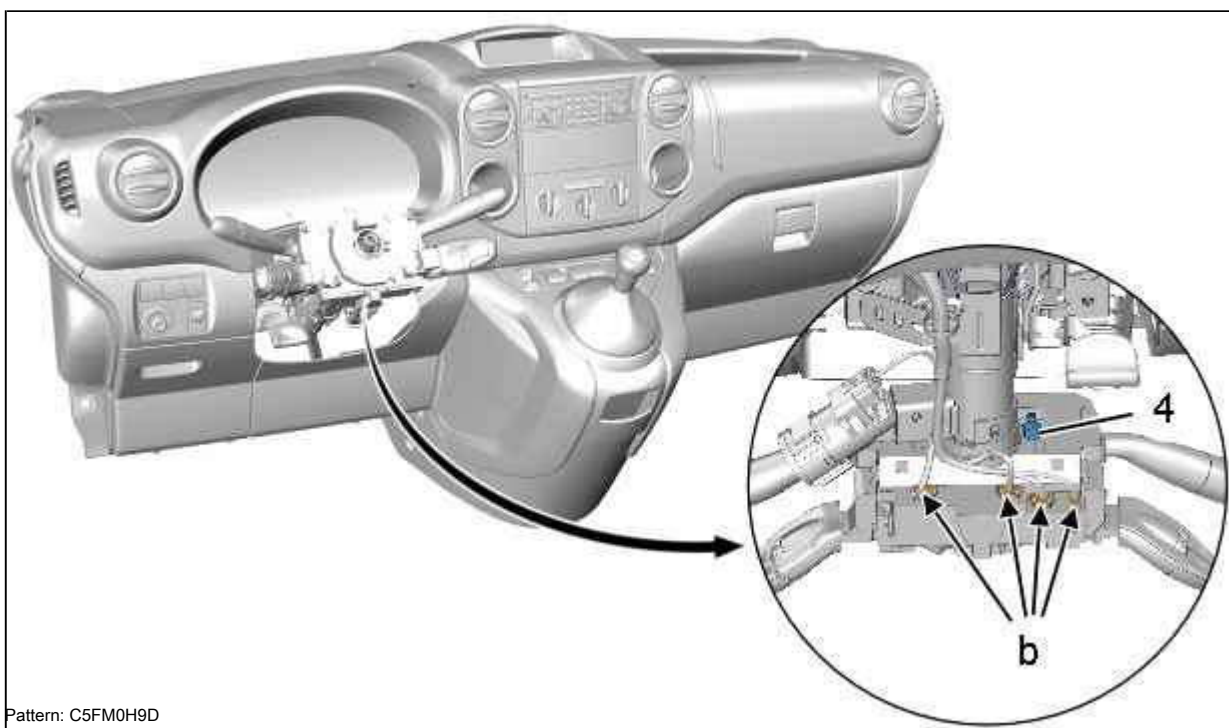


Unlock the steering column, extend and lower it as far as possible. Remove:

- bolts (2)
- Steering column lower trim (1)

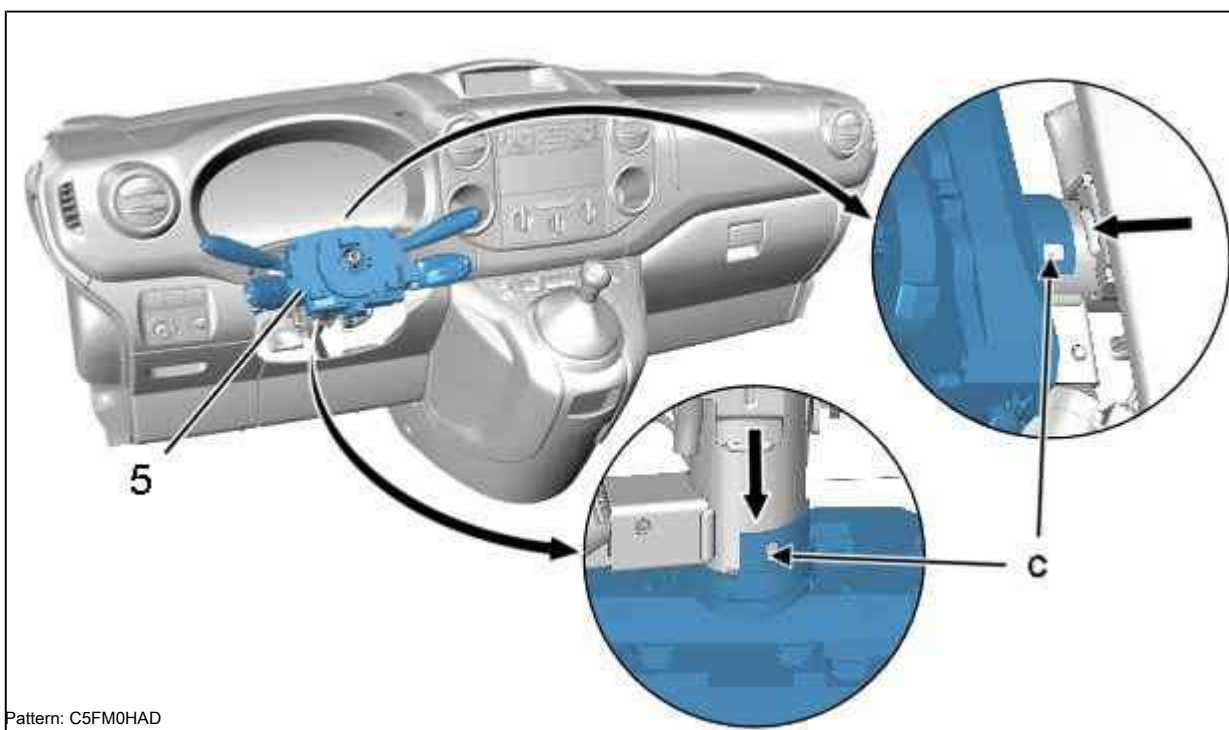


Disconnect the steering column upper lining clips (3) (at "a"); Using the tool [1]. Remove: The upper steering column trim (3).



Pattern: C5FM0H9D

Disconnect the electrical connectors (at "b"). Loosen the bolt (4) (maximum).



Pattern: C5FM0HAD

ATTENTION : Do not damage the steering column switch lock pads.

Disconnect the locking tabs of the steering column switches assembly (5) (at "c");

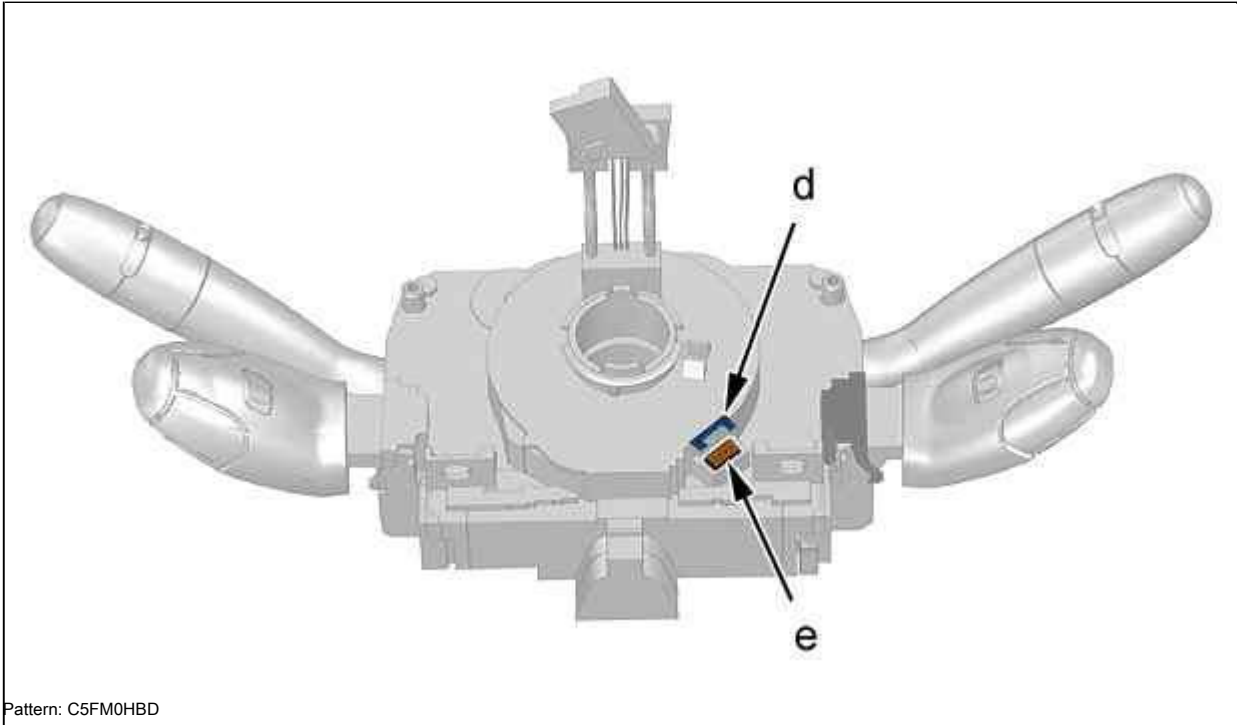
[1].

Remove the under-steering wheel switch box (5) (in accordance with the arrow).

4. Installation

ATTENTION : Adjust the slip ring before installing the steering column switch.

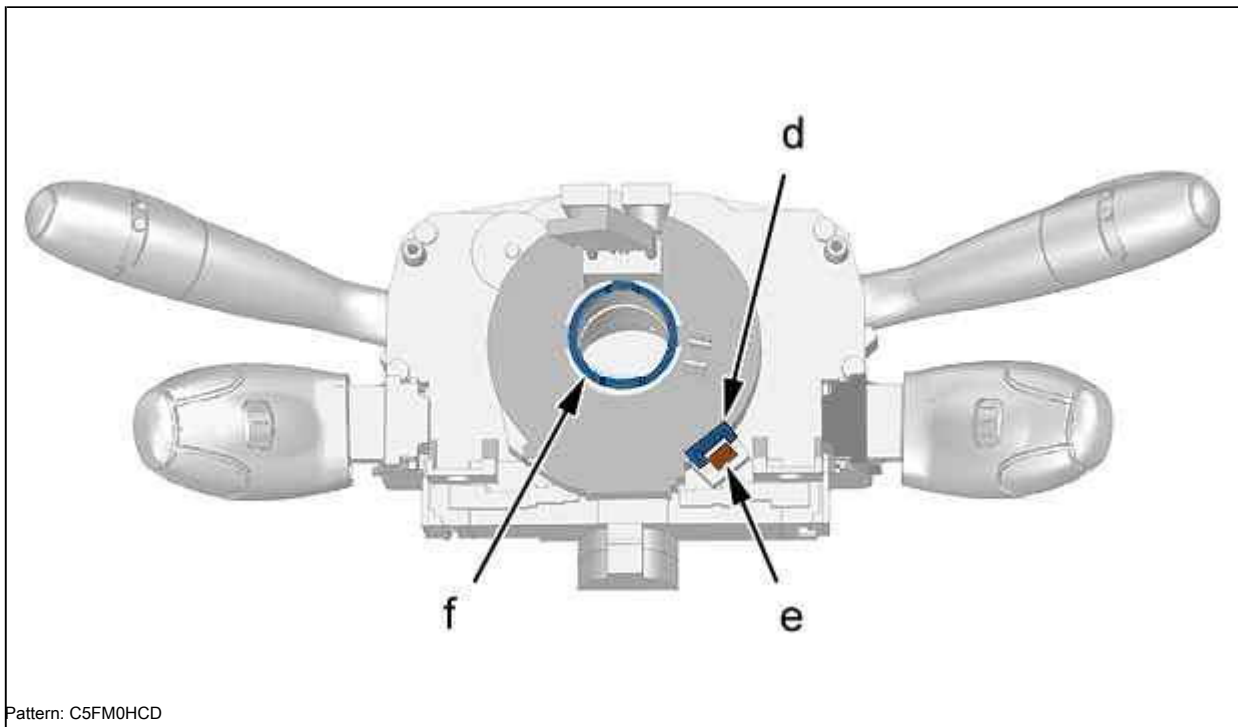
4.1. Steering Wheel Control (New)



Pattern: C5FM0HBD

The slip ring of the new steering column switch does not require adjustment. Adjustment is ensured by aligning the cutout "d" and the pointer "e" (supplier DELPHI).

4.2. Reusing a removed steering column switch



Find point 0:

- Press the center of the slip ring (in "f")
- Turn clockwise to stop
- Rotate the rotary contactor 2.5 turns counterclockwise

NOTE: Make no effort when reaching an extreme position.

Check the alignment of cutout "d" with pointer "e".

ATTENTION : Never rotate counterclockwise until clockwise to the end position, this will permanently damage the slip ring track.

5. General operations

ATTENTION : Align the wheels in a straight line.

Perform the following checks:

- Electrical connector blockers must not be damaged
- The electrical harnesses of the steering column switch must not be damaged

Install the steering column column switch block (5) with the handles horizontal.

Clip in: Steering column switch (5) (in "c"). Tighten the bolts to a torque of (4) to 0.3 ± 0.07 da.Nm.

The steering column switch (5) must be centered on the steering column so that there is no additional noise.

Connect the electrical connectors (at "b").

ATTENTION : Do not pull on electrical connectors; Do not bend electrical harnesses (observe allowable bends); Take all necessary measures to protect electrical harnesses from damage (Do not twist electrical harnesses).

Install:

- Upper steering column pad (3)

- Steering column lower trim (1)
- bolts (2)

6. Additional operations

Install:

- **Steering wheel**
- **Driver airbag**



ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Check the correct functioning of the electrical equipment.

7. Vehicles with Dynamic Stability Program (ESP)

Calibrate the steering wheel angle sensor; Using the scan tool. Use the "Anti-lock braking system (ABS / ESP)" menu to carry out this operation.

REMOVAL REFITTING: HEADLIGHT

MANDATORY: Observe the cleanliness and safety rules



1. Removal

Disconnect the battery

Remove the front bumper

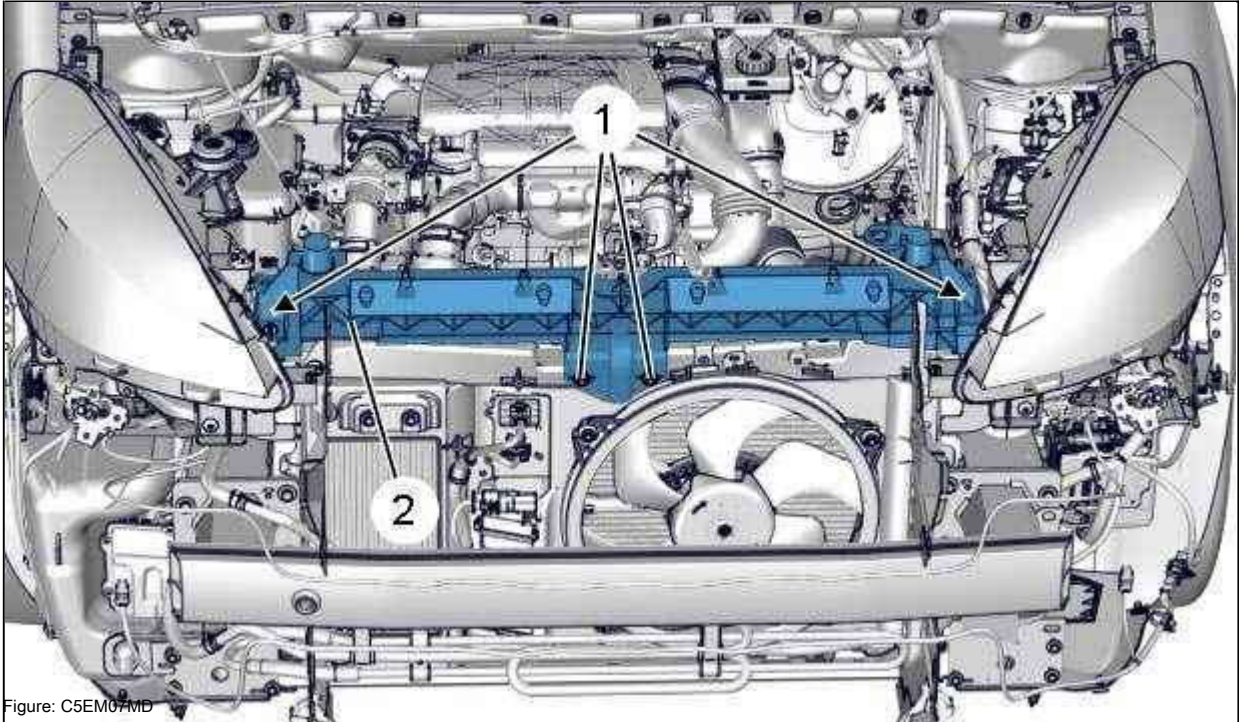
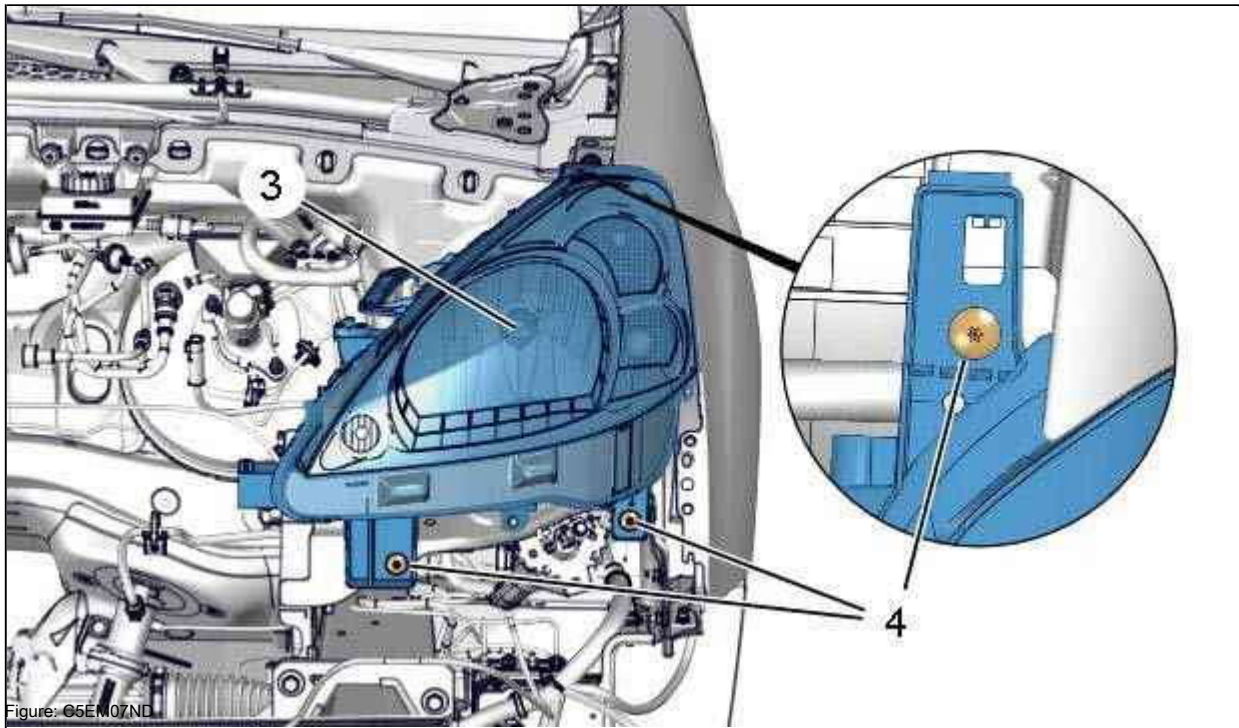


Figure: C5EM0FMD

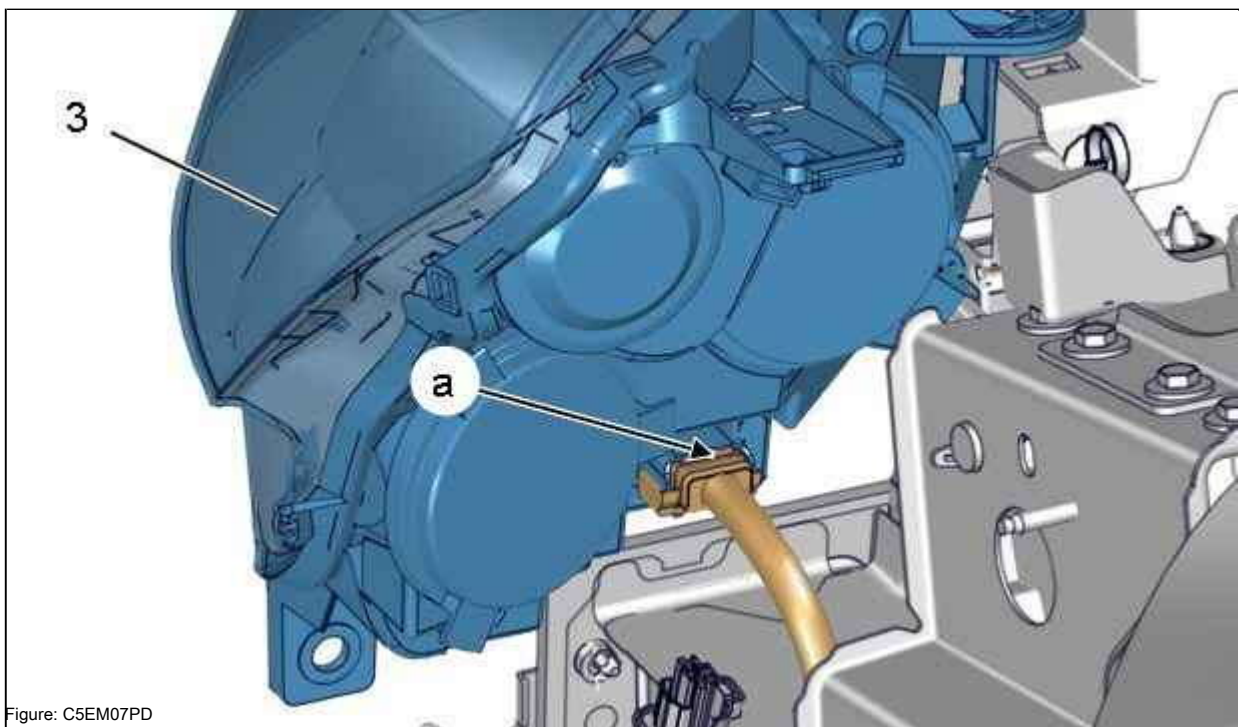
Loosen screws (1).

Separate: Head rail (2).



NOTE: Separate: Washer fluid fill tube (Right side only).

Loosen screws (4).
Release headlight (3).



Disconnect the connector (at "a"). Remove the headlight (3).

2. Installation

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- Tighten the screws (1) to 2 ± 0.4 da.Nm
- Tighten the bolts (4) to 0.8 ± 0.2 da.Nm

Install the front bumper

Reconnect the rechargeable battery

In case of replacement: **Adjust the headlights**

Check the functioning of the electrical equipment.



...



...



REPLACEMENT: HEADLAMP MOUNTING BRACKET

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : Check that the headlamp is not damaged beyond the permissible cuts; otherwise, replace the headlamp.

1. Preliminary operation

Take off the headlight ...



2. Required parts

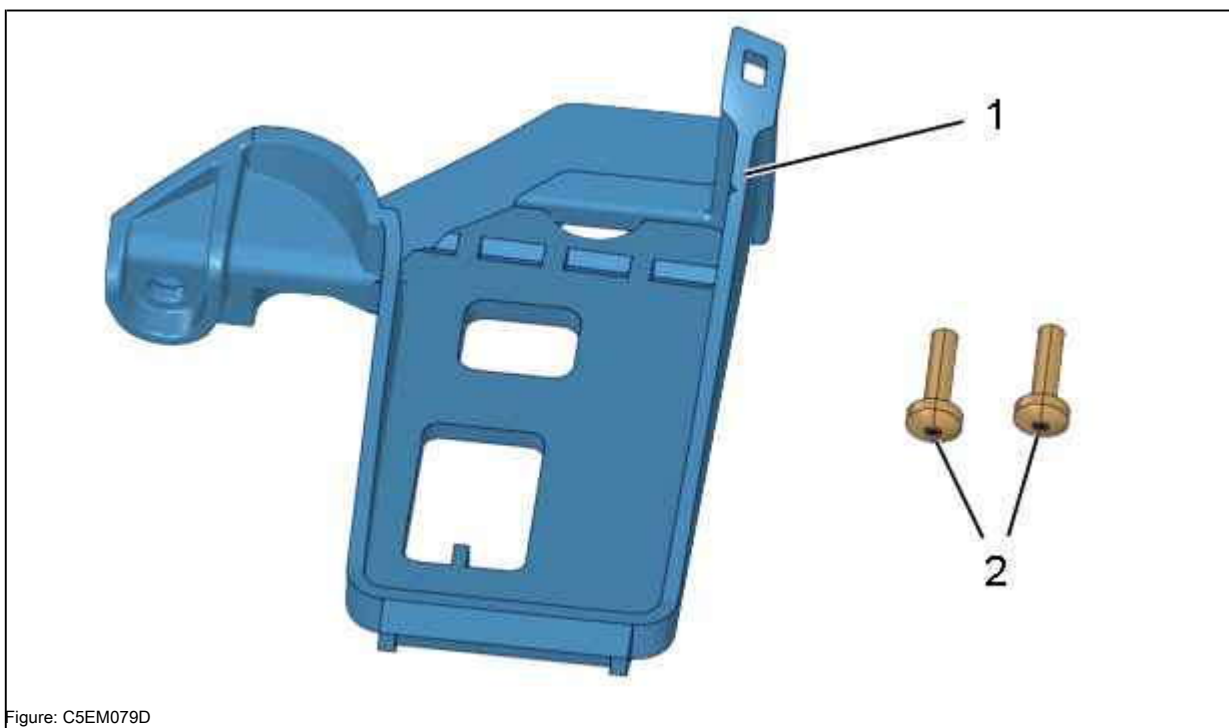


Figure: C5EM079D

NOTE: There are 2 repair kits (left and right side).

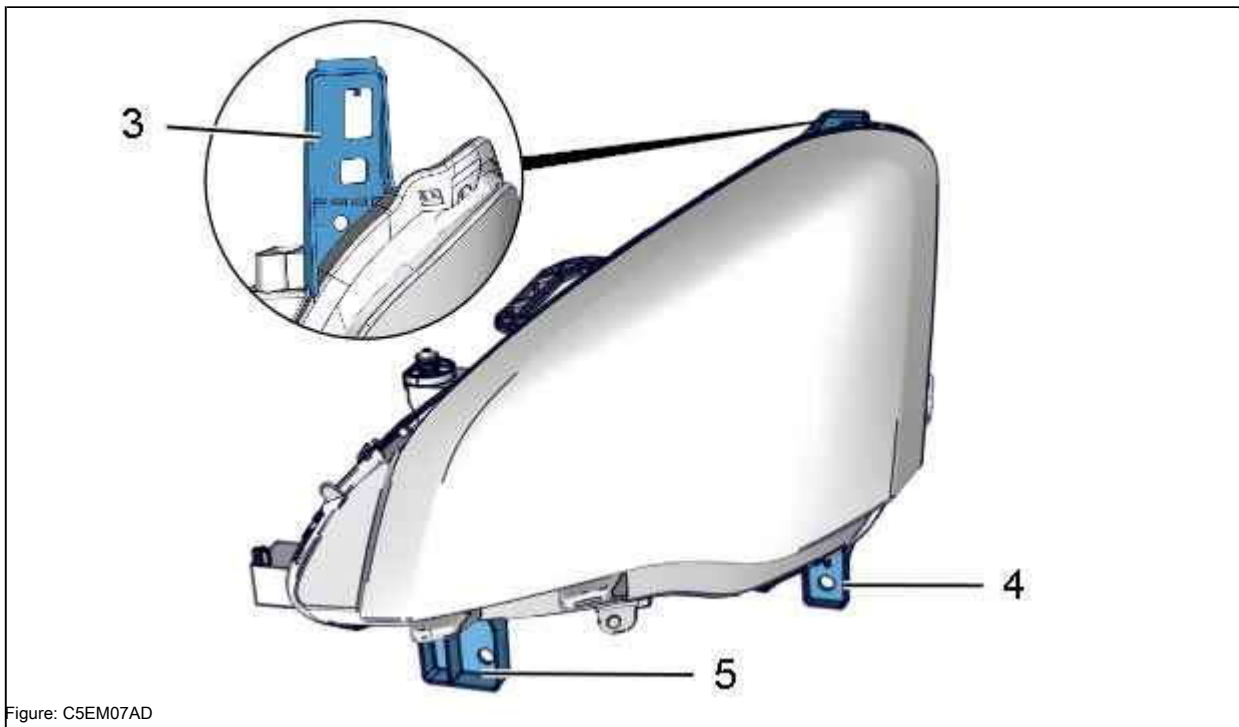
Set composition

Label Designation		Number of parts
(1)	Rear upper repair tab 1 bolt	
(2)		2

3. Replacement

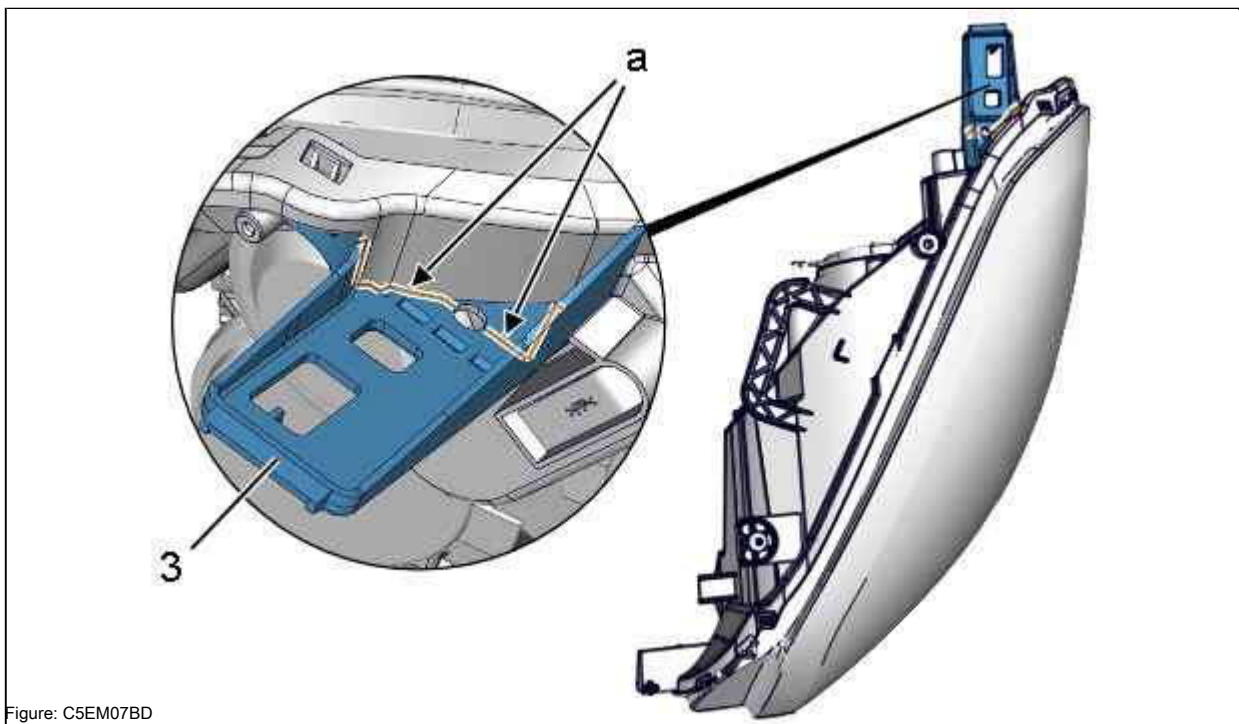
The following operations are the same for right and left headlights.

3.1. Identification

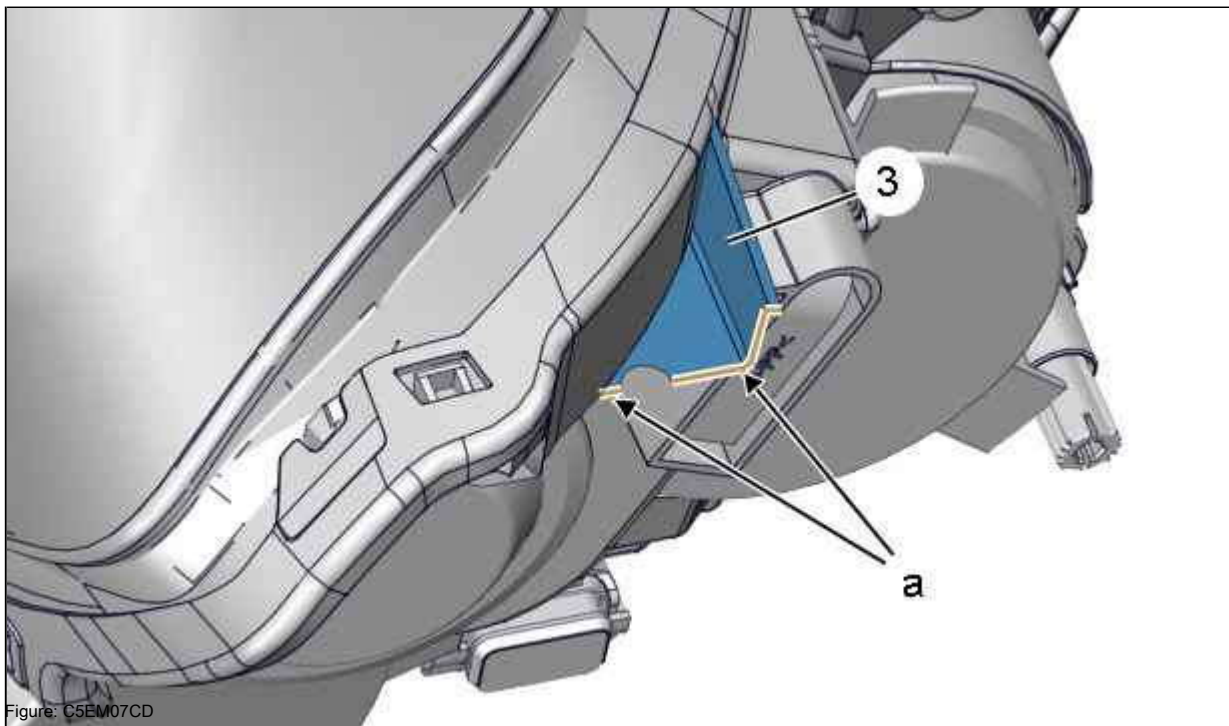


Label Designation		Maintainability
(3)	Rear attachment (top)	Yes
(4)	Rear attachment (lower)	No
(five)	Anterior attachment (lower) No	

3.2. Headlight preparation



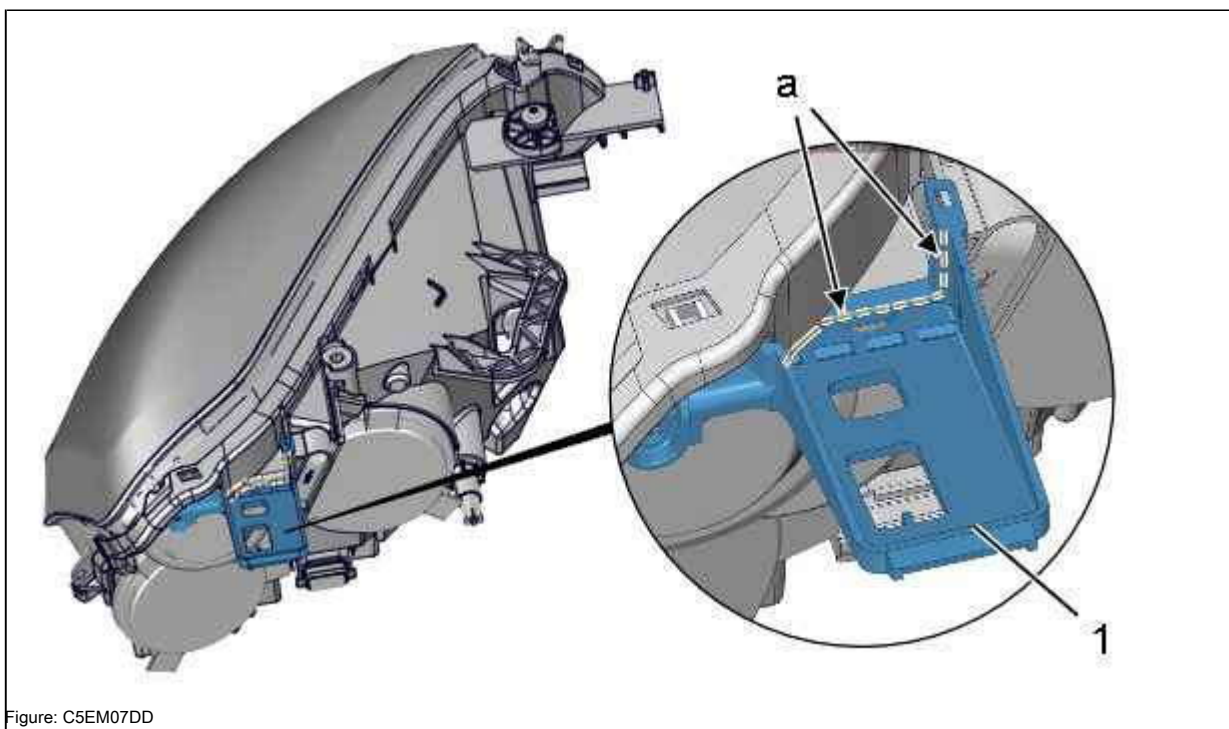
Cut off the rear upper attachment foot (3) (at "a"); Using the metal scissors.



Correct and clean the cut, if necessary, in order to install the repair tab (1) the headlamp mount (3) (in "a").

3.3. Installing the repair presser foot

ATTENTION : Use screws (2) from the kit to avoid damaging the headlamp unit.



Position: Repair foot (1) nafare.

Check the joint of the cut (at "a") and the repair foot (1).

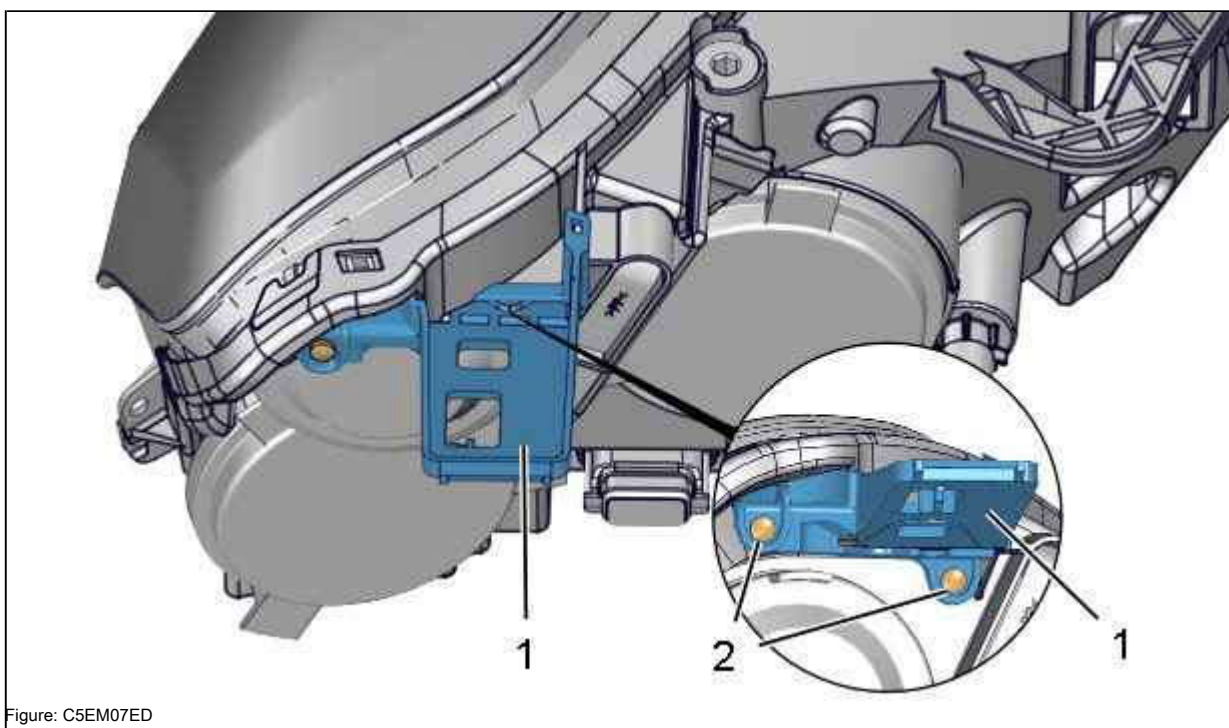


Figure: C5EM07ED

Fasten: Repair foot (1); With screws (2). Gradually tighten the fastening screws (2) all the way round.

Check that there is no play between the repair tab (1) and the fastening tab (3).

4. Additional operation

Install the headlight ...



5. Adjustment

Check and adjust the headlights

Check the operation of the various equipment.

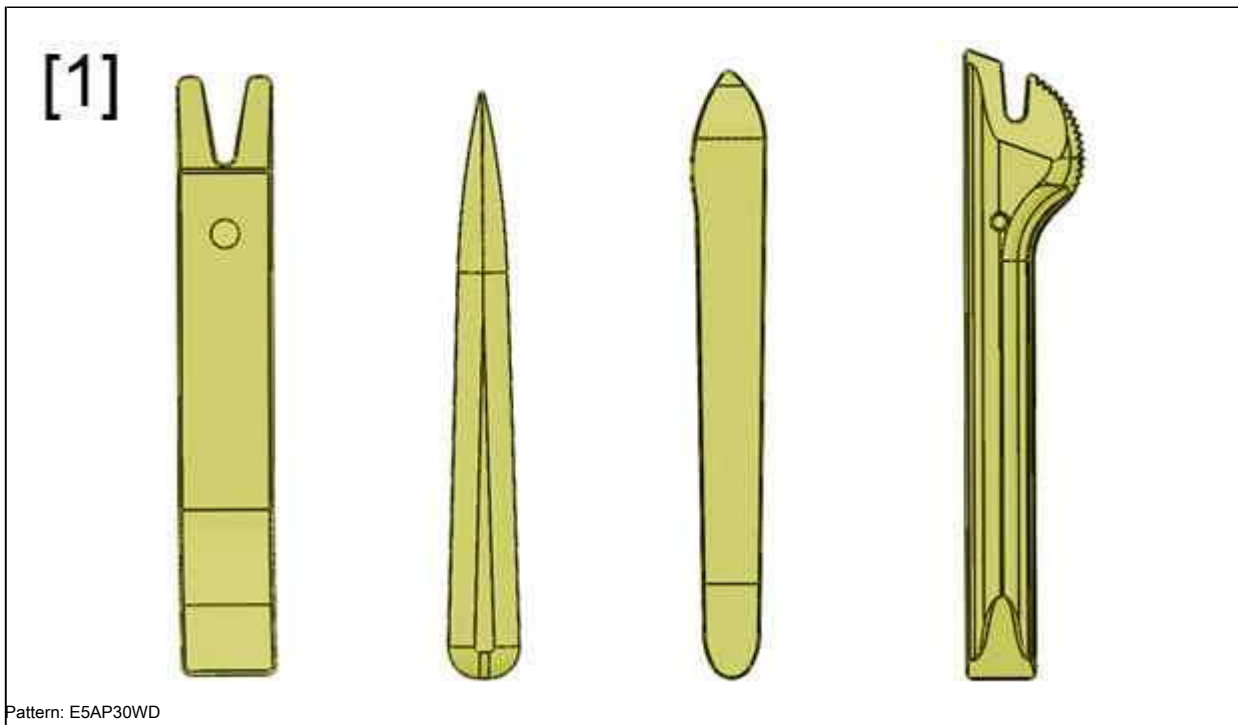


REPLACEMENT: FOG LAMP BULB (FRONT)

MANDATORY: Observe the cleanliness and safety rules



1. RECOMMENDED TOOL

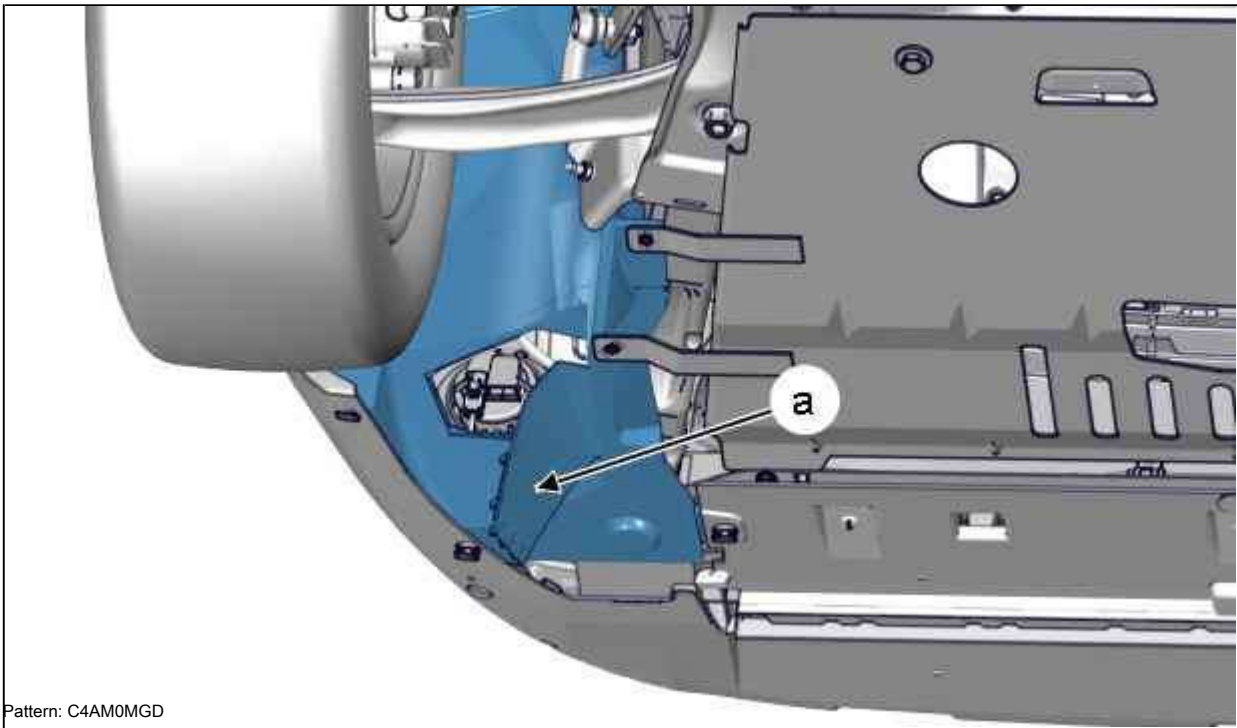


Pattern: E5AP30WD

[1] Trim stripper () .1350ZZ.

2. Removal

Place the vehicle on a 2 post lift.



Pattern: C4AM0MGD

Disconnect: Front mudguard access cover (a); Using the tool [1].

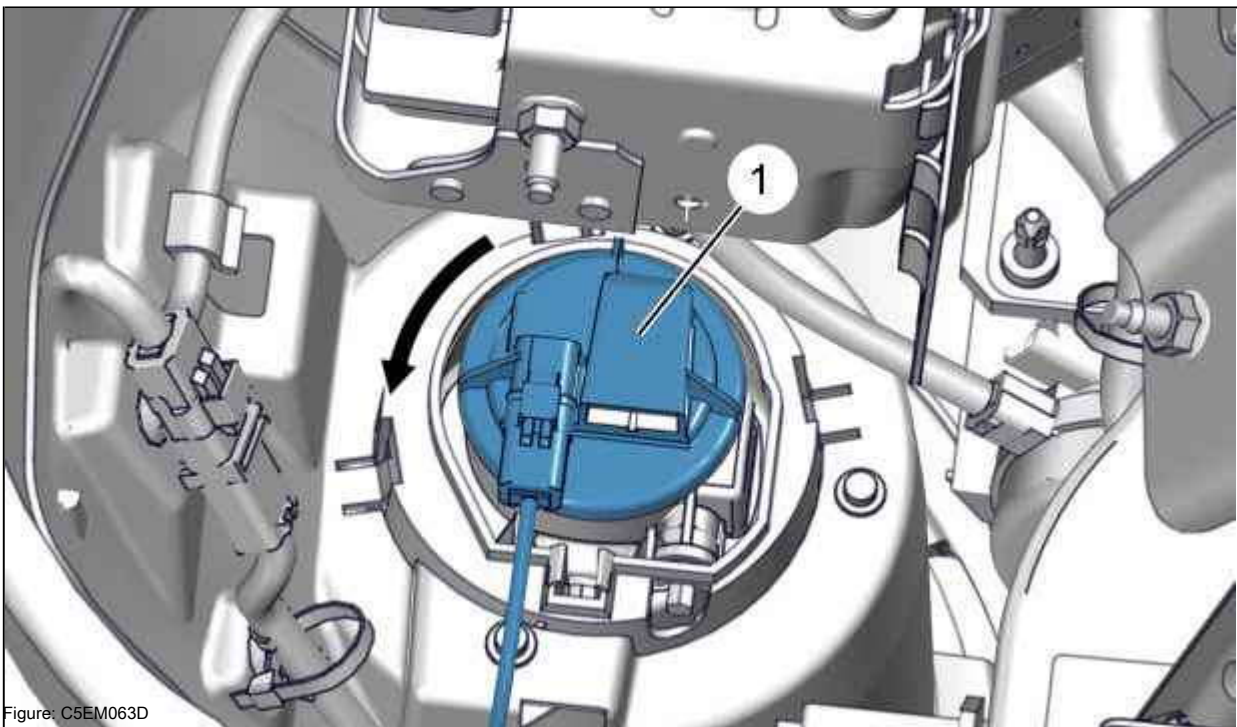
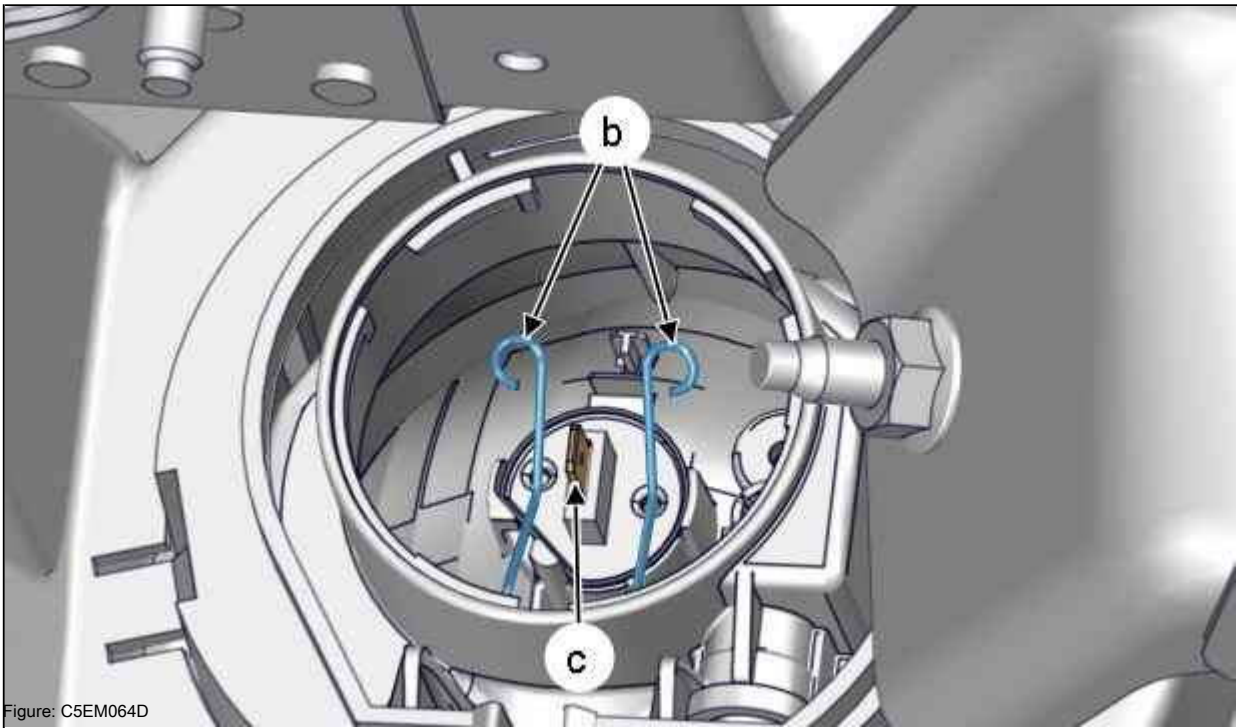
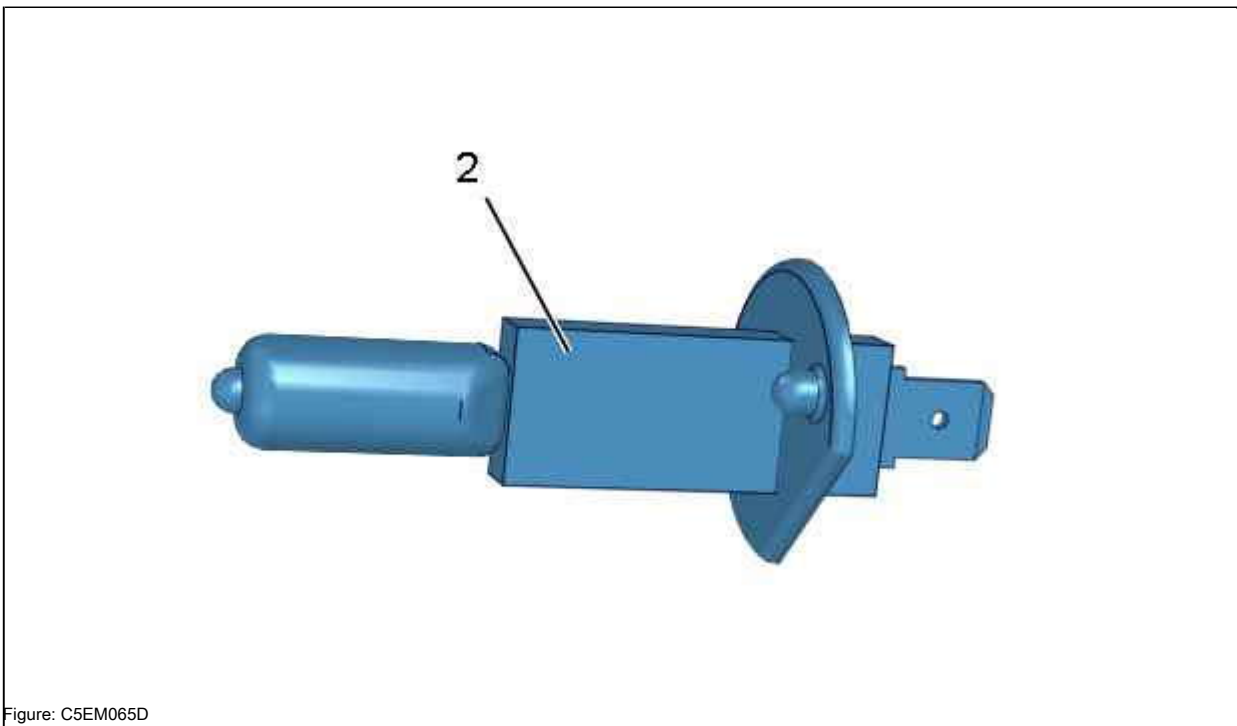


Figure: C5EM063D

Turn the cover (1) (Counterclockwise) (As indicated by the arrow) by a quarter turn. Loosen trim (1).



Disconnect the connector (at "c").
Detach the spring clips (b).



Remove: Front fog lamp bulb (2) (Front). Carry out the same operation on another fog lamp.

3. Installation

Install a new fog lamp bulb.

Installation is carried out by performing the removal operations in the reverse order. Lower the car to the ground.

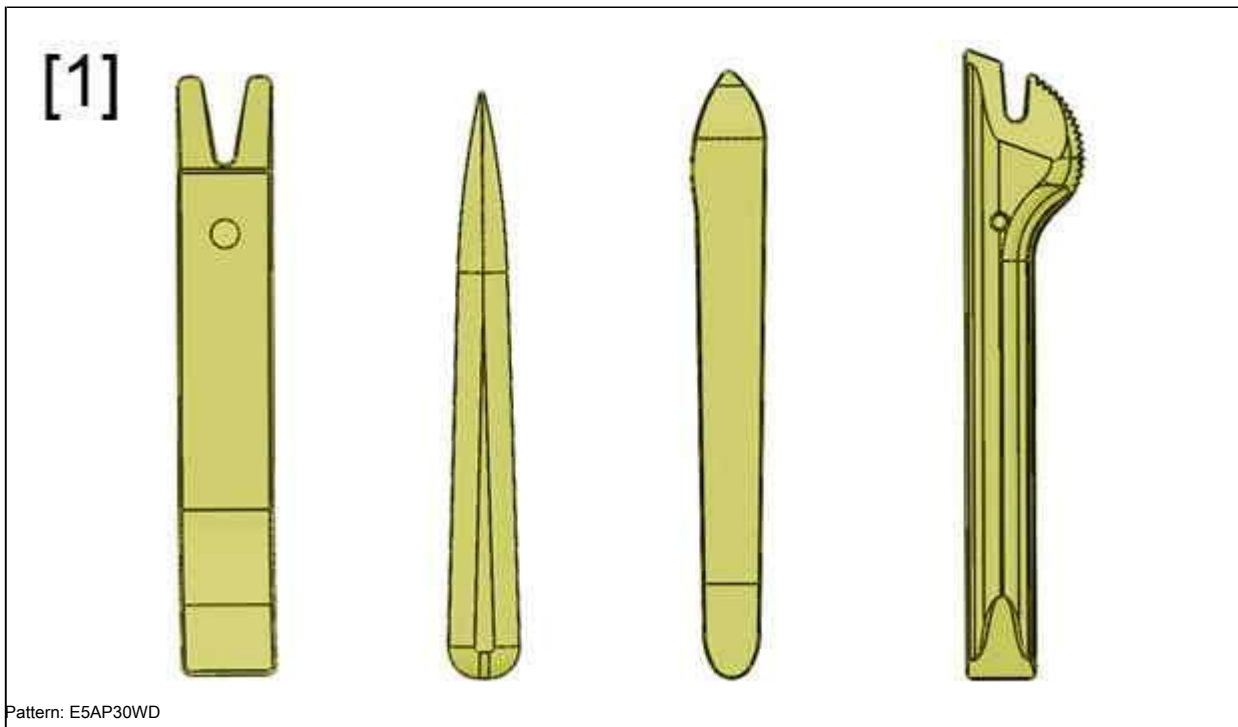
Check the operation of the various equipment.

REMOVAL REFITTING: LAMP OF THE 3rd BOTTOM SIGNAL

MANDATORY: Observe the cleanliness and safety rules

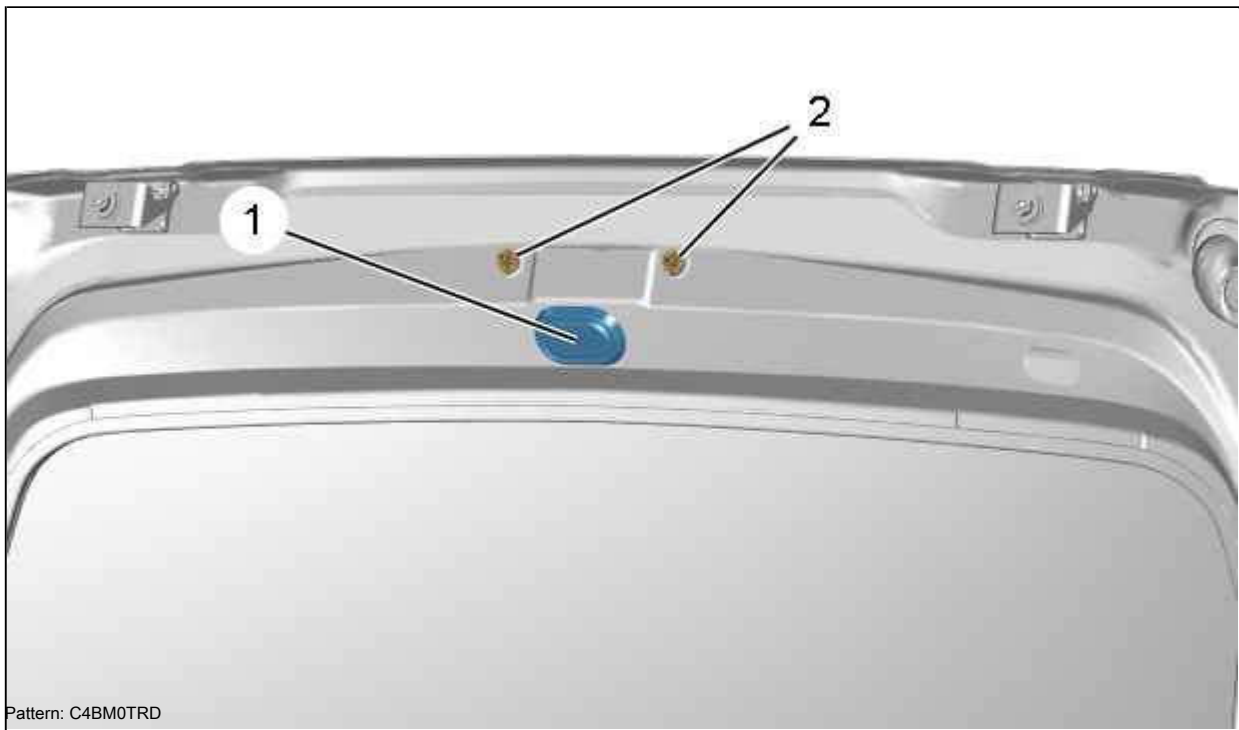


1. Recommended equipment



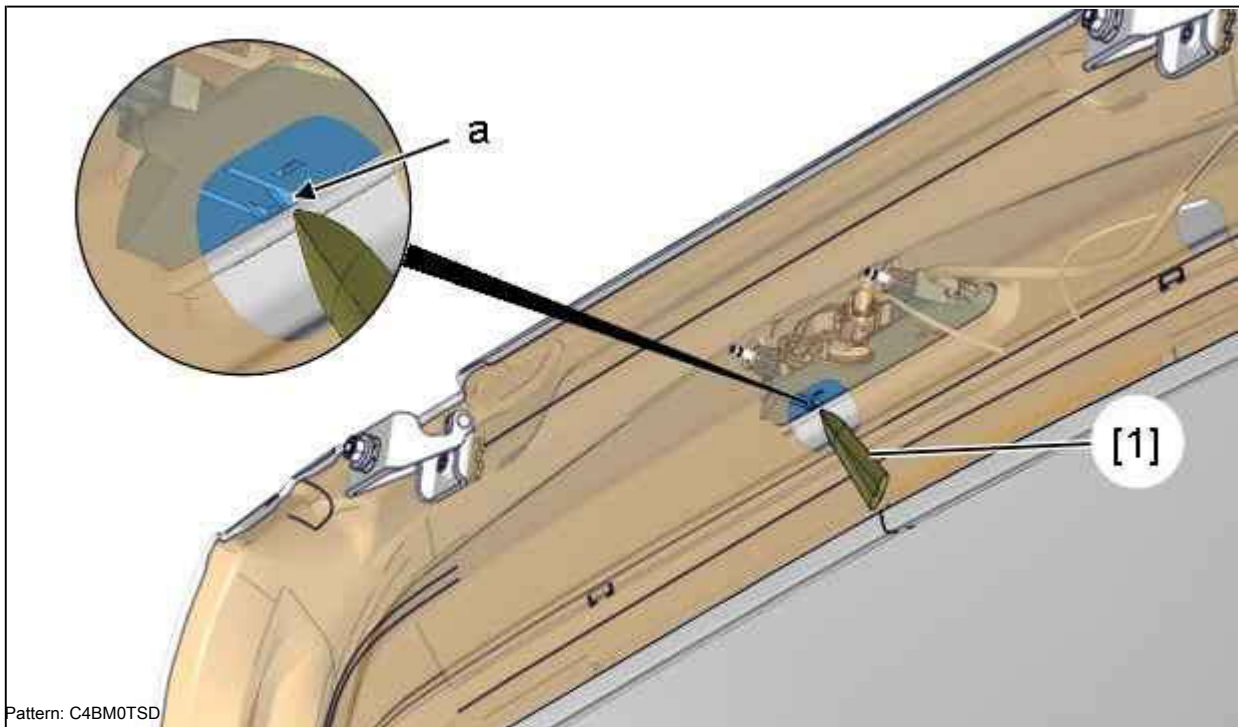
[1] Trim stripper () .1350ZZ.

2. Removal



Remove:

- Cap (1); Using the tool [1]
- Plastic nuts (2)



Disconnect the 3rd brake light (at "a"); Using the tool [1] (on each side of the 3rd brake light).

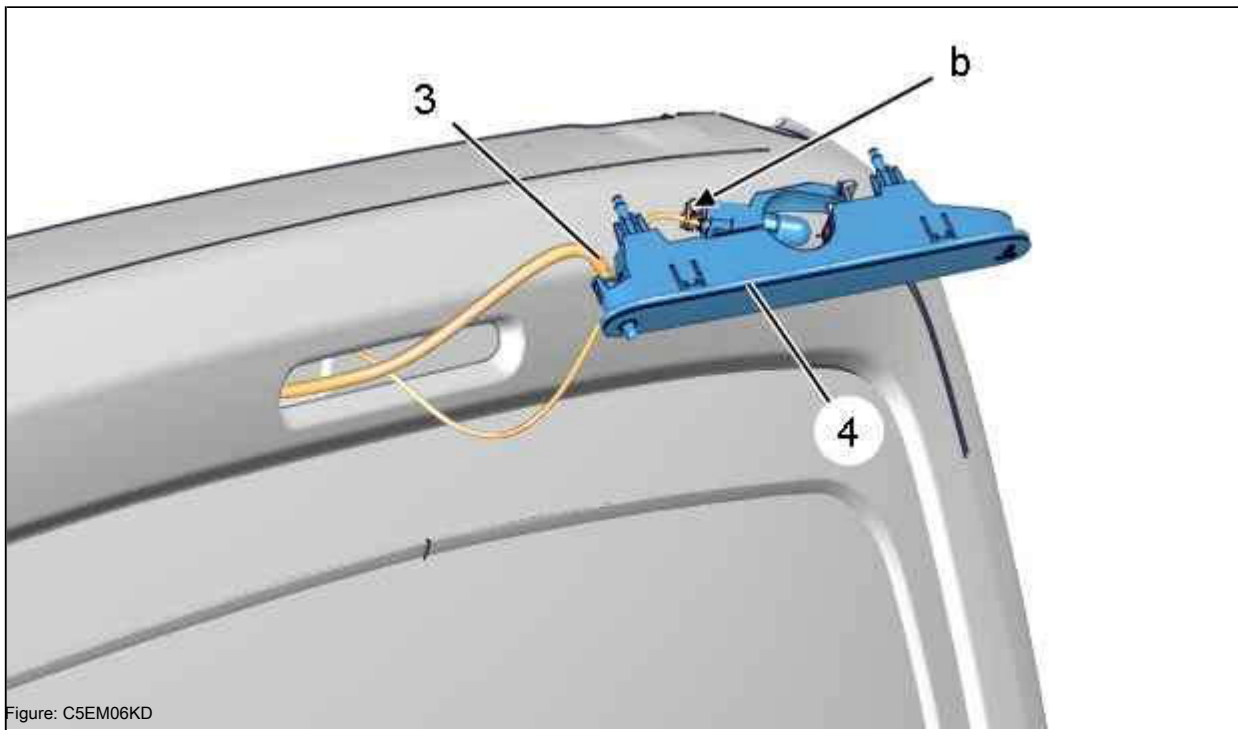


Figure: C5EM06KD

Disconnect the washer hose (3).

Unlock and disconnect the "" connector (at "b"). Remove the 3rd brake light (4).

3. Installation

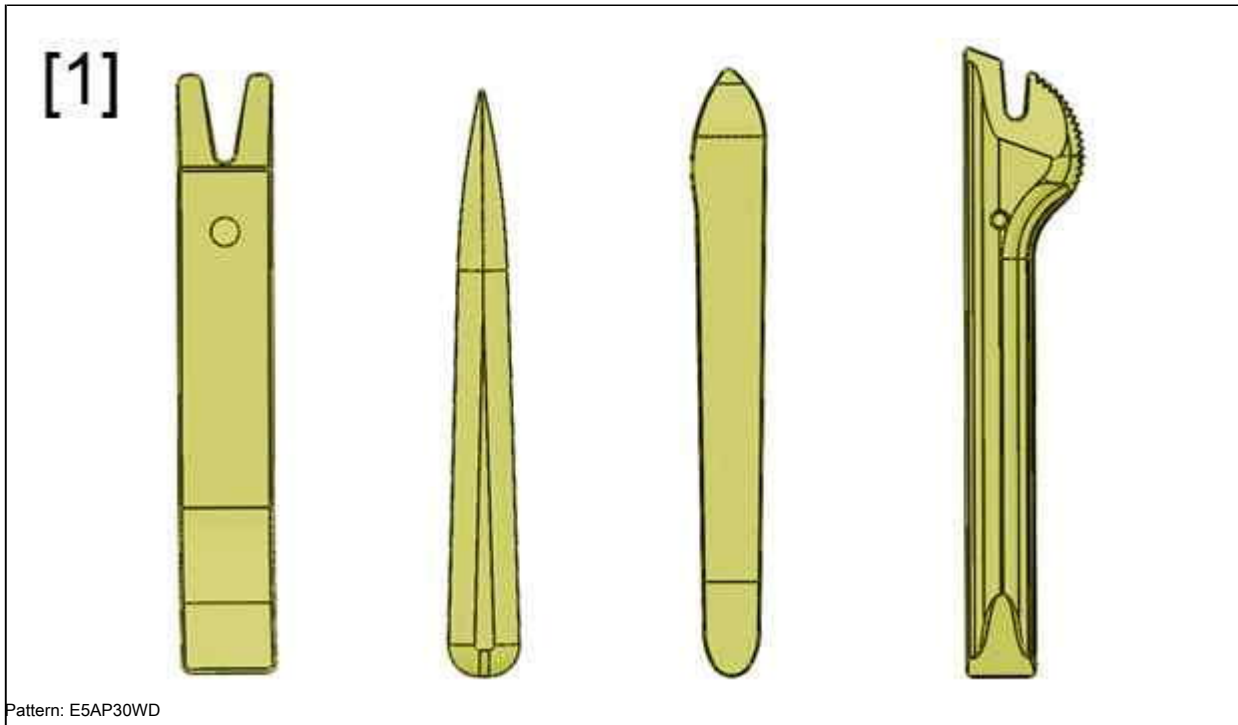
Installation is carried out by performing the removal operations in the reverse order. Check the operation of the removed elements.

REMOVAL INSTALLATION: HEADLAMP WASHER

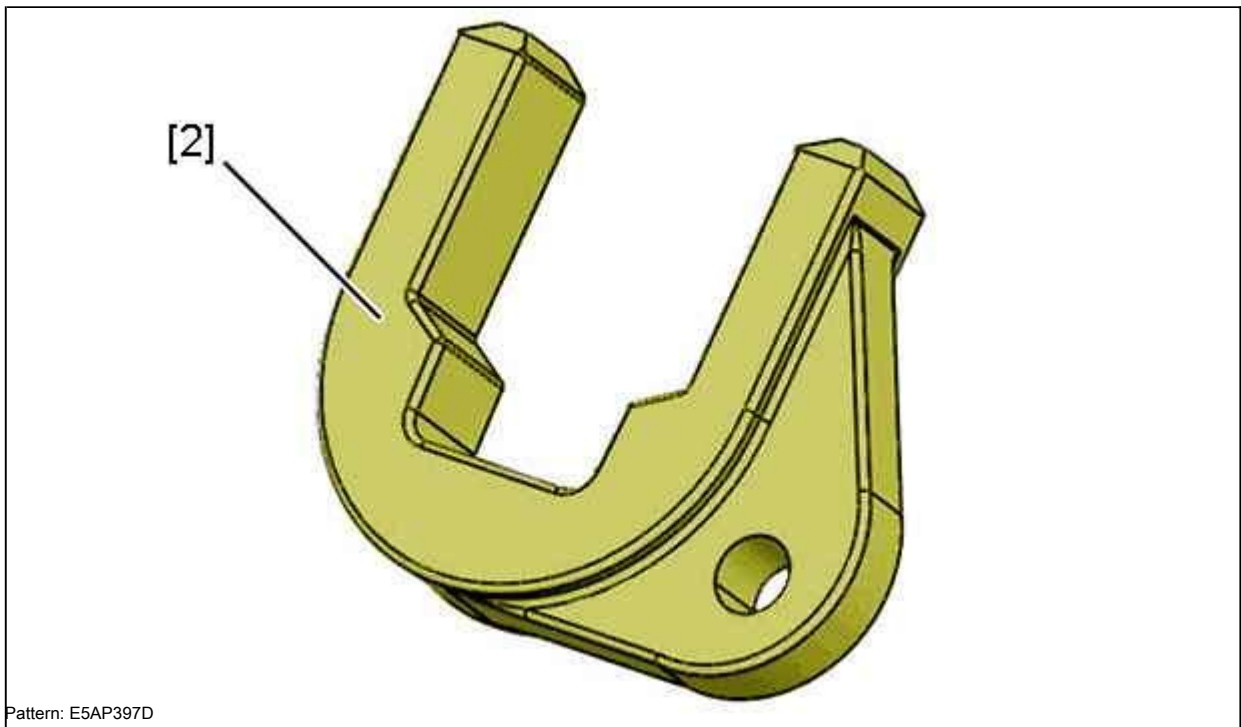
MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



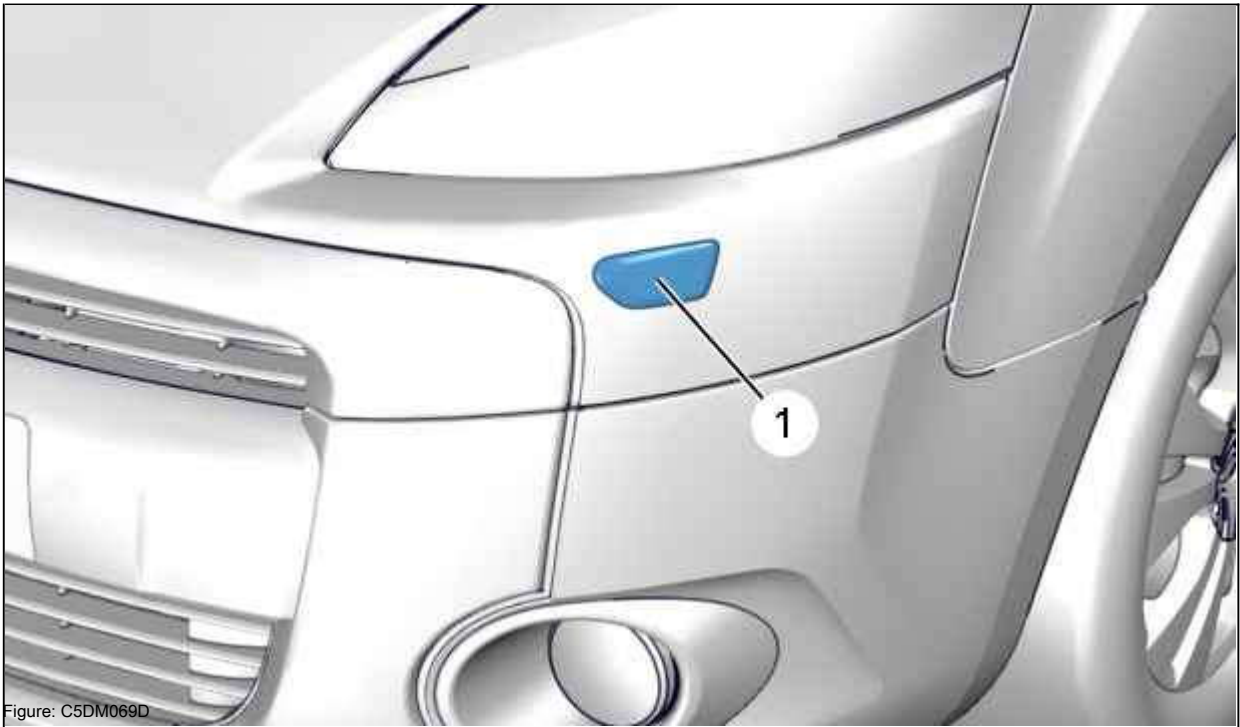
[1] Trim stripper () .1350ZZ.



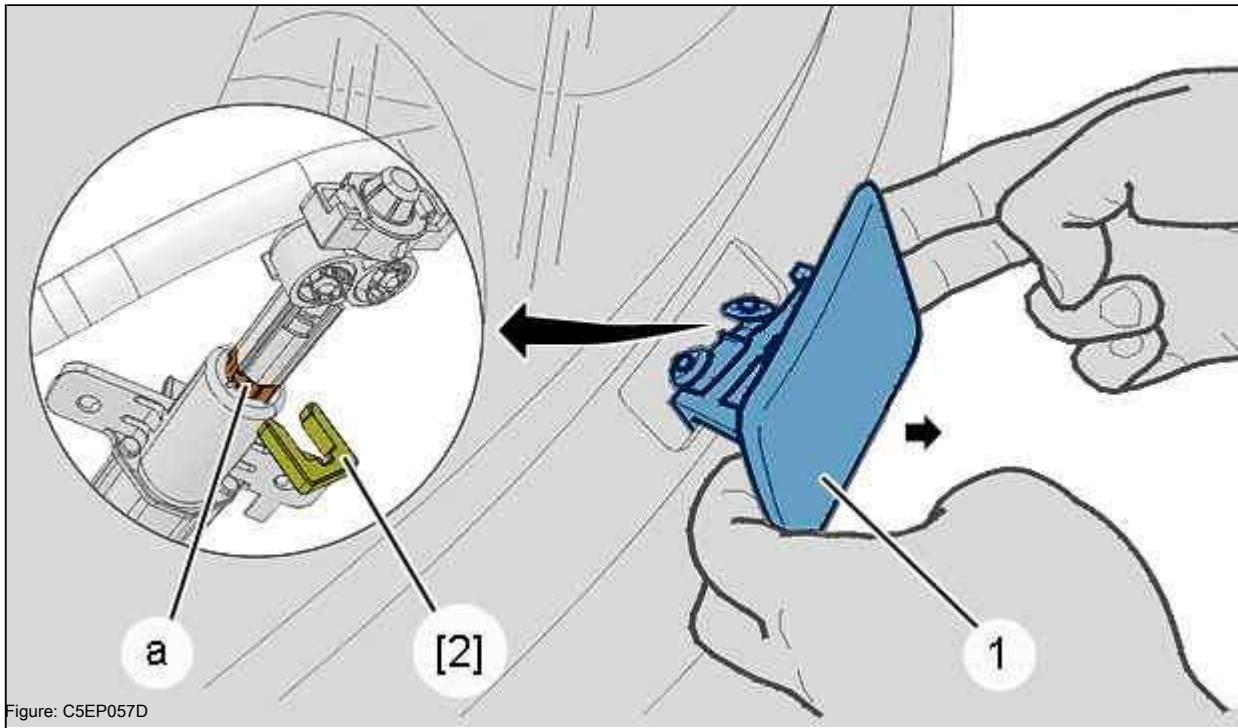
[2] Retaining fork for fixing the headlamp washer in a stationary position () .1371D.

2. Removal

2.1. Decorative overlay



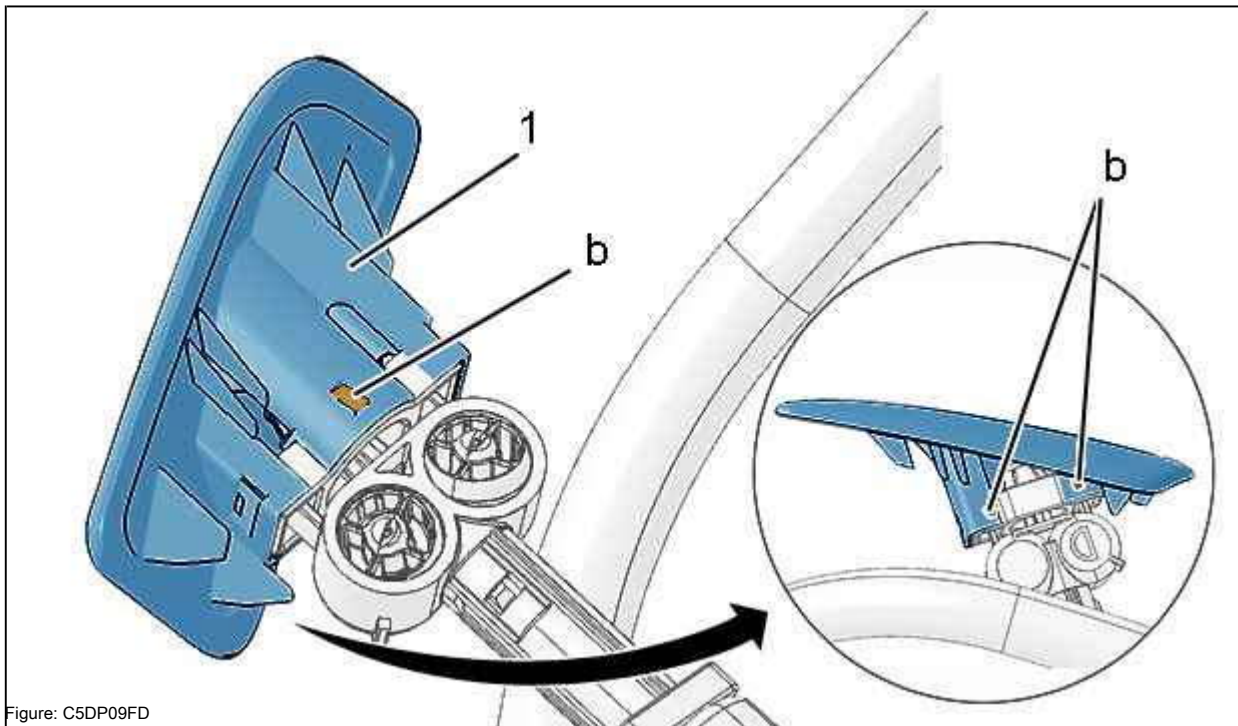
Detach the jet trim (1) from the bumper; Using the tool [1].



Pull the cover (1).

Install the tool [2] into the groove of the power cylinder of the windscreen washer (in zone "a"), carefully release the hydraulic cylinder of the windscreen washer.

NOTE: Protect the contour of the headlight washer socket; With adhesive tape.



Unfasten cover (1) (in "b"); Using a small screwdriver. Remove decorative strip (1).

2.2. Headlight washer jets

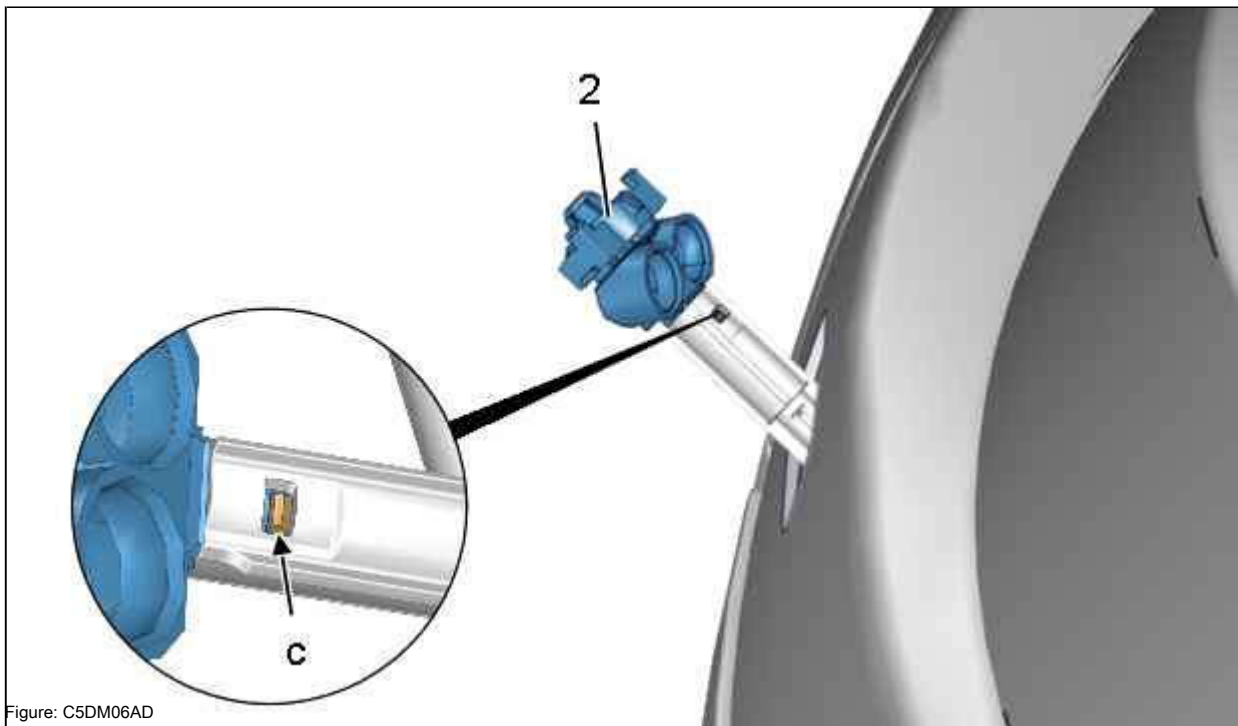


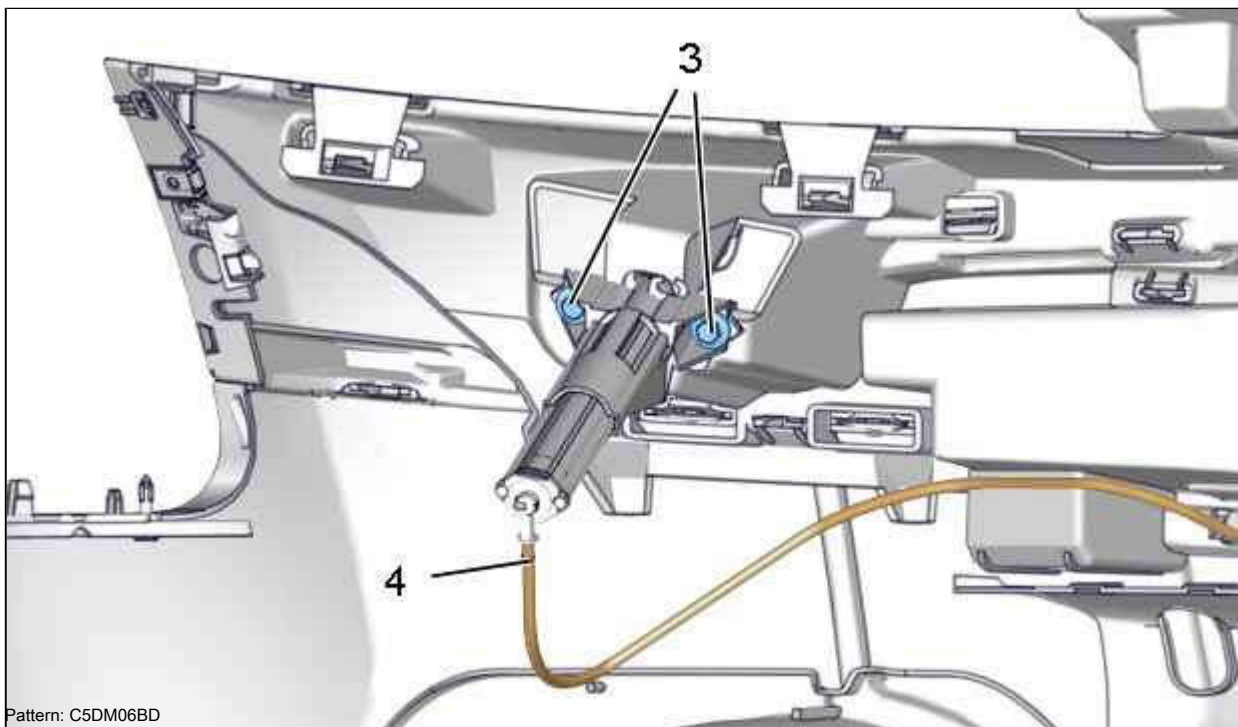
Figure: C5DM06AD

Detach the fasteners in area "c"; to loosen the jets / headlight washer assembly (2), pull it; Using a small screwdriver.

Remove the headlight washer / washer assembly (2).

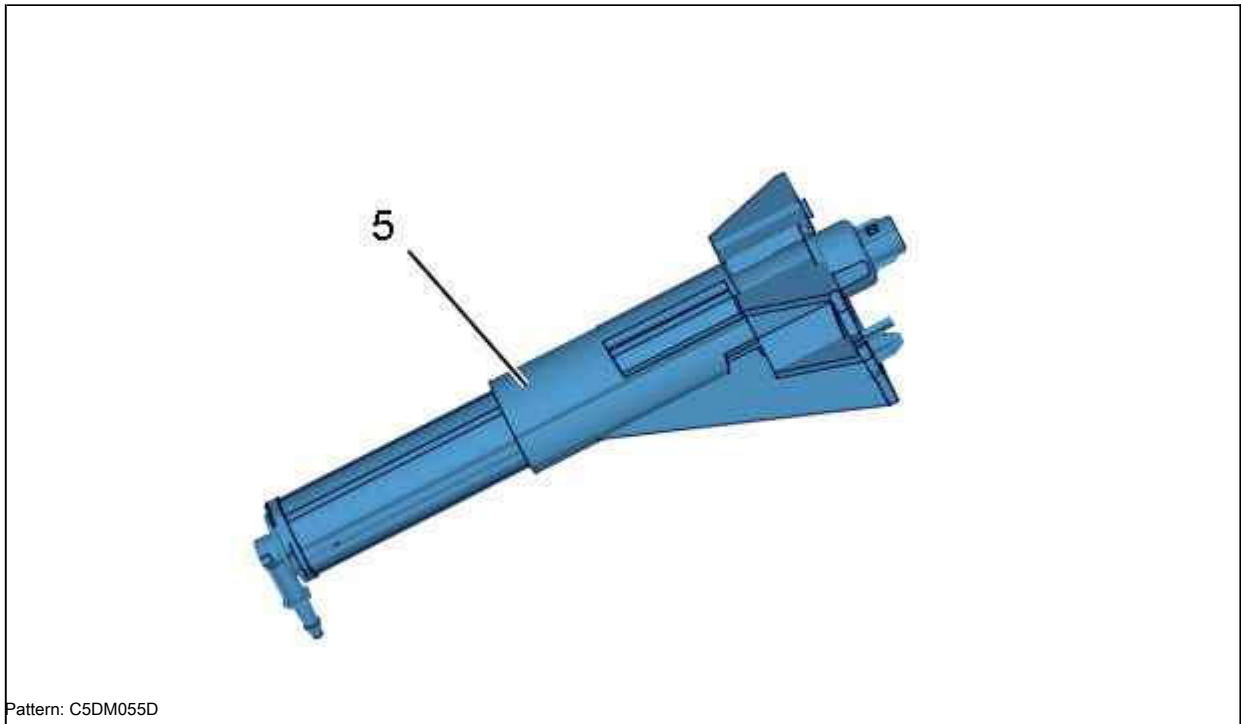
2.3. Headlight washer

Remove the front bumper



Pattern: C5DM06BD

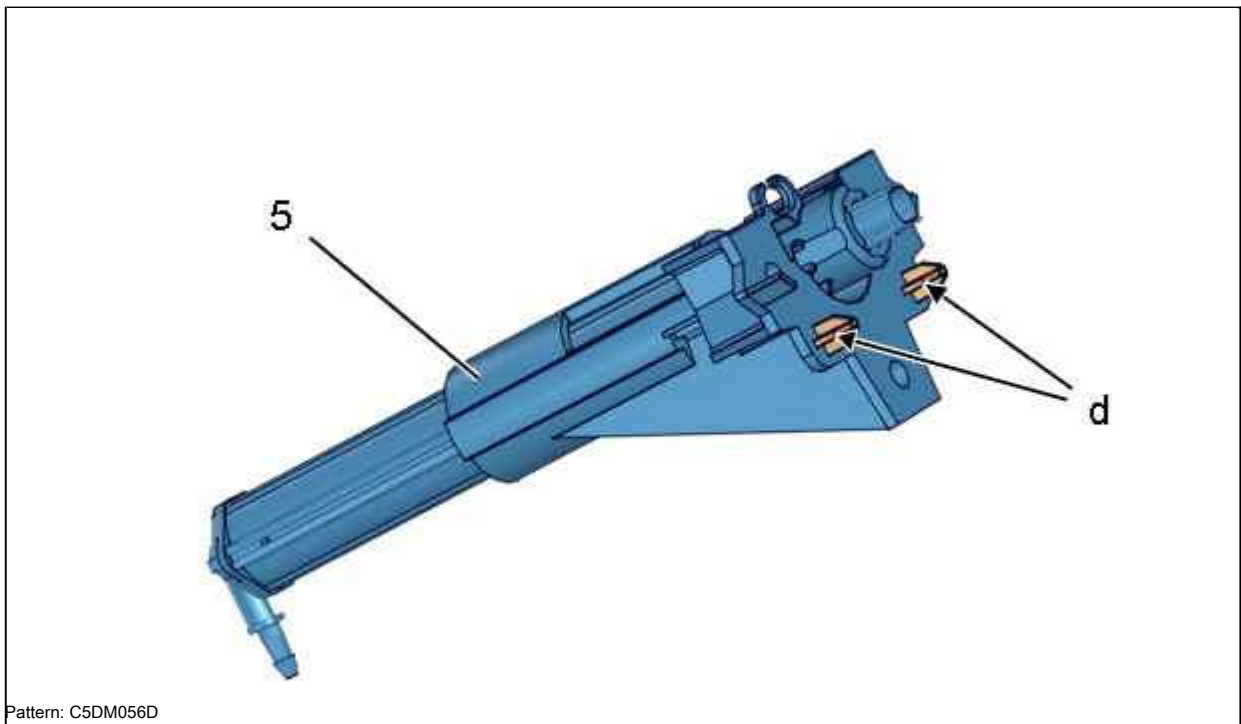
Disconnect the tube (4).
Loosen screws (3).



Remove the headlamp washer (5).

3. Installation

3.1. Headlight washer



Install:

- Headlight washer (5); With (in "d")
- bolts (3); Tighten to 0.8 ± 0.2 da.Nm

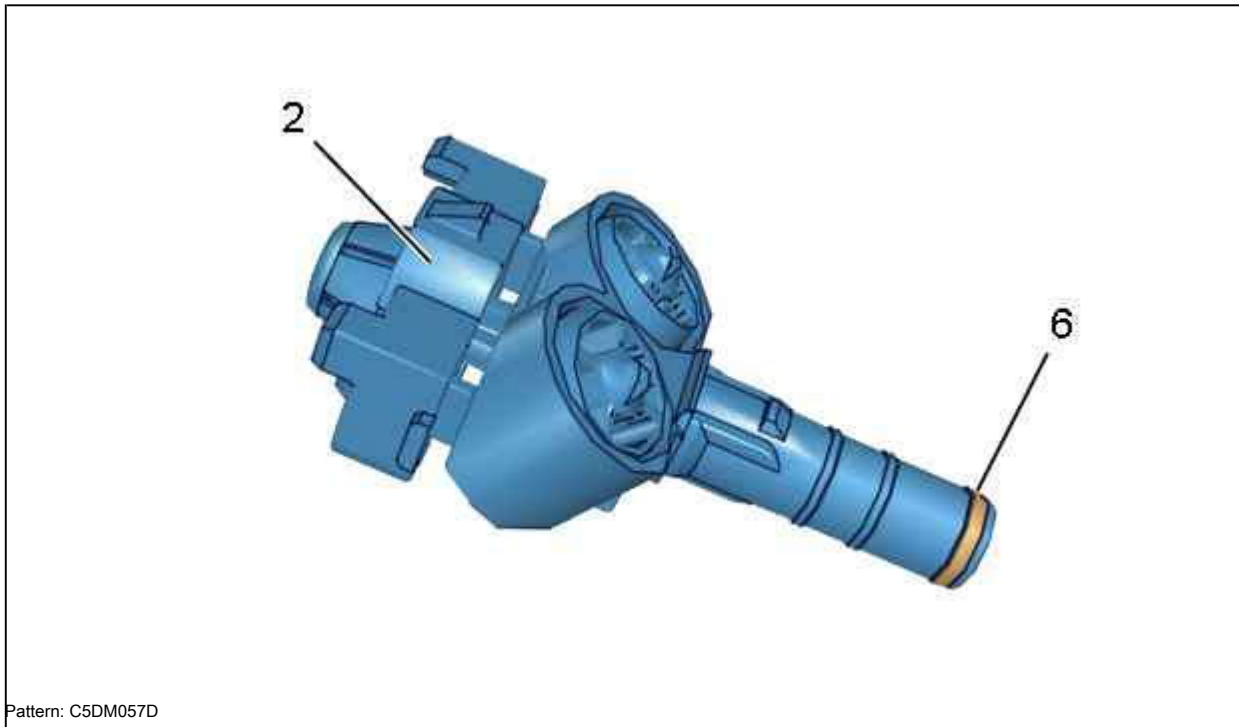
Connect the hose (4).

Install the front bumper

Proceed with the installation operation.

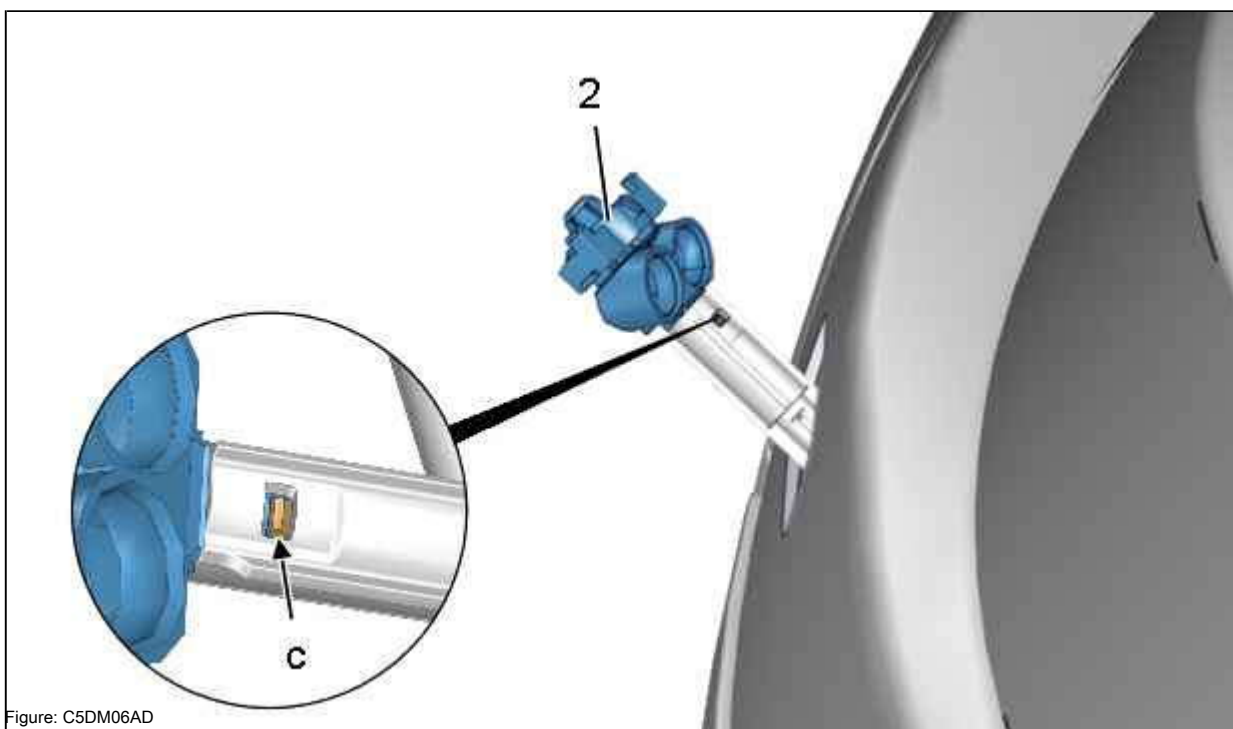


3.2. Headlight washer jets



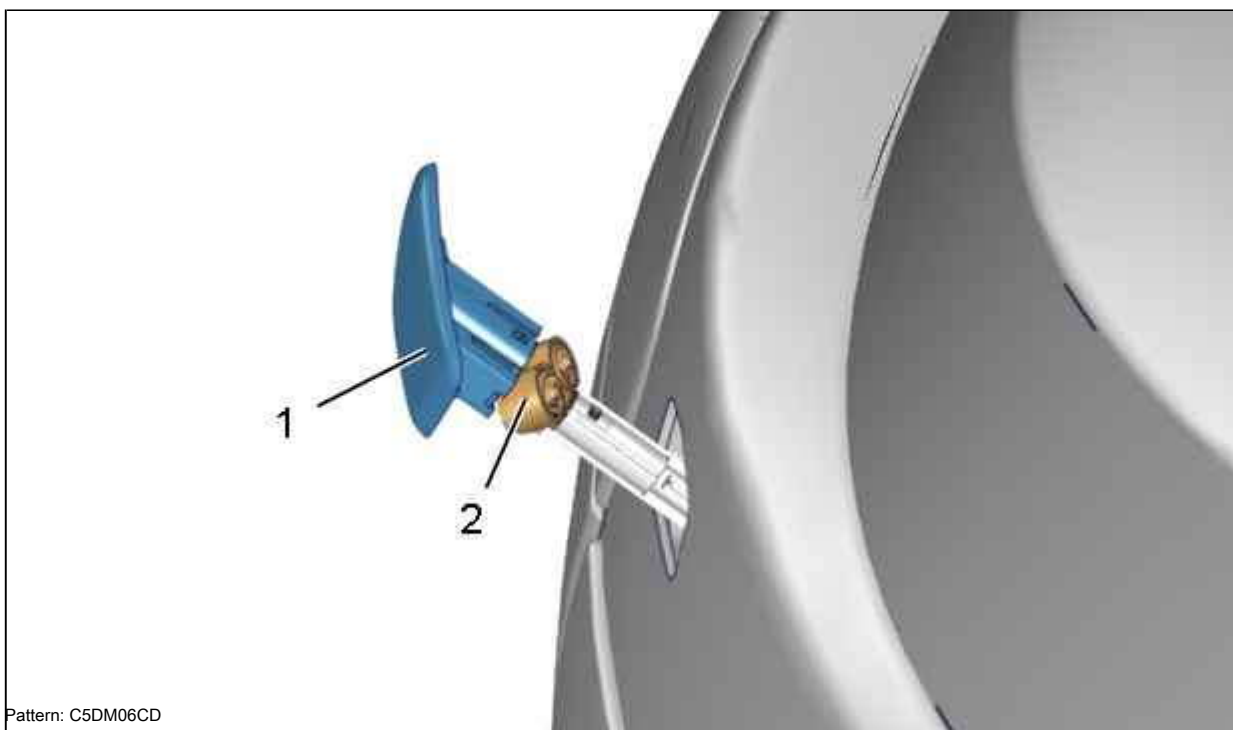
Pattern: C5DM057D

Check the condition of the seal (6).



Connect the jets / washer assemblies (2) (in area "c") to the hydraulic cylinder.

3.3. Decorative overlay



Attach the decorative element (1) to the headlight washer / washer assembly (2) using the clips. Pull the assembly into the headlight washer / washer assembly (2) the trim (1) to make sure it is firmly in place and to raise the fork [2].

ATTENTION : Hold the jet block during its return movement until it touches the bumper

(The return movement of the actuator may be too fast, resulting in damage to the bumper or actuator).

Check: Functionality of the headlight washer.

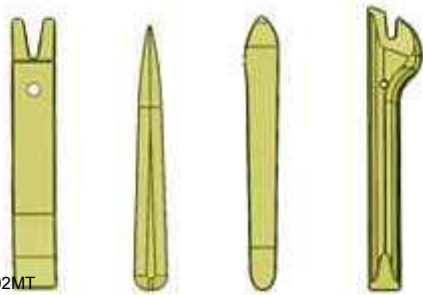
If necessary, adjust the headlight washer jets. Check the fluid level in the windscreen washer reservoir. Check the operation of the various equipment.

REMOVAL REFITTING: LIGHT AND RAIN SENSOR

MANDATORY: Observe the cleanliness and safety rules

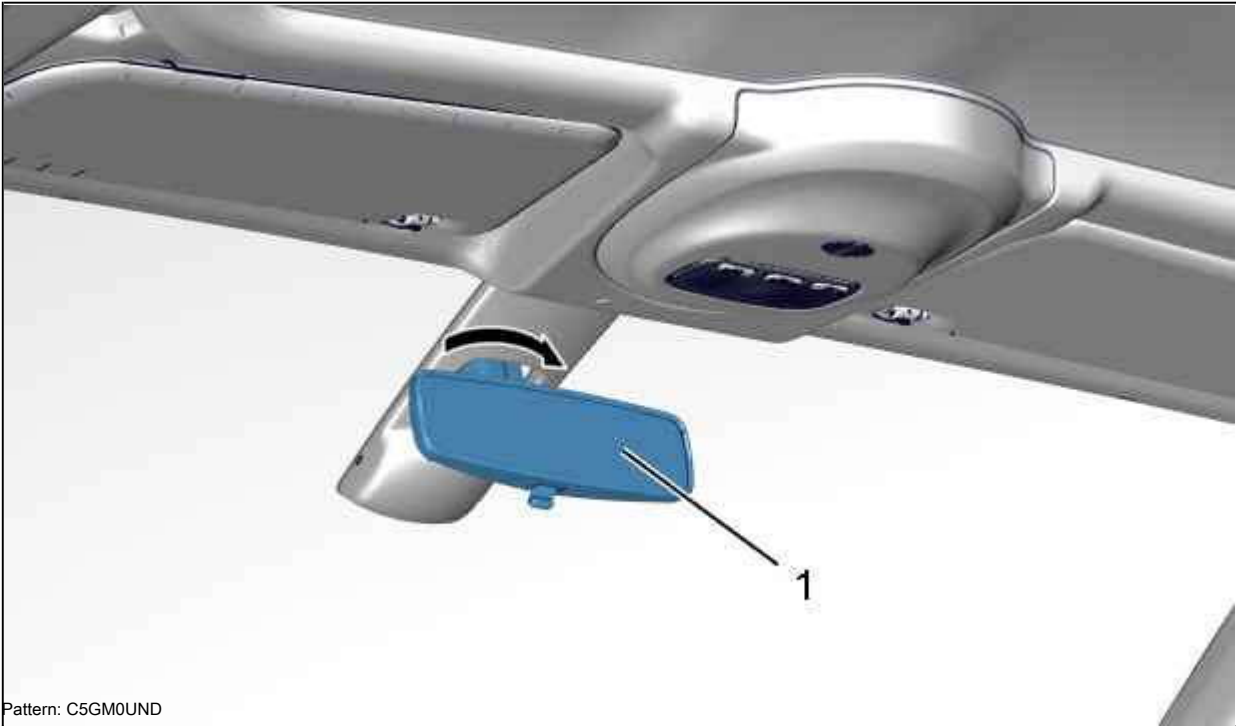


1. Tools

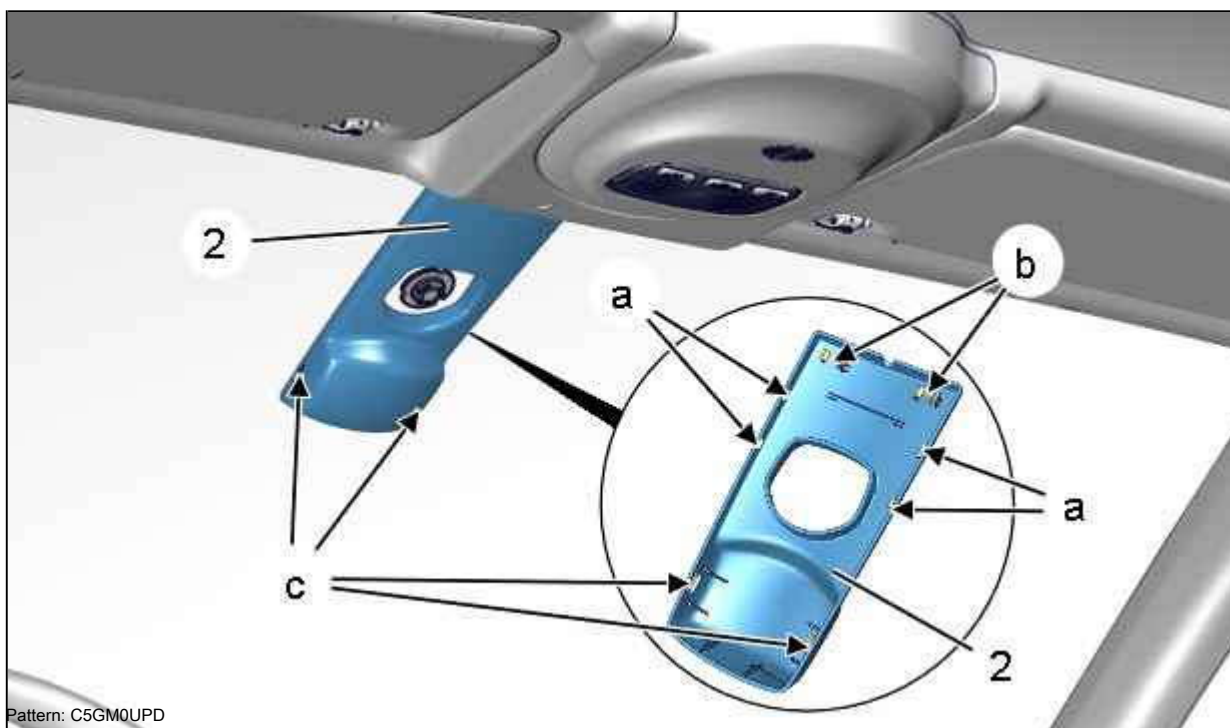
tool	room (reference)	Designation
<div><div>[1350-ZZ]</div><div>Figure: E5AG02MT</div></div>	[1350ZZ]	Removal tools plating

2. Removal

Disconnect the battery.



Remove the interior rearview mirror (1) from the base (Turn it a quarter turn) (in accordance with the arrow).



Pattern: C5GM0UPD

Disconnect:

- Decorative element (2) (in "c"); Using a thin screwdriver
- Decorative element (2) (in "a", "b"); Using the tool [1350ZZ]

Remove decorative strip (2).

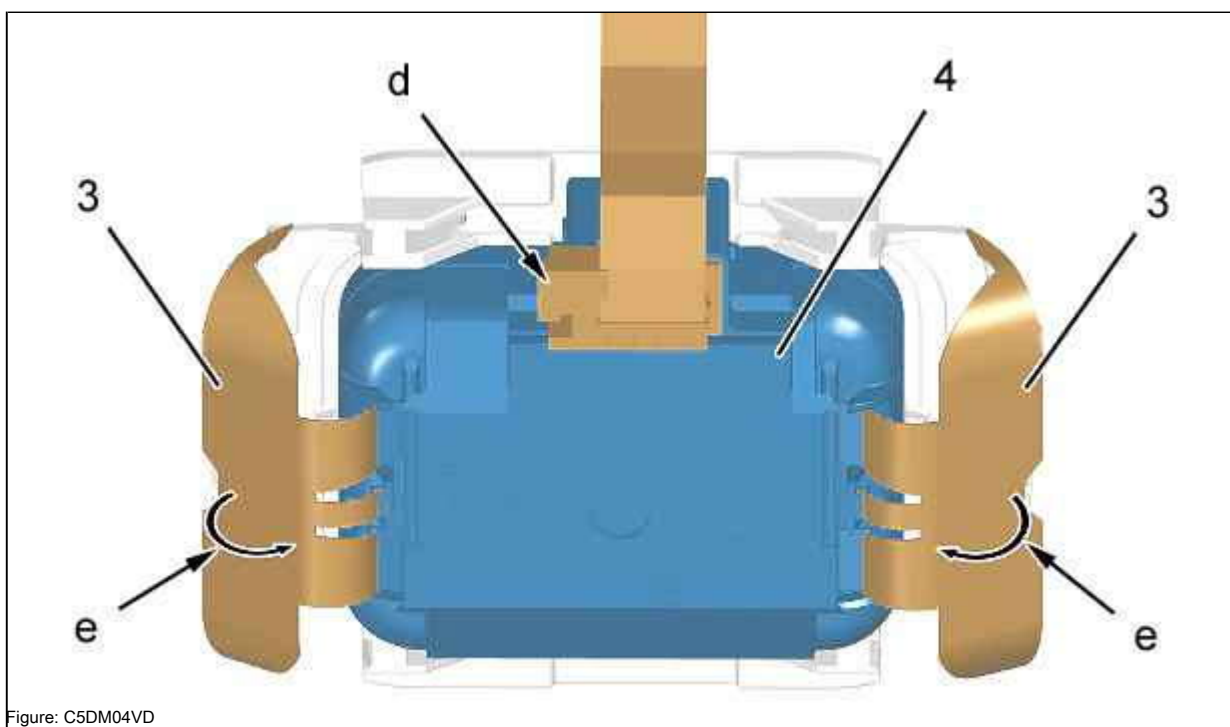


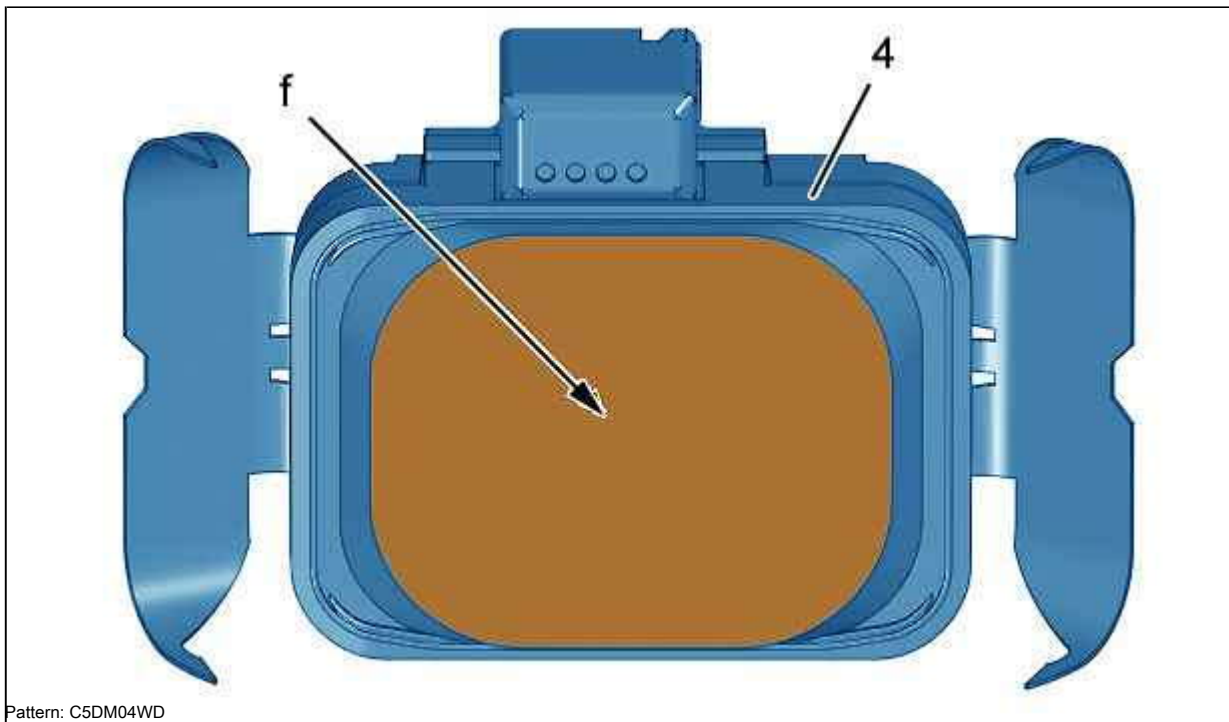
Figure: C5DM04VD

Disconnect the dual light and rain sensor connector (4) (at "d").

Set the springs (3) to the 45 ° pre-blocking position (as shown "e"); Using the tool [1350ZZ].

Remove the light and rain sensor (4) by hand from its base (perpendicular to the windscreen).

NOTE: If necessary, pass the tool [1350ZZ] between the base and the light and rain sensor (4) (on the spring side) and lift it simultaneously on each side.



ATTENTION : Protect the double rain and light sensor connection pad (4) with transparent adhesive tape (at "f") Place the double rain and light sensor (4) in an envelope.

Remove the dual light and rain sensor (4).

3. Installation

ATTENTION : The cleanliness of the dual light and rain sensor (4) for the windscreen is independent of the functioning of the system. Do not touch the surface of the contact pad with your fingers or any objects (in "f"). Do not use chemical solvents. Clean the windshield and the inside of the sensor socket of all dirt, glue and other particles; using a lint-free paper towel and glass cleaning solvent.

3.1. New dual light and rain sensor

Remove the protective cap.

ATTENTION : Install light and rain sensor (4) without effort. Make sure there are no air bubbles between the sensor and the windshield.

Install the light and rain sensor (4) in its base. Lock the springs (3) at the same time.

Connect the connector (at "d").

Replace decorative element (2).

3.2. Reusable dual light and rain sensor

ATTENTION : It is not necessary to replace this type of sensor every time it is removed.

Remove the transparent self-adhesive tape (in "f").

ATTENTION : Clean the surface of the contact pad with transparent self-adhesive tape.

NOTE: The springs (3) must be in the 45 ° pre-locking position.

ATTENTION : Install light and rain sensor (4) without force. Make sure there are no air bubbles between the sensor and the windscreen.

Install the light and rain sensor (4) in its base. Lock the springs (3) at the same time.

Connect the connector (at "d").

Replace decorative element (2).

3.3. General operations

Install: Interior rearview mirror (1).

4. Checks

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Turn the ignition key to the "+ APC" position.

Activate the "allumage automatique des feux" function (automatic light on).

NOTE: The following message appears on the multifunction display: "Automatic headlights on".

Engine starting.

Cover the light and rain sensor in the windscreen. Check the automatic switching on of lighting devices.

Activate the "essuievitre avant automatique" function (automatic activation of the windscreen wiper).

NOTE: Activation of the automatic system is confirmed with a single sweep of the front wiper blades.

NOTE: The following message appears on the multifunction display: "essuievitre automatique activé" (automatic wiper switch active).

Spray water over the area of the light and rain sensor. Test the automatic wiper operation.

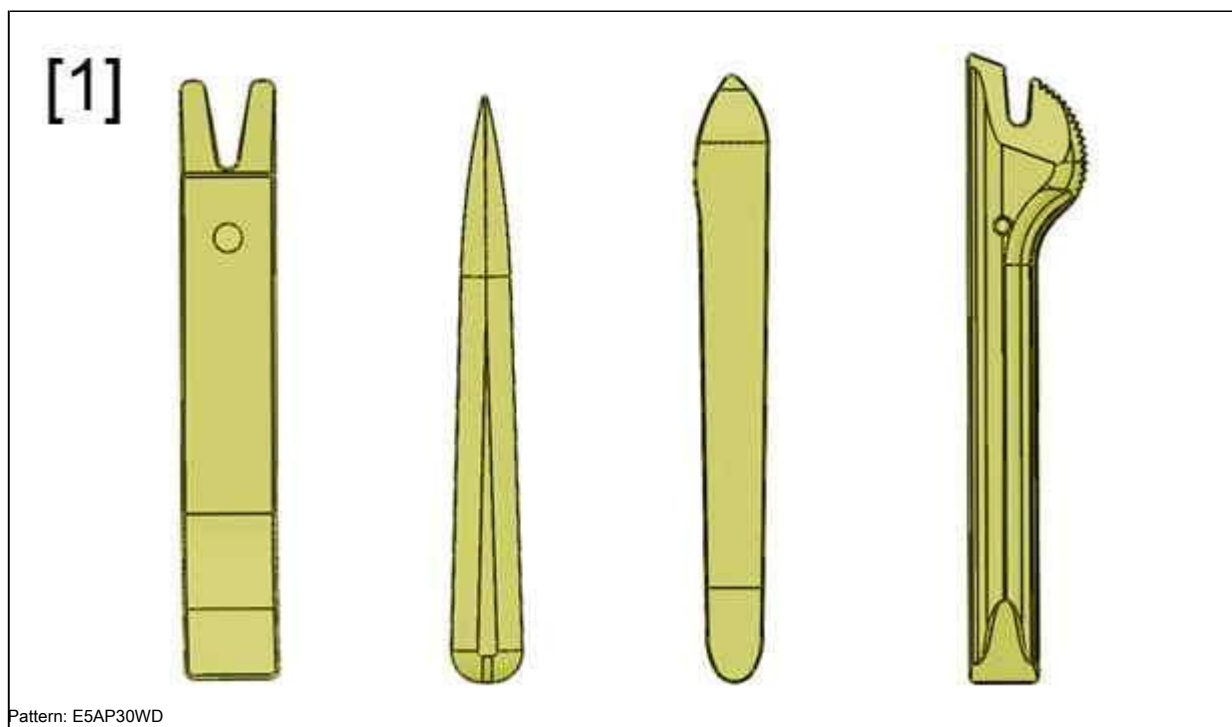
Set the wiper switch to "0". Stop the engine.

REMOVAL INSTALLATION: REAR WIPER MECHANISM

MANDATORY: Observe the cleanliness and safety rules



1. Tools

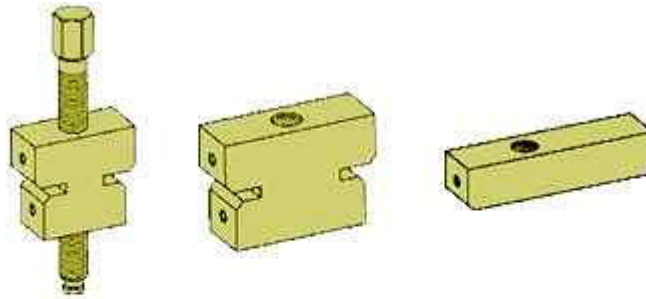


Pattern: E5AP30WD

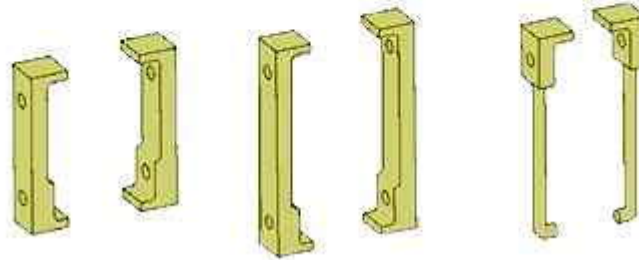
[1] Trim removal tool () .1350ZZ.

[2]

A



B



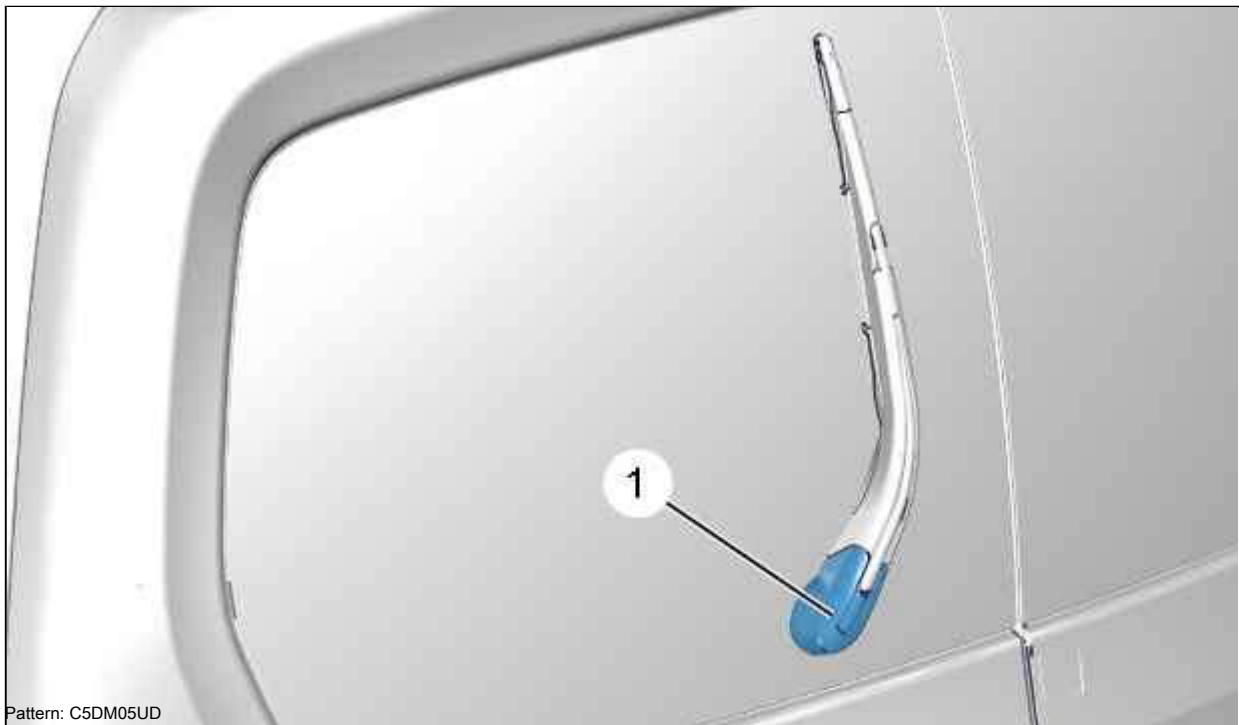
Pattern: E5AM0LHD

/ 2 / extractor for wiper arms (). 1373l.

2. Removal

Disconnect the battery

2.1. Rear Wiper Mechanism: Rear Hinged Door



Pattern: C5DM05UD

Detach cover (1).

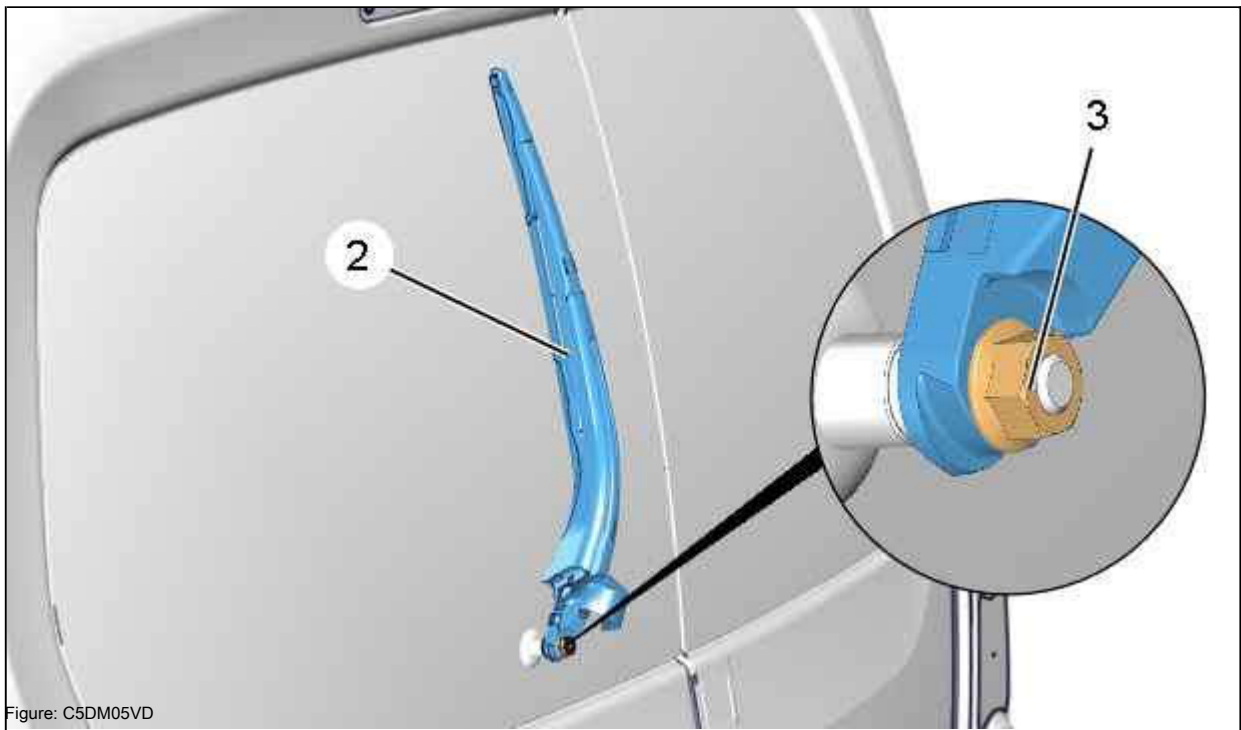
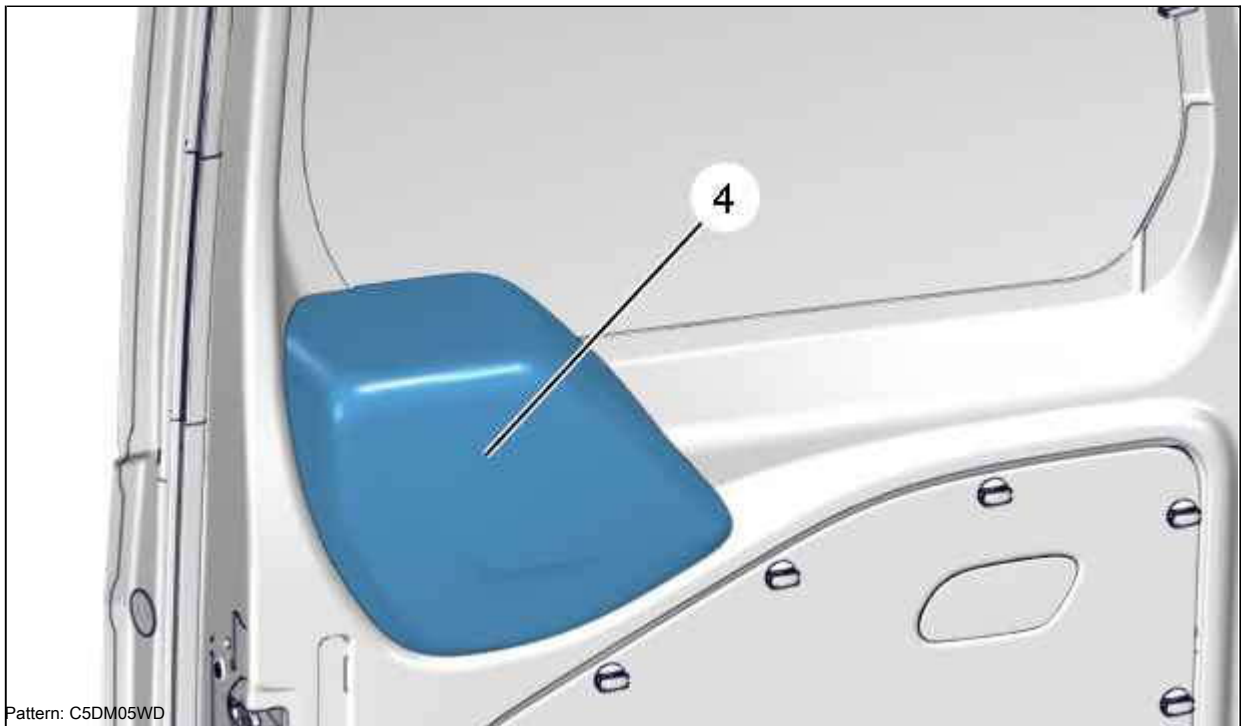


Figure: C5DM05VD

Remove:

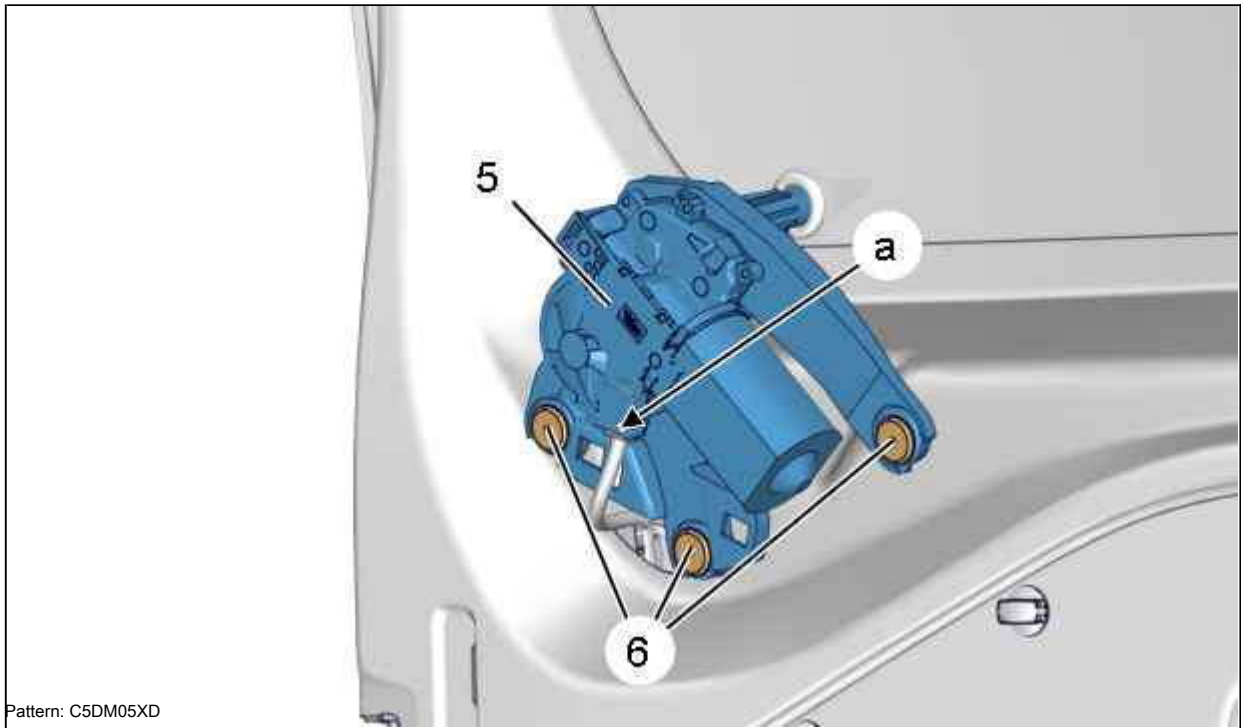
- Nut (3)
- Rear wiper arm (2); Using the tool [2]

Open the tailgate.



Pattern: C5DM05WD

Remove the cover (4) of the windscreen wiper drive.



Disconnect the connector (at "a").

Cut off the rivet shafts before drilling. Drill out the rivet heads (6); with an 8 mm drill. Remove the wiper drive (5).

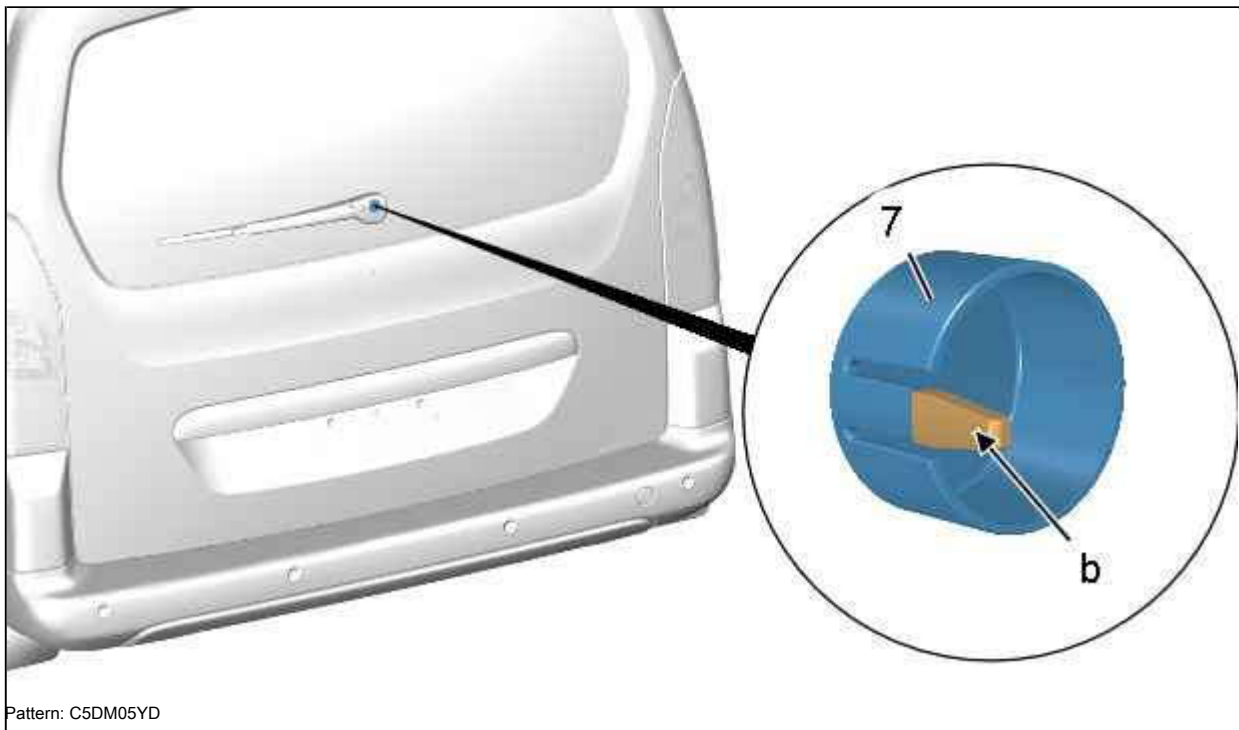
Drill out the remaining rivets.

Remove the rear door trim

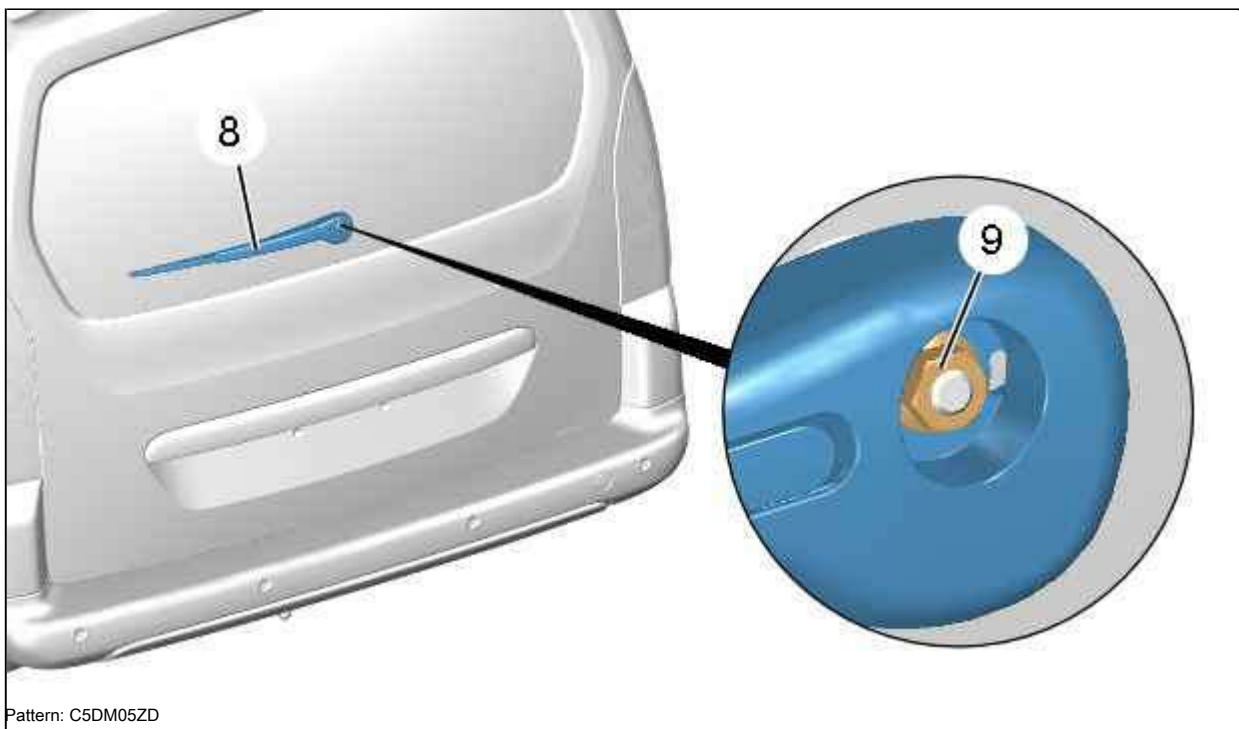


NOTE: Remove remnants of rivets from the bottom of the door with a vacuum cleaner.

2.2. Rear wiper mechanism: Luggage compartment lid (fixed glass)



Detach the cover (7); Using the tool [1] (in "b").

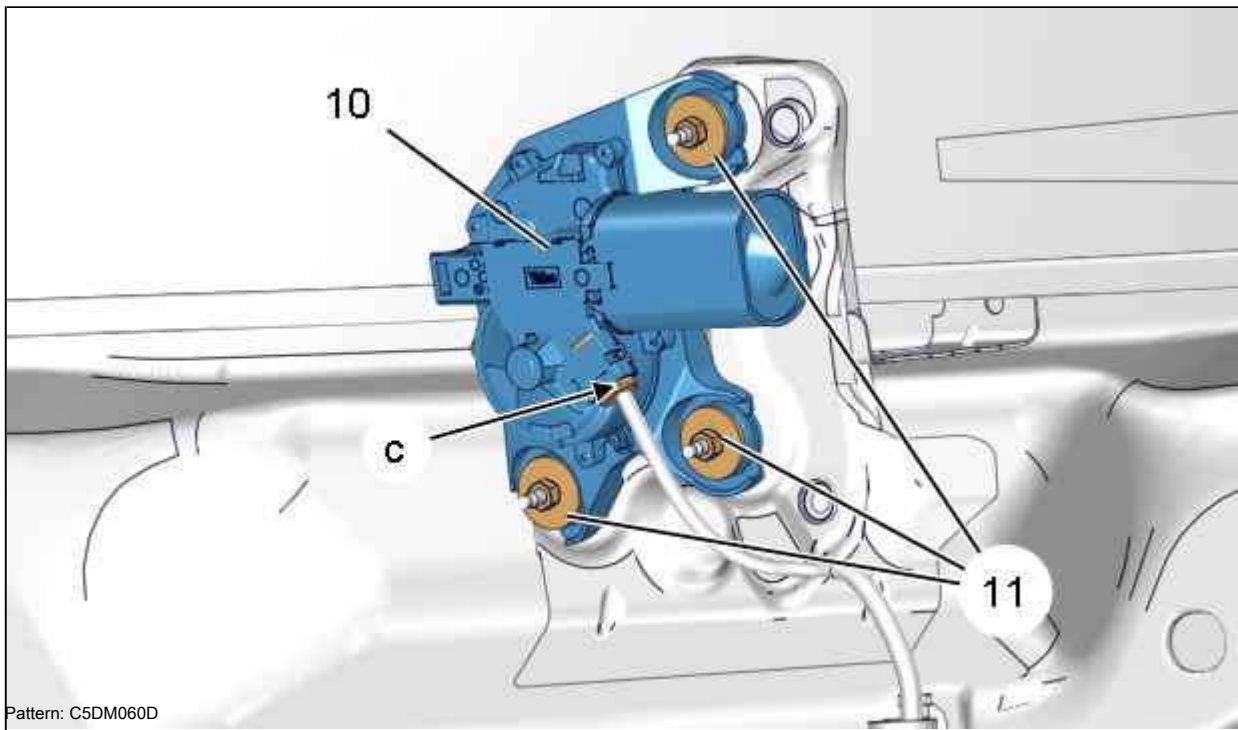


Remove:

- Nut (9)
- Rear wiper arm (8); Using the tool [2]
- **Remove the trim for the tailgate**



(fixed glass)

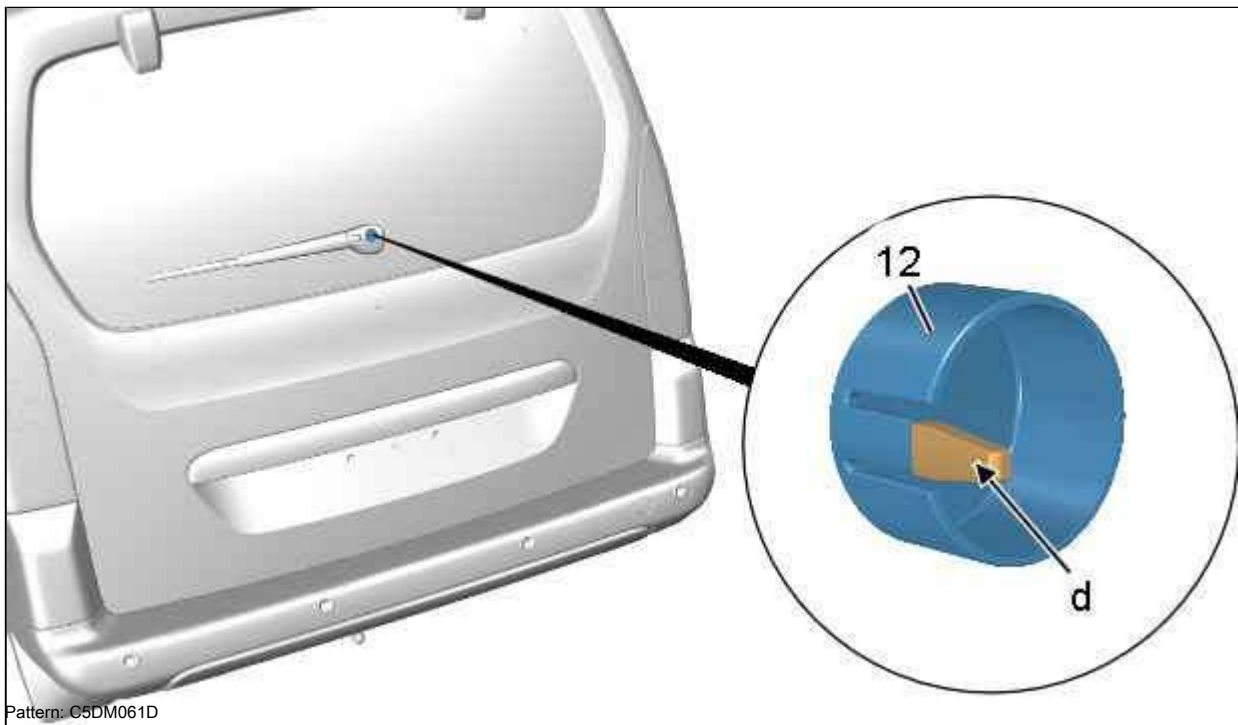


Disconnect the connector (at "c").

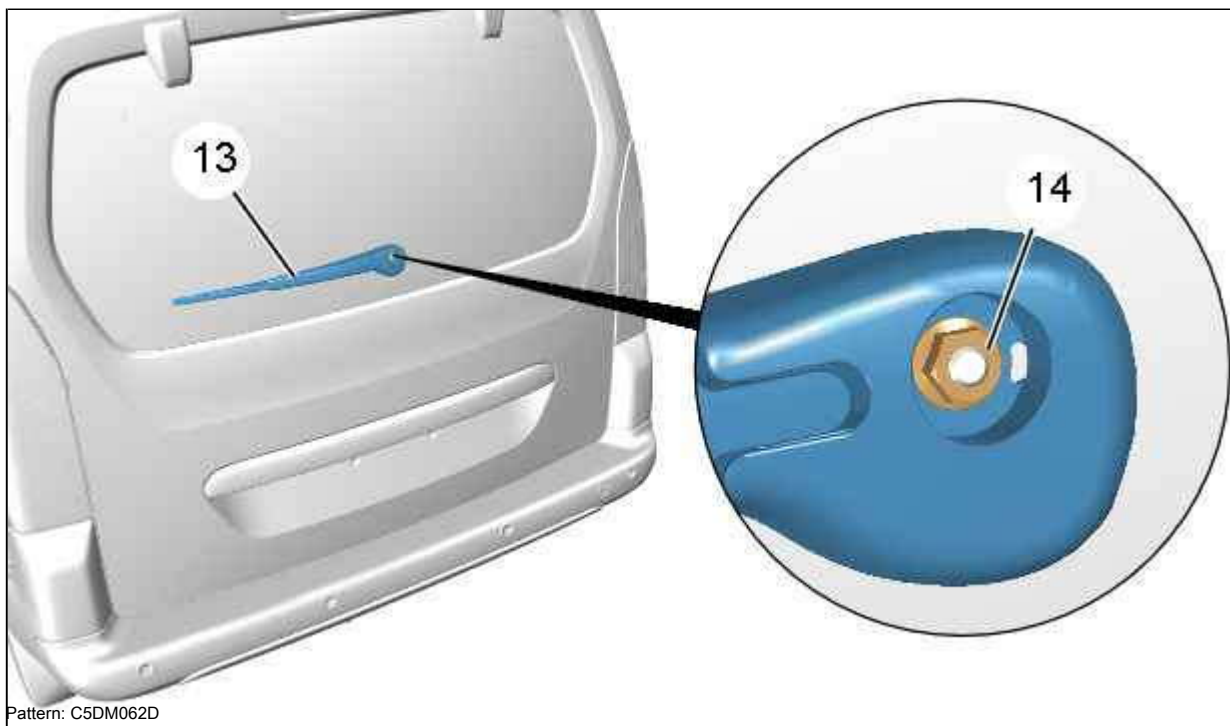
Remove:

- Nuts (11)
- Rear wiper drive (10)

2.3. Rear wiper mechanism: Luggage compartment lid (Moving glass)



Detach the cover (12); Using the tool [1] (in "d").

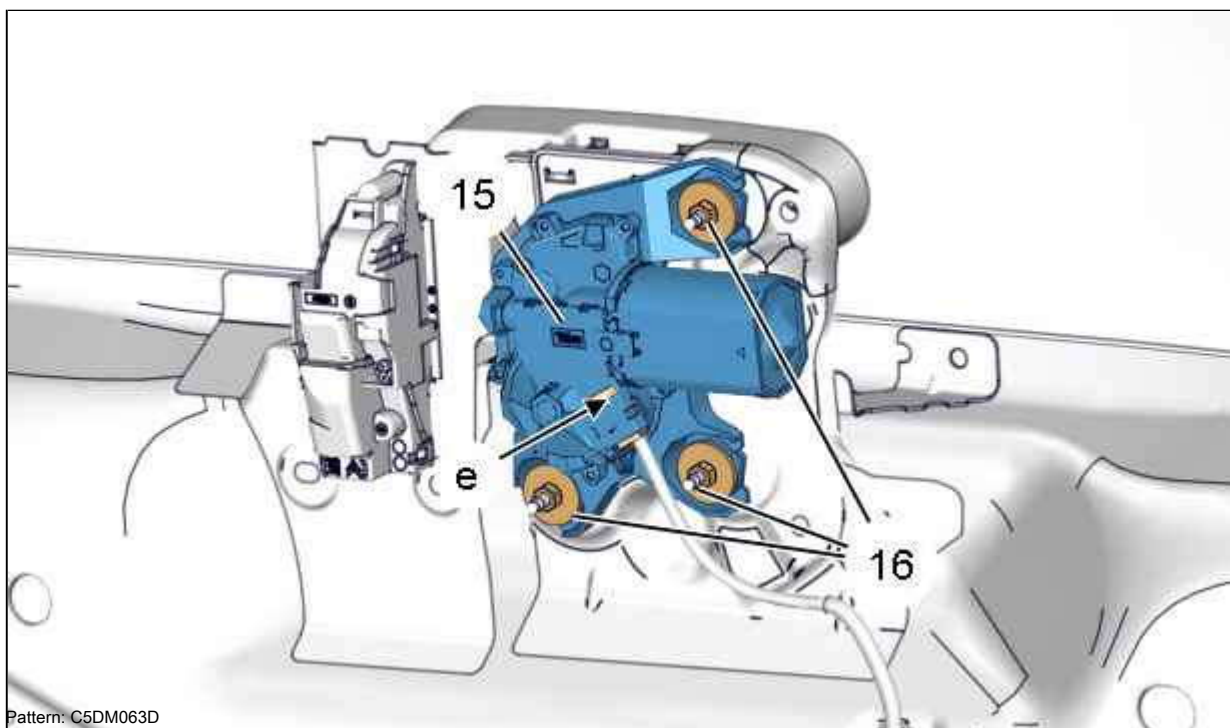


Pattern: C5DM062D

Remove:

- Nut (14)
- Rear wiper arm (13); Using the tool [2]
- **Luggage compartment lid trim**

(Moving glass)



Pattern: C5DM063D

Disconnect the connector (at "e").

Remove:

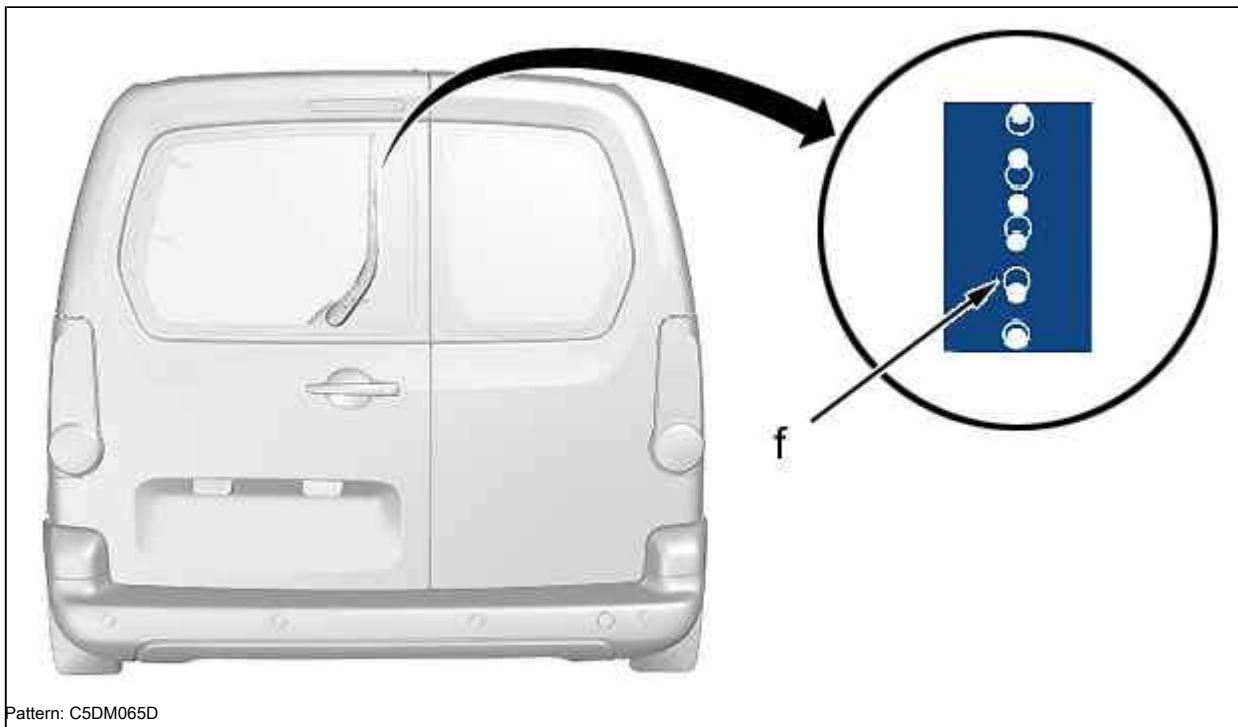
- Nuts (16)
- Rear wiper drive (15)

3. Installation



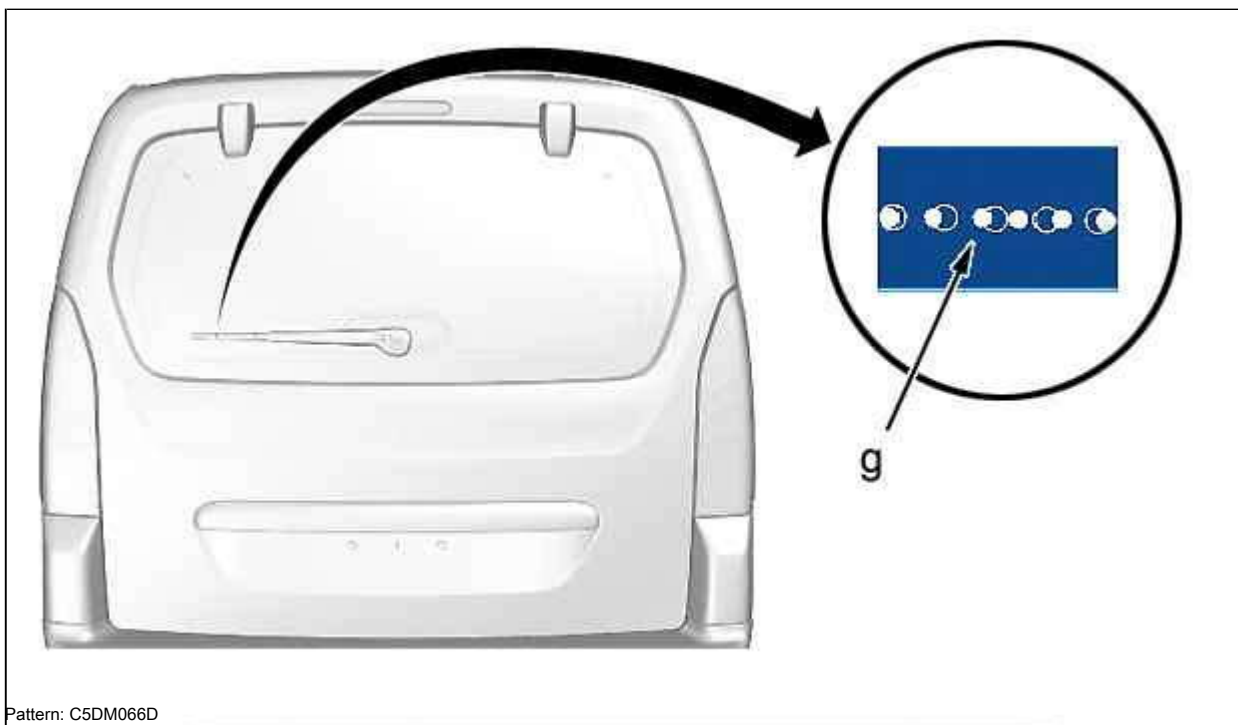
ATTENTION : Check the correct position of the O-ring (17).

3.1. Rear wiper arm: Rear swing door



Install the rear wiper arm (according to the screen mark) (at "f").

3.2. Rear wiper arm: Luggage compartment lid (Fixed glass Moving glass)



Install the rear wiper arm (According to the template) (at "g").

3.3. General operations

Tighten the nuts (3), (9), (14) to a torque of 1.2 ± 0.2 da.Nm.

Tighten the nuts (11), (16) to a torque of 0.8 ± 0.2 da.Nm.

Installation is carried out by performing the removal operations in the reverse order.

Reconnect the rechargeable battery

Check the operation of the various equipment.



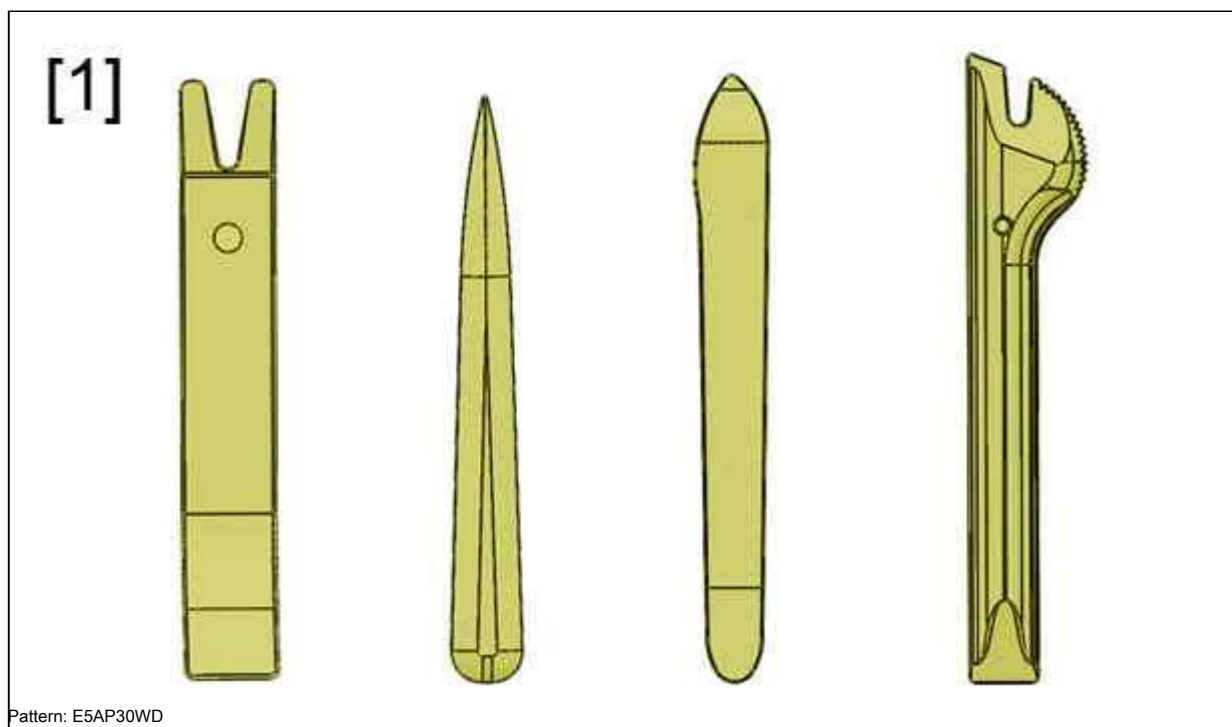
...

REMOVAL INSTALLATION: FRONT WIPER MECHANISM

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



Pattern: E5AP30WD

[1] Trim removal tool () .1350.

2. Removal

MANDATORY: Check the off position of the wiper switch.

Open the hood.

Disconnect the battery

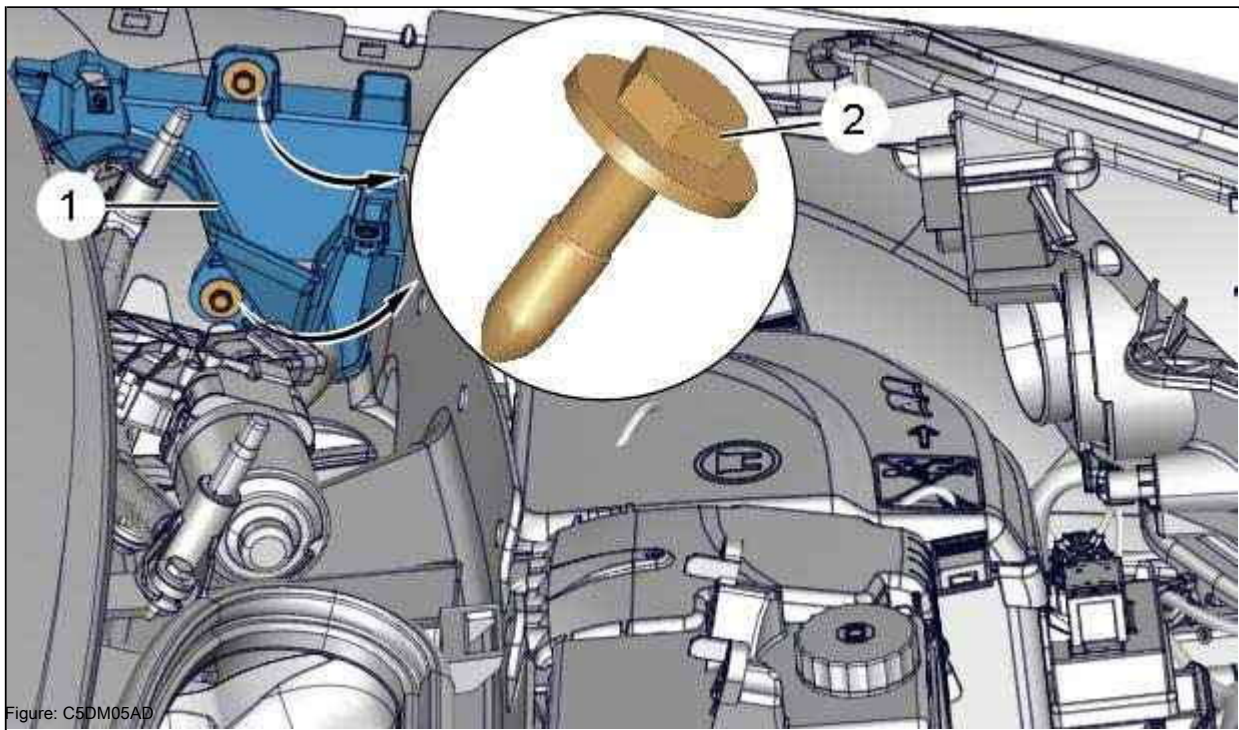
Remove the air intake grille



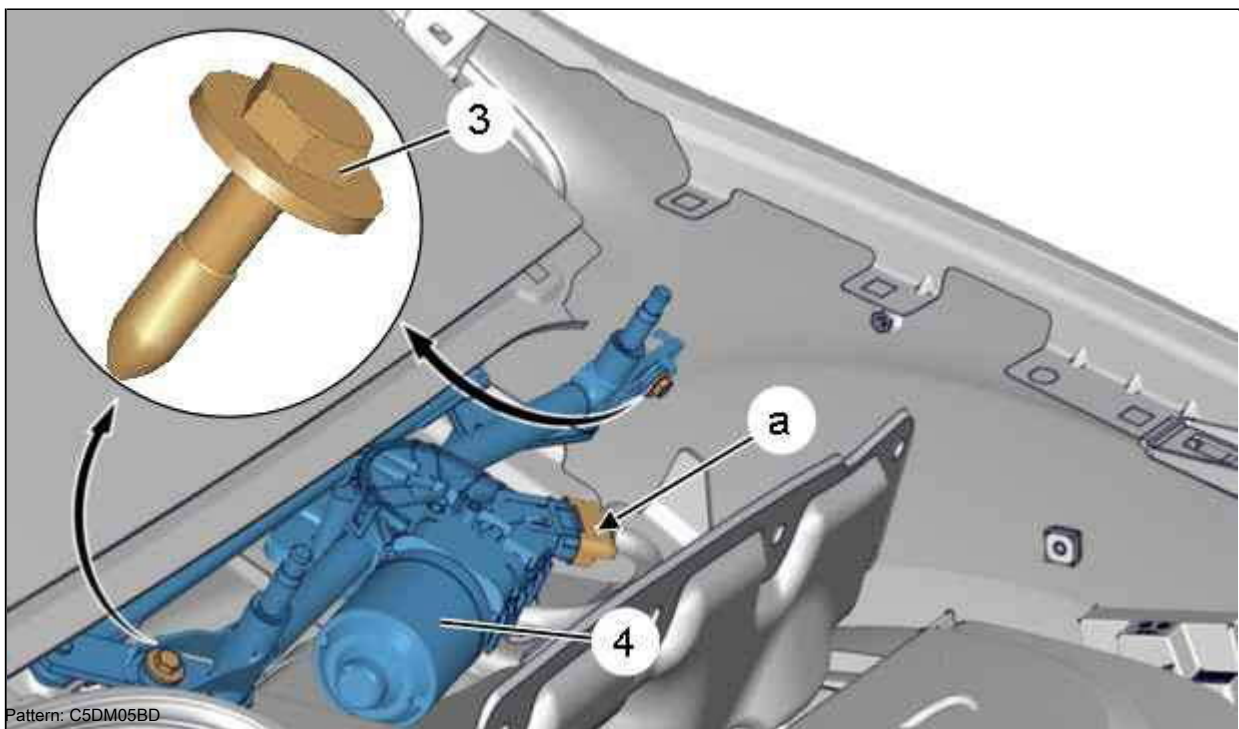
...



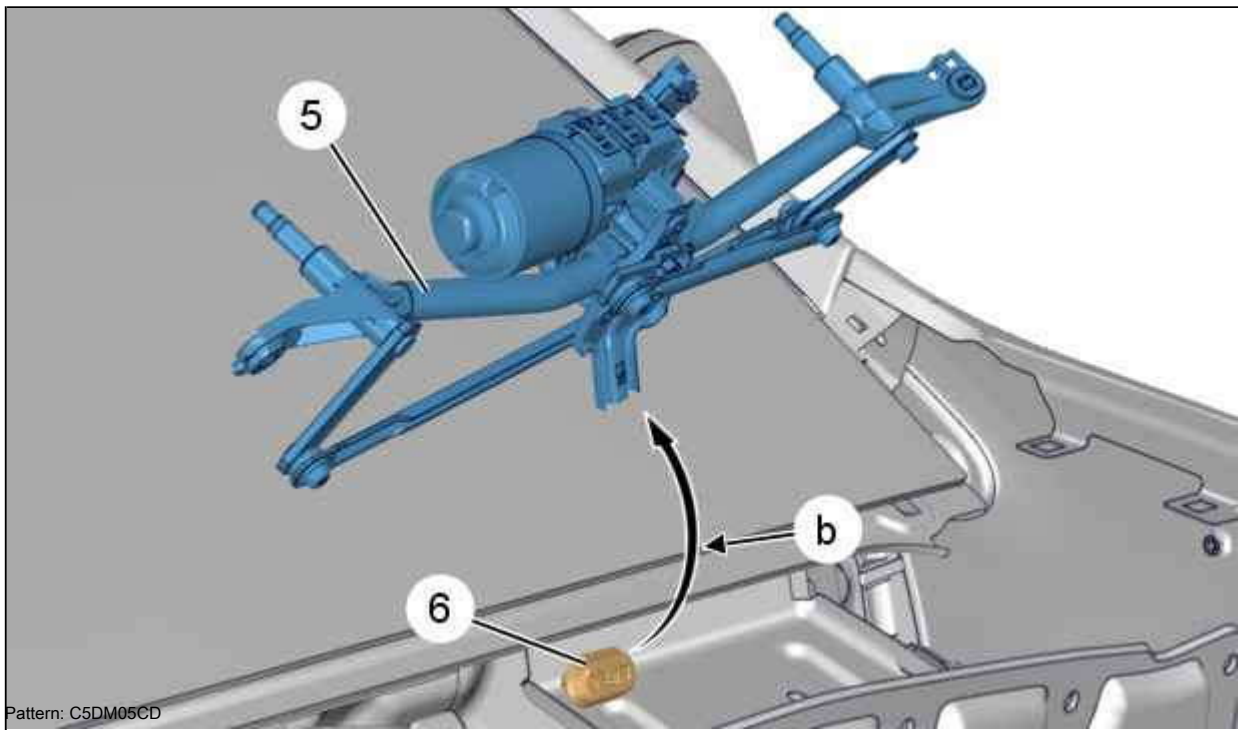
...



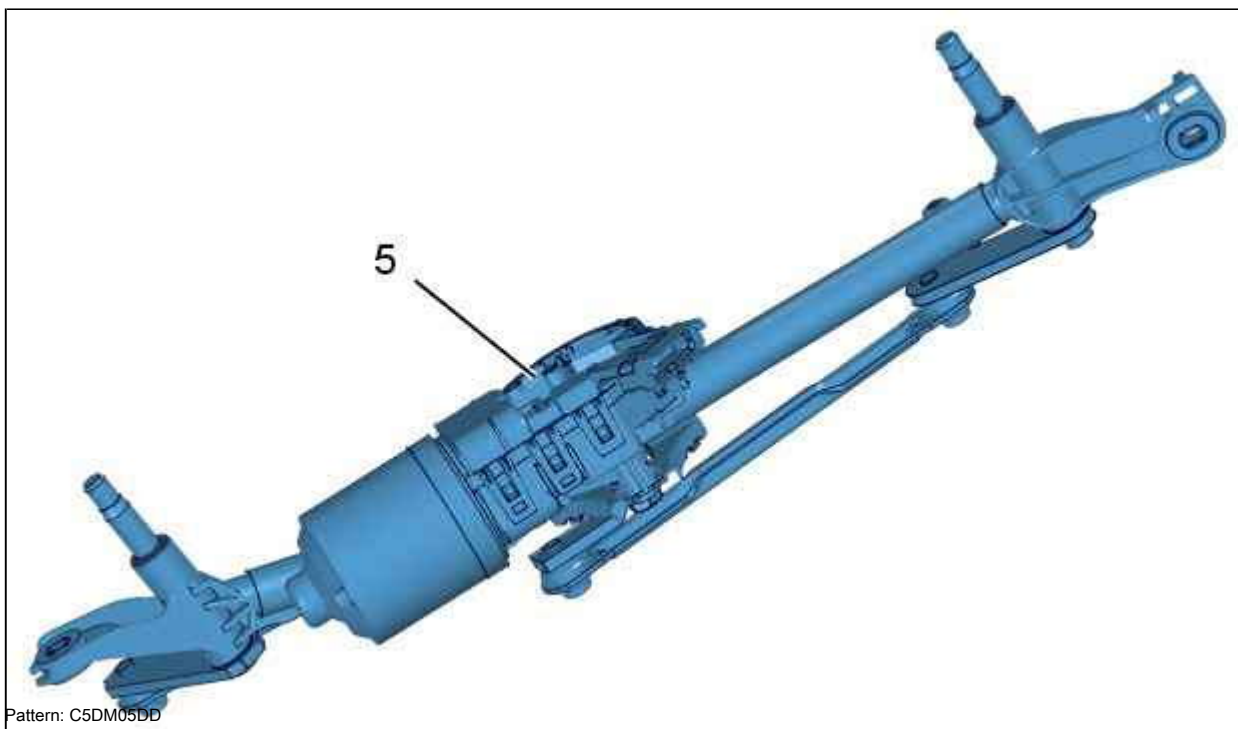
Remove the screws (2) of the side cover (1) (Operation is symmetrical).



Disconnect (at "a") the wiper motor connector (4); Using the tool [1]. Loosen screws (3).



Release the wiper mechanism (5) from the guide support (6) (as shown "b").



Remove the front wiper mechanism (5).

3. Installation

Installation is carried out by performing the removal operations in the reverse order. Tighten the bolt (3) to a torque of 1 ± 0.2 da.Nm.

Install the air intake grille



Reconnect the rechargeable battery

Check the functioning of the electrical equipment.



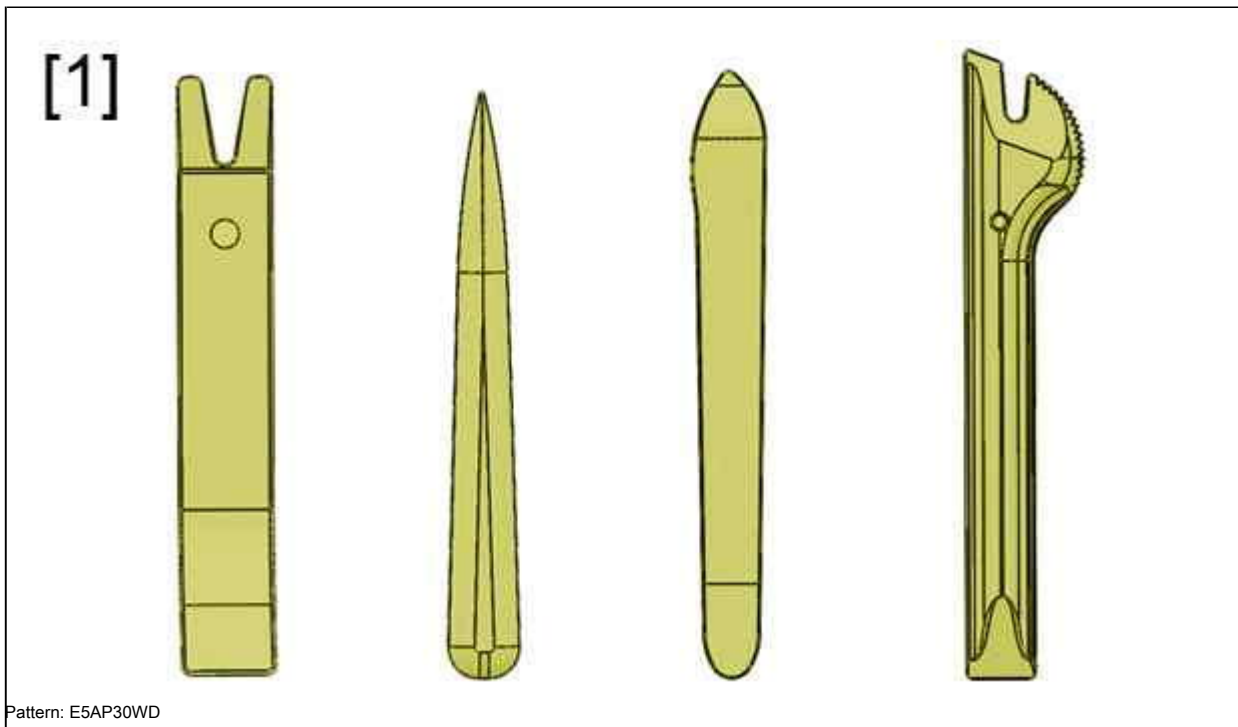
...

REMOVAL INSTALLATION: AIR INTAKE GRILLE

MANDATORY: Observe the cleanliness and safety rules



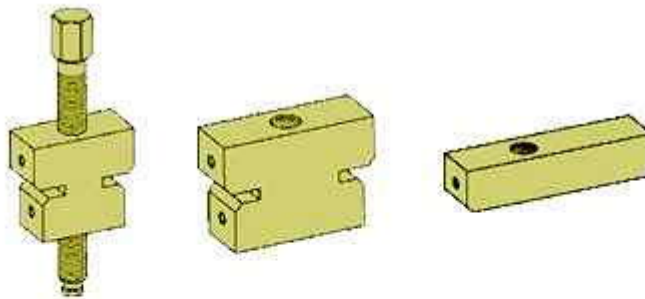
1. Recommended equipment



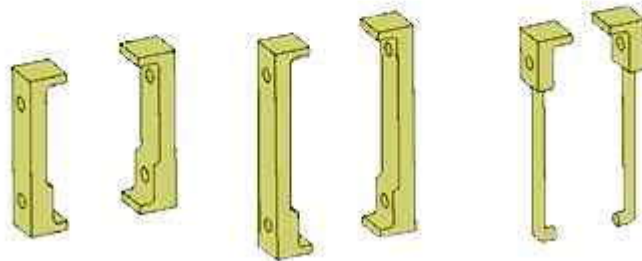
[1] Trim removal tool () .1350.

[2]

A



B



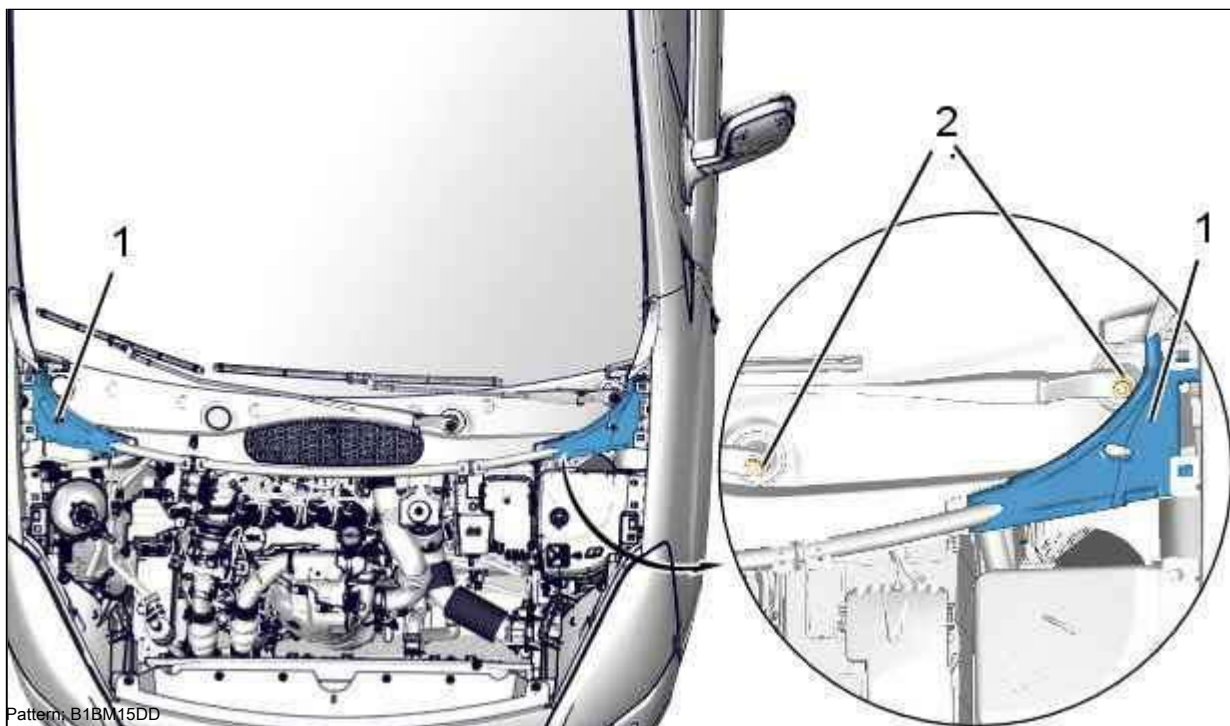
Pattern: E5AM0LHD

/ 2 / puller for wiper arms () .1373.

2. Removal

MANDATORY: Check the off position of the wiper switch

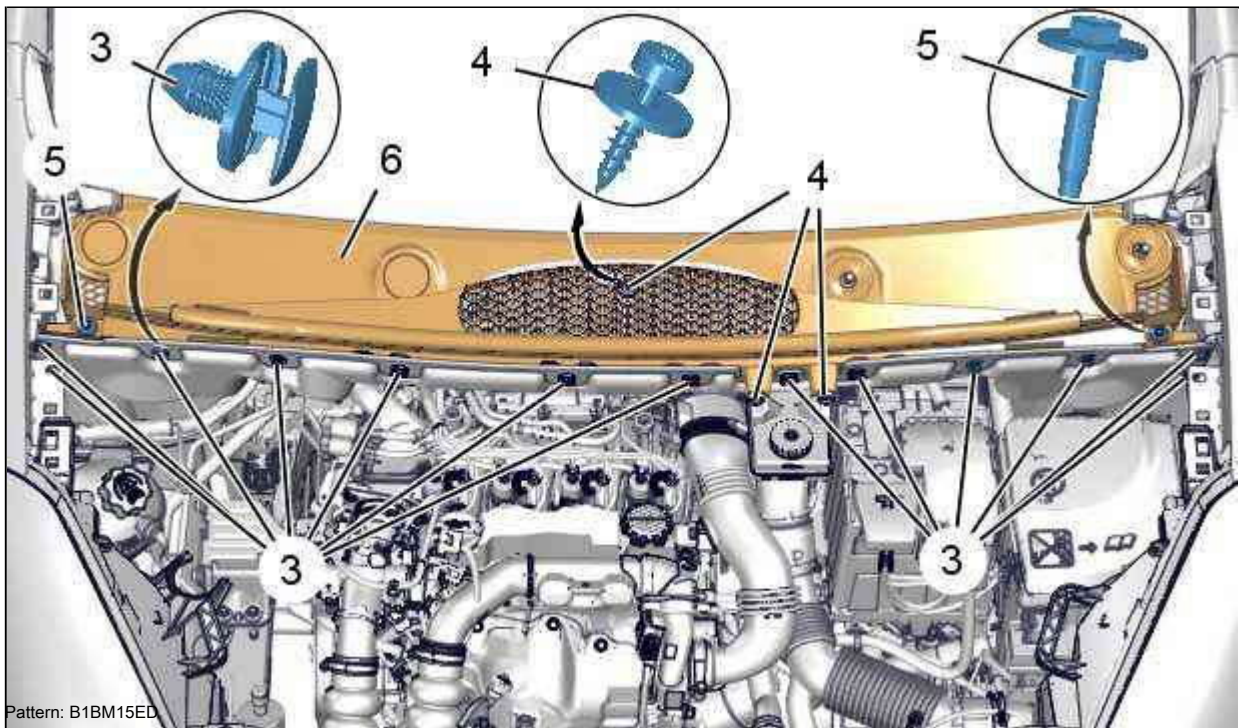
Open the hood.



Pattern: B1BM15DD

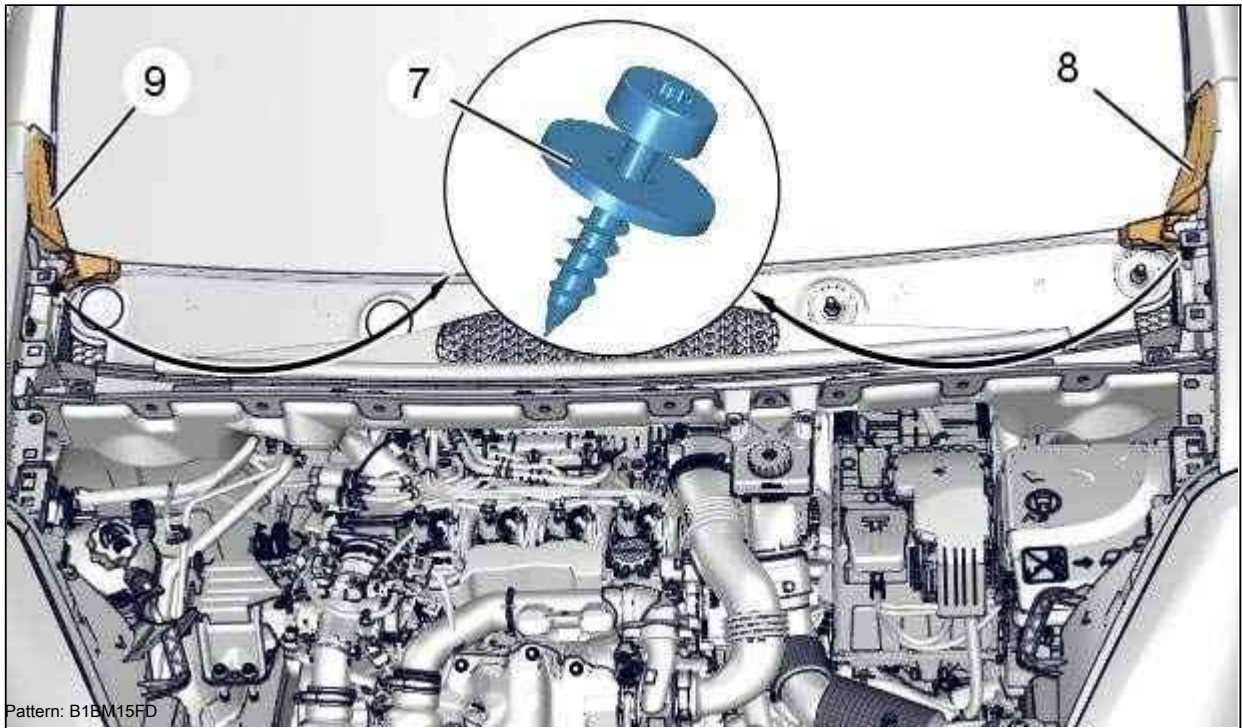
Remove:

- Foam side seals (1)
- Wiper arm mounts (2)
- Wiper arms; Using the tool [2]

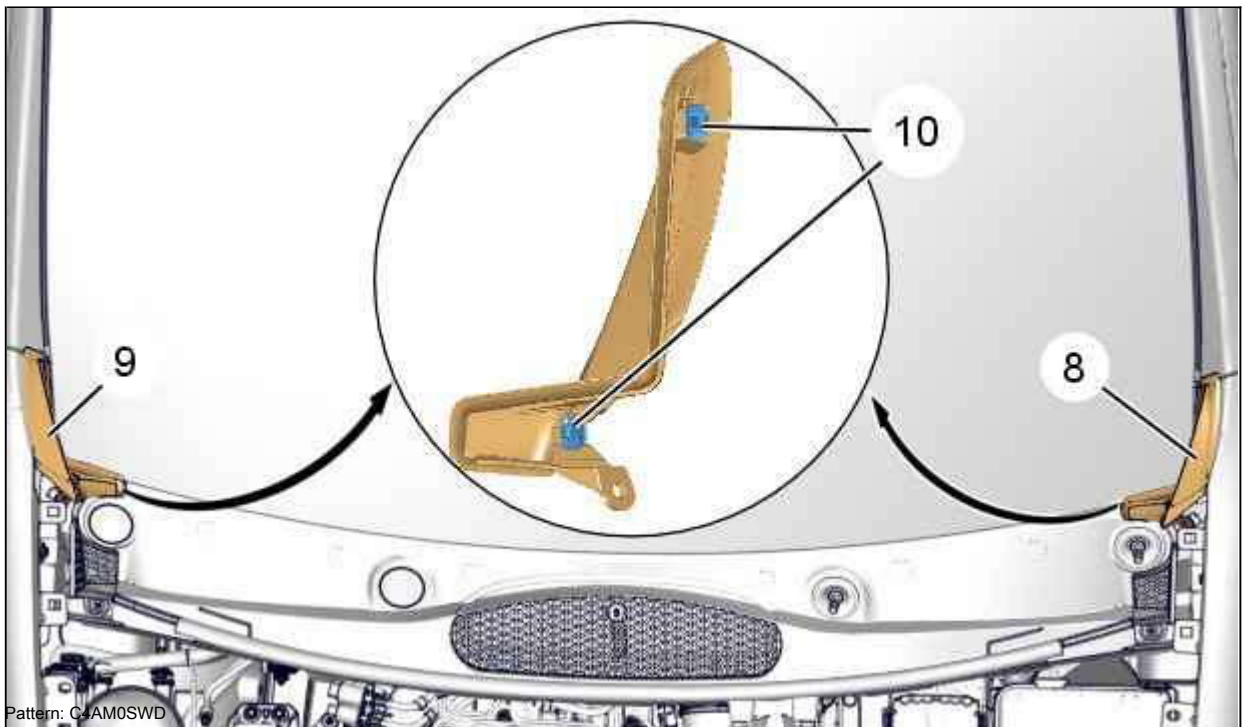


Remove:

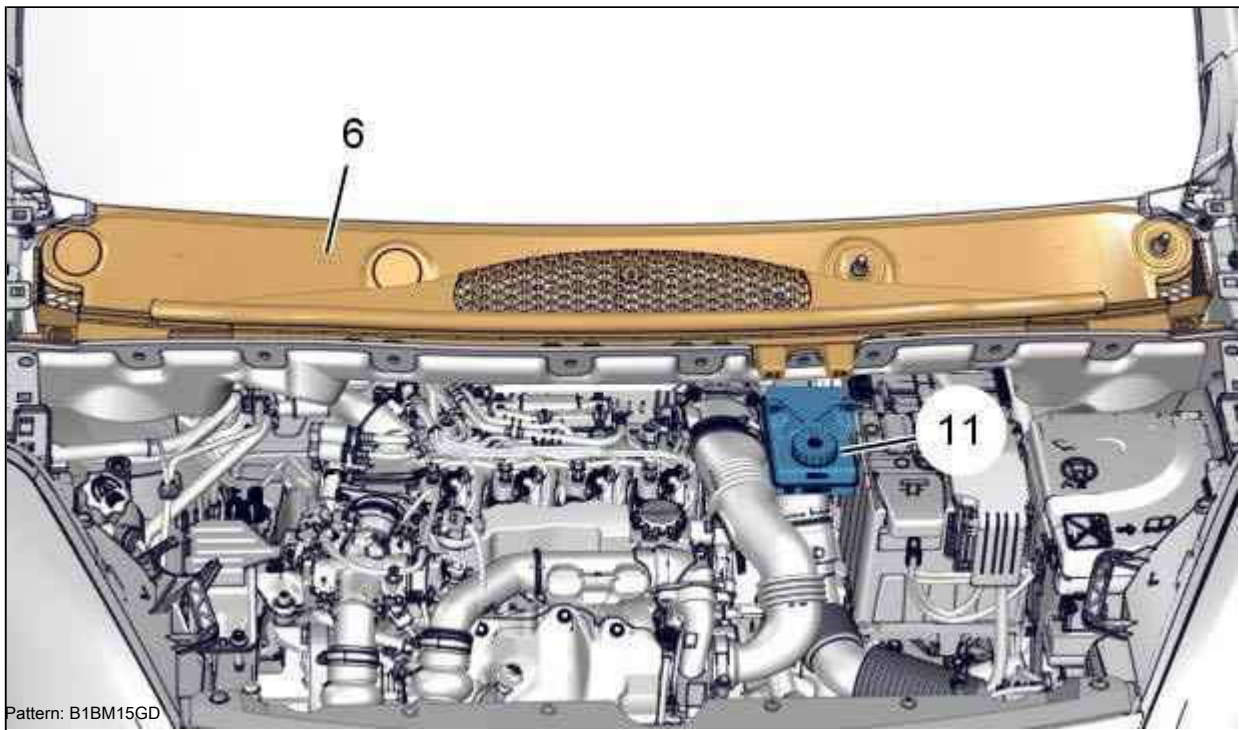
- Mounts (3) for engine noise insulation; Using tool [1]
- Screws (4) for the air intake grille (6)
- bolt (4) brake fluid reservoir
- Screws (5) for the air intake grille (6)



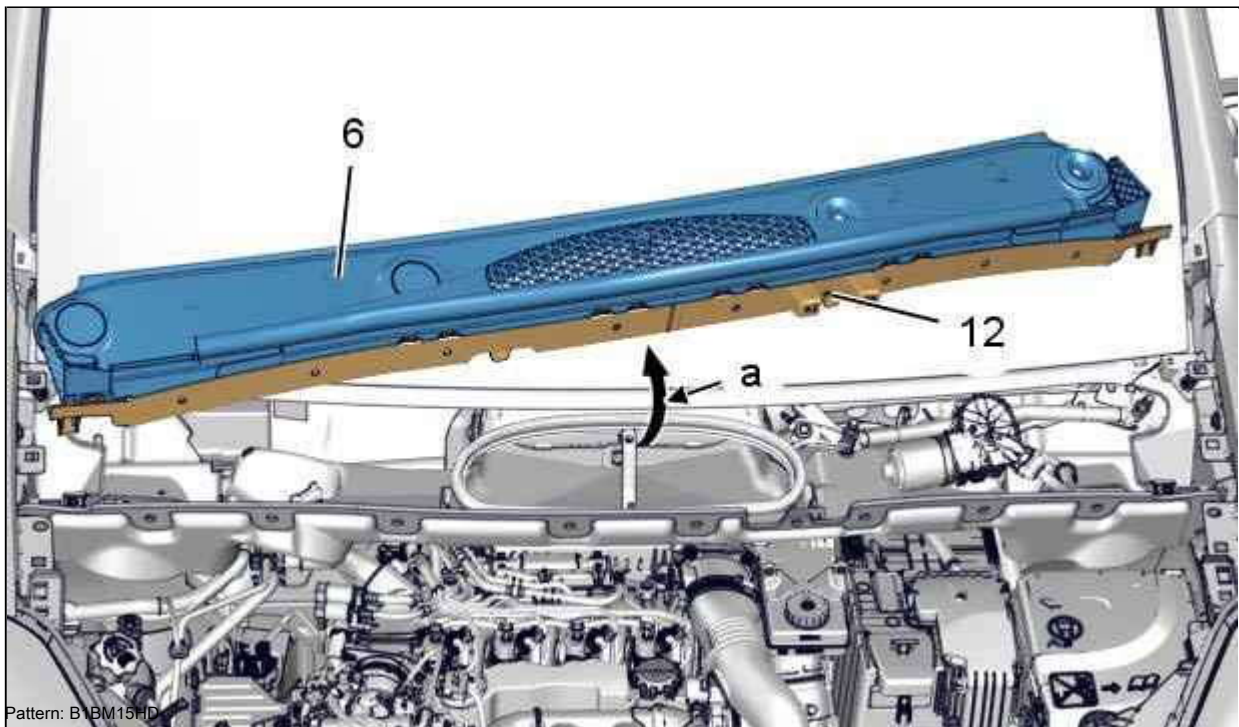
Remove the screws (7) of the side air intake grilles (8), (9).



Release the clips (10) of the side air intake grilles (8), (9).



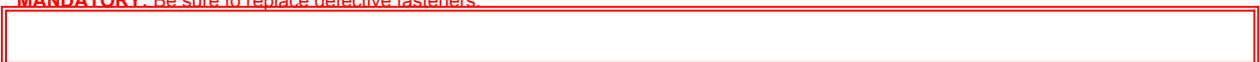
Move the brake reservoir (11) away from the air intake grille (6).



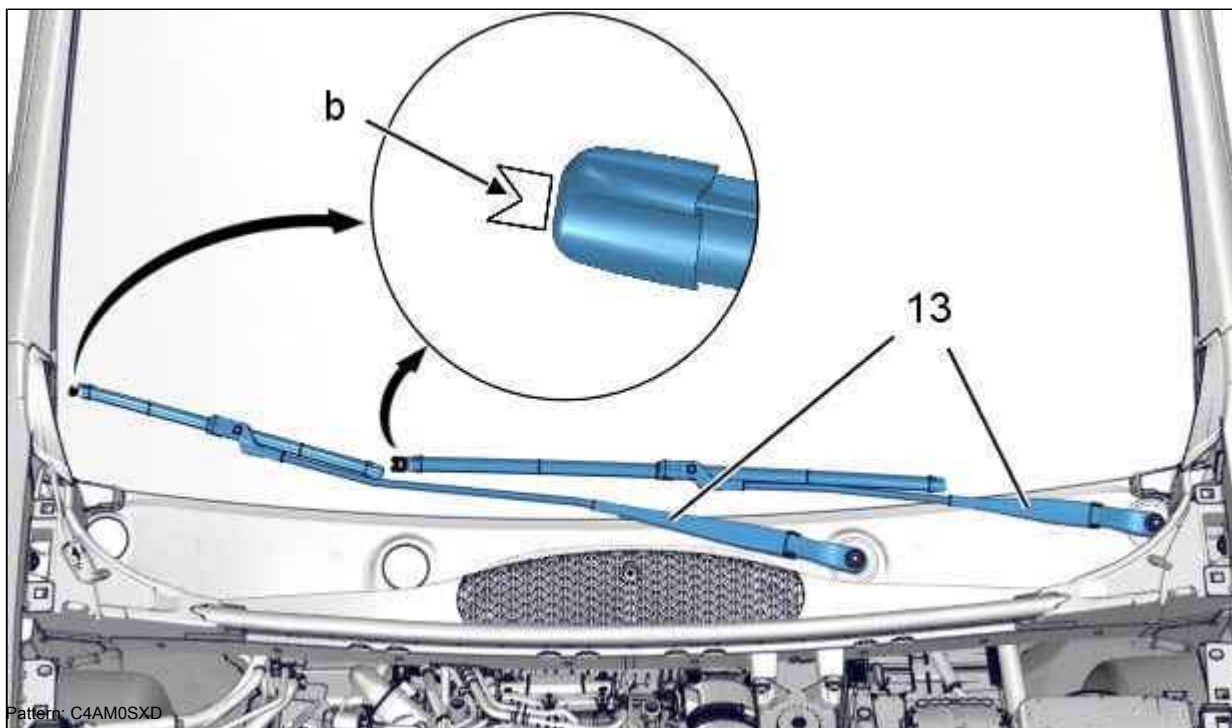
Move aside the air intake grille (6) with base (12) (as shown "a"). Remove the air intake grille (6).

3. Installation

MANDATORY: Be sure to replace defective fasteners.



Installation is carried out by performing the removal operations in the reverse order.



Part no: C4AM0SxD

Install:

- Wiper arms (13)
- Wiper blades

Install the front wiper blades against the marks on the windscreen (in "b"). Tighten the nuts (2) to a torque of 1 ± 0.25 da.Nm.

Check the functioning of the electrical equipment.

CAPACITY OF SYSTEMS: CIRCUIT COOLING

Models	Engine	Number	OPR Number
iOn			refrigerant (in grams) 325
107	384 / F		450
	DV4TD		500
1007	All types: Europe		500
	All types: Countries		600
206	TU / TUD, EW / DW		725
	EV / DV (Displacement 1400, cm ³)		
	EV / DV (Working volume 1400 cm ³)		630
206CountriesMercosur	All types		700
206 +	All types		675
207 China	All types		725
207CountriesMercosur	TU3 / TU5 RF (A / AC		500
Except T34 Pickup	Standard)		
	TU3 / TU5 RFTA (A / A		525
	Automatic)		
	DW All types		525
207CountriesMercosur	All types		475
T34 Pickup (Without front grill from animals)			
207CountriesMercosur	All types		500
T34 Pickup (with front grill from animals)			
207 Iran	TU5JP4		600
207 (T33) (cars right steering)	TU5JP4		720
207 (A7)	All types		425
307	All types except DV6	To the room	585
		OPR 10080	
	All types except DV6	From number	450
	DV6	OPR 10080	
		To the room	585
	DV6	OPR 10218	
		From number	450
307 post-styling (5 doors)	All types	OPR 10218	450
307 post-styling (4 doors)	All types		620
308	All types		425
TX3 China	TU5JP4		580
	EW10A		650
RCZ	All types		425
407	Euro 4 standards (except DW12B, DT17)		650
	Euro 5 standard (all types) Euro 4 standard (DT17 / DW12B)		525

408 China	EW / TU	525
508	All types	525
508 China	All types	525
607 post-styling	EW / ES9 / DW10 / DW12B DT17	625
		600
807	Diesel car	540
	engine	
	Petrol engines	675
3008	All types	450
4007	All types	500
5008	All types	450
BIPPER	All types	500
PARTNER II	All types	575
PARTNER (B9)	All types	450
EXPERT II	All types	950
EXPERT III	Gasoline engine, simple	675 (*)
	circuit	
	Diesel engine, simple	540 (*)
	circuit	
	Petrol engines	1075 (* *)
	Extra long with double contour	
	Petrol engines	950 (**)
	Shortened with double outline	
	Diesel Engines	950 (**)
	Extra long with double contour	
	Diesel Engines	850 (**)
	Shortened with double outline	
BOXER II	All types	500 (*)
		700 (**)
BOXER III	All types	550 (*)
		950 (**)
OPR = spare part number (*) Simple air conditioning system (* *) Additional air conditioning system		

CHECK AND ADJUSTMENT VALUES: SYSTEM ELEMENTS

AIR CONDITIONING

1. Charge with liquid refrigerant

Used fluid: R134.a.

Charge with liquid refrigerant

When checking the charge, if the amount of refrigerant is not correct, it must be brought to level using the charging station.

2. Total amount of oil in the compressor

Oil type used: SP10 or DENSOND8 (For DENSO compressor).

NOTE: DENSOND8 oil is 100% compatible with SANDEN SP10 oil.

Engine EP6C (With DENSO air conditioning compressor)

Engine	EP6C
air conditioner compressor	DENSO5SEL12
A / C compressor pulley Compressor oil capacity (cm3) Oil ref.	6 Vés
	87.5
	DENSOND8

Engine TU5JP4 DV6

air conditioner compressor	SD6C12 SD7C16
A / C compressor pulley Compressor oil capacity (cm3) 135 cm3 135 cm3	6 in
Reference oils	SP10 SP10

3. Compressor clutch clearance adjustment

A / C compressor clutch not adjusting.

CHECK AND ADJUSTMENT VALUES: SYSTEM ELEMENTS

AIR CONDITIONING

1. Charge with liquid refrigerant

Used fluid: R134.a.

Charge with liquid refrigerant

When checking the charge, if the amount of refrigerant is not correct, it must be brought to level using the charging station.

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Oil type used: SP10 or DENSOND8 (For DENSO compressor).

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Engine EP6C (With DENSO air conditioning compressor)

Engine	EP6C
air conditioner compressor	DENSO5SEL12
A / C compressor pulley Compressor oil capacity (cm3) Oil ref.	6 Vés
	87.5
	DENSOND8

NOTE: DENSOND8 oil is 100% compatible with SANDEN SP10 oil.

Engine	TU / DV6 TU / DV6	
Air conditioning	37	45
air conditioner compressor	SD6C12	SD7C16
A / C compressor pulley Compressor oil capacity (cm3) 135 cm3	6 Vés	6 Vés
		135 cm3
Reference oils	SP10	SP10

3. Compressor clutch clearance adjustment

A / C compressor clutch not adjusting.

CHARACTERISTIC IDENTIFICATION: SYSTEM ELEMENTS

AIR CONDITIONING

1. Characteristics

1.1. air conditioner compressor

Engine EP6C (With DENSO air conditioning compressor)

Engine	EP6C
air conditioner compressor	DENSO5SEL12
A / C compressor pulley Compressor oil capacity (cm3) Oil ref.	6 Vés
	87.5 cm3
	DENSOND8

NOTE: DENSOND8 oil is 100% compatible with SANDEN SP10 oil.

Engine TU / DV6 TU / DV6

Air conditioning	37	45
air conditioner compressor	SD6C12	SD7C16
Air Conditioner Compressor Pulley 6 Vés		6 Vés
Compressor oil filling tank 135 cm3		135 cm3
Reference oils	SP10	SP10

1.2. Identification

Fastening the inlet and outlet of the air conditioner compressor is carried out using a clamp.

1.3. Grease

Oil reference: SANDEN SP10 or DENSOND8 (DENSO compressor).

ATTENTION : This oil is highly hygroscopic and should therefore be avoided in opened cans.

MANDATORY: Do not use any other type of oil.

~~It is imperative to check the oil level of the compressor when charging the air conditioner. Oil level control is carried out in the event of a refrigerant leak from the refrigeration circuit.~~

1.4. pressure switch

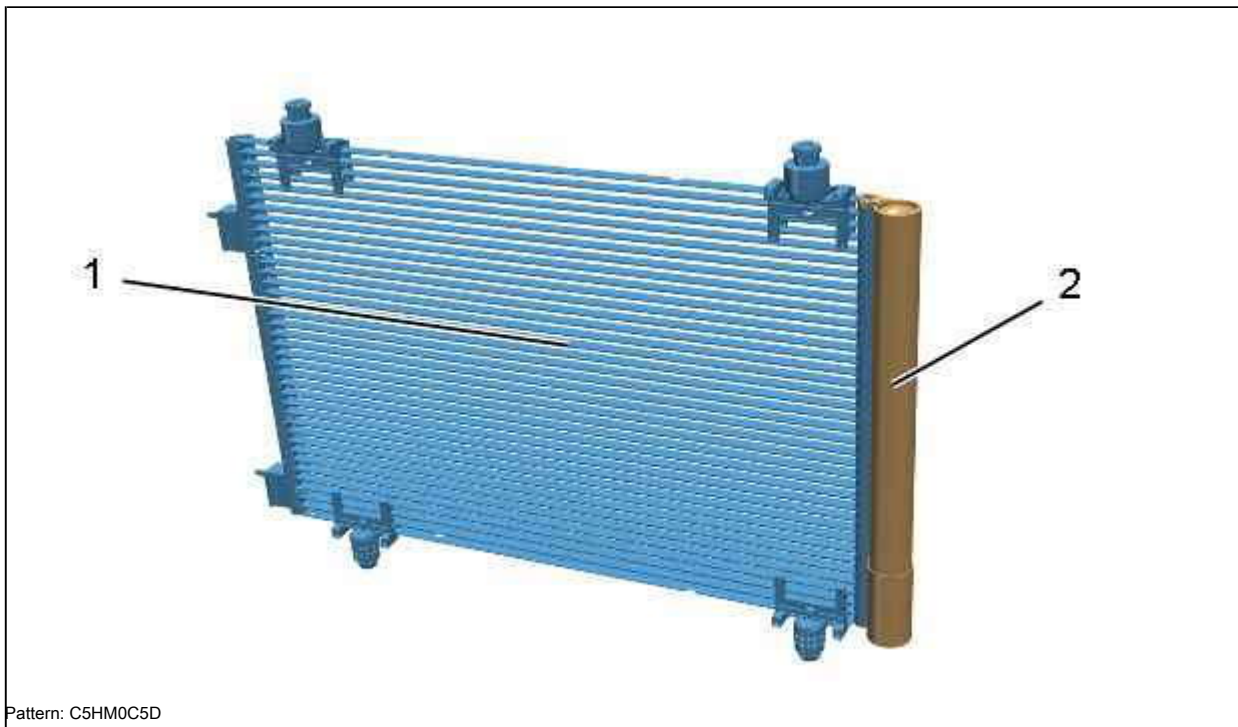
Relay pressure (pressure switch).

1.5. Valves for filling

Refueling valves with ratchet mechanisms and protective caps.

NOTE: The high and low pressure valves have different diameters to eliminate errors when working with them.

1.6. Condenser with integrated reservoir



The condenser (1) is equipped with a cylinder that acts as a refrigerant reservoir, inside of which a filter cartridge is installed.

NOTE: The filter element (2) is not interchangeable.

1.7. reducer

EUROCLIM type.

1.8. Air conditioning piping

Aluminum ducts and soft rubber hoses.

1.9. Liquid refrigerant

Used fluid: R134.a.

Charge with liquid refrigerant ...

1.10. Cabin ventilation filter

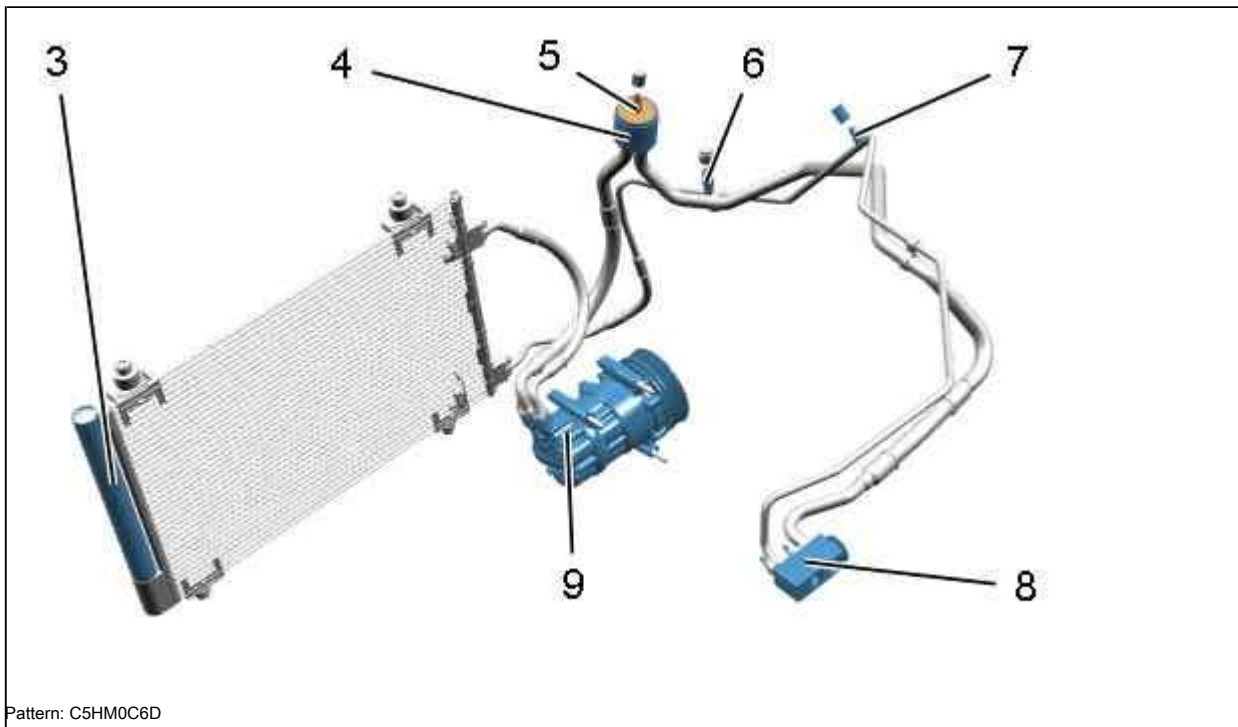


The cabin filter is located behind the air conditioning unit ...



2. Cooling circuit

2.1. TU5JP4 engine



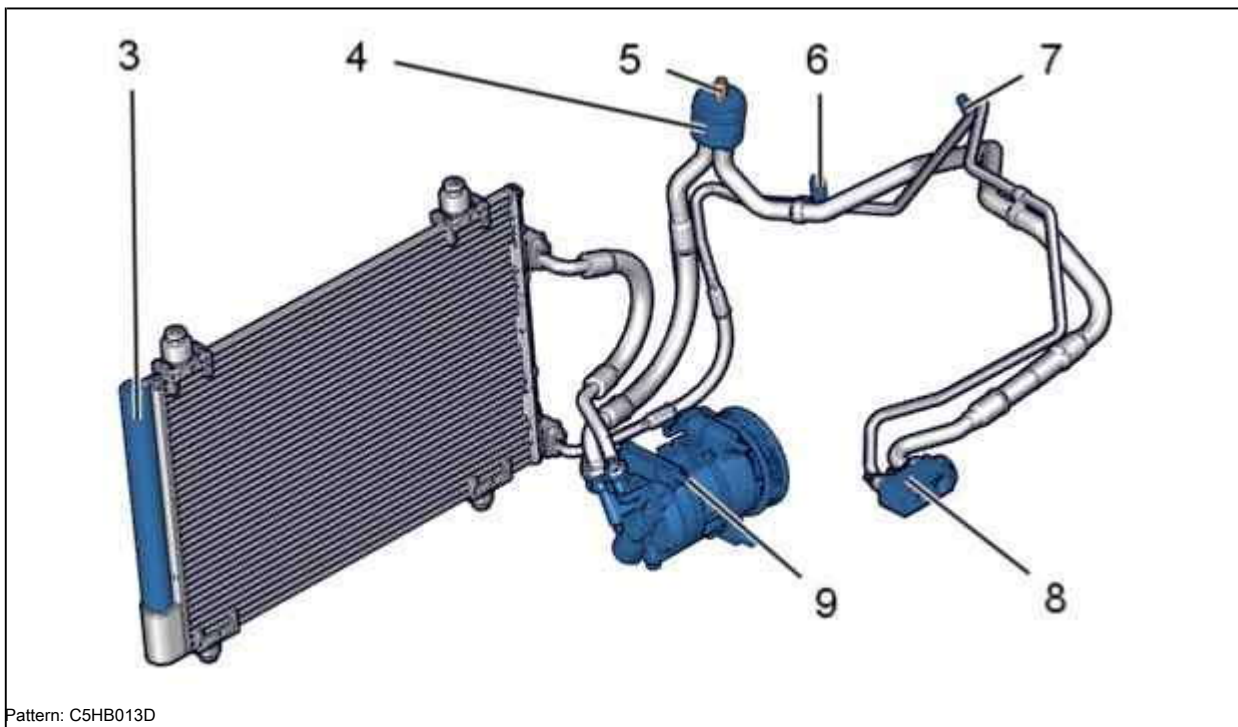
(3) filter and drying element. (4) refueling plug.

(5) low pressure valve. (6) high pressure valve. (7) pressure relay.

(8) reducer.

(9) air conditioning compressor.

2.2. EP6C engine



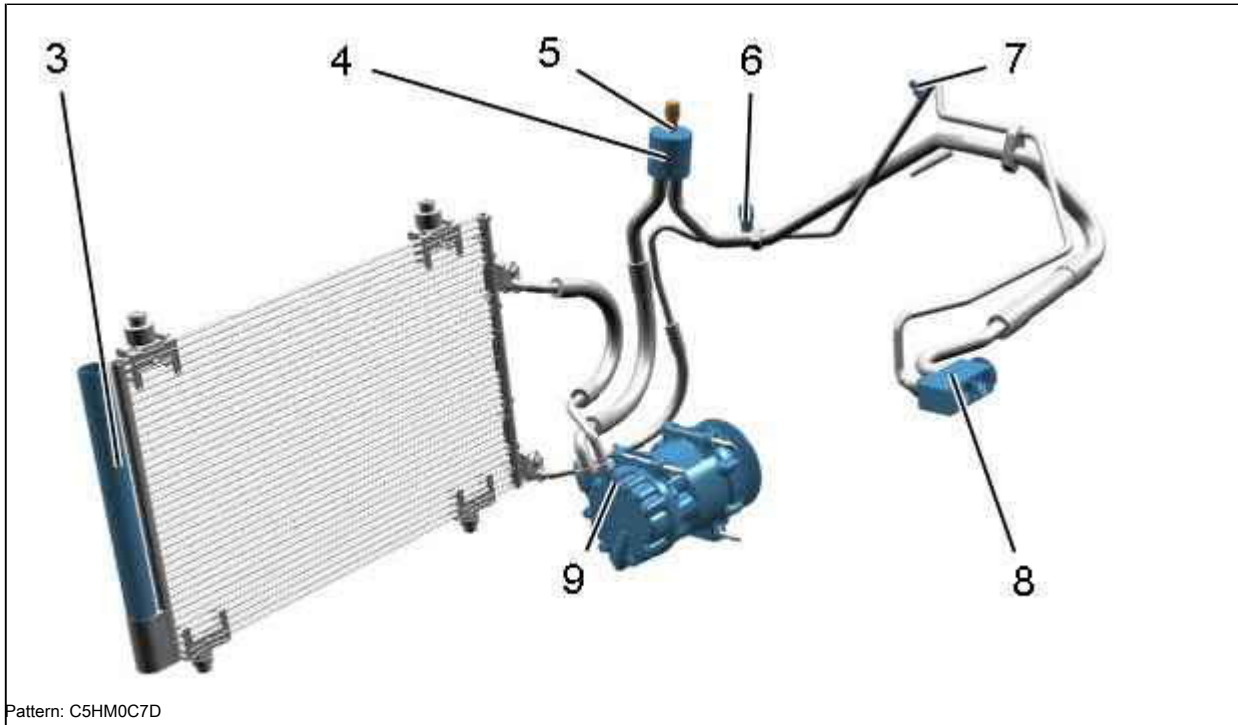
(3) filter and drying element. (4) refueling plug.

(5) low pressure valve. (6) high pressure valve. (7) pressure relay.

(8) reducer.

(9) air conditioning compressor.

2.3. DV6 engine



(3) filter and drying element. (4) refueling plug.

(5) low pressure valve. (6) high pressure valve. (7) pressure relay.

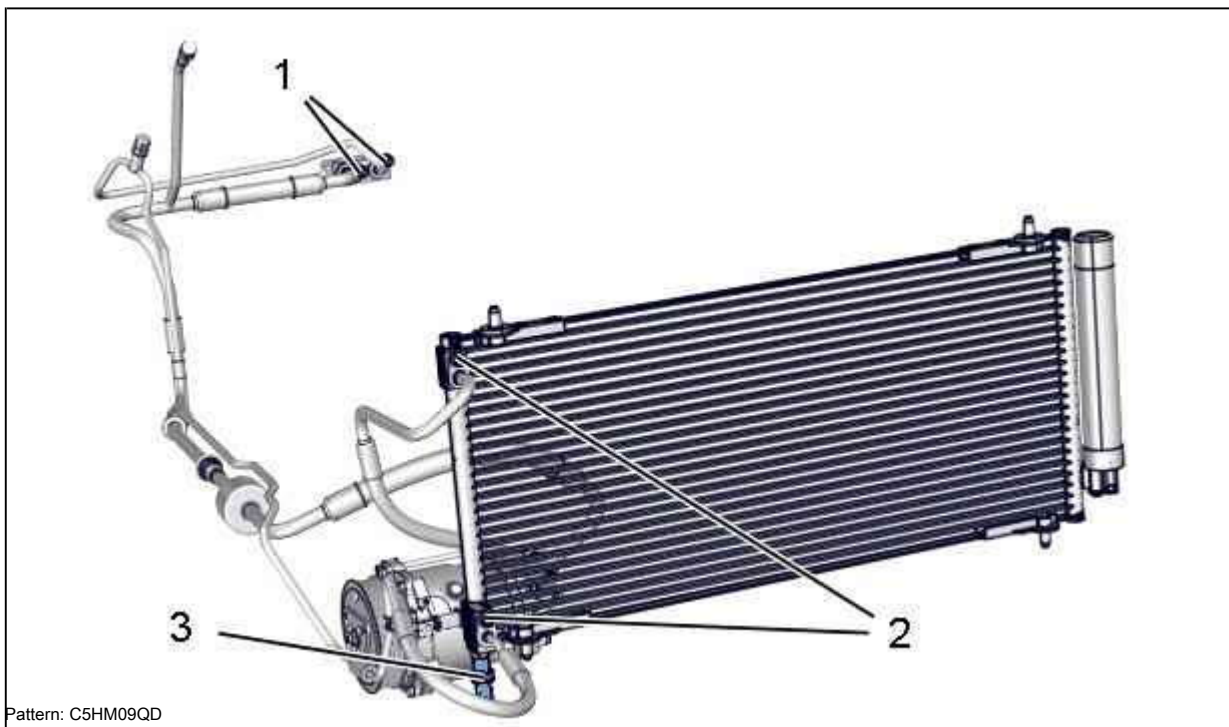
(8) reducer.

(9) air conditioning compressor.

TIGHTENING TORQUES: AIR CONDITIONING ELEMENTS

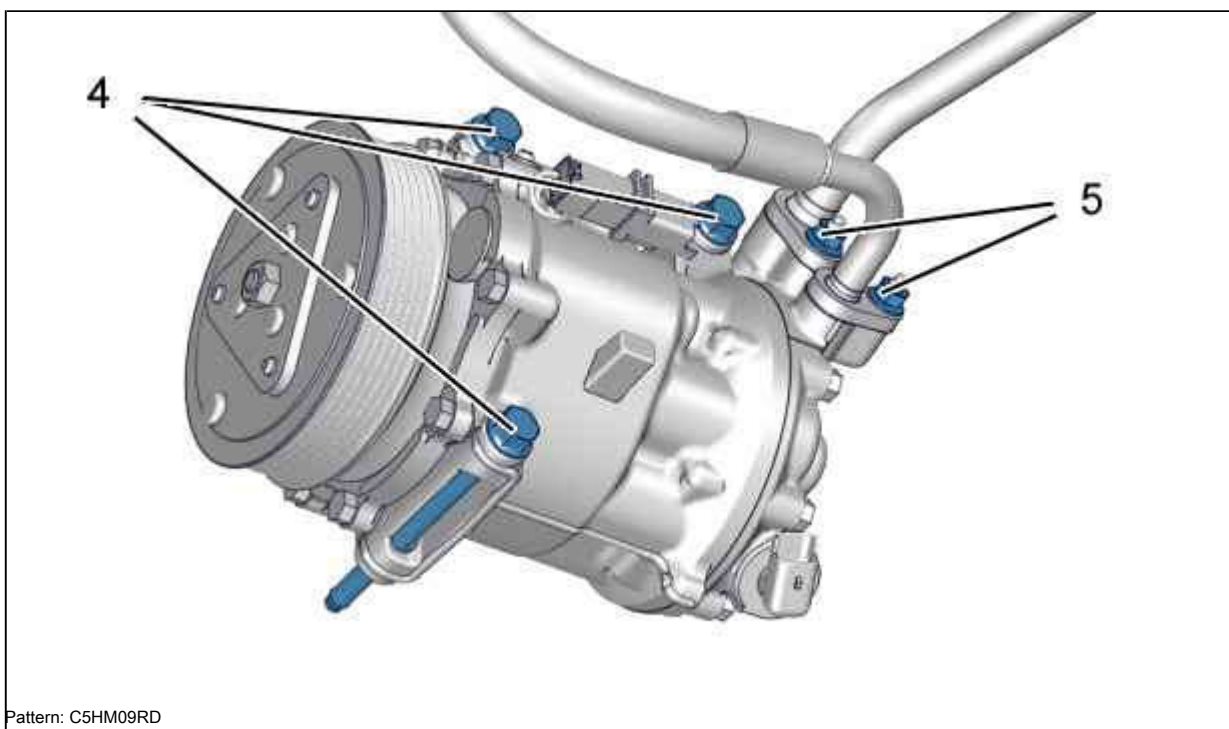
AIR

1. Cooling circuit



Labels Designation		Tightening moments
(1)	Liquid refrigerant pipe / Reducer	0.7 da.Nm
(2)	Liquid refrigerant pipe / Condenser 0.7 da.Nm pressure relay	
(3)		0.7 da.Nm

2. Air conditioning compressor

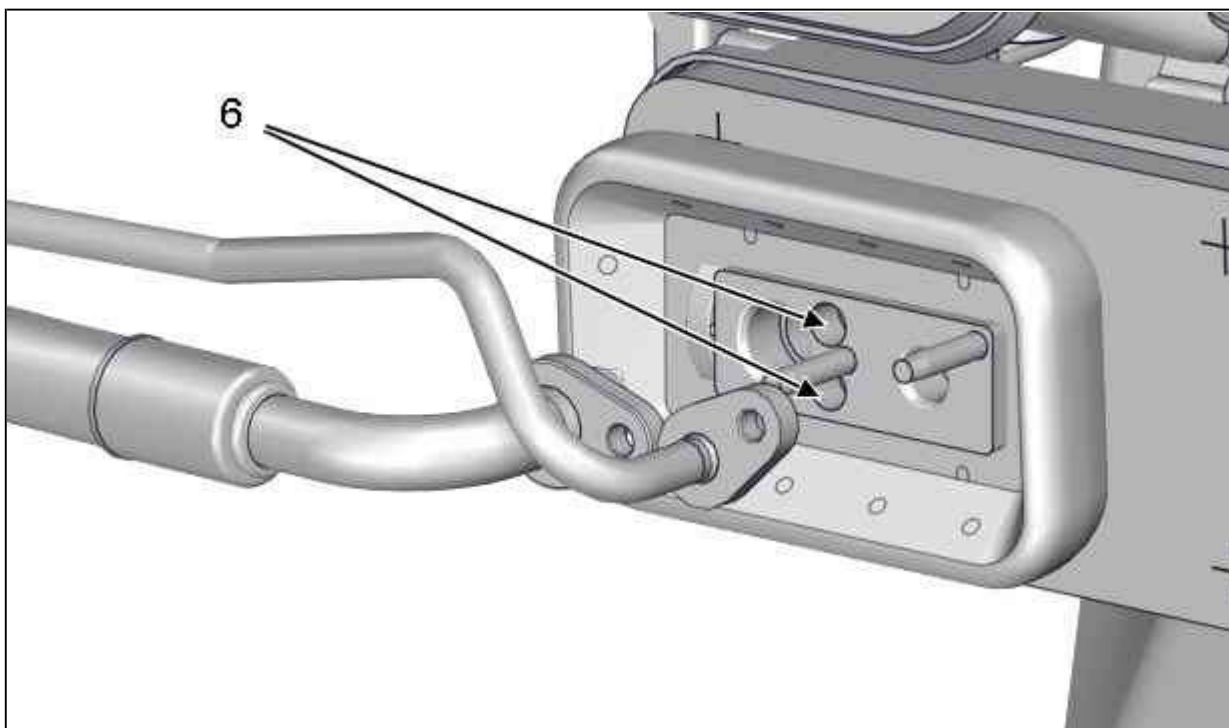


Labels Designation

Tightening moments

(4)	Air conditioning compressor SD6C12 (TU5JP4 engine) Air conditioning	2.4 da.Nm
	compressor SD7C16 (DV6 engine)	2.5 da.Nm
	Air conditioning compressor 5SEL12 (EP6 engine)	2.4 da.Nm
(five)	Liquid refrigerant pipe / A / C compressor 0.7 da.Nm	

3. Air conditioner reducer



Pattern: C5HM09SD

Label Designation		Torque
(6)	Air conditioning reducer 0.7 da.Nm	

TECHNICAL REMINDER: SYSTEM CONTROL AIR CONDITIONING

1. Checking: air conditioning compressor

ATTENTION : Before any work on the compressor, bring the air conditioning system up to refrigerant level. If the system malfunction still appears: Check the following.

1.1. Preliminary checks

Carry out a visual check: A / C compressor:

- Check for damage or deformation of all system elements and connections
- Check for pulley bumps and beats
- Check if the compressor clutch engages when 12V power is applied to its winding
- Check the condition of the power cable and plug
- Check the compressor casing for cracks (at the compressor mounting points)
- Check if the air conditioner compressor inlet and outlet are intact

Error: Leak

Malfunction symptoms	Possible reasons	Solutions
Leakage between case	Compressor overpressure	Comply with the requirements
air conditioning compressor and air conditioner as a consequence	high amount of refrigerant in the system filling the system	specifications for
cylinder head	Ingress of a foreign object	refrigerant
Gas / oil leak from		Observe cleanliness when
suction and discharge		installation of tubes
tubes	Inappropriate tubing tightening	Observe the established
		tightening torques

Error: Sound

Malfunction symptoms	Possible reasons	Solutions
Air conditioner compressor noise	Damaged ball	Zamenashkova
(Clutch not included)	pulley bearing	
	Drive disc hits	Replacing the drive disc when
	(Drive disc contact pulley)	need a pulley
Severe operating noise (Clutch compressor is permanently on)	Gas pressure too high	Comply with the requirements
		specifications when filling
Operation noise and vibration	Air conditioner tube touches	refrigerant systems
felt in the cabin	other car parts	Check if they do not touch
Noise caused by slip	The presence of oil or grease in	car parts piping
compressor clutches	compressor clutch	Check: The cleanliness of the drive disc and
Continuous click	Foreign matter Check: System cleanliness	the compressor pulley
permanent or occasional	under the valves	air conditioner
	injection	

Control Faults

Malfunction symptoms	Possible reasons	Solutions
Compressor clutch open	Poor contact Check: Connections	
on command	in connector	
air conditioner	Eating disorder	Check if the voltage in the harness on the motor side is
		12V:

		overvoltage or undervoltage
The clutch turns on, but the effect	Abnormal	Check: Filling the system
no air conditioning	filling the system refrigerant	gaseous refrigerant

The values of the pressures measured in the air conditioning circuit (Stationary vehicle with

running engine)					
High	High	Low	Signs	Possible	Solutions
pressure	pressure	fault pressure		the reasons	
(approximately (app	roximately				
20 ° C)	25 ° C)				
8 9 bar	9 10 bar	3 bar	No cooling	Excess oils	Remove gaseous
				contour	refrigerant. Delete all
				Air or	oil from the circuit.
				humidity in	Blow out the contour.
				contour	Fill in the outline
					gaseous
					refrigerant
Pressure> Pressure>		Pressure	Temperature	Too large Replace gearbox	
11 bar	12 bar	> 4.2 bar	suction tube	opening	air conditioner
			below the temperature	reducer	
			evaporator	air conditioner	
			High and	Suction or Replace: Unloader compressor	
			low pressure		air conditioner
			align like	valve	
			compressor only	locked in	
			air conditioner	open	
			turns off. When	what state	
			working	some particle	
			compressor	or broken	
			there is a fluctuation		
			these pressures		
Pressure	Pressure	Pressure	No cooling	Not enough	Remove gaseous
less than 6 bar less	han 7 bar less than 24	bar		gaseous	refrigerant
				refrigerant	Check absence
					Leakage Blow
					outline fill
					gaseous circuit
					refrigerant
			Temperature	Clogged circuit Replace piping	
			suction tube	in terms of low	
			below the temperature	pressure	
			evaporator		
Pressure> Pressure>	Pressure> Pressure Liquid			Blockage	Replace piping
11 bar	12 bar	> 2.4 bar piping		liquid	Replace: Filter
			(Filter freeze	pipeline	dehumidifier
			dryer)	Filter drier	
				locked	

1.2. Control using the device

Check the air conditioner compressor (use recommended accessories).

NOTE: See instruction manual: Tools.

1.3. Checking the oil level

MANDATORY: Compressor grease is very hygroscopic; use only new grease when working

It is necessary to distinguish 3 cases:

- Work with the circuit, no leaks
- Weak leaks
- Large leaks

1.4. Contouring (No leakage)

Using a charging and recirculation unit not equipped with an oil separator:

- Drain the low pressure circuit as slowly as possible to prevent the oil from flowing out
- Liquid refrigerant charge without adding oil

Using a charging and recirculating unit equipped with an oil separator:

- Drain the liquid refrigerant from the air conditioning circuit, following the instructions in the installation manual
- Measure the amount of collected oil
- Lay the same amount of oil that has been collected

1.5. Weak leaks

Slow leaks will not lead to loss of oil; it is sufficient to apply the same strategy as in the case of work on a circuit that does not have leaks.

1.6. Large leaks

This type of failure leads to loss of oil, as well as leakage of the circuit. Perform the following operations:

- Replace filter and drier element (If necessary)
- Remove as much oil as possible (when replacing the causing element)
- Before filling or during filling with R134 fluid, add 80 cm3 of new oil to the circuit

2. Control of the air conditioning system contour

Install the attachment (Attachments Recommended in After Sales Documentation).

Perform the following operations:

- Close all ventilation grilles
- Engine starting
- Open the front ventilation grill
- On the control panels of the air conditioner, select the central and side ventilation grilles Set the air circulation control knob to the outdoor air supply position Switch on the fan at maximum speed
-
- Decrease the temperature as much as possible
- Let the air conditioning system run for 5 minutes

3. Interpretation of values (call)

NOTE: Values associated with the use of the instrument.

3.1. Hypothermia (SR)

Subcooling is the difference between the condensing temperature and the temperature of the liquid refrigerant at the outlet of the air conditioning condenser.

Subcooling indicates the amount of liquid refrigerant (liquid state) in the air conditioner circuit.

Hypothermia Origin		Solutions
(SR)		
Below 2 ° C	Lack of liquid refrigerant in the air conditioner condenser: Above 150 grams	Add liquid refrigerant; C using the installation for the bay
Between 2 ° C and 4 ° C	Lack of liquid refrigerant in the condenser air conditioner: Approx. 100 to 150	

gram

Between 4 ° C and 12 ° C	Charge is correct	
Above 12 ° C	Excess liquid refrigerant in the air conditioner condenser	Remove the liquid refrigerant; C
Above 15 ° C		using the installation for the bay

3.2. Overheat

Superheat is the difference between the temperature of the liquid refrigerant leaving the evaporator and the temperature at the evaporator.

Superheat indicates the amount of liquid refrigerant (in gaseous state) in the air conditioner circuit.

Overheat	Origin	Solutions
Between 2 ° C and 15 ° C	Charge is correct	
Above 15 ° C	Not enough liquid refrigerant	Add liquid refrigerant; C
	air conditioning	using the installation for the bay
Below 2 ° C	Excess liquid refrigerant in the air conditioner circuit	Remove the liquid refrigerant; C
		using the installation for the bay

3.3. Inlet air temperature "u"

The inlet air temperature must be between 2 ° C and 10 ° C.

4. Air conditioner circuit diagnostics table (for information)

Main fault	Symptom	Possible reasons
Air conditioning compressor air does not rotate or is rapidly stopping	Electromagnetic clutch	Turning on the compressor
	compressor air conditioning does not turn on or quickly opens	air conditioning
		Not enough liquid
		refrigerant in the air conditioning circuit
		air
		Circuit pressure relief
	Electromagnetic clutch compressor air conditioning stays on and stops quickly	air conditioner
		A / C Evaporator Sensor
		air
		Electrical circuit (connections, circuit breakers, ...)
		Belt drive
Air conditioning compressor produces abnormal noise	Electromagnetic clutch compressor air conditioning stays on and stops quickly	equipment
		air conditioner compressor
		Filter element,
		moisture absorbing
		Air conditioner reducer
	Electromagnetic clutch	Leakage of liquid refrigerant
		Turning on the compressor
		air conditioning
		Adjustment electromagnetic
		compressor clutch
	compressor air conditioning stays on	air conditioner completed
		wrong
		Charge with liquid refrigerant
		Air conditioner compressor
		faulty
		Not enough liquid
		refrigerant in the air conditioning circuit
		air
		Air conditioner compressor valves

		air defective
	Electromagnetic clutch	Air conditioner compressor clutch
Abnormal levels	compressor air conditioning remains on and slips	Belt drive equipment
	Low and high pressure	Air conditioner reducer
pressure	too high	faulty
	The value of low pressure is too high Seal defective	The pipeline is clogged
	too small	high and high pressure compressor air conditioning
	Low pressure value too high A / C evaporator sensor high	
	low high pressure too air defective	Air conditioner reducer
		locked
	Low and high pressure	Filtering and drying
		replaceable element clogged
	too low	The pipeline is clogged
		The pipeline is clogged
	Value of low pressure	Air conditioner reducer
	normal, high pressure	locked
	too big	Not enough liquid
	Value of low pressure	refrigerant in the air conditioning circuit
	normal, high pressure	air
	too small	Air conditioner compressor
	The value of the low pressure is too high A / C reducer is too high, but the pressure is too high	faulty
		Air presence in the circuit
	normal	air conditioner
	Low pressure value too Filtering and drying low, high pressure	Relay pressure (pressure switch)
	normal	air conditioner defective
		Evaporator sensor defective
System operation	Hypothermia is too weak	
		locked in open position
conditioning in emergency mode	Subcooling too strong Excessive liquid refrigerant	the replacement element is saturated or clogged
		Air conditioner reducer
		froze
		Not enough liquid
		refrigerant
		Air presence in the circuit
		air conditioner
		Filtering and drying
		replaceable element clogged

NOTE: In any case, measure the superheat and supply air temperature.

CHECK: AIR CONDITIONING COMPRESSOR

MANDATORY: Before any work on the air conditioner circuit, the necessary precautions must be taken

...

Observe

i

i

1. Tools

tool	room	Designation
	(reference)	
	[EXXO CLIM]	Check circuit pressure air conditioning systems
<div><div>[EXXO-CLIM]</div><div></div><div>Figure: E5AB0N9T</div></div>		
<div><div></div><div></div><div>Pattern: E5AB0CLT</div></div>		installation for collection, recirculation, creating a vacuum, filling contour
	[1701HZ]	Set of plugs
<div><div>[1701-HZ]</div><div></div></div>		

2. Control of the air conditioning compressor

ATTENTION : Before any work on the compressor, bring the air conditioning system up to refrigerant level. If the system malfunction still appears: Check the following.

2.1. Preliminary check

Visual inspection of the air conditioner compressor:

- Check for damage or deformation of all system elements and connections
- Check for pulley bumps and beats
- Check if the compressor clutch engages when 12V power is applied to its winding
- Check condition: Power wire Connector
- Check the compressor casing for cracks (at the compressor mounting points)
- Check if the air conditioner compressor inlet and outlet are intact

Error: Noise

Malfunction symptoms	Possible reasons	Solutions
Noise when compressor is running)	Damaged ball pulley bearing	Zamenashkova
	Drive disc hits (Drive disc contact pulley)	Replacing the drive disc when need a pulley
Severe operating noise (Clutch Gas pressure too high compressor constantly included)		Comply with specification requirements when filling the system with refrigerant
Operation noise and vibration felt in the cabin	Air conditioner tube touches other car parts	Check if they do not touch car parts piping
Noise caused by slip The presence of oil or grease in compressor clutches	compressor clutch	Check: The cleanliness of the drive disc and the compressor pulley
Continuous click permanent or occasional	Presence of outsiders items under the valves admitted injection	Check the pipes for cleanliness at the output of the contour elements climate control

Control Faults

Malfunction symptoms	Possible reasons	Solutions
Compressor clutch open on command air conditioner	Poor contact Check: Connections in connector	
	Eating disorder	Check whether the voltage in the harness on the motor side is 12V; Whether there is overvoltage or undervoltage
The clutch turns on, but the effect no air conditioning	Abnormal filling the system refrigerant	Check: Refrigerant gas pressure

2.2. Checking with the [EXXOCLIM] block

Control the air conditioner compressor; Using the [EXXOCLIM] tool.

NOTE: See instruction manual.

2.3. Checking the oil level

MANDATORY: Compressor grease is very hygroscopic: use only new grease when working.

It is necessary to distinguish between 2 cases:

- If the residual pressure in the circuit is greater than 0, it is necessary to carry out a repair operation on the air conditioning circuit without moisture penetration into the circuit (No leakage or slow leakage)
- If the residual pressure in the circuit is zero, a repair operation is required on the air conditioning system with the penetration of moisture into the circuit (Long-term opening of the air conditioning circuit)

2.4. Repair of the air conditioning system circuit without moisture penetration into the circuit

Using a charging and recirculation unit not equipped with an oil separator:

- Drain the low pressure circuit as slowly as possible to prevent the oil from flowing out
- Liquid refrigerant charge without adding oil

Using a charging and recirculation unit equipped with an oil separator:

- Drain the liquid refrigerant from the air conditioning circuit, following the instructions in the installation manual
- Measure the amount of collected oil
- Lay the same amount of oil that has been collected

2.5. Repair on the contour of the air conditioning system by the penetration of moisture into the circuit

This type of failure leads to loss of oil, as well as leakage of the circuit. Perform the following operations:

- Replace the filter element and the desiccant or condenser if the filter element is built into it.
- Remove as much oil as possible (when replacing the causing element)

Before filling or during filling with R134 fluid, inject 80 cm³ of new oil in the circuit.

3. Replacing the elements of the air conditioning circuit

3.1. compressor

Remove the compressor.

Remove the oil from the compressor.

Measure the amount of collected oil.

Remove the oil from the new compressor (supplied filled with oil) to leave the same amount of new oil as in the old compressor.

Filling with contour fluid is done without adding oil.

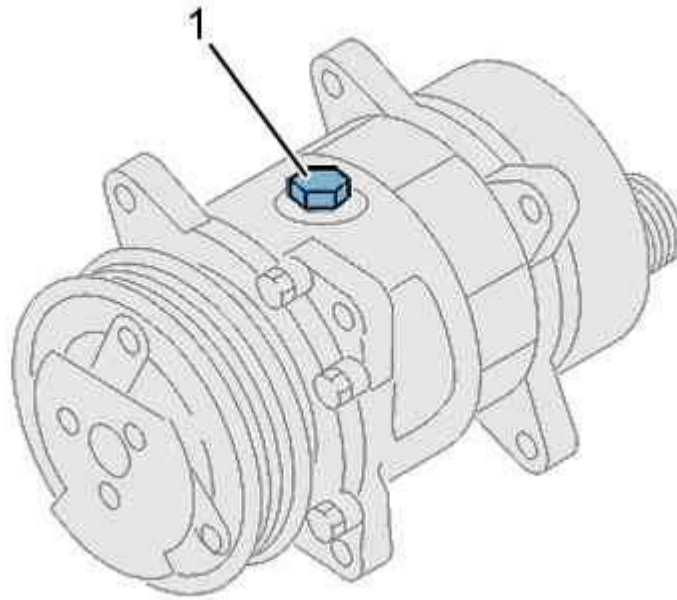
3.2. Elements of the air conditioning system (Kromekompressor)

When filling the circuit, add the same amount of oil as the amount contained in the element to be replaced.

Replaced item	Take the exact amount of oil (cm ³)
Air Conditioner Condenser	20
Air conditioner evaporator	20
Low pressure pipeline	five
High pressure pipeline	five
Moisture-absorbing filter element fifteen	

4. Drain filling: air conditioner compressor

NOTE: Operations Performed (After Removing A / C Compressor).



Pattern: C5HP1G9D

Remove the filler plug (1).

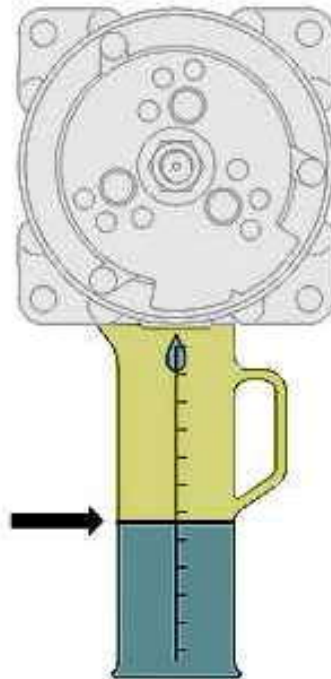
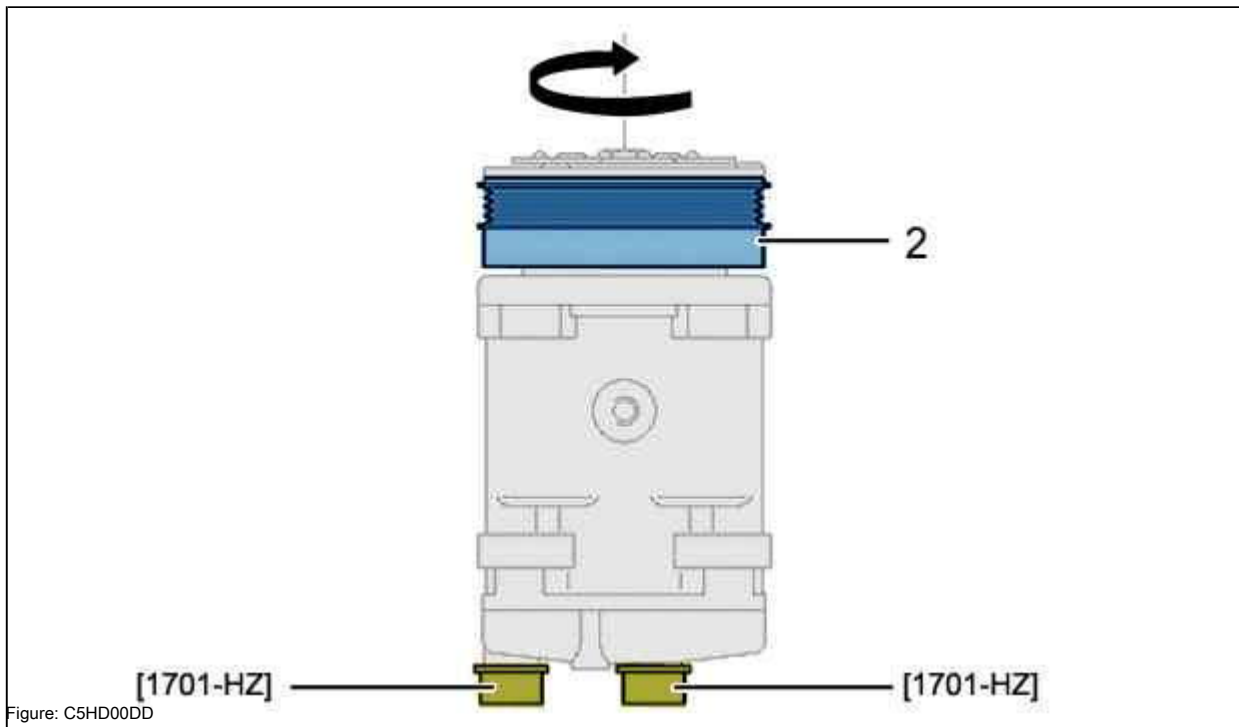
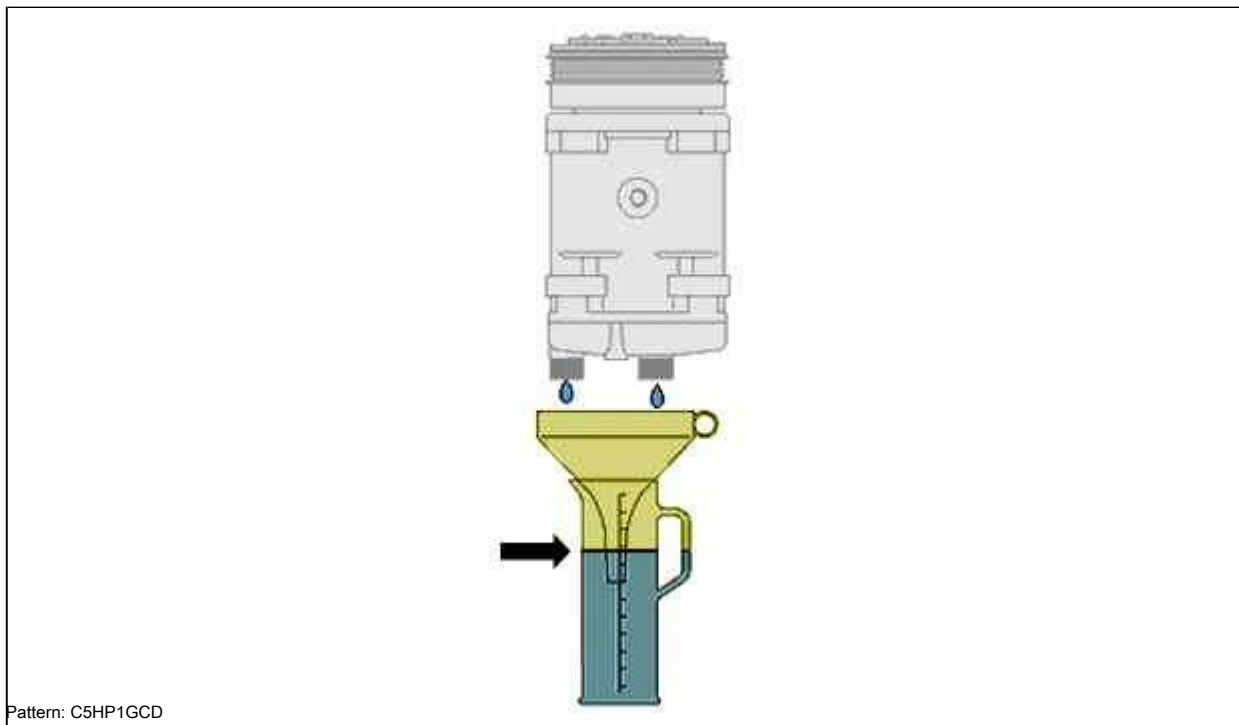


Figure: C5HP1GAD

Turn the compressor over and let the oil drain from the compressor.



Install dummy plugs [1701HZ] at the compressor outlet. Place the compressor vertically (with the compressor clutch up).
Turn the entire knot (2) ten revolutions (oil flowing out in the cylinder head).



Remove plugs [1701HZ].
Let the oil drain.
Measure the amount of collected oil.
Compares the collected oil to the manufacturer's recommended amount.

NOTE: Different amounts of oil will remain in the compressor (depending on the type of compressor).

Add the same amount of oil that has been collected (filling hole). Replace drain plug (1) (new seal and clean bearing surfaces).
Tighten the drain plug (1) to 2 daNm.

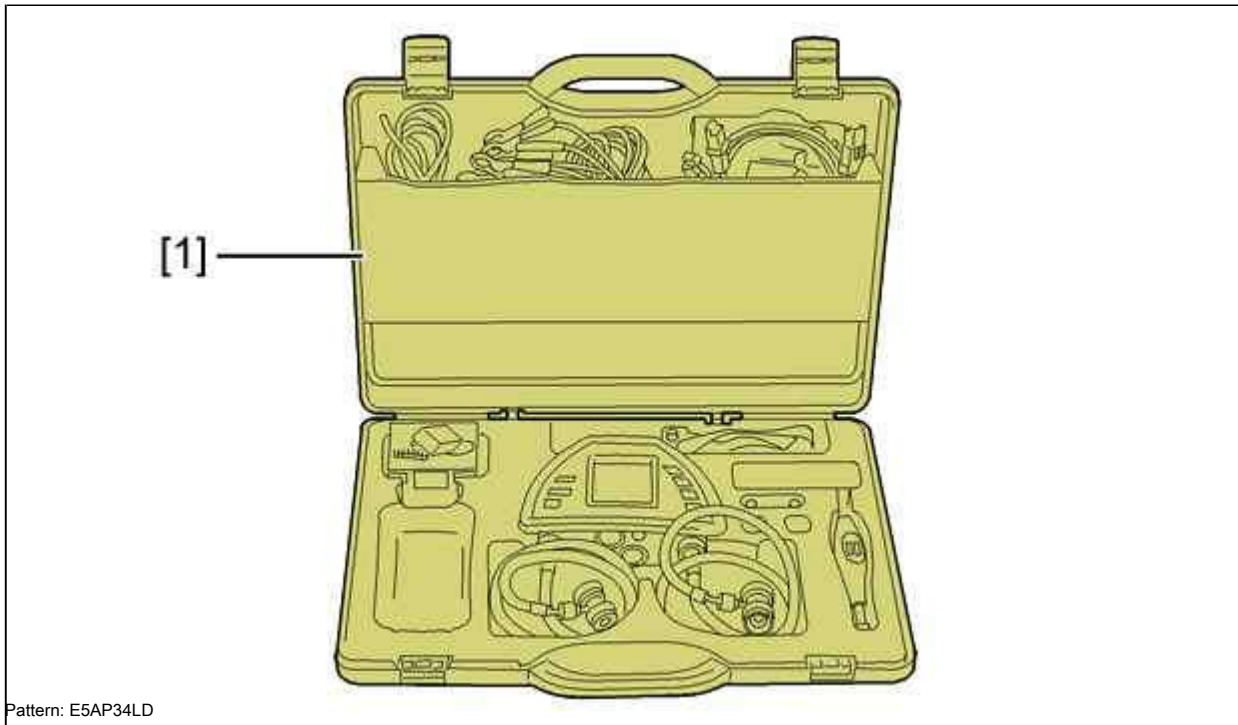
Install the plugs [1701HZ] at the compressor outlet (in case of work on the cold production circuit).

CHECK: AIR CONDITIONING CIRCUITS

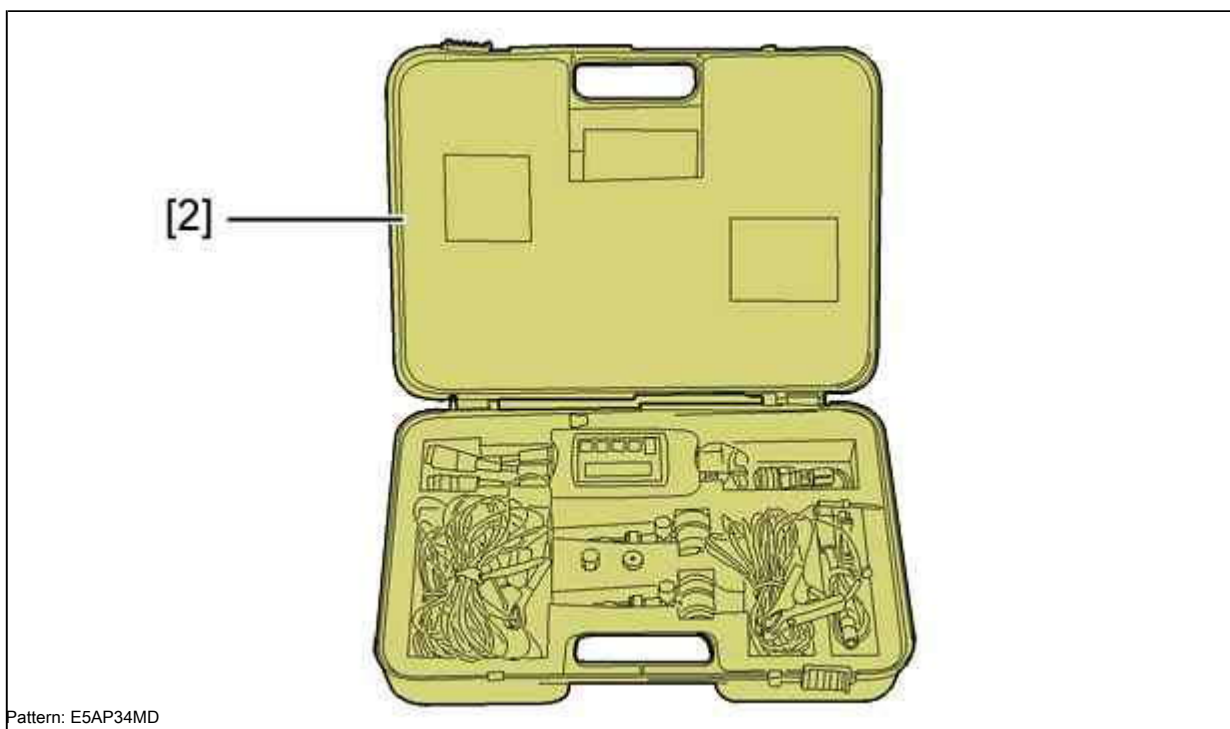
MANDATORY: Observe the cleanliness and safety rules



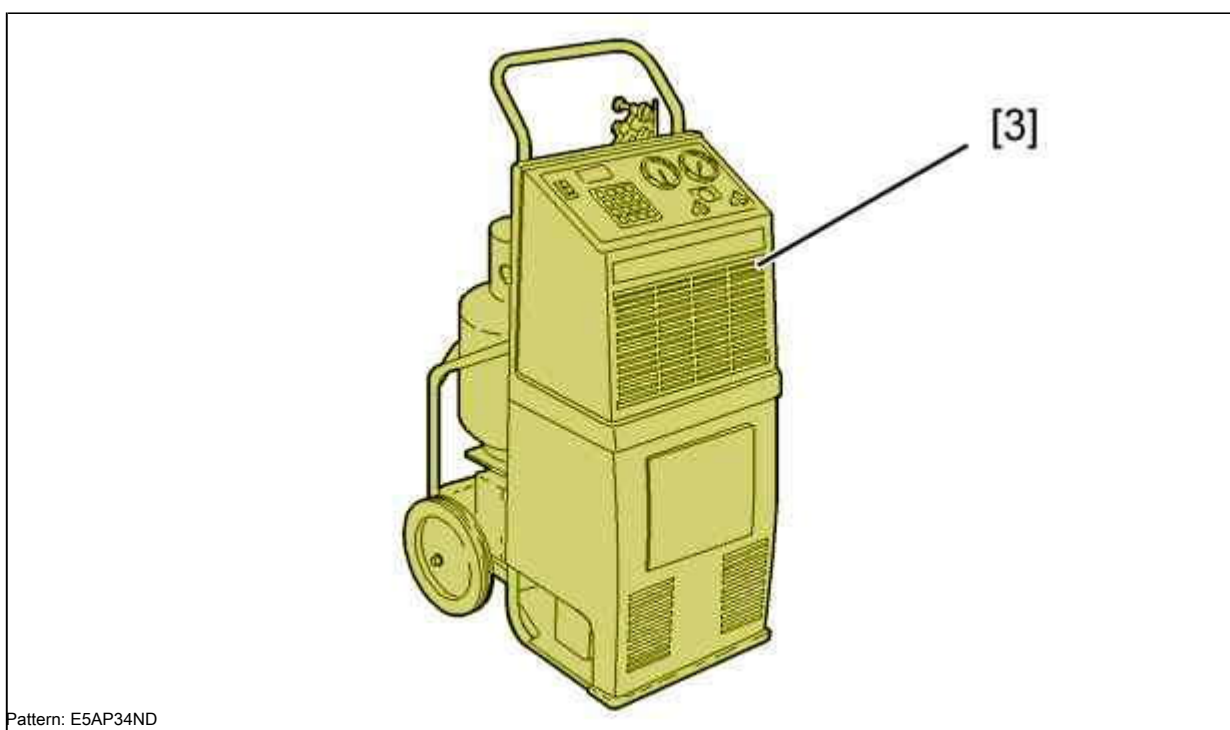
1. Recommended equipment



[1] EXXOCLIM toolbox (see manufacturer's instructions: equipment and tools 2.4.2 1).



[2] CLIM test 2 VALEO4372T (according to manufacturer's instructions).



[3] charging and recycling station.

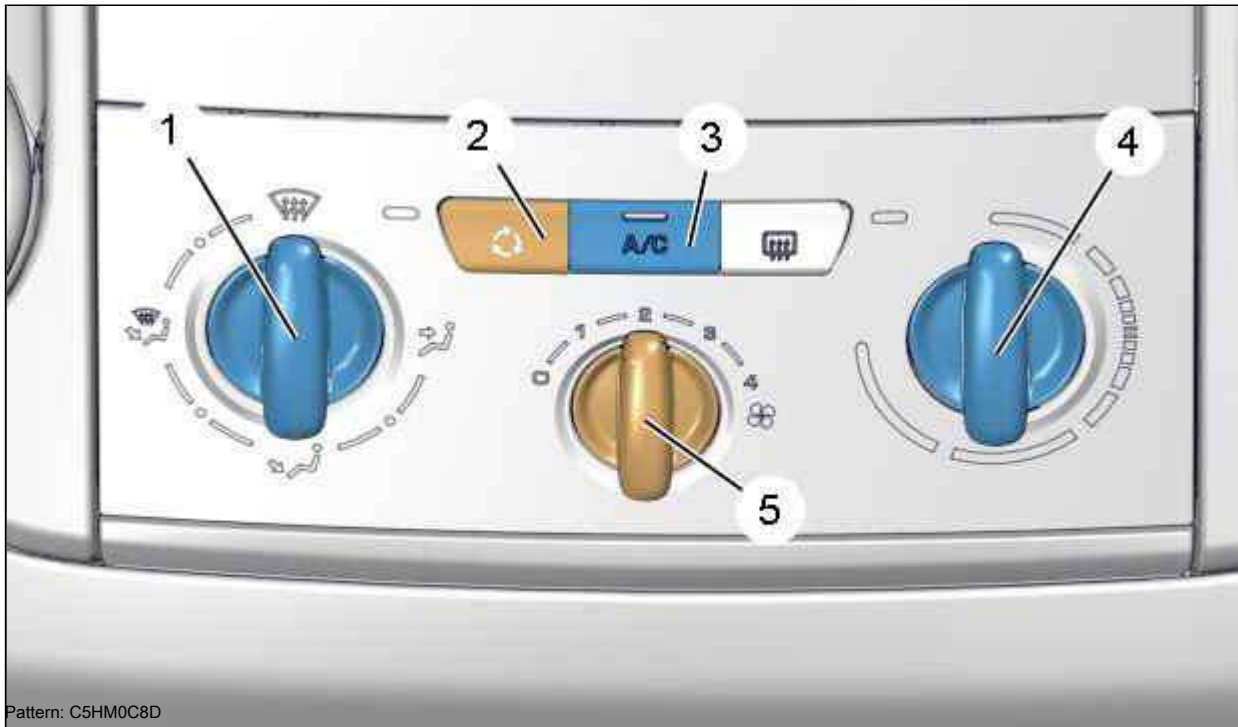
2. Control procedure

Install tool [1] or [2] (according to manufacturer's instructions). Perform the following operations:

- Close all front ventilation grilles

- Engine starting
- Open the front ventilation grill

2.1. Air conditioning system with manual control



Pattern: C5HM0C8D

Switching on the air distribution function: Turn the switch (1) to select the center and side ducts.

Switching on the outdoor air circulation function: Press the switch (2) (visual indicator is off).

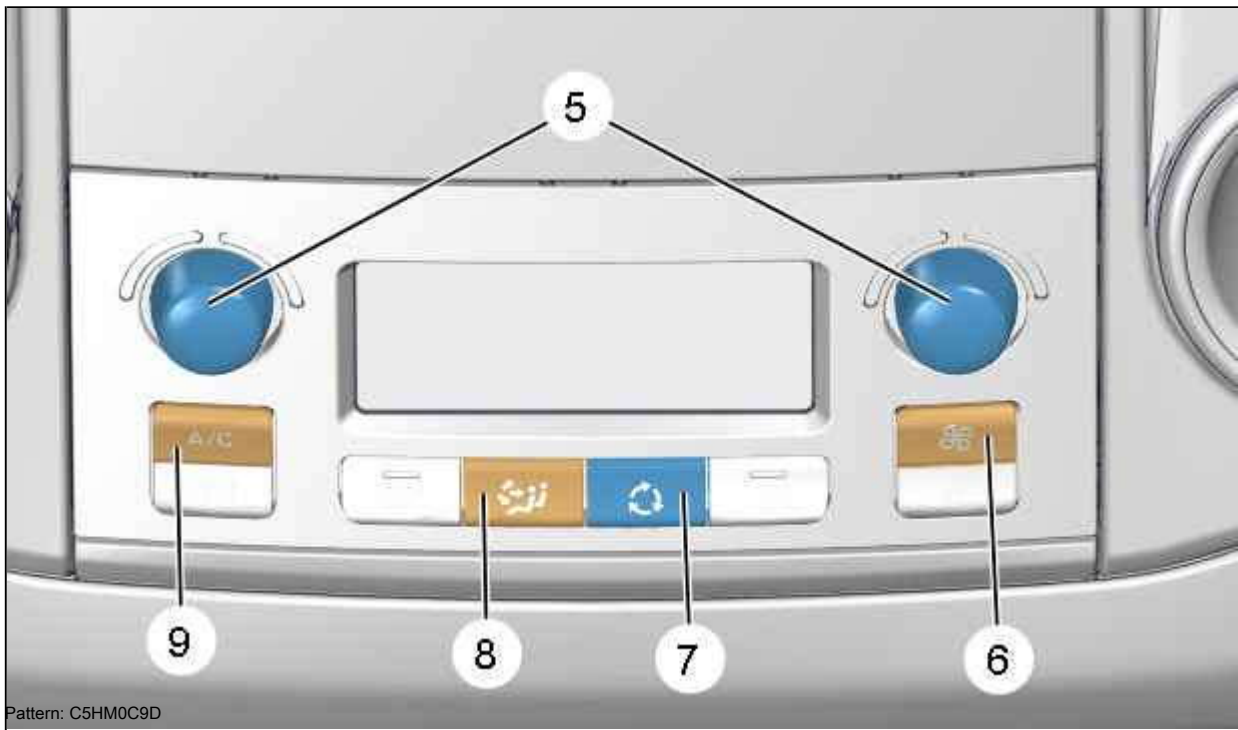
Switching on the air conditioning function: Press the switch (3) (visual indicator is on).

Activating the airflow function: Turn the switch (5) to select the maximum airflow.

Switching on the function of adjusting the temperature of the air in the passenger compartment: Turn the switch (4) to reduce the temperature as much as possible.

Let the air conditioning system run for 5 minutes.

2.2. Automatic air conditioning system



Activating the air distribution function:

- Press the on / off switch (8)
- Select center and side ducts

Switching on the outdoor air circulation function: Press the switch (7) (indicator is off).

Switching on the air conditioning function: Press the switch (9) (warning lamp is on). Activating the airflow function: Press the switch (6) to increase the airflow to the maximum.

Switching on the function of adjusting the temperature of the air in the passenger compartment: Turn the switches (5) to reduce the temperature to the maximum.

Let the air conditioning system run for 5 minutes.

3. Interpretation of values (call)

NOTE: Values associated with the use of the VALEO CLIM Test 2 and entered into the EXXOCLIM.

3.1. Hypothermia (SR)

Subcooling is the difference between the condensing temperature and the temperature of the liquid refrigerant at the outlet of the air conditioning condenser.

Subcooling indicates the amount of liquid refrigerant (liquid state) in the air conditioner circuit.

Hypothermia	Origin	Solutions
(SR)		
Below 2 ° C	Lack of liquid refrigerant in the air conditioner condenser: Above 150 grams	Add refrigerant using fixtures [3]
Between 2 ° C and 4 ° C	Lack of liquid refrigerant in the condenser air conditioner: About 100 to 150 grams	
Between 4 ° C and 12 ° C	Charge is correct	
Above 12 ° C	Excess liquid refrigerant in the condenser	Remove the refrigerant using

Above 15 ° C	air conditioner	fixtures [3]
--------------	-----------------	--------------

3.2. Overheat

Superheat is the difference between the temperature of the liquid refrigerant leaving the evaporator and the temperature at the evaporator.

Superheat indicates the amount of liquid refrigerant (in gaseous state) in the air conditioner circuit.

Overheat	Origin	Solutions
Between 2 ° C and 15 ° C	Charge is correct	
Above 15 ° C	Not enough liquid refrigerant	Add refrigerant using fixtures [3]
Below 2 ° C	Excess liquid refrigerant in the air conditioner circuit	Remove the refrigerant using fixtures [3]

3.3. Inlet air temperature "u"

The inlet air temperature must be between 2 ° C and 10 ° C.

4. Air conditioner circuit diagnostics table (for information)

Main fault	Symptom	Possible reasons
Air conditioning compressor air does not rotate or is rapidly stopping	Electromagnetic clutch	Turning on the compressor
	compressor air conditioning does not turn on or quickly opens	air conditioning
		Not enough liquid
		refrigerant in the air conditioning circuit
		air
		Circuit pressure relief
	Electromagnetic clutch	air conditioner
		A / C Evaporator Sensor
		air
		Electrical circuit (connections, circuit breakers, ...)
		Belt drive
Air conditioning compressor produces abnormal noise	compressor air conditioning stays on and stops quickly	equipment
		air conditioner compressor
		Filter element,
		moisture absorbing
		Air conditioner reducer
	Electromagnetic clutch	Leakage of liquid refrigerant
		Turning on the compressor
		air conditioning
		Adjustment electromagnetic
		compressor clutch
Air conditioning compressor produces abnormal noise	compressor air conditioning stays on	air conditioner completed wrong
		Charge with liquid refrigerant
		Air conditioner compressor
		faulty
		Not enough liquid
	compressor air conditioning remains on and slips	refrigerant in the air conditioning circuit
		air
		Air conditioner compressor valves
		air defective
		Air conditioner compressor clutch
Air conditioning compressor produces abnormal noise	compressor air conditioning remains on and slips	Belt drive
		equipment

Abnormal levels pressure	Low and high pressure	Air conditioner reducer
	too high	faulty
		The pipeline is clogged
	The value of low pressure is too high Seal defective	high and high pressure
	too small	compressor air conditioning
	Low pressure value too A / C evaporator sensor low	High pressure too Air defective high
		Air conditioner reducer
		locked
		Filtering and drying
		replaceable element clogged
		The pipeline is clogged
	Low and high pressure	The pipeline is clogged
	too low	Air conditioner reducer
		locked
		Not enough liquid
		refrigerant in the air conditioning circuit
		air
		Air conditioner compressor
		faulty
	Value of low pressure	Air presence in the circuit
System operation	normal, high pressure	air conditioner
	too big	
	Value of low pressure	Relay pressure (pressure switch)
	normal, high pressure	air conditioner defective
	too small	Evaporator sensor defective
	The value of the low pressure is too high A / C reducer	is too high, but the pressure is too high
	normal	locked in open position
	Low pressure value too Filtering and drying low, high	pressure
	normal	the replacement element is saturated or clogged
		Air conditioner reducer
conditioning in emergency mode	Hypothermia is too weak	froze
		Not enough liquid
	Subcooling too strong Excessive liquid refrigerant	refrigerant
		Air presence in the circuit
		air conditioner
		Filtering and drying
		replaceable element clogged

NOTE: In any case, measure the superheat and supply air temperature.

REMOVAL INSTALLATION: OVEN FAN

MANDATORY: Observe the cleanliness and safety rules

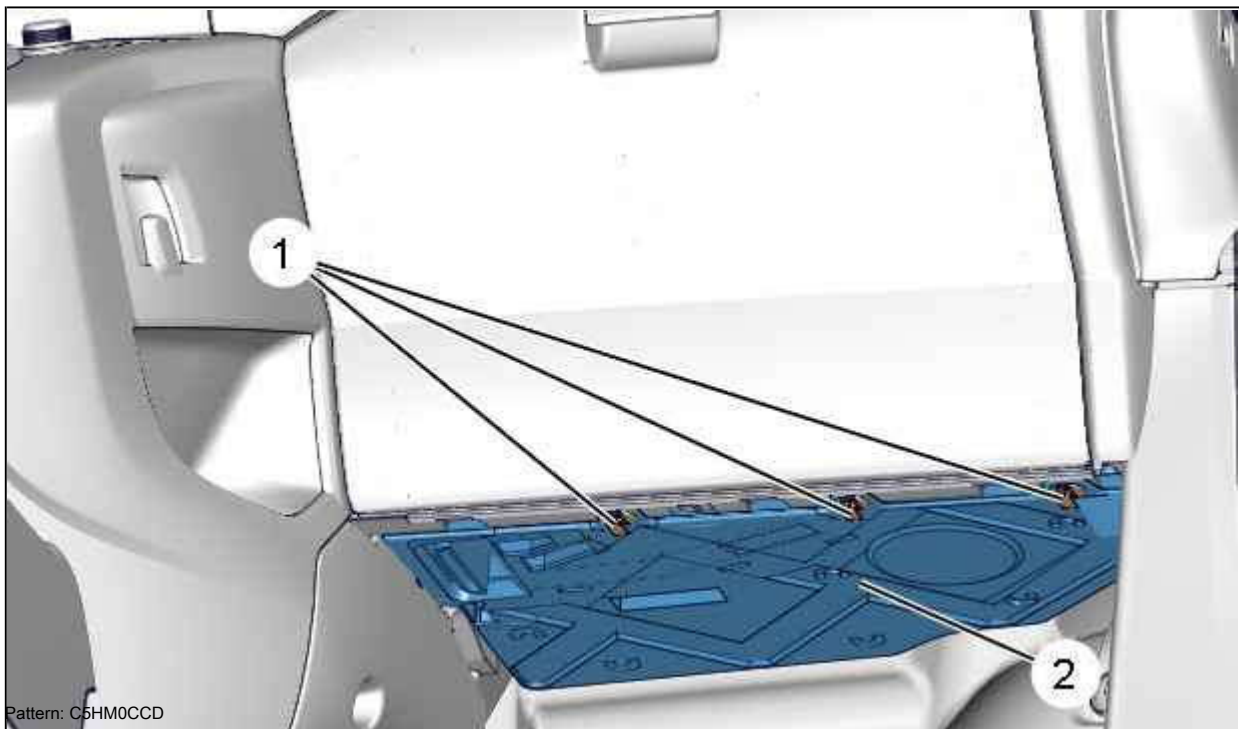


1. Removal

Disconnect the battery



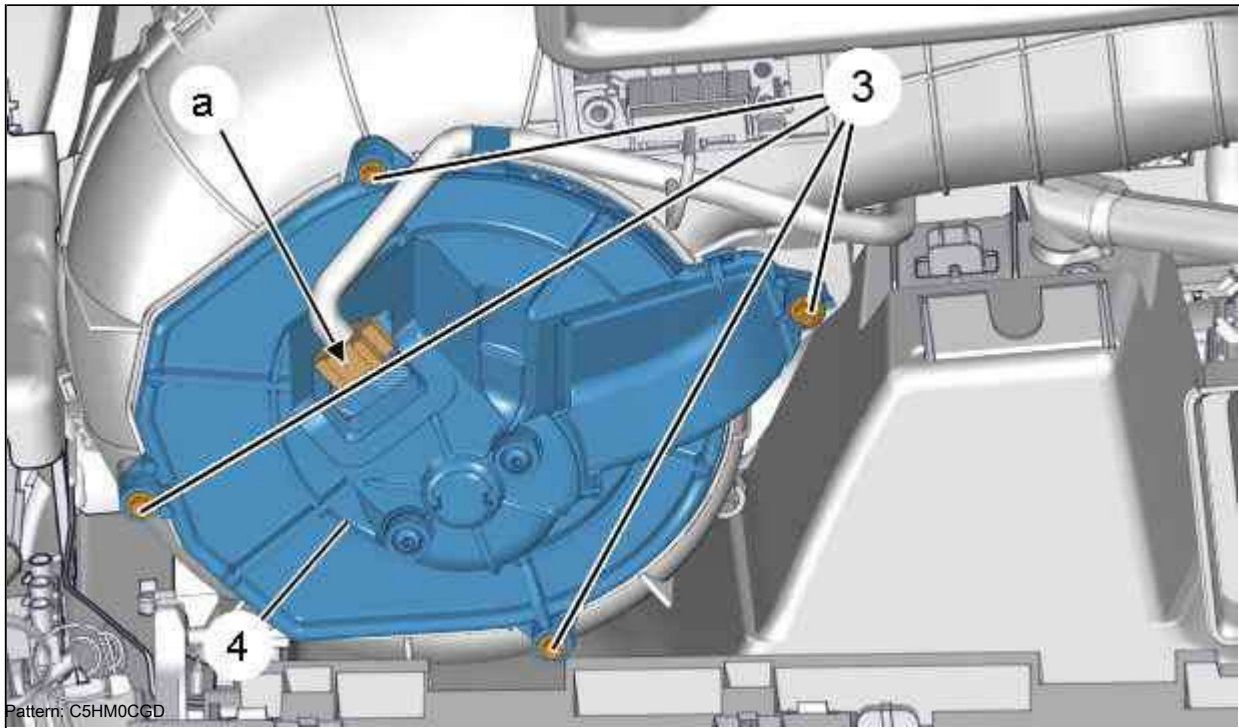
1.1. General operations



Remove:

- 3 clips (1)
- Under-dash trim (2) (right side)
- Accelerator pedal (right-hand drive vehicles)

1.2. Air conditioning system with manual control

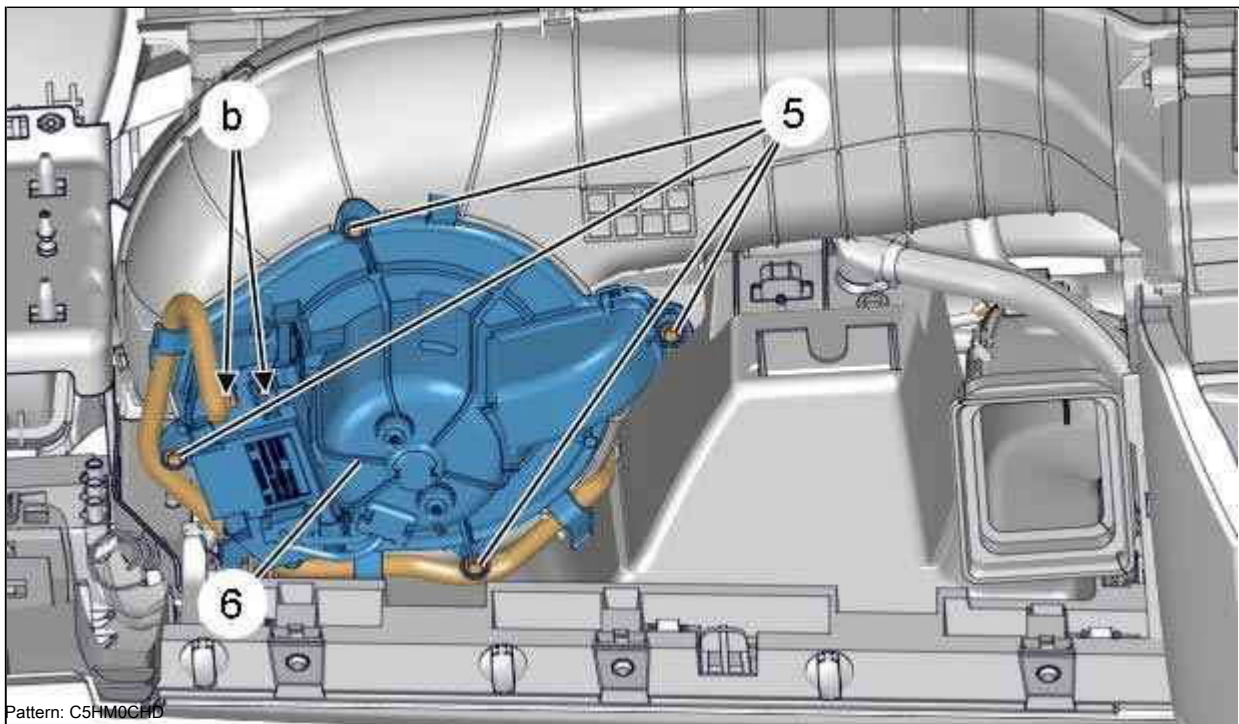


Disconnect the connector (at "a").

Remove:

- 4 bolts (3)
- Stove fan (4)

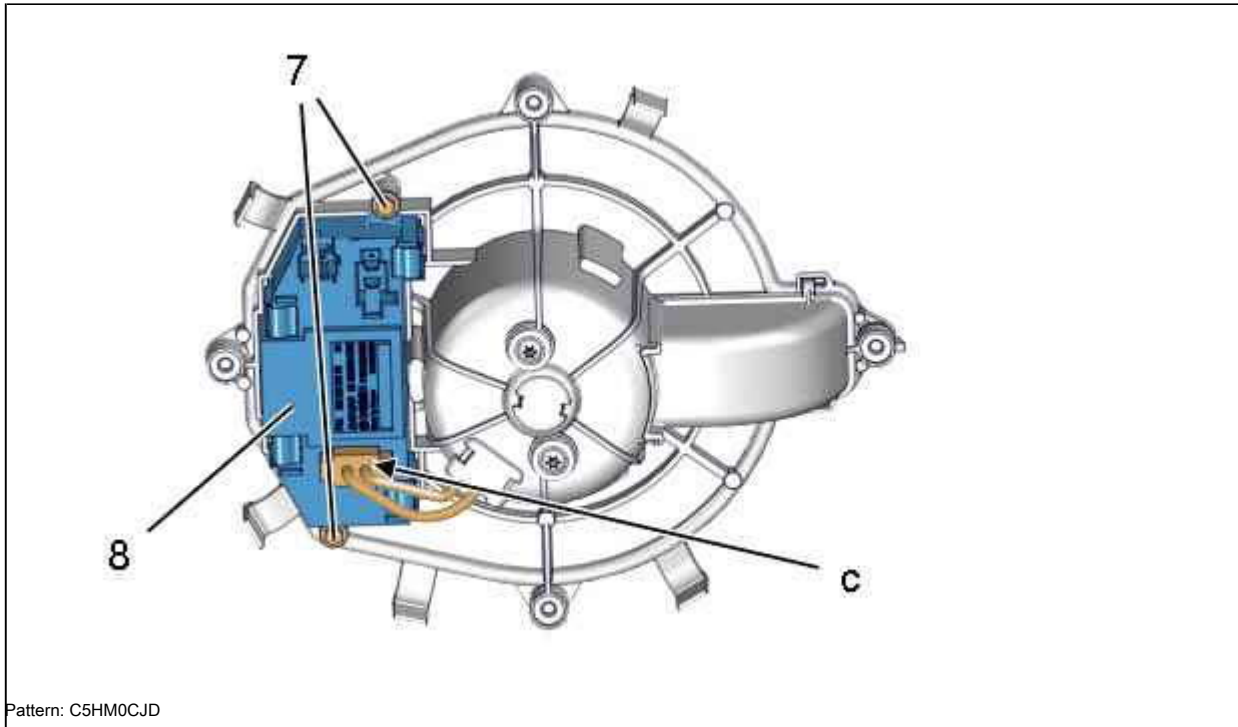
1.3. Automatic air conditioning system



Disconnect the electrical connectors (at "b").

Remove:

- 4 bolts (5)
- Stove fan (6)



Disconnect the connector (at "c").

Remove:

- 2 bolts (7)
- Fan Control Module (8)

2. Installation

2.1. Air conditioning system with manual control

Install:

- Stove fan (4)
- 4 bolts (3)

Reconnect the connector (at "a").

2.2. Automatic air conditioning system

Install:

- Fan Control Module (8)
- 2 bolts (7)

Reconnect the connector (at "c"). Install:

- Stove fan (6)
- 4 bolts (5)

Reconnect the connectors (at "b").

2.3. General operations

Install:

- Accelerator pedal (right-hand drive vehicles)
- Under-dash trim (2) (right side)

- 3 clips (1)

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Check the function of the air impulse distributor.

REMOVAL REFITTING: EVAPORATOR SENSOR

MANDATORY: Observe the cleanliness and safety rules

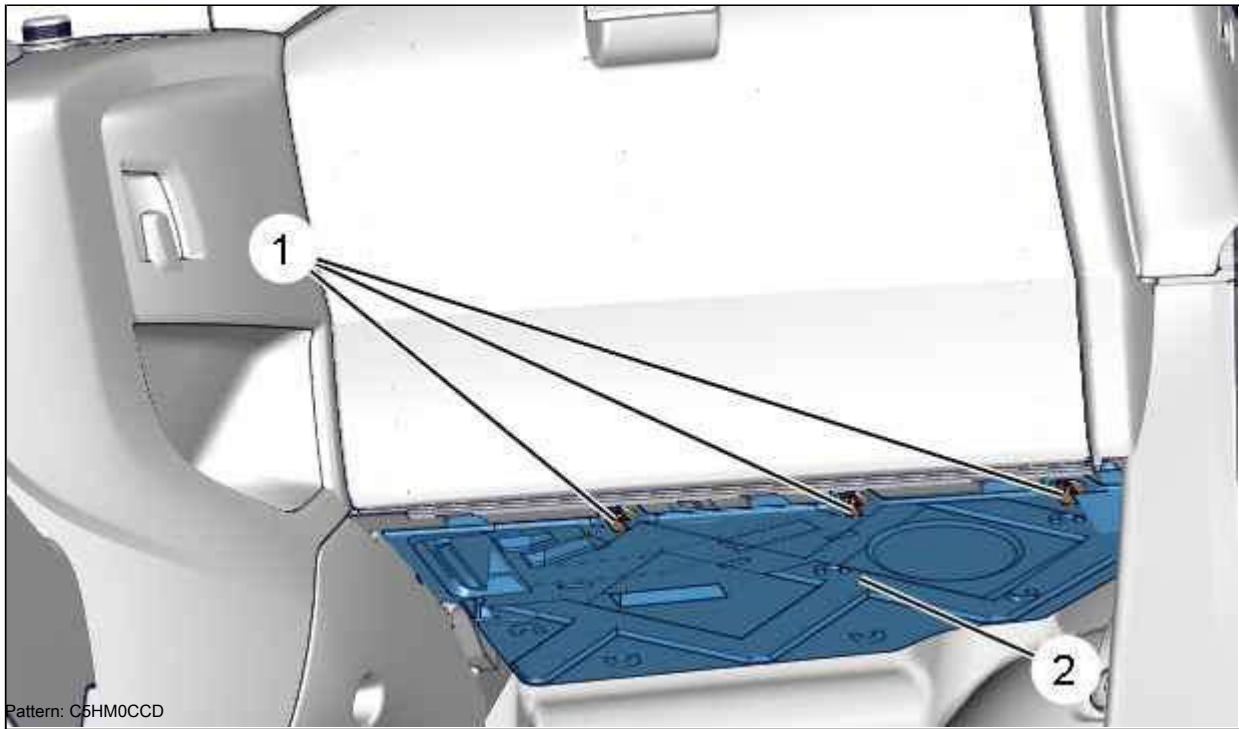


1. Preliminary operations

Disconnect the battery

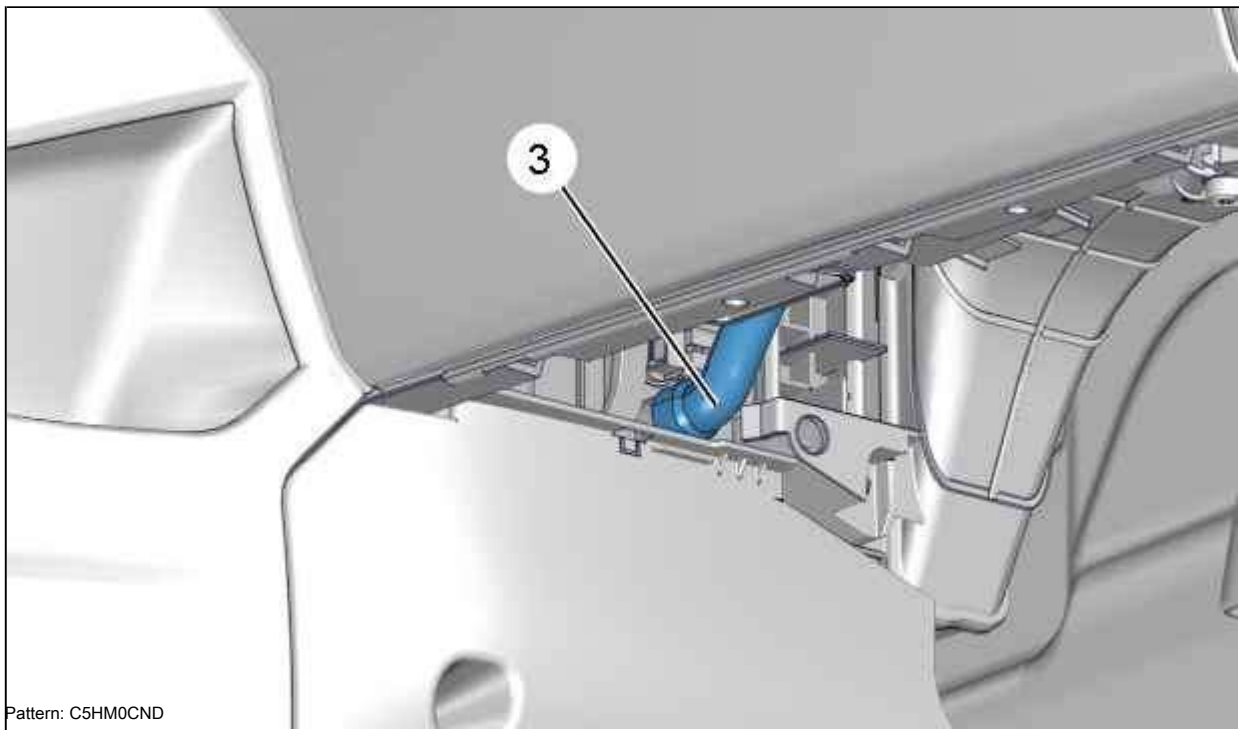


2. Removal

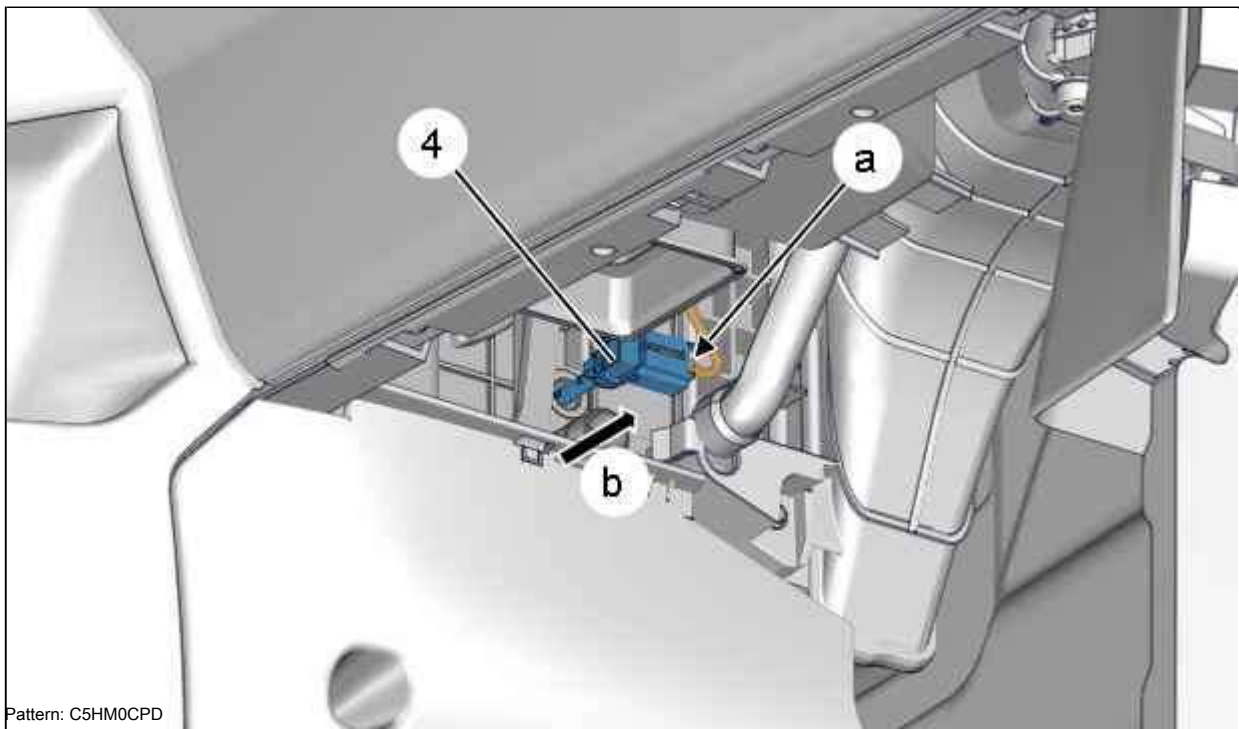


Remove:

- 3 clips (1)
- Trim (2) under the dash (right side)



Detach and move aside: Air duct (3) (Glove compartment, right front passenger side).



Disconnect the evaporator probe (4) (according to arrow "b"). Disconnect the connector (at "a").

Remove the evaporator sensor (4).

3. Installation

Reconnect the connector (at "a"). Install the evaporator sensor (4).

Connect the air pipe (3) (in the glove compartment, right front passenger side).

Install:

- Trim (2) under the dash (right side)
- 3 clips (1)

Reconnect the battery.

ATTENTION : [Follow the steps to follow after removing the battery.](#)

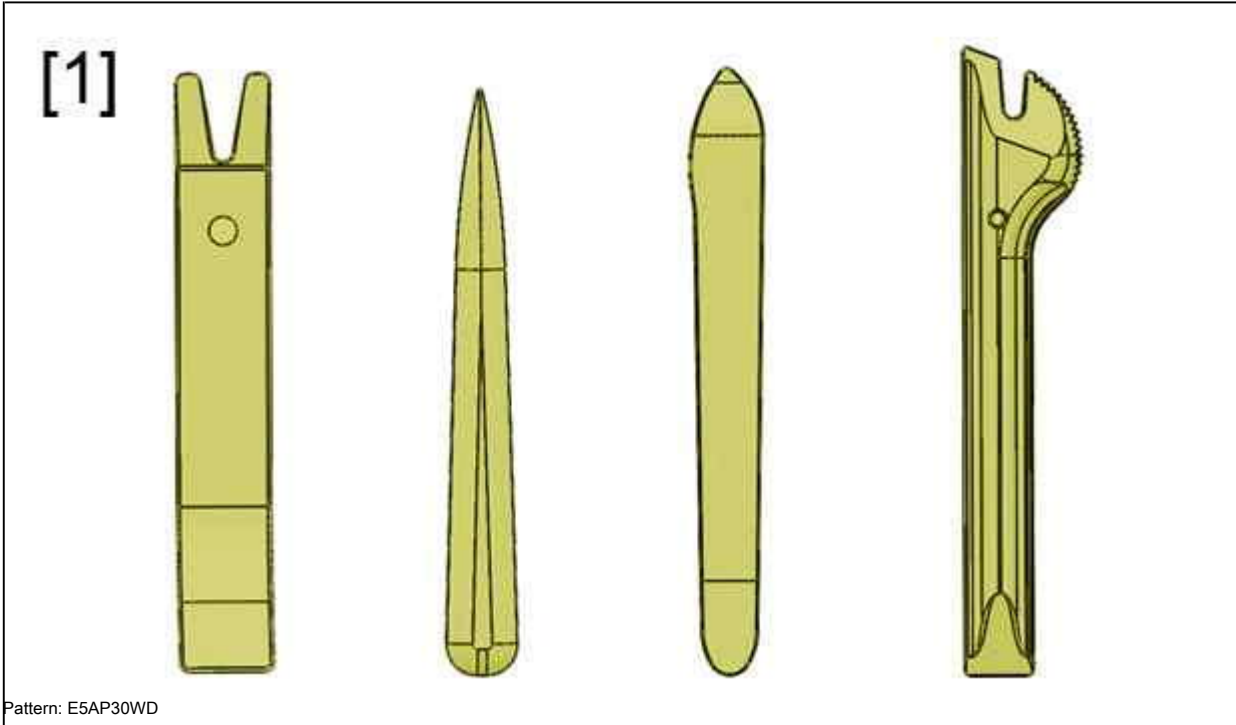
Check the function of the air conditioning system.

REMOVAL INSTALLATION: FRONT SYSTEM CONTROL PANEL AIR CONDITIONING

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim stripper () .1350ZZ.

2. Removal

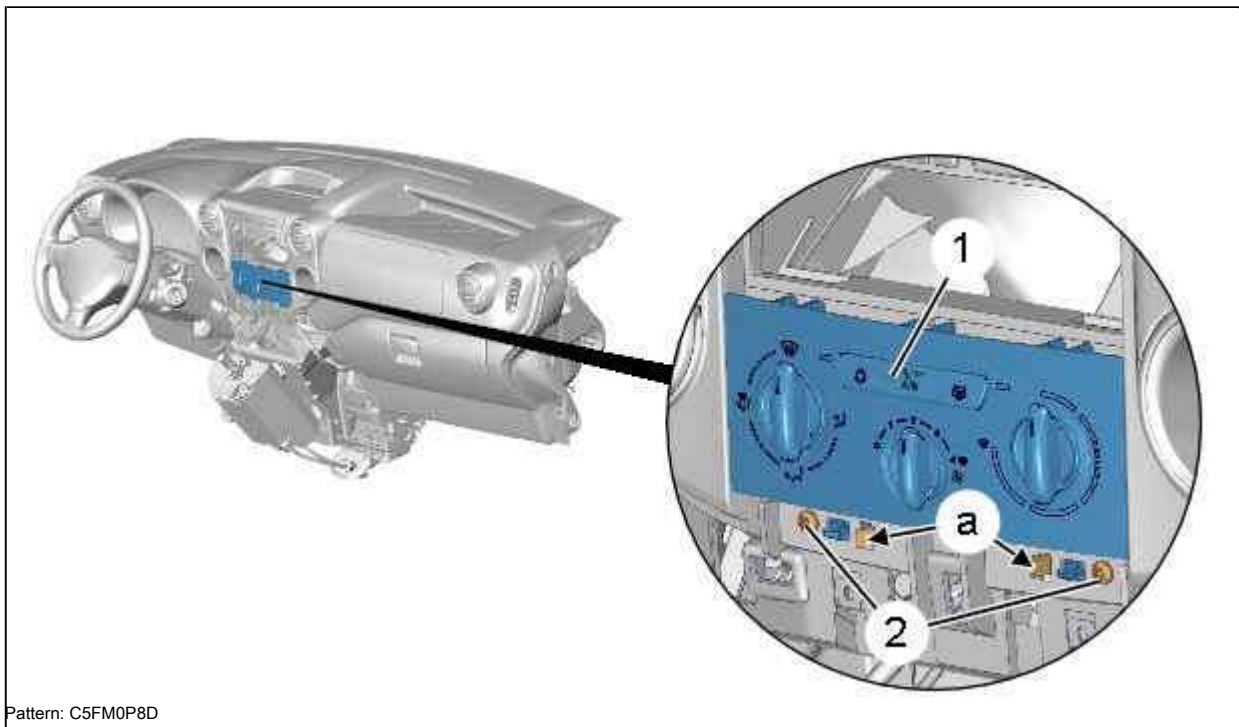
Disconnect the battery

2.1. Front panel of automatic air conditioner

Remove:

- **CD player** (depending on configuration)
- **Control panel central switch assy**

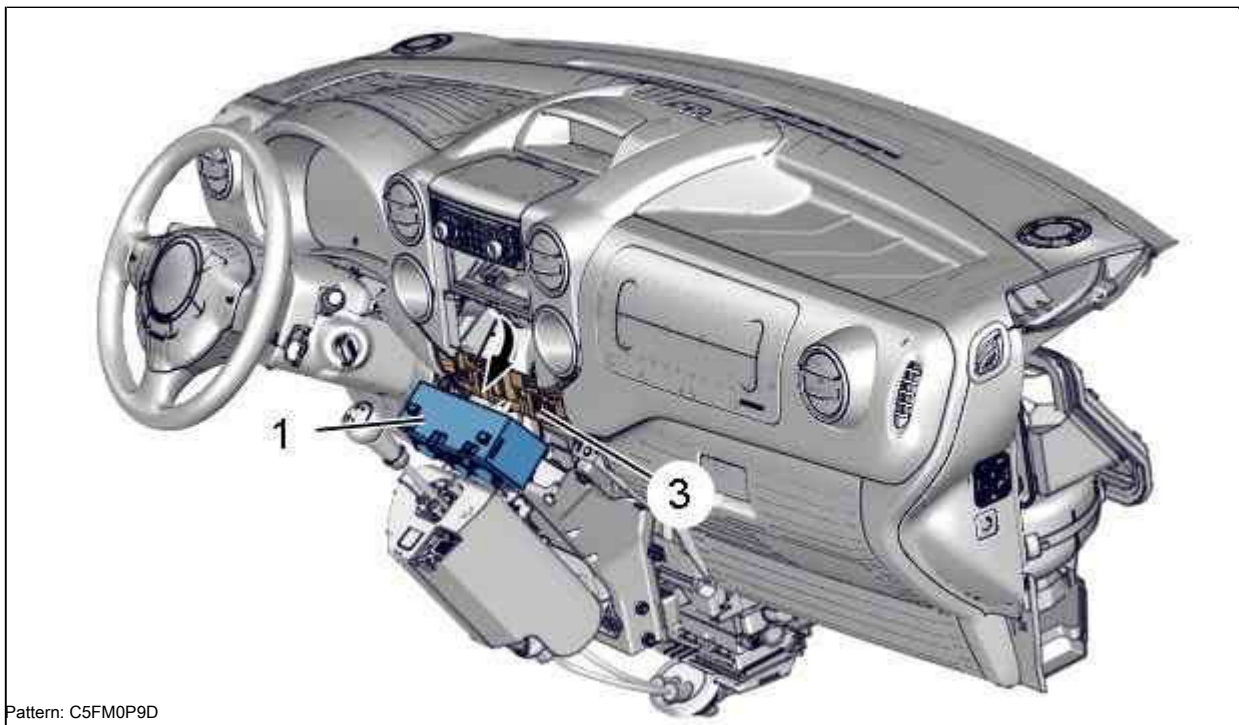




Pattern: C5FM0P8D

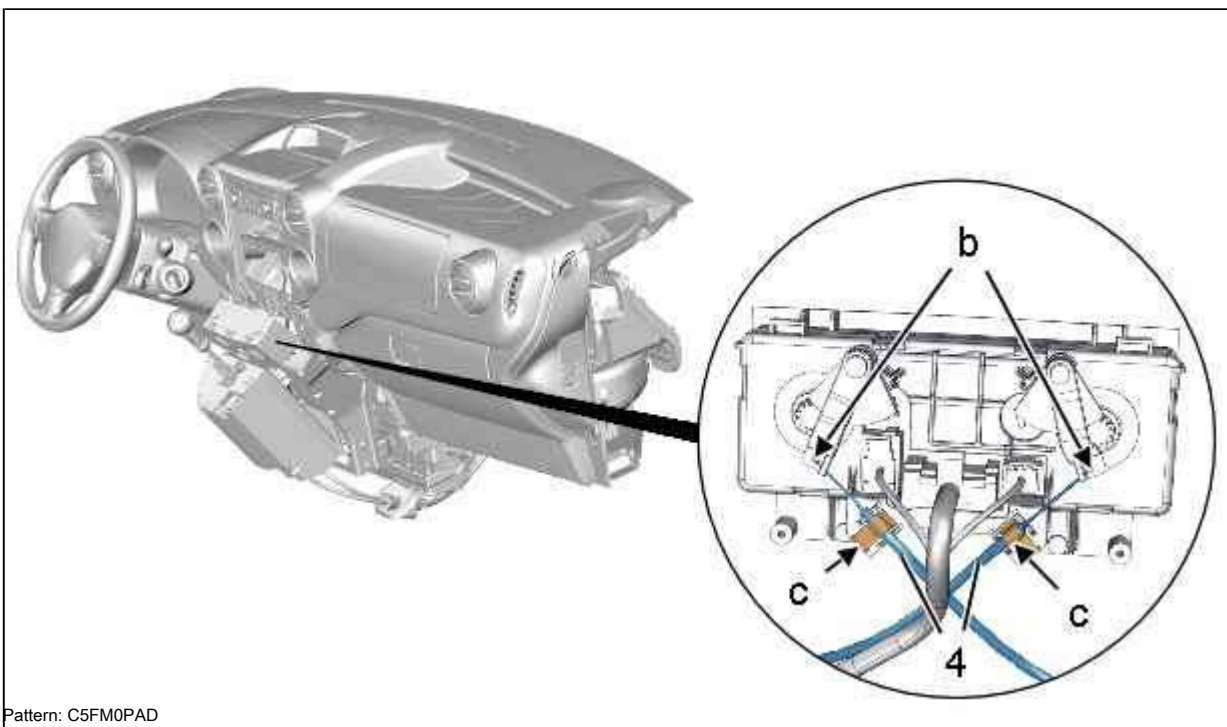
Loosen screws (2).

Disconnect; Move the front panel of the air conditioner (1) (at "a") inside the control panel; Using the tool [1].

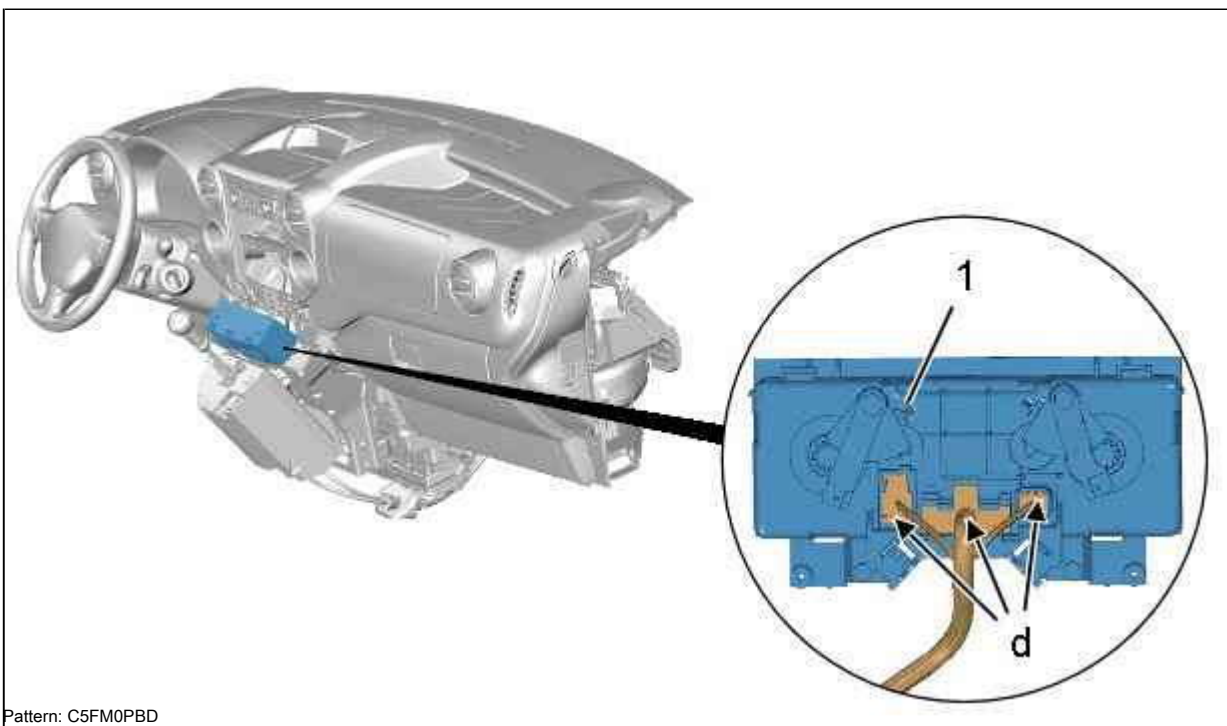


Pattern: C5FM0P9D

Disconnect the front panel of the air conditioner (1) under the control panel (3) (in accordance with the arrow).



Disconnect; Remove: Braid holder (in "c"). Detach the cables (4) (at "b").

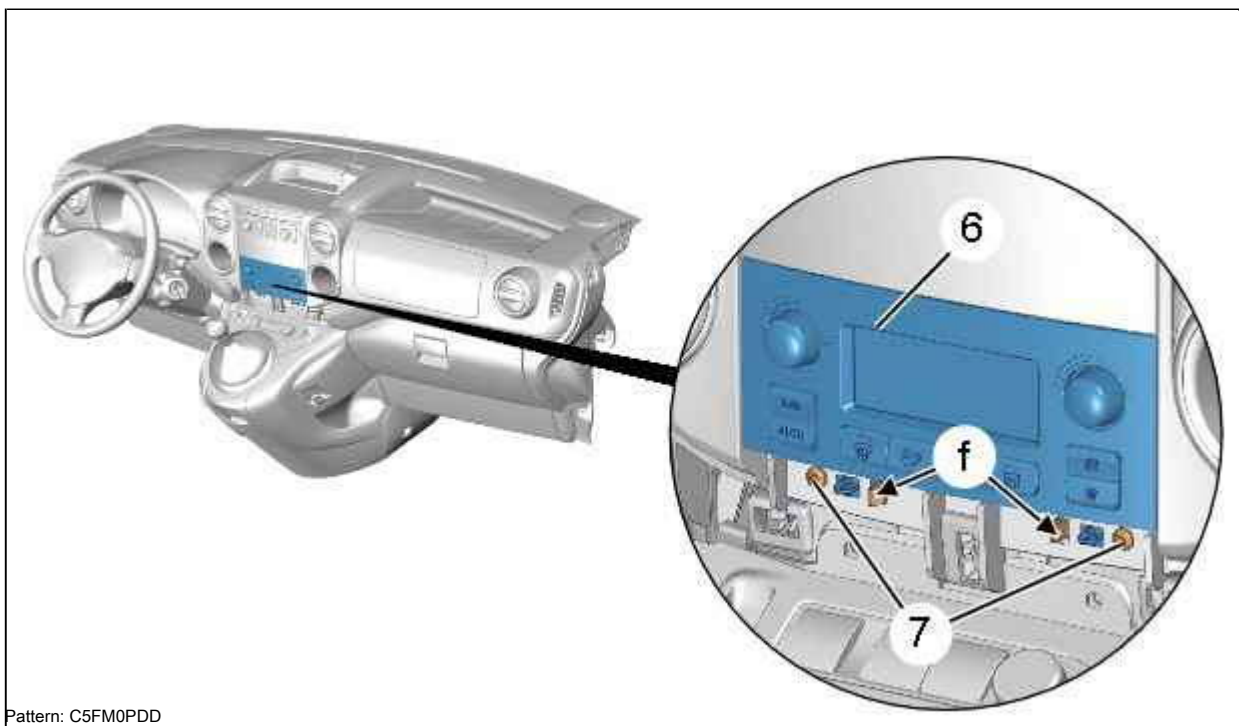


Disconnect the electrical connectors (at "d"). Remove: Air conditioner bezel (1).

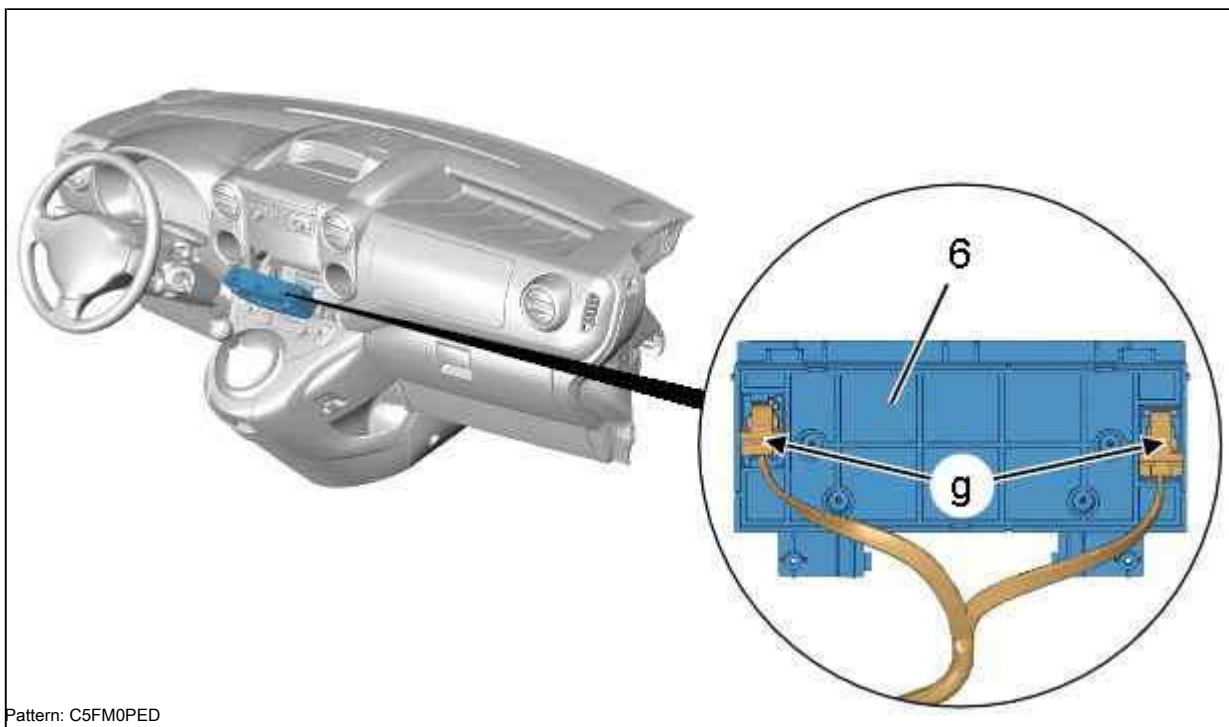
2.2. Front panel of automatic air conditioning system



Detach trim panel ((5)) (at "e").
Remove the trim panel (5); Using the tool [1].



Loosen screws (7).
Detach and separate the front panel of the automatic air conditioner (6) (at "f") from the control panel; Using the tool [1].



Pattern: C5FM0PED

Tilt the front panel of the automatic air conditioner (6). Disconnect electrical connectors (at "g").

Remove: Automatic air conditioner bezel (6).

3. Installation

MANDATORY: Replace systematically: Braid attachment (Defective).

Reconnect the battery.

MANDATORY: Check the operation of various equipment before replacing the front panel of the air conditioner (1)

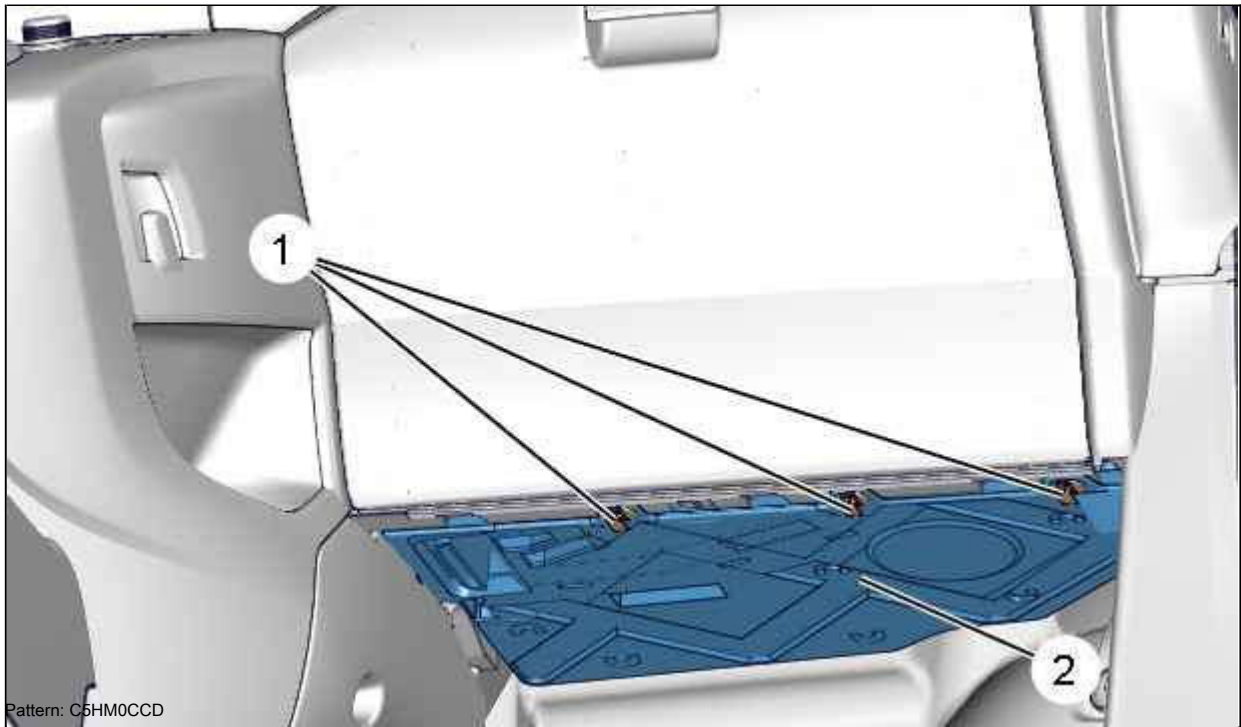
Installation is carried out by performing the removal operations in the reverse order. Check the functioning of the electrical equipment.

REMOVAL INSTALLATION: INTERIOR VENTILATION FILTERS

MANDATORY: Observe the cleanliness and safety rules

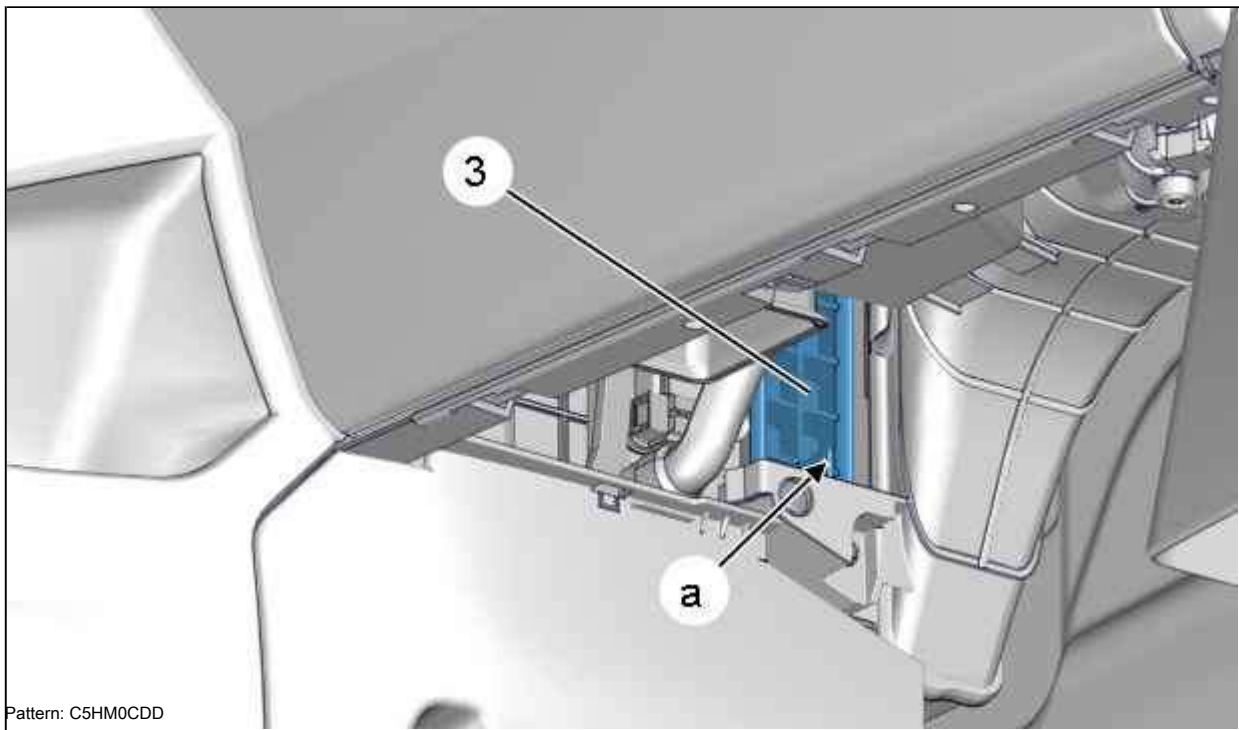


1. Removal

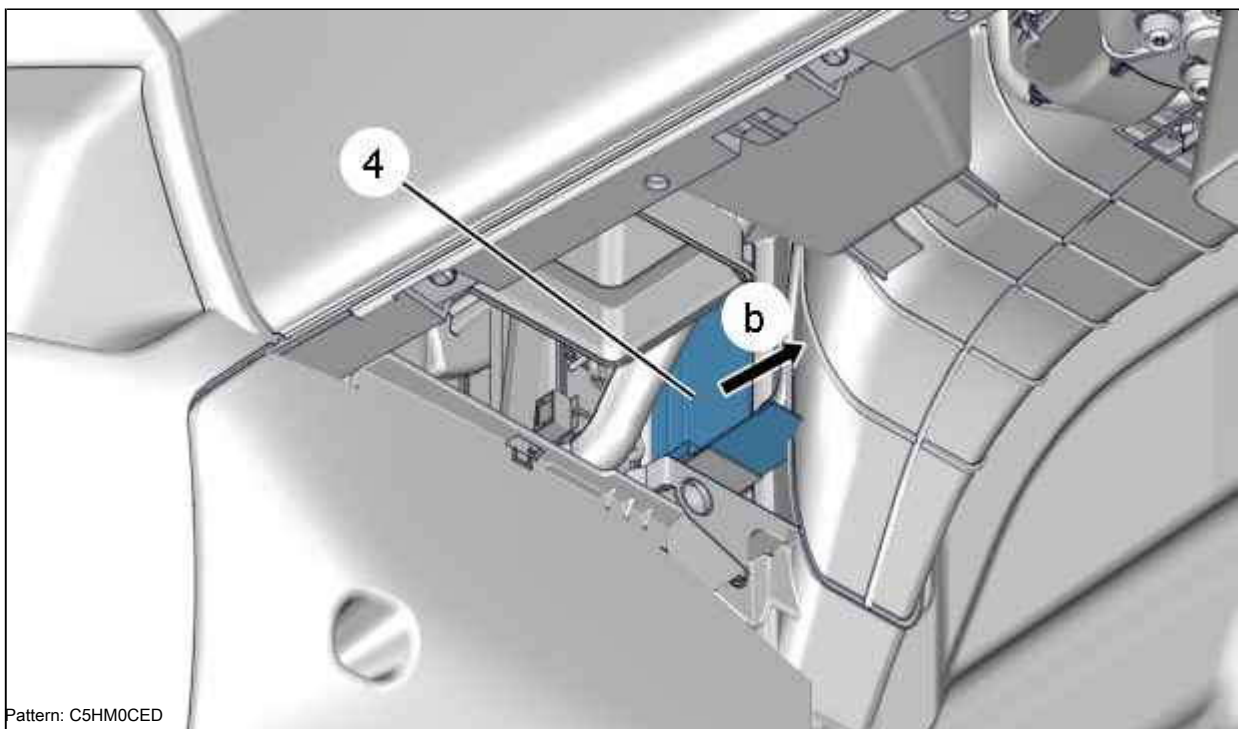


Remove:

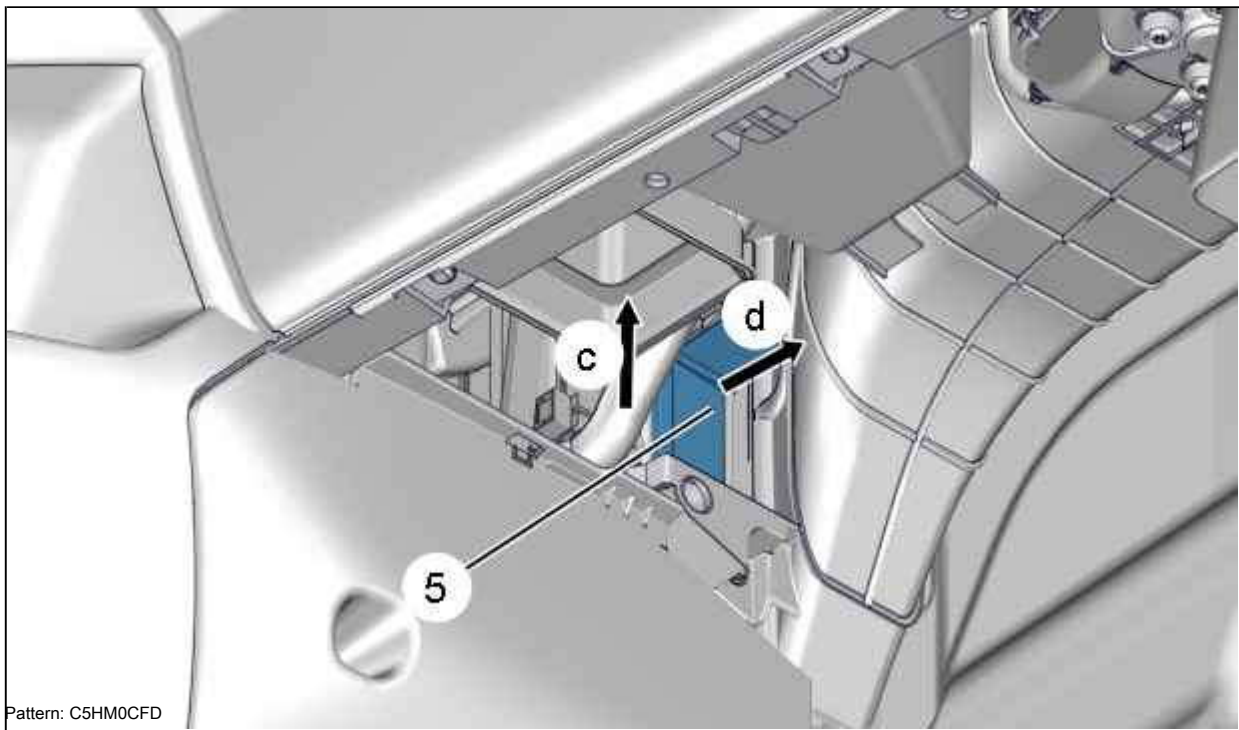
- 3 clips (1)
- Under-dash trim (2) (right side)



Remove the pollen filter bar (3); Pull the tab "a".



Remove the first filter (4) (as shown "b").



Slide the second filter (5) up (as shown "c"). Remove the second filter (5) (as shown "d").

2. Installation

Clean the cabin filter seat.

Install: Cabin dust filter (5). Make sure that the salon filter (5) is correctly installed. Install:

- Cabin dust filter (4)
- Filter compartment hatch (3)

Check the air flow through the passenger compartment fan by running at different speeds.

REMOVAL INSTALLATION: FAN SPEED CONTROL

MANDATORY: Observe the cleanliness and safety rules



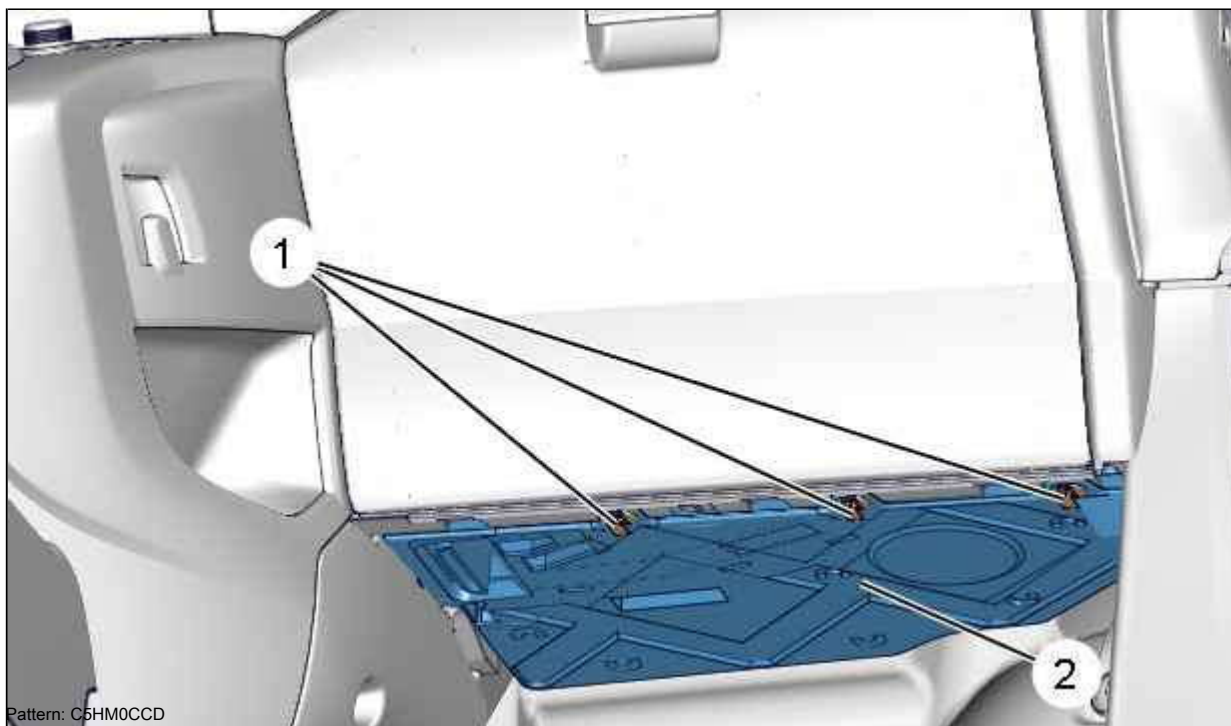
1. Preliminary operations

Disconnect the battery



2. Removal

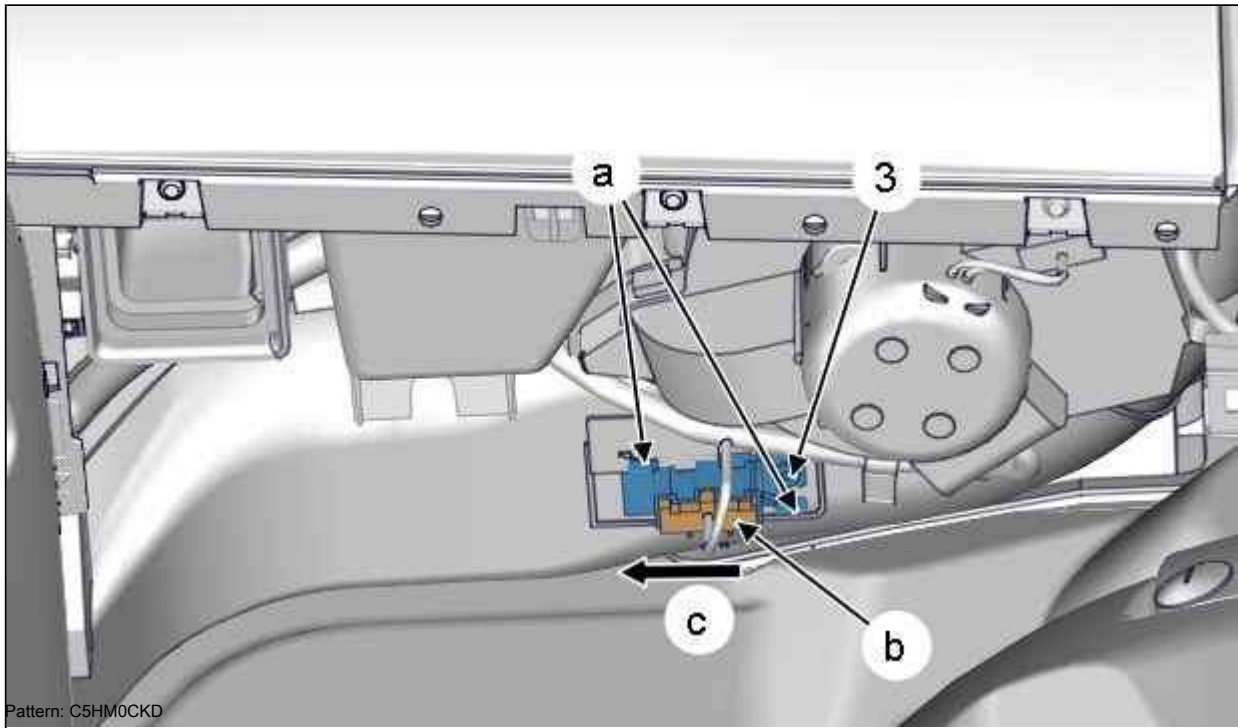
2.1. General operations



Remove:

- 3 clips (1)
- Under-dash trim (2) (right side)
- Accelerator pedal (right-hand drive vehicles)

2.2. Air conditioning system with manual control



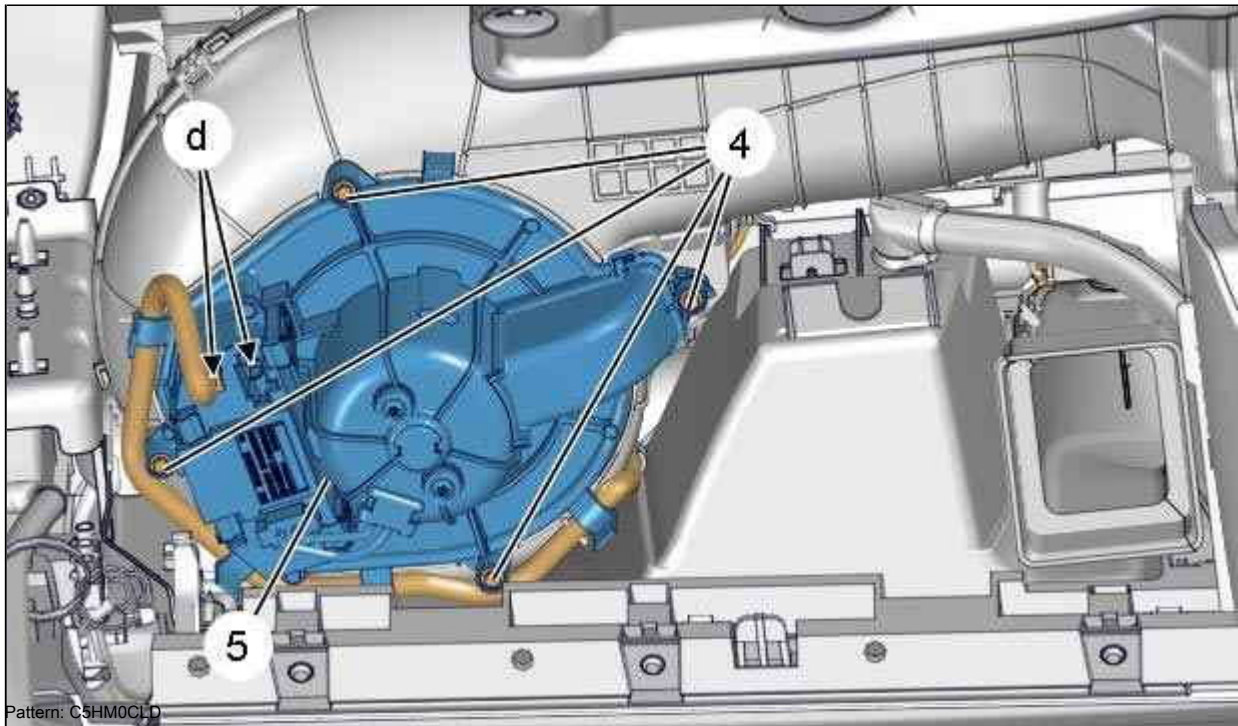
Disconnect the connector (at "b").

Remove the bolts (3).

Press in "a".

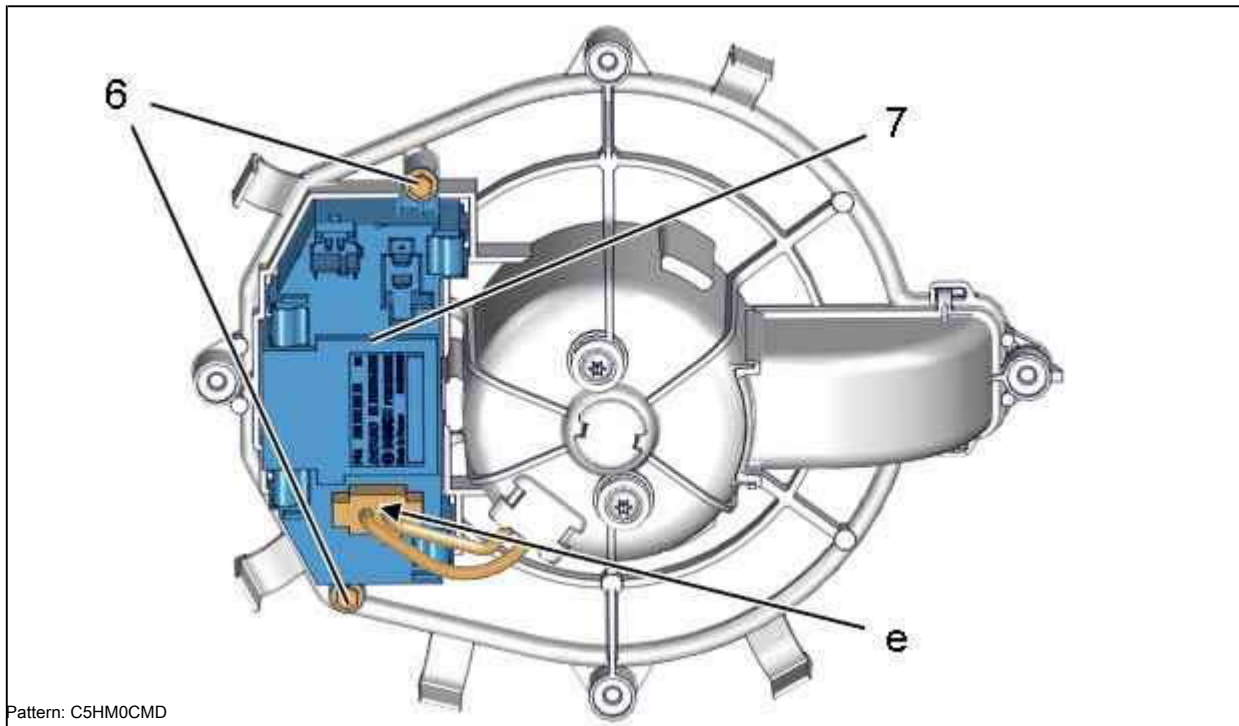
Remove: Fan control resistor (as shown "c").

2.3. Automatic air conditioning system



Disconnect the electrical connectors (at "d"). Remove:

- 4 bolts (4)
- Fan assembly (5)



Disconnect the connector (at "e").

Remove:

- 2 bolts (6)
- Fan control module (7)

3. Installation

3.1. Air conditioning system with manual control

Install:

- Fan control resistor
- Bolt (3)

Reconnect the connector (at "b").

3.2. Automatic air conditioning system

Install:

- Fan control module (7)
- 2 bolts (6)

Reconnect the connector (at "e"). Install:

- Fan assembly (5)
- 4 bolts (4)

Reconnect the connectors (at "d").

3.3. General operations

Install:

- Accelerator pedal (right-hand drive vehicles)
- Under-dash trim (2) (right side)
- 3 clips (1)

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Check the function of the air impulse distributor.

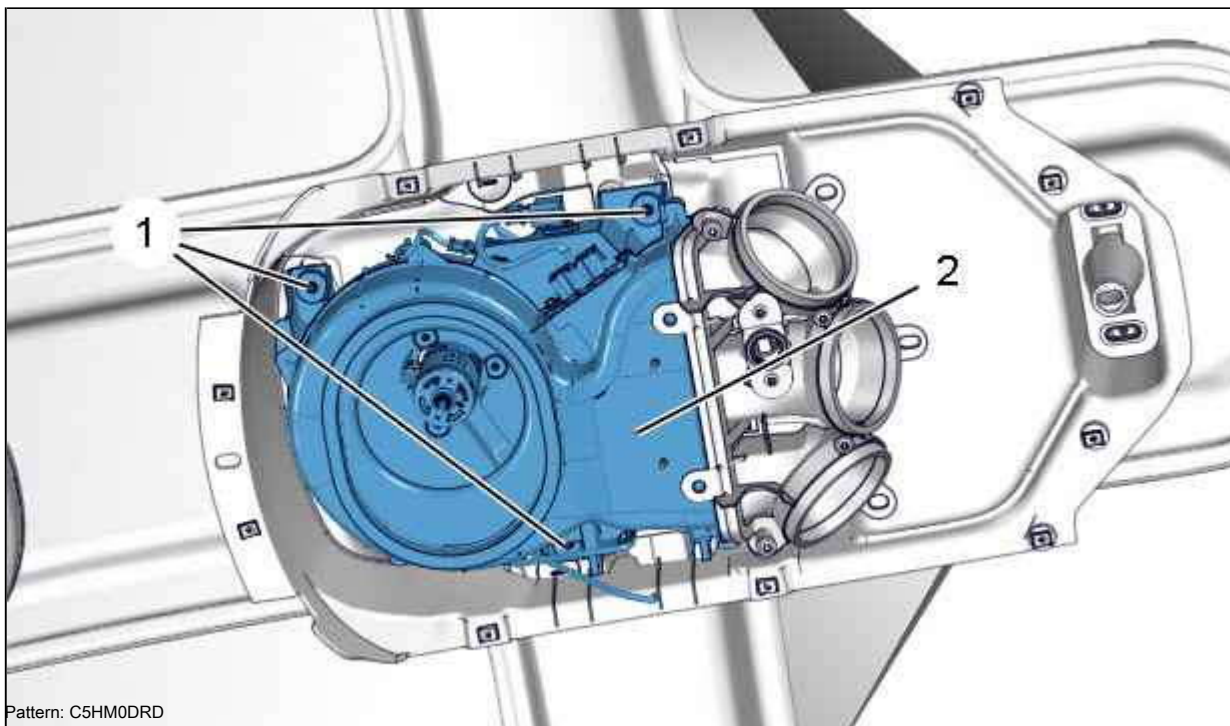
REMOVAL - REFITTING: ADDITIONAL FAN

MANDATORY: Observe the cleanliness and safety rules



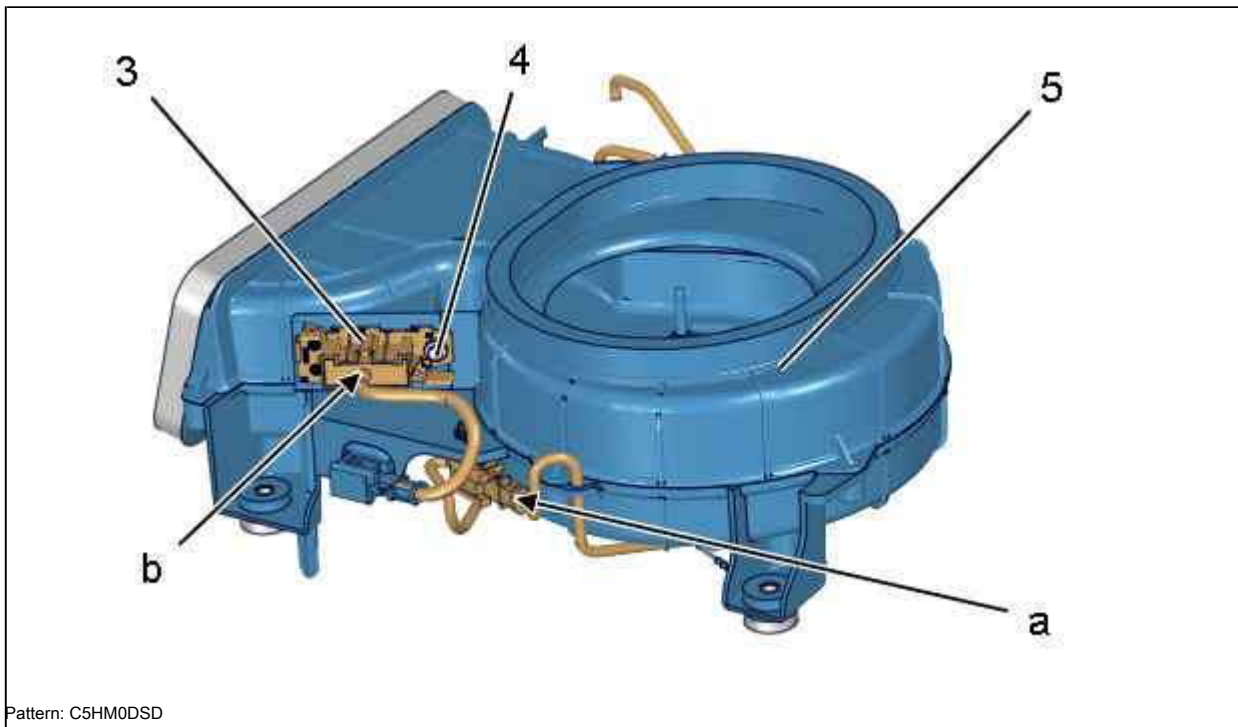
1. Removal

Remove: **Upper chamber**



Remove:

- 3 bolts (1)
- Additional fan assembly (2)



Disconnect the electrical connectors (in "a", "b"). Remove:

- Bolt (4)
- Fan control module (3)
- Additional fan (5)

2. Installation

Install:

- Additional fan (5)
- Fan control module (3)
- Bolt (4)

Reconnect the connectors (at "a", "b"). Install:

- Additional fan assembly (2)
- bolts (1)

Install: **Upper chamber**

Check the operation of the auxiliary fan.



...

PRECAUTIONS REQUIRED: WORKING WITH AIR CONDITIONING SYSTEM

1. Safety Recommendations

MANDATORY: In all cases, follow these general guidelines.

Wear protective gloves and goggles to eliminate any risk of frostbite.

Do not handle liquid refrigerant near flames or objects that are too hot (such as cigarettes) to eliminate any risk of toxic fumes being emitted.

Work in a ventilated area.

Handle used compressor lubricant with care as it may contain acids.

MANDATORY: Compressor oil is extremely hygroscopic; use new oil for repairs.

2. Precautions to be taken when opening the circuit

Quickly plug the pipelines to prevent moisture ingress; Using a set of plugs () .1701HZ.

New parts must be at ambient temperature before unpacking to prevent condensation.

Plugs in pipe fittings should be removed at the last moment before installation.

ATTENTION : Uninstall parts not covered with plugs.

The replacement filter and desiccant element must not be left in open air for more than 5 minutes, even if connected to the circuit (risk of moisture saturation).

If the circuit remains in open air, it is necessary to replace:

- Replaceable filter and drying element
- Compressor lubrication (operation included in liquid refrigerant change: see instructions for certified units)

3. Precautions to be taken (with refrigeration compressor)

3.1. General information

Handle A / C compressors with care:

- Remove air conditioner compressor from electrical connectors or
- Do not install A / C compressor
- Protect sheaves and electrical connectors from impacts (fragile zones)
- Protect the compressor clutch from oil ingress for the air conditioner compressor or other lubricant

Air conditioner compressors must be stored indoors at temperatures between 5 ° C and 50 ° C. The plastic plugs supplied with new A / C compressors can be reused later.

When returning the air conditioner compressor, the supplier should properly pack the compressor to protect it from damage during transport.

ATTENTION : When starting the A / C compressor for the first time, do not exceed 1500 rpm for the first minute of operation to ensure oil distribution to the system.

3.2. Features: Clutchless Air Conditioning Compressor (DENSO)

"DENSO" compressors without a clutch rotate constantly, the engine will run.

ATTENTION : Do not run the compressor (and therefore the engine) if there is no liquid refrigerant in the air conditioning circuit. Moreover, the compressor must not be turned on when draining the liquid refrigerant.

If it is necessary to turn on the engine when there is no refrigerant in the cooling circuit:

- The air conditioning system must be turned off
- The frequency of rotation of the shaft of the air conditioner compressor must not exceed 2000 rpm for 15 minutes (not more than)

ATTENTION : If these recommendations cannot be followed, the air conditioning compressor should be replaced.

4. Precautions to be taken when installing tubing

Use only new seals.

ATTENTION : Lubricate the seals with a compressor lubricant.

Tighten the pipe connecting elements to the specified torque using a counter key, if possible.

5. General circuit protection

ATTENTION : Do not operate the air conditioner when the liquid circuit is empty. Do not remove the refrigerant filling plug of the compressor when the circuit is full.

6. Electrical checks

Before connecting the connector, check:

- State of different contacts (deformation, oxidation ...)
- Presence of a seal
- Presence and state of mechanical locking

During electrical checks:

- The battery must be properly charged
- It is forbidden to use a voltage source greater than 12V
- It is forbidden to use the indicator lamp
- It is forbidden to create an electric arc

Do not disable:

- Battery with the engine running
- Computer with ignition on

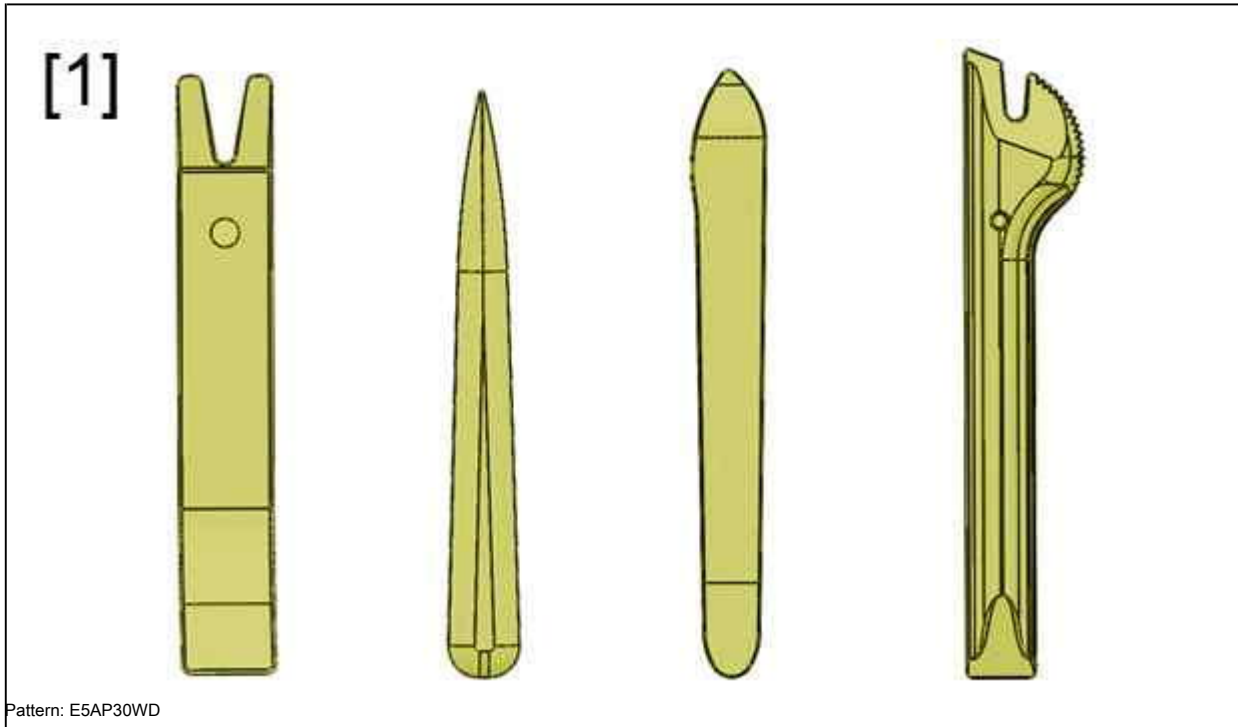
MANDATORY: For the operation of draining the filling of liquid refrigerant: Refer to the instructions of the specialized stations.

REMOVAL INSTALLATION: CIRCUIT BOX AND INSTRUMENT PLUG PANELS

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



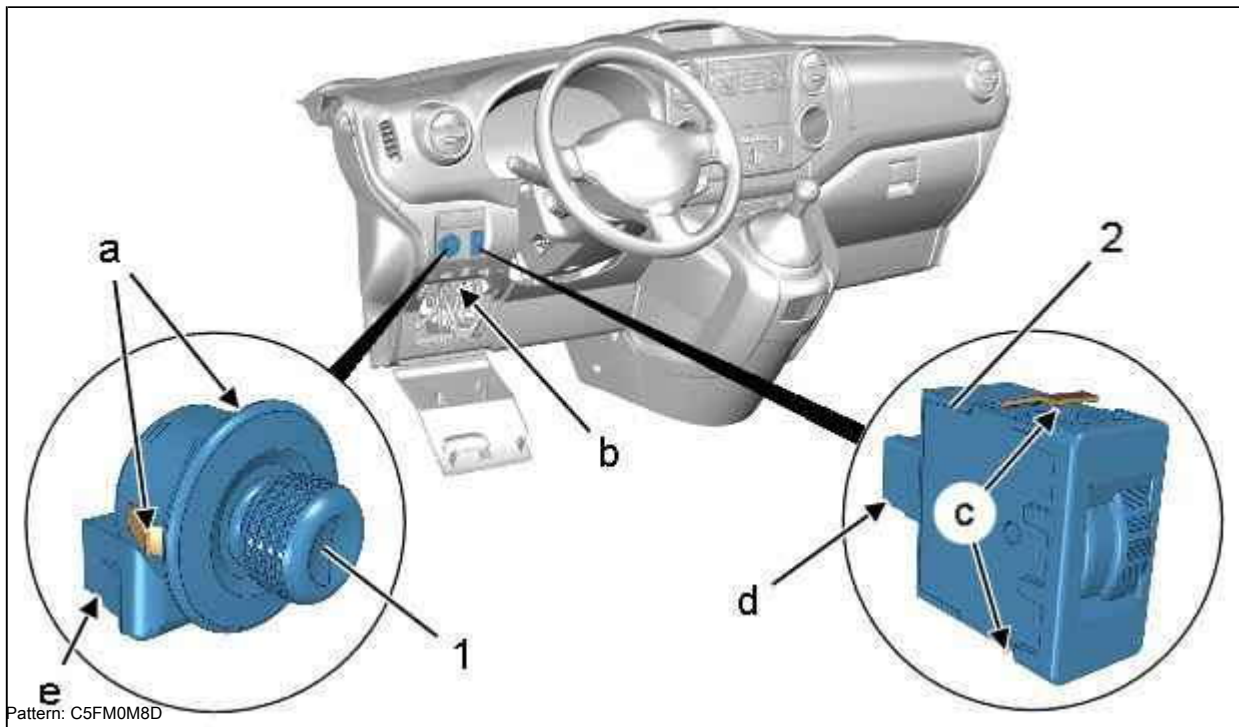
[1] Trim stripper () .1350ZZ.

2. Removal

Disconnect the battery



...



Open the lid.

Disconnect: Switch (2) (at "c") (Pull yourself; Through hole "b"). Separate: Switch (2).

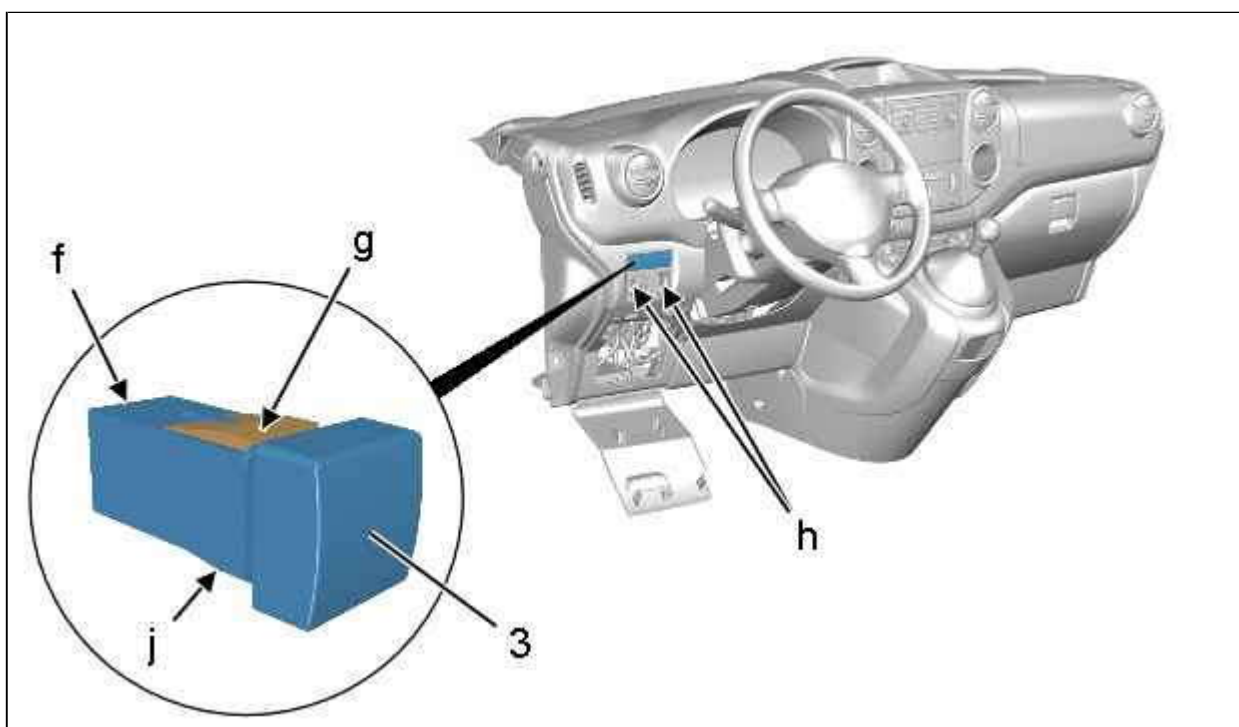
Disconnect the connector (at "d").

Remove: Switch (2).

Disconnect: Switch (1) (at "a") (Pull yourself; Through hole "b"); Using the tool [1].

Separate: Switch (1). Disconnect the connector (at "e").

Remove: Switch (1).



Pattern: C5FM0M9D

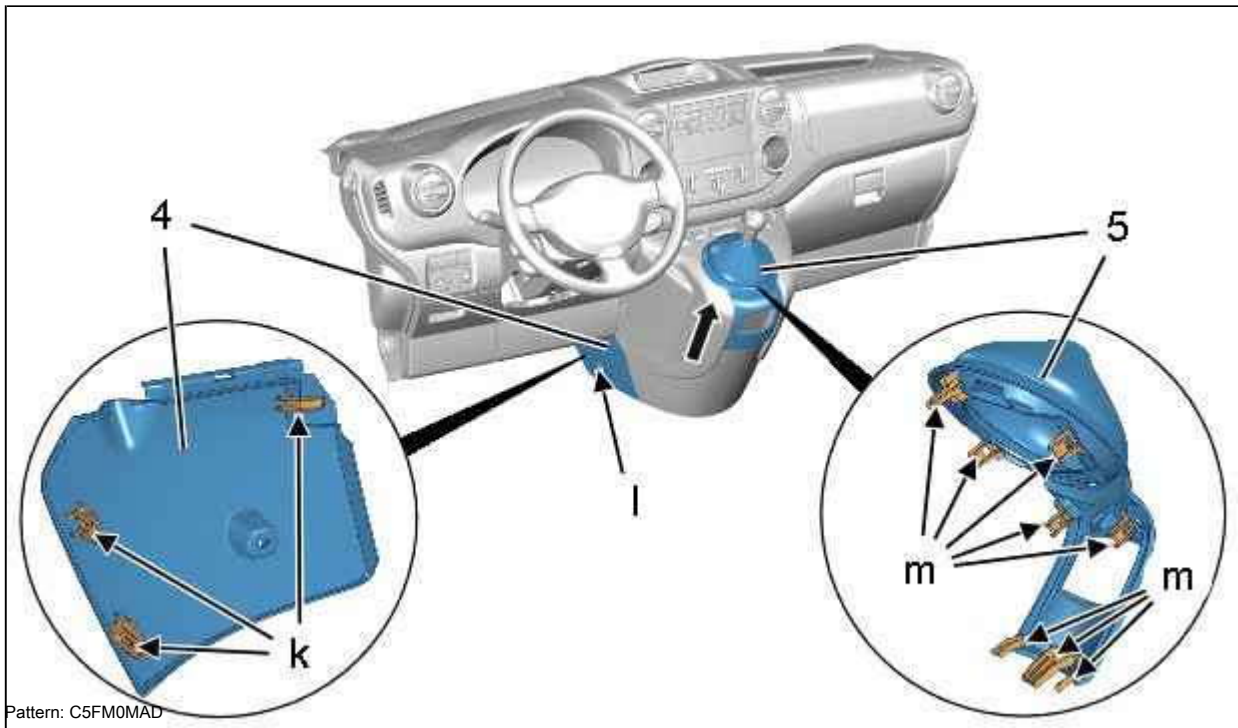
Disconnect:

- Switches (3) (at "j") (Pull yourself; Through holes "h")
- Switches (3) (at "g"); Using the tool [1]

Separate the switches (3).

Disconnect switches (3) (at "f") (depending on equipment).

Remove switches (3).

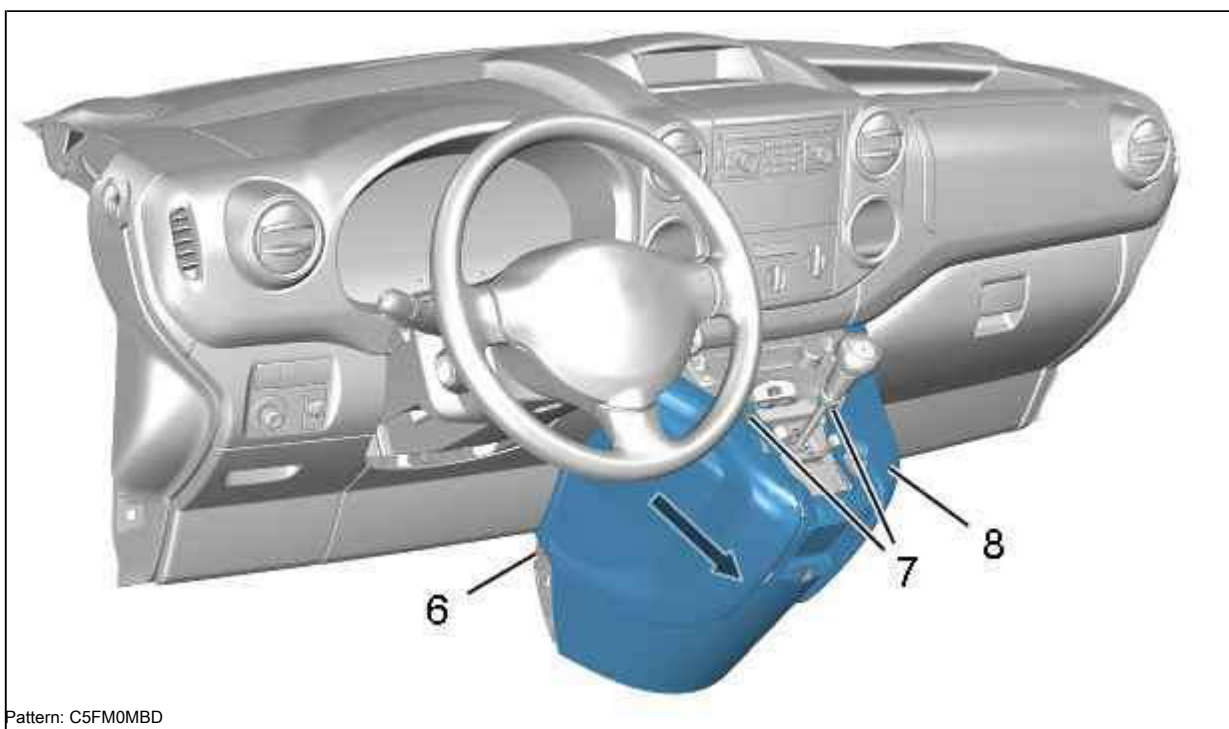


Pattern: C5FM0MAD

The operation is performed symmetrically:

- Remove the bolts (at "l")
- Detach the trim panel ((4)) (at "k"); Using the tool [1]
- Remove the trim panel (4)

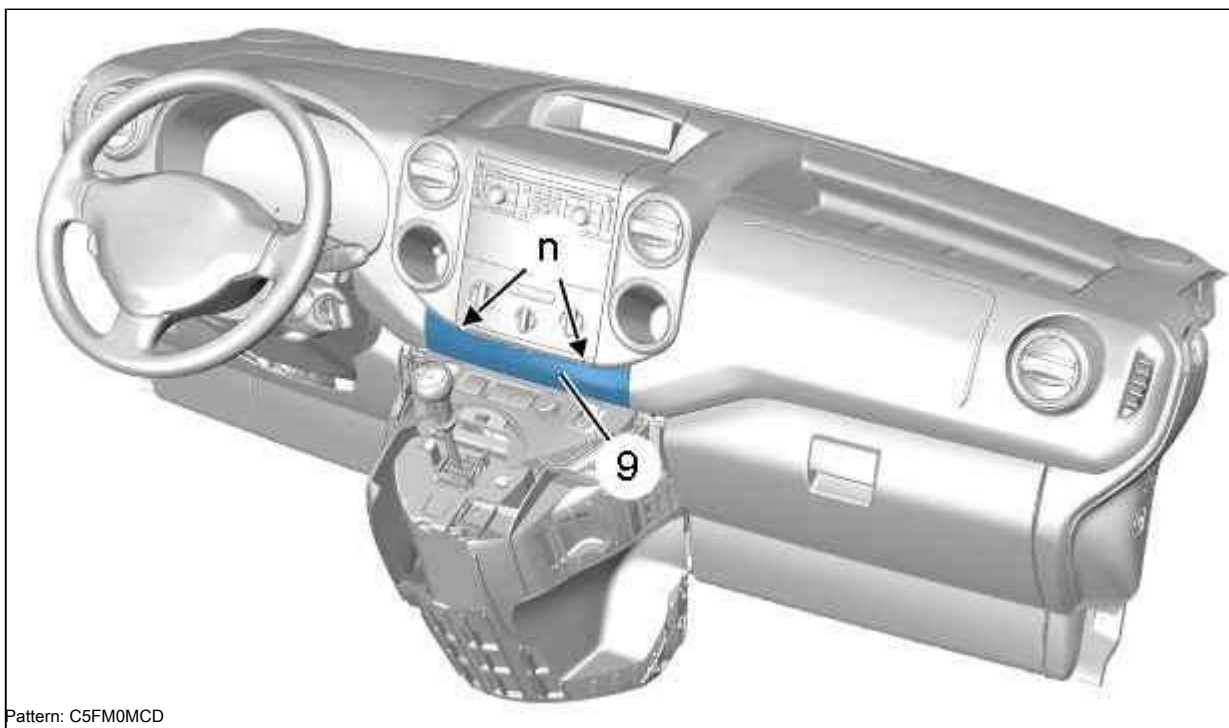
Disconnect Separate: Assembly (5) assembly (at "m") (according to arrow); Using the tool [1].



Pattern: C5FM0MBD

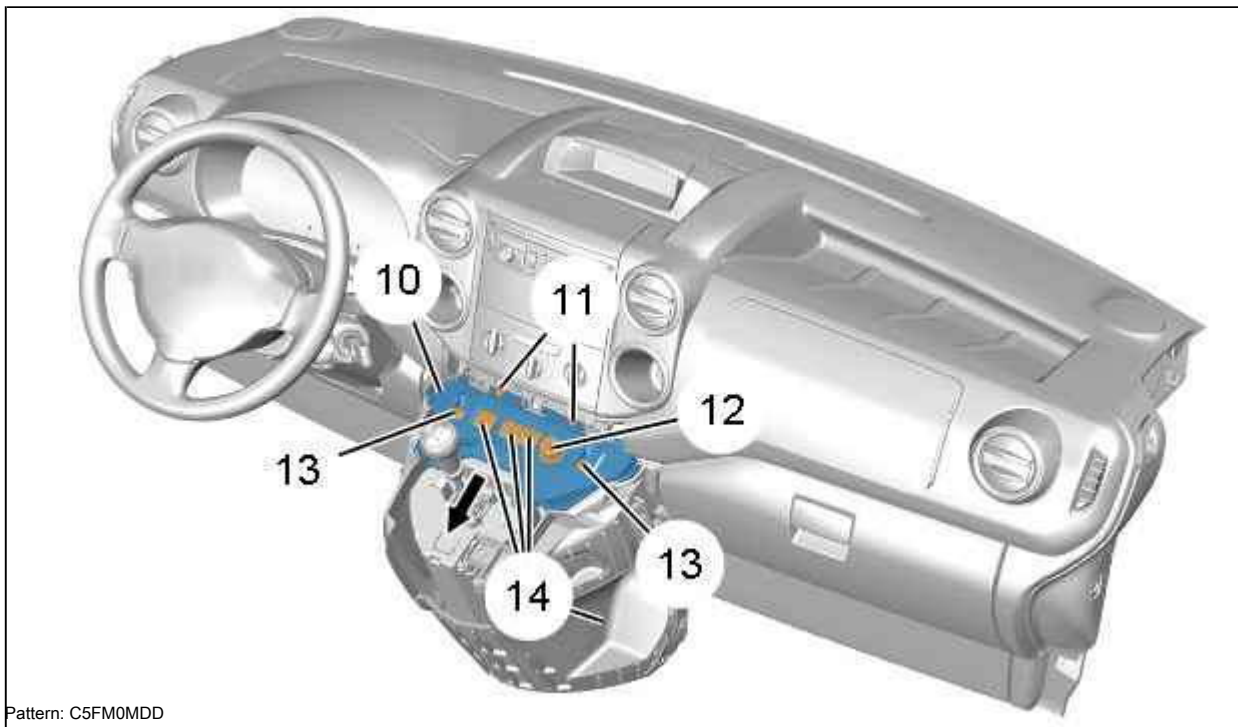
Unscrew the screws (6), (7).

Detach, then detach trim (8) (in accordance with arrow).



Pattern: C5FM0MCD

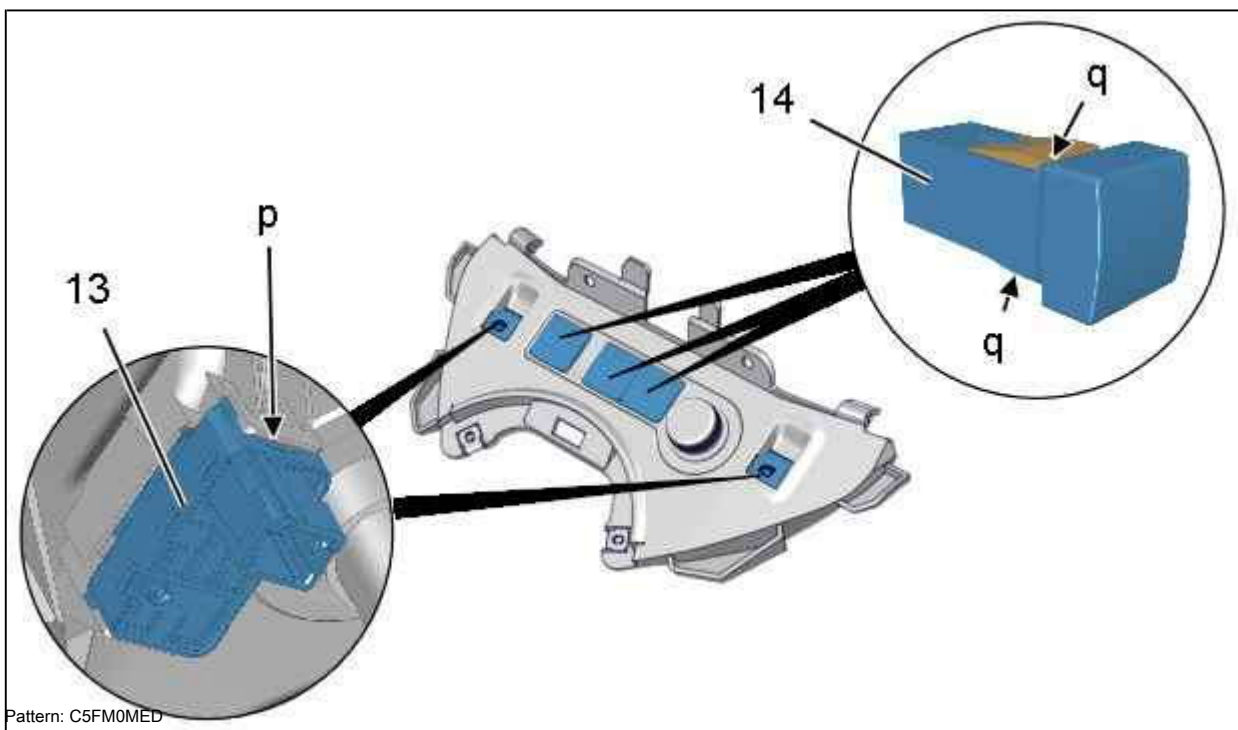
Detach the trim panel ((9)) (at "n"); Using the tool [1]. Remove the trim panel (9).



Loosen the screws (11).

Separate Remove: Plate (10) (according to arrow). Disconnect the cigarette lighter plug (12).

Disconnect: Switch connectors (13), (14).



Disconnect: Switches (13) (at "p"); Using the tool [1]. Remove switches (13).

Disconnect: Switches (14) (at "q"); Using the tool [1]. Remove switches (14).

3. Installation

Installation is carried out by performing the removal operations in the reverse order.

Reconnect the rechargeable battery

Check the correct functioning of the electrical equipment.



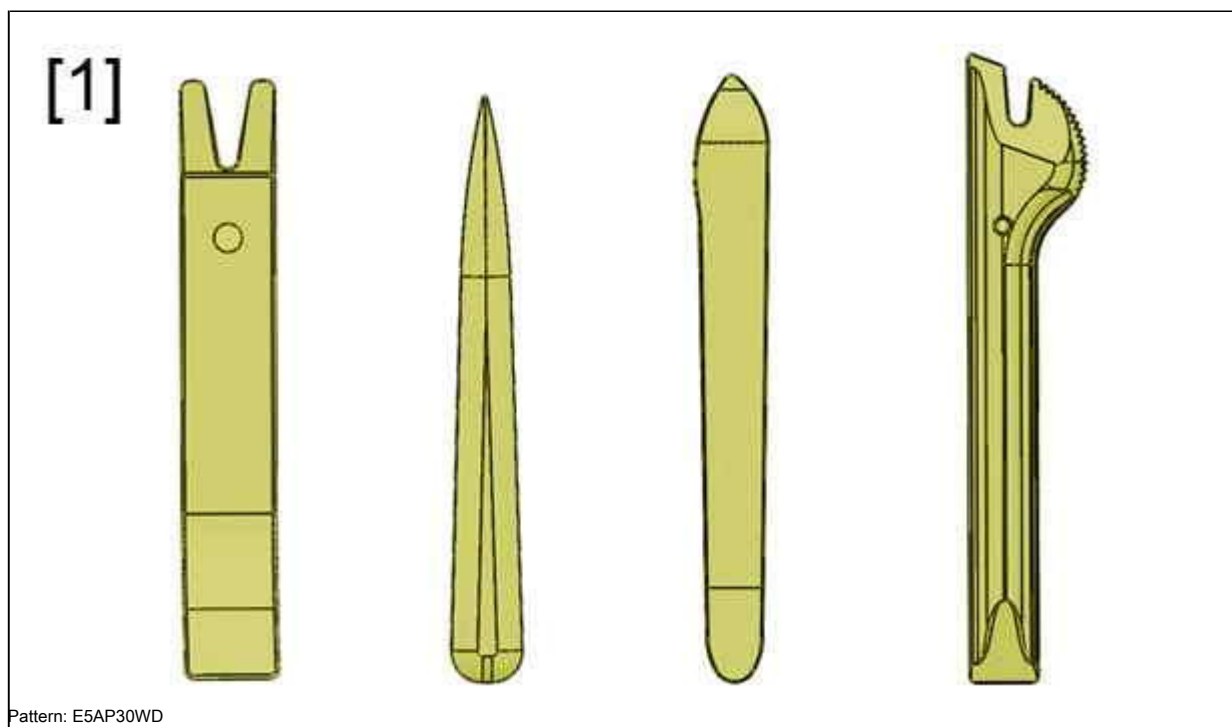
...

REMOVAL INSTALLATION: INSTRUMENT PANEL VENTILATION GRILLES

MANDATORY: Observe the cleanliness and safety rules



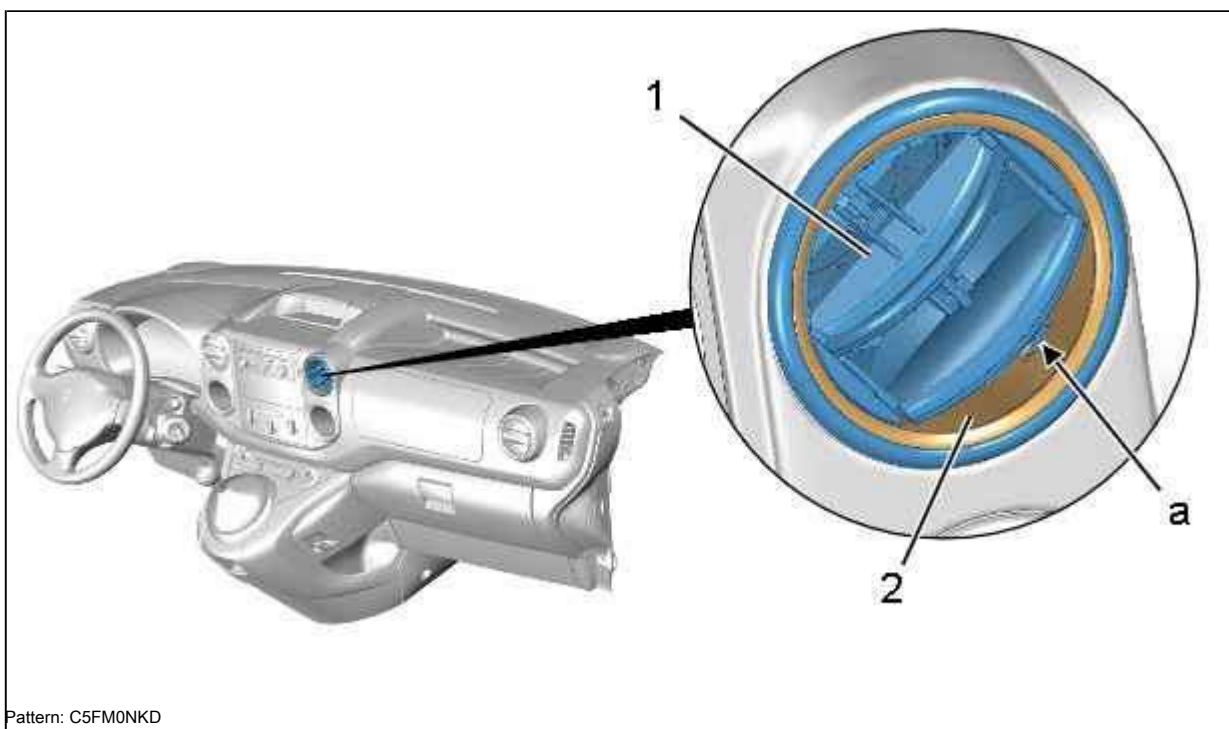
1. Recommended equipment



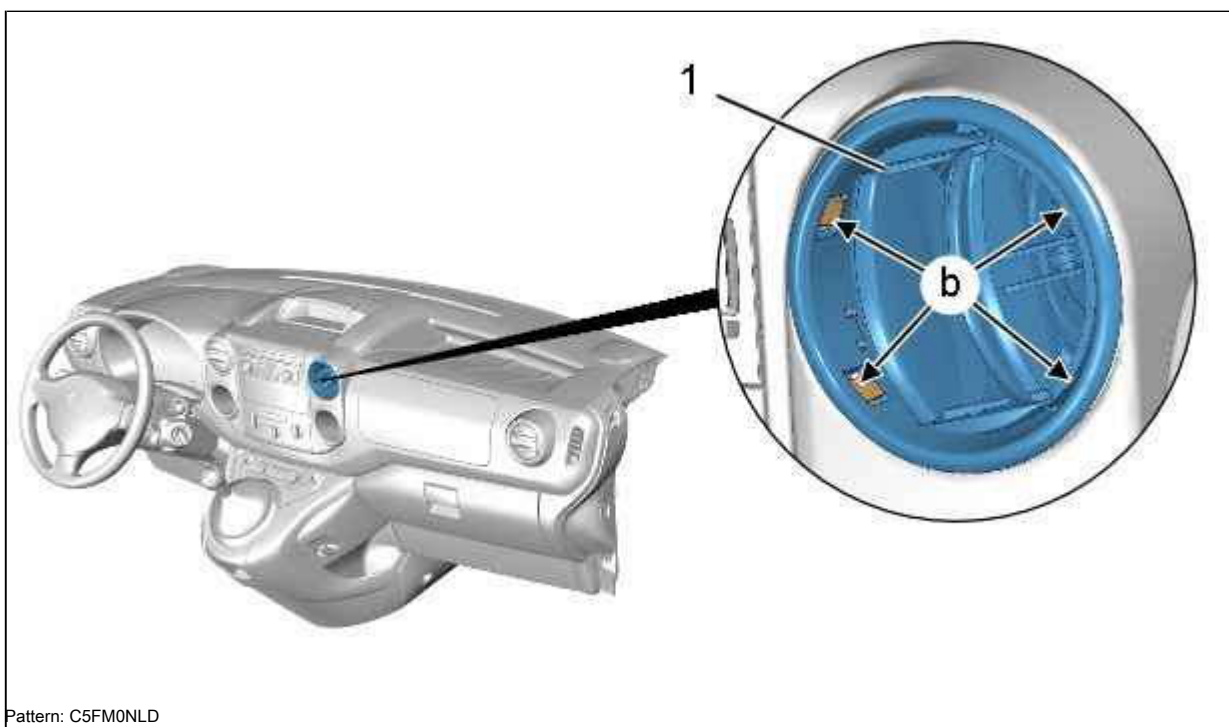
[1] Trim stripper ().1350ZZ.

2. Removal

NOTE: The operation is identical for the 4 control panel ducts.



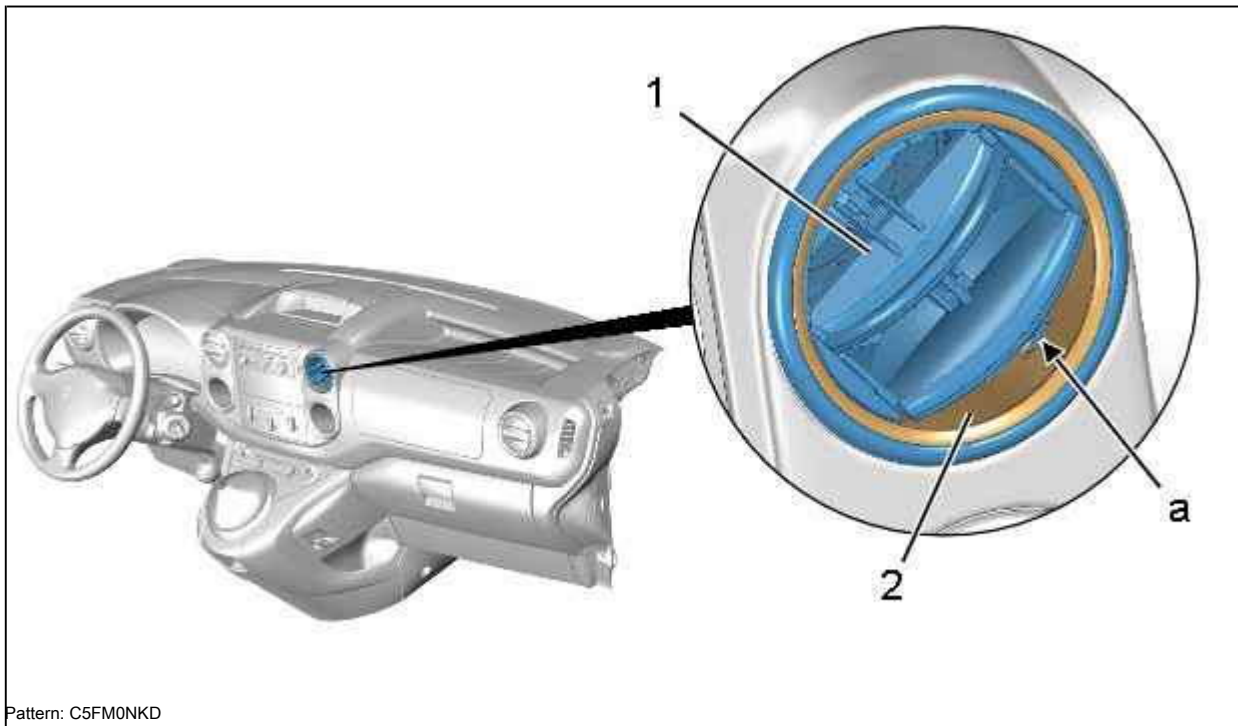
Push the air duct (1) in position to gain access to the clips (at "a"). Detach decorative strip (2) (in "a"); Using the tool [1]. Remove: Decorative element (2).



NOTE: You can only detach each side in turn.

Place the air duct (1) in position to gain access to the clips (at "b"). Free the air duct (1) (at "b"); Using the tool [1].

3. Installation



NOTE: Check the position of the pad (2) (at "a") on the aerator (1).

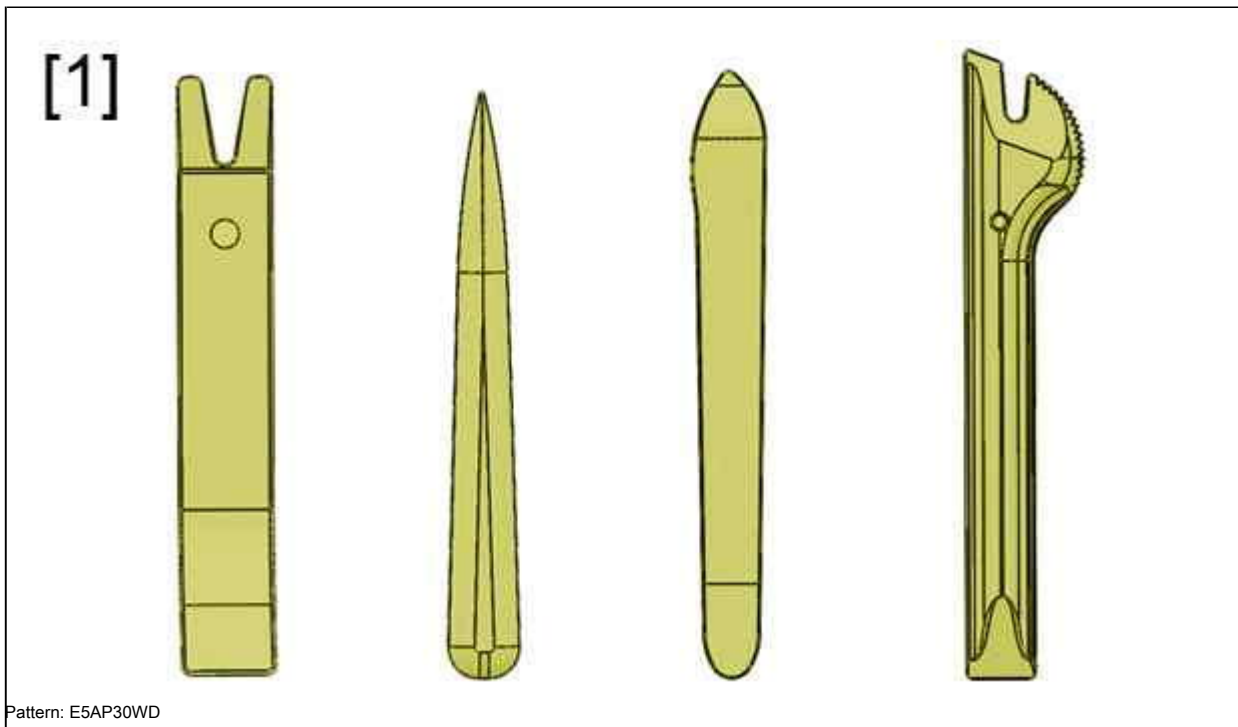
Installation is carried out by performing the removal operations in the reverse order. Check the functioning of the electrical equipment.

REMOVAL REFITTING: SOLAR RADIATION SENSOR

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



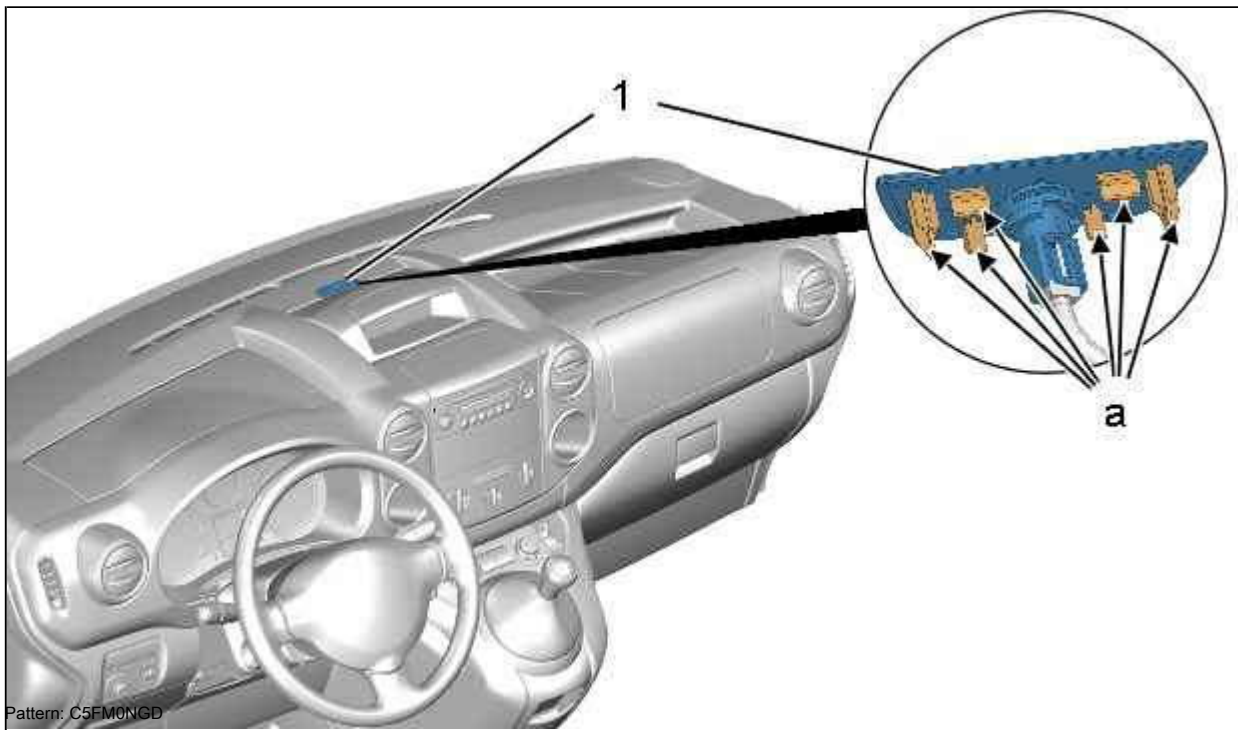
[1] Trim removal tool () .1350ZZ.

2. Removal

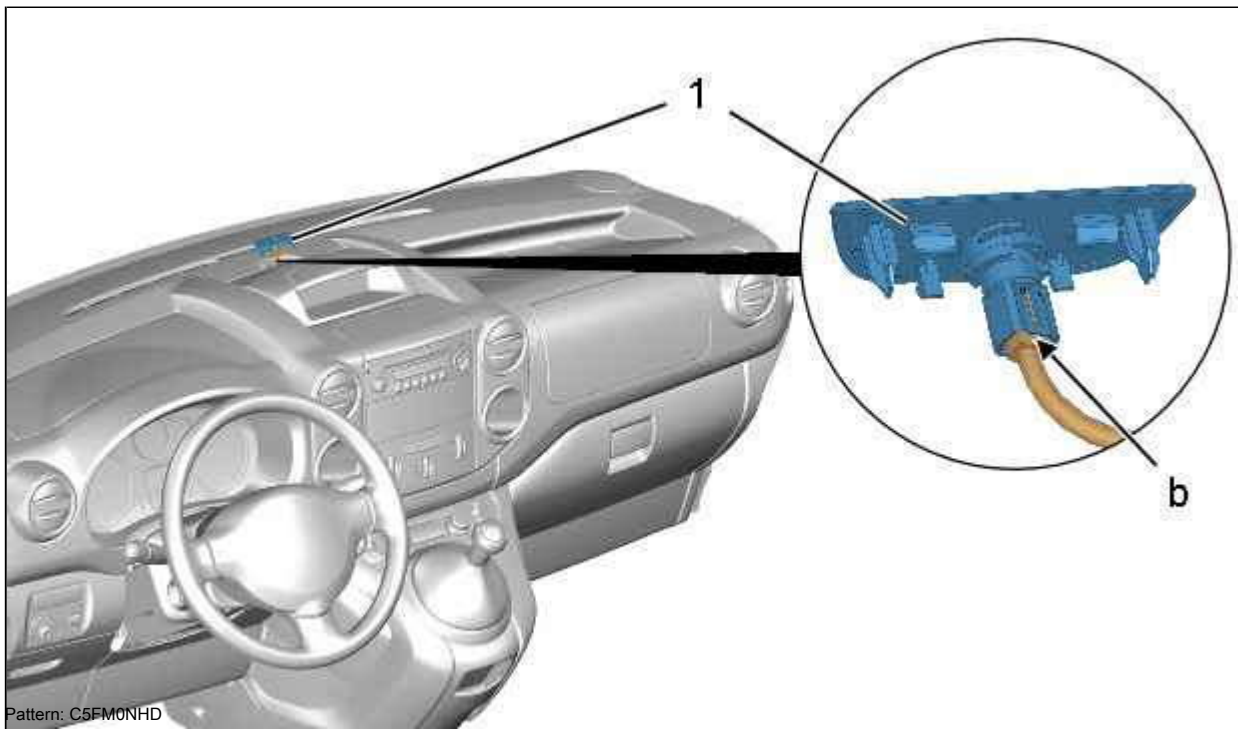
Disconnect the battery



...

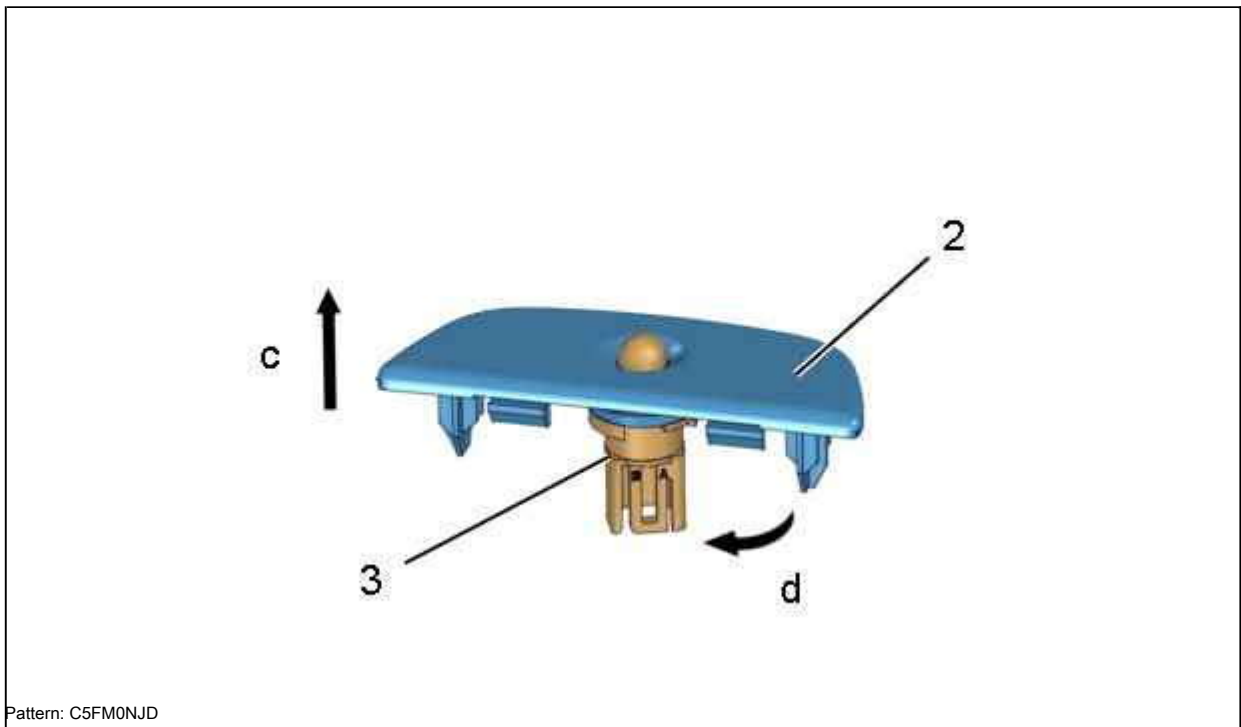


Disconnect (at "a"); Using the tool [1].
Separate: Trim and sun sensor (1).



NOTE: Hold the electrical harness on the dashboard; With adhesive tape.

Disconnect the connector (at "b").
Remove: Cover trim and sun sensor (1).



Disconnect the sun sensor (3) by turning it a quarter of a turn (As shown in "d"). Remove: Trim (2) (As shown in "c").

Remove: Sun sensor (3).

3. Installation

Installation is carried out by performing the removal operations in the reverse order.

Reconnect the rechargeable battery

Check the functioning of the electrical equipment.

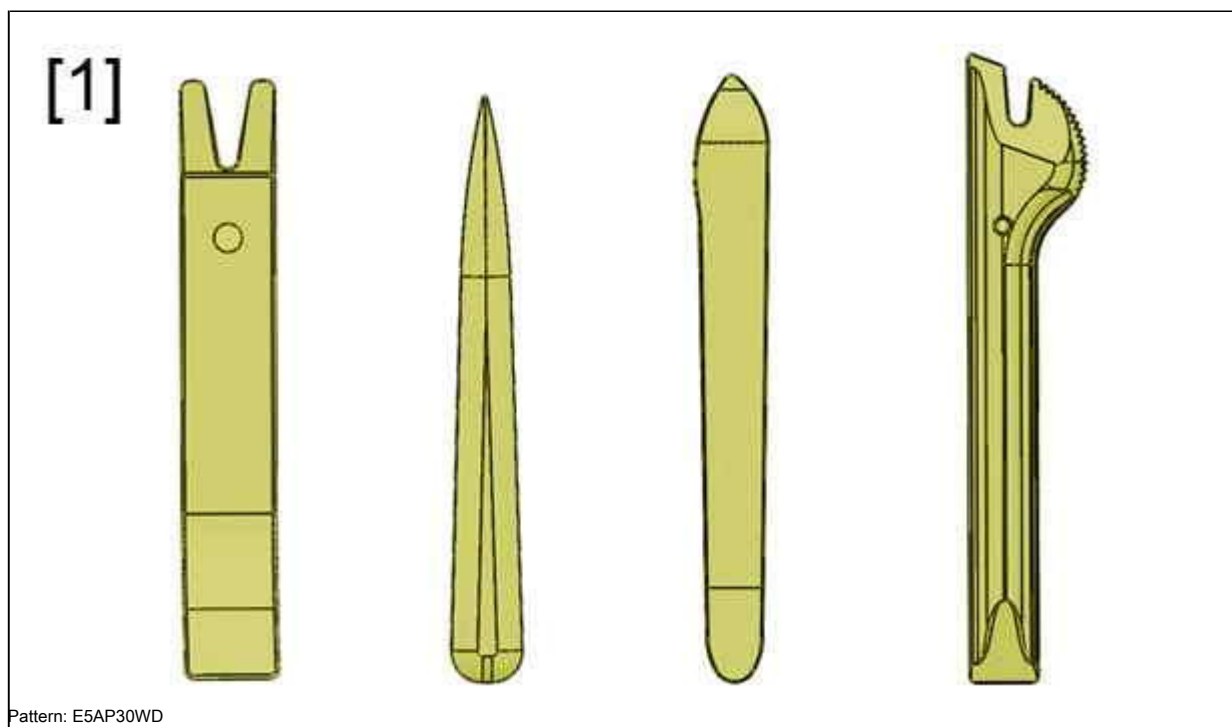


REMOVAL INSTALLATION: GLOVE BOX COVER

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



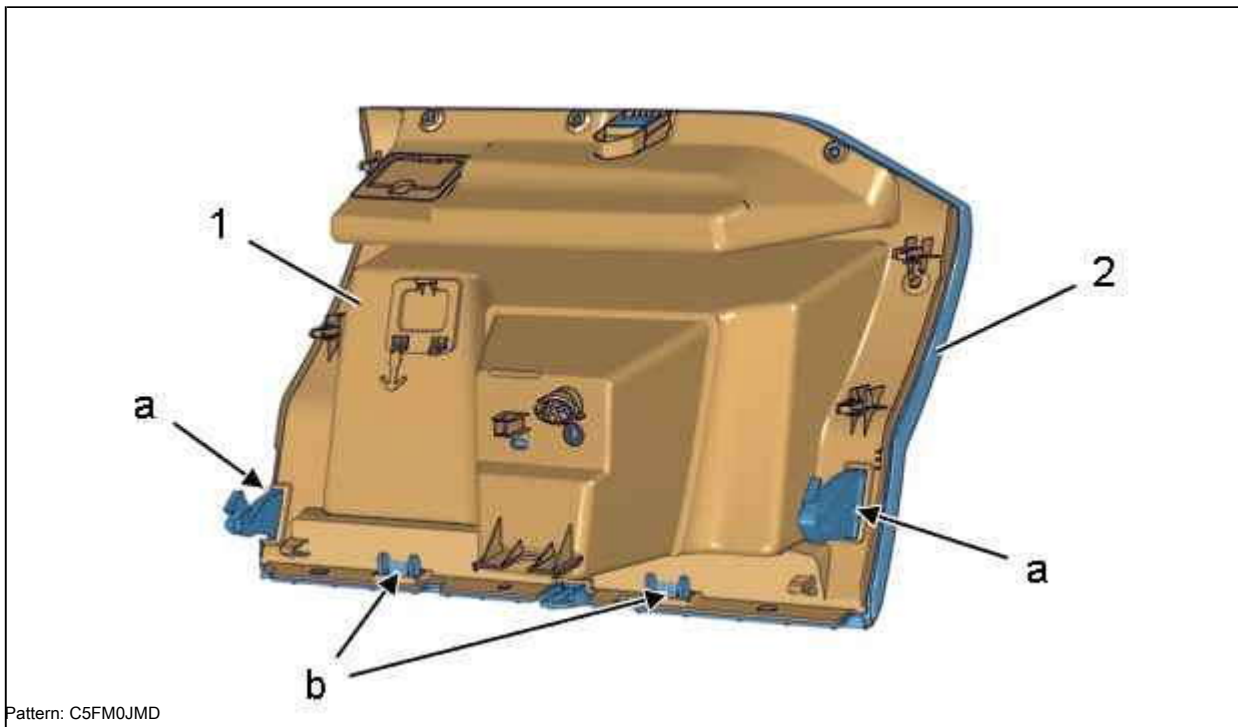
[1] Trim stripper () .1350ZZ.

2. Removal

2.1. Glove box cover (passenger)

Remove the glove box from the passenger side





Open the lid of the small baggage compartment (2).

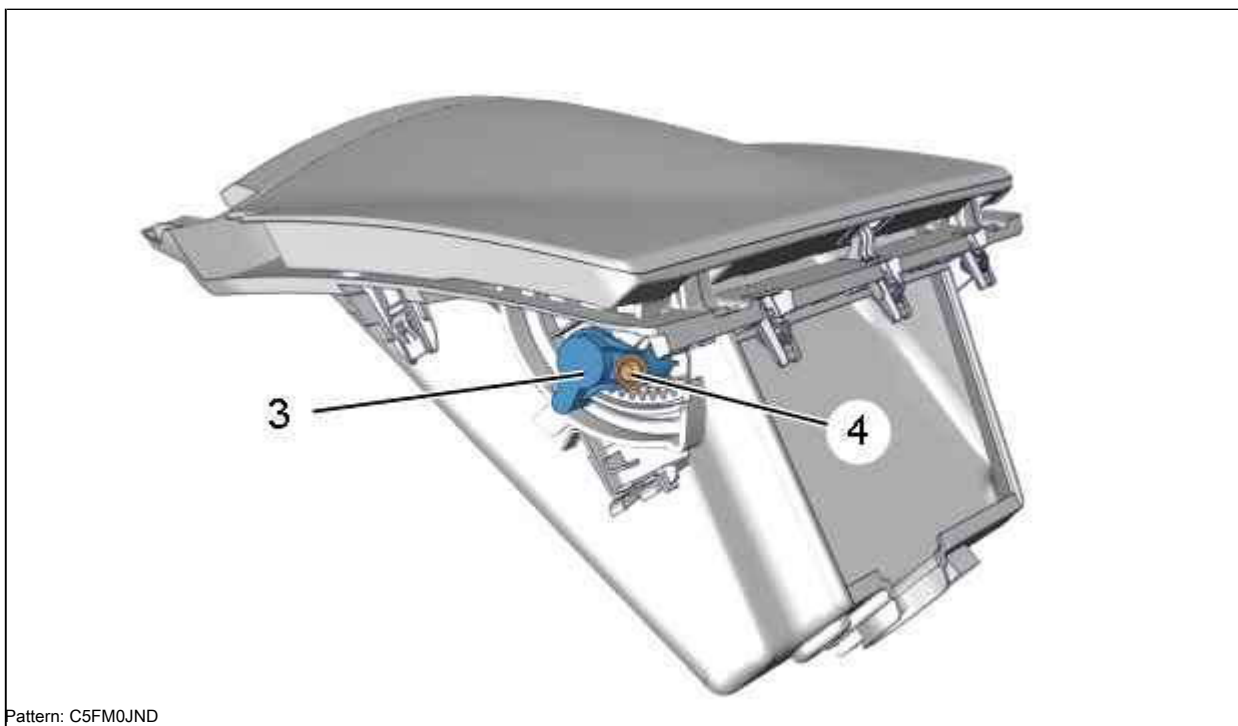
Detach: Cover (2) for passenger's glove box (1) (in "b"); Using the tool [1]. Separate the cover (2) through the holes (at "a").

Remove the cover (2).

2.2. Glove box cover (driver)

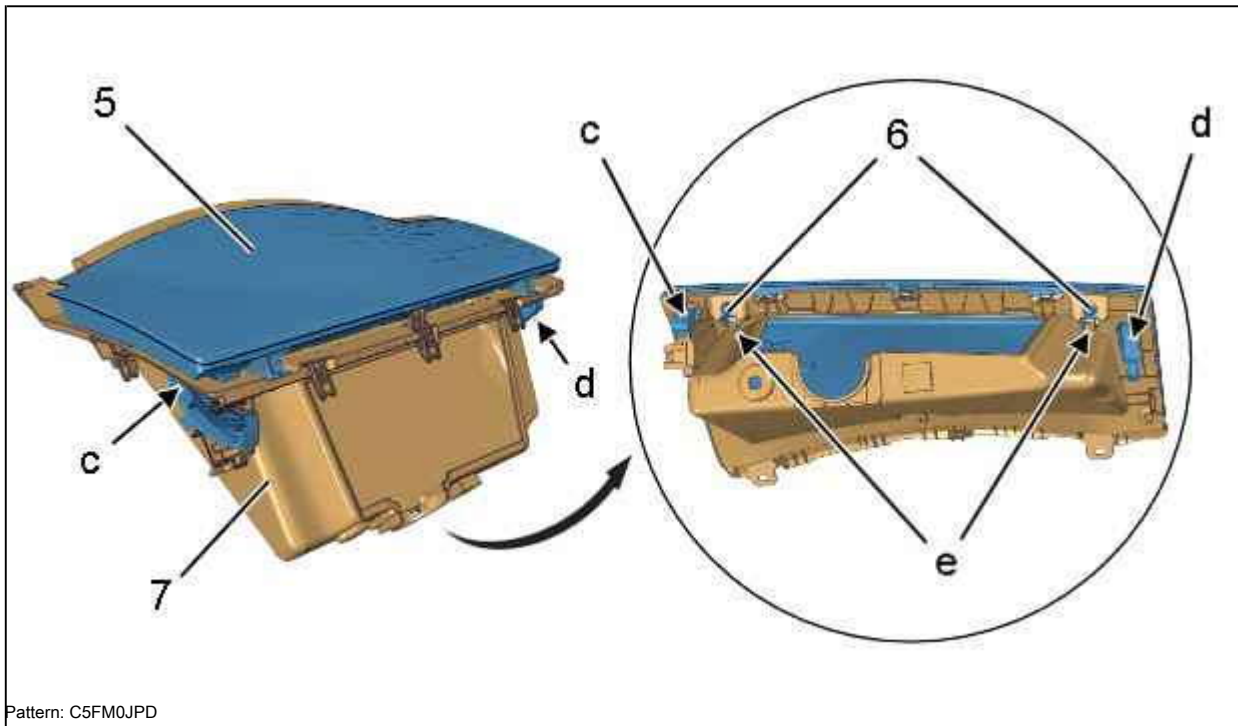
Remove the glove box

(driver).



Remove:

- Bolt (4)
- Pulley (3)



Loosen screws (6).

Open the lid of the small baggage compartment (5).

Detach: Cover (5) for driver's glove box (7) (at "e"); Using the tool [1]. Separate the cover (5) through the holes (at "c", "d").

Remove the cover (5).

3. Installation

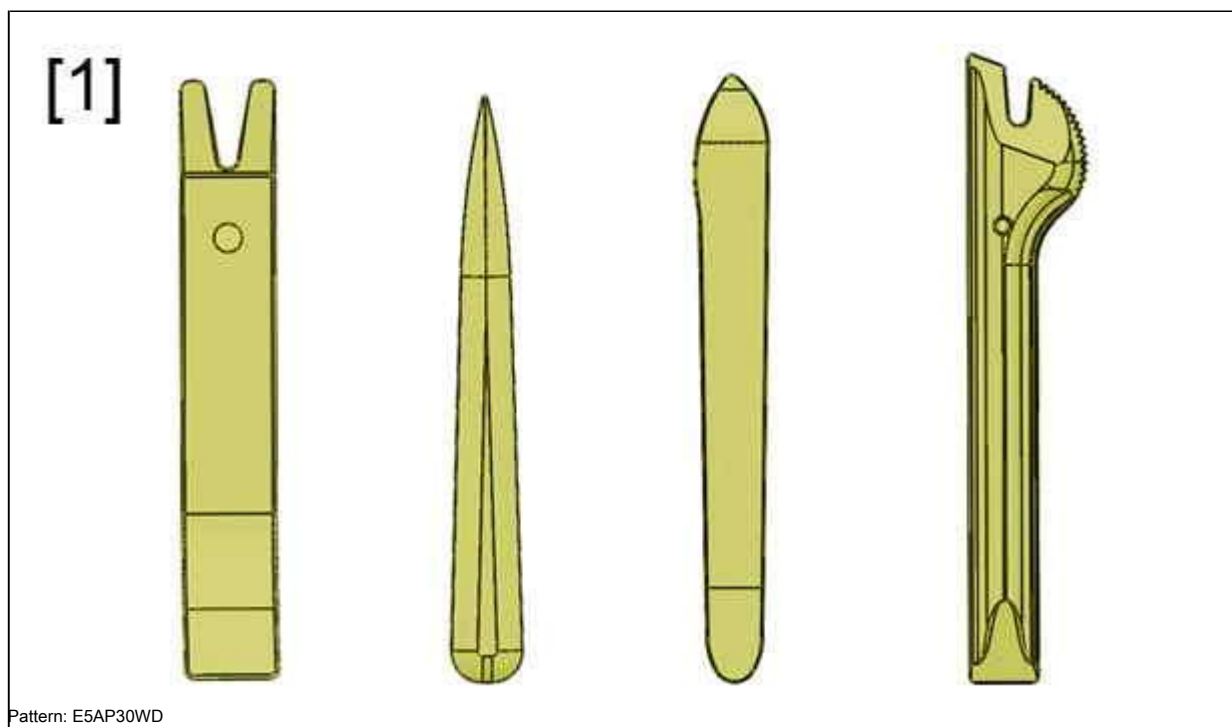
Installation is carried out by performing the removal operations in the reverse order. Check the operation of the various equipment.

REMOVAL INSTALLATION: INSTRUMENT PANEL

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim stripper () .1350ZZ.

2. Preliminary operation

Disconnect the battery

Remove:

- Passenger side glove box
- Passenger side glove box
- Steering column
- Steering column
- Panel of switches and dashboard plugs
- panel
- Solar sensor



(right-hand drive vehicles)



(right-hand drive vehicles)

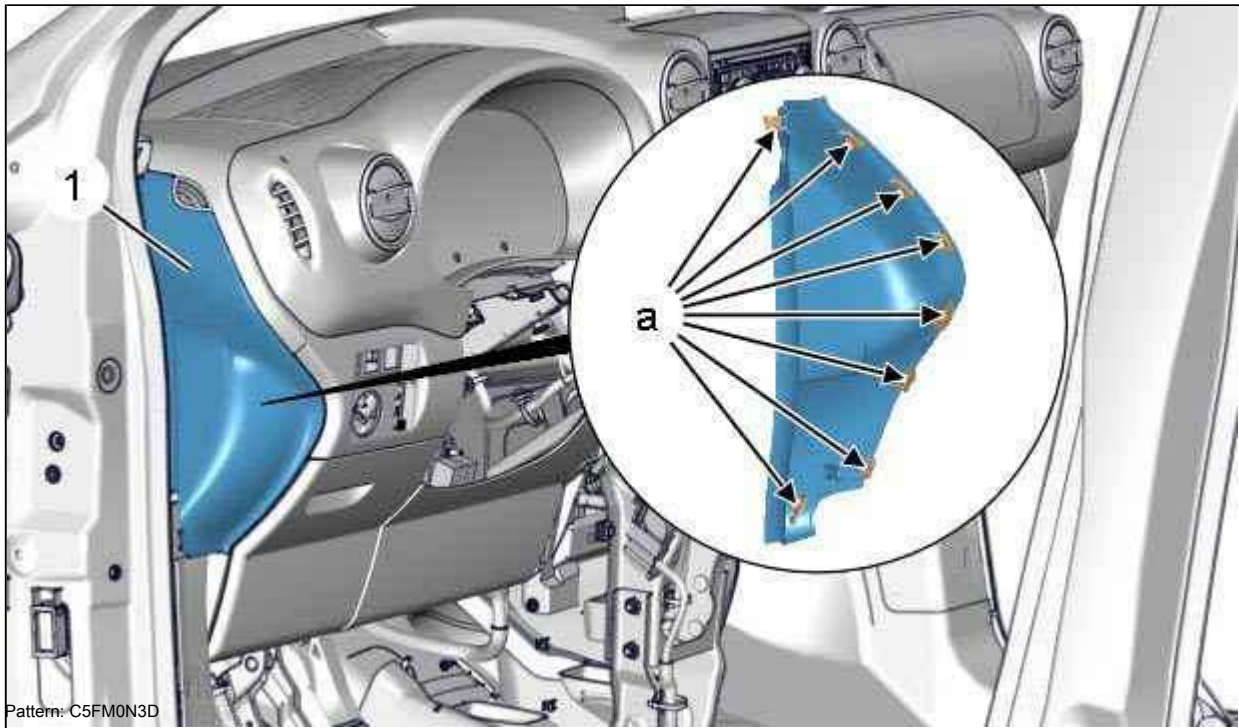


Center console

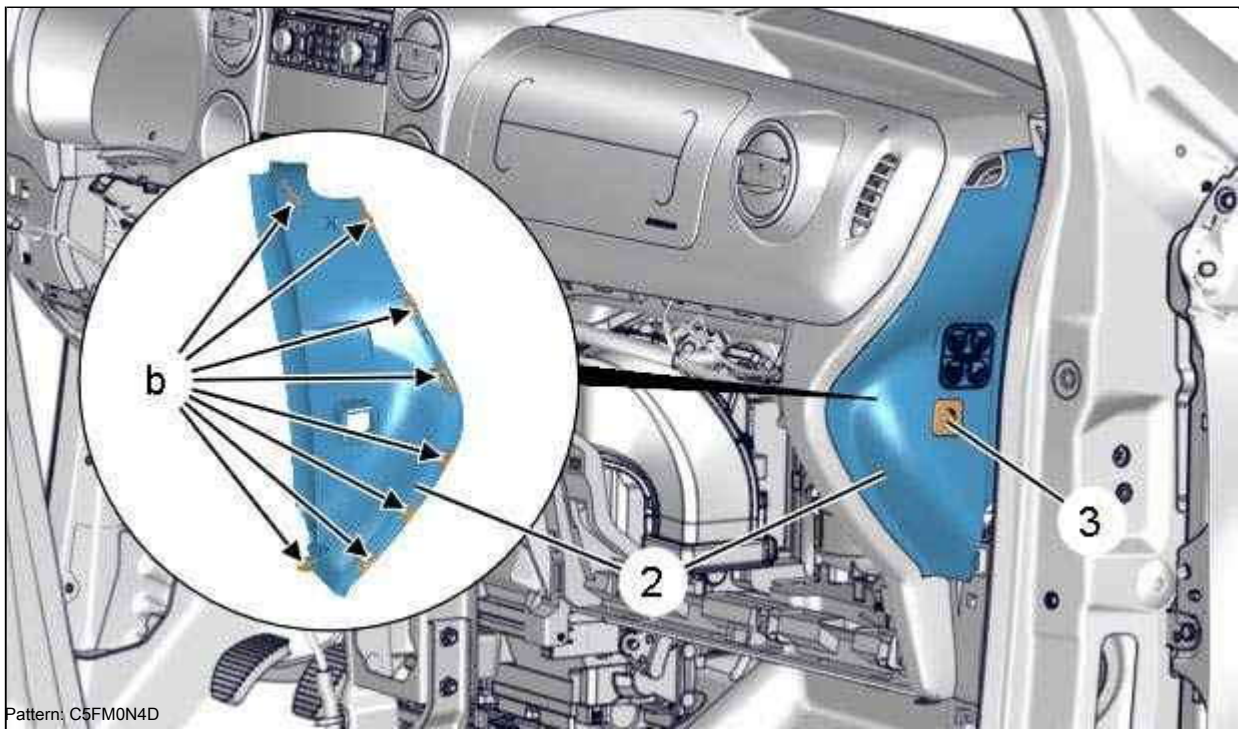


3. Removal

NOTE: The operation is carried out in the same way with left or right steering.



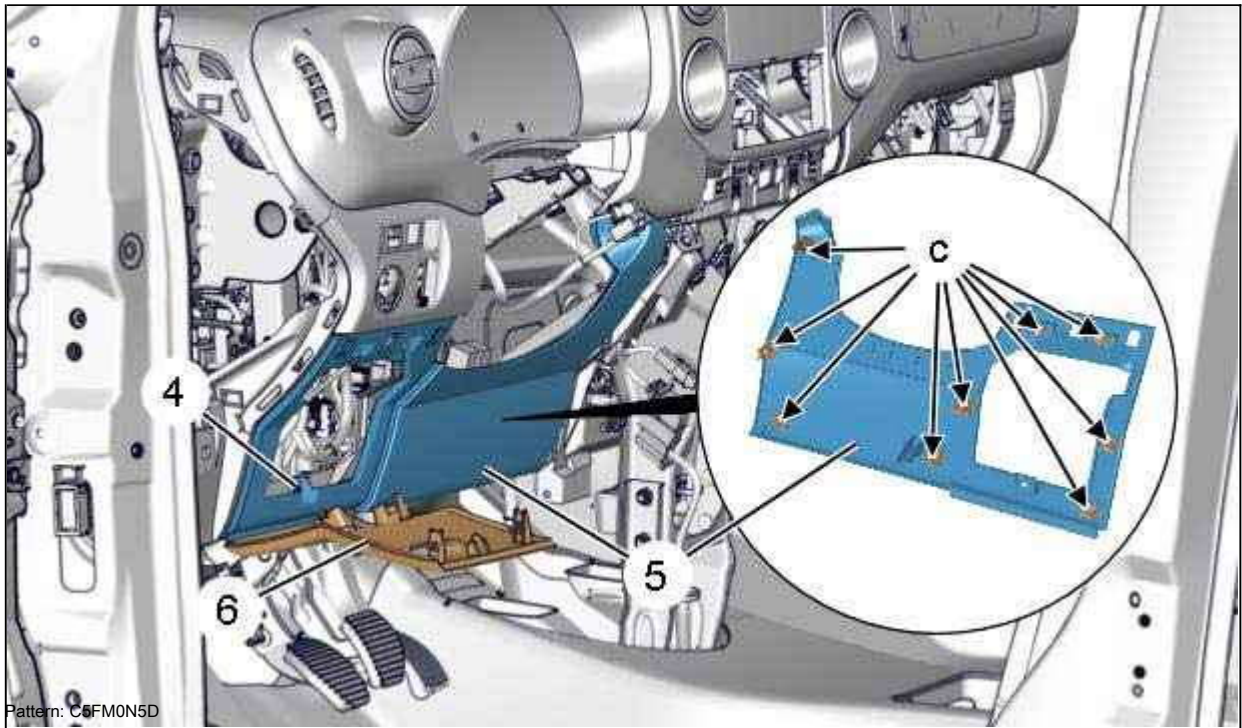
Detach: Left side control panel trim (1) (at "a"); Using the tool [1]. Remove: Left side control panel trim (1).



Detach: Dashboard side trim ((2)) (in "b"); Using the tool [1]. Separate: Dashboard side trim ((2)).

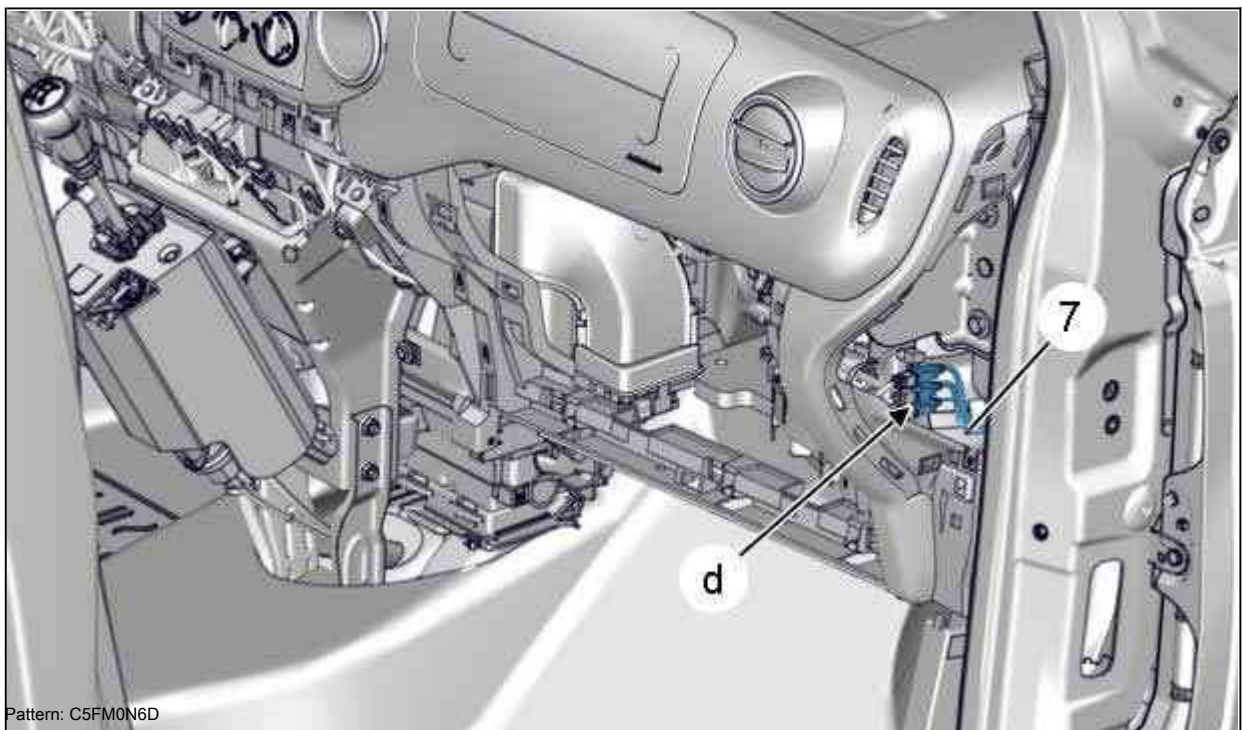
Disconnect: Front passenger airbag deactivation switch connector. Remove: The dashboard side trim (2).

Remove: **A-pillar trim panels**

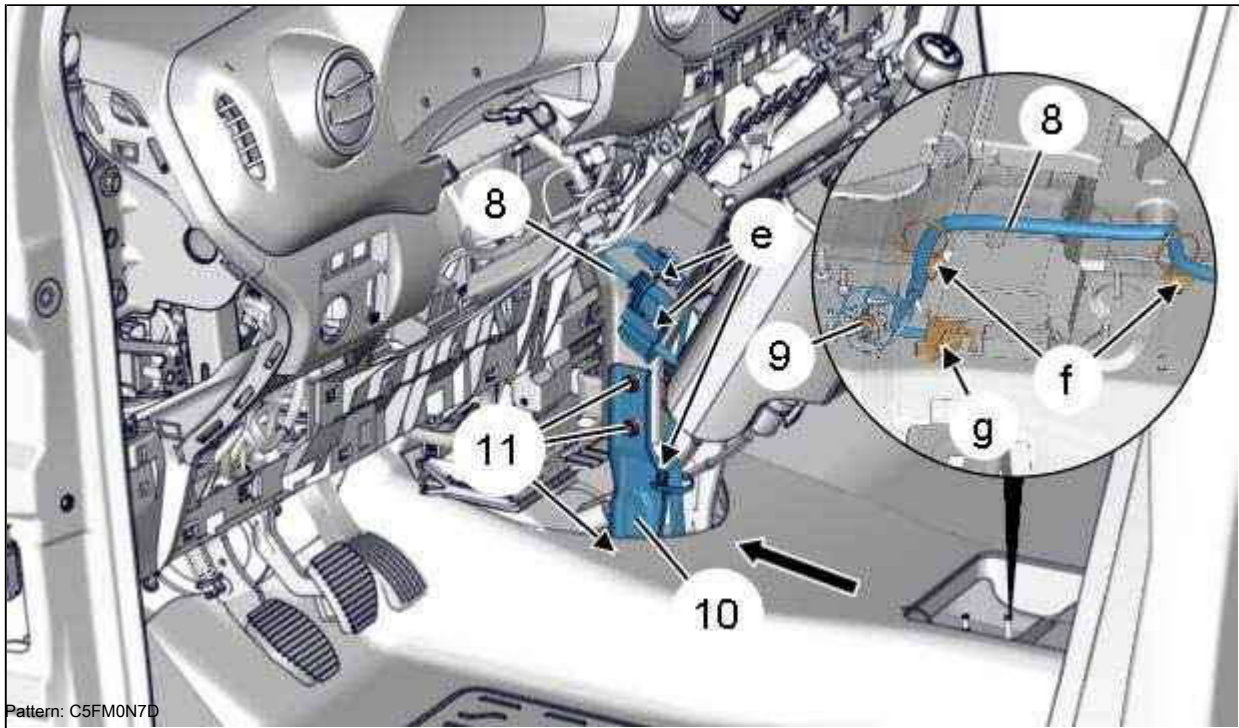


Open the access cover to the Intelligent Switching Unit (BSI) (6). Remove the bolts (4).

Disconnect: Dashboard lower trim (5) (at "c"); Using the tool [1]. Remove: The dashboard lower trim (5).



Disconnect: Antenna cable (7) (in "d"). Separate: Antenna cable (7).



Disconnect the connector (at "g").

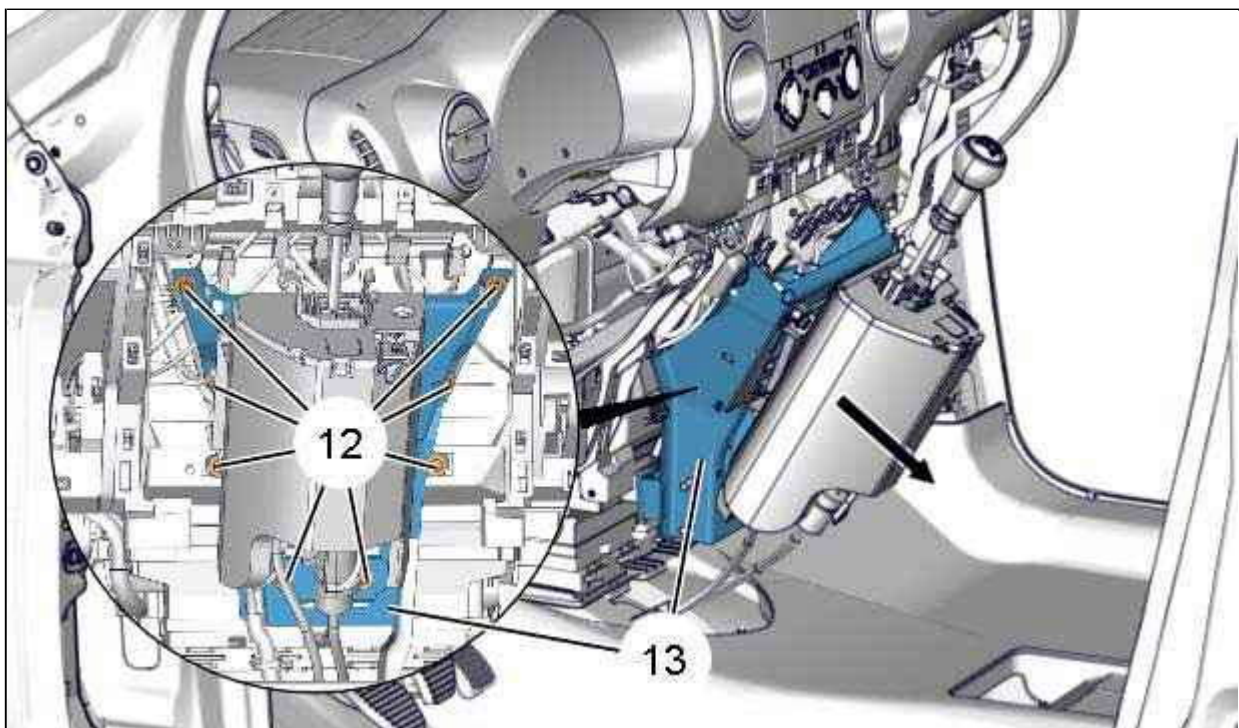
Unscrew the nut (9).

Disconnect: Wire harness (8) (at "f"); Using the tool [1]. Detach the wiring harness (8) (in accordance with the arrow).

Disconnect: Harness (8) (at "e"); Using the tool [1]. Detach the wiring harness (8).

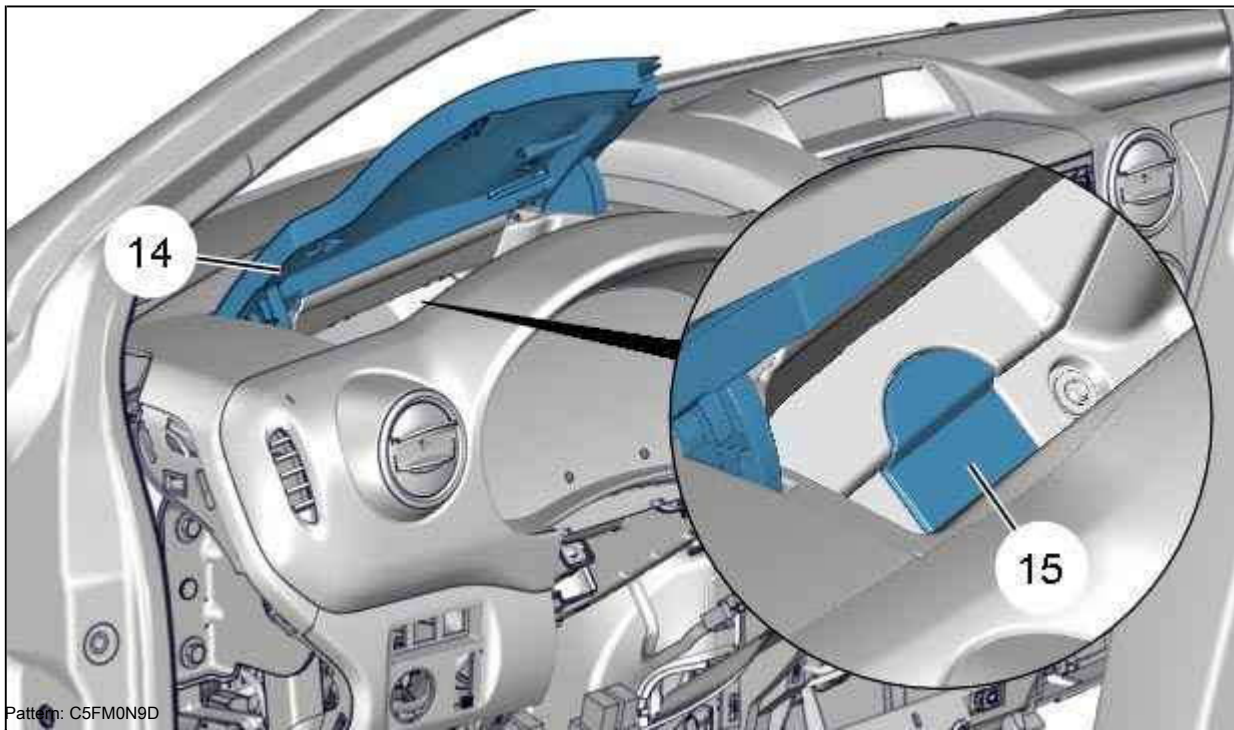
Uncheck (The operation is performed symmetrically):

- Nuts (11)
- Support (10)



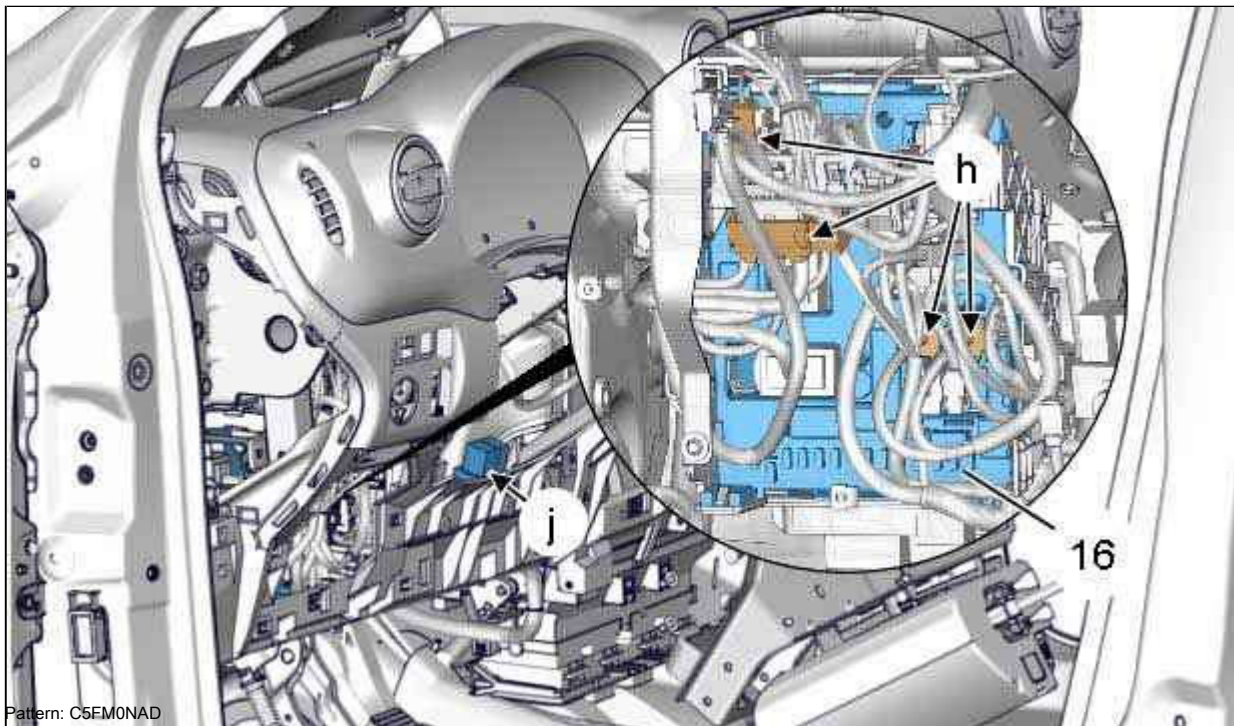
Pattern: C5FM0N8D

Remove the bolts (12) of the transmission selector lever support (13).
Separate: Gear lever support (13) (in line with arrow).



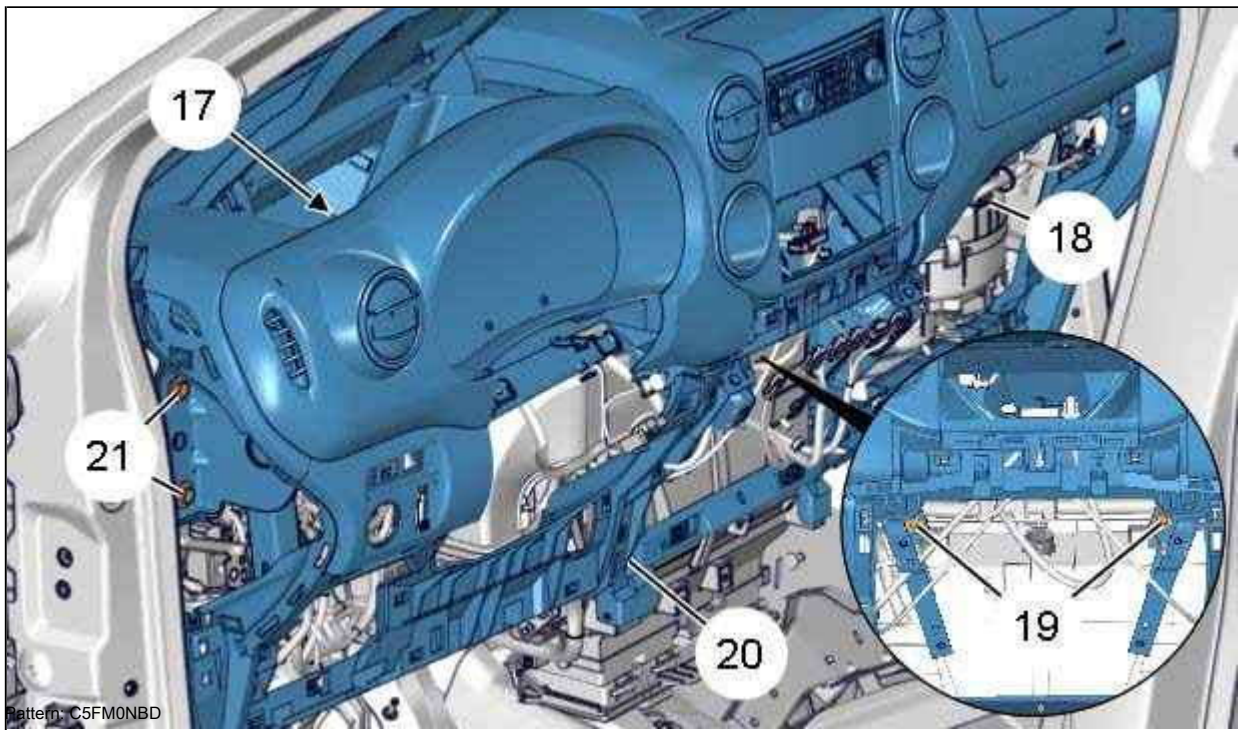
Pattern: C5FM0N9D

Open the lid of the small luggage compartment (Driver) (14). Detach the cover (15);
Using the tool [1].



Pattern: C5EM0NAD

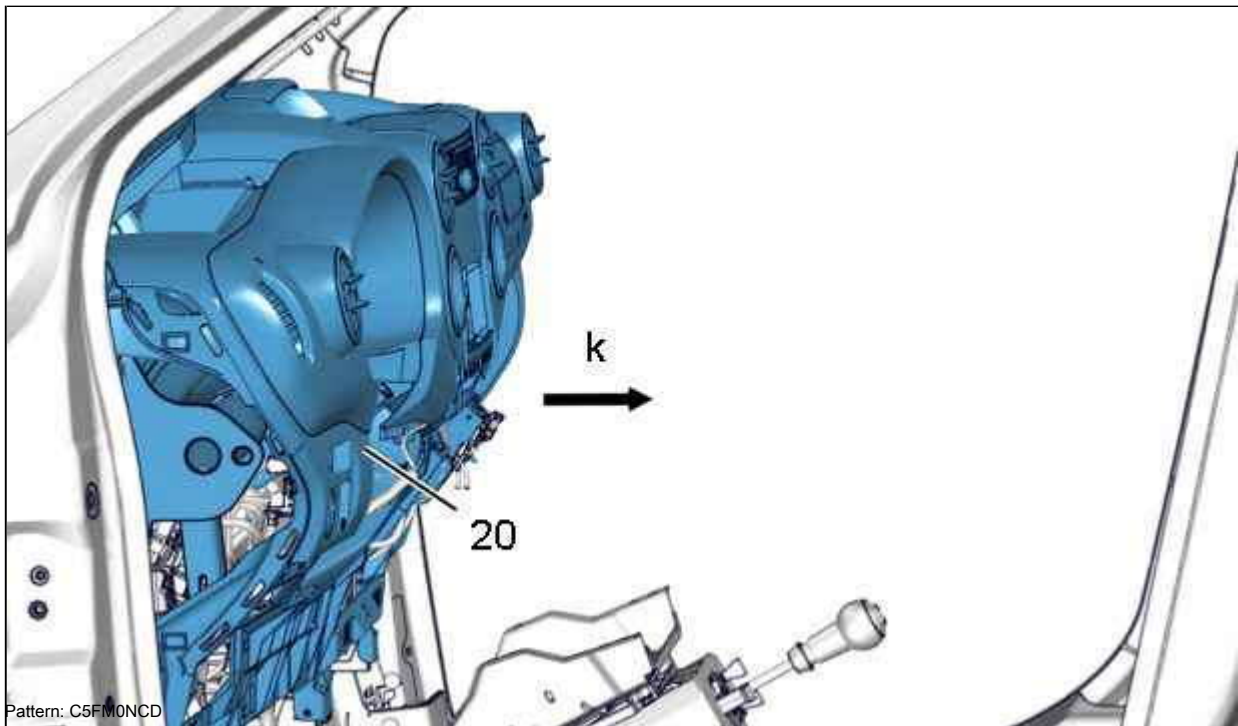
Disconnect the connectors (at "h") of the intelligent switching unit (BSI) (16). Disconnect. Disconnect the electrical connector (at "j").



Remove:

- Bolt (17)
- bolts (18), (19)
- bolts (21) (Operation is symmetrical)

Free the dashboard (20).



NOTE: The following operation must be carried out by 2 mechanics.

Loosen the dashboard (20) (as indicated by the arrow "k") (Be careful).

ATTENTION : Take off the dashboard and place it neatly on the table; Place on the protective film.

Remove the dashboard (20) through the driver's door (Be careful).

4. Installation

ATTENTION : Be sure to replace defective fasteners.

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- nuts (11) to a torque of 2 ± 0.4 da.Nm
- bolts (12) to a torque of 2 ± 0.4 da.Nm
- The bolt (17) to a torque of 2 ± 0.5 da.Nm
- bolts (18), (19) with a torque of 1.1 ± 0.6 da.Nm
- bolts (21) to a torque of 2 ± 0.5 da.Nm

Reconnect the battery.

Check the functioning of the electrical equipment.

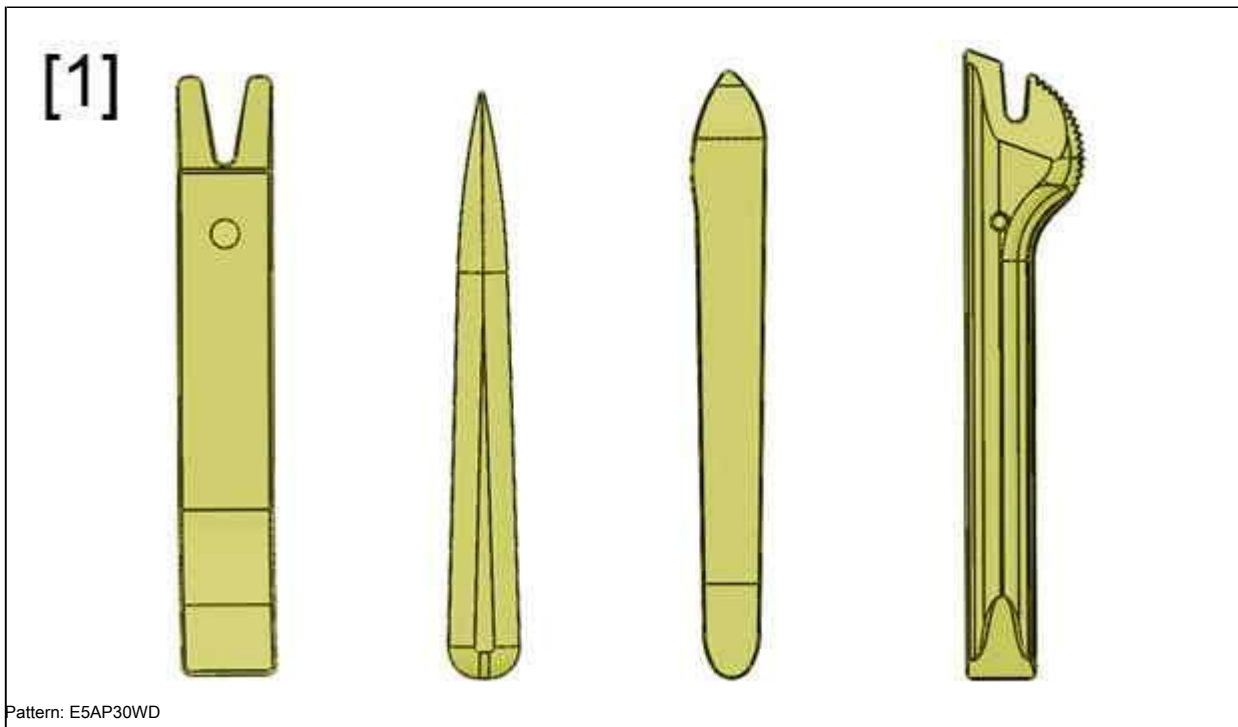
Carry out a sea test.

REMOVAL INSTALLATION: MULTI-FUNCTIONAL DISPLAY

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



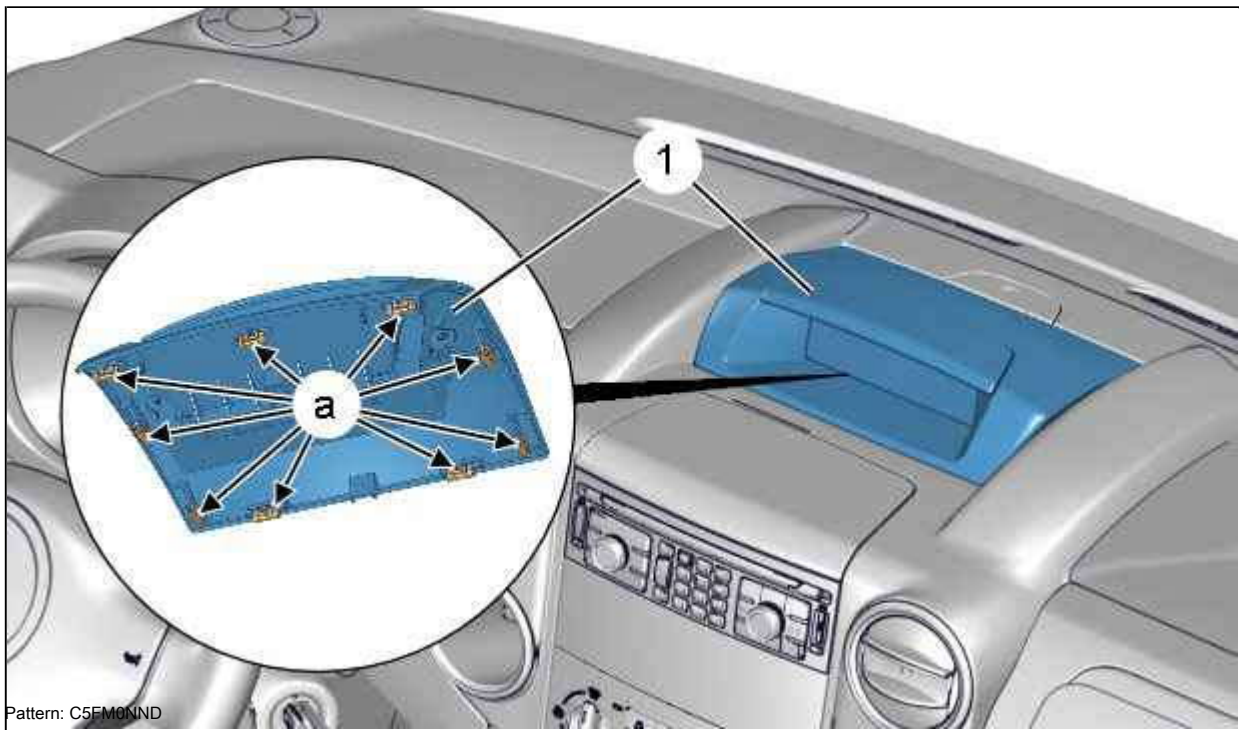
[1] Trim stripper (.) .1350ZZ.

2. Removal

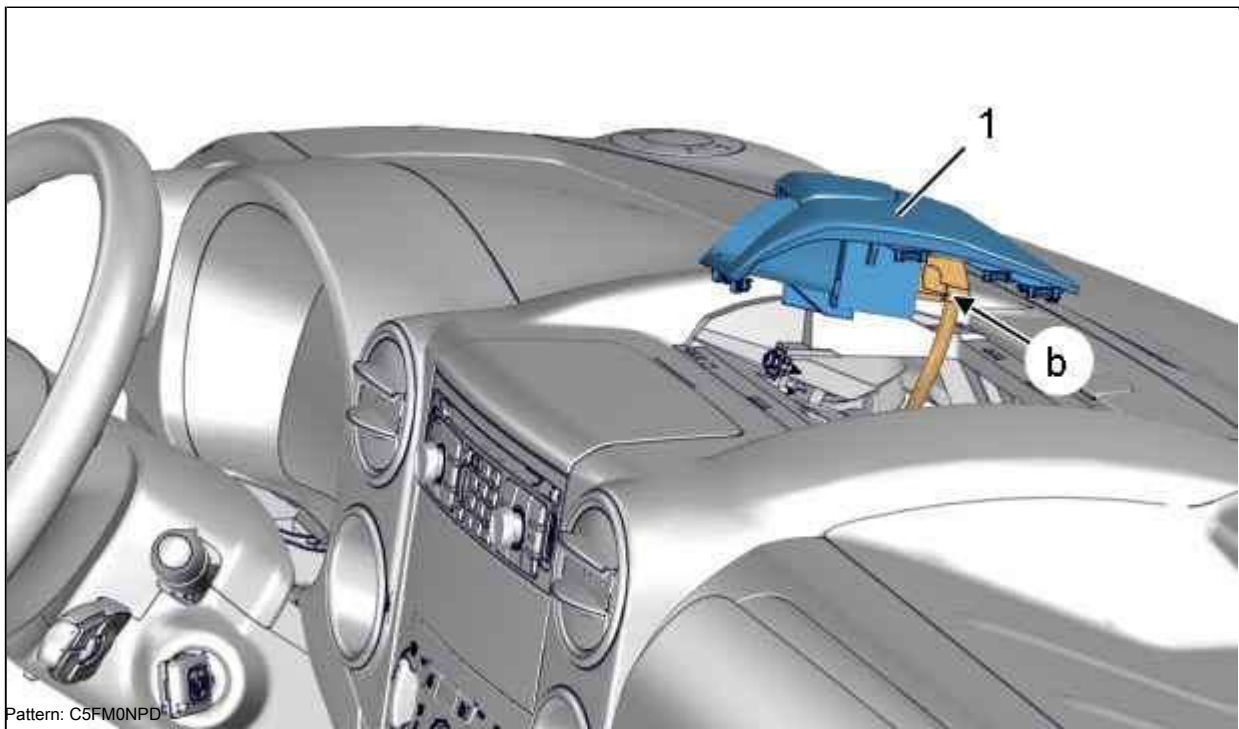
Disconnect the battery



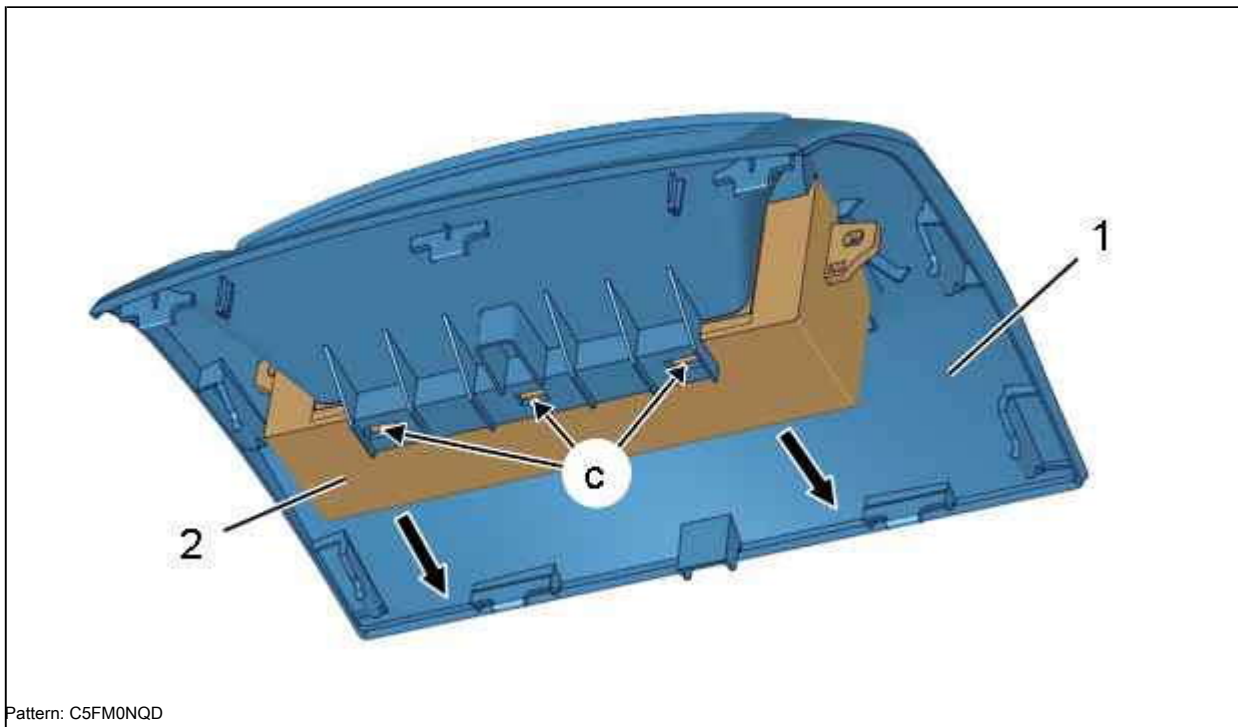
...



Disconnect: bracket for multifunction display (1) (at "a"); Using the tool [1]. Detach: Multi-function display bracket (1).



Disconnect the connector (at "b").
Remove: Multi-function display bracket (1).



Disconnect: Multifunction display (2) (at "c"); Using the tool [1]. Remove:

- Multifunction display (2) (according to the arrow)
- Multi-function display bracket (1)

3. Installation



MANDATORY: Replace defective clips systematically.

NOTE: Position the clips (at "d").

Place the multifunction display (2) on the display support (1). Reconnect the connector (at "b").

Install: Multi-function display bracket (1).

Reconnect the rechargeable battery

Check the functioning of the electrical equipment.

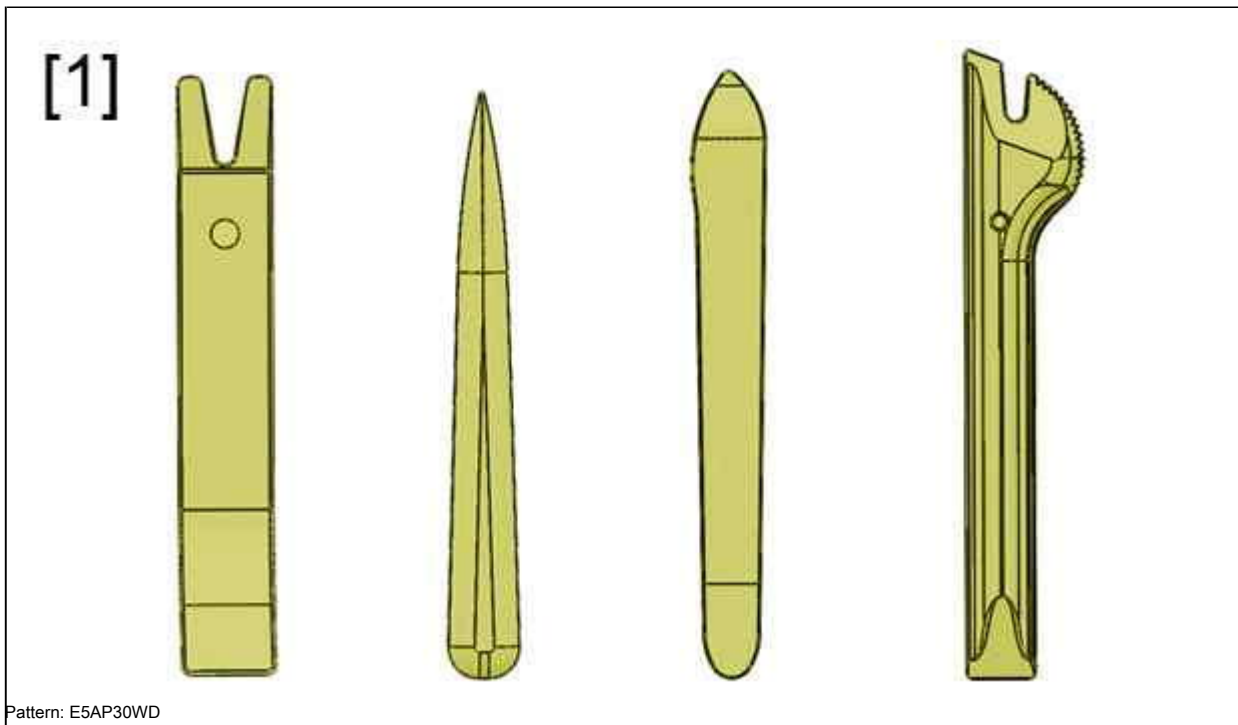


REMOVAL INSTALLATION: GLOVE BOX

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim stripper ().1350ZZ.

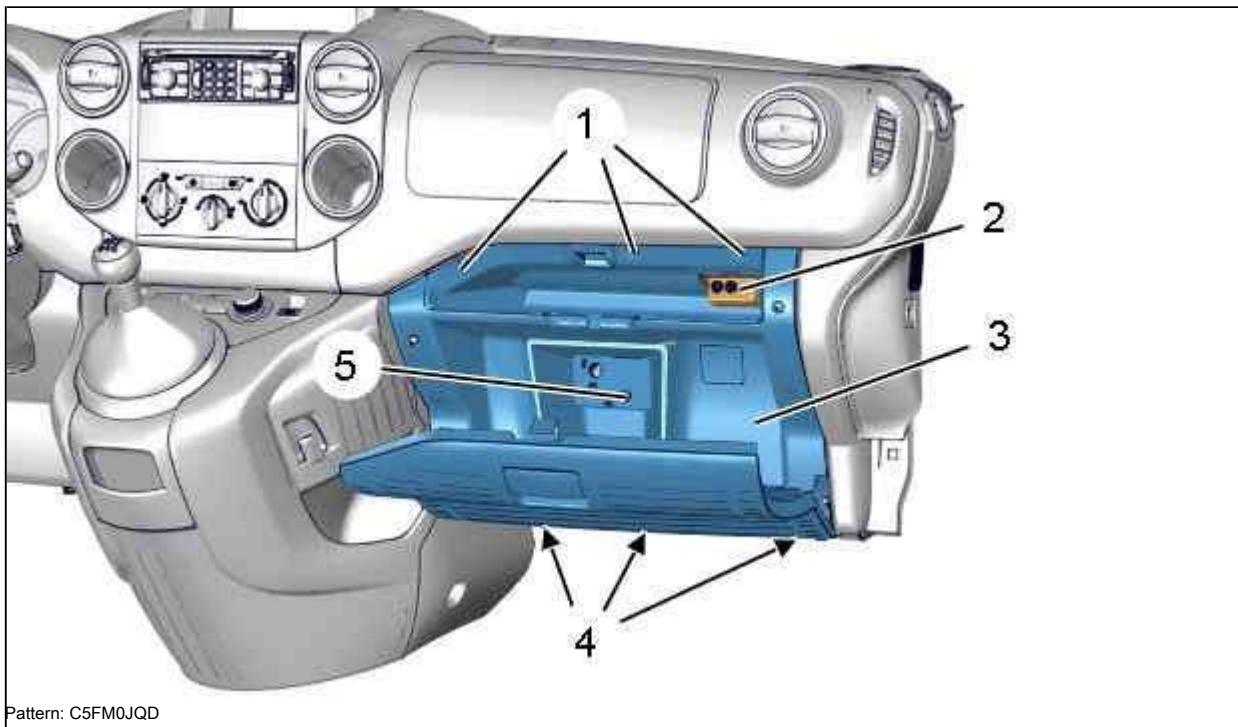
2. Removal

Disconnect the battery

...

2.1. Luggage pockets on the front passenger side

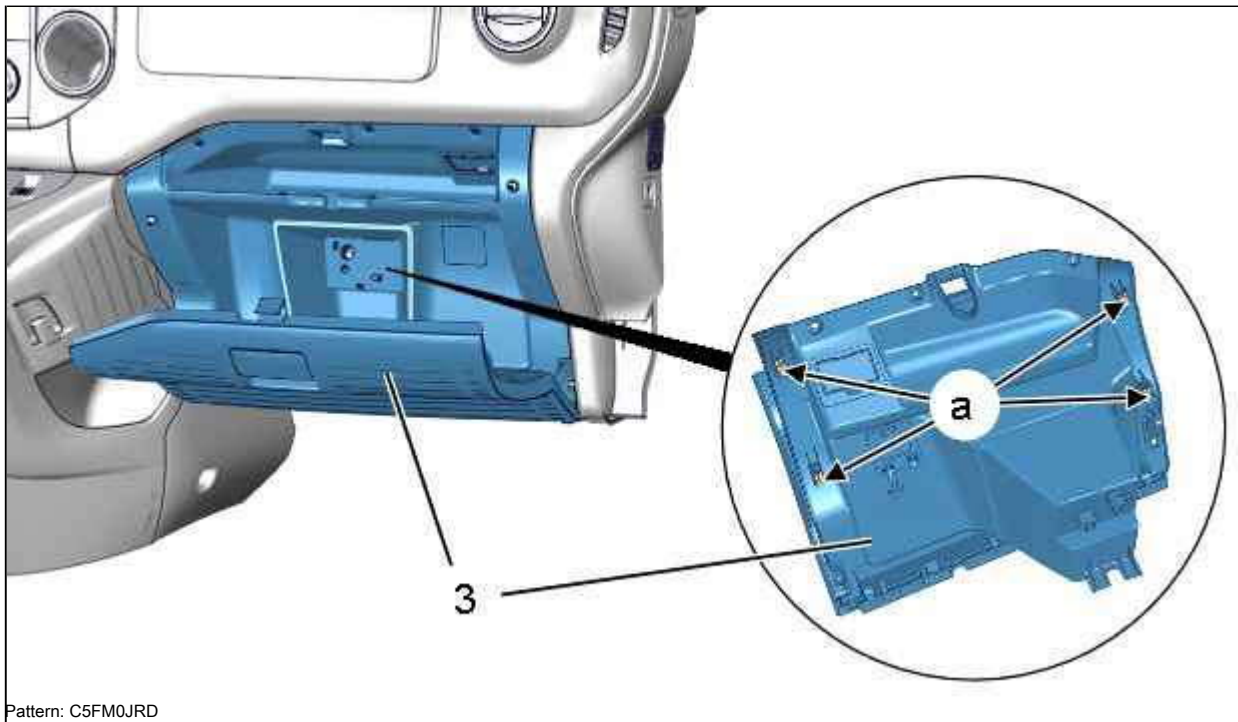
Open: Glove box (/).



Disconnect: Output system for video equipment (2); Using the tool [1]. Separate: Output system for video equipment (2).

Disconnect the video signal output connector (2). Remove:

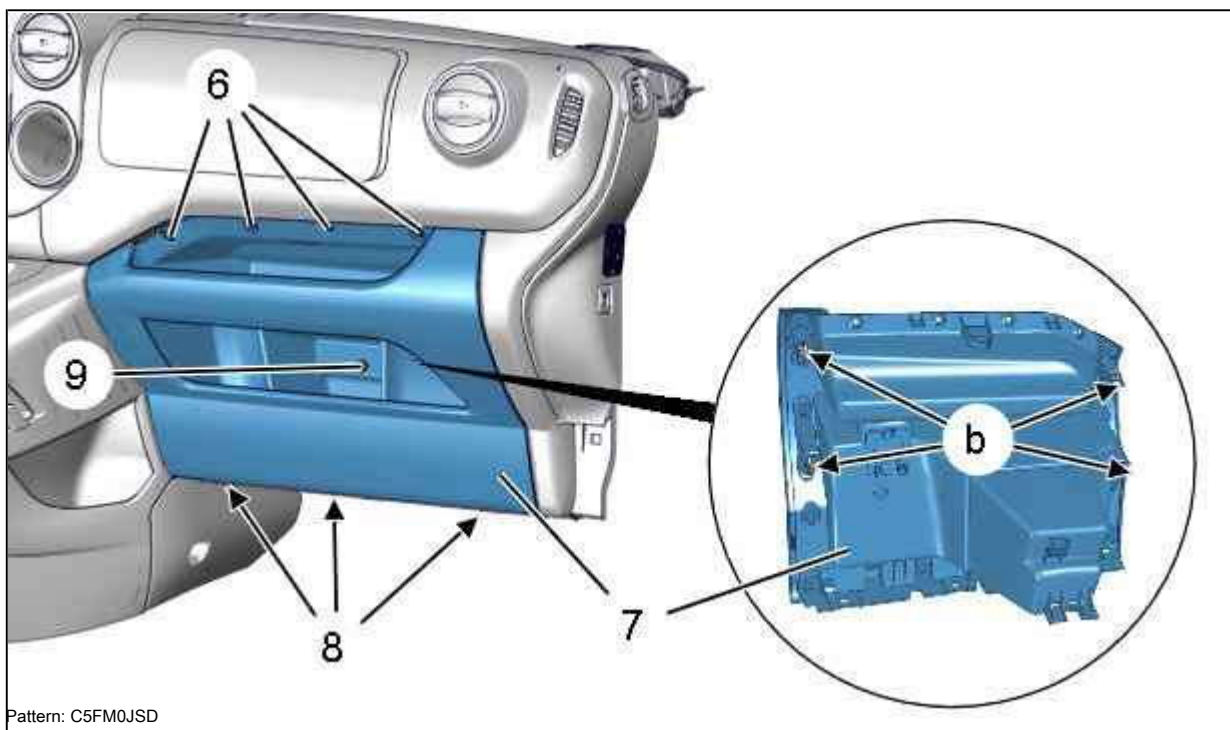
- Video output system (2)
- Bolts (1), (4), (5) glove box (3) (passenger)



Disconnect: Passenger side glove box (3) (at "a"); Using the tool [1].

Remove the passenger side glove box (3) (pull yourself).

2.2. Luggage pockets on the front passenger side (fixed)



Remove: The screws (6), (8), (9) from the passenger door glove box (7).

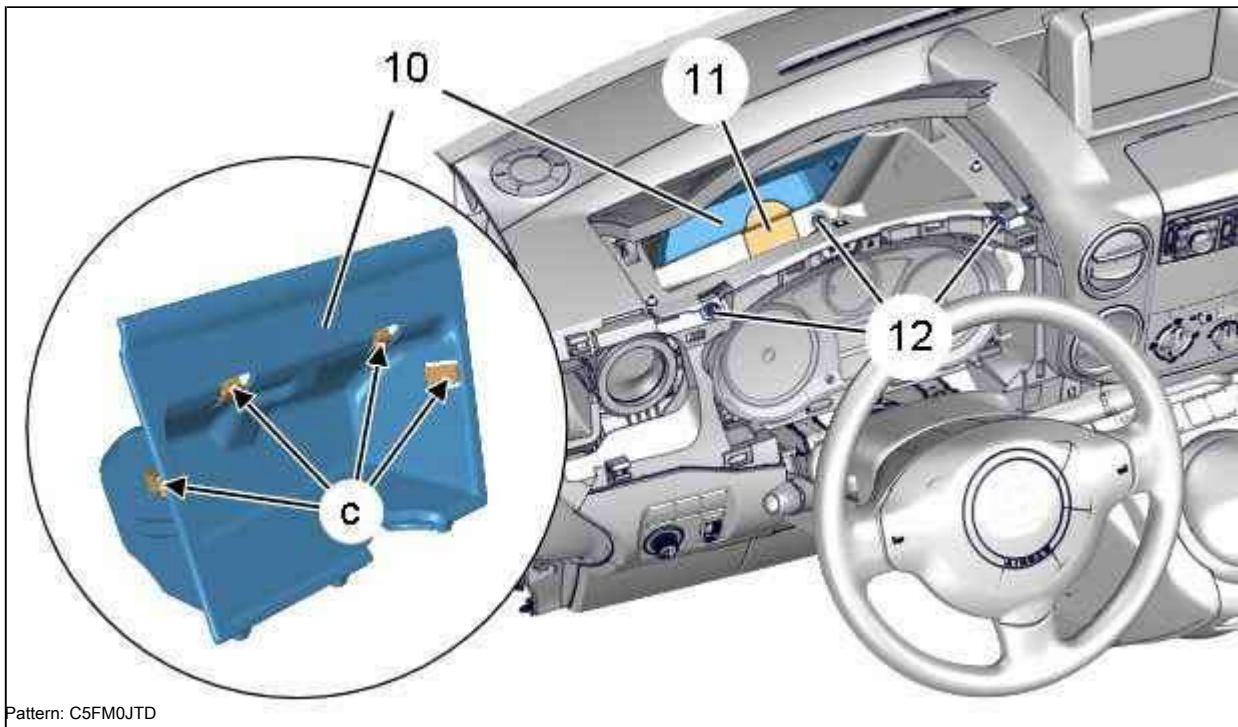
Disconnect: Passenger side glove box (7) (fixed) (at "b"); Using the tool [1].

Remove: Passenger side glove box (7) (fixed) (pull yourself).

2.3. Glove box (driver)

Detach the dashboard trim



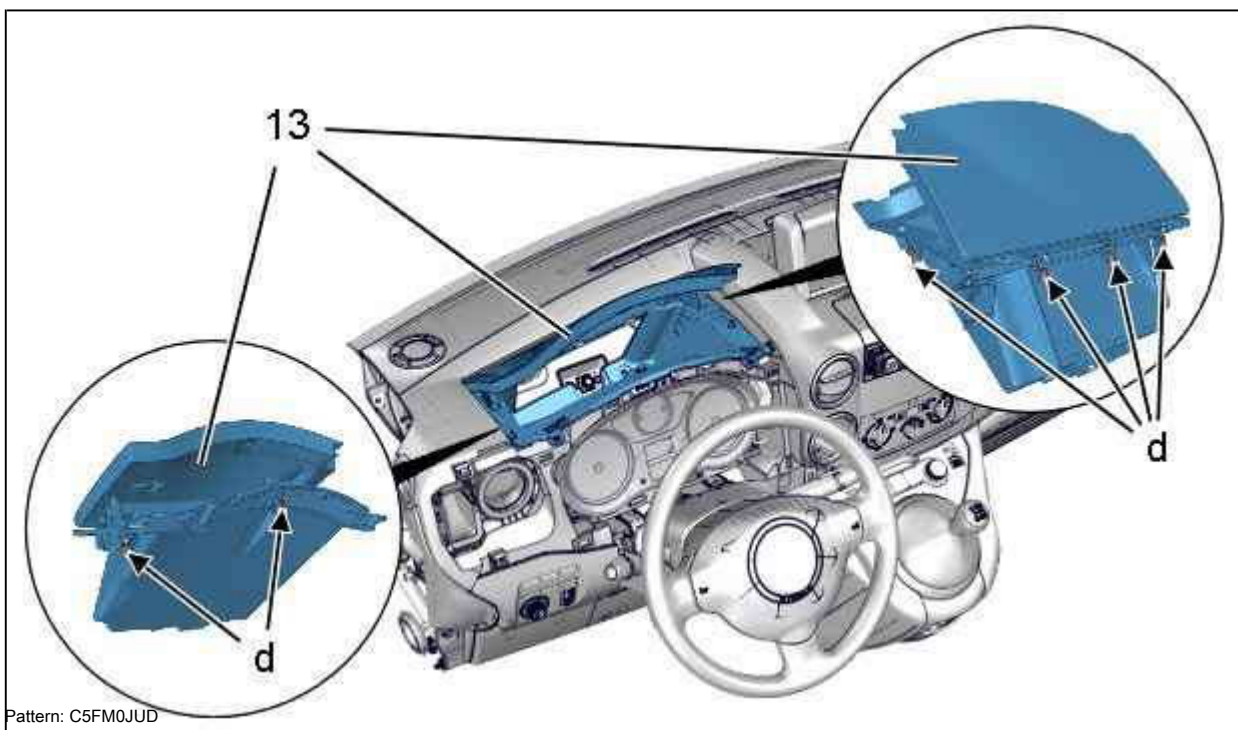


Pattern: C5FM0JTD

Loosen the screws (12).

Disconnect and remove the decorative element (11); Using the tool [1].

Disconnect: The inside of the glove box (10) (driver) (at "c"); Using a thin screwdriver. Remove: The inside of the glove box (10) (driver) (pull yourself).



Pattern: C5FM0JUD

Disconnect and remove: Glove box (13) (driver) (at "d") (pull yourself).

3. Installation

Installation is carried out by performing the removal operations in the reverse order.

Reconnect the rechargeable battery

Check the functioning of the electrical equipment.

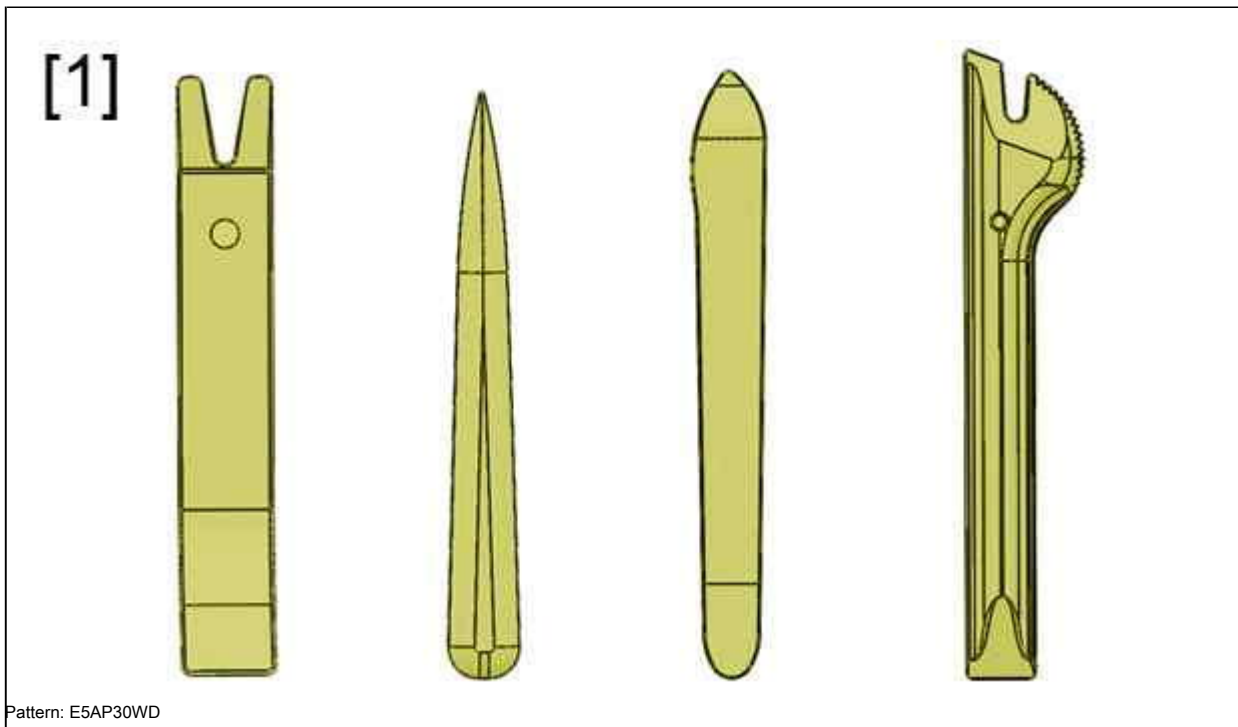


REMOVAL INSTALLATION: CENTRAL CONSOLE

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



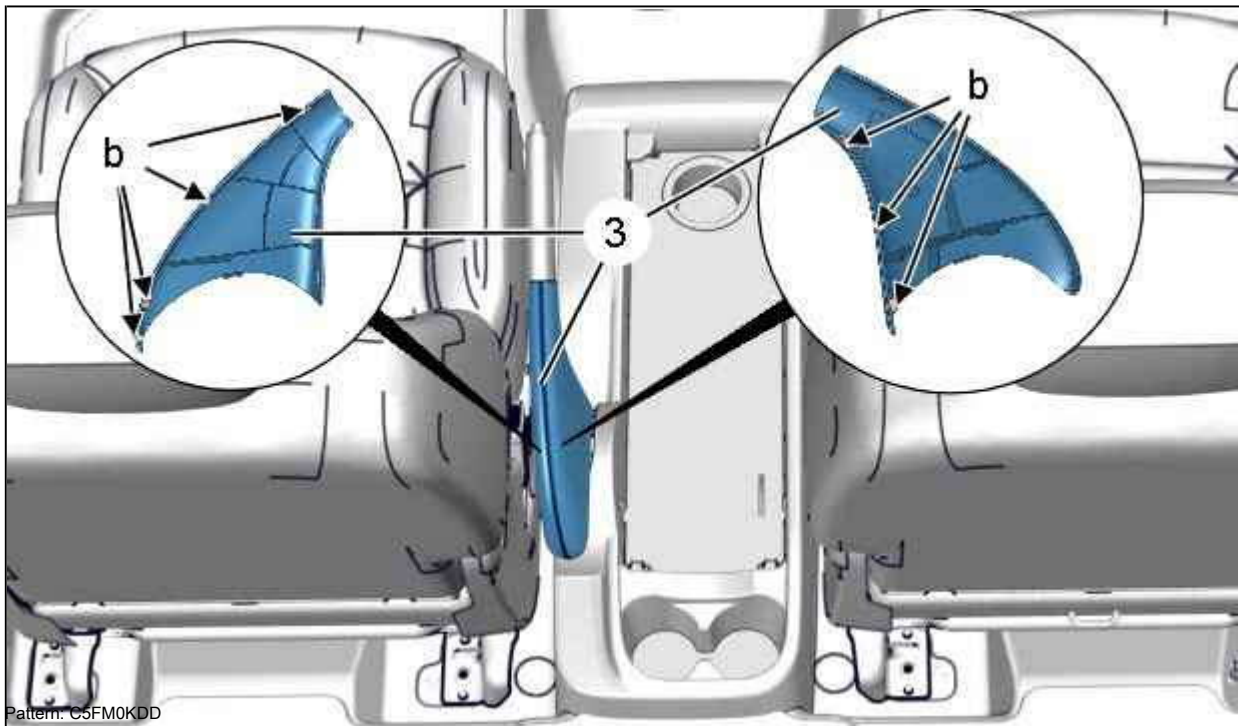
[1] Trim stripper () .1350ZZ.

2. Removal

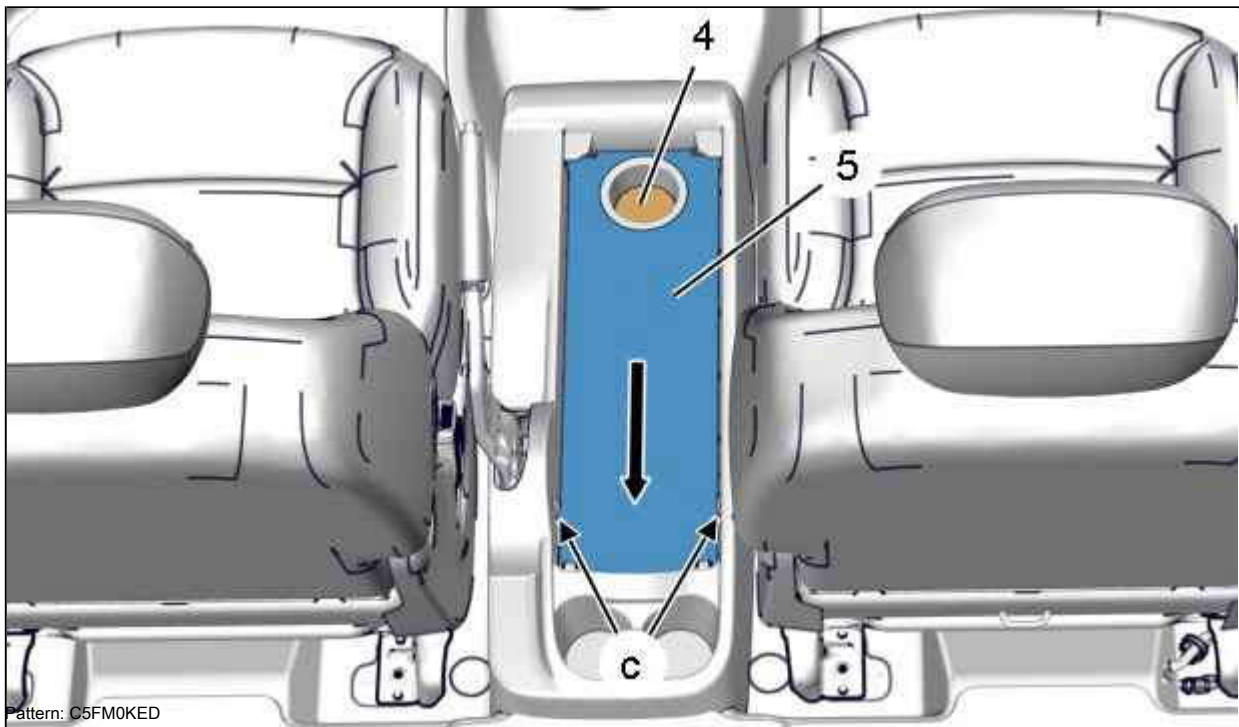


NOTE: Press the glove box (1) and continue to press (at "a") to facilitate unlocking the handle (2).

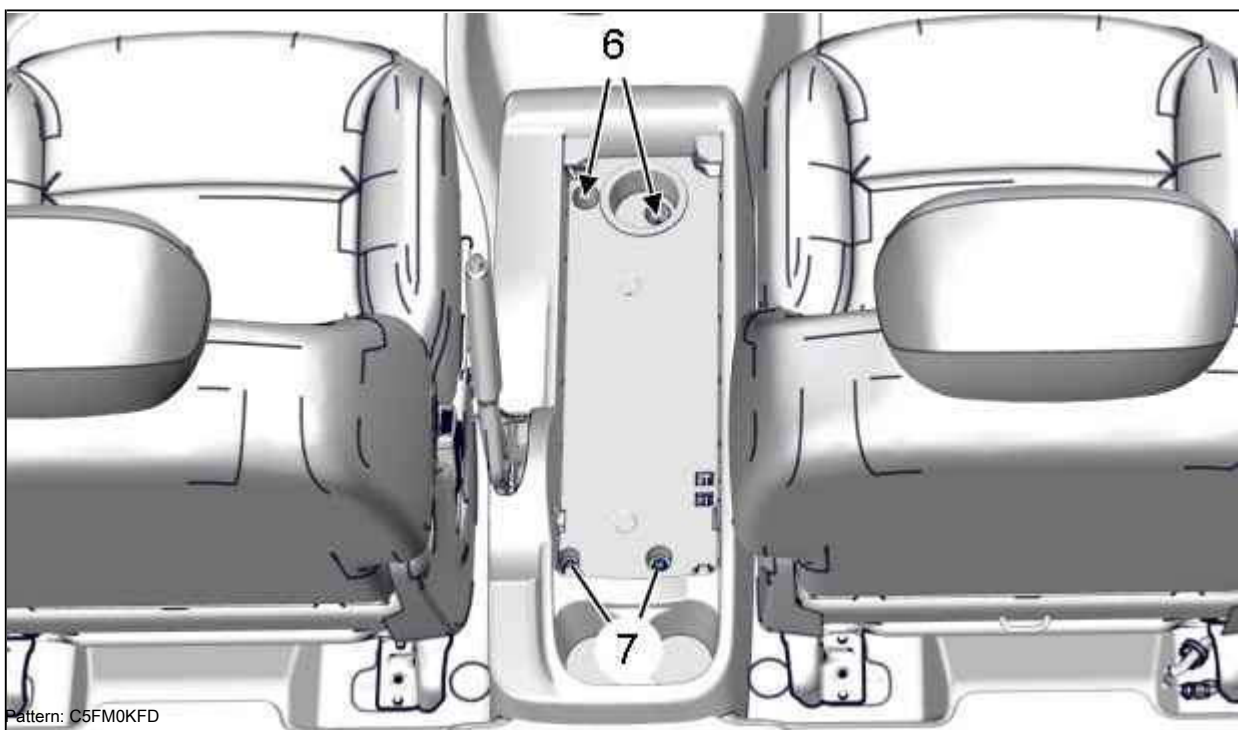
Press the handle (2).
Remove: Luggage Crate (1) (Pull yourself).



Disconnect: Parking brake lining (3) (at "b"); Using the tool [1]. Remove: the parking brake pad (3).

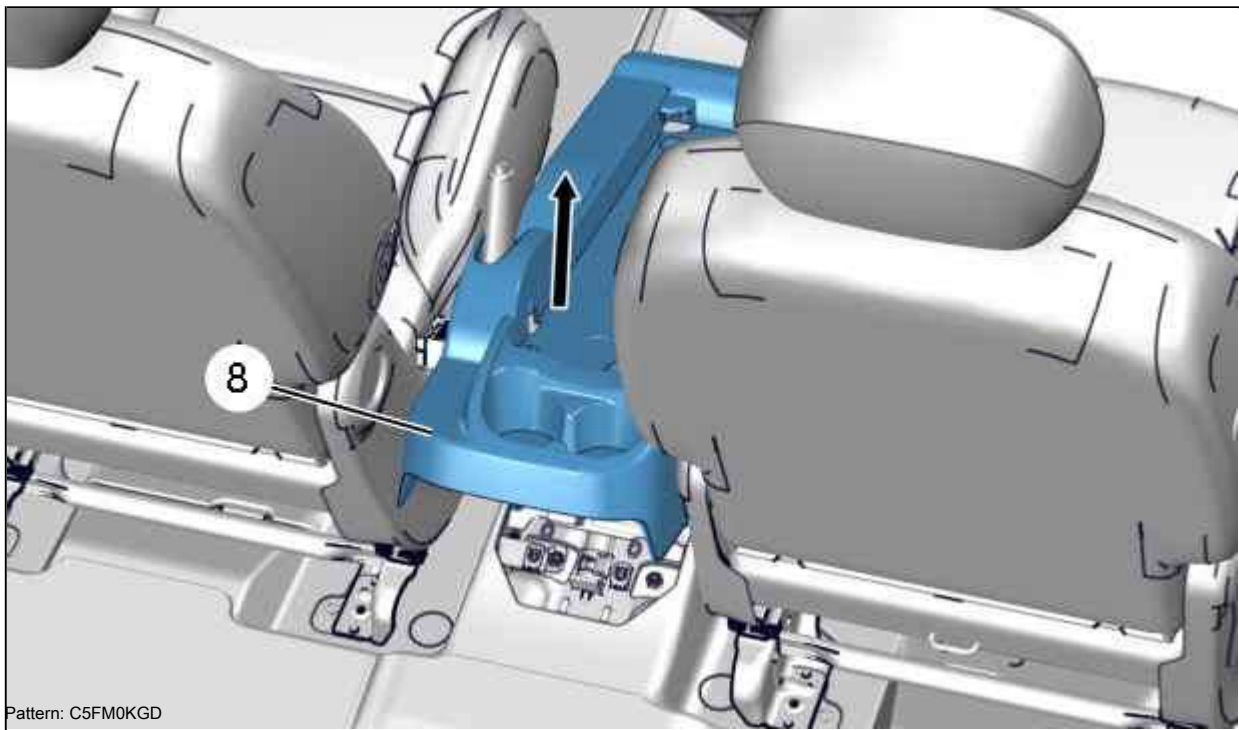


Separate: Center console mat (5) (in "c"); Using tool [1]. Remove: Center console mat (5) (in line with arrow).
 Separate: Cup holder liner (4); Using tool [1]. Remove: Cup holder liner (4).



Remove:

- Nuts (6)
- the bolts (7)



Apply the parking brake (Maximum).

Detach the center console (8) (As shown by the arrow). Remove the center console (8).

3. Installation

Installation is carried out by performing the removal operations in the reverse order. Tighten:

- nuts (6) to a torque of 0.8 ± 0.2 da.Nm
- Tighten the bolts (7) to 0.8 ± 0.2 da.Nm

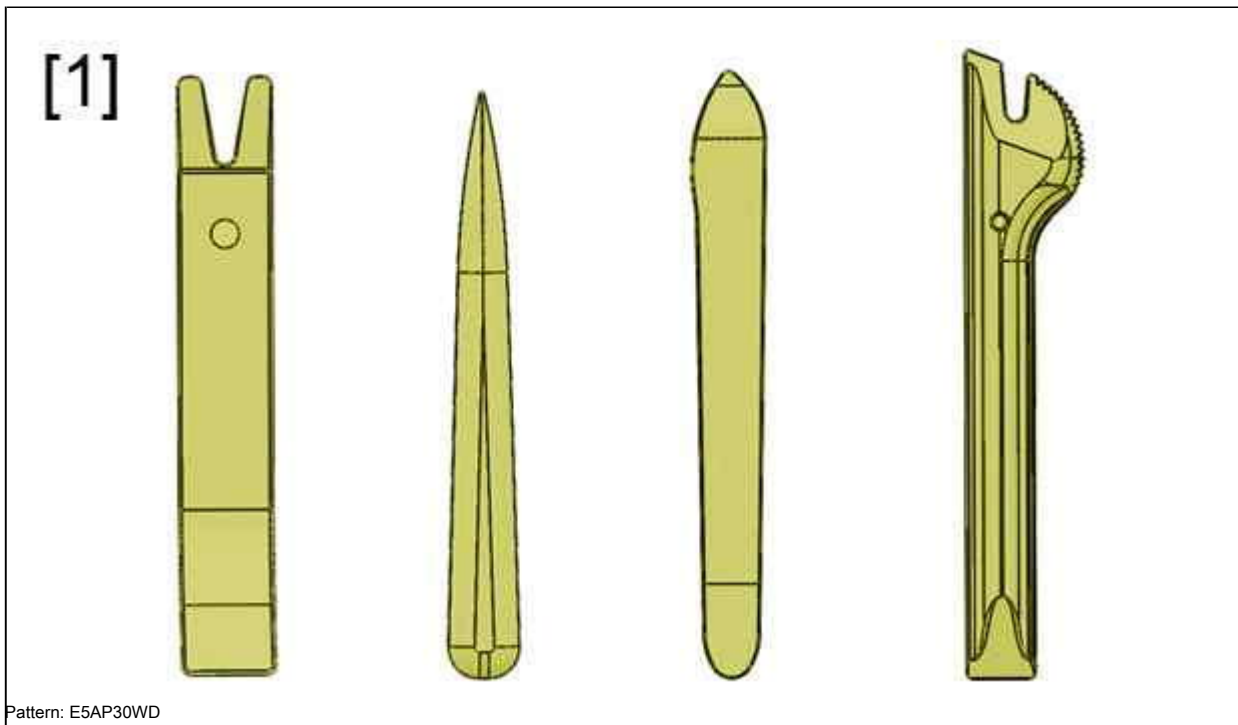
Check the operation of the various equipment.

DISASSEMBLY ASSEMBLY: INSTRUMENT PANEL

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim stripper () .1350ZZ.

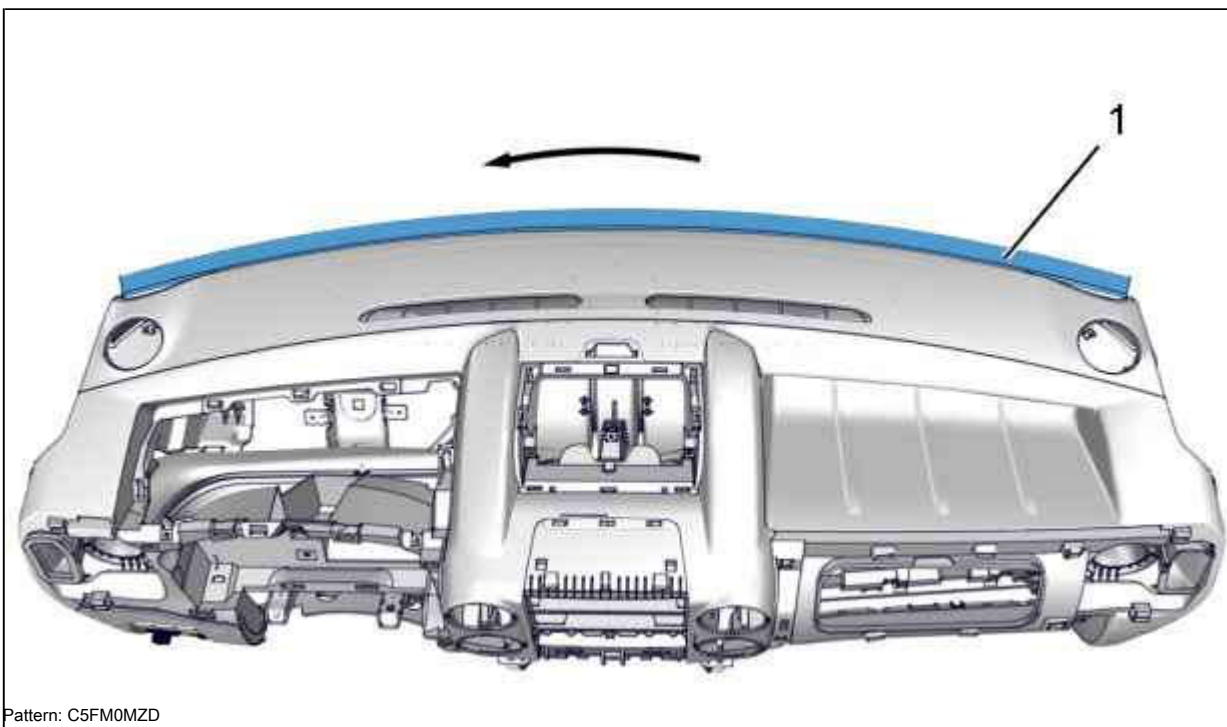
2. Preliminary operation

Remove:

- Dashboard
- Dashboard
- Multifunction display
- Car radio
- CD changer (depending on configuration)
- Passenger airbag
- Dashboard ducts
- Control panel tweeters
- Glove box (driver)
- Dashboard electrical harness

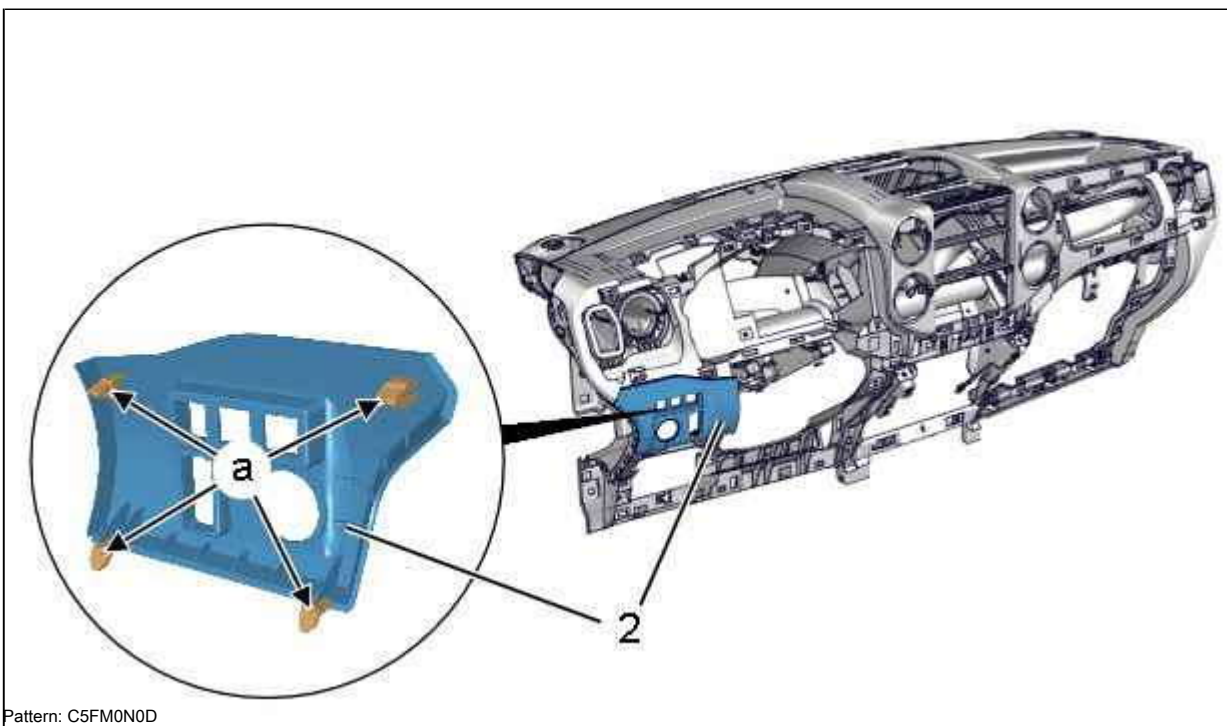


3. Disassembly



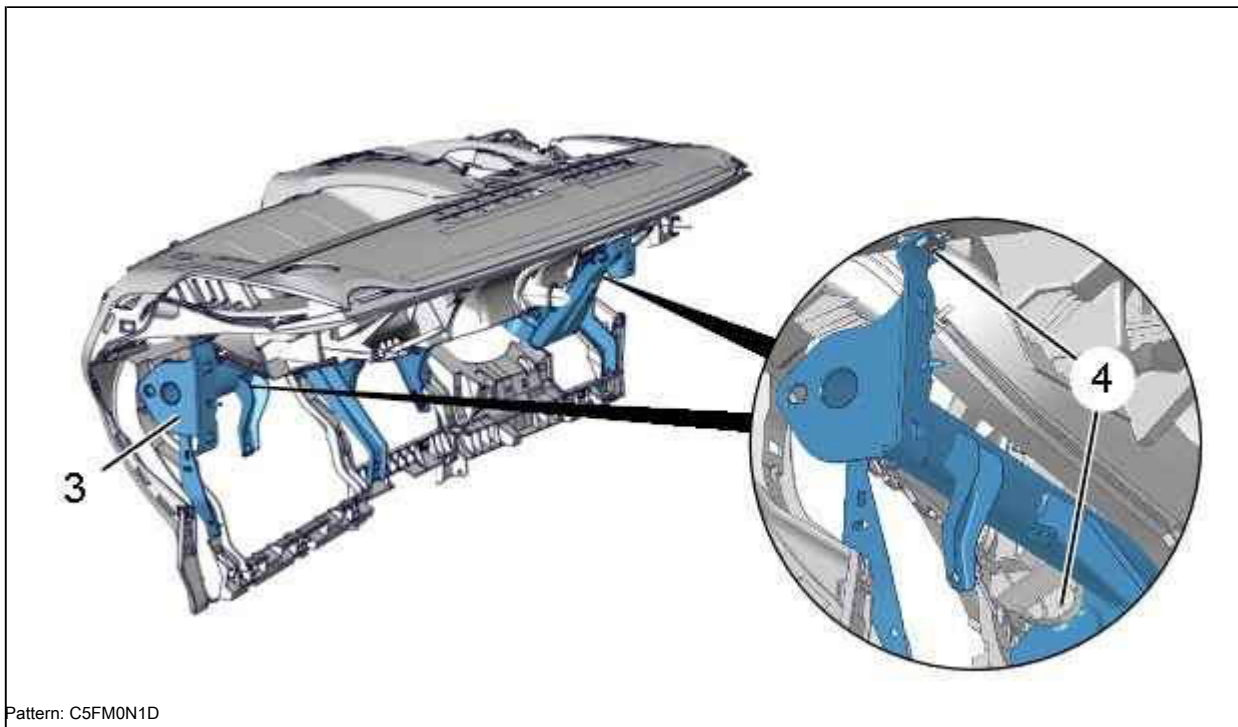
Pattern: C5FM0MZD

Remove and move the seal (1) (in accordance with the arrow). Remove the gasket (1).

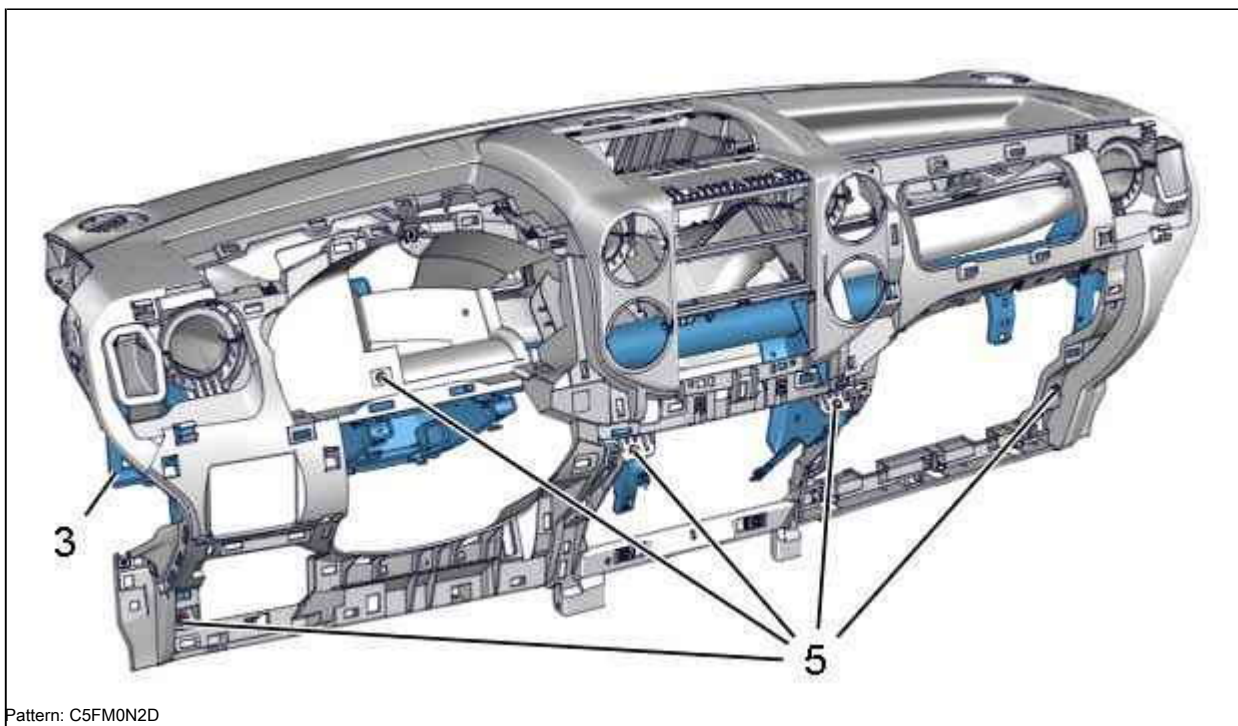


Pattern: C5FM0N0D

Detach the trim panel ((2)) (at "a"); Using the tool [1]. Remove the trim panel (2).



Loosen the screws (4) (Dashboard cross members (3)).



Remove the bolts (5) (Dashboard cross members (3)).

Separate: The cross member of the dashboard (3) (Be careful). Remove: The cross member of the dashboard (3).

4. Assembly

Proceed in the reverse order of disassembly.

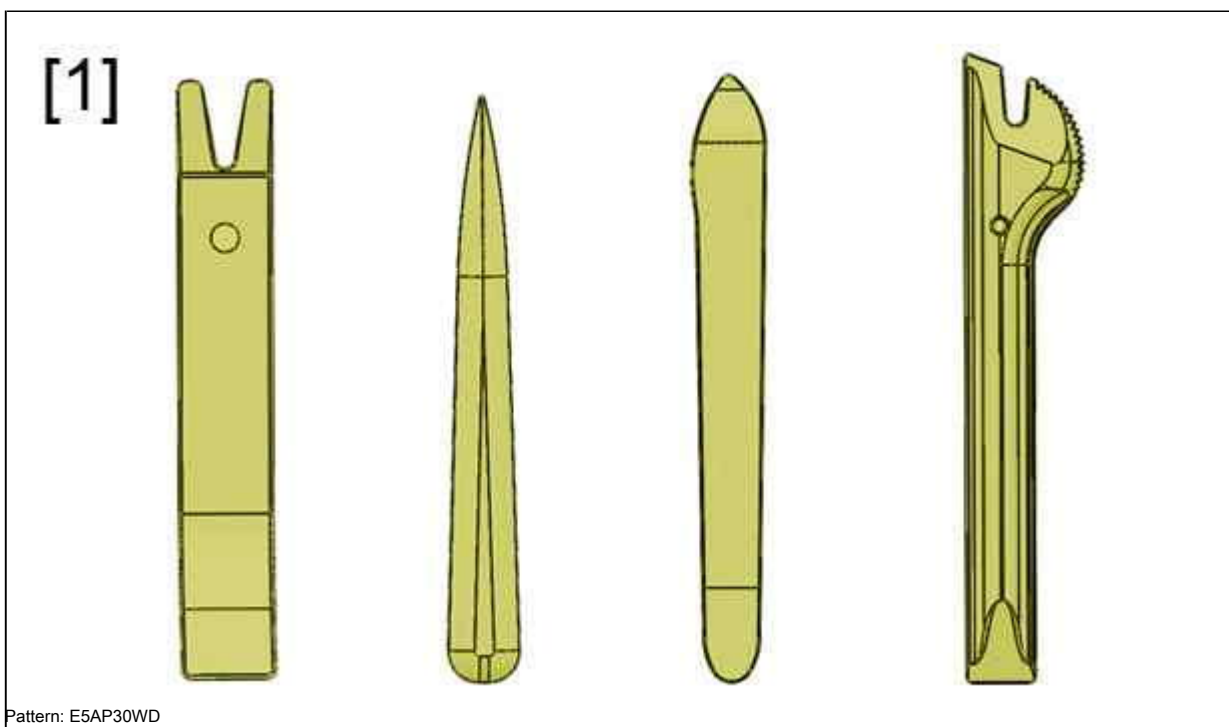
Tighten the bolts (4), (5) to a torque of 0.8 ± 0.1 da.Nm. Check the functioning of the electrical equipment.

REMOVAL - REFITTING: INSTRUMENT PANEL

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Trim stripper () .1350ZZ.

2. Preliminary operations

Perform the following operations:

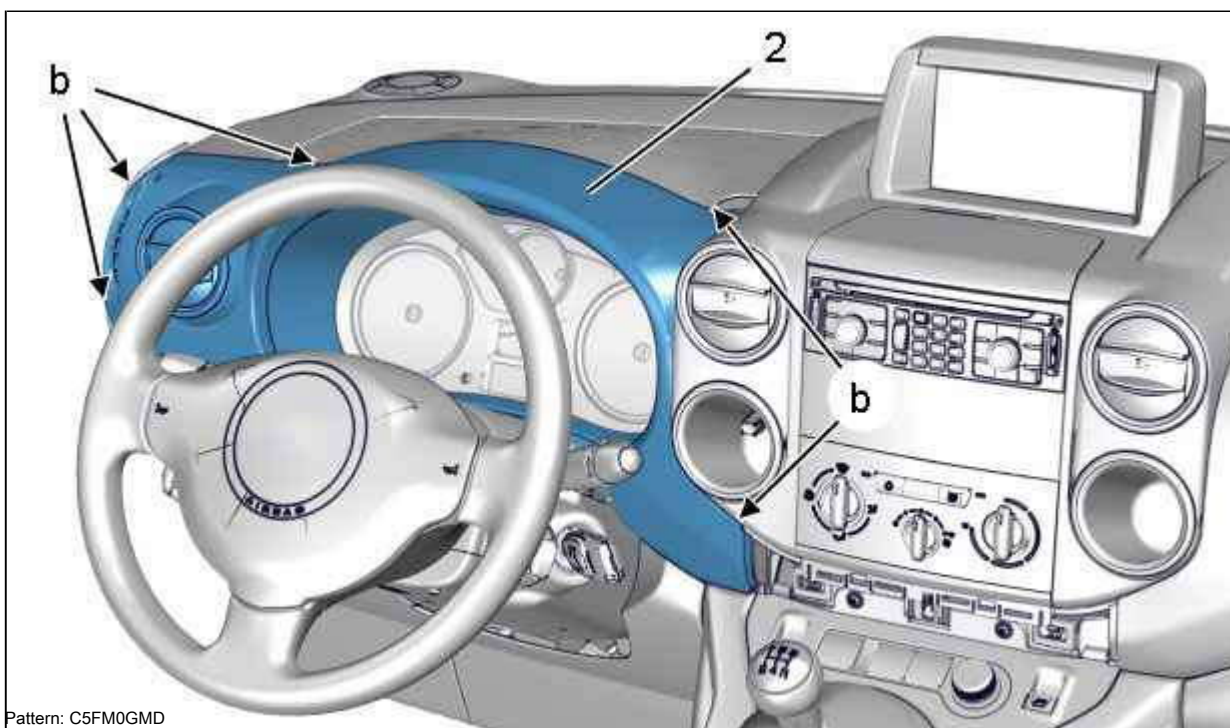
- Switch off ignition
- Wait 3 minutes before disconnecting the battery
- Disconnect the battery

3. Removal



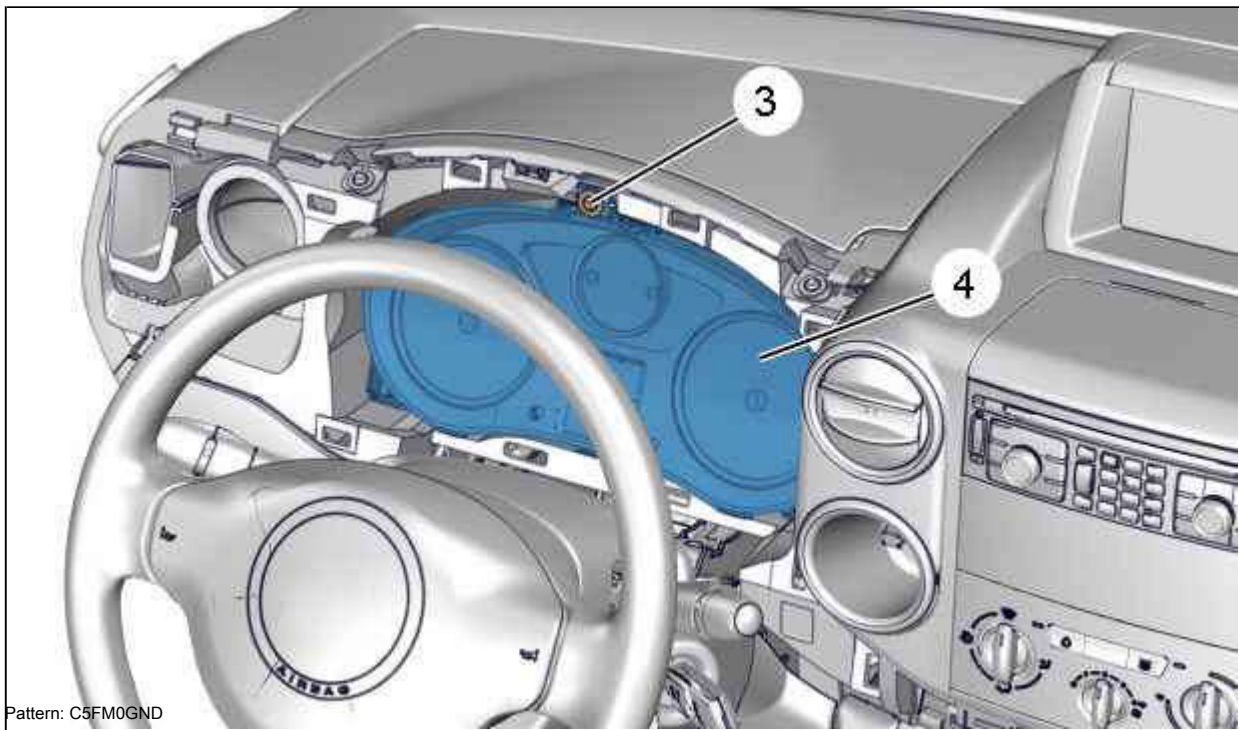
Pattern: C5FM0GLD

Detach the trim panel ((1)) (at "a"); Using the tool [1]. Remove the trim panel (1).



Pattern: C5FM0GMD

Unlock the steering column, extend and lower it as far as possible. Detach the trim panel ((2)) (in "b");
Using the tool [1]. Loosen upholstery (2).



Remove the bolts (3).

Detach the instrument panel (4).

Disconnect: Instrument panel connector (4). Remove the instrument panel (4).

4. Installation

Installation is carried out by performing the removal operations in the reverse order. Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

Check the functioning of the electrical equipment.

TIGHTENING TORQUES: DRIVE SHAFT

1. Recommendations

ATTENTION : Tighten the nuts on the drive shafts; Using a torque wrench.

2. Tightening torques: Nuts; Drive shaft support

Models	Drive shaft bolt	Drive shaft support	
	Tightening torques	Angle tightening	Tightening
ION	16 da.Nm		
107	21.6 da.Nm		
1007	24.5 da.Nm		1 da.Nm
206			1 da.Nm
206 +			1 da.Nm
207			2 da.Nm
206			1 da.Nm
207 i (Iran)	(M24x150) 32.5 da.Nm		1 da.Nm
207 (Asean)	(M24x150) 30 da.Nm		1 da.Nm
207	(M24x150) 31 da.Nm		2 da.Nm
307	32.5 da.Nm		1 da.Nm
308			2 da.Nm
308 (China)			1 da.Nm
RCZ	32.5 da.Nm		2 da.Nm
3008			2 da.Nm
5008			2 da.Nm
408 (China)			1 da.Nm (TU engine) 2 da.Nm
Partner			(EW engine) 2 da.Nm
508	30.5 da.Nm		2 da.Nm
508 (China)	34.5 da.Nm		2 da.Nm
408 (Countries Mercosur)	30.5 da.Nm		2 da.Nm
407	34.5 da.Nm		2 da.Nm
807			2 da.Nm
EXPERT			2 da.Nm
Buzzer (beeper) 7 da.Nm		55 °	2 da.Nm
BOXER	15 da.Nm	35 °	

3. Tightening torques: Transmission with 4 driving wheels

Models Cross Nut		Bearing bolt	Cardan shaft nut on
	engine (Front / Rear)	cardan shaft	controlled rear clutch bridge
Models	Tightening torques		
4007	16 da.Nm	4 da.Nm	5.4 da.Nm

4. Tightening torques: Hybrid vehicles

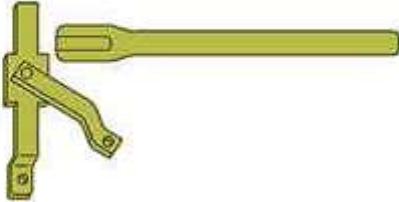


Front Nut Models		Rear nut	Front bearing	Rear bearing
waterfall		waterfall	waterfall	waterfall
Models	Tightening torques			
3008	32.5 da.Nm	34.5 da.Nm	2 da.Nm	1 da.Nm
508	31.2 da.Nm	31.2 da.Nm	2 da.Nm	1 da.Nm



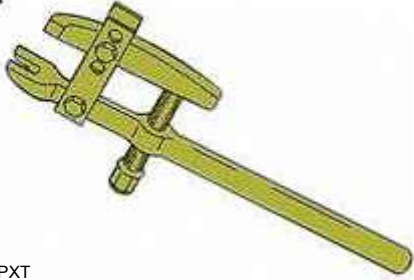
REMOVAL REFITTING: DRIVE SHAFT

MANDATORY: Observe the cleanliness and safety rules



1. Tools

tool	room	Designation
	(reference)	
	[0606AY]	fixation device
<div><div><div>[0606-AY] [6310-T]</div></div><div>Figure: E5AB0RFT</div></div>	[6310T]	hubs
	[0317U]	Installation jig
<div><div><div>[0317-U] [7114-T.X]</div></div><div>Pattern: E5AB0YZT</div></div>	[7114TX]	semi-shaft sealing collar (on the right side)
	[0317T]	Installation jig
<div><div><div>[0317-T] [7114-T.W]</div></div><div>Pattern: E5AB0YYT</div></div>	[7114TW]	semi-axle sealing lip (left side)

<p>[0346-S]</p>  <p>Pattern: E5AB0KCT</p>	<p>[0346S]</p>	<p>MCP / MCM: Guide for installing the shaft seal (right side)</p>
<p>[0346-R]</p>  <p>Pattern: E5AB0KDT</p>	<p>[0346R]</p>	<p>MCP / MCM: Guide for installing the axle shaft seal (left side)</p>
<p>[0709] [1892-T]</p>  <p>Pattern: E5AB0PXT</p>	<p>[0709] [1892T]</p>	<p>hinge puller</p>

2. Removal

Raise the vehicle and secure it so that the wheels touch the floor. Remove engine cover.

Drain transmission oil.

Install: Drain plug with new seal. Remove wheels.

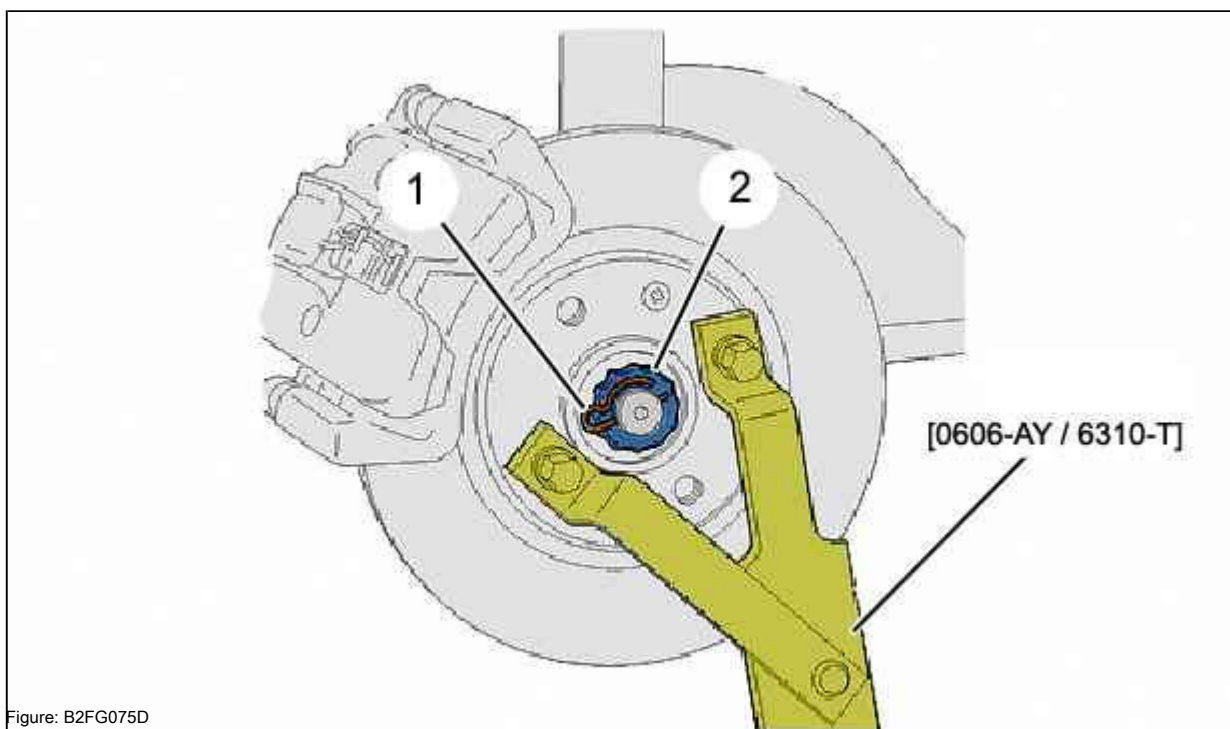


Figure: B2FG075D

Install tool [0606AY / 6310T].

Remove:

- Pin (1)
- Detail (2)
- Drive shaft nut
- Fixture [0606AY / 6310T]

ATTENTION : Do not press the brake pedal to loosen the transmission nut.

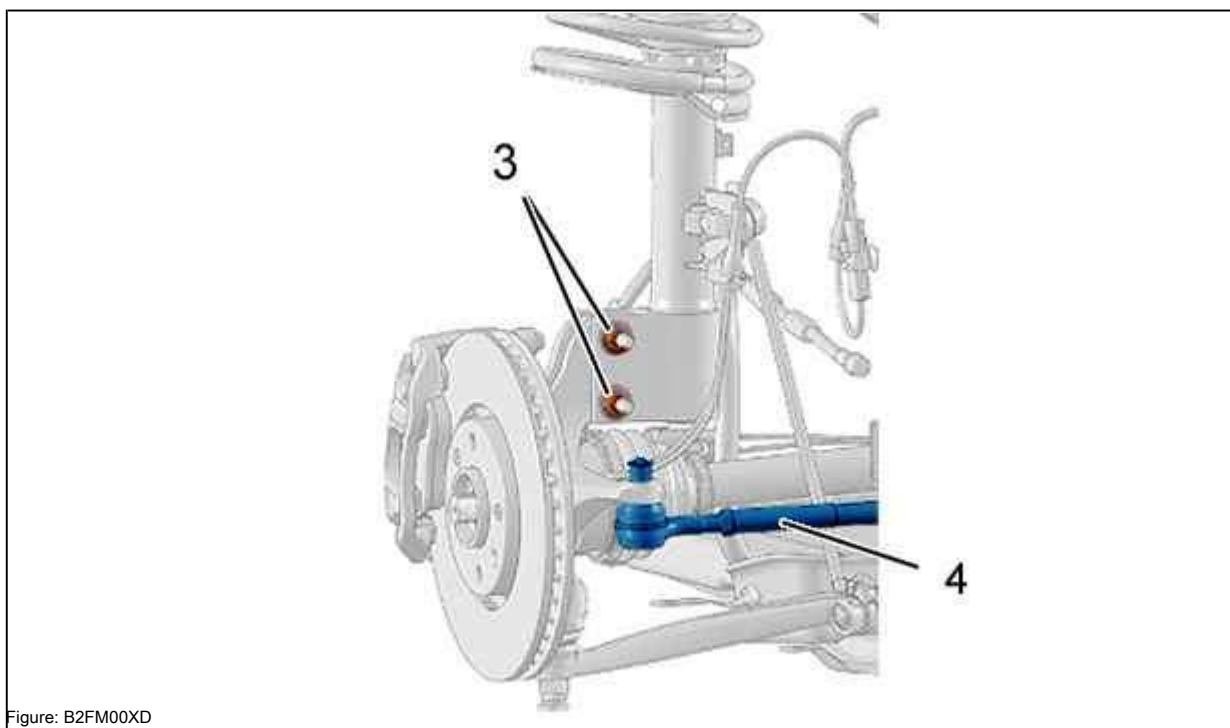


Figure: B2FM00XD

Disconnect the tie rod joint (4) using the tool [0709 / 1892T]. Remove 2 nuts (3).

3. Left drive shaft

To avoid damaging the transmission cover, release the steering knuckle and turn the shock absorber housing a quarter turn.

ATTENTION : Be careful not to twist the brake hose.

Separate the transmission from the wheel hub. Remove the axle shaft.

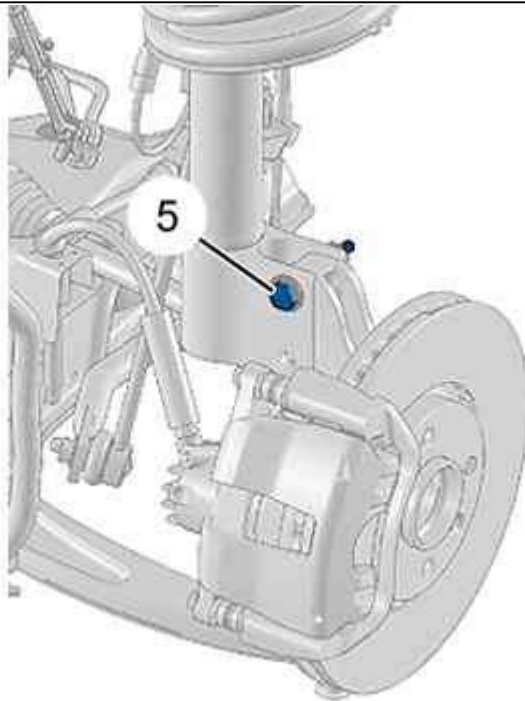
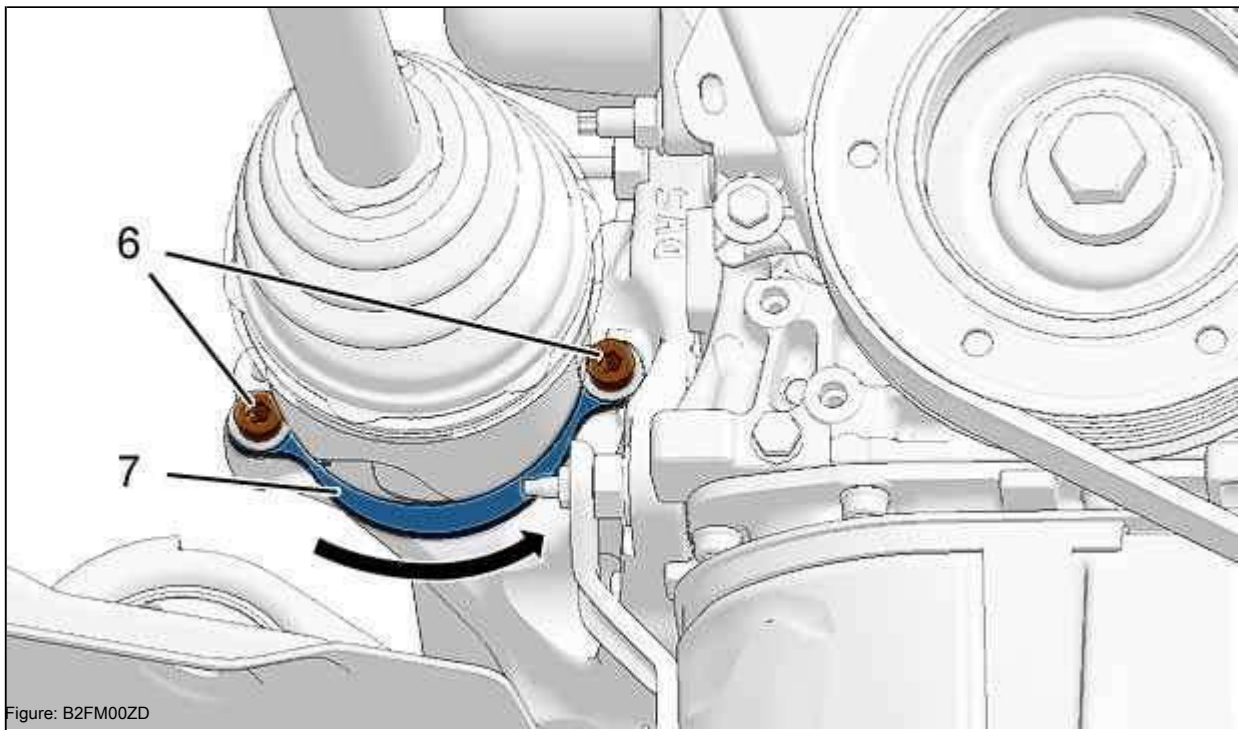


Figure: B2FM00YD

Install the shock absorber housing and secure it with the bolt (5).

4. Right drive shaft



Unscrew 2 screws (6).

Turn the retaining plate (7) (according to the arrow).

To avoid damaging the transmission cover, release the steering knuckle and turn the shock absorber housing a quarter turn.

ATTENTION : Be careful not to twist the brake hose.

Separate the transmission from the wheel hub. Install the right axle shaft.

Install the shock absorber housing and secure it with the bolt (5).

5. Installation

ATTENTION : Observe the required tightening torques

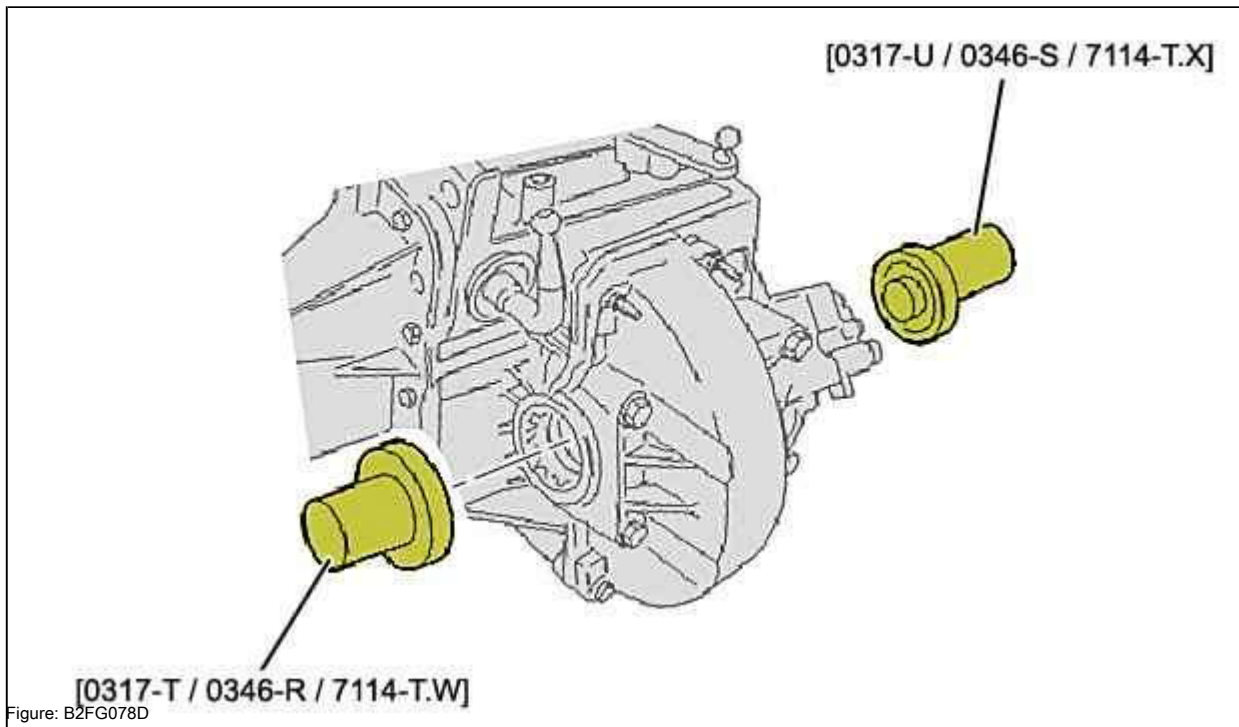


ATTENTION : Replace Nilstop nuts after each removal.

Verify :

- No backlash in the drive shaft connections
- Condition of covers
- Bearing condition

Repair the drive shafts (if necessary).



Replace the oil seals after each removal using an assembly mandrel:

- [0317U / 7114 TX], [0317T / 7114TW]: BE4 gear boxes
- [0346S], [0346R]: MCP / MCM gear boxes

Fill the gap between the cuffs with grease.

Lubricate the outer cage bearing of the transmission.

ATTENTION : When installing the drive shafts, take care not to damage the oil seals at the transmission outlet.

ATTENTION : Be careful not to damage the covers when installing the transmissions.

Install:

- Drive shaft to intermediate bearing
- Bearing in its support
- Differential splines
- Wheel hub transmissions

Install: Wheel hub.

Install:

- the bolts (5)
- Nuts (3)
- Steering ball joints (4)
- Transmission nuts
- Details (2)
- Pins (1)

Install: Support plate (7).

Tighten down screws (6).

Install:

- Wheels
- Car ground

Fill the gearbox with oil through the air vent. Install the engine shield.

TIGHTENING TORQUES: WHEELS

1. Recommendations

ATTENTION : The use of impact wrenches to replace the wheel bolts and wheel bolts "anti-lock" is strictly prohibited.

Observe the correct positioning of the "lock" key during re-installation.

ATTENTION : Tighten the wheel bolts with a torque wrench.

2. Tightening torques: Wheels

NOTE: Double tightening tightening to the specified torque after completely loosening (unscrewing) the connection.

Cars	Stamped steel discs (Double tightening)	Aluminum rims
ION	10 da.Nm	10 da.Nm
106	9 da.Nm	9 da.Nm
107	10 da.Nm	10 da.Nm
1007	9 da.Nm	10 da.Nm
206	10 da.Nm	10 da.Nm
206+	9 da.Nm	10 da.Nm
207 i (Iran)	9 da.Nm	10 da.Nm
207	10 da.Nm	10 da.Nm
207 restyling	10 da.Nm	10 da.Nm
207 (Countries Mercosur / China / Asean)		
306	9 da.Nm	10 da.Nm
307	9 da.Nm	10 da.Nm
308	10 da.Nm	10 da.Nm
308 (China)	10 da.Nm	10 da.Nm
RCZ		10 da.Nm
406	9 da.Nm	10 da.Nm
407	9 da.Nm	10 da.Nm
408 (China)	10 da.Nm	10 da.Nm
408 (Countries Mercosur)	10 da.Nm	10 da.Nm
508	10 da.Nm	10 da.Nm
508 (China)	10 da.Nm	10 da.Nm
607	9 da.Nm	10 da.Nm
806	9 da.Nm	9 da.Nm
807	10 da.Nm	10 da.Nm
3008	10 da.Nm	10 da.Nm
5008	10 da.Nm	10 da.Nm
4007	10 da.Nm	10 da.Nm
Buzzer (beeper) 9 da.Nm		10 da.Nm
Partner (M49) (M59) Partner	9 da.Nm	9 da.Nm
(B9)	10 da.Nm	10 da.Nm
EXPERT	10 da.Nm	9 da.Nm

BOXER (15 inch wheels)	16 da.Nm	
BOXER (16 inch wheels)	18 da.Nm	

3. Wheel valve

3.1. Vehicles not equipped with a tire pressure drop detection system

Be sure to replace the wheel valves when replacing tires.

3.2. Vehicles equipped with a tire pressure drop detection system

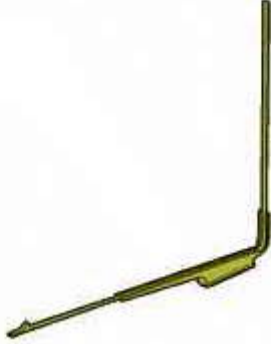

Observe the tightening torque of the wheel valve nuts: Tighten to 0.8 da.Nm.

CHECK AND ADJUSTMENT VALUES: GEOMETRY OF THE FRONT AND REAR BRIDGES

MANDATORY: Observe the cleanliness and safety rules



1. Tools

tool	room	Designation
	(reference) [U7010]	Landing gauge
<div><p>[U701-0]</p><p>Pattern: E5AB0IRT</p></div>		
	[0924]	Wheel center disc (4 fingers)
<div><p>[P-0924]</p><p>Figure: E5AB0LIT</p></div>		

2. Conditions for checking and adjusting

Tire pressure is normal.

The geometry of the bridges is checked when the load is set to the working height.

3. Identification: Measurement zones of the vehicle body height when it is set to the working height

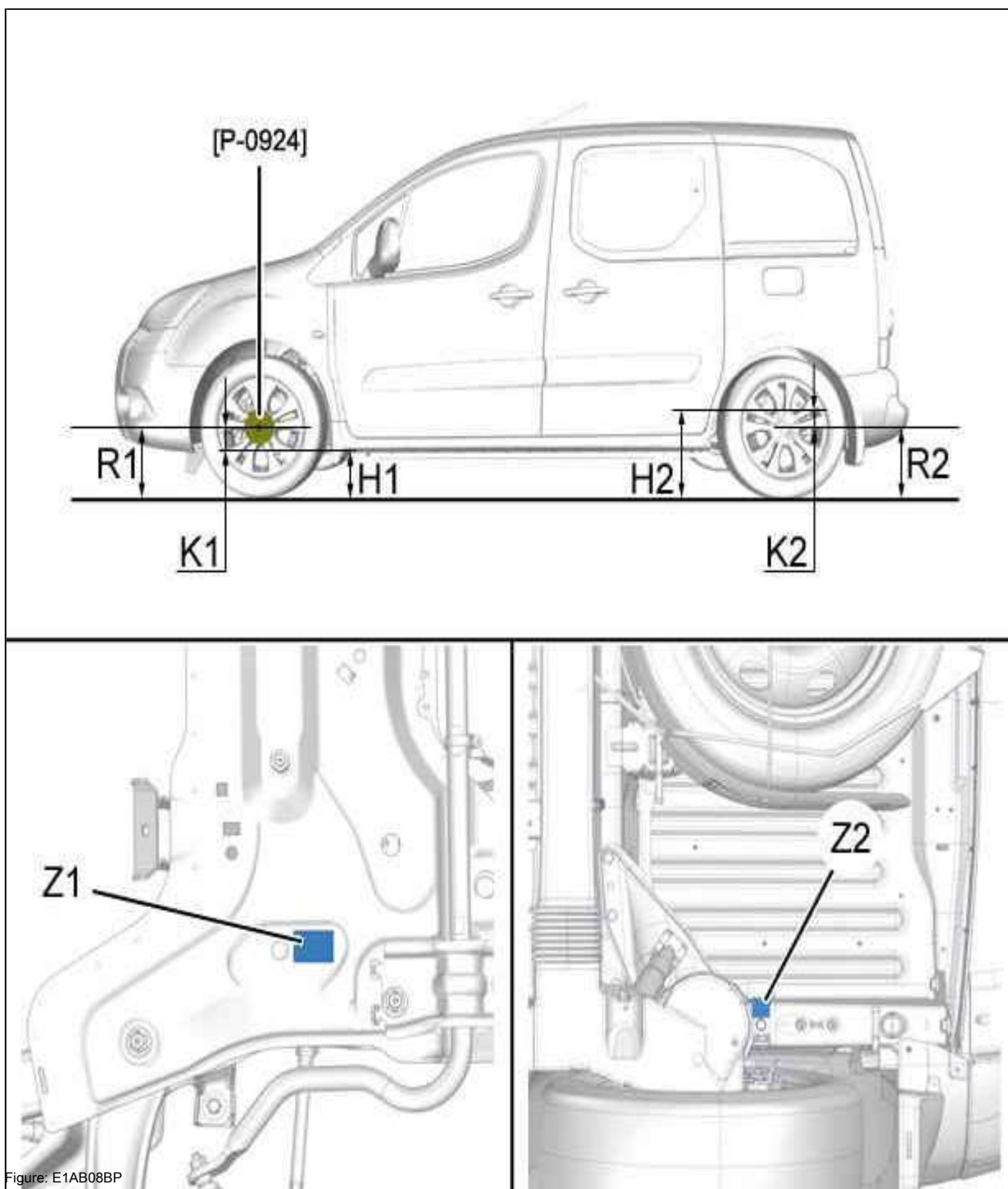


Figure: E1AB08BP

"R1" Front wheel radius. "R2" Rear wheel radius.

"H1" Distance between the measuring area under the front subframe and the floor. "H2": Distance between the measuring area under the rear side member and the floor.

"K1" Distance between the wheel axle and the measuring area under the front subframe. "K2" Distance from the wheel axle to the measuring point under the rear side member. "Z1" Measurement area under the front subframe.

"Z2" Measurement area under the rear side member.

The measuring point "Z2" is located along the fastening hooks.

NOTE: The reference dimension "H2" includes the thickness of the hooks.

4. Rated body height: Front axle

Measure the radius of the front wheel "R1"; Using the tools [U7010], [0924]. Calculate "H1" for the front: "H1" = "R1" + "K1".

4.1. A car

The value at the working height of the body

Accessory All types (Except XTR VTC CRD PC and Equipment Level XTR			Stop and
	Stop and Start systems)	VTC CRD PC	start
K1	141 mm	134 mm	146 mm
CRD = for difficult road conditions PC = "pack chantier"			

Measure the front height at "H1" between the floor and the area "Z1" under the front subframe; Using the tool [U7010].

Compress front suspension to "H1"



NOTE: The difference in height between the two sides of the front axle must not exceed 10 mm.

4.2. Commercial vehicle

The value at the working height of the body

Accessory All types (Kromsystems "Stop and Start") Stop and start K1		
	141 mm	146 mm

5. Rated body height: Rear axle

Measure the radius of the rear wheel "R2"; Using the tools [U7010], [0924]. Calculate "H2" for the rear: "H2" = "R2" + "K2".

Measure the rear height at "H2" between the floor and the "Z2" area under the rear side member Using the tool [U7010].

Squeeze rear suspension with "H2"



NOTE: The difference in height between the two sides of the rear axle must not exceed 10 mm.

5.1. A car

The value at the working height of the body

Accessory All types (Except XTR VTC CRD PC and Equipment Level XTR			Stop and
	Stop and Start systems)	VTC CRD PC	start
K2	88 mm	98 mm	83 mm
CRD = for difficult road conditions PC = "pack chantier"			

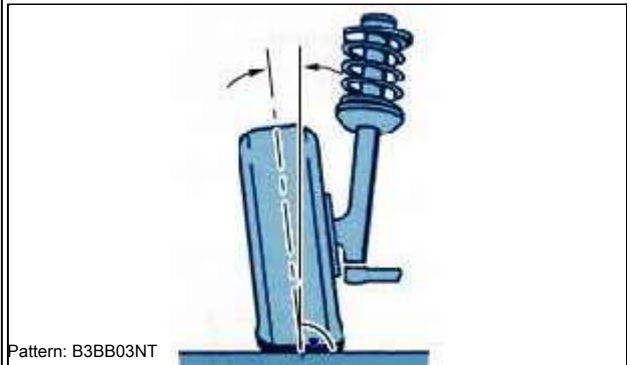
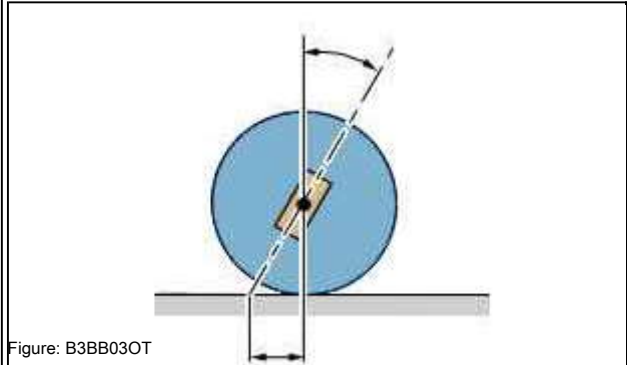
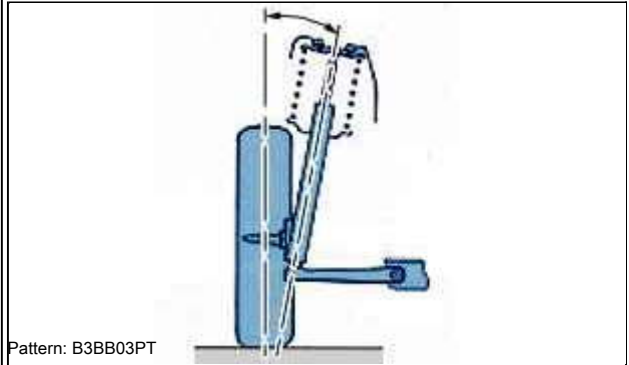
5.2. Commercial vehicle

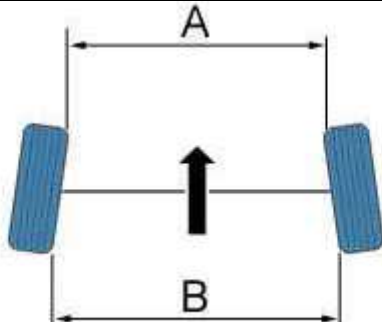
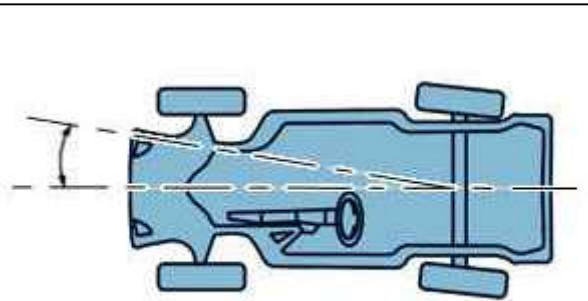
The value at the working height of the body

Accessory All types (Kromsystems "Stop and Start") Stop and start K2		
	78 mm	73 mm

6. Installation angles

Angle	Designation	Definitions
	Corner	Angle formed wheel plane vertical (Vehicle view

 <p>Pattern: B3BB03NT</p>	<p>Longitudinal angle</p>	<p>front)</p> <p>Axis angle</p>
 <p>Figure: B3BB03OT</p>	<p>tilts front wheel</p> <p>Tilt angle</p>	<p>turn the front wheel vertical (Vehicle view side)</p> <p>Axis angle</p>
 <p>Pattern: B3BB03PT</p>	<p>steering knuckle steering knuckle</p> <p>Parallelism</p>	<p>vertical, measured in transverse plane vehicle (Vehicle type front)</p> <p>Difference between dimensions B and A (Arrow direction: Front of the vehicle)</p>
	<p>wheels</p>	<p>"B" "A" greater than 0: Toe-in "B" "A" less than 0: Opening</p>

 <p>Pattern: B3BB03QT</p>		
 <p>Pattern: B3BB03RT</p>	<p>Lifting angle strength</p>	<p>Angle formed rear thrust direction longitudinal axle bridge car</p>

7. Geometry: Front axle

7.1. Front axle: Passenger car

Control values

Affiliation	All types (Except XTR VTC CRD PC equipment level and Stop and XTR	Stop and start	
	VTC CRD PC Start system)		
Camber: Left wheel (Not adjustable)	+ 0 ° 01 '(+ 0 ° 40'; 0 ° 20 ')	+ 0 ° 03 '(+ 0 ° 40'; 0 ° 20 ')	0 ° (+ 0 ° 40';
Camber: Right wheel (Not adjustable)	+ 0 ° 01 '(+ 0 ° 20'; 0 ° 40 ')	+ 0 ° 03 '(+ 0 ° 20'; 0 ° 40 ')	0 ° (+ 0 ° 20';
Longitudinal tilt of the rack	+ 4 ° 54 '(± 0 ° 30')	+ 4 ° 42 '(± 0 ° 30')	0 ° 40 ')
front wheels (Not regulated)			thirty')
Steering knuckle angle: Left wheel (Non-adjustable)	+ 11 ° 42 '(+ 0 ° 20'; 0 ° 40 ')	+ 11 ° 30 '(+ 0 ° 20'; 0 ° 40 ')	+ 11 ° 48 '(+ 0 °
Steering knuckle angle: Right wheel (unregulated)	+ 11 ° 42 '(+ 0 ° 40'; 0 ° 20 ')	+ 11 ° 30 '(+ 0 ° 40'; 0 ° 20 ')	0 ° 13'
Axis parallelism (Adjustable)	0 ° 13 '(± 0 ° 09')	(± 0 ° 09 ')	40'; 0 ° 20')
Wheel parallelism (Adjustable)	0 ° 06 '(± 0 ° 04')	0 ° 06 '(± 0 ° 04')	0 ° 13 '(± 0 °
Camber asymmetry	+ 0 ° 20 '(± 0 ° 28')	+ 0 ° 20 '(± 0 ° 28')	09 ')

		28')	
Longitudinal tilt asymmetry 0 ° (± 0 ° 20 ')		0 ° (± 0 ° 20 ')	0 ° (± 0 ° 20 ')
front wheel stands			
Tilt angle asymmetry	0 ° 20 '(± 28')	0 ° 20 '(± 28')	0 ° 20 '(± 28')
steering knuckle			

CRD = Bad road conditions. For vehicles with axles and suspension designed for use on poorly paved roads.

PC = "pack chantier". STT =

Stop and Start.

Distribute symmetrically, left wheel right wheel, global parallelism value.

7.2. Front axle: Commercial vehicle

Control values		
Affiliation	Vsetypes (Kromesystems "Stop Stop and Start and Start")	
Camber: Left wheel (unregulated) Camber: Right wheel	+ 0 ° 01 '(+ 0 ° 40'; 0 ° 20 ')	0 ° (+ 0 ° 40'; 0 ° 20')
(unregulated)	+ 0 ° 01 '(+ 0 ° 20'; 0 ° 40 ')	0 ° (+ 0 ° 20'; 0 ° 40')
The longitudinal tilt of the front wheel strut (not + 5 ° 12' ± 0 ° 30' regulated)		+ 4 ° 54 '(± 0 ° 30')
Steering knuckle angle: Left wheel (not adjustable)	+ 11 ° 42 '(+ 0 ° 20'; 0 ° 40 ')	+ 11 ° 48 '(+ 0 ° 20'; 0 ° 40 ')
Steering knuckle angle: Right wheel (not adjustable)	+ 11 ° 42 '(+ 0 ° 40'; 0 ° 20 ')	+ 11 ° 48 '(+ 0 ° 40'; 0 ° 20 ')
Axle parallelism (adjustable)	0 ° 13 '(± 0 ° 09')	0 ° 13 '(± 0 ° 09')
Wheel parallelism (adjustable)	0 ° 06 '(± 0 ° 04')	0 ° 06 '(± 0 ° 04')
Camber asymmetry	+ 0 ° 20 '(± 0 ° 28')	+ 0 ° 20 '(± 0 ° 28')
Asymmetry of the longitudinal tilt of the rack frontwheels	0 ° (± 0 ° 20 ')	0 ° (± 0 ° 20 ')
Asymmetry of the angle of inclination of the steering knuckle	0 ° 20 '(± 0 ° 28')	0 ° 20 '(± 0 ° 28')
Distribute symmetrically, left wheel right wheel, global parallelism value.		

8. Geometry: Rear axle

8.1. Rear axle: Passenger car

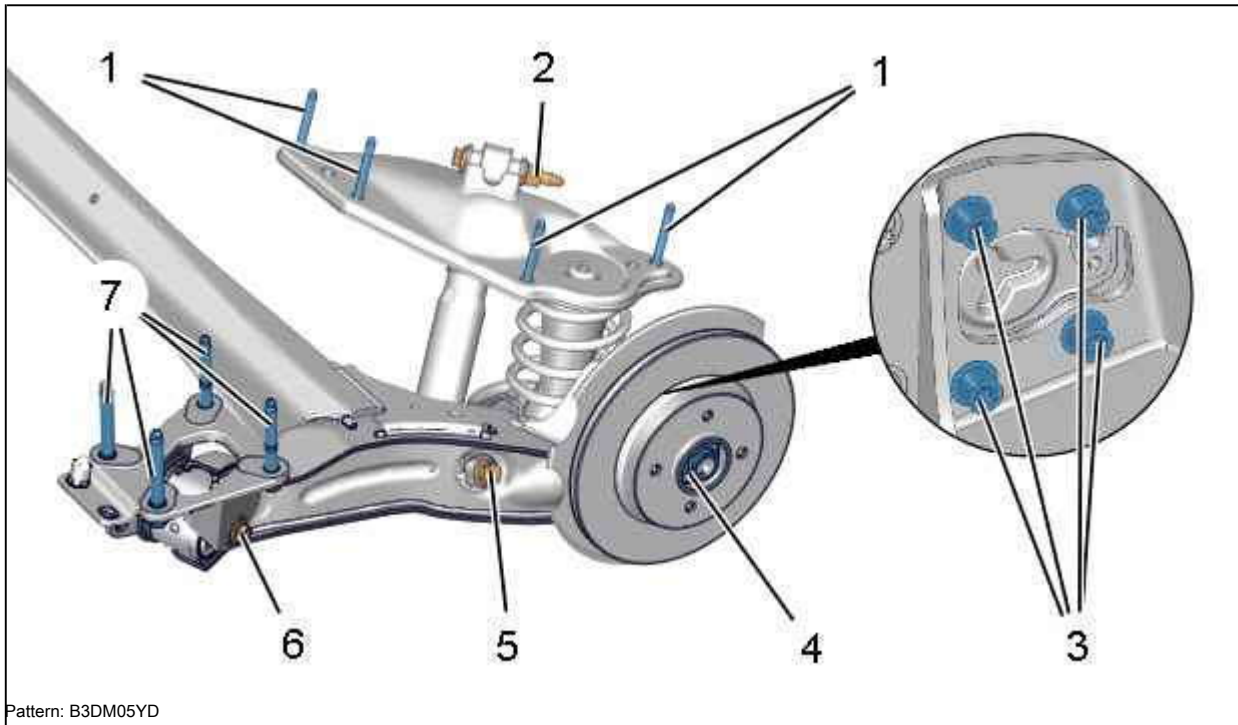
Control values			
Affiliation	All types (Except XTR VTC CRD Equipment level XTR Stop and PC and Stop and Start systems)		
Camber (not regulated)	1 ° 42 '(± 0 ° 30')	VTC CRD PC 1 ° 44 '(± 0 ° 30')	start 1 ° 46 '(± 0 ° 30 ')
Lift angle	0 ° (± 0 ° 10 ')	0 ° (± 0 ° 10 ')	0 ° (± 0 ° 10 ')
Axis parallelism (not regulated)	+ 0 ° 52 '(± 0 ° 09')	+ 0 ° 48 '(± 0 ° 09')	+ 0 ° 53 '(± 0 ° 09 ')
Wheel parallelism (not + 0 ° 26 '(± 0 ° 04') regulated)		+ 0 ° 24 '(± 0 ° 04')	+ 0 ° 27 '(± 0 ° 04 ')
Camber asymmetry 0 ° (± 0 ° 20 ')		0 ° (± 0 ° 20 ')	0 ° (± 0 ° 20 ')
CRD = for difficult road conditions PC = "pack chantier"			20')

8.2. Rear axle: Commercial vehicle

Control values		
Affiliation	Vsetypes (Kromesystems "Stop and Start") Stop and start	

Camber (not adjustable)	1 ° 44 '(± 0 ° 30')	1 ° 43 '(± 0 ° 30')
Lift angle	0 ° (± 0 ° 10 ')	0 ° (± 0 ° 10 ')
Axis parallelism (not adjustable)	0 ° 55 '(± 0 ° 09')	0 ° 57 '(± 0 ° 09')
Wheel parallelism (not adjustable) 0 ° 28 '(± 0 ° 04')		0 ° 28 '(± 0 ° 04')
Camber asymmetry	0 ° (± 0 ° 20 ')	0 ° (± 0 ° 20 ')

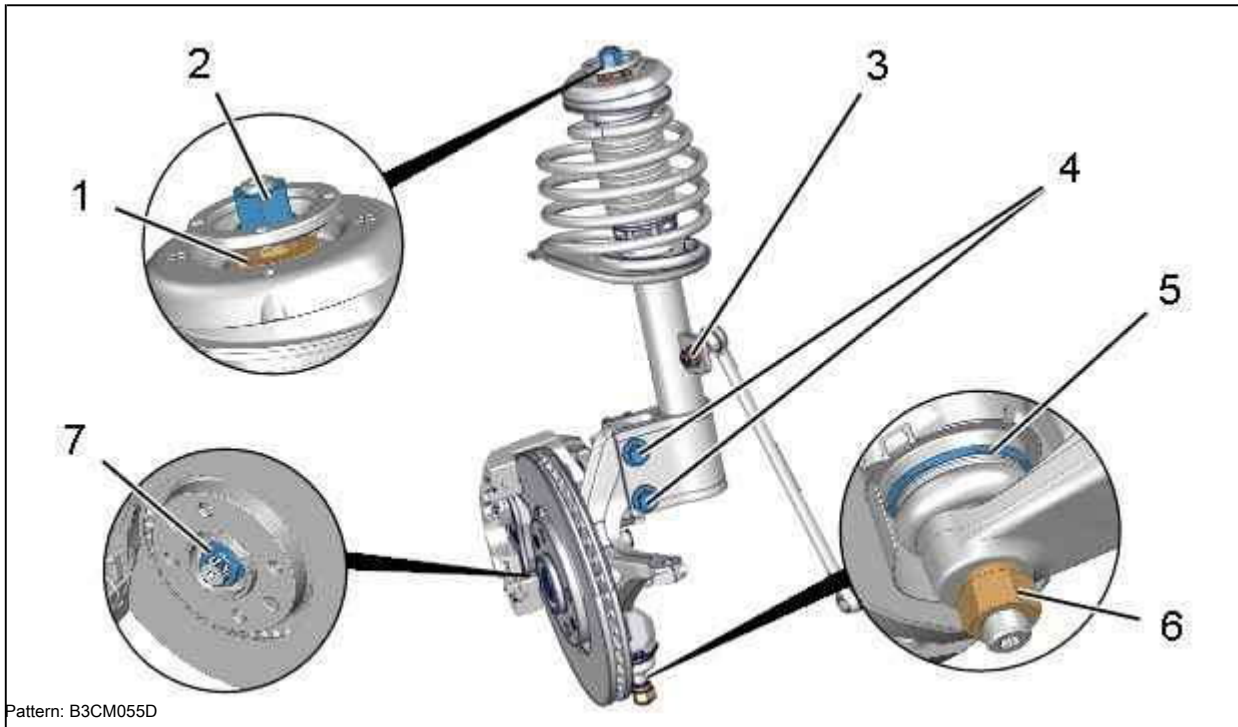
TIGHTENING TORQUES: REAR AXLE



Pattern: B3DM05YD

Label Designation		Torque
(1)	Mount the upper shock absorber cup	4.5 da.Nm
(2)	Shock absorber upper fastening	12.1 da.Nm
(3)	Attaching the reaction rod to the rear suspension 11 da.Nm Rear hub nut	
(4)		30 da.Nm
(five)	Lower fastening of the shock absorber	19 da.Nm
(6)	Rear suspension support	11.5 da.Nm
(7)	Mounting the rear suspension to the body	11.5 da.Nm

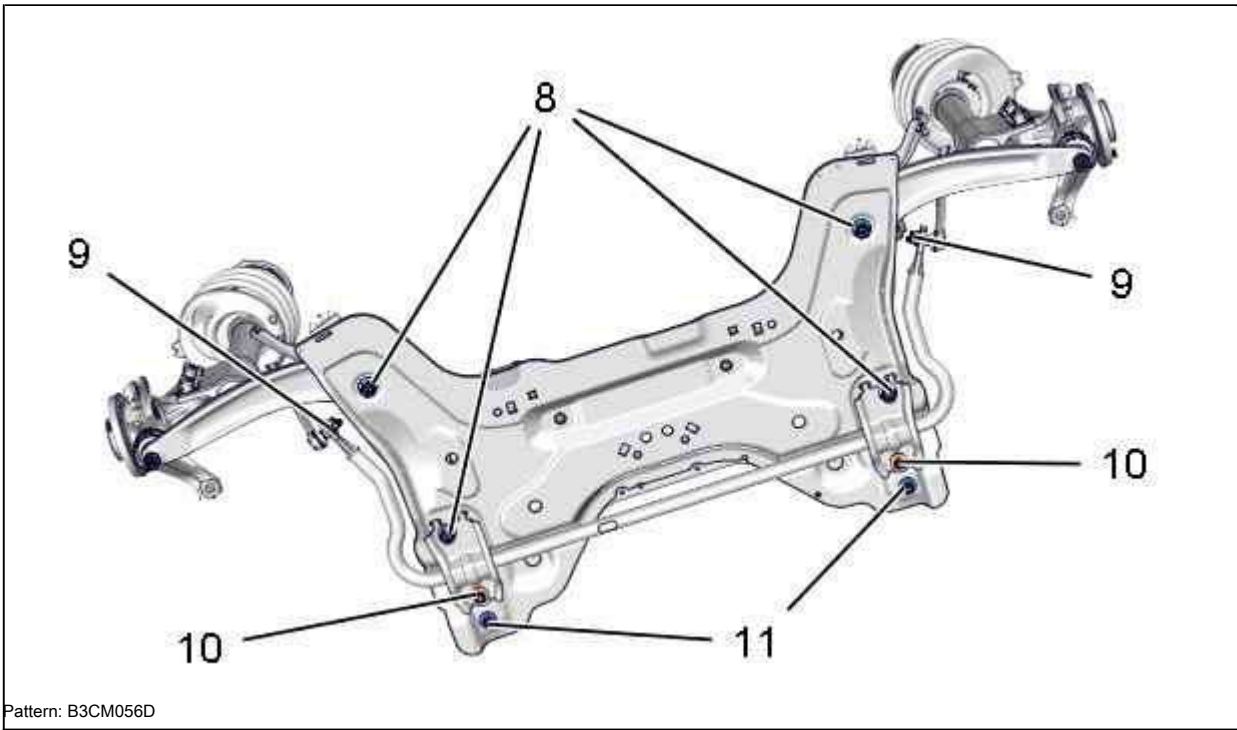
TIGHTENING TORQUES: FRONT AXLE



Label Designation

Torque

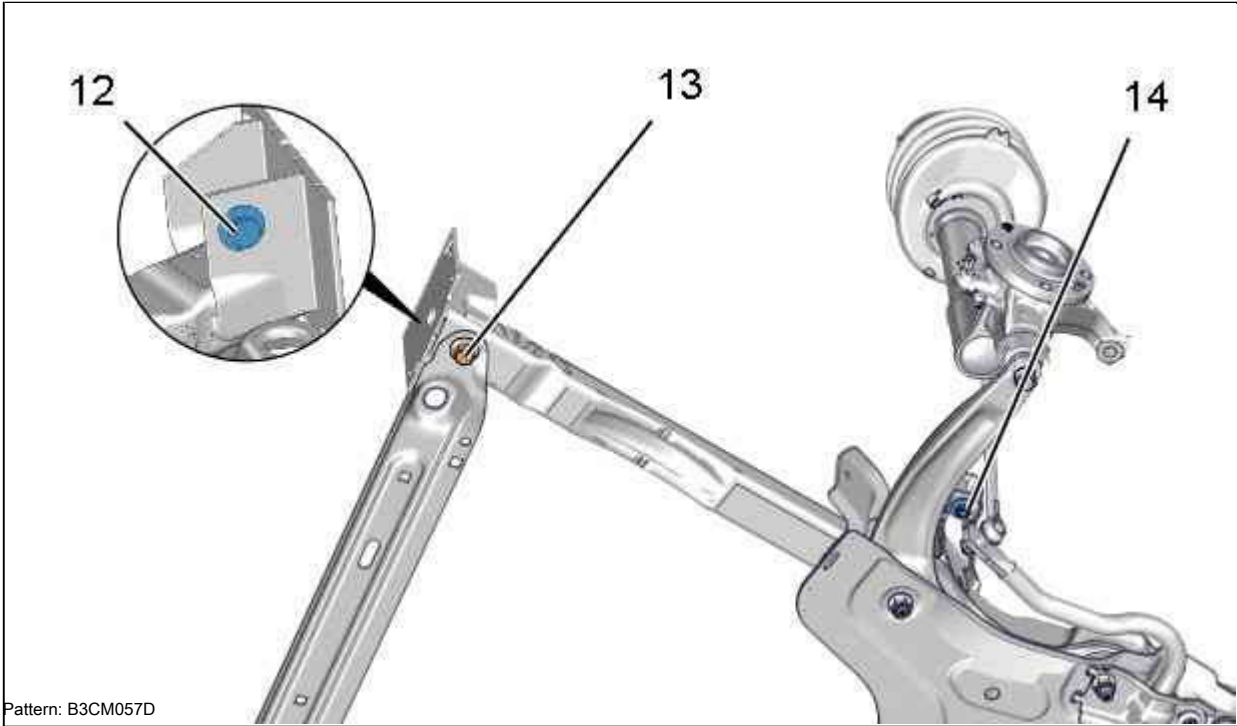
(1)	Nut for fastening the upper support of the shock absorber nut	6.9 da.Nm
(2)	Fastening the support element to the body	6.9 da.Nm
(3)	nut Upper attachment of the anti-roll bar support 4 da.Nm bolts Attachment of the support element	
(4)		8 da.Nm
(five)	Attachment of the lower hinge to the steering knuckle	23 da.Nm
(6)	nut of fastening of the lower joint of the swivel knuckle	4.2 da.Nm
(7)	nut hub	32.5 da.Nm



Label Designation

Torque

(eight)	nut Fastening the suspension arm to the subframe	11.1 da.Nm
(nine)	nut Bottom fastening of the anti-roll bar support 4 da.Nm bolts Bracket for the anti-roll bar	
(ten)		10 da.Nm
(eleven)	Front subframe retaining bolt	9.8 da.Nm



Label Designation

Torque

--	--	--

(12)	bolt attachment of the subframe extensions	5 da.Nm
(13)	bolts Fastening the front lower cross member of the subframe 5 da.Nm Bolt of the front	
(fourteen)	subframe	9.8 da.Nm

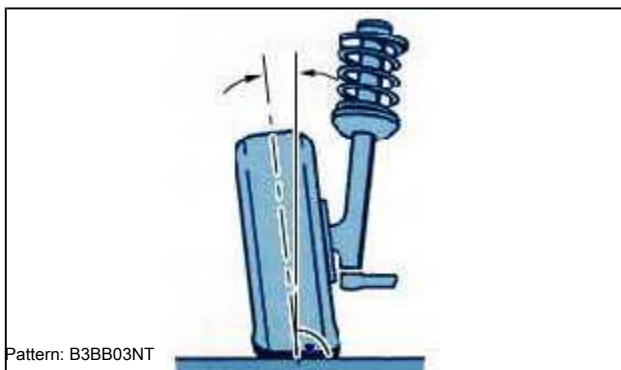
TECHNICAL REMARK: FRONT AND REAR AXLE GEOMETRY

ATTENTION : To check all angles (caster angles, camber, parallelism), it is necessary to put the car in the working position).

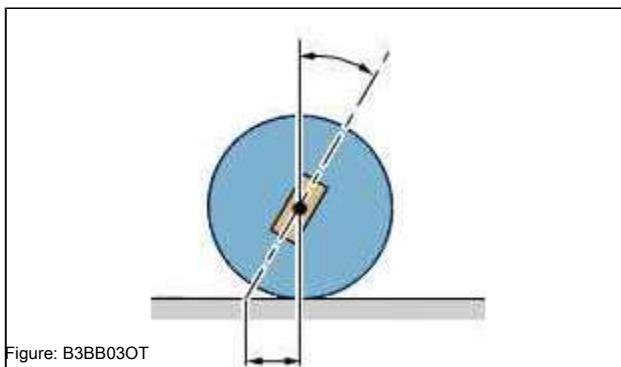
Distribute symmetrically, left wheel right wheel, global parallelism value.

NOTE: PC = "pack chantier" VTC = Off-road vehicle CRD = for difficult road conditions STT = Stop and start.

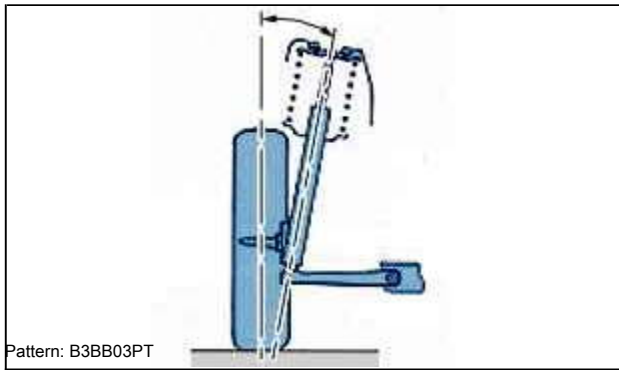
1. Installation angles



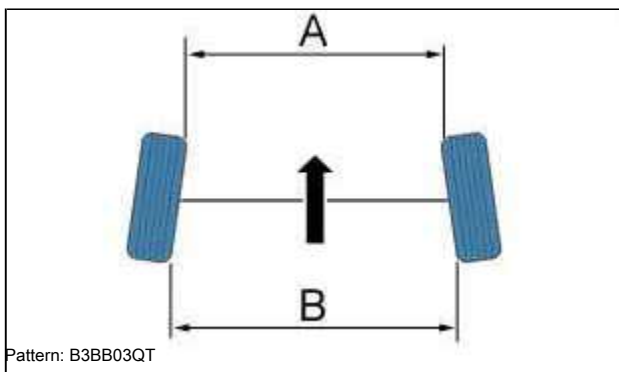
Camber: The angle formed by the plane of the wheels with the vertical (Front view of the vehicle).



Front wheel strut angle: The angle formed by the vertical axis of the front wheel (Vehicle side view).

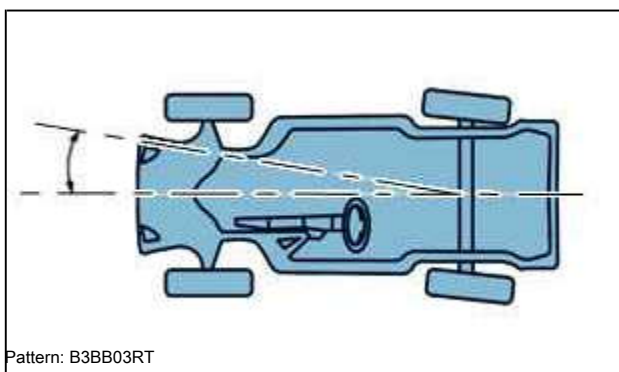


Steering knuckle angle: The angle formed by the steering knuckle axis with the vertical, measured in the transverse plane of the vehicle (Front view of the vehicle).



Parallelism of wheels: Difference between dimensions A and B (Front of vehicle: In direction of arrow).

A < B: Toe-in. A > B:
Opening.



Lift angle: The angle formed by the direction of thrust of the rear axle with the longitudinal axis of the vehicle.

2.107

2.1. Front axle

Front wheel tilt asymmetry $0^\circ 30'$. The camber asymmetry is less than $0^\circ 30'$.

Values to check and adjust

Camber (not adjustable)	0 ° 47 '± 0 ° 45'
Front wheel strut longitudinal tilt (not adjustable) 2 ° 47 '± 0 ° 45'	
Steering knuckle angle (not adjustable)	9 ° 33'
Parallelism of wheels	0 ° 07 '± 0 ° 12'
Steering angle	38 ° 55 '± 2 °

2.2. Rear axle

The camber asymmetry is less than 0 ° 30 '.

Values to check and adjust

Camber (not adjustable)	0 ° 56 '± 0 ° 30'
Parallelism of wheels (not adjustable) 0 ° 21 '± 0 ° 13'	

3. ION

3.1. Front axle

Front wheel tilt asymmetry 0 ° 30 '. The camber asymmetry is less than 0 ° 30 '.

Values to check and adjust

Camber (not adjustable)	0 ± 0 ° 45 '
Front wheel strut longitudinal tilt (not adjustable) 3 ° 30 '± 0 ° 45'	
Steering knuckle angle (not adjustable)	15 ° 20 '± 1 ° 30'
Axis parallelism	0 ° 26 '± 0 ° 26'
Wheel parallelism	0 ° 13 '± 0 ° 13'

3.2. Rear axle

The camber asymmetry is less than 0 ° 30 '.

Values to check and adjust

Camber (not adjustable) 0 ° 00 '± 0 ° 45'	Axle parallelism
	0 ° 26 '± 0 ° 26'
Wheel parallelism	0 ° 13 '± 0 ° 13'

4.1206+ (T3 for Europe)

4.1. Front axle

The camber asymmetry is less than 0 ° 20 '.

Front wheel tilt asymmetry 0 ° 20 '. Rotor angle asymmetry less than 0 ° 20 '.

Version	All other than	Cars in version
	CRD	CRD
Camber (not adjustable)	0 ° ± 0 ° 30'	
Front wheel strut longitudinal tilt (not adjustable)	3 ° ± 0 ° 30'	2 ° 54 '± 0 ° 30'
Steering knuckle angle (not adjustable)	9 ° 42 '± 0 ° 30'	9 ° 12 '± 0 ° 30'
Axis parallelism	0 ° ± 0 ° 09'	0 ° 13 '± 0 ° 09'
Wheel parallelism	0 ° ± 0 ° 04'	0 ° 06 '± 0 ° 04'

4.2. Rear axle

Camber asymmetry less than 0 ° 20 '.

Version	All except Cars in version Commercial CRD		
		CRD	cars
Lift angle	0 ° ± 0 ° 06'		
Camber (not adjustable)	1 ° ± 0 ° 30'		
Axis parallelism (not regulated)	0 ° 29' ± 0 ° 09'	0 ° 17' ± 0 ° 09'	0 ° 36' ± 0 ° 09'
Wheel parallelism (not regulated)	0 ° 15' ± 0 ° 04'	0 ° 08' ± 0 ° 04'	0 ° 18' ± 0 ° 04'

5.206 (T3Mercosur China)

5.1. Front axle

Camber asymmetry less than 0 ° 20'.

The asymmetry of the tilt of the cornice is less than 0 ° 20'.

Rotor angle asymmetry less than 0 ° 20'.

Values to check and adjust: Sedan with 3 or 5 doors (Bromotor DW10)

pneumatics	185/65 R14	185/65 R14	185/60 R15	175/65 R14
Steering	No Boost Assisted		Assisted	No gain
Camber (Unregulated)	+ 0 ° 06' (± 0 ° + 0 ° 06' (± 0 ° 30')		+ 0 ° 06' (± 0 °	+ 0 ° 06' (± 0 °
		thirty')	thirty')	thirty')
Front wheel strut longitudinal tilt (Non-adjustable)	+ 2 ° 06' (± 0 ° + 3 ° 06' (± 0 ° 30')		+ 3 ° 12' (± 0 °	+ 2 ° 06' (± 0 °
		thirty')	thirty')	thirty')
Steering knuckle angle (Non-adjustable)	+ 9 ° 18' (± 0 ° + 9 ° 18' (± 0 ° 30')		+ 9 ° 18' (± 0 °	+ 9 ° 18' (± 0 °
		thirty')	thirty')	thirty')
Axis parallelism (adjustable)	0 ° (± 0 ° 09')	0 ° (± 0 ° 09')	0 ° (± 0 ° 09')	+ 0 ° 13' (± 0 °
				09')
Wheel parallelism (adjustable)	0 ° (± 0 ° 04')	0 ° (± 0 ° 04')	0 ° (± 0 ° 04')	+ 0 ° 06' (± 0 °
				04')

Values to check and adjust: Sedan with 3 or 5 doors (Engine DW10)

pneumatics	185/65 R14	185/60 R15
Camber (Unregulated)	+ 0 ° 06' (± 0 ° 30') + 0 ° 06' (± 0 ° 30')	
Front wheel strut longitudinal tilt (Non-adjustable) + 3 ° 06' (± 0 ° 30') + 3 ° 12' (± 0 ° 30')		
Steering knuckle angle (Non-adjustable)	+ 9 ° 18' (± 0 ° 30') + 9 ° 18' (± 0 ° 30') 0 ° 09' (± 0 ° 09') 0 ° 09' (± 0 ° 09') 0 ° 04' (± 0 ° 04') 0 ° 04' (+ 0 ° 04')	
Axle parallelism (adjustable)		
Wheel parallelism (adjustable)		

Values to check and adjust: Estate, Sedan 4 doors.

pneumatics	185/65 R14	185/60 R15
Camber (not adjustable)	+ 0 ° 06' (± 0 ° 30') + 0 ° 06' (± 0 ° 30')	
The longitudinal tilt of the front wheel strut (not adjustable) + 3 ° 06' (± 0 ° 30') + 3 ° 12' (± 0 ° 30')		
Steering knuckle angle (not adjustable)	+ 9 ° 18' (± 0 ° 30') + 9 ° 18' (± 0 ° 30') 0 ° 13' (± 0 ° 09') 0 ° 13' (± 0 ° 09') 0 ° 06' (± 0 ° 04') 0 ° 06' (+ 0 ° 04')	
Axle parallelism (adjustable)		
Wheel parallelism (adjustable)		

Values to check and adjust: Escapade Universal

Camber (not adjustable)	+ 0 ° 12' (± 0 ° 30')
The longitudinal tilt of the front wheel strut (not adjustable) + 3 ° 06' (± 0 ° 30')	
Steering knuckle angle (not adjustable)	+ 9 ° (± 0 ° 30')
Axle parallelism (adjustable)	0 ° 13' (± 0 ° 09')
Wheel parallelism (adjustable)	0 ° 06' (± 0 ° 04')

5.2. Rear axle

Camber asymmetry less than $0^{\circ} 20'$.

Body type	Sedan c3 or 5	Station wagon Sedan 4	Station wagon dv.
	doors		Escapade
Lift angle	$0^{\circ} (\pm 0^{\circ} 06')$	$0^{\circ} (\pm 0^{\circ} 06')$	$0^{\circ} (\pm 0^{\circ} 06')$
Camber (not adjustable)	$1^{\circ} 30' (\pm 0^{\circ} 30')$	$1^{\circ} 30' (\pm 0^{\circ} 30')$	$1^{\circ} 30' (\pm 0^{\circ} 30')$
Axis parallelism (not regulated)	$+ 0^{\circ} 13' (\pm 0^{\circ} 09')$	$+ 0^{\circ} 46' (\pm 0^{\circ} 09')$	$+ 0^{\circ} 45' (\pm 0^{\circ} 09')$
Wheel parallelism (not regulated)	$+ 0^{\circ} 06' (\pm 0^{\circ} 04')$	$+ 0^{\circ} 23' (\pm 0^{\circ} 04')$	$+ 0^{\circ} 22' (\pm 0^{\circ} 04')$

6.206 PICKUP (T34Mercosur China)

6.1. Front axle

Camber asymmetry less than $0^{\circ} 20'$.

The asymmetry of the tilt of the cornice is less than $0^{\circ} 20'$.

Rotor angle asymmetry less than $0^{\circ} 20'$.

Values to check and adjust					
pneumatics	185/65 R15 175/70 R14 175/70 R14 175/65 R14 175/65 R14				
Steering		Without	Assisted	Without	Assisted
		amplification		amplification	
Camber (Unregulated)	$+ 0^{\circ} 06' (\pm 0^{\circ} + 0^{\circ} 06' (\pm 0^{\circ} 30'))$		$+ 0^{\circ} 06' (\pm 0^{\circ} + 0^{\circ} 06' (\pm 0^{\circ} 30'))$		$+ 0^{\circ} 06' (\pm 0^{\circ} + 0^{\circ} 06' (\pm 0^{\circ} 30'))$
Front Wheel Strut Caster (Non-adjustable)	$+ 3^{\circ} 30' (\pm 0^{\circ} + 3^{\circ} 12' (\pm 0^{\circ} 30'))$		$+ 2^{\circ} 18' (\pm 0^{\circ} + 3^{\circ} 06' (\pm 0^{\circ} 30'))$		$+ 2^{\circ} 12' (\pm 0^{\circ} + 3^{\circ} 06' (\pm 0^{\circ} 30'))$
Steering knuckle angle (Not regulated)	$+ 9^{\circ} 12' (\pm 0^{\circ} + 9^{\circ} 12' (\pm 0^{\circ} 30'))$		$+ 9^{\circ} 12' (\pm 0^{\circ} + 9^{\circ} 12' (\pm 0^{\circ} 30'))$		$+ 9^{\circ} 12' (\pm 0^{\circ} + 9^{\circ} 12' (\pm 0^{\circ} 30'))$
Axis parallelism (adjustable)	$0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09')$		$+ 0^{\circ} 13' (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09')$		$+ 0^{\circ} 13' (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09') 0^{\circ} (\pm 0^{\circ} 09')$
Wheel parallelism (adjustable)	$0^{\circ} 04' (\pm 0^{\circ} 04') 0^{\circ} (\pm 0^{\circ} 04') 0^{\circ} (\pm 0^{\circ} 04') 0^{\circ} (\pm 0^{\circ} 04') 0^{\circ} (\pm 0^{\circ} 04') 0^{\circ} (\pm 0^{\circ} 04')$		$+ 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06')$		$+ 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06') + 0^{\circ} 06' (\pm 0^{\circ} 06')$

6.2. Rear axle

Camber asymmetry less than $0^{\circ} 20'$.

Values to check and adjust	
Lift angle	$0^{\circ} (\pm 0^{\circ} 06')$
Camber (not adjustable)	$1^{\circ} 18' (\pm 0^{\circ} 30')$
Axis parallelism (not adjustable)	$+ 0^{\circ} 56' (\pm 0^{\circ} 09')$
Wheel parallelism (not adjustable) $+ 0^{\circ} 28' (\pm 0^{\circ} 04')$	

7.206 (T3 Iran)

7.1. Front axle

Camber asymmetry less than $0^{\circ} 20'$.

The asymmetry of the tilt of the cornice is less than $0^{\circ} 20'$.

Rotor angle asymmetry less than $0^{\circ} 20'$.

Values to check and adjust	
Camber (not adjustable)	$0^{\circ} 07' \pm 0^{\circ} 30'$
Front wheel strut longitudinal tilt (not adjustable) $2^{\circ} 54' \pm 0^{\circ} 30'$	
Steering knuckle angle (not adjustable)	$9^{\circ} 12' \pm 0^{\circ} 30'$

Axle parallelism (adjustable)	0 ° 13 '± 0 ° 09'
Wheel parallelism (adjustable)	0 ° 06 '± 0 ° 04'

7.2. Rear axle

Camber asymmetry less than 0 ° 20 '.

Values to check and adjust

Lift angle	0 ° ± 0 ° 06 '
Camber (not adjustable)	1 ° ± 0 ° 30 '
Axis parallelism (not adjustable)	0 ° 17 '± 0 ° 09'
Wheel parallelism (not adjustable) 0 ° 08 '± 0 ° 04'	

8.207 (A7)

8.1. Front axle

Camber asymmetry less than 0 ° 30 '.

The asymmetry of the tilt of the cornice is less than 0 ° 30 '.

European car		Cars in CRD version		
Engines	TypeTU3, EP3,	TypeDV6,	TypeTU3,	TypeDV4, DV6,
	DV4 and ET3	EP6 and TU5	EP3 and ET3	EP6 and TU5
Camber (not adjustable)	0 ° 31 '± 0 ° 30'	0 ° 33 '± 0 ° 30' 0 ° 29'	± 0 ° 30' 0 ° 31 '± 0 ° 30' 4 ° 39 '± 0 °	
Front wheel strut longitudinal tilt (not adjustable)	4 ° 38 '± 0 ° 18'	18'	4 ° 34 '± 0 ° 18'	
Steering knuckle angle (not regulated)	11 ° 26 '± 0 ° 30'	11 ° 28 '± 0 ° 30' 11 °	16 '± 0 ° 30' 11 ° 17 '± 0 ° 30'	
Axis parallelism	0 ° 17 '± 0 ° 09'			
Wheel parallelism	0 ° 09 '± 0 ° 04'			
Vehicle type	Commercial		Car body type	
Engines	car		station wagon	OUTDOOR
	TU3, DV4 and ET3	DV6	All types	
Camber (not adjustable)	0 ° 31 '± 0 ° 30'	0 ° 33 '±	0 ° 31 '± 0 ° 30'	
		0 ° 30'		
Front wheel strut longitudinal tilt (not adjustable)	4 ° 38 '± 0 ° 18'	4 ° 39 '±	4 ° 34 '± 0 ° 18'	
		0 ° 18'		
Steering knuckle angle (not regulated)	11 ° 26 '± 0 ° 30'	11 ° 28 '±	11 ° 17 '± 0 ° 30'	
		0 ° 30'		
Axis parallelism	0 ° 17 '± 0 ° 09'			
Wheel parallelism	0 ° 09 '± 0 ° 04'			
Vehicle type	EngineDV6 Version 99 grams CO2 / km			
Camber (not adjustable)	0 ° 33 '± 0 ° 30'			
Front wheel strut longitudinal tilt (not adjustable)	4 ° 41 '± 0 ° 18'			
Steering knuckle angle (not adjustable)	11 ° 32 '± 0 ° 30'			
Axis parallelism	0 ° 17 '± 0 ° 09'			
Wheel parallelism	0 ° 09 '± 0 ° 04'			

8.2. Rear axle

Camber asymmetry less than 0 ° 30 '.

Vehicle type	European	Cars in	Commercial	By car
	car	CRD versions	car	wagon type

OUTDOOR				
Camber (not regulated)	1 ° 42 '± 0 ° 30'			
Axis parallelism (not 0 ° 43 '± 0 ° 09' regulated)	0 ° 38 '± 0 ° 09'	0 ° 49 '± 0 ° 09'	0 ° 36 '± 0 ° 09'	
Parallelism	0 ° 21 '± 0 ° 04'	0 ° 19 '± 0 ° 04'	0 ° 24 '± 0 ° 04'	0 ° 18 '± 0 ° 04'
wheels (not regulated)				
Vehicle type	EngineDV6 Version 99 grams CO2 / km			

Camber (not adjustable)	1 ° 42 '± 0 ° 30'
Axis parallelism (not adjustable)	0 ° 45 '± 0 ° 09'
Wheel parallelism (not adjustable) 0 ° 22 '± 0 ° 04'	

9.1007

9.1. Front axle

Values to check and adjust

pneumatics	175/65 R14	185/60 R15 195/50 R16
Camber	0 ° 24 '± 0 ° 30' 0 ° 26 '± 0 ° 30'	
Longitudinal tilt of the front wheel strut 3 ° 54 '± 0 ° 18' 3 ° 55 '± 0 ° 18'		
Steering knuckle angle	11 ° 16 '± 0 ° 30' 11 ° 21 '± 0 ° 30' 0 ° 08 '±	
Wheel parallelism	0 ° 04'	

9.2. Rear axle

Values to check and adjust

pneumatics	175/65 R14	185/60 R15 195/50 R16
Wheel parallelism 0 ° 23 '± 0 ° 04'	0 ° 24 '± 0 ° 04'	
Camber	1 ° 29 '± 0 ° 18' 1 ° 30 '± 0 ° 18'	

10.308 (T7)

10.1. Front axle

Body asymmetry is 0 ° 12 ± 0 ° 28 '. The chassis

asymmetry is 0 ° ± 0 ° 20 '.

The steering knuckle asymmetry is 0 ° 12 ± 28 '.

Hatchback	For Europe (Except	Cars in	Engines	STT
	EP6DTS engines EP6CDTX)	CRD versions	EP6DTS and EP6CDTX	
Camber: Left wheel (not adjustable)	0 ° 18 '(+ 0 ° 36'; 0 ° 24)	0 ° 12 '(+ 0 ° 36'; 0 ° 0 ° 24)	0 ° 24 '(+ 0 ° 36'; 0 ° 24)	0 ° 24 '(+ 0 ° 36'; 0 ° 24)
Camber: Right wheel (not adjustable)	0 ° 18 '(+ 0 ° 24'; 0 ° 36')	0 ° 12 '(+ 0 ° 24'; 0 ° 0 ° 24)	0 ° 24 '(+ 0 ° 24'; 0 ° 36')	0 ° 24 '(+ 0 ° 24'; 0 ° 36')
Longitudinal tilt of the rack front wheels (not regulated)	5 ° 12 '± 0 ° 30'	5 ° 06 ± 0 ° 30'	5 ° 12 '± 0 ° 30'	+ 5 ° 06 ± 0 ° thirty'
Steering knuckle angle: Left wheel (unregulated)	12 ° 54 '(+ 0 ° 24'; 0 ° 36')	12 ° 42 '(+ 0 ° 24'; 13 ° 12'	(+ 0 ° 24'; 0 ° + 13 ° 06 '(+ 36')	0 ° 24'; 0 ° 36')
Steering knuckle angle: Right wheel (not	12 ° 54 '(+ 0 ° 36'; 0 ° 24')	12 ° 42 '(+ 0 ° 36'; 0 ° 13 ° 24)	2' (+ 0 ° 36'; 0 ° + 13 ° 06' (+ 24')	0 ° 36'; 0 °

regulated)			24 ')
Axis parallelism	0 ° 21 ± 0 ° 09		
Wheel parallelism	0 ° 11 ± 0 ° 04		
Station wagon	For Europe (Except	Cars in	Engine
	EP6DTS engines EP6CDTX)	CRD versions	EP6DTS
Camber: Left wheel (not adjustable)	0 ° 18 (+ 0 ° 36'; 0 ° 24) 0 ° 18'	0 ° 12 (+ 0 ° 36'; 0 °	0 ° 24 (+ 0 ° 36'; 0 °
Camber: Right wheel (not adjustable)	(+ 0 ° 24'; 0 ° 36') 5 ° ± 0 ° 30 '	24)	24')
Longitudinal tilt of the rack		0 ° 12 '(+ 0 ° 24'; 0 ° 36 ')	0 ° 24 '(+ 0 ° 24'; 4 ° 54
front wheels (unregulated)		5 ° 06' ± 0 ° 30'	0 ° 36 ')
Steering knuckle angle: Left wheel (not adjustable)	12 ° 54 '(+ 0 ° 24'; 0 ° 36 ')	12 ° 42 '(+ 0 ° 24'; 0 ° 36 ')	13 ° 06 '(+ 0 ° 24'; 0 ° 36
Steering knuckle angle: Right wheel (not adjustable)	54' (+ 0 ° 36'; 0 ° 24')	12 ° 42 '(+ 0 ° 36'; 0 ° 24 '))
Axis parallelism	0 ° 21 '± 0 ° 09'		13 ° 06 '(+ 0 ° 36'; 0 ° 24
Wheel parallelism	0 ° 11 ± 0 ° 04')
Version	Kupecabriolet	Utilitarian (for transportation	
		cargo)	
Camber: Left wheel (unregulated) Camber: Right wheel	0 ° 24 '(+ 0 ° 36'; 0 ° 24 ')	0 ° 18 '(+ 0 ° 36'; 0 ° 24 ')	0 ° 18'
(unregulated)	0 ° 24 '(+ 0 ° 24'; 0 ° 36 ')	(+ 0 ° 24'; 0 ° 36') 5 ° 42' ± 0 °	
Front wheel strut longitudinal tilt (not adjustable)	5 ° 12' ± 0 ° 30'	30'	
Steering knuckle angle: Left wheel (not adjustable)	13 ° 12 '(+ 0 ° 24'; 0 ° 36 ')	12 ° 54 '(+ 0 ° 24'; 0 ° 36 ')	12 °
Steering knuckle angle: Right wheel (not adjustable)	13 ° 12 '(+ 0 ° 36'; 0 ° 24 ')	54' (+ 0 ° 36'; 0 ° 24')	
Axis parallelism	0 ° 17' ± 0 ° 09'	0 ° 21' ± 0 ° 09'	
Wheel parallelism	0 ° 09' ± 0 ° 04'	0 ° 11' ± 0 ° 04'	

10.2. Rear axle

Body asymmetry is 0 ° ± 0 ° 20 '.

Hatchback	For Europe (Except	Cars in	Engines EP6DTS STT
	EP6DTS engines EP6CDTX)	CRD versions	and EP6CDTX
Camber (not regulated)	1 ° 42' ± 0 ° 30'		
Axis parallelism (not regulated)	0 ° 55' ± 0 ° 09'	0 ° 51' ± 0 ° 09'	0 ° 58' ± 0 ° 09'
Wheel parallelism (not 0 ° 28' ± 0 ° 04 regulated)		0 ° 25' ± 0 ° 04'	0 ° 29' ± 0 ° 04'
Lift angle	0 ° ± 0 ° 10 '		
Station wagon	For Europe (Except	Cars in version	Engine
	EP6DTS engine)	CRD	EP6DTS
Camber (not adjustable) 1 ° 42' ± 0 ° 30'			
Axis parallelism (not regulated)	0 ° 51' ± 0 ° 09'		0 ° 53' ± 0 ° 09'
Wheel parallelism (not regulated)	0 ° 25' ± 0 ° 04'	0 ° 25' ± 0 ° 04'	0 ° 27' ± 0 ° 04'
Lift angle	0 ° ± 0 ° 10 '	0 ° ± 0 ° 10 '	0 ° ± 0 ° 10 '

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Kupekabriolet Utility (for the carriage of goods)

Camber (not adjustable)	1 ° 42 '± 0 ° 30'	
Axis parallelism (not adjustable)	0 ° 58 '± 0 ° 09'	1 ° 04 '± 0 ° 09'
Wheel parallelism (not adjustable) 0 ° 29 '± 0 ° 04'		0 ° 31 '± 0 ° 04'
Lift angle	0 ° ± 0 ° 10 '	

11. RCZ

11.1. Front axle

Camber asymmetry (left / right): 0 ° ± 0 ° 28 '.

Asymmetry of the longitudinal tilt of the front wheel 0 ° ± 0 ° 20 '. Steering knuckle angle

asymmetry 0 ° ± 0 ° 28 '.

Values to check and adjust

Camber: (not adjustable)	0 ° 24 '± 0 ° 30'
Front wheel strut longitudinal tilt (not adjustable) 5 ° 24 '± 0 ° 30'	
Steering knuckle angle (not adjustable)	13 ° 12 '± 0 ° 30'
Axis parallelism	0 ° 21 '± 0 ° 09'
Wheel parallelism	0 ° 11 '± 0 ° 04'

11.2. Rear axle

Wheel camber asymmetry 0 ° ± 0 ° 20 '.

Values to check and adjust

Camber (not adjustable) 1 ° 42 '± 0 ° 30'	Axle parallelism
	0 ° 47 '± 0 ° 10'
Lift angle	0 ° ± 0 ° 10 '

12.3008

12.1. Front axle

Body asymmetry is 0 ° 12 ± 28 '. The chassis

asymmetry is 0 ° ± 20 '.

The steering knuckle asymmetry is 0 ° 12 ± 28 '.

Values to check and adjust: Vehicles without hybrid drive

Camber: Left wheel (not adjustable)	0 ° 12 '(+ 0 ° 36'; 0 ° 24 ')
Camber: Right wheel (unregulated)	0 ° 12 '(+ 0 ° 24'; 0 ° 36 ')
Front wheel strut longitudinal tilt (not adjustable) 4 ° 54 '± 0 ° 30'	
Steering knuckle angle: Left wheel (unadjustable) Steering knuckle angle: Right wheel (unadjustable) Axle parallelism	12 ° 42 '(+ 0 ° 24'; 0 ° 36 ') 12 °
	42' (+ 0 ° 36 '; 0 ° 24') 0 ° 21 '± 0
	° 09'
Wheel parallelism	0 ° 11 '± 0 ° 04'

Values to check and adjust: Vehicles with hybrid drive

Camber: Left wheel (not adjustable)	0 ° 12 '(+ 0 ° 36'; 0 ° 24 ')
Camber: Right wheel (unregulated)	0 ° 12 '(+ 0 ° 24'; 0 ° 36 ')
Front wheel strut longitudinal tilt (not adjustable) 4 ° 36 '± 0 ° 30'	
Steering knuckle angle: Left wheel (unadjustable) Steering knuckle angle: Right wheel (unadjustable) Axle parallelism	12 ° 42 '(+ 0 ° 24'; 0 ° 36 ') 12 °
	42' (+ 0 ° 36 '; 0 ° 24') 0 ° 21 '± 0
	° 09'
Wheel parallelism	0 ° 11 '± 0 ° 04'

12.2. Rear axle

Body asymmetry is $0^\circ \pm 20'$.

Values to check and adjust: Vehicles without hybrid drive

Camber (not adjustable)	$1^\circ 48' \pm 0^\circ 30'$
Axis parallelism (not adjustable)	$0^\circ 54' \pm 0^\circ 10'$
Wheel parallelism (not adjustable)	$0^\circ 27' \pm 0^\circ 05'$
Lift angle	$0^\circ \pm 0^\circ 10'$

Values to check and adjust: Vehicles with hybrid drive

Camber (not adjustable)	$1^\circ 55' \pm 0^\circ 30'$
Axis parallelism (not adjustable)	$0^\circ 43' \pm 0^\circ 09'$
Wheel parallelism (not adjustable)	$0^\circ 21' \pm 0^\circ 04'$
Lift angle	$0^\circ \pm 0^\circ 30'$

13.5008

13.1. Front axle

Body asymmetry is $0^\circ 12' \pm 28'$. The chassis asymmetry is $0^\circ \pm 20'$.

The steering knuckle asymmetry is $0^\circ 12' \pm 28'$.

Version

For Europe: 5 For Europe: 7 Cars in version seats

Version	For Europe: 5	For Europe: 7	Cars in version seats
Camber: Left wheel (not adjustable) $0^\circ 18' (+0^\circ 36'; 0^\circ 24')$		places	CRD $0^\circ 12' (+0^\circ 36'; 0^\circ 24') 0^\circ 12'$
Camber: Right wheel (not adjustable)	$0^\circ 18' (+0^\circ 24'; 0^\circ 36')$		$(+0^\circ 24'; 0^\circ 36') 4^\circ 42' \pm 0^\circ$
Longitudinal tilt of the front wheel strut $4^\circ 24' \pm 0^\circ 30'$ (unregulated)		$4^\circ 48' \pm 0^\circ 30'$	$30'$
Steering knuckle angle: Left wheel (not $13^\circ (+0^\circ 24'; 0^\circ$ regulated)	$36'$	$13^\circ 06' (+0^\circ 24'; 12^\circ 42'$	$(+0^\circ 24'; 0^\circ 36') 0^\circ 36')$
Steering knuckle angle: Right wheel (not $13^\circ (+0^\circ 36'; 0^\circ$ regulated)	$24'$	$13^\circ 06' (+0^\circ 36'; 12^\circ 42'$	$(+0^\circ 36'; 0^\circ 24') 0^\circ 24')$
Axis parallelism	$0^\circ 21' \pm 0^\circ 09'$		

13.2. Rear axle

Wheel camber asymmetry $0^\circ \pm 0^\circ 20'$.

Version

For Europe: 5

For Europe: 7

Cars in version

Version	For Europe: 5	For Europe: 7	Cars in version
Camber (not adjustable)	places $1^\circ 44' \pm 0^\circ 30'$	places $1^\circ 42' \pm 0^\circ 30'$	CRD
Axis parallelism (not regulated)	$0^\circ 42' \pm 0^\circ 09'$	$0^\circ 53' \pm 0^\circ 09'$	
Lift angle	$0^\circ \pm 0^\circ 10'$		

14.4007

14.1. Front axle

The camber asymmetry is less than $0^\circ 30'$.

Front wheel tilt asymmetry $0^\circ 30'$.

Values to check and adjust

Camber (not adjustable)	$0^\circ 20' \pm 0^\circ 30'$
Front wheel strut longitudinal tilt (not adjustable) $2^\circ 35' \pm 0^\circ 30'$	

Steering knuckle angle	12 ° 45 ± 1 ° 30 '
Wheel parallelism	0 ° 02 '± 0 ° 04'

14.2. Rear axle

The camber asymmetry is less than 0 ° 30 '.

Values to check and adjust

Camber (not adjustable) 0 ° 25 '± 0 ° 30' Wheel parallelism	
	0 ° 02 'à 0 ° 12'

15.508 Chine

15.1. Front axle

Wheel camber asymmetry 0 ° 18 '± 0 ° 30'.

Asymmetry of the longitudinal tilt of the front wheel 0 ° ± 0 ° 30 '. Asymmetry of the steering knuckle angle 0 ° 18 '± 0 ° 30'.

Values to check and adjust

Camber: Left wheel (unregulated) Camber: Right wheel	0 ° 24 '± 0 ° 30'
(unregulated)	0 ° 42 '± 0 ° 30'
The longitudinal tilt of the front wheel strut (not adjustable) + 4 ° 18 '± 0 ° 30'	
Steering knuckle angle: Left wheel (non-adjustable) Steering knuckle angle:	+ 15 ° ± 0 ° 30 '
Right wheel (non-adjustable) Axle parallelism (adjustable)	+ 15 ° 18 '± 0 ° 30'
	+ 0 ° 09 '± 0 ° 09'
Wheel parallelism (adjustable)	+ 0 ° 04 '± 0 ° 04'

15.2. Rear axle

Wheel camber asymmetry 0 ° ± 0 ° 30 '.

Values to check and adjust

Camber (not adjustable)	1 ° 53 '± 0 ° 30'
Lift angle	0 ° ± 0 ° 30 '
Axle parallelism (adjustable) + 0 ° 34 '± 0 ° 09'	

16.508

16.1. Front axle

	European car european		Cars in
	(Bromotor DW12C) Car DW12C CRD version		
Camber: Left wheel (not adjustable)	0 ° 24 '± 0 ° 30'	0 ° 20 '± 0 ° 30'	0 ° 08 '± 0 ° 30'
Camber: Right wheel (not 0 ° 42 '± 0 ° 30' regulated)		0 ° 40 '± 0 ° 30'	0 ° 26 '± 0 ° 30'
Longitudinal tilt of the rack	4 ° 18 '± 0 ° 30'	5 ° 30 '± 0 ° 30'	4 ° 12 '± 0 ° 30'
front wheels (not regulated)			
Steering knuckle angle: Left 15 ° ± 0 ° 30 ' wheel (not adjustable)		8 ° 06 '± 0 ° 30'	14 ° 36 '± 0 ° 30'
Steering knuckle angle:	15 ° 18 '± 0 ° 30'	8 ° 24 '± 0 ° 30'	14 ° 54 '± 0 ° 30'
Right wheel (unregulated)			
Axis parallelism	0 ° 09 '± 0 ° 09'		
Wheel parallelism	0 ° 04 '± 0 ° 04'		
Longitudinal asymmetry	0 ° ± 0 ° 30 '		

front wheel strut tilt

Camber asymmetry	$0^{\circ} 12' \geq \text{Wheel asymmetry} \leq + 0^{\circ} 51'$
Tilt angle asymmetry steering knuckle	$0^{\circ} 48' \geq \text{Asymmetry of the steering knuckle angle} \leq + 0^{\circ} 12'$

16.2. Rear axle

Wheel camber asymmetry $0^{\circ} \pm 0^{\circ} 30'$.

Version	For Europe	For Europe	For Europe	Cars in
	(other than the engine (DW12C))	Bromotor (engine DW12C)		version CRD
Body type	Station wagon	Hatchback	Wagon / Hatchback	Hatchback
Camber: Left wheel (not adjustable)	$1^{\circ} 48' \pm 0^{\circ} 30'$	$1^{\circ} 54' \pm 0^{\circ} 30'$		$1^{\circ} 36' \pm 0^{\circ} 30'$
Camber: Right wheel (not adjustable)	$0^{\circ} \pm 0^{\circ} 30'$			
Axis parallelism (not regulated)	$0^{\circ} 43' \pm 0^{\circ} 09'$			
Parallelism wheels (not adjustable)	$0^{\circ} 21' \pm 0^{\circ} 04'$			

17.308Mercosur China Malaysia

17.1. Front axle

Body asymmetry is $0^{\circ} 12' \pm 0^{\circ} 28'$. The chassis asymmetry is $0^{\circ} \pm 0^{\circ} 20'$.

The steering knuckle asymmetry is $0^{\circ} 12' \pm 28'$.

Values to check and adjust

Camber: Left wheel (Non-adjustable) Camber: Right wheel	$0^{\circ} 12' (+ 0^{\circ} 36'; 0^{\circ} 24')$
(Non-adjustable)	$0^{\circ} 12' (+ 0^{\circ} 24'; 0^{\circ} 36')$
Front wheel strut longitudinal tilt (Non-adjustable)	$5^{\circ} 06' \pm 0^{\circ} 30'$
Steering knuckle angle: Left wheel (Non-adjustable) Steering fist angle:	$12^{\circ} 42' (+ 0^{\circ} 24'; 0^{\circ} 36') 12^{\circ}$
Right-hand wheel (Non-adjustable) Axle parallelism (Adjustable)	$42' (+ 0^{\circ} 36'; 0^{\circ} 24') 0^{\circ} 21' \pm 0^{\circ} 09'$
Wheel parallelism (adjustable)	$0^{\circ} 11' \pm 0^{\circ} 04'$

17.2. Rear axle

Body asymmetry is $0^{\circ} \pm 0^{\circ} 20'$.

Values to check and adjust

Camber (Unregulated)	$1^{\circ} 42' \pm 0^{\circ} 30'$
Axis Parallelism (Non-adjustable)	$0^{\circ} 51' \pm 0^{\circ} 09'$
Wheel parallelism (Non-adjustable)	$0^{\circ} 25' \pm 0^{\circ} 04'$
Lift angle	$0^{\circ} \pm 0^{\circ} 10'$

18. Sound signaling device (beeper)

18.1. Front axle

Values to check and adjust

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Tire size	175/70 R14 185/65 R15 175/70 R14 185/65 R15			
Fuel level	Tank full		5 liters (maximum)	20 '
Camber (not adjustable)	0 ° 10 '± 0 ° 0 ' 04' ± 0 ° 0 ' 08' ± 0 ° 0 ' 02' ± 0 ° 20 '			
Front wheel strut longitudinal tilt (not adjustable)		20'		20'
Steering knuckle angle (not adjustable)	2 ° 38 '± 0 ° 30' 2 °	40 '± 0 ° 30' 2 ° 44' ± 0 ° 30' 2 ° 46' ± 0 °		30'
Axis parallelism	13 °			
	0 ° 09 '± 0 ° 09'			

18.2. Rear axle

Values to check and adjust

Tire size	175/70 R14	185/65 R15	175/70 R14	185/65 R15
Fuel level	Tank full		(filling limited to 5 liters)	
Camber (not adjustable)	0 ° 32 '± 0 ° 20' 0 ° 31' ± 0 ° 20' 0 ° 31' ± 0 ° 20'			0 ° 30 '± 0 ° 20'
Axis parallelism	0 ° 08 '± 0 ° 09'		0 ° 07 '± 0 ° 09'	

19. Partner (M59)

19.1. Front axle

Front wheel tilt asymmetry 0 ° 18 '. The camber asymmetry is less than 0 ° 39 '.

Passenger car (Except:	With suspension	Without suspension 800 kg	800 kg	Without suspension 800 kg (Except
Rear leaf spring)		(Michelin Energy E3A)		Michelin Energy E3A)
Parallelism of wheels	'0°17' ± 0°09' '			0°09' ± 0°09'
Camber	0° ± 0 ° 30' '			
Longitudinal tilt of the rack	3° ± 0 ° 30' '			
frontwheels				
Steering knuckle angle	10°54 '± 0 ° 30' 10°44' ± 0 ° 30'			
Passenger car (Except:	With suspension 800	Without suspension kg	All other than	Michelin
Rear leaf spring)		800 Kg	Michelin Energy E3A	Energy E3A
Version	Version with increased ground clearance	VEC or CRD		
Parallelism of wheels	0°17' ± 0°09'			0°09' ± 0°09'
Camber	0° ± 0°30' '			
Longitudinal tilt of the rack	2°58' ± 0°30'	2°55' ± 0°30'		
frontwheels				
Steering knuckle angle	10°38' ± 0°30'	10°26' ± 0°30'		
Commercial vehicle	Cab or	Version with augmented		electric
(Except: Rear leaf spring)	platform	ground clearance or		
Parallelism of wheels	0°17' ± 0°09'	CRD		
Camber	0° ± 0 ° 30' '			
Longitudinal tilt of the rack	3 ° ± 0 ° 30' '			
frontwheels				
Steering knuckle angle	10°54' ± 0 ° 30'	10°38' ± 0 ° 30'		10°30' ± 0 ° 30'
Rear leaf spring	Passenger	Commercial	Passenger	Commercial
(Except for reinforced or CRD) vehicle	car	car	car	car
Engines	TU5, DV6A and DV6B	0°01	DW8	
Camber	'± 0°30'	0°04' ± 0°30'	0°05' ± 0°30'	
Longitudinal tilt of the rack 3 ° ± 0 ° 30' '		3 ° 03' ± 0 ° 18'	3 ° 05' ± 0 ° 18'	

frontwheels

Steering knuckle angle	10°42 '± 0°30'	10°48 '± 0°30'	10°12 '± 0°30'	10°54 '± 0°30'
Axis parallelism	0 ° 17 '± 0 ° 09'	0 ° 09 '± 0 ° 09'	0 ° 17 '± 0 ° 09'	
Wheel parallelism	0 ° 09 '± 0 ° 04'	0 ° 04 '± 0 ° 04'	0 ° 09 '± 0 ° 04'	
Passenger car: Rear leaf spring (Version with increased road clearance or CRD)			TU5 engines, Engine	
			DV6A and DV6B	DW8
Camber (not adjustable)			0 ° 08 '± 0 ° 30'	0 ° 02 '± 0 ° 30'
Front wheel strut longitudinal tilt (not adjustable) 2 ° 57 '± 0 ° 18'				3 ° ± 0 ° 18 '
Steering knuckle angle (not adjustable)			10°24 '± 0°30'	10°36 '± 0°30'
Axis parallelism			0 ° 17 '± 0 ° 09'	0 ° 17 '± 0 ° 09'
Wheel parallelism			0 ° 09 '± 0 ° 04'	
Minibus: Rear leaf spring (Version with increased road clearance or CRD)			TU5 motors DV6B motor Engine	
			DV6A	DW8
Camber (not adjustable)			0°12 '± 0°30'	0°05 '± 0°30'
Front wheel strut longitudinal tilt (not adjustable)			2 ° 56 '± 0 ° 18'	2 ° 59 '± 0 ° 18'
Steering knuckle angle (not adjustable)			10°18 '± 0°30'	10°24 '± 0°30' 10°30 '± 0°30'
Axis parallelism			0 ° 17 '± 0 ° 09'	0 ° 09 '± 0 ° 09'
Wheel parallelism			0 ° 09 '± 0 ° 04'	0 ° 04 '± 0 ° 04'

19.2. Rear axle

The camber asymmetry is less than 0° 30'.

Passenger car (Except: Without suspension With suspension Rear leaf spring)

	800 Kg	800 Kg	800 Kg	800 Kg	Everything
Version	All types (Without height adjuster, CRD and VTC)	Enlarged version	Enlarged version	Enlarged version	types EEC
Parallelism of wheels	0°13' ± 0°11'	0°42' ± 0°11'	0°33' ± 0°11'	0°04' ± 0°11'	0°04' ± 0°11'
Camber	1°16' ± 0° 30'	1°13' ± 0° 30'	1°14' ± 0° 30'	1°16' ± 0° 30'	
Commercial electric version with enlarged road cab or cargo					
car (Except: Rear leaf spring)		lumen or CRD		platform	
Parallelism of wheels	0°29' ± 0°11'	0°33' ± 0°11'		0°42' ± 0°11'	
Camber	1°14' ± 0° 30'			1°13' ± 0° 30'	

Wheel camber asymmetry 0° ± 0° 25'.

Vehicles with rear leaf suspension Camber

All types

(unadjustable)	1°15' ± 0° 30'
Axis parallelism (not adjustable)	0° ± 0° 11'
Wheel parallelism (not adjustable) 0° ± 0° 05'	

20.807

20.1. Front axle

Values to check and adjust

Axis parallelism	0° 17' ± 0° 09'
Camber (not adjustable)	0° ± 0° 30'
Front wheel strut longitudinal tilt (not adjustable) 3° 30' ± 0° 30'	

Steering knuckle angle (not adjustable)

12 ° 24 ' ± 0 ° 30'

20.2. Rear axle

Values to check and adjust

Engines		
EW, DW up to RPO 9789 ES9 up to EW, DW from RPO 9790 ES9 from RPO 9927		
		RPO 9928
Axis parallelism	0 ° 43 ' ± 0 ° 09'	0 ° 29 ' ± 0 ° 09'
Camber (not regulated)	1 ° ± 0 ° 30 '	1 ° 30 ' ± 0 ° 30'

21. Partner (B9)

21.1. Front axle

Body asymmetry is 0 ° 20 ' ± 0 ° 28'.

The chassis asymmetry is 0 ° ± 0 ° 20 '.

The steering knuckle asymmetry is 0 ° 20 ' ± 0 ° 28'.

A car	All types, except for the complete set:	Outer layers: XTR STT CRD PC version	
	XTR VEC Cars in version	VEC Cars in CRD PC version	Stop and start
Camber: Left wheel (not adjustable)	0 ° 01 ' (+ 0 ° 40'; 0 ° 20 ') 0 ° 01'	0 ° 03 ' (+ 0 ° 40'; 0 ° 20 ') 0 ° 03'	0 ° (+ 0 ° 40'; 0 ° 20 ')
Camber: Right wheel (not adjustable)	(+ 0 ° 20 '; 0 ° 40')	(+ 0 ° 20 '; 0 ° 40') 4 ° 42 ' ± 0 °	0 ° (+ 0 ° 20 '; 0 ° 40 ')
Longitudinal tilt of the rack front wheels (not regulated)	4 ° 54 ' ± 0 ° 30'	30'	4 ° 54 ' ± 0 ° thirty'
Steering knuckle angle: Left wheel (not regulated)	11 ° 42 ' (+ 0 ° 20'; 0 ° 40 ')	11 ° 30 ' (+ 0 ° 20'; 0 ° 40 ')	11 ° 48 ' (+ 0 ° 20 ';
Steering knuckle angle: Right wheel (not regulated)	11 ° 42 ' (+ 0 ° 40'; 0 ° 20 ')	11 ° 30 ' (+ 0 ° 40'; 0 ° 20 ')	40 ';
Axis parallelism	0 ° 13 ' ± 0 ° 09'		0 ° 20 ')
Wheel parallelism	0 ° 06 ± 0 ° 04 '		

Commercial vehicle

All other than

STT

Camber: Left wheel (unregulated)	STT	
	0 ° 01 ' (+ 0 ° 40'; 0 ° 20 ') 0 ° 01'	0 ° (+ 0 ° 40'; 0 ° 20 ') 0 ° (+
Camber: Right wheel (unregulated)	(+ 0 ° 20 '; 0 ° 40') 5 ° 12 ' ± 0 °	0 ° 20 ';
Front wheel strut longitudinal tilt (not adjustable)	30'	0 ° 40') 4 ° 54 ' ± 0 °
Steering knuckle angle: Left wheel (not adjustable)	30'	
Steering knuckle angle: Right wheel (not adjustable)	11 ° 48 ' (+ 0 ° 20'; 0 ° 40 ')	
° 42 ' (+ 0 ° 40'; 0 °		11 ° 48 ' (+ 0 ° 40'; 0 ° 20 ')
	20')	
Axis parallelism	0 ° 13 ' ± 0 ° 09'	
Wheel parallelism	0 ° 06 ± 0 ° 04 '	

21.2. Rear axle

Body asymmetry is 0 ° ± 0 ° 20 '.

A car All types other than the complete set: XTR Outer layers: XTR VEC Cars in version CRD PC STT

	VEC Cars in version		
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	Stop and start	CRD PC	
Camber (not regulated)	1 ° 42 '± 0 ° 30'	1 ° 44 '± 0 ° 30'	1 ° 46 '± 0 ° 30'
Lift angle	0 ° ± 0 ° 10		
Axis parallelism (not regulated)	0 ° 52 '± 0 ° 09'	0 ° 48 '± 0 ° 09'	0 ° 53 '± 0 ° 09'
Parallelism wheels (not adjustable)	0 ° 26 '± 0 ° 04'	0 ° 24 '± 0 ° 04'	0 ° 27 '± 0 ° 04'

Commercial vehicle

All types except STT STT

Camber (not adjustable)	1 ° 44 '± 0 ° 30'	1 ° 43 '± 0 ° 30'
Lift angle	0 ° ± 0 ° 10	
Axis parallelism (not adjustable)	0 ° 55 '± 0 ° 09'	0 ° 57 '± 0 ° 09'
Wheel parallelism (not adjustable)	0 ° 28 '± 0 ° 04'	0 ° 28 '± 0 ° 04'

22. Expert 3

22.1. Front axle

Wheel camber asymmetry is less than 0 ° 18.

Steering fist angle asymmetry less than 0 ° 24 '.

Station wagon	Mechanical	Pneumatic	Mechanical	Pneumatic
Version	suspension Short	suspension	suspension long version	suspension
Camber (not regulated)	0 ° ± 0 ° 30			
Longitudinal tilt front wheel stands (unregulated)	3 ° 34 '± 0 ° 30'	3 ° 41 '± 0 ° 30'	3 ° 39 '± 0 ° 30'	3 ° 46 '± 0 ° 30'
Turning angle fist (unregulated)	12 ° 08 ± 0 ° 30			
Axis parallelism	0 ° 09 '± 0 ° 09'		0 ° 17 '± 0 ° 09'	
Wheel parallelism	0 ° 04 '± 0 ° 04'		0 ° 09 '± 0 ° 04'	

Commercial vehicle Mechanical	Pneumatic	Mechanical	Pneumatic
Version	suspension Short	suspension long version	suspension
Camber (not regulated)	0 ° 05 ± 0 ° 30		
Longitudinal tilt front wheel stands (unregulated)	4 ° 15 '± 0 ° 30'	3 ° 39 '± 0 ° 30'	4 ° 18 '± 0 ° 30'
Turning angle fist (unregulated)	12 ° 15 ± 0 ° 30		
Axis parallelism	0 ° 17 '± 0 ° 09'		
Wheel parallelism	0 ° 09 '± 0 ° 09'		

22.2. Rear axle

Wheel camber asymmetry is less than 0 ° 18.

Station wagon Mechanical	Pneumatic	Mechanical	Pneumatic
Version	suspension Short	suspension long version	suspension
Camber (not regulated)	1 ° 42 ± 0 ° 30		

Axis parallelism (not 0 ° 38 '± 0 ° 09' regulated)		0 ° 40 '± 0 ° 09'	0 ° 39 '± 0 ° 09'	0 ° 40 '± 0 ° 09'
Parallelism	0 ° 19 '± 0 ° 04'			0 ° 20 '± 0 ° 04'
wheels (not adjustable)				
Commercial	Mechanical	Pneumatic	Mechanical	Pneumatic
car	suspension	suspension	suspension	suspension
Version	Short		long version	
Camber (not regulated)	1 ° 48 '± 0 ° 30'	1 ° 42 '± 0 ° 30'	1 ° 48 '± 0 ° 30'	1 ° 42 '± 0 ° 30'
Axis parallelism (not 0 ° 47 '± 0 ° 09' regulated)		0 ° 40 '± 0 ° 09'	0 ° 50 '± 0 ° 09'	0 ° 40 '± 0 ° 09'
Parallelism	0 ° 24 '± 0 ° 04'	0 ° 19 '± 0 ° 04'	0 ° 25 '± 0 ° 04'	0 ° 20 '± 0 ° 04'
wheels (not adjustable)				

23. BOXER

23.1. Front axle

Values to check and adjust

Parallelism of wheels	0 ° 09 '± 0 ° 09'
Front wheel strut longitudinal tilt (not adjustable)	1 ° 45 '± 0 ° 30'
Camber (not adjustable)	0 ° ± 0 ° 30 '
Steering knuckle angle	10 ° 45 '± 0 ° 30'

23.2. Rear axle

Values to check and adjust

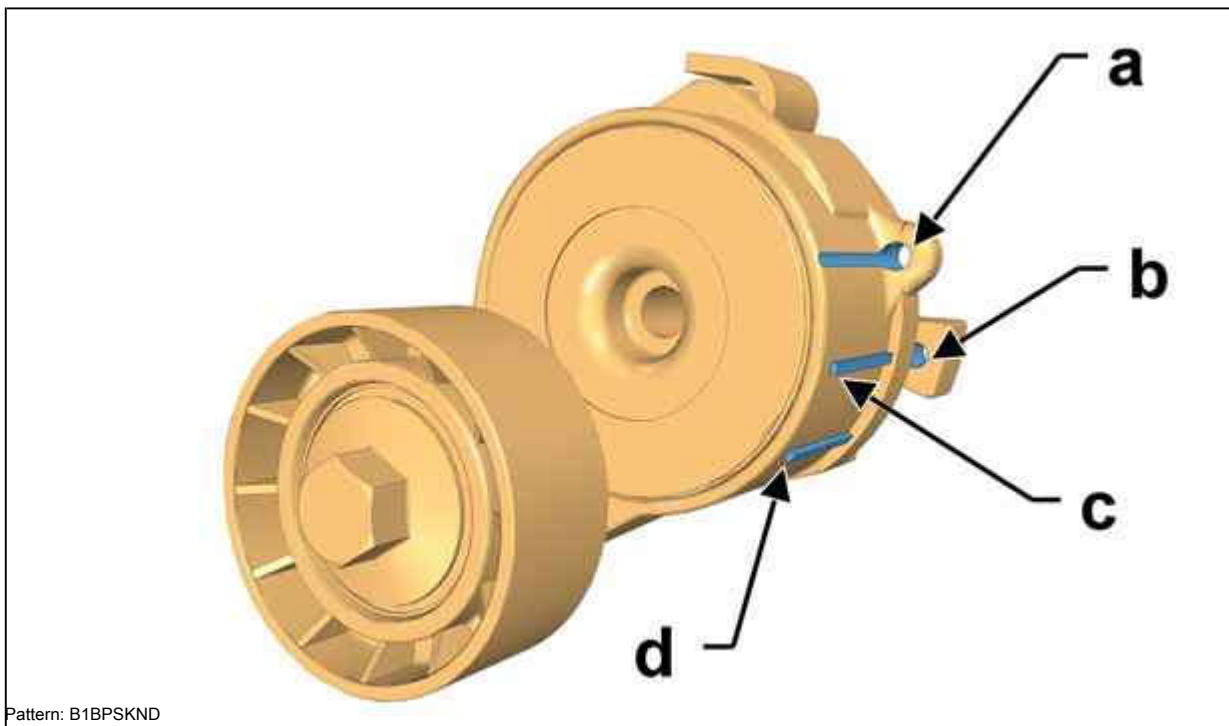
Parallelism of wheels (not adjustable)	0 ° ± 0 ° 17
Camber (not adjustable)	

CHECK: ANCILLARY DRIVE BELT (VEHICLES STEERLESS AMPLIFIER)

MANDATORY: Observe the cleanliness and safety rules



1. Dynamic idler roller



"a" Holes for the pin connection of the dynamic tensioning roller. "b" Elongation reference mark.

"c" Marks for minimum elongation.

"d" Maximum elongation mark.

This marking system allows control of the attachment drive belt elongation.

2. Attachment drive belt

Visually check the extension of the attachment drive belt on the dynamic tensioner pulley.

If marks "d" and "b" match, replace the attachment drive belt.

ATTENTION : Before removing, note the direction of rotation of the accessory drive belt.

Remove the attachment drive belt.

Make sure there are no hard points, noises or marks from the oil dynamic tensioner and the pulleys of the units.

Install the attachment drive belt.

Crank the engine 4 turns and check the extension of the accessory drive belt.

The attachment drive belt must be correctly installed on the dynamic idler pulley and strips.



ADJUSTMENT: BODY SETTING AT WORKING HEIGHT

MANDATORY: Observe the cleanliness and safety rules



1. Recommended fixtures

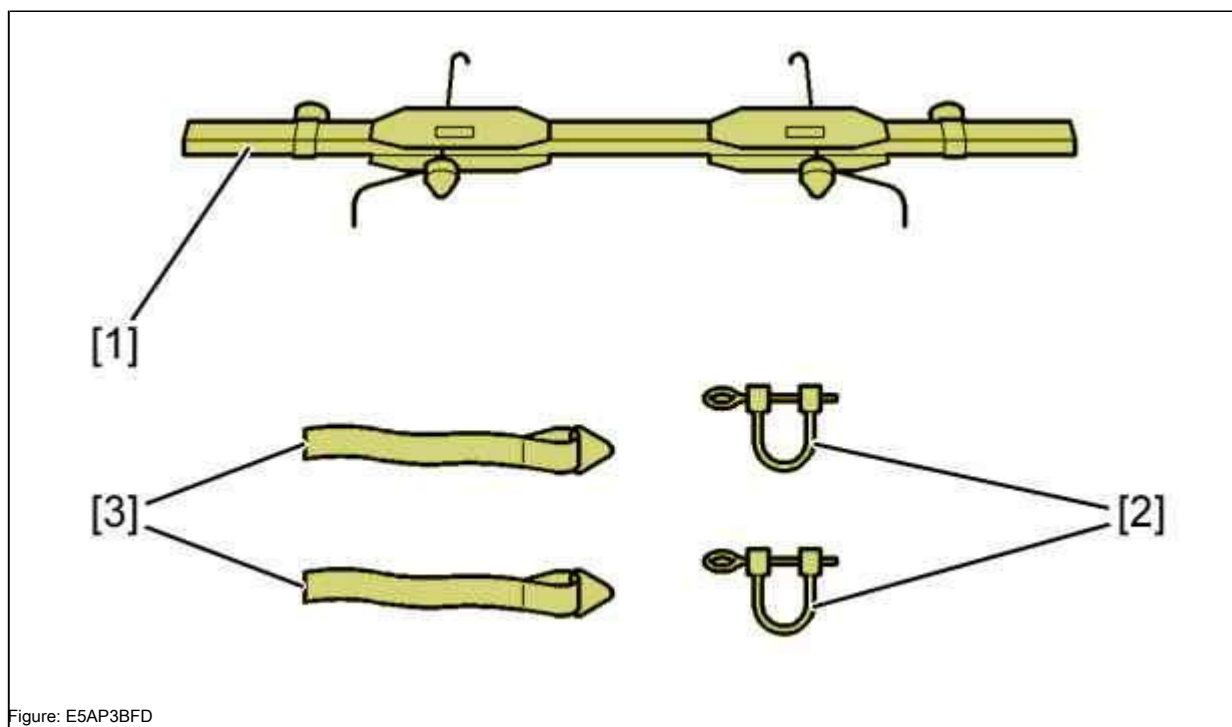
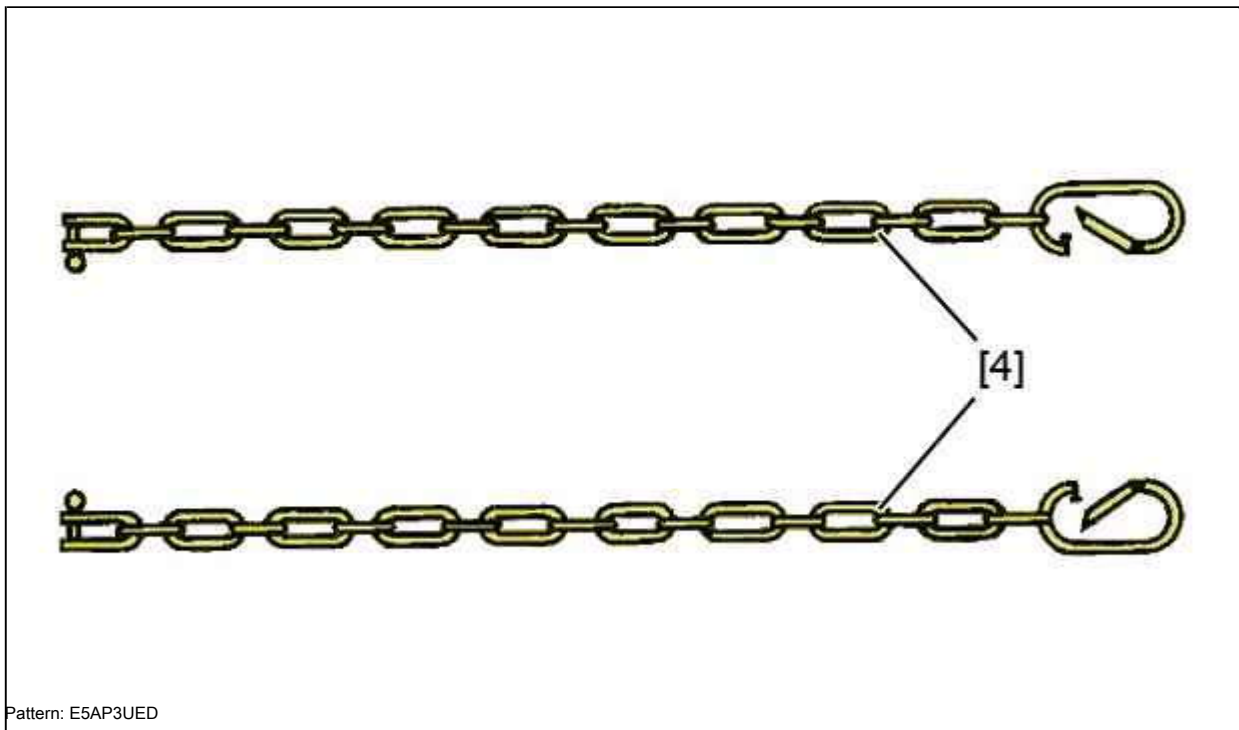


Figure: E5AP3BFD

Label Designation		Number (reference)	
[1]	Suspension compressor 9511TA		() .0916A
[2]	Connecting bracket 9511TC		() .0916C
[3]	Safety belts 9511TB		() .0916B



Label	Designation	Number (reference)	Number (reference)
[4]	Set of 2 lines 9511TD		() .0102M

2. Installation of the body at working height

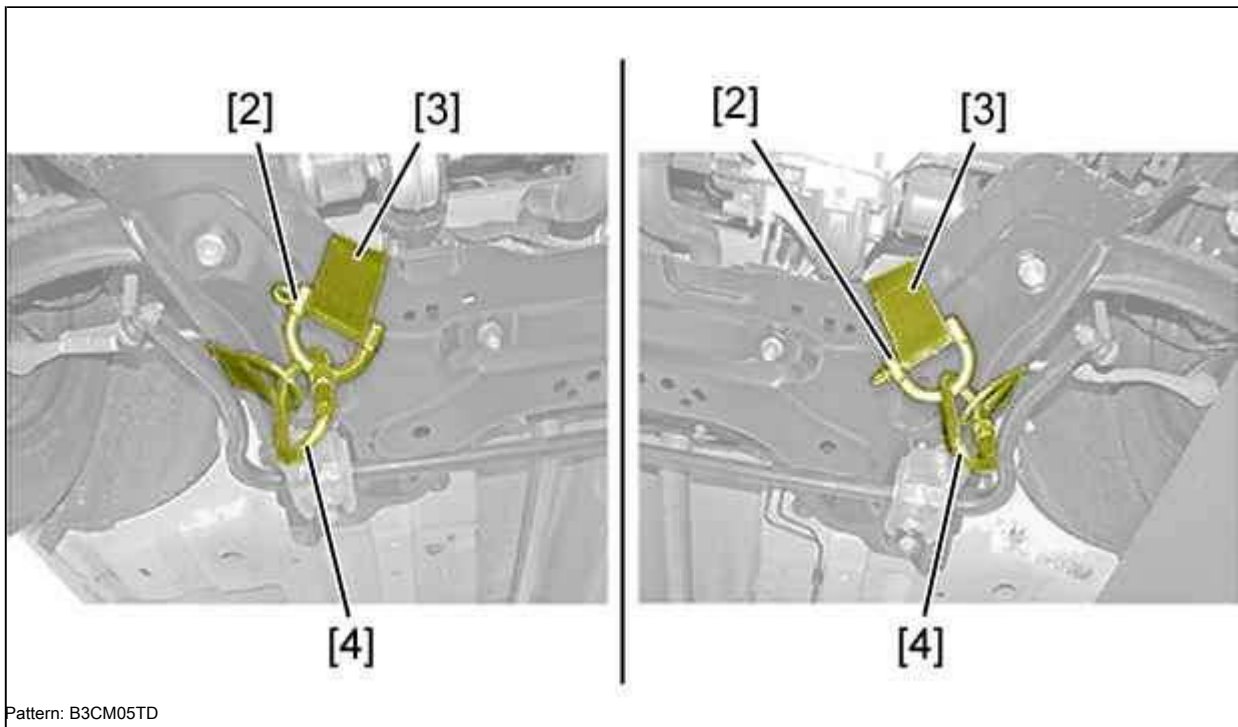
ATTENTION : Checking the geometric parameters of the front and rear axles, as well as adjusting the front axle should be carried out at a strictly defined position of the compression of the suspension springs (working height of the suspension) on the stand for the axle controls.

Verify :

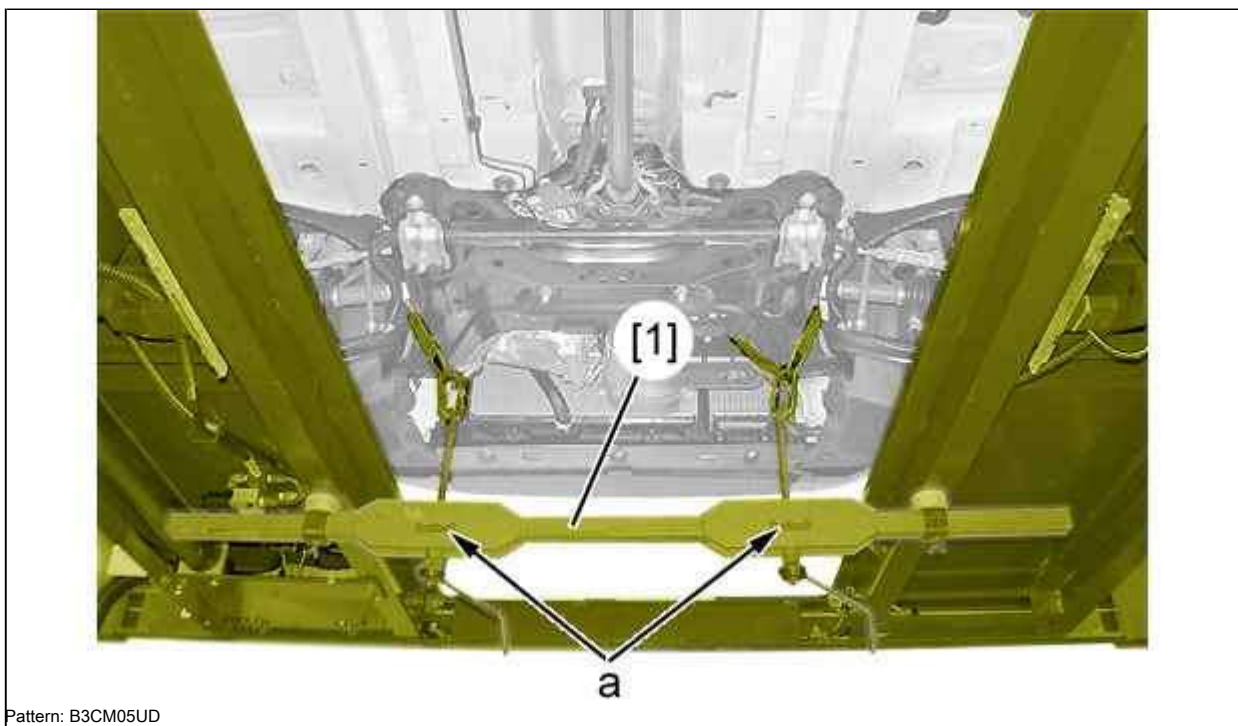
- Correspondence between normal and air pressure
- Arrangement of front wheels in a straight line

2.1. Front (H1)

Remove engine cover.



Place the belts [3] with the connecting brackets [2] on the engine frame (Front). Attach the lanyard hooks [4] to the safety straps [3] and the clip [2].

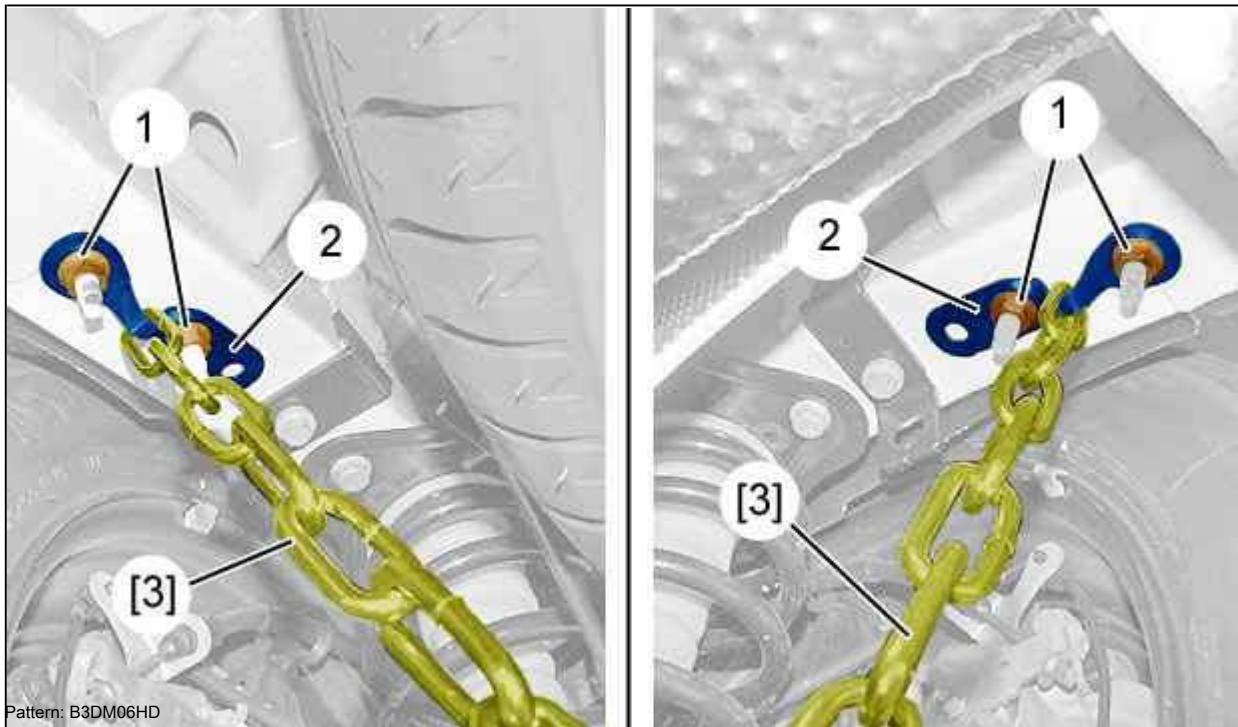


Install the suspension compressor [1].
Adjust the grooves (a) of the belts so that they are most vertical when tensioned.

Compress the suspension so as to obtain the right and left front height "H1"

ATTENTION : When measuring the working body height "H1", observe the height of the pivot plates.

2.2. Rear (H2)

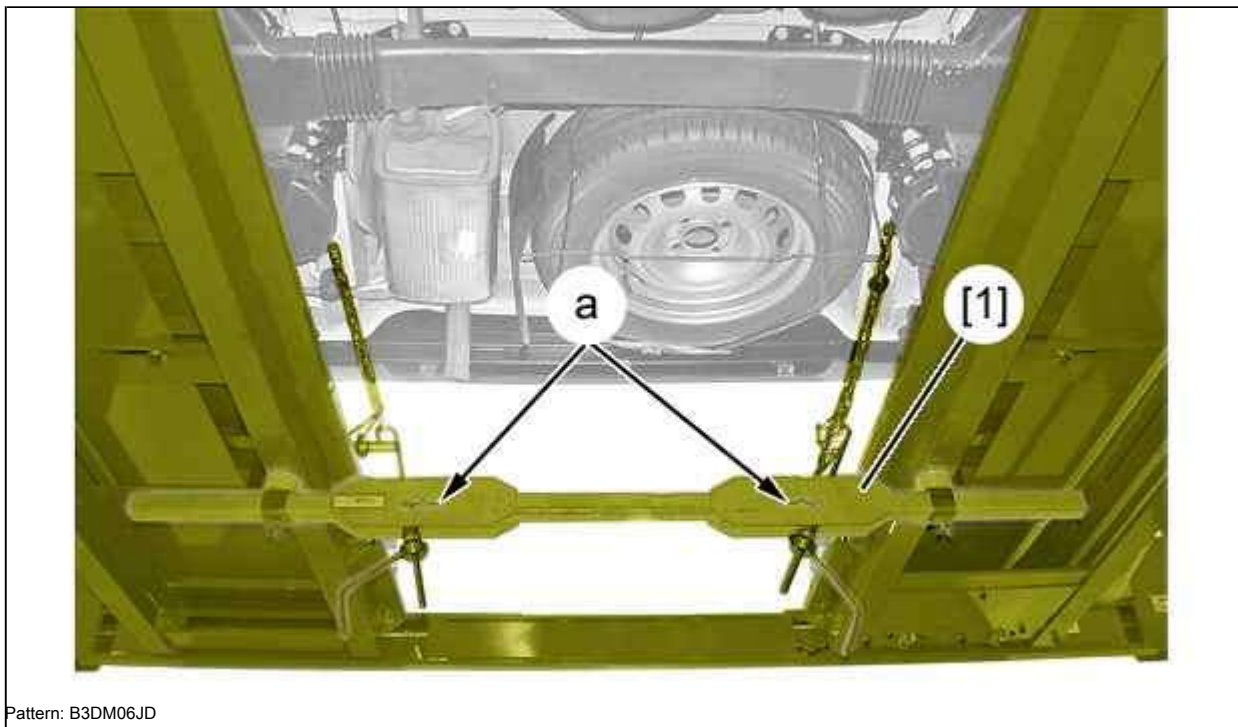


Remove:

- Nuts (1)
- Fastening rings (2)

Connect the slings [3] to the rings (2). Install:

- Fastening rings (2)
- Nuts (1); Tightening torque 4.5 ± 0.1 da.Nm



Pattern: B3DM06JD

Install the suspension compressor [1].

Adjust the notches "a" of the straps so that the straps are at the most vertical position when they are pulled.

Compress the suspension in such a way to obtain the right and left rear height "H2"



ATTENTION : Observe the height of the pivot plates when measuring the working height of the body "H2".

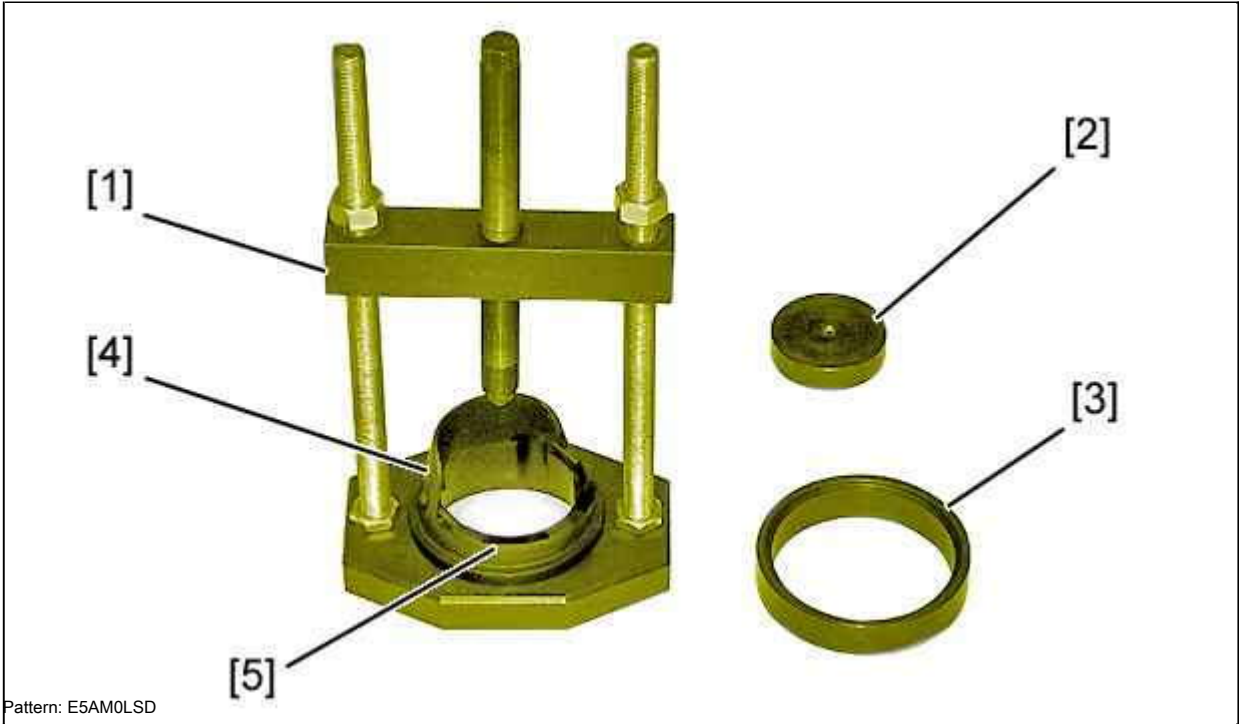
Check that the height "H1" measured before the front of the body has not changed.

REMOVAL REFITTING: FLEXIBLE PIVOTS (REAR AXLE)

MANDATORY: Observe the cleanliness and safety rules

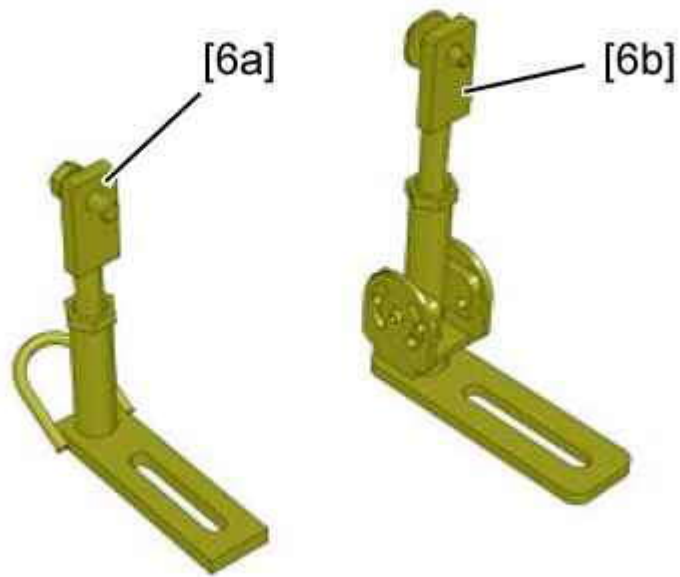
i

1. Recommended equipment



Label Designation		Number (reference)
[1]	bracket	() .0549 A
[2]	Tool for removing the installation of the elastic hinge () .0549.B4 ring	
[3]		() .0549.C4
[4]	Stop for removing the installation of elastic hinges	() .0549.D4
[five]	Stop for installing elastic hinge	() .0549.E4

[6]



Pattern: E5AM0LTD

[6] Set of supports () .0005.

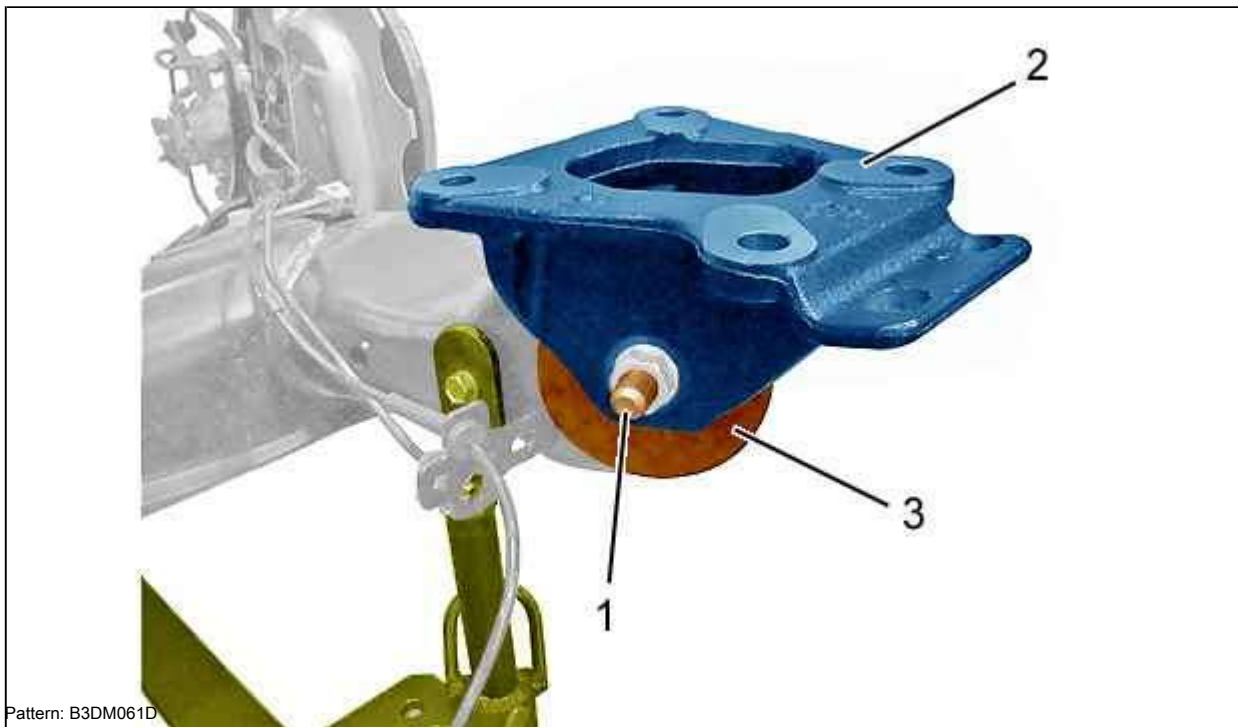
2. Removal

Take off the rear bridge



Pattern: B3DM060D

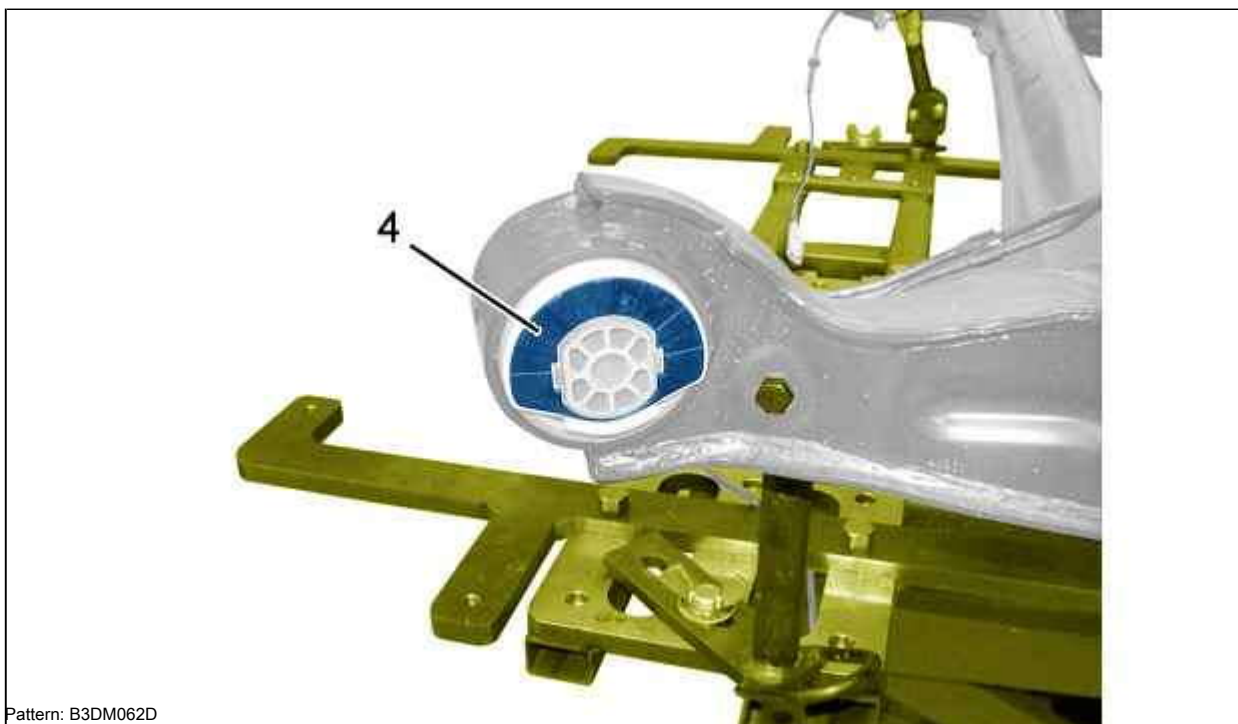
Fix the rear axle; Using the tools [6a], [6b].



Remove:

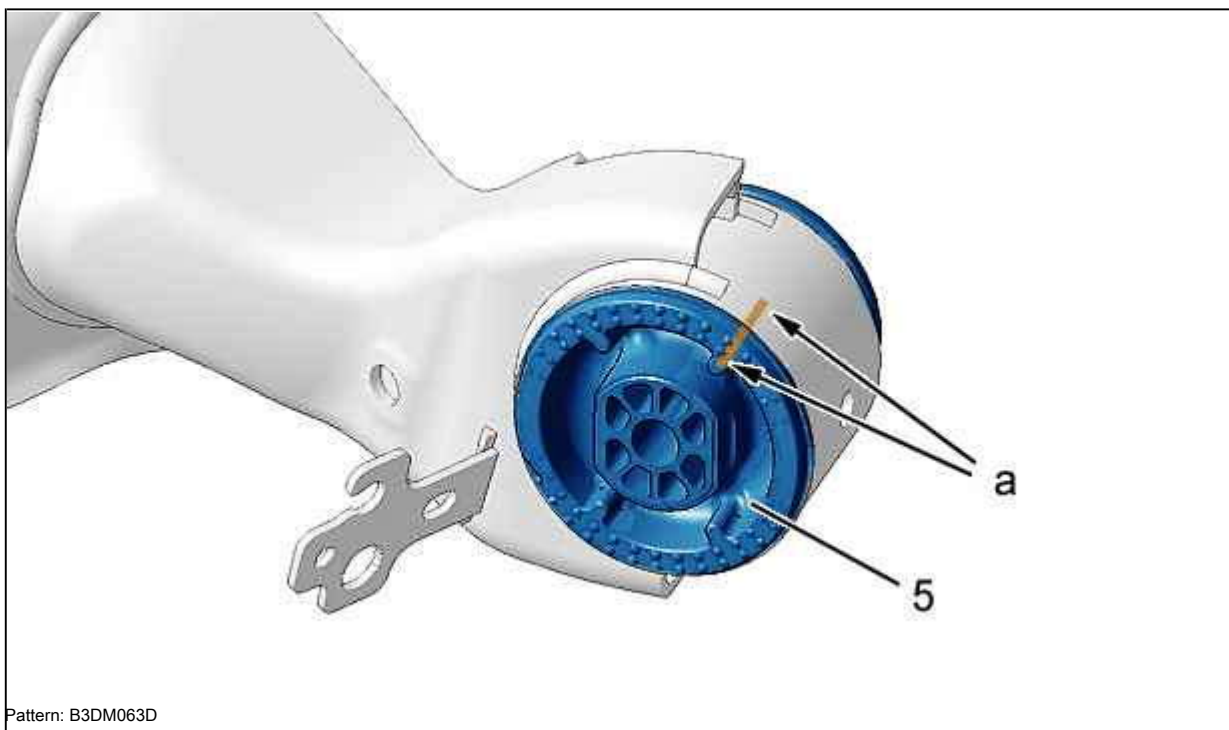
- Bolt (1)
- Cap (2)
- Washer (3)

2.1. "hydraulic" silent block



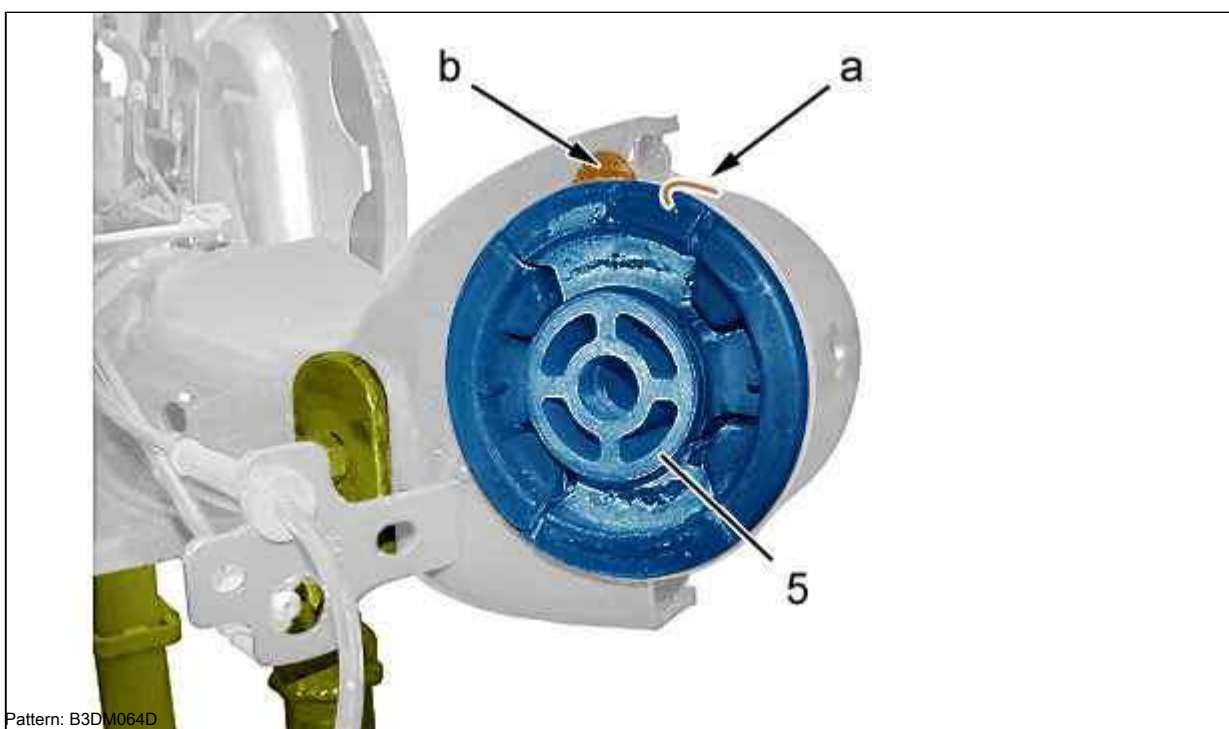
NOTE: Mark the installation of the washer (4) (Before removal).

Remove: Washer (1) (4).



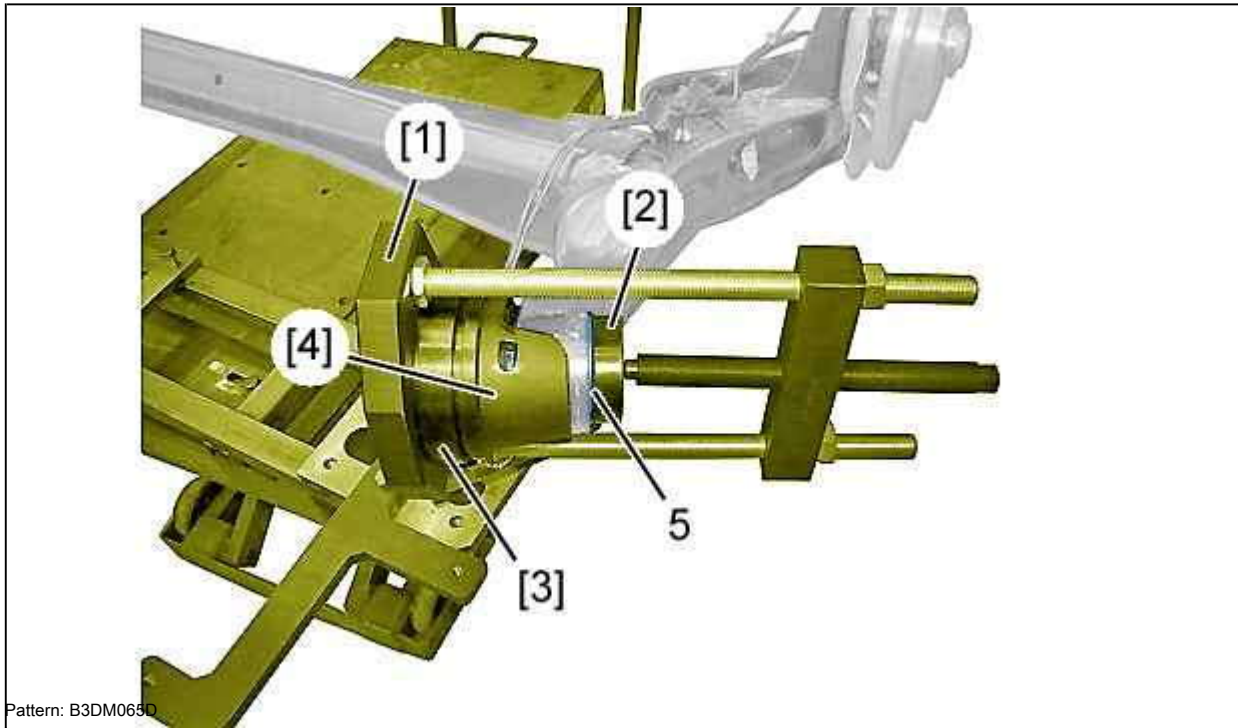
In area "a" mark the position of the silentblock (5) with respect to the suspension arm; Using a thin line (at "a").

2.2. Composite silentblock



In area "a" mark the position of the silent block (5) in relation to the suspension arm. Cut off the ledge (at "b").

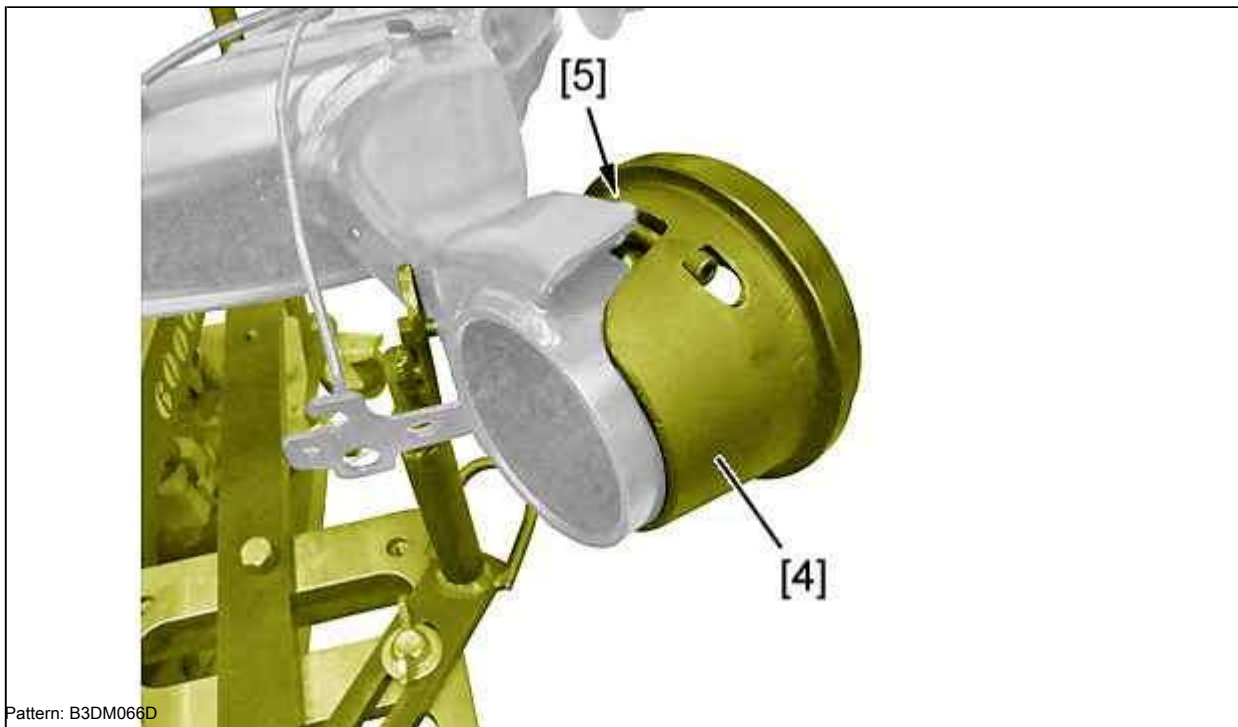
2.3. Removal (continued)



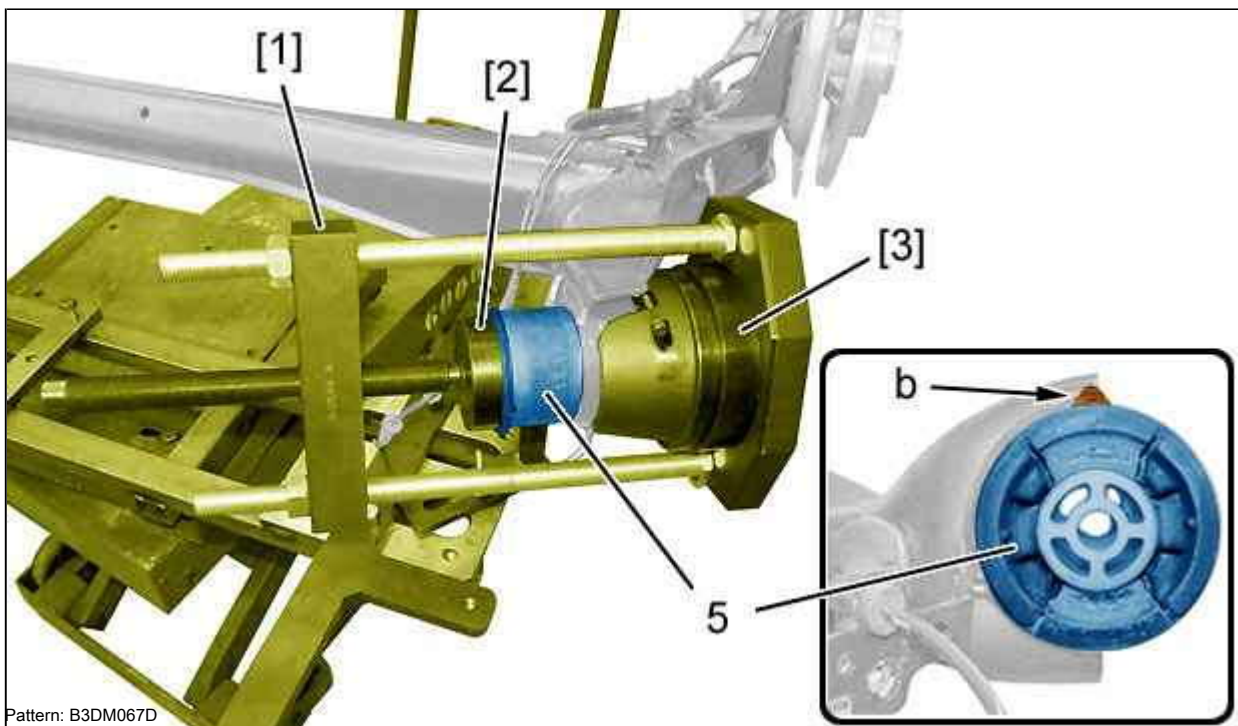
NOTE: Check the presence of grease on the device / 1 /.

Install the tool / 4 / on the silent block (5). Place the tools / 1/, [2 / and / 3 / on the elastic connection (5). Remove the silent block (5) by tightening the bolt of the tool [1]. Remove the tools [1], [2], [3], [4].

3. Installation



Install the tools [4], [5] on the bush of the rear axle silentblock [5].



ATTENTION : Observe the position of the silent blocks (5).

Install the silent block (5) (New) (Observe the marks made when removing).

NOTE: On vehicles with split bushings, observe the orientation of the projection (at "b") of the bush (5).

Install:

- Silent block (5)
- devices [1], [2], [3]

NOTE: Check the presence of grease on the device / 1 /.

Tighten the bolt of the tool [1] before replacing the silent block (5). Remove the tools [1], [2], [3], [4], [5].

3.1. "hydraulic" silent block

Install: Washer (4).

3.2. Installation (continued)

Install:

- Washer (3)
- Cap (2)
- Bolt (1) (loose)
- **Rear axle**



REMOVAL REFITTING: REAR AXLE

MANDATORY: Observe the cleanliness and safety rules

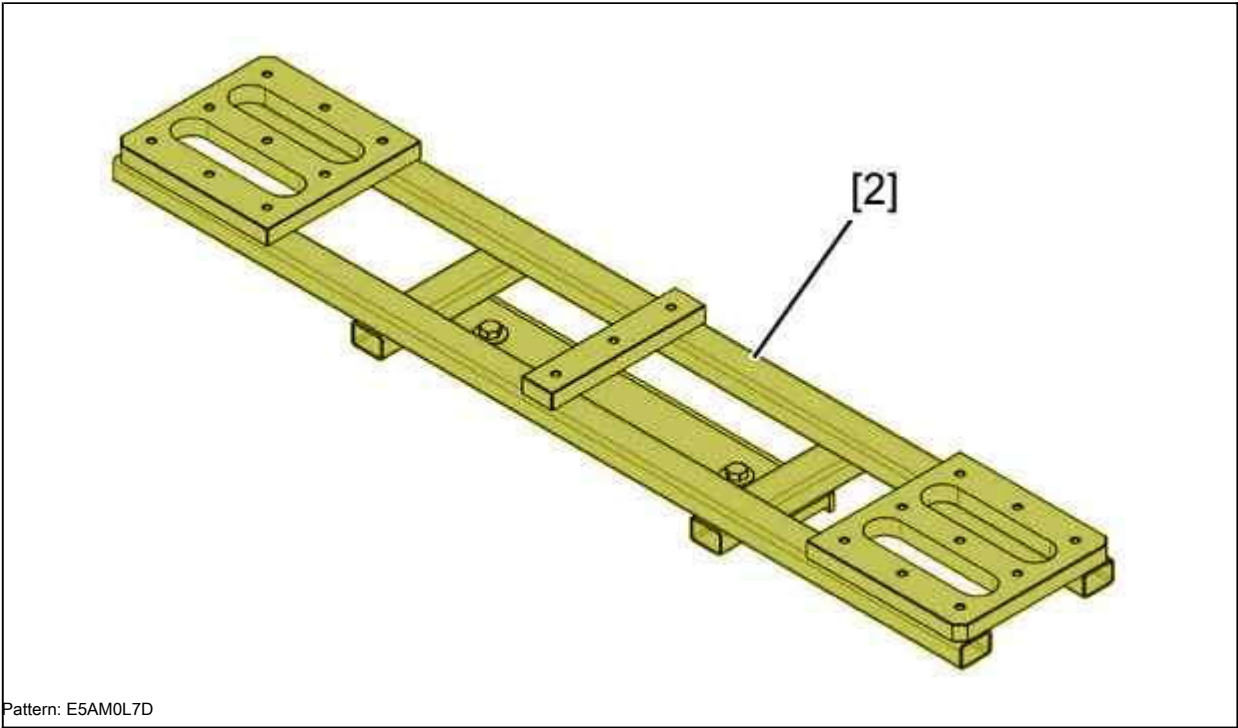


1. Recommended equipment

Pedal press.

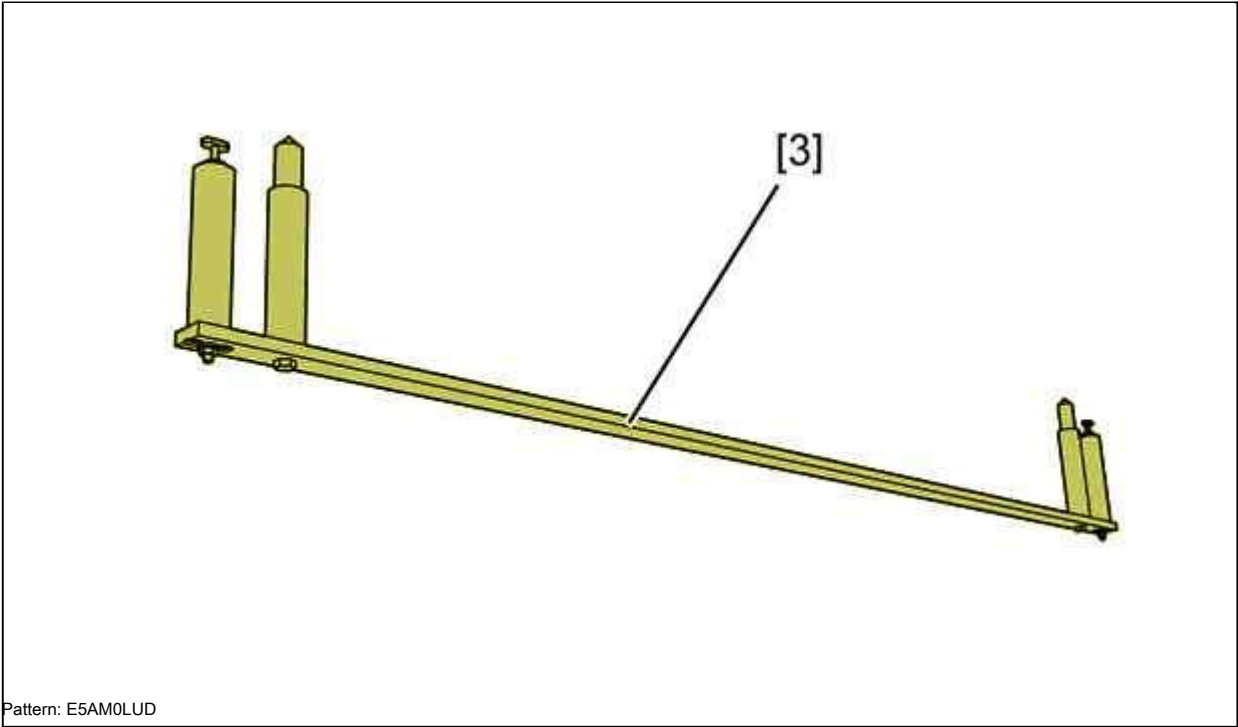


Label Designation		Number (reference)	Number (reference)
[1]	lifting table 5702TA		() .0004



Label Designation Number (reference) [2]

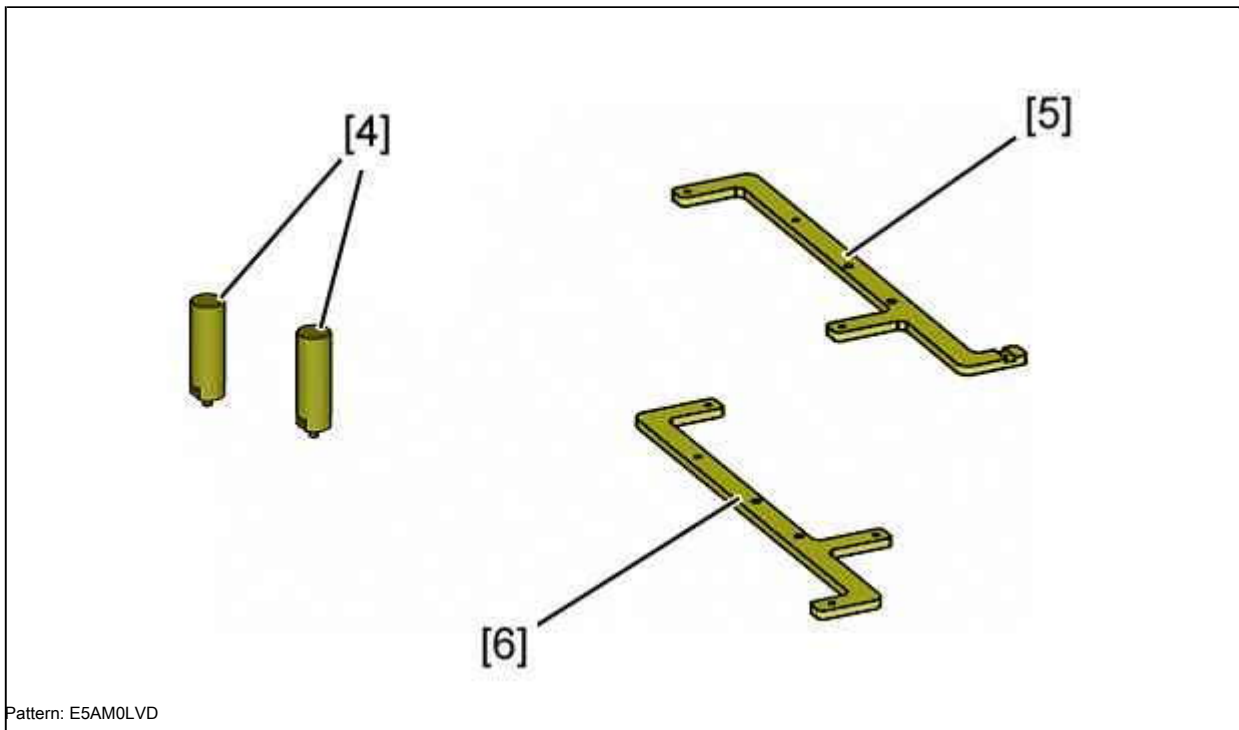
	crossbar	() .0554



Label Designation

Number (reference)

[3]	4399T Rear Axle Positioning Tool	



Label Designation		Number (reference)
[4]	Guide pin	() .0629C
[five]	Installation tool () .0555A	
[6]	Installation tool () .0555B	

2. Removal

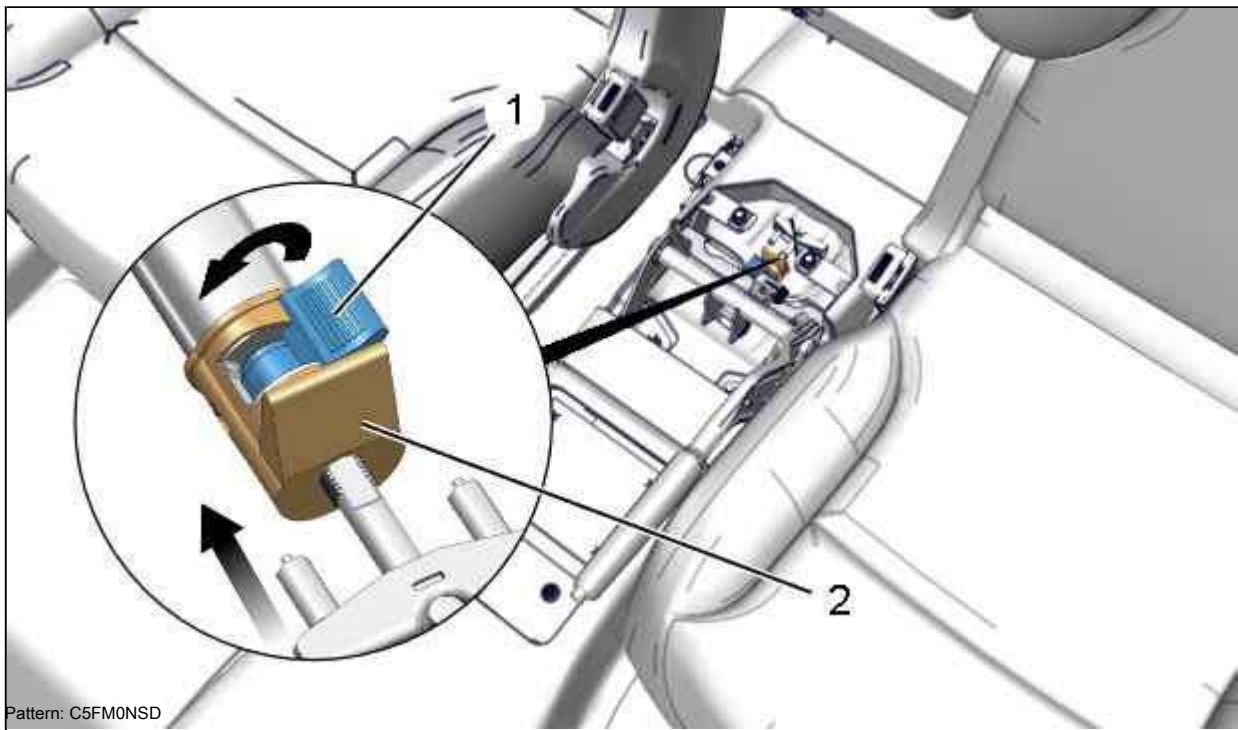
Release the parking brake levers.

Release the rear wheel bolts.

Raise and secure the vehicle on a 2 post lift. Fasten the vehicle on a 2 post lift.

Disconnect the battery. Remove:

- Rear wheel bolts
- Rear wheels
- Center console



Set the parking brake lever to the released position. Press the release knob (2) (in accordance with the arrow).

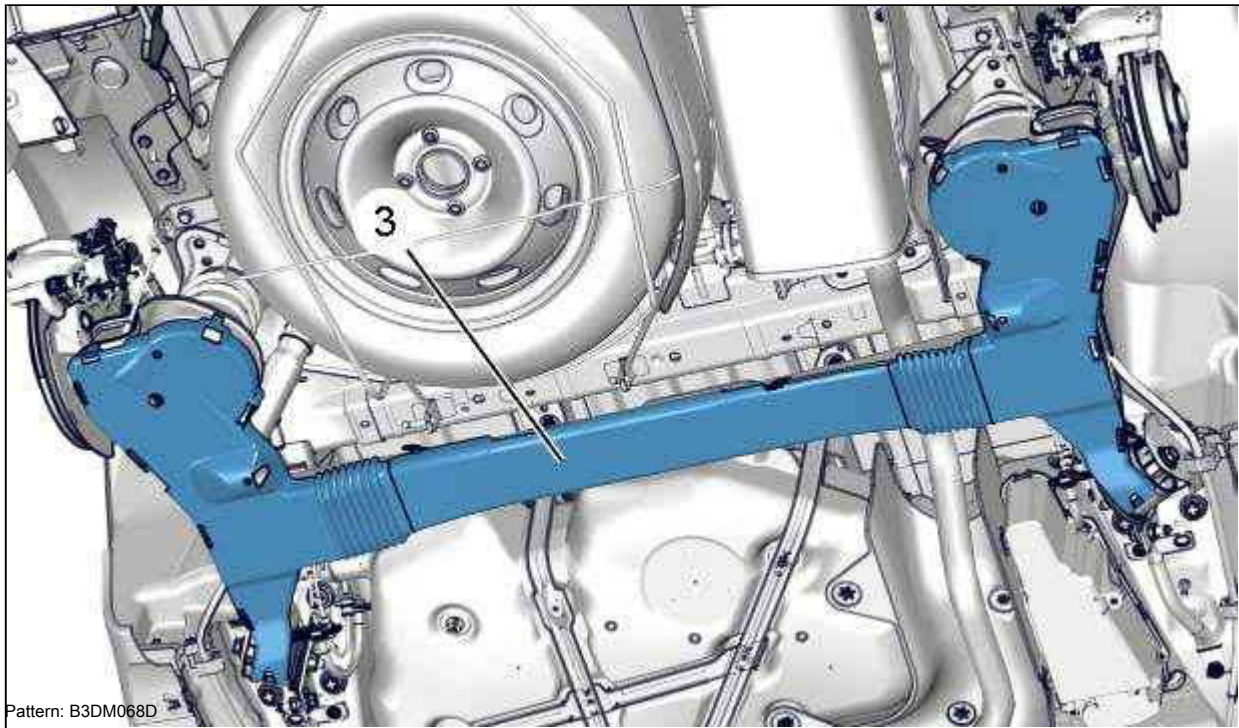
While continuing to press the release knob (2), turn the backlash compensation knob (1) by a quarter of a turn (in accordance with the arrow).

Release the release pusher (2).

ATTENTION : To avoid damaging the spring of the backlash compensation system, do not tighten the parking brake lever more than the first fixed position of the lever travel without moving the button (1) to the LOCKED position.

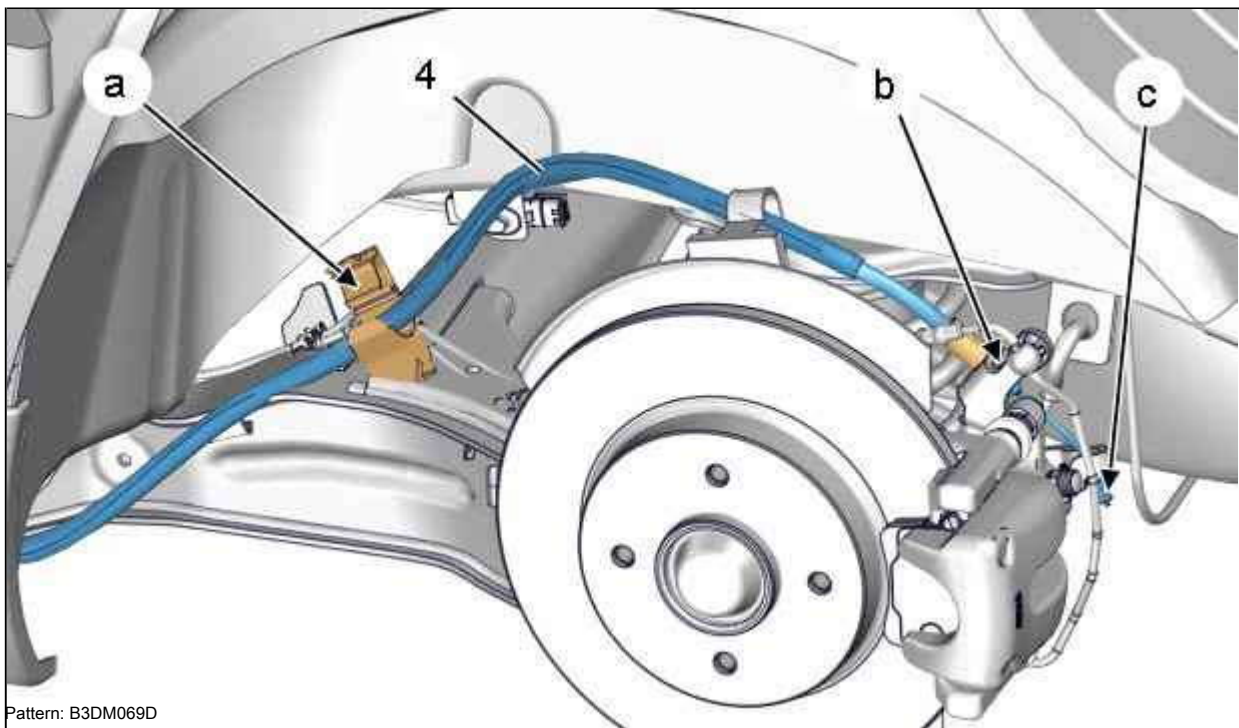
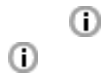
~~Raise the parking brake lever to the first click.~~

Turn the backlash compensation knob (1) by a quarter of a turn (in the opposite direction). Set the parking brake lever to the released position.



Remove:

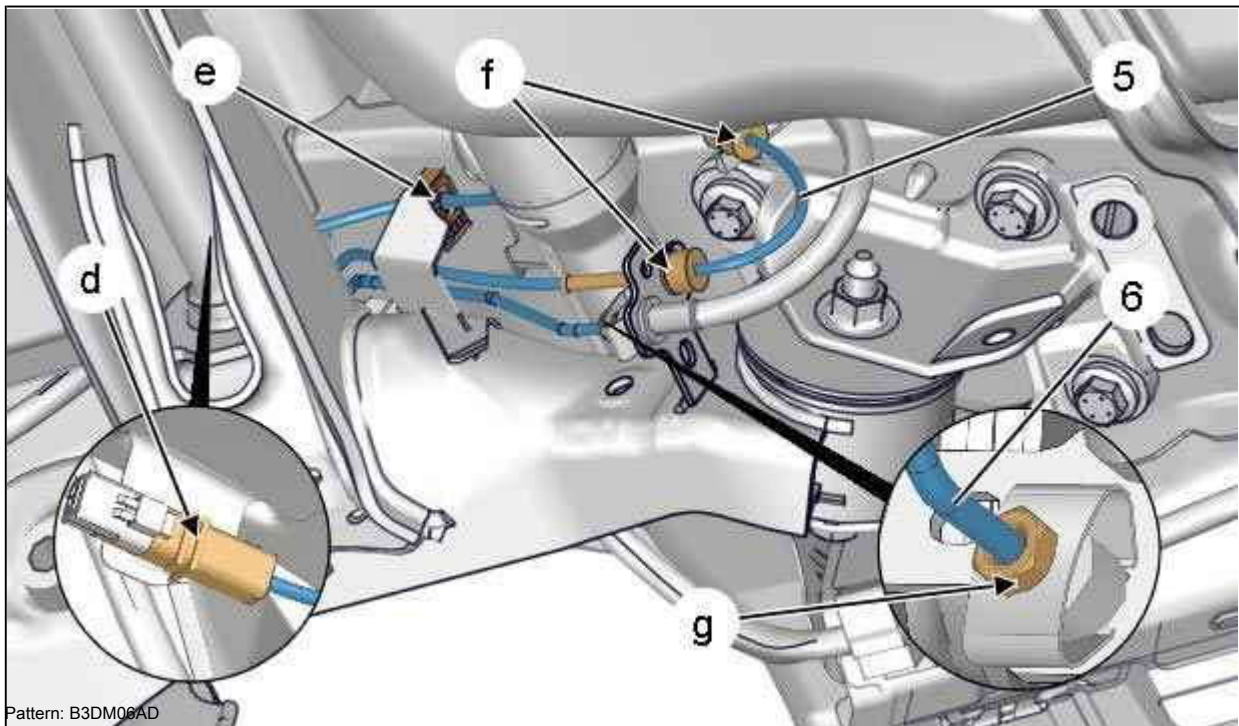
- Display (3)
- **Rear suspension springs**
- **Rear shock absorbers**



from each side :

- Disconnect: Parking brake cable (4) (at "c")
- Disconnect the parking brake cable (4) (at "b", "a")

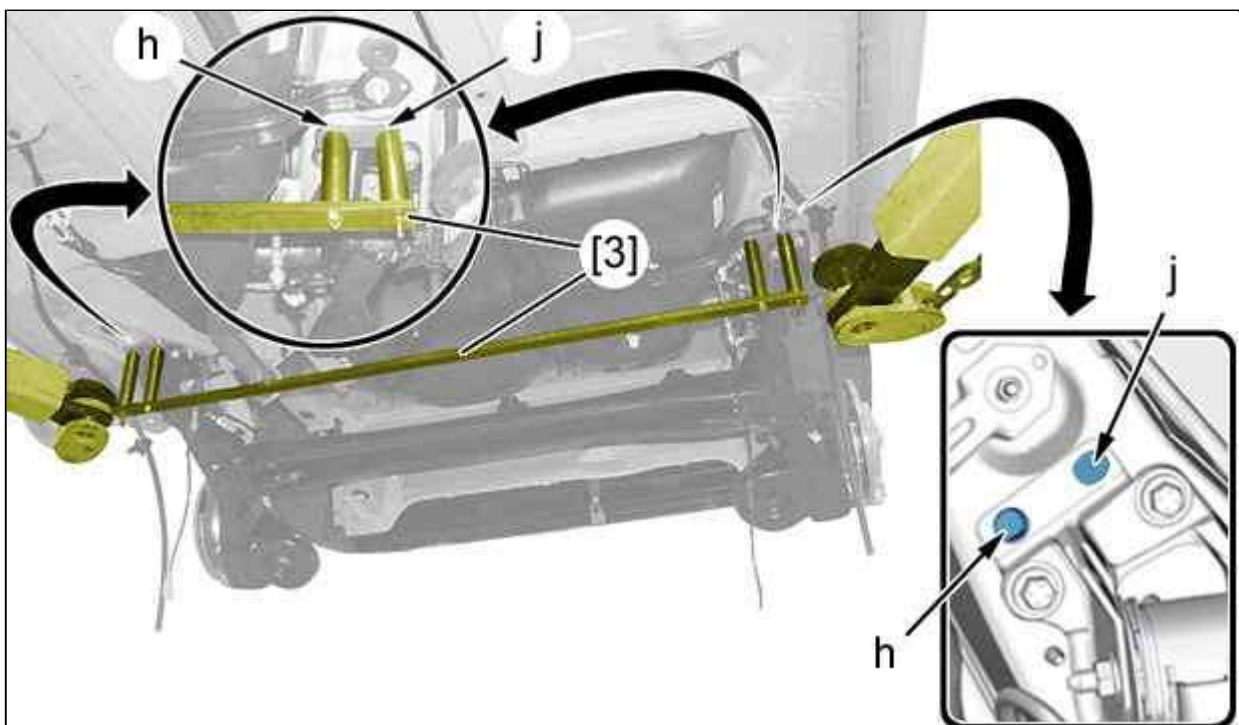
- Disconnect the parking brake cable (4) from its guides



Install the pedal press on the brake pedal to prevent brake fluid from escaping when disconnecting the brake pipes.

from each side :

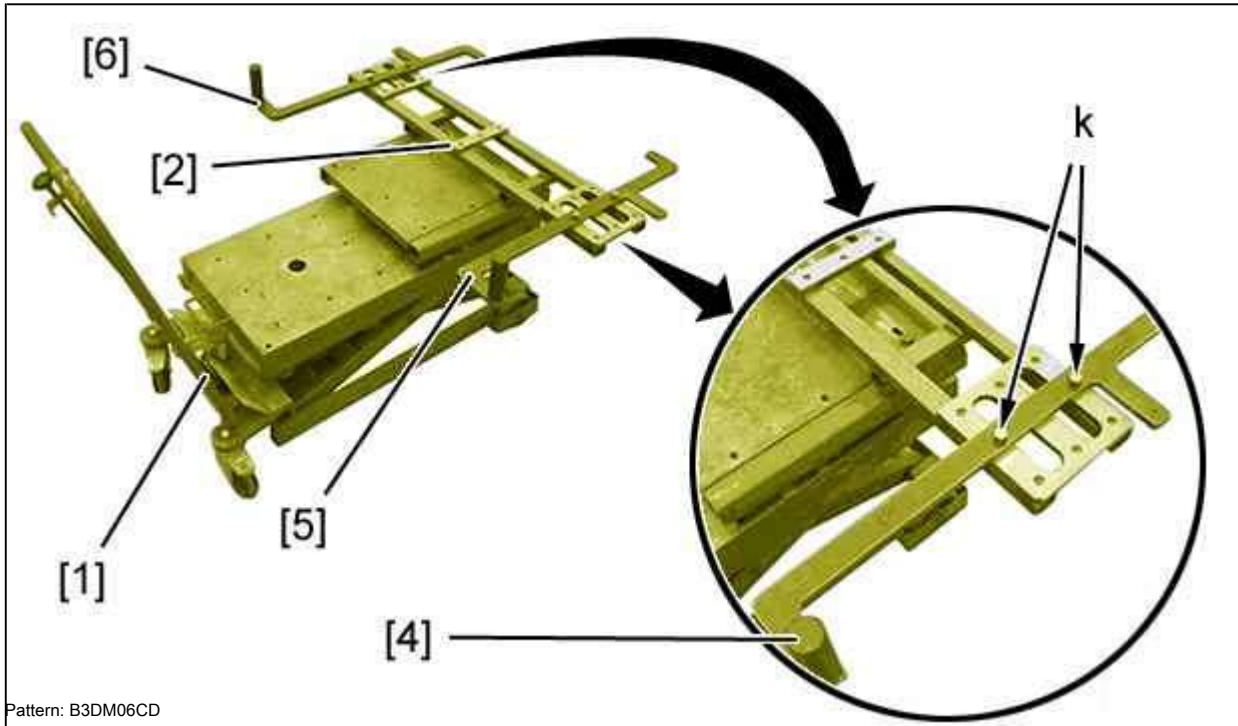
- Disconnect: Rear wheel sensor connector (5) (at "d")
- Unfasten the rear wheel sensor wiring harness (5) (in "e", "f")
- Disconnect the hydraulic pipe (6) (at "g") (Allow for brake fluid to drain)
- Plug holes in parts



Pattern: B3DM06BD

Remove the plugs (in "h"). from
each side :

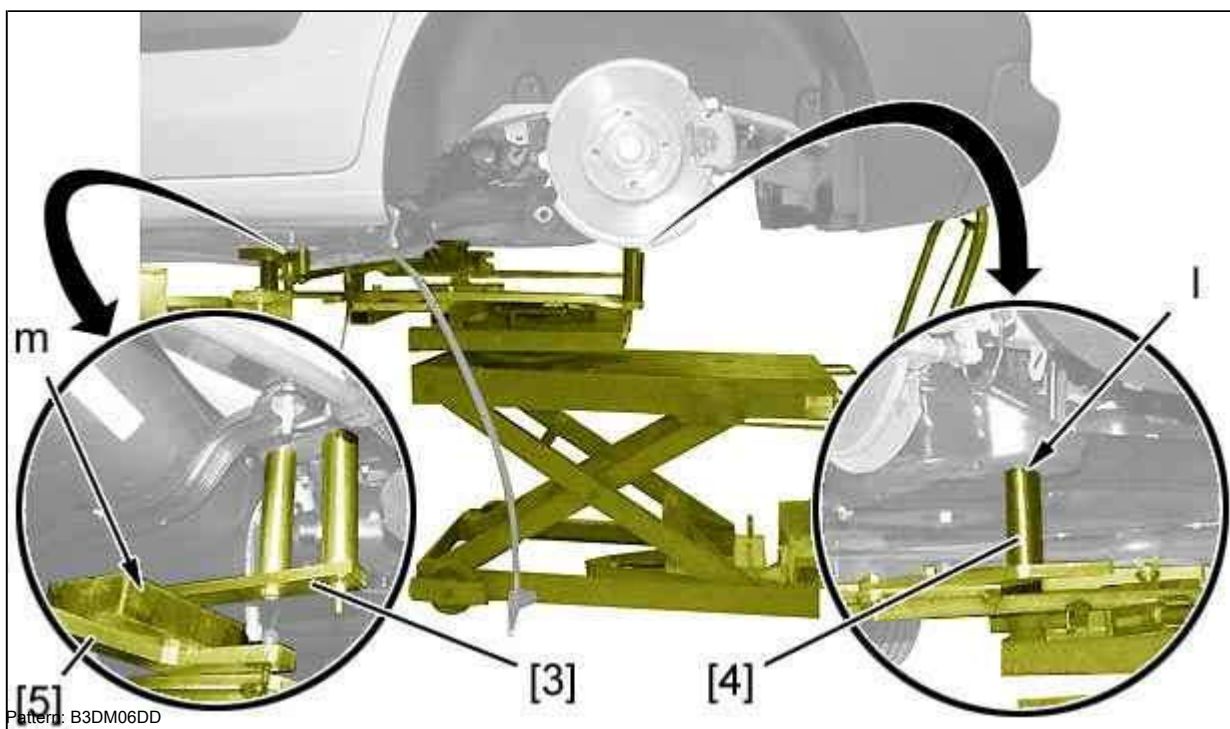
- Place the tool [3] under the rear axle covers (in "h")
- Hold the tool [3] to the rear of the bridge (at "j")



Pattern: B3DM06CD

Place the traverse [2] on the lifting table [1]. On each side of the
traverse [2]; Install:

- fixtures [5], [6] (in "k")
- Positioning pins [4]



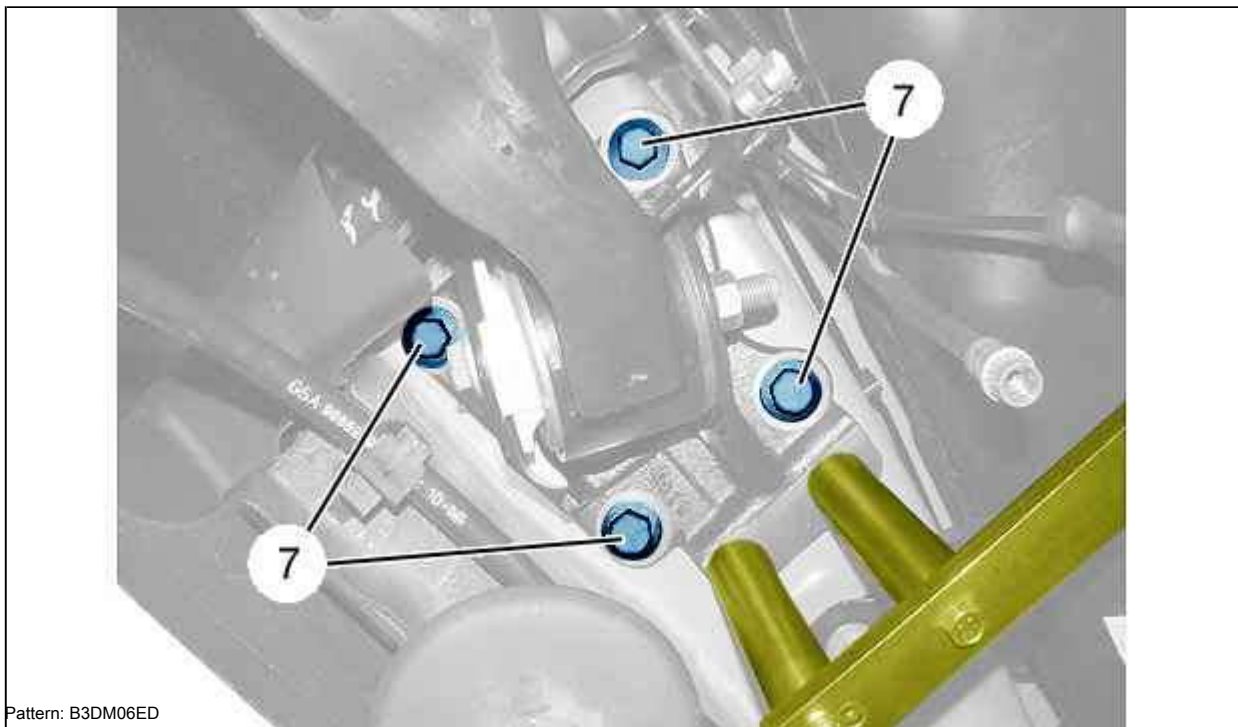
ATTENTION : The following operations must be performed with two people.

ATTENTION : Do not use a jack to raise the rear axle crossbar.

from each side :

- Install the mounting studs [4] ((place the supports under the suspension spring cups at "l"))
- Install the spacers available in the workshop (in "m") between the tool [3] and the tools [5] and [6]

Position the rear axle cross member horizontally using a lifting table [1], [2], [3], [4], [5], [6].

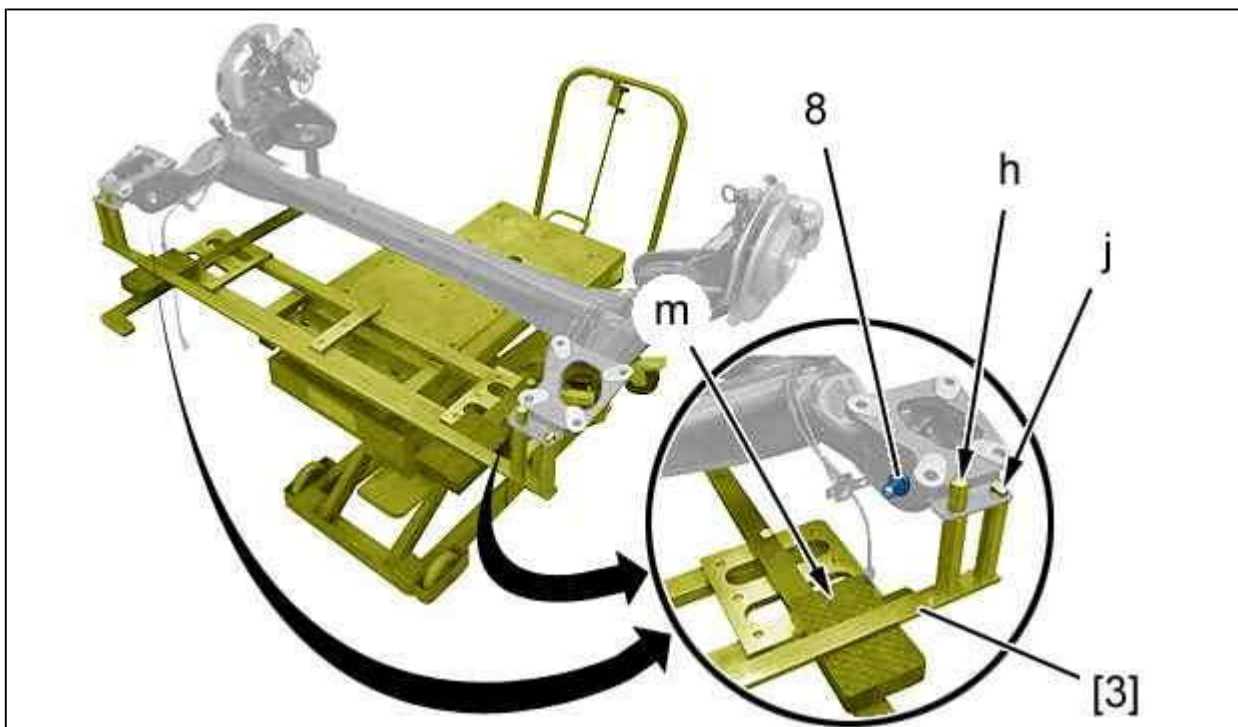


ATTENTION : The following operations must be performed with two people.

Remove:

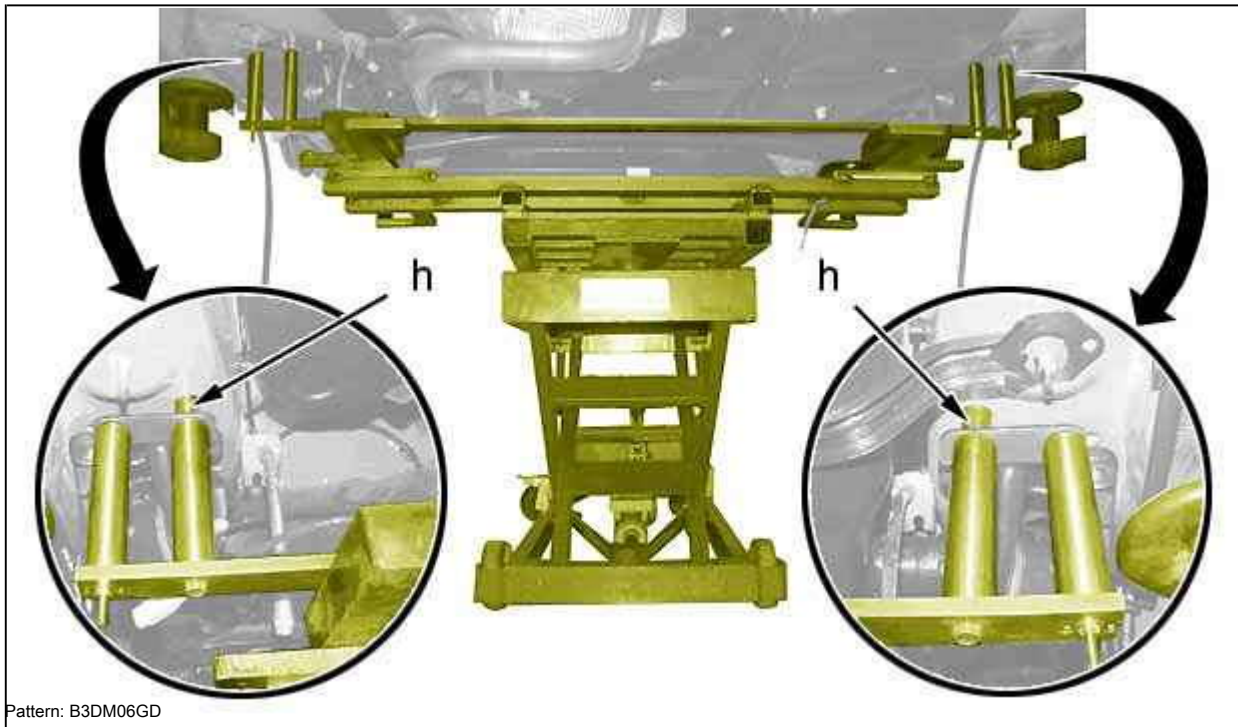
- the bolts (7)
- Rear axle

3. Installation



from each side :

- Loosen the bolt (8)
- Place the tool [3] under the rear axle covers (in "h")
- Hold the tool [3] to the rear of the bridge (at "j")
- Use the pads at hand (in "m") so that the rear axle is in a horizontal position



ATTENTION : The following operations must be performed with two people.

Place the rear axle under the body in the same position as when it was removed. Adjust the position of the rear axle in relation to the holes in the pinned joint (at "h"). Replace the bolts (7).

Tighten:

- bolts (7) to a torque of 11.5 ± 1.1 da.Nm
- bolts (8) to a torque of 11.5 ± 1.1 da.Nm

Remove the tools [1], [2], [3], [4], [5], [6]. from each side :

- Replace plugs (in "h")
- Connect: The hydraulic pipe (8) (at "f"); Tighten to 1.5 ± 0.3 da.Nm Attach the rear wheel sensor wiring harness (9) (at "e")
-
- Connect: Rear wheel sensor connector (9) (in "d") Fasten the parking brake cable
- (4) in its guides Connect the parking brake cable (4) (in "b", "a") Connect the
- parking brake cable (4) (in "c")
-

Install:

- **Rear shock absorbers**
- **Rear suspension springs**
- Display (3)

Remove the pedal press.

NOTE: Parking brake lever in released position.

Press the release knob (2) (in accordance with the arrow).

Continuing to press the release knob (2), turn the backlash compensation knob by a quarter turn

(1) (according to the arrow). Release the release

pusher (2).

Turn the backlash compensation knob (1) by a quarter of a turn (in the opposite direction). Reconnect the battery.

Drain the brake fluid and purge the brake circuit

Install:

- Rear wheels
- Rear wheel bolts



Adjust the parking brake

Install:

- Center console
- A car on its wheels



Tighten the rear wheel bolts

Mettre le véhicule en assiette de référence



Tighten the shock absorber lower bolts to a torque of 19 ± 1 da.Nm.



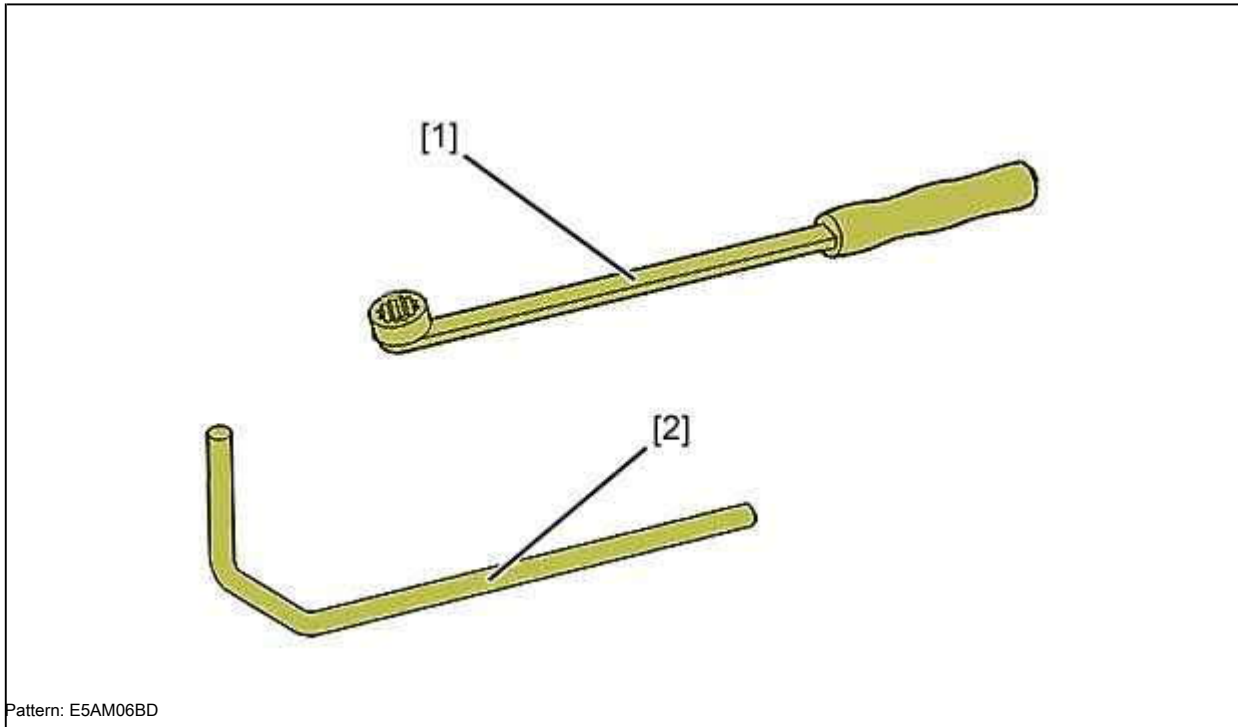
ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL REFITTING: ANCHORED EQUIPMENT DRIVE BELT (POWER STEERING)

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



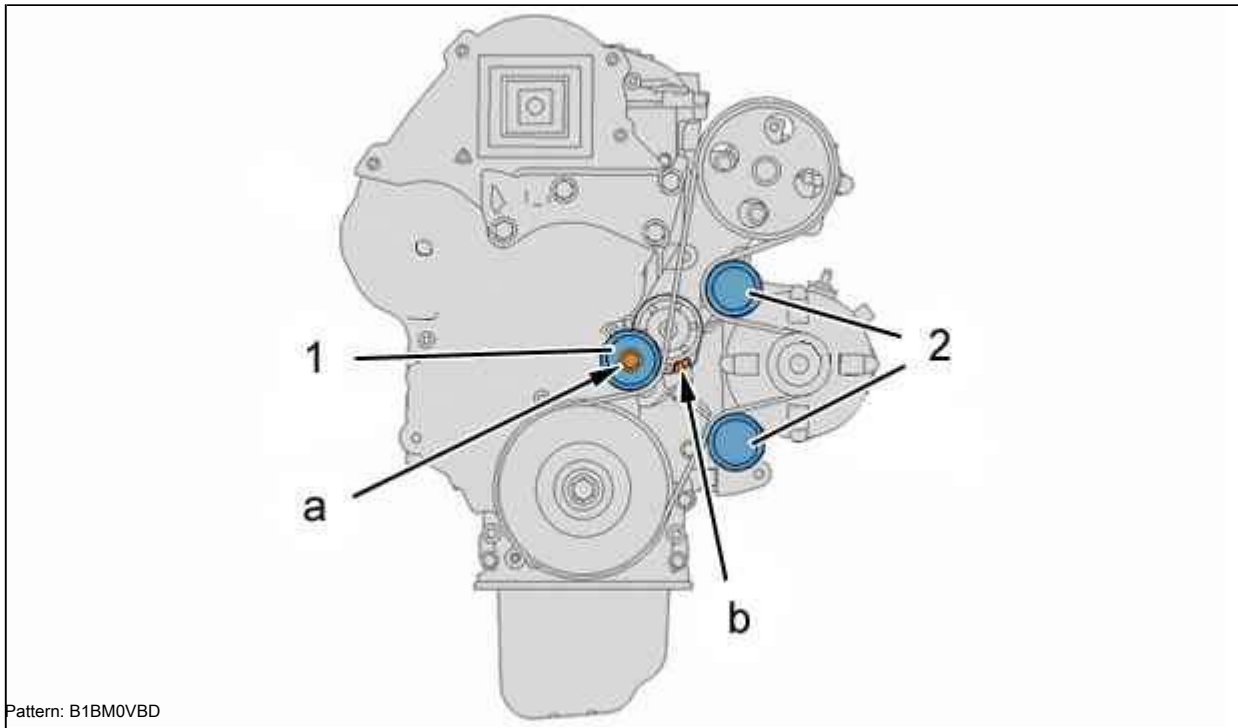
[1] Lever for spring compression of dynamic tensioner (). 0188Z. [2] Pin for dynamic tensioning roller (). 0194F.

2. Removal

Disconnect the battery. Remove:

- Front right wheel
- Under engine guard

2.1. Car without air conditioning



ATTENTION : Mark the mounting direction of the ancillary drive belt if reused.

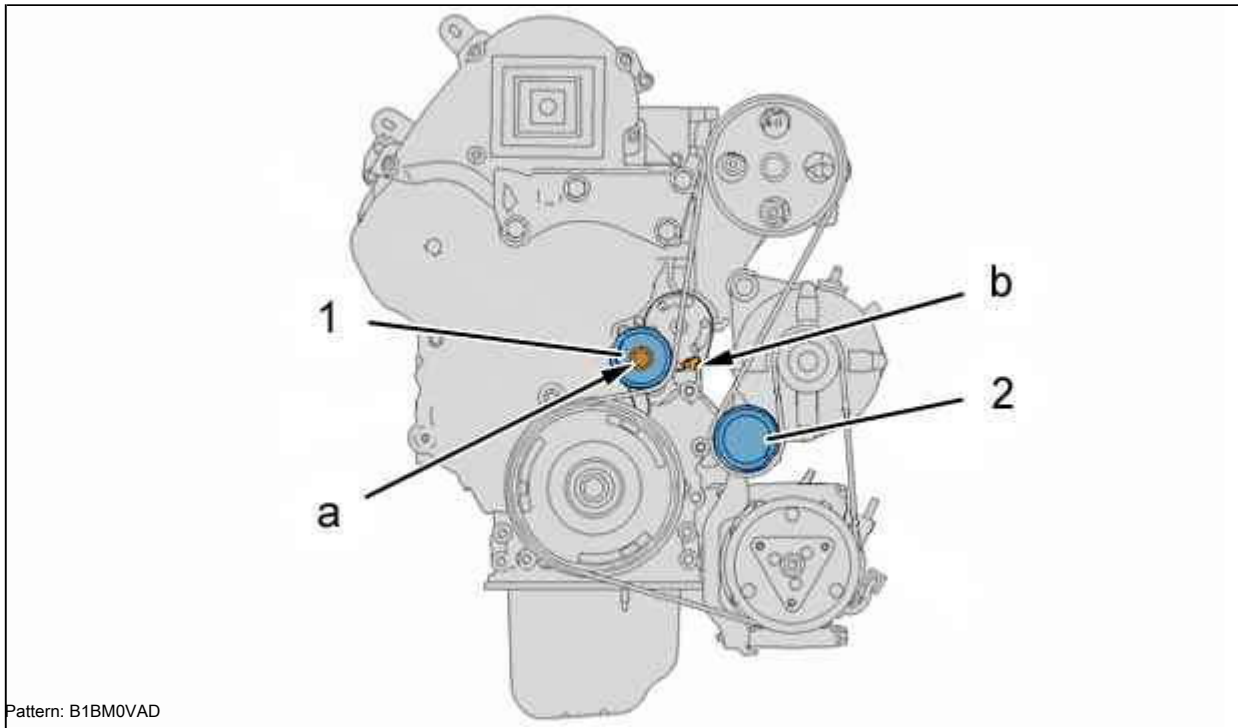
Squeeze the dynamic tensioner roller (1) by pushing in "a" (clockwise); Using the tool [1].

Secure with a pin (at "b"); Using a pin [2].

Hold dynamic tensioner roller (1) compressed and remove bodywork belt.

ATTENTION : Make sure that the rollers (1), (2) rotate freely (without play and jamming).

2.2. Car air conditioner



ATTENTION : Mark the mounting direction of the ancillary drive belt if reused.

Squeeze the dynamic tensioner roller (1) by pushing in "a" (clockwise); Using the tool [1].

Secure with a pin (at "b"); Using a pin [2].

Hold dynamic tensioner roller (1) compressed and remove bodywork belt.

ATTENTION : Make sure that the rollers (1), (2) rotate freely (without play and jamming).

3. Installation

ATTENTION : Drive belt that has already been used: Observe the direction of installation of the drive belt.

Replace the ancillary drive belt.

Squeeze the dynamic tensioner roller (1) by pushing in "a" (clockwise); Using the tool [1].

Remove the pin [2].

ATTENTION : Observe the normal installation of the attachment drive belt in the grooves of the various pulleys.

Install:

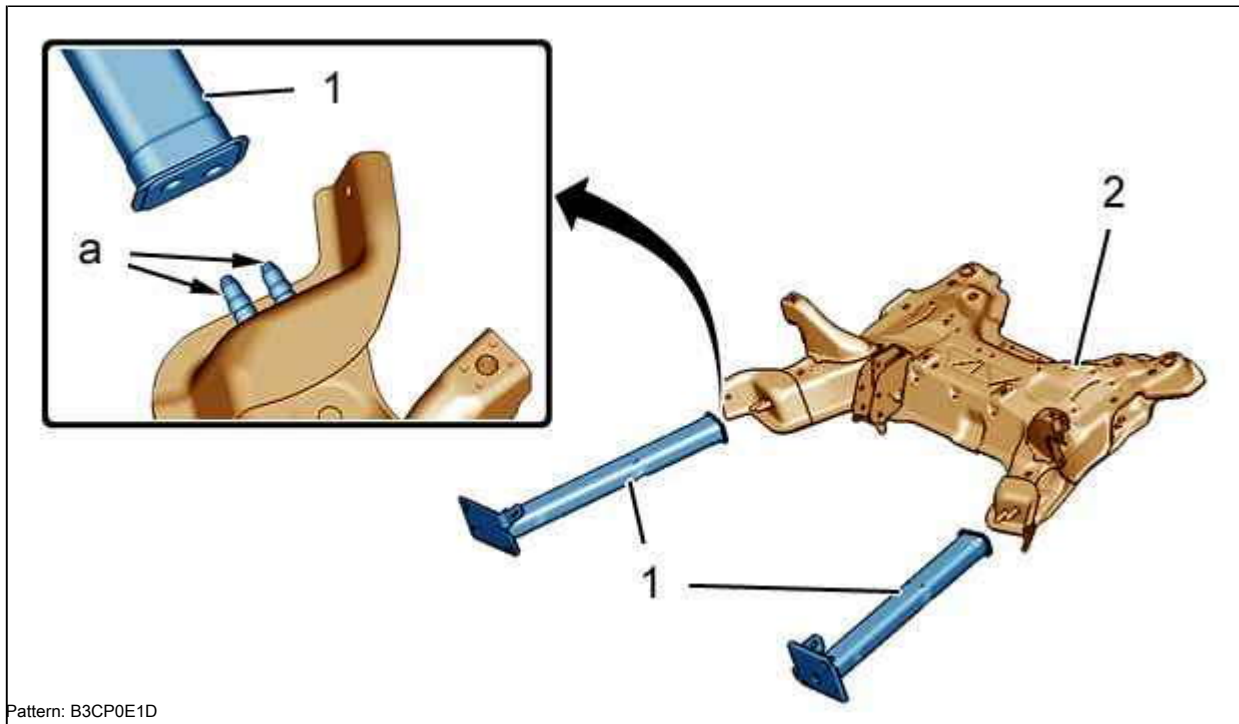
- Under engine guard
- Front right wheel

Reconnect the battery.

ATTENTION : Follow the steps to follow after removing the battery.

FEATURE IDENTIFICATION: FRONT AXLE

1. Front sub-frame



(1) Subframe extensions (depending on country of sale). (2) Subframe.

Subframe extensions stamped at the two lugs "a" on the subframe side. Subframe extensions bolted to the lower beam and to the front of the body. Mechanically welded painted subframe.

Subframe mounted on the body with locating lugs.

2. Rotary fist

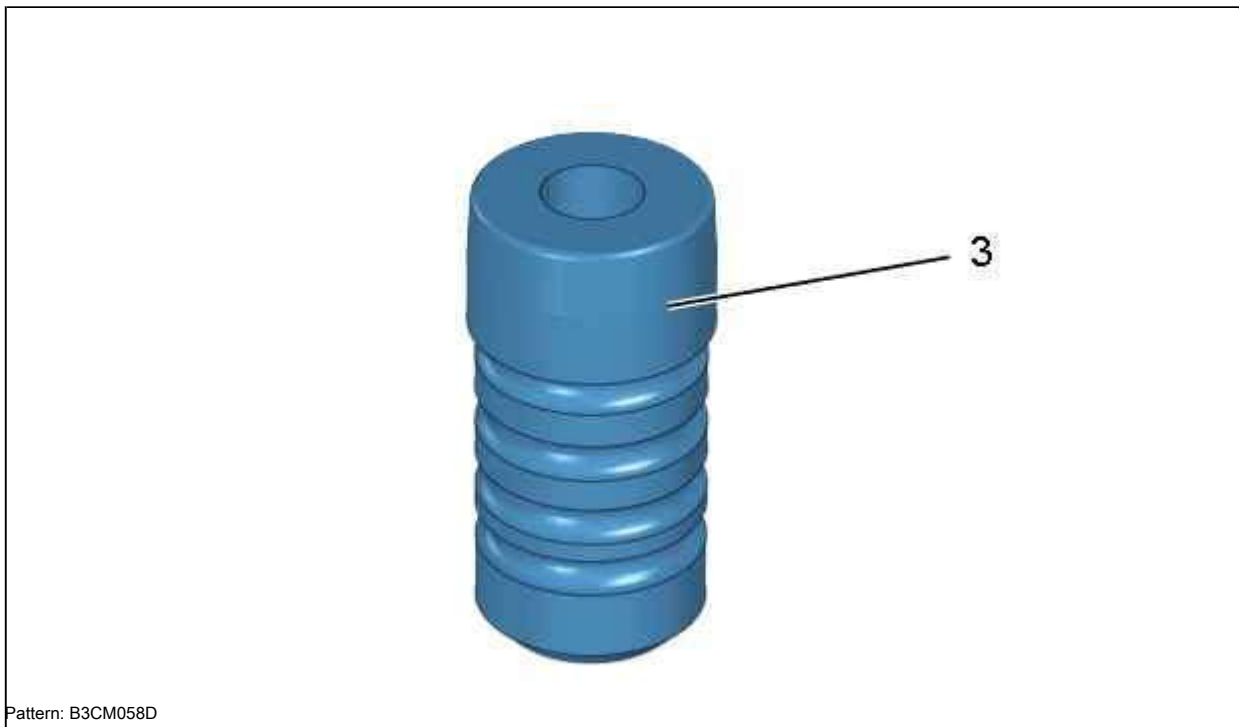
Steering fist "compressed type". Steering knuckle bearing:

- Diameter 82 mm
- Bearing with two rows of balls and integrated magnetic target (48 polar pairs)

Lower removable swivel knuckle ball joint.

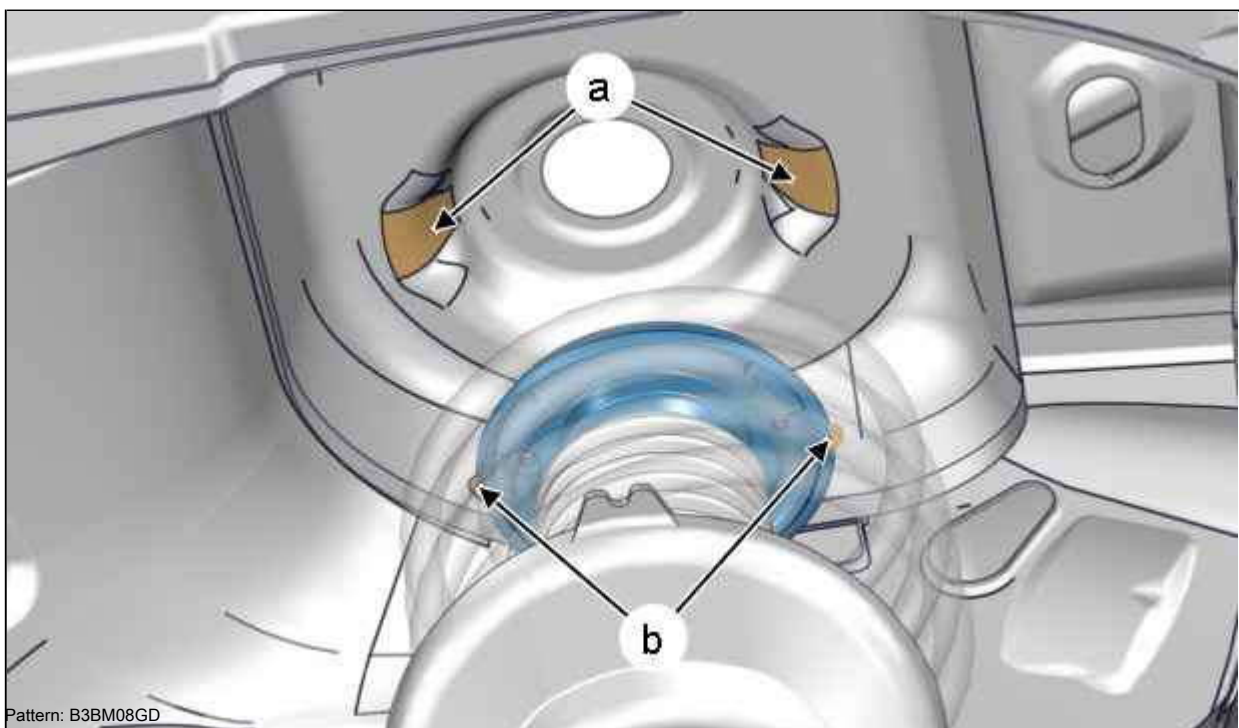
3. Supporting element

3.1. Emphasis



Independent front suspension type McPherson.
Stop (3): Height = 96 mm.

3.2. Carrier tilt



Install lugs "b" of shock absorber support into recess "a" in wheel arch.

4. Anti-roll bar

Body type	Diameter
All (Except: 7 seats) 23 mm	
7seats	25 mm

5. Car geometry

NOTE: The geometric characteristics are given with the values of control and adjustment of the geometry of the bridges.

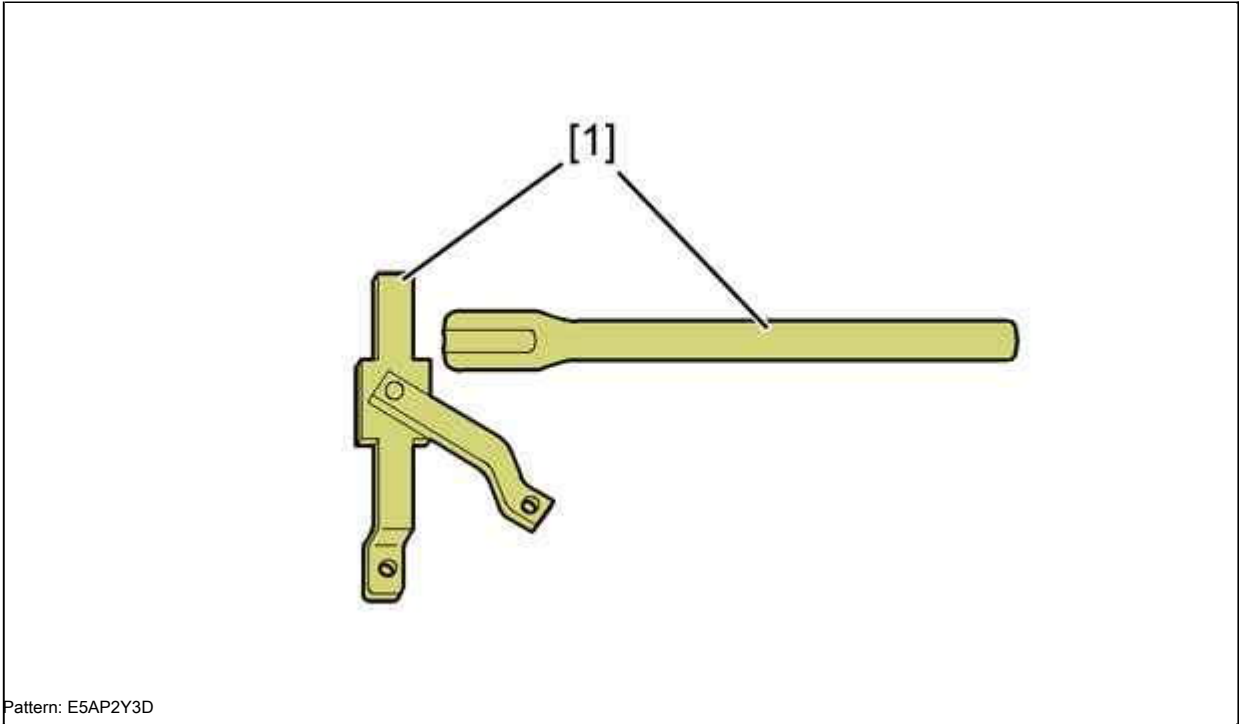


REMOVAL REFITTING: FRONT STEERING AXLE

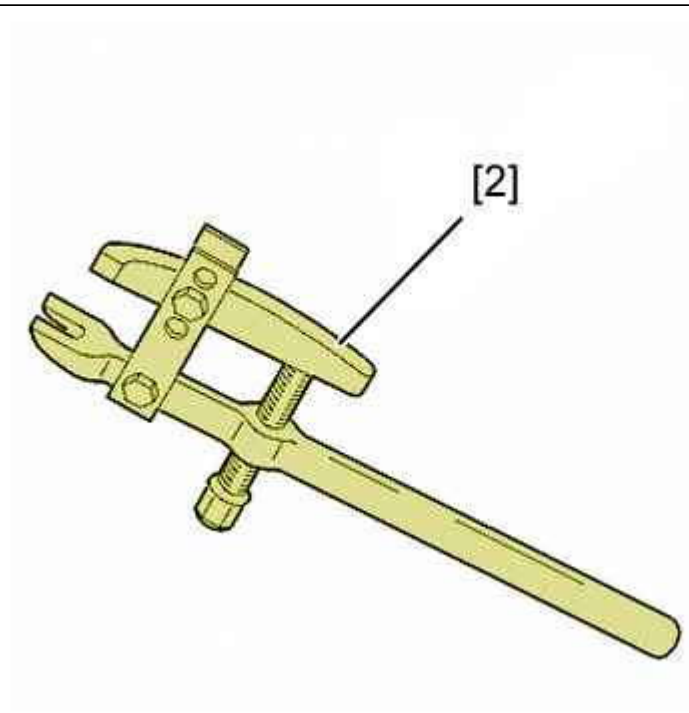
MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment

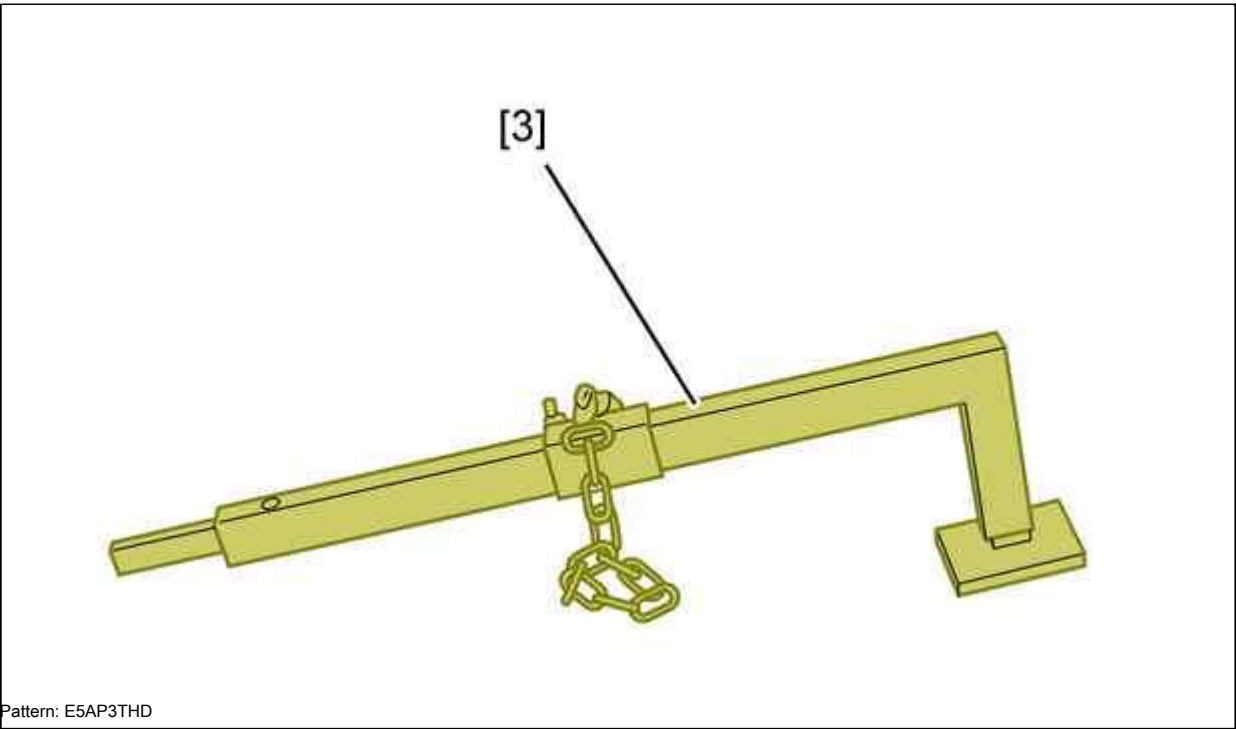


Label Designation		Number (reference)	Number (reference)
[1]	hub fixing device 6310T		() .0606AY



Pattern: E5AP3TGD

Label Designation		Number (reference)	Number (reference)
[2]	hinge puller 1892T		() .0709



Pattern: E5AP3THD

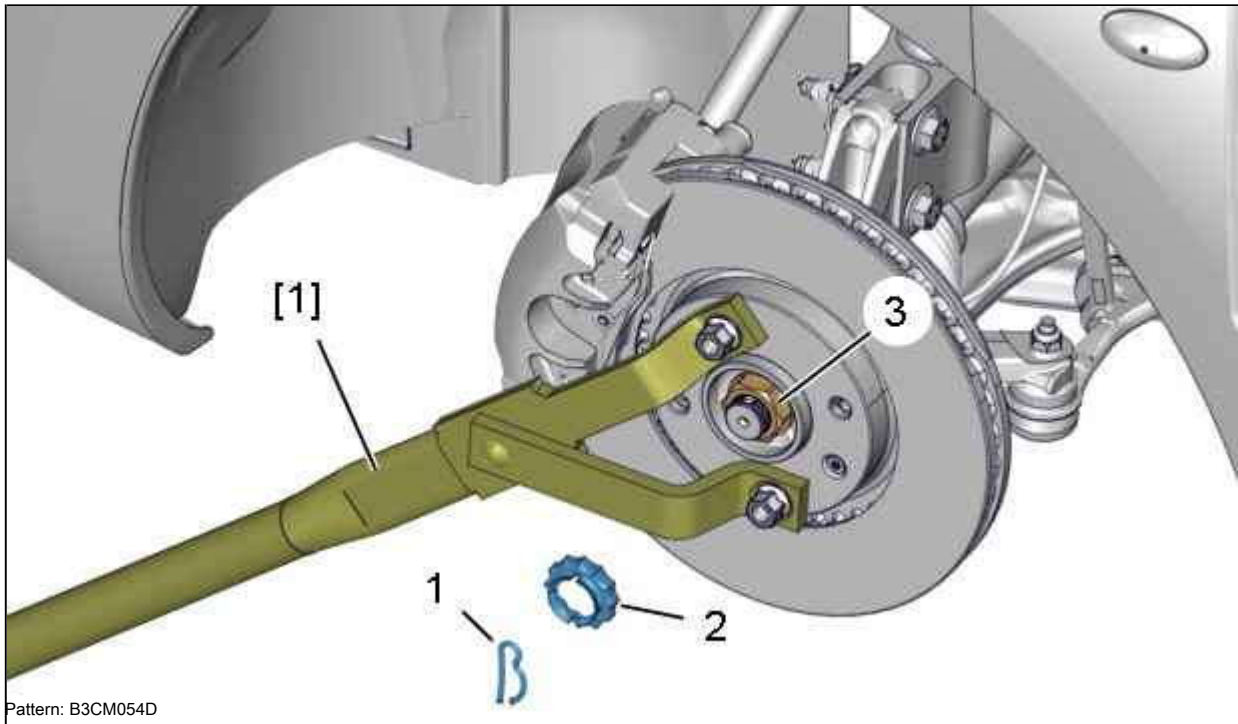
Label Designation		Number (reference)	Number (reference)
[3]	lever for disconnecting the ball joints of the steering knuckle	9509T	() .0622

2. Removal

Unlock front wheel bolts.

Raise and secure the vehicle in the raised position. Remove:

- Front wheel bolts
- Front wheel



Remove:

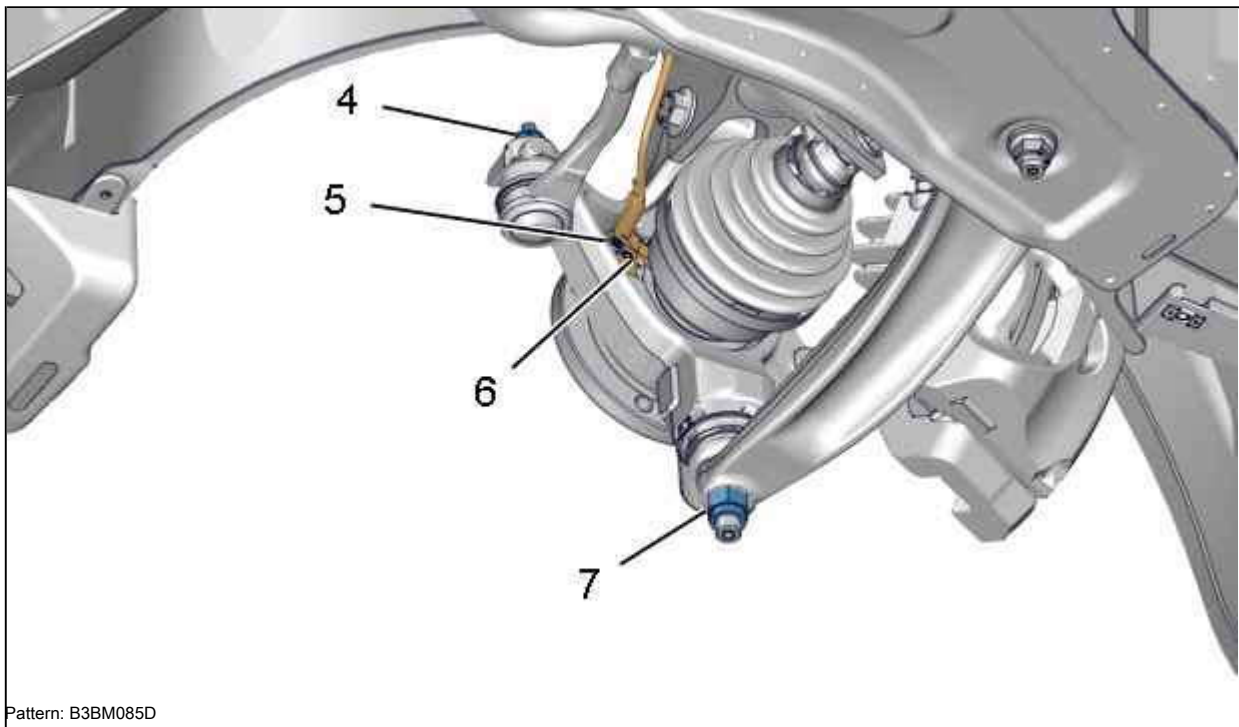
- Hairpin (1)
- Clip (2)

ATTENTION : Do not brake to loosen the fastening; this can lead to cracking of the bolts holding the brake discs to the hub.

Secure the hub against rotation using the tool [1]. Unscrew then remove the drive shaft nut (3).

Remove the front brake disc





Loosen nut (4).

Disconnect the tie rod ball joint; Using the tool [2]. Remove the bolts (5).

Move the wheel sensor (6).

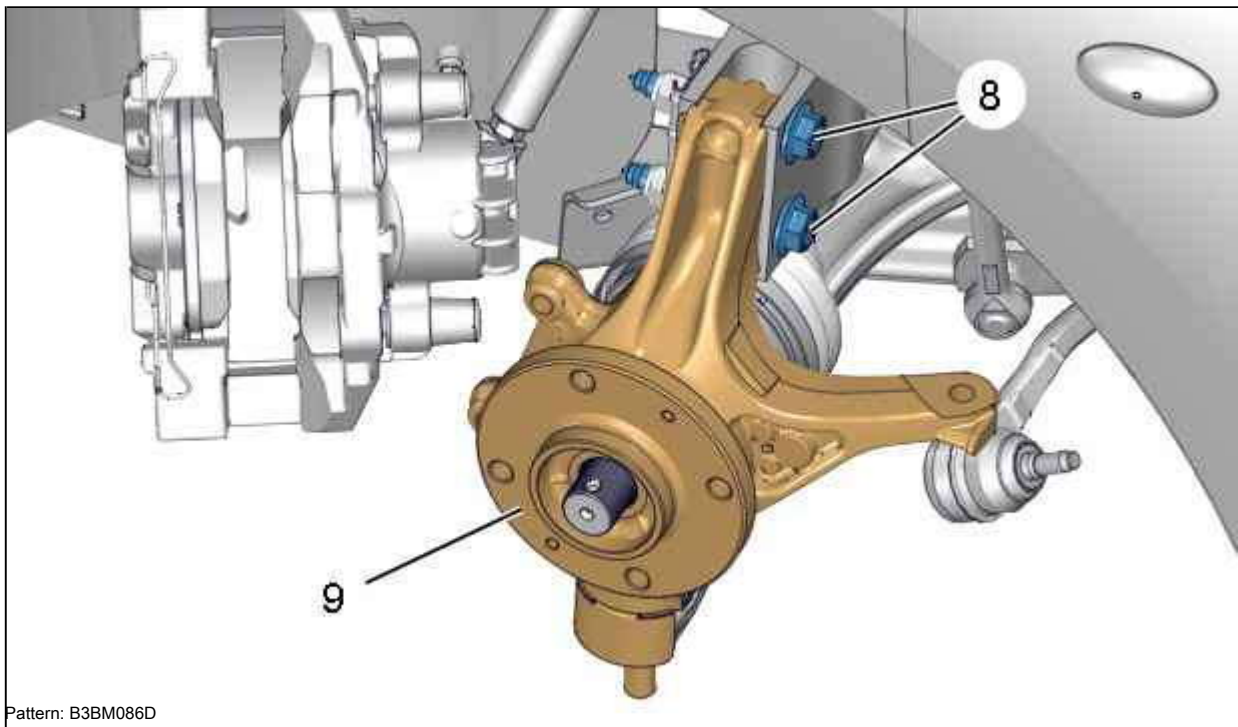
Unscrew the nut (7).

ATTENTION : Be careful not to damage the slewing knuckle cover.

Disconnect the steering knuckle ball from the lower arm; Using the tool [3].

ATTENTION : When releasing the steering knuckle; Hold the drive shaft in the differential.

Disconnect the front drive shaft joint.



Remove:

- Bolts (8) with their own nuts
- Front hinge (9)

3. Installation

NOTE: Replace Nilstop nuts after each removal.

Install:

- Front hinge (9)
- Bolts (8) with their own nuts; Tighten to 8 ± 0.8 da.Nm

Attach the pivot to the front steering knuckle. Attach the knuckle ball to the lower arm. Install:

- The nut (7); Tightening torque 4.2 ± 0.4 da.Nm
- Wheel sensor (6)
- Bolt (5); Tightening torque 0.8 ± 0.1 da.Nm

Connect the tie rod ball joint.

Replace the nut (4) (new); Tighten to 4.5 ± 0.4 da.Nm.

Install front brake disc

Secure the hub against rotation using the tool [1].



Install. Tighten the drive shaft nut (3) with a tightening torque of 32.5 ± 2.6 da.Nm. Install:

- Clip (2)
- Pin (1)
- Front wheel
- A car on its wheels

Tighten the wheel bolts

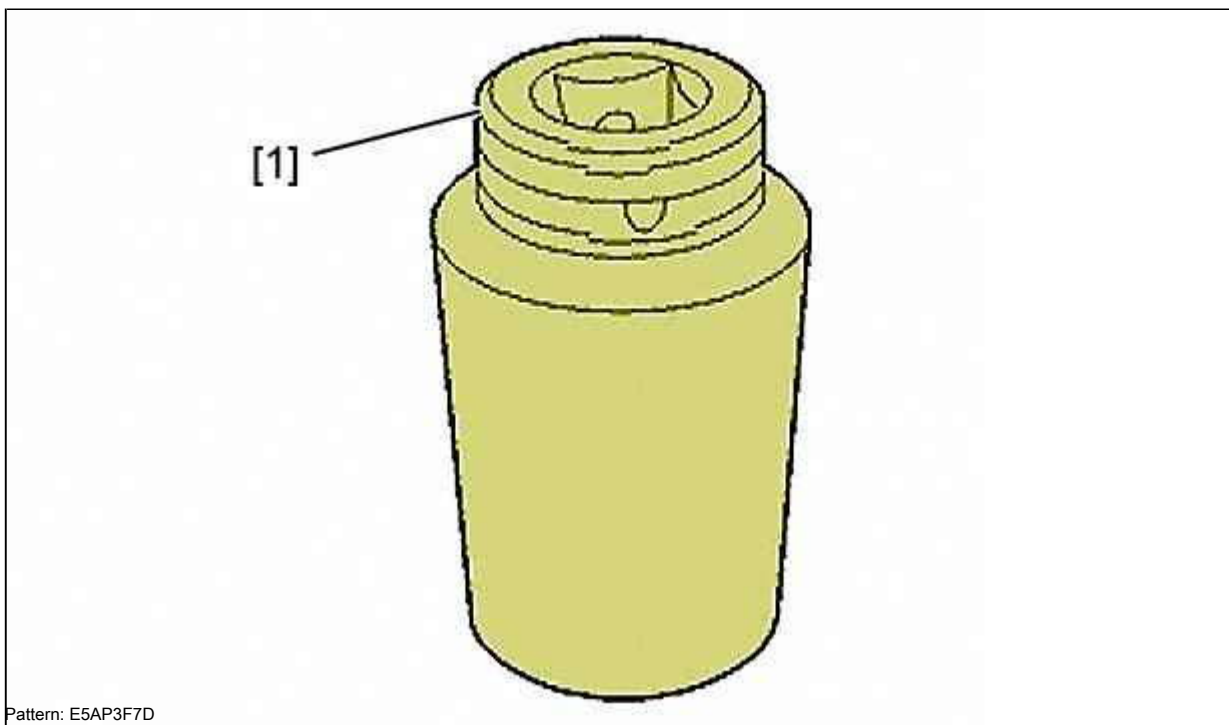


REMOVAL REFITTING: STEERING KNUCKLE FRONT BALL

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



[1] Bushing for the lower ball joint of the steering knuckle (type: FACOM NK.41L).

2. Removal

Unlock the bolts (Front wheel).

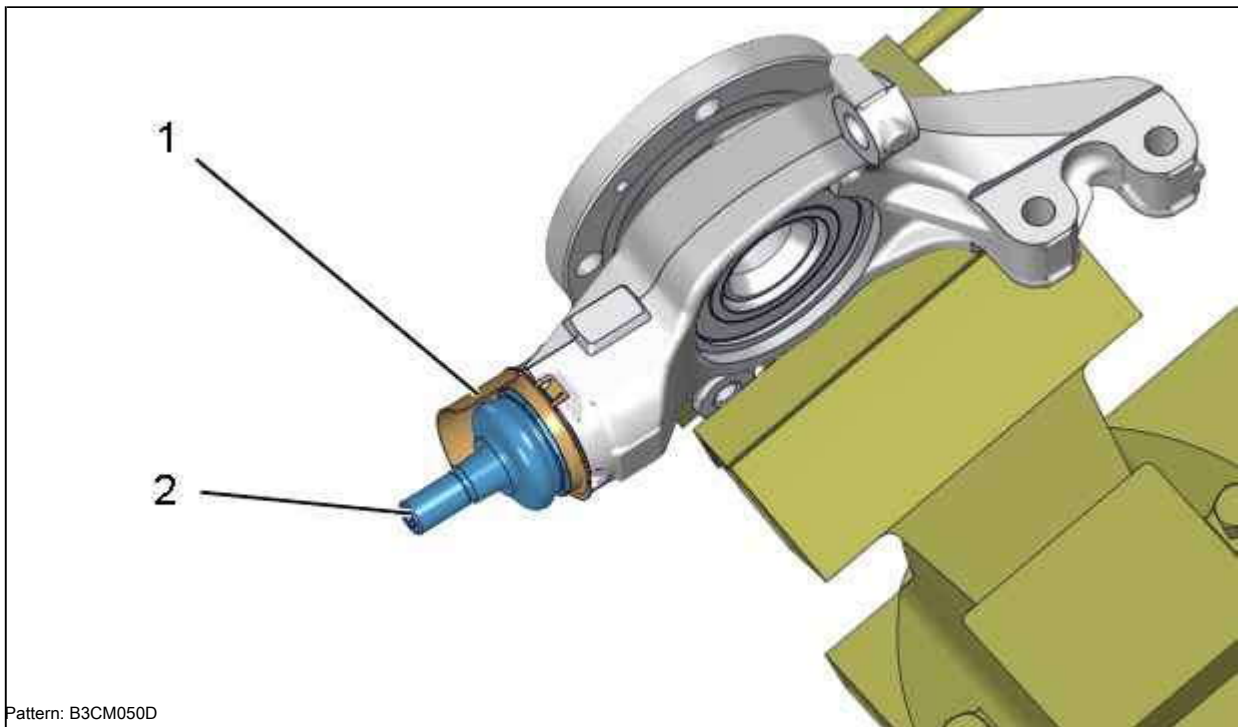
Raise and secure the vehicle by hanging the front wheels. Remove:

- bolts (Front wheel)
- Front wheel

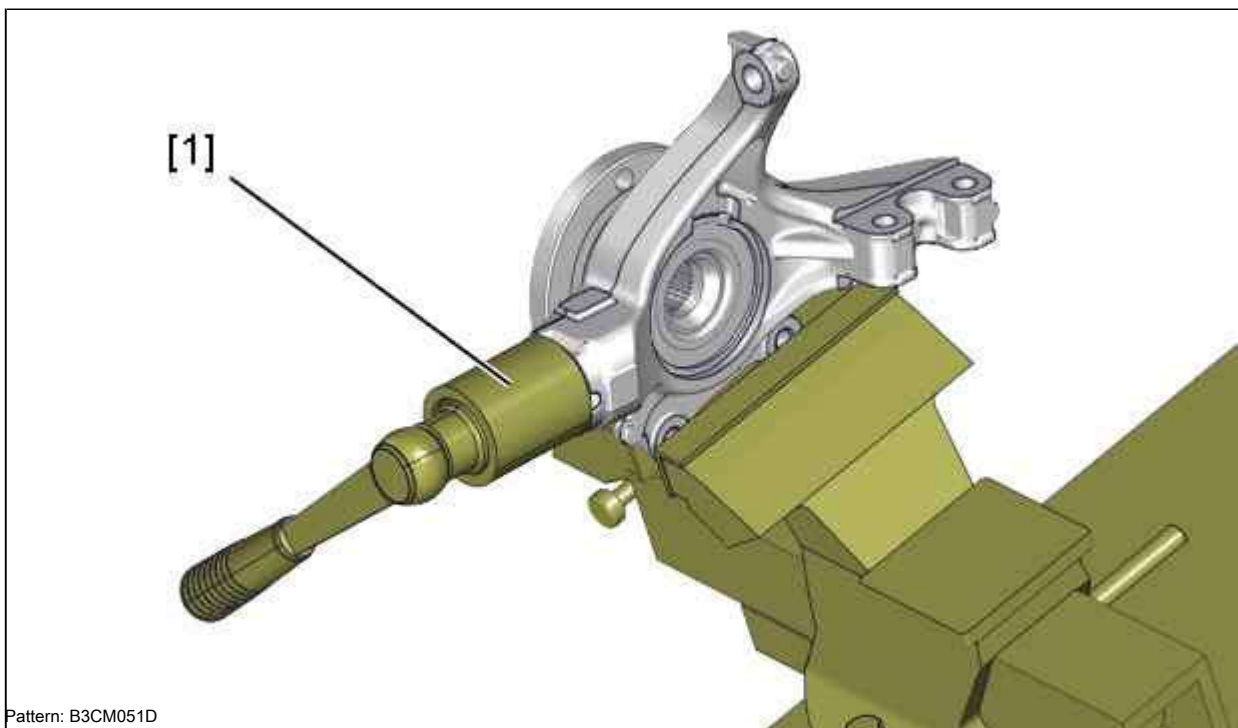
Remove the front steering knuckle



...



Secure the front steering knuckle in a vise fitted with jaws.
Remove the protective sheet (1) (Front steering knuckle ball joint (2)); Using screwdrivers.

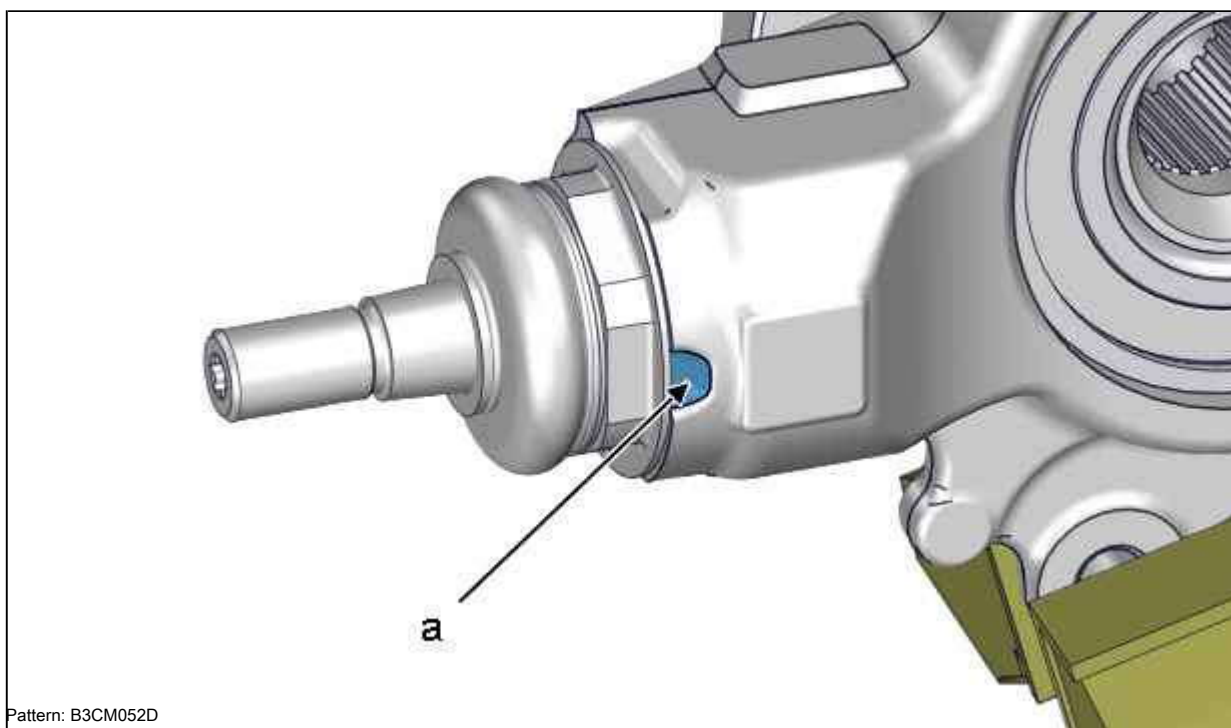


ATTENTION : Be careful not to damage the rubber of the ball joint.

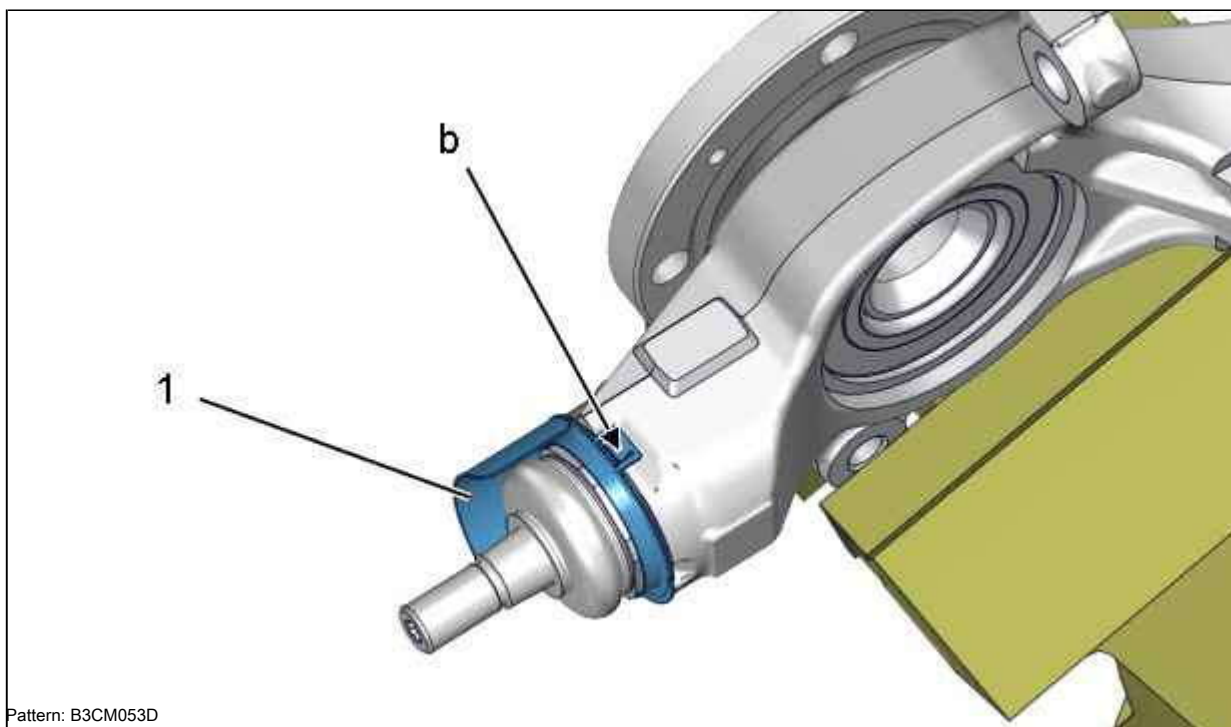
Remove the front steering knuckle ball (2); Using the tool [1].

3. Installation

Install: Front steering knuckle ball joint (2).
Tighten the front ball joint (2) to 23 ± 2.3 da.Nm.



Lock the ball joint in the grooves "a" on the steering knuckle.



Installation plate (1) on the ball joint housing.

Fix the plate to one of the faces of the ball joint. To do this, bend the plate in area "b".

Install front steering knuckle

Install:



- Front wheel
- Front wheel bolts

Tighten the wheel bolts



...

REMOVAL REFITTING: FRONT SUSPENSION ARM

MANDATORY: Observe the cleanliness and safety rules

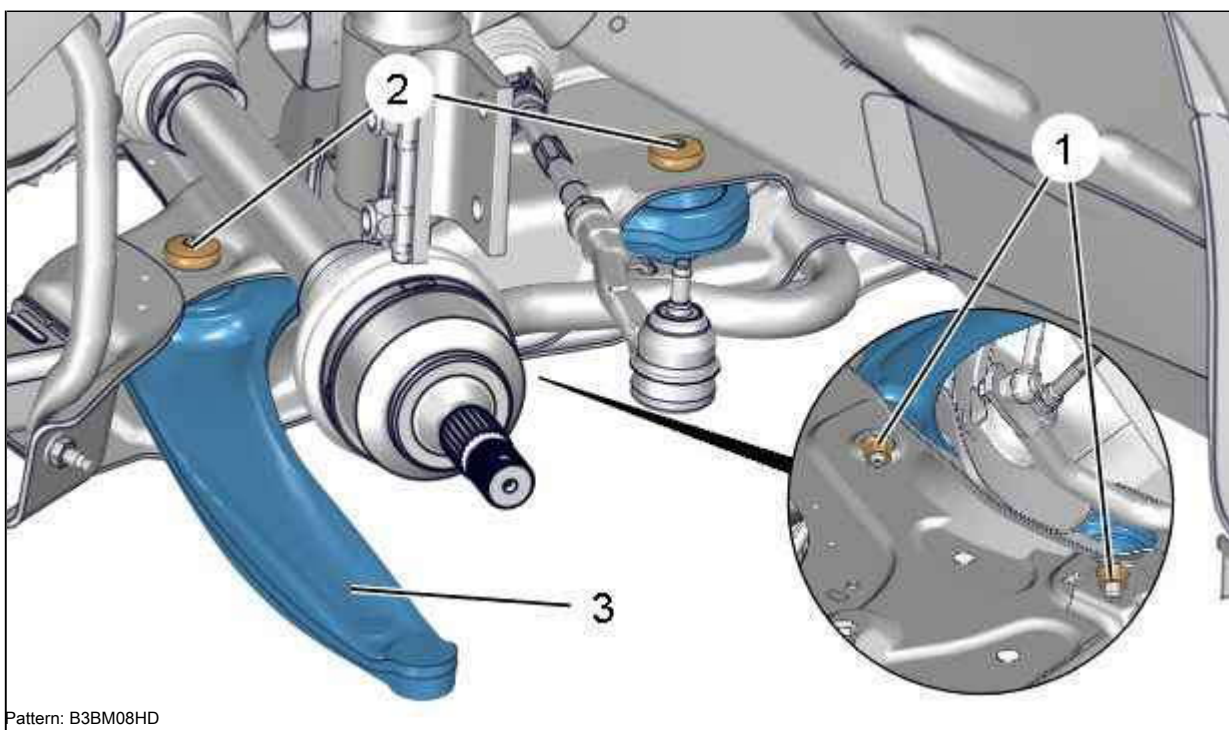


1. Removal

Unlock: Front wheel bolts.

Raise and secure the vehicle by hanging the front wheels. Remove:

- Front wheel bolts
- Front wheel
- **Rounded fist**



Pattern: B3BM08HD

Remove:

- Nuts (1)
- bolts (2)
- Suspension arm (3)

2. Installation

Install:

- Suspension arm (3)
- bolts (2)
- Nuts (1); Tightening torque 11.1 ± 1.1 da.Nm
- **Rounded fist**
- Front wheel
- Front wheel bolts
- A car on its wheels



Tighten the wheel bolts



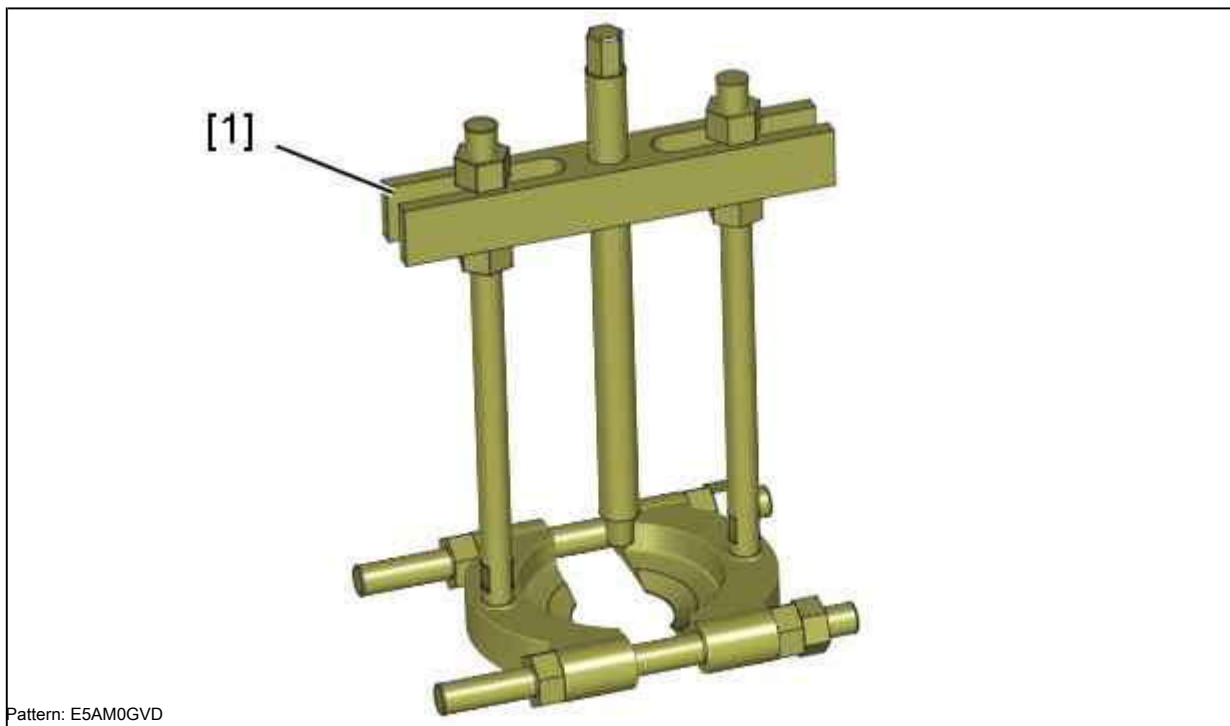
BALANCE STANDARD: FRONT STEERING

FIST

~~MANDATORY: Observe the cleanliness and safety rules~~

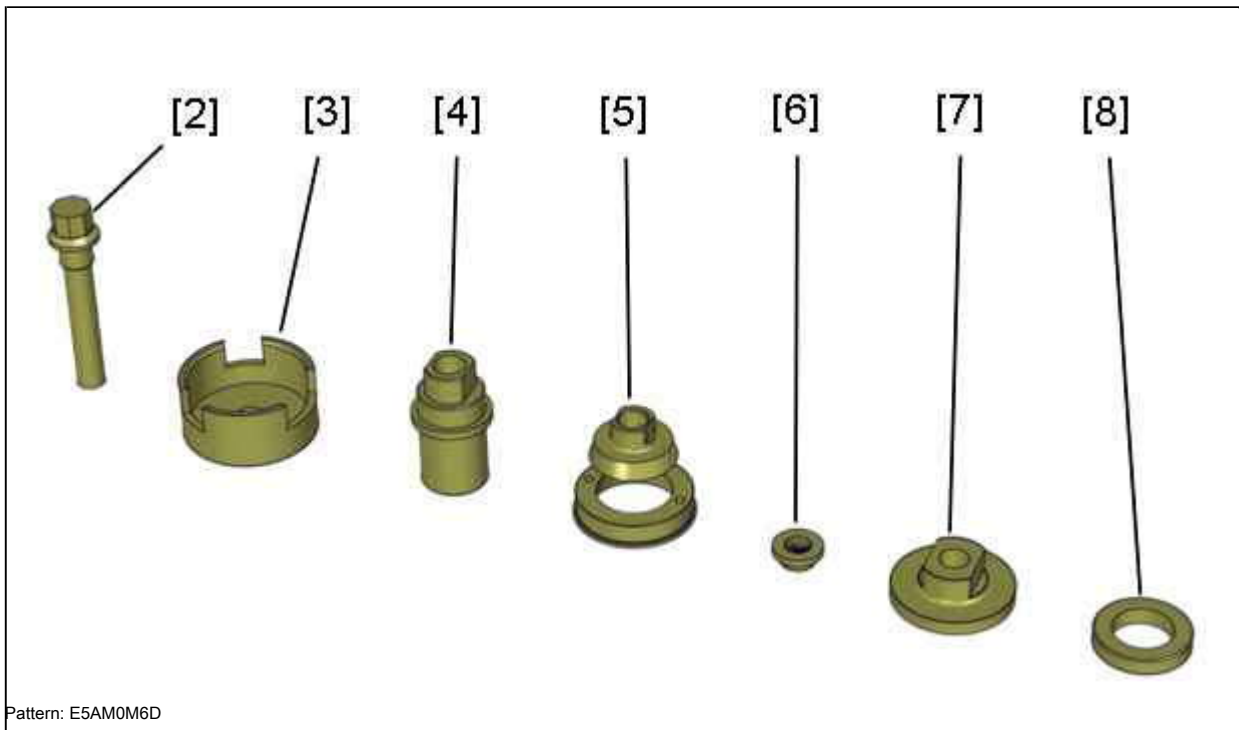


1. Recommended equipment



Pattern: E5AM0GVD

[1] puller FACOM U53 (K2 + T2).



Label Designation		Number (reference) Number (reference)	
[2]	[/] bolt	() .0621C	9501TA
[3]	[/] bearing puller base plate () .0621B nut		() .0621B
[4]		() .0621D	9501T.C1
[five]	[/] puller	() .0621K	9501T.D5
[6]	[/] auxiliary liner	() .0621E	9501T.C2
[7]	[/] tip for bearing installation () .0621L installation mandrel		() .0621L
[eight]		() .0621P	() .0621P

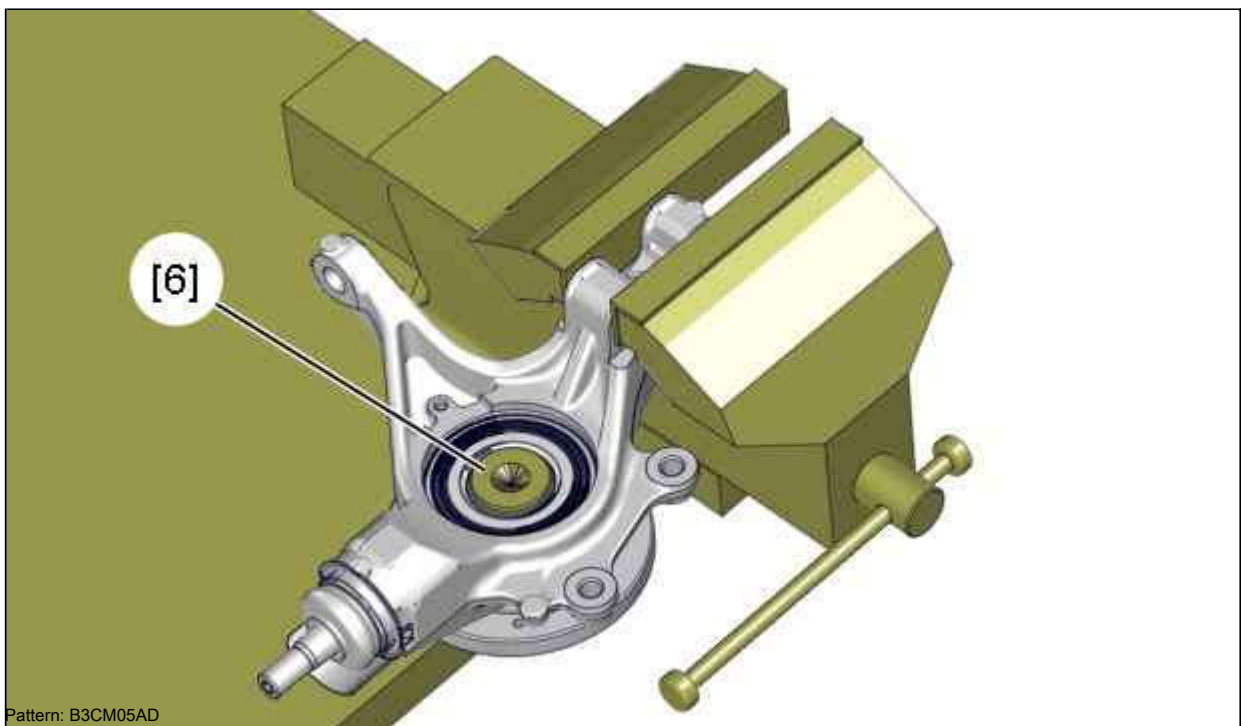
2. Removal

Remove the front steering knuckle

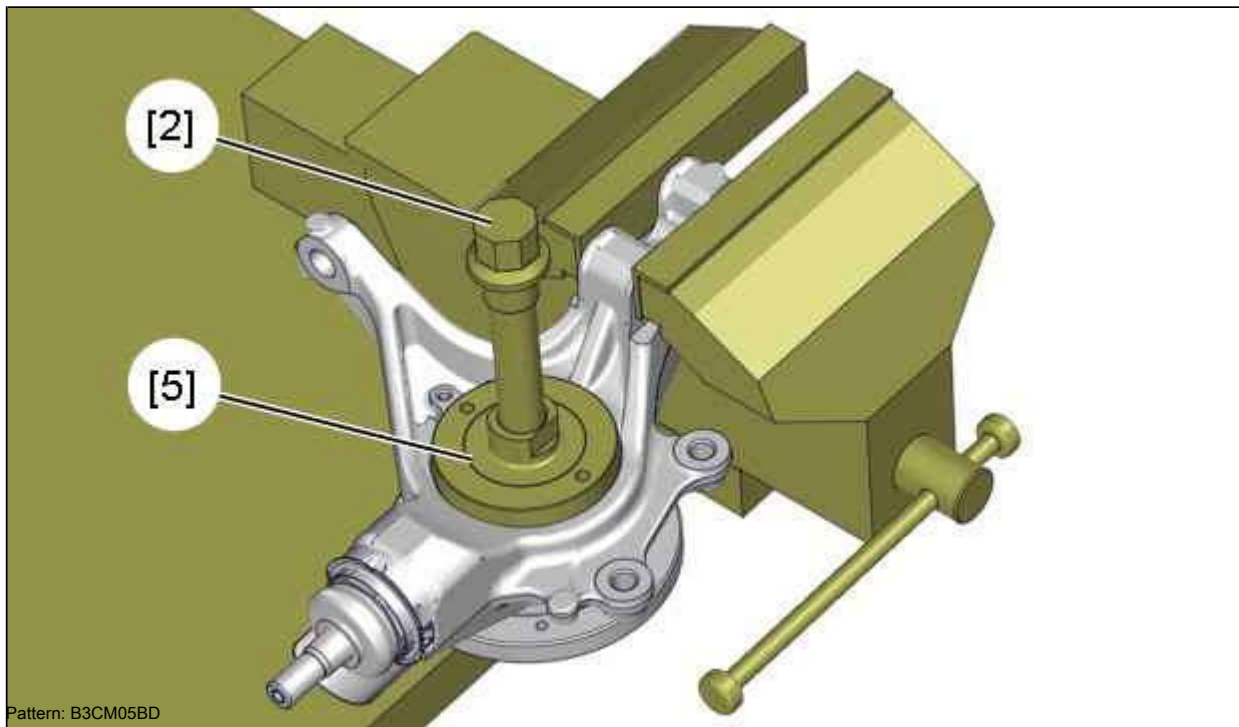




Remove the circlip (1) holding the front hub bearing.

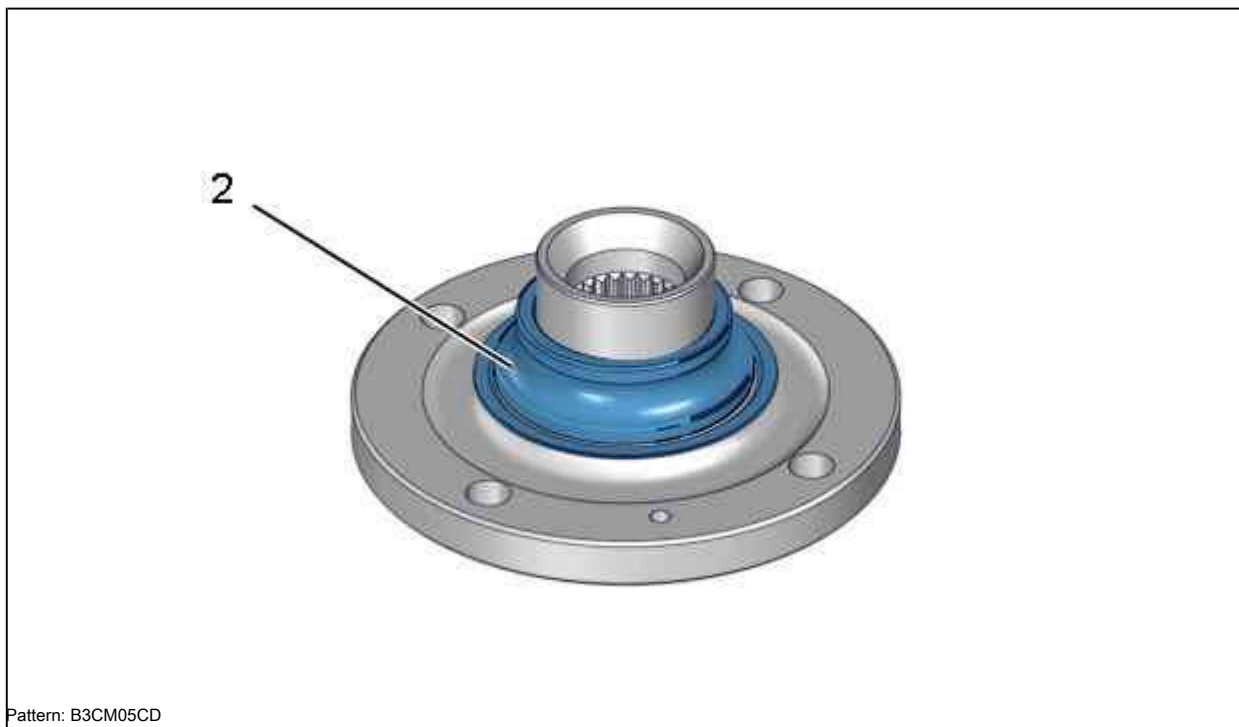


Clamp the front steering knuckle in a vise. Install the tool [6].

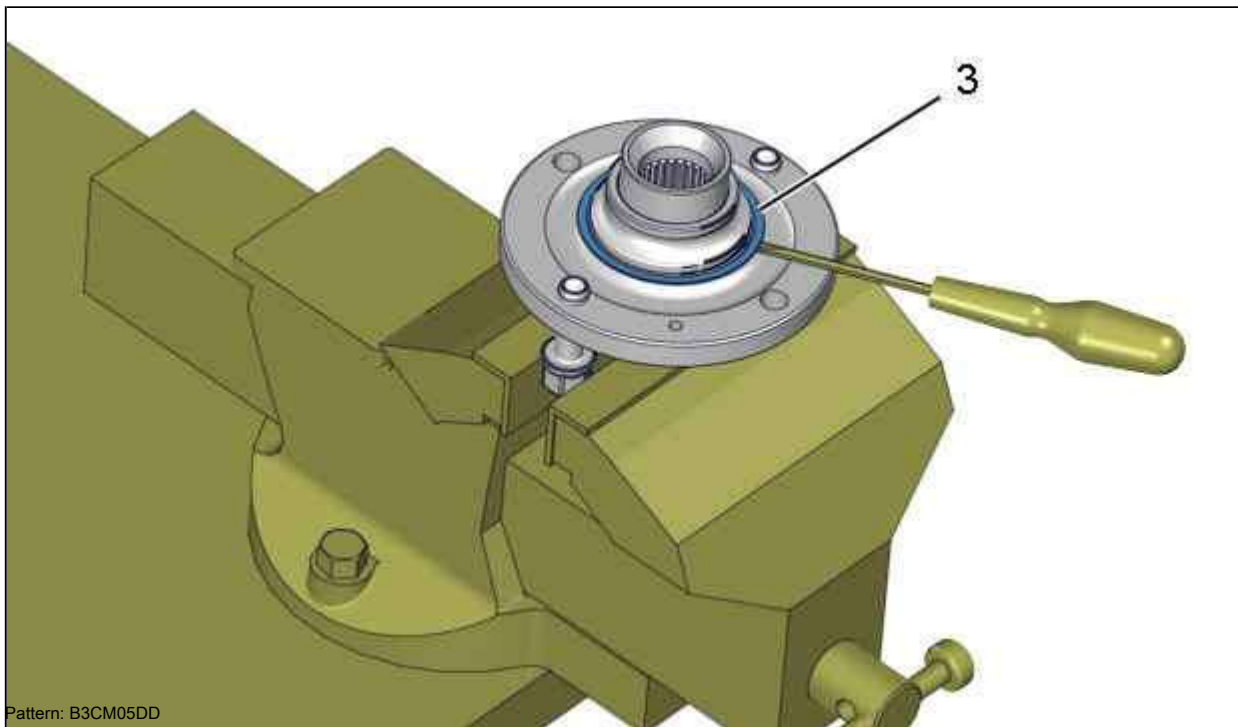


Install:

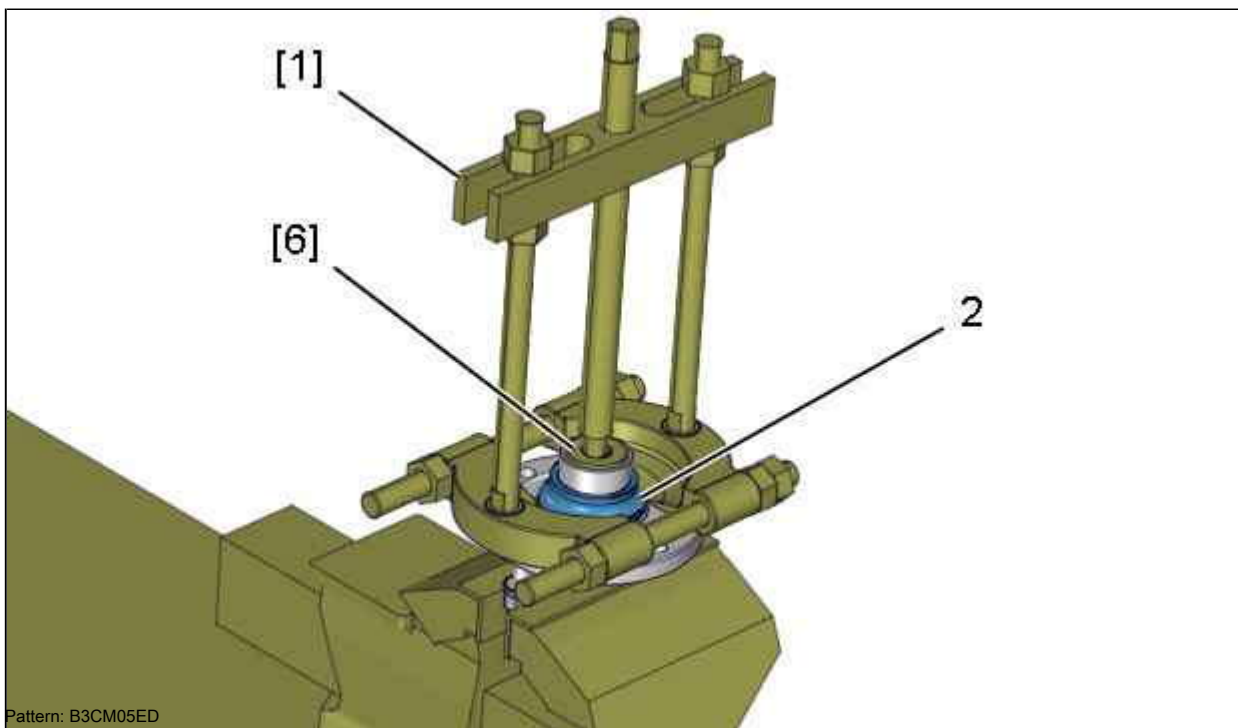
- Fixture [5]
- Fixture [2]



Remove the hub with the inner half of the bearing cage (2).



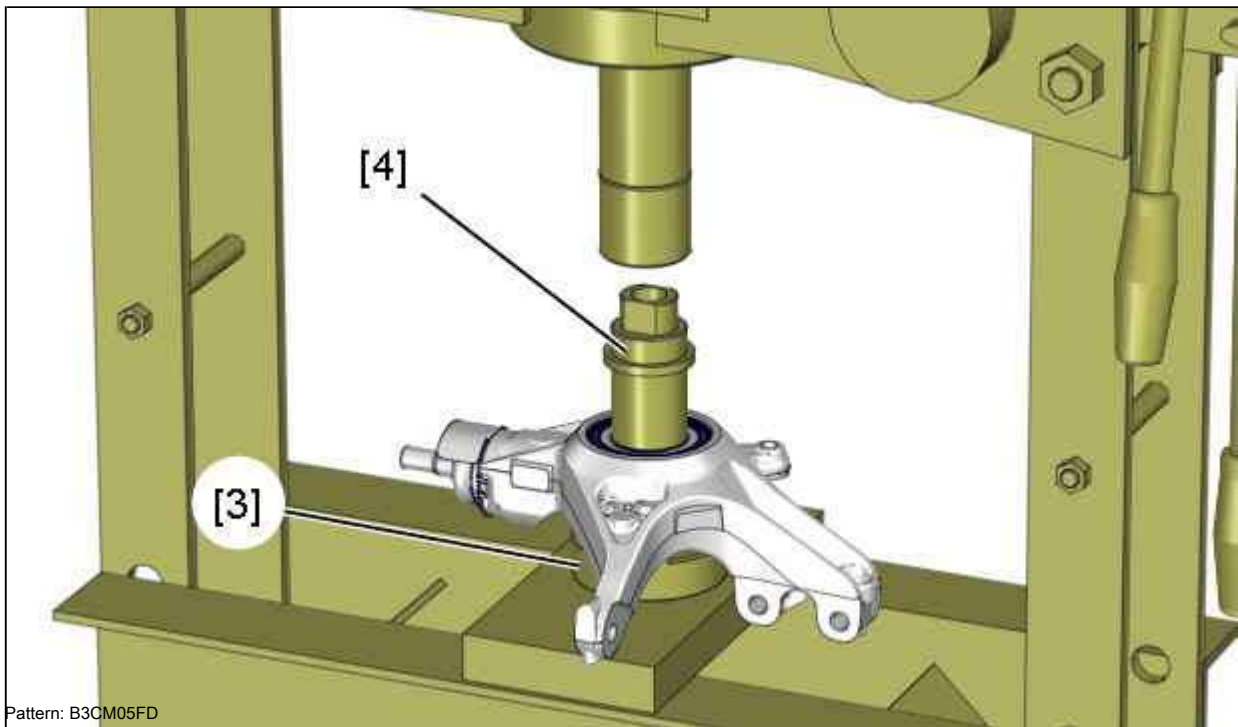
Install the two-wheel bolts in the hub, then install it in a vice. Remove the dust cover (3) of the bearing; Using screwdrivers.



Install:

- Fixture [6]
- Fixture [1]

Remove the inner bearing race (2) with a puller.



Pattern: B3CM05FD

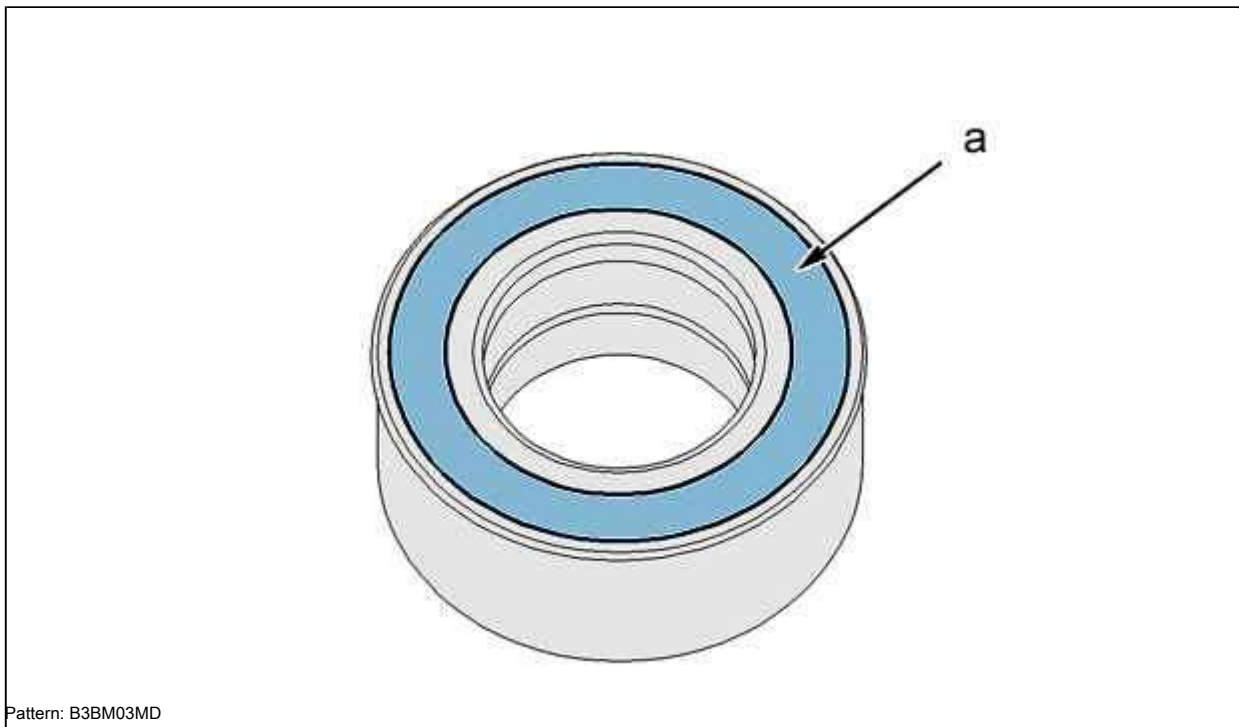
Install the tool [3].
Install the inner ring (2) into its seat. Install the tool [4] on the bearing cage.
Remove the bearing using a press.

3. Installation

3.1. Features of wheel bearings

MANDATORY: Use new bearing and circlips. Lightly grease the bearing seat in the steering knuckle housing and the hub itself. Parts must be clean and free from abnormal wear or impact.

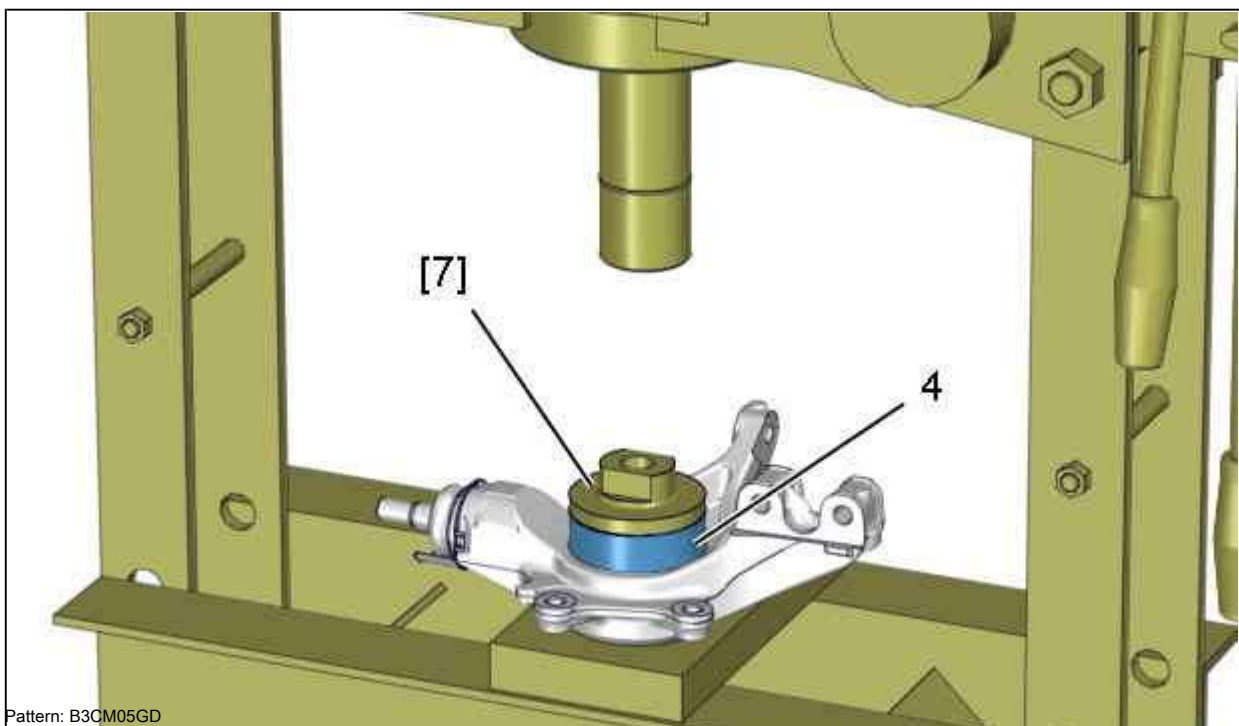
MANDATORY: Do not place a bearing with a built-in magnetic wheel near a magnetic field source or a source contaminated with metal particles.



"a": Bearing side with integrated magnetic wheel.

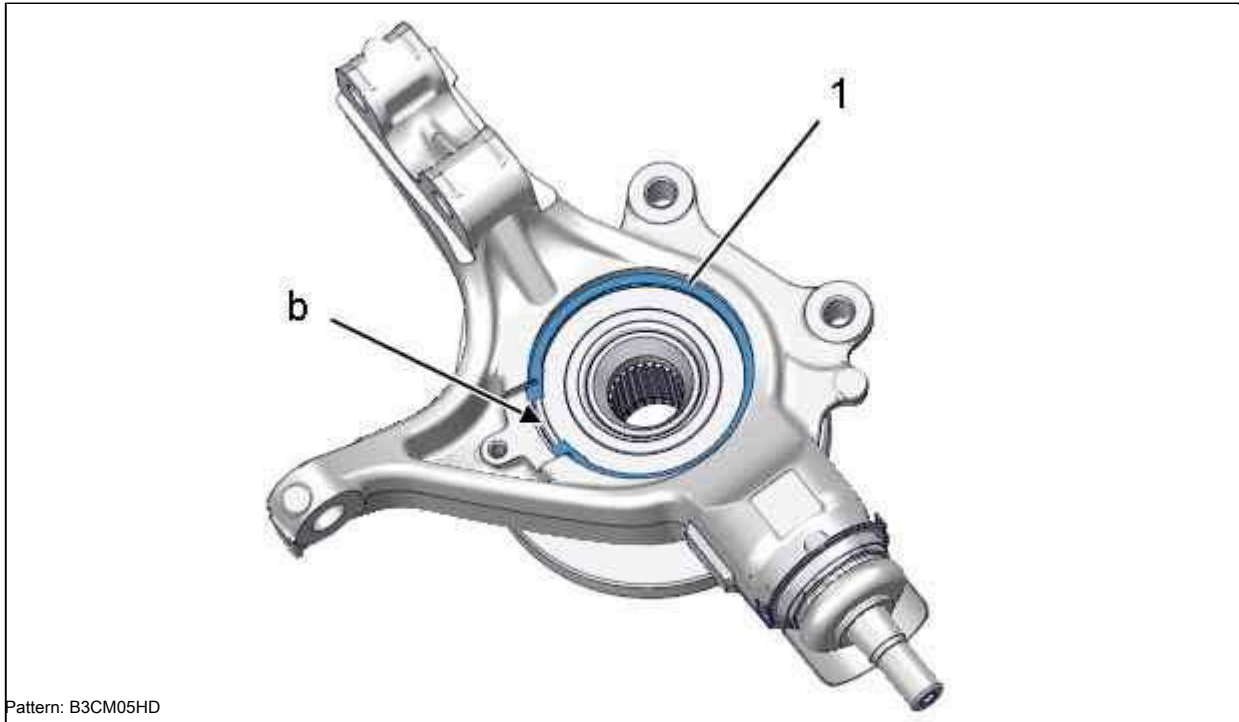
ATTENTION : Mount with the drive shaft end bearing surface "a".

3.2. Installation (continued)



Install the tool [7].

Fit new steering knuckle (4) as far as it will go.

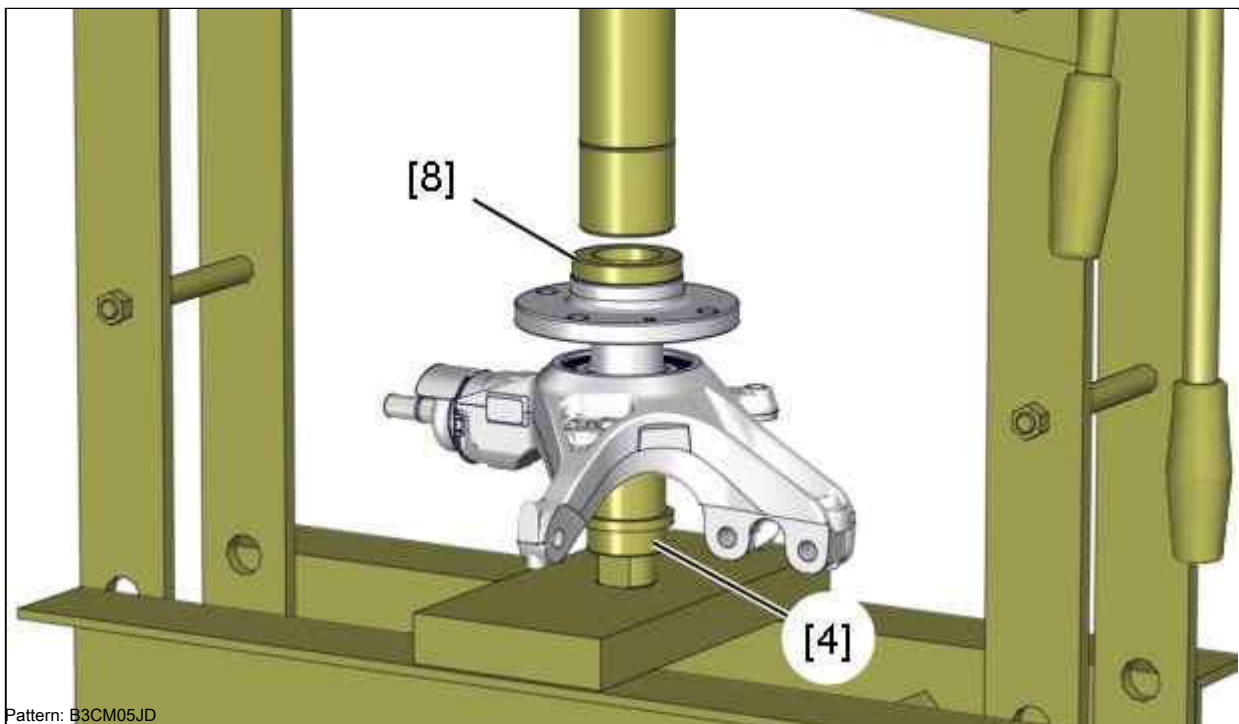


Pattern: B3CM05HD

Install a new bearing snap ring (1) into the seat.

ATTENTION : The snap ring must not block space "b" to accommodate the ABS sensor.

Check the position of the retaining rings (1).



Pattern: B3CM05JD

Install tools [4] and [8]. Install:

- Hub all the way with a press
- **Front hinge**



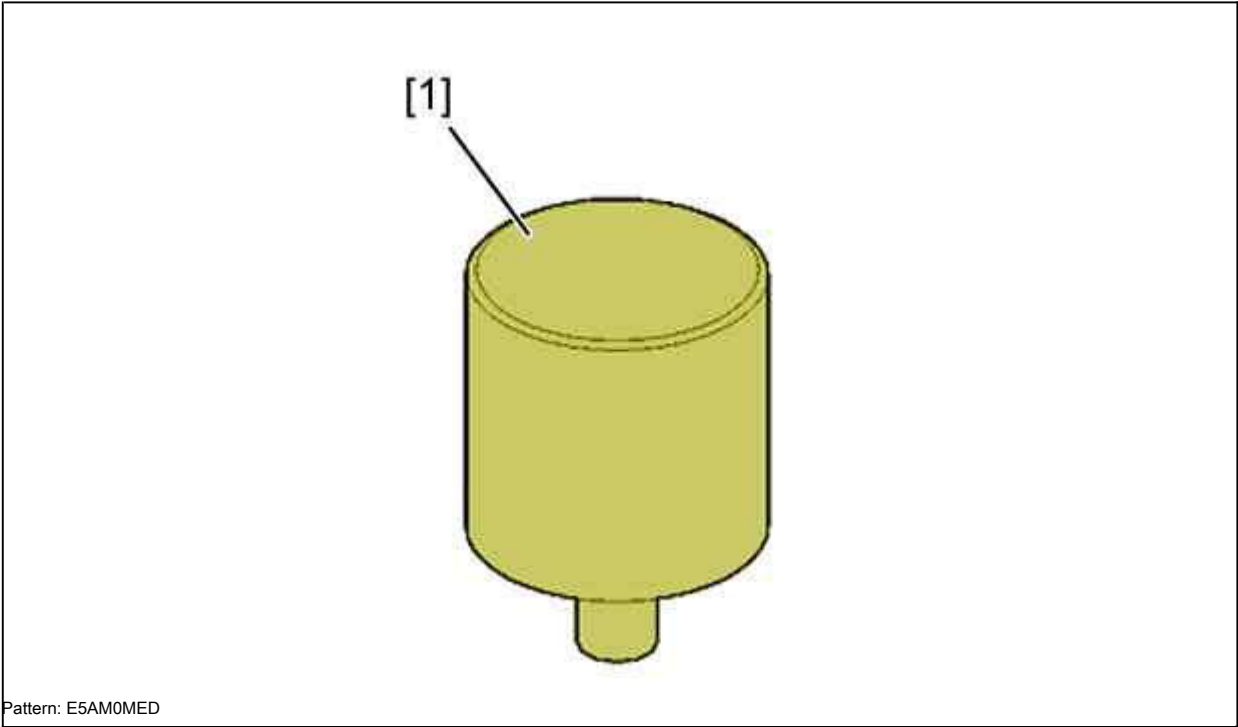
BALANCE BALANCE: FRONT LOWER ARM

SUSPENSIONS

~~MANDATORY: Observe the cleanliness and safety rules~~

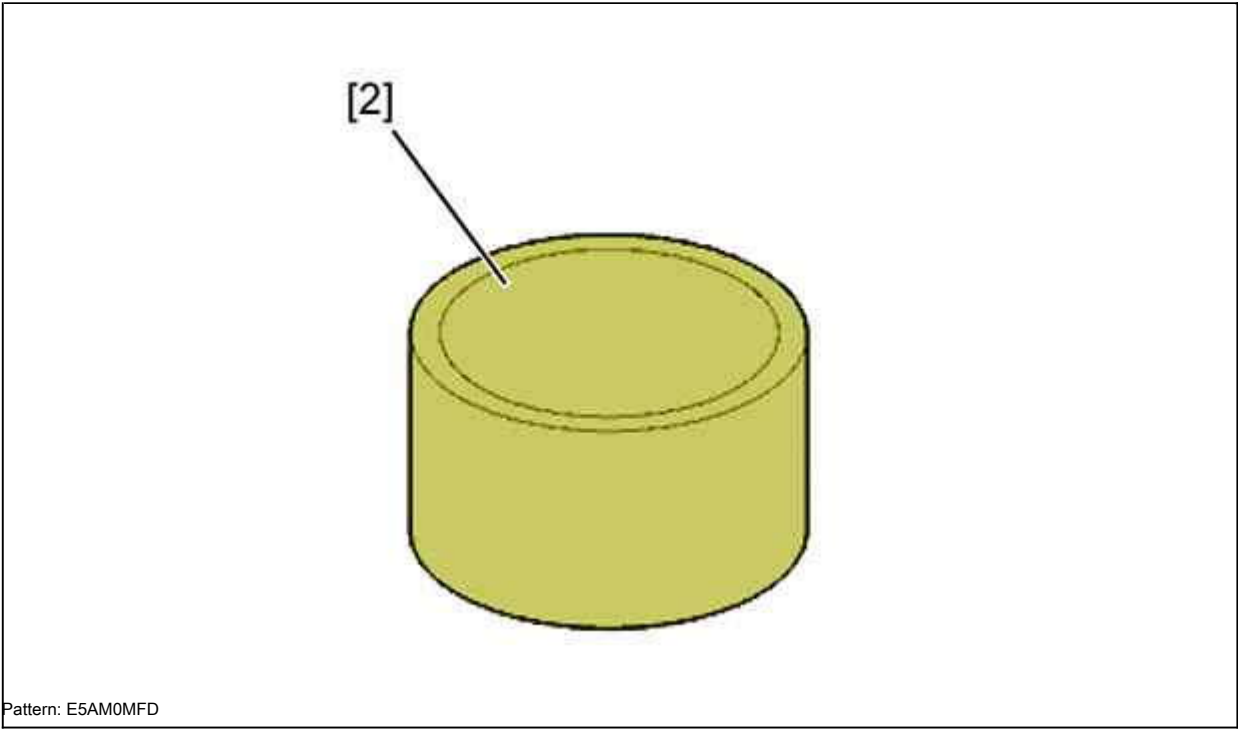


1. Recommended equipment

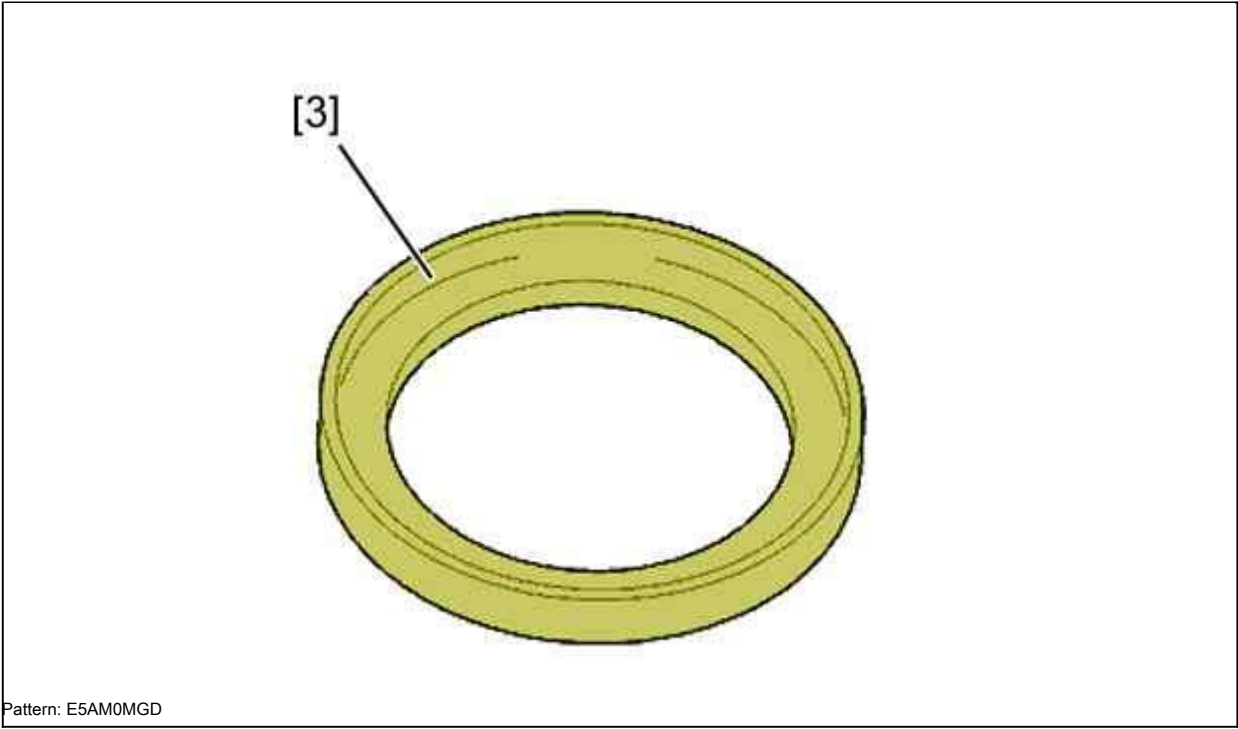


Label Designation Number (reference) [1]

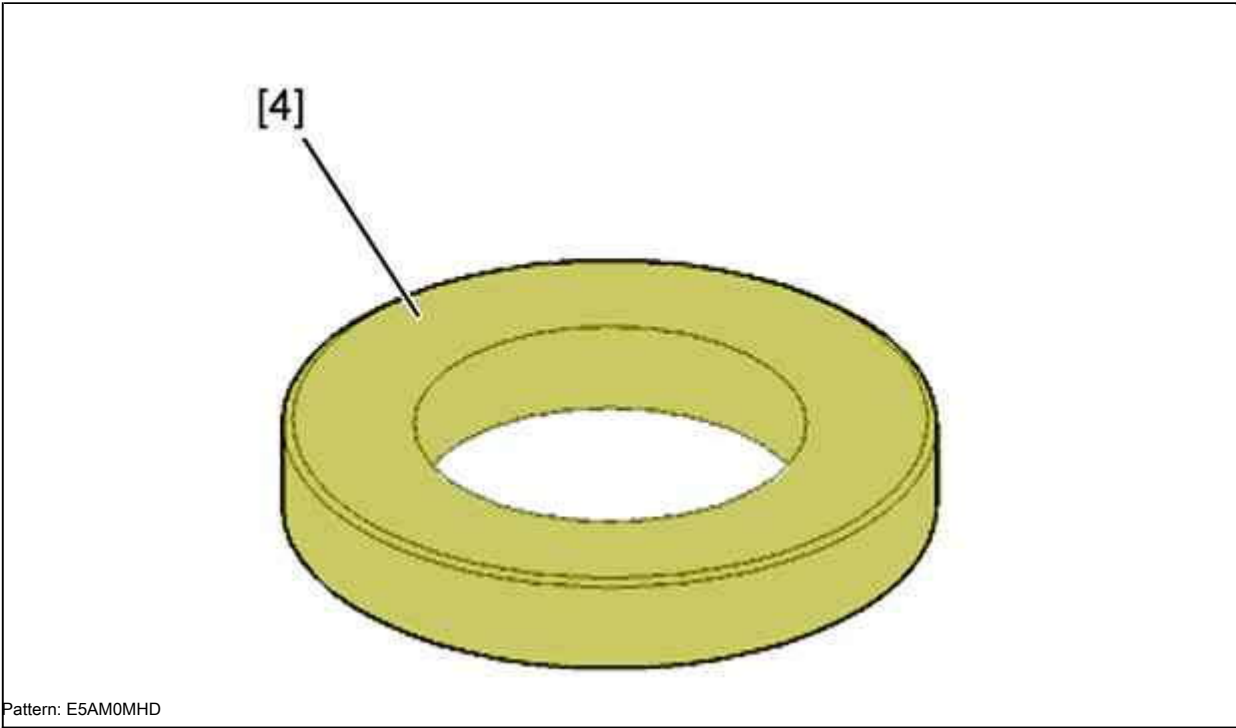
	shroud	() .0621.N



Label Designation		Number (reference)
[2]	[/] installation mandrel () .0621.M	



Label Designation		Number (reference)
[3]	setting stop () .0621.Q	



Label Designation		Number (reference)
[4]	[/] installation mandrel () .0621.P	

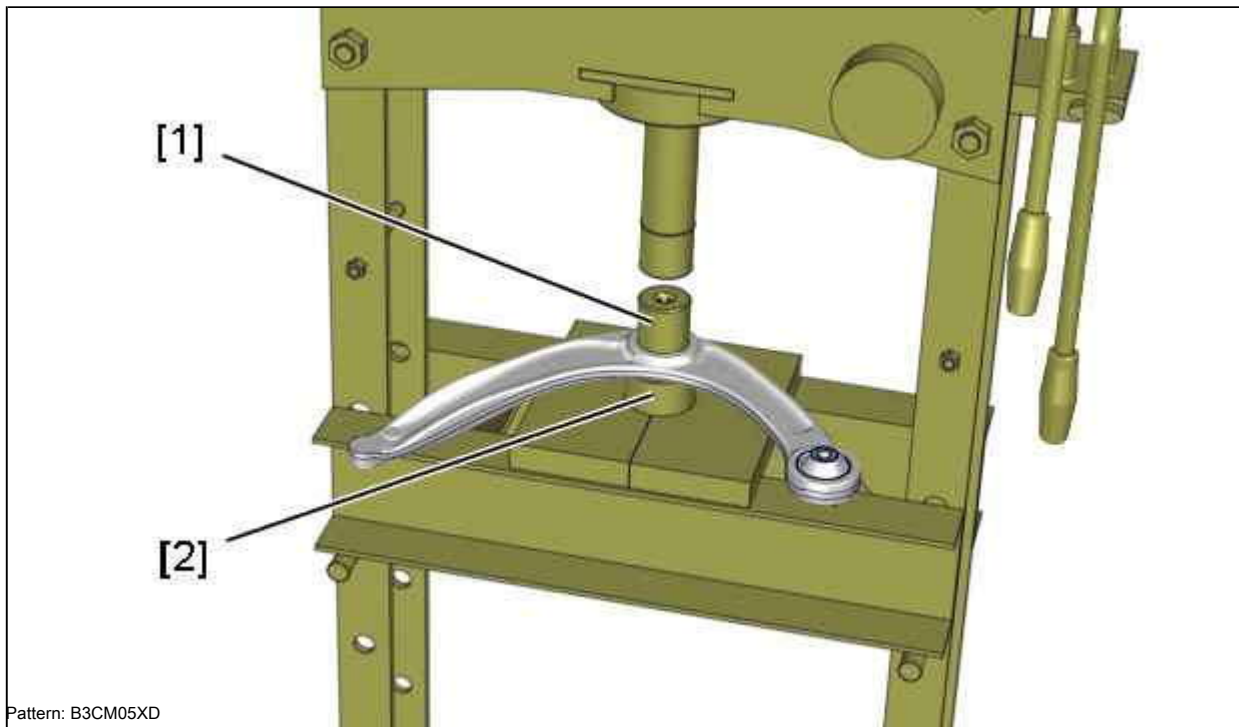
2. Preliminary operations

Remove:

- Front hinge
- Front suspension arm ⓘ ⓘ

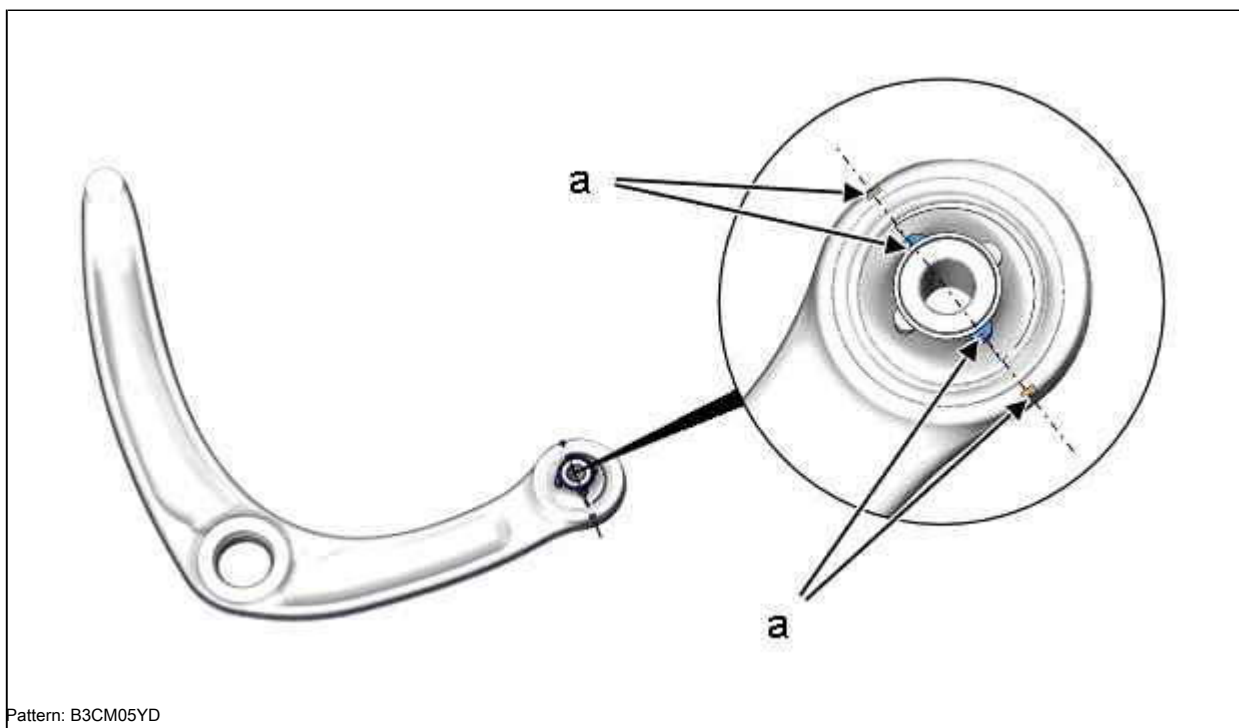
3. Removal

3.1. Front elastic hinge

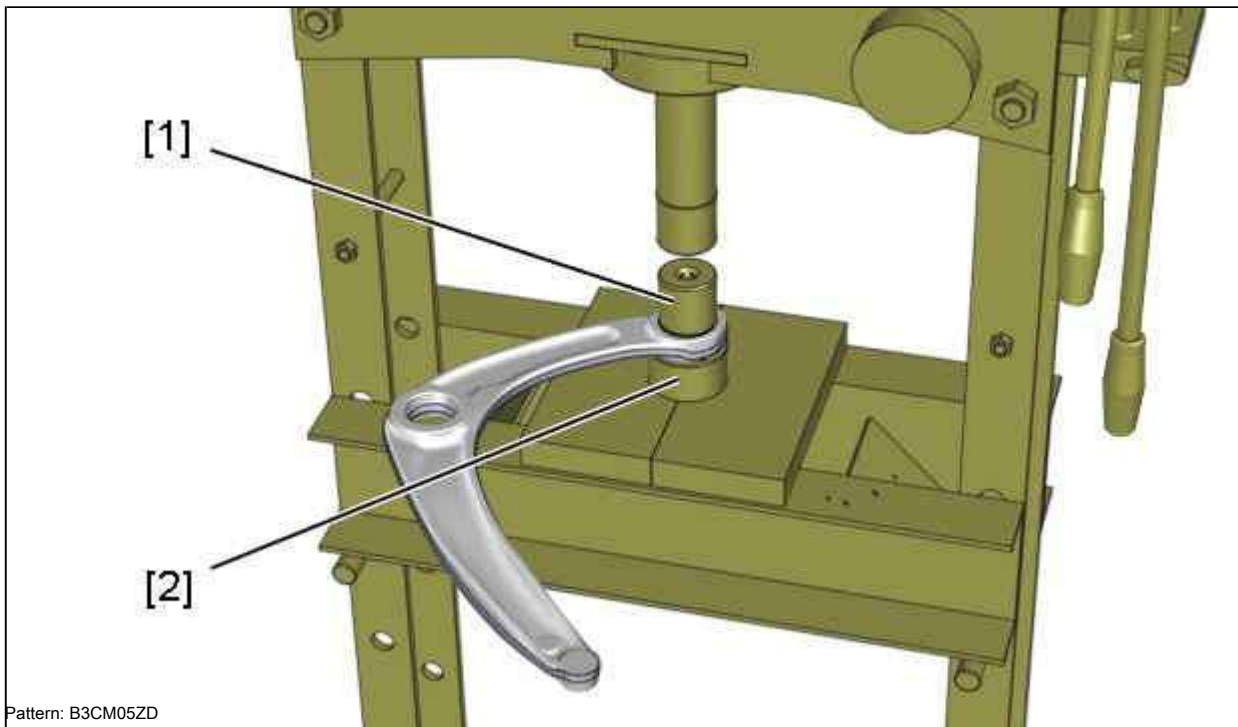


Install tools [1] and [2] on the elastic hinge. Pull out the elastic hinge using a press.

3.2. Rear elastic hinge



Mark the angular position of the rear cushion pivot on the lower suspension arm (at "a").



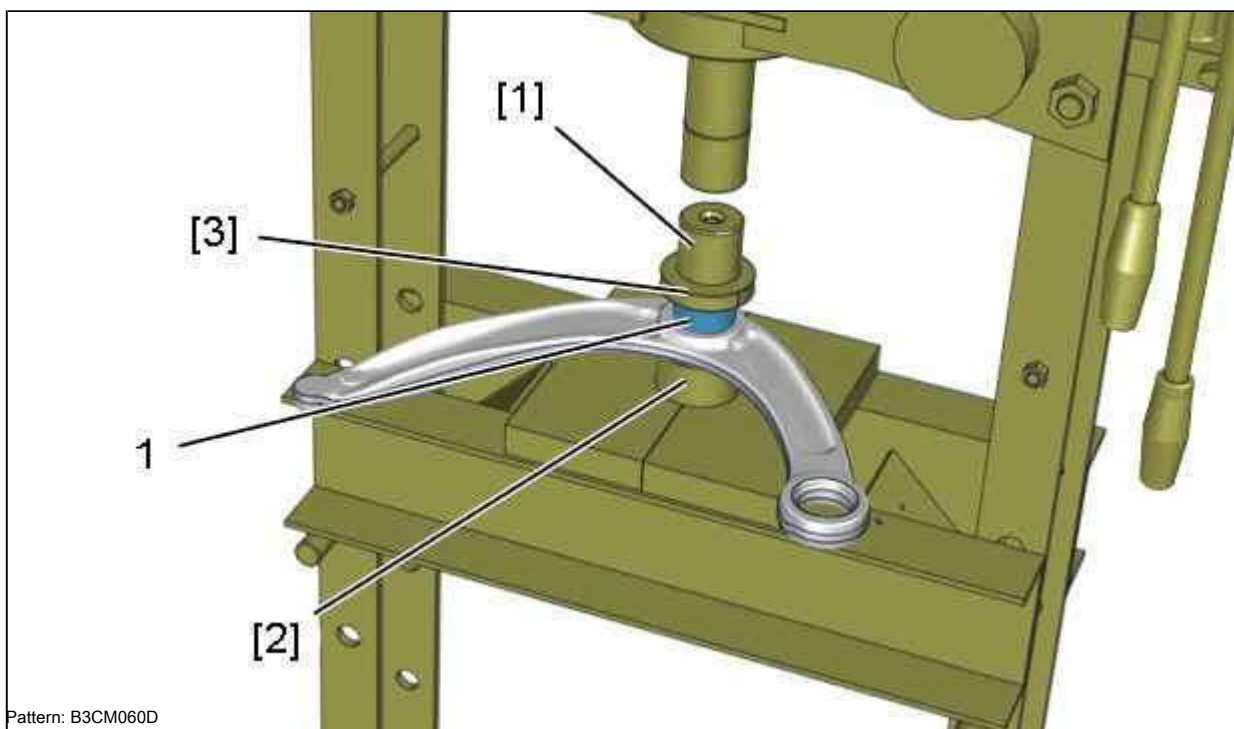
Install tools [1] and [2] on the elastic hinge. Pull out the elastic hinge using a press.

4. Installation

ATTENTION : The silent blocks are fitted with an interference fit into the suspension arm. Installation of silent blocks should be done with effort.

ATTENTION : If at least one silent block is installed freely, replace the suspension arm.

4.1. Front elastic hinge



Pattern: B3CM060D

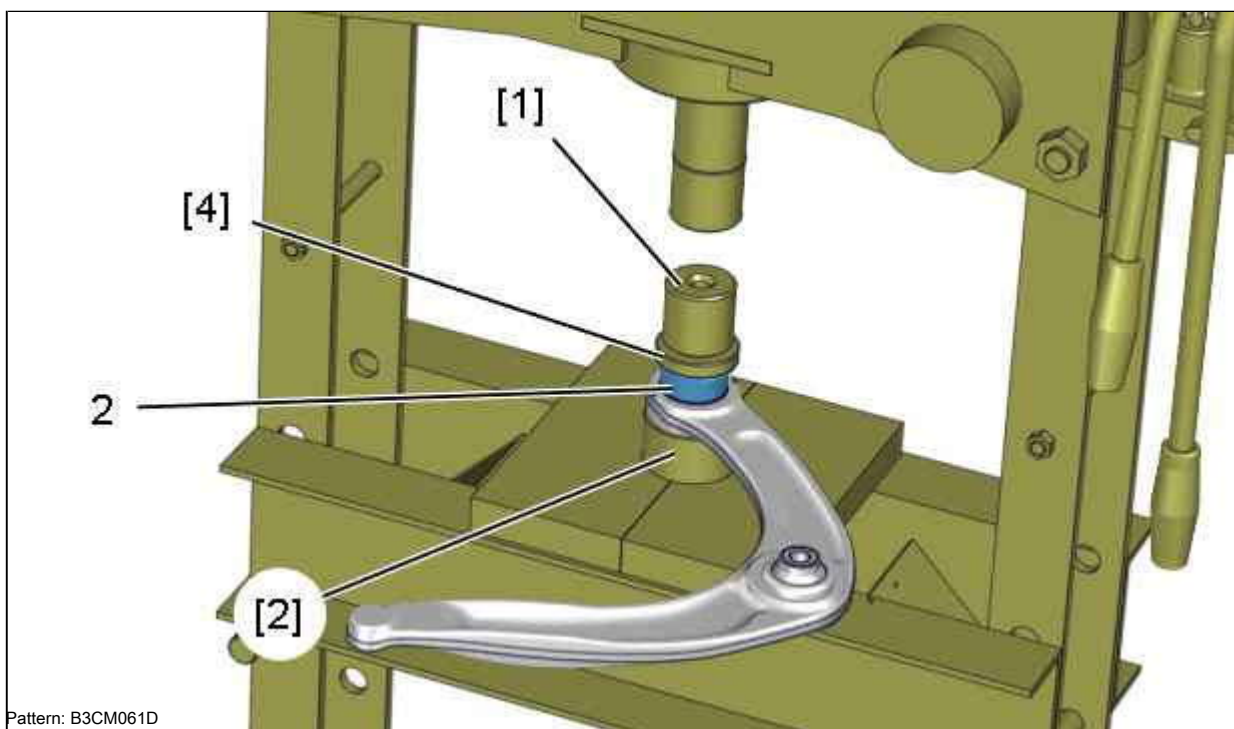
Install the silent block (1).

Install the tools [2], [3] and [1] on the bushing (1).

Press flexible joint up to stop [3] into lower arm. Remove the tools [1], [3], [2].

4.2. Rear elastic hinge

ATTENTION : Observe the marked position of the silent block in relation to the suspension arm.



Pattern: B3CM061D

Install the silent block (2).

Install the tools [2], [4] and [1] on the bushing (2). Press in the elastic hinge with a press until the lower arm stops. Remove the tools [1], [4], [2].

5. Additional operations

Install:

- **Front suspension arm**
- **Front hinge**



REMOVAL REFITTING: SPRING ASSEMBLY FRONT

SHOCK ABSORBER (AT WORKSTATION)

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment

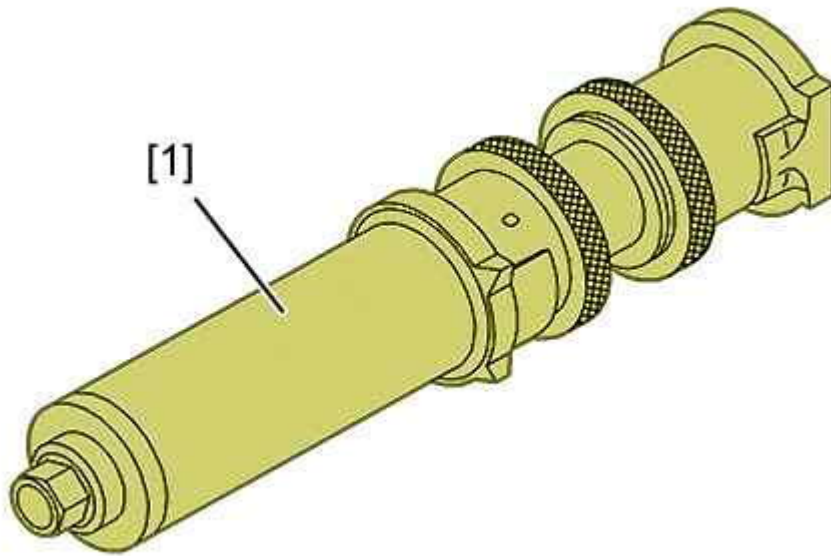
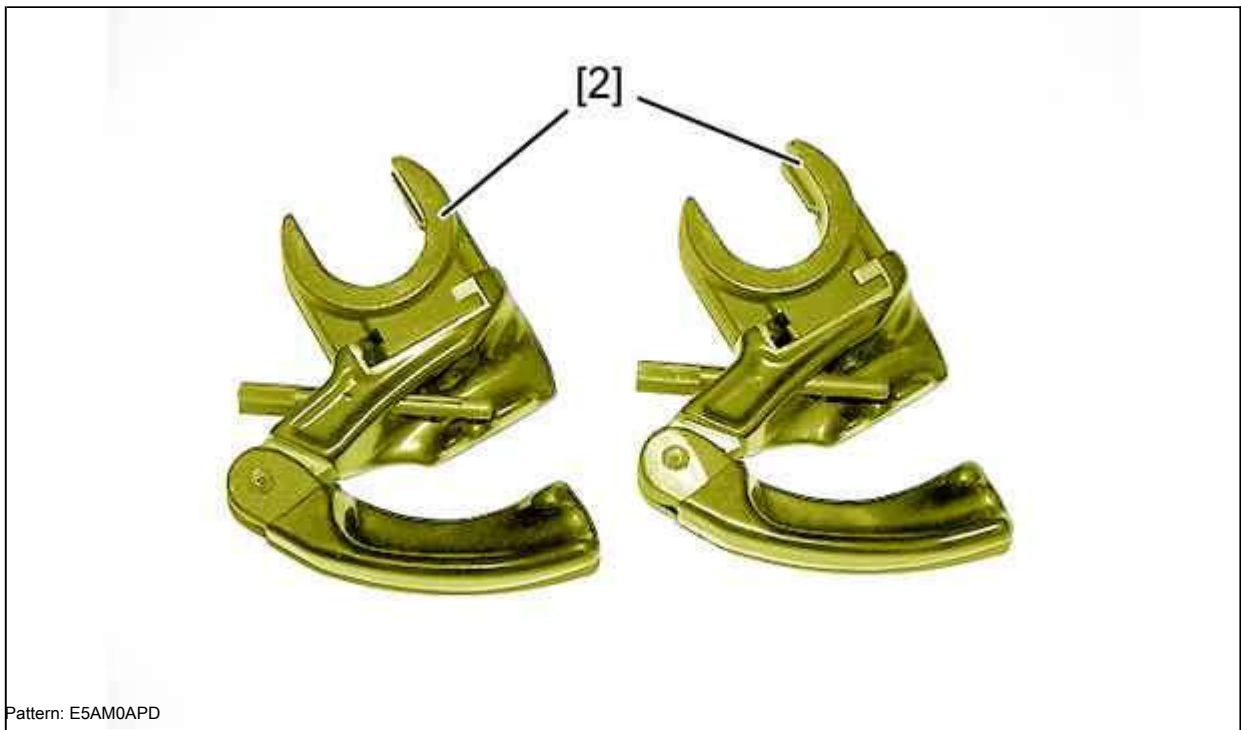
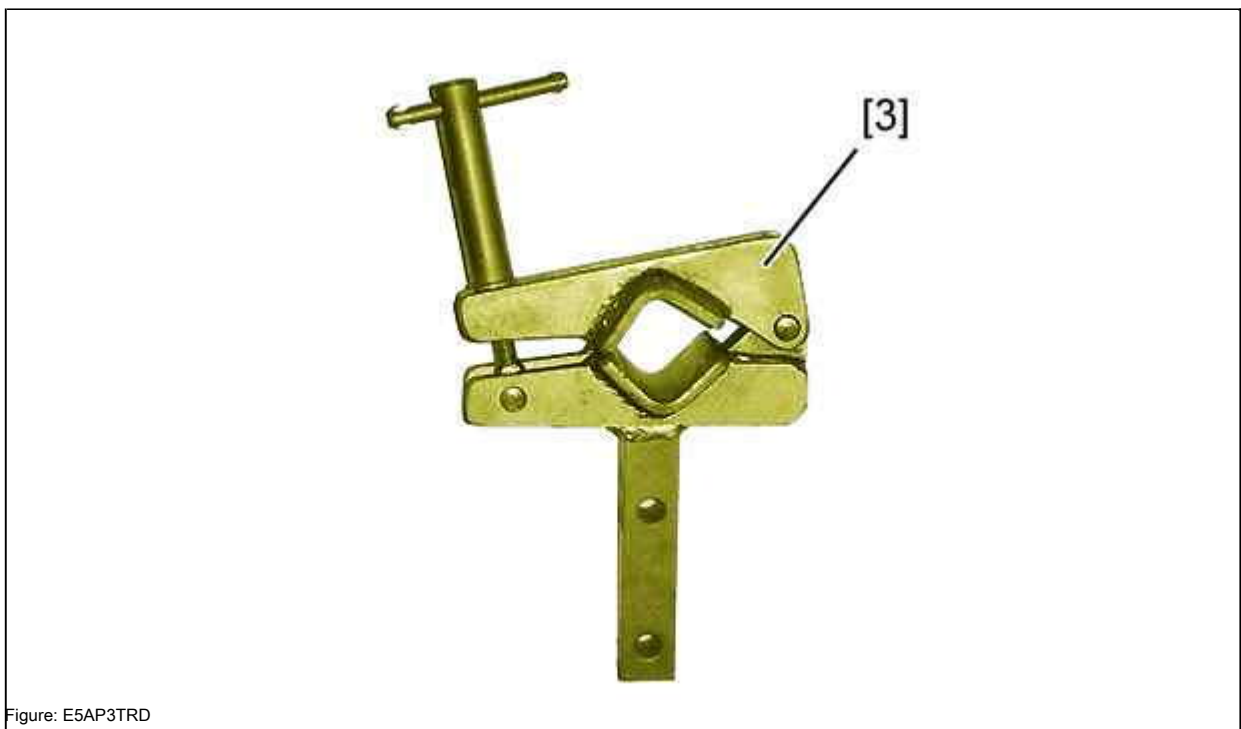


Figure: E5AP3TPD

[1] Spring Compression Tool: Type M90.



[2] Set of 2 cups for FACOM U.89 JM.



[3] device for fixing the shock absorber body in the FACOM D22 vice.

[4]



Pattern: E5AM08VD

[4] FACOM tool D.83C.

2. Removal

ATTENTION : Do not allow the suspension spring to come into direct contact with a metal object or equipment.

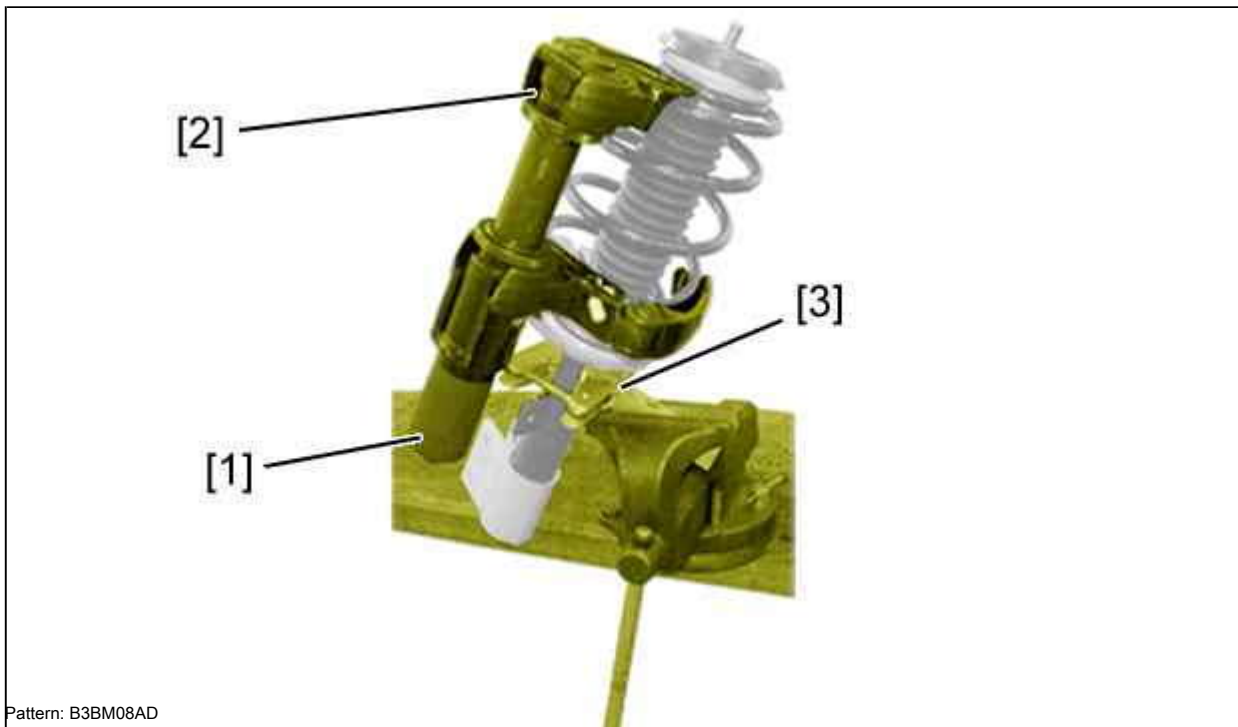
Unlock front wheel bolts.

Raise and secure the vehicle by hanging the front wheels.

Remove:

- Front wheel bolts
- Front wheel
- **Front spring and shock absorber**



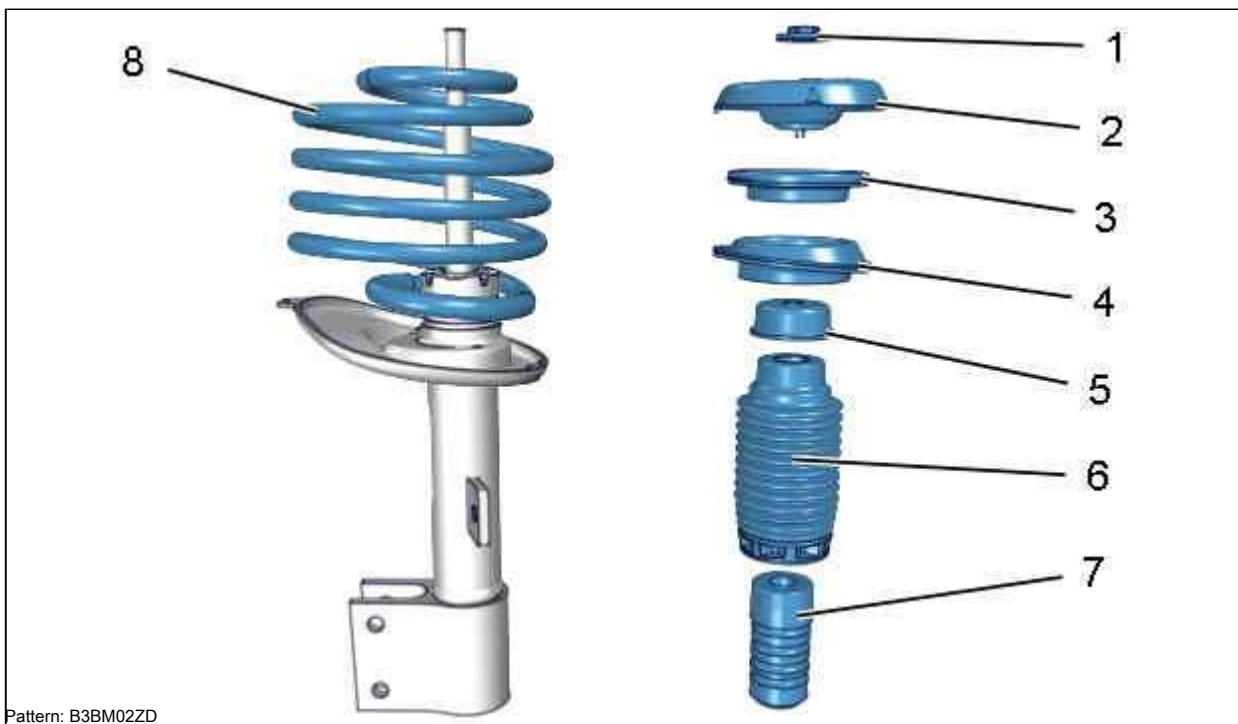


Fix the device [3] in a vise.

Secure the front shock absorber spring assembly using the tool [3].

ATTENTION : Check the presence and condition of the protective rubber caps on the fixed and movable spring cups.

Compress the spring: Using the tools [1], [2].



Remove:

- Nut (1); Using the tool [4] Support (2)
-
- Thrust ball bearing (3)
- Support cup (4)
- Shroud (5)
- Spring (8); Using the tools [1], [2] Protective cover (6)
-
- Stop (7)

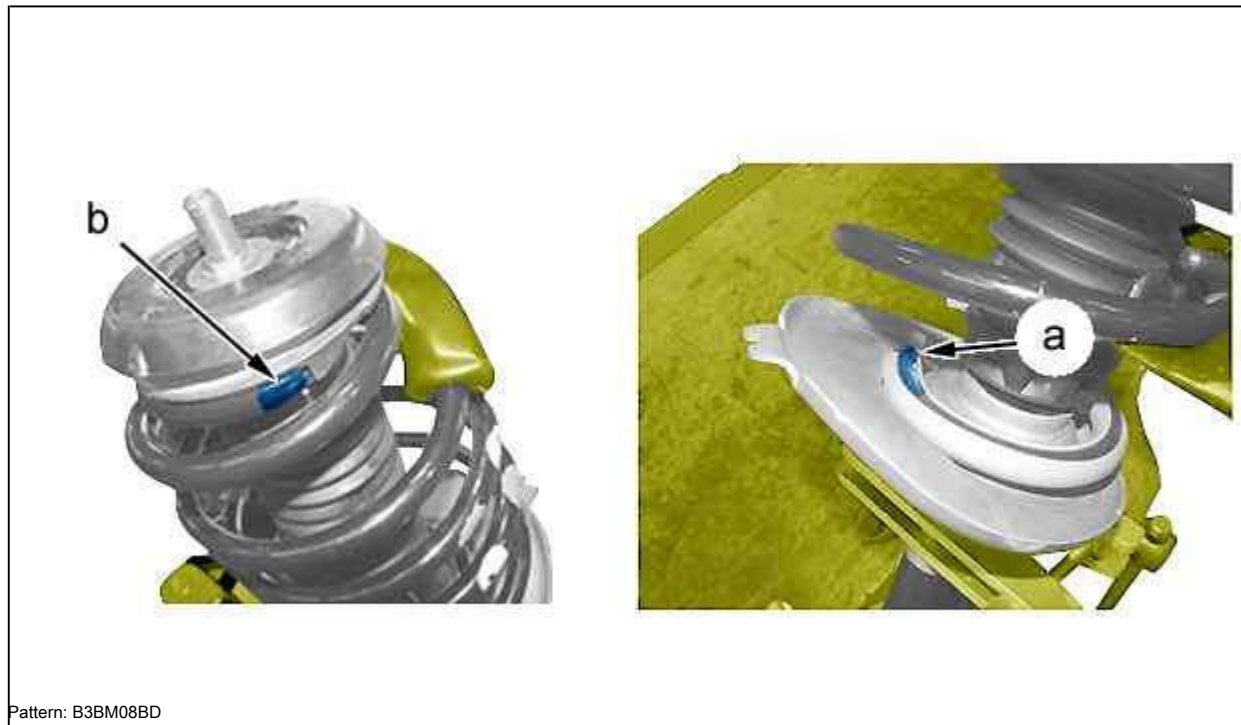
3. Installation

ATTENTION : Check the condition of the suspension springs (no bumps, scratches or corrosion spots); The paint coat on the suspension springs should not be damaged so that bare metal is visible.

Assemble the shock absorber tension block from the following parts:

- Stop (7)
- Protective cover (6)
- Spring (8); Using tools [1], [2] Cover (5)
-
- Support cup (4)
- Thrust ball bearing (3)
- Support (2)
- New nut (1); Using the tool [4]

Tighten the new nut (1) to 6.9 ± 0.6 ppm.



Arrange:

- End of the lower coil of the spring (in "a")
- End of the upper coil of the spring (in "b")

Release the spring (8); Using the tools [1], [2]. Remove the tools [1], [2], [3].

Install:

- **Front spring and shock absorber**

- Front wheel
- Front wheel bolts
- A car on its wheels




Tighten the front wheel bolts



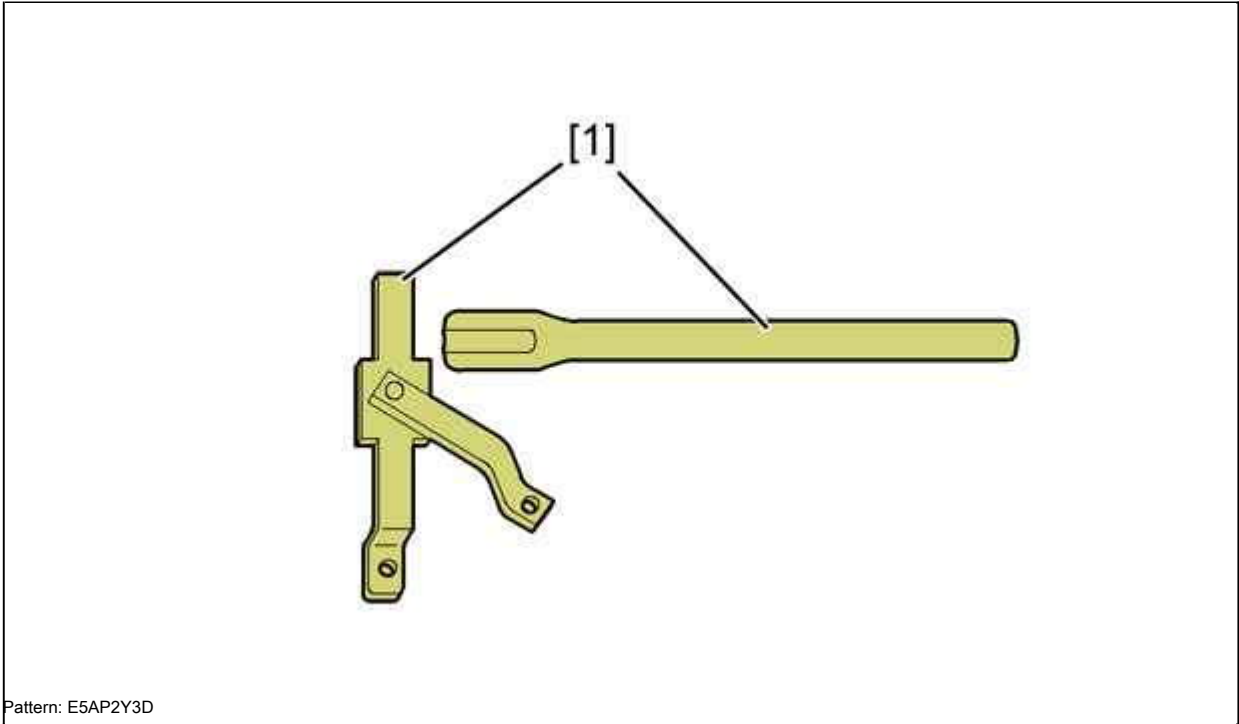
...

REMOVAL INSTALLATION: FRONT AXLE ELEMENT

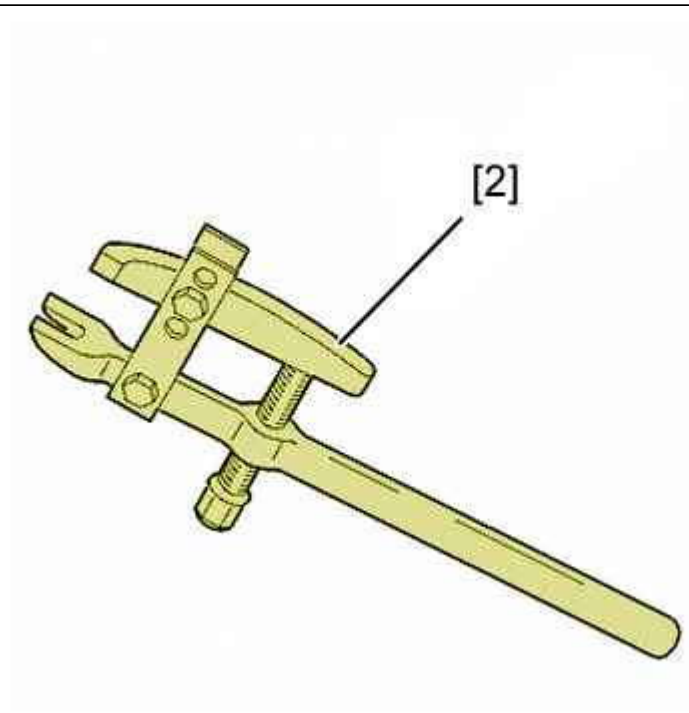
MANDATORY: Observe the cleanliness and safety rules



1. Equipment



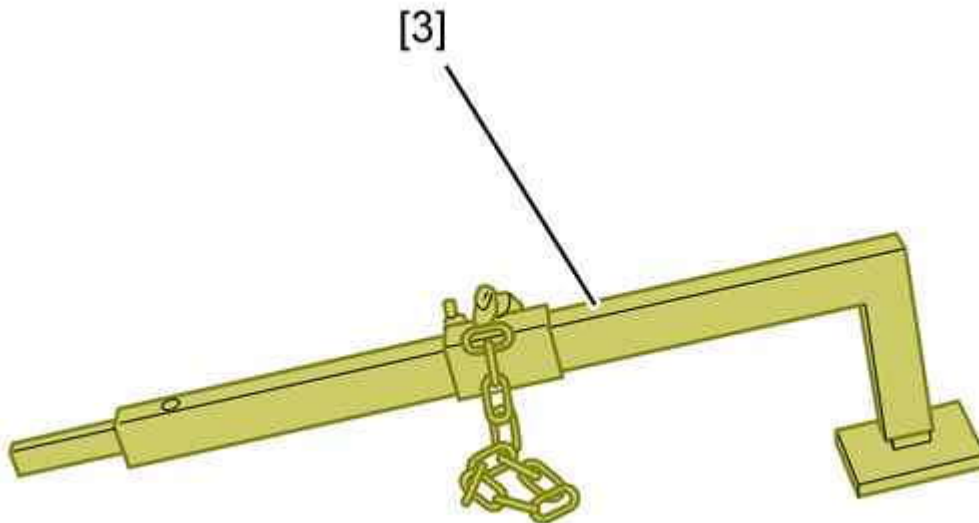
Label Designation		Number (reference)	Number (reference)
[1]	hub fixing device 6310T		() .0606AY



Pattern: E5AP3TGD

Label Designation **Number (reference)** **Number (reference)**

[2]	hinge puller 1892T		() .0709



Pattern: E5AP3THD

Label Designation **Number (reference)** **Number (reference)**

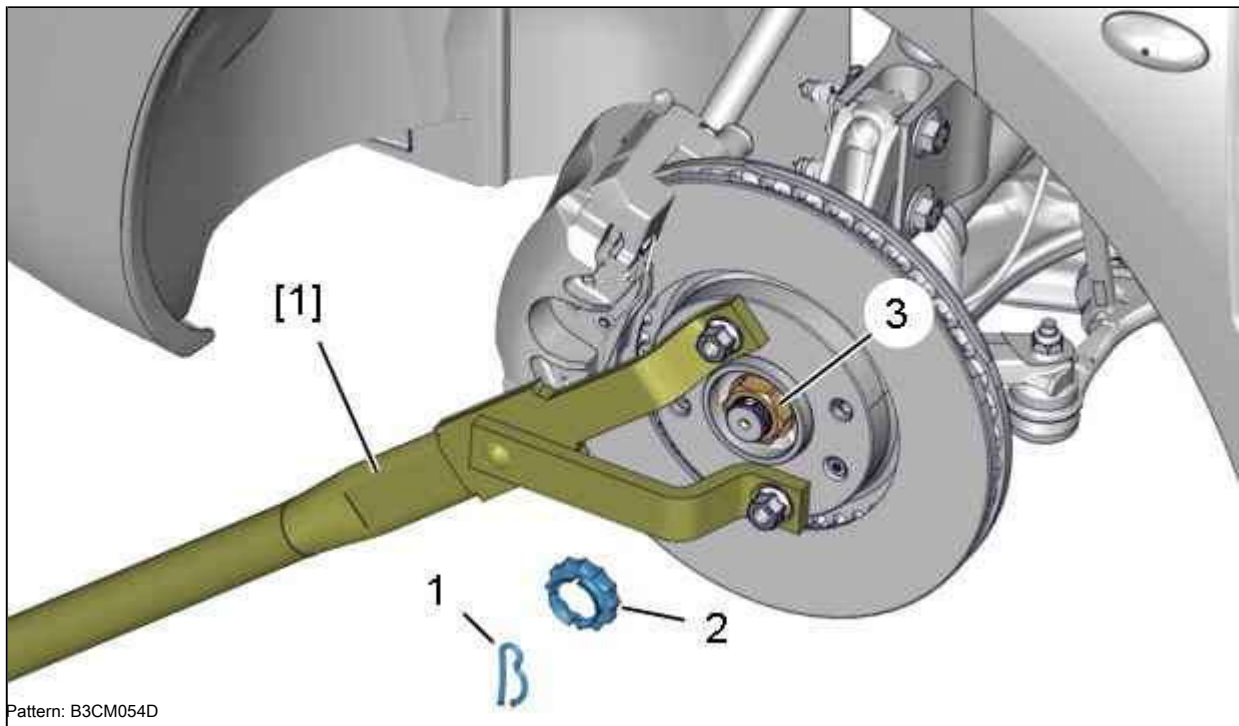
[3]	lever for disconnecting the ball joints of the steering knuckle	9509T	() .0622

2. Removal

Unlock front wheel bolts.

Raise and secure the vehicle in the raised position. Remove:

- Front wheel bolts
- Front wheel



Remove:

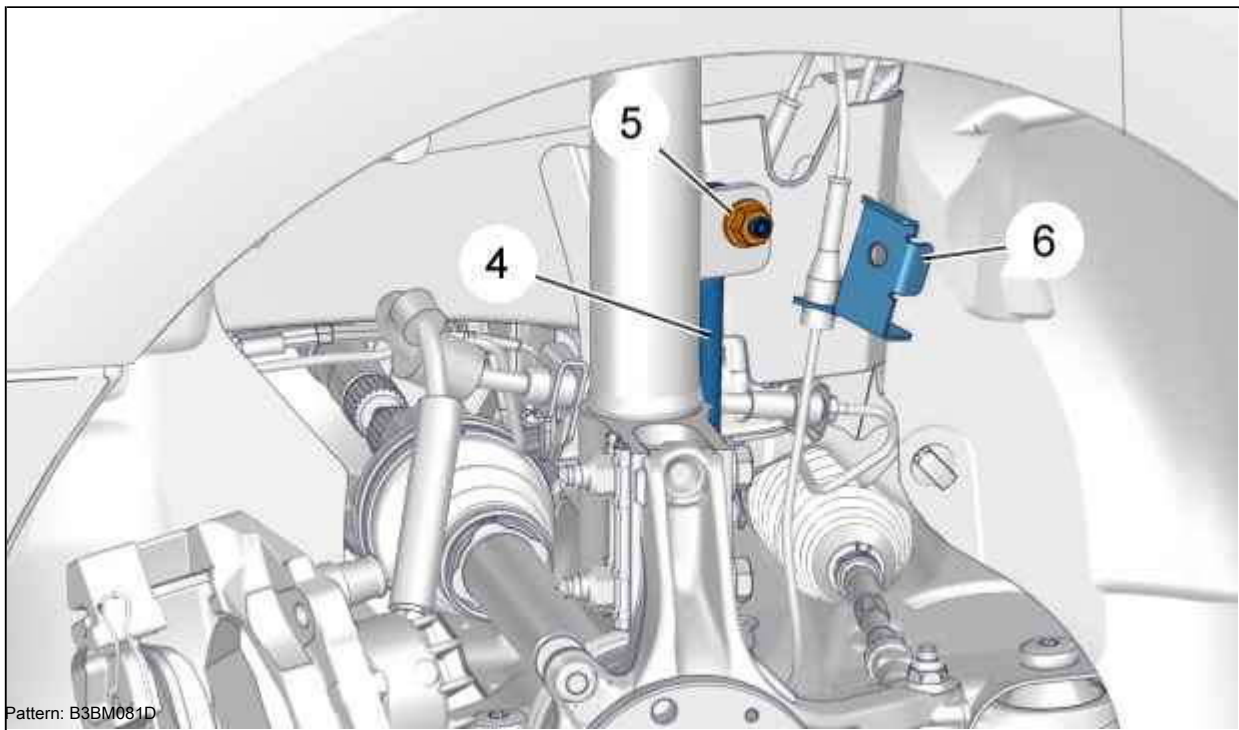
- Hairpin (1)
- Clip (2)

ATTENTION : Do not brake to loosen the fastening; this can lead to cracking of the bolts holding the brake discs to the hub.

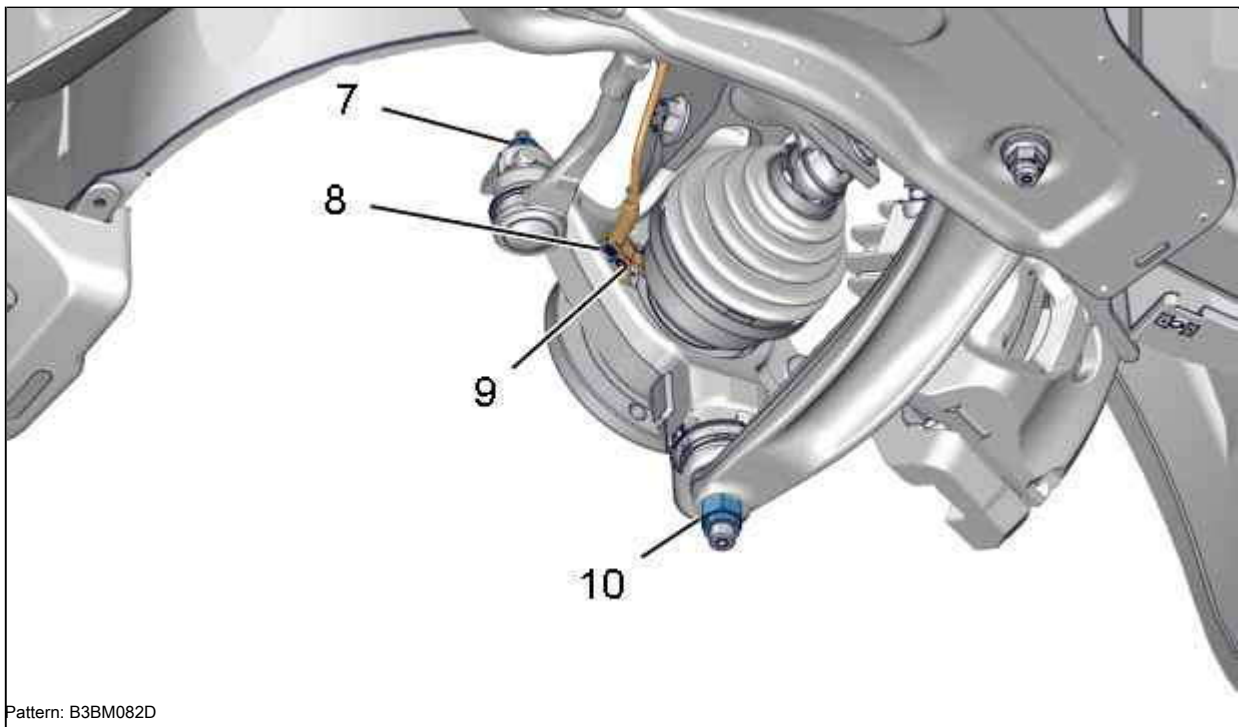
Secure the hub against rotation using the tool [1]. Unscrew then remove the drive shaft nut (3).

Remove the brake disc





Move back the harness support (6).
 Unscrew the nut (5).
 Move the front anti-roll bar link (4).



Unscrew the nut (7).
 Disconnect the tie rod ball joint; Using the tool [2]. Remove the bolts (8).
 Move the wheel sensor (9).
 Unscrew the nut (10).

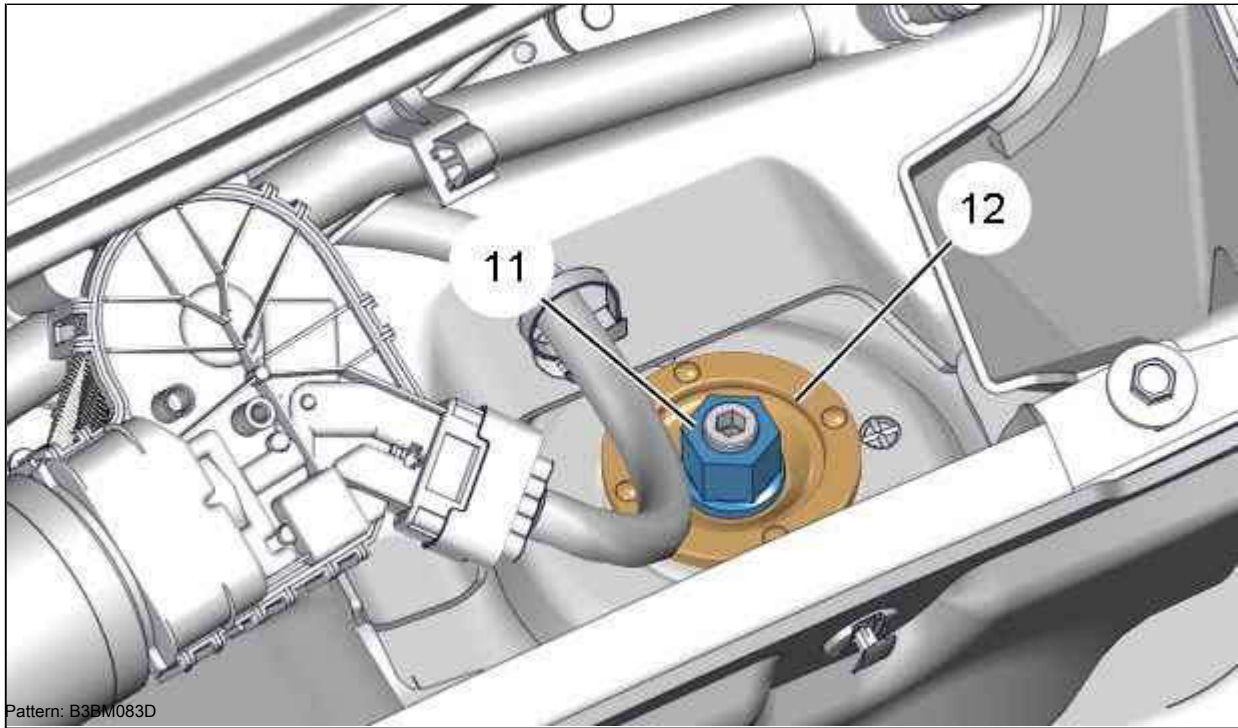
ATTENTION : Be careful not to damage the cover of the lower arm.

Disconnect the steering knuckle ball from the lower arm; Using the tool [3].

ATTENTION : When releasing steering knuckle: Hold drive shaft in differential.

Free the transmission steering knuckle.

Remove the air intake grille



Remove:

- Nut (11)
- Cup (12)
- Carrier element

3. Installation

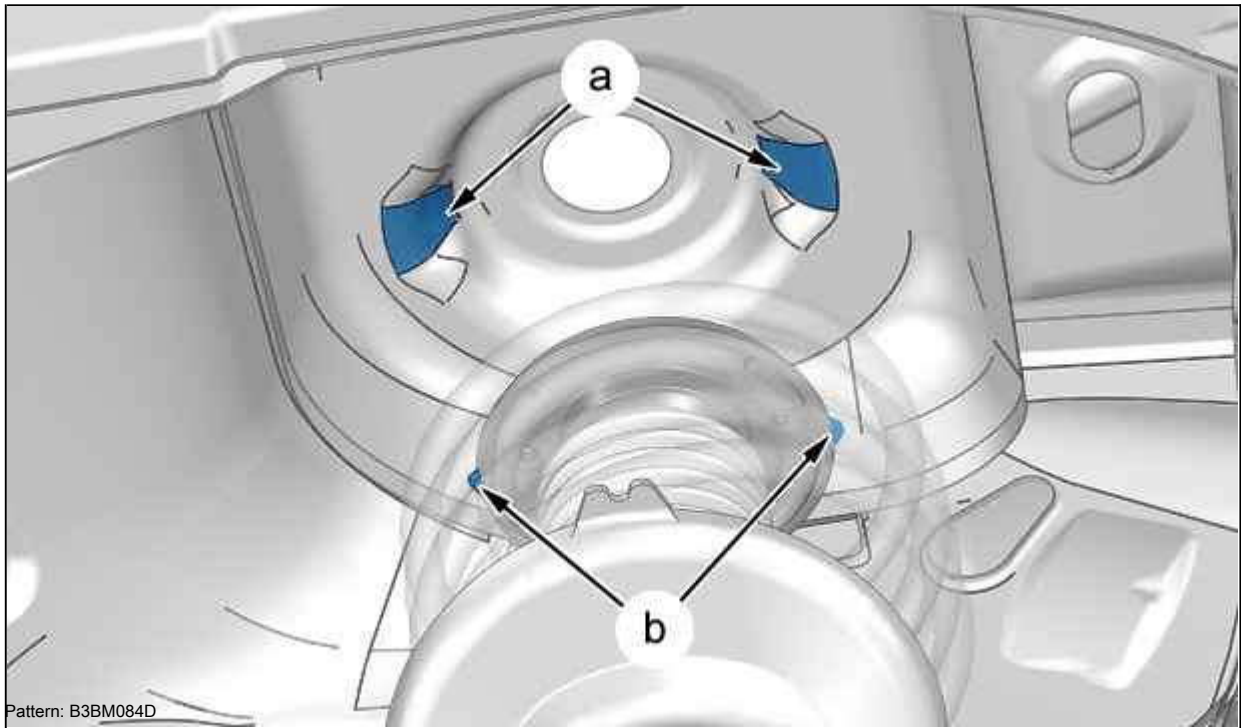
ATTENTION : Observe the required tightening torques.

Tightening torques:

- **Front axle**
- Drive shafts



ATTENTION : Replace Nilstop nuts after each removal.



Install the lugs in "b" of the shock absorber bracket and the wheel arch stamping in "a". Insert the carrier into the wheel arch.

Install:

- Cup (12)
- Nut (11)
- **Air intake grille in front of the windscreen**



Insert steering knuckle into transmission.

Attach the knuckle ball to the lower arm. Install:

- Nut (10)
- Wheel sensor (9)
- Bolt (8)

Connect the tie rod ball joint. Install:

- Nut (7) (new)
- **Remove the brake disc**



Install the front anti-roll bar (4) into the spring with the front shock absorber.

Install:

- Nut (5)
- Harness holder (6)

Secure the hub against rotation using the tool [1]. Install Tighten the drive shaft nut (3).

Install:

- Clip (2)
- Pin (1)
- Front wheel
- A car on its wheels

Tighten the wheel bolts



REMOVAL INSTALLATION: ASSEMBLY - FRONT SPRINGS SHOCK ABSORBER

~~MANDATORY: Observe the cleanliness and safety rules~~



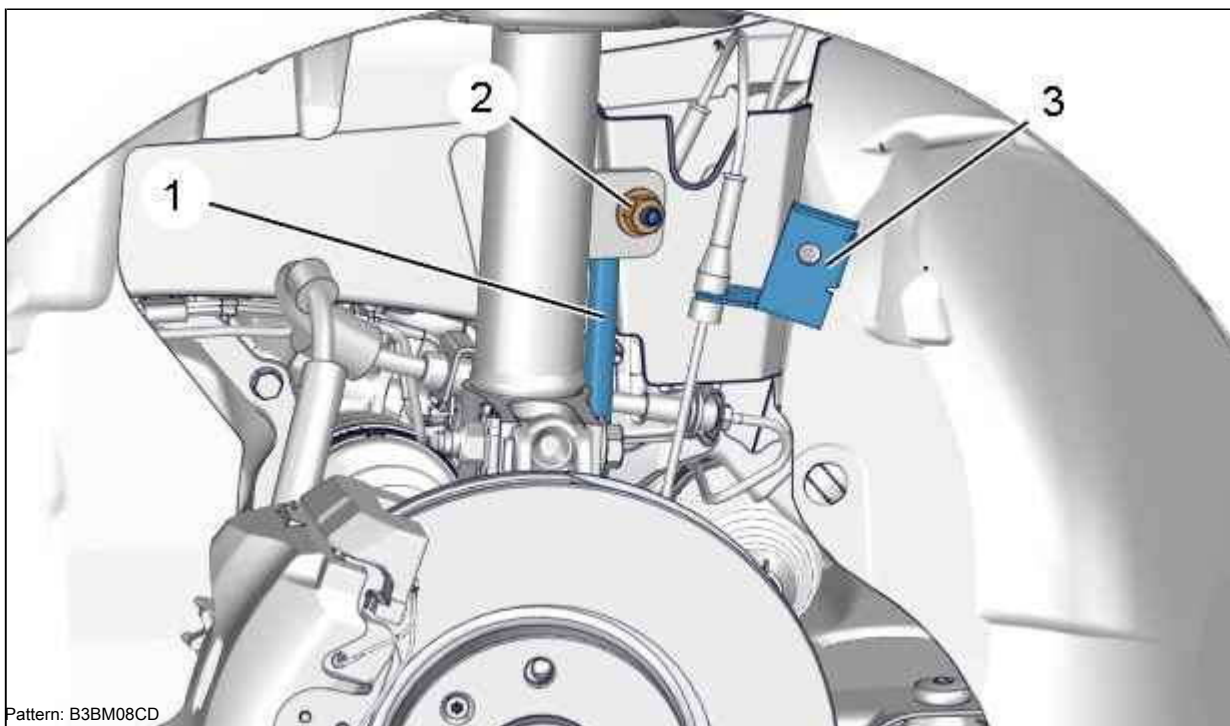
1. Removal

Unlock the front wheel bolts.

Raise and secure the vehicle by hanging the front wheels. Disconnect the battery.

Remove:

- Front wheel bolts
- Front wheels
- **Air intake grille in front of the windscreen**

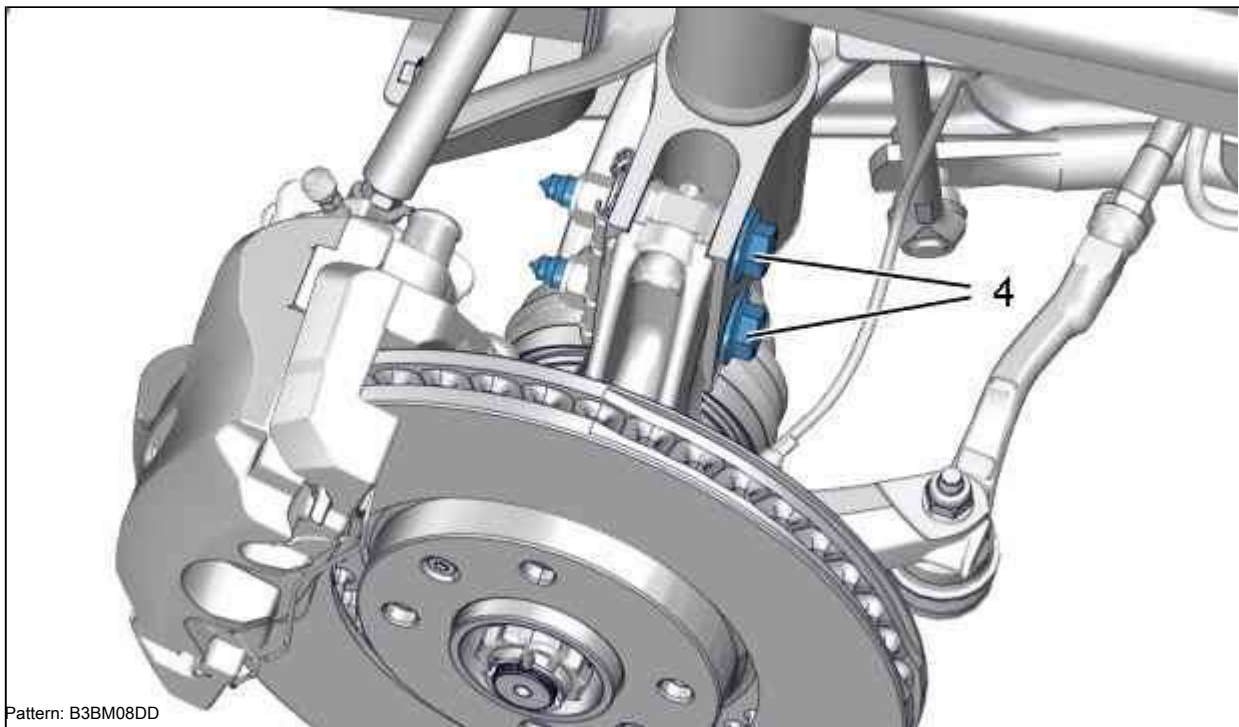


Pattern: B3BM08CD

Move back the support (3) of the wiring harness.

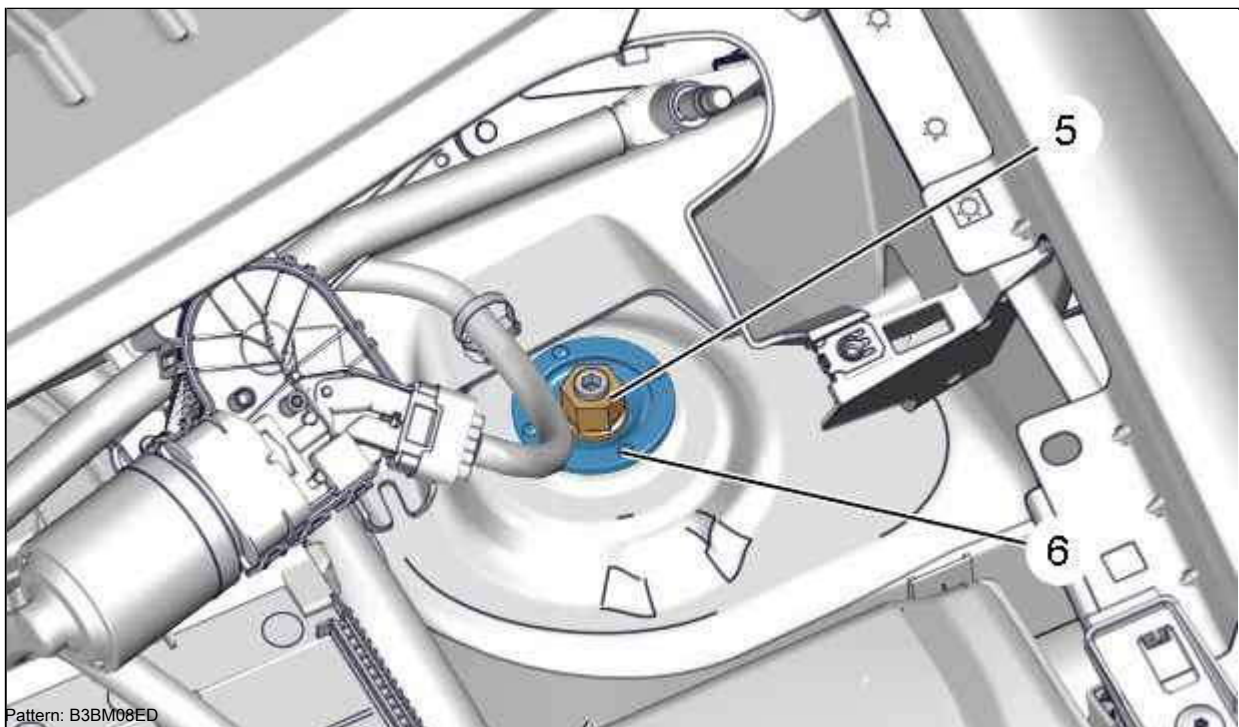
Release nut (2).

Move aside the anti-roll bar link (1).



ATTENTION : Install the guard on the drive shaft guard.

Remove the bolts (4) (Fastening the spring with front shock absorber to the steering knuckle).



Remove:

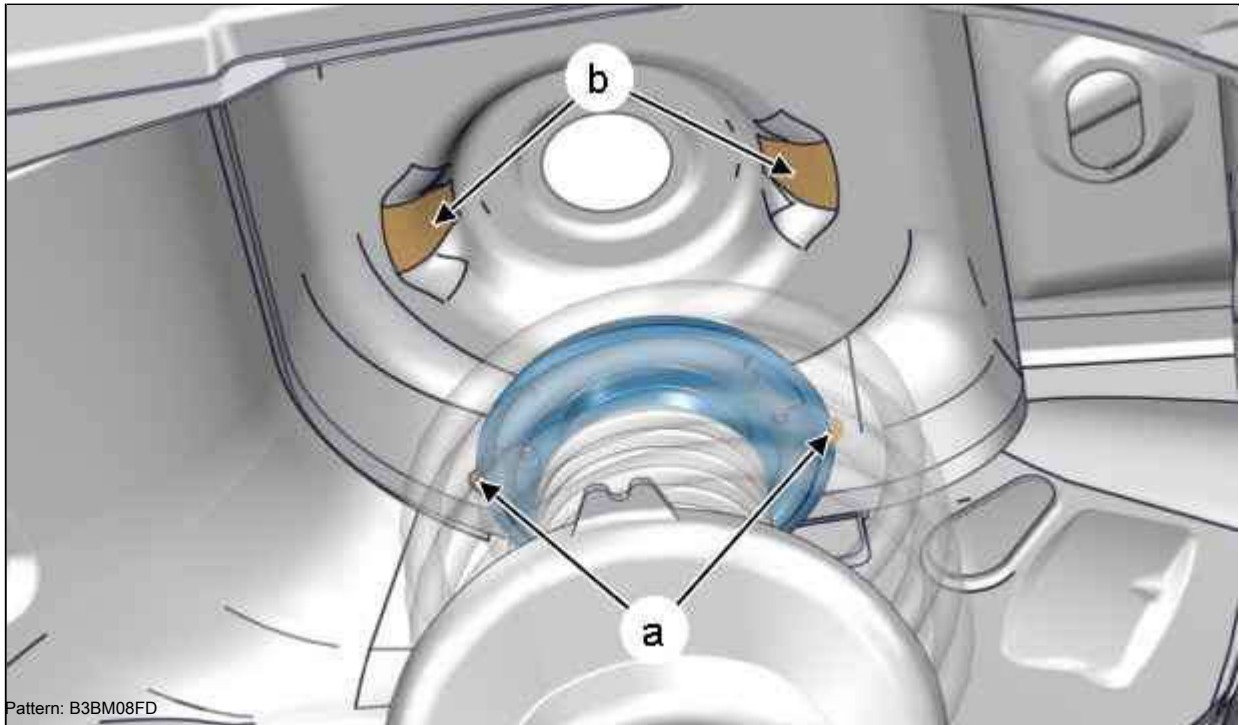
- Nut (5)
- Cup (6)

ATTENTION : Hold the drive shaft in the differential when removing the suspension.

Remove the front shock absorber spring assembly.

2. Installation

ATTENTION : Observe the required tightening torques



ATTENTION : Replace Nilstop nuts after each removal.

Install the lugs in "a" of the shock absorber bracket and the wheel arch stamping in "b". Install the spring with front shock absorber into the wheel arch.

Install:

- Cup (6)
- Nut (5)

Install the knuckle into the spring clamp with front shock absorber assembly. Replace the bolts (4).

Install the front anti-roll bar (1) into the spring with the front shock absorber.

Install:

- Nut (2)
- Electrical harness holder (3)
- **Air intake grille in front of the windscreen**
- Front wheels
- Front wheel bolts



Tighten the front wheel bolts



ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

REMOVAL REFITTING: FRONT TRANSVERSAL STABILIZER SUSTAINABILITY

MANDATORY: Observe the cleanliness and safety rules

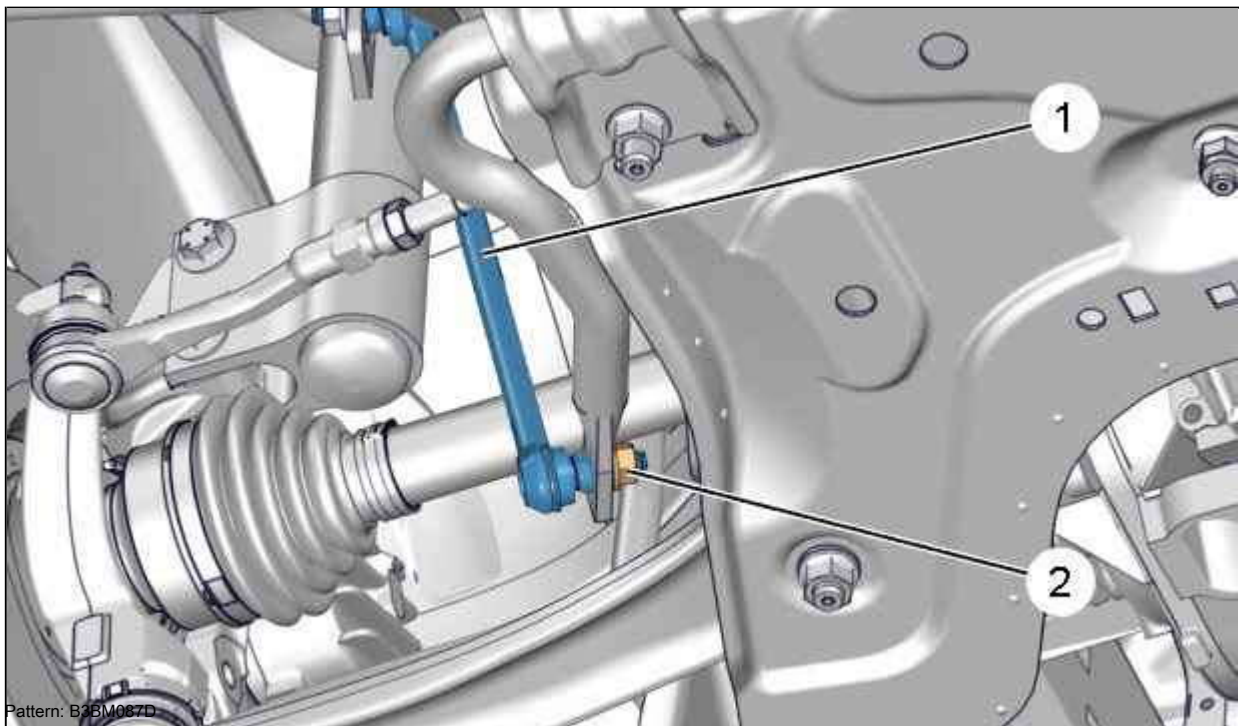


1. Removal

Unlock the front wheel bolts.

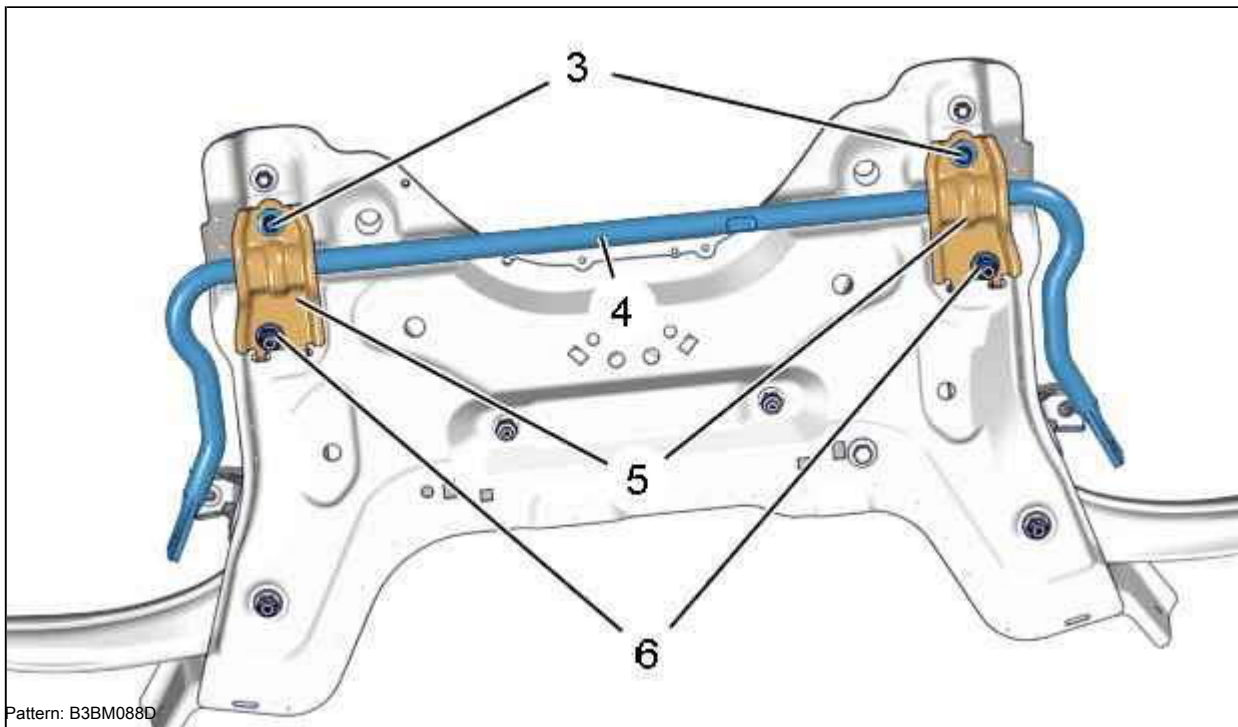
Raise and secure the vehicle by hanging the front wheels. Remove:

- Front wheel bolts
- Front wheels
- Under engine guard



Unscrew nut (2) (on each side).

Disconnect: the front roll stabilizer link (1) (on each side).

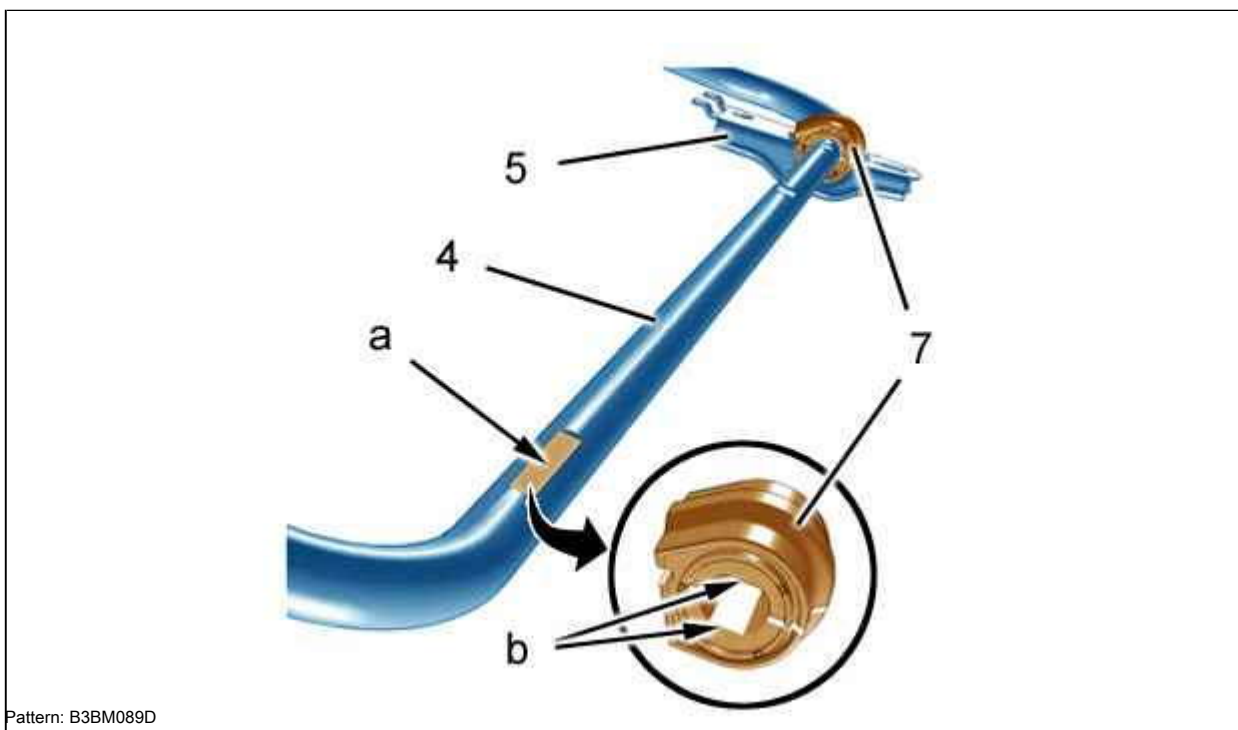


Remove:

- Nuts (6)
- bolts (3)
- tip (5)

Remove the front anti-roll bar (4).

2. Identification of the stabilizer bar elastic bushings



The front stabilizer bar (4) moves in 2 elastic bushings (7).

Positioning in the horizontal and angular directions is achieved by two edges (at "b") inside the elastic sleeve (7) and by the flats (at "a") of the stabilizer bar.

The assembly is fixed with a yoke (5).

3. Installation of elastic supports of the anti-roll bar

Slide the elastic bearings (7).

Align the bush with the flat a of the stabilizer bar (on each side).

4. Installation

ATTENTION : Observe the required tightening torques



Install:

- Front Anti-roll Bar (4)
- tip (5)
- bolts (3)
- Nuts (6)

Attach: Front roll stabilizer link (1) (on each side). Install:

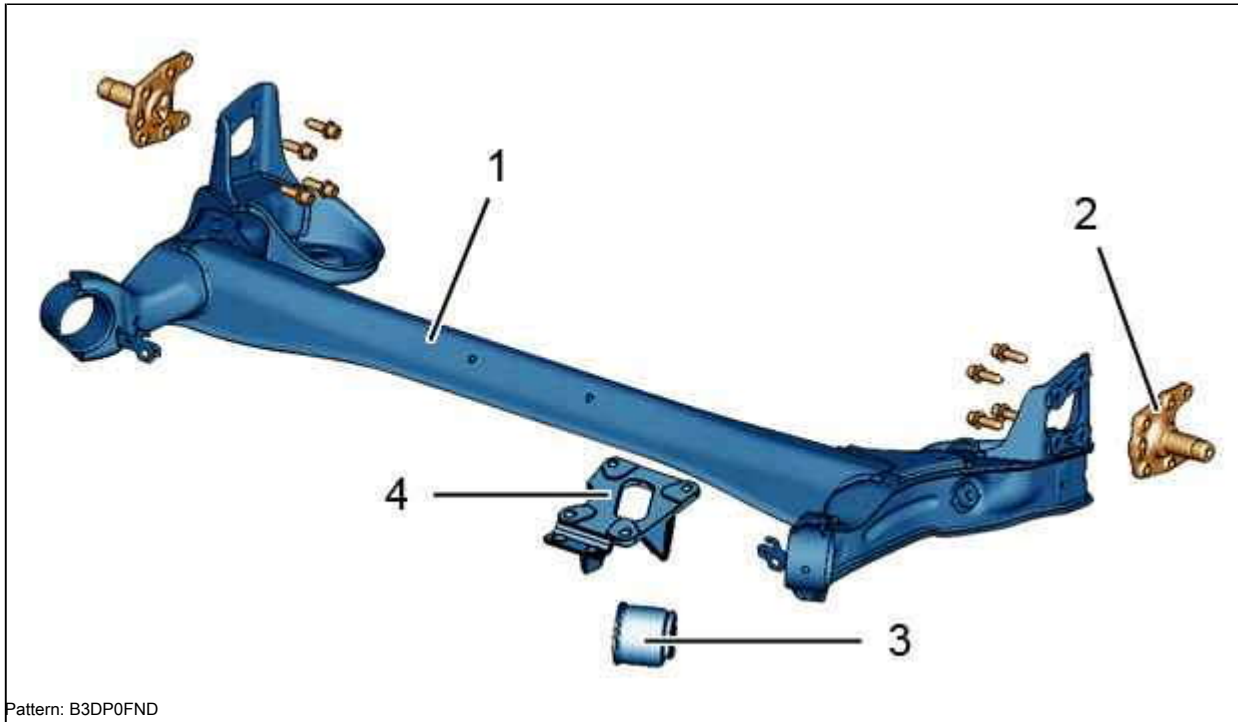
- nuts (2) (each side)
- Under engine guard
- Front wheels
- Front wheel bolts
- A car on its wheels

Tighten the front wheel bolts



FEATURE IDENTIFICATION: REAR AXLE

1. Rear axle



(1) Traverse of the rear bridge.

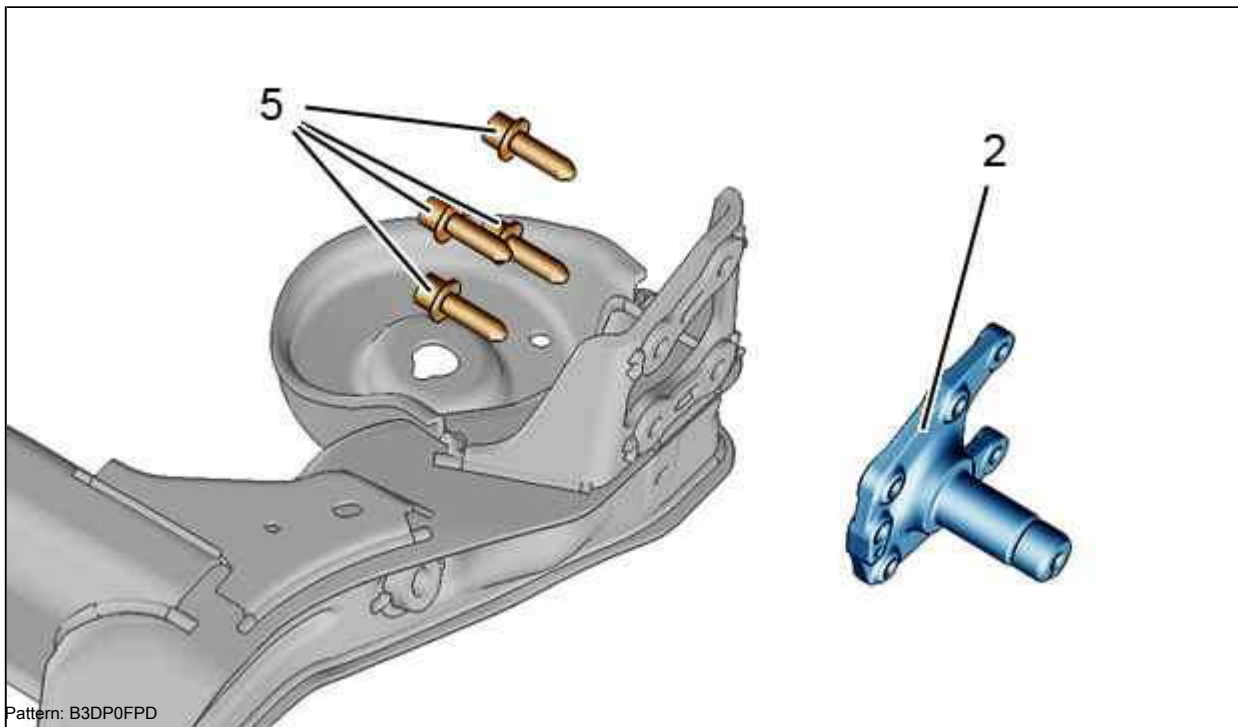
(2) Trunnion.

(3) Rear axle bushing.

(4) Cover for the rear axle cross member to the body.

The rear axle is welded-together, with trailing arms of the pulling type and an elastic cross member.

2. Trunnion



(2) Trunnion.

Rear axle trunnion; fixed with 4 bolts (5). Trunnion diameter: 30 mm.

3. Anti-roll bar

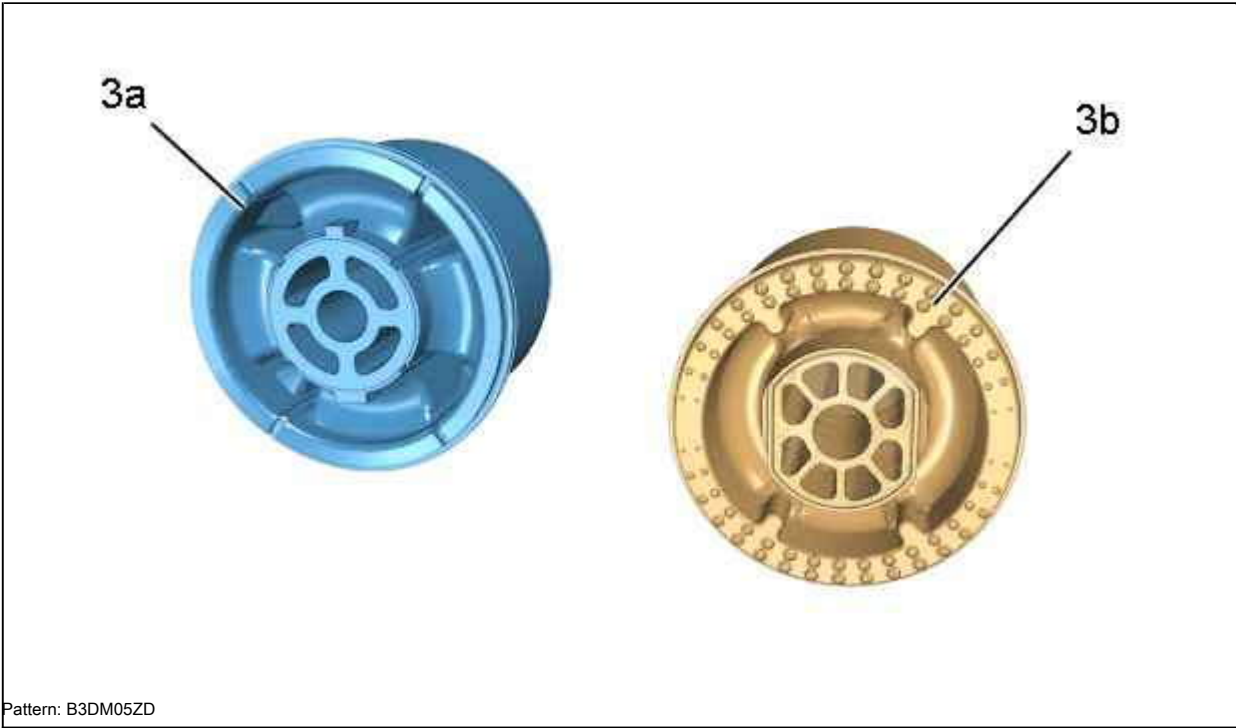
The anti-roll bar is integrated in the rear axle cross member.

The anti-roll bar is not removable. The ends of the anti-roll bar are welded to the rear axle.

Version	Engine	Stabilizer diameter	Metal thickness
		lateral stability (Inner x Outer)	rear crossbars bridge
Passenger car 5 TU5JP4 DV6ATED4		25.5 x 31.5 mm	6 mm
places	DV6BTED4		
	DV6TED4	25 x 31 mm	6 mm
Passenger car 7 TU5JP4 TU5JP4B		23.7 x 29.5 mm	6 mm
places	DV6TED4 DV6TED4B		
	DV6ATED4		
Commercial	TU5JP4 DV6AUTED4	25.5 x 31.5 mm	6 mm
car (van) with short base			
Commercial	TU5JP4 (Europe	23.7 x 29.5 mm	6 mm
car (van) with long base	Cars (version for CRD) (*)		
	TU5JP4 ("pack chantier")	25.5 x 31.5 mm	6 mm
	DV6AUTED4	23.7 x 29.5 mm	6 mm
	DV6BUTED4		

NOTE: (*) CRD = for difficult road conditions.

4. Elastic connection



[3a] Elastic connection: Composite.
[3b] Elastic connection: Hydraulic.

Type: Elastic connection	
Elastic connection: Hydraulic All versions of the vehicle, except for CRD PC XTR (*) Elastic connection: Composite	
	Cars (CRD version) PC XTR (*)

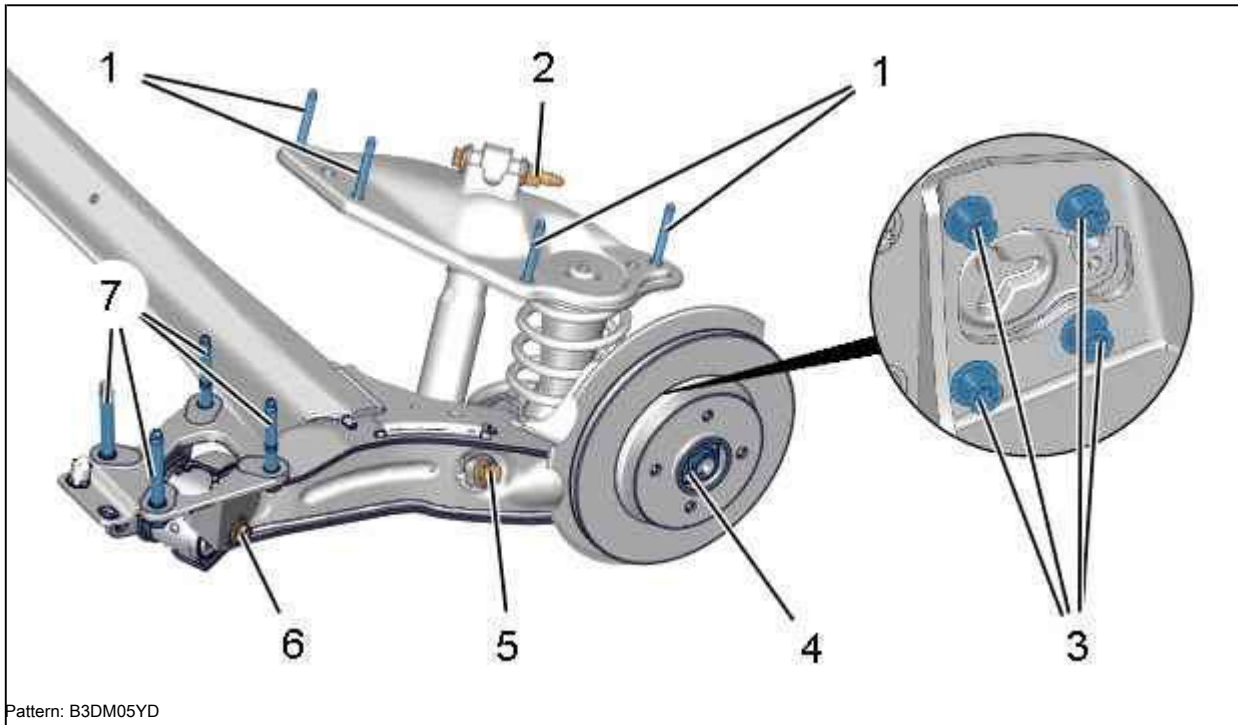
NOTE: (*) CRD = for difficult road conditions; PC = "pack chantier" XTR = XTR / VTC package.

5. Rear axle geometry

The geometric characteristics of the rear axle are given with the indication of control and adjustment dimensions



TIGHTENING TORQUES: REAR AXLE



Pattern: B3DM05YD

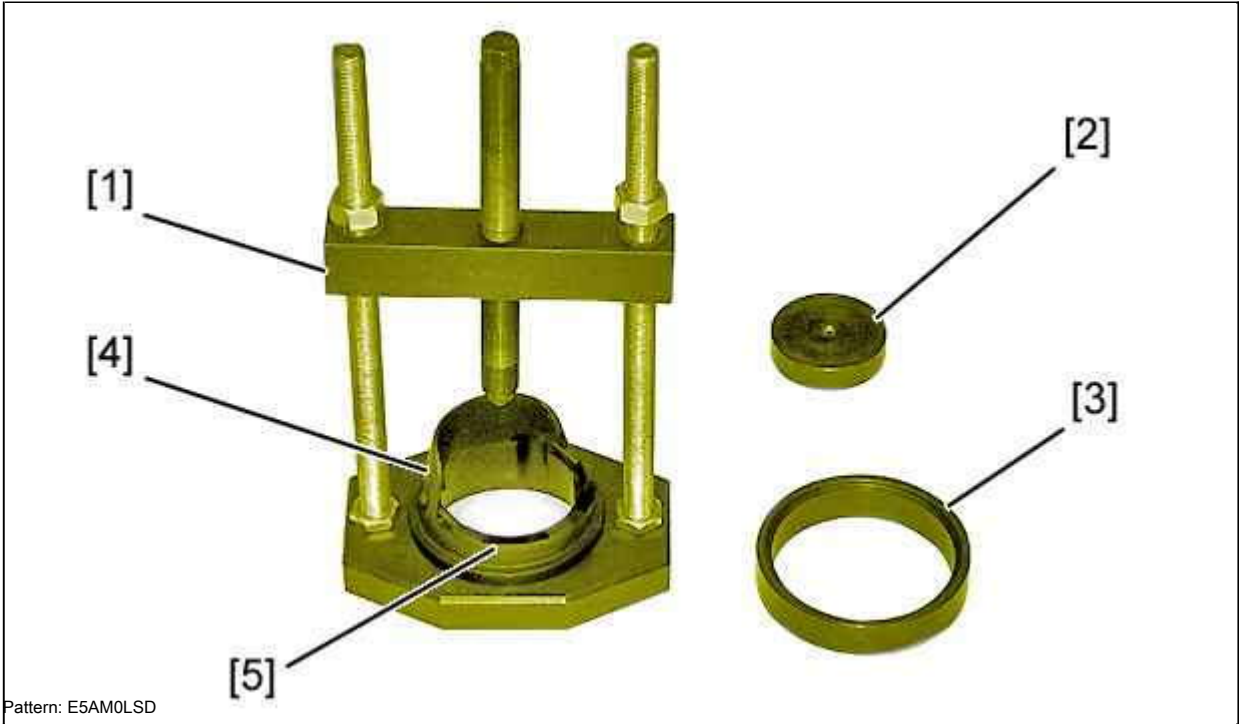
Label Designation		Torque
(1)	Mount the upper shock absorber cup	4.5 da.Nm
(2)	Shock absorber upper fastening	12.1 da.Nm
(3)	Attaching the reaction rod to the rear suspension 11 da.Nm Rear hub nut	
(4)		30 da.Nm
(five)	Lower fastening of the shock absorber	19 da.Nm
(6)	Rear suspension support	11.5 da.Nm
(7)	Mounting the rear suspension to the body	11.5 da.Nm

REMOVAL REFITTING: FLEXIBLE PIVOTS (REAR AXLE)

MANDATORY: Observe the cleanliness and safety rules

i

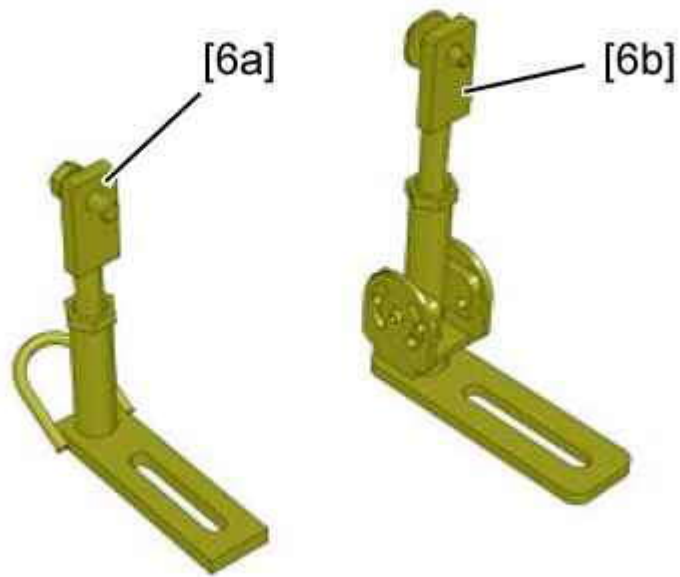
1. Recommended equipment



Pattern: E5AM0LSD

Label Designation		Number (reference)
[1]	bracket	() .0549 A
[2]	Tool for removing the installation of the elastic hinge () .0549.B4 ring	
[3]		() .0549.C4
[4]	Stop for removing the installation of elastic hinges	() .0549.D4
[five]	Stop for installing elastic hinge	() .0549.E4

[6]



Pattern: E5AM0LTD

[6] Set of supports () .0005.

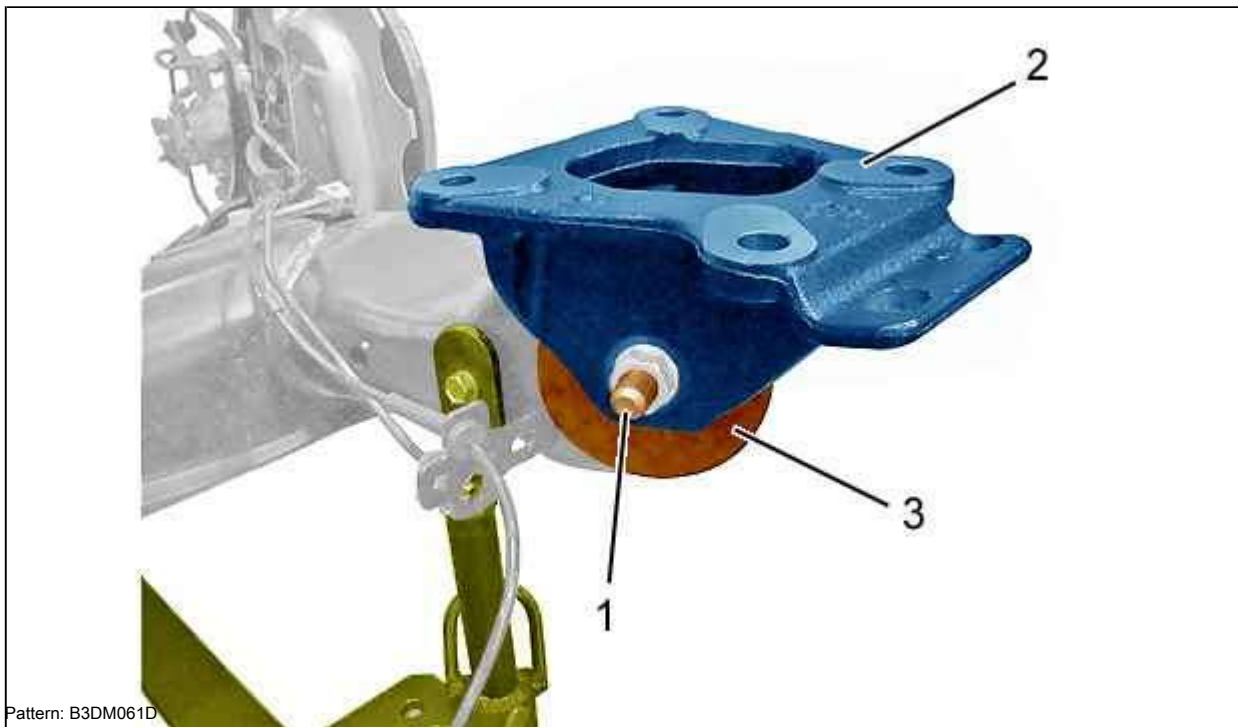
2. Removal

Take off the rear bridge



Pattern: B3DM060D

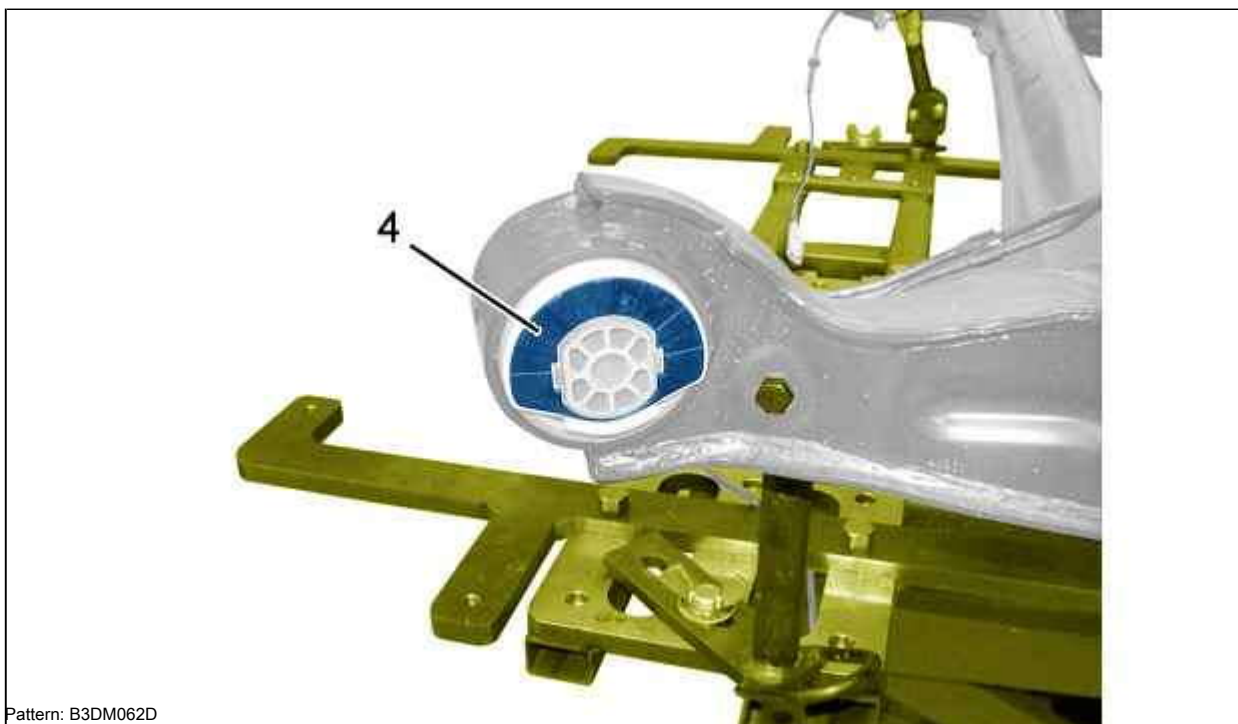
Fix the rear axle; Using the tools [6a], [6b].



Remove:

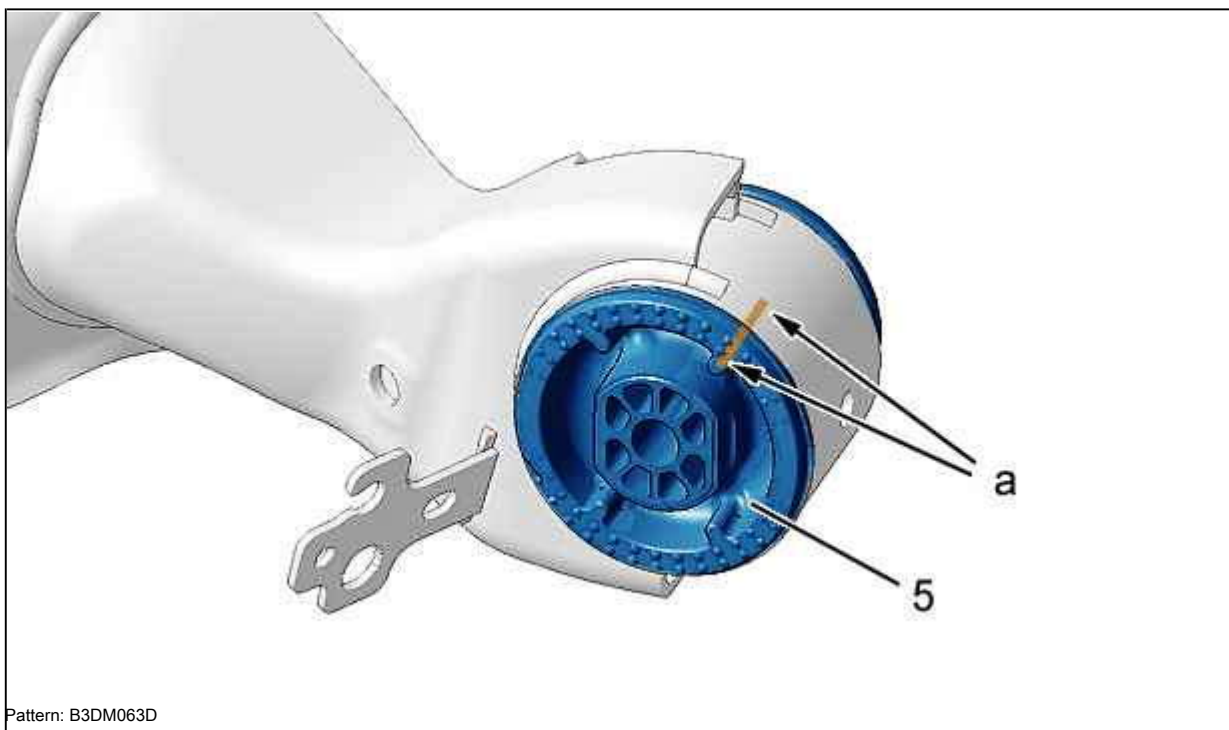
- Bolt (1)
- Cap (2)
- Washer (3)

2.1. "hydraulic" silent block



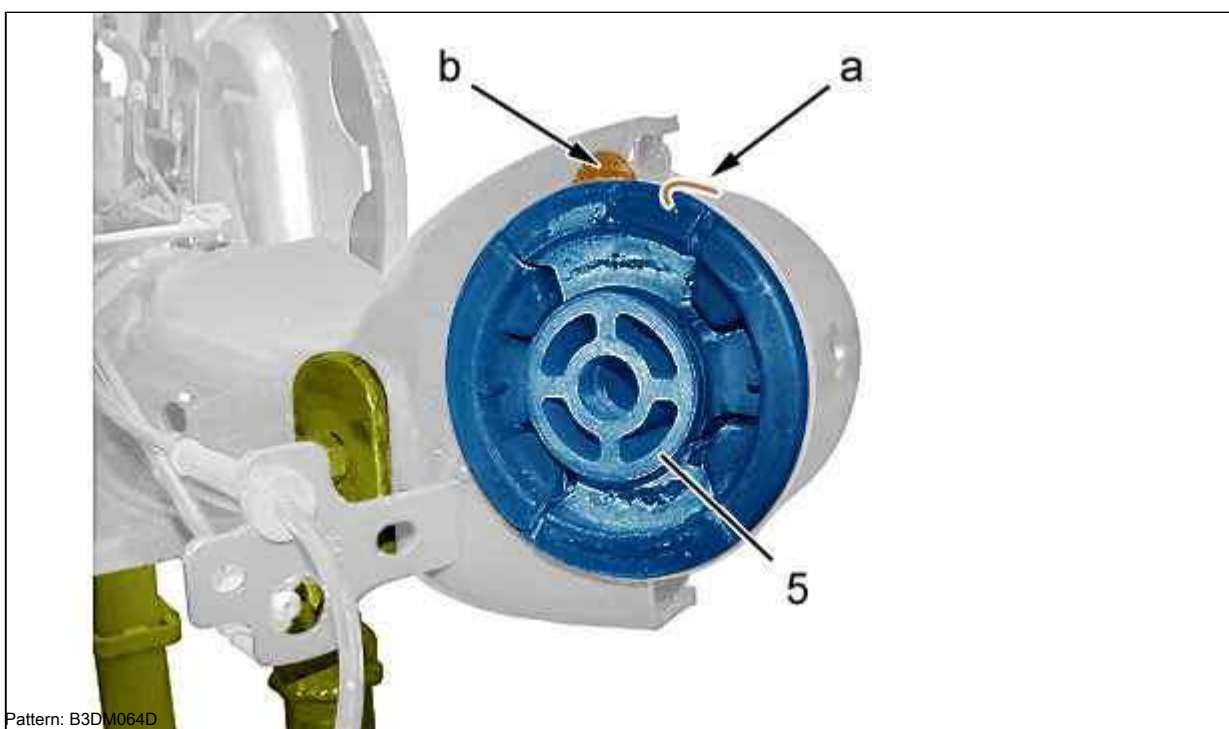
NOTE: Mark the installation of the washer (4) (Before removal).

Remove: Washer (1) (4).



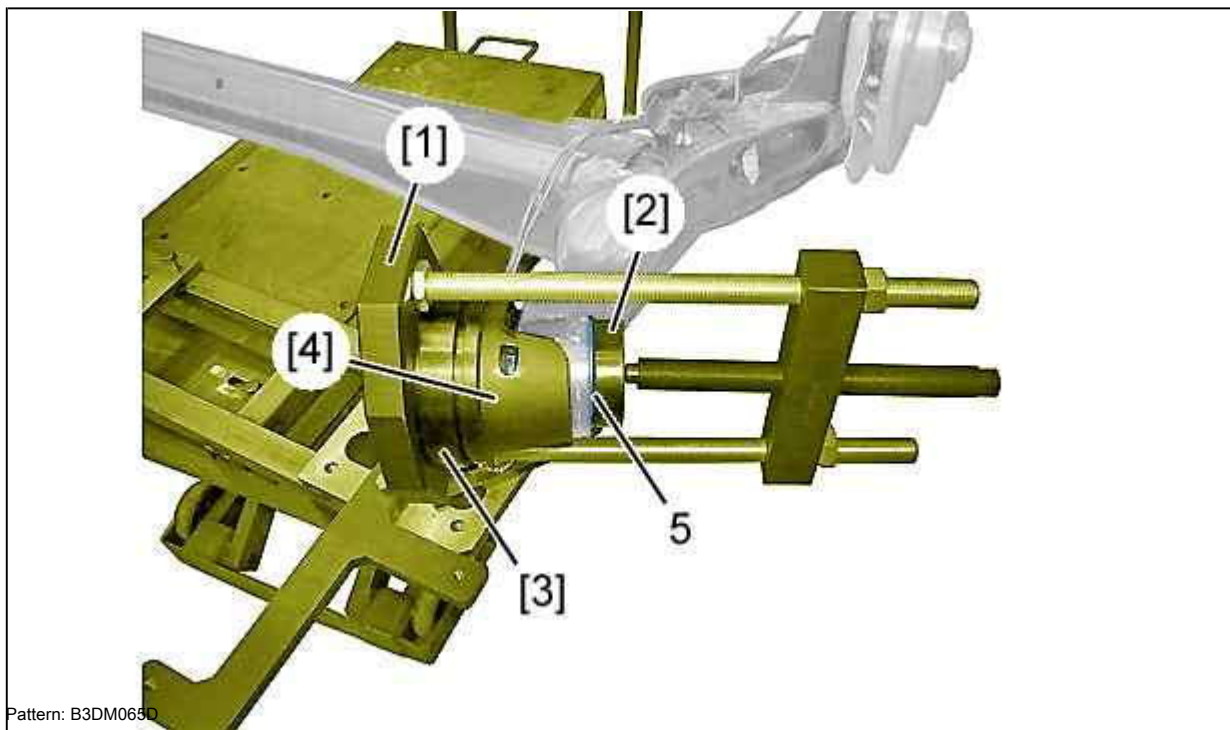
In area "a" mark the position of the silentblock (5) with respect to the suspension arm; Using a thin line (at "a").

2.2. Composite silentblock



In area "a" mark the position of the silent block (5) in relation to the suspension arm. Cut off the ledge (at "b").

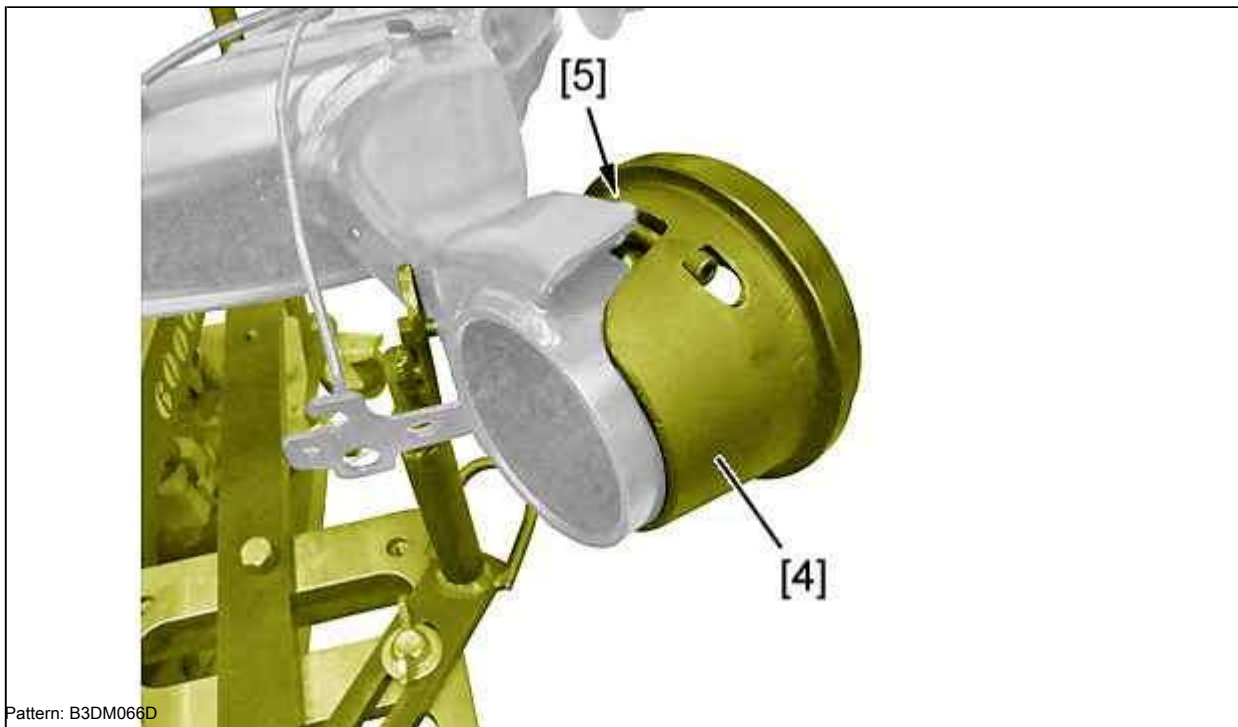
2.3. Removal (continued)



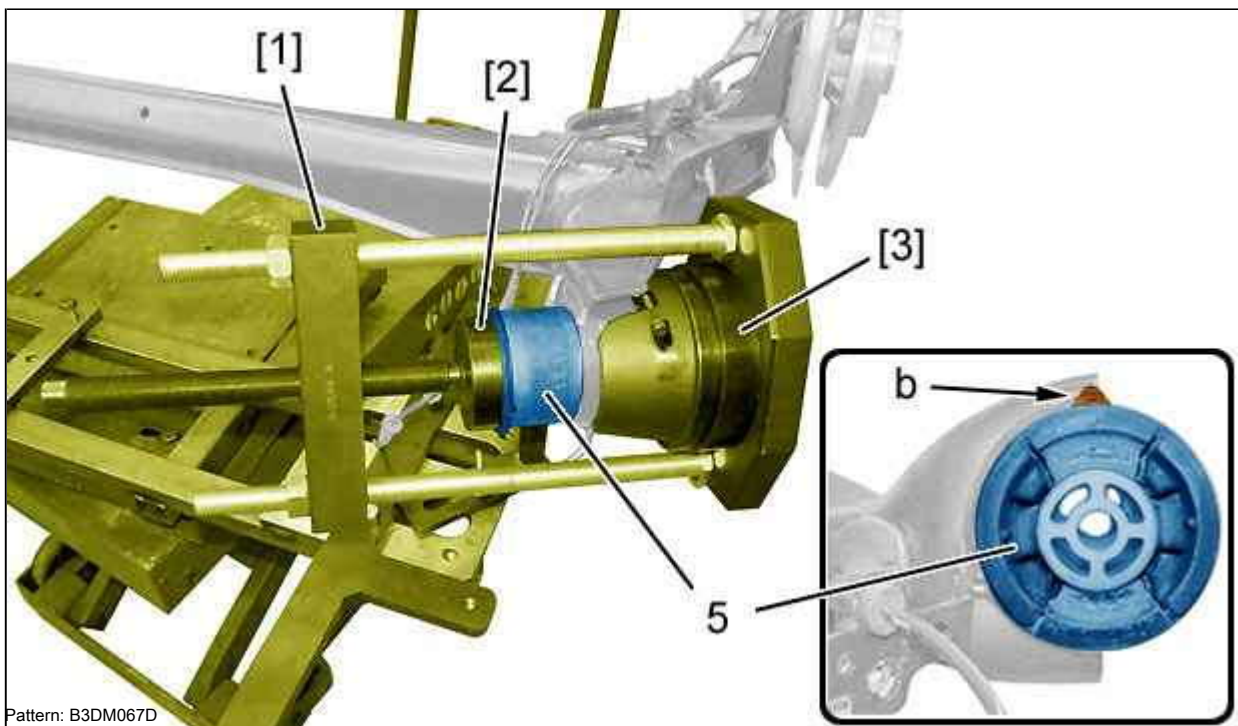
NOTE: Check the presence of grease on the device / 1 /.

Install the tool / 4 / on the silent block (5). Place the tools / 1/, [2 / and / 3 / on the elastic connection (5). Remove the silent block (5) by tightening the bolt of the tool [1]. Remove the tools [1], [2], [3], [4].

3. Installation



Install the tools [4], [5] on the bush of the rear axle silentblock [5].



ATTENTION : Observe the position of the silent blocks (5).

Install the silent block (5) (New) (Observe the marks made when removing).

NOTE: On vehicles with split bushings, observe the orientation of the projection (at "b") of the bush (5).

Install:

- Silent block (5)
- devices [1], [2], [3]

NOTE: Check the presence of grease on the device / 1 /.

Tighten the bolt of the tool [1] before replacing the silent block (5). Remove the tools [1], [2], [3], [4], [5].

3.1. "hydraulic" silent block

Install: Washer (4).

3.2. Installation (continued)


Install:

- Washer (3)
- Cap (2)
- Bolt (1) (loose)
- **Rear axle**



REMOVAL REFITTING: REAR AXLE

~~MANDATORY: Observe the cleanliness and safety rules~~

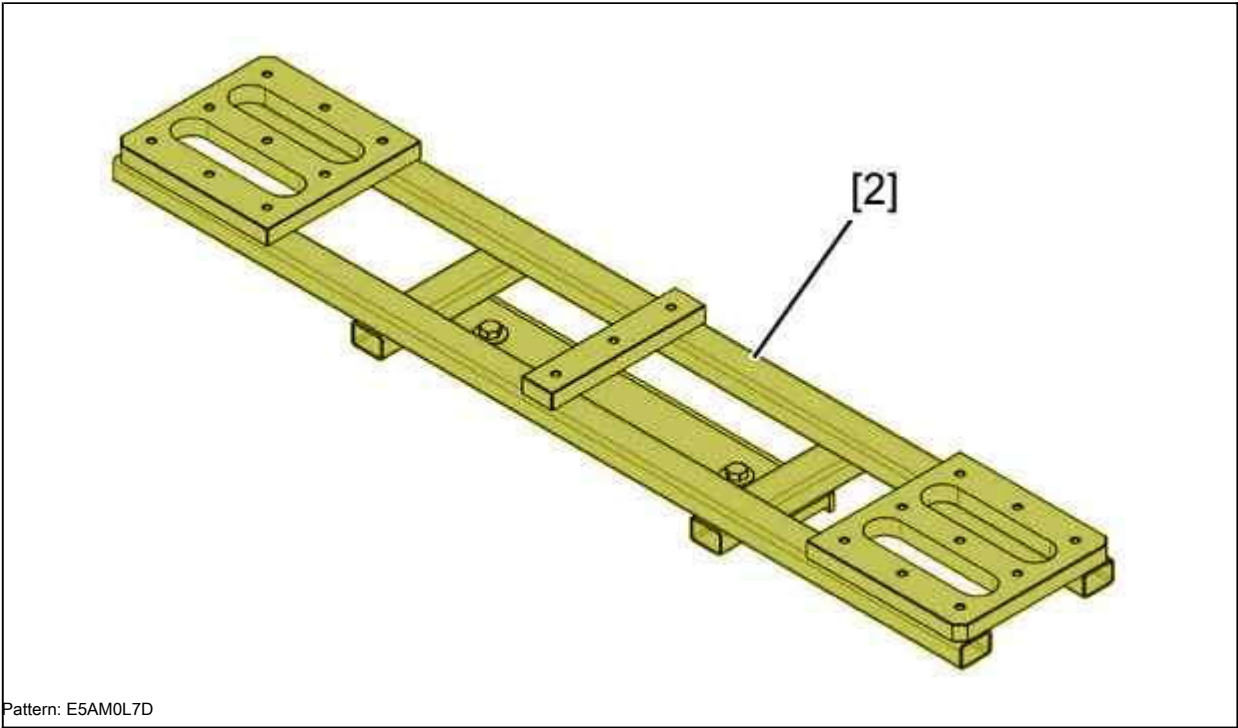


1. Recommended equipment

Pedal press.

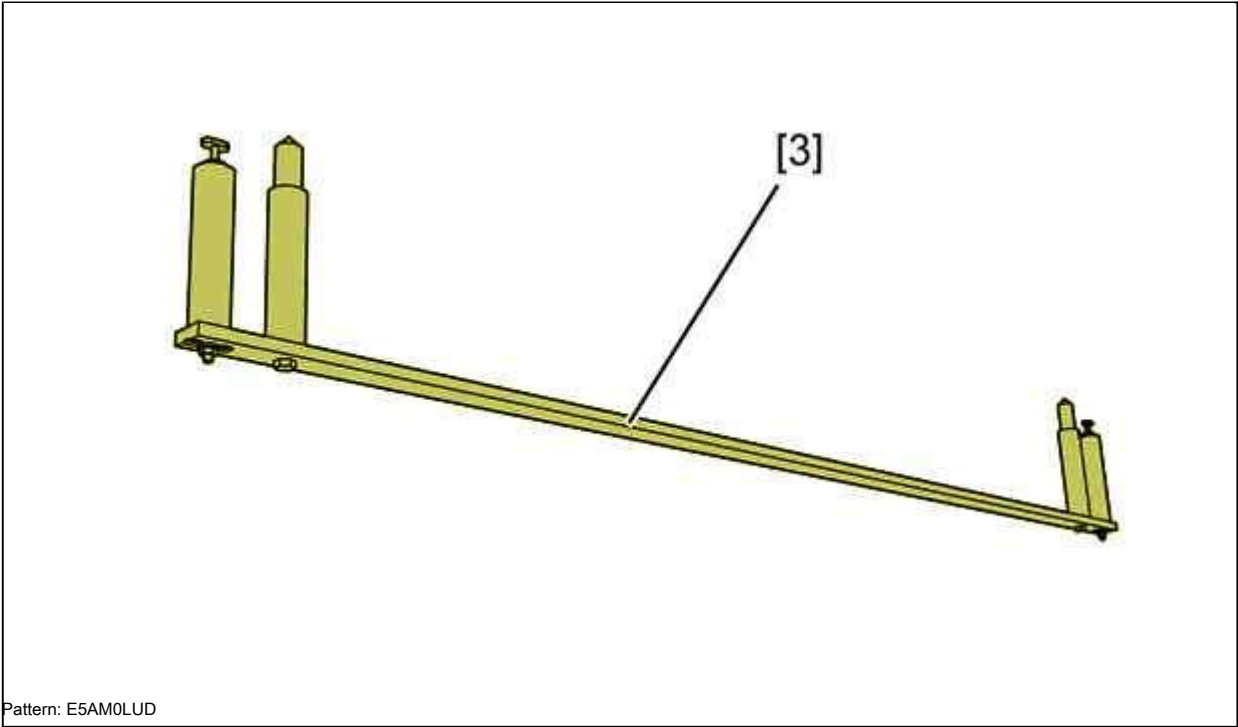


Label Designation		Number (reference)	Number (reference)
[1]	lifting table 5702TA		() .0004



Label Designation Number (reference) [2]

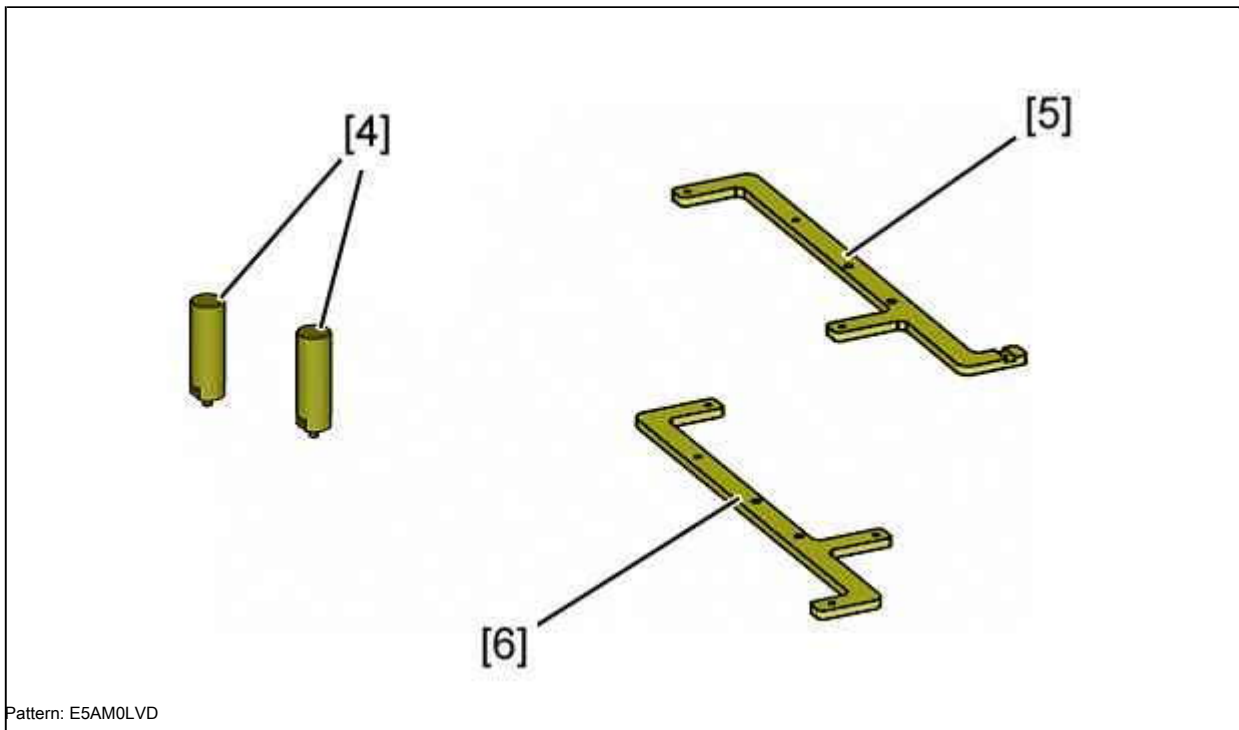
	crossbar	() .0554



Label Designation

Number (reference)

[3]	4399T Rear Axle Positioning Tool	



Label Designation		Number (reference)
[4]	Guide pin	() .0629C
[five]	Installation tool () .0555A	
[6]	Installation tool () .0555B	

2. Removal

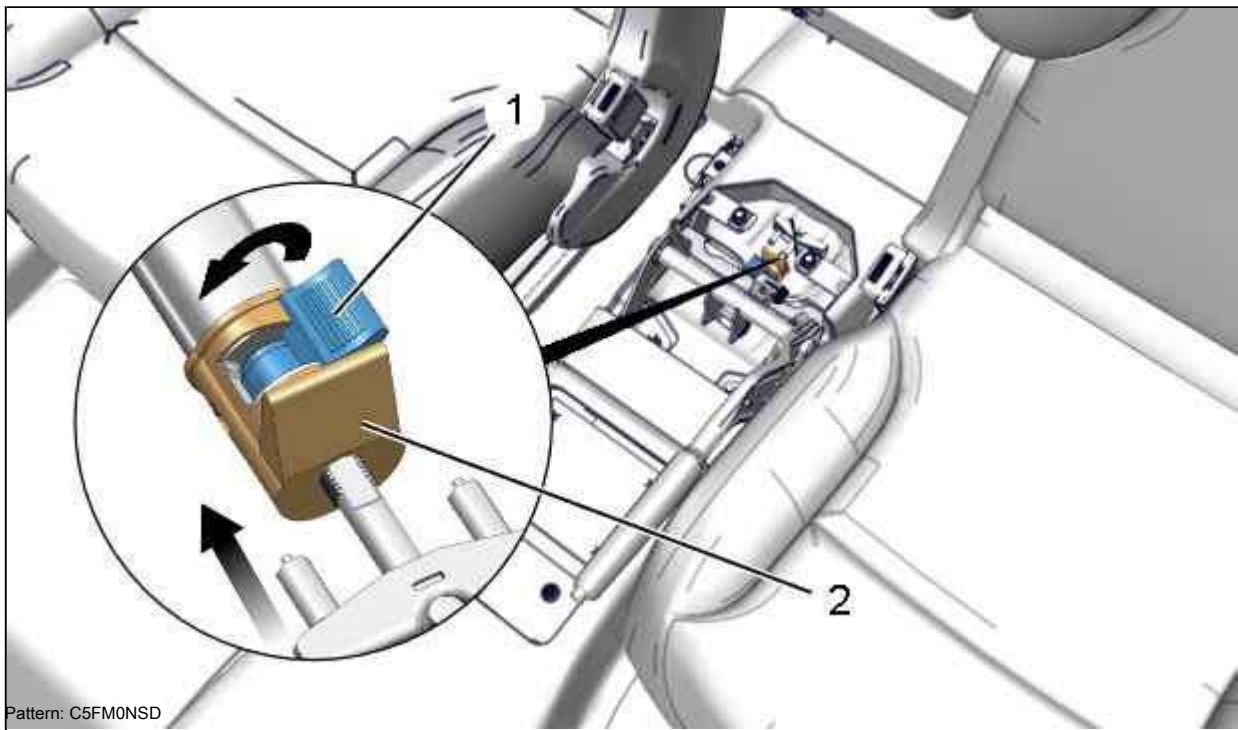
Release the parking brake levers.

Release the rear wheel bolts.

Raise and secure the vehicle on a 2 post lift. Fasten the vehicle on a 2 post lift.

Disconnect the battery. Remove:

- Rear wheel bolts
- Rear wheels
- Center console



Set the parking brake lever to the released position. Press the release knob (2) (in accordance with the arrow).

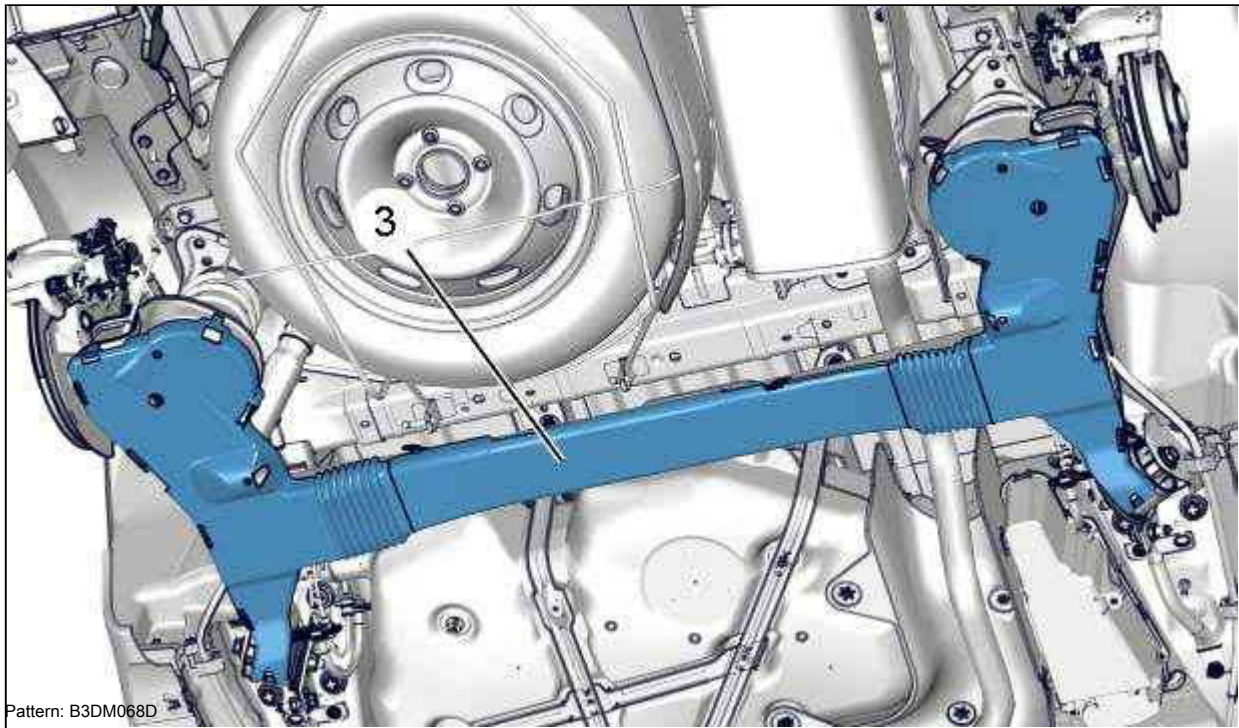
While continuing to press the release knob (2), turn the backlash compensation knob (1) by a quarter of a turn (in accordance with the arrow).

Release the release pusher (2).

ATTENTION : To avoid damaging the spring of the backlash compensation system, do not tighten the parking brake lever more than the first fixed position of the lever travel without moving the button (1) to the LOCKED position.

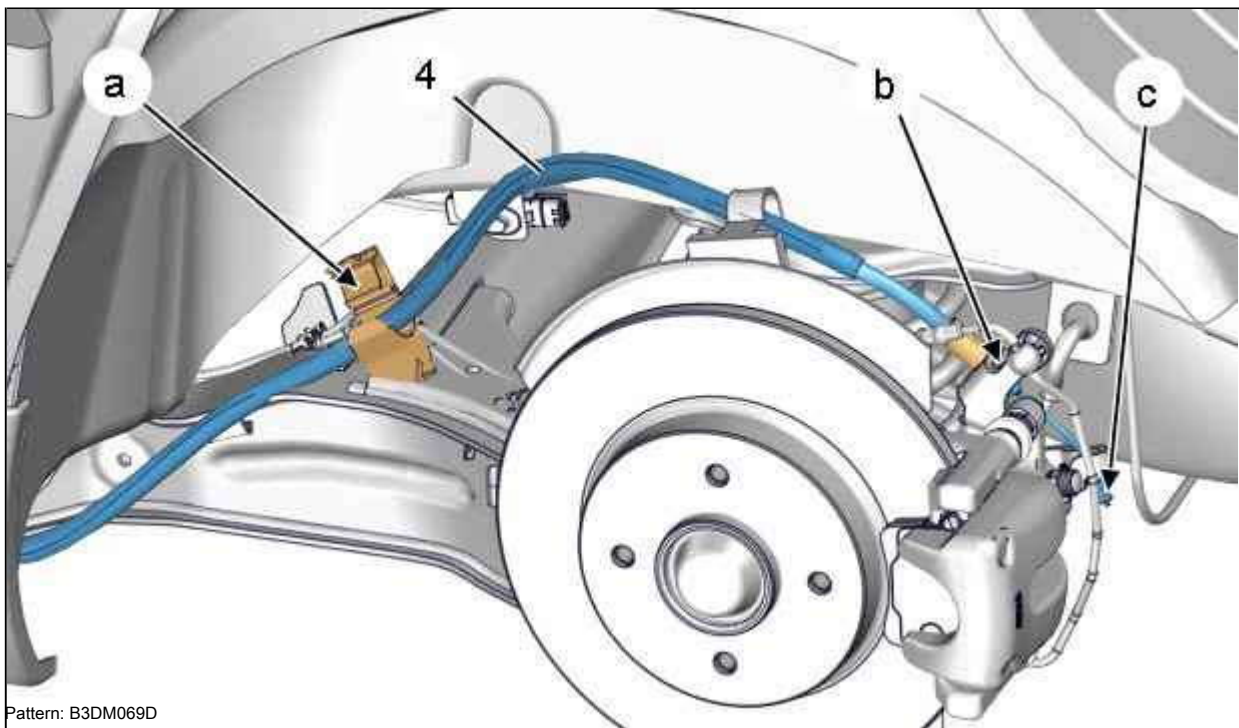
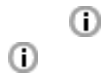
~~Raise the parking brake lever to the first click.~~

Turn the backlash compensation knob (1) by a quarter of a turn (in the opposite direction). Set the parking brake lever to the released position.



Remove:

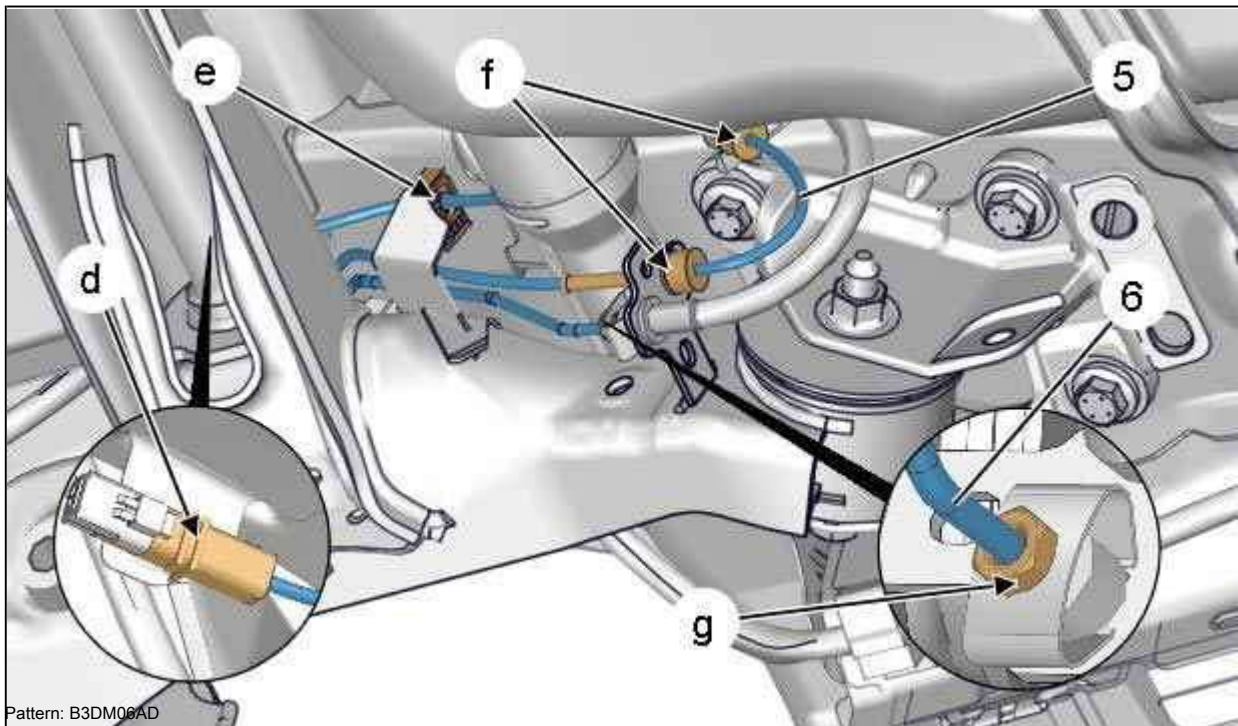
- Display (3)
- **Rear suspension springs**
- **Rear shock absorbers**



from each side :

- Disconnect: Parking brake cable (4) (at "c")
- Disconnect the parking brake cable (4) (at "b", "a")

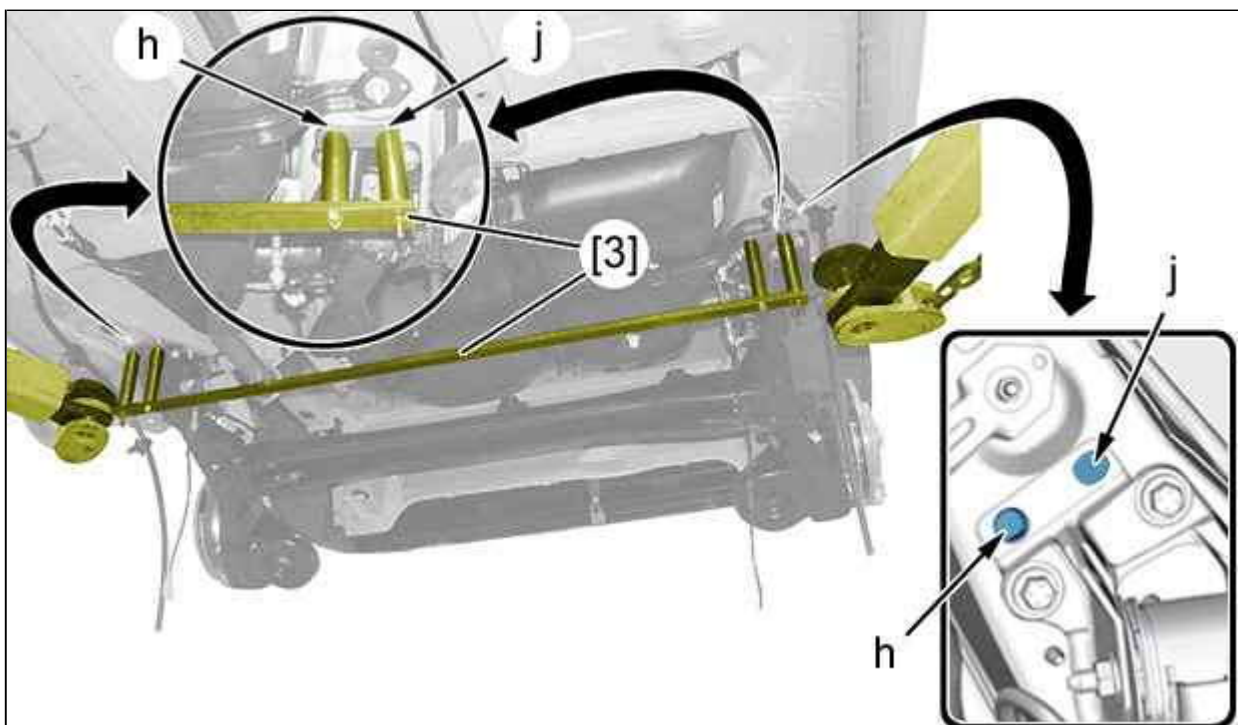
- Disconnect the parking brake cable (4) from its guides



Install the pedal press on the brake pedal to prevent brake fluid from escaping when disconnecting the brake pipes.

from each side :

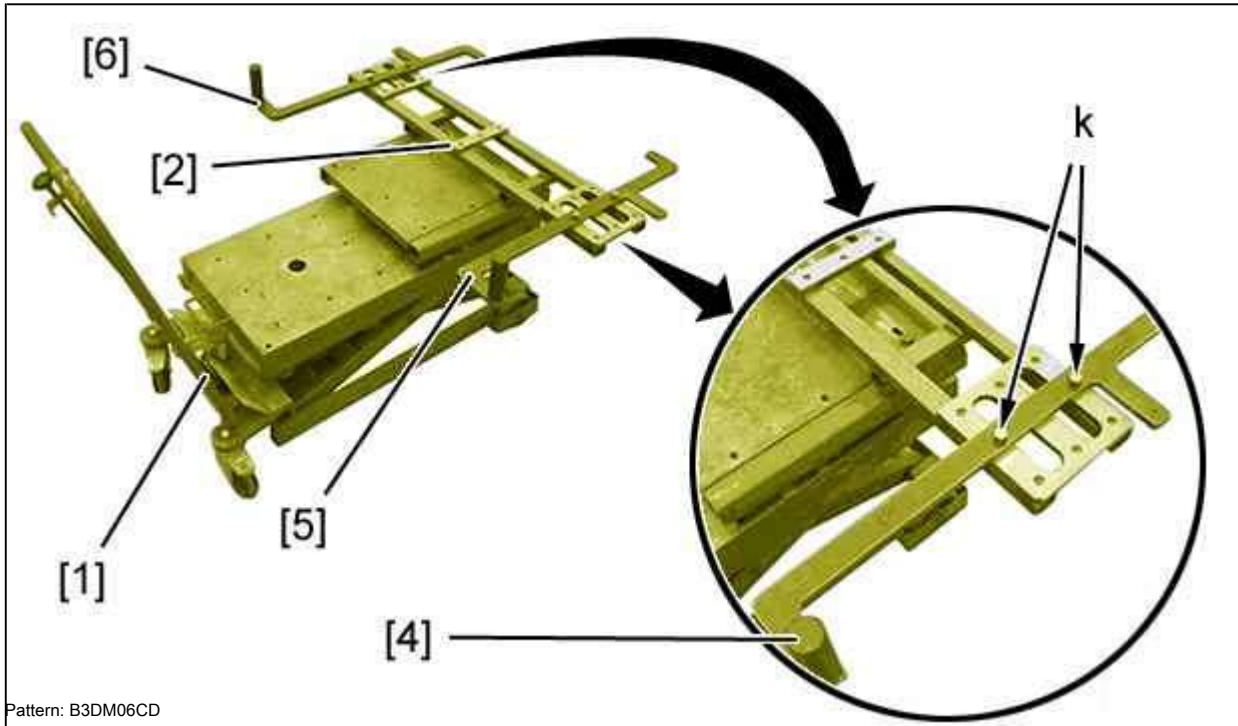
- Disconnect: Rear wheel sensor connector (5) (at "d")
- Unfasten the rear wheel sensor wiring harness (5) (in "e", "f")
- Disconnect the hydraulic pipe (6) (at "g") (Allow for brake fluid to drain)
- Plug holes in parts



Pattern: B3DM06BD

Remove the plugs (in "h"). from
each side :

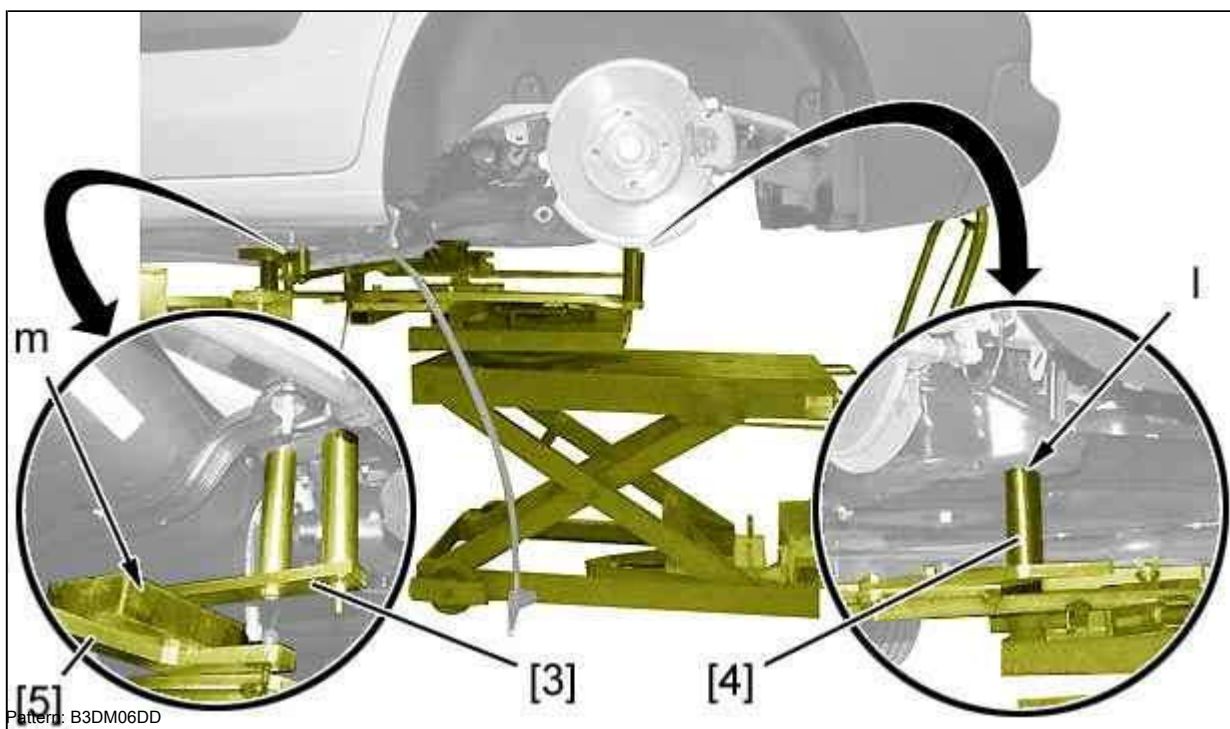
- Place the tool [3] under the rear axle covers (in "h")
- Hold the tool [3] to the rear of the bridge (at "j")



Pattern: B3DM06CD

Place the traverse [2] on the lifting table [1]. On each side of the
traverse [2]; Install:

- fixtures [5], [6] (in "k")
- Positioning pins [4]



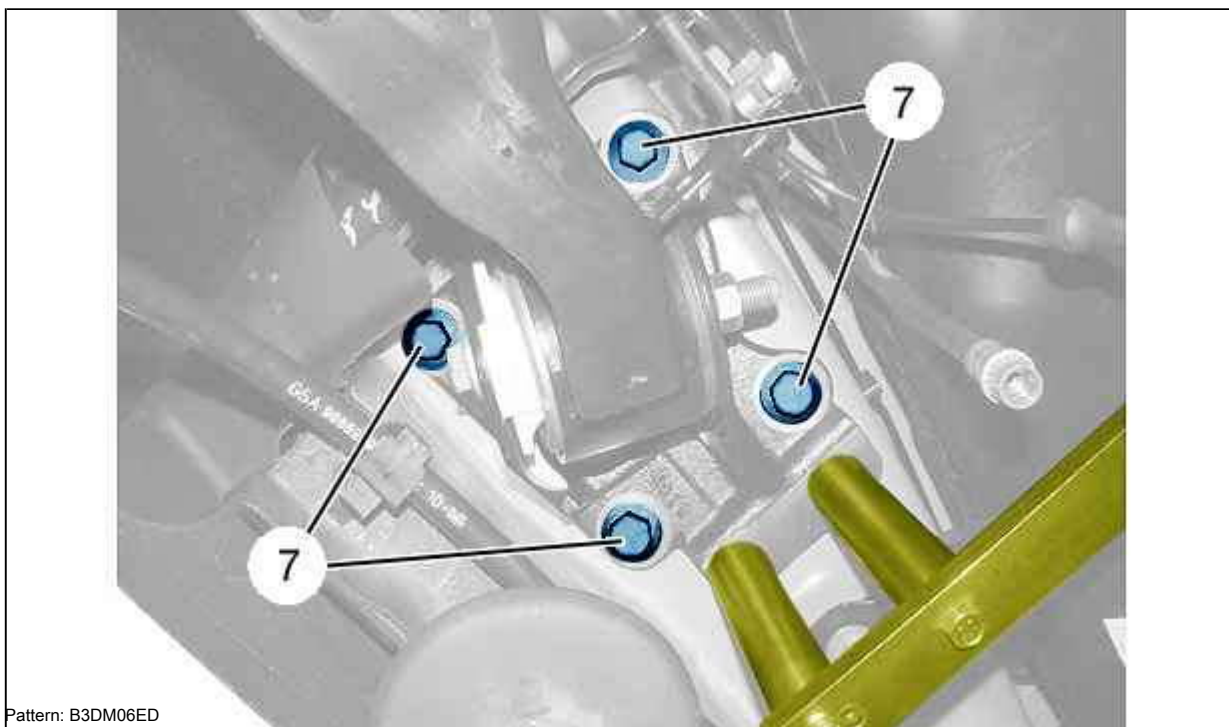
ATTENTION : The following operations must be performed with two people.

ATTENTION : Do not use a jack to raise the rear axle crossbar.

from each side :

- Install the mounting studs [4] ((place the supports under the suspension spring cups at "l"))
- Install the spacers available in the workshop (in "m") between the tool [3] and the tools [5] and [6]

Position the rear axle cross member horizontally using a lifting table [1], [2], [3], [4], [5], [6].

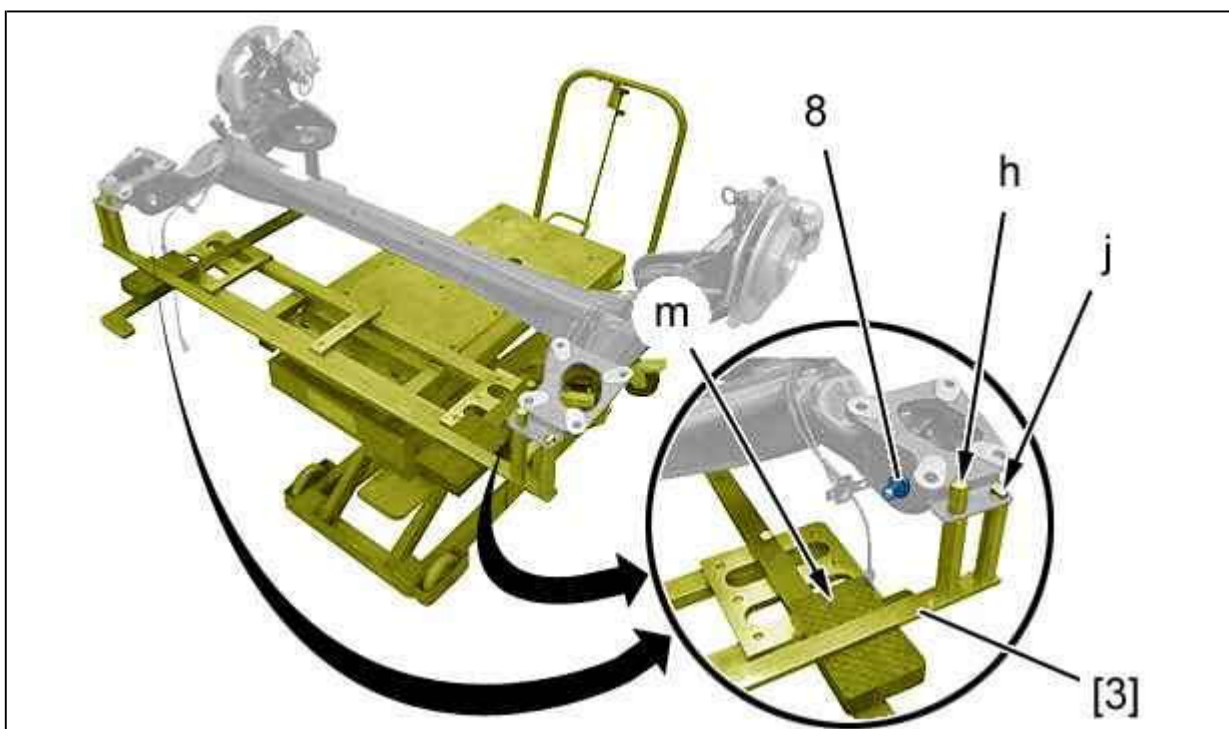


ATTENTION : The following operations must be performed with two people.

Remove:

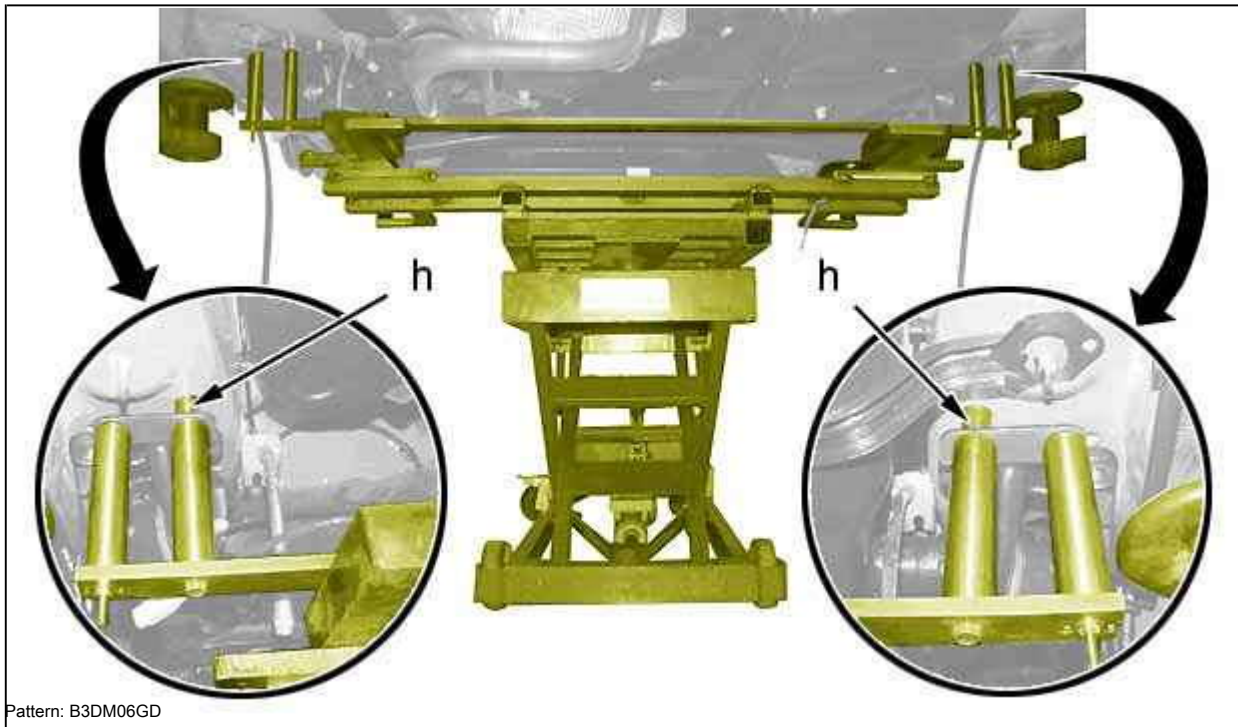
- the bolts (7)
- Rear axle

3. Installation



from each side :

- Loosen the bolt (8)
- Place the tool [3] under the rear axle covers (in "h")
- Hold the tool [3] to the rear of the bridge (at "j")
- Use the pads at hand (in "m") so that the rear axle is in a horizontal position



ATTENTION : The following operations must be performed with two people.

Place the rear axle under the body in the same position as when it was removed. Adjust the position of the rear axle in relation to the holes in the pinned joint (at "h"). Replace the bolts (7).

Tighten:

- bolts (7) to a torque of 11.5 ± 1.1 da.Nm
- bolts (8) to a torque of 11.5 ± 1.1 da.Nm

Remove the tools [1], [2], [3], [4], [5], [6]. from each side :

- Replace plugs (in "h")
- Connect: The hydraulic pipe (8) (at "f"); Tighten to 1.5 ± 0.3 da.Nm Attach the rear wheel sensor wiring harness (9) (at "e")
-
- Connect: Rear wheel sensor connector (9) (in "d") Fasten the parking brake cable
- (4) in its guides Connect the parking brake cable (4) (in "b", "a") Connect the
- parking brake cable (4) (in "c")
-

Install:

- **Rear shock absorbers**
- **Rear suspension springs**
- Display (3)

Remove the pedal press.

NOTE: Parking brake lever in released position.

Press the release knob (2) (in accordance with the arrow).

Continuing to press the release knob (2), turn the backlash compensation knob by a quarter turn

(1) (according to the arrow). Release the release

pusher (2).

Turn the backlash compensation knob (1) by a quarter of a turn (in the opposite direction). Reconnect the battery.

Drain the brake fluid and purge the brake circuit

Install:

- Rear wheels
- Rear wheel bolts



Adjust the parking brake

Install:

- Center console
- A car on its wheels



Tighten the rear wheel bolts

Mettre le véhicule en assiette de référence



Tighten the shock absorber lower bolts to a torque of 19 ± 1 da.Nm.



ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL REFITTING: REAR TRUCK

MANDATORY: Observe the cleanliness and safety rules

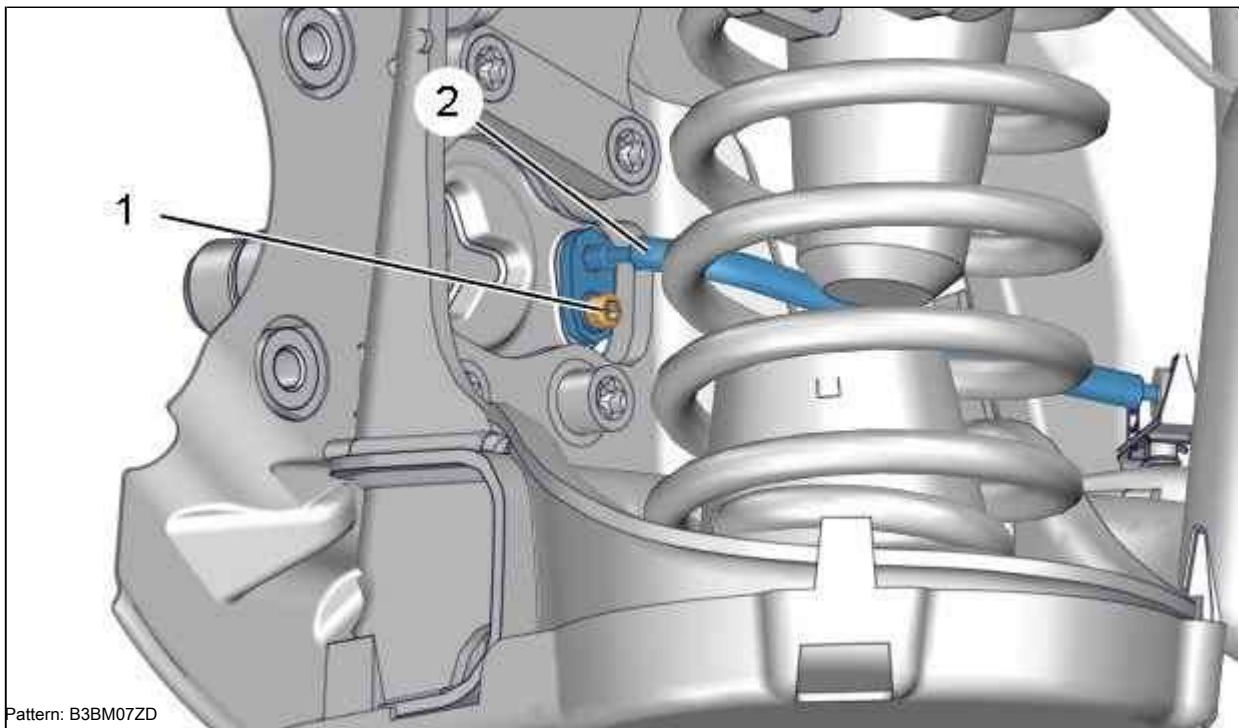


1. Removal

Unlock rear wheel bolts.

Raise and secure the vehicle by hanging out the rear wheels. Remove:

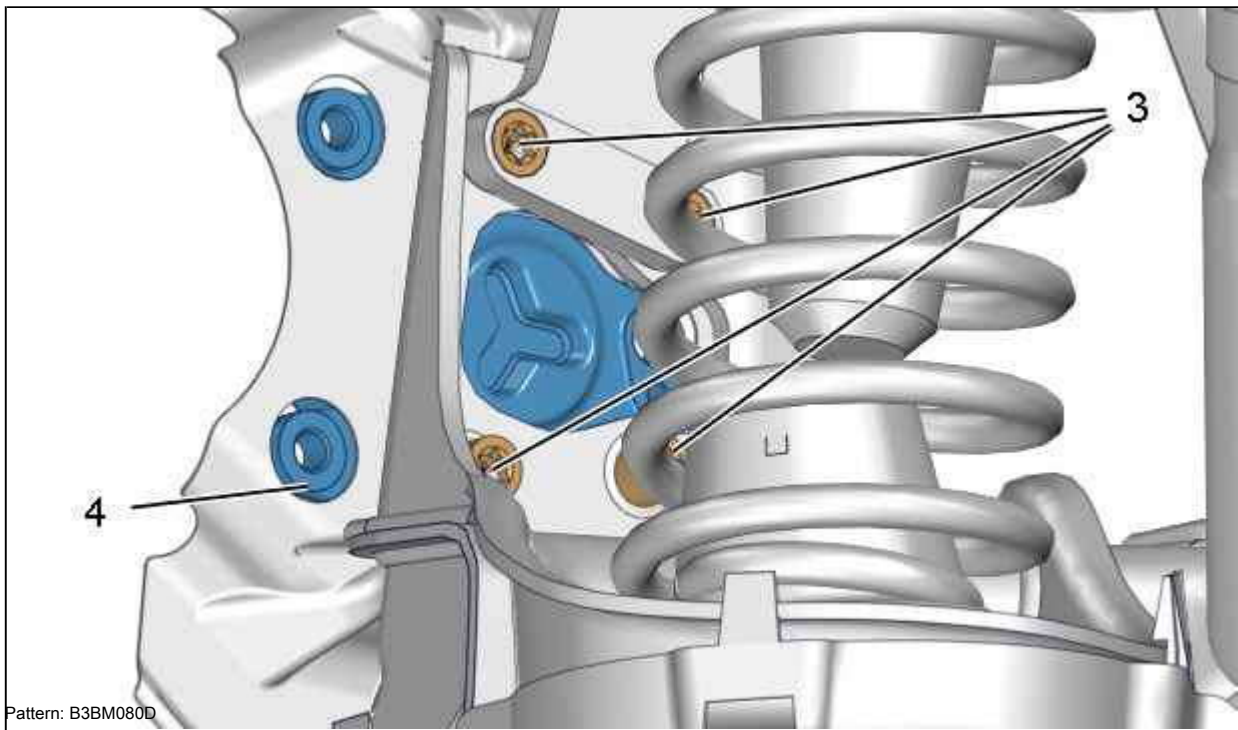
- rear wheel bolts
- Rear wheel
- **Rear hub rear brake disc**



Pattern: B3BM07ZD

Remove the bolts (1).

Move the wheel sensor (2).



Remove:

- bolts (3)
- Front axle (4)
- Brake flange

2. Installation

Install:

- Brake flange
- Front axle (4)
- Bolts (3) pre-lubricated with LOCTITEFRENETANCH

Tighten the bolt (3) to a torque of 11 ± 1.1 da.Nm. Install:

- Wheel sensor (2)
- Bolt (1)

Tighten the bolts to a torque of (1) to 0.8 ± 0.1 da.Nm. Install:

- **Rear hub rear brake disc**
- Rear wheel
- rear wheel bolts



Lower the vehicle to the ground.

Tighten the rear wheel bolts

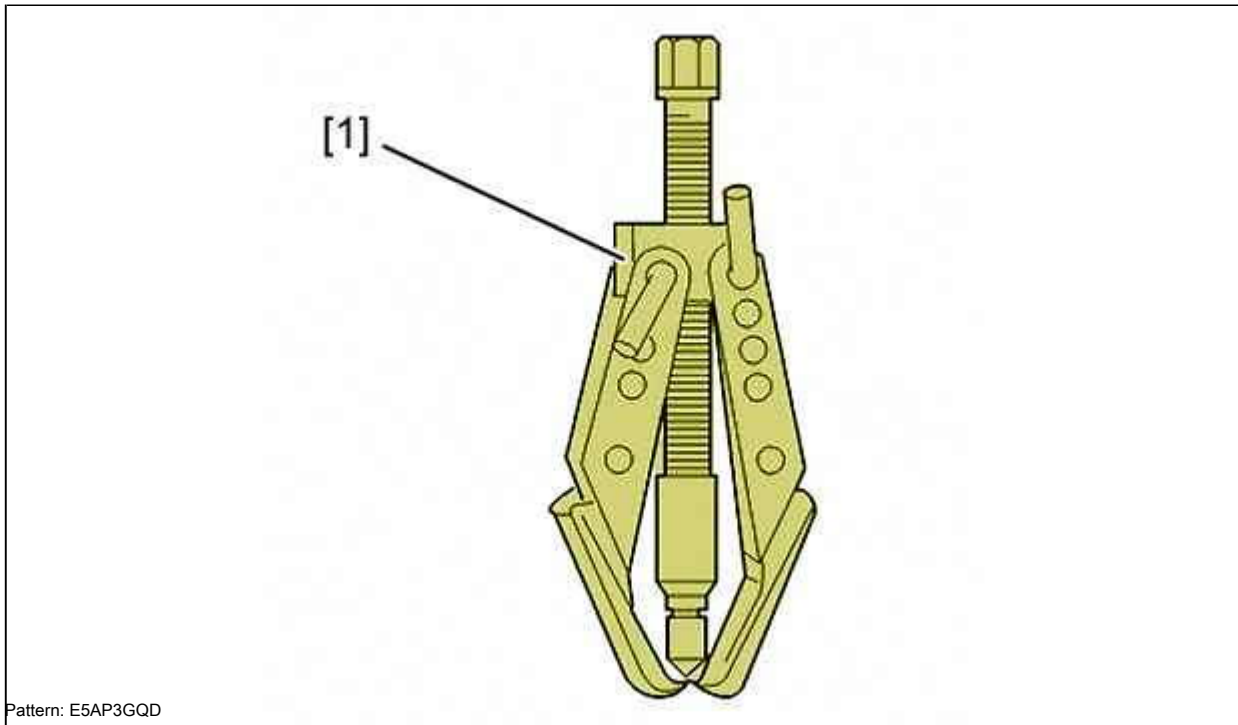


BODY COMPLIANCE: REAR HUB

MANDATORY: Observe the cleanliness and safety rules

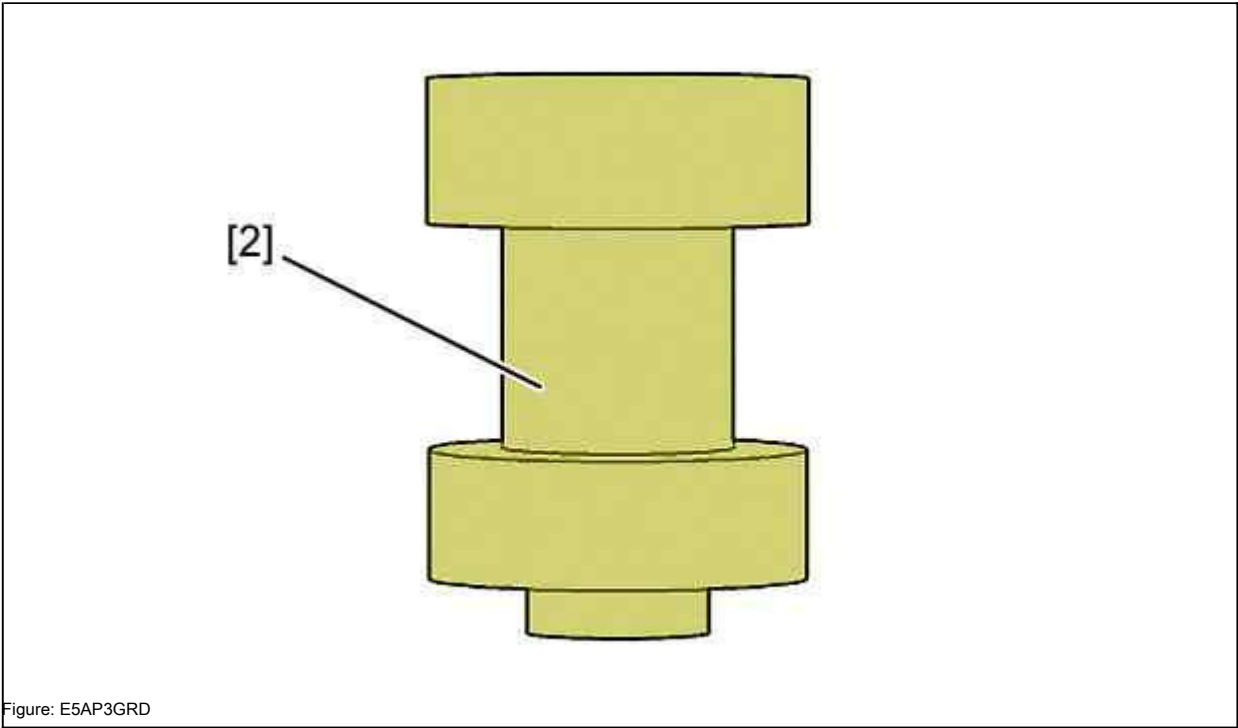


1. Recommended equipment

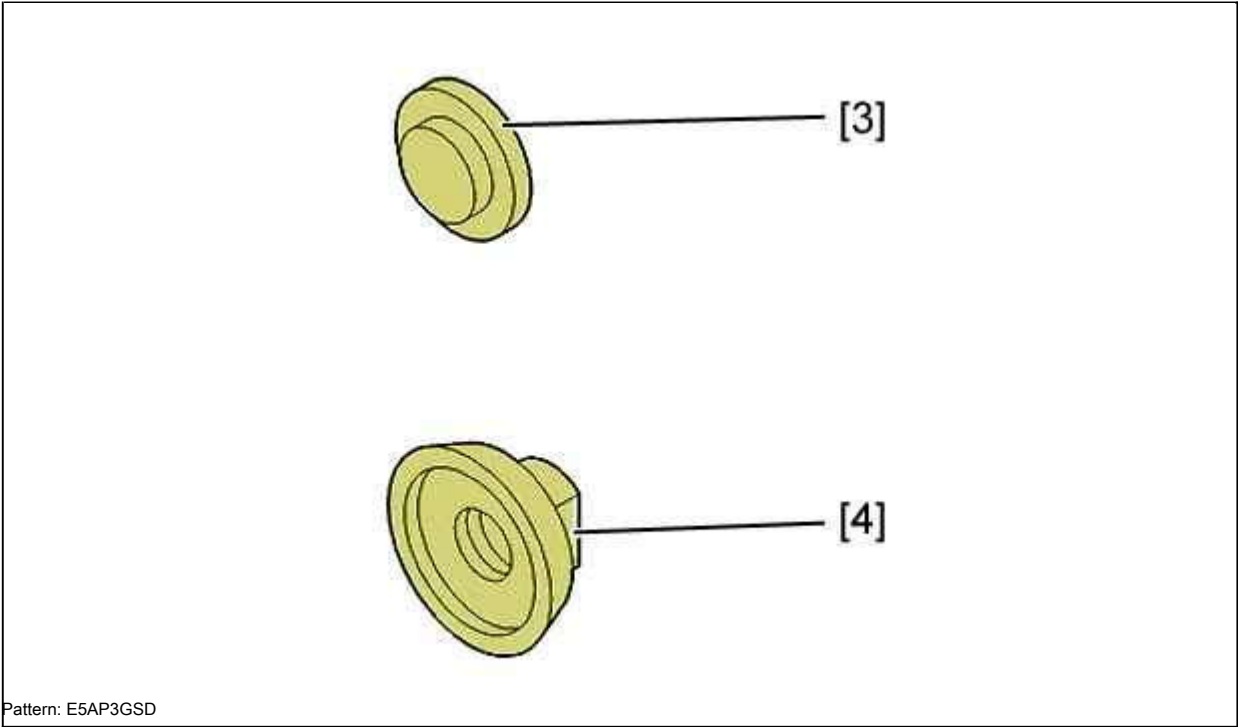


Pattern: E5AP3GQD

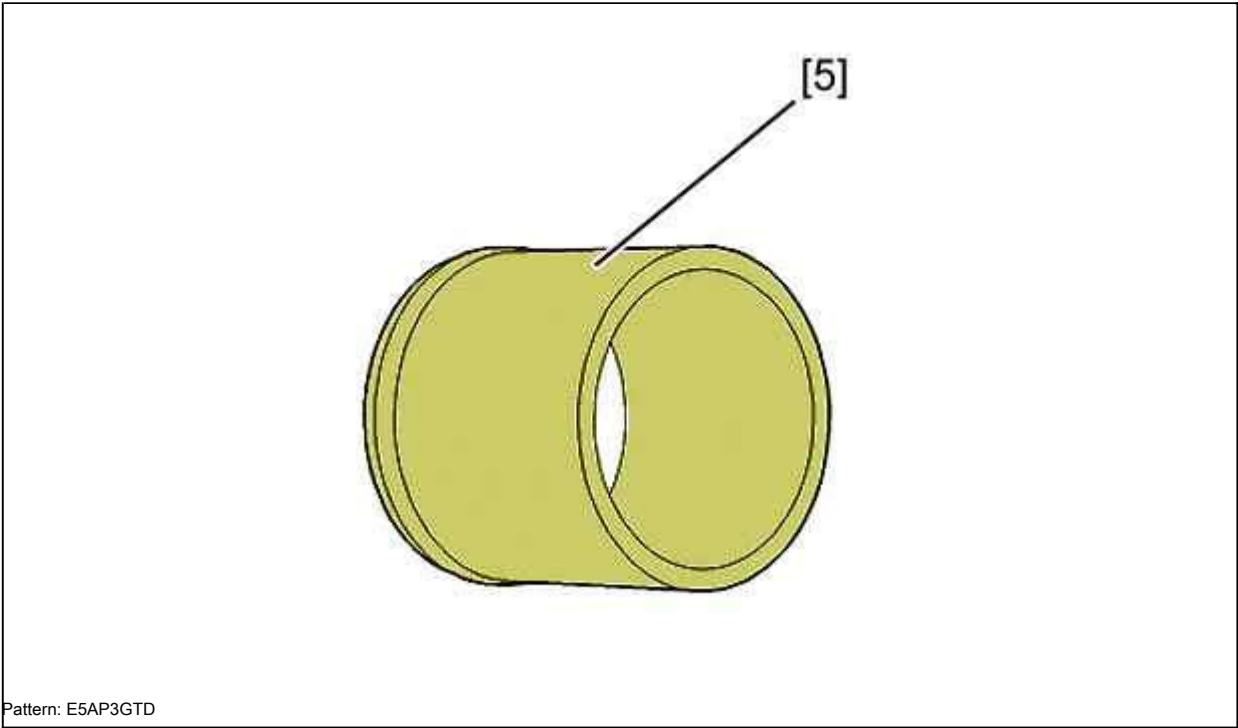
[1] FACOM U35 puller.



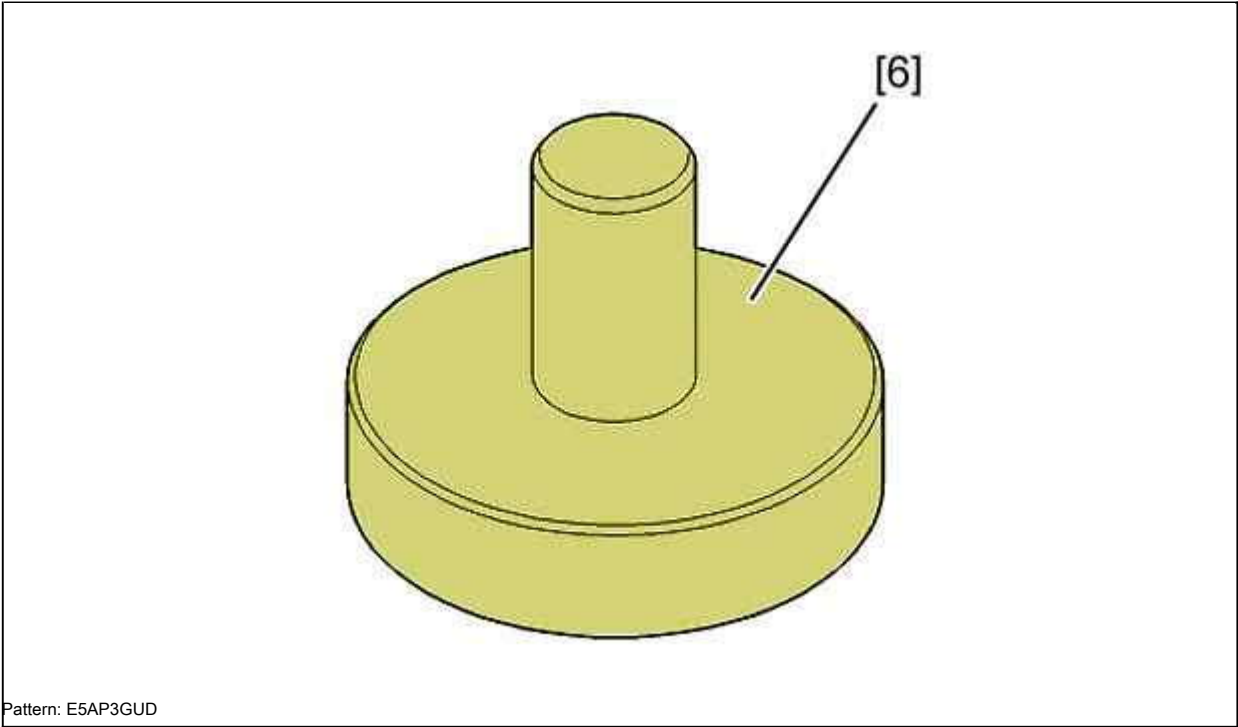
Label Designation		Number (reference)	Number (reference)
[2]	device for removing / installing rolling bearings 9501T.E4		() .0526X



Label Designation		Number (reference)	
[3]	auxiliary bearing 9501T.C2		() .0621E
[4]	puller	9501T.D5	() .0621K



Label Designation		Number (reference)	Number (reference)
[five]	mandrel for installing the hub cover 5709T.F2		() .0619F2



Label Designation		Number (reference)
[6]	Bush for pressing in the target of the rear wheel speed sensor ABS (). 0819	

2. Preliminary operation

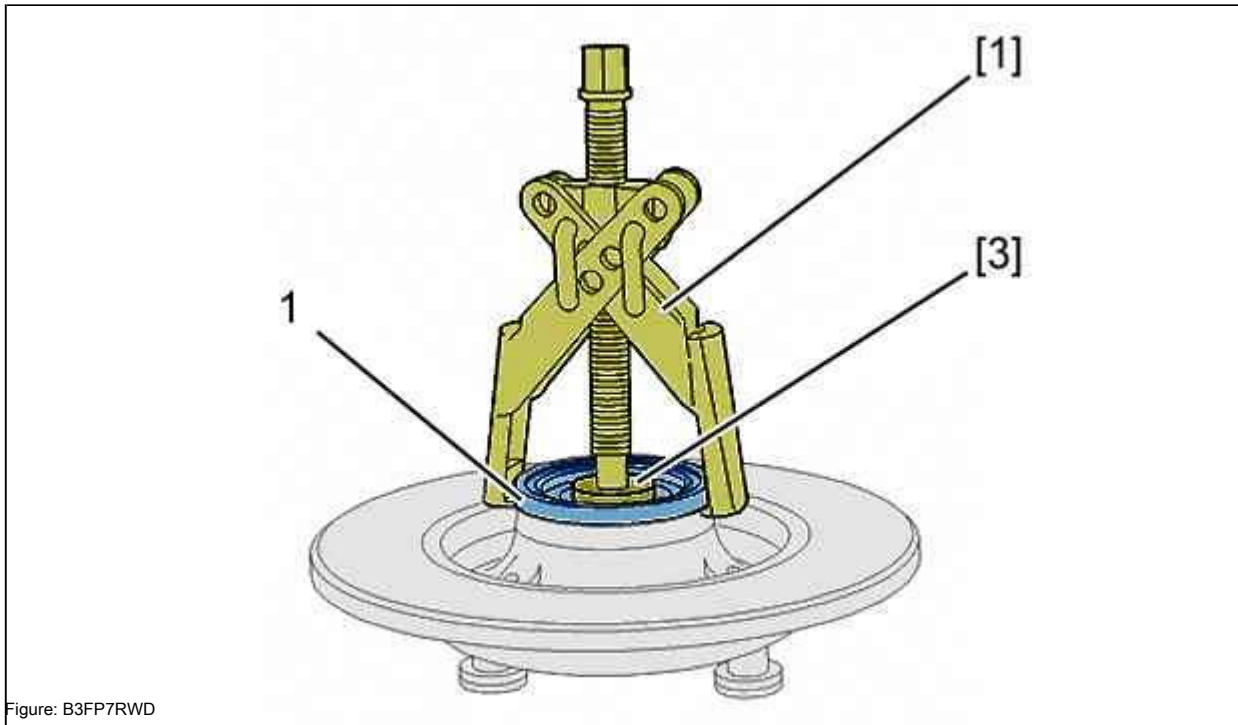
Remove the hubs of the rear brake disc



3. Removal

3.1. Target for wheel speed sensor ABS

Install the two wheel bolts into the brake disc hub. Place the brake disc hub in a vise.



Install tools [1] and [3].

Remove the ABS wheel speed sensor target (1); Using the tool [1].

NOTE: In the process of removing the target, the wheel speed sensor is destroyed.

ATTENTION : A new wheel speed sensor target must be installed after each removal.

3.2. Rear brake disc hub rolling bearing

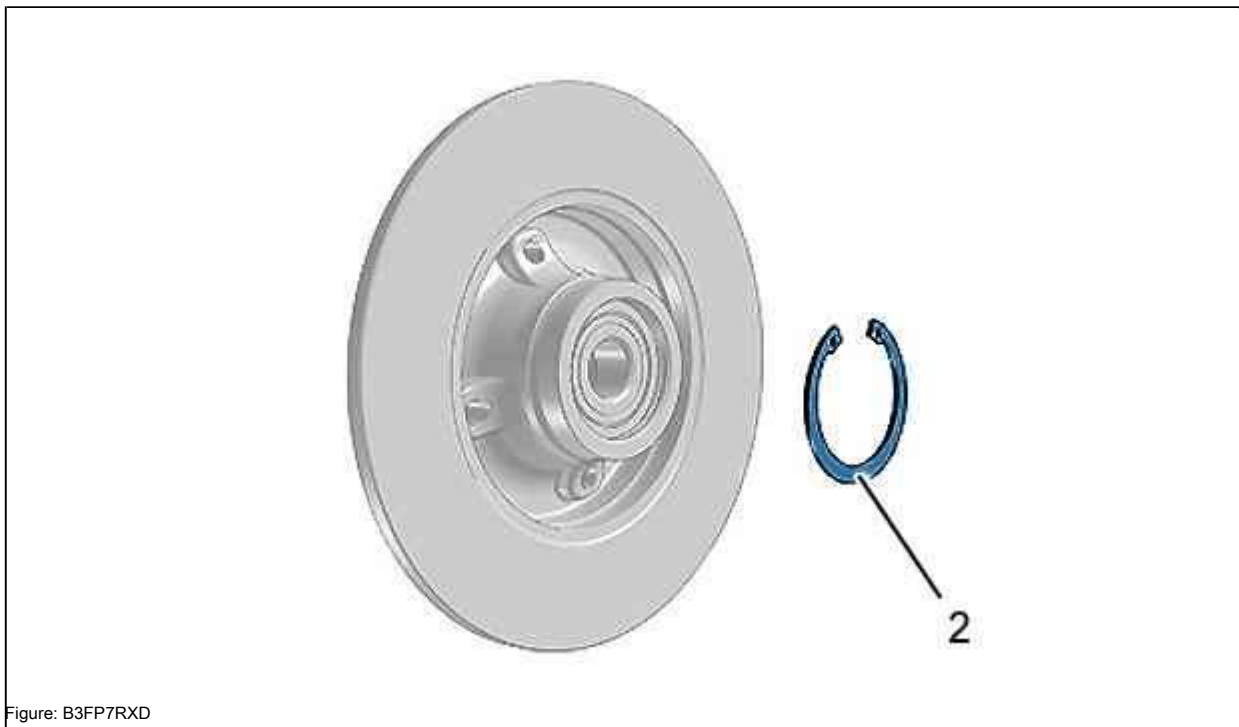
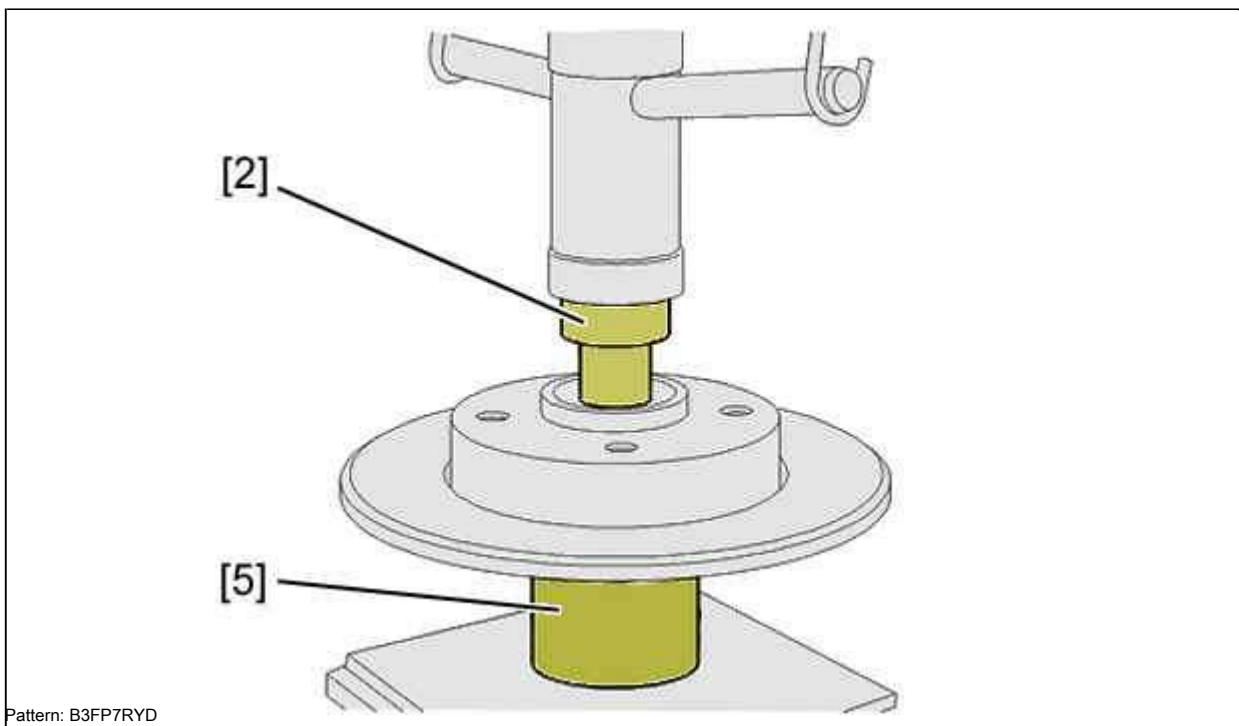


Figure: B3FP7RXD

Remove the snap ring holding the bearing (2).



Pattern: B3FP7RYD

Install tools [2] and [5]. Remove the bearing using a press.

4. Installation

4.1. Features of ABS Wheel Speed Sensor Target

ATTENTION : The target of the wheel speed sensor is mounted on the rear brake disc hub; Do not place the rear brake disc hub near magnetic sources. Contamination with metal particles is not allowed.

ATTENTION : Parts must be clean and free from abnormal wear or impact.

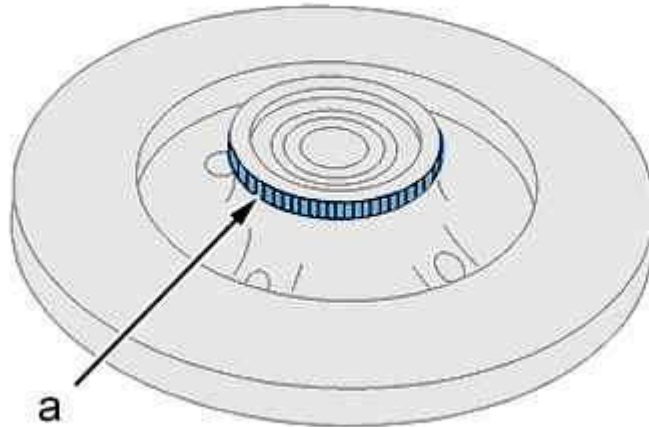


Figure: B3FP7RZD

"a" Wheel speed sensor target ABS.

4.2. Rear brake disc hub rolling bearing

ATTENTION : Use new rolling bearings and retaining rings.

ATTENTION : Lubricate the bearing seat in the rear brake disc.

ATTENTION : Parts must be clean and free from abnormal wear or impact.

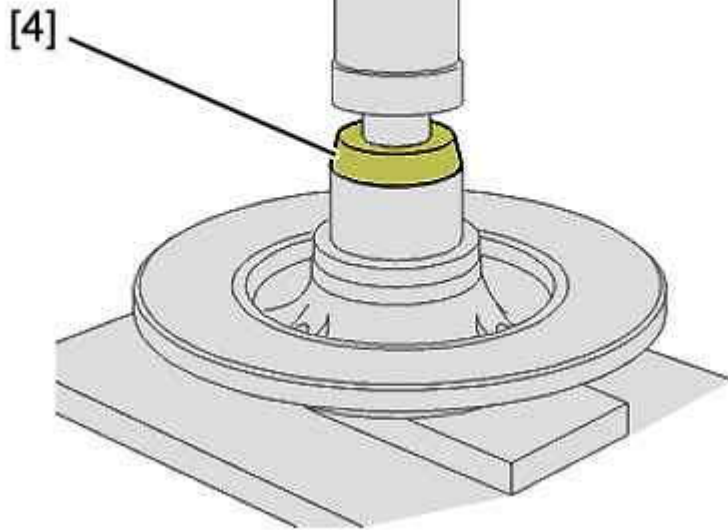


Figure: B3FP7S0D

Install the tool [4].

Install the bearing with a press until it stops. Install a new bearing snap ring (2) into the seat.

4.3. Target for wheel speed sensor ABS

ATTENTION : A new wheel speed sensor target must be installed after each removal.

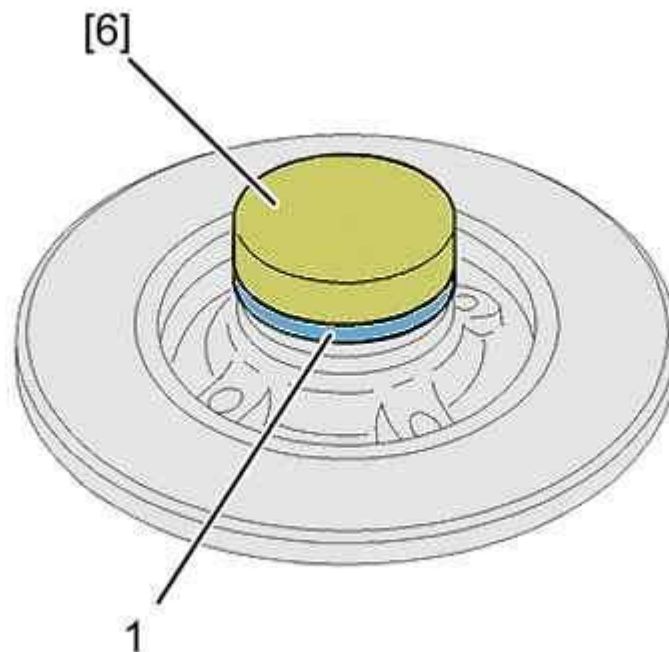


Figure: B3FP7S1D

Place the target of the wheel speed sensor (1) on the rear brake disc. Install the tool [6].

Install the wheel speed sensor target (1) with a sledgehammer as far as it will go.

5. Additional operation

Install the rear brake disc hub



REMOVAL REFITTING: REAR SUSPENSION SPRING

MANDATORY: Observe the cleanliness and safety rules



1. Tools

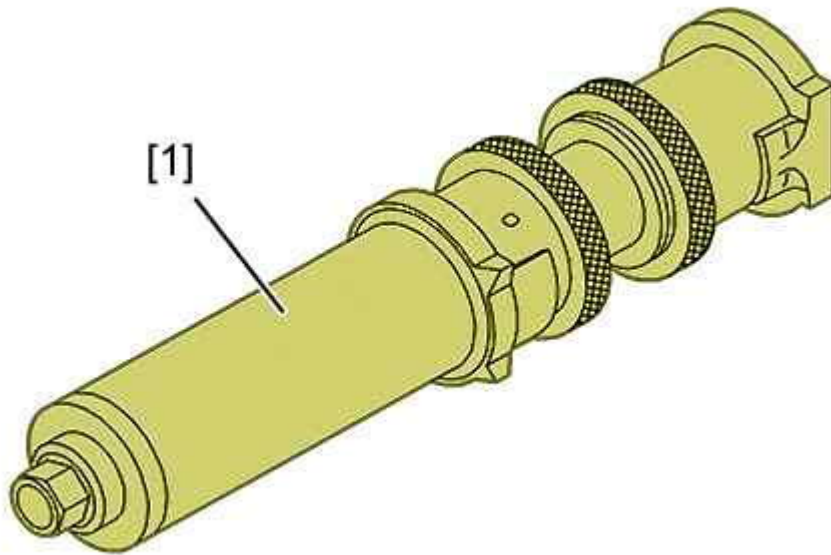
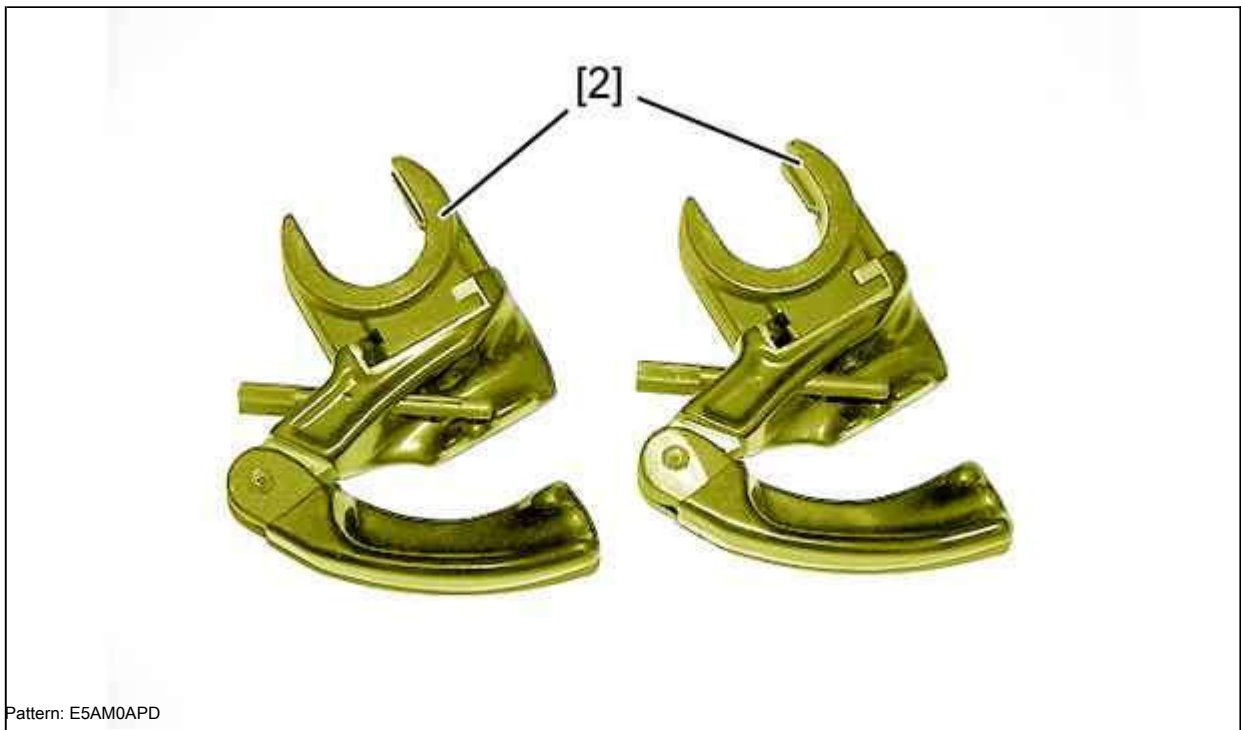


Figure: E5AP3TPD

[1] Spring Compression Tool: Type M90.



Pattern: E5AM0APD

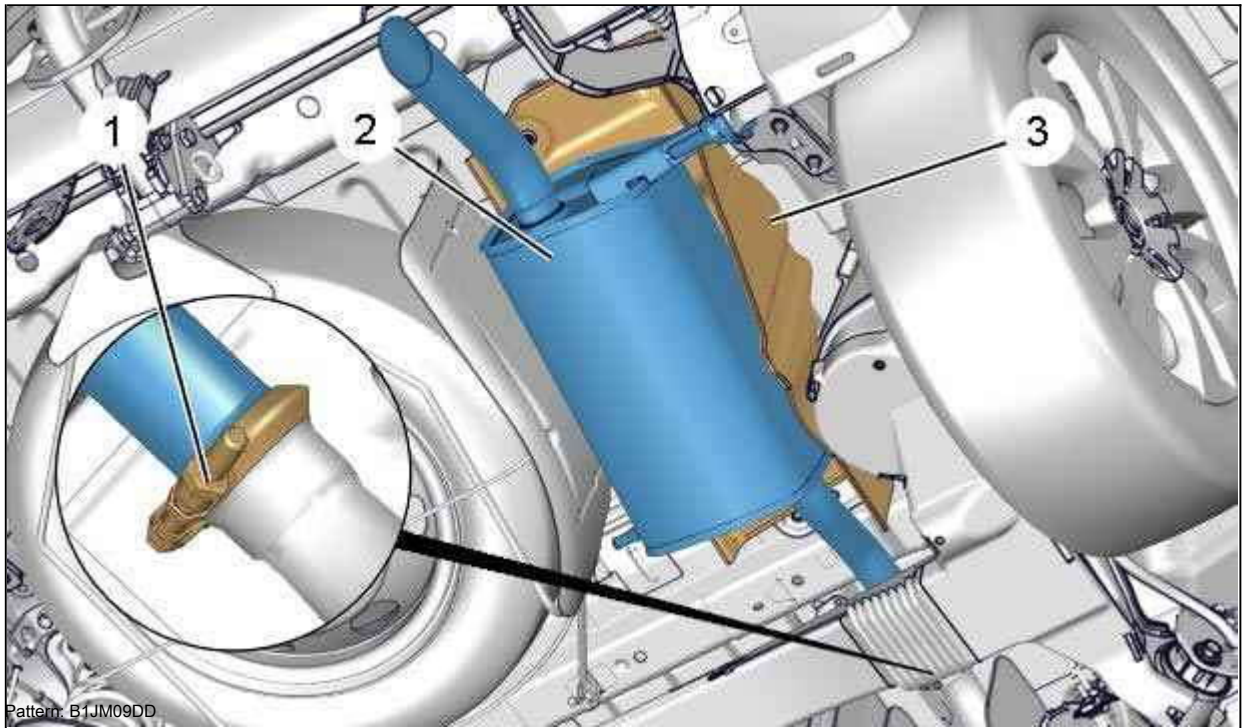
[2] Set of two cups for suspension spring compression: Type FACOM U.89 JM.

ATTENTION : Check the presence and condition of the protective rubber caps on the fixed and movable spring cups.

2. Removal

Raise and secure the vehicle by hanging out the rear wheels.

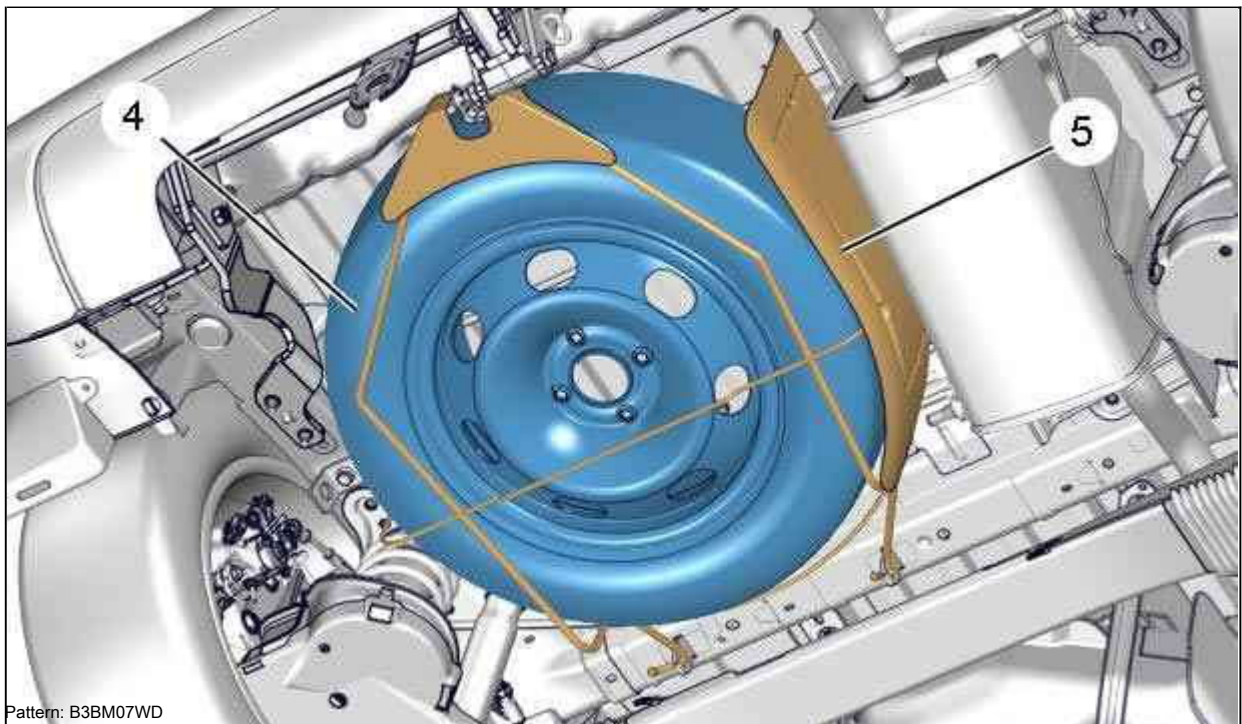
2.1. On the right side



Remove:

- Clamp (1)
- Exhaust Muffler (2)
- Heat shield (3)

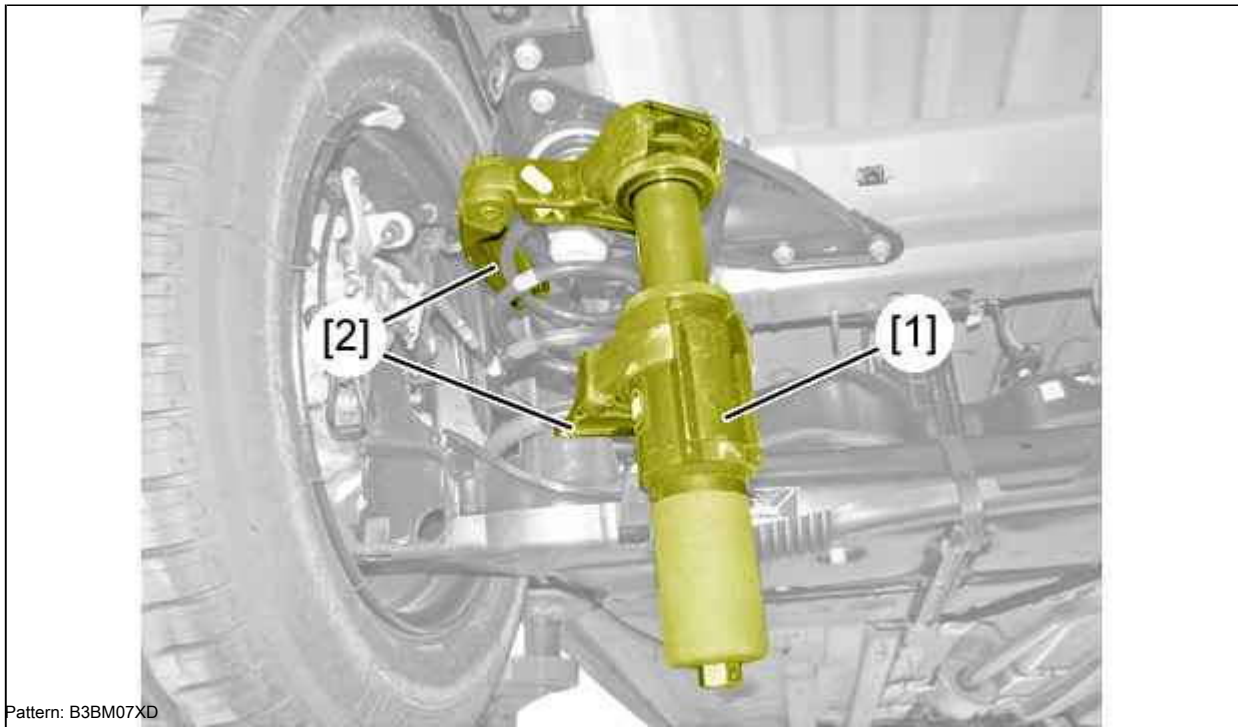
2.2. From the left side



Remove:

- Spare wheel (4)
- Spare wheel guard (5)

2.3. Removal (continued)



Pattern: B3BM07XD

Install tools [1], [2] suspension spring.

ATTENTION : When compressing the spring, make sure that the coils do not touch.

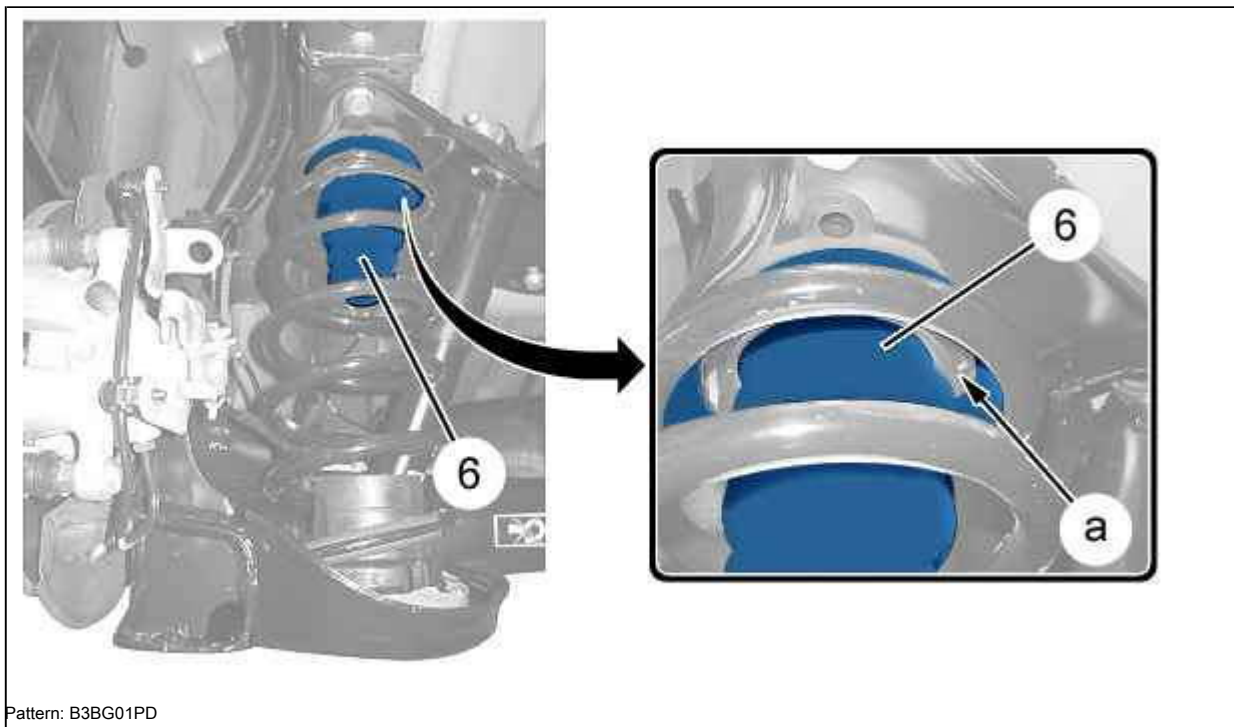
Compress the suspension spring.

Remove the rear suspension spring.

ATTENTION : Check the condition of the suspension springs (no signs of impacts, scratches or corrosion). The paint coat on the suspension springs must not be damaged so that bare metal is visible.

ATTENTION : Do not allow the suspension spring to come into direct contact with a metal object or equipment.

3. Installation



Install the rear suspension spring into the cups; Using the tools [1], [2].

ATTENTION : Position the heel of the upper cup (6) so that the end of the upper coil of the spring is towards the right side of the vehicle (at "a").

Release the rear suspension spring; Using the tools [1], [2].

NOTE: Check the position of the rear suspension spring in the cups.

3.1. From the left side

Install:

- Spare wheel guard (5)
- Spare wheel (4)

3.2. On the right side

Install:

- Heat shield (3)
- Exhaust Muffler (2)
- Clamp ((1); Torque tighten

3.3. Installation (continued)

Lower the vehicle to the ground.

REMOVAL REFITTING: REAR SHOCK ABSORBER

MANDATORY: Observe the cleanliness and safety rules

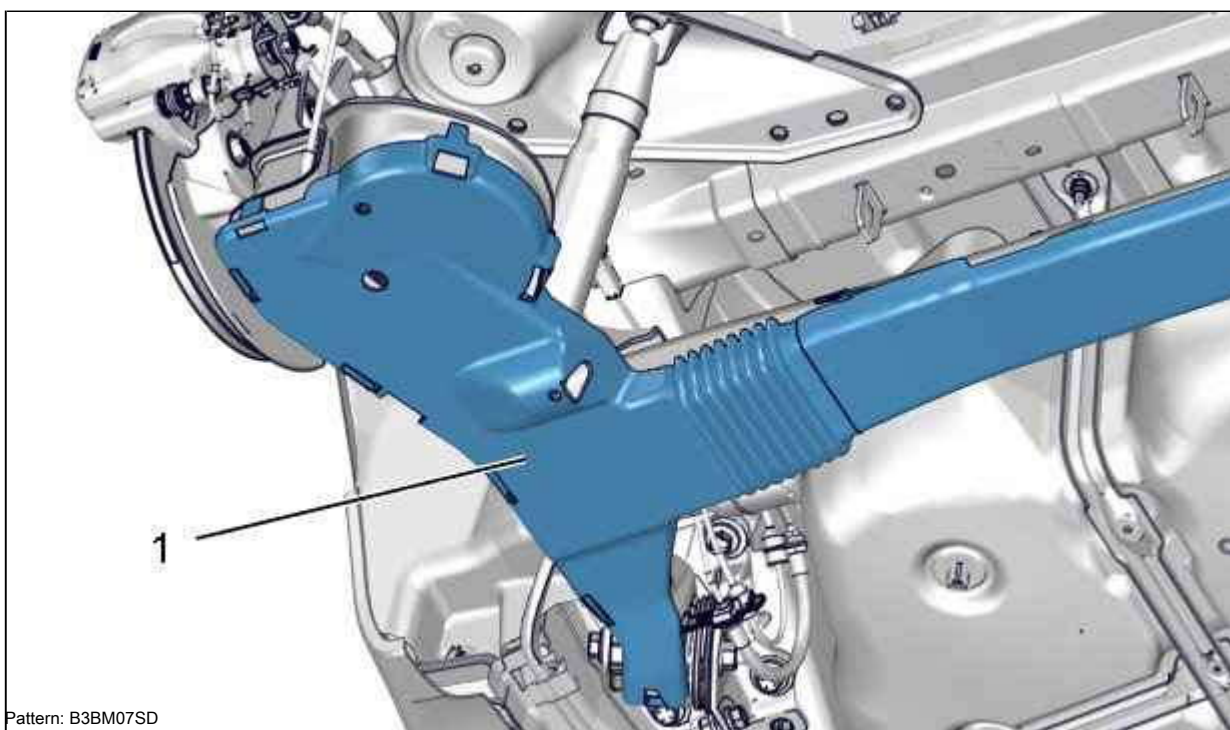


1. Removal

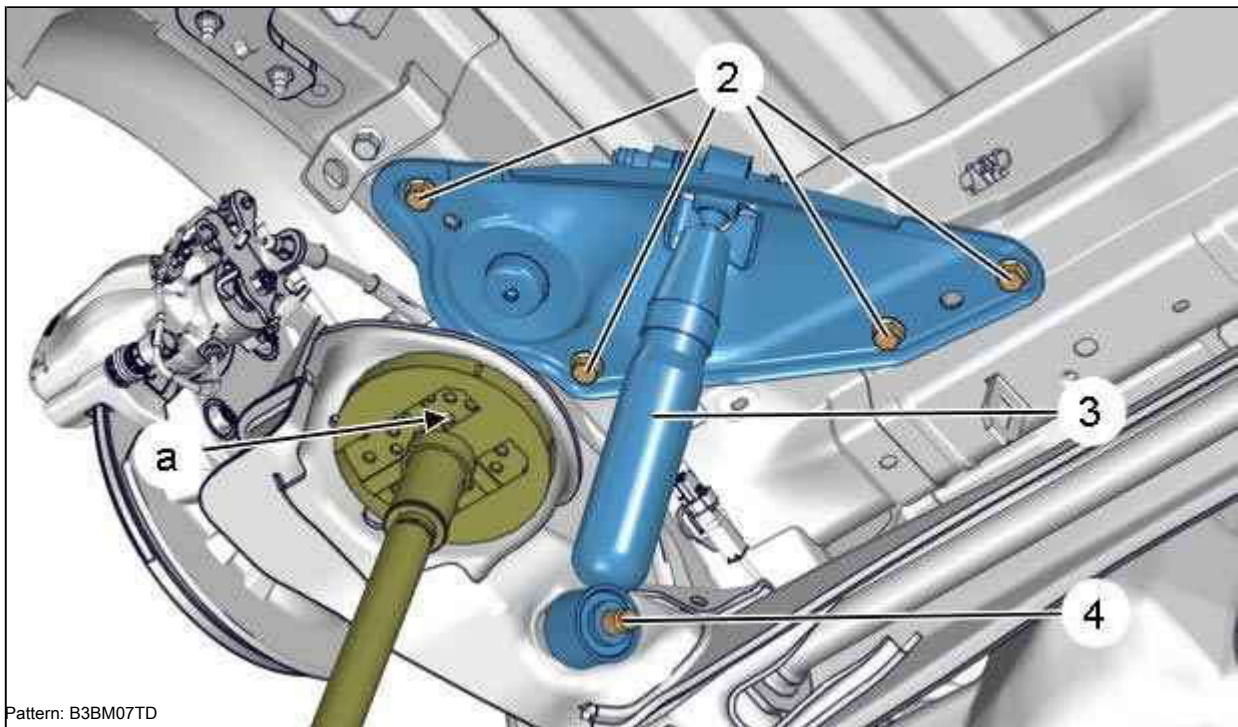
Release the rear wheel bolts.

Raise and secure the vehicle by hanging out the rear wheels. Remove:

- Rear wheel bolts
- Rear wheels
- **Rear suspension springs**



Remove the screen (1).

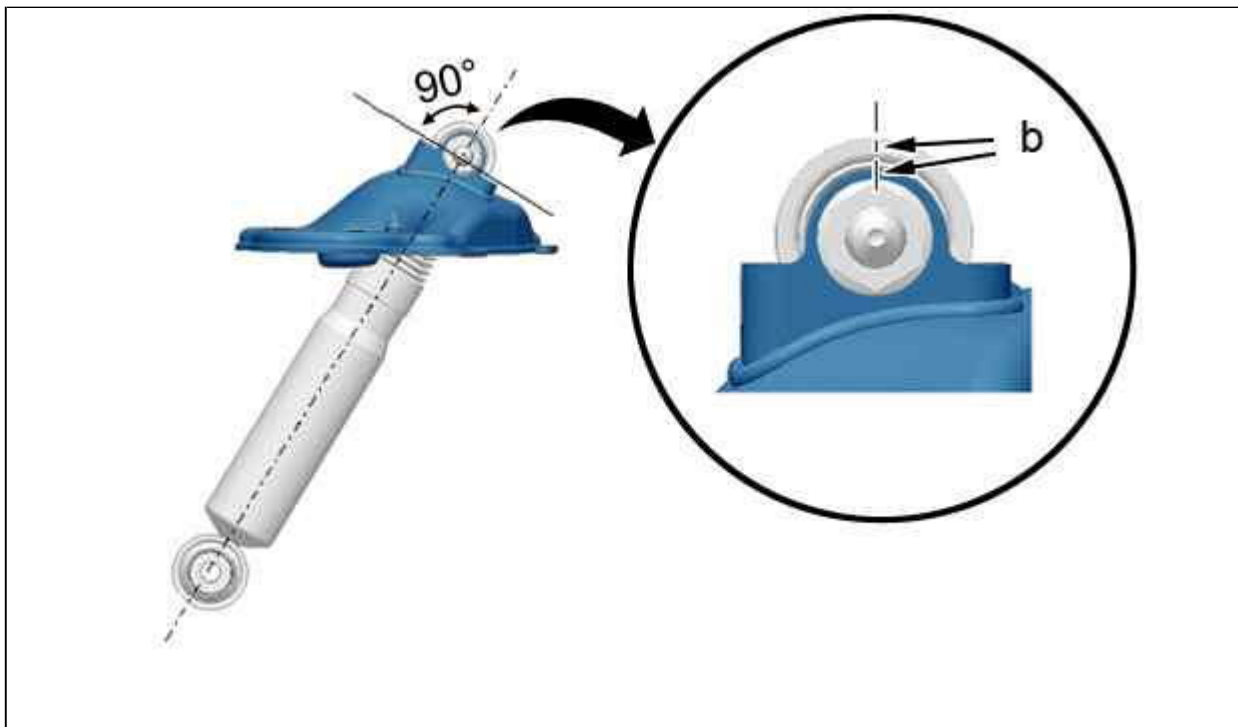


Place the hydraulic support leg under the lower spring cup (at "a"). Compress rear axle slightly.

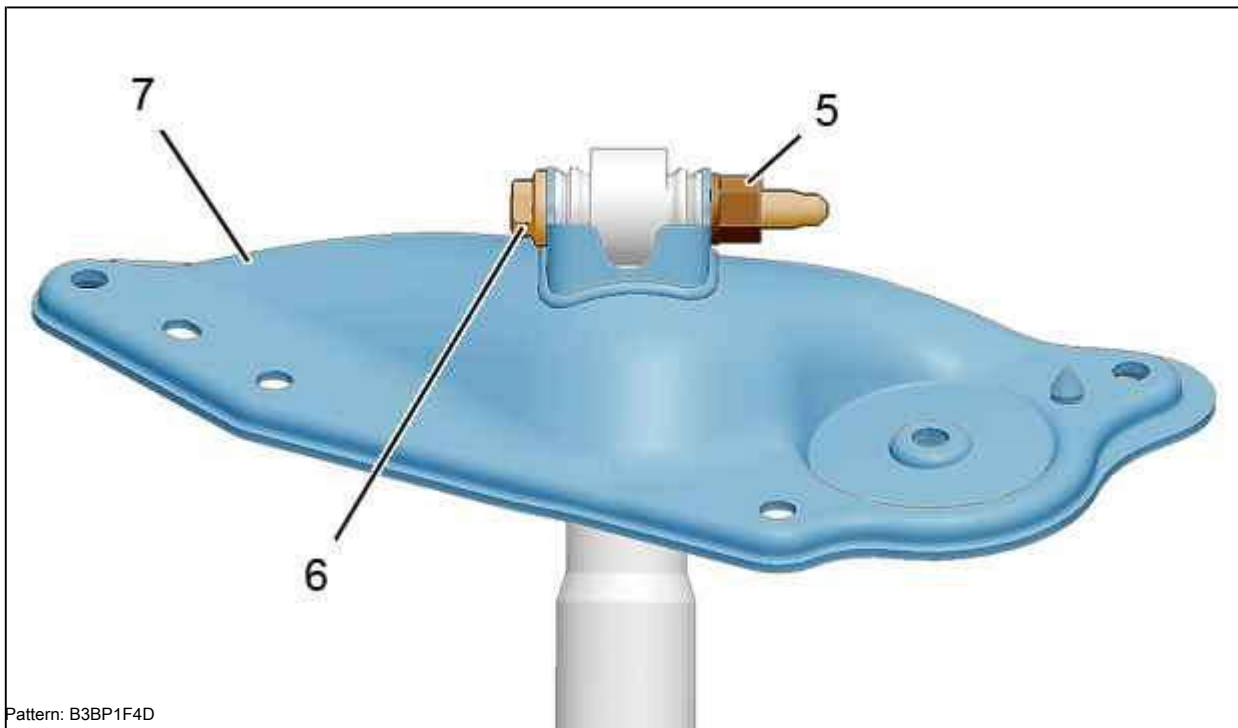
Remove:

- Bolt with nut (4)
- bolts (2)
- Assy shock absorber upper cup and rear shock absorber (3)

Fix the upper shock absorber support cup and rear shock absorber assembly in a vise; Using the FACOM D.22B tool.



ATTENTION : Before removing the rear shock absorber and upper shock absorber, mark the position of the upper shock absorber cup in relation to the rear shock absorber (in "b").



Remove:

- Nut (5)
- Bolt (6)
- Shock absorber upper cup (7)

2. Installation

ATTENTION : Observe the required tightening torques

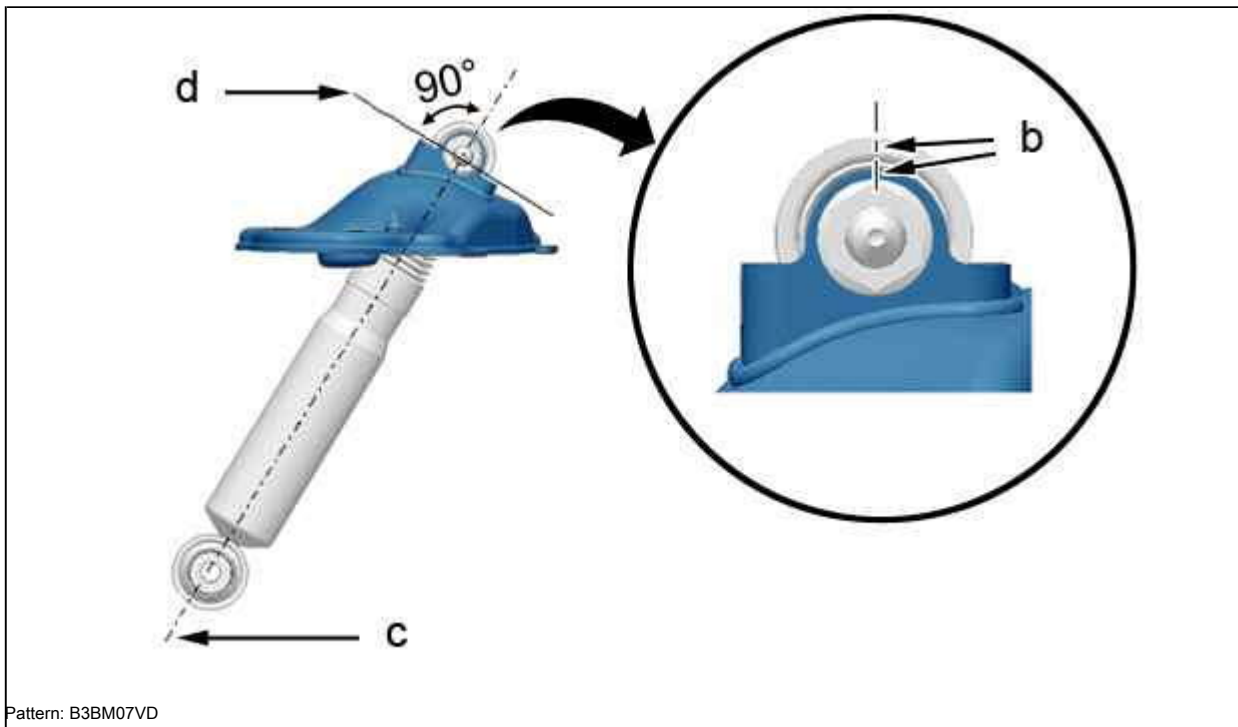


ATTENTION : Observe the position of the upper shock absorber cup in relation to the rear shock absorber.

Install the upper shock absorber cup (7) and the rear shock absorber. Install:

- Bolt (6)
- Nut (5) (loose)

NOTE: The screw (6) must be oriented with the protruding threaded end towards the outside of the vehicle.



Install the upper shock absorber cup in relation to the rear shock absorber (at "b") (Observe the marks when removing).

Visually make sure that the shock absorber body axis "c" is perpendicular to the plane (at "d").

NOTE: When tightening to the recommended torque, two people are required to immobilize the parts.

Tighten the nut (5).

Install:

- Assy shock absorber upper cup and rear shock absorber (3)
- Bolt with nut (4) (loose)
- bolts (2)
- **Rear suspension springs**
- Rear wheels
- Rear wheel bolts



Lower the vehicle to the ground.

Tighten the rear wheel bolts

Set car reference altitude

Tighten: Bolt with nut (4). Install:

Display (1).



REMOVAL INSTALLATION: SYSTEM UNIT "HANDSFREE"

MANDATORY: Observe the cleanliness and safety rules



1. Removal

Disconnect the battery

Remove the dashboard side trim

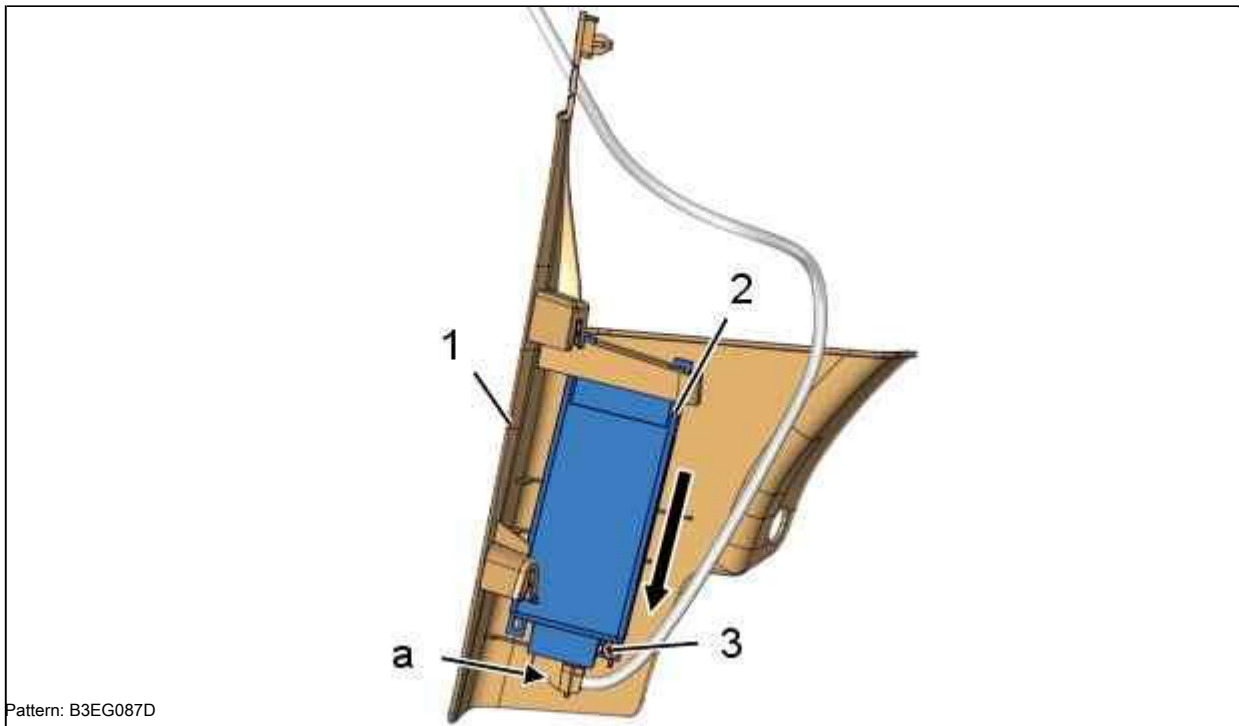
Separate: **A-pillar lower trim**



...

(Passenger side).

(Passenger side).



Pattern: B3EG087D

Disconnect the connector (at "a").

Remove the bolts (3).

Detach: Hands-free headset unit (2) (As indicated by the arrow). Remove:

- Handsfree headset unit (2)
- A-pillar lower trim (1)

2. Installation

Installation is carried out by performing the removal operations in the reverse order.

ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Check the functioning of the electrical equipment.

REMOVAL REFITTING: STEERING STEERING SWITCH

MANDATORY: Observe the cleanliness and safety rules.



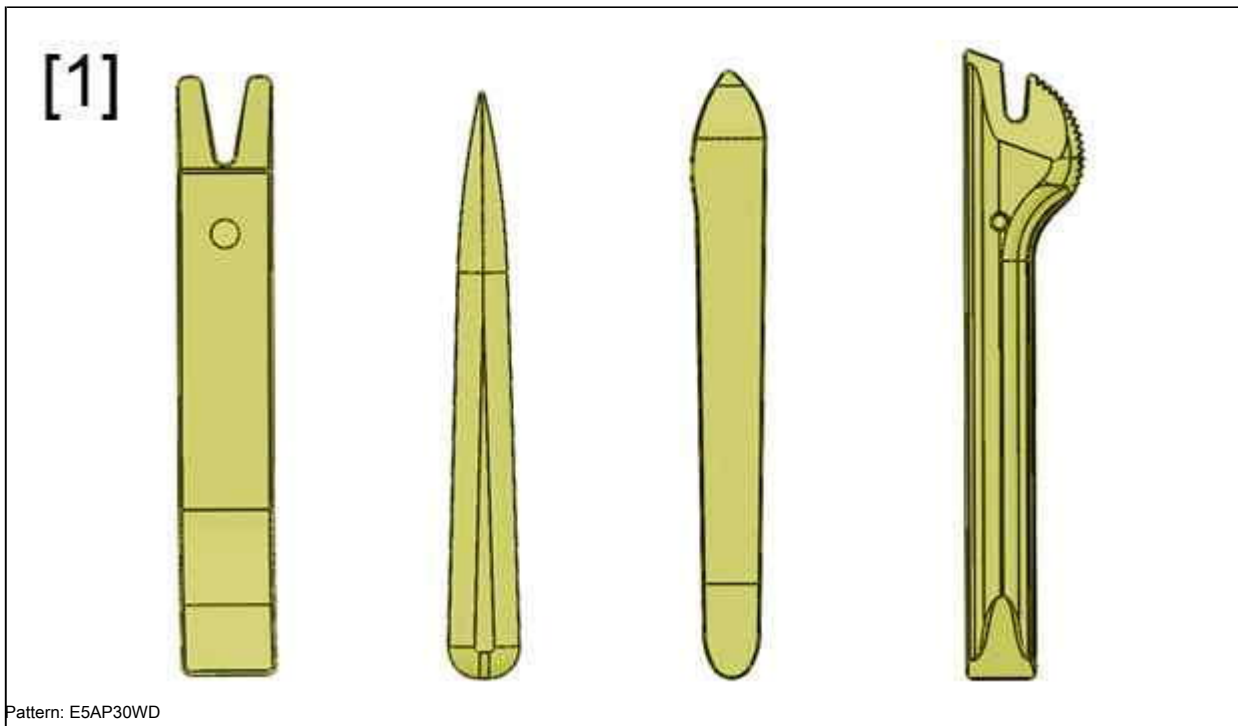
ATTENTION : Before carrying out any work: Align the wheels in a straight line.

ATTENTION : When carrying out all work involving disconnecting the steering wheel and wheels (steering wheel, steering column switch, steering column, steering rack ...), ensure that the slip ring of the steering column switch is locked.

ATTENTION : When disconnecting, observe the normal unlocking of the electrical connectors; When connecting, observe the correct installation and fastening of the electrical harnesses.

ATTENTION : Disconnection of electrical connectors must be carried out without applying force to electrical harnesses and electrical connectors (Do not pull on electrical harnesses).

1. Recommended equipment



[1] Trim removal tool () .1350ZZ.

2. Preliminary operations

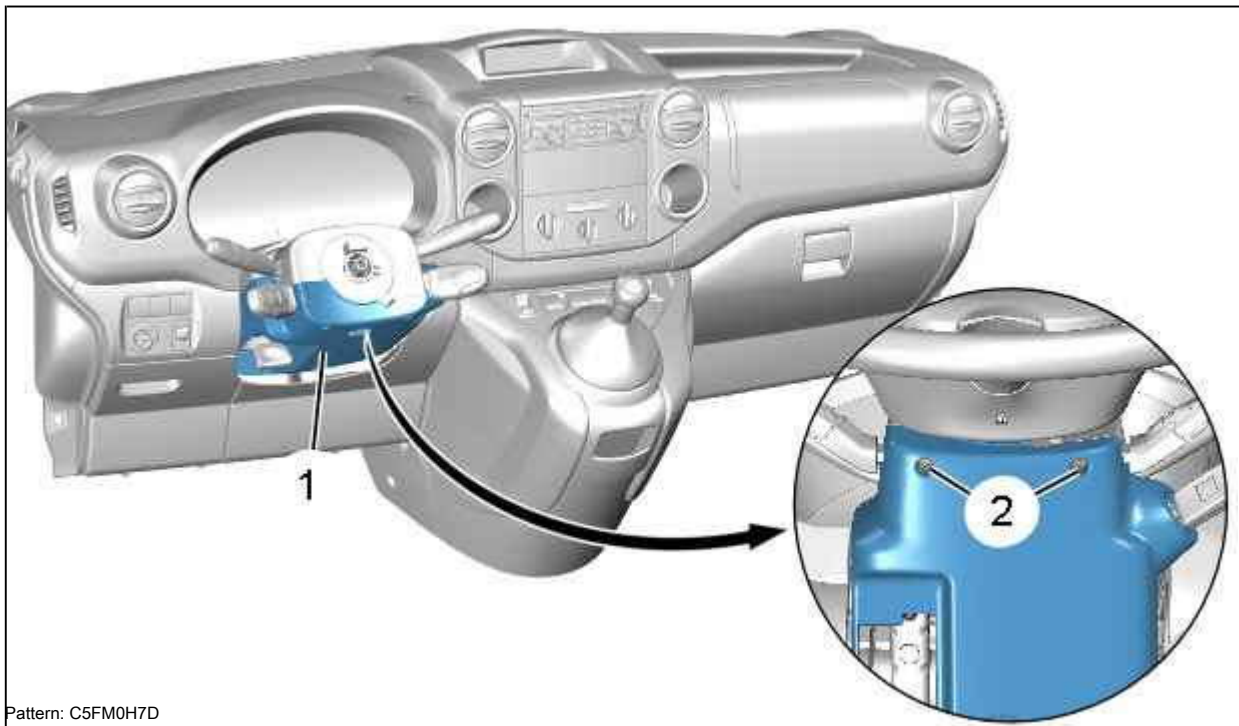
NOTE: The operation is carried out in the same way with left or right steering.

Disconnect the battery. Remove:

- Driver airbag
- Steering wheel

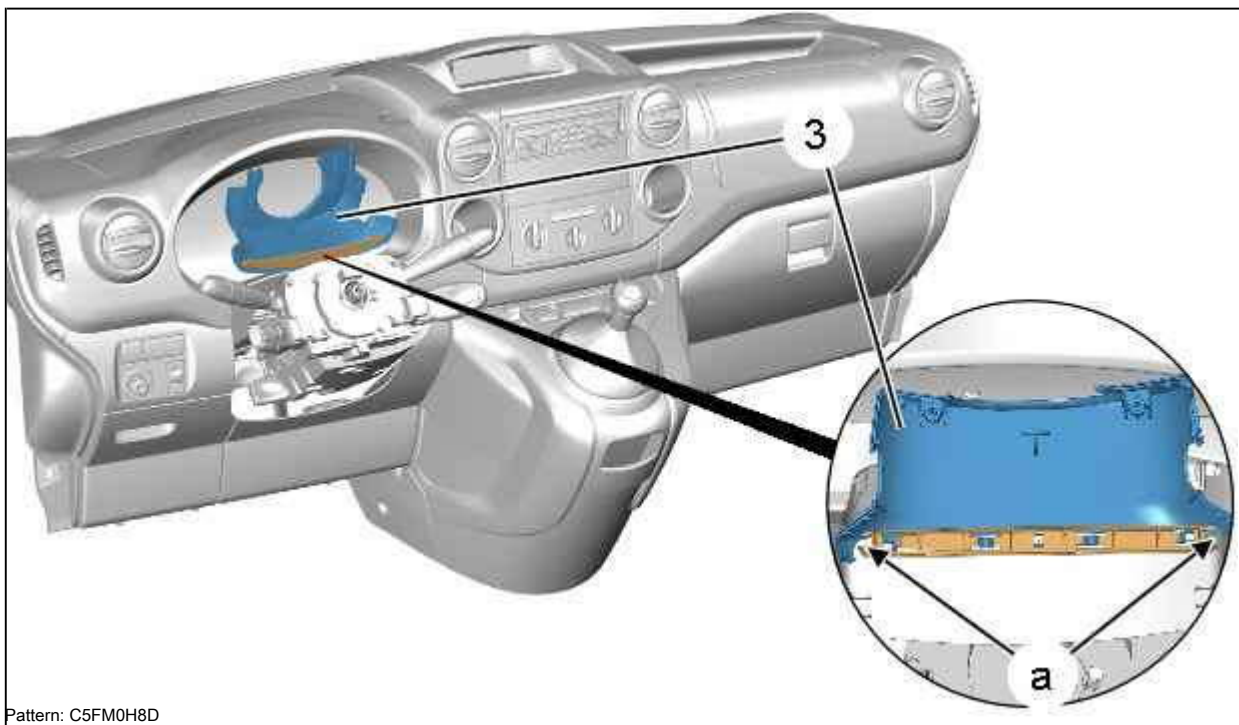


3. Removal

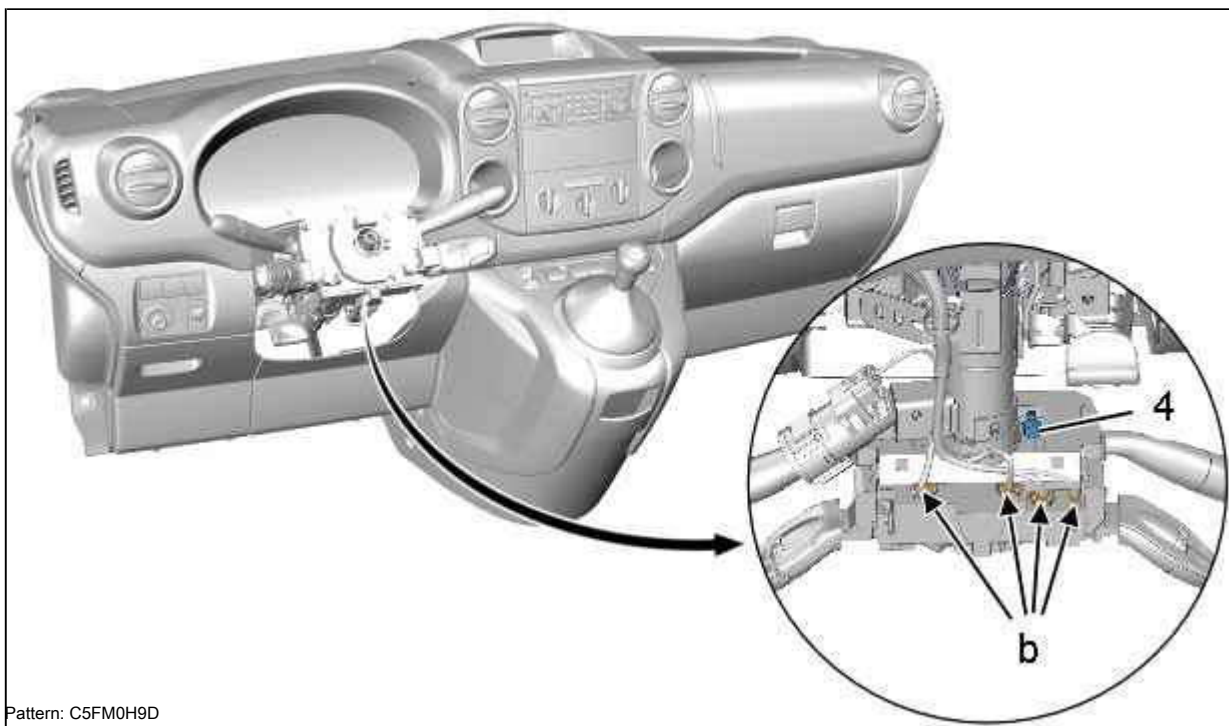


Unlock the steering column, extend and lower it as far as possible. Remove:

- bolts (2)
- Steering column lower trim (1)

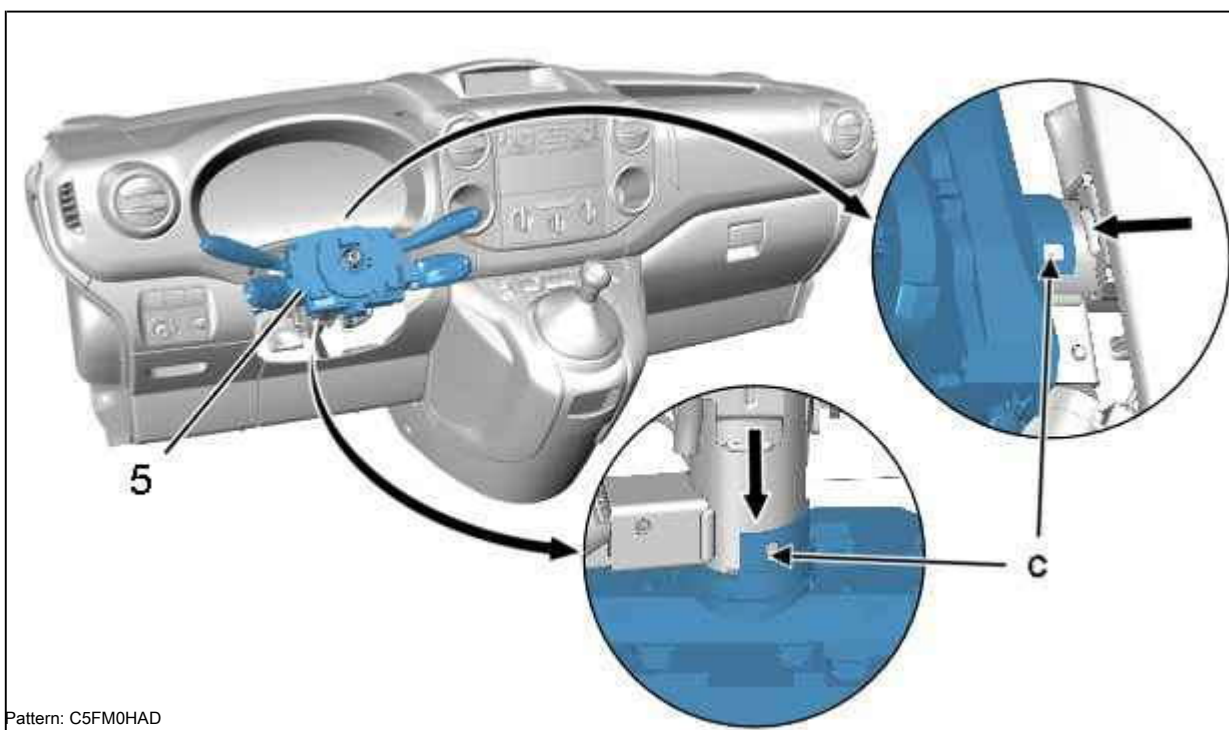


Disconnect the steering column upper lining clips (3) (at "a"); Using the tool [1]. Remove: The upper steering column trim (3).



Pattern: C5FM0H9D

Disconnect the electrical connectors (at "b"). Loosen the bolt (4) (maximum).



Pattern: C5FM0HAD

ATTENTION : Do not damage the steering column switch lock pads.

Disconnect the locking tabs of the steering column switches assembly (5) (at "c");

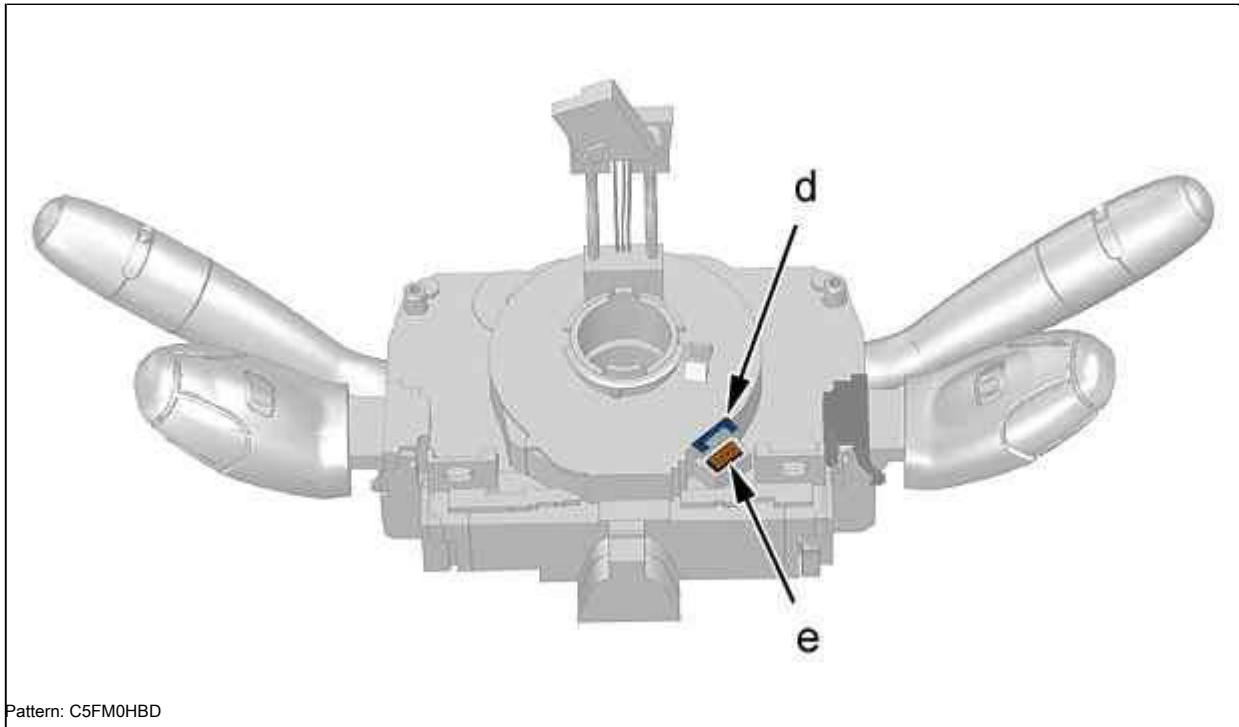
[1].

Remove the under-steering wheel switch box (5) (in accordance with the arrow).

4. Installation

ATTENTION : Adjust the slip ring before installing the steering column switch.

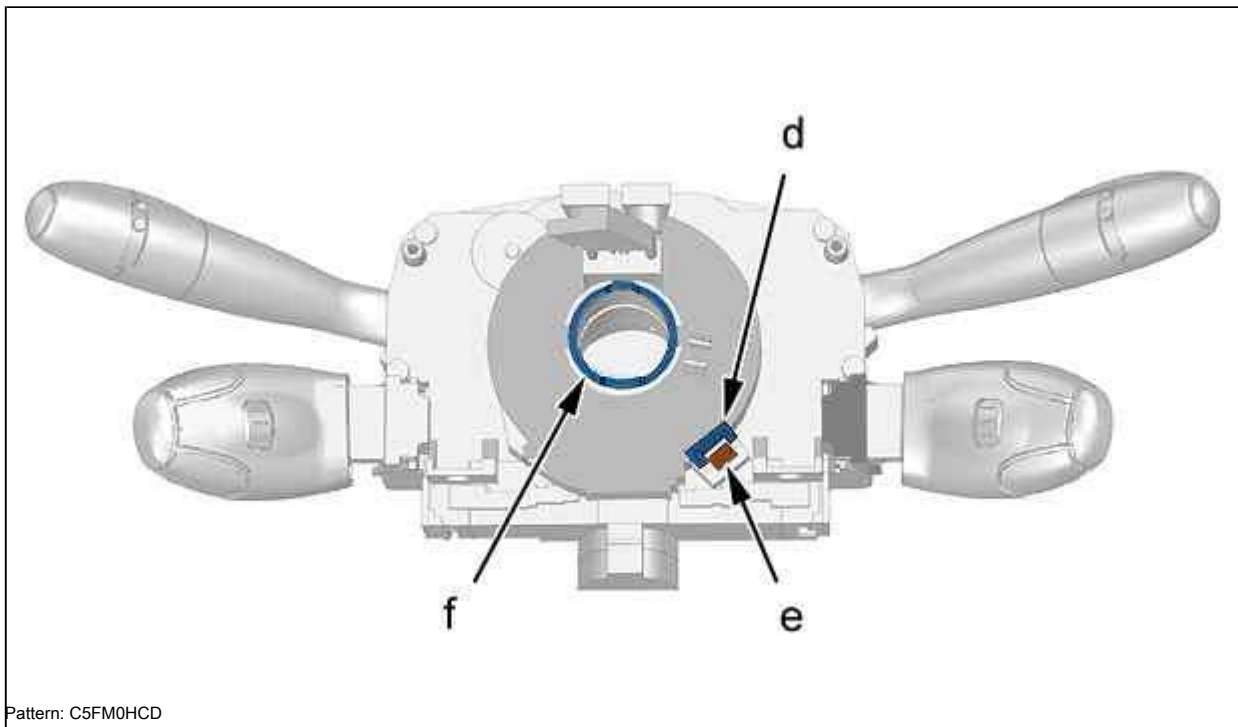
4.1. Steering Wheel Control (New)



Pattern: C5FM0HBD

The slip ring of the new steering column switch does not require adjustment. Adjustment is ensured by aligning the cutout "d" and the pointer "e" (supplier DELPHI).

4.2. Reusing a removed steering column switch



Find point 0:

- Press the center of the slip ring (in "f")
- Turn clockwise to stop
- Rotate the rotary contactor 2.5 turns counterclockwise

NOTE: Make no effort when reaching an extreme position.

Check the alignment of cutout "d" with pointer "e".

ATTENTION : Never rotate counterclockwise until clockwise to the end position, this will permanently damage the slip ring track.

5. General operations

ATTENTION : Align the wheels in a straight line.

Perform the following checks:

- Electrical connector blockers must not be damaged
- The electrical harnesses of the steering column switch must not be damaged

Install the steering column column switch block (5) with the handles horizontal.

Clip in: Steering column switch (5) (in "c"). Tighten the bolts to a torque of (4) to 0.3 ± 0.07 da.Nm.

The steering column switch (5) must be centered on the steering column so that there is no additional noise.

Connect the electrical connectors (at "b").

ATTENTION : Do not pull on electrical connectors; Do not bend electrical harnesses (observe allowable bends); Take all necessary measures to protect electrical harnesses from damage (Do not twist electrical harnesses).

Install:

- Upper steering column pad (3)

- Steering column lower trim (1)
- bolts (2)

6. Additional operations

Install:

- **Steering wheel**
- **Driver airbag**



ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

Check the correct functioning of the electrical equipment.

7. Vehicles with Dynamic Stability Program (ESP)

Calibrate the steering wheel angle sensor; Using the scan tool. Use the "Anti-lock braking system (ABS / ESP)" menu to carry out this operation.

REMOVAL REFITTING: STEERING WHEEL

MANDATORY: Observe the cleanliness and safety rules



ATTENTION : Before carrying out any work: Align the wheels in a straight line.

ATTENTION : When carrying out all work involving disconnecting the steering wheel and wheels (steering wheel, steering column switch, steering column, steering rack ...), ensure that the slip ring of the steering column switch is locked.

ATTENTION : Disconnection of electrical connectors must be carried out without applying force to electrical harnesses and electrical connectors (Do not pull on electrical harnesses).

1. Removal

NOTE: The operation is carried out in the same way with left or right steering.

Perform the following operations:

- Switch off ignition
- Wait 3 minutes before disconnecting the battery
- Disconnect the battery

Remove driver airbag

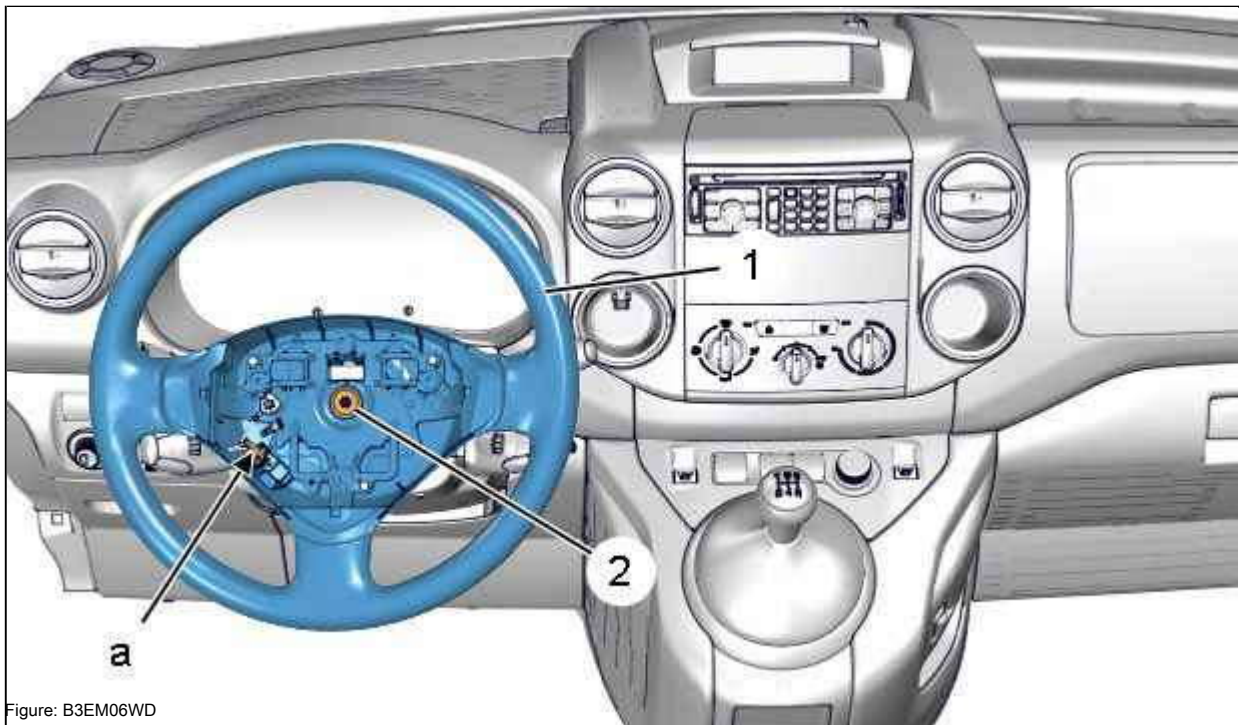


Figure: B3EM06WD

Detach the Disconnect connector (at "a"). Loosen screw (2) a few turns.

Unlock the steering wheel (1): Unlock the steering wheel mounting on the slots by tapping on the rim with your hands.

ATTENTION : When passing the electrical connectors for the horn and airbag through the slot in the steering wheel (1): Do not apply any pulling force to the wiring harnesses and connectors.

Remove:

- Bolt (2)
- Steering wheel (1)

2. Installation

ATTENTION : Align the wheels in a straight line.

Replace the steering wheel (1).

ATTENTION : Pass the electrical connectors for the horn and airbag into the slot in the steering wheel; Do not pull strongly on the electrical connectors; Do not bend electrical harnesses (observe the allowable bends).

Install the bolt (2); Tightening torque 3.3 ± 3.3 2 da.Nm.

Install the driver airbag

Reconnect the battery.



...

ATTENTION : Follow the steps to follow after removing the battery.

Check the functioning of the electrical equipment.

REMOVAL REFITTING: STEERING COLUMN

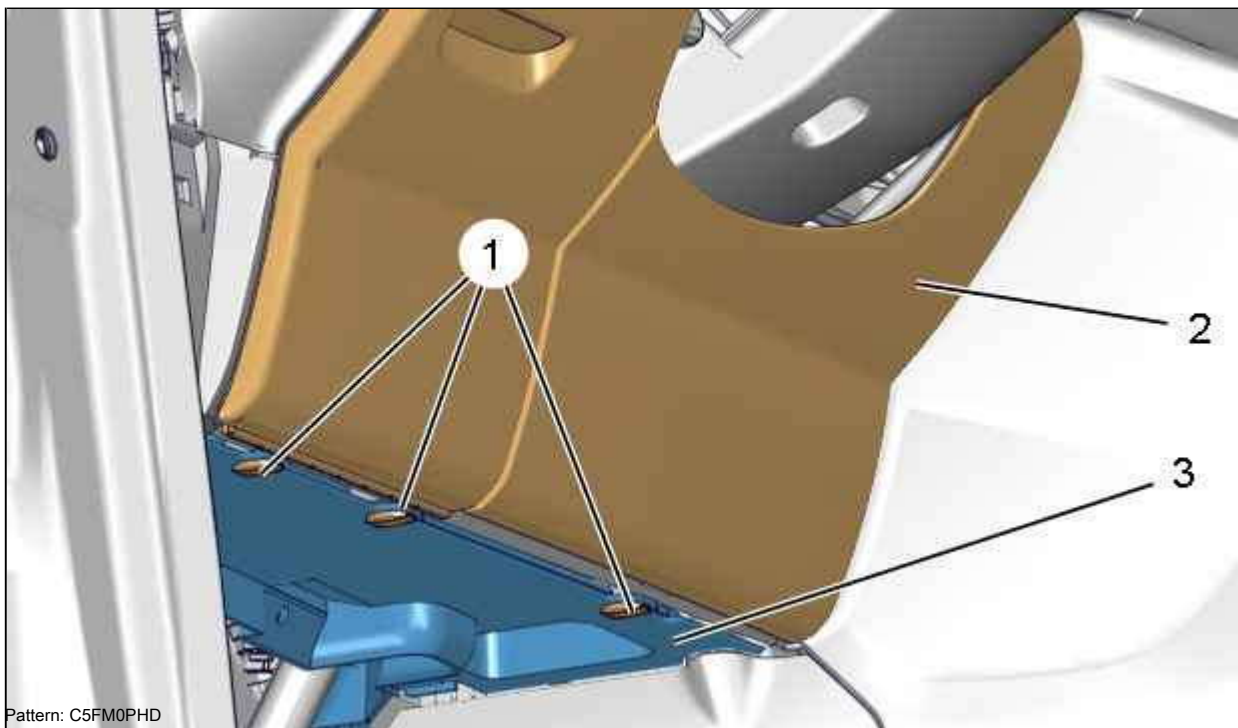
MANDATORY: Observe the cleanliness and safety rules



1. Removal

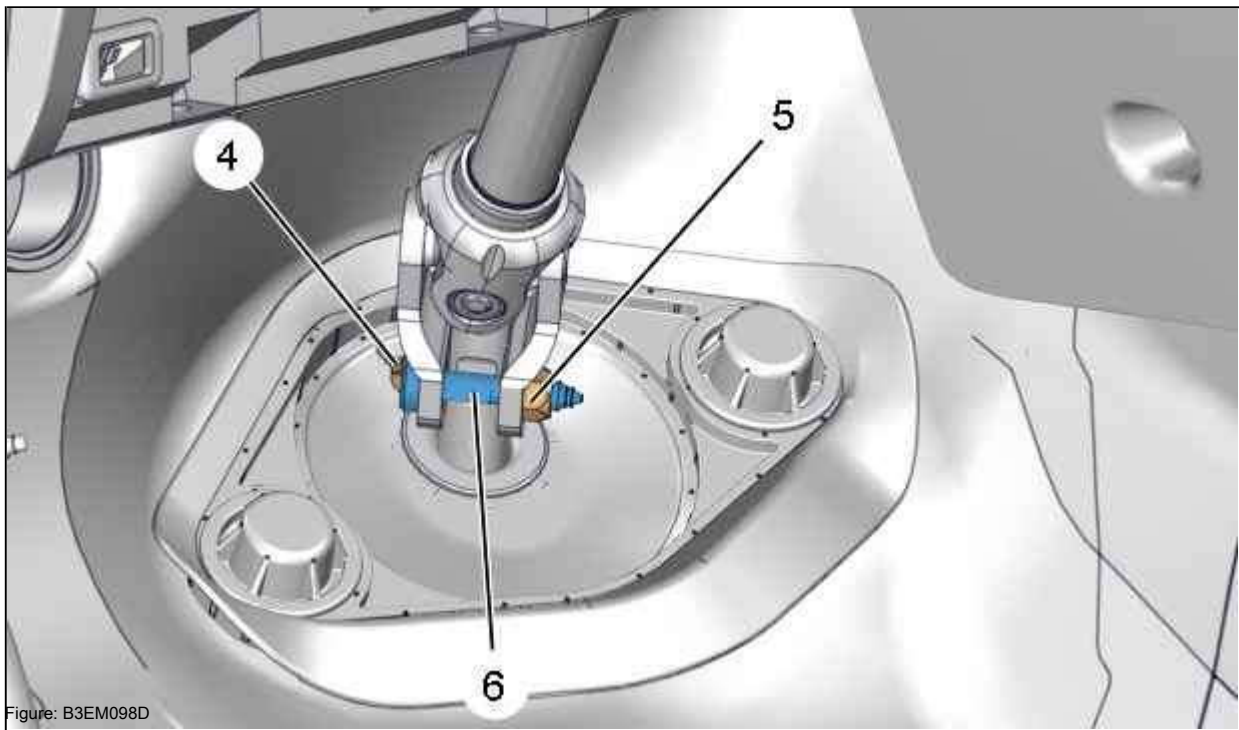
Disconnect the battery. Remove:

- Driver airbag
- Steering wheel
- Steering column switches



Remove:

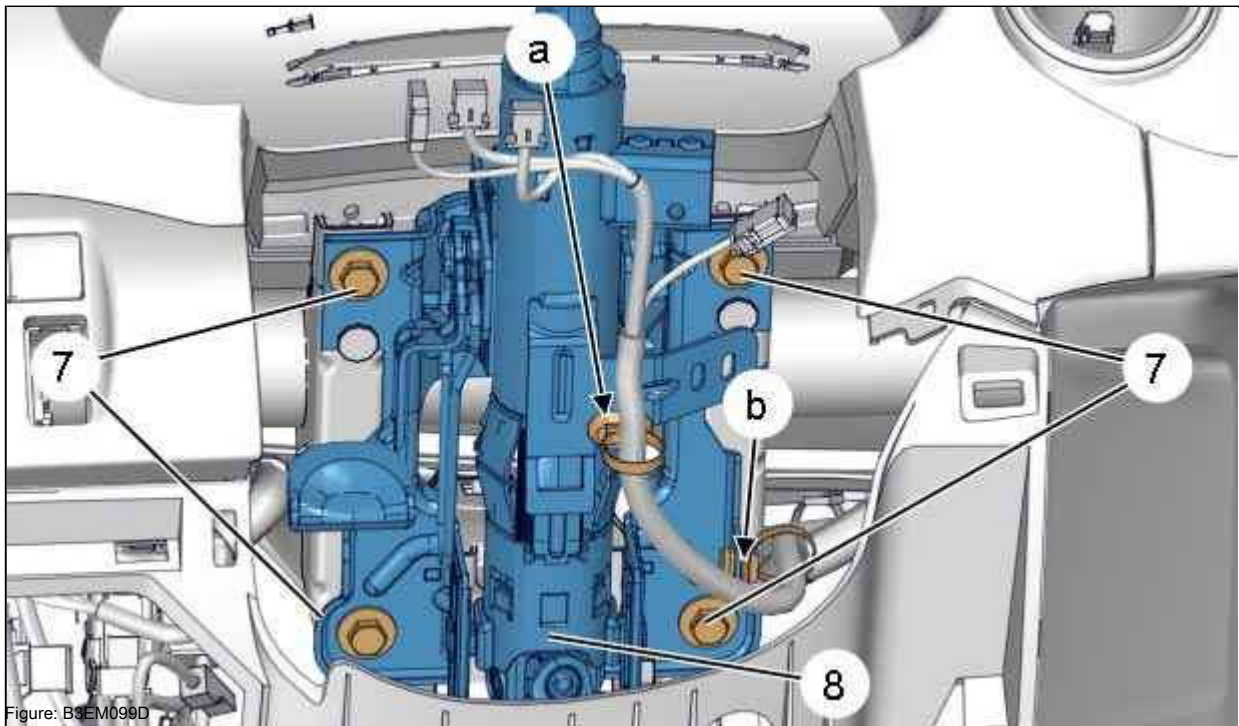
- clamp (s) (1)
- Upholstery (3)
- Bottom trim (2)



Remove:

- Nut (5)
- Bolt (6); Slide clamp (4)

Disconnect the steering column from the power steering valve.

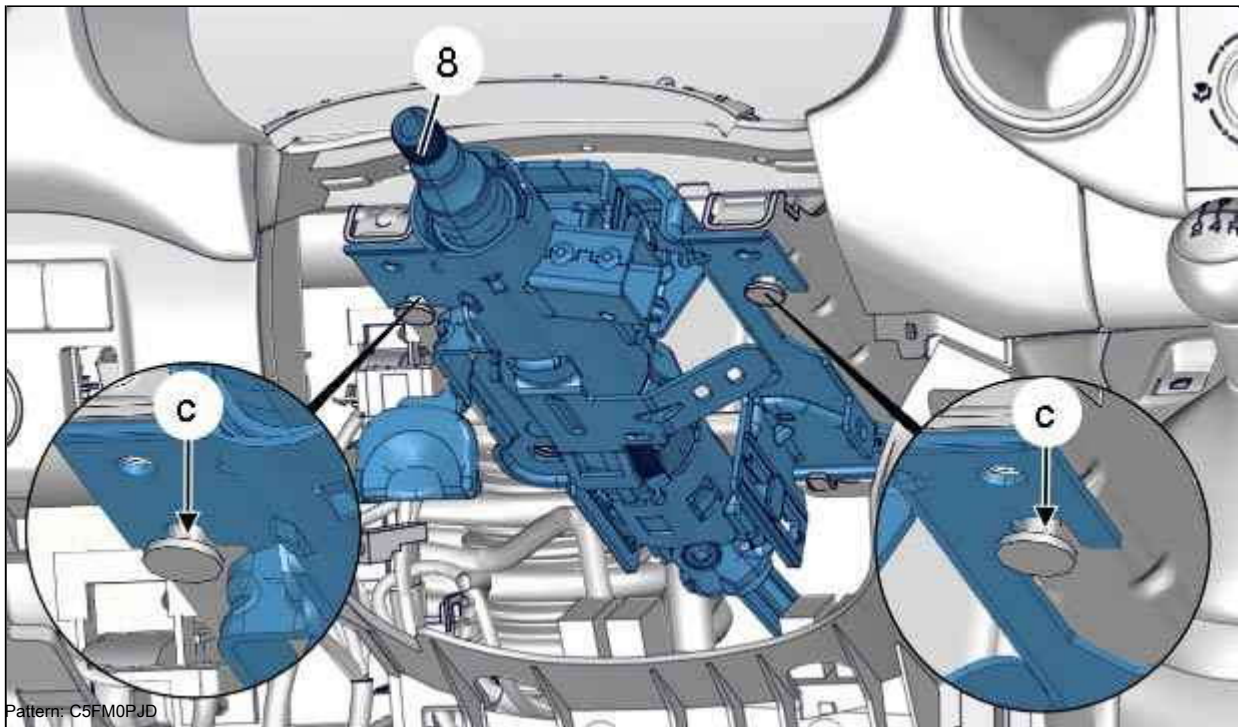


Unfasten the harness (in "a", "b"). Remove:

- the bolts (7)

- Steering column (8)

2. Installation



Install:

- Steering column (8) overhangs (in "c")
- bolts (7); Tighten to 2 ± 0.5 da.Nm

Attach the harness (in "a", "b").

Connect the steering column to the power steering valve. Install:

- Bolt (6)
- The nut (5); tightening torque 2 ± 0.5 da.Nm

NOTE: Check for the presence of the bolt (6) in the clip.

Install:

- Bottom trim (2)
- Upholstery (3)
- clamp (s) (1)
- Steering column switches**
- Steering wheel**
- Driver airbag**



Reconnect the battery.

ATTENTION : Perform the operations to be performed after removing the battery

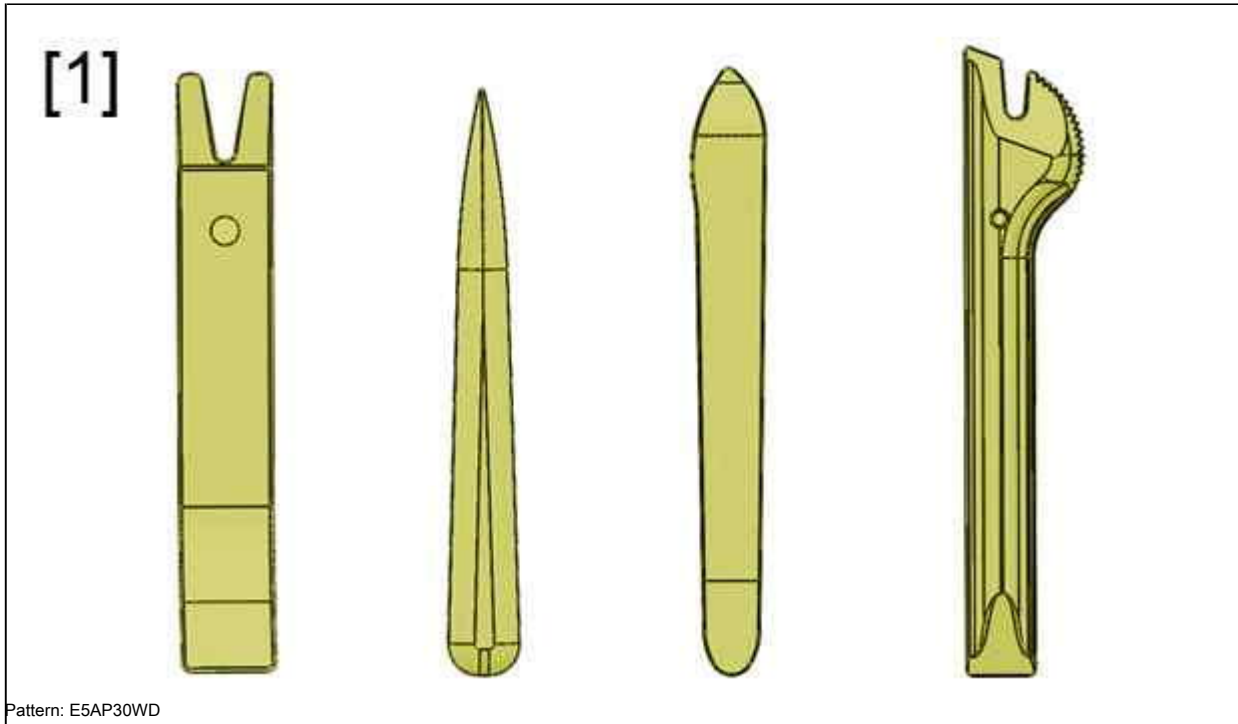


REMOVAL REFITTING: IGNITION LOCK

MANDATORY: Observe the cleanliness and rules of safe work.

ATTENTION : Before carrying out any work; Align the wheels in a straight line.

1. Recommended equipment



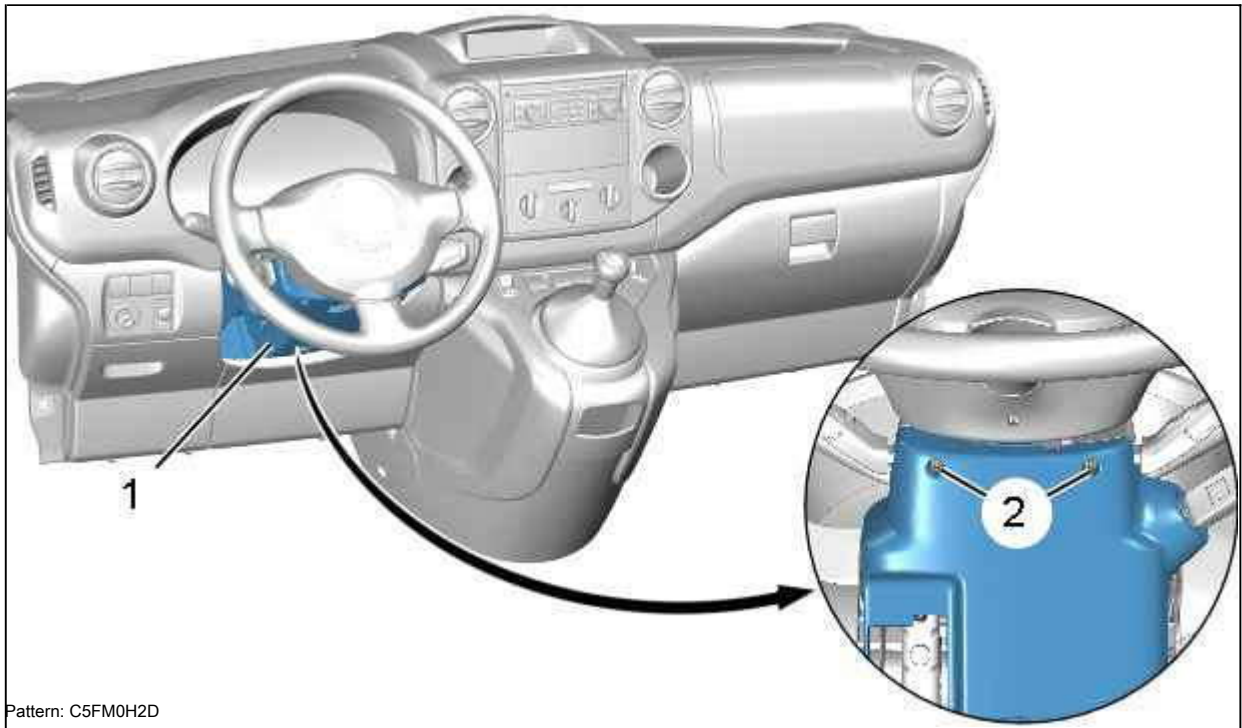
[1] Trim removal tool () .1350ZZ.

2. Removal

NOTE: The operation is carried out in the same way with left or right steering.

Perform the following operations:

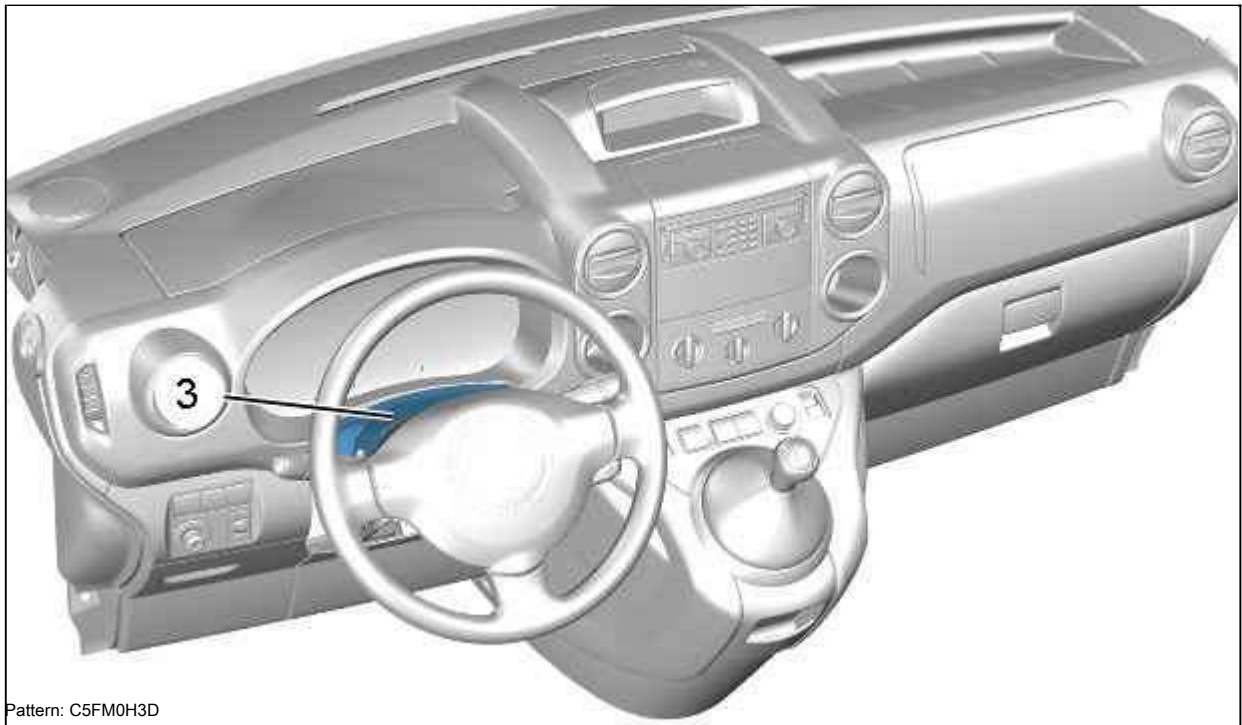
- Move the front seat as far back as possible
- Switch off ignition
- Wait 3 minutes before disconnecting the battery
- Disconnect the battery



Pattern: C5FM0H2D

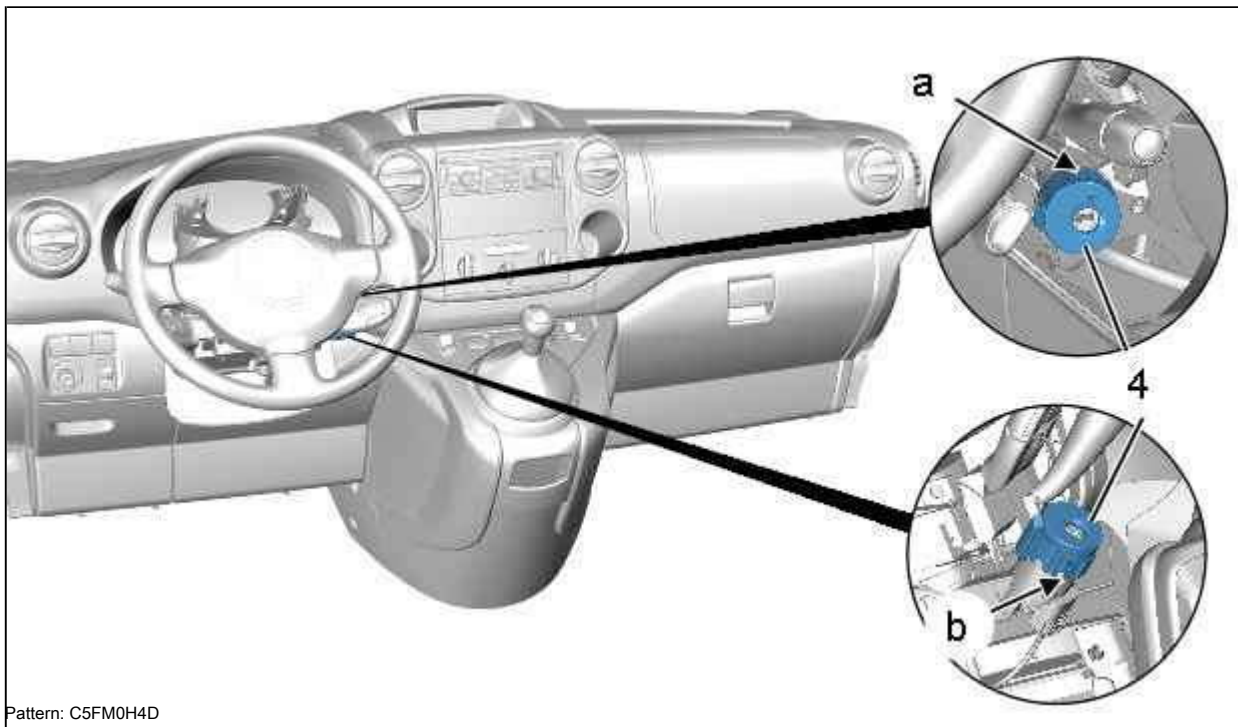
Unlock the steering column, extend it as far as possible and lower it. Loosen screws (2).

Remove the steering column lower trim (1).

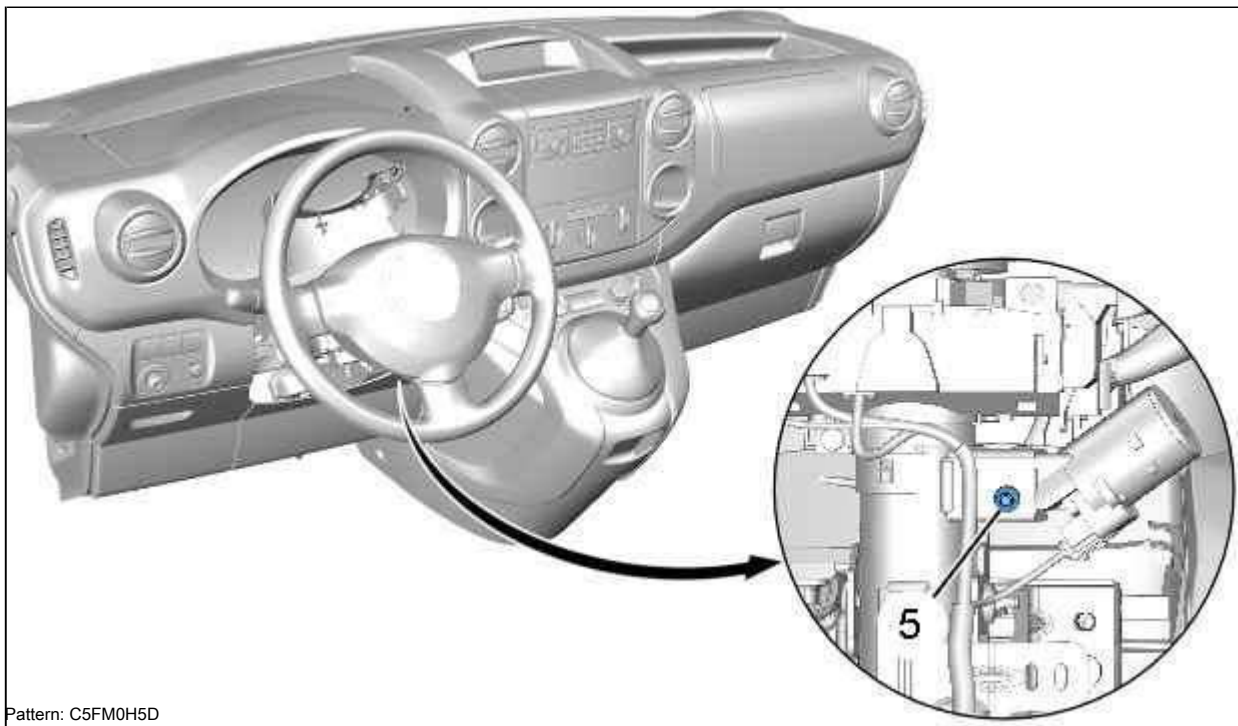


Pattern: C5FM0H3D

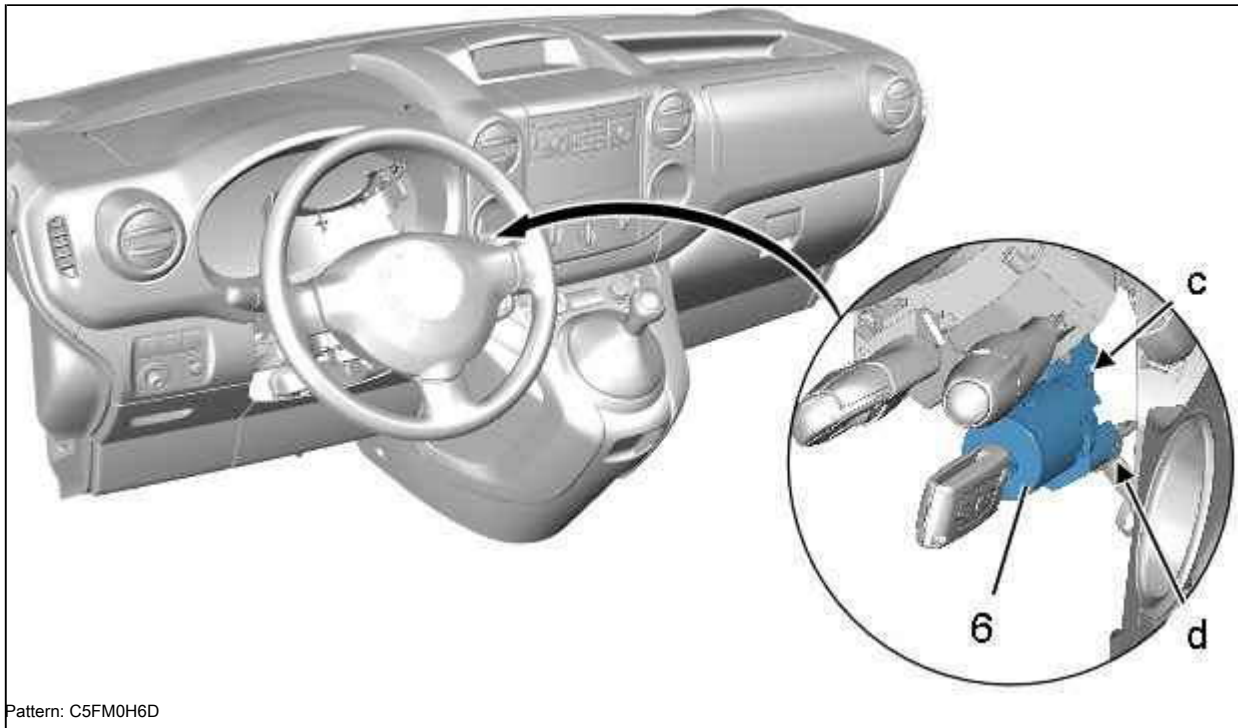
Separate: The upper steering column trim (3).



Detach: Fixing feet in areas "a", "b"; Using the tool [1]. Detach: Transponder electrical antenna sleeve (4).



Unlock: Self-breaking bolt (5); With a metal rod and a hammer.



Disconnect the connector (at "d").

Set the ignition key to the "+ ACC" position. Press out "c"; Using screwdrivers.

Remove the ignition lock with anti-theft device (6).

3. Installation

Install: the steering lock (6).

Remove: Ignition key.

Check the steering lock. Install a new bolt (Self-breaking bolt).

NOTE: Tighten the self-breaking self-breaking bolt before shearing off its head.

Check the locking of the lug (in "d"). Install:

- Transponder antenna sleeve (4)
- Steering column lower trim (1)

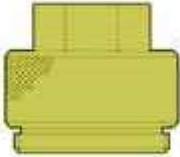
ATTENTION : Follow the steps to follow after removing the battery.

Reconnect the battery.

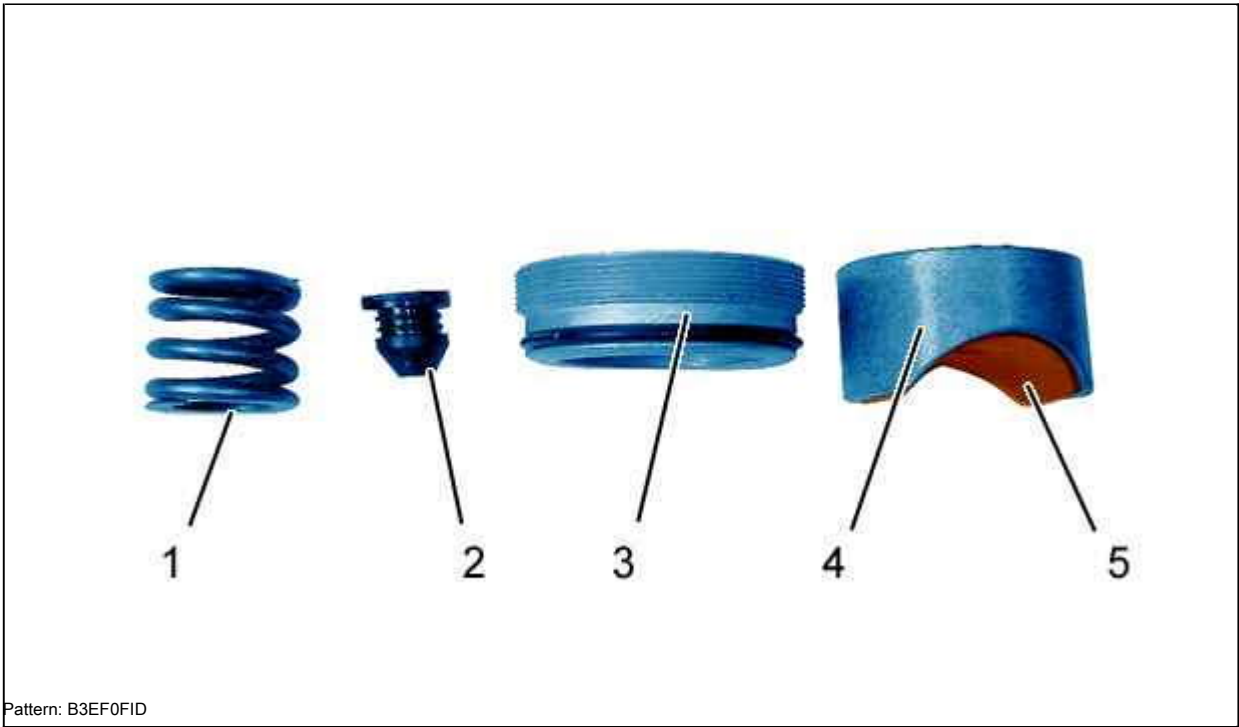
Check the functioning of the electrical equipment.

ADJUSTMENT: STEERING GEAR STEP

1. Equipment

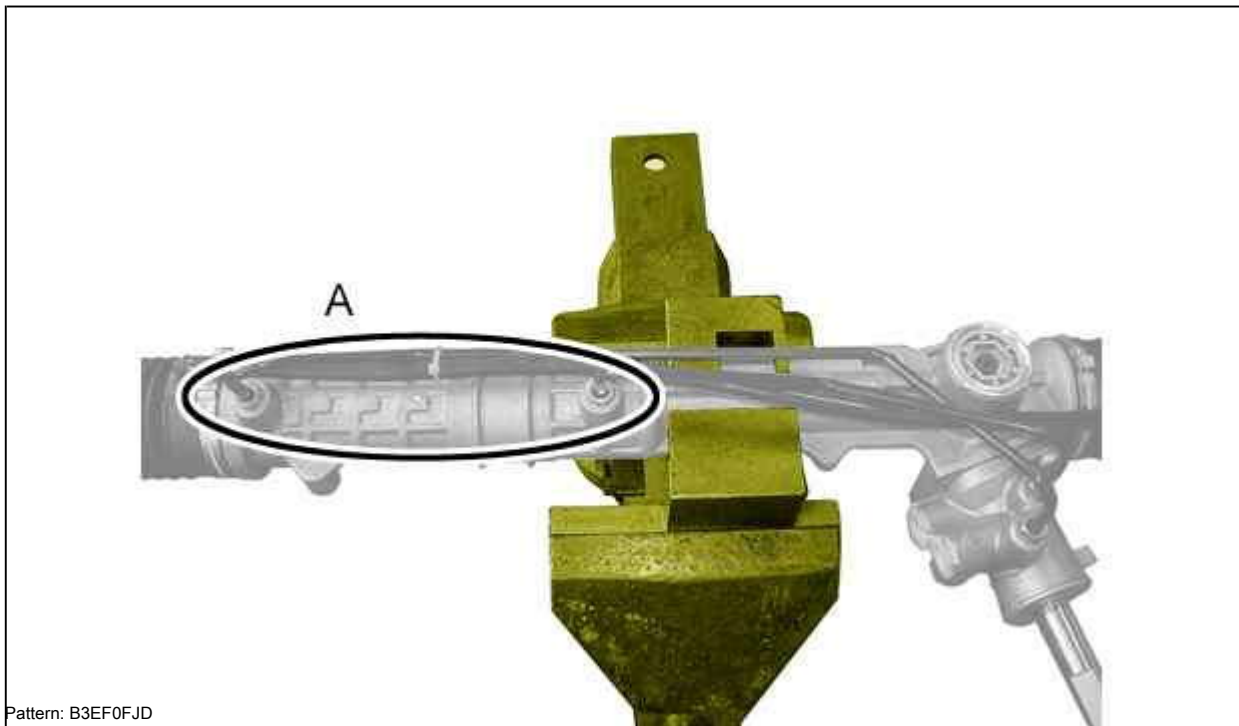
Adaptation	Reference Name	
	[0725]	Tap
<div><div>[0725]</div><div></div><div>Figure: E5AB0Q5T</div></div>		

2. Composition of the steering pusher assembly



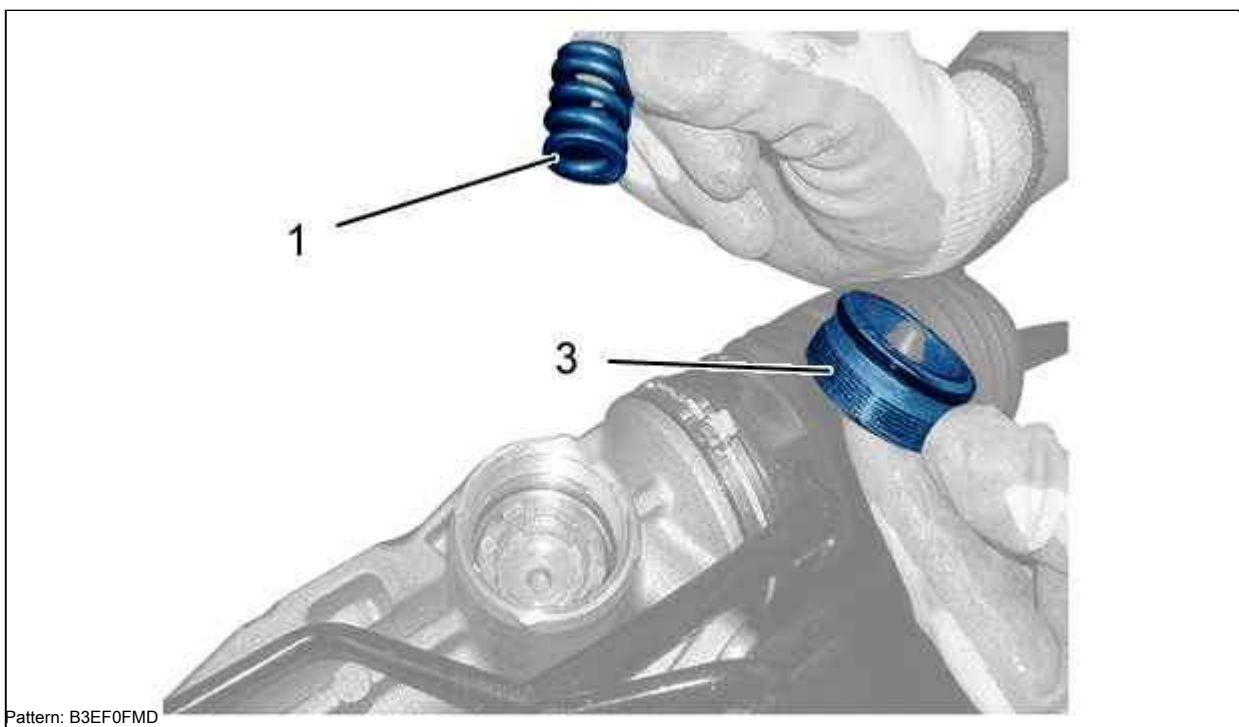
- (1) spring.
- (2) Blanking plug.
- (3) bolt.
- (4) Pusher.
- (5) Shoe.

3. Removing the steering pusher assembly



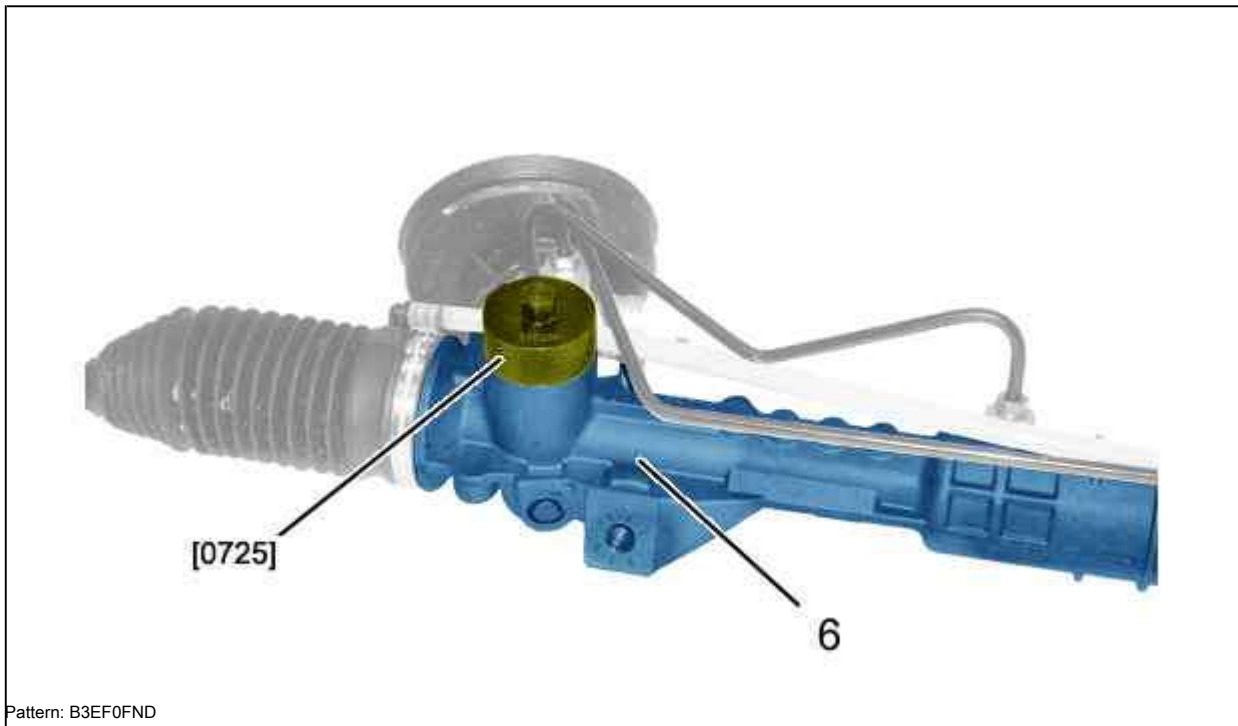
Fasten the steering gear in a vice equipped with pads.

ATTENTION : Do not compress steering box in hydraulic area "A".

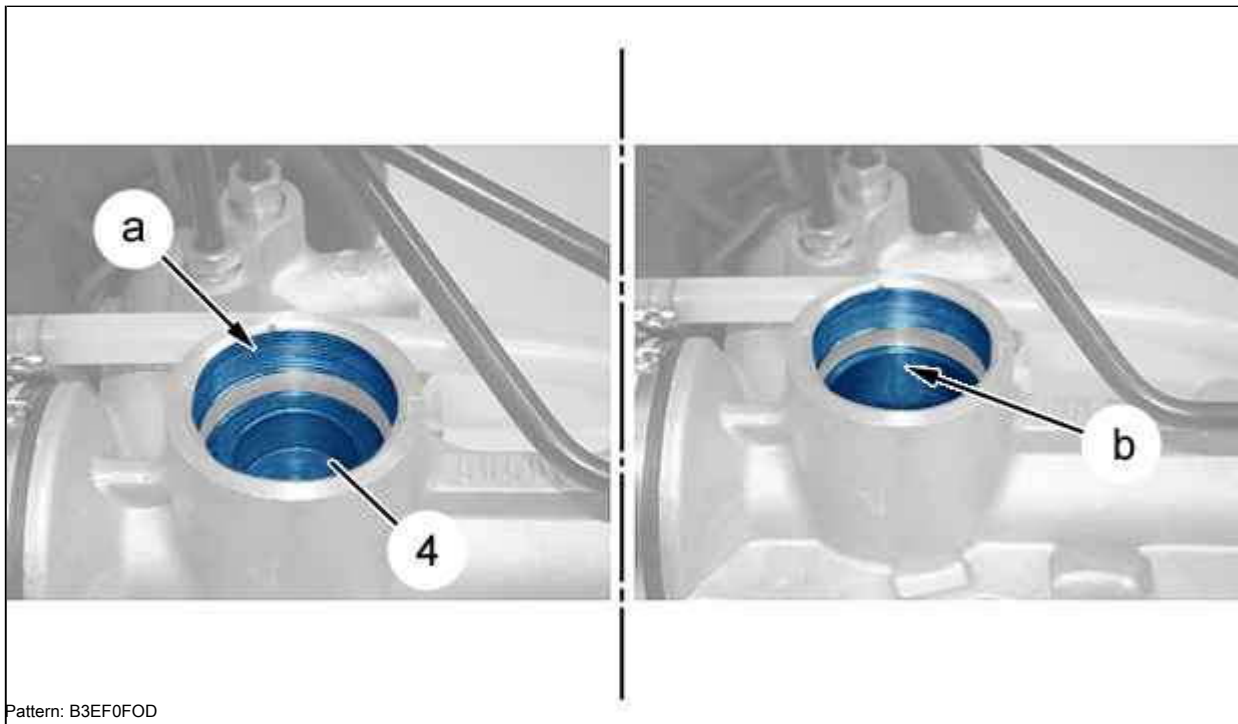


Remove:

- Bolt (3)
- Adjustment mechanism (1)



Apply a thin layer of grease to thread of tool [0725] (Grease TOTAL N3924). Screw in the tool [0725] as far as it will go to the steering box (6).
Remove special tool [0725].



Clean groove "a"; With a lint-free cloth.

ATTENTION : Check that no aluminum particles remain (in "a").

Remove the pusher (4).

Clean the tappet seat (4) (at "b"); With a lint-free cloth.

ATTENTION : Check that no aluminum particles remain (in "b").

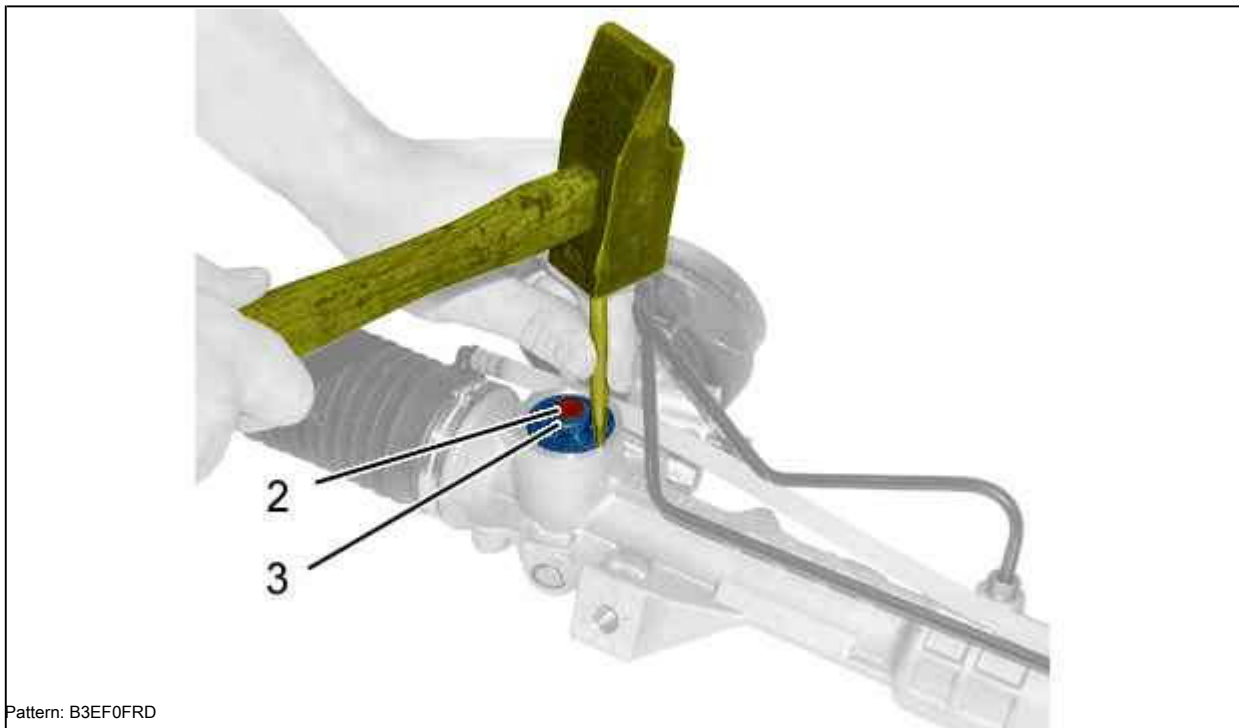
4. Install the new steering pusher assembly

Apply a light coat of grease to the slide (5) (Grease TOTAL N3924). Set the rack and pinion gear to the middle position

Install:

- New pusher (4)
- New spring (1)
- Bolt (3)

Tighten the plug (3) with a torque of 1.5 da.Nm. Move the rail from left to right half a turn. Set the rack and pinion gearbox to the middle position. Check the tightening torque of the bolt (3) (1.5 da.Nm).



Lock the screw (3) with 3 blows with a 120 ° punch.

5. Adjusting the steering pusher

Loosen screw (3) 65 degrees.

Ensure that there is no binding along the entire stroke of the steering rack.

In case of resistance, gradually loosen the screw (3) 5 ° to 5 °.

NOTE: Turn back no more than 20 °.

Replace the plug (2) on the pusher bolt. Install the steering gear.

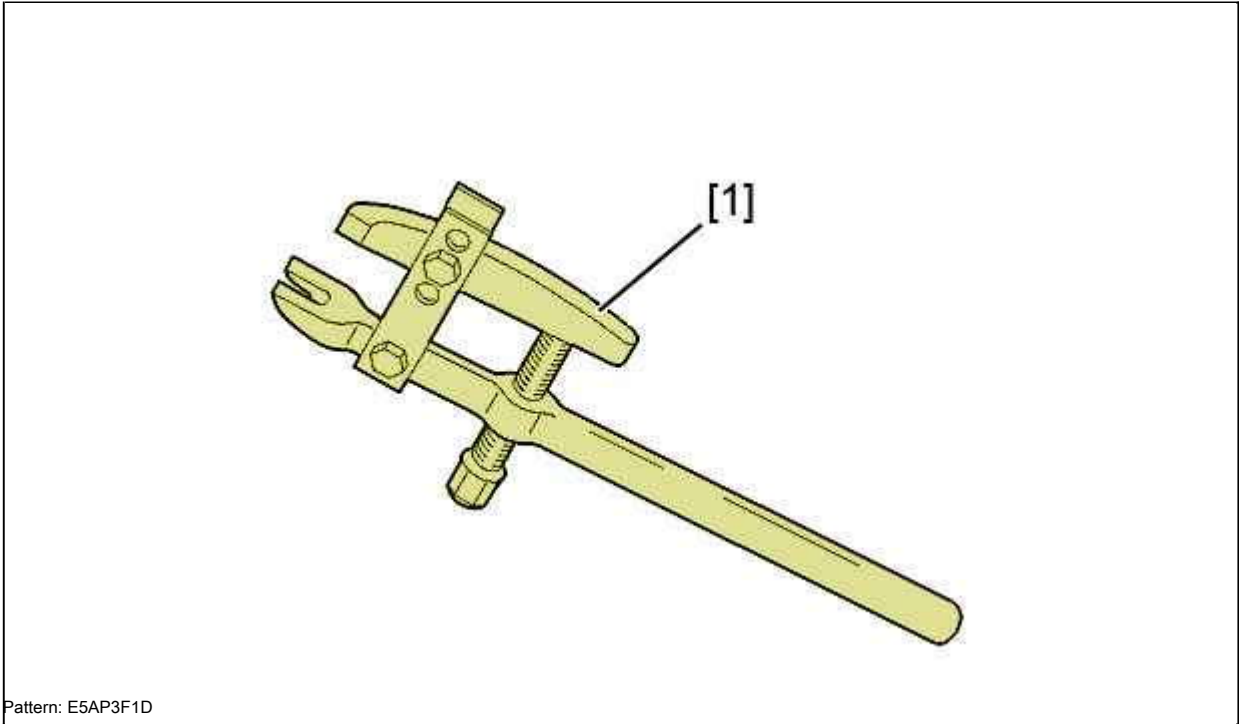
Carry out a test drive (in an urban environment) to make sure there is no jamming of the mechanism.

REMOVAL REFITTING: STEERING GEAR

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



Label Designation		Number (reference)	Number (reference)
[1]	Ball joint puller 1892T		() .0709

2. Removal

ATTENTION : Set the wheel to the straight-ahead position; Lock the steering wheel in this position.

Disconnect the battery. Unlock the front wheel bolts.

Raise and secure the vehicle by hanging the front wheels. Remove:

- Front wheel bolts
- Front wheels
- **Front right wheel arch liner**



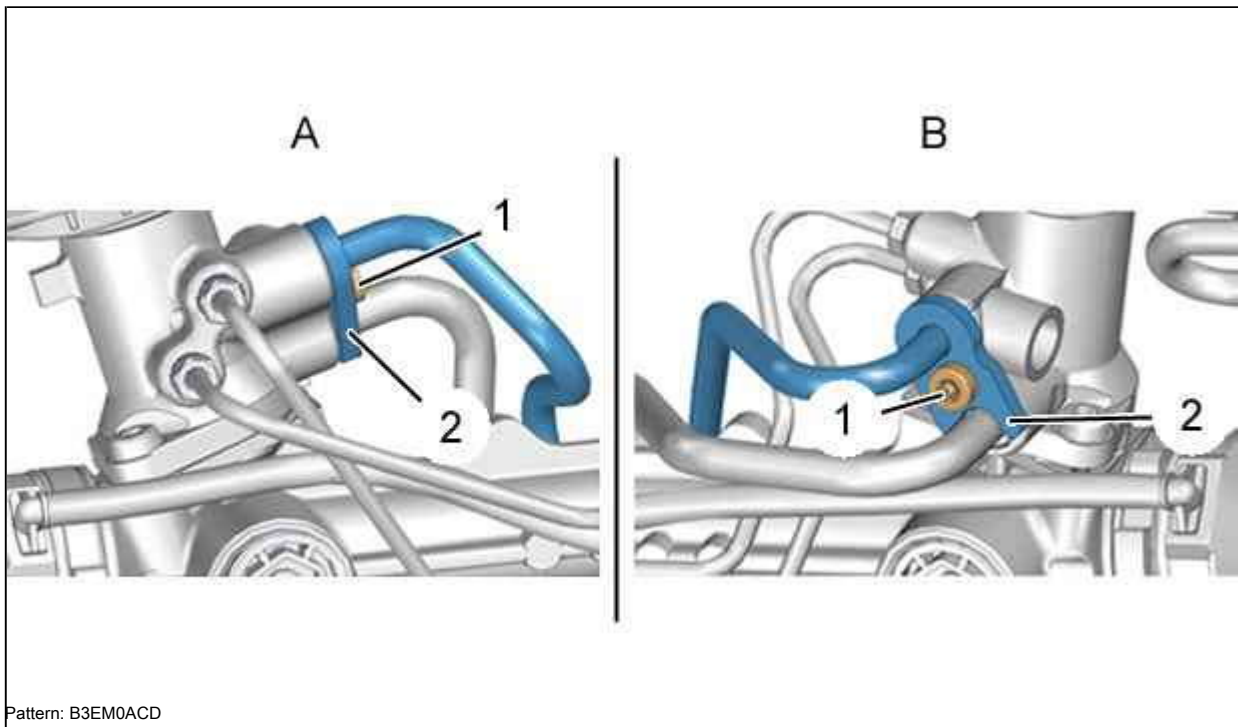
Slater operating fluid from the hydraulic power steering circuit

Remove:

- **Sub-frame**
- Thermal protection of the steering mechanism



Secure the steering gear to the exhaust manifold.



ATTENTION : Handle the power steering valve with care using the correct tool to avoid damage.

"A": left-hand drive. "B": right-hand drive. Remove the bolts (1).

Disconnect clamp (2) for power steering valve.

ATTENTION : Open the circuit carefully to prevent dirt particles from entering.

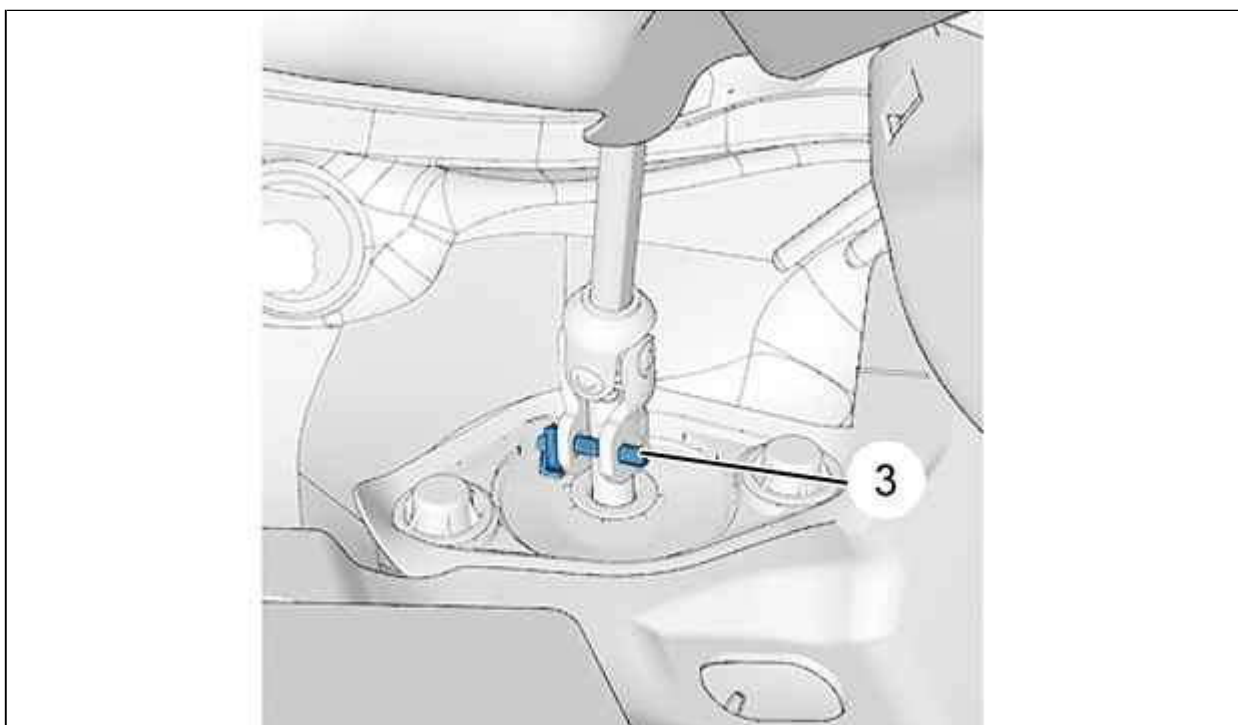
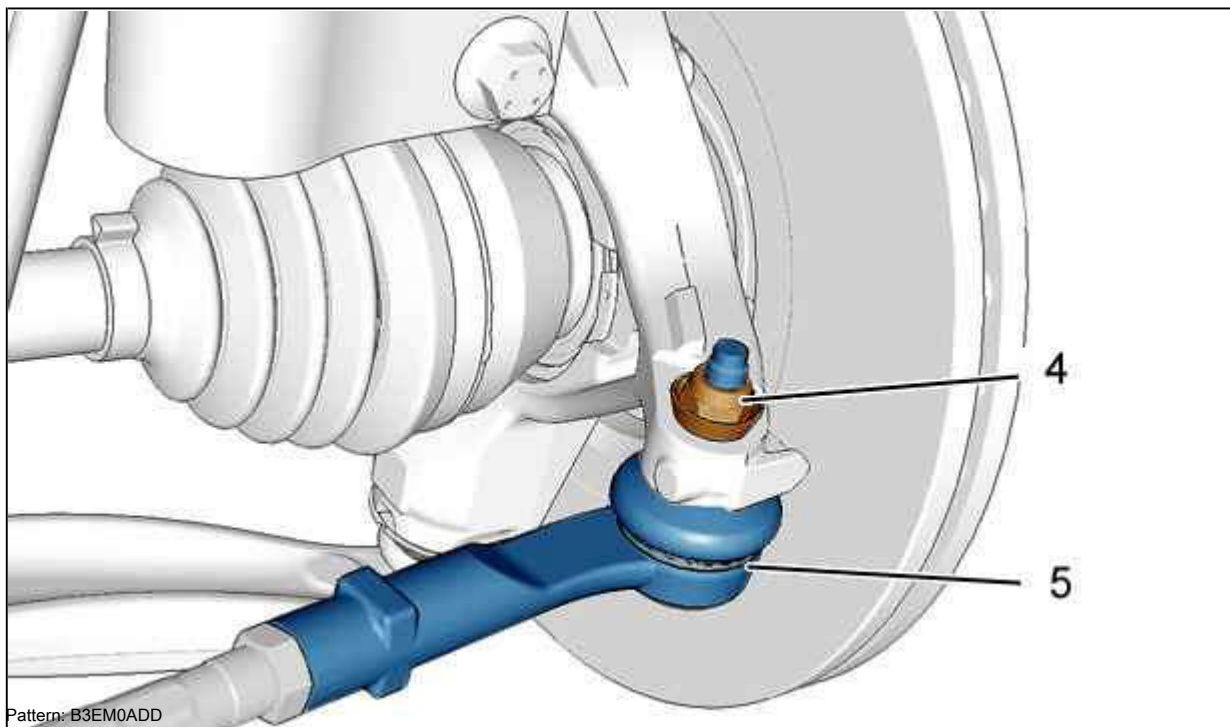


Figure: B3EP1B7D

Remove the bolts (3).

Disconnect the steering column from the steering gear.



Remove the tie rod ball nut (4) (each side).

Disconnect the tie rod ball joint (5); Using the tool [1] (on each side).

Remove the steering gear.

3. Installation

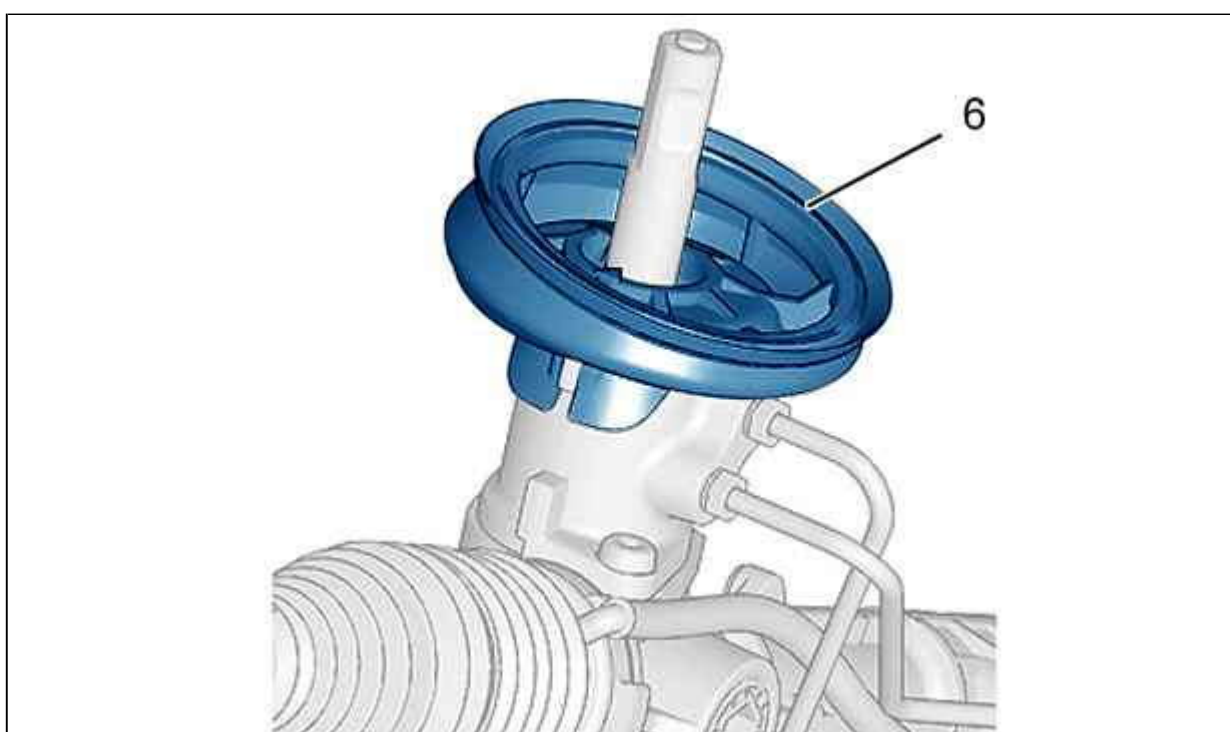


Figure: B3EP1B9D

Install a new rubber gasket (6).

Remove the steering box; Secure the steering box to the exhaust manifold.

Attach the tie rod ball joint (5) (on each side).

Install the nut (4) of the steering end; Tighten to 4.5 ± 0.4 da.Nm (on each side).

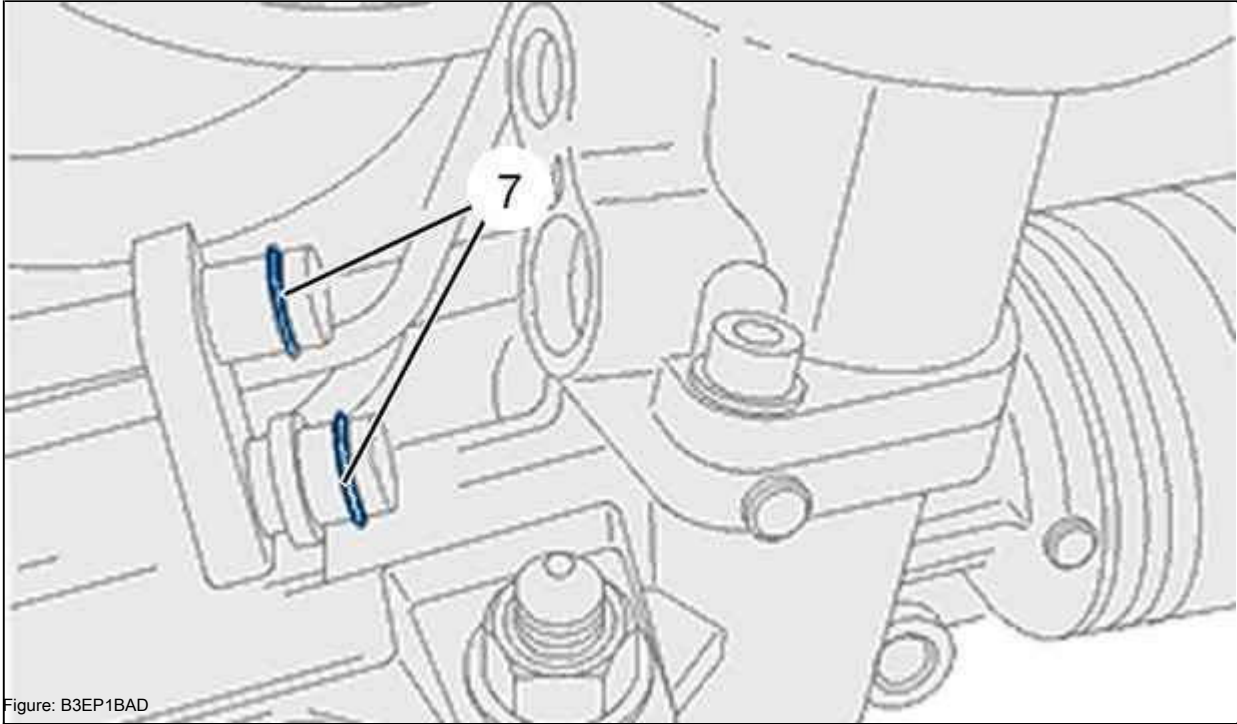


Figure: B3EP1BAD

NOTE: Each time it is removed: Periodically replace the gaskets (7).

Connect the clamp (2) for the power steering valve. Install:

- Bolt (1); Tightening torque 1.9 ± 0.2 da.Nm
- Thermal protection of the steering mechanism

ATTENTION : Do not forget the O-rings between the subframe and the steering gear.

Install front subframe

Connect the steering column to the steering gear. Install:

- Bolt (3); Tightening torque 2 ± 0.2 da.Nm
- **Front right wheel arch liner**
- Front wheels
- Front wheel bolts

Lower the vehicle to the ground.

Tighten the wheel bolts:

- Aluminum rim: Tightening torque 9 ± 9.2 da.Nm
- Forged steel wheel rim: Tightening torque 11 ± 11.2 da.Nm

Reconnect the battery.

ATTENTION : Perform the operations to be performed after removing the battery

Prime and purge the power steering hydraulic circuit

Check and adjust the cam rate.



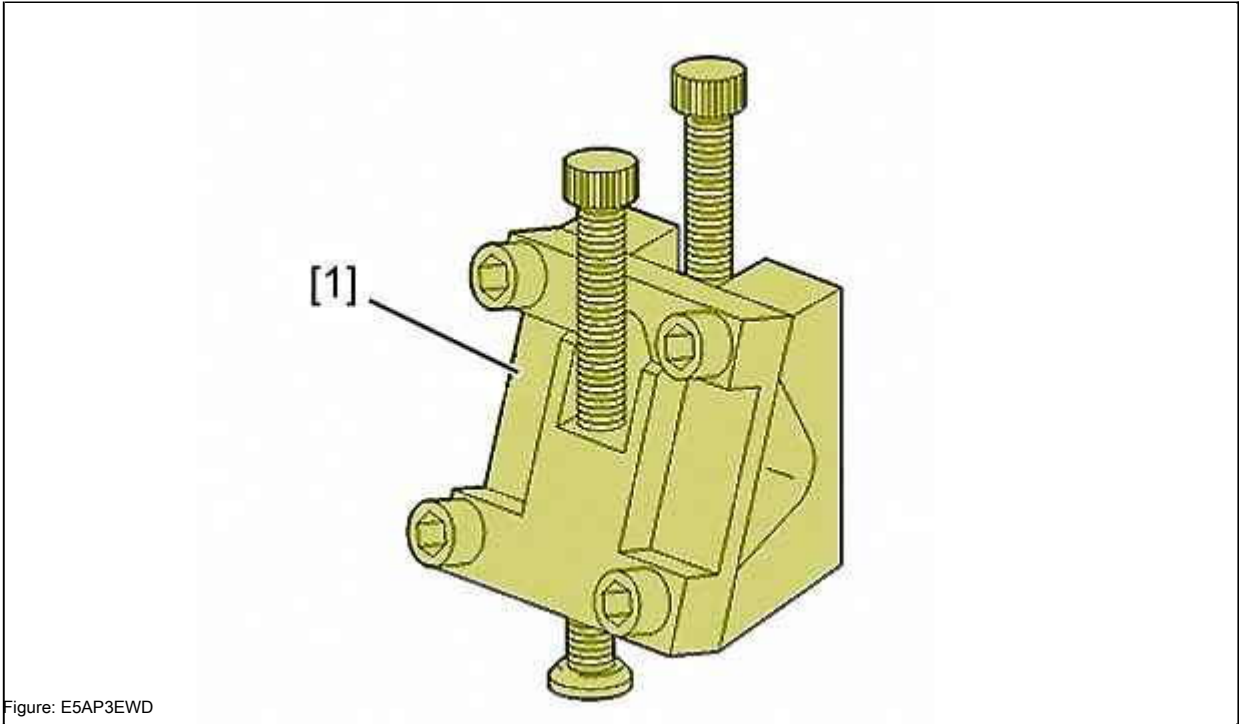
...

REMOVAL REFITTING: STEERING RODS

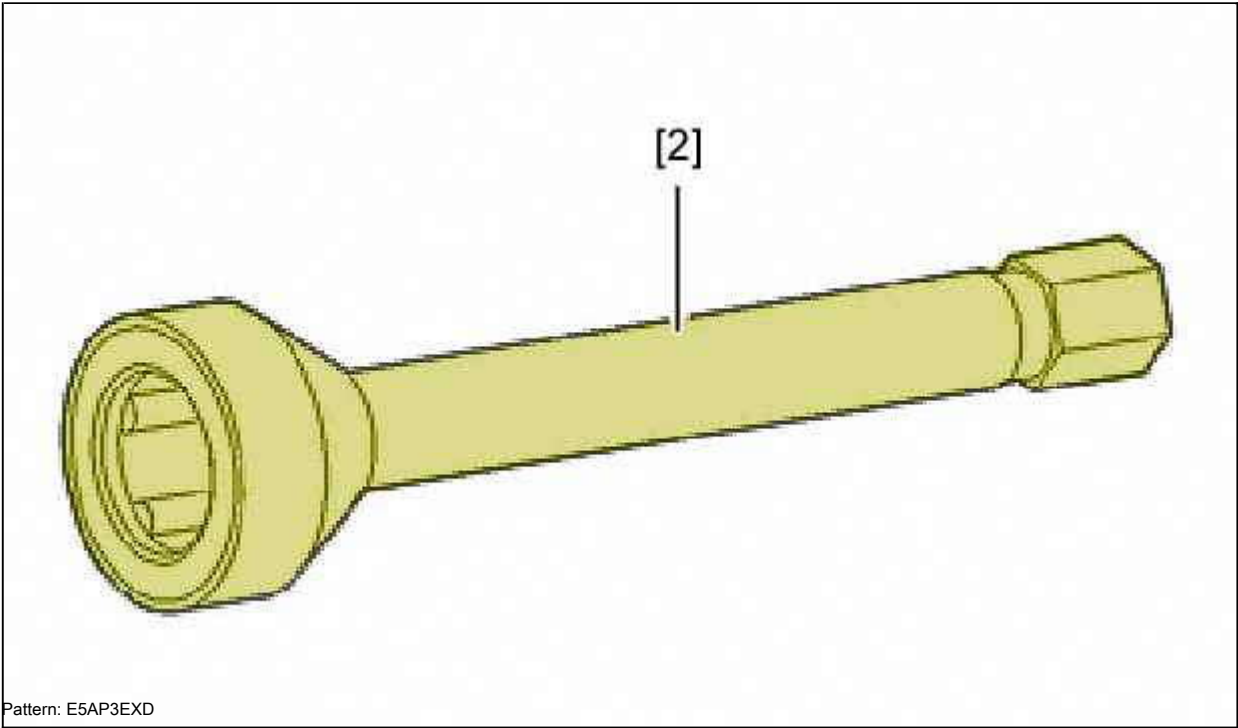
MANDATORY: Observe the cleanliness and safety rules



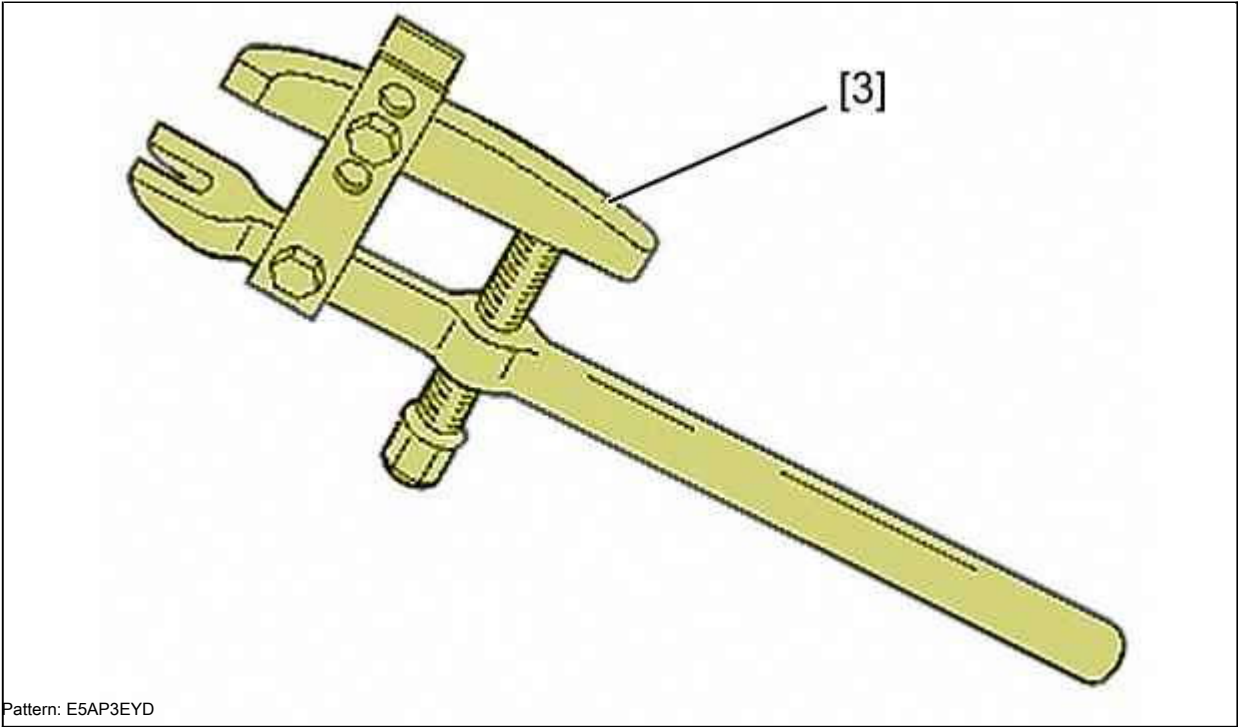
1. Recommended equipment



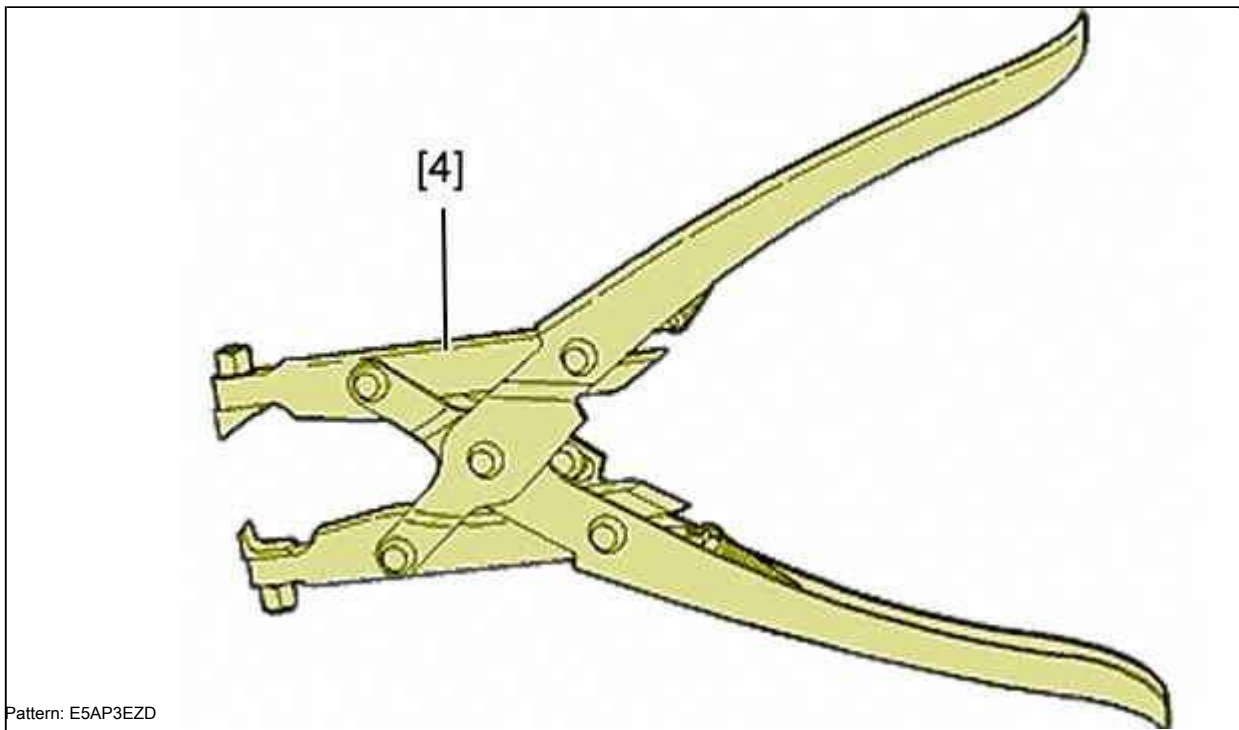
Label Designation		Number (reference)
[1]	The device, locking from the rotation of the steering rack () .0721B	



Label Designation		Number (reference)
[2]	pipe wrench () .0721A	



Label Designation		Number (reference)	Number (reference)
[3]	tie rod ball joint puller 1892T		() .0709



Label Designation		Number (reference)
[4]	clamp pliers "CLIC" () .0172Z	

2. Removal

Raise and secure the vehicle on a 2 post lift. Remove:

- Front wheels
- Unscrew the ball stud nut

Disconnect the steering ball pin; Using the tool [3]. Remove the tie rod ball joint.

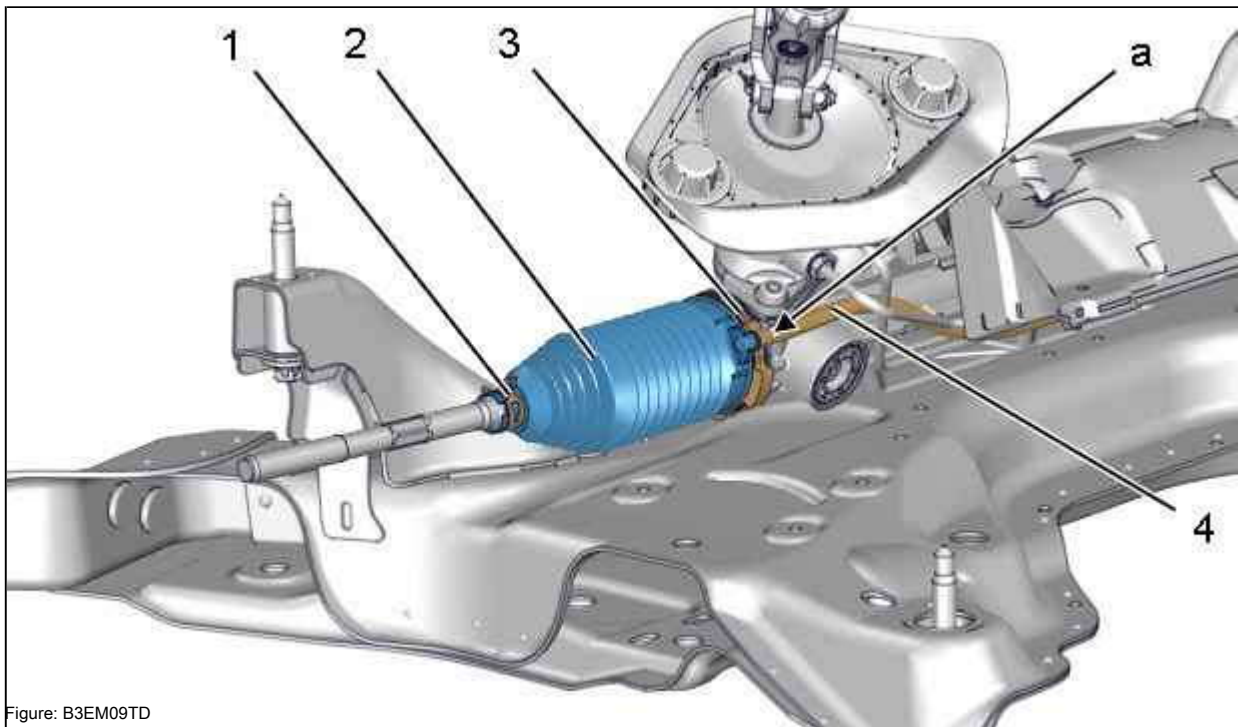
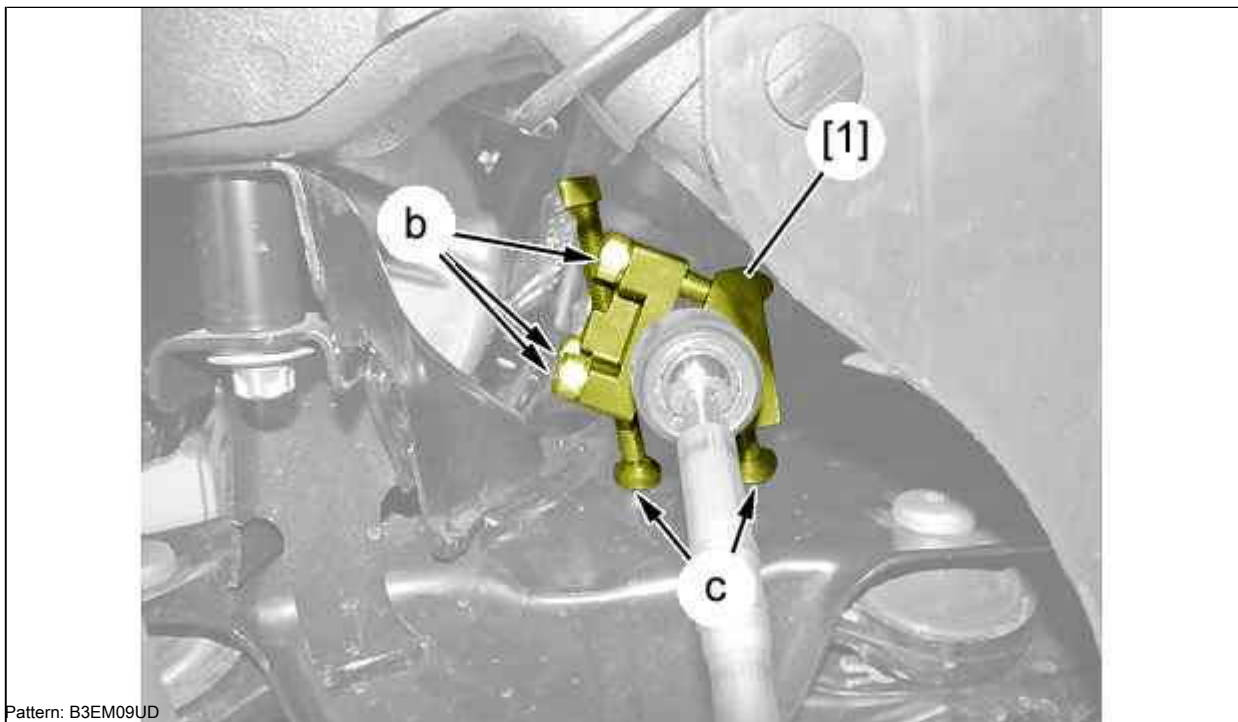


Figure: B3EM09TD

Disconnect the tube (4) from the corrugated steering rack (2) (in "a"). Disconnect the clamps (3);
 Using a thin screwdriver.
 Remove the clamp (1); Using the universal pliers. Remove the silver steering rack cover (2).

Turn the steering wheel to the right as far as it will go and return 1/4 turn (left-hand drive). Turn the steering wheel all the way to the left and return 1/4 turn (right-hand drive vehicles).



Pattern: B3EM09UD

Install the tool [1] on the steering rack so that its ball joints rest against the subframe.

Pre-tighten the 4 bolts (in "b").

Move the 2 stops "f" until they contact the subframe (at "c").

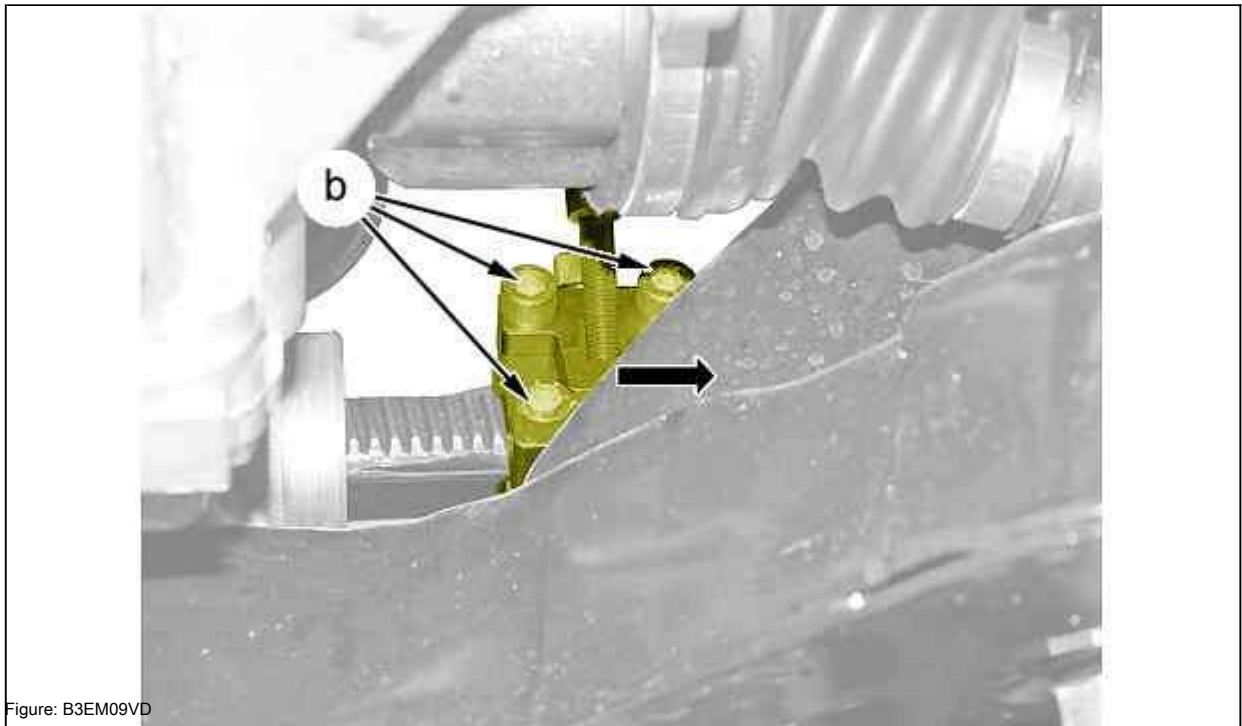


Figure: B3EM09VD

Position the tool as close as possible to the tie rod joint (in accordance with the arrow). Tighten the screws (at "b").

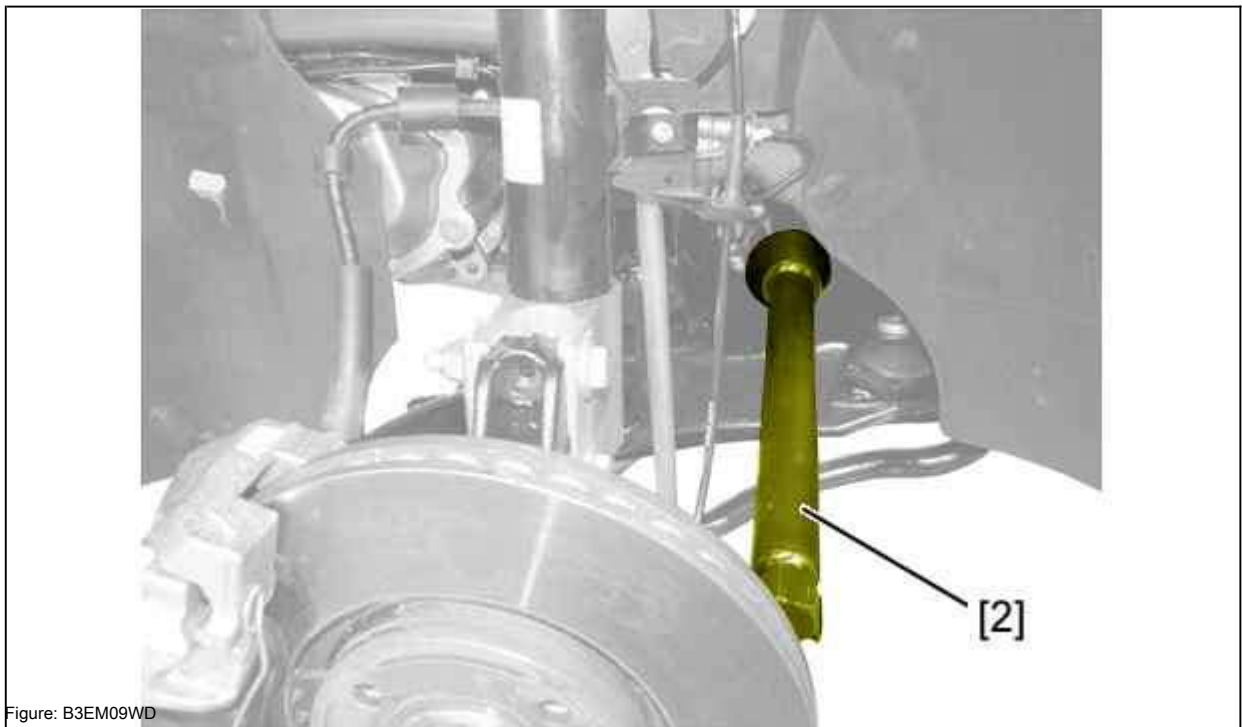


Figure: B3EM09WD

Remove the steering rod; Using the tool [2].

3. Installation

Install the steering link; Using the tool [2]. Tighten the steering rod to a torque of 7 ± 0.7 da.Nm.

Remove the tool [1].

Lubricate the toothed rack with TOTAL N3924 / N3945 grease.

Install a new ribbed steering rack cover (2). Installation clamp (3); Using the tool [4]. Connect the tube (4) to the steering rack gaiter (2). Install:

- Clamp (1)
- Ball pin; Tightening torque 4.5 ± 4.5 2 da.Nm

Install the wheels.

Lower the vehicle to the ground.

Tighten the wheel bolts:

- Aluminum rim: Tightening torque 9 ± 9 2 da.Nm
- Forged steel wheel rim: Tightening torque 11 ± 11 2 da.Nm

Check and adjust the cam rate.

4. A vehicle equipped with a dynamic stabilization system

Calibrate the steering wheel angle sensor; Using the scan tool. Use the "Anti-lock braking system (ABS / ESP)" menu to carry out this operation.

SPECIFICATION IDENTIFICATION: POWER STEERING MANAGEMENT

1.power steering

1.1. Power steering pump assembly (DV6TED4 engine)

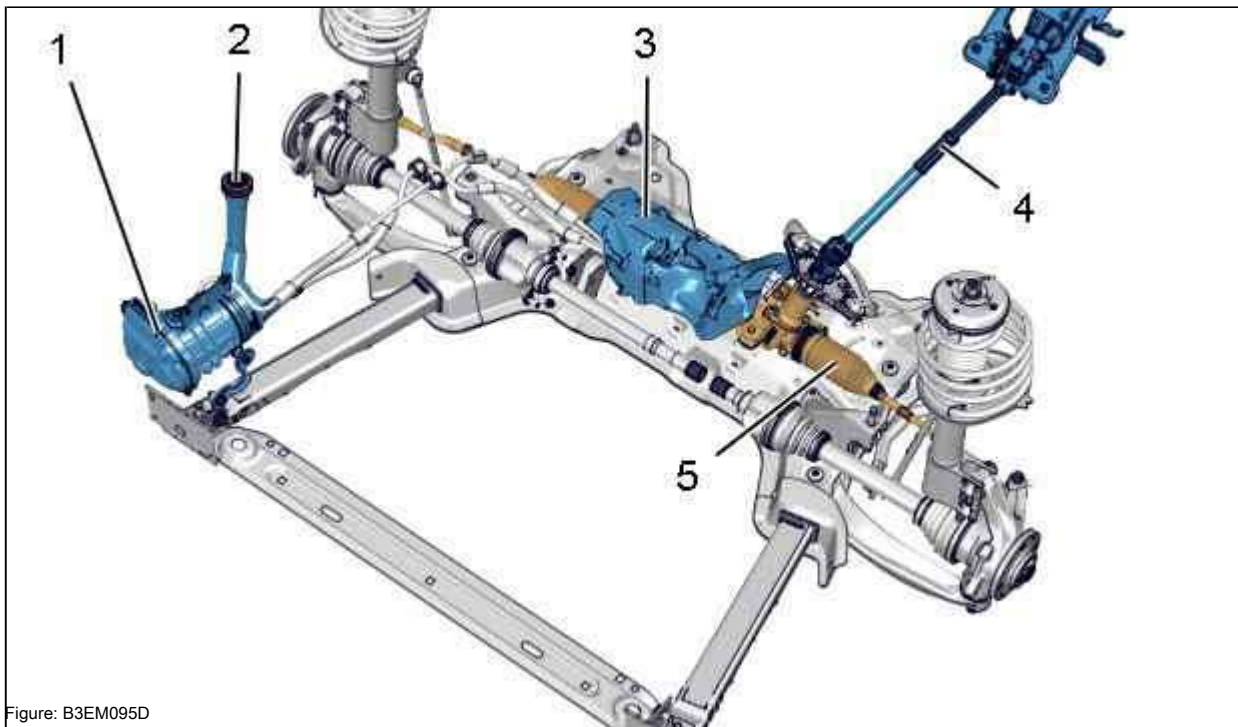


Figure: B3EM095D

(1) Power-assisted steering pump assembly. (2) Stopper.

(3) Heat shield.

(4) Steering column.

(5) Steering gear with integrated power cylinder. Set pressure: 100 5 bar.

Power steering circuit capacity: 1.8 liters. Recommended power steering fluid: TOTAL FLUIDEDA.

1.2. With an ancillary belt driven pump (Other DV6 motors)

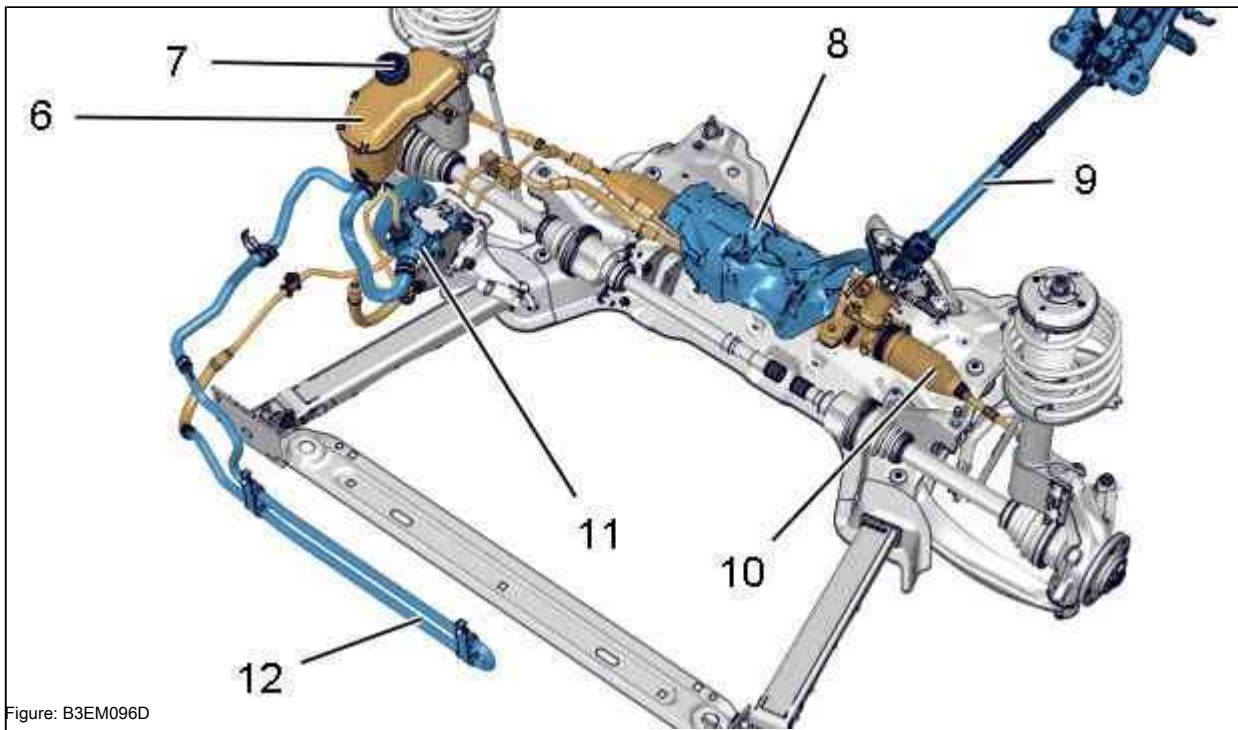


Figure: B3EM096D

(6) Power steering reservoir. (7) Stopper.

(8) Heat shield.

(9) Steering column.

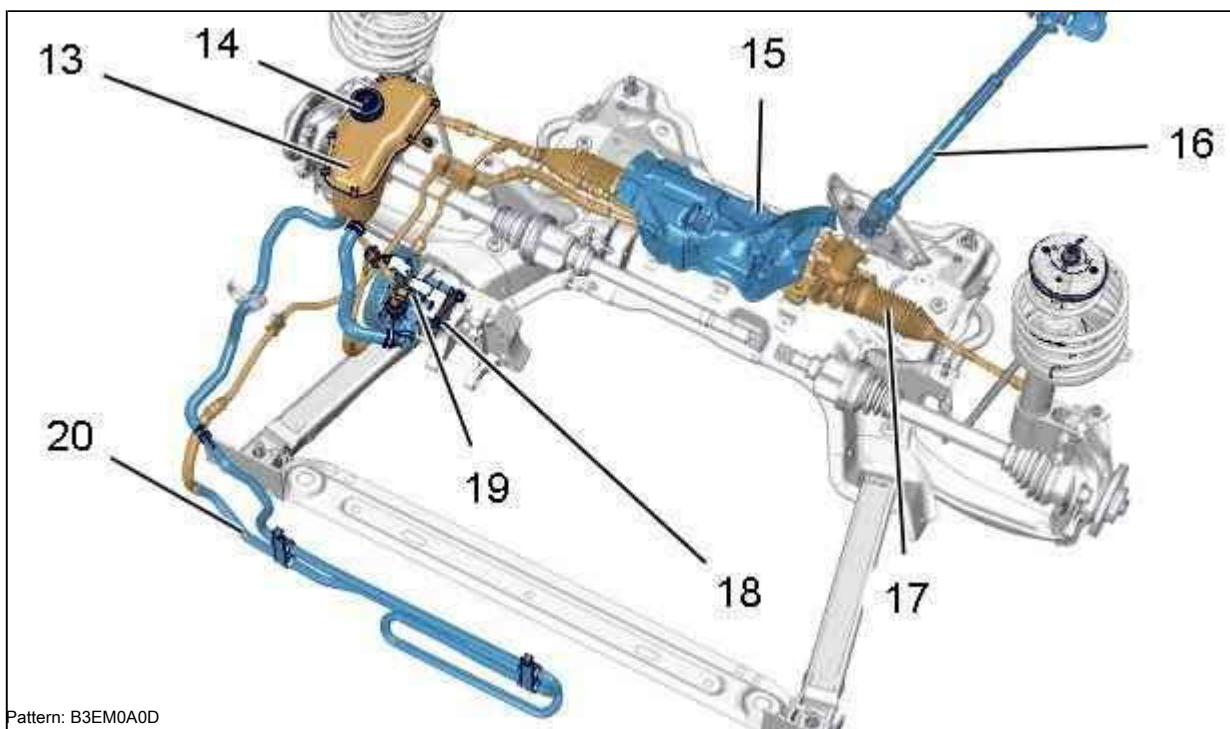
(10) Steering gear with integrated power cylinder. (11) Power steering pump.

(12) Power steering radiator tube.

The power steering pump is supported on a support and is driven by the ancillary drive belt. Booster pump pressure maintained by the regulator: 102.5 3.5 bar. Diameter of the pump pulley and steering booster: 129 mm.

Power steering circuit capacity: 1.8 liters. Recommended power steering fluid: TOTAL AT42.

1.3. With an ancillary belt driven pump (TU5JP4 engine)



(13) Power steering reservoir. (14) Cork.

(15) Heat shield.

(16) Steering column.

(17) Steering gear with integrated power cylinder. (18) Power steering pump.

(19) Manokontakt.

(20) Power steering radiator tube.

The power steering pump is supported on a support and is driven by the ancillary drive belt. Booster pump pressure maintained by the regulator: 102.5 3.5 bar. Diameter of the pump pulley and steering booster: 140 mm.

Power steering circuit capacity: 1.8 liters. Recommended power steering fluid: TOTAL AT42.

2. Steering gear

Power steering mechanism with built-in hydraulic cylinder.

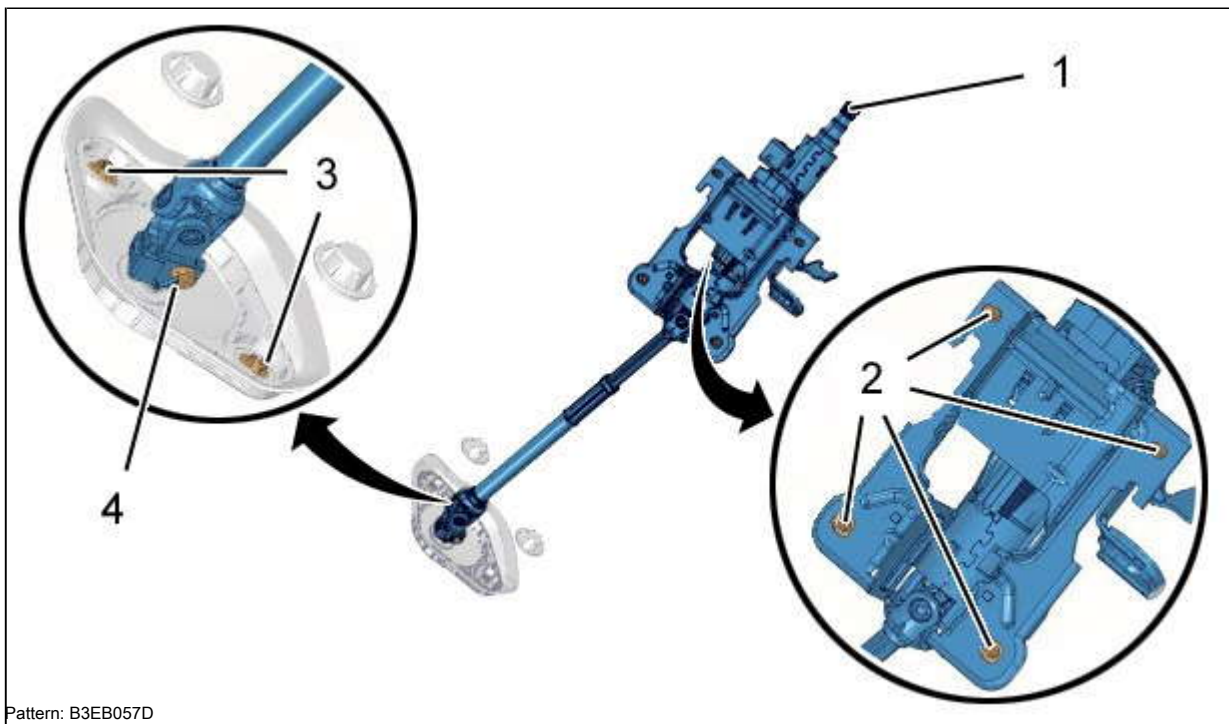
The steering gear is attached to the front subframe with two pins.

There are two anti-slip wedges between the steering gear and the subframe.

Khodreiki (mm)	2 x 74
Reduction ratio 1 / 51.27	
Number of revolutions of the steering wheel	2.89

TIGHTENING TORQUES: POWER STEERING

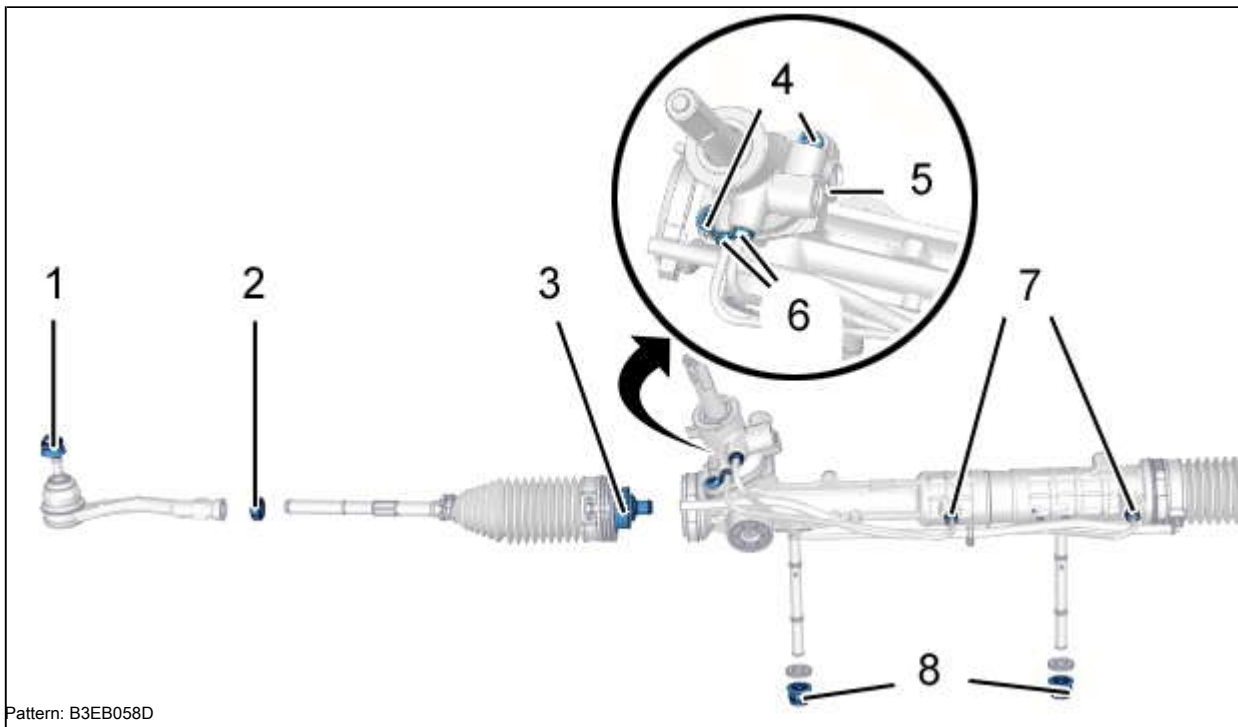
1. Steering column



Pattern: B3EB057D

Label	Designation	Torque
(1)	Steering wheel bolt (*)	3.3 da.Nm
(2)	Bolts of fastening of a steering column to a support Nuts of	2 da.Nm
(3)	fastening of a hinge of a steering column	0.5 da.Nm
(4)	Bolt of fastening of a steering column to a steering gear	2 da.Nm
(*) In case of repeated use of the bolt, treat the bolt with the locking compound "Loktit"		

2. Steering gear

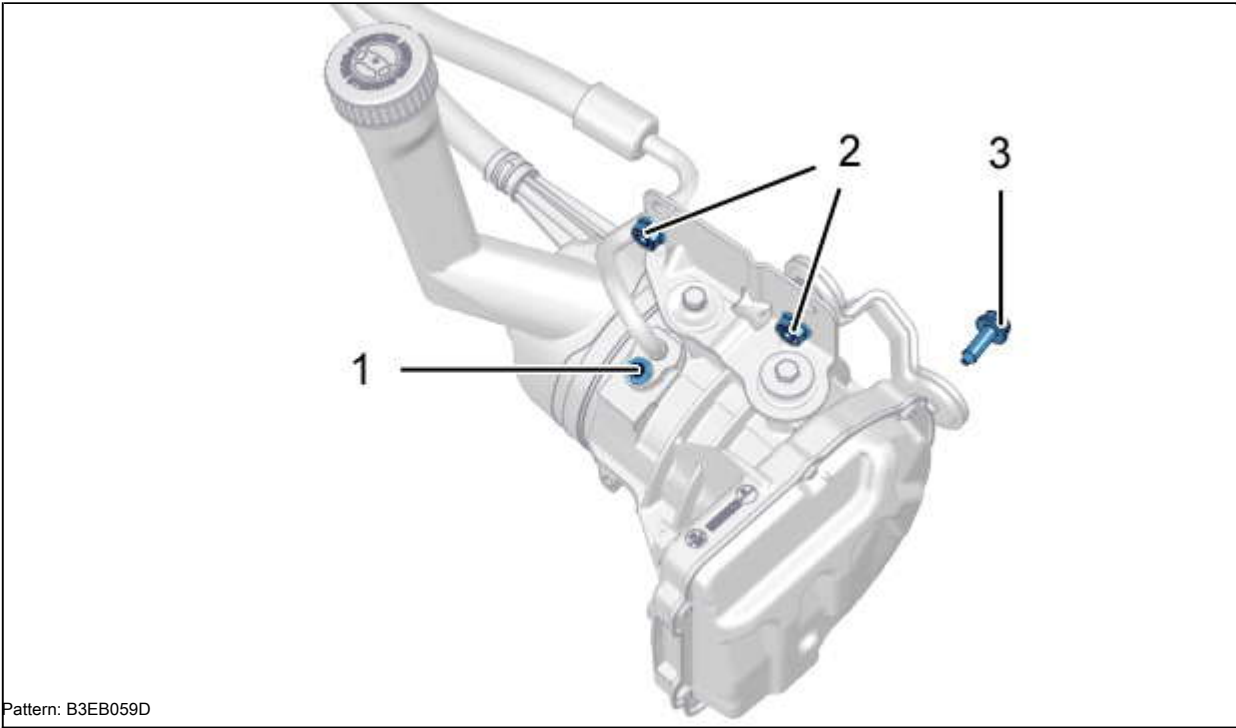


Label Designation

Torque

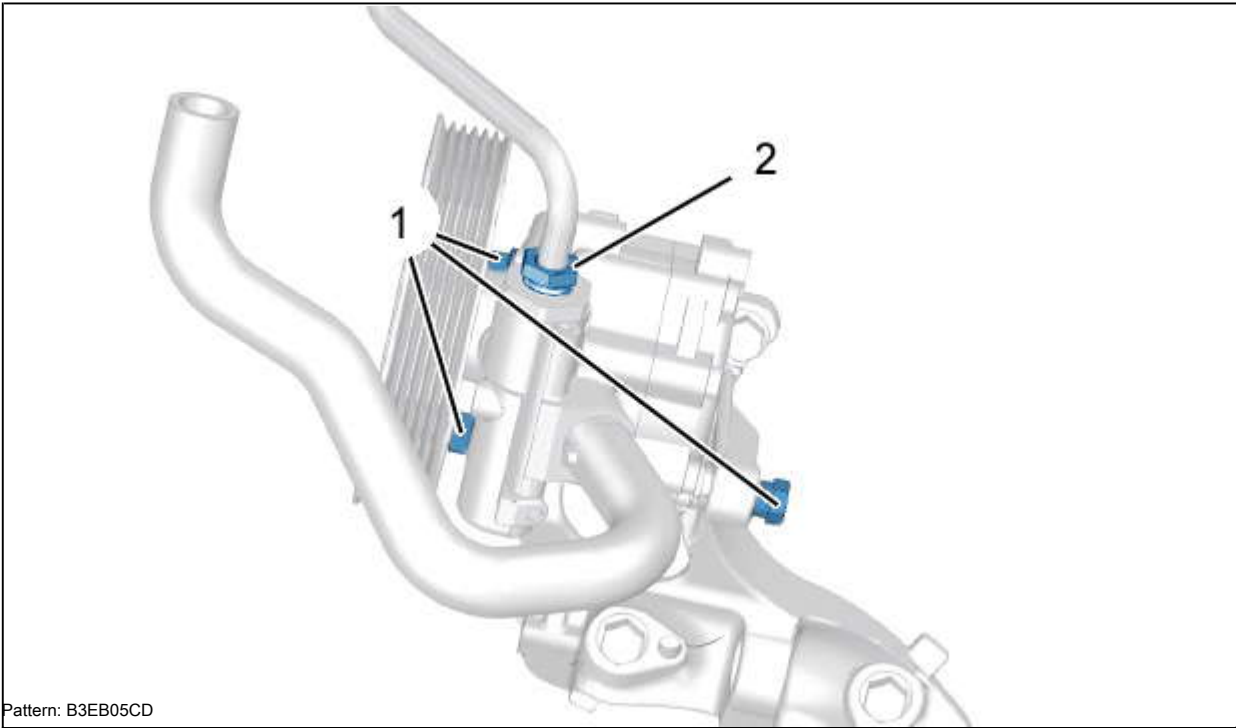
(1)	Steering wheel nut	4.5 da.Nm
(2)	Tie rod adjustment locknut	7.5 da.Nm
(3)	Fastening the steering rod to the rail	7 da.Nm
(4)	Distributor valve attachment to steering gear	2 da.Nm
(five)	Fastening the pipe strip to the power steering valve 1.9 da.Nm Hydraulic pipe connection on the valve	
(6)		0.8 da.Nm
(7)	Connecting the hydraulic pipe to the working cylinder	0.8 da.Nm
(eight)	Fastening the steering gear to the subframe	10 da.Nm

3. Power steering (Power steering pump assembly)

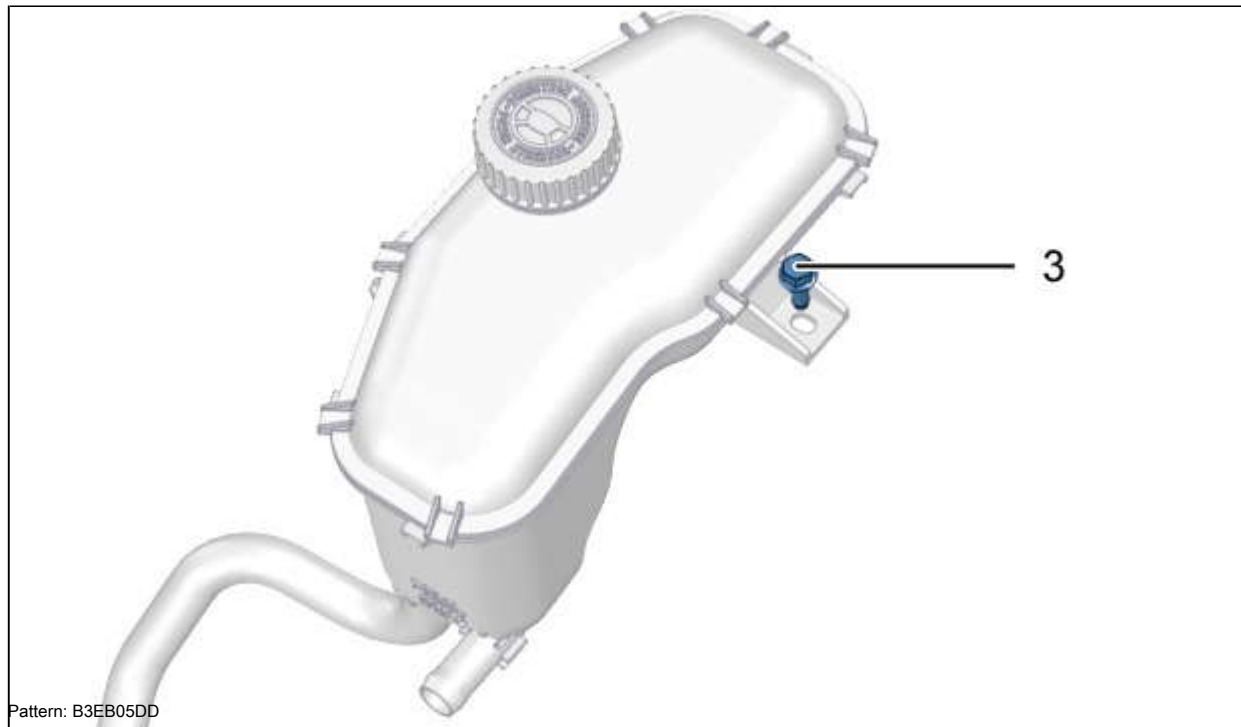


Label Designation		Torque
(1)	Bolt fastening the pipe clamp on the electric pump unit	1.9 da.Nm
(2)	Fastening the electric pump unit on the subframe	2 da.Nm
(3)	Support bolt	2.3 da.Nm

4. Power steering (Pump installed)



Label Designation		Torque
(1)	Mounting the power steering pump on a support	2.1 da.Nm
(2)	Fastening the high pressure pipe to the steering pump 2.5 da.Nm	



Label Designation		Torque
(3)	Power steering reservoir retaining bolt 0.5 da.Nm	

CHECK: POWER STEERING CIRCUIT PRESSURE
MANAGEMENT

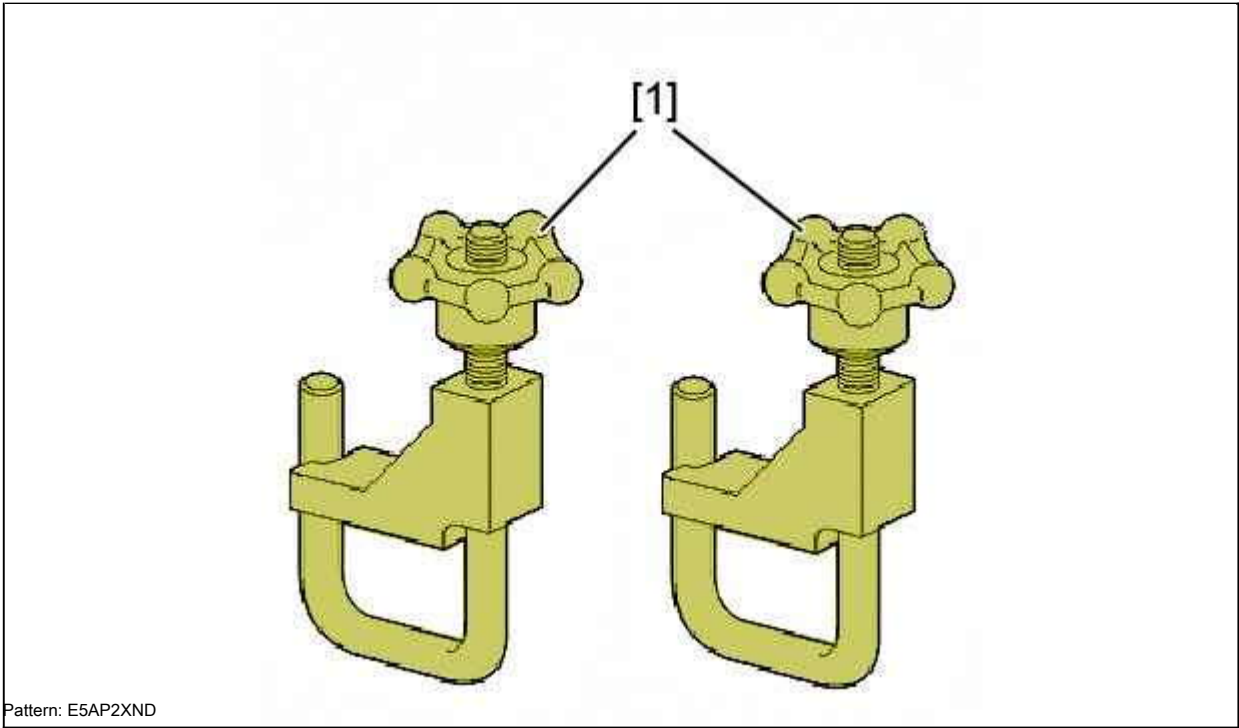
MANDATORY: Observe the cleanliness and safety rules

i

ATTENTION : Before performing the power steering pressure test, make sure that there is no power assistance after the preliminary test.

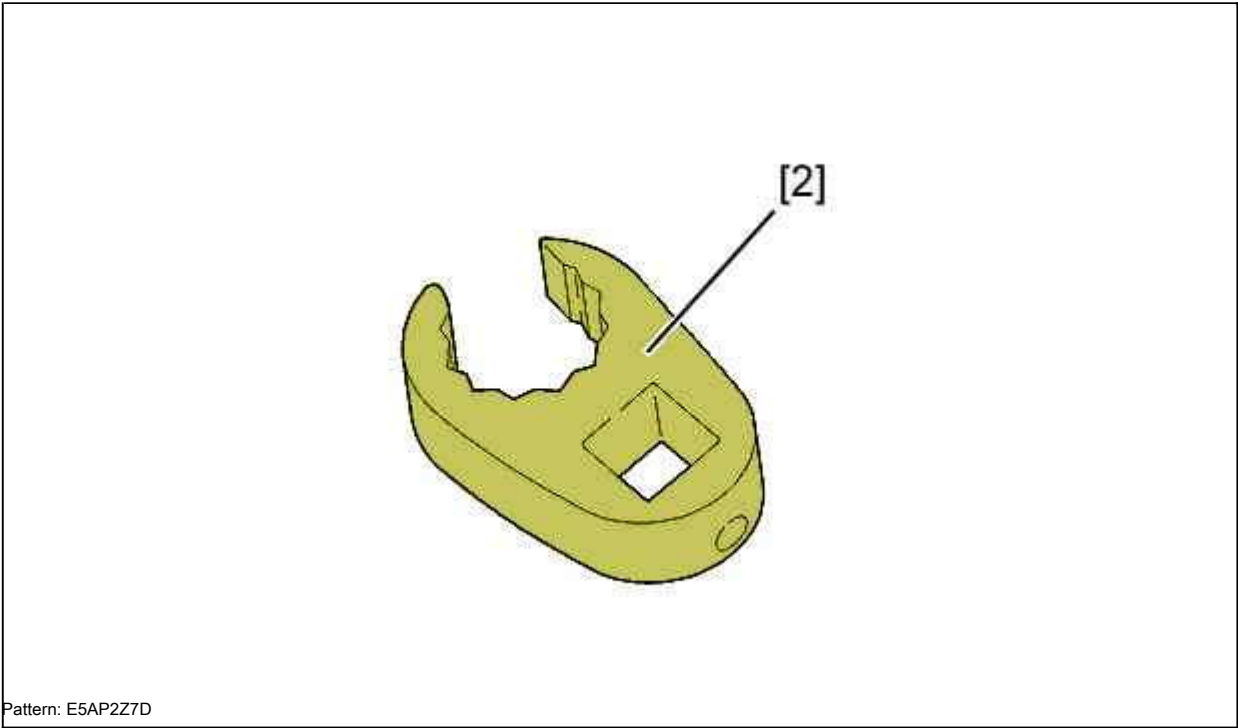
ATTENTION : Only the power steering pump can be tested. If it is working properly, the reason for the lack of amplification lies in a malfunction of the steering mechanism (built-in servo cylinder or control valve).

1. Recommended equipment



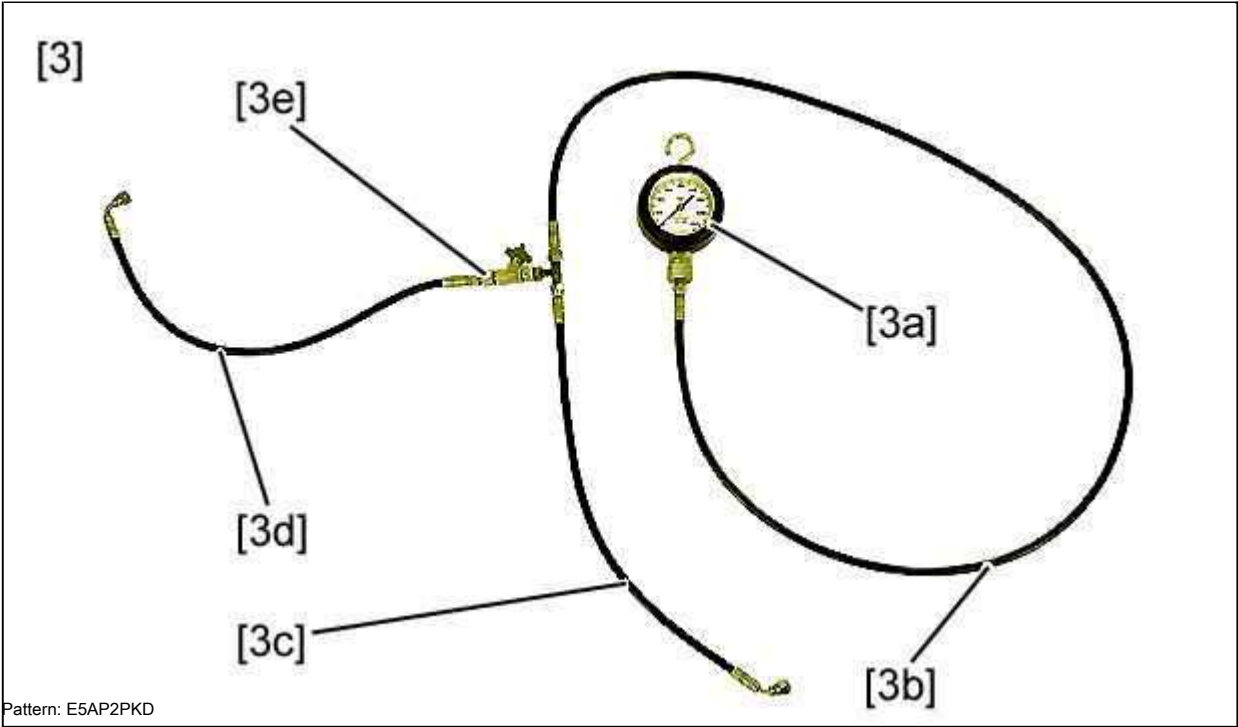
Pattern: E5AP2XND

Label Designation		Number (reference) Number (reference)	
[1]	Set of 2 4153T Hose Clips		() .1512



Label Designation Number (reference) [2]

	pipe wrench Type FACOM 18.17	



Power steering pressure monitor kit [3]

Label Designation		Number (reference)
[3a]	[/] pressure gauge	() .0710AZ
[3b]	Hose for testing with a pressure gauge with a tap	() .0710B1

[3c]	High pressure pump test hose with cock () .0710B3 High pressure hose test hose with cock ()	
[3d]	.0710B2 [/] three-way cock	
[3e]		() .0710C

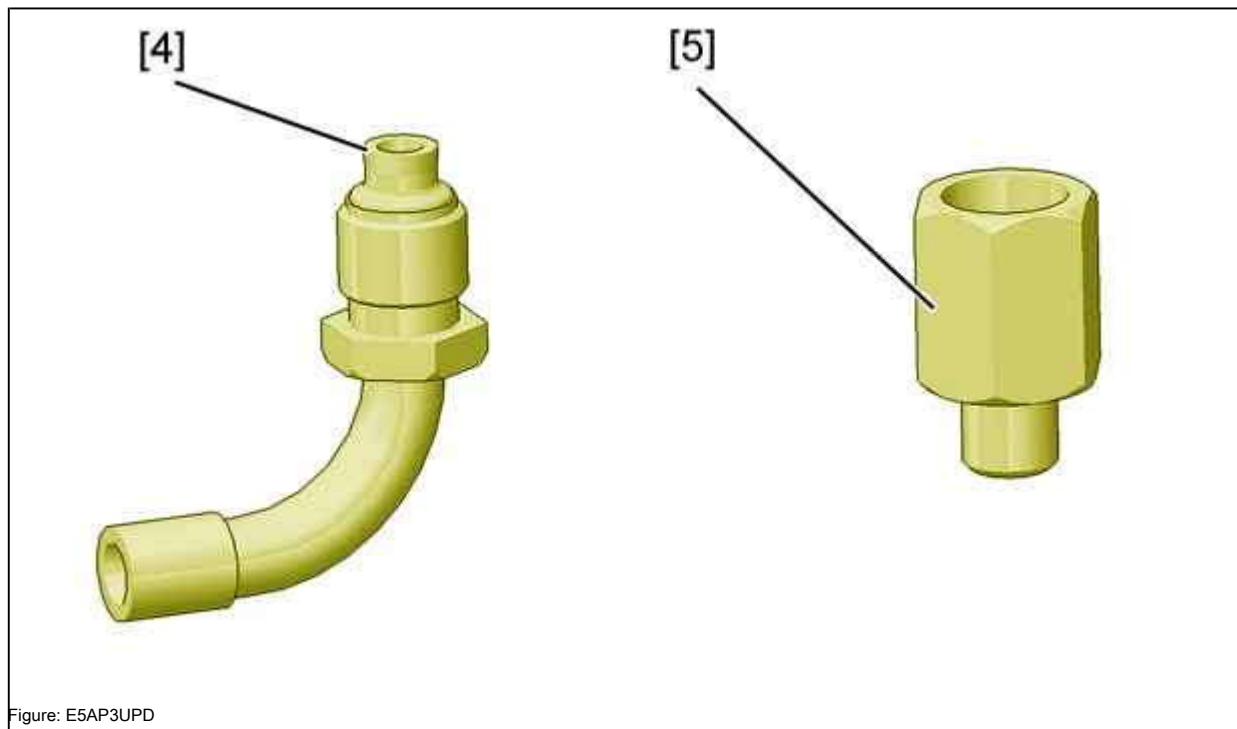


Figure: E5AP3UPD

Label Designation	Number (reference)	
[4]	SAGINAWM16 X 150 () .0710E1Z SAGINAWM16 X 150 ()	
[five]	.0710E2Z	

2. Necessary precautions

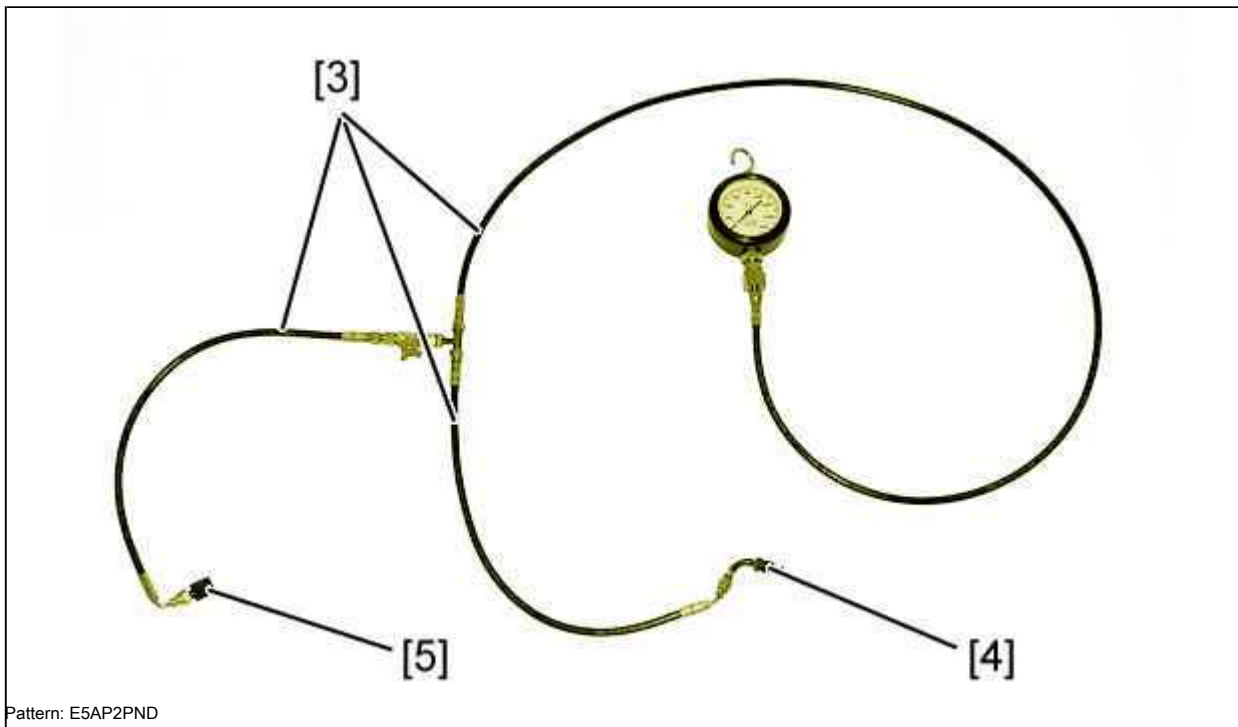
ATTENTION : Do not allow contaminants to enter the hydraulic power steering circuit.

NOTE: Proper operation of the device requires exceptional cleanliness of the power steering fluid and hydraulic components.

Verify :

- Condition and tension of the accessory drive belt
- Power steering fluid level
- Condition of pipes and couplings

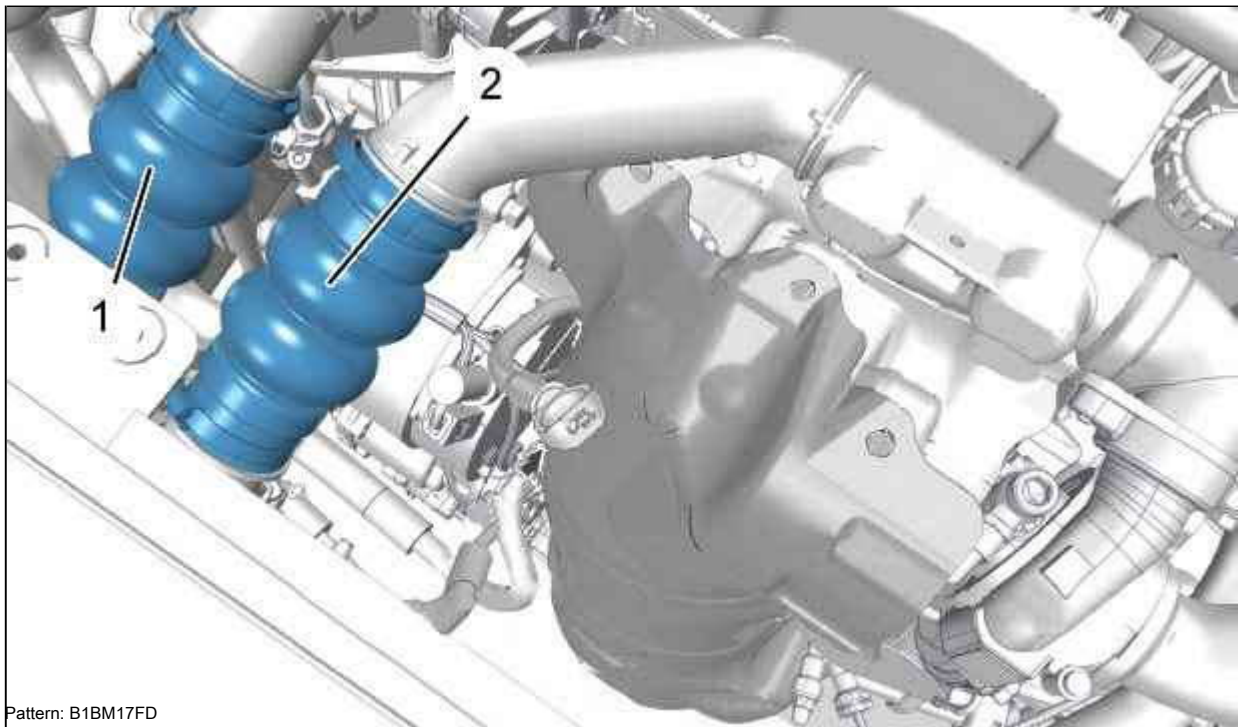
3. Application of the equipment



Collect the following gadgets: [3], [4], [5].

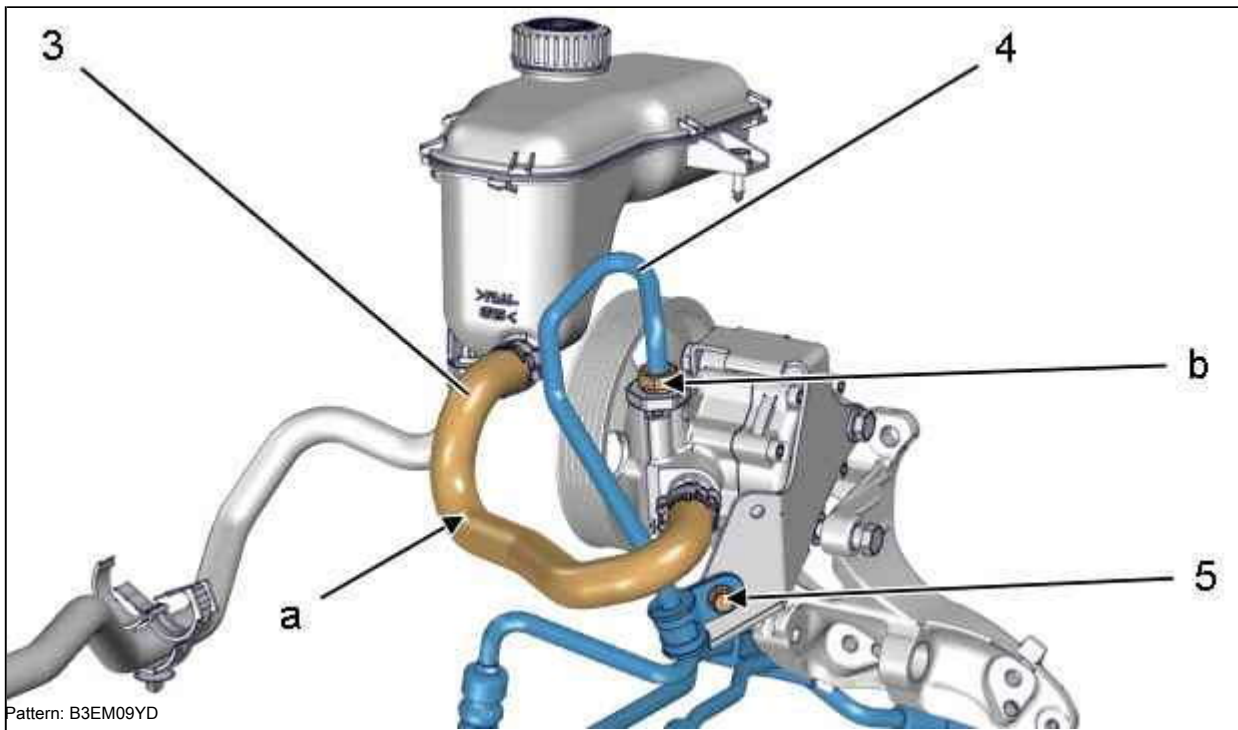
4. Preliminary operations

4.1. Diesel Engines



Remove: Air ducts (1) and (2).

4.2. Preliminary operations (continued)

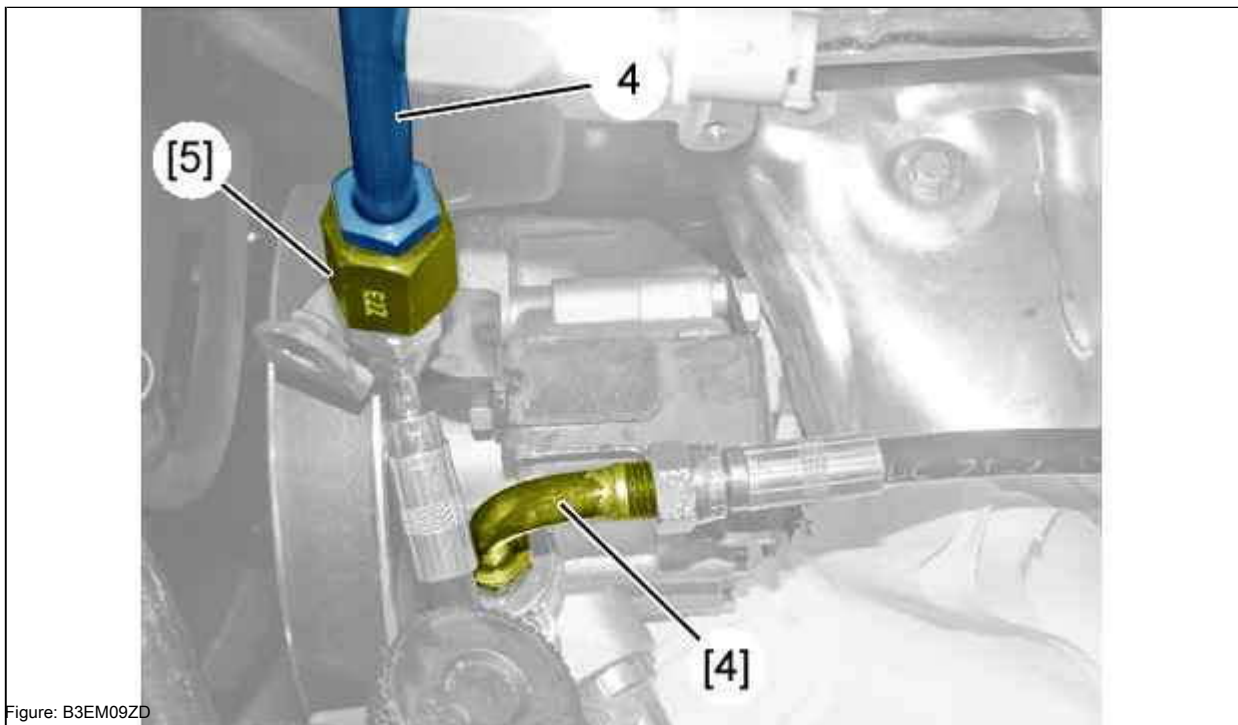


Clamp the power steering pump supply hose (3) (at "a"); Using the tool [1].

Loosen: High pressure line (4) (at "b"); Using the tool [2]. Remove the bolts (5).

ATTENTION : Prepare a container for the power steering fluid.

Disconnect the high-pressure pipe (4) (at "b"). Attach the tool [3a] to the engine hood.



Screw on:

- Coupling connection [4] of the power steering pump
- Connection [5] on the high pressure line (4)

Tighten all fittings.

Remove the tool [1].

Open the screen [3e].

ATTENTION : Check that the power steering high pressure line (4) does not touch the power steering pump pulley.

Start the engine and let it run for 5 seconds. Stop the engine.

Check the power steering fluid level. Check for leaks.

5. Checking the power steering pump pressure

Engine starting.

Close the valve [3e] for 7 seconds.

Bring the engine speed to 1200 1500 rpm, the pressure should be 102.5 ± 3.5 bar. Stop the engine.

Power-assisted steering pump pressure (Weak): Replace the power-assisted steering pump.

Power Steering Pump Pressure (Correct): Problem in the steering gear.

NOTE: After confirming the absence of reinforcement (empirically before checking the pressure), replace the power steering mechanism.

6. Installation

Clamp the power steering pump supply hose (3) (at "a"); Using the tool [1].

Remove:

- Connection [5] high pressure line for power steering (4)
- Coupling connection [4] of the power steering pump
- devices [3], [4], [5]

Connect: Power steering high pressure pipe (4) (at "b"). Install the screw (5); Tighten to 0.8 ± 0.2 da.Nm.

Tighten to a torque of 2 ± 0.3 da.Nm; Power steering high pressure pipe (4) (in "b"); Using the tool [2].

Remove the tool [1].

6.1. Diesel Engines

Install air lines (2), (1).

6.2. Installation (continued)

ATTENTION : Use new oil to bleed and top up the power steering hydraulic circuit.

Fill the power steering reservoir up to the maximum level mark.

Blow out the power steering circuit



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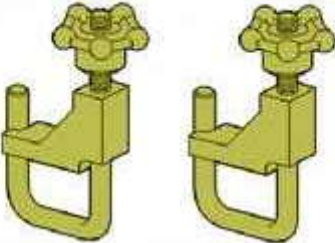

REMOVAL REFITTING: POWER STEERING PUMP

MANDATORY: Observe the cleanliness and safety rules

i

ATTENTION : Wait until the exhaust heat shield has cooled to avoid scalding.

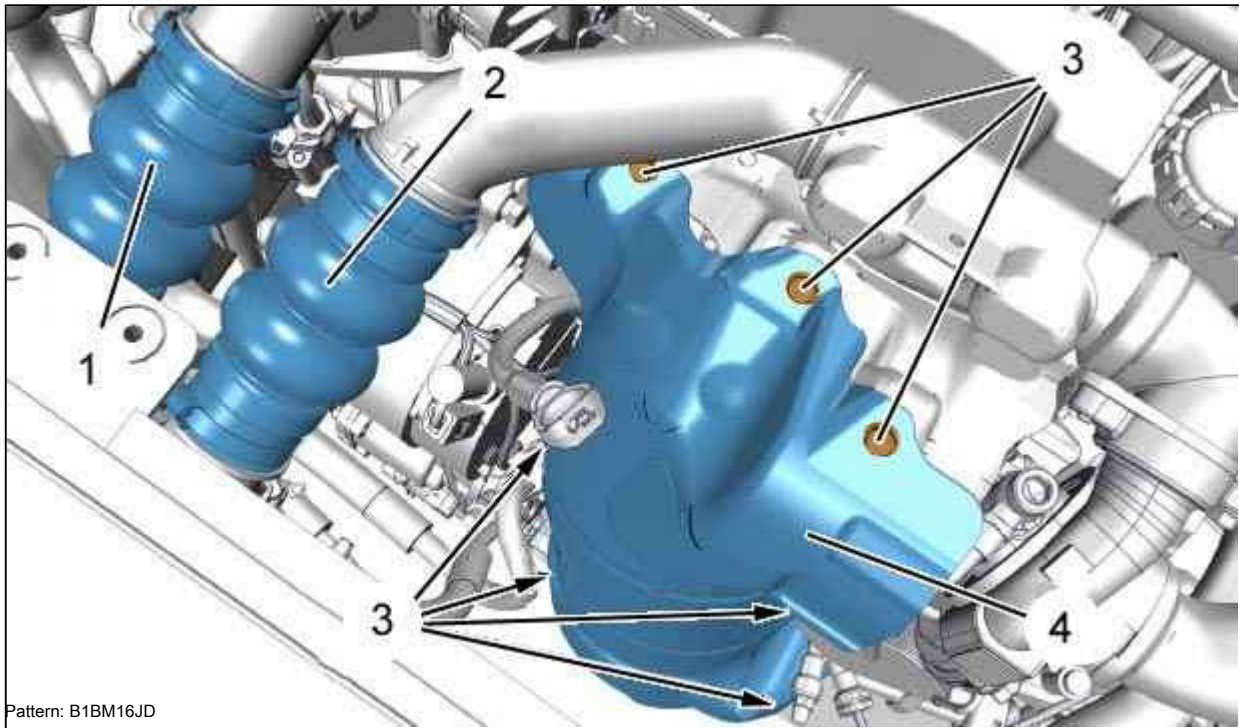
1. Equipment

tool	room	Designation
	(reference)	
	[1512]	set of two hose clips
<div><div>[1512] [4153-T]</div><div></div><div>Figure: E5AG085T</div></div>	[4153T]	
	[1603G]	pipe wrench
<div><div>[1603-G]</div><div></div><div>Pattern: E5APZYZT</div></div>		

2. Removal

Raise and secure the vehicle in the raised position. Disconnect the battery.

Remove the attachment drive belt.



NOTE: Protect the radiator of the cooling system.

Remove:

- Air ducts (1) and (2)
- bolts (3)
- Heat shield (4)

ATTENTION : Protect the generator from oil.

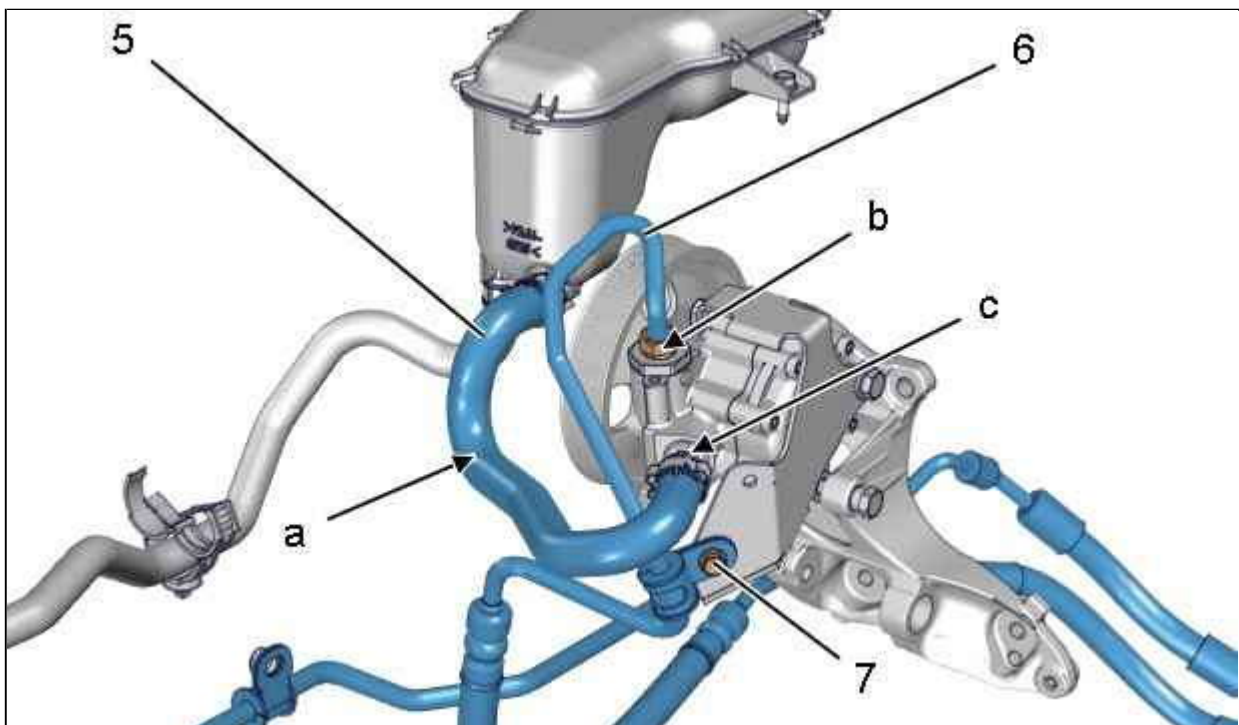


Figure: B3EM09FD

Clamp the power steering pump supply hose (5) (at "a"); Using the tool [1512 / 4153T].

Loosen the power steering high pressure pipe (6) (at "b"); Using the tool [1603G].

Remove the bolts (7).

Disconnect (Prepare power steering fluid container):

- Power steering high pressure pipe (6) (in "b")
- Power steering pump fluid supply pipe (5) (in "c")

Seal the openings of the hydraulic system; Using temporary plugs.

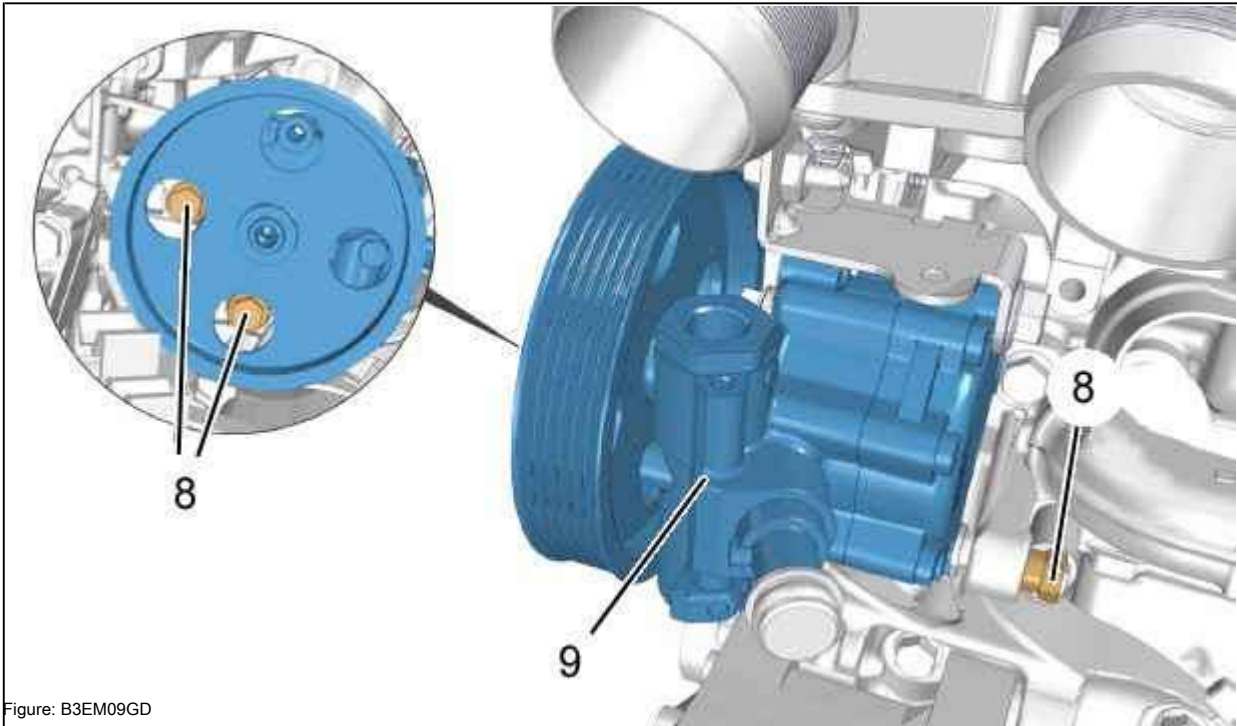


Figure: B3EM09GD

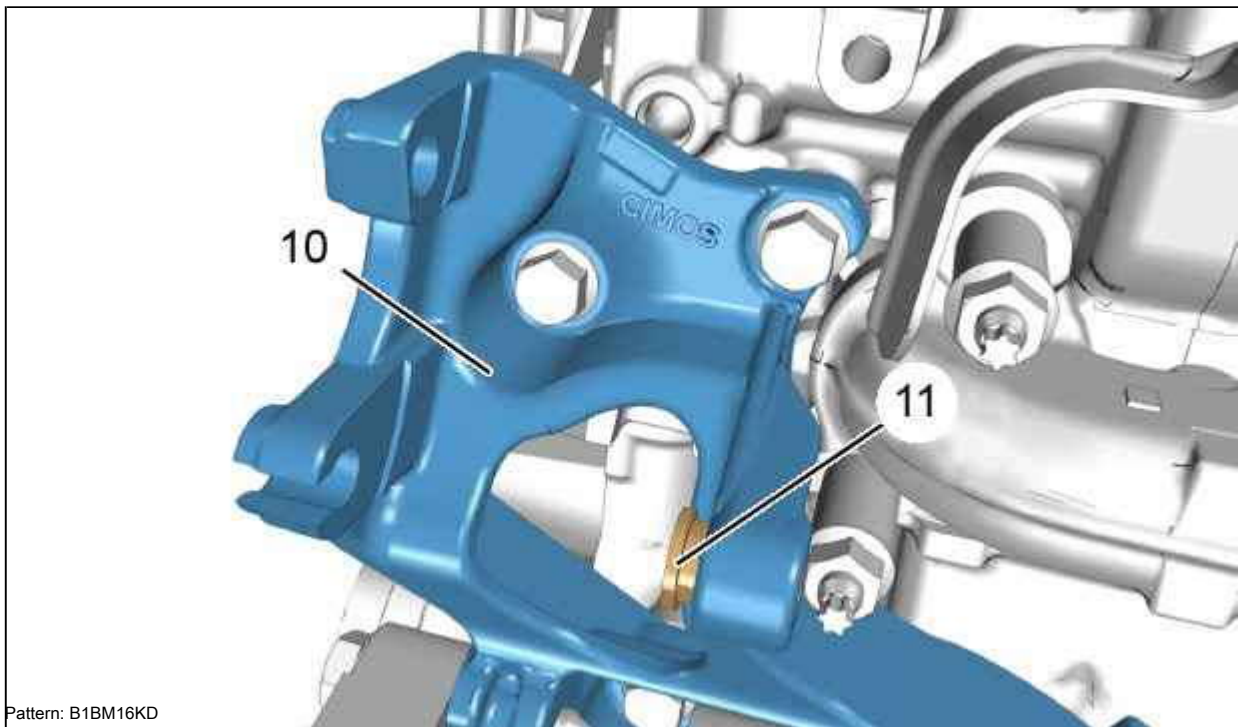
Remove:

- the bolts (8)
- Power steering pump (9)

3. Installation

ATTENTION : Observe the required tightening torques





ATTENTION : Before reinstalling the power steering, check for the presence of the bushing (11) on its support (10).

Install:

- Power steering pump (9)
- the bolts (8)

Attach:

- Power steering pump fluid supply pipe (5) (in "a")
- Power steering high pressure pipe (6) (in "b")

Install the screw (7).

Tighten the power steering high pressure pipe (6) (at "b"); Using the tool [1603G].

Remove the tool [1512 / 4153T].

Install:

- Heat shield (4)
- bolts (3)
- Air ducts (1) and (2)
- Remove the attachment drive belt.

Reconnect the battery.

Fill the power steering system with working fluid



ATTENTION : Perform the operations to be performed after removing the battery



REMOVAL REFITTING: POWER STEERING PUMP (GEP)

MANDATORY: Observe the cleanliness and safety rules.



1. Recommended equipment

Diagnostic device.

2. Removal

Disconnect the battery.

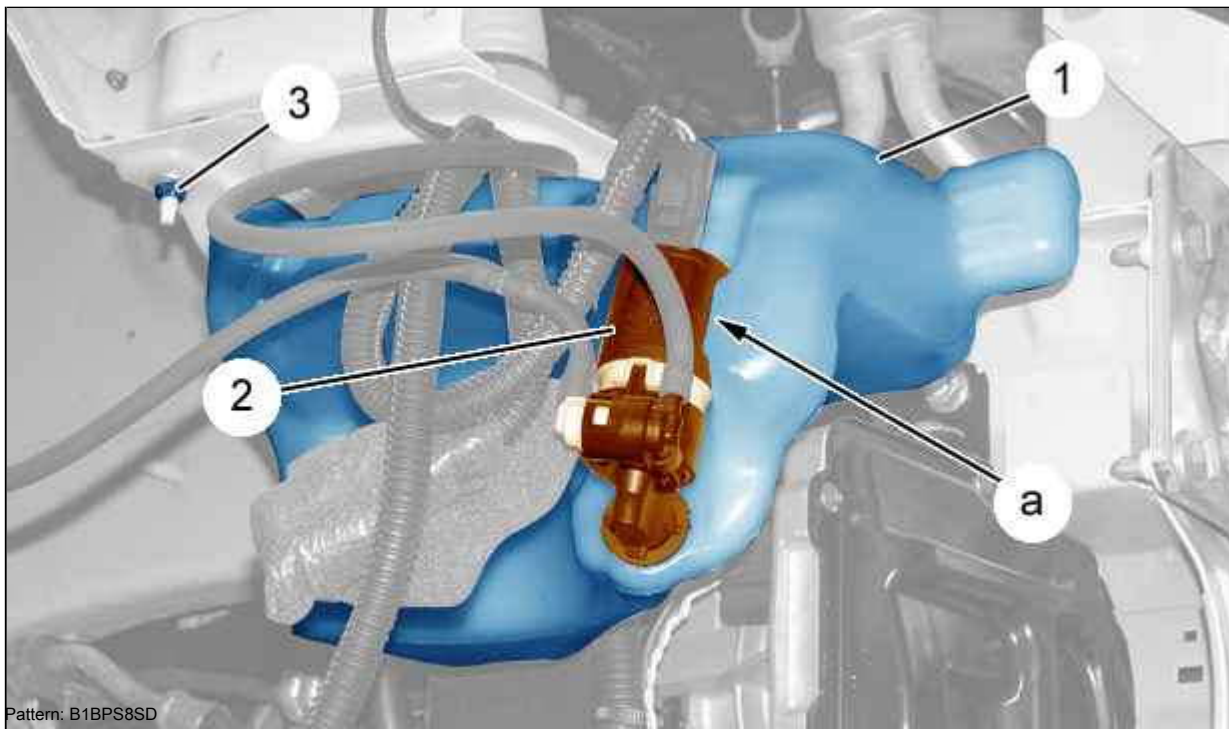
ATTENTION : Open the circuit carefully to prevent dirt particles from entering.

Remove: Washer fluid filler neck. Unlock the right front wheel bolts.

Raise and secure the vehicle by hanging the front wheels. Remove:

- Wheel Bolts (Front Right)
- Front right wheel
- Front bumper

Drain the power steering oil

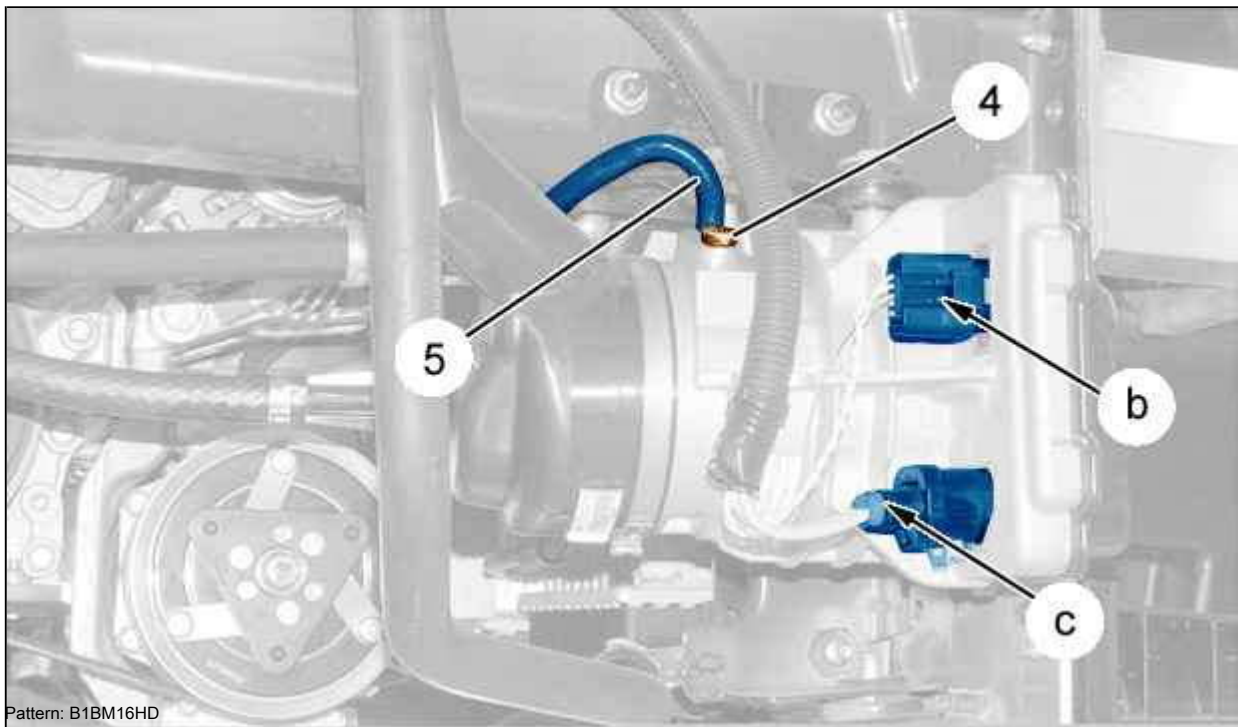


Pattern: B1BPS8SD

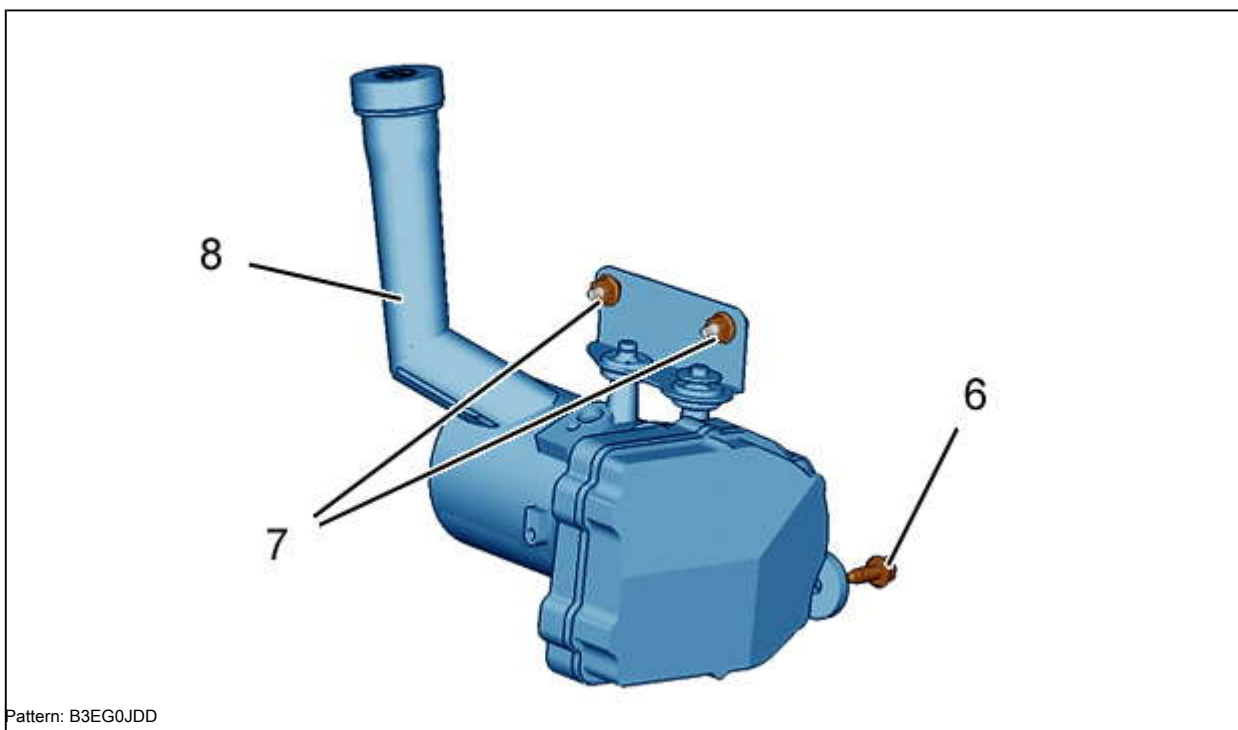
Place a container under the washer fluid reservoir (1). Remove: The electric screenwash pump (2) (in "a").

Drain: Washer fluid reservoir (1). Remove:

- Nut (3)
- Windscreen washer reservoir (1)



Remove the bolt (4).
 Disconnect the tube (5).
 Seal openings on hydraulic system. Disconnect the electrical connectors
 (in "b", "c").



Remove:

- Bolt (6)
- Nuts (7)
- The power steering pump assembly (8)

3. Installation

ATTENTION : Observe the required tightening torques.

Tightening torques:

- **Power steering**
- **wheels**



Install:



- The power steering pump assembly (8)
- Nuts (7)
- Bolt (6)

Reconnect the connectors (in "b", "c").

NOTE: Replace the tube O-ring (5) periodically each time it is removed.

Connect the hose (5).

Install the bolt (4).

Install:

- Windscreen washer reservoir (1)
- Nut (3)
- Theelectric screenwash pump (2) (in "a") Front bumper
- Front right wheel
- Wheel Bolts (Front Right)

Tighten the wheel bolts.

Install: Washer fluid filler neck (1).

ATTENTION : Perform the operations to be performed after removing the battery



Reconnect the battery.

Prime and purge the power steering hydraulic circuit



4. Programming

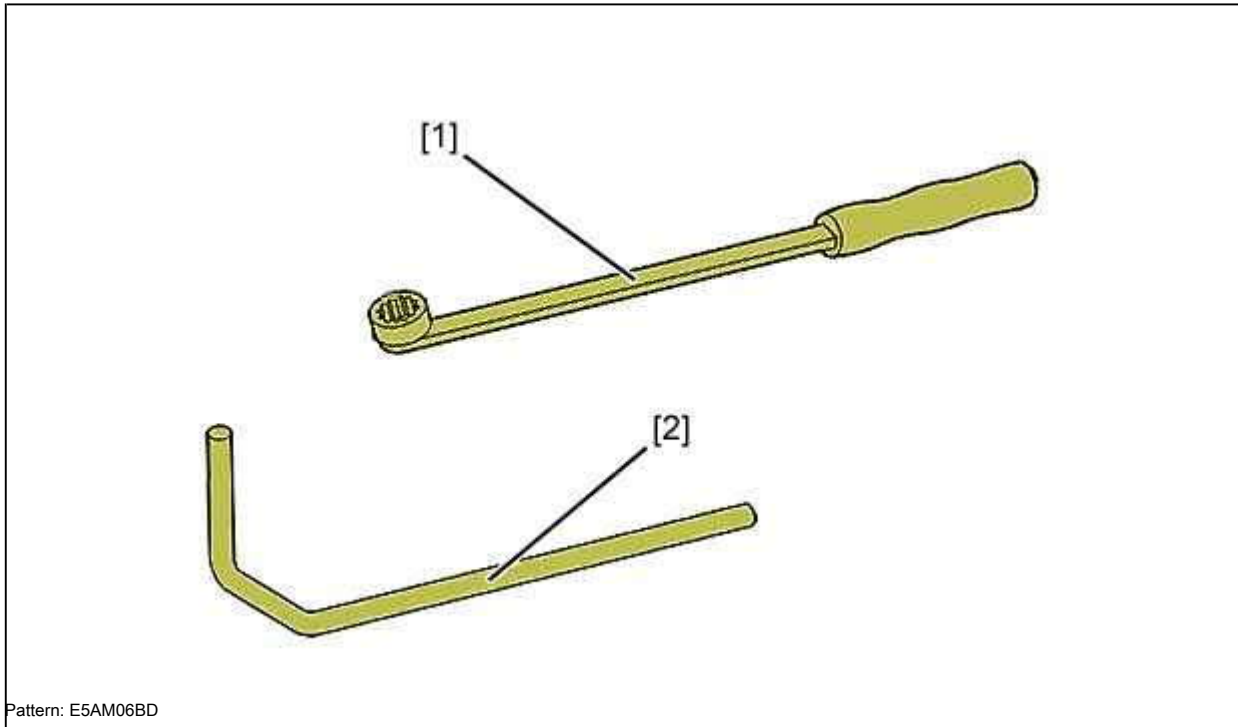
Carry out the telecoding of the power-assisted steering pump assembly; Using the scan tool.

REMOVAL REFITTING: ANCHORED EQUIPMENT DRIVE BELT (POWER STEERING)

MANDATORY: Observe the cleanliness and safety rules



1. Recommended equipment



Pattern: E5AM06BD

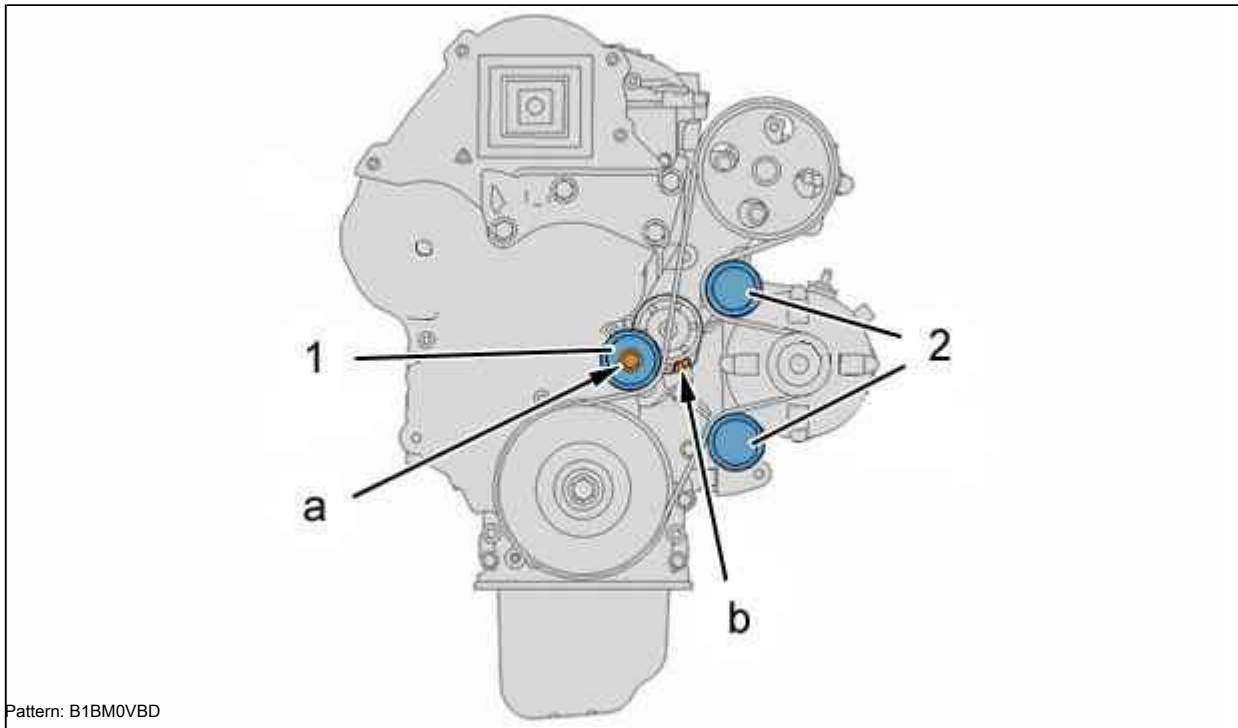
[1] Lever for spring compression of dynamic tensioner (). 0188Z. [2] Pin for dynamic tensioning roller (). 0194F.

2. Removal

Disconnect the battery. Remove:

- Front right wheel
- Under engine guard

2.1. Car without air conditioning



ATTENTION : Mark the mounting direction of the ancillary drive belt if reused.

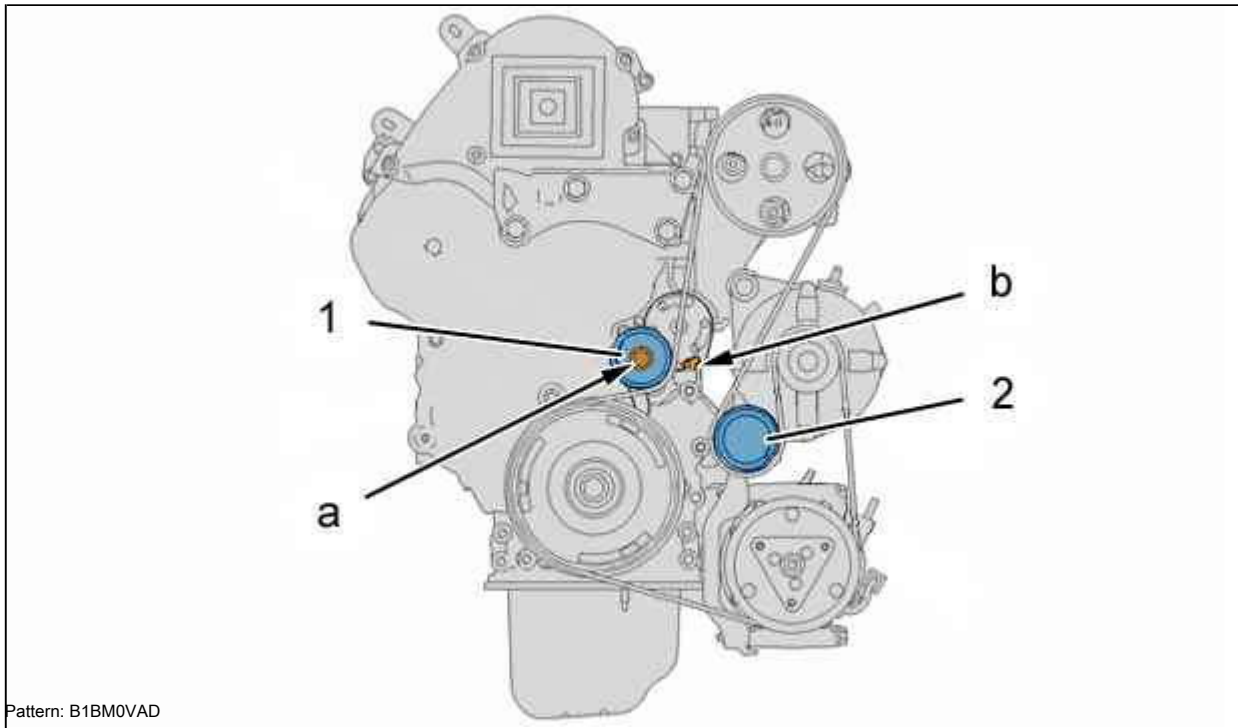
Squeeze the dynamic tensioner roller (1) by pushing in "a" (clockwise); Using the tool [1].

Secure with a pin (at "b"); Using a pin [2].

Hold dynamic tensioner roller (1) compressed and remove bodywork belt.

ATTENTION : Make sure that the rollers (1), (2) rotate freely (without play and jamming).

2.2. Car air conditioner



ATTENTION : Mark the mounting direction of the ancillary drive belt if reused.

Squeeze the dynamic tensioner roller (1) by pushing in "a" (clockwise); Using the tool [1].

Secure with a pin (at "b"); Using a pin [2].

Hold dynamic tensioner roller (1) compressed and remove bodywork belt.

ATTENTION : Make sure that the rollers (1), (2) rotate freely (without play and jamming).

3. Installation

ATTENTION : Drive belt that has already been used: Observe the direction of installation of the drive belt.

Replace the ancillary drive belt.

Squeeze the dynamic tensioner roller (1) by pushing in "a" (clockwise); Using the tool [1].

Remove the pin [2].

ATTENTION : Observe the normal installation of the attachment drive belt in the grooves of the various pulleys.

Install:

- Under engine guard
- Front right wheel

Reconnect the battery.

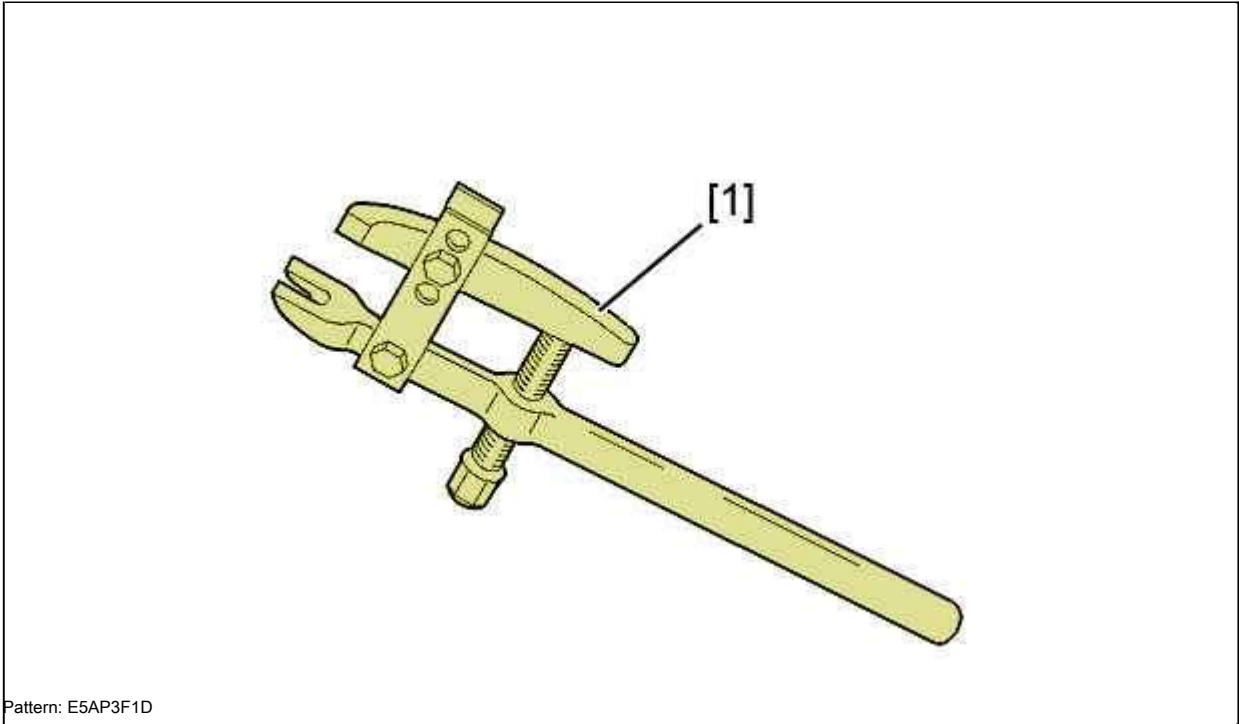
ATTENTION : Follow the steps to follow after removing the battery.

REMOVAL REFITTING: STEERING GEAR

MANDATORY: Observe the cleanliness and safety rules

i

1. Recommended equipment



Label Designation		Number (reference)	Number (reference)
[1]	Ball joint puller 1892T		() .0709

2. Removal

ATTENTION : Set the wheel to the straight-ahead position; Lock the steering wheel in this position.

Disconnect the battery. Unlock the front wheel bolts.

Raise and secure the vehicle by hanging the front wheels. Remove:

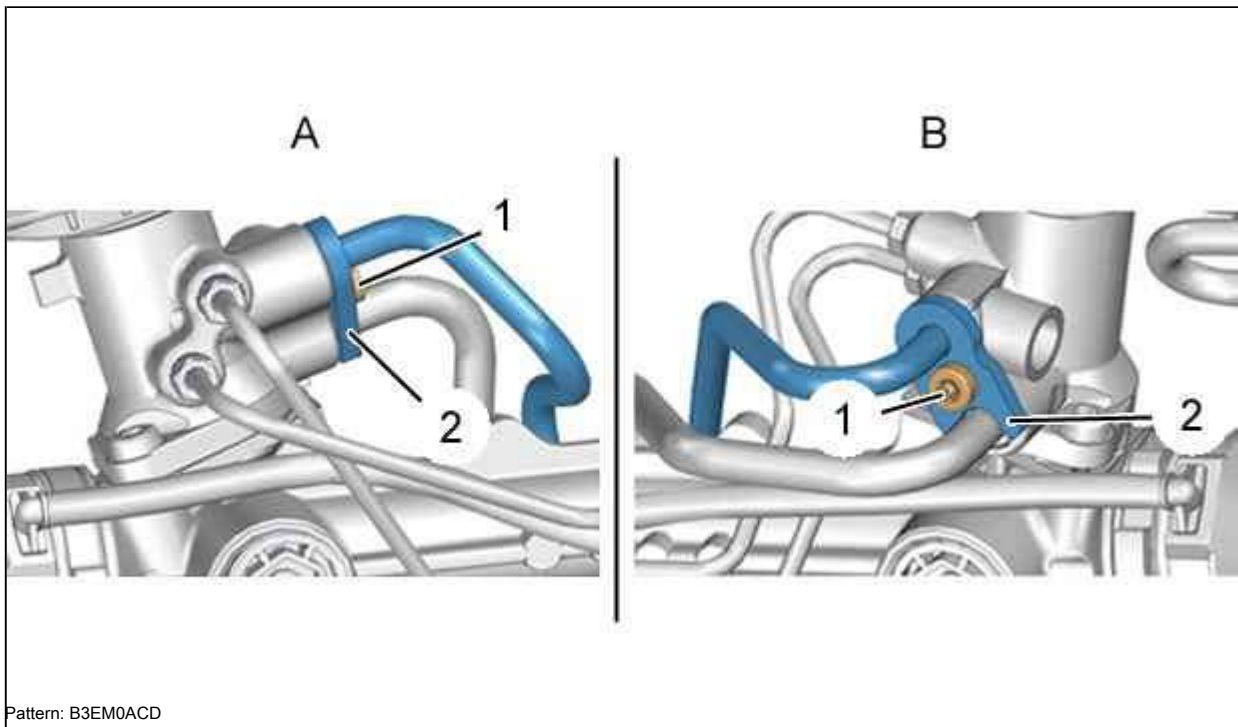
- Front wheel bolts
- Front wheels
- **Front right wheel arch liner**

Slater operating fluid from the hydraulic power steering circuit

Remove:

- **Sub-frame**
- Thermal protection of the steering mechanism

Secure the steering gear to the exhaust manifold.



ATTENTION : Handle the power steering valve with care using the correct tool to avoid damage.

"A": left-hand drive. "B": right-hand drive. Remove the bolts (1).

Disconnect clamp (2) for power steering valve.

ATTENTION : Open the circuit carefully to prevent dirt particles from entering.

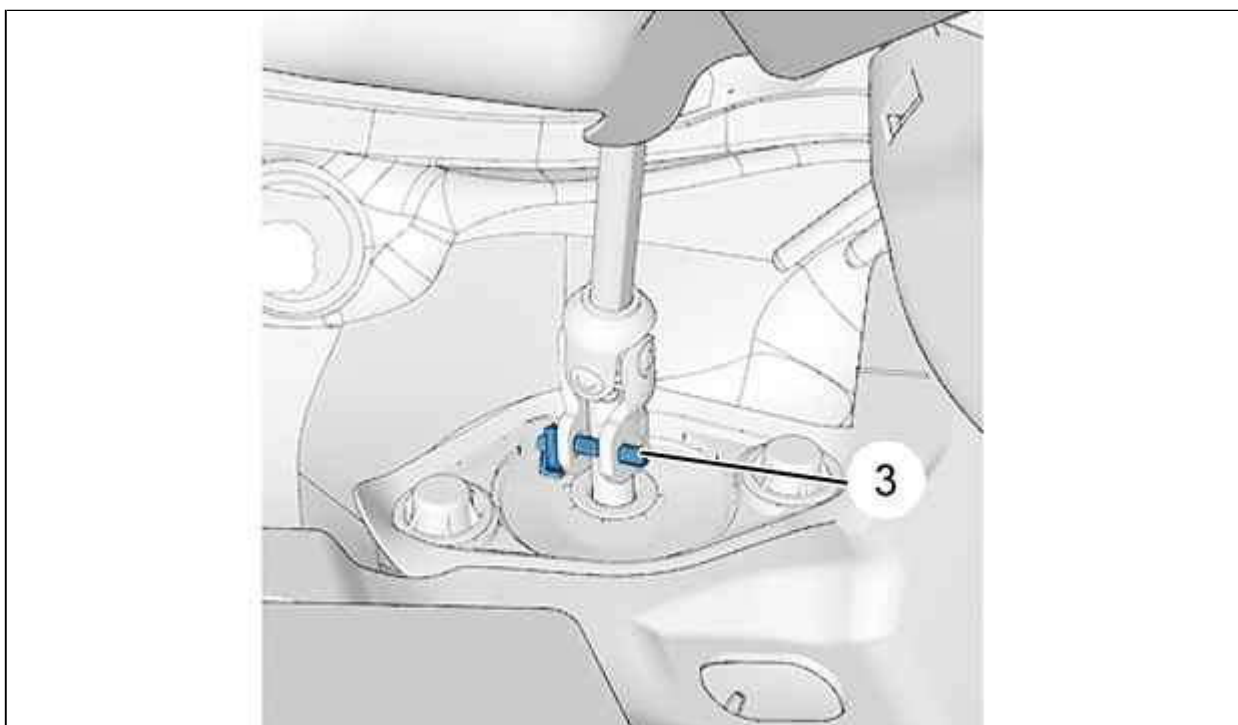
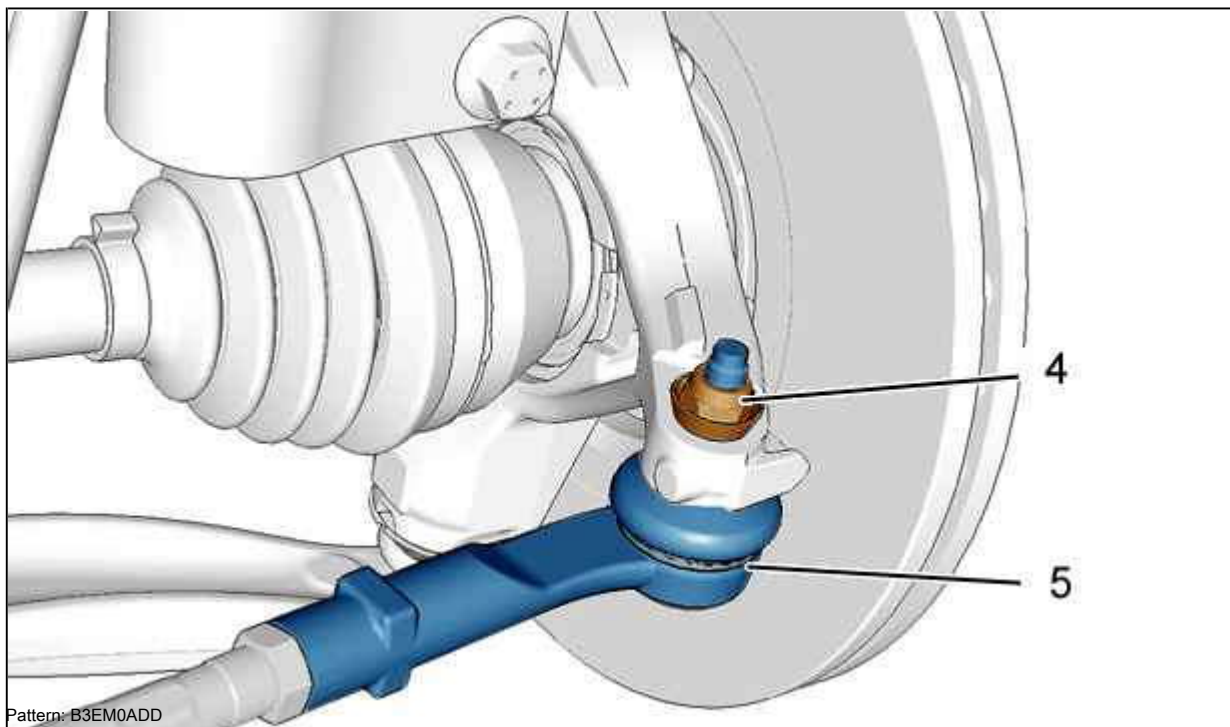


Figure: B3EP1B7D

Remove the bolts (3).

Disconnect the steering column from the steering gear.



Remove the tie rod ball nut (4) (each side).

Disconnect the tie rod ball joint (5); Using the tool [1] (on each side).

Remove the steering gear.

3. Installation

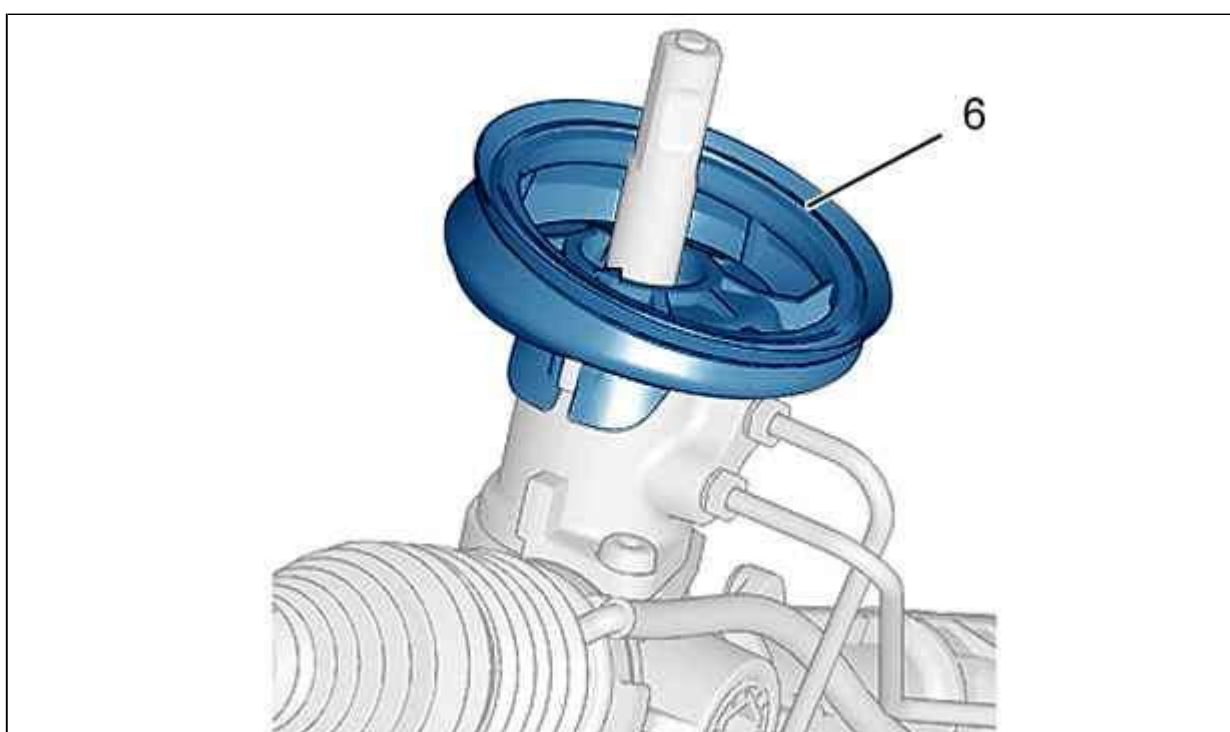


Figure: B3EP1B9D

Install a new rubber gasket (6).

Remove the steering box; Secure the steering box to the exhaust manifold.

Attach the tie rod ball joint (5) (on each side).

Install the nut (4) of the steering end; Tighten to 4.5 ± 0.4 da.Nm (on each side).

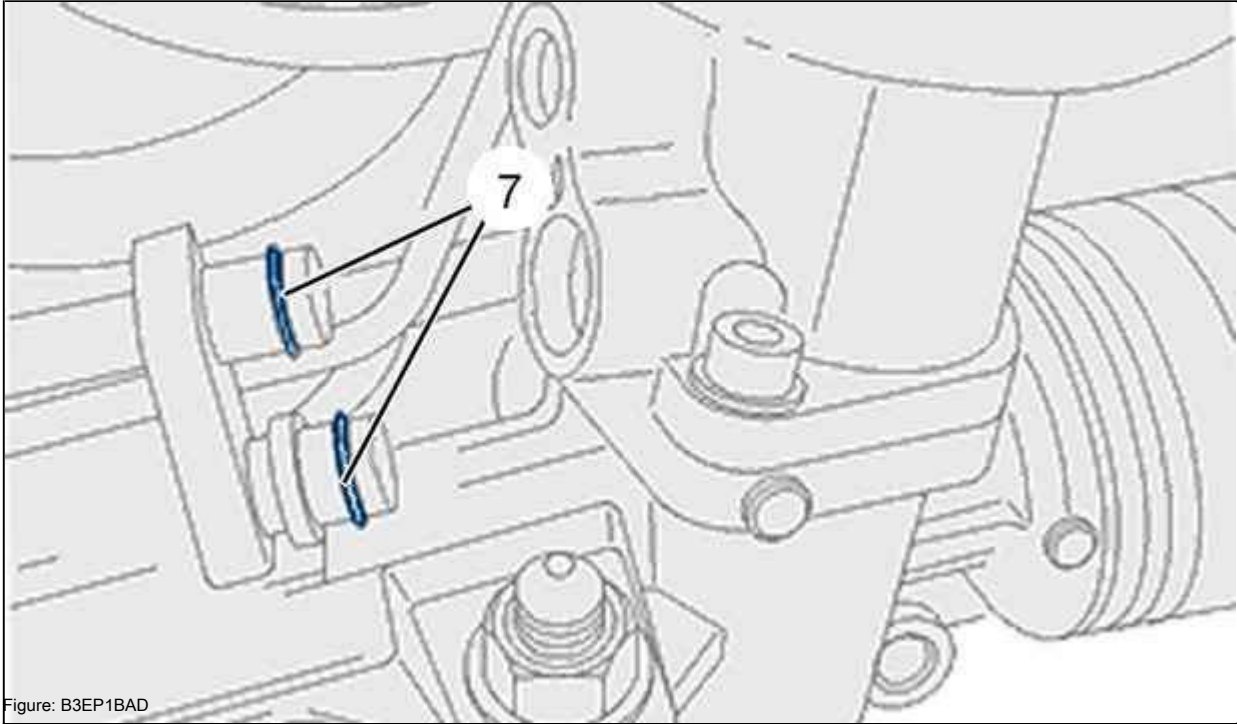


Figure: B3EP1BAD

NOTE: Each time it is removed: Periodically replace the gaskets (7).

Connect the clamp (2) for the power steering valve. Install:

- Bolt (1); Tightening torque 1.9 ± 0.2 da.Nm
- Thermal protection of the steering mechanism

ATTENTION : Do not forget the O-rings between the subframe and the steering gear.

Install front subframe

Connect the steering column to the steering gear. Install:

- Bolt (3); Tightening torque 2 ± 0.2 da.Nm
- **Front right wheel arch liner**
- Front wheels
- Front wheel bolts

Lower the vehicle to the ground.

Tighten the wheel bolts:

- Aluminum rim: Tightening torque 9 ± 9.2 da.Nm
- Forged steel wheel rim: Tightening torque 11 ± 11.2 da.Nm

Reconnect the battery.

ATTENTION : Perform the operations to be performed after removing the battery

Prime and purge the power steering hydraulic circuit

Check and adjust the cam rate.



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