Forward

Dear users：

Sincerely thank you for choosing the BD700-3 two wheeled riding motorcycle designed and produced by our company! This car is independently developed and produced by our company, combining advanced technology and avant-garde design concepts at home and abroad. We hope it can bring you a safe driving process and a comfortable driving experience!

Before driving your motorcycle, please fully read the regulations and requirements outlined in this user manual!

This user manual provides an overview of the repair and maintenance of this motorcycle. Please follow the various procedures in this user manual for operation!

Our company has dedicated technical maintenance personnel and departments to provide you with excellent technical maintenance service support!

The company has always adhered to the service tenet of "making consumers more satisfied" and will continuously optimize and improve its products. Any changes in appearance and structure that may arise from this may result in inconsistency with this user manual. We apologize for any inconvenience caused. The pictures in this user manual are for reference only, please refer to the actual product for details.

Thank you again for your attention and trust in our company!

HANGZHOU SATURN POWER TECHNOLOGY CO,. LTD

Important precautions

Please operate and drive according to this user manual, strictly abide by national and local traffic laws and regulations, and always pay attention to safety!

This user manual is one of the essential accessories of this vehicle. When the vehicle is resold to others, please attach it with the vehicle.

The preparation of this user manual complies with the provisions of GB/T9969-2008 and GB/T19678-2005 standards.

Danger/Warning/Caution

Please read the content of this manual and remember the key points inside.

Warning:

The items indicated by this word indicate precautions for operation to avoid damage to the motorcycle.

Attention:

The item indicated by this word is a specialized explanation designed to facilitate maintenance or make important instructions more clear.

Contents

Ⅰ、User notice

1.1 Safety instruction for motorcycle drivers

Please comply with following six regulations for your personal and vehicle safety：

① Properly wear various protective equipment

The protective equipment for cycling includes safety helmets, goggles, knee protectors, elbow protectors, and gloves. Wearing protective equipment can greatly reduce the harm to the body when accidentally falling a car, and can maximize the protection of your personal safety.

② Familiar with vehicle construction

The driver's driving skills and understanding of the vehicle are the foundation of safe driving. Before officially riding a bicycle on the road, it is necessary to practice in an open area without other vehicles and be fully familiar with the vehicle and its handling methods.

③ Understand the limits of one's safe speed

The driving speed depends on the ground conditions, your own skills, and the weather. Drive at a safe speed and within your skill range at all times. Understanding this limit will prevent accidents from occurring.

④ Wear appropriate clothing

Loose and bizarre clothing can make driving uncomfortable and unsafe. Wearing suitable clothing on the saddle will allow you to move your hands, feet, and body freely. Therefore, try to choose high-quality tight fitting clothing.

⑤ Inspection before driving

Please carefully read the instructions in the "Pre driving Inspection" section of this manual, and driving according to the rules can ensure the safety of you and passengers.

⑥ Double attention to safety when driving on cloudy and rainy days

Pay special attention in rainy days. Remember that the Braking distance is twice as long as in sunny days. When driving, keep away from the hole cover, marking paint and greasy road surface to avoid skidding.

1.2 Number position（Fig1）

①、Vehicle frame number(VIN):Front end of frame (right side of front pipe)；

②、Nameplate：Front end of frame(Left side of front pipe);

③、Engine number:Right side of the engine casing；

Please fill in the frame and engine code below for future **reference:**

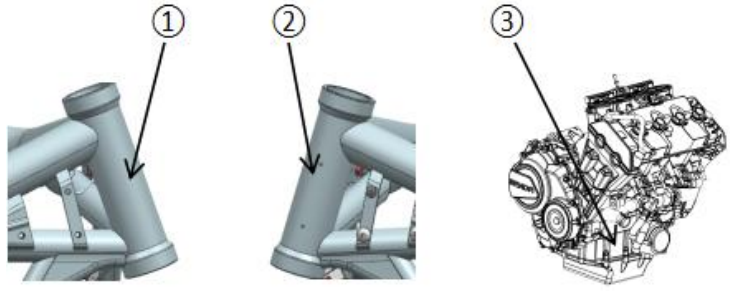


Fig1　Nameplate、Vehicle frame number VIN code、Engine number position

VIN	
Engine No	

II、Brief introduction to motorcycles

The motorcycle has a compact structure, unique style, novel appearance, and is equipped with TCS traction control system, which ensures good driving stability and comfortable riding. Adopting an electronic fuel injection system, it is more environmentally friendly and efficient, meeting national emission requirements.

BENDA BD700-3（TANGDAO）Two wheeled motorcycles will bring you an unprecedented driving experience!

2.1 Range of application of BENDA two wheeled motorcycles

BD700-3 a self-developed two wheeled motorcycle, which is suitable for both urban roads and rural roads.

2.2 Characteristics of BENDA two wheeled motorcycles

1、Strong power, heavy load

2、High torque,strong climbing ability

3、Electronic fuel inject system

4、Domestic Advanced Professional Water-Cooled Engine

5、Full DC power supply system

6、TCS Traction control system

2.3 Carrying regulations

Number of passengers：2perple（Include drivers）

Maximum allowed load capacity：150kg

2.4 Fuel

Fuel grade：95#or above unleaded gasoline

Due to highly flammable nature of gasoline，If the fuel tank, fuel filter, fuel pipe, throttle valve body and other parts of this vehicle leak oil due to damage or aging, they must be repaired in a timely manner before use.

Unleaded gasoline can extend the service life of spark plugs and mufflers.

2.5 Electrical equipment

You can not install or modify the route of this vehicle on your ow,you cannot modify electrical equipment on your own. Otherwise, it will overload the electrical system, causing the circuit to overheat, resulting in fuse melting or short circuit of the circuit, and even generating sparks, causing danger such as burning the car.

Danger:

Our company shall not be responsible for any consequences caused by the installation or modification of our vehicle's wiring or electrical equipment.

2.6 Inspection

You should strictly follow requirements in the "Maintenance Schedule" to maintain your vehicle.

III、Safe driving of motorcycles

This motorcycle is two wheeled motorcycle,It can bring convenience and speed to the rider.In order to ensure the best performance of your motorcycle, you must perform proper maintenance and upkeep on the motorcycle.When using a motorcycle, it must be safe and normal; When driving or riding this motorcycle, your body must be healthy so that you can drive the vehicle at your best condition.

Danger:

Our company shall not be responsible for any consequences caused by the installation or modification of our vehicle's wiring or electrical equipment.

3.1 Safe driving rules

1、Before starting the motorcycle, it is necessary to carefully inspect the vehicle to confirm that it is safe and functioning properly. This can prevent accidents and damage to components.

2、 Motorcycle drivers must pass the traffic management department examination and obtain a "motorcycle driver's license"; Do not lend motorcycles to people without a motorcycle driver's license.

3、To avoid injury,you should：

●Wear eye-catching clothing.

●Do not drive too close to other motor vehicles, and use signals such as turn signals, horns, and brake lights correctly.

●Please do not drive in blind spots of other drivers.

4、Strictly comply with traffic regulations.

●Speeding is the main factor leading to motorcycle accidents. If encountering rainy and snowy weather, gravel roads, intersections and other road conditions, you must drive at low speed or slow down carefully.

●When turning or changing lanes, signal devices such as turn signals must be turned on to attract the attention of other drivers.

5、 The driver should grip the steering handle tightly with both hands and step on the front pedals with both feet; Passengers should tightly grip the handrails or hold the driver's waist with both hands, and step on the rear pedals with both feet.

3.2 Safety protection equipment

1. Most of the injured in motorcycle traffic accidents are head injuries. Therefore, drivers and passengers must wear helmets that meet safety and quality standards, as well as protective equipment such as dust proof glasses and gloves.

2. When driving, the temperature of the exhaust muffler is high. To avoid contact with burns, both the driver and passengers should wear boots and other equipment.

3. Loose clothing should not be worn to prevent accidents from catching the steering lever, clutch lever, pedals, or nearby vehicles.

3.3 Vehicle refitting

Warning:

1. It is illegal to arbitrarily modify a motorcycle or replace the original device of the motorcycle, which cannot guarantee the safe driving of the motorcycle. You must comply with the traffic management department's regulations on the use of vehicles.

2. To ensure that the exhaust emissions meet national emission requirements, you cannot modify or remove the following components without authorization.

1) Unable to adjust idle speed arbitrarily;

2) Due to the installation of optimized catalysts in the exhaust muffler, if the exhaust muffler is damaged, please go to the designated maintenance unit for repair or replacement.

3. If there are good modification suggestions, you can inform our company by letter, and after confirmation, our company will be responsible for implementing them. Our company is not responsible for any adverse consequences caused by unauthorized modification.

Attention:

Improper or overweight loading of motorcycle cargo will affect the performance of the vehicle, reduce its driving stability, and easily cause safety accidents.

The modification or removal of original parts from motorcycles may result in reduced safety or illegal driving of the vehicle. Please follow all regulations in your region.

Danger:

We are not responsible for any dangerous consequences such as short circuits in wires, blown fuses, electrical appliances exceeding rated power, or sparks that may cause the vehicle to burn due to your own modification of cables and electrical appliances.

When loading goods:

1. The goods should be loaded at the center and lower, close to the center of the vehicle.

2. All goods must be firmly fixed to the vehicle, which is conducive to vehicle handling and stability.

3. Do not attach large or heavy objects to the steering handle, front shock absorber, or front mudguard, as this may cause unstable driving or poor steering.

4. It is strictly prohibited to exceed the maximum loading weight of 150kg (including drivers, passengers, and loaded goods)

3.4 Warning on installation accessories:

The original accessories of this car have been tested by the company. Our company is not responsible for any adverse consequences caused by the installation of non original accessories.

After installing non original accessories, you must carefully inspect: visual obstruction, ground clearance, side tilt angle, steering flexibility of the control mechanism, ease of operation, and performance of the accessories. If the above issues exist, the attachment should be canceled before using this vehicle.

Ⅳ、Operation instruction

4.1 Parts position

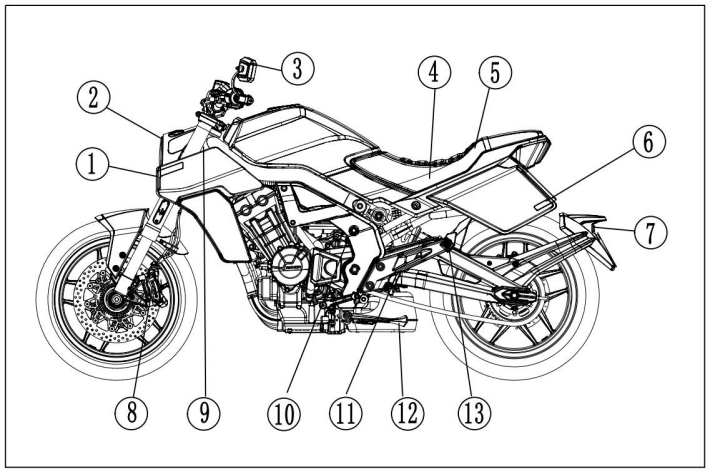


Fig 1

1、（Fig2）

(1)Front left turn signal
(2)Front headlight
(3)Left rear mirror
(4)Battery（below the seat）
(5)Seat
(6)left Rear signal
(7)Rear license plate light
(8)Front brake caliper
(9)Vehicle nameplate
(10)Shift lever
(11)Left front foot pedal
(12)Side stand
(13)Rear left foot pedal

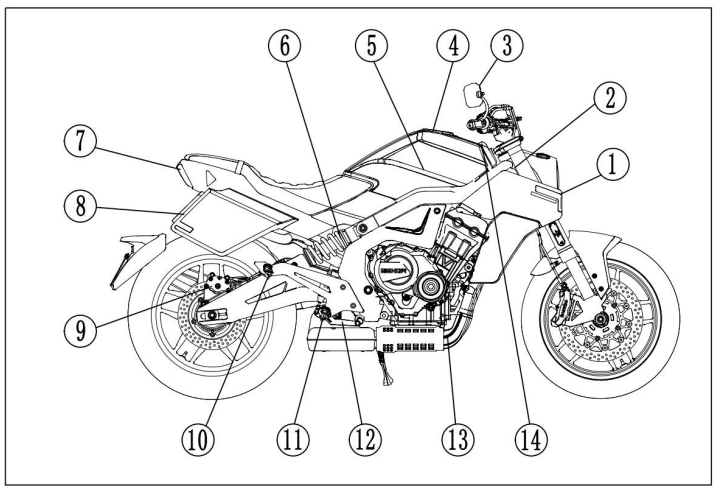


Fig2

2、（Fig3）

(1)Front right turn signal
(2)Vehicle frame VIN codes
(3)Right rear mirror
(4)Fuel tank cover
(5)Air filter below fuel tank
(6)Rear shock absorber
(7)Rear tail light
(8)Right rear turn signal
(9)Rear brake caliper
(10)Rear right foot pedal
(11)Front right foot pedal
(12)Brake pedal
(13)Exhaust muffler
(14)Ignition lock

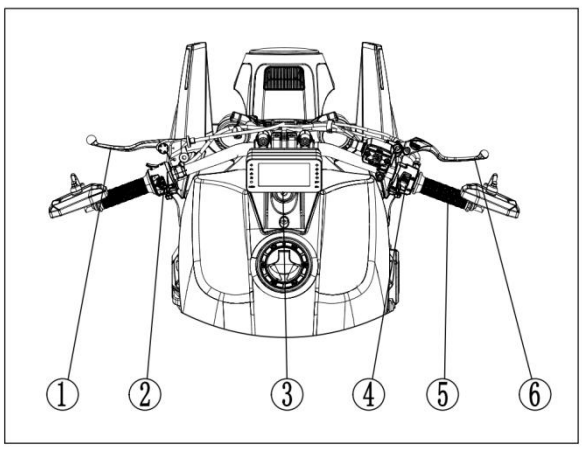


Fig 3

3、Front car body（Fig4）

①Clutch handle
②Left switch combination
③Instrument
④Right switch combination
⑤Throttle handle grip
⑥Front brake handle

Number	Name	Function
1	Left turn indicator	The front and rear left turn signals flash and illuminate in green
2	Electronic fuel injection malfunction indicator light	After the engine is running, the light goes out. If there is a fault, the yellow light will flash
3	Water temperature alarm indication	illuminate and display in red ： Overheat coolant,Cooling system malfunction
4	Fuel capacity indicator	Display whether the current fuel level is sufficient
5	Photosensitive switch	Change the instrument background color based on the external ambient lighting conditions
6	Right turn indicator	The front and rear right turn signals flash, and when illuminated, they display green
7	High beam indicator	The high beam light is on, and when it is lit, it displays blue
8	ABS indication	Display ABS status
9	Oil warning light	Display the current oil level. The red display shows insufficient oil.
10	TCS indication	During TCS operation, it flashes at a frequency of 2HZ.
11	Vehicle speed indication	The instantaneous speed at which the vehicle is traveling
12	Gear indication	Display the gear position of the engine
13	Navigation indicator	Indicate the direction of travel at the next intersection
14	Bluetooth indicator	Indicates the current Bluetooth connection status
15	Navigation distance indication	Indicate the distance to the intersection and the total remaining distance.
16	Instrument oil level indication	Display the percentage of fuel remaining in the fuel tank
17	Voltage display	Display the current vehicle battery voltage
18	Water temperature alarm indication	Illuminate and display in red: coolant overheating, cooling system malfunction
19	Time indication	Display current Beijing time
20	Mileage indicator	The total mileage traveled by the vehicle

4.2 Instrument——

Table 1

1.Please refer to Table 1 for the names and functions of indicator light symbols.

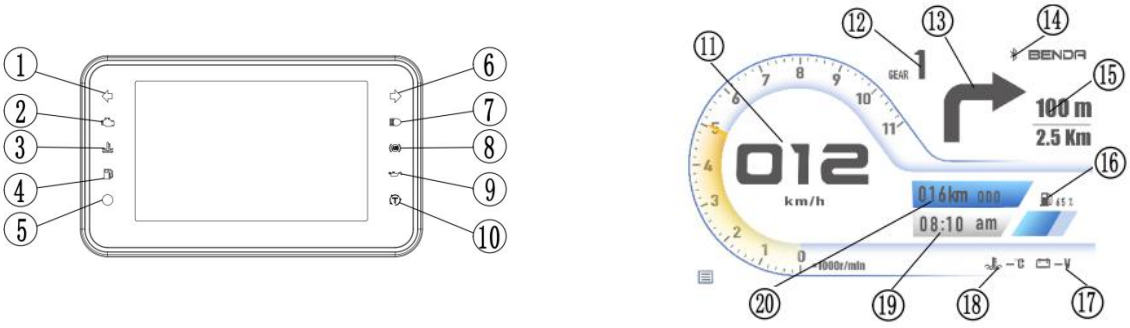


Fig5

4.3 Instrument settings

BD700-3There are no operation buttons on the vehicle instrument panel. The operation buttons are located on the left switch combination of the vehicle. Please refer to Figure 9, page 9 for details. There are four buttons in total, which are the up button, down button, back button, and confirm button. The operation method is shown in the table below:

Menu interface：	Press the confirm button to enter the menu interface, press the up and down buttons to select the desired function, and then press the confirm button to enter.
Setting interface：	Press the up and down arrow keys to enter the clock and mileage settings, select them, and press the confirm button to enter.
Clock setting：	After entering the clock setting, first press the up and down keys to switch between the 12 hour or 24 hour system. After selecting, press the confirm key to enter the clock adjustment position. First, press the down key to decrease the number in the hour position, and press the up key to increase the number. After setting the hour, press the confirm key to move to the minute setting. Repeat the same process and then press the confirm key to enter AM/PM selection. After setting up, press the return button to return to the previous menu level.
Metric and imperial systems switch：	After entering the interface for switching between metric and imperial systems, press the up and down keys to select the metric and imperial system status. After selecting, return to it.
Total subtotal switching：	In the main interface state, short press the up and down keys to switch between metric and English systems, and long press the confirm key to clear subtotals in subtotal state.
Virtual screen projection：	Download "MOTOFUN" from the application market, install it, click "Connect Bluetooth" on the main interface, and then the phone will automatically search for Bluetooth. After searching, double-click "Connect Bluetooth". After connecting successfully, click "Return to the main interface", click "Navigation" on the main interface to enter the navigation function. Enter the address in the navigation interface and search. The instrument panel will display the navigation function in the upper right corner.

Table2

4.4 Ignition switch lock

The ignition switch lock (Figure 6) is set on the front right side of the vehicle, and the ignition switch must be turned on before starting the motorcycle. The key positions and functions are shown in Table 3.

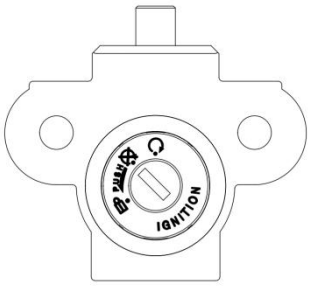


Fig6

Key position	Function	Key state
Turn off“ ”	Circuit disconnected, engine unable to start	Can be pulled out
Turn on“ ”	The circuit is closed and the engine can start	Not removable
Steering lock“ ”	Circuit disconnected, engine unable to start	Can be pulled out
Attention： When not in use, turn the key to the off position**“ ”direction and pull out the key**		

Table3

4.5 Front lock

The front lock (Figure 7) is installed at the upper connecting plate of the vehicle. Press and turn the key" " when not in use to lock the steering mechanism.

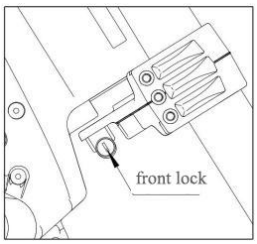
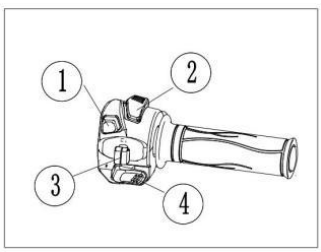


Fig7 Front lock

Note: Before locking the steering mechanism, the vehicle needs to be parked properly. After locking, the motorcycle cannot be pushed, making it difficult to balance and prone to rollover.

4.6 Right switch combination



① Double flashing warning switch
② Flame-out preset switch
③ Headlamp, position light switch
④ Electric start button

Fig8 Right switch combination

1、Preset flame-out switch

The ignition switch is located on the right side of the steering lever, and the ignition preset switch has two positions："⊠"and"↻"

Turn off"⊠"	Turn off switch - At this position, the ignition circuit is disconnected, the running engine is turned off, and the engine cannot be started.
Turn on"↻"	The ignition switch is turned on - it needs to be switched to this position during operation, and the ignition circuit has been closed.

2、Headlight,position light switch

The headlight and position light switches have three states："☼" "≡D≡" "●"

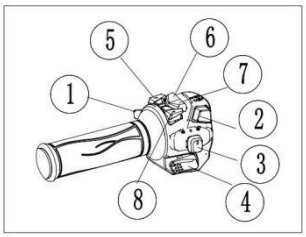
Headlight" ☼ "	When the switch is turned to this position, the headlights, position lights, and tail lights will light up.

Position light“ ”	When the switch is turned to this position, the position lights and tail lights light up.
Turn off“ ● ”	When the switch is turned to this position, the headlights, position lights, and tail lights are turned off.

3、Electronic start button

The operation method is as follows: After completing the preparation work for starting (see page 16), press the electric start button ,and if necessary, turn the throttle handle to add oil appropriately to start the engine.

4.7 Left switch combination



①Overtaking light switch
②Dimmer switch
③Turn signal
④Horn button
⑤Instrument function up key
⑥Instrument function return key
⑦Instrument function confirm key
⑧Instrument function move down key

Fig9 Left switch combination

1、Overtaking light switch

When the "overtaking light button" is pressed, the overtaking light will light up;

When the "overtaking light button" is released, the overtaking light does not light up.

Attention：

When headlamp was in the high beam status“ ”,overtaking light was not on.

2、Headlight dimmer switch

The headlight switch has two operating states: ignition lock is turned on, and the "headlight and position light switch" is turned to the "" position

Low beam“ ”	Turn the headlight dimmer switch to the low beam position
High beam“ ”	Turn the headlight dimmer switch to the high beam position.

Warning:

Please adjust the high and low beam lights according to the road conditions in a timely manner. If there are oncoming vehicles, please adjust the lights to low beam to avoid direct light affecting the driving status of oncoming drivers and causing traffic accidents.

3、Turn signal switch

When turn left， move“turn signal”to“⇦”； Front and rear turn signal light of left,the left turn indicator light is on of the instrument.

When turn right，move“turn signal switch”to“⇨”position；Front and rear turn signal light of right，the right turn indicator light is on of the instrument.

Move the turn light switch to middle position； Then left,right turn light and indicator light are not light up.

Warning：

When turn or change the lane we must turn on the turn signal switch， And turn off the turn signal till finish turning or changing the lane.

4.8 Headlight Pitch angle adjustment（Fig10）

Due to user's height and observation habits,So have different requirements to light for night time drive.To give the user a better drive experience in night， The front headlight was designed specially with a adjustable angle.User can adjust according to self need. Ways as followings：

The first step、Use6#Hex key、10#open spanner loosen the upper and lower fixing screws that secure the front headlights

The second step、 After loosening the screws .Rotate the light with lower fixing screws as the axis ,then adjust to proper position and fasten the screw.

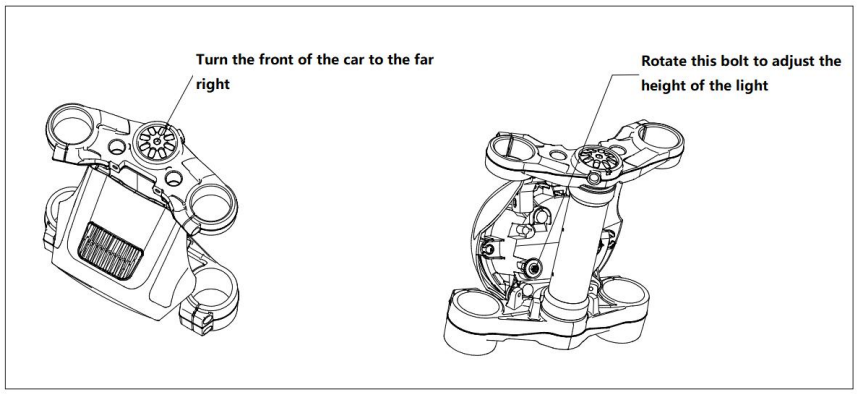
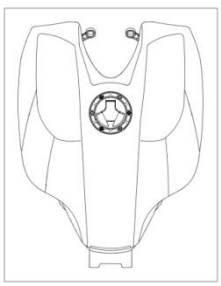


Fig 10

4.9 Opening method of fuel tank cover（Fig11）



Open the small cover that covers the keyhole, insert the key into the fuel tank lock hole, and rotate clockwise to open the fuel tank lock; When closing, remove the key, gently close the fuel tank cap, and press firmly until you hear a "click" sound. Finally, cover the small lid that covers the keyhole.

Fig 11 Fuel tank cover

4.10 Tire

Correct tire pressure will ensure： stable driving、comfortable driving、 endurable tire.Tire pressure should inspect at cold tires. Tire specification and pressure referenced to Table 4 :

Cold tire pressure	Single			Double		
	kPa	kgf/cm2	psi	kPa	kgf/cm2	psi
Front wheel	250	2.50	36	250	2.50	36
Rear wheel	290	2.90	42	290	2.90	42

Table4

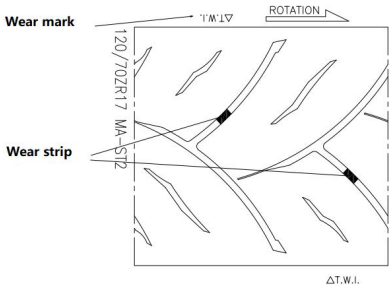


Fig12 Inspection of the tire

Determine tire state.Incorrect tire specification will influence manipulate performance.Damage and wear on the tire will lead to the tire lose control.Over wear of the tire will lead to perforation and lose control.Tire's wear also influence appearance and manipulate performance.

Inspect the state and pressure of the tire before using.If many obvious wear like wear,scratch or worn to their limit position,must change the tire.

Attention：

1、When pressure of tire decline， Inspect if have nail,small hole on the tire.Is the side of the wheel rim damaged。 Tires without inner tubes will gradually deflate when they have small holes.

2、Incorrect pressure of tire will lead to abnormal wear of tire tread ,Even causing safety accidents.

3、Insufficient tire pressure may cause tire damage or detachment from the wheel hub.

Warning：

1、The triangular mark indicates the position of the wear strip.If wear strip touch the ground,that means tire has reach to the limit and should change the tire.

2、When change the tire， determine the size and type of tire should accord with table 3.If change the tire of different size or type,it will affect the performance of manipulating the motorcycle and cause it lose control.

3、After repairing or changing the tire， we should balance the wheel which is very important.Because it can avoid the touch between tire and ground， also avoid some uneven wear.

Danger：

1. This motorcycle is equipped with vacuum tires, and the rims and tire lips are sealed in contact. In order to avoid air leakage, special tools are needed to protect the rim and tire lip during the disassembly and installation of tubeless tires, using a specialized tire disassembly and assembly machine.

2. To repair the small hole in a tubeless tire, it is necessary to remove the tire and apply a patch on the inside of the tire. Do not use external repair methods, as the centrifugal force of the tire during turning can loosen the repaired area. After repairing the tire, the vehicle speed should not exceed 80 kilometers per hour within 24 hours, and the vehicle speed should not exceed 130 kilometers per hour in the future. If you exceed the speed limit, the heat generation of the tire will increase sharply, which will make the repair ineffective and lead to tire air leakage. If the side of the tire is damaged, or if the area where the tire is damaged is greater than 6 millimeters, the tire cannot be repaired or used.

Ⅴ、Operation guide

5.1 New vehicle running in

Run-in period is the initial period of use of the new vehicle,a method to ensure that the bonding surface between parts becomes the optimal bonding state.Correct run in operation can improve the life time of vehicle to the maximum extent possible.

New vehicle run in mileage：3000km

1、In the running in period ： Throttle should be avoided full open,Engine's maximum speed can not exceed 6500 rpm(Instrument)：Speed should be controlled within the following range

0～300km Run in ：

Throttle handle should be opened to avoid exceeding 1/2 of the maximum opening；Vehicle speed within 50km/h.

300～600km Run in：

Throttle handle should be opened to avoid exceeding 2/3 of the maximum opening； Vehicle speed within 60km/h

600～1500km Run in：

Throttle handle should be opened to avoid exceeding 3/4 of the maximum opening； Vehicle speed within 70km/h.

2、Avoid sustained low speed：Engine runs at a certain low speed （light load）,Will cause smooth grinding of components and poor running in.

3、Use every gear properly：Do not drive Continually at a fixed speed of engine,Can change the speed ,enable every components of engine to undertake pressure，Which can make the engine run in better.

4、Before driving,first circulate the oil：After start the hot or cold engine,before operating without applying load to give the engine sufficient idle time,this can lubricate all important components of the engine with oil.Reduce the wear，prolong the life time and can also preheat the engine.

5、New tire's run in：Tire also need to be run in,Before running in the new tire,Within 160 km you should increase the turning inclination angle,but avoid sudden braking rapid acceleration sharp turns.

6、Run in period repair：Please repair when driving the new vehicle over 1000km,In the run in period，other parts have already engaged.This time all components should be adjusted properly Then change the oil.

Danger：

Poor tire running in will cause slip or lose control.When using new tire should be very careful,Run in the tires within the first 160 kilometers (100 miles)

Attention:

Under complex road conditions and harsh weather conditions, vehicles should undergo early break-in maintenance

5.2 Inspection before driving

To ensure driving safe,please check this vehicle before using it； If there are any abnormal phenomena during the inspection, they must be repaired and resolved before use.

The following procedures can be followed for inspection：

1. Check the engine oil inside (see page 17) and ensure there are no leaks;
2. Check if the fuel is sufficient;
3. Check if the coolant in the cooling system is sufficient and ensure that there are no leaks;
4. Check the front and rear brakes: free travel (front 5-10mm, back 10-15mm), smooth operation;
5. Check the front and rear tires: air pressure, depth of tread wear, cracks (see page 11);
6. Check the transmission chain: the chain should be tightened, with a swinging arc of 10-20mm; No defects or damage;
7. Check the throttle handle: free clearance (2-6mm), and whether refueling or refueling is easy to operate;
8. Check the lighting and signal lights: ensure that the headlights, tail lights, brake lights, turn signals, indicator lights, and horns are in good condition;
9. Check if the battery voltage is greater than 12.8V;
10. Check the steering device: it should be stable, rotate flexibly, without looseness or axial movement;
11. Check the clutch handle: free clearance (5-10mm) and smooth operation;
12. Tightening bolts and nuts: front and rear shock absorbers, wishbones, front and rear wheel axles, engine suspension, steering system, steering lever, front and rear brakes, clutch, rear suspension system, electrical components, etc.

Warning:

Not conducting inspections and repairs before riding can leave safety hazards for the motorcycle, and conducting maintenance on the motorcycle before riding can eliminate safety hazards.

5.3 Start of motorcycles

1、Turn on the ignition lock， move the flame-out preset switch to“”position.

2、Shift the gear to low or neutral.

3、Fully grip the clutch lever with the left hand (release the clutch when not in neutral).

4、Press on the electronic start button“”,If necessary, turn the throttle handle and add fuel appropriately to start the engine.

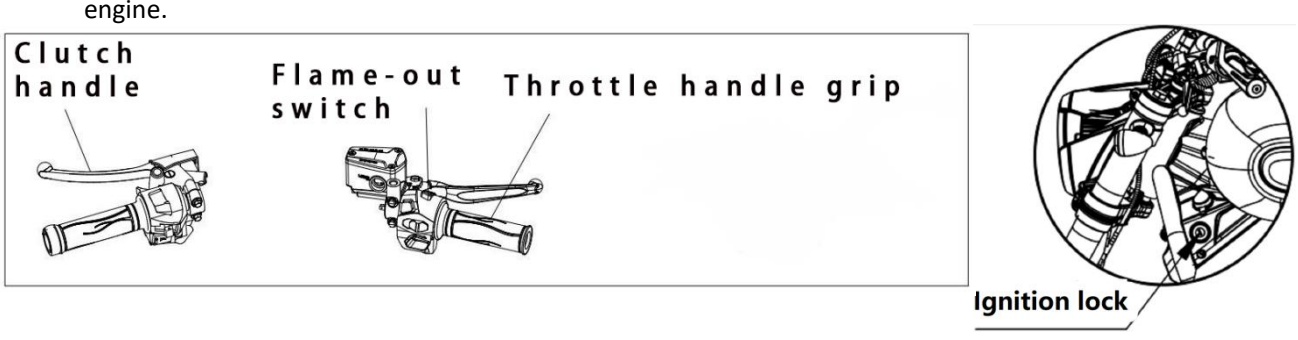


Fig 13 Start preparation

Danger:

1. Starting a vehicle in gear is prone to the risk of forward collision, which can cause accidents.
2. When not driving, the engine speed should not be too high and the idle time should not be too long, otherwise it may cause the engine to overheat and damage internal components.

Danger:

1. If you are driving this type of vehicle for the first time, we suggest that you practice on a non-public road until you become familiar with the control and handling methods of this vehicle.
2. One handed driving is the most dangerous, one should firmly grasp the steering wheel with both hands and place both feet on the pedals while driving. Regardless of the situation, do not drive with both hands off the handlebars.
3. Reduce the speed to a safe speed before turning.
4. The road surface is damp and smooth, and the tire friction is low, resulting in a natural decrease in braking and turning ability. Therefore, it is necessary to slow down in advance.
5. Cross winds are usually most likely to occur at tunnel exits, valleys, or when large vehicles overtake from behind. You must be careful and calm, slow down while driving.

Attention:

1. After starting, it should be preheated for 2-3 minutes before driving on the road. An engine with insufficient preheating temperature will exacerbate the wear of components such as cylinders, piston rings, and rocker arms during operation.
2. When using the electric start button, it should be immediately released within 3-5 seconds of each operation; Otherwise, it is easy to cause the battery to discharge too quickly and affect the service life of the battery.
3. After the engine starts, the electric start button should be immediately released; When the engine is running, it is not allowed to press the electric start button again, otherwise the engine may be damaged.
4. Ensure that the single brace is fully retracted to avoid driving obstruction and control failure when turning left.
5. After starting or during driving, it is necessary to refuel smoothly (by turning the throttle handle).
6. Do not start the motorcycle in a narrow space to avoid the risk of poisoning caused by the difficult diffusion of exhaust gases.
7. If the clutch switch fails, it should be replaced in a timely manner.
8. It is strictly prohibited to start the engine before the clutch is disengaged, otherwise it may cause component damage or safety accidents.
9. Do not start the motorcycle when there is a lack of fuel or oil.

5.4 Driving motorcycles

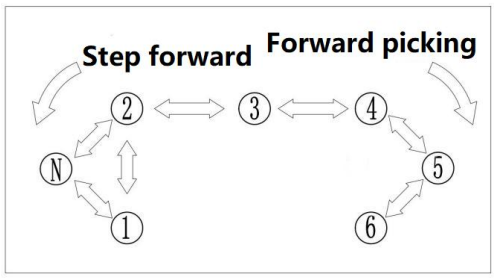


Fig14 Shift gear position

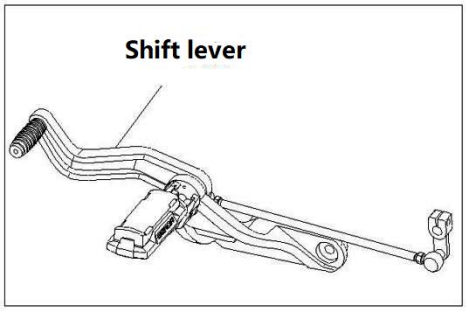


Fig15 Shift gear

5.4.1 Shift gear operation （Fig14、Fig15）

This vehicle has a six speed constant engagement；①,②gear are low speed,③、④gear are medium speed,⑤、⑥gear are high speed.Gear shifting can refer to the following operations：

1)Shirt neutral to ① gear： Return the throttle with the right hand, quickly grip the clutch handle with the left hand, and press down on the gear lever with the left foot once to shift the transmission into gear ①，Gradually release the clutch handle with the left hand and gradually fill the fuel door with the right hand. Coordinate the movements to ensure smooth operation of the motorcycle in the ① gear.

2)Shift ①gear to ②gear:Return the accelerator pedal with the right hand, quickly grip the clutch

handle with the left hand, and hook the gear lever with the left foot upwards once, allowing the transmission to enter gear ②,Gradually release the clutch handle with the left hand and gradually fill the fuel door with the right hand. Coordinate the movements to ensure smooth operation of the motorcycle in the ② gear.

3)The method of shifting from② to ③④⑤⑥ is same to shift ①to②.

4)The method of downshifting is the same as shifting from neutral to ①gear.

⚠Warning：

1、Do not shift gears without returning the throttle or gripping the clutch lever,otherwise it may cause damage to the engine and transmission system and lead to safety accidents.

2、When shifting gears, please confirm that the gear lever is pressed in place before releasing the clutch lever.

3、When shifting or gripping clutch handle， clutch out.Motorcycles rely on inertia to travel, therefore,minimize the shifting time ASAP.

4、When driving at high speed, suddenly lower the gear or quickly return the throttle,low engine speed and high rear wheel speed. When loosening clutch handle， Friction and engagement deceleration of the clutch pads cause rear wheel braking, Loss of control leading to accident.Therefore.When changing from high-speed to low-speed driving， it must slow down and then lower the gear.

5、Do not use low-gears for high speed driving or high gears for low speed driving.Otherwise it will cause damage of the engine.

⚠**Attention：**

1、Before switching the low gear,lower vehicle speed or increase the speed of engine。Before shifting into high gear, increase the vehicle speed or decrease the engine speed. This can prevent unnecessary wear of transmission system components and rear tires.

2、When the gear is in neutral and the neutral indicator light is on, it is best to slowly release the clutch handle to confirm whether it has truly entered the neutral position

5.4.2 Climbing or turning driving（Fig16）

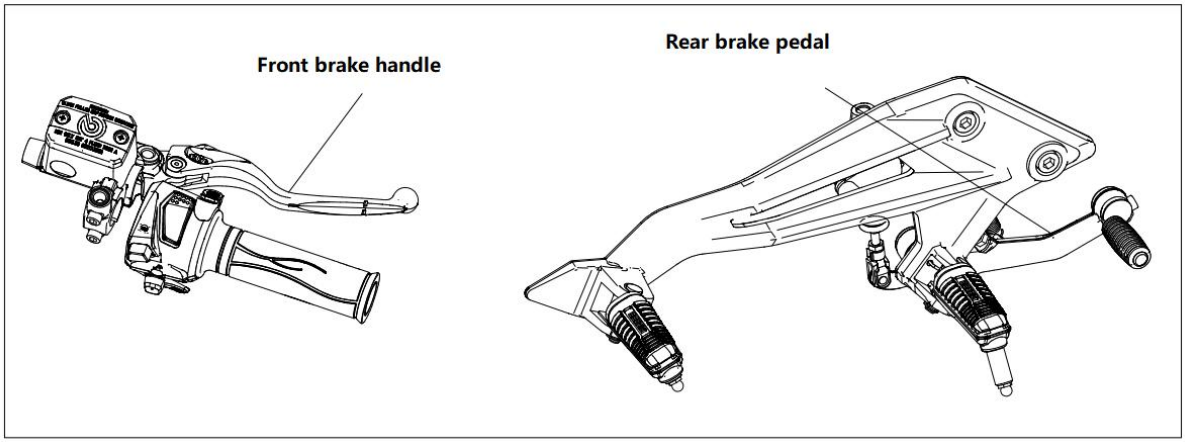
1） When driving uphill,there will be a deceleration phenomenon where the gear is too high and the power is insufficient.Therefore, it is necessary to quickly lower the gear before driving uphill.

2）When driving downhill, the gear must be lowered,Intermittent use of front and rear brakes.If the front and rear brakes are used continuously for a long time, it can cause the brakes to overheat and reduce braking effectiveness, posing a danger.

3）When going downhill, do not turn off the ignition switch or the engine flame-out switch to coast, otherwise it will reduce the lifespan of the catalyst inside the exhaust muffler.

4）Before turning, you must first use the brakes to reduce the speed and then lower the gear. Otherwise, driving too fast and rushing out of the bend, or using the brakes during turns can cause dangerous accidents.

Fig16 Brake position diagram



5.4.3 Use brakes

1) When decelerating, both front and rear brakes must be used simultaneously. (Slowly grip the front brake handle with your right hand and step on the rear brake pedal with your right foot to avoid using the front and rear brakes separately). Avoid decelerating too quickly, which may cause clutch slippage.

2) In emergency situations, simply turn off the ignition switch and use both the front and rear brakes to stop the vehicle.

3) Try to avoid sudden braking. Because sudden braking can cause the front and rear wheels to suddenly stop, making it difficult to control the vehicle.

4) Avoid sudden acceleration, sudden braking, and sharp turns on wet or soft road surfaces. Prevent vehicle skidding that is difficult to control.

5.4.4 Park

1） Gradually return the throttle until it fully returns

2）At the same time, slowly grip the front brake lever with your right hand and step on the rear brake pedal with your right foot to avoid using the front and rear brakes separately.

3) When the speed decreases, lower the gear.

4) Grasp the clutch handle tightly, shift into neutral, and then come to a complete stop. After shifting into neutral, the neutral indicator light on the instrument panel lights up.

5) If you want to park on a gentle slope with a single support, you should shift to a lower gear and keep the front of the car uphill to avoid overturning. (Be sure to shift to neutral position when starting again)

6) Turn off the ignition lock; In emergency situations, the engine can be turned off by directly turning off the ignition switch.

7) Lock the steering mechanism and remove the key to prevent theft.

Danger：

1.The higher the vehicle speed, the longer the braking distance will be. Therefore, it is necessary to maintain a safe distance to prevent rear end collisions.

2.Using only the front or rear brakes can cause slipping and loss of control; Be cautious when using the braking system on slippery roads and when changing lanes; Emergency braking on uneven or smooth roads can cause the motorcycle to lose control.

Ⅵ、Maintenance and upkeep

6.1 Maintenance cycle table

Maintenance frequency Maintenance items	Maintenance period	Odometer km（Note②）				
		1000km	4000km	8000km	12000km	Note
★Fuel tank、oil pipe		Damage and aging should be repaired or replaced in a timely manner				Before using
★Throttle		I	I	I	I	Before using
★Coolant		Every two years				Check before using
Air filter element	Note①	Every 40 hours of driving or 1000km/I；Every 80 hours of driving or2000km/C；Every driving20000km/R				
Spark plug		Every diving 2000km or 80hours/I；Every driving 6000km/R				
Engine oil	Replace the new car once every 1000km, replace it every 2000km for the second time, replace it every 3000km for the third time, and replace it every 3000km thereafter					
Oil filter element	Replace the new car once every 1000km, replace it every 3000km after the second journey, and replace it every 3000km thereafter					
Chain\Sprocket	NOte①	Perform I and L every 500km				
★Brake friction pedal		Perform I and, if necessary, R every 1000km				
★★Brake oil		Replace every two years				
★★Front and rear brake systems	Note③	I	I	I	I	Before using
★Switch		I	I	I	I	Before using
★Lights and horn		I	I	I	I	Before using
★Battery	Every month	I	I	I	I	
Fuse		I	I	I	I	
Connecting lines		I	I	I	I	
★★Valve clearance	Note③	Initially: 20 hours or 200km/I; Every 2000km or 80 hours/I				
★ Clutch		Every 2000km or 80 hours/I				Before using
★ Suspension system		I	I	I	I	
★ Tightening of nuts and bolts		I	I	I	I	Before using
★ Wheels		I	I	I	I	Before using
★★ Steering handle bearing (steering column thrust bearing)	Note③	I	I	I	I	
★★ Engine maintenance	Note③	I	I	I	I	

Motorcycles should be regularly maintained according to the time and mileage specified in the table above. Before maintenance, the vehicle must be cleaned thoroughly.

The symbol in the table above is: "I" for timely inspection, cleaning, adjustment, lubrication or replacement; "C" cleaning; "R" replacement; "L" lubrication.No ★ items need to be maintained by yourself, or you can go to the BENDA specialty store for maintenance.

One ★ project is maintained by personnel from a BENDA specialty store; If you have specialized tools, repair parts, or repair capabilities, you can also repair and maintain them yourself.

Two ★★ projects, for the sake of driving safety, can only be maintained by personnel from the BENDA specialty store.

Note ① indicates that when driving in dusty areas, the cleaning cycle should be shortened.

Note 2 indicates that when the odometer reading exceeds the highest number in the table, the maintenance and repair cycle will still be repeated according to the mileage specified in the table.

Note ③ indicates that maintenance and adjustment can only be carried out by personnel from BENDA specialty stores.

6.2 Inspection, selection, and replacement of engine oil

The function of lubricating oil on the engine is to reduce friction, increase sealing, cool parts, clean parts, and prevent rust.

If the quality of lubricating oil is poor, the usage time is too long, or the lubricating oil quantity is insufficient, it will accelerate the wear of engine parts and reduce the service life of the engine; Even causing excessive engine temperature, clutch wear or burning, decreased power, abnormal noise, and burning of lubricating oil.

[Inspection] （Fig17）

Before each use, it is necessary to check the oil level and determine whether the oil is sufficient by checking the highest oil level on the dipstick. Start the engine and run it for 3 minutes, then wait for the engine to stop for 3 minutes. Park the motorcycle on a flat surface with the entire vehicle perpendicular to the ground. At this point, the oil level should be between the upper and lower markings on the dipstick. If the oil is insufficient, unscrew the oil dipstick and add an appropriate amount of oil. After installing the oil dipstick, check for any leaks.

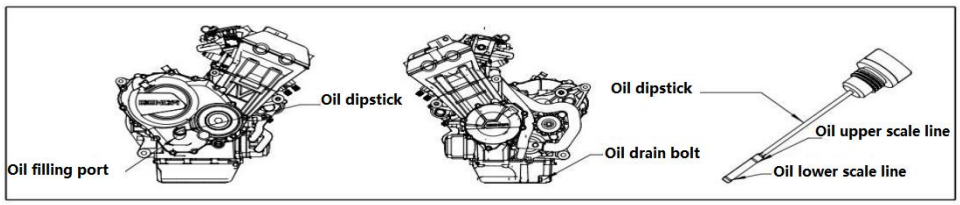


Fig17 Oil inspection

[Selection]（Fig18）

Oil grade：SAE 15W-40

Oil quality requirements: SAE grade or above

SAE	SAE15W-40
API	SG Or higher
JASO	MA

Using high-quality four stroke engine oil can extend the lifespan of the engine. Its viscosity is SAE 15W-40, and the engine oil should be selected as SJ grade or higher in the API classification system. It is recommended to use synthetic oil, and you need to choose according to Figure 16 and local temperature conditions:

When the local temperature rises, high viscosity engine oil should be replaced, such as SAE15W-40;

When the local temperature drops, oil with low viscosity, such as SAE10W-30, should be replaced.

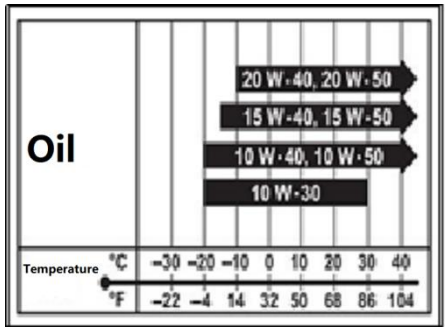


Fig 18 Oil choice

Warning:

1. The use of inferior engine oil can seriously affect the performance and lifespan of the engine.
2. Long term failure to change engine oil can cause deterioration, and spoiled oil can cause excessive wear and tear on the engine and components.
3. If there is insufficient oil, it will seriously damage the engine.

[Replace]

Thoroughly replace the engine oil within 1000km of the new car's running in period; Replace after the second journey of 2000km, and replace every 3000km thereafter.

1. After running the engine for 3 minutes, turn off the engine and place an oil container under the engine drain bolt.
2. Drain the engine oil after 3 minutes (be careful not to get burned by the engine or oil). Unscrew the oil bolt, loosen the nut, and take out the machine filter cover, spring, filter element, etc.
3. After draining the oil, the drain bolts and filter cover must be cleaned thoroughly; Replace the filter element and check if the sealing ring is intact. If there is any damage, replace it with a new one; Then install the filter element, spring, sealing ring, and machine filter cover.
4. Inject approximately 2.6L of new engine oil from the fuel inlet. If replacing the filter element, 2.9L of new engine oil is required. Check and confirm that there is no oil leakage, then install the fuel inlet plug.
5. Run the engine at different speeds for 3 minutes and check for leaks at the disassembled parts. After the engine is turned off for 3 minutes, observe. If the oil level is below the mark below the oil window, add an appropriate amount of engine oil and then check again for any leaks.

Common causes of engine oil deterioration:

1. The engine oil temperature is too high and naturally deteriorates.
2. Oil with different grades mixed together deteriorates.
3. The metal shavings generated by the friction of the components are increasing.
4. There are many dust and impurities in the oil barrel.
5. The gap between the piston and cylinder is too large to leak exhaust gas, and carbon residue is generated during fuel combustion.

Danger:

1. The engine oil and exhaust pipes of the muffler can burn people. Before draining the old engine oil, wait for the drain bolt and exhaust pipe to cool down.
2. Drinking engine oil by mistake can cause bodily injury. Reiterating: Long term exposure to engine oil can lead to skin cancer. Short term exposure to engine oil can irritate the skin. Keep children and pets away from oil. When changing oil, to reduce skin irritation, please wear long sleeved clothes and protective gloves (such as gloves used when washing clothes). If the skin comes into contact with engine oil, wash thoroughly with soap and water.

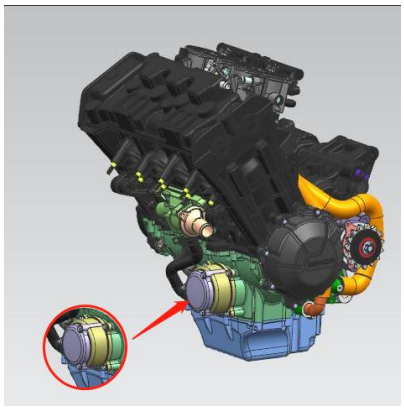
Attention:

Please dispose of the waste engine oil properly, do not pour it into the trash can or directly pour it onto the ground. Put the waste oil into a sealed container and send it to the local recycling center to avoid polluting the environment.

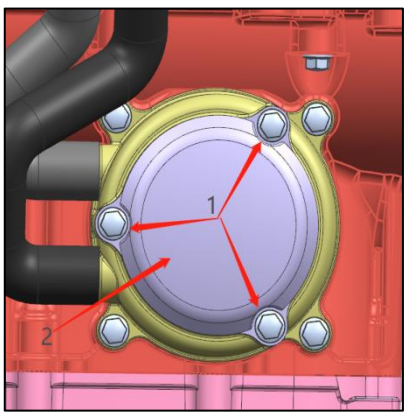
Warning:
If the specified engine oil is not used, it may damage the engine.

6.3 Replacement of oil filter element

[Filter replacement]（Fig19）

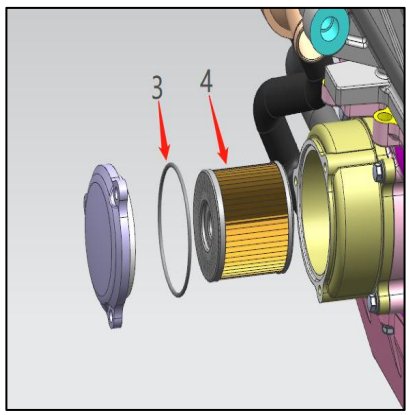


1.Find the position of the oil filter element.

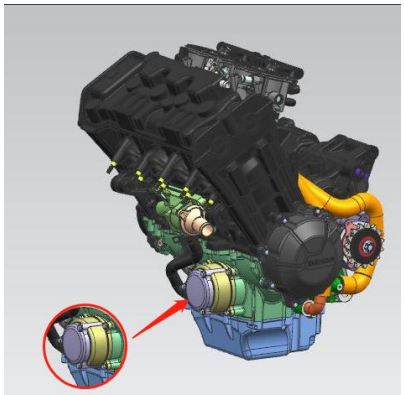


2.Remove the three fixing bolts ① that secure the machine filter cover ②.

Tips： **During the process of removing the oil filter, residual oil may flow out.**



3.Remove the sealing O-ring ③, remove the filter element ④, and replace it with a new filter element.



4. Install the filter element in reverse order.

6.4 Selection and replacement of spark plugs

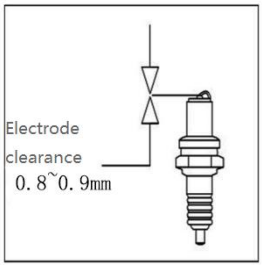


Fig 20

[Selection] （Fig20）

Type：CR9EH-9 (NGK)

Spark plug sleeve opposite side：16mm

[Check and replace]

1. The replacement cycle for spark plugs is around 6000 km.

2. Remove the spark plug cap, remove the surrounding dirt, use the spark plug socket wrench in the tool bag to remove the spark plug, and use a wire brush to remove the carbon and dirt from the spark plug.

3. Check whether the spark plug is damaged, whether the electrode gap is burned, and whether the sealing gasket is intact; If there is damage, it should be replaced.

4. Check the electrode gap with a high-precision feeler gauge, and the normal electrode gap is 0.8-0.9mm.

5. When installing spark plugs: First, screw the spark plug into the thread by hand, and then tighten it with a spark plug socket wrench.

Warning：

1. Dirt can enter the engine through the spark plug installation hole and damage the engine. After removing the spark plug, something must be used to cover the spark plug installation hole.

2. If the color of the spark plug electrode is different from that of a normal spark plug, a new spark plug of the same model must be replaced. Spark plugs of different models have different heating value ranges, which can cause serious engine damage. This kind of loss cannot be claimed for.

3. Excessive torque or loose threads when installing spark plugs can seriously damage the engine cylinder head. Therefore, careful manual installation of spark plugs is necessary.

6.5 Cleaning and disassembly of air filters

[Clean or replace]

1. The filter element of the air filter must be regularly maintained: the filter element must be checked, cleaned, and adjusted in a timely manner every 40 hours or 1000km of driving; The air filter must be cleaned every 80 hours or 2000km of driving; A new filter element must be replaced every 5000km.

2. If the motorcycle is used in muddy, humid, or dusty environments, the cleaning or replacement cycle of the filter should be shortened.

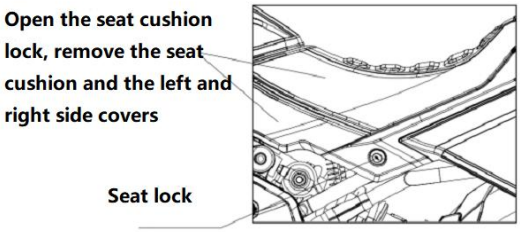
3. If the filter element is too dirty, water ingress or damaged, it must be replaced with a new one, otherwise it will increase the intake resistance, decrease the engine output power, and increase fuel consumption. Keeping the air filter

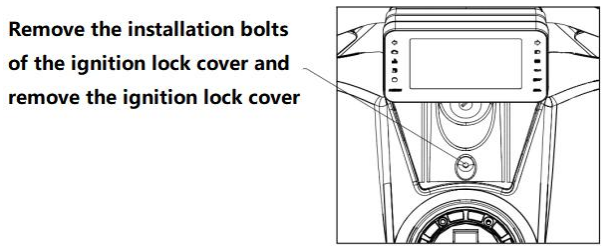
clean can improve the efficiency of the engine and extend its service life.

4. This motorcycle is equipped with a sponge filter element. When cleaning, you can gently knock it on the ground to shake off most of the dust. If there is an air pump, you can blow it from the inside out to remove the dust. If the filter element is already dusty or the filter paper is wet with oil, water, etc., it must be replaced with a new one.

5. During regular maintenance, remove the oil accumulation pipe and drain the waste oil inside. The oil accumulation pipe is located under the air filter.

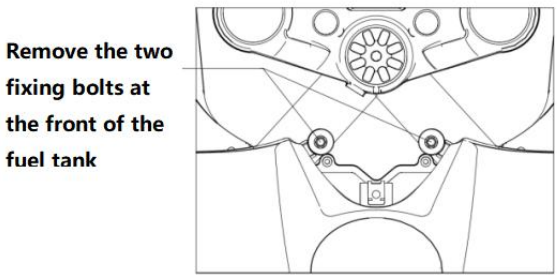
[Disassembly and assembly]（Figs 21）

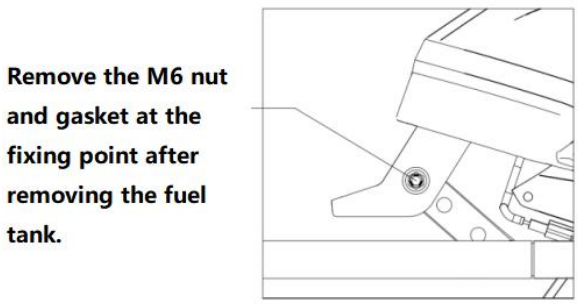




1 Open the seat cushion lock,remove the seat cushion and the left and right side covers

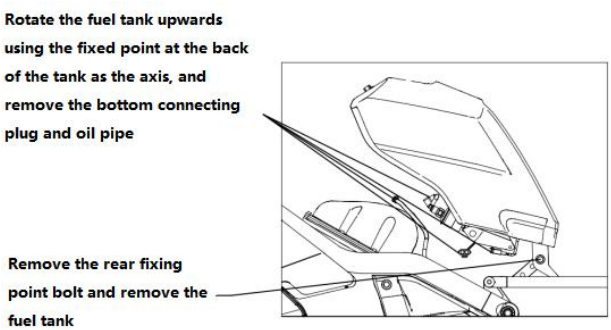
2 Remove the ignition lock cover

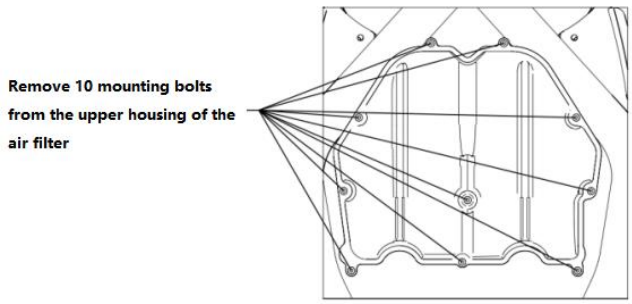




3 Remove the fixing bolts at the front end of the fuel tank.

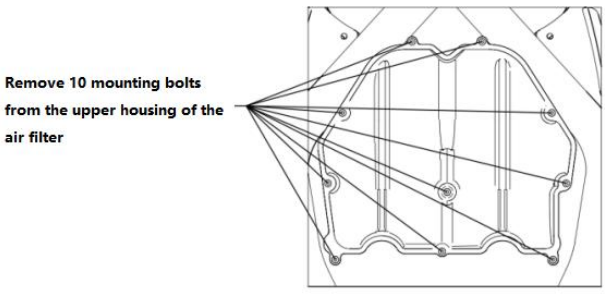
4 Remove the nut and gasket on the right side of the fixing point after removing the fuel tank.





5、Lift the oil tank, unplug the oil pump and oil level sensor plug, unplug the high-pressure oil pipe, oil tank overflow pipe, and adsorption hose (connect the dumping valve); Remove the fuel tank

6、Remove the 10 self tapping screws connecting the upper cover of the air filter and remove the upper cover.

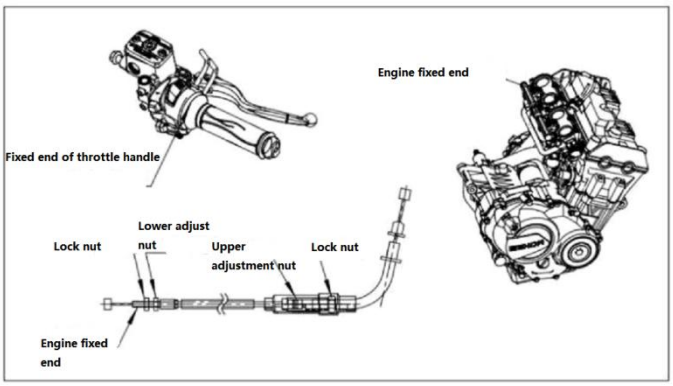


7、Remove the air filter element and replace it.

Warning:

1. Starting the engine without installing a filter is very dangerous. Without the obstruction of the filter element, the engine flame will spray back into the air filter intake chamber from the engine, and dirt will also be sucked into the engine interior, causing serious wear and tear to the engine. Therefore, it is prohibited to start and run the engine without installing a filter element.
2. When washing the motorcycle, do not let water enter the interior of the air filter.
3. When cleaning the air filter, it is necessary to check whether the filter element is damaged. If the filter element is damaged, it must be replaced with a new one.
4. If the installation position of the filter element is incorrect, dust will bypass the filter element and enter the engine, damaging the engine. Confirm that the filter element is installed in the correct position and properly sealed.

6.6 Check and adjust of throttle handle



[Inspection]（Fig 22）

1. Check if the front of the car is turning from the far left to the far right normally and if the limit is reliable.
2. Check if the rotation of the throttle control handle is flexible from the fully open position to the fully closed position; Can it automatically return to its original position when releasing the handle.
3. Check if the throttle cable is flexible and in good condition.

[Adjust]

1. The free stroke of the throttle handle is 2-6mm.
2. The upper adjustment screw can be fine tuned, and the lower adjustment screw (at the connection between the throttle valve and the throttle cable) can be adjusted to a certain stroke.
3. When making minor adjustments, first loosen the locking nut on the upper adjustment screw tube, and then rotate the upper adjustment screw tube for adjustment.
4. When making larger adjustments, loosen the fastening nut and adjust the free stroke to 2-6mm.
5. The throttle cable should be regularly lubricated to reduce the wear of the steel wire rope; Do not bend the throttle cable.

Danger:

1. The throttle cable is not properly routed and should be reinstalled correctly.
2. If the throttle cable is twisted, stuck or cannot return, the throttle control cable should be replaced.
3. After the free stroke adjustment of the throttle cable is completed, it is necessary to ensure that the throttle control handle can automatically return and the idle speed will not increase. After simultaneous adjustment, there should be

[Throttle body]

The throttle limit screw on the throttle body has been precisely set and cannot be adjusted by yourself. Check if the idle speed of the vehicle is stable (after the engine is fully preheated, the idle speed of the engine should be between 1200 and 1500 RPM per minute). If the idle speed is unstable, please have our company's designated professional service personnel from the maintenance unit inspect and handle it.

6.7 Adjustment of clutch

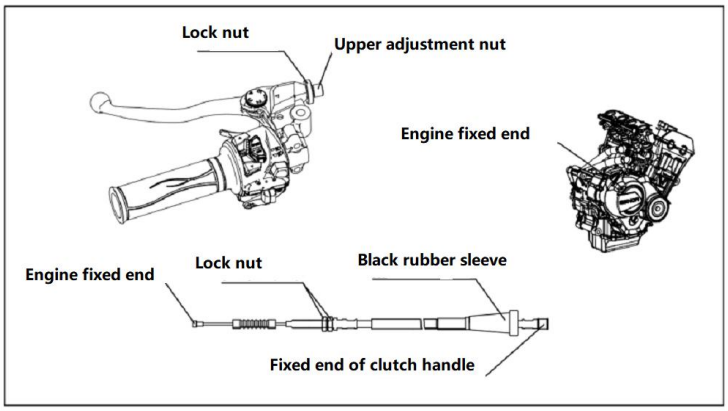


Fig23 Clutch

The free stroke of the clutch handle is：5～10mm

Function of clutch：**(Fig23）**

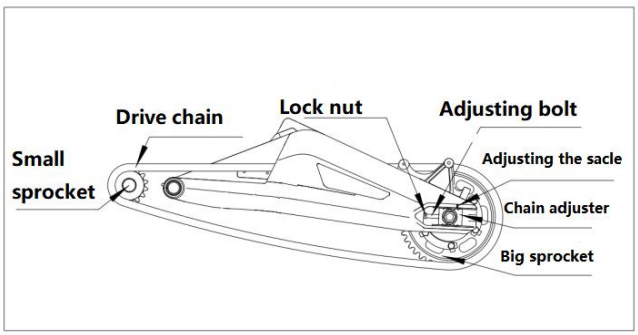
1. Ensure a smooth and gentle combination between the engine crankshaft and the variable transmission system to ensure a smooth start of the motorcycle.
2. Enable the engine crankshaft to quickly and thoroughly separate from the variable transmission system to ensure that the motorcycle does not experience impact during gear shifting
3. It can prevent damage to components of the variable speed transmission system due to excessive load.

⚠Attention:

When using the clutch handle, you should fully grasp or fully release it; Try to avoid grabbing only half or releasing only half (using a semi clutch), otherwise it may cause clutch wear or burning.

VII、Check and adjust of the chain

Fig 24 Drive system



Model： 525-118

[Inspection]（Fig24）

1、 Park the vehicle in the flat ground and shift to neutral gear,Engine stall

2、 Swinging the chain up and down, the chain should be tightened and the swing amplitude should be adjusted10-20mm

3、Check the chain locking clip if loosen,and the large and small sprockets in the same horizontal plane

4、 Check the wear state of the chain.If the chain link defect,wear too much,chain too long all should change the chain.

5、Check big,small sprocket's wear state,if the gear teeth wear too much,missing,or broken,they must be replaced.

[Adjustment]

Adjust the tightness of the motorcycle chain in a timely manner,Swing amplitude 10-20mm.， Regularly inspect the buffer bearing and add lubricating grease on time.When adjusting chain ,in addition to adjusting it according to the frame chain adjustment scale,also use eyes to observe whether the front and rear toothed disc and chains are in the

same straight line.

[Lubricate]

1. Clean the chain and sprocket, add an appropriate amount of engine oil or spray clean lubricating oil after cleaning.

2. The chain needs to be cleaned and lubricated every 500km.

3. After 3000km in general, the chain should be removed and cleaned once, and soaked in heated and melted graphite lubricating grease for 5-10 minutes.

4. After driving on muddy roads, the dust inside the chain link should be promptly removed and lubricating oil should be added.

[Replace]

1. Remove the engine sprocket cover;

2. Carefully remove the chain locking clip with pointed pliers, open the chain link, and remove the chain;

3. Install the chain in the opposite order of disassembly and adjust the swing of the chain;

4. Regularly clean the chain and toothed discs, add lubricating grease in a timely manner, and strengthen the maintenance of the chain and toothed discs in rainy, snowy, and muddy roads.

⚠Attention:
Before each ride, check if the transmission system is working properly. If you notice any defects or damages, you must immediately inspect and repair them carefully.

Ⅷ、ABS anti-locking system

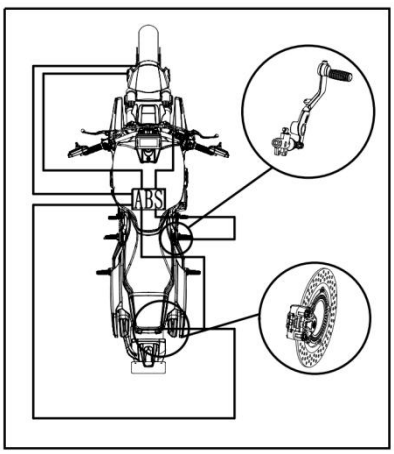


Fig 25 ABS system

ABS consists of hydraulic unit, ABS control unit, and return pump, installed below the fuel tank. There are two wheel speed sensors on the front and rear wheels.

ABS operates using two independent brake circuits (front brake and rear brake). In normal operating mode, the function of the braking system is the same as that of a conventional braking system without ABS. Only when the ABS control unit recognizes that a wheel is tending to lock up, will the ABS start working by adjusting the brake pressure. This adjustment process can be felt through slight jumps on the front brake handle or brake pedal.

After turning on the ignition switch, the ABS warning indicator light must light up and turn off when the starting speed exceeds 5km/h. If the ABS warning indicator light does not turn off after starting or lights up during driving, it indicates a malfunction in the ABS system. At this time, the ABS cannot be activated again, and the wheels may lock up during braking.

⚠Warning：
1. Only when the ABS is in the off state can the rear wheels rotate when the front brake is tightened.
2. If modifications are made, such as shortening or extending the shock absorption stroke, using other wheel rim diameters, using other tires, incorrect tire pressure, or using other brake friction pads, it may prevent ABS from continuing to function. Only when using spare parts and tires recommended by Benda Motors on the braking system can the optimal function of ABS be guaranteed.
3. Please perform maintenance and repairs as required.

IX、TCS（Traction control system）

9.1 Function introduction

BD700-3 vehicle Equipped with TCS (Traction Control System), when braking on smooth road surfaces, the wheels may slip and even cause directional loss. Similarly, during starting or rapid acceleration, the driving wheels may also slip, which can lead to loss of control and danger on smooth roads such as ice and snow. TCS is designed to address this issue;

TCS relies on electronic sensors to detect that the speed of the driven wheel is lower than that of the driving wheel (this is a characteristic of slipping),It will send a signal to adjust the ignition time, reduce the valve opening, decrease the throttle, downshift or brake the wheels, so that the wheels no longer slip. TCS can improve vehicle driving stability, acceleration, and hill climbing ability. If TCS is used in conjunction with ABS, it will further enhance the safety performance of the vehicle. TCS and ABS can share the wheel speed sensors on the axle and connect them to the onboard computer to continuously monitor the speed of each wheel. When slip is detected at low speeds, TCS will immediately notify ABS to take action to reduce the slip of the wheel. If slipping is detected at high speed, the TCS immediately sends a command to the onboard computer to command the engine to slow down or the transmission to downshift, so that the slipping wheels no longer slip and prevent the vehicle from losing control and spinning.

9.2 ABS, TCS on and off

Operate the instrument function key on the left hand lever switch, press the "Confirm" button to enter the instrument menu, and refer to group diagram 26 to select the opening and closing of ABS and TCS.

1. After entering the menu, press the up and down keys to select "cycling mode" and press the "confirm key" to enter cycling mode.

2.Enter cycling mode,road mode is set to default “ON”,no operation required ,press the”Up and Down”keys to enter off -road mode.

3.Enter off-road mode,Press”confirm”lock”ABS” Option by repeatedly pressing”confirm”to Select ON or OFF.

4.After selecting "ABS" on/off， Use the up and down keys to enter the TCS option,and move the cursor down to choose ON or OFF.

5. Press the "Back" button to return to the main interface layer by layer.

Figs 26

9.3 TCS indicator light logic：

1、Until initialization is complete: Keep it constantly on.

Initialization conditions: function enabled, engine started, no current faults, and vehicle speed greater than 1KPH.

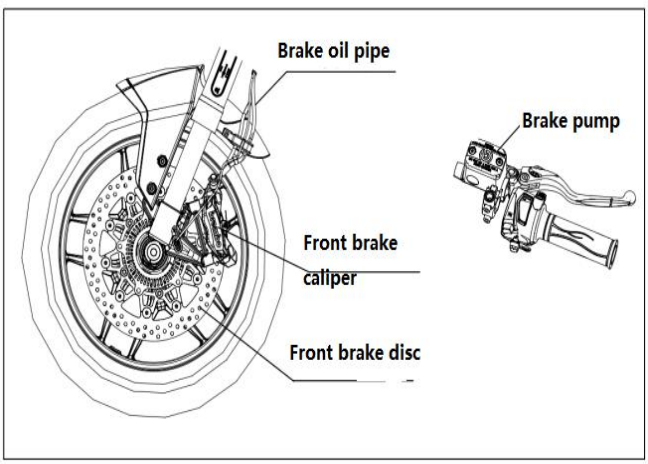
2、After initialization is completed: turn off

When the vehicle is driving, the TCS indicator light goes out to indicate that the system is normal

3、During TCS operation: flashing at a frequency of 2HZ.

When the system completes initialization and meets the triggering conditions, the indicator light will flash to indicate that the TCS system is working.

Ⅹ、Check and adjust of front brake



[Inspection](Fig27）

● Measure the free stroke of the front brake handle to be 5-10mm.

●Measure the thickness of the front brake disc and brake friction pad.

●Check the oil level in the oil cup; Check if the brake caliper is functioning properly; Check the brake oil pipe and

The brake oil cup has no oil leakage or cracks; Check the wear of the brake discs.

●When operating the brake handle, if you feel insufficient pressure on the handle, there is air in the brake system; The braking system should be completely emptied of air before it can be used normally; Otherwise, it will reduce braking performance or result in braking failure. This work should be completed at the BENDA specialty store.

Warning:

1. Should add: non petroleum based brake oil with brand name DOT3 or DOT4; Different grades cannot be mixed for use;
2. Brake oil has strong corrosiveness and should not splash onto the surface of painted or plastic parts; If accidentally consumed, it should be forcibly vomited out; If it gets on the eyes or skin, immediately rinse with plenty of water and seek medical attention;
3. Hydraulic disc brakes operate under high pressure. To ensure safety and reliability, the replacement time of brake friction pads and brake oil should not exceed the maintenance cycle;
4. When the hydraulic disc brake system needs maintenance, it can only be repaired by professional technicians.

Attention:

The brake is an extremely important component to ensure the personal safety of the rider, and it should be checked and adjusted regularly.

Replace with new brake discs or brake friction pads, do not drive immediately; You should first operate (grip) the front brake handle several times until the brake disc and brake caliper are well engaged.

10.1 Check the front brake discs

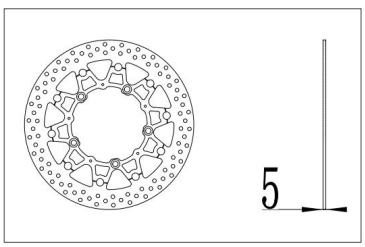


Fig28 Inspection of front brake disc

The brake disc will gradually wear out during long-term use, so it is necessary to check the thickness dimension of the brake disc at multiple positions. And inspect its appearance to confirm whether the brake disc is damaged, cracked, or deformed.

If the thickness of the brake disc is lower than the specified value: please replace the brake disc.

If the brake disc is damaged, cracked, or deformed: please replace the brake disc

Brake disc thickness: not less than 4mm.

Warning:

The wear of the brake disc can reduce the thickness of the brake disc within the contact area of the brake friction plate, which will reduce the braking effect and pose a threat to your driving safety. Once damage, cracks, or deformation occurs, please replace the brake disc immediately.

When the brake disc is worn to the maximum thickness of 4mm, it must be replaced; Remove the front brake calipers and front wheels, and then replace the brake discs.

10.2 Check the brake pads of the front brake

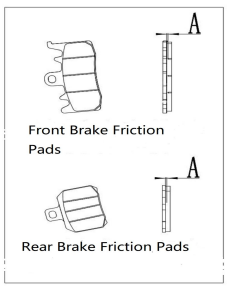


Fig29 Front brake friction pad inspection

Check the minimum thickness of brake pads(A)

Minimum thickness: A=1.5mm.

If the thickness is lower than the minimum thickness: please replace the friction plate in a timely manner.If any damage or cracks are found on the friction plate, please replace it in a timely manner.

10.3 Check the brake fluid level of the front brake system

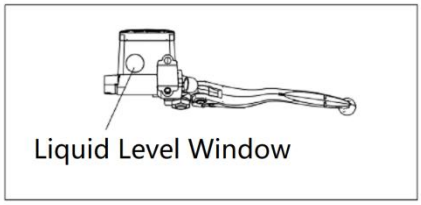


Fig30 Front brake fluid level check

Adjust the vehicle's placement posture so that the brake fluid in the brake fluid tank is in a horizontal position, and check the brake fluid level through the fluid level window.

When the brake fluid level is below the mark, please replenish the brake fluid in a timely manner.

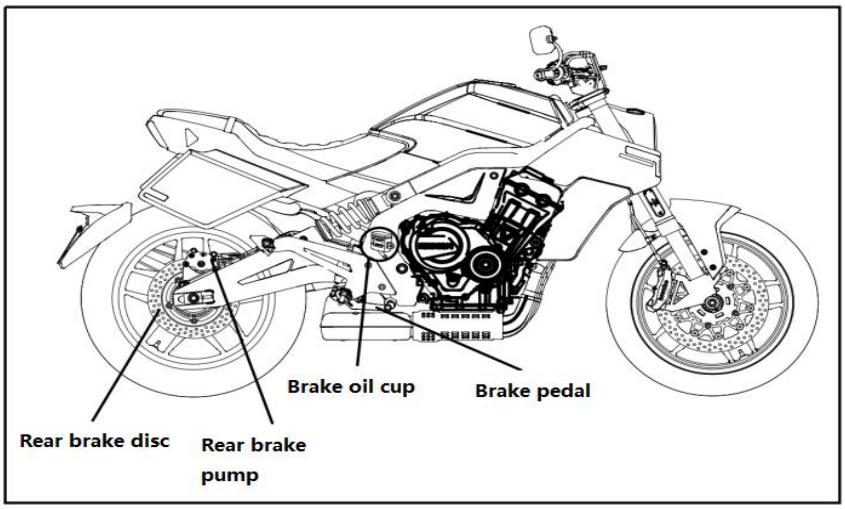
Warning：

If the brake fluid level is below the mark, it means that the brake system is not sealed or the brake friction pads are completely worn. Check the brake system and do not continue driving. Please go to the designated after-sales point of BENDA for repair.

Excessive use of brake fluid can reduce braking effectiveness. Please replace the brake fluid in a timely manner.

[Check]（Fig 31）

XI、Check and adjustment of rear brake



●Measure the free stroke of the rear brake pedal to be 10-20mm.

●Measure the thickness of the rear brake disc and brake friction pad.

●Check the oil level in the oil cup; Check if the brake caliper is functioning properly.

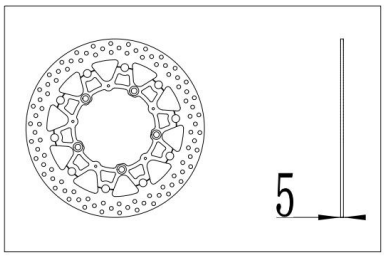
●Check for oil leakage or cracks in the brake oil pipe and brake oil cup; Check the wear of the brake discs.

When operating the brake pedal and feeling insufficient pedal pressure, there is air in the brake system; The braking system should be completely emptied of air before it can be used normally; Otherwise, it will reduce braking performance or result in braking failure. Please have the professional technical personnel of the repair unit serve you for this repair.

Attention：

Friction pads will gradually wear out during vehicle braking. The braking effect will gradually decrease. To ensure your safety and that of the vehicle, please check regularly and replace it promptly. If you are not familiar with the specifications of the friction plate or cannot replace it on your own, please go to the designated after-sales point of BENDA for repair.

11.1 Check rear brake disc

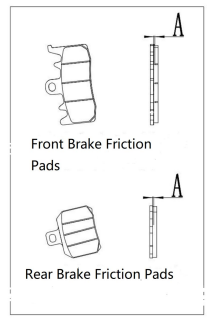


The brake disc will gradually wear out during long-term use, so it is necessary to check the thickness dimension of the brake disc at multiple positions. And inspect its appearance to confirm whether the brake disc is damaged, cracked, or deformed.

If the thickness of the brake disc is lower than the specified value: please replace the brake disc.

If the brake disc is damaged, cracked, or deformed: please replace the brake disc

Brake disc thickness: not less than 4mm.



11.2 Check the brake pads of the rear brake

Check the minimum thickness (A) of the brake friction plate.

The minimum thickness value of the brake friction plate is A=1.5mm.

If the thickness is lower than the minimum thickness: please replace the friction plate in a timely manner.

If any damage or cracks are found on the friction plate, please replace it in a timely manner

Fig32 Rear brake inspection

⚠Warning：

The wear of the brake disc can reduce the thickness of the brake disc within the contact area of the brake friction plate, which will reduce the braking effect and pose a threat to your driving safety. Once damage, cracks, or deformation occurs, please replace the brake disc immediately.

When the brake disc is worn to the maximum thickness of 4mm, it must be replaced; Remove the rear brake calipers and rear wheels, then replace the brake discs.

11.3 Check the brake fluid level of the rear brake system

Adjust the placement posture of the vehicle so that the brake fluid in the brake fluid filling is in a horizontal position, and check the brake fluid level through the liquid level window.

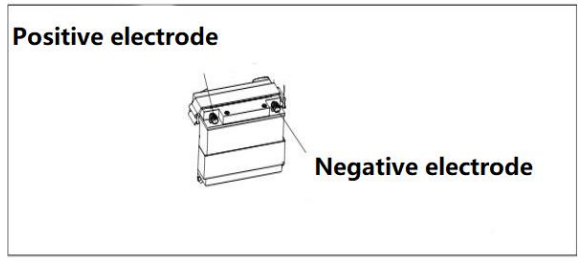
When the brake fluid level is below the scale mark: please replenish the brake fluid in time.

Fig 34 Rear brake fluid level check

⚠Warning：

If the brake fluid level is below the mark, it means that the brake system is not sealed or the brake friction pads are completely worn. Check the brake system and do not continue driving. Please go to the designated after-sales point of BENDA for repair.

Excessive use of brake fluid can reduce braking effectiveness. Please replace the brake fluid in a timely manner.



XII、Battery maintenance

[Battery model] （**Fig35**）

Type：MG14L-BS-C

Capacity：12V　14Ah

Standard charge：1A～1.4A×6～8hours

[Disassembly and assembly of battery]

Dismantle：

1. Open the seat cushion lock and remove the seat cushion;
2. Remove the battery box cover and battery strap;
3. First, remove the negative electrode wire (-);
4. Remove the positive electrode wire (lift) afterwards;
5. Remove the battery.Install：

1.The installation sequence is opposite to the disassembly steps.

2. First install the positive wire (lift), then install the negative wire (-), and ensure that it is positive and negative

The terminal block is not loose, and the positive and negative terminals cannot be reversed. Reverse connection can damage electrical components.

Fig36 Battery installment

Danger：

Arrange the positive and negative poles of the cable on the left and right sides of the battery for installation (as shown in Figure 36) to avoid short circuits caused by random overlapping, which may damage the battery, cause explosions, and even threaten personal safety.

[Battery charge]

1.Dismantle seat cushion

2.Remove the battery box cover and battery strap, remove the positive and negative wires, and take out the battery.

Connect the charger wire and ensure that the charging current is 1/10A of the battery capacity. For example, if a battery with a capacity of 10Ah is charged, its charging current is 1 ampere.For detailed instructions on the charger, please contact your dealer.

[Check and maintenance of charger]

1. When frequently used, the motorcycle charging system automatically charges the battery fully. If you occasionally use a motorcycle or use it for a short period of time, there may be a low battery charge. Batteries will generate self discharge, and the rate of self discharge varies with the type of battery and ambient temperature.

2. When the motorcycle is not used for a long time, the battery must be removed for charging and stored, and the battery must be charged regularly;

3. The positive and negative terminals of the battery should be cleaned regularly.

When replacing batteries, use batteries of the same model and specification.

Danger：

1. Battery terminals, terminals, and related components contain lead or lead compounds. If lead or lead compounds enter the bloodstream, they can harm your health. After contact with pollution, they must be cleaned promptly.

2. The battery must be stored out of reach of children.

3. Batteries contain toxic substances such as sulfuric acid and lead. It can cause harm to people and pollute the environment. Used batteries must be disposed of or recycled in accordance with local laws and regulations. It cannot be discarded like ordinary household waste.

⚠Attention:

1. Overcharging or undercharging the battery can shorten its lifespan. Do not let the battery overcharge or undercharge.

2. If your vehicle is rarely driven, you must use a voltmeter to check the battery voltage every week. If the voltage of the battery is below 12.8V, a charger must be used to charge the battery.

3. If you do not use the vehicle for more than two weeks, you must use a charger to charge the battery. Do not use an automatic fast charger to charge the battery, as it can cause overload and damage to the battery.

⚠Warning:

Before checking or replacing fuses, the ignition switch and electrical switch must be turned off to prevent circuit short circuits. Never use a fuse that is different from the rated current, otherwise it may damage the vehicle's electrical system or cause a fire. It may also pose a risk of lighting failure or engine failure at night or during driving.

[Replacement of fuse]

There are a total of 6 plug-in fuses in the circuit system. There are a total of 6 fuses in the six fuse box, including 1 1A fuse, 1 20A fuse, 2 10A fuses, and 2 15A fuses. Additionally, there are 1 spare fuse for 15A, 10A, and 1A in the fuse box. There is a separate 30A fuse 1 PCS on the starter relay, and there is also a backup 30A fuse. If the fuse frequently burns out, there may be a short circuit or overload in the circuit system. Please have professional technicians from the maintenance unit serve you.

When replacing a fuse, first unplug the old fuse and plug in a spare fuse.

XIII、Instructions for using and maintaining the engine water cooling system

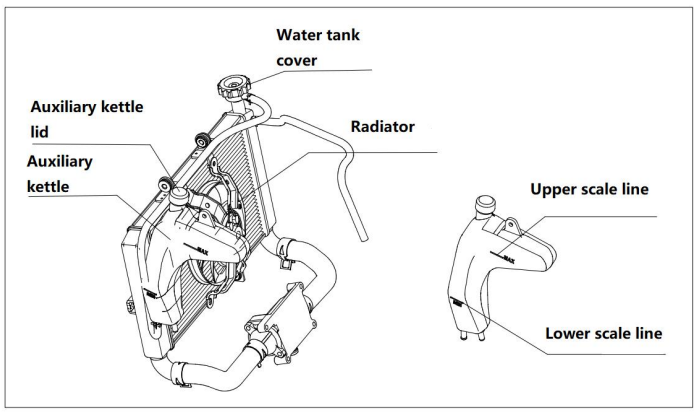


Fig37 Cooling system

[Cooling system]（Fig37）

The cooling system can prevent engine overheating， and proper use and maintenance of the cooling system can extend the service life of the engine.

The Radiator is located at the front of the engine and should be regularly cleaned of dust and soil according to the road condition you are driving on.

[Coolant type]

The coolant have five characteristics： corrosion prevention, cavitation prevention, high boiling point, anti scaling, and anti freezing.

Cooling liquid is generally mixed with concentrated antifreeze and soft water (purified or distilled water) in an appropriate proportion. Please mix it into a fixed concentration that adapts to the local minimum temperature. Generally,

when mixed into a concentration of 40% to 50%, the antifreeze function is the best.

The direct coolant specially used for aluminum alloy engine is used. This coolant has been prepared in the factory and contains Antifreeze, rust inhibitor, foam inhibitor and trace silicate. The ambient temperature for use is indicated on the container.

⚠**Attention:**

1. This coolant is a specialized coolant and cannot be replaced with tap water or other liquids, as it may cause engine damage.

2. Please go to the "BENDA Exclusive Store" to purchase direct coolant for aluminum alloy engines.

3. If you need to replace the coolant or if there is a coolant leak, please go to the "BENDA Exclusive Store" for replacement and repair.

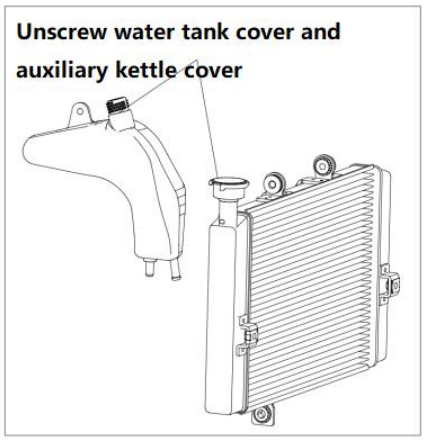
The total amount of coolant in the cooling system is approximately 2300ml

1. Park the motorcycle on a flat surface with a single support.

2. Check the coolant level while the engine is cooling, and the coolant level should be between the upper and lower markings.

[Add small amount coolant]

If the coolant in the auxiliary water tank is at or below the lower mark position, please add special coolant in a timely manner to the upper mark position.



[Ways]

1. Park the motorcycle on a flat surface with a single support and wait for the engine to cool down; Otherwise, the heat may cause burns to the skin;

2. Unscrew the water tank cover and the auxiliary kettle cover,;

3. Pour the coolant into the water tank and add it to the upper mark position;

4. Cover the water tank cover and the auxiliary kettle cover.

[Storage of the coolant]

1.When the coolant is not in use， it should be stored in a dedicated sealed container.

2. It should be placed in a cool and dry place. The coolant is a toxic liquid and must be kept out of reach of children.

3. Pay attention to the strict prevention of coolant contamination by petroleum products, and do not mix or store two different brands of coolant.

⚠Danger:

1. Antifreeze is an organic solvent that is toxic and corrosive. During use, it should not be splashed onto the surface of rubber products or painted parts, and should not come into contact with human skin. If it accidentally splashes onto the surface of rubber products, painted parts, or human body, it should be immediately rinsed with water.

2. When repairing the engine, if it is necessary to loosen the cylinder nut, please drain the coolant first to prevent it from entering the crankcase.

XIV、Vehicle cleaning and storage

[Vehicle cleaning]

1. Motorcycles should be regularly cleaned to promptly detect damage, wear, or oil leakage.

2. When cleaning, it is necessary to wait for the engine to cool down and rinse with clean water. After cleaning, dry the motorcycle and start the engine, allowing it to run for a few minutes; Use lubricating oil to lubricate the chain; Before driving on the road, check the brakes, and the front and rear brakes should be normal.

3. Parts that cannot be sprayed with high-pressure water include headlights, turn signals, ignition lock, electrical switches, instruments, electrical parts and circuits, batteries, air filters, wheel hubs, exhaust pipe outlets, under the fuel tank, and engine cylinder heads. These components are best cleaned with a cloth.

4. The braking performance may decrease after cleaning, and it must be tested and adjusted before use.

[Vehicle storage]

After using the motorcycle on the same day, it should be stored in a dry, safe place with small temperature difference and good ventilation. If stored for a long time (more than 30 days), necessary repairs should be carried out before storing the motorcycle; Otherwise, issues that require repair may be forgotten during use after storage. For long-term storage (over 30 days), in addition to the above maintenance, maintenance should also be carried out according to the following requirements:

1. Clean and dry the motorcycle, and apply wax to the painted surface of the entire vehicle.

2. Drain the fuel from the tank and spray rust inhibitor into the tank.

3. Thoroughly drain the oil and add new oil to the crankcase.

4. Remove the spark plug and inject a small amount (15-20 milliliters) of lubricating oil into the cylinder; Then reinstall the spark plug, turn on the ignition lock, press the start button for 2-3 seconds to evenly distribute the oil on the cylinder wall.

5. Remove the battery, remove rust from the terminals and wiring connectors, and store in a well ventilated, dry, cool, and away from direct sunlight.

6. Inflate the tire to the specified pressure and place the motorcycle above the cushion block, so that the front and rear wheels are off the ground. If the tire pressure is too low, it will cause premature aging and cracking of the tire.

7. Cover the air filter inlet and exhaust muffler outlet with a cloth containing new engine oil to prevent moisture from entering.

8. Cover the motorcycle with breathable materials and store it in a dry, safe place with low temperature difference and good ventilation.

[Use after vehicle storage]

1. Remove the motorcycle cover and clean the motorcycle.

2. Check the voltage of the battery. If the voltage is below 12.8V, it must be charged at low speed before installing the battery.

3. Remove the rust inhibitor from the fuel tank and add new fuel.

4. Try riding a motorcycle in a safe place and check if its performance is normal.

XV、The service life and vehicle handling of vehicles

[Vehicle service life]

The service life of the vehicle shall be in accordance with the regulations of the traffic management department or local vehicle management office.

[Vehicle handling]

1. Disposal of waste engine oil: The waste engine oil that has been replaced by a motorcycle should be placed in a plastic bucket and handed over to a recycling company for disposal. You cannot discharge waste engine oil at will, otherwise it will cause damage to the environment such as the site, soil, water sources, etc.
2. Disposal of waste batteries, light bulbs, appearance parts, filter cartridges, tires, iron parts, aluminum parts, and other parts: These scrapped parts should be classified and recycled. You cannot dispose of it casually, let alone pour out the dilute sulfuric acid in the battery to cause harm to people or pollution to the environment.
3. After the vehicle is scrapped, please handle it according to the vehicle scrapping regulations of the traffic management department or local vehicle management office.

XVI、Adjustment data related to motorcycles

Front (handbrake) free stroke 5-10mm

Free clearance of throttle handle: 2-6mm

Free stroke of rear (foot) brake 10-15mm

Free stroke of clutch: 5-10mm

Spark plug gap: 0.8-0.9mm

Inlet valve clearance: 0.14-0.18 mm

Exhaust valve clearance: 0.24-0.28 mm

Rear shock absorber fastening bolt torque value: 30-40N · m

Torque value of the handle fastening bolt: 22-30N · m

Torque value of the flat fork shaft fastening nut: 70-90N · m

Front wheel axle fastening nut torque value: 70-90N · m

Steering system fastening nut torque value: 50-70N · m

Rear wheel axle fastening nut torque value: 120-140N · m

Front shock absorber and upper connecting plate fastening bolt torque value: 10-14N · m

Front shock absorber and steering column fastening bolt torque value: 20-25N · m

Engine suspension fastening nut torque values: M10:30-40N · m, M12:50-60N · m

XVII、Table of main technical parameters

Model Name		BD700-3
Vehicle parameters	Manufacturer Name	HANGZHOU SATURN TECHNOLOGY CO,.LTD
	Vehicle model (commercial name)	BD700-3
	Vehicle brand	(BENDA)
	Vehicle type	Ordinary two wheeled motorcycle

	Vehicle identification number	H84PDWLAxNxxxxxxx
	Authorized passenger capacity	Two people（One driver and one passenger each）
	Turning form	Directional handle
	Gear format	Sixth gear constant engagement
	Braking form	Front wheel: disc type Rear wheel: disc type
	Braking operation mode	Front wheel: Hand brake Rear wheel: Foot brake
	Clutch form	Sliding clutch/wet multi disc
	Starting method	Electric start
	Length * Width * Height	2142*848*1106
	Wheelbase	1480
	Minimum ground clearance	170
	Vehicle curb weight	208
Model （name）		BD700-3
Vehicle parameters	Maximum load capacity mass	150
	Fuel tank capacity	16L
	Number of tires	2
	Front wheel specifications	120/70-17
	rear tire	180/55-17
Electrical installations	Ignition method	ECU
	Spark plug model	CR9EH-9 (NGK)
	Headlamp specifications	12V 20W/25W
	Turn signal specifications	12V LED
	Tail/brake light specifications	12V LED
	Fuse specification	Main cables: 1A (1), 10A (2), 15A (4), 15A (backup 1), 1A (backup 1). Start relay: 30A (1), 30A (1 spare)
	Battery specification	12V 14Ah
Engine	Engine form	L-type four cylinder
	Engine model	BD467MU
	Compression ratio	11.6：1
	Actual displacement	676
	Maximum net power	58kw/10000rpm
	Maximum torque	62N.m/8000rpm
	Bore * stroke	67*48
	idling	1350±150
	engine oil	SAE
	Brand	15W-40 level and above
	Oil capacity	3.5L

	Fuel grade	95 # or above gasoline
	Spark plug gap	0.8~0.9 mm
Ratio	Primary speed ratio	1.690
	First gear ratio	3.071
	Second gear ratio	2.235
	Third gear ratio	1.777
	Fourth gear ratio	1.520
	Five speed ratio	1.333
	Six speed ratio	1.214
	Final speed ratio	2.8
Performance	Maximum speed	200
	Fuel consumption	6.2

XVIII、Common motorcycle troubles and causes

Phenomenon	Parts position	**Cause of malfunction**	Ways
Can not start	Fuel system	There is no fuel in the fuel tank	come on
		Oil pump blockage or damage, poor fuel quality	Cleaning or replacement
	Ignition system	Spark plug malfunction: Excessive carbon buildup and prolonged use	Check or replace
		Spark plug cap malfunction: poor contact or burnt out Ignition coil malfunction: poor contact or burnt out	Check or replace
		CDI malfunction: poor contact or burnt out	Check or replace
		Trigger coil malfunction: poor contact or burnt out	Check or replace
		Stator fault: poor contact or burning	Check or replace
		Fault in each connecting line: poor contact	Check or replace
	Cylinder pressure system	Starting mechanism malfunction: worn or damaged	Check or replace
		Malfunction of intake and exhaust valves and valve seats: Fuel contains too much gum or has been used for too long	Check or replace
		Cylinder, piston, and piston ring malfunction: Fuel contains gum or is worn	Check or replace
		Air intake pipe leakage: used for too long	Check or replace
		Valve timing malfunction	Check or replace
Insufficient power	Valve piston	Excessive carbon deposits on the intake and exhaust valves and pistons: poor fuel quality, poor oil quality	Repair or replace
	clutch	Clutch slipping: poor oil quality, prolonged use, overload	Adjust or replace
	Cylinder block and ring	Wear of cylinder block and piston rings: poor oil quality and prolonged use time	Oil Change
	Brakes	Incomplete brake release: brake too tight	adjustment
	chain	Chain too tight: improper adjustment	adjustment

	engine	Engine overheating: The mixture is too rich or too thin, and the quality of the engine oil and fuel is poor,	Adjust or replace
	spark plug	There are obstructions, etc	Adjust or replace
	Intake pipe	Improper spark plug gap, normal 0.8-0.9 mm	Adjust or replace
	Cylinder head	Air leakage in the intake pipe: adjusted or replaced after prolonged use	Check or replace
	Electrical system	Cylinder head or valve leakage	Inspect or repair
	Air filter	Electrical system malfunction	Cleaning or adjusting
Headlamps and tail lights do not light up	cable	Poor wiring connection	adjustment
	Left and right switches	Poor or damaged switch contact	Adjust or replace
	Headlamps	Inspection of light bulbs and lamp holders	Adjust or replace
Headlamps and tail lights do not light up	Voltage regulator	Voltage regulator inspection: poor contact or burnt out	Check or replace
	Magneto	Magnetic motor coil inspection: poor contact or burnt out	Check or replace
The horn does not sound	Battery	The battery is dead	Adjust or replace
	Left switch	Horn button inspection	Adjust or replace
	cable	Poor circuit contact	Adjust or replace
	horn	Damaged horn	Adjust or replace

The above are common malfunctions of motorcycles. If your motorcycle malfunctions, please go to the designated repair unit for inspection and repair in a timely manner.

FE08Inline four cylinder national four fault code table

NO	Fault code	Fault description
1	P 0118	Cylinder temperature sensor circuit high voltage/open circuit fault
2	P 0117	Low voltage fault in the cylinder temperature sensor circuit
3	P 0336	Signal interference fault of crankshaft position sensor circuit
4	P 0335	No signal fault in the crankshaft position sensor circuit
5	P 2300	Short circuit to low voltage/open circuit fault of ignition coil "A" (physical cylinder 2)
6	P 2303	Short circuit to low voltage/open circuit fault of ignition coil "B" (physical cylinder 4)
7	P 2306	Short circuit to low voltage/open circuit fault of ignition coil "C" (physical cylinder 3)
8	P 2309	Short circuit to low voltage/open circuit fault of ignition coil "D" (physical cylinder 1)
9	P 0123	Short circuit to high voltage fault of throttle position sensor
10	P 0122	Short circuit to low voltage/open circuit fault of throttle position sensor

11	P 0459	Carbon canister solenoid valve circuit short circuit to high voltage fault
12	P 0458	Carbon canister solenoid valve circuit short circuit to low voltage/open circuit fault
13	P 0232	Oil pump relay short circuit to high voltage fault
14	P 0231	Oil pump relay short circuit to low voltage/open circuit fault
15	P 0601	ECM read-only memory verification error
16	P 0262	Fuel injector "A" short circuited to high voltage fault (physical cylinder 2)
17	P 0261	Fuel injector "A" short circuit to low voltage/open circuit fault (physical cylinder 2)
18	P 0265	Fuel injector "B" short circuited to high voltage fault (physical cylinder 4)
19	P 0264	Fuel injector "B" short circuit to low voltage/open circuit fault (physical cylinder 4)
20	P 0268	Fuel injector "C" short circuited to high voltage fault (physical cylinder 3)
21	P 0267	Fuel injector "C" short circuit to low voltage/open circuit fault (physical cylinder 3)
22	P 0271	Fuel injector "D" short circuit to high voltage fault (physical cylinder 1)
23	P 0270	Fuel injector "D" short circuit to low voltage/open circuit fault (physical cylinder 1)
24	P 0108	High voltage/open circuit fault in the intake sensor circuit
25	P 0107	Low voltage fault in the intake sensor circuit
26	P 0113	High voltage/open circuit fault in the intake temperature sensor circuit
27	P 0112	Low voltage fault in the intake temperature sensor circuit
28	P 0132	Oxygen sensor signal "A" short circuit to high voltage/open circuit fault (physical cylinder 2)
29	P 0131	Oxygen sensor signal "A" short circuit to ground fault (physical cylinder 2)
30	P 0138	Oxygen sensor signal "B" short circuit to high voltage/open circuit fault (physical cylinder 4)
31	P 0137	Oxygen sensor signal "B" short circuit to ground fault (physical cylinder 4)
32	P 0152	Oxygen sensor signal "C" short circuit to high voltage/open circuit fault (physical cylinder 3)
33	P 0151	Oxygen sensor signal "C" short circuit to ground fault (physical cylinder 3)
34	P 0158	Oxygen sensor signal "D" short circuit to high voltage/open circuit fault (physical cylinder 1)
35	P 0157	Oxygen sensor signal "D" short circuit to ground fault (physical cylinder 1)
36	P 0031	Oxygen sensor heater "A" short circuit to low voltage/open circuit fault (physical cylinder 2)
37	P 0032	Oxygen sensor heater "A" short circuited to high voltage fault (physical cylinder 2)
38	P 0037	Oxygen sensor heater "B" short circuit to low voltage/open circuit fault (physical cylinder 4)
39	P 0038	Oxygen sensor heater "B" short circuited to high voltage fault (physical cylinder 4)
40	P 0051	Oxygen sensor heater "C" short circuit to low voltage/open circuit fault (physical cylinder 3)
41	P 0052	Oxygen sensor heater "C" short circuited to high voltage fault (physical cylinder 3)

42	P 0057	Oxygen sensor heater "D" short circuit to low voltage/open circuit fault (physical cylinder 1)
43	P 0058	Oxygen sensor heater "D" short circuited to high voltage fault (physical cylinder 1)
44	P 0563	System voltage high fault
45	P 0562	Low system voltage fault
46	P 0500	Vehicle speed sensor malfunction
47	P 0850	Neutral/clutch switch circuit input fault
48	P 0650	Engine malfunction indicator light malfunction
49	P 1693	Engine speed output low voltage fault
50	P 1694	Engine speed output high voltage fault
51	P 0505	Idle control malfunction

The above are common fault codes for motorcycles. If your motorcycle malfunctions, please go to the designated repair unit for inspection and repair in a timely manner.

Remember: You cannot handle motorcycle malfunctions on your own, otherwise it may cause safety hazards or accidents. If you handle motorcycle malfunctions on your own and cause safety accidents, you are solely responsible.

XIX、BD700-3 Electrical schematic diagram