

Remove the spark plug using a equipped spark plug wrench or an equivalent tool.
Inspect or replace as described in the maintenance schedule.



Spark Plug Cap

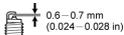
INSPECTION

Remove the carbon deposits from the spark plug with a small wire brush or a spark plug cleaning machine.

The spark plug should be replaced periodically. Whenever removing the operational color of the spark plug's porcelain tip. This color tells you whether or not the standard spark plug is suitable for your type of usage. A normal operating spark plug should be light brown or tan color. If the spark plug is very white or glazed appearing, then it has been operating much too hot. This spark plug should be replaced with the colder plug.

**Recommended spark plug: NGK: CR8E**

Measure the spark plug gap between the center and side electrodes with the feeler gauge. Adjust the gap by bending the side electrode carefully.

**Spark plug gap: 0.6-0.7 mm (0.024-0.028 in)**

Install the spark plug in the cylinder head and hand tighten, then torque to the specification.

Torque: 12 Nm (1.2 kgfm, 9 lbf-ft)

Install the spark plug cap.

Install the removed parts in the reverse order of removal.

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VALVE CLEARANCE

* Inspect and adjust the valve clearance while the engine is cold (Below 35°C/95°F).

Remove the floorboard (page 2-6).
Remove the cylinder head cover (page 8-5).
Remove the timing hole cap and O-ring.
Remove the crankshaft hole cap and O-ring.



Turn the crankshaft clockwise and align the "T" mark on the flywheel with the index mark on the right crankcase cover.



Index Mark

The punch marks on the camshaft should face upward as shown:

If the punch marks on the camshaft are facing downward, turn the crankshaft clockwise one full turn (360°) and the punch marks are facing upward.



Punch Marks

3-9

Adjust by loosening the valve adjusting screw lock-nut and turning the adjusting screw until there is a slight drag on the thickness gauge.

Valve clearance (when cold):
IN: 0.1 mm (0.004 in)
EX: 0.1 mm (0.004 in)

Apply oil to the valve adjusting screw lock-nut threads and seating surface.
Hold the adjusting screw and tighten the lock nut.



Lock Nut

Thickness Gauge

Valve Adjusting Wrench/Adjusting Screw

Special tool:

Valve adjusting wrench: E812

Torque: 95Nm (9.5 kgfm, 6 lbf-ft)

After tightening the lock nut, recheck the valve clearance.

Install the removed parts in the reverse order of removal.

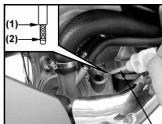
ENGINE OIL**OIL LEVEL INSPECTION**

Start the engine and let it idle for 2-3 minutes.
Turn off the engine and support the scooter level surface.

Remove the oil filler cap/dipstick and wipe the oil from the dipstick with a clean cloth.

Insert the dipstick into the oil filler hole without screwing it in.

If the oil level is below or near the lower level line (1) be dipstick, add the recommended engine oil until the oil level is to the upper level line (2).



(1)

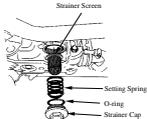
(2)

Oil Filler Cap/Dipstick

3-10

Place a drain pan under the crankcase and remove the oil strainer cap.

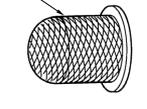
The setting spring and oil strainer screen will come out when the oil strainer cap is removed.



Oil Strainer Screen

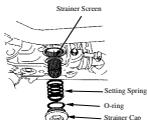
Clean the oil strainer screen.

After draining the oil completely, install the strainer screen and setting spring into the engine.



Apply clean engine oil to the strainer cap threads, flange surface and a new O-ring install and tighten the strainer cap with a new O-ring.

Torque: 12Nm (1.2 kgfm, 11 lbf-ft)



Strainer Screen

Setting Spring

O-ring

Strainer Cap

3-12

Fill the crankcase with the recommended engine oil.

Oil capacity:
2.0 liter (2.1 US qt, 1.8 Imp qt) at draining
2.1 liter (2.2 US qt, 1.9 Imp qt)

Install the oil filler cap/dipstick (1).
Check the engine oil level (page 3-11).
Make sure there are no oil leaks.

**ENGINE OIL FILTER CARTRIDGE****REPLACEMENT**

Drain the engine oil (page 3-11).

Remove the rubber sleeve (2) by removing the clip (1).



Remove and discard the oil filter cartridge (3) using the special tool.

Tool:
Oil filter wrench: E852

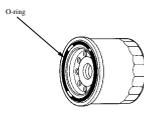


3-13

Apply clean engine oil to the new oil filter cartridge threads, flange surface and a new O-ring.
Install the new oil filter cartridge and tighten it to the specified torque.

Tool:
Oil filter cartridge wrench: E852

Torque: 10Nm (1 kgfm, 7 lbf-ft)
Refill the engine oil (page 3-13)



O-ring

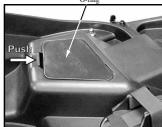
ENGINE IDLE SPEED

* Inspect and adjust the idle speed after all other maintenance items have been performed and are within specifications.
* The engine must be warm for accurate idle speed inspection and adjustment.

Warm up the engine.

Place the scooter on its center stand.

Unlock the seat with the ignition key.
Open the seat and remove carburetor cover.



O-ring

Pin

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

Idle speed: 1400-1600 rpm



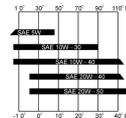
Throttle Stop Screw

3-14

Recommended engine oil:
KYMCO 4-stroke oil or equivalent motor oil API service classification: SJ
Viscosity: SAE 5W/50

* Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range.

Reinstall the filter cap/dipstick.

**ENGINE OIL & STARINER SCREEN**

When running in very dusty conditions, oil changes should be performed more frequently than specified in the maintenance schedule.
Please dispose of used engine oil in a manner that is compatible with the environment. We suggest you take it to a sealed container to your local recycling center or service station for recollection. Do not throw in the trash or pour it on the ground or down a drain.

Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handled used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil.

Change the engine oil with the engine at normal operating temperature and the scooter on its center stand to assure complete and rapid draining.

Remove the oil filler cap/dipstick (1) from the right crankcase cover.



3-11

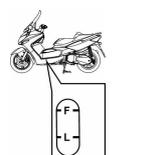
RADIATOR COOLANT

Place the scooter on its center stand.

Check the coolant level through the inspection window at the left floor mat while the engine is at the normal operating temperature.

The level should be between the "F" and "L" level surface.

* If the level is low, remove the reserve tank cap and fill the tank to the "F" level line with 1:1 mixture of distilled water and antifreeze (coolant mixture preparation page 6-5).
* Using coolant with silicate substances may cause premature wear of water pump seals or blockage of radiator passages. Using tap water may cause engine damage.



F

L

Remove the left floor mat and remove screw and reserve tank lid.



Reserve Tank Lid

Screw

Left Floor Mat

3-15

Remove reserve tank cap.

Check to see if there are any coolant leaks when the coolant level decrease very rapidly.
If reserve tank becomes completely empty, there is a possibility of air getting into the cooling system.
Be sure to remove all air from the cooling system (page 6-6).

Reinstall the filler cap.



COOLING SYSTEM

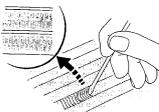
Remove the floorboard (page 2-6).

Check for any coolant leakage from the water pump, radiator hoses and hose joints.
Check the radiator hoses for cracks or deterioration and replace if necessary.
Check that all hose clamps are tight.

Remove the front lower cover (page 2-15).



Check the radiator air passages for clogs or damage.
Straighten any bent fins, and remove insects, mud or other obstructions with compressed air or low water pressure.
Replace the radiator if the air flow is restricted over more than 20% of the radiating surface.



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SECONDARY AIR SUPPLY SYSTEM

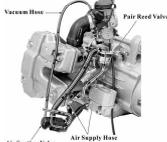
This model is equipped with a built-in secondary air supply system.
The secondary air supply system introduces filtered air into exhaust gases in the exhaust port. The secondary air is drawn into the exhaust port whenever there is negative pressure pulse in the exhaust system. This charged secondary air promotes burning of the inhaled exhaust gases and changes a considerable amount of hydrocarbons and carbon monoxide into relatively harmless carbon dioxide and water.

Check the AICV (air injection control valve) hoses between the AICV control solenoid valve and AICV control solenoid valve for deterioration, damage or loose connections. Make sure the hoses are not cracked.
If the hoses show any signs of heat damage, inspect the AICV check valve in the AICV road valve cover damage.

TRANSMISSION OIL OIL CHANGE

Place the scooter in its center stand.
Remove the transmission oil drain bolt (1) and the transmission oil filler bolt (2), slowly turn the rear wheel and drain the oil.
After draining the oil completely, install the oil drain bolt with a new sealing washer and tighten it.

Torque: 24 N•m (2.4 kgf•m, 18 lbf•ft)



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Fill the transmission case with recommended oil.

Recommended transmission oil: SAE 90
Oil capacity (at draining):
0.45 liter (0.48 US qt, 0.4 Imp qt)

Install the transmission oil filler bolt with a new sealing washer and tighten it.

Torque: 24 N•m (2.4 kgf•m, 18 lbf•ft)

BRAKE FLUID

- * Do not mix different type of fluid, as they are not compatible with each other.
- * Do not allow foreign material to enter the system when filling the reservoir.
- * Avoid spilling fluid on painted, plastic or rubber parts. Place a rag over these parts whenever the system is serviced.

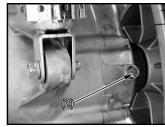
When the fluid level is low, check the brake pads for wear. A low fluid level may be due to wear of the brake pads. If the brake pads are worn, the caliper piston is pushed out, and this accounts for a low reservoir level. If the brake pads are not worn and the fluid level is low, check the entire system for leaks.

FRONT BRAKE

Turn the handlebar so the reservoir is level and check the front brake fluid reservoir level.
If the level is near the lower level line "L", check brake pad wear.

REAR BRAKE

Place the scooter on a level surface and support it in an upright position.
Check the rear brake fluid reservoir level.
If the level is near the lower level line "L", check brake pad wear.



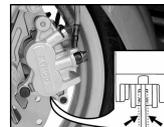
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BRAKE PAD WEAR

Brake pad wear depends upon the severity of usage, the type of riding, and road conditions. (Generally, the pads will wear faster on wet and dirty roads.) Inspect the pads at each regular maintenance interval.

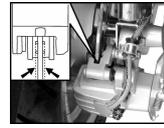
FRONT RIGHT/LEFT BRAKE

Check the contact in each pad.
If either pad is worn to the contact, replace both pads as a set.



REAR BRAKE

Check the contact in each pad.
If either pad is worn to the contact, replace both pads as a set.



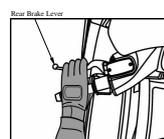
BRAKE SYSTEM INSPECTION

This model equipped with a linked brake system.
Check the rear brake operation as follows:

Place the scooter in its center stand.

Jack up the scooter to raise the front wheel off the ground.

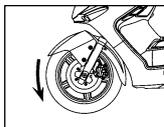
- * Do not use the oil filter as a jack point.



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Operate the rear brake lever.

Make sure the front wheel does not turn while the rear brake lever is operated.



Firmly apply the brake lever and check that no air has entered the system.
If the lever feels soft or spongy when operated, bleed the air from the system.

Inspect the brake hose and fittings for deterioration, cracks and signs of leakage.
Tighten any loose fittings.
Replace hoses and fittings as required.



BRAKE LOCK OPERATION

Stop the engine and put the scooter on its center stand on level ground.

Pull up the parking brake lever slowly and check the parking brake lever stroke.

Parking brake lever stroke: 3-6 notches
If out of specification, adjust the parking brake lever.



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ADJUSTMENT

Place the scooter in its center stand.
Release the parking brake lever lock.
Pull up the parking brake lever until 1 notch.

Loosen the lock nut.
Turn the adjust bolt until you feel resistance when turn the rear wheel by your hand.
Hold the adjust bolt and tightens the lock nut securely.

Release the parking brake lever.
Make sure the rear wheel turns smoothly.

Pull the parking brake lever slowly and check the lever stroke.

Standard: 3-6 notches
All strokes: 9 notches

If there is out of specification, adjust again.

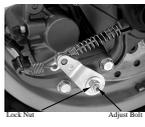
HEADLIGHT AIM

Place the scooter on a level surface.

Adjust the headlight beam vertically by turning the vertical beam adjuster.
A clockwise rotation moves the beam up and a counterclockwise rotation moves the beam down.

Adjust the headlight beam horizontally by turning the horizontal beam adjuster.
A clockwise rotation moves the beam toward the right side of the rider.

- * Adjust the headlight beam as specified by local laws and regulations.



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SIDE STAND

Support the scooter on a level surface.

Check the side stand spring for fatigue or damage.
Check the side stand assembly for smooth movement and lubricate the side stand pivot if necessary.

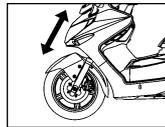
Check the side stand ignition cut-off system:
✓ Start the engine.
✓ Fully lower the side stand while running the engine.
✓ The engine should stop as the side stand is lowered.

If there is a problem with the system, check the side stand switch (page 20-15).

SUSPENSION

FRONT SUSPENSION INSPECTION

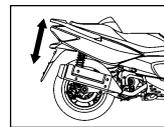
Check the action of the forks by operating the front brakes and compressing the front suspension several times.
Check the entire assembly for signs of leaks, damage or loose fasteners.
Replace damaged components which cannot be repaired.
Tighten all nuts and bolts.



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REAR SUSPENSION INSPECTION

Check the action of the shock absorber by compressing it several times.
Check the entire shock absorber assembly for signs of leaks, damage or loose fasteners.
Replace damaged components which cannot be repaired.
Tighten all nuts and bolts.



NUTS, BOLTS, FASTENERS

Check that all chassis nuts and bolts are tightened to their correct torque values (page 1-7).
Check that all safety clips, hose clamps and cable stays are in place and properly secured.

WHEELS/TIRES

Tire pressure should be checked when the tires are cold.

	Recommended tire pressure:	
	Solo riding	Two-up riding
Front	200 kpa (2 kgf/cm ² , 29 psi)	225 kpa (2.25 kgf/cm ² , 32 psi)
Rear	250 kpa (2.5 kgf/cm ² , 36 psi)	250 kpa (2.5 kgf/cm ² , 36 psi)

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Recommended tire size:

	Front	Rear
Size	120/70-15	150/70-14
Type	TUBELESS	TUBELESS

Check the tires for cuts, embedded nails, or other damage.
 Check the front and rear wheels for trueness.

Measure the tread depth at the center of the tires.

Replace the tires when the tread depth reaches the following limits.

Minimum tread depth:

Front: 1.6 mm (0.06 in)

Rear: 2.0 mm (0.08 in)

**STEERING HEAD BEARINGS**

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

Support the scooter securely and raise the front wheel off the ground.

Check that the handlebar moves freely from side to side.

If the handlebar moves unevenly, binds, or has vertical movement, inspect the steering head bearings.

