

XCITING VS 400

SCOOTER

E5

OWNER'S MANUAL



Dear User,

Thank you very much for purchasing our **XCITING VS 400** Series product.

This Manual gives detailed instructions on how to operate, maintain and adjust the **XCITING VS 400** Series for prolonged durability and comfort. This model of vehicles complies with EPA regulations on scooter emission control standards, therefore complying environmental requirements in terms of low pollution, low noise and low energy consumption. Although having exceptional quality, regular maintenance is still essential for keeping the product in giving optimal performances.

In order to enjoy a safe and comfortable journey with your motorcycle, please read this manual thoroughly.

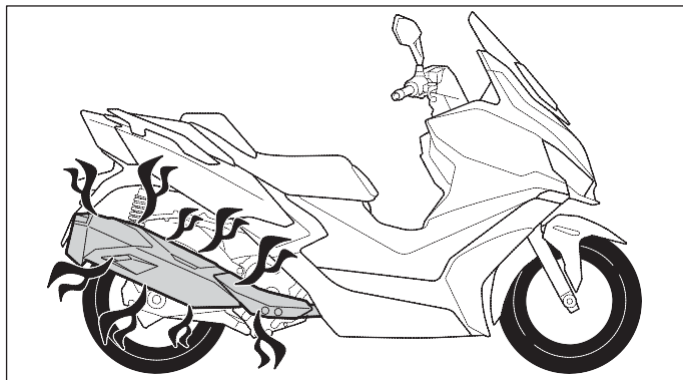
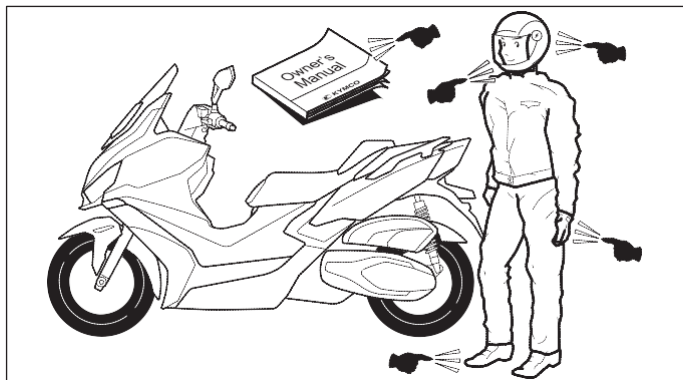
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Precautions on Safe Driving

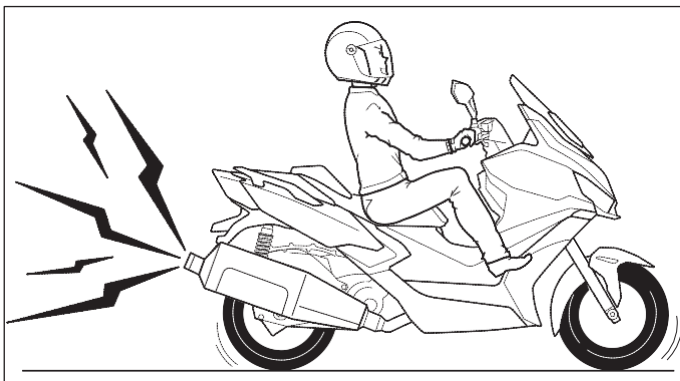
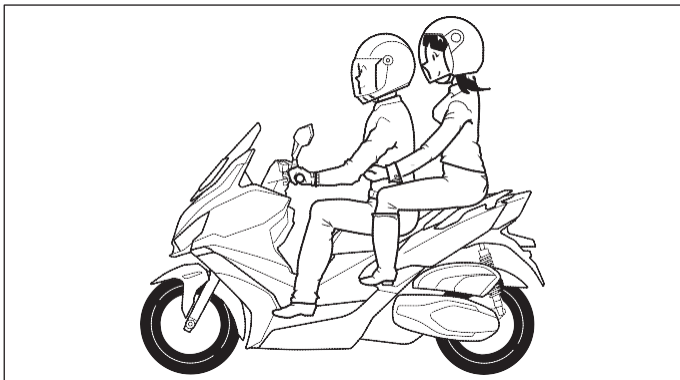


1. Precautions on Safe Driving

Peruse user manual and precautions.

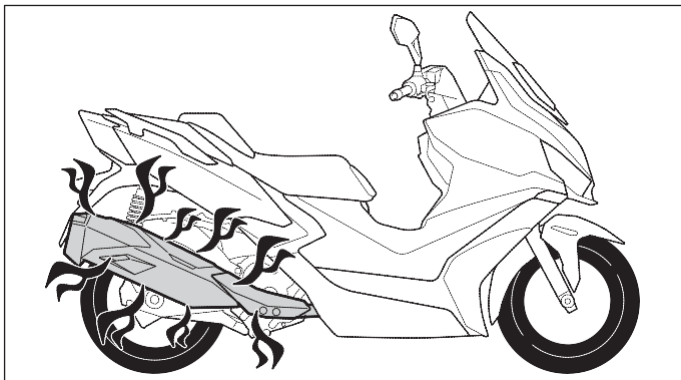
- ◆ Driver shall wear a helmet, gloves, goggles, etc.
- ◆ Do not wear clothes that may impede safe driving.
- ◆ Excessively wide and loose sleeves may be caught by the brake lever and is extremely dangerous.
- ◆ Operation of brake lever shall in no case be obstructed.
- ◆ Daily and regular checks are necessities.
- ◆ Visually check tire appearance for any foreign object or unusual abrasion.
- ◆ Exhaust gas from the muffler contains carbon monoxide which is harmful to human body.
- ◆ Start the engine only in a well-ventilated location.
- ◆ Buckle up the chin-belt when wearing a Helmet.
- ◆ Hold the Handlebar with both hands when riding. Do not ride with one hand as this is extremely dangerous.
- ◆ Wearing flat shoes is safer.
- ◆ The muffler is at a very high temperature after stopping the running engine, do not touch it.
- ◆ Avoid dry grasses or flammables when parking the scooter, for the prevention of fire risks.
- ◆ The muffler is at a very high temperature after stopping the engine; park the vehicle with the Muffler facing a wall or a location free of pedestrian, for preventing any hazard of burn.

Precautions on Safe Driving



- ◆ Metal or plastic parts of the scooter may reach a very high temperature after exposing to sunshine; care shall be taken not to touch such surfaces or a burn may occur.
- ◆ Avoid making sharp turns or one-handed driving.
- ◆ Abide by all traffic rules.
- ◆ Smoking is prohibited when replenishing fuel.
- ◆ Shutdown the engine when replenishing fuel.
- ◆ When mounting/dismounting the scooter, special care must be taken by the rear rider to prevent being burnt by the high-temp Exhaust Muffler.
- ◆ Operability of the handle varies in conditions with or without an extra load.
- ◆ When riding the motorcycle, the rider must place both feet on the pedals; the rear rider shall put their arms around the rider's waist and both feet on the rear pedals.
- ◆ Avoid overloading when carrying objects. Make sure that objects are fixed properly. Extra care must be taken for safe driving.
- ◆ Vehicle functionalities are related to its structure; arbitrary modification may deteriorate operability of vehicle, causing shortened service life and obstructed driver safety.
- ◆ Arbitrary modification of a vehicle is an illegal action forbidden by law. Never try to make any modification.
- ◆ Modification of vehicle may result in a nullified warrant.

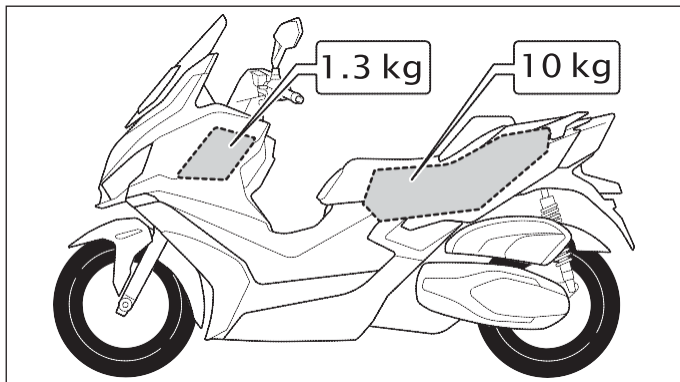
Precautions on Safe Driving



Attention

- ◆ Natural mental relaxation and comfortable clothes are essentials to a safe driving.
- ◆ Abide by traffic rules, avoid anxiety, relax your mood, and pay attention to drive.
- ◆ Avoid wearing clothes that may impede driving safety when riding the scooter. (E.g., long skirt, flared trousers, etc.)
- ◆ The temperature of the Muffler is extremely high when the vehicle is running as well as within 30 minutes after stopping of driving; avoid contacting the vehicle with the body or skin to avoid burn injuries.
- ◆ Avoid dry grasses or flammables when parking the vehicle, for the prevention of fire risks.

Precautions on Safe Driving



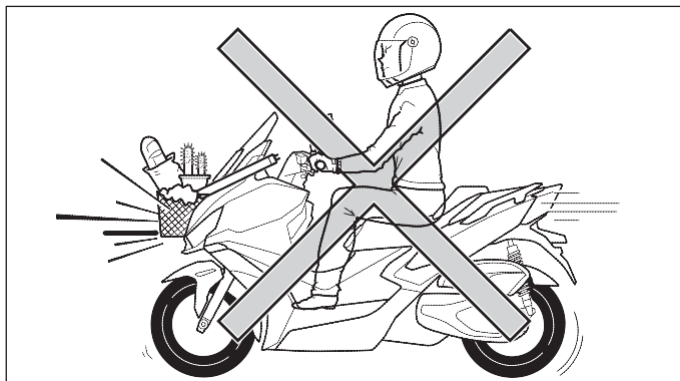
The Front Inner Box has a capacity of holding no more than 1.3 kg.

The Luggage Box has a capacity of holding no more than 10 kg.

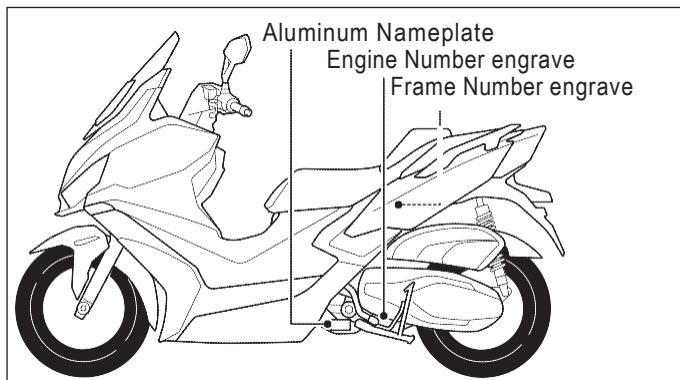
Do Not exceed the following load limits:

The Front Inner Box has a capacity of holding no more than 1.3 kg

The Luggage Box has a capacity of holding no more than 10 kg



It is forbidden to install a carrying basket or bracket on the front header. Carrying anything in front of the vehicle will surly block the headlight and significantly affect driving safety.

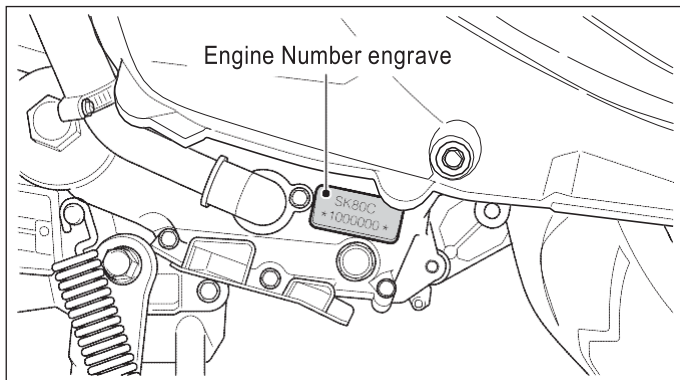


2. Owner Information

ID Number Record Field

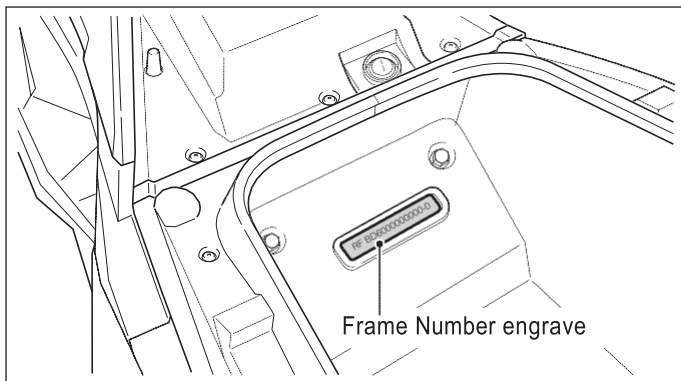
Please note down the Engine Number and Vehicle Frame Number in the relevant fields below, to facilitate ordering spare parts from a KYMCO dealer, or for reference in the event of a lost of vehicle.

ID Number Record Field:

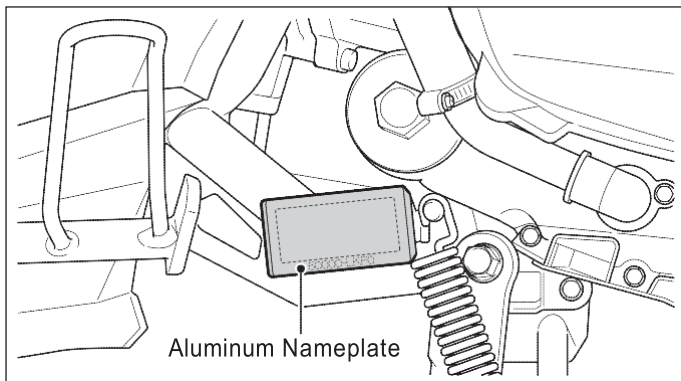


Engine Number

The Engine Number is engraved on the crank case as shown in the figure.

**Frame Number:**

The Frame Number is engraved on the chassis as shown in the figure.

**Aluminum Nameplate**

The Aluminum Nameplate located as shown in the figure.

3. Parts Names

Right View of Scooter



1: Muffler

2: Oil level guide

3: Fuel filler cap

4: Rear passenger foot peg

5: Battery / Fuses (under seat)

6: Windsdshied

7: Rear

8: Front luggage box

Parts Name

Parts Names

Left View of Scooter



9: Rear brake lever

10: Headlamp

11: Left turn signal lamp

12: Side stand

13: Seat

14: Air filter

15: Taillamp & Stoplamp

16: Coolant lever viewing window

4. Control Functions of Mechanism

Left Handlebar Switch

1. KEYLESS Switch: For more information, see page 22-23.
2. Over-pass Light Switch:
Pressing this button will activate High Beam.
3. High/Low Beam Switch: Pushing the switch to 「」 for High BEAM, to 「」 for Low Beam.

1. Winker Switch:

Use the winker when making a turn or changing a lane.
Pressing-in the button will deactivate the Winker.

↶ : Use this position for Left Turn.

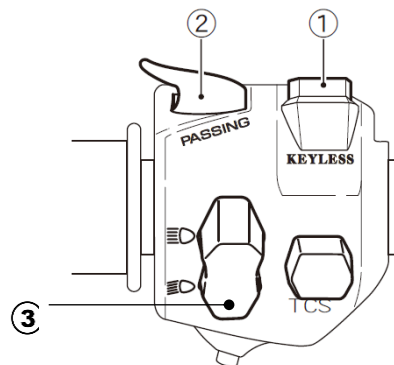
↷ : Use this position for Right Turn.

■ : To release Winker, just press-in the button.

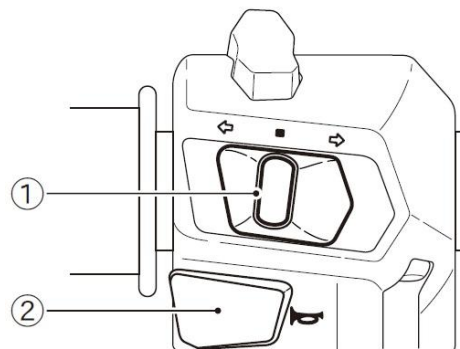
Winker will not activate when the Main Switch is at "  " position.

2. Horn Switch:

Horn will sound when Main Switch KEY is turned ON at "  " position.



- ① KEYLESS Switch ② Over-pass Light Switch
③ High/Low Beam Switch



- ① Winker Switch ② Over-pass Light Switch

Attention

Winker will not release automatically, it requires resuming after use. Forgetting to resume it may result in traffic safety issues.

Right Handlebar Switch

1. Park Alert Switch:

▲ : Push this switch to the left, all the Fault Alert Lights (4 winkers, left and right, front and rear) will flash.

OFF : Push this switch to the right, all the Fault Alert Lights stop flashing.

Attention

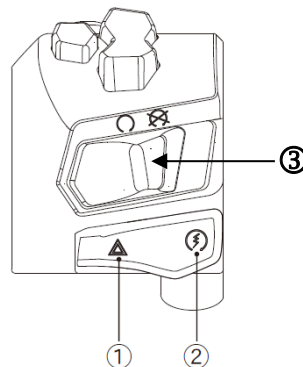
Do NOT use the Fault Alert Light for prolonged period after stopping the engine, or power of battery will deplete.

2. Electrical Start-up Switch:

Turn ON Main Switch, do remember to pull-up both the front and rear brake levers; press down this button to start the engine.

Attention

To avoid insufficient voltage of battery and you cannot start the engine, go to KYMCO dealer for check-up when the starting motor becomes less powerful.



- ① Park Alert Switch ② Electrical Start-up Switch
③ Engine Stop Switch

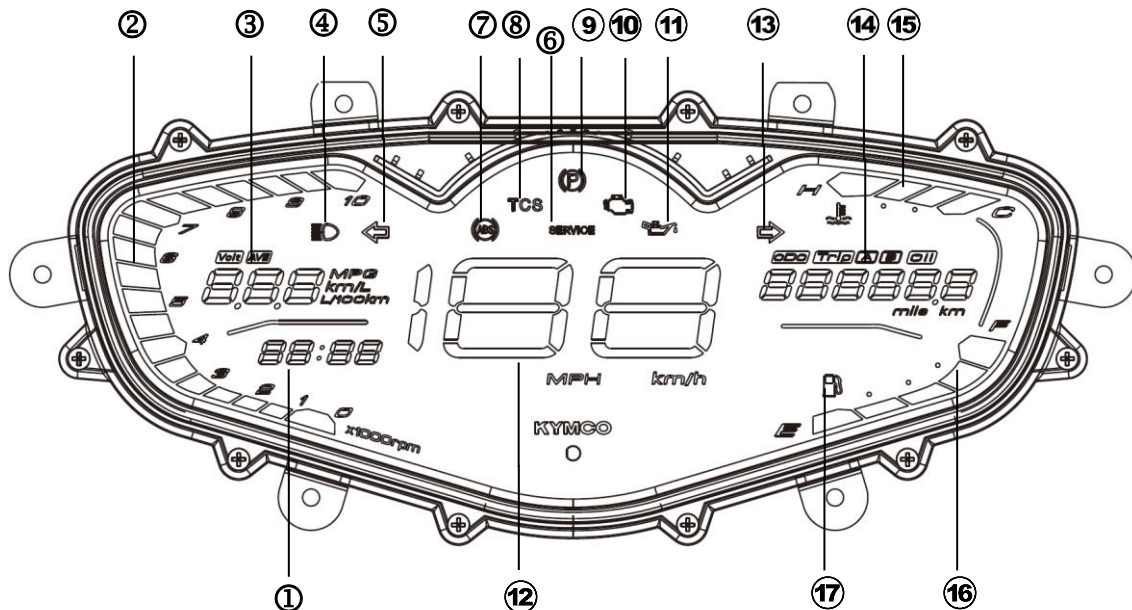
3. Engine Stop Switch:

⊗ : At this position, engine is stopped and cannot be started; it requires switching back to “○” position to start the engine.

○ : At this position, starting the engine is allowed. During normal riding, put the Engine Stop Switch at “○” position. In the event of emergency, such as fuel cable jam or vehicle tumbling, turn the switch to “⊗” position to force-stop the engine.

Control Functions of Mechanism

Dashboard



1. Time	2. Tachometer	3. Dashboard-Adjustment Zone	4. High beam	5. Turn Signal Indicator lights	6. Oil warning indicator
7. ABS brake Indicator	8. TCS indicator	9. Parking brake indicator	10. Engine Detection Indicator	11. Oil pressure warning indicator	12. Speedometer
13. Turn Signal Indicator lights	14. Mileage Information	15. Water Thermometer	16. Fuel gauge	17. Fuel indicator	

Control Functions of Mechanism

Right Handlebar Switch

1. Time:

2. Tachometer:

Tachometer: Indicates engine speed in rpm; each scale multiplied by 1000 rpm.

3. Dashboard-Adjustment Zone:

Function Zone:

- Clicking UP ($\wedge$) button on the Right Handlebar Switch,
- VOLT (Battery Voltage) → AVE (Average Fuel Consumption) → (Instant Fuel Consumption)
- VOLT → Indicates Battery Voltage
- AVE → Average Fuel Consumption (AVE) mode, indicates Average Fuel Consumption (km/L and L/100km), (after returning TRIP to Zero, AVE will also return to Zero.)
- Instant Fuel Consumption Mode, AVE indicator goes off, indicating Instant Fuel Consumption of vehicle (in km/L and L/100km).
- Change unit of fuel consumption: When in AVE/ Instant Fuel Consumption Mode, Click "O" button on Right Handlebar Switch to switch-over between "km/L" and "L/100km".
- Km/Mile Unit Change-over: When in ODO Display Interface, Press-and-hold "O" button on Right Handlebar Switch for 2s to switch-over between Km and Mile display.

ⓘ Attention

When selecting Mile Gauge, the displayed unit is MPG, i.e. miles per gallon.

The Average Fuel Consumption or Instant Fuel Consumption of the vehicle displayed by the meter is for reference only. The actual fuel consumption is dependent on the actual vehicle behavior.

⚠ WARNING

- When Battery Indication is lower than 12V, it means the battery power is low and an immediate check-up or recharge is required.
- If the battery voltage is higher than 16V after engine is running, the battery voltage is too high.
- When any of the above situations occurs, the vehicle must be inspected.

Handlebar Control button overview

	($\wedge$) Button → Up Button
	($\vee$) Button → Down Button
	(O) Button → Enter Button

4. High Beam Indicator light:

This light is illuminated when the headlight high beam is on.

5. Turn Signal Indicator lights:

Flashes when the turn left signal is being used.

6. SERVICE Warning Indicator:

The Oil Replacement Indicator (SERVICE Symbol) lights up when the mileage reaches 5000km. Switch to OIL Mode to turn off the Oil Replacement Indicator light (SERVICE Symbol) and reset the mileage readings to zero.

7. ABS brake Indicator:

The ABS brake Indicator lights up constantly when KEY ON; it will go off when the vehicle speeds up $\geq 10\text{km/h}$.

 Attention

If ABS brake Indicator stays lighting up when vehicle speed is $\geq 10\text{km/h}$, it indicates the ABS system is faulty. Please go to a local KYMCO dealer for check-up immediately.

8. TCS indicator:

TCS indicator light will light up in amber color when turn on the ignition switch. Once the vehicle speed over 6km/h , the indicator light will go off automatically. The TCS keeps function at this time.

9. Parking Brake Indicator light:

This light is illuminated when the parking brake is applied.

10. Engine Detection Indicator:

After KEY ON, this indicator lights up for 2s and then goes off automatically, indicating the vehicle is normal. If it does not light up for 2s after KEY ON or it lights up and keeps on after 2s, the vehicle is faulty and shall be checked up by a service station.

11. Oil pressure warning indicator:

This indicator will come on if the oil pressure is below the normal operating pressure when the engine is running. The indicator will come on when the key is turned to ON position before the engine is running. The indicator should go out when the engine starts. If the indicator fails to go out completely once the engine is started, consult your KYMCO dealer immediately.

12. Speedometer:

It indicates the vehicle speed.

13. Turn Signal Indicator lights:

Flashes when the turn right signal is being used.

14. Mileage Information:

- Pressing DOWN ($\sim$) button on the Right Handlebar Switch,
- ODO $\rightarrow$ TRIP A $\rightarrow$ TRIP B $\rightarrow$ OIL
- ODO $\rightarrow$ Total running Mileage displayed in Km or Mile.
- TRIP A/TRIP B $\rightarrow$ Single trip mileage; Single trip mileage can be zeroed by pressing and holding "O" button for 2s.
- OIL $\rightarrow$ Oil Indicator. After running 5,000km, the "SERVICE" symbol on the left of Dashboard lights up constantly, indicating an oil recheck is required and shall be checked up by a service station.

Control Functions of Mechanism

Attention

Oil Replacement indicator will only light up after running 5000km, therefore it will not light up for the first oil replacement. However, a Zero adjustment is still necessary after oil replacement at the first oil replacement so that the indicator can act correctly for a subsequent indication

15. Water Thermometer:

If water temperature reaches H (High- temp Position) when vehicle is running, it means water temperature is abnormal. Pull over and park your scooter safely, wait until the cooling water gets cooler before adding cool- ant and restart your engine. Go to the KYMCO dealer nearest to you for inspection and maintenance. Please note that riding your scooter with the water temperature at a high level may lead to engine failure.

16. Fuel Meter:

Indicates fuel content in the tank. Replenish with 95 unleaded gasoline when Fuel Meter approaches the last scale near "E" (preventing fuel pump from running dry and damage).

17. Fuel Indicator:

The fuel indicator will light up when the fuel meter approaches the scale " E" .

ABS (Anti-lock Braking System)

ABS Brake Indicator:

ABS is a double electronic control system capable of controlling front and rear brakes respectively. When ABS is activated, the rider can feel pulses acted by ABS on the handlebar; in which case the rider needs to hold the handlebar constantly, without "press-and-releasing" it, or the ABS effect may be diminished.

The ABS Brake Indicator situates on the display zone of Dashboard (as shown in the figure); it lights up when the Main Switch is activated and does not go off automatically. The ABS Brake Indicator only goes off when engine is started and vehicle runs above 10km/hr.

Attention

- ABS is controlled by ECU; if ABS fails, the ABS Brake Indicator will light up; ABS may lose its function, but the original brake still works; the ABS resumes normal braking functionalities.
- When riding on a rough or pebbled road surface, effective ABS braking distance will become longer.
- Always keep a proper safety distance with preceding vehicles while riding a scooter.
- ABS gives optimal performance with a longer braking distance. To avoid deterioration of ABS performance, do not remove or damage the wheel sensor or the rotor of wheel sensor.

- When activating power of Main Switch, or when vehicle speed exceeds 10km/h, ABS will execute a self-diagnosis. During this self-diagnosis session, a vibration may be felt on the Brake Lever if you pull it gently, which is a normal phenomenon.
- It is recommended to pay attention therefore in cases of braking in low grip conditions at low speed.(For example braking on garage floor tiles after having ridden on wet roads or similar situations).

In the event of an emergency brake in response to a special road condition, ABS system helps preventing a locked wheel resulting from the sudden braking action, allowing the rider being able to steer the vehicle smoothly. An ABS system controls the braking force automatically to prevent the tire from skidding.

An ABS system will not shorten braking distance in the following conditions: when running on a soft and unlevelled road or a descending slope, the braking distance is even longer than a vehicle without ABS. Therefore models with ABS have the optimal performances on flat road surfaces.

An ABS System comprises an ABS ECU and front and rear tire speed sensors. Using tires not conforming to original specifications may affect the detection of speed sensors and result in abnormal ABS activation.

WARNING

- Using tires not conforming to original size specifications may result in malfunctioning of the ABS system, or even an accident of the rider due to malfunctioned activation of the Anti-lock Braking System. Therefore it is a must that you use tires conforming to KYMCO specifications.
- When ABS activates, you may feel a light vibration on the Brake Lever, which is a normal phenomenon.
- When vehicle speed is below 10 km/h, the ABS system will not activate.
- ABS will not work when power is out or the system malfunctions, and ABS indicator will light up.

Control Functions of Mechanism

TCS (Traction Control System)

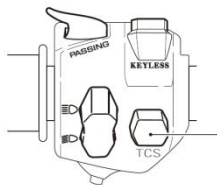
The indicator light will light up in amber color if TCS is on when turn on the main switch. Once the vehicle speed is over 6 km/h, the indicator light will go off automatically. The TCS keeps function at this time.

Following indicator condition is

- Does not light up: TCS is on but not function.
- Flashing in amber light: TCS is on and is functioning.
- Solid amber light: TCS is malfunction. Please have a KYMCO dealer check the vehicle as soon as possible.
- Solid green light: TCS is off.

Introduction of TCS

If rider gives too much throttle or rides on a slippery surface like an ice-covered road or a wet road and etc., it may cause the rear wheel slipping. The traction control system helps the vehicle maintain traction when above situation happens. If sensors detect that the rear wheel is starting to slip (uncontrolled spinning), the TCS assists by regulating engine speed until traction is restored. You may notice changes in engine response or exhaust sound.



TCS switch

⚠ WARNING

- The TCS is not a substitute for riding appropriately for the conditions. The TCS cannot prevent loss of traction or front wheel-slip while rider is entering turn in excessive speed or accelerating hard at a sharp lean angle or braking too hard. As with any vehicle approach surfaces that maybe slippery with caution and avoid especially slippery surfaces.
- Use only the specified tyres. Using different size tyres will result the TCS cannot operate accurately that may cause hazardous situation.

📢 Attention

- The TCS will turn on automatically when main switch restarts.
- Turn the TCS off to free the rear wheel if the vehicle gets stuck in mud, sand, or other soft road surfaces.
- When the vehicle is on the center stand and the TCS is on, do not attempt to wide open the throttle for an extended period of time to avoid the spark plug wetting or cause the indicator light remains on due to the malfunction detected.
- The TCS will lose function and the indicator will light up when the battery malfunction or died.

KEYLESS Wireless Key

In design, KEYLESS is a high-tech electronic main switch that does not require a physical key.

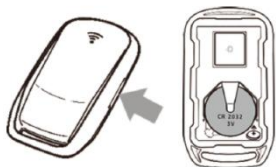
Each vehicle will be equipped with 2 sets of wireless keys, and they should be properly preserved.

If you lose the wireless key, it will be impossible to open the KEYLESS main switch. For this reason, the wireless key should be properly preserved in a cautious manner.

Replacing the wireless key battery

Wireless key battery model: CR2032

Pry it open with an appropriate tool.



Attention

- Ensure that the positive pole of the battery is installed in the correct position.
 - Do not touch the internal circuit and terminal to avoid causing failure.
 - When replacing the battery, do not apply excessive force on the wireless key.
 - If both wireless keys are lost or damaged, please contact your dealer to execute the required inspection or replacement.
- If the power of the wireless key is low, it will affect the sensing distance. In this case, please replace the battery immediately.
 - If the user is implanted with an electronic medical device, please consult the doctor or the device manufacturer to check if the radio waves will affect these devices before each use.
 - Do not expose the wireless key to strong radio waves to avoid impairing its function and performance.
 - Do not touch or cover the metallic parts of the wireless key to avoid impairing its function and performance.
 - Do not store the wireless keys in a damp or high-temperature environment.
 - Precision electronic components are used in the wireless key. Please follow the instructions provided below to prevent potential failure or damage.
 - Do not place or store the wireless key in the storage cabinet, because the wireless key may be damaged due to the vibration of the road surface or the overheating of the cabinet.
 - Do not drop or bend the wireless key or expose it to strong impacts.
 - Do not soak the wireless key in water or other type of liquid.
 - Do not place a heavy object or apply excessive pressure on the wireless key.
 - Do not store the wireless key in an environment subject to direct sunshine, high temperature or high humidity.
 - Do not attempt to grind or modify the wireless key.
 - Be sure to keep the wireless key away from strong magnetic fields and magnetic objects such as key rings, TV sets and computers.

Control Functions of Mechanism

KEYLESS sensing distance

1. Long-range antenna sensing (independent open area): The optimal sensing distance will be 1.5m, and the sensing function will be inactive if the distance is more than 3.5m.
2. Short-range antenna sensing (independent open area): The sensing function will be active when attaching to the short-range sensing symbol.

Attention

- The optimal sensing distance should be set at 150cm. But actual sensing distance may vary depending on the conditions of the environment where the device is located and the power level of the battery.
- When leaving the motorcycle, ensure that the steering rod is securely locked and then turn off the KEYLESS System. In the meantime, be sure to remove and bring away the wireless key.

Short-range sensor

When the wireless key is running out of power such that it cannot be unlocked, you may use the short-range sensing function to unlock the key. At this time, attach the wireless key to the upper side of the storage cabinet (short-range sensing symbol), place the back of the keyless car key near the upper-side circular symbol of the center switch set and press the main switch button. The power will be turned on following 2 short beeps, and this will complete the unlocking action.



short-range sensing symbol

Attention

- Under short-range sensor state, when the keyless car key leaves the short-range sensing location, the system will make 10 beep sounds before turning power off. Press again to turn power on.
- If the power of the wireless key is low, it will affect the long-range sensing distance.
- When replacing the battery, it should be executed properly to avoid damaging the remote control function. In this case, please bring the key to a professional service center for repairs.
- Because the sensing distance is provided for reference only, the power should be started together with the KEYLESS key.

- As radio wave technologies are used for the wireless key, the operating range might be affected by the nearby operating environment. If you store the wireless key in the rear-end trunk or a front-mounting storage cabinet, it will affect the communication efficiency between the wireless key and the motorcycle as to cause ineffective sensing.
- When the wireless key is running out of power, it will affect the sensing range and even lose the long-range detecting or sensing function. At this time, you may use the short-range sensing function by placing the wireless key in the short-range antenna sensing scope of the right-side front-mounting storage cabinet. Next, press the key. After the key emits two rounds of brisk beeping sound, the main switch LED will show a blue light and the unlocking step is completed.
- Be sure to bring along the wireless key with you. Do not place it in the storage cabinet or leave it on the motorcycle.
- When the wireless key enters the operable range, other persons not provided with the wireless key may start the engine within the sensing range and then bring away the motorcycle.
- If the wireless key is not located within the sensing range, the vehicle will become inactive.
- The wireless key will consume the power continuously when moving it away from the sensing range.
- If the KEYLESS main switch is no longer operable, please replace the battery of the wireless key immediately.

Control Functions of Mechanism

KEYLESS operation

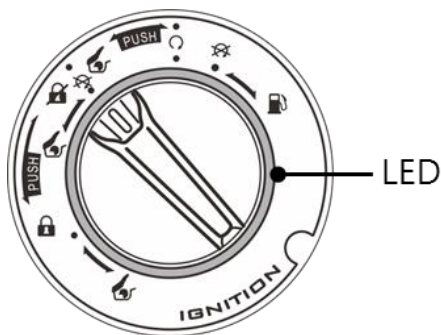
Bring the wireless key and then place it within the sensing range (identity identification)

Starting

Press and hold the KEYLESS key, the main switch will show a blue LED and then emit two rounds of brisk beeping sound. At this time, you will be allowed to turn the main switch.

Closing

Turn the main switch  or turn it to the left  and hold the KEYLESS key. At this time, the blue LED will turn to red and extinguish and then emit one round of long beeping round.



Attention

- If the backlight is not illuminated normally or is extinguished, please send the key to a KYMCO dealer for inspection.
- Do not turn the switch to  during the driving process, otherwise the electrical system will disappear as to cause abnormal hazard in motorcycle control.

Refueling

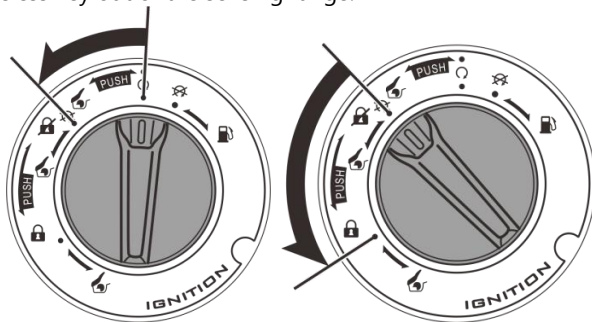
Turn to the  from  and then turn to  rightward and you may open the lid of the refueling tank.



Locking

To stop the vehicle and leave it unattended, please turn the KEYLESS main switch knob to the left  or  from  and then press KEYLESS key. At this time, the main switch LED will turn to red from blue and then extinguish. When hearing one round of long beeping sound, it means the locking step is completed.

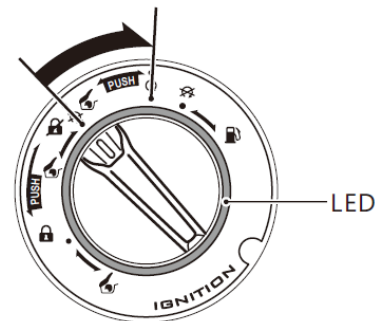
The main switch knob is located at the left-hand side  or . The main switch will be locked automatically after moving the wireless key out of the sensing range.



* The steering rod should be turned left to the end and then the main switch can turn to  when pressing inner.

Unlocking

Press and hold the KEYLESS key, the LED will show a blue light and then emit two rounds of brisk beeping sound. At this time, turn the knob to  and you will be allowed to power up the engine.



Attention

- When locking the steering rod, turn the main switch to  position and then close the KEYLESS System. You will be allowed to leave the vehicle after confirming that the steering rod has been securely locked.
- When parking, do not park the vehicle in a location that will interfere with traffic safety.
- To close and lock the vehicle, be sure to execute such step when the  or the left side  is secured in position. If locking the vehicle in an incorrect position, you will be unable to lock the vehicle which may even lead to theft.
- Before leaving the vehicle, confirm that the main switch LED is extinguished and that the vehicle has been securely locked to avoid theft.

Control Functions of Mechanism

Steering Stem Lock

For theft prevention, lock the steering stem when parking your scooter.

Locking Method:

Under the power-off state, turn the steering stem completely to the left, long-press the “KEYLESS” button for 2 sec, a long beep sound will indicate successful locking.

Unlocking Method:

Long-press the main switch button, the system will make 2 short beep sounds to power on, and this unlocks the vehicle.



Attention

- The system will make 4 short beep twice for unsuccessful lock. Please confirm that the steering rod is completely turned to the left and try locking again.
- The system will make 4 short beep twice for unsuccessful unlocking. Please confirm that the steering rod is completely turned to the left and try unlocking again.
- If the keyless car key is out of power, it needs to be operated through the short-range method.
- The levelness and safety of the parking location needs to be evaluated when locking and parking the vehicle, and lock the hand brake for safety.
- After locking the steering lever, confirm that the steering lever has been securely locked before leaving the vehicle.
- Do not park your scooter at locations where traffic safety may be obstructed.
- The wireless key storage position may affect the KEYLESS System (e.g. in the rear-side pocket or a backpack).

Rear Brake Lever

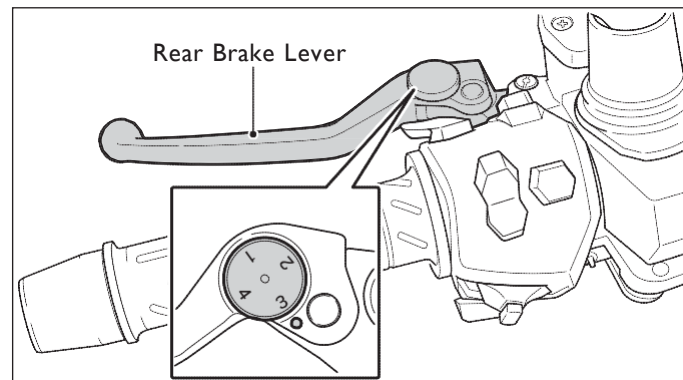
Rear Brake Lever situates on the Left Handlebar; when applying the Rear Brake, hold the Front Brake Lever with left hand and apply a proper force on it.

⚠ WARNING

Improper operation may result in danger.

👁 Attention

Rear Brake Lever is provided with an adjustment knob, allowing adjusting the space between the Rear Brake Lever and the Left handlebar. Please set the knob to the proper position and align with the Alignment Mark on the Rear Brake Lever.



Control Functions of Mechanism

Front Brake Lever

Front Brake Lever situates on the Right Handlebar; when applying the Front Brake, hold the Front Brake Lever with right hand and apply a proper force on it.

WARNING

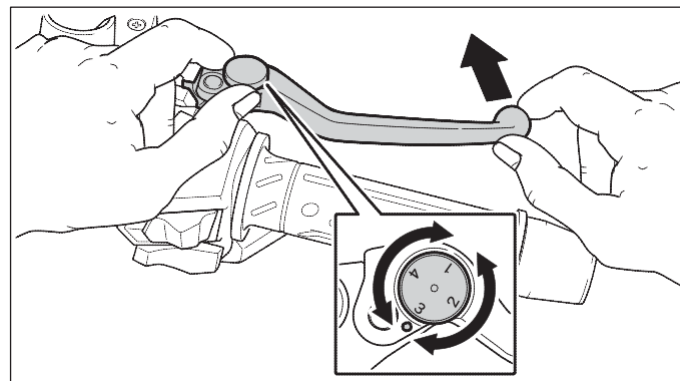
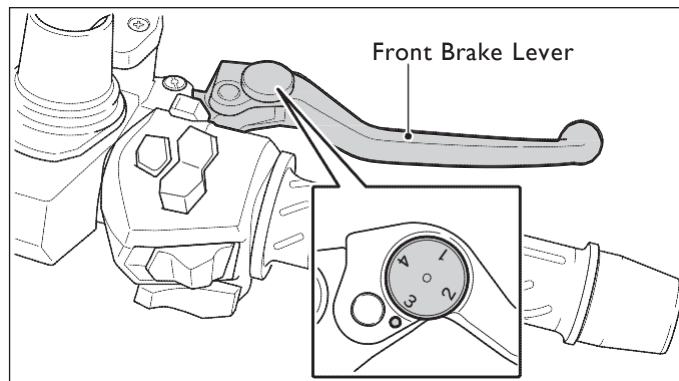
Improper operation may result in danger.

Attention

The Front Brake Lever is provided with an adjustment knob, allowing adjusting of the space between the Front Brake Lever and the throttle grip. Please set the knob to the proper position and align with the Alignment Mark on the Front Brake Lever.

Adjust handle distance

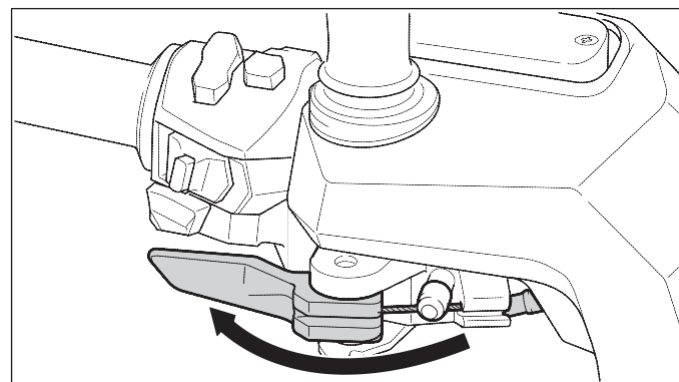
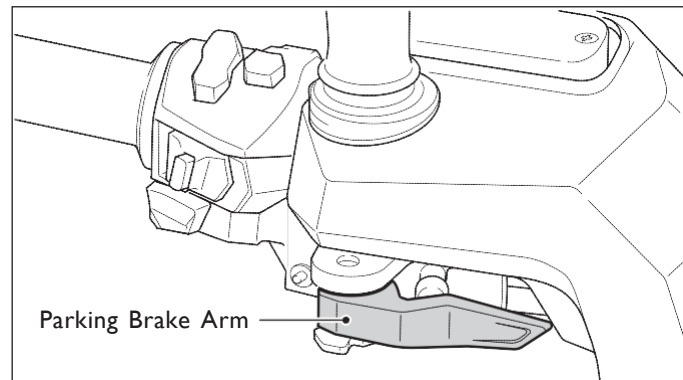
To adjust the distance of the lever from the handlebar grip, push the lever forward and turn the adjuster knob to align the number with the mark on the lever holder. The distance from the grip to the released lever is at its closest at number 4 and the furthest away at number 1.



Parking Brake Arm

This vehicle is provided with a Parking Brake Arm for locking up the rear tire, so as to prevent accident caused by rear tire movement when parking the vehicle on a slope.

Turn Parking Brake Arm to the left and click into lock position. To unlock, just turn Parking Brake Arm back to its original position (on the right).



⚠ WARNING

- Never use the Parking Brake Arm while riding the vehicle, or loss of control of the scooter and an accident may occur. Make sure the vehicle is fully stopped before using this Parking Brake Arm.
- When using the Parking Brake Arm, verify if rear tire is truly stopped from moving.
- Before riding your scooter, verify if the Parking Brake Arm is released, otherwise output power may be affected and the Parking Brake may be damaged.

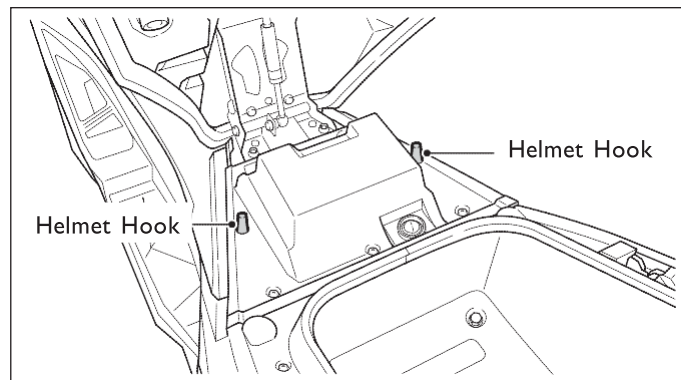
Control Functions of Mechanism

Helmet Hook

A Helmet Hook is provided on the front edge of Seat Pad. Lift up the Seat and put the buckle of the Helmet around the Hook, then close up the Seat Pad.

⚠ WARNING

DO NOT ride your scooter with the helmet attached to the hook. A hooked helmet may hit others or hamper your driving when riding your scooter which, in turn, may hamper your riding safety.



Luggage Box

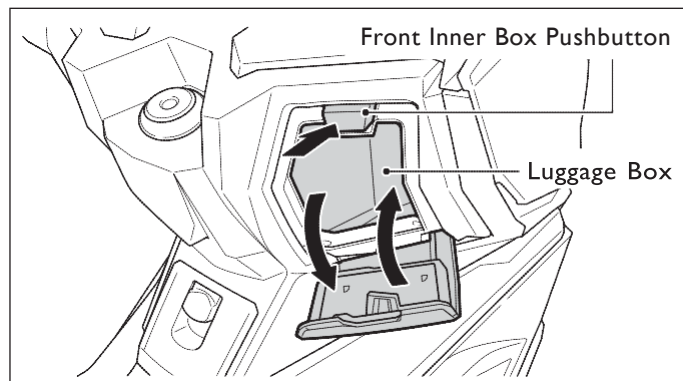
Front Inner Box

Open the Front Inner Box

Press down the Front Inner Box pushbutton and pull the cover downward to open it.

Close up the Front Inner Box

Pushing the cover back to its original position will close it up.

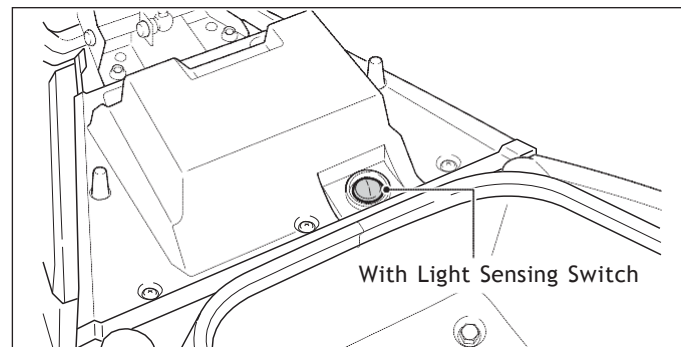
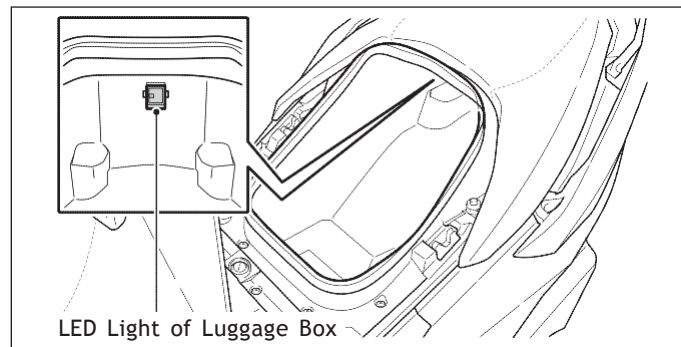


Components inside the Luggage Box

Light (Lighting angle adjustable):

The lamp lights up when Seat Pad is lifted up, goes out when closed.

The Luggage Box Light is provided with light-sensing switch; in case the user forgets to close the Seat Pad or the Seat fails to fully close up, system will cut the power automatically after a set time, preventing any power loss of battery.



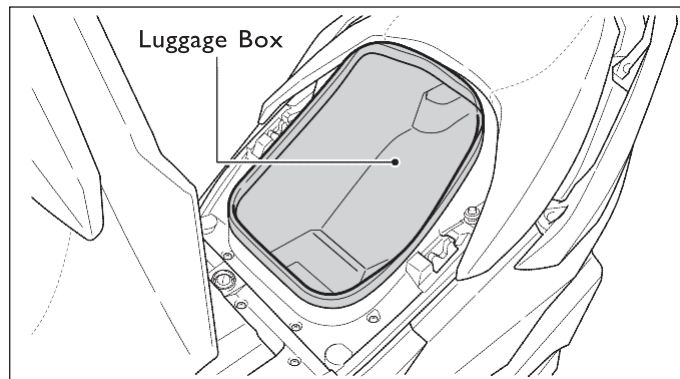
Control Functions of Mechanism

Do Not exceed the following load limits:

Front Inner Box	1.3 kg
Luggage box	10 kg

Attention

- It may be impossible to put a Helmet of different size and shape into the Luggage Box. Please select a Helmet that fits the capacity of the Luggage Box.
- For the purpose of theft prevention, do not put valuables in the Luggage Box. Close the Seat Pad when leaving the scooter.
- Make sure not to leave the KEYLESS Wireless Key in the Luggage Box while closing it.
- To prevent mold generation, do not leave a wet raincoat or clothing in the Luggage Box.
- Empty the Luggage Box before washing the scooter, so that objects do not get wet.
- Due to engine operation and environmental factors, the Luggage Box tends to be warm and humid; do not put fragile, flammable or easy to decay objects in it.

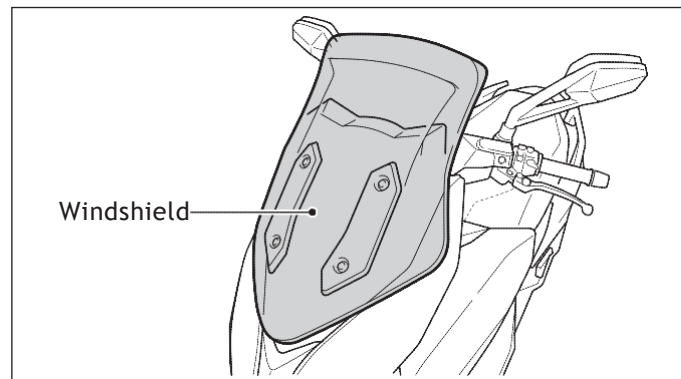


Windshield

Adjusting Windshield Height

Attention

DO NOT wipe with organic solvent (ex gas) on the windshield or scooter.



Control Functions of Mechanism

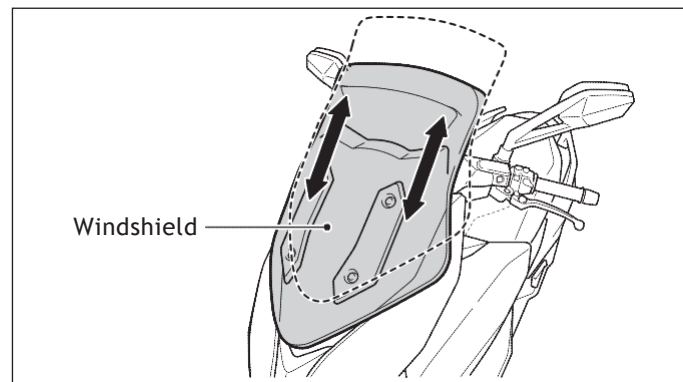
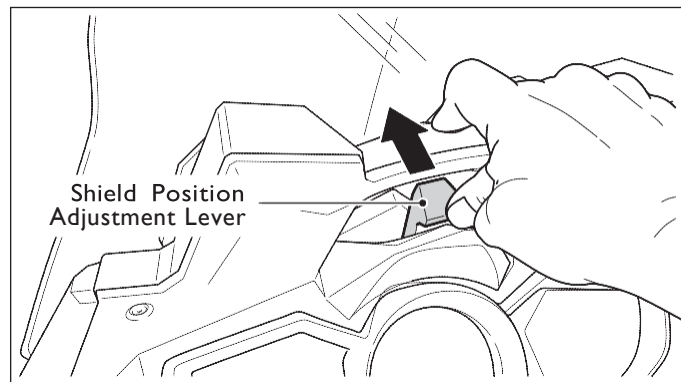
The front wind shield can be adjusted without any tools

Adjustable wind shield:

The wind shield has five different height adjustments that can be selected according to the rider's needs

Adjusting the wind shield height:

Push the wind shield position adjustment lever forward lightly with your right hand (as shown in Fig. 1). Hold the bottom middle position of the wind shield (Fig. 2) and push up or pull down to adjust the wind shield height as required with your left hand. Release and set the wind shield adjustment lever. Check to make sure the wind shield is fixed in position.

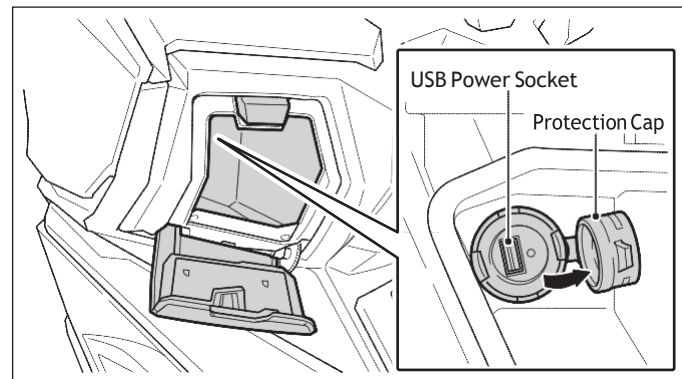


USB Power Socket

This vehicle is provided with a USB Power Socket. You may connect a low power consumption product to the Socket, for charging the product while the engine is running.

⚠ WARNING

- To avoid electrocution or short-circuit, make sure to cover up the protection cap after using the USB Power Socket.
- To prevent any accident from occurring, park your Scooter at a safe location before using the USB Power Socket.



👁 Attention

- SB Power Socket can only be used with a running engine.
- To prevent power depletion of battery, do not charge a product using the USB Power Socket without running the engine.
- To prevent fuse from being blown, do not charge a product with a load exceeding 10W; if overheat occurs during charging, the system will cut off power supply automatically.
- After riding and before leaving the scooter, make sure the product is unplugged and the Protection Cap is properly covered back.

NOTICE

Mobile phone charge only. Use other appliance may cause damage.

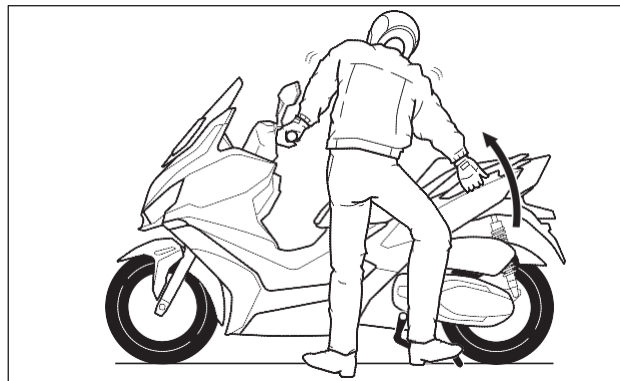
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Control Functions of Mechanism

Main Stand

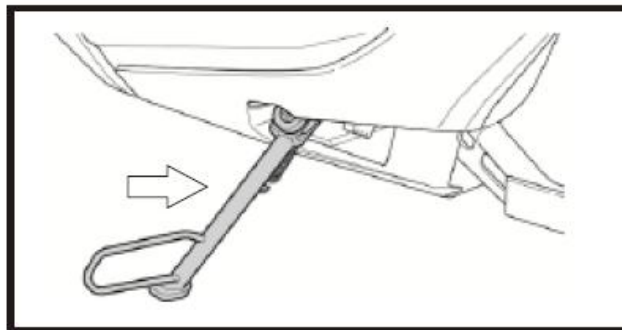
When parking with Main Stand, stop the engine and turn the Main Switch off.

While keeping the scooter perpendicular to the ground, holding the Left Handlebar with left hand and Rear Grip with right hand, thread upon the Main Stand using the right foot and exert force with both right foot and right hand to lift the vehicle up to a standing pose.



WARNING

- Make sure the Main Stand springs up fully before riding the scooter.
- The Main Stand must not come in contact with the ground while riding the scooter, otherwise it may interfere the riding and cause loss of control due to abrasion with the ground.
- Main Stand may fail to spring up to position while running the vehicle if the bracket spring becomes weak. Go to a KYMCO service station for replacement as soon as possible.



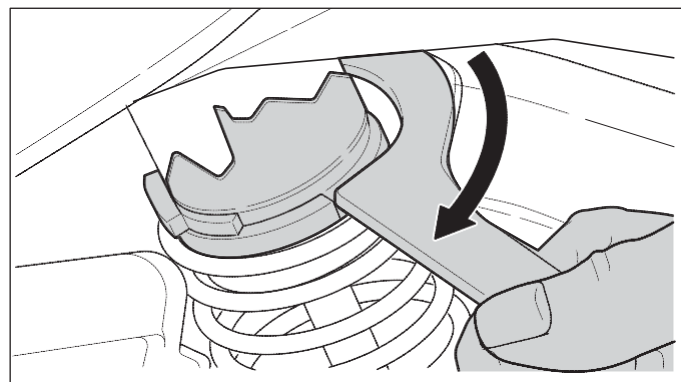
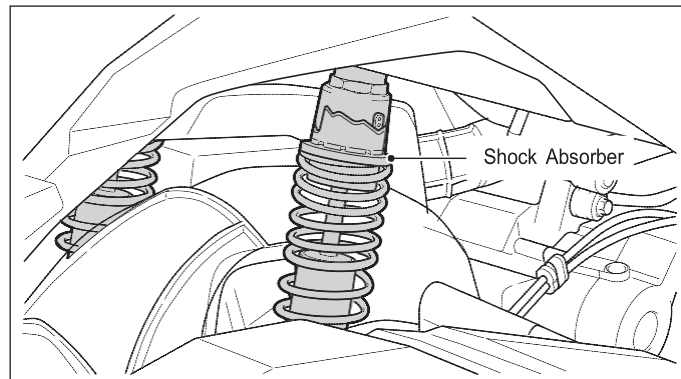
SUSPENSION

Each shock absorber on your scooter has 5 spring preload adjustment positions for different load or riding conditions.

Use a pin spanner to adjust the rear shock spring preload. Position 1 is for light loads and smooth road conditions. Position 3 to 5 increase spring preload for a stiffer rear suspension and can be used when the scooter is heavily loaded. Be certain to adjust both shock absorbers to the same spring preload positions. Standard spring preload position: 3

⚠ WARNING

- Always adjust the shock absorber pre-load position in sequence (1-2-3-4-5 or 5-4-3-2-1). Attempting to adjust directly from 1 to 5 or 5 to 1 may damage the shock absorber.



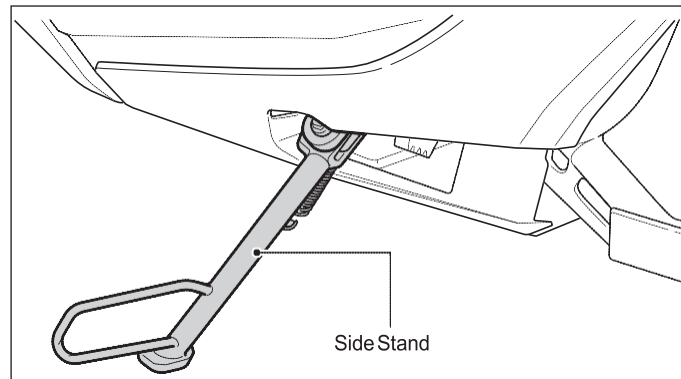
Control Functions of Mechanism

Side Stand

Side Stand situates on the left side of scooter; push the Side Stand down or up with your foot. Engine cannot be started when the Side Stand is pushed down.

⚠ WARNING

- Side Stand Switch is a part of the ignition obstruction circuit; the rider must push the Side Stand up before riding the vehicle. If this function becomes inactive, go to a KYMCO service station for repair.
- Do NOT ride the vehicle if the Side Stand fails to lower down or maintain the pushed-up position; should the Side Stand touch the ground, the rider may lose control of the vehicle.



Control Functions of Mechanism

Check/Replenish the Fuel

Replenish gasoline as soon as possible when the Fuel Indicator on the Dashboard approaches the last segment near E.

Replenish with #95 Unleaded Gasoline as soon as possible.

Using Fuel Tank Cap

1. Open the Fuel Tank Decorative Cover.
2. Unlock the fuel filler cap counterclockwise.
3. Once unlocked, lift the cap from the fuel filler neck.
4. To install the fuel filler cap, clockwise to lock the cap.

⚠ WARNING

- In order to prevent fire risks caused by fuel overflow from the Fuel Inlet, make sure the Fuel Tank Cap is fully locked after refueling.
- DO NOT smoke when replenishing gasoline.
- Stop engine when replenishing gasoline.
- When replenishing the fuel, keep the fuel level below the baseline plate, otherwise the fuel will overflow.
- It is recommended to add Kymco Nozzle Cleaner in the fuel every 10,000km when replenishing the fuel, for cleaning Fuel Injection Nozzle.
- Avoid operating Fuel Pump for prolonged time when the Fuel Tank is empty, which may affect normal service life of Fuel Pump.

Fuel recommendation

Use nonleaded gasoline with a research octane number of 95 or higher to prevent from spark plug and exhaust component damaged.

After refueling, be sure to close the filler cap securely.



Fuel Tank Cap

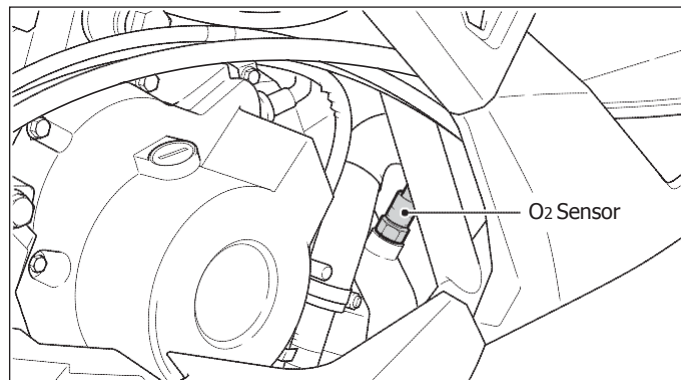
Control Functions of Mechanism

O2 Sensor

This vehicle is provided with O2 Sensor for reducing generation of pollutants in the exhaust gas.

⚠ WARNING

Do not dismantle or replace O2 Sensor by yourself, otherwise the O2 Sensor may deteriorate or lose efficacy.



Muffler and Catalytic Converter

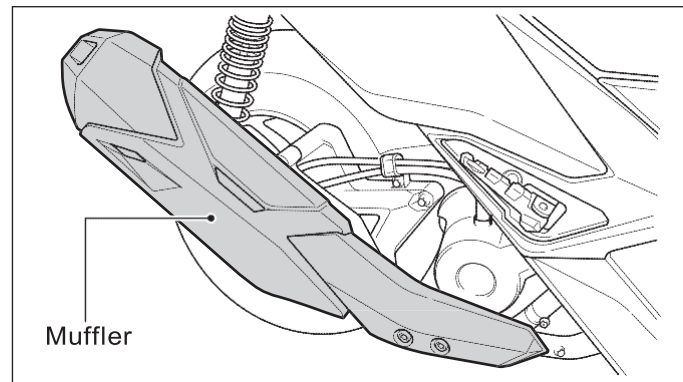
Catalytic Converter is used for reducing generation of pollutants in the exhaust gas.

⚠ WARNING

After using the scooter, the exhaust system becomes extremely hot due to heat from the exhaust gas

To prevent fire or burn

- ◆ Park the scooter properly so that pedestrian or children cannot reach.
- ◆ Do not park the scooter in the vicinity of flammables.
- ◆ Make sure the exhaust system has cooled off before performing any maintenance.
- ◆ Never turn off the main power switch while riding the scooter. Otherwise a great amount of non-burnt gas mixture will enter into muffler and combust there, damaging and burning the Catalytic Converter.
- ◆ Use only unleaded gasoline; leaded gasoline can result in aging and failure of Catalytic Converter.



Exhaust Control System

Complying with EPA Exhaust Emission Standard, the scooter is equipped with following parts in the Exhaust Control System:

- ◆ Electronic Control Unit (ECU)
- ◆ Crankcase Ventilation Valve
- ◆ Catalytic Converter
- ◆ Throttle Valve
- ◆ Various sensors:
Air Intake Pressure Sensor/Throttle Position Sensor/O2 Sensor/Temperature Sensor

5. Proper Riding Method

Starting the Engine

- ◆ Lift up Main Stand before starting the engine.
- ◆ Check oil and gasoline content before starting the engine.

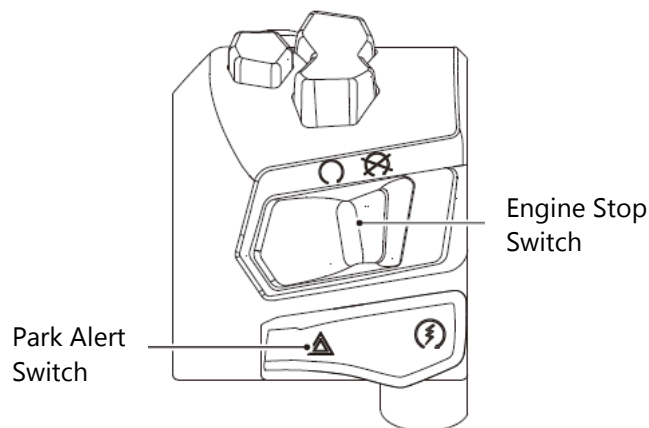
Engine Stop Switch

⊗ : Engine will stop and cannot be started when setting switch to this position. Re-start of engine is only possible after setting the switch to “⌚” position.

⌚ : The Engine can be started when setting the switch to this position.

Attention

- The Main Power is cut off when the Engine Stop Switch is set to the position “⊗”, therefore pulling the Brake
- Lever and pushing the Start Button will not activate the motor.
- The Engine Stop Switch is meant for a temporary engine stop only.
- When the vehicle is parked, make sure that main switch is switched OFF; otherwise battery depletion may occur.



Proper Riding Method

Front and Rear Brake Levers applied

1. Hold-down the Front Brake Lever or Rear Brake Lever and press the Start Button to start the engine.
2. If starting is difficult, release the Start Button and wait for a few seconds before trying again. Each retry shall not exceed 5 seconds, for preserving battery power.

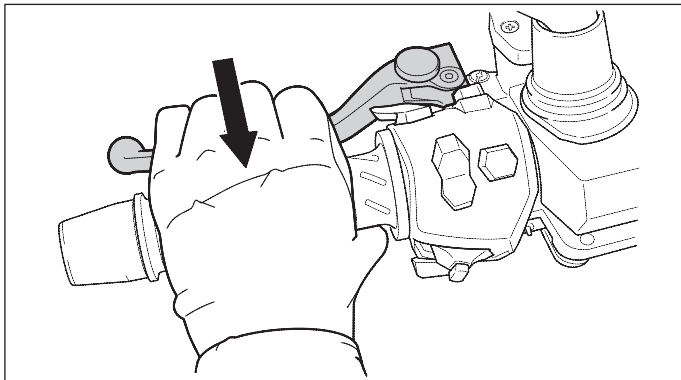
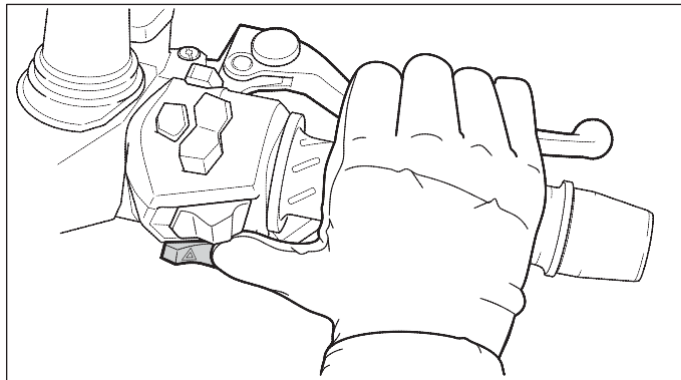
Attention

- Keep finger off from Start Button immediately when engine starts.
- Never push the Start Button when engine is running, or engine parts may get damage.
- When starting the engine, Front/Rear Brake Lever shall be set to braking state, Brake Light shall light up when the power is connected.

Allow a brief warm-up after starting a cold engine (about 1-2 minutes), in mountains and cold areas, prolong the warm-up (about 3-5 minutes), for facilitating engine operation and a trouble-less riding.

⚠ WARNING

- Keep the Rear Brake Lever in braking state before riding started.
- The exhaust contains carbon monoxide which is harmful to health; avoid starting the vehicle in a narrow space or a poorly ventilated location.



Proper Riding Method

Proper Riding Method

Keep the Rear Brake Lever in braking state and push the vehicle forward, the Main Stand will spring up automatically.

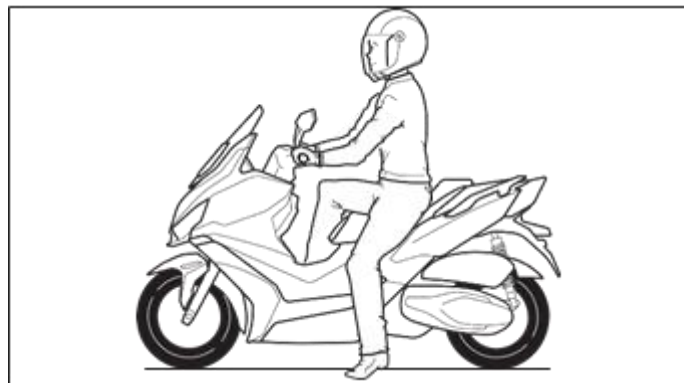
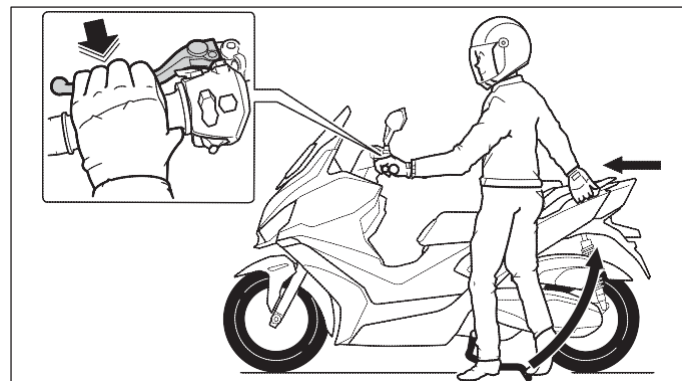
⚠ WARNING

- After starting the engine, do not raise engine rpm while not advancing the vehicle, or danger may occur.

Boarding from the left side, sit upright; keep left foot standing on the ground to prevent toppling; adjust the Back Mirror to a proper angle.

⚠ WARNING

- Before advancing, keep the Rear Brake Lever in braking state. DO NOT raise engine rpm arbitrarily.



Proper Riding Method

Release Front and Rear Brake Levers

⚠ WARNING

- After releasing the brake, do not turn the Throttle Grip arbitrarily, or the vehicle may dash out dangerously.

Turn the Throttle Grip to adjust scooter speed.

Speed is controlled by adjusting the Throttle Grip. Turn Speed increases.

Increase fuel (throttle) slowly

When taking off or riding on an up-slope, slowly turn the Throttle Grip to increase horsepower.

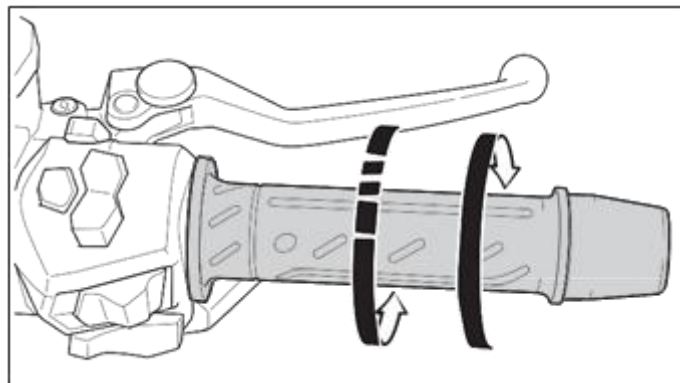
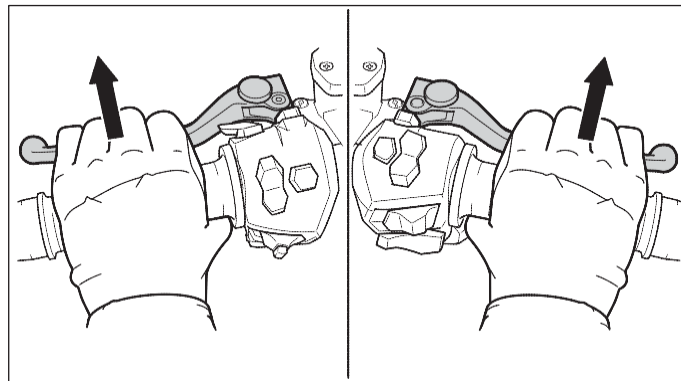
Return to original position Speed decreases.

Be agile while returning the Throttle Grip.

👁 Attention

For prolonging engine service life, do not speed up suddenly when the vehicle is still cold.

Do not turn the Throttle Grip rapidly, or the vehicle may dash out.



Proper Riding

Before taking off, switch on the winker, check traffic conditions both directions, slowly turn the Throttle Grip to start.

Running-in a new engine

- ◆ Run-in Period of a new engine is 300km; keep speed under 80 km/h in this period.
- ◆ Avoid speeding-up rapidly.

WARNING

- High-speed riding in the run-in period may result in worn engine parts.

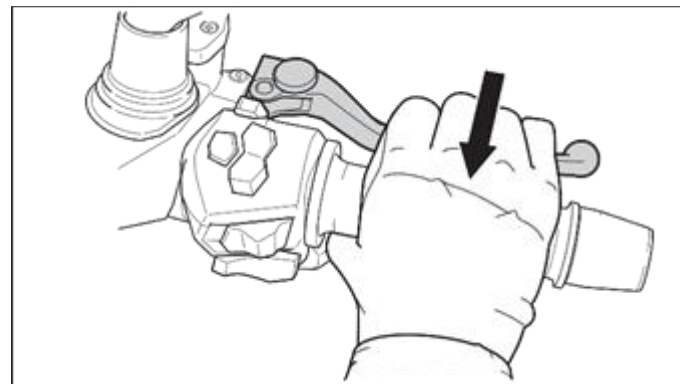
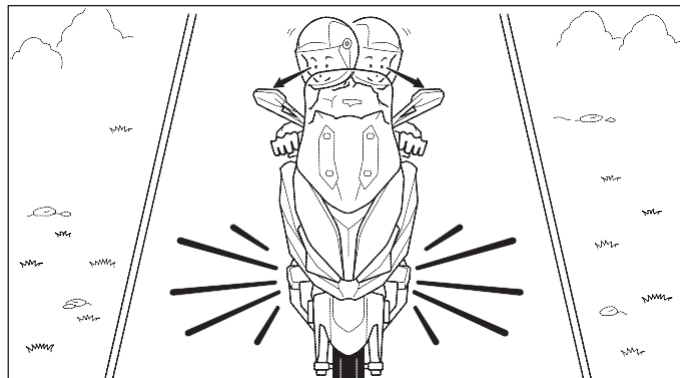
Brakes

Front Brake

1. Before using the brake, release Throttle Grip first to a full close.
2. Grip the front brake levers at the same time and exert force gradually to activate the brake.

WARNING

- Braking on a wet or sandy road requires a longer effective braking distance and is more difficult.
- Slow down while running on mountain roads; it will be more difficult to brake while running down-slope, more dangerous as well.



Proper Riding Method

Rear Brake

1. Before using the brake, release Throttle Grip first to a full close.
2. Grip the rear brake levers at the same time and exert force gradually to activate the brake.

⚠ WARNING

- Braking on a wet or sandy road requires a longer effective braking distance and is more difficult.
- Slow down while running on mountain roads; it will be more difficult to brake while running down-slope, more dangerous as well.

Do not brake or turn abruptly.

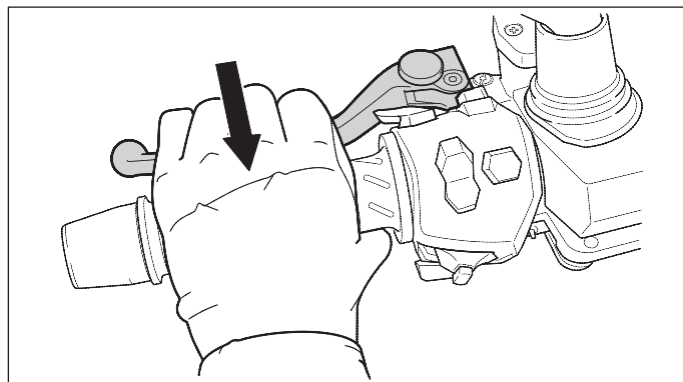
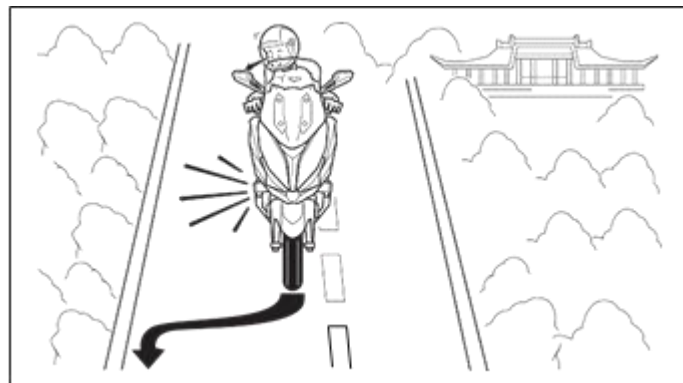
Abrupt braking and turning are the causes for the extremely dangerous side skidding or tumbling.

⚠ WARNING

- Avoid forceful or emergency braking especially when the vehicle is tilting to one side, or a side skidding or tumbling may occur.

Take extra cautions when riding in rainy days

Road surfaces in rainy days are different from in fine days; braking distance will be longer, you should reduce your speed and take advanced actions for braking.



Proper Riding Method

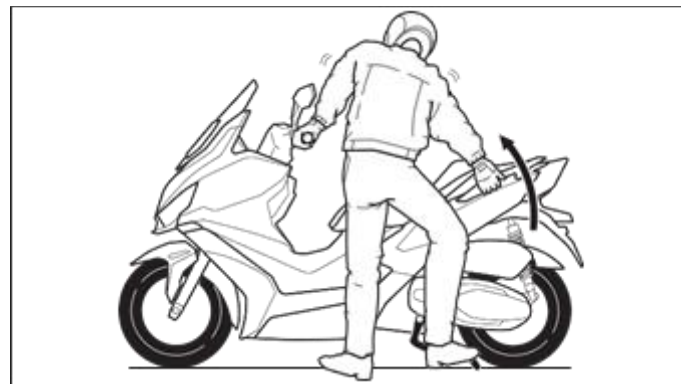
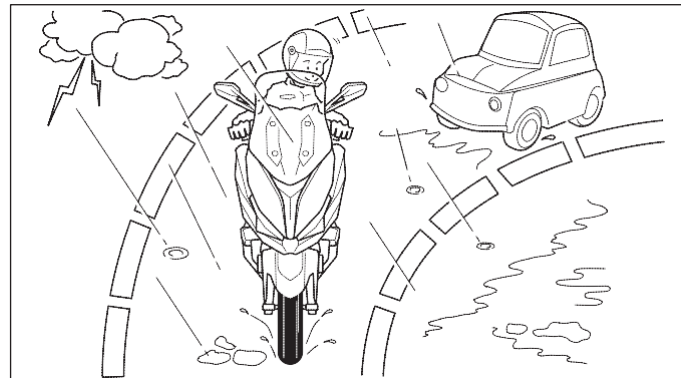
When running down-slope, return Throttle Grip to closed position and apply brake intermittently to slow down the speed.

⚠ WARNING

- Wet road surfaces as well as railroad crossover, light rail track, manhole cover, and steel plates covering the construction sections are very slippery; slow down and take extra caution when passing them.

Parking the Vehicle

- ◆ Standing on the left side on a flat ground, the rider shall brace the Main Stand up.
- ◆ Brace the Main Stand up on a flat ground not impeding the traffic.
- ◆ Bracing up the Main Stand on an unlevel ground may result in tumbling of vehicle.
- ◆ Hold the Handlebar with left hand and keep it straight; while treading down the Main Stand with right foot, grasp the Left Rear Grip beside the Seat Pad with right hand and pull upwards forcefully.



Proper Riding Method

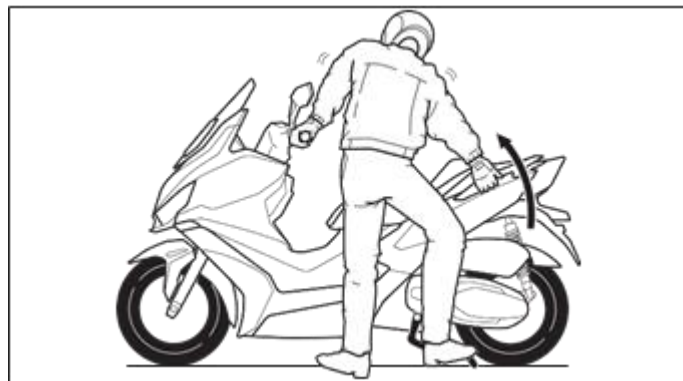
- ◆ For the purpose of theft prevention, lock up the Steering Stem and switch off the main switch when parking the vehicle.

A tumbled vehicle

To restart a tumbled vehicle with engine stopped, you need to turn the Main Switch off and on again before restarting.

⚠ WARNING

- To prevent potential fire hazard caused by overflowed gasoline of tumbled vehicle, the engine will be stopped automatically when the vehicle tilts more than 65°.



Checks before Riding

Keep a good habit to perform checks before riding.

For keeping your vehicle in a safe and effective operating condition, perform regular checks, adjustments and lubricating maintenance according to the Maintenance Program.

Exhaust Control System can reduce generation of pollutants in the exhaust gas of your scooter. Please perform maintenance according to specified mileage or schedule, for ensuring compliance with exhaust emission standards

⚠ WARNING

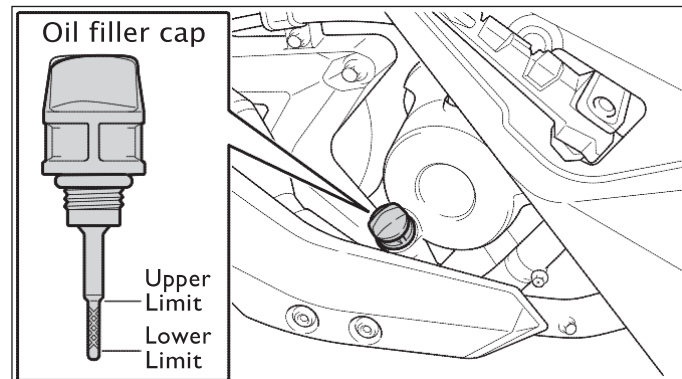
- Please consult a KYMCO dealer if you are not familiar with scooter check-up and maintenance.
- Injury or electrocution may occur if anybody part or clothing touches a running engine. Please stop the engine while performing scooter maintenance.
- For preventing burning hazard after riding a vehicle, touch its engine, muffler, brake disc, brake caliber or brake pad only after it has cooled down.
- When performing maintenance, never run the engine in an enclosed space; there is a risk of carbon monoxide intoxication due to exhaust emission.
- To avoid damaging the scooter, never carry out any maintenance without receiving a professional training or lacking of a special tool.

Engine Oil and Oil Filter

Before riding the scooter, check engine oil for compliance with level requirement or any leakage. Engine Oil and Oil Filter shall be replaced regularly according to maintenance and lubrication schedule.

Check/Replenish Engine Oil

1. Park the scooter on flat ground and brace up the Main Stand. Activate Main Switch and start the engine, idle it for about 3 minutes without using Throttle Grip, then stop the engine. Allow resting for another minute.
2. Pull out Oil Level Guide and wipe it clean, insert the Oil Level Guide without screwing it in.
3. Check oil level. When the level approaches lower limit, replenish oil to a middle level between the upper and lower limits.



Proper Riding Method

Attention

- Engine and Muffler are extremely hot. Take special care to prevent burn while checking oil level.
- A slanted vehicle may lead to a faulty verification of oil level.
- If oil is checked or replaced immediately after stopping the engine, be specially careful not to get burnt.

Recommended Oil Specification

Specification:

SAE: 5W/50 MA

API: SL Class or better

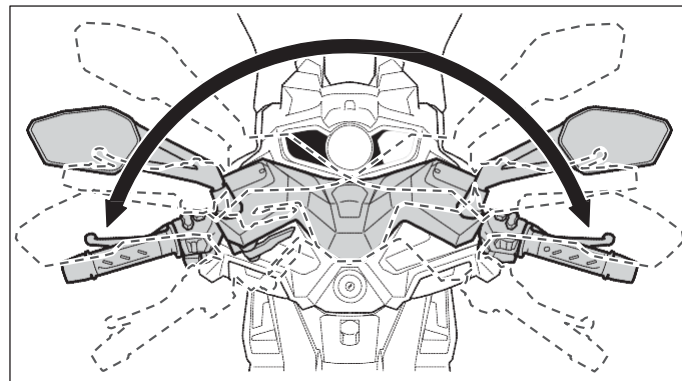
First oil replacement: 1,000 km. Subsequent oil replacement Every 5000 km.

WARNING

- There are many inferior oils in the market which may cause engine failure if miss-used by the consumer.
- To ensure oil replacement of your beloved vehicle with recommended specifications, please go to the dealer where you purchased your vehicle from.

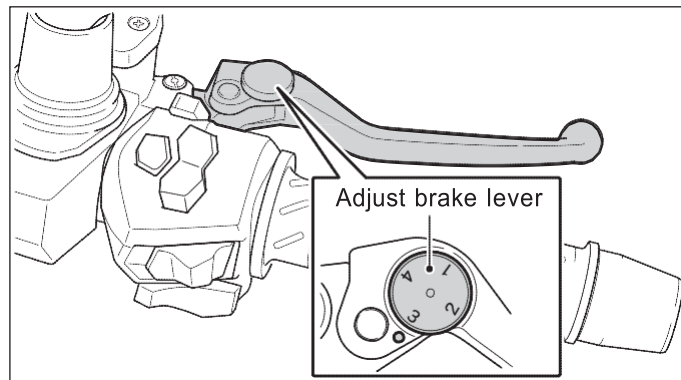
Check Steering Stem

- ◆ Check for any slackening by swaying it up and down, forward and back, and left and right.
- ◆ Check if Handlebar is too tight.
- ◆ Check the Handlebar for any colliding.
- ◆ When finding any anomaly, go to a KYMCO dealer or service station for repair.



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.



Proper Riding Method

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.

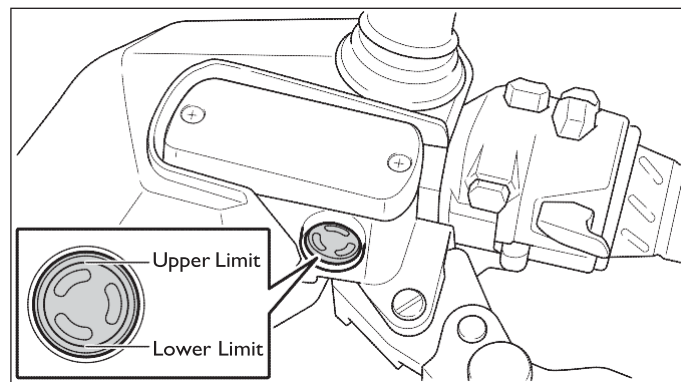
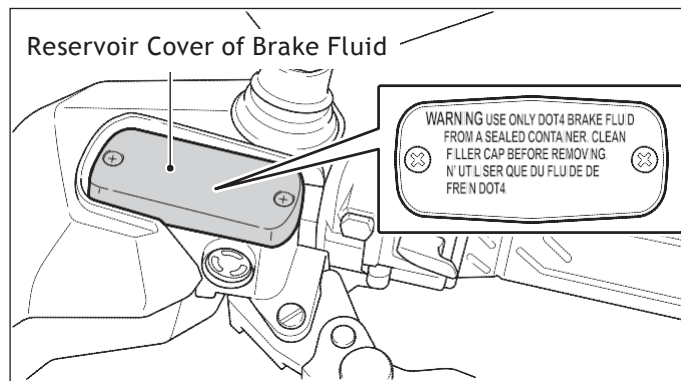
Viewing Window of Front Brake Fluid

⚠ WARNING

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

Replenishing Front Brake Fluid

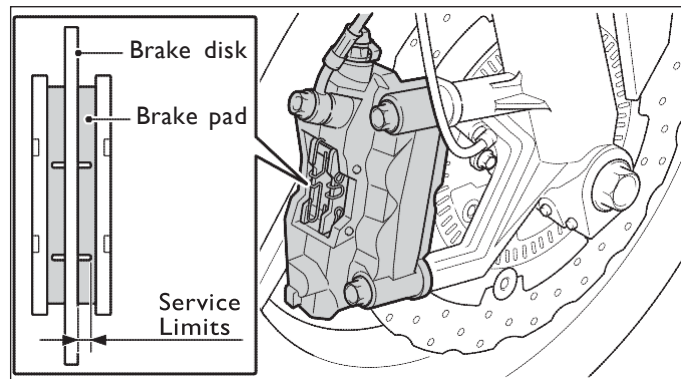
1. Straighten the Handlebar, remove 2 fixing screws of Reservoir and remove Reservoir Cover.
2. Replenish Reservoir with recommended DOT-4 Brake Fluid to the Upper Scale. Install Reservoir Cover and tighten 2 fixing screws.
3. Replace Brake Fluid every 10000km or 1 year.



Check Front Brake Lining

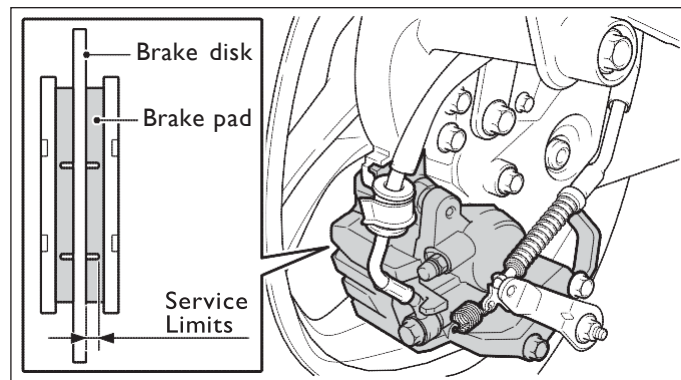
Check Brake Lining Limit

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

**Check Rear Brake Lining**

Check Brake Lining Limit

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



Proper Riding Method

Check Tires

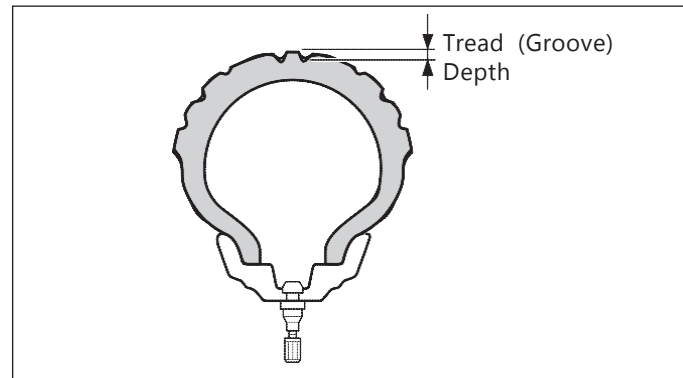
- ◆ Check grip between tire and ground and a normal tire pressure. If the tire pressure is low, inflate to the normal level.
- ◆ In case of a gripping anomaly, check tire pressure for normal reading using a pressure gauge.
- ◆ Check the tire grooves for any metal or pebble chip; remove it, if any, before riding.
- ◆ Replace the tire if there is a fracture or the limit of the groove depth is reached. (See arrow indication in the drawing.)

Measure the groove depth at the center of the tread pattern. Take measurements at several points since uneven wear may occur.

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.

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 reduce friction and the tire will become more prone to be punctured; it also affects safety of operation.



Pressure measurements of cool tire:

With 1 rider

Front Tire 2.0 kgf/cm² Rear Tire 2.25 kgf/cm²

With 2 persons

Front Tire 2.0 kgf/cm² Rear Tire 2.25 kgf/cm²

Service Limits:

Front Tire 1.6 mm

Rear Tire 2.0 mm

Tire Specifications:

Front Tire Specifications

120/70-R15

Rear Tire Specifications

150/70-R14

Check Brake Light

- ◆ Turn 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.**Attention**

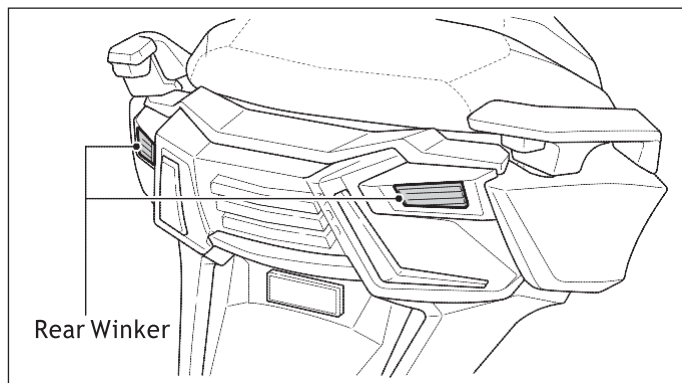
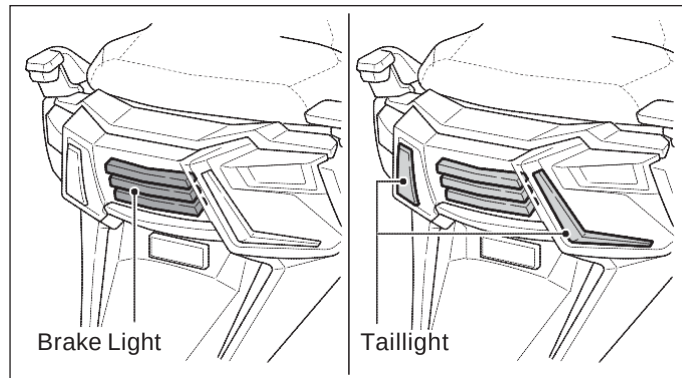
Turn Main Switch to “ ” position but Engine Stop Switch to “ ” position.

Check the Tail Light

- ◆ Turn the Main Switch to “ ” position.
- ◆ Check if the Tail Light goes on.
- ◆ Check the Tail Light Lens for stains or fractures.

Check the Winkers

- ◆ Turn the Main Switch to “ ” position.
- ◆ Operate the Winker Switch to verify if each Winker works.
- ◆ Check the Winker lens for stain or fracture.



Proper Riding Method

Check the Winkers

- ◆ Turn the Main Switch to “” position.
- ◆ Operate the Winker Switch to verify if each Winker works.
- ◆ Check the Winker lens for stain or fracture.

Check Front/Rear Cushion

Exert load onto Handlebar and Seat Pad and shake the vehicle up and down, check if cushions act normally.

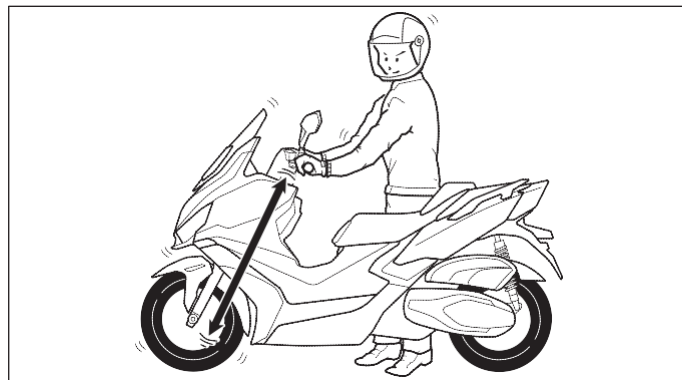
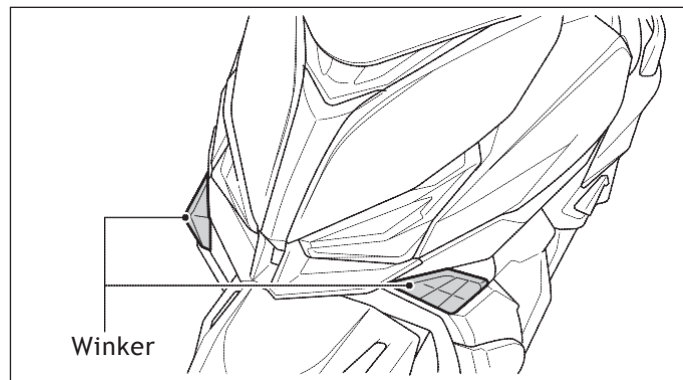
- ◆ Check if Head Light, Tail Light or Winker goes on normally.
Start engine and turn on switches, check if Head Light, Tail Light or Winker goes on normally, and check for any stain or fracture on the light lens.
- ◆ Check Dashboard for normal display.
- ◆ Check the Horn for working normally.

Turn Main Switch to “” position and press Horn Button.

Check Back Mirror for proper angle.

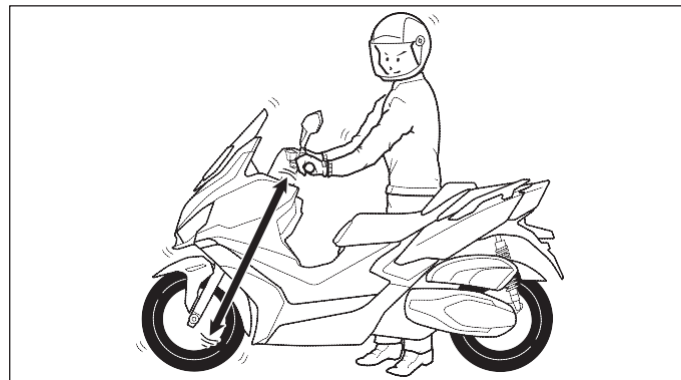
Sit yourself on Seat Pad and check the rearview of the mirror; also check for any damage or stain.

Considering actual riding safety, a torque is specified by the statutory regulation as of 1.02-1.428 Kgf-m.



Therefore when fixing the Back Mirror onto the vehicle, it shall not be totally rigid (either exceptionally loose).

- ◆ Check License Plate for any stain or damage.
Check License Plate for any stain or damage; secure it tightly.
- ◆ Check for normal exhaust gas.
Check Muffler for slackening or noise.
- ◆ Others, check if previous anomalies still existed.



Side Stand

In addition to parking the vehicle, the Side Stand provide an additional safety mechanism: when it is lowered down, the ignition power will be cut off automatically.

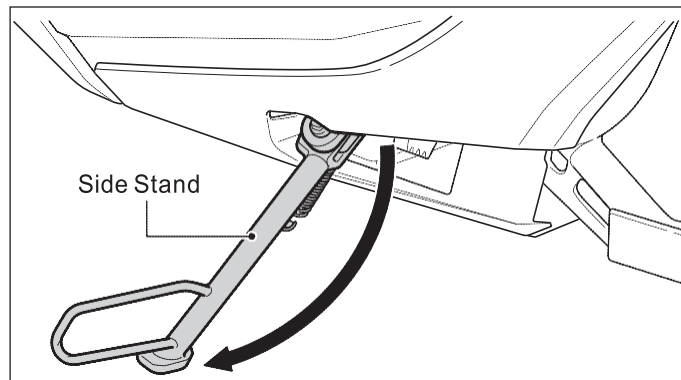
<Checking Method>

Check the Automatic Engine-Stop Function of Side Stand.

1. Brace up Main Stand on flat ground.
2. Retrieve Side Stand to UP position and start the engine.
3. Kick Side Stand to DOWN position and engine shall stop running automatically.

Attention

If any problem occurs when operating Side Stand, go to a KYMCO dealer for checking up.



Simplified Maintenance and Repair Regular Checks

6. Simplified Maintenance and Repair Regular Checks

- ◆ To ensure comfortable riding, regularly checking of your vehicle is necessary. Please go to a KYMCO dealer or service station for after sales service and maintenance.
- ◆ Refer to User Manual for Check Schedule and Check Items.
- ◆ Regular check is also required when scooter is left idle for a long period of time.

Initial Check

Please perform the initial check of a new vehicle within 1 month from the date of purchase or at the mileage of 300km.

Precautions

If a cleaning, adjustment, or replacement is necessary based on the check result, please carry it out as required.

Attention

Take safety precautions while performing maintenance

- Brace the vehicle with its Main Stand on a level location.
- Operate with proper tools.
- Carry out preparations with the engine stopped.
- Engine body and muffler are extremely hot after engine stops, take care not to be burnt.

Simplified Maintenance and Repair Regular Checks

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 legend:

I: INSPECT AND CLEAN, ADJUST, LUBRICATE OR REPLACE IF NECESSARY

C: CLEANR: REPLACEA: ADJUSTL: LUBRICATED: DIAGNOSE

The maintenance schedule on the following two pages specifies the maintenance required to keep your XCTING VS 400i 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.

Maintenance schedule notes:

1. At higher odometer readings, repeat at the frequency interval established here.
2. Service more frequently if the scooter is ridden in unusually wet or dusty areas.
3. Service more frequently when riding in rain or at full throttle.
4. Inspect every 12,000 mi (20,000 km) after replacement.
5. Replace every 1 year, or every 6,000mi (10,000km), whichever comes first. Replacement requires mechanical skill.
6. Replace every 2 years, or at the indicated odometer interval, whichever comes first. Replacement requires mechanical skill.
7. Replace every 2 years. Replacement requires mechanical skill.

Simplified Maintenance and Repair Regular Checks

FREQUENCY ITEM		WHICEVER COMES FIRST	→	ODOMETER READING								
			X 1000km	1	5	10	15	20	25	30	35	40
			X 1000mi	0.6	3	6	9	12	15	18	22	24
		Note	Month	1	6	12	18	24	30	36	42	46
*	AIR CLEANER	Note2			R	R	R	R	R	R	R	R
*	V-BELT CASE AIR FILTER ELEMENT				C	C	C	C	C	C	C	C
	SPARK PLUGS				I	R	I	R	I	R	I	R
*	THROTTLE OPERATION				I	I	I	I	I	I	I	I
*	VALVE CLEARANCE				I	A	I	A	I	A	I	A
*	FUEL LINE					I		I		I		I
	CRANKCASE BREATHER	Note3		C	C	C	C	C	C	C	C	C
*	ENGINE OIL			R	R	R	R	R	R	R	R	R
*	ENGINE OIL SCREEN				C	R	C	R	C	R	C	R
*	ENGINE OIL FILTER			R	R	R	R	R	R	R	R	R
*	ENGINE IDLE SPEED					D		D		D		D
*	TRANSMISSION FLUID	Note5		R		R		R		R		R
*	DRIVE BELT	Note4			I	I	I	R	I	I	I	R

Simplified Maintenance and Repair Regular Checks

FREQUENCY ITEM		WHICEVER COMES FIRST	→	ODOMETER READING								
			X 1000km	1	5	10	15	20	25	30	35	40
			X 1000mi	0.6	3	6	9	12	15	18	22	24
		Note	Month	1	6	12	18	24	30	36	42	46
**	CLUTCH SHOE WEAR					I		I		I		I
	BRAKE FLUID	Note7			I	R	I	R	I	R	I	R
	BRAKE PAD WEAR				I	I	I	I	I	I	I	I
	BRAKE SYSTEM				I	I	I	I	I	I	I	I
*	BRAKE LIGHT SWITCH				I	I	I	I	I	I	I	I
**	STEERING BEARINGS				I	I	I	I	I	I	I	I
*	HEADLIGHT AIM				I	I	I	I	I	I	I	I
*	NUTS , BOLTS , FASTENERS				I	I	I	I	I	I	I	I
**	WHEELS / TIRES				I	I	I	I	I	I	I	I
**	COOLANT	Note6			I	R	I	R	I	R	I	R
**	INJECTOR				D	C	D	C	D	C	D	C

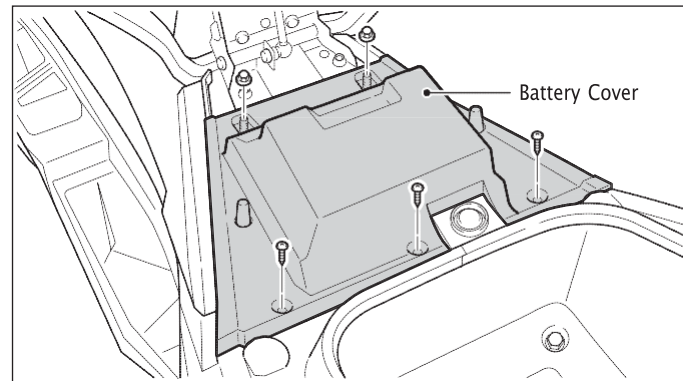
Simplified Maintenance and Repair Regular Checks

Check Battery

This vehicle uses maintenance-free battery. No battery fluid replenishment is required. Check battery voltage:

Battery voltage shall exceed 12V when checked using a voltmeter. Remove battery and fully recharge it if voltage is too low.

Replacement – Removal and Installation of battery cover



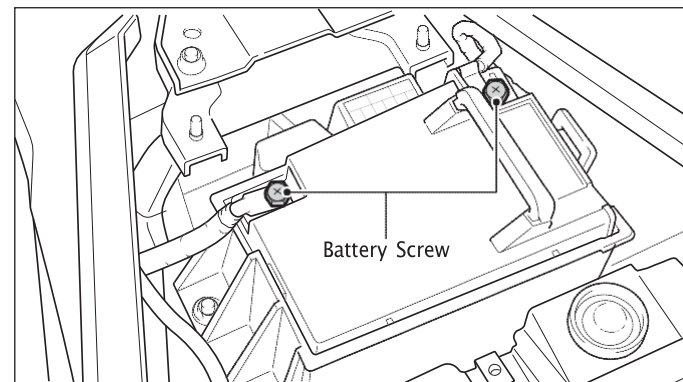
Remove Battery

1. Loosen and remove the battery screws.
2. Release the battery box latch.
3. Draw out the battery box.
4. Remove the battery.

Reinstall battery in a reverse sequence.

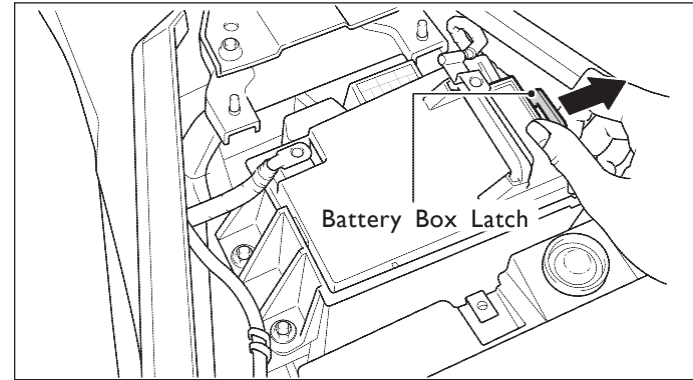
Attention

- The Battery tends to self-discharge and become weak when the vehicle is left idle for a long time. Remove the Battery from the vehicle and fully re-charge it; then store it in a cool and well ventilated place.



Simplified Maintenance and Repair Regular Checks

- Remove the negative cord from the battery if the vehicle is expected to idle for a long time.
- A weakened battery voltage is displayed on the Dash- board; you will need to remove the battery and fully recharge it, or go to a KYMCO service station for service.
- If battery is stored for more than 2 months, it shall be checked monthly and re-charged if necessary.
- When re-using a stored battery, fully recharge it before installing it.

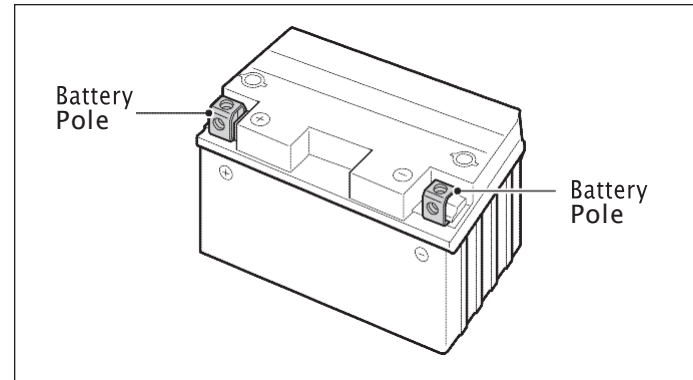


Cleaning Battery Poles

- ◆ For cleaning battery poles, remove a battery fixing screw first.
- ◆ If battery pole is corroded, remove the battery for cleaning.
- ◆ After cleaning, apply a thin layer of grease or Vaseline on battery poles before installing battery

Attention

- Keep away from naked fire when removing/installing a battery.
- For removal, turn Main Switch to OFF position first. Followed by removing the negative (-) wire, then the positive (+) wire. Connect the positive wire first when installing, then the negative.
- Fully tight a slackened nut of battery poles.



Simplified Maintenance and Repair Regular Checks

Precautions on using batteries:

1. Electrolyte in the battery contains sulfuric acid, therefore is toxic and dangerous; severe burn may occur on negligence; avoid getting in contact with skin, eye or clothing. Wear goggles when working in the vicinity of battery. In the event of following conditions, take first aid measures as required:
 - ◆ Skin contact: Rinse with plenty amount of clean water.
 - ◆ Ingestion: Drink large amount of water or milk and seek medical care immediately.
 - ◆ Eye contact: Rinse with clean water for 15 minutes and seek medical care immediately.
2. Battery will generate explosive hydrogen, therefore shall be kept away from any fire source (e.g. spark, flame or lit cigarette). Provide with sufficient ventilation if charged in an enclosed room.
3. Store batteries in a location where children cannot access.
4. Battery situates below the Front Windshield. Remove Windshield and Dashboard Front cover will reveal the battery. For recharging the battery: When battery power is about to deplete, immediately go to a KYMCO dealer for recharge. Keep in mind that the more option devices installed on the scooter, the faster the battery power depletes.

- ◆ Turn Main Switch off, check for blown Fuse.
- ◆ Only replace with a fuse of specified capacity.
- ◆ Identify the cause of a blown fuse before replacing it.

Fuse Specification:

FUSE A :	15 A	(WINKER , FR / RR STOP , HORN , METER , STARTER , POSITION , PHONE)
FUSE B :	15 A	(IGITION , IGN , COIL , FUEL PUMP , ANGLE DETECTOR SENSOR , FAN MOTOR)
FUSE C :	30 A	(CHARGING)
FUSE D :	25 A	(ABS MOTOR)
FUSE E :	5 A	(MAGNET VALVE CONTROLLER , CLOCK ,)
FUSE F :	10 A	(ABS ECU)
FUSE H :	5 A	(HAZARD , MAGNET VALVE CONTROLLER)
FUSE I :	5 A	(LEARN , INSERT THE FUSE WHEN LEARNING)

Fuse Replacement

Fuse situates above the battery. Remove Battery Cover to access Fuse.

Simplified Maintenance and Repair Regular Checks

Attention

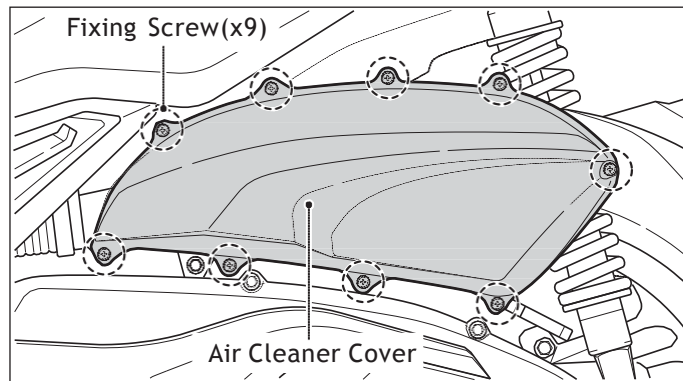
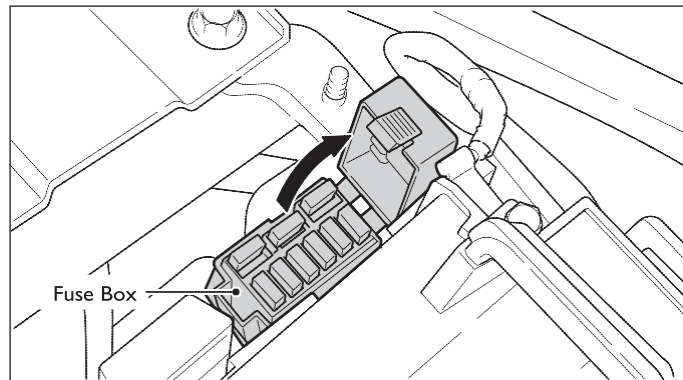
- Only replace electrical devices (lights, meters) with ones of specified ratings.
- If using an inadequate fuse, it may be blown easily or battery loading may become imbalance.
- Avoid frontal strong water jet when cleaning the scooter.

Air Cleaner Element

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

Replace Air Cleaner Element

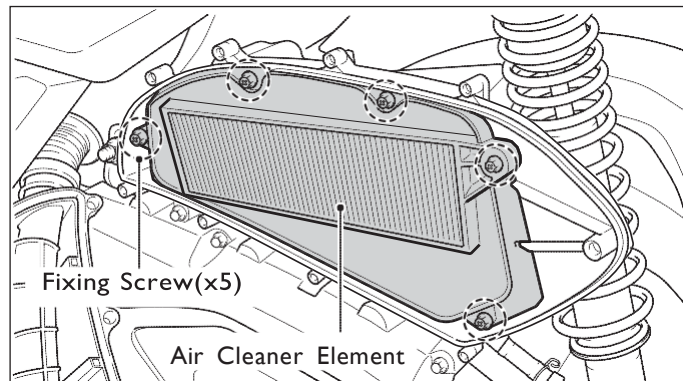
1. Remove outer covers of scooter.
2. Remove Air Cleaner Cover.
3. Loosen Air Cleaner Cover Fixing Screw and take out Air Cleaner Element.
4. Take out Air Cleaner Element
5. Replace a new Air Cleaner Element



Simplified Maintenance and Repair Regular Checks

Precautions on replacing Cleaner Element:

- ◆ Make sure the Air Cleaner Element is positioned correctly in the case.
 - ◆ Do not start engine when Air Cleaner Element is not installed, or dirty air may enter the engine and cause abnormal wear.
 - ◆ Do not wet the Air Cleaner Element when cleaning the vehicle, or engine start may become difficult.
1. Install Air Cleaner Cover and tighten Fixing Screw.
 2. Reinstall outer covers of scooter.



Simplified Maintenance and Repair Regular Checks

Change Oil

Oil Change Period

First oil change when running 1,000km; afterwards every 5000km. In order to maintain optimal engine performance, check oil level every 5,000km. Replenish to standard level in case of shortage.

Oil Capacity:

Dismantle: 1.5L (full capacity)

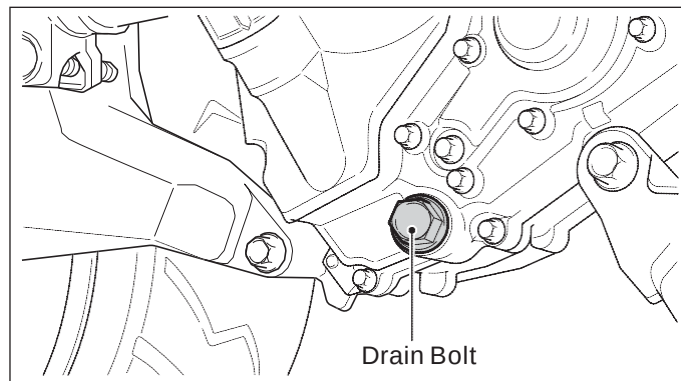
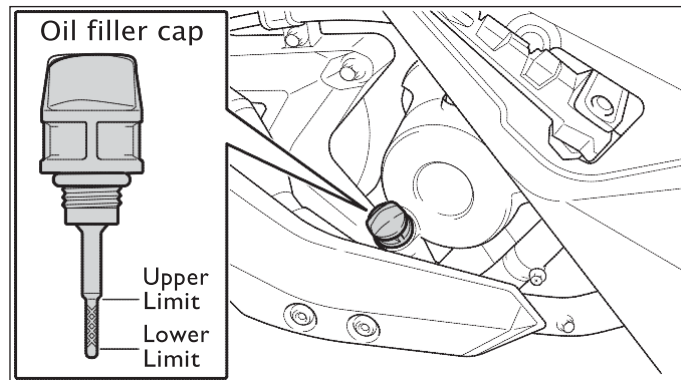
Change oil: 1.3L

Attention

- If vehicle is used rarely and 5000 km is not reached after using for 1 year, it is suggested that oil shall still be changed since it may deteriorate along with time and cause damage to the engine.
- The annual checks must be performed every year.
- To avoid using poor quality oil, please go to a KYMCO dealer for oil change.

Oil Change Period

1. Remove Oil Level Guide.
 - Remove Drain Bolt and drain all the oil.
 - Warming up the engine before changing oil facilitates oil draining.



Simplified Maintenance and Repair Regular Checks

2. Clean Oil Screen and re-install it. Tighten Drain Bolt after wiping it clean.
3. Fill in new oil.
4. Fully tighten the Oil Level Guide.
5. After warming up the engine, stop the engine and wait for 1 minute; then verify the oil level with the Oil Level Guide.

Attention

- ◆ 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.

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.

Simplified Maintenance and Repair Regular Checks

Engine oil

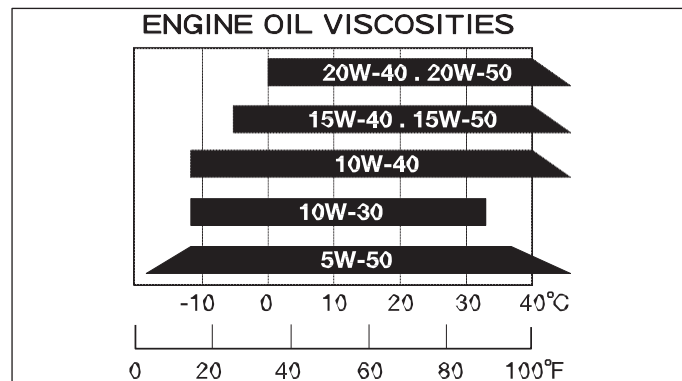
Engine oil recommendation

Use a premium quality 4-stroke engine oil to ensure longer service life of your scooter. Only use oils that have a SJ rating above per the API service classification.

Engine oil viscosity: SAE 5W-50

If these viscosities are not available, select an alternative engine oil according to the chart shown below.

Engine oil capacity: 1.5 L



Engine oil level inspection

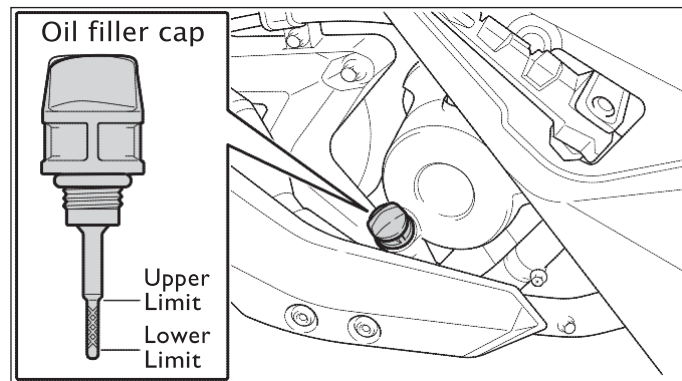
Check the engine oil level each day before riding your scooter. The level must be maintained between the upper and lower level marks on the oil filler cap/dipstick.

1. Start the engine and let it idle for a few minutes.

⚠ WARNING

Running the engine with insufficient oil pressure can cause serious engine damage.

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



Simplified Maintenance and Repair Regular Checks

2. After a few minutes, remove the oil filler cap/dipstick, wipe it clean, and reinsert the oil filler cap/dipstick without screwing it in. Remove the oil filler cap/dipstick. The oil level should be between the upper and lower marks on the oil filler cap/dipstick.
3. If required, add the specified oil so the oil level touches the upper level mark on the dipstick. Do not overfill.
4. Reinstall the oil filler cap/dipstick. Check for oil leaks.

⚠ WARNING

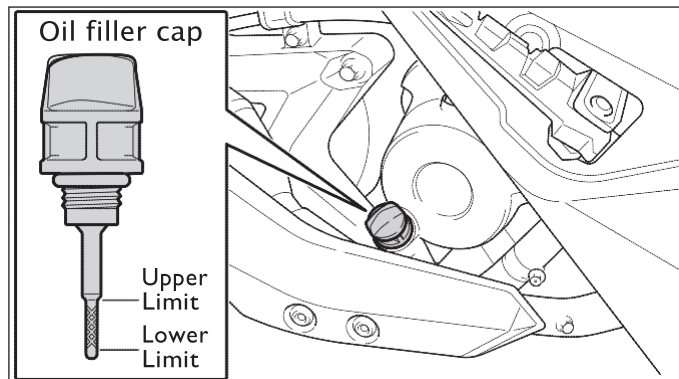
The engine and related components can become very hot. Use care when inspecting the oil level so you do not burn yourself. If needed, let the engine and exhaust system cool before working in those areas.

Engine oil replacement

Engine oil quality is the primary factor that affects engine longevity. Change your scooter's engine oil as specified in the maintenance schedule.

ⓘ Attention

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



Simplified Maintenance and Repair Regular Checks

Transmission fluid change

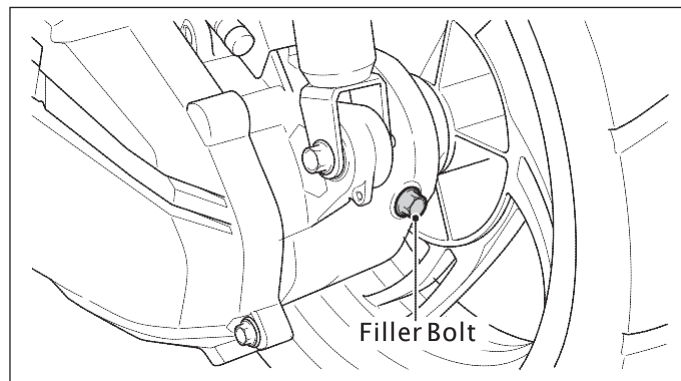
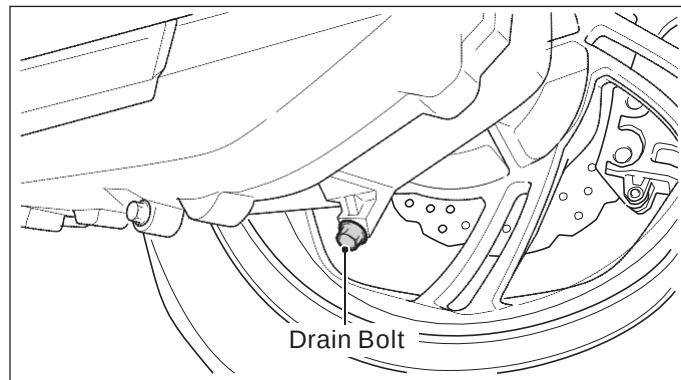
1. Place the scooter on its center stand.
2. Remove the transmission fluid drain bolt
3. Remove the transmission fluid filler bolt , then slowly rotate the rear wheel to drain the fluid.
4. Fill the transmission with the recommend fluid to the capacity listed below.

Transmission fluid type: SAE 90

Transmission fluid capacity: 0.23 L

Transmission fluid exchanging capacity: 0.21 L

5. Install the transmission filler bolt and tighten it to the specified torque.



Simplified Maintenance and Repair Regular Checks

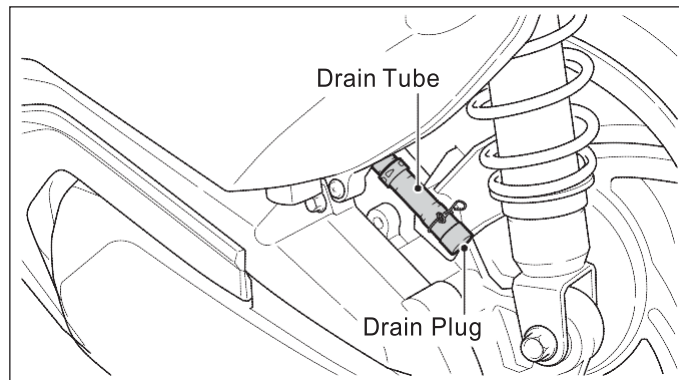
Crankcase breather drain

Your scooter has a drain tube that permits you to drain water and oil that has condensed in the air cleaner.

When you see that fluid has accumulated in the transparent drain tube, remove the plug and drain the fluid into a suitable container. After draining, reinstall the plug.

Attention

You will need to drain the crankcase breather tube more frequently if you are riding your scooter in the rain, operating it often at full throttle, or after the scooter is washed or overturned. Dispose of this residue in an environmentally appropriate manner.



Simplified Maintenance and Repair Regular Checks

Spark Plug Check and Adjustment

Dirty electrode or excessive gap can cause poor sparking.

Cleaning Method

Use a Spark Plug Cleaning Device is the best way.

If a Spark Plug Cleaning Device is not available, clean with a needle brush.

Adjustment

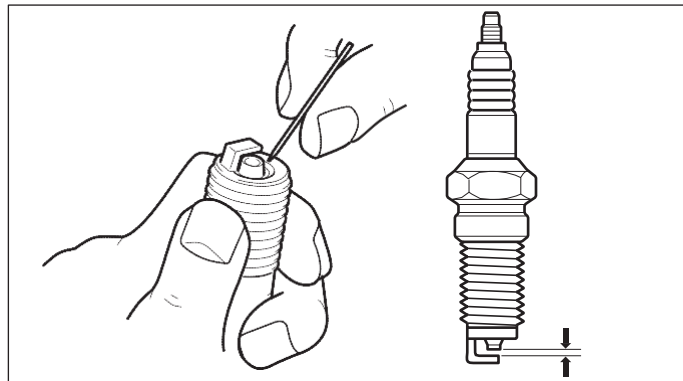
Normal Gap of Spark Plug is 0.7~0.8mm (See the Figure).

Specified Spark Plug:
(NGK) CR7E

Do not use a Spark Plug other than the specified one.

Attention

- Engine is very hot after stopping, be careful not to get burnt.
- Tighten the plug by hand, followed by using a Spark Plug Spanner.



Simplified Maintenance and Repair Regular Checks

Check Coolant

For the sake of safety, check level of coolant before riding the scooter. Replace the coolant as specified in Regular Maintenance Schedule.

Check Level of Coolant

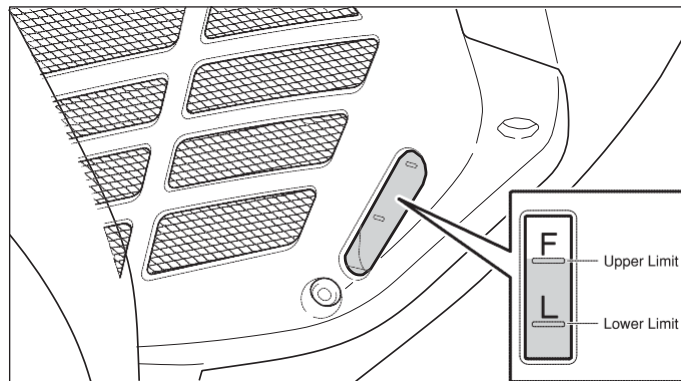
1. Park the vehicle on flat ground and brace it up with Main Stand.

Attention

- Temperature in the engine may cause false reading of Coolant level. Check coolant level after the engine cools down.
 - Inclined vehicle may cause false reading of Coolant level.
2. Check level of Coolant via viewing window on the preserving radiator. Make sure the level is between "F" and "L" marks.

Attention

- Before riding the vehicle, check the radiator and pipe for 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 radiator for any foreign object. Foreign objects may reduce the cooling function or even cause vehicle or engine damage in worse conditions.



Simplified Maintenance and Repair Regular Checks

Replenish Coolant (Fill the Reserve Radiator)

1. Stand the vehicle upright on flat ground.
2. Open Reserve Radiator 4 (remove screw 1 and cover 2), replenish water to Upper Limit.

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

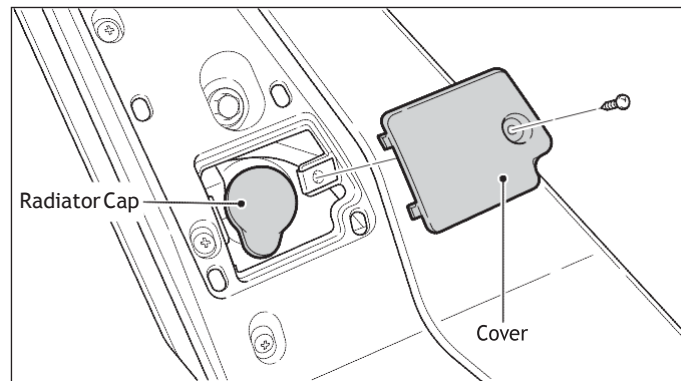
Attention

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



Simplified Maintenance and Repair Regular Checks

CVT Transmission System Filter Wool

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

Based on the maintenance cycle indicated in the periodic maintenance schedule, clean the filtering core and then replace the filtering core every 10,000km.

Replace Filter Wool

1. Remove Fixing Bolts of Crankcase Left Cover as picture 1.
2. Remove 2 Fixing Bolts of Filter Wool as picture 2.
3. Replace Filter Wool.

Insert Method: Operate in reversed procedures as removal.

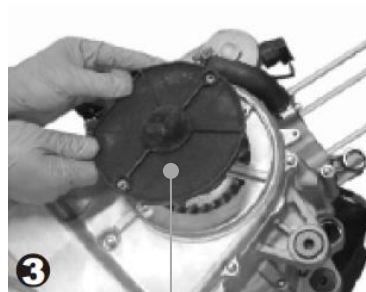


Crankcase Left Cover



Cleaning Method

1. Remove Fixing Bolts of Crankcase Left Cover.
2. Remove 2 Fixing Bolts of Filter Wool.
3. Clean Filter Wool body with air jet and clean out dirt from Crankcase Right Cover as picture 4.



Filter Wool Body



7. Specifications XCITING VS 400

Item	Specifications	Item	Specifications
Engine Type	SK80	Axle Base	1565 mm
Displacement	400 c.c.	Vehicle Weight (Curb Weight)	213 kg
Cylinder diameter × Stroke	84 * 72.1 mm	Front Tire	120/70-R15
Compression Ratio	10.8	Rear Tire	150/70-R14
Transmission	Automatic CVT	Fuel type	95 unleaded gasoline or better
		Battery Capacity	12V 11.8Ah
Ignition Method	ECU Full Transistor Type	Spark Plug	NGK CR7E
		Fuel tank	12.5L
Total Oil Content	1.5L	Front Brake Type	Disk
Transmission oil	0.23L	Rear Brake Type	Disk
Total Length	2190 mm		
Total Width	800 mm		
Total Height	1345 mm		

XCITING VS 400 Series User Manual
KWANG YANG MOTOR CO., LTD.
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MODENAS

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