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## Owner's Manual

## **Preface**

We highly appreciate you for choosing our model LJ250-2V fuel injection motorcycle, it will offer you pleasant and safe driving.

Driving motorcycle is one of the most exciting sport. For safety reason, you should read this owner's manual carefully and following these instructions before you drive.

This manual introduces the regular maintenance and service, please follow these instructions, it will help you to keep your motorcycle in good condition and more durable.

Our company never stop improving our quality and performance, it may cause color or structure change, not as same as manual description. If it brings any inconvenience to you, we are very sorry about this.

Ningbo Longjia Motorcycle Co., Ltd.

## Important Notice

### 1. Driver and passenger

This motorcycle is designed only for one driver and one passenger.

### 2. Road condition for driving

This motorcycle is only suitable for driving on road.

3. Please read this manual carefully. The run-in time of engine is necessary, it will make motorcycle more durable and stable.

Please take notice of following words:

**Warning:** It means if you don't follow instruction, it may cause serious damage for driver and passenger.

**Carefully:** It means if you don't follow instruction, it may cause the person injured or damage of motorcycle.

**Notice:** Provide useful information.

This user manual is property of the motorcycle. If transfer this vehicle to others, you should pass this manual to new owner together with vehicle.

Without our company permission, it is not allowed to copy or translate any part of this manual.

**The motorcycle use professional oil for lubrication.**

## Special Notice

**Warning: The motorcycle must equip the right fuse for driving, it is not allowed to use other fuse or without fuse. Otherwise it may cause damage to the vehicle or fire.**

Fuse position: Under the seat.

Fuse specification: The main cable fuse is 15A, others are 10A.

The fuse failure is normally by vehicle circuit problem, before change fuse, should check the situation of vehicle. If after change fuse, it breaks again, please send the vehicle to nearest shop for service.

Notice:

※First time mounting or change battery should be careful with Anode and Cathode. If make wrong connection, should check the fuse immediately. even fuse not broken, the vehicle should be sent to service centre to check deeply. The wrong connection for anode and cathode may cause some damage of electric part. If damage part continue working, it may bring some unpredicted risk.

※Before change fuse, should take off the key in case of short circuit.

※When change fuse, should be carefully not damage the fuse bottom, otherwise it may bring damage part or fire.

**Forbidden Modify:**

**Please do not change original parts position, otherwise it will seriously affect the vehicle performance and safety, and even cause vehicle not driving properly. Such as modify electronic, emission and fuel system, it is not allowed legally. Our company will not take the responsibility for any change without our permission.**

# Context

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## **Safety information**

### **Safety Regulation:**

1. Before driving must check vehicle, in case of accident or damage parts.
2. Driver must have legal driving license, and not allowed to borrow the vehicle to whom without driving license.
3. Avoid to have damage from other vehicle, driver should:
  - Wear bright color clothes.
  - Not to close other vehicle.
4. Strictly obey regulation, not allowed to cut in other line suddenly.
5. Most accident because of over speed, so speed should follow the speed limitation.
6. When making turns, should turn on indicator.
7. In the cross, parking or fast line, should be carefully driving.
8. Do not modify motorcycle or take off parts, it is illegal and not safe, and it will affect warranty.
9. Add accessories must not affect driving, specially not overload electronic parts.

### **Clothes:**

1. For safety reason, driver must wear helmet, glass and boot, gloves and racing suit. Passenger should also wear helmet.
2. During driving, the muffler temperature is high, it is forbidden to touch muffler during driving or just after driving.
3. During driving, please do not wear too loose clothes.

### **Helmet:**

It is most important to wear good quality helmet and wear glass.

### **Driving when raining:**

Driving in the rain need special attention, the brake distance is two times more than dry weather.

### Motorcycle series number

Vehicle Identification Number ( VIN ) and engine number is for motorcycle registration. Please record your number for future use.

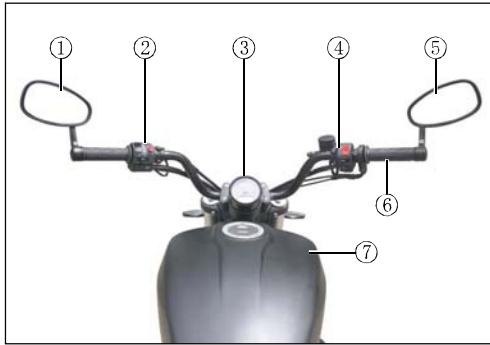
VIN number grave on the vehicle handle bar right side ①,  
Engine number grave on the engine crankcase left side②,  
Product information label on the vehicle handle bar right side ③.

VIN number: \_\_\_\_\_

Engine number: \_\_\_\_\_



## Parts description



- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| (1)Left mirror       | (2)Left side switch  | (3)Speedometer       |
| (4)Right side switch | (5)Right mirror      | (6)Throttle grip     |
| (7)Fuel tank         | (8)Front brake lever | (9)Seat locker       |
| (10)Rear brake       | (11)Rear footrest    | (12)Oil cover        |
| (13)Front footrest   | (14)Rear brake pedal | (15)Ignition switch  |
| (16)Front brake      | (17)Clutch lever     | (18)Shift gear pedal |
| (19)Side stand       |                      |                      |





## Speedometer

### (1)Turning light indicator

When the left turning light on, the indicator will be flash. When the right turning light on, the indicator will be flash.

### (2)Neutral indicator

When the gear on neutral, the neutral indicator will be on.

### (3)High beam indicator

When the high beam headlight on, the High beam indicator will be on.

### (4)FI Indicator

When the key on, the fuel injection indicator on. Oil pump will work 3 seconds, then engine will start. When the engine start, the indicator will be off. If indicator still on, it means has some problem. In the same way, during normal driving, the indicator should be off. If indicator on, it must stop driving and check immediately.

### (5)Speedo

This is to show your driving speed.

### (6)Odometer

This is to record the distance of all driving.



### (7)Gear position indicators

Indicate the engine's gear position.

### (8)Low fuel level warning light

Indicate the fuel level in the fuel tank. If the fuel is sufficient, the light will be off. When the fuel is not sufficient, the light will be on. Please fill up with fuel in time.

### (9)ABS instruction light

Turn on the bike, the ABS instruction light on the speedometer is on, this is normal. When the speed reach 5Km/H, the ABS instruction light will be off, ABS works properly. If the ABS system is wrong, the ABS instruction light will be on during ride. Then stop and check the ABS, contact your dealers for service.

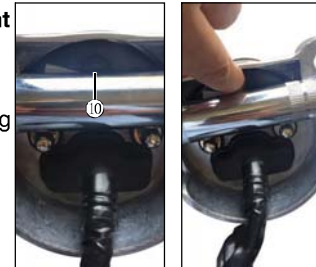
### (10)Speedometer adjustment button

In the bottom of speedometer, there's a small round projecting button.

Button function:

Short press: switch between total mileage and trip mileage.

Long press: when the speedometer shows total mileage, long press this button, switch between kilometers and miles. When the speedometer shows trip mileage, long press this button, the trip mileage turns to zero.



## Operation of parts

### ●Key



This vehicle has two keys, it's used to start motorcycle and open all the locks. Please keep key in safe place. If you want to have more keys, please contact closest dealer of your area.





### ●Electric power locker



#### Warning:

Please don't try to turn the key during driving, otherwise the vehicle will lose control.

“” logo……when the key on “” position, it is no power and can not start engine, the key can be taken out.

“” logo……when the key on “” position, it has electric power and start engine, the key can not be taken out.



“” position: In case of thieves, when you parking, please use this function. Turn the handle bar to left, press key down and release, then turn the key to “” position, it will lock handlebar. Then you can take out the key.

#### Notice:

when you parking, please lock turning and take out the key in case of thieves. Please park the vehicle in a proper place.

### ●Left grip



#### ①Clutch lever

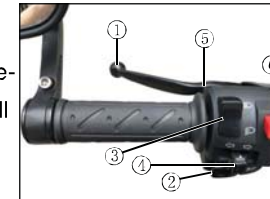
When start the engine or shift gear, please grip clutch lever, it will stop rear wheel driving.

#### ②Horn button

When you press horn button, the horn will work.

#### ③The switch of low and high beam

when the switch on “” position, the high beam on, and the speedometer high beam indicator will be on as well. When switch on “” position, the low beam on. Normally, use low beam when driving in city area or meeting others.



#### ④Turning light switch

Turn the switch to left “←” ,the left side turning light will be flash. Turn the switch to right “→” ,the right side turning light will be flash. Dismiss the turning signal, please press the switch down.

#### **Warning:**

when you change line or turning, please turn on turning light on time. After turning, please turn off the turning light immediately.

#### ⑤Passing

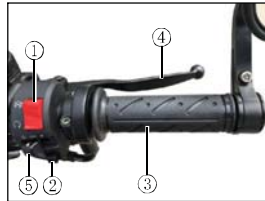
When you fast press this button several times, the headlight will be flash. It is only for pass or warning.

#### ●Right side grip

##### ①Engine off switch

When the switch on “↻” position, it has electric power, the engine can be start.

When the switch on “⊗” position, it is not power, the engine can not be start.



#### **Warning:**

The engine off switch only use for emergency case. When the vehicle still slide, please don't stop engine, otherwise it has air with gas together enter muffler, burning catalyst may damage muffler.

#### ②Start

When you press this button, the engine will be start.

#### ③Throttle grip

Throttle grip control the speed of motorcycle. when you want to accelerate speed, please turn the grip to the direction close to driver.

#### ④Front brake lever

When brake, please grip the right side lever gradually.

#### ⑤Light switch

Turn the switch to “☰” position, front position light, rear position light and license light are on. Turn to “☼” ,head-light, front position light, rear position light and license light are on. Turn to “●” , drive daytime only.

### ●Fuel tank

When the speedometer's low fuel lever warning light is on , please add gasoline immediately. First open the anti-dusty cover as ① , then enter the key and turn as clockwise, pull out the fuel tank cap with key. After fill in gasoline,close the fuel tank cap, please align the right point, press down cap then it will be close.



#### **Warning:**

please do not fill in too much gasoline. Do not splash gasoline on the hot engine, it is very dangerous.

Flame is prohibited when filling gasoline

If the gasoline go inside the carbon box, please go to the local dealer to clean or replace the carbon box. Because gasoline will make the activated carbon expire earlier.

Check the water leaking hole around the fuel tank cap, make sure it work properly and no water go inside the fuel tank.

### ●Shift gear pedal

This vehicle is international 5 gear engine. Neutral gear between first gear and second gear. When you change gear, please follow the rules.



#### **Caution:**

When it is neutral gear, the indicator will be on. Please loose clutch gradually to make sure it is really in the neutral gear. When change gear, hold the clutch lever, change gear when clutch loose completely.

● **Rear brake pedal**

Press down rear brake pedal (as picture). When the brake pedal working, the taillight will be on.



● **Side stand**

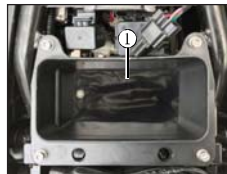
Side stand is on the left side, when park motorcycle, please make sure side stand in the right position. This motorcycle is equipped with a side stand switch. If the side stand is folded up, the engine can be started. otherwise, the engine is shut off and won't start.

**Caution:**

Please don't park the vehicle in the slope place, otherwise the vehicle may fall down.

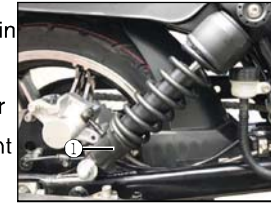
● **Toolbox**

Toolbox ① under the seat. Toolbox including screwdriver, sleeve, wrench.



● **Rear shock absorber**

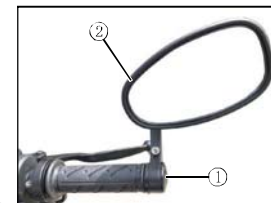
This vehicle shock absorber main component including spring and liquid damp, this shock absorber is adjustable according different road condition.



There's an adjustable bracket ① at the lower end of rear suspension, use special tool to adjust the bracket, turn left or right to change the spring pressure, then harden or soften the suspension. Adjust the 2 rear suspensions at same time and to same position.

● **Adjustable mirror**

Loosen the bolt ①, rotate the mirrors ②, adjust the front and rear angle of the mirrors. To adjust the left and right angle of the mirrors, just turn the mirrors to left or right.



Adjust the glasses inside the mirrors until the objects displayed clearly in the mirrors.

## Gasoline and oil information

### Gasoline

Please use lead-free gasoline. Euro IV version: E5

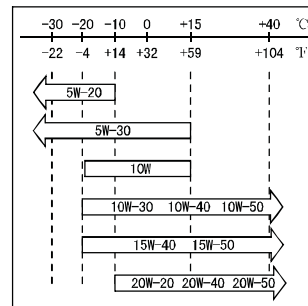
Other version: Unleaded fuel min. 95 Octane

### Caution:

use lead-free gasoline, spark plug will have longer life.

### Oil

Please use SG or above SG grade engine oil which match SAE standard. Please buy oil from dealer according to the local weather, please check the follow chart to choose suitable oil.



## Engine running in

### Top speed

All the new motorcycle, during the first 1500 km driving, not to make engine run too high speed or accelerate too much. It should avoid the rpm to beyond 80% of maximum.

### Engine speed change

Speed should not always keep the same, it should change frequently, it help the parts running smoothly.

### Avoid running long time in low speed

It is damage to the parts if always keep engine in a low speed, it should always change to different gear to drive.

## The chart show the max rpm during engine run-in period

First 800 km	Under 5000 rpm
First 1500 km	Under 6000 rpm
Over 1500 km	Under 8500 rpm

**Before driving, please let oil lubricate sufficiently**

Before driving, please keep engine in idle situation for a while, in order to have enough lubrication of engine.

**First maintenance**

The first 1,000 km maintenance is the most important work. Please tighten all the screw and change oil.

**Caution:**

1,000km maintenance should follow this manual. Please pay more attention on “Caution” and “Warning” part.

**▲Special Notice**

The first engine running at 300km, please ask dealer to change oil and clean oil filter and air filter. Then follow the maintenance schedule to maintain the motorcycle.



**Before driving**

Before driving, it is necessary to check the following items.

Checking item	Points
Handle bar	1)Stable 2)Turning flexible 3)No loosening
Brake	1)Brake level and pedal has right feeling 2)No oil leaking
Tire	1)Air pressure correct 2)Pattern of tire correct 3)No crack on tire
Fuel	Have enough gasoline for driving
Light	Turn on/off all the lights
Indicator	Checking high-beam, gear, turning indicator
Horn	Correct
Oil	The level of oil correct
Throttle	1)The throttle grip work correct 2)Acceleration and deceleration correct
Clutch	Correct
Drive chain	1)Correct setting 2)Lubrication

## **Driving motorcycle**

### **Engine start**

Please turn the key to “” position, and the engine switch on right handle bar on “” position, put gear in the neutral gear, the gear indicator should be on. Press start switch, engine turn on. If it's not at "N" position, please make sure the side stand is folded, clench the clutch lever, press the engine start button to start engine.

#### **Caution:**

Start engine when hold the clutch lever and put gear in neutral position .

When start by electric starter, ECU will check the environment temperature and engine condition to supply necessary fuel to engine.

#### **Warning:**

Not to start engine indoor without good air ventilation. don't leave motorcycle on without monitor.

#### **Caution:**

When not driving motorcycle, don't make the engine run over speed, otherwise, engine will be over heated and damage the parts inside.

### **Using gear shift**

Gear shift system will make engine driving smoothly. Driver should change gear according to the driving speed.

### **Slope driving**

When driving in the slope place, motorcycle speed will decrease and show the power is not enough. In this case, it should reduce gear to get more torque.

When go downhill, put the gear in low position, it help engine brake. Please don't make the engine run at overhigh speed.

### **Using brake and parking**

It should completely loose throttle and gradually brake front and rear. Before completely stop motorcycle, hold clutch and change gear to neutral and check the gear indicator on or not.



**Caution:**

The new driver always want to use rear brake, it will make brake abased very fast and brake distance too long.

**Warning:**

Only using front brake or rear brake is dangerous, it may slip down or lose control. Especially in wet road condition or corner, should be very carefully use brake. Suddenly brake hard is very dangerous.

Motorcycle should parking in flat ground. If motorcycle must park in slope place, please put motorcycle in first gear in case of motorcycle slip away.

**ABS maintain instruction**

Turn on the bike every time, the ABS instruction light on the speedometer is on, this is normal. When the speed reach 5 Km/H, the ABS instruction light will be off, ABS works properly. If the ABS system is wrong, the ABS instruction light will be on during ride. Then check the ABS, like if the ABS plug-in to wire harness is loose, is the gap between ABS wheel speed sensors and gear rings 0.5mm and 1.5mm, if the surface of wheel speed sensors adsorb small metal pieces. After fixation of ABS faults, the instruction light on speedometer will be off when speed is 5Km/H and up. If the problem still exists, contact your dealers for service.

### Checking and maintenance

The follow chart show the kilometers for maintenance. When reach the kilometer, it must follow the instruction to check and make maintenance. Turning system, engine, electronic system, side stand and wheels are key important parts. It is necessary to have a professional technician to handle.

**The symbol means:** I: checking, clean, adjust C: clean R: change A: adjust L: lubrication T: tight

Maintenance period Maintenance content	Odometer (KM) (Remark 2)																Everyday check before riding	
	300	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000	14000	15000		
Oil for crankcase	R																Every 2000km R	I
Oil filter and oil net	C																Every 2000km C	
Air filter(Remark 1)																	Every 4000km clean filter if necessary please change	
Spark plug		I			I				I				I					
Valve clearance	I	I			I				I				I					
Gasoline filter					C				C				C					
Brake pedal		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake oil																		I
Driving chain																	Every 1000km: I, A	I
Screw	T					T					T						T	

Maintenance period  Maintenance content	Odometer (KM) (Remark 2)																Everyday check before riding
	300	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000	14000	15000	
Driving chain(Remark 3)	Every1000km: I、L、A																
Friction disc					I				I				I				
Brake system		I、A			I、A				I、A				I、A				
Brake					I				I				I				
Front headlight beam adjustment					I				I				I				
Clutch		I			I				I				I				
Stand					I				I				I				
Suspension					I				I				I				
Screw/bolt/fasteners (Remark 3)		I							I								
Wheel(Remark 3)		I			I				I				I				
Turning system		I											I				

- \* When the mileage is over the highest on the table, please perform according to the period set on the table.
- \* Driving on dusty place, it is recommended to clean it frequently.
- \* Often drive on bad road condition, make the maintenance and service more frequently.

### ●Oil level and change oil

Before start engine, it need to check the oil level. When check the oil level, it should park the vehicle in flat ground, through oil window to check oil between the scale L and H. when the oil level lower than the scale L position, it should open the oil cover ①, add oil until the scale H position.



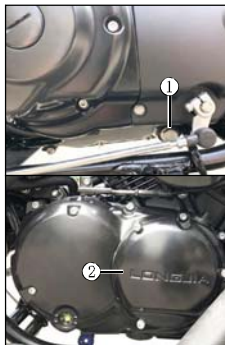
#### Caution:

When the engine is not completely cold down, it is the best time to change oil. The body should support by supporter and keep vehicle in vertical position and fast leaking all the oil.

The engine oil capacity is 1.7 liter, it should change 1.7 liter oil.

1. When leaking oil, please put a container under the oil leaking position, and take off leaking screw ①.

When completely leading out the oil, put on the leaking screw. The fix torque is 20-25 Nm.



- (1). Remove oil filter cap ②, take off the oil filter.(1).
- (2). Clear up the oil filter cap and the engine surface.
- (3). Remove the oil filter screen cap ③, clean the oil filter screen ④ or change a new oil filter.



- (4). Assemble them back.

#### Caution:

Please do not take off oil filter O ring seal, because it will make O ring seal not in right position. It will bring leaking or damage engine.

2. Fill the qualified oil. The capacity is 1.7 liter. Check the oil level gauge accordingly. Don't fill more than upper level.
3. Close the oil cover.
4. Start engine and keep engine in the idle for few minutes and turn off engine.
5. Check oil level. Again make sure the oil level in the right position and no leaking of engine.

### ●Spark plug

Using small metal brush or spark plug cleaner to clean carbon on the spark plug in the first 1000 km driving, and do it after every 4000 km driving.

Every 8000 km driving, spark plug should change immediately.



### Caution:

Spark plug should not tighten too much in order not to damage cylinder header thread.

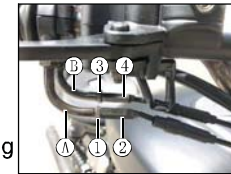
### ●Throttle cable adjust

1. Turn both side of throttle grip to check if it's reaction is fast or not.
2. Check the throttle cable to measure its travel degree, it should be 10° -15° degree.



This vehicle is steel cable for throttle. ① speed-up cable ② de-acceleration cable. Please follow the steps to adjust throttle grip travel distance.

- (1) Move away the throttle cable cover.
- (2) Loose the screw ③.
- (3) Completely tighten the adjusting screw ④.



- (4) Loose the tight screw ①.
- (5) Turn adjusting screw ② make the grip travel degree between 10° ~ 15° degree.
- (6) Tighten screw ①.
- (7) Adjust screw ④ make the grip flexible.
- (8) Tighten screw ③.

### ●Clutch adjust

Clutch travel distance should be around 5-15mm, if found this distance is not correct. Please follow the steps to adjust:

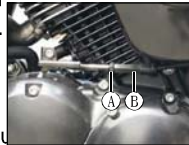
- (1) Move clutch cable cover.
- (2) Loose screw ①.
- (3) Loose or tighten the adjust screw ②, make the correct clutch travel distance.
- (4) Tighten screw ①.



If clutch cable lever adjust to maximum and still not correct, please adjust again cable and the screw ① and ②.

●Engine idle adjustment

This vehicle motor will adjust the idle automatically. If you need to change, please contact professional dealer.



●Throttle valve

The vehicle engine idle may be down because the pollution of throttle valve. It need to clean the throttle valve every 5000 km driving.

When clean the throttle valve, disconnect anode and cathode of battery, stop the sensor of throttle valve, take away rubber pipe which connect the throttle cable and air filter. Then take away the throttle valve.

Open the valve bottom cover, and spray the cleanser inside the valve and using brush to clean dust and carbon.

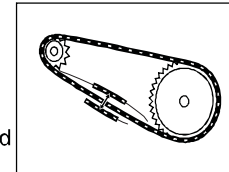
After clean, mount the valve and all other parts as original and try to start engine.

●Driving chain

The life of driving chain depending on your maintenance. Not properly maintenance will cause its life shorter.

Driving chain adjustment:

Every drive 1000 km, please adjust driving chain to make the degree of chain droop as 10-20mm. according to your driving condition, it may need to adjust chain frequently.



Warning:

All the above suggestion is the maximum adjustment period, actually it need to check chain every time before you drive. If the chain is too loose, it may cause the chain fall off or make big damage to the engine.

Please adjust chain according to following way :

- (1) Please use supporter to support vehicle.
- (2) Loose the rear axle screw ①.
- (3) Loose the locker screw ②.
- (4) Turn left or turn right to adjust screw ③, to adjust the chain properly. When adjust the chain, it must keep the front chain wheel and rear chain wheel in the middle and in the



same line. To help you doing this adjustment, there's basic scale on the swing arm and every chain adjustment, they can match and as reference from beginning to end. After match and set the degree of chain droop to 10-20mm, tighten the rear axle screw and do final check.

**Caution:**

When you change to the new chain, please check if the chain wheel is ok or not. If necessary, please change it.

Checking chain, it should check the followings points:

- (1) Pin is tight or not.
- (2) Chain wheel situation.
- (3) Single chain is rusty and dry or not.
- (4) Single chain damage or not.
- (5) Adjust chain if too loose.
- (6) Adjust the loose chain.

If the chain have above problem, it may come from chain wheel. It must to check following items of chain:

- (1) Chain wheel tooth may already abrase too much.
- (2) Broken or damage chain tooth.
- (3) The chain wheel screw may loose.

**Lubrication of chain wheel**

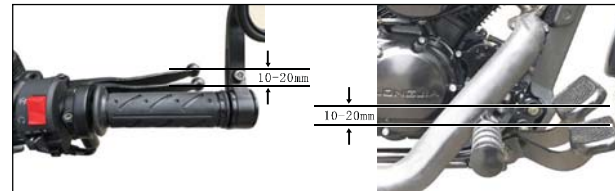
It is priority to buy professional chain oil for lubrication. And also it could use engine oil or other lubrication oil for lubrication.

**● Brake**

This vehicle front and rear brake are all disc brake. Correct operation for brake is very important of safe driving. It should check brake system in professional store.

**Adjust brake**

- (1) The front brake level travel distance is 10-20mm.
- (2) The rear brake pedal travel distance is 10-20mm.



**Brake pad**

Please check the front brake pad if it has been abraded mark until the scale ①. If already reach to point ①, it should change brake pad.



### Brake oil level

When the brake pad already have been abraded, the brake cylinder oil will going to the oil pipe automatically, so the brake cylinder oil level will be decreased. Front brake cylinder on the right side of handle bar. If the oil level under the cylinder minimum scale ①, please add brake oil. The rear brake oil tank is in the middle of vehicle, please make sure the oil level between Lower to Upper scale. If the level under lower scale, please add brake oil. Please check brake oil level frequently.



### Caution:

This vehicle is using DOT 4 brake oil. Do not use the second hand oil or the remaining oil from last maintenance. Because the oil exposed in the air will absorb water. Please do not spray oil to any painting surface, it will corrode the surface.

### Brake system

Please check the brake system every day as followings:

- (1) If have any oil leaking from front and rear brake.
- (2) Try brake lever and pedal, it should have certain bounce.

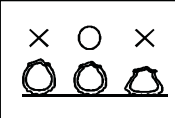
(3) Check brake pad condition.

### Warning:

If brake system or brake pad need to change, please go to professional dealer. When finish this change, please grasp several times brake lever and press down brake pedal.

### Tire

The correct air pressure of tire will provide stable, comfortable and durable driving feeling.



Front tire pressure	225 ± 5 kpa
Rear tire pressure	250 ± 5 kpa

### Caution:

Please check tire condition when the tire is "cold".

When the middle patten of tire already reach to the certain degree, please change to new tire. Please follow the chart:

Min pattern depth of tire	
Front tire	1.6mm
Rear tire	2.0mm



**Warning:**

Please do not try to repair any damage tire. It may affect the wheel balance and stable. Not correct air pressure will damage tire surface quickly. The air pressure not enough will cause wheel slip or fall off and even damage rim, it may cause the vehicle out of control.

**●Seat assembly and dis-assembly**

Put the key inside the keyhole as figure ①, turn clockwise, open the seat, lift the seat tail gently and move backwards, remove the seat.

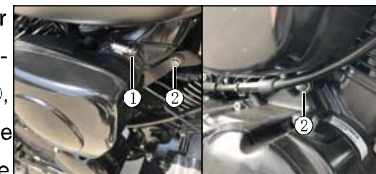
When assemble the seat, please push the seat from rear to front, and the hook ② to the point ③, slightly press down seat to fix it.



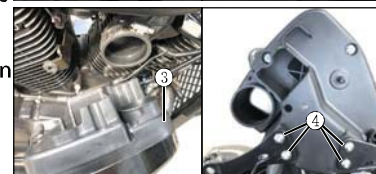
**●Air filter maintenance**

The air filter should have maintenance regularly. If the driving condition is not good, it should check more for air filter.

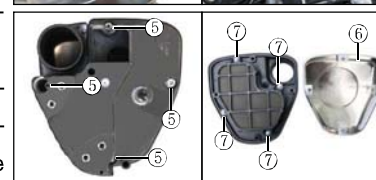
(1)The air filter is under the fuel tank, loosen the screw of the clamp ①, remove 2 screws on the air filter ②, take out the air filter ③.



(2)Remove 4 screws on the air filter bracket ④.



(3)Remove the 4 screws on the air filter ⑤, take out the external cover of air filter element ⑥, remove 4 screws ⑦, then take out the element of air filter ⑧.



(4)Put the filter inside clean gear oil to absorb oil completely, then squeeze oil out.



(5)Assemble back all the parts.

**Caution:**

Gasoline or other flammability oil is not recommended for clean air filter.

### ●Catalyst

In order to reach homologation standard, this vehicle muffler has catalyst.

Catalyst contains rare metal, it will clean the harmful exhausting air which include Co, oxycarbide and oxynitride. After chemical treatment, those will change to Co<sub>2</sub> and oxygen.

It is very important for catalyst, the faulted catalyst will make more pollution to the air or damage engine. If change is necessary, please contact your dealer.

#### Caution:

Catalyst area is high temperature area, please do not touch.

### ●Carbon tank

The motorcycle is equipped with fuel evaporation equipment: carbon tank

The carbon tank is behind the left side cover, the carbon tank is filled with activated carbon particle which absorbs the steam, the activated carbon particle can prevent the extra fuel steam to atmosphere efficiently, so save fuel and protect the environment.

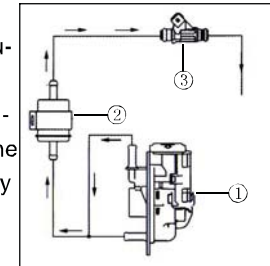
### ●Magnetic valve

When the motorcycle is off, the fuel steam goes to the carbon tank by breather pipe, after absorbed by activated carbon particle, it turns clean and goes to atmosphere. The magnetic valve is close, fuel steam can't go to engine intake tube. Turn on the engine, fuel pump works, the fuel and air inside the fuel tank move, inside the fuel tank is vacuo condition (negative pressure), some fuel steam in the carbon tank go to the fuel tank with air from atmosphere through carbon tank breather pipe and give pressure, so the fuel supply properly. Meanw-

hile, ECU give signal to open magnetic valve, the fuel steam in carbon tank is absorbed to engine intake tube through desorption pipe, and burn out in the combustion chamber.

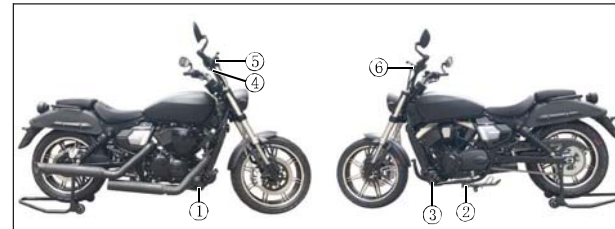
### ●Fuel injection and oil path

Fuel pump ① connector, fuel pump send the fuel to fuel injector ③ through a fuel filter ②, then inject the fuel-air mixture to engine intake tube. The connecting way as the right figure.



### ●Parts lubrication

Proper lubrication will keep your motorcycle every single part running smoothly and increase durability. After long driving or raining, we suggest you make lubrication maintenance. The main points as followings:



Y lubrication oil

① rear brake pedal axle Z

③ gear shift pedal axle Z

⑤ front brake lever axle Z

Z lubrication grease

② side stand connector and spring hook Z

④ throttle cable Z

⑥ clutch lever axle Z

### ●Battery

The battery is behind the right side cover. This vehicle battery is electrolyte maintain-free type. First time use, please ask dealer to add electrolyte, in future it doesn't need to add anymore. Take out battery, please

follow the steps:

- a、 Turn off motorcycle.
- b、 Take off seat.
- c、 Take off screw and battery plate.
- d、 First dis-connect negative pole (-) and dis-connect positive pole(+).
- e、 Take out battery carefully. Put the battery back in opposite sequence.



#### Caution:

When mount the battery, it must connect cable correct. If any wrong, it will damage battery and wire harness. The red cable must connect to positive pole(+), and black pole connect to negative pole(-). Check or change battery please turn off motorcycle.

### First time using, please follow the steps:

Take off the seal paper on the top of battery, and add special electrolyte into battery and close the cover to wait for 30 minutes.

After add the electrolyte into new battery, charging battery will increase durability.

When add the electrolyte, please follow the steps:

- a、 Put the battery on the flat ground, and take off the seal paper.
- b、 Take out the container which contain the electrolyte, and remove battery cover stripe as plug. Caution: please do not break the stripe, it will be as cover for battery.
- c、 Put the electrolyte into the 6 holes and fill in.

#### Caution:

It must put battery in the flat ground, otherwise electrolyte can not fill in completely.

- d、 Please check the left and right side, it must have bubble come out from side pillar and wait for at least 20 minutes.

If both side (left and right side) not bubble come out, please pat slightly to the battery bottom 2 or 3 times, and check if any bubble come out again.

e. After electrolyte completely fill in and pat slightly to the battery bottom several times, and take out the vessel.

f. Put the strip into the battery 6 holes separately, and press down the strip until it flat with the surface.

After fill in electrolyte, please do not take out strip or add any water or electrolyte.

**Change battery, please take note as following:**

Change battery should check the type is correct or not. If battery type not correct it will damage vehicle and bring problem for circuitry. If don't ride motorcycle for long time, please remove battery from motorcycle and charge 1 time every month.

**Warning:**

Battery will make exposure air, be careful with spark, flame. Battery including vitriol, it is not allowed to contact electrolyte. It will hurt skin or eye. Battery is dangerous poison material. Not allow kids touch.

**●Fuse change**

The fuse box is located under the seat, front of the tool box.

The fuse box spec as drawing:

If fuse break many times, it means short circuitry or overload of electric. Please ask your dealer to check.

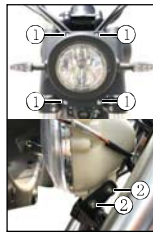


**Warning:**

When checking or change fuse, please turn off the power. Please do not use the fuse which not match this vehicle spec, otherwise it will bring serious problem to electric circuitry, and even will burn the vehicle or lose engine power.

**●Front headlight adjustment**

The headlight is adjustable vertically. Remove the 4 socket head cap screws ①, remove the headlight cover. Loosen the left and right bolts ② of headlight by #10 wrench, move the headlight vertically until light beam at right position, fasten the 2 bolts ②.



Assemble back light.

**Caution:**

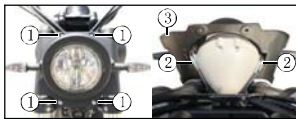
When adjust the beam, driver should be on the seat and keep the vehicle in the vertical position.

**●Bulb change**

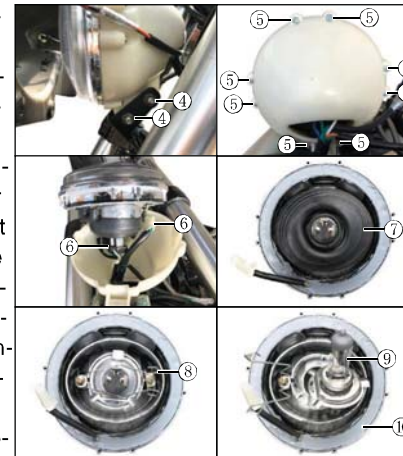
When change broken bulb, please use the same specification bulb. If the specification not the same, it will bring problem for circuitry. Suggest you change bulb in your dealer's shop.

**Front headlight, position light change**

(1) Loosen the bolt ①, unplug the front left and right headlights connector ②, remove the front cover of headlight ③.



(2) Remove the 2 screws which fasten the headlight ④, take out screw ⑤, remove the headlight cover, unplug the headlight connector ⑥, remove anti-dust cover ⑦, unplug the bulb press spring clip ⑧, remove the headlight bulb ⑨. Change to bulb with same size.



(3) The front position light is LED light source and reliable. In case to change, need to change the complete headlight. (4) Remove the headlight cover ③ as step (1), remove the nut, change left turning light (wire color orange) and right turning light (wire color blue). The light source of turning lights are LED, need to change the complete turning lights.



(5) Assemble back light.

**Headlight bulb: 12V 35W/35W(HS1)**

**Front position light bulb: 12V 0.5W\*18**

**Left and right turn lights bulb: LED 12V 1W**

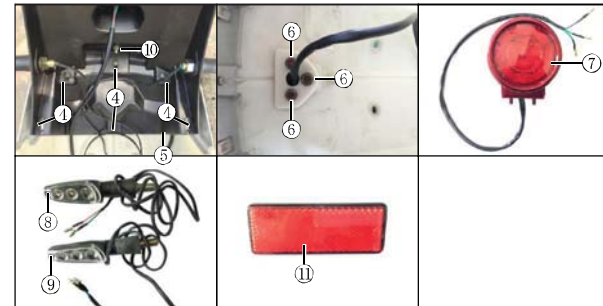
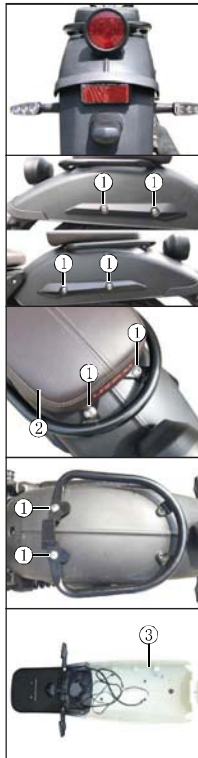
### Rear light(brake and rear position light) change

The light source of brake light, rear position light ①, rear turning lights are all LED, it's very reliable. In case to change the light, need to change the complete light.

- (1) Remove the 4 socket head cap screws ① on rear cover, take out the 2 socket head cap screws ①, remove the rear seat ②, take out 2 socket head cap screws on armrest ①, remove the connector, take down the rear fender ③.
- (2) Remove the 6 screws ④, take out the rear tire fender ⑤, remove 3 nuts ⑥, change the rear brake light ⑦.
- (3) Remove the nut, change the left turning light ⑧ (wire color orange) and right turning light ⑨ (wire color blue).
- (4) Remove the fasten nut ⑩, change the rear reflector ⑪.
- (5) Assemble back light.

**Brake/rear light**  
bulb: LED 12V 5W/1W

**Left and right turn lights**  
bulb: LED 12V 1W

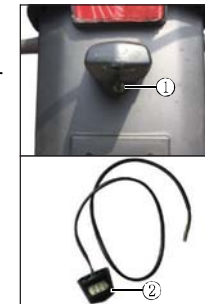


### change the license plate light

The light source of license plate light is LED, it's very reliable. In case to change, change the complete light.

- (1) Remove the rear fender same procedure as removing the brake light.
- (2) Remove the screw ①, change the license plate light ②.
- (3) Assemble back light.

**Rear registration plate lamp**  
bulb: LED 12V 5W



### **Store information**

#### **Store**

If need to store vehicle in long period, please take certain maintenance to protect vehicle:

1. Change engine oil.
2. Lubricate driving chain.
3. Make the fuel tank and injection system as empty as possible.

#### **Caution:**

Gasoline stored in long time may go bad, it will be very difficult to start.

#### **Warning:**

Gasoline is very flammable, when you empty the gasoline, please keep away spark or firework.

4. Take off spark plug and fill in 15-20 cm<sup>3</sup> oil into cylinder, then start engine several times. It make oil spray to every part of cylinder, then mount spark plug again.
5. Take out battery, put it separately in somewhere. But not too cold and avoid exposure under sunshine.
6. Clean and dry motorcycle.
7. Make the tire air pressure properly.
8. Cover motorcycle and store it in the place where temperature not change too big. Don't put the motorcycle under sunshine.

#### **End of store and using**

If store over 4 months, please change oil.

Check battery and all other parts and test bike first.

**Specification****Size&Weight**

Length.....	2220mm
Width.....	880mm
Height.....	1090mm
Wheel base.....	1530mm
Weight.....	173kg
Front wheel axle load.....	82kg
Rear wheel axle load.....	91 kg
Technically permissible maximum laden mass.....	323kg

**Engine**

Engine type.....	2V49FMM-R
Bore X Stroke.....	49 X 66(mm)
Displacement.....	249cm <sup>3</sup> (Calculated 248.9cm <sup>3</sup> )
Max power.....	13.5kw/8500r/min r/min
Max torque.....	16.0N · m /7500r/min
Ignition.....	ECU
Compression rate.....	10:1
Start.....	Electric start

**Transmission**

Clutch.....	Wet multi disc clutch
Gear shift.....	Five gears
Frist reduction gear.....	3.130
Final reduction gear.....	3.000
First gear ratio.....	2.642
Second gear ratio.....	1.684
Third gear ratio.....	1.260
Fourth gear ratio.....	1.000
Fifth gear ratio.....	0.821
Intake valve clearance.....	0.03-0.08mm
Exhaust valve clearance.....	0.03-0.08mm

**Frame**

Front suspension.....	Hydraulic shock
Rear shock absorber.....	Hydraulic monoshock
Front tire.....	100/80-17
Rear tire.....	140/70-16

**Brake**

ABS equipped.....	
Front brake.....	Disc brake by hand
Rear brake.....	Disc brake by foot

**Electric system**

Battery.....	12V 8AH
Magneto.....	Permanent magnet
Front headlight.....	12V 35W/35W
Rear light.....	LED 12V 1W/5W
Turning light.....	LED 12V 1W
Fuel injection.....	12V
ECU.....	12V

**Capacity**

Fuel tank.....	20L
Oil tank.....	1.7L

**Performance**

Max speed.....	110km/h
Climb ability.....	≥20°
Brake distance.....	≤ 7m(30km/h)
Fuel consumption.....	≤ 3.0L/100km
CO <sub>2</sub> emissions:.....	68g/km
Loading.....	One passenger&driver
Gasoline type.....	Euro IV version: E5

Other version: Unleaded fuel min. 95 Octane



# Circuit diagram

