Electrical Systems

This chapter covers the location and servicing of the electrical systems for the KYMCO G-Dink 125i.

CHARGING SYSTEM AND BATTERY

GENERAL INSTRUCTIONS

• The battery can be charged and discharged repeatedly. If a discharged battery is not used for a long time, its service life will be shortened. Generally, the capacity of a battery will decrease after it is used for 2～3 years. A capacity-decreased battery will resume its voltage after it is recharged but its voltage decreases suddenly and then increases when a load is added.

• When a battery is overcharged, some symptoms can be found. If there is a short circuit inside the battery, no voltage is produced on the battery terminals. If the rectifier won‘t operate, the voltage will become too high and shorten the battery service life.

• If a battery is not used for a long time, it will discharge by itself and should be recharged every 3 months.

• A new battery filled with electrolyte will generate voltage within a certain time and it should be recharged when the capacity is insufficient. Recharging a new battery will prolong its service life.

• Inspect the charging system according to the sequence specified in the Troubleshooting.

• Do not disconnect and soon reconnect the power of any electrical equipment because the electronic parts in the regulator/rectifier will be damaged. Turn off the ignition switch before operation.

• It is not necessary to check the MF battery electrolyte or fill with distilled water.

• Check the load of the whole charging system.

• Do not quick charge the battery. Quick charging should only be done in an emergency.

• Remove the battery from the motorcycle for charging.

• When replacing the battery, do not use a traditional battery.

• When charging, check the voltage with an electric tester.

TROUBLESHOOTING

No power

• Dead battery
• Disconnected battery cable
• Fuse burned out
• Faulty ignition switch

Intermittent power

• Loose battery cable connection
• Loose charging system connection
• Loose connection or short circuit in the ignition system

Low power

• Weak battery
• Loose battery connection
• Charging system failure
• Faulty regulator/rectifier

Charging system failure

• Loose, broken or shorted wire or connector
• Faulty regulator/rectifier
• Faulty A.C. generator

IGNITION SYSTEM

GENERAL INSTRUCTIONS

• Some electrical components may be damaged if terminals or connectors are connected or disconnected while the ignition switch is “ON” and current is present.

• When servicing the ignition system, always follow the steps in the troubleshooting on page above.

- The ignition timing cannot be adjusted since the ignition control module is already adjusted in factory.

- The ignition control module or ECU maybe damaged if dropped or the connector is disconnected when the key is "ON", the excessive voltage may damage the ignition control module or ECU. Always turn off the ignition switch before servicing.

- A faulty ignition system is often related to poor connections. Check those connections before proceeding.

- Make sure the battery is adequately charged. Using the starter motor with weak battery results in a slower engine cranking speed as well as no spark at the spark plug.

- Use a spark plug of the correct heat range. Using spark plug with an incorrect heat range can damage the engine.

TROUBLESHOOTING

No peak voltage

- Short circuit in engine stop switch or ignition switch wire.
- Faulty engine stop switch or ignition switch.
- Loose or poorly connected ignition control module connectors.
- Open circuit or poor connection in ground wire of the ignition control module.
- Faulty crank position sensor.
- Faulty ignition control module.

Peak voltage is normal, but no spark jumps at the plug

- Faulty spark plug or leaking ignition coil secondary current.
- Faulty ignition coil.

Starting System

GENERAL INSTRUCTIONS

- The removal of starter motor can be accomplished with the engine installed.

- After the starter clutch is installed, be sure to add the engine oil and coolant and then bleed air from the cooling system.

TROUBLESHOOTING

Starter motor will not turn

- Fuse burned out
- Weak battery
- Faulty ignition switch
- Faulty starter clutch or gear
- Faulty front or rear stop switch
- Faulty starter relay
- Poorly connected, broken or shorted wire
- Faulty starter motor

Lack of power

- Weak battery
- Loosed wire or connection
- Foreign matter stuck in starter motor

Starter motor rotates but engine does not start

- Faulty starter pinion
- Starter motor rotates in reverse
- Weak battery

LIGHTS, SWITCHES, AND FUEL PUMP

GENERAL INSTRUCTIONS

- Note the following when replacing the halogen headlight bulb

  1. Wear clean gloves while replacing the bulb. Do not put finger prints on the headlight bulb, as they may create hot spots on the bulb and cause it to fail.
  2. If you touch the bulb with your bare hands, clean it with a cloth moistened with alcohol to prevent its early failure.
  3. Be sure to install the dust cover after replacing the bulb.

- Check the battery condition before performing any inspection that requires proper battery voltage.

- A continuity test can be made with the switches installed on the scooter.

- Route the wires and cables properly after servicing each component.

TROUBLESHOOTING

Lights do not come on when ignition switch is “ON”
• Burned bulb
• Faulty switch
• Poorly connected, broken or shorted wire

Temperature gauge does not register correctly

• Faulty temperature gauge
• Faulty thermosensor
• Broken or shorted wire between the temperature gauge and thermosensor

Fuel gauge does not work or shows wrong figures

• Faulty fuel gauge
• Faulty fuel unit
• Poorly connected wire between fuel gauge and fuel unit
• Fuse burned out

Battery

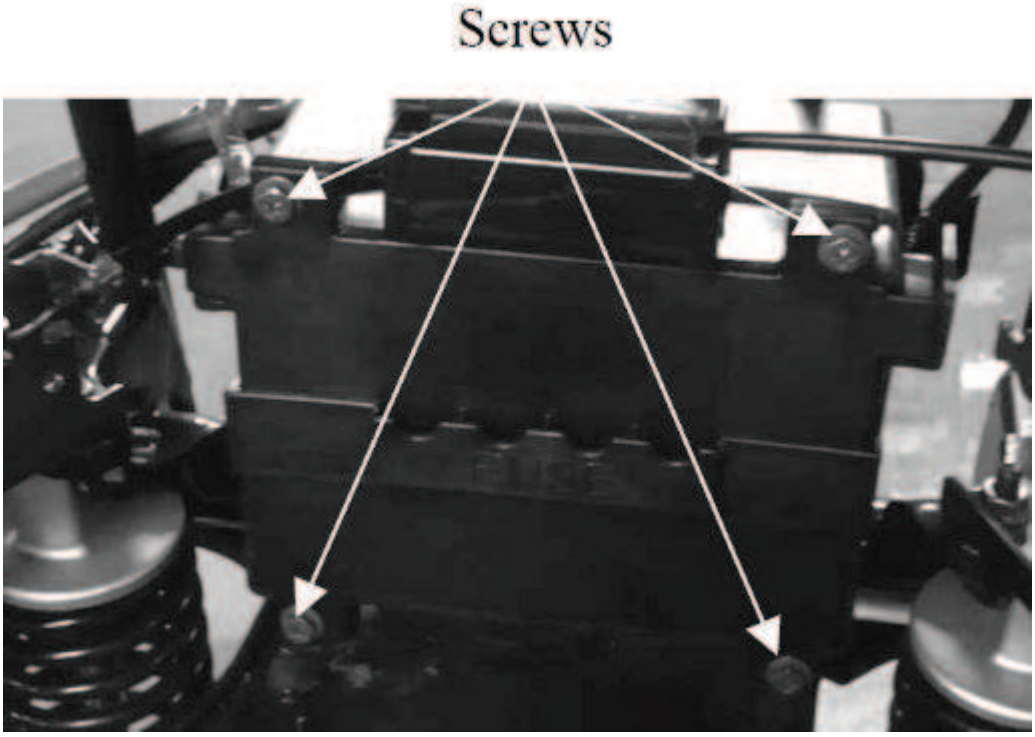
SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Warning: The battery electrolyte (sulfuric acid) is poisonous and may seriously damage the skin and eyes. Avoid contact with skin. eyes, or clothing. In case of contact, flush with water and get prompt medical attention.

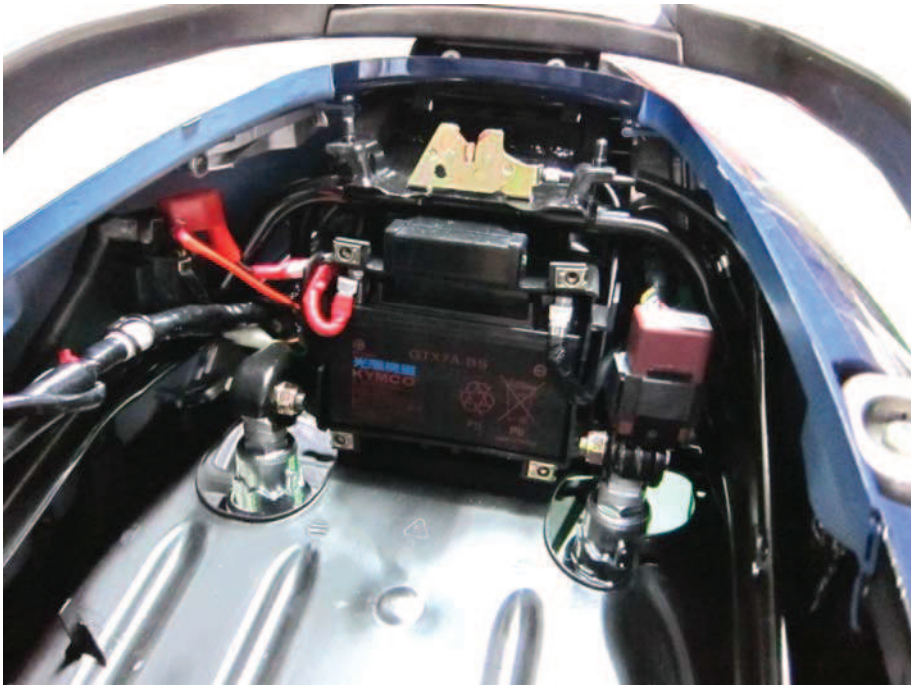
Removal

Remove the seat. See the Seat topic for more information.

Remove the luggage box. See the Luggage Box topic for more information.



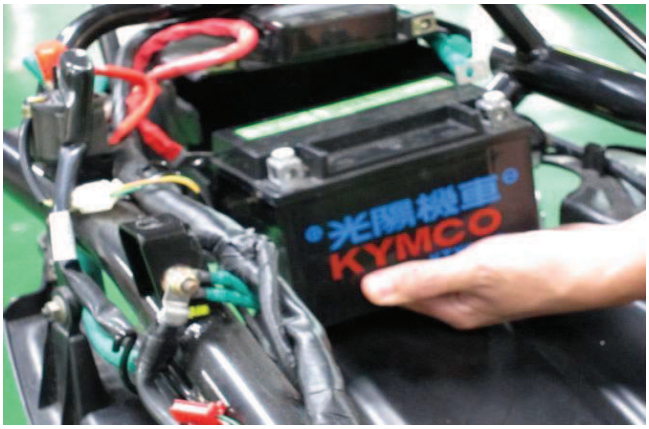
Remove the four battery cover screws. Remove the battery cover.



The battery is located in the back of the vehicle.

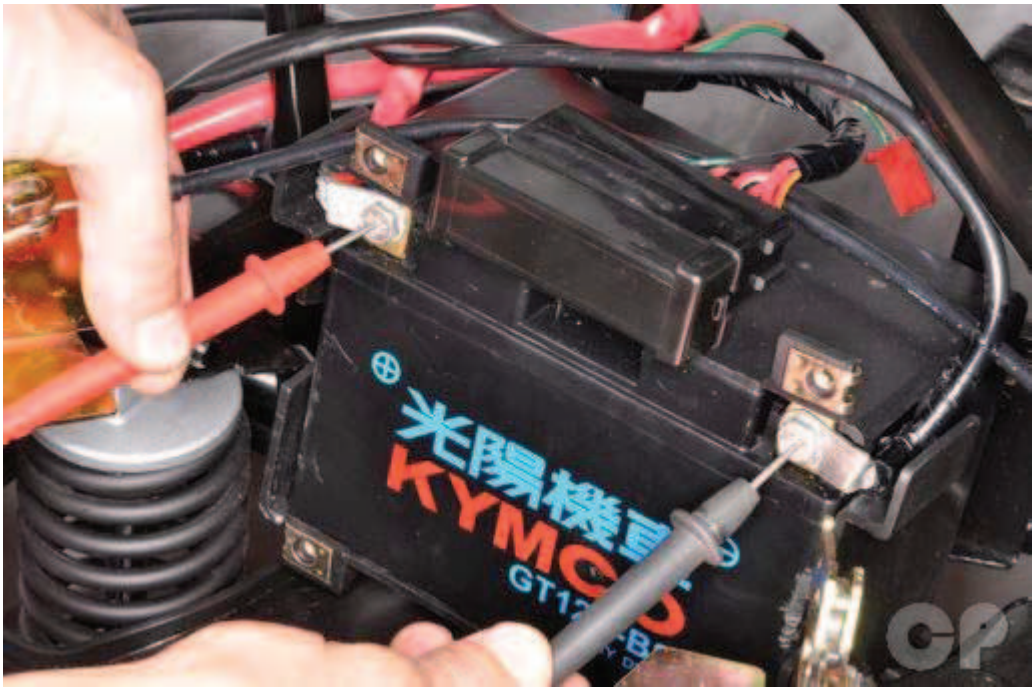
Remove the negative battery cable bolt with a 10 mm socket or #3 Phillips screwdriver. Free the negative cable from the battery.

Remove the positive battery cable bolt with a 10 mm socket or #3 Phillips screwdriver. Free the positive cable from the battery.



Lift the battery out of the battery tray.

Testing

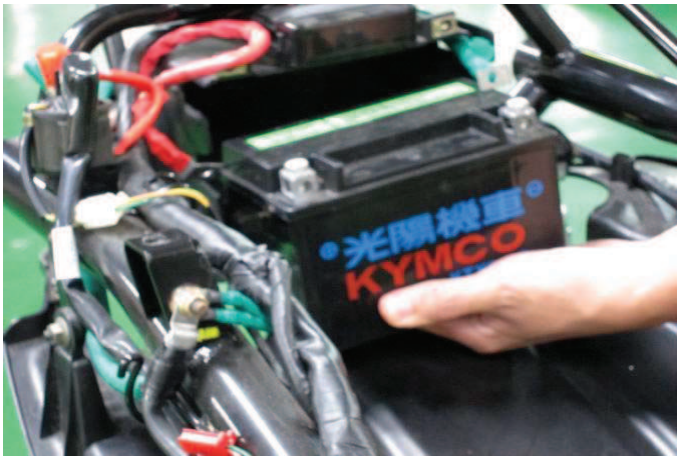


Check the battery voltage with a multi-meter. Place the positive probe onto the positive battery terminal and the negative probe to the negative battery terminal. If the battery reads under 12.3 V it is undercharged.

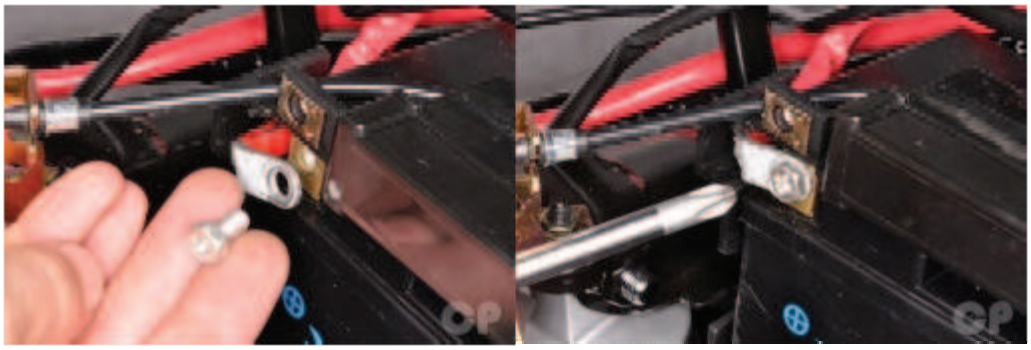
Battery Voltage (20°C/68°F)	
Fully Charged	13.0 - 13.2 V

Installation

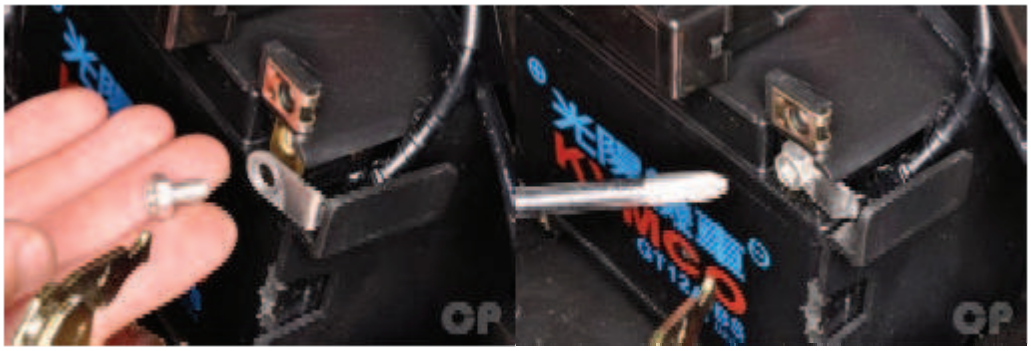
Only install the specified battery (8Ah).



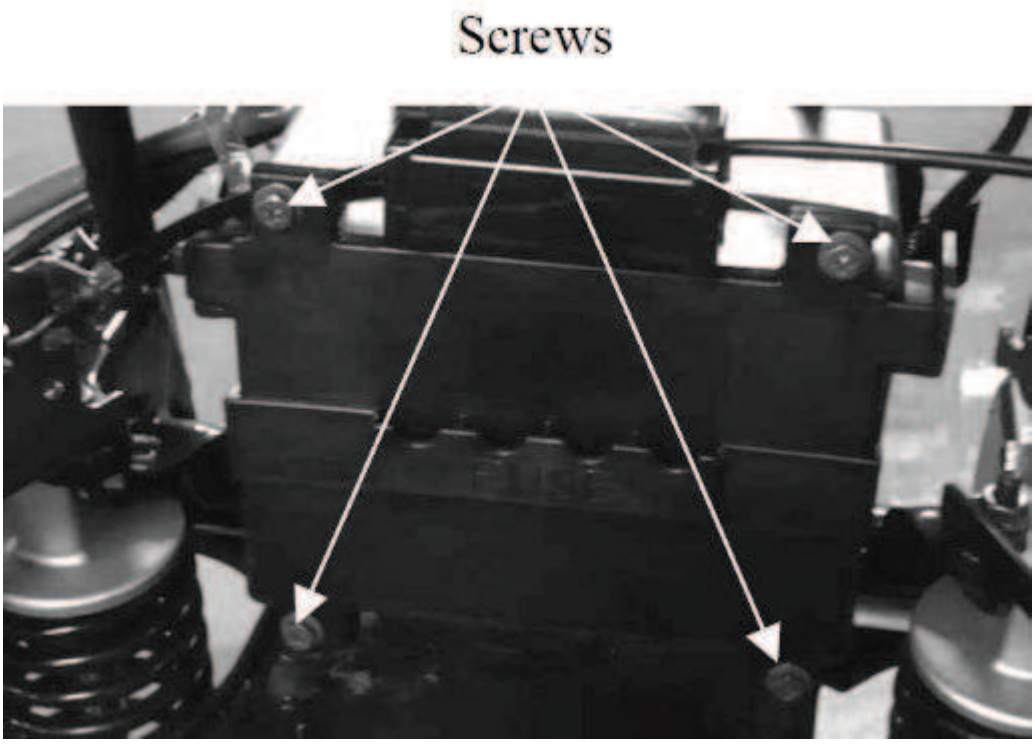
Fit the battery into the battery tray.



Connect the positive battery cable and install the bolt with a 10 mm socket or #3 Phillips screwdriver.



Connect the negative battery cable and install the bolt with a 10 mm socket or #3 Phillips screwdriver.



Install the battery cover. Install the four battery cover screws and tighten them securely.

Battery Charging

Charge the battery with a motorcycle specific battery charger at the specified rate. Connect the charger leads to their appropriate battery terminals. Keep open flames away from a charging battery.

Standard Charge	
0.9 Amps	5 - 10 Hours

Note: For battery charging, do not exceed the charging current and time specified on the battery. Using excessive current or extending the charging time may damage the battery.

Install the luggage box. See the Luggage Box topic for more information.

Install the seat. See the Seat topic for more information.

Charging System

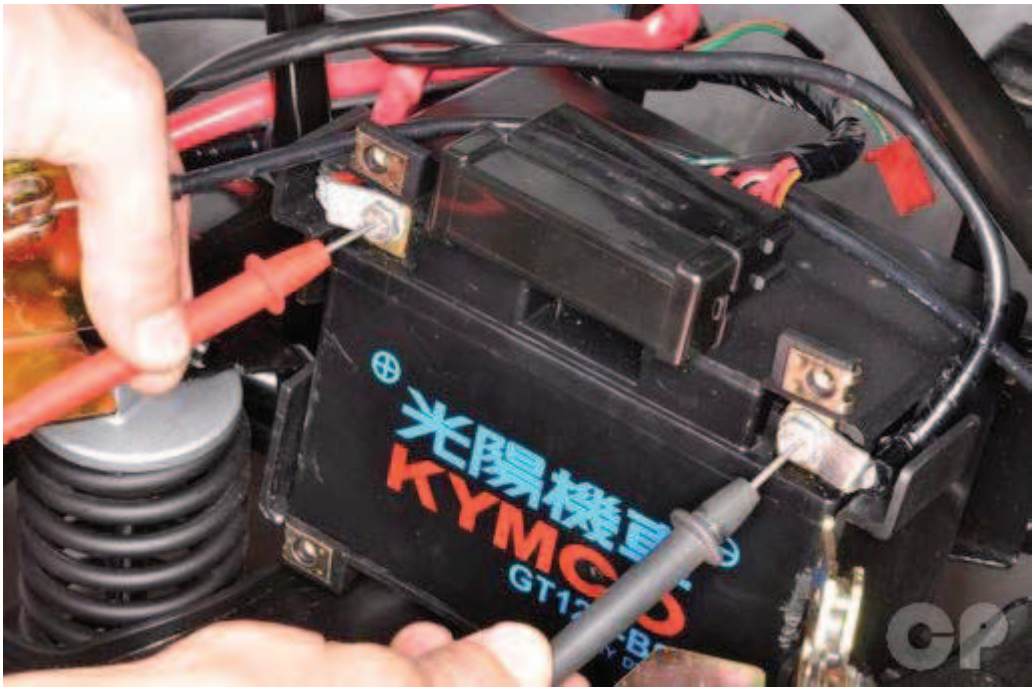
SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

You will need a digital multimeter to inspect the charging system.

Charging Voltage Inspection

Remove the battery cover. See the Battery topic for more information.

Note: The battery should be fully charged prior to making charging system checks.



Start the engine and warm it up to the operating temperature; stop the engine. Connect the multimeter between the positive (+) and negative (-) terminals of the battery. To prevent short, make absolutely certain which are the positive (+) and negative (-) terminals or cable.

With the headlight on and turned to the high beam position, restart the engine. Measure the voltage on the multimeter when the engine runs at 5000 rpm.

Battery charging voltage@ 5000 rpm	14 ~ 15V

Regulator/Rectifier

Remove the seat. See the Seat topic for more information.

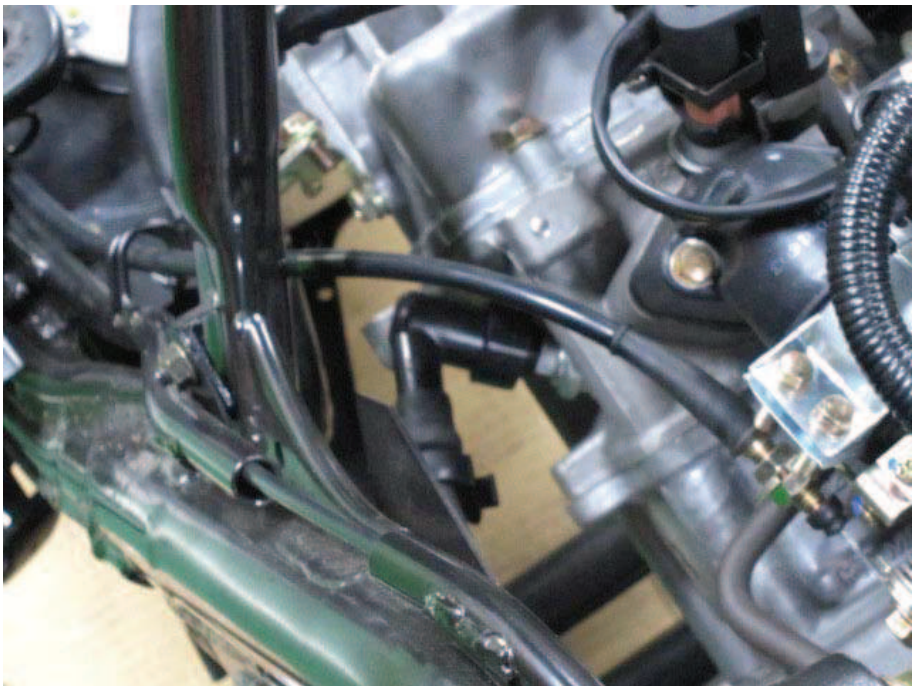
Ignition System

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

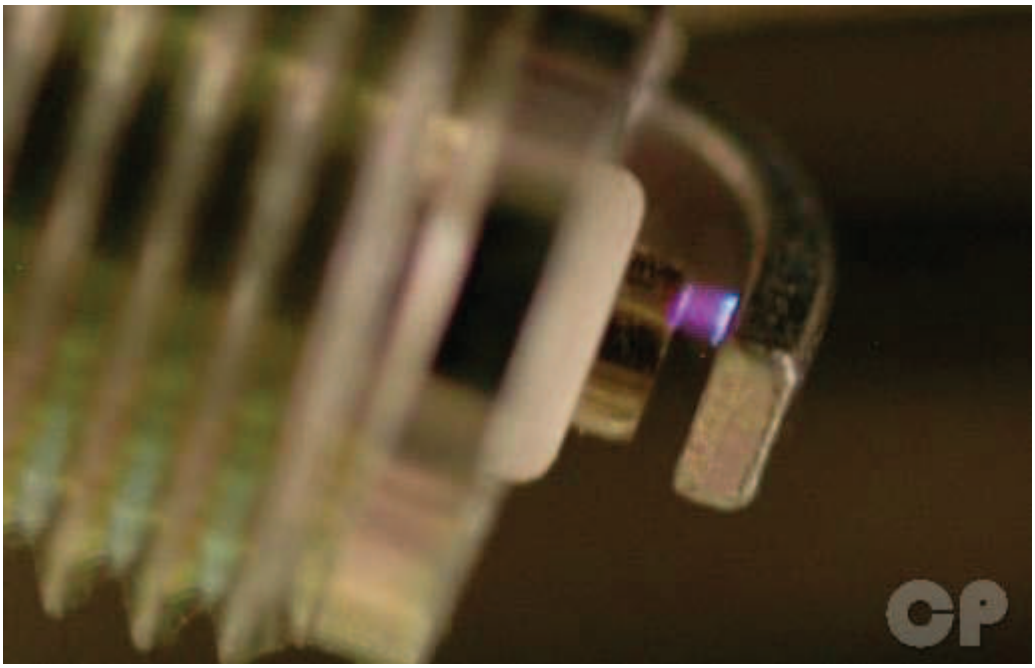
The ignition timing is set at the factory and is not adjustable. Perform the following checks. Before performing any tests make sure the electrical connections are not loose or corroded.

Spark Test

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. See the Spark Plug topic for more information.



Leave the old spark plug installed. Connect known good spark plug to the coil and ground the plug to the cylinder head.

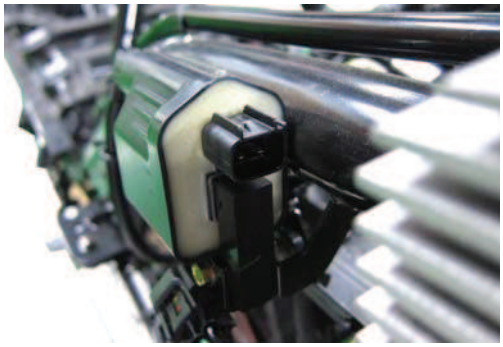


Turn the ignition switch to ON, lift the side stand, hold in one of the brake levers, and push the engine start button. The plug should spark.

Caution: Do not touch the spark plug or spark plug wire while cranking or running the engine as this can result in a severe shock.

Ignition Coil

Removal



Remove the ignition coil leads.

Remove the two ignition coil mounting bolts with an 8 mm socket.

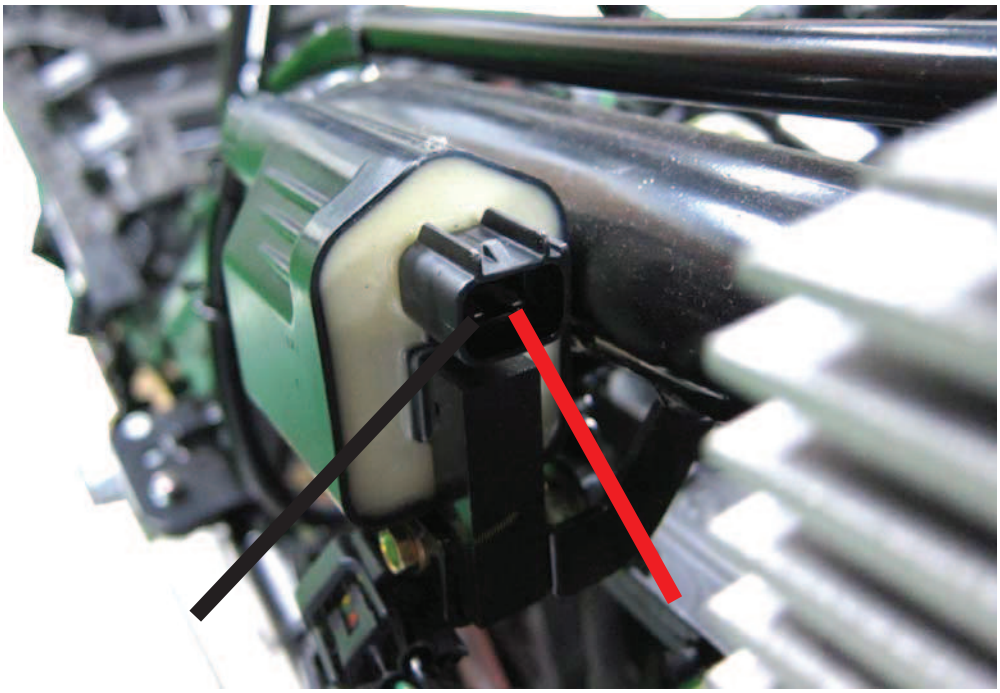
Remove the ignition coil.

Ignition Coil Resistance

Primary

Set the multimeter to read ohms of resistance (Ω).

Touch the positive and negative meter leads to the ignition coil terminals as shown. Measure the resistance.

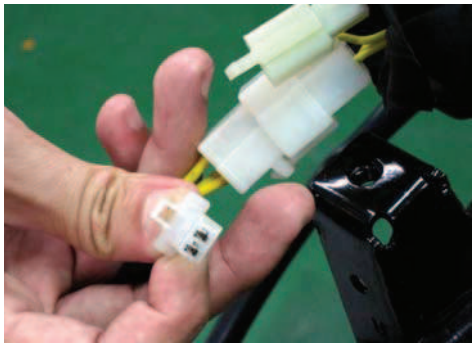


Ignition Coil Primary Resistance	0.55 – 0.75 Ω

AC Generator Inspection

Crank Position Sensor Inspection

Note: This test is performed with the stator installed in the engine.



Disconnect the crank position sensor wire coupler. Measure the resistance between the Blue/White and green/white wire terminals.

Resistance	
Blue/White - Green/White	96Ω – 144Ω

Starting System

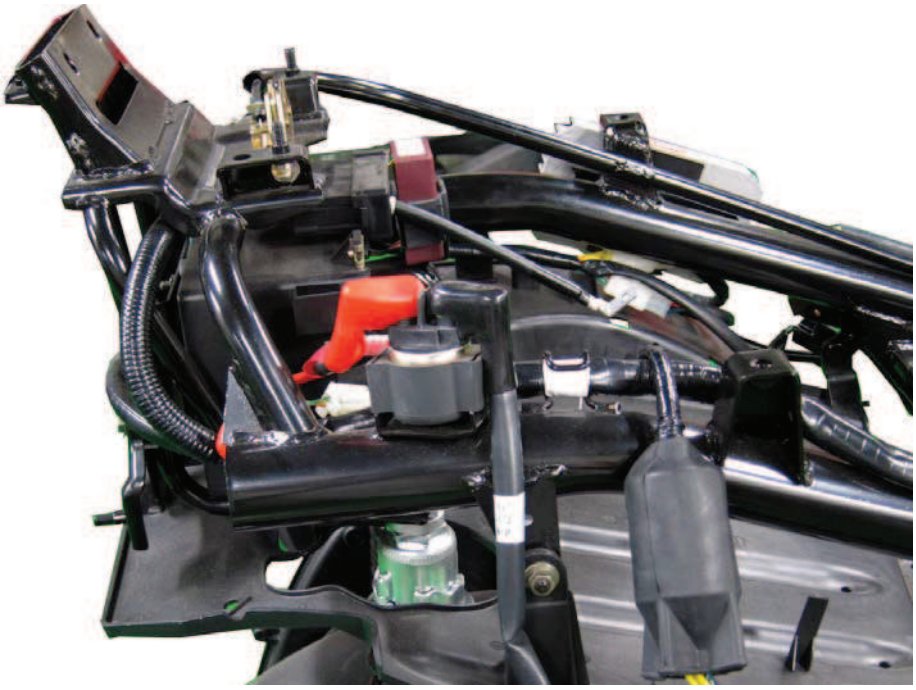
SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

You will need a digital multimeter to inspect the starting system.

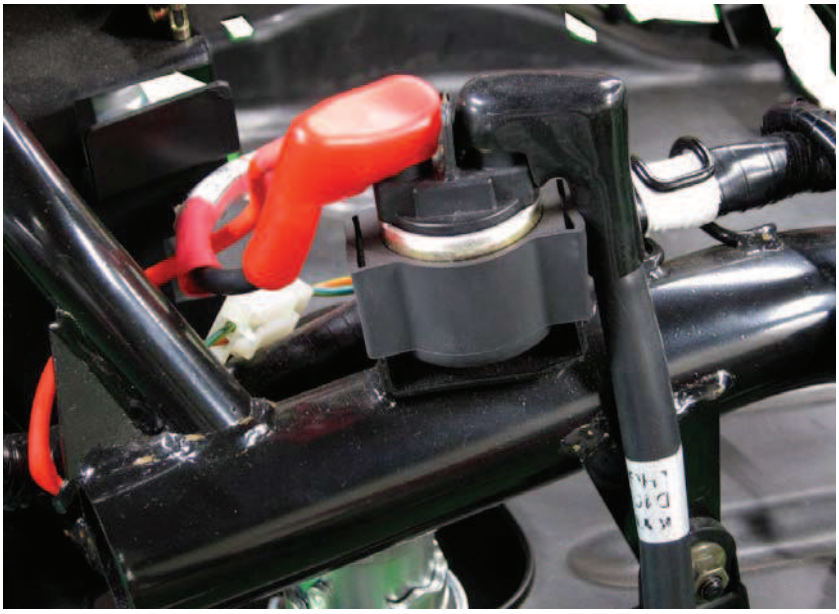
Starter Relay

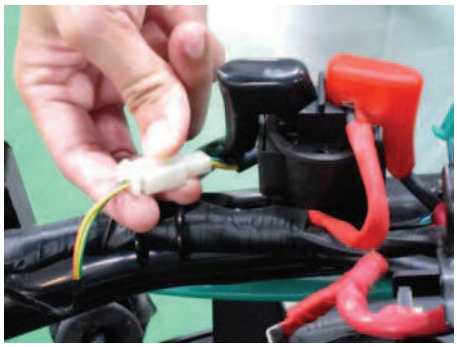
Inspection

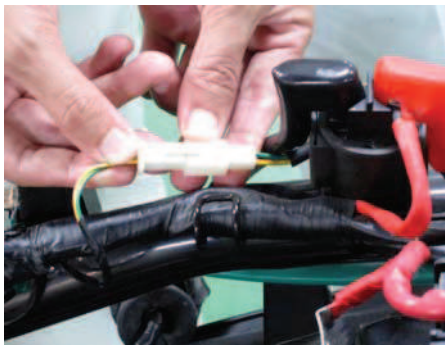
Remove the body cover. See the Body Cover topic for more information.



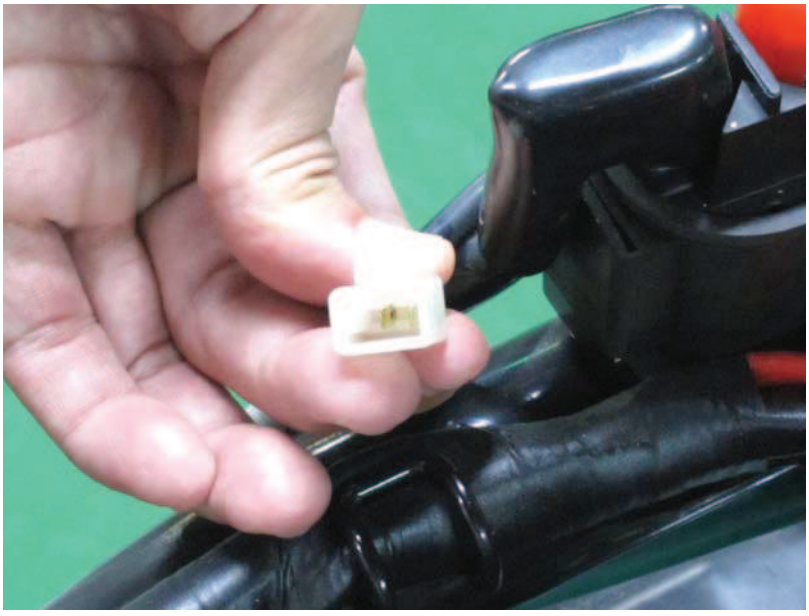
The starter relay is located on the right side of the vehicle.







Disconnect the starter relay wire connector.

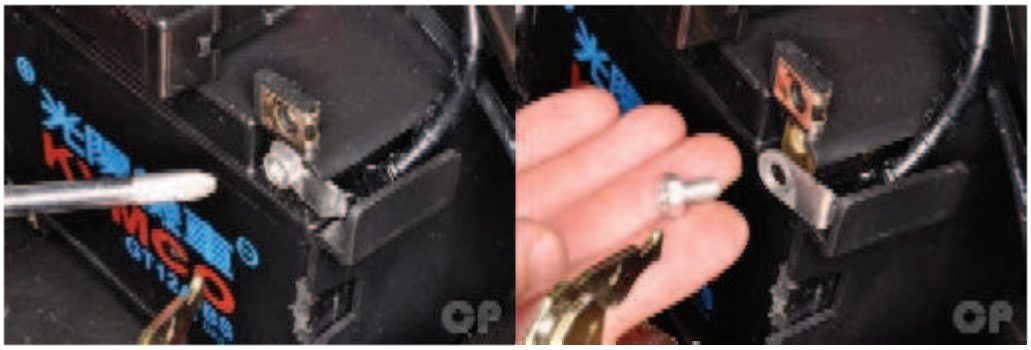


Check for continuity between the yellow/red wire and green/yellow wire. There should be continuity when the starter button is depressed. If there is no continuity, check the starter button for continuity and inspect the wire.

Operation Test

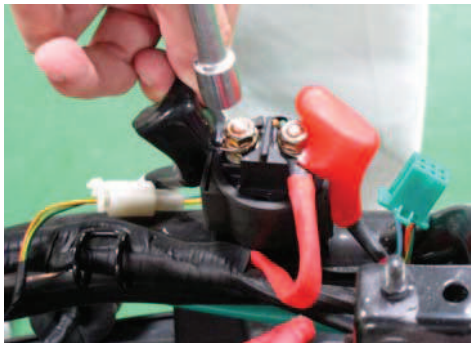
Remove the battery cover. See the Battery topic for more information.

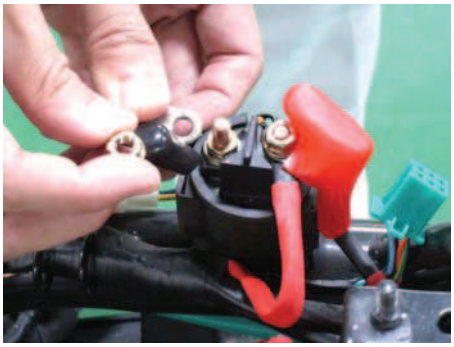
Turn the ignition switch to "OFF".

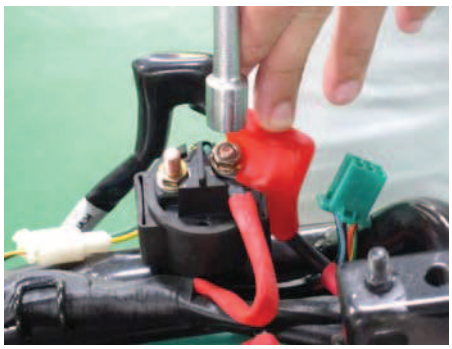
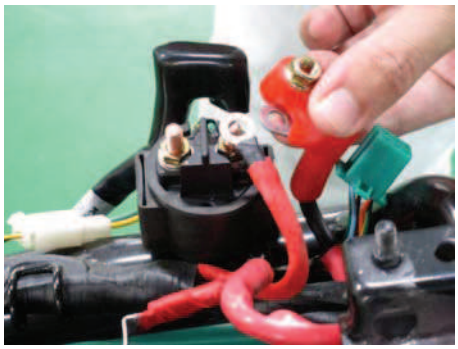


Remove the negative battery cable bolt with a 10 mm socket or #3 Phillips screwdriver. Free the negative cable from the battery.

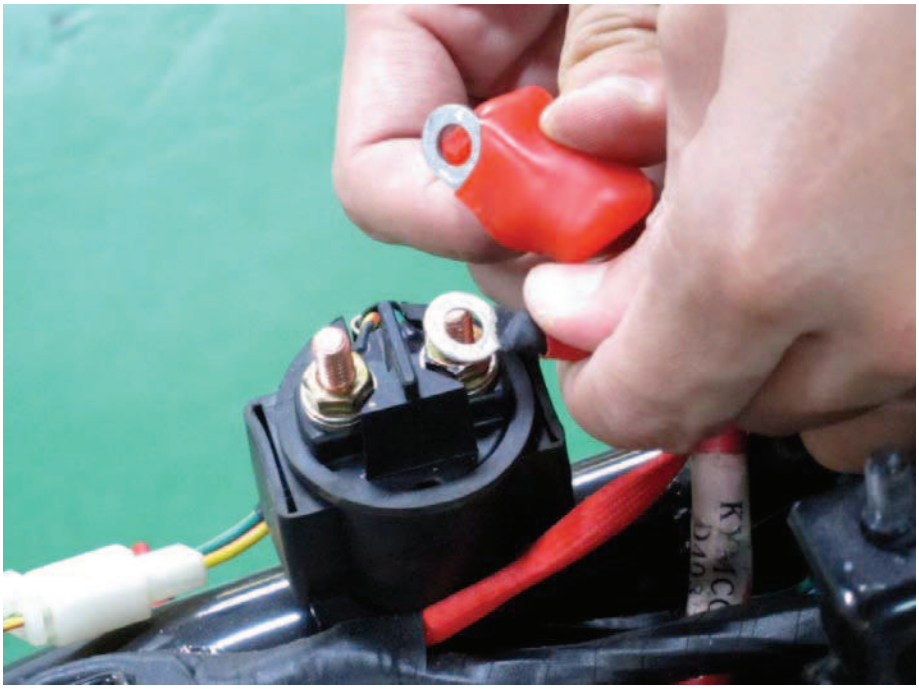
Remove the two terminal covers.



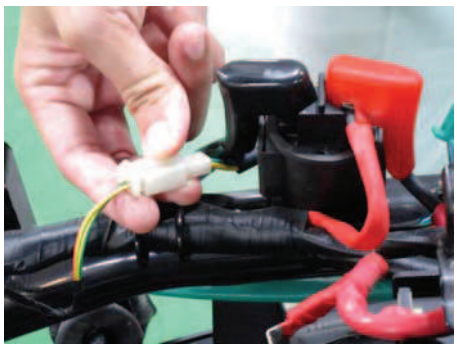
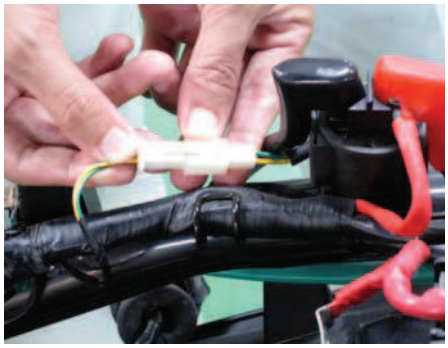


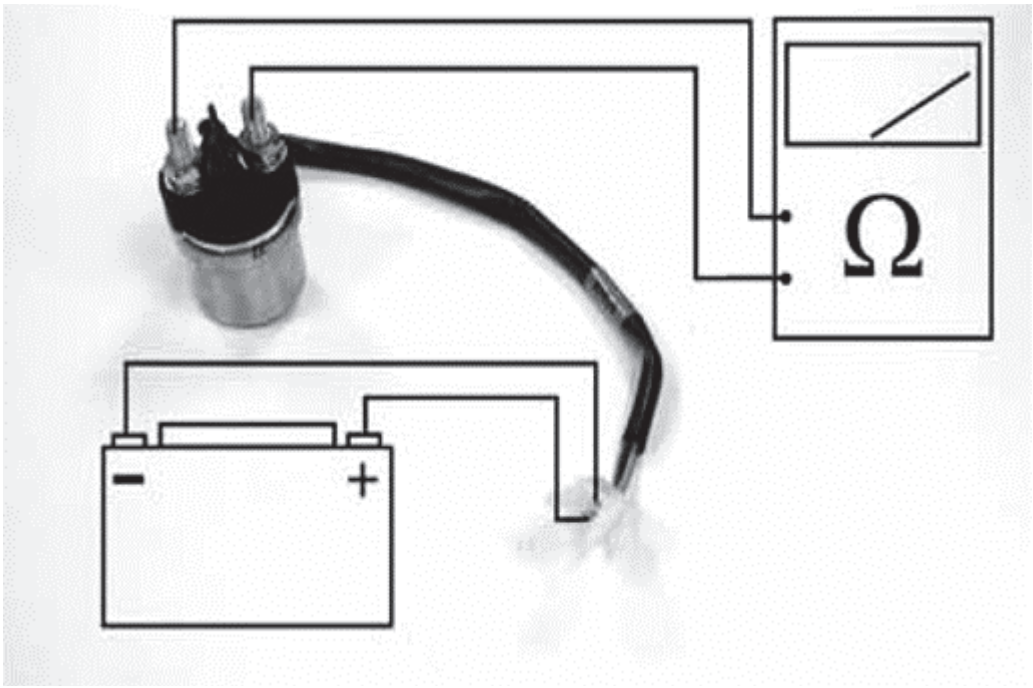
Remove the nuts that hold the starter motor lead and battery lead wires to the starter relay with a 10 mm socket.



Remove the leads from the starter relay.

Disconnect the starter relay wire connector.



Connect the electric meter to the starter relay terminals that connect to the battery positive cable and the starter motor cable. Connect a fully charged battery across the starter relay yellow/red and green/yellow wire terminals. Check for continuity between the starter relay large terminals. The relay is normal if there is continuity and hear sounds.

Warning: Do not apply the battery voltage jump for more than five seconds or the relay may be damaged.

Starter Motor

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

Removal

Remove the battery cover. See the Battery topic for more information.

Turn the ignition switch to "OFF".

Remove the negative battery cable bolt with a 10 mm socket or #3 Phillips screwdriver. Free the negative cable from the battery.

Remove the airbox. See the Airbox topic for more information.

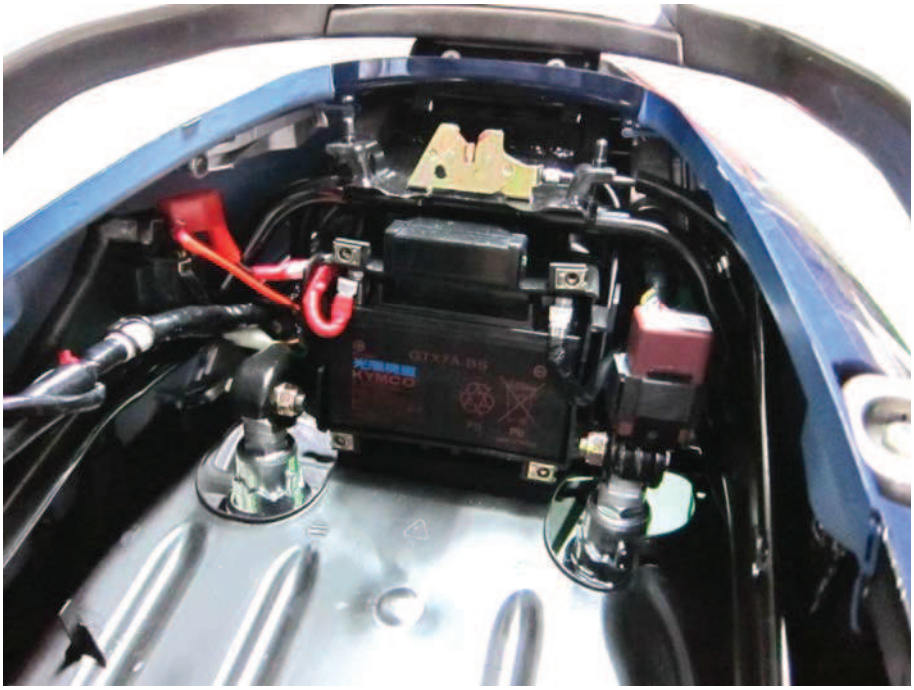
Pull back the rubber starter motor lead cover.

Fuses

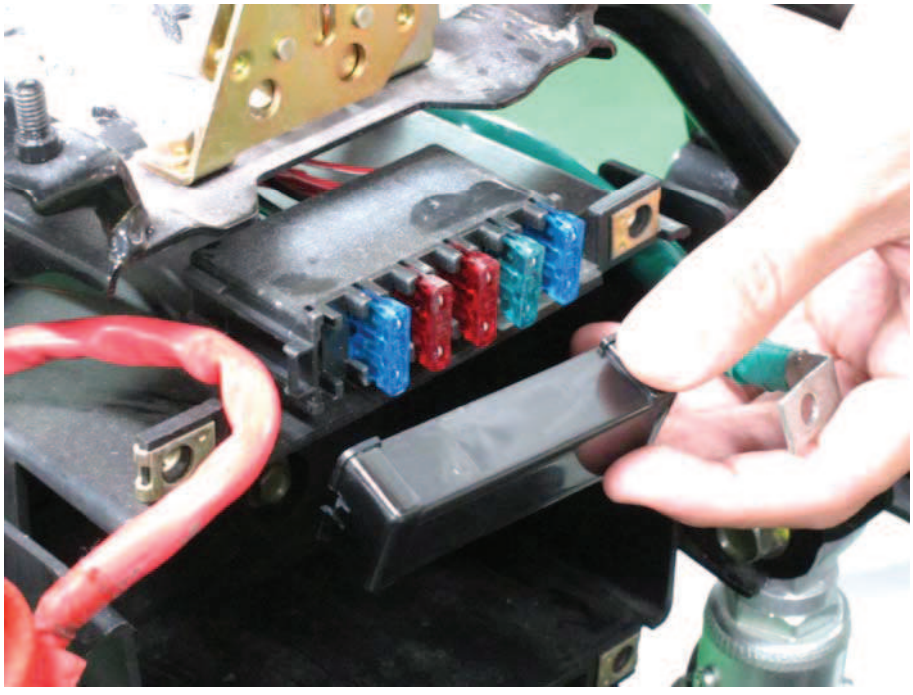
SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Fuse Box

Remove the seat and the luggage box. See the Seat topic for more information.



The fuse box is located on top of the battery.

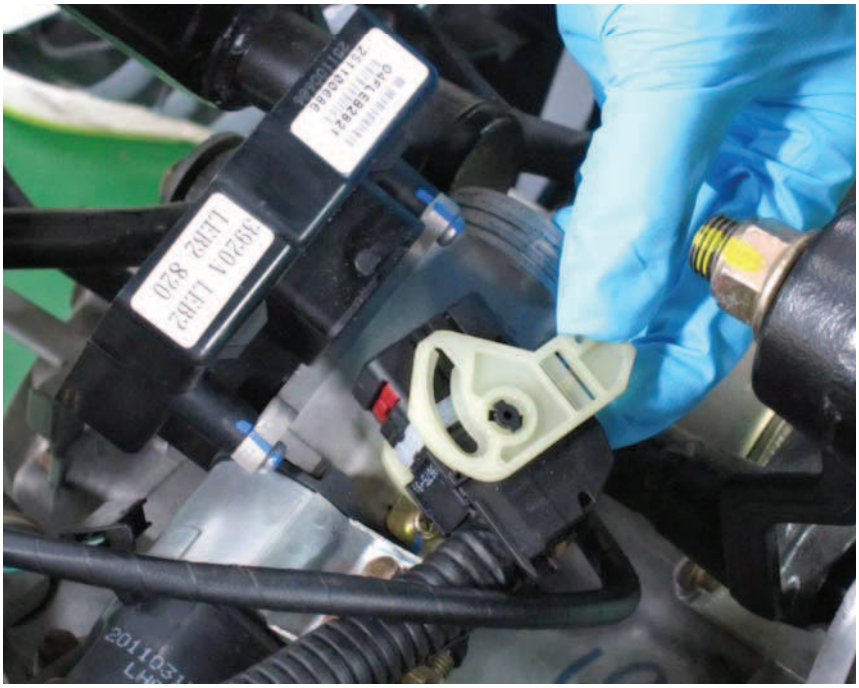


Open the covers to access the fuses.

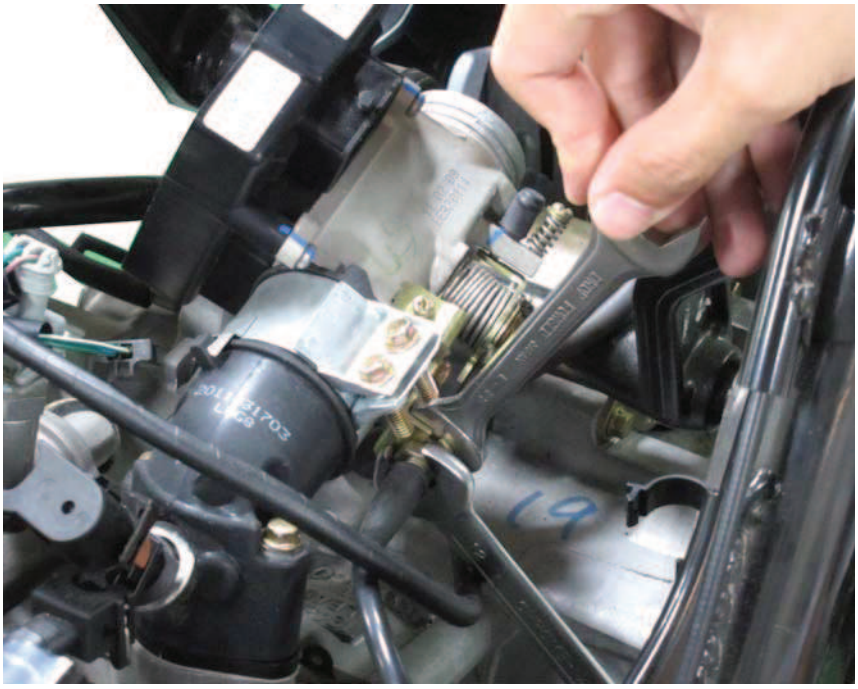
ECU Removal

Remove the seat and luggage box. See the seat and luggage box topic for more information.

Note: The ignition control module or ECU maybe damaged if dropped or the connector is disconnected when the key is “ ON" . The excessive voltage may damage the ignition control module or ECU. Always turn off the ignition switch before servicing.

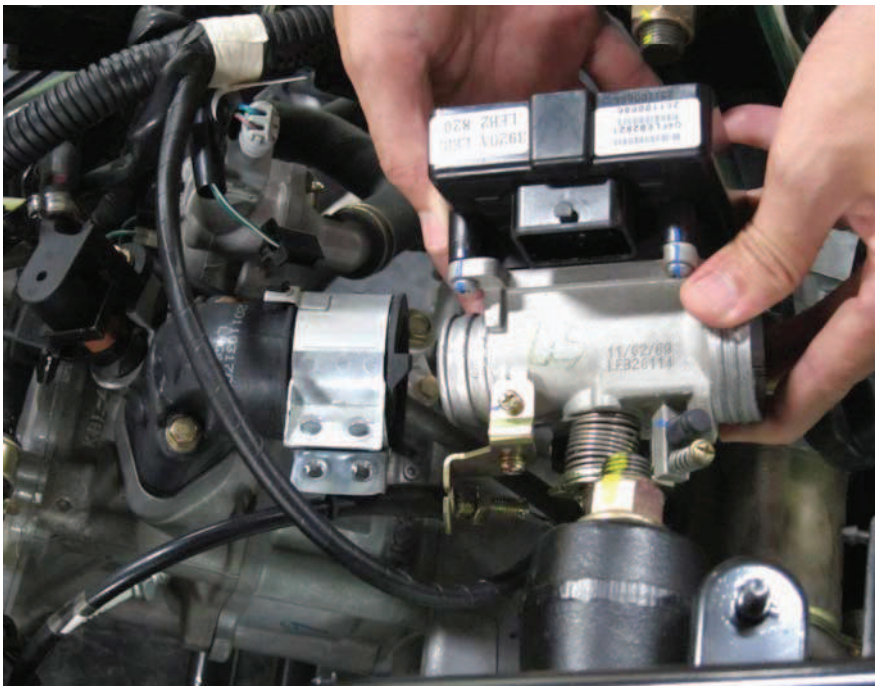


Disconnect the ECU harness.



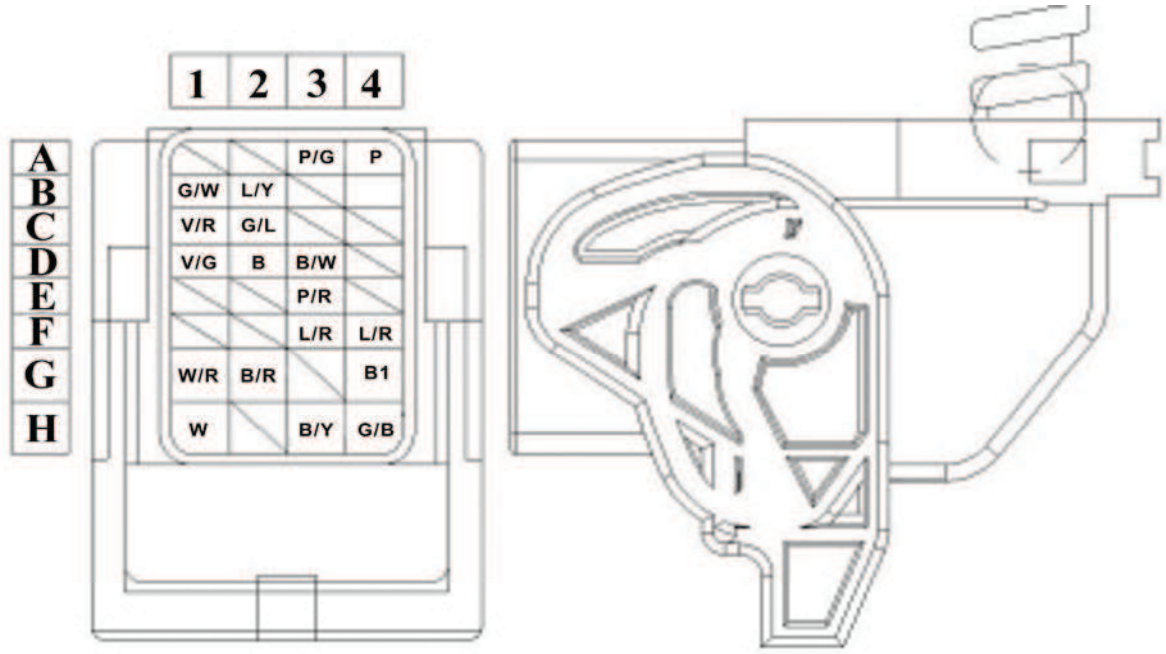
Loose two nuts attaching to throttle cable with 10mm&12mm sockets, and then remove the throttle cable.

Loose two nuts attaching to the holder intake pipe.



Remove the ECU.

Inspection



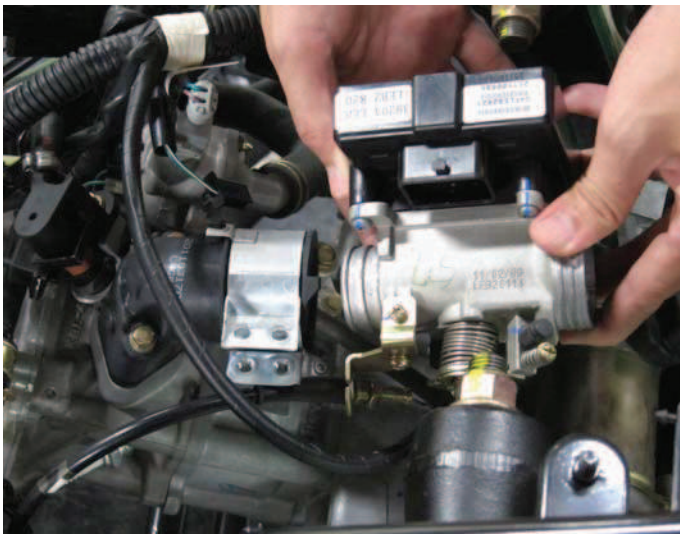
Disconnect and remove the ECU.

Check for continuity between pin H4 of the ECU side connector and body frame. There should be continuity at all times.

Check for continuity between each pin B1 and D1 of the ECU side connector. There should be continuity at all times.

Check for continuity between pin D1 and H4 of the ECU side connector. There should be no continuity at all times.

Installation



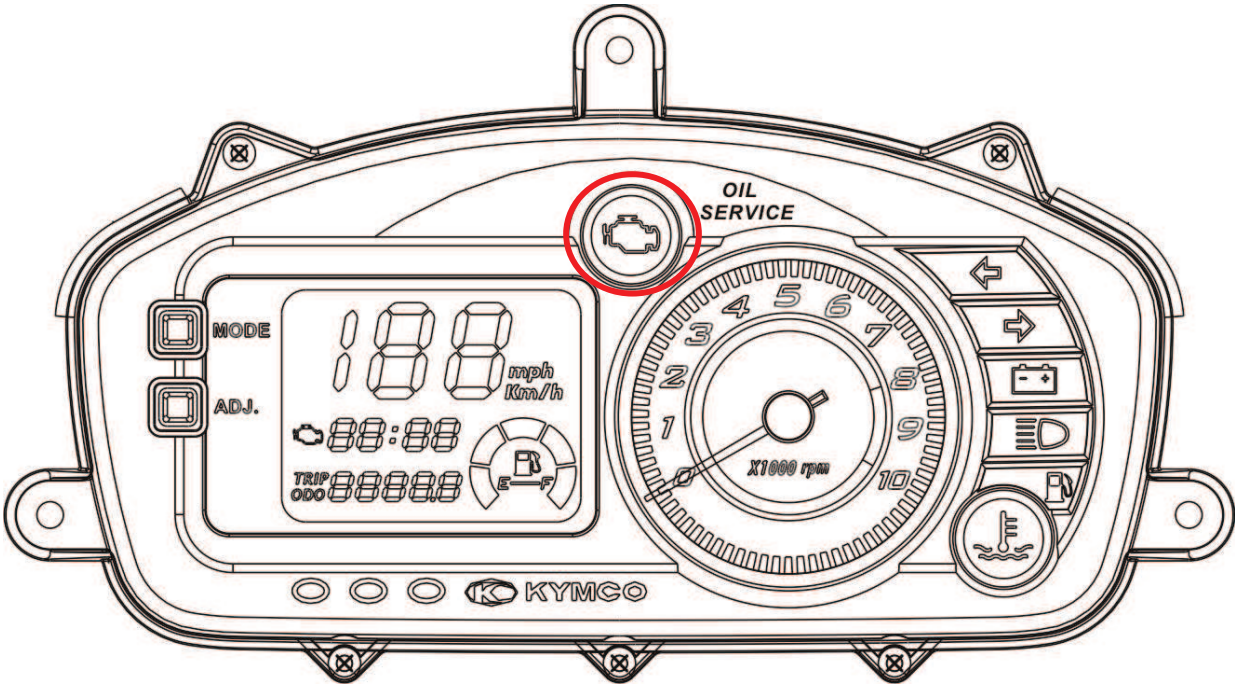
Connect the ECU harness.

Install the seat and luggage box. See the seat and luggage box topic for more information.

Self-Diagnosis

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

Note: No matter when the CELP illuminated while riding condition, should find out the cause of the problem as soon as possible.

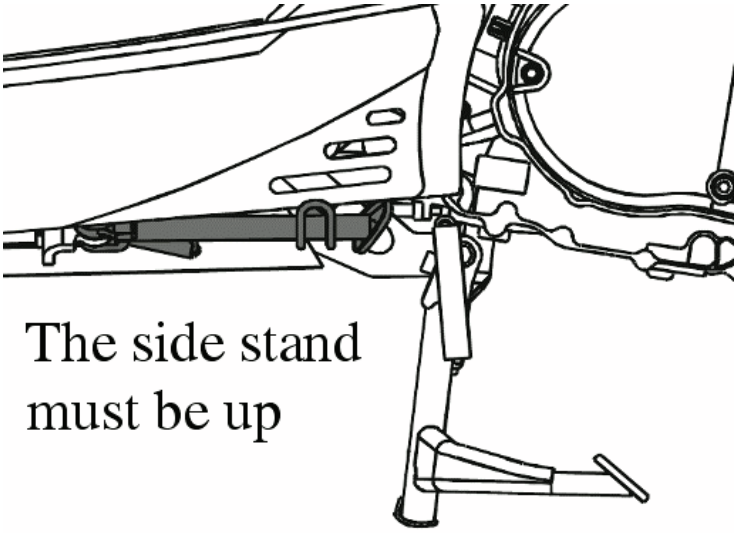


The check engine lamp (CELP) or Fi indicator is located in the center of meter.

If the ECU connectors, or battery leads are disconnected the stored malfunction codes will be lost.

Without Diagnostic Special Tool

SELF-DIAGNOSTIC PROCEDURES



Place the scooter on its main stand and put the side stand up.

Set the engine stop switch to the “RUN” position.

- Turn key to On position.
- The CELP will be lighting for two seconds and then off.
- If the engine has problem, the CELP will blink to show the failure codes.
- There’re 23 failure codes for the Synerjet system.

If the vehicle gets more failure codes, the CELP will be blinking from a lower number, then show the higher number after three seconds. All failure codes would be appeared repeatedly. It can be performed without diagnostics program.

EFI SELF-DIAGNOSIS FAILURE CODES

The CELP denotes the failure codes. When the indicator lights for one second that is equal to ten.

For example: one longer blink illumination and two shorter blinks (0.5 second x 2) of the indicator is equal to 12 blinks. Follow code 12.

If more than a damaged part has occurred, the CELP begins blinking in order.

For example: If the indicator blinks six times, then shows one second illumination and two blinks, so there are two failures have occurred. Follow code 6 and 12.

Blinks	Failure Codes	Fault Description	Priority	Fault Management
1	P0217	Engine Overheating	1	1.Stop immediately and check CELP code. 2.Check engine thermo sensor wiring and connections. 3.Check engine lubrication and cooling systems. 4.Check engine ignition and fuel systems. 5.Extended periods of riding can cause engine overheating
2	P0335	Crank Position Sensor (CPS) Fault	2	1.Check Crank Position Sensor(CPS) wiring and connections. 2.Check CPS tp flywheel gap (0.6mm-1.2mm). 3.Check crankshaft runout. 4.Use ohm meter to check circuit resistance (100-130 ohms with engine cool).
3	P1120	Throttle Position Sensor (TPS) Fault	2	1.Use KYMCO AFI Diagnostic Tool to reset code. Ensure TPS is within specs. (With throttle plate closed-0.68 volts +/- 0.03 volts). 2.Check TPS wiring and connections. 3.Ensure that TPS value to be 0% when throttle plate is closed.
4	P1121	Throttle Position Sensor (TPS) output is abnormal	2	1.Check TPS wiring and connections. 2.Use KYMCO AFI Diagnostic Tool to measure voltage (below 0.5 volts). 3.Ensure that TPS screw has not been adjusted unnormally, TPS should be 0% when throttle plate is closed.
5	P1122	Throttle Position Sensor Velocity Fault	2	1.Check TPS wiring and connections. 2.Use KYMCO AFI Diagnostic Tool to measure voltage (below 0.5 volts). 3.Ensure that TPS screw is adjusted to 0% when throttle plate is closed. 4. Replace TPS sensor
6	P0560	Battery Voltage abnormal	1	1.Using volt meter, check battery voltage (12-15 volts). 2.Using volt meter, check stator output (13.5-14.5 volts). 3.Check black, blue, and red wires on ECU for shorts. 4.Check battery condition.
7	P0110	Inlet Air Thermosensor (IAT) Fault	2	1-Check IAT wiring and connections. 2-Using Ohm meter, check IAT resistance (2554-568.9 ohms within 20~60 degree centigrade).
8	P0410	Idle Air Bypass Valve (IABV) Fault	2	1.Check IABV wiring and connections. 2.Using Ohm meter, check IABV resistance (24.7-27.3 ohms). Note-IABV is powered by the battery

Blinks	Failure Codes	Fault Description	Priority	Fault Management
9	P0505	Idle Air Bypass Control Range Fault	2	1-Check idle bypass valve opening is within specs. (brand new: above 35 degree used: <180 degree) 2.Check throttle body for carbon deposits. 3.Check Idle Throttle Valve for sticking and check adjustment of screw. 4. Check intake for air leaks 5. Replace the IABV 6. Note-IABV is powered by the battery
10	P0251	Fuel Injector Fault	2	1.Use ohm meter to measure resistance (13.78-15.23 ohms. 2.Check injector wiring and connections. 3.Check battery wiring and connections. Note-Fuel Injector is powered by battery
11	P0350	Ignition Coil Fault	2	1.Verify ignition is within specs (0.57-0.66 ohms) 2.Check wiring and connections. 3.Check condition of battery wiring and connections.
12	P0230	Fuel Pump Relay Fault	2	1. Check wiring and connections. 2. Listen for relay clicking when ignition is switched on.
13	P0219	Engine Over Speed Condition Fault	2	1. Engine exceeded 10,500 rpm redline. 2. Check belt. 3. Check spark plug. Use resistor plug "R".
14	P1560	Sensor Power Supply Fault	2	1.Use volt meter to check ECU pin 18 (5 volts DC) or use diagnostic tool (5 volts +/- 0.1 volts). 2.Check voltage difference between pin 16 and pin 18 (5 volts DC). 3.Cylinder head Temperature Sensor, Intake Air Temperature Sensor, and TPS use the same power supply. If getting more than three faults, ECU could be faulty.
15	P0700	Engine RPM/CVT Fault	2	1.If engine exceeds 3250 rpm at idle, ECU will lower engine idle speed or shut engine down. 2.When start the engine, Do NOT use throttle 3.Check throttle cables and throttle body for sticking and binding. 4.Check throttle idle voltage (0.68 volts +/- 0.03 volts). 5.Check CVT belt.
16	P0115	Cylinder Head Thermosensor Fault	2	1.Use voltmeter to check resistance (cold 2445.2-5458.3 ohms). 2.Check wiring and connections for ECU pin 9.
18	P0650	Check Engine Light Fault	3	1.Check bulb (1.7w 12 volt DC). 2.Check ECU wiring and connections pin 4.
21	P0105	Atmosphere Pressure Sensor Fault	2	1.Check sensor voltage (5 volts +/- 0.1 volt). 2.Check ECU wiring and connections pin 8. 3.Use Diagnostic Tool to check pressure (101.3 +/- 3 KPA).
22	P1110	Bank Angle Detector Sensor Fault	2	1.Use KYMCO AFI Diagnostic Tool Check sensor voltage (3.5~4.7 volts). 2.Check ECU wiring and connections pin 11. 3.If still getting fault, replace sensor.
23	P0136	O2 Sensor Fault	1	1.Check sensor resistance (Standard: 6.7~9.5Ω @20℃~30 ℃). 2.Check ECU wiring and connections pin 10. 3.If still getting fault, replace sensor.
24	P0141	O2 Heater Sensor Fault	2	1. Check ECU wiring and connections pin 14. 2. If still getting fault, replace sensor.
25	P0171	Close loop Fault	1	1. Check wiring and connections pins 10 and 14. 2. If still getting fault, the injector probably injected more fuel or inlet air adnormal. Check if the injector is cloged, if the valve timing is correct or valve leaking, if the piston and ring piston is damaged….and so on.

FAILURE CODES LIST

With Special Tool

See the Fuel Injection Diagnostic Tool topic.

Self-Diagnosis Reset Procedure

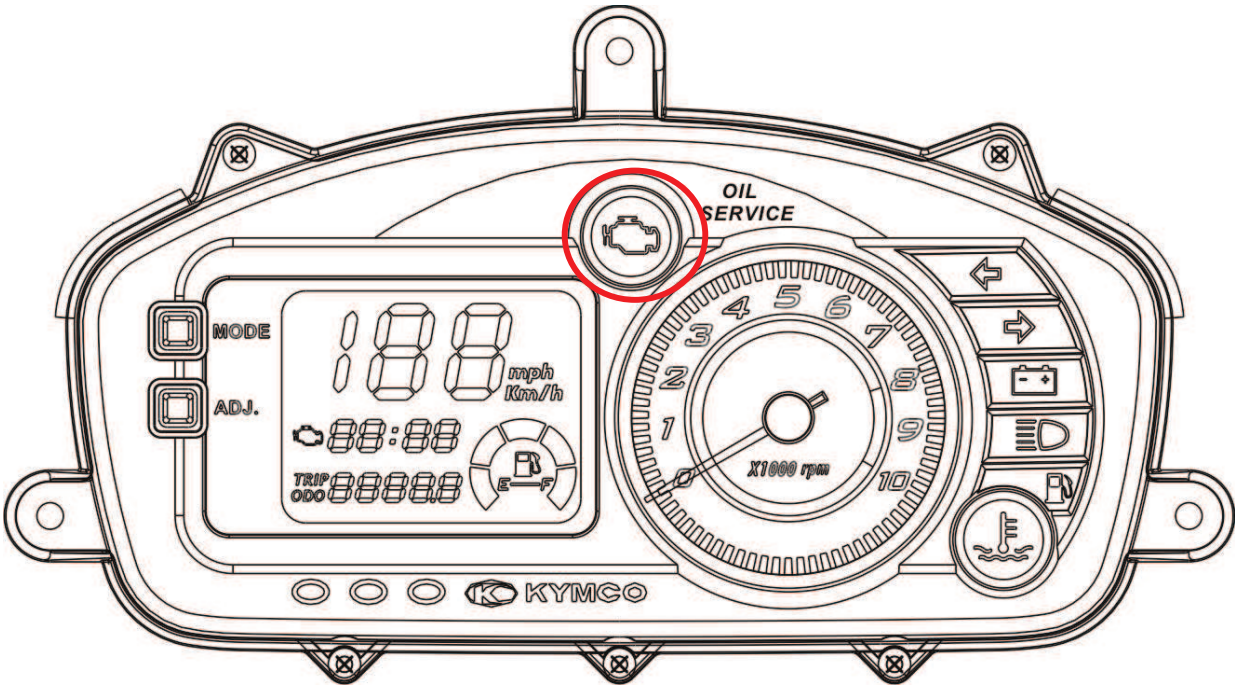
Note: The self-diagnosis cannot be reset when has still problem inside the system.

After excluding trouble, how the DTC can be cleared? Confirm the failure is excluded.

- Turn on the ignition switch but the engine not stated and keep the CELP light up for four times. If it is off automatically, it means the historical DTC is cleared automatically.

- Check again to confirm DTC is excluded.

- Turn on the ignition switch again. When there is no residual historical failure code. Starting the engine and if no failure lamp is on or flashing, it is Okay.



Spark Plug Anti-Flood

When no failure code occurs and pressing starter switch repeatedly can still not start the engine the spark plug maybe fouled be a flooded engine. Perform the spark plug anti-flood to purge the fuel in the engine.

Make sure the battery voltage is greater than 12 V.

1. Close the throttle, turn the ignition switch to ON.

2. Open and hold the throttle fully, pressing starter switch more than 3 seconds.

TPI/ABV Reset

- After replacing throttle body or engine overhauled, It will change the efficiency of air intake so must be do the TPI/ABV initialization process.

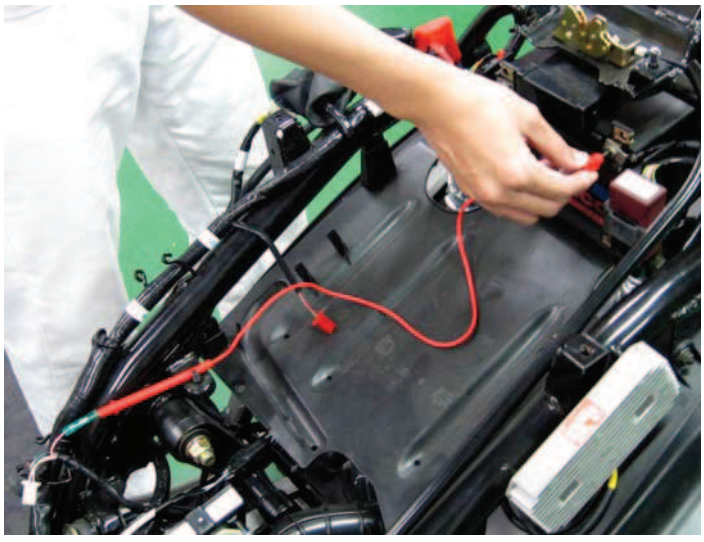
- If the throttle cable is being moved when the throttle body is installed it can cause a hard to start engine or incorrect idling speed.

- ABV controls air bypass valve to obtain a smooth idling speed. The ECU may record the incorrect ABV position when the ECU or the throttle body has been reinstalled. It can cause engine stop, hard to start engine or rough idling speed.

The throttle position sensor (TPS) and air bypass valve (ABV) have to be reset when throttle body or ECU have been reinstalled.

TPI/ABV RESET PROCEDURE

- When the vehicle is started, turn off the ignition and Key On again at engine stop working. Use the testing rod or wire clip short Reset (Pink color) wire to touch the negative wire or the body frame to complete TPI/ABV resetting procedure.



Horn

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

Remove the front cover. See the Front Cover for more information.

Disconnect the horn connectors from the horn. Connect a 12 V battery to the horn terminals. The horn is normal if it sounds when the 12 V battery is connected across the horn terminals.

To test the horn switch see the Switches topic.

Lights

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

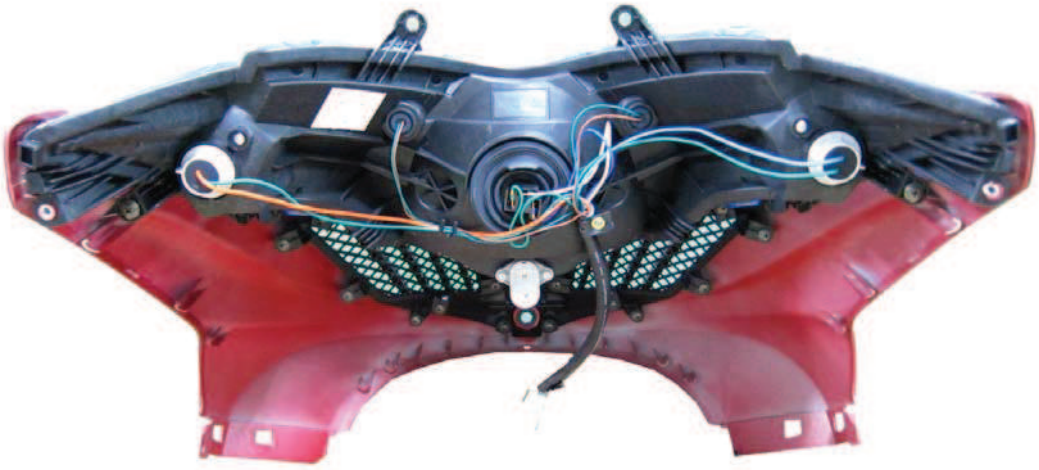
For general information and troubleshooting for the lights see the Electrical Systems chapter landing page.

Headlight

Bulb Replacement

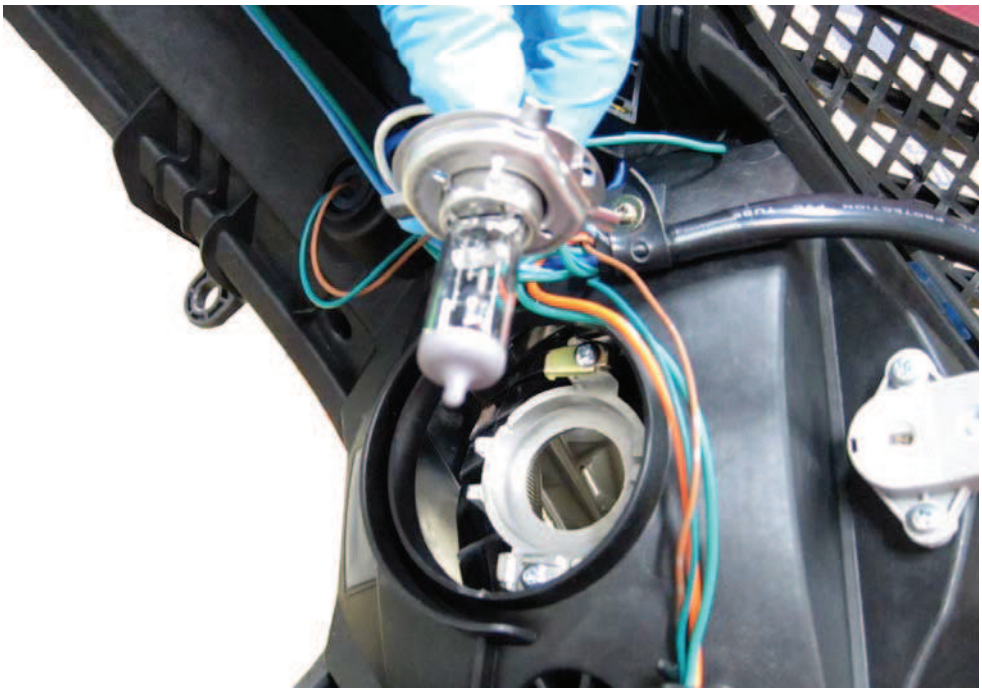
Make sure the machine has been off for several minutes before removing the headlight bulb.

Remove the front cover. See the Front Cover topic for more information.



Slide back the rubber headlight covers.

Remove the clip with a screwer.



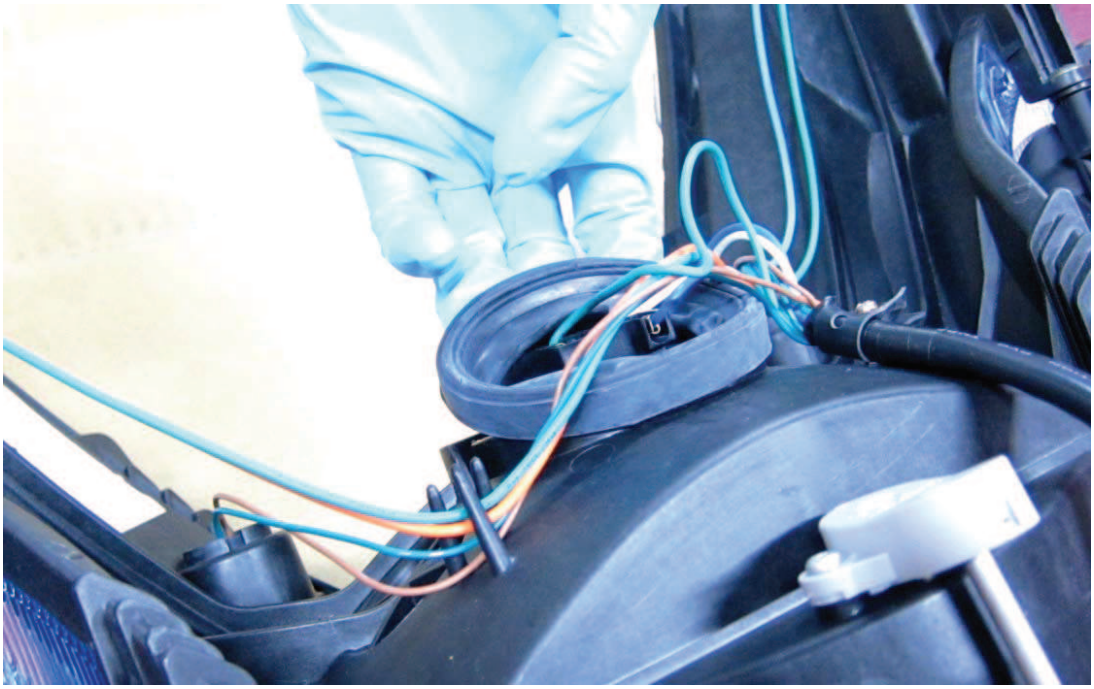
Remove the headlight bulbs from the lamp.

Unplug the bulb from its connector. Do not touch the bulb with your bare hands if you plan to reuse it.

Do not touch your new bulb with your bare hand. The oils on your hand can cause an early failure of the headlight bulb. If you do touch the bulb with your bare hand wipe off the bulb with a clean shop towel and alcohol.

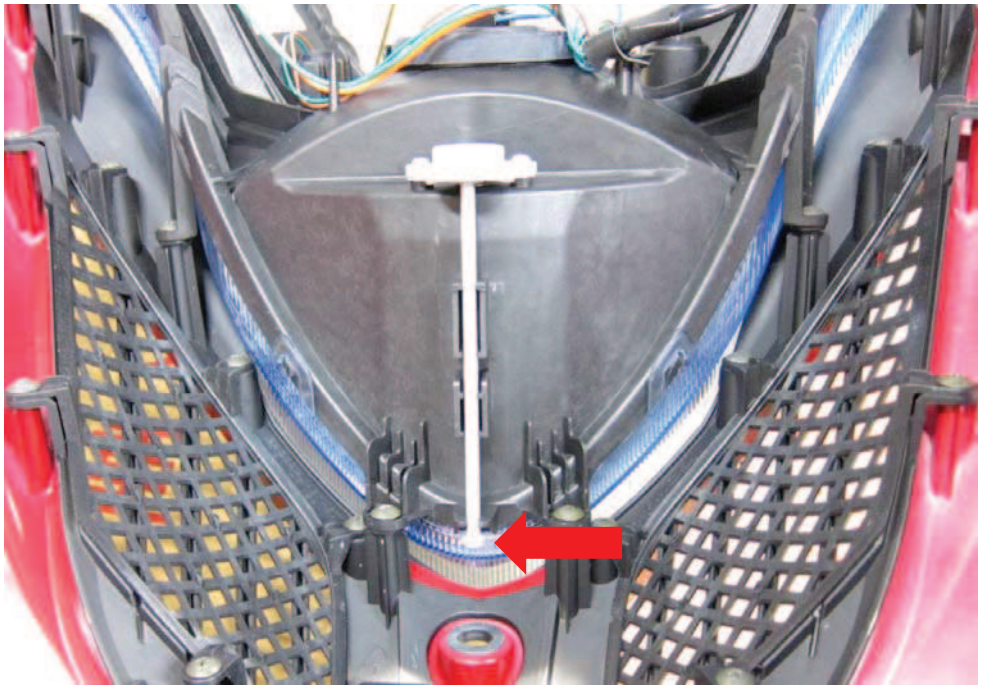
Plug the connector into the bulb.

Fit the bulb into the lamp.



Fit the rubber cover into place. Make sure the rubber covers are secured in place.

Aim



Turn the screws to adjust the head light aim as needed.

Front Turn Signals

Remove the front cover. See the Front Cover topic for more information.

Turn the turn signal bulb socket counterclockwise and free it from the lamp.

Push in on the bulb and rotate it clockwise to remove if from the socket. Insert the new bulb. Push down on the bulb and rotate it counterclockwise to lock it into place.

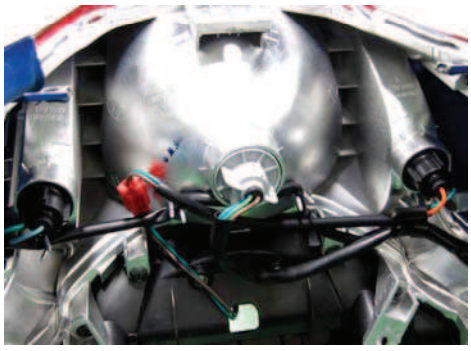
Insert the turn signal bulb and socket into place. Turn the socket clockwise to lock it into place.

Taillights

Bulb Replacement

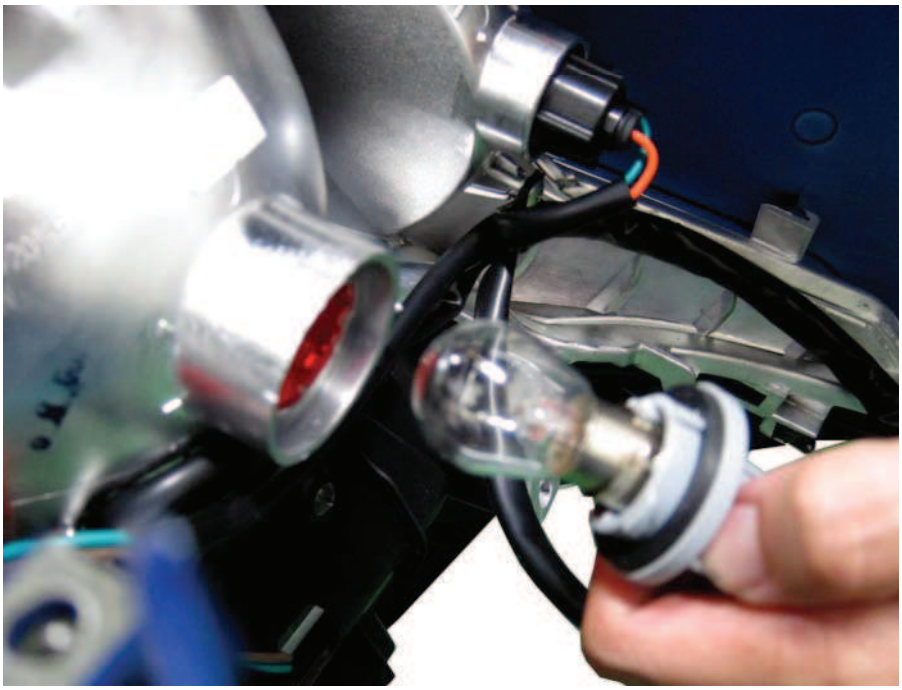
Lift the seat. See the Seat topic for more information.

Remove the turn signal sockets with bulbs from the turn signal lamps.



Remove the taillight socket with bulb from the tail light housing by turning it counterclockwise.

Replace the bulbs as needed. Push in and turn the bulbs counterclockwise to remove the and clockwise to install them.



Install the taillight socket into the lamp and turn it clockwise to lock it into place.

Rear Turn Signals

Remove the rear cover. See the Body Cover topic for more information.

Turn the socket counterclockwise and remove it from the lamp.

Push in the bulb and turn it counterclockwise. Remove the bulb. Insert the new bulb and turn it clockwise to lock it in place.

License Tag Light

Remove the license tag light from the mud flap. See the Body Cover topic for more information.

Pull the rubber tag light socket out of its housing. Pull the bulb straight out and insert a new one.

Insert the rubber socket into the housing. Install the body cover. See the Body Cover topic for more information.

Relays

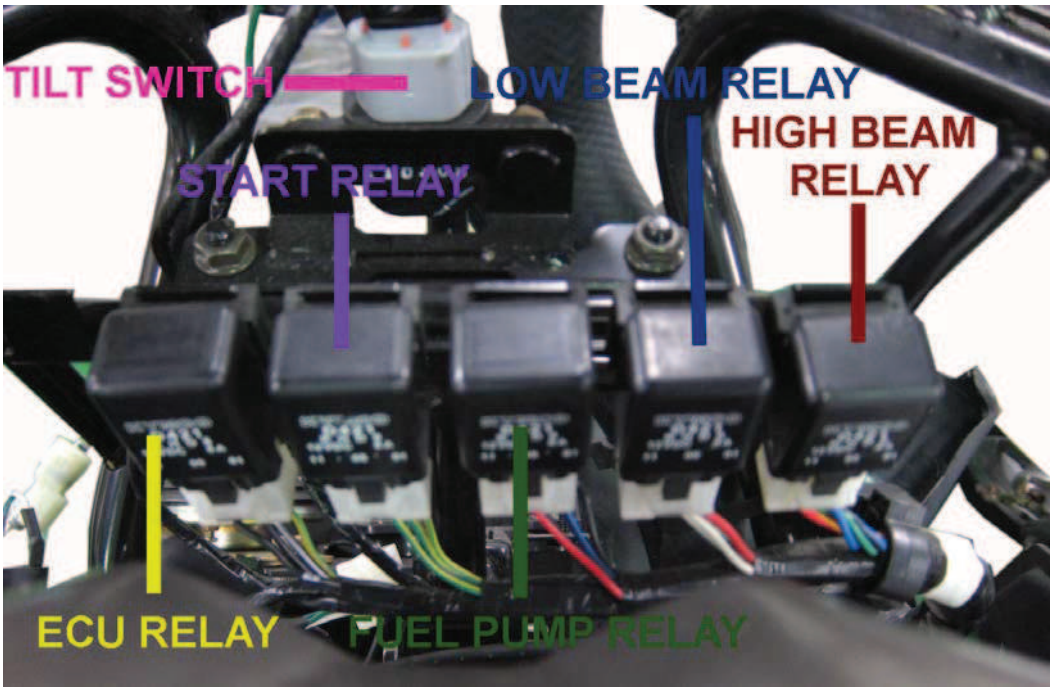
SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Starter Relay

See the Starting System topic for more information.

High/Low Beam Relays

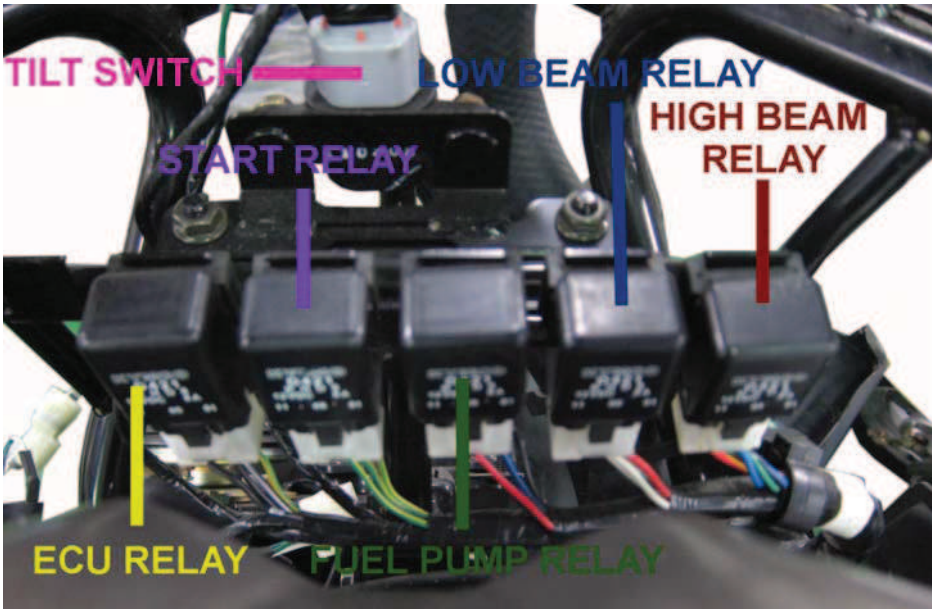
Remove the front cover. See the Front Cover for more information.



Remove and disconnect the high beam relay. The high beam relay is on the right.

Fuel Pump Relay

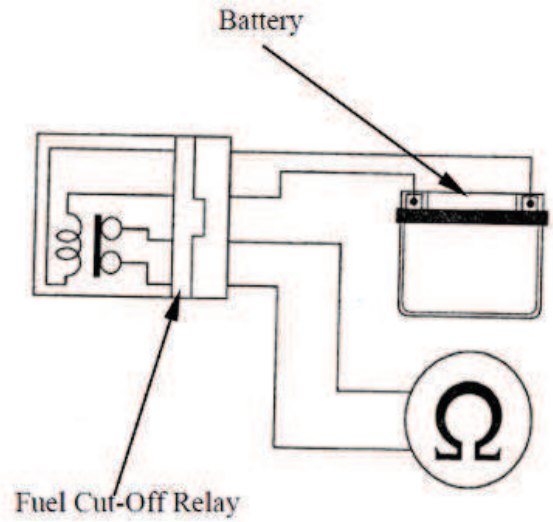
Remove the front cover. See the Front Cover for more information.



The fuel pump relay is located in the front under the dash panel.
Remove and disconnect the fuel pump relay.

Inspection

Use a digital multimeter to inspect the fuel cut-off relay. Set the multimeter to read ohms of resistance.



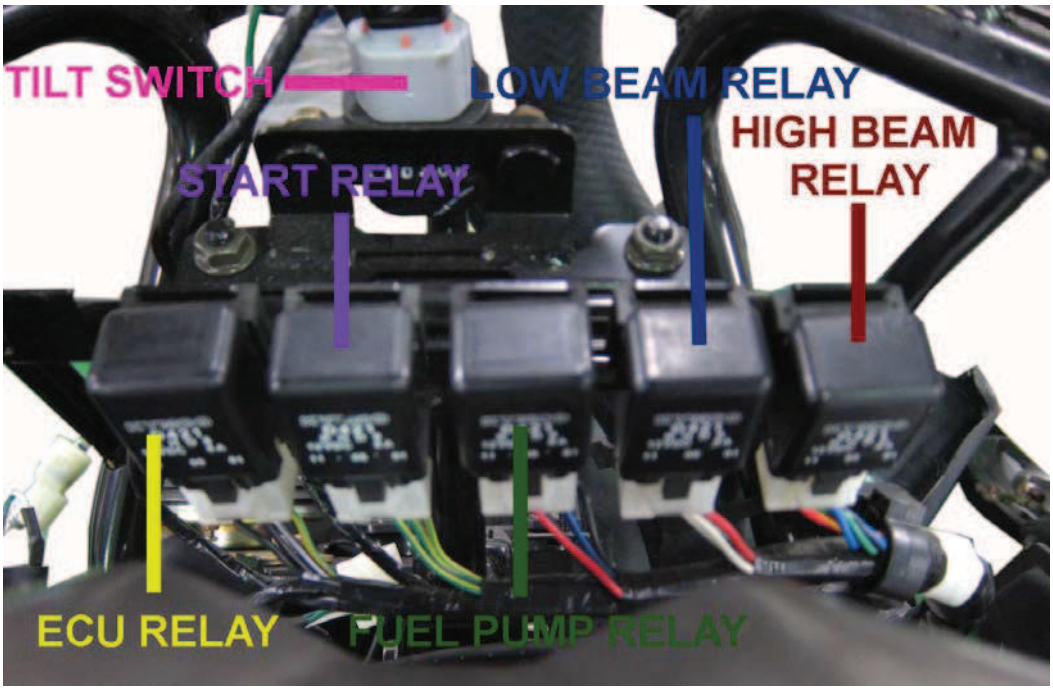
Connect the multimeter to the fuel cut-off relay connector terminals.
Connection: Black/Red - Red/Black

Connect 12 V battery with the fuel cut-off relay connector.
Connection: Blue/Black – Black/Red

There should be continuity only when 12 V battery connected.
If there is not continuity when the 12 V battery is connected, replace the fuel cut-off relay.

ECU Relay

Remove the front cover. See the Front Cover for more information.



The ECU relay is located in the front under the dash panel, to the left of the start relay. Remove and disconnect the ECU relay. Disconnect the dash if needed. See the Dash topic for more information.

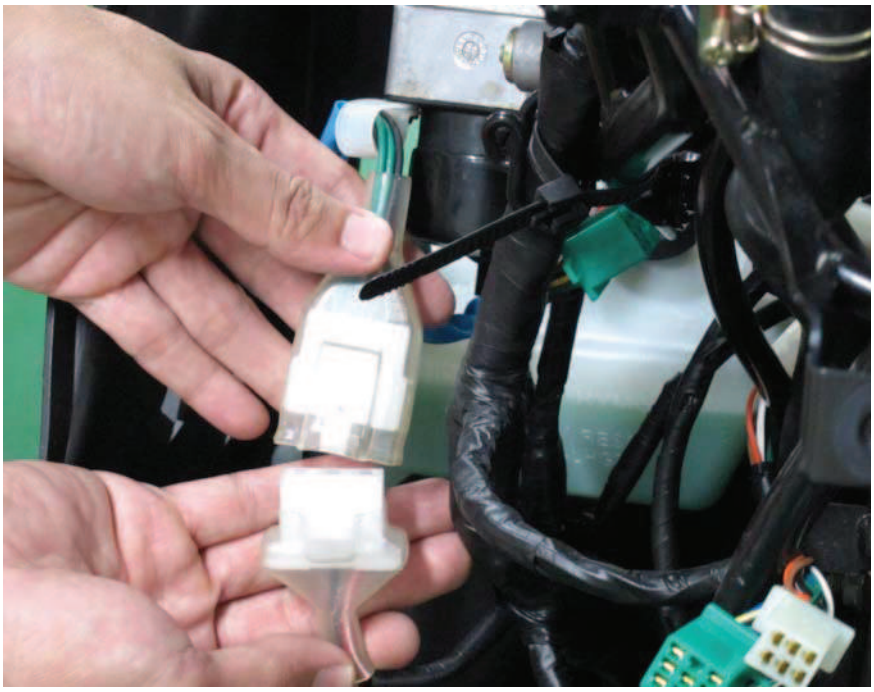
Switches

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

You will need a digital multimeter to inspect the switches.

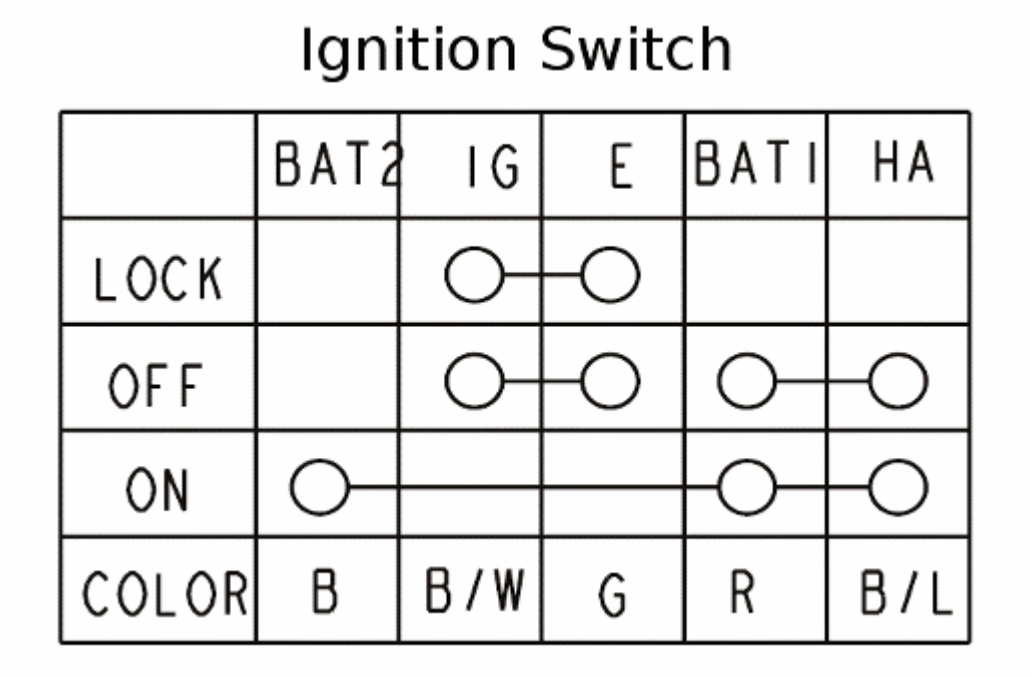
Ignition Switch

Remove the front cover. See the Front Cover topic for more information.



Unplug the white six-pin ignition switch connector.

Use a digital multimeter to check for continuity to inspect the ignition switches. Continuity should exist between the wires as indicated.

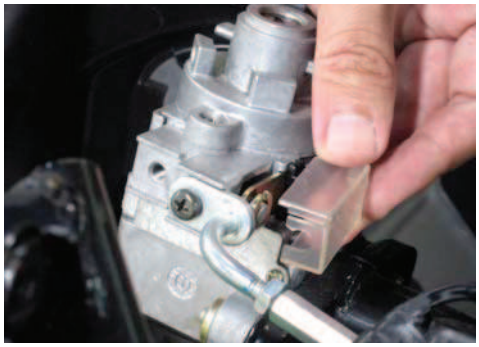


Removal

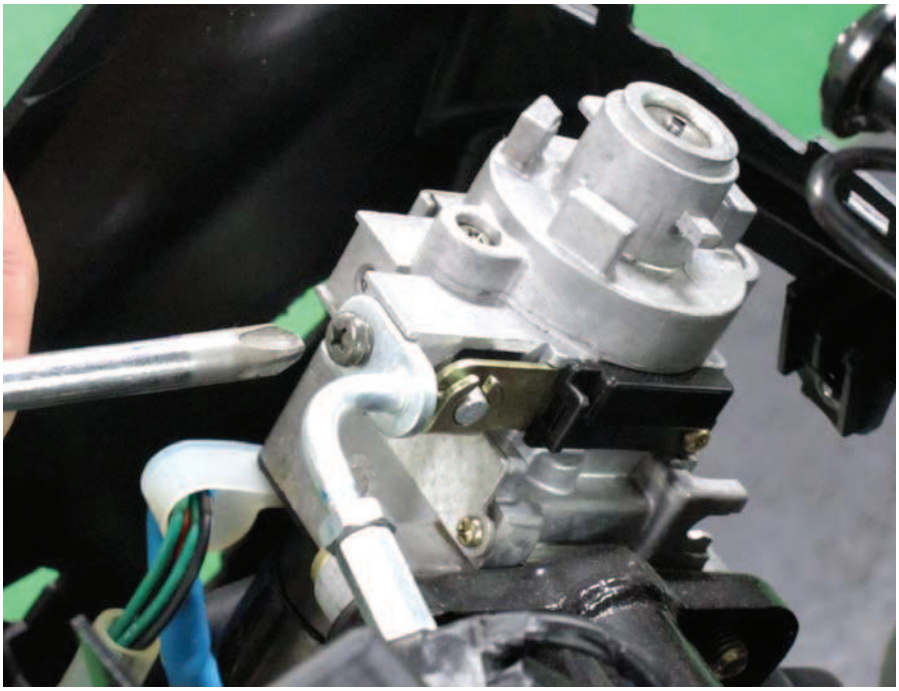
Remove the front cover. See the Front Cover topic for more information.

Remove the front center cover. See the Front Center Cover topic for more information.

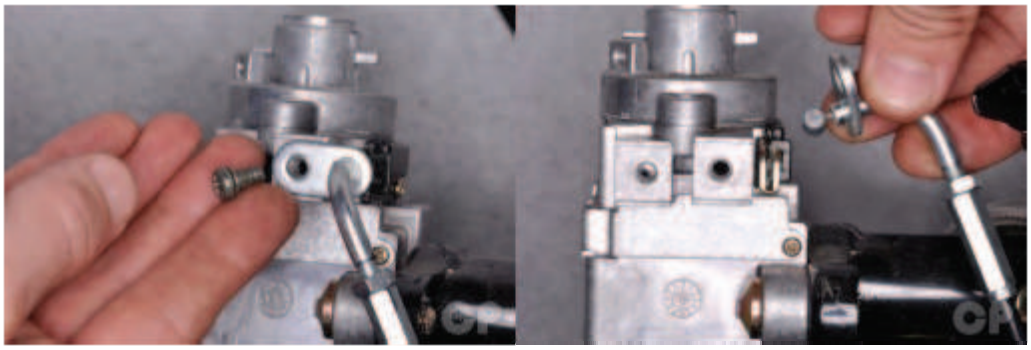
Remove the dash. See the Dash topic for more information.



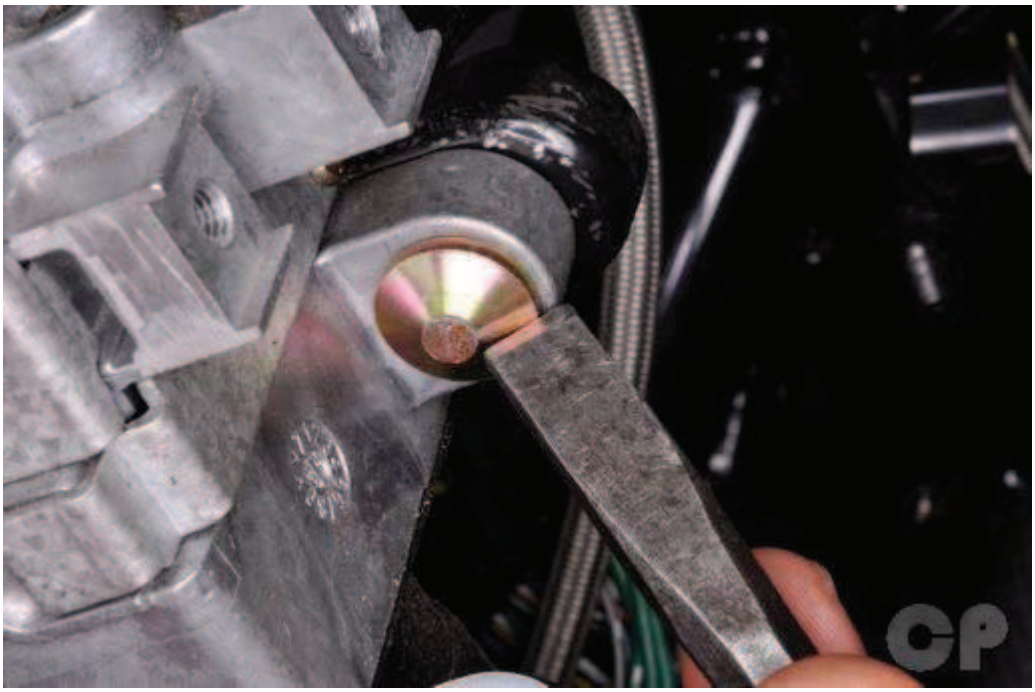
Remove the seat latch cable cover.



Loosen the seat latch cable screw with a #2 Phillips screwdriver.



Remove the seat latch cable screw and free the seat latch cable from the ignition switch.

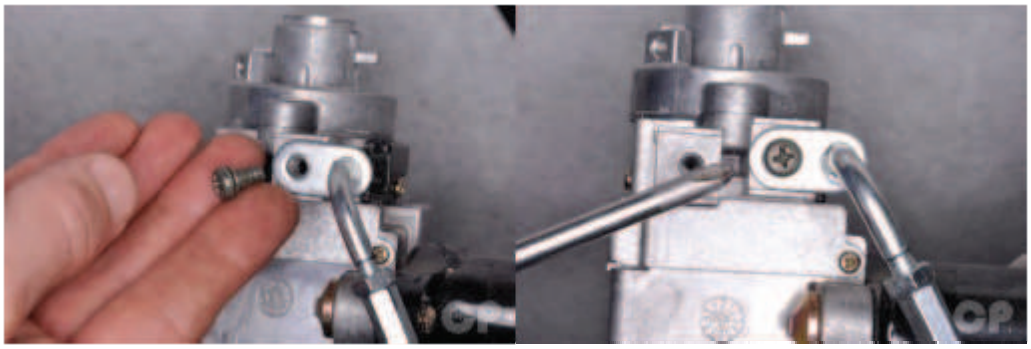


To remove the anti-tamper bolts use a punch and a hammer to strike the bolts so that they rotate loose. Turn the bolts clockwise to loosen them.

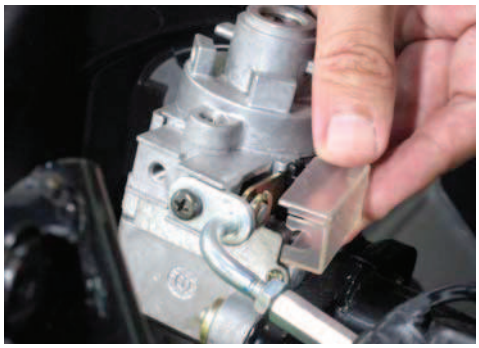
Installation

Install new anti-tamper bolts and tighten them securely.

Fit the end of the seat latch cable into the ignition switch.



Install the seat latch cable screw and tighten it securely with a #2 Phillips screwdriver.



Install the seat latch cable cover.

Tilt Switch

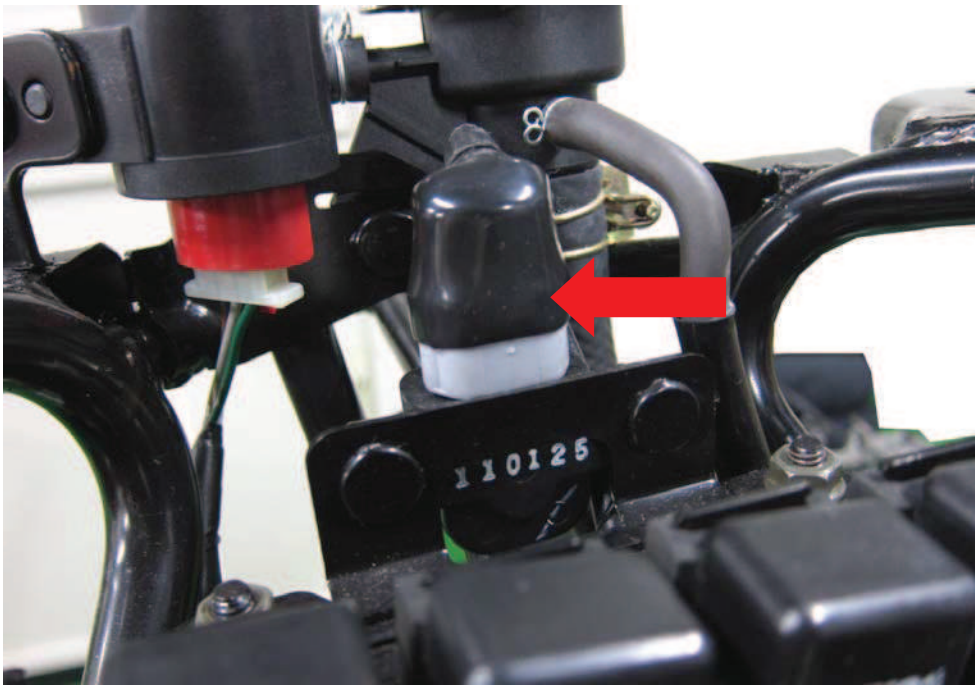
Remove the front cover. See the Front Cover topic for more information.

Remove the front center cover. See the Front Center Cover topic for more information.

Support the scooter level surface.

Put the side stand up and engine stop switch on “RUN”. Turn the ignition switch to “OFF”.

Note: Do not disconnect the tilt switch connector during inspection. The capacity of battery must be fully charged.



The tilt switch is located in the front near the radiator cap.


Remove the two tilt switch nuts with a 10mm socket.

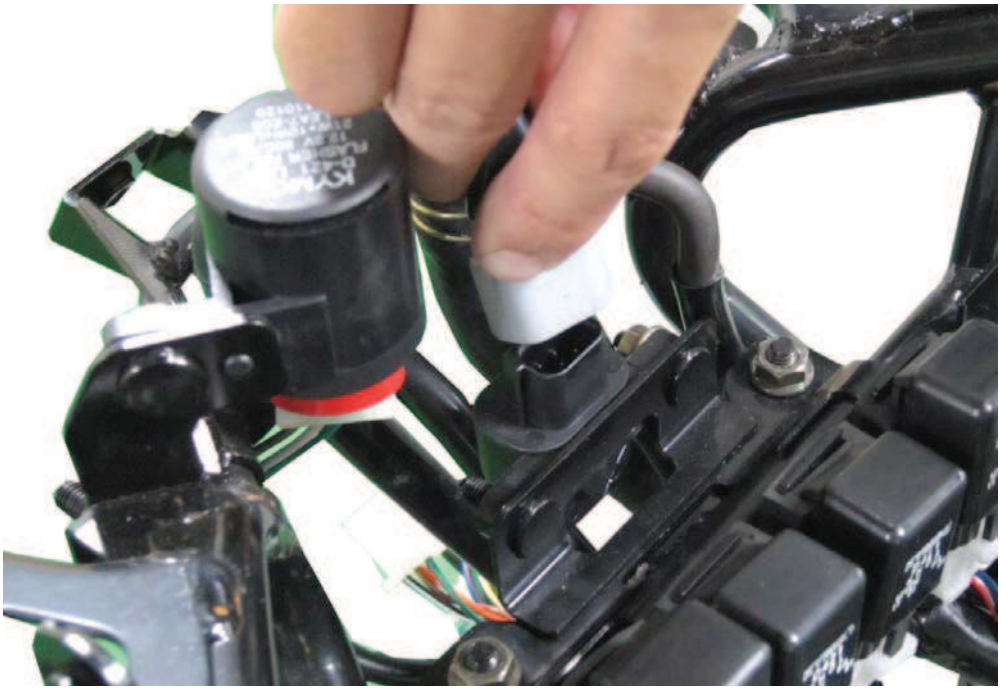
Place the tilt switch vertical as shown and the ignition switch “ON”. Measure the voltage as below.

Terminal	Standard
Violet/Red (+) ~ Green/Pink (-)	5 V (ECU voltage)
Black/Blue (+) ~ Green/Pink (-)	0.4 - 1.4 V less

Incline the tilt switch 65±10 degrees to the left or right at the ignition switch “ON”. Measure the voltage as below.

Terminal	Standard
Violet/Red (+) ~ Green/Pink (-)	5 V (ECU voltage)
Black/Blue (+) ~ Green/Pink (-)	3.7 - 4.4 V

Note: Repeat this test, first turn the ignition switch to “OFF”, then turn the ignition switch to “ON”.

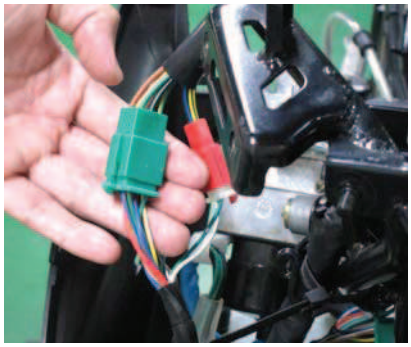
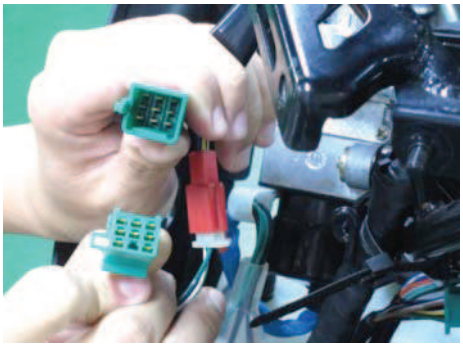


Disconnect the connector to remove the tilt switch.

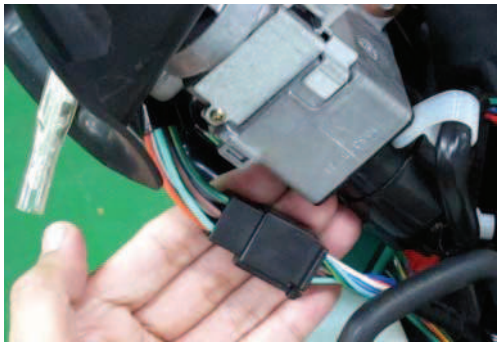
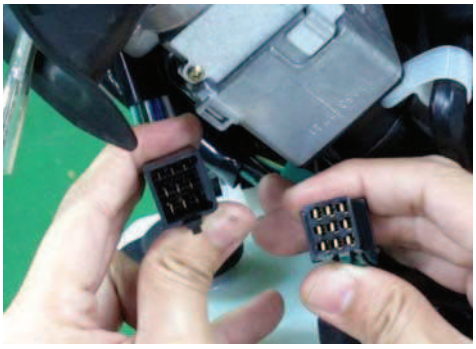
Handlebar Switches

Remove the front cover. See the Front Cover topic for more information.

To remove the handle bar switches see the Handlebar topic.

Unplug the green connector for the right handlebar switches.

Unplug the black connector for the left handlebar switches.

Right Handlebar Switches

Use a digital multimeter to check for continuity to inspect the handlebar switches. Continuity should exist between the wires as indicated.

Lighting Switch

	BAT3	PO	TL	HL
∘				
(N)				
P	○	○	○	
(N)	○	○	○	○
H	○		○	○
COLOR	BR/L	BR/W	BR	W/L

Starter Switch

	E	ST
FREE		
PUSH	○	○
COLOR	G	Y/R

Engine Stop Switch

	IG	BAT3
OFF		
RUN	○	○
COLOR	B/W	B/G

Left Handlebar Switches

Use a digital multimeter to check for continuity to inspect the handlebar switches. Continuity should exist between the wires as indicated.

Passing Switch

	BAT4	HI
FREE		
PUSH	○	○
COLOR	BR/L	L

Horn Switch

	BAT4	HO
FREE		
PUSH	○	○
COLOR	BR/L	LG

Turn Signal Switch

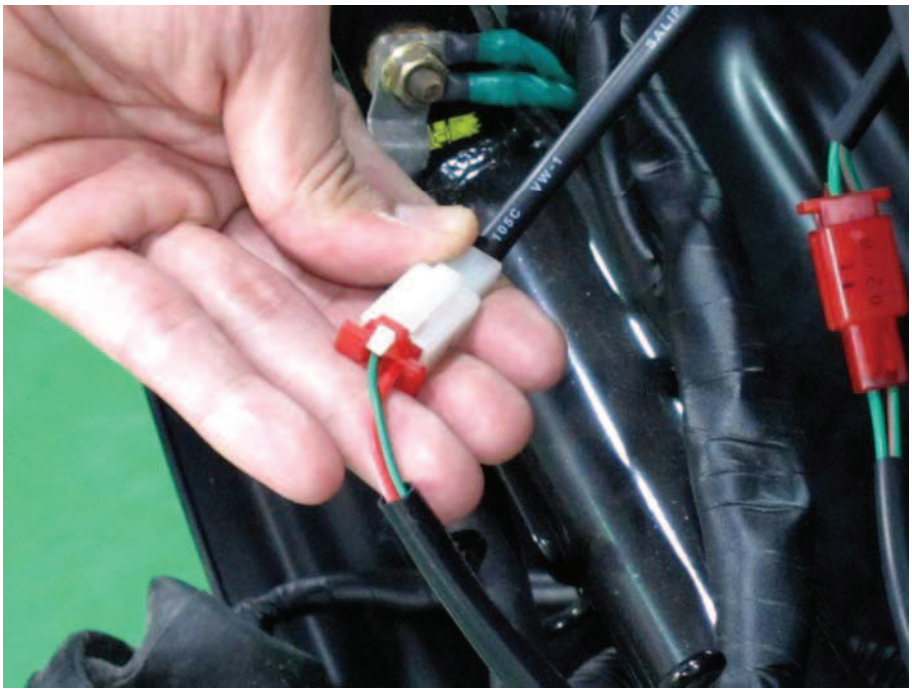
	WR	R	L
R	○	○	
N			
L	○		○
COLOR	GR	SB	O

Dimmer Switch

	HL	HI	LO
LO	○		○
(N)	○	○	○
HI	○	○	
COLOR	W/L	L	W

Luggage Box Switch

Remove the luggage box. See the Luggage Box topic for more information.



Unplug the two-pin luggage box light switch connector with green and green/red wires.

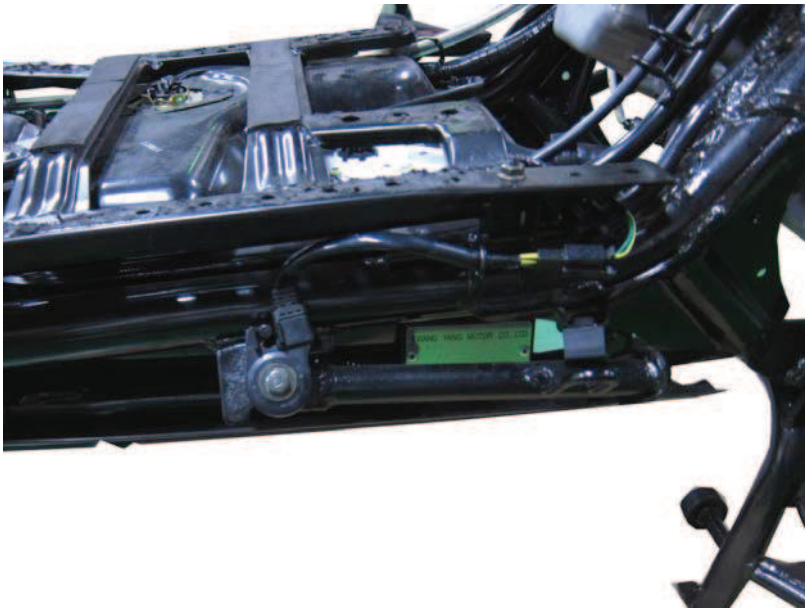
Side Stand Switch

Remove the luggage box. See the Luggage Box topic for more information.

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.

To remove the side stand switch see the Stands topic.

Brake Light Switches

Test the front and rear brake light switches in the same manner. Use a digital multimeter to check for continuity.

Remove the upper handlebar cover. See the Handlebar Covers topic for more information.

Unplug the brake light switch connectors.

Check for continuity between the brake light switch connectors. There should be continuity when the lever is pulled and none when released.

To remove the brake light switch see the Master Cylinder topic.

Remove the dash. See the Dash topic for more information.

Thermostatic Switch

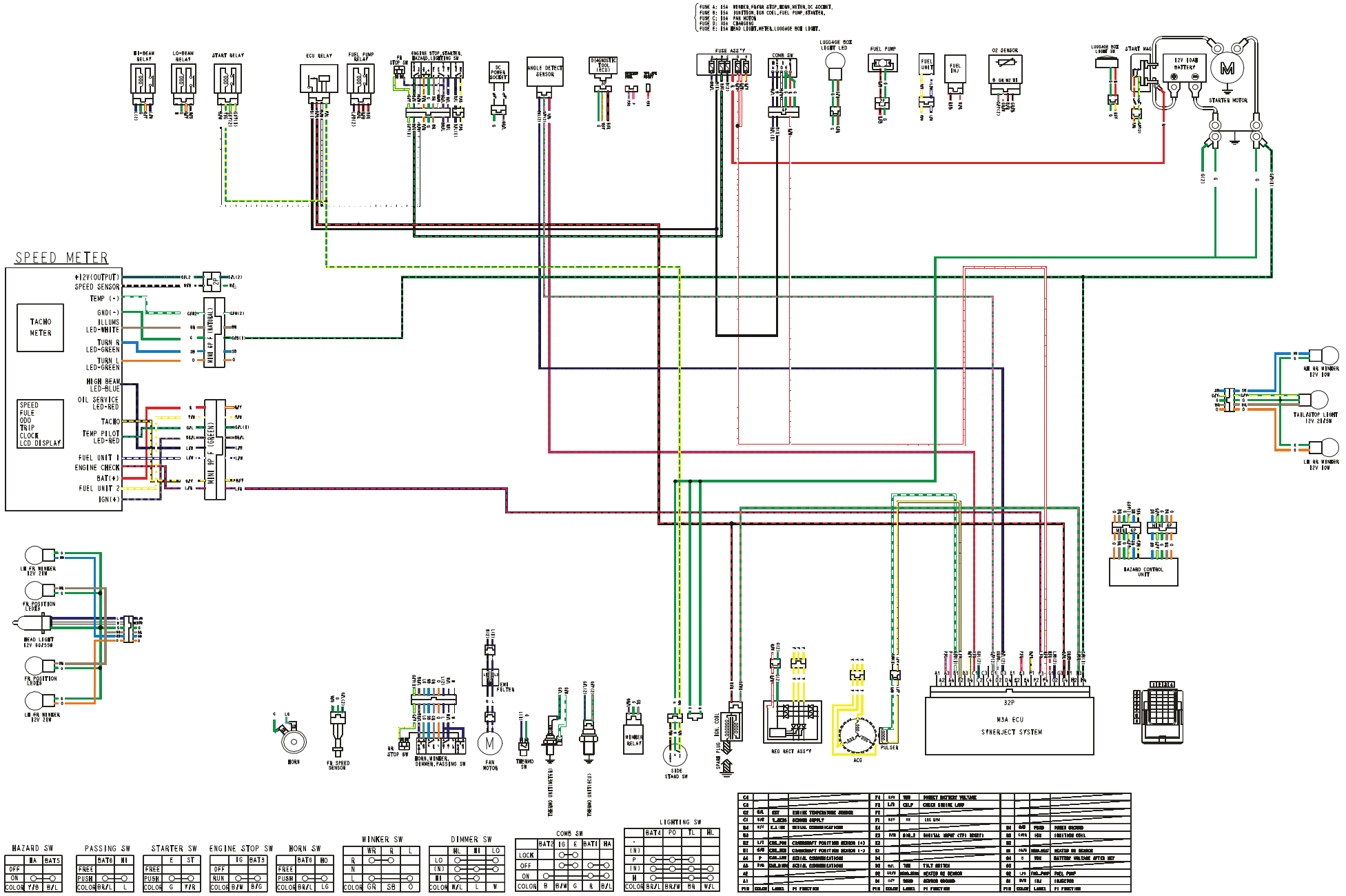
See the Radiator topic.

KYMCO G-Dink 125i Specifications

General Information

Item	Standard		
Charging voltage of battery	> 12V		
Voltage from the ECU to every sensor	5±0.1V		
Fuel injector resistance (20°C/68°F)	10.6Ω~15.9Ω		
Throttle position sensor voltage	Idle (0°) = 0.23±0.05V Throttle fully (>90°) >3.27V		
O^2 Sensor	O^2 Sensor heater resistance (two white wires)		6.7Ω~9.5Ω
	Voltage	Air/Fuel < 14.7 (Rich)	> 0.80V
		Air/Fuel > 14.7 (Lean)	< 0.18V
Crank position sensor (Pulser) resistance (20°C/68°F)	96 Ω~144 Ω		
Inductive ignition coil resistance (20°C/68°F)	0.55Ω~0.75Ω (for primary coil)		
Roll sensor voltage	Normal: 0.4V~1.44V Over 65° fall down: 3.7V~4.4V		
Idle speed	1800±100 rpm		
Fuel Pump resistance	1.0Ω~ 6.0Ω		
Fuel Pump Output pressure	2.5 Bar		
Fuel unit resistance (20°C/68°F)	F: about 7Ω±3Ω E: about 95Ω±5Ω		
Working Temperature	>80°C		
Water Temperature Sensor resistance (20℃~30℃)	2.075 kΩ±10%		

IGNITION SYSTEM G-DINK 125i



LIGHTING SYSTEM G-DINK 125i