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SERVICE INFORMATION

GENERAL

 **WARNING**

- Before running the engine, make sure that the working area is well-ventilated. Never run the engine in a closed area. The exhaust contains poisonous carbon monoxide gas which may cause death to people.
- Gasoline is extremely flammable and is explosive under some conditions. The working area must be well-ventilated and do not smoke or allow flames or sparks near the working area or fuel storage area.

SPECIFICATIONS

ENGINE

Throttle grip free play : 2~6mm
Spark plug gap : 0.6~0.7mm
Spark plug : CHAMPION-P-RZ9HC

Valve clearance : IN: 0.12±0.02mm
: EX: 0.12±0.02mm

Idle speed : 1700 ±100rpm

Engine oil capacity:
At disassembly : 0.9 liter
At change : 0.8 liter

Gear oil capacity :
At disassembly : 0.2 liter
At change : 0.19 liter

3. INSPECTION/ADJUSTMENT

Cylinder compression : 13 kg/cm²

Ignition timing: BTDC 27°±2° /4000rpm

CHASSIS

Front brake free play: 10~20mm

Rear brake free play : 10~20mm

TIRE PRESSURE

	1 Rider	2 Riders
Front	1.5kg/cm ²	1.75kg/cm ²
Rear	2.0kg/cm ²	2.25kg/cm ²

TIRE SIZE:

Front : 120/70-12

Rear : 130/70-12

TORQUE VALUES

Front axle nut 5.0~7.0kgf-m

Rear axle nut 11~13kgf-m

3. INSPECTION/ADJUSTMENT

MAINTENANCE SCHEDULE

Perform the periodic maintenance at each scheduled maintenance period.

I: Inspect, and Clean, Adjust, Lubricate or Replace if necessary.

A: Adjust C: Clean R: Replace T : Tighten

Item	Frequency Whichever comes first ⇒ ↓	Regular Service Mileage (km)											
		1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
Engine oil		R New Motorcycle 300km	R		R		R		R		R		R
Engine oil filter screen					C				C				
Fuel filter screen											R		
Gear oil	Note 3	R New motorcycle 300km				R					R		
Valve clearance			A		A				A				A
Carburetor					I				I				C
Air Cleaner	Note 2,3	Replace at every 2000km											
Spark plug		Clean at every 3000km and replace if necessary											
Brake system		I	I	I	I	I	I	I	I	I	I	I	I
Drive belt									I				
Suspension					I				I				I
Nut, bolt, fastener									I				
Tire					I				I				I
Steering head bearing		I					I						I

• In the interest of safety, we recommend these items should be serviced only by an authorized KYMCO motorcycle dealer.

Note: 1. For higher odometer readings, repeat at the frequency interval established here.

2. Service more frequently when riding in dusty or rainy areas.

3. Service more frequently when riding in rain or at full throttle.

3. INSPECTION/ADJUSTMENT

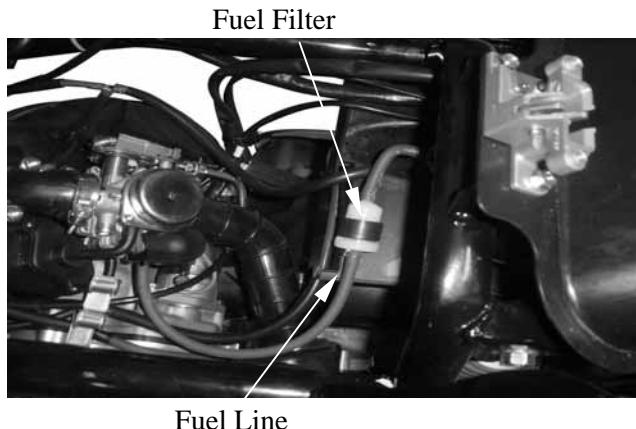
FUEL FILTER

Remove the met-in box. (⇒2-3)

Check the fuel lines and replace any parts which show signs of deterioration, damage or leakage.



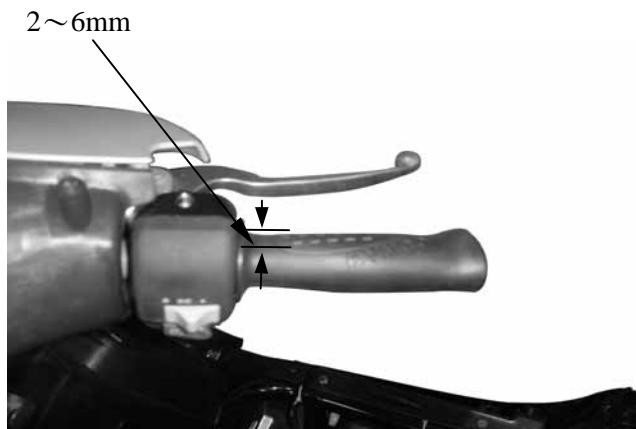
Do not smoke or allow flames or sparks in your working area.



THROTTLE OPERATION

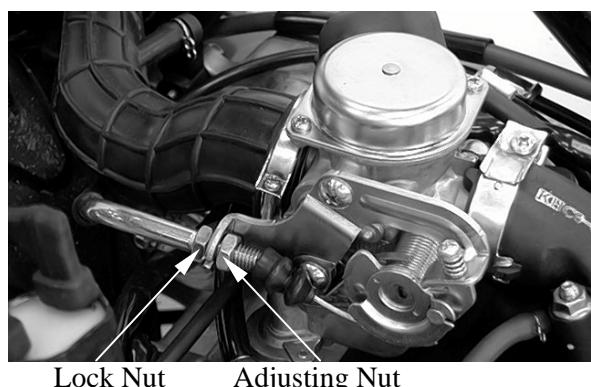
Check the throttle grip for smooth movement. Measure the throttle grip free play.

Free Play: 2~6mm



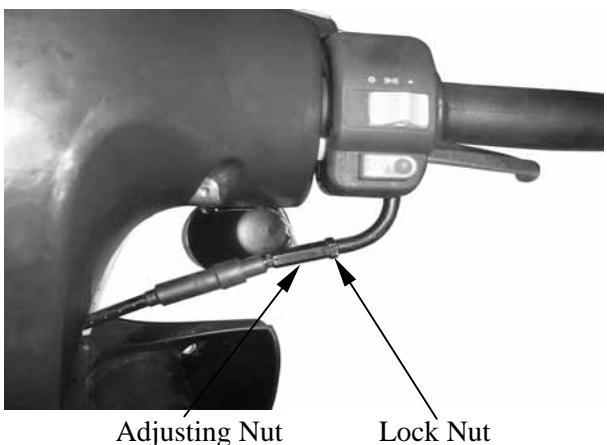
Major adjustment of the throttle grip free play is made at the carburetor side.

Adjust by loosening the lock nut and turning the adjusting nut.



Minor adjustment is made with the adjusting nut at the throttle grip side.

Slide the rubber cover out and adjust by loosening the lock nut and turning the adjusting nut.



3. INSPECTION/ADJUSTMENT

AIR CLEANER

AIR CLEANER REPLACEMENT

Remove the air cleaner case cover screws and the cover by removing the six screws.

Remove the air cleaner element by removing the four screws.

Check the element and replace it if it is excessively dirty or damaged.



CHANGE INTERVAL

More frequent replacement is required when riding in unusually dusty or rainy areas.

*

- The air cleaner element has a viscous type paper element. Do not clean it with any fluid.
- Be sure to install the air cleaner element and cover securely.

SPARK PLUG

Remove the spark plug.

Check the spark plug for wear and fouling deposits.

Clean any fouling deposits with a spark plug cleaner or a wire brush.

Specified Spark Plug:

CHAMPION-P-RZ9HC

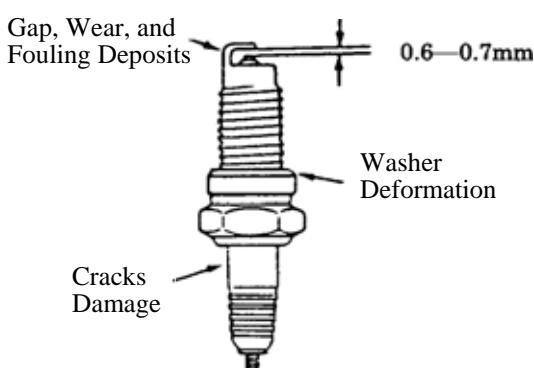


Measure the spark plug gap.

Spark Plug Gap: 0.6~0.7mm

*

- When installing, first screw in the spark plug by hand and then tighten it with a spark plug wrench.



3. INSPECTION/ADJUSTMENT

VALVE CLEARANCE

Inspect and adjust valve clearance while the engine is cold (below 35°).

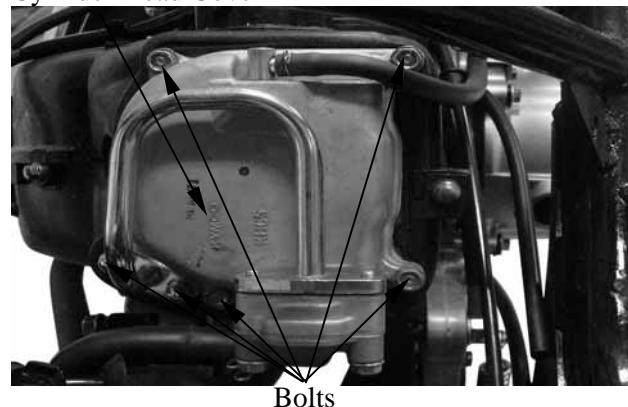
Remove the frame cover. (⇒2-3)

Remove the six bolts on the cylinder head cover.

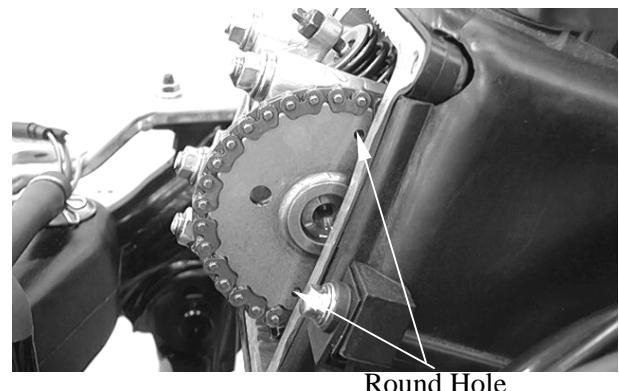
Remove the cylinder head cover. (⇒7-3)

Remove the cylinder head cover..

Cylinder Head Cover



Turn the flywheel counterclockwise so that the "T" mark on the flywheel aligns with the index mark on the crankcase to bring the round hole on the camshaft gear facing up to the top dead center on the compression stroke.



Inspect and adjust the valve clearance.

Valve Clearance: IN : 0.12±0.02mm
EX: 0.12±0.02mm

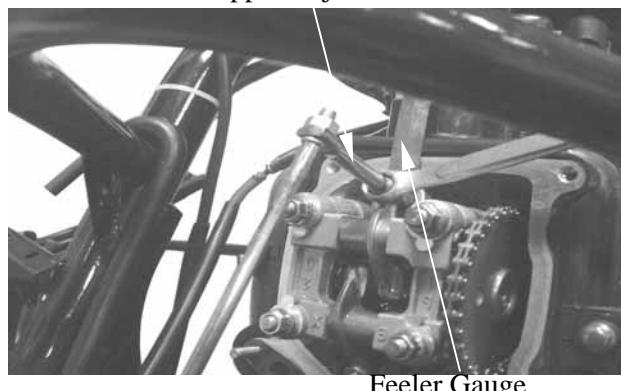
Loosen the lock nut and adjust by turning the adjusting nut

Special

Tappet Adjuster

- Check the valve clearance again after the lock nut is tightened.

Tappet Adjuster



CARBURETOR IDLE SPEED

- The engine must be warm for accurate idle speed inspection and adjustment.

Remove the inspection cover.

Warm up the engine before this operation.

Start the engine and connect a tachometer.

Turn the throttle stop screw to obtain the specified idle speed.

Idle Speed: 1900±100rpm

When the engine misses or run erratic, adjust the pilot screw.



Throttle Stop Screw

3. INSPECTION/ADJUSTMENT

IGNITION TIMING

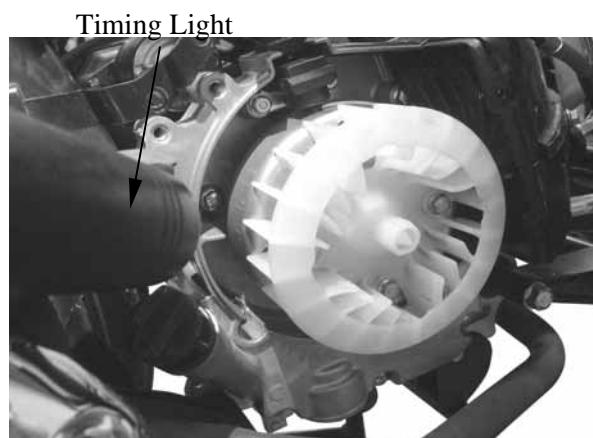


The CDI unit is not adjustable. If the ignition timing is incorrect, check the ignition system. (⇒15-5)

Remove the right of the fan cover.



Check the ignition timing with a timing light. When the engine is running at idle speed, the ignition timing is correct if the "F" mark on the flywheel aligns with the index mark on the crankcase.



Also use a timing light to check the advance. Raise the engine speed to 4,000rpm and the index mark on the crankcase cover should be aligned with the advance mark on the flywheel.

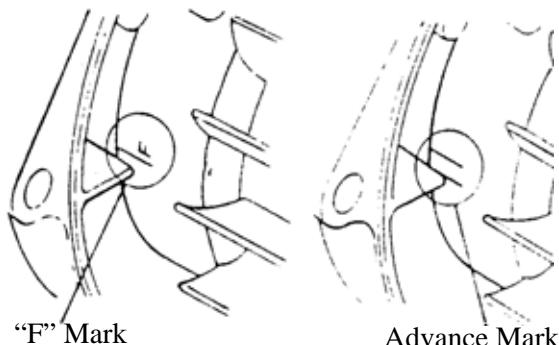
CYLINDER COMPRESSION

Warm up the engine before compression test. Remove the met-in box and center cover. (⇒2-3)

Remove the spark plug.

Insert a compression gauge.

Open the throttle valve fully and push the starter button to test the compression.



Compression: 16kg/cm²rpm

If the compression is low, check for the following:

- Leaky valves
- Valve clearance to small
- Leaking cylinder head gasket
- Worn piston rings
- Worn piston/cylinder

If the compression is high, it indicates that carbon deposits have accumulated on the combustion chamber and the piston head.



3. INSPECTION/ADJUSTMENT

FINAL REDUCTION GEAR OIL OIL LEVEL CHECK

* Place the motorcycle on its main stand on level ground for oil level check.

Stop the engine and remove the oil check bolt. The oil level shall be at the oil check bolt hole.

If the oil level is low, add the recommended oil to the proper level.

Recommended Oil: SAE90#



Install the oil check bolt.

* Make sure that the sealing washer is in good condition.



OIL CHANGE

Remove the oil check bolt.

Remove the oil drain bolt and drain the oil thoroughly.

Install the oil drain bolt.

Torque: 0.8~1.2kgf-m

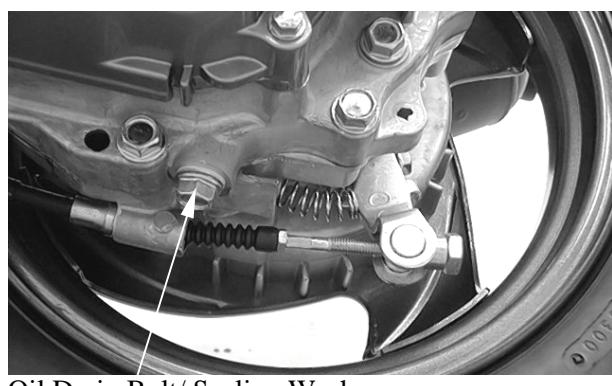
* Make sure that the sealing washer is in good condition.

Fill with the recommended oil.

Oil Capacity: At disassembly : 0.11 liter
At change : 0.10 liter

Reinstall the oil check bolt and check for oil leaks.

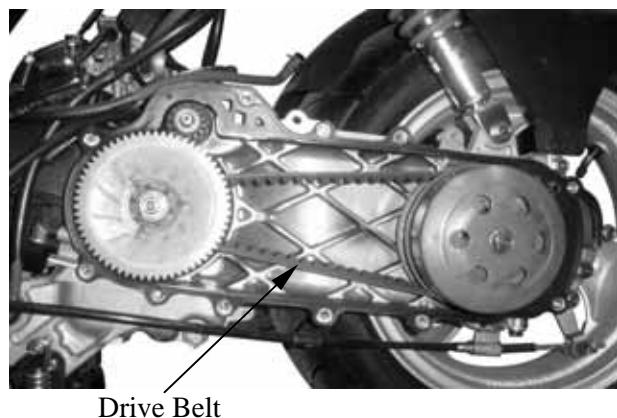
Torque: 0.8~1.2kgf-m



DRIVE BELT

Remove the left crankcase cover. (⇒9-2)
Inspect the drive belt for cracks or excessive wear.

Replace the drive belt with a new one if necessary and in accordance with the Maintenance Schedule.

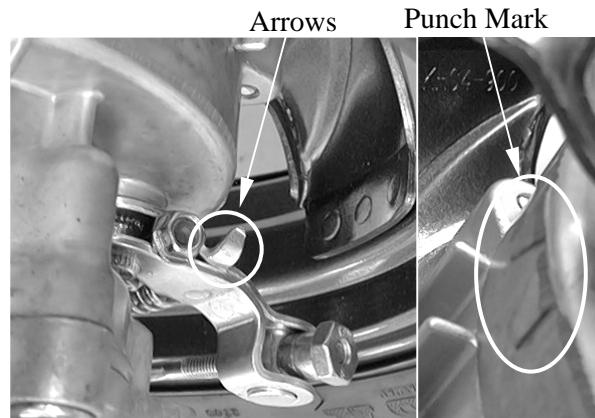


3. INSPECTION/ADJUSTMENT

BRAKE SHOE

Replace the brake shoes if the arrow on the wear indicator plate aligns with the punch mark on the brake panel when the brake is fully applied.

Refer to page 12-7 and 13-3 for brake shoe replacement.



REAR BRAKE

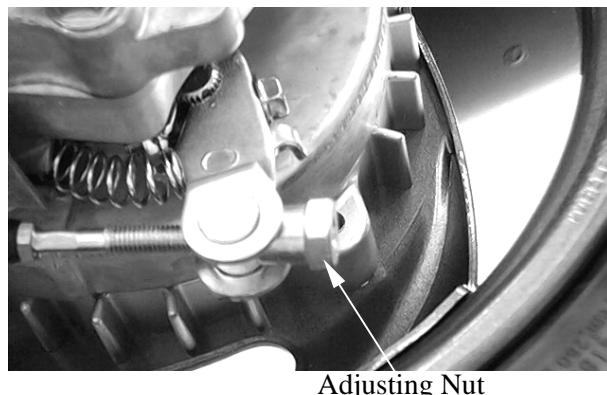
Measure the rear brake lever free play.

Free Play: 10~20mm



BRAKE ADJUSTING NUT

If the free play do not fall within the limit, adjust by turning the adjusting nut.



BRAKE FLUID

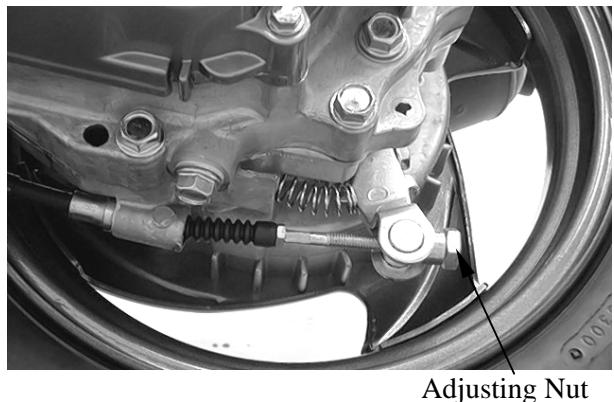
Turn the steering handlebar upright and check if the rear brake fluid level should be between the upper and lower level lines.

Specified Brake Fluid: DOT-4 °



3. INSPECTION/ADJUSTMENT

If the free play do not fall within the limit, adjust by turning the adjusting nut.

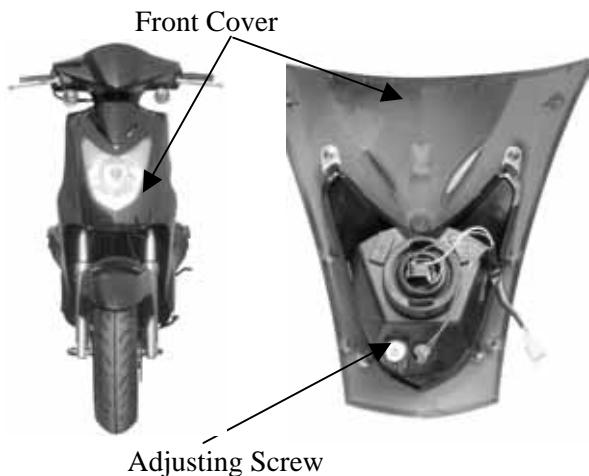


HEADLIGHT AIM

Turn the ignition switch ON and start the engine.

Turn on the headlight switch.

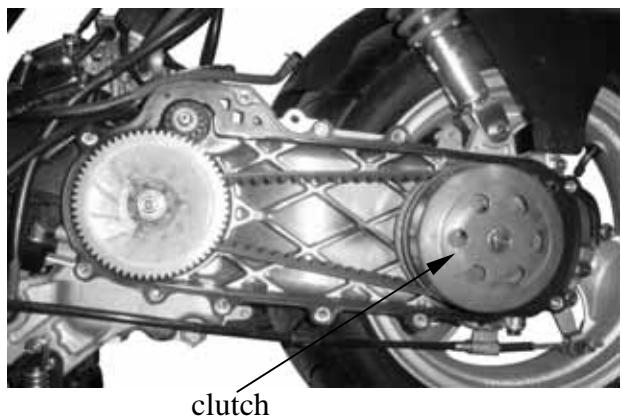
Adjust the headlight aim by turning the headlight aim adjusting screw.



CLUTCH SHOE WEAR

Start the engine and check the clutch operation by increasing the engine speed gradually.

If the motorcycle tends to creep, or the engine stalls, check the clutch shoes for wear and replace if necessary. (⇒9-11)



SUSPENSION

FRONT

Fully apply the front brake lever and check the action of the front shock absorbers by compressing them several times.

Check the entire shock absorber assembly for oil leaks, looseness or damage.



3. INSPECTION/ADJUSTMENT

REAR

Check the action of the rear shock absorber by compressing it several times.
 Check the entire shock absorber assembly for oil leaks, looseness or damage.
 Jack the rear wheel off the ground and move the rear wheel sideways with force to see if the engine hanger bushings are worn.



NUTS/BOLTS/FASTENERS

Check all important chassis nuts and bolts for looseness.
 Tighten them to their specified torque values if any looseness is found. (⇒1-11)

WHEELS/TIRES

Check the tires for cuts, imbedded nails or other damages.

Check the tire pressure.

*

Tire pressure should be checked when tires are cold.

TIRE PRESSURE

	1 Rider	2 Riders
Front	1.5kg/cm ²	1.75kg/cm ²
Rear	2.00kg/cm ²	2.25kg/cm ²



TIRE SIZE

Front : 120/70-12

Rear : 130/70-12

Check the front axle nut for looseness.

Check the rear axle nut for looseness.

If the axle nuts are loose, tighten them to the specified torques.

Torques: Front : 5.0~7.0kgf-m

Rear : 11~13kgf-m



Front Axle Nut

3. INSPECTION/ADJUSTMENT

STEERING HANDLEBAR

Check that the control cables do not interfere with handlebar rotation.

Raise the front wheel off the ground and check that the steering handlebar rotates freely.

If the handlebar moves unevenly, binds, or has vertical movement, adjust the steering head bearing.

