

2.Periodic Maintenance

This chapter covers the periodic maintenance for the KYMCO AK 550.

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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.

Maintenance Schedule

Perform the pre-ride inspection at each scheduled maintenance period. This interval should be judged by odometer reading or months, whichever comes first.

Maintenance schedule

I: Inspection; clean, lubricate, replenish, remedy or replace as required. A: Adjustment. C: Cleaning. R: Replace. T: Tightening. M: Maintenance. D: Diagnosis

The maintenance schedule specifies the maintenance required to keep your AK 550 scooter in peak operating condition. Maintenance work should be performed in accordance with KYMCO standards and specifications by properly trained and equipped technicians. Your KYMCO dealer meets all of these requirements.

* Should be serviced by your KYMCO dealer, unless you have the proper tools, service data and are technically qualified.

** In the interest of safety, we recommend these items be serviced only by your KYMCO dealer. KYMCO recommends that your KYMCO dealer road test your scooter after each periodic maintenance service is completed.

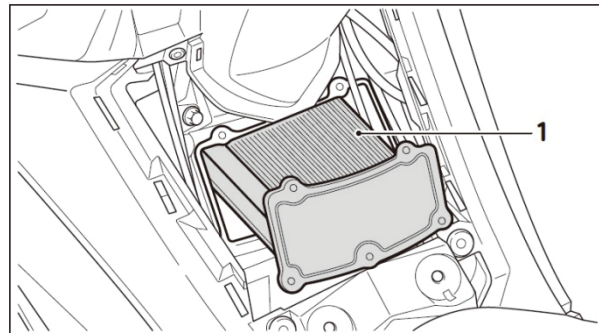
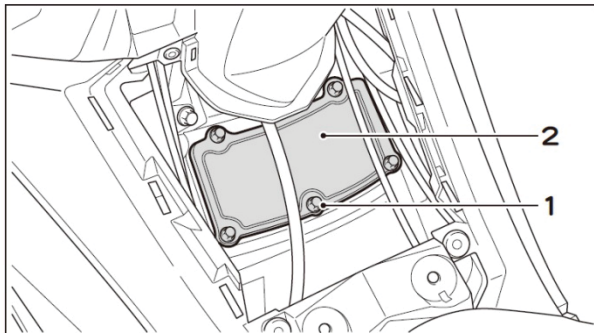
FREQUENCY		WHICHEVER COMES FIRST	ODOMETER READING						
			X 1000 km	0.3	5	10	15	20	25
ITEM		X 1000 mi	0.18	3	6	9	12	15	18
		MONTH	1	6	12	18	24	30	36
*	Air Filter Servicing			R	R	R	R	R	R
	Spark Plug				I		R		I
*	Throttle Free Play			I	I	I	I	I	I
*	Valve Clearance	Check/Adjust.	Every 40000 km (24000 mi)						
*	Hose Inspection				I		I		I
*	Engine Oil		R	R	R	R	R	R	R
*	Engine Oil Screen			C	C	C	C	C	C
*	Engine Oil Filter		R	R	R	R	R	R	R
*	Fuel Injection Diagnostic Tool				I		I		I
*	CVT Removal			I	I	I	I	I	I
*	CVT Air Filter			C	C	C	C	C	C
*	CVT Clutch				I		I		I
*	Removal								
	Brake Fluid			I	R	I	R	I	R
	Brake Pad Replacement			I	I	I	I	I	I
	Brakes			I	I	I	I	I	I
*	Switches			I	I	I	I	I	I
	Steering			I	I	I	I	I	I
*	Lights			I	I	I	I	I	I
*	Torque Specifications			I	I	I	I	I	I
*	Wheels/Tires			I	I	I	I	I	I
*									
	Coolant Level Check			I	R	I	R	I	R
	Drive Belt			I	I	I	R	I	I
	Timing Belt(Drive Belt)			I	I	I	I	I	I

Air Filter Servicing

Replace Air Filter as specified in Regular Maintenance Schedule. Check and replace Air Filter Cartridge more frequently if vehicle is often used in dusty environments or damp areas.

Replace Air Filter Cartridge

1. Remove outer casing of vehicle.
2. Remove Air Filter Cover.
3. Loosen Air Filter Cover Fixing Screw and take out Air Filter Cartridge.



Precautions on replacing Filter Cartridge:

1. Make sure the Air Filter Cartridge is positioned correctly in the casing.
2. Do not start engine when Air Filter Cartridge is not installed, or dirty air may enter the engine and cause abnormal wear.
3. Do not wet the Air Filter Cartridge when cleaning the vehicle, or engine start may become difficult.
4. Install Air Filter Cover and tighten Fixing Screw.
5. Re-install outer casing of vehicle.

NOTICE

◆ Air Filter Cartridge made of paper is used. Clean the Cartridge every 2000 km.

Replace with a new Air Filter Cartridge every 5000km.

Check CVT Transmission System Filter Wool

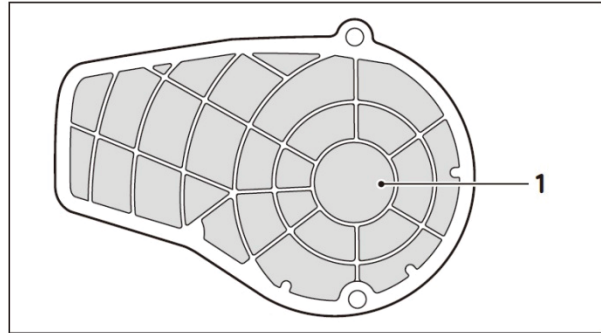
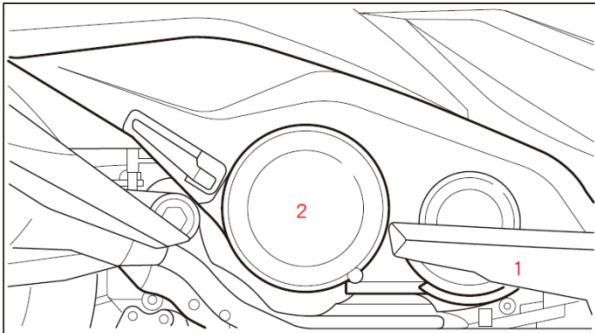
CVT Transmission System Filter Wool

Excessive dust accumulation in CVT Transmission System may result in unsmooth engine operation; clean and replace Filter Wool regularly.

Clean Filter Wool regularly as specified in Maintenance Schedule; replace or clean Filter Wool every 5000km

Replace Filter Wool

1. Remove side plate on the right.
2. Remove Fixing Bolts of Crankcase Right Cover.
3. Remove 2 Fixing Bolts of Filter Wool.
4. Replace Filter Wool.



Insert Method

Operate in reversed procedures as removal.

Cleaning Method

1. Remove side plate on the right.
2. Remove Fixing Bolts of Crankcase Right Cover.
3. Remove 2 Fixing Bolts of Filter Wool.
4. Clean Filter Wool body with air jet and clean out dirt from Crankcase Right Cover.

Brake Fluid

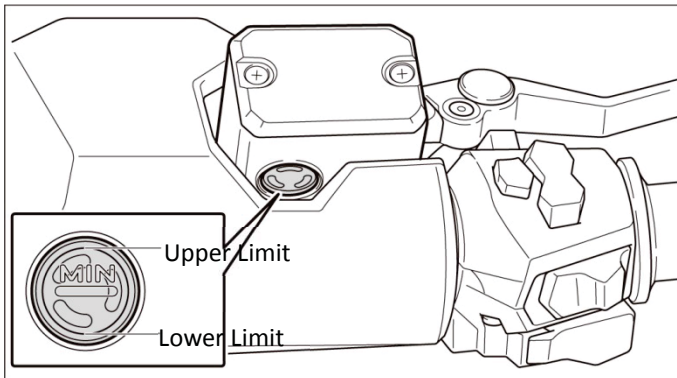
The KYMCO AK 550 uses DOT 4 brake fluid that should be inspected after 3,000 mi (5,000 km) of use. It should be flushed and bled every 12 months, 6,000 mi (10,000 km), whenever the brakes feel spongy, or if the brake system has been taken apart and rebuilt. Always use fresh brake fluid from a tightly sealed container.

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Checking Front Brake Fluid

1. Straighten the Handlebar, check brake fluid in the Right Reservoir. Keep the level between the Upper Mark and Lower Mark.
2. If level lowers near the Lower Mark, check the brake lining for a worn condition.
3. If the brake lining is not worn exceeding a specified limit, most likely there is a leakage of brake fluid; go to a dealer for repair.

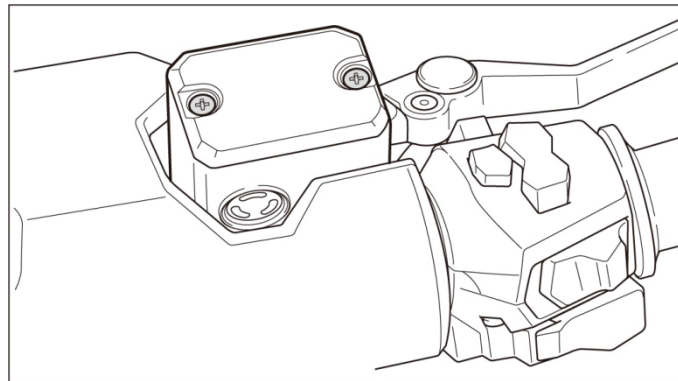
Viewing Window of Front Brake Fluid



Warning: Brake fluid is very caustic and can damage paint, chrome and plastic. Wipe up any spills immediately.

Replenishing Brake Fluid

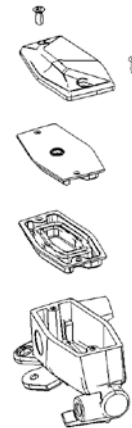
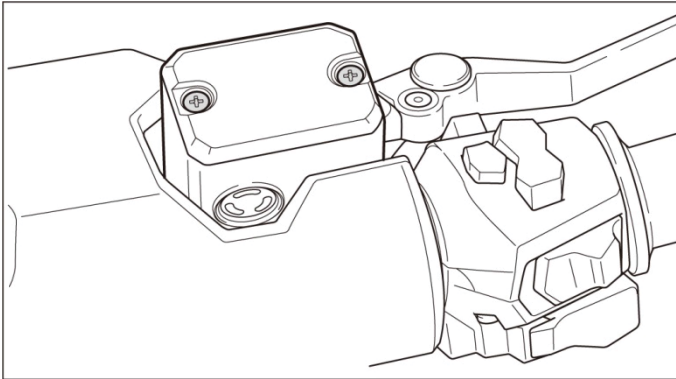
1. Straighten the Handlebar, remove 2 fixing screws of Reservoir and remove Reservoir Cover.
2. Replenish Reservoir with recommended DOT-4 Brake Fluid to the Upper Scale. Replace Reservoir Cover and tighten 2 fixing screws.
3. Replace Brake Fluid every 10000km or 1 year.

**⚠ WARNING**

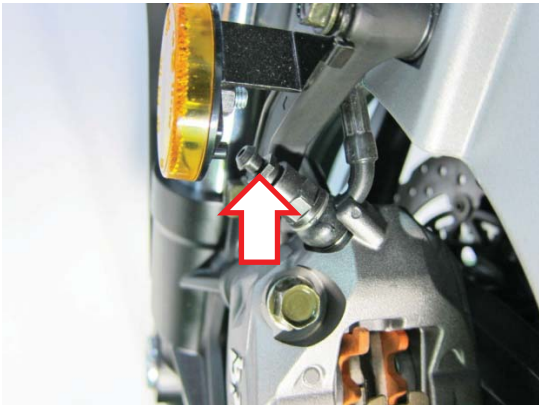
- ◆ Mixed use of Brake Fluids of different brand and different specifications may result in braking fault and danger.
- ◆ When replenishing braking fluid, cover coated parts with a cloth to prevent damaging them.

Draining

The brake bleeding process is the same for the front and rear brakes. Remove the two master cylinder cover screws with a #2 Phillips head screwdriver. Remove the master cylinder cover, plastic piece and rubber accordion diaphragm. Pour out any remaining brake fluid.

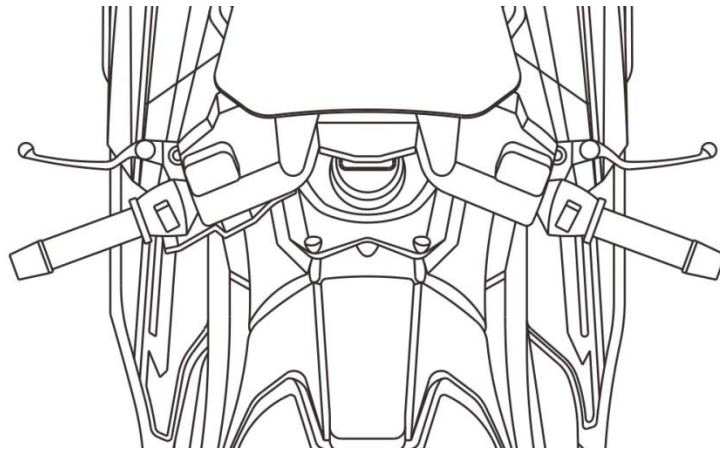


Clean and inspect the rubber diaphragm for tears or other damage. Replace as necessary.



Pull off the rubber cap over the bleeder valve and crack open the bleeder valve on the brake caliper using an 8 mm wrench. This valve is usually very tight so use a box end wrench or a 6 point socket and ratchet to prevent rounding off the head. Snug the bleeder valve back down.

Open the valve and remove the old brake fluid with a Mighty -Vac or a similar device.



Pump the brake lever several times and hold the lever in. While holding the lever in, crack open the bleeder valve. The front brake lever will travel all the way to the grip and brake fluid and/or air will come out of the bleeder valve into the 6 mm hose. Tighten the bleeder valve before releasing the front brake lever. Pump the lever several times again and repeat the process.

Be certain to check the master cylinder reservoir occasionally to make sure the reservoir doesn't run dry. Add more brake fluid as necessary. Continue this process until clean brake fluid comes out of the bleeder valve and there are no air bubbles. The brake lever should feel firm.

Tighten the bleeder valve to specification and push its rubber cover over the nipple.

Make sure the reservoir has the proper amount of fluid.

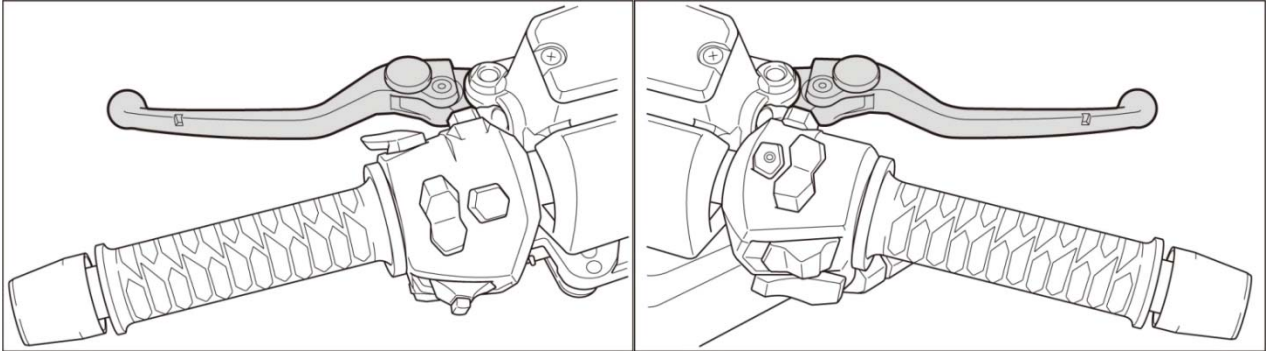
Place the rubber diaphragm, plastic piece and cover over the reservoir.

Thread in the reservoir cover screws and tighten them securely with a #2 Phillips screwdriver.

Check the function of the brakes before operating the machine.

Brake Inspection

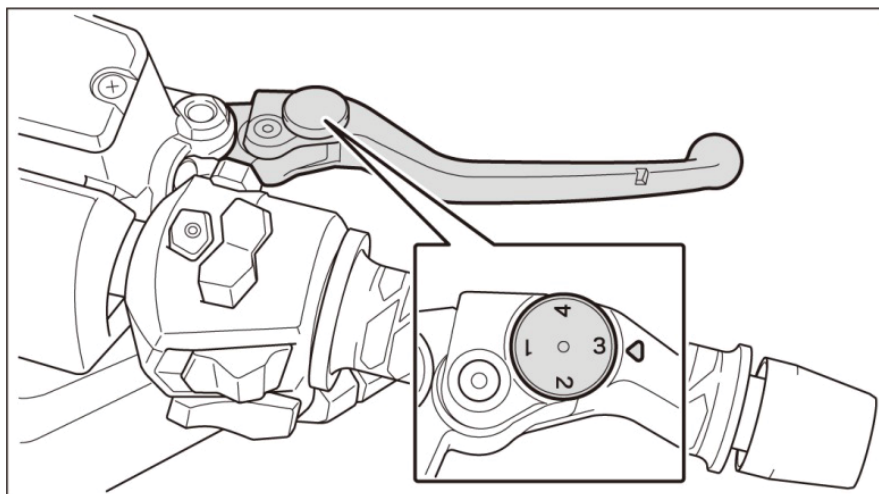
Brake Lever Adjuster



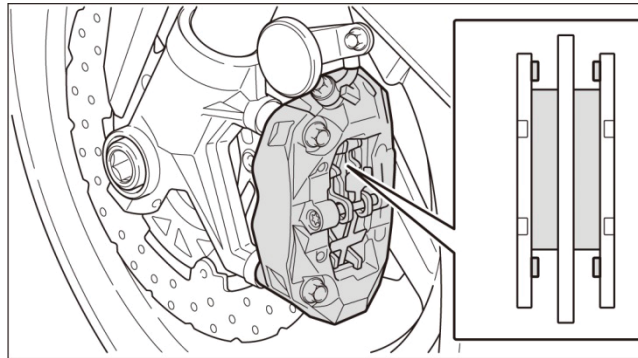
There is adjuster on each brake lever. Each adjuster has four positions so that the released lever position can be adjusted to suit the rider's hands. To adjust the distance of the lever from the handlebar grip, push the lever forward and turn the adjuster knob to align the number with the arrow mark on the lever holder.

Check and Adjust Brakes

1. Adjust brake lever clearance using adjustment knob (totally 4 adjustment positions).
2. Push the brake lever forward when adjusting the knob (default setting is 2).
3. After adjustment, pull the Brake Lever (1) with hand until reaching a position where fingers feel comfortable; check if the clearance at the front end of Brake Lever is within the specified dimension.



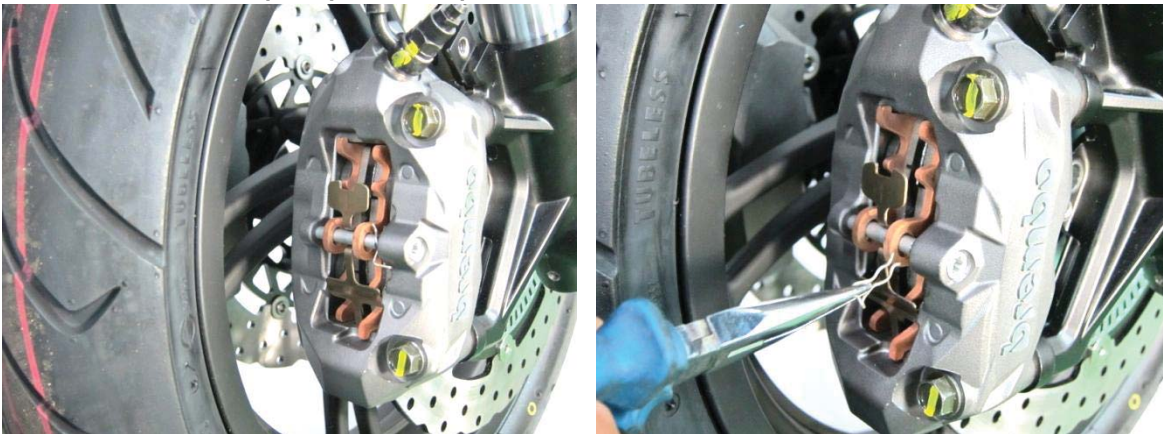
Brake Pad



- ◆ Is braking effective?
- ◆ Verify braking effect of front and rear brakes in low speed.

Brake Pad Removal

Remove the snap clip of the pin.



Remove the screw, loosen the brake pad.



Remove the spring of the brake pad.



Remove the right and left brake pads.

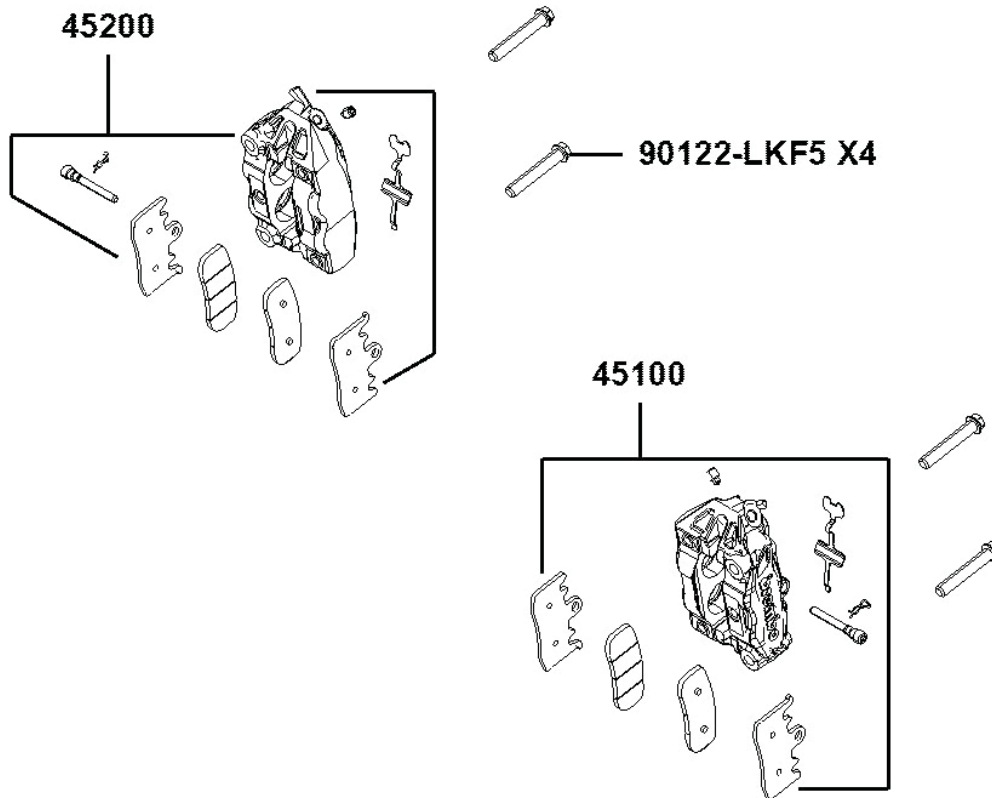
Replace the pads if the brake wear exceeds the wear indicator lines or if the wear is uneven. Insert new brake pads as needed.



Remove the two bolts of caliper and remove the caliper.
Installation torque: 3~4 kgf-m (30~40 N-m)



Remove the two caliper mounting bolts with a 12 mm socket.
And remove the front caliper.



When installation:

Apply a light coat of waterproof grease to the brake pad pin. Push the pads against the pad spring and insert the brake pad pin.

It may be necessary to spread the pads and force the pistons back into the caliper in order to allow room for the brake disc to fit between the new pads.

Install the front caliper. Guide the brake disc between the pads. Line up the caliper bracket mounts with the fork.

Install the two caliper bracket mounting bolts. Tighten the mounting bolts to specification.

Coolant

For the sake of safety, check level of cooling water before riding the vehicle. Replace the cooling liquid as specified in Regular Maintenance Schedule.

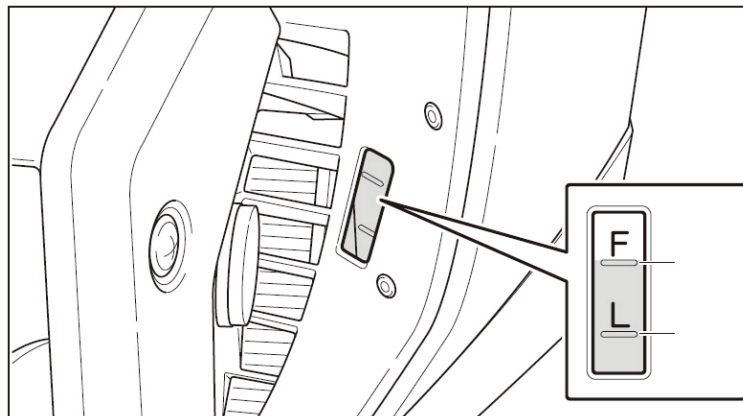
Check Level of Cooling Water

1. Park the vehicle on level ground and brace it up with Main Stand.
2. Figure to be inserted

NOTICE

- ◆ Temperature in the engine may cause false reading of Cooling Water level. Check water level after the engine cools down.
- ◆ Inclined vehicle may cause false reading of Cooling Water level.

3. Check level of Cooling Water via viewing window on the water preserving tank. Make sure the level is between “F” and “L” marks.



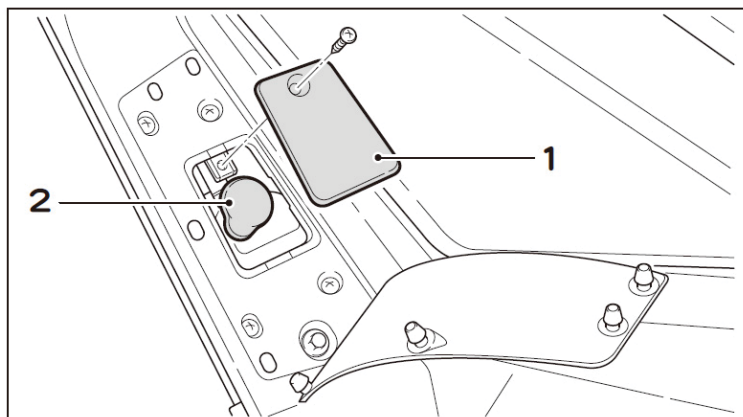
NOTICE

- ◆ Before riding the vehicle, check the water tank and piping or any leakage.
- ◆ Check the ground where the vehicle is parked for any leakage mark.
- ◆ Before riding the vehicle, check the fin and front protection screen of water tank for any foreign object. Foreign objects may reduce the cooling function or even cause vehicle or engine damage in worse conditions.

Replenish Cooling Water (Fill the Reserve Water Tank)

1. Stand the vehicle upright on level ground.
2. Open Reserve Water Tank (remove screw 1 and cover 2), replenish water to Upper Limit.

If level of cooling water gets excessively low, something must be wrong. Go to a KYMCO Dealer for check and repair.



NOTICE

- ◆ Water temperature is very high after riding, do not open the cap of water tank.
- ◆ Use soft water for mixing cooling liquid.
- ◆ Using poor quality cooling water may shorten the service life of water tank. Please be careful.
- ◆ Replace cooling water in the tank every 10000km.
- ◆ Add proper amount of water tank additives to ensure performance of the cooling system.

In case of fault of vehicle:

Go to a KYMCO dealer for check and repair if any fault occurs when riding the vehicle. Use only original parts for replacement.

Check following items if engine does not start or engine stops when riding the vehicle:

- ◆ Whether gasoline is sufficient.
- ◆ Whether Dashboard Fuel Indicator approaches E. Replenish with 95 unleaded gasoline or better.
- ◆ Whether proper method is used for starting the engine.
- ◆ Others, whether any part is faulty.

Filling

When the coolant has finished draining return the drain bolt to the water pump with a new sealing washer. Tighten the drain bolt securely with an 8 mm socket.

Fill the cooling system with a mix of distilled water and KYMCO SIGMA Coolant Concentrate. Continue filling until the coolant reaches the bottom of the filler neck as shown.



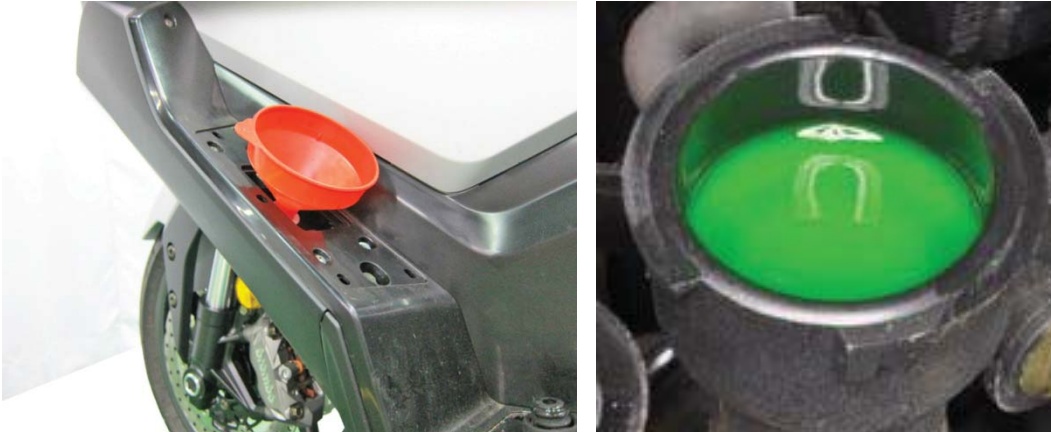
Coolant capacity	Total 1500 cc	Radiator: 1200 cc Reserve tank: 300 cc
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- Use coolant of specified mixing rate. (The mixing rate of KYMCO coolant/distilled water is 50%.)
- Do not mix coolant concentrate of different brands.
- Do not drink the coolant, which is poisonous.
- The freezing point of coolant mixture shall be 5 °C lower than the freezing point of the riding area.

Add coolant to the reserve tank until it reaches the upper level mark.

Gently rock the vehicle side-to-side to release any air bubbles trapped in the cooling system.

Place the vehicle on its center stand and start the engine. Let it run for several minutes. This will purge any air out of the cooling system. Check for coolant leaks



When the air bubbles stop coming up turn off the engine and recheck the coolant level, add coolant if necessary. Check the reserve tank and add coolant if needed. Wet the seal of the radiator cap and install.



Engine Oil

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Caution: Hot engine oil can burn. Avoid letting used motor oil contact exposed skin.

TROUBLESHOOTING

Oil level too low

1. Natural oil consumption
2. Oil leaks
3. Worn or poorly installed piston rings
4. Worn valve guide or seal

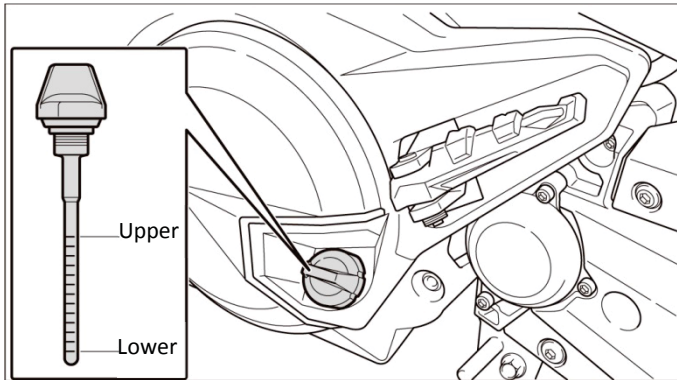
Poor lubrication pressure

1. Oil level too low
2. Clogged filter or oil passages
3. No use the specified oil

Oil Level Inspection

Check the engine oil level each day before operating the scooter.

Place the motorcycle upright on level ground for engine oil level check. Run the engine for 2 ~ 3 minutes and check the oil level after the engine is stopped for 2 ~ 3 minutes.



The oil filler cap/dipstick is located on the left side of the engine.

Remove the oil filler cap/dipstick and wipe off the oil. Inspect the O-ring and replace it as needed. Insert the dipstick in without threading it in. Remove the dipstick and check the oil level.

The level must be maintained between the upper and lower level marks on the oil filler cap/dipstick.

If the oil level is at or below the lower mark add more of the same type and brand of oil to the engine through the oil filler hole. If the oil level is too high remove the drain plug and the excess oil.

Oil Change Period

First oil change when running 300km; afterwards every 5000km.

In order to maintain optimal engine performance, check oil level every 1000km. Replenish to standard level in case of shortage.

Oil Capacity:

Dismantle: 3.0L (full capacity)

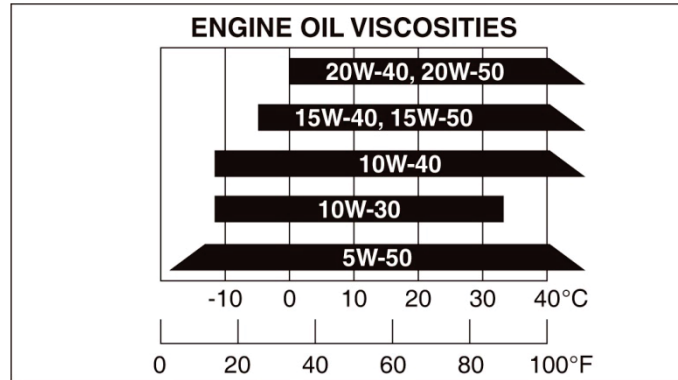
Change oil: 2.6L(excluding oil filter)

2.7L(including oil filter)

⚠ NOTICE

If vehicle is used rarely and 5000km is not reached after using for 6 months, it is suggested that oil shall still be changed since it may deteriorate along with time and cause damage to the engine.

Applicable Temperature of Engine Oil

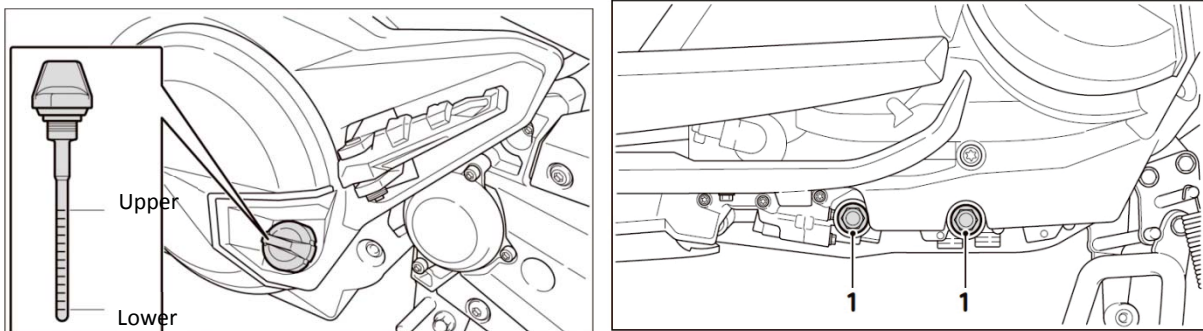


⚠ NOTICE

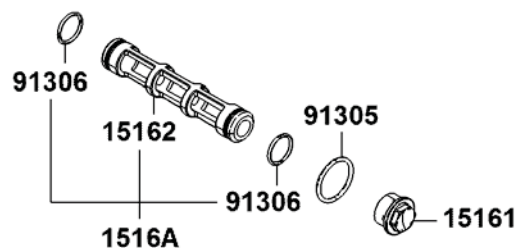
◆ To avoid using poor quality oil, please go to a KYMCO dealer for oil change.

Oil Change Method

1. Remove Oil Scale. Remove Drain Cock. Drain all the oil. Warming up the engine before changing oil facilitates oil draining.



2. Clean Oil Filter and re-install it. Tighten Drain Cock after wiping it clean.



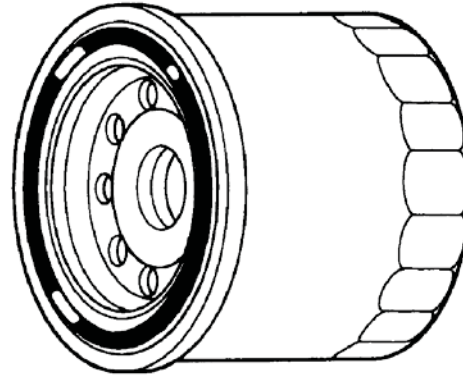
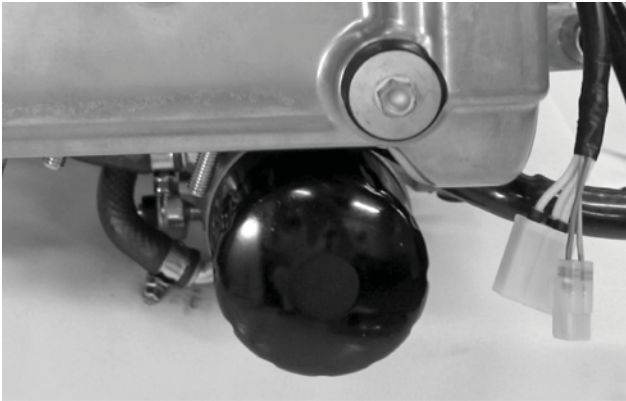
3. Fill in new oil. Filling capacity is 3.0L. (If Oil filter cartridge is replaced, oil change shall be 2.7L).

Oil Capacity:

Dismantle: 3.0L (full capacity)

Change oil: 2.6L(excluding oil filter)

2.7L(including oil filter)



Make sure the O-ring is positioned correctly in the groove of the oil filter cartridge.
Oil filter cartridge installation torque: 0.8~1.2 kgf-m (8~12 N-m)

4. Fully tighten the Oil Scale
5. After warming up the engine, stop engine and wait for 10-20 seconds, then verify oil level with Oil Scale.

⚠ NOTICE

- ◆ It is recommended to use KYMCO original 4-stroke engine oil.
- ◆ The following conditions may expedite oil deterioration, an early oil change is advised.
 - Riding on pebbled roads often.
 - Riding short distances often.
 - Idling often.
 - Riding in the cold area.
- ◆ When replenishing oil, make sure the oil level is not exceeding the Upper Limit mark.
- ◆ Do not mix-use oils of different brand, class or low quality ones; they may cause engine faults.
- ◆ Change oil while the engine is still hot; be careful not to burn your skin.

Oil Filter Cartridge Tightening Torque:

11 Nm (110 kgf•cm)

Engine Oil Drain Cock Tightening Torque:

9 Nm (90 kgf•cm)

Magnet Screw Tightening Torque:

28 Nm (280 kgf•cm)

Precautions on Oil Change

◆ Excessive and insufficient oil amount can both affect engine performance.
Excessive Oil— Increased friction resistance of moving parts in the engine, which lowers output power and increases engine temperature, leading to early deterioration of engine oil.

Insufficient Oil— Reduced oil supply to moving parts in the engine, therefore results in worn parts, parts ablation, etc.

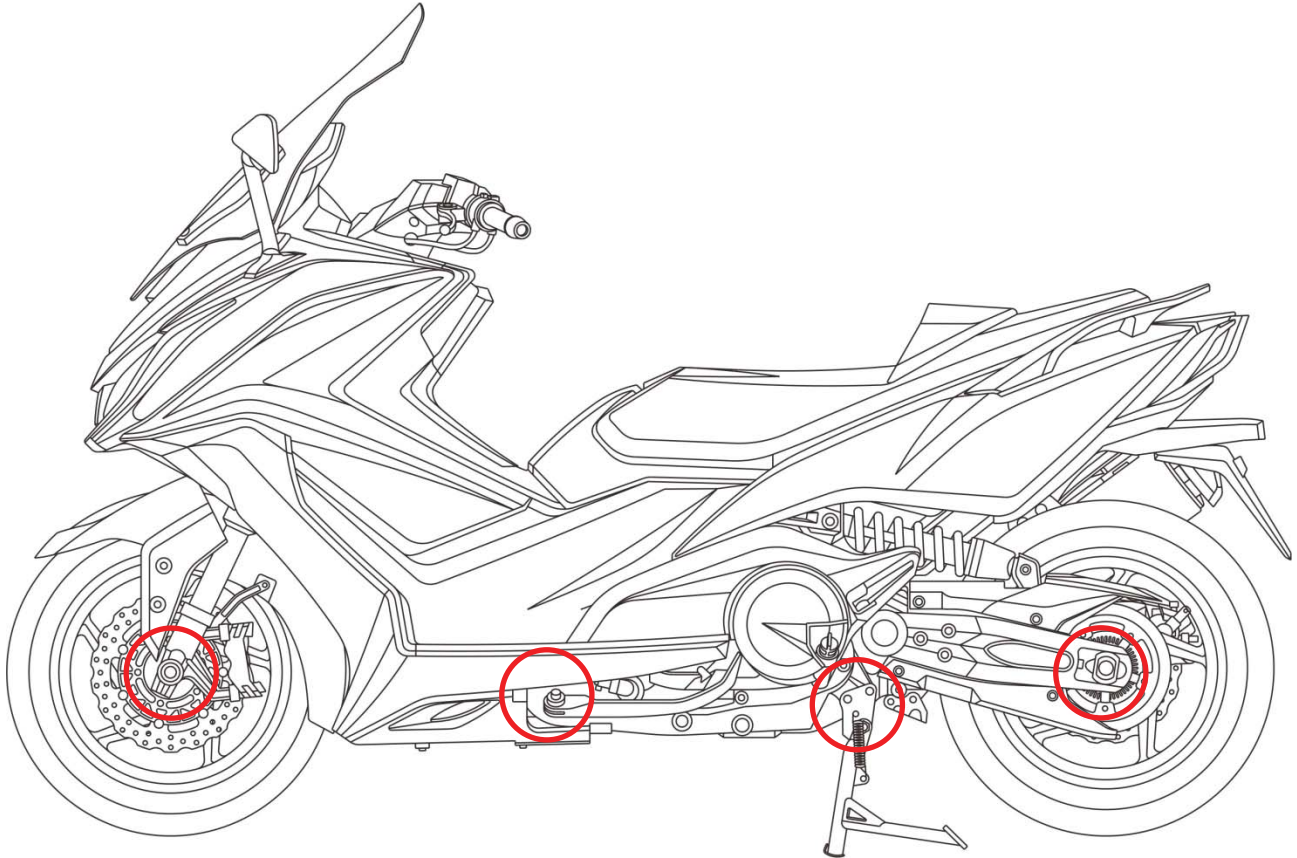
Do not mix-use oils of different brand, class or low quality ones; they may cause engine faults.

Kymco Emissary Engine Oil contains additives (e.g., spirits, etc.) during the manufacturing process.

Arbitrarily mixing additives bought from the market may deteriorate the oil, affect lubricating properties and shorten the service life of engine.

General Lubrication

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.



The frame lubrication points are listed below. Use general purpose grease. Apply clean engine oil or grease to cables and movable parts not specified. This will avoid abnormal noise and increase the durability of the motorcycle.

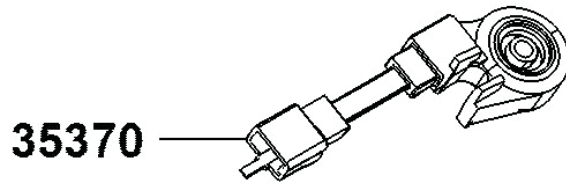
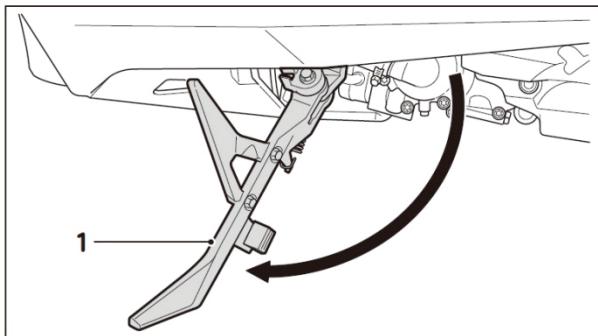
- Front Wheel Axle
- Side Stand Pivot
- Center Stand Pivot
- Rear Wheel axle

Side Stand

Interlock Function Check

Your scooter's side stand is not only necessary when you park, but it contains an important safety feature. This feature cuts-off the ignition if you try to ride the scooter when the side stand is down. Perform the following side stand inspection.

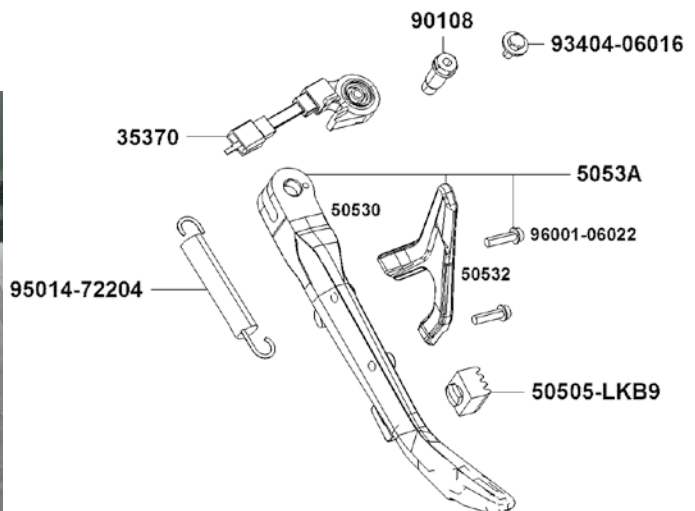
Place the vehicle on the center stand.
Unplug the three-pin side stand switch connector.



Use a digital multimeter to check for continuity.

With the side stand retracted there should be continuity between the yellow/green wire and the green wire terminals.

With the side stand extended there should be continuity between the yellow/black wire and the green wire terminals.

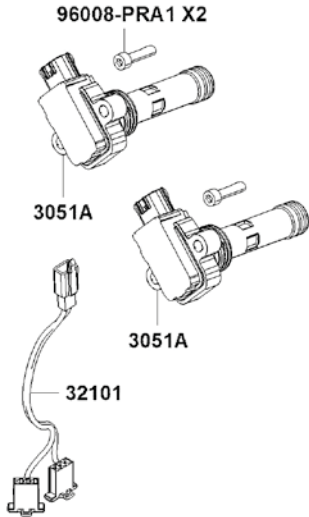


Spark Plug

remove the spark plug wire off of the spark plug.

Remove the connectors of the ignition coil.

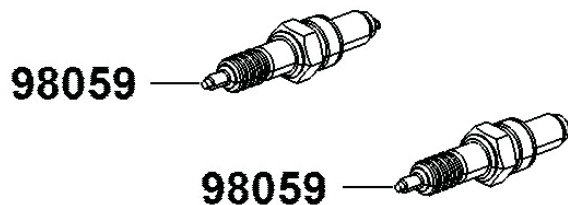
Remove the two ignition coil mounting bolts and remove the ignition coil.



Clean off the area surrounding the spark plug with compressed air or a shop towel to make sure debris doesn't get into the combustion chamber when the spark plug is removed.

NOTE: Always wear safety glasses when using compressed air and never point it directly at yourself or anyone else.

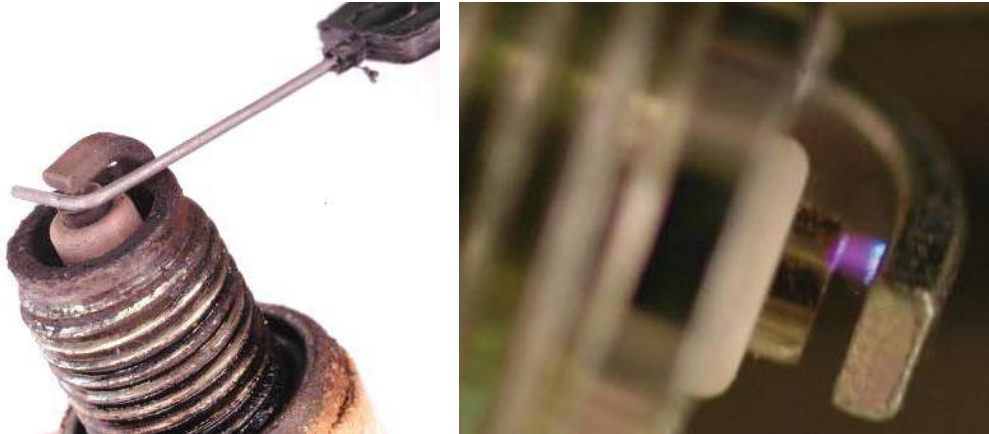
Remove the spark plug with a spark plug with a 5/8 in socket.



Installation torque

Spark plug	NGK CR7E
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Check the spark plug to see if it is the correct type and gapped properly. If the spark plug is black and fouled, replace it.



If the spark plug center electrode or side electrode are corroded or damaged, or if the insulator is cracked, replace the plug.

Measure the gap with a wire-type thickness gauge. If the gap is incorrect, replace the spark plug.

Always check the gap of the spark plug before installation. Inspect the color of the porcelain nose of the spark plug. The color of the spark plug can indicate how the mixture is burning. A white colored plug shows a lean mixture, where a dark plug shows a rich mixture. Do not hesitate to replace a spark plug. Always replace a spark plug if any part of it is damaged.

Spark plug gap	0.7 - 0.8 mm
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Do not over tighten the spark plug. The cylinder head is made out of soft metal, and it can be easily damaged.

Item	Torque
Spark plug	8 - 12 N-m (0.8 – 1.2 kgf-m)

Engine Compression Test

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Remove the under cowl set. See the external topic for more information.

Before testing the compression make sure the cylinder head bolts are tightened securely and the valve clearance is specification.

See the Cylinder Head and Valve Clearance topics for more information.

Remove the spark plug. See the Spark Plug topic for more information.

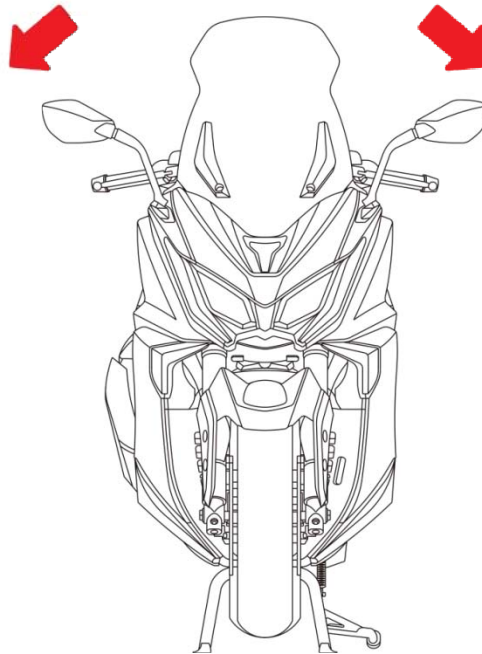


Thread a compression tester into the spark plug hole hand tight. Hold the throttle all the way open. Crank the engine with the starter motor until the needle on the gauge stops rising. Do not crank the engine more than a few seconds.

Cylinder compression	19 kg/cm ²
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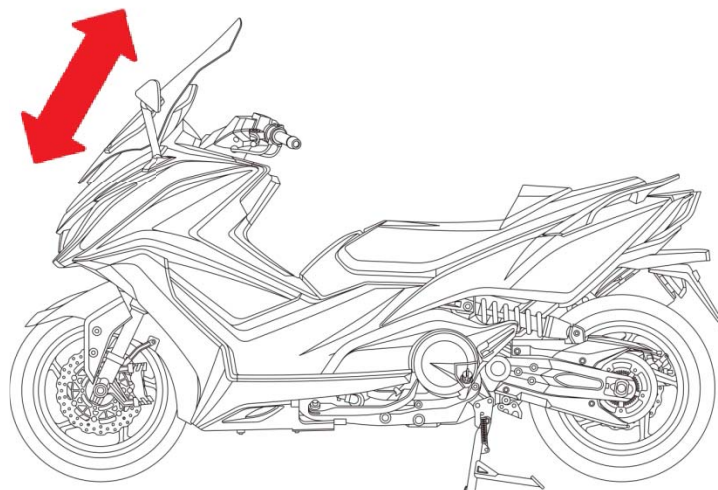
Low compression is an indication of excessive engine wear, possibly worn rings or poorly sealing valves, or maybe a tight valve with not enough valve clearance. High compression is possibly an indication of excessive carbon buildup on the piston or performance modifications.

Steering Inspection



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. See the Steering Stem Removal topic for more information.

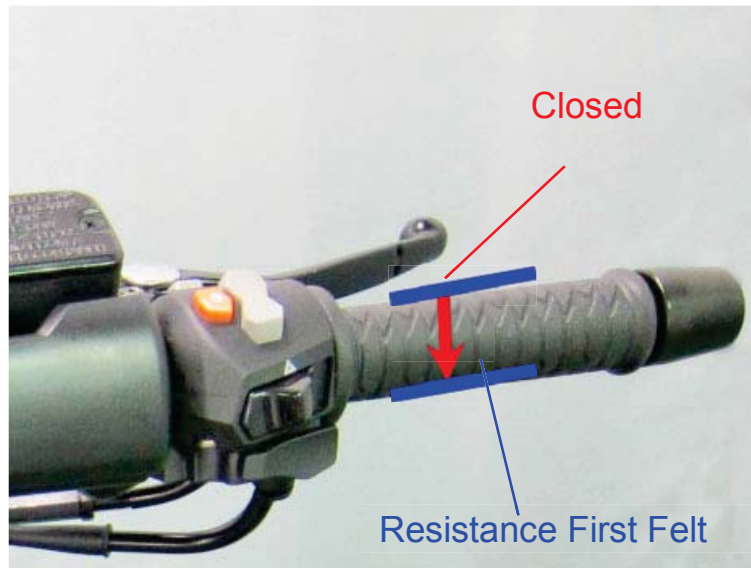
Front Suspension Inspection



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.

Throttle Free Play

Inspection

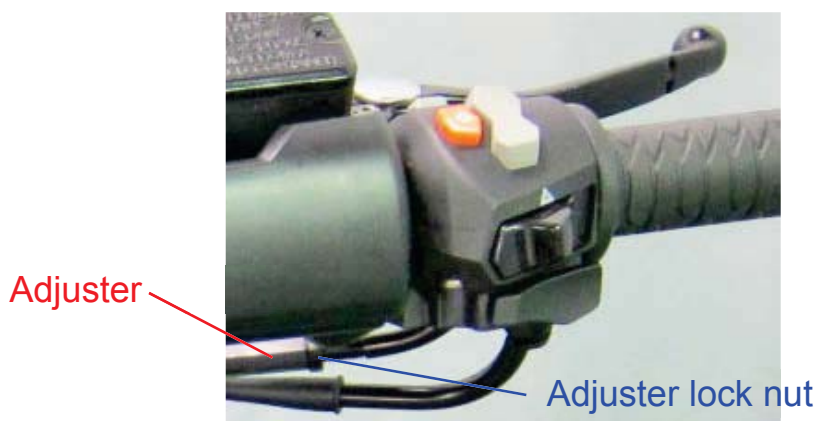


Check the throttle cable free play by gently rotating the throttle grip back until resistance is felt.

Throttle grip free play	2 ~ 6 mm
-------------------------	----------

Make sure the throttle moves smoothly and returns on its own. Start the engine and let it warm up. Turn the handlebars from side to side, if the engine rpm changes either the free play is too small or the throttle cables are not routed properly. Check and correct the cause.

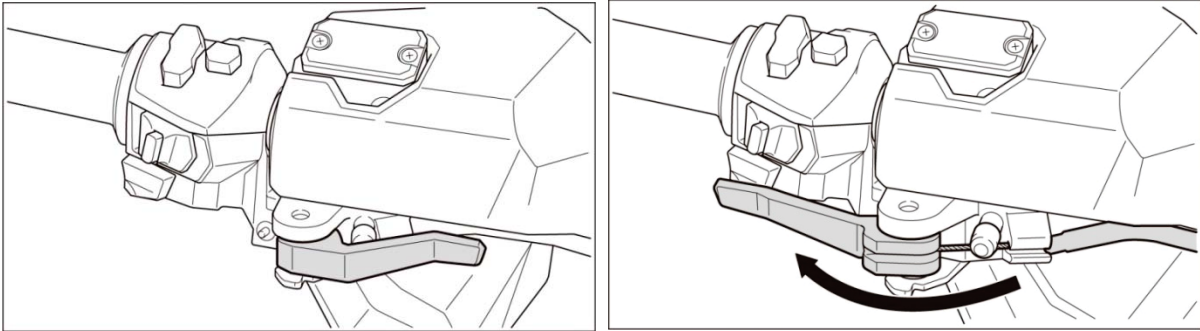
Adjustments of the throttle free play can be made with the cable adjusters below the grip throttle.



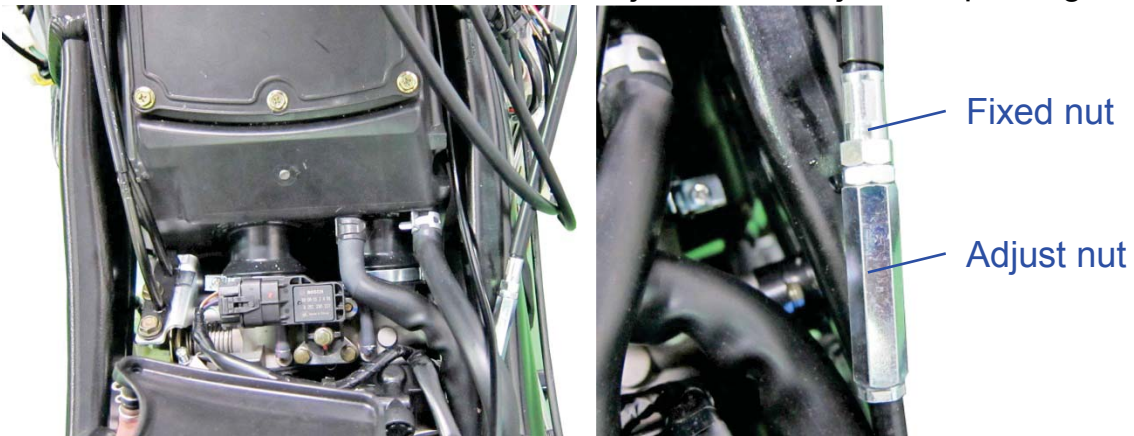
Loosen the throttle cable adjuster lock nut and turn the adjuster to achieve the specified free play.

When the free play has been moved into specification hold the adjuster in place and tighten the locknut securely.

Parking Brake Adjustment




Release the fixed nut, and rotate the adjust nut to adjust the parking brake.



Note: Do not use the rear brake lock lever while driving.



Light Inspection

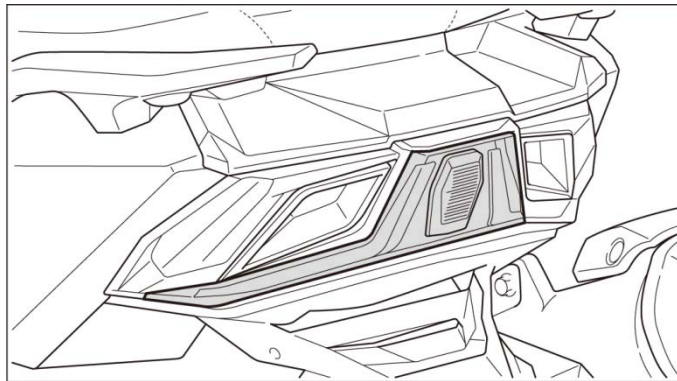
Check Brake Light

- ◆ Turn KEYLESS Main Switch to  position.
- ◆ Respectively pull the Front and Rear Brake Levers, verify if Brake Light goes on.


Check Brake Light for stain or fracture.

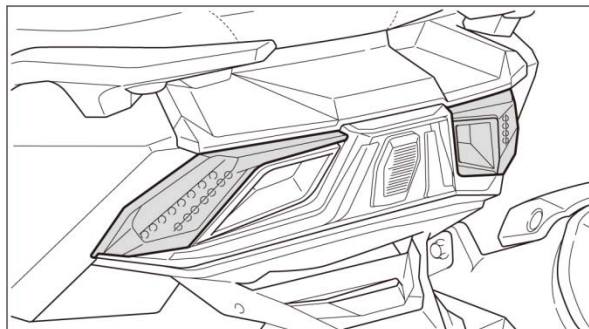
NOTICE

Turn KEYLESS Main Switch to  position but Engine Stop Switch to  position.



Check Direction Lights

- ◆ Turn KEYLESS Main Switch to  position.
- ◆ Operate Direction Light Switch to verify if each Direction Light goes on.
- ◆ Check Light Switch casing for stain or fracture.



Tires

Check grip between tire and ground and a normal tire pressure.

In case of a gripping anomaly, check tire pressure for normal reading using a pressure gauge.

Pressure measurements of cool tire:

With 1 rider

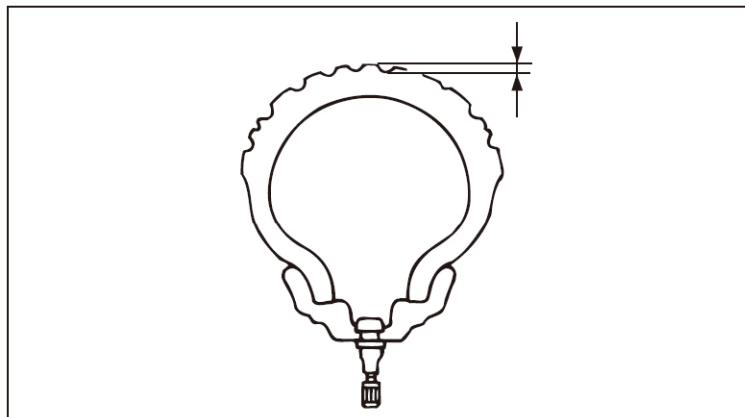
Front Wheel 2.4 kgf/cm² Rear Wheel 2.7 kgf/cm²

With 2 persons

Front Wheel 2.4 kgf/cm² Rear Wheel 2.7 kgf/cm²

Measure pattern depth at center of tread pattern. Measurements shall be taken at several points due to uneven wear.

Replace the tire if any of the measurements is lower than the service limit. Make sure the wheel is properly balanced when a new tire is replaced.



Service Limits:

Front Wheel 0.8 mm

Rear Wheel 0.8 mm

Check Tread Pattern for Wear

Check tires before each riding. In case of finding a transverse line (minimum pattern depth), nail or glass chip on the tire, or crack line on the side wall of tire, go to Kymco dealer for replacing with new one. Excessive wear of tire tread pattern will result in widened tread which is more prone to be punctured.

Tire Dimensions:

Front Tire Dimensions: 120/70-R15 56H

Rear Tire Dimensions: 160/60-R15 67H

TPMS Tire Pressure Management System

Operation of TPMS, Electronic Tire Pressure Sensor

◆ TPMS consists of 2 wireless Tire Pressure Sensors (1 each on respective nozzle of front and rear tire) and a controller. The sensor detects the current tire pressure and sends the signal to Controller by wireless transmission. The Controller then sends the signal to Dashboard, informing the rider of pressure condition with the displayed indicator.

NOTICE

1. When KEYLESS Main Switch is set ON, the Tire Pressure Sensor related pressure symbol on the left side of Dashboard will light up; if this symbol then goes out automatically, the tire pressure is normal (as shown in the Figure).
2. When KEYLESS Main Switch is set ON, the Tire Pressure Sensor related pressure symbol on the left side of Dashboard will light up; if this symbol stays on constantly, the tire pressure is not normal (as shown in the Figure).

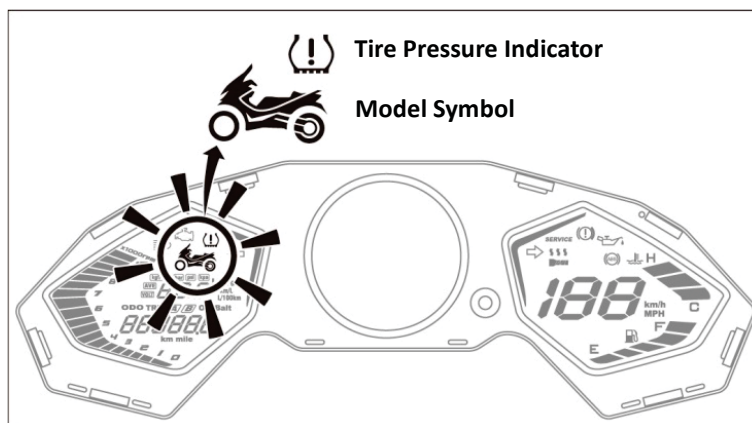
Front Tire Pressure 3.2kgf/cm² or < 1.6kgf/cm²

Rear Tire pressure 3.75kgf/cm² or < 1.65kgf/cm²

The owner needs to replenish or release tire pressure if the reading is too low or too high. Consult the dealer for assistance if you have any questions.

(Standard tire pressure under normal inflation: Front Wheel 2.3kgf/cm²; Rear Wheel 2.7kgf/cm²)

3. Do Not remove wireless Tire Pressure Sensor or Controller, or TPMS function will be lost.
4. No re-adjustment of TPMS is required when a new tire or rim is replaced.
5. Re-adjustment of TPMS is required when replacing a new wireless tire pressure sensor and controller; please consult a KYMCO dealer.
6. When replacing a tire rim, the Tire Pressure Sensor shall be kept in a correct order to distinguish the front one and the rear one.

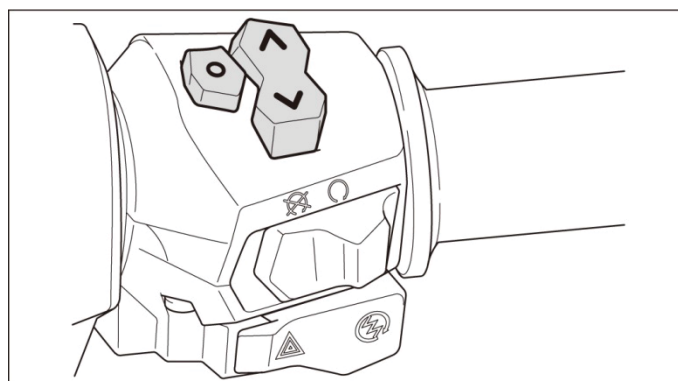


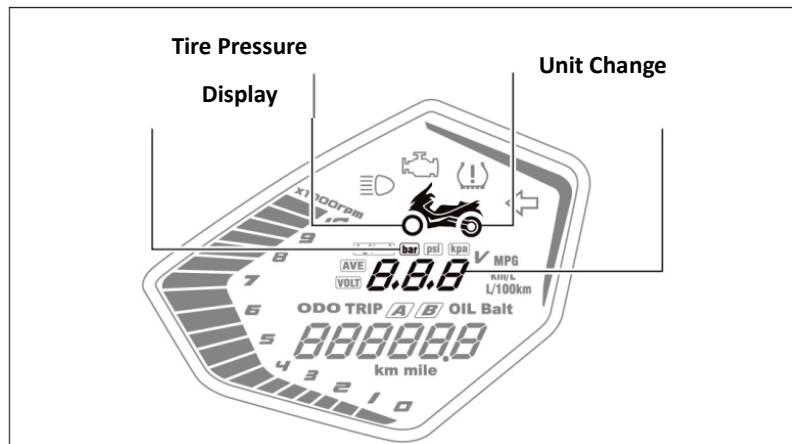
Owner Learn Code Operation:

- ◆ Applicable to owner and dealer service personnel.
- ◆ Re-adjustment of TPMS is required when replacing a new wireless tire pressure sensor and controller.
- ◆ When performing code learning, keep the vicinity clear of other vehicle or transmitter, to prevent miss-triggering.
- ◆ After installing Tire Pressure Sensor, inflate the tire to correct pressure and install it properly onto the vehicle.

Learn Code Activation Procedure:

1. Press and hold Operation Button (↵ button on the Handlebar), but it is necessary to switch over to Dashboard position “m” in advance.
2. KEY ON the KEYLESS Main Switch.
3. Release the Operation Button (↵) when the front tire of the Model Symbol flashes and tire pressure unit disappears.
4. TPMS is now entered into Code Learning Mode.
5. The Front Tire in the Symbol flashes continuously.
6. Operator releases or inflates the Front Tire to get a pressure change > 3psi, the sensor will be awakened within 1 minute; setting of the front wheel is complete when the pressure value appears.(If a Code Learn is not performed when the Front Tire flashes, press the UP button to jump to Rear Tire Code Learn. If a Code Learn is not accomplished within 2 minutes, the program exits Code Learn Mode.)
7. Now that the Rear Tire of the Model Symbol flashes continuously.
8. Operator releases or inflates the Rear Tire to get a pressure change > 3psi, the sensor will be awakened within 1 minute; setting of the rear wheel is complete when the pressure value appears.(If a Code Learn is not performed when the Rear Tire flashes, press the UP button to exit Code Learn Mode. If a Code Learn is not accomplished within 2 minutes, the program exits Code Learn Mode.)
9. Now that Front Tire flashes, tire pressure value appears with unit displayed.



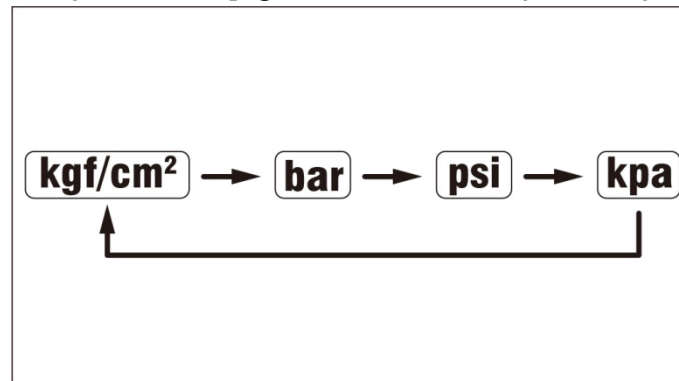


Remarks:

1. The dealer and owner are requested to inflate the tires to 20psi or more, so that TPMS computer can automatically learn the initial values and facilitate the subsequent normal operation.
2. Re-do Code Learning after replacing parts.
3. When replacing a tire, care must be taken to avoid inserting a tool onto the nozzle.
4. Make sure the direction is correct when replacing a part.
5. Tire Pressure values are for reference only.
6. Slackening of nut during parts installation will cause air leakage.
7. If tire pressure cannot be detected, the unit may be out of battery power and requires replacement of a new part.

Change Pressure Unit

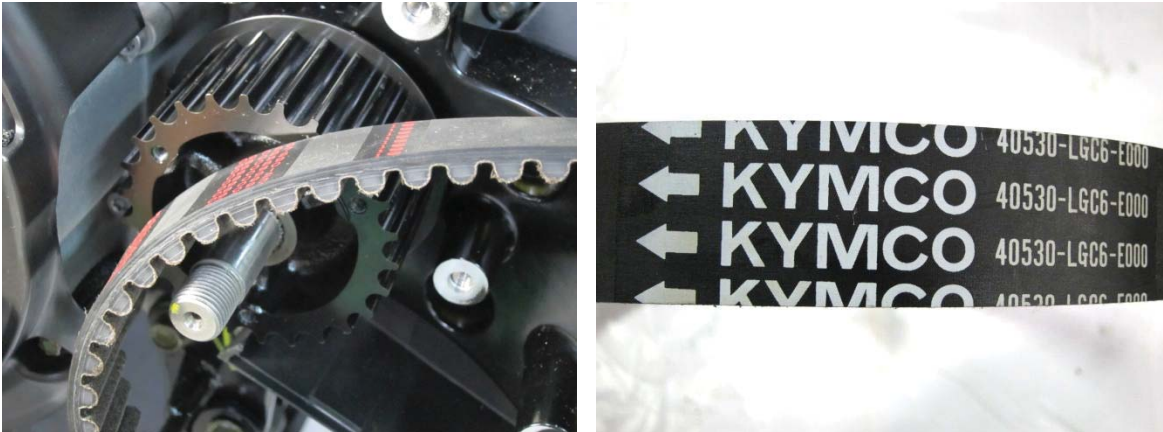
Turn KEYLESS Main Switch ON, the Model Symbol will light up. Push the Dashboard and noodoe Switch to “m” position and press the UP button to change over to TPMS Mode. Pressing “O” button on the Right Handlebar Switch to change units in the sequence of [kgf/cm² → bar → psi → kpa].



■Anomaly:

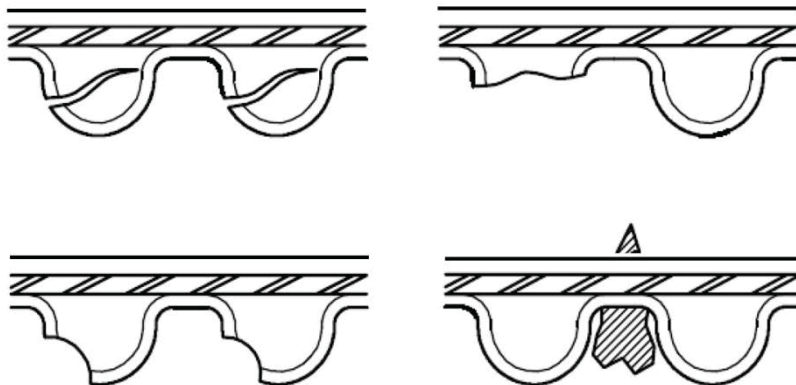
1. With Main Switch set to ON, when Tire Pressure Indicator in the Dashboard lights up continuously, it may be due to a pressure > 3.2 kgf/cm² or < 1.6 kgf/cm² of Front Tire; or a pressure >3.75 kgf/cm² or < 1.65 kgf/cm² (23.4psi) of Rear Tire. Change over to TPMS Mode by pressing the Mode button, the tire pressure value will be flashing.
2. Tire Pressure Indicator will light up continuously if controller is faulty. Change over to TPMS Mode by pressing the Mode button, the *Err* symbol will appear.
3. Tire Pressure Indicator will light up continuously if signal of tire pressure sensor fails to reach the controller due to environmental interference. Change over to TPMS Mode by pressing the Mode button, - - - will appear.
4. When power of battery in Tire Pressure Sensor is low, Tire Pressure Indicator will light up constantly. The owner shall prepare for replacing with a new wireless Tire Pressure Sensor.
5. Tire Pressure Indicator flashes quickly if tire pressure drops fast; it flashes slowly if tire pressure drops slowly.

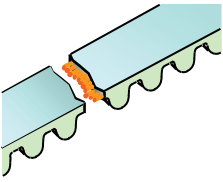
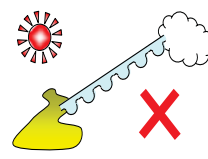
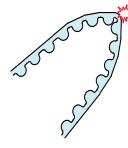
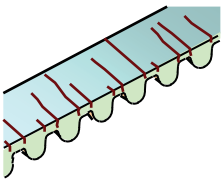
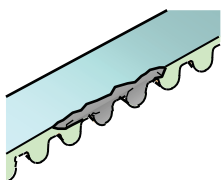
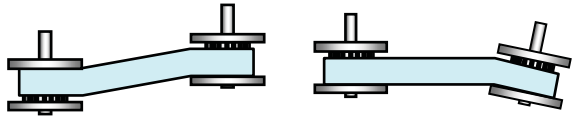
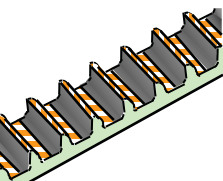
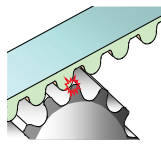
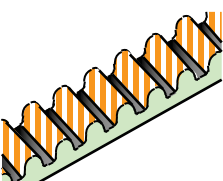
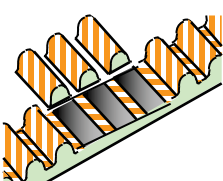
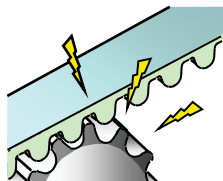
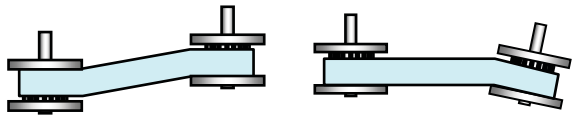
Drive Belt Inspection



Check the drive belt.

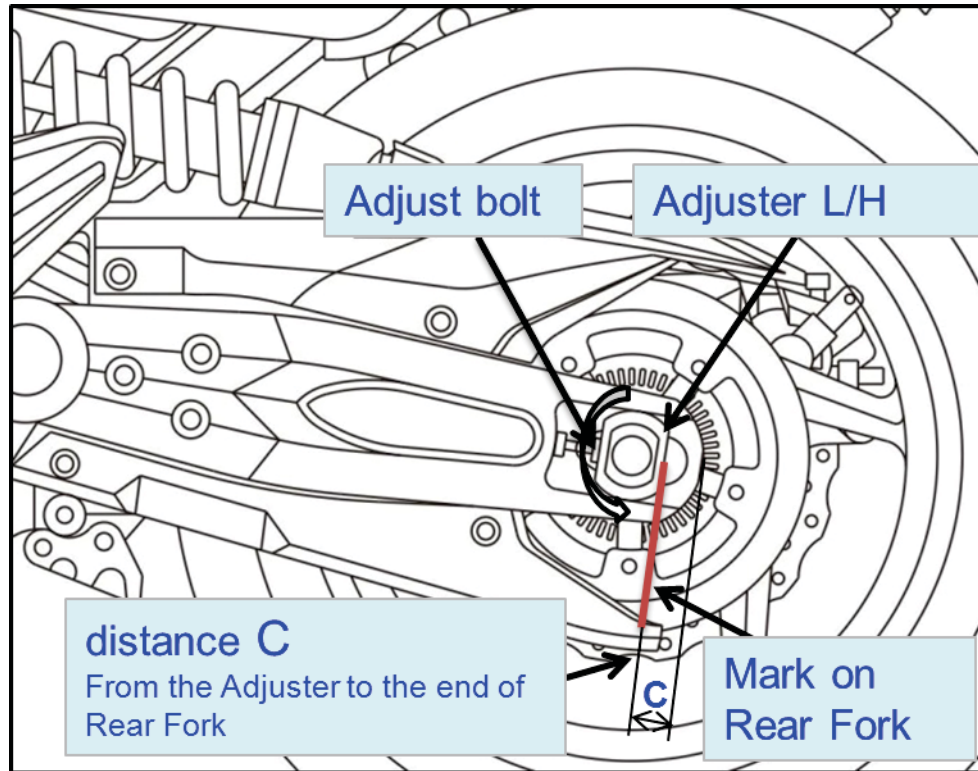
If the drive belt crack, missing teeth, hook wear or damage replace the drive belt with a new one.



<p>1</p> <p>CRACK</p> 	<p>a</p> <p>1) Check belt storage condition</p>  <p>Avoid the sun light Away the oil and heat</p>  <p>Do not press tie or press the belt.</p> <p>2) Avoid the water</p>
<p>CHAP</p> 	<p>1) Temperature too high ⇒ Use the (H-NBR) belt.</p> <p>Standard(CR) : 90°C below H(H-NBR) : 120°C below</p>
<p>Ⓔ > ...</p> 	<p>~... β 1 † 1 † ∅ † œ 1 > b † † † β 1 †</p> 
<p>Ⓔ > †</p> 	<p>~... β 1 † .1 1 † † 1 † † > b † † β œ β † † β 1 †</p>  <p>~... œ œ 1 † b œ 1 1 † † 1 †</p>
<p>Ⓔ > †</p> 	<p>~... β 1 † .1 1 † † 1 † ⇒ † † † † β β œ β † † 1 †</p> <p>~... œ œ 1 † ⇒ œ 1 1 † † 1 †</p>
	<p>~... > b † a † 1 1 † † ∅ †</p> <p>~... † > b † β 1 1 † † † † † ∅ † † †</p> <p>~... β 1 † .1 1 † † 1 † ⇒ † † † † β β œ β † † 1 †</p> <p>~... 1 1 † † † ⇒ † † † † β β 1 œ β † † † ... † 1</p>
<p>Ⓔ</p> 	<p>~... β 1 † 1 † ∅ † œ 1 ⇒ † † † † β 1 †</p>  <p>~... β 1 † .1 1 † † 1 † ⇒ † † † † β β œ β † † 1 †</p>

Drive Belt Tension Adjustment

Step 1: Adjusting the Adjusters



~1. Adjust L/H Adjuster place to the Mark on Rear Fork.

~2. Adjust R/H Adjuster place to be aligned the L/H Adjuster.

~3. Check the distance C of both L/H and R/H Adjusters are the same (18.8mm±0.5mm).

Step 2-1: Sonic Tension Meter setting and use
Recommended~ Gates Unitta, U-508



~1. Setting mass constant(M) / width(W) / span(S)
M 008.3 g/m **W** 040.0 mm/R **S** 0381 mm

~2. Align the meter probe and press “MEASURE” button.

~3. Knock the belt gently to get the tension reading.



Step 2-2: Measure the belt tension

P.S. distance C vs. tension (for reference only)

18.8mm --- (1300~1700N)

19.2mm --- (1100~1500N)



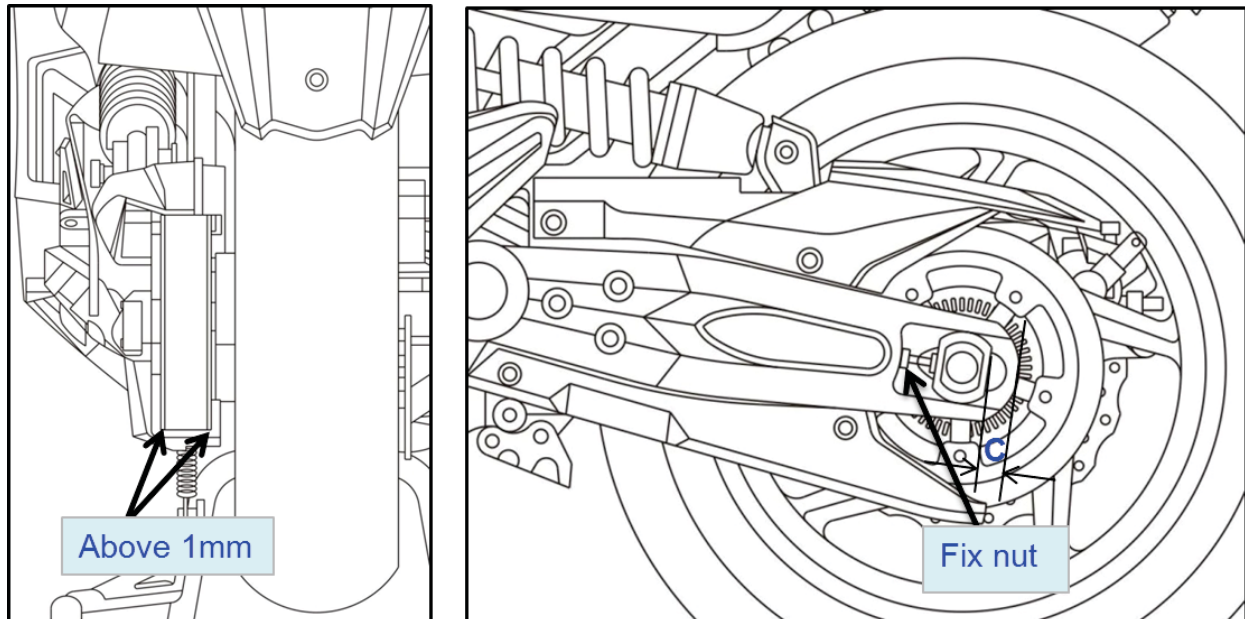
~1. Probe of Sonic Tension meter should be parallel to the belt as shown above pictures.

~2. Distance between probe and belt is approx. 1cm, location as shown above pictures.

~3. Appropriately hit the belt with metal tool.

~4. Tension reading should be 1300~1700N (brand new, after running 1000~1400N).

Step 3: Belt side Clearance



~1. Turn the wheel for several runs, check the belt is located at the center of driven pulley, (both sides clearance should be more than 1mm), if not, slightly adjust R/H Adjuster, and distance C of R/H and L/H Adjuster must remained within the range $18.8\pm 0.5\text{mm}$.

~2. Then, tightening the rear axle nut to specific tighten torque, and the fix nut(shown above) as well.

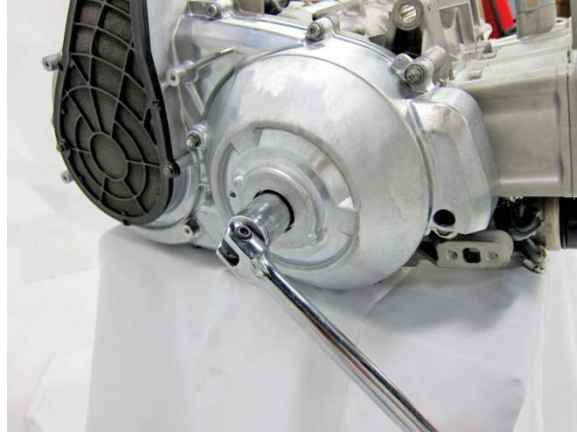
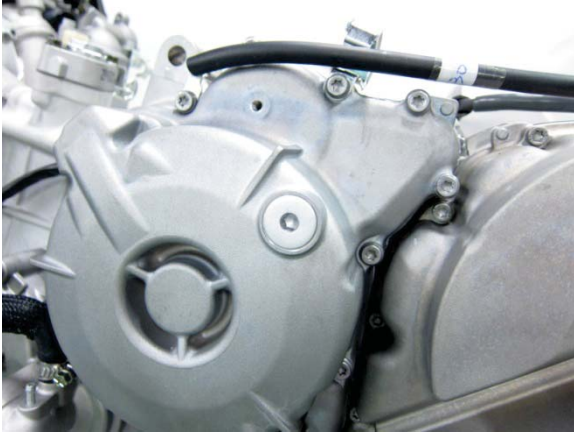
Valve Clearance

The valve clearance specification is only relevant if the engine is cold.

Inspection

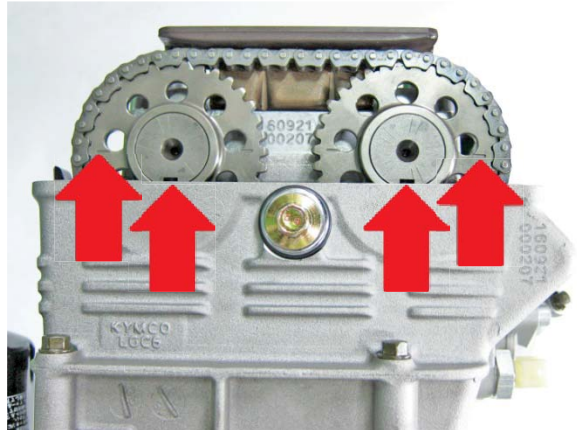
Remove the timing inspection cap from the left side of the engine. And rotate the crankshaft from the right side of the engine.

When installation, inspect the O-ring on the cap and replace it as needed.



Rotate the crankshaft to TDC mark.

And align the TDC mark at camshaft sprocket.

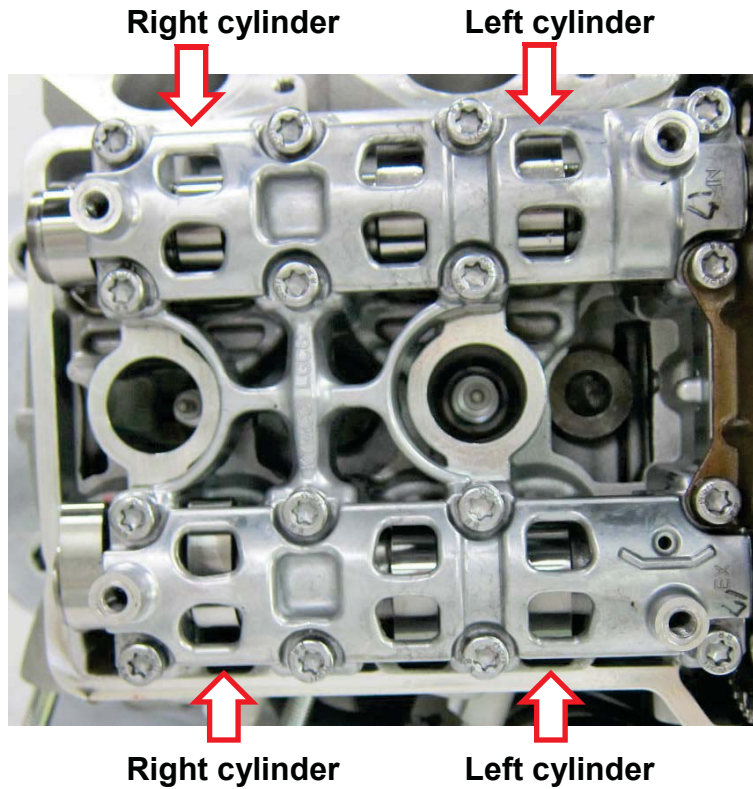


For correct engine timing the marks on the camshaft sprocket must be even with the cylinder head mating surface at the same time the "T" mark is lined up with the with the index notch in the timing inspection hole.

If this is not the case, rotate the crankshaft 360° clockwise until the "T" mark is once again aligned with the notch on the case cover.

Note: Valve clearance measuring sequence: First to adjust the left cylinder then turn the crankshaft clockwise 180° to adjust the right cylinder.

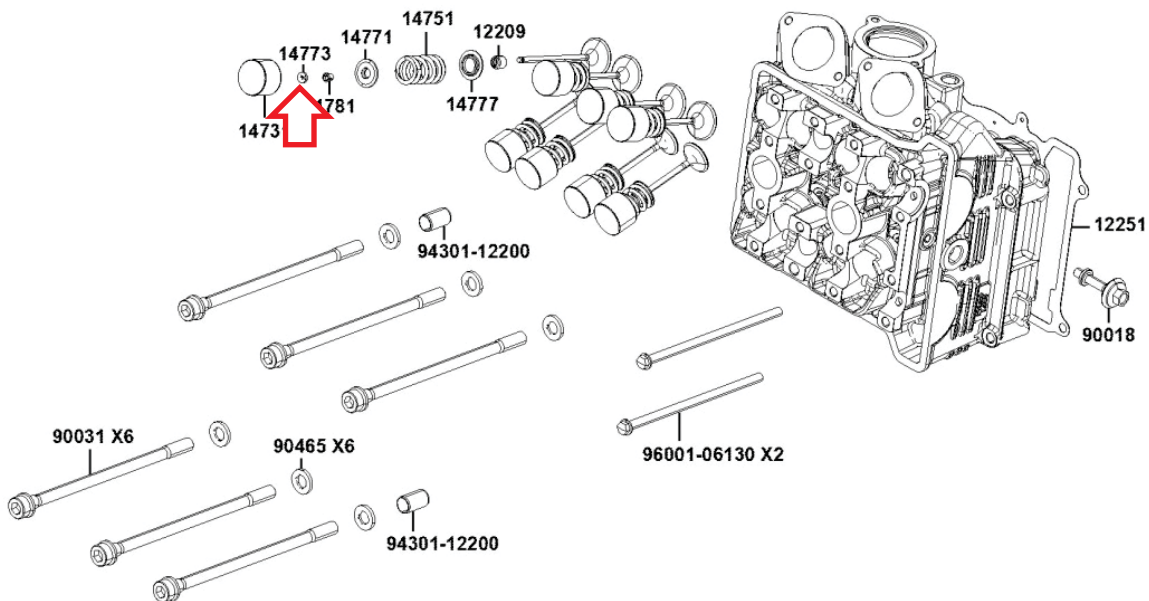
Valve Clearance Adjustment



Measure the valve clearance with a thickness feeler gauge.

Valve clearance	IN: 0.175 mm	EX: 0.225 mm
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If the clearance is out of specification, replace the shim to fit in the standard.



Measure the valve clearance with a thickness feeler gauge.

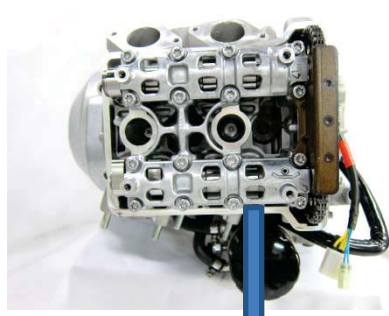
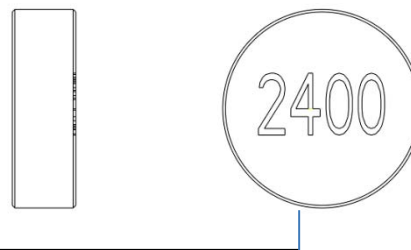
Valve clearance	IN: 0.175 mm	EX: 0.225 mm
-----------------	--------------	--------------

If the clearance is out of specification, replace the shim to fit in the standard.

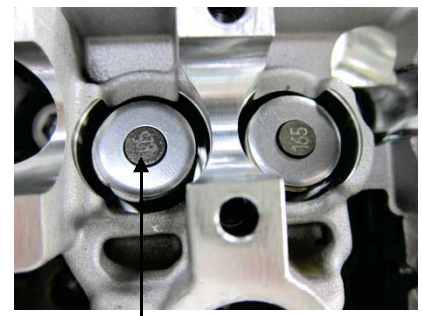
Specification of shim: 1.8~3.0mm

01	1.8	1800
02	1.825	1825
03	1.85	1850
04	1.875	1875
05	1.9	1900
06	1.925	1925
07	1.95	1950
08	1.975	1975
09	2.0	2000
10	2.025	2025
11	2.05	2050
12	2.075	2075
13	2.1	2100
14	2.125	2125
15	2.15	2150
16	2.175	2175
17	2.2	2200
18	2.225	2225
19	2.25	2250
20	2.275	2275
21	2.3	2300
22	2.325	2325
23	2.35	2350
24	2.375	2375
25	2.4	2400
26	2.425	2425
27	2.45	2450
28	2.475	2475
29	2.5	2500
30	2.525	2525
31	2.55	2550
32	2.575	2575
33	2.6	2600

34	2.625	2625
35	2.65	2650
36	2.675	2675
37	2.7	2700
38	2.725	2725
39	2.75	2750
40	2.775	2775
41	2.8	2800
42	2.825	2825
43	2.85	2850
44	2.875	2875
45	2.9	2900
46	2.925	2925
47	2.95	2950
48	2.975	2975
49	3.0	3000



thickness feeler gauge



Shim

Note: Valve clearance measuring sequence: First to adjust the left cylinder then turn the crankshaft clockwise 180° to adjust the right cylinder.