400-660LC42003

REPAIR MANUAL

REPARATURANLEITUNG

MANUALE DI RIPARAZIONE

MANUEL DE RÉPARATION

MANUAL DE REPARACIÓN

ART.NR.: 3.206.006-E

MOTOREX Oil of Switzerland
KTM Group Partner

suspension WP

TÜV

400-660LC4

REPAIR MANUAL

IMPORTANT INFORMATION/UPDATING INSTRUCTIONS

To be able to continue using the existing loose-leaf repair instructions, simply print the following pages and insert them in the existing repair instructions:

15-18, 20-28, 32, 35, 40-54, 64, 66-69, 73, 77, 79-81, 84-207, 219, 280-291, 314-319, 323, 378-387

Remove page (s)	Replace by page (s)	Insert page (s)	after page
2-1C to 2-3C	2-1D to 2-3D	2-5D	
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3-3	3-3D		
4-1A	4-1D		
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12-2C	12-2D	12-57D to 12-66D	

KTM REPAIR MANUAL IN LOOSE-LEAF FORM

STORING THE REPAIR MANUAL IN THE BINDER

– Put the index into the binder.
– Put the front page of the repair manual (210x297 mm) into the transparent pocket provided for this purpose on the outside of the binder.
– Put the spine label (170x45 mm) into the transparent pocket provided for this purpose on the spine of the binder.
– Put the summary list of contents (150x297 mm) into the transparent pocket provided for this purpose on the inside of the binder or insert this page on the beginning of the manual.
– Then insert the individual chapters of the manual between the sheets of the index according to the page number printed in the right bottom corner of each page.
  Example: page no. 3-5 3 = chapter 3 5 = page 5
  All pages with a page number that begins with the digit 3, for example, must be put under the index heading „Chapter 3“.
– Index sheets that have not been marked with a certain chapter are for your personal convenience. The respective headings can be entered in the list of contents.

EXPLANATION - UPDATING

3.205.49-E	**Repair Manual LC4** **Basicversion Modelyear 1998** **(Engine number with first digit „8“)**	**6/1998**
3.205.73-E	**Updating of Rep.Manual LC4** **Modelyear 1999** **(Engine number with first digit „9“)**	**7/1999**
3.205.89-E	**Updating of Rep.Manual LC4** **Modelyear 2000/2001** **(Engine number with first digit „0“ and „1“)**	**9/2000**
3.210.30-E	**Updating of Rep.Manual LC4** **Modelljahr 2002** **(Engine number with first digit „2“)**	**12/2001**
3.206.006-E	**Updating of Rep.Manual LC4** **Modelljahr 2003** **(Engine number with first digit „3“)**	**4/2003**

Modification / Updating:
Special tools, hydraulic clutch, Keihin carburator,
technical details model 2003, technical specification,
Maintenance schedule and wiring diagrams for modell 2003

Art.-Nr. 3.206.006 -E

Edition 4/2003

INTRODUCTION

This repair manual offers extensiv repair-instructions and is an up-to-date version that describes the latest models of the series. However, the right to modifications in the interest of technical improvement is reserved without updating the current issue of this manual.

A description of general working modes common in work shops has not been included. Safety rules common in the work shop have also not been listed. We take it for granted that the repairs are made by qualified profesionally trained mechanics.

Read through the repair manual before beginning with the repair work.

⚠ WARNING ⚠

STRICT COMPLIANCE WITH THESE INSTRUCTIONS IS ESSENTIAL TO AVOID DANGER TO LIFE AND LIMB.

! CAUTION !

NON-COMPLIANCE WITH THESE INSTRUCTIONS CAN LEAD TO DAMAGE OF MOTORCYCLE COMPONENTS OR RENDER MOTORCYCLES UNFIT FOR TRAFFIC !

„NOTE" POINTS OUT USEFUL TIPS.

Use only **ORIGINAL KTM SPARE PARTS** when replacing parts.

The KTM high performance engine is only able to meet user expectations if the maintenance work is performed regularly and professionally.

TÜV MANAGEMENT SERVICE ISO 9001
REG.NO. 12 100 6061

KTM Austria's certificate of achievement for its quality system ISO 9001 is the beginning of an ongoing total reengineered quality plan for a brighter tomorrow.

KTM Sportmotorcycle AG
5230 Mattighofen, Austria

REPLY FAX FOR REPAIR MANUALS

We have made every effort to make our repair manuals as accurate as possible but it is always possible for a mistake or two to creep in.

To keep improving the quality of our repair manuals, we request mechanics and shop foremen to assist us as follows:

If you find any errors or inaccuracies in one of our repair manual – whether these are technical errors, incorrect or unclear repair procedures, tool problems, missing technical data or torques, inaccurate or incorrect translations or wording, etc. – please enter the error(s) in the table below and fax the completed form to us at 0043/7742/6000/5349.

NOTE to table:
- Enter the complete item no. for the repair manual in column 1 (**e.g.: 3.210.66-E**).
  You will find the number on the cover page or in the left margin on each right page of the manual.

- Enter the corresponding page number in the repair manual (**e.g.: 5-7c**) in column 2.

- Enter the current text (inaccurate or incomplete) in column 3 by quoting or describing the respective passage of the text. If your text deviates from the text contained in the repair manual, please write your text in German or English if possible.

- Enter the correct text in column 4.

Your corrections will be reviewed and incorporated in the next issue of our repair manual.

Item no. of repair manual	Page	Current text	Correct text

Additional suggestions, requests or comments on our Repair Manuals (in German or English):

Name mechanic/shop foreman **Company/work shop**

GENERAL INFORMATION 2

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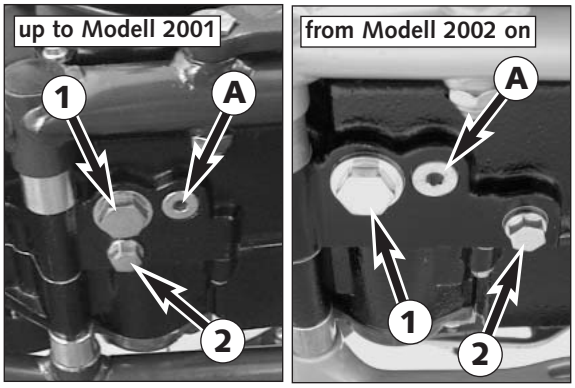
Art.-Nr. 3.206.006 -E



Changing the engine oil (models without frame oil)

NOTE: The engine oil change is to be carried out when the engine is still warm.

⚠ **WARNING** ⚠

AN ENGINE HAVING BEEN RUN WARM, AND THE ENGINE OIL IN IT ARE VERY HOT - DO NOT BURN YOURSELF.

– Place the motorbike on a horizontal surface. Remove the two plugs (❶ and ❷), and drain oil into a container.

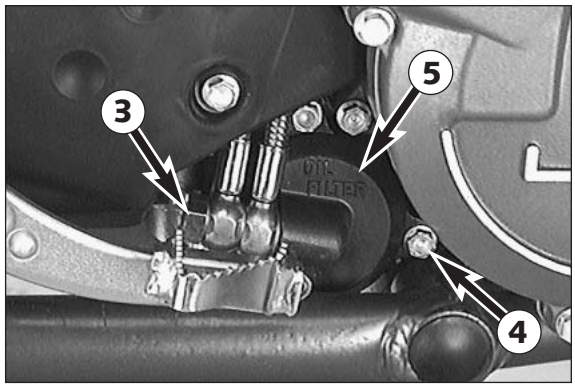
NOTE: A third plug was installed in the 660 SMC model. Tightening torque: 20 Nm

! **CAUTION** !

THE SCREW PLUG Ⓐ MUST NOT BE REMOVED, THIS IS PART OF THE BY-PASS VALVE.

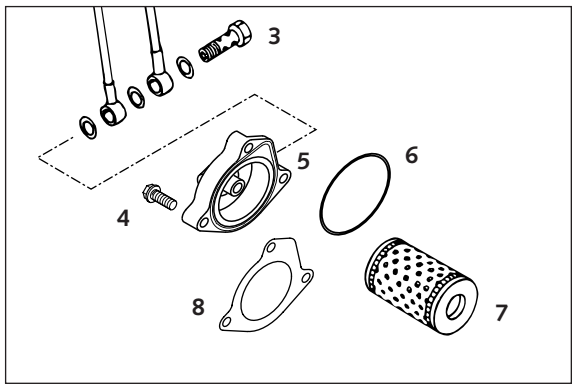
– Clean the plugs thoroughly with a fireproof solvent and compressed air, in order to remove the metal abrasion.
– After all the oil has drained through, clean raised and flat faces and install plugs with seals. Tighten plug ❶ with 30 Nm (22 ft.lb) and plug ❷ with 20 Nm (15ft.lb).
– Remove the oil dipstick at the clutch cover, pour in engine oil and replace the oil dipstick.

Oil capacity (up to model 2002) : 1.40 l
Oil capacity (from model 2003 on) : 1.50 l



Changing the oil filter

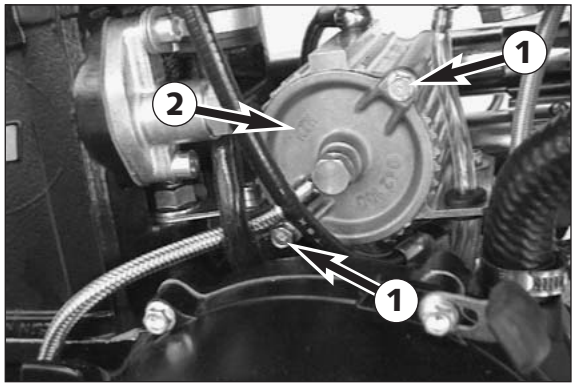
Replace the oil filter when changing the engine oil.
– Press the foot brake pedal and place a screwdriver or similar between foot brake pedal and stopper roll so that the oil filter cover is more accessible.
– Remove banjo bolt ❸ and the three bolts ❹.
– Remove oil filter cover ❺ and oil filter.
– Clean filter housing, oil filter cover and sealing surfaces. Check oil duct in oil filter cover if clogged.



– Press the new O-ring ❻ into the groove of the filter cover (if necessary fix with grease). Mount a new oil filter ❼ on the connection piece of the oil filter cover an mount the whole unit.

NOTE: From model 2001 onwards the gasket ❽ is mounted with a changed filter cover ❺. If the new gasket ❽ should be used on older engines, the filter cover must be flat regrinded or renewed (see Technical Info Nr. 0201/30/01).

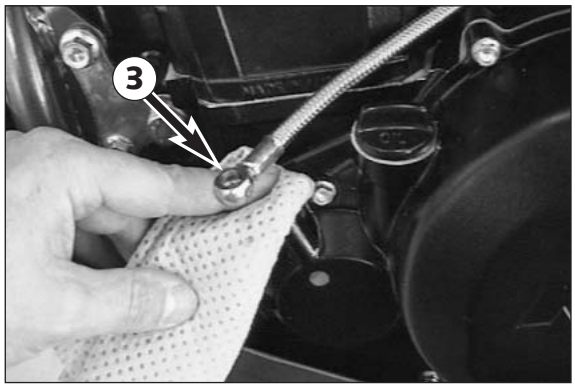
– Mount three bolts and tighten with 5 Nm (4 ft.lb).
– Mount hollow bolt with seal rings and tighten with 15 Nm (11 ft.lb).



Changing the microfilter

Replace the microfilter while changing the engine oil.

– To do so, remove bolts ❶ and take off the microfilter cover ❷.
– Remove the microfilter, clean its parts and check the O-ring on the microfilter cover for signs of damage.
– Insert a new microfilter into the filter housing, tilt the motorcycle sideways and fill the microfilter housing with engine oil.
– Slightly grease the O-ring and mount the microfilter cover. Then put the motorcycle back on its stand.

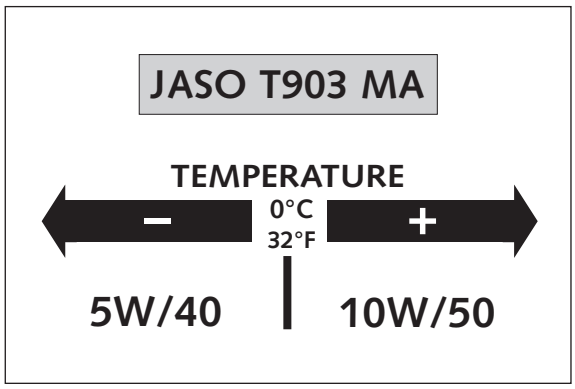


– It is necessary to bleed the microfilter so that all lubricating points can be quickly supplied with engine oil.
– To do this, fill with oil and remove the jet screw from the oil line on the clutch cover.
– Start the engine and close off the bore on the clutch cover with a rag.
– Allow the engine to run at idle until oil runs out of the oil line ❸.
– Turn off the engine. Mount the jet screw, using two new seal rings.
– Torque the jet screw to 10 Nm and check for leaks.

– Start the engine and let it idle for 1 - 2 minutes.

! CAUTION !

DO NOT REV UP THE ENGINE IMMEDIATELY AFTER AN OIL CHANGE ! KEEP IN MIND THAT IT TAKES SOME TIME UNTIL ALL LUBRICATING POINTS ARE PROPERLY PROVIDED WITH ENGINE OIL.



– Allow the engine to run until warm. Then, turn off the engine, and place the motorbike on a flat, level surface in an upright position (center stand). Wait for 5 minutes. Unscrew and remove the oil dipstick, and wipe it clean with a cloth.
– Screw the dipstick in all the way and remove it again. The oil level should be between the two marks on the oil dipstick, however, it must never rise above the MAX mark. Otherwise, engine oil would get into the air filter box by way of the engine venting system. Add engine oil, if necessary.
– Finally, check oil system and engine for leaks.

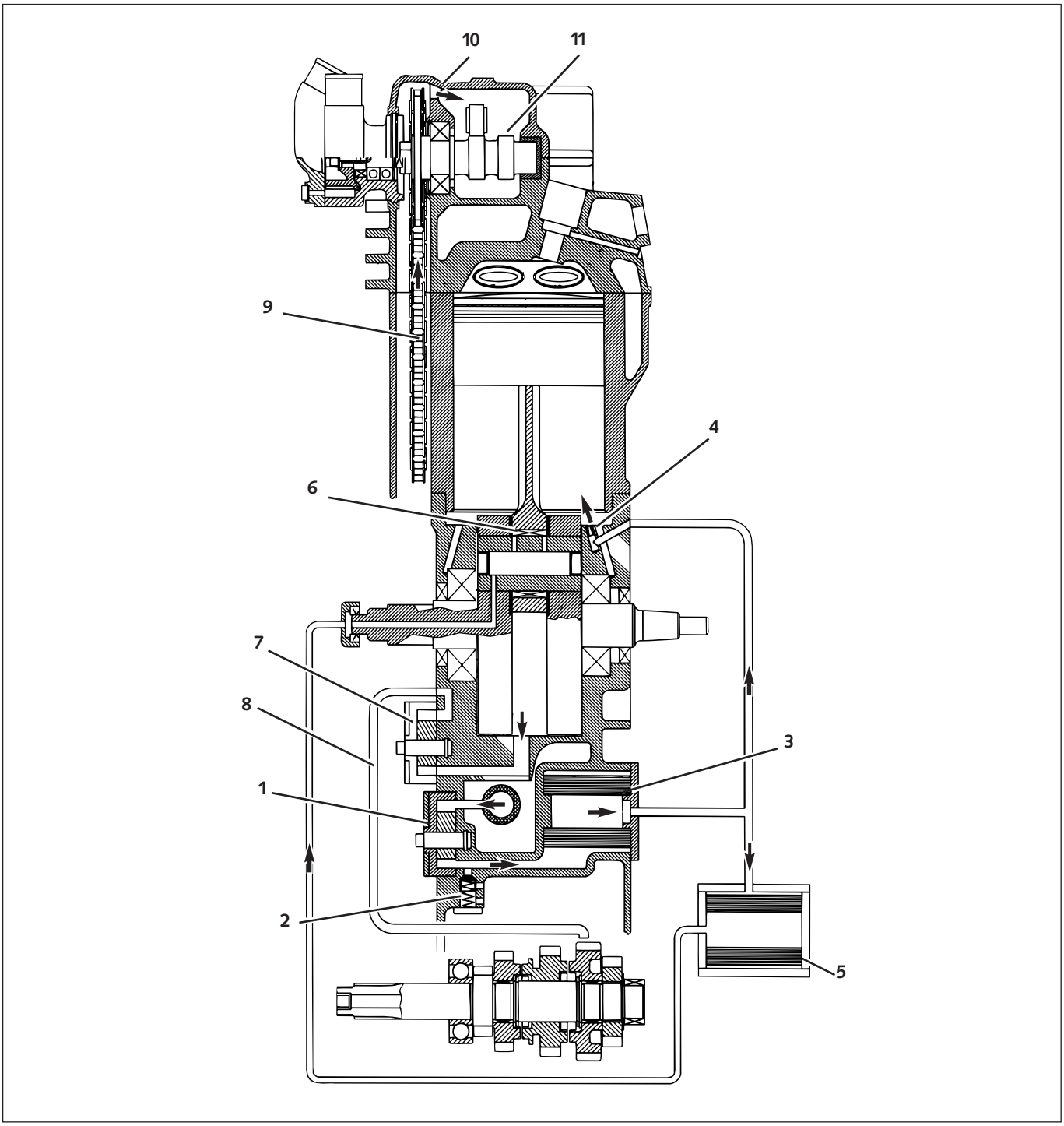
! CAUTION !

– ONLY USE HIGH-QUALITY OILS MEETING OR SURPASSING THE QUALITY REQUIREMENTS OF JASO T903 MA (FOR SPECIFICATIONS SEE CONTAINERS).
– INSUFFICIENT OIL OR POOR QUALITY OIL RESULTS IN PREMATURE WEAR OF THE ENGINE.
– YOU MAY USE EITHER MINERAL OILS OR SYNTHETIC OILS FULFILLING THE ABOVE CRITERIA.

NOTE: Dispose of used oil properly !
Under no circumstances may used oil be disposed of in the sewage system or in the open countryside.
1 liter oil contaminates 1.000.000 liter water.

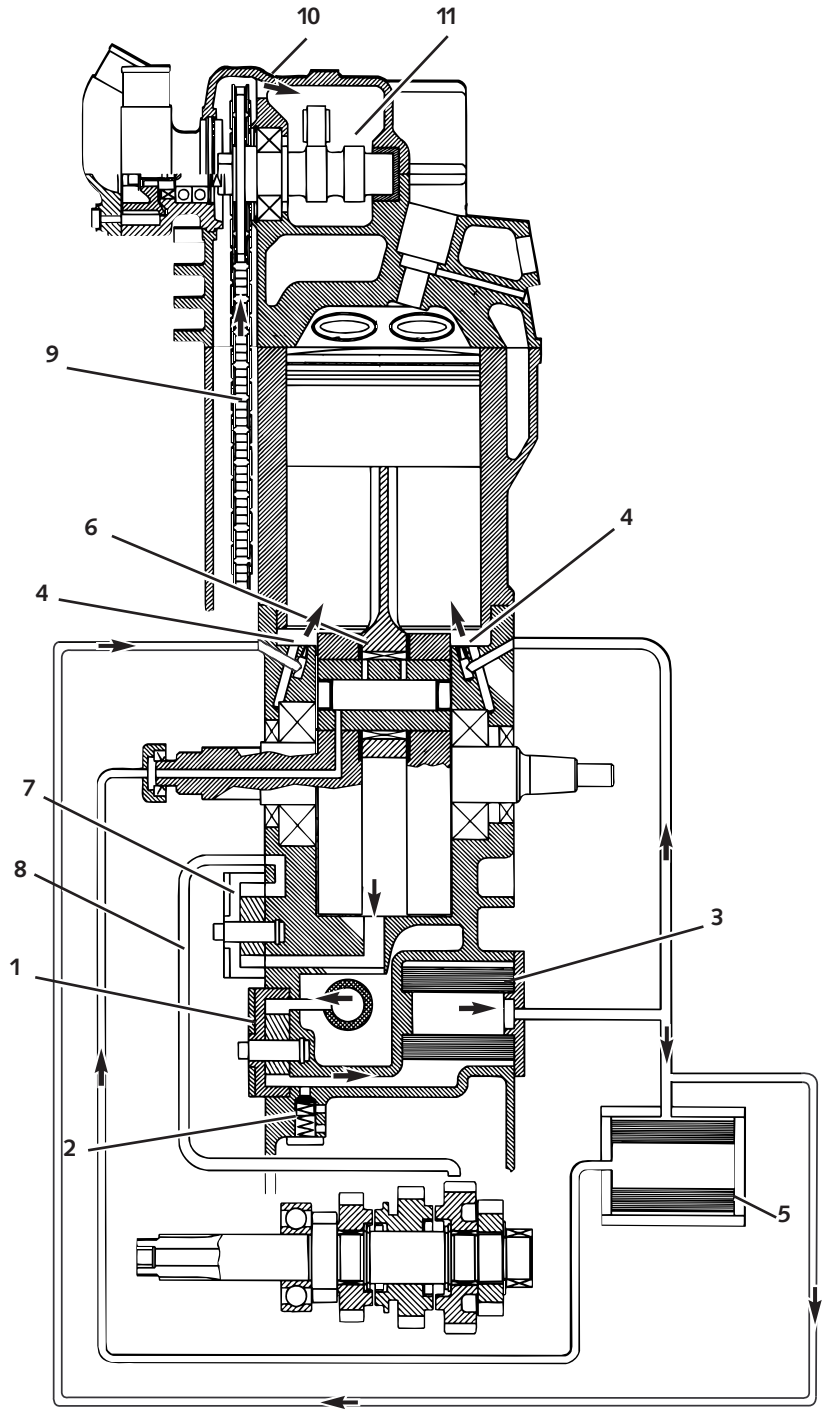
Oil circuit

The oil pump ❶ pumps the engine oil past the by-pass valve ❷ through the oil filter ❸. After the oil filter, an oil lead branches off to a jet ❹ which sprays engine oil onto the piston pin bearing and piston head. The second oil lead takes the main flow of oil to the microfilter ❺, which filters out even the finest impurities. The cleaned engine oil is pumped through the oil lead and the clutch cover into the crankshaft to the connecting rod bearing ❻ and drips into the crankcase. An additional oil pump ❼ sucks the engine oil out of the crankcase and pumps it through the oil line ❽ to the gear wheels of the 4th and 5th gear. Via the gear wheels, the engine oil reaches the oil sump. The timing chain ❾ runs through the oil sump and transports the engine oil upwards to the cylinder head. Through the bore ❿ the oil reaches the camshaft ⓫ and the valves.



Oil circuit 660 SMC

The oil pump ❶ pumps the engine oil past the by-pass valve ❷ through the oil filter ❸. After the oil filter, an oil lead branches off to a jet ❹ which sprays engine oil onto the piston pin bearing and piston head. The second oil lead takes the main flow of oil to the second jet ❹ and the microfilter ❺, which filters out even the finest impurities. The cleaned engine oil is pumped through the oil lead and the clutch cover into the crankshaft to the connecting rod bearing ❻ and drips into the crankcase. An additional oil pump ❼ sucks the engine oil out of the crankcase and pumps it through the oil line ❽ to the gear wheels of the 4th and 5th gear. Via the gear wheels, the engine oil reaches the oil sump. The timing chain ❾ runs through the oil sump and transports the engine oil upwards to the cylinder head. Through the bore ❿ the oil reaches the camshaft ⓫ and the valves.



Changing the engine oil (models with frame oil)

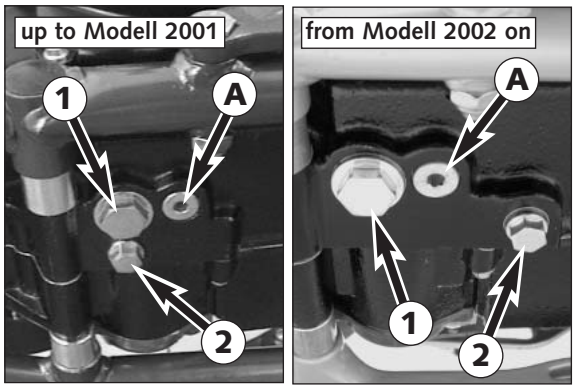
NOTE: For improved cooling of the engine oil, the front tube of the frame was integrated into the oil circuit.Thus, when you change the oil, you also have to drain the engine oil from the front tube and bleed the oil system.

If the oil system is not bled at all or bled insufficiently, the bearings of the engine will not get enough lubrication, which in turn may result in engine failure.

The engine oil change is to be carried out when the engine is still warm.

⚠ WARNING ⚠

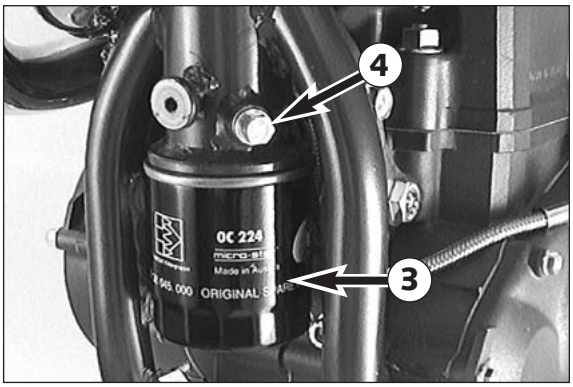
AN ENGINE HAVING BEEN RUN WARM, AND THE ENGINE OIL IN IT ARE VERY HOT - DO NOT BURN YOURSELF.



- Place the motorcycle on a horizontal surface. When working on a motorcycle with engine guard, remove the latter before commencing to change the engine oil.
- Remove the two plugs ❶ and ❷, and drain oil into a container.

! CAUTION !

PLUG Ⓐ MUST NOT BE REMOVED, THIS IS PART OF THE BY-PASS VALVE.

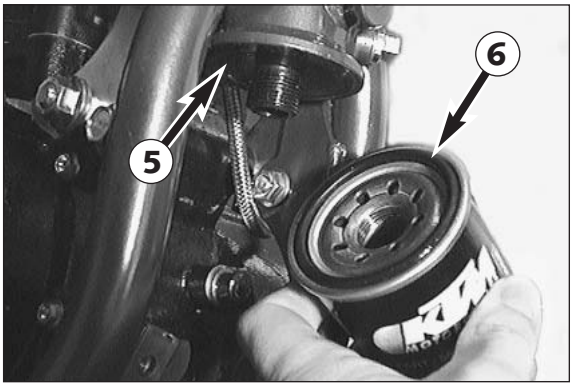


Changing the fine screen filter

Replace the fine screen ❸ filter when changing the engine oil.

- Loosen the three bolts and remove the cover.
- Undo the spin-on filter ❸ with the corresponding special tool, twist it off manually and let the engine oil out of the front pipe of the frame.

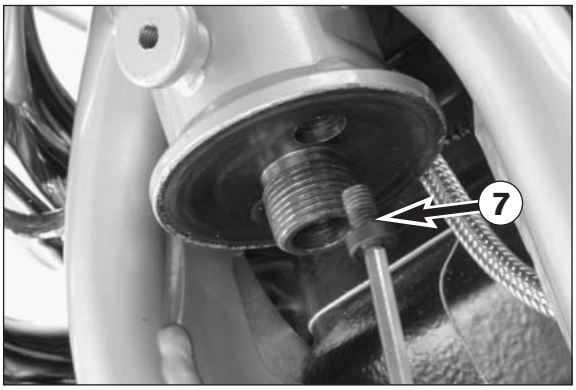
- Unscrew plug ❹ at the lower end of the front pipe and drain oil (**up to model 2000**).



- Clean sealing surfaces on the front pipe ❺, fill new fine screen filter with engine oil, and oil rubber gasket ❻. Replace fine screen filter and screw it back in place, your bare hand will do.

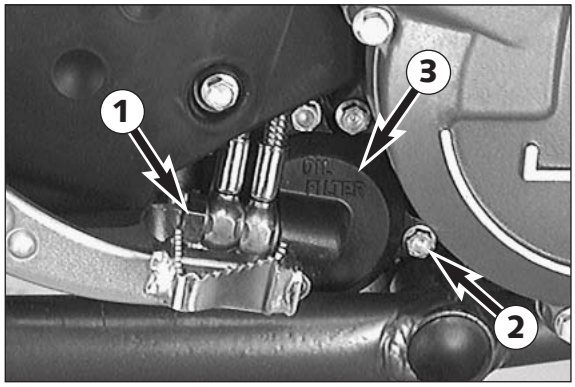
! CAUTION !

USE ONLY ORIGINAL KTM FINE SCREEN FILTERS. USING ANOTHER FILTER BRAND CAN RESULT IN DAMAGE TO THE ENGINE!



- From **model 2001 onwards** the drain plug ❼ of the frame oil is located in the oil filter flange, draining is only possible after removing the oil filter.

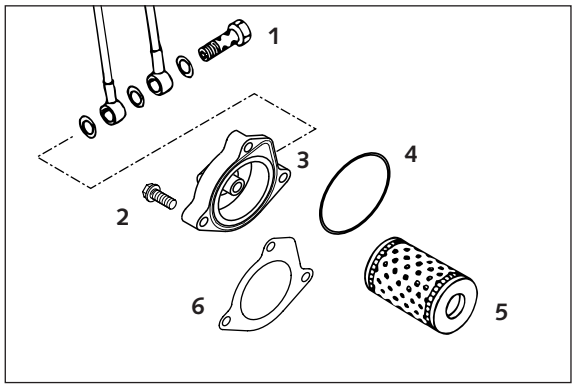
- Clean all 3 plugs thoroughly with a fireproof solvent and compressed air, in order to remove the metal abrasion.
- After all the oil has drained through, clean sealing areas and install plugs with gaskets. Tighten plug ❶ with 30 Nm (23 ft.lb), plug ❷ with 20 Nm and plug ❹ with 10 Nm (**up to model 2000**). Drain plug of frame oil (**model 2001 onwards**) is to be mounted without a gasket and tightened to 10 Nm (7 lb.ft).



Changing the oil filter

Replace the oil filter when changing the engine oil.

– Press the foot brake pedal and place a screwdriver or similar between foot brake pedal and stopper roll so that the oil filter cover is more accessible.
– Remove banjo bolt ❶ and the three bolts ❷.
– Remove oil filter cover ❸ and oil filter.
– Clean filter housing, oil filter cover and sealing surfaces. Check oil duct in oil filter cover if clogged.



– Press the new O-ring ❹ into the groove of the filter cover (if necessary fix with grease). Mount a new oil filter ❺ on the connection piece of the oil filter cover an mount the whole unit.

NOTE: From model 2001 onwards the gasket ❻ is mounted with a changed filter cover ❸. If the new gasket ❻ should be used on older engines, the filter cover must be flat regrinded or renewed (see Technical Info Nr. 0201/30/01).

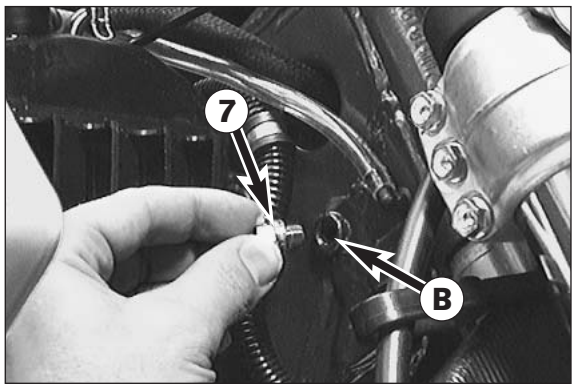
– Mount three bolts and tighten with 5 Nm (4 ft.lb).
– Mount banjo bolt with seal rings and tighten with 15 Nm (11 ft.lb).

– Remove the oil dipstick at the clutch cover, pour in engine oil and replace the oil dipstick.

Oil quantity (engine only) : 1.40 liter

! CAUTION !

IF THE ENGINE OIL HAS BEEN DRAINED FROM THE FRONT PIPE OF THE FRAME, YOU MUST BLEED THE OIL SYSTEM!



– Remove the plug ❼ next to the steering head and use a lubricating syringe ❽ (see special tools) to fill the front pipe with approx. 0.6 l engine oil. Add oil until it begins to emerge at bore Ⓑ.
– Mount the plug, using a new seal ring.

! CAUTION !

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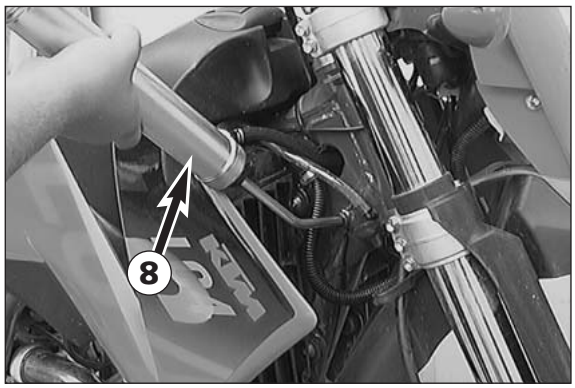

– Allow the engine to run until warm. Then, turn off the engine, and place the motorbike on a flat, level surface in an upright position (center stand). Wait for 5 minutes. Unscrew and remove the oil dipstick, and wipe it clean with a cloth.
– Screw the dipstick in all the way and remove it again. The oil level should be between the two marks on the oil dipstick, however, it must never rise above the MAX mark. Otherwise, engine oil would get into the air filter box by way of the engine venting system. Add engine oil, if necessary.
– Finally, check oil system and engine for leaks.

! CAUTION !

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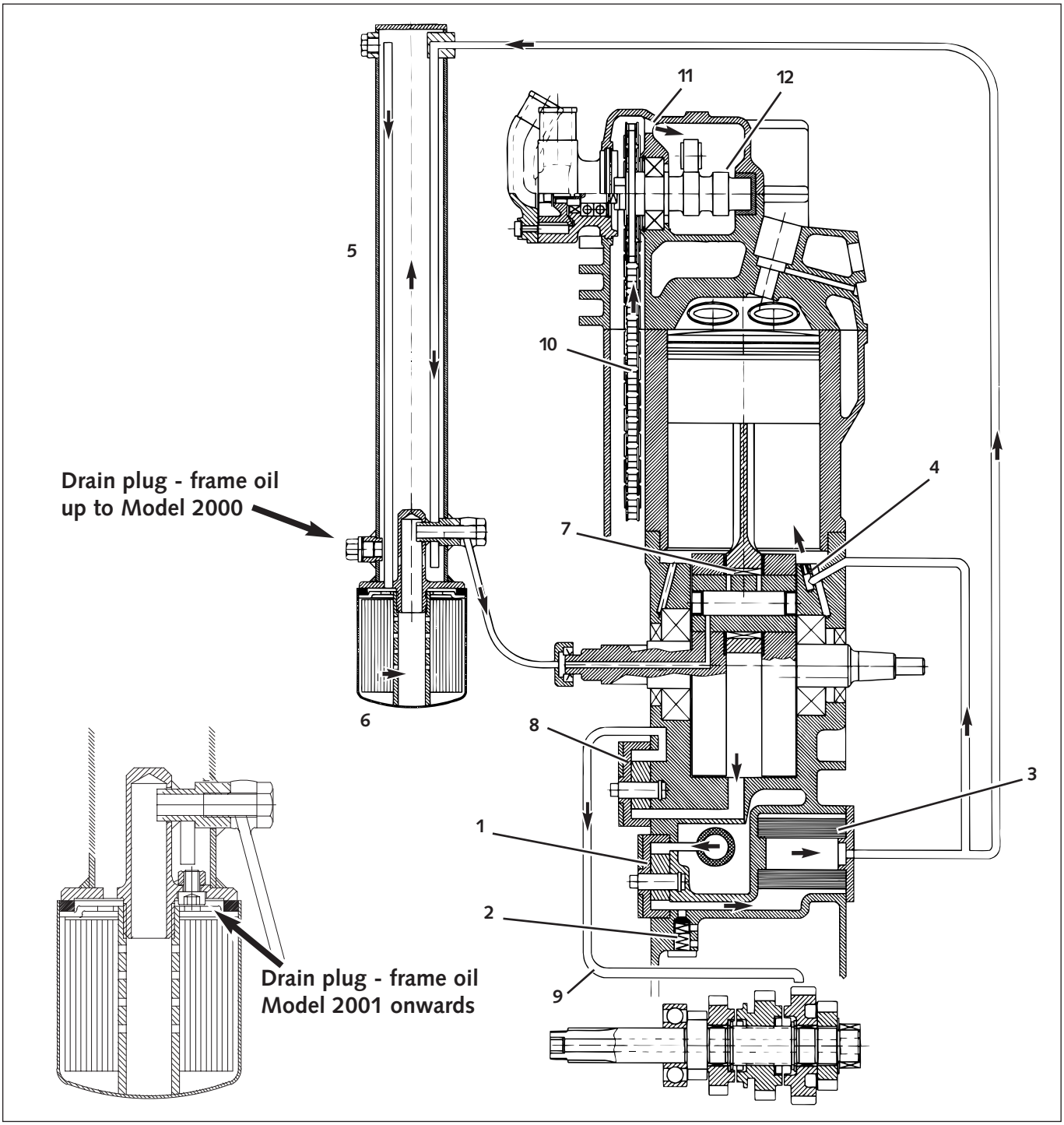
NOTE: Dispose of used oil properly !
Under no circumstances may used oil be disposed of in the sewage system or in the open countryside !
1 liter oil contaminates 1.000.000 liter water !

Oil circuit

The oil pump ❶ pumps the engine oil past the by-pass valve ❷ through the oil filter ❸. After the oil filter, an oil line branches off to a jet ❹ which sprays engine oil onto the piston pin bearing and piston head. The second oil line takes the main flow of oil into the front pipe of the frame ❺, where the engine oil is cooled down. Afterwards the engine oil runs through the fine screen filter ❻, which filters out even the finest impurities. The cleaned engine oil is pumped through the oil line and the clutch cover into the crankshaft to the conrod bearing ❼ and drips into the crankcase. An additional oil pump ❽ sucks the engine oil out of the crankcase and pumps it through the oil line ❾ to the gear wheels of the 4th and 5th gear. Via the gear wheels, the engine oil reaches the oil sump. The timing chain ❿ runs through the oil sump and transports the engine oil upwards to the cylinder head. Through the bore hole ⓫ the oil reaches the camshaft ⓬ and the valves.



Functional characteristics of the secondary air system (SLS)

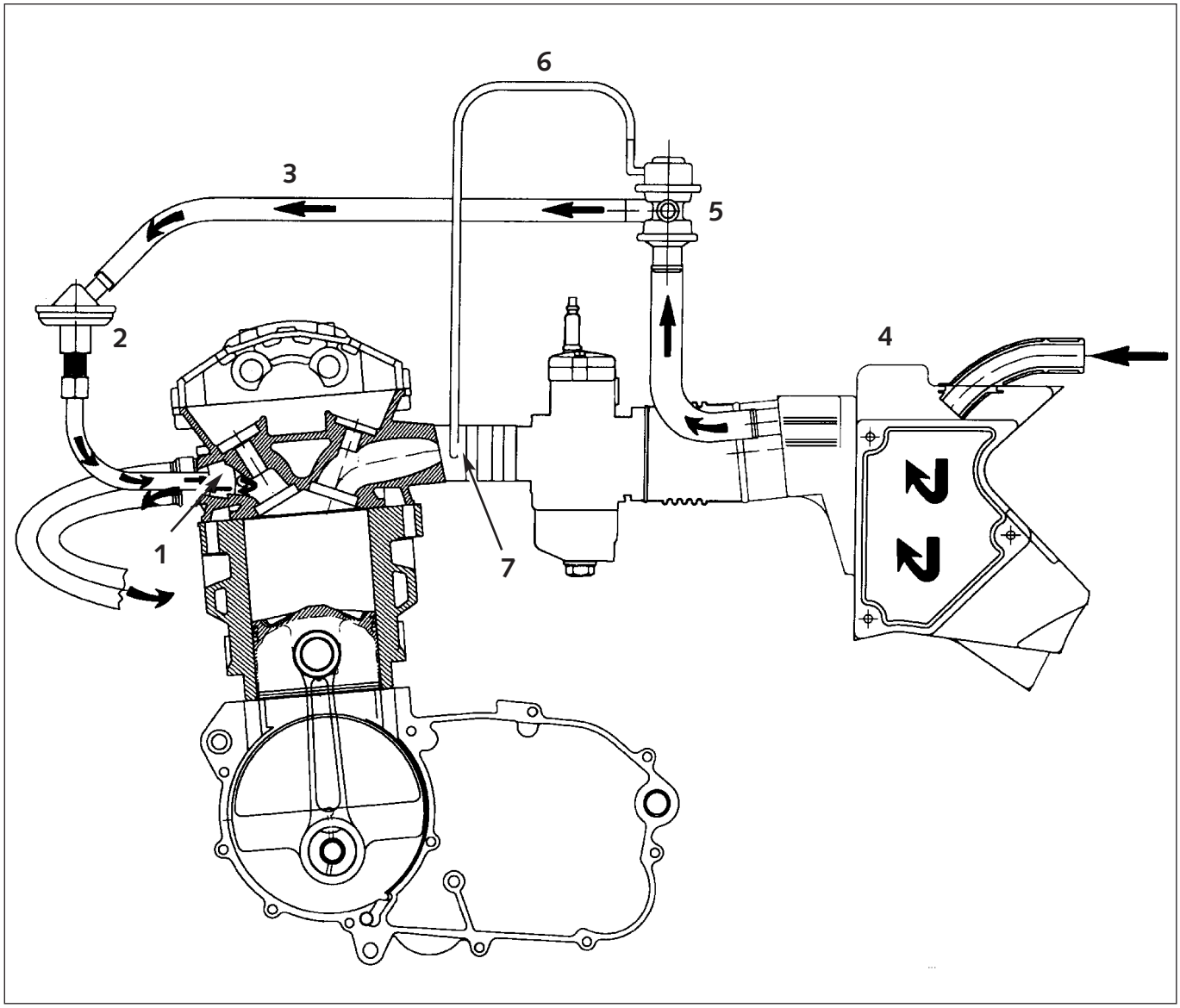
When the exhaust valve is open, the hot exhaust gases flow through the exhaust port ❶ at a very high speed. As a consequence of the flow conditions in the exhaust port and due to the influence exerted by the entire exhaust system on the escaping gases, the pressure in the exhaust port drops temporarily (underpressure).

During these cyclic underpressure phases, the secondary air valve ❷ opens, thus adding oxygen of the air to the hot exhaust gases through pipe ❸.
At higher engine speeds, the secondary air valve interrupts the oxygen supply to prevent overheating of the catalytic converter. Additionally, the secondary air valve prevents the exhaust gases from flowing back into the air filter box ❹.

When the motorcycle is pushed (high underpressure in the intake port) the control valve (ASV) ❺ interrupts the air flow into the exhaust port to prevent exhaust detonations.

The control valve is controlled via a control pipe ❻. This control pipe transmits the underpressure from the intake port ❼ to the control valve.
During normal operation (slight underpressure in the intake port), the control valve is open.

The reaction between the oxygen of the air and the harmful components of the exhaust gases (CO - carbon monoxide, HC - hydrocarbon) reduces the content of harmful substances by approximately 50%. The use of a catalytic converter, in combination with the SLS, allows an additional significant reduction of pollutant emissions.



Electronic Power Control System (EPC)

Main components of the EPC system:

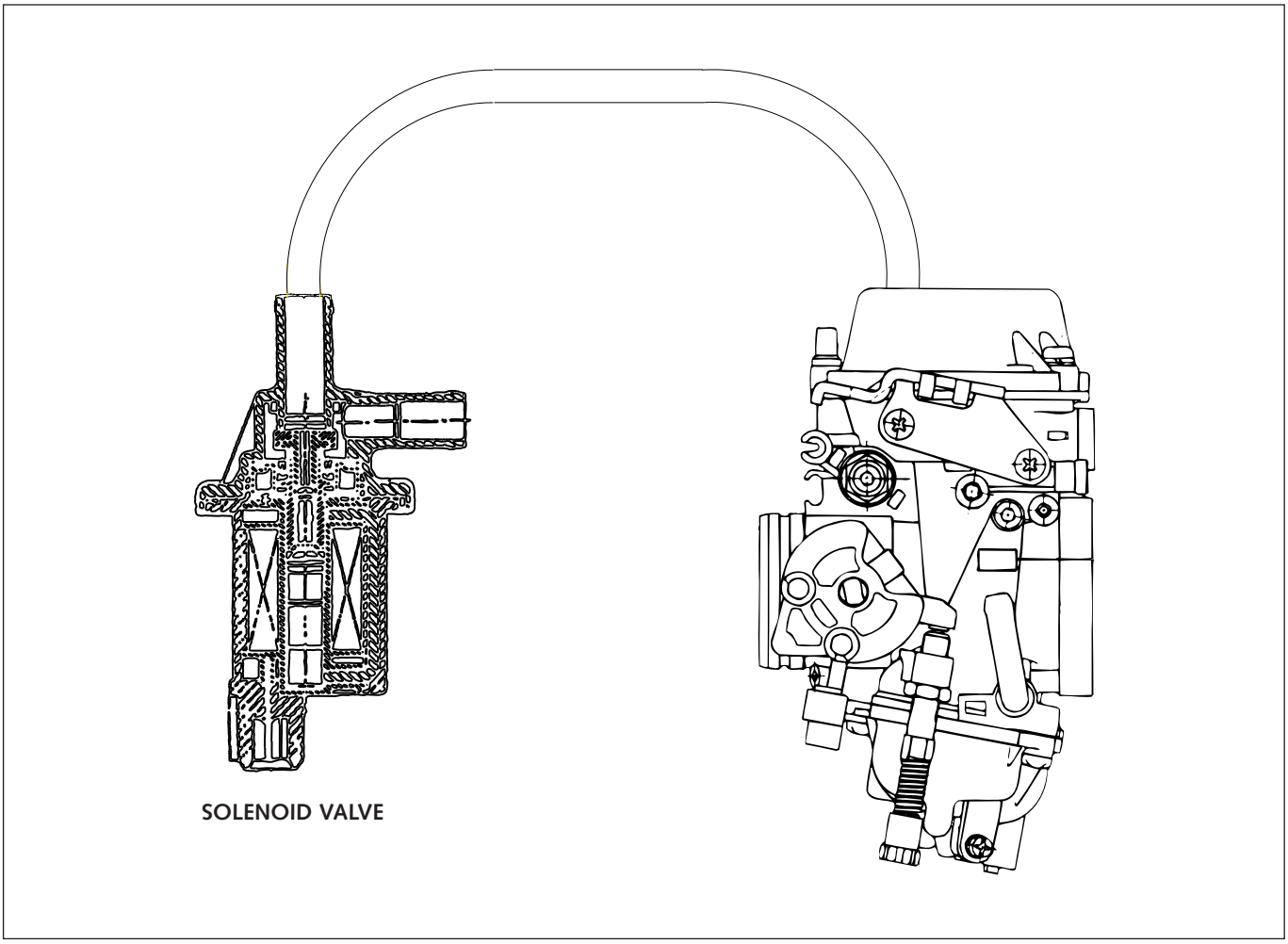
- Constant-pressure carburetor
- Control device
- Solenoid valve
- 2 contact screws at the engine
- Micro-switch (at carburetor)

FUNCTIONAL CHARACTERISTICS:

The EPC system is not activated during normal operation of the motorcycle.

It is, however, activated as soon as the throttle is fully opened at a speed of 45 - 55 km/h while the second or third gear are engaged.

The EPC control device opens the solenoid valve, directing an appropriate flow of fresh air onto the upper side of the slide membrane of the constant-pressure carburetor, thus reducing the opening speed of the slide. This mechanism significantly reduces the exhaust gas emissions of the vehicle.



SOLENOID VALVE

SPECIAL TOOLS

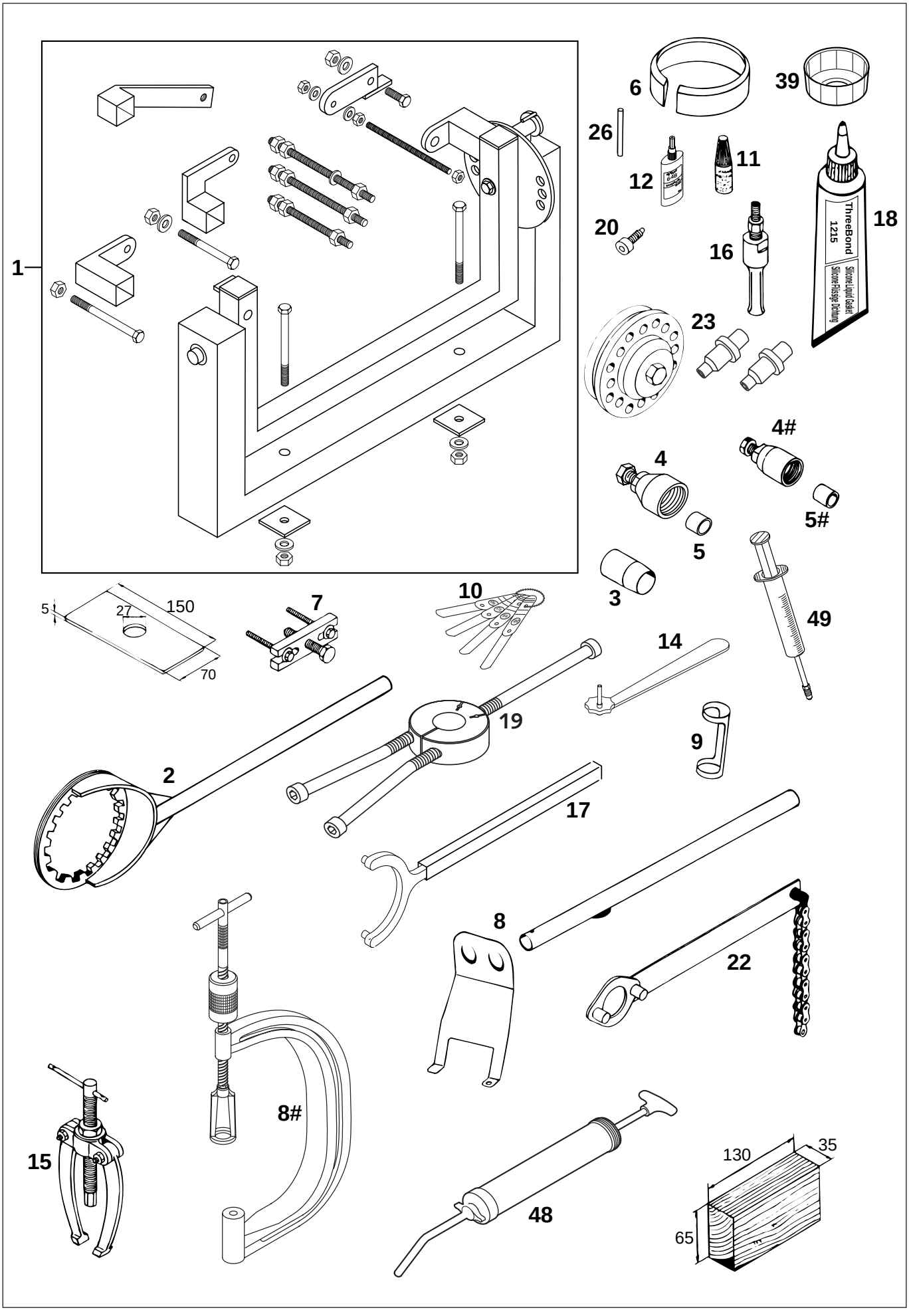
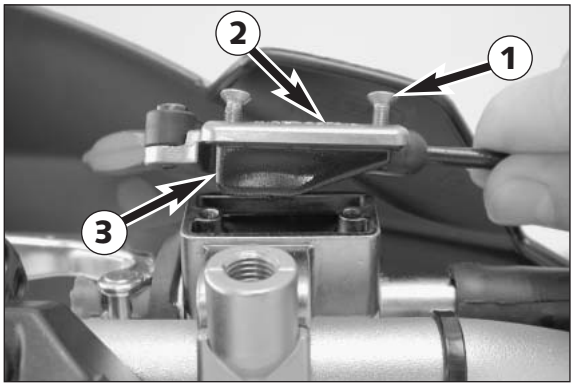


FIG.	PART NO.	DESCRIPTION
1	560.12.001.000	Universal engine work stand
2	583.29.003.000	Clutch holder
3	580.12.005.025	Mounting sleeve for crankshaft seal ring Ø 25 mm
4	584.29.009.000	Magneto extractor (Kokusan)
4#	580.12.009.000	Magneto extractor (SEM)
5	510.12.016.000	Protection cover for crankshaft (SEM)
5#	584.29.031.000	Protection cover for crankshaft (Kokusan)
6	580.12.015.089	Piston ringspanner Ø 89 mm
	580.12.015.095	Piston ringspanner Ø 95 mm
	580.12.015.100	Piston ringspanner Ø 100 mm
	580.12.015.101	Piston ringspanner Ø 101 mm
	585.29.015.102	Piston ringspanner Ø 102 mm
7	590.29.021.044	Extractor for primary gear and clutch hub
8	580.12.019.000	Valve mounting set
8#	590.29.019.000	Valve mounting set
9	6.276.470	Valve spring-push insert
10	590.29.041.000	Feeler gauge for valve clearance
11	6.899.785	Loctite 243 blue 6 ml
12	584.29.059.000	Loctite 648 red 20 ml
14	590.29.034.000	Wrench for mixture regulating screw
15	151.12.017.000	Gear puller
16	151.12.018.000	Internal bearing puller 12 - 16 mm
16	151.12.018.100	Internal bearing puller 18 - 23 mm
17	584.29.012.000	Flywheel holding spanner (Kokusan)
18	3090.98	Seal (Three-Bond)
19	584.29.037.040	Mounting tool inner ring NJ207 (all versions of LC4)
19	584.29.037.043	Mounting tool inner ring NJ306 (LC4-E)
20	580.30.080.000	Crankshaft locking bolt
22	510.12.012.000	Chain sprocket holder
23	546.29.027.000	Clutch rivetting tool
26	580.29.026.007	Limit plug gauge Ø 7,05 mm
39	583.29.039.000	Oil filter wrench
48	584.29.048.000	Syringe for pipe oil
49	503.29.050.000	Bleeding syringe for hydraulic clutch

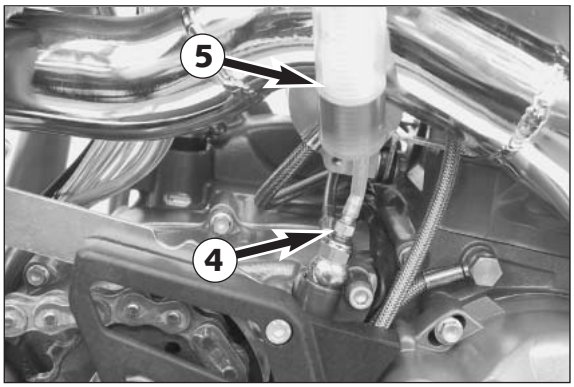


Checking the oil level of the hydraulic clutch

To check the oil level in the master cylinder of the clutch remove the cover. For this purpose, remove screws ❶ and cover ❷ together with the rubber boot ❸. The oil level in the horizontal-standing master cylinder should be 4 mm below the upper edge.
If necessary, fill up with biodegradable hydraulic oil SAE 10 (f.ex. Motorex Kupplungs-Fluid 75).

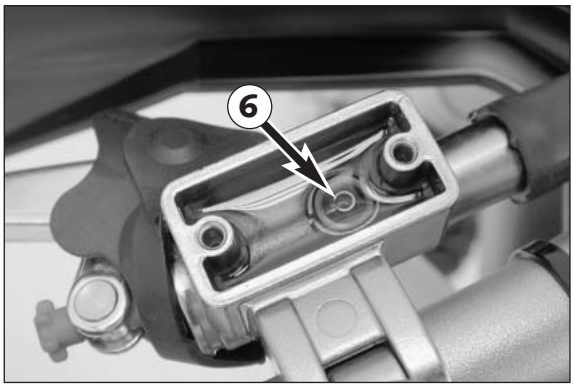
! CAUTION !

– KTM USES BIODEGRADABLE HYDRAULIC OIL FOR THE HYDRAULIC CLUTCH CONTROL. NEVER MIX BIODEGRADABLE HYDRAULIC OILS WITH MINERAL OILS.
– ALWAYS USE BIODEGRADABLE HYDRAULIC OIL SAE 10 TO FILL UP THE MASTER CYLINDER. NEVER REFILL WITH MINERAL HYDRAULIC OIL OR BRAKE FLUID.



Bleeding of the hydraulic clutch

To bleed, the cover of the master cylinder of the clutch needs to be removed. For this purpose, remove screws ❶ and take off cover ❷ together with rubber bellows ❸. At the slave cylinder of the clutch, remove the bleeder nipple ❹. In its place, mount the bleeder syringe ❺ which is filled with SAE 10 hydraulic oil. Refill oil until oil is discharged from the bore ❻ of the master cylinder in a bubble-free state. Make sure that the oil does not overflow. The bleeder syringe can be purchased from your KTM dealer.



Having completed the bleeding procedure, you have to verify that the oil level in the master cylinder is correct. If necessary, fill up with biodegradable hydraulic oil SAE 10 (f.ex. Motorex Kupplungs-Fluid 75).

! CAUTION !

– KTM USES BIODEGRADABLE HYDRAULIC OIL FOR THE HYDRAULIC CLUTCH CONTROL. NEVER MIX BIODEGRADABLE HYDRAULIC OILS WITH MINERAL OILS.
– ALWAYS USE BIODEGRADABLE HYDRAULIC OIL SAE 10 TO FILL UP THE MASTER CYLINDER. NEVER REFILL WITH MINERAL HYDRAULIC OIL OR BRAKE FLUID.

REMOVING AND REFITTING ENGINE 3

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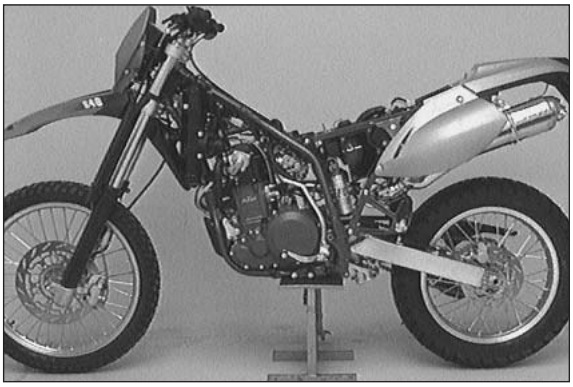
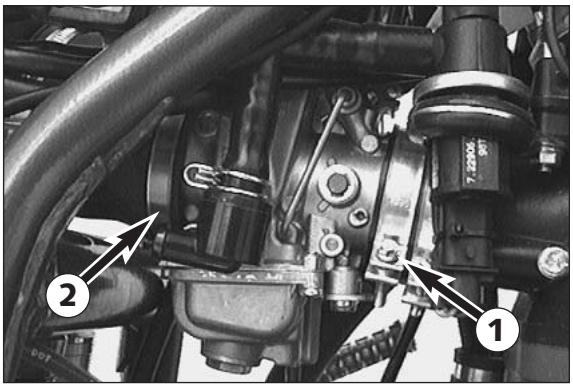
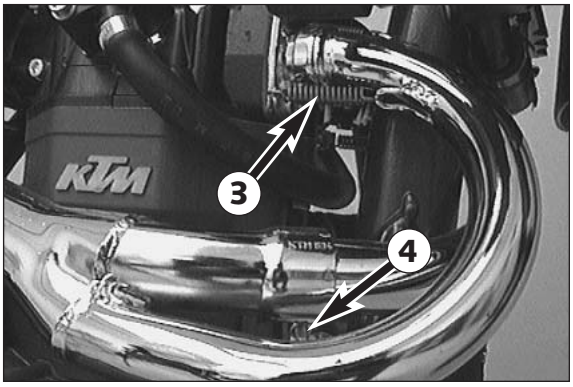


Removing the engine

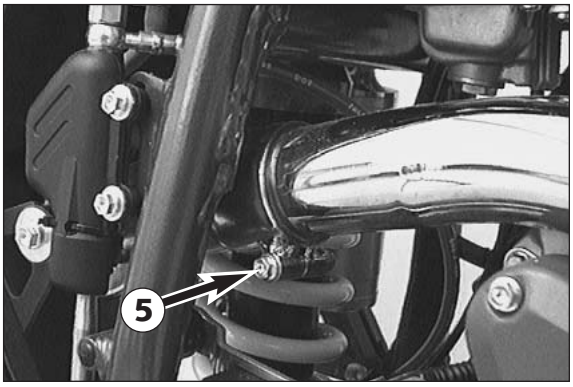
– Thoroughly clean the entire motorcycle.
– When working on a motorcycle with engine guard, remove the latter.
– Jack the motorcycle up on a stable supporting device.
– Remove the seat, the side covers as well as the tank and the spoilers.
– Disconnect the negative pole of the battery.



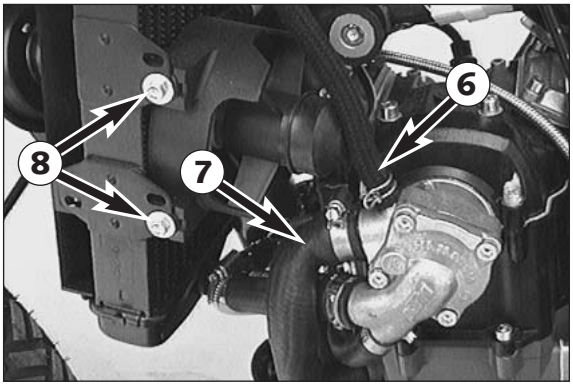
– Undo the 2 hose clamps ❶ as well as hose clamp ❷. Pull the carburetor backwards out of the intake flange and swing it aside.



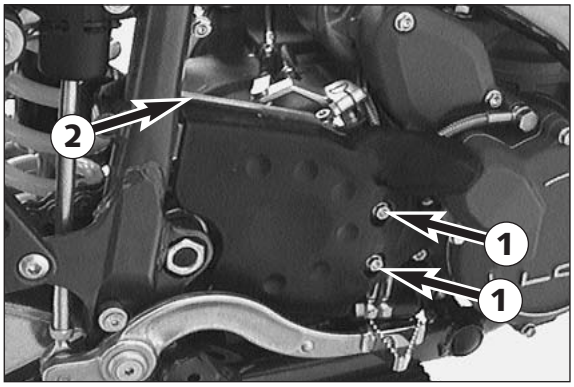
– Unhook the 4 springs ❸ at the exhaust manifold.
– Undo bolt ❹.



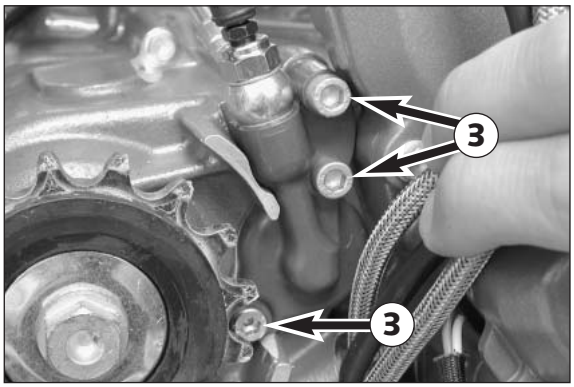
– Undo bolt ❺ and remove the exhaust manifold.



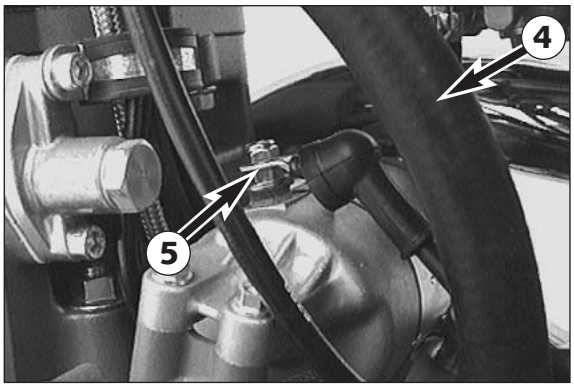
– Disconnect water hoses ❻ and ❼ from the water pump and let out the cooling liquid.
– Remove the two bolts ❽, disconnect and remove the fan.
– Unhook the clutch cable and the decompression cable.
– Disconnect the bleeder hose at the valve cover.



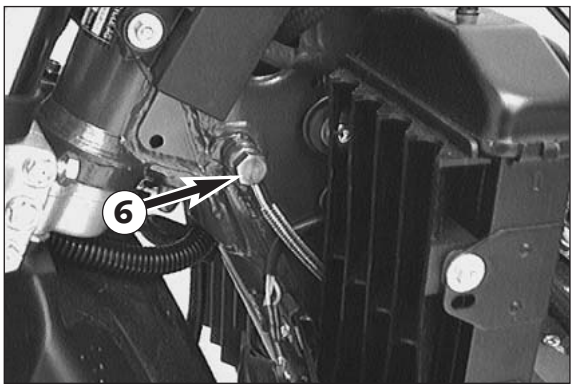
– Remove the two bolts ❶ and take off the chain guard.
– Remove the chain damping plate ❻.
– Remove the chain joint and take off the chain.



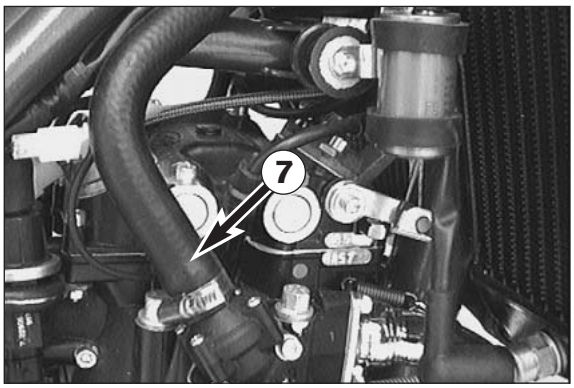
From model 2003 on:
– Remove the 3 bolts ❸ of the clutch slave cylinder and pull the clutch slave cylinder off the casing.



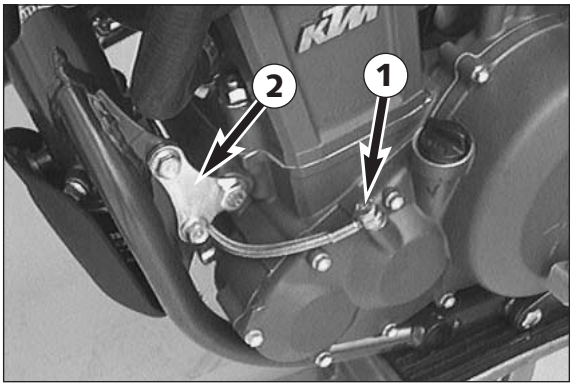
– Disconnect the bleeder hose ❹.
– Disconnect the positive cable ❺ from the electric starter motor.



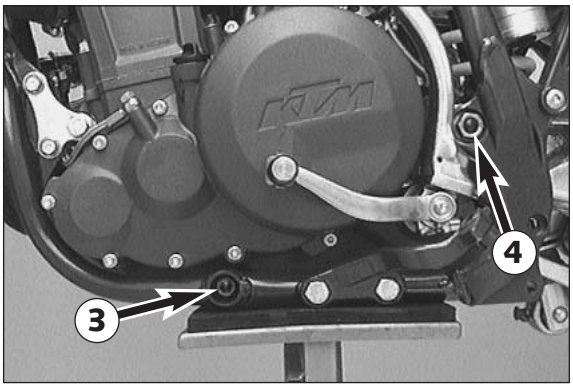
– Disconnect all electric plug and socket connections from the engine.
– Remove the banjo bolt ❻.



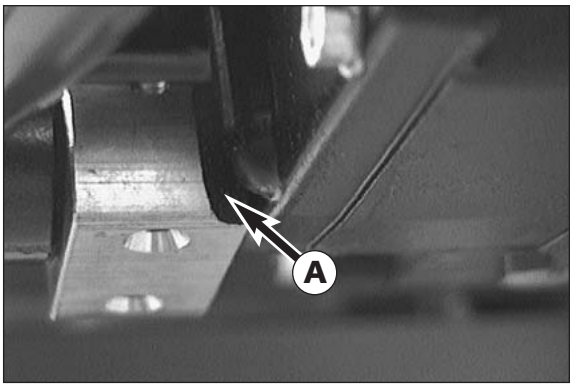
– Disconnect the water hose ❼.



– Remove the jet screw ❶.
– Remove the left as well as the right engine retaining bracket ❷.



– Remove bolt ❸ as well as the swingarm pivot ❹.
– Then lift the engine out of the frame.



Installing the engine

NOTE: To install the engine reverse the procedure indicated above.

– When working on a model with an engine guard keep in mind that opening Ⓐ must be located on the right side and face the engine.

Tightening torques:

Swingarm pivot:	100 Nm	74 ft.lb
Engine mounting bolts M8:	40 Nm	30 ft.lb
Engine mounting bolts M10:	70 Nm	50 ft.lb
Banjo bolt (oil pipe on the frame):	15 Nm	11 ft.lb
Jet screw (clutch cover):	10 Nm	7 ft.lb
All other M6 bolts:	10 Nm	7 ft.lb
All other M8 bolts:	25 Nm	19 ft.lb
All other M10 bolts:	45 Nm	33 ft.lb

NOTE: Use only high-quality antifreeze (e.g. Shell Advance Coolant) for the cooling system. The frame oil should always be changed after engine repair.

! CAUTION !

AFTER INSTALLING THE ENGINE CAREFULLY BLEED THE OIL SYSTEM (SEE OIL CHANGE INSTRUCTIONS). DO NOT REV THE ENGINE DURING THE BLEEDING PROCESS !

– The motorcycle can be tested as soon as the engine is running smoothly. After the test run check and, if necessary, correct all liquid levels.

DISASSEMBLING THE ENGINE 4

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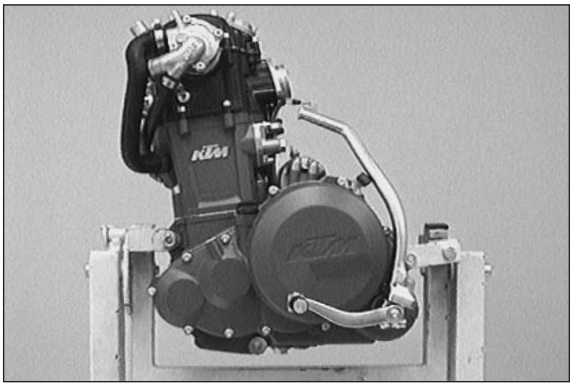
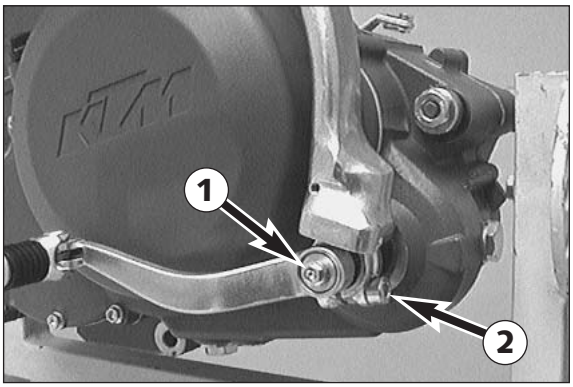
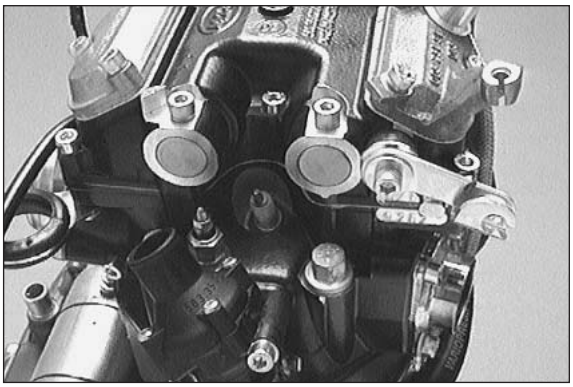


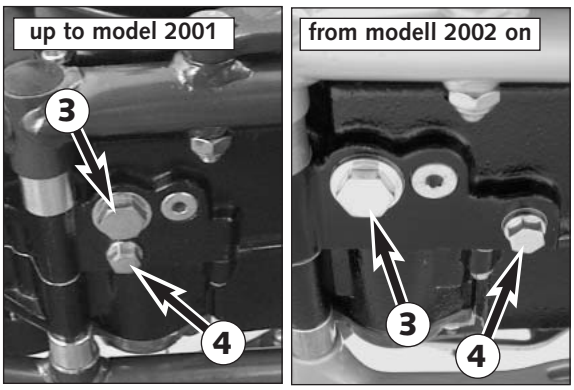
– Fit engine to engine work stand.



– Remove bolt ❶ together with the washers. Then remove the shift lever together with the V-seal ring behind.
– Remove bolt ❷ together with the washer. Then remove the kickstarter.

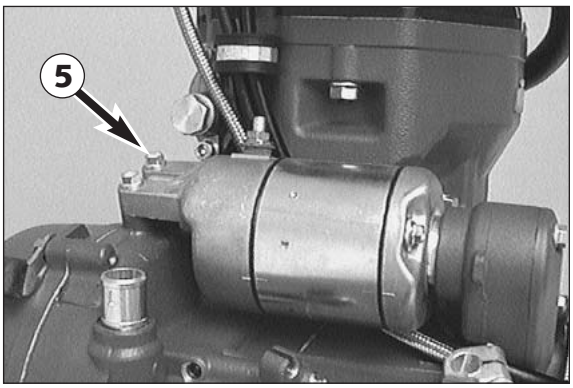


– Remove spark plug



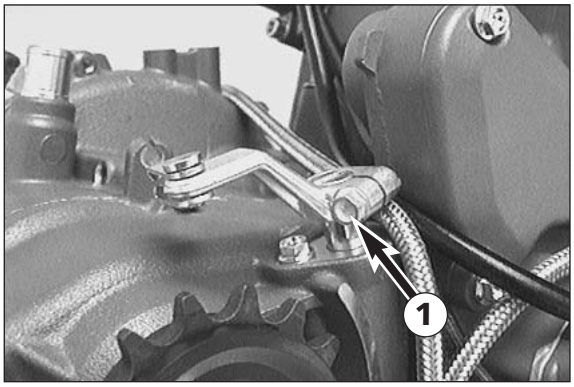
Drain engine oil

– Remove oil drain plug ❸ and magnetic plug ❹ and drain oil.



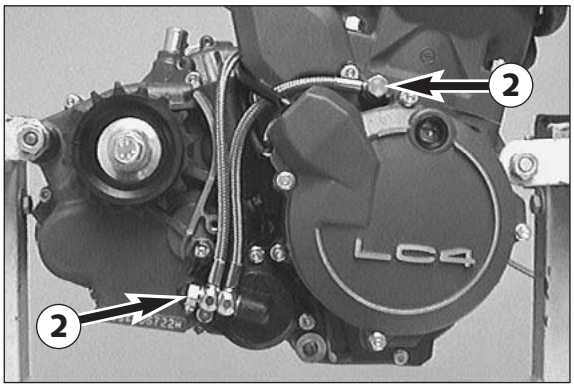
Removing the electric starter motor

– Undo 2 bolts ❺ and remove the electric starter motor from the flange.

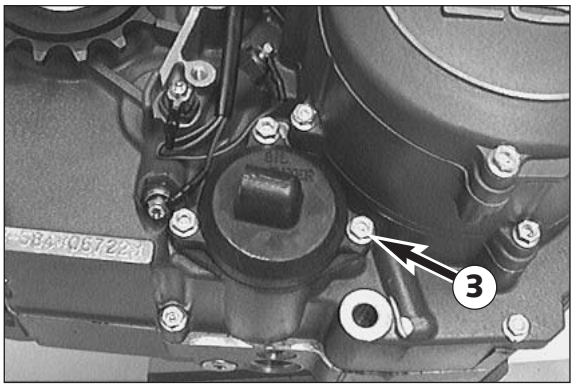


Removing the clutch release lever and the oil hoses

– Undo bolt ❶ and remove the clutch release lever.

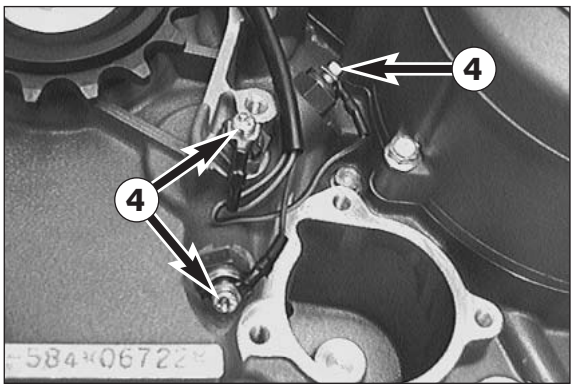


– Remove the two banjo bolts ❷ together with the seal rings and remove both oil hoses.



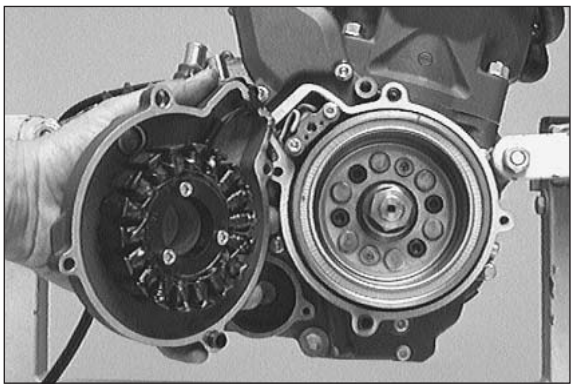
Removing the oil filter

– Remove all three bolts ❸ and take off the oil filter cover together with the O-ring or gasket.
– Take the oil filter out of the engine housing.



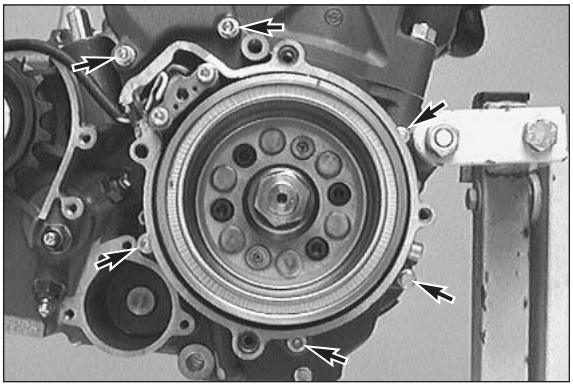
Removing the EPC wiring harness

– Undo the 3 bolts ❹ and remove the EPC wiring harness.

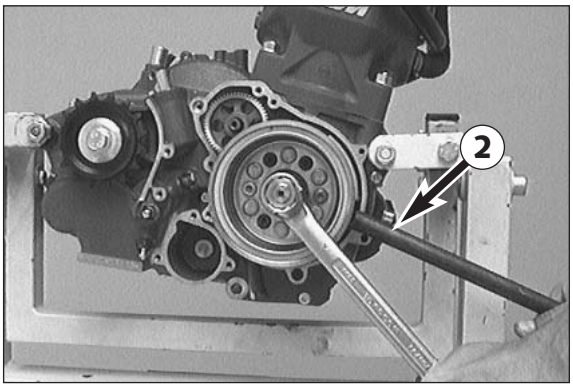


Removing the ignition (Kokusan 4K-2)

– Undo 4 bolts and remove the ignition cover with the stator incl. gasket.



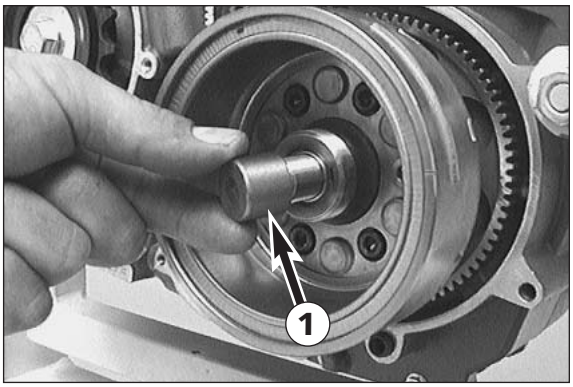
– Undo 6 bolts and remove starter flange incl. gasket.



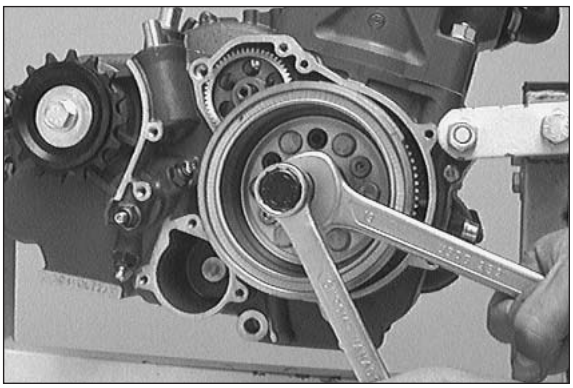
– Insert the holding spanner ❷ into the 2 bores of the flywheel.
– Hold the flywheel and remove the hexagon nut (LH thread).
– Remove the disc.

! CAUTION !

TO AVOID DISTORTION OF THE CRANK WEB, NEVER MOUNT THE CRANKSHAFT LOCKING BOLT TO STEADY THE FLYWHEEL.



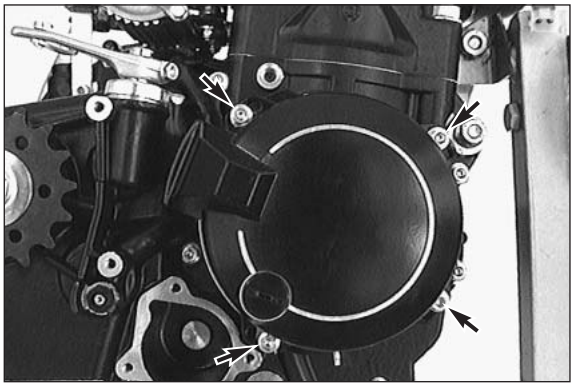
– Put the protection cover ❶ onto the crankshaft and mount the flywheel extractor.



– Pull off the flywheel and take the woodruff key out of the crankshaft.

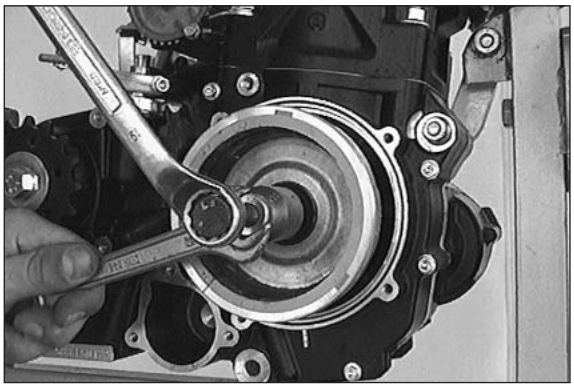
! CAUTION !

NEVER USE A HAMMER OR ANY OTHER TOOL ON THE FLYWHEEL TO AVOID LOOSENING OF THE MAGNETS.



Removing the ignition (SEM)

– Undo the 4 bolts and remove ignition cover and O-ring.
– Use the crankshaft locking bolt to block the crankshaft.



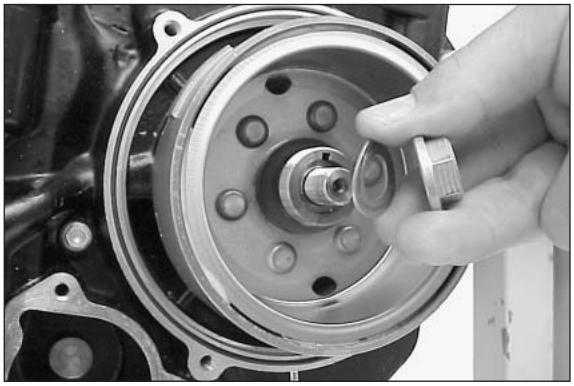
– Unscrew collar nut (LH thread) and remove spring disc.
– Fit extractor and pull off flywheel. Use protective sleeve.
– Remove woodruff key from the crankshaft.
– Twist the crankshaft locking bolt out until the crankshaft is no longer blocked.

! CAUTION !

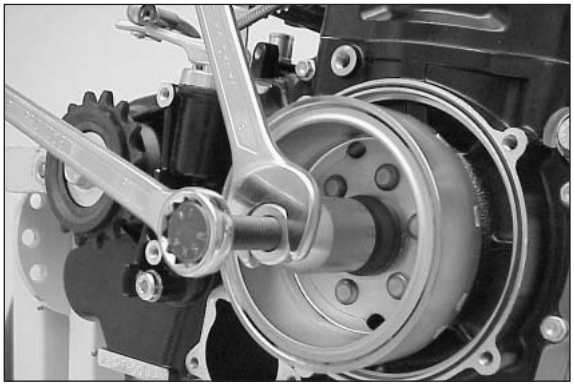
NEVER USE A HAMMER OR ANY OTHER TOOL ON THE FLYWHEEL TO AVOID LOOSENING OF THE MAGNETS.

Removing the ignition (Kokusan 4K-3)

– Undo the 4 bolts and take off the ignition cover together with the O-ring.
– Use the crankshaft locking bolt to block the crankshaft.



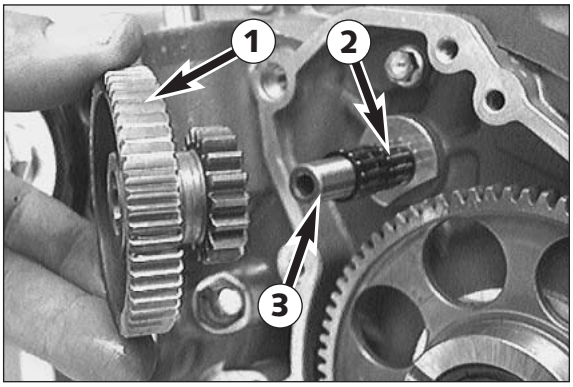
– Undo the collar nut (LH thread) and remove the spring washer.



– Mount the extractor and pull off the flywheel.
– Take the woodruff key out of the crankshaft.
– Finally, twist out the crankshaft locking bolt until the crankshaft is no longer blocked.

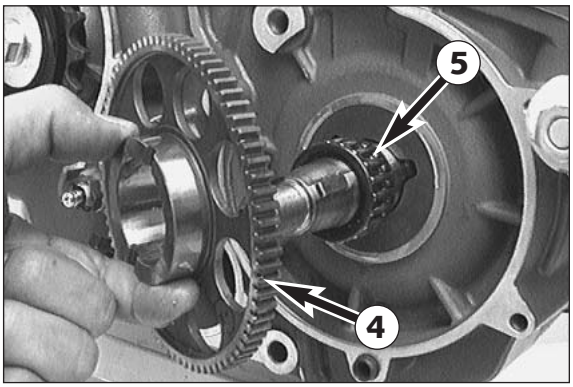
! CAUTION !

NEVER USE A HAMMER OR SIMILAR TOOL ON THE FLYWHEEL TO PREVENT LOOSENING OF THE MAGNETS.

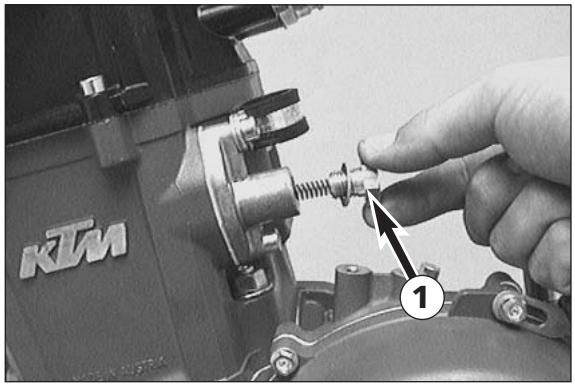


Removing the electric starter drive

– Pull the reduction gear ❶ off the bearing bolt.
– Remove both needle bearings ❷ and pull the bearing bolt ❸ out of the engine housing.

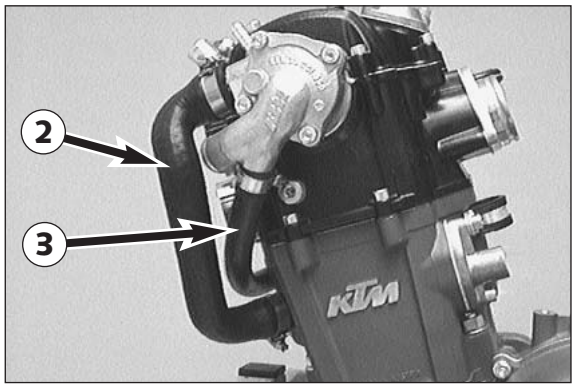


– Remove the freewheel gear ❹ and the needle bearing ❺.

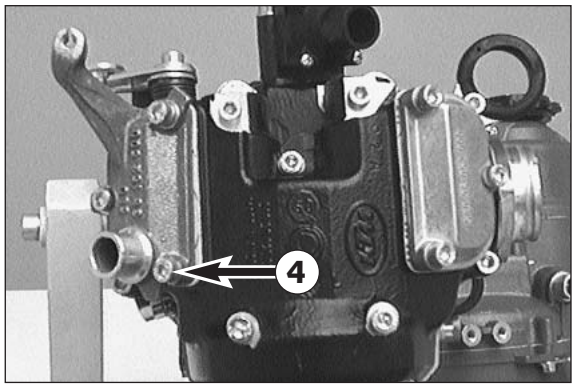


Removing the cylinder head top section

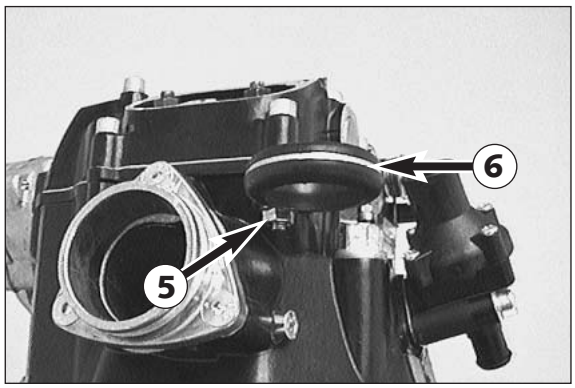
– Unscrew plug ❶ with gasket and remove pressure spring from automatic tensioner.



– Undo the 4 hose clamps and remove both hoses (❷ and ❸).

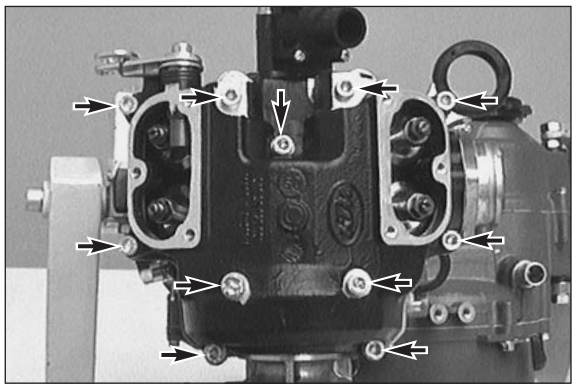


– Remove all 6 bolts ❹ together with the seal rings and take off both valve covers together with the gaskets.



– Remove the hexagon nut ❺ and take off the retaining bracket of the solenoid valve ❻.

NOTE: A retaining bracket is only used in engines with EPC.

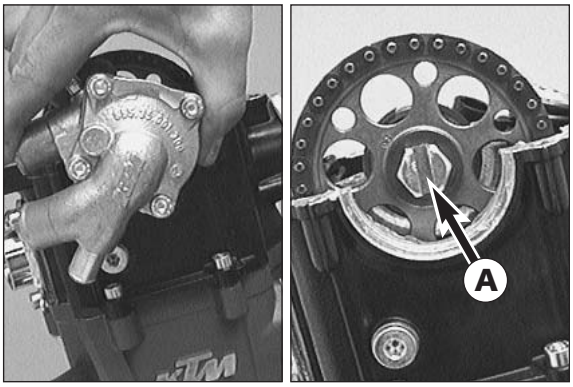


– Remove all 11 bolts. Then remove the cylinder head top section.

! CAUTION !

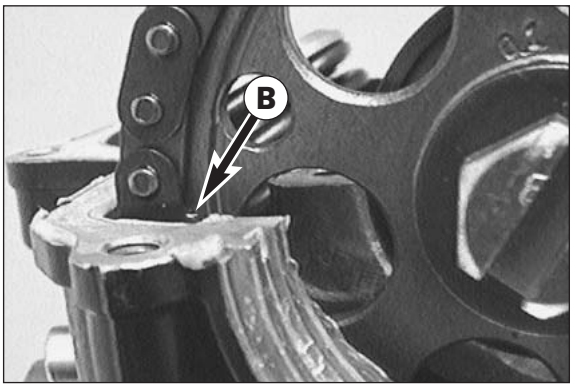
WHEN REMOVING CYLINDER HEAD TOP SECTION DO NOT CHOCK IT. THIS WOULD DAMAGE THE HOUSING OF THE WATER PUMP.

NOTE: The control valve of SLS models can be removed after undoing the bolts of the cylinder head top section.



– Pull water pump upward and simultaneously turn crankshaft.

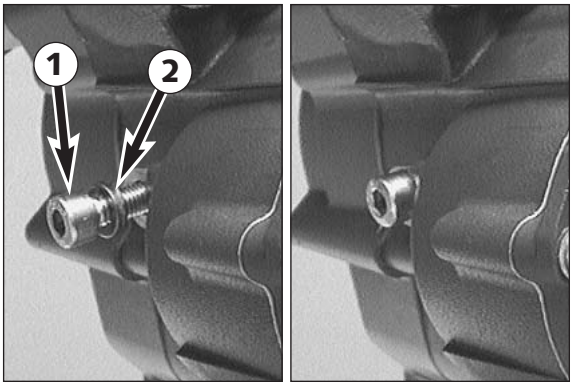
NOTE: When groove ❹ in the HH bolt is vertical, the water pump can be pulled upward and taken out of the cylinder head without the application of force.



Blocking the crankshaft

– Turn the piston to position TDC (mark ❸ must coincide with the plane surface of the cylinder head).

– Undo the crankshaft locking bolt ❶.
– Remove the copper disc ❷.

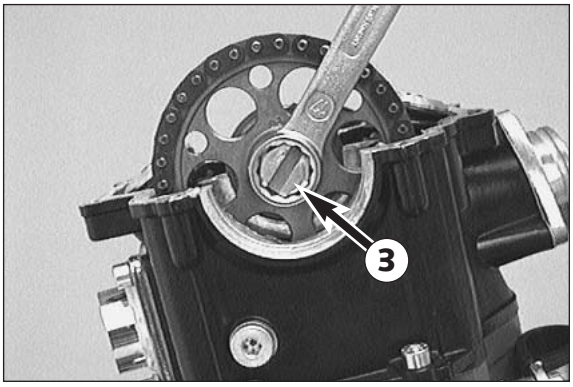


NOTE: Same engines are equipped with a normal bolt M8x16 and a copper washer 8x12x1 instead of the crankshaft locking bolt M8 and a copper washer 8x14x3. In this case the special tool 580.30.080.000 must be used.

– Reinsert crankshaft locking bolt by hand.
– If the bolt does not slide smoothly into its bore, slightly move the camshaft gear (if cylinder head top section is mounted turn the flywheel) back and forth until the crankshaft locking bolt engages in its bore.
– Tighten crankshaft locking bolt with 20 Nm.

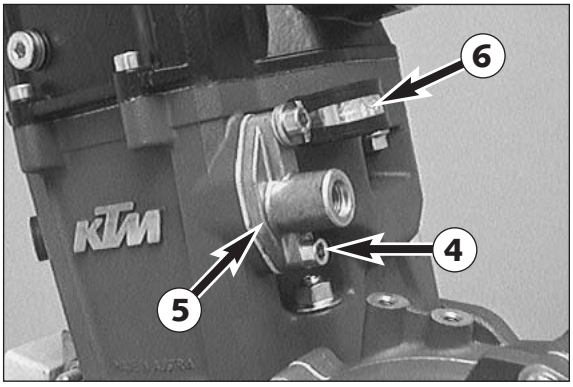
! CAUTION !

UNDER NO CIRCUMSTANCES APPLY FORCE TO bolt IN CRANKSHAFT LOCKING BOLT AS THIS WILL DAMAGE THE CRANKSHAFT.

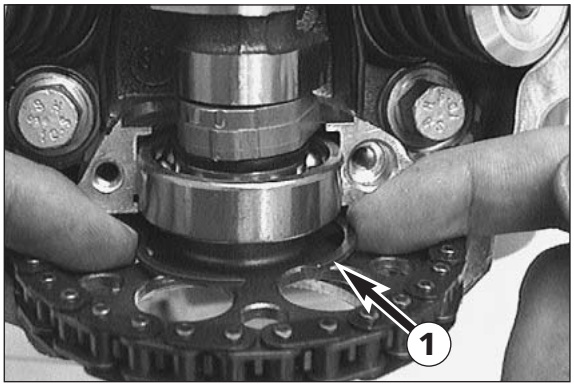


Removing the camshaft and the automatic tensioner

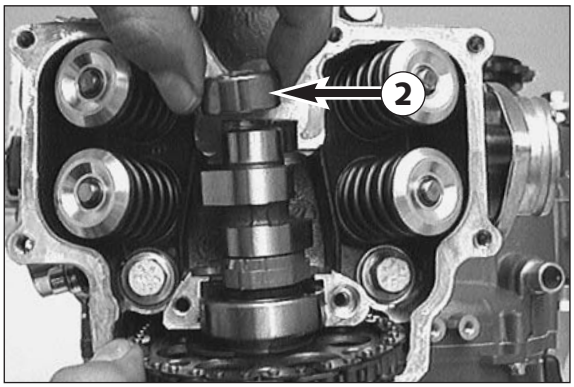
– Remove the driving bolt ❸ together with the two washers.



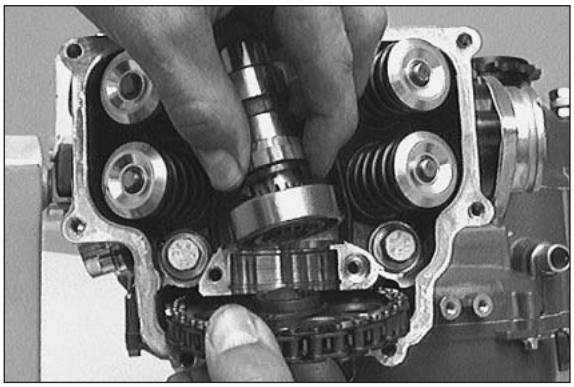
– Remove the two bolt ❹ and take off the automatic tensioner ❺ and the clamp ❻.



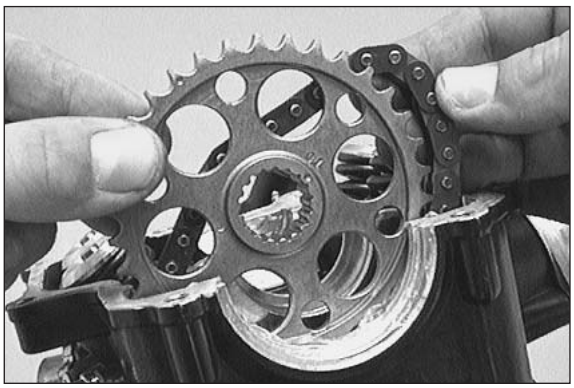
– Using a screwdriver, lever circlip ❶ out of the groove.



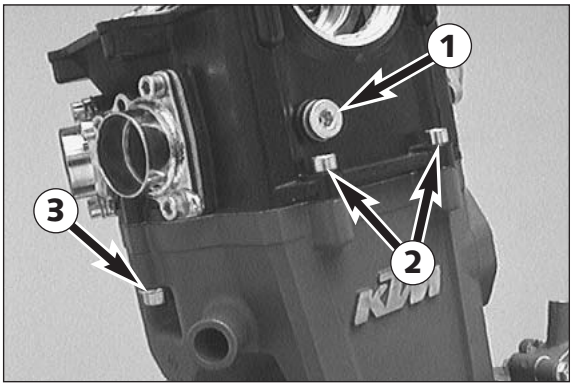
– Tilt camshaft and remove needle bushing ❷.



– While tilted, pull camshaft from camshaft gear and remove together with grooved ball bearing and circlip.

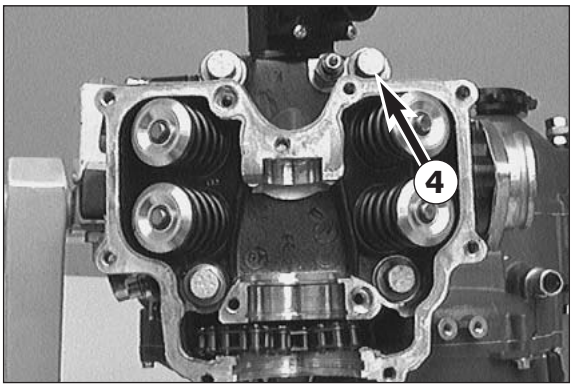


– Take the camshaft gear out of the timing chain as indicated in the illustration.

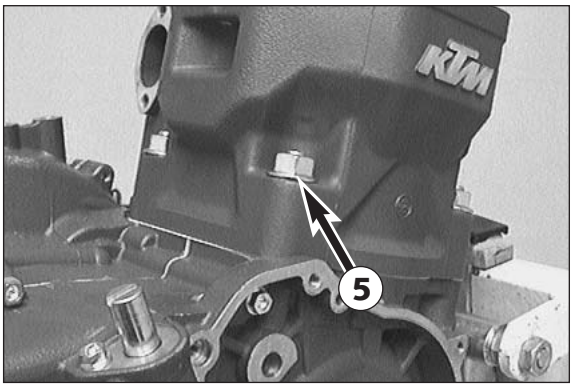


Removing cylinder head

– Unscrew chain guide bolt ❶ incl. gasket, bolts ❷ and collar nuts ❸.

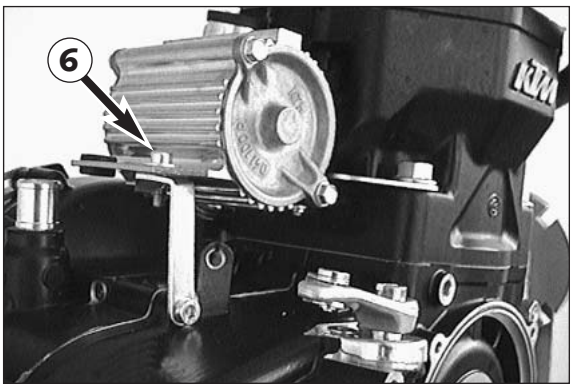


– Unscrew the 4 collar bolts ❹ and detach cylinder head with gasket.

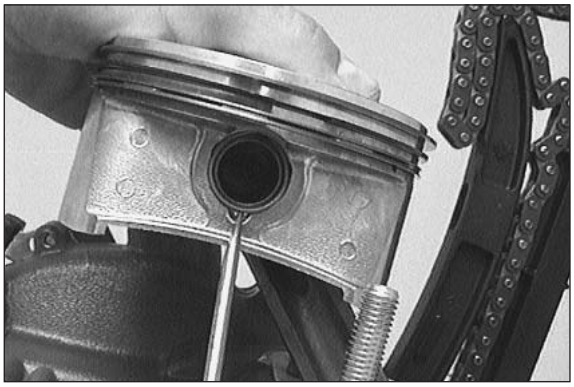


Removing cylinder and piston

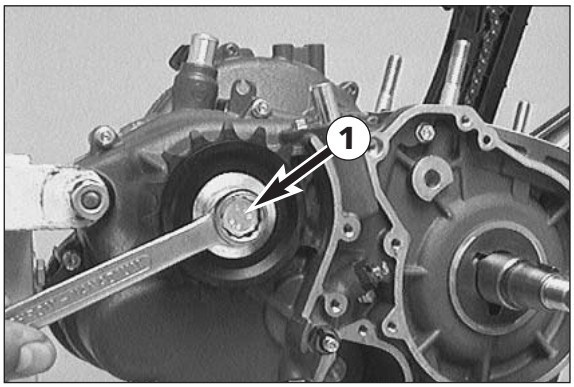
– Unscrew the 4 collar nuts at the cylinder base ❺.
– Remove cylinder and cylinder base gasket.



– When working on an engine with a microfilter, remove the AH bolt ❻ before taking off the cylinder.
– Disconnect the oil hose at the clutch cover and remove the microfilter together with the holder.



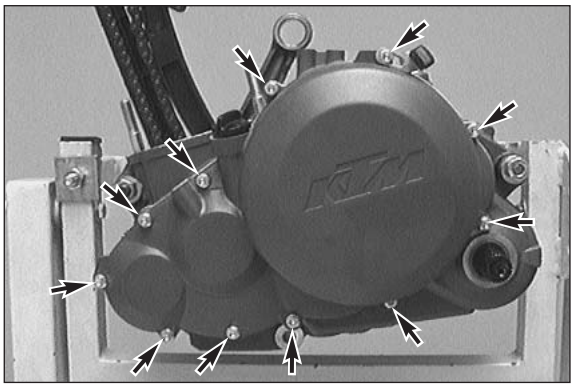
– Remove two wire circlips and press piston pin out of piston.
– Remove piston.



Removing engine sprocket

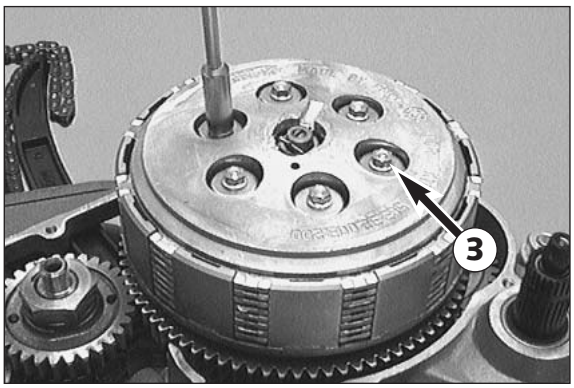
– Remove collar bolt ❶ and spring washer.
– Remove the sprocket from the counteshaft.
– Remove the distance bushing from the countershaft.

NOTE: If the gear-box and the clutch of the engine are in good condition, throw it into gear in order to block the take-off shaft (frictional connection to the blocked crankshaft is present). If the take-off shaft cannot be blocked as described above, a chain sprocket holder must be applied for the removal of the chain sprocket nut.

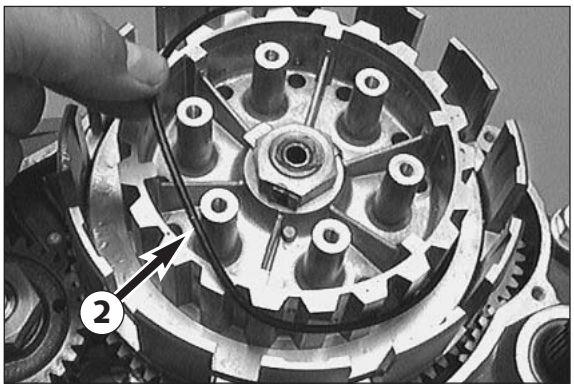


Removing clutch and primary drive

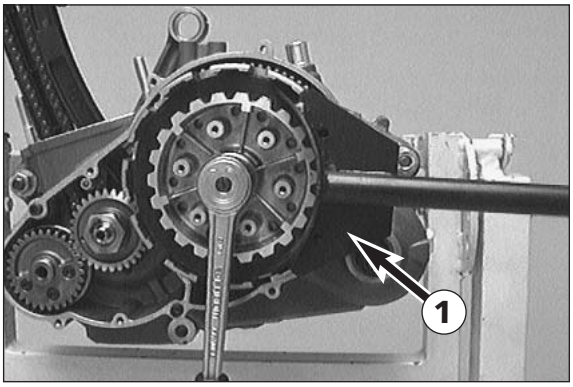
– Remove the 11 bolts and detach clutch cover with gasket.



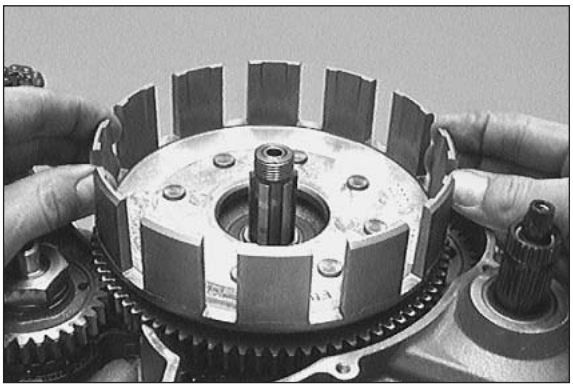
– Unscrew the bolts ❸ of the clutch crosswise to prevent the clutch discs from jamming when the springs are relieved of tension.
– Remove bolts, spring retainer and springs.
– Remove pressure cap with push rod.



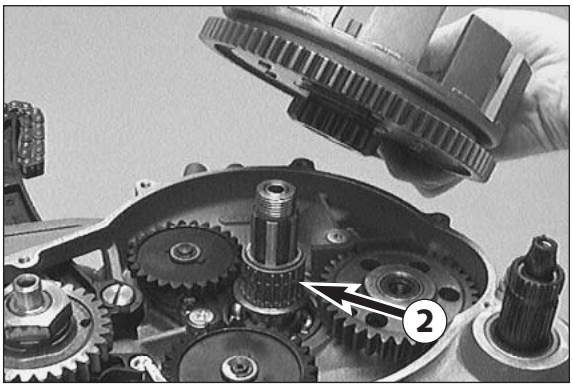
– Remove the disc package and take the O-ring ❷ also off the inner clutch hub.



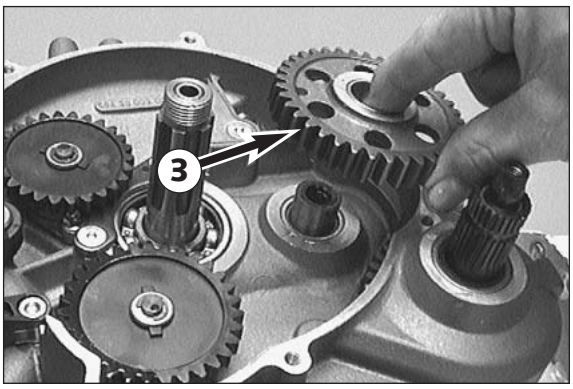
– Release the lock washer of the inner clutch hub.
– Put the clutch holder ❶ onto the inner clutch hub and undo the hexagon nut (see illustration).
– Remove the clutch holder.
– Take the hexagon nut, the lock washer and the inner clutch hub off the main shaft.



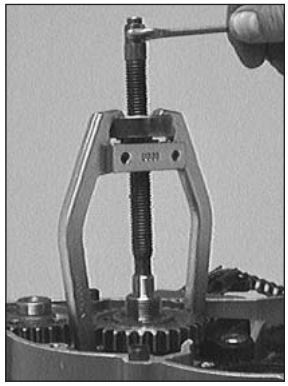
– Try to turn the outer clutch hub in both directions to check the absorbing elements. Dead travel in either direction is inadmissible.



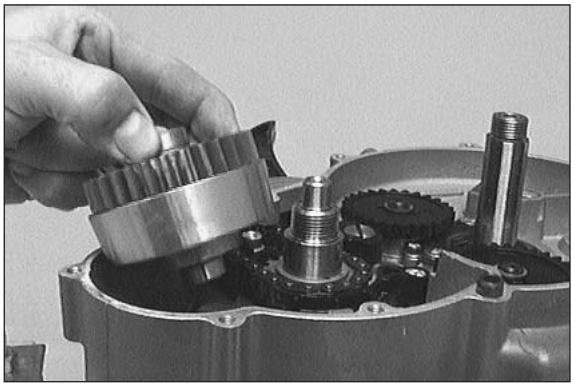
– Take the outer clutch hub and the needle bearing ❷ off the main shaft.



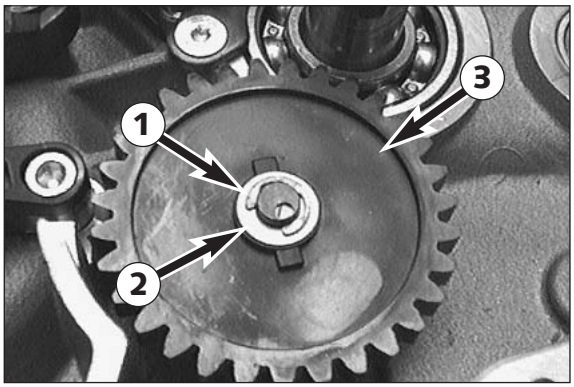
– Remove the kickstarter intermediate gear ❸.



– Unscrew hexagon nut of primary gear wheel and detach spring washer from the crankshaft.
– Fit extractor for primary gear and pull off primary gear.



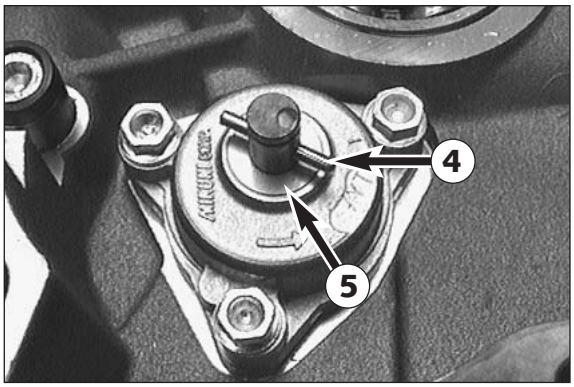
– Remove the balancer shaft from the bearing by hand.



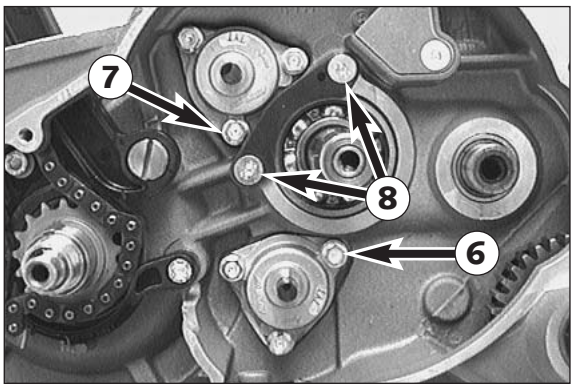
Removing the oil pumps

NOTE: The following procedure must always be performed on both oil pumps.

– Remove the locking washer ❶.
– Remove stop disc ❷ and the oil pump gear ❸.

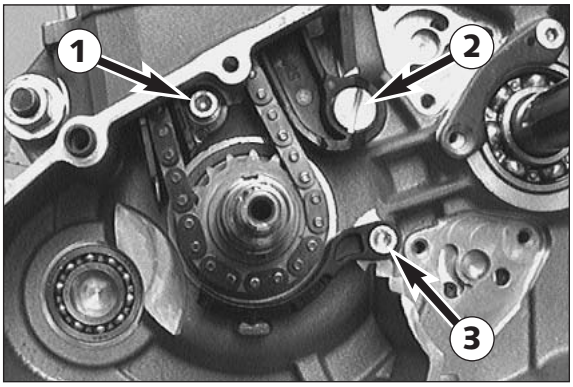


– Remove the needle roll ❹ and stop disc ❺.



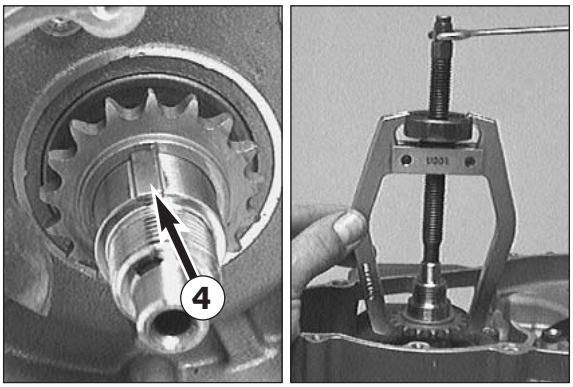
– Twist out the 6 bolts ❻ and remove the oil pumps from the housing.

NOTE: For better access to bolt ❼ remove bolts ❽ and take off the retaining bracket.

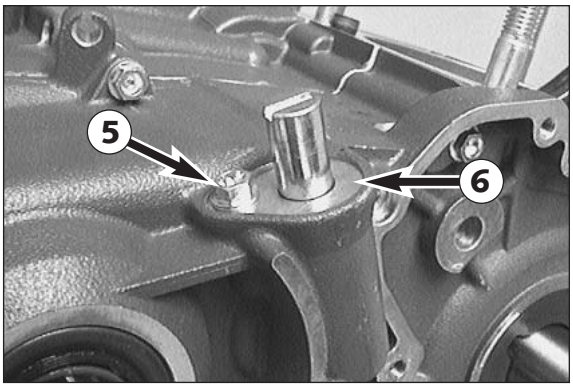


Removing the timing chain and the timing gear

– Remove allan head bolt ❶ and remove timing chain guide from the casing.
– Unscrew flat-head screw ❷ and remove timing chain tensioner.
– Unscrew allan head bolt ❸ and remove timing chain securing guide.
– Insert timing chain into the clutch compartment of the engine housing and disengage from timing gear.

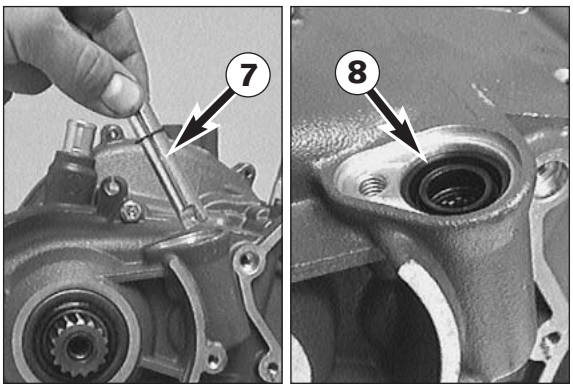


– Remove the primary gear woodruff key ❹ from the crankshaft.
– Withdraw the timing pinion from crankshaft with a 2-jaw puller.
– Take the woodruff key of the timing gear out of the crankshaft.

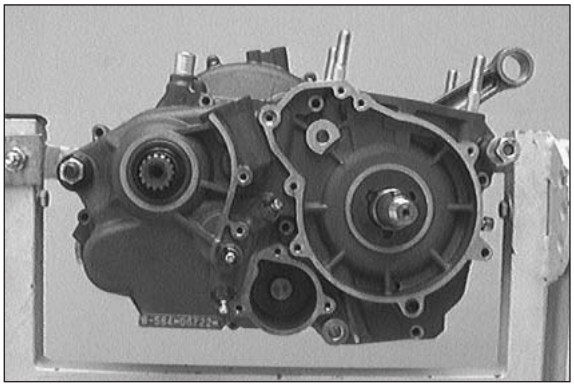


Removing the clutch release shaft

– Remove bolt(s) ❺ and take off the retaining bracket ❻.



– Pull the clutch release shaft ❼ out of the housing.
– Remove the grooved ring ❽.

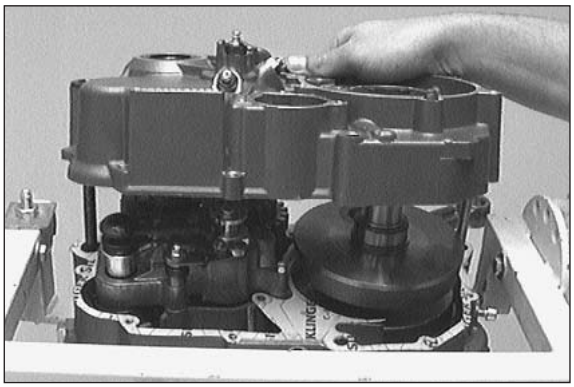


Parting of engine housing

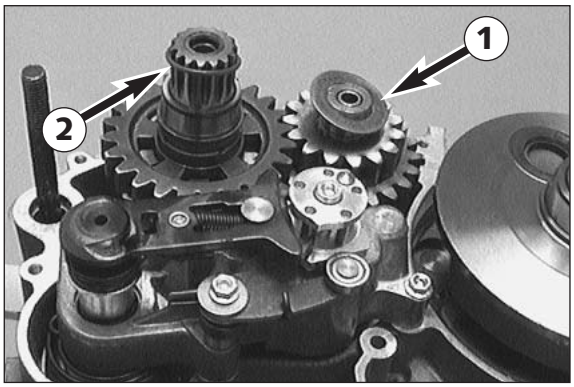
– Loosen the crankshaft locking bolt.
– Tip ignition side upwards and remove all the housing bolts.
– Release engine mount on engine repair stand.
– Lift right hand housing half with suitable tools bearing on the bosses provided, or part with a few light plastic mallet blows against the counter shaft.

! CAUTION !

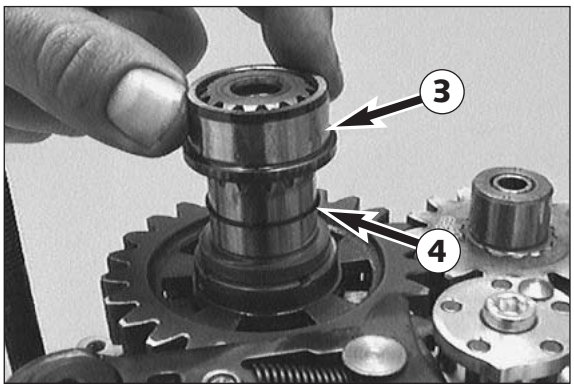
LEVERING APART WITH A SCREW-DRIVER OR SIMILAR TOOL MUST BE AVOIDED, SINCE THE SEALING SURFACES ARE EASILY DAMAGED.



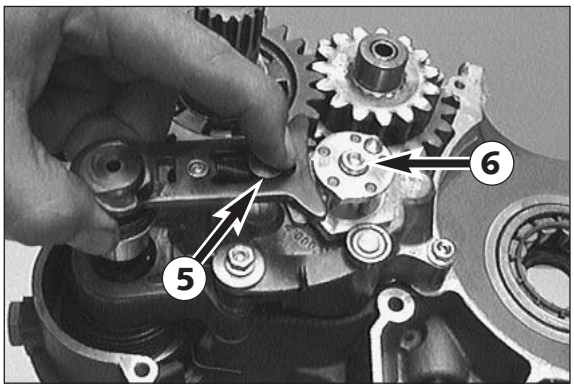
– Remove housing-half and gasket.



– Take the stop disc ❶ off the main shaft (can stick to the inside of the housing).
– Take the O-ring ❷ off the countershaft.
– Remove the crankshaft from the bearing by hand.

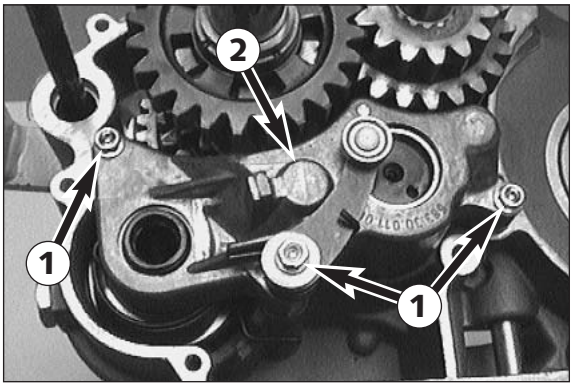


– Take the inner ring ❸ of the roller bearing and the O-ring below ❹ off the countershaft.

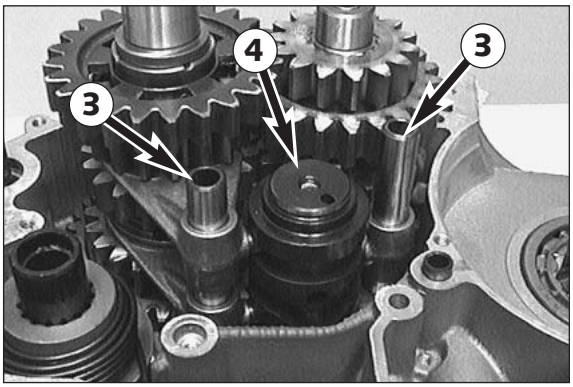


Removing the shift mechanism

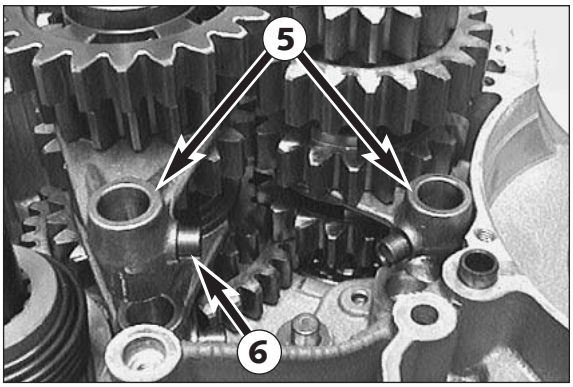
– Push back slide plate ❺ and pull shift shaft out of the kickstarter shaft.
– Remove allan head bolt ❻ and detach locking piece.



– Remove the 3 bolts ❶ and detach the shift mechanism support ❷.

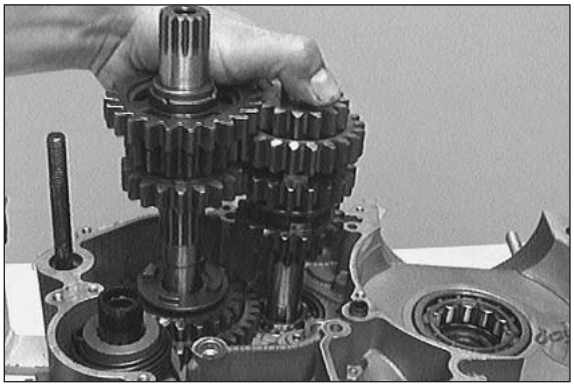


– Pull out the shift rails ❸ and swing the shift forks aside, taking care of the shift rolls ❻ on the driving pins of the shift forks.
– Pull the shift roller ❹ out of the bearing seat.



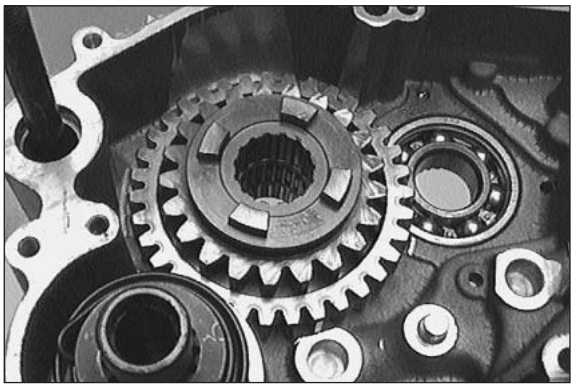
– Take the shift forks ❺ together with the shift rolls ❻ out of the engine housing.

NOTE: Although the counter shaft shift forks are identical they should be refitted in the same position as before if reused. Therefore mark accordingly upon removal.



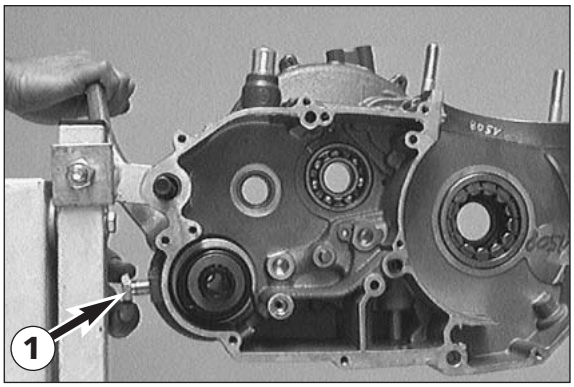
Removing the transmission shafts

– Pull both transmission shafts out of the bearing seats.



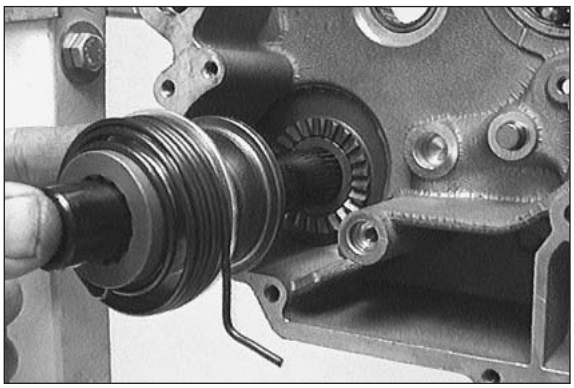
– Take the 3rd gear/sliding gear and the 1st gear/idler gear out of the engine housing together with the needle bearing and the stop disc.

NOTE: A roller bearing was installed in the 660 SMC model, thus a stop disc is unnecessary.

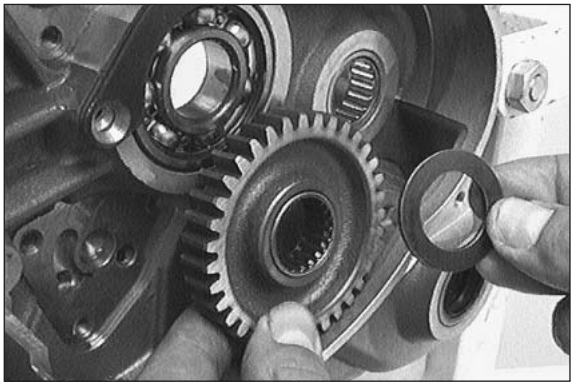


Removing the kickstarter shaft

– Put kickstarter onto kickstarter shaft and hold in this position.
– Unscrew stop bolt ❶ and relieve starter spring tension by releasing the kickstarter.



– Remove kickstarter shaft assembly from housing.



– Take the starter gear out of the housing bag together with the needle bearing and the stop discs.

– Clean all parts and check for wear, replace if necessary.

NOTE: When an engine is completely overhauled it is recommended that all gaskets, shaft seal rings, O-rings and, possibly, all bearings are renewed.

SERVICING ON INDIVIDUAL COMPONENTS 5

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Art.-Nr. 3.206.006 -E

INDEX

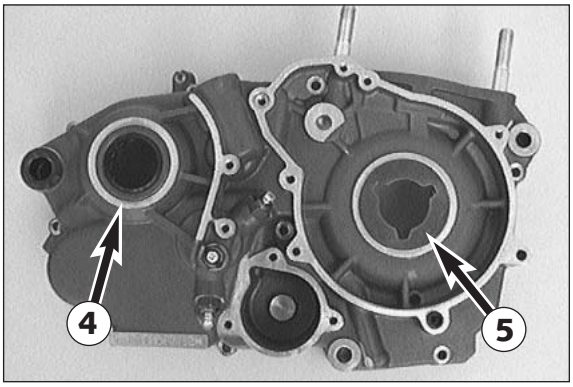
IMPORTANT NOTE REGARDS WORKING ON ENGINE HOUSING

Read through the following section before commencing work. Then determine the assembly sequence so that the engine housing halves only need to be heated up once before replacing the bearings.

Having first removed the dowels, in order to expel the bearings or remove them with light mallet blows, the housing halves must be placed on a suitably large plane surface, supporting the whole of the sealing surface without damaging it. A wooden panel is best used as a base.

Bearings or shaft seal rings should not be hammered into their seats. If no suitable press is available, use a suitable mandrel and hammer them in with great care. Cold bearings will practically drop into their seats at an engine housing temperature of approx. 150° C.

After cooling, should the bearings fail to lock in the bore, they are bound to rotate after warming. In that event the housing must be replaced.



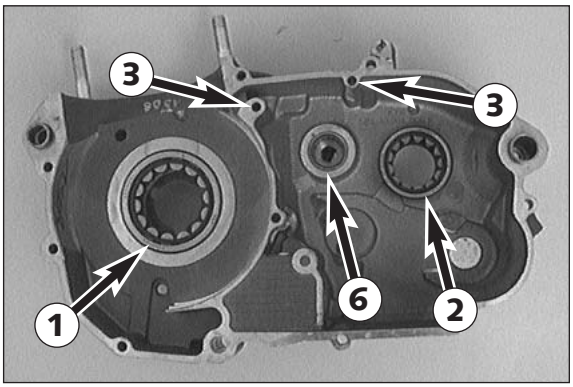
Working on the right housing half

Remove shaft seal rings and heat housing half to approx. 150° C by means of a hot-plate.

Roller bearing of crankshaft ❶
Proceed as for left housing half.

Cylinder roller bearing of counter shaft ❷
Remove shaft seal ring. Press old bearing inwards. Press in new bearing from inside as far as stop.

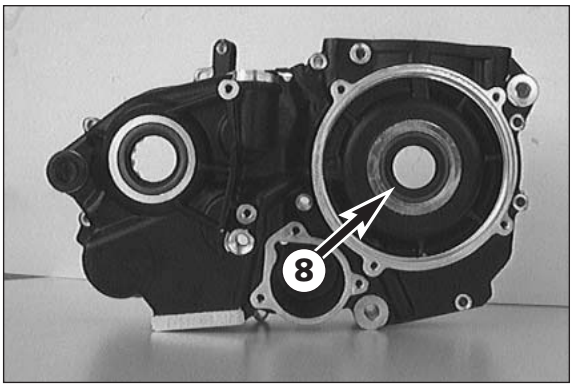
Oil ducts ❸
Use compressed air to clean all oil ducts. Ensure that the oil ducts are not clogged.

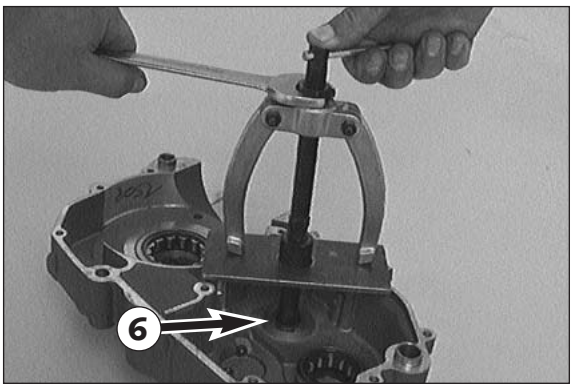


Counter shaft seal ring ❹
Press in new shaft seal ring from outside until flush.

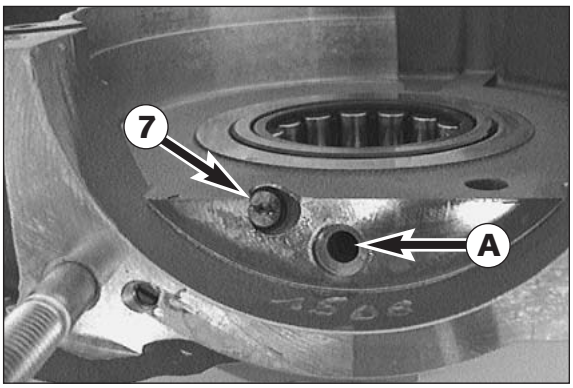
Crankshaft seal ring ❽
Press in new shaft seal ring from outside until flush.

NOTE: Engine with an electric starter have a stop disk instead of the shaft seal ring ❺. Do not remove this disk.



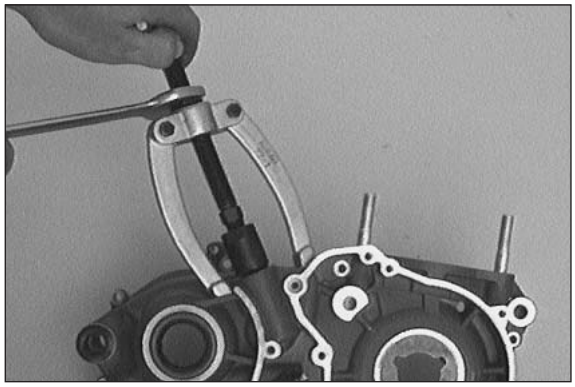


Needle bearing of main shaft ❻
Pull old bearing from bearing seat using bearing extracto and insert. In order to apply the bearing extractor in an vertical position, a steel plate (see special tools) must be laid on the sealing area of the housing. The bearing extractor jaws should fit as close as possible up to the housing walls. Then press in new bearing from inside until flush.

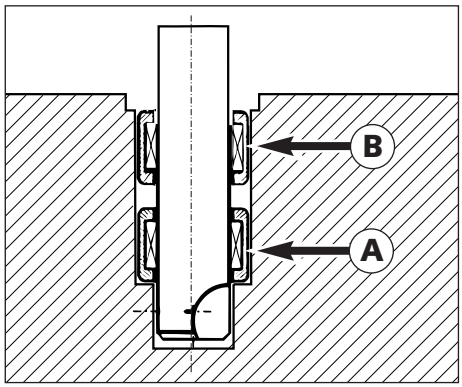


Oil nozzle ❼
For the cleaning of the oil nozzle and the oil duct simply blow it through with compressed air from the nozzle side. If the oil nozzle is disassembled, secure it with Loctite 243 when mounting again.
Then check the lubrication bore Ⓐ of the crankshaft roller bearing for free passage.

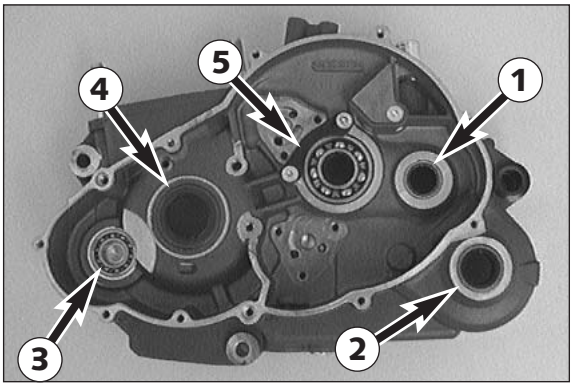
After the case half has cooled down, check bearings for secure fit.



Needle bushes of the clutch disengagement
– Pull out the needle bushes of the clutch disengagement with a gear puller and insert from the housing half.



– Oil the needle bushes.
– Press the first needle bush Ⓐ to stop.
– Press the second needle bush Ⓑ so that it is flush.



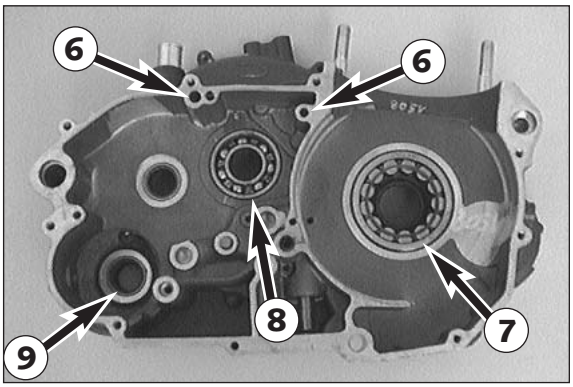
Working on the left half of the housing

Remove shaft seal rings and heat housing half to approx. 150° C by means of a hot-plate.

Needle bearing of counter shaft ❶
Press in new needle bearing from inside until flush.

Shaft seal ring of kickstarter shaft ❷
Press in new shaft seal ring from outside with sealing lip facing inwards until flush.

Grooved ball bearing of the balancer shaft ❸.
Use an extractor and insert to remove the grooved ball bearing from the housing half.

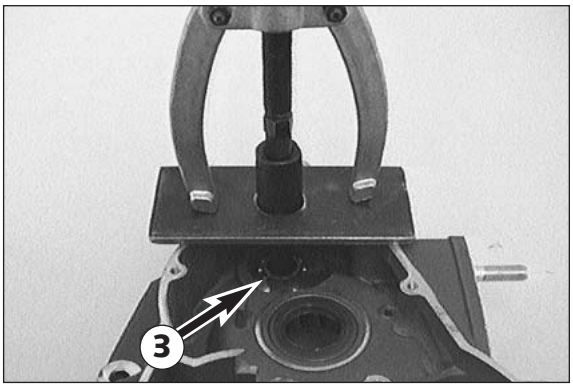


Shaft seal ring of crankshaft ❹
Press in new shaft seal ring from outside with sealing lip facing inwards until flush.

Retaining plate for main shaft grooved ball bearing ❺
If the retaining plate has been removed, use Loctite 243 for the two countersunk bolts during assembly.

Oil ducts ❻
Use compressed air to clean all oil ducts. Ensure that the oil ducts are not clogged.

Roller bearing of crankshaft ❼
From outside press crankshaft roller bearing inwards using a suitable mandrel.
Press in new roller bearing from inside up to the stop.

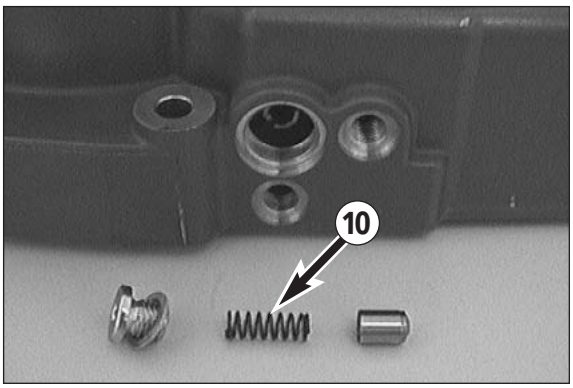


Grooved ball bearing of main shaft ❽
Press in new grooved ball bearing from inside up to the stop.

! CAUTION !

DO NOT USE FORCE WHEN PRESSING THE GROOVED BALL BEARING AGAINST THE RETAINING PLATE ❺ TO AVOID A BENDING OF THE PLATE, WHICH WOULD RESULT IN EXCESSIVE AXIAL PLAY OF THE MAIN SHAFT.

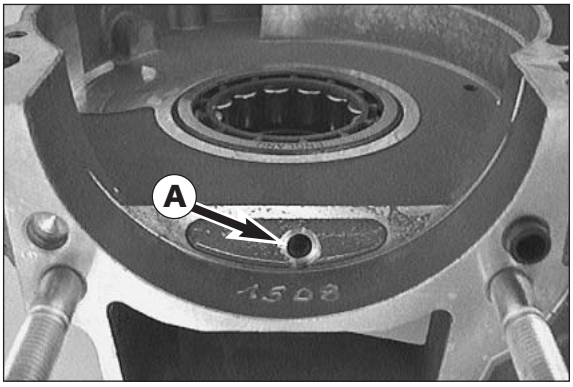
Needle bearing of kickstarter shaft ❾
Press in new needle bearing from inside until flush.



Bypass valve
Test valve piston, tight fit and pressure spring for damage.

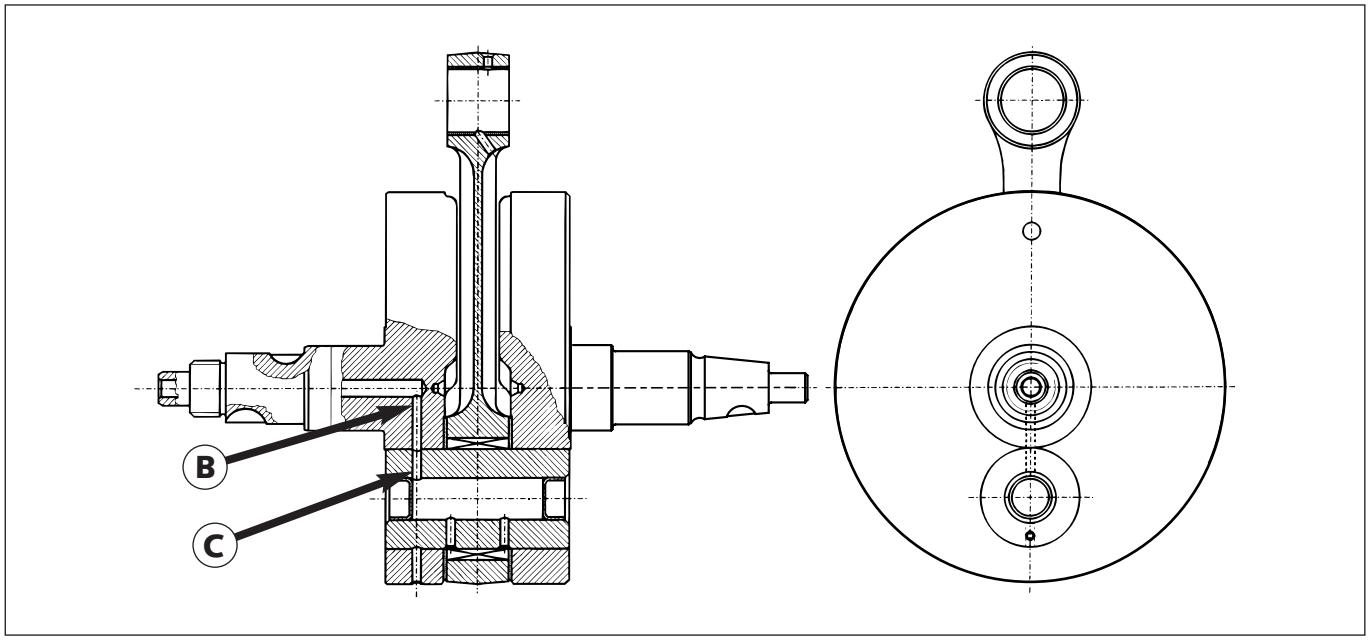
Minimum length of the pressure spring ❿: 23,5 mm

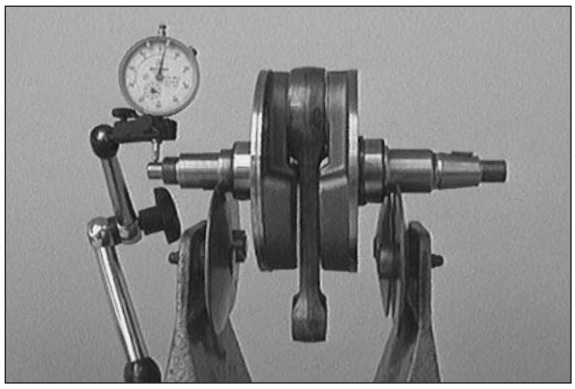
NOTE: The opening pressure of the bypass valve is reduced when the length of the pressure spring decreases below 23,5 mm. This reduces the oil pressure and causes engine damage.

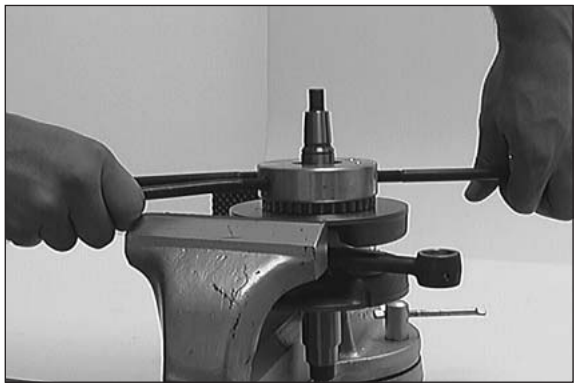


Ensure that neither the lubrication bore of the roller bearing Ⓐ nor the oil ducts of the oil pumps are clogged.

– After the housing half has cooled down, check bearings for tight fit.
– Finally, insert both dowels so that the dowel with internal diameter 15.4 mm is mounted at the rear (swingarm pivot).







Crankshaft

If the conrod bearing is replaced, take care to properly position the crankpin. The bores of the crank web Ⓑ and crank pin Ⓒ must coincide.

! CAUTION !

IF THE CRANK PIN IS PRESSED IN THE WRONG POSITION, THE CONROD BEARING IS SUPPLIED INSUFFICIENTLY OR NOT AT ALL WITH ENGINE OIL, WHICH RESULTS IN BEARING DAMAGE.

If the crankshaft is continued to be used, check crankshaft journals for run out. Place crankshaft on a roller block or a similar device and check the outer end of the journals for run out with a dial gauge.

run out of crankshaft journals: max. 0.04 mm (0.0016 in)

The radial clearance and axial clearance on the conrod bearing must be checked.

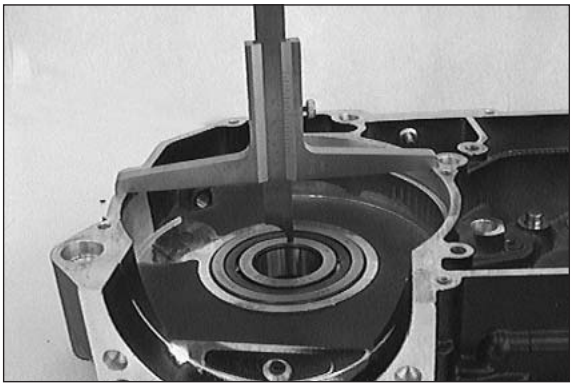
radial clearance: max. 0.05 mm (0.0019 in)
axial clearance: max. 1.00 mm (0.04 in)

- If the crankshaft roller bearings are replaced, the inner rings on the crankshaft should also be changed.
- Heat special tool on a heating pad up to approx. 150°C and slip it on the inner ring immediately. Press the special tool together tightly to obtain a good heat transfer and pull the inner ring off the crankshaft.
- To mount the new inner ring, heat the special tool again to approx. 150°C, engage the inner ring and slip it on the crankshaft journal immediately.
- In order to safely press on new rings, a middle panel should be inserted between the crankshaft webs. This panel should be big enough to be supported on both sides, so that the crankshaft lies free and accessible.

NOTE: Because LC4-E models have different diameters of inner crankshaft bearing rings, it is necessary to have both special tools (584.29.037.040 and 584.29.037.043).

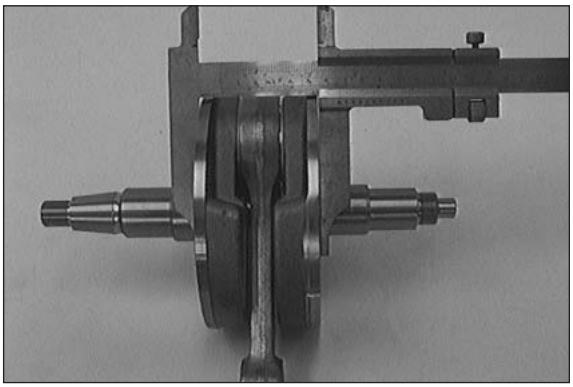
! CAUTION !

NEVER CLAMP THE CRANKSHAFT WITH A CRANKSHAFT JOURNAL OR WEB IN THE VICE, AND NEVER TRY TO KNOCK THE INNER RING FREE. THE CRANKSHAFT WEBS MAY BE COMPRESSED THEREBY MAKING THE CRANKSHAFT UNUSEABLE.



Measuring and adjusting of crankshaft axial clearance

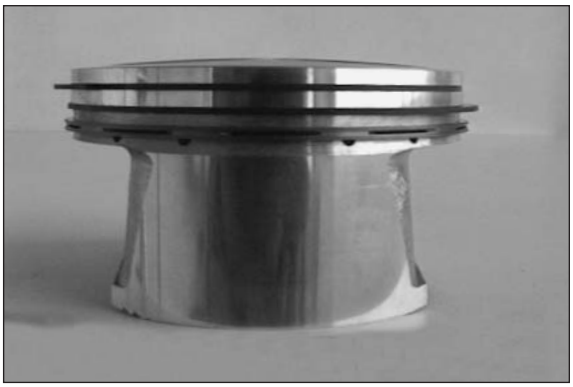
– Should the crankshaft, engine housing, or a roller bearing be replaced, the axial clearance of the crankshaft should also be checked.
– The housing should be laid inside upwards, then measure the distance from the sealing area to the inner rings of the roller bearings. Note the readings and then add on 0.3 mm to allow for gasket thickness.
– Measure the crankshaft at touching points and then subtract the measured value from the housing dimensions. This figure will be the axial play of the crankshaft, which should be 0.03- 0.12 mm (0.001-0.005 in).



EXAMPLE:

Left-hand housing half		33.0 mm	1.300 (in)
Right-hand housing half	+	32.8 mm	1.290 (in)
Gasket	+	0.3 mm	0.012 (in)
Total housing dimension	=	66.1 mm	2.602 (in)
Crankshaft dimension	–	65.8 mm	2.590 (in)
Axial play present	=	0.3 mm	0.012 (in)

The compensating washers should be equally distributed between the two sides of the crankshaft. In our example, one compensation washer (≠ 0.1 mm / 0.004 in.) must be mounted on either side.



Checking the piston

– Replace the piston in the case of excessive oil consumption or grooves in the piston skirt.
– If reinstalling the old piston perform the following steps:

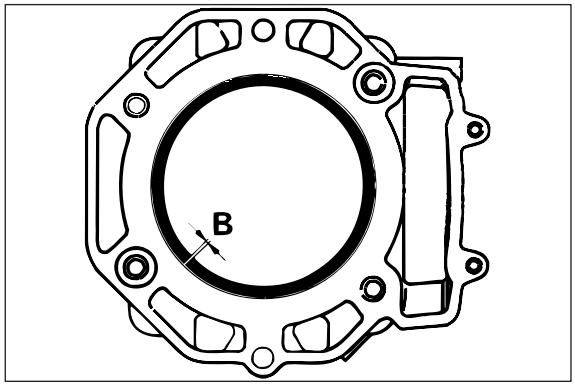
1. Piston bearing surface - check for damage
2. Piston ring grooves - the piston rings must move easily in the groove. Old piston rings or sandpaper (400 grit) may be used to clean the piston ring grooves.
3. Piston rings - check for damage and end gap (see below).
4. The piston pin must move freely in the piston when mounted. If the piston pin changed its color badly or shows running traces, it must be replaced. Insert piston pin also into the conrod and check for clearance. Maximum clearance in the conrod eye 0.08 mm (0.003 in).

NOTE: When in place, the piston pin may not have any play. It must be possible to shift it with slight counterpressure.

Mounting instructions for piston rings

– Insert the oil scraper ring in the lower ring groove. Side of ring marked facing piston head.
– Mount compression ring (tapered compression piston ring) in middle ring groove. Side of ring marked facing piston head.
– Insert the compression ring (rectangular ring) in the upper piston ring groove (the surface marked must be on top).

	ELKO Ø 89 mm	ELKO Ø 95 mm	ELKO Ø 101 mm	ARIAS Ø 101 mm
Compression ring	O	O	O	N 100
Tapered ring	TOP	TOP	TOP	N 101
Oil scraper ring	ELKO	TOP	TOP	—

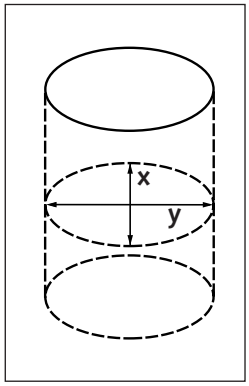


Piston ring end gap

– Insert pisto ring into the cylinder and adjust. Piston ring must be approx. 10 mm (1/2 inch) from top of cylinder.
– The end gap Ⓑ can now be checked which a feeler gauge.

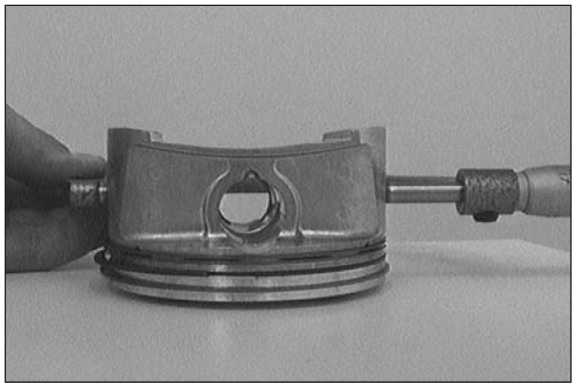
Compression rings: max. 0.60 mm (0.023 in)
Oil scraper ring: max. 0.80 mm (0.03 in)

If the end gap is greater check piston and cylinder for wear. If piston and cylinder wear are within the permitted tolerance limits, replace the piston ring.



Measuring piston and cylinder, determining the piston fitting clearance

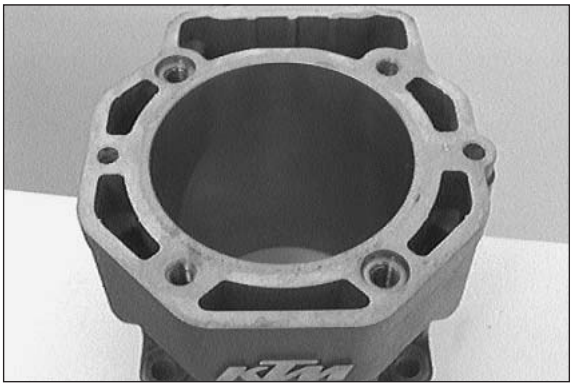
– In order to determine the wear of the cylinder, measure the cylinder center of the running area with a micrometer.
– Measure the diameter of the x-axis and the y-axis in order to check for oval wear, if any.



– The piston is measured on the piston skirt across to the piston pin as shown in the illustration.

– The cylinder diameter minus the piston diameter yields the piston assembly clearance.

Piston assembly clearence: see Technical Specification

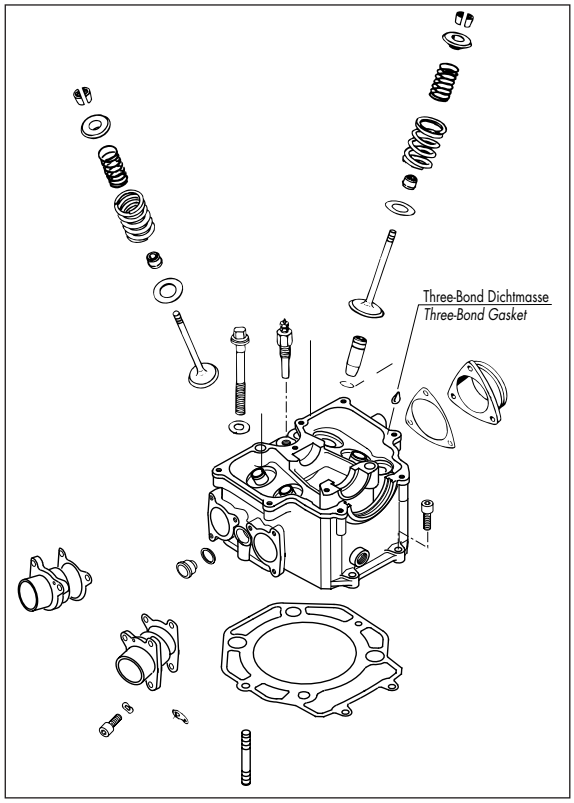


Cylinder – nikasil coating

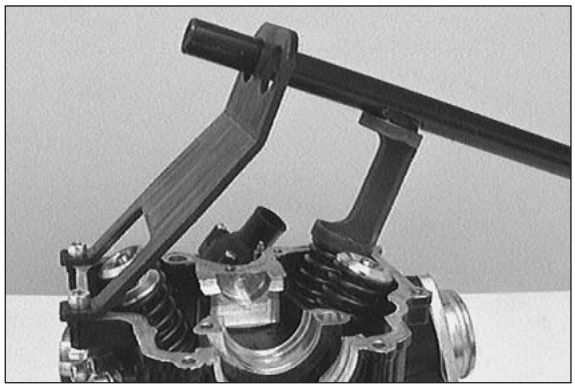
Nikasil is the brand name for a cylinder coating process, developed by the piston manufacturer Mahle. The name is derived from the two materials used in this process - a nickel layer into which the particularly hard silicon carbide is embedded. The main advantages of the Nikasil coating are excellent heat dissipation and thus better power output, low wear and low weight of the cylinder. The worn coating can be regenerated at low cost provided that the running surface of cylinder is flawless.

Recoated cylinder

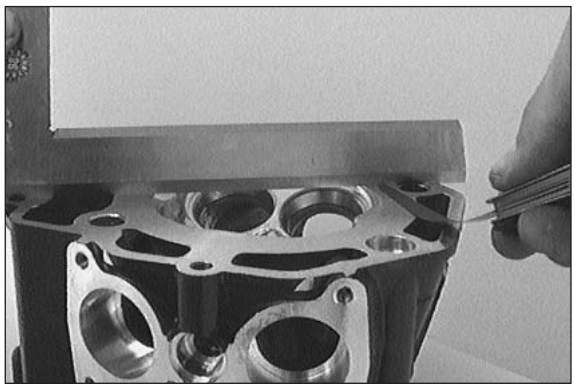
If the Nikasil coating of your cylinder is worn but undamaged, you may obtain a recoated cylinder at your KTM dealer (new Nikasil coating on used cylinder).
It may be that your spare cylinder shows color changes on the exterior side.



Disassembling the cylinder head and checking the components for wear



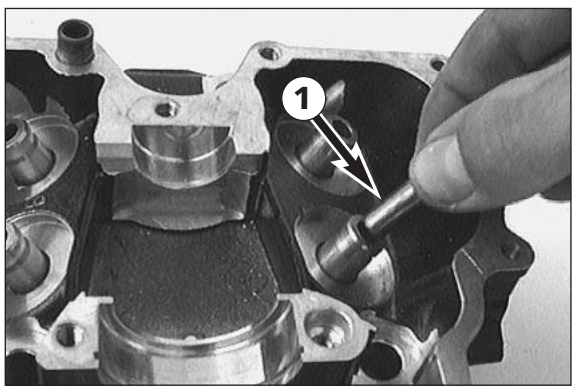
– Mount cylinder head in vice using the studs. Do not allow it to rest on sealing surface.
– Mark valves and remove using special tool (see illustration).
– Clean all parts.



Sealing area
Check spark plug threads and valve seats for damage or cracks. Check the sealing area to the cylinder for distortions with a straightedge and a feeler gauge. Distortion limit 0.10 mm (0.004 in).

Valve guides
The valve guides are checked with a limit plug gauge ❶ (Ø 7.05 mm). If the limit plug gauge can be easily inserted into the valve guide, the guide must be replaced in a specialized workshop.

Valve seats
The valve seats must not be pocketed. Seat sealing width: intake max. 1.5 mm (0.059 in); exhaust max. 2.0 mm (0.079 in). Grind valves if necessary.

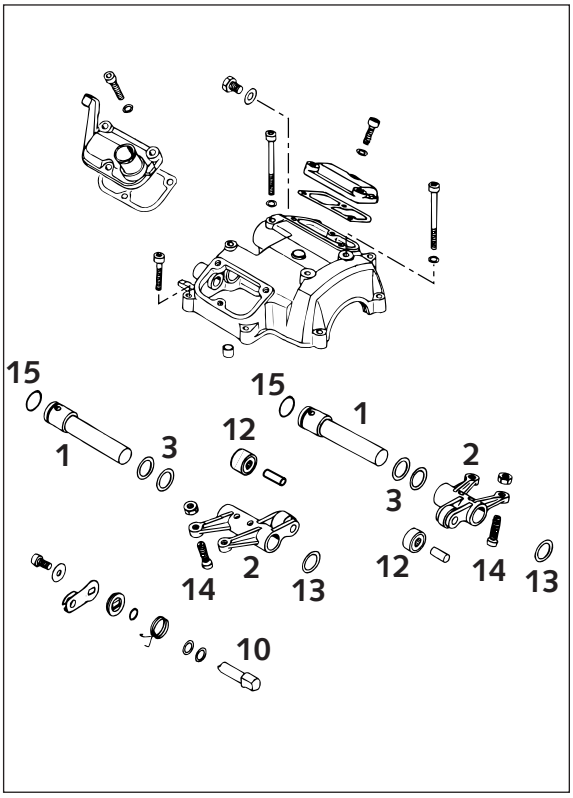


Valves
Check valve heads for wear and run out. Max. run-out on valve heads 0.03 mm (0.001 in). Valve seats should not be pocketed. The sealing area must be located in the center of the valve seat. The valve stem is hard-chrome plated. Experience shows that wear appears primarily on the valve guide.

Valve springs
Only visual check for breakage or wear is necessary.

Valve stem seals
Always renew valve stem seals when the valves are removed.

Intake flange
Check flange surface for distortion, scrape on glas plate if necessary.



Disassembling the cylinder head top section and checking the components for wear

– Simply pull the rocker arm axles ❶ out of the cylinder head top section. Then take both rocker arms ❷ together with thrust washers ❸ and ⓭ out of the cylinder head top section.

Undo bolt ❹ and remove the following components:

Washer ❺
Decompression shaft lever ❻
Covering disc ❼
O-ring ❽
Decompression lever spring ❾

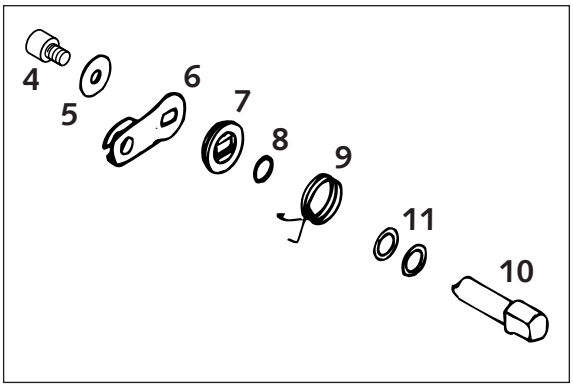
– Press the decompression shaft ❿ inwards and take it out of the cylinder head top section together with the washers ⓫.
– Clean all components.

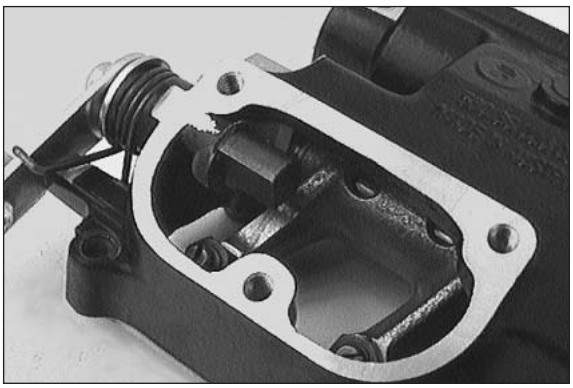
Rocker arm shafts ❶
The rocker arm shafts must be free of grooves and should turn easily within the rocker arms ❷.

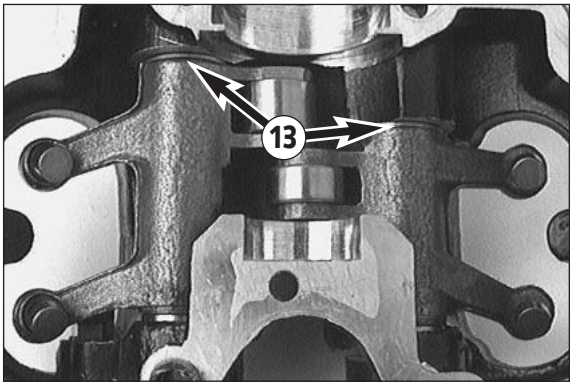
Rocker arm rollers ⓬
The rocker arm rollers must move smoothly. Rocker arm rollers must be removed in the case of radial clearance.

Adjusting screws ⓮
The contact surfaces of the adjusting screws must be plane.

Decompression shaft ❿
Check for smooth operation and clearance in the bearing bore.







Pre-assembling the cylinder head top section

– Insert decompression shaft ❿ with compensation washers ⓫ into the top section.
– Mount the new O-ring ❽, the decompression lever spring ❾ and the cover disc ❼ in such a way that the O-ring fits into the recess of the cover disc.
– Mount the decompression shaft lever ❻.
– Apply Loctite 243 to the thread of bolt ❹ and mount the bolt together with washer ❺.
– Hook the decompression lever spring onto the decompression shaft lever.

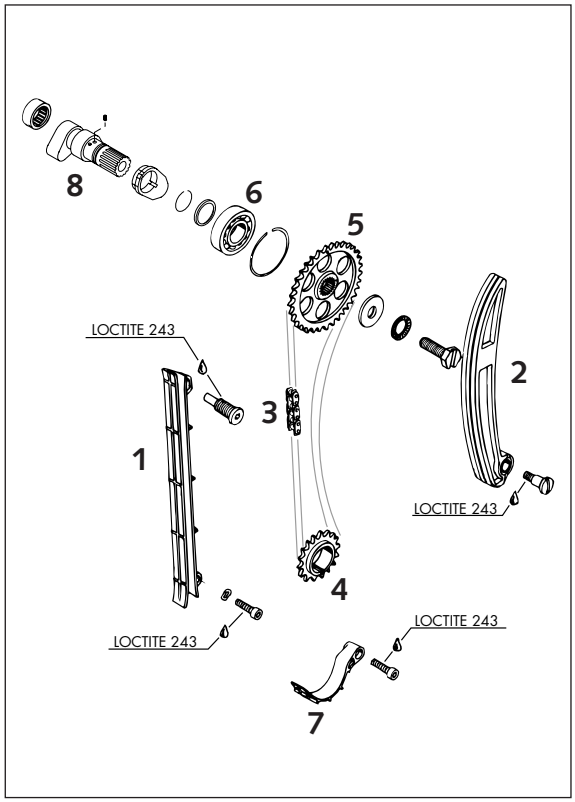
! CAUTION !

THE DECOMPRESSION SHAFT MUST EXHIBIT NO AXIAL PLAY WHEN THE ALLAN HEAD BOLT ❹ IS TIGHTENED. TO ENSURE THAT THE O-RING ❽ FORMS A SEAL, IT MUST BE SLIGHTLY PRESSED AGAINST THE TOP SECTION BY THE COVER DISC ❼. HOWEVER, THE PRESSURE ON THE O-RING MUST NOT BE EXCESSIVELY HIGH AS THE DECOMPRESSION SHAFT WILL BECOME SLUGGISH. ADJUST OUT WITH COMPENSATION WASHERS ⓫ IF NECESSARY.

NOTE: Discs ⓫ are available 0.15 mm, 0.30 mm and 0.50 mm thick.

– Mount new O-rings ⓯ on rocker arm shafts ❶.
– Mount rocker arms ❷, thrust washers ❸ and rocker arm shafts ❶.
– On the side of the water pump one thrust washer ⓭ ≠ 1.0 mm (0.04 in) must be mounted.
– The axial play on the opposite side is roughly equalized with thrust washers ❸ ≠ 1.0 (0.04 in) and ≠ 0.5 mm (0.02 in).

The axial clearance of the rocker arm axles must be 0.20 - 0.30 mm.



Checking the components of the timing mechanism for wear

Timing chain guide ❶
Check for signs of wear.

Timing chain tensioner ❷
Check for signs of wear.

Timing chain ❸
Check rollers for smooth operation and signs of wear.

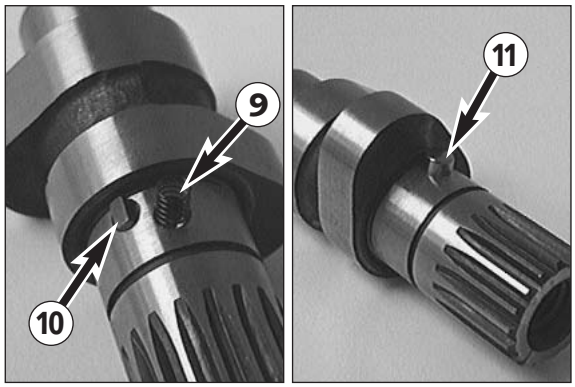
Timing gear ❹
Check teeth for signs of wear.

Camshaft gear ❺
Check teeth for signs of wear.

Grooved ball bearing ❻
Check clearance.

Safety device ❼
Check for signs of wear.

Camshaft ❽
Check pivot points and running surfaces for signs of wear.



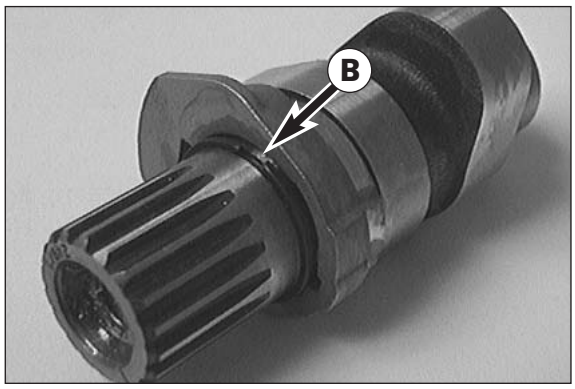
Disassembling the camshaft and checking the components for wear

– Remove both the stepped ring ⓮ and the circlip ⓯. Carefully remove the decompression cam ⓬. Keep a watch on the spring ❾.

Supporting pin ❿
Check for signs of wear.

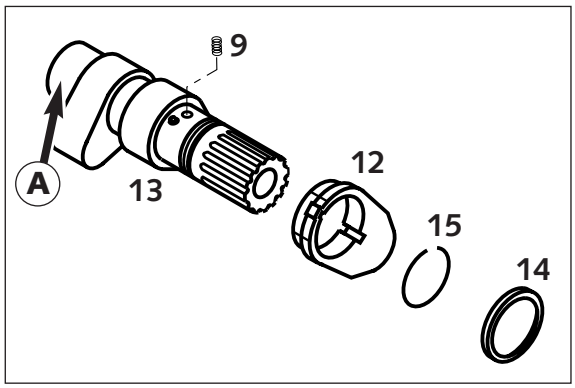
Guide pin ⓫
Check for signs of wear.

Decompression cam ⓬
Check the contact surfaces towards the supporting pin for signs of wear.



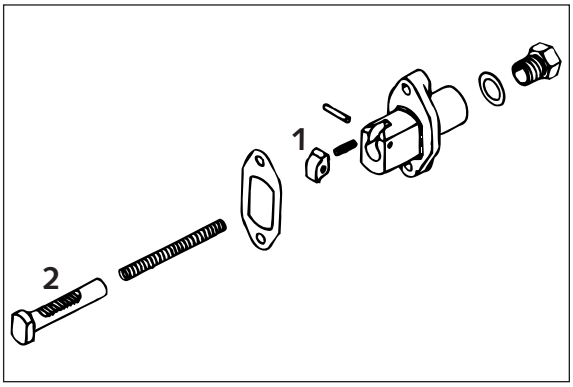
Spring ❾
Check length (minimum length: 7.0 mm/0.275 in).

Camshaft ⓭
Check for signs of wear at pivot point Ⓐ. Minimum diameter of the pivot point 19.97 mm.



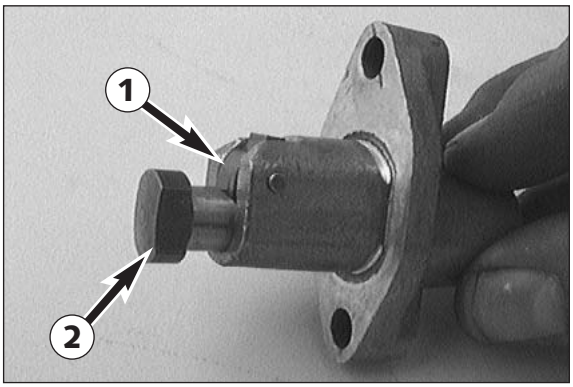
Preassembling the camshaft

– Place spring ❾ in the bore, compress and slide decompression cam ⓬ over it.
– Mount circlip ⓯ with the sharp side towards the decompression cam.
– Position the open side Ⓑ of the circlip between the open spaces of the decompression cam.
– Slide the step ring ⓮ with open spaces over the lock washer.



Automatic tensioner

– Check ratcheting pawl ❶ for smooth operation and wear.
– Check thrust bolt ❷ for wear at teeth.

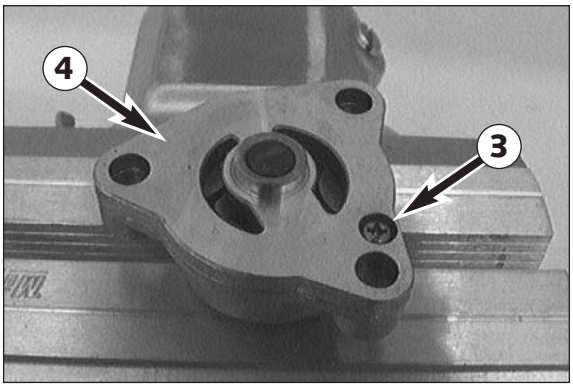


Preassembly of automatic tensioner

– Insert thrust bolt into tensioner housing and engage ratcheting pawl into first notch (see illustration).

! CAUTION !

IF THE RATCHETING PAWL IS NOT ENGAGED INTO THE FIRST NOTCH THIS WILL CAUSE EXCESSIVE TENSION OF THE CHAIN.

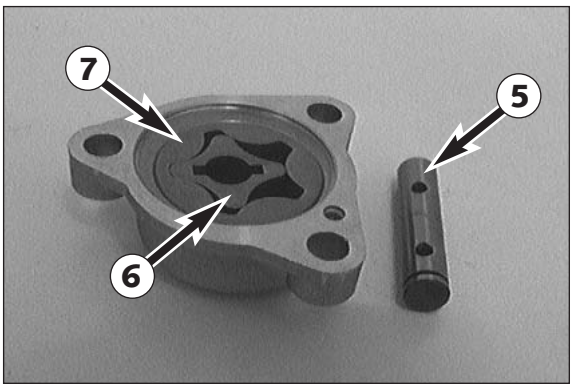


Disassembling the oil pumps and checking the components for wear

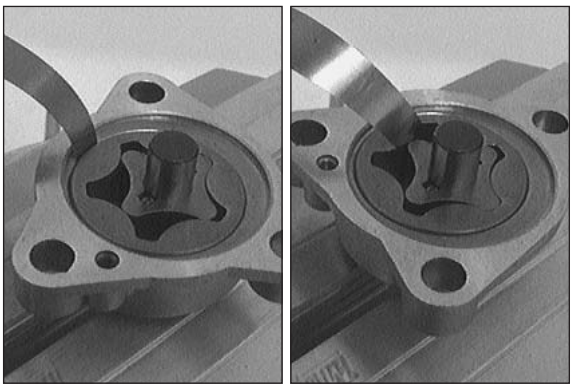
NOTE: The two oil pumps are similar in design but work at different speeds. Disassemble and check the oil pumps separately to avoid mixing up of components.

– Remove screw ❸ and take off the oil pump cover ❹.
– Pull the oil pump shaft ❺ out of the oil pump housing together with the bearing needle.
– Take the inner rotor ❻ and the outer rotor ❼ out of the oil pump housing.

– Clean all components and check for signs of wear.



– When reassembling the unit insert the inner rotor and the outer rotor into the oil pump housing, making sure that the point faces the inside.
– Mount oil pump shaft and bearing needle



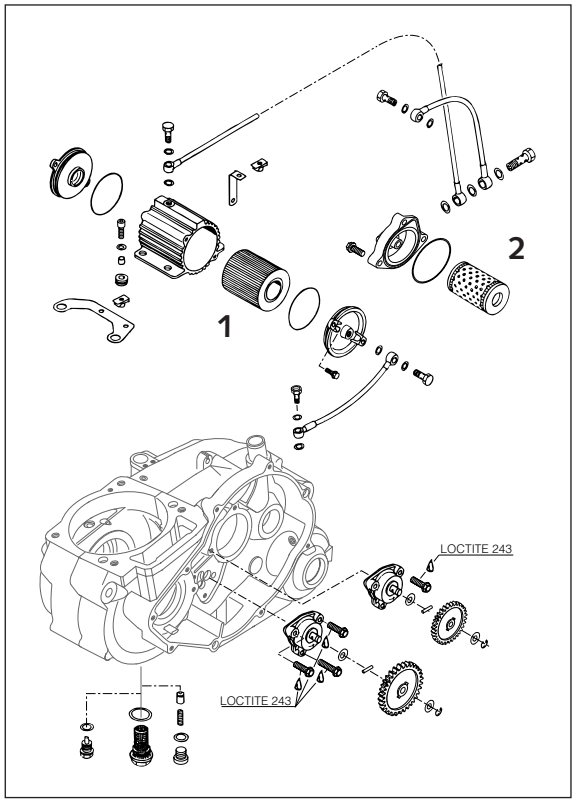
– Now perform the following measurements to determine the degree of wear:

Outer rotor - oil pump housing: max. 0.20 mm
Outer rotor - inner rotor: max. 0.20 mm

– Fill the oil pump housing with oil and mount the oil pump cover.
– Apply Loctite 243 to the thread of screw ❸ and mount the screw.

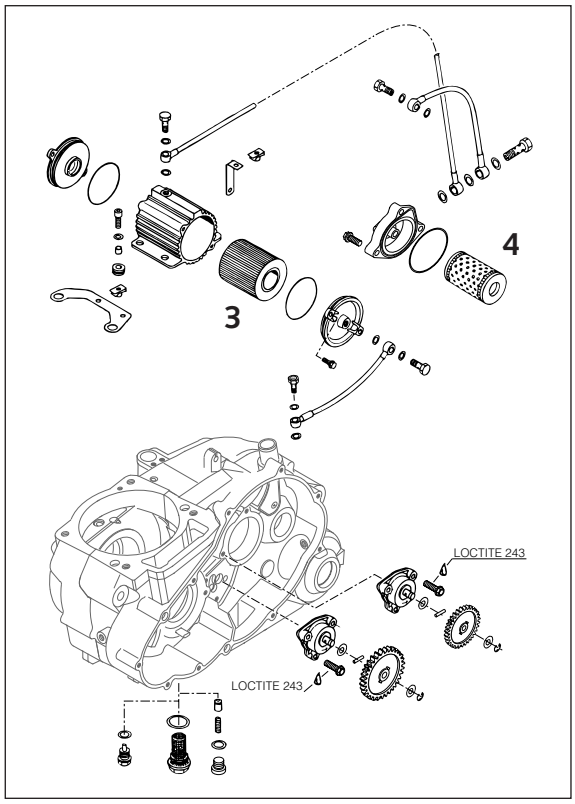
! CAUTION !

FILL OIL PUMPS WITH OIL BEFORE PREASSEMBLING.



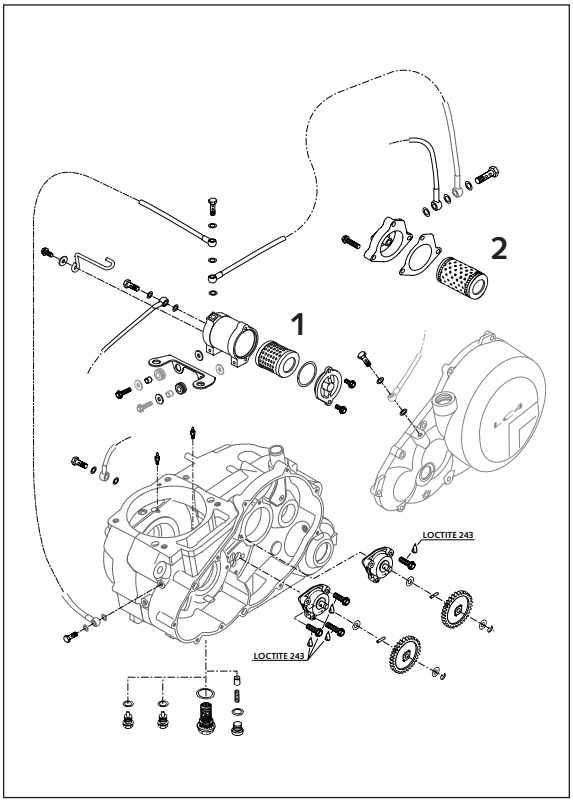
Oil lines (SX, SXC)

– Check oil lines and banjo bolts for damage and clear passage.
– When repairing the engine, the microfilter ❶ and the oil filter ❷ must be replaced.



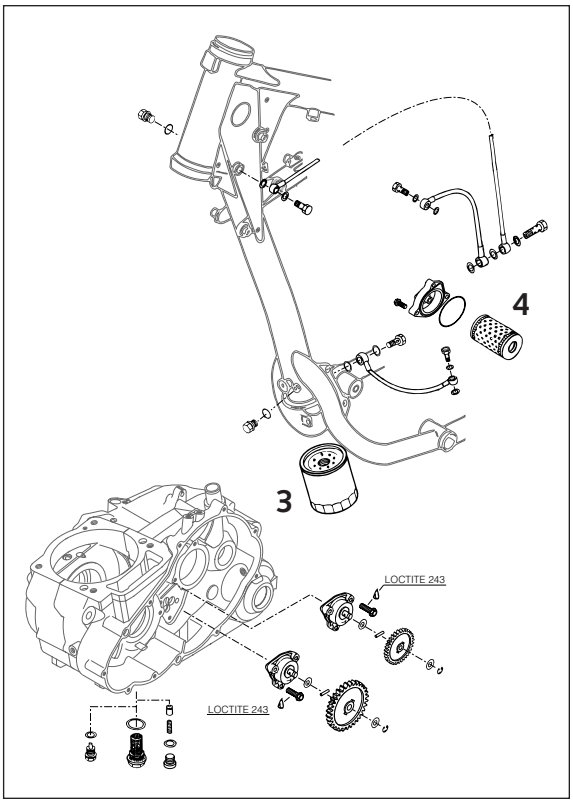
Oil lines (SC)

– Check oil lines and banjo bolts for damage and clear passage.
– When repairing the engine, the microfilter ❸ and the oil filter ❹ must be replaced.



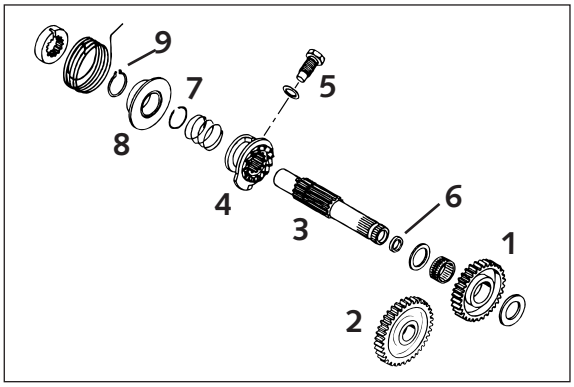
Oil lines (660 SMC)

– Check oil lines and banjo bolts for damage and clear passage.
– When repairing the engine, the microfilter ❶ and the oil filter ❷ must be replaced.



Oil lines (Models with frame oil)

– Check oil lines and banjo bolts for damage and clear passage.
– When repairing the engine, the fine filter ❸ and the oil filter ❹ must be replaced.



Checking the kickstarter components for wear

Starter gear ❶
Check the bearing for clearance (the starter gear must be in permanent mesh with the outer clutch hub).

Intermediate starter gear ❷
Check the bearing for clearance.

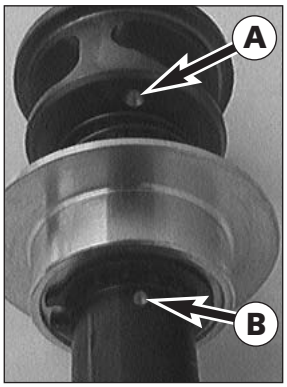
Kick starter shaft ❸
Check the toothing for signs of wear.

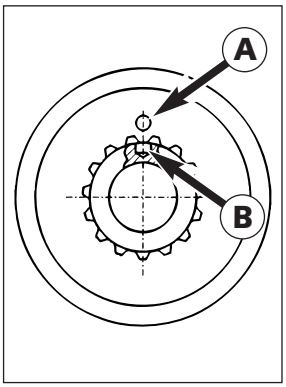
Ratchet gear ❹
Check the ascending surface and the toothing for signs of wear.

Stop bolt ❺
Check for signs of wear.

Replace the seal ring ❻

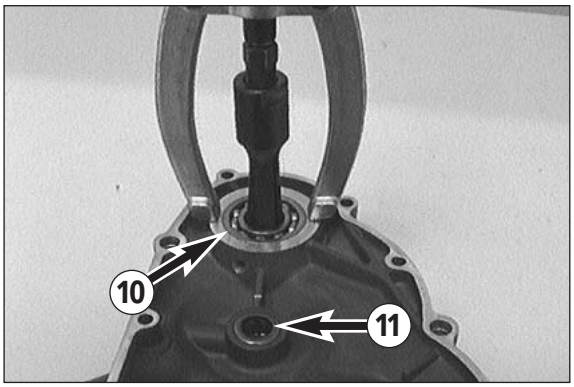
NOTE: Due to a parts change from 2000 onwards the seal ring is blue-green and is to be mounted with the seal lip to the outer side.





Preassembly of kickstarter shaft

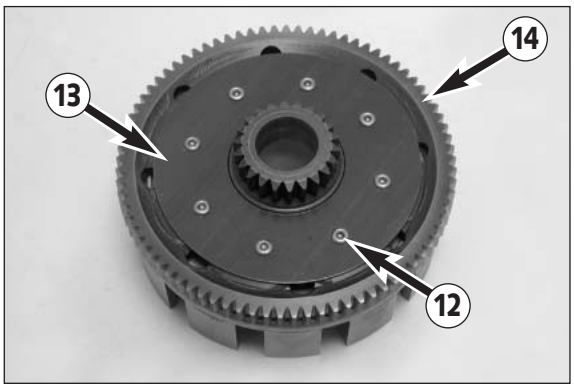
- Clamp kickstarter shaft with toothed end in vice (use soft jaw-covers).
- Mount circlip ❼ in lower ring groove.
- Fit spring guide ❽ with collar facing downwards and circlip ❾ with sharp edge facing upwards.
- Remove kickstarter shaft from vice and fit ratchet gear spring.
- Mount the ratchet gear ❹ on the kickstarter shaft in such a way that the markings Ⓐ and Ⓑ coincide.



Clutch cover

Balancer shaft bearing ❿
Use the bearing extractor tool with insert to remove the grooved ball bearing from the bearing seat.
Insert the new bearing into the seat and ensure flush fit.

Seal ring ⓫
Use a screwdriver to lever the old shaft seal ring out of the clutch cover.
Insert the new shaft seal ring and ensure flush fit.



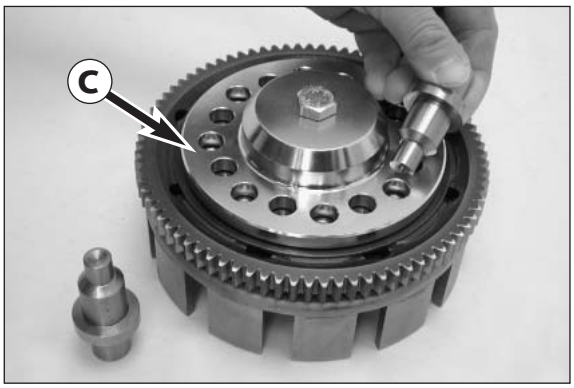
Replacing absorbing elements of the outer clutch hub

- Drill open the clutch rivets ⓬ in area of the retaining bracket ⓭ and take off the parts.

NOTE: When performing repair work always exchange all 8 absorbing elements.

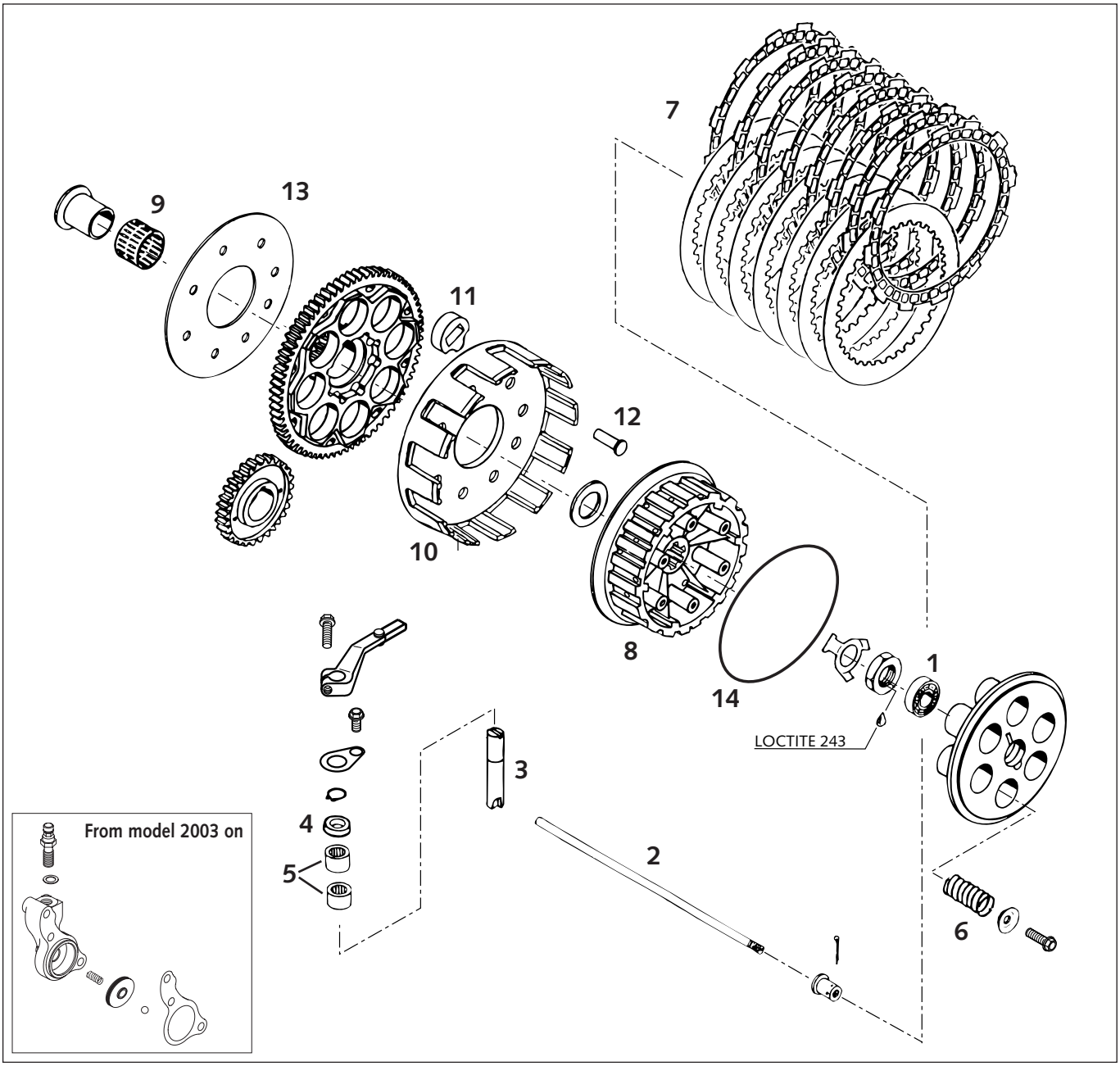
! CAUTION !

THE DAMPING ELEMENTS ARE WIDER THAN THE PRIMARY GEAR CROWN ⓮. TO ENSURE THAT THE OUTER CLUTCH HUB AND RETAINING BRACKET ARE POSITIONED DIRECTLY ON THE PRIMARY GEAR CROWN, THE PARTS MUST BE HELD IN POSITION UNDER TENSION WITH THE CLUTCH RIVETTING TOOL Ⓒ BEFORE RIVETTING.



- Apply the special tool as shown, screw together and lock the rivets with a pointed mandrel and a round mandrel.

Locking pressure for the pointed mandrel: approx. 4000 kg
Locking pressure for the round mandrel: approx. 5000 kg



Checking the clutch components for wear

Thrust bearing ❶ – Check for signs of wear.

Push rod ❷ – Check the face side for signs of wear.

Clutch release shaft ❸, sealing cup ❹ and needle bearing ❺ – Check for damage and signs of wear.

Clutch pressure springs ❻ – Minimum length: 34.5 mm (1.36 in) (length/new spring: 37 mm (1.457 in)).
Replace all 6 springs if necessary.

Clutch discs ❼ – Clutch discs must be plane.
7 steel discs ≠ 1.5 mm (0.066 in) must be free of grooves.
8 lining discs ≠ 2.7 mm (0.106 in), wear limit: 2.5 mm (0.1 in)

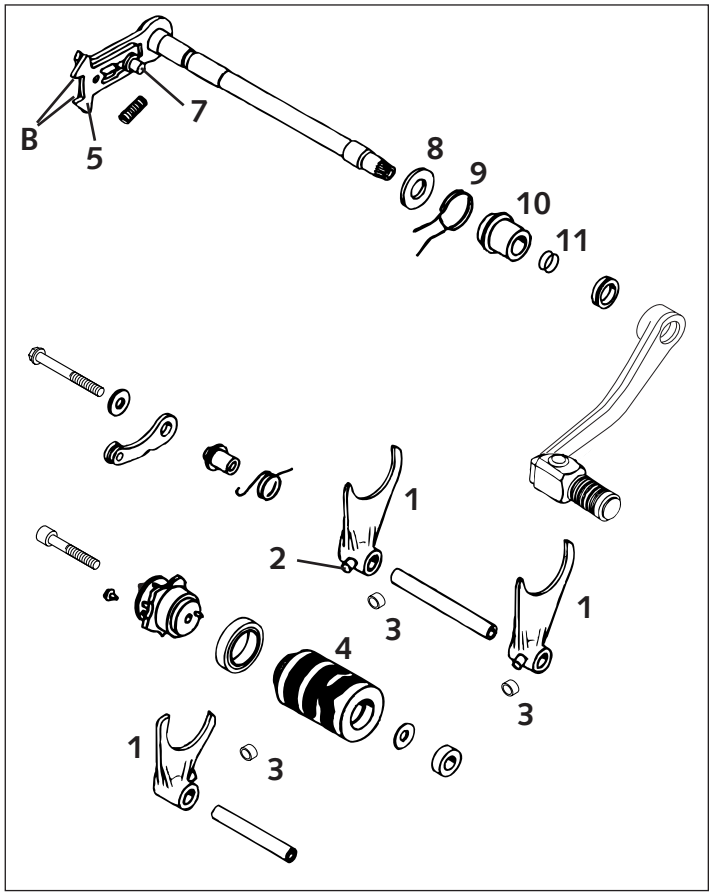
Inner clutch hub ❽ – Check both the exterior and the interior toothing for signs of wear.

Needle bearing ❾ – Check for signs of wear.

Outer clutch hub ❿ – Check if all rivets ⓬ are tight.

Absorbing elements ⓫
Power transmission from the primary drive to the clutch is cushioned by rubber elements ⓫. These rubber elements must be checked in the course of normal checking for signs of wear. It is recommended to check the elements while disassembling the engine. Try to turn the outer clutch hub after removing the inner clutch hub (engine will lock). Dead travel should be impossible.

Check O-ring ⓮ for brittleness and cracks. If the cross section of the O-ring is oval (deformed) replace the O-ring.



Checking the shift mechanism components for wear

Shift forks ❶
Check the fork leaf for signs of wear.
Check the shift roller driving pin ❷ for signs of wear.

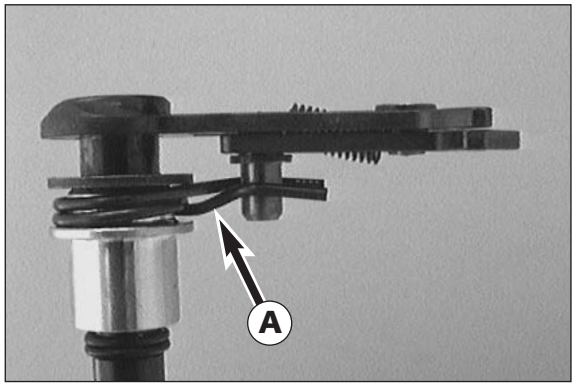
Shift rolls ❸
Check the shift rolls for hairline cracks and pressure marks. Additionally, make sure that the shift rolls turn easily on the driving pins ❷ of the shift forks.

Shift roller ❹
Check the shift grooves for signs of wear.
Check the two grooved ball bearings of the shift roller for wear.

Slide plate ❺
Check the contact surfaces for signs of wear.
Check the return surface of the slide plate for signs of wear (replace in the case of deep grooves).

Slide guides
Check clearance (maximum clearance between guide bolt and slider 0.70 mm / 0.027 in.).

Guide bolt ❼
Check for tight fit and signs of wear.

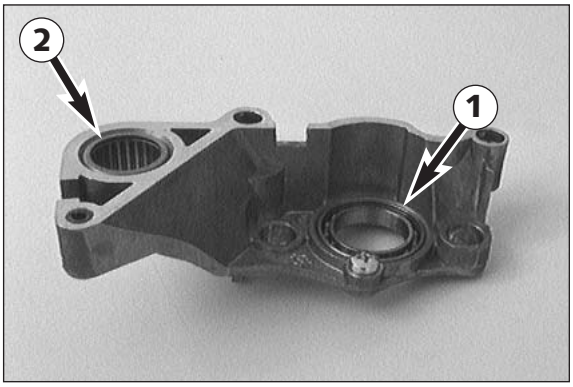


Preassembly of shift shaft

– Push steel disc ❽ (14x28x2 mm) onto shift shaft.

– Mount the return spring ❾, positioning the offset Ⓐ on the side of the shift quadrant.

– Mount spring sleeve ❿ with shallower collar facing shift quadrant.
– Cross return spring legs and hook in shift quadrant.
– Grease and mount both O-rings ⓫.



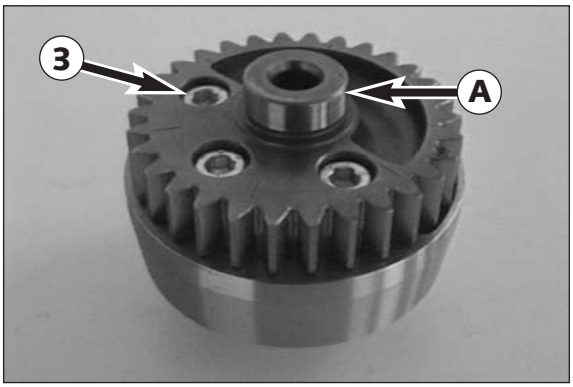
Shift mechanism support

– If the grooved ball bearing ❶ of the shift roller must be exchanged, press the new grooved ball bearing all the way into the seat.

! CAUTION !

TO PREVENT DAMAGING OF THE SHIFT MECHANISM SUPPORT, DO NOT APPLY EXCESSIVE FORCE WHEN INSERTING THE GROOVED BALL BEARINGS.

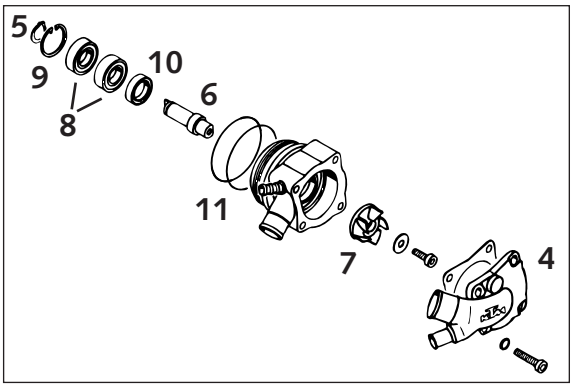
– Apply Loctite 243 to the screw and fix the bearing.
– The new needle bearing of the kickstarter shaft ❷ has to be pressed in flush.



Balancer shaft

Check bearing seat Ⓐ for wear and tear.

Check three allan head bolts ❸ for tight fit.



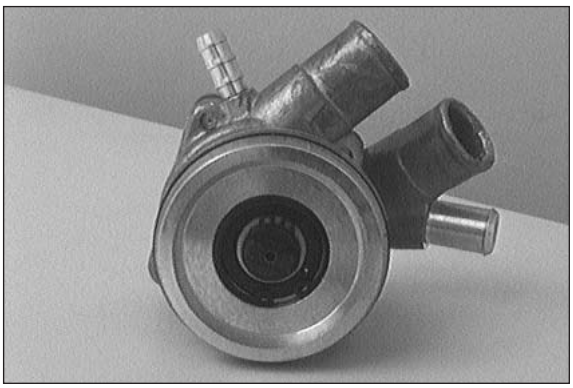
Disassembling and reassembling the water pump

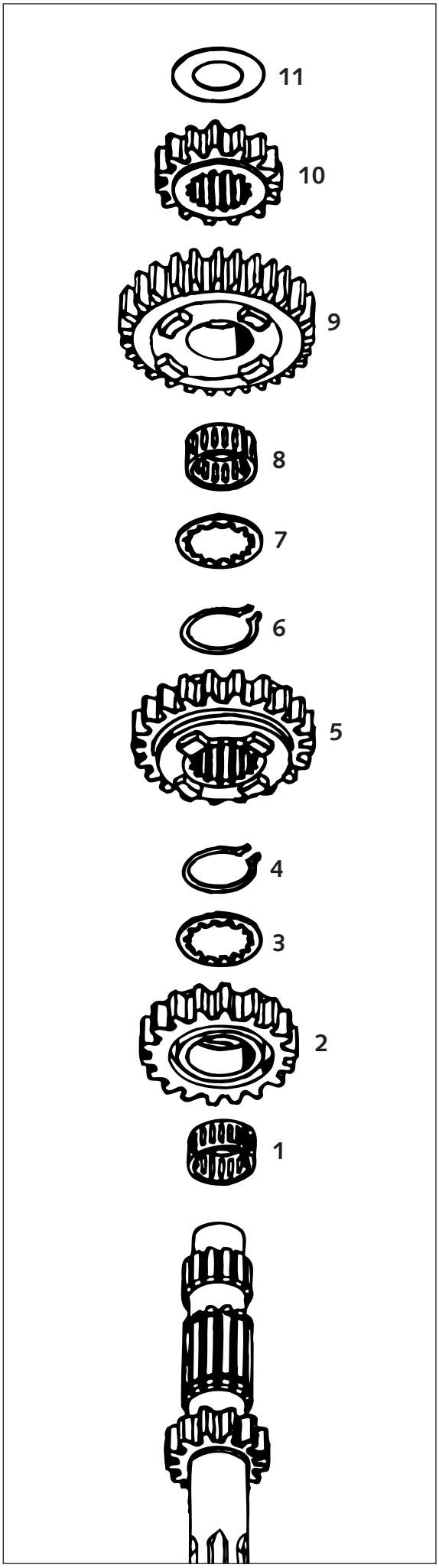
Remove the water pump cover ❹ together with the gasket.

– Remove circlip ❺ from the water pump shaft ❻ and pull shaft and water pump wheel ❼ out of the grooved ball bearings.

– If grooved ball bearings ❽ are replaced, remove circlip ❾ and shaft seal ring ❿ and press out bearing.
– Properly lubricate new grooved ball bearings and press in to stop with the open sides facing each to them.

– Mount circlip ❾.
– Cover new shaft seal ring with Loctite 648 and press in with the printing facing outward.
– Lubricate water pump shaft and mount carefully so as to not damage sealing lips of shaft seal ring and check for smooth working.
– Mount circlip ❺ and water pump cover ❹ with gasket.
– Finally, remove silicone from the sealing flange and mount 2 new O-rings ⓫.





Important note regards working on transmission

– Fix the main shaft or countershaft, respectively, in the vise (use special vise jaws to avoid damaging of the shafts) and remove the gear wheels.
– Clean and check all parts.

Always use new lock washers when performing repair work on the transmission !

Check the tooth profiles of transmission shafts and sliding gears for signs of wear.

Slide the sliding gears onto the transmission shafts and check the toothing for easy operation.

Check the pivot points of the transmission shafts.

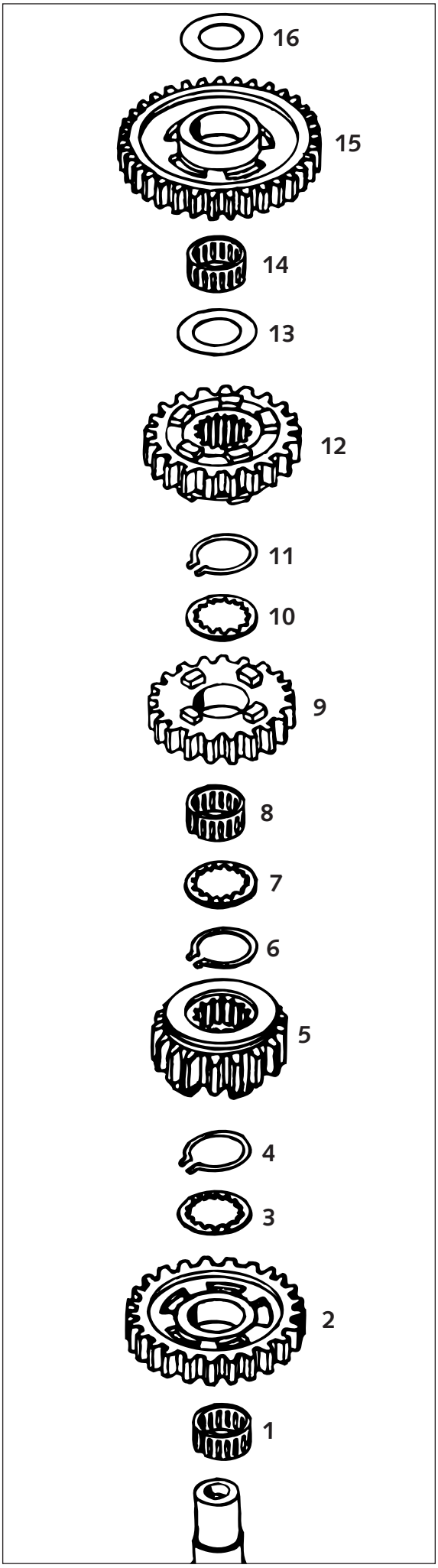
Mount the idler gears with the bearings on the transmission shafts and check for clearance.

Check the needle bearings of the idler gears.

Assembling the main shaft

– Mount the main shaft in a vise with the gearwheel facing downwards (use protective jaws).
– Mount the needle cage ❶ and slide the 3rd gear ❷ with the shift dogs facing upwards.
– Mount stop disc ❸ (22.7x32x1.5 mm) and the circlip ❹ with the sharp edge facing up.
– Mount 4th gear ❺ with the shift groove facing down.
– Secure it with the circlip ❻ with the sharp edge down and mount the stop disc ❼ (22.7x32x1.5 mm).
– Mount needle cage ❽ and 5th gear ❾ with the shift dogs down.
– Mount 2nd gear ❿ and stop disc ⓫ (20.2x35x1 mm).

NOTE: Check all gears for smooth operation.



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Check the pivot points of the transmission shafts.

Mount the idler gears with the bearings on the transmission shafts and check for clearance.

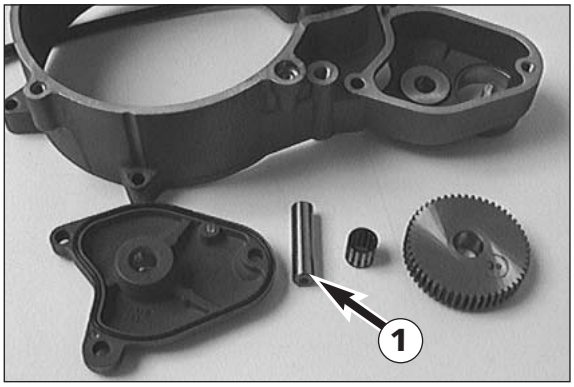
Check the needle bearings of the idler gears.

Assembling the counter shaft

– Mount counter shaft in vise with collar facing downwards.
– Oil and mount needle cage ❶.
– Slide 2nd gear ❷ over needle cage with collar facing downwards.
– Mount stop disc ❸ (22.7x32.0x1.50 mm) with clearance towards gear wheel and circlip ❹ with sharp edge facing upwards.
– Mount 5th gear ❺ with shift groove facing upwards.
– Fit circlip ❻ with sharp edge down and stop disc ❼ (22.7x32.0x1.50 mm).
– Mount needle cage ❽ and fit 4th gear ❾ with shift dogs facing up.
– Mount stop disc ❿ (22.7x32.0x1.50 mm) and circlip ⓫ with sharp edge facing up.
– Fit 3rd gear ⓬ with shift groove down and mount stop disc (22.2x35.0x1.50 mm) ⓭.
– Mount needle cage ⓮, 1st gear ⓯ with collar facing up and fit stop disc (20.2x35.0x1.0 mm) ⓰.

NOTE: A roller bearing was installed in the 660 SMC model, thus a stop disc is unnecessary.

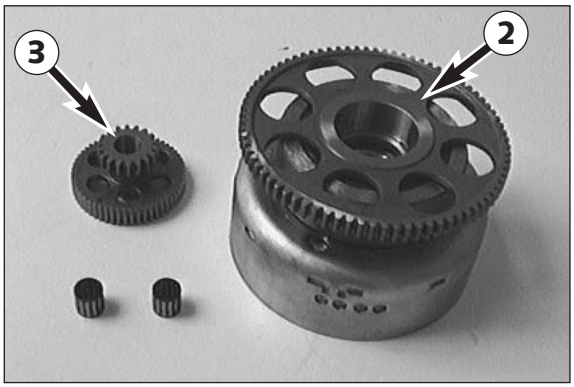
Check all gears for smooth operation.



Removing the intermediate gear

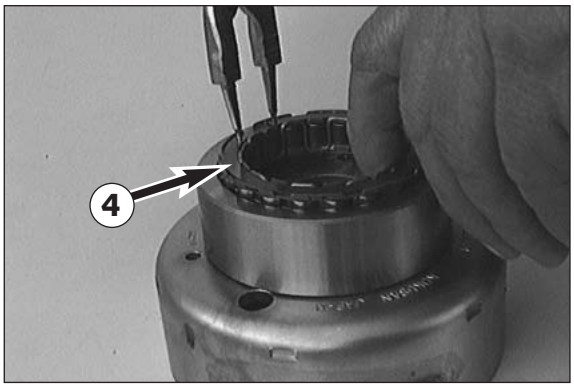
– Remove the starter cover.
– Pull out the bearing bolt ❶.
– Remove the intermediate gear and the needle bearing.
– Check the parts for signs of wear.

– Insert the intermediate gear with the collar downward into the housing for preassembly.
– Oil the needle bearing and install it with the bearing bolt.
– Do not yet replace the starter cover.



Checking the freewheel

– Insert the freewheel gear ❷ into the freewheel.
– The freewheel gear must turn clockwise.
– The freewheel gear must lock without empty run if turned anticlockwise.
– Check the reduction gear ❸ and the needle bearings for signs of wear.
– Check the needle bearing of the freewheel gear for signs of wear.



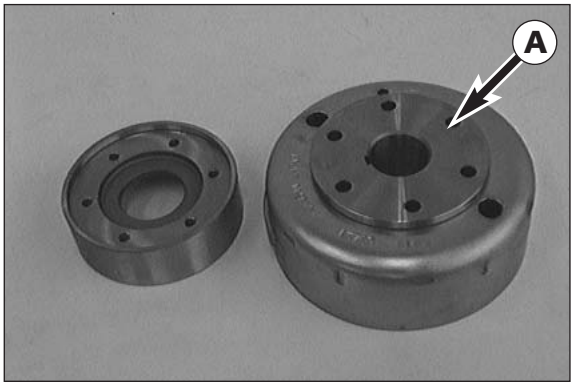
Replacing the freewheel hub

– Squeeze the spreader ring ❹ with the circlip pliers and remove it together with the freewheel.
– Check the freewheel segments for signs of wear.
– Check the freewheel hub sections at the freewheel running surface for signs of wear.
– Heat the flywheel to a temperature of approx. 80° C (176° F) and remove the 6 bolts.

! CAUTION !

MAKE SURE THAT THE FLYWHEEL IS NOT HEATED BEYOND 80° C (176° F) TO AVOID LOOSENING OF THE MAGNETS.

– Carefully tap the side of the freewheel hub with a plastic hammer and take off the freewheel hub.

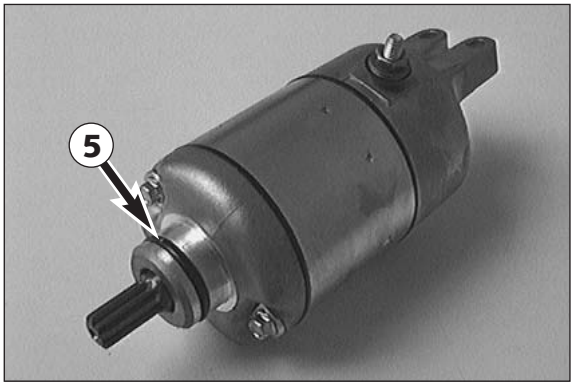


– Apply Loctite 648 to the flange surface Ⓐ of the flywheel and the freewheel hub.
– Mount the freewheel hub on the flywheel.
– Apply Loctite 648 to the thread of the bolts and tighten them crosswise (18 Nm).

! CAUTION !

ALWAYS USE NEW BOLTS (12.9) AND APPLY LOCTITE 648 TO THE THREADS.

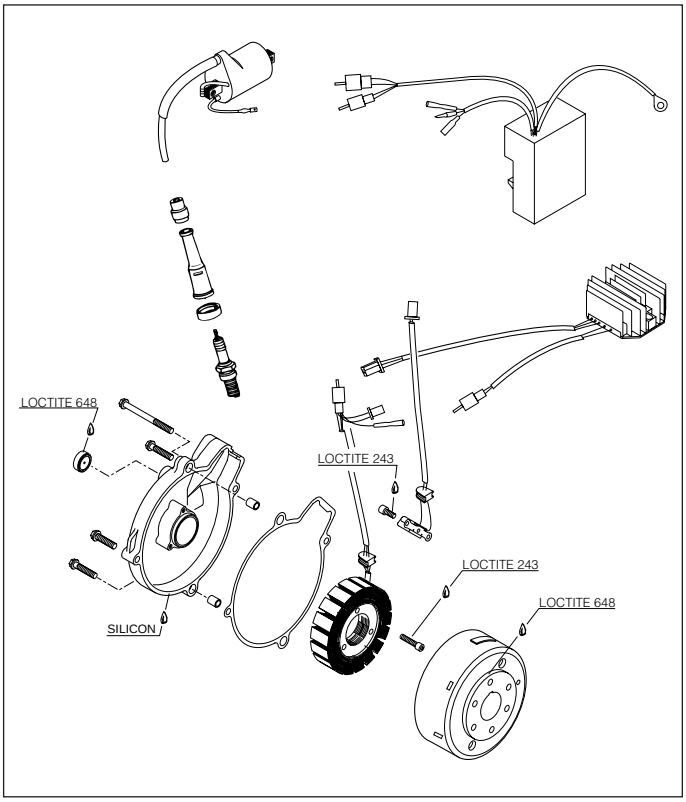
– Thoroughly oil the free-wheel and insert it into the freewheel hub.
– Insert the spreader ring into the groove with a pair of circlip pliers and make sure that it properly rests in the groove.



Electric starter motor

– The starter showed only slight signs of wear after 10.000 starting processes, and exchanging individual parts must be considered uneconomical. Therefore, such work is not described in the present documentation.

– Exchange the O-ring ❺ at the starter flange (incl. in the gasket set).



Ignition (Kokusan 4K2)

General information

The measurements described below will only reveal severe problems. Coil short circuits leading to weak ignition sparks or low generator output, respectively, can only be detected with the help of an ignition test bench. In the case of malfunction always check the cables and the plug and socket connections of the ignition system first.

Make sure to select the correct measuring range when performing measurements.

Checking the stator and the pulse generator (Kokusan 4K2)

Use an ohmmeter to perform the following measurements:

NOTE: The measuring must be performed at a temperature of 20° C. Otherwise significant deviations must be expected.

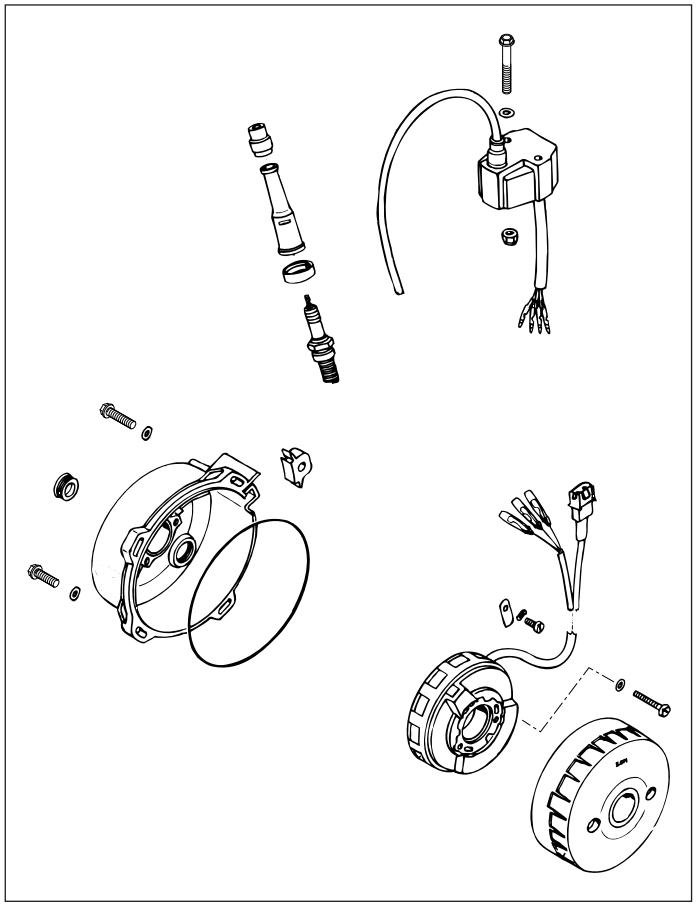
MEASUREMENT	CABLE COLORS	RESISTANCE
Stator	red/black – black/red yellow – black/red yellow – red/black	0.45 – 0.56 Ω
Pulse generator	white – green	80 – 120 Ω

Replace the stator and/or the pulse generator if the measured values deviate significantly from the setpoint values or in the case of continuity between one of the cables and ground.

Replacing the stator (Kokusan 4K2)

– Loosen the 3 bolts and remove the stator.

– Insert a new stator into the ignition cover.
– Apply Loctite 243 to 3 new bolts and tighten the bolts.
– Insert the cable guide in the opening provided for that purpose in the ignition cover.



Ignition (SEM)

General information

The measurements described below will only reveal severe problems. Coil short circuits leading to weak ignition sparks or low generator output, respectively, can only be detected with the help of an ignition test bench. In the case of malfunction always check the cables and the plug and socket connections of the ignition system first.

Make sure to select the correct measuring range when performing measurements.

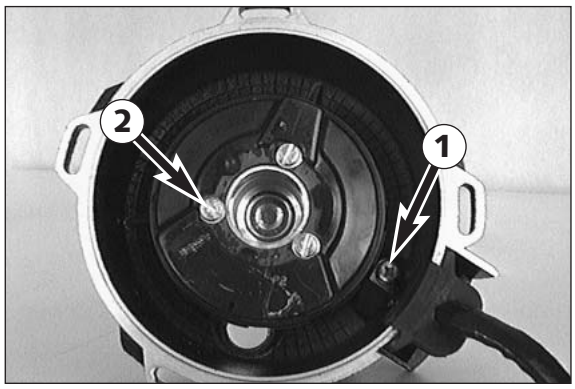
+ POLE	– POLE	MEASURE VALUE
black	red	1.7 kΩ
red	black	1.7 kΩ
black	green	165 Ω +/- 20 Ω
green	red	1.7 kΩ
yellow	yellow	1.0 Ω

Checking the stator (SEM)

Perform the measurements indicated to the left with an ohmmeter.

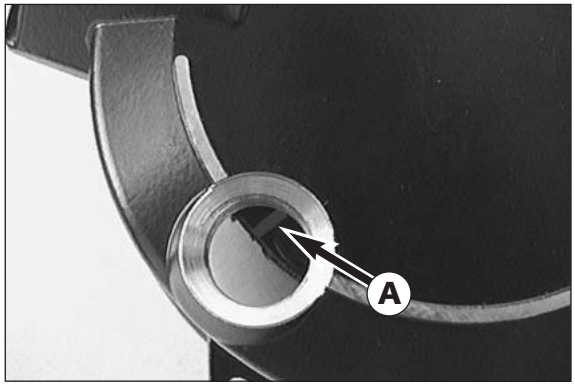
NOTE: The measuring must be performed at a temperature of 20° C. Otherwise significant deviations must be expected.

The stator must be exchanged if any of the measured values deviates significantly from the respective nominal value or in the case of continuity between one of the cables and ground.

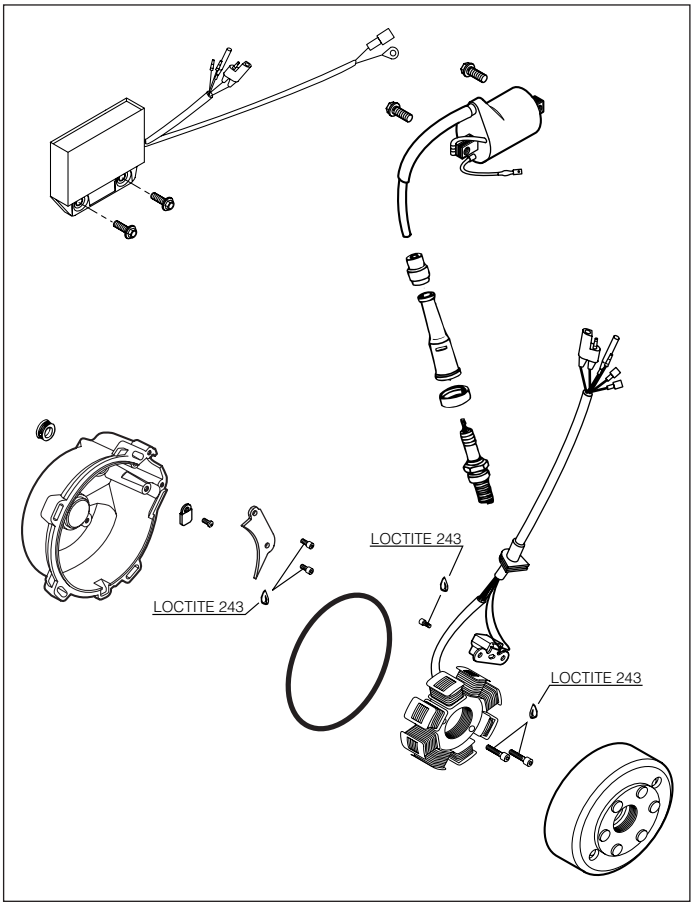


Replacing the stator (SEM)

– Remove bolt ❶ with retaining bracket.
– Remove the three clamp bolts ❷ and lift the stator out of the ignition cover.



– Mount the new stator in such a way that the timing mark Ⓐ is visible in the checking hole on the rear side.
– Apply Loctite 243 to the threads of the bolts ❷ and insert the bolts without, however, tightening them yet.
– Apply Loctite 243 to the thread of bolt ❶, turn the stator clockwise all the way to the stop.
– Fix the cable strand with retaining clips and insert the rubber cable guide into the opening provided for that purpose.
– Turn the stator until the mark becomes visible in the peephole. Then tighten the bolts ❷.



Ignition (Kokusan 4K-3)

General information

The measurements described below will only reveal severe problems. Coil short circuits leading to weak ignition sparks or low generator output, respectively, can only be detected with the help of an ignition test bench. In the case of malfunction always check the cables and the plug and socket connections of the ignition system first.

Make sure to select the correct measuring range when performing measurements.

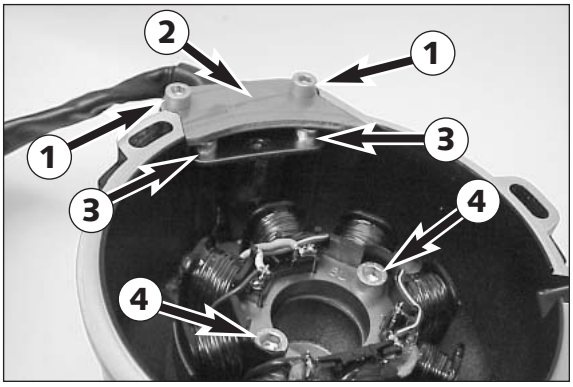
Checking the stator (Kokusan 4K-3)

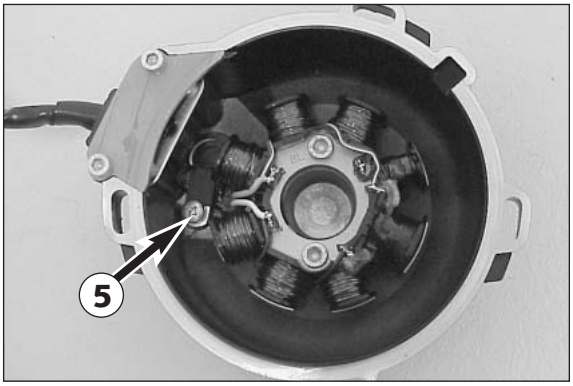
Use an ohmmeter to perform the following measurements.

Note: The measuring must be performed at a temperature of 20° C. Otherwise significant deviations must be expected.

Replace the stator if the measured values deviate significantly from the setpoint values.

Ignition	Measure	Cable colours	Resistance
4K-3	Pulser coil	red – green	100 Ω ± 20%
	Stator	black/red – red/white	12,7 Ω ± 20%
	Charging coil	ground – yellow	0,65 Ω ± 20%
		white – yellow	0,16 Ω ± 20%





Installing a new stator (Kokusan 4K-3)

- Remove the 2 bolts ❶ and take the cover plate ❷ out of the ignition cover.
- Remove the 2 bolts ❸ of the pulse generator and the 2 bolts ❹ of the stator.
- Undo bolt ❺ and take the retaining platelet out of the ignition cover. Take the stator and the pulse generator out of the ignition cover.

NOTE: When reassembling the unit, degrease and apply Loctite 243 to the threads of all bolts.

- Put the new stator into the ignition cover and fix it with the two bolts ❹.
- Position the pulse generator in the ignition cover and fix it with the two bolts ❸.
- Put the cable guide into the recess provided for this purpose and fix the cover plate ❷ with the two bolts ❶.
- Position the wiring harness, taking care to avoid tension, and use the retaining platelet and the bolt ❺ to fix it in the ignition cover.

ASSEMBLING THE ENGINE 6

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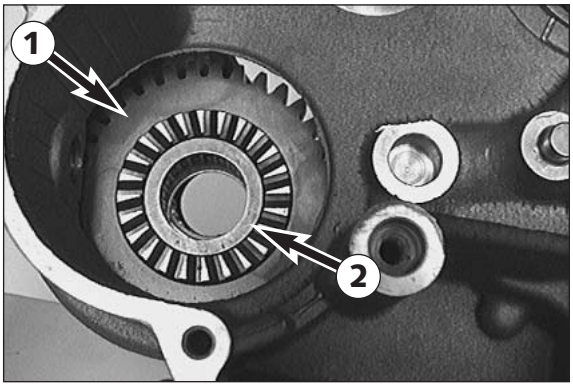
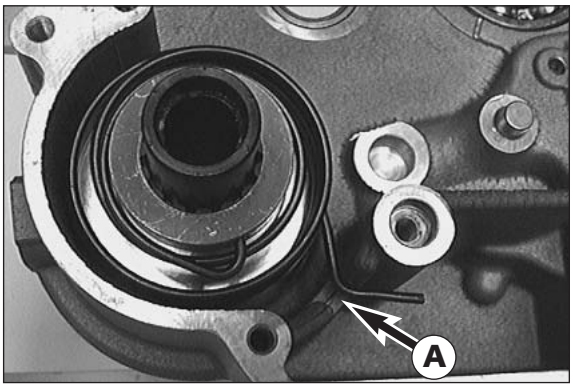


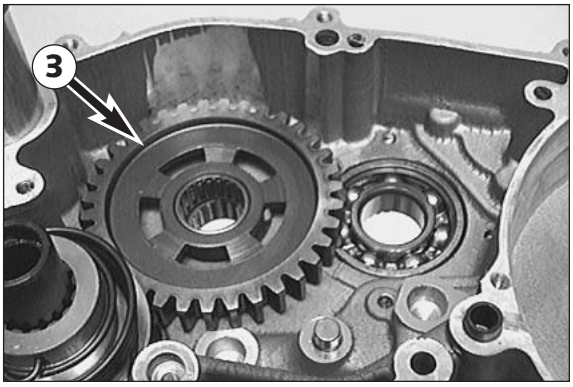
– Place left-hand housing half in engine work stand.

Mounting the kickstarter unit

– Insert stop disc (22.2x35x2 mm), starter gear ❶, needle bearing and stop disc ❷ (22.2x30x1.5 mm) into housing.



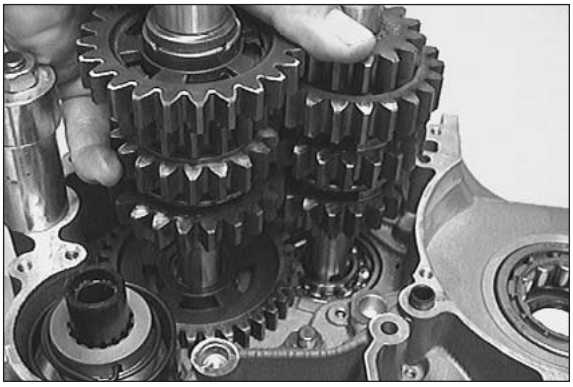
– Insert the pre-assembled kickstarter shaft into the bearing seat, putting it through the starter gear. Make sure that the starter spring slips into opening Ⓐ of the housing.



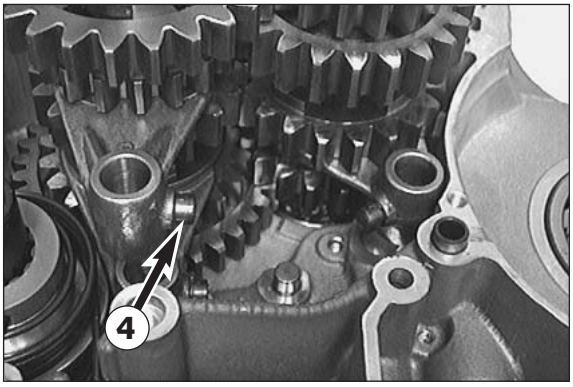
Mounting transmission and shift mechanism

– Insert stop disc (20.2x35x1 mm), 1st gear wheel ❸ with collar facing down into the housing and the needle bearing into the idler gear.

NOTE: A roller bearing was installed in the 660 SMC model, thus a stop disc is unnecessary.



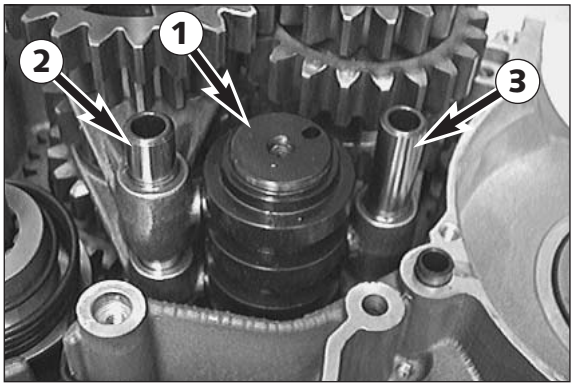
– Mount transmission shafts together and slightly turn them.



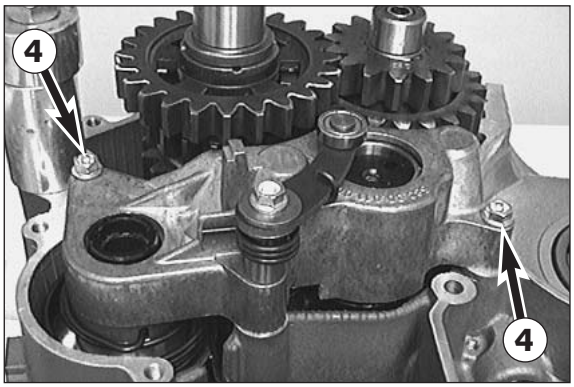
– Grease the driving pins of the shift forks and mount the shift rollers ❹.
– Hook shift fork with legs of same length in the sliding gear of the main shaft.
– Fit the other two shift forks into the gears of the counter shaft, paying attention to the marks applied during disassembly.

! CAUTION !

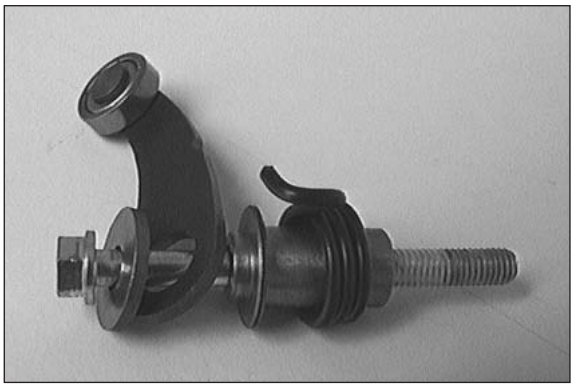
USED SHIFT FORKS SHOULD BE MOUNTED IN THE SAME SLIDING GEAR AS BEFORE.



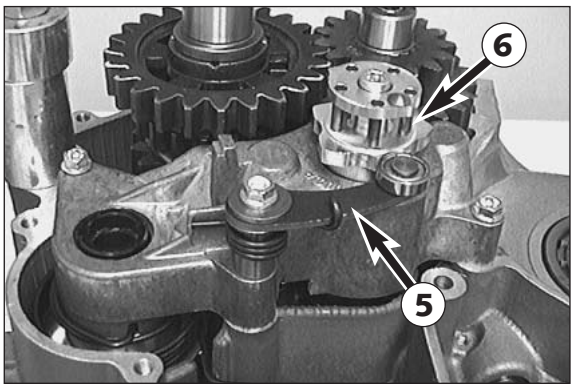
– Insert shift roller ❶ into the housing with the holder for the locking piece facing up.
– Hook the shift forks into the shift roller and mount shift rails ❷ + ❸. The shorter shift rail ❸ must be fitted to the main shaft.



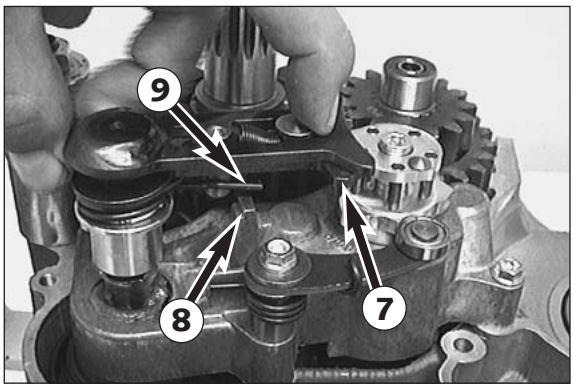
– Before mounting the shift mechanism support, check whether the two dowels have been fitted.
– Mount shift mechanism support, secure the two bolts ❹ with Loctite 243 and tighten.



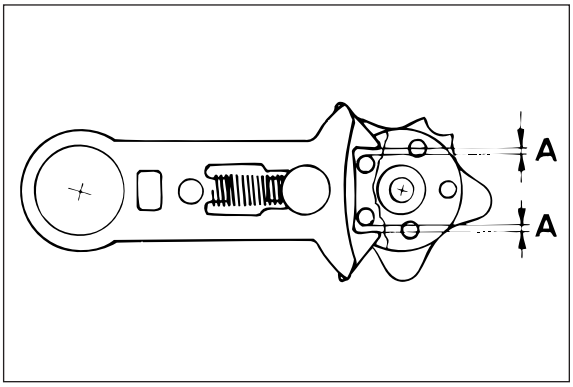
– Put the washer (6.2x18x2 mm), the locking lever, the locking spring bushing and the locking lever spring onto the third bolt.
– Apply Loctite 243 to the thread of the bolt and mount it.



– Pull locking lever ❺ away from the shift roller.
– Put the shift drum locating device ❻ onto the shift roller, apply Loctite 243 to the thread of the bolt and fix the shift drum locating device.

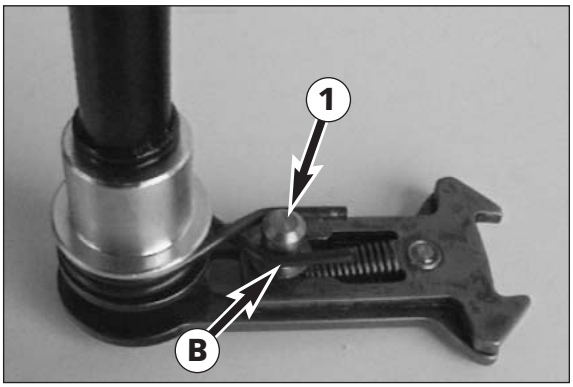


– Oil the O-rings and grease the shank of the shift shaft.
– Slide preassembled shift shaft into kickstarter shaft.
– At the same time, push back the slide plate ❼ and make sure that the ends of the return spring ❾ are resting against the centering cup of the shift mechanism support ❽.

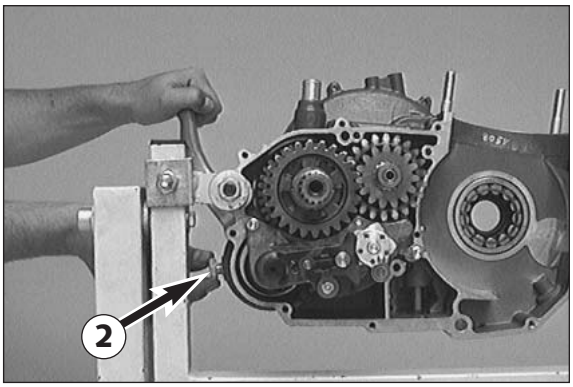


Adjustment of return spring

– Engage second or third gear.
– Check free travel of slide plate and check shift pin play.
– The free travel of the slide plate is the path this component travels until the shift roller is moved. The return spring pressure will be felt. Proceeding from the basic position, this free travel Ⓐ should be identical for upward and downward movement.
– If necessary, the free travel must be readjusted by adjusting the return spring.



– For this purpose, remove the shift shaft and bend the return spring by an appropriate amount at points Ⓑ using a pair of pliers. Refit shift shaft. After the shifting shaft has been fitted, the return spring must rest against shift pin ❶ and against the centering cup on the shift mechanism support.
– If necessary, bend the return spring accordingly.



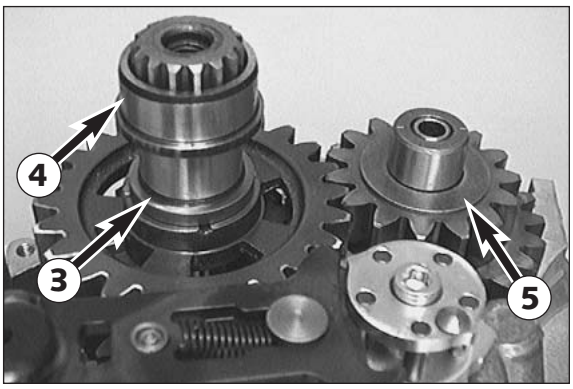
Pretensioning of the starter spring

– Fit kickstarter onto kickstarter shaft, turn one revolution in starting direction and hold in this position.
– Mount the stop bolt ❷ together with a new seal ring and tighten it manually.

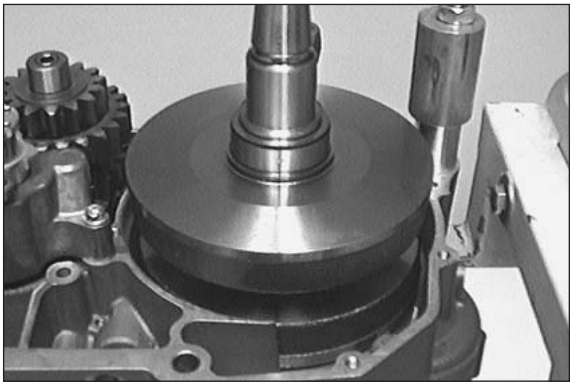
! CAUTION !

IT MUST BE POSSIBLE TO MOUNT THE STOP BOLT WITHOUT APPLYING EXCESSIVE FORCE. IF IT IS NOT POSSIBLE TO MOUNT THE STOP BOLT MANUALLY, TURN THE KICKSTARTER SHAFT FURTHER AGAINST THE FORCE OF THE SPRING UNTIL THE STOP BOLT CAN BE MOUNTED.

– Move kickstarter to stop and remove.
– Tighten stop bolt ❷ with 50 Nm.

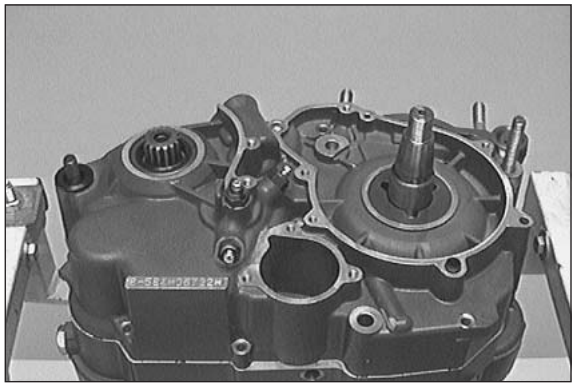


– Place O-ring ❸ (22x1 mm) and inner ring ❹ of roller bearing on the counter shaft with the collar facing the gear.
– Mount stop disc ❺ (20.2x35x1 mm) onto the main shaft.



Mounting crankshaft

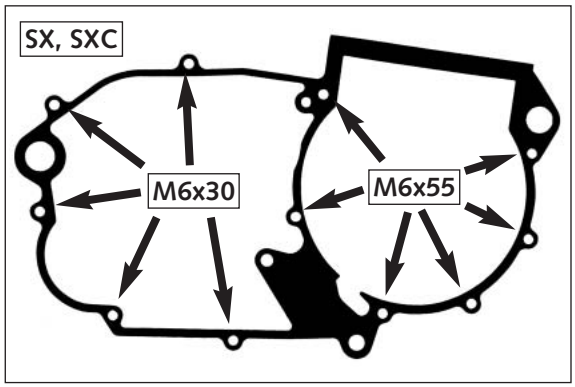
– Grease the shaft seal ring of the crankshaft and thoroughly oil the roller bearing of the crankshaft.
– Fit mounting sleeve onto crankshaft and place crankshaft into bearing.

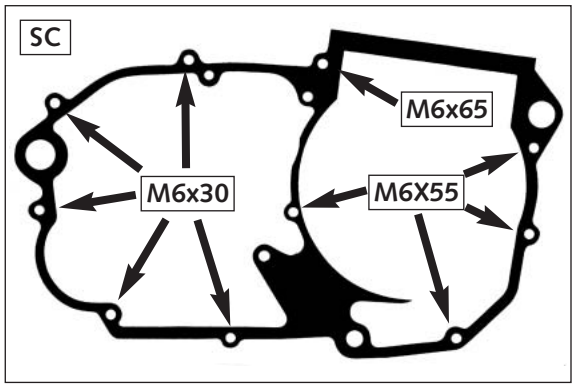


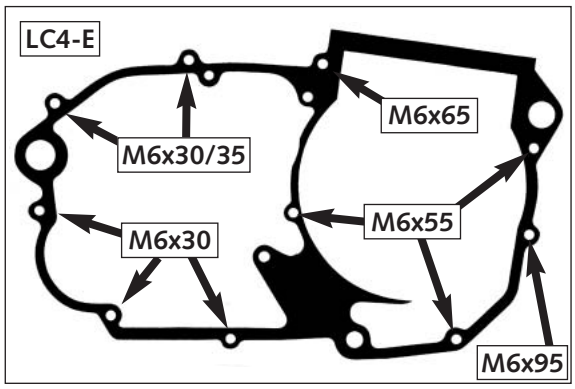
Assembly of engine housing

- Make sure both dowels are in place in the left housing half, and put gasket on the sealing surface. Use a little bit of grease to hold the gasket in place.
- Grease all shaft seal rings in the left side of the housing.
- Oil all bearings in the right side of the housing and put on the housing half. If necessary, tap lightly with a plastic mallet and turn transmission shafts.
- Check to make sure that the gasket is in the proper position before final assembly.
- Grease housing bolts (threads and contact surfaces of bolts heads). Insert bolts and assemble the housing (see sketch for bolt lengths).

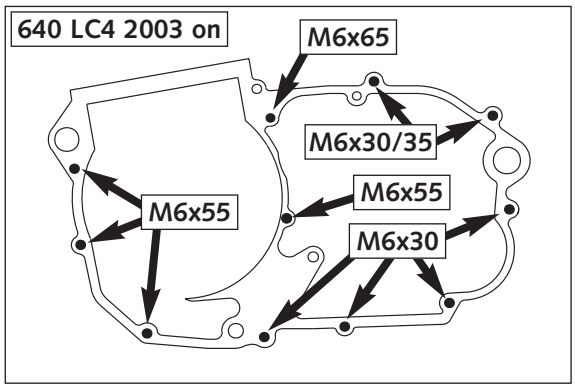
- Check all the shafts for smooth operation before and after tightening with 7-8 Nm.
- Mount case in mounting rack and check function of gear-change by engaging all gears.
- Check crankshaft axial clearance (0.03 - 0.12 mm) (0.0012 - 0.0047 in) and fit crankshaft locking bolt.



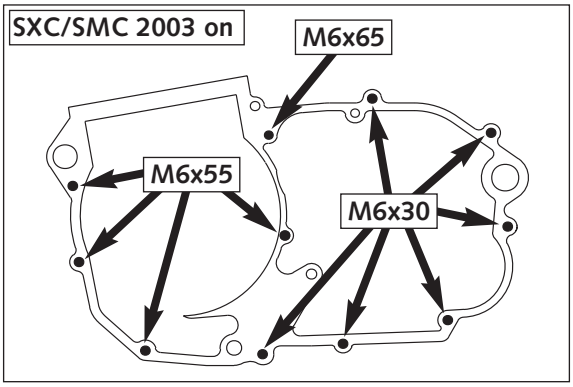


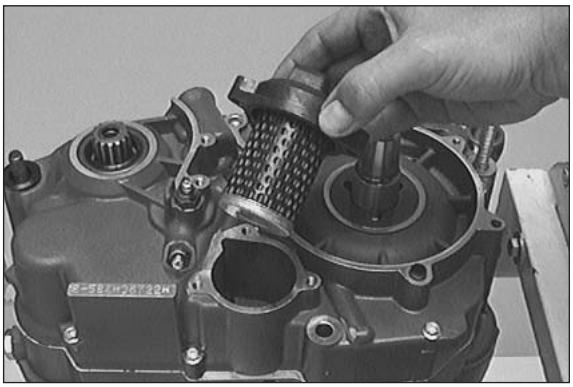


NOTE: On Adventure-models bolts M6x35 are used instead of the two upper bolts M6x30.



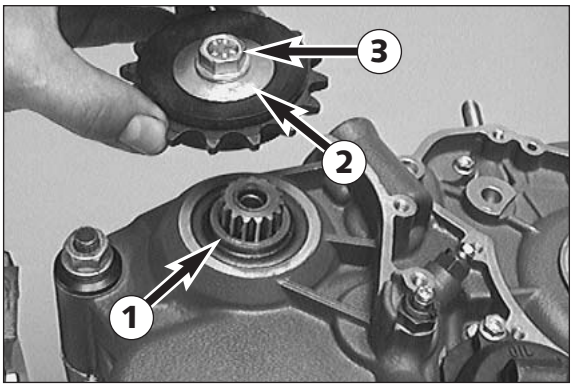
NOTE: On Adventure-models bolts M6x35 are used instead of the two upper bolts M6x30.





Mounting oil filter

– Fit oil filter with rubber gasket onto the connection in the oil filter cover.
– Fit a new O-ring into the oil filter cover groove or use new gasket and fix the oil filter cover with the 3 bolts, tighten bolts with 5 Nm.



Mounting the engine sprocket

– Lubricate O-ring (25x2 mm) with oil and slide over countershaft.
– Slide distance bushing ❶ in position so that O-ring is in correct position.

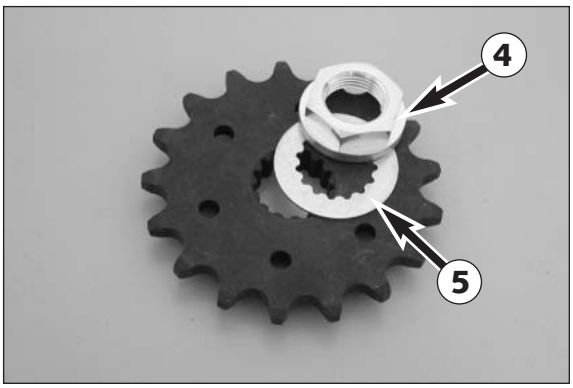
NOTE: The distance bushing for Duke and Supermoto-models is 2mm thicker.

! CAUTION !

DO NOT REVERSE DUST LIP OF THE SHAFT SEAL.

– Fit the engine sprocket with the collar facing the housing.

NOTE: For Duke and Supermoto-models an additional 2 mm washer is used.

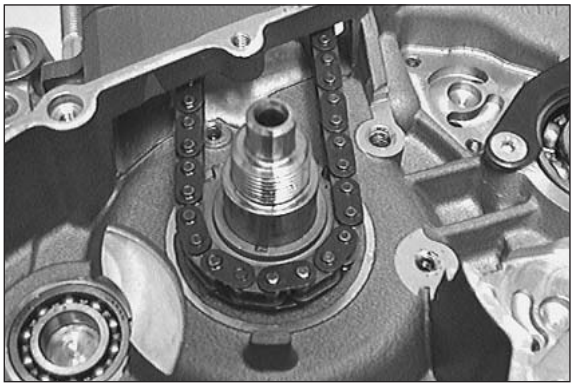


– Apply Loctite 243 to thread of sprocket bolt.
– Mount spring retainer ❷ and sprocket bolt ❸.
– Apply counterpressure with the sprocket holding spanner and tighten sprocket bolt.

NOTE: Tighten bolts with quality 8.8 to 40 Nm, bolts with quality 10.9 to 60 Nm.

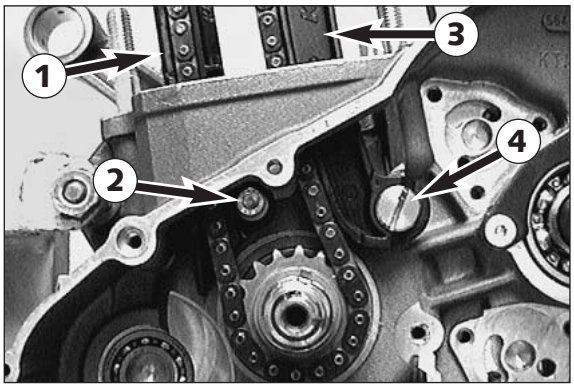
NOTE (from model 2003 on):
A collar nut ❹ and a lock washer ❺ are installed in some of the models instead of a collar screw.

Tightening torque off the collar nut: 60 Nm

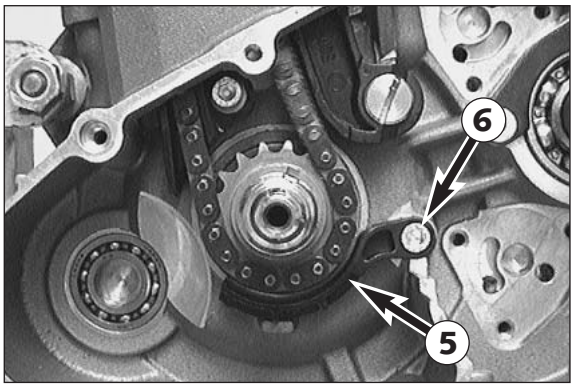


Mount the timing gear and the timing chain

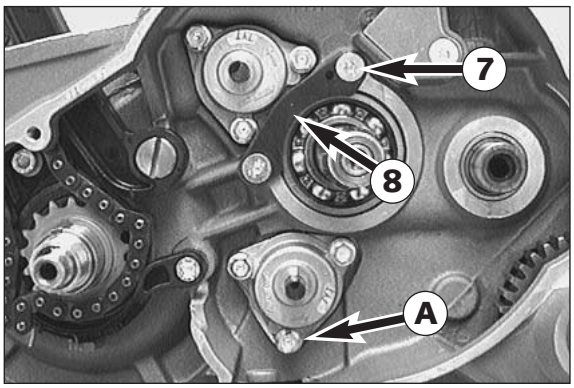
– Insert woodruff key for timing gear into crankshaft and fit timing gear onto crankshaft with high collar towards housing.
– Fit timing chain onto timing gear and draw up through chain tunnel.



– Insert the timing chain guide ❶, apply Loctite 243 to the Allen head bolt ❷ and mount.
– Apply Loctite 243 to the thread of the flat-head screw ❹.
– Fasten timing chain tensioner ❸ with flat head screw.
– Check timing chain tensioner for smooth operation.



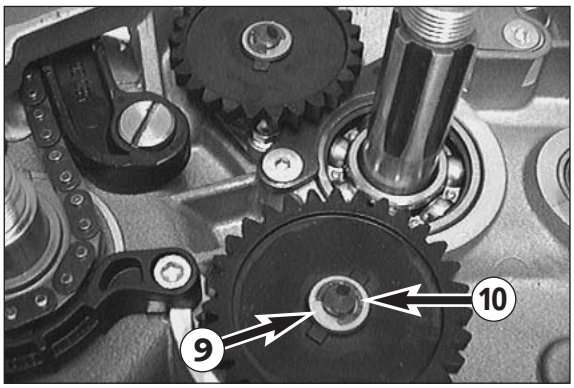
– Insert the safety device ❺, apply Loctite 243 to the Allen head bolt ❻ and mount.



Mounting the oil pumps

– Clean the sealing surfaces and install the oil pumps in the engine housing (Ⓐ M6x25!)
– Degrease the threads and use Loctite 243 to secure the bolts in their position.

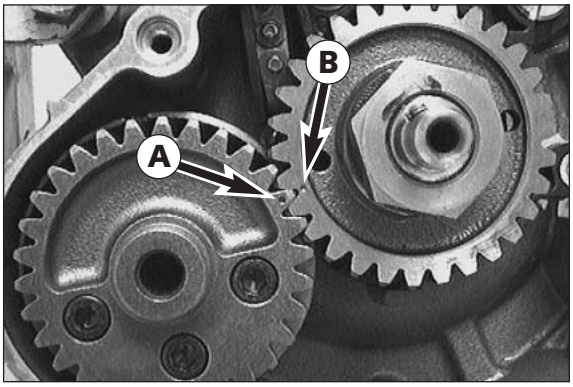
– Degrease the threads of both bolts ❼, apply Loctite 243 and mount the retaining bracket ❽.



– Put the stop discs (8.1x15x0.5 mm) onto the oil pump shafts.
– Insert the bearing needles into the oil pump shafts and slide on the oil pump gears (high collars must face the casing; the small oil pump gear must face the upper oil pump).

NOTE: From model 2002 onwards both oil pumps are fitted with the same size of oil pump gear.

– Put on the upper stop discs ❾ (8.1x15x0.5 mm) and mount the locking discs ❿.

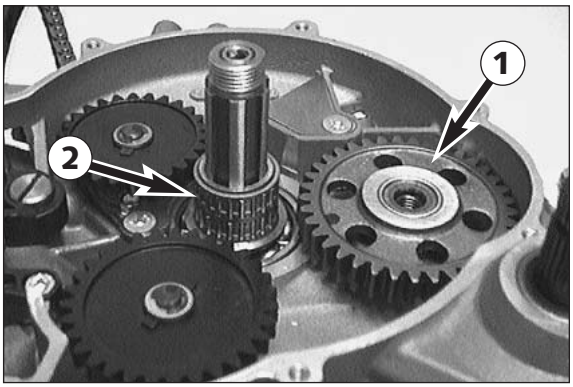


Mounting the balancer shaft and the primary pinion

– Fit balancer shaft in the bearing.
– Mount woodruff key in crankshaft and place primary pinion on the crankshaft. When doing so, adjust the teeth of the primary pinion and the balancer shaft in such a way that the markings ❹ and ❺ coincide.
– Apply Loctite 243 to the crankshaft thread.
– Mount spring ring and hexagon nut and tighten hexagon nut to 170 Nm.

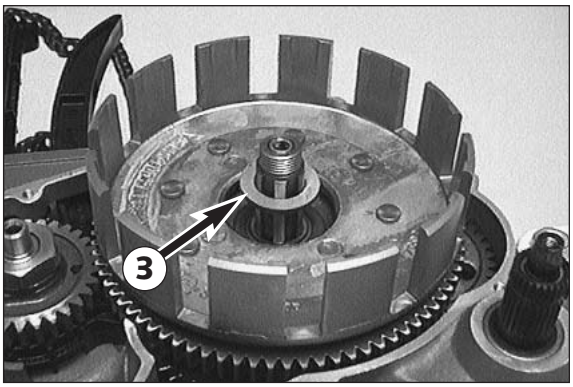
! CAUTION !

IF THE BALANCER SHAFT IS NOT INSTALLED ALSO REMOVE BOTH GROOVED BALL BEARINGS (IN THE CLUTCH COVER AND IN THE ENGINE HOUSING). OTHERWISE THE GROOVED BALL BEARINGS WOULD DROP OUT OF THE BEARING SEATS AND CAUSE ENGINE DAMAGE AS SOON AS THE ENGINE HEATS UP.

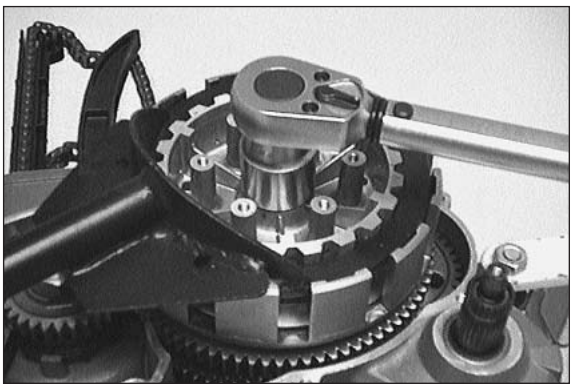


Mounting the clutch

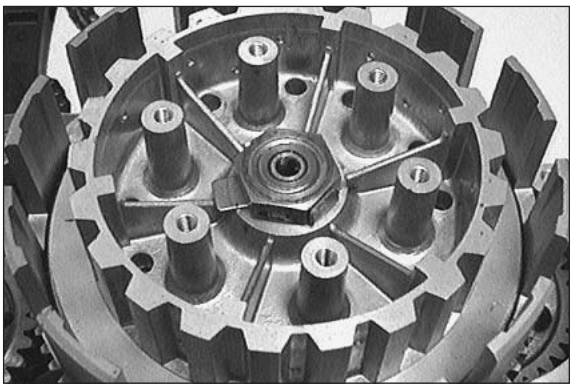
– Fit kickstarter intermediate gear ❶ onto counter shaft with clearance space towards housing.
– Slide the inner ring and the needle bearing ❷ onto the main shaft.



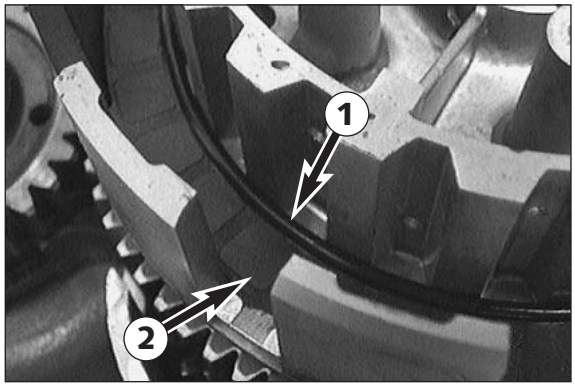
– Fit outer clutch hub and outer stop disc ❸ (22.2x35x3 mm).



– Degrease the thread of the main shaft.
– Place inner clutch hub and a new safety plate on the main shaft.
– Coat the thread of the main shaft with Loctite 243 and mount hexagon nut.
– Fit clutch holder and tighten hexagon nut to 100 Nm (60 ft.lb.).
– Remove clutch holder.
– Check clutch hub and main shaft for smooth operation and axial clearance.

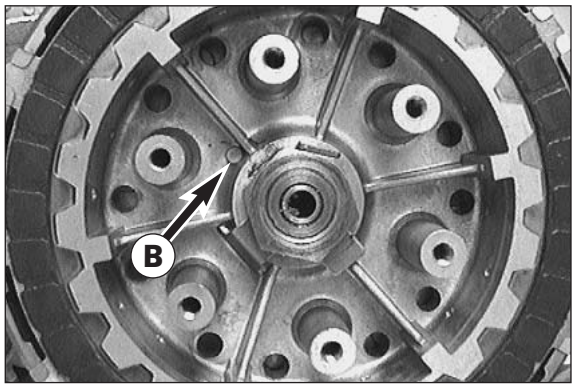


– Secure outer clutch hub hexagon nut by bending the safety plate up into place.



Mounting the clutch discs

– Thoroughly oil the O-ring ❶ and put it onto the inner clutch hub.
– Oil the lining disc ❷ (internal diameter: 127 mm) and mount it, making sure that the disc encircles the O-ring (see illustration).

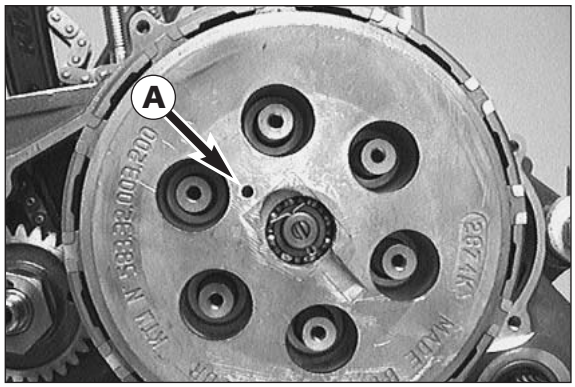


– Thoroughly oil all clutch discs before mounting.
– Alternately mount 1 steel disc and one lining disc.

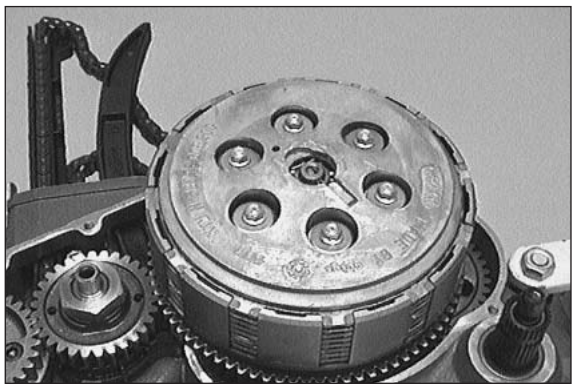
NOTE: The last disc must be a lining disc.

! CAUTION !

MOUNT ALL STEEL DISKS WITH THE SHARP EDGE FACING DOWNWARD.

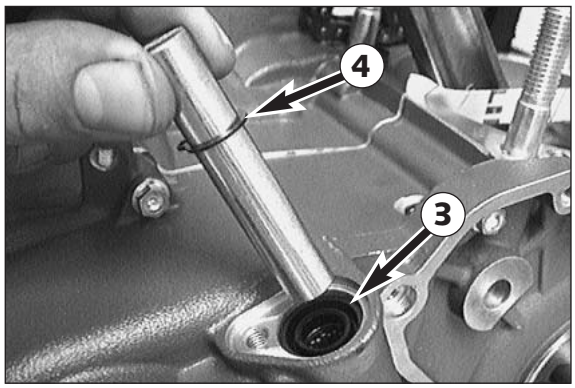


– Grease the end of the push rod with Molykote grease and fit the pressure cap together with the push rod.
– When mounting the pressure cap make sure that bore Ⓐ in the pressure cap and the pin Ⓑ of the inner clutch hub coincide.



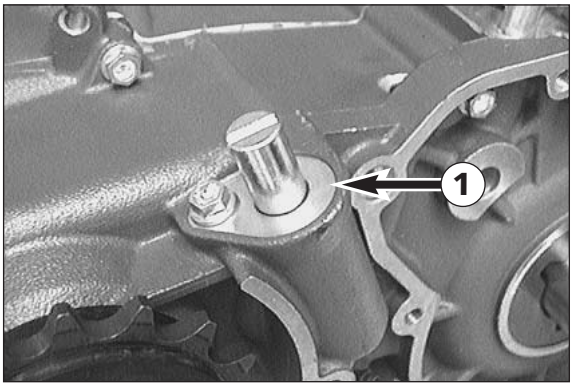
– Place the springs in the pressure cap and fit the HH srews with spring retainers.
– Secure carefully to 6 Nm in a diagonal pattern, to avoid any damage to the inner clutch hub thread.

NOTE:
– Use offset instead of flat spring retainers for 640 ccm engines.
– From model 2000 onwards spring retainers 6,5x20x2 replaced spring retainers 6,2x20x3,2, these can be used for all models with 540, 620 and 640 engines.

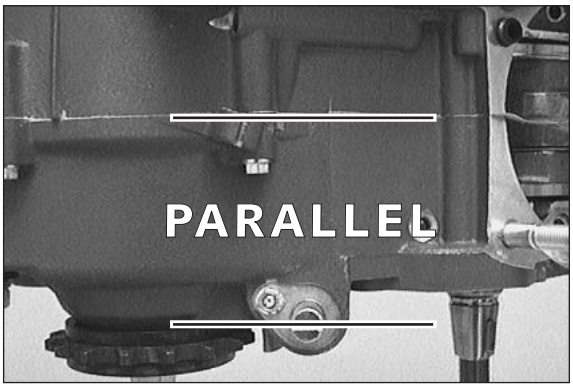


Installing the clutch release shaft

– Oil needle bushings in engine housing.
– Insert the grooved ring ❸ into the housing with the open side up.
– Check for the right position of the circlip ❹ on the clutch release shaft.
– Slide the release shaft into the housing until it lies on the clutch push rod.

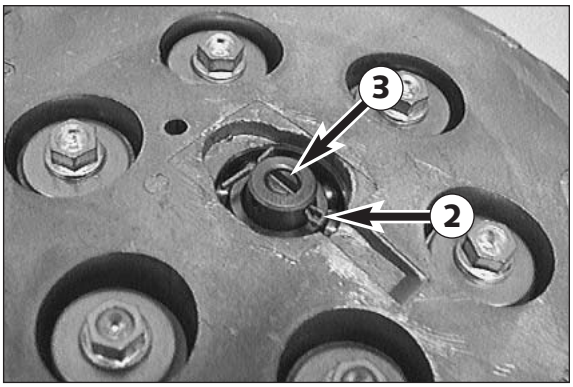


– Turn the release shaft clockwise until it glides a bit further into the housing. The push rod now sits on the release shaft.
– Apply Loctite 243 to the bolt (s).
– Fasten the retaining bracket for the clutch release ❶ with bolt(s).



Adjusting the clutch release

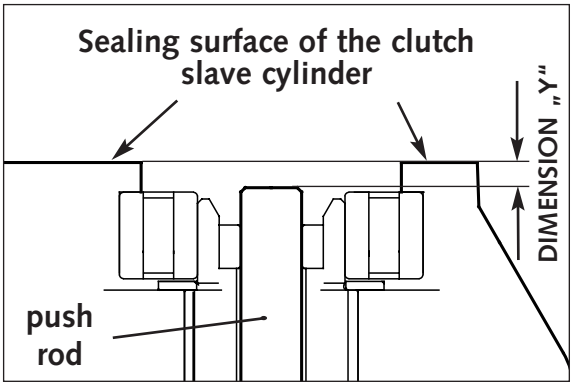
– Turn the clutch release shaft clockwise to stop.
– The slot on the front side of the release shaft should now be parallel to the sealing surface of the housing (see ill.).



– To adjust the clutch release remove pin ❷ and turn the push rod ❸ with a screwdriver until the desired setting is achieved.
– Once you have completed the adjustment, the push rod is to be secured with a pin.

! CAUTION !

TO MAKE SURE THAT THE CLUTCH DISENGAGES PERFECTLY, THE CLUTCH RELEASE MUST BE PROPERLY ADJUSTED.

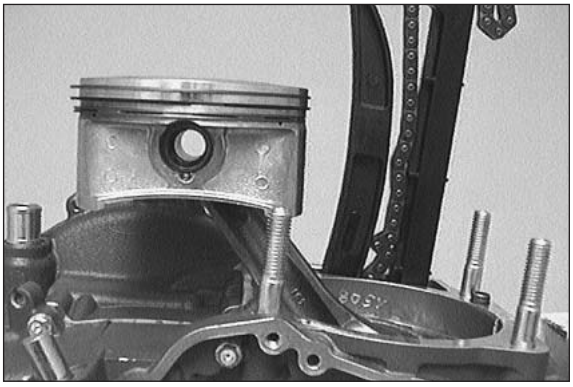


Measure the dimension „Y" (from model 2003 on)

NOTE: The dimension „Y" must be adjusted to make sure the clutch release operates correctly.
The dimension „Y" is the distance between the sealing area of the clutch slave cylinder and the pushrod.

– Oil the pushrod and insert in the main shaft all the way in to the stop.
– Measure the distance between the mounting face (without the gasket) of the clutch slave cylinder to the pushrod using a depth gauge.
– To adjust, remove the splint ❷ and turn the pushrod ❸ with a screwdriver.
– After making the adjustment, lock the pushrod with the splint again.

Dimension „Y" = 2.75 mm

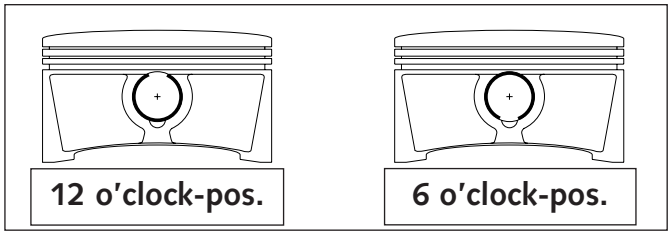


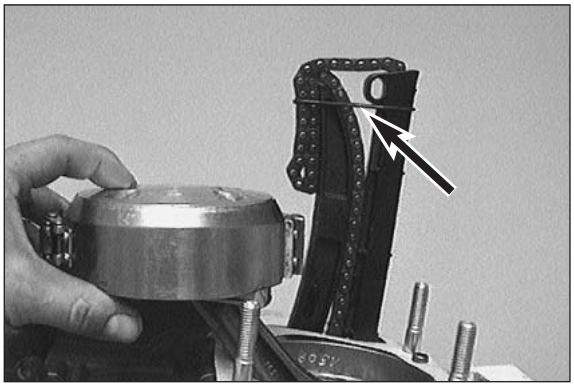
Mounting piston and cylinder

– Lubricate the piston pin eye in the connecting rod and the piston pin with oil.
– Mount piston and secure piston pin with 2 new wire circlips.

! CAUTION !

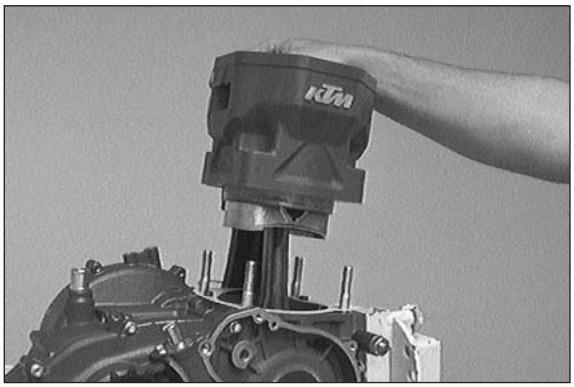
THE ARROW ON THE PISTON HEAD MUST POINT IN THE DIRECTION OF TRAVEL.
MOUNT WIRE CIRCLIPS IN „6 O'CLOCK" OR „12 O'CLOCK" POSITION (SEE ILL.).





– Cut off the section of the housing gasket protruding around the cylinder flange and mount 2 dowels.
– Apply sealing compound to the sections near the chain tunnel and mount the cylinder base gasket.

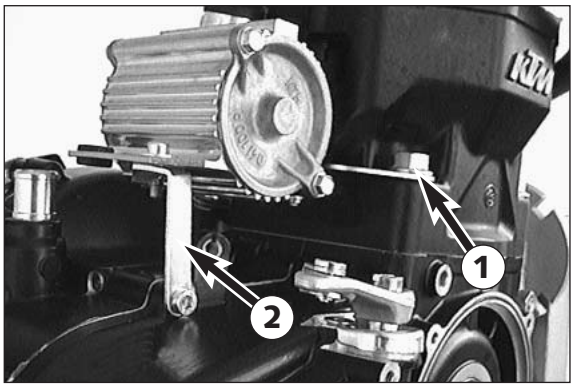
NOTE:
– To facilitate the installation of the cylinder it is recommended to place a rubber band (see illustration) around the timing chain guide and the timing chain tensioner.
– Oil the piston, adjust the piston rings (piston rings must be turned 120 ° against each other) and mount the piston mounting ring.
– Only for 640 LC4 engines a black cylinder base gasket (0,7 mm thickness) is used, the other LC4 engines need the green gasket (0,5mm thickness).



– Slide the cylinder over the piston and remove the mounting ring.

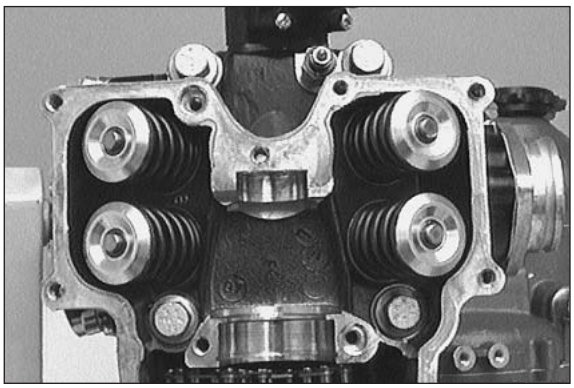
! CAUTION !

APPLY PARTICULAR CARE WHEN MOUNTING THE CYLINDER! THE OIL SCRAPER RING IS EXTREMELY FRAGILE.



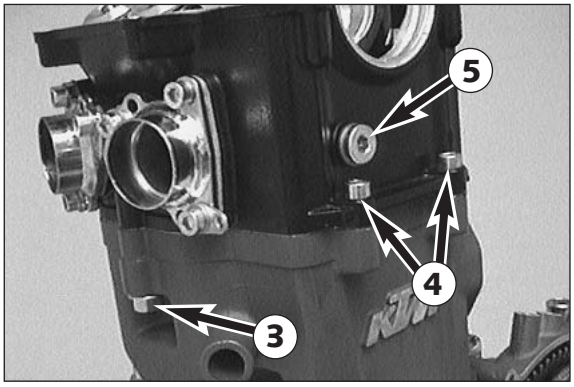
– Hook in the preassembled microfilter with the holding device onto the rear studs and mount the collar nuts ❶ at the cylinder base.
– Tighten collar nuts with 40 Nm (30 ft.lb.) crosswise.
– Then mount the bracket ❷ and attach the microfilter.

NOTE: The upper edge of the piston is higher than the upper edge of the cylinder when the cylinder is screwed down.



Mounting the cylinder head

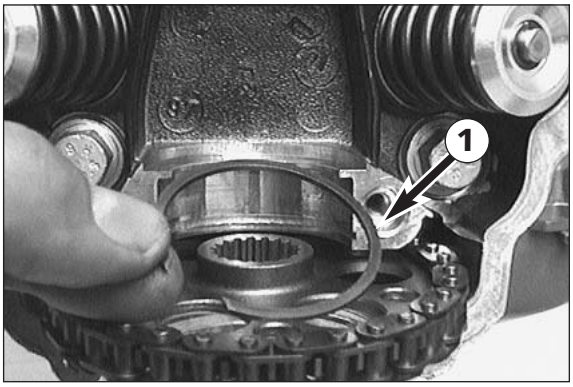
– Check both dowels within the cylinder for proper fit.
– Mount cylinder head gasket and fit cylinder head.
– Oil the 4 bolt (threads and contact surfaces of bolt head) and then mount with new copper seal rings.
– Tighten collar bolts crosswise in three rounds up to the prescribed torque of 50 Nm. During the first round only tighten until a slight resistance is felt.



– Mount M8 collar nuts ❸ on the front and rear side of cylinder and tighten.
– Mount and tighten bolts ❹.
– Put a new seal ring on the chain guide bolt ❺ and degrease the thread.
– Apply Loctite 243 to the thread of the chain guide bolt, mount and tighten it (30 Nm).

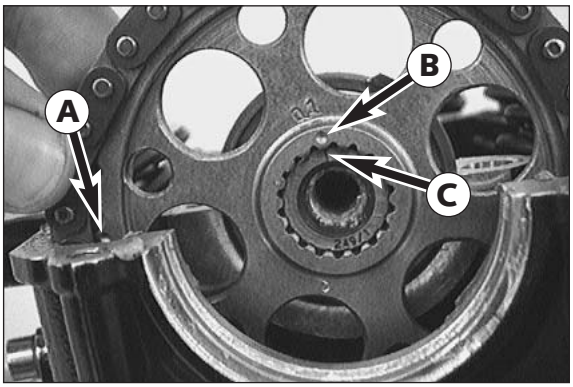
! CAUTION !

BEFORE MOUNTING THE CHAIN GUIDE BOLT MAKE SURE THAT THE OPENING OF THE TIMING CHAIN GUIDE IS VISIBLE THROUGH THE THREADED HOLE. IF THIS IS THE CASE THE CHAIN GUIDE BOLT CAN EASILY BE MOUNTED WITHOUT EXERTING EXCESSIVE FORCE.

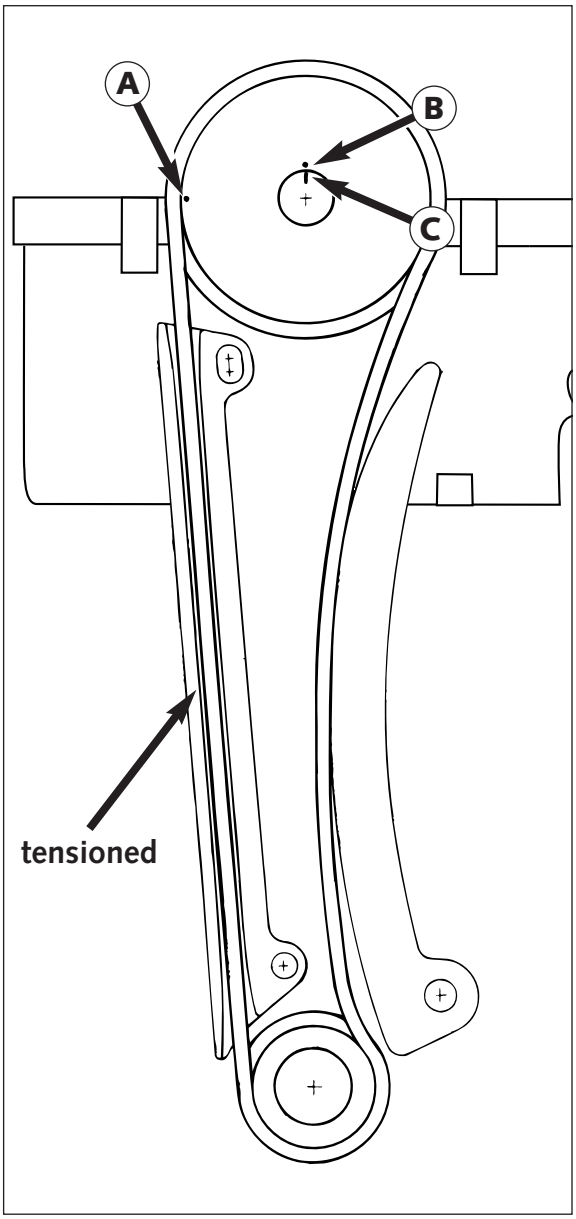


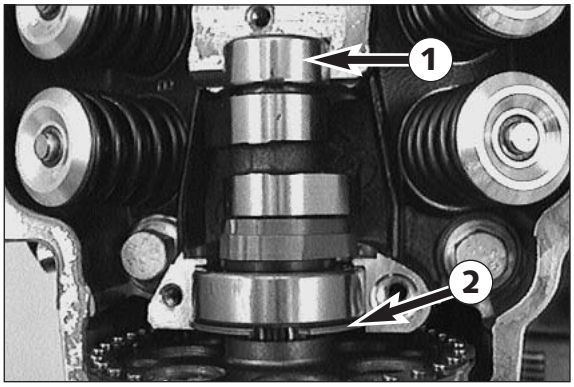
Mounting the camshaft, timing marks

– Fit the camshaft gear into the timing chain so that mark ❹ (a point) is aligned with the top surface of the cylinder head when the timing chain strand tensioned.
– Tilt engine to one side and place circlip ❶ on camshaft gear.

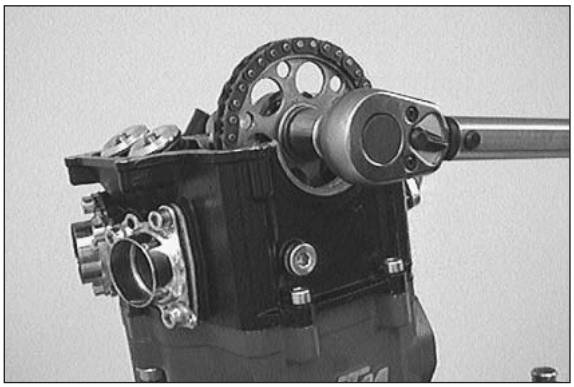


– Slide grooved ball bearing flush onto the preassembled camshaft and fit the camshaft into the camshaft gear so that the mark ❸ and mark ❷ are aligned.

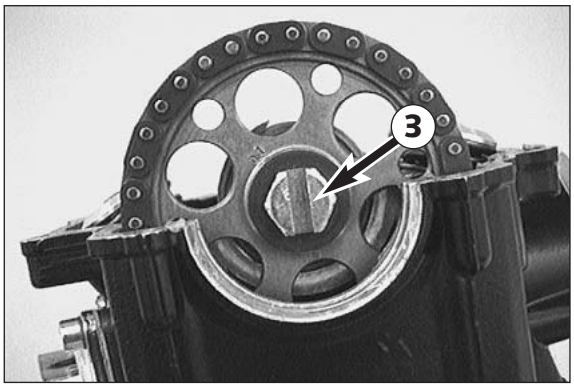




– Lubricate the needle bushing ❶ with oil and slide it onto the camshaft.
– Mount camshaft together with bearing and circlip ❷ into cylinder head.



– Degrease the threads in the camshaft and the driving bolt and apply Loctite 243.
– Mount the driving bolt together with the lock washer and the washer (10x28x3 mm) and tighten (35 Nm/25 ft.lb).

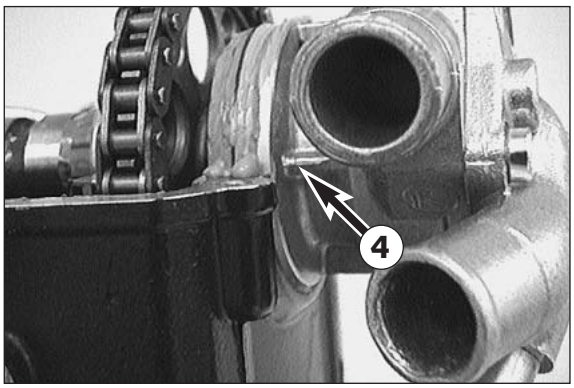


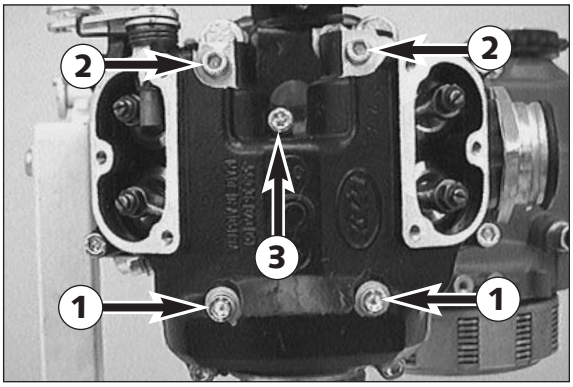
Mounting the water pump

– Loosen crankshaft locking bolt and turn crankshaft until groove ❸ is at a position vertical to the sealing surface for the cylinder head top section.
– Coat O-ring of water pump with sealing compound (Three-Bond) and carefully mount the water pump. The flat part of the water pump shaft must be introduced into the groove of the HH bolt.

! CAUTION !

THE MARKING ❹ LOCATED ON THE HOUSING OF THE WATER PUMP MUST BE FLUSH TO THE SEAL SURFACE.





Mounting the cylinder head top section

– Clean the sealing area of the cylinder head top section and apply a thin layer of sealing compound.
– Fit dowel in the area of the spark plug.
– Carefully position cylinder head top section (do not jam with water pump) and mount bolts.

! CAUTION !

COPPER SEAL RINGS MUST BE FITTED TO THE 5 ALLEN HEAD BOLTS ❶, ❷ AND ❸.

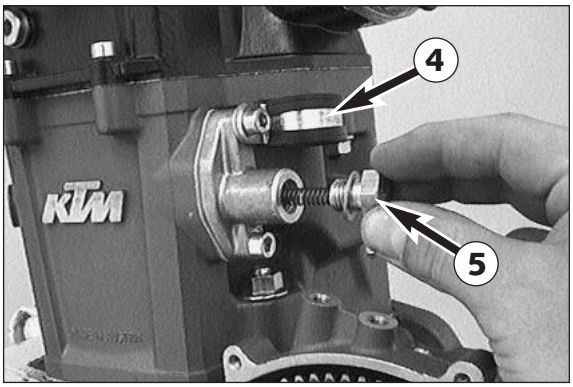
– Tighten bolts ❶ and ❷ to 8 Nm diagonally.
– Tighten bolts ❷ to 15 Nm.
– Tighten all other bolts of the cylinder head top section with 8 Nm.

Mounting the automatic tensioner

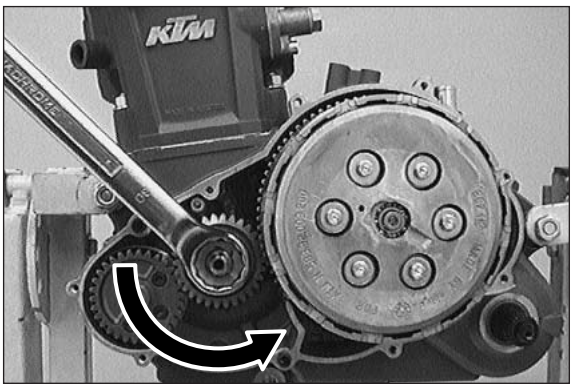
– Fit preassembled automatic tensioner with gasket into the cylinder.
– Mount the clamp ❹ and two bolts with copper seal rings.

! CAUTION !

IF THE RATCHETING PAWL IS NOT ENGAGED INTO THE FIRST NOTCH THIS WILL CAUSE EXCESSIVE TENSION OF THE CHAIN.



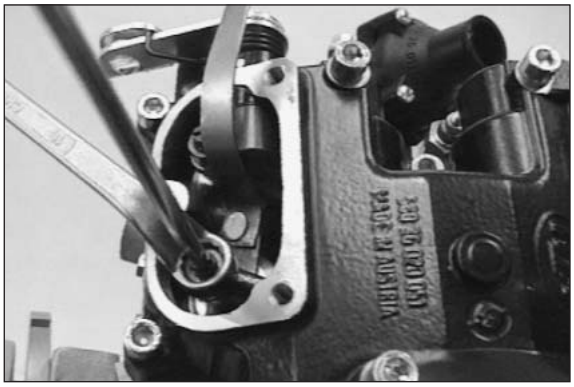
– Fit pressure spring and plug ❺ with gasket and tighten with 20 Nm.



Automatic decompression testing

– Rotate the crankshaft in the usual direction of rotation (i.e. forward). After every other rotation, the decompression cam must be clearly heard to click as it disengages.

NOTE: If turning of the engine does not produce a click of the decompression cam, first of all check the tightening torque of the driving bolt (camshaft gear).



Adjustment of valve clearance

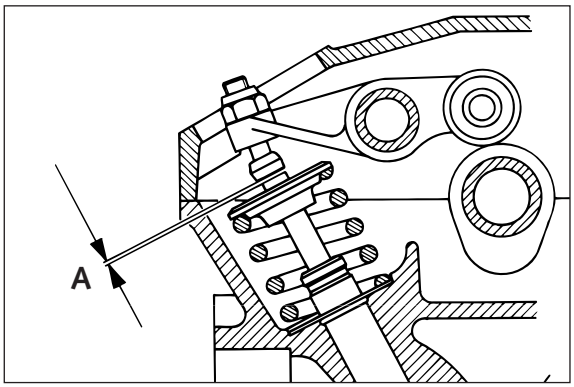
– Adjust piston to ignition top dead center (check marks of flywheel) and screw crankshaft locking bolt back in.

! CAUTION !

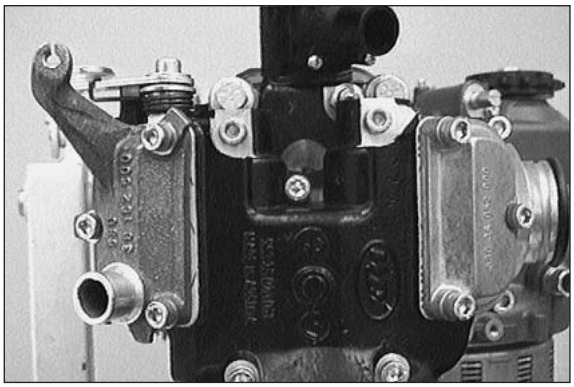
IF THE PISTON IS NOT IN IGNITION TDC, VALVES ARE OPENED AND A CORRECT ADJUSTMENT IS NOT POSSIBLE - IN THAT CASE CRANKSHAFT MUST BE MOVED A FULL TURN.

– Valve clearance ❹ is measured at cold engine between valve stem and adjusting screw.

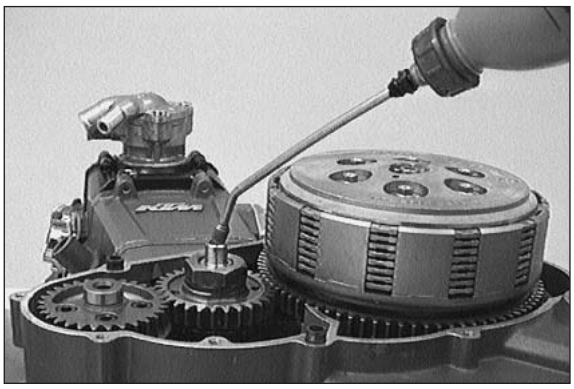
VALVE CLEARANCE 400 : INTAKE 0.20 mm / EXHAUST 0.20 mm
VALVE CLEARANCE 540 : INTAKE 0.15 mm / EXHAUST 0.15 mm
VALVE CLEARANCE 620 : INTAKE 0.15 mm / EXHAUST 0.15 mm
VALVE CLEARANCE 625 : INTAKE 0.15 mm / EXHAUST 0.15 mm
VALVE CLEARANCE 640 : INTAKE 0.15 mm / EXHAUST 0.15 mm
VALVE CLEARANCE 660 : INTAKE 0.15 mm / EXHAUST 0.15 mm



– Tighten counternuts with 20 Nm.
– Remove the crankshaft locking bolt.

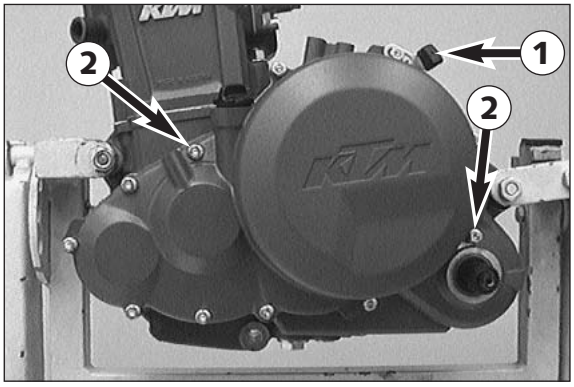


– Mount both valve covers with new gaskets and bolts with copper seal rings.
– Tighten bolts with 8 Nm.
– Insert and tighten spark plug with 20 Nm.



Mounting the clutch cover

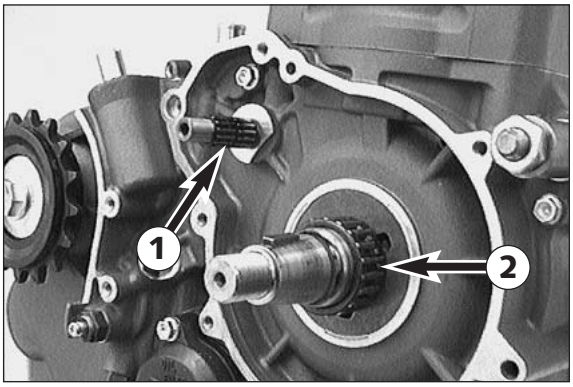
– Pour approx. 30 ml of oil into the crankshaft journal hole.



– Make sure that the two dowels are mounted.
– Fit new gasket and fix with dabs of grease.
– Apply grease to the shaft seal ring in the clutch cover and mount clutch cover.
– Fit bolts and bump rubber ❶ for kickstarter.

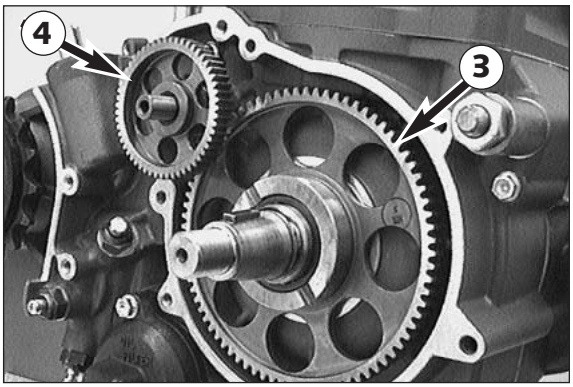
NOTE: Bolts ❷ must each be provided with a copper seal ring.

– Tighten bolts with 8 Nm.

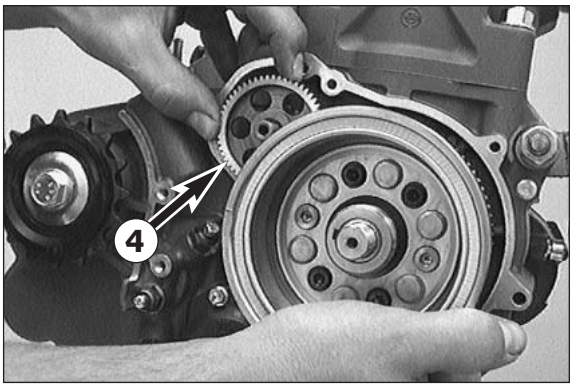


Mounting the electric starter drive

– Insert the woodruff key into the crankshaft.
– Slide 2 needle bearings ❶ onto the bearing pin of the reduction gear.
– Slide the needle bearing ❷ onto the crankshaft.
– Oil the needle bearings.



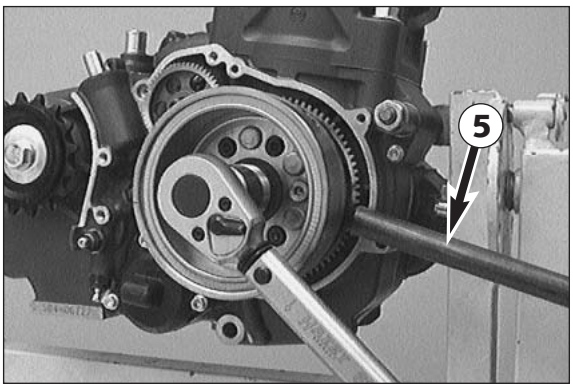
– Mount the freewheel gear ❸ and the reduction gear ❹.



Mounting the ignition (Kokusan 4K-2)

– Degrease the cones of flywheel and crankshaft.
– Thoroughly oil the freewheel and mount the flywheel.

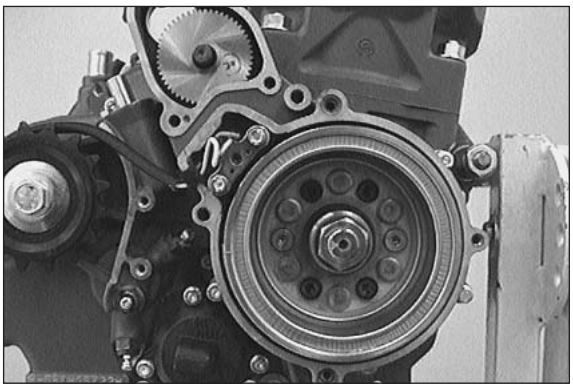
NOTE: Turn the reduction gear for easier mounting of the flywheel.



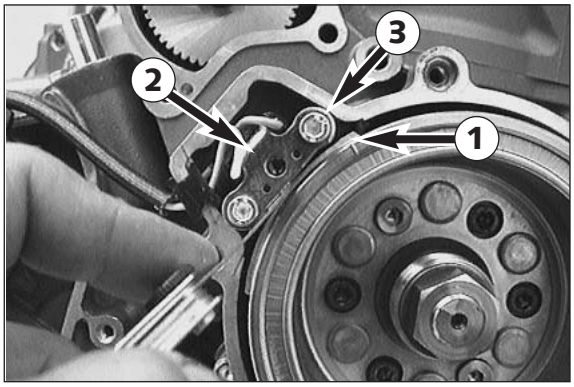
– Mount disk with the nut.
– Use the holding tool ❺ to hold the flywheel and tighten the hexagon nut with 150 Nm.

! CAUTION !

TO AVOID DISTORTION OF THE CRANK WEB, NEVER MOUNT THE CRANKSHAFT LOCKING BOLT TO TIGHTEN THE HEXAGON NUT OF THE FLYWHEEL.



– Insert 2 dowels into the housing.
– Apply silicone to both sealing surfaces and mount a new gasket.
– Mount the preassembled starter flange and use 4 bolts to fasten the starter flange.

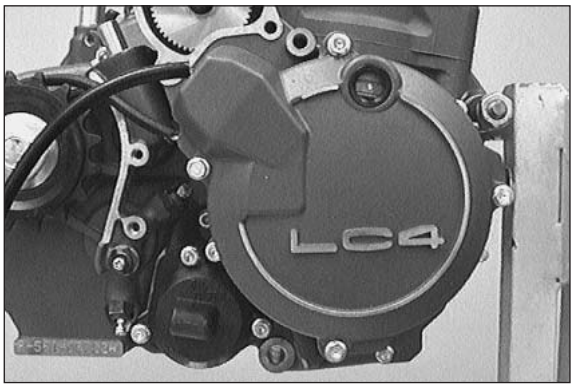


Adjusting the pulse generator

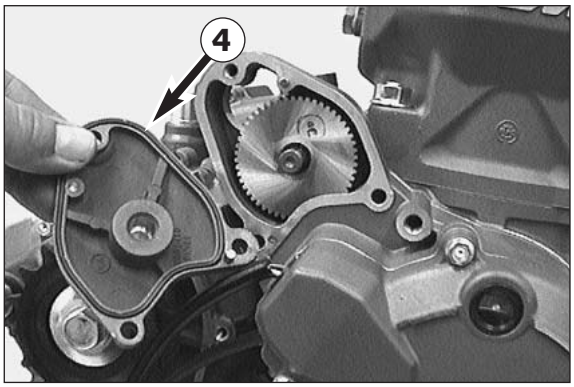
– Turn the flywheel until the elevated section of the flywheel ❶ coincides with the pulse generator ❷.
– Use a feeler gauge to measure the distance between the pulse generator and the flywheel.

Setpoint value: 0.75 mm (0.03 in) +/- 0.2 mm (0.008 in)

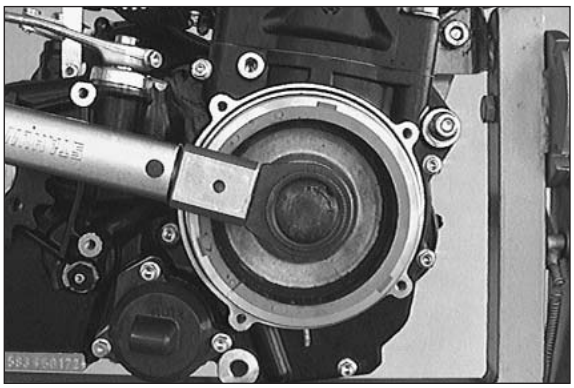
– If necessary undo the two bolts ❸ and adjust the distance by moving the pulse generator. When mounting the two bolts secure them with Loctite 243.



– Insert 2 dowels.
– Apply silicone to both sealing surfaces and mount a new gasket.
– Mount ignition cover and tighten all bolts.

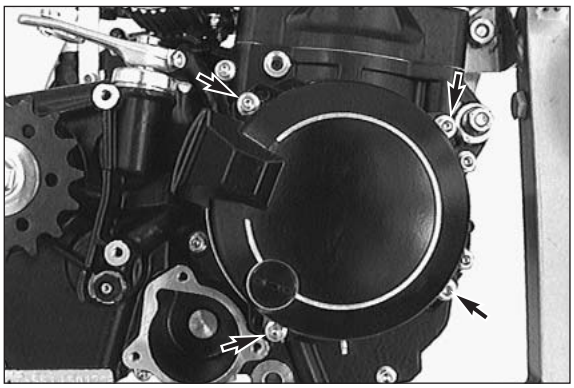


– Insert a new O-ring ❹ into the groove of the starter cover and fasten the starter cover with 3 bolts.

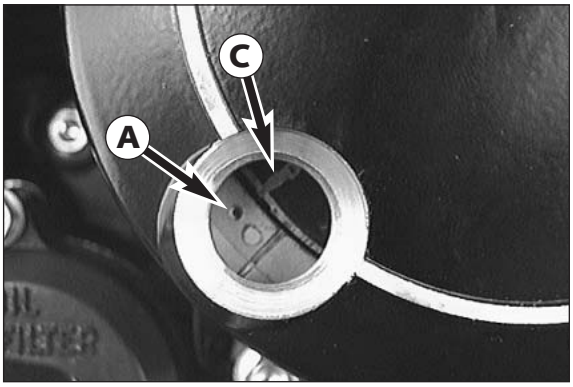


Mounting the ignition (SEM)

– Block crankshaft with crankshaft locking bolt.
– Place woodruff key in crankshaft.
– Clean cones of crankshaft and flywheel and mount flywheel.
– Fit spring washer and collar nut.
– Tighten collar nut to 60 Nm.
– Place the O-ring into the groove of the engine housing.



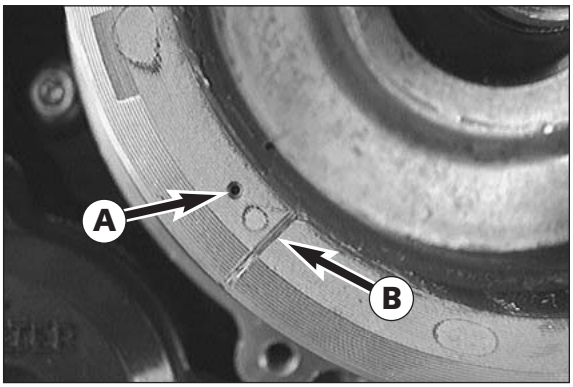
– Fit preassembled ignition cover and mount the 4 bolts but do not tighten.



Adjustment of ignition point (SEM)

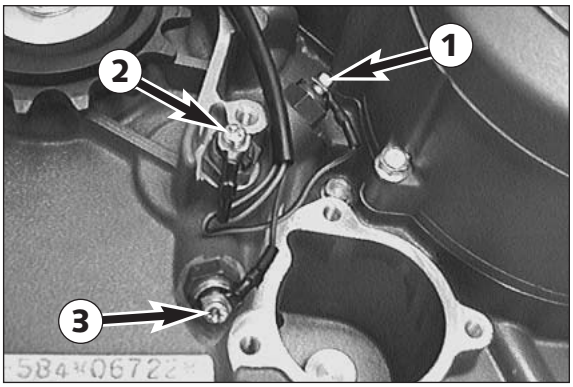
NOTE: The ignition point is adjusted after the crankshaft locking bolt has been mounted.

- Remove the plug at the ignition cover.
- Turn ignition cover so that the mark ❻ on the stator and the mark ❹ on the flywheel are aligned.
- Tighten the 4 bolts of the ignition cover.
- Finally, mount the ignition cover plug.



NOTE: The 400 LC4 engine needs more preignition than the other LC4 engines. As all LC4 engines are equipped with the same ignition system, the flywheel is provided with an additional mark (groove) for the 400 LC4 engine. The ignition adjustment procedure is exactly the same.

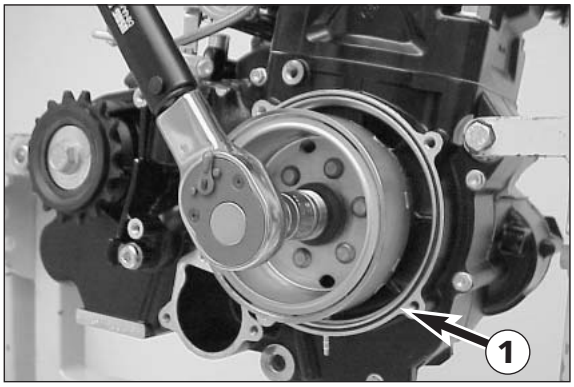
- In the 400 LC4 model the marking ❺ (notch) must coincide with the marking on the stator.
- In the 540 LC4, 620 LC4 and 640 LC4 model the marking ❹ (2 mm bore) must coincide with the marking on the stator.



Mounting the EPC wiring harness

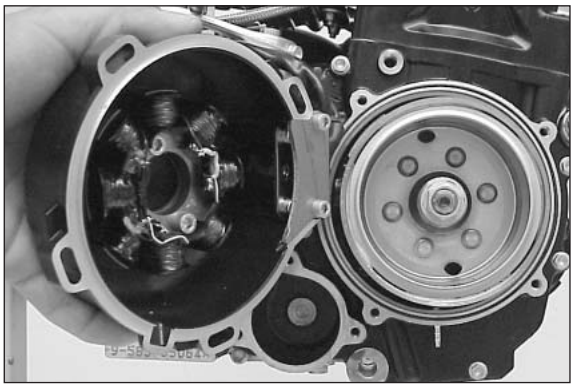
- Put the wiring harness through the clip at the automatic tensioner and connect all 3 cable lugs to the contact screws, making sure to connect each cable to the corresponding screw:

- Connect the black/orange cable to contact screw ❶.
- Connect the black/green cable to contact screw ❷.
- Connect the black/blue cable to contact screw ❸.

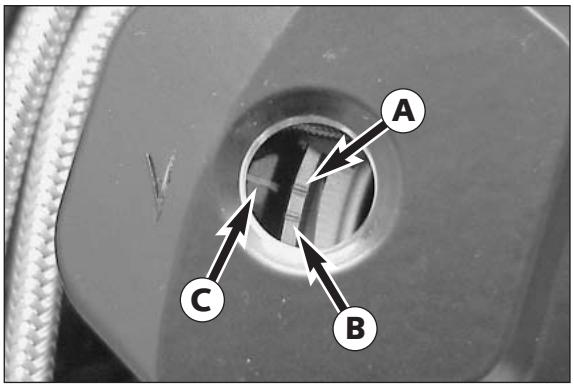


Installing the ignition (Kokusan 4K-3)

– Block the crankshaft with the crankshaft locking bolt.
– Insert the woodruff key into the crankshaft.
– Clean the cone of the flywheel and the crankshaft and mount the flywheel.
– Mount the spring washer and the collar nut (LH thread).
– Tighten the collar nut with 60 Nm.
– Insert the O-ring ❶ into the groove in the engine housing.



– Mount the pre-assembled ignition cover. Insert the 4 bolts without tightening them yet.

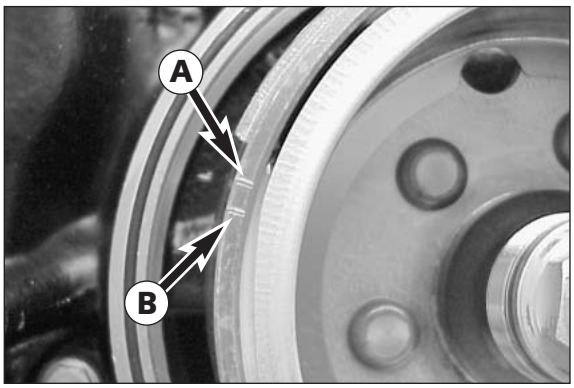


Adjusting the ignition point (Kokusan 4K-3)

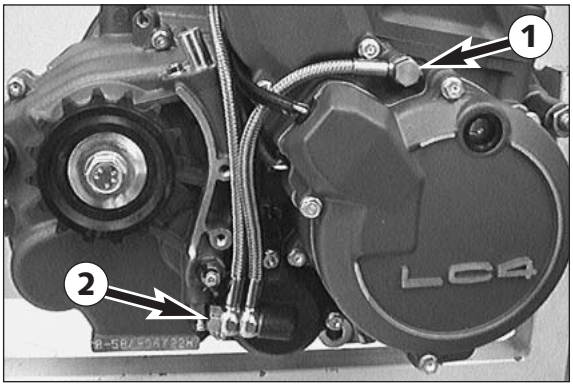
NOTE: The ignition point is adjusted while the crankshaft locking bolt is still twisted in.

– Remove the plug at the clutch cover.
– Turn the clutch cover until mark ❸ on the pulse generator and mark ❶ or ❷, respectively, on the flywheel coincide.

NOTE: In 400 LC4 engines mark ❷ must coincide with the mark on the pulse generator.
In 620/660 LC4 engines mark ❶ must coincide with the mark on the pulse generator.

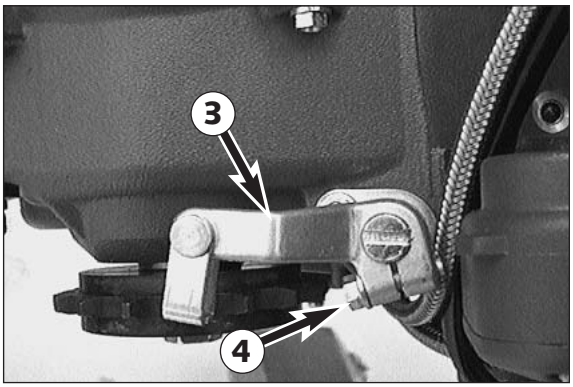


– Tighten the 4 bolts of the ignition cover.
– Finally, mount the plug.



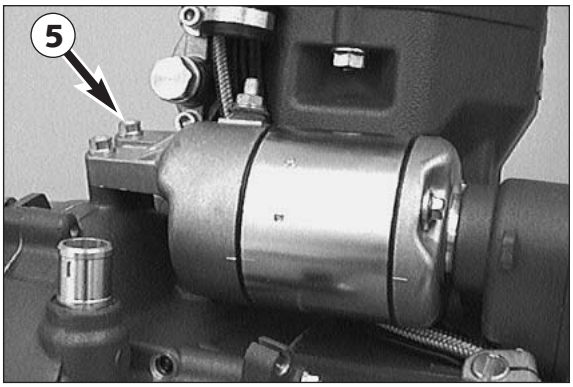
Mounting the oil hoses

– Mount the two oil hoses.
– Tighten banjo bolt ❶ with 10 Nm and banjo bolt ❷ with 15 Nm.



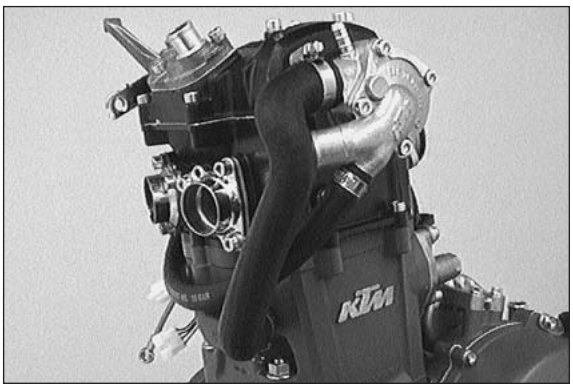
Mounting the clutch release lever

– To mount the clutch release lever ❸, turn the clutch release shaft clockwise as far as stop and fit the release lever as illustrated.
– Tighten clamp bolt ❹.



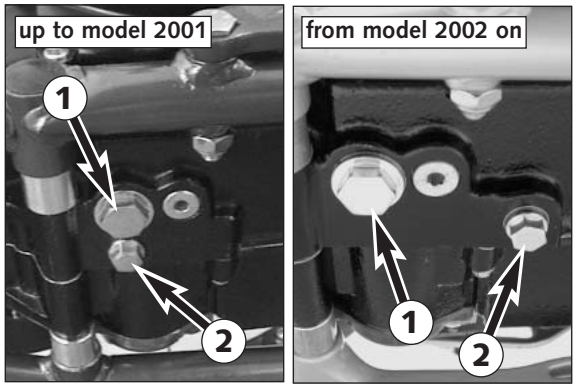
Mounting the electric starter motor

– Slightly oil the O-ring on the flange of the electric starter motor.
– Mount the electric starter motor and fix it with 2 bolts ❺.



Mounting the water hoses

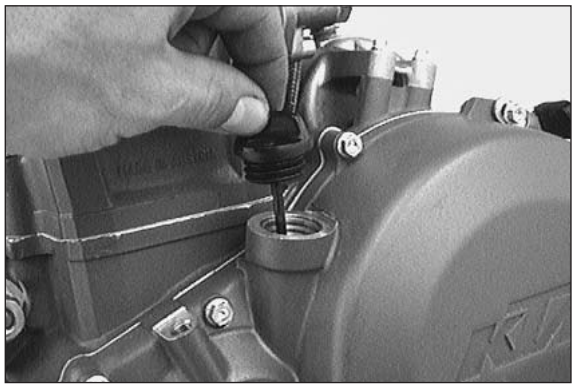
– Mount the two water hoses and use the four hose clamps to fasten.



Pouring in engine oil

– Mount oil drain plug ❶ with seal ring and tighten with 30 Nm.
– Mount the magnetic plug ❷ and tighten with 20 Nm.

NOTE: A third plug was installed in the 660 SMC model. Tightening torque: 20 Nm

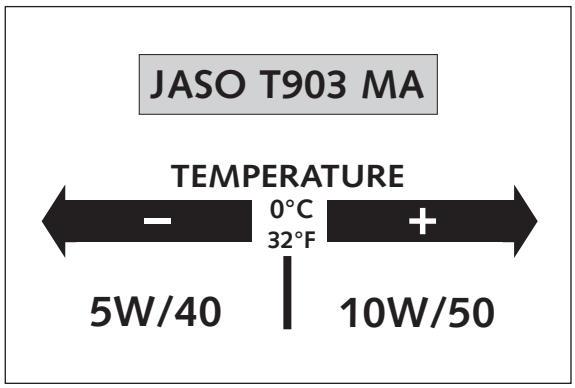


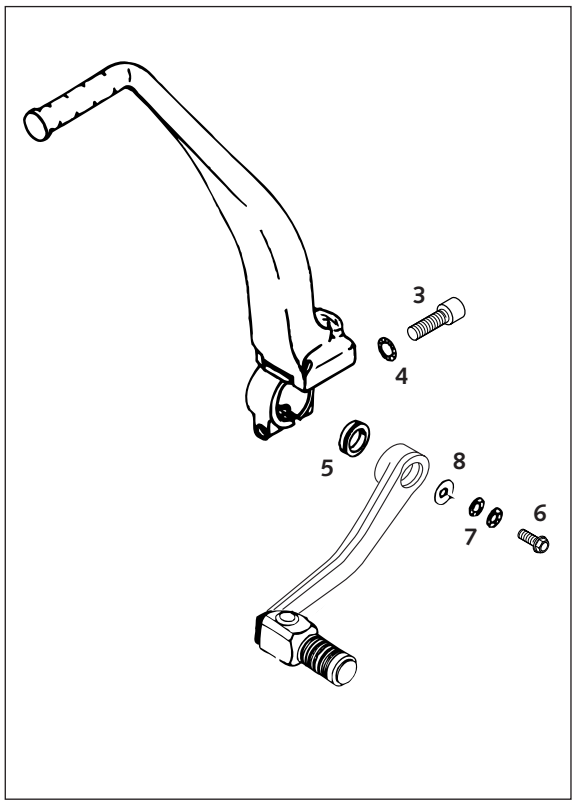
– Remove the oil dipstick or the oil filler screw on the clutch cover and add engine oil (see below for quality and viscosity). Remount the oil dipstick or the oil filler screw.

! CAUTION !

– ONLY USE HIGH-QUALITY OILS MEETING OR SURPASSING THE QUALITY REQUIREMENTS OF JASO T903 MA (FOR SPECIFICATIONS SEE CONTAINERS).
– INSUFFICIENT OIL OR POOR QUALITY OIL RESULTS IN PREMATURE WEAR OF THE ENGINE.
– YOU MAY USE EITHER MINERAL OILS OR SYNTHETIC OILS FULFILLING THE ABOVE CRITERIA.

Oil capacity (up to model 2002) : 1.40 l
Oil capacity (from model 2003 on) : 1.50 l





Mounting the kickstarter and the shift lever

– Put the kickstarter onto the kickstarter shaft, then mount bolt ❸ together with a new Schnorr lock washer ❹ and tighten it.
– Put the V- seal ring ❺ and the shift lever onto the shifting shaft.
– Mount bolt ❻ together with 2 Nordlock discs ❼ and washer ❽.
– Adjust the stop rubber for the kickstarter so that it rests against the kickstarter.

NOTE: As soon as the engine is assembled close all openings providing access to the engine (intake port, exhaust port, water connections, bleeding openings ...) with appropriate plugs to prevent small parts from slipping into the interior of the engine during the further installation process.

ELECTRICAL 7

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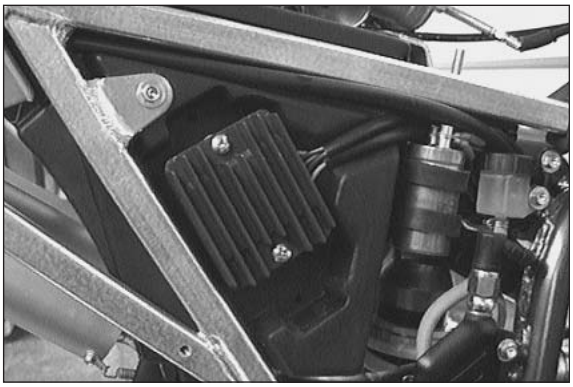
ELECTRICAL – SUPER COMPETITION

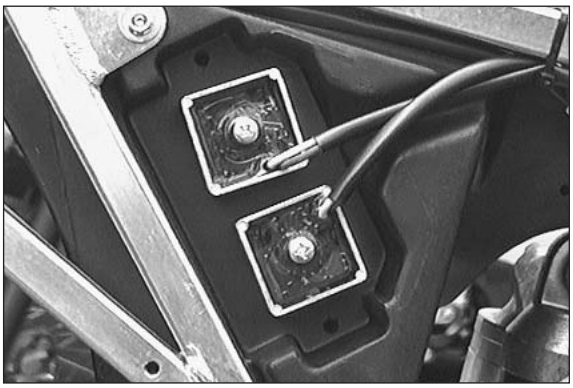


Checking the voltage regulator-rectifier

– Start the engine and switch on the low beam.
– Connect a voltmeter to the two terminals of the capacitor (red/white cable = positive, brown cable = negative).
– Accelerate the engine to a speed of 5000 r.p.m. and read off the voltage.

Nominal value: 14.0 - 15.0 V

If the reading significantly deviates from the nominal value above, check the capacitor. If the capacitor is intact, replace the voltage regulator-rectifier.



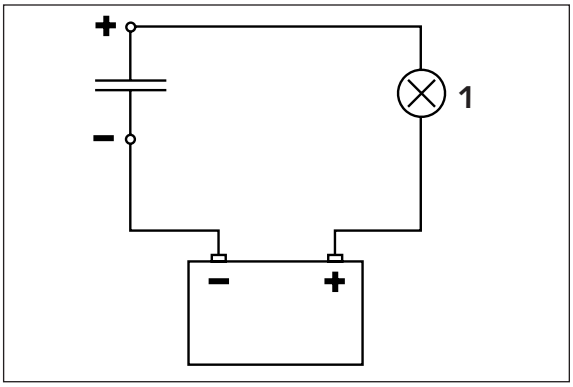
Checking the voltage regulator

The two voltage regulators are located under the right side cover at the air filter box.
The voltage regulators are connected downstream of the switches. One of the voltage regulators regulates only the brake light circuit, the other regulates the circuit for the head light, the tail light, the speedometer illumination and the horn.

A defect voltage regulator can cause different kinds of trouble:

- No voltage in the circuit

In this case, the voltage regulator must be disconnected at idle speed. The voltage regulator is defect if the power consumers now work properly.
If the power consumers are still not supplied with power, the switch, the wiring harness or the ignition system must be checked for defects.

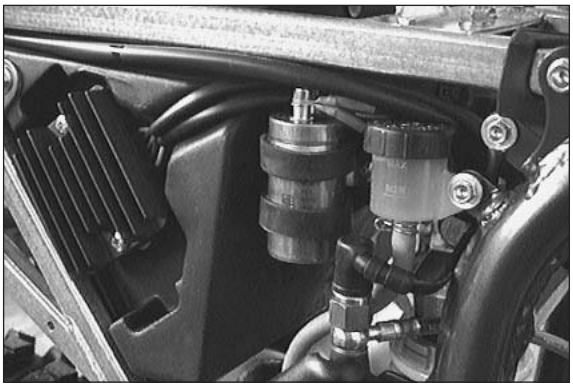


- Excessive voltage in the circuit

The bulbs burn out.
Connect a voltmeter (yellow cable = positive, brown cable = negative) to check the voltage. Start the engine and switch on the power consumers.

At an engine speed of 3000 r.p.m, the voltage regulator must supply a voltage of 12.0 - 14.0 V A.C. At higher engine speeds, the limit of 14 V should not be exceeded either.

If the reading significantly deviates from the nominal value, replace the voltage regulator.



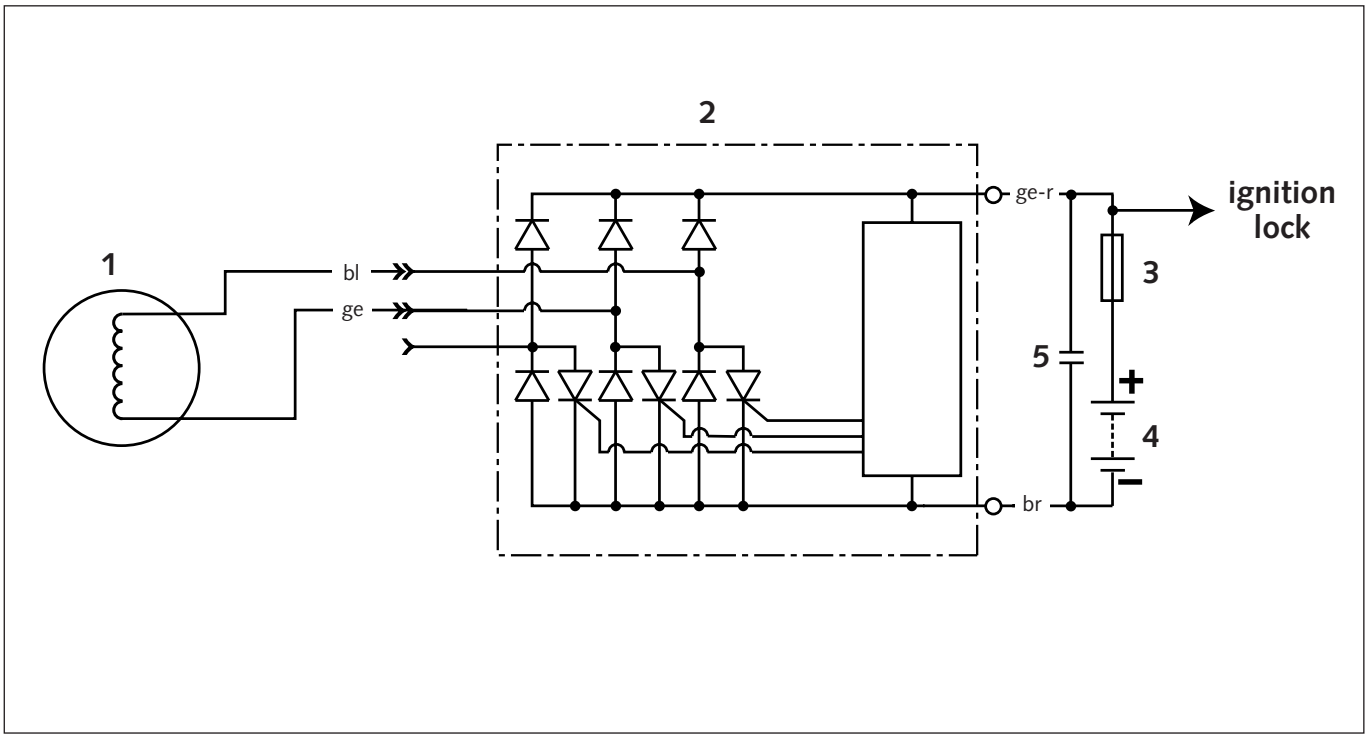
Checking the capacitor

– Discharge the capacitor 1 by bridging the two terminals with a screwdriver and remove.
– Connect the negative pole of a 12V battery with the negative terminal of the capacitor. The connection between the positive pole of the battery and the positive terminal of the capacitor (marked +) is made with a test lamp ❶.
– When the power circuit is closed, the test lamp must begin to light up. As capacitor charging increases, the brightness of the test lamp must decrease.
– The test lamp must go out after 0,5-2 seconds (depending on the lamp capacity).
– If the test lamp does not go out or does not light up at all, the capacitor is faulty.

! CAUTION !

DISCHARGE THE CAPACITOR BEFORE AND AFTER EACH TEST.
WHEN INSTALLING THE CAPACITOR, MAKE SURE THAT THE TERMINALS ARE CONNECTED IN ACCORDANCE WITH THEIR MARKINGS. CONNECT RED/WHITE CABLE TO + TERMINAL.

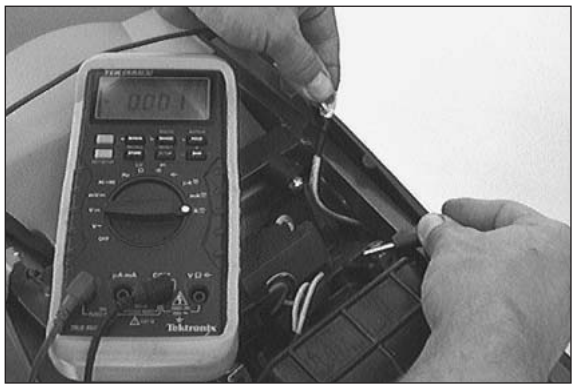
ELECTRICAL – LC4 COMPETITION

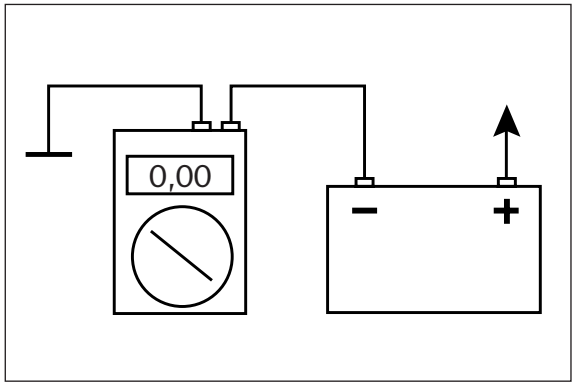


bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Charging system

❶ Generator
❷ Regulator-rectifier
❸ Main fuse (20 A)
❹ Battery (12V / 8 Ah)
❺ Capacitor





Leakage inspection

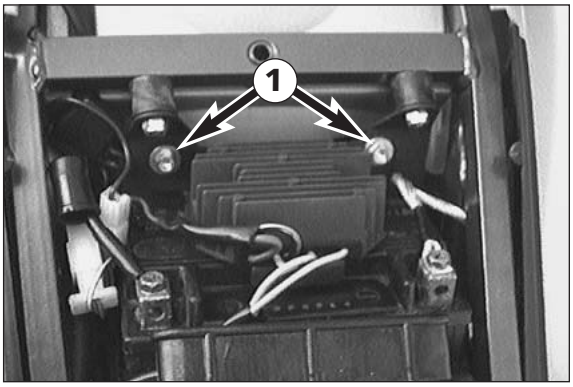
The drop test must be performed before checking the voltage regulator/rectifier

– Turn off the ignition and disconnect the ground wire from the battery.
– Insert an amperemeter between the ground wire and the negative pole of the battery.

Setpoint value: max. 1 mA

– Check for power consumers, should the measured value exceed the indicated maximum value.

Example:
- defective voltage regulator-rectifier
- leak currents in the socket connectors, in the ignition lock or in the starter relay.

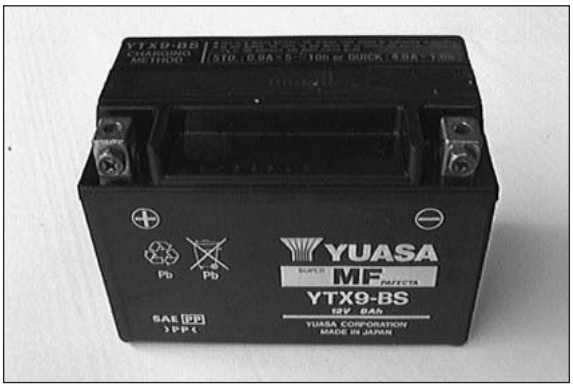


Removing the battery

– Remove the seat.
– Disconnect first the negative and then the positive pole of the battery.
– Remove the bolts ❶ and swing the battery support with the voltage regulator-rectifier sideways.
– Remove the battery.
– When reinstalling the battery, connect the negative pole last.

! CAUTION !

FOLLOW THE INSTRUCTIONS OF THE MANUFACTURER WHEN FILLING A NEW BATTERY. THE RELEVANT SAFETY INSTRUCTIONS ARE ALSO CONTAINED IN THE USER MANUAL SUPPLIED WITH THE BATTERY.

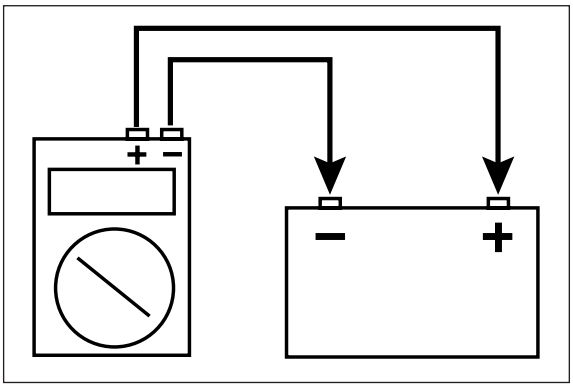


Charging the battery

– Remove the battery and check the charging level. Use a voltmeter to measure the voltage between the battery poles (off-load voltage).
– Accurate results can only be obtained if the battery has neither been charged nor discharged during a period of 30 minutes preceding the measuring.
– If the battery is empty, it can be recharged for a maximum period of 10 hours at 0.8 A and a maximum of 14.4 V.

! CAUTION !

– TO AVOID DAMAGE, DO NOT REMOVE THE LOCKING BAR
– ALWAYS CONNECT THE BATTERY TO THE CHARGING UNIT BEFORE TURNING THE CHARGING UNIT ON.
– WHEN RECHARGING THE BATTERY IN CLOSED ROOMS ENSURE SUFFICIENT VENTILATION. EXPLOSIVE GASES ARE RELEASED DURING THE BATTERY CHARGING PROCESS.
– CHARGING TIME AND CHARGING VOLTAGE SHOULD NOT EXCEED THE STATED VALUES. OTHERWISE ELECTROLYTE WILL BE RELEASED THROUGH THE SAFETY VALVES.
– AVOID QUICK CHARGING IF POSSIBLE.



off load voltage Volt	charging level %	charging time 0.8 A	charging voltage
>12.7	100	—	max. 14.4 V
~12.5	75	4 h	
~12.2	50	7 h	
~12.0	25	11 h	
~11.8	0	14 h	

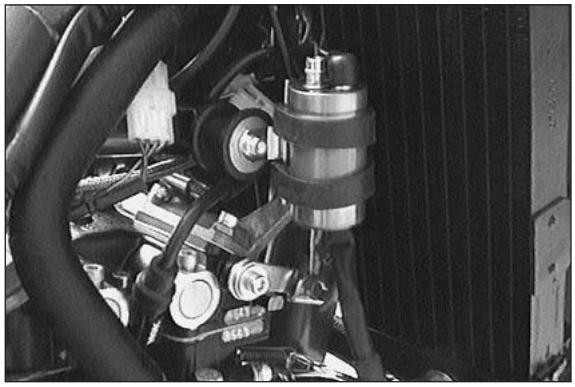
Charging voltage / checking the voltage regulator-rectifier

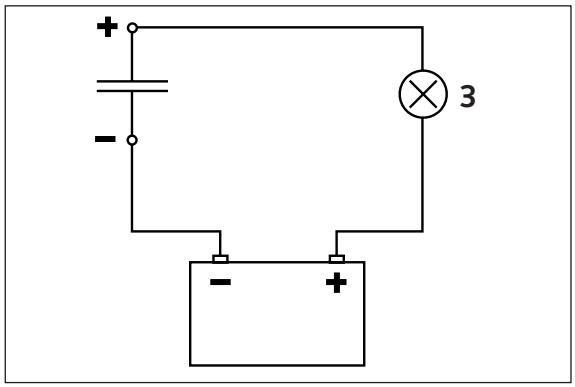
NOTE: The values stated below apply only to fully charged batteries (minimum charging level 90%).

– Start the engine and switch on the low beam.
– Connect a voltmeter to both battery connections.
– Accelerate the engine to a speed of 5000 rpm and read off the voltage.

Nominal value: 14.0 - 15.0 V

In the case of a significant deviation from the nominal value:
– Check the connector between the stator and the voltage regulator-rectifier and the connector between the voltage regulator-rectifier and the cable tree.
– Check the stator.
– Replace the voltage regulator-rectifier.



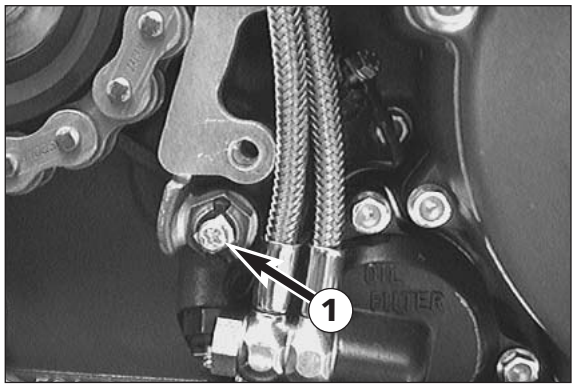


Checking the capacitor

– Pull main fuse out of the fuse holder.
– Discharge the capacitor 1 by bridging the two terminals with a screwdriver and remove.
– Connect the negative pole of a 12V battery with the negative terminal of the capacitor. The connection between the positive pole of the battery and the positive terminal of the capacitor (marked +) is made with a test lamp ❸.
– When the power circuit is closed, the test lamp must begin to light up. As capacitor charging increases, the brightness of the test lamp must decrease.
– The test lamp must go out after 0,5-2 seconds (depending on the lamp capacity).
– If the test lamp does not go out or does not light up at all, the capacitor is faulty.

! CAUTION !

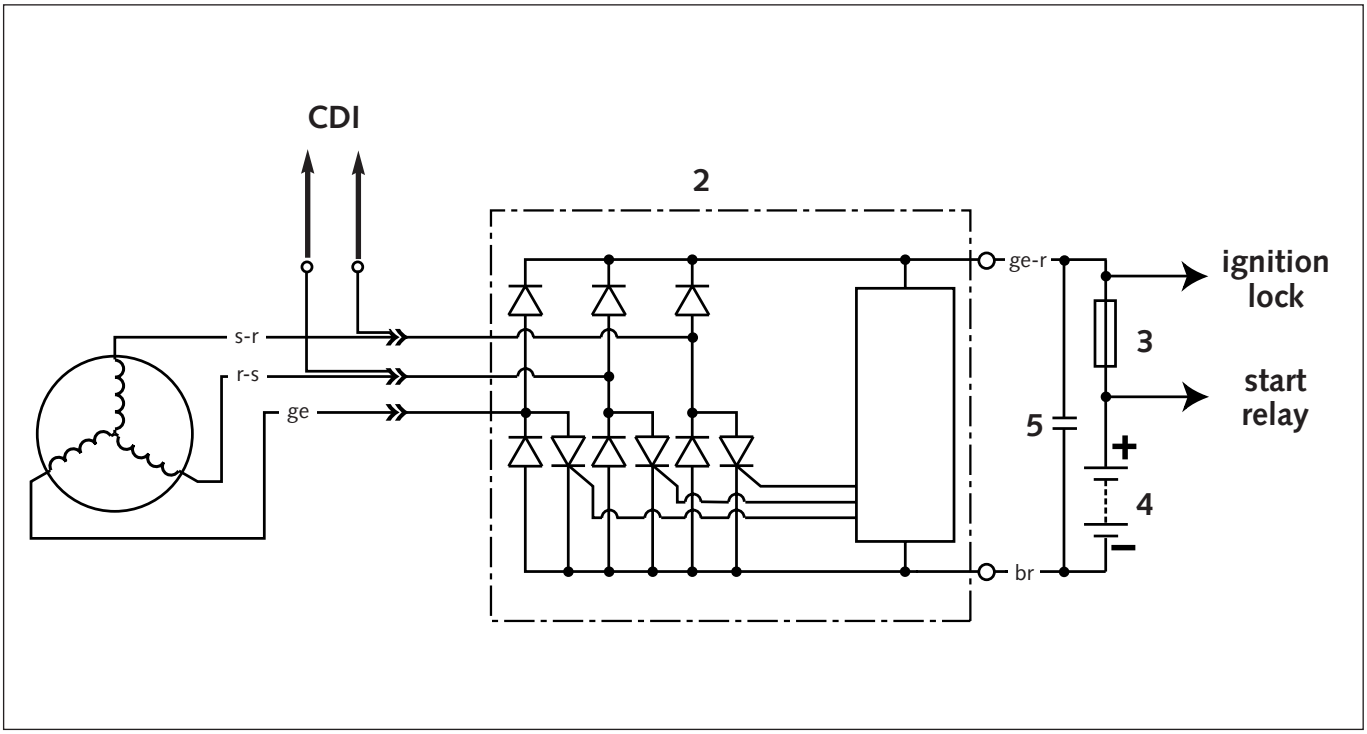
DISCHARGE THE CAPACITOR BEFORE AND AFTER EACH TEST.
WHEN INSTALLING THE CAPACITOR, MAKE SURE THAT THE TERMINALS ARE CONNECTED IN ACCORDANCE WITH THEIR MARKINGS. CONNECT RED/WHITE CABLE TO + TERMINAL.



Checking the neutral switch

– Remove the chain cover.
– Connect one terminal of a test lamp to the positive pole of the battery and the other to connection ❶ of the neutral switch.
– The test lamp must light up when the transmission is switched to neutral.
– The test lamp must go out as soon as a gear is put in.

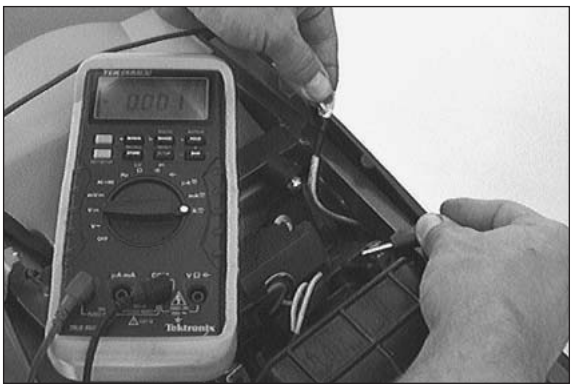
ELECTRICAL – LC4



bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Charging system

❶ Generator
❷ Regulator-rectifier
❸ Main fuse (20 A)
❹ Battery (12V / 8 Ah)
❺ Capacitor



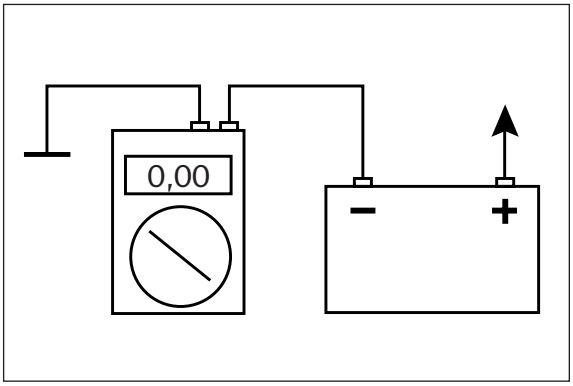
Leakage inspection

The drop test must be performed before checking the voltage regulator/rectifier

– Turn off the ignition and disconnect the ground wire from the battery.
– Insert an amperemeter between the ground wire and the negative pole of the battery.

Setpoint value: max. 1 mA

– Check for power consumers, should the measured value exceed the indicated maximum value.
Example:
- defective voltage regulator-rectifier
- leak currents in the socket connectors, in the ignition lock or in the starter relay.



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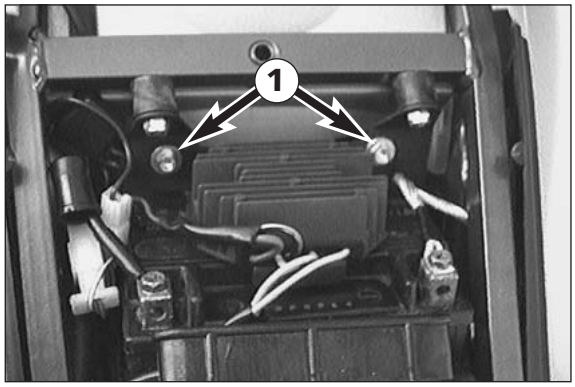


Removing the battery

– Remove the seat.
– Disconnect first the negative and then the positive pole of the battery.
– Remove the bolts ❶ and swing the battery support with the voltage regulator-rectifier sideways.
– Remove the battery.
– When reinstalling the battery, connect the negative pole last.

! CAUTION !

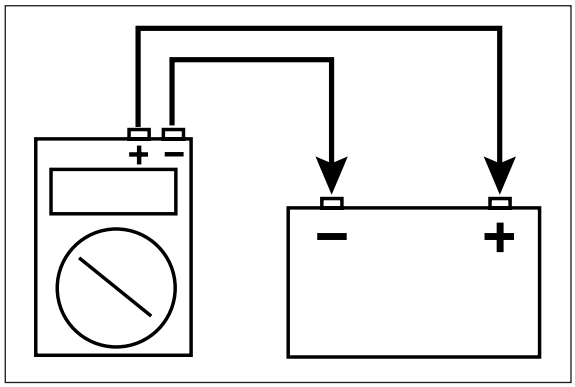
FOLLOW THE INSTRUCTIONS OF THE MANUFACTURER WHEN FILLING A NEW BATTERY. THE RELEVANT SAFETY INSTRUCTIONS ARE ALSO CONTAINED IN THE USER MANUAL SUPPLIED WITH THE BATTERY. ANY FAILURE TO OBSERVE THESE INSTRUCTIONS MAY RESULT IN SEVERE INJURIES.

Charging the battery

– Remove the battery and check the charging level. Use a voltmeter to measure the voltage between the battery poles (off-load voltage).
– Accurate results can only be obtained if the battery has neither been charged nor discharged during a period of 30 minutes preceding the measuring.
– If the battery is empty, it can be recharged for a maximum period of 10 hours at 0.8 A and a maximum of 14.4 V.

! CAUTION !

– TO AVOID DAMAGE, DO NOT REMOVE THE LOCKING BAR.
– ALWAYS CONNECT THE BATTERY TO THE CHARGING UNIT BEFORE TURNING THE CHARGING UNIT ON.
– WHEN RECHARGING THE BATTERY IN CLOSED ROOMS ENSURE SUFFICIENT VENTILATION. EXPLOSIVE GASES ARE RELEASED DURING THE BATTERY CHARGING PROCESS.
– CHARGING TIME AND CHARGING VOLTAGE SHOULD NOT EXCEED THE STATED VALUES. OTHERWISE ELECTROLYTE WILL BE RELEASED THROUGH THE SAFETY VALVES.
– AVOID QUICK CHARGING IF POSSIBLE.



off load voltage Volt	charging level %	charging time 0.8 A	charging voltage
>12.7	100	—	max. 14.4 V
~12.5	75	4 h	
~12.2	50	7 h	
~12.0	25	11 h	
~11.8	0	14 h	

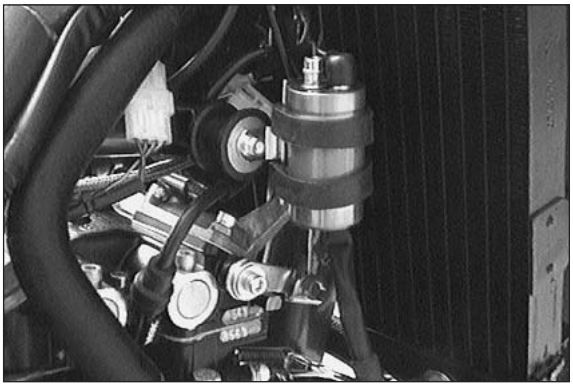
Charging voltage / checking the voltage regulator-rectifier

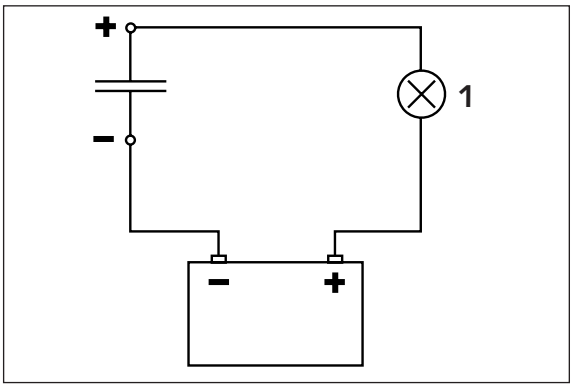
NOTE: The values stated below apply only to fully charged batteries (minimum charging level 90%).

– Start the engine and switch on the low beam.
– Connect a voltmeter to both battery connections.
– Accelerate the engine to a speed of 5000 rpm and read off the voltage.

Nominal value: 14.0 - 15.0 V

In the case of a significant deviation from the nominal value:
– Check the connector between the stator and the voltage regulator-rectifier and the connector between the voltage regulator-rectifier and the cable tree.
– Check the stator.
– Replace the voltage regulator-rectifier.



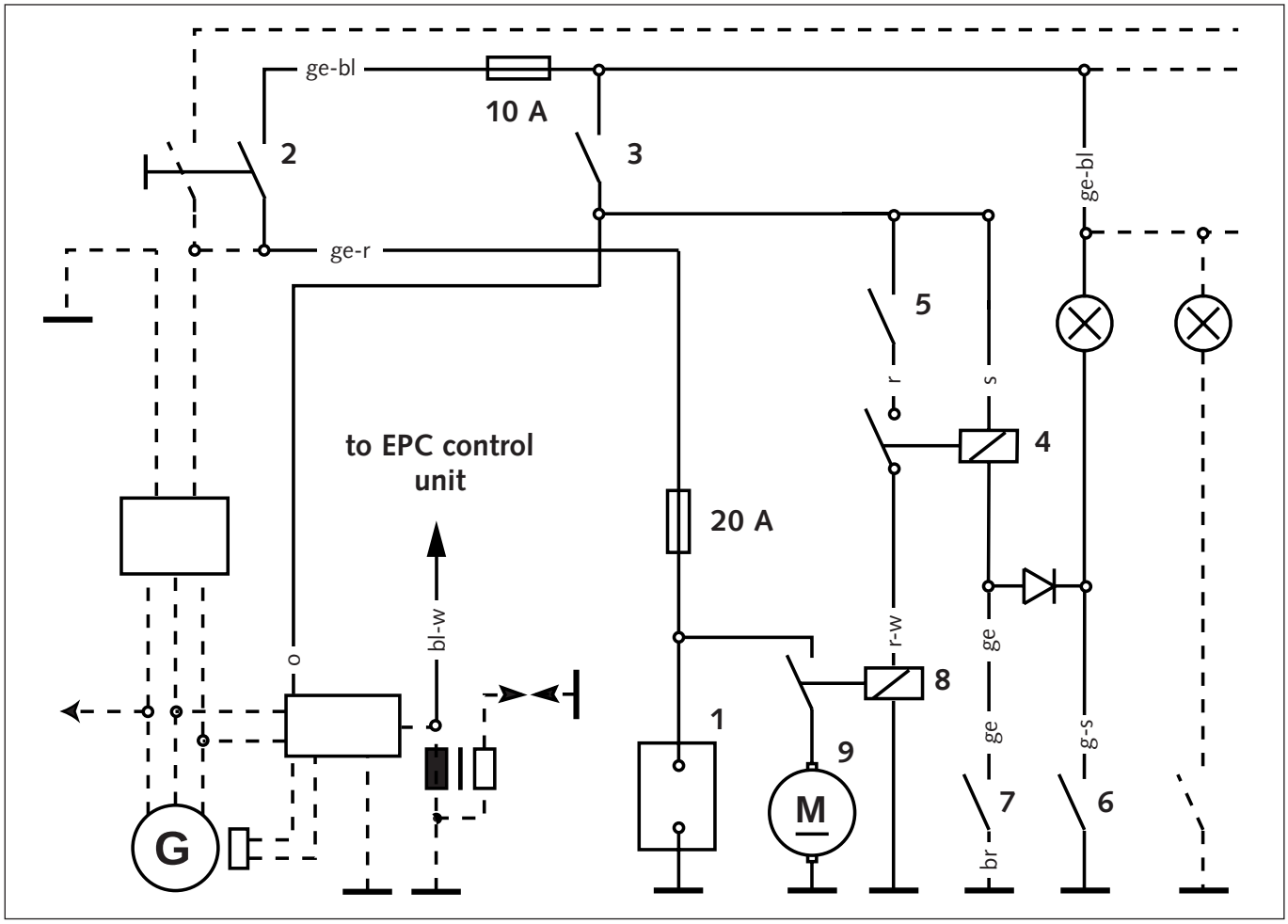


Checking the capacitor

– Pull main fuse out of the fuse holder.
– Discharge the capacitor 1 by bridging the two terminals with a screwdriver and remove.
– Connect the negative pole of a 12V battery with the negative terminal of the capacitor. The connection between the positive pole of the battery and the positive terminal of the capacitor (marked +) is made with a test lamp ❶.
– When the power circuit is closed, the test lamp must begin to light up. As capacitor charging increases, the brightness of the test lamp must decrease.
– The test lamp must go out after 0,5-2 seconds (depending on the lamp capacity).
– If the test lamp does not go out or does not light up at all, the capacitor is faulty.

! CAUTION !

DISCHARGE THE CAPACITOR BEFORE AND AFTER EACH TEST.
WHEN INSTALLING THE CAPACITOR, MAKE SURE THAT THE TERMINALS ARE CONNECTED IN ACCORDANCE WITH THEIR MARKINGS. CONNECT RED/WHITE CABLE TO + TERMINAL.



❶ Battery
❷ Ignition lock
❸ Emergency off switch
❹ Auxiliary relay
❺ Tip switch built in emergency off switch
❻ Neutral switch
❼ Clutch switch
❽ Starter relay
❾ Starter motor

bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Electric Starter system

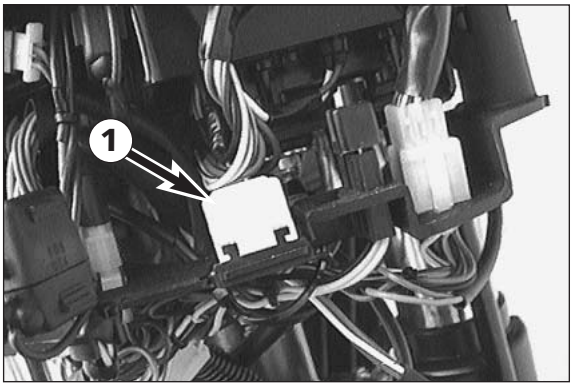
NOTE: The electric starter system is equipped with a safety mechanism. Starting is possible only in the following conditions:

- ignition lock in position ○ or ☼
- emergency OFF switch in position ○
- transmission set to idle, or clutch is pulled

Function of the electric starter system:
From the battery ❶, battery voltage is supplied via the ignition lock ❷ and the emergency OFF switch ❸ to the coil of the auxiliary starter relay ❹ and the tip switch ❺.
The contact of the auxiliary starter relay will enable starting only if at least one of the following conditions is met :

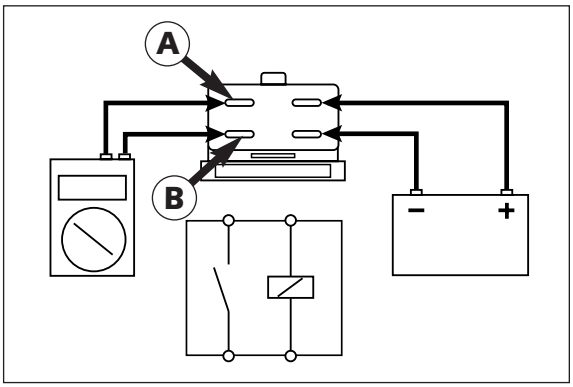
- transmission is set to idle (idle switch ❻ closed)
- clutch is pulled (clutch switch ❼ closed)

If the tip switch ❺ is actuated, the electric starter motor ❾ is turned on by way of the starter relay ❽.



Check start auxiliary relay

– Remove headlight mask and remove the start auxiliary relay.



– Connect the start auxiliary relay to a 12 V battery as shown in the illustration.
– Use an ohmmeter to measure the continuity between the terminals ❶ and ❷.

Reading 0 Ω relay intact
Reading ∞ Ω relay defect

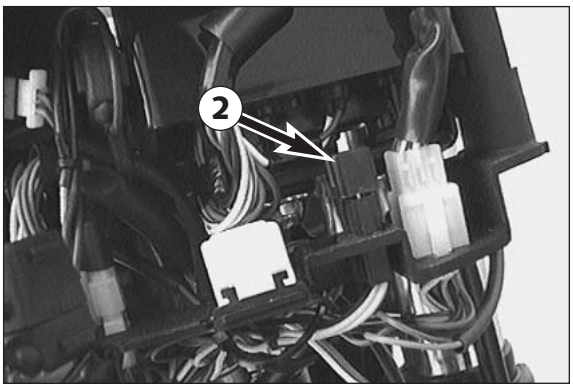
Checking the auxiliary starting relay for faultless operation

Preparation:
– Pull the auxiliary starter relay out of its holder.
– Connect an ohmmeter or a continuity tester to the cables of the auxiliary starting relay (colors: red and red/white).

– Perform the tests in the order indicated below. The auxiliary starting relay must respond in either of the following two cases:

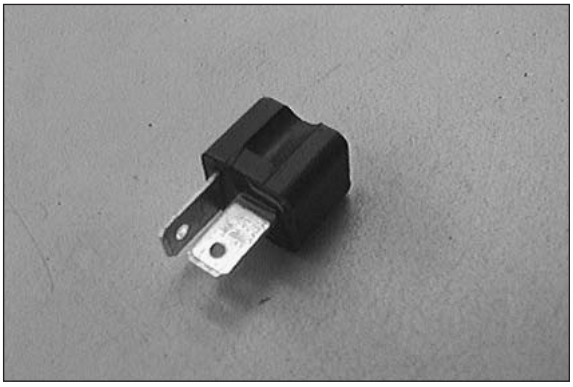
- Put in a gear and slowly pull the clutch lever. The auxiliary starting relay should respond when the lever is pulled approximately half of the overall distance. If this is not the case, please check the clutch switch. Keep an eye on the neutral control lamp while performing this test. The neutral control lamp should not light up. If it lights up, check the diode.
- Switch the transmission to neutral without previously pulling the clutch. The auxiliary starting relay should now connect and be tripped as soon as a gear is put in. If this is not the case, please check the diode and the neutral switch.

NOTE: Connecting of the auxiliary starting relay is always accompanied by a faint clicking sound. The ohmmeter or continuity tester indicates continuity while the auxiliary starting relay is on.



Checking the diode

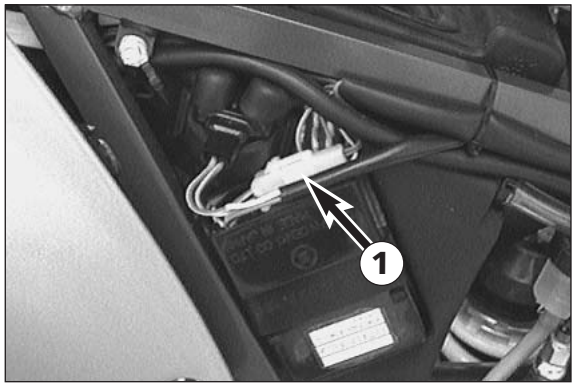
NOTE: Diodes conduct current only in the direction indicated by the arrow, preventing the conduction of current in the opposite direction.



Two different kinds of diode defects can be distinguished:
– The diode conducts no current at all.
– The diode conducts current in both directions.
Diode defects can lead to different kinds of trouble, depending on the type of defect.

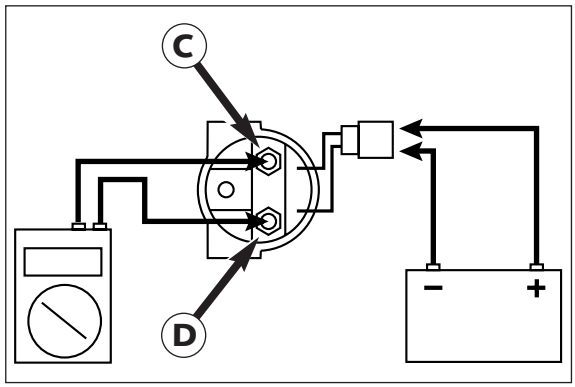
NOTE: The diode is located in a 2-pole connector.

Checking for faultless operation:
– Remove the headlight mask.
– Pull the diode ❷ out of the connector.
– Connect an appropriate ohmmeter to the diode and check for continuity.
– Connect the ohmmeter in the opposite direction and check if the diode prevents current conduction in the opposite direction.



Checking the starter relay

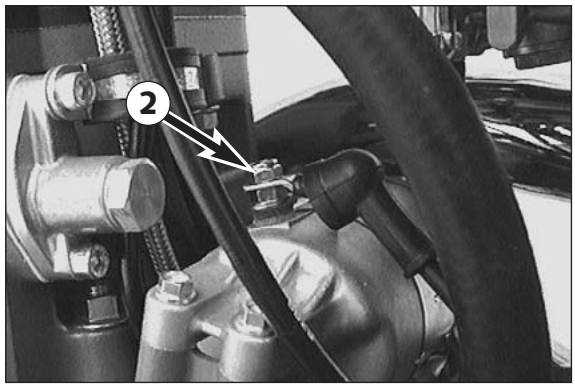
– Remove the seat and the right side cover and disconnect the combination connector ❶ of the starter relay.
– Disconnect negative terminal at battery and the two cables at the starter relay.



– Connect the starter relay to a 12 V battery as indicated in the diagram.
– Check continuity between terminals ❻ and ❹ using an ohmmeter.

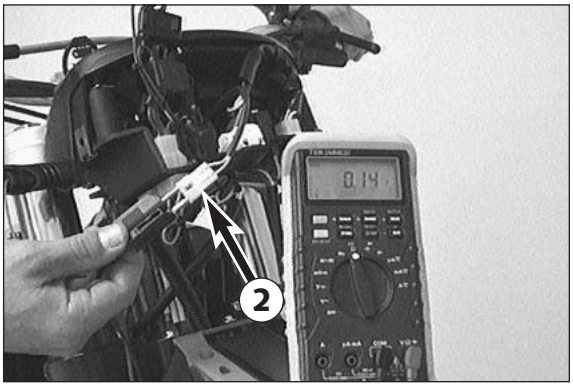
Reading: 0 Ω OK
Reading: ∞ Ω defect

NOTE: The response of the starter relay is accompanied by a faint clicking sound.



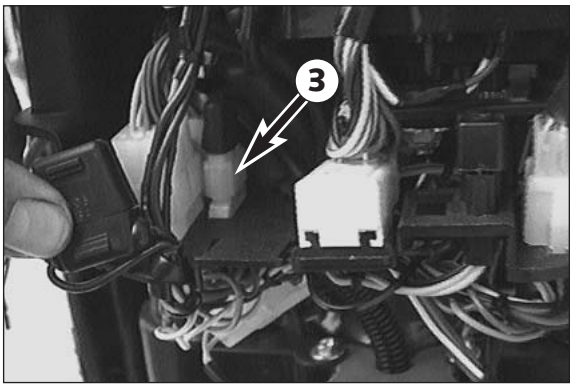
Checking the electric starter motor

– Switch off the ignition.
– Disconnect the negative pole of the battery and remove the electric starter motor.
– Connect the negative pole of a 12 V battery to the housing of the E starter motor and briefly connect the positive pole of the battery to connection ❷ of the electric starter motor (use thick cables).
– The starter must turn as soon as the circuit is closed.
– If this is not the case, replace the starter motor.



Checking the clutch switch

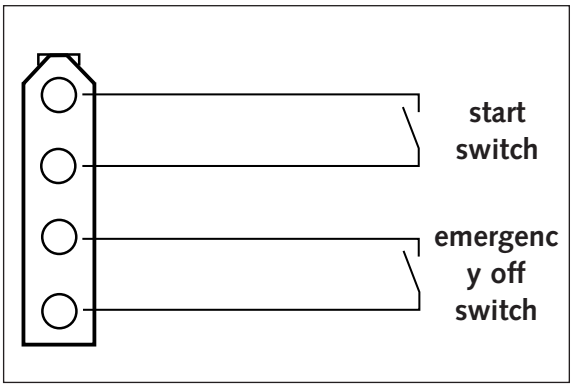
– Disconnect the clutch switch from the cable tree.
– Connect the ohmmeter to the 2-pole connector ❷ (cable colors: yellow/yellow) of the clutch switch and slowly pull the clutch lever.
– The switch must connect when the lever is pulled approximately half of the overall distance.



Checking the tip switch and the emergency OFF switch

– Remove the headlight mask.
– Disconnect the 4-pole connector ❸ of the tip switch/emergency OFF switch from the cable tree.
– Use an ohmmeter and test both switches according to the table below (please refer to the sketch for the configuration of the connector).
– Then check all lines for ground contact.

Circuit	Position	Condition
Emergency off switch	○	duct
Emergency off switch	⊗	no duct
Tip switch	operated	duct
Tip switch	not operated	no duct

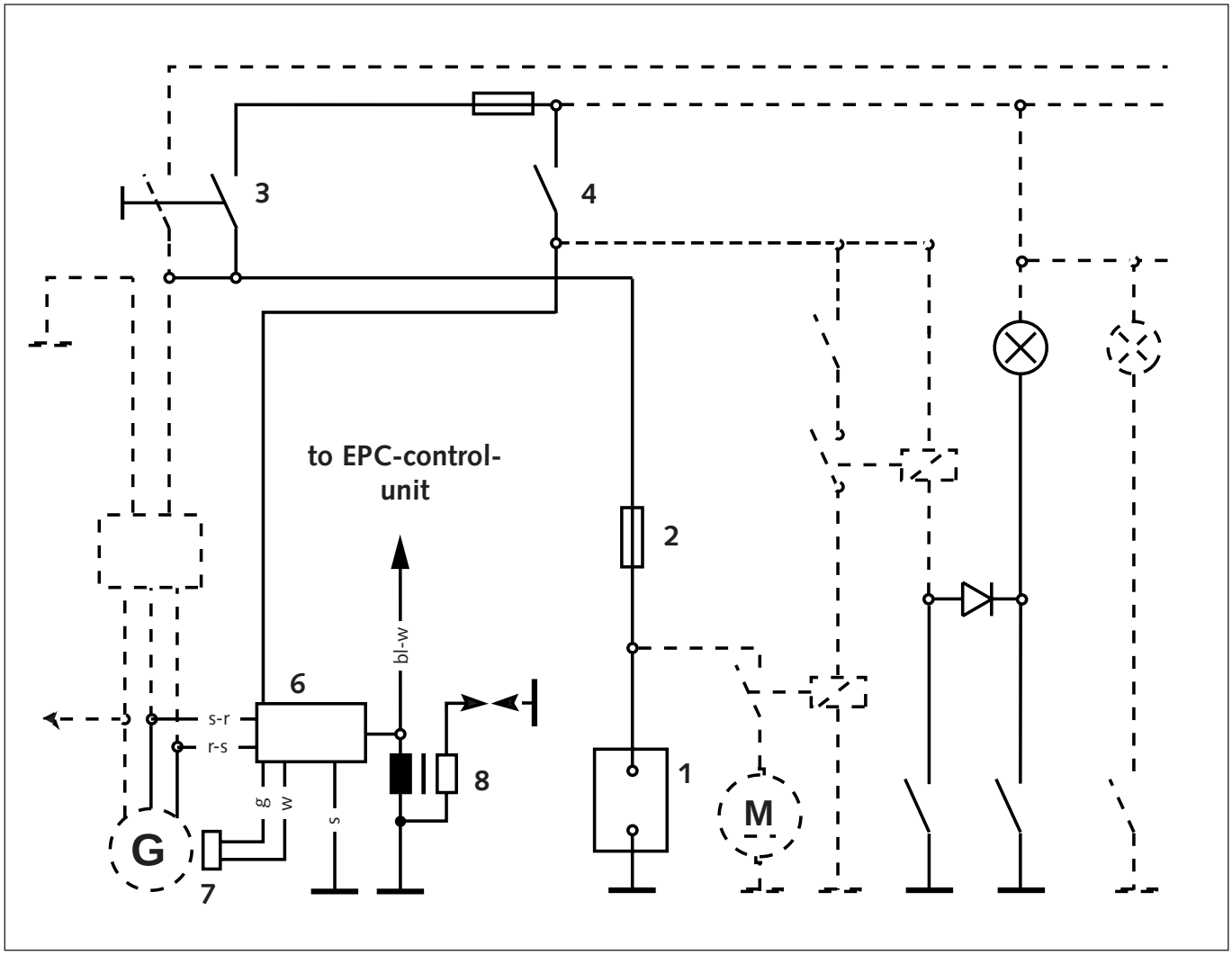


Trouble shooting in the electric starter system

When the starter motor fails to turn upon operation of the tip switch, perform the following checks first:

- Is the ignition lock in position ○ or ☼ ?
- Is the emergency OFF switch position ○ ?
- Is the neutral control lamp on while the ignition is on?
- Can the engine be started with the clutch pulled?
- Is the battery charged?
- Has the main fuse blown?
- Has the fuse for startsystem and ignition blown?
- Fuse for starter system and ignition has melted?

- Check the auxiliary starting relay
- Check the starter relay
- Check the electric starter motor



❶ Battery
❷ Main fuse (20 A)
❸ Ignition lock
❹ Emergency-off switch
❺ Auxiliary relay
❻ CDI
❼ Pulse generator
❽ Ignition coil

bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Ignition system

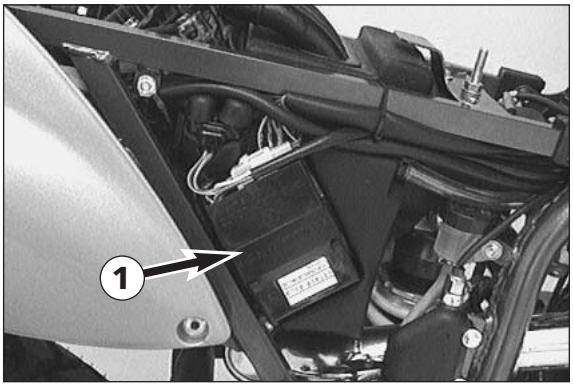
From the battery ❶, battery voltage is delivered via the main fuse ❷, through the activated ignition lock ❸ and the activated emergency OFF switch ❹ to the CDI unit ❻.

During each revolution of the crankshaft, the pulse generator ❼ supplies a signal to the CDI unit ❻. In the CDI unit, this signal is processed so as to calculate the ignition point.
This ignition pulse is passed on to the ignition coil ❽ (the ignition spark is produced).

The ignition system is a digital high voltage capacitor ignition that receives its power supply from the battery. Therefore, it works only with an intact battery.
When the battery is discharged below the threshold level, the voltage can, due to the starting process, drop below the minimum supply voltage required by the ignition. In this case, turn off the light, and use the kickstarter.

! CAUTION !

SAFE AND FAULTLESS OPERATION OF THE DIGITAL IGNITION REQUIRES SPARK PLUG CONNECTORS AND SPARK PLUGS WITH INTEGRATED RESISTANCE TYPE SUPPRESSORS.

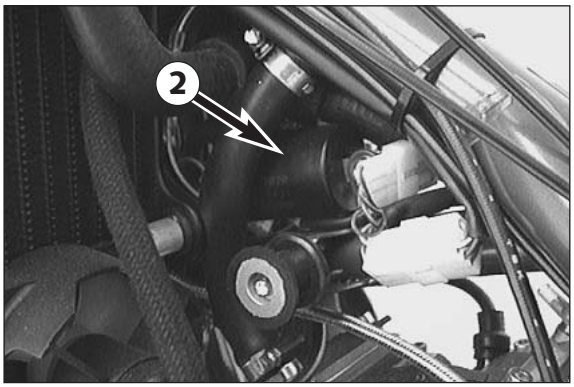


CDI unit

Check the cables and plug and socket connections of the CDI unit ❶.
The CDI unit function can only be checked on an ignition test bench.

! CAUTION !

NEVER USE A COMMERCIAL MEASURING DEVICE TO CHECK THE CDI UNIT. COMMERCIAL MEASURING DEVICES CAN DESTROY HIGHLY SENSITIVE ELECTRONIC COMPONENTS.



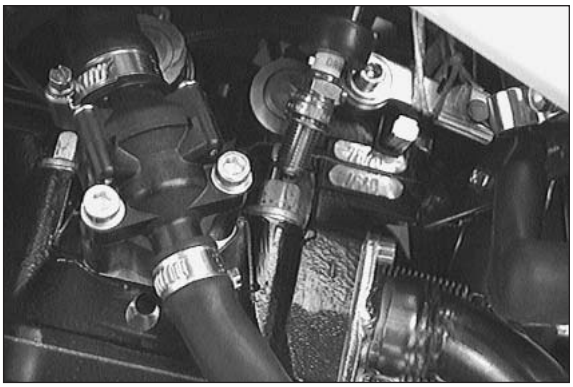
Checking the ignition coil

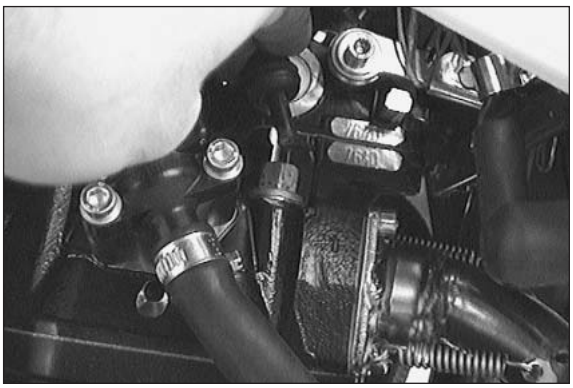
– Disconnect all cables and remove the spark plug connector.
– Use an ohmmeter to measure the following values.

NOTE: The indicated setpoint values correspond to a temperature of 20° C.

Replace the ignition coil if the measured values deviate significantly from the setpoint values.

MEASUREMENT	COLOURS	RESISTANCE
primary coil	blue/white – ground	0,425 – 0,575 Ω
secondary coil	blue/white – ignition wire	10,80 – 16,20 kΩ





Trouble shooting in the ignition system

Before checking the ignition system check:

- if the ignition lock is in position ◯ or ☼
- if the emergency off switch is in position ◯
- if the neutral control lamp is on
- if the motorcycle can be started with the clutch pulled
- if the battery is charged
- the main fuse

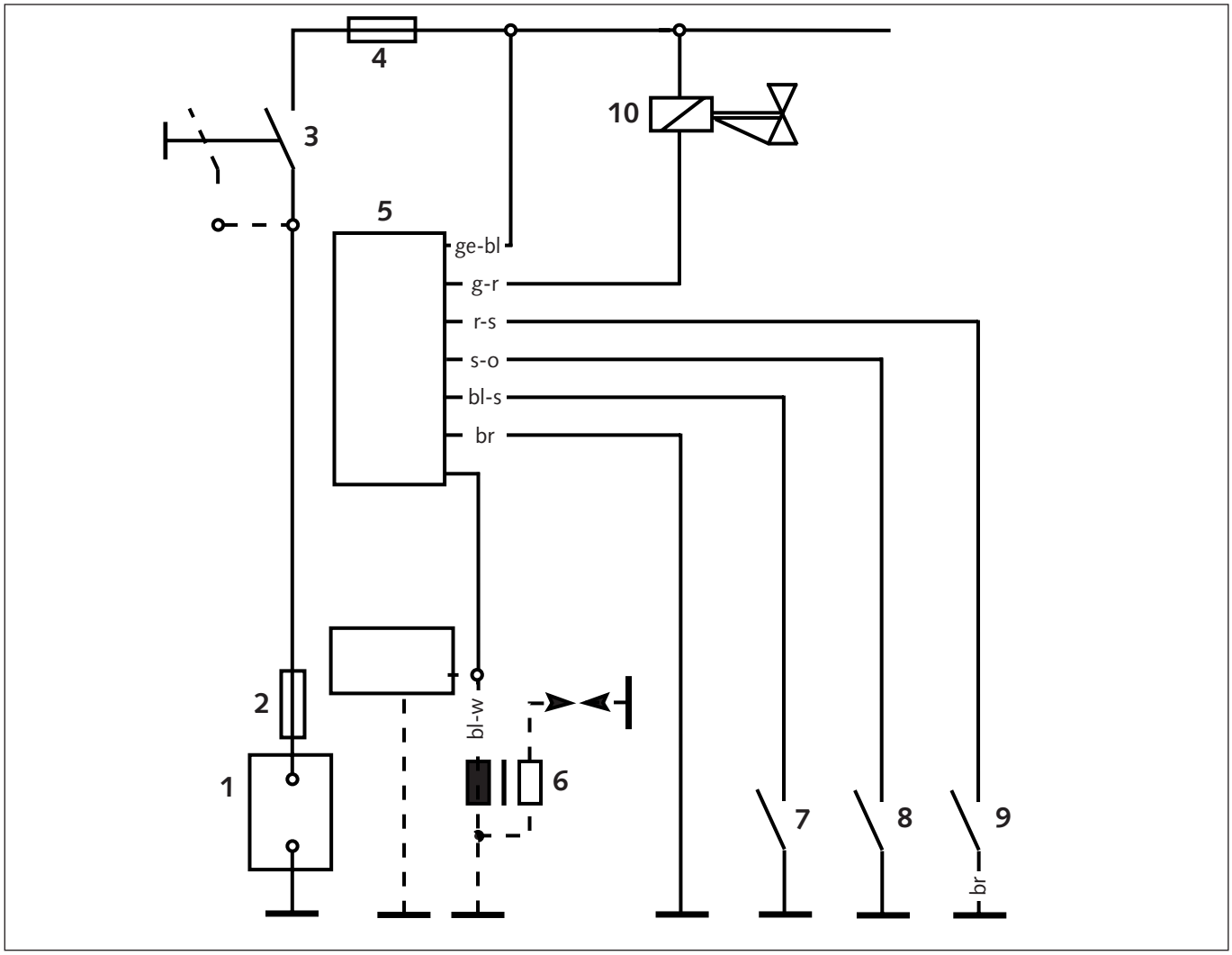
Check if an ignition spark is produced when the starter is operated. Proceed as follows:
– Pull off the spark plug connector.
– Disconnect the spark plug connector from the ignition cable.
– Hold the free end of the ignition cable approximately 5 mm from ground.
– A strong spark should be visible when the electric starter is now operated. If the battery level is low, turn off the light, and use the kick starter.

– If a spark is visible, replace the spark plug connector.
– Twist out the spark plug and insert it into the spark plug connector.
– Connect the spark plug to ground. A strong spark should be visible at the electrode when the electric starter is now operated. If this is not the case, the spark plug connector or the spark plug is defect.

– If no spark is produced during the first test, perform the following checks:
- Does the ignitionís power supply line (orange) carry battery voltage?
- If this is not the case, check the ignition lock, the emergency OFF switch and, if applicable, the side stand relay as well as the corresponding parts of the cable tree.

– If the ignition is sufficiently supplied with power and no spark is produced, check:
- ground connection of CDI unit and ignition coil
- the cable between CDI unit and ignition coil
- pulse generator
- stator
- ignition coil

NOTE: The CDI unit can't be tested with simple devices. It can only be replaced. It can only be tested on an ignition test bench.



❶ Battery (12V / 8 Ah)
❷ Main fuse (20 A)
❸ Ignition lock
❹ Fuse for ignition and start system
❺ EPC-control unit
❻ Ignition lock
❼ Contact screw 2nd gear
❽ Contact screw 3rd gear
❾ Micro switch
❿ Solenoid valve

bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

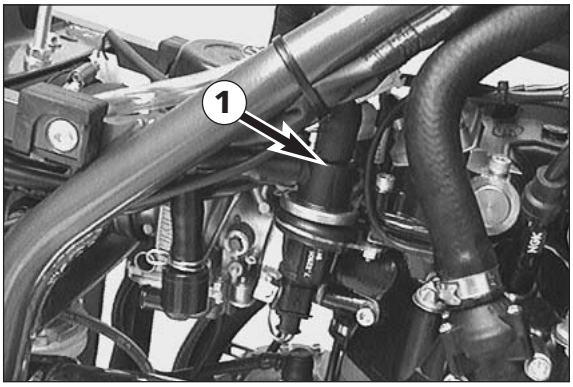
EPC system

Function:
From the battery ❶, battery voltage is supplied to the EPC controller ❺ via the main fuse ❷, the activated ignition lock ❸, and the fuse ❹.

The blue/white cable leading to the ignition coil ❻ provides an r.p.m. signal to the EPC controller ❺. Using this signal, the EPC controller will then calculate the current speed.

When the throttle grip is opened all the way (microswitch ❾ closes) at a certain speed, the EPC controller will activate the solenoid valve ❿, provided that either the 2nd or the 3rd gear has been engaged.
By opening the solenoid valve ❿, a dosed amount of fresh air will get to the upper end of the slide membranes of the carburetor. This causes the throttle slide to open slowly. Thereby, the operating noise of the motorbike is reduced.

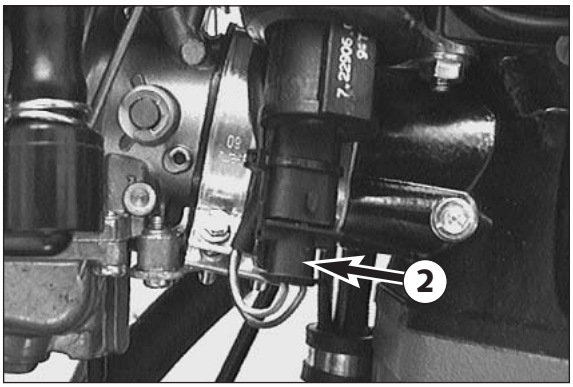
NOTE: If malfunctions develop in the EPC system, the EPC controller can be unplugged. This will not cause damage to any other parts of the motorcycle.



Dismount / renew solenoid valve for EPC

– Remove seat, side covers, and tank with spoilers.
– Unplug the solenoid-valve connector.
– Disconnect the two hoses, and pull solenoid valve ❶ upwards and out of the holder.

– Insert new solenoid valve into the holder.
– Connect the two hoses, and plug in connector.

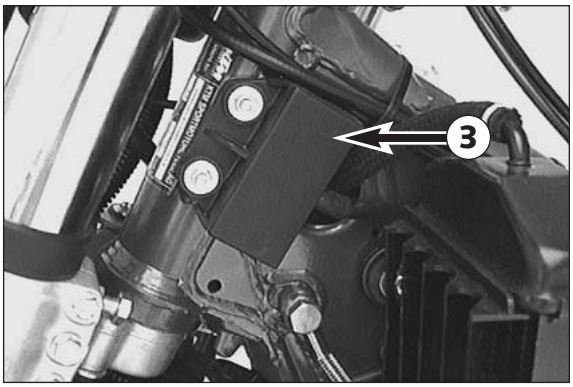


Check of solenoid valve for EPC

NOTE: When you turn on the ignition, the solenoid valve must open for approx. 1 second. During this process, you can hear a slight clicking noise.

– For checking, disconnect the 2-pole connector ❷ at the solenoid valve.
– Now, connect a 12V battery to both terminals of the solenoid valve.
– When closing the power circuit, a clicking noise must be audible in the solenoid valve (the membrane opens).

– If you cannot hear any clicking noise, you have to replace the solenoid valve.



Controller of the EPC system

NOTE: The controller ❸ cannot be checked by means of standard measuring methods.

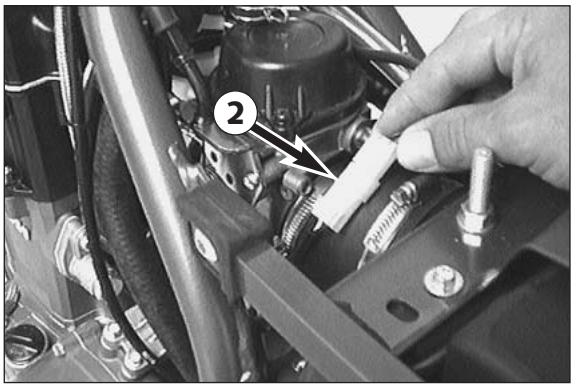
If malfunctions develop in the EPC system, start by checking:

solenoid valve
microswitch
plug-and-socket connection ❹ and cables
contact screws at engine
hose from magnetic valve to carburetor

– If the above components are okay, the controller has to be replaced.

! CAUTION !

BEFORE CONNECTING THE CONTROLLER, IT IS ABSOLUTELY NECESSARY THAT YOU TURN OFF THE IGNITION. OTHERWISE, MALFUNCTIONS IN THE ELECTRONIC SYSTEM MAY DEVELOP.



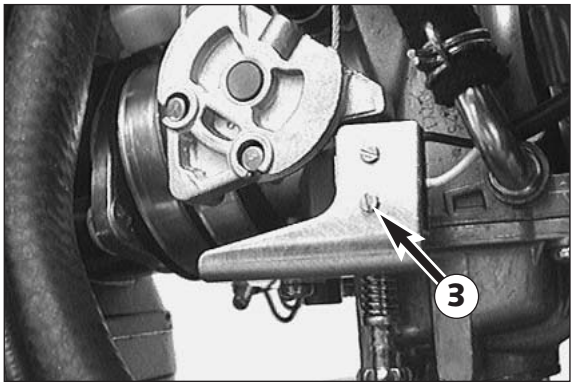
Check of EPC system microswitch

NOTE: The microswitch is arranged on the left side of the constant-depression carburetor in the area of the throttle valve. If the throttle valve is opened all the way, the microswitch will close the power circuit.

– Remove seat and tank.
– Disconnect the 2-pole plug ❷ of the microswitch.
– Connect an ohmmeter to both terminals of the microswitch.

– With the throttle valve closed, the ohmmeter must indicate zero continuity.

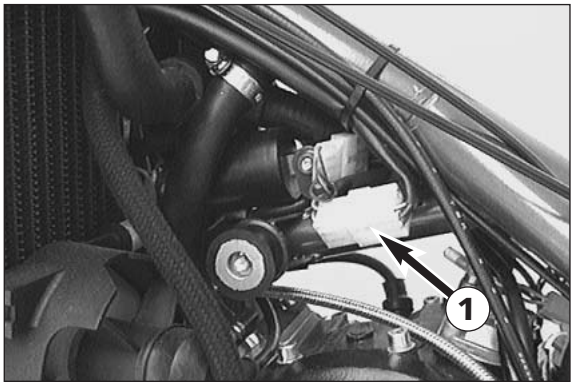
– Open throttle valve all the way by twisting the throttle grip as far as possible. In this case, you will hear a slight clicking noise of the microswitch. In this position, the ohmmeter must indicate conductive continuity.

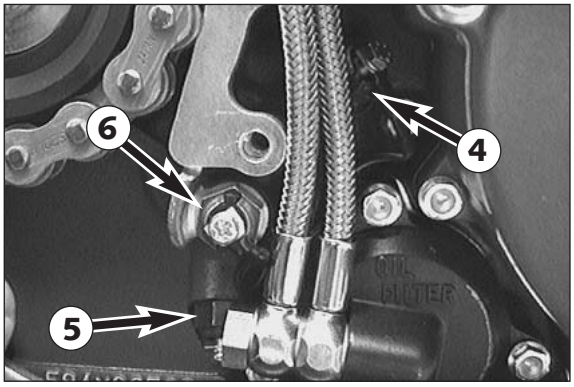


Replacing the EPC system microswitch

– Remove seat and tank.
– Disconnect the microswitch plug.
– Remove the 2 screws ❸, and take off the microswitch.

– Apply Loctite 243 to the threads of the two screws.
– Position the new microswitch, and fasten it with the two screws.
– Connect the plug, mount tank and seat.





Check of idle switch / contact screws

NOTE: The contact screw having the cable colors black/blue closes the contact, when the 2nd gear is engaged.

The contact screw having the cable colors black/orange closes the contact, when the 3rd gear is engaged.

The contact screw having the cable colors black/green closes the contact, when the idle gear is engaged.

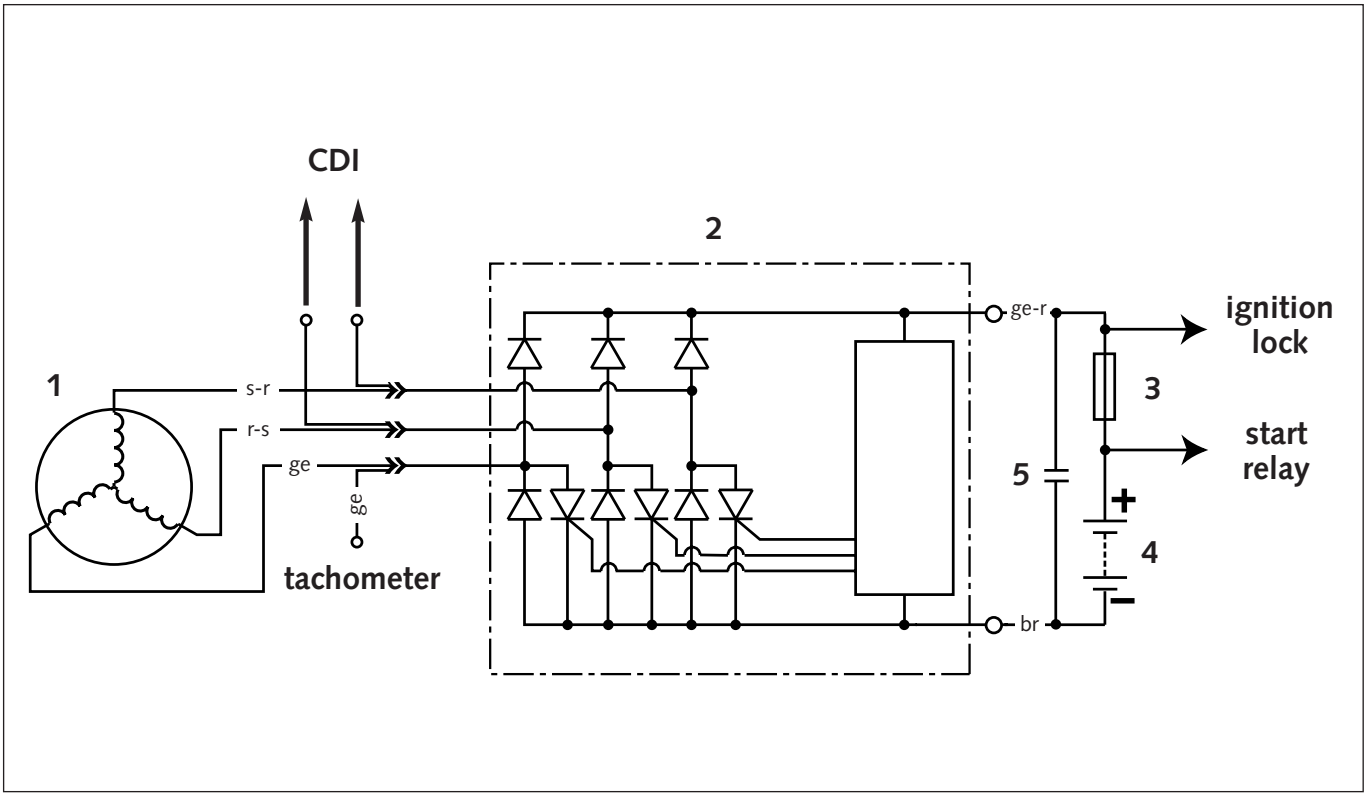
– Before you start with the check, disconnect the plug-and-socket connection ❶ to the EPC controller.
– For checking of the contact screws, connect a test lamp to the positive terminal of the battery.

– Touch the connection of the central contact screw ❻ with the test probe. With the transmission set to idle, the test lamp has to be lit.
– When a gear is engaged, the test lamp must cease to be lit.

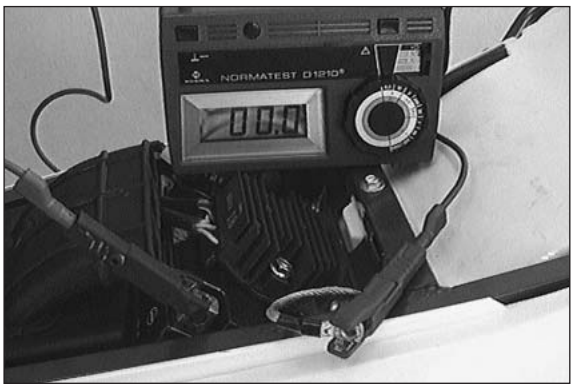
– Shift to 2nd gear, and touch the connection of the lower contact screw ❺ with the test probe. The test lamp must light up.
– With the transmission set to idle, the test lamp must not be lit.

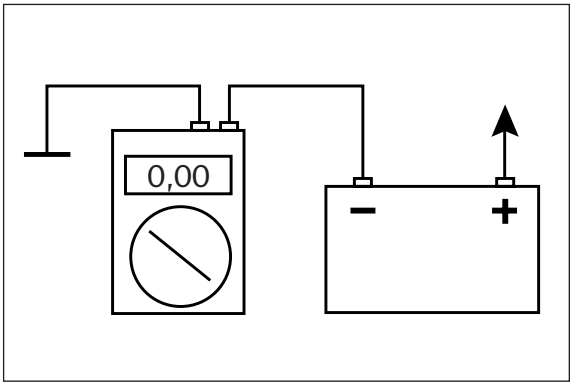
– Shift to 3rd gear, and touch the connection of the upper contact screw ❹ with the test probe. The test lamp must light up.
– With the transmission set to idle, the test lamp must not be lit.

ELECTRICAL – DUKE-E



bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white





Charging system

❶ Generator
❷ Regulator-rectifier
❸ Main fuse (20 A)
❹ Battery (12V / 8 Ah)
❺ Capacitor

Leakage inspection

The drop test must be performed before checking the voltage regulator/rectifier

– Turn off the ignition and disconnect the ground wire from the battery.
– Insert an amperemeter between the ground wire and the negative pole of the battery.

Setpoint value: max. 1 mA

– Check for power consumers, should the measured value exceed the indicated maximum value.
Example:
- defective voltage regulator-rectifier
- leak currents in the socket connectors, in the ignition lock or in the starter relay.

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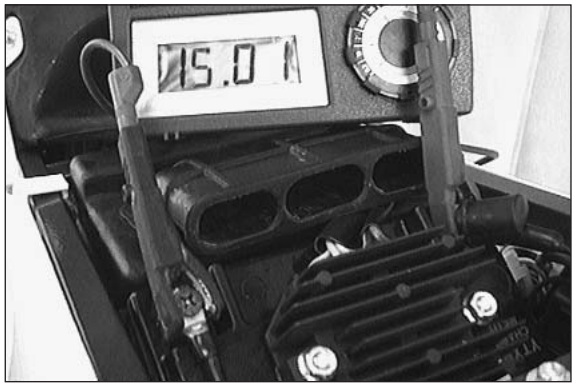
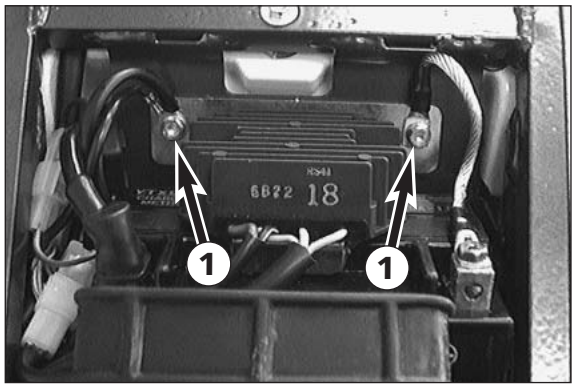
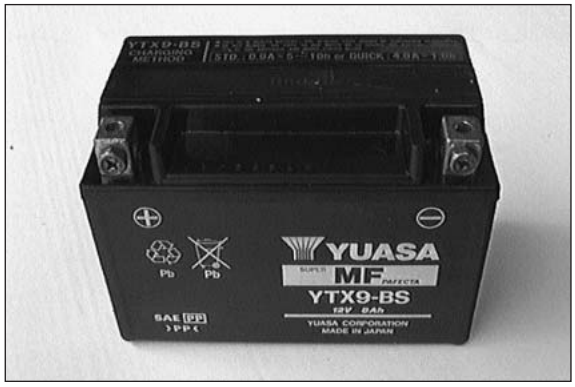
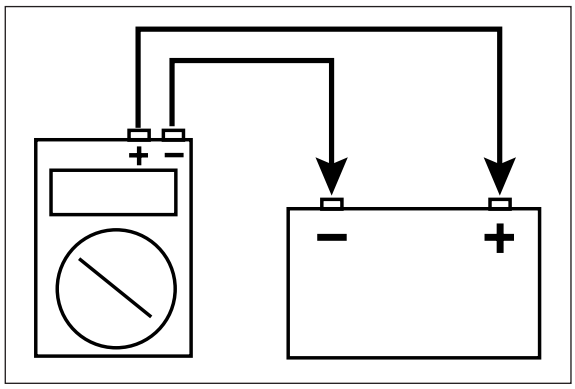








Charging voltage / checking the voltage regulator-rectifier

NOTE: The values stated below apply only to fully charged batteries (minimum charging level 90 %).

- Start the engine and switch on the low beam.
- Connect a voltmeter to both battery connections.
- Accelerate the engine to a speed of 5000 rpm and read off the voltage.

Nominal value: 14.0 - 15.0 V

In the case of a significant deviation from the nominal value:
- Check the connector between the stator and the voltage regulator-rectifier and the connector between the voltage regulator-rectifier and the cable tree.
- Check the stator.
- Replace the voltage regulator-rectifier.

Removing the battery

- Remove the seat.
- Disconnect first the negative and then the positive pole of the battery.
- Remove the bolts ❶ and swing the battery support with the voltage regulator-rectifier sideways.
- Remove the battery.
- When reinstalling the battery, connect the negative pole last.

! CAUTION !

FOLLOW THE INSTRUCTIONS OF THE MANUFACTURER WHEN FILLING A NEW BATTERY. THE RELEVANT SAFETY INSTRUCTIONS ARE ALSO CONTAINED IN THE USER MANUAL SUPPLIED WITH THE BATTERY.

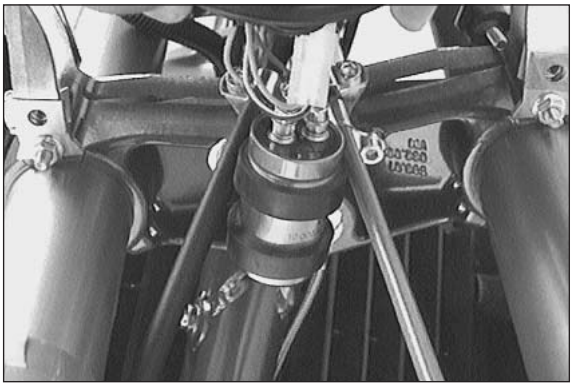
Charging the battery

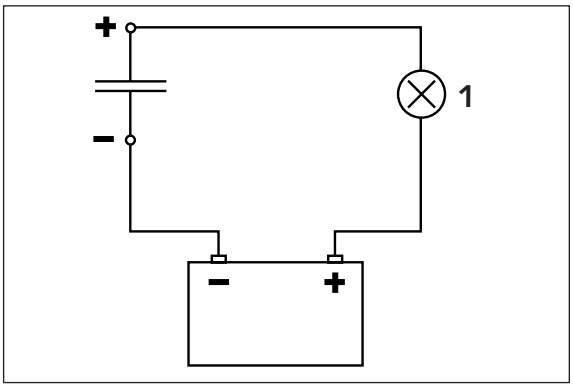
- Remove the battery and check the charging level. Use a voltmeter to measure the voltage between the battery poles (off-load voltage).
- Accurate results can only be obtained if the battery has neither been charged nor discharged during a period of 30 minutes preceding the measuring.
- If the battery is empty, it can be recharged for a maximum period of 10 hours at 0.8 A and a maximum of 14.4 V.

! CAUTION !

- TO AVOID DAMAGE, DO NOT REMOVE THE LOCKING BAR
- ALWAYS CONNECT THE BATTERY TO THE CHARGING UNIT BEFORE TURNING THE CHARGING UNIT ON.
- WHEN RECHARGING THE BATTERY IN CLOSED ROOMS ENSURE SUFFICIENT VENTILATION. EXPLOSIVE GASES ARE RELEASED DURING THE BATTERY CHARGING PROCESS.
- CHARGING TIME AND CHARGING VOLTAGE SHOULD NOT EXCEED THE STATED VALUES. OTHERWISE ELECTROLYTE WILL BE RELEASED THROUGH THE SAFETY VALVES.
- AVOID QUICK CHARGING IF POSSIBLE.

off load voltage Volt	charging level %	charging time 0.8 A	charging voltage
>12.7	100	—	max. 14.4 V
~12.5	75	4 h	
~12.2	50	7 h	
~12.0	25	11 h	
~11.8	0	14 h	



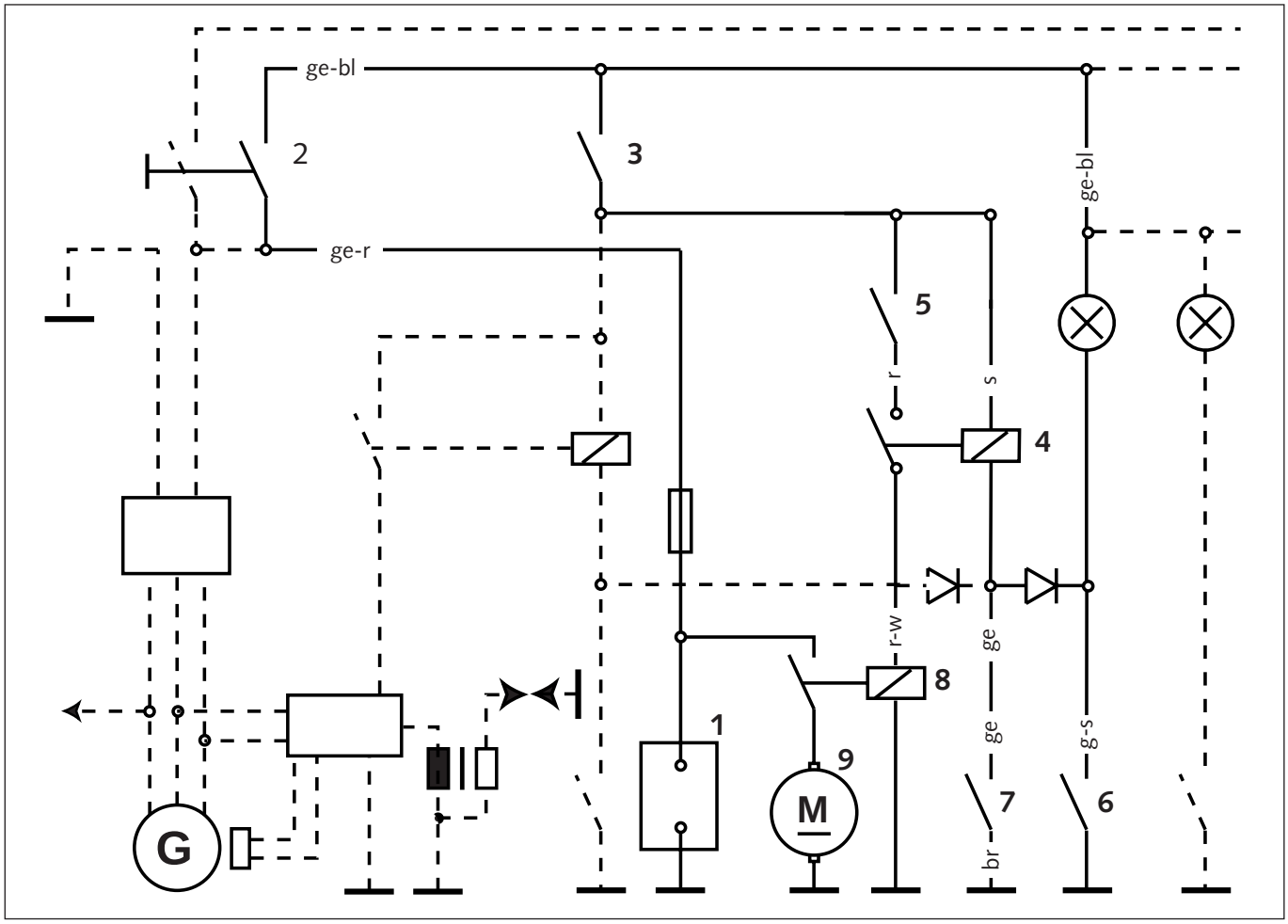


Checking the capacitor

– Pull main fuse out of the fuse holder.
– Discharge the capacitor by bridging the two terminals with a screwdriver and remove.
– Connect the negative pole of a 12V battery with the negative terminal of the capacitor. The connection between the positive pole of the battery and the positive terminal of the capacitor (marked +) is made with a test lamp ❶.
– When the power circuit is closed, the test lamp must begin to light up. As capacitor charging increases, the brightness of the test lamp must decrease.
– The test lamp must go out after 0,5-2 seconds (depending on the lamp capacity).
– If the test lamp does not go out or does not light up at all, the capacitor is faulty.

! CAUTION !

DISCHARGE THE CAPACITOR BEFORE AND AFTER EACH TEST.
WHEN INSTALLING THE CAPACITOR, MAKE SURE THAT THE TERMINALS ARE CONNECTED IN ACCORDANCE WITH THEIR MARKINGS. CONNECT RED/WHITE CABLE TO + TERMINAL.



❶ Battery
❷ Ignition lock
❸ Emergency off switch
❹ Auxiliary relay
❺ Tip switch built in emergency off switch
❻ Neutral switch
❼ Clutch switch
❽ Start relay
❾ Starter motor

bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Electric starter system

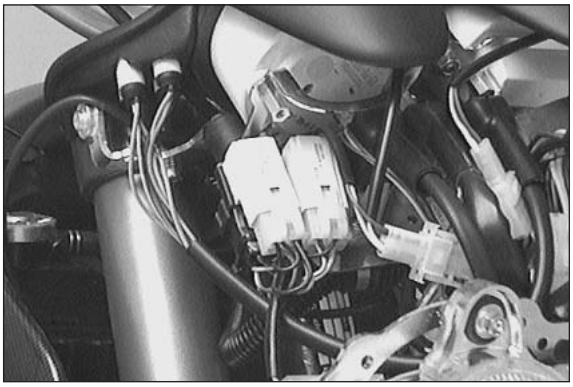
The system is equipped with a safety mechanism. Electric starting is only possible when

- the ignition lock is in the position ◯
- the emergency OFF switch is in the position ◯
- the transmission is switched to neutral or the clutch is pulled.

Function of the electric starter system:
From the battery ❶ the battery voltage is transmitted via the ignition lock ❷ and the emergency OFF switch ❸ to the coil of the auxiliary starting relay ❹ and to the tip switch ❺.
The contact of the auxiliary starting relay prevents starting unless at least one of the following requirements is met :

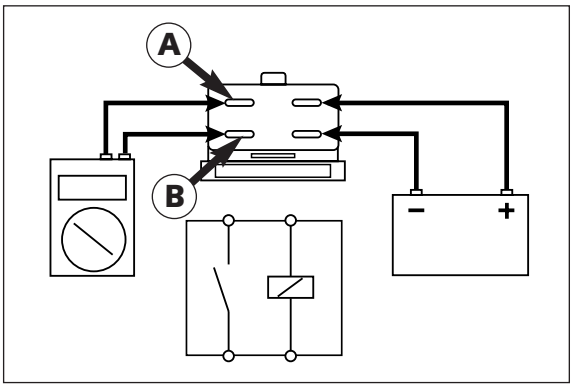
- The transmission must be switched to neutral (neutral switch ❻ is closed).
- The clutch must be pulled (clutch switch ❼ must be closed).

When the tip switch ❺ is operated, the starter motor ❾ is switched on via the starter relay ❽.



Check start auxiliary relay

– Remove headlight mask and remove the start auxiliary relay (cable colours red and red-white).



– Connect the start auxiliary relay to a 12 V battery as shown in the illustration.
– Use an ohmmeter to measure the continuity between the terminals Ⓐ and Ⓑ.

Reading 0 Ω relay intact
Reading ∞ Ω relay defect

Checking the auxiliary starting relay for faultless operation

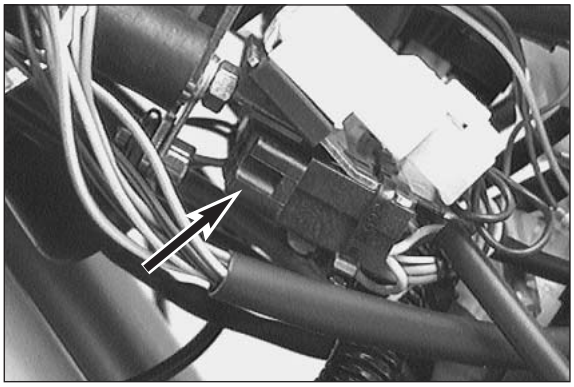
Preparation:

– Connect an ohmmeter or a continuity tester to the cables of the auxiliary starting relay (colors: red and red/white).

– Perform the tests in the order indicated below. The auxiliary starting relay must respond in either of the following two cases:

- Put in a gear and slowly pull the clutch lever. The auxiliary starting relay should respond when the lever is pulled approximately half of the overall distance. If this is not the case, please check the clutch switch. Keep an eye on the neutral control lamp while performing this test. The neutral control lamp should not light up. If it lights up, check the diode with the cable colors yellow and green/black.
- Switch the transmission to neutral without previously pulling the clutch. The auxiliary starting relay should now connect and be tripped as soon as a gear is put in. If this is not the case, please check the diode in the connector with the cable colors yellow and green/black and the neutral switch.

NOTE: Connecting of the auxiliary starting relay is always accompanied by a faint clicking sound. The ohmmeter or continuity tester indicates continuity while the auxiliary starting relay is on.

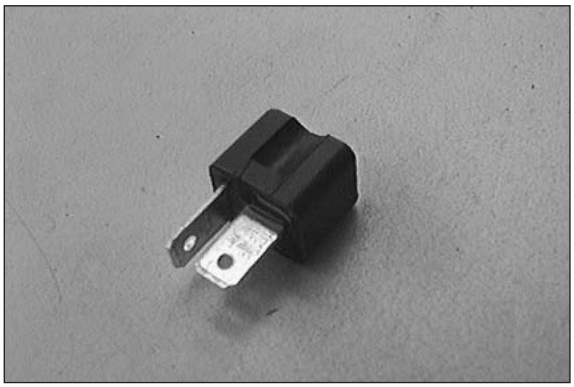


Checking the diodes

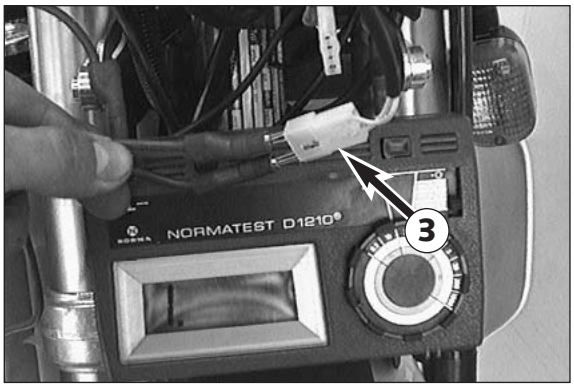
NOTE: Diodes conduct current only in the direction indicated by the arrow, preventing the conduction of current in the opposite direction.

Two different kinds of diode defects can be distinguished:
– The diode conducts no current at all.
– The diode conducts current in both directions.
Diode defects can lead to different kinds of trouble, depending on the type of defect.

NOTE: Both diodes are the same type and require the same testing procedure. They are each located in a 2-pole connector and can be identified by the color of the cables leading up to and away from the respective connector.

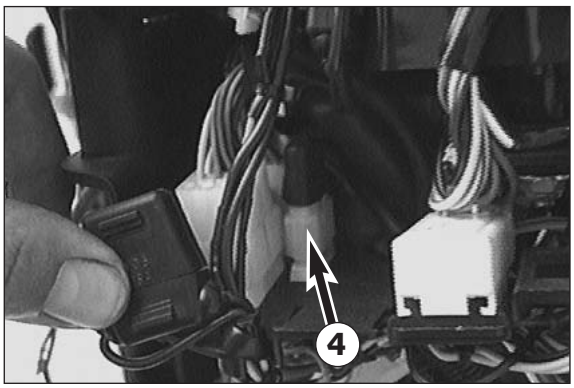


Checking the diodes for faultless operation:
– Remove the headlight mask.
– Pull the diode to be tested out of the connector.
– Connect an appropriate ohmmeter to the diode and check for continuity.
– Connect the ohmmeter in the opposite direction and check if the diode prevents current conduction in the opposite direction.



Checking the clutch switch

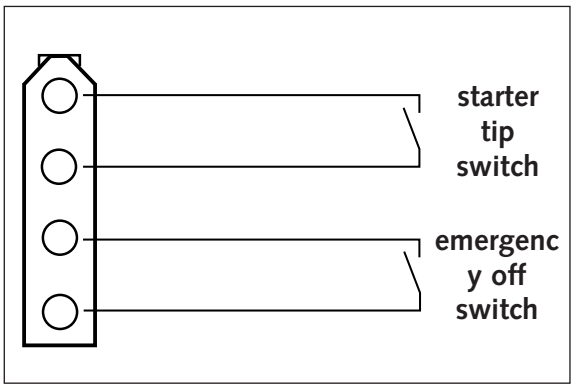
– Disconnect the clutch switch from the cable tree.
– Connect the ohmmeter to the 2-pole connector ❸ (cable colors: yellow/yellow) of the clutch switch and slowly pull the clutch lever.
– The switch must connect when the lever is pulled approximately half of the overall distance.

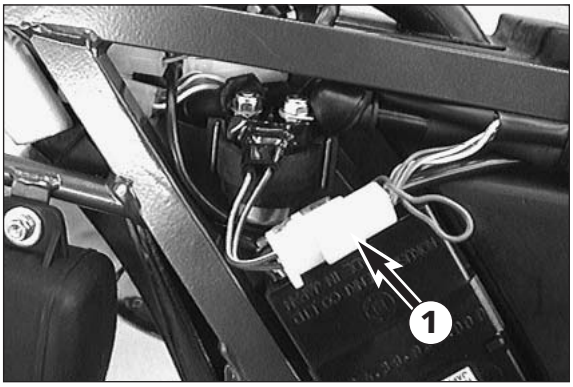


Checking the tip switch and the emergency off switch

– Remove the headlight mask.
– Disconnect the 4-pole connector ❹ of the tip switch/emergency OFF switch from the cable tree.
– Use an ohmmeter and test both switches according to the table below (please refer to the sketch for the configuration of the connector).
– Then check all lines for ground contact.

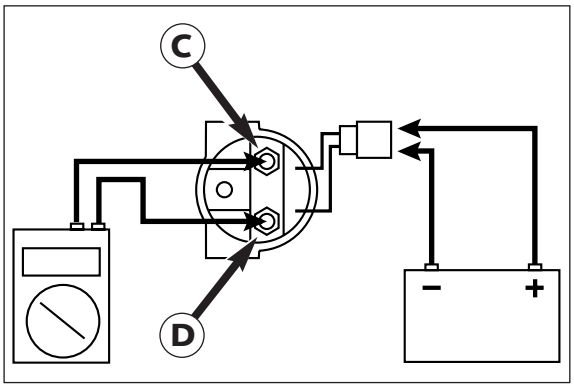
Circuit	Position	Condition
Emergency off switch	○	duct
Emergency off switch	⊗	no duct
Tip switch	operated	duct
Tip switch	not operated	no duct





Checking the starter relay

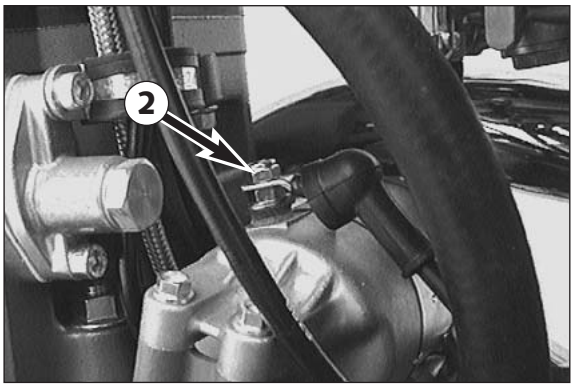
– Remove the seat and the right side cover and disconnect the combination connector ❶ of the starter relay.
– Disconnect negative terminal at battery and the two cables at the starter relay.



– Connect the starter relay to a 12 V battery as indicated in the diagram.
– Check continuity between terminals ❻ and ❹ using an ohmmeter.

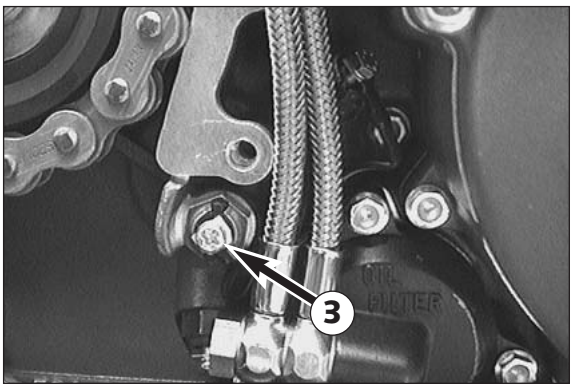
Reading: 0 Ω OK
Reading: ∞ Ω defect

NOTE: The response of the starter relay is accompanied by a faint clicking sound.



Checking the electric starter motor

– Switch off the ignition.
– Disconnect the negative pole of the battery and remove the electric starter motor.
– Connect the negative pole of a 12 V battery to the housing of the E starter motor and briefly connect the positive pole of the battery to connection ❷ of the electric starter motor (use thick cables).
– The starter must turn as soon as the circuit is closed.
– If this is not the case, replace the starter.



Checking the neutral switch

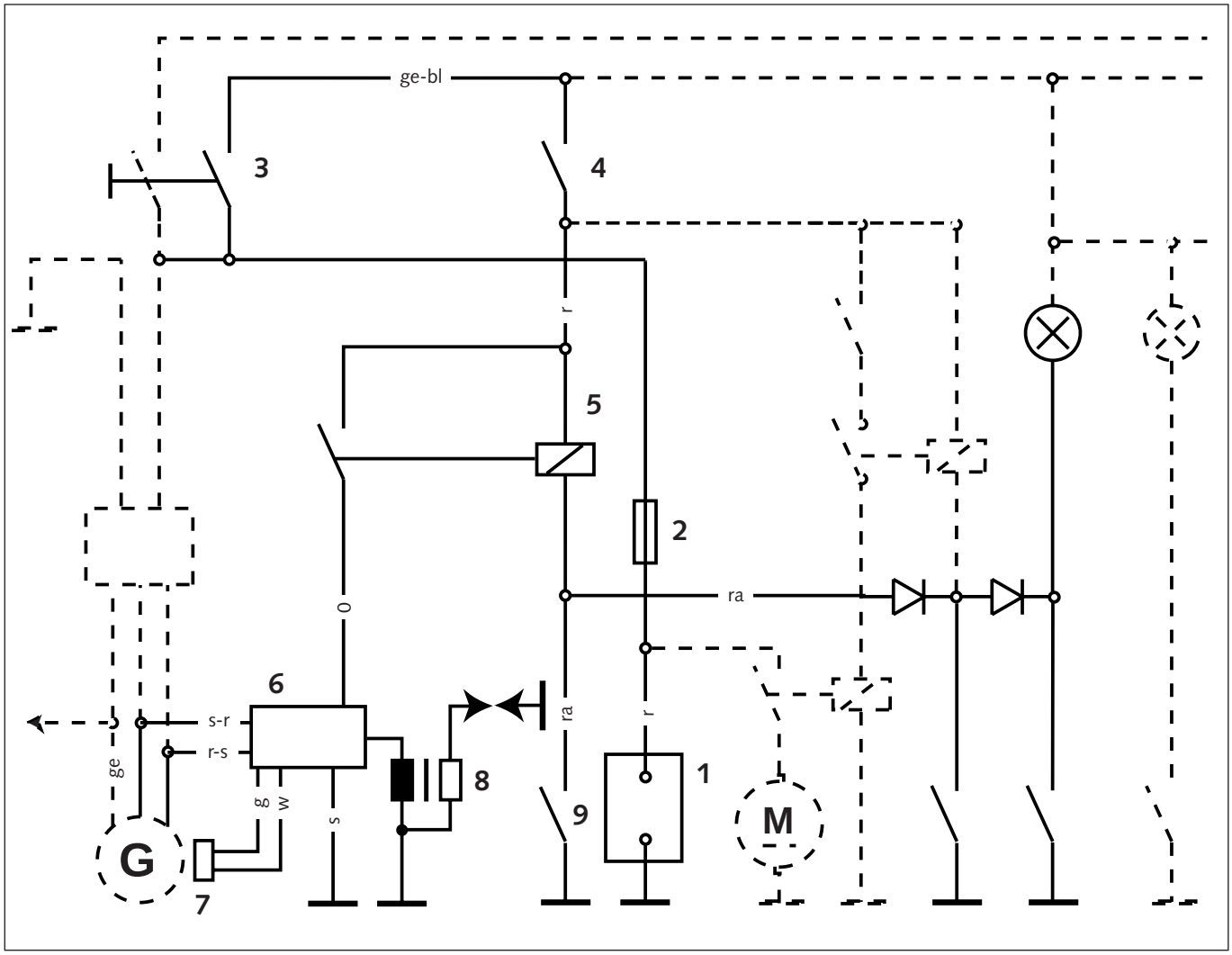
– Remove the chain cover.
– Connect one terminal of a test lamp to the positive pole of the battery and the other to connection ❸ of the neutral switch.
– The test lamp must light up when the transmission is switched to neutral.
– The test lamp must go out as soon as a gear is put in.

Trouble shooting in the electric starter system

When the starter motor fails to turn upon operation of the tip switch, perform the following checks first:

- Is the ignition lock switched to ◯ ?
- Is the emergency OFF switch in the position ◯ ?
- Is the neutral control lamp on while the ignition is on?
- Can the engine be started with the clutch pulled?
- Is the battery charged?
- Has the main fuse blown?

- Check the auxiliary starting relay
- Check the starter relay
- Check the starter motor



❶ Battery
❷ Main fuse
❸ Ignition lock
❹ Emergency-off switch
❺ Auxiliary relay
❻ CDI
❼ Pulse generator
❽ Ignition coil
❾ Side stand switch

bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Ignition system

From the battery ❶ the battery voltage is conducted via the main fuse ❷ through the ignition lock ❸ and the emergency OFF switch ❹, which are both ON, to the side stand relay ❺.
The side stand relay conducts the battery voltage to the CDI unit ❻, if at least one of the following requirements is met :

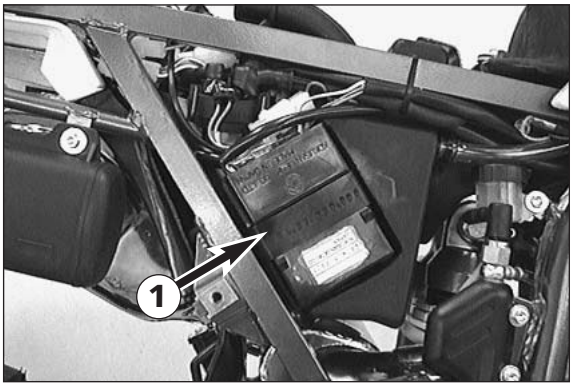
- The side stand is up (side stand switch closed).
- The transmission is switched to neutral (neutral switch closed).
- The clutch is pulled (clutch switch closed).

The pulse generator ❼ transmits a signal to the CDI unit ❻ upon every rotation of the crankshaft. In the CDI unit, the ignition point is computed from this signal.
The ignition pulse is transmitted to the ignition coil ❽ (i.e. an ignition spark is generated).

NOTE: The ignition system is a digital high voltage capacitor ignition that receives its power supply from the battery. Therefore, it works only with an intact battery.
When the battery is discharged below the threshold level, the voltage can, due to the starting process, drop below the minimum supply voltage required by the ignition.

! CAUTION !

SAFE AND FAULTLESS OPERATION OF THE DIGITAL IGNITION REQUIRES SPARK PLUG CONNECTORS AND SPARK PLUGS WITH INTEGRATED RESISTANCE TYPE SUPPRESSORS.



CDI unit

Check the cables and plug and socket connections of the CDI unit ❶.
The CDI unit function can only be checked on an ignition test bench.

! CAUTION !

NEVER USE A COMMERCIAL MEASURING DEVICE TO CHECK THE CDI UNIT. COMMERCIAL MEASURING DEVICES CAN DESTROY HIGHLY SENSITIVE ELECTRONIC COMPONENTS.

Check ignition coil

– Disconnect all cables and remove the spark plug connector.
– Use an ohmmeter to measure the following values.

NOTE: The indicated setpoint values correspond to a temperature of 20° C.

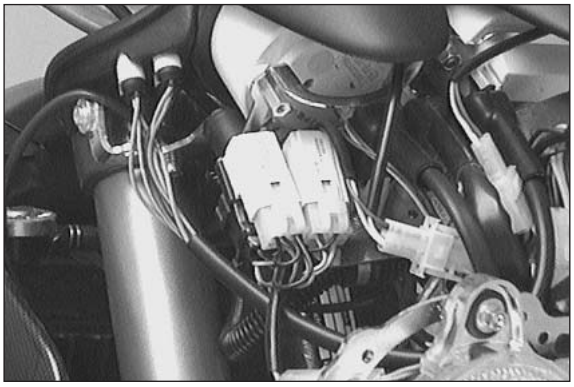
Replace the ignition coil if the measured values deviate significantly from the setpoint values.

MEASUREMENT	COLOURS	RESISTANCE
primary coil	blue/white – ground	0,425 – 0,575 Ω
secondary coil	blue/white – ignition wire	10,80 – 16,20 kΩ

Spark plug connector

– Check the spark plug connector for cracks and fissures.
– Measure spark plug connector resistance.

Setpoint value: 3.0 – 7.5 kΩ

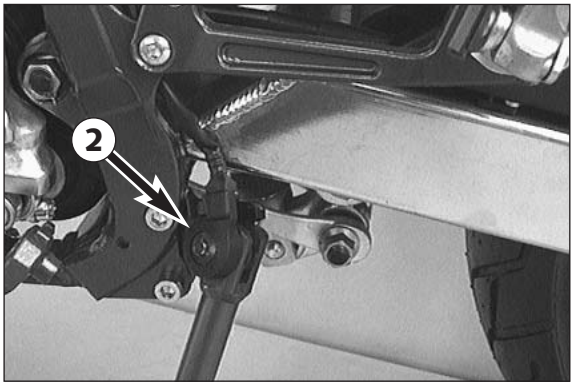


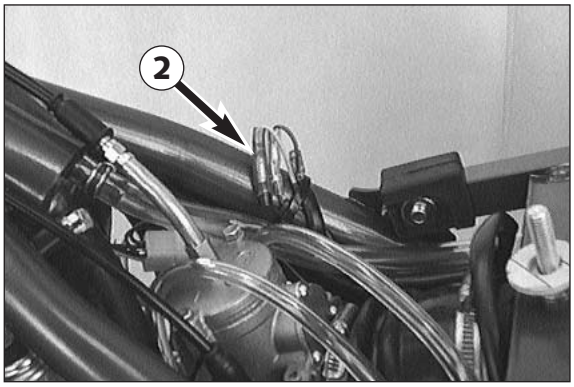
Checking the side stand relay

Preparation:
– Remove the seat, the right side cover and the headlight mask.
– Disconnect the power supply from the CDI (orange cable).
– To check the current status of the relay connect the orange cable coming from the cable tree either to the positive line of a voltmeter or to a test lamp.
– The negative line of the voltmeter or test lamp is connected to ground.
– Switch on the ignition lock and the emergency OFF switch.

Perform the following tests in the order indicated below:
– The relay must connect in either of the following three cases:
- Put a gear in but do not pull the clutch. Slowly swing up the side stand. When the side stand is approximately halfway up, the side stand relay should respond. If this is not the case, please check the relay, the side stand switch ❷ as well as the corresponding parts of the cable tree.
- With the side stand down and a gear put in, slowly pull the clutch lever. The side stand relay should respond when the lever is pulled approximately half of the overall distance. If this is not the case, please check the diode in the connector with the yellow and the pink cable and the neutral switch.
- With the side stand down and the clutch not pulled, switch the transmission to neutral. The relay should connect when the transmission is switched to neutral and be tripped when a gear is put in. If this is not the case, please check the diode in the connector with the yellow and the green/black cable and the neutral switch.

NOTE: Responding of the relay is accompanied by a faint clicking sound and the CDI's power supply is switched on. The voltmeter or the test lamp indicates a battery voltage. After testing, reconnect the CDI unit's power supply (orange cable).



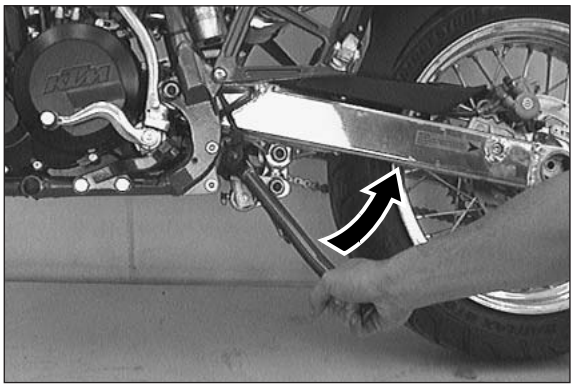


Checking the side stand switch

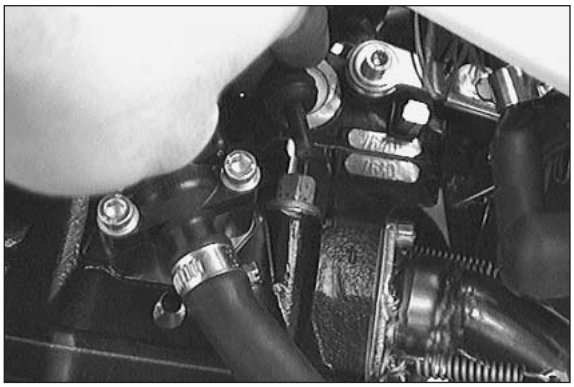
– Disconnect the 2 connectors connecting the side stand switch ❷ with the cable tree (below the tank).
– Connect an ohmmeter to the side stand cable.
– Slowly swing up the side stand.
– The switch must be open while the side stand is down.
– The side stand switch must connect when the side stand is approximately halfway up.
– If this is not the case, replace the side stand switch.

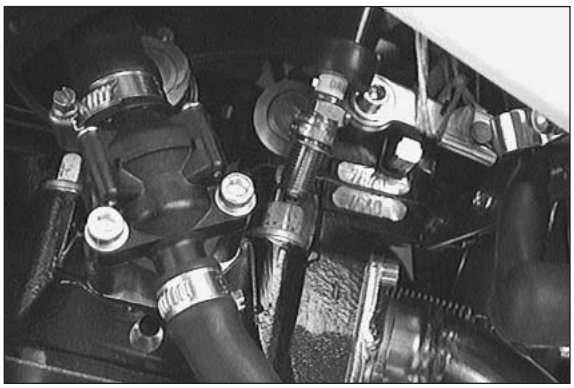
! CAUTION !

NEVER SHORT-CIRCUIT THE SIDE STAND SWITCH SO AS TO BE ABLE TO DRIVE ON. THIS WOULD DEACTIVATE THE IGNITION CUT-OFF WITH THE SIDE STAND DOWN, AND YOUR MOTORCYCLE WOULD NO LONGER COMPLY WITH THE APPLICABLE SAFETY STANDARDS.



NOTE: If the side stand is removed, for example when subsequently installing a center stand, the two connectors of the cable tree that lead to the side stand switch must also be connected.





Trouble shooting in the ignition system

Before checking the ignition system check

- if the ignition lock is in position ◯
- if the emergency off switch is in the position ◯
- if the neutral control lamp is on
- if the motorcycle can be started with the clutch pulled
- if the battery is charged
- the main fuse

Check if an ignition spark is produced when the starter is operated. Proceed as follows:

– Pull the spark plug connector.
– Disconnect the spark plug connector from the ignition cable.
– Hold the free end of the ignition cable approximately 5 mm from ground.
– A strong spark should be visible when the electric starter is now operated. If the battery is discharged below the threshold level required for electric starting, please use the kickstarter.

– If a spark is visible, replace the spark plug connector.
– Twist out the spark plug and insert it into the spark plug connector.
– Connect the spark plug to ground. A strong spark should be visible at the electrode when the electric starter is now operated. If this is not the case, the spark plug connector or the spark plug is defect.

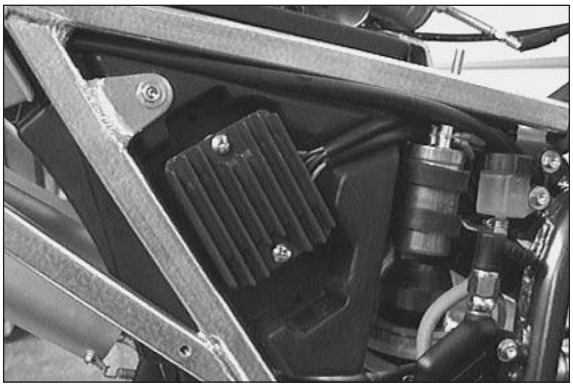
– If no spark is produced during the first test, perform the following checks:

- Does the ignition's power supply line (orange) carry battery voltage?
- If this is not the case, check the ignition lock, the emergency off switch and, if applicable, the side stand relay as well as the corresponding parts of the cable tree.

– If the ignition is sufficiently supplied with power and no spark is produced, check:

- ground connection of CDI unit and ignition coil
- the cable between CDI unit and ignition coil
- pulse generator
- stator
- ignition coil

ELECTRICAL – SXC '99

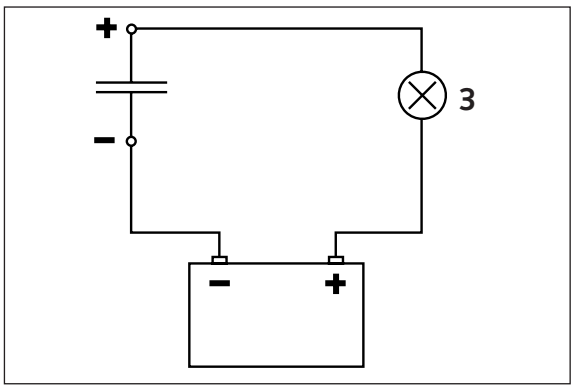


Checking the voltage regulator-rectifier

– Start the engine and switch on the low beam.
– Connect a voltmeter to the two terminals of the capacitor (red/white cable = positive, brown cable = negative).
– Accelerate the engine to a speed of 5000 r.p.m. and read off the voltage.

Nominal value: 14.0 - 15.0 V

If the reading significantly deviates from the nominal value above, check the capacitor. If the capacitor is intact, replace the voltage regulator-rectifier.

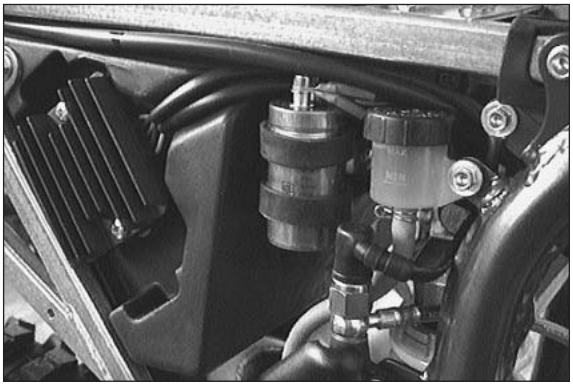


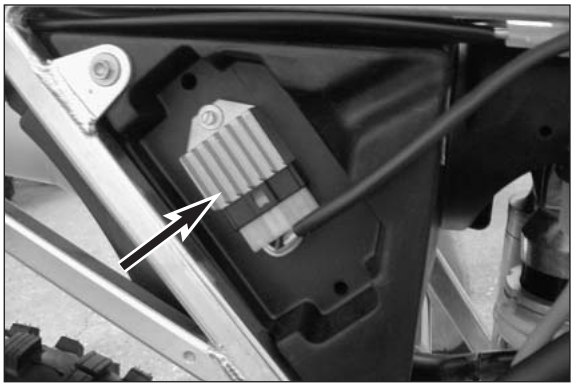
Checking the capacitor

– Discharge the capacitor by bridging the two terminals with a screwdriver and remove.
– Connect the negative pole of a 12V battery with the negative terminal of the capacitor. The connection between the positive pole of the battery and the positive terminal of the capacitor (marked +) is made with a test lamp ❸.
– When the power circuit is closed, the test lamp must begin to light up. As capacitor charging increases, the brightness of the test lamp must decrease.
– The test lamp must go out after 0,5-2 seconds (depending on the lamp capacity).
– If the test lamp does not go out or does not light up at all, the capacitor is faulty.

! CAUTION !

DISCHARGE THE CAPACITOR BEFORE AND AFTER EACH TEST.
WHEN INSTALLING THE CAPACITOR, MAKE SURE THAT THE TERMINALS ARE CONNECTED IN ACCORDANCE WITH THEIR MARKINGS. CONNECT RED/WHITE CABLE TO + TERMINAL.

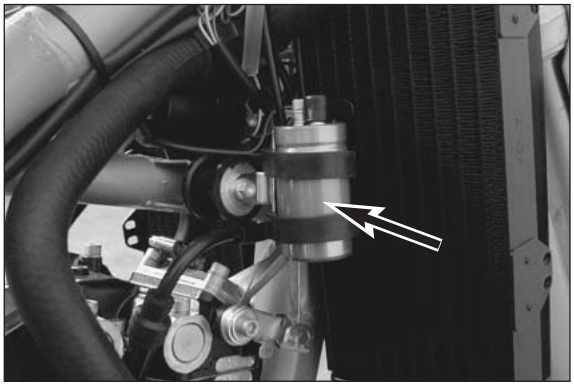




Checking the voltage regulator (Kokusan)

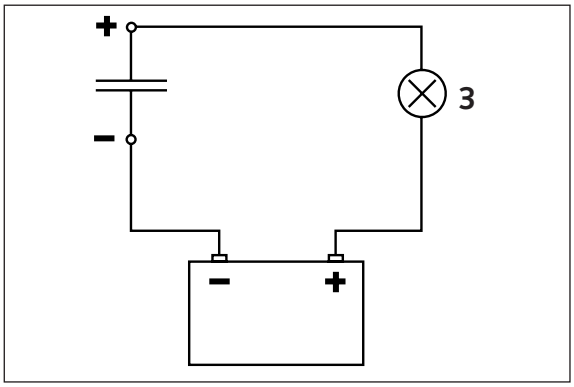
A defect voltage regulator can cause different kinds of trouble:

- No voltage in the circuit
  In this case, the voltage regulator must be disconnected at idle speed. The voltage regulator is defect if the power consumers now work properly.
  If the power consumers are still not supplied with power, the switch, the wiring harness or the ignition system must be checked for defects.
- Excessive voltage in the circuit
  The bulbs burn out. In this case the voltage regulator must be replaced.



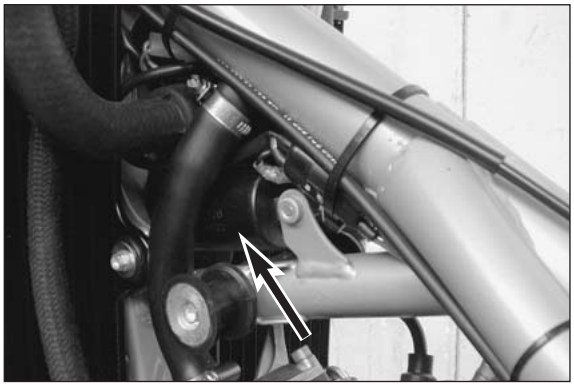
Checking the capacitor

– Discharge the capacitor 1 by bridging the two terminals with a screwdriver and remove.
– Connect the negative pole of a 12V battery with the negative terminal of the capacitor. The connection between the positive pole of the battery and the positive terminal of the capacitor (marked +) is made with a test lamp ❸.
– When the power circuit is closed, the test lamp must begin to light up. As capacitor charging increases, the brightness of the test lamp must decrease.
– The test lamp must go out after 0,5-2 seconds (depending on the lamp capacity).
– If the test lamp does not go out or does not light up at all, the capacitor is faulty.



! CAUTION !

DISCHARGE THE CAPACITOR BEFORE AND AFTER EACH TEST.
WHEN INSTALLING THE CAPACITOR, MAKE SURE THAT THE TERMINALS ARE CONNECTED IN ACCORDANCE WITH THEIR MARKINGS. CONNECT RED/WHITE CABLE TO + TERMINAL.



Check ignition coil

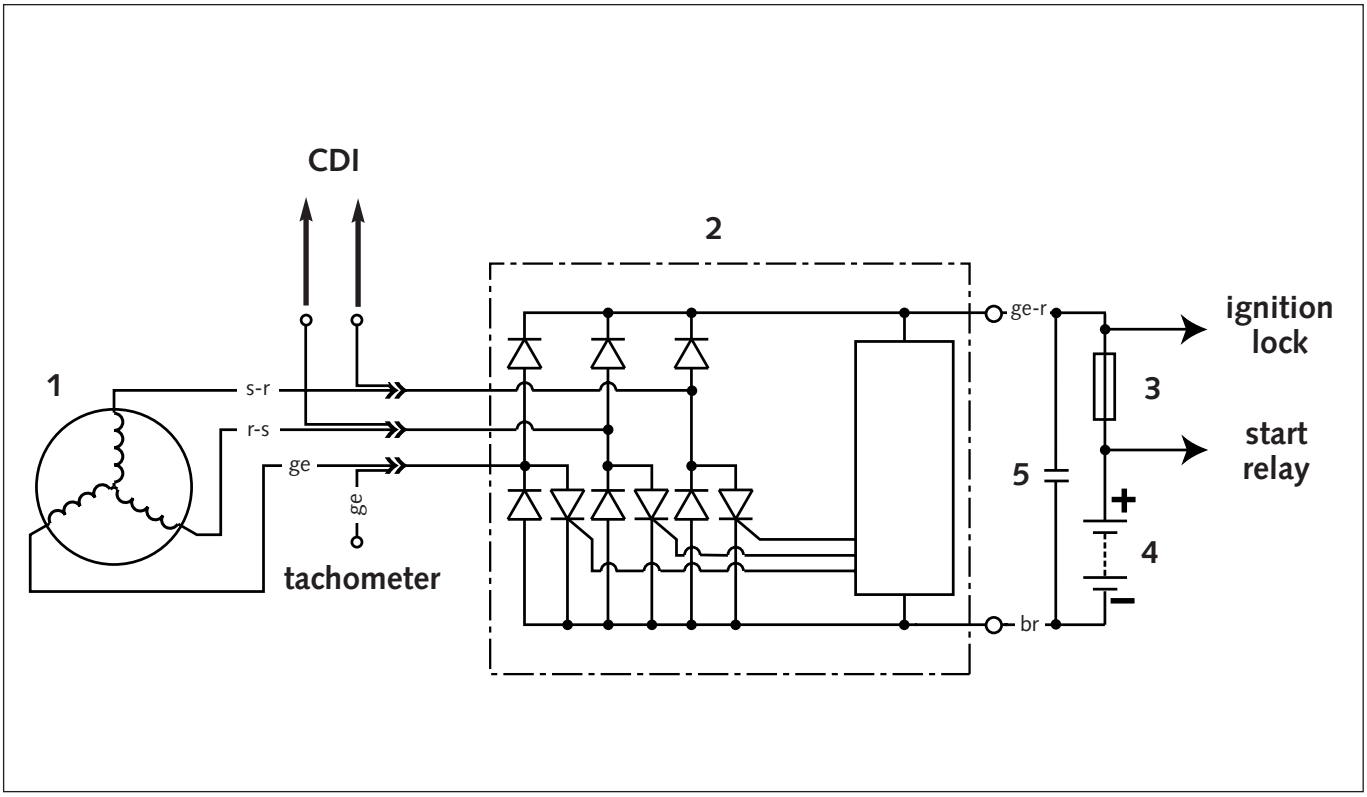
– Disconnect all cables and remove the spark plug connector.
– Use an ohmmeter to measure the following values.

NOTE: The indicated setpoint values correspond to a temperature of 20° C.

Replace the ignition coil if the measured values deviate significantly from the setpoint values.

MEASUREMENT	COLOURS	RESISTANCE
primary coil	blue/white – ground	0,425 – 0,575 Ω
secondary coil	blue/white – ignition wire	10,80 – 16,20 kΩ

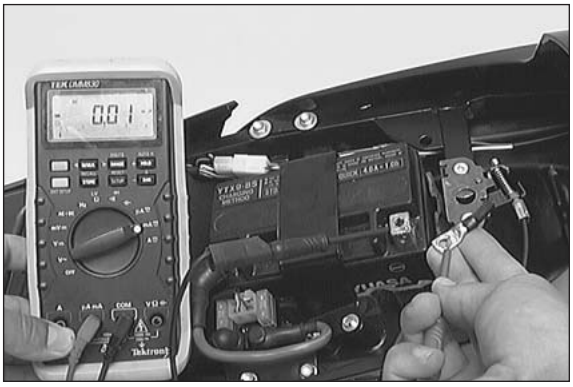
ELECTRICAL – DUKE '99



bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Charging system

❶ Generator
❷ Regulator-rectifier
❸ Main fuse (20 A)
❹ Battery (12V / 8 Ah)
❺ Capacitor



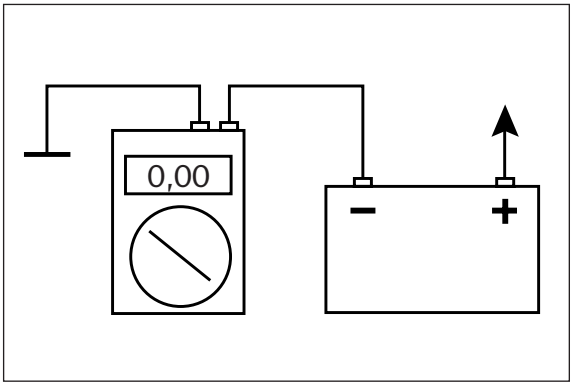
Leakage inspection

The drop test must be performed before checking the voltage regulator/rectifier.

– Turn off the ignition and disconnect the ground wire from the battery.
– Insert an amperemeter between the ground wire and the negative pole of the battery.

Setpoint value: max. 1 mA

– Check for power consumers, should the measured value exceed the indicated maximum value.
  Example:
- defective voltage regulator-rectifier
- leak currents in the socket connectors, in the ignition lock or in the starter relay.



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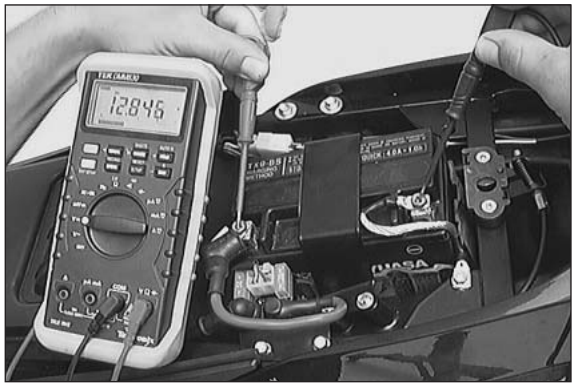
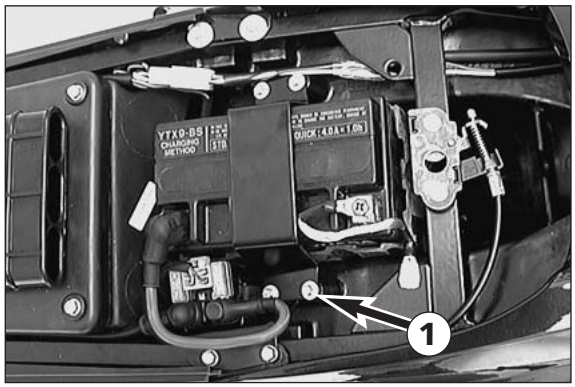
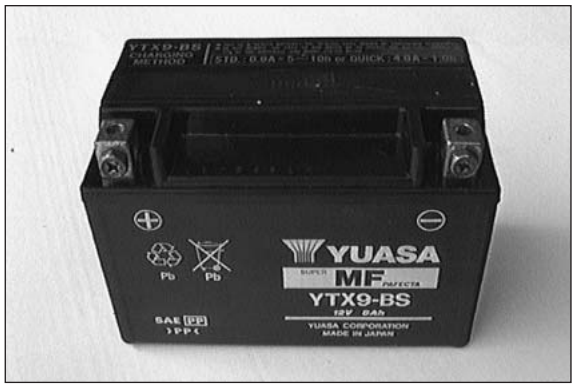
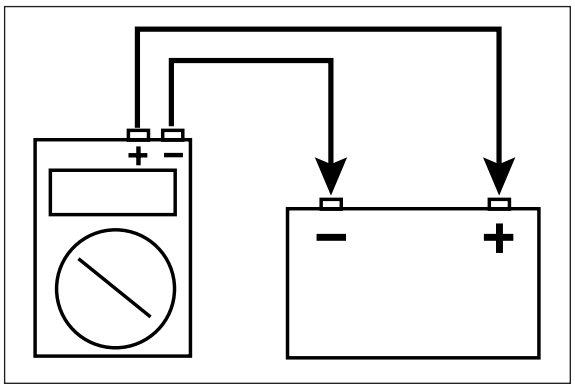








Charging voltage / checking the voltage regulator-rectifier

NOTE: The values stated below apply only to fully charged batteries (minimum charging level 90 %).

– Start the engine and switch on the low beam.
– Connect a voltmeter to both battery connections.
– Accelerate the engine to a speed of 5000 rpm and read off the voltage.

Nominal value: 14.0 - 15.0 V

In the case of a significant deviation from the nominal value:
– Check the connector between the stator and the voltage regulator-rectifier and the connector between the voltage regulator-rectifier and the cable tree.
– Check the stator.
– Replace the voltage regulator-rectifier.

Removing the battery

– Remove the seat.
– Disconnect first the negative and then the positive pole of the battery.
– Remove the bolts ❶ and swing the battery support with the voltage regulator-rectifier sideways.
– Remove the battery.
– When reinstalling the battery, connect the negative pole last.

! CAUTION !

FOLLOW THE INSTRUCTIONS OF THE MANUFACTURER WHEN FILLING A NEW BATTERY. THE RELEVANT SAFETY INSTRUCTIONS ARE ALSO CONTAINED IN THE USER MANUAL SUPPLIED WITH THE BATTERY.

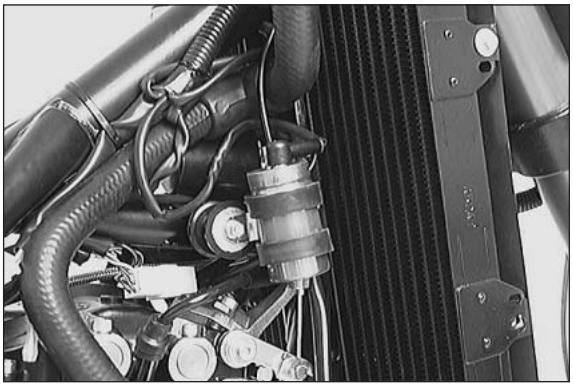
Charging the battery

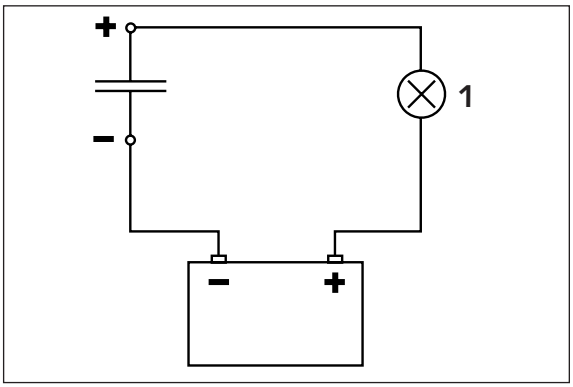
– Remove the battery and check the charging level. Use a voltmeter to measure the voltage between the battery poles (off-load voltage).
– Accurate results can only be obtained if the battery has neither been charged nor discharged during a period of 30 minutes preceding the measuring.
– If the battery is empty, it can be recharged for a maximum period of 10 hours at 0.8 A and a maximum of 14.4 V.

! CAUTION !

– TO AVOID DAMAGE, DO NOT REMOVE THE LOCKING BAR
– ALWAYS CONNECT THE BATTERY TO THE CHARGING UNIT BEFORE TURNING THE CHARGING UNIT ON.
– WHEN RECHARGING THE BATTERY IN CLOSED ROOMS ENSURE SUFFICIENT VENTILATION. EXPLOSIVE GASES ARE RELEASED DURING THE BATTERY CHARGING PROCESS.
– CHARGING TIME AND CHARGING VOLTAGE SHOULD NOT EXCEED THE STATED VALUES. OTHERWISE ELECTROLYTE WILL BE RELEASED THROUGH THE SAFETY VALVES.
– AVOID QUICK CHARGING IF POSSIBLE.

off load voltage Volt	charging level %	charging time 0.8 A	charging voltage
>12.7	100	—	max. 14.4 V
~12.5	75	4 h	
~12.2	50	7 h	
~12.0	25	11 h	
~11.8	0	14 h	



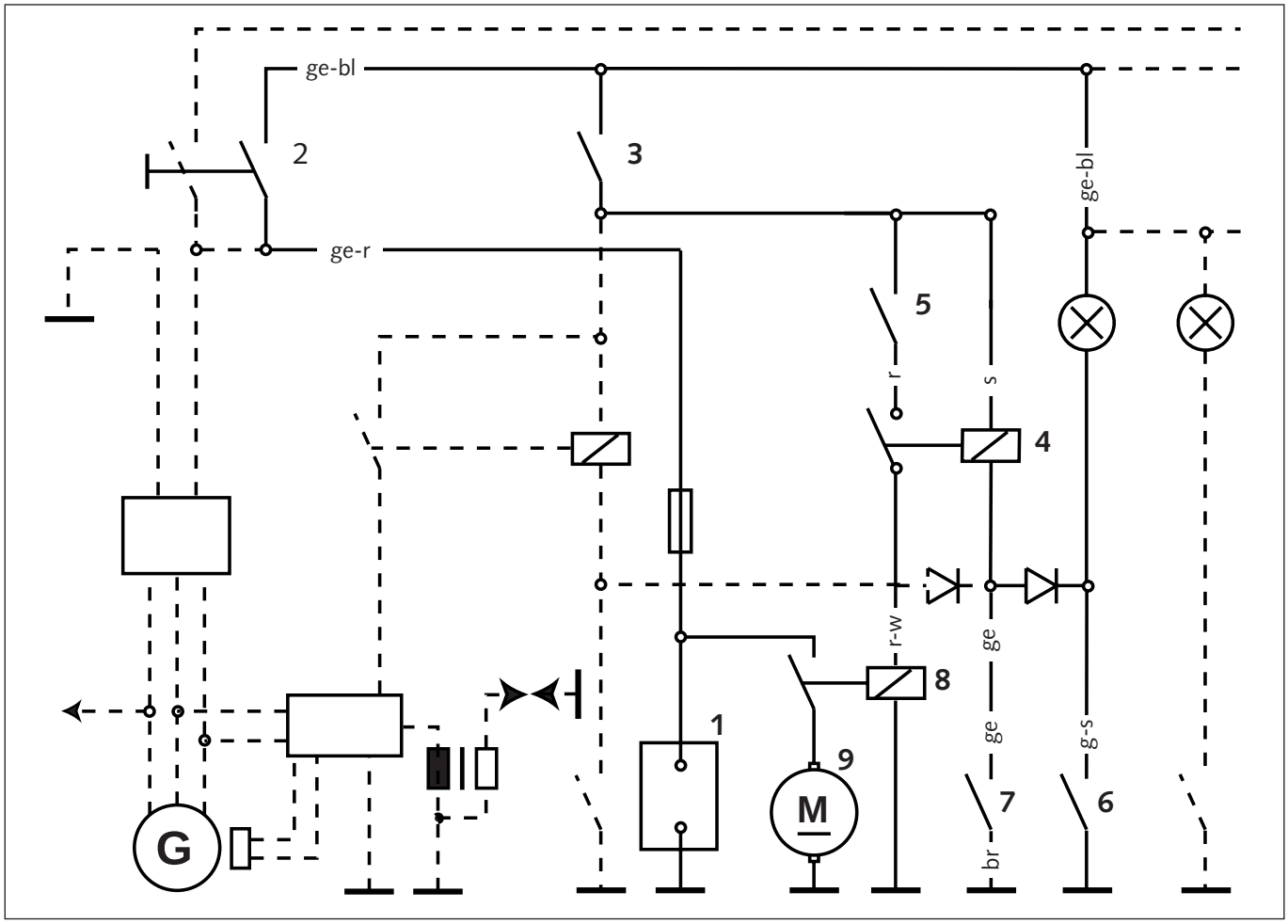


Checking the capacitor

– Pull main fuse out of the fuse holder.
– Discharge the capacitor by bridging the two terminals with a screwdriver and remove.
– Connect the negative pole of a 12V battery with the negative terminal of the capacitor. The connection between the positive pole of the battery and the positive terminal of the capacitor (marked +) is made with a test lamp ❶.
– When the power circuit is closed, the test lamp must begin to light up. As capacitor charging increases, the brightness of the test lamp must decrease.
– The test lamp must go out after 0,5-2 seconds (depending on the lamp capacity).
– If the test lamp does not go out or does not light up at all, the capacitor is faulty.

! CAUTION !

DISCHARGE THE CAPACITOR BEFORE AND AFTER EACH TEST.
WHEN INSTALLING THE CAPACITOR, MAKE SURE THAT THE TERMINALS ARE CONNECTED IN ACCORDANCE WITH THEIR MARKINGS. CONNECT RED/WHITE CABLE TO + TERMINAL.



❶ Battery
❷ Ignition lock
❸ Emergency off switch
❹ Auxiliary relay
❺ Tip switch built in emergency off switch
❻ Neutral switch
❼ Clutch switch
❽ Start relay
❾ Starter motor

bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Electric starter system

The system is equipped with a safety mechanism. Electric starting is only possible when

- the ignition lock is in the position ⟳
- the emergency OFF switch is in the position ⟳
- the transmission is switched to neutral or the clutch is pulled.

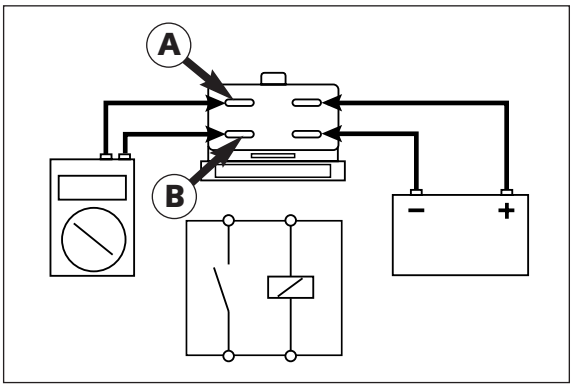
Function of the electric starter system:
From the battery ❶ the battery voltage is transmitted via the ignition lock ❷ and the emergency OFF switch ❸ to the coil of the auxiliary starting relay ❹ and to the tip switch ❺.
The contact of the auxiliary starting relay prevents starting unless at least one of the following requirements is met :

- The transmission must be switched to neutral (neutral switch ❻ is closed).
- The clutch must be pulled (clutch switch ❼ must be closed).

When the tip switch ❺ is operated, the starter motor ❾ is switched on via the starter relay ❽.

Check start auxiliary relay

– Remove headlight mask and remove the start auxiliary relay (cable colours red and red-white).



– Connect the start auxiliary relay to a 12 V battery as shown in the illustration.
– Use an ohmmeter to measure the continuity between the terminals Ⓐ and Ⓑ.

Reading 0 Ω relay intact
Reading ∞ Ω relay defect

Checking the auxiliary starting relay for faultless operation

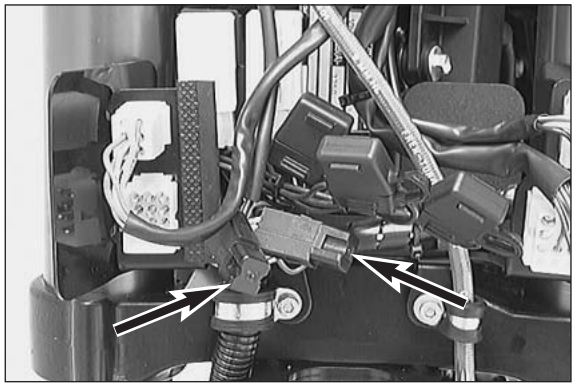
Preparation:

– Connect an ohmmeter or a continuity tester to the cables of the auxiliary starting relay (colors: red and red/white).

– Perform the tests in the order indicated below. The auxiliary starting relay must respond in either of the following two cases:

- Put in a gear and slowly pull the clutch lever. The auxiliary starting relay should respond when the lever is pulled approximately half of the overall distance. If this is not the case, please check the clutch switch. Keep an eye on the neutral control lamp while performing this test. The neutral control lamp should not light up. If it lights up, check the diode with the cable colors yellow and green/black.
- Switch the transmission to neutral without previously pulling the clutch. The auxiliary starting relay should now connect and be tripped as soon as a gear is put in. If this is not the case, please check the diode in the connector with the cable colors yellow and green/black and the neutral switch.

NOTE: Connecting of the auxiliary starting relay is always accompanied by a faint clicking sound. The ohmmeter or continuity tester indicates continuity while the auxiliary starting relay is on.

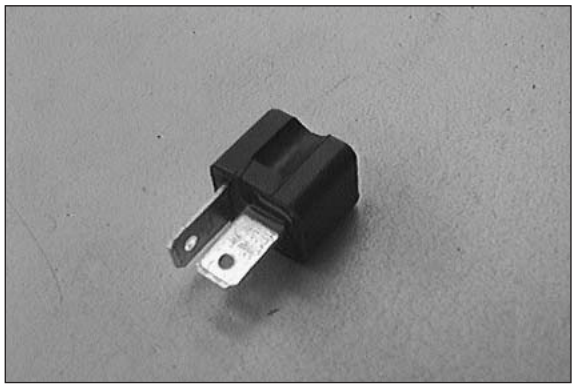


Checking the diodes

NOTE: Diodes conduct current only in the direction indicated by the arrow, preventing the conduction of current in the opposite direction.

Two different kinds of diode defects can be distinguished:
– The diode conducts no current at all.
– The diode conducts current in both directions.
Diode defects can lead to different kinds of trouble, depending on the type of defect.

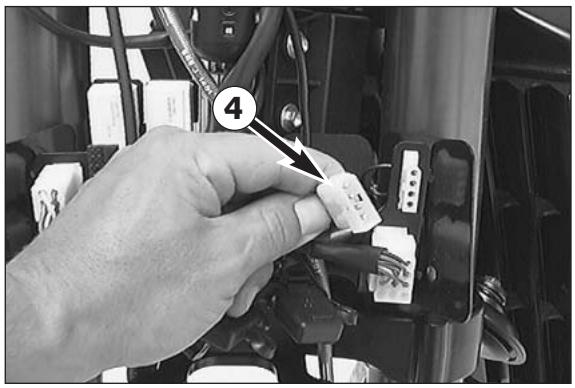
NOTE: Both diodes are the same type and require the same testing procedure. They are each located in a 2-pole connector and can be identified by the color of the cables leading up to and away from the respective connector.



Checking the diodes for faultless operation:
– Remove the headlight mask.
– Pull the diode to be tested out of the connector.
– Connect an appropriate ohmmeter to the diode and check for continuity.
– Connect the ohmmeter in the opposite direction and check if the diode prevents current conduction in the opposite direction.

Checking the clutch switch

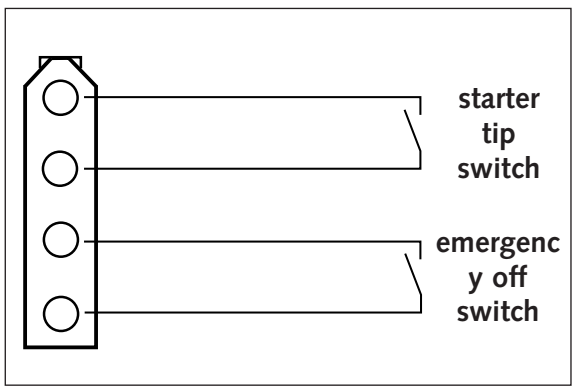
– Disconnect the clutch switch from the cable tree.
– Connect the ohmmeter to the 2-pole connector ❸ (cable colors: yellow/yellow) of the clutch switch and slowly pull the clutch lever.
– The switch must connect when the lever is pulled approximately half of the overall distance.

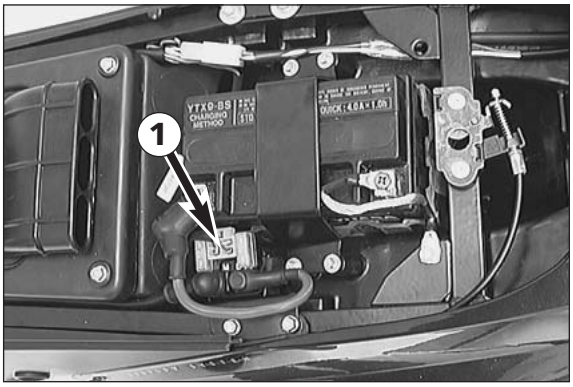


Checking the tip switch and the emergency off switch

– Remove the headlight mask.
– Disconnect the 4-pole connector ❹ of the tip switch/emergency OFF switch from the cable tree.
– Use an ohmmeter and test both switches according to the table below (please refer to the sketch for the configuration of the connector).
– Then check all lines for ground contact.

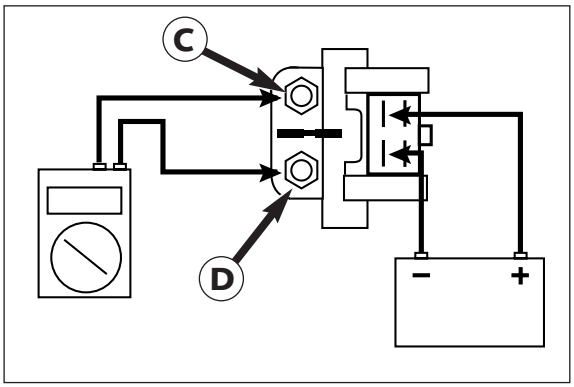
Circuit	Position	Condition
Emergency off switch	○	duct
Emergency off switch	⊗	no duct
Tip switch	operated	duct
Tip switch	not operated	no duct





Checking the starter relay

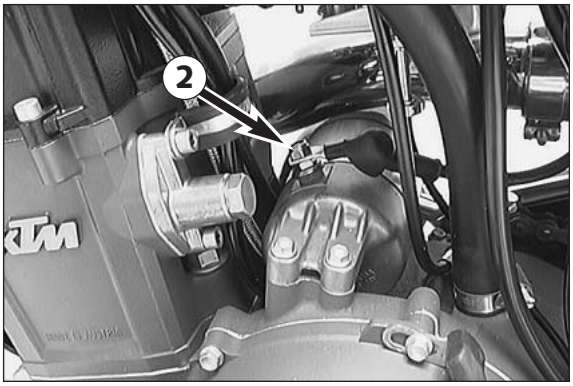
– Remove the seat and disconnect the combination connector ❶ of the starter relay.
– Disconnect negative terminal at battery and the two cables at the starter relay.



– Connect the starter relay to a 12 V battery as indicated in the diagram.
– Check continuity between terminals ❻ and ❹ using an ohmmeter.

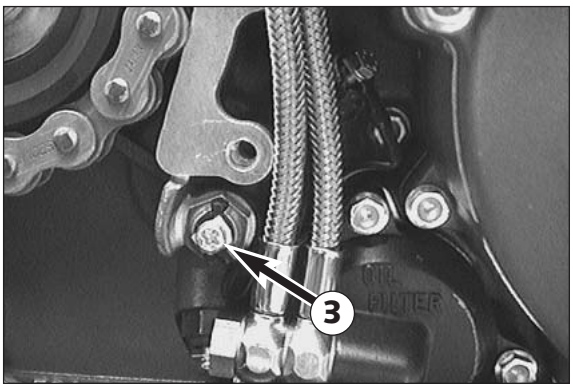
Reading: 0 Ω OK
Reading: ∞ Ω defect

NOTE: The response of the starter relay is accompanied by a faint clicking sound.



Checking the electric starter motor

– Switch off the ignition.
– Disconnect the negative pole of the battery and remove the electric starter motor.
– Connect the negative pole of a 12 V battery to the housing of the E starter motor and briefly connect the positive pole of the battery to connection ❷ of the electric starter motor (use thick cables).
– The starter must turn as soon as the circuit is closed.
– If this is not the case, replace the starter.



Checking the neutral switch

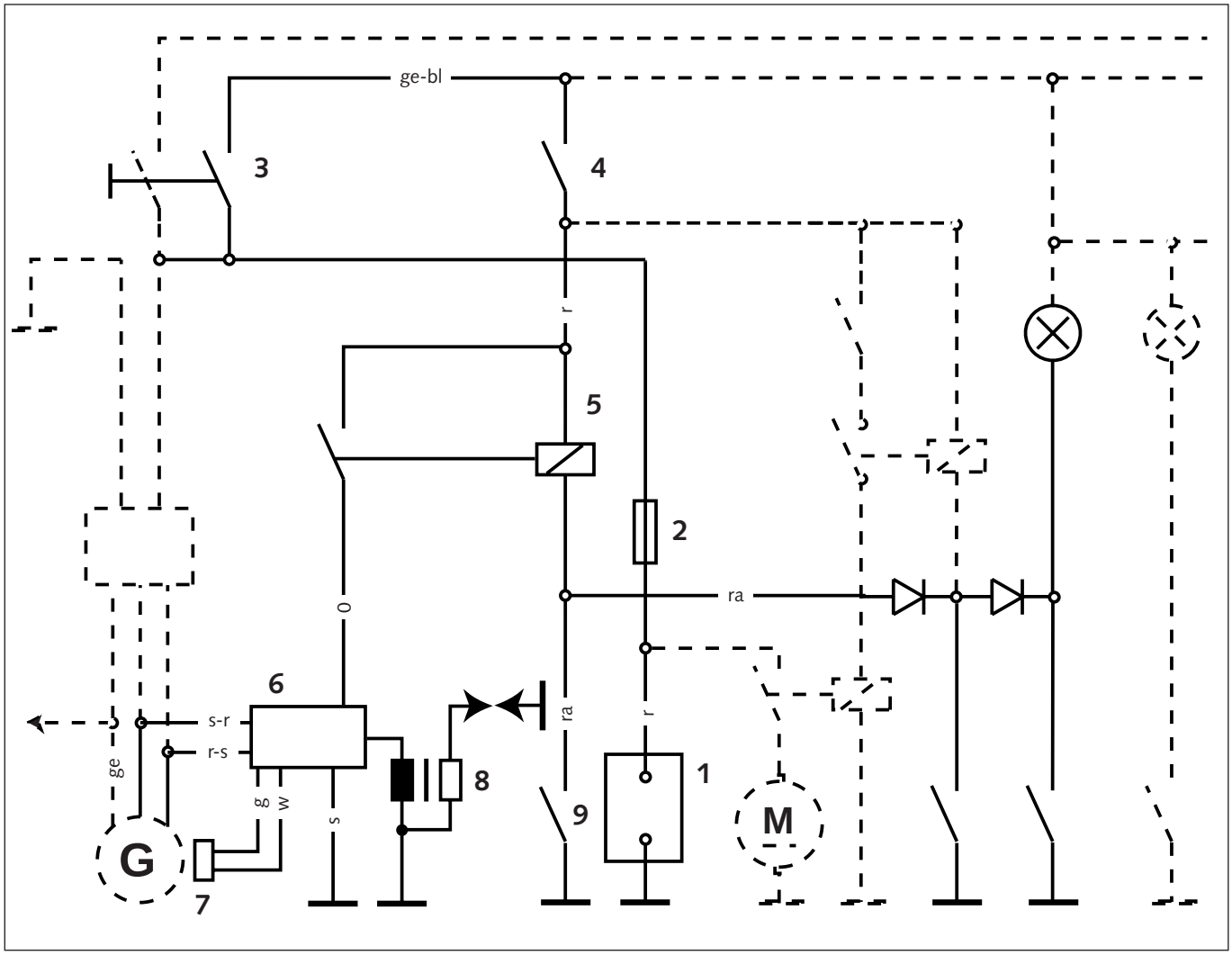
– Remove the chain cover.
– Connect one terminal of a test lamp to the positive pole of the battery and the other to connection ❸ of the neutral switch.
– The test lamp must light up when the transmission is switched to neutral.
– The test lamp must go out as soon as a gear is put in.

Trouble shooting in the electric starter system

When the starter motor fails to turn upon operation of the tip switch, perform the following checks first:

- Is the ignition lock switched to ◯ ?
- Is the emergency OFF switch in the position ◯ ?
- Is the neutral control lamp on while the ignition is on?
- Can the engine be started with the clutch pulled?
- Is the battery charged?
- Has the main fuse blown?
- Has the fuse under headlight mask blown?

- Check the auxiliary starting relay
- Check the starter relay
- Check the starter motor



❶ Battery
❷ Main fuse
❸ Ignition lock
❹ Emergency-off switch
❺ Auxiliary relay
❻ CDI
❼ Pulse generator
❽ Ignition coil
❾ Side stand switch

bl . . . . . .blue
br . . . . . .brown
ge . . . . . .yellow
gr . . . . . .grey
g . . . . . .green
o . . . . . .orange
r . . . . . .red
ra . . . . . .pink
s . . . . . .black
v . . . . . .violet
w . . . . . .white

Ignition system

From the battery ❶ the battery voltage is conducted via the main fuse ❷ through the ignition lock ❸ and the emergency OFF switch ❹, which are both ON, to the side stand relay ❺.
The side stand relay conducts the battery voltage to the CDI unit ❻, if at least one of the following requirements is met :

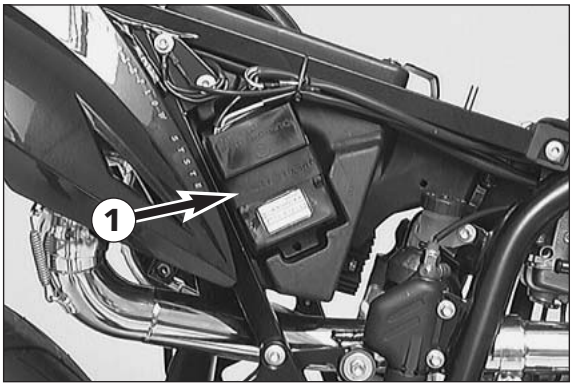
- The side stand is up (side stand switch closed).
- The transmission is switched to neutral (neutral switch closed).
- The clutch is pulled (clutch switch closed).

The pulse generator ❼ transmits a signal to the CDI unit ❻ upon every rotation of the crankshaft. In the CDI unit, the ignition point is computed from this signal.
The ignition pulse is transmitted to the ignition coil ❽ (i.e. an ignition spark is generated).

NOTE: The ignition system is a digital high voltage capacitor ignition that receives its power supply from the battery. Therefore, it works only with an intact battery.
When the battery is discharged below the threshold level, the voltage can, due to the starting process, drop below the minimum supply voltage required by the ignition.

! CAUTION !

SAFE AND FAULTLESS OPERATION OF THE DIGITAL IGNITION REQUIRES SPARK PLUG CONNECTORS AND SPARK PLUGS WITH INTEGRATED RESISTANCE TYPE SUPPRESSORS.

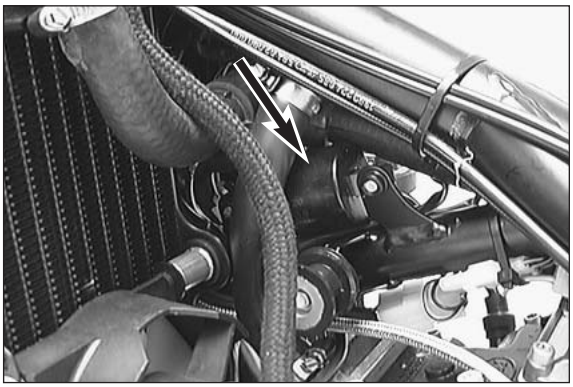


CDI unit

Check the cables and plug and socket connections of the CDI unit ❶.
The CDI unit function can only be checked on an ignition test bench.

! CAUTION !

NEVER USE A COMMERCIAL MEASURING DEVICE TO CHECK THE CDI UNIT. COMMERCIAL MEASURING DEVICES CAN DESTROY HIGHLY SENSITIVE ELECTRONIC COMPONENTS.



Check ignition coil

– Disconnect all cables and remove the spark plug connector.
– Use an ohmmeter to measure the following values.

NOTE: The indicated setpoint values correspond to a temperature of 20° C.

Replace the ignition coil if the measured values deviate significantly from the setpoint values.

MEASUREMENT	COLOURS	RESISTANCE
primary coil	blue/white – ground	0,425 – 0,575 Ω
secondary coil	blue/white – ignition wire	10,80 – 16,20 kΩ

Spark plug connector

– Check the spark plug connector for cracks and fissures.
– Measure spark plug connector resistance.

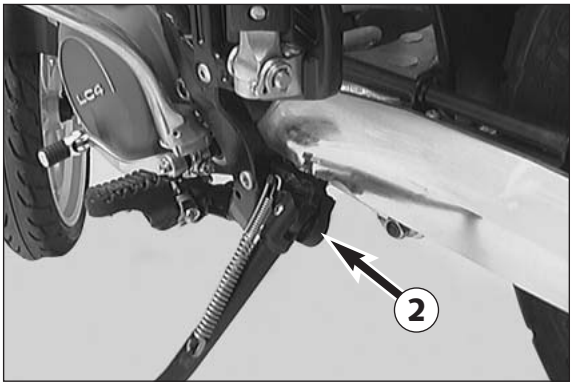
Setpoint value: 3.0 – 7.5 kΩ

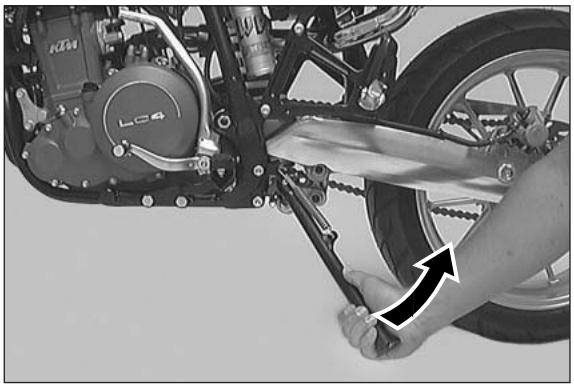
Checking the side stand relay

Preparation:
– Remove the seat, the right side cover. Swing the headlight mask forward.
– Disconnect the power supply from the CDI (orange cable).
– To check the current status of the relay connect the orange cable coming from the cable tree either to the positive line of a voltmeter or to a test lamp.
– The negative line of the voltmeter or test lamp is connected to ground.
– Switch on the ignition lock and the emergency OFF switch.

Perform the following tests in the order indicated below:
– The relay must connect in either of the following three cases:
- Put a gear in but do not pull the clutch. Slowly swing up the side stand. When the side stand is approximately halfway up, the side stand relay should respond. If this is not the case, please check the relay, the side stand switch ❷ as well as the corresponding parts of the cable tree.
- With the side stand down and a gear put in, slowly pull the clutch lever. The side stand relay should respond when the lever is pulled approximately half of the overall distance. If this is not the case, please check the diode in the connector with the yellow and the pink cable and the neutral switch.
- With the side stand down and the clutch not pulled, switch the transmission to neutral. The relay should connect when the transmission is switched to neutral and be tripped when a gear is put in. If this is not the case, please check the diode in the connector with the yellow and the green/black cable and the neutral switch.

NOTE: Responding of the relay is accompanied by a faint clicking sound and the CDI's power supply is switched on. The voltmeter or the test lamp indicates a battery voltage. After testing, reconnect the CDI unit's power supply (orange cable).





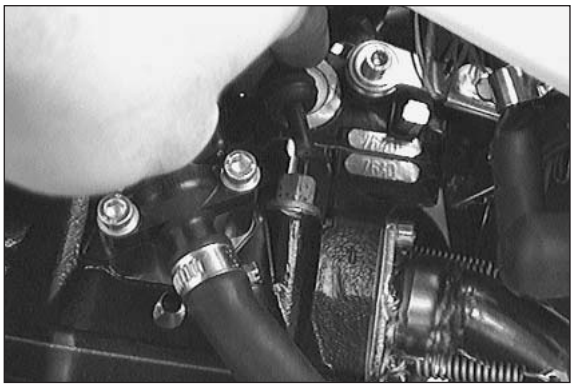
Checking the side stand switch

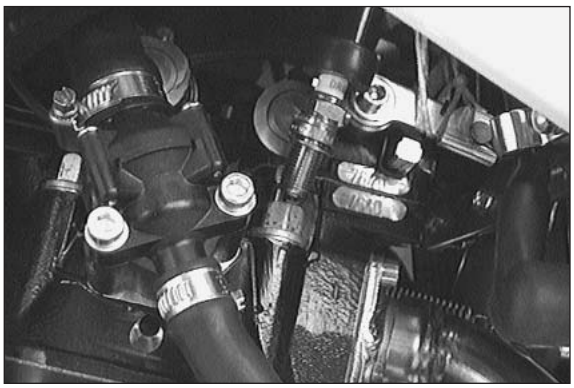
– Disconnect the 2 connectors connecting the side stand switch ❷ with the cable tree (below the tank).
– Connect an ohmmeter to the side stand cable.
– Slowly swing up the side stand.
– The switch must be open while the side stand is down.
– The side stand switch must connect when the side stand is approximately halfway up.
– If this is not the case, replace the side stand switch.

! CAUTION !

NEVER SHORT-CIRCUIT THE SIDE STAND SWITCH SO AS TO BE ABLE TO DRIVE ON. THIS WOULD DEACTIVATE THE IGNITION CUT-OFF WITH THE SIDE STAND DOWN, AND YOUR MOTORCYCLE WOULD NO LONGER COMPLY WITH THE APPLICABLE SAFETY STANDARDS.

NOTE: If the side stand is removed, for example when subsequently installing a center stand, the two connectors of the cable tree that lead to the side stand switch must also be connected.





Trouble shooting in the ignition system

Before checking the ignition system check

- if the ignition lock is in position ◯
- if the emergency off switch is in the position ◯
- if the neutral control lamp is on
- if the motorcycle can be started with the clutch pulled
- if the battery is charged
- the main fuse and the fuse under the headlight mask

Check if an ignition spark is produced when the starter is operated. Proceed as follows:

– Pull the spark plug connector.
– Disconnect the spark plug connector from the ignition cable.
– Hold the free end of the ignition cable approximately 5 mm from ground.
– A strong spark should be visible when the electric starter is now operated. If the battery is discharged below the threshold level required for electric starting, please use the kickstarter.

– If a spark is visible, replace the spark plug connector.
– Twist out the spark plug and insert it into the spark plug connector.
– Connect the spark plug to ground. A strong spark should be visible at the electrode when the electric starter is now operated. If this is not the case, the spark plug connector or the spark plug is defect.

– If no spark is produced during the first test, perform the following checks:

- Does the ignition's power supply line (orange) carry battery voltage?
- If this is not the case, check the ignition lock, the emergency off switch and, if applicable, the side stand relay as well as the corresponding parts of the cable tree.

– If the ignition is sufficiently supplied with power and no spark is produced, check:

- ground connection of CDI unit and ignition coil
- the cable between CDI unit and ignition coil
- pulse generator
- stator
- ignition coil

DYNAMIC GENERATOR VALUES 400/640 LC4-E / 625 SXC (KOKUSAN 4K-2)

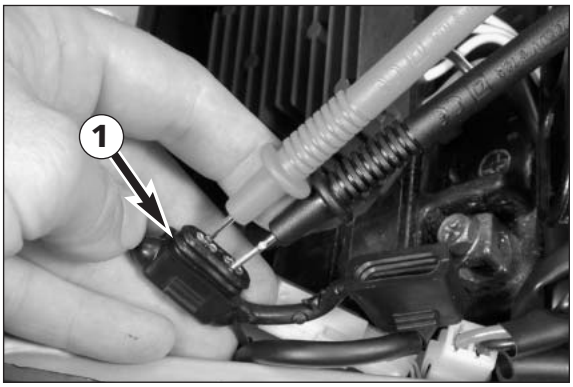
Measuring conditions:
- **remove seat (also side trim and left side cover for Racing model)**
- **all connectors and the ground connection in a non-corroding condition, connectors tightly connected**
- **battery in a startable condition, not fully loaded (start several times for fully loaded battery)**

Regulator rectifier output – measure the voltage with the measuring leads of the peak voltage adapter directly on the poles of the vehicle battery:

– unstressed and stressed for the entire speed range

Multimeter display: 14 volts +/- 1 volt

NOTE: The black measuring lead on the peak voltage adapter should be applied to the ground (negative terminal).



Check the **charge current** – remove main fuse, apply the multimeter measuring leads (without the peak voltage adapter) to both connectors on the fuse carrier ❶ and measure the current (set the multimeter DCA to 10 amperes):

– Unstressed (no electric consumer switched on), engine running at idle speed (1400 +/-50 rpm)

Multimeter display: 6 amperes +/- 0.1 ampere

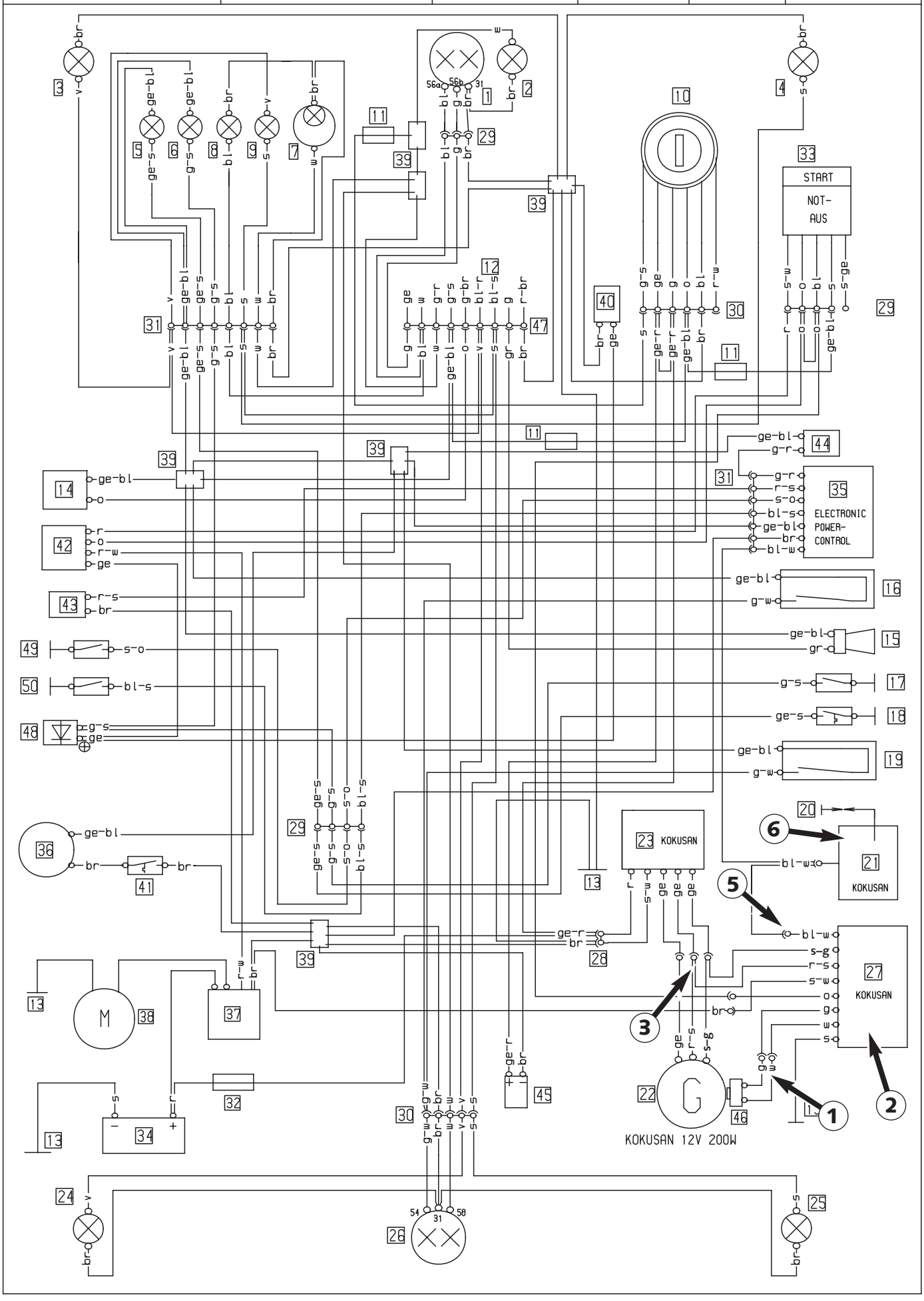
– Stressed (light switched on, horn and brake actuated), engine running at idle speed

Multimeter display: 0 amperes +/- 0.1 ampere

– Stressed (light switched on, horn and brake actuated), engine running at increasing speed (up to 8000 rpm)

Multimeter display: 2 amperes +/- 0.1 ampere

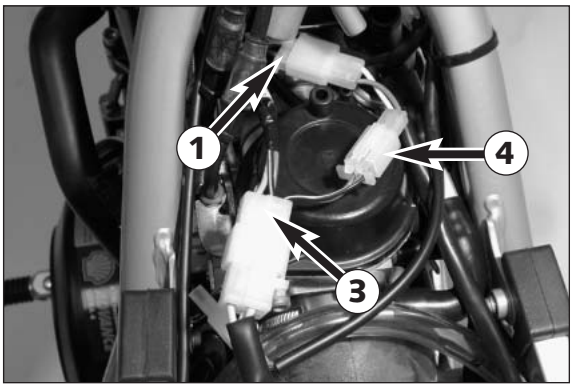
SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	640 LC4-E '2000	vorne 584 11 175 100 hinten 584 11 176 100	DIV LANDER	16 04 98 KE	vo hi



STATIC IGNITION VALUES 400/640 LC4-E / 625 SXC (KOKUSAN 4K-2)

Measuring conditions:
- **cold engine**
- **seat, side trim and tank removed**
- **all connectors and the ground connection in a non-corroding condition, connectors tightly connected**
- **battery loaded, ignition switch to position 1 (without light)**
- **the gap between the rotor and pulse generator must be set to 0.75 mm**
- **compression release lever pulled**
- **kick the kick starter forcefully at least 5 times for each measurement**

NOTE: Before performing a test with the peak voltage adapter, make sure that the orange cable (battery voltage) is applied to the CDI unit and the black and white/black cables are applied to the ground.



Check the **pulse generator** for an output signal – two-pin connector ❶ with green and white cable colors (also see circuit diagram on opposite page):

– Apply the red measuring lead of the peak voltage adapter to the green cable and the black measuring lead to the white cable, disconnect connector ❶ to disconnect the CDI unit ❷.

Multimeter display: 7 volts +/- 1 volt

– Same measurement with CDI unit connected

Multimeter display: 4 volts +/- 1 volt

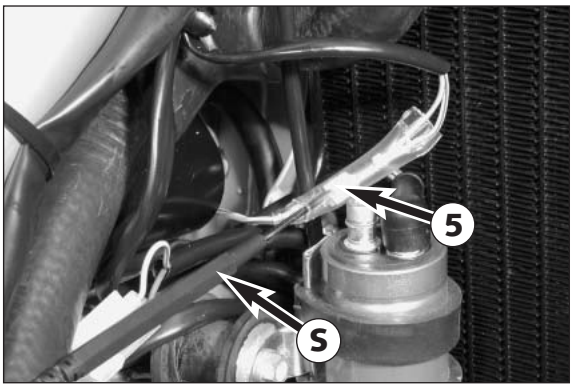
Check the **generator phase for detection of the direction of rotation** three-pin connector ❸ with red/black and black/yellow cables (also see circuit diagram on opposite page):

– Apply the red measuring lead of the peak voltage adapter to the red/black cable and the black measuring lead to the black/yellow cable, disconnect connectors ❸ and ❹

Multimeter display: 17 volts +/- 1 volt

– Same measurement with connectors ❸ and ❹ connected

Multimeter display: 12.5 volts +/- 0.5 volt

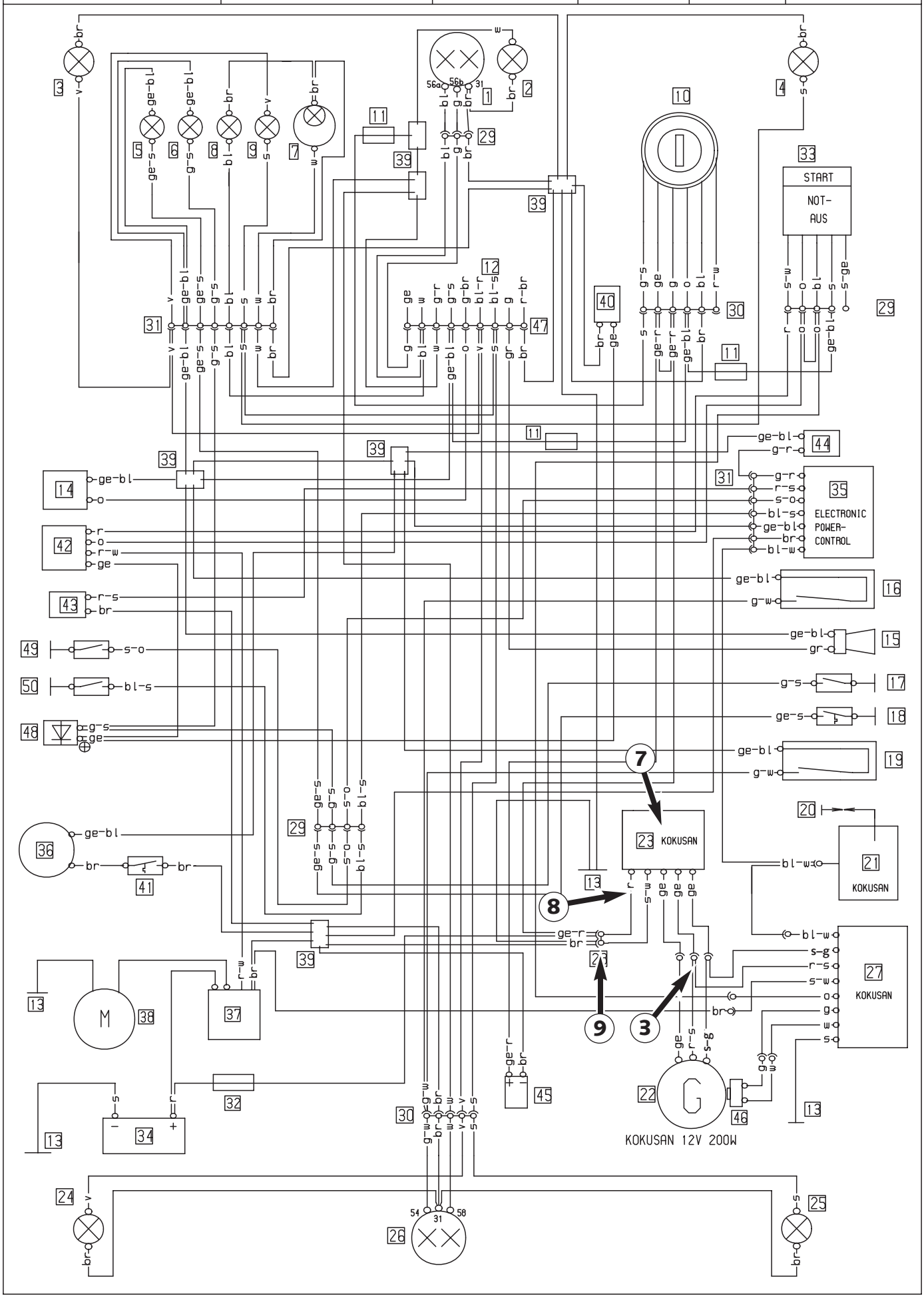


Check the **primary voltage output** for ignition coil control for output voltage – one-pin connector ❺ with blue/white cable (also see circuit diagram on opposite page):

– Apply the red measuring lead of the peak voltage adapter to the ground and the black measuring lead ❽ to the blue/white cable, CDI unit ❷ and ignition coil ❻ connected

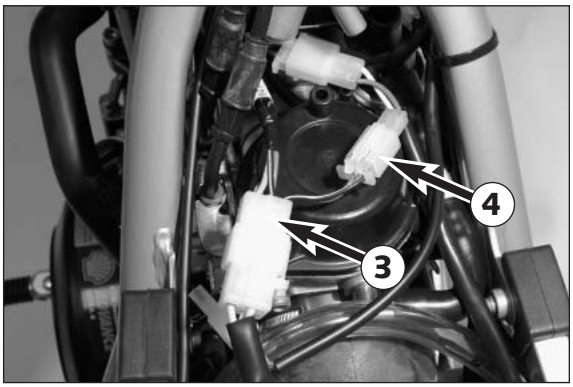
Multimeter display: 220 volts +/- 10 volts

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	640 LC4-E '2000	vorne 584 11 175 100 hinten 584 11 176 100	DIV LANDER	16 04 98 KE	vo hi



STATIC GENERATOR VALUES 400/640 LC4-E / 625 SXC (KOKUSAN 4K-2)

Measuring conditions:
- **cold engine**
- **seat, side trim and tank removed**
- **all connectors and the ground connection in a non-corroding condition, connectors tightly connected**
- **battery loaded, ignition switch to position 1 (without light)**
- **compression release lever pulled**
- **kick the kick starter forcefully at least 5 times for each measurement**



Check the **generator output** for voltage between the following cable colors
– three-pin connector ❸ (also see circuit diagram on opposite page), connectors ❸ and ❹ disconnected; this disconnects the regulator rectifier ❼ and the CDI unit:

- between black/yellow and red/black
- between black/yellow and yellow
- between red/black and yellow

Multimeter display: 17 volts +/- 1 volt

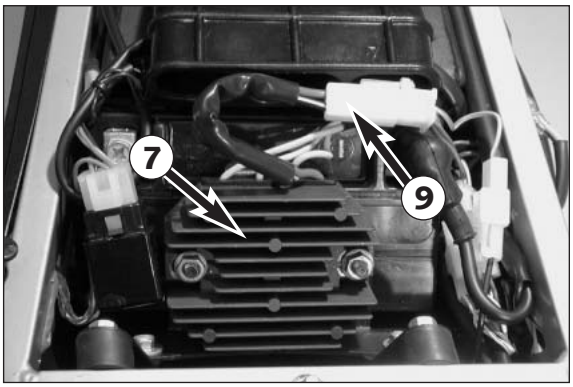
NOTE: The measuring leads of the peak voltage adapter can be randomly applied.

Check **generator output for voltage to ground** – three-pin connector ❸ (also see circuit diagram on opposite page), connectors ❸ and ❹ connected; this connects the regulatorl rectifier ❼ and the CDI unit:

- between black/yellow and ground
- between yellow and ground
- between red/black and ground

Multimeter display: 12.5 volts +/- 0.5 volt

NOTE: The black measuring lead of the peak voltage adapter must be applied to the ground.

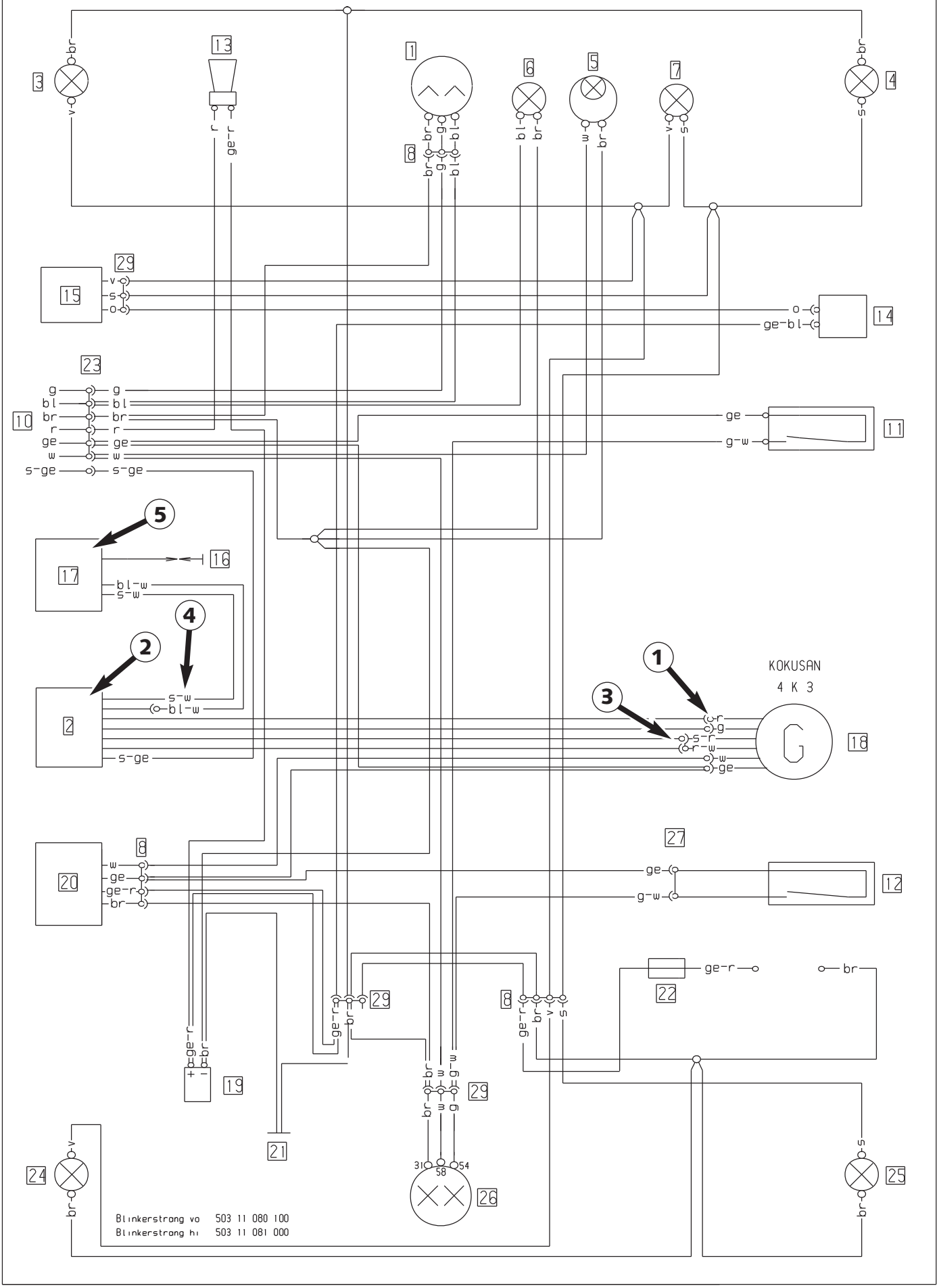


Check **regulator rectifier output voltage** ❽ - two-pin connector ❾ with cable colors red and black/white disconnected, connectors ❸ and ❹ connected (also see circuit diagram on opposite page):

- between red and black/white (ground)

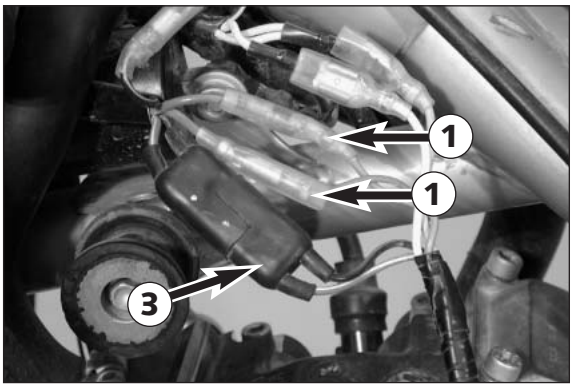
Multimeter display: 13 volts +/- 0.5 volt

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/620 SC '99-2000	vorne 583 11 275 100 hinten 583 11 176 200	DIV	01 03 99 Hei	vo 400-620 SC '99 hi ECIE



STATIC IGNITION VALUES 400/620/625 SC / 660 SMC (KOKUSAN 4K-3, 3C)

Measuring conditions:
- **cold engine**
- **seat, right side trim and tank removed**
- **all connectors and the ground connection in a non-corroding condition, connectors tightly connected**
- **light switch turned off**
- **the gap between the rotor and pulse generator must be set to 0.75 mm**
- **compression release lever pulled**
- **kick the kick starter forcefully at least 5 times for each measurement**



Check the **pulse generator** for an output signal – two one-pin connectors ❶ with green and red cable colors (also see circuit diagram on opposite page):

– Apply the red measuring lead of the peak voltage adapter to the green cable and the black measuring lead to the red cable, disconnect both connectors ❶ to disconnect the CDI unit ❷

Multimeter display: 4.5 volts +/- 0.5 volt

– Same measurement with CDI unit connected

Multimeter display: 3 volts +/- 0.5 volt

NOTE: On 625 SC-models one two-pin connector is used instead of the two one-pin connectors, the colors of the cable are the same.

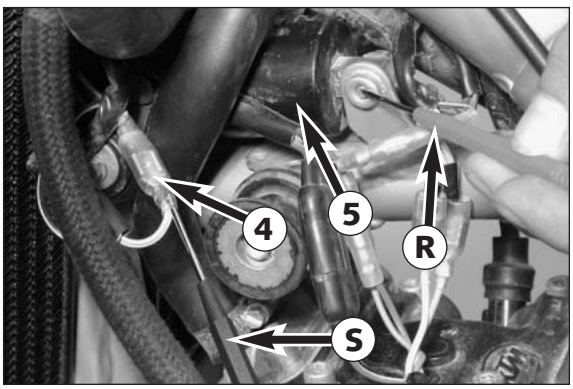
Check the **generator charging coil** for ignition capacitor charge for an output signal– two-pin connector ❸ with black/red and red/white cable colors (also see circuit diagram on opposite page):

– Apply the red measuring lead of the peak voltage adapter to the black/red cable and the black measuring lead to the red/white cable, disconnect connector ❸ to disconnect the CDI unit ❷

Multimeter display: 30 volts +/- 5 volts

– Same measurement with connectors CDI unit connected

Multimeter display: 180 volts +/- 10 volts

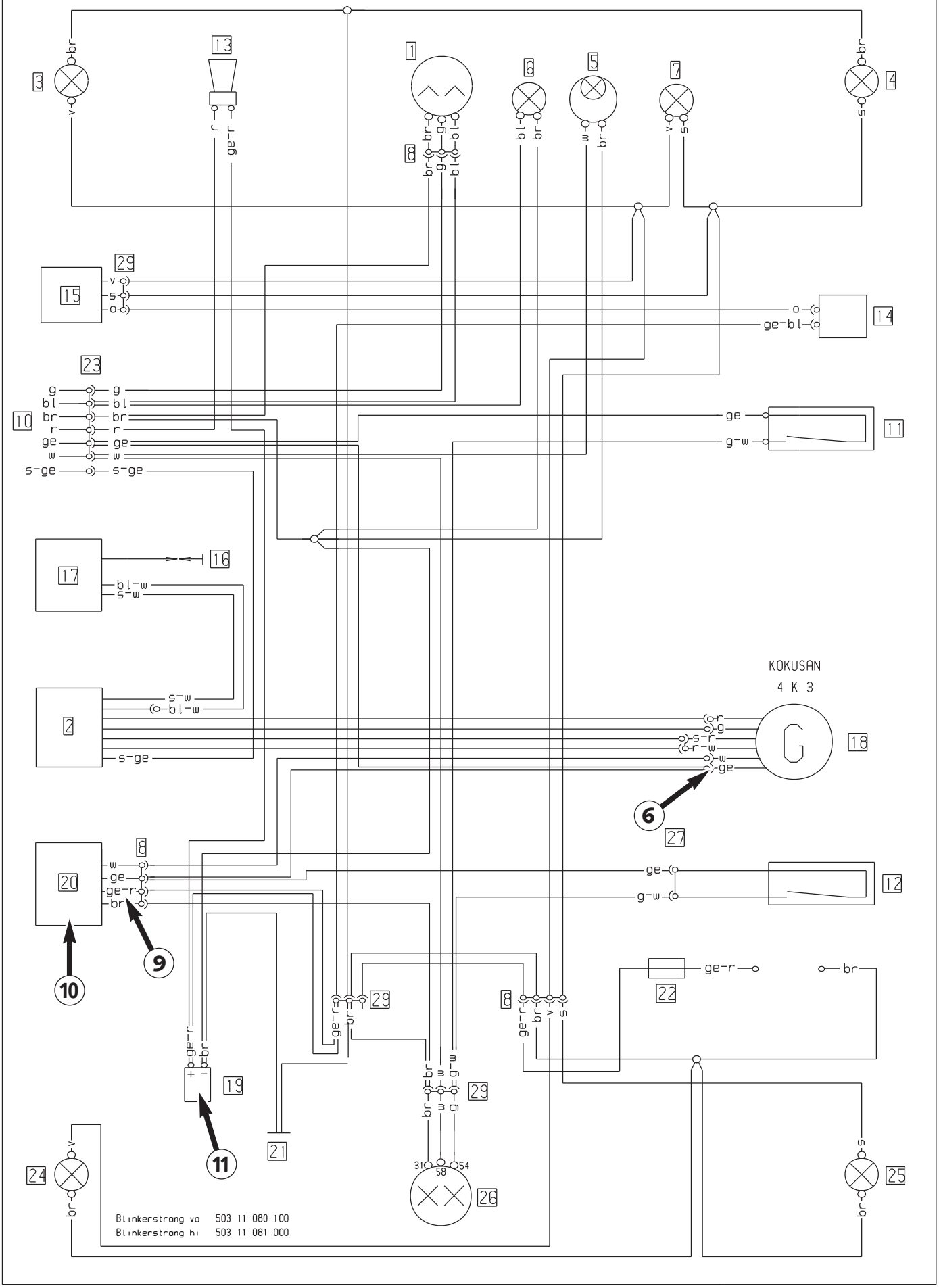


Check the **primary voltage output** ❹ for ignition coil control (also see circuit diagram on opposite page) for output voltage (blue/white cable color):

– Apply the red measuring lead Ⓡ of the peak voltage adapter to ground and the black measuring lead Ⓢ to the blue/white cable, CDI unit ❷ and ignition coil ❺ connected

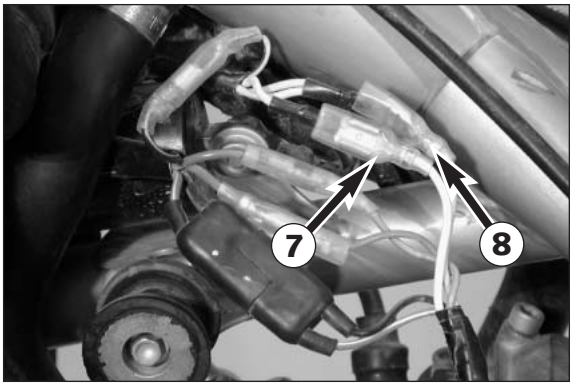
Multimeter display: 180 volts +/- 10 volts

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/620 SC '99-2000	vorne 583 11 275 100 hinten 583 11 176 200	DIV	01 03 99 Hei	vo 400-620 SC '99 hi ECIE



STATIC GENERATOR VALUES 400/620/625 SC / 660 SMC (KOKUSAN 4K-3, 3C)

Measuring conditions:
- **cold engine**
- **seat, right side trim and tank removed**
- **all connectors and the ground connection in a non-corroding condition, connectors tightly connected**
- **light switch turned off**
- **compression release lever pulled**
- **kick the kick starter forcefully at least 5 times for each measurement**



Check the **generator output** ❻ (also see circuit diagram on opposite page) for voltage between the following cable colors:

– between yellow and brown (ground), connector ❼ disconnected

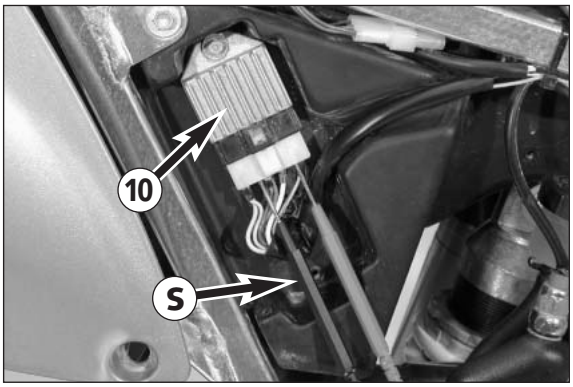
Multimeter display: 15 volts +/- 1 volt

– between white and brown (ground), connector ❽ disconnected

Multimeter display: 19 volts +/- 1 volt

– Repeat both measurements with connector ❼ and ❽ connected. The measured values should be the same.

NOTE: The black measuring lead of the peak voltage adapter must be applied to the ground.

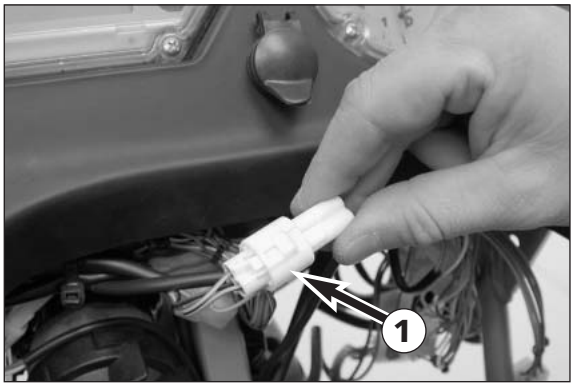


Check **regulator rectifier output voltage** ❾ (also see circuit diagram on opposite page, cable colors yellow/red), regulator rectifier ❿ connected, capacitor ⓫ disconnected:

– between yellow/red and brown (ground)

Multimeter display: 14 volts +/- 1 volt

NOTE:
– The black measuring lead Ⓢ of the peak voltage adapter must be applied to the ground.
– The regulator rectifier ❿ is located on the right behind the side trim.

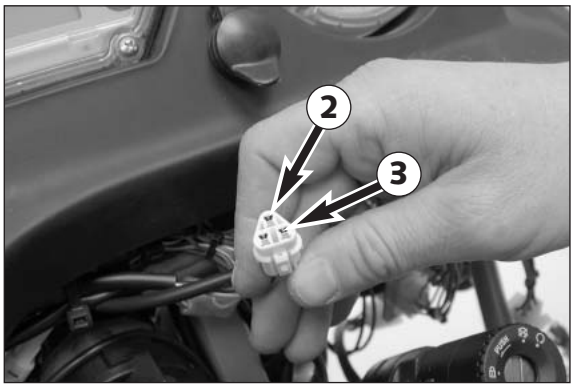


Checking the speedometer sensor and the speedometer (Adventure – from the 2002 model)

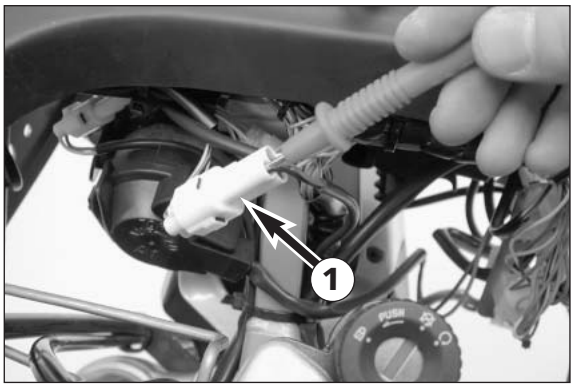
Checking the speedometer:

– Disconnect the connector ❶ from the speedometer.

NOTE: The connector ❶ is located under the cockpit covering.



– Switch on the ignition.
– Briefly connect pins ❷ and ❸ (cable colors black/brown and black/orange) with a cable several times while you observe the speed reading. If the speedometer is functioning correctly, the speed should be indicated.



Checking the speedometer sensor:

NOTE: The measurement must be made with the ignition switched on and the plug and socket connection connected.

– Use a digital multimeter to measure the voltage at the black cable on connector ❶ against the ground.
– Slowly turn the front wheel.
– The measured value should be over 4.5 volts when the wheel is turned or less than 1 volt when the magnet on the front-wheel hub is within the range of the speed sensor.

! CAUTION !

SINCE YOU MUST MEASURE WITH THE CONNECTOR ATTACHED, MAKE SURE TO CAREFULLY PUSH THE MEASURING TIPS ON THE MULTIMETER THROUGH THE SEALING FROM THE CABLE SIDE AND NOT TO DAMAGE ANY PART OF THE CONNECTOR.

FUEL SYSTEM 8

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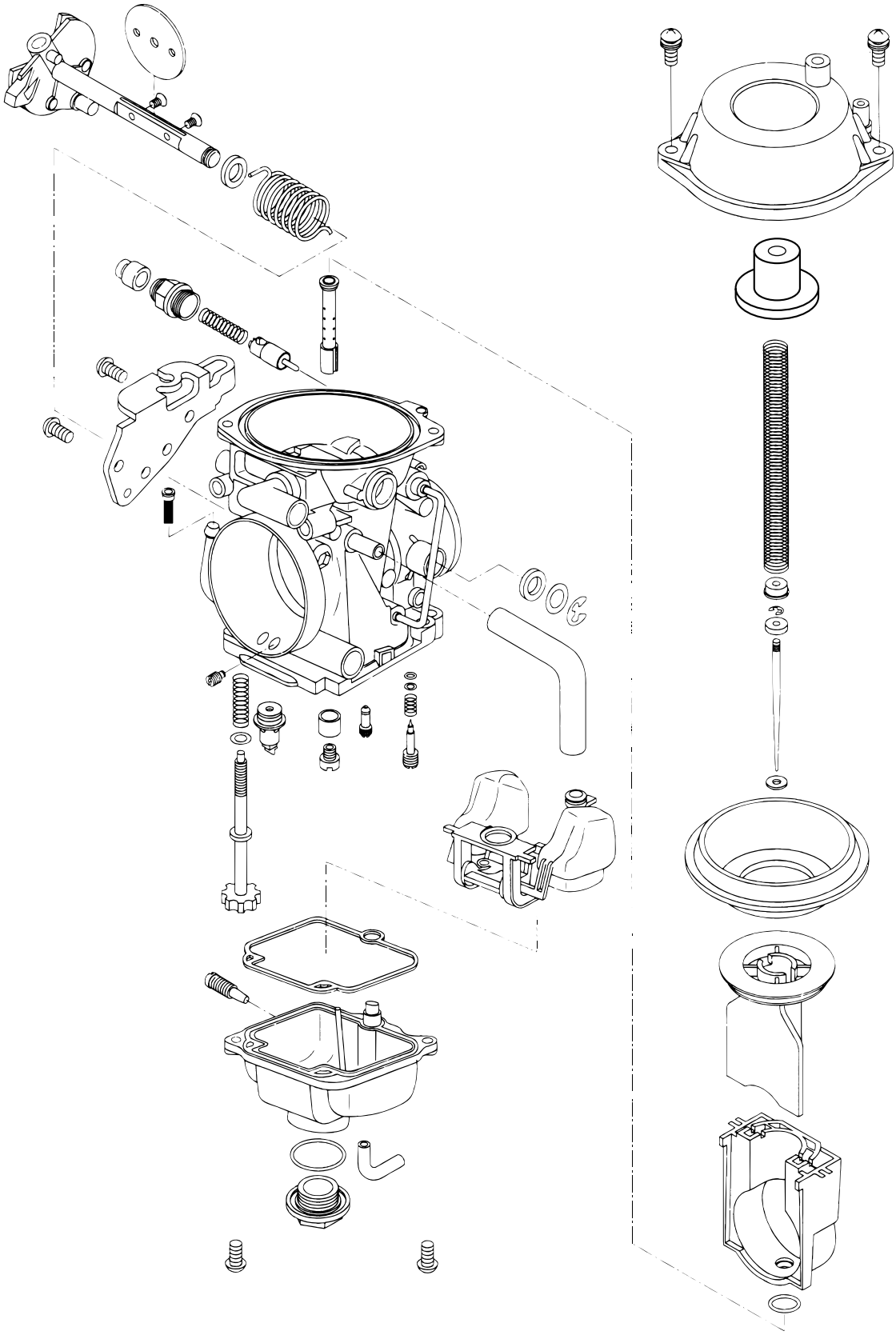
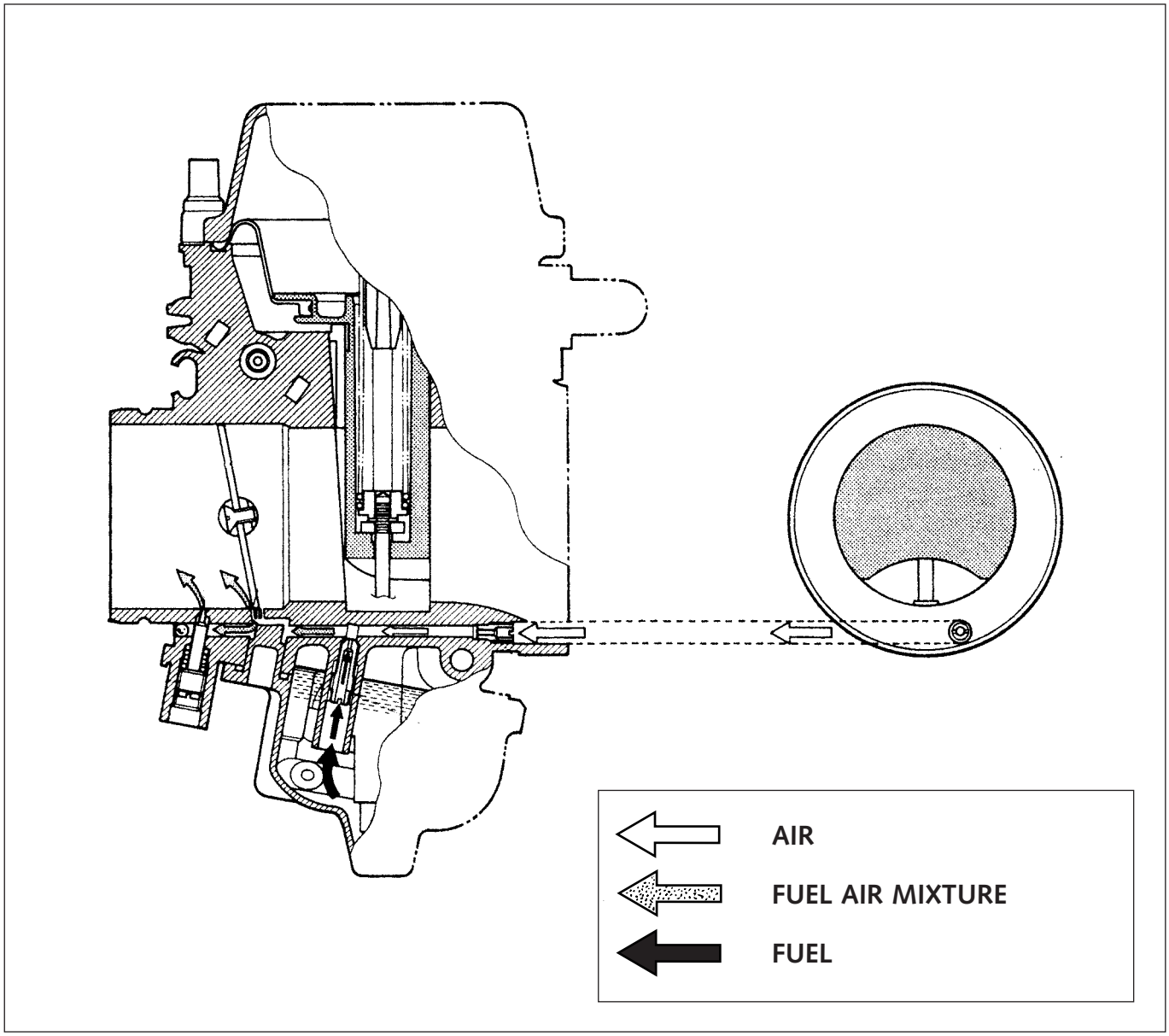
CARBURETOR - MIKUNI BST 40

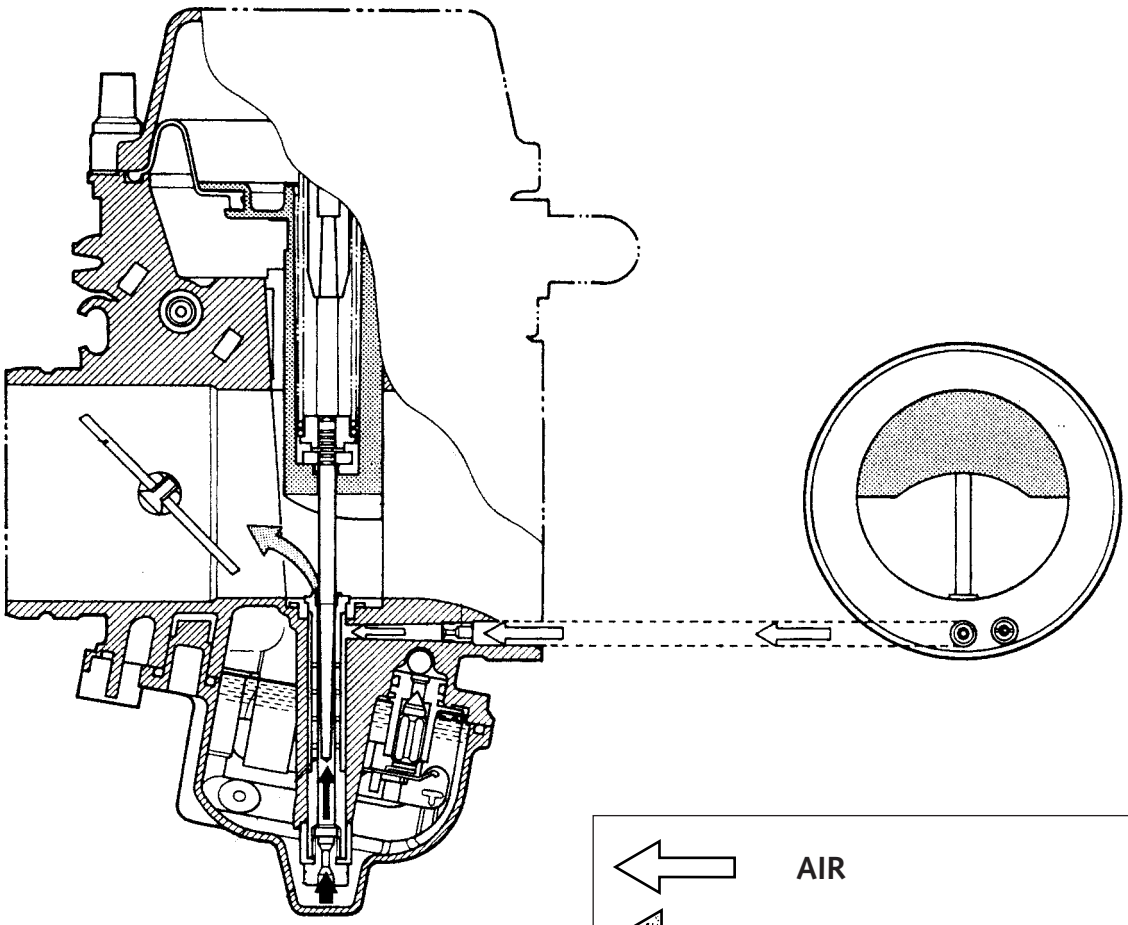




Part-load system (Mikuni BST 40)

The part-load system supplies the engine with fuel while the throttle slide is closed or only slightly opened.

From the float chamber the fuel enters the mixture pipe through the idling jet. There the fuel mixes with the air that flows in through the idling air jet.
Then the fuel air mixture reaches the idle adjusting screw and the bypass bores through the mixture pipe.
A certain amount of the fuel air mixture is sucked into the intake pipe through the bypass bores.
The remaining fuel air mixture is adjusted by the idle adjusting screw and enters the intake pipe through the idling bore.



Full-load system (Mikuni BST 40)

When the throttle valve is opened the engine speed increases and the negative pressure in the venturi pipe grows. The same negative pressure is transferred to the upper side of the slide membrane and pulls the throttle slide upwards.
At the same time the fuel flows from the float chamber through the main jet into the needle jet. There it mixes with the air flowing in through the main air jet. The result is a fuel air mixture.
Negative pressure causes this fuel air mixture to flow through the space between the needle jet and the jet needle into the venturi pipe. There it meets the main air flow sucked in by the engine.

The precise amount of the mixture released is adjusted in the needle jet. The space through which the mixture passes changes depending on the position of the throttle slide.

Throttle slide in top position: large space
Throttle slide in bottom position: small space

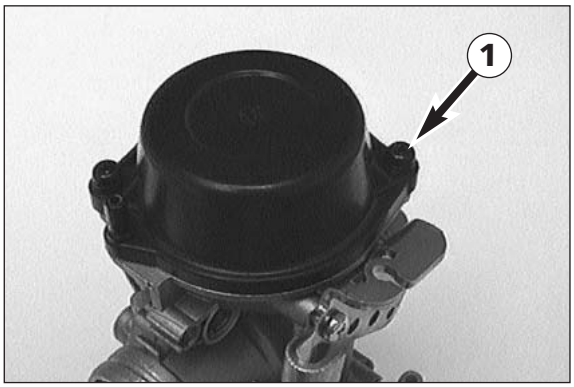
Art.-Nr. 3.206.006 -E

Disassembling the carburetor (Mikuni BST-40)

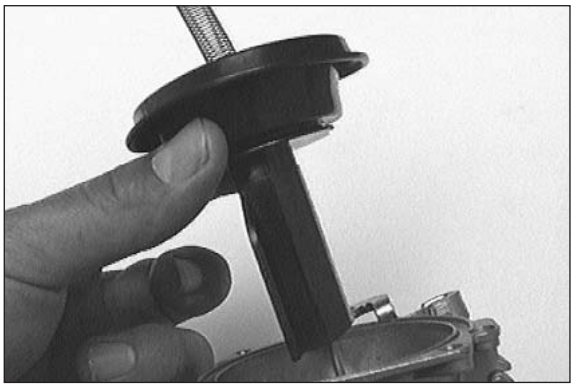
NOTE: Before commencing to disassemble the carburetor make sure that your workplace is clean and large enough to properly arrange all carburetor components before you.

! CAUTION !

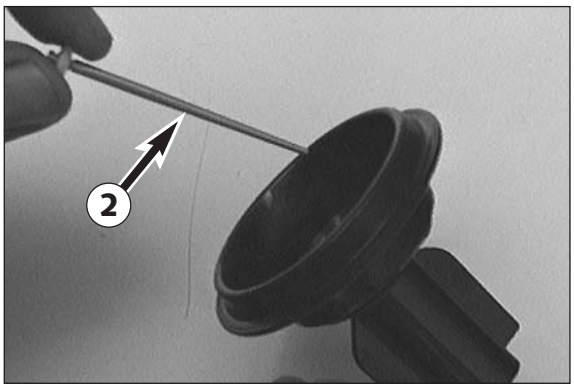
TO PREVENT DAMAGING OF THE SLIDE MEMBRANE DO NOT APPLY COMPRESSED AIR TO CLEAN THE CARBURETOR BEFORE REMOVING THE MEMBRANE.



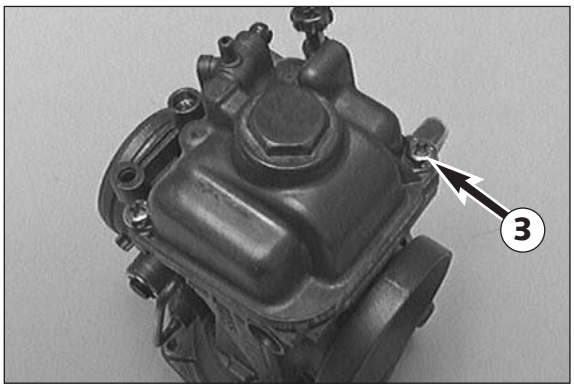
– Remove the two screws ❶ and take off the membrane cover.
– Remove the throttle stop.



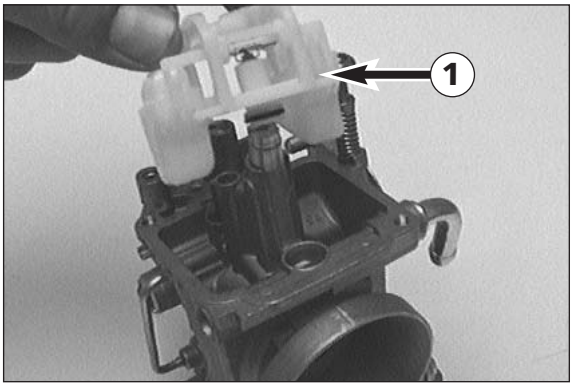
– Take the throttle slide out of the carburetor together with the spring.



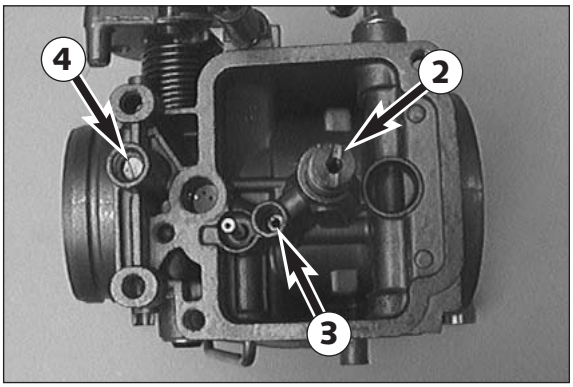
– Pull the jet needle ❷ out of the throttle slide.



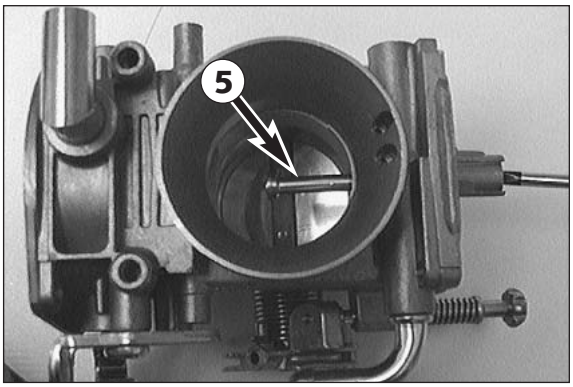
– Remove the 2 screws ❸ and take off the float chamber together with the gasket.



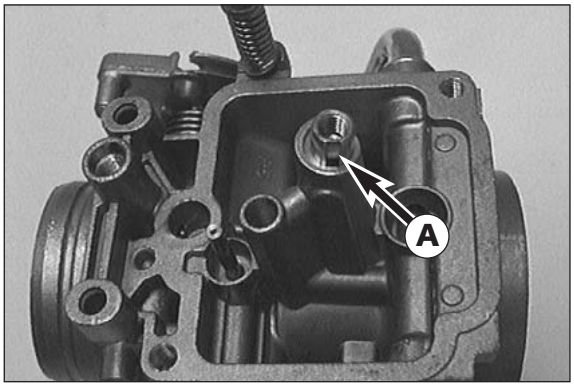
– Take the entire float unit ❶ out of the carburetor.



– Then remove the main jet ❷ together with the distance bushing.
– Remove the idling jet ❸.
– Twist the mixture adjusting screw ❹ clockwise all the way in. Count and write down the number of twists.
  Twist out the mixture adjusting screw and remove it together with the spring, the O-ring and the washer.

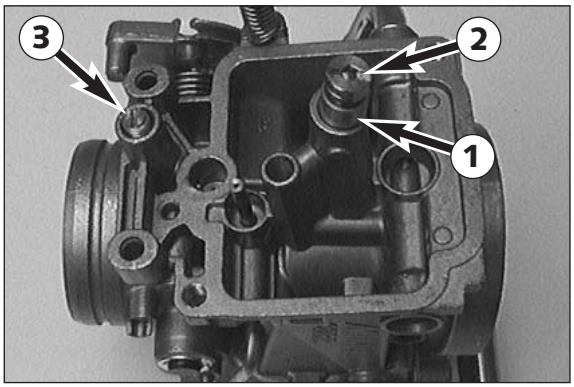


– Use a screwdriver to push the needle jet ❺ upwards out of the carburetor.
– Clean all jets and blow them through with compressed air.
– Clean the carburetor housing and use compressed air to blow through all ducts within the carburetor.

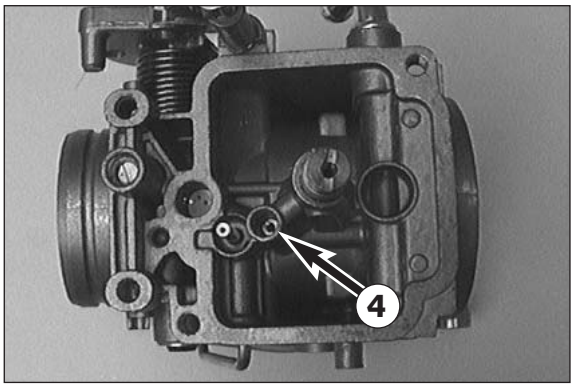


Assembling the carburetor (Mikuni BST 40)

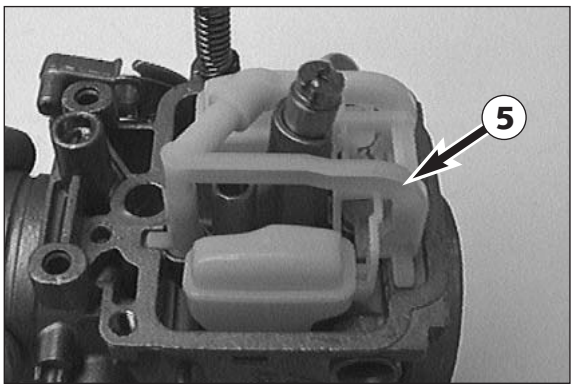
– Put the needle jet into the carburetor, making sure that the flat portion ❶ is located next to the jet needle.



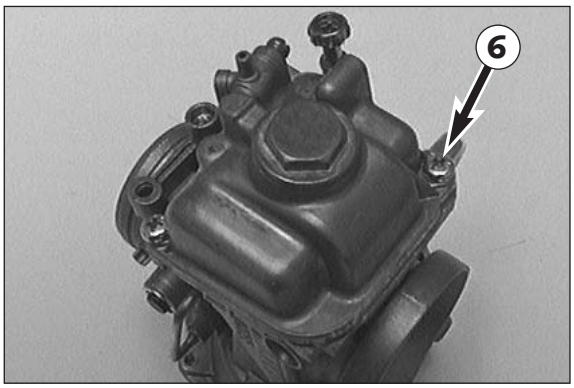
– Put the distance bushing ❶ onto the needle jet and mount the main jet ❷.
– Mount the spring, the washer and a new O-ring on the mixture adjusting screw ❸ and twist the mixture adjusting screw all the way in.
– Then twist the mixture adjusting screw back out, applying the same number of twists you have written down when disassembling the device.



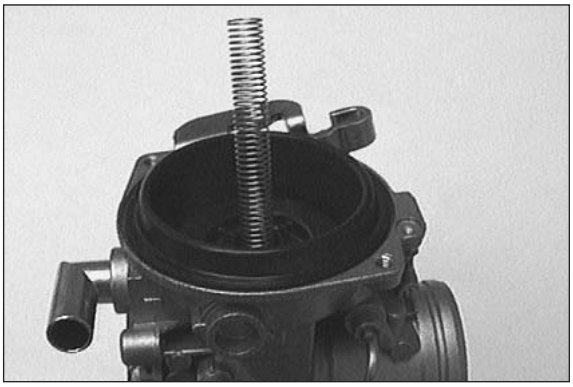
– Mount the idling jet ❹.



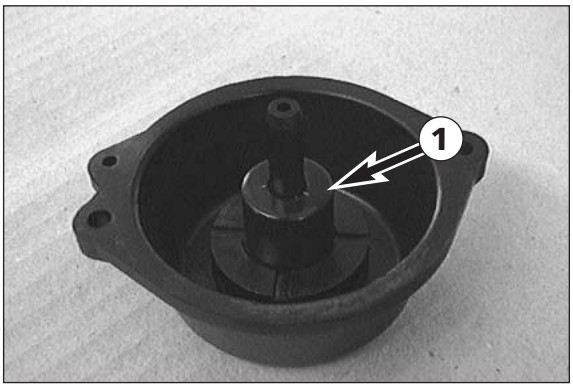
– Insert the float unit ❺ into the carburetor.



– Mount the float chamber together with a new gasket and tighten both screws ❻.

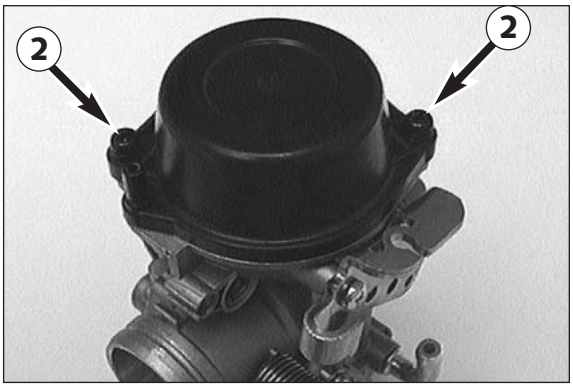


– Mount the throttle slide, making sure that the membrane of the throttle slide rests properly against the round wall of the carburetor housing.
– Insert the spring into the throttle slide.

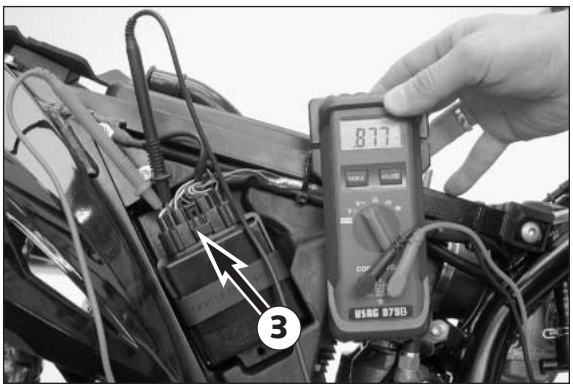


– Put the throttle stop ❶ into the membrane cover.

NOTE: The throttle stop shown in the picture is fitted in a restricted version.



– Mount the membrane cover and fasten it with the two screws ❷.



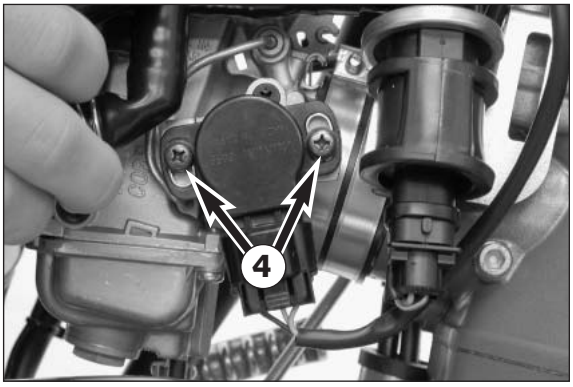
Checking the throttle sensor (from model 2003 on)

NOTE: the adjustment must be made in a mounted condition with the cable connected and the ignition switched on.

– Use a digital multimeter to measure the voltage between the black and yellow cables at the connector ❸ (CDI).

! CAUTION !

SINCE YOU MUST MEASURE WITH THE CONNECTOR ATTACHED, MAKE SURE TO CAREFULLY PUSH THE MEASURING TIPS ON THE MULTIMETER THROUGH THE SEALING FROM THE CABLE SIDE AND NOT TO DAMAGE ANY PART OF THE CONNECTOR.

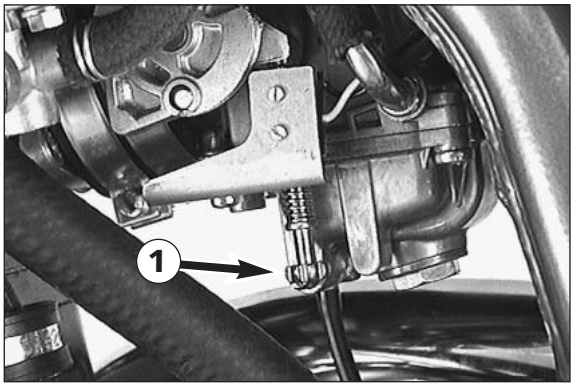


– Reading with closed throttle (neutral position): 0.88 +/- 0,075 volts
– Slowly open the throttle valve with the throttle grip, the measured voltage should increase uniformly up to the full load reading.
– Reading with fully opened throttle grip (full throttle position): 3,88 +/- 0,1 volts.

Adjusting the throttle sensor

– Loosen the screw on the throttle sensor ❹ and turn the throttle sensor until you reach the reading for the neutral position.

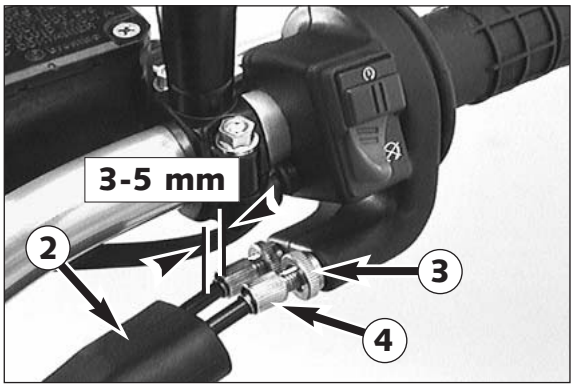
– Tighten the screw on the throttle sensor.



Adjust idling speed

NOTE: Warm up the engine before adjusting the idle speed.

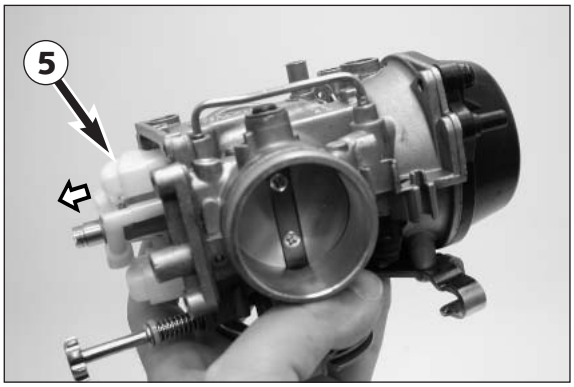
Use the adjusting screw ❶ to adjust the basic position of the throttle valve and, thus, the idle speed. Turning in clockwise direction will increase the idling speed, turning in counterclockwise direction will reduce the idling speed. Normal idling speed 1400 - 1500 rpm.



Adjusting the throttle cable

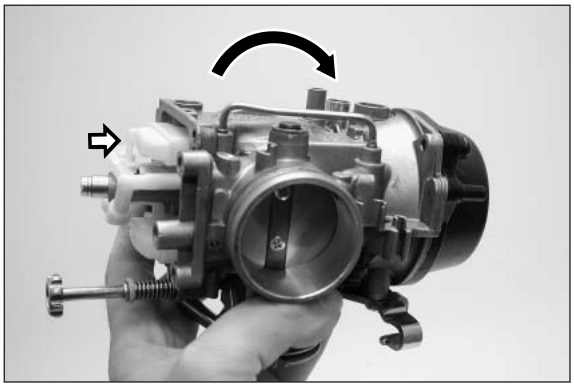
A play of 3-5 mm must at any time be left in the throttle cables. To check the play of the throttle cables, first push back the protective cap ❷ on the throttle twist grip. Now it should be possible to lift the outer sleeve of one of the two cables 3-5 mm off the adjusting screw ❹ before resistance is felt. The play of the throttle cables can be adjusted, if necessary, using the two adjusting screws.
For this purpose, undo counter nut ❸ and turn the adjusting screw until the desired play is achieved. Then tighten the counter nut and replace the protective cap.

After adjusting the throttle cables turn the handlebar all the way to the left and to the right while the engine is still running. The idle speed should not change.



Check float level

Take off the float chamber, press down the float frame and hold carburator as shown in the picture. The float ❺ mooves downwards.

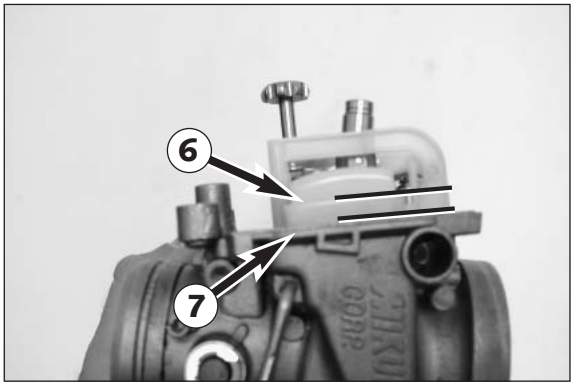


Turn carburator slowly until the float moves towards the carburator. In this position the edge of the float ❻ must be parallel to the sealing surface of the carburator ❼.

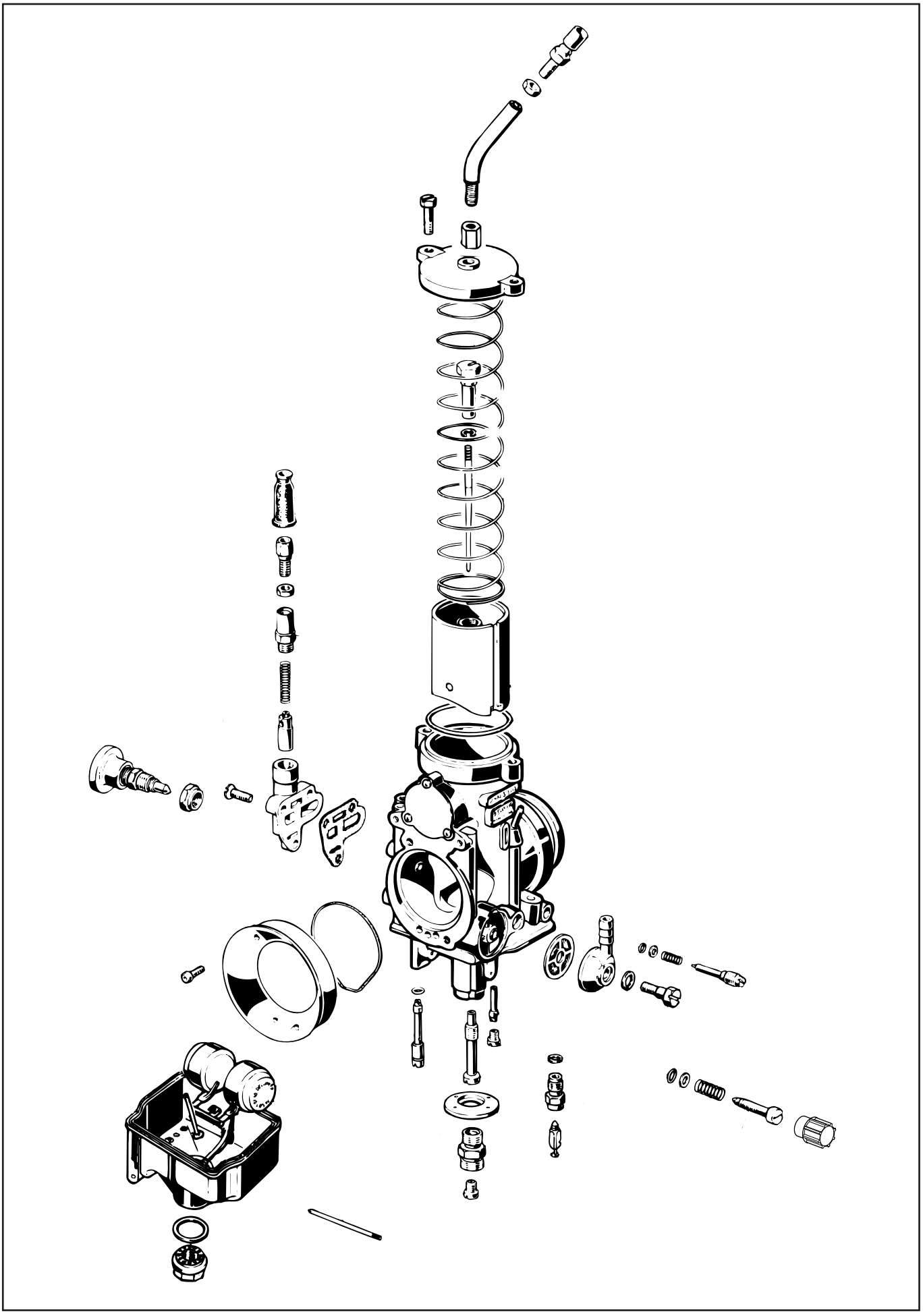
! CAUTION !

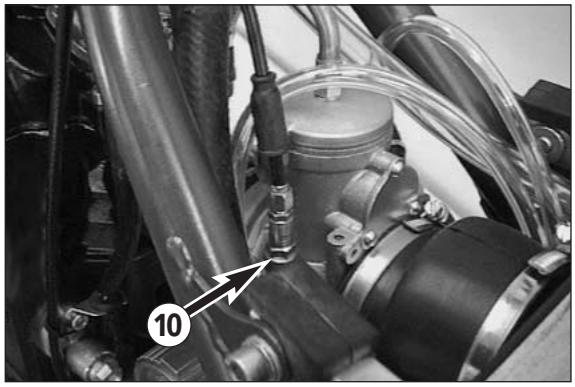
IF YOU HOLD ON TURNING THE CARBURATOR, THE FLOAT WILL PRESS AGAINST THE SPRING OF THE NEEDLE VALVE AND A CORRECT CHECK IS NOT POSSIBLE. IN THAT CASE THE CARBURATOR IS TO BE TURNED BACK AND THE CHECK MUST BE DONE TWICE.

If the two edges are not parallel, correction can be done by bending the lever of the needle valve. At the end a check is necessary again.



CARBURETOR – DELL'ORTO PHM 40 SD

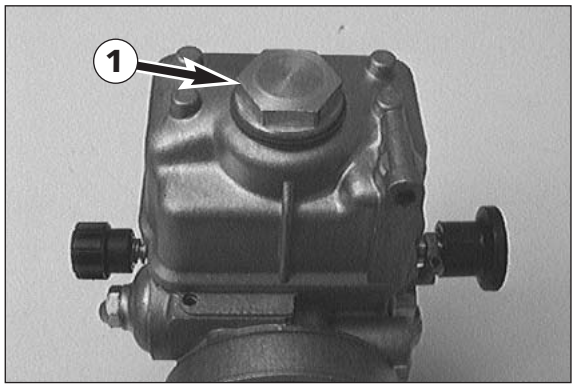




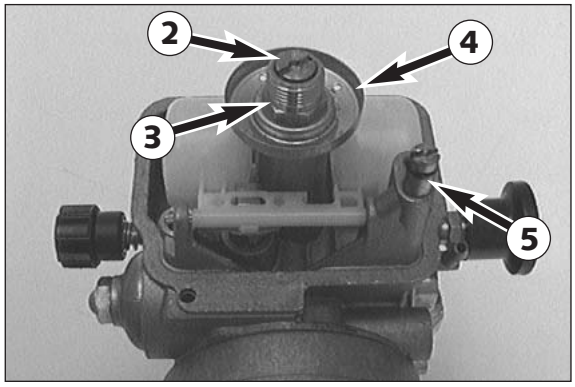
Disassembling the carburetor (Dell'Orto PHM 40 SD)

NOTE: Before commencing to disassemble the carburetor make sure that your workplace is clean and large enough to properly arrange all carburetor components before you.

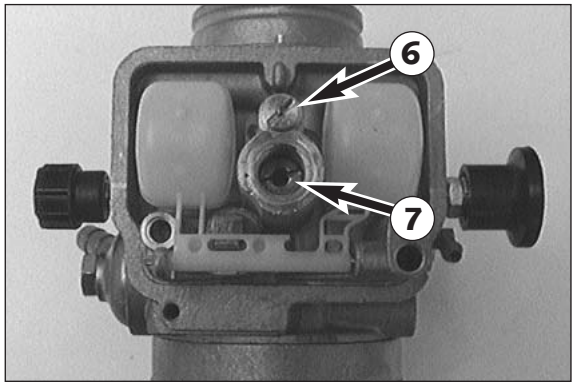
– Remove the two screws and pull the carburetor cover out of the carburetor together with the throttle slide.
– Wrap the throttle slide in a clean piece of cloth and put it onto the air filter box.
– Undo screw ❿ and take the starting piston out of the carburetor.



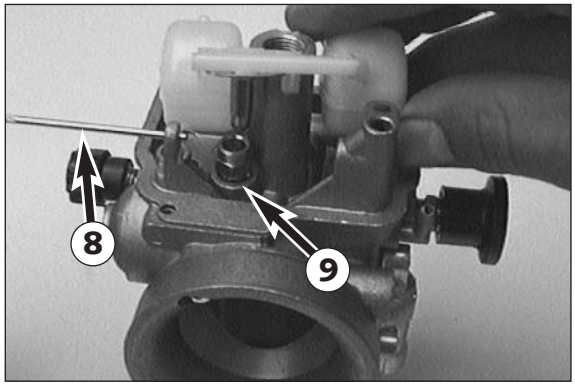
– Remove the plug ❶ together with the seal ring and take off the float chamber.



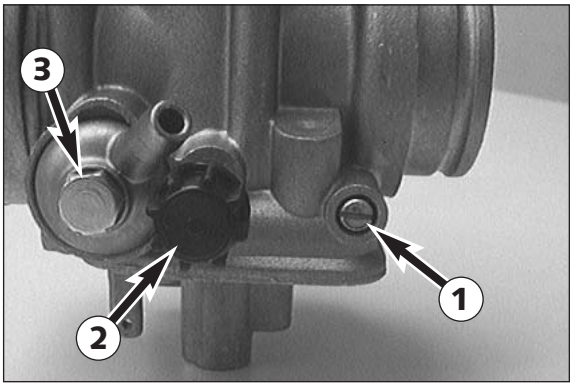
– Remove the main jet ❷, the main jet holder ❸ and the baffle ❹.
– Twist out the starting jet ❺.



– Remove the idling jet ❻ together with the idle mixture pipe below.
– Twist out the needle jet ❼.

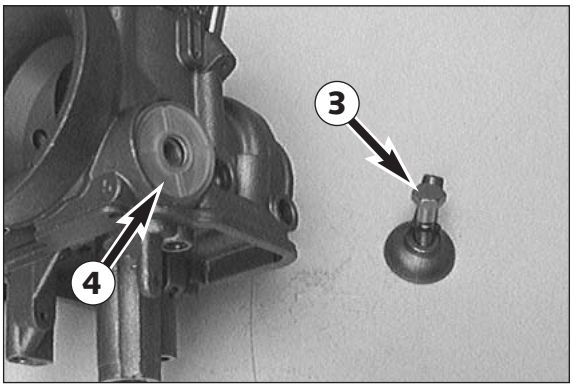


– Pull out the pin ❽ and remove the float.
– Remove the entire needle valve ❾ together with the gasket behind.



– Twist the mixture adjusting screw ❶ clockwise all the way in, counting and writing down the number of twists. Twist out the mixture regulating screw and remove it together with the spring, the washer and the O-ring.

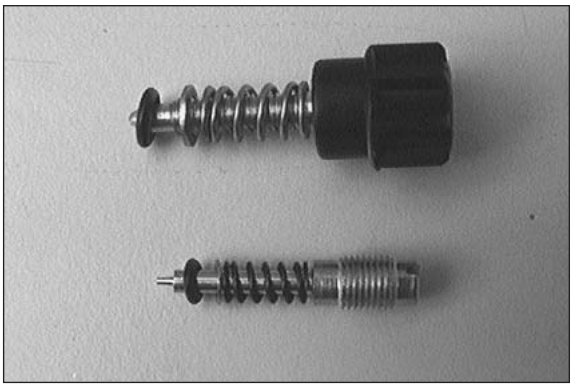
– Twist the adjusting screw ❷ clockwise all the way in, counting and writing down the number of twists. Twist out the adjusting screw and remove it together with the spring, the O-ring and the washer.



– Remove screw ❸, and take off the hose connection together with the fuel filter ❹.

– Clean all jets and other components and blow them through with compressed air.
– Clean the carburetor housing and use compressed air to blow through all ducts within the carburetor.

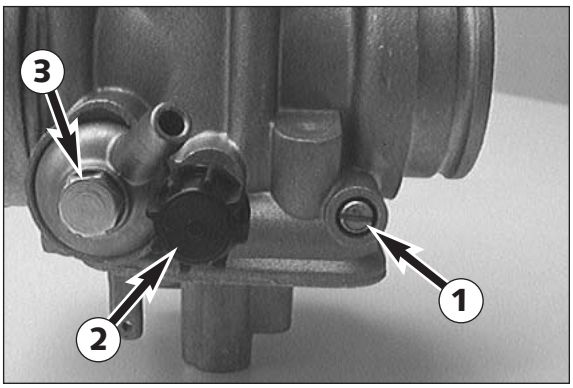
– Check all gaskets for damage and exchange them, if necessary.



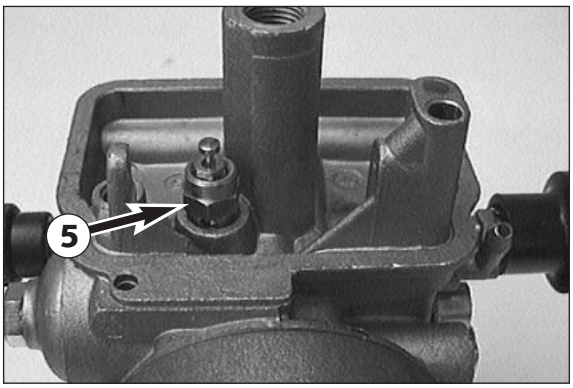
Assembling the carburetor (Dell'Orto PHM 40 SD)

– Put the spring, the washer and the O-ring onto the mixture adjusting screw ❶ and twist the mixture adjusting screw all the way in.
– Twist out the mixture adjusting screw, applying the same number of twists previously written down during the disassembly of the device.

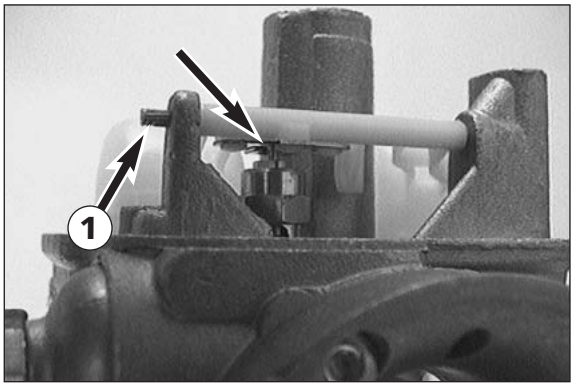
– Put the spring, the washer and the O-ring onto the adjusting screw ❷ and twist the adjusting screw all the way in.
– Twist out the adjusting screw, applying the same number of twists previously written down during the disassembly of the device.



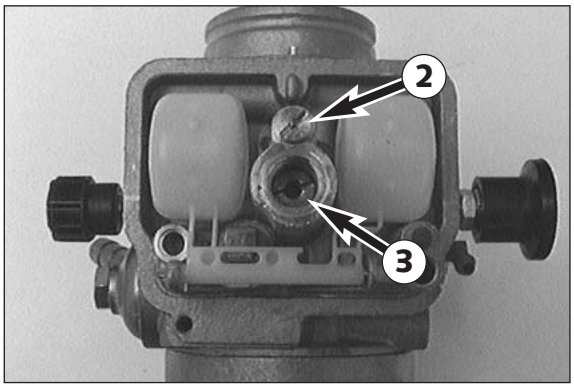
– Insert the fuel filter into the carburetor. Properly position the hose connection and mount screw ❸ together with the seal ring.



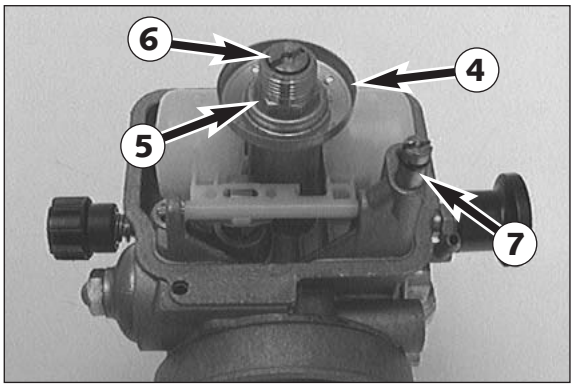
– Insert the seal ring into the carburetor bore and mount the needle valve ❺.



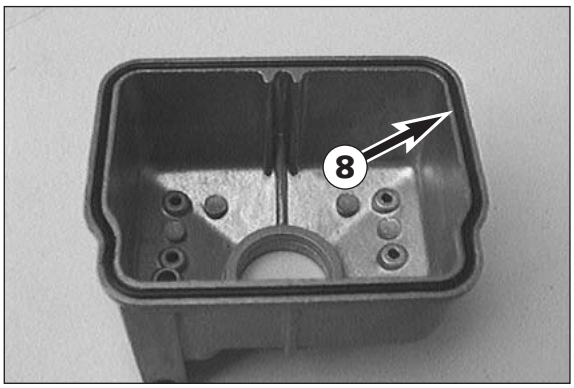
– Position the float and mount the pin ❶. When mounting the float make sure that the needle valve properly engages with the float. Check by moving the float upwards: the needle valve must move with the float.



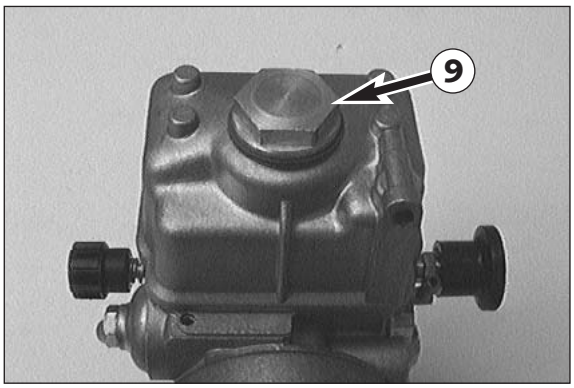
– Mount the idling mixture pipe and the idling jet ❷.
– Mount the needle jet ❸.



– Position the baffle ❹ and fasten it with the main jet holder ❺.
– Mount and tighten the main jet ❻.
– Mount and tighten the starting jet ❼.

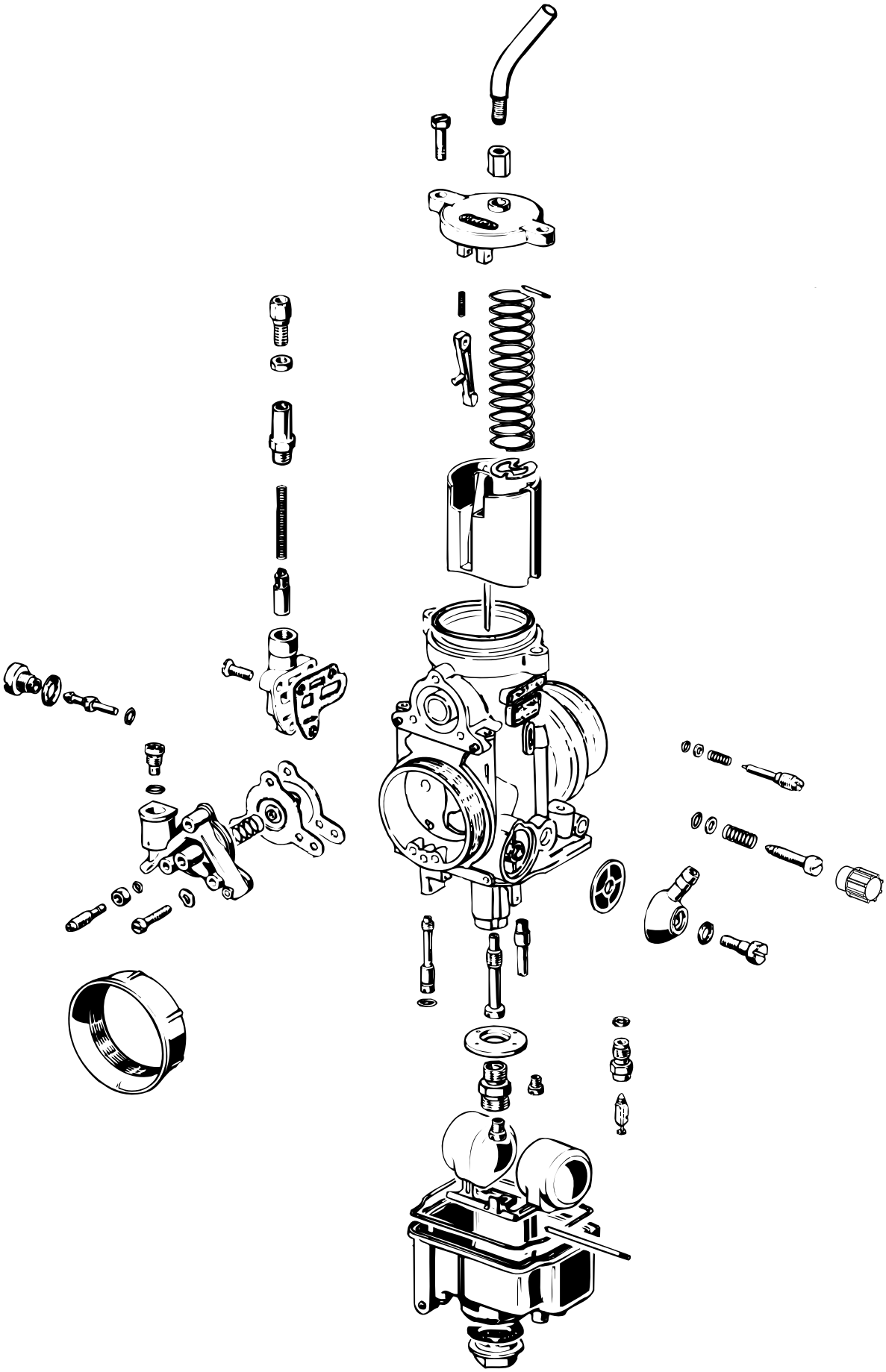


Check the O-ring ❽ in the float chamber for proper fit.



– Position the float chamber and fasten it with the plug ❾. Do not forget the seal ring.

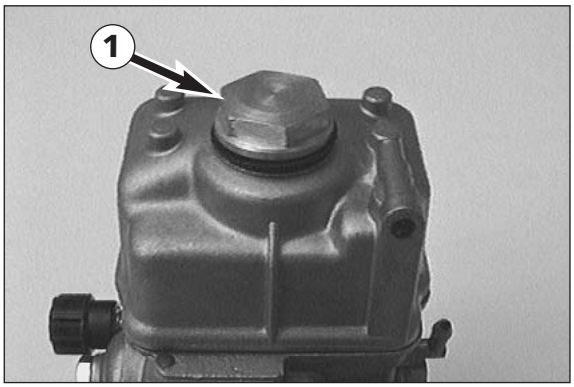
CARBURETOR – DELL'ORTO PHM 38 ND



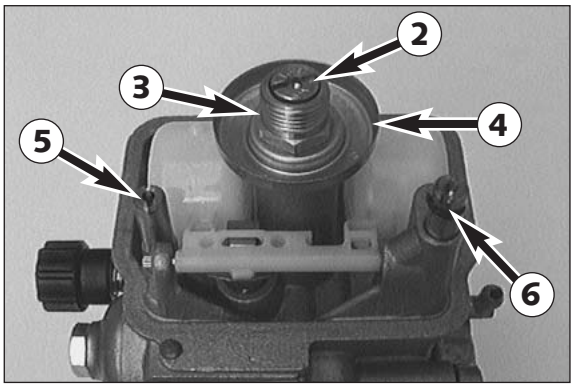
Disassembling the carburetor (Dell'Orto PHM 38 ND)

NOTE: Before commencing to disassemble the carburetor make sure that your workplace is clean and large enough to properly arrange all carburetor components before you.

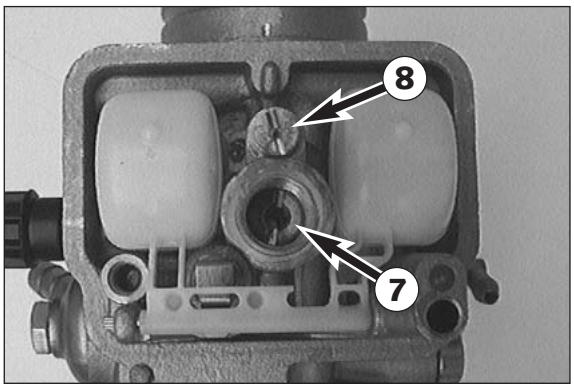
– Remove the two screws and pull the carburetor cover out of the carburetor together with the throttle slide.
– Wrap the throttle slide in a clean piece of cloth and put it onto the air filter box.
– Undo screw and take the starting piston out of the carburetor.



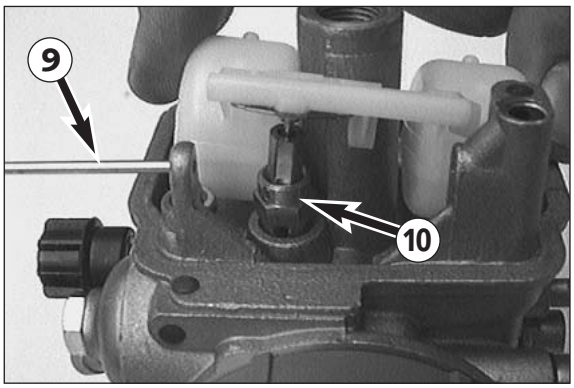
– Remove the plug ❶ together with the seal ring and take off the float chamber.



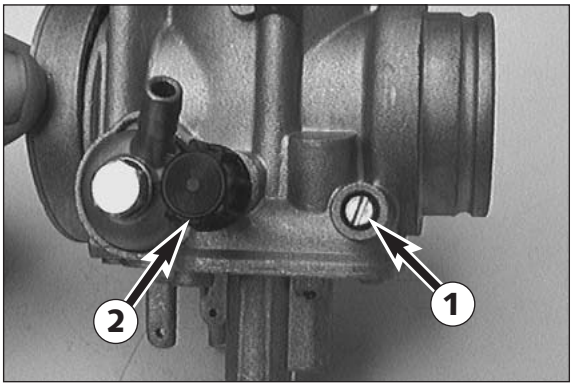
– Remove the main jet ❷, the main jet holder ❸ and the baffle ❹.
– Twist out the starting jet ❻.
– Twist out the return valve ❺.



– Remove the idling jet ❽ together with the idle mixture pipe below.
– Twist out the needle jet ❼.

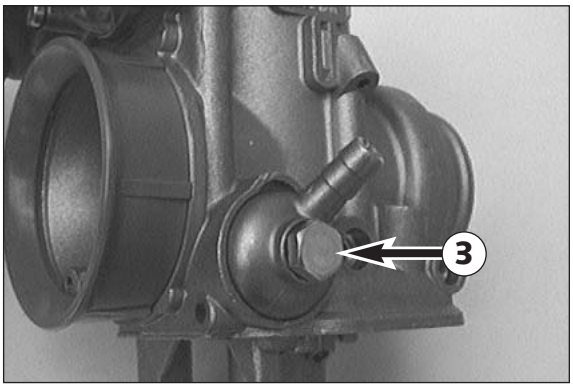


– Pull out the pin ❾ and remove the float.
– Remove the entire needle valve ❿ together with the gasket behind.

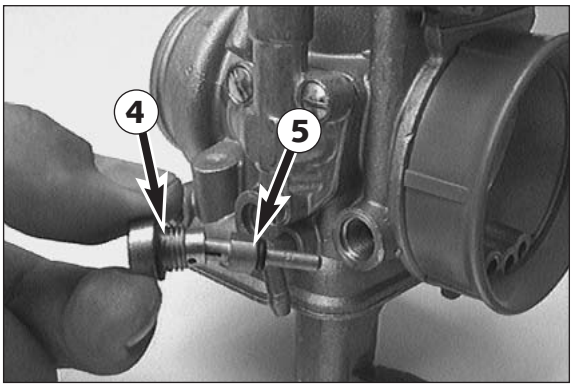


– Twist the mixture adjusting screw ❶ clockwise all the way in, counting and writing down the number of twists. Twist out the mixture regulating screw and remove it together with the spring, the washer and the O-ring.

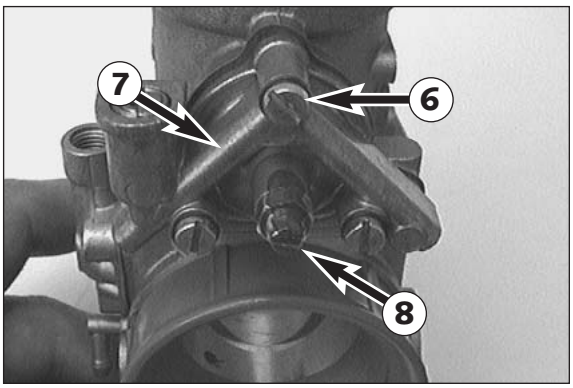
– Twist the adjusting screw ❷ clockwise all the way in, counting and writing down the number of twists. Twist out the adjusting screw and remove it together with the spring, the O-ring and the washer.



– Remove screw ❸, and take off the hose connection together with the fuel filter.



– Twist out the jet holder ❹ together with the accelerating jet ❺.

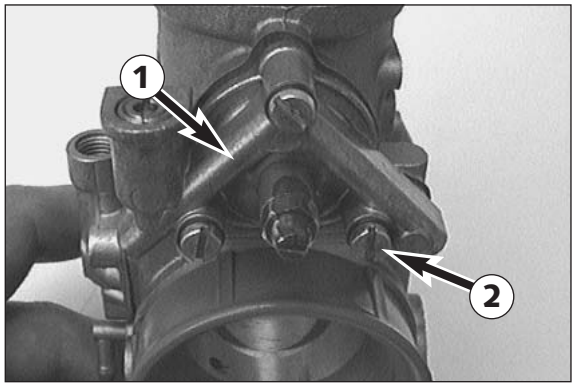


– Remove the 3 screws ❻ and take off the entire pump housing ❼ together with the gasket.

! CAUTION !

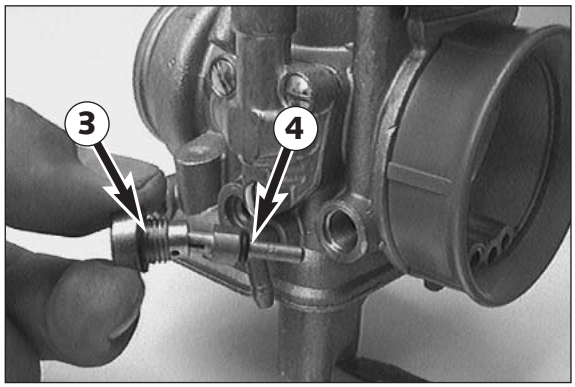
– DO NOT DAMAGE THE MEMBRANE WHEN REMOVING THE PUMP HOUSING. REMOVE THE MEMBRANE BEFORE CLEANING THE PUMP HOUSING.
– ADJUSTMENT SCREW ❽ IS FACTORY CALIBRATED AND MUST NOT BE TURNED.

– Clean all jets and other components and blow them through with compressed air.
– Clean the carburetor housing and use compressed air to blow through all ducts within the carburetor.
– Check all gaskets for damage and exchange them, if necessary.

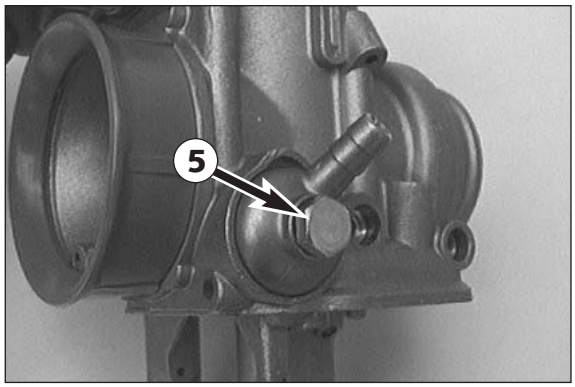


Assembling the carburetor (Dell'Orto PHM 38 ND)

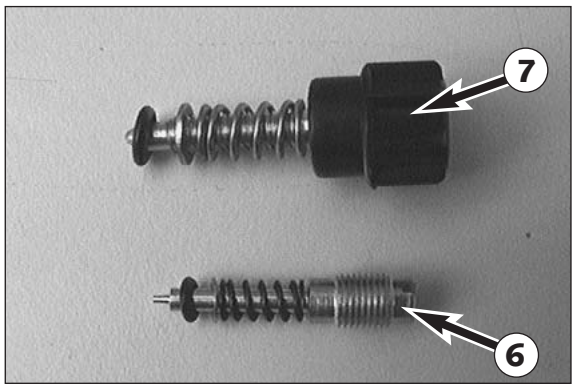
– Position the pump housing ❶ together with the gasket and fasten them with the 3 screws. Make sure that the membrane is properly positioned in the pump housing.



– Put the seal ring onto the jet holder ❸ and mount the jet holder together with the accelerating jet ❹. The flat section of the accelerating jet must face backwards.

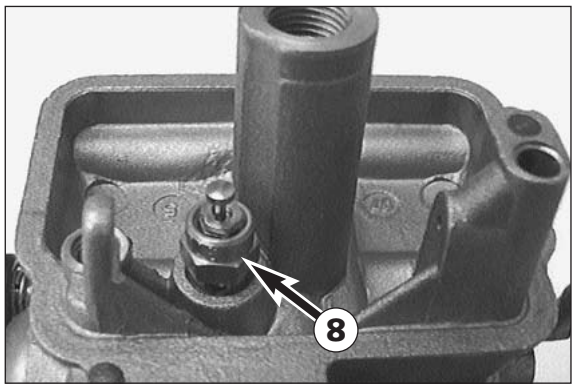


– Insert the fuel filter into the carburetor. Position the hose connection and mount screw ❺ together with the seal ring.

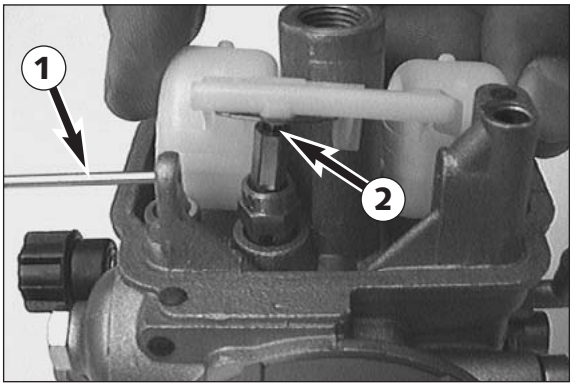


– Put the spring, the washer and the O-ring onto the mixture adjusting screw ❻ and twist the mixture adjusting screw all the way in.
– Twist out the mixture adjusting screw, applying the same number of twists previously written down during the disassembly of the device.

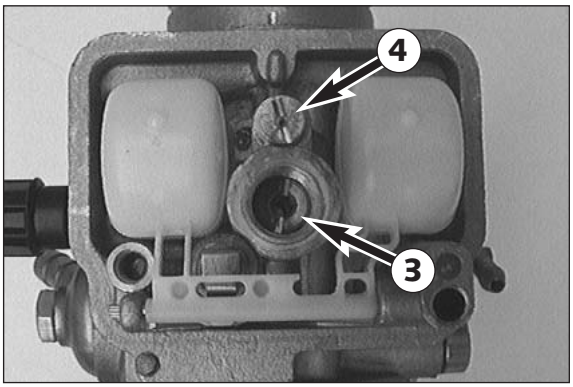
– Put the spring, the washer and the O-ring onto the adjusting screw ❼ and twist the adjusting screw all the way in.
– Twist out the adjusting screw, applying the same number of twists previously written down during the disassembly of the device.



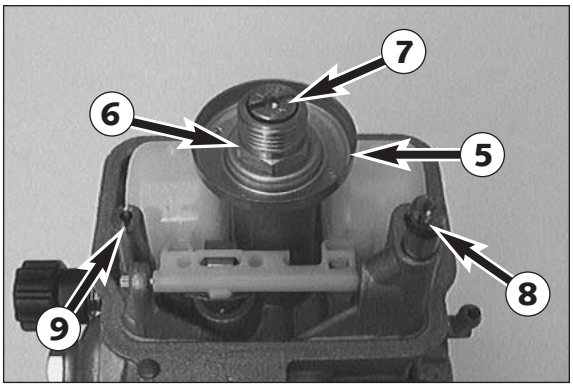
– Insert the seal ring into the carburetor bore and mount the needle valve ❽.



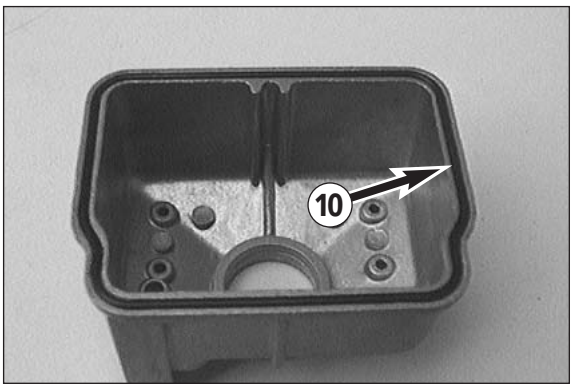
– Position the float and mount the pin ❶. When mounting the float make sure that the needle ❷ valve properly engages with the float. Check by moving the float upwards: the needle valve must move with the float.



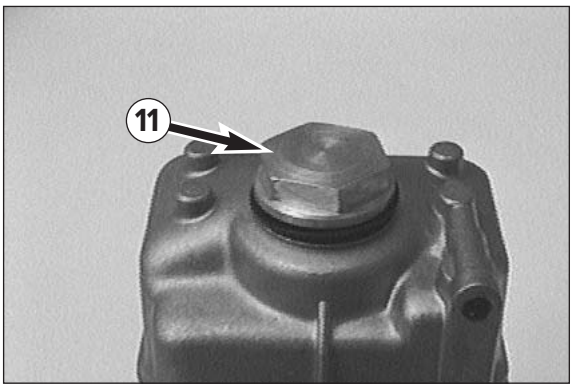
– Mount the idling mixture pipe and the idling jet ❹.
– Mount the needle jet ❸.



– Position the baffle ❺ and fasten it with the main jet holder ❻.
– Mount and tighten the main jet ❼.
– Mount and tighten the starting jet ❽.
– Mount the return valve ❾.

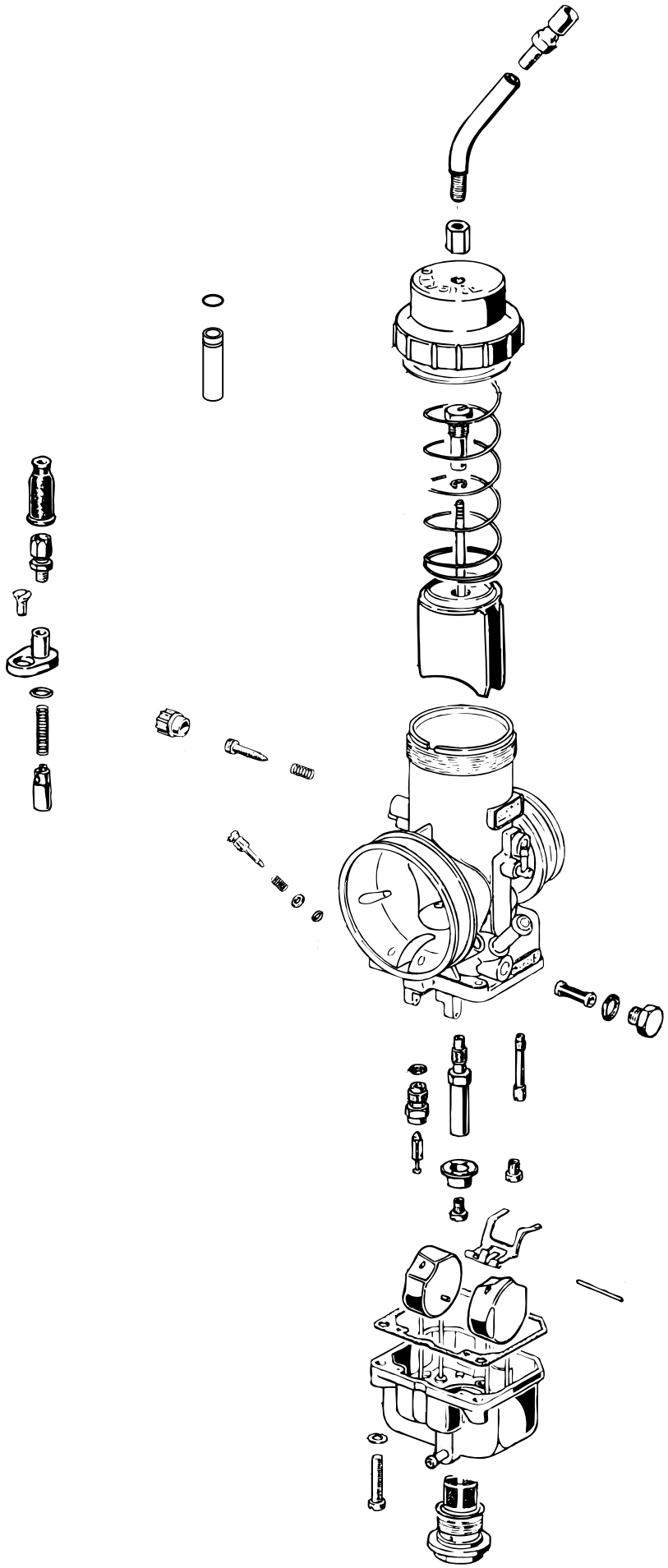


Check the O-ring ❿ in the float chamber for proper fit.



– Position the float chamber and fasten it with the plug ⓫. Do not forget the seal ring.

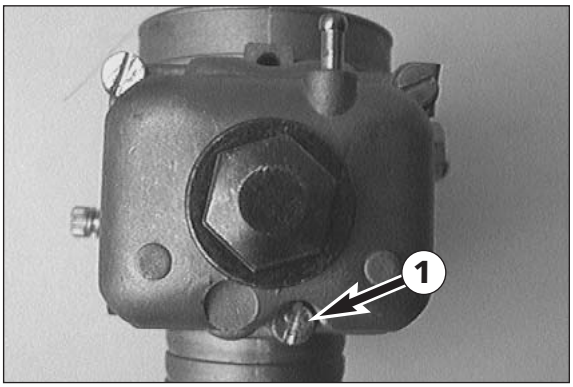
CARBURETOR – DELL'ORTO VHSB 38 QS



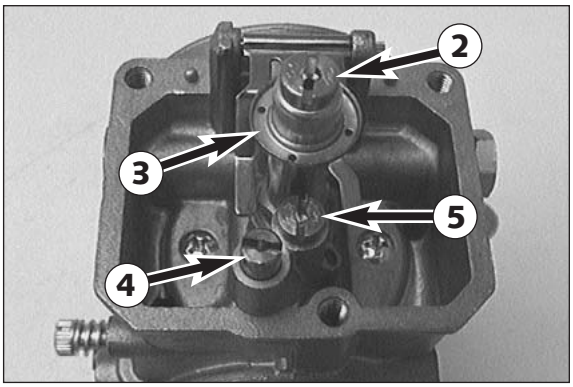
Disassembling the carburetor (Dell'Orto VHSB 38 QS)

NOTE: Before commencing to disassemble the carburetor make sure that your workplace is clean and large enough to properly arrange all carburetor components before you.

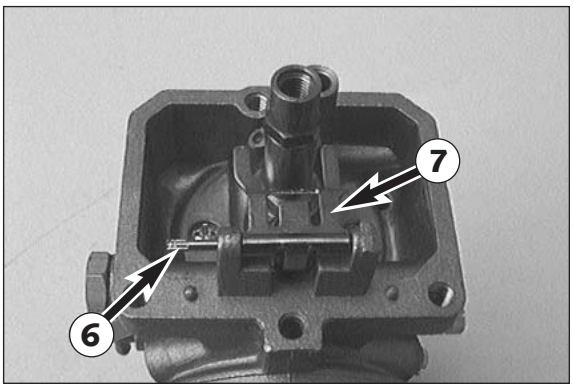
– Open the cap and pull the carburetor cover out of the carburetor together with the throttle slide.
– Wrap the throttle slide in a clean piece of cloth and put it onto the air filter box.
– Undo the screw and pull the entire cold-starting device out of the carburetor.



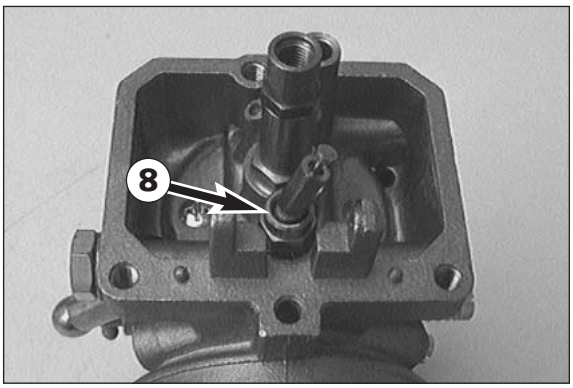
– Remove the three screws ❶ and take off the float chamber together with the gasket.
– Take the two floats out of the carburetor.
– Take the perforated bushing off the baffle.



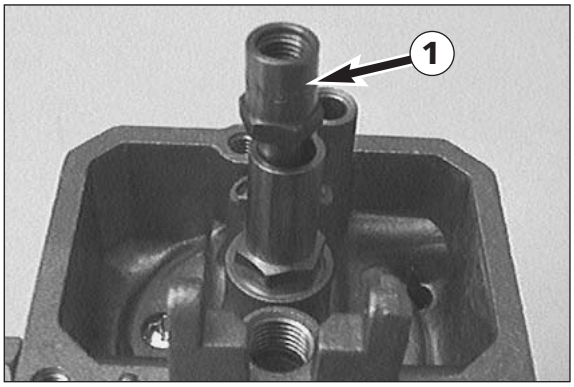
– Remove the main jet ❷ and the baffle ❸.
– Twist out the starting jet ❹ and the idling jet ❺.



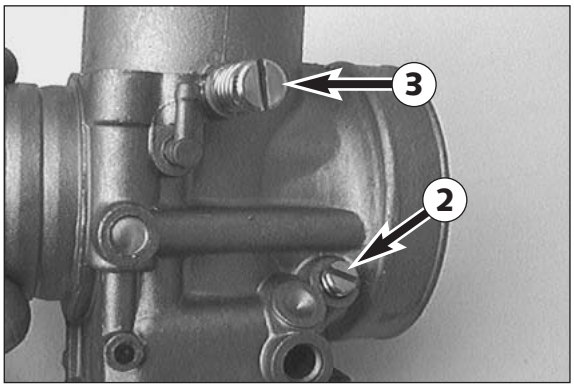
– Pull out pin ❻ and remove the float arm ❼.



– Remove the entire needle valve ❽ together with the seal ring behind.

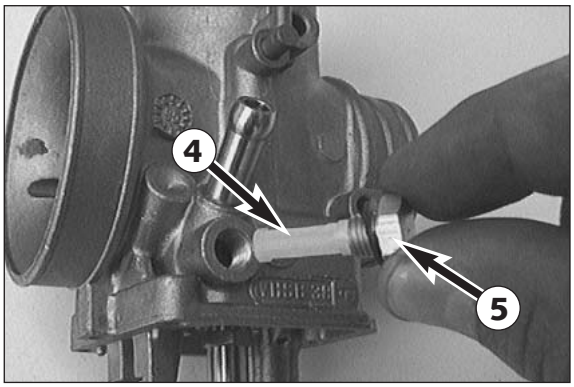


– Twist out the needle jet ❶.



– Twist the mixture adjusting screw ❷ clockwise all the way in, counting and writing down the number of twists. Twist out the mixture regulating screw and remove it together with the spring, the washer and the O-ring.

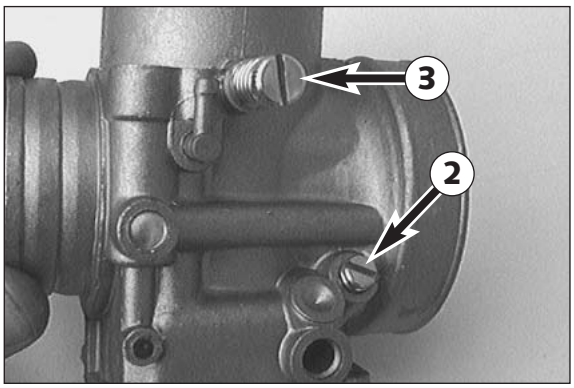
– Twist the adjusting screw ❸ clockwise all the way in, counting and writing down the number of twists. Twist out the adjusting screw and remove it together with the spring.



– Remove plug ❺ together with the seal ring and take off the fuel filter ❹.

– Clean all jets and other components and blow them through with compressed air.
– Clean the carburetor housing and use compressed air to blow through all ducts within the carburetor.

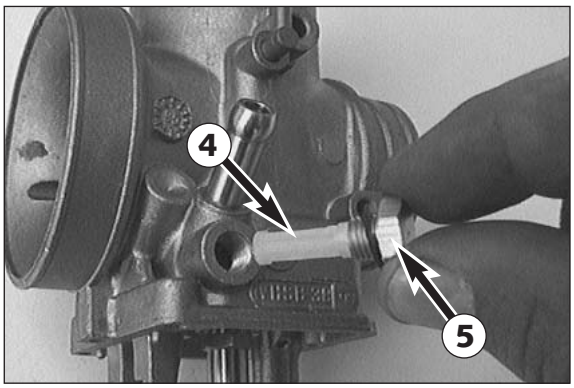
– Check all gaskets for damage and exchange them, if necessary.



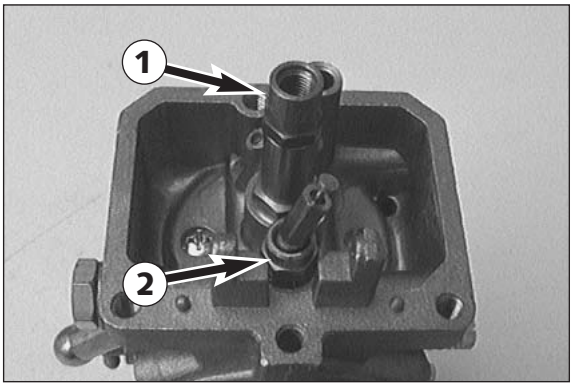
Assembling the carburetor (VHSB 38 QS)

– Put the spring, the washer and the O-ring onto the mixture adjusting screw ❷ and twist the mixture adjusting screw all the way in.
– Twist out the mixture adjusting screw, applying the same number of twists previously written down during the disassembly of the device.

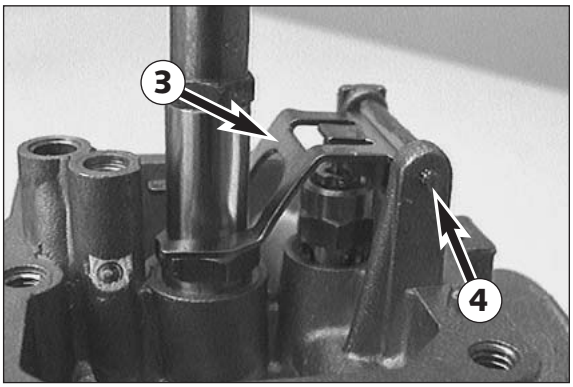
– Put the spring, the washer and the O-ring onto the adjusting screw ❸ and twist the adjusting screw all the way in.
– Twist out the adjusting screw, applying the same number of twists previously written down during the disassembly of the device.



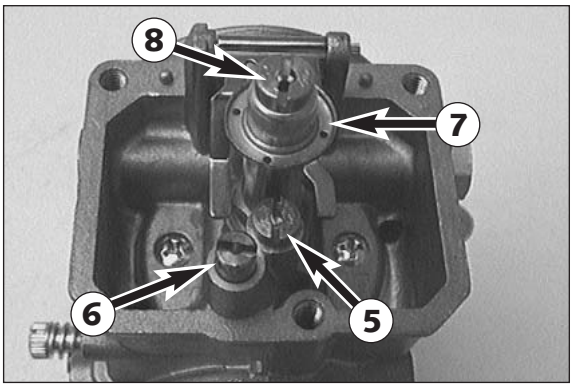
– Insert the fuel filter ❹ into the plug ❺ and mount the plug together with the seal ring.



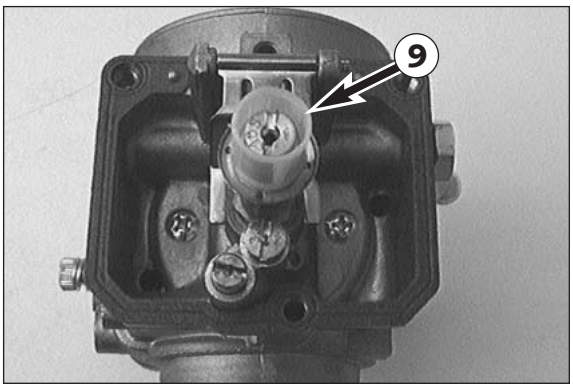
– Mount the needle jet ❶.
– Insert the seal ring into the carburetor bore and mount the needle valve ❷.



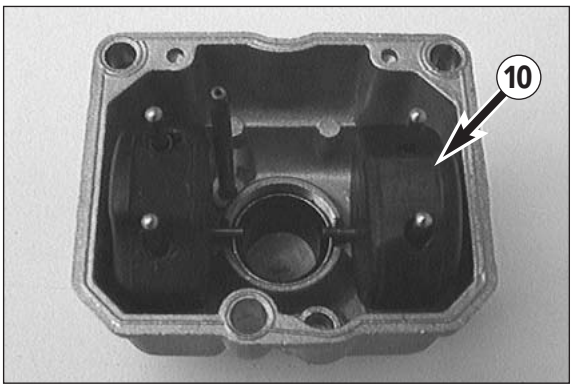
– Position the float arm ❸ and mount pin ❹.



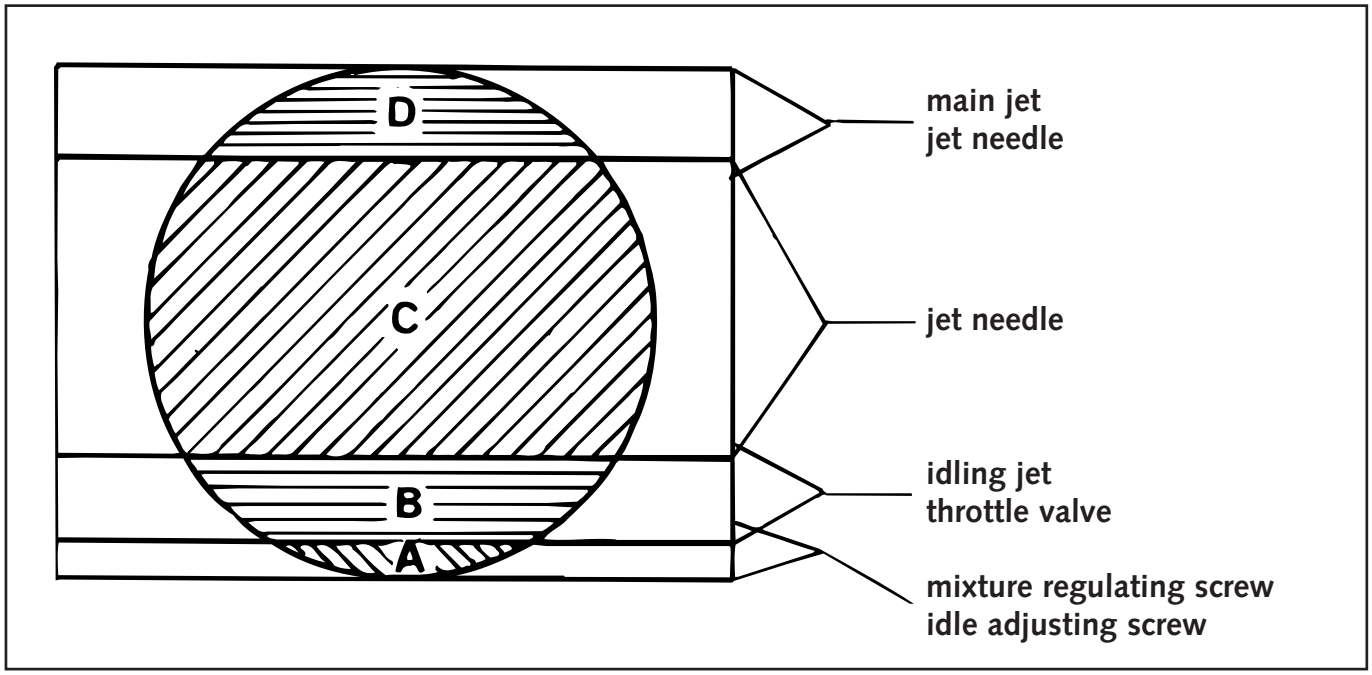
– Mount the idling jet ❺ and the starting jet ❻.
– Position the baffle ❼ and fasten it with the main jet ❽.



– Put the perforated bushing ❾ onto the baffle and mount the gasket.



– Insert the two floats ❿ into the float chamber and mount the float chamber.



Idling range – A

Operation with closed throttle valve. This range is influenced by the position of the air control screw ❶ and the idle adjusting screw ❷. Idling adjustment of the carburetor strongly affects the engine's starting behavior. That is, an engine whose idling speed is adjusted correctly will be easier to start than one whose idling speed has not been adjusted correctly.

The throttle stop screw is used to adjust the basic position of the throttle. The mixture control screw is used to control the idle mixture which arrives at the engine via the idle system. Turning it clockwise will reduce the amount of gasoline (lean mixture), turning it counterclockwise will increase the amount of gasoline (rich mixture).

TO ADJUST IDLING CORRECTLY, PROCEED AS FOLLOWS:

1 Turn in mixture control screw up to the stop, and turn it back out by 1.5 turns
2 Warm up the engine
3 Use throttle stop screw to adjust normal idling speed (1400-1500 r.p.m.)
4 Turn mixture control screw slowly clockwise until idling speed starts to decrease. Memorize this position, and turn mixture control screw slowly counterclockwise until the idling speed will decrease again. Adjust the point of the highest idling speed between these two positions. (The highly competitive user will make his adjustment 1/4 turn leaner because his engine will heat up more in competitive use).

   NOTE: If you fail to obtain a satisfying result by following the procedure described above, an incorrectly dimensioned idling nozzle may be the cause. In case:
   a) the mixture control screw has been screwed in up to the stop without causing any change in rotational speed, a smaller idling jet has to be installed;
   b) the engine dies when the mixture control screw is still open by 2 turns, a larger idling jet needs to be selected;
   Naturally, in cases of jet changes, you have to start your adjusting work from the beginning.
5 Now, use the slide stop screw to adjust the desired idling speed
6 In cases of greater changes in outside temperature and extremely different altitudes, the idling speed should be readjusted.

Opening up – B

Engine behavior when the throttle opens. The idle jet and the shape of the throttle valve influences this range. If, despite good idling-speed and part-throttle setting, the engine sputters when the throttle is fully opened and develops its full power not smoothly but suddenly at high engine speeds, the mixture to the carburetor will be too rich, the fuel level too high or the float needle is leaking.

Part-throttle range – C

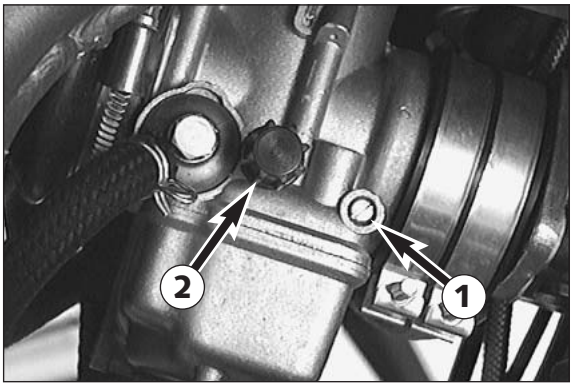
Operation with partly open throttle valve. This range is only influenced by the jet needle (shape and position). The optimum part-throttle setting is controlled by the idling setting in the lower range and by the main jet in the upper range.

Full throttle range – D

Operation with the throttle fully open (flat out). This range is influenced by the main jet and the jet needle. If the porcelain of the new spark plug is found to have a very bright or white coating after a short distance of riding flat out, a larger main jet is required. If the porcelain is dark brown or black with soot the main jet must be replaced by a smaller one.

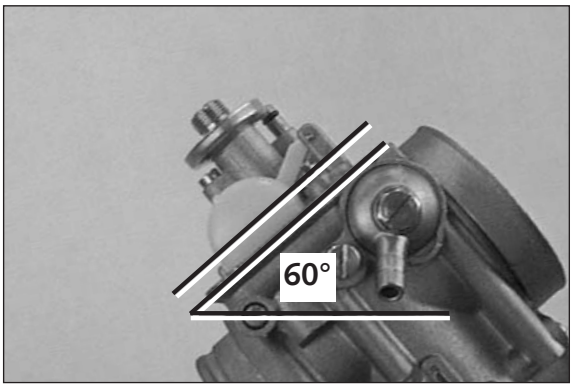
Basic information on carburetor wear

As a result of engine vibrations, throttle valve, jet needle, and needle jet are subjected to increased wear. This wear may cause carburetor malfunction (e.g., overly rich mixture). Therefore, these parts should be replaced after 10000 kilometers (6000 miles).



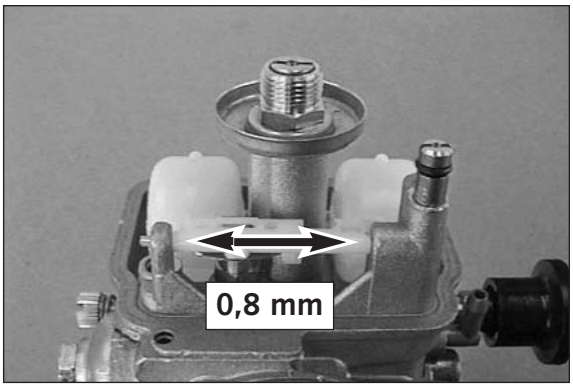
Mixture too rich:
Too much fuel in proportion to air

Mixture too lean:
Not enough fuel in proportion to air



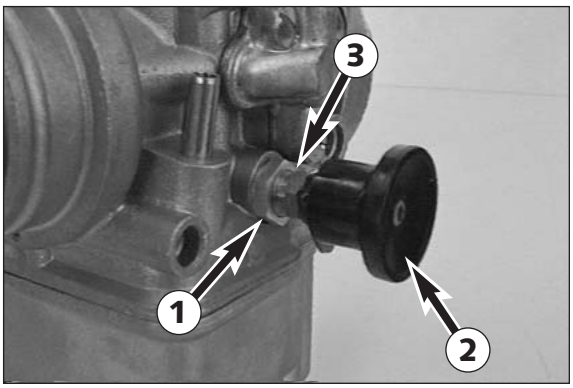
Check float level (Dell'Orto PHM 38ND / 40SD)

Stand the carburettor diagonally at about 60° so that the spring in the float needle valve is not pressed together. In this position, the edge of the float should be parallel with the float bowl sealing surface (see illustration).



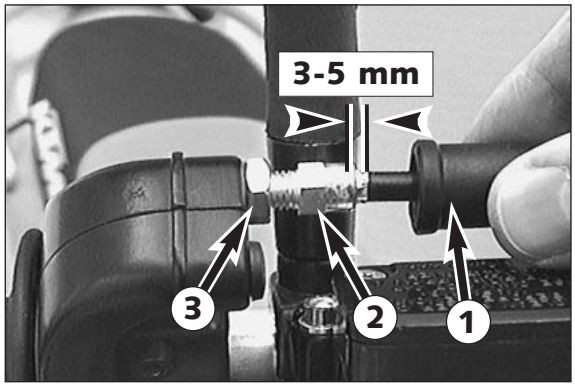
Checking axial play of float (Dell'Orto PHM 38ND / 40SD)

For proper functioning of the float, there must be an axial play of 0.8 mm (0,03 in). If necessary, slightly abrade and deburr lateral float guide.



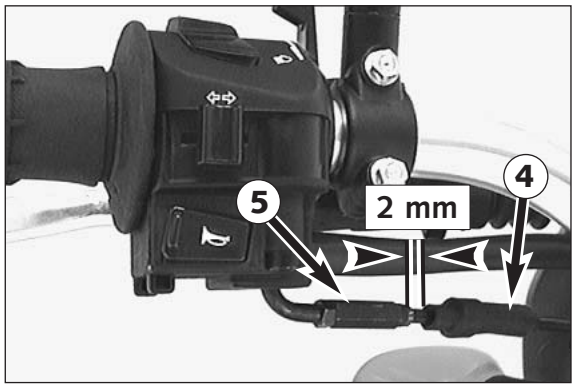
Adjust hot start device (Dell'Orto PHM 40SD)

If the hot start button was removed when cleaning the carburetor, readjust the hot start device.
Install carburetor and adjust idling as discribed above. Then unlock nut ❶, press in hot start device ❷ and adjust engine rev with adjusting screw ❸ to 2000-2500 rpm. Tighten locking nut.



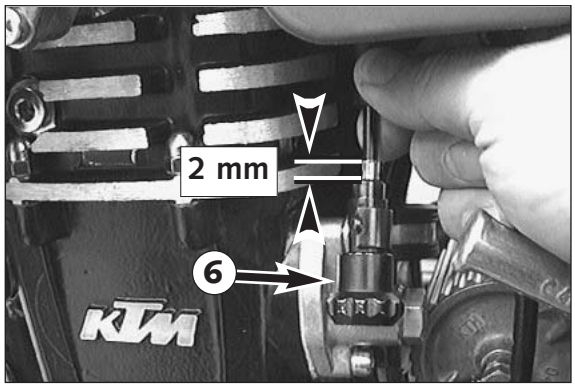
Adjusting the throttle cable

There must always be a 3-5 mm (0.1-0.2 in) play in the throttle cable. To check this, move back the protective cover ❶ on the throttle grip. You must be able to lift the outer covering of the cable 3-5 mm from the adjusting screw ❷, until resistance is felt.
To adjust, loosen the counter nut ❸ and turn the adjusting screw accordingly. Finally tighten counter nut and slide the protective cover back on.



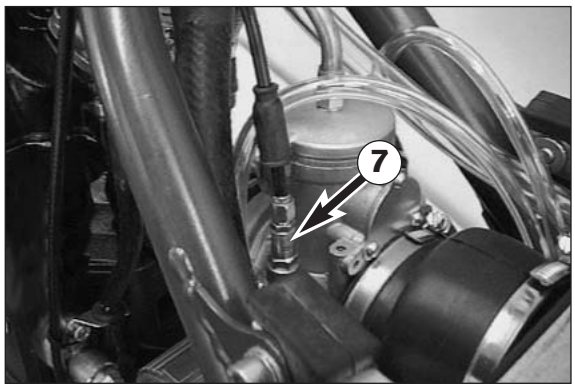
Adjusting the choke cable

At the choke cable, there must always exist a play of approx. 2 mm (0.1 in). To check this, push choke lever fully forward and pull protective cover ❹ from the adjuster piece ❺. Now, it must be possible to lift the outer covering of the cable by approx. 2 mm from the adjuster piece until feeling a resistance. If necessary, loosen counter nut and readjust play by turning the adjuster piece. Tighten counter nut, and slide on protective cover.



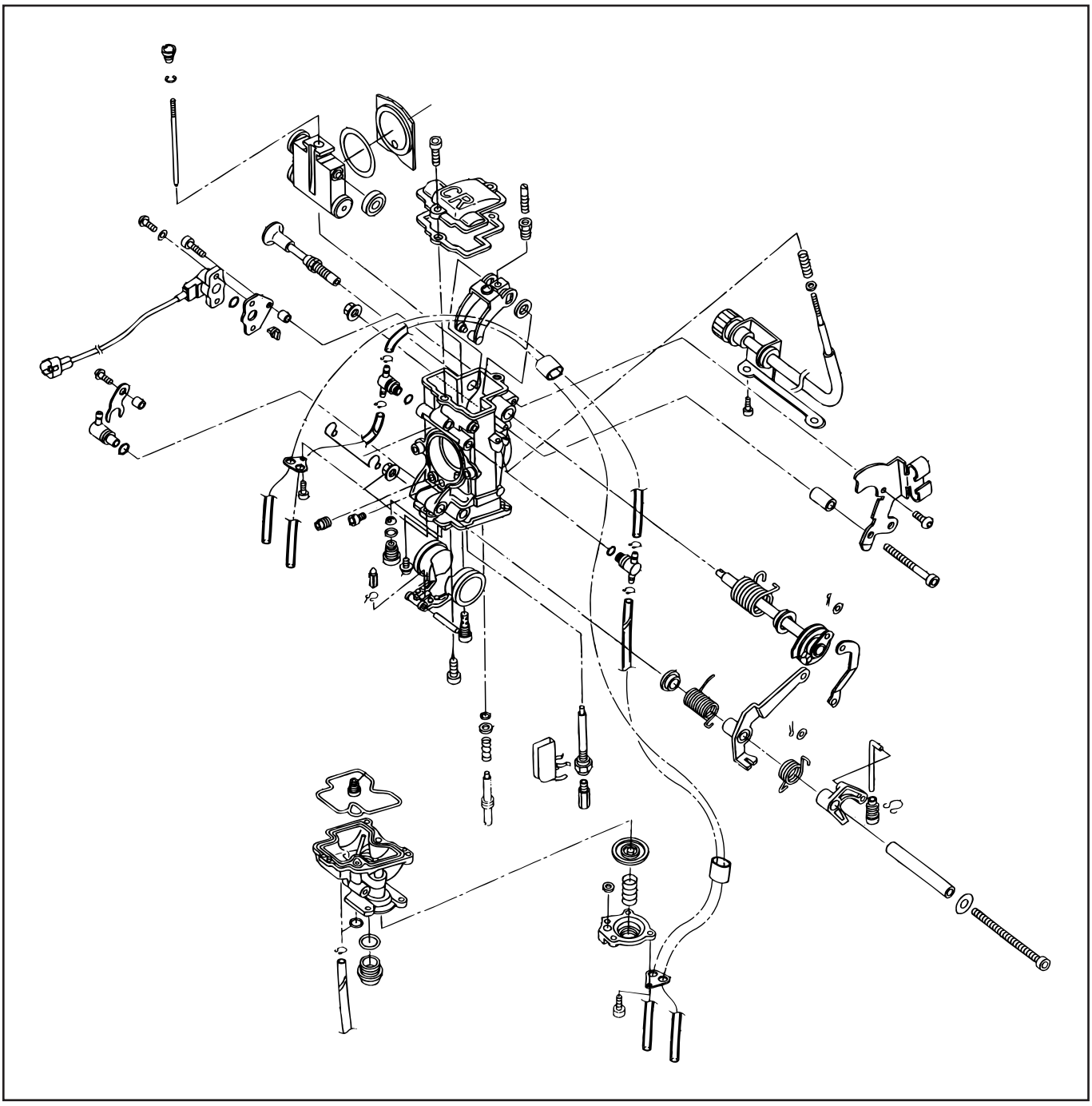
Adjusting the choke cable

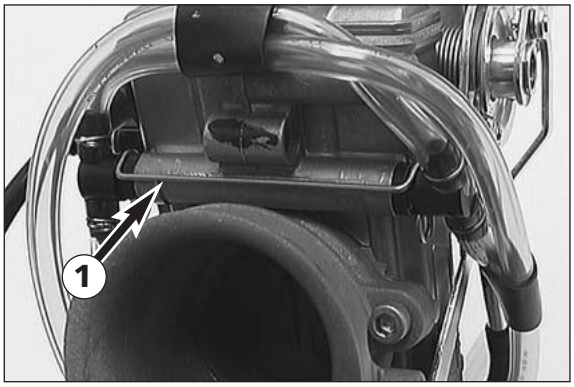
The choke cable must have a play of approximately 2 mm at all times. To check the play turn the knob ❻ into the initial position. Now it should be possible to lift the exterior case of the choke cable approximately 2 mm from the supporting surface of the choke knob before the upward movement is blocked by resistance.



To adjust, remove the seat and the gastank, push the protective cover upwards, loosen the counter nut and turn the adjustment screw ❼ accordingly. Turn the adjustment screw clockwise for more play or anticlockwise for less play.
Tighten the counter nut, replace the protective cover and mount the gas-tank and the seat.

CARBURATOR - KEIHIN FCR 41

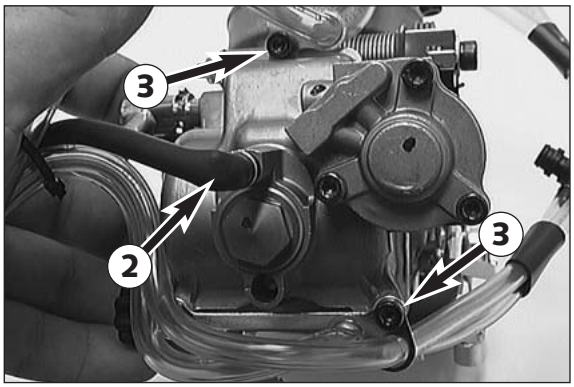




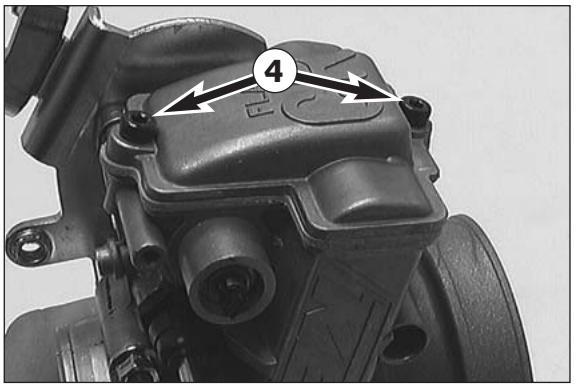
Disassembling the carburetor

NOTE: Before you start disassembling the carburetor, you should look for a clean work place. It should offer you enough space to lay out all individual components of the carburetor in perfect order.

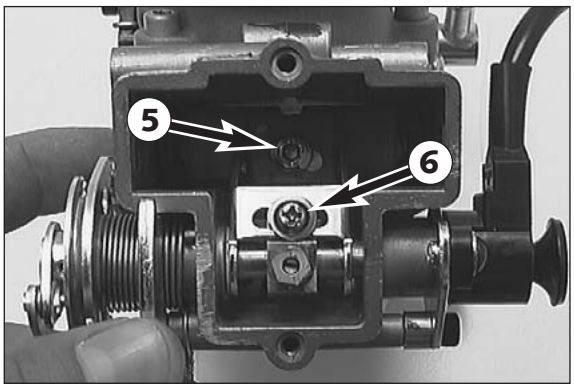
– Dismount the carburetor and remove any coarse dirt.



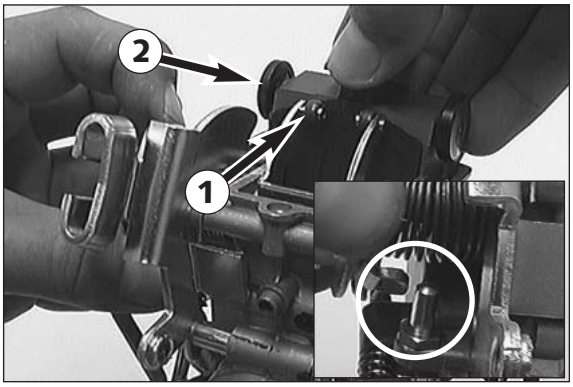
– Remove the wire clip ❶ and pull the ventilation hoses out of the carburetor.
– Disconnect the hose ❷.
– Loosen the 2 screws ❸ and dismount all ventilation hoses from the carburetor.



– Remove the 2 screws ❹ and dismount the slide cover together with its gasket.

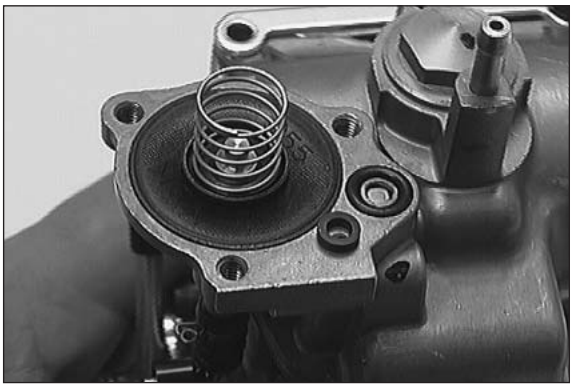


– Remove the screw ❺ and take the jet needle out of the throttle valve.
– Remove the screw ❻.



– Now, pull the cable disc approx. 5 mm outward and turn it until the throttle valve can be lifted out of the carburetor and detach the rollers ❶ at the throttle valve.
– Take the throttle valve together with the 4 rollers ❷ and the valve paddle out of the carburetor.

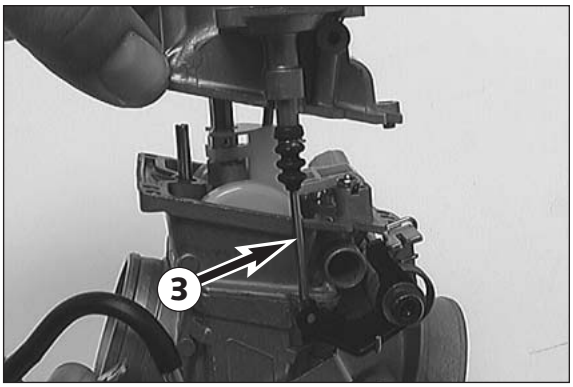
NOTE: When you turn the cable disc, it must not be blocked by the stop bolt (see photo). Otherwise, pull the shaft further outward.



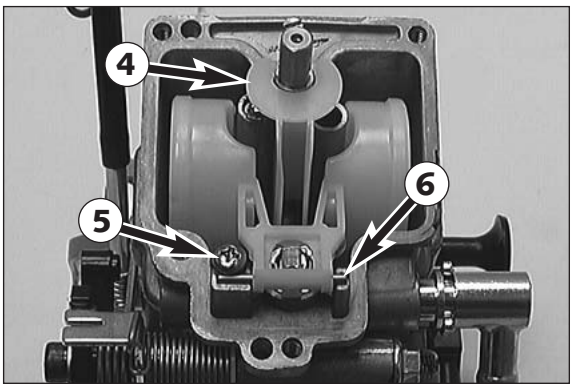
– Turn the carburetor around, remove the 3 screws and remove the cover of the accelerator pump.

NOTE: When dismounting the cover, watch out for the spring and the sealing rings as they may get lost easily.

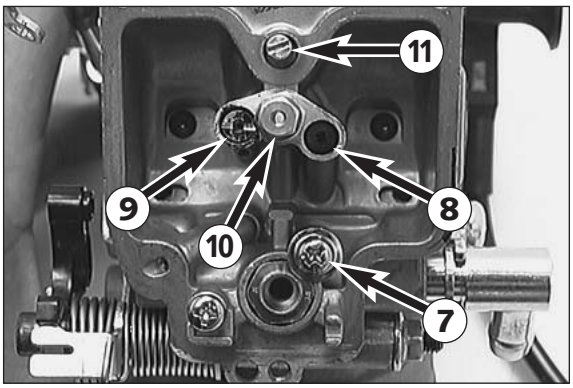
– Remove the 2 sealing rings, the spring and the diaphragm from the pump housing.



– Remove the screw and dismount the float chamber.
– Unhitch the push rod ❸ of the accelerator pump and dismount it.



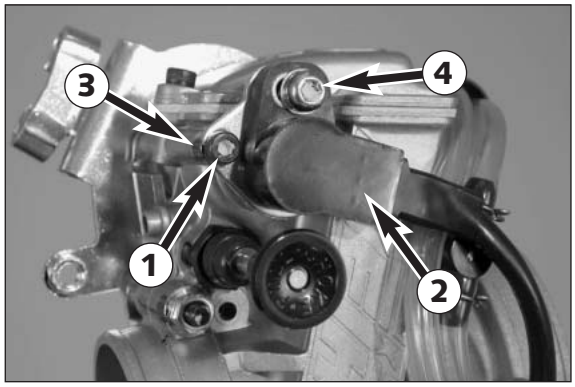
– Take the plastic part ❹ off the needle jet.
– Loosen the screw ❺, pull out the float hinge pin ❻ and dismount the float together with the float needle valve.



– Remove the screw ❼ and use pliers to carefully extract the seat of the float needle valve from the carburetor.
– Turn out the idling jet ❽, the starting jet ❾ and the needle jet together with the main jet ❿.

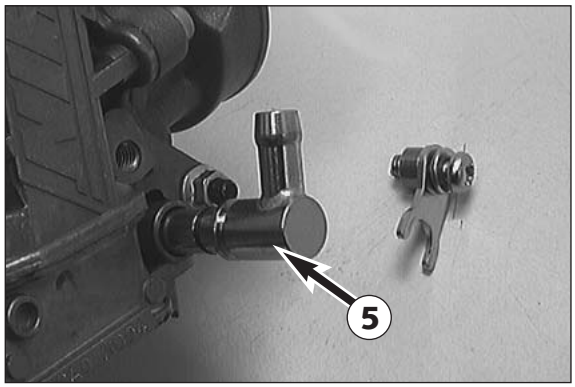
– Turn in the mixture control screw ⓫ down to the stop, count the number of turns and write it down.
– Turn out the mixture control screw and dismount it together with the spring, the washer, and the O-ring.

NOTE: The spring, the washer, and the O-ring will usually remain in the bore. These parts can be removed with the help of compressed air.

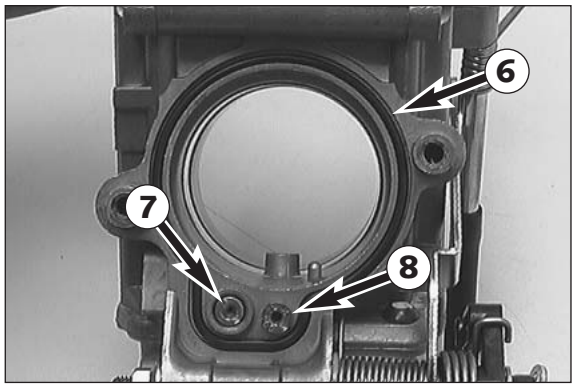


– Remove the screw ❶ and dismount the throttle-valve sensor ❷. When unfastening the screw, be sure to watch out for the bushing ❸.

NOTE: To dismount the throttle-valve sensor, always remove the screw ❶. After the screw ❹ was loosened, the throttle-valve sensor must be adjusted again.



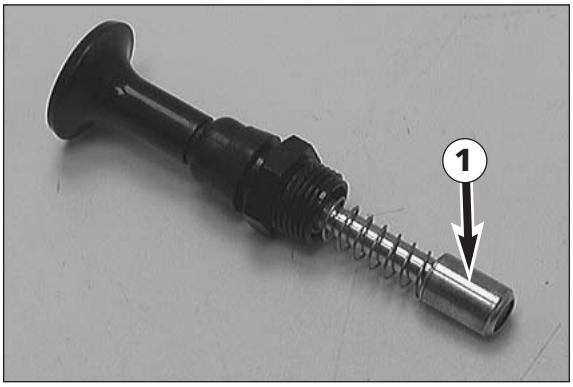
– Remove the screw and the clip together with the bushing and pull the connection piece ❺ out of the carburetor.



– Remove the 2 screws and take the intake trumpet together with the O-ring ❻ off the carburetor.
– Unscrew the idle-air jet ❼ and the main air jet ❽.

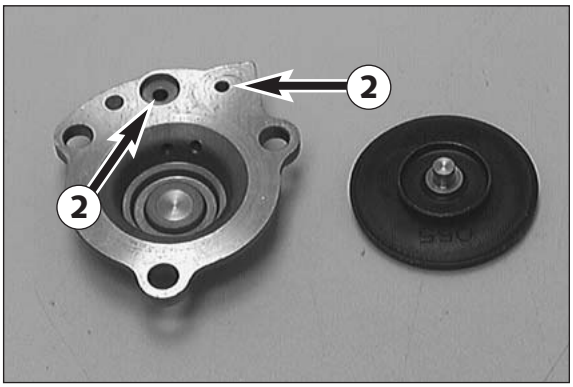
– Thoroughly clean all jets and other parts and blow compressed air through them.
– Clean the carburetor housing and blow compressed air through all ducts in the carburetor.

– Check all gaskets for damage and, if necessary, replace them.



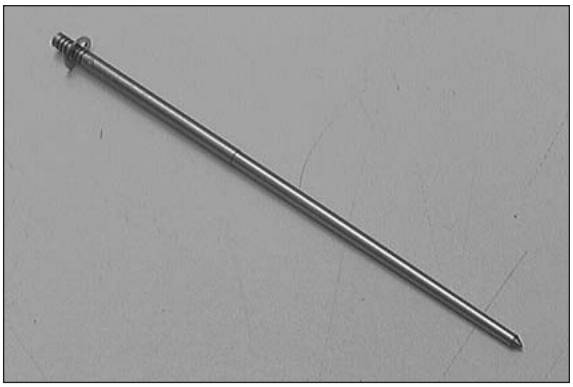
Checking the choke slide

It must be easy to actuate the choke slide.
The piston ❶ of the choke slide must not have any pronounced score marks or deposits.



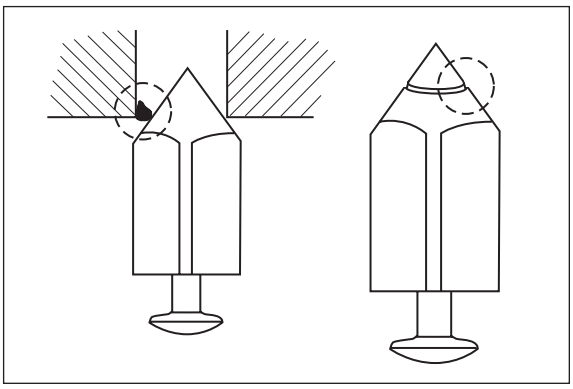
Checking the accelerator pump

Check the membranes for cracking or brittleness.
Check gaskets for damage.
Check if the bores ❷ are unobstructed.



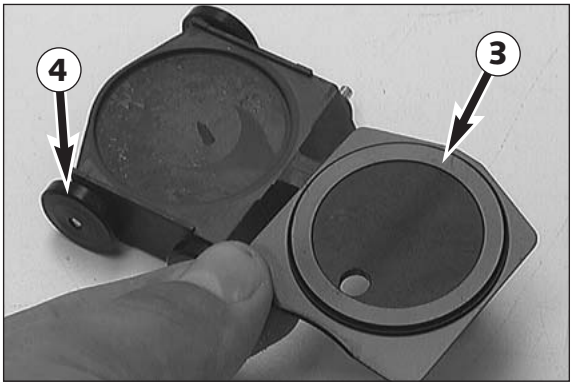
Checking the jet needle

Check the jet needle for bending and wear.



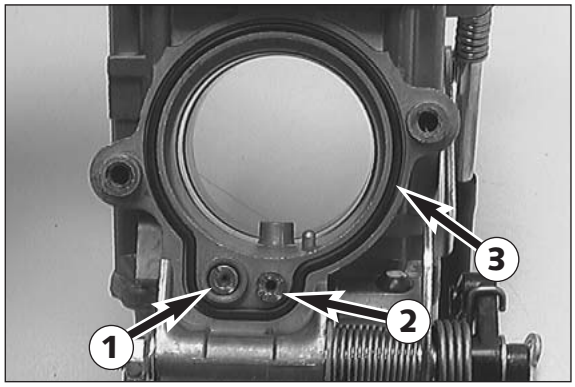
Checking the float needle valve

Check the sealing surface of the needle valve for notches.
There must not be any dirt between valve seat and float needle.



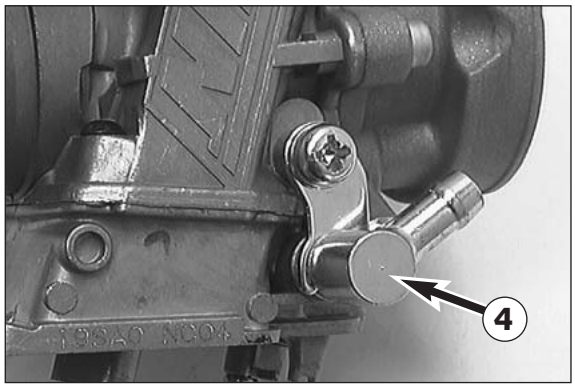
Checking the throttle valve

Check the throttle valve paddles ❸ for damage.
The rollers ❹ at the throttle valve must be easy to turn and must not have any flat spots.



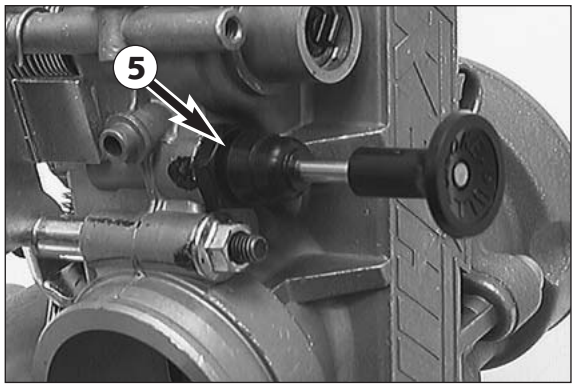
Assembling the carburetor

– Mount the idle-air jet ❶ and the main air jet ❷.
– Place the O-ring ❸ in the groove and secure the intake trumpet to the carburetor by means of the 2 screws.

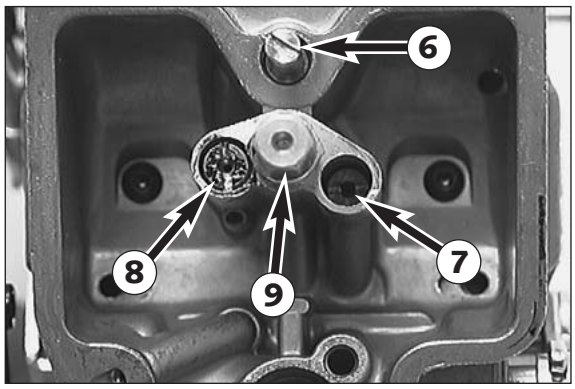


– Insert the fuel connection ❹ into the carburetor and secure it with the clip.

NOTE: In the mounted state, the connection piece must be easy to turn.



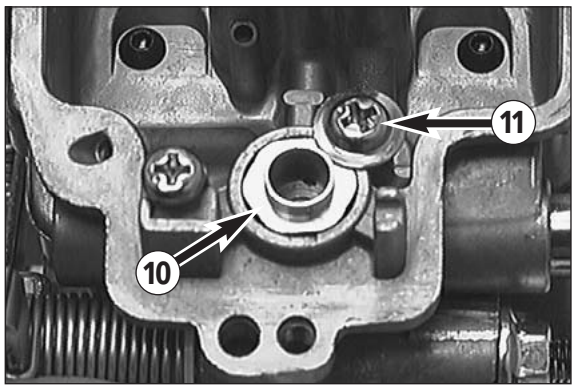
– Mount the choke slide ❺ and actuate it several times, checking whether it can be moved smoothly. Besides, check whether the choke locks properly.



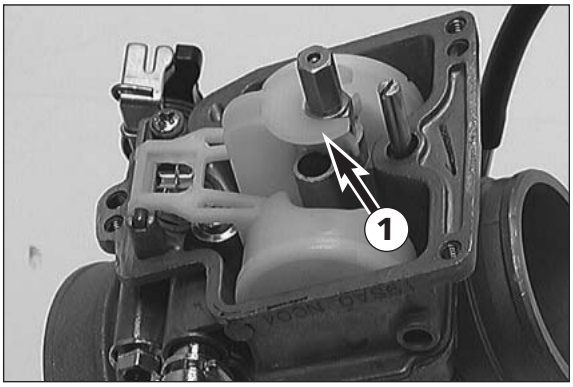
– Thread the spring, the washer and the O-ring onto the mixture control screw ❻ and screw the mixture control screw in as far as it will go.
– Now, unscrew the mixture control screw the number of turns written down during disassembly.

NOTE: Basic setting see technical spezifications.

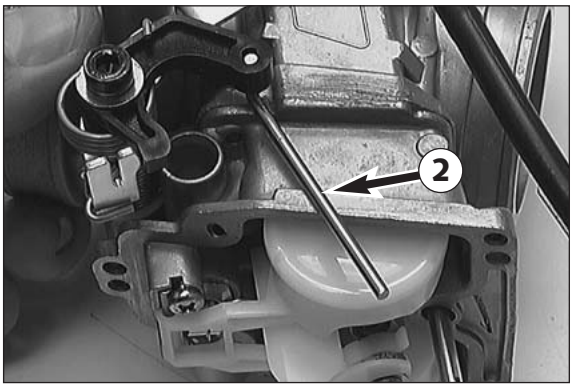
– Mount idling jet ❼, starting jet ❽ and needle jet together with main jet ❾.



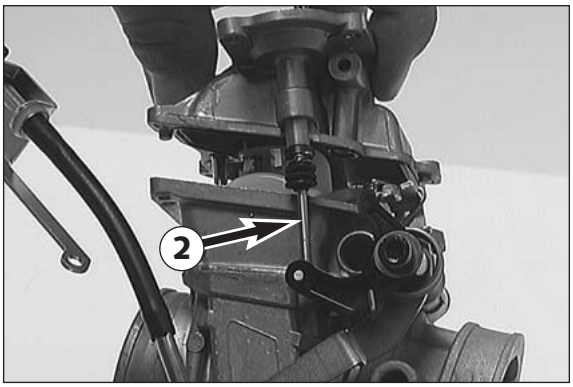
– Insert the needle jet ❿ into bore and secure it by means of the screw ⓫.



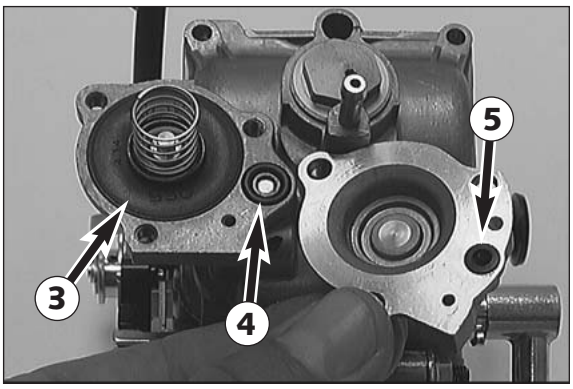
– Position the float, mount the float hinge pin and secure it by means of the screw.
– Check the float level.
– Stick the plastic component ❶ on the needle jet.



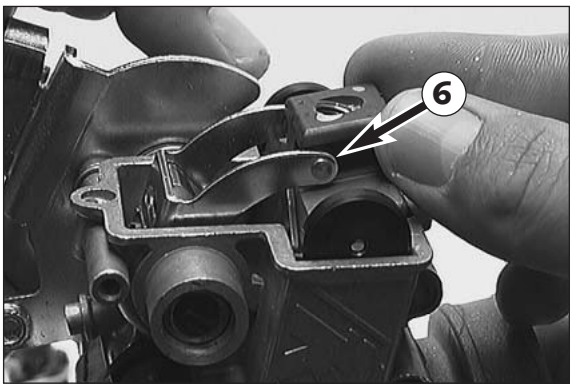
– Engage the push rod ❷ of the accelerator pump at the lever.



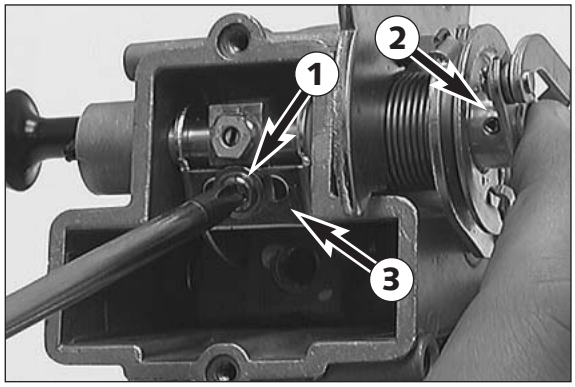
– Mount the float chamber and at first secure it with only 1 screw. When positioning the float chamber, make sure that the push rod ❷ of the accelerator pump slides into the bore.



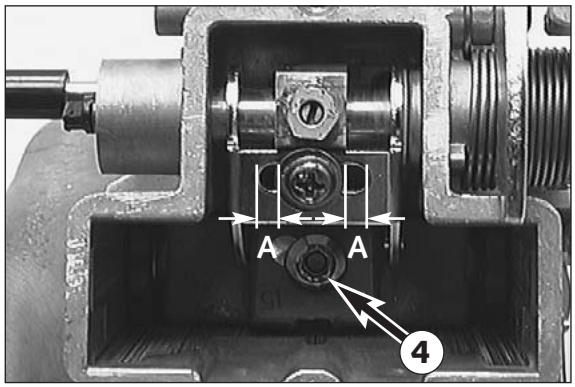
– Place the membrane ❸ with the labeling facing upwards and the spring into the pump housing.
– Place the O-ring ❹ into the groove. Secure the sealing ring ❺ with some grease in the cover and fasten the cover by means of 3 screws.



– Turn the cable disc and push the throttle valve into the carburetor such that the rollers ❻ engage the throttle valve (see photo). Push the throttle valve all the way into the carburetor.
– Turn the cable disc several times and while doing so check whether the throttle valve moves smoothly.

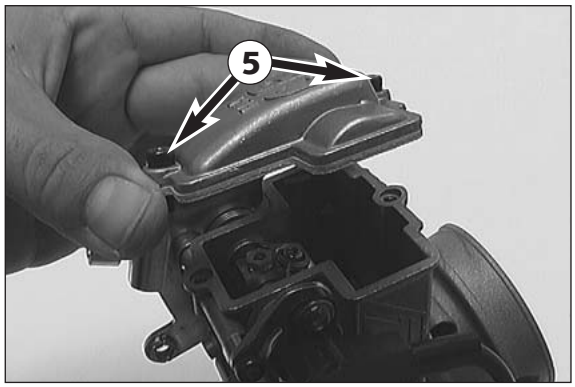


– Coat the thread of the screw ❶ with Loctite 243 and mount the screw, however, do not tighten it yet.
– Push the slide pin ❷ inward. At the same time, push the slide lever ❸ to the extreme right and tighten the screw ❶.

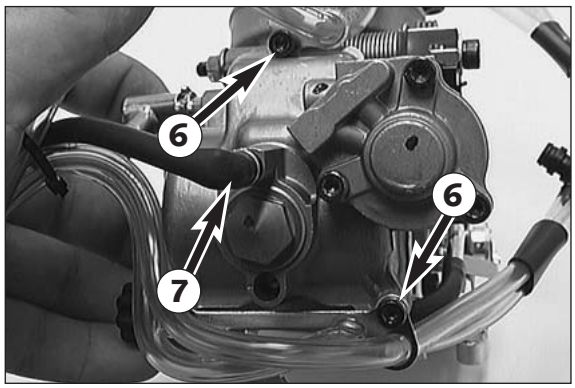


– Now, the distances Ⓐ on the left and on the right should be identical. Then, turn the cable disc and check if the throttle valve moves smoothly.

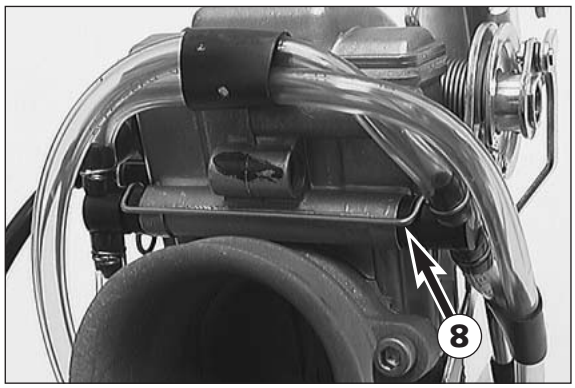
– Mount the jet needle and secure it with the screw ❹.



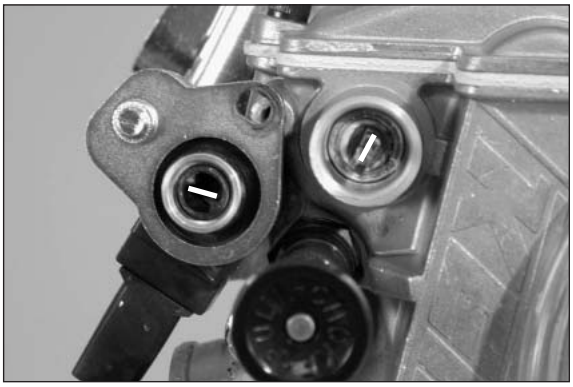
– Position the slide cover together with its gasket and fasten it by means of the 2 screws ❺.



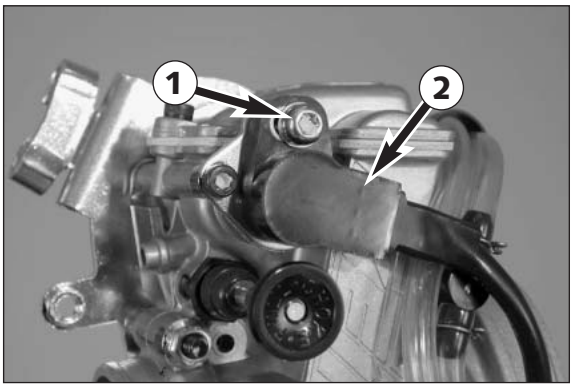
– Secure the ventilation hoses with the 2 screws ❻ of the float chamber and connect the hose ❼.



– Insert the 2 hose connections into the bores and fasten them with the retaining clip ❽.



– Mount the throttle valve sensor such that the flat spot at the carburetor engages the groove of the throttle valve sensor and secure it by means of the screw.



Adjusting the position of the throttle valve sensor

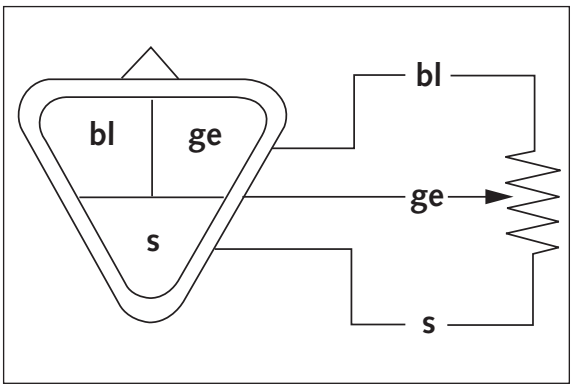
NOTE: Before checking the position of the throttle valve sensor, you have to adjust the idle speed correctly.

– Disengage the plug-and-socket connection of the throttle valve sensor.
– Connect a multimeter (measuring range Ω x 1k) to the **blue (+)** and the **black (-)** cable of the throttle valve sensor and measure the throttle valve resistance.
– Now, multiply this value by 0.15. This yields the adjustment value for the throttle valve sensor.

Example:
throttle valve sensor resistance (bl/s) = 5 kΩ

throttle valve sensor resistance (ge/s) =
5 kΩ x 0.15 = 750 Ω ± 50 Ω

– Connect the multimeter (measuring range Ωx100) to the **yellow (+)** and the **black (-)** cable of the throttle valve sensor and measure the throttle valve sensor resistance with the throttle grip closed. According to the above example, this value should be 750 Ω ± 50 Ω.
– If the value measured does not correspond to the desired value, loosen the screw ❶ and turn the throttle valve sensor ❷ until the instrument displays the desired value.
– Secure the throttle valve sensor in this position by fastening the screw and check the value once more.
– Connect the throttle valve sensor to the wiring harness.

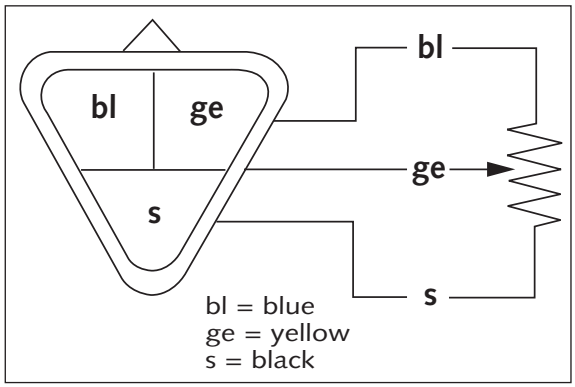


Checking the throttle valve sensor

NOTE: The following measurement must be taken at a component temperature of approx. 20°C.

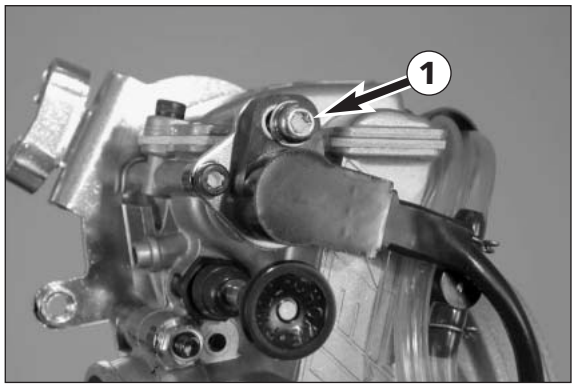
– Open the plug-and-socket connection of the throttle valve sensor.
– Connect a multimeter (measuring range Ω x 1k) to the **blue (+)** and the **black (-)** cable of the throttle valve sensor.

throttle valve sensor resistance: 4 - 6 kΩ



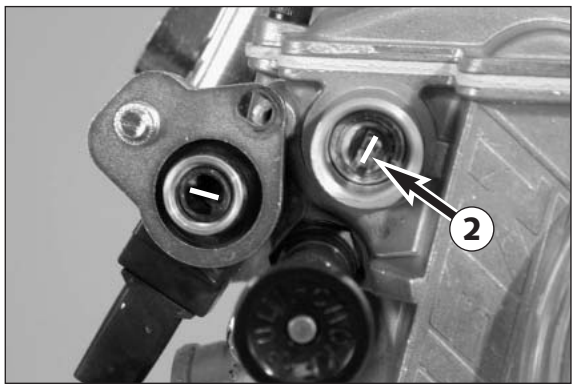
– Now, connect the multimeter to the **yellow (+)** and the **black (-)** cable of the throttle valve sensor.
– As you open the throttle grip slowly, the resistance must change evenly.

throttle valve sensor resistance: 0-5 kΩ ±1 kΩ
(while opening the throttle grip)

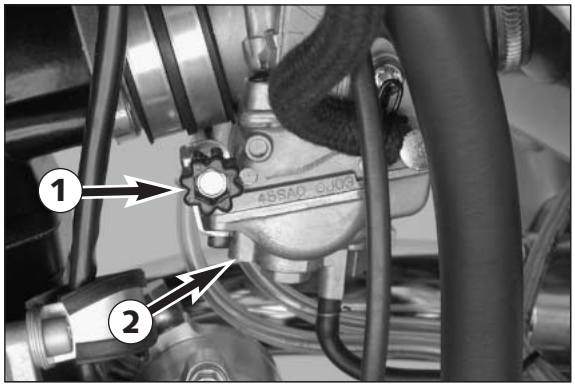


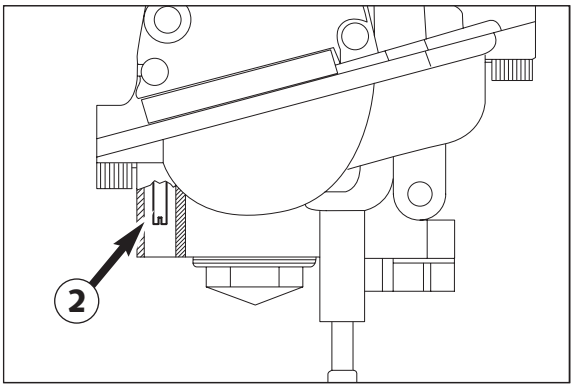
Dismounting and installing the throttle valve sensor

– Disconnect the plug-and-socket connection of the throttle valve sensor and remove the bolt ❶.
– Take the throttle valve sensor off the carburetor.



– When mounting the throttle valve sensor, make sure that the flat spot at the throttle valve pin ❷ engages the groove on the throttle valve sensor.
– Mount the bolt, however, do not yet tighten fully and adjust the position of the throttle valve sensor. Secure the bolt with Loctite 243.





Adjust idling

Idling adjustment of the carburetor strongly affects the engine's starting behavior. That is, an engine whose idling speed is adjusted correctly will be easier to start than one whose idling speed has not been adjusted correctly.

The idle speed is controlled by means of the adjusting wheel ❶ and the mixture control screw ❷. The adjusting wheel is used to adjust the basic setting of the slide. The mixture control screw is used to control the idle mixture which arrives at the engine by way of the idle system. Clockwise turning reduces the fuel quantity (lean mixture), counterclockwise turning increases the fuel quantity (rich mixture).

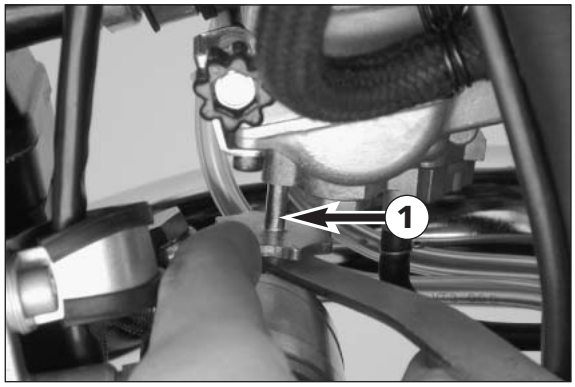
TO ADJUST IDLING CORRECTLY, PROCEED AS FOLLOWS:

1 Turn in mixture control screw ❷ up to the stop, and turn it back out to the basic position (see technical data engine)
2 Warm up the engine
3 Use the adjusting wheel ❶ to set the normal idle speed (1400 - 1500 rpm).
4 Turn mixture control screw ❷ slowly clockwise until idling speed starts to decrease. Memorize this position, and turn mixture control screw slowly counterclockwise until the idling speed will decrease again. Adjust the point of the highest idling speed between these two positions. If, in the course of this procedure, the speed undergoes a relatively high increase, reduce the idle speed to a normal level and repeat the procedure specified in 4. Serious competitive racers will choose a setting approx. 1/4 turn (clockwise) leaner than this ideal value because their engine will heat up more when used in competitions.

NOTE: If you fail to obtain a satisfying result by following the procedure described above, an incorrectly dimensioned idling nozzle may be the cause.

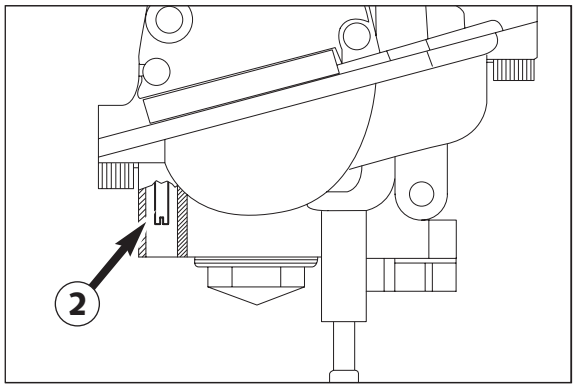
a) If the mixture control screw has been screwed in up to the stop without causing any change in rotational speed, a smaller idling jet has to be installed;
b) If the engine dies when the mixture control screw is still open by 2 turns, a larger idling jet needs to be selected;
Naturally, in cases of jet changes, you have to start your adjusting work from the beginning.

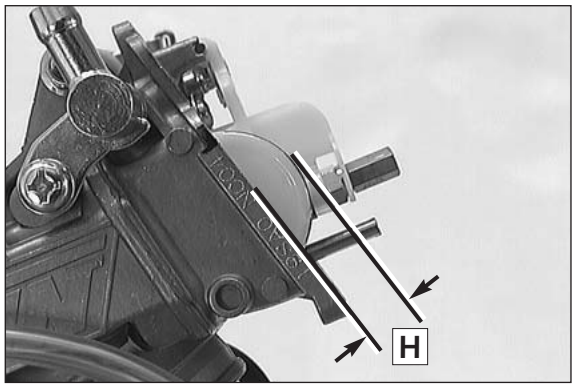
5 Then, use the adjusting wheel to set the desired idle speed.
6 In cases of greater changes in outside temperature and extremely different altitudes, the idling speed should be readjusted.



Adjusting the mixture control screw

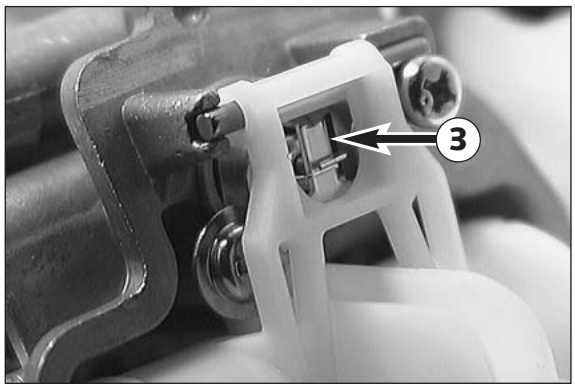
The mixture control screw is difficult to reach. For this reasons, we have created an appropriate special tool 590.29.034.000.
Introduce the special tool into the bore at the carburetor bottom. Press the tool slightly upward and turn the adjusting wheel ❶ until the tool engages the slot of the mixture control screw ❷.
Now, you can go about adjusting the screw. Marks were provided on the adjusting wheel, making it easier to keep track of the turns.





Checking the float level (float height)

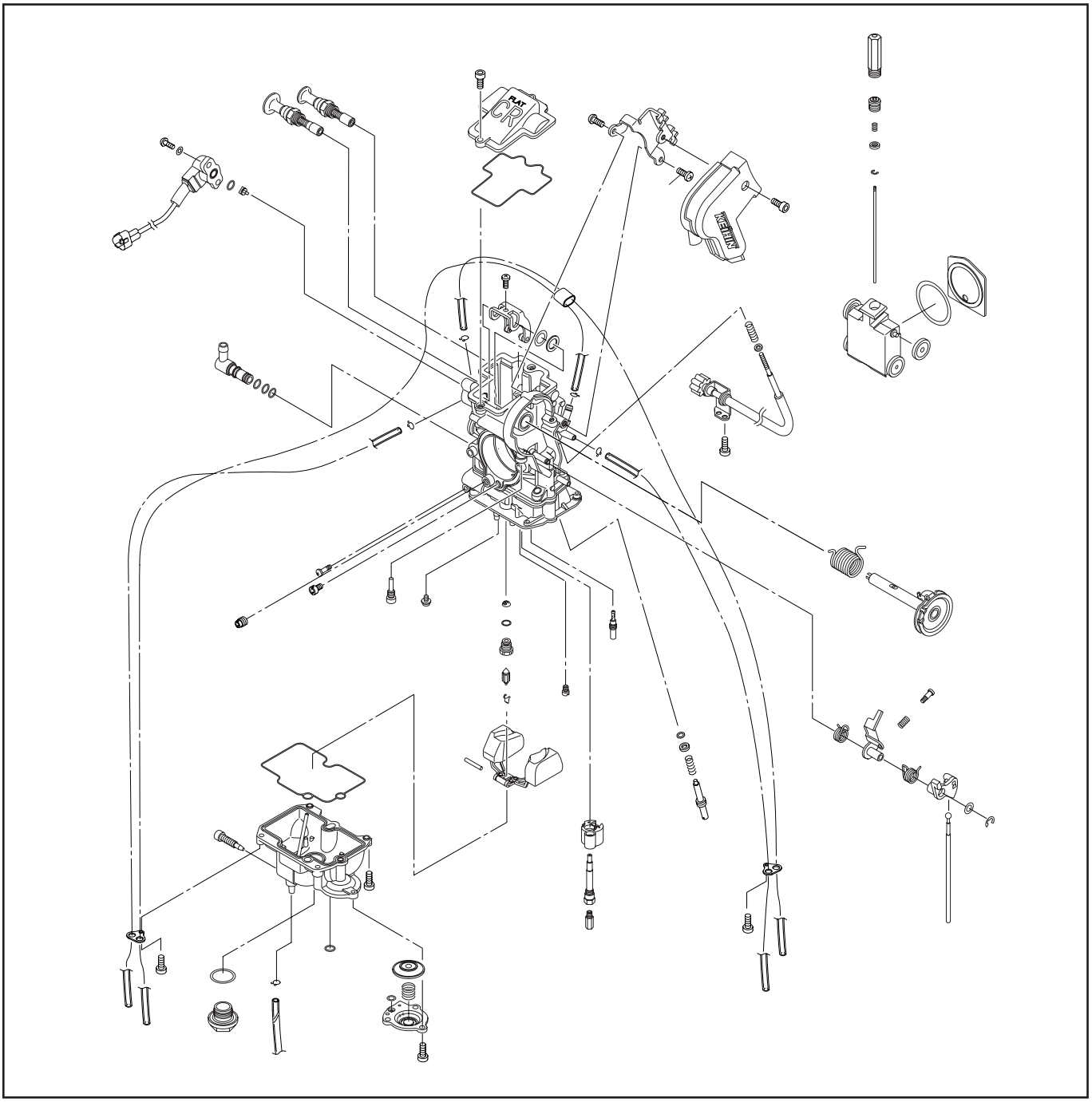
For this purpose, dismount the carburetor and remove the float chamber. Hold the carburetor in a slanted position such that the float will abut the float needle valve but not compress it (see photo).
Now, use a sliding caliper to measure the distance Ⓗ between the casing edge and the float's upper edge.
The float height Ⓗ is to be 9 mm.
If the float height does not correspond to the desired value, check the float needle valve and, if necessary, replace it.

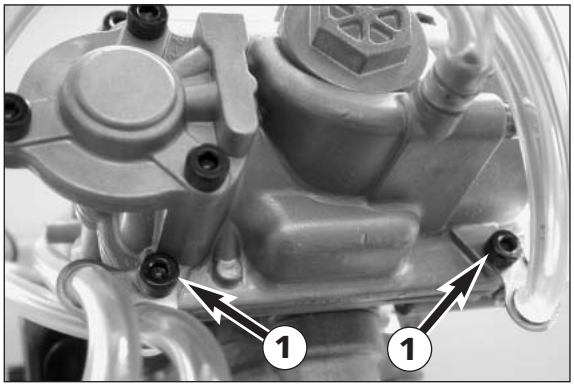


If the float needle valve is correct, you can adjust the float height by bending of the float lever ❸.

Mount the float chamber, install the carburetor, and adjust the idle speed.

CARBURETOR - KEIHIN FCR-MX 41



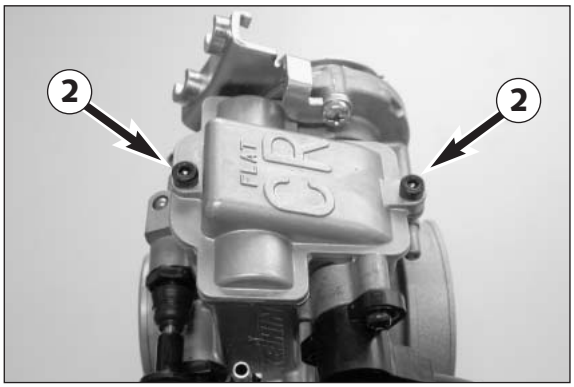


Disassembling the carburetor Keihin FCR - MX 41

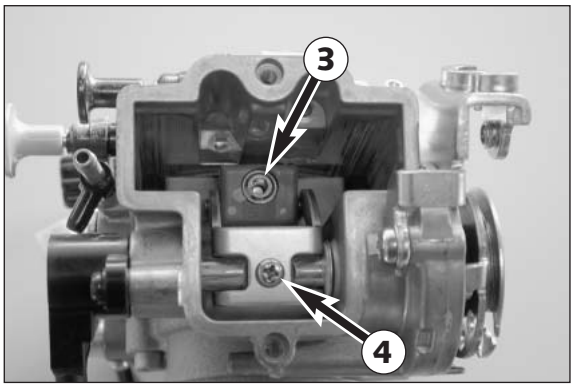
NOTE: Before you start disassembling the carburetor, you should look for a clean workplace. It should offer you enough space to lay out all individual components of the carburetor in perfect order.

– Dismount the carburetor and remove any coarse dirt.

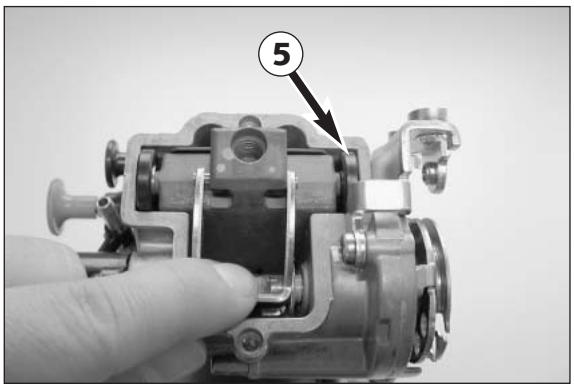
– Loosen both bolts ❶ and remove all of the vent hoses from the carburetor.



– Remove both bolts ❷ and remove the slide cover and gasket from the carburetor.



– Remove screw ❸ and pull the jet needle out of the throttle slide.
– Remove screw ❹.

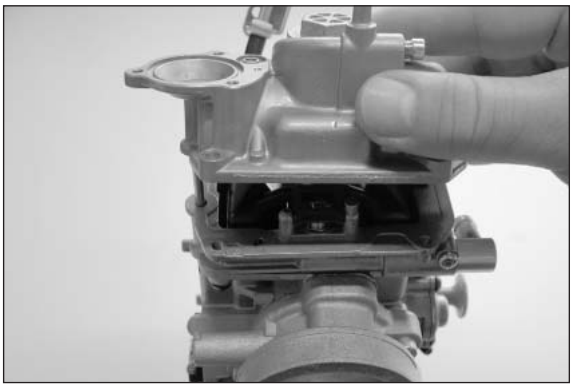


– Pull the throttle slide arm up and take the throttle slide roller ❺ and the slide shim out of the carburetor.

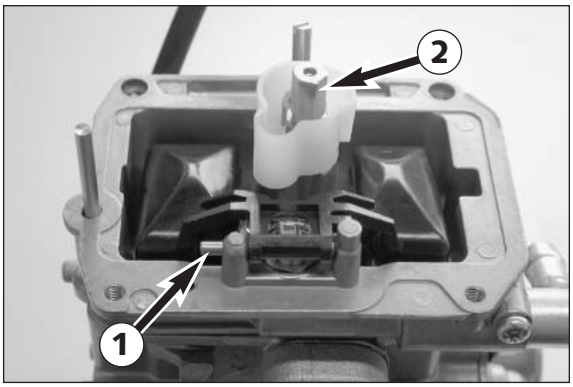
– Turn the carburetor around, remove the 3 screws and remove the cover of the accelerator pump.

NOTE: When dismounting the cover, watch out for the spring and the sealing rings as they may get lost easily.

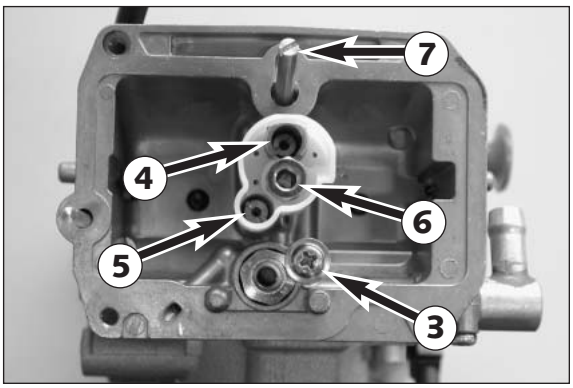
– Remove the 2 sealing rings, the spring and the diaphragm from the pump housing.



– Remove the screws on the float chamber and remove the housing.



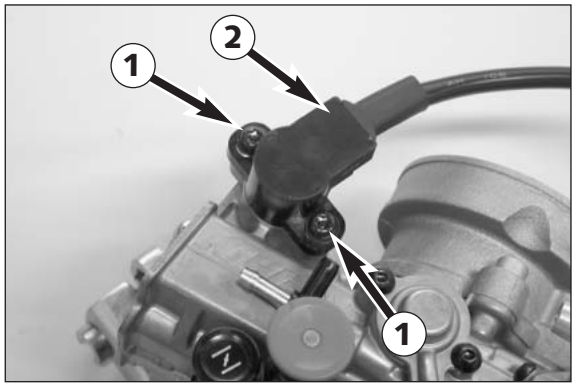
– Pull out the float hinge pin ❶ and remove the float together with the float needle valve.
– Remove the main jet ❷.



– Remove the screw ❸ and use pliers to carefully extract the seat of the float needle valve from the carburetor.
– Screw out the idling jet ❹, the starting jet ❺ and the needle jet ❻.

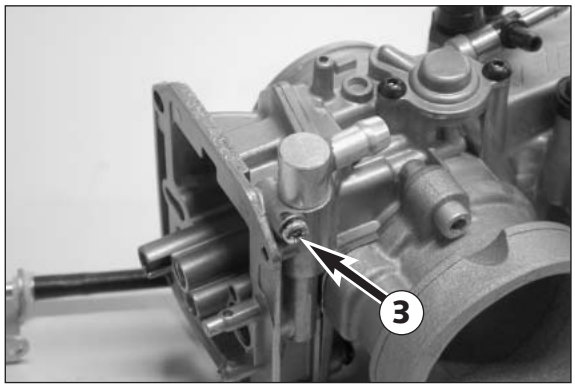
– Turn in the mixture control screw ❼ down to the stop, count the number of turns and write it down.
– Turn out the mixture control screw and dismount it together with the spring, the washer, and the O-ring.

NOTE: The spring, the washer, and the O-ring will usually remain in the bore. These parts can be removed with the help of compressed air.

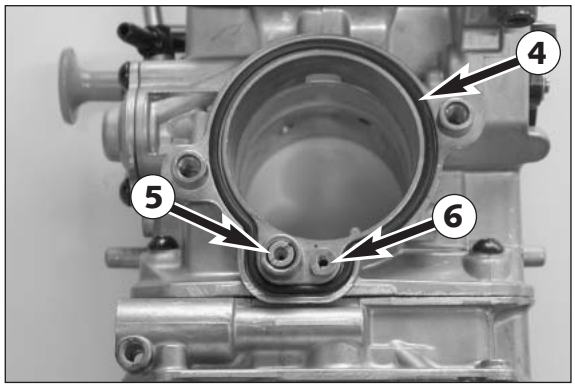


– Remove bolts ❶ and the throttle sensor ❷.

NOTE: the throttle sensor should only be dismounted if defective. If the bolts ❶ are loosened, the throttle sensor must be adjusted again.



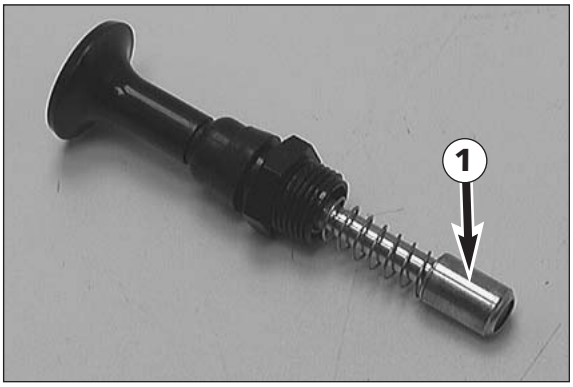
– Remove screw ❸ and pull the connecting piece out of the carburetor.



– Remove the 2 screws and take the intake trumpet together with the O-ring ❹ off the carburetor.
– Unscrew the idle-air jet ❺ and the main air jet ❻.

– Thoroughly clean all jets and other parts and blow compressed air through them.
– Clean the carburetor housing and blow compressed air through all the ducts in the carburetor.

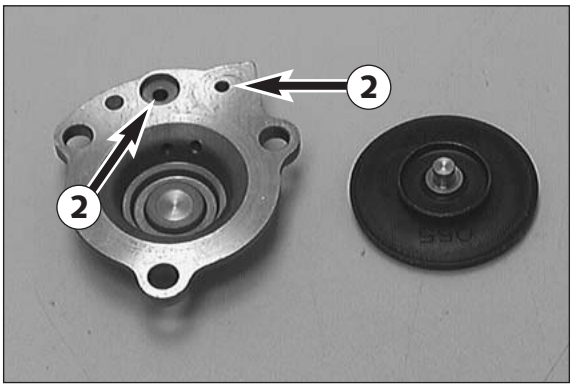
– Check all gaskets for damage and, if necessary, replace them.



Checking the choke slide and hot start knob

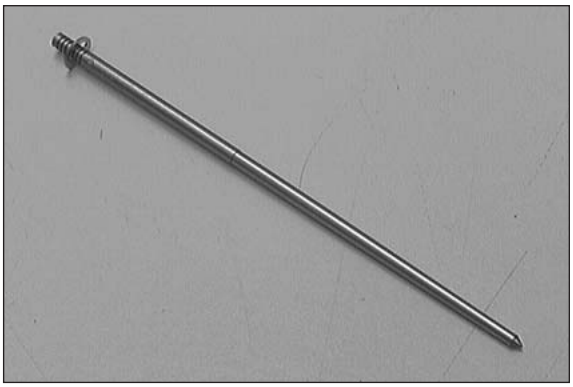
Choke slide:
The choke slide must be easy to actuate .
The piston ❶ of the choke slide must not have any pronounced score marks or deposits.

Hot start knob:
The hot start knob must be easily actuated.
The piston on the hot start knob may not have any scores or deposits.



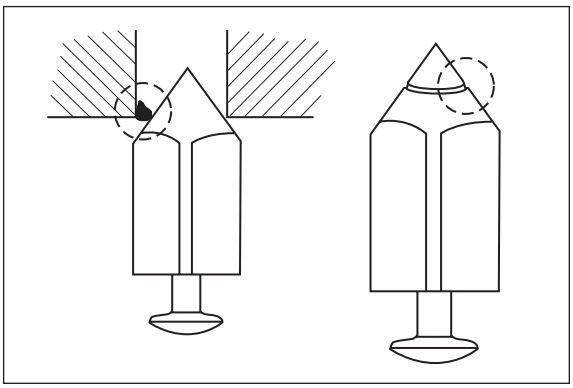
Checking the accelerator pump

Check the membranes for cracking or brittleness.
Check gaskets for damage.
Check if the bores ❷ are unobstructed.



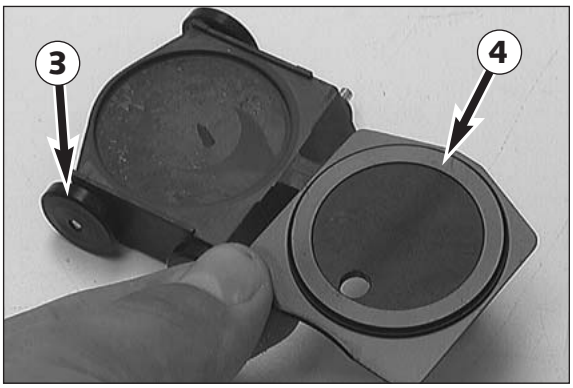
Checking the jet needle

Check the jet needle for bending and wear.



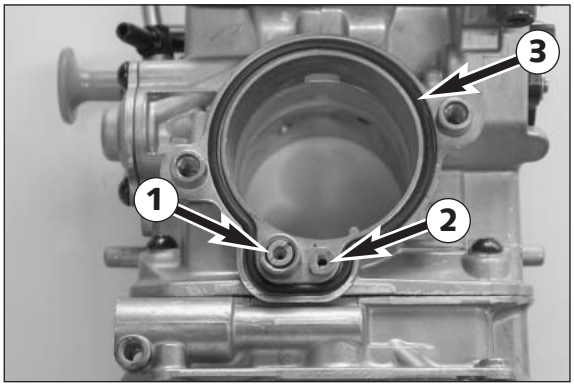
Checking the float needle valve

Check the sealing surface of the needle valve for notches.
There must not be any dirt between the valve seat and the float needle.



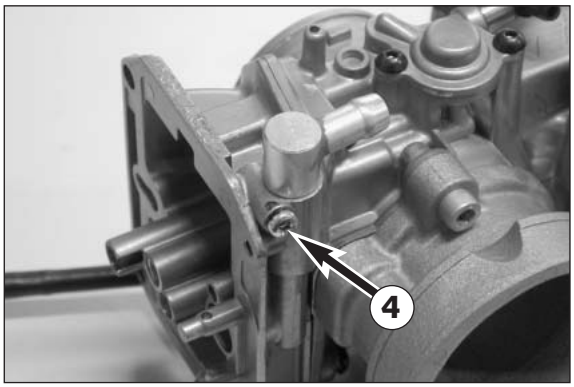
Checking the throttle valve

The rollers ❸ at the throttle valve must be easy to turn and must not have any flat spots.
Check the throttle valve paddles ❹ for damage.



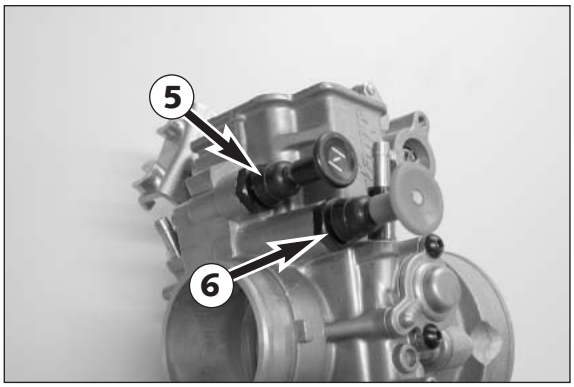
Assembling the carburetor Keihin FCR-MX 41

– Mount the idle-air jet ❶ and the main air jet ❷.
– Place the O-ring ❸ in the groove and secure the intake trumpet to the carburetor by means of the 2 screws.

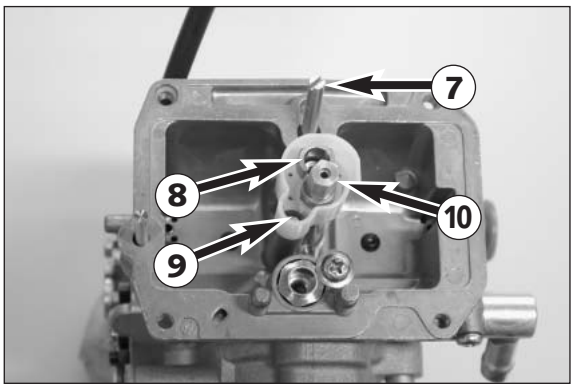


– Insert the fuel port in the carburetor and fix with screw ❹.

NOTE: In the mounted state, the connection piece must be easy to turn.



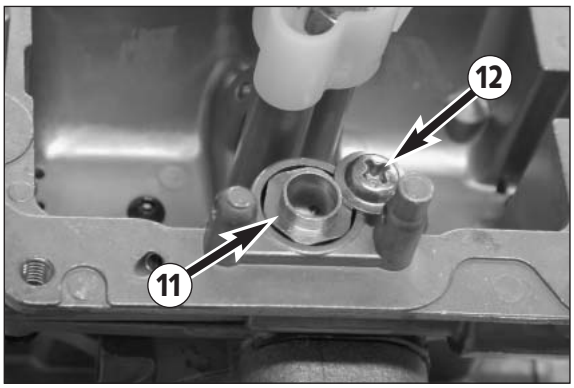
– Mount the choke slide ❺, the hot start knob ❻ and actuate several times, checking for smooth operation. Also make sure the choke and the hot start knob lock into place.



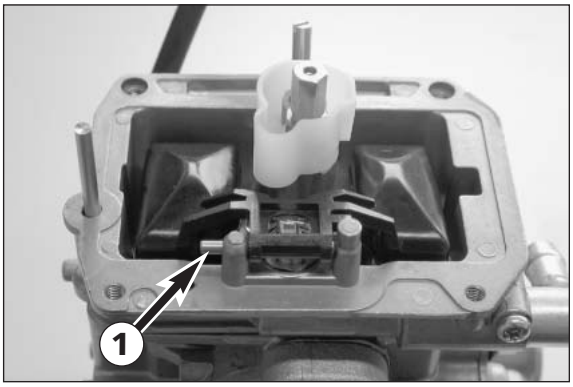
– Thread the spring, the washer and the O-ring onto the mixture control screw ❼ and screw the mixture control screw in as far as it will go.
– Now, unscrew the mixture control screw the number of turns written down during disassembly.

NOTE: See the Technical Specifications for the basic carburetor setting.

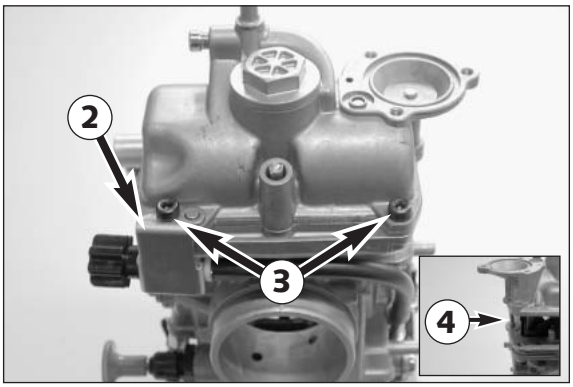
– Mount idling jet ❽, starting jet ❾ and needle jet together with main jet ❿.



– Insert the needle valve seat ⓫ in the bore and fix with screw ⓬.

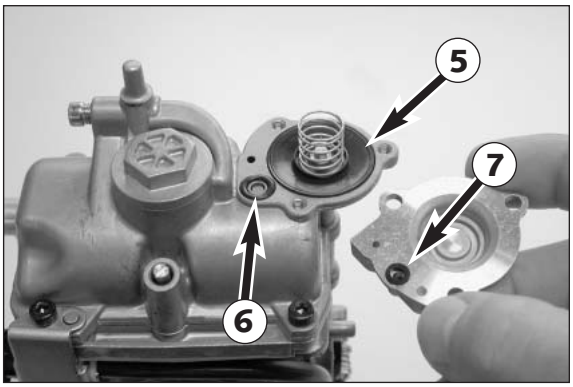


– Position the float and the float needle valve and mount the float hinge pin ❶.
– Check the float level (see page 8-21).

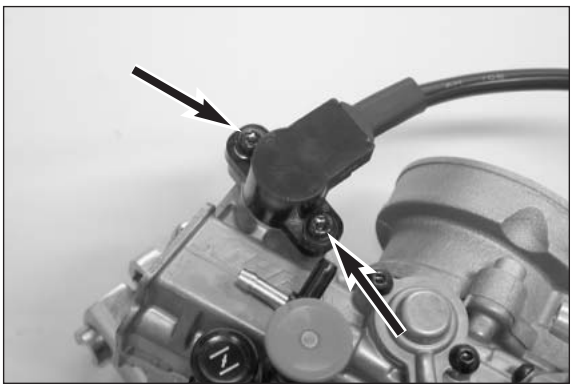


– Mount the float chamber and the gasket, position the bracket for the adjustment screw ❷ and fix the float chamber with the screws ❸.

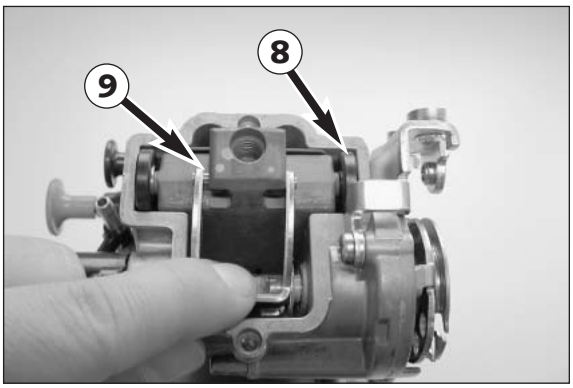
NOTE: When positioning the float chamber, make sure that the push rod ❹ of the accelerator pump slides into the bore.



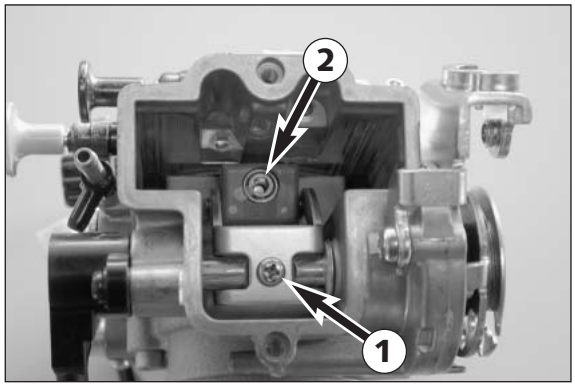
– Place the membrane ❺ with the labeling facing upwards and the spring into the pump housing.
– Place the O-ring ❻ into the groove. Secure the sealing ring ❼ with some grease in the cover and fasten the cover by means of 3 screws.



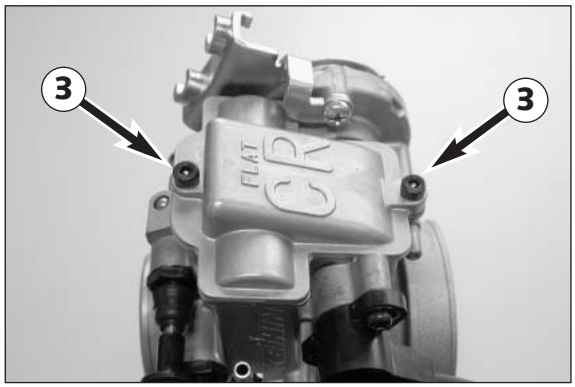
– Mount the throttle valve sensor such that the flat spot at the carburetor engages the groove of the throttle valve sensor and secure it by means of the bolt.



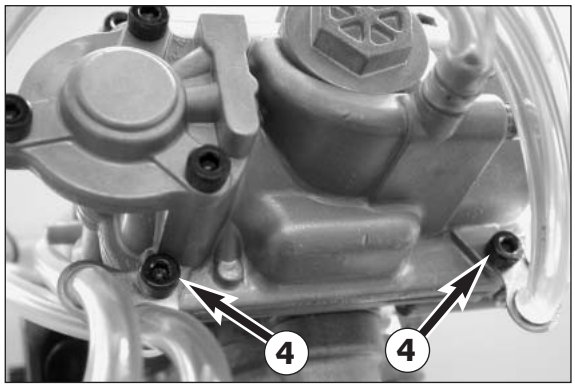
– Pull up the throttle slide arm, push the throttle slide together with roll ❽ and the slide shim into the carburetor so that the rolls ❾ engage in the throttle slide (see illustration).
– Check the throttle slide for smooth operation.



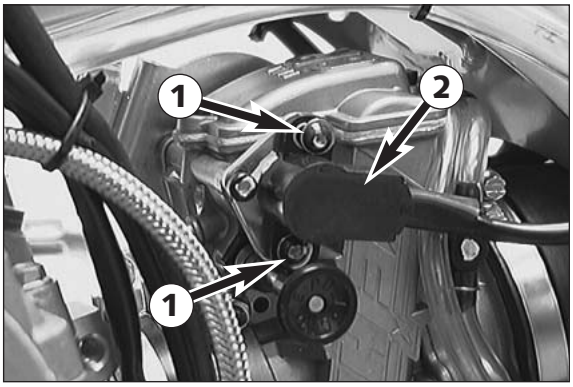
– Apply Loctite 243 to the screw ❶ and tighten.
– Mount the jet needle and fix with the screw ❷.

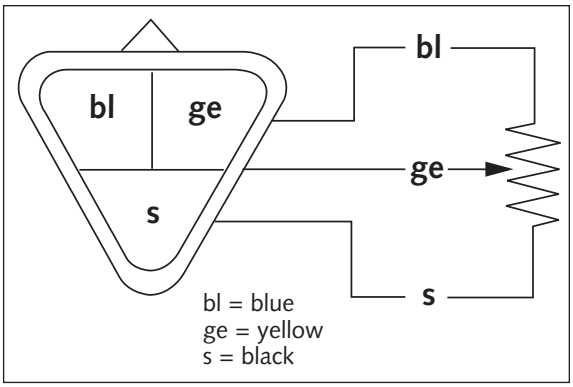


– Position the slide cover with the gasket and fasten with the 2 screws ❸.



– Fix the vent hoses on the float chamber with the 2 bolts ❹.





Adjusting the position of the throttle valve sensor

NOTE: Before checking the position of the throttle valve sensor, you have to adjust the idle speed correctly.

- Disengage the plug-and-socket connection of the throttle valve sensor.
- Connect a multimeter (measuring range Ω x 1k) to the **blue (+)** and the **black (-)** cable of the throttle valve sensor and measure the throttle valve resistance.
- Now, multiply this value by 0.15. This yields the adjustment value for the throttle valve sensor.

Example:
Throttle valve sensor resistance (bl/s) = 5kΩ

Throttle valve sensor resistance (ge/s) =
5 kΩ x 0.15 = 750 Ω ± 50 Ω

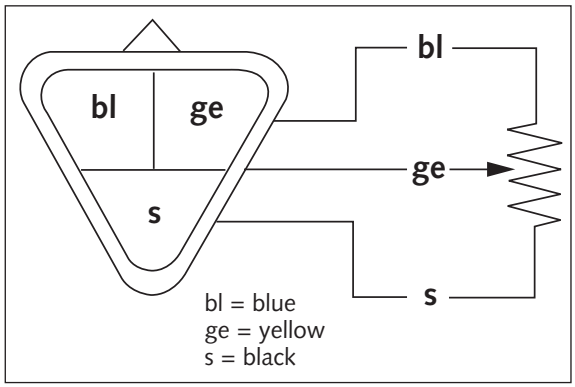
- Connect the multimeter (measuring range Ωx100) to the **yellow (+)** and the **black (-)** cable of the throttle valve sensor and measure the throttle valve sensor resistance with the throttle grip closed. According to the above example, this value should be 750Ω ± 50Ω.
- If the value measured does not correspond to the desired value, loosen the 2 bolts ❶ and turn the throttle valve sensor ❷ until the instrument displays the desired value.
- Secure the throttle valve sensor in this position by fastening the bolts and check the value once more.
- Connect the throttle valve sensor to the wiring harness.

Checking the throttle valve sensor

NOTE: The following measurement must be taken at a component temperature of approx. 20°C.

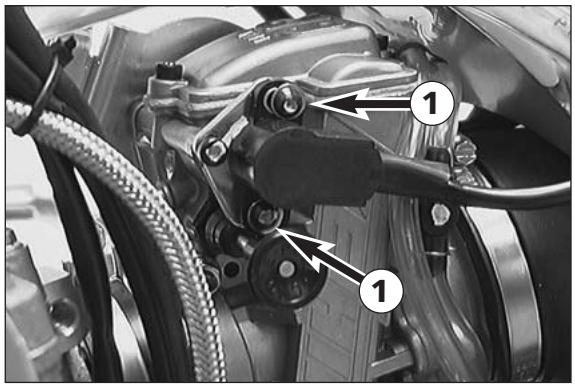
– Open the plug-and-socket connection of the throttle valve sensor.
– Connect a multimeter (measuring range Ω x 1k) to the **blue (+)** and the **black (-)** cable of the throttle valve sensor.

Resistance of throttle valve sensor: 4 - 6 kΩ



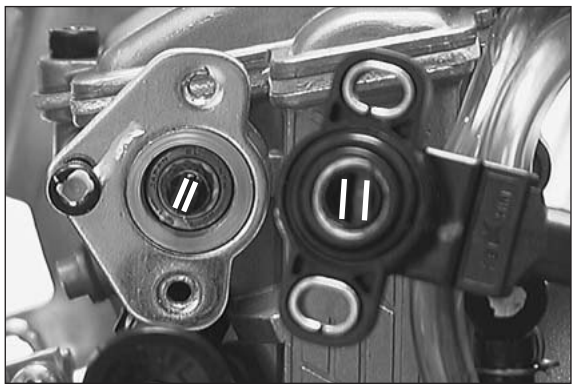
– Now, connect the multimeter to the **yellow (+)** and the **black (-)** cable of the throttle valve sensor.
– As you open the throttle grip slowly, the resistance must change evenly.

Resistance of throttle valve sensor: 0-5 kΩ ±1 kΩ
(while opening the throttle grip)

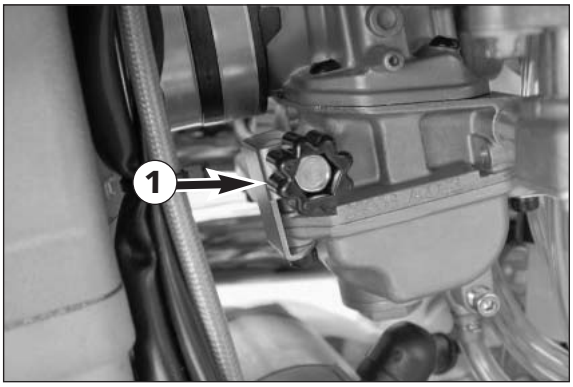


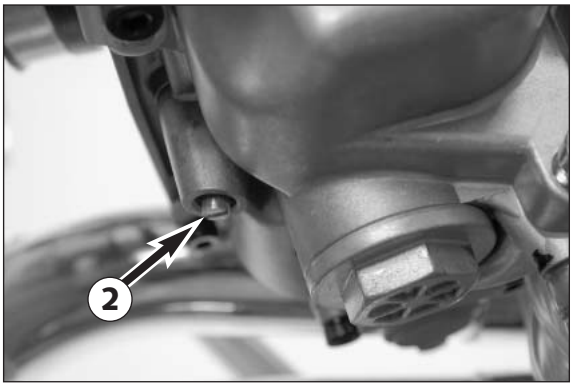
Dismounting and installing the throttle valve sensor

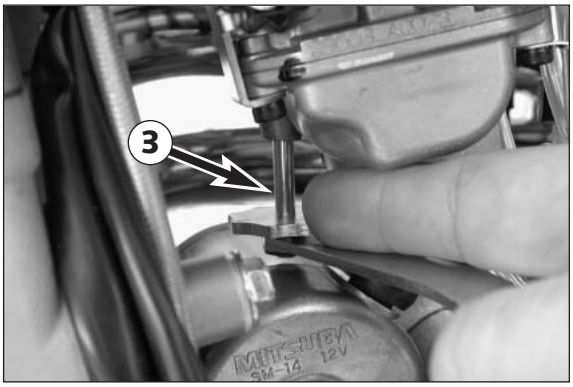
– Disconnect the plug-and-socket connection of the throttle valve sensor and remove the bolts ❶.
– Take the throttle valve sensor off the carburetor.

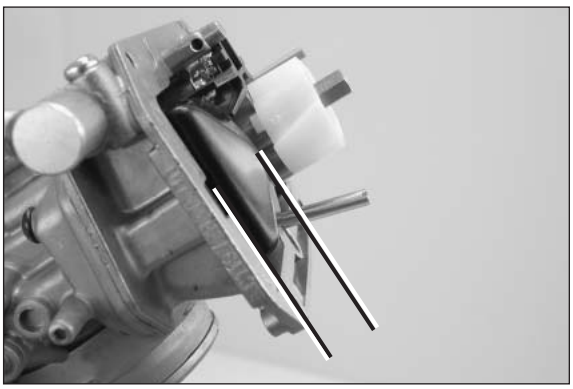


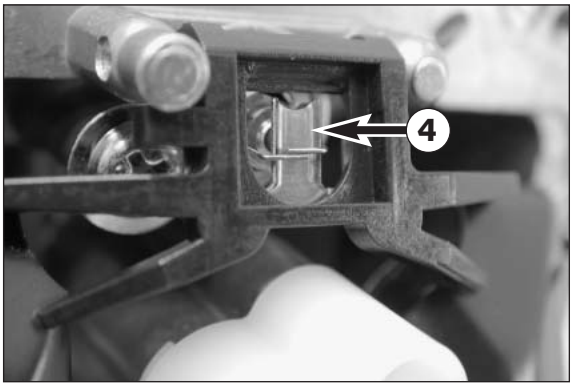
– When mounting the throttle valve sensor, make sure that the flat spot at the throttle valve pin engages the groove on the throttle valve sensor.
– Mount the 2 bolts, however, do not yet tighten them fully and adjust the position of the throttle valve sensor. Secure the 2 bolts with Loctite 243.











CARBURETOR – Adjust idling (Keihin FCR-MX 41)

Idling adjustment of the carburetor strongly affects the engine's starting behavior. That is, an engine whose idling speed is adjusted correctly will be easier to start than one whose idling speed has not been adjusted correctly.

The idle speed is controlled by means of the adjusting wheel ❶ and the mixture control screw ❷. The adjusting wheel is used to adjust the basic setting of the slide. The mixture control screw is used to control the idle mixture which arrives at the engine by way of the idle system. Clockwise turning reduces the fuel quantity (lean mixture), counterclockwise turning increases the fuel quantity (rich mixture).

TO ADJUST IDLING CORRECTLY, PROCEED AS FOLLOWS:

1 Turn in mixture control screw ❷ up to the stop, and turn it back out to the basic position (see technical date-engine)
2 Warm up the engine
3 Use the adjusting wheel ❶ to set the normal idle speed (1400 - 1500 rpm).
4 Turn mixture control screw ❷ slowly clockwise until idling speed starts to decrease. Memorize this position, and turn mixture control screw slowly counterclockwise until the idling speed decreases again. Adjust the point of the highest idling speed between these two positions. If, in the course of this procedure, the speed undergoes a relatively high increase, reduce the idle speed to a normal level and repeat the procedure specified in 4. Serious competitive racers will choose a setting approx. 1/4 turn (clockwise) leaner than this ideal value because their engine will heat up more when used in competitions.
   NOTE: If you fail to obtain a satisfying result by following the procedure described above, an incorrectly dimensioned idling nozzle may be the cause. If:
   a) the mixture control screw has been screwed in up to the stop without causing any change in rotational speed, a smaller idling jet has to be installed;
   b) the engine dies when the mixture control screw is still open by 2 turns, a larger idling jet needs to be selected.
   Naturally, in cases of jet changes, you have to start your adjusting work from the beginning.
5 Then, use the adjusting wheel to set the desired idle speed.
6 In cases of greater changes in the outside temperature and extremely different altitudes, the idling speed should be readjusted.

Basic information on carburetor wear

As a result of engine vibrations, the throttle valve, jet needle, and needle jet are subjected to increased wear. This wear may cause the carburetor to malfunction (e.g., overly rich mixture). Therefore, these parts should be replaced after 200 hours.

Adjusting the mixture control screw

Especially on the EXC models, accessing the mixture control screw is difficult. For this reasons, we have created an appropriate special tool.

Introduce the special tool on the mixture control screw ❷ at the carburetor bottom. Press the tool slightly upward and turn the adjusting wheel ❸ until the tool engages the slot of the mixture control screw.
Now, you can go about adjusting the screw. Marks were provided on the adjusting wheel, making it easier to keep track of the turns.

Checking the float level (float height)

For this purpose, dismount the carburetor and remove the float chamber. Hold the carburetor in a slanted position such that the float will abut the float needle valve but not compress it.
In this position, the edge of the float should be parallel with the float chamber sealing surface (see illustration).
If the float height does not correspond to the desired value, check the float needle valve and, if necessary, replace it.

If the float needle valve is o.k., you can adjust the float height by bending the float lever ❹.

Mount the float chamber, install the carburetor, and adjust the idle speed.

TROUBLE SHOOTING 9

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TROUBLE SHOOTING – SX, SXC, SC, SMC

TROUBLE	CAUSE	REMEDY
Engine will not start	Operating error	Switch on ignition, switch on emergency OFF switch, open fuel tap, tank fuel, do not use choke i.e. the hotstart device. Pay attention to starting off information (see driving instructions).
	Fuel supply interrupted	Close fuel tap, loosen fuel hose at carburettor, lead into a basin and open fuel tap, – if fuel leaks out, clean carburettor – if no fuel leaks out, check tank ventilation, i.e. clean fuel tap
	Flooded engine	See driving instructions
	Sooty or wet spark plug	Clean or replace spark plug
	Electrode gap too large	Adjust spark plug electrode gap to 0,6 mm
	Spark plug connector or spark plug faulty	Dismount spark plug, connect ignition cable, hold to ground (blank place on engine) and actuate kickstarter, a strong spark must be produced at the spark plug – If no spark is produced, loosen spark plug cap from ignition cable, hold about 5 mm from ground and actuate kickstarter – If a spark now occurs, replace spark plug cap – If no spark is produced, control ignition system
	If connector oxidates from generator to ignition coil	Remove fuel tank, clean connector and treat with contact spray
	Short circuit cable scored in wiring harness, ignition lock, emergency OFF switch or short circuit button faulty	Remove fuel tank, draw off blue/black cable from orange cable of ignition coil and check spark. – If a spark is produced, seek fault in short circuit current
	The plug connection of the CDI-unit, the pulse generator or the ignition coil has oxydized	Remove the seat, the right side cover and the fuel tank. Clean the plug connection and treat it with contact spray
	Water in short emergency OFF switch	Remove 2-pole connector located underneath the headlight mask, treat emergency OFF switch with contact spray
	Water in carburettor or jets blocked	Dismount and clean carburettor
	Carburettor does not fit in properly at intake flange	Check if carburettor is fitted in correctly
Engine will not idle	Idling jet blocked	Dismount carburettor and clean jets
	Adjusting screws on carburettor uncorrect adjusted	Adjust carburettor
	Ignition system faulty	Check ignition system
Engine does not rev high	Carburettor fuel level too high because float needle valve is dirty or worn out	Dismount carburettor and check if worn out
	Loose carburettor jets	Tighten jets
	Electronical ignition timing faulty	Check ignition system

TROUBLE	CAUSE	REMEDY
Engine will not reach full power	Fuel supply partically interrupted or carburettor dirty	Clean and check fuel system as well as carburettor
	Float is not tight, or no axial play	Replace or abrade the float
	Air filter very dirty	Clean or replace air filter
	Exhaust leaking or blocked	Check if exhaust is damaged, replace glas fibre yarn in exhaust silencer
	Valve gap to small	Adjust valve gap
	Loss of compression because hand decompressor has no play	Check setting of the hand decompression cable
	Electronical ignition timing faulty	Check ignition system
Engine stops or splutters in carburettor	Insuffient fuel	Clean and check fuel system and carburettor
	Engine takes air out of control	Check intake flange and carburettor if firmly setted
Engine gets to hot,	Insufficient cooling liquid	Refill cooling liquid (see maintenace work), check cooling system for leaks
	Not enough air stream	Drive on briskly
	Radiators very dirty	Clean radiators with water jet
	Foam formation in cooling system	Replace cooling liquid, use anti freeze liquid with brand name
	Bent cooling hose	Shorten or replace cooling hose
	Thermostat defective	Dismount and check thermostat (opening temperature 70° C, 158° F) or replace it
High oil consumption	Buckling gearing ventilation hose	Dislocate i.e. replace non-buckling vetilation hose
	Engine oil level too high	Check engine oil level when the engine is warm; correct if necessary
	Motor oil too thin (viscosity)	Use thicker engine oil; see chapter „Engine oil“
All switched on lamps blown out	Capacitor or voltage regulator faulty	Remove right side cover and control connections. Check capacitor and voltage regulator

TROUBLE SHOOTING – LC4 COMPETITION

TROUBLE	CAUSE	REMEDY
Engine will not start	Operating error	Switch on ignition, switch on emergency OFF switch, open fuel tap, tank fuel, do not use choke i.e. the hotstart device. Pay attention to starting off information (see driving instructions).
	The motorcycle has been out of operation for a longer period of time. Therefore the float chamber is filled with old fuel.	The easily inflammable components of the new fuels evaporate during longer periods of standstill. When the motorcycle has been out of operation for more than a week, it is therefore recommended to drain the old fuel from the float chamber. The engine will immediately start off when the float chamber is filled with new fuel.
	Fuel supply interrupted	Close fuel tap, loosen fuel hose at carburetor, lead into a basin and open fuel tap, – if fuel leaks out, clean carburetor – if no fuel leaks out, check tank ventilation, i.e. clean fuel tap
	Flooded engine	Fully open the throttle when starting or replace the spark plug, respectively.
	Sooty or wet spark plug	Clean / dry or replace spark plug.
	Electrode gap too large	Adjust spark plug electrode gap to 0,7 mm
	Spark plug connector or spark plug faulty	Dismount spark plug, connect ignition cable, hold to ground (blank place on engine) and actuate kickstarter, a strong spark must be produced at the spark plug – If no spark is created exchange the spark plug. – If the new spark plug doesn't produce a spark either, disconnect the spark plug connector from the ignition cable, hold it approx. 5 mm from ground and start. – If a spark now occurs, replace spark plug cap – If no spark is produced, control ignition system
	If connector oxidates from generator to ignition coil	Remove fuel tank, clean connector and treat with contact spray
	Short circuit cable scored in wiring harness, ignition lock, emergency OFF switch faulty	Remove fuel tank, draw off blue/black cable from orange cable of ignition coil and check spark. – If a spark is produced, seek fault in short circuit current
	Water in short emergency OFF switch	Remove 2-pole connector located underneath the headlight mask, treat emergency OFF switch with contact spray
	Water in carburetor or jets blocked	Dismount and clean carburetor
	Carburetor does not fit in properly at intake flange	Check if carburetor is fitted in correctly
Engine will not idle	Idling jet blocked	Dismount carburetor and clean jets
	Adjusting screws on carburetor uncorrect adjusted	Adjust carburetor
	Spark plug faulty	Exchange the spark plug
	Ignition system faulty	Check ignition system

TROUBLE	CAUSE	REMEDY
Engine does not rev high	Carburetor fuel level too high because	Dismount carburetor and check if worn out
	Float needle is dirty or worn out	Replace float needle
	Float leaks	Replace float
	The cold starting system is permanently activated due to a lack of play in the choke cable.	Adjust choke cable.
	Carburetor jets have loosened.	Retighten jets.
	Defective electronic ignition timing device.	Check ignition system
Engine will not reach full power	Fuel supply partically interrupted or carburetor dirty	Clean and check fuel system as well as carburetor
	Float is not tight	Replace the float
	Air filter very dirty	Clean or replace air filter
	Valve gap to small	Adjust valve gap
	Loss of compression because hand decompressor has no play	Check setting of the hand decompression cable
	Electronical ignition timing faulty	Check ignition system
Engine gets to hot, cooling liquid tmperature warning lamp lights up	Insufficient cooling liquid	Refill cooling liquid (see maintenace work), check cooling system for leaks
	Radiators very dirty	Clean radiators with water jet
	Foam formation in cooling system	Replace cooling liquid, use anti freeze liquid with brand name
	Bent cooling hose	Shorten or replace cooling hose
	Thermostat defective	Dismount and check thermostat (opening temperature 70°C, 158°F) or replace it
High oil consumption	Buckling gearing ventilation hose	Dislocate i.e. replace non-buckling ventilation hose
	Engine oil level too high	Check engine oil level when the engine is warm; correct if necessary
	Motor oil too thin (viscosity)	Use thicker engine oil; see chapter „Engine oil“
All lamps that were on have burned out.	Defective voltage regulator.	Remove seat, check connections, Check the voltage regulator
Headlight and parking light fail.	Blown fuse.	Replace fuse (below the headlight mask).
Flasher lights, brake light, fan and horn fail.	Blown fuse	Replace fuse (below the headlight mask).

TROUBLE	CAUSE	REMEDY
The neutral indicator lamp doesn't light up when the motorcycle is put into neutral.	Defective indicator lamp.	Replace indicator lamp.
	Defective idle switch.	Connect the cable to ground. The neutral switch must be replaced if the indicator lamp lights up.
	Loose connections, defective cable.	Check connections and cable.
Discharged battery.	The ignition (power consumer) has been left on.	Recharge the battery according to the relevant instructions.
	The generator doesn't recharge the battery.	Remove the seat and check the voltage regulator connections. Check the voltage regulator and the generator.

TROUBLE SHOOTING LC4

TROUBLE	CAUSE	REMEDY
Engine doesn't crank.	Operating errror	Turn on the ignition, switch the gear to neutral and switch the emergency OFF switch on.
	Discharged battery.	Recharge the battery and investigate the causes for discharging.
	Defect ignition lock or emergency OFF switch	Check ignition lock and emergency OFF switch.
The engine doesn't crank. The neutral indicator lamp doesn't light up.	Blown fuse safe-starting system.	Replace fuse (below the headlight mask).
	Blown main fuse.	Remove seat and replace the main fuse.
The engine cranks only with pulled clutch lever	Defect safe-starting system.	Check the components of the safe-starting system.
Engine cranks with gear engaged.	Defect safe-starting system.	Check the components of the safe-starting system.
Engine cranks but doesn't start.	Operating error	Open fuel tap, tank fuel, you did not use choke i.e. the warmstart device. Pay attention to starting off information (see driving instructions).
	The motorcycle has been out of operation for a longer period of time. Therefore old fuel has accumulated in the float chamber	The easily inflammable components of the new fuels evaporate during longer periods of standstill. When the motorcycle has been out of operation for more than a week, it is therefore recommended to drain the old fuel from the float chamber. The engine will immediately start off when the float chamber is filled with new fuel.
	Fuel supply interrupted	Loosen fuel hose at carburettor, lead into a basin and open fuel tap – if fuel leaks out, the carburetor might need cleaning – if no fuel leaks out, check tank ventilation, i.e. clean fuel tap
	Flooded engine	Fully open the throttle when starting or exchange the spark plug, respectively
	Sooty or wet spark plug	Clean and dry the spark plug or exchange it, respectively
	Electrode gap too large	Adjust spark plug electrode gap to 0,7 mm
	Spark plug connector or spark plug faulty	Dismount spark plug, connect ignition cable, hold to ground (blank place on engine) and actuate starter, a strong spark must be produced at the spark plug – If no spark is created exchange the spark plug. – If the new spark plug doesn't produce a spark either, disconnect the spark plug connector from the ignition cable, hold it a distance of approx. 5 mm from ground and start. – If a spark now occurs, replace spark plug cap – If no spark is produced, control ignition system
	The plug connection of the CDI-unit, the pulse generator or the ignition coil has oxydized	Remove the seat, the right side cover and the fuel tank. Clean the plug connection and treat it with contact spray
	Water in carburetor or jets blocked	Dismount and clean carburetor

TROUBLE	CAUSE	REMEDY
Engine fails to idle	Glogged idling jet	Disassemble carburetor and clean jets
	Uncorrect adjustment of adjusting screws on carburetor	Adjust carburetor
	Defective spark plug	Replace spark plug
	Defective ignition system	Check ignition system
Engine does not rev high	Carburetor fuel level too high because	Dismount carburetor and check if worn out
	Float needle is dirty or worn out	Replace float needle
	Float leaks	Replace float
	The cold starting system is permanently activated due to a lack of play in the choke cable.	Adjust choke cable.
	Defective membrane of slide (640)	Replace membrane
	Loose carburettor jets	Tighten jets
	Electronic ignition timing faulty	Check pulse generator and ignition system
Engine will not reach full power	Fuel supply partically interrupted or carburetor dirty	Clean and check fuel system as well as carburetor
	Float leaks	Replace the float
	Defective membrane of slide (640)	Replace membrane
	Air filter very dirty	Clean or replace air filter
	Valve clearance to small	Adjust valve clearance
	Loss of compression because hand decompressor has no play	Check setting of the hand decompression cable
	Electronic ignition timing faulty	Check pulse generator and ignition system
Engine overheats	Insufficient cooling liquid	Refill cooling liquid (see maintenace work), check cooling system for leaks
	Radiator fins are extremely dirty	Clean radiator with water jet
	Foam forms in cooling system	Replace cooling liquid, use antifreezer with brand name
	Bent cooling hose	Shorten or replace cooling hose
	Thermostat defective	Remove and check thermostat (opening temperature 70°C (158°F) or replace it.
	Blown fan fuse	Replace fuse and check if fan operates properly (see below)
	Defect thermo switch	Replace thermo switch
	Fan defective	Check if fan operates properly. To do this, start the engine, then bypass the connections to the thermo switch (bottom right radiator).
High oil consumption	Buckling gear ventilation hose	Readjust or replace ventilation hose
	Engine oil level too high	Check engine oil level when the engine is warm; correct if necessary
	Engine oil too thin (viscosity)	Use thicker engine oil; see chapter „Engine oil“

TROUBLE	CAUSE	REMEDY
All switched on lamps blown out	Voltage regulator faulty	Remove seat and check connections. Check voltage regulator
Headlight and parking light fail	Blown fuse	Replace fuse (below the headlight mask).
Flasher lights, brake light, fan and horn fail	Blown fuse	Replace fuse (below the headlight mask).
The NEUTRAL lamp is not on even though the gear is in NEUTRAL	Defect indicator lamp. Defect neutral switch. Loose connections, defect cable.	Replace indicator lamp Connect cable to ground; neutral switch must be replaced if indicator lamp lights up. Check connections and cables.
The battery is discharged	The ignition (power consumer) hasn't been switched off The battery isn't charged by the generator	Recharge the battery according to the relevant instructions. Remove seat and check voltage regulator connections; Check voltage regulator and generator.

TECHNICAL SPECIFICATIONS 10

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TECHNICAL SPECIFICATIONS – ENGINE 400/540 SXC '98

Engine	**400 LC4**	**540 LC4**
Design	Liquid-cooled single cylinder 4-stroke engine with and without balancer shaft	
Displacement	398 cm^3	538,5 cm^3
Bore / Stroke	89 / 64 mm	95 / 76 mm
Ratio	10,8 : 1	11,1 : 1
Fuel	unleaded premium gasoline with a least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	249° (249/1)	
Valve timing by 1 mm valve clearence	IO 22° BTDC EO 60° BBDC IC 42° ABDC EC 4° ATDC	IO 13° BTDC EO 53° BBDC IC 51° ABDC EC 11° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm	
Valve clearence cold	Intake: 0,20 mm Exhaust: 0,20 mm	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	forged/cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	forced-feed lubrication through two Eaton-Oilpumps with oil sump	
Engine oil	see bellow #	
Engine oil quantity	1,40liters	
Primary ratio	straight geared spur wheels 30 : 81 teeth	
Clutch	multi disc clutch in oil bath	
Transmission	5-speed claw shifted	
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18	
Ignition system	contactless thyristor ignition with electronic advanced system type SEM	
Ignition timing	400 SXC : adjustment to max. 38 ° BTDC at 6000 rpm 540 SXC: adjustment to max. 32 ° BTDC at 6000 rpm	
Generator	12V 130W	
Spark plug	NGK D8EA	
Spark plug gap	0,6 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)	
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor	

TOLERANCE, ASSEMBLY CLEARANCE

Crank shaft	axial play	0,03 - 0,12 mm	(0,001-0,005 in)
	run out of crank stud	max. 0,04 mm	(0,0016 in)
Connecting rod bearing	radial play	max. 0,05 mm	(0,0019 in)
	axial play	max. 1,00 mm	(0,04 in)
Piston	assembly clearance 400/540/620	max. 0,12 mm	(0,005 in)
Piston rings end gap	compression rings	max. 0,60 mm	(0,023 in)
	oil scraper ring	max. 0,80 mm	(0,031 in)
Valves	seat sealing intake	max. 1,50 mm	0,059 in)
	seat sealing exhaust	max. 2,00 mm	(0,079 in)
	run out of valve heads	max. 0,03 mm	(0,001 in)
	valve guides diameter	max. 7,05 mm	(0,277 in)
Oil pump	clearance outer rotor - housing	max. 0,20 mm	(0,008 in)
	clearance outer rotor - inner rotor	max. 0,20 mm	(0,008 in)
Bypaß valve	minimum spring lenght	25 mm	(1 in)
Clutch discs	wear limit organic	2,5 mm	(0,1 in)
Transmission shafts	axial play	0,1 - 0,4 mm	(0,004 in)
Clutch	minimum clutchspring lenght	34,5 mm (new 37 mm)	(1,36 in - new 1,45 in)

TIGHTENING TORQUES - ENGINE			
Hexagon nut at primary gear	M20x1,5	Loctite 243 + 170 Nm	(125 ft.lb)
Collar nut flywheel	M12x1 LH thread	60 Nm	(44 ft.lb)
Hexagon nut for inner clutch hub	M18x1,5	Loctite 243 + 80 Nm	(59 ft.lb)
Kickstarter stop bolt	M12x1,5	50 Nm	(37 ft.lb)
AH bolts oil pump	M6	Loctite 243 + 8 Nm	(6 ft.lb)
Hexagon bolt camshaft gear	M10	Loctite 243 + 35 Nm	(26 ft.lb)
AH bolt cylinder head top sect.	M6x25	8 Nm	(6 ft.lb)
AH bolt cylinder head top sect.	M6x50/M6x55 (12.9)	20 Nm	(15 ft.lb)
AH bolt cylinder head top sect.	M6x65/M6x70 (8.8)	8 Nm	(6 ft.lb)
Cylinder head bolts	M10	50 Nm	(37 ft.lb)
Collar nuts at cylinder base	M10	40 Nm	(30 ft.lb)
Hexagon bolt chain sprocket	M10	Loctite 243 + 40 Nm	(30 ft.lb)
Oil drain plug	M22x1,5	30 Nm	(22 ft.lb)
Magnetic plug	M12x1,5	20 Nm	(15 ft.lb)
Plug bypass valve	M12x1,5	20 Nm	(15 ft.lb)
Banjo bolts oil lines	M8x1	10 Nm	(7 ft.lb)
Banjo bolt oil lines	M10x1	15 Nm	(11 ft.lb)
Jet screw clutch cover	M8x1	10 Nm	(7 ft.lb)
Bolt plug timing-chain tensioner	M12x1,5	20 Nm	(15 ft.lb)
Counternuts valve adjusting screws	M7x0,75	20 Nm	(15 ft.lb)
Spark Plug	M12	20 Nm	(15 ft.lb)

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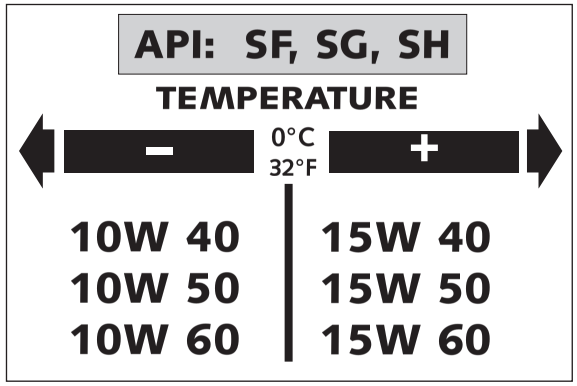

Engine oil

Use only oil brands, which meet quality requirements of API-classes SF, SG or SH (informations on bottles) or higher. Both, mineral and synthetic oils with above specifications can be used.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

BASIC CARBURETOR SETTING				
	400 SXC	**400 SXC (20 kW)**	**540 SXC**	**540 SXC (20 kW)**
Carburetor	PHM 38 ND	PHM 38 ND	VHSB 38 QS	VHSB 38 QS
Carburetor setting number	120198	120198	081297	091297
Main jet	140	140	185	140 (185)
Needle jet	AB 265	AB 265	FN 260	FN 260
Idling jet	50	50	33	33
Jet needle	K 32	K 32	K 32	K 32
Needle position from top	II	II	II	II
Mixture.adju. screw open	1,5 turn	1,5 turn	1,5 turn	1,5 turn
Throttle valve	50/1	50/1	50	50
Starting jet	45	45	40	40
Performance restrictor	–	slide stop 56mm	–	slide stop 36mm

TECHNICAL SPECIFICATIONS - CHASSIS 400/540 SXC '98

	400/540 SXC
Frame	Central chrome-moly-steel frame
Fork	WP Extreme
Wheel travel front/rear	285/320 mm (11,2/12,6 in)
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing
Front brake	Disc brake with carbon-steel brake disc , brake caliper floated brake disc Ø = 260 mm (10,2 in)
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated
Tyres front Air pressure offroad Air press. road, driver only Air press. road with passenger	90/90 - 21 1,0 bar (14 psi) 1,5 bar (21 psi) –
Tyres rear Air pressure offroad Air press. road, driver only Air press. road with passenger	140/80 - 18 1,2 bar (17 psi) 2,0 bar (28 psi) –
Fuel tank capacity	9 liter (3 US gallons) of that 1,5 liter (0,4 US gallons) reserve
Final drive ratio	400: 14:50 540:15:50
Chain	5/8 x 1/4" O-Ring
Steering angle	62,5°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	940 mm (37 in)
Ground clearance	350 mm (13,8 in)
Dead weight without fuel	400: 121 kg (267 lbs) 540: 122 kg (269 lbs)

STANDARD ADJUSTMENT - FORK

	WP 09.18.S7.44
Compression adjuster	12
Rebound adjuster	12
Spring	4,2 N/mm
Spring preload	7 mm
Air chamber length	155 mm
Capacity per fork leg	ca 800 ccm
Fork oil	SAE 5

NOTE FOR WHITE POWER FORKS:
The damping units in the left and the right fork leg are of different design. Make sure not to mix them up in case of repair or service works.

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	WP 01.18.Q7.82
Compression adjuster	3
Rebound adjuster	4
Spring	63/260
Spring preload	23 mm

TORQUES

Collar bolt front axle	M 10	40 Nm	(30 ft.lb)
Brake caliper front	M 8	Loctite 243 + 25 Nm	(18 ft.lb)
Collar nut rear axle	M 20x1,5	80 Nm	(59 ft.lb)
Hex. nut swing arm bolt	M 14x1,5	100 Nm	(74 ft.lb)
Clamping bolt top triple clamp	M 8	15 Nm	(11 ft.lb)
Clamping bolt bottom triple clamp	M 8	20 Nm	(15 ft.lb)
Clamping bolts fork leg axle passage	M 8	10 Nm	(7,4 ft.lb)
Other bolts chassis	M 6 M 8 M 10	10 Nm 25 Nm 45 Nm	(7,4 ft.lb) (18 ft.lb) (33 ft.lb)

TECHNICAL SPECIFICATIONS – ENGINE 400/620 SX, SC '98

Engine	400 LC4	620 LC4
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft	
Displacement	398 cm³	609 cm³
Bore / Stroke	89 / 64 mm	101 / 76 mm
Ratio	10,8 : 1	SX: 11,5 : 1 SC: 10,4 : 1
Fuel	unleaded premium gasoline with a least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	249° (249)	
Valve timing by 1 mm valve clearence	IO 22° BTDC EO 59° BBDC IC 47° ABDC EC 10° ATDC	IO 14° BTDC EO 56° BBDC IC 55° ABDC EC 13° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm	
Valve clearence cold	Intake: 0,20 mm Exhaust: 0,20 mm	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	forged/cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	forced-feed lubrication through Eaton-Oilpump with oil sump	
Engine oil	see bellow #	
Engine oil quantity	1,40 liters	
Primary ratio	straight geared spur wheels 30 : 81 teeth	
Clutch	multi disc clutch in oil bath	
Transmission	5-speed claw shifted	
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18	
Ignition system	contactless thyristor ignition with electronic advanced system type SEM	
Ignition timing	adjustment to max. 38 ° BTDC at 6000 rpm	SX: adjustment to max. 38 ° BTDC at 6000 rpm SC: adjustment to max. 32 ° BTDC at 6000 rpm
Generator	12V 130W	
Spark plug	NGK D8EA	
Spark plug gap	0,6 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)	
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor	

TOLERANCE, ASSEMBLY CLEARANCE

Crank shaft	axial play	0,03 - 0,12 mm	(0,001-0,005 in)
	run out of crank stud	max. 0,04 mm	(0,0016 in)
Connecting rod bearing	radial play	max. 0,05 mm	(0,0019 in)
	axial play	max. 1,00 mm	(0,04 in)
Piston	assembly clearance 400/620	max. 0,12 mm	(0,005 in)
Piston rings end gap	compression rings	max. 0,60 mm	(0,023 in)
	oil scraper ring	max. 0,80 mm	(0,031 in)
Valves	seat sealing intake	max. 1,50 mm	0,059 in)
	seat sealing exhaust	max. 2,00 mm	(0,079 in)
	run out of valve heads	max. 0,03 mm	(0,001 in)
	valve guides diameter	max. 7,05 mm	(0,277 in)
Oil pump	clearance outer rotor - housing	max. 0,20 mm	(0,008 in)
	clearance outer rotor - inner rotor	max. 0,20 mm	(0,008 in)
Bypaß valve	minimum spring lenght	25 mm	(1 in)
Clutch discs	wear limit organic	2,5 mm	(0,1 in)
Transmission shafts	axial play	0,1 - 0,4 mm	(0,004 in)
Clutch	minimum clutchspring lenght	34,5 mm (new 37 mm)	(1,36 in - new 1,45 in)

TIGHTENING TORQUES - ENGINE

Hexagon nut at primary gear	M20x1,5	Loctite 243 + 170Nm	(125 ft.lb)
Collar nut flywheel	M12x1 LH thread	60 Nm	(44 ft.lb)
Hexagon nut for inner clutch hub	M18x1,5	Loctite 648 + 80 Nm	(59 ft.lb)
Kickstarter stop bolt	M12x1,5	70 Nm	(52 ft.lb)
AH bolts oil pump	M6	Loctite 243 + 8 Nm	(6 ft.lb)
Hexagon bolt camshaft gear	M10	35 Nm	(26 ft.lb)
AH bolt cylinder head top sect.	M6x25	8 Nm	(6 ft.lb)
AH bolt cylinder head top sect.	M6x50/M6x55 (12.9)	20 Nm	(15 ft.lb)
AH bolt cylinder head top sect.	M6x65/M6x70 (8.8)	8 Nm	(6 ft.lb)
Cylinder head bolts	M10	50 Nm	(37 ft.lb)
Collar nuts at cylinder base	M10	40 Nm	(30 ft.lb)
Hexagon bolt chain sprocket	M10	Loctite 243 + 40 Nm	(30 ft.lb)
Oil drain plug	M22x1,5	30 Nm	(22 ft.lb)
Magnetic plug	M12x1,5	20 Nm	(15 ft.lb)
Plug bypass valve	M12x1,5	20 Nm	(15 ft.lb)
Banjo bolts oil lines	M8x1	10 Nm	(7 ft.lb)
Banjo bolt oil lines	M10x1	15 Nm	(11 ft.lb)
Jet screw clutch cover	M8x1	10 Nm	(7 ft.lb)
Bolt plug timing-chain tensioner	M12x1,5	20 Nm	(15 ft.lb)
Counternuts valve adjusting screws	M7x0,75	20 Nm	(15 ft.lb)
Spark plug	M12	20 Nm	(15 ft.lb)

BASIC CARBURETOR SETTING				
	400 SC (20 kW)	400 SC	620 SX 620 SC	620 SC (20 kW)
Carburetor	PHM 38 SD	PHM 38 SD	PHM 40 SD	PHM 40 SD
Carburetor setting number	300896	4894/6	4922	110996
Main jet	150	190	195	155
Needle jet	DR 266	DR 270	DR 272	DR 268
Idling jet	45	45	45	45
Jet needle	K 51	K 51	K 51	K 51
Needle position from top	3 rd	2 nd	2 nd	3 rd
Mixture.adju. screw open	1,5 turn	1,5 turn	1,5 turn	1,5 turn
Throttle valve	40	40	40	40
Starting jet	45	45	45	45
Performance restrictor	slide stop 22 mm	–	–	slide stop 26 mm

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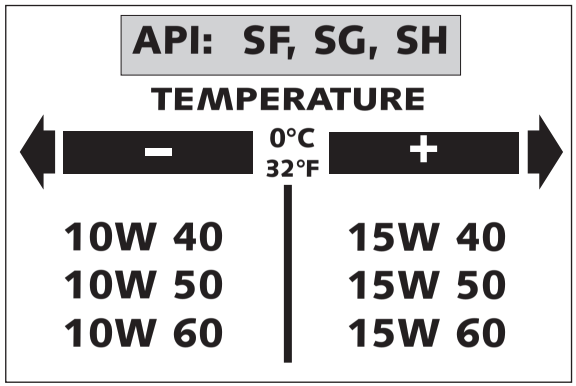

Engine oil

Use only oil brands, which meet quality requirements of API-classes SF, SG or SH (informations on bottles) or higher. Both, mineral and synthetic oils with above specifications can be used.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TECHNICAL SPECIFICATIONS - CHASSIS 400 / 620 SX, SC '98

	620 SX	400/620 SC
Frame	Central chrome-moly-steel frame	
Fork	WP Extreme	
Wheel travel front/rear	285/320 mm (11,2/12,6 in)	
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing	
Front brake	Disc brake with carbon-steel brake disc , brake caliper floated brake disc Ø = 260 mm (10,2 in)	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated	
Tyres front Air pressure offroad Air press. road, driver only	80/100-21 1,0 bar (14 psi) –	90/90-21 1,0 bar (14 psi) 1,5 bar (21 psi)
Tyres rear Air pressure offroad Air press. road, driver only	110/90-19 1,2 bar (17 psi) –	140/80-18 70R 1,2 bar (17 psi) 2,0 bar (28 psi)
Fuel tank capacity	9 liter (3 US gallons) of that 1,5 liter (0,4 US gallons) reserve	
Final drive ratio	14:48, 14:50, 15:40, 15:45, 15:48 15:50, 16:40, 16:45	
Chain	5/8 x 1/4"	
Steering angle	62,5°	
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)	
Seat high	940 mm (37 in)	
Ground clearance	350 mm (13,8 in)	
Dead weight without fuel	115 kg (254 lbs)	400 : 121 kg (267 lbs) 620 : 122 kg (269 lbs)
Max. permissible front axle load	211 kg (466 lbs)	
Max. permissible rear axle load	335 kg (737 lbs)	
Max. permissible laden weight	350 kg (770 lbs)	

STANDARD ADJUSTMENT - FORK

	WP 09.18.S7.40	WP 09.18.S7.44
Compression adjuster	8	12
Rebound adjuster	12	12
Spring	4,4 N/mm	4,2 N/mm
Spring preload	8 mm	7 mm
Air chamber length	140 mm	155 mm
Capacity per fork leg	ca 800 ccm	ca 800 ccm
Fork oil	SAE 5	SAE 5

NOTE FOR WHITE POWER FORKS:
The damping units in the left and the right fork leg are of different design. Make sure not to mix them up in case of repair or service works.

STANDART-ADJUSTMENT - SHOCK ABSORBER

	WP 01.18.Q7.82	WP 01.18.Q7.81
Compression adjuster	3	3
Rebound adjuster	4	4
Spring	63/260	66/260
Spring preload	23 mm	23 mm

TORQUES

Collar bolt front axle	M 10	40 Nm (30 ft.lb)
Brake caliper front	M 8	25 Nm (19 ft.lb) + Loctite 243
Collar nut rear axle	M 20x1,5	80 Nm (59 ft.lb)
Hex. nut swing arm bolt	M 14x1,5	100 Nm (74 ft.lb)
Clamping bolt top triple clamp	M 8 (Extreme) M8 (USD)	15 Nm (11 ft.lb) 15 Nm (11 ft.lb)
Clamping bolt bottom triple clamp	M 8 (Extreme) M8 (USD)	20 Nm (15 ft.lb) 15 Nm (11 ft.lb)
Clamping bolts fork leg axle passage	M 7/M8	7/10 Nm (5/7 ft.lb)
Other bolts chassis	M6 M8 M10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

TECHNICAL SPECIFICATIONS – ENGINE 620 LC4 COMPETITION '98

Engine	**620 LC4 COMP.**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft
Displacement	609 cm^3
Bore / Stroke	101 / 76 mm
Ratio	10,4 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	249° (249/1)
Valve timing by 1 mm valve clearence	IO 15° BTDC EO 52° BBDC IC 54° ABDC EC 17° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm
Valve clearence cold	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	forged/cast aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	forced-feed lubrication through Eaton-Oilpump with oil sump
Engine oil	see bellow #
Engine oil quantity	2,1 liters including frame
Primary ratio	straight geared spur wheels 30 : 81 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless thyristor ignition with electronic advanced system type SEM
Ignition timing	adjustment to max. 32 ° BTDC at 6000 rpm
Generator	12V 130W
Spark plug	NGK DR8EA
Spark plug gap	0,7 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor

ASSEMBLY CLEARANCE, WEAR LIMIT

Crank shaft	axial play	0,03 - 0,12 mm	(0,001-0,005 in)
	run out of crank stud	max. 0,08 mm	(0,0031 in)
Connecting rod bearing	radial play	max. 0,05 mm	(0,0019 in)
	axial play	max. 1,00 mm	(0,04 in)
Piston	assembly clearance	max. 0,12 mm	(0,005 in)
Piston rings end gap	compression rings	max. 0,60 mm	(0,023 in)
	oil scraper ring	max. 0,80 mm	(0,031 in)
Valves	seat sealing intake	max. 1,50 mm	0,059 in)
	seat sealing exhaust	max. 2,00 mm	(0,079 in)
	run out of valve heads	max. 0,05 mm	(0,002 in)
	valve guides diameter	max. 7,05 mm	(0,277 in)
Oil pump	clearance outer rotor - housing	max. 0,20 mm	(0,008 in)
	clearance outer rotor - inner rotor	max. 0,20 mm	(0,008 in)
Bypaß valve	minimum spring lenght	25 mm	(1 in)
Clutch discs	wear limit organic	2,5 mm	(0,1 in)
Transmission shafts	axial play	0,1 - 0,4 mm	(0,004 in)
Clutch	minimum clutchspring lenght	34,5 mm (new 37 mm)	(1,36 in - new 1,45 in)

TIGHTENING TORQUES - ENGINE			
Hexagon nut at primary gear	M20x1,5	Loctite 243 +170Nm	(125 ft.lb)
Collar nut flywheel	M12x1 LH thread	60 Nm	(44 ft.lb)
Hexagon nut for inner clutch hub	M18x1,5	Loctite 243 + 80 Nm	(59 ft.lb)
Kickstarter stop bolt	M12x1,5	50 Nm	(37 ft.lb)
AH bolts oil pump	M6	Loctite 243 + 8 Nm	(6 ft.lb)
Hexagon bolt camshaft gear	M10	Loctite 243 + 35 Nm	(26 ft.lb)
AH bolt cylinder head top sect.	M6x25	8 Nm	(6 ft.lb)
AH bolt cylinder head top sect.	M6x50/M6x55 (12.9)	20 Nm	(15 ft.lb)
AH bolt cylinder head top sect.	M6x65/M6x70 (8.8)	8 Nm	(6 ft.lb)
Cylinder head bolts	M10	50 Nm	(37 ft.lb)
Collar nuts at cylinder base	M10	40 Nm	(30 ft.lb)
Hexagon bolt chain sprocket	M10	Loctite 243 + 40 Nm	(30 ft.lb)
Oil drain plug	M22x1,5	30 Nm	(22 ft.lb)
Magnetic plug	M12x1,5	20 Nm	(15 ft.lb)
Plug bypass valve	M12x1,5	20 Nm	(15 ft.lb)
Banjo bolts oil lines	M8x1	10 Nm	(7 ft.lb)
Banjo bolt oil lines	M10x1	15 Nm	(11 ft.lb)
Jet screw clutch cover	M8x1	10 Nm	(7 ft.lb)
Bolt plug timing-chain tensioner	M12x1,5	20 Nm	(15 ft.lb)
Counternuts valve adjusting screws	M7x0,75	20 Nm	(15 ft.lb)
Spark plug	M 12	20 Nm	(15 ft.lb)

BASIC CARBURETOR SETTING	
	620 LC4 COMP.
Carburetor	PHM 40 SD
Carburetor setting number	110996
Main jet	155
Needle jet	DR 268
Idling jet	45
Jet needle	K 51
Needle position from top	3 rd
Mixture.adju. screw open	1,5 turn
Throttle valve	40
Starting jet	45
Performance restrictor	slide stop 26 mm

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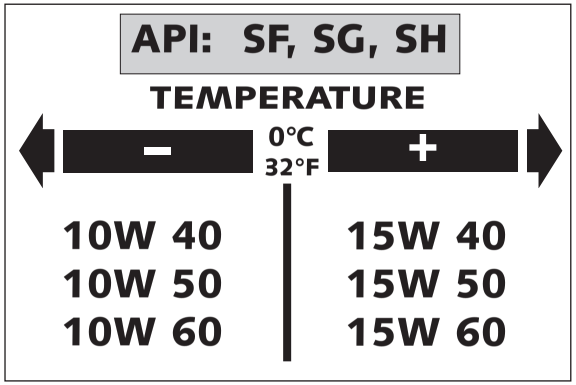


Engine oil

Use only oil brands, which meet quality requirements of API-classes SF, SG or SH (informations on bottles) or higher. Both, mineral and synthetic oils with above specifications can be used.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TECHNICAL SPECIFICATIONS - CHASSIS 620 LC4 COMP. '98

	620 LC4 COMP.
Frame	Central chrome-moly-steel frame
Fork	WP Extreme
Wheel travel front/rear	280 / 320 mm (11,0 / 12,6 in)
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing
Front brake	Disc brake with carbon-steel brake disc , brake caliper floated brake disc Ø = 300 mm (11,8 in)
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated
Tyres front Air press. road, driver only Air press. road with passenger	90/90-21 T63 1,5 bar (21 psi) 2,0 bar (28 psi)
Tyres rear Air press. road, driver only Air press. road with passenger	130/80-18 T63 2,0 bar (28 psi) 2,2 bar (31 psi)
Fuel tank capacity	12 liter (3,2 US gallons) of that 2,5 liter (0,7 US gallons) res
Final drive ratio	16:40
Chain	O-ring 5/8 x 1/4"
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	955 mm (37,6 in)
Ground clearance	335 mm (13,2 in)
Dead weight without fuel	133 kg (293 lbs)
Max. permissible front axle load	211 kg (466 lbs)
Max. permissible rear axle load	335 kg (737 lbs)
Max. permissible laden weight	350 kg (770 lbs)

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	118 S 701
Compression adjuster	3
Rebound adjuster	5
Spring	66/260
Spring preload	23 mm

NOTE FOR WP EXTREME FORKS:
The damping units in the left and the right fork leg are of different design. Make sure not to mix them up in case of repair or service works.

STANDARD ADJUSTMENT - FORK

	918 S 757
Compression adjuster	12
Rebound adjuster	12
Spring	4,4 N/mm
Spring preload	10 mm
Air chamber length	160 mm
Capacity per fork leg	ca. 800 ccm
Fork oil	SAE 5

TORQUES

Collar bolt front axle	M 10	40 Nm (30 ft.lb)
Brake caliper front	M 8	25 Nm (19 ft.lb) + Loctite 243
Collar nut rear axle	M 20x1,5	80 Nm (59 ft.lb)
Hex. nut swing arm bolt	M 14x1,5	100 Nm (74 ft.lb)
Clamping bolt top triple clamp	M 8	15 Nm (11 ft.lb)
Clamping bolt bottom triple clamp	M 8	20 Nm (15 ft.lb)
Clamping bolts fork leg axle passage	M8	10 Nm (7 ft.lb)
Other bolts chassis	M6 M8 M10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

Art.-Nr. 3.206.006 -E

TECHNICAL DATA – ENGINE 400 / 640 LC4 '98

Engine	**400 LC4**	**640 LC4**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter	
Displacement	398 ccm	624.6 ccm
Bore / Stroke	89 / 64 mm	101 / 78 mm
Ratio	10,8 : 1	11 : 1
Fuel	unleaded premium gasoline with a least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	249° (249/1)	
Valve timing by 1 mm valve clearence	IO 22° BTDC EO 60° BBDC IC 47° ABDC EC 4° ATDC	IO 13° BTDC EO 53° BBDC IC 51° ABDC EC 11° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm	
Valve clearence cold	Intake: 0,20 mm Exhaust: 0,20 mm	0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	forged/cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	two Eaten-oilpumps	
Engine oil	see bellow #	
Engine oil quantity	appr. 2,1 liters including frame	
Primary ratio	straight geared spur wheels 30 : 81 teeth	
Clutch	multi disc clutch in oil bath	
Transmission	5-speed claw shifted	
Ignition system	contactless DC-CDI ignition with digital advanced system type KOKUSAN	
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm	
Generator	12V 200W	
Spark plug	NGK DR8EA	
Spark plug gap	0,7 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)	
Starting equipment	electric starter and kickstarter	

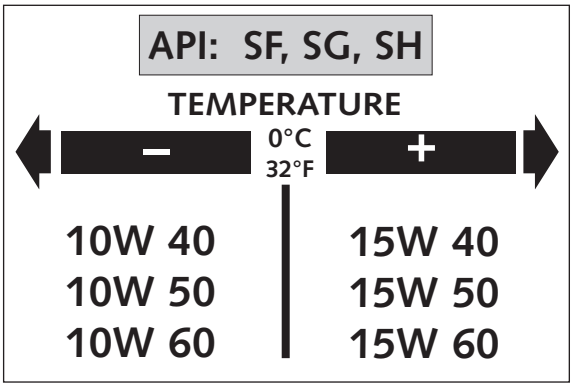
ASSEMBLY CLEARANCE, WEAR LIMIT

Crank shaft	axial play	0,03 - 0,12 mm	(0,001-0,005 in)
	run out of crank stud	max. 0,08 mm	(0,0031 in)
Connecting rod bearing	radial play	max. 0,05 mm	(0,0019 in)
	axial play	max. 1,00 mm	(0,04 in)
Piston	assembly clearance	max. 0,12 mm	(0,005 in)
Piston rings end gap	compression rings	max. 0,60 mm	(0,023 in)
	oil scraper ring	max. 0,80 mm	(0,031 in)
Valves	seat sealing intake	max. 1,50 mm	0,059 in)
	seat sealing exhaust	max. 2,00 mm	(0,079 in)
	run out of valve heads	max. 0,05 mm	(0,002 in)
	valve guides diameter	max. 7,05 mm	(0,277 in)
Oil pump	clearance outer rotor - housing	max. 0,20 mm	(0,008 in)
	clearance outer rotor - inner rotor	max. 0,20 mm	(0,008 in)
Bypaß valve	minimum spring lenght	25 mm	(1 in)
Clutch discs	wear limit organic	2,5 mm	(0,1 in)
Transmission shafts	axial play	0,1 - 0,4 mm	(0,004 in)
Clutch	minimum clutch spring lenght	34,5 mm (new 37 mm)	(1,36 in - new 1,45 in)

TIGHTENING TORQUES - ENGINE		
Hexagon nut at primary gear	M20x1,5	Loctite 243 + 170Nm (125 ft.lb)
Hexagon nut flywheel	M16x1,25 LH thread	150 Nm (110 ft.lb)
Hexagon nut for inner clutch hub	M18x1,5	80 Nm (59 ft.lb)
Kickstarter stop bolt	M12x1,5	50 Nm (37 ft.lb)
Allen head bolts oil pump	M6	Loctite 243 + 8 Nm (6 ft.lb)
Hexagon bolt camshaft gear	M10	Loctite 243 + 35 Nm (26 ft.lb)
Allen head bolts outer race	M6x12/M6x12,5	Loctite 648 + 18 Nm (13 ft.lb)
Allen head bolt cylinder head top sect.	M6x50/M6x55 (12.9)	20 Nm (15 ft.lb)
Allen head bolt cylinder head top sect.	M6x25/M6x65/M6x70 (8.8)	8 Nm (6 ft.lb)
Cylinder head bolts	M10	50 Nm (37 ft.lb)
Collar nuts at cylinder base	M10	40 Nm (30 ft.lb)
Hexagon bolt chain sprocket	M10	Loctite 243 + 40 Nm (30 ft.lb)
Oil drain plug	M22x1,5	30 Nm (22 ft.lb)
Magnetic plug	M12x1,5	20 Nm (15 ft.lb)
Plug bypass valve	M12x1,5	20 Nm (15 ft.lb)
Crankshaft locating bolt	M8	25 Nm (18 ft.lb)
Hollow bolts oil lines	M8x1	10 Nm (7 ft.lb)
Hollow bolts oil lines	M10x1	15 Nm (11 ft.lb)
Jet screw clutch cover	M8	10 Nm (7 ft.lb)
Bolt plug timing-chain tensioner	M12x1,5	20 Nm (15 ft.lb)
Counternuts valve adjusting screws	M7x0,75	20 Nm (15 ft.lb)
Engine fastening bolt	M8	40 Nm (30 ft.lb)
	M10	70 Nm (52 ft.lb)

GEAR RATIOS

Primary ratio	Transmission	Original final drive ratio	Available chain drive sprockets	Available final drive sprockets
30:81	1st gear 14:35 2nd gear 15:24 3rd gear 18:21 4th gear 20:19 5th gear 22:18	15:45 16:40 16:42 17:38	15 16 for chain 17 5/8 x 1/4"	38 40 42 for chain 45 5/8 x 1/4" 48



Engine oil

Use only oil brands (Shell Advance Ultra 4), which meet quality requirements of API-classes SF, SG or SH (informations on bottles) or higher. Both, mineral and synthetic oils with above specifications can be used.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

BASIC CARBURETOR SETTING

	400 LC4 25 kW	**400 LC4** 31 kW
Carburetor	PHM 38 ND	PHM 38 ND
Carburetor setting number	100197	100197
Main jet	130	130
Needle jet	AR 264	AR 264
Idling jet	50	50
Jet needle	K 23	K 23
Needle position from top	2 nd	2 nd
Mixture.adju. screw open	1,5 turn	1,5 turn
Throttle valve	50/1	50/1
Starting jet	45 (50, 55)	45 (50, 55)
Performance restrictor	slide stop 51 mm	–

BASIC CARBURETOR SETTING

	640 DUKE-E 640 ADV.-R 25 kW	**640 DUKE-E 640 ADV.-R** 37 kW	**640 LC4** 25 kW	**640 LC4** 37 kW
Type	PHM 40 SD	PHM 40 SD	BST40-225	BST40-225
Carb.-setting number	210198	210198	080298	080298
Main jet	155	155	142,5	142,5
Needle jet	DR 268	DR 268	689 X-6	689 X-6
Idling jet	45	45	45	45
Jet needle	K 51	K 51	6G5	6G5
Needle clip pos. f. top	4. from top	4. from top	3 rd	3 rd
Mixt. adj. screw open	1.5 turns	1,5 turns	–	–
Throttle valve	40	40	–	–
Starting jet	55	55	–	–
Performance restrictor	slide stop 28mm	–	slide stop 17 mm	–

TECHNICAL SPECIFICATIONS - CHASSIS 400 / 640 LC4 '98

	400/640 LC4 '98
Frame	Central chrome-moly-steel frame
Fork	WP Extreme
Wheel travel front/rear	280 / 320 mm (11 / 12.6 in)
Rear suspension	Central shock absorber WP IBS with PRO-LEVER linkage to rear- swing-arm with needle bearing
Front brake	Disc brake with carbon-steel brake disc ∅300 mm (11.8 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc ∅220 mm (8.7 in), brake caliper floated
Tyres front	90/90 - 21 Enduro 3
Air press. road, driver only	1.5 bar (22 psi)
Air press. road with passenger	2.0 bar (29 psi)
Tyres rear	140/80 - 18 Enduro 3
Air press. road, driver only	2.0 bar (29 psi)
Air press. road with passenger	2.2 bar (31 psi)
Fuel tank capacity	12 liter (3.2 US gallons), 2.5 liter (0,6 US gallons) reserve
Final drive ratio	400 LC4 = 15:45t 640 LC4 = 16:42t
Chain	O – Ring 5/8 x 1/4"
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5 °
Wheel base	1510 ± 10 mm (59.4 ± 0.4 in)
Seat high	955 mm (37.6 in)
Ground clearance	355 mm (13.8 in)
Dead weight without fuel	136 kg (300 lbs)
Max. permissible front axle load	211 kg (465 lbs)
Max. permissible rear axle load	335 kg (740 lbs)
Max. permissible laden weight	350 kg (773 lbs)

STANDARD ADJUSTMENT - FORK

	918S757
Compression adjuster	12
Rebound adjuster	12
Spring	4,4 N/mm
Spring preload	10 mm (0,4 in)
Air chamber length	160 mm (6,3 in)
Capacity per fork leg	ca 800 ccm
Fork oil	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	118S701
Compression adjuster	3
Rebound adjuster	5
Spring	66/260
Spring preload	23 mm (0,9 in)

TORQUES

Collar bolt front axle	M10	40 Nm	(30 ft.lb)
Brake caliper front	M8	Loctite 243 + 25 Nm	(20 ft.lb)
Collar nut rear axle	M20x1,5	80 Nm	(60 ft.lb)
Hex. nut swing arm bolt	M14x1,5	100 Nm	(74 ft.lb)
Clamping bolt upper fork bridge	M8	25 Nm	(11 ft.lb)
Clamping bolt lower fork bridge	M8	20 Nm	(15 ft.lb)
Clamping bolts fork stubs	M8	10 Nm	(7 ft.lb)
Other bolts chassis	M6	10 Nm	(7 ft.lb)
	M8	25 Nm	(20 ft.lb)
	M10	45 Nm	(33 ft.lb)

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TECHNICAL SPECIFICATIONS - CHASSIS 640 ADVENTURE R '98

	640 ADVENTURE R
Frame	Central chrome-moly-steel frame
Fork	WP-Extreme Ø 50 mm
Wheel travel front/rear	300 / 320 mm (11,8 / 12,6 in)
Rear suspension	Central shock absorber WP IBS with PRO-LEVER linkage to rear- swing-arm with needle bearing
Front brake	Disc brake with carbon-steel brake disc ∅300 mm (11,8 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc ∅220 mm (8,7 in), brake caliper floated
Tyres front	90/90 - 21 54S Enduro 3
Air press. road, driver only	1,5 bar (22 psi)
Air press. road with passenger	2,0 bar (29 psi)
Tyres rear	140/80 - 18 70R Enduro 3
Air press. road, driver only	2,0 bar (29 psi)
Air press. road with passenger	2,2 bar (31 psi)
Fuel tank capacity	28 liter (7,4 US gallons), 3,8 liter (1 US gallons) reserve
Final drive ratio	16:40 t
Chain	O – Ring 5/8 x 1/4"
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5 °
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	940 mm (37 in)
Ground clearance	320 mm (12,6 in)
Dead weight without fuel	154kg (340 lbs)
Max. permissible front axle load	150 kg (331 lbs)
Max. permissible rear axle load	230 kg (507 lbs)
Max. permissible laden weight	380 kg (839 lbs)

STANDARD ADJUSTMENT - FORK

	09.18.S7.55
Compression adjuster	14
Rebound adjuster	12
Spring	4,4 N/mm
Spring preload	10 mm (0,4 in)
Air chamber length	155 mm (5,9 in)
Capacity per fork leg	ca 800 ccm
Fork oil	SAE5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	01.18.R7.97
Compression adjuster	3
Rebound adjuster	5
Spring	70/260
Spring preload	23 mm (0,9 in)

TORQUES

Collar bolt front axle	M 10	40 Nm	(30 ft.lb)
Collar nut rear axle	M 20x1,5	80 Nm	(59 ft.lb)
Hex. nut swing arm bolt	M 14x1,5	100 Nm	(74 ft.lb)
Clamping bolt upper fork bridge	M 8	15 Nm	(11 ft.lb)
Clamping bolt lower fork bridge	M 8	20 Nm	(15 ft.lb)
Clamping bolts fork stubs	M 8	10 Nm	(7 ft.lb)
Other bolts chassis	M6	10 Nm	(7 ft.lb)
	M8	25 Nm	(19 ft.lb)
	M10	45 Nm	(33 ft.lb)

TECHNICAL SPECIFICATIONS - CHASSIS KTM 640 DUKE-E '98

Type	**640 DUKE last edition**		
Frame	Central chrome-moly-steel frame		
Fork	type	WP - 4054 Roma Top adjuster	
	wheel travel	140 mm (5,5 in)	
	standard adjustment compression	driver only = 14,	with passenger = 14
	standard adjustment rebound	driver only = 14,	with passenger = 14
	fork leg projection upper fork bridge	10 mm (0,4 in)	
	oil capacity per fork leg	appr. 740 ccm (45 cubic in) / SAE 5	
	air chamber lenght	100 mm (4 in)	
Rear suspension	WP central shock absorber with PRO-LEVER linkage to rear- swing-arm with needle bearing		
WP central shock absorber BAVP 170 mm (6.7 in) driver only = 3, with passenger = 5 driver only = 5, with passenger = 3 70 - 260	Shock absorber . . . . . type . . . . . rear wheel travel . . . . . standard adjustment compression . . . . . standard adjustment rebound . . . . . spring preload . . . . . driver only = 23 mm (0.9 in),with passenger = 28 mm (1.1 in) . . . . . spring type		
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (12,6 in) and 4-piston brake caliper		
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in) and single-piston brake caliper floated		
Tyres	front: 120/70 R 17 58H	rear: 160/60 R 17 69H	
Air pressure rider only	2.0 bar (29 psi)	2.2 bar (32 psi)	
Air pressure with passenger	2.2 bar (32 psi)	2.4 bar (35 psi)	
Fuel tank capacity	11,3 liter (3 US gallons), out of this 1,5 liter (0,42 US gallons) reserve		
Final drive ratio	17 : 38		
Chain	o-ring 5/8 x 1/4"		
Lamps	low beam	H1 12V 55W (socket P14,5s)	HS1 12V 35/35W (socket Px43t)
	high beam	H1 12V 55W (socket P14,5s)	HS1 12V 35/55W (socket Px43t)
	parking light	12V 4W (socket Ba9s)	12V 4W (socket W2.1 9,5D)
	speedometer, tachometer light	12V 1,2W (socket W2x4,6d)	12V 1,2W (socket W2x4.6d)
	indicator lamp	12V 1,2W (socket W2x4,6d)	12V 1,2W (socket W2x4.6d)
	stop and taillight	12V 21/5W (socket BaY15d)	12V 21/5W (socket BaY15d)
	flasher	12V 10W (socket Ba15s)	12V 10W (socket Ba15s)
Battery	maintenance-free battery 12V 8Ah		
Steering angle	62,5°		
Wheel base	1460 ± 15 mm (57.5 ± 0.6 in)		
Seat high	860 mm (33.9 in)		
Ground clearance	250 mm (9.9 in)		

TORQUES		
Front axle	M 17	40 Nm (30 ft.lb)
Rear axle	M 20x1.5	80 Nm (59 ft.lb)
Hex. nut swing arm bolt	M 14x1.5	100 Nm (74 ft.lb)
Clamping bolt upper fork bridge	M 8	15 Nm (18 ft.lb)
Clamping bolt lower fork bridge	M 8	15 Nm (11 ft.lb)
AH bolts front brake caliper	M10	40 Nm (30 ft.lb)
AH bolt rear brake caliper support	M10	40 Nm (30 ft.lb)
Collar nuts chain tension eccentrics	M10	40 Nm (30 ft.lb)
Clamping bolts fork stubs	M 8	15 Nm (11 ft.lb)
Other bolts chassis	M6 M8 M10	10 Nm (7 ft.lb) 25 Nm (22 ft.lb) 45 Nm (33 ft.lb)

TECHNICAL SPECIFICATIONS – ENGINE 400/540 SXC, 620 SX '99

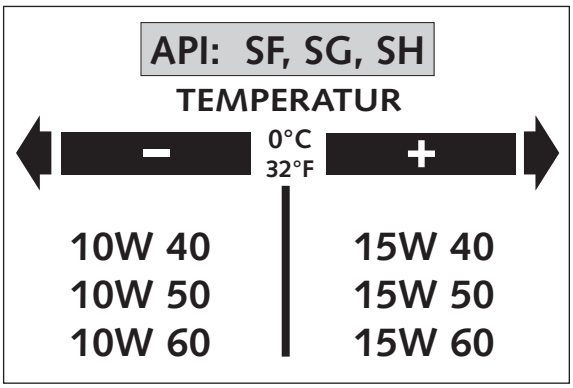
Engine	400 SXC	540 SXC	620 SX
Design	Liquid-cooled single cylinder 4-stroke engine		
Displacement	398 ccm	538,5 ccm	609 ccm
Bore / Stroke	89 / 64 mm		101 / 76 mm
Ratio	10,8 : 1	11,3 : 1	11,5 : 1
Fuel	unleaded premium gasoline with at least RON 95		
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain		
Camshaft	249/1		
Valve timing by 1 mm valve clearance	IO 22° BTDC EO 60° BBDC IC 42° ABDC EC 4° ATDC	IO 13° BTDC EO 53° BBDC IC 51° ABDC EC 11° ATDC	
Valve diameter	Intake: 36 mm Exhaust: 30 mm		
Valve clearance cold	Intake: 0,20 mm Exhaust: 0,20 mm	Intake: 0,15 mm Exhaust: 0,15 mm	
Crankshaft bearing	2 cylinder roller bearing		
Conrod bearing	needle bearing		
Top end bearing	bronze bushing		
Piston	forged/cast aluminium alloy		
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring		
Engine lubrication	forced-feed lubrication through 2 Eaten-oilpumps		
Engine oil	see bellow #		
Engine oil quantity	1,45 liters (0,38 US gallons)		
Primary ratio	straight geared spur wheels 30 : 81 teeth		
Clutch	multi disc clutch in oil bath		
Transmission	5-speed claw shifted		
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18		
Ignition system	contactless thyristor ignition with electronic advanced system type SEM		
Ignition timing	400 SXC/620 SX: adjustment to max. 38 ° BTDC at 6000 rpm 540 SXC: adjustment to max. 32 ° BTDC at 6000 rpm		
Generator	12V 130W		
Spark plug	NGK D8EA NGK DPR8 EA-9		
Spark plug gap	0,90 mm		
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump		
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25°C (–13°F)		
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor		

BASIC CARBURETOR SETTING

	400 SXC	400 SC (20 kW)	540 SXC	540 SXC (20 kW)	620 SX
Carburetor	PHM 38 ND	PHM 38 ND	VHSB 38 QS	VHSB 38 QS	PHM 40 SD
Carburetor setting number	120198	120198	081297	091297	4922
Main jet	150 (155)	150 (155)	185	140 (185)	195
Needle jet	AB 265	AB 265	FN 260 (FN 258)	FN 260 (FN 258)	DR 272
Idling jet	52 (50)	52 (50)	33	33	45
Jet needle	K 11	K 11	K 35 (K 32)	K 35 (K32)	K 51
Needle position from top	I	I	II	II	II
Mixture.adju. screw open	1,5 turn	1,5 turn	1,5 turn	1,5 turn	1,5 turn
Throttle valve	50/1	50/1	50	50	40
Starting jet	45	45	40	40	45
Performance restrictor	–	slide stop 48mm	–	slide stop 36mm	–
Pump jet	33 (38)	33 (38)	–	–	–

ASSEMBLY CLEARANCE, WEAR LIMIT		
Crank shaft	axial play....0,03 - 0,12 mm	(0,001-0,005 in)
	run out of crank stud....max. 0,08 mm	(0,003 in)
Conrod bearing	radial play....max. 0,05 mm	(0,002 in)
	axial play....max. 1,00 mm	(0,04 in)
Piston forged	assembly clearance....max. 0,12 mm	(0,005 in)
Piston cast	assembly clearance....max. 0,05 mm	(0,002 in)
Piston rings end gap	compression rings....max. 0,60 mm	(0,023 in)
	oil scraper ring....max. 0,80 mm	(0,031 in)
Valves	seat sealing intake....max. 1,50 mm	0,059 in)
	seat sealing exhaust....max. 2,00 mm	(0,080 in)
	run out of valve heads....max. 0,03 mm	(0,001 in)
	valve guides diameter....max. 7,05 mm	(0,277 in)
Oil pump	clearance outer rotor - housing....max. 0,20 mm	(0,008 in)
	clearance outer rotor - inner rotor....max. 0,20 mm	(0,008 in)
Bypaß valve	minimum spring length....25 mm	(1 in)
Clutch discs	wear limit organic....2,5 mm	(0,1 in)
Clutch springs	minimum length....34,5 mm (new 37 mm)	(1,36 in - new 1,45 in)
Transmission shafts	axial play....0,1 - 0,4 mm	(0,004 - 0,016 in)

TIGHTENING TORQUES - ENGINE			
Hexagon nut at primary gear	M 20x1,5	Loctite 243 +170 Nm	(125 ft.lb)
Collar nut flywheel	M 12x1 LH thread	60 Nm	(44 ft.lb)
Hexagon nut for inner clutch hub	M 18x1,5	Loctite 648 + 80 Nm	(59 ft.lb)
Kickstarter stop bolt	M 12x1,5	50 Nm	(37 ft.lb)
AH bolts oil pump	M 6	Loctite 243 + 8 Nm	(6 ft.lb)
Hexagon bolt camshaft gear	M 10	Loctite 243 + 35 Nm	(26 ft.lb)
AH bolt cylinder head top sect.	M 6x25	8 Nm	(6 ft.lb)
AH bolt cylinder head top sect.	M 6x50/M 6x55 (12.9)	20 Nm	(15 ft.lb)
AH bolt cylinder head top sect.	M 6x65/M 6x70 (8.8)	8 Nm	(6 ft.lb)
Cylinder head bolts	M 10	50 Nm	(37 ft.lb)
Collar nuts at cylinder base	M 10	40 Nm	(30 ft.lb)
Hexagon bolt chain sprocket	M 10	Loctite 243 + 40 Nm	(30 ft.lb)
Oil drain plug	M 22x1,5	30 Nm	(22 ft.lb)
Magnetic plug	M 12x1,5	20 Nm	(15 ft.lb)
Plug bypass valve	M 12x1,5	20 Nm	(15 ft.lb)
Banjo bolts oil lines	M 8x1	10 Nm	(7 ft.lb)
Banjo bolt oil lines	M 10x1	15 Nm	(11 ft.lb)
Jet screw clutch cover	M 8x1	10 Nm	(7 ft.lb)
Bolt plug timing-chain tensioner	M 12x1,5	20 Nm	(15 ft.lb)
Counternuts valve adjusting screws	M 7x0,75	20 Nm	(15 ft.lb)
Spark plug	M 12x1,25	20 Nm	(15 ft.lb)
Crankshaft locking bolt	M 8	25 Nm	18 ft.lb)
Engine fastening bolt	M 8	40 Nm	(30 ft.lb)
	M 10	70 Nm	(51 ft.lb)



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Engine oil

Use only oil brands, (Shell Advance Ultra 4) which meet quality requirements of API-classes SF, SG or SH (informations on bottles) or higher. Both, mineral and synthetic oils with above specifications can be used.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TECHNICAL SPECIFICATIONS - CHASSIS 400/540 SXC, 620 SX '99

	400/540 SXC	620 SX
Frame	Central chrome-moly-steel frame	
Fork	WP Extreme	
Wheel travel front/rear	280/320 mm (11/12,6 in)	
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing	
Front brake	Disc brake with carbon-steel brake disc Ø 260 mm (10,2 in), brake caliper floated	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated	
Tyres front	90/90-21 54R	80/100-21 51M
Air pressure offroad	1,0 bar (14 psi)	1,0 bar (14 psi)
Air press. road, driver only	–	1,5 bar (21 psi)
Tyres rear	140/80-18 70R	110/90-19 62M
Air pressure offroad	1,2 bar (17 psi)	1,2 bar (17 psi)
Air press. road, driver only	2,0 bar (28 psi)	–
Fuel tank capacity	9 liter (3 US gallons) of that 1,5 liter (0,4 US gallons) reserve	
Final drive ratio	400 = 14 : 50, 540 = 15 : 50	15 : 50
Chain	5/8 x 1/4 "	
Steering angle	62,5°	
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)	
Seat high	940 mm (37 in)	
Ground clearance	375 mm (14,8 in)	
Dead weight without fuel	121 kg (267 lbs)	117 kg (258 lbs)

STANDARD ADJUSTMENT - FORK

	09.18.S7.40	09.18.S7.44
Compression adjuster	8	12
Rebound adjuster	12	12
Spring	4,4 N/mm	4,2 N/mm
Spring preload	8 mm	7 mm
Air chamber length	140 mm	155 mm
Capacity per fork leg	ca 800 ccm	ca 800 ccm
Fork oil	SAE 5	SAE 5

NOTE FOR WHITE POWER FORKS:
The damping units in the left and the right fork leg are of different design. Make sure not to mix them up in case of repair or service works.

STANDARD ADJUSTMENT - SHOCK ABSORBER

	01.18.S7.98	01.18.Q7.82
Compression adjuster	3	3
Rebound adjuster	5	4
Spring	66/260	63/260
Spring preload	17 mm	23 mm

TIGHTENING TORQUES - CHASSIS

Collar bolt front axle	M 10	40 Nm	(30 ft.lb)
Brake caliper front	M 8	Loctite 243 + 25 Nm	(18 ft.lb)
Collar nut rear axle	M 20x1,5	80 Nm	(59 ft.lb)
Hex. nut swing arm bolt	M 14x1,5	100 Nm	(74 ft.lb)
Clamping bolt top triple clamp	M 8	15 Nm	(11 ft.lb)
Clamping bolt bottom triple clamp	M 8	20 Nm	(15 ft.lb)
Clamping bolts fork leg axle passage	M 8	10 Nm	(7 ft.lb)
Other bolts chassis	M 6	10 Nm	(7 ft.lb)
	M 8	25 Nm	(18 ft.lb)
	M 10	45 Nm	(33 ft.lb)

TECHNICAL SPECIFICATIONS – ENGINE 400/620 Supercompetition '99

Engine	**400 LC4**	**620 LC4**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft	
Displacement	398 ccm	609 ccm
Bore / Stroke	89 / 64 mm	101 / 76 mm
Ratio	10,8 : 1	10,4 : 1
Fuel	unleaded premium gasoline with a least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	249/1	
Valve timing by 1 mm valve clearance	IO 22° BTDC EO 60° BBDC IC 42° ABDC EC 4° ATDC	IO 15° BTDC EO 52° BBDC IC 54° ABDC EC 17° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm	
Valve clearance cold	Intake: 0,20 mm Exhaust: 0,20 mm	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing	
Conrod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	forced-feed lubrication through 2 Eaten-oilpumps	
Engine oil	see bellow #	
Engine oil quantity	1,6 liters (0,42 US gallons)	
Primary ratio	straight geared spur wheels 30 : 81 teeth	
Clutch	multi disc clutch in oil bath	
Transmission	5-speed claw shifted	
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18	
Ignition system	contactless thyristor ignition with electronic advanced system type KOKUSAN	
Ignition timing	adjustment to max. 40 ° BTDC at 5000 rpm	adjustment to max. 36 ° BTDC at 5000 rpm
Generator	12V 110W	
Spark plug	NGK DPR8 EA-9	
Spark plug gap	0,90 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25°C (–13°F)	
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor	

BASIC CARBURETOR SETTING

	400 SC (20 kW)	**400 SC**	**620 SC (20 kW)**	**620 SC**
Carburetor	PHM 38 SD	PHM 38 SD	PHM 40 SD	PHM 40 SD
Carburetor setting number	300896	4894/6	110996	4922
Main jet	150	190	155	195
Needle jet	DR 266	DR 270 (DR 272)	DR 268	DR 272
Idling jet	45	45	45	45
Jet needle	K 51	K 51	K 51	K 51
Needle position from top	3 rd	2 nd	3 rd	2 nd
Mixture.adj. screw open	1,5 turn	1,5 turn	1,5 turn	1,5 turn
Throttle valve	40	40	40	40
Starting jet	45	45	45	45
Performance restrictor	slide stop 22 mm	–	slide stop 26 mm	–

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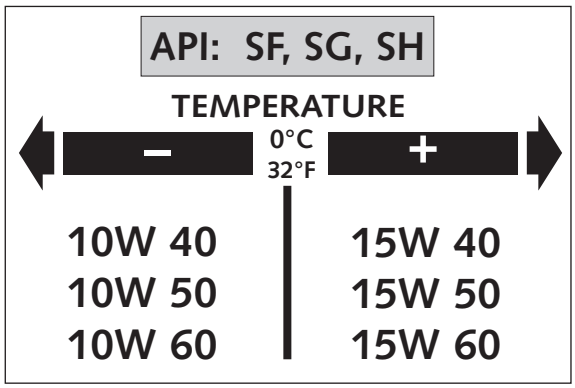
ASSEMBLY CLEARANCE, WEAR LIMIT		
Crank shaft	axial play	0,03 - 0,12 mm (0,001-0,005 in)
	run out of crank stud	max. 0,04 mm (0,002 in)
Conrod bearing	radial play	max. 0,05 mm (0,002 in)
	axial play	max. 1,00 mm (0,04 in)
Piston forged	assembly clearance	max. 0,12 mm (0,005 in)
Piston cast	assembly clearance	max. 0,05 mm (0,002 in)
Piston rings end gap	compression rings	max. 0,60 mm (0,023 in)
	oil scraper ring	max. 0,80 mm (0,031 in)
Valves	seat sealing intake	max. 1,50 mm 0,059 in)
	seat sealing exhaust	max. 2,00 mm (0,080 in)
	run out of valve heads	max. 0,03 mm (0,001 in)
	valve guides diameter	max. 7,05 mm (0,277 in)
Oil pump	clearance outer rotor - housing	max. 0,20 mm (0,008 in)
	clearance outer rotor - inner rotor	max. 0,20 mm (0,008 in)
Bypaß valve	minimum spring length	25 mm (1 in)
Clutch discs	wear limit organic	2,5 mm (0,1 in)
Clutch springs	minimum length	34,5 mm (new 37 mm) (1,36 in - new 1,45 in)
Transmission shafts	axial play	0,1 - 0,4 mm (0,004 - 0,016 in)

TIGHTENING TORQUES - ENGINE			
Hexagon nut at primary gear	M 20x1,5	Loctite 243 +170 Nm	(125 ft.lb)
Collar nut flywheel	M 12x1 LH thread	60 Nm	(44 ft.lb)
Hexagon nut for inner clutch hub	M 18x1,5	Loctite 648 + 80 Nm	(59 ft.lb)
Kickstarter stop bolt	M 12x1,5	50 Nm	(37 ft.lb)
AH bolts oil pump	M 6	Loctite 243 + 8 Nm	(6 ft.lb)
Hexagon bolt camshaft gear	M 10	Loctite 243 + 35 Nm	(26 ft.lb)
AH bolt cylinder head top sect.	M 6x25	8 Nm	(6 ft.lb)
AH bolt cylinder head top sect.	M 6x50/M 6x55 (12.9)	20 Nm	(15 ft.lb)
AH bolt cylinder head top sect.	M 6x65/M6x70 (8.8)	8 Nm	(6 ft.lb)
Cylinder head bolts	M 10	50 Nm	(37 ft.lb)
Collar nuts at cylinder base	M 10	40 Nm	(30 ft.lb)
Hexagon bolt chain sprocket	M 10	Loctite 243 + 40 Nm	(30 ft.lb)
Oil drain plug	M 22x1,5	30 Nm	(22 ft.lb)
Magnetic plug	M 12x1,5	20 Nm	(15 ft.lb)
Plug bypass valve	M 12x1,5	20 Nm	(15 ft.lb)
Banjo bolts oil lines	M 8x1	10 Nm	(7 ft.lb)
Banjo bolt oil lines	M 10x1	15 Nm	(11 ft.lb)
Jet screw clutch cover	M 8x1	10 Nm	(7 ft.lb)
Bolt plug timing-chain tensioner	M 12x1,5	20 Nm	(15 ft.lb)
Counternuts valve adjusting screws	M 7x0,75	20 Nm	(15 ft.lb)
Spark plug	M 12x1,25	20 Nm	(15 ft.lb)
Crankshaft locking bolt	M 8	25 Nm	18 ft.lb)
Engine fastening bolt	M 8	40 Nm	(30 ft.lb)
	M 10	70 Nm	(51 ft.lb)



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Engine oil

Use only oil brands (Shell Advance Ultra 4), which meet quality requirements of API-classes SF, SG or SH (informations on bottles) or higher. Both, mineral and synthetic oils with above specifications can be used.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TECHNICAL SPECIFICATIONS - CHASSIS 400 / 620 Supercompetition '99

	400 SC	620 SC
Frame	Central chrome-moly-steel frame	
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 43	
Wheel travel front/rear	295 / 320 mm (11,6 / 12,6 in)	
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing	
Front brake	Disc brake with carbon-steel brake disc Ø 260 mm (10,2 in), brake caliper floated	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated	
Tyres front	90/90-21 54R	
Air pressure offroad	1,0 bar (14 psi)	
Air press. road, driver only	1,5 bar (21 psi)	
Tyres rear	140/80-18 70R	
Air pressure offroad	1,2 bar (17 psi)	
Air press. road, driver only	2,0 bar (28 psi)	
Fuel tank capacity	9 liter (2,38 US gallons) of that 2,5 liter (0,66 US gallons) reserve	
Final drive ratio	16:48 (14:50)	16:40 (15:50)
Chain	5/8 x 1/4 " O-Ring	
Steering angle	62,5°	
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)	
Seat high	940 mm (37 in)	
Ground clearance	375 mm (14,8 in)	
Dead weight without fuel	122 kg (269 lbs)	

STANDARD ADJUSTMENT - FORK

	05.18.T7.81
Compression adjuster	10
Rebound adjuster	12
Spring	4,2 N/mm
Spring preload	6 mm (0,24 in)
Air chamber length	130 mm (5,1 in)
Capacity per fork leg	app. 700 ccm
Fork oil	SAE 5

NOTE FOR WHITE POWER FORKS:
The damping units in the left and the right fork leg are of different design. Make sure not to mix them up in case of repair or service works.

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	01.18.T7.05
Compression adjuster	3
Rebound adjuster	5
Spring	63 / 260
Spring preload	23 mm (0,9 in)

TIGHTENING TORQUES - CHASSIS

Collar bolt front axle	M 10	40 Nm	(30 ft.lb)
Brake caliper front	M 8	Loctite 243 + 25 Nm	(18 ft.lb)
Collar nut rear axle	M 20x1,5	80 Nm	(59 ft.lb)
Hex. nut swing arm bolt	M 14x1,5	100 Nm	(74 ft.lb)
Collar bolts handlebar clamps	M 8	20 Nm	(15 ft.lb)
Collar bolts handlebar support	M 10	40 Nm	(30 ft.lb)
Clamping bolt top triple clamp	M 8	23 Nm	(17 ft.lb)
Clamping bolt bottom triple clamp	M 8	18 Nm	(13 ft.lb)
Clamping bolts fork leg axle passage	M 8	10 Nm	(7 ft.lb)
Other bolts chassis	M 6	10 Nm	(7 ft.lb)
	M 8	25 Nm	(18 ft.lb)
	M 10	45 Nm	(33 ft.lb)

Art.-Nr. 3.206.006 -E

TECHNICAL SPECIFICATIONS – ENGINE 620 LC4 COMPETITION '99

Engine	**620 LC4 COMPETITION**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft
Displacement	609 cm^3
Bore / Stroke	101 / 76 mm
Ratio	10,4 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	249/1
Valve timing by 1 mm valve clearance	IO 15° BTDC EO 52° BBDC IC 54° ABDC EC 17° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm
Valve clearance cold	Intake: 0,15 mm Exhaust: 0,15 mm
Crankshaft bearing	2 cylinder roller bearing
Conrod bearing	needle bearing
Top end bearing	bronze bushing
Piston	cast aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	forced-feed lubrication through 2 Eaten-oilpumps
Engine oil	see bellow #
Engine oil quantity	2,1 liters including frame
Primary ratio	straight geared spur wheels 30 : 81 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless thyristor ignition with electronic advanced system type SEM
Ignition timing	adjustment to max. 32 ° BTDC at 6000 rpm
Generator	12V 130W
Spark plug	NGK DPR8 EA-9
Spark plug gap	0,90 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor

TIGHTENING TORQUES - ENGINE			
Hexagon nut at primary gear	M 20x1,5	Loctite 243 +170 Nm	(125 ft.lb)
Collar nut flywheel	M 12x1 LH thread	60 Nm	(44 ft.lb)
Hexagon nut for inner clutch hub	M 18x1,5	Loctite 648 + 80 Nm	(59 ft.lb)
Kickstarter stop bolt	M 12x1,5	50 Nm	(37 ft.lb)
AH bolts oil pump	M 6	Loctite 243 + 8 Nm	(6 ft.lb)
Hexagon bolt camshaft gear	M 10	Loctite 243 + 35 Nm	(26 ft.lb)
AH bolt cylinder head top sect.	M 6x25	8 Nm	(6 ft.lb)
AH bolt cylinder head top sect.	M 6x50/M 6x55 (12.9)	20 Nm	(15 ft.lb)
AH bolt cylinder head top sect.	M 6x65/M 6x70 (8.8)	8 Nm	(6 ft.lb)
Cylinder head bolts	M 10	50 Nm	(37 ft.lb)
Collar nuts at cylinder base	M 10	40 Nm	(30 ft.lb)
Hexagon bolt chain sprocket	M 10	Loctite 243 + 40 Nm	(30 ft.lb)
Oil drain plug	M 22x1,5	30 Nm	(22 ft.lb)
Magnetic plug	M 12x1,5	20 Nm	(15 ft.lb)
Plug bypass valve	M 12x1,5	20 Nm	(15 ft.lb)
Banjo bolts oil lines	M 8x1	10 Nm	(7 ft.lb)
Banjo bolt oil lines	M 10x1	15 Nm	(11 ft.lb)
Jet screw clutch cover	M 8x1	10 Nm	(7 ft.lb)
Bolt plug timing-chain tensioner	M 12x1,5	20 Nm	(15 ft.lb)
Counternuts valve adjusting screws	M 7x0,75	20 Nm	(15 ft.lb)
Spark plug	M 12	20 Nm	(15 ft.lb)

ASSEMBLY CLEARANCE, WEAR LIMIT		
Crank shaft	axial play....0,03 - 0,12 mm	(0,001-0,005 in)
	run out of crank stud....max. 0,08 mm	(0,0031 in)
Conrod bearing	radial play....max. 0,05 mm	(0,0019 in)
	axial play....max. 1,00 mm	(0,04 in)
Piston	assembly clearance....max. 0,12 mm	(0,005 in)
Piston ring end gap	compression rings....max. 0,60 mm	(0,023 in)
	oil scraper ring....max. 0,80 mm	(0,031 in)
Valves	seat sealing intake....max. 1,50 mm	0,059 in)
	seat sealing exhaust....max. 2,00 mm	(0,079 in)
	run out of valve heads....max. 0,05 mm	(0,002 in)
	valve guides diameter....max. 7,05 mm	(0,277 in)
Oil pump	clearance outer rotor - housing....max. 0,20 mm	(0,008 in)
	clearance outer rotor - inner rotor....max. 0,20 mm	(0,008 in)
Bypaß valve	minimum spring length....25 mm	(1 in)
Clutch discs	wear limit organic....2,5 mm	(0,1 in)
Transmission shafts	axial play....0,1 - 0,4 mm	(0,004 in)
Clutch	minimum clutchspring length....34,5 mm (new 37 mm)	(1,36 in - new 1,45 in)

BASIC CARBURETOR SETTING		
	620 LC4 COMP. 24 kW	**620 LC4 COMP. 37 kW**
Carburetor	PHM 40 SD	PHM 40 SD
Carburetor setting number	110996	110996
Main jet	155	155
Needle jet	DR 268	DR 268
Idling jet	45	45
Jet needle	K 51	K 51
Needle position from top	3 rd	3 rd
Mixture.adju. screw open	1,5 turn	1,5 turn
Throttle valve	40	40
Starting jet	45	45
Performance restrictor	slide stop 26 mm	–

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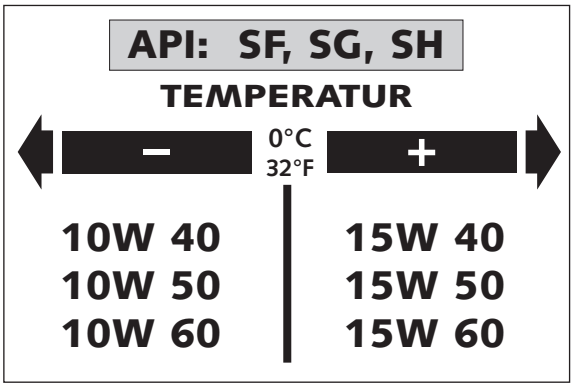

Engine oil

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POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TECHNICAL SPECIFICATIONS - CHASSIS 620 LC4 COMPETITION '99

	620 LC4 COMPETITION
Frame	Central chrome-moly-steel frame
Fork	WP Extreme
Wheel travel front/rear	280 / 320 mm (11,0 / 12,6 in)
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing
Front brake	Disc brake with carbon-steel brake disc , brake caliper floated brake disc Ø = 300 mm (11,8 in)
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated
Tyres front Air press. road, driver only Air press. road with passenger	90/90-21 T63 1,5 bar (21 psi) 2,0 bar (28 psi)
Tyres rear Air press. road, driver only Air press. road with passenger	130/80-18 T63 2,0 bar (28 psi) 2,2 bar (31 psi)
Fuel tank capacity	12 liter (3,2 US gallons) of that 2,5 liter (0,7 US gallons) res
Final drive ratio	16:40
Chain	O-ring 5/8 x 1/4"
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	955 mm (37,6 in)
Ground clearance	335 mm (13,2 in)
Dead weight without fuel	133 kg (293 lbs)
Max. permissible front axle load	211 kg (466 lbs)
Max. permissible rear axle load	335 kg (737 lbs)
Max. permissible laden weight	350 kg (770 lbs)

STANDARD ADJUSTMENT - FORK

	918 S 757
Compression adjuster	12
Rebound adjuster	12
Spring	4,4 N/mm
Spring preload	10 mm
Air chamber length	160 mm
Capacity per fork leg	app. 800 ccm
Fork oil	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	118 S 701
Compression adjuster	3
Rebound adjuster	5
Spring	66/260
Spring preload	23 mm

NOTE FOR WP EXTREME FORKS:
The damping units in the left and the right fork leg are of different design. Make sure not to mix them up in case of repair or service works.

TIGHTENING TORQUES - CHASSIS

Collar bolt front axle	M 10	40 Nm (30 ft.lb)
Brake caliper front	M 8	25 Nm (19 ft.lb) + Loctite 243
Collar nut rear axle	M 20x1,5	80 Nm (59 ft.lb)
Hex. nut swing arm bolt	M 14x1,5	100 Nm (74 ft.lb)
Clamping bolt top triple clamp	M 8	15 Nm (11 ft.lb)
Clamping bolt bottom triple clamp	M 8	20 Nm (15 ft.lb)
Clamping bolts fork leg axle passage	M 8	10 Nm (7 ft.lb)
Other bolts chassis	M 6 M 8 M 10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

TECHNICAL DATA – ENGINE 400 / 640 LC4 '99

Engine	**400 LC4-E**	**640 LC4-E**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter	
Displacement	398 ccm	625 ccm
Bore / Stroke	89 / 64 mm	101 / 78 mm
Ratio	10,8 : 1	11 : 1
Fuel	unleaded premium gasoline with at least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	249/1	
Valve timing by 1 mm valve clearance	IO 22° BTDC EO 60° BBDC IC 47° ABDC EC 4° ATDC	IO 13° BTDC EO 53° BBDC IC 51° ABDC EC 11° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm	
Valve clearance cold	Intake: 0,20 mm Exhaust: 0,20 mm	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing	
Conrod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	forged/cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	two Eaten-oilpumps	
Engine oil	see bellow #	
Engine oil quantity	appr. 2,1 liters including frame	
Primary ratio	straight geared spur wheels 30 : 81 teeth	
Clutch	multi disc clutch in oil bath	
Transmission	5-speed claw shifted	
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18	
Ignition system	contactless DC-CDI ignition with digital advanced system type KOKUSAN	
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm	
Generator	12V 200W	
Spark plug	NGK DPR8 EA-9	
Spark plug gap	0,90 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)	
Starting equipment	electric starter and kickstarter	

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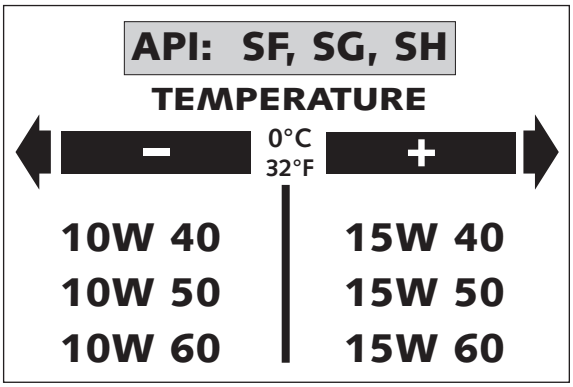

Engine oil

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BASIC CARBURETOR SETTING

	400 LC4 25 kW	400 LC4 31 kW	640 LC4 25 kW	640 LC4 37 kW
Carburetor	PHM 38 ND	PHM 38 ND	BST40-225	BST40-225
Carburetor setting number	100197	100197	080298	090298
Main jet	130	130	142,5	142,5
Needle jet	AR 264	AR 264	689 X-6	689 X-6
Idling jet	50	50	45	45
Jet needle	K 23	K 23	6G5	6G5
Needle position from top	2 nd	2 nd	3 rd	3 rd
Mixture adj. screw open	1,5 turn	1,5 turn	–	–
Throttle valve	50/1	50/1	–	–
Starting jet	45 (50, 55)	45 (50, 55)	–	–
Performance restrictor	slide stop 51 mm	–	slide stop 17 mm	–

TIGHTENING TORQUES - ENGINE

Hexagon nut at primary gear	M 20x1,5	Loctite 243 + 170 Nm (125 ft.lb)
Hexagon nut flywheel	M 16x1,25 LH thread	150 Nm (110 ft.lb)
Hexagon nut for inner clutch hub	M 18x1,5	80 Nm (59 ft.lb)
Kickstarter stop bolt	M 12x1,5	50 Nm (37 ft.lb)
Allen head bolts oil pump	M 6	Loctite 243 + 8 Nm (6 ft.lb)
Hexagon bolt camshaft gear	M 10	Loctite 243 + 35 Nm (26 ft.lb)
Allen head bolts outer race	M 6x12/M 6x12,5	Loctite 648 + 18 Nm (13 ft.lb)
Allen head bolt cylinder head top sect.	M 6x50/M 6x55 (12.9)	20 Nm (15 ft.lb)
Allen head bolt cylinder head top sect.	M 6x25/M 6x65/M 6x70 (8.8)	8 Nm (6 ft.lb)
Cylinder head bolts	M 10	50 Nm (37 ft.lb)
Collar nuts at cylinder base	M 10	40 Nm (30 ft.lb)
Hexagon bolt chain sprocket	M 10	Loctite 243 + 40 Nm (30 ft.lb)
Oil drain plug	M 22x1,5	30 Nm (22 ft.lb)
Magnetic plug	M 12x1,5	20 Nm (15 ft.lb)
Plug bypass valve	M 12x1,5	20 Nm (15 ft.lb)
Crankshaft locating bolt	M 8	25 Nm (18 ft.lb)
Hollow bolts oil lines	M 8x1	10 Nm (7 ft.lb)
Hollow bolts oil lines	M 10x1	15 Nm (11 ft.lb)
Jet screw clutch cover	M 8	10 Nm (7 ft.lb)
Bolt plug timing-chain tensioner	M 12x1,5	20 Nm (15 ft.lb)
Counternuts valve adjusting screws	M 7x0,75	20 Nm (15 ft.lb)
Engine fastening bolt	M 8	40 Nm (30 ft.lb)
	M 10	70 Nm (52 ft.lb)

ASSEMBLY CLEARANCE, WEAR LIMIT

Crank shaft	axial play .....0,03 - 0,12 mm (0,0012 - 0,0047 in)
	run out of crank stud .....max. 0,04 mm (0,0031 in)
Conrod bearing	radial play .....max. 0,05 mm (0,002 in)
	axial play .....max. 1,00 mm (0,043 in)
Cylinder	bore diameter.....max. 101,04 mm (3,9779 in)
Piston	assembly clearance.....max. 0,12 mm (0,0047 in)
Piston ring end gap	compression rings.....max. 0,80 mm (0,0315 in)
	oil scraper ring.....max. 1,0 mm (0,0394 in)
Valves	seat sealing intake .....max. 1,50 mm (0,0591 in)
	seat sealing exhaust .....max. 2,00 mm (0,0788 in)
	run out of valve heads .....max. 0,05 mm (0,0019 in)
	valve guides diameter.....max. 7,05 mm (0,2778 in)
Oil pump	clearance outer rotor - housing .....max. 0,20 mm (0,0079 in)
	clearance outer rotor - inner rotor .....max. 0,20 mm (0,0079 in)
Bypaß valve	minimum spring length .....25 mm (0,985 in)
Clutch	clutchspring length...min. 34,5 mm (1,36 in), new 37 mm (1,458 in)
	wear limit organic.....min. 2,5 mm (0,0985 in)
Camshaft	diameter of bearing bolt.....min. 19,97 mm (0,7868 in) (needle bearing)
Transmission shafts	axial play.....0,1 – 0,4 mm (0,0039 – 0,0158 in)

TECHNICAL SPECIFICATIONS - CHASSIS 400 LC4 / 640 LC4 (R) / SUPERMOTO '99

	400 LC4 / 640 LC4	640 Supermoto	400 LC4 R / 640 LC4 R
Frame	Central chrome-moly-steel frame		
Fork	WP Extreme		
Wheel travel front/rear	280 / 320 mm (11 / 12.6 in)		250 / 290 mm (10 / 11.4 in)
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear- swing-arm with needle bearing		
Front brake	Disc brake with carbon-steel brake disc ∅300 mm (11.8 in), brake caliper floated		
Rear brake	Disc brake with carbon-steel brake disc ∅220 mm (8.7 in), brake caliper floated		
Tyres front	90/90-21	120/70-17	90/90-21
Air press. road, driver only	1.5 bar (22 psi)	2.0 bar (29 psi	1.5 bar (22 psi)
Air press. road with passenger	2.0 bar (29 psi)	2.2 bar (31 psi)	2.0 bar (29 psi)
Tyres rear	140/80-18	160/60-17	140/80-18
Air press. road, driver only	2.0 bar (29 psi)	2.2 bar (31 psi)	2.0 bar (29 psi)
Air press. road with passenger	2.2 bar (31 psi)	2.4 bar (34 psi)	2.2 bar (31 psi)
Fuel tank capacity	12 or 18 liter (3.2 or 4.8 US gallons), 2.5 liter (0,6 US gallons) reserve		
Final drive ratio	400 LC4 - 15:45 640 LC4 - 16:42	17:40	16:42
Chain	O – Ring 5/8 x 1/4"		
Battery	maintenance-free battery 12V 8Ah		
Steering angle	62,5 °	63°	62.5°
Wheel base	1510 ± 10 mm (59.4 ± 0.4 in)		
Seat high	955 mm (37.6 in)	935 mm (36.8 in)	
Ground clearance	375 mm (14.8 in)	355 mm (13.9 in)	
Dead weight without fuel	136kg (300 lbs)	137 kg (302 lbs)	135 kg (298 lbs)
Max. permissible front axle load	211 kg (465 lbs)		
Max. permissible rear axle load	335 kg (740 lbs)		
Max. permissible loaden weight	350 kg (773 lbs)		

STANDARD ADJUSTMENT - FORK

	918S757	918S776
Compression adjuster	12	12
Rebound adjuster	12	12
Spring	4,4 N/mm	4,4 N/mm
Spring preload	10 mm (0,4 in)	15 mm (0,6 in)
Air chamber length	160 mm (6,3 in)	160 mm (6,3 in)
Capacity per fork leg	app. 800 ccm	app. 800 ccm
Fork oil	SAE 5	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	118S701	118Q784
Compression adjuster	3	3
Rebound adjuster	5	4
Spring	66/260	63/260
Spring preload	23 mm (0,9 in)	23 mm (0,9 in)

TIGHTENING TORQUES - CHASSIS

Collar bolt front axle	M 10	40 Nm	(30 ft.lb)
Brake caliper front	M 8	Loctite 243 + 25 Nm	(20 ft.lb)
Collar nut rear axle	M 20x1,5	80 Nm	(60 ft.lb)
Hexagon nut swingarm bolt	M 14x1,5	100 Nm	(74 ft.lb)
Clamping bolt upper triple clamp	M 8	15 Nm	(11 ft.lb)
Clamping bolt lower triple clamp	M 8	20 Nm	(15 ft.lb)
Clamping bolts fork stubs	M 8	10 Nm	(7 ft.lb)
Other bolts chassis	M 6	10 Nm	(7 ft.lb)
	M 8	25 Nm	(20 ft.lb)
	M 10	45 Nm	(33 ft.lb)

TECHNICAL DATA – ENGINE 640 LC4-E ADVENTURE R '99

Engine	**640 LC4-E**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter
Displacement	625 ccm
Bore / Stroke	101 / 78 mm
Ratio	11,0 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	249° (249/1)
Valve timing by 1 mm valve clearance	IO 13° BTDC EO 53° BBDC IC 51° ABDC EC 11° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm
Valve clearance cold	0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing
Conrod bearing	needle bearing
Top end bearing	bronze bushing
Piston	cast aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	two Eaten-oilpumps
Engine oil	see below #
Engine oil quantity	appr. 2,1 liters including frame
Primary ratio	straight geared spur wheels 30 : 81 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless DC-CDI ignition with digital advanced system type KOKUSAN
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm
Generator	12V 200W
Spark plug	NGK DPR8 EA-9
Spark plug gap	0,90 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)
Starting equipment	electric starter and kickstarter

BASIC CARBURETOR SETTING

	640 ADVENTURE 25 kW	**640 ADVENTURE** 36 kW
Carburetor	BST40-225	BST40-225
Carburetor setting number	080298	090298
Main jet	142,5	142,5
Needle jet	689 X-6	689 X-6
Idling jet	45	45
Jet needle	6G5	6G5
Needle position from top	3rd	3rd
Mixt. adj. screw open	–	–
Throttle valve	–	–
Starting jet	–	–
Permormance restrictor	slide stop 17 mm	–

TIGHTENING TORQUES - ENGINE		
Hexagon nut at primary gear	M 20x1,5	Loctite 243 + 170 Nm (125 ft.lb)
Hexagon nut flywheel	M 16x1,25 LH thread	150 Nm (110 ft.lb)
Hexagon nut for inner clutch hub	M 18x1,5	80 Nm (59 ft.lb)
Kickstarter stop bolt	M 12x1,5	50 Nm (37 ft.lb)
Allen head bolts oil pump	M 6	Loctite 243 + 8 Nm (6 ft.lb)
Hexagon bolt camshaft gear	M 10	Loctite 243 + 35 Nm (26 ft.lb)
Allen head bolts outer race	M 6x12/M 6x12,5	Loctite 648 + 18 Nm (13 ft.lb)
Allen head bolt cylinder head top sect.	M 6x50/M 6x55 (12.9)	20 Nm (15 ft.lb)
Allen head bolt cylinder head top sect.	M 6x25/M 6x65/M 6x70 (8.8)	8 Nm (6 ft.lb)
Cylinder head bolts	M 10	50 Nm (37 ft.lb)
Collar nuts at cylinder base	M 10	40 Nm (30 ft.lb)
Hexagon bolt chain sprocket	M 10	Loctite 243 + 40 Nm (30 ft.lb)
Oil drain plug	M 22x1,5	30 Nm (22 ft.lb)
Magnetic plug	M 12x1,5	20 Nm (15 ft.lb)
Plug bypass valve	M 12x1,5	20 Nm (15 ft.lb)
Crankshaft locating bolt	M 8	25 Nm (18 ft.lb)
Hollow bolts oil lines	M 8x1	10 Nm (7 ft.lb)
Hollow bolts oil lines	M 10x1	15 Nm (11 ft.lb)
Jet screw clutch cover	M 8	10 Nm (7 ft.lb)
Bolt plug timing-chain tensioner	M 12x1,5	20 Nm (15 ft.lb)
Counternuts valve adjusting screws	M 7x0,75	20 Nm (15 ft.lb)
Engine fastening bolt	M 8	40 Nm (30 ft.lb)
	M 10	70 Nm (52 ft.lb)

ASSEMBLY CLEARANCE, WEAR LIMIT	
Crank shaft	axial play .....0,03 - 0,12 mm (0,0012 - 0,0047 in)
	run out of crank stud .....max. 0,08 mm (0,0031 in)
Conrod bearing	radial play .....max. 0,05 mm (0,002 in)
	axial play.....max. 1,10 mm (0,043 in)
Cylinder	bore diameter.....max. 101,04 mm (3,9779 in)
Piston	assembly clearance .....max. 0,12 mm (0,0047 in)
Piston ring end gap	compression rings.....max. 0,80 mm (0,0315 in)
	oil scraper ring.....max. 1,0 mm (0,0394 in)
Valves	seat sealing intake .....max. 1,50 mm (0,0591 in)
	seat sealing exhaust .....max. 2,00 mm (0,0788 in)
	run out of valve heads .....max. 0,05 mm (0,0019 in)
	valve guides diameter.....max. 7,05 mm (0,2778 in)
Oil pump	clearance outer rotor - housing .....max. 0,20 mm (0,0079 in)
	clearance outer rotor - inner rotor .....max. 0,20 mm (0,0079 in)
Bypaß valve	minimum spring length .....25 mm (0,985 in)
Clutch	clutchspring length ...min. 34,5 mm (1,36 in), new 37 mm (1,458 in)
	Wear limit organic .....min. 2,5 mm (0,0985 in)
Camshaft	diameter of bearing bolt.....min. 19,97 mm (0,7868 in) (needle bearing)
Transmission shafts	axial play.....0,1 – 0,4 mm (0,0039 – 0,0158 in)

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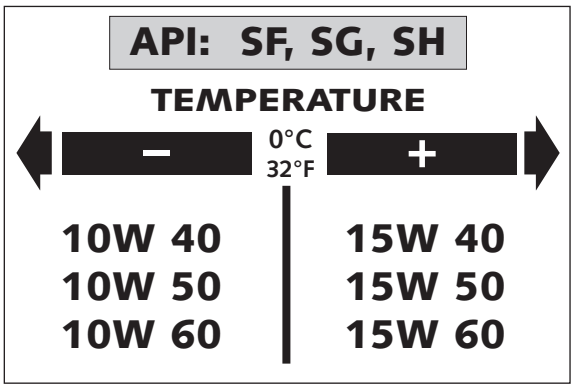

Engine oil

Use only oil brands, which meet quality requirements of API-classes SF, SG or SH (informations on bottles) or higher. Both, mineral and synthetic oils with above specifications can be used.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TECHNICAL SPECIFICATIONS - CHASSIS 640 ADVENTURE R '99

	640 ADVENTURE R
Frame	Central chrome-moly-steel frame
Fork	WP-Extreme Ø 50 mm
Wheel travel front/rear	300 / 320 mm (11,8 / 12,6 in)
Rear suspension	Central shock absorber WP IBS with PRO-LEVER linkage to rear- swing-arm with needle bearing
Front brake	Disc brake with carbon-steel brake disc ∅ 300 mm (11,8 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc ∅ 220 mm (8,7 in), brake caliper floated
Tyres front	90/90 - 21 54S Enduro 3
Air press. road, driver only	1,5 bar (22 psi)
Air press. road with passenger	2,0 bar (29 psi)
Tyres rear	140/80 - 18 70R Enduro 3
Air press. road, driver only	2,0 bar (29 psi)
Air press. road with passenger	2,2 bar (31 psi)
Fuel tank capacity	28 liter (7,4 US gallons), 3,8 liter (1 US gallons) reserve
Final drive ratio	16:40 t
Chain	O – Ring 5/8 x 1/4"
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5 °
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	940 mm (37 in)
Ground clearance	320 mm (12,6 in)
Dead weight without fuel	154 kg (340 lbs)
Max. permissible front axle load	150 kg (331 lbs)
Max. permissible rear axle load	230 kg (507 lbs)
Max. permissible loaden weight	380 kg (839 lbs)

STANDARD ADJUSTMENT - FORK

	09.18.S7.55
Compression adjuster	14
Rebound adjuster	12
Spring	4,4 N/mm
Spring preload	10 mm (0,4 in)
Air chamber length	155 mm (5,9 in)
Capacity per fork leg	app. 800 ccm
Fork oil	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	01.18.R7.97
Compression adjuster	3
Rebound adjuster	5
Spring	70/260
Spring preload	23 mm (0,9 in)

TORQUES

Collar bolt front axle	M 10	40 Nm	(30 ft.lb)
Brake caliper front	M 8	Loctite 243 + 25 Nm	(18 ft.lb)
Collar nut rear axle	M 20x1,5	80 Nm	(59 ft.lb)
Hexagon nut swingarm bolt	M 14x1,5	100 Nm	(74 ft.lb)
Clamping bolt upper triple clamp	M 8	15 Nm	(11 ft.lb)
Clamping bolt lower triple clamp	M 8	20 Nm	(15 ft.lb)
Clamping bolts fork stubs	M 8	10 Nm	(7 ft.lb)
Other bolts chassis	M 6	10 Nm	(7 ft.lb)
	M 8	25 Nm	(19 ft.lb)
	M 10	45 Nm	(33 ft.lb)

TECHNICAL DATA – ENGINE KTM 640 DUKE '99

Type	**640 LC4-E**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter
Displacement	625 ccm
Bore / Stroke	101 / 78 mm
Ratio	11,0 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	249° (249/1)
Valve timing by 1 mm valve clearence	IO 13° BTDC EO 53° BBDC IC 53° ABDC EC 11° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm
Valve clearence cold	Intake: 0.15 mm Exhaust: 0.15 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	cast aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	2 Eaton-Oilpumps
Quantity of engine oil	see below #
Engine oil	2.1 liters including frame
Primary ratio	straight geared spur wheels 30 : 81 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless DC- CDI ignition with digital advanced system type KOKUSAN
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm
Generator	12V 200W
Spark plug	NGK DPR8 EA-9
Spark plug gap	0.90 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25° C (–13° F)
Starting equipment	electric starter, kick starter

BASIC CARBURETOR SETTING

	640 DUKE 40 kW
Carburetor	BST40-225
Carburetor setting number	100299
Main jet	145
Needle jet	689 X-6
Idling jet	45
Jet needle	6G5
Needle position from top	3 rd
Mixture.adju. screw open	2,25 turn

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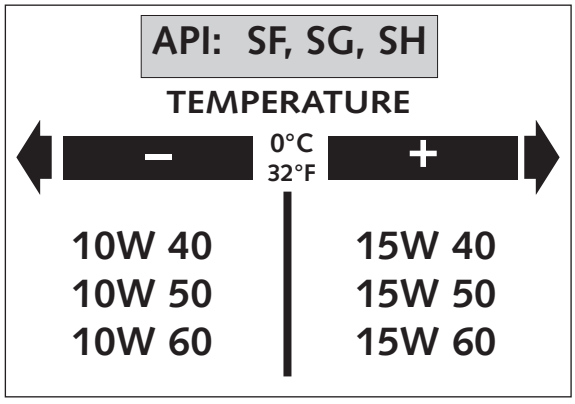

Engine oil

Use only oil brands (Shell Advance Ultra 4), which meet quality requirements of API-classes SF, SG or SH (informations on bottles) or higher. Both, mineral and synthetic oils with above specifications can be used.

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POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TIGHTENING TORQUES - ENGINE		
Hexagon nut at primary gear	M 20x1,5	Loctite 243 + 170 Nm (125 ft.lb)
Hexagon nut flywheel	M 16x1,25 LH thread	150 Nm (110 ft.lb)
Hexagon nut for inner clutch hub	M 18x1,5	Loctite 243 + 80 Nm (59 ft.lb)
Kickstarter stop bolt	M 12x1,5	50 Nm (37 ft.lb)
Allen head bolts oil pump	M 6	Loctite 243 + 8 Nm (6 ft.lb)
Hexagon bolt camshaft gear	M 10	Loctite 243 + 35 Nm (26 ft.lb)
Allen head bolts outer race	M 6x12/M 6x12,5	Loctite 648 + 18 Nm (13 ft.lb)
Allen head bolt cylinder head top sect.	M 6x50/M 6x55 (12.9)	20 Nm (15 ft.lb)
Allen head bolt cylinder head top sect.	M 6x25/M 6x65/M 6x70 (8.8)	8 Nm (6 ft.lb)
Cylinder head bolts	M 10	50 Nm (37 ft.lb)
Collar nuts at cylinder base	M 10	40 Nm (30 ft.lb)
Hexagon bolt chain sprocket	M 10	Loctite 243 + 40 Nm (30 ft.lb)
Oil drain plug	M 22x1,5	30 Nm (22 ft.lb)
Magnetic plug	M 12x1,5	20 Nm (15 ft.lb)
Plug bypass valve	M 12x1,5	20 Nm (15 ft.lb)
Crankshaft locating bolt	M 8	25 Nm (18 ft.lb)
Hollow bolts oil lines	M 8x1	10 Nm (7 ft.lb)
Hollow bolts oil lines	M 10x1	15 Nm (11 ft.lb)
Jet screw clutch cover	M 8	10 Nm (7 ft.lb)
Bolt plug timing-chain tensioner	M 12x1,5	20 Nm (15 ft.lb)
Counternuts valve adjusting screws	M 7x0,75	20 Nm (15 ft.lb)
Engine fastening bolt	M 8	40 Nm (30 ft.lb)
	M 10	70 Nm (52 ft.lb)

ASSEMBLY CLEARANCE, WEAR LIMIT		
Crankshaft	axial play	0,03 - 0,12 mm (0,0012 - 0,0047 in)
	run out of crank stud	max. 0,08 mm (0,0031 in)
Conrod bearing	radial play	max. 0,05 mm (0,002 in)
	axial play	max. 1,10 mm (0,043 in)
Cylinder	bore diameter	max. 101,04 mm (3,9779 in)
Piston	assembly clearance	max. 0,12 mm (0,0047 in)
Piston ring end gap	compression rings	max. 0,80 mm (0,0315 in)
	oil scraper ring	max. 1,0 mm (0,0394 in)
Valves	seat sealing intake	max. 1,50 mm (0,0591 in)
	seat sealing exhaust	max. 2,00 mm (0,0788 in)
	run out of valve heads	max. 0,05 mm (0,0019 in)
	valve guides diameter	max. 7,05 mm (0,2778 in)
Oil pump	clearance outer rotor - housing	max. 0,20 mm (0,0079 in)
	clearance outer rotor - inner rotor	max. 0,20 mm (0,0079 in)
Bypaß valve	minimum spring length	25 mm (0,985 in)
Clutch	clutchspring length	min. 34,5 mm (1,36 in), new 37 mm (1,458 in)
	Wear limit organic	min. 2,5 mm (0,0985 in)
Camshaft	diameter of bearing bolt (needle bearing)	min. 19,97 mm (0,7868 in)
Transmission shafts	axial play	0,1 – 0,4 mm (0,0039 – 0,0158 in)

TECHNICAL SPECIFICATIONS - CHASSIS KTM 640 DUKE '99

Frame	Central chrome-moly-steel frame		
Fork	type	WP - USD 43 Top adjuster 518T780	
	wheel travel	140 mm (5,5 in)	
	standard adjustment compression	driver only = 14,	with passenger = 14
	standard adjustment rebound	driver only = 14,	with passenger = 14
	fork leg projection upper fork bridge	3 mm (0.12 in)	
	oil capacity per fork leg	appr. 750 ccm (45 cubic in) / SAE 5	
	air chamber lenght	100 mm (4 in)	
Rear suspension	WP central shock absorber with PRO-LEVER linkage to rear- swing-arm with needle bearing		
Shock absorber	type	WP central shock absorber BAVP 118Q785	
	rear wheel travel	170 mm (6.7 in)	
	standard adjustment compression	driver only = 3,	with passenger = 5
	standard adjustment rebound	driver only = 5,	with passenger = 3
	spring preload	driver only = 23 mm (0.9 in),	with passenger = 28 mm (1.1 in)
	spring type	70 - 260	
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (12,6 in) and 4-piston brake caliper		
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in) and single-piston brake caliper floated		
Tyres	front: 120/70 R 17 58H		rear: 160/60 R 17 69H
Air pressure rider only	2.0 bar (29 psi)		2.2 bar (32 psi)
Air pressure with passenger	2.2 bar (32 psi)		2.4 bar (35 psi)
Fuel tank capacity	12 liter (3,2 US gallons), out of this 2,5 liter (0,6 US gallons) reserve		
Final drive ratio	17 : 38		
Chain	o-ring 5/8 x 1/4"		
Lamps	low beam	HB3 12V 65W (socket P20d)	
	high beam	HB3 12V 65W (socket P20d)	
	parking light	12V 5W (socket W2,1x9,5d)	
	speedometer, tachometer light	12V 1,2W (socket W2x4,6d)	
	indicator lamp	12V 1,2W (socket W2x4,6d)	
	stop and taillight	12V 21/5W (socket BaY15d)	
	flasher	12V 10W (socket Ba15s)	
Battery	maintenance-free battery 12V 8Ah		
Steering angle	64,2°		
Wheel base	1460 ± 15 mm (57.5 ± 0.6 in)		
Seat high	860 mm (33.9 in)		
Ground clearance	250 mm (9.9 in)		
Dead weight without fuel	145 kg (3 lbs)		
Max. permissible front axle load	150 kg (2 lbs)		
Max. permissible rear axle load	200 kg (4 lbs)		
Max. permissible laden weight	350 kg (773 lbs)		

TIGHTENING TORQUES - CHASSIS

Front axle	M 17	40 Nm	(30 ft.lb)
Rear axle	M20x1.5	80 Nm	(59 ft.lb)
Hex. nut swing arm bolt	M14x1.5	100 Nm	(74 ft.lb)
Clamping bolt upper fork bridge	M8	15 Nm	(11 ft.lb)
Clamping bolt lower fork bridge	M8	15 Nm	(11 ft.lb)
Clamping bolts fork stubs	M8	15 Nm	(11 ft.lb)
AH bolts front brake caliper	M10x1,25	Loctite 243 + 40 Nm	(30 ft.lb)
AH bolt rear brake caliper support	M10	40 Nm	(30 ft.lb)
Collar nuts chain tension eccentrics	M10	40 Nm	(30 ft.lb)
Collar nut conrod pro lever system	M12x1,75	60 Nm	(44 ft.lb)
Bolts handlebar clamps	M8	25 Nm	(15 lb.ft)
Bolt adjusting ring spring preload shock absorber	M6	8 Nm	(6 ft.lb9
Other bolts chassis	M6	10 Nm	(7 ft.lb)
	M8	25 Nm	(22 ft.lb)
	M10	45 Nm	(33 ft.lb)

Art.-Nr. 3.206.006 -E

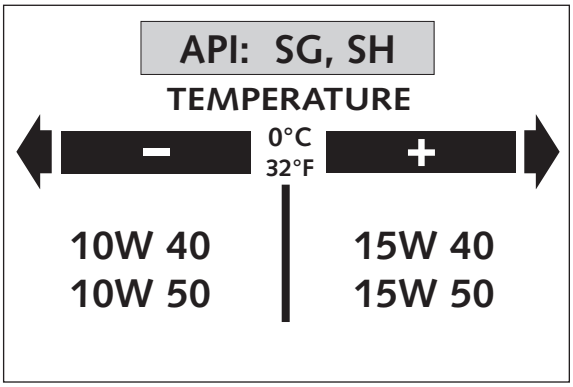
TECHNICAL SPECIFICATIONS – ENGINE 400/620 SC, Supermoto 2000

Engine	**400 LC4**	**620 LC4**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft	
Displacement	398 ccm	609 ccm
Bore / Stroke	89 / 64 mm	101 / 76 mm
Ratio	10,8 : 1	10,4 : 1
Fuel	unleaded premium gasoline with a least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	249/1	
Valve timing by 1 mm valve clearance	IO 22° BTDC EO 60° BBDC IC 42° ABDC EC 4° ATDC	IO 15° BTDC EO 52° BBDC IC 54° ABDC EC 17° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm	
Valve clearance cold	Intake: 0,20 mm Exhaust: 0,20 mm	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing	
Conrod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	forced-feed lubrication through 2 Eaten-oilpumps with oil sump	
Engine oil	see below #	
Engine oil quantity	1,6 liters (0,42 US gallons)	
Primary ratio	straight geared spur wheels 30 : 81 teeth	
Clutch	multi disc clutch in oil bath	
Transmission	5-speed claw shifted	
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18	
Ignition system	contactless thyristor ignition with electronic advanced system type KOKUSAN 4K-3	
Ignition timing	adjustment to max. 40 ° BTDC at 5000 rpm	adjustment to max. 36 ° BTDC at 5000 rpm
Generator	12V 110W	
Spark plug	NGK DPR8 EA-9	
Spark plug gap	0,90 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25°C (–13°F)	
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor	

BASIC CARBURETOR SETTING

	400 SC (20 kW)	**400 SC**	**620 SC (20 kW)**	**620 SC**
Carburetor	PHM 38 SD	PHM 38 SD	PHM 40 SD	PHM 40 SD
Carburetor setting number	300896	4894/6	110996	4922
Main jet	150	190	155	195
Needle jet	DR 266	DR 270 (DR 272)	DR 268	DR 272
Idling jet	45	45	45	45
Jet needle	K 51	K 51	K 51	K 51
Needle position from top	3 rd	2 nd	3 rd	2 nd
Mixture.adju. screw open	1,5 turn	1,5 turn	1,5 turn	1,5 turn
Throttle valve	40	40	40	40
Starting jet	45	45	45	45
Performance restrictor	slide stop 22 mm	–	slide stop 26 mm	–

ASSEMBLY CLEARANCE, WEAR LIMIT		
Crank shaft	axial play.....0.03 - 0.12 mm	(0.001-0.005 in)
	run out of crank stud.....max. 0.04 mm	(0.002 in)
Conrod bearing	radial play.....max. 0.05 mm	(0.002 in)
	axial play.....max. 1.00 mm	(0.04 in)
Piston forged	assembly clearance.....max. 0.12 mm	(0.005 in)
Piston cast	assembly clearance.....max. 0.05 mm	(0.002 in)
Piston rings end gap	compression rings.....max. 0.60 mm	(0.023 in)
	oil scraper ring.....max. 0.80 mm	(0.031 in)
Valves	seat sealing intake.....max. 1.50 mm	0.059 in)
	seat sealing exhaust.....max. 2.00 mm	(0.080 in)
	run out of valve heads.....max. 0.03 mm	(0.001 in)
	valve guides diameter.....max. 7.05 mm	(0.277 in)
Oil pump	clearance outer rotor - housing.....max. 0.20 mm	(0.008 in)
	clearance outer rotor - inner rotor.....max. 0.20 mm	(0.008 in)
Bypaß valve	minimum spring length.....25 mm	(1 in)
Clutch discs	wear limit organic.....2.5 mm	(0.1 in)
Clutch springs	minimum length.....34.5 mm (new 37 mm)	(1.36 in - new 1.45 in)
Transmission shafts	axial play.....0.1 - 0.4 mm	(0.004 - 0.016 in)



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Engine oil

Use only synthetic oil (Shell Advance Ultra 4), which meet quality requirements of API-classes SG or SH (informations on bottles) or higher.

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POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TECHNICAL SPECIFICATIONS - CHASSIS 400 / 620 SC, Supermoto 2000

	400/620 SC	620 Supermoto
Frame	Central chrome-moly-steel frame	
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 43	
Wheel travel front/rear	295 / 320 mm (11.6 / 12.6 in)	
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing	
Front brake	Disc brake with carbon-steel brake disc Ø 260 mm (10.2 in), brake caliper floated	Disc brake with carbon-steel brake disc Ø 320 mm (12.6 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8.7 in), brake caliper floated	
Tyres front	90/90-21 Pirelli MT 21	120/70-17 Pirelli MT 60
Air pressure offroad	1.0 bar (14 psi)	–
Air press. road, driver only	1.5 bar (21 psi)	2.0 bar (28 psi)
Tyres rear	140/80-18 Pirelli MT 21	160/60-17 Pirelli MT 60
Air pressure offroad	1.2 bar (17 psi)	–
Air press. road, driver only	2.0 bar (28 psi)	2.2 bar (31 psi)
Fuel tank capacity	9 liter (2.38 US gallons) of that 2.5 liter (0.66 US gallons) reserve	
Final drive ratio	400: 16:48 620: 16:40	17:38
Chain	5/8 x 1/4 " O-Ring	
Steering angle	62.5°	
Wheel base	1510 ± 10 mm (59.4 ± 0.4 in)	
Seat height	940 mm (37 in)	920 mm (36 in)
Ground clearance	375 mm (14.8 in)	355 mm (14 in)
Dead weight without fuel	122 kg (269 lbs)	123 kg (271 lbs)

STANDARD ADJUSTMENT - FORK

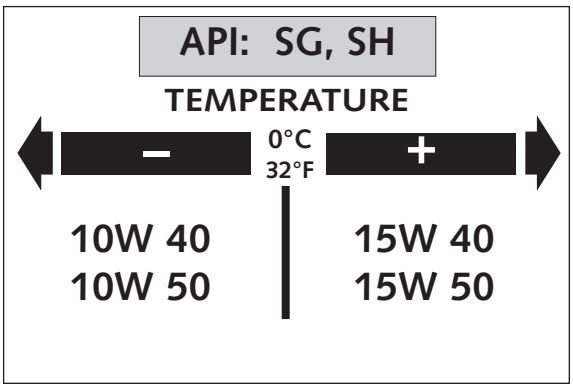
	05.18.U7.82
Compression adjuster	14
Rebound adjuster	14
Spring	4.2 N/mm
Spring preload	7 mm (0.28 in)
Air chamber length	120 mm (4.72 in)
Capacity per fork leg	app. 420 ccm
Fork oil	SAE 5

STANDARD ADJUSTMENT - SHOCK ABSORBER

	01.18.T7.05
Compression adjuster	3
Rebound adjuster	5
Spring	63 / 260
Spring preload	23 mm (0.9 in)

TECHNICAL DATA – ENGINE 400/640 LC4-E, 640 ADVENTURE, DUKE 2000

Type	400 LC4-E	640 LC4-E
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter	
Displacement	398 ccm	624,6 ccm
Bore / Stroke	89 / 64 mm	101 / 78 mm
Ratio	10,8 : 1	11,0 : 1
Fuel	unleaded premium gasoline with a least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	(249/1)	
Valve timing by 1 mm valve clearance	IO 22° BTDC EO 60° BBDC IC 42° ABDC EC 4° ATDC	IO 13° BTDC EO 53° BBDC IC 51° ABDC EC 11° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm	
Valve clearance cold	Intake: 0.20 mm Exhaust: 0.20 mm	Intake: 0.15 mm Exhaust: 0.15 mm
Crank shaft bearing	2 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	forged/cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	2 Eaton-Oilpumps	
Quantity of engine oil	see table	
Engine oil	2.1 liters including frame	
Primary ratio	straight geared spur wheels 30 : 81 teeth	
Clutch	multi disc clutch in oil bath	
Transmission	5-speed claw shifted	
Ignition system	contactless DC- CDI ignition with digital advanced system type KOKUSAN	
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm	
Generator	12V 200W	
Spark plug	DPR8 EA9	
Spark plug gap	0.9 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25° C (–13° F)	
Starting equipment	electric starter, kick starter	



Engine oil

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POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

GEAR RATIOS

Primary ratio	Transmission	Original final drive ratio	Available chain drive sprockets	Available final drive sprockets
30:81	1st gear 14:35 2nd gear 15:24 3rd gear 18:21 4th gear 20:19 5th gear 22:18	15:45 16:42 17:38 17:42	15 t 16 t for chain 17 t 5/8 x 1/4"	38 t 40 t for chain 42 t 5/8 x 1/4" 45 t 48 t

ASSEMBLY CLEARANCE, WEAR LIMIT		
Crank shaft	axial play	.0.03 - 0.12 mm
	run out of crank stud	.max. 0.08 mm
Connecting rod bearing	radial play	.max. 0.05 mm
	axial play	.max. 1.10 mm
Cylinder 400	bore	.max. 89.04 mm
Cylinder 640	bore	.max. 101.04 mm
Piston forged	assembly clearance	.max. 0.12 mm
Piston cast	assembly clearance	.max. 0.05 mm
Piston rings end gap	compression rings	.max. 0.80 mm
	oil scraper ring	.max. 1.00 mm
Valves	seat sealing intake	.max. 1.50 mm
	seat sealing exhaust	.max. 2.00 mm
	run out of valve heads	.max. 0.05 mm
	valve guides diameter	.max. 7.05 mm
Oil pumps	clearance outer rotor - housing	.max. 0.20 mm
	clearance outer rotor - inner rotor	.max. 0.20 mm
Bypaß valve	minimum spring length	.25.00 mm
Clutch	Length of springs	.min. 34.5 mm (new 37.00 mm)
	wear limit organic	.min. 2.50 mm
Camshaft	diameter of bearing bolt (needle bearing)	.min. 19.97 mm
Transmission shafts	axial play	.0.10 - 0.40 mm

BASIC CARBURETOR SETTING			
	400 LC4-E 25 kW	**400 LC4-E** 31 kW	**400 LC4-E** USA
Type	PHM 38 ND	PHM 38 ND	BST40-225
Carb.-setting number	100197	100197	090298
Main jet	130	130	142,5
Needle jet	AR 264	AR 264	689 X-6
Idling jet	50	50	45
Jet needle	K 23	K 23	6G5
Needle clip pos. f. top	2. from top	2. from top	3. from top
Mixt. adj. screw open	1.5 turns	1,5 turns	2,25 turns
Throttle valve	50/1	50/1	–
Starting jet	45(50,55)	45(50,55)	–
Performance restrictor	slide stop 51mm	–	–

BASIC CARBURETOR SETTING			
	640 LC4-E, Adventure 25 kW	**640 LC4-E, Adventure** 36 kW	**640 Duke** 40 kW
Type	BST40-225	BST40-225	BST40-225
Carb.-setting number	080298	090298	100299
Main jet	142,5	142,5	145
Needle jet	689 X-6	689 X-6	689 X-6
Idling jet	45	45	45
Jet needle	6G5	6G5	6G5
Needle clip pos. f. top	3. from top	3. from top	3. from top
Mixt. adj. screw open	2,25 turns	2,25 turns	2,25 turns
Throttle valve	–	–	–
Starting jet	–	–	–
Performance restrictor	slide stop 17mm	–	–

TECHNICAL SPECIFICATIONS - CHASSIS 400/640 LC4-E, 640 LC4-E SUPERMOTO 2000

	400 LC4-E	640 LC4-E	640 LC4-E SUPERMOTO
Frame	Central chrome-moly-steel frame		
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 43		
Wheel travel front/rear	270 / 300 mm (10,6 / 11,8 in)		
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing		
Front brake	Disc brake with carbon-steel brake disc, brake caliper floated		
Brake Disk front	Ø 300 mm (11,8 in)		Ø 320 mm (12,6 in)
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated		
Tyres front	90/90-21		120/70-17
Air press. road, driver only	1,5 bar (21 psi)		2,0 bar (28 psi)
Air press. road, with passenger	2,0 bar (28 psi)		2,2 bar (31 psi)
Tyres rear	140/80-18		160/60-17
Air press. road, driver only	2,0 bar (28 psi)		2,2 bar (31 psi)
Air press. road, with passenger	2,2 bar (31 psi)		2,4 bar (34 psi)
Fuel tank capacity	11 liter (2,9 US gallons) / 18 liter (4,75 US gallons) 2,5 liter (0,66 US gallons) reserve		
Final drive ratio	15:45	16:42	17:42
Chain	5/8 x 1/4 " O-Ring		
Lamps	head light . . . . . H4 12V 60/55W (socket P43t) parking light . . . . . 12V 5W (socket W2,1x9,5d) speedometer, tachometer light . . . . . 12V 1,2W (socket W2x4,6d) indicator lamp . . . . . 12V 1,2W (socket W2x4,6d) stop and taillight . . . . . 12V 21/5W (socket BaY15d) flasher . . . . . 12V 10W (socket Ba15s) license plate illumination . . . . . 12V 5W (socket W2,1x9,5d)		
Battery	12V 8Ah		
Steering angle	62,5°		
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)		
Seat high	935 mm (36,8 in)		915 mm (36 in)
Ground clearance	355 mm (14 in)		335 mm (13,2 in)
Dead weight without fuel	136 kg (300 lbs)		137 kg (302 lbs)
Max. permissable front axe load	211 kg (466 lbs)		
Max. permissable rear axe load	335 kg (740 lbs)		
Max. permissable laden weigth	350 kg (773 lbs)		

Art.-Nr. 3.206.006 -E

STANDARD ADJUSTMENT - FORK

	WP 0518U790
Compression adjuster	20
Rebound adjuster	12
Spring	4,4 N/mm
Spring preload	6 mm (0,25 in)
Air chamber length	150 mm (5,9 in)
Capacity per fork leg	ca 410 ccm
Fork oil	SAE5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	WP 0118U707
Compression adjuster	6
Rebound adjuster	7
Spring	66 / 260
Spring preload	27 mm (1,1 in)

TECHNICAL SPECIFICATIONS - CHASSIS LC4 ADVENTURE R 640 2000

	LC4 Adventure R 640
Frame	Central chrome-moly-steel frame
Fork	WP Extreme
Wheel travel front/rear	280/320 mm (11/12,6 in)
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing
Front brake	Disc brake with carbon-steel brake disc Ø 300 mm (11,8 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated
Tyres front	90/90-21 Enduro3
Air pressure offroad	1,5 bar (21 psi)
Air press. road, driver only	2,0 bar (29 psi)
Tyres rear	140/80-18 Enduro3
Air press. road, driver only	2,0 bar (29 psi)
Air press. road, with passenger	2,2 bar (32 psi)
Fuel tank capacity	28 liter (7,4 US gallons) of that 3,5 liter (1 US gallons) reserve
Final drive ratio	16 : 42
Chain	5/8 x 1/4 " O-Ring
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	955 mm (37,7 in)
Ground clearance	375 mm (14,8 in)
Dead weight without fuel	154 kg (340 lbs)
Max. permissible front axle load	150 kg (331 lbs)
Max. permissible rear axle load	230 kg (507 lbs)
Max. permissible laden weight	380 kg (839 lbs)

STANDARD ADJUSTMENT - FORK

	09.18.S7.55
Compression adjuster	14
Rebound adjuster	12
Spring	4,4 N/mm
Spring preload	10 mm (0,4 in)
Air chamber length	155 mm (5,9 in)
Capacity per fork leg	ca 400 ccm
Fork oil	SAE5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	01.18.R7.97
Compression adjuster	3
Rebound adjuster	5
Spring	70/260
Spring preload	23 mm (0,9 in)

TECHNICAL SPECIFICATIONS - CHASSIS KTM 640 DUKE 2000

Frame	Central chrome-moly-steel frame	
Fork	type	WP - USD 43 Multi adjuster 0518U795
	wheel travel	140 mm (5,5 in)
	standard adjustment compression	driver only = 14, with passenger = 14
	standard adjustment rebound	driver only = 16, with passenger = 16
	fork leg projection upper fork bridge	3 mm (0,12 in)
	oil capacity per fork leg	appr. 400 ccm (24 cubic in) / SAE 5
	air chamber lenght	100 mm (4 in)
Rear suspension	WP central shock absorber with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Shock absorber	type	WP central shock absorber BAVP 118Q785
	rear wheel travel	170 mm (6.7 in)
	standard adjustment compression	driver only = 3, with passenger = 5
	standard adjustment rebound	driver only = 5, with passenger = 3
	spring preload	driver only = 23 mm (0.9 in),with passenger = 28 mm (1.1 in)
	spring type	70 - 260
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (12,6 in) and 4-piston brake caliper	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in) and single-piston brake caliper floated	
Tyres	front: 120/70 R 17 58H	rear: 160/60 R 17 69H
Air pressure rider only	2.0 bar (29 psi)	2.2 bar (32 psi)
Air pressure with passenger	2.2 bar (32 psi)	2.4 bar (35 psi)
Fuel tank capacity	11 liter (2,9 US gallons), out of this 2,5 liter (0,6 US gallons) reserve	
Final drive ratio	17 : 38	
Chain	O-ring 5/8 x 1/4"	
Lamps	low beam	HB3 12V 65W (socket P20d)
	high beam	HB3 12V 65W (socket P20d)
	parking light	12V 5W (socket W2,1x9,5d)
	speedometer, tachometer light	12V 1,2W (socket W2x4,6d)
	indicator lamp	12V 1,2W (socket W2x4,6d)
	stop and taillight	12V 21/5W (socket BaY15d)
	flasher	12V 10W (socket Ba15s)
Battery	maintenance-free battery 12V 8Ah	
Steering angle	64,2°	
Wheel base	1460 ± 15 mm (57.5 ± 0.6 in)	
Seat high	860 mm (33.9 in)	
Ground clearance	250 mm (9.9 in)	
Dead weight without fuel	145 kg (3 lbs)	
Max. permissible front axle load	150 kg (2 lbs)	
Max. permissible rear axle load	200 kg (4 lbs)	
Max. permissible laden weight	350 kg (773 lbs)	

TECHNICAL SPECIFICATIONS - CHASSIS 640 DUKE 2000 USA, AUS

Frame	Central chrome-moly-steel frame	
Fork	type	WP - USD 43 Top adjuster 518T780
	wheel travel	140 mm (5,5 in)
	standard adjustment compression	driver only = 14, with passenger = 14
	standard adjustment rebound	driver only = 14, with passenger = 14
	fork leg projection upper fork bridge	3 mm (0,12 in)
	oil capacity per fork leg	appr. 400 ccm (45 cubic in) / SAE 5
	air chamber lenght	100 mm (4 in)
Rear suspension	WP central shock absorber with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Shock absorber	type	WP central shock absorber BAVP 118Q785
	rear wheel travel	170 mm (6.7 in)
	standard adjustment compression	driver only = 3, with passenger = 5
	standard adjustment rebound	driver only = 5, with passenger = 3
	spring preload	driver only = 23 mm (0.9 in),with passenger = 28 mm (1.1 in)
	spring type	70 - 260
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (12,6 in) and 4-piston brake caliper	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in) and single-piston brake caliper floated	
Tyres	front: 120/70 R 17 58H	rear: 160/60 R 17 69H
Air pressure rider only	2.0 bar (29 psi)	2.2 bar (32 psi)
Air pressure with passenger	2.2 bar (32 psi)	2.4 bar (35 psi)
Fuel tank capacity	12 liter (3,2 US gallons), out of this 2,5 liter (0,6 US gallons) reserve	
Final drive ratio	17 : 38	
Chain	O-ring 5/8 x 1/4"	
Lamps	low beam	HB3 12V 65W (socket P20d)
	high beam	HB3 12V 65W (socket P20d)
	parking light	12V 5W (socket W2,1x9,5d)
	speedometer, tachometer light	12V 1,2W (socket W2x4,6d)
	indicator lamp	12V 1,2W (socket W2x4,6d)
	stop and taillight	12V 21/5W (socket BaY15d)
	flasher	12V 10W (socket Ba15s)
Battery	maintenance-free battery 12V 8Ah	
Steering angle	64,2°	
Wheel base	1460 ± 15 mm (57.5 ± 0.6 in)	
Seat high	860 mm (33.9 in)	
Ground clearance	250 mm (9.9 in)	
Dead weight without fuel	145 kg (3 lbs)	
Max. permissible front axle load	150 kg (2 lbs)	
Max. permissible rear axle load	200 kg (4 lbs)	
Max. permissible laden weight	350 kg (773 lbs)	

TECHNICAL SPECIFICATIONS – ENGINE 400 SXC USA 2000

Engine	**400 SXC**
Design	Liquid-cooled single cylinder 4-stroke engine
Displacement	398 ccm
Bore / Stroke	89 / 64 mm
Ratio	10,8 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	249/1
Valve timing by 1 mm	IO 22° BTDC EO 60° BBDC
valve clearence	IC 42° ABDC EC 4° ATDC
Valve diameter	Intake: 36 mm Exhaust: 30 mm
Valve clearence cold	Intake: 0,20 mm Exhaust: 0,20 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	cast aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	forced-feed lubrication through Eaton-Oilpump with oil sump
Engine oil	see bellow
Engine oil quantity	1,45 liters (0,38 US gallons)
Primary ratio	straight geared spur wheels 30 : 81 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless thyristor ignition with electronic advanced system type SEM
Ignition timing	adjustment to max. 38 ° BTDC at 6000 rpm
Generator	12V 130W
Spark plug	NGK D8EA
Spark plug gap	0,6 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25°C (–13°F)
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor

ASSEMBLY CLEARANCE, WEAR LIMIT

Crank shaft	axial play	0,03 - 0,12 mm	(0,001-0,005 in)
	run out of crank stud	max. 0,08 mm	(0,003 in)
Connecting rod bearing	radial play	max. 0,05 mm	(0,002 in)
	axial play	max. 1,00 mm	(0,04 in)
Piston cast	assembly clearance	max. 0,05 mm	(0,002 in)
Piston rings end gap	compression rings	max. 0,60 mm	(0,023 in)
	oil scraper ring	max. 0,80 mm	(0,031 in)
Valves	seat sealing intake	max. 1,50 mm	0,059 in)
	seat sealing exhaust	max. 2,00 mm	(0,080 in)
	run out of valve heads	max. 0,03 mm	(0,001 in)
	valve guides diameter	max. 7,05 mm	(0,277 in)
Oil pump	clearance outer rotor - housing	max. 0,20 mm	(0,008 in)
	clearance outer rotor - inner rotor	max. 0,20 mm	(0,008 in)
Bypaß valve	minimum spring lenght	25 mm	(1 in)
Clutch discs	wear limit organic	2,5 mm	(0,1 in)
Clutch springs	minimum lenght	34,5 mm (new 37 mm)	(1,36 in - new 1,45 in)
Transmission shafts	axial play	0,1 - 0,4 mm	(0,004 - 0,016 in)

TECHNICAL SPECIFICATIONS - CHASSIS 400 SXC USA 2000

	400 SXC
Frame	Central chrome-moly-steel frame
Fork	**W**hite **P**ower – **E**XTREME
Wheel travel front/rear	295 / 320 mm (11,6 / 12,6 in)
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing
Front brake	Disc brake with carbon-steel brake disc Ø 260 mm (10,2 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated
Tyres front	90/90-21 54R
Air pressure offroad	1,0 bar (14 psi)
Air press. road, driver only	1,5 bar (21 psi)
Tyres rear	140/80-18 70R
Air pressure offroad	1,2 bar (17 psi)
Air press. road, driver only	2,0 bar (28 psi)
Fuel tank capacity	9 liter (3 US gallons) of that 1,5 liter (0,4 US gallons) reserve
Final drive ratio	15 : 50
Chain	5/8 x 1/4 "
Steering angle	62,5°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	940 mm (37 in)
Ground clearance	375 mm (14,8 in)
Dead weight without fuel	121 kg (267 lbs)

STANDARD ADJUSTMENT - FORK

	05.18.T7.81
Compression adjuster	10
Rebound adjuster	12
Spring	4,2 N/mm
Spring preload	6 mm (0,24 in)
Air chamber length	130 mm (5,1 in)
Capacity per fork leg	ca 350 ccm
Fork oil	SAE5

STANDART-ADJUSTMENT - SHOCK ABSORBER

	01.18.Q7.82
Compression adjuster	3
Rebound adjuster	4
Spring	63/260
Spring preload	23 mm

NOTE FOR WHITE POWER FORKS:
The damping units in the left and the right fork leg are of different design. Make sure not to mix them up in case of repair or service works.

BASIC CARBURETOR SETTING

Type	BST40-225
Carb.-setting number	040599
Main jet	160
Needle jet	689 X-6
Idling jet	45
Jet needle	6G5
Needle clip pos. f. top	3. from top
Mixt. adj. screw open	2,25 turns
Throttle valve	–
Starting jet	–
Performance restrictor	–

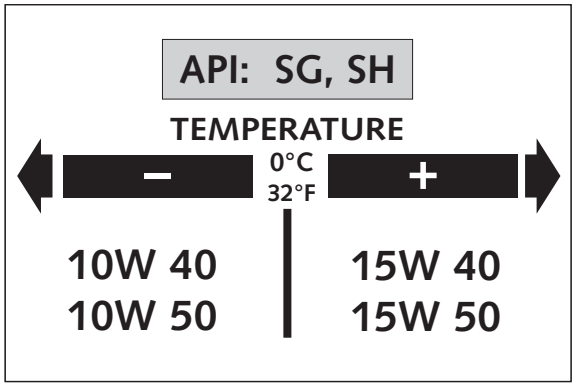
TECHNICAL SPECIFICATIONS – ENGINE 620 SC, 620 SC SUPERMOTO 2001

Engine	**620**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft
Displacement	609 ccm
Bore / Stroke	101 / 76 mm
Ratio	10,4 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	249/1
Valve diameter	Intake: 36 mm Exhaust: 30 mm
Valve clearence cold	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	forged aluminium
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	forced-feed lubrication through Eaton-Oilpump with oil sump
Engine oil	see table
Engine oil quantity	1,6 liters (0,42 US gallons)
Primary ratio	straight geared spur wheels 30 : 81 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless thyristor ignition with electronic advanced system type KOKUSAN 4K3
Ignition timing	adjustment to max. 36 ° BTDC at 5000 rpm
Generator	12V 110W
Spark plug	NGK DPR8 EA-9
Spark plug gap	0,9 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25°C (–13°F)
Starting equipment	decompressor automatic and hand actuated, cold and hot start knob on carburetor

BASIC CARBURETOR SETTING

	620 SC, 620 SC SUPERMOTO
Carburetor	PHM 40 SD
Carburetor setting number	080600
Main jet	155
Needle jet	DR 266
Idling jet	45
Jet needle	K 51
Needle position from top	3 rd
Mixture.adju. screw open	1,5 turns
Throttle valve	40
Starting jet	45
Performance restrictor	Slide stop 24mm

ASSEMBLY CLEARANCE, WEAR LIMIT		
Crank shaft	axial play.....0,03 - 0,12 mm	(0,001-0,005 in)
	run out of crank stud.....max. 0,04 mm	(0,002 in)
Connecting rod bearing	radial play.....max. 0,05 mm	(0,002 in)
	axial play.....max. 1,00 mm	(0,04 in)
Piston forged	assembly clearance.....max. 0,12 mm	(0,005 in)
Piston rings end gap	compression rings.....max. 0,60 mm	(0,023 in)
	oil scraper ring.....max. 0,80 mm	(0,031 in)
Valves	seat sealing intake.....max. 1,50 mm	0,059 in)
	seat sealing exhaust.....max. 2,00 mm	(0,080 in)
	run out of valve heads.....max. 0,03 mm	(0,001 in)
	valve guides diameter.....max. 7,05 mm	(0,277 in)
Oil pump	clearance outer rotor - housing.....max. 0,20 mm	(0,008 in)
	clearance outer rotor - inner rotor.....max. 0,20 mm	(0,008 in)
Bypaß valve	minimum spring lenght.....25 mm	(1 in)
Clutch discs	wear limit organic.....2,5 mm	(0,1 in)
Clutch springs	minimum lenght.....34,5 mm (new 37 mm)	(1,36 in - new 1,45 in)
Transmission shafts	axial play.....0,1 - 0,4 mm	(0,004 - 0,016 in)



Engine oil

Use only oil brands, which meet quality requirements (Shell Advance Ultra 4) of API-classes SG or SH (informations on bottles) or higher.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TECHNICAL SPECIFICATIONS - CHASSIS 620 SC, 620 SC SUPERMOTO 2001

	620 SC	620 SC SUPERMOTO
Frame	Central chrome-moly-steel frame	
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 43	
Wheel travel front/rear	295 / 320 mm (11,6 / 12,6 in)	
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing	
Front brake	Disc brake with carbon-steel brake disc, brake caliper floated	
Brake Disk	Ø 260 mm (10,2 in)	Ø 320 mm (12,6 in)
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated	
Tyres front	90/90-21	120/70-17
Air pressure offroad	1,0 bar (14 psi)	–
Air press. road, driver only	1,8 bar (21 psi)	2,0 bar (28 psi)
Tyres rear	140/80-18	160/60-17
Air pressure offroad	1,2 bar (17 psi)	–
Air press. road, driver only	2,0 bar (28 psi)	2,2 bar (32 psi)
Fuel tank capacity	9 liter (2,38 US gallons) of that 2,5 liter (0,66 US gallons) reserve	
Final drive ratio	16:40	17:38
Chain	5/8 x 1/4 " O-Ring	
Steering angle	62,5°	
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)	
Seat high	940 mm (37 in)	920 mm (36 in)
Ground clearance	375 mm (14,8 in)	355 mm (14 in)
Dead weight without fuel	122 kg (269 lbs)	123 kg (271 lbs)

STANDARD ADJUSTMENT - FORK

	620 SC WP 0518V706	SC SUPERMOTO WP 0518V721
Compression adjuster	14	14
Rebound adjuster	12	14
Spring	4,2 N/mm	5,0 N/mm
Spring preload	6 mm	9 mm
Air chamber length	150 mm	130 mm
Fork oil	SAE 5	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	620 SC WP 0118V712	SC SUPERMOTO WP 0118V720
Compression adjuster	3	5
Rebound adjuster	5	7
Spring	63 / 260	75 / 260
Spring preload	23 mm	15 mm

TECHNICAL DATA – ENGINE 400/640 LC4-E, 640 ADVENTURE, DUKE 2001

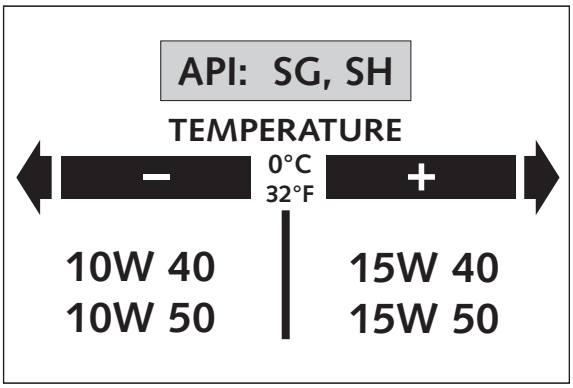
Type	400 LC4-E	640 LC4-E
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter	
Displacement	398 ccm	624,6 ccm
Bore / Stroke	89 / 64 mm	101 / 78 mm
Ratio	10,8 : 1	11,0 : 1
Fuel	unleaded premium gasoline with a least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	249/1	
Valve diameter	Intake: 36 mm Exhaust: 30 mm	
Valve clearence cold	Intake: 0.20 mm Exhaust: 0.20 mm	Intake: 0.15 mm Exhaust: 0.15 mm
Crank shaft bearing	2 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	forged/cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	2 Eaton-Oilpumps	
Quantity of engine oil	see table	
Engine oil	2.1 liters including frame	
Primary ratio	straight geared spur wheels 30 : 81 teeth	
Clutch	multi disc clutch in oil bath	
Transmission	5-speed claw shifted	
Ignition system	contactless DC- CDI ignition with digital advanced system type KOKUSAN	
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm	
Generator	12V 200W	
Spark plug	NGK DPR8 EA9	
Spark plug gap	0.9 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25° C (–13° F)	
Starting equipment	electric starter, kick starter	

ASSEMBLY CLEARANCE, WEAR LIMIT

Crank shaft	axial play	0.03 - 0.12 mm
	run out of crank stud	max. 0.08 mm
Connecting rod bearing	radial play	max. 0.05 mm
	axial play	max. 1.10 mm
Cylinder 400	bore	max. 89.04 mm
Cylinder 640	bore	max. 101.04 mm
Piston forged	assembly clearance	max. 0.12 mm
Piston cast	assembly clearance	max. 0.05 mm
Piston rings end gap	compression rings	max. 0.80 mm
	oil scraper ring	max. 1.00 mm
Valves	seat sealing intake	max. 1.50 mm
	seat sealing exhaust	max. 2.00 mm
	run out of valve heads	max. 0.05 mm
	valve guides diameter	max. 7.05 mm
Oil pumps	clearance outer rotor - housing	max. 0.20 mm
	clearance outer rotor - inner rotor	max. 0.20 mm
Bypaß valve	minimum spring length	25.00 mm
Clutch	Length of springs	min. 34.5 mm (new 37.00 mm)
	wear limit organic	min. 2.50 mm
Camshaft	diameter of bearing bolt (needle bearing)	min. 19.97 mm
Transmission shafts	axial play	0.10 - 0.40 mm

GEAR RATIOS

Primary ratio	Transmission	Original final drive ratio	Available chain drive sprockets	Available final drive sprockets
30:81	1st gear 14:35 2nd gear 15:24 3rd gear 18:21 4th gear 20:19 5th gear 22:18	15:45 16:42 17:38 17:42	15 t 16 t for chain 17 t 5/8 x 1/4"	38 t 40 t for chain 42 t 5/8 x 1/4" 45 t 48 t



Engine oil

Use only oil brands, which meet quality requirements (Shell Advance Ultra 4) of API-classes SG or SH (informations on bottles) or higher.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

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BASIC CARBURETOR SETTING

	400 LC4-E 25 kW	**400 LC4-E** 31 kW	**400 LC4-E USA**
Type	PHM 38 ND	PHM 38 ND	BST40-225
Carb.-setting number	100197	100197	090298
Main jet	130	130	142,5
Needle jet	AR 264	AR 264	689 X-6
Idling jet	50	50	45
Jet needle	K 23	K 23	6G5
Needle clip pos. f. top	2. from top	2. from top	3. from top
Mixt. adj. screw open	1.5 turns	1,5 turns	2,25 turns
Throttle valve	50/1	50/1	–
Starting jet	45(50,55)	45(50,55)	–
Performance restrictor	slide stop 51mm	–	–

Repair manual KTM LC4

BASIC CARBURETOR SETTING

	640 LC4-E, Adventure 25 kW	**640 LC4-E, Adventure** 36 kW	**640 Duke** 40 kW
Type	BST40-225	BST40-225	BST40-225
Carb.-setting number	080298	090298	100299
Main jet	142,5	142,5	145
Needle jet	689 X-6	689 X-6	689 X-6
Idling jet	45	45	45
Jet needle	6G5	6G5	6G5
Needle clip pos. f. top	3. from top	3. from top	3. from top
Mixt. adj. screw open	2,25	2,25	2,25
Throttle valve	–	–	–
Starting jet	–	–	–
Performance restrictor	slide stop 17mm	–	–

TECHNICAL SPECIFICATIONS - CHASSIS 400/640 LC4-E, 640 LC4-E SUPERMOTO 2001

	400 LC4-E	640 LC4-E	640 LC4-E SUPERMOTO
Frame	Central chrome-moly-steel frame		
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 43		
Wheel travel front/rear	270 / 300 mm (10,6 / 11,8 in)		
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing		
Front brake	Disc brake with carbon-steel brake disc, brake caliper floated		
Brake Disk front	Ø 300 mm (11,8 in)		Ø 320 mm (12,6 in)
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated		
Tyres front	90/90-21		120/70-17
Air press. road, driver only	1,5 bar (21 psi)		2,0 bar (28 psi)
Air press. road, with passenger	2,0 bar (28 psi)		2,2 bar (31 psi)
Tyres rear	140/80-18		160/60-17
Air press. road, driver only	2,0 bar (28 psi)		2,2 bar (31 psi)
Air press. road, with passenger	2,2 bar (31 psi)		2,4 bar (34 psi)
Fuel tank capacity	11 liter (2,9 US gallons) / 18 liter (4,75 US gallons) 2,5 liter (0,66 US gallons) reserve		
Final drive ratio	15:45	16:42	17:42
Chain	5/8 x 1/4 " O-Ring		
Lamps	head light . . . . . H4 12V 60/55W (socket P43t) parking light . . . . . 12V 5W (socket W2,1x9,5d) speedometer, tachometer light . . . . . 12V 1,2W (socket W2x4,6d) indicator lamp . . . . . 12V 1,2W (socket W2x4,6d) stop and taillight . . . . . 12V 21/5W (socket BaY15d) flasher . . . . . 12V 10W (socket Ba15s) license plate illumination . . . . . 12V 5W (socket W2,1x9,5d)		
Battery	12V 8Ah		
Steering angle	62,5°		63°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)		
Seat high	955 mm (37,6 in)		935 mm (36,8 in)
Ground clearance	355 mm (14 in)		335 mm (13,2 in)
Dead weight without fuel	136 kg (300 lbs)		137 kg (302 lbs)
Max. permissable front axe load	211 kg (466 lbs)		
Max. permissable rear axe load	335 kg (740 lbs)		
Max. permissable laden weigth	350 kg (773 lbs)		

STANDARD ADJUSTMENT - FORK

	400/640 LC4-E	640 LC4-E SUPERMOTO
	WP 0518V707	**WP 0518V721**
Compression adjuster	20	14
Rebound adjuster	12	14
Spring	4,4 N/mm	5,0 N/mm
Spring preload	6 mm	9 mm
Air chamber length	150 mm	130 mm
Fork oil	SAE 5	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	400/640 LC4-E	640 LC4-E SUPERMOTO
	WP 0118V710	**WP 0118V720**
Compression adjuster	6	5
Rebound adjuster	7	7
Spring	66 / 260	75 / 260
Spring preload	27 mm	15 mm

TECHNICAL SPECIFICATIONS - CHASSIS 640 LC4 ADVENTURE 2001

	640 LC4 Adventure
Frame	Central chrome-moly-steel frame
Fork	WP USD
Wheel travel front/rear	275/300 mm (10,5/12 in)
Rear suspension	Central shock absorber (WP) with PRO-LEVER linkage to rear-swingarm with needle bearing
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (11,8 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated
Tyres front	90/90-21 Enduro3
Air pressure offroad	1,8 bar (21 psi)
Air press. road, driver only	2,0 bar (29 psi)
Tyres rear	140/80-18 Enduro3
Air press. road, driver only	2,0 bar (29 psi)
Air press. road, with passenger	2,2 bar (32 psi)
Fuel tank capacity	28 liter (7,4 US gallons) of that 3,5 liter (1 US gallons) reserve
Final drive ratio	16 : 42
Chain	5/8 x 1/4 " O-Ring
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	955 mm (37,7 in)
Ground clearance	355 mm (14,2 in)
Dead weight without fuel	154 kg (340 lbs)
Max. permissible front axle load	150 kg (331 lbs)
Max. permissible rear axle load	230 kg (507 lbs)
Max. permissible laden weight	380 kg (839 lbs)

STANDARD ADJUSTMENT - FORK

	14.18.V704
Compression adjuster	14
Rebound adjuster	14
Spring	4,4 N/mm
Spring preload	4 mm
Air chamber length	120 mm
Capacity per fork leg	ca 420 ccm
Fork oil	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	01.18.V709
Compression adjuster	3
Rebound adjuster	5
Spring	66/260
Spring preload	27 mm (0,9 in)

Art.-Nr. 3.206.006 -E

TECHNICAL SPECIFICATIONS - CHASSIS KTM 640 DUKE 2001

Frame	Central chrome-moly-steel frame	
Fork	type . . . . . WP - USD 43 Multi adjuster 0518U795	
	wheel travel . . . . . 140 mm (5,5 in)	
	standard adjustment compression. . . . . driver only = 14, with passenger = 14	
	standard adjustment rebound. . . . . driver only = 16, with passenger = 16	
	fork leg projection upper fork bridge . . . . . 3 mm (0,12 in)	
	oil capacity per fork leg . . . . . appr. 400 ccm (24 cubic in) / SAE 5	
	air chamber lenght . . . . . 100 mm (4 in)	
Rear suspension	WP central shock absorber with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Shock absorber	type . . . . . WP central shock absorber BAVP 118Q785	
	rear wheel travel . . . . . 170 mm (6.7 in)	
	standard adjustment compression. . . . . driver only = 3, with passenger = 5	
	standard adjustment rebound. . . . . driver only = 5, with passenger = 3	
	spring preload . . . . . driver only = 23 mm (0.9 in),with passenger = 28 mm (1.1 in)	
	spring type . . . . . 70 - 260	
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (12,6 in) and 4-piston brake caliper	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in) and single-piston brake caliper floated	
Tyres	front: 120/70 R 17 58H	rear: 160/60 R 17 69H
Air pressure rider only	2.0 bar (29 psi)	2.2 bar (32 psi)
Air pressure with passenger	2.2 bar (32 psi)	2.4 bar (35 psi)
Fuel tank capacity	11 liter (2,9 US gallons), out of this 2,5 liter (0,6 US gallons) reserve	
Final drive ratio	17 : 38	
Chain	O-ring 5/8 x 1/4"	
Lamps	low beam . . . . . HB3 12V 65W (socket P20d)	
	high beam . . . . . HB3 12V 65W (socket P20d)	
	parking light . . . . . 12V 5W (socket W2,1x9,5d)	
	speedometer, tachometer light . . . . . 12V 1,2W (socket W2x4,6d)	
	indicator lamp . . . . . 12V 1,2W (socket W2x4,6d)	
	stop and taillight . . . . . 12V 21/5W (socket BaY15d)	
	flasher . . . . . 12V 10W (socket Ba15s)	
Battery	maintenance-free battery 12V 8Ah	
Steering angle	64,2°	
Wheel base	1460 ± 15 mm (57.5 ± 0.6 in)	
Seat high	860 mm (33.9 in)	
Ground clearance	250 mm (9.9 in)	
Dead weight without fuel	145 kg (3 lbs)	
Max. permissible front axle load	150 kg (2 lbs)	
Max. permissible rear axle load	200 kg (4 lbs)	
Max. permissible laden weight	350 kg (773 lbs)	

TECHNICAL SPECIFICATIONS - CHASSIS 640 DUKE 2001 USA, AUS

Frame	Central chrome-moly-steel frame	
Fork	type . . . . . WP - USD 43 Top adjuster 518T780	
	wheel travel . . . . . 140 mm (5,5 in)	
	standard adjustment compression. . . . . driver only = 14, with passenger = 14	
	standard adjustment rebound. . . . . driver only = 14, with passenger = 14	
	fork leg projection upper fork bridge . . . . . 3 mm (0,12 in)	
	oil capacity per fork leg . . . . . appr. 400 ccm (45 cubic in) / SAE 5	
	air chamber lenght . . . . . 100 mm (4 in)	
Rear suspension	WP central shock absorber with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Shock absorber	type . . . . . WP central shock absorber BAVP 118Q785	
	rear wheel travel . . . . . 170 mm (6.7 in)	
	standard adjustment compression. . . . . driver only = 3, with passenger = 5	
	standard adjustment rebound. . . . . driver only = 5, with passenger = 3	
	spring preload . . . . . driver only = 23 mm (0.9 in),with passenger = 28 mm (1.1 in)	
	spring type . . . . . 70 - 260	
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (12,6 in) and 4-piston brake caliper	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in) and single-piston brake caliper floated	
Tyres	front: 120/70 R 17 58H	rear: 160/60 R 17 69H
Air pressure rider only	2.0 bar (29 psi)	2.2 bar (32 psi)
Air pressure with passenger	2.2 bar (32 psi)	2.4 bar (35 psi)
Fuel tank capacity	12 liter (3,2 US gallons), out of this 2,5 liter (0,6 US gallons) reserve	
Final drive ratio	17 : 38	
Chain	O-ring 5/8 x 1/4"	
Lamps	low beam . . . . . HB3 12V 65W (socket P20d)	
	high beam . . . . . HB3 12V 65W (socket P20d)	
	parking light . . . . . 12V 5W (socket W2,1x9,5d)	
	speedometer, tachometer light . . . . . 12V 1,2W (socket W2x4,6d)	
	indicator lamp . . . . . 12V 1,2W (socket W2x4,6d)	
	stop and taillight . . . . . 12V 21/5W (socket BaY15d)	
	flasher . . . . . 12V 10W (socket Ba15s)	
Battery	maintenance-free battery 12V 8Ah	
Steering angle	64,2°	
Wheel base	1460 ± 15 mm (57.5 ± 0.6 in)	
Seat high	860 mm (33.9 in)	
Ground clearance	250 mm (9.9 in)	
Dead weight without fuel	145 kg (3 lbs)	
Max. permissible front axle load	150 kg (2 lbs)	
Max. permissible rear axle load	200 kg (4 lbs)	
Max. permissible laden weight	350 kg (773 lbs)	

TECHNICAL SPECIFICATIONS – ENGINE 625 SC, 625 SC SUPERMOTO 2002

Engine	**625 LC4**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft
Displacement	625 ccm
Bore / Stroke	101 / 78 mm
Ratio	11,0 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	249/1
Valve diameter	Intake: 36 mm Exhaust: 30 mm
Valve clearence cold	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	forged aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	two oilpumps
Engine oil	10W-40 (Shell Advance Ultra 4)
Engine oil quantity	1,6 liters (0,42 US gallons)
Primary ratio	straight geared spur wheels 30 : 81 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless DC-CDI ignition with digital advanced system type KOKUSAN 4K-3C
Ignition timing	adjustment to max. 38 ° BTDC at 6000 rpm
Generator	12V 150 W
Spark plug	NGK DPR8 EA-9
Spark plug gap	0,9 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25°C (–13°F)
Starting equipment	Kickstarter, cold start knob on carburetor

BASIC CARBURETOR SETTING

	625 SC, 625 SC SUPERMOTO
Carburetor	Keihin FCR41
Carburetor setting number	140501
Main jet	180
Needle jet	OBDVT
Idling jet	45
Main air jet	200
Idling air jet	100
Needle position from top	5th
Throttle valve	15
Starting jet	85
Performance restrictor	Slide stop 23mm
Stop pump membrane	3,2mm

TECHNICAL SPECIFICATIONS - CHASSIS 625 SC, 625 SC SUPERMOTO 2002

	625 SC	625 SC SUPERMOTO
Frame	Central chrome-moly-steel frame	
Fork	**W**hite **P**ower 4357 MXMA	
Wheel travel front/rear	295 / 320 mm (11,8 / 12,8 in)	270 / 320 (10,8 / 12.8 in)
Rear suspension	Central shock absorber (WP BAVP3612) with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Front brake	Disc brake with carbon-steel brake disc, brake caliper floated	
Front brake disc	Ø 260 mm (10,4 in)	Ø 320 mm (12.8 in)
Rear brake	Disc brake with carbon-steel brake disc ∅ 220 mm (8.8 in), brake caliper floated	
Tyres front Air press. offroad Air press. road	90/90-21 1,0 bar (14 psi) 1,8 bar (26 psi)	120/70-17 - 2,0 bar (29 psi)
Tyres rear Air press offroad Air press. road	140/80-18 1,2 bar (17 psi) 2,0 bar (29 psi)	160/60-17 - 2,2 bar (32 psi)
Fuel tank capacity	9 liter (2,3 US gallons), 1.5 liter (0,4 US gallons) reserve	
Final drive ratio	16:40 (15:50) t	17:38t
Chain	X – Ring 5/8 x 1/4"	
Bulps	headlight . . . . . H4 12V 60/55W (socket P43t) parking light . . . . . 12V 5W (socket W2,1x9,5d) indicator lamps . . . . . 12V 1,2W (socket W2x4,6d) brake – rear light . . . . . 12V 21/5 W (socket BaY15d) flasher light . . . . . 12V 10W (socket Ba15s) license plate illmination . . . 12V 5W (socket W2,1x9,5 d)	
Steering angle	62,5 °	63°
Wheel base	1510 ± 10 mm (59.4 ± 0.4 in)	
Seat high	950 mm (38 in)	920 mm (36.8 in)
Ground clearance	340 mm (13,6 in)	300 mm (12 in)
Dead weight without fuel	122 kg (269 lbs)	123 kg (271 lbs)

STANDARD ADJUSTMENT - FORK		
	625 SC WP 0518W712	**625 SC SUPERMOTO WP 0518W722**
Compression adjuster	20	14
Rebound adjuster	12	14
Spring	4,2 N/mm	5,0 N/mm
Spring preload	5 mm	9 mm
Air chamber length	140 mm	130 mm
Fork oil	SAE 5	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER		
	625 SC WP 0118W714	**625 SC SUPERMOTO WP 0118W721**
Compression adjuster	3	5
Rebound adjuster	5	7
Spring	63 / 260	75 / 260
Spring preload	23 mm	15 mm

TECHNICAL DATA – ENGINE 640 LC4 2002

Engine	**640 LC4**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter
Displacement	624,6 ccm
Bore / Stroke	101 / 78 mm
Ratio	11 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	249/1
Valve diameter	Intake: 36 mm Exhaust: 30 mm
Valve clearence cold	0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	forged aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	two oilpumps
Engine oil	10W-40 (Shell Advance Ultra 4)
Engine oil quantity	appr. 2,1 liters including frame
Primary ratio	straight geared spur wheels 30 : 81 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless DC-CDI ignition with digital advanced system type KOKUSAN 4K-2
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm
Generator	12V 200W
Spark plug	NGK DPR8 EA9
Spark plug gap	0,9 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)
Starting equipment	electric starter and kickstarter

BASIC CARBURETOR SETTING

	640 LC4, SUPERMOTO **640 LC4 ADVENTURE**	**640 DUKE** 40 kW
Type	BST40-225	BST40-225
Carb.-setting number	090298	100299
Main jet	142,5	145
Needle jet	689 X-6	689 X-6
Idling jet	45	45
Jet needle	6G5	6G5
Needle clip pos. f. top	3.	3.
Mixt. adj. screw open	2,25	2,25

TECHNICAL SPECIFICATIONS - CHASSIS 640 LC4, 640 LC4 SUPERMOTO 2002

	640 LC4	640 LC4 Supermoto
Frame	Central chrome-moly-steel frame	
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 4357 MXMA	
Wheel travel front/rear	270 / 300 mm (10,6 / 11.8 in)	
Rear suspension	Central shock absorber (WP BAVP3612) with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Front brake	Disc brake with carbon-steel brake disc, brake caliper floated	
Front brake disc	Ø 300 mm (11.8 in)	Ø 320 mm (12.6 in)
Rear brake	Disc brake with carbon-steel brake disc ∅ 220 mm (8.7 in), brake caliper floated	
Tyres front	90/90-21	120/70-17
Air press. road, driver only	1.8 bar (26 psi)	2.0 bar (29 psi)
Air press. road with passenger	2.0 bar (29 psi)	2.2 bar (31 psi)
Tyres rear	140/80-18	160/60-17
Air press. road, driver only	2.0 bar (29 psi)	2.2 bar (31 psi)
Air press. road with passenger	2.2 bar (31 psi)	2.4 bar (34 psi)
Fuel tank capacity	11 or 18 liter (2.9 or 4.8 US gallons),	2.5 liter (0,6 US gallons) reserve
Final drive ratio	16:42t	17:42t
Chain	X – Ring 5/8 x 1/4"	
Bulps	headlight . . . . . H4 12V 60/55W (socket P43t) parking light . . . . . 12V 5W (socket W2,1x9,5d) instrument lights . . . . . 12V 1,2W (socket W2x4,6d) indicator lamps . . . . . 12V 1,2W (socket W2x4,6d) brake – rear light . . . . . 12V 21/5 W (socket BaY15d) flasher light . . . . . 12V 10W (socket Ba15s) license plate illmination . . . 12V 5W (socket W2,1x9,5 d)	
Battery	maintenance-free battery 12V 8Ah	
Steering angle	62,5 °	63°
Wheel base	1510 ± 10 mm (59.4 ± 0.4 in)	
Seat high	940 mm (37.6 in)	910 mm (36.4 in)
Ground clearance	355 mm (14.0 in)	335 mm (13.2 in)
Dead weight without fuel	136kg (300 lbs)	137 kg (302 lbs)
Max. permissible front axle load	211 kg (465 lbs)	
Max. permissible rear axle load	335 kg (740 lbs)	
Max. permissible laden weight	350 kg (773 lbs)	

STANDARD ADJUSTMENT - FORK

	640 LC4	640 LC4 SUPERMOTO
	WP 0518W714	**WP 0518W722**
Compression adjuster	20	14
Rebound adjuster	12	14
Spring	4,2 N/mm	5,0 N/mm
Spring preload	6 mm (0,24in)	9 mm (0,36in)
Air chamber length	150 mm (5,9in)	130 mm (5,1in)
Fork oil	SAE 5	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	640 LC4	640 LC4 SUPERMOTO
	WP 0118W724	**WP 0118W721**
Compression adjuster	3	5
Rebound adjuster	7	7
Spring	66 / 260	75 / 260
Spring preload	23,5 mm(0,94in)	15 mm(0,6in)

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TECHNICAL SPECIFICATIONS - CHASSIS 640 LC4 ADVENTURE 2002

	640 LC4 Adventure
Frame	Central chrome-moly-steel frame
Fork	WP USD MXMA 4860
Wheel travel front/rear	275/300 mm (10,5/12 in)
Rear suspension bearing	Central shock absorber (WP BAVP3612) with PRO-LEVER linkage to rear-swingarm with need
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (11,8 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated
Tyres front Air pressure offroad Air press. road, driver only	90/90-21 Enduro3 1,8 bar (21 psi) 2,0 bar (29 psi)
Tyres rear Air press. road, driver only Air press. road, with passenger	140/80-18 Enduro3 2,0 bar (29 psi) 2,2 bar (32 psi)
Fuel tank capacity	28 liter (7,4 US gallons) of that 2 liter (0,5 US gallons) reserve
Final drive ratio	16 : 42
Chain	5/8 x 1/4 "X-Ring
Lampenbestückung	head light . . . . . .H1 12V 55W (Sockel P14,5S) parking light . . . . . .12V 2W (Sockel Ba9s) brake- rear light . . . . . .12V 21/5W (Sockel BaY15d) flasher light . . . . . .12V 10W (Sockel Ba15s) license plate illintion . . . . . .12V 5W (Sockel W2,1x9,5d)
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	955 mm (37,7 in)
Ground clearance	355 mm (14,2 in)
Dead weight without fuel	154 kg (340 lbs)
Max. permissible front axle load	150 kg (331 lbs)
Max. permissible rear axle load	230 kg (507 lbs)
Max. permissible laden weight	380 kg (839 lbs)

STANDARD ADJUSTMENT - FORK

	WP 4860 MXMA 1418W711
Compression adjuster	14
Rebound adjuster	14
Spring	4,4 N/mm
Spring preload	4 mm
Air chamber length	120 mm
Capacity per fork leg	approx. 420 ccm
Fork oil	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	WP BAVP3612 0118W715
Compression adjuster	6
Rebound adjuster	7
Spring	70/260
Spring preload	27 mm (0,9 in)

TECHNICAL SPECIFICATIONS - CHASSIS 640 DUKE II 2002

Frame	Central chrome-moly-steel frame	
Fork	type . . . . . WP 4357 ROMA 0518716	
	wheel travel . . . . . 140 mm (5,5 in)	
	standard adjustment compression. . . . . driver only = 14,	with passenger = 14
	standard adjustment rebound. . . . . driver only = 16,	with passenger = 16
	fork leg projection upper fork bridge . . . . 3 mm (0,12 in)	
	oil capacity per fork leg . . . . . appr. 400 ccm (24 cubic in) / SAE 5	
	air chamber lenght . . . . . 100 mm (4 in)	
Rear suspension	WP central shock absorber with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Shock absorber 0118W71	type . . . . . WP central shock absorber BAVP 4681	
	rear wheel travel . . . . . 170 mm (6.7 in)	
	standard adjustment compression. . . . . driver only = 3,	with passenger = 5
	standard adjustment rebound. . . . . driver only = 5,	with passenger = 3
	spring preload . . . . . driver only = 23 mm (0.9 in),with passenger = 28 mm (1.1 in)	
	spring type . . . . . 70 - 260	
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (12,6 in) and 4-piston brake caliper	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in) and single-piston brake caliper floated	
Tyres	front: 120/70 R 17 58H	rear: 160/60 R 17 69H
Air pressure rider only	2.0 bar (29 psi)	2.2 bar (32 psi)
Air pressure with passenger	2.2 bar (32 psi)	2.4 bar (35 psi)
Fuel tank capacity	11 liter (2,9 US gallons), out of this 2,5 liter (0,6 US gallons) reserve	
Final drive ratio	17 : 38	
Chain	X-ring 5/8 x 1/4"	
Lamps	low beam . . . . . HB3 12V 65W (socket P20d)	
	high beam . . . . . HB3 12V 65W (socket P20d)	
	parking light . . . . . 12V 5W (socket W2,1x9,5d)	
	speedometer, tachometer light . . . . . 12V 1,2W (socket W2x4,6d)	
	indicator lamp . . . . . 12V 1,2W (socket W2x4,6d)	
	stop and taillight . . . . . 12V 21/5W (socket BaY15d)	
	flasher . . . . . 12V 10W (socket Ba15s)	
Battery	maintenance-free battery 12V 8Ah	
Steering angle	64,2°	
Wheel base	1460 ± 15 mm (57.5 ± 0.6 in)	
Seat high	880 mm (34,7 in)	
Ground clearance	250 mm (9.9 in)	
Dead weight without fuel	145 kg (3 lbs)	
Max. permissible front axle load	150 kg (2 lbs)	
Max. permissible rear axle load	200 kg (4 lbs)	
Max. permissible laden weight	350 kg (773 lbs)	

TECHNICAL SPECIFICATIONS – ENGINE 625 SXC 2003

Engine	**625 SXC**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft
Displacement	625 ccm
Bore / Stroke	101 / 78 mm
Ratio	11,5 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	584-V03/1
Valve diameter	Intake: 36 mm Exhaust: 32 mm
Valve clearence cold	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	forged aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	two Eaton-oilpumps
Engine oil	SAE 5W/40, 10W-50 (f.ex. Motorex Power Synt 4T)
Engine oil quantity	1,6 liters (0,42 US gallons)
Primary ratio	straight geared spur wheels 31 : 79 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless DC-CDI ignition with digital advanced system type KOKUSAN
Ignition timing	adjustment to max. 38 ° BTDC at 6000 rpm
Generator	12V 200W
Spark plug	NGK DCPR8 E
Spark plug gap	0,9 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25°C (–13°F)
Starting equipment	kick - electric starter

BASIC CARBURATOR SETTING	
	625 SXC
Type	Keihin FCR-MX 41
Carburator-setting number	4138A
Main jet	165
Jet needle	OBDVT
Idling jet	42
Main air jet	200
Idling air jet	100
Needle position	5. rd from top
Starting jet	85
Mixture control screw open	2
Slide	15
Performance restrictor	Slide stop
Stop pump membrane	858 / 2,15 mm
Hot start device	3,8 mm

BASIC CARBURETOR SETTING	
	625 SXC USA
Type	Mikuni BST40-266
Main jet	152,5
Needle jet	X-6 689
Idling jet	45
Jet needle	6G5
Needle clip pos. f. top	3. from top
Mixt. adj. screw open	2,25

TECHNICAL SPECIFICATIONS - CHASSIS 625 SXC 2003

	625 SXC
Frame	Central chrome-moly-steel frame
Fork	**W**hite **P**ower 4357 MXMA
Wheel travel front/rear	295 / 320 mm (11,8 / 12,8 in)
Rear suspension	Central shock absorber (WP BAVP4681) with PRO-LEVER linkage to rear- swing-arm with needle bearing
Front brake	Disc brake with carbon-steel brake disc, brake caliper floated
Front brake disc	Ø 260 mm (10,4 in)
Rear brake	Disc brake with carbon-steel brake disc ∅ 220 mm (8.8 in), brake caliper floated
Tyres front Air press. offroad Air press. road	90/90-21 1,0 bar (14 psi) 1,8 bar (26 psi)
Tyres rear Air press offroad Air press. road	140/80-18 1,2 bar (17 psi) 2,0 bar (29 psi)
Fuel tank capacity	9 liter (2,3 US gallons), 2.5 liter (0,6 US gallons) reserve
Final drive ratio	16:40 (USA 15:50) t
Chain	X – Ring 5/8 x 1/4"
Bulps	headlight . . . . . HS1 12V 35/35W (socket PX43t) parking light . . . . . 12V 5W (socket W2,1x9,5d) indicator lamps . . . . . 12V 1,2W (socket W2x4,6d) brake – rear light . . . . . 12V 21/5 W (socket BaY15d) flasher light . . . . . 12V 10W (socket Ba15s) license plate illmination . . . 12V 5W (socket W2,1x9,5 d)
Battery	maintenance-free battery 12V 8,6 Ah
Steering angle	62,5 °
Wheel base	1510 ± 10 mm (59.4 ± 0.4 in)
Seat high	980 mm (39,2 in)
Ground clearance	360 mm (14,4 in)
Dead weight without fuel	132 kg (291 lbs)

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STANDARD ADJUSTMENT - FORK	
	625 SXC WP 0518X729
Compression adjuster	20
Rebound adjuster	12
Spring	4,2 N/mm
Spring preload	5 mm
Air chamber length	140 mm
Fork oil	SAE 5

STANDARD-ADJUSTMENT-SHOCK ABSORBER	
	625 SXC WP 0118X725
Compression adjuster	3
Rebound adjuster	5
Spring	63 / 260
Spring preload	23 mm

TECHNICAL DATA – ENGINE 640 LC4, 640 LC4 Supermoto 2003

Engine	**640 LC4**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter
Displacement	625 ccm
Bore / Stroke	101 / 78 mm
Ratio	11.5 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	584-V03/1
Valve diameter	Intake: 36 mm Exhaust: 32 mm
Valve clearence cold	0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	forged/cast aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	two Eaton-oilpumps
Engine oil	SAE 5W/40, 10W-50 (f.ex. Motorex Power Synt 4T)
Engine oil quantity	appr. 2,1 liters including frame
Primary ratio	straight geared spur wheels 31 : 79 teeth
Clutch	multi disc clutch in oil bath, hydraulically operated
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless DC-CDI ignition with digital advanced system type KOKUSAN 4K5
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm
Generator	12V 200W
Spark plug	NGK DCPR 8 E
Spark plug gap	0,9 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1 liter, 40% antifreeze, 60% water, at least –25 ° C (–13 ° F)
Starting equipment	electric starter and kickstarter

BASIC CARBURETOR SETTING	
	640 LC4 **640 LC4 Supermoto**
Type	BST40-266
Main jet	152,5
Needle jet	X-6 689
Idling jet	45
Jet needle	6G5
Needle clip pos. f. top	3. from top
Mixt. adj. screw open	2,25

BASIC CARBURETOR SETTING	
	640 LC4 Adventure
Type	BST40-266
Main jet	152,5
Needle jet	X-6 689
Idling jet	45
Jet needle	6G5
Needle clip pos. f. top	3. from top
Mixt. adj. screw open	2,25

BASIC CARBURETOR SETTING	
	640 DUKE 40 kW
Carburetor	BST40-258
Main jet	145
Needle jet	689 X-6
Idling jet	45
Jet needle	6G5
Needle position from top	3 rd
Mixture.adju. screw open	2.25 turn

TECHNICAL SPECIFICATIONS - CHASSIS 640 LC4, 640 LC4 SUPERMOTO 2003

	640 LC4	640 LC4 Supermoto
Frame	Central chrome-moly-steel frame	
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 4357 MXMA	**W**hite **P**ower – **U**p **S**ide **D**own 4860 MXMA
Wheel travel front/rear	270 / 300 mm (10,6 / 11.8 in)	265 / 310 mm (10,4 / 12,2 in)
Rear suspension	Central shock absorber (WP BAVP3612) with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Front brake	Disc brake with carbon-steel brake disc, 2-piston brake caliper floated	Disc brake with carbon-steel brake disc, 4-piston brake caliper
Front brake disc	Ø 300 mm (11.8 in)	Ø 320 mm (12.6 in)
Rear brake	Disc brake with carbon-steel brake disc ∅ 220 mm (8.7 in), brake caliper floated	
Tyres front	90/90-21	120/70-17
Air press. road, driver only	1.8 bar (26 psi)	2.0 bar (29 psi)
Air press. road with passenger	2.0 bar (29 psi)	2.2 bar (31 psi)
Tyres rear	130/80-18	160/60-17
Air press. road, driver only	2.0 bar (29 psi)	2.2 bar (31 psi)
Air press. road with passenger	2.2 bar (31 psi)	2.4 bar (34 psi)
Fuel tank capacity	11 liter (2.9 US gallons), 2.5 liter (0.6 US gallons) reserve	
Final drive ratio	16:42t	17:42t
Chain	X – Ring 5/8 x 1/4"	
Bulps	headlight . . . . . H4 12V 60/55W (socket P43t) parking light . . . . . 12V 5W (socket W2,1x9,5d) instrument lights . . . . . 12V 1,2W (socket W2x4,6d) indicator lamps . . . . . 12V 1,2W (socket W2x4,6d) brake – rear light . . . . . 12V 21/5 W (socket BaY15d) flasher light . . . . . 12V 10W (socket Ba15s) license plate illmination . . . 12V 5W (socket W2,1x9,5 d)	
Battery	maintenance-free battery 12V 8,6Ah	
Steering angle	62°	63°
Wheel base	1510 ± 10 mm (59.4 ± 0.4 in)	
Seat high	925 mm (36.4 in)	910 mm (35.9 in)
Ground clearance	310 mm (12.2 in)	290 mm (11.4 in)
Dead weight without fuel	149kg (329 lbs)	149 kg (329 lbs)
Max. permissible front axle load	150 kg (331 lbs)	
Max. permissible rear axle load	230 kg (508 lbs)	
Max. permissible laden weight	350 kg (773 lbs)	

STANDARD ADJUSTMENT - FORK

	640 LC4	640 LC4 SUPERMOTO
	WP 0518X730	**WP 0518X738**
Compression adjuster	20	20
Rebound adjuster	12	15
Spring	4,2 N/mm	4,4 N/mm
Spring preload	6 mm (0.24in)	28 mm (1.1in)
Air chamber length	150 mm (5,9in)	110 mm (4.3in)
Fork oil	SAE 5	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER

	640 LC4	640 LC4 SUPERMOTO
	WP 0118X729	**WP 0118X730**
Compression adjuster	3	4
Rebound adjuster	7	8
Spring	66 / 260	70 / 260
Spring preload	23,5 mm(0,93in)	16 mm(0,63in)

TECHNICAL SPECIFICATIONS - CHASSIS 640 LC4 ADVENTURE 2003

	640 LC4 Adventure
Frame	Central chrome-moly-steel frame
Fork	WP USD MXMA 4860
Wheel travel front/rear	275/300 mm (10,5/12 in)
Rear suspension	Central shock absorber (WP BAVP3612) with PRO-LEVER linkage to rear-swingarm with needle bearing
Front brake	Disc brake with carbon-steel brake disc Ø 320 mm (11,8 in), brake caliper floated
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8,7 in), brake caliper floated
Tyres front	90/90-21 Enduro3
Air pressure offroad	1,8 bar (21 psi)
Air press. road, driver only	2,0 bar (29 psi)
Tyres rear	140/80-18 Enduro3
Air press. road, driver only	2,0 bar (29 psi)
Air press. road, with passenger	2,2 bar (32 psi)
Fuel tank capacity	28 liter (7,4 US gallons) of that 3,5 liter (0,9 US gallons) reserve
Final drive ratio	16 : 42
Chain	5/8 x 1/4 "X-Ring
Bulbs	head light . . . . . .H1 12V 55W (Sockel P14,5S) parking light . . . . . .12V 2W (Sockel Ba9s) brake- rear light . . . . . .12V 21/5W (Sockel BaY15d) flasher light . . . . . .12V 10W (Sockel Ba15s) license plate illintion . . . . . .12V 5W (Sockel W2,1x9,5d)
Battery	maintenance-free battery 12V 8Ah
Steering angle	62,5°
Wheel base	1510 ± 10 mm (59,4 ± 0,4 in)
Seat high	945 mm (37,2 in)
Ground clearance	315 mm (12,4 in)
Dead weight without fuel	158 kg (340 lbs)
Max. permissible front axle load	150 kg (331 lbs)
Max. permissible rear axle load	230 kg (507 lbs)
Max. permissible laden weight	380 kg (839 lbs)

STANDARD ADJUSTMENT - FORK	
	WP 4860 MXMA 1418X728
Compression adjuster	14
Rebound adjuster	14
Spring	4,4 N/mm
Spring preload	4 mm
Air chamber length	120 mm
Capacity per fork leg	ca 420 ccm
Fork oil	SAE 5

STANDARD-ADJUSTMENT - SHOCK ABSORBER	
	WP BAVP3612 0118X726
Compression adjuster	6
Rebound adjuster	7
Spring	70/260
Spring preload	27 mm (0,9 in)

TECHNICAL SPECIFICATIONS - CHASSIS 640 DUKE II 2003

Frame	Central chrome-moly-steel frame	
Fork	type . . . . . WP 4357 ROMA 0518X732	
	wheel travel . . . . . 140 mm (5.5 in)	
	standard adjustment compression . . . . . driver only = 14, with passenger = 14	
	standard adjustment rebound . . . . . driver only = 16, with passenger = 16	
	fork leg projection upper fork bridge . . . . . 3 mm (0.12 in)	
	oil capacity per fork leg . . . . . appr. 400 ccm (24 cubic in) / SAE 5	
	air chamber lenght . . . . . 100 mm (4 in)	
Rear suspension	WP central shock absorber with PRO-LEVER linkage to rear- swing-arm with needle bearing	
Shock absorber	type . . . . . WP central shock absorber BAVP 4681 0118X728	
	rear wheel travel . . . . . 170 mm (6.7 in)	
	standard adjustment compression . . . . . driver only = 3, with passenger = 5	
	standard adjustment rebound . . . . . driver only = 5, with passenger = 3	
	spring preload . . . . . driver only = 23 mm (0.9 in),with passenger = 28 mm (1.1 in)	
	spring type . . . . . 70 - 260	
Front brake	Disc brake with carbon-steel floated brake disc Ø 320 mm (12.6 in) and 4-piston brake caliper	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8.7 in) and single-piston brake caliper floated	
Tyres	front: 120/70 R 17 58H	rear: 160/60 R 17 69H
Air pressure rider only	2.0 bar (29 psi)	2.2 bar (32 psi)
Air pressure with passenger	2.2 bar (32 psi)	2.4 bar (35 psi)
Fuel tank capacity	11 liters (2.9 US gallons), out of this 2.5 liters (0.6 US gallons) reserve	
Final drive ratio	16 : 38	
Chain	X-ring 5/8 x 1/4"	
Lamps	low beam . . . . . HB3 12V 65W (socket P20d)	
	high beam . . . . . HB3 12V 65W (socket P20d)	
	parking light . . . . . 12V 5W (socket W2,1x9,5d)	
	speedometer, tachometer light . . . . . 12V 1,2W (socket W2x4,6d)	
	indicator lamp . . . . . 12V 1,2W (socket W2x4,6d)	
	stop and taillight . . . . . 12V 21/5W (socket BaY15d)	
	flasher . . . . . 12V 10W (socket Ba15s)	
Battery	maintenance-free battery 12V 8Ah	
Steering angle	63.5°	
Wheel base	1460 ± 15 mm (57.5 ± 0.6 in)	
Seat high	900 mm (35.5 in)	
Ground clearance	270 mm (10.6 in)	
Dead weight without fuel	149 kg (329 lbs)	
Max. permissible front axle load	150 kg (331 lbs)	
Max. permissible rear axle load	200 kg (441 lbs)	
Max. permissible laden weight	350 kg (773 lbs)	

TECHNICAL SPECIFICATIONS – ENGINE 660 SMC 2003

Engine	**660 SMC**
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft
Displacement	653 ccm
Bore / Stroke	102 / 80 mm
Ratio	11,5 : 1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Camshaft	586-V039
Valve diameter	Intake: 36 mm Exhaust: 32 mm
Valve clearence cold	Intake: 0,15 mm Exhaust: 0,15 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	forged aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	two Eaton-oilpumps
Engine oil	SAE 5W/40, 10W-50 (f.ex. Motorex Power Synt 4T)
Engine oil quantity	1,6 liters (0,42 US gallons)
Primary ratio	straight geared spur wheels 31 : 79 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratio	1st 14:35 2nd 15:24 3rd 18:21 4th 20:19 5th 22:18
Ignition system	contactless DC-CDI ignition with digital advanced system type KOKUSAN
Ignition timing	adjustment to max. 38 ° BTDC at 6000 rpm
Generator	12V 200W
Spark plug	NGK DCPR8 E
Spark plug gap	0,9 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	at least –25°C (–13°F)
Starting equipment	kickstarter

BASIC CARBURATOR SETTING	
	660 SMC
Type	Keihin FCR-MX 41
Carburator-setting number	4138A
Main jet	165
Jet needle	OBDVT
Idling jet	42
Main air jet	200
Idling air jet	100
Needle position	5. rd from top
Starting jet	85
Mixture control screw open	2
Slide	15
Performance restrictor	Slide stop
Stop pump membrane	858 / 2,15 mm
Hot start device	3,8 mm

TECHNICAL SPECIFICATIONS - CHASSIS 660 SMC 2003

	660 SMC
Frame	Central chrome-moly-steel frame
Fork	**W**hite **P**ower 4860 MXMA
Wheel travel front/rear	265 / 310 mm (10,6 / 12,4 in)
Rear suspension	Central shock absorber (WP BAVP4681) with PRO-LEVER linkage to rear- swing-arm with needle bearing
Front brake	Disc brake with carbon-steel brake disc, and 4 piston brake caliper
Front brake disc	Ø 320 mm (12,8 in)
Rear brake	Disc brake with carbon-steel brake disc ∅ 220 mm (8.8 in), brake caliper floated
Tyres front Air press.	120/70-17 2 bar (29 psi)
Tyres rear Air press.	160/60-17 2,2 bar (31 psi)
Fuel tank capacity	9 liter (2,3 US gallons), 2.5 liter (0,6 US gallons) reserve
Final drive ratio	16:38
Chain	X – Ring 5/8 x 1/4"
Bulps	headlight . . . . . HS1 12V 35/35W (socket PX43t) parking light . . . . . 12V 5W (socket W2,1x9,5d) indicator lamps . . . . . 12V 1,2W (socket W2x4,6d) brake – rear light . . . . . 12V 21/5 W (socket BaY15d) flasher light . . . . . 12V 10W (socket Ba15s) license plate illmination . . . 12V 5W (socket W2,1x9,5 d)
Steering angle	63 °
Wheel base	1510 ± 10 mm (59.4 ± 0.4 in)
Seat high	910 mm (36,4 in)
Ground clearance	290 mm (11,6 in)
Dead weight without fuel	131 kg (289 lbs)

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STANDARD ADJUSTMENT - FORK	
	660 SMC WP 1418X738
Compression adjuster	20
Rebound adjuster	15
Spring	4,4 N/mm
Spring preload	28 mm
Air chamber length	110 mm
Fork oil	SAE 5

STANDARD-ADJUSTMENT-SHOCK ABSORBER	
	660 SMC WP 0118X730
Compression adjuster	4
Rebound adjuster	8
Spring	70 / 260
Spring preload	22 mm

TIGHTENING TORQUE - ENGINE		
Hexagon nut at primary gear	M20x1,5	Loctite 243 + 170 Nm
Collar nut flywheel (LC4, ADVENTURE, DUKE)	M16x1,25 links	80° C + 150 Nm
Collar nut flywheel (SC, SXC)	M12x1 left	60 Nm
Hexagon nut for inner clutch hub	M18x1,5	Loctite 243 + 100 Nm
Collar bolt clutch springs	M6	10 Nm
Kickstarter stop bolt	M12x1,5	50 Nm
Allen head bolt freewheel hub (E-STARTER)	M6x12/M6x12,5	Loctite 648 + 12/16 Nm
Allen head bolts oil pumps	M6	Loctite 243 + 8 Nm
Collar bolts oil pumps (from modell 2003 on)	M6	Loctite 243 + 10 Nm
Hexagon bolt camshaft gear	M10	Loctite 243 + 35 Nm
Allen head bolts cylinder head top section	M6x25/M6x35/M6x65/M6x70 (8.8)	8 Nm
Allen head bolts cylinder head top section	M6x50/M6x55 (12.9)	15 Nm
Bolts cylinder head top section (from model 2003 on)	M6 (8.8)	10 Nm
Bolts cylinder head top section (from model 2003 on)	M7 (12.9)	15 Nm
Cylinder head to cylinder	M8	25 Nm
Cylinder head to cylinder	M6	8 Nm
Cylinder head to cylinder (from model 2003 on)	M6	10 Nm
Cylinder head bolts	M10	50 Nm
Collar nuts at cylinder base	M10	40 Nm
Plug at cylinder head (SC)	M10	20 Nm
Hexagon bolt chain sprocket 8.8	M10	Loctite 243 + 40 Nm
Hexagon bolt chain sprocket 12.9	M10	Loctite 243 + 60 Nm
Nut chain sprocket	M20x1,5	60 Nm
Oil drain plug	M22x1,5	30 Nm
Magnetic plug	M12x1,5	20 Nm
Plug bypass valve	M12x1,5	20 Nm
Banjo bolts oil lines	M8x1	10 Nm
Banjo bolts oil lines	M10x1	15 Nm
Jet screw clutch cover	M8	10 Nm
Plug timing-chain tensioner	M12x1,5	20 Nm
Timing-chain tensioner to cylinder	M6	Loctite 243 + 8 Nm
Timing-chain tensioner to cylinder (from model 2003 on)	M6	10 Nm
Timing-chain guide to cylinder	M12x1,25	Loctite 243 + 8 Nm
Hexagon bolt timing-chain guide	M6	Loctite 243 + 10 Nm
Tension guide	M8	Loctite 243 + 15 Nm
Timing-chain securing guide	M6	8 Nm
Allen head bolt timing-chain securing guide (from model 2003 on)	M6	Loctite 243 + 10 Nm
Counternuts valve adjusting screws	M7x0,75	16 Nm
Crankshaft locking bolt	M8	25 Nm
Spark plug	M12x1,25	20 Nm
Engine mounting bolt	M8	40 Nm
Engine mounting bolt	M10	70 Nm
Retaining plate for main shaft bearing	M6	Loctite 648 + 8 Nm
Retaining plate for main shaft bearing (from model 2003 on)	M6	Loctite 648 + 10 Nm
Shift mechanism support, securing device for bearing	M5	Loctite 243 + 6 Nm
Shift mechanism support	M6	Loctite 243 + 8 Nm
Shift mechanism support (from model 2003 on)	M6	Loctite 243 + 10 Nm
Shift drum locating	M6	Loctite 243 + 8 Nm
Engine housing, clutch cover, ignition cover	M6	10 Nm
Water pump cover	M6	10 Nm
Bolts of impuls generator	M5	Loctite 243 + 6 Nm
Stator (SC)	M6	Loctite 243 + 8 Nm
Stator (E-Start)	M5	Loctite 243 + 6 Nm
Kick starter	M8	25 Nm
Shifting lever	M6	Loctite 243 + 10 Nm
Oil filter cover	M6	10 Nm
Microfilter cover (SC)	M5	6 Nm
Starter flange, starter cover	M6	10 Nm
AH bolt for slave cylinder	M6	10 Nm
Starter	M6	10 Nm
Valve cover	M6	10 Nm
Exhaust flange	M6	10 Nm
AH screw for decompression shaft lever	M6	Loctite 243 + 10 Nm
Retaining shim for ignition (SC)	M5	Loctite 243 + 6 Nm
Other bolts, engine	M5	6 Nm
	M6	10 Nm

TIGHTENING TORQUE - CHASSIS		
Collar nut front axle	M16x1,5, M17	40 Nm
Collar nut front axle (400 SXC)	M10	40 Nm
Collar nut front axle	M24x1,5	40 Nm
Collar nut rear axle	M20x1,5	80 Nm
Shock absorber top	M10	45 Nm
Shock absorber bottom	M10	45 Nm
Collar bolts brake disk front	M6	Loctite 243 + 10 Nm
Collar bolts brake disk front	M6	Loctite 243 + 10 Nm
Bolts brake caliper front	M8	Loctite 243 + 25 Nm
Bolts brake caliper front (LC4 Supermoto)	M10	Loctite 243 + 40 Nm
Allen head bolts brake caliper front (DUKE)	M10x1,25	Loctite 243 + 45 Nm
Allen head bolt brake caliper support rear (DUKE)	M10	40 Nm
Allen head bolts brake caliper front (660 SMC)	M10	60 Nm
Bearing bolt linkage arm/frame	M12	60 Nm
Collar nuts rocker arm bolts	M14x1,5	100 Nm
Engine mounting bolt	M10	45 Nm
Ball joint for push rod	M8	Loctite 243 + 25 Nm
Sprocket bolts with nuts	M8	Loctite 243 + 35 Nm
Collar nut swingarm bolt	M14x1,5	100 Nm
Clamping bolts top triple clamp (USD 43)	M8	20 Nm
Clamping bolts top triple clamp (EXTREME)	M8	15 Nm
Clamping bolts top triple clamp (USD 48)	M8	20 Nm
Clamping bolts bottom triple clamp (USD 43)	M8	15 Nm
Clamping bolts bottom triple clamp (EXTREME)	M8	20 Nm
Clamping bolts bottom triple clamp (USD 48)	M8	15 Nm
Clamp bolts for front wheel axle clamp	M8	10 Nm
Collar nut for eccentric chain adjuster (DUKE)	M10	40 Nm
Bolts, handlebar clamp	M8	Loctite 243 + 20 Nm
Allen head bolts handle bar support, damped (LC4, LC4-SM, SMC, ADVENTURE, DUKE)	M10	Loctite 243 + 20 Nm
Allen head bolts handle bar support, not damped (SC, SC-SM, SXC)	M10	Loctite 243 + 40 Nm
Rim lock	M8	5 Nm
Clamping of steering stemm	M8	20 Nm
Subframe	M8	Loctite 243 + 35 Nm
Spoke nipple	M4	4 Nm
Blocking bolt of adjusting ring for spring preload	M6	8 Nm
Other bolts on chassis	M6	10 Nm
	M8	25 Nm
	M10	45 Nm
Other collar nuts on chassis	M6	15 Nm
	M8	30 Nm
	M10	50 Nm

ASSEMBLY CLEARANCE, WEAR LIMIT		
Crank shaft	axial play	.0.03 - 0.12 mm
	run out of crank stud	.max. 0.08 mm
Connecting rod bearing	radial play	.max. 0.05 mm
	axial play	.max. 1.10 mm
Cylinder 400	bore	.max. 89.04 mm
Cylinder 640	bore	.max. 101.04 mm
Cylinder 660	bore	max. 102.04 mm
Piston forged	assembly clearance	.max. 0.12 mm
Piston cast	assembly clearance	.max. 0.05 mm
Piston rings end gap	compression rings	.max. 0.80 mm
	oil scraper ring	.max. 1.00 mm
Valves	seat sealing intake	.max. 1.50 mm
	seat sealing exhaust	.max. 2.00 mm
	run out of valve heads	.max. 0.05 mm
	valve guides diameter	.max. 7.05 mm
Oil pumps	clearance outer rotor - housing	.max. 0.20 mm
	clearance outer rotor - inner rotor	.max. 0.20 mm
Bypaß valve	minimum spring length	.25.00 mm
Clutch	Length of springs	.min. 34.5 mm (new 37.00 mm)
	wear limit organic	.min. 2.50 mm
	Length of the clutch spring 660 SMC	min. 31.5 mm (new 33.5 mm)
Camshaft	diameter of bearing bolt (needle bearing)	.min. 19.97 mm
Transmission shafts	axial play	.0.10 - 0.40 mm
Crankshaft webs – outer dimension		.66 mm +/- 0.05 mm

PERIODIC MAINTENANCE SCHEDULE 11

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PERIODIC MAINTENANCE SCHEDULE

SX, SXC, SC
9.97

IF THE MOTORCYCLE IS USED PRIMARILI FOR OFF ROAD RIDING OR COMPETITIVE RACING, THE 5000 KM (3000 MILES) SERVICE NEEDS TO BE CARRIED OUT AFTER EACH RIDE OR RACE

	KTM rider		KTM dealer			
	before each start	after washing	1st service, after 1000 km (600 miles) or 10 hours	after 2500 km (1500 miles) or 25 hours	after 5000 km (3000 miles) or once a year	at least once a year
Check engine oil level	●					
Change engine oil			●	●		●
Clean oil screen and magnet of the drain plugs whenever you exchange the engine oil			●	●		●
Change oil filter unit			●	●		●
Change microfilter			●	●		●
Check oil lines for leakage and proper instalment			●		●	
Check valve clearance			●		●	
Clean spark plug and adjust electrode gap					●	
Change spark plug after 10 000 kilometers (6 200 miles)						
Check valve clearance					●	
Drain and clean carburator float bowl		●			●	●
Adjust idling					●	
Check breather hoses of engine gase and gas tank for correct position without buckles			●		●	
Clean air filter and air filter box		●			●	●
Check sprockets, chain guides and chain for wear	●		●		●	
Clean and lube chain	●	●			●	
Check chain tension	●		●		●	
Check cooling liquid level	●		●		●	
Check quality of antifreeze						●
Check cooling system for leaks	●		●		●	
Check exhaust system for leakage						●
Change exhaust muffler packing				●	●	
Check exhaust brackets			●		●	
Disassemble and clean spark arrestor discs (USA models)					●	
Check brake fluid level front and rear	●		●		●	
Change brake fluid						●
Check brake pad thickness	●				●	
Check brake discs					●	
Check condition and correct instalment of brake hoses	●		●		●	
Check freeplay and easy operation of hand brake lever and foot brake lever	●		●		●	
Check adjustment and function of fork	●				●	
Check fork for leaks					●	
Loosen breather screws at fork legs (overpressure)					●	
Change fork oil						●
Perform a full maintenance job for the telescopic fork						●
Clean dust scrabber on forks		●			●	●
Check steering head bearing clearance / adjust			●		●	
Clean and grease steering head bearings and its seals						●
Check adjustment and funktion of shock absorber	●				●	
Check O-ring of the shock absorber for wear					●	●
Servicing the shock absorber						●
Grease lubricating nipple of the Pro Lever suspension system					●	
Disassemble the Pro Lever suspension system and perform a full maintenance job on it						●
Servicing swingarm pivots						●
Check tightness of spokes and rim join	●		●		●	
Check wheel bearings for clearance	●				●	
Check chock absorber rubbers on the rear wheel hub					●	
Check tire condition and air pressure	●				●	
Check cables for damage and easy working	●				●	
Lube and adjust cables		●	●		●	
Check the electrical system	●		●		●	
Check adjustment of head light					●	
Spray ignition lock, short circuit button, and light switch with contact spray		●			●	
Check all bolts, nuts and hose clamps for proper tightness	●		●		●	
Grease or lube all pivot points and sliding components		●	●		●	

Art.-Nr. 3.206.006 -E

PERIODIC MAINTENANCE SCHEDULE

400/640 LC4'98
620 LC4 Comp.'98
4. 98

IF THE MOTORCYCLE IS USED PRIMARILI FOR OFF ROAD RIDING OR COMPETITIVE RACING, THE 5000 KM (3000 MILES) SERVICE NEEDS TO BE CARRIED OUT AFTER EACH RIDE OR RACE

	KTM rider		KTM dealer		
	before each start	after washing	1st service, after 500 km (300 miles)	after 5000 km (3000 miles) or once a year	at least once a year
Check engine oil level	●				
Change engine oil			●	●	●
Clean oil screen and magnet of the drain plugs whenever you exchange the engine oil			●	●	●
Change oil filter insert			●	●	●
Change fine screen filter (screwed filter) at front pipe (of the frame)			●	●	●
Check oil lines for leakage and proper instalment without kinks			●	●	
Check valve clearance			●	●	
Clean spark plug and adjust electrode gap				●	
Change spark plug after 10 000 kilometers (6 200 miles)					
Drain and clean carburetor float chamber		●		●	●
Adjust idling				●	
Check all air supply and ventilation hoses of of the engine and of the carburetor for kinks			●	●	
Clean air filter and air filter box		●		●	●
Check sprockets, chain guides and chain for wear	●		●	●	
Clean and lube chain	●	●		●	
Check chain tension	●		●	●	
Check cooling liquid level	●		●	●	
Check quality of antifreezer					●
Check cooling system for leaks – visual check	●		●	●	
Check exhaust system for leakage					●
Check exhaust brackets			●	●	
Disassemble and clean spark arrestor discs (USA models)					●
Check brake fluid level front and rear	●		●	●	
Change brake fluid					●
Check brake pad thickness	●			●	
Check brake discs				●	
Check condition and correct instalment of brake hoses	●		●	●	
Check free play and easy operation of foot brake pedal	●		●	●	
Check adjustment and function of telescopic fork	●			●	
Check telescopic fork for leaks				●	
Loosen bleeder screws at fork legs (overpressure)				●	
Change telescopic fork oil					●
Perform a full maintenance job for the telescopic fork					●
Clean dust scrabber of telescopic fork				●	●
Check steering head bearing clearance / adjust			●	●	
Clean and grease steering head bearings and its seals					●
Check adjustment and funktion of shock absorber	●			●	
Check O-ring of the shock absorber for wear				●	●
Service the shock absorber					●
Grease nipple of the Pro Lever suspension system				●	
Disassemble the Pro Lever suspension system linkage and perform a full maintenance job on it					●
Service swingarm pivot					●
Check spoke tension and join	●		●	●	
Check wheel bearings for clearance	●			●	
Check shock absorber rubbers on the rear hub				●	
Check tire condition and air pressure	●			●	
Check cables for damage and easy working	●			●	
Lube and adjust cables		●	●	●	
Check the electrical system	●		●	●	
Check battery holder, battery and connections				●	●
Check adjustment of headlight				●	
Spray ignition lock, emergency off switch, and light switch with contact spray		●		●	
Check all bolts, nuts and hose clamps for proper tightness	●		●	●	
Grease or lube all pivot points and sliding points		●	●	●	

PERIODIC MAINTENANCE SCHEDULE

Adventure-R 3.98

IF THE MOTORCYCLE IS USED PRIMARILI FOR OFF ROAD RIDING OR COMPETITIVE RACING, THE 5000 KM (3000 MILES) SERVICE NEEDS TO BE CARRIED OUT AFTER EACH RIDE OR RACE

	KTM rider		KTM dealer			
	before each start	after washing	1st service, after 500 km (300 miles)	after 2500 km (1500 miles)	after 5000 km (3000 miles) or once a year	at least once a year
Check engine oil level	●					
Change engine oil			●		●	●
Clean oil screen and magnet of the drain plugs whenever you exchange the engine oil			●		●	●
Change oil filter insert			●		●	●
Change fine screen filter (screwed filter) at front pipe (of the frame)			●		●	●
Check oil lines for leakage and proper instalment without kinks			●		●	
Check valve clearance			●		●	
Clean spark plug and adjust electrode gap					●	
Change spark plug after 10 000 kilometers (6 200 miles)						
Check ignition point					●	
Drain and clean carburetor float chamber		●			●	●
Adjust idling					●	
Check breather hoses of engine gase and gas tank for correct position without buckles			●		●	
Clean air filter and air filter box		●			●	●
Check sprockets, chain guides and chain for wear	●		●		●	
Clean and lube chain	●	●			●	
Check chain tension	●		●		●	
Check cooling liquid level	●		●		●	
Check quality of antifreezer						●
Check cooling system for leaks – visual check	●		●		●	
Check exhaust system for leakage						●
Check exhaust brackets			●		●	
Disassemble and clean spark arrestor discs (USA models)						
Check brake fluid level front and rear	●		●		●	
Change brake fluid						●
Check brake pad thickness	●				●	
Check brake discs					●	
Check condition and correct instalment of brake hoses	●		●		●	
Check free play and easy operation of foot brake pedal	●		●		●	
Check adjustment and function of telescopic fork	●				●	
Check telescopic fork for leaks					●	
Loosen bleeder screws at fork legs (overpressure)					●	
Change telescopic fork oil						●
Perform a full maintenance job for the telescopic fork						●
Clean dust scrabber of telescopic fork					●	●
Check steering head bearing clearance / adjust			●		●	
Clean and grease steering head bearings and its seals						●
Check adjustment and funktion of shock absorber	●				●	
Check O-ring of the shock absorber for wear					●	●
Service the shock absorber						●
Grease nipple of the Pro Lever suspension system					●	
Disassemble the Pro Lever suspension system linkage and perform a full maintenance job on it						●
Service swingarm pivot						●
Check spoke tension and join	●		●		●	
Check wheel bearings for clearance	●				●	
Check shock absorber rubbers on the rear hub					●	
Check tire condition and air pressure	●				●	
Check cables for damage and easy working	●				●	
Lube and adjust cables		●	●		●	
Check the electrical system	●		●		●	
Check battery holder, battery and connections					●	●
Check adjustment of headlight					●	
Spray ignition lock, emergency off switch, and light switch with contact spray		●			●	
Check all bolts, nuts and hose clamps for proper tightness	●		●		●	
Grease or lube all pivot points and sliding points		●	●		●	

PERIODIC MAINTENANCE SCHEDULE

DUKE-E 2.98

IF THE MOTORCYCLE IS USED PRIMARILI FOR OFF ROAD RIDING OR COMPETITIVE RACING, THE 5000 KM (3000 MILES) SERVICE NEEDS TO BE CARRIED OUT AFTER EACH RIDE OR RACE

	KTM rider		KTM dealer			
	before each start	after washing	1st service, after 500 km (300 miles)	after 2500 km (1500 miles)	after 5000 km (3000 miles) or once a year	at least once a year
Check engine oil level	●					
Change engine oil			●		●	●
Clean oil screen and magnet of the drain plugs whenever you exchange the engine oil			●		●	●
Change oil filter insert			●		●	●
Change fine screen filter (screwed filter) at front pipe (of the frame)			●		●	●
Check oil lines for leakage and proper instalment without kinks			●		●	
Check valve clearance			●		●	
Clean spark plug and adjust electrode gap					●	
Change spark plug after 10 000 kilometers (6 200 miles)						
Check ignition point					●	
Drain and clean carburetor float chamber		●			●	●
Adjust idling					●	
Check breather hoses of engine gase and gas tank for correct position without buckles			●		●	
Clean air filter and air filter box		●			●	●
Check sprockets, chain guides and chain for wear	●		●		●	
Maintain chain tension eccentrics						●
Clean and lube chain	●	●			●	
Check chain tension	●		●		●	
Check cooling liquid level	●		●		●	
Check quality of antifreezer						●
Check cooling system for leaks – visual check	●		●		●	
Check exhaust system for leakage						●
Check exhaust brackets			●		●	
Disassemble and clean spark arrestor discs (USA models)						
Check brake fluid level front and rear	●		●		●	
Change brake fluid						●
Check brake pad thickness	●				●	
Check brake discs					●	
Check condition and correct instalment of brake hoses	●		●		●	
Check free play and easy operation of foot brake pedal	●		●		●	
Check adjustment and function of telescopic fork	●				●	
Check telescopic fork for leaks					●	
Change telescopic fork oil						●
Perform a full maintenance job for the telescopic fork						●
Clean dust scrabber of telescopic fork					●	●
Check steering head bearing clearance / adjust			●		●	
Clean and grease steering head bearings and its seals						●
Check adjustment and funktion of shock absorber	●				●	
Check O-ring of the shock absorber for wear					●	●
Service the shock absorber						●
Grease nipple of the Pro Lever suspension system					●	
Disassemble the Pro Lever suspension system linkage and perform a full maintenance job on it						●
Service swingarm pivot						●
Check spoke tension and join	●		●		●	
Check wheel bearings for clearance	●				●	
Check shock absorber rubbers on the rear hub					●	
Check tire condition and air pressure	●				●	
Check cables for damage and easy working	●				●	
Lube and adjust cables		●	●		●	
Check the electrical system	●		●		●	
Check battery holder, battery and connections					●	●
Check adjustment of headlight					●	
Spray ignition lock, emergency off switch, and light switch with contact spray		●			●	
Check all bolts, nuts and hose clamps for proper tightness	●		●		●	
Grease or lube all pivot points and sliding points		●	●		●	

PERIODIC MAINTENANCE SCHEDULE

2.99
620 SX
400/540 SXC
400/620 SC

IF THE MOTORCYCLE IS USED PRIMARILI FOR OFF ROAD RIDING OR COMPETITIVE RACING, THE 5000 KM (3000 MILES) SERVICE NEEDS TO BE CARRIED OUT AFTER EACH RIDE OR RACE

	KTM rider		KTM dealer			
	before each start	after washing	1st service, after 1000 km (600 miles) or 10 hours	after 2500 km (1500 miles) or 25 hours	after 5000 km (3000 miles) or once a year	at least once a year
Check engine oil level	●					
Change engine oil			●	●		●
Clean oil screen and magnet of the drain plugs whenever you exchange the engine oil			●			
Change oil filter unit			●		●	●
Change microfilter				●		●
Check oil lines for leakage and proper instalment			●		●	
Check valve clearance			●		●	
Clean spark plug and adjust electrode gap					●	
Change spark plug after 10 000 kilometers (6 200 miles)						
Check valve clearance					●	
Drain and clean carburetor float bowl		●			●	●
Adjust idling					●	
Check breather hoses of engine gase and gas tank for correct position without buckles			●		●	
Clean air filter and air filter box		●			●	●
Check sprockets, chain guides and chain for wear	●		●		●	
Clean and lube chain	●	●			●	
Check chain tension	●		●		●	
Check cooling liquid level	●		●		●	
Check quality of antifreeze						●
Check cooling system for leaks	●		●		●	
Check exhaust system for leakage						●
Change exhaust muffler packing (aluminium-muffler)				●	●	
Check exhaust brackets			●		●	
Disassemble and clean spark arrestor discs (USA models)						
Check brake fluid level front and rear	●		●		●	
Change brake fluid						●
Check brake pad thickness	●				●	
Check brake discs					●	
Check condition and correct instalment of brake hoses	●		●		●	
Check freeplay and easy operation of hand brake lever and foot brake lever	●		●		●	
Check adjustment and function of fork	●				●	
Check fork for leaks					●	
Loosen breather screws at fork legs (overpressure)					●	
Change fork oil						●
Perform a full maintenance job for the telescopic fork						●
Clean dust scrabber on forks		●			●	●
Check steering head bearing clearance / adjust			●		●	
Clean and grease steering head bearings and its seals						●
Check adjustment and function of shock absorber	●				●	
Check O-ring of the shock absorber for wear					●	●
Servicing the shock absorber						●
Grease lubricating nipple of the Pro Lever suspension system					●	
Disassemble the Pro Lever suspension system and perform a full maintenance job on it						●
Servicing swingarm pivots						●
Check tightness of spokes and rim join	●		●		●	
Check wheel bearings for clearance	●				●	
Check tire condition and air pressure	●				●	
Check cables for damage and easy working	●				●	
Lube and adjust cables		●	●		●	
Check the electrical system	●		●		●	
Check adjustment of head light					●	
Spray ignition lock, emergency OFF switch, short circuit button, and light switch with contact spray		●			●	
Check all bolts, nuts and hose clamps for proper tightness	●		●		●	
Grease or lube all pivot points and sliding components		●	●		●	

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PERIODIC MAINTENANCE SCHEDULE

400/640 LC4 '99
400/640 LC4 R '99
620 LC4 Comp.'99
620/640 Supermoto '99
10. 98

IF THE MOTORCYCLE IS USED PRIMARILI FOR OFF ROAD RIDING OR COMPETITIVE RACING, THE 5000 KM (3000 MILES) SERVICE NEEDS TO BE CARRIED OUT AFTER EACH RIDE OR RACE

	KTM rider		KTM dealer		
	before each start	after washing	1st service, after 500 km (300 miles)	after 5000 km (3000 miles) or once a year	at least once a year
Check engine oil level	●				
Change engine oil			●	●	●
Clean oil screen and magnet of the drain plugs whenever you exchange the engine oil			●		
Change oil filter insert			●	●	●
Change fine screen filter (screwed filter) at front pipe (of the frame)			●	●	●
Check oil lines for leakage and proper instalment without kinks			●	●	
Check valve clearance			●	●	
Clean spark plug and adjust electrode gap				●	
Change spark plug after 10 000 kilometers (6 200 miles)					
Drain and clean carburetor float chamber		●		●	●
Adjust idling				●	
Check all air supply and ventilation hoses of the engine and of the carburetor for kinks.			●	●	
Clean air filter and air filter box		●		●	●
Check sprockets, chain guides and chain for wear	●		●	●	
Clean and lube chain	●	●		●	
Check chain tension	●		●	●	
Check cooling liquid level	●		●	●	
Check quality of antifreezer					●
Check cooling system for leaks – visual check	●		●	●	
Check exhaust system for leakage					●
Check exhaust brackets			●	●	
Disassemble and clean spark arrestor discs (USA models)					
Check brake fluid level front and rear	●		●	●	
Change brake fluid					●
Check brake pad thickness	●			●	
Check brake discs				●	
Check condition and correct instalment of brake hoses	●		●	●	
Check free play and easy operation of foot brake pedal	●		●	●	
Check adjustment and function of telescopic fork	●			●	
Check telescopic fork for leaks				●	
Loosen bleeder screws at fork legs (overpressure)				●	
Change telescopic fork oil					●
Perform a full maintenance job for the telescopic fork					●
Clean dust scrabber of telescopic fork				●	●
Check steering head bearing clearance / adjust			●	●	
Clean and grease steering head bearings and its seals					●
Check adjustment and function of shock absorber	●			●	
Check O-ring of the shock absorber for wear				●	●
Service the shock absorber					●
Grease nipple of the Pro Lever suspension system				●	
Disassemble the Pro Lever suspension system linkage and perform a full maintenance job on it					●
Service swingarm pivot					●
Check spoke tension and join	●		●	●	
Check wheel bearings for clearance	●			●	
Check shock absorber rubbers on the rear hub				●	
Check tire condition and air pressure	●			●	
Check cables for damage and easy working	●			●	
Lube and adjust cables		●	●	●	
Check the electrical system	●		●	●	
Check battery holder, battery and connections				●	●
Check adjustment of headlight				●	
Spray ignition lock, emergency off switch, and light switch with contact spray		●		●	
Check all bolts, nuts and hose clamps for proper tightness	●		●	●	
Grease or lube all pivot points and sliding points		●	●	●	

PERIODIC MAINTENANCE SCHEDULE

Adventure 09.98

IF THE MOTORCYCLE IS USED PRIMARILI FOR OFF ROAD RIDING OR COMPETITIVE RACING, THE 5000 KM (3000 MILES) SERVICE NEEDS TO BE CARRIED OUT AFTER EACH RIDE OR RACE

	KTM rider		KTM dealer		
	before each start	after washing	1st service, after 500 km (300 miles)	after 5000 km (3000 miles) or once a year	at least once a year
Check engine oil level	●				
Change engine oil			●	●	●
Clean oil screen and magnet of the drain plugs whenever you exchange the engine oil			●		
Change oil filter insert			●	●	●
Change fine screen filter (screwed filter) at front pipe (of the frame)			●	●	●
Check oil lines for leakage and proper instalment without kinks			●	●	
Check valve clearance			●	●	
Clean spark plug and adjust electrode gap				●	
Change spark plug after 10 000 kilometers (6 200 miles)					
Check ignition point				●	
Drain and clean carburetor float chamber		●		●	●
Adjust idling				●	
Check breather hoses of engine case and gas tank for correct position without buckles			●	●	
Clean air filter and air filter box		●		●	●
Check sprockets, chain guides and chain for wear	●		●	●	
Clean and lube chain	●	●		●	
Check chain tension	●		●	●	
Check cooling liquid level	●		●	●	
Check quality of antifreezer					●
Check cooling system for leaks – visual check	●		●	●	
Check exhaust system for leakage					●
Check exhaust brackets			●	●	
Disassemble and clean spark arrestor discs (USA models)					
Check brake fluid level front and rear	●		●	●	
Change brake fluid					●
Check brake pad thickness	●			●	
Check brake discs				●	
Check condition and correct instalment of brake hoses	●		●	●	
Check free play and easy operation of foot brake pedal	●		●	●	
Check adjustment and function of telescopic fork	●			●	
Check telescopic fork for leaks				●	
Loosen bleeder screws at fork legs (overpressure)				●	
Change telescopic fork oil					●
Perform a full maintenance job for the telescopic fork					●
Clean dust scrabber of telescopic fork				●	●
Check steering head bearing clearance / adjust			●	●	
Clean and grease steering head bearings and its seals					●
Check adjustment and function of shock absorber	●			●	
Check O-ring of the shock absorber for wear				●	●
Service the shock absorber					●
Grease nipple of the Pro Lever suspension system				●	
Disassemble the Pro Lever suspension system linkage and perform a full maintenance job on it					●
Service swingarm pivot					●
Check spoke tension and join	●		●	●	
Check wheel bearings for clearance	●			●	
Check shock absorber rubbers on the rear hub				●	
Check tire condition and air pressure	●			●	
Check cables for damage and easy working	●			●	
Lube and adjust cables		●	●	●	
Check the electrical system	●		●	●	
Check battery holder, battery and connections				●	●
Check adjustment of headlight				●	
Spray ignition lock, emergency off switch, and light switch with contact spray		●		●	
Check all bolts, nuts and hose clamps for proper tightness	●		●	●	
Grease or lube all pivot points and sliding points		●	●	●	

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PERIODIC MAINTENANCE SCHEDULE

Duke 5.99

IF THE MOTORCYCLE IS USED FOR COMPETITIVE RACING, THE 5000 KM (3000 MILES) SERVICE NEEDS TO BE CARRIED OUT AFTER EVERY RACE

	KTM rider		KTM dealer		
	before each start	after washing	1st service, after 500 km (300 miles)	after 5000 km (3000 miles) or once a year	at least once a year
Check engine oil level	●				
Change engine oil			●	●	●
Clean oil screen and magnet of the drain plugs whenever you exchange the engine oil			●		
Change oil filter insert			●	●	●
Change fine screen filter (screwed filter) at front pipe (of the frame)			●	●	●
Check oil lines for leakage and proper instalment without kinks			●	●	
Check valve clearance			●	●	
Clean spark plug and adjust electrode gap				●	
Change spark plug after 10 000 kilometers (6 200 miles)					
Drain and clean carburetor float chamber		●		●	●
Adjust idling				●	
Check breather hoses of engine gase and gas tank for correct position without buckles			●	●	
Clean air filter and air filter box		●		●	●
Check sprockets, chain guides and chain for wear	●		●	●	
Maintain chain tension eccentrics					●
Clean and lube chain	●	●		●	
Check chain tension	●		●	●	
Check cooling liquid level	●		●	●	
Check quality of antifreezer					●
Check cooling system for leaks – visual check	●		●	●	
Check exhaust system for leakage					●
Check exhaust brackets			●	●	
Clean spark arrestor discs (USA model)					●
Check brake fluid level front and rear	●		●	●	
Change brake fluid					●
Check brake pad thickness	●			●	
Check wear of brake discs				●	
Check condition and correct instalment of brake hoses	●		●	●	
Check free play and easy operation of foot brake pedal	●		●	●	
Check adjustment and function of telescopic fork	●			●	
Check telescopic fork for leaks				●	
Loosen breather screws at fork legs (overpressure)		●		●	
Change telescopic fork oil					●
Perform a full maintenance job for the telescopic fork					●
Check steering head bearing clearance / adjust			●	●	
Clean and grease steering head bearings and its seals					●
Check adjustment and funktion of shock absorber	●			●	
Check O-ring of the shock absorber for wear				●	●
Service the shock absorber					●
Grease nipple of the Pro Lever suspension system				●	
Disassemble the Pro Lever suspension system linkage and perform a full maintenance job on it					●
Service swingarm pivot					●
Check spoke tension and join	●		●	●	
Check wheel bearings for clearance	●			●	
Check shock absorber rubbers on the rear hub				●	
Check tire condition and air pressure	●			●	
Check cables for damage and easy working	●			●	
Lube and adjust cables		●	●	●	
Check the electrical system	●		●	●	
Check battery holder, battery and connections				●	●
Check adjustment of headlight				●	
Spray ignition lock, emergency off switch, and light switch with contact spray		●		●	
Check all bolts, nuts and hose clamps for proper tightness	●		●	●	
Grease or lube all pivot points and sliding points		●	●	●	

PERIODIC MAINTENANCE SCHEDULE

620 SC

	A washed motorcycle can be checked more quickly which saves money!	1. Service after 1000 km or 10 hours	after / every 2500 km or 25 hours	after / every 5000 km or once a year
ENGINE	Change engine oil, oil filter, and micro-filter	●	●	●
	Clean oil screens and magnet of drain plug	●		●
	Check oil lines for damage and kink-less arrangement	●		●
	Check and adjust spark plug, replace it every 10,000 km			●
	Check and adjust valve clearance	●		●
	Check engine fastening bolts for tight fit	●		●
CARBURATOR	Check carburetor connection boots for cracks and leaks			●
	Check idle setting	●		●
	Check bleeder hoses for damage and kink-free arrangement	●		●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●		●
	Check exhaust system for leaks and suspension	●		●
	Check actuating cables for damage, smooth operation, and kink-less arrangement, adjust and lubricate	●		●
	Clean air filter and air filter box			●
	Check cables for damage and kink-less arrangement			●
	Check headlamp adjustment			●
	Check electrical system for function; (low/high beams, stop light, turn indicators, tell-tale lamps, speedometer illumination, horn, emergency-off switch)	●		●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●		●
	Check brake lines for damage and leaks	●		●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers	●		●
	Check bolts of brake system for tight fit	●		●
CHASSIS	Check suspension strut and fork for leaks and proper function	●		●
	Check O-ring of suspension strut for wear			●
	Clean dust sleeves			●
	Bleed fork legs	●		●
	Check swinging-fork pivot			●
	Check/adjust steering-head bearing	●		●
	Lubricate reversing lever			●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●		●
WHEELS	Check spoke tension and rim join	●		●
	Check tire condition and inflation pressure	●		●
	Check chain, chain wheels, chain wheel guides for wear, tight fit, and tension	●		●
	Lubricate chain	●		●
	Check wheel bearings and jerk damper for play			●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	every 2500 km or 25 hours	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance		●	
Perform complete suspension strut maintenance			●
Perform complete reversing lever maintenance			●
Replace glass-fiber yarn packing of main silencer	●		
Clean and lubricate steering-head bearing and sealing elements		●	
Clean and adjust the carburetor		●	
Treat the electrical contacts and switches with contact spray		●	
Change brake fluid		●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MOOR THAN 5 HOURS OR 500 KM.

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	for cross country use	once a year
Check oil level	●			
Check brake fluid level	●			
Check brake pads for wear	●			
Check lighting system for proper operation	●			
Check horn for proper operation	●			
Lubricate and adjust actuating cables and nipples		●		
Bleed fork legs in regular intervals			●	
Remove and clean dust sleeves in regular intervals			●	
Clean and lubricate chain as necessary		●	●	
Check chain tension		●	●	
Clean air filter and filter box				●
Check tire pressure and wear	●			
Check coolant level	●			
Check fuel lines for leaks	●			
Drain float chamber		●		
Verify smooth operation of all controls	●			
Check brake performance	●	●		
Btreat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●		
Treat ignition/steering lock and light switch with contact spray		●		
Check all bolts, nuts, and hose clamps for their tight fit				●

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PERIODIC MAINTENANCE SCHEDULE

400/640 LC4-E
640 LC4 Adventure

	A washed motorcycle can be checked more quickly which saves money!	1. Service after 1000 km	2. Service after 5000 km, then every 5000 km or once a year
ENGINE	Change engine oil, oil filter, and fine filter	●	●
	Clean oil screens and magnet of drain plug	●	●
	Check oil lines for damage and kink-less arrangement	●	●
	Check and adjust spark plug, replace it every 10,000 km		●
	Check and adjust valve clearance	●	●
	Check engine fastening bolts for tight fit	●	●
CARBURETOR	Check carburetor connection boots for cracks and leaks		●
	Check idle setting	●	●
	Check bleeder hoses for damage and kink-free arrangement	●	●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●	●
	Check radiator fan for proper operation		●
	Check exhaust system for leaks and suspension	●	●
	Check actuating cables for damage, smooth operation, and kink-less arrangement, and adjust and lubricate them	●	●
	Clean air filter and air filter box		●
	Check cables for damage and kink-less arrangement		●
	Check headlamp adjustment		●
	Check electrical system for function (low/high beams, stop light, turn indicators, headlamp flasher, tell-tale lamps, speedometer illumination, horn, side-stand switch, clutch switch, emergency-off switch)	●	●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●	●
	Check brake lines for damage and leaks	●	●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers	●	●
	Check bolts of brake system for tight fit	●	●
CHASSIS	Check suspension strut and fork for leaks and proper operation	●	●
	Check O-ring of suspension strut for wear		●
	Clean dust sleeves		●
	Bleed fork legs	●	●
	Check swinging-fork pivot	●	●
	Check/adjust steering-head bearing	●	●
	Lubricate reversing lever		●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●	●
WHEELS	Check spoke tension and rim join	●	●
	Check tire condition and inflation pressure	●	●
	Check chain, chain wheels, chain wheel guides for wear, tight fit, and tension	●	●
	Lubricate chain	●	●
	Check wheel bearings and jerk damper for play		●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance	●	
Perform complete suspension strut maintenance		●
Perform complete reversing lever maintenance		●
Clean and lubricate steering-head bearing and sealing elements	●	
Clean and adjust the carburetor	●	
Treat the electrical contacts and switches with contact spray	●	
Treat battery connections with contact grease	●	
Change the brake fluid	●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MOOR THAN 500 KM.

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	for cross country use	once a year
Check oil level	●			
Check brake fluid level	●			
Check brake pads for wear	●			
Check lighting system for proper operation	●			
Check horn for proper operation	●			
Lubricate and adjust actuating cables and nipples		●		
Bleed fork legs in regular intervals			●	
Remove and clean dust sleeves in regular intervals			●	
Clean and lubricate chain as necessary		●	●	
Check chain tension	●	●	●	
Clean air filter and filter box				●
Check tire pressure and wear	●			
Check coolant level	●			
Check fuel lines for leaks	●			
Drain float chamber		●		
Verify smooth operation of all controls	●			
Check brake performance	●	●		
Treat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●		
Treat ignition/steering lock and light switch with contact spray		●		
Check all bolts, nuts, and hose clamps for their tight fit				●

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PERIODIC MAINTENANCE SCHEDULE

640 Duke II

	A washed motorcycle can be checked more quickly which saves money!	1. Service after 1000 km	2. Service after 5000 km, then every 5000 km or once a year
ENGINE	Change engine oil, oil filter, and fine filter	●	●
	Clean oil screens and magnet of drain plug	●	●
	Check oil lines for damage and kink-less arrangement	●	●
	Check and adjust spark plug, replace it every 10,000 km		●
	Check and adjust valve clearance	●	●
	Check engine fastening bolts for tight fit	●	●
CARBUTATOR	Check carburetor connection boots for cracks and leaks		●
	Check idle setting	●	●
	Check bleeder hoses for damage and kink-free arrangement	●	●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●	●
	Check radiator fan for proper function		●
	Check exhaust system for leaks and suspension	●	●
	Check actuating cables for damage, smooth operation, and kink-less arrangement, adjust and lubricate	●	●
	Clean air filter and air filter box		●
	Check cables for damage and kink-less arrangement		●
	Check headlamp adjustment		●
	Check electrical system for function (low/high beams, stop light, turn indicators, headlamp flasher, tell-tale lamps, speedometer illumination, horn, side-stand switch, clutch switch, emergency-off switch)	●	●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●	●
	Check brake lines for damage and leaks	●	●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers		● ●
	Check bolts of brake system for tight fit	●	●
CHASSIS	Check suspension strut and fork for leaks and proper function	●	●
	Check O-ring of suspension strut for wear		●
	Clean dust sleeves		●
	Bleed fork legs	●	●
	Check swinging-fork pivot	●	●
	Check/adjust steering-head bearing	●	●
	Service eccentric for chain tension		●
	Lubricate reversing lever		●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●	●
WHEELS	Check tire condition, inflation pressure, and rim condition	●	●
	Check chain, chain wheels, chain wheel guides for wear, tight fit, and tension	●	●
	Lubricate chain	●	●
	Check wheel bearings and jerk damper for play		●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance	●	
Perform complete suspension strut maintenance		●
Perform complete reversing lever maintenance		●
Replace glass-fiber yarn packing of the silencers		●
Clean and lubricate steering-head bearing and sealing elements	●	
Clean and adjust the carburetor	●	
Treat the electrical contacts and switches with contact spray	●	
Treat battery connections with contact grease	●	
Change the brake fluid	●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MOOR THAN 500 KM!

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	for competition use	once a year
Check oil level	●			
Check brake fluid level	●			
Check brake pads for wear	●			
Check lighting system for proper function	●			
Check horn for proper function	●			
Lubricate and adjust actuating cables and nipples		●		
Bleed fork legs in regular intervals			●	●
Remove and clean dust sleeves in regular intervals			●	●
Clean and lubricate chain as necessary		●	●	
Check chain tension	●	●	●	
Clean air filter and filter box			●	●
Check tire pressure and wear	●			
Check coolant level	●			
Check fuel lines for leaks	●			
Drain float chamber		●		
Verify smooth operation of all controls	●			
Check braking performance	●	●		
Treat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●		
Treat ignition/steering lock and light switch with contact spray		●		
Check all bolts, nuts, and hose clamps for their tight fit				●

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PERIODIC MAINTENANCE SCHEDULE 2002

625 SC
625 SC SUPERMOTO

	A washed motorcycle can be checked more quickly which saves money!	1. Service after 1000 km or 10 hours	after / every 2500 km or 25 hours	after / every 5000 km or once a year
ENGINE	Change engine oil, oil filter, and micro-filter	●	●	●
	Clean oil screens and magnet of drain plug	●		●
	Check oil lines for damage and kink-less arrangement	●		●
	Check and adjust spark plug, replace every 10,000 km			●
	Check and adjust valve clearance	●		●
	Check engine fastening bolts for tight fit	●		●
	Check all engine bolts accessible from the outside for tight fit	●		●
CARBURATOR	Check carburetor connection boots for cracks and leaks			●
	Check idle setting	●		●
	Check bleeder hoses for damage and kink-free arrangement	●		●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●		●
	Check exhaust system for leaks and suspension	●		●
	Check actuating cables for damage, smooth operation, and kink-less arrangement, adjust and lubricate	●		●
	Clean air filter and air filter box			●
	Check cables for damage and kink-less arrangement			●
	Check headlamp adjustment			●
	Check electrical system for function; (low/high beams, stop light, turn indicators, tell-tale lamps, horn)	●		●
	Make sure all bolts and nuts are tight.	●		●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●		●
	Check brake lines for damage and leaks	●		●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers	●		●
	Check bolts of brake system for tight fit	●		●
CHASSIS	Check suspension strut and fork for leaks and proper function	●		●
	Check O-ring of suspension strut for wear			●
	Clean dust sleeves			●
	Bleed fork legs	●		●
	Check swinging-fork pivot			●
	Check/adjust steering-head bearing	●		●
	Lubricate reversing lever			●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●		●
WHEELS	Check spoke tension and rim join	●		●
	Check tire condition and inflation pressure	●		●
	Check chain and chain guides for wear, force fit and tension.	●		●
	Check bolts on pinion and chain sprocket for locking devices and a tight fit.	●		●
	Lubricate chain	●		●
	Check wheel bearings and jerk damper for play			●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	every 2500 km or 25 hours	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance		●	
Perform complete suspension strut maintenance			●
Perform complete reversing lever maintenance			●
Replace glass-fiber yarn packing of main silencer	●		
Clean and lubricate steering-head bearing and sealing elements		●	
Clean and adjust the carburetor		●	
Treat the electrical contacts and switches with contact spray		●	
Change brake fluid		●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MOOR THAN 5 HOURS OR 500 KM.

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	for cross country use	once a year
Check oil level	●			
Check brake fluid level	●			
Check brake pads for wear	●			
Check lighting system for proper operation	●			
Check horn for proper operation	●			
Lubricate and adjust actuating cables and nipples		●		
Bleed fork legs in regular intervals			●	
Remove and clean dust sleeves in regular intervals			●	
Clean and lubricate chain as necessary		●	●	
Check chain tension	●	●	●	
Clean air filter and filter box			●	
Check tire pressure and wear	●			
Check coolant level	●			
Check fuel lines for leaks	●			
Drain float chamber		●		
Verify smooth operation of all controls	●			
Check brake performance	●	●		
Treat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●		
Treat steering lock and light switch with contact spray		●		
Check all bolts, nuts, and hose clamps for tight fit				●

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PERIODIC MAINTENANCE SCHEDULE 2002

640 LC4, LC4 SUPERMOTO
640 LC4 ADVENTURE

	A washed motorcycle can be checked more quickly which saves money!	1. Service after 1000 km	2. Service after 5000 km, then every 5000 km or once a year
ENGINE	Change engine oil and oil filter	●	●
	Clean oil screens and magnet of drain plug	●	●
	Check oil lines for damage and kink-less arrangement	●	●
	Check and adjust spark plug, replace it every 10,000 km		●
	Check and adjust valve clearance	●	●
	Check engine fastening bolts for tight fit	●	●
	Check all engine bolts accessible from the outside for tight fit	●	●
CARBURETOR	Check carburetor connection boots for cracks and leaks		●
	Check idle setting	●	●
	Check bleeder hoses for damage and kink-free arrangement	●	●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●	●
	Check radiator fan for proper operation		●
	Check exhaust system for leaks and suspension	●	●
	Check actuating cables for damage, smooth operation, and kink-less arrangement,adjust and lubricate them	●	●
	Clean air filter and air filter box		●
	Check cables for damage and kink-less arrangement		●
	Check headlamp adjustment		●
	Check electrical system for function (low/high beams, stop light, turn indicators,headlamp flasher, tell-tale lamps, speedometer illumination, horn, side-stand switch, clutch switch, emergency-off switch)	●	●
	Make sure all bolts and nuts are tight.	●	●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●	●
	Check brake lines for damage and leaks	●	●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers	●	●
	Check bolts of brake system for tight fit	●	●
CHASSIS	Check suspension strut and fork for leaks and proper operation	●	●
	Check O-ring of suspension strut for wear		●
	Clean fork dust sleeves		●
	Bleed fork legs	●	●
	Check swinging-fork pivot	●	●
	Check/adjust steering-head bearing	●	●
	Lubricate reversing lever		●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●	●
WHEELS	Check spoke tension and rim joint	●	●
	Check tire condition and inflation pressure	●	●
	Check chain and chain guides for wear, force fit and tension.	●	●
	Check bolts on pinion and chain sprocket for locking devices and a tight fit.	●	●
	Lubricate chain	●	●
	Check wheel bearings and jerk damper for play		●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance	●	
Perform complete suspension strut maintenance		●
Perform complete reversing lever maintenance		●
Clean and lubricate steering-head bearing and sealing elements	●	
Clean and adjust the carburetor	●	
Treat the electrical contacts and switches with contact spray	●	
Treat battery connections with contact grease	●	
Change the brake fluid	●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MOOR THAN 500 KM.

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	for cross country use	once a year
Check oil level	●			
Check brake fluid level	●			
Check brake pads for wear	●			
Check lighting system for proper operation	●			
Check horn for proper operation	●			
Lubricate and adjust actuating cables and nipples		●		
Bleed fork legs in regular intervals			●	
Remove and clean fork dust sleeves in regular intervals			●	
Clean and lubricate chain as necessary		●	●	
Check chain tension	●	●	●	
Clean air filter and filter box			●	
Check tire pressure and wear	●			
Check coolant level	●			
Check fuel lines for leaks	●			
Drain float chamber		●		
Check all control elements for smooth running	●			
Check brake performance	●	●		
Treat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●		
Treat ignition/steering lock and light switch with contact spray		●		
Check all bolts, nuts, and hose clamps for their tight fit				●

Art.-Nr. 3.206.006 -E

PERIODIC MAINTENANCE SCHEDULE 2002

640 Duke II

	A washed motorcycle can be checked more quickly which saves money!	1. Service after 1000 km	2. Service after 5000 km, then every 5000 km or once a year
ENGINE	Change engine oil, oil filter, and fine filter	●	●
	Clean oil screens and magnet of drain plug	●	●
	Check oil lines for damage and kink-less arrangement	●	●
	Check and adjust spark plug, replace it every 10,000 km		●
	Check and adjust valve clearance	●	●
	Check engine fastening bolts for tight fit	●	●
CARBUTATOR	Check carburetor connection boots for cracks and leaks		●
	Check idle setting	●	●
	Check bleeder hoses for damage and kink-free arrangement	●	●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●	●
	Check radiator fan for proper function		●
	Check exhaust system for leaks and suspension	●	●
	Check actuating cables for damage, smooth operation, and kink-less arrangement, adjust and lubricate	●	●
	Clean air filter and air filter box		●
	Check cables for damage and kink-less arrangement		●
	Check headlamp adjustment		●
	Check electrical system for function (low/high beams, stop light, turn indicators, headlamp flasher, tell-tale lamps, speedometer illumination, horn, side-stand switch, clutch switch, emergency-off switch)	●	●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●	●
	Check brake lines for damage and leaks	●	●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers		● ●
	Check bolts of brake system for tight fit	●	●
CHASSIS	Check suspension strut and fork for leaks and proper function	●	●
	Check O-ring of suspension strut for wear		●
	Clean dust sleeves		●
	Bleed fork legs	●	●
	Check swinging-fork pivot	●	●
	Check/adjust steering-head bearing	●	●
	Service eccentric for chain tension		●
	Lubricate reversing lever		●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●	●
WHEELS	Check tire condition, inflation pressure, and rim condition	●	●
	Check chain, chain wheels, chain wheel guides for wear, tight fit, and tension	●	●
	Lubricate chain	●	●
	Check wheel bearings and jerk damper for play		●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance	●	
Perform complete suspension strut maintenance		●
Perform complete reversing lever maintenance		●
Replace glass-fiber yarn packing of the silencers		●
Clean and lubricate steering-head bearing and sealing elements	●	
Clean and adjust the carburetor	●	
Treat the electrical contacts and switches with contact spray	●	
Treat battery connections with contact grease	●	
Change the brake fluid	●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MOOR THAN 500 KM!

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	once a year
Check oil level	●		
Check brake fluid level	●		
Check brake pads for wear	●		
Check lighting system for proper operation	●		
Check horn for proper operation	●		
Lubricate and adjust actuating cables and nipples		●	
Bleed fork legs in regular intervals			●
Remove and clean fork dust sleeves in regular intervals			●
Clean and lubricate chain as necessary		●	
Check chain tension	●	●	
Clean air filter and filter box			●
Check tire pressure and wear	●		
Check coolant level	●		
Check fuel lines for leaks	●		
Drain float chamber		●	
Check all control elements for smooth running.	●		
Check brake performance	●	●	
Treat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●	
Treat ignition/steering lock and light switch with contact spray		●	
Check all bolts, nuts, and hose clamps for their tight fit			●

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PERIODIC MAINTENANCE SCHEDULE 2003

625 SXC
660 SMC

	A washed motorcycle can be checked more quickly which saves money!	1. Service after 1000 km or 10 hours	after / every 2500 km or 25 hours	after / every 5000 km or once a year
ENGINE	Change engine oil, oil filter, and micro-filter	●	●	●
	Clean oil screens and magnet of drain plug	●	●	●
	Check oil lines for damage and kink-less arrangement	●		●
	Check and adjust spark plug, replace every 10,000 km			●
	Check and adjust valve clearance	●		●
	Check engine fastening bolts for tight fit	●		●
	Make sure all engine bolts accessible from the outside are screwed tight	●		●
CARBURATOR	Check carburetor connection boots for cracks and leaks			●
	Check idle setting	●		●
	Check bleeder hoses for damage and kink-free arrangement	●		●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●		●
	Check exhaust system for leaks and suspension	●		●
	Check actuating cables for damage, smooth operation, and kink-less arrangement, adjust and lubricate	●		●
	Clean air filter and air filter box			●
	Check cables for damage and kink-less arrangement			●
	Check headlamp adjustment			●
	Check electrical system for function; (low/high beams, stop light, turn indicators, tell-tale lamps, horn, emergency-off switch)	●		●
	Make sure all bolts and nuts are tight	●		●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●		●
	Check brake lines for damage and leaks	●		●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers	●		●
	Check bolts of brake system for tight fit	●		●
CHASSIS	Check suspension strut and fork for leaks and proper function	●		●
	Check O-ring of suspension strut for wear			●
	Clean dust sleeves			●
	Bleed fork legs	●		●
	Check swinging-fork pivot			●
	Check/adjust steering-head bearing	●		●
	Lubricate reversing lever			●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●		●
WHEELS	Check spoke tension and rim join	●		●
	Check tire condition and inflation pressure	●		●
	Check chain and chain guides for wear, force fit and tension	●		●
	Check bolts on pinion and chain sprocket for locking devices and a tight fit	●		●
	Lubricate chain	●		●
	Check wheel bearings and jerk damper for play			●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	every 2500 km or 25 hours	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance		●	
Perform complete suspension strut maintenance			●
Perform complete reversing lever maintenance			●
Replace glass-fiber yarn packing of main silencer	●		
Clean and lubricate steering-head bearing and sealing elements		●	
Clean and adjust the carburetor		●	
Treat the electrical contacts and switches with contact spray		●	
Change brake fluid		●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MOOR THAN 5 HOURS OR 500 KM.

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	for cross country use	once a year
Check oil level	●			
Check brake fluid level	●			
Check brake pads for wear	●			
Check lighting system for proper operation	●			
Check horn for proper operation	●			
Lubricate and adjust actuating cables and nipples		●		
Bleed fork legs in regular intervals			●	
Remove and clean dust sleeves in regular intervals			●	
Clean and lubricate chain as necessary		●	●	
Check chain tension	●	●	●	
Clean air filter and filter box (depending on the dirt accumulation)			●	
Check tire pressure and wear	●			
Check coolant level	●			
Check fuel lines for leaks	●			
Drain float chamber		●		
Verify smooth operation of all controls	●			
Check brake performance	●	●		
Treat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●		
Treat steering lock and light switch with contact spray		●		
Check all bolts, nuts, and hose clamps for tight fit				●

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PERIODIC MAINTENANCE SCHEDULE 2003

640 LC4, 640 LC4 SUPERMOTO
640 LC4 ADVENTURE

	A washed motorcycle can be checked more quickly which saves money!	1. Service after 1000 km	2. Service after 5000 km, then every 5000 km or once a year
ENGINE	Change engine oil, oil filter, and fine filter	●	●
	Clean oil screens and magnet of drain plug	●	●
	Check oil lines for damage and kink-less arrangement	●	●
	Check and adjust spark plug, replace it every 10,000 km		●
	Check and adjust valve clearance	●	●
	Check engine fastening bolts for tight fit	●	●
	Make sure all engine bolts accessible from the outside are screwed tight	●	●
CARBURETOR	Check carburetor connection boots for cracks and leaks		●
	Check idle setting	●	●
	Check bleeder hoses for damage and kink-free arrangement	●	●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●	●
	Check radiator fan for proper operation		●
	Check exhaust system for leaks and suspension	●	●
	Check actuating cables for damage, smooth operation, and kink-less arrangement,adjust and lubricate them	●	●
	Clean air filter and air filter box		●
	Check cables for damage and kink-less arrangement		●
	Check headlamp adjustment		●
	Check electrical system for function (low/high beams, stop light, turn indicators,headlamp flasher, tell-tale lamps, speedometer illumination, horn, side-stand switch, clutch switch, emergency-off switch)	●	●
	Make sure all bolts and nuts are tight.	●	●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●	●
	Check brake lines for damage and leaks	●	●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers	●	●
	Check bolts of brake system for tight fit	●	●
CHASSIS	Check suspension strut and fork for leaks and proper operation	●	●
	Check O-ring of suspension strut for wear		●
	Clean fork dust sleeves		●
	Bleed fork legs	●	●
	Check swinging-fork pivot	●	●
	Check/adjust steering-head bearing	●	●
	Lubricate reversing lever		●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●	●
WHEELS	Check spoke tension and rim joint	●	●
	Check tire condition and inflation pressure	●	●
	Check chain and chain guides for wear, force fit and tension.	●	●
	Check bolts on pinion and chain sprocket for locking devices and a tight fit.	●	●
	Lubricate chain	●	●
	Check wheel bearings and jerk damper for play		●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance	●	
Perform complete suspension strut maintenance		●
Perform complete reversing lever maintenance		●
Clean and lubricate steering-head bearing and sealing elements	●	
Clean and adjust the carburetor	●	
Treat the electrical contacts and switches with contact spray	●	
Treat battery connections with contact grease	●	
Change the brake fluid	●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MOOR THAN 500 KM.

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	for cross country use	once a year
Check oil level	●			
Check brake fluid level	●			
Check brake pads for wear	●			
Check lighting system for proper operation	●			
Check horn for proper operation	●			
Lubricate and adjust actuating cables and nipples		●		
Bleed fork legs in regular intervals			●	
Remove and clean fork dust sleeves in regular intervals			●	
Clean and lubricate chain as necessary		●	●	
Check chain tension	●	●	●	
Clean air filter and filter box (depending on the dirt accumulation)			●	
Check tire pressure and wear	●			
Check coolant level	●			
Check fuel lines for leaks	●			
Drain float chamber		●		
Check all control elements for smooth running.	●			
Check brake performance	●	●		
Treat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●		
Treat ignition/steering lock and light switch with contact spray		●		
Check all bolts, nuts, and hose clamps for their tight fit				●

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PERIODIC MAINTENANCE SCHEDULE 2003

640 Duke

	A washed motorcycle can be checked more quickly which saves money!	1st Service after 1000 km	2nd Service after 5000 km, then every 5000 km or once a year
ENGINE	Change engine oil, oil filters, and fine filter	●	●
	Clean oil screens and magnet of drain plug	●	●
	Check oil lines for damage and kink-less arrangement	●	●
	Check and adjust spark plug, replace it every 10,000 km		●
	Check and adjust valve clearance	●	●
	Check engine fastening bolts for tight fit	●	●
CARBUTATOR	Check carburetor connection boots for cracks and leaks		●
	Check idle setting	●	●
	Check bleeder hoses for damage and kink-free arrangement	●	●
ADD-ON-PARTS	Check cooling system for leaks, antifreeze protection	●	●
	Check radiator fan for proper function		●
	Check exhaust system for leaks and suspension	●	●
	Check actuating cables for damage, smooth operation, and kink-less arrangement, adjust and lubricate	●	●
	Clean air filter and air filter box		●
	Check cables for damage and kink-less arrangement		●
	Check headlamp adjustment		●
	Check electrical system for function (low/high beams, stop light, turn indicators, headlamp flasher, tell-tale lamps, speedometer illumination, horn, side-stand switch, clutch switch, emergency-off switch)	●	●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●	●
	Check brake lines for damage and leaks	●	●
	Check/adjust smooth operation, free travel of handbrake/foot brake levers		●
	Check bolts of brake system for tight fit	●	●
CHASSIS	Check suspension strut and fork for leaks and proper function	●	●
	Check O-ring of suspension strut for wear		●
	Clean dust sleeves		●
	Bleed fork legs	●	●
	Check swinging-fork pivot	●	●
	Check/adjust steering-head bearing	●	●
	Service eccentric for chain tension		●
	Lubricate reversing lever		●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, suspension strut)	●	●
WHEELS	Check tire condition, inflation pressure, and rim condition	●	●
	Check chain, chain wheels, chain wheel guides for wear, tight fit, and tension	●	●
	Lubricate chain	●	●
	Check wheel bearings and jerk damper for play		●

IMPORTANT RECOMMENDED MAINTENANCE PROCEDURES TO BE PERFORMED BASED ON A SEPARATE SUPPLEMENTARY ORDER

	at least once a year	every 2 years or 20000 km
Perform complete fork maintenance	●	
Perform complete suspension strut maintenance		●
Perform complete reversing lever maintenance		●
Replace glass-fiber yarn packing of the silencers		●
Clean and lubricate steering-head bearing and sealing elements	●	
Clean and adjust the carburetor	●	
Treat the electrical contacts and switches with contact spray	●	
Treat battery connections with contact grease	●	
Change the brake fluid	●	

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!

SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MORE THAN 500 KM!

MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

VITAL CHECKS AND CARE PROCEDURES TO BE CONDUCTED BY THE OWNER OR THE MECHANIC

	before each start	after every cleaning	once a year
Check oil level	●		
Check brake fluid level	●		
Check brake pads for wear	●		
Check lighting system for proper operation	●		
Check horn for proper operation	●		
Lubricate and adjust actuating cables and nipples		●	
Bleed fork legs in regular intervals			●
Remove and clean fork dust sleeves in regular intervals			●
Clean and lubricate chain as necessary		●	
Check chain tension	●	●	
Clean air filter and filter box			●
Check tire pressure and wear	●		
Check coolant level	●		
Check fuel lines for leaks	●		
Drain float chamber		●	
Check all control elements for smooth running.	●		
Check brake performance	●	●	
Treat exposed metal components (except for the braking and exhaust systems) with wax-based anti-corrosion agents		●	
Treat ignition/steering lock and light switch with contact spray		●	
Check all bolts, nuts, and hose clamps for their tight fit			●

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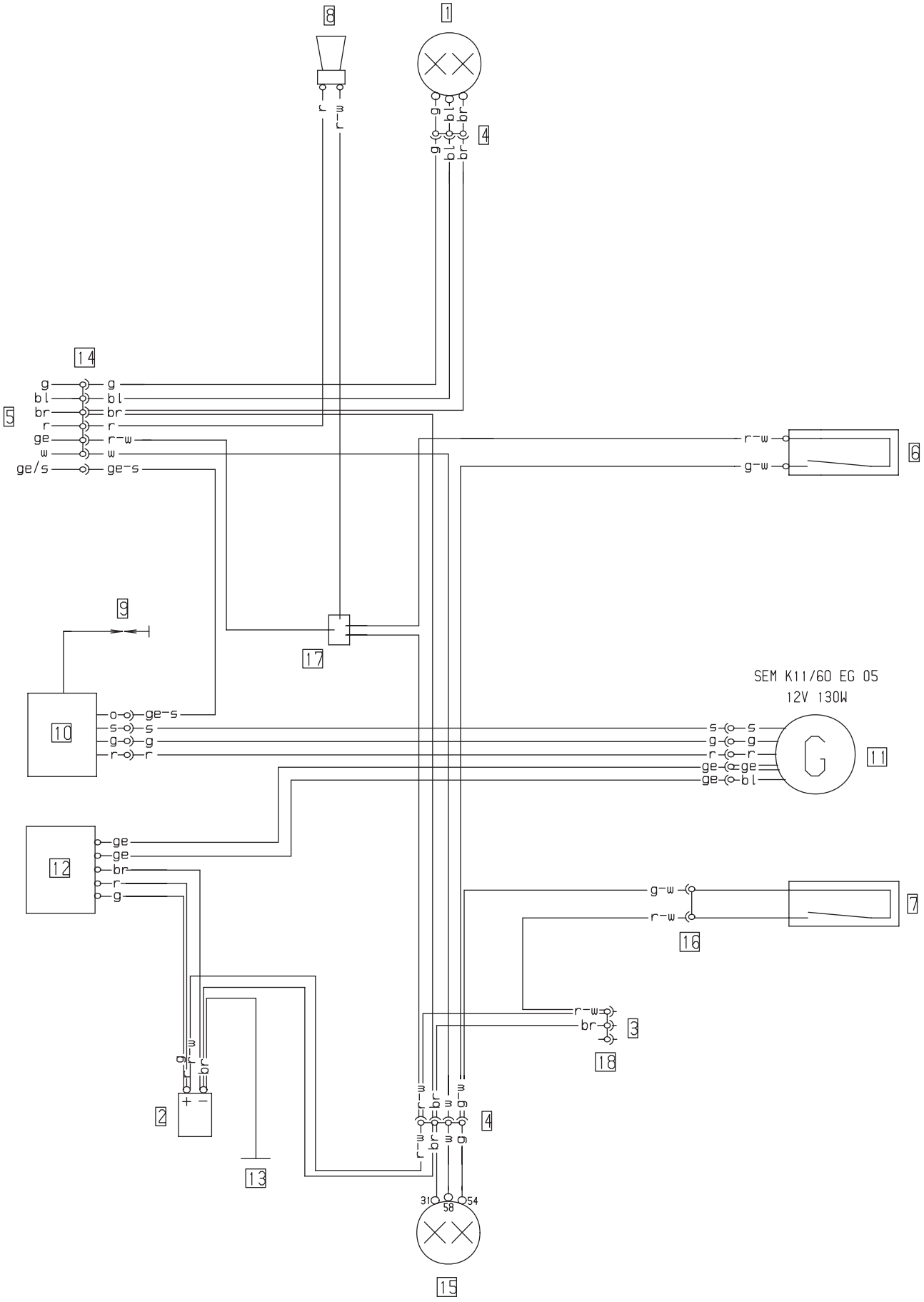
SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/540 SXC '98	vorne 583 11 176 500 hinten 583 11 176 100	Diverse	27 08 97 KE	vo 400/620 SC '98 hi ACERBIS '95



KTM 400/540 SXC 1998

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Kondensator	2 capacitor	2 condensatore	2 condensateur
3 Anschluß f Blinker	3 connector to blinker	3 connettore lampeg	3 nonnect clignateur
4 4-pol Stecker	4 multip cont plug (4)	4 connettore a 4 poli	4 connect multiple (4)
5 zum Kombischalter	5 to combinat switch	5 multicomando	5 commodo
6 Bremslichtsch vo	6 stoplight switch f	6 int luce arresto ant	6 contact de stop av
7 Bremslichtsch hi	7 stoplight switch r	7 int luce arresto post	7 contact Harr de stop
8 Horn	8 horn	8 clacson	8 klaxon
9 Zündkerze	9 spark plug	9 candela	9 bougie
10 Zündspule	10 ignition coil	10 bobina d'accens	10 bobine d'allumage
11 Generator	11 generator	11 dinamo	11 generateur
12 Spannungsregler	12 voltage regulator	12 regol di tens	12 regulateur
13 Masseanschluß	13 ground connection	13 collegam di masse	13 masse
14 6-pol Stecker	14 multip cont plug (6)	14 connettore a 6 poli	14 connect multiple (6)
15 Brems-Schlußlicht	15 rear-stoplight	15 fanal post di freno	15 feu arr et de stop
16 2-pol Stecker	16 multip cont plug (2)	16 connettore a 2 poli	16 connect multiple (2)
17 Parallelverbinder	17 parallel connector	17 parallelo composto	17 parallele connecteur
18 3-pol Stecker	18 multip cont plug (3)	18 connettore a 3 poli	18 connect multiple (3)

Spanisch
1 faro
2 condensador
3 conector intermitente
4 conector multiple (4)
5 interruptor combinado
6 interr luz de freno del
7 interr luz de fren tras
8 claxon
9 bujia
10 bobina de encendido
11 generador
12 regulador de tension
13 conector a masa
14 conector multiple (6)
15 luz de freno trasero
16 conector multiple (2)
17 parallele connecteur
18 conector multiple (3)

Kontaktbelegung –
Lichtschalter (Typ CEV 9610)

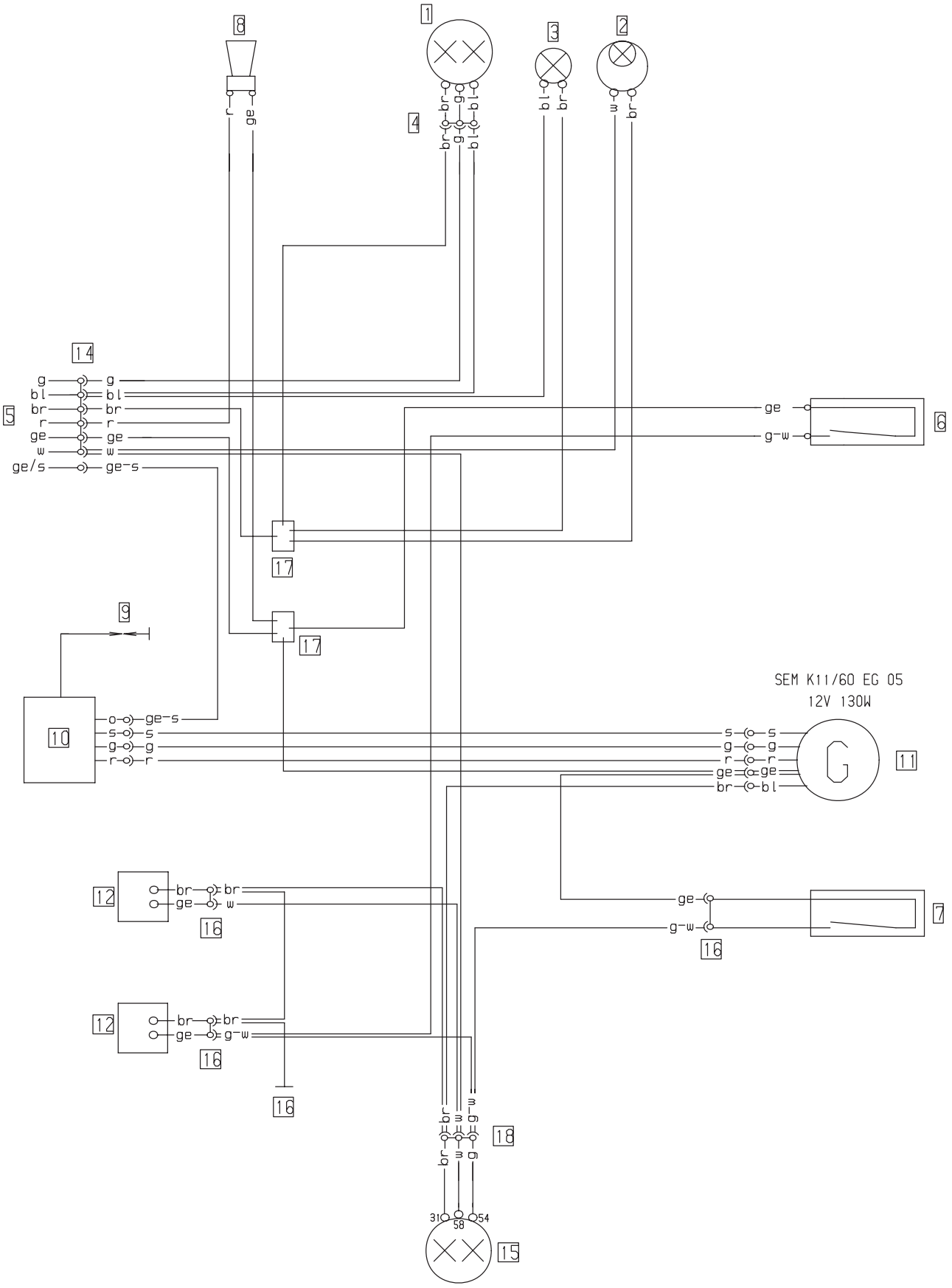
	g	bl	ge	w	ge /s	r	br
LICHT o							
Abblendl	●		●	●			
Fernlicht		●	●	●			
HUPE						●	●
ZÜNDUNG AUS					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	●
⇨	●	●	

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	Wettbewerb 400/620 SC '98	vorne 583 11 175 400 hinten 583 11 276 000		27 08 97 KE	vo 400/620 SC/Wb '98 hi SUPCOM '93



KTM 400/620 Super Competition (Wettbewerb) 1998

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Tachobeleuchtung	2 speedometer light	2 luce di tachimetro	2 eclair comp vitesse
3 Fernlichtkontrolle	3 high beam indicator	3 spia abbagliante	3 temoin feu route
4 4-pol Stecker	4 multip cont plug (4)	4 connettore a 4 poli	4 connect multiple (4)
5 zum Kombischalter	5 to combinat switch	5 multicomando	5 commodo
6 Bremslichtsch vo	6 stoplight switch f	6 int luce arresto ant	6 contact de stop av
7 Bremslichtsch hi	7 stoplight switch r	7 int luce arresto post	7 contact Harr de stop
8 Horn	8 horn	8 clacson	8 klaxon
9 Zündkerze	9 spark plug	9 candela	9 bougie
10 Zündspule	10 ignition coil	10 bobina d'accens	10 bobine d'allumage
11 Generator	11 generator	11 dinamo	11 generateur
12 Spannungsregler	12 voltage regulator	12 regol di tens	12 regulateur
13 Masseanschluß	13 ground connection	13 collegam di masse	13 masse
14 6-pol Stecker	14 multip cont plug (6)	14 connettore a 6 poli	14 connect multiple (6)
15 Brems-Schlußlicht	15 rear-stoplight	15 fanal post di freno	15 feu arr et de stop
16 2-pol Stecker	16 multip cont plug (2)	16 connettore a 2 poli	16 connect multiple (2)
17 Parallelverbinder	17 parallel connector	17 parallelo composto	17 parallele connecteur
18 3-pol Stecker	18 multip cont plug (3)	18 connettore a 3 poli	18 connect multiple (3)

Spanisch
1 faro
2 luz tacometro
3 lampara aviso luces largas
4 conector multiple (4)
5 interruptor combinado
6 interr luz de freno del
7 interr luz de fren tras
8 claxon
9 bujia
10 bobina de encendido
11 generador
12 regulador de tension
13 conector a masa
14 conector multiple (6)
15 luz de freno trasero
16 conector multiple (2)
17 parallele connecteur
18 conector multiple (3)

Kontaktbelegung –
Lichtschalter (Typ CEV 9610)

	g	bl	ge	w	ge /s	r	br
LICHT o							
Abblendl	●		●	●			
Fernlicht		●	●	●			
HUPE						●	●
ZÜNDUNG AUS					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	
⇨	●		

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

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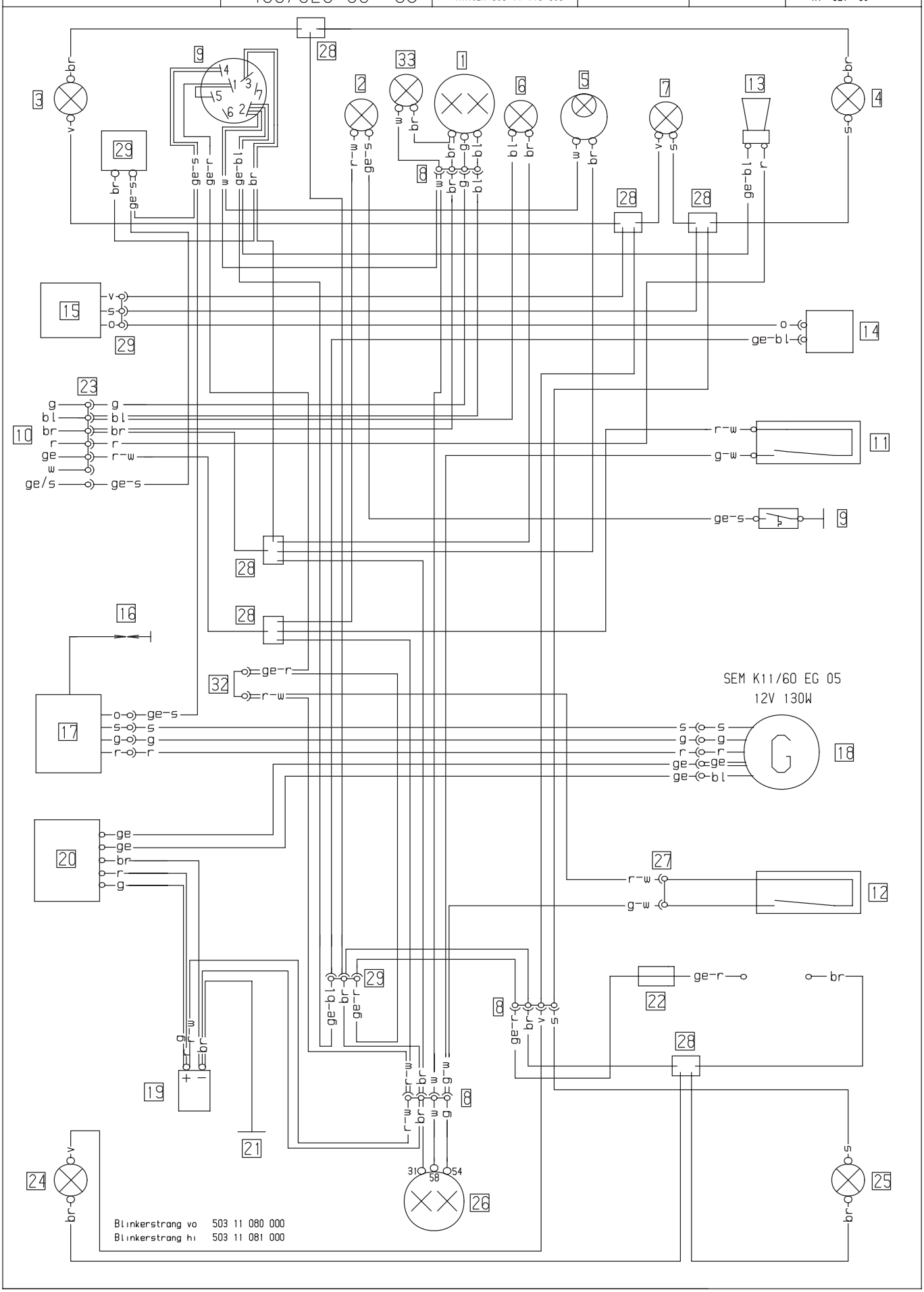
SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/620 SC '98	vorne 583 11 175 600 hinten 583 11 176 000	AUSTRALIEN	27 08 97 KE	vo SC Australien'98 hi CEV '95



KTM 400/620 Super Competition 1998

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Temperaturkontrolle	2 temperature control	2 indicazione tempera	2 temoin de temp
3 Blinker li vo	3 turn indic left fr	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 turn indic right fr	4 lampegg ant dx	4 clignoteur av droit
5 Tachobeleuchtung	5 speedometer light	5 luce di tachimetro	5 eclair comp vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 4-pol Stecker	8 multip cont plug (4)	8 connettore a 4 poli	8 connect multiple (4)
9 Thermoschalter	9 temperature switch	9 interr temperatura	9 contact de temp
10 zum Kombischalter	10 to combinat switch	10 multicomando	10 commodo
11 Bremslichtsch vo	11 stoplight switch f	11 int luce arresto ant	11 contact de stop av
12 Bremslichtsch hi	12 stoplight switch r	12 int luce arresto post	12 contact Harr de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett di lampeg	14 centrale clignot
15 Blinkerschalter	15 blink switch	15 int lampeggiatori	15 contact d clignateur
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol di tens	20 regulateur
21 Masseanschluß	21 ground connection	21 collegam di masse	21 masse
22 Stecksicherung 10A	22 fuse 10A	22 fusibile 10A	22 fusible 10A
23 6-pol Stecker	23 multip cont plug (6)	23 connettore a 6 poli	23 connect multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 2-pol Stecker	27 multip cont plug (2)	27 connettore a 2 poli	27 connect multiple (2)
28 Parallelverbinder	28 parallel connector	28 parallelo composto	28 parallele connecteur
29 3-pol Stecker	29 multip cont plug (3)	29 connettore a 3 poli	29 connect multiple (3)

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch
1 faro
2 control temperatura
3 interm izquierdo delantero
4 intermitente derecho delantero
5 luz tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (4)
9 interruptor temperatura
10 interruptor combinado
11 interr luz de freno del
12 interr luz de fren tras
13 claxon
14 conjunto del intermintente
15 interuptor clignoteur
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 conector a masa
22 fusible principal 10A
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector multiple (2)
28 parallele connecteur
29 conector multiple (3)

Kontaktbelegung -
Lichtschalter (Typ CEV 9610)

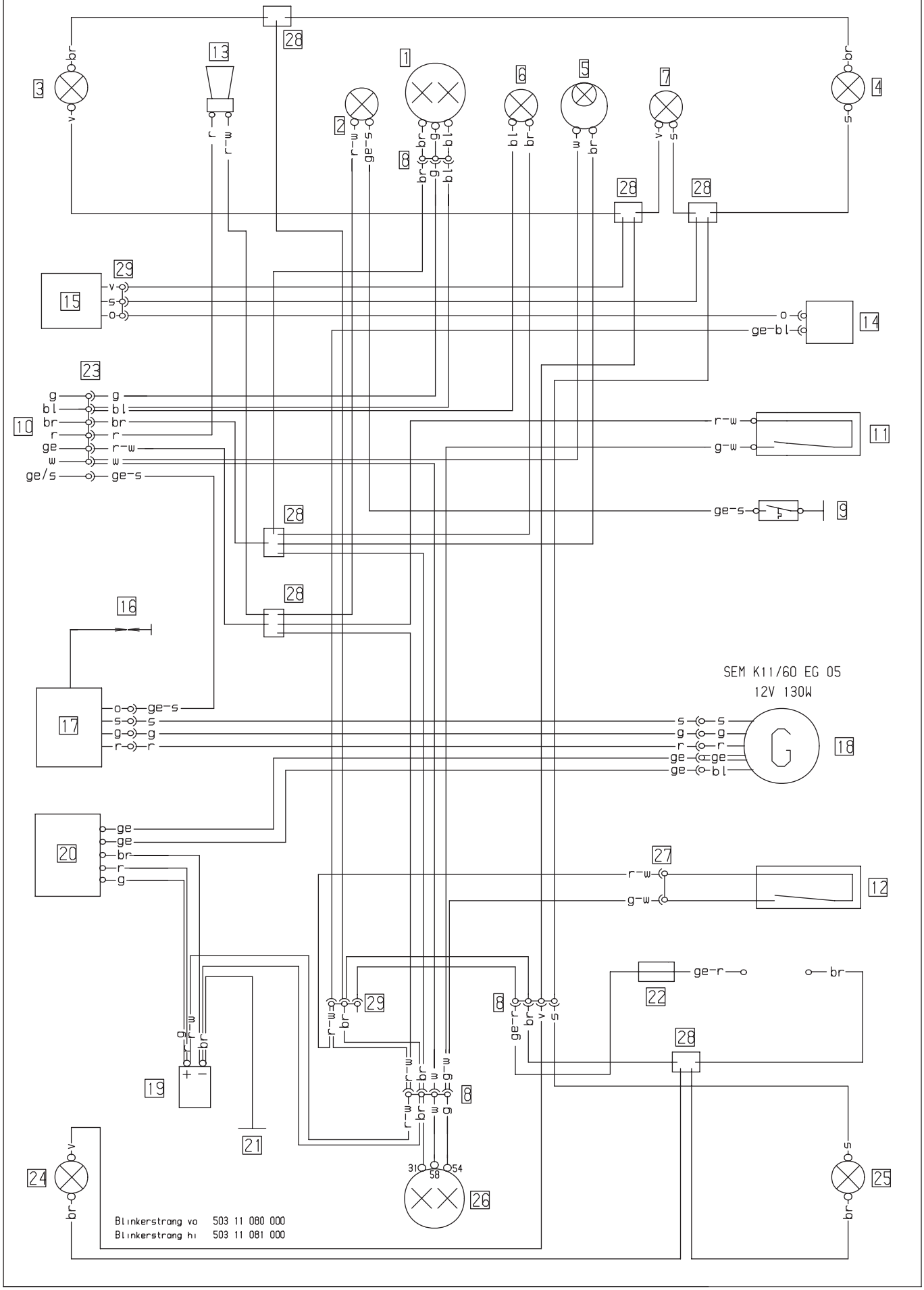
	g	bl	ge	w	ge /s	r	br
LICHT o							
Abblendl	●		●	●			
Fernlicht		●	●	●			
HUPE						●	●
ZÜNDUNG AUS					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	
⇨	●		

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/620 SC '98	vorne 583 11 175 300 hinten 583 11 176 000	BRD	27 08 97 KE	vo 400/620 SC '98 hi CEV '95



KTM 400 / 640 SC 1998

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 CDI	2 CDI	2 CDI	2 CDI
3 Blinker li vo	3 turn indic left fr	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 turn indic right fr	4 lampegg ant dx	4 clignoteur av droit
5 Tachobeleuchtung	5 speedometer light	5 luce di tachimetro	5 eclair comp vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 4-pol Stecker	8 multip cont plug (4)	8 connettore a 4 poli	8 connect multiple (4)
10 zum Kombischalter	10 to combinat switch	10 multicomando	10 commodo
11 Bremslichtsch vo	11 stoplight switch f	11 int luce arresto ant	11 contact de stop av
12 Bremslichtsch hi	12 stoplight switch r	12 int luce arresto post	12 contact Harr de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett di lampeg	14 centrale clignot
15 Blinkerschalter	15 blink switch	15 int lampeggiatori	15 contact d clignateur
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol di tens	20 regulateur
21 Masseanschluß	21 ground connection	21 collegam di masse	21 masse
22 Stecksicherung 10A	22 fuse 10A	22 fusibile 10A	22 fusible 10A
23 6-pol Stecker	23 multip cont plug (6)	23 connettore a 6 poli	23 connect multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 2-pol Stecker	27 multip cont plug (2)	27 connettore a 2 poli	27 connect multiple (2)
29 3-pol Stecker	29 multip cont plug (3)	29 connettore a 3 poli	29 connect multiple (3)

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch
1 faro
2 CDI
3 interm izquierdo delantero
4 intermitente derecho delantero
5 luz tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (4)
10 interruptor combinado
11 interr luz de freno del
12 interr luz de fren tras
13 claxon
14 conjunto del intermintente
15 interuptor clignoteur
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 conector a masa
22 fusible principal 10A
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector multiple (2)
29 conector multiple (3)

Kontaktbelegung -
Lichtschalter (Typ CEV 9610)

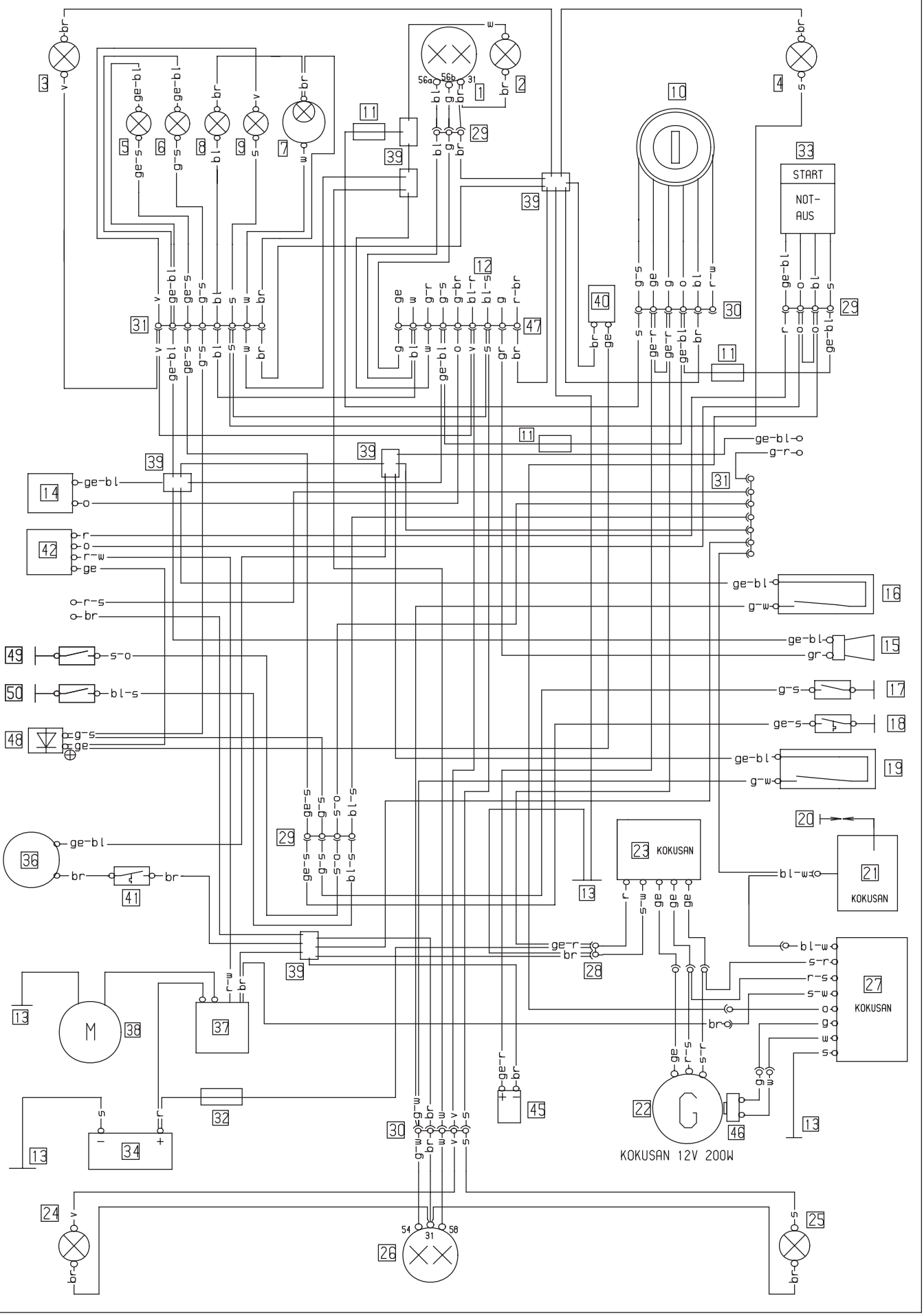
	g	bl	ge	w	ge /s	r	br
LICHT o							
Abblendl	o		o	o			
Fernlicht		o	o	o			
HUPE						o	o
ZÜNDUNG AUS					o		o
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		o	o
⇨	o	o	

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	640 LC4 '99	vorne 584 11 175 100 hinten 584 11 176 100	USA	16 04 98 KE	vo hi



KTM 640 LC4 USA 1999

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 neutral switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Parallelverbinder	39 parallel connector	39 parallelo composto	39 parallele connecteur
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3 Gang	49 gear switch 3rd gear	49 3 secondo marcia	49 cont d boite d vites (3)
50 Kontaktstift 2 Gang	48 gear switch 2th gear	50 2 secondo marcia	50 cont d bolte d vites (2)

Spanisch

1 faro
2 luz de posicion
3 interm izquierdo delantero
4 intermitente derecho delantero
5 control temperatura
6 indicador punto muerto
7 luz tacometro
8 lampara aviso luces largas
9 lampara aviso intermitentes
10 llave de contacto
11 fusible 10A
12 interruptor combinado
13 conector a masa
14 conjunto del intermitente
15 claxon
16 interruptor
17 interruptor punto muerto
18 interruptor temperatura
19 interruptor luz de frendo tras
20 bujia
21 bobina de encendido
22 generador
23 regulador de tension
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 unidad cdi
28 conecdor multiple (2)
29 conector multiple (4)
30 conector multiple (6)
31 conector multiple (9)
32 fusible principal 20A
33 boton de arranque par de urg
34 bateria 12V 8 Ah
36 ventilador electrica
37 rele de arranque
38 motor de arranque
39 conector paralelo
40 interruptor de embraque
41 interruptor temperatura
42 rele del arranque
45 condensador
46 generado de impulsos
47 conector multiple (12)
48 diodo
49 interruptor de cambio (3)
50 interruptor de cambio (2)

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s	br	v	r–w	bl–s	g	gr	r/ge–s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ●								
H LO		●						●
H HI			●					●
HORN	●					●		
PASSING		●						●

Kontaktbelegung Start- Notaus- Schalter

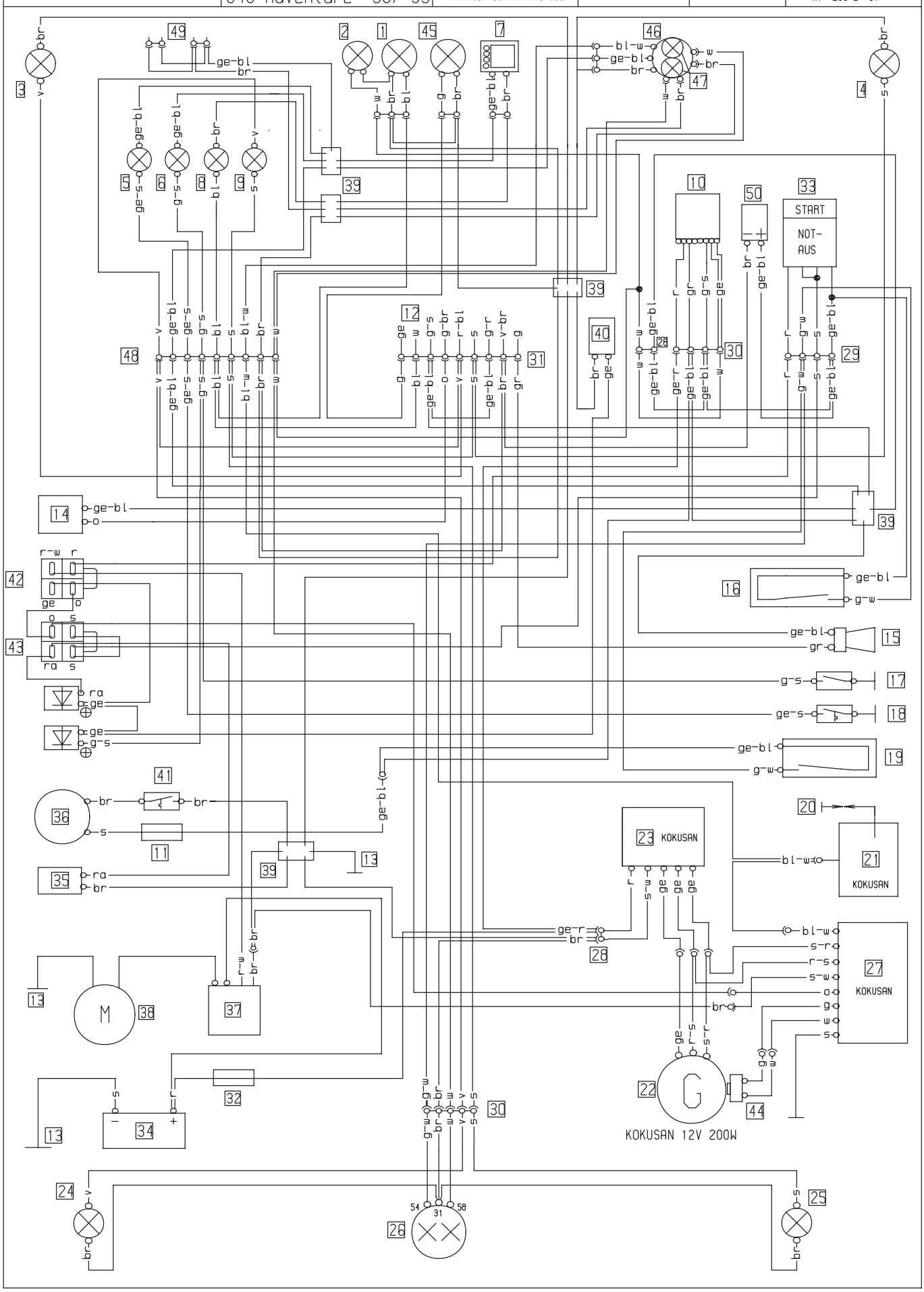
ENGINE \ CEV	o	ge–bl	bl	s
●			●	●
●				
●	●			

Zündschloß (Typ Zadi)

	o	g	ge	g–s	r–w	bl
					●	●
					●	●
●	●					
●	●	●	●			

Art.-Nr. 3.206.006 -E

SERVICE	Modell (Dell'Orto-Vergaser)	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	640 Adventure '98/'99	vorne 582 11 075 100 hinten 584 11 176 000	DIV LÄNDER	18 02 98 KE	vo Adventure '98 hi EGS-E '97



KTM 640 Adventure 1998/1999

(Dell'Orto-Vergaser)

Deutsch	Englisch	Italienisch	Französisch
1 Fernlicht-Scheinwerfer	1 main beam headlight	1 abbagliante	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachometer	7 tachometer	7 tachimetro	7 compteur de vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Lüftersicherung 5A	11 fan fuse 5A	11 fusibile 5A per ventola	11 fusible 5A pour ventil
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 neutral switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 10A	32 mainfuse 10A	32 fusibile principale 10A	32 fusible principal 10A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 Seitenständerschalter	35 sidestand switch	35 int del cavalleto later	35 commut de bequille later
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Parallelverbinder	39 parallel connector	39 parallelo composto	39 parallele connecteur
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Seitenständerrelaise	43 sidestand relay	43 rele del cavalleto later	43 relaise com de bequ lat
44 Impulsgeber	44 pulser coil	44 trasmettitore d'impulsi	43 capteur
45 Abblendlicht	45 low beam	45 anabbaglianti	45 feu de croisement
46 Drehzahlmesser	46 tachometer	46 contagiri	46 compte-tours
47 Drehzahlmesserbel	47 tachometer light	47 luce di contagiri	47 eclair compte-tours
48 12-pol Stecher	48 multip cont plug (12)	48 connettore a 12 poli	48 connect multiple (12)
49 Roadbookverorgung	49 roadbook-energie	49 roadbook-energia	49 roadbook-energie
50 Kondensator	50 capacitor	50 condensatore	50 condensateur

Spanisch

1 faro	18 interruptor temperatura	35 int del caballete lateral
2 luz de posicion	19 interruptor luz de frendo tras	36 ventilador electrica
3 interm izquierdo delantero	20 bujia	37 rele de arranque
4 intermitente derecho delantero	21 bobina de encendido	38 motor de arranque
5 control temperatura	22 generador	39 conector paralelo
6 indicador punto muerto	23 regulador de tension	40 interruptor de embraque
7 tacometro	24 intermitente izquierdo trasero	41 interruptor temperatura
8 lampara aviso luces largas	25 intermitente derecho trasero	42 rele del arranque
9 lampara aviso intermitentes	26 luz de freno trasero	43 rele del caballette lateral
10 llave de contacto	27 unidad cdi	44 generado de impulsos
11 fusible del ventilador 5A	28 conecdor multiple (2)	45 luces de crule
12 interruptor combinado	29 conector multiple (4)	46 cuentarreveluciones
13 conector a masa	30 conector multiple (6)	47 luz del cuentarrevolucion
14 conjunto del intermitente	31 conector multiple (9)	48 conector multiple (12)
15 claxon	32 fusible principal 10A	49 roadbook-energia
16 interruptor	33 boton de arranque par de urg	50 condensador
17 interruptor punto muerto	34 bateria 12V 8 Ah	

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Start- Notaus- Schalter

	CEV	s	r	ge-bl	s
ENGINE					
				●	●
	⊗				
	⚷	●	●		

Zündschloß (Typ Zadi)

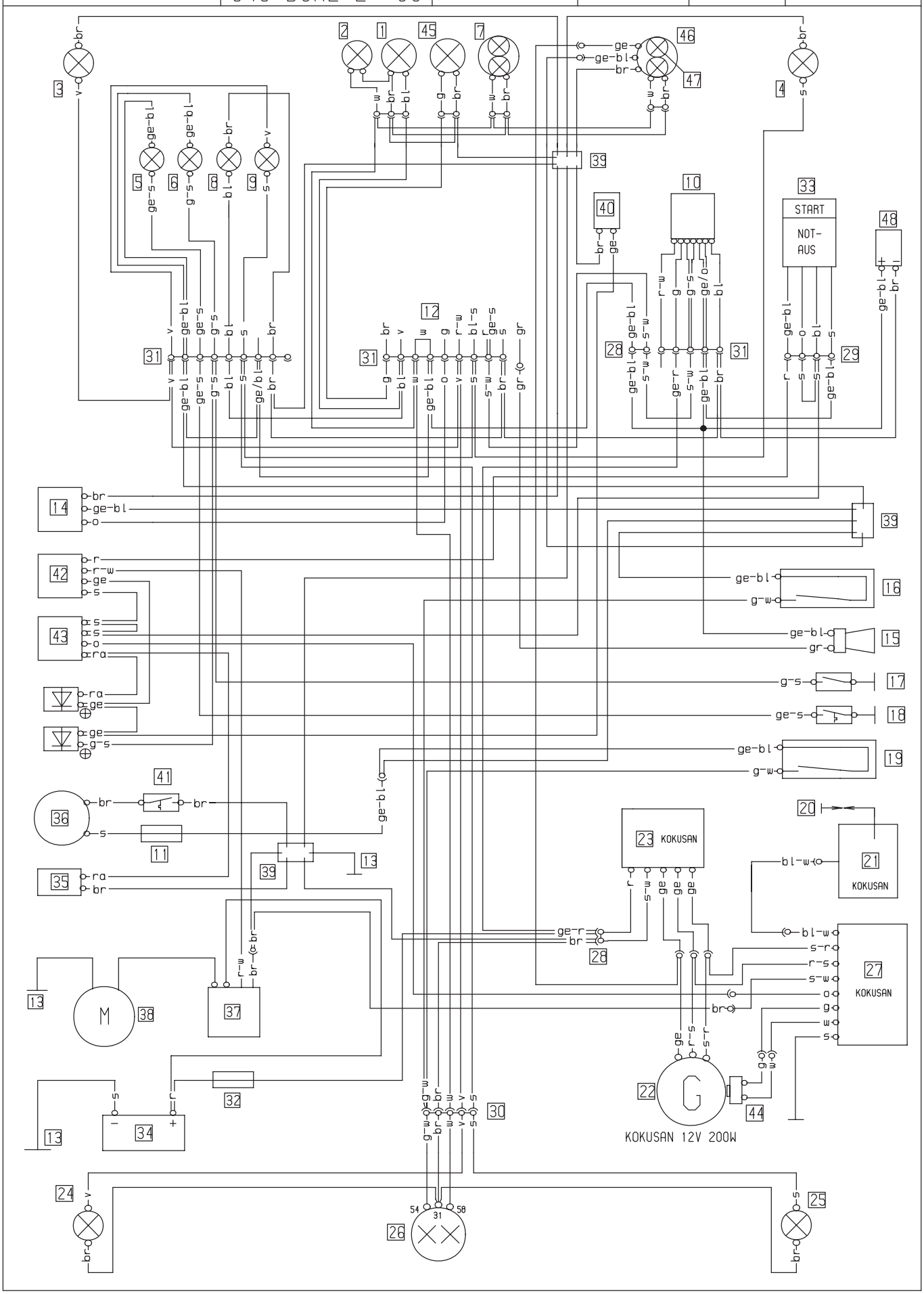
	ge	gr	g-s	r	bl	
	●	●	●			
⊗				●	●	
				●	●	
P≤	●			●	●	●

Kombischalter (Typ CEV 100826000)

	s-bl	g-br	v-br	r-bl	g-s	g	g-r	ge	w
TURN L ⇦		●		●					
TURN R ⇨	●								
LIGHTS ○									
H LO							●	●	
H HI							●		●
HORN			●			●			
PASSING					●	●	●		●

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	640 DUKE-E '98	vorne 584 11 075 300 hinten 584 11 176 000	DIV LÄNDER	18 02 98 KE	vo DUKE-E '98 hi EGS-E '97



KTM 640 DUKE-E 1998

Deutsch	Englisch	Italienisch	Französisch
1 Fernlicht-Scheinwerfer	1 main beam headlight	1 abbagliante	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Lüftersicherung 5A	11 fan fuse 5A	11 fusibile 5A per ventola	11 fusible 5A pour ventil
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 neutral switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 10A	32 mainfuse 10A	32 fusibile principale 10A	32 fusible principal 10A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 Seitenständerschalter	35 sidestand switch	35 int del cavalleto later	35 commut de bequille later
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Parallelverbinder	39 parallel connector	39 parallelo composto	39 parallele connecteur
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Seitenständerrelaise	43 sidestand relay	43 rele del cavalleto later	43 relaise com de bequ lat
44 Impulsgeber	44 pulser coil	44 trasmettitore d'impulsi	43 capteur
45 Abblendlicht	45 low beam	45 anabbaglianti	45 feu de croisement
46 Drehzahlmesser	46 tachometer	46 contagiri	46 compte-tours
47 Drehzahlmesserbel	47 tachometer light	47 luce di contagiri	47 eclair compte-tours
48 Kondensator	48 capacitor	48 condensatore	48 condensateur

Spanisch		
1 faro	18 interruptor temperatura	35 int del caballete lateral
2 luz de posicion	19 interruptor luz de frendo tras	36 ventilador electrica
3 interm izquierdo delantero	20 bujia	37 rele de arranque
4 intermitente derecho delantero	21 bobina de encendido	38 motor de arranque
5 control temperatura	22 generador	39 conector paralelo
6 indicador punto muerto	23 regulador de tension	40 interruptor de embraque
7 luz tacometro	24 intermitente izquierdo trasero	41 interruptor temperatura
8 lampara aviso luces largas	25 intermitente derecho trasero	42 rele del arranque
9 lampara aviso intermitentes	26 luz de freno trasero	43 rele del caballette lateral
10 llave de contacto	27 unidad cdi	44 generado de impulsos
11 fusible del ventilador 5A	28 conecdor multiple (2)	45 luces de crule
12 interruptor combinado	29 conector multiple (4)	46 cuentarreveluciones
13 conector a masa	30 conector multiple (6)	47 luz del cuentarrevolucion
14 conjunto del intermitente	31 conector multiple (9)	48 condensador
15 claxon	32 fusible principal 10A	
16 interruptor	33 boton de arranque par de urg	
17 interruptor punto muerto	34 bateria 12V 8 Ah	

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Start- Notaus- Schalter

ENGINE \ CEV	o	ge-bl	bl	s
			●	●
	●			

Zündschloß (Typ Zadi)

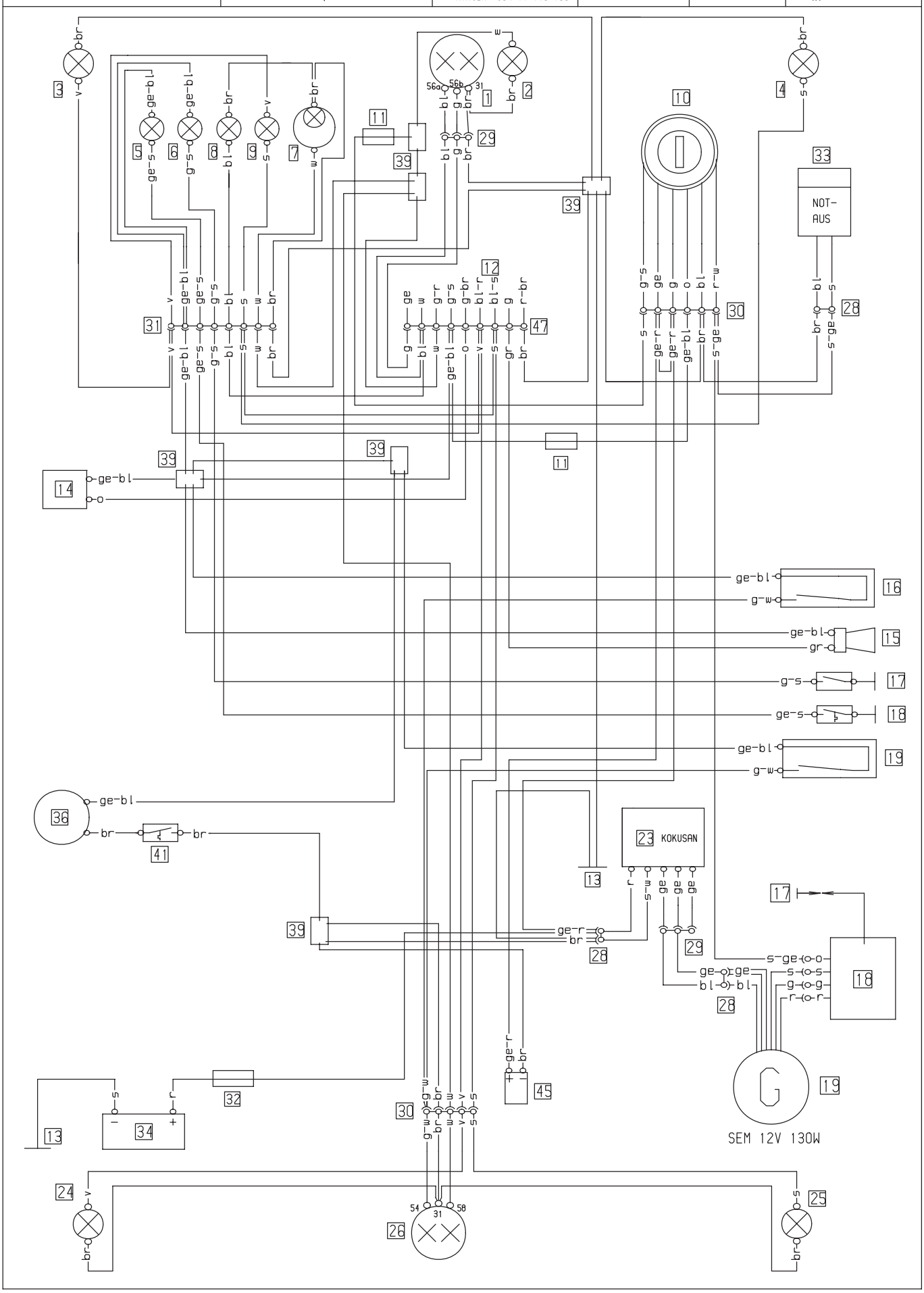
	ge/o	g	g-s	r-w	bl
	●		●		
				●	
				●	
		●		●	

Kombischalter (Typ CEV 100826000)

	s	br	v	r-w	bl-s	g	gr	r/ge-s
TURN L ⇦				●		●		
TURN R ⇨					●			
LIGHTS ○								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●						●

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	620 LC4 Competition '98	vorne 583 11 175 700 hinten 584 11 176 100	DIV LANDER	16 04 98 KE	vo hi



KTM 620 LC4 Competition 1998

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 neutral switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Notausschalter	33 run-off switch	33 disinseritor	33 bouton d'arret d'urgence
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
39 Parallelverbinder	39 parallel connector	39 parallelo composto	39 parallele connecteur
41 Thermoschalter	41 temperature switch	41 interr temperatura	41 contact de temperature
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)

Spanisch

1 faro
2 luz de posicion
3 interm izquierdo delantero
4 intermitente derecho delantero
5 control temperatura
6 indicador punto muerto
7 luz tacometro
8 lampara aviso luces largas
9 lampara aviso intermitentes
10 llave de contacto
11 fusible 10A
12 interruptor combinado
13 conector a masa
14 conjunto del intermitente
15 claxon
16 interruptor
17 interruptor punto muerto
18 interruptor temperatura
19 interruptor luz de frendo tras
20 bujia
21 bobina de encendido
22 generador
23 regulador de tension
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
28 conecdor multiple (2)
29 conector multiple (4)
30 conector multiple (6)
31 conector multiple (9)
32 fusible principal 20A
33 interruptor de parada deemergenc
34 bateria 12V 8 Ah
36 ventilador electrica
39 conector paralelo
41 interruptor temperatura
45 condensador
46 generado de impulsos
47 conector multiple (12)

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s	br	v	r–w	bl–s	g	gr	r/ge–s
TURN L ⇦				●	——	●		
TURN R ⇨					●——			
LIGHTS ○								
H LO		●						●
H HI			●					●
HORN	●					●		
PASSING		●——	●——					●

Kontaktbelegung Notausschalter

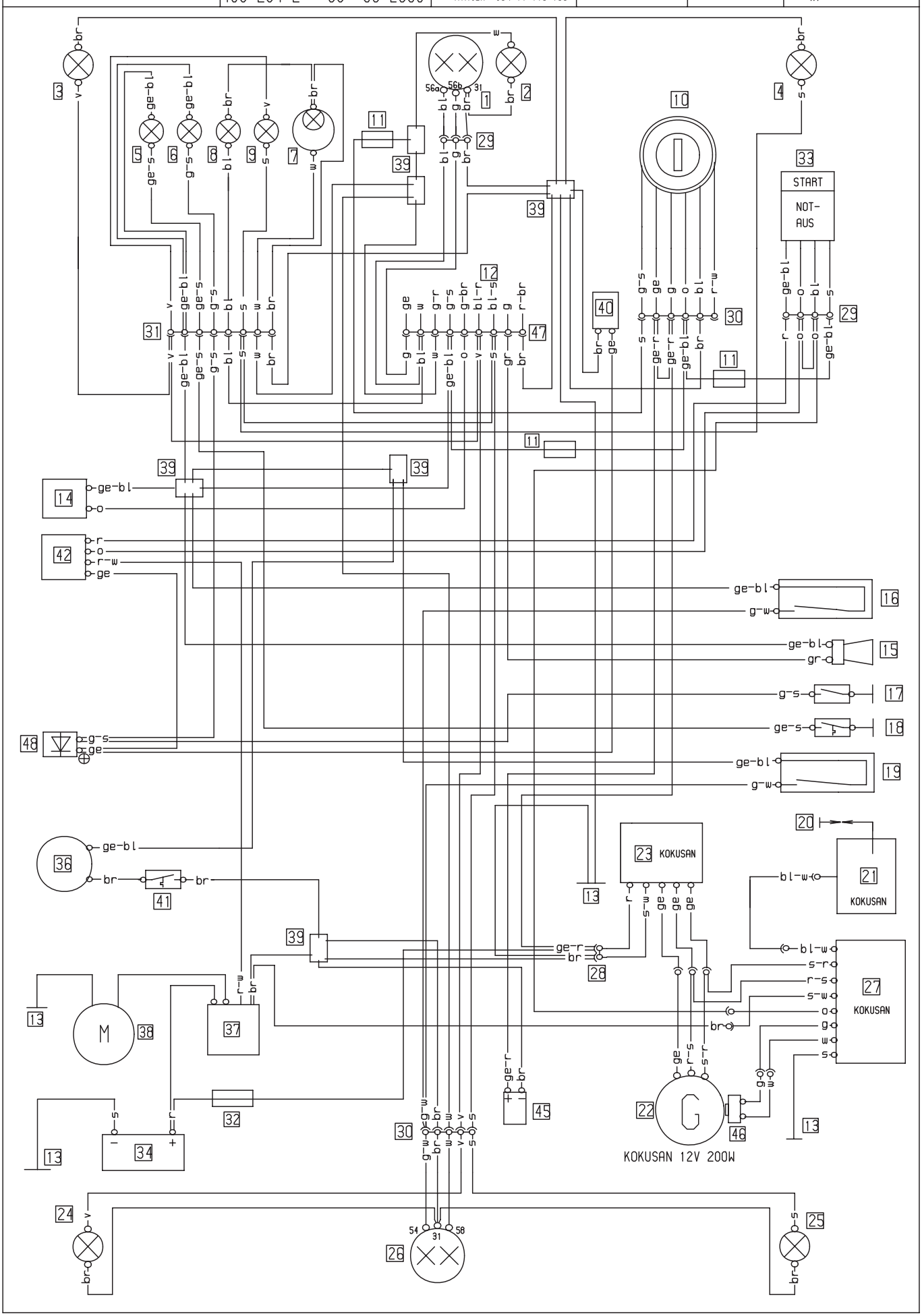
ENGINE \ CEV	bl	s
○	●	—●
⊗		
⚷		

Zündschloß (Typ Zadi)

	o	g	ge	g–s	r–w	bl
🔒					●	—●
⊗					●	—●
○	●—	—●				
☼	●—	—●	●—	—●		

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400 LC4-E '98 '99 2000	vorne 584 11 175 200 hinten 584 11 176 100	DIV LANDER	16 04 98 KE	vo hi



KTM 400 LC4-E - 98 - 99 2000

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 neutral switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Parallelverbinder	39 parallel connector	39 parallelo composto	39 parallele connecteur
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)
48 Diode	48 diode	48 diodo	48 diode

Spanisch		
1 faro	18 interruptor temperatura	36 ventilador electrica
2 luz de posicion	19 interruptor luz de frendo tras	37 rele de arranque
3 interm izquierdo delantero	20 bujia	38 motor de arranque
4 intermitente derecho delantero	21 bobina de encendido	39 conector paralelo
5 control temperatura	22 generador	40 interruptor de embraque
6 indicador punto muerto	23 regulador de tension	41 interruptor temperatura
7 luz tacometro	24 intermitente izquierdo trasero	42 rele del arranque
8 lampara aviso luces largas	25 intermitente derecho trasero	45 condensador
9 lampara aviso intermitentes	26 luz de freno trasero	46 generado de impulsos
10 llave de contacto	27 unidad cdi	47 conector multiple (12)
11 fusible 10A	28 conecdor multiple (2)	48 diodo
12 interruptor combinado	29 conector multiple (4)	
13 conector a masa	30 conector multiple (6)	
14 conjunto del intermitente	31 conector multiple (9)	
15 claxon	32 fusible principal 20A	
16 interruptor	33 boton de arranque par de urg	
17 interruptor punto muerto	34 bateria 12V 8 Ah	

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s	br	v	r–w	bl–s	g	gr	r/ge–s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ○								
H LO		●						●
H HI			●					●
HORN	●					●		
PASSING		●	●					●

Kontaktbelegung Start- Notaus- Schalter

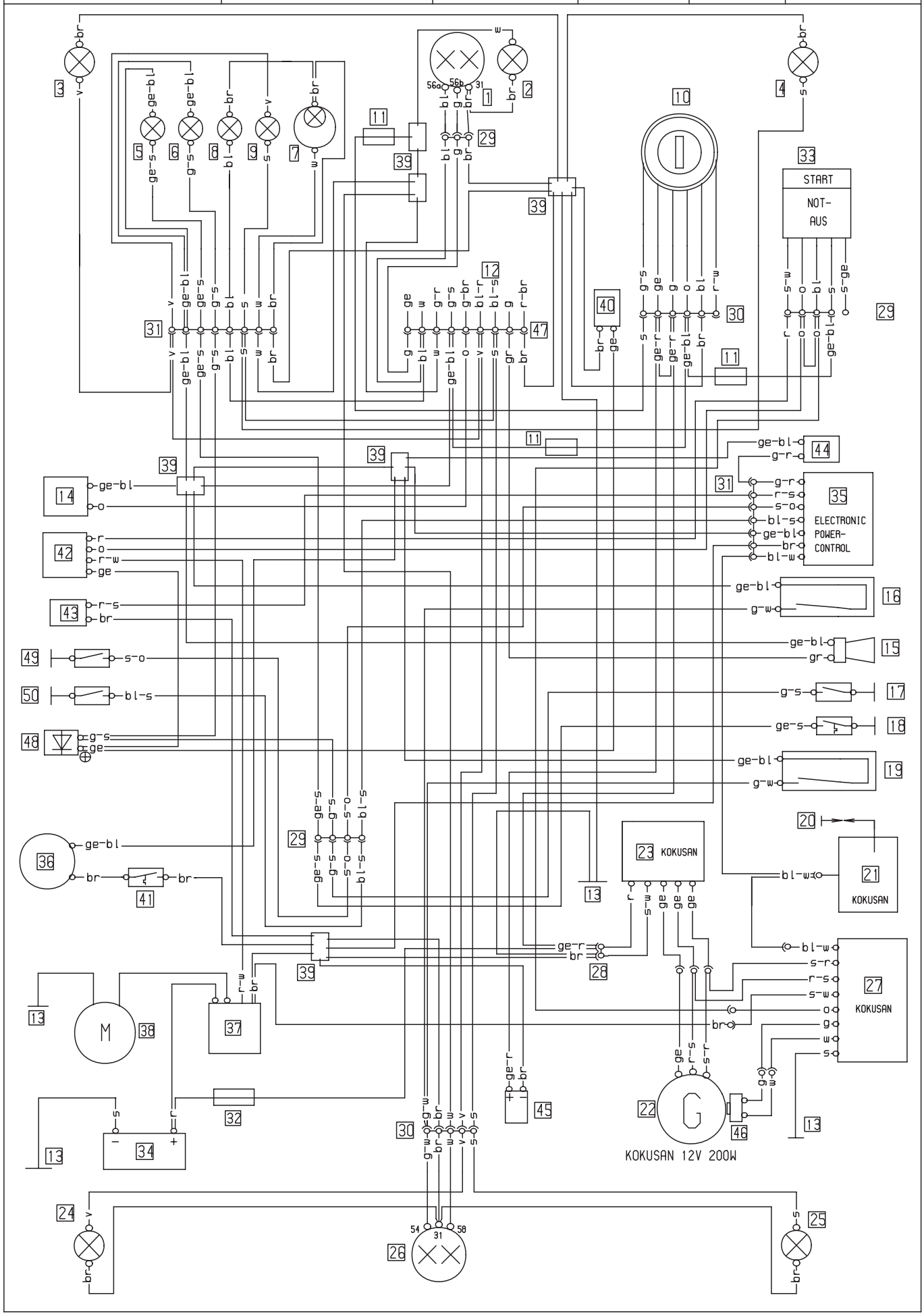
ENGINE \ CEV	o	ge–bl	bl	s
↺			●	●
⊠				
⚷	●	●		

Zündschloß (Typ Zadi)

	o	g	ge	g–s	r–w	bl
⛽					●	●
⊠					●	●
↺	●	●				
☼	●	●	●			

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	640 LC4-E '2000	vorne 584 11 175 100 hinten 584 11 176 100	DIV LANDER	16 04 98 KE	vo hi



KTM 640 LC4-E 2000

Art.-Nr. 3.206.006 -E

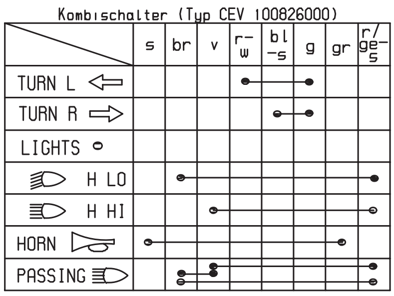
Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 EPC	35 EPC	35 EPC	35 EPC
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3 Gang	49 gear switch 3rd gear	49 3 secondo marcia	49 cont d boite d vites (3)
50 Kontaktstift 2 Gang	48 gear switch 2th gear	50 2 secondo marcia	50 cont d bolte d vites (2)

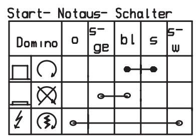
Spanisch

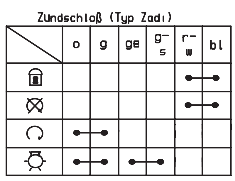
1 faro	18 interruptor temperatura	35 EPC
2 luz de posicion	19 interruptor luz de frendo tras	36 ventilador electrica
3 interm izquierdo delantero	20 bujia	37 rele de arranque
4 intermitente derecho delantero	21 bobina de encendido	38 motor de arranque
5 control temperatura	22 generador	
6 indicador punto muerto	23 regulador de tension	40 interruptor de embraque
7 luz tacometro	24 intermitente izquierdo trasero	41 interruptor temperatura
8 lampara aviso luces largas	25 intermitente derecho trasero	42 rele del arranque
9 lampara aviso intermitentes	26 luz de freno trasero	43 interruptor de carburador
10 llave de contacto	27 unidad cdi	44 valvola magnetica
11 fusible 10A	28 conecdor multiple (2)	45 condensador
12 interruptor combinado	29 conector multiple (4)	46 generado de impulsos
13 conector a masa	30 conector multiple (6)	47 conector multiple (12)
14 conjunto del intermitente	31 conector multiple (9)	48 diodo
15 claxon	32 fusible principal 20A	49 interruptor de cambio (3)
16 interruptor	33 boton de arranque par de urg	50 interruptor de cambio (2)
17 interruptor punto muerto	34 bateria 12V 8 Ah	

Repair manual KTM LC4

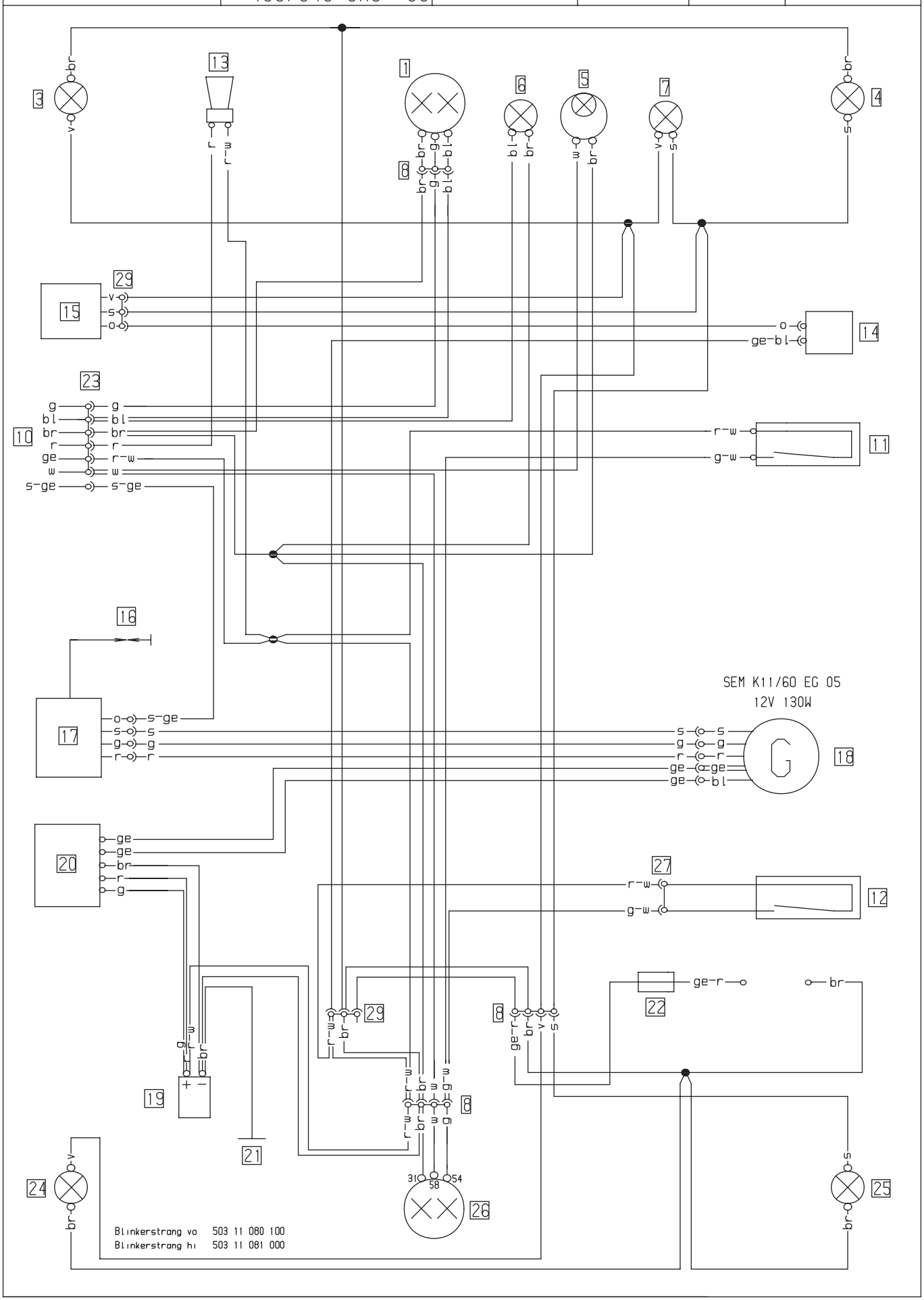
Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco







KTM SPORTMOTORCYCLES SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/540 SXC '99	vorne 583 11 175 900 hinten 583 11 176 100	DIV	13 11 98 KE	vo 400/540 SXC '99 hi Acerbis'95



KTM 400/540 SXC 1999

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Temperaturkontrolle	2 temperature control	2 indicazione tempera	2 temoin de temp
3 Blinker li vo	3 turn indic left fr	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 turn indic right fr	4 lampegg ant dx	4 clignoteur av droit
5 Tachobeleuchtung	5 speedometer light	5 luce di tachimetro	5 eclair comp vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 4-pol Stecker	8 multip cont plug (4)	8 connettore a 4 poli	8 connect multiple (4)
9 Thermoschalter	9 temperature switch	9 interr temperatura	9 contact de temp
10 zum Kombischalter	10 to combinat switch	10 multicomando	10 commodo
11 Bremslichtsch vo	11 stoplight switch f	11 int luce arresto ant	11 contact de stop av
12 Bremslichtsch hi	12 stoplight switch r	12 int luce arresto post	12 contact Harr de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett di lampeg	14 centrale clignot
15 Blinkerschalter	15 blink switch	15 int lampeggiatori	15 contact d clignateur
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol di tens	20 regulateur
21 Masseanschluß	21 ground connection	21 collegam di masse	21 masse
22 Stecksicherung 10A	22 fuse 10A	22 fusibile 10A	22 fusible 10A
23 6-pol Stecker	23 multip cont plug (6)	23 connettore a 6 poli	23 connect multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 2-pol Stecker	27 multip cont plug (2)	27 connettore a 2 poli	27 connect multiple (2)
28 Parallelverbinder	28 parallel connector	28 parallelo composto	28 parallele connecteur
29 3-pol Stecker	29 multip cont plug (3)	29 connettore a 3 poli	29 connect multiple (3)

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch
1 faro
2 control temperatura
3 interm izquierdo delantero
4 intermitente derecho delantero
5 luz tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (4)
9 interruptor temperatura
10 interruptor combinado
11 interr luz de freno del
12 interr luz de fren tras
13 claxon
14 conjunto del intermintente
15 interuptor clignoteur
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 conector a masa
22 fusible principal 10A
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector multiple (2)
28 parallele connecteur
29 conector multiple (3)

Kontaktbelegung –
Lichtschalter (Typ CEV 9610)

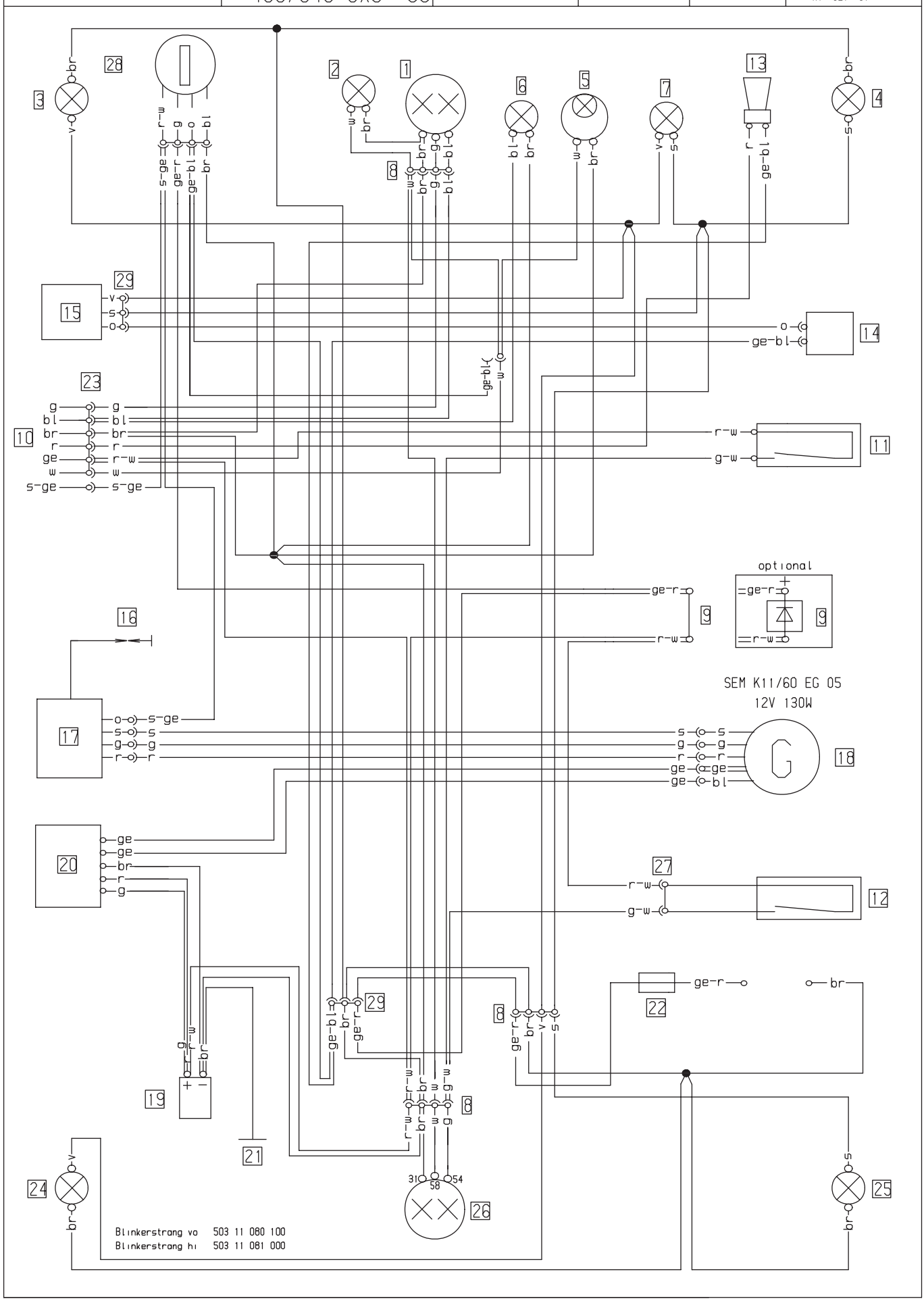
	g	bl	ge	w	ge /s	r	br
LICHT o							
Abblendl	●		●	●			
Fernlicht		●	●	●			
HUPE						●	●
ZÜNDUNG AUS					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	●
⇨	●		

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/540 SXC '99	vorne 583 11 175 800 hinten 583 11 176 000	Australien	17 11 98 KE	vo 400/540 SXC '99 hi CEV '97



KTM 400/540 SXC 1999 (Australien)

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu-position
3 Blinker li vo	3 turn indic left fr	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 turn indic right fr	4 lampegg ant dx	4 clignoteur av droit
5 Tachobeleuchtung	5 speedometer light	5 luce di tachimetro	5 eclair comp vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 4-pol Stecker	8 multip cont plug (4)	8 connettore a 4 poli	8 connect multiple (4)
9 Kabelbrücke (Diode)	9 wirebridge (diode)	9 collegamento (diodo)	9 conn d'cables(diode)
10 zum Kombischalter	10 to combinat switch	10 multicomando	10 commodo
11 Bremslichtsch vo	11 stoplight switch f	11 int luce arresto ant	11 contact de stop av
12 Bremslichtsch hi	12 stoplight switch r	12 int luce arresto post	12 contact Harr de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett di lampeg	14 centrale clignot
15 Blinkerschalter	15 blink switch	15 int lampeggiatori	15 contact d clignateur
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol di tens	20 regulateur
21 Masseanschluß	21 ground connection	21 collegam di masse	21 masse
22 Stecksicherung 10A	22 fuse 10A	22 fusibile 10A	22 fusible 10A
23 6-pol Stecker	23 multip cont plug (6)	23 connettore a 6 poli	23 connect multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 2-pol Stecker	27 multip cont plug (2)	27 connettore a 2 poli	27 connect multiple (2)
28 Zündschloß	28 ignition lock	28 interr di accensione	28 contacteur
29 3-pol Stecker	29 multip cont plug (3)	29 connettore a 3 poli	29 connect multiple (3)

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch
1 faro
2 luces de posicion
3 interm izquierdo delantero
4 intermitente derecho delantero
5 luz tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (4)
9 enlace por cable (diodo)
10 interruptor combinado
11 interr luz de freno del
12 interr luz de fren tras
13 claxon
14 conjunto del intermintente
15 interuptor clignoteur
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 conector a masa
22 fusible principal 10A
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector multiple (2)
28 cerradura de encendido
29 conector multiple (3)

Kontaktbelegung –
Lichtschalter (Typ CEV 9610)

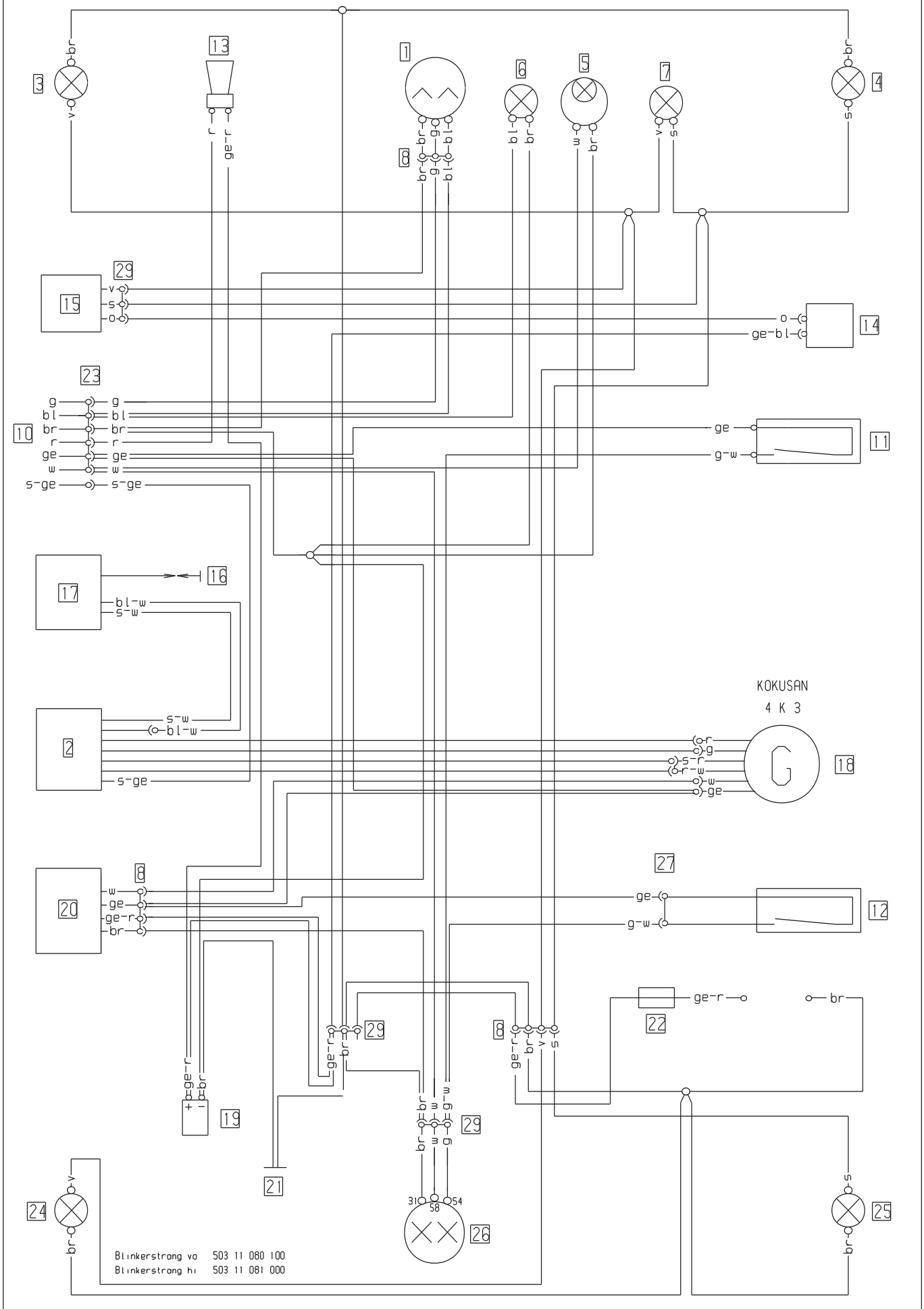
	g	bl	ge	w	ge /s	r	br
LICHT o							
Abblendl	●		●	●			
Fernlicht		●	●	●			
HUPE						●	●
ZÜNDUNG AUS					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	
⇨	●		

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/620 SC '99-2000	vorne 583 11 275 100 hinten 583 11 176 200	DIV	01 03 99 Hei	vo 400-620 SC '99 hi ECIE



KTM 400-620 SC 1999-2000

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 CDI	2 CDI	2 CDI	2 CDI
3 Blinker li vo	3 turn indic left fr	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 turn indic right fr	4 lampegg ant dx	4 clignoteur av droit
5 Tachobeleuchtung	5 speedometer light	5 luce di tachimetro	5 eclair comp vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 4-pol Stecker	8 multip cont plug (4)	8 connettore a 4 poli	8 connect multiple (4)
10 zum Kombischalter	10 to combinat switch	10 multicomando	10 commodo
11 Bremslichtsch vo	11 stoplight switch f	11 int luce arresto ant	11 contact de stop av
12 Bremslichtsch hi	12 stoplight switch r	12 int luce arresto post	12 contact Harr de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett di lampeg	14 centrale clignot
15 Blinkerschalter	15 blink switch	15 int lampeggiatori	15 contact d clignateur
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol di tens	20 regulateur
21 Masseanschluß	21 ground connection	21 collegam di masse	21 masse
22 Stecksicherung 10A	22 fuse 10A	22 fusibile 10A	22 fusible 10A
23 6-pol Stecker	23 multip cont plug (6)	23 connettore a 6 poli	23 connect multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 2-pol Stecker	27 multip cont plug (2)	27 connettore a 2 poli	27 connect multiple (2)
29 3-pol Stecker	29 multip cont plug (3)	29 connettore a 3 poli	29 connect multiple (3)

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch
1 faro
2 CDI
3 interm izquierdo delantero
4 intermitente derecho delantero
5 luz tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (4)
10 interruptor combinado
11 interr luz de freno del
12 interr luz de fren tras
13 claxon
14 conjunto del intermintente
15 interuptor clignoteur
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 conector a masa
22 fusible principal 10A
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector multiple (2)
29 conector multiple (3)

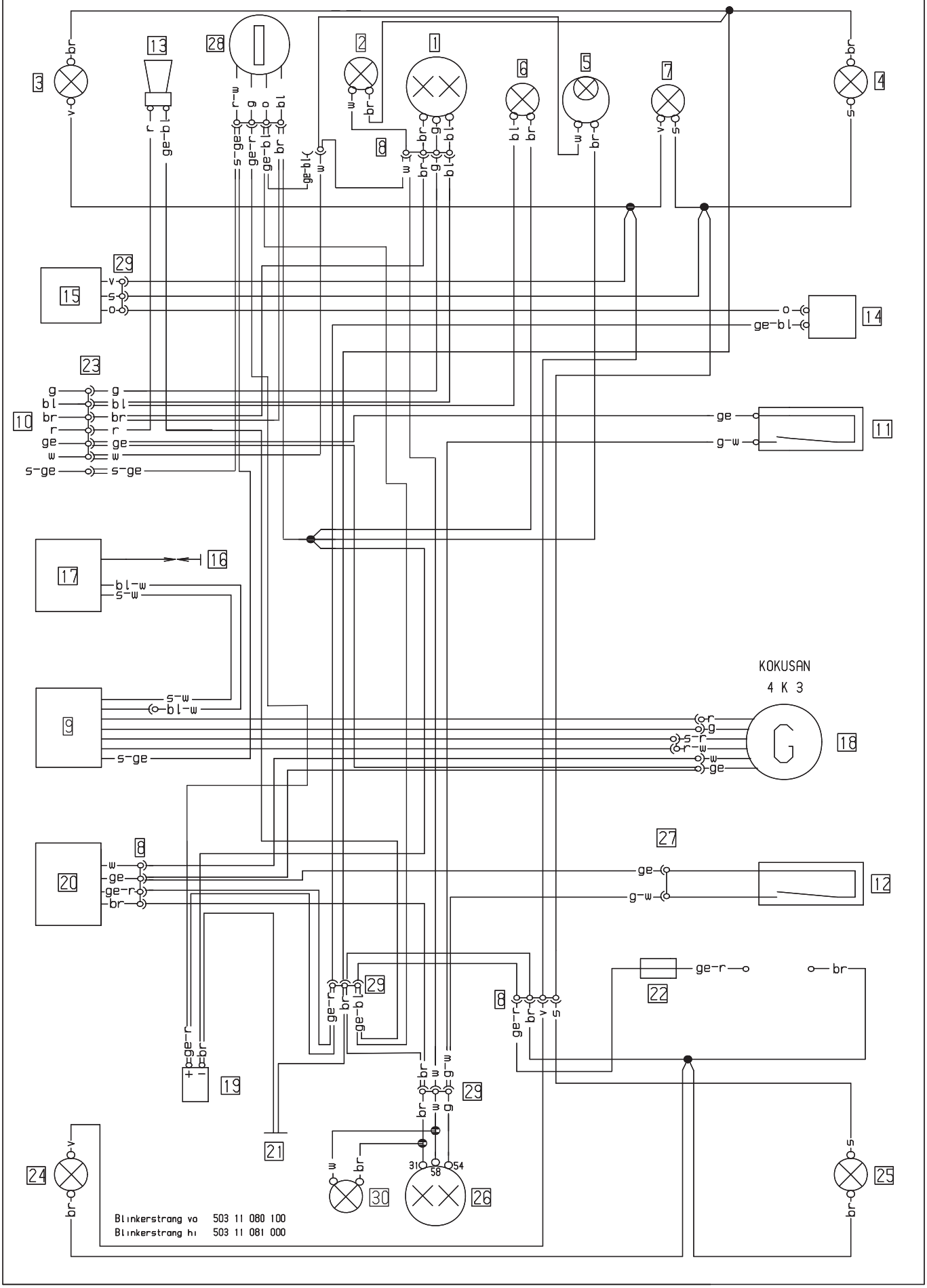
Kontaktbelegung -
Lichtschalter (Typ CEV 9610)

	g	bl	ge	w	ge /s	r	br
LICHT o							
Abblendl	o		o	o			
Fernlicht		o	o	o			
HUPE						o	o
ZÜNDUNG AUS					o		o
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		o	o
⇨	o	o	

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400-620 SC '99	vorne 583 11 375 000 hinten 583 11 176 200	AUS	01 03 99 Hei	vo 400-620 SC '99 hi ECIE



KTM 400-620 SC 1999 AUS

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu-position
3 Blinker li vo	3 turn indic left fr	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 turn indic right fr	4 lampegg ant dx	4 clignoteur av droit
5 Tachobeleuchtung	5 speedometer light	5 luce di tachimetro	5 eclair comp vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 4-pol Stecker	8 multip cont plug (4)	8 connettore a 4 poli	8 connect multiple (4)
9 CDI	9 CDI	9 CDI	9 CDI
10 zum Kombischalter	10 to combinat switch	10 multicomando	10 commodo
11 Bremslichtsch vo	11 stoplight switch f	11 int luce arresto ant	11 contact de stop av
12 Bremslichtsch hi	12 stoplight switch r	12 int luce arresto post	12 contact Harr de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett di lampeg	14 centrale clignot
15 Blinkerschalter	15 blink switch	15 int lampeggiatori	15 contact d clignateur
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol di tens	20 regulateur
21 Masseanschluß	21 ground connection	21 collegam di masse	21 masse
22 Stecksicherung 10A	22 fuse 10A	22 fusibile 10A	22 fusible 10A
23 6-pol Stecker	23 multip cont plug (6)	23 connettore a 6 poli	23 connect multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 2-pol Stecker	27 multip cont plug (2)	27 connettore a 2 poli	27 connect multiple (2)
28 Zündschloß	28 ignition lock	28 interr di accensione	28 contacteur
29 3-pol Stecker	29 multip cont plug (3)	29 connettore a 3 poli	29 connect multiple (3)
30 Kennzeichenbel	30 licence pl lighting	30 illuminat de targa	30 ecl plaque d immat

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch

1 faro
2 luces de posicion
3 interm izquierdo delantero
4 intermitente derecho delantero
5 luz tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (4)
9 CDI
10 interruptor combinado
11 interr luz de freno del
12 interr luz de fren tras
13 claxon
14 conjunto del intermintente
15 interuptor clignoteur
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 conector a masa
22 fusible principal 10A
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector multiple (2)
28 cerradura de encendido
29 conector multiple (3)
30 luz placa de matricula

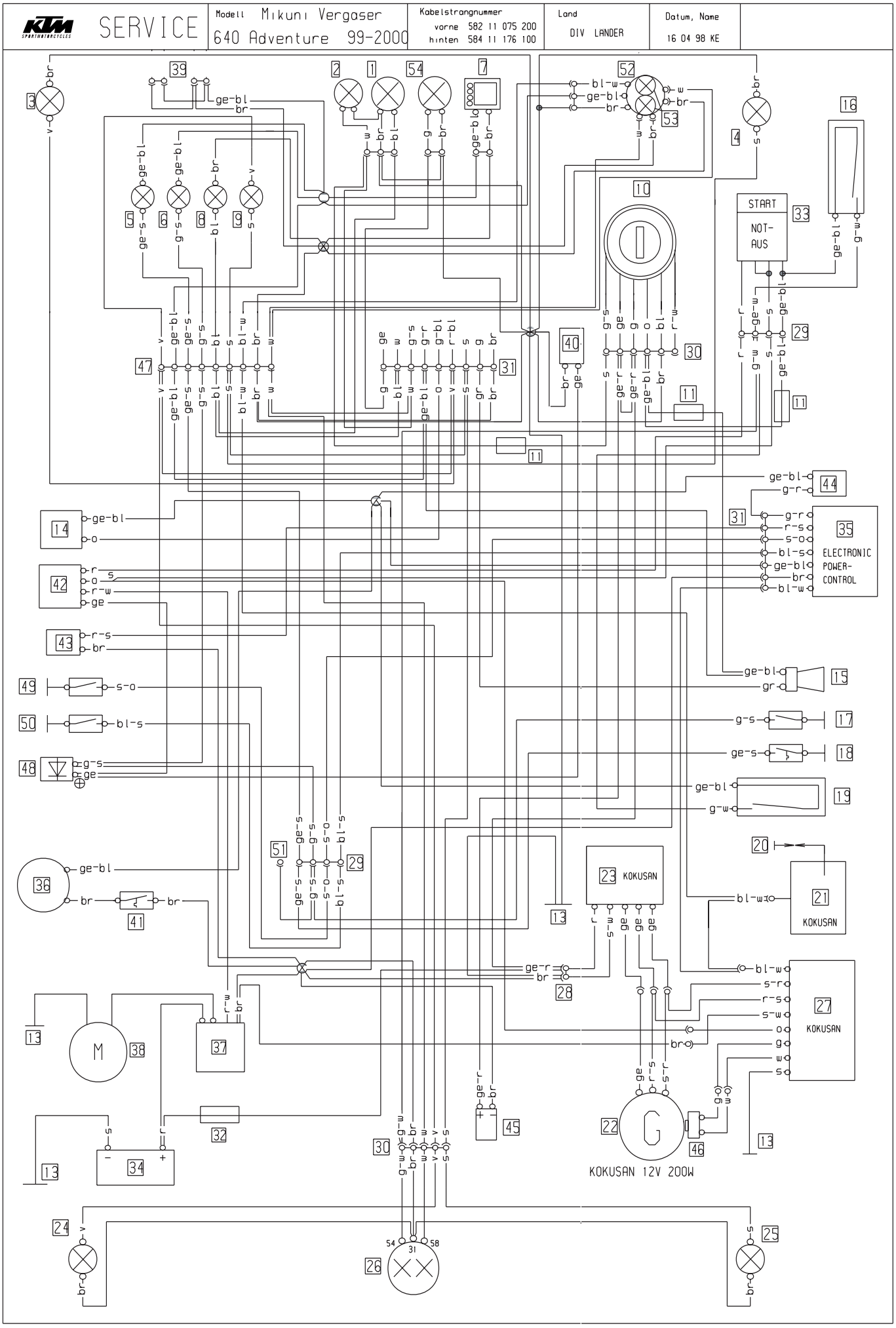
Kontaktbelegung -
Lichtschalter (Typ CEV 9610)

	g	bl	ge	w	ge/s	r	br
LICHT o							
Abblendl	●		●	●			
Fernlicht		●	●	●			
HUPE						●	●
ZÜNDUNG AUS					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	●
⇨	●	●	

Art.-Nr. 3.206.006 -E


SERVICE
Modell Mikuni Vergaser
640 Adventure 99-2000
Kabelstrangnummer
vorne 582 11 075 200
hinten 584 11 176 100
Land
DIV LÄNDER
Datum, Name
16 04 98 KE
START
NOT-
AUS
ELECTRONIC
POWER-
CONTROL
KOKUSAN
KOKUSAN 12V 200W

KTM 640 Adventure 99-2000 Mikuni

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachometer	7 tachometer	7 tachimetro	7 comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 EPC	35 EPC	35 EPC	35 EPC
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Roadbookversorgung	39 roadbook-ernergie	39 roabook-energia	39 roadbook-energie
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3 Gang	49 gear switch 3rd gear	49 3 secondo marcia	49 cont d boite d vites (3)
50 Kontaktstift 2 Gang	50 gear switch 2th gear	50 2 secondo marcia	50 cont d bolte d vites (2)
51 Seitenständerstecker	51 side stand connector	51 cavalletto laterale conn	51 bequille laterale connec
52 Drehzahlmesser	52 tachometer	52 contagiri	52 compte-tours
53 Drehzahlmesserbel	53 tachometer light	53 luce di contagiri	53 eclair compte-tours
54 Abblendlicht	54 low beam	54 anabbaglianti	54 feu de croisement

Spanisch			
1 faro	19 interruptor luz de frendo tras	37 rele de arranque
2 luz de posicion	20 bujia	38 motor de arranque
3 interm izquierdo delantero	21 bobina de encendido	39 conector paralelo
4 intermitente derecho delantero	22 generador	40 interruptor de embraque
5 control temperatura	23 regulador de tension	41 interruptor temperatura
6 indicador punto muerto	24 intermitente izquierdo trasero	42 rele del arranque
7 luz tacometro	25 intermitente derecho trasero	43 interruptor de carburador
8 lampara aviso luces largas	26 luz de freno trasero	44 valvola magnetica
9 lampara aviso intermitentes	27 unidad cdi	45 condensador
10 llave de contacto	28 conecdor multiple (2)	46 generado de impulsos
11 fusible 10A	29 conector multiple (4)	47 conector multiple (12)
12 interruptor combinado	30 conector multiple (6)	48 diodo
13 conector a masa	31 conector multiple (9)	49 interruptor de cambio (3)
14 conjunto del intermitente	32 fusible principal 20A	50 interruptor de cambio (2)
15 claxon	33 boton de arranque par de urg	51 caballete lateral conector
16 interruptor	34 bateria 12V 8 Ah	52 cuentarreveluciones
17 interruptor punto muerto	35 EPC	53 luz del cuentarrevolucion
18 interruptor temperatura	36 ventilador electrica	54 luces de crule

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s-bl	g-br	v-br	r-bl	g-s	g	g-r	ge	w
TURN L ⇦		o		o					
TURN R ⇨	o								
LIGHTS ○									
H LO							o		
H HI							o		o
HORN			o		o				
PASSING			o		o		o		o

Start- Notaus- Schalter

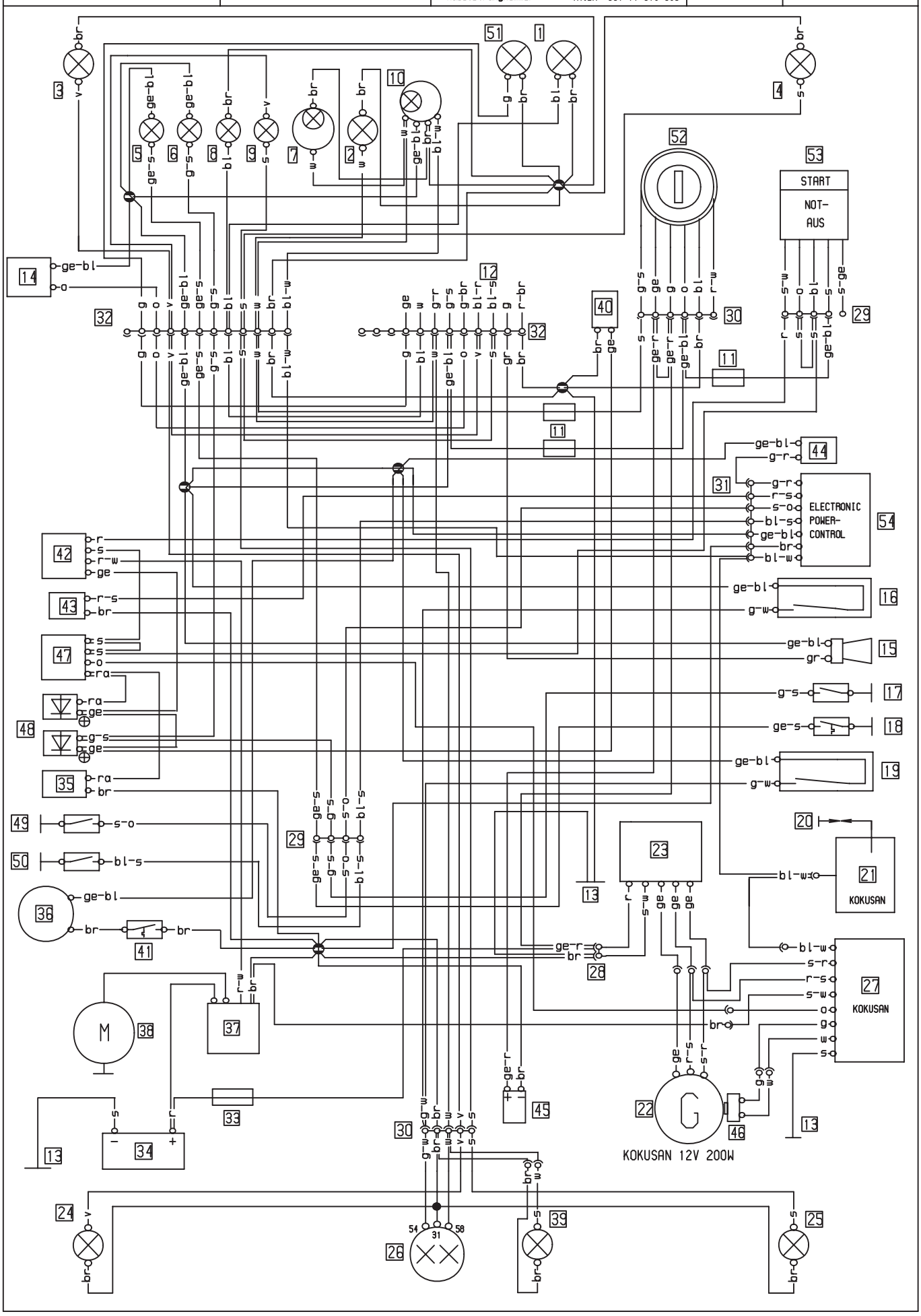
ENGINE \ CEV	s	r	ge-bl	s-s
○			o	o
⊗				
⚷	o			

Zündschloß (Typ Zadi)

	o	g	ge	g-s	r-w	bl
⛽					o	o
⊗					o	o
○	o					
☼	o		o			

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer cockpit 587 11 082 000 Kabelstrangnummer vorne 587 11 075 000 Kabelstrangnummer inten 587 11 076 000	Land	Datum, Name
	DUKE 2000		DIV LANDER	15 03 00 KE



KTM DUKE 2000

Deutsch	Englisch	Italienisch	Französisch
1 Fernlicht	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Drehzahlmesser	10 tachometer	10 contagiri	10 comte-tours
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 12-pol Stecker	32 multip cont plug (12)	32 connettore a 12 poli	32 connect multible (12)
33 Hauptsicherung 20A	33 mainfuse 20A	33 fusibile principale 20A	33 fusible principal 20A
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 Seitenständerschalter	35 sidestandswitch	35 int del cavalleto later	35 commut de bequille later
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Kennzeichenbel	39 licence pl lighting	39 illuminat de targa	39 ecl plaque d immat
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 Seitenständerrelais	47 sidestand relay	47 rele del cavalleto later	47 relaise com de bequ lat
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3 Gang	49 gear switch 3rd gear	49 3 secondo marcia	49 cont d boite d vites 3
50 Kontaktstift 2 Gang	50 gear switch 2th gear	50 2 secondo marcia	50 cont d bolte d vites 2
51 Abblendlicht	51 low beam	51 anabbaglianti	51 feu de croisement
52 Zündschloß	52 ignition switch	52 interrutore accensione	52 contact d'allum
53 Starttast Notaussch	53 run-off / start switch	53 disinseritor / partire	53 bout de demar/arr d'urg
54 EPC	54 EPC	54 EPC	54 EPC

Spanisch

1 faro	19 interruptor luz de frendo tras	37 rele de arranque
2 luz de posicion	20 bujia	38 motor de arranque
3 interm izquierdo delantero	21 bobina de encendido	39 luz placa de matricula
4 intermitente derecho delantero	22 generador	40 interruptor de embraque
5 control temperatura	23 regulador de tension	41 interruptor temperatura
6 indicador punto muerto	24 intermitente izquierdo trasero	42 rele del arranque
7 luz tacometro	25 intermitente derecho trasero	43 interruptor de carburador
8 lampara aviso luces largas	26 luz de freno trasero	44 valvola magnetica
9 lampara aviso intermitentes	27 unidad cdi	45 condensador
10 cuentarreveluciones	28 conecdor multiple (2)	46 generado de impulsos
11 fusible 10A	29 conector multiple (4)	47 rele del caballete lateral
12 interruptor combinado	30 conector multiple (6)	48 diodo
13 conector a masa	31 conector multiple (9)	49 interruptor de cambio 3
14 conjunto del intermitente	32 conector multible (12)	50 interruptor de cambio 2
15 claxon	33 fusible principal 20A	51 luces de crule
16 interruptor	34 bateria 12V 8 Ah	52 llave de contacta
17 interruptor punto muerto	35 int delcaballetelateral	53 boton de arranque par de urg
18 interruptor temperatura	36 ventilador electrica	54 EPC

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s	br	v	r–w	bl–s	g	gr	r/ge–s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ○								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●	●					●

Start- Notaus- Schalter

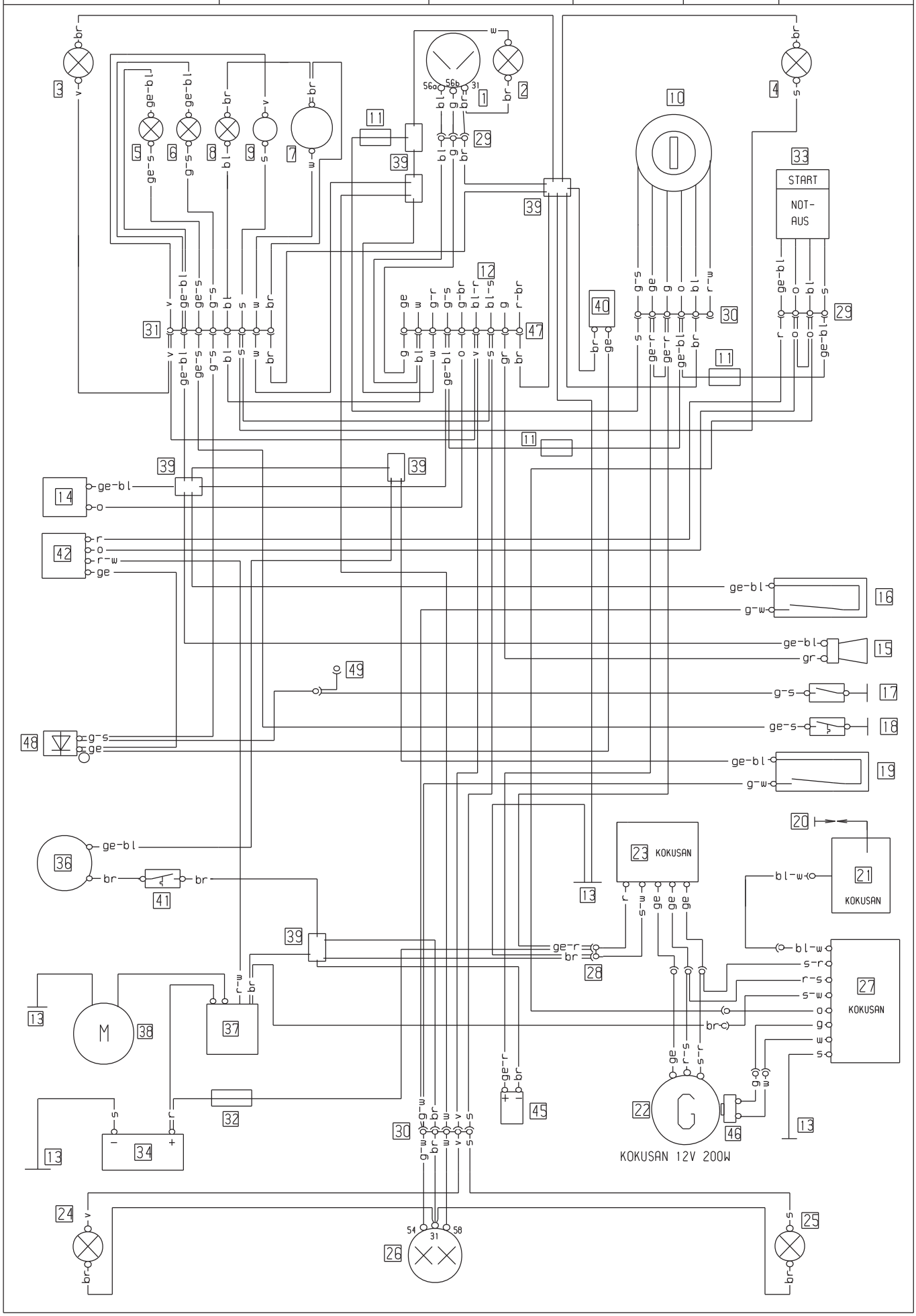
	Domino	o	s–ge	bl	s	s–w
□ ○				●		
▭ ⊠			●			
ϟ $		●				●

Zündschloß (Typ Zadi)

	o	g	ge	g–s	r–w	bl
⛽					●	●
⊠					●	●
○	●	●				
☼	●		●			

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400/640 LC4	vorne 584 11 175 200 hinten 584 11 176 100	USA	16 04 98 KE	vo hi



400/640 LC4 USA 2000

Art.-Nr. 3.206.006 -E

Repair manual KTM LC4

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 neutral switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-scatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Parallelverbinder	39 parallel connector	39 parallelo composto	39 parallele connecteur
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)
48 Diode	48 diode	48 diodo	48 diode
49 Seitenständerstecker	49 side stand connector	49 cavalletto laterale conn	49 bequille laterale connec

Spanisch

1 faro	18 interruptor temperatura	36 ventilador electrica
2 luz de posicion	19 interruptor luz de frendo tras	37 rele de arranque
3 interm izquierdo delantero	20 bujia	38 motor de arranque
4 intermitente derecho delantero	21 bobina de encendido	39 conector paralelo
5 control temperatura	22 generador	40 interruptor de embraque
6 indicador punto muerto	23 regulador de tension	41 interruptor temperatura
7 luz tacometro	24 intermitente izquierdo trasero	42 rele del arranque
8 lampara aviso luces largas	25 intermitente derecho trasero	45 condensador
9 lampara aviso intermitentes	26 luz de freno trasero	46 generado de impulsos
10 llave de contacto	27 unidad cdi	47 conector multiple (12)
11 fusible 10A	28 conecdor multiple (2)	48 diodo
12 interruptor combinado	29 conector multiple (4)	49 caballete lateral conector
13 conector a masa	30 conector multiple (6)	
14 conjunto del intermitente	31 conector multiple (9)	
15 claxon	32 fusible principal 20A	
16 interruptor	33 boton de arranque par de urg	
17 interruptor punto muerto	34 bateria 12V 8 Ah	

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 1008260000)

	s	br	v	r-w	bl-s	g	gr	r/ge-s
TURN L ⇦				○		●		
TURN R ⇨					○	●		
LIGHTS ○								
H LO		○						●
H HI			○					●
HORN	○						●	
PASSING		○	○					●

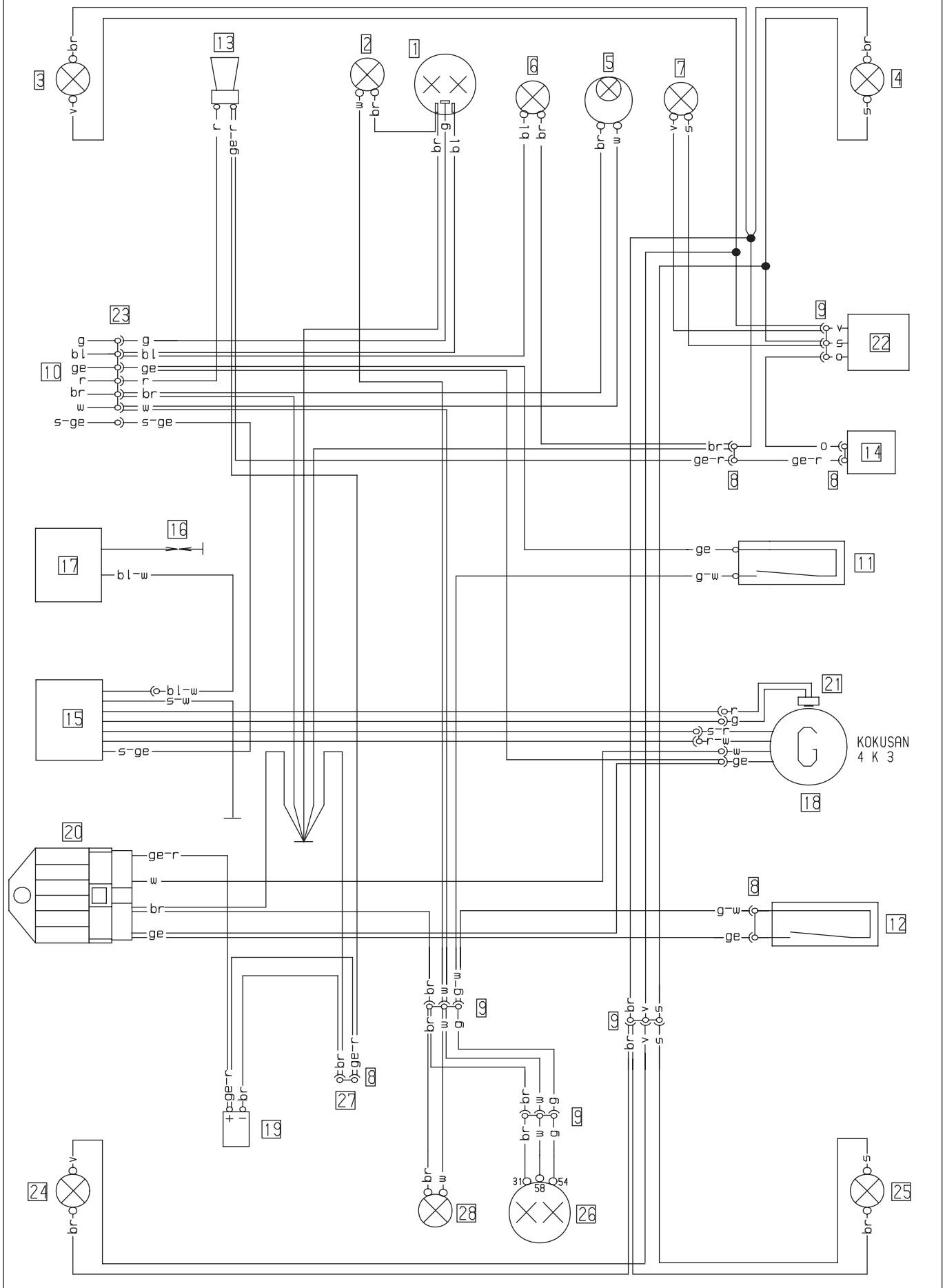
Kontaktbelegung
Start- Notaus- Schalter

ENGINE	CEV	o	ge-bl	bl	s
	↺			○	●
	⊗				
	🔑	○	●		

Zündschloß (Typ Zadi)

	o	g	ge	g-s	r-w	bl
🔒					○	●
⊗					○	●
↺	○	●				
☼	○	●	○	●		

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Datei name
	620 SuperComp 2001	vorne 583 11 375 200 Kennzeichenbel 584 11 047 000 Blinkerstrang vorne 590 11 080 000 Blinkerstrang hinten 590 11 081 000	EU	04 05 00 KE	SUPC001



KTM 620 SC 2001

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 CDI	2 CDI	2 CDI	2 CDI
3 Blinker li vo	3 turn indic left fr	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 turn indic right fr	4 lampegg ant dx	4 clignoteur av droit
5 Tachobeleuchtung	5 speedometer light	5 luce di tachimetro	5 eclair comp vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 4-pol Stecker	8 multip cont plug (4)	8 connettore a 4 poli	8 connect multiple (4)
10 zum Kombischalter	10 to combinat switch	10 multicomando	10 commodo
11 Bremslichtsch vo	11 stoplight switch f	11 int luce arresto ant	11 contact de stop av
12 Bremslichtsch hi	12 stoplight switch r	12 int luce arresto post	12 contact Harr de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett di lampeg	14 centrale clignot
15 Blinkerschalter	15 blink switch	15 int lampeggiatori	15 contact d clignateur
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol di tens	20 regulateur
21 Masseanschluß	21 ground connection	21 collegam di masse	21 masse
22 Stecksicherung 10A	22 fuse 10A	22 fusibile 10A	22 fusible 10A
23 6-pol Stecker	23 multip cont plug (6)	23 connettore a 6 poli	23 connect multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 2-pol Stecker	27 multip cont plug (2)	27 connettore a 2 poli	27 connect multiple (2)
29 3-pol Stecker	29 multip cont plug (3)	29 connettore a 3 poli	29 connect multiple (3)

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

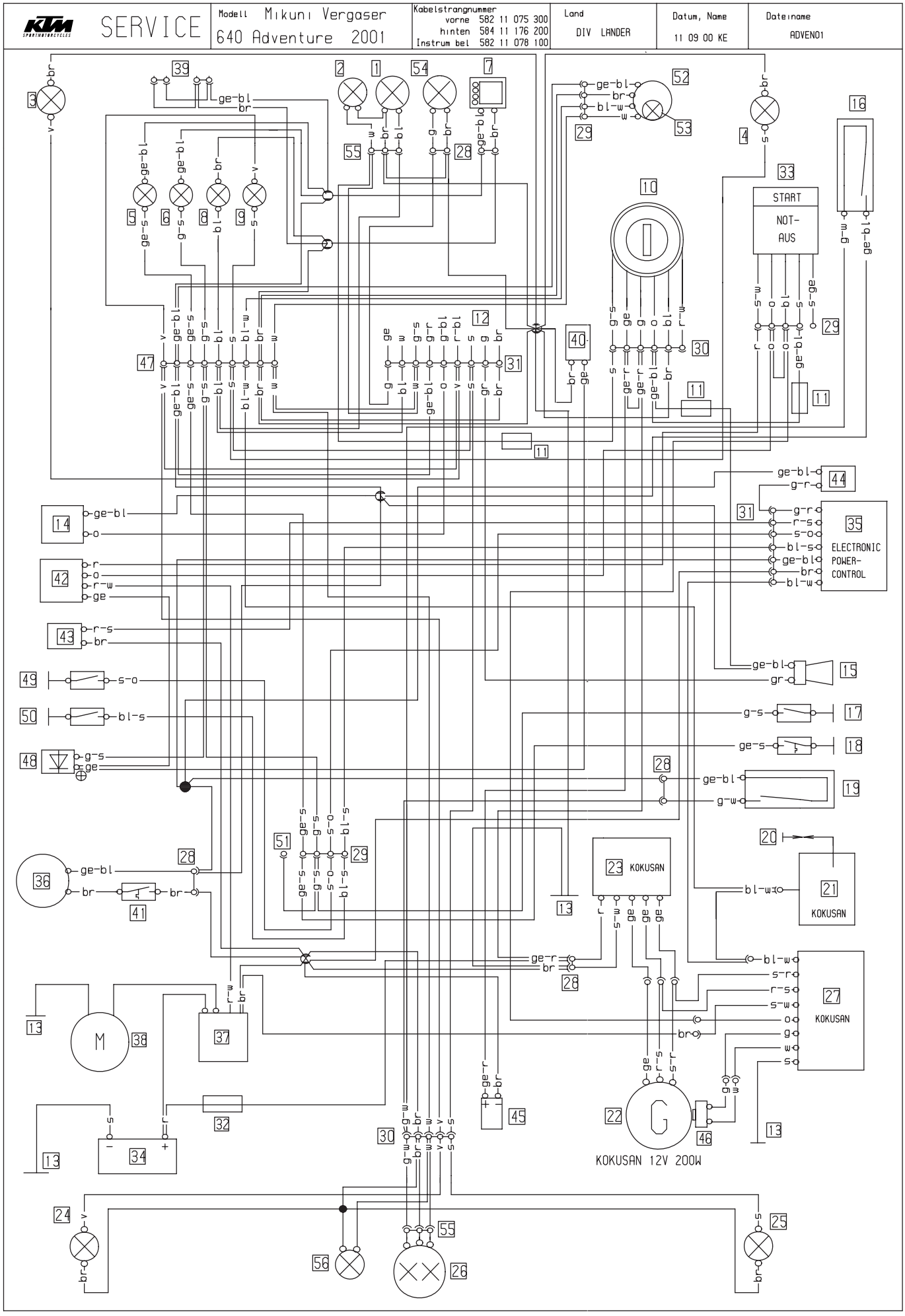
Spanisch
1 faro
2 CDI
3 interm izquierdo delantero
4 intermitente derecho delantero
5 luz tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (4)
10 interruptor combinado
11 interr luz de freno del
12 interr luz de fren tras
13 claxon
14 conjunto del intermintente
15 interuptor clignoteur
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 conector a masa
22 fusible principal 10A
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector multiple (2)
29 conector multiple (3)

Kontaktbelegung -
Lichtschalter (Typ CEV 9610)

	g	bl	ge	w	ge /s	r	br
LICHT o							
Abblendl	●		●	●			
Fernlicht		●	●	●			
HUPE						●	●
ZÜNDUNG AUS					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	●
⇨	●		


SERVICE
Modell Mikuni Vergaser
640 Adventure 2001
Kabelstrangnummer
vorne 582 11 075 300
hinten 584 11 176 200
Instrum bel 582 11 078 100
Land
DIV LANDER
Datum, Name
11 09 00 KE
Dateiname
ADVENO1
START
NOT-
AUS
ELECTRONIC
POWER-
CONTROL
KOKUSAN
KOKUSAN 12V 200W

KTM 640 Adventure 2001 Mikuni

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachometer	7 tachometer	7 tachimetro	7 comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 EPC	35 EPC	35 EPC	35 EPC
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Roadbookversorgung	39 roadbook-ernergie	39 roabook-energia	39 roadbook-energie
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3 Gang	49 gear switch 3rd gear	49 3 secondo marcia	49 cont d boite d vites (3)
50 Kontaktstift 2 Gang	50 gear switch 2th gear	50 2 secondo marcia	50 cont d bolte d vites (2)
51 Seitenständerstecker	51 side stand connector	51 cavalletto laterale conn	51 bequille laterale connec
52 Drehzahlmesser	52 tachometer	52 contagiri	52 compte-tours
53 Drehzahlmesserbel	53 tachometer light	53 luce di contagiri	53 eclair compte-tours
54 Abblendlicht	54 low beam	54 anabbaglianti	54 feu de croisement
55 3-pol Stecker	55 multip cont plug (3)	55 connettore a 3 poli	55 connect multiple (3)
56 Kennzeichenbeleuchtung	56 licence pl lighting	56 illuminat de targa	56 ecl plaque d immat

Spanisch			
1 faro	20 bujia	39 conector paralelo
2 luz de posicion	21 bobina de encendido	40 interruptor de embraque
3 interm izquierdo delantero	22 generador	41 interruptor temperatura
4 intermitente derecho delantero	23 regulador de tension	42 rele del arranque
5 control temperatura	24 intermitente izquierdo trasero	43 interruptor de carburador
6 indicador punto muerto	25 intermitente derecho trasero	44 valvola magnetica
7 luz tacometro	26 luz de freno trasero	45 condensador
8 lampara aviso luces largas	27 unidad cdi	46 generado de impulsos
9 lampara aviso intermitentes	28 conecdor multiple (2)	47 conector multiple (12)
10 llave de contacto	29 conector multiple (4)	48 diodo
11 fusible 10A	30 conector multiple (6)	49 interruptor de cambio (3)
12 interruptor combinado	31 conector multiple (9)	50 interruptor de cambio (2)
13 conector a masa	32 fusible principal 20A	51 caballete lateral conector
14 conjunto del intermitente	33 boton de arranque par de urg	52 cuentarreveluciones
15 claxon	34 bateria 12V 8 Ah	53 luz del cuentarrevolucion
16 interruptor	35 EPC	54 luces de crule
17 interruptor punto muerto	36 ventilador electrica	55 conector multiple (3)
18 interruptor temperatura	37 rele de arranque	56 luz placa de matricula
19 interruptor luz de frendo tras	38 motor de arranque	

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s-bl	g-br	v-br	r-bl	g-s	g	g-r	ge	w
TURN L ⇦		o		o					
TURN R ⇨	o								
LIGHTS ○									
H LO							o		
H HI							o		o
HORN			o			o			
PASSING			o		o	o	o		o

Start- Notaus- Schalter

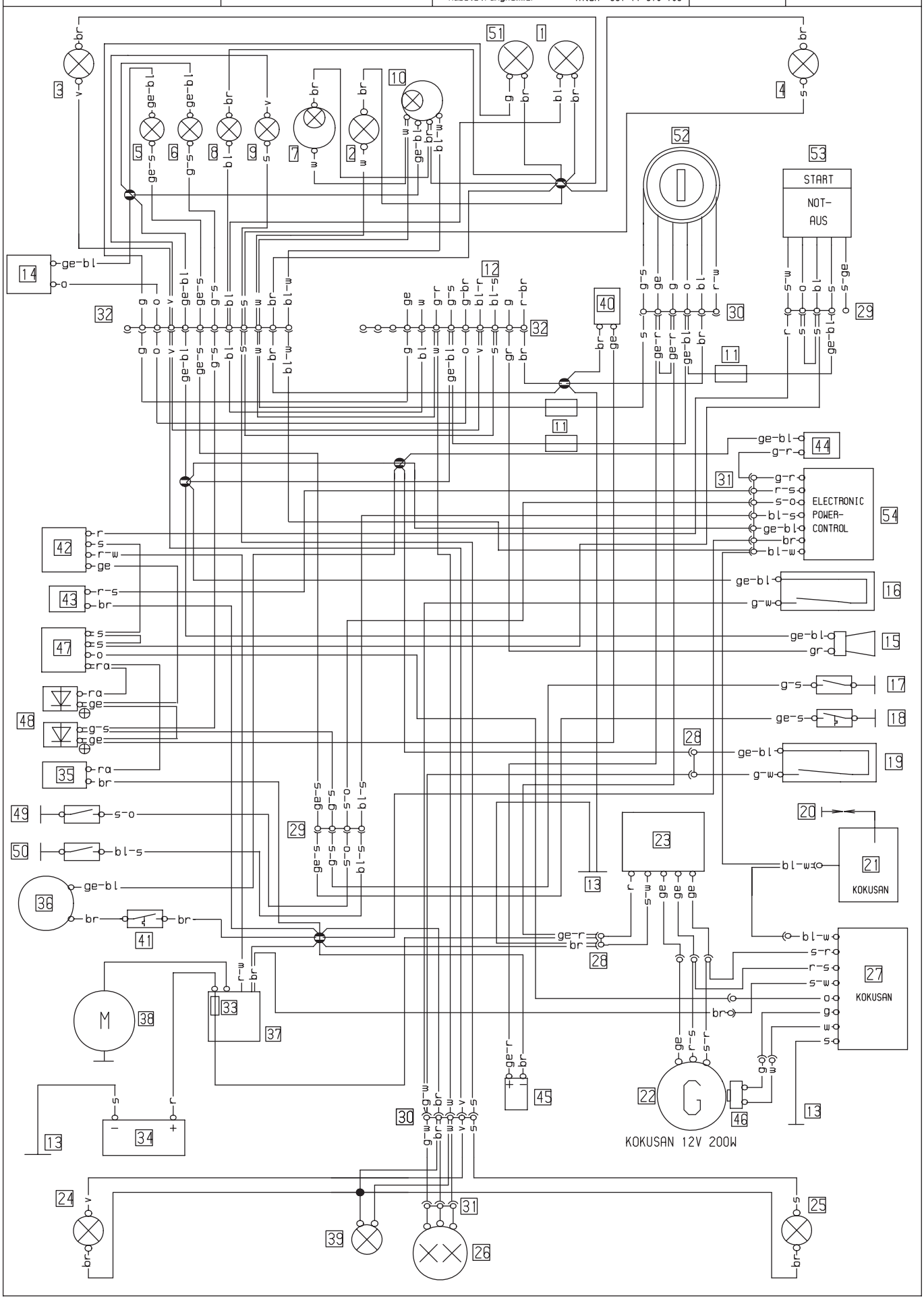
Domino	o	s-ge	bl	s	s-w
□ ○			o		
⊠			o		
ϟ ⓢ		o			o

Zündschloß (Typ Zadi)

	o	g	ge	g-s	r-w	bl
⛽					o	o
⊠					o	o
○	o	o				
☼	o	o	o			

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer cockpit 587 11 082 000 Kabelstrangnummer vorne 587 11 075 000 Kabelstrangnummer inten 587 11 076 100	Land	Datum, Name
	DUKE 2001		DIV LANDER	15 03 00 KE



KTM DUKE 2001

Deutsch	Englisch	Italienisch	Französisch
1 Fernlicht	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Drehzahlmesser	10 tachometer	10 contagiri	10 comte-tours
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 3-pol Stecker	31 multip cont plug (3)	31 connettore a 3 poli	31 connect multiple (3)
32 12-pol Stecker	32 multip cont plug (12)	32 connettore a 12 poli	32 connect multible (12)
33 Hauptsicherung 20A	33 mainfuse 20A	33 fusibile principale 20A	33 fusible principal 20A
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 Seitenständerschalter	35 sidestandswitch	35 int del cavalleto later	35 commut de bequille later
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Kennzeichenbel	39 licence pl lighting	39 illuminat de targa	39 ecl plaque d immat
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 Seitenständerrelais	47 sidestand relay	47 rele del cavalleto later	47 relaise com de bequ lat
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3 Gang	49 gear switch 3rd gear	49 3 secondo marcia	49 cont d boite d vites 3
50 Kontaktstift 2 Gang	50 gear switch 2th gear	50 2 secondo marcia	50 cont d bolte d vites 2
51 Abblendlicht	51 low beam	51 anabbaglianti	51 feu de croisement
52 Zündschloß	52 ignition switch	52 interrutore accensione	52 contact d'allum
53 Starttast Notaussch	53 run-off / start switch	53 disinseritor / partire	53 bout de demar/arr d'urg
54 EPC	54 EPC	54 EPC	54 EPC

Spanisch

1 faro	19 interruptor luz de frendo tras	37 rele de arranque
2 luz de posicion	20 bujia	38 motor de arranque
3 interm izquierdo delantero	21 bobina de encendido	39 luz placa de matricula
4 intermitente derecho delantero	22 generador	40 interruptor de embraque
5 control temperatura	23 regulador de tension	41 interruptor temperatura
6 indicador punto muerto	24 intermitente izquierdo trasero	42 rele del arranque
7 luz tacometro	25 intermitente derecho trasero	43 interruptor de carburador
8 lampara aviso luces largas	26 luz de freno trasero	44 valvola magnetica
9 lampara aviso intermitentes	27 unidad cdi	45 condensador
10 cuentarreveluciones	28 conecdor multiple (2)	46 generado de impulsos
11 fusible 10A	29 conector multiple (4)	47 rele del caballete lateral
12 interruptor combinado	30 conector multiple (6)	48 diodo
13 conector a masa	31 conector multiple (3)	49 interruptor de cambio 3
14 conjunto del intermitente	32 conector multible (12)	50 interruptor de cambio 2
15 claxon	33 fusible principal 20A	51 luces de crule
16 interruptor	34 bateria 12V 8 Ah	52 llave de contacta
17 interruptor punto muerto	35 int delcaballetelateral	53 boton de arranque par de urg
18 interruptor temperatura	36 ventilador electrica	54 EPC

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s	br	v	r–w	bl–s	g	gr	r/ge–s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ○								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●	●					●

Start- Notaus- Schalter

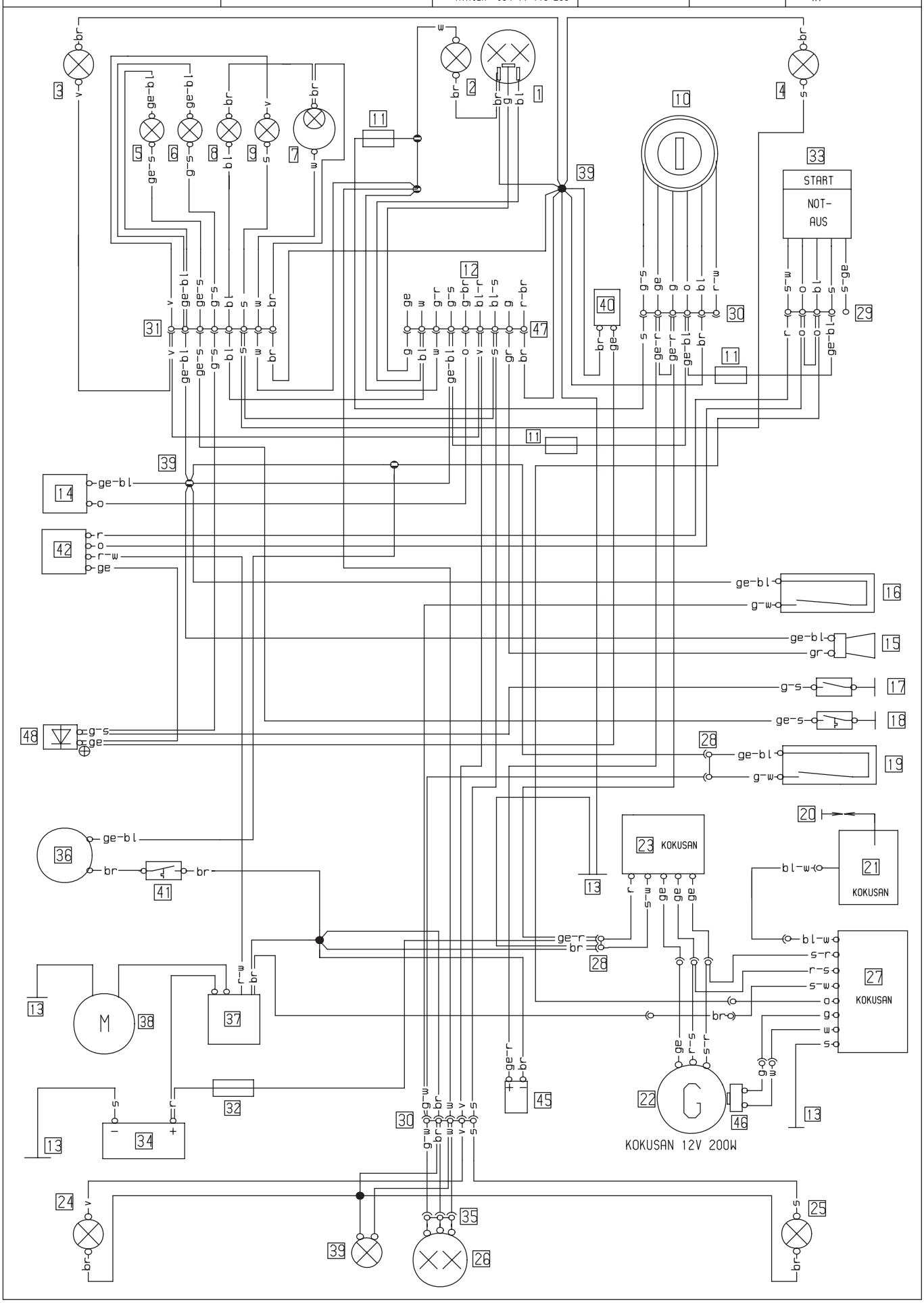
Domino	o	s–ge	bl	s	s–w
○			●		
⊠		●			
ϟ Ⓢ	●				●

Zündschloß (Typ Zadi)

	o	g	ge	g–s	r–w	bl
⛽					●	
⊠					●	
○	●					
☼	●		●			

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	400 LC4-E 2001	vorne 584 11 175 200 hinten 584 11 176 200	DIV LÄNDER	16 04 98 KE	vo hi



KTM 400 LC4-E 2001

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 neutral switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 3-pol Stecker	35 multip cont plug (3)	35 connettore a 3 poli	35 connect multiple (3)
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Kennzeichenbeleuchtung	39 licence pl lighting	39 illuminat de targa	39 ecl plaque d immat
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)
48 Diode	48 diode	48 diodo	48 diode

Spanisch

1 faro
2 luz de posicion
3 interm izquierdo delantero
4 intermitente derecho delantero
5 control temperatura
6 indicador punto muerto
7 luz tacometro
8 lampara aviso luces largas
9 lampara aviso intermitentes
10 llave de contacto
11 fusible 10A
12 interruptor combinado
13 conector a masa
14 conjunto del intermitente
15 claxon
16 interruptor
17 interruptor punto muerto
18 interruptor temperatura
19 interruptor luz de frendo tras
20 bujia
21 bobina de encendido
22 generador
23 regulador de tension
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 unidad cdi
28 conecdor multiple (2)
29 conector multiple (4)
30 conector multiple (6)
31 conector multiple (9)
32 fusible principal 20A
33 boton de arranque par de urg
34 bateria 12V 8 Ah
35 conector multiple (3)
36 ventilador electrica
37 rele de arranque
38 motor de arranque
39 luz placa de matricula
40 interruptor de embraque
41 interruptor temperatura
42 rele del arranque
45 condensador
46 generado de impulsos
47 conector multiple (12)
48 diodo

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s	br	v	r–w	bl–s	g	gr	r/ge–s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ○								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●						●

Start- Notaus- Schalter

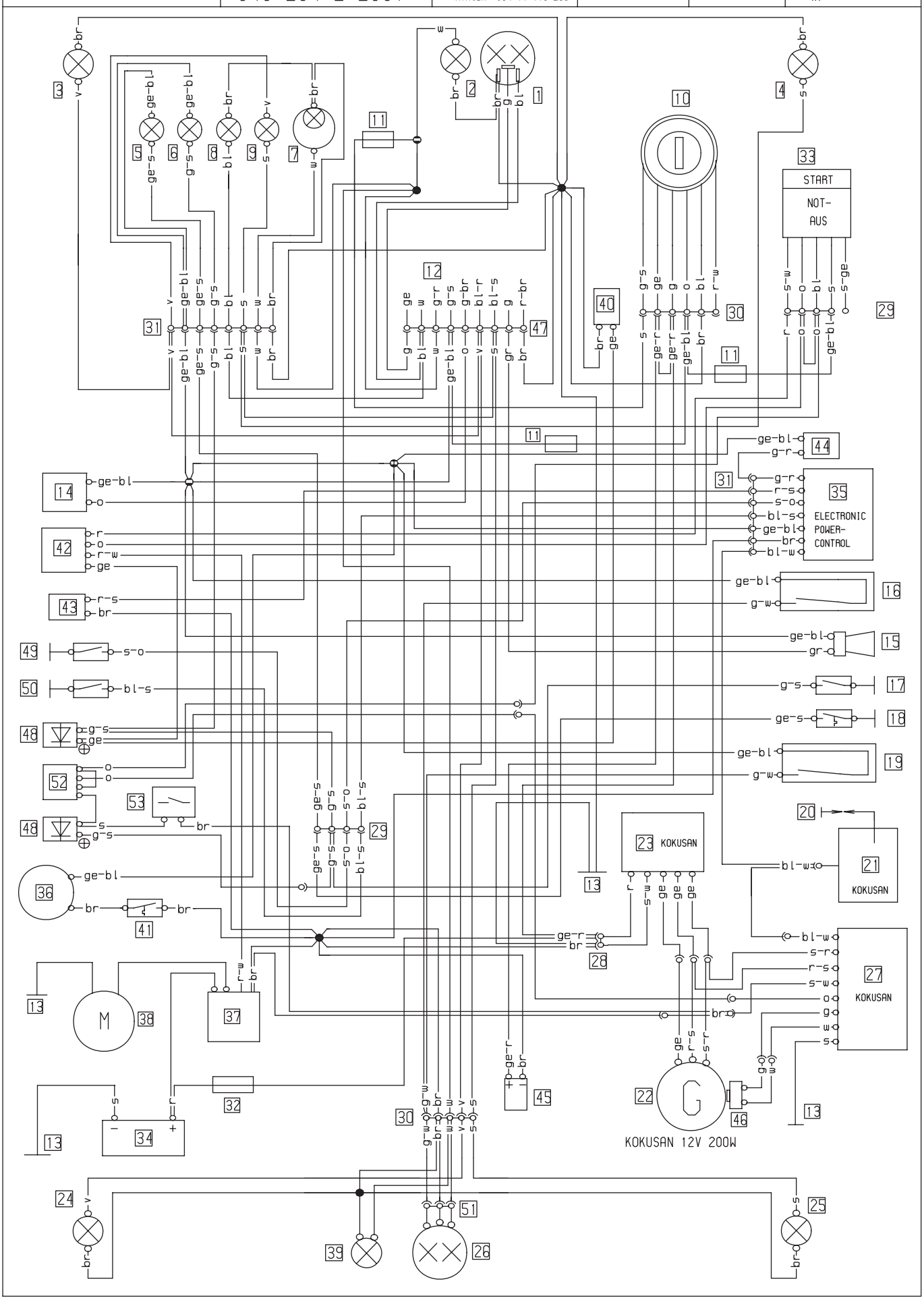
Domino	o	s–ge	bl	s	s–w
□ ○			●	●	
⊠		●			
ϟ ⊛	●				●

Zündschloß (Typ Zadi)

	o	g	ge	g–s	r–w	bl
					●	●
⊠					●	●
○	●					
☼	●		●			

Art.-Nr. 3.206.006 -E

SERVICE	Modell	Kabelstrangnummer	Land	Datum, Name	Kabelstrangbez
	640 LC4-E 2001	vorne 584 11 175 100 hinten 584 11 176 200	DIV LÄNDER	16 04 98 KE	vo hi



KTM 640 LC4-E 2001

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Zündschloß	10 ignition switch	10 int accensione	10 contact d'allum
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 9-pol Stecker	31 multip cont plug (9)	31 connettore a 9 poli	31 connect multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast Notaussch	33 run-off/start switch	33 disinseritor/partire	33 bout de demar/arr d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 EPC	35 EPC	35 EPC	35 EPC
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Kennzeichenbeleuchtung	39 licence plate lighting	39 illuminat de targa	39 ecl plaque d immat
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelais	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol Stecker	47 multip cont plug (12)	47 connettore a 12 poli	47 connect multiple (12)
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3 Gang	49 gear switch 3rd gear	49 3 secondo marcia	49 cont d boite d vites (3)
50 Kontaktstift 2 Gang	50 gear switch 2th gear	50 2 secondo marcia	50 cont d bolte d vites (2)
51 3-pol Stecker	51 multip cont plug (3)	51 connettore a 3 poli	51 connect multiple (3)
52 Seitenständerrelais	52 sidestand relay	52 rele del cavalleto later	52 relaise com de bequ lat
53 Seitenständerschalter	53 side stand switch	53 int del cavalleto later	53 commut de bequille later

Spanisch

1 faro	19 interruptor luz de frendo tras	37 rele de arranque
2 luz de posicion	20 bujia	38 motor de arranque
3 interm izquierdo delantero	21 bobina de encendido	39 luz plaza de matricula
4 intermitente derecho delantero	22 generador	40 interruptor de embraque
5 control temperatura	23 regulador de tension	41 interruptor temperatura
6 indicador punto muerto	24 intermitente izquierdo trasero	42 rele del arranque
7 luz tacometro	25 intermitente derecho trasero	43 interruptor de carburador
8 lampara aviso luces largas	26 luz de freno trasero	44 valvola magnetica
9 lampara aviso intermitentes	27 unidad cdi	45 condensador
10 llave de contacto	28 conecdor multiple (2)	46 generado de impulsos
11 fusible 10A	29 conector multiple (4)	47 conector multiple (12)
12 interruptor combinado	30 conector multiple (6)	48 diodo
13 conector a masa	31 conector multiple (9)	49 interruptor de cambio (3)
14 conjunto del intermitente	32 fusible principal 20A	50 interruptor de cambio (2)
15 claxon	33 boton de arranque par de urg	51 conector multiple (3)
16 interruptor	34 bateria 12V 8 Ah	52 rele del caballete lateral
17 interruptor punto muerto	35 EPC	53 int del caballete lateral
18 interruptor temperatura	36 ventilador electrica	

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s	br	v	r–w	bl–s	g	gr	r/ge–s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ○								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●	●					●

Start- Notaus- Schalter

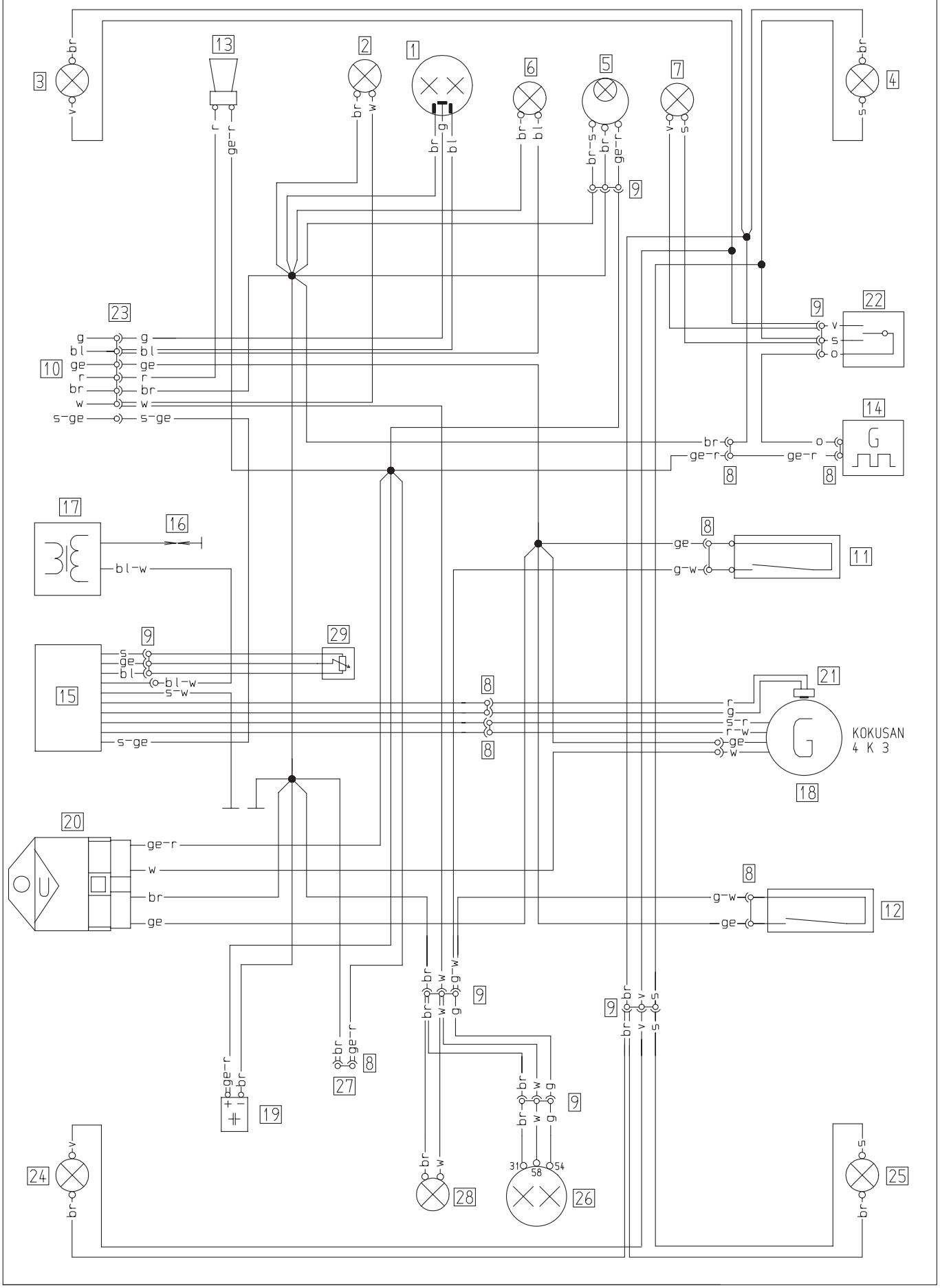
	Domino	o	s–ge	bl	s	s–w
□	○			●	●	
	⊗		●			
	⚷	●				●

Zündschloß (Typ Zadi)

	o	g	ge	g–s	r–w	bl
					●	●
⊗					●	●
○	●	●				
☼	●	●	●			

Art.-Nr. 3.206.006 -E

SERVICE	625 SuperComp. 2002	Kabelstrangnummer: vorne:583.11.375.300 Kennzeichenbel.:584.11.047.000 Blinkerstrang vorne:590.11.080.000 Blinkerstrang hinten:590.11.081.000	Land: EU	Datum, Name: 09.07.01 KE	Dateiname: SUPC002



KTM 625 SUPER COMPETITION 2002

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 position light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 turn indic.left fr.	3 lampegg.ant.sn.	3 clignoteur av gauche
4 Blinker re vo	4 turn indic.right fr.	4 lampegg.ant.dx.	4 clignoteur av.droit
5 Tacho	5 speedometer	5 tachimetro	5 compteur de vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 2-pol.Stecker	8 multip.cont.plug (2)	8 connettore a 2 poli	8 connect.multiple (2)
9 3-pol.Stecker	9 multip.cont.plug (3)	9 connettore a 3 poli	9 connect.multiple (3)
10 zum Kombischalter	10 to combinat. switch	10 multicomando	10 commodo
11 Bremslichtsch. vo	11 stoplight switch f.	11 int.luce arresto ant	11 contact de stop av.
12 Bremslichtsch. hi	12 stoplight switch r.	12 int.luce arresto post	12 contact Harr.de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett. di lampeg.	14 centrale clignot.
15 CDI	15 CDI	15 CDI	15 CDI
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens.	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol. di tens.	20 regulateur
21 Impulsgeber	21 pulser coil	21 trasmett.d'impulsi	21 generateur d'impuls.
22 Blinkerschalter	22 blink switch	22 int. lampeggiatori	22 contact d.clignateur
23 6-pol.Stecker	23 multip.cont.plug (6)	23 connettore a 6 poli	23 connect.multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg.post.sn	24 clign.arr.gauche
25 Blinker re hi	25 blinker right rear	25 lampegg.post.dx.	25 clign.arr.droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal.post.di freno	26 feu arr.et de stop
27 Lüfteranschluss	27 fan connection	27 connett. ventilatore	27 connect.ventilateur
28 Kennzeichenbeleucht.	28 licence plt.lighting	28 illuminat.de.targa.	28 ecl.plaque d.immat.
29 Vergaserpotentiomet.	29 carburetor potentiom	29 carburatore potent.	29 carburateur potenti.

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch
1 faro
2 luz de posicion
3 interm. izquierdo delantero
4 intermitente derecho delantero
5 tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (2)
9 conector multiple (3)
10 interruptor combinado
11 interr. luz de freno del.
12 interr. luz. de fren tras.
13 claxon
14 conjunto del intermintente
15 CDI
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 generado de impulsos
22 interuptor clignoteur
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector ventilador
28 luz plaza de matricula
29 carburador poteciometro

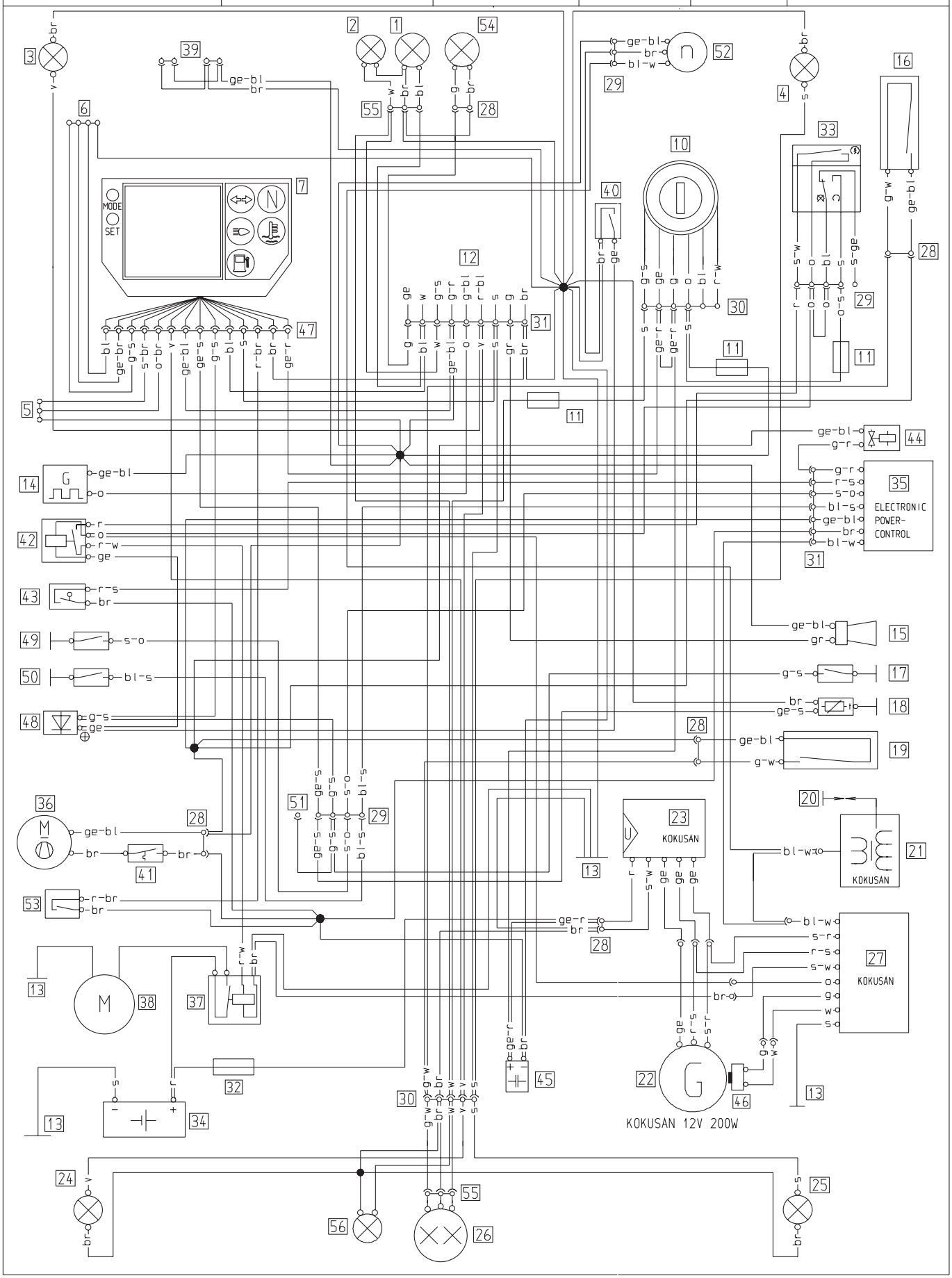
Kontaktbelegung –
Lichtschalter (Typ CEV 9610)

	g	bl	ge	w	ge /s	r	br
Lights ●							
LO beam ≡D	●		●	●			
Hi beam ≡D		●	●	●			
Horn						●	●
Engine off ⊗					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	●
⇨	●	●	

KTM SPORTMOTORCYCLES SERVICE	640 LC4 ADVENTURE	Kabelstrangnummer: vorne: 582.11.075.400 hinten: 584.11.176.200	Land: DIV. LÄNDER	Datum, Name: 19.09.01 KE	Dateiname: ADVEN02



KTM 640 LC4 ADVENTURE 2002

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg. ant. sn.	3 clignoteur av. gauche
4 Blinker re vo	4 blinker right front	4 lampegg. ant. dx.	4 clignoteur av. droit
5 zum Sensorkabel	5 to the sensor cable	5 sensor cavo	5 palpeur cable
6 zum Tachosensor	6 to speedometer sensor	6 generatore d impulso	6 ind.de point mort
7 Tachometer	7 tachometer	7 tachimetro	7 comp.vitesse
10 Zündschloß	10 ignition switch	10 int. accensione	10 contact.d'allum.
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat. switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam. a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett. di lampeg.	14 centrale clignot.
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch. vo	16 stoplight switch f.	16 int.luce arresto ant.	16 cont.av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr.luce folle (N)	17 contact.pt.mort (N)
18 Temperaturfühler	18 temperature switch	18 int. temperatura	18 contact. de temperature
19 Bremslichtsch. hi	19 stoplight switch r.	19 int.luce arresto post	19 contact.arr.de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens.	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat.redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg. post. sn.	24 clign.arr.gauche
25 Blinker re hi	25 blinker right rear	25 lampegg. post. dx.	25 clign.arr.droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal.post.di freno	26 feu arr.et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol.Stecker	28 multip.cont.plug (2)	28 connettore a 2 poli	28 connect.multiple (2)
29 4-pol.Stecker	29 multip.cont.plug (4)	29 connettore a 4 poli	29 connect.multiple (4)
30 6-pol.Stecker	30 multip.cont.plug (6)	30 connettore a 6 poli	30 connect.multiple (6)
31 9-pol.Stecker	31 multip.cont.plug (9)	31 connettore a 9 poli	31 connect.multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast.Notaussch.	33 run-off/start switch	33 disinseritor/partire	33 bout.de demar/arr.d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 EPC	35 EPC	35 EPC	35 EPC
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot.d'avviamento elettr.	38 demarreur electrique
39 Roadbookversorgung	39 roadbook-ernergie	39 roabook-energia	39 roadbook-energie
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact.de embrayage
41 Thermoschalter	41 temperature switch	41 int. temperatura	41 contact.de temperature
42 Starterhilfsrelaise	42 startar auxil. relay	42 rele avviam. ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact.de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 20-pol.Stecker	47 multip.cont.plug (20)	47 connettore a 20 poli	47 connect.multiple (20)
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3.Gang	49 gear switch 3rd gear	49 3.secondo marcia	49 cont.d.boite d.vites.(3)
50 Kontaktstift 2.Gang	50 gear switch 2th gear	50 2.secondo marcia	50 cont.d.bolte.d.vites.(2)
51 Seitenständerstecker	51 side stand connector	51 cavalletto laterale conn.	51 bequille laterale connec
52 Drehzahlmesser	52 tachometer	52 contagiri	52 compte-tours
53 Benzinstandgeber	53 reserve fuel sensor	53 carbur.de vreserve sensor	53 palpeur d.livello d.carb
54 Abblendlicht	54 low beam	54 anabbaglianti	54 feu de croisement
55 3-pol.Stecker	55 multip.cont.plug (3)	55 connettore a 3 poli	55 connect.multiple (3)
56 Kennzeichenbeleuchtung	56 licence pl.lighting	56 illuminat.de.targa.	56 ecl.plaque d.immat

Spanisch

1 faro
2 luz de posicion
3 interm. izquierdo delantero
4 intermitente derecho delantero
5 sensor cable
6 tacometro generator
7 luz tacometro

10 llave de contacto
11 fusible 10A
12 interruptor combinado
13 conector a masa
14 conjunto del intermitente
15 claxon
16 interruptor
17 interruptor punto muerto
18 interruptor temperatura
19 interruptor luz de frendo tras
20 bujia
21 bobina de encendido
22 generador
23 regulador de tension
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 unidad cdi
28 conecdor multiple (2)
29 conector multiple (4)
30 conector multiple (6)
31 conector multiple (9)
32 fusible principal 20A
33 boton de arranque par.de urg.
34 bateria 12V 8 Ah
35 EPC
36 ventilador electrica
37 rele de arranque
38 motor de arranque
39 conector paralelo
40 interruptor de embraque
41 interruptor temperatura
42 rele del arranque
43 interruptor de carburador
44 valvola magnetica
45 condensador
46 generado de impulsos
47 conector multiple (20)
48 diodo
49 interruptor de cambio (3)
50 interruptor de cambio (2)
51 caballete lateral conector
52 cuentarreveluciones
53 combustible sensor
54 luces de crule
55 conector multiple (3)
56 luz placa de matricula

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s-bl	g-br	v-br	r-bl	g-s	g	g-r	ge	w
TURN L ⇦		●		●					
TURN R ⇨	●								
LIGHTS •									
H LO							●		
H HI							●		●
HORN			●			●			
PASSING			●		●		●	●	●

Start- Notaus- Schalter

Domino	o	s-ge	bl	s	s-w
□ ∩			●		
⊠		●			
ϟ Ⓢ	●				●

Zündschloß (Typ Zadil)

	o	g	ge	g-s	r-w	bl
▮					●	
⊠					●	
∩	●					
☼	●		●			

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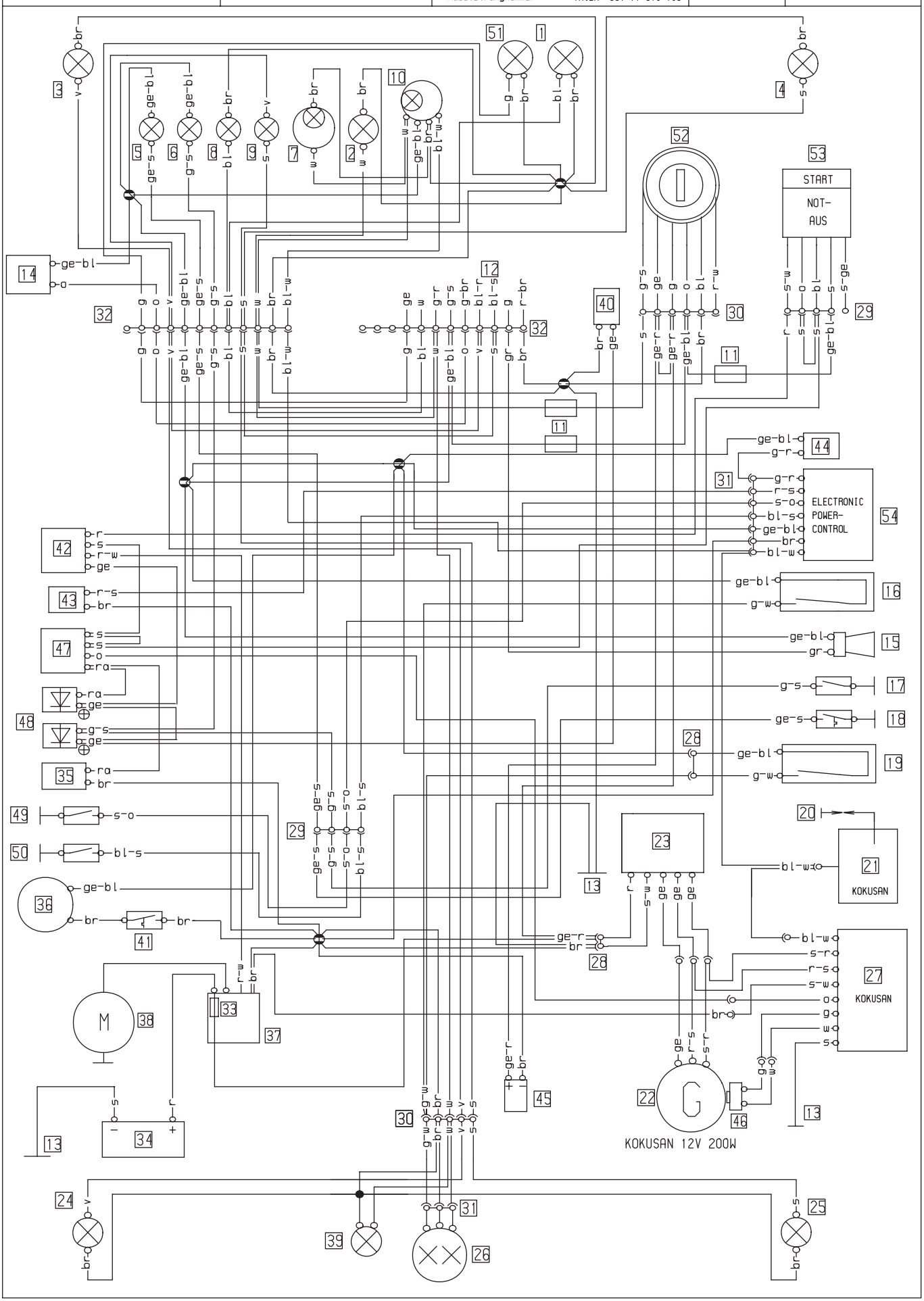
KTM SPORTMOTORCYCLES SERVICE	DUKE 2002	Kabelstrangnummer cockpit 587 11 082 000 Kabelstrangnummer vorne 587 11 075 000 Kabelstrangnummer inten 587 11 076 100	Land DIV LANDER	Datum, Name 15 03 00 KE



KTM DUKE 2002

Deutsch	Englisch	Italienisch	Französisch
1 Fernlicht	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg ant sn	3 clignoteur av gauche
4 Blinker re vo	4 blinker right front	4 lampegg ant dx	4 clignoteur av droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat marcia folle	6 ind de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair comp vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Drehzahlmesser	10 tachometer	10 contagiri	10 comte-tours
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett di lampeg	14 centrale clignot
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch vo	16 stoplight switch f	16 int luce arresto ant	16 cont av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr luce folle (N)	17 contact pt mort (N)
18 Thermoschalter	18 temperature switch	18 int temperatura	18 contact de temperature
19 Bremslichtsch hi	19 stoplight switch r	19 int luce arresto post	19 contact arr de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg post sn	24 clign arr gauche
25 Blinker re hi	25 blinker right rear	25 lampegg post dx	25 clign arr droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal post di freno	26 feu arr et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol Stecker	28 multip cont plug (2)	28 connettore a 2 poli	28 connect multiple (2)
29 4-pol Stecker	29 multip cont plug (4)	29 connettore a 4 poli	29 connect multiple (4)
30 6-pol Stecker	30 multip cont plug (6)	30 connettore a 6 poli	30 connect multiple (6)
31 3-pol Stecker	31 multip cont plug (3)	31 connettore a 3 poli	31 connect multiple (3)
32 12-pol Stecker	32 multip cont plug (12)	32 connettore a 12 poli	32 connect multible (12)
33 Hauptsicherung 20A	33 mainfuse 20A	33 fusibile principale 20A	33 fusible principal 20A
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 Seitenständerschalter	35 sidestandswitch	35 int del cavalleto later	35 commut de bequille later
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d'avviamento elettr	38 demarreur electrique
39 Kennzeichenbel	39 licence pl lighting	39 illuminat de targa	39 ecl plaque d immat
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact de embrayage
41 Thermoschalter	41 temperature switch	41 int temperatura	41 contact de temperature
42 Starterhilfsrelaise	42 startar auxil relay	42 rele avviam ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 Seitenständerrelais	47 sidestand relay	47 rele del cavalleto later	47 relaise com de bequ lat
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3 Gang	49 gear switch 3rd gear	49 3 secondo marcia	49 cont d boite d vites 3
50 Kontaktstift 2 Gang	50 gear switch 2th gear	50 2 secondo marcia	50 cont d bolte d vites 2
51 Abblendlicht	51 low beam	51 anabbaglianti	51 feu de croisement
52 Zündschloß	52 ignition switch	52 interrutore accensione	52 contact d'allum
53 Starttast Notaussch	53 run-off / start switch	53 disinseritor / partire	53 bout de demar/arr d'urg
54 EPC	54 EPC	54 EPC	54 EPC

Spanisch		
1 faro	19 interruptor luz de frendo tras	37 rele de arranque
2 luz de posicion	20 bujia	38 motor de arranque
3 interm izquierdo delantero	21 bobina de encendido	39 luz placa de matricula
4 intermitente derecho delantero	22 generador	40 interruptor de embraque
5 control temperatura	23 regulador de tension	41 interruptor temperatura
6 indicador punto muerto	24 intermitente izquierdo trasero	42 rele del arranque
7 luz tacometro	25 intermitente derecho trasero	43 interruptor de carburador
8 lampara aviso luces largas	26 luz de freno trasero	44 valvola magnetica
9 lampara aviso intermitentes	27 unidad cdi	45 condensador
10 cuentarreveluciones	28 conecdor multiple (2)	46 generado de impulsos
11 fusible 10A	29 conector multiple (4)	47 rele del caballete lateral
12 interruptor combinado	30 conector multiple (6)	48 diodo
13 conector a masa	31 conector multiple (3)	49 interruptor de cambio 3
14 conjunto del intermitente	32 conector multible (12)	50 interruptor de cambio 2
15 claxon	33 fusible principal 20A	51 luces de crule
16 interruptor	34 bateria 12V 8 Ah	52 llave de contacta
17 interruptor punto muerto	35 int delcaballetelateral	53 boton de arranque par de urg
18 interruptor temperatura	36 ventilador electrica	54 EPC

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter (Typ CEV 100826000)

	s	br	v	r–w	bl–s	g	gr	r/ge–s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ○								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●	●					●

Start- Notaus- Schalter

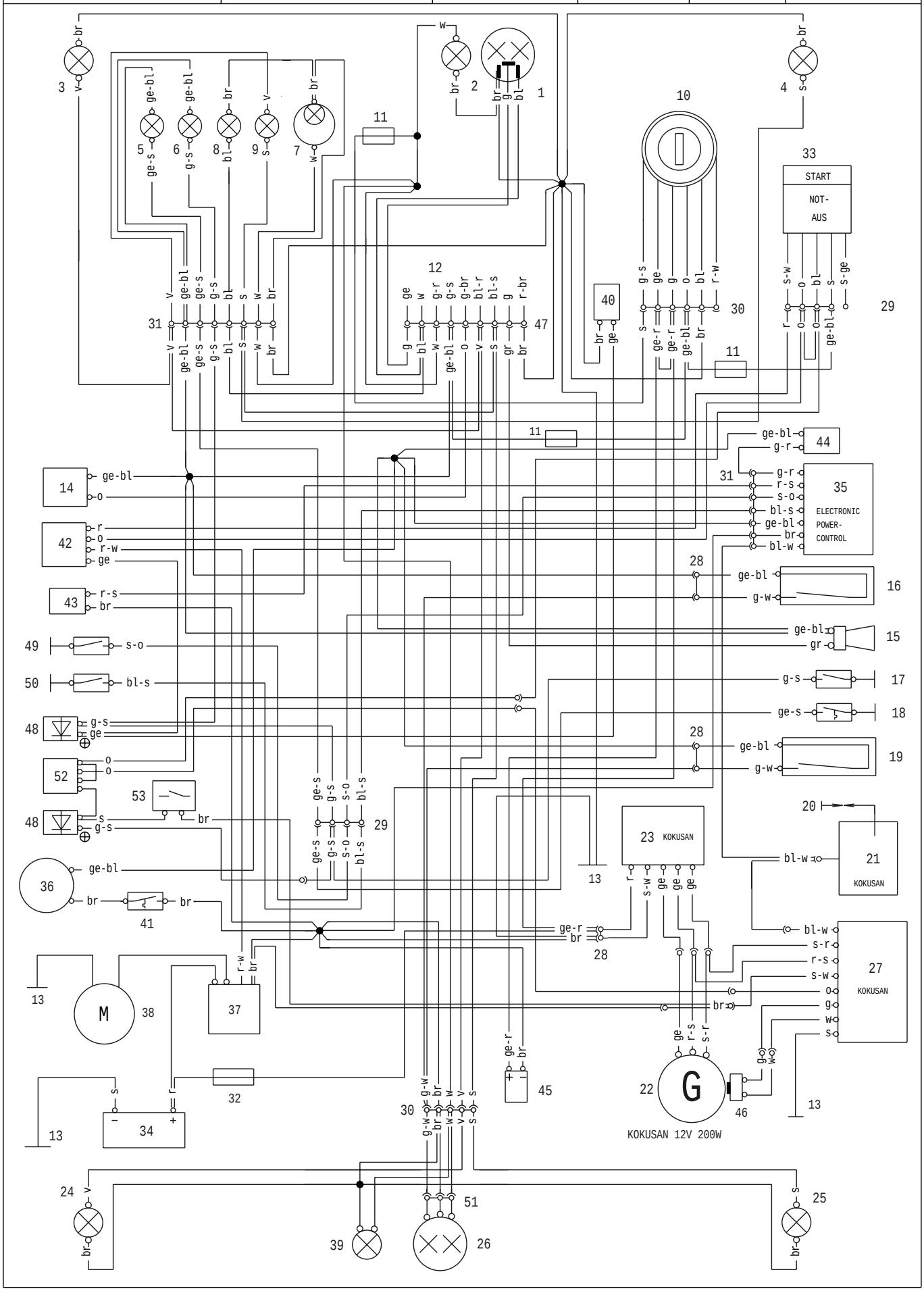
Domino	o	s–ge	bl	s	s–w
□ ○			●	●	
▭ ⊠		●			
ϟ Ⓢ	●				●

Zündschloß (Typ Zadi)

	o	g	ge	g–s	r–w	bl
⛽					●	
⊠					●	
○	●					
☼	●		●			

Art.-Nr. 3.206.006 -E

SERVICE	640 LC4 2002	Kabelstrangnummer: vorne: 584.11.175.300 hinten: 584.11.176.200	Land: DIV. LÄNDER	Datum, Name: 10.05.01 KE	Dateiname: LC42002



KTM 640 LC4 2002

Deutsch	Englisch	Italienisch	Franz sisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg. ant. sn.	3 clignoteur av. gauche
4 Blinker re vo	4 blinker right front	4 lampegg. ant. dx.	4 clignoteur av. droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat.marcia folle	6 ind.de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair.comp.vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Z ndschlo§	10 ignition switch	10 int. accensione	10 contact.d'allum.
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat. switch	12 multicomando	12 vers commutateur
13 Masseanschlu§	13 ground connection	13 collegam. a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett. di lampeg.	14 centrale clignot.
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch. vo	16 stoplight switch f.	16 int.luce arresto ant.	16 cont.av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr.luce folle (N)	17 contact.pt.mort (N)
18 Thermoschalter	18 temperature switch	18 int. temperatura	18 contact. de temperature
19 Bremslichtsch. hi	19 stoplight switch r.	19 int.luce arresto post	19 contact.arr.de stop
20 Z ndkerze	20 spark plug	20 candela	20 bougie
21 Z ndspule	21 ignition coil	21 bobina d'accens.	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat.redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg. post. sn.	24 clign.arr.gauche
25 Blinker re hi	25 blinker right rear	25 lampegg. post. dx.	25 clign.arr.droit
26 Brems-Schlu§licht	26 rear-stoplight	26 fanal.post.di freno	26 feu arr.et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol.Stecker	28 multip.cont.plug (2)	28 connettore a 2 poli	28 connect.multiple (2)
29 4-pol.Stecker	29 multip.cont.plug (4)	29 connettore a 4 poli	29 connect.multiple (4)
30 6-pol.Stecker	30 multip.cont.plug (6)	30 connettore a 6 poli	30 connect.multiple (6)
31 9-pol.Stecker	31 multip.cont.plug (9)	31 connettore a 9 poli	31 connect.multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast.Notaussch.	33 run-off/start switch	33 disinseritor/partire	33 bout.de demar/arr.d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 EPC	35 EPC	35 EPC	35 EPC
36 L ftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot.d'avviamento elettr.	38 demarreur electrique
39 Kennzeichenbeleuchtung	39 licence plate lighting	39 illuminat.de.targa	39 ecl.plaque d.immat.
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact.de embrayage
41 Thermoschalter	41 temperature switch	41 int. temperatura	41 contact.de temperature
42 Starterhilfsrelais	42 startar auxil. relay	42 rele avviam. ausiliario	42 relaise auxi demarrage
43 Vergaserschalter	43 carburetor switch	43 interrutore carburatore	43 contact.de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol.Stecker	47 multip.cont.plug (12)	47 connettore a 12 poli	47 connect.multiple (12)
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3.Gang	49 gear switch 3rd gear	49 3.secondo marcia	49 cont.d.boite d.vites.(3)
50 Kontaktstift 2.Gang	50 gear switch 2th gear	50 2.secondo marcia	50 cont.d.bolte.d.vites.(2)
51 3-pol.Stecker	51 multip.cont.plug (3)	51 connettore a 3 poli	51 connect.multiple (3)
52 Seitenst nderrelais	52 sidestand relay	52 rele del cavalleto later	52 relaise com de bequ lat
53 Seitenst nderschalter	53 side stand switch	53 int del cavalleto later	53 commut de bequille later

Spanisch

1 faro	19 interruptor luz de frendo tras	37 rele de arranque
2 luz de posicion	20 bujia	38 motor de arranque
3 interm. izquierdo delantero	21 bobina de encendido	39 luz plaza de matricula
4 intermitente derecho delantero	22 generador	40 interruptor de embraque
5 control temperatura	23 regulador de tension	41 interruptor temperatura
6 indicador punto muerto	24 intermitente izquierdo trasero	42 rele del arranque
7 luz tacometro	25 intermitente derecho trasero	43 interruptor de carburador
8 lampara aviso luces largas	26 luz de freno trasero	44 valvola magnetica
9 lampara aviso intermitentes	27 unidad cdi	45 condensador
10 llave de contacto	28 conecdor multiple (2)	46 generado de impulsos
11 fusible 10A	29 conector multiple (4)	47 conector multiple (12)
12 interruptor combinado	30 conector multiple (6)	48 diodo
13 conector a masa	31 conector multiple (9)	49 interruptor de cambio (3)
14 conjunto del intermitente	32 fusible principal 20A	50 interruptor de cambio (2)
15 claxon	33 boton de arranque par.de urg.	51 conector multiple (3)
16 interruptor	34 bateria 12V 8 Ah	52 rele del caballete lateral
17 interruptor punto muerto	35 EPC	53 int.del caballete lateral
18 interruptor temperatura	36 ventilador electrica	

Deutsch	Englisch	Italienisch	Franz sisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g gr n	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w wei§	w white	w bianco	w blanc	w blanco

Kombischalter

	br	ge	w	bl-r	bl-s	g-br	g	g-s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ●								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●	●					●

Start- Notaus- Schalter

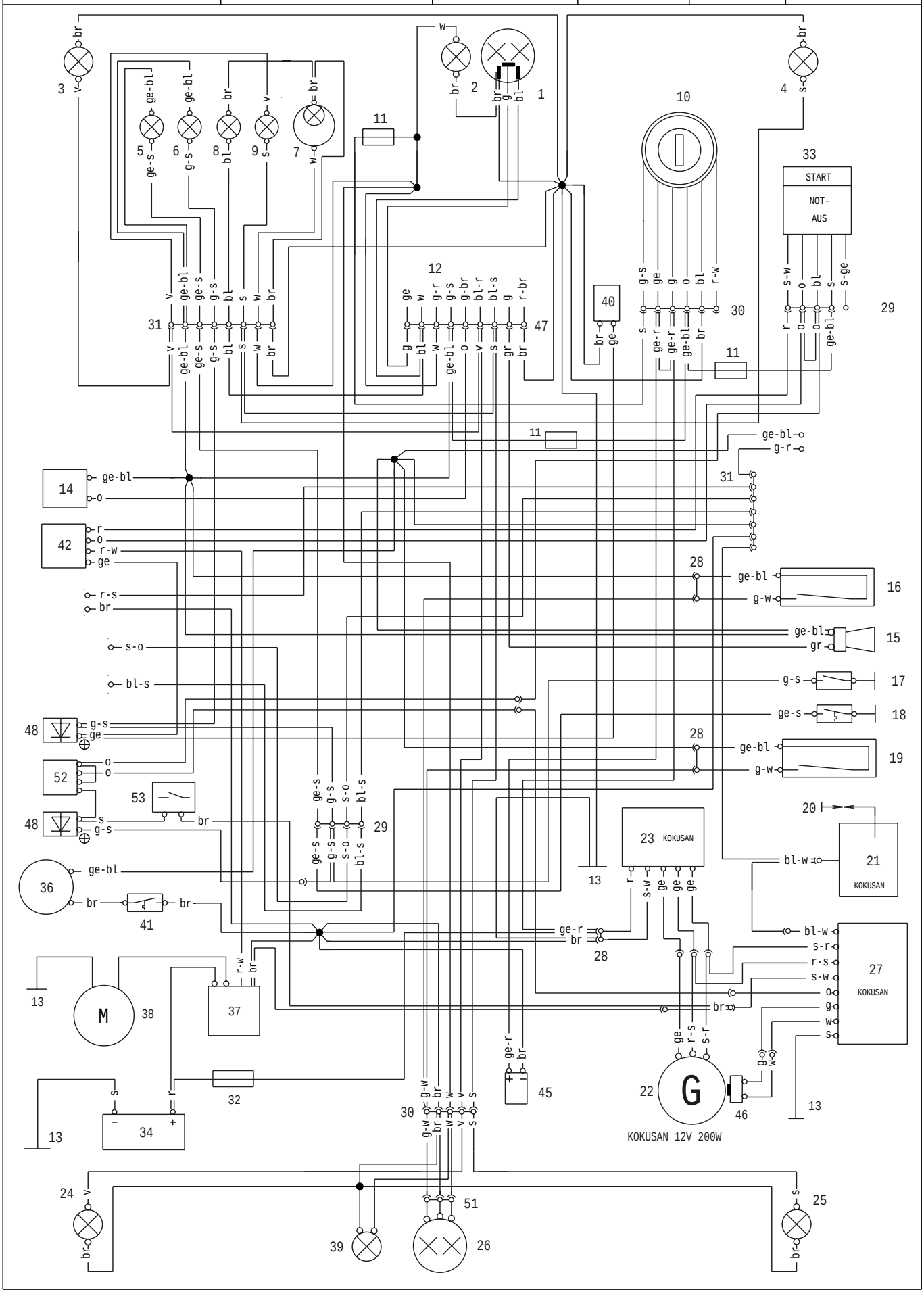
Domino	o	s-ge	bl	s	s-w
			●		
		●			
					●

Z ndschlo§ (Typ Zadi)

	o	g	ge	g-s	r-w	bl
					●	
					●	
	●					
	●		●			

Art.-Nr. 3.206.006 -E

SERVICE	640 LC4 USA 2002	Kabelstrangnummer: vorne: 584.11.175.300 hinten: 584.11.176.200	Land: USA	Datum, Name: 10.05.01 KE	Dateiname: LC42002



KTM 640 LC4 USA 2002

Deutsch	Englisch	Italienisch	Franz sisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg. ant. sn.	3 clignoteur av. gauche
4 Blinker re vo	4 blinker right front	4 lampegg. ant. dx.	4 clignoteur av. droit
5 Temperaturkontrolle	5 temperature control	5 controllo temperatura	5 temoin de temperature
6 Leerlaufanzeige	6 neutral	6 indicat.marcia folle	6 ind.de point mort
7 Tachobeleuchtung	7 tachometer light	7 luce di tachimetro	7 eclair.comp.vitesse
8 Fernlichtkontrolle	8 high beam control	8 spia abbagliante	8 temoin de feu route
9 Blinkerkontrolle	9 blink control	9 spia lampeggiatori	9 temoin de clignoteur
10 Z ndschlo§	10 ignition switch	10 int. accensione	10 contact.d'allum.
11 Sicherung 10A	11 fuse 10A	11 fusibile 10A	11 fusible 10A
12 zum Kombischalter	12 to combinat. switch	12 multicomando	12 vers commutateur
13 Masseanschlu§	13 ground connection	13 collegam. a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett. di lampeg.	14 centrale clignot.
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch. vo	16 stoplight switch f.	16 int.luce arresto ant.	16 cont.av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr.luce folle (N)	17 contact.pt.mort (N)
18 Thermoschalter	18 temperature switch	18 int. temperatura	18 contact. de temperature
19 Bremslichtsch. hi	19 stoplight switch r.	19 int.luce arresto post	19 contact.arr.de stop
20 Z ndkerze	20 spark plug	20 candela	20 bougie
21 Z ndspule	21 ignition coil	21 bobina d'accens.	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat.redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg. post. sn.	24 clign.arr.gauche
25 Blinker re hi	25 blinker right rear	25 lampegg. post. dx.	25 clign.arr.droit
26 Brems-Schlu§licht	26 rear-stoplight	26 fanal.post.di freno	26 feu arr.et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol.Stecker	28 multip.cont.plug (2)	28 connettore a 2 poli	28 connect.multiple (2)
29 4-pol.Stecker	29 multip.cont.plug (4)	29 connettore a 4 poli	29 connect.multiple (4)
30 6-pol.Stecker	30 multip.cont.plug (6)	30 connettore a 6 poli	30 connect.multiple (6)
31 9-pol.Stecker	31 multip.cont.plug (9)	31 connettore a 9 poli	31 connect.multiple (9)
32 Hauptsicherung 20A	32 mainfuse 20A	32 fusibile principale 20A	32 fusible principal 20A
33 Starttast.Notaussch.	33 run-off/start switch	33 disinseritor/partire	33 bout.de demar/arr.d'urg
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
36 L ftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot.d'avviamento elettr.	38 demarreur electrique
39 Kennzeichenbeleuchtung	39 licence plate lighting	39 illuminat.de.targa	39 ecl.plaque d.immat.
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact.de embrayage
41 Thermoschalter	41 temperature switch	41 int. temperatura	41 contact.de temperature
42 Starterhilfsrelais	42 startar auxil. relay	42 rele avviam. ausiliario	42 relaise auxi demarrage
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 12-pol.Stecker	47 multip.cont.plug (12)	47 connettore a 12 poli	47 connect.multiple (12)
48 Diode	48 diode	48 diodo	48 diode
51 3-pol.Stecker	51 multip.cont.plug (3)	51 connettore a 3 poli	51 connect.multiple (3)
52 Seitenst nderrelais	52 sidestand relay	52 rele del cavalleto later	52 relaise com de bequ lat
53 Seitenst nderschalter	53 side stand switch	53 int del cavalleto later	53 commut de bequille later

Spanisch

1 faro
2 luz de posicion
3 interm. izquierdo delantero
4 intermitente derecho delantero
5 control temperatura
6 indicador punto muerto
7 luz tacometro
8 lampara aviso luces largas
9 lampara aviso intermitentes
10 llave de contacto
11 fusible 10A
12 interruptor combinado
13 conector a masa
14 conjunto del intermitente
15 claxon
16 interruptor
17 interruptor punto muerto
18 interruptor temperatura
19 interruptor luz de frendo tras
20 bujia
21 bobina de encendido
22 generador
23 regulador de tension
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 unidad cdi
28 conecdor multiple (2)
29 conector multiple (4)
30 conector multiple (6)
31 conector multiple (9)
32 fusible principal 20A
33 boton de arranque par.de urg.
34 bateria 12V 8 Ah
36 ventilador electrica
37 rele de arranque
38 motor de arranque
39 luz plaza de matricula
40 interruptor de embraque
41 interruptor temperatura
42 rele del arranque
45 condensador
46 generado de impulsos
47 conector multiple (12)
48 diodo
51 conector multiple (3)
52 rele del caballete lateral
53 int.del caballete lateral

Deutsch	Englisch	Italienisch	Franz sisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g gr n	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w wei§	w white	w bianco	w blanc	w blanco

Kombischalter

	br	ge	w	bl-r	bl-s	g-br	g	g-s
TURN L				●		●		
TURN R					●	●		
LIGHTS ●								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●						●

Start- Notaus- Schalter

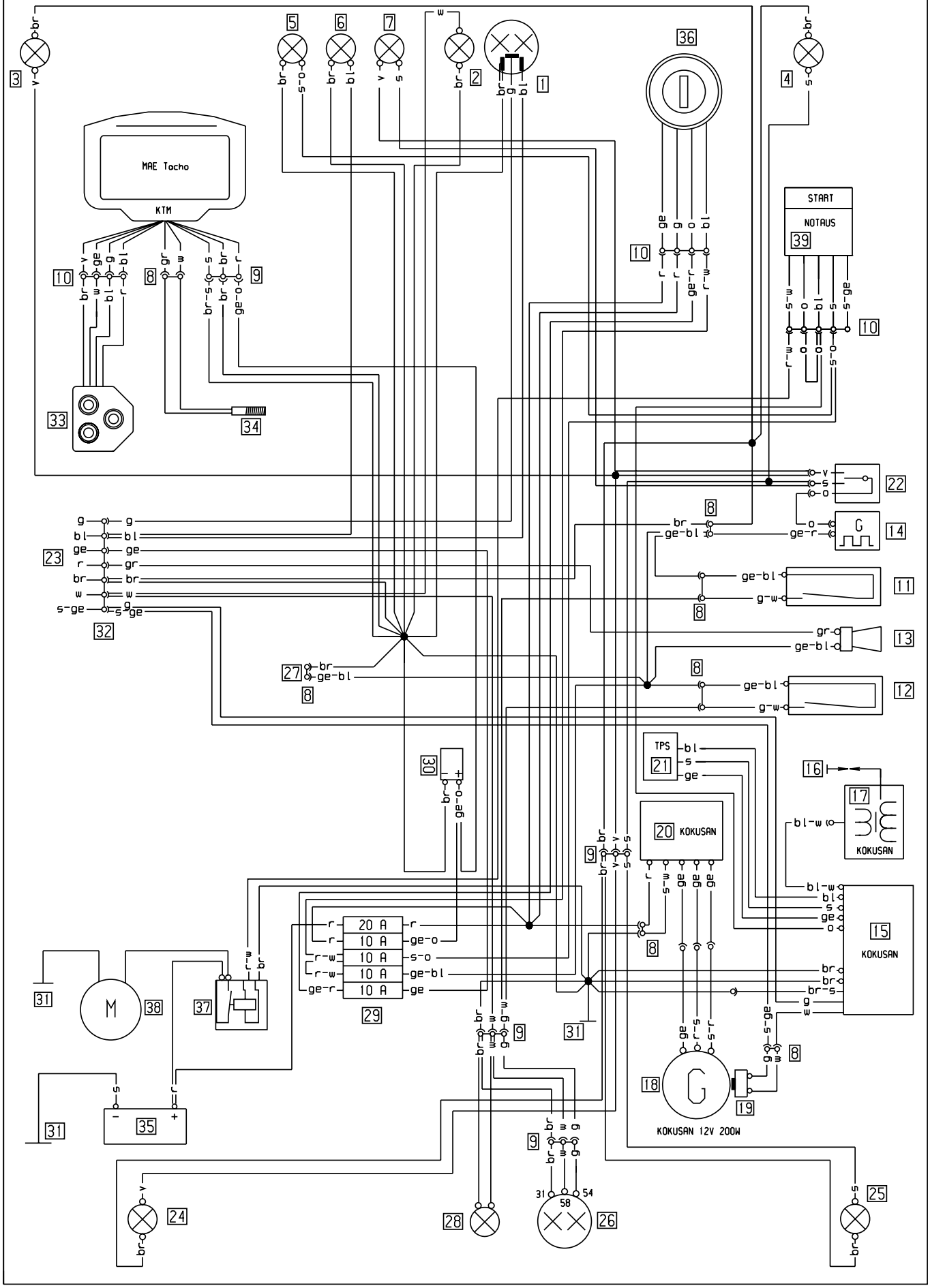
Domino	o	s-ge	bl	s	s-w
			●		
			●		
●					●

Z ndschlo§Æ (Typ Zadi)

	o	g	ge	g-s	r-w	bl
					●	
					●	
	●					
	●		●			

Art.-Nr. 3.206.006 -E

KTM SPORTMOTORCYCLES SERVICE	Modell	Kabelstrangnummer:	Land:	Datum, Name:	Dateiname:
	625 SXC 2003	vorne: 583.11.375.450 hinten: 584.11.075.000	DIV. LANDER	31.07.02 SS	SXC 2003



KTM 625 SXC 2003

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 turn indic.left fr.	3 lampegg.ant.sn.	3 clignoteur av gauche
4 Blinker re vo	4 turn indic.right fr.	4 lampegg.ant.dx.	4 clignoteur av.droit
5 Zündungskontrolle ON	5 ignition controll ON	5 spiedicontrollo ON	5 temion ON
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 2-pol.Stecker	8 multip.cont.plug (2)	8 connettore a 2 poli	8 connect.multiple (2)
9 3-pol.Stecker	9 multip.cont.plug (3)	9 connettore a 3 poli	9 connect.multiple (3)
10 4-pol.Stecker	10 multip.cont.plug (4)	10 connettore a 4 poli	10 connect.multiple (4)
11 Bremslichtsch. vo	11 stoplight switch f.	11 int.luce arresto ant	11 contact de stop av.
12 Bremslichtsch. hi	12 stoplight switch r.	12 int.luce arresto post	12 contact Harr.de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett. di lampeg.	14 centrale clignot.
15 CDI	15 CDI	15 CDI	15 CDI
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens.	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Impulsgeber	19 pulser coil	19 trasmettitore d imp.	19 capteur
20 Reglelgleichrichter	20 regulator-rectifier	20 regol. di tens.	20 regulat redresseur
21 TPS	21 TPS	21 TPS	21 TPS
22 Blinkerschalter	22 blink switch	22 int. lampeggiatori	22 contact d clignoteur
23 zum Kombischalter	23 to combinat switch	23 multicomando	23 commodo
24 Blinker li hi	24 blinker left rear	24 lampegg.post.sn	24 clign.arr.gauche
25 Blinker re hi	25 blinker right rear	25 lampegg.post.dx.	25 clign.arr.droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal.post.di freno	26 feu arr.et de stop
27 Lüfteranschluss	27 fan connection	27 connett ventilatore	27 connect ventilateur
28 Kennzeichenbel.	28 licence pl. lighting	28 iluminat de targa	28 ecl plaque d immat
29 Sicherungskasten	29 fusebox	29 scatola fusibili	29 boite a fusibles
30 Kondensator	30 capacitor	30 condensatore	30 condensateur
31 Masseanschluß	31 ground connection	31 collegam. di masse	31 masse
32 6-pol.Stecker	32 multip.cont.plug (6)	32 connettore a 6 poli	32 connect.multiple (6)
33 Tripmasterschalter	33 tripmaster switch	33 interrupttore tripm.	33 bouton tripmaster
34 Sensorkabel	34 Sensorcable	34 cavo sensor	34 capteur cable
35 Batterie 12V	35 battery 12V	35 batteria 12V	35 batterie 12V
36 Zündschloß	36 ignition switch	36 interrutore accesion	36 contact d allum
37 Startrelaise	37 starter relay	37 rele d avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot d avviamento ele	38 demarreur electrique
39 Start-Not-Aus	39 run-off/start switch	39 disinseritor/partire	39 bout de demar/arr d urg

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch

1 faro
2 luz de posicion
3 interm. izquierdo delantero
4 intermitente derecho delantero
5 luces de aviso ON
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (2)
9 conector multiple (3)
10 conector multiple (4)
11 interr. luz de freno del.
12 interr. luz. de fren tras.
13 claxon
14 conjunto del intermintente
15 CDI
16 bujia
17 bobina de encendido
18 generador
19 generado de impulsos
20 regulador de tension
21 TPS
22 interuptor clingoteur
23 interruptor combinado
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector ventilador
28 luz lpaca de matricula
29 caja de fusibles
30 condensador
31 conector a masa
32 conector multiple (6)
33interruptor tripmaster
34 sensor cable
35 batteria 12V
36 llave de contacto
37 rele de arranque
38 motor de arranque
39 boton de arranque per de urg

Start- Notaus- Schalter

Domino	o	s-ge	bl	s	s-w
☐ ∩			●	●	
⊠		●	●		
ϟ ($)	●				●

Sicherungskasten

20 A	res.
10 A	res.
20 A	Hauptsicherung
10 A	Kondensator, Tacho
10 A	Startsystem
10 A	Blinker, Hupe, Bremslicht
10 A	Licht

Zündschloß (Typ Zadi)

	bl	r-w	g	o
⊠				
∩	●	●		
☼	●	●	●	●

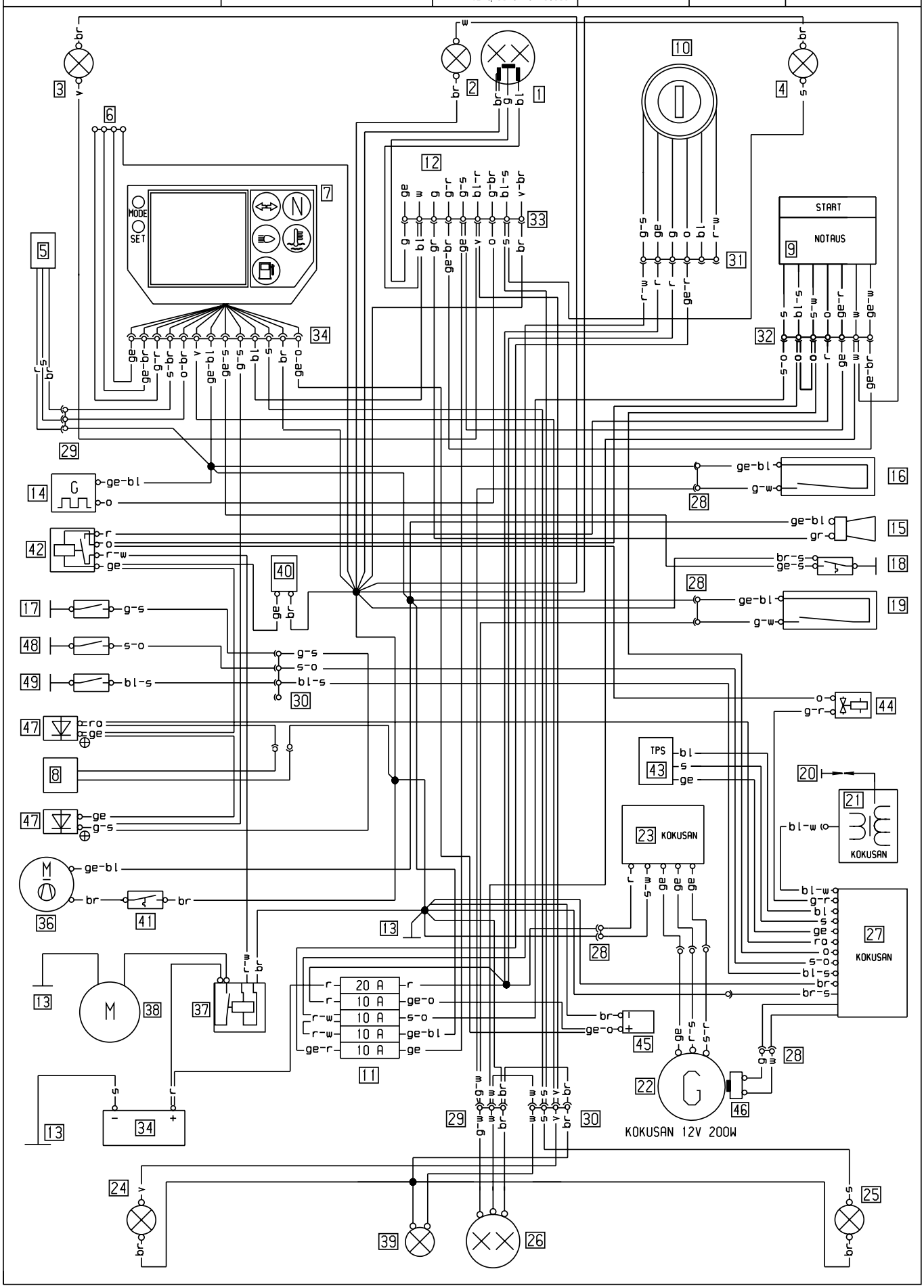
Kontaktbelegung - Lichtschalter (Typ CEV 9610)

	g	bl	ge	w	ge/s	r	br
Lights ●							
LO beam	●		●	●			
Hi beam		●	●	●			
Horn						●	●
Engine off ⊠					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	●
⇨	●	●	

KTM SPORTMOTORCYCLES SERVICE	640 LC4 2003	Kabelstrangnummer: vorne: 584.11.175.400 hinten: 584.11.176.300	Land: DIV. LANDER	Datum, Name: 25.07.02 SS	Dateiname: LC42003



KTM 640 LC4 2003

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg. ant. sn.	3 clignoteur av. gauche
4 Blinker re vo	4 blinker right front	4 lampegg. ant. dx.	4 clignoteur av. droit
5 Sensorkabel	5 Sensorcable	5 cavo sensor	5 capteur cable
6 zum Tripmasterschalter	6 to tripmaster switch	6 interrupttore tripmaster	6 bouton tripmaster
7 Tacho	7 tachometer	7 tachimetro	7 capteur
8 Seitenständerschalter	8 sidestandswitch	8 int.de cavalleto later	8 commut de bequille later
9 Start-Not-Aus	9 run-off/start switch	9 disinseritor/partire	9 bout de demar/aar d urg
10 Zündschloß	10 ignition switch	10 int. accensione	10 contact.d'allum.
11 Sicherungskasten	11 fusebox	11 scatola fusibili	11 boite a fusibles
12 zum Kombischalter	12 to combinat. switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam. a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett. di lampeg.	14 centrale clignot.
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch. vo	16 stoplight switch f.	16 int.luce arresto ant.	16 cont.av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr.luce folle (N)	17 contact.pt.mort (N)
18 Thermoschalter	18 temperature switch	18 int. temperatura	18 contact. de temperature
19 Bremslichtsch. hi	19 stoplight switch r.	19 int.luce arresto post	19 contact.arr.de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens.	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat.redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg. post. sn.	24 clign.arr.gauche
25 Blinker re hi	25 blinker right rear	25 lampegg. post. dx.	25 clign.arr.droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal.post.di freno	26 feu arr.et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol.Stecker	28 multip.cont.plug (2)	28 connettore a 2 poli	28 connect.multiple (2)
29 3-pol.Stecker	29 multip.cont.plug (3)	29 connettore a 3 poli	29 connect.multiple (3)
30 4-pol.Stecker	30 multip.cont.plug (4)	30 connettore a 4 poli	30 connect.multiple (4)
31 6-pol.Stecker	31 multip.cont.plug (6)	31 connettore a 6 poli	31 connect.multiple (6)
32 9-pol.Stecker	32 multip.cont.plug (9)	32 connettore a 9 poli	32 connect.multiple (9)
33 12-pol.Stecker	33 multip.cont.plug (12)	33 connettore a 12 poli	33 connect.multiple (12)
34 20-pol.Stecker	34 multip.cont.plug (20)	34 connettore a 20 poli	34 connect.multiple (20)
35 Batterie 12V 8Ah	35 battery 12V 8Ah	35 batteria 12V 8Ah	35 batterie 12V 8Ah
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot.d'avviamento elettr.	38 demarreur electrique
39 Kennzeichenbeleuchtung	39 licence plate lighting	39 illuminat.de.targa	39 ecl.plaque d.immat.
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact.de embrayage
41 Thermoschalter	41 temperature switch	41 int. temperatura	41 contact.de temperature
42 Starterhilfsrelais	42 startar auxil. relay	42 rele avviam. ausiliario	42 relaise auxi demarrage
43 TPS	43 TPS	43 TPS	43 TPS
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 Diode	47 diode	47 diodo	47 diode
48 Kontaktstift 3.Gang	48 gear switch 3rd gear	48 3.secondo marcia	48 cont.d.boite d.vites.(3)
49 Kontaktstift 2.Gang	49 gear switch 2th gear	49 2.secondo marcia	49 cont.d.bolte.d.vites.(2)

Sicherungskasten

20 A	res.
10 A	
20 A	Hauptsicherung
10 A	Kondensator, Tacho
10 A	Startsystem
10 A	Blinker, Hupe, Bremslicht
10 A	Licht

Spanisch

1 faro	19 interruptor luz de frendo tras	37 rele de arranque
2 luz de posicion	20 bujia	38 motor de arranque
3 interm. izquierdo delantero	21 bobina de encendido	39 luz plaza de matricula
4 intermitente derecho delantero	22 generador	40 interruptor de embraque
5 sensor cable	23 regulador de tension	41 interruptor temperatura
6 interruptor tripmaster	24 intermitente izquierdo trosero	42 rele del arranque
7 tacometro	25 intermitente derecho trosero	43 TPS
8 int delacoballetelateral	26 luz de freno trosero	44 valvola magnetica
9 boton de arranque per de urg	27 unidad cdi	45 condensador
10 llave de contacto	28 conecdor multiple (2)	46 generado de impulsos
11 caja de fusibles	29 conector multiple (3)	47 diodo
12 interruptor combinado	30 conector multiple (4)	48 interruptor de combio (3)
13 conector a moso	31 conector multiple (6)	49 interruptor de combio (2)
14 conjunto del intermitente	32 conector multiple (9)	
15 claxon	33 conector multiple (12)	
16 interruptor	34 conector multiple (20)	
17 interruptor punto muerto	35 bateria 12V 8 Ah	
18 interruptor temperatura	36 ventilador electrico	

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ro rosa	ro pink	ro rosa	ro rose	ro rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter

	br	ge	w	bl-r	bl-s	g-br	g	g-s
TURN L ⇦				●		●		
TURN R ⇨					●	●		
LIGHTS ●								
H LO		●						●
H HI			●					●
HORN	●						●	
PASSING		●	●					●

Start- Notaus- Schalter

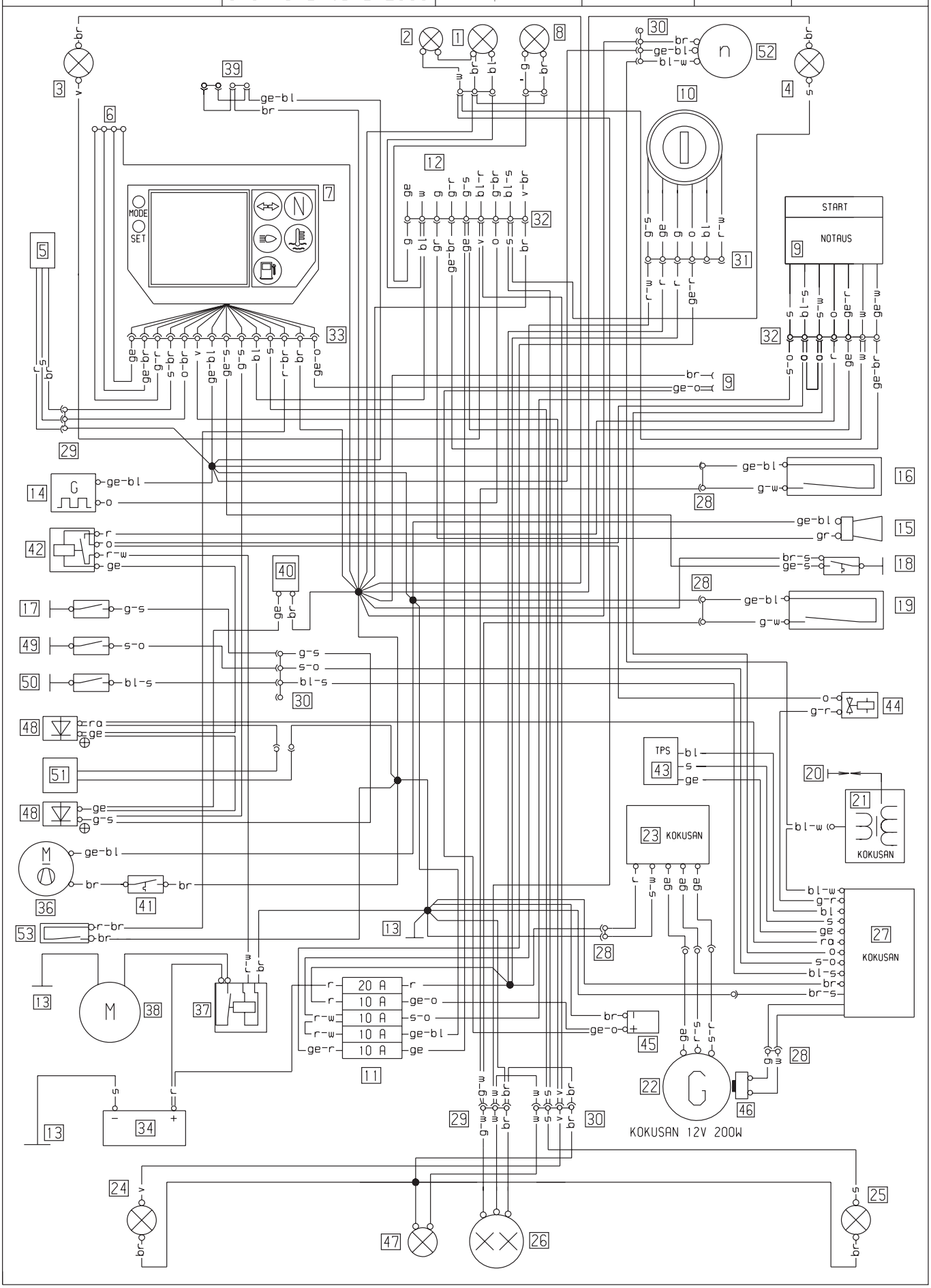
ASAHI DENSO	o	s-w	bl-s	s	ge-r	w	ge-w
□ ○			●	●			
⊠							
ϟ $	●	●					
•							
⋈					●	●	
○					●	●	●

Zündschloß (Typ Zadi)

	o	g	ge	g-s	r-w	bl
⛽					●	●
⊠					●	●
∩	●		●			

Art.-Nr. 3.206.006 -E

KTM SPORTMOTORCYCLES SERVICE	Modell	Kabelstrangnummer:	Land:	Datum, Name:	Dateiname:
	640 Adventure 2003	vorne: 582.11.075.500 hinten: 584.11.176.300	DIV. LÄNDER	06.08.02 SS	Advent03



KTM 640 Adventure 2003

Deutsch	Englisch	Italienisch	Französisch
1 Fernlicht	1 headlight	1 faro	1 phare
2 Standlicht	2 parking light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 blinker left front	3 lampegg. ant. sn.	3 clignoteur av. gauche
4 Blinker re vo	4 blinker right front	4 lampegg. ant. dx.	4 clignoteur av. droit
5 Sensorkabel	5 the sensor cable	5 sensor cavo	5 palpeur cable
6 zum Tripmasterschalter	6 to tripmaster switch	6 interrupttore tripm.	6 bouton tripmaster
7 Tachometer	7 tachometer	7 tachimetro	7 comp.vitesse
8 Abblendlicht	8 low beam	8 anabbaglianti	8 feu de croisement
9 Steckdose	9 socket	9 la presa a spina	9 prise de courant
10 Zündschloß	10 ignition switch	10 int. accensione	10 contact.d'allum.
11 Sicherungskasten	11 fusebox	11 scatola fusibili	11 boite a fusibles
12 zum Kombischalter	12 to combinat. switch	12 multicomando	12 vers commutateur
13 Masseanschluß	13 ground connection	13 collegam. a massa	13 masse
14 Blinkgeber	14 blink signal system	14 trasmett. di lampeg.	14 centrale clignot.
15 Horn	15 horn	15 clacson	15 klaxon
16 Bremslichtsch. vo	16 stoplight switch f.	16 int.luce arresto ant.	16 cont.av de stop
17 Leerlaufschalter (N)	17 idle switch (N)	17 interr.luce folle (N)	17 contact.pt.mort (N)
18 Temperaturfühler	18 temperature switch	18 int. temperatura	18 contact. de temperature
19 Bremslichtsch. hi	19 stoplight switch r.	19 int.luce arresto post	19 contact.arr.de stop
20 Zündkerze	20 spark plug	20 candela	20 bougie
21 Zündspule	21 ignition coil	21 bobina d'accens.	21 bobine d'allumage
22 Generator	22 generator	22 dinamo	22 generateur
23 Regelgleichrichter	23 regulator-rectifier	23 regolatore di tens	23 regulat.redresseur
24 Blinker li hi	24 blinker left rear	24 lampegg. post. sn.	24 clign.arr.gauche
25 Blinker re hi	25 blinker right rear	25 lampegg. post. dx.	25 clign.arr.droit
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal.post.di freno	26 feu arr.et de stop
27 CDI-Einheit	27 CDI-unit	27 CDI-seatola	27 boitier CDI
28 2-pol.Stecker	28 multip.cont.plug (2)	28 connettore a 2 poli	28 connect.multiple (2)
29 3-pol.Stecker	29 multip.cont.plug (3)	29 connettore a 3 poli	29 connect.multiple (3)
30 4-pol.Stecker	30 multip.cont.plug (4)	30 connettore a 4 poli	30 connect.multiple (4)
31 6-pol.Stecker	31 multip.cont.plug (6)	31 connettore a 6 poli	31 connect.multiple (6)
32 9-pol.Stecker	32 multip.cont.plug (9)	32 connettore a 9 poli	32 connect.multiple (9)
33 20-pol.Stecker	33 multip.comt.plug (20)	33 connettore a 20 poli	33 connect.multiple (20)
34 Batterie 12V 8Ah	34 battery 12V 8Ah	34 batteria 12V 8Ah	34 batterie 12V 8Ah
35 Start-Not-Aus	35 run-off/start switch	35 disinsertor/partire	35 bout de demar/all d urg
36 Lüftermotor	36 fan motor	36 ventilatore	36 ventilateur
37 Startrelaise	37 starter relay	37 rele d'avviamento	37 relaise de demarreur
38 Startermotor	38 starter engine	38 mot.d'avviamento elettr.	38 demarreur electrique
39 Roadbookversorgung	39 roadbook-ernergie	39 roabook-energia	39 roadbook-energie
40 Kupplungsschalter	40 clutch switch	40 interrutore frizione	40 contact.de embrayage
41 Thermoschalter	41 temperature switch	41 int. temperatura	41 contact.de temperature
42 Starterhilfsrelaise	42 startar auxil. relay	42 rele avviam. ausiliario	42 relaise auxi demarrage
43 TPS	43 TPS	43 TPS	43 contact.de carburateur
44 Magnetventil	44 magnetic valve	44 valvola elettromagnetica	44 electrovanne
45 Kondensator	45 capacitor	45 condensatore	45 condensateur
46 Impulsgeber	46 pulser coil	46 trasmettitore d'impulsi	46 capteur
47 Kennzeichenbeleuchtung	47 licence pl. lighting	47 iluminat de targa	47 ecl lpaque d immat
48 Diode	48 diode	48 diodo	48 diode
49 Kontaktstift 3.Gang	49 gear switch 3rd gear	49 3.secondo marcia	49 cont.d.boite d.vites.(3)
50 Kontaktstift 2.Gang	50 gear switch 2th gear	50 2.secondo marcia	50 cont.d.bolte.d.vites.(2)
51 Seitenständersalter	51 sidestandswitch	51 int. de cavalleto later	51 commut de bequille later
52 Drehzahlmesser	52 tachometer	52 contagiri	52 compte-tours
53 Benzinstandgeber	53 reserve fuel sensor	53 carbur.de vreserve sensor	53 palpeur d.livello d.carb

Spanisch

1 faro
2 luz de posicion
3 interm. izquierdo delantero
4 intermitente derecho delantero
5 sensor cable
6 interruptor tripmaster
7 luz tacometro
8 luces de crule
9 tomacorriente
10 llave de contacto
11 caja de fusibles
12 interruptor combinado
13 conector a masa
14 conjunto del intermitente
15 claxon
16 interruptor
17 interruptor punto muerto
18 interruptor temperatura
19 interruptor luz de frendo tras
20 bujia
21 bobina de encendido
22 generador
23 regulador de tension
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 unidad cdi
28 conecdor multiple (2)
29 conector multiple (3)
30 conector multiple (4)
31 conector multiple (6)
32 conector multiple (9)
33 conector multiple (20)
34 bateria 12V 8 Ah
35 boton de arranque per de urg
36 ventilador electrica
37 rele de arranque
38 motor de arranque
39 conector paralelo
40 interruptor de embraque
41 interruptor temperatura
42 rele del arranque
43 TPS
44 valvola magnetica
45 condensador
46 generado de impulsos
47 luz lpaca de matricula
48 diodo
49 interruptor de cambio (3)
50 interruptor de cambio (2)
51 int delcaballetelateral
52 cuentarreveluciones
53 combustible sensor

23.01.2002

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
ra rosa	ra pink	ra rosa	ra rose	ra rosado
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Kombischalter

	s-bl	g-br	v-br	r-bl	g-s	g	g-r	ge	w
TURN L ⇦		●		●					
TURN R ⇨	●	●							
LIGHTS ●									
H LO							●		
H HI							●		●
HORN			●			●			
PASSING					●				●

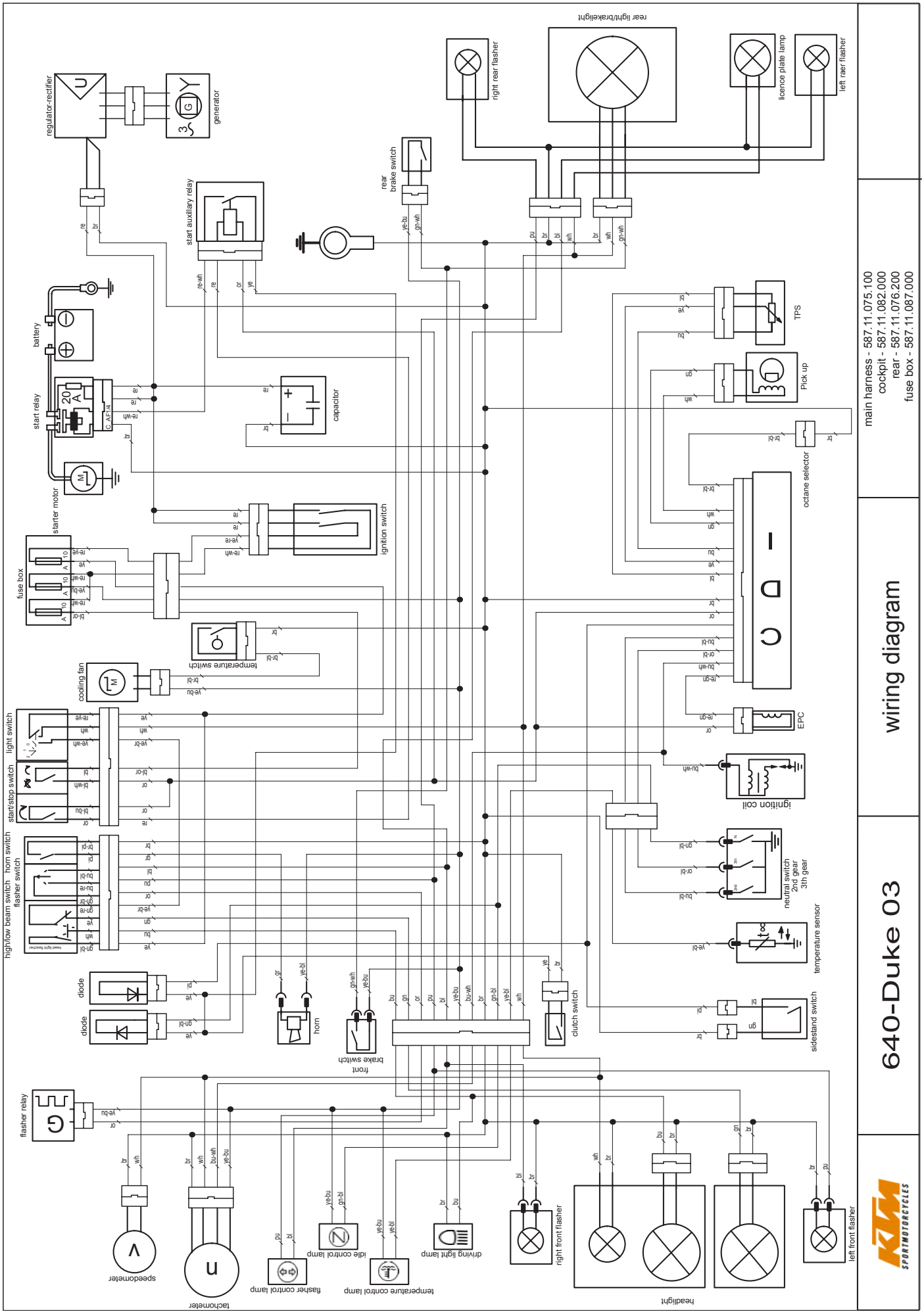
Start- Notaus- Schalter

ASAHI DENSO	o	s-w	bl-s	s	ge-r	w	ge-w
			●	●			
●	●	●					
					●	●	
					●	●	●

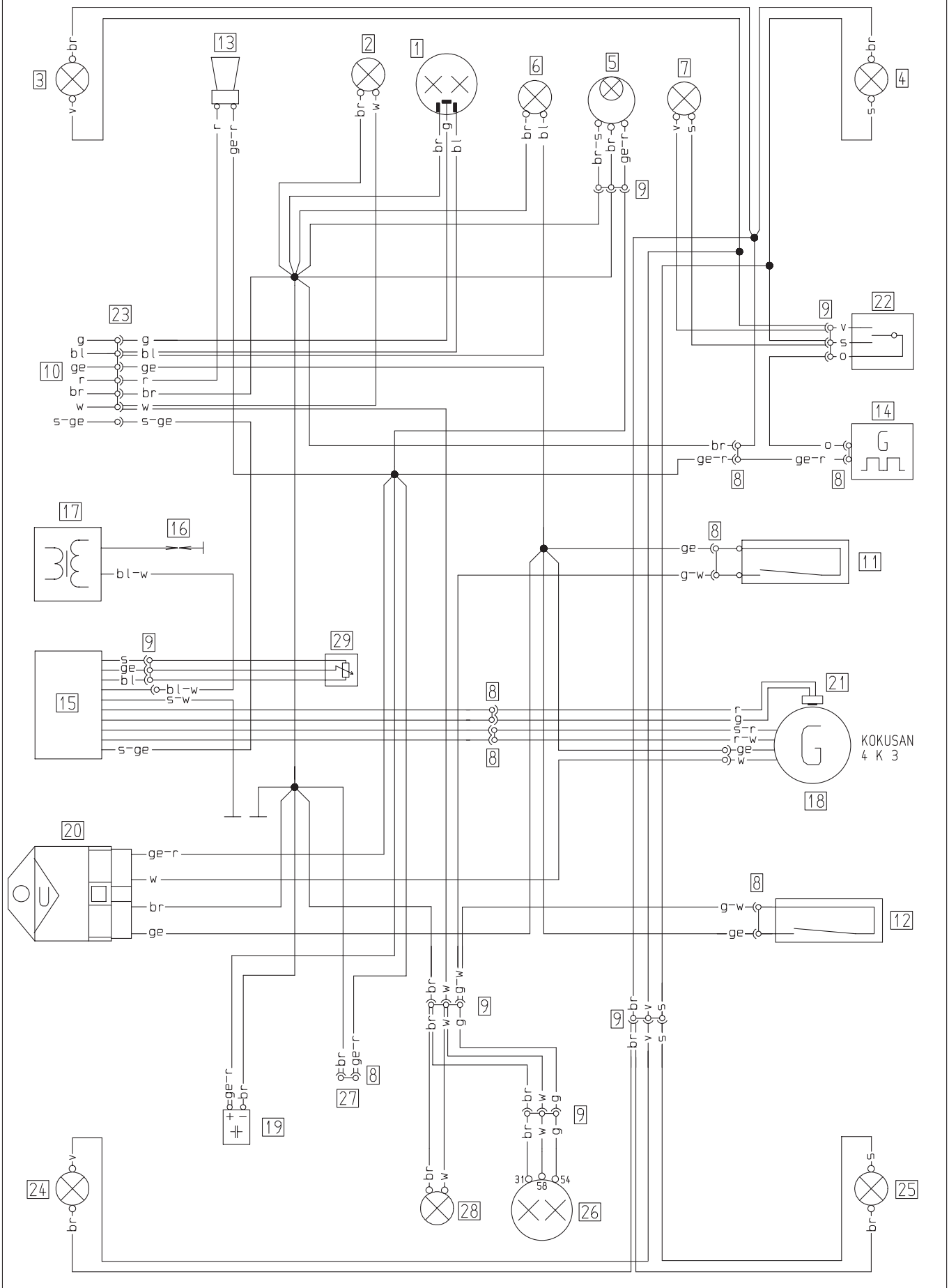
Zündschloß (Typ Zadi)

	o	g	ge	g-s	r-w	bl
					●	●
					●	●
●	●		●	●		

Art.-Nr. 3.206.006 -E


main harness - 587.11.075.100
cockpit - 587.11.082.000
rear - 587.11.076.200
fuse box - 587.11.087.000
wiring diagram
640-Duke 03
KTM SPORTMOTORCYCLES
regulator-rectifier
generator
rear light/brakelight
right rear flasher
licence plate lamp
left raer flasher
rear brake switch
start auxiliary relay
battery
start relay
capacitor
starter motor
ignition switch
fuse box
temperature switch
cooling fan
light switch
start/stop switch
horn switch
flasher switch
high/low beam switch
diode
diode
horn
front brake switch
clutch switch
sidestand switch
temperature sensor
neutral switch 2nd gear 3th gear
ignition coil
EPC
octane selector
Pick up
TPS
flasher relay
speedometer
tachometer
flasher control lamp
temperature control lamp
idle control lamp
driving light lamp
right front flasher
left front flasher
headlight

KTM SPORTMOTORCYCLES SERVICE	Modell	Kabelstrangnummer: vorne:583.11.375.300 Kennzeichenbel.:584.11.047.000 Blinkerstrang vorne:590.11.080.000 Blinkerstrang hinten:590.11.081.000	Land:	Datum, Name:	Dateiname:
	660 SMC 2003		EU	09.07.01 KE	SUPC002



KTM 660 SMC 2003

Deutsch	Englisch	Italienisch	Französisch
1 Scheinwerfer	1 headlight	1 faro	1 phare
2 Standlicht	2 position light	2 luce di posizione	2 feu de position
3 Blinker li vo	3 turn indic.left fr.	3 lampegg.ant.sn.	3 clignoteur av gauche
4 Blinker re vo	4 turn indic.right fr.	4 lampegg.ant.dx.	4 clignoteur av.droit
5 Tacho	5 speedometer	5 tachimetro	5 compteur de vitesse
6 Fernlichtkontrolle	6 high beam indicator	6 spia abbagliante	6 temoin feu route
7 Blinkerkontrolle	7 turn indicator	7 spia lampeggiatori	7 temoin de clignoteur
8 2-pol.Stecker	8 multip.cont.plug (2)	8 connettore a 2 poli	8 connect.multiple (2)
9 3-pol.Stecker	9 multip.cont.plug (3)	9 connettore a 3 poli	9 connect.multiple (3)
10 zum Kombischalter	10 to combinat. switch	10 multicomando	10 commodo
11 Bremslichtsch. vo	11 stoplight switch f.	11 int.luce arresto ant	11 contact de stop av.
12 Bremslichtsch. hi	12 stoplight switch r.	12 int.luce arresto post	12 contact Harr.de stop
13 Horn	13 horn	13 clacson	13 klaxon
14 Blinkgeber	14 turn indicator	14 trasmett. di lampeg.	14 centrale clignot.
15 CDI	15 CDI	15 CDI	15 CDI
16 Zündkerze	16 spark plug	16 candela	16 bougie
17 Zündspule	17 ignition coil	17 bobina d'accens.	17 bobine d'allumage
18 Generator	18 generator	18 dinamo	18 generateur
19 Kondensator	19 capacitor	19 condensatore	19 condensateur
20 Spannungsregler	20 voltage regulator	20 regol. di tens.	20 regulateur
21 Impulsgeber	21 pulser coil	21 trasmett.d'impulsi	21 generateur d'impuls.
22 Blinkerschalter	22 blink switch	22 int. lampeggiatori	22 contact d.clignateur
23 6-pol.Stecker	23 multip.cont.plug (6)	23 connettore a 6 poli	23 connect.multiple (6)
24 Blinker li hi	24 blinker left rear	24 lampegg.post.sn	24 clign.arr.gauche
25 Blinker re hi	25 blinker right rear	25 lampegg.post.dx.	25 clign.arr.droite
26 Brems-Schlußlicht	26 rear-stoplight	26 fanal.post.di freno	26 feu arr.et de stop
27 Lüfteranschluss	27 fan connection	27 connett. ventilatore	27 connect.ventilateur
28 Kennzeichenbeleucht.	28 licence plt.lighting	28 illuminat.de.targa.	28 ecl.plaque d.immat.
29 Vergaserpotentiomet.	29 carburetor potentiom	29 carburatore potent.	29 carburateur potenti.

Deutsch	Englisch	Italienisch	Französisch	Spanisch
bl blau	bl blue	bl blu	bl bleu	bl azul
br braun	br brown	br marrone	br brun	br marron
ge gelb	ge yellow	ge giallo	ge jaune	ge amarillo
gr grau	gr grey	gr grigio	gr gris	gr gris
g grün	g green	g verde	g vert	g verde
o orange	o orange	o arancione	o orange	o naranja
r rot	r red	r rosso	r rouge	r rojo
s schwarz	s black	s nero	s noir	s negro
v violett	v violet	v violetto	v violet	v violeta
w weiß	w white	w bianco	w blanc	w blanco

Spanisch
1 faro
2 luz de posicion
3 interm. izquierdo delantero
4 intermitente derecho delantero
5 tacometro
6 lampara aviso luces largas
7 lampara aviso intermitentes
8 conector multiple (2)
9 conector multiple (3)
10 interruptor combinado
11 interr. luz de freno del.
12 interr. luz. de fren tras.
13 claxon
14 conjunto del intermintente
15 CDI
16 bujia
17 bobina de encendido
18 generador
19 condensador
20 regulador de tension
21 generado de impulsos
22 interuptor clignoteur
23 conector multiple (6)
24 intermitente izquierdo trasero
25 intermitente derecho trasero
26 luz de freno trasero
27 conector ventilador
28 luz plaza de matricula
29 carburador poteciometro

Kontaktbelegung –
Lichtschalter (Typ CEV 9610)

	g	bl	ge	w	ge /s	r	br
Lights ●							
LO beam	●		●	●			
Hi beam		●	●	●			
Horn						●	●
Engine off ⊗					●		●
	5	2	1	3	6	4	

Blinkerschalter

	s	o	v
⇦⇨			
⇦		●	
⇨	●		