

650 TK-G



CF650-6

CF650J-2

CF650J-3

SERVICE MANUAL

 **CFMOTO**

FORWARD

Thank you for choosing a CFMOTO vehicle.

Welcome to join our worldwide family of CFMOTO owners. We proudly produce exciting products such as sports vehicles, utility vehicles, and recreational vehicles.

- All terrain vehicles (ATVs)
- Utility vehicles (Patrol, forest protecting and hunting)
- Motorcycles
- Travelling motorcycles
- Vehicles for government purpose

CFMOTO, a company which is specialized in production of liquid-cooled engine, is the top-level manufacturer in China. Compared to same displacement of air-cooled engine, CFMOTO engine cooling effect is better, oil temperature can be adjusted more freely, more powerful and lower fuel consumption, longer engine working life. This motorcycle is designed not only for working, but also for fun and adventure.

For safe and enjoyable operation of your vehicle, be sure to follow the instructions and recommendations in this owner's manual. Your manual contains instructions for minor maintenance. Information about major repairs is

outlined in the service manual and should be performed only by CFMOTO service dealer and technician authorized by CFMOTO.

Your CFMOTO dealer knows your vehicle best. Be sure to return to your dealership for vehicle service.

This Model (CF650-6/CF650J-2/CF650J-3) is subject to standard: Q/CFD 013

Compiling the owner's manual is accordance with standard: GB/T9969-2008 and GB/T19678-2005

Zhejiang CFMOTO power Co., Ltd reserves the final explanation rights of the owner's manual

IMPORTANT SAFETY INFORMATION

Your safety, and the safety of others, is very important. To help you make informed decisions about safety, we have provided operating procedures and other information on labels and in this manual. This information alerts you to potential hazards that could hurt you or others.

You will find important safety information in a variety of forms, including:



This signal means “You **WILL** be **KILLED** or **SERIOUSLY HURT** if you don’ t follow instructions” .



This signal means “Vehicle could be **Damaged** if you don’t follow instructions” .



This signal means “**More efficient and convenient driving points**”.

**NOTE**

This motorcycle can only be used by eligible riders with proper way. At the same time, please pay attention to following instructions.

Do not make any modification on this motorcycle without our approval. Any modification about this motorcycle or electric components will cause potential side effect on performance, emission and noise control.

Be sure to follow your local traffic rules and laws when ride.

CF650J-2 and CF650J-3 are for police use. “For police use” mark in this manual stands for CF650J-2/CF650J-3 special equipment.

All information in this publication is based on the latest production available at the time of approval for printing. CFMOTO reserves the right to make changes at any time without notice and without incurring any obligation.

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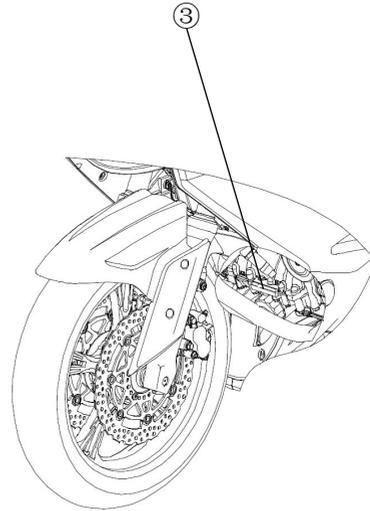
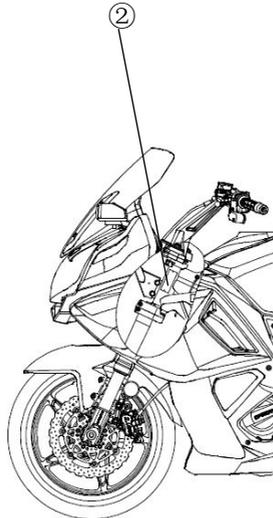
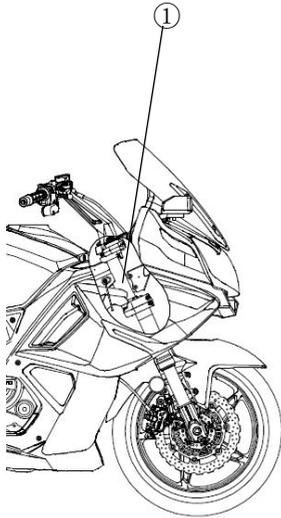
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VIN AND ENGINE SERIAL NUMBER

Be sure to record VIN number, engine serial number and name plate number for the maintenance purposes. At the same time, keep spare key in a safe place. If two keys are missing, then you have to replace the whole set of locks.



① Vehicle Identification Number: _____

② Name Plate: _____

③ Engine Serial Number: _____

SPECIFICATIONS

Performance

| | |
|------------------|-------------------|
| Max. Power | 52kW/8750r/min |
| Max. Torque | 62N · m/7000r/min |
| Min. Turn Radius | 2.8m |

Size

| | |
|------------------------|----------------------------------|
| Length: | 2210mm / 2330mm (For police use) |
| Width: | 998mm |
| Height: | 1310mm |
| Wheel Base: : | 1415mm |
| Seat Height: | 780mm |
| Min. Ground Clearance: | 140mm |
| Dry Weight: | 252kg / 265kg (For police use) |

Engine

| | |
|---------------|---|
| Type: | Two cylinders in line, 4-strokes, DOHC, 8 valves, liquid-cooled |
| Displacement: | 649.3mL |
| Bore×Stoke: | 83mm×60mm |

Compression Ratio: 11.3: 1

Starting System: Electric starter

Number of Cylinder: 2

Firing Order: from left to right, 1 – 2

Carburetion System: EFI (electronic fuel injection)

Ignition System: ECU

Ignition Timing (before compression to top dead point) : 10BTDC@1450r/min

(Advance angle of ignition): 33BTDC@6000r/min

Spark Plug: CR8EI

Lubricating System: Splash and pressure (semi-dry sump)

Engine Oil: Type: ELF, SAE10W-40/SJ, JASO MA2

Capacity: 2.6L

Coolant Capacity: 1.8L

Reservoir Tank Capacity: 90mL~230mL (lowest line~highest line)

Transmission

Transmission Type: 6-speed, international standard gear

Clutch: Wet, multi disc, manually

Driving System: Chain drive

Primary Reduction Ratio: 2.095

Final Reduction Ratio: 3.2

Total Drive Ratio: 5.712 (highest gear)

| | | |
|------------|-----------------|-------|
| Gear Ratio | 1 st | 2.353 |
| | 2 nd | 1.714 |
| | 3 rd | 1.333 |
| | 4 th | 1.111 |
| | 5 th | 0.966 |
| | 6 th | 0.852 |

Chassis

Castor: 24.5°

Tire Size: Front: 120/70 ZR17 (58W)

Rim size: Front: 3.50×17 MT

Rear: 180/55 ZR17 (73W)

Rear: 5.50×17 MT

Capacity of Fuel Tank: 22L

Electric Components

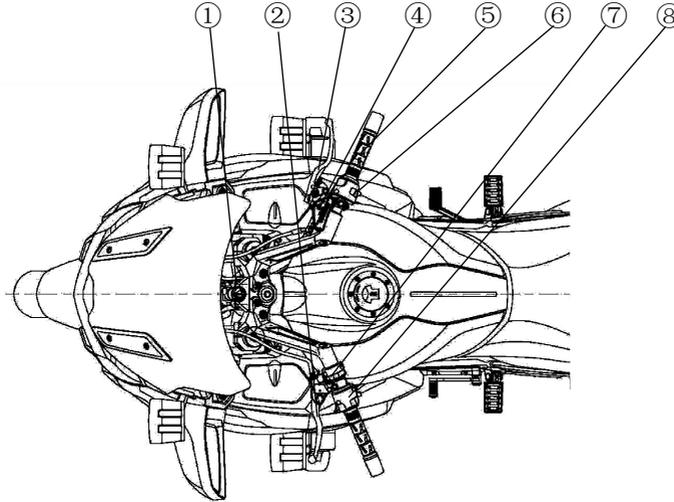
Battery: 12V10Ah

Warning System Battery (For police use): 12V6Ah

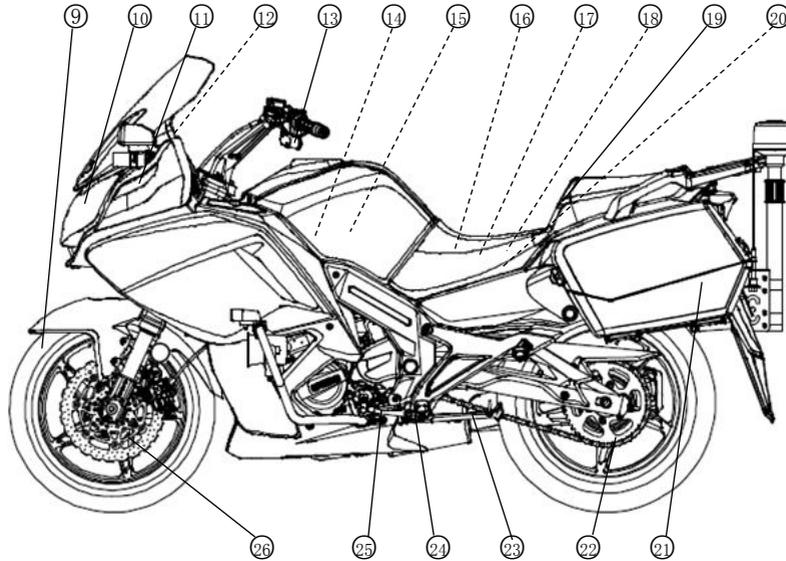
Headlight: LED

Tail/Brake Light: LED

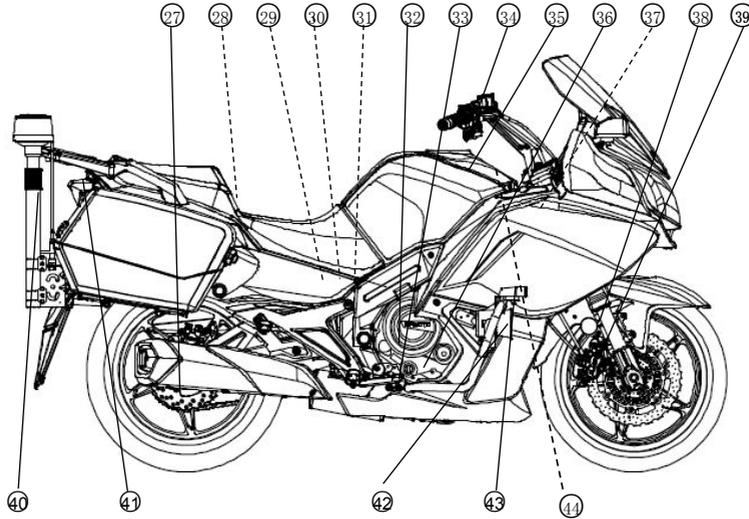
LOCATION OF PARTS



- ① Ignition Switch/Steering Lock ② Clutch Lever ③ Front Brake Lever ④ Front Brake Fluid Reservoir
⑤ Throttle Grip ⑥ Handlebar Switches, RH ⑦ Police Tools Switch (For police use) ⑧ Handlebar Switches, LH



- ⑨ Wheel ⑩ Headlight ⑪ Turning light ⑫ Dashboard ⑬ Adjustable Windshield Switch ⑭ Spark Plug
 ⑮ Air filter ⑯ Fuse Box ⑰ Battery ⑱ Rear Brake Fluid Reservoir ⑲ Seat ⑳ Tools ㉑ Side Box ㉒ Drive
 Chain ㉓ Side Stand ㉔ Side Stand Switch ㉕ Shifting Pedal ㉖ Front Brake Disc
(Broken line means it cannot be seen)



- ②⑦ Rear Brake Disc ②⑧ Seat Lock ②⑨ Rear Shock Absorber ③⑩ Regulating Cam, Rear Shock Absorber
 ③① Rear Brake Light Switch ③② Cap, Oil Filler ③③ Rear Brake Pedal ③④ Cap, Fuel Tank ③⑤ Fuel Tank
 ③⑥ Inspection Window, Engine Oil ③⑦ Reservoir Tank ③⑧ Front Fork ③⑨ Front Brake Caliper ④⑩ Rear Police
 Light (For police use) ④① Tail Light ④② Horn (For police use) ④③ Front Police Light (For police use)
 ④④ Switch, Seat Heating (**Broken line means it cannot be seen**)

LOAD AND ACCESSORIES INFORMATION

WARNING

Incorrect loading, improper installation or modification of your motorcycle may result in an unsafe riding condition. Before you ride the motorcycle, make sure that the motorcycle is not overloaded and operator has followed these instructions.

Always use CFMOTO genuine parts and accessories. Non-genuine parts or accessories, improper installation or motorcycle modification will void motorcycle warranty, negatively affect performance and even be illegal. In selecting and using parts or accessories, and loading motorcycle, you are personally responsible for your own safety and the safety of person involved.

NOTE

CFMOTO parts and accessories have been specially designed for CFMOTO motorcycles. We strongly recommend that all parts and accessories you use are genuine CFMOTO components.

Weight change and aerodynamic forces will strongly affect motorcycle performance; Operator must take extreme care in carrying cargoes, passengers and/or in fitting of additional accessories.

Important Information before Riding

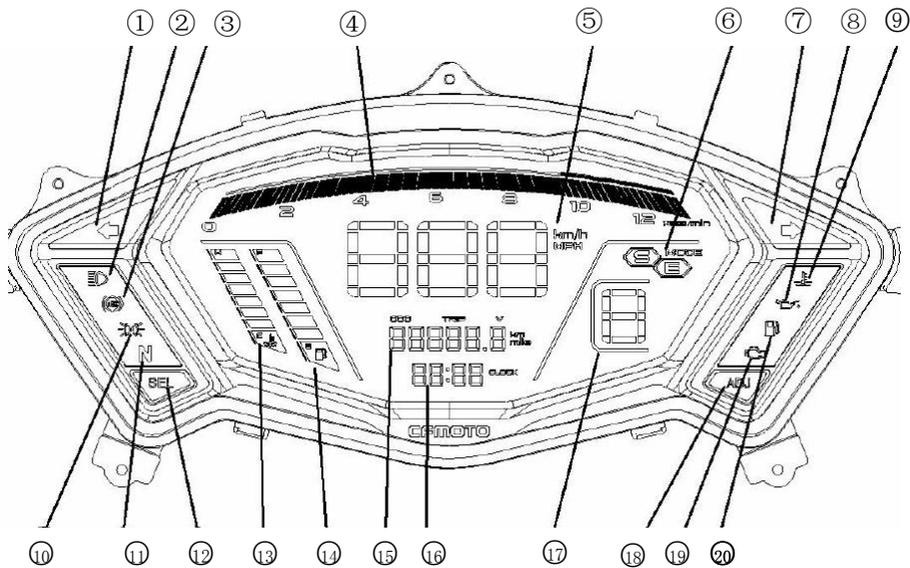
1. Any driver and/or passenger should be very familiar with motorcycle operation. Passenger can affect motorcycle controlling by improper positioning during turning corner or sudden movements. So it's important for passenger to sit still while the motorcycle is in motion and not affect the operation of motorcycle. Do not carry animals on the motorcycle.
2. Operator should instruct the passenger before riding to keep his/her feet on the passenger foot pedal and hold on the driver or grab rail. Do not carry a passenger unless he or she is tall enough to reach foot pedal.
3. All baggages should be carried as low as possible to reduce the effect on the motorcycle gravity. Baggage weight should also be distributed equally on both sides of motorcycle. Avoid carrying baggage that extends beyond the rear of the motorcycle.
4. Do not carry heavy or bulky items on a luggage rack. They are designed for light items, and overloading can affect handling due to changes of weight distribution and aerodynamic forces.
5. Do not install accessories or carry baggages that impair the performance of motorcycle. Make sure that you have not adversely affected any lighting components, road clearance, banking capability (i.e., lean angle), control operation, wheel travel, front fork movement, or any other aspect of motorcycle's operation.
6. Weight attached to handlebar or front fork will increase the mass of steering and can result in unsafe riding condition.

7. Fairings, windshield, backrest and any other large items have the capability of adversely affecting stability and handling of the motorcycle. Not only because of their weight, but also aerodynamic forces acting on these surfaces while motorcycle is in operation. Poorly designed or installed items can result in unsafe riding condition.
8. The motorcycle cannot be modified to triple-wheel motorcycle and intended to be used for towing any trailer or other vehicle. CFMOTO cannot assume responsibility for the results of such unintended use of the motorcycle. Furthermore, any adverse effects on motorcycle components caused by the use of such accessories will not be remedied under warranty.

Maximum load: Not exceed 100kg (Including the weight of operator, baggages and accessories).

General Information

Meter Instrument



①Turning Indicator, LH ②High-beam Indicator ③ABS Indicator ④Tachometer ⑤Speedometer ⑥EFI Mode Display ⑦Turning Indicator, RH ⑧Alarm Indicaor, Oil Pressure ⑨Alarm Indicator, Water Temperature ⑩Position Indictor ⑪Neutral Indicator ⑫Select Button ⑬Water Temperature Display ⑭Fuel Display ⑮Odometer ⑯Time Display ⑰Gear Display ⑱Adjusting Button ⑲MIL(Malfunction Indicator Light) ⑳Warning Indicator, Fuel Capacity

Turn Signal Indicator, LH ①

When the turn signal switch is pushed to “”, left turn signal indicator flashes.

High-Beam Indicator ②

When light switch turns to “” position and dimmer switch turns to “” position, high-beam indicator is on.

ABS Indicator ③

If ABS works normally, indicator should blink when motorcycle is stopped; Indicator will be off when motorcycle is running. If ABS is failed, indicator goes on;

Tachometer ④

The tachometer shows the engine speed in revolutions per minute. There's a “RED” zone in right side of tachometer. Engine RPM in the red zone means it is above the recommended engine speed and also above the range of good performance.

When ignition key is turned to “⓪” position, the tachometer needle momentarily point to the last reading to check its operation. If the tachometer does not work correctly, have it inspected by an authorized CFMOTO dealer.



CAUTION

RPM should not be allowed to enter into the red zone. Operation in the red zone will cause serious engine damage.

Speedometer ⑤

Speed display setting is on the right side of instrument. It shows vehicle speed.

EFI Mode Display ⑥

Change between sport mode and economic mode.

Turn Signal Indicator, RH ⑦

When the turn signal switch is pushed to “”, right turn signal indicator is on.

Alarm Indicator, Engine Oil ⑧

This indicator illuminates when engine RPM is greater than 1000r/min with oil pressure is less than 0.06MPa.

Alarm Indicator, Water Temperature ⑨

 CAUTION

Engine temperature is normal when water temperature is at C area; Engine temperature is overhigh when water temperature reaches to H end. In that case, please stop engine until it cools down. If the temperature is overhigh frequently, check rest capacity of coolant or consult your dealer.

Position Indicator ⑩

Turn ignition switch at “” position, use side stand at the same time, parking indicator will illuminate.

Neutral Indicator ⑪

Light up when the transmission in the Neutral.

Select Button ⑫

Change each item on the dashboard.

Water Temperature Display ⑬

Engine temperature is normal when water temperature is at C area; Engine temperature is overhigh when water temperature reaches to H end. In that case, please stop engine until it cools down. If the temperature is overhigh frequently, check rest capacity of coolant or consult your dealer.

CAUTION

Engine should not work for a long period when water temperature is close to H end. When water temperature indicator “” flashes, stop engine immediately and check coolant pipeline and reservoir tank capacity, or contact your dealer for consultation. Prolonged engine operation will result in severe damage from overheating when water temperature indicator is close to H end.

Fuel Display ⑭

It shows how much fuel remains. “F” indicates the total amount of fuel is 22L . When fuel level reaches to “E”, it indicates there is only about 4L fuel left, refuel as soon as possible.

 **WARNING**

When “” flashes, please fill fuel in order to protect fuel pump. Start engine after full-filled.

Odometer ⑮

Odometer records and displays the distance traveled by the vehicle; Press SELECT button to switch odometer display and trip meter display under normal display interface; Press and hold CLOCK button can reset trip meter to zero under trip meter display interface.

Time Display ⑯

24-Hour

Gear Display ⑰

6-Gear

Adjusting Button ⑱

Adjust each item.

MIL, EFI System ⑨

Indicator flashes when vehicle circuit or EFI system is failed.

Warning Indicator, Fuel Capacity ⑩

When this indicator flashes, please fill fuel.

Key

This key can be used for ignition switch/steering lock, side box, and fuel tank cap. Keep the key safe. Remove the spare key and store it in a safe place. If both original and spare keys are lost, go for your dealer for help.

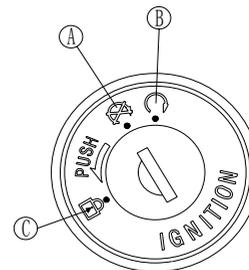
Ignition Switch/Steering Lock

This ignition switch has “”、“”、“” positions.

 : Engine is off. ALL electrical circuits are off.

 : Engine circuits are on. Electrical equipment can be used.

 : Steering locked. ALL electrical circuits are off avoiding stealing.

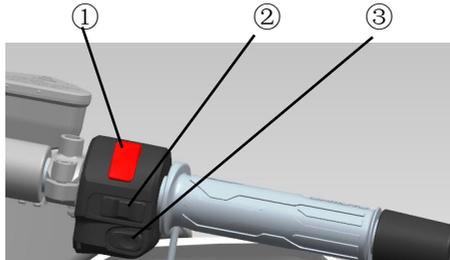


A Turn off B Turn on C Steering Locked

▲NOTE

Signal light, tail light, license light can be lit when the ignition key is in the position. When headlight is on, it's better to start the engine. Otherwise, prolonged lighting can cause battery being discharged, even damaged.

Handlebar Switches, RH



- ① Engine Stop Switch ② Illumination Switch ③ Starting Button

Engine Stop Switch ①

Both ignition switch and engine stop switch must be turned to the “” position before riding.

Engine stop switch is for emergency use. If emergency cases require stopping the engine, please turn the engine stop switch to “” position.



Although the engine stop switch could stop the engine, it doesn't turn off all the electrical circuits. Ordinarily, key should be used to stop the engine.

Illumination Switch ②

Illumination switch includes: “”、 “”、 “” positions.

 : When illumination switch turns to this position, headlight, position light, tail light and dashboard light can be on.

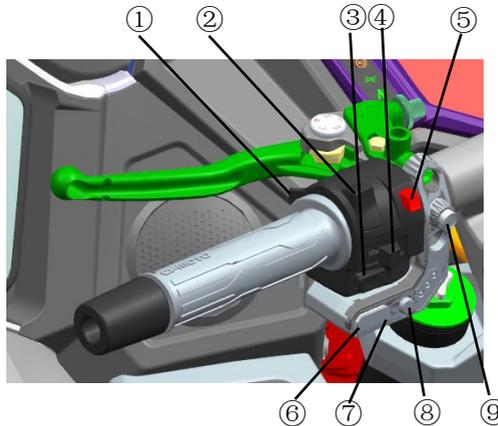
 : When illumination switch turns to this position, position light, tail light and dashboard light can be on.

 : When illumination switch turns to this position, headlight, position light, tail light and dashboard light are off.

Starting Button ③

When both ignition switch and engine stop switch turn to “” position with transmission in the Neutral, push this button can start the engine.

Handlebar Switches, LH



- ①Override Light Switch
- ②Dimmer Switch
- ③Horn Button
- ④Turn Light Switch
- ⑤Hazard Signal Light Switch
- ⑥Adjustable Button, Windshield (up)
- ⑦Adjustable Button, Windshield (down)
- ⑧Handlebar Heating Switch
- ⑨EFI Mode Switch

Override Light Switch ①

When the driver needs overtaking, press this button alternately, Hi beam indicator on the dashboard will also flash..

Dimmer Switch ②

Dimmer switch includes “” 、 “ ” positions.

: When dimmer switch turns to this position and lighting switch is on “” , Hi beam light and Hi beam indicator are both on.

: When dimmer switch turns to this position and lighting switch is on “” , Lo beam light is on.

Horn Button ③

When the horn button is pressed in, horn sounds.

Turn Signal Switch ④

Turn signal switch includes: “” 、 “” 、 “” position.

: When turn signal switch turns to this position, left turn light and left turn signal indicator are on.

: When this button is pushed in, turn light is off.

⇒: When turn signal switch turns to this position, right turn light and right turn signal indicator are on.

Hazard Signal Light Switch ⑤

▲: When this button is pushed in, turn light and turn indicator are both on. It indicates hazard.

Adjustable Button, Windshield (up) ⑥

Press this button to raise windshield.

Adjustable Button, Windshield (down) ⑦

Press this button to drop windshield.

Initialize windshield motor after windshield maintenance; Press and hold this button for 7 seconds to initialize motor when windshield bracket is at bottom dead center. When initialization is done, windshield will raise to the position automatically in accordance with user's setting after turn on the ignition switch.

Handlebar Heating Switch ⑧

This switch controls the temperature of grips.

Press and hold the switch to shift ON and OFF. Press the switch to shift temperature position 1, 2 and 3.

Position 1 means “hottest”.

On the right side of the switch, there is a light showing temperature position.

EFI Mode Switch ⑨

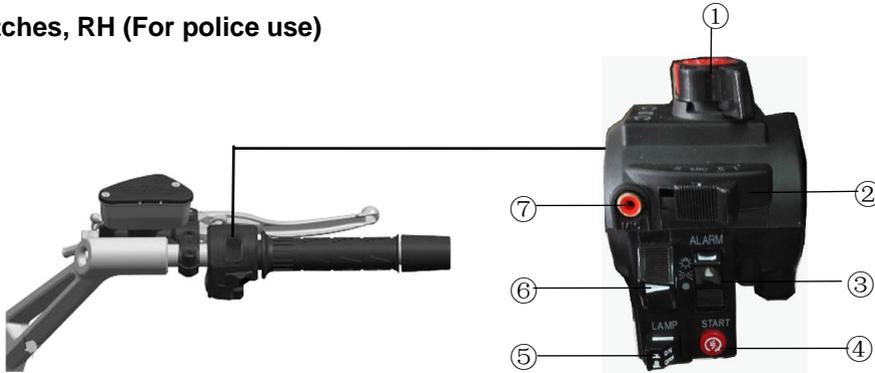
It is used for changing engine mode (Economic mode/Sport mode) .



WARNING

When engine is stopped, turn light and dashboard indicator can not flash for more than 30 min. Otherwise, battery could be damaged.

Handlebar Switches, RH (For police use)



- ① Engine Stop Switch ② Police Horn Select Switch ③ Control Switch, Alarm ④ Starter Button
⑤ Control Switch, Police Light ⑥ Light Switch ⑦ Socket, Microphone

Control Switch, Alarm ③

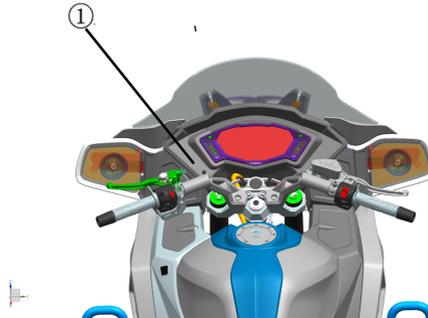
When press this switch, police horn gives out the alarm. When the police horn select switch shifts to different position (position I or position II), police horn gives out different alarm sound. When the police horn select switch shifts to position MIC, microphone works.

Control Switch, Police Light ⑤

When the switch is in the  position, front and rear police light are both off.

When the switch is in the  position, front and rear police light are both on.

ABS Shifting Switch



① ABS Shifting Switch

When ignition key is on with motorcycle stopped, press and hold ABS shifting switch for 2 to 6 seconds to disable ABS function; when ignition switch is on again, ABS function will be restored automatically.



DANGER

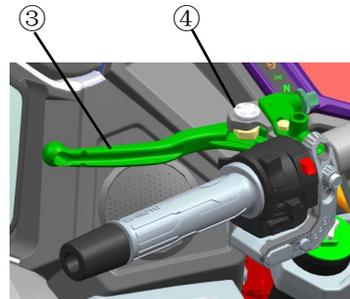
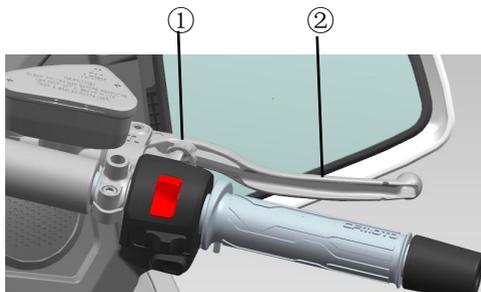
Turning ABS system off might cause severe danger.

Brake/Clutch Lever Adjuster

There is an adjuster on both the brake and clutch levers, with which the released lever position can be adjusted to suit the driver operation.

Rotate the adjuster.

Adjustable distance between lever and handgrip: 103mm ~ 118mm.



① Brake Lever Adjusting Button

② Brake Lever

③ Clutch Lever

④ Clutch Lever Adjusting Button

Fuel Tank Cap

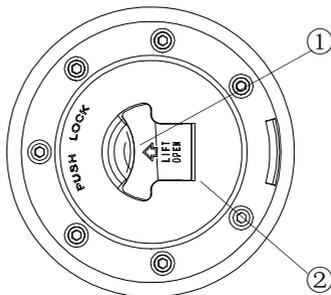
Open the fuel tank cap; pull up the key hole cover; insert the ignition key into the fuel tank cap and turn the key clockwise.

Close the cap; push it down into place with the key inserted. The key can be removed by turning to the left/to the original position.



NOTE

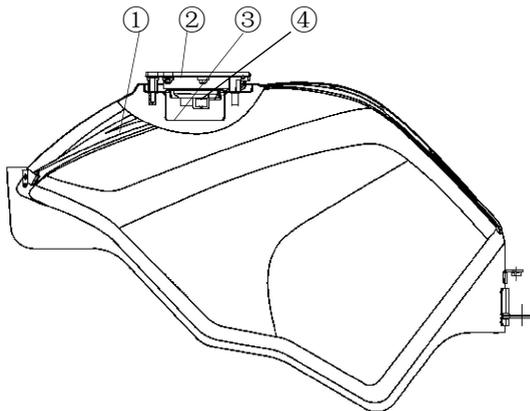
The fuel tank cap cannot be closed without the key inserted, and the key cannot be removed unless the cap is locked properly. Don't push the key to close the cap.



① Key Hole cover ② Fuel Tank Cap

Fuel Tank

Do not outflow fuel during filling. If so, wipe it off immediately to avoid pollution or danger.



- ① Fuel tank ② Fuel tank cap ③ Top level ④ Fuel Filler



DANGER

Gasoline is extremely flammable and can be explosive under certain conditions. When refueling, turn the ignition key to “” position. No smoking. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light. Never fill the tank over the filler neck. After refueling, make sure the fuel tank cap is locked securely. For example, wipe fuel off when overflow.

Fuel Requirement

This motorcycle is designed to use only unleaded 93# (V) or above gasoline.



Don't use leaded gasoline, as it will destroy the catalytic converter (For further information, refer to the catalytic converter section.

Octane Rating

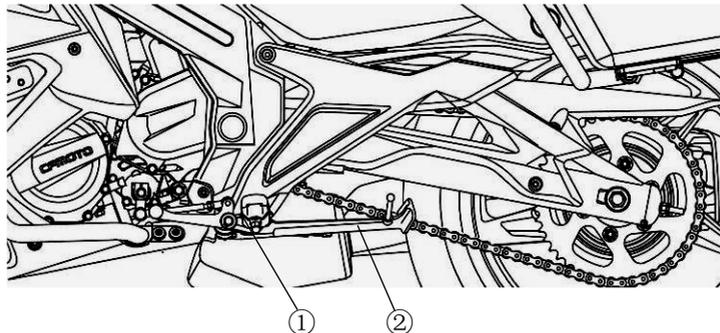
The higher Research Octane Number (RON), the greater ability of suppressing engine “knocking”. The term, RON, is commonly used to describe gasoline octane rating. Always use gasoline with octane rating equal to, or higher than RON 93(V).



If “knocking” or “pinging” occurs, choose a better brand of unleaded gasoline or an unleaded gasoline with higher octane rating.

Side Stand

This motorcycle is equipped with a side stand.



① Side stand switch ② Side stand

NOTE

When using the side stand, turn the handlebar to the left.

Kick the side stand fully up before riding.

This motorcycle is equipped with a side stand switch.

Engine can not start when the gear does not in neutral and the side stand is down.

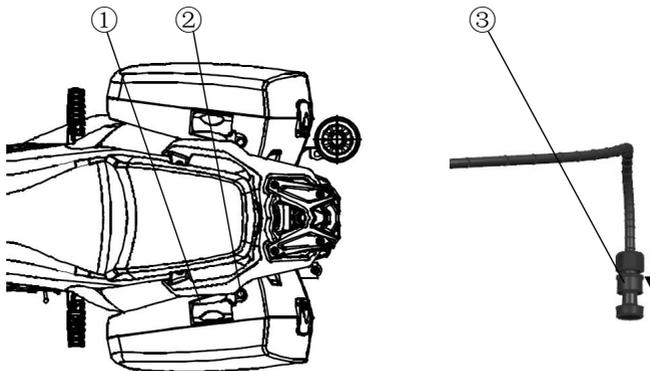
Side Box Lock, Seat Lock

Open Side Box

Insert ignition key into the hole and turn it clockwise; Open the plate of side stand; Open side box.

Open Seat

After opened left side box, find seat release lever as the picture shown. Pull the seat release lever following the arrow direction to open the seat.



①Buckle, left side box

②Key hole, left side box

③Seat release lever

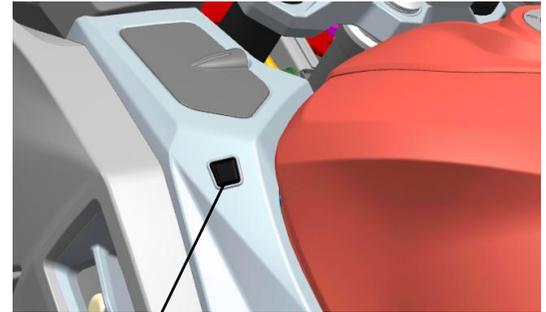
Seat (Include Constant Temperature Heating System)

Seat height: 780mm

Integrated style; Seat height is not adjustable.

Driver seat can be heated; Seat heating switch is located below the left glove box to control heating system switching, temperature. Press and hold the switch for more than 3 seconds to turn on/off the power, press to change temperature mode.

Press and hold the switch for more than 3 seconds to turn on seat heating system. Indicator shows red when at high temperature. It can be used for driving in severe cold weather; Press switch to change high temperature to low temperature, indicator becomes green. It is used for driving in cold weather; Press switch to shift high temperature and low temperature. Press and hold the switch for more than 3 seconds to turn off the indicator and seat heating systems.



Seat Heating Switch



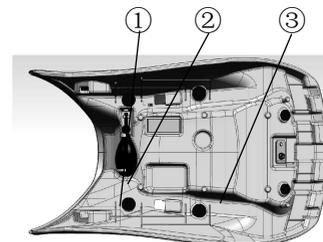
Seat (Include heating plate)

Adjustable Seat (For police use)

Seat height: 780mm~810mm

If user needs to adjust height, open and remove the seat firstly;
remove the air bag; tighten the knob clockwise; and then clench
and release the air bag by hand to adjust height.

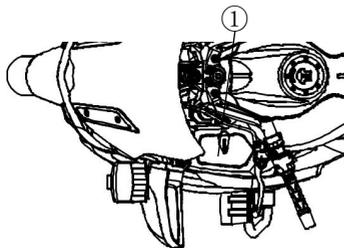
If user needs to turn the seat down, loosen the knob counterclockwise
to let air bag deflate to the desired seat height, tighten the knob clockwise.



① Air Bag ② Button ③ Seat plate

Glove Box

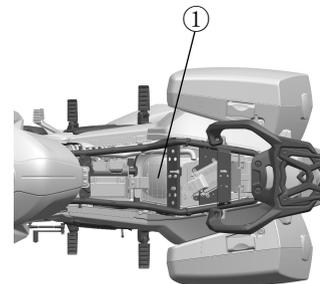
Open the left glove box to use USB connector.



① Golve box

Tool Kit

Tools are stored under the seat. You can see it once you open the seat. Those tools are helpful in making some simple repairs and adjustments.



① Tool kit

Rear View Mirror

Rear View Mirror Adjustment

Adjust the rear view mirror by slightly moving

The adjustment method of right & left rear view mirror is same.



CAUTION

Don't push too hard when install and remove rear view mirror avoiding damaging rear view mirror bracket.

BREAK-IN

The break-in period for your new motorcycle is the first 1500km of operation. The following rules should be observed during the “break-in” period.

- The table shows the maximum recommended engine speed during the break-in period.

| Odometer | Maximum engine speed |
|----------------|----------------------|
| 0km ~ 800km | 4000r/min |
| 800km ~ 1500km | 6000r/min |

- Don't press start button during driving or run the engine at high speed immediately after just starting it. Run the engine for 2 minutes or 3 minutes at idle speed to let the lubricants enter into the engine parts, even the engine is already warm.
- Engine speed shouldn't be too high when the gear is in neutral.



WARNING

New tires are slippery which may lose control easily. Tire pressure should be specified during the break-in period. Avoiding sudden braking or acceleration, or hard cornering during break-in period.

It is extremely important that the owner has the initial maintenance service performed by an authorized CFMOTO dealer.

HOW TO RIDE THIS MOTORCYCLE

Starting the Engine

- Check that whether the engine stop switch is in the “” position.
- Turn the ignition key to the “” position.
- Make sure the transmission in NEUTRAL.

NOTE

This motorcycle is equipped with a vehicle-down sensor (also called roll-over sensor). Engine will stop automatically and the MIL on the dashboard will flash when the motorcycle falls down. After righting the motorcycle, turn the ignition key from “” position to “” position before starting the engine.

WARNING

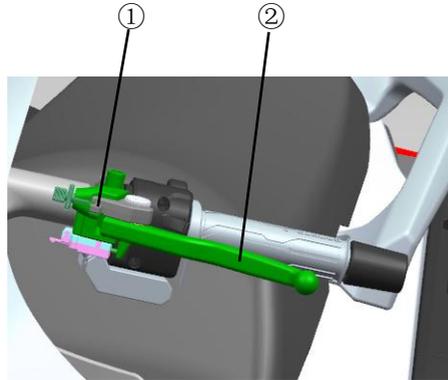
Don't depress the start button for more than 5 seconds, otherwise the starter motor will overheat and the battery power will drop temporarily. Wait for 15 seconds and then press start button.

NOTE

This motorcycle is equipped with a clutch switch. Engine can be started when the transmission in first gear and the clutch lever is pulled and the side stand is fully up.

⚠ WARNING

Don't let the engine at idle speed for more than 5 minutes, otherwise the engine will be overheated and other parts will be damaged.



① Clutch Switch

② Clutch Lever

Quick Starting

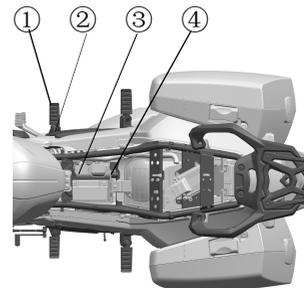
If your motorcycle battery is “run out” , it should be removed and charged. If this is an emergency case, a 12V booster battery can be used to start the engine.

⚠ WARNING

Battery acid generates hydrogen which is flammable and explosive under certain conditions. It will gather in the battery, even leak out. Keep all flames and sparks (cigarettes) away from the battery. Wear goggles when working with a battery. In the event of the battery acid contacts with skin, eyes, clothing, wash the affected areas immediately with water for at least 5 minutes and seek for medical attention.

Connecting quick starting Cables

- Remove seat
- Make sure the ignition key in “” position.
- Connect quick starting cable positive(+) terminal with battery positive(+) terminal.
- Connect quick starting cable negative(-) terminal with motorcycle footrest or other unpainted metal surface. Don't connect negative (-) terminal with vehicle battery negative(-) terminal directly.



- ① Footrest
- ② Quick starting cable negative(-) terminal
- ③ Quick starting cable positive(+) terminal
- ④ Battery (+) terminal

⚠ WARNING

Don't make the last connection at the fuel system or battery, or it may cause fire. Don't lean over the battery when making the last connection. Don't quick start a frozen battery. It could explode. Don't reverse the polarity by connecting the positive (+) to negative (-), or a battery explosion or serious damage to the electrical system could occur.

- Following the standard engine starting procedures.

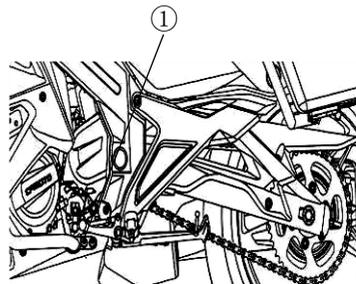
⚠ CAUTION

Don't operate the start button continuously for more than 5 seconds, or the starter will be overheated and the battery power will drop temporarily. Wait for 15 seconds between each operation of the starter to let it cool and the battery power recover.

- After the engine started, disconnect the quick starting cables.
- Reinstall the parts.

Driving Preparation

- Check if the side stand is fully up.
- Grip the clutch lever.
- Shift into 1st gear.
- Open the throttle a little, and release the clutch lever very slowly.



① Gearshift Pedal

- When the clutch is fully engaged, open the throttle a little more, ensure that engine has enough fuel to prevent it flameout.



This motorcycle is equipped with a side stand switch. Engine can't start when the transmission does not in neutral and the side stand is down.

Shifting Gears

- Release the throttle while pulling in the clutch lever.
- Use shift pedal for shifting gears.



Reduce engine speed first when shift gears. Otherwise, engine could be damaged or the rear wheel may skid and cause accidents. Shifting should be done below 5,000r/min (rpm).

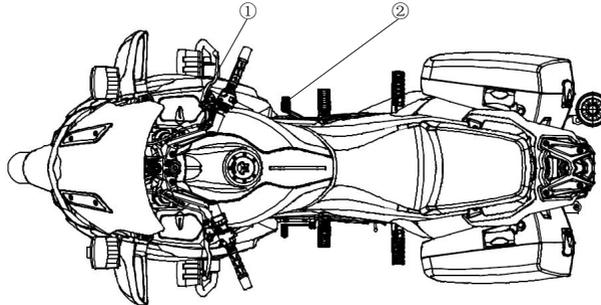
- Open the throttle slowly while releasing the clutch lever.



When parking, shift gear into Neutral. Lift shift pedal up while shift into Neutral.

ABS Braking

- Close the throttle completely, disengage clutch to reduce speed.
- Shift to 1st gear.
- When parking, apply front & rear brake at the same time. Normally, the force of front brake is a little smaller than the rear. Shift down or fully disengage the clutch to keep the engine from stalling when necessary.
- Never lock the brakes, or it will cause the tires become skid. When turning a corner, brake force should be light. Reduce your speed before get into the corner.
- Emergency braking, disregard downshifting and applying the brakes hard can cause skid.
- When turning a corner, it is better to limit braking and reduce speed before you get into the corner.



① Lever, Front Brake

② Pedal, Rear Brake

Stopping the Engine

- Close the throttle completely.
- Shift the transmission into Neutral.
- Turn the ignition key to “” position.
- Place the motorcycle on a level surface with side stand.
- Locking the steering lock.



NOTE

The motorcycle is equipped with a roll-over sensor. Engine will stop automatically and malfunction indicator light will flash when the motorcycle falls down. After righting the motorcycle, turn the ignition key from “” to “” before starting the engine.

Stopping the Motorcycle in an Emergency

This switch is for driving safety and convenience, at the meantime, for meeting design and safety requirements. It is essential that this switch can protect you, the owner and operator from danger under dangerous situations. Two of the most common causes of throttle failure are:

1. Improper service or wrong valve clearance may allow dirt and dust enter into air inlet system.
2. During removal of the air cleaner, dirt may enter and block fuel injection system.

In an emergency situation such as throttle failure, your vehicle can be stopped by applying the brakes and holding the clutch lever. Once those stopping procedures are initiated, the engine stop switch can be used to stop the engine. After using engine stop switch, turn off the ignition switch at “” position .

Parking

- Shift the transmission into neutral and turn off the ignition key.
- Support the motorcycle on a firm, level surface with the side stand.

| |
|--|
|  CAUTION |
|--|

| |
|--|
| Do not park the vehicle on a soft or steeply inclined surface; otherwise, the motorcycle may fall over. |
|--|

- If parking inside a garage or other structure, be sure it is well ventilated and the motorcycle is not close to any source of flame or sparks; This includes any appliance with a pilot light.

| |
|--|
|  WARNING |
|--|

| |
|---|
| The muffler and exhaust pipe are very hot while the engine is running or just stopped. This can ignite a fire, resulting in property damage or severe injury. Do not idle or park your vehicle in an area where grasses or dry leaves or other flammable materials may contact with muffler or exhaust pipe. |
|---|



WARNING

Gasoline is extremely flammable and can be explosive under certain conditions.

- Lock the steering to prevent theft.



NOTE

When parking the vehicle near road at night, turn taillight on for greater visibility, but do not leave the taillight on for too long, or the battery will discharge.

Catalytic Converter

This motorcycle is equipped with a catalytic converter in the exhaust system. Platinum and rhodium in the converter will react with carbon monoxide and hydrocarbons, and then convert them into carbon dioxide and water resulting in much cleaner exhaust gases to be discharged into the atmosphere.

For proper operation of the catalytic converter, the following caution must be observed:

- **Only use unleaded gasoline. Never use leaded gasoline. Leaded gasoline significantly reduces the service life of the catalytic converter.**

Do not coast the vehicle with the ignition switch and/or engine stop switch off. Do not attempt to start the engine by rolling the vehicle if the battery is discharged. Do not operate the vehicle or piston when gear in neutral. Under these conditions, unburned air/fuel mixture flow into exhaust system and accelerate reaction with the converter allowing the converter become overheated and damaged when the engine is hot, or reduce converter

performance when the engine is cold.



Follow the below structions to protect catalytic converter.

- 1. Only use unleaded gasoline. With only small amounts of lead can even stain your precious metals in catalytic converters causing catalytic converter failure.**
- 2. Do not add antirust oil or engine oil into muffler which may result in catalytic converter failure.**

Fuel Evaporation System

Please contact CFMOTO dealer when fuel evaporation system is failed. Don't change the fuel evaporation system. Tube connection should be well connected without air leakage, blocking, squeezing, broken and damage after maintenance.

Fuel steam from fuel tank will be released into carbon tank through absorption tube. Absorbing fuel steam by active carbon when engine stops; Fuel steam of carbon tank will follow into combustor for burning when engine works, avoiding environment pollution in case of fuel stem released into air directly. Meanwhile, Air pressure of fuel tank should be balanced by absorption tube. If inner pressure of fuel tank is lower than outside, it is available to replenish air pressure by air tube of carbon tank or absorption tube. All tube system should be smooth running without blocking and squeezing, otherwise fuel pump will be damaged, fuel tank also will be deformed or broken.

SAFETY OPERATION

Safe Riding Technique

The following cautions are applicable for daily motorcycle use and should be carefully observed for safe and effective vehicle operation.

For safety, eye protection and a helmet are strongly recommended. You should be aware of safety regulations in force prior to riding your motorcycle. Gloves and suitable footwear should also be used for protection.

You should wear protective apparel when riding in case of any collision.

Before changing lanes, look over your shoulder to make sure the way is safe. Do not rely solely on the rear view mirror; you may misjudge a vehicle's distance and speed which can easily cause accidents.

When going up steep slopes, shift to a lower gear so that there's plenty of power to spare rather than overloading the engine.

When applying the brakes, use both the front and rear brakes. Applying only one brake for sudden braking may cause the motorcycle to skid and lose control.

When going down long slopes, control vehicle speed by closing the throttle. Use the front and rear brakes for auxiliary braking.

In wet conditions, rely more on the throttle to control vehicle speed and less on the front and rear brakes. The throttle should also be used judiciously to avoid skidding when the rear wheel rapid acceleration or deceleration.

Riding at the proper rate of speed and avoiding unnecessarily fast acceleration are important, not only for safety and low fuel consumption but also for long vehicle life and quieter operation.

When riding in wet conditions or on loose roadway surfaces, vehicle performance will be reduced.

All of your actions should be smooth under these conditions. Sudden acceleration, braking or turning may cause loss of control.

On rough roads, exercise cautiously, slow down, and grip the fuel tank with the knees for better stability. When quick acceleration is necessary as in passing, shift to a lower gear can obtain the necessary power.

Do not downshift at too high r/min (rpm) to avoid damage to the engine.

Avoid unnecessary weaving wrap rider and motorcycle.

Pre-Ride Inspection

Check the following items each day before you ride, habitual performance of these checks will ensure you a safe, reliable ride.

If any irregularities are found during these checks, refer to the Maintenance and Adjustment chapter or contact your dealer for the action required to return the motorcycle to a safe operating condition.



WARNING

Continue to ride after finding any irregularity may result in serious damage or a severe accident.

Fuel.....Adequate supply in tank, no leaks.

Engine oil.....Oil level between upper and lower level lines.

Tires.....tire pressure(when cold):

| | | |
|-------------|-------------|------------------|
| Front wheel | Load: 245kg | Pressure: 250kPa |
| Rear wheel | Load: 315kg | Pressure: 290kPa |

Install the air valve cap

Drive chain····· Slack 30mm~40mm , lubricate drive chain if dry.

Nuts, bolts,fasteners·····Check steering and suspension components, axles, and all control parts whether are properly tightened or fastened.

Steering·····Action smooth but fasteners can't be loose. No binding of control cables.

Brakes ······Brake pad wear: Lining thickness is more than 1 mm. No brake fluid leakage.

Throttle····· Throttle grip play: 2mm ~ 3mm

Clutch·····Clutch lever play: 2mm~3mm, clutch lever operates smoothly.

Coolant····· No coolant leakage.

Coolant level between level lines (when engine is cold).

Electrical equipment·····All lights(Headlight,Tail/Brake Lights,Turn Signal Lights, Warning/Indicator Lights) and horn can work normally.

Engine stop switch·····Stop engine.

Side stand····· Return spring can not be weak or damaged.

Alarm system·····work normally

Refer to all warning labels on the motorcycle.

Special Remarks for High Speed Operation

Brake: Brake is very important, especially during high speed operation. It cannot be overemphasized.

Check and adjust to get better performance.

Steering: Looseness in the steering can cause loss of control. Check to see whether the handlebar turns freely but has no play.

Tires: High speed operation is hard on tires, and good tires are crucial for riding safety. Examine their overall condition, inflate them to the proper pressure, and check the wheel balance.

Fuel: Have sufficient fuel for the high fuel consumption during High speed operation.

Engine Oil: To avoid engine seizure and result in loss of control, make sure the oil level is between level lines, better in the middle.

Coolant: To avoid overheating, check that the coolant level is between level lines.

Electrical Equipment: Make sure that the headlights, tail/brake light, turn signals, horn, etc., all work properly.

Fasteners: Make sure that all nuts and bolts are tight and that all safety related parts are in good condition.



WARNING

Riding at too high speed on highway will violate related regulations. Do not try high speed operation unless you have received sufficient training and have the required skills. It is forbidden to ride a motorcycle on highway in China.

MAINTENANCE AND ADJUSTMENT

The maintenance and adjustment outlined in this chapter must be carried out and must be done in accordance with the Periodic Maintenance Chart to keep the motorcycle in good running condition.

The initial maintenance is vitally important.

With a basic knowledge of mechanics and the proper use of tools, you should be able to carryout many of the maintenance items described in this chapter. If you lack proper experience or doubt your ability, all adjustments, maintenance, and repair work should be completed by a qualified technician. You can contact your dealer for help if you have other questions.

Periodic Maintenance Chart

- : It should be serviced by an authorized CFMOTO dealer.
- *: Regarding odometer readings, repeat at the frequency interval established here.
- #: Service more frequently when operating in severe conditions: dusty, wet, muddy, high speed, or frequent starting/stopping.

1. Periodic Inspection (Engine)

| Item | Frequency ↓ Every | Whichever comes first → *Odometer Reading km×1000 | | | | | | | See Page |
|--|-------------------------|---|---|----|----|----|----|----|----------|
| | | 1 | 6 | 12 | 18 | 24 | 30 | 36 | |
| | | ■ Air cleaner element—clean | | | ● | | ● | | |
| ■ Valve clearance—inspect | | | | | | | | 76 | |
| Throttle system (clearance,smooth return) —inspect | | ● | | ● | | ● | | ● | 78 |
| Idle speed—inspect | | ● | | ● | | ● | | ● | 79 |
| ■ Fuel leak (fuel hose and pipe) —inspect | | ● | | ● | | ● | | ● | — |
| ■ Fuel hoses damage—inspect | | ● | | ● | | ● | | ● | — |
| ■ Fuel hoses installation—inspect | | ● | | ● | | ● | | ● | — |
| ■ Throttle body—clean | | | ● | ● | ● | ● | ● | ● | |

| | | | | | | | | | |
|--|--------|---|--|---|--|---|--|---|----|
| Coolant level—inspect | | ● | | ● | | ● | | ● | 71 |
| Coolant leak—inspect | 1 year | ● | | ● | | ● | | ● | 71 |
| Radiator and water hose damage—inspect | 1 year | ● | | ● | | ● | | ● | 69 |
| Radiator and water hose installation—inspect | 1 year | ● | | ● | | ● | | ● | 69 |
| ■ Air inlet system damage—inspect | | | | ● | | ● | | ● | 75 |

2. Periodic Inspection (Chassis)

| Frequency Item | Whichever comes first → ↓ Every | * Odometer Reading km×1000 | | | | | | | See Page |
|---|---|-------------------------------|---|----|----|----|----|----|----------|
| | | 1 | 6 | 12 | 18 | 24 | 30 | 36 | |
| Clutch and drive chain | | | | | | | | | |
| Clutch operation(clearance, engagement, disengagement) —inspect | | ● | | ● | | ● | | ● | 81 |
| Drive chain lubrication condition—inspect # | 600km | | | | | | | | 82 |

| | | | | | | | | | |
|--|----------|---|---|---|---|---|---|---|-----|
| Drive chain slack—inspect # | 1000km | | | | | | | | 84 |
| Drive chain wear—inspect # | | | | ● | | ● | | ● | 88 |
| ■Drive chain guide wear—inspect | | | | ● | | ● | | ● | — |
| Wheel and tires | | | | | | | | | |
| Tire air pressure—inspect | 1 year | ● | | ● | | ● | | ● | 102 |
| Wheel/tires damage—inspect | | | | ● | | ● | | ● | 103 |
| Tire tread wear, abnormal wear—inspect | | | | ● | | ● | | ● | 103 |
| ■wheel bearing damage—inspect | 1 year | | | ● | | ● | | ● | — |
| Footrest—lubricate | | ● | | ● | | ● | | ● | — |
| Sprocket bearing—inspect | | | | ● | | ● | | ● | — |
| Brake system | | | | | | | | | |
| Brake fluid leak—inspect | 1 year | ● | ● | ● | ● | ● | ● | ● | 92 |
| Brake hoses and pipe damage—inspect | 1 year | ● | ● | ● | ● | ● | ● | ● | — |
| Brake pad wear—inspect # | | | ● | ● | ● | ● | ● | ● | — |
| Brake hose installation—inspect | 1 year | ● | ● | ● | ● | ● | ● | ● | — |
| Brake fluid level—inspect | 6 months | ● | ● | ● | ● | ● | ● | ● | 93 |
| Brake operation(effectiveness, clearance, drag) —inspect | 1 year | ● | ● | ● | ● | ● | ● | ● | 95 |
| Brake light switch operation—inspect | | ● | ● | ● | ● | ● | ● | ● | — |
| Suspensions: | | | | | | | | | |

| | | | | | | | | | |
|--|---------|---|---|---|--|---|--|---|-----|
| Front forks/rear shock absorber operation (damping and smooth stroke) —inspect | | | | ● | | ● | | ● | 97 |
| Front forks / rear shock absorber oil leak —inspect | 1 year | | | ● | | ● | | ● | 97 |
| Steering System | | | | | | | | | |
| ■steering play—inspect | 1 year | ● | | ● | | ● | | ● | — |
| ■steering stem bearings—lubricate | 2 years | | | | | ● | | | — |
| Electrical System | | | | | | | | | |
| Lights and switches operation—inspect | 1 year | | | ● | | ● | | ● | — |
| Headlight aiming—inspect | 1 year | | | ● | | ● | | ● | 111 |
| Side stand switch operation—inspect | 1 year | | | ● | | ● | | ● | — |
| Engine stop switch operation—inspect | 1 year | | | ● | | ● | | ● | — |
| Alarm system—inspect | 1 year | | | ● | | ● | | ● | |
| Chassis | | | | | | | | | |
| ■Chassis parts—lubricate | 1 year | | | ● | | ● | | ● | — |
| ■Bolts and nuts torque—inspect | | ● | | ● | | ● | | ● | — |
| ■fuel vapourization system—inspect | | | ● | | | | | | |

3. Periodic Replacement

| Item | Frequency | Whichever comes first → | | | | | See Page |
|-----------------------------------|-----------|-------------------------------|----|----|----|----|----------|
| | | * Odometer Reading km×1000 | | | | | |
| | Every | 1 | 12 | 24 | 36 | 48 | |
| ■ Air filter element# | 2 years | | | | | | 77 |
| Engine oil# | 6 months | Every 6000km | | | | | 64 |
| Oil filter | 6 months | Every 6000km | | | | | 66 |
| ■ Fuel hoses | 4 years | | | | | ● | — |
| ■ Coolant | 2 years | | | | ● | | 70 |
| ■ Radiator , water hoses | 2 years | | | | ● | | — |
| ■ Brake fluid hoses and pipe | 4 years | | | | | ● | — |
| ■ Brake fluid (front/rear) | 2 years | | | ● | | ● | 93 |
| ■ Rubber parts of master cylinder | 4 years | | | | | ● | — |
| ■ Spark plug | | | ● | ● | ● | ● | 74 |
| ■ damper, sprocket seat | | | ● | ● | ● | ● | — |

Engine Oil

In order that the engine, transmission, and clutch function properly, ensure the engine oil at the proper level, change the oil and replace the oil filter in accordance with the Periodic Maintenance Chart. During lubrication processes, dirt and metallic impurities will come out.



WARNING

Motorcycle with insufficient, deteriorated or contaminated engine oil will cause engine wear and may result in engine/transmission seizure, accident and injury.

Oil Level Inspection

- If the oil has just been changed, start the engine and run it for several minutes at idle speed. Let filter fill with oil. Stop the engine, and then wait several minutes until the oil settles down.

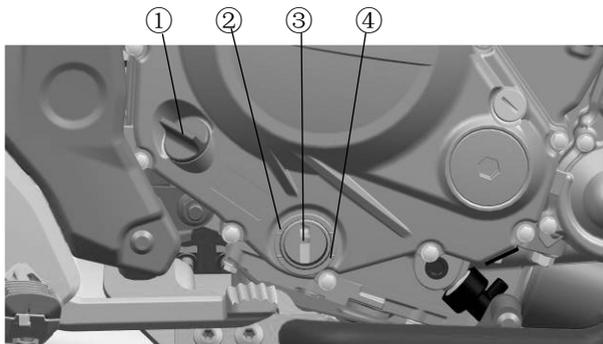


CAUTION

Running the engine before the oil reaches every part can cause engine seizure.

- If the motorcycle has just been operated, wait several minutes for all the oil to drain down.
- Check the engine oil level through the oil level mirror. With the motorcycle held level, the oil level should come up between the upper and lower level lines.
- If the oil level is too high, remove the excess oil.

- If the oil level is too low, add the oil to reach the correct level. Use the same type and brand of oil.



① Oil Filler

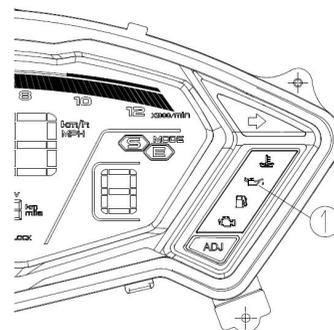
② Highest Level Line

③ Oil Level Inspection Window

④ Lowest Level Line

⚠ CAUTION

If the engine oil level is extremely low or the oil pump does not work properly or oil lines are clogged, the warning light will be on. If the light were on, stop the engine immediately and find the cause.



Oil Alarm

Oil and Oil Filter Change

- Place the vehicle on the a level surface.
- Warm up the engine thoroughly, and then stop it.
- Place an oil pan beneath the engine.
- Remove the engine oil drain bolt.
- Let the oil completely drain.



DANGER

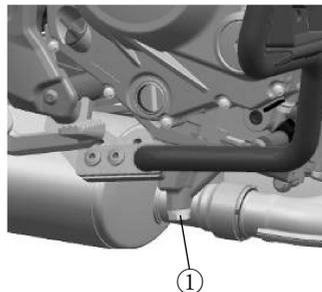
Oil is a toxic substance. Dispose of the used oil properly.

- Remove the oil filter and replace it with a new one.

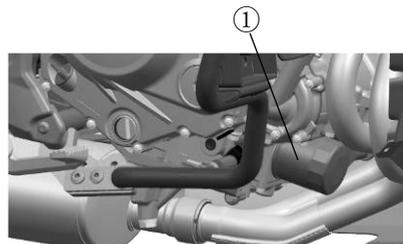


NOTE

Contact your local dealer to get special tools

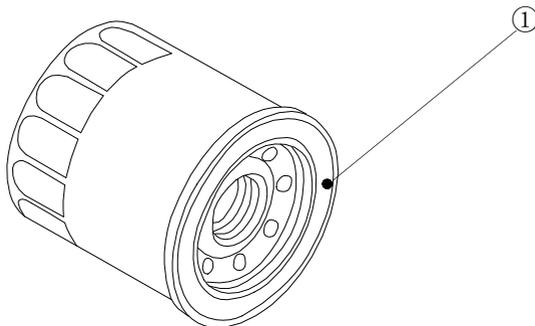


① Drain Bolt and Wahser



Oil Filter

- Apply a thin film on seal ring and tighten the cartridge to the specified torque.



① Apply a thin film

- Replace a new gasket before install the drain bolt.

| |
|--|
|  WARNING |
| Replace all gaskets with new ones. |

- Fill the engine between upper and lower level line with a good quality engine oil as listed bellow.
- Start the engine.
- Check the oil level and leakage.

Tightening Torque

Engine Oil Drain Bolt: 30N • m

Oil Filter: 17.2N • m

Recommended Engine Oil:

Type: SJ JASO MA2

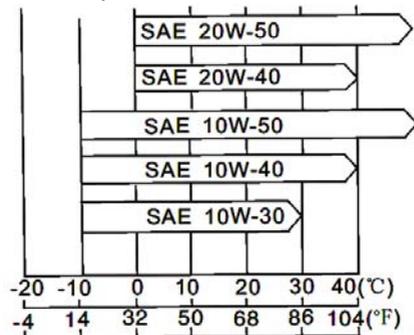
Viscosity: ELF 10W-40

Engine Oil Capacity:

When filter is removed: 2.2L

When engine oil is completely empty: 2.6L

We recommend use APISH oil or above, JASO MA2 oil is the first choice, secondary is JASO Ma oil. Although 10W-40 engine oil is the recommended oil for most conditions, the oil viscosity may need to be changed in accordance with the accommodate atmospheric condition.



Cooling System

Radiator and Cooling Fan

Check the radiator fins for deformation or obstruction by mud, clean off obstructions with a stream of low-pressure water.



WARNING

Keep your hands and clothing away from the fan when it's running.



CAUTION

Using high-pressure water could damage the radiator and impair the radiator's effectiveness. Do not install unauthorized accessories in front of the radiator or behind the cooling fan. Obstructing of radiator airflow can lead to engine overheating and damage.

Radiator Hoses

Check the radiator hoses for leakage, cracks and deterioration. Check connectors for leakage or looseness before riding the motorcycle, and perform periodic inspection in accordance with Periodic Maintenance Chart.

Coolant

Coolant absorbs excessive heat from the engine and transfers it to the air by the radiator. If the coolant level is too low, it may cause engine overheating and damage engine. Check the coolant level each day before riding the motorcycle and perform periodic inspection in accordance with the periodic maintenance chart. Replenish coolant if the level is too low. Change the coolant in accordance with the periodic maintenance Chart.

Coolant Information

To protect the cooling system (because engine and radiator consists of the aluminum parts) from rust and corrosion, use corrosion and rust inhibitor chemicals in the coolant is essential. If coolant contains corrosion and rust, then inhibitor chemicals is not needed. Over a period of time, the cooling system accumulates rust and scales in the water jacket and radiator. This will clog up the coolant hoses, and considerably reduce the efficiency of the cooling system.



Corrosion inhibitors in the engine and radiator should be conducted as specified. Chemicals are harmful to the human body.

Distilled water must be used with the antifreeze (If the coolant level comes to low).

 **WARNING**

**If hard water is used in the system, it causes scales accumulation in the water hoses, and considerably reduces the efficiency of the cooling system.
If the environment temperature below than the freezing point of water, use permanent antifreeze in the coolant to protect the cooling system from freeze-up, as well as from hoses rust and corrosion.**

Mixture ratio of antifreeze (distilled water, ethylene glycol, and chemical inhibitors those for preventing the engine, radiator and other aluminum oxide from corrosion) and coolant should be compounded in accordance with the environment temperature.

 **WARNING**

Permanent types of antifreeze on the market have anti-corrosion and anti-rust properties. When it is diluted excessively, it loses anti-corrosion property. Dilute a permanent type of antifreeze in accordance with the instructions of the manufacturer.

 **NOTE**

When fill the coolant into the cooling system, its color becomes green and it contains ethylene glycol. Coolant concentration is 50% when environment at -35℃.

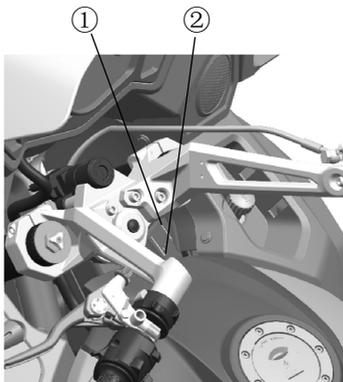
Coolant Level Inspection

- Situate the motorcycle so that it is perpendicular to the ground.
- Check the coolant level if it is between the F (Full) and L (Lowest) level lines.



NOTE

Check the level when the engine is cold.
(Atmospheric temperature).

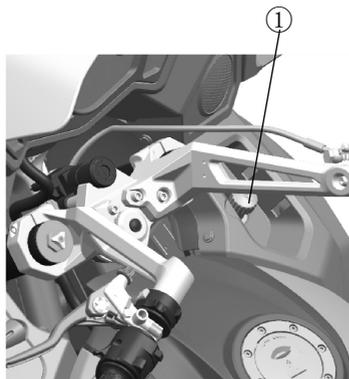


① F (Full) level line ② L (Lowest) level line

- If the coolant level is lower than lowest level line, remove the right side cover and add coolant into the reservoir tank until the coolant is between F and L level line.

Filling Coolant

- Remove the right glove box cover.
- Open the reservoir tank cap and add coolant until it is between F and L level line.



① Reservoir tank cap

- Close reservoir tank cap.
- Close the right glove box cover.

 **NOTE**

In an emergency case, you can add distilled water to reservoir tank, however it must be returned to the correct mixture ratio by the addition of antifreeze concentrate as soon as possible.

 **WARNING**

If coolant must be added frequently, or the reservoir tank complete runs dry, there is probably leakage in the system. Have the cooling system inspected by your authorized dealer.

Changing Coolant

Have the coolant changed by an authorized dealer.

Spark Plug

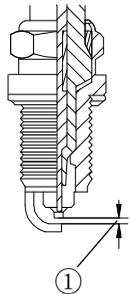
The spark plugs should be replaced in accordance with the Periodic Maintenance Chart.

Spark plug removal should be done by an authorized dealer.

Spark Plug type: CR8EI

Spark Plug Gap: 0.7mm~0.9mm

Tightening Torque: 15N • m



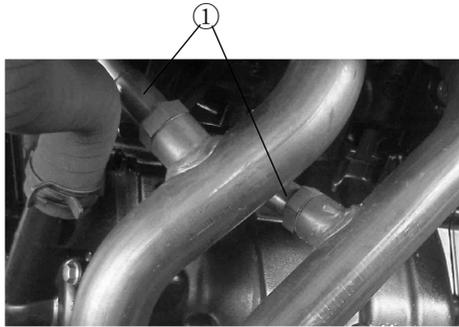
① Spark Plug Gap

Air System

Fuel & Exhaust Detecting System

Fuel & Exhaust System is detected by Oxygen Sensor. There is an Oxygen Sensor installed on exhaust pipe. It detects Air & Fuel combustion condition by measuring oxygen density and transferring it to electrical signal to ECU. When ECU judges that combustion is not completely, ECU will give signals to TPS and Intake air temperature sensor to adjust fuel injection. By this way, the ratio of air against fuel can be optimized and make

combustion completely.



① Oxygen Sensor

Air Inlet Valve

The air inlet valve is essentially a check valve which allows fresh air to flow only from the air cleaner into the exhaust port. Any air that has passed air inlet valve is prevented from returning.

Inspect the air inlet valves in accordance with the Periodic Maintenance Chart. Also, inspect the air inlet valves

whenever stable idling cannot be obtained, engine power is greatly reduced, or there are abnormal engine noises.

Air inlet valve removal and inspection should be done by an authorized dealer.

Valve Clearance

Valve and valve seat will be worn and need to be adjusted after using for a period.



CAUTION

If valve and valve seat have not been adjusted after worn, it will eventually cause the valves remain partly open or without clearance, reduce engine performance or cause noise and serious engine damage. Valve clearance of each valve should be checked and adjusted in accordance with the Periodic Maintenance Chart. Inspection and adjustment should be done by an authorized dealer.

Air Filter

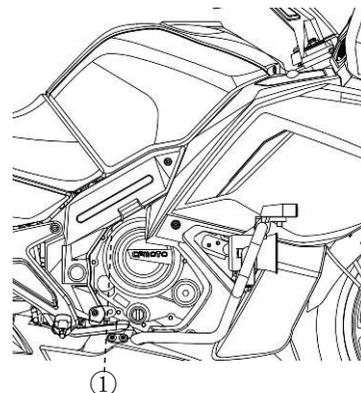
A clogged air filter restricts air intake; increases fuel consumption, reduces engine power, and causes spark plug fouling.

The air filter element must be cleaned in accordance with the Periodic Maintenance Chart. In dusty, rainy, or muddy conditions, the air filter element should be serviced more frequently than the recommended interval by an authorized dealer.

Air Filter Fluid Storage Hose

- Fluid storage hose is located on the top of rear shock absorber(RH) where is to see if any oil or water has run down from the air filter housing.
- If there are any oil/water in the hose, remove and drain it.

| |
|---|
|  WARNING |
| Be sure to install the hose after oil/water drained. Oil on tires/plastics surface will damage them. |



① Fluid storage hose (Broken line can not be seen)

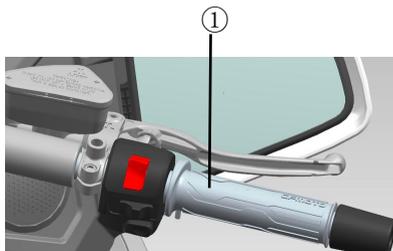
Throttle System

Check the throttle grip play in accordance with the Periodic Maintenance Chart, adjust it when necessary.

Throttle Grip

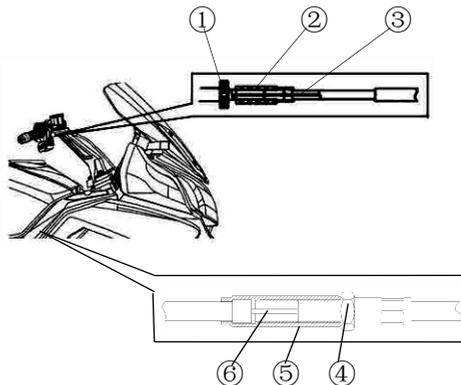
The throttle grip controls the throttle valve. If the throttle grip play is too big resulting in throttle coordinating, it means throttle cable is too long. Throttle valve may not open fully at full throttle. If the throttle grip play is too small, the throttle will be hard to control, and the idle speed will be erratic.

- Inspection**
- Check if the throttle grip play is neatly.
 - Adjust throttle grip if the play is not proper.



① Throttle grip

Throttle Grip Play: 2mm~3mm



- ① Lock nut, fuel filling ② Adjust nut, fuel filling ③ Throttle cable
④ Lock nut, fuel returning ⑤ Adjust nut, fuel returning ⑥ Throttle cable

Adjustment

- Loosen the lock nut of the throttle cable and turn adjusting nut of throttle cable to the proper throttle grip clearance.
- Adjusting throttle cable play until throttle grip is completely closed.
- Tighten the lock nut.
- Loosen the lock nut of throttle until a play of 2mm~3mm is obtained of the throttle grip.
- Tighten the lock nut.



CAUTION

Operation with improperly adjusted, incorrectly routed, or damaged cables could result in an unsafe riding condition.

Idle Speed

The idle speed of your vehicle has been set before out of factory. There is no need to do any adjustment by owner; otherwise vehicle's performance will be affected. If there is any part that could affect idle speed needs to be replaced, contact with authorized local dealer and use PDA to diagnose and have ECU calibrated.

**CAUTION**

Improperly adjustment of idle speed could result in an unsafe riding condition.

Idle Speed: 1450r/min \pm 145r/min

Throttle Body

Limit screw on throttle body had been set accurately, and can not be adjusted. Check if the idle speed is stable, if not, please contact specified professional people for maintenance.

Clutch

Friction plate will wear and clutch cable will stretch after a long period of use, the clutch operation performance should be checked before daily riding, and perform it in accordance with the Maintenance Chart.

**CAUTION**

To avoid serious burn, never touch a hot engine or exhaust pipe during adjustment.

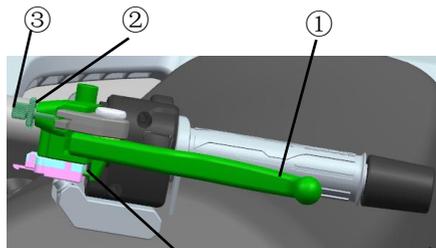
Inspection

● Check the clutch lever performance and if cable works neatly. If there is any irregularity, have the clutch cable checked by an authorized dealer.

● Check the clutch lever play.

Clutch Lever play: 2mm~3mm

If the play is incorrect, adjust the lever play.



① Adjust nut

② Lock Nut

③ Clutch Lever

④ Free Play

Adjustment

● Loosen the lock nut, and turn the adjust nut until the clutch lever to the proper play.

WARNING

Be sure the top of the clutch cable is fully seated and the lock nut is fastened, or the cable could slip off, clutch can not be disengaged, resulting in a hazardous riding condition.

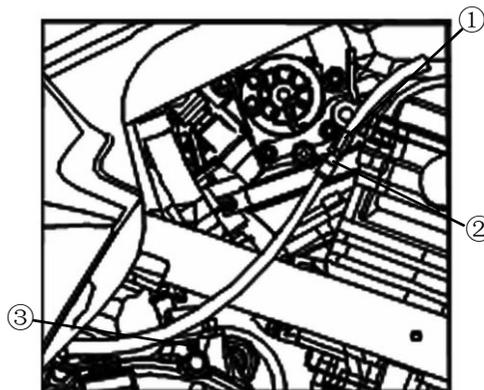
- If it still cannot meet lever play requirements when the clutch cable lever at the limiting position, adjust the nut at the lower end of the clutch cable.



NOTE

After the adjustment is done, start the engine and check if the clutch can release properly.

- ① Adjust nut
- ② Lock nut
- ③ Clutch cable



Drive Chain

The drive chain slack and lubrication must be checked before daily riding in accordance with the Periodic Maintenance Chart for safety and prevent excessive wear. If the chain becomes severe worn or maladjusted, it will result in chain is too loose or too tight, jump off or break.

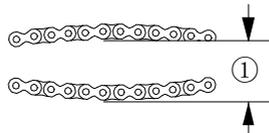
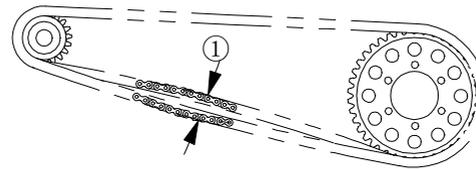
⚠ WARNING

A chain that breaks or jumps off the sprockets could reduce engine performance or lock the rear wheel, which will severely damage the motorcycle and cause vehicle out of control.

Chain Slack Inspection

- Set the motorcycle up with its side stand
- Rotate the rear wheel to check if the chain is too tight; Measure the maximum chain slack by pulling up and pushing down the chain midway between the engine sprocket and rear wheel sprocket.
- If the drive chain is too tight or too loose ,adjust to the standard value.

standard value: 30mm-40mm



① Chain Slack

Adjustment

- Loosen the left and right chain adjuster lock nut.
- Remove the cotter pin, and loosen the rear wheel shaft lock nut.
- If the chain is too loose, turn the left and right chain adjust nuts clockwise and evenly.
- If the chain is too tight, turn the left and right chain adjust nuts anticlockwise and evenly.
- Turn both chain adjust nuts evenly until the drive chain reaches the correct value of slack.
- Keep rear wheel shaft has same displacement on left and right fork.



NOTE

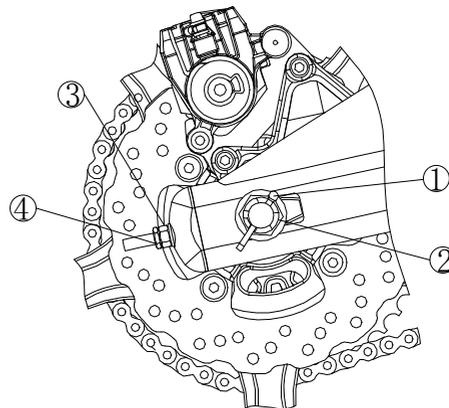
Rear wheel shaft should be installed at same level on left and right rear fork.



WARNING

Misalignment of the rear wheel will result in abnormal wear and unsafe riding condition.

- Tighten both chain adjuster locknuts.

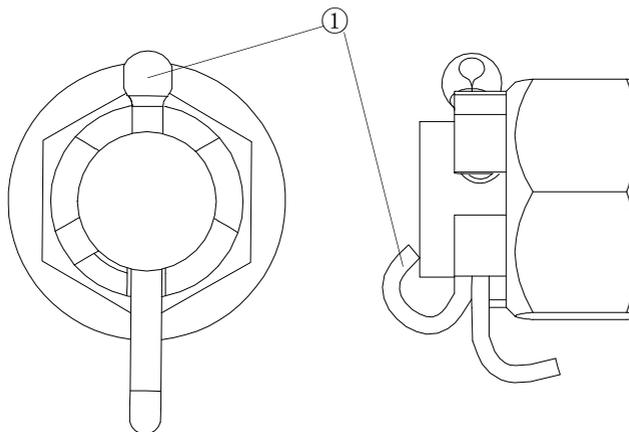


- ① Cotter pin
- ② Locknut
- ③ Chain adjuster nut
- ④ Chain locknut

- Tighten the rear axle nut to the specified torque.
- **Tightening Torque: 110N • m**

| |
|---|
|  NOTE |
| If there is no torque wrench, contact an authorized dealer. |

- Rotate the rear wheel, measure the chain slack again and re-adjust if necessary.
- Install a new cotter pin through the rear axle nut and axle and spread its ends.



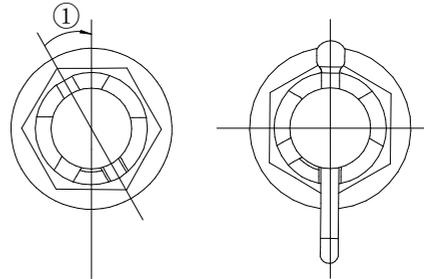
① Cotter pin

▲ NOTE

When inserting the cotter pin, if the slots of the nut do not align with the cotter pin hole in the axle shaft, tighten the nut clockwise up to the next alignment. It should be within 30 degree. Loosen once and tighten again when the slot goes past the nearest hole.

▲ WARNING

If the rear wheel axle nut is not securely tightened or the cotter pin is not installed, may result in an unsafe riding condition.



① Turn clockwise

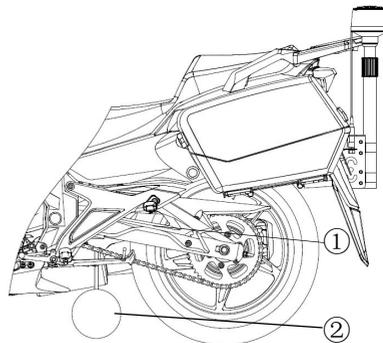
- Rear brake Inspection (Refer to Brake Chapter) .

Wear Inspection

- Stretch the chain taut either by using the chain adjusters, or by hanging a 10 kg weight on the chain.
- Measure the length of 20 links after elongation from pin center of the 1st pin to pin Center of the 21st pin.
- If the length exceeds the service limit, the chain should be replaced

Drive chain 20-Link Length

Service Limit: 323mm



① Measuring ② Hang weight



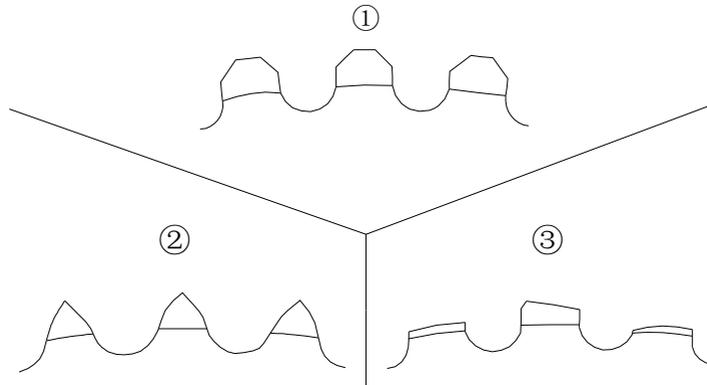
WARNING

For safety, please use the standard chain. It is an endless type and should not be cut for installation; Have it installed/replaced by an authorized CFMOTO dealer.

- Rotate the rear wheel to inspect the drive chain for damaged rollers, loose pins and links.
- Also inspect the sprockets for unevenly or excessively worn teeth, and damaged teeth.

NOTE

Refer to the below illustration for sprocket wear.



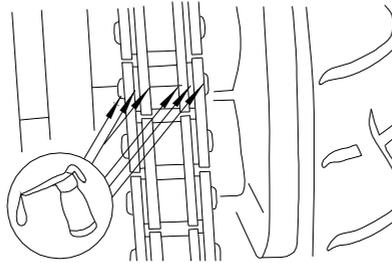
① Standard Teeth ② Worn Teeth ③ Damaged Teeth

● If there is any irregularity, have the drive chain and/or the sprockets replaced by an authorized CFMOTO Dealer.

Lubrication

Lubrication is also necessary after riding through rain or on wet roads, or any time that chain or sprocket appears dry. High viscosity oil like SAE 90 can work on the chain for longer time and provide better lubrication.

- Apply lubricant to the sides of the rollers so that it will penetrate to the rollers and bushings.

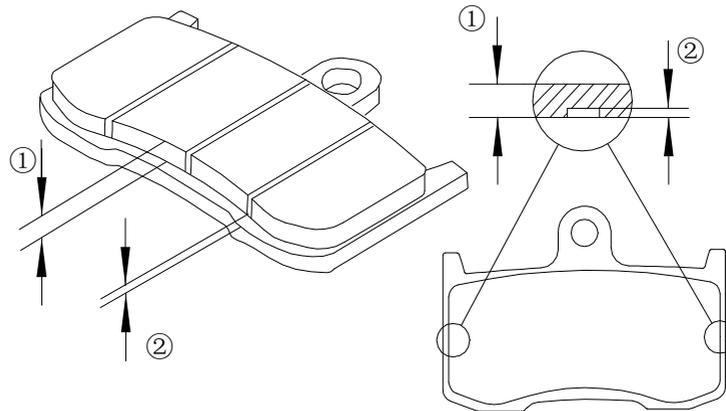


- If the chain is especially dirty, clean it by using diesel oil or kerosene, and then apply oil as mentioned above.

Brake

Brake Wear Inspection

Inspect the brake for wear. Inspect front and rear disc brake caliper, If the thickness of either pad is less than 1mm, replace both pads in the caliper as a set. Pad replacement should be done by an authorized CFMOTO dealer.



① Brake Pad Thickness

② 1mm

Brake Fluid

According to the Periodic Maintenance Chart, inspect the brake fluid level in both front and rear brake fluid reservoirs and change the brake fluid. The brake fluid should also be changed if it is contaminated with dirt or water.

Brake Fluid Requirement

Use DOT4 brake fluid marked the container.



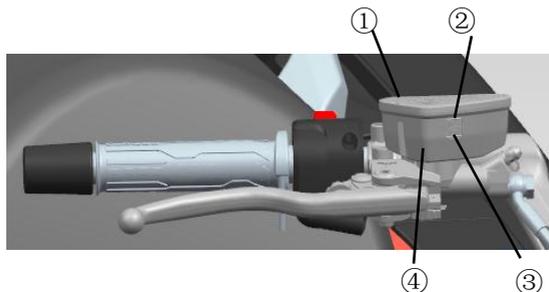
Do not spill brake fluid onto plastic parts or painted surface. Do not use fluid from a container that has been left open or unsealed for a long time.

Check for fluid leakage.

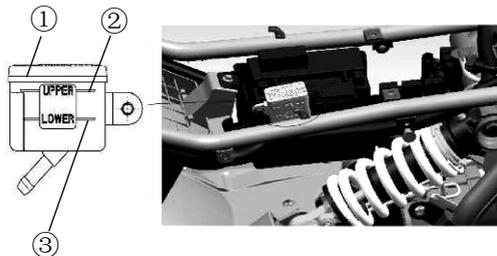
Check brake hose for damage.

Brake Fluid Level Inspection

- Check if the brake fluid level in the front and rear brake fluid reservoir is between the upper and lower lines.



- ① Front Brake Fluid Reservoir Cap ② Upper Level Line ③ Lower Level Line ④ Front Brake Fluid Reservoir



- ① Rear Brake Fluid Reservoir ② Upper Level Line ③ Lower Level Line

- If the fluid level in either reservoir is lower than the lower level line, check for fluid leakage , and fill the reservoir to the upper level line. Upper level line is located inside of the front brake fluid reservoir. It can be seen after open the reservoir cap.



Do not mix different brake fluid of different brand. Change the brake fluid completely if the brake fluid must be refilled but the type and brand of the brake fluid are unidentified.

Brake Fluid Replacement

Have the brake fluid changed by an authorized CFMOTO dealer.

Front and Rear Brake

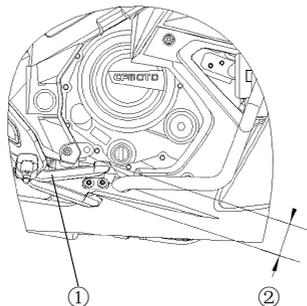
Brake disc and friction pad will be worn after a long period use. Check or replace them as maintenance chapter specified.

▲WARNING

If the brake lever or pedal becomes mushy when it is applied, there might be air in the brake lines or the brake may be defective. Since it is dangerous to operate the motorcycle under such conditions, have the brake checked immediately by an authorized CFMOTO dealer.

Inspection

- Turn the ignition key to the “” position.
- The brake light should go on when the front brake is applied.
Check front brake switch by dealer.
- Check rear brake switch. Brake light should be lit when press rear brake pedal.



① Rear Brake Pedal ② Rear Brake Pedal Travel

- If brake light can not be lit, check cable connectors of front & rear brake switch.

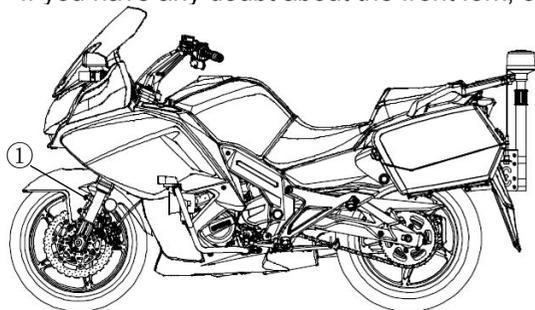
Rear brake pedal travel: 10mm

Front Fork

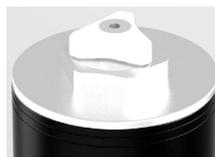
The front fork performance and oil leakage inspection should be checked in accordance with the Periodic Maintenance Chart.

Front Fork Inspection

- Holding front brake lever, pump the front fork up and down by several times.
- Visually inspect the front fork for oil leakage, scoring or scratches.
- If you have any doubt about the front fork, contact authorized CFMOTO dealer.



① Front Fork Tube



Recovery Damping Button



Compression Damping Button

Adjust compression damping and recovery damping of the front shock absorber when drive on the rough road with full loading.

Front Fork Compression Damping Adjustment

Locate white button on the top of front left shock absorber, turn it clockwise to increase compression damping, turn it counterclockwise to reduce compression damping.

Front Fork Recovery Damping Adjustment

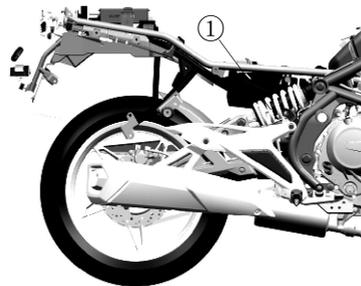
Locate red button on the top of front right shock absorber, turn it clockwise to increase recovery damping, turn it counterclockwise to reduce recovery damping.

Rear Shock Absorber

The rear shock absorber performance and damping oil leakage should be checked in accordance with the Periodic Maintenance Chart.

Rear Shock Absorber Inspection

- Press the seat for several times to check if the rear shock absorber stroke is smooth.
- Visually inspect the rear shock absorber for oil leakage.
- If you have any doubt about the rear shock absorber, contact authorized CFMOTO dealer.

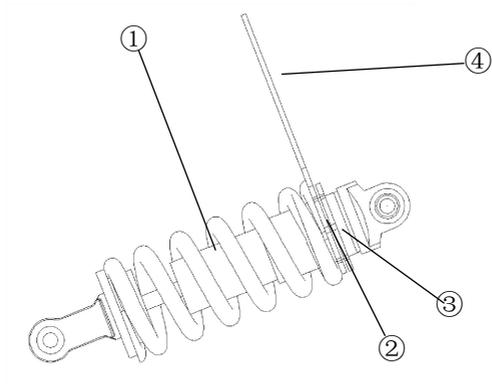


① Rear Shock Absorber

Adjust spring preload and recovery damping of rear shock absorber when drive on the rough road with full loading.

Spring Preload Adjustment

Rear shock absorber preload adopts stepless adjustment. Use special tool to turn the nut I & II to adjust the pre-load..



① Rear Shock Absorber ② Nut I ③ Nut II ④ Special Tool

Rear Shock Absorber Recovery Damping Adjustment

Locate the button under at the bottom of rear shock absorber, turn it clockwise to increase recovery damping, turn it counterclockwise to reduce recovery damping.



WARNING

This unit contains high pressure nitrogen gas. Incorrect operation can cause explosion. Read Service Manual for instructions. Do not incinerate, puncture or open it.

Wheels

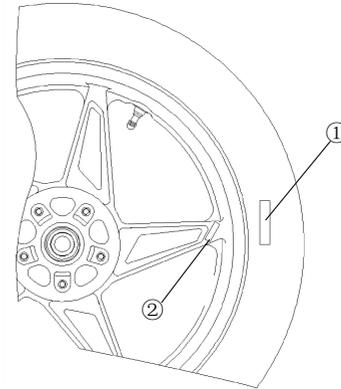
This motorcycle is equipped with tubeless tires.

The indication of TUBELESS is located on the tire side wall.



WARNING

The tires, rims, and air valves on this motorcycle are designed only for tubeless type wheels. Only use recommended standard tires, rims and air valves. Do not install tube-type tires on tubeless rims. Incorrect installation will cause tire deflation. Do not install a tube inside a tubeless tire.



1 Tubeless tires

2 Tubeless rims

Tires

Load and Tire Pressure

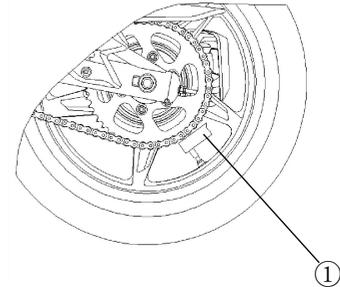
Improper tire pressure or beyond tire load limits for your tires may adversely affect handling and performance of your motorcycle and can result in loss of control.

The maximum recommended load is 340kg, including rider, baggage and accessories.

- Remove the air valve cap.
- Check the tire pressure by using an tire pressure gauge.
- Make sure to install the air valve cap securely.

▲ NOTE

Measure the tire pressure when the tires are cold (That is, motorcycle has not been ridden for more than 3 hours). Tire pressure is affected by ambient temperature and altitude. Tire pressure should be checked and adjusted when drive with temperature or altitude changes.



① Tire pressure Gauge

Tire Air Pressure (When cold)

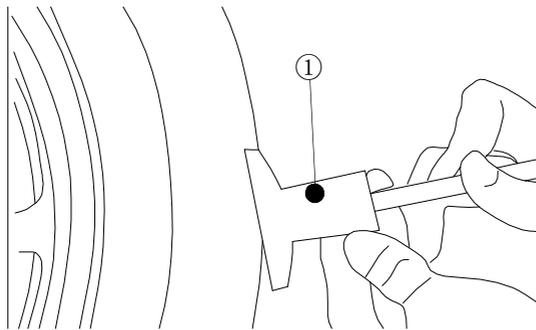
| | |
|-------|--------|
| Front | 250kPa |
| Rear | 290kPa |

Tire Wear, Damage

When the tire tread wears, the tire becomes more susceptible to puncture and failure. An accepted estimate is that 90% of tire failures occur during the last 10% of tread life (90% worn). So it is unsafe to use the tires until they are bald. In accordance with the Periodic Maintenance Chart, measure the depth of the tread with a depth gauge, and replace the tire that has worn to the minimum allowable tread depth.

Minimum Tread Depth

| | |
|-------|-----------|
| Front | 0.8mm~1mm |
| Rear | 0.8mm~1mm |



① Tire Depth Gauge

- Visually inspect the tire for cracks and cuts. Replace the worn tire.
Swelling or high spots indicate internal damage, requiring tire replacement.
- Remove any imbedded stones or other foreign particles from the tread.

**NOTE**

**Most countries may have their own regulations requiring the minimum tire tread depth; Be sure to follow them.
Have the wheel balance inspected whenever a new tire is installed.**

**WARNING**

To ensure safe handling and stability, use only the recommended standard tire and pressure. Tires that have been punctured and repaired do not have the same capabilities as undamaged tires. Do not exceed 100km/h within 24 hours after repair and 180km/h at any time after that.

**NOTE**

When operating on public roadways, keep maximum speed under traffic law limits.

Standard Tire (Tubeless)

| | |
|-------|---------------------------|
| Front | Size: 120/70 ZR17 M/C 58W |
| Rear | Size: 180/55 ZR17 M/C 73W |

**WARNING**

Use the same manufacturer's tires of both front and rear wheels.



New tire is smooth which can cause loss of control and injury. Normal friction surface can be formed after 160km break-in period. Avoid sudden, great brakes, enormous acceleration and sharp turns during break-in period.

Battery

The battery in this vehicle is maintenance-free battery. Therefore, it is unnecessary to inspect the amount of battery electrolyte or add distilled water. There is no need to remove the seal strip once the electrolyte is added into the battery. To ensure optimum service life of the battery, charge the battery properly to ensure the battery have enough power to the starter motor. When the motorcycle is used frequently, battery will be fully charged by the motorcycle charging system. If the motorcycle is only occasionally used, or used in a short time during each ride, the battery could be discharged. Battery can also discharge automatically.

The rate of discharge varies with battery type and ambient temperature.

When environment temperature rises, for example, the rate of discharge could increase one time when temperature rises every 15°C.

Battery charged in the cold weather is not proper which may easily cause electrolyte freezes, battery cracking and metal plate's deformation. Battery fully charged can increase the frost resistance capacity.

Battery Sulfation

Sulfation occurs when the battery is left in a discharged condition for an extended time. Sulfate is a normal byproduct of the chemical reactions within a battery. But when continuous discharge allows the sulfate to crystallize in the cells, the battery plates become permanently damaged and will not hold a charge. If this happens, you must replace it with a new battery.

Battery Maintenance

Always keep the battery fully charged. Failure to do so can damage the battery and result in a shorter life. If you ride your vehicle infrequently, inspect the battery voltage weekly with a voltmeter. If it drops below 12.8 volts, the battery should be charged with an appropriate charger (check with your dealer). If you will not use the vehicle for longer than 2 weeks, the battery should be charged with an appropriate charger. Don't use an automotive-type quick charger that may overcharge the battery and damage it.

Battery Recharger

Contact your dealer for the charger specification.

Charging Battery

- Remove the battery from the vehicle (Refer to Battery Removal)
- Attach the leads from the charger and charge the battery at a rate that is a tenth of the battery capacity. For example, the charging rate for a 10Ah battery would be 1.0 ampere.
- Ensure that the battery is fully charged before installation. (Refer to Battery Installation)



CAUTION

Never remove the sealing strip, or the battery can be damaged. Don't install a conventional battery in this motorcycle, or the electrical system can't work properly.



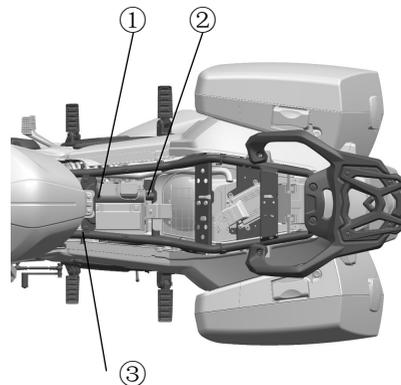
NOTE

If you charge the sealed battery, observe the instructions shown on the battery.

Battery Removal

- Remove the seat. Remove munting bolt of fuel tank.
- Disconnect the wires from the battery, first from the (-) terminal, then the (+) terminal.

- Lift rear part of fuel tank up, take the battery out of the case.
- Clean the battery with a solution of baking soda and water.
Ensure that the wire terminals are clean.



- ① (-) terminal ② (+) terminal
③ Mounting bolt, fuel tank

Battery Installation

- Place the battery in the battery case.
- Connect the wire to the (+) terminal first, then connect the wire to the (-) terminal.



(+) terminal and (-) terminal connecting order is opposite with battery removal when install battery.



WARNING

Incorrct terminal connection could serious damage electrical system.

- Coat the terminals with dielectric grease to prevent corrosion.
- Cover the terminals with their sleeves.
- Reinstall the removed parts.

Foot Pedal

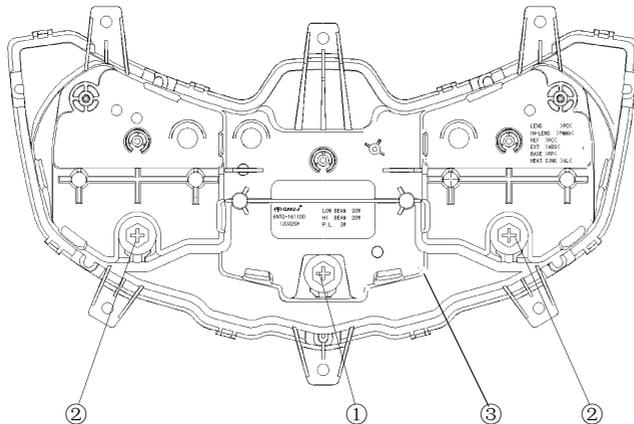
Lubricate foot pedal with silicone oil periodically (Refer to maintenance chart for more informations).

Headlight Beam

Low-beam Light Adjustment

Low-beam light is adjustable. When low-beam light is not suitable, adjust the bolt of low-beam light.

- Adjusting bolt until light beam is suitable.



- ① Adjust bolt, high-beam light ② Adjust bolt, high-beam light ③ Rear view, headlight

Headlight Beam Adjustment

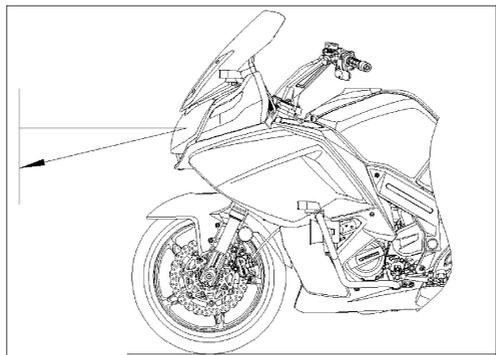
When high-beam light is not suitable, adjust the bolt of high-beam light.

- Adjusting bolt until light beam is suitable.



NOTE

Front and rear wheels touch ground and driver seats on the vehicle when adjust high/low beams. Adjustment of high/low beams should be accordance with local regulations.



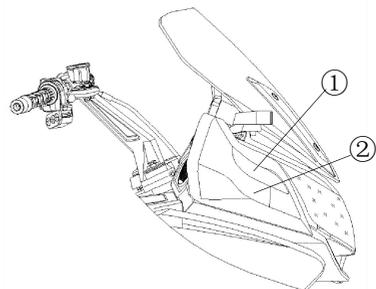
Rear Turning Light and Tail Light

Rear turning light and tail light should be replaced as a combination when damaged..

Front Turning Light

Front Turning Light: LED

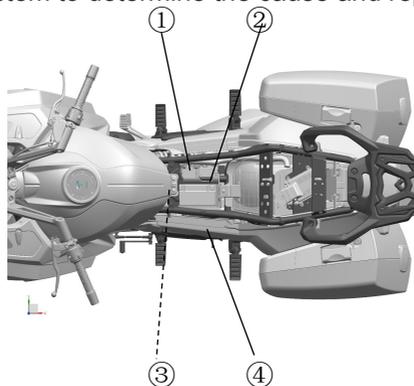
Remove decoration cover of rear view mirror when replace front turning light.



① Front Turning Light ② Decoration Cover, Rear View Mirror

Fuse

Fuse box is located under the seat. The main fuse is fitted on the starter relay under the left side cover. If a fuse is blown, inspect the electrical system to determine the cause and replace it with the same ampere fuse.



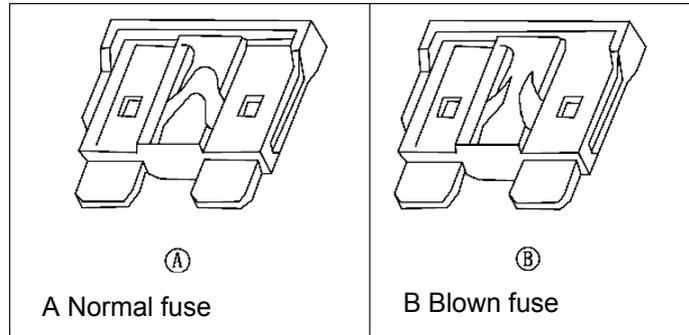
- Remove seat
- Remove side cover

① Fuse box ② Spare fuse ③ Main fuse ④ Left side cover



WARNING

Don't use any substitute for the standard fuse. Replace the blown fuse with a new one of the same ampere. Ampere value is shown on fuse.



Cleaning Your Motorcycle

General Precautions

Keeping your motorcycle clean will improve its appearance, optimize its performance and extend the life of various components. Covering your motorcycle with a high quality, breathable motorcycle cover will help protect its finish from harmful UV rays, pollutants, and reduce the amount of dust reaching its surfaces.

- Always wash the motorcycle after the engine and muffler cooled down.

- Avoid applying degreaser to seals, brake pads, and tires
- Always use non-abrasive wax and cleaner.
- Avoid all harsh chemicals, solvents, detergents, and household cleaning products like ammoniabased window cleaners.
- Gasoline, brake fluid, and coolant will damage the finish of painted and plastic surfaces: Wash them off immediately.
- Avoid wire brushes, steel wool, and all other abrasive pads or brushes.
- Be careful when washing the windshield, headlight cover, and other plastic parts as they can be easily scratched.
- Avoid high water pressure, as it may penetrate seals and electrical components, resulting in vehicle damage.
- Avoid spraying water in delicate areas such as air intakes, fuel line, brake components, electrical components, muffler outlets and fuel tank openings.
- Rinse with cold water from a garden hose to remove any loose dirt.
- Mix a mild neutral detergent (specified for motorcycles or automobiles) and water in bucket. Use a soft cloth or sponge to wash your motorcycle. If needed, use a mild degreaser to remove any oil or grease build up.
- After washing, rinse your motorcycle with clean water to remove any residue (residue from the detergent can damage the components of your motorcycle.)

- Dry off your motorcycle with a soft cloth to avoid scratches.
- Start the engine and allow it idle from several minutes. The heat from the engine will help dry off the moist areas.
- Carefully ride your vehicle at a low speed and apply the brake several times. Doing so help dry the brakes and restores them to normal operating performance.
- Lubricate the drive chain to prevent rusting.

 **NOTE**

After a ride in an area where the roads are salted or near the ocean, immediately you're your motorcycle with cold water. Don't use warm water to wash your vehicle as it accelerates the chemical reaction of the salt. After drying, apply an anti-corrosion sprays on all metal or chrome surfaces to prevent corrosion. In the case of riding in the rain or washing the motorcycle, condensation may form on the inside of the headlight lens. To remove the moisture, start the engine and turn on the headlight, gradually the condensation formed on the inside of the lens will clear off.

Painted Surfaces

After washing your motorcycle, coat the painted surfaces, both metal and plastic, with a commercially available motorcycle/automobile wax. Wax should be applied once every three months or as conditions require. Always use non-abrasive products and apply them according to the instructions on the container.

Windshield and Other Plastic Parts

After washing, use a soft cloth to gently dry off plastic parts. When dry, treat the windshield, headlight lens, and other unpainted plastic parts with an approved plastic cleaner/ polisher product.



Plastic parts may deteriorate and break if they come in contact with chemical substances or household cleaning products such as gasoline, brake fluid, window cleaners, threadlocking agents, or other harsh chemicals. If a plastic part comes in contact with any harsh chemical substance, wash it off with water and a mild neutral detergent immediately, and then inspect for damage. Avoid using abrasive pads or brushes to clean plastic parts, as they will damage the plastic parts' finish.

Chrome and Aluminum

Chrome plating and uncoated aluminum parts exposed to road salt or salt in the air in coastal areas are susceptible to corrosion if not properly cleaned. Coated aluminum should be cleaned with a mild neutral detergent and finished with a spay polish. Both painted and unpainted aluminum wheels can be cleaned with non-acid based wheel spray cleaners.

Leather, Vinyl, and Rubber

If your motorcycle has leather accessories, special care must be taken. Use a leather cleaner/treatment to clean and care leather accessories. Washing leather parts with detergent and water will damage them, shortening their life.

Vinyl parts should be cleaned with the rest of your motorcycle, and then treated with a vinyl treatment. The side walls of tires and other rubber components should be treated with a rubber protectant to preserve their life.



Special care must be taken not to get any rubber protectant on the tire tread surface when treating. This may decrease the traction between tire and ground causing the vehicle loss of control.

STORAGE

Preparation for Storage

- Clean the entire vehicle thoroughly.
- Run the engine for about 5 minutes to warm the oil, shut it off, then drain the engine oil.

 **WARNING**

Motorcycle oil is a toxic substance. Dispose the used oil properly. Contact your local authorities for approved disposal methods or possible recycling. Keep the used oil out of reach of children.

- Fill in fresh engine oil.
- Empty the fuel tank with a fuel pump or siphon.

 **WARNING**

Gasoline is extremely flammable and explosive under certain conditions. Turn the ignition key to “” position. Don't smoke. Make sure the area is well ventilated and free of any source of flame or sparks; this includes any appliance with a pilot light. Gasoline is a toxic substance. Dispose of gasoline properly. Keep the used oil out of reach of children. Contact your local authorities for approved disposal methods.

- Empty the fuel system by running the engine at idle speed until the engine stalls. (if left in for a long time, the fuel will break down and clog the fuel system.)
- Reduce tire pressure by 20% during storage period.

- Set the motorcycle on a box or stand so that both wheels are raised off the ground. (If this can't be done, put boards under the front and rear wheels to keep dampness away from the tire rubber.)
- Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts or in the brakes.
- Lubricate the drive train and all cables.
- Ensure that the battery is fully charged before storage. Remove the battery and store it out of the sun and in a cool, dry place.
- Tie plastic bags over the muffler to prevent moisture from entering.
- Put a cover over the motorcycle to keep dust and dirt from collecting on it.

Preparation after Storage

- Remove the plastic bags from the muffler.
- Install the battery in the motorcycle and charge it if necessary.
- Fuel the fuel tank.
- Check all the points listed in Daily Safety Checks section.
- Lubricate the pivots, bolts and nuts.

WARNING LABELS ON MOTORCYCLE

Please read all warning labels on the motorcycle and heed their instructions before your first riding.

If any of the labels depicted in this manual differ from the labels on your motorcycle, always read and follow the instructions of the labels on the motorcycle.

EFI ERRORS CODING TABLE

Self-diagnosis Outline

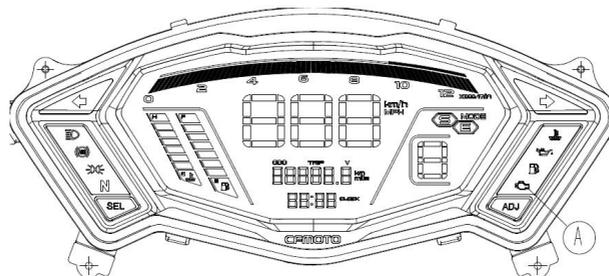
ECU constantly monitor sensors, actuators and circuits, MIL and battery voltage, etc, even ECU itself and inspect the sensor output signal, actuator drive signal and internal signal (such as close loop control, coolant temperature, idle speed control and battery voltage control, etc.) for reliability. If any process or signal is suspect, ECU records the trouble code in the RAM memory.

Faulty information is recorded in the form of trouble code, and in the sequence of which trouble comes first. Fault can be divided into “Current Fault” and “History Fault”.

When servicing, using PDA and FI indicator, the defective parts can be promptly found to improve the service efficiency and quality.

Self-diagnosis Procedures

In case of a problem occurs in the EFI system and ignition system, the MIL (LED) [A] goes on.



Note

Use a fully charged battery when conducting self-diagnosis. Otherwise, the light (LED) blinks very slowly or doesn't blink.

MIL is On

● MIL has two control ways.

- During the running of engine, MIL is on when system diagnoses defective parts with 2Hz flash frequency. Restart ignition switch after engine flameout. If the system detected the repaired fault, MIL will be on constantly until starting engine. If the system still detects fault, then MIL will be on for 4s and off for 1s, flashing frequency is 2Hz, until starting engine. If there is no fault, MIL will be off after lit for 4s, or start engine before MIL is off.
- Flashing code control: Flashing code needs special trigger condition. Before the engine start (Speed is 0 and engine RPM is 0), turn the throttle into full opened (Or throttle opened over valve value 65.1) and keep the throttle full opened. Then turn the EFI lock on. If the EMS system hasn't diagnosed the trouble out, the indicator light will be off after shining for 4s. If the EMS diagnosed the trouble, Indicator light will blinking the code. Trouble light will stop blinking for 1s between 2 numbers. If EMS diagnosed two troubles at the same time, indicator light will blink from the sequence of troubles. Indicator light will be off for 4s as trouble code interval. After blinking, MIL turns off automatically. If you need to observe flash codes again, turn off EFI lock first and then turn it on, meanwhile keep throttle fully opened.

- Read fault information through flashing code

Turn ignition switch on; K line connects ground for more than 2.5s. For example, if fault code has already in ECU fault memory, then MIL will output flashing code, that is P-CODE. For example: P0203 blink way: Blink 10 times continuously-stop-blink 2 times-stop-blink 10 times continuously-stop-blink 3 times.

EFI Fault Code

| No | Pcode | Decription(UAES) |
|----|-------|--|
| 1 | P0030 | O2 Sensor 1 Heater Contr. Circ. open |
| 2 | P0031 | O2 Sensor 1 Heater Contr. Circ. Low Input |
| 3 | P0032 | O2 Sensor 1 Heater Contr. Circ. High Input |
| 4 | P0036 | O2 Sensor 2 Heater Contr. Circ. open |
| 5 | P0037 | O2 Sensor 2 Heater Contr. Circ. Low Input |
| 6 | P0038 | O2 Sensor 2 Heater Contr. Circ. High Input |
| 7 | P0107 | Air inlet pressure sensor Short to Ground |
| 8 | P0108 | Air inlet pressure sensor Short to Power |
| 9 | P0112 | Intake Air Temp. Sensor Signal. Low Input |

| No | Pcode | Decription(UAES) |
|-----------|--------------|--|
| 10 | P0113 | Intake Air Temp. Sensor Signal. High Input |
| 11 | P0117 | Engine Coolant Temp.Circ. Low Input |
| 12 | P0118 | Engine Coolant Temp. Sensor Circ. High Input |
| 13 | P0122 | Throttle Pos.Sensor Circ. Low Input |
| 14 | P0123 | Throttle Pos.Sensor Circ. High Input |
| 15 | P0130 | O2 Sensor Circ.,Bank1-Sensor1 Malfunction |
| 16 | P0131 | O2 Sensor Circ.,Bank1-Sensor1 low Voltage |
| 17 | P0132 | O2 Sensor Circ.,Bank1-Sensor1 High Voltage |
| 18 | P0134 | O2 Sensor Circ.,Bank1-Sensor1 Malfunction |
| 19 | P0136 | O2 Sensor Signal.,Bank1-Sensor2 Malfunction |
| 20 | P0137 | O2 Sensor Circ.,Bank1-Sensor2 low Signal |
| 21 | P0138 | O2 Sensor Circ.,Bank1-Sensor2 High Voltage |
| 22 | P0140 | O2 Sensor Circ.,Bank1-Sensor2 Malfunction |
| 23 | P0201 | Cylinder 1- Injector Circuit Open |
| 24 | P0261 | Cylinder 1- Injector Circuit Low |

| No | Pcode | Decription(UAES) |
|-----------|--------------|---|
| 25 | P0262 | Cylinder 1- Injector Circuit Short |
| 26 | P0202 | Cylinder 2- Injector Circuit Open |
| 27 | P0264 | Cylinder 2- Injector Circuit Short To Ground |
| 28 | P0265 | Cylinder 2- Injector Circuit Short to Power |
| 29 | P0321 | Ign./Distributor Eng.Speed Inp.Circ. Range/Performance |
| 30 | P0322 | Ign./Distributor Eng.Speed Inp.Circ. No Signal |
| 31 | P0480 | cooling fan control Circuit Open |
| 32 | P0508 | Idle Air Control Circuit Short To Ground |
| 33 | P0509 | Idle Air Control Circuit Short to Power |
| 34 | P0511 | Idle Air Control Circuit Open |
| 35 | P0560 | System Voltage Malfunction |
| 36 | P0562 | System Voltage Low Voltage |
| 37 | P0563 | System Voltage High Voltage |
| 38 | P0627 | Fuel Pump "A" Control Circuit /Open |

| No | Pcode | Decription(UAES) |
|----|-------|--|
| 39 | P0628 | Fuel Pump "A" Control Circuit Short To Ground |
| 40 | P0629 | Fuel Pump "A" Control Circuit Short to Power |
| 41 | P0650 | Malfunction Indicator Lamp Control Circ. failure |
| 42 | P0691 | Cooling fan control Circuit Short To Ground |
| 43 | P0692 | Cooling fan control Circuit Short to Power |
| 44 | P1116 | Engine Temp High |

ABS ERRORS CODING TABLE

If the ABS indicator light [B] lighted, and then it means ABS system has something wrong. Please use PDA to read errors code. Below table shows what kind of error that every flashing condition stands for:

| No. | ERROR CODE | ERRORS DESCRIPTION |
|-----|------------|---|
| 1 | C1D90 | Front wheel speed sensor-el. Fault |
| 2 | C1D91 | Front wheel speed sensor-Extrapolation Fault |
| 3 | C1D92 | Front wheel speed sensor-Periodic Fault |
| 4 | C1D93 | Front wheel speed sensor-Start Recognition Fault |
| 5 | C1D94 | Fault wheel speed sensor-Phase-Length-Supervision Fault |
| 6 | C1D95 | Front wheel speed sensor-Double Frequency Check |
| 7 | C1DA0 | Rear wheel speed sensor-el. Fault |
| 8 | C1DA1 | Rear wheel speed sensor-Extrapolation Fault |
| 9 | C1DA2 | Front wheel speed sensor-Periodic Fault |
| 10 | C1DA3 | Rear wheel speed sensor-Start Recognition Fault |
| 11 | C1DA4 | Rear wheel speed sensor-Phase-Length-Supervision Fault |
| 12 | C1DA5 | Rear wheel speed sensor-Double Frequency Check |
| 13 | C1DD3 | O OSEK Fatal Error |
| 14 | C1DF0 | Pump defective |
| 15 | C1DF1 | Pump-connection |
| 16 | C1DF2 | Hardware Fault |

| No. | ERROR CODE | ERRORS DESCRIPTION |
|------------|-------------------|--|
| 17 | C1DF5 | Internal Hardware Fault (main driver, valves, ...) |
| 18 | C1DF3 | Voltage low |
| 19 | C1DF4 | Voltage low |
| 20 | C1DF7 | Voltage high |
| 21 | C1E59 | Vehicle variant coding Error |
| 22 | C1E5A | ABS Switch Failure |

General Troubles and Causes

| Problem | Components | Possible cause | Solution |
|----------------------------|----------------------|---|--------------------|
| Engine fails to be started | Fuel system | No fuel | Refuel |
| | | Pump blockage or damage: poor fuel quality | Clean or replace |
| | Ignition system | Spark plug failure: excessive carbon deposits, too long time use | Inspect or replace |
| | | Spark plug cap failure: Poor contact or burning | Inspect or replace |
| | | Ignition coil failure: poor contact or burning | Inspect or replace |
| | | ECU failure: Poor contact or burning | Inspect or replace |
| | | Pick up coil failure: poor contact or burning | Inspect or replace |
| | | Stator failure: poor contact or burning | Inspect or replace |
| | | Wiring failure: poor contact | Inspect or adjust |
| | Cylinder compression | Starting mechanism failure: worn or damaged | Inspect or replace |
| | | Intake and exhaust valves, valve seats faulty: too much fuel colloidal or too long time use | Inspect or replace |
| | | Cylinder, piston, piston ring failure: too much fuel colloidal or wear | Inspect or replace |
| | | Intake manifold leakage: too long time use | Adjust or replace |
| Valve timing faulty | | Adjust or replace | |
| Horn doesn't work | Battery | Flat | Charge or replace |
| | Left switch | Faulty horn button | Adjust or replace |
| | Cable | Poor connection | Adjust or repair |
| | Horn | Horn faulty | Adjust or replace |

| Problem | Components | Possible cause | Solution |
|--|-------------------------|---|--------------------|
| Insufficient power | Valve and piston | Intake and exhaust valves, piston excessive carbon deposits: poor fuel quality and poor oil quality | Inspect or replace |
| | Clutch | Clutch slips: poor oil, too long time use and overloaded | Adjust or replace |
| | Cylinder and ring | Cylinder, piston rings wear: poor oil and too long time use | Replace oil |
| | Brake | Separation of brake is incomplete: the brake is too tight | Adjust |
| | Main chain | The drive chain is too tight: improper adjustment | Adjust |
| | Engine | Engine overheats: too rich or too lean mixture, poor oil, fuel quality, shelter, etc | Adjust or replace |
| | Spark plug | Improper spark plug gap, specification is 0.8mm -0.9mm | Adjust or replace |
| | Intake pipe | Air leakage of intake pipe: too long time use | Adjust or replace |
| | Cylinder head | Cylinder head or valves leak | Inspect or replace |
| | Electric system | Electrical system failure | Inspect or repair |
| Headlights and tail lights do not work | Air cleaner | Clogged air filter | Clean or adjust |
| | Cable | Poor connections | Adjust |
| | Left and right switches | Switch faulty or damaged | Adjust or replace |
| | Headlight | Faulty bulbs, lamp holder | Adjust or replace |
| | Regulator | Loose connection or burnt | Inspect or replace |
| Alarm system fault | Magneto | Faulty or burnt stator | Inspect or replace |
| | Battery | Flat | Charge or replace |
| | Cable | Poor connection | Adjust or repair |
| | Speaker, alarm light | Damaged | Replace |
| | Alarm control box | Damaged | Adjust or replace |

Listed above are the common faults of the motorcycle. If your motorcycle has failed (especially the electronic fuel injection system, fuel evaporation system and alarms system), please contact “CFMOTO SERVICE STATION” timely to check and repair vehicle

Caution: Do not try to fix faults by yourself, otherwise it will cause accidents easily. You are responsible for the accidents if you fail to follow the caution.



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