



*lip*  
Concept

OWNER'S MANUAL ASTOR / SPRINT / SIRIO 125 Euro4

## FOREWORD

Thank you for choosing ORCAL OR125-25B motorcycle. To ensure you a pleasure and safe riding, please be sure to read this manual carefully before formal operation.

This manual summarized the method of how to use and maintain the model correctly. If you can follow the rules and guidelines of the manual strictly, then your motorcycle could be durable and keep in good condition. The after-sales staff who received specialized training from qualified distribution unit has accumulated rich experience; they will provide you excellent after-sales service with sincere and warm attitude and complete tool equipment.

All the date、 pictures and specifications are of the latest products when this manual published. Due to the continuous improvement and other changes of products, there maybe some discrepancies with the actual condition. We reserve the right to appropriate changes at any time.

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# ONE、NOTICE OF USER

## Safety instruction for driver's operation

Motorcycle riding is of great fun and an exciting sport. Motorcycle riding also requires that some extra precautions be taken to ensure a safe riding, you must obey the traffic rules and the following provisions.

### Wear safety helmet

Safe riding starts from wearing a safety helmet. This is an important factor of driving motorcycle. You must wear helmet that meets safety standard when driving motorcycle.

### Riding apparel

Loose, fancy clothing can be uncomfortable and unsafe when riding your motorcycle choose good quality motorcycle riding apparel when riding your motorcycle.

### Inspection before riding

Please read all the instructions in INSPECTION BEFORE BIDING. In accordance with the driving provisions will assure a safety riding for you and passenger.

### Be familiar with your motorcycle structure

Your riding skill and your mechanical knowledge is the foundation for safe riding practices. We suggest that you practice riding your motorcycle in a non-traffic situation until you are thoroughly familiar with your machine and its controls. Remember practice makes perfect.

### Don't refitting

Without manufacturer's approve, any refit of this model(e.g. adding the third tire) can lead to unpredictable risk. To refit the model optionally or remove the original device can not guarantee the safety of driving and it is illegal. User must comply with the using rules of vehicles from the traffic administrative department.

## Know your limits

Don't ever speeding. Whether speeding depends on the ground conditions, weather and you own. whenever in the familiar range driving can avoid the accident.

## Pay extra attention to safety in rainy days

Take special note in rainy days. Keep in mind the braking distance of rainy day is twice as much as sunny days. Stay off manhole cover, painted marks and greasy dirt when driving. Don't take a sudden turn while driving. Be very careful when pass railways and bridges. Remember to keep a safe distance from the motorcycle in front.

## Do not overload

The maximum load of this model is 150kg, it can be hazardous if over loading and it will be difficult to control the motorcycle when riding. Please remember no over loading.

## Swrial number location

The frame(VIN NO)and/or engine serie serial numbers are used to register the motorcycle. The numbers will assist your dealer to provide you better service when order spare parts or entrust the special service.

Frame number print on the stand pipe of the frame, metal nameplate pin on the stand pipe of the frame. Engine number print on the left side of the crankcase.



Frame number  
(VIN number)



Engine number

Please write down the numbers blow for your future reference.

Frame number(VIN number)

Engine number

## About information of security

Read and observe this Manual carefully. These terms such as "Warning", "Caution" and "Notice" are used to emphasize intensity of precaution. Please study and understand their meanings thoroughly.

### "Warning"

For warning information, in order to protect you and other people's safety as well as avoid damaging your motorcycle, this precaution must be read.

### "Caution"

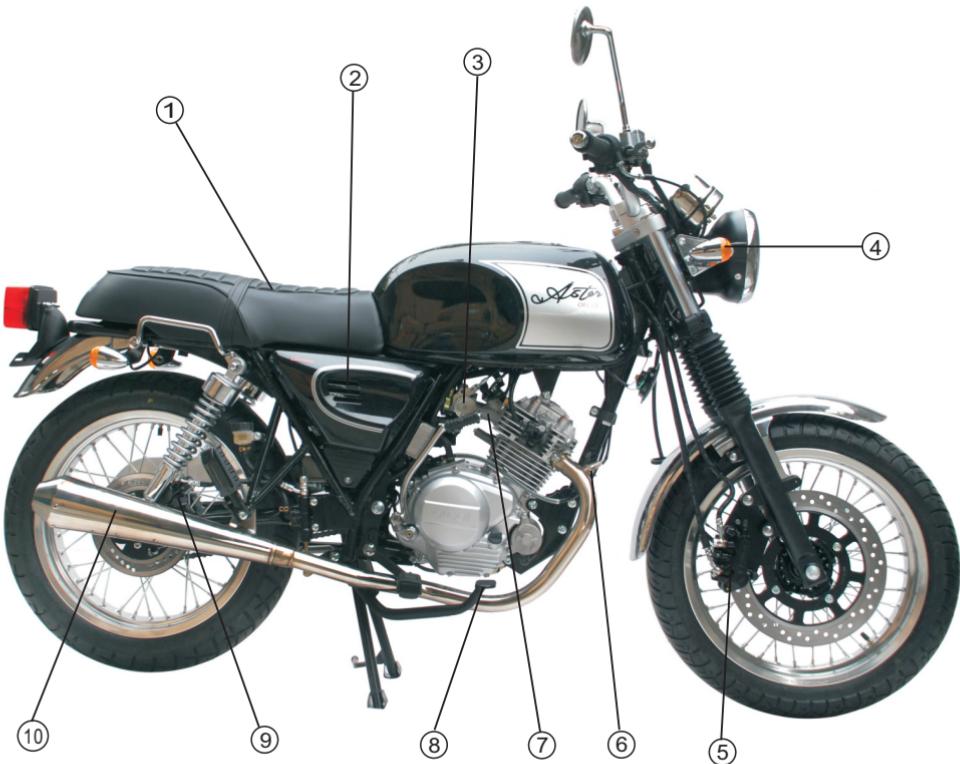
It is notice information; In order to extend service life of your motorcycle and exert its performance well, please carry out according to notice information.

### "Notice"

It can help you to use your motorcycle in best of all condition based on its useful information.

## TWO、THE INSTALLATION OF SPARE PARTS

- ① Seat
- ② Side cover
- ③ Throttle body assembly
- ④ Turning lights
- ⑤ Front disc brake
- ⑥ Oxygen sensor
- ⑦ In-take tube
- ⑧ Rear brake pedal
- ⑨ Rear brake panel
- ⑩ Muffler





- (11) Front light
- (12) Rearview mirror
- (13) Fuel tank
- (14) Cylinder temperature sensor
- (15) Hand-hold
- (16) Rear sprocket
- (17) Side stand
- (18) Center stand
- (19) Gearshift lever



⑩ Left handlebar switch

⑪ Clutch lever

⑫ Meter

⑬ Front brake lever

⑭ Throttle grip

⑮ Right handlebar switch

⑯ Fuel tank lock

## THREE、CONTROL PART

### KEY

This motorcycle is equipped with two keys and please put one of them in the safe place as the spare key.



### IGNITION SWITCH



The ignition switch has three positions:

#### “ ” (OFF) POSITION

The ignition circuit is on state of turning off and the engine can't be started now, the key can removed from the ignition switch in this position.

#### “ ” (ON) POSITION

The ignition circuit is connected and the engine can be started. The key can not be removed from the ignition switch in this position.

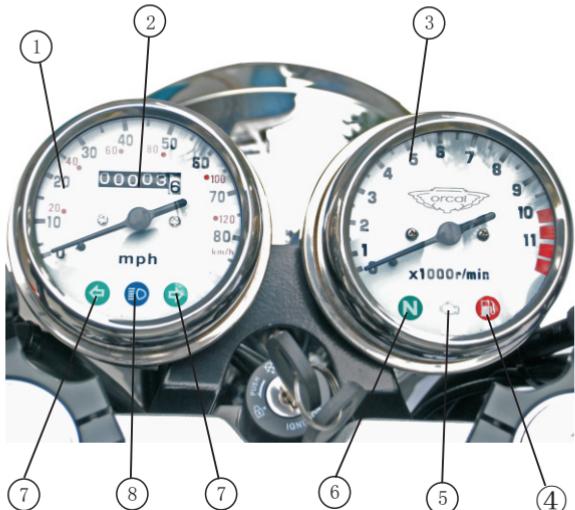
#### “ ” STEERING LOCK

To lock head steering, turn the steering handlebar all the way to the left, insert the ignition switch key in the steering lock and turn it clockwise.

#### ! WARNING :

In the steering lock state, you can never push the motorcycle or it will out of balance.

## INSTRUMENT PANEL



### ① Speedometer

The speedometer indicates the current speed, the number of black digits is how many miles per hour(mph)and the red number is how many kilometers per hour(km/h)

### ② Odometer

The main display of the car running total mileage accumulation.

### ③ Tachometer

This meter can indicate the rotate speed of the engine perminute. The red zone in the tachometer is the most limit of the engine's rotate speed, it will shorten the life of the engine if it is continual rotate long time in this zone, it should be avoid the finger of the tachometer point to this red zone.

### ④ Fuel indicator

Indicates that the fuel is sufficient indicating that the fuel is about to run our, as soon as possible to the nearby gas station refueling.

### ⑤ Fault indicator light

Ignition switch is turned on and the engine has not started or rotating, fault which does not light will light; when the engine starting and running after, if there is no check to the fault, the indicator light will be extinguished, when the engine in operation process(or moving), if the fault indicator long bright or broken flicker is detected EFI system fault. At this point ,you should immediately to the dealer or the maintenance station to find qualified maintenance workers to carry out an inspection and maintenance.

## ⑥ Neutral indicator light

When this button is lit, the motorcycle can be parked safely.

## ⑦ Turn light indicator

When the turn signals are being operated either to the right or to the left, the indicator will flash at the same time.

## ⑧ Indicator light

When using the high beam and pressing the overtaking button, this lamp lights up.

# LEFT HANDLEBAR CONTROL SYSTEM



### ! WARNING :

Please be careful when accelerating between 1st and 2nd gear as the indicator would point to the red zone.

The red zone indicates the limit of engine speed. If the engine rotates in this zone, the engine will be influenced.

### ① Clutch grip

To start the engine or make a gear shifting, press the grip to release the drive system and cut off the clutch.

### ② Dimmer switch

High beam/city beam operation

Moving the switch to the upper position the headlight high beam and the blue indicator light will be lit at the same time. Moving the switch to the down position the headlight lower beam and the blue indicator light will be lit at the same time.

### ③ Horn button

Press the button to sound the horn.

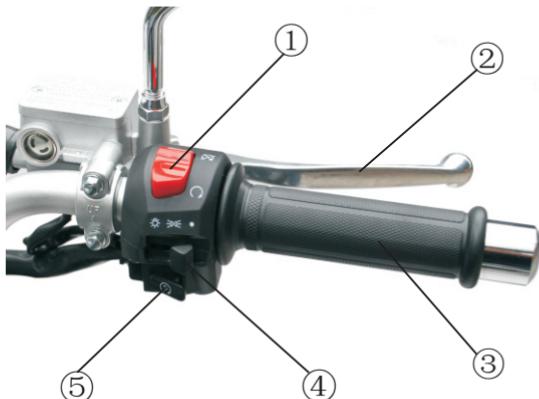
### ④ Turn signal operation

Moving the switch to the “ $\leftarrow$ ” position will flash the left turn signal. Moving the switch to the “ $\rightarrow$ ” position will flash the right turn signal. The indicator light will also flash intermittently.

#### ! WARNING:

When you want to change lanes or make a turn, turn on the signal lights in advance. And after a lane change, turn off the signal light in time. Otherwise it may cause an accident.

## RIGHT HANDLEBAR CONTROL SYSTEM



### ① Engine stop switch

If you press the switch at “ $\times$ ” position, the engine can't be started. When pressing the switch at “ $\circlearrowright$ ” position, and the circuit is connected. then the engine can be started. This is the emergency switch.

## ② Front brake lever

Front brake grip is on the right hand, if you want to operate front brake, pull brake grip to the direction of the handgrip. As this model using hydraulic brake disc, so you can brake holding easily. When holding brake grip tightly, rear brake light will light up automatically.

## ③ Throttle grip

The throttle rolling handle is used to control engine speed. Turn the handle toward yourself in clockwise direction to speed up the engine( turn from motorcycle to outside). On the contrary , turn the handle toward yourself in anti-clockwise direction to slow down the engine speed(turn from motorcycle to outside).

## ④ Light switch

### “ ” Switch position

Turn on the headlight, position light, taillight at same time.

### “ ” Position

Turn on the position light、 instrument lamp taillight at same time.

### “ ” Close light position

Turn off the headlight, position light, at same time.

## ⑤ Starting switch

After press this switch to start the engine.

### ! WARNING :

Continuous running motor can not exceed 5 seconds one time. The circuit and motor will be abnormal fever after a large number of electro-discharge. If it can not start after trying, you should check the oil supplying and the start circuit system (please refer to the chapter “troubleshooting”).

## FUEL TANK CAP AND AUDIO CONTROL PANEL



### Fuel tank cap

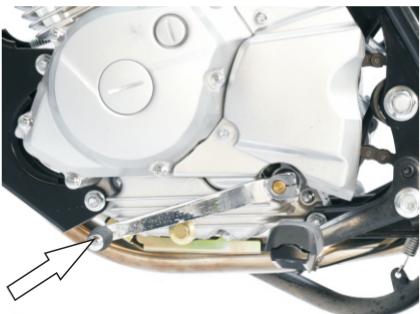
To open the fuel tank cap insert the ignition key and turn it clockwise. With the key still held in a clockwise position remove the cap. To install the fuel tank cap, simply line up the fuel tank guid pins and push down until the locking pins click into position. The key must be in cap before installing the cap. Turn the key counterclockwise and remove the ignition key from the cap.

### ! WARNING :

You can not add the excessive fuel and let the fuel reach on the hot engine. Do not add fuel on the oil filler. Otherwise it will overflow if fuel temperature increase. Stop the engine when add the fuel, and turn the key to the position of "stop". Avoid the fire when add the fuel.

## GEAR LEVER

The model is equipped with 5 gear recycle transmission, shown in the picture, the gear lever is connected with the ratchet wheel. The gear lever automatically goes back to its original position ready to be changed to the next gear. The low gear is put on when the gear lever is stepped down from the neutral position. The gear increase a level every time the gear lever is stepped down. Due to the fact that it is of a ratchet wheel structure, it cannot be added more than 2 levels at one time.



## REAR BRAKING PEDAL

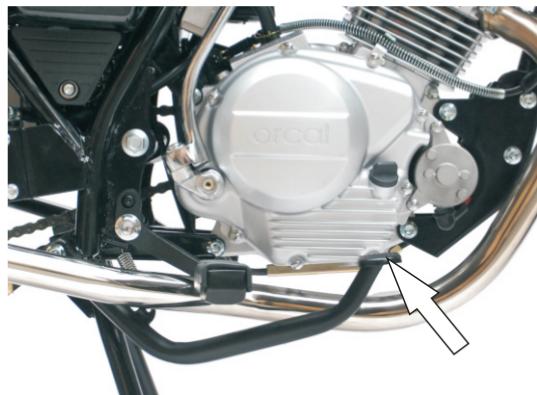
It will works when push the brake pedal. The brake indicator would be lighted. You should push even To avoid the strong pushing, you can use the snub: pay attention to combine the front brake and engine brake to reduce the brake distance.

### ! NOTICE:

In order to avoid the damage of engine, speed variator and transmission chain which can't withstand the pounding of mandatory shift in the design of these parts, be sure to use clutch when shift gear.

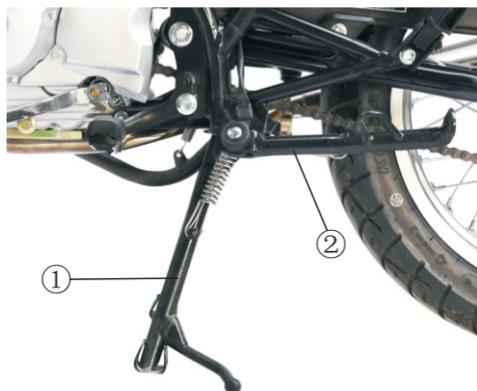
### ! CAUTION:

When it is in the neutral gear, the indicator on the meter would show the green. Although the light is on, you also need to loosen the clutch level to make sure whether it enter into the neutral position.



## STAND

This motor has the center stand① and side stand②. When you want to put the motorcycle on the main stand, you should step on the pedal of main stand, and hold the carrier by right hand and the by left hand. Then pull up the motorcycle fixing into the stand .When you want to park the motorcycle by side stand, then you should step onto the end of the side stand, and depress it using your strength, until the side stand turning to its end onto the floor still.



① Center stand

② Side stand

### ! CAUTION:

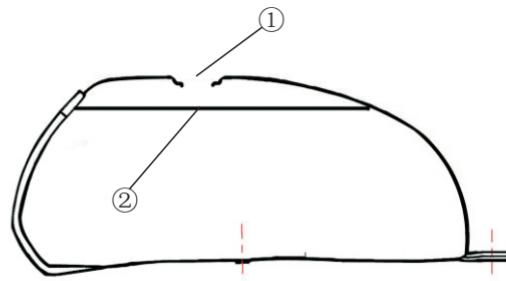
When you park the motorcycle on the slope you should make the front head as the above position of slope, to avoid the motorcycle fall off by the side cover. Or you could put into gear 1.

### ! WARNING:

Side stand is used only for the temporary parking, Pay attention to check whether it turn to the upper limit position.Before starting it never park in other place. Never riding the motorcycle before the side stand lift up.

## FOUR、FUEL AND ENGINE OIL RECOMMENDATION

Use unleaded gasoline with an octane rating or 93 oil higher (Research method). If the engine give out a slight knock, it may be because of using normal level fuel as the succedaneum that need to be replaced.



① Fuel tank port

② Fuel level

### ! NOTICE:

Just can use the Un-leaded Petro. If use the leaded Petro, then it will destroy the valve, piston ring and other engine inside parts and emission system seriouly.

### ! WARNING:

Never add fuel excessively to avoid overflow that can spread on the engine under nigh tempe rature. Fuel leven ② can not exceed the bottom of fuel tank port ① shown as the figure, othferwise heated fuel is expansible to overflow.

Before adding fuel, turn off the engine and turn the key to "OFF"(Close) position. Never close to any fire.

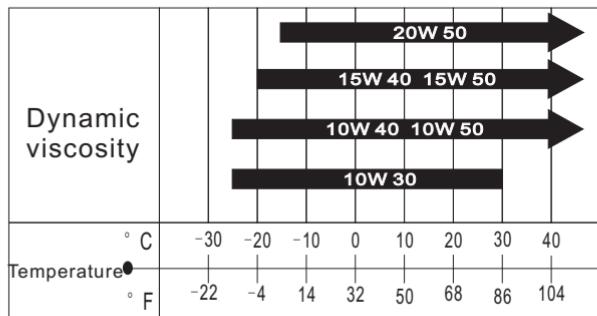
### ! NOTICE:

When washing motorcycle, never wash fuel tank with high-pressure water to prevent water from entering into the tank.

## Engine oil

The oil in the motorcycle engine operation not only plays the cooling, lubrication, rust etc., more, decontamination effect. In order to make the oil better, reach each run more smoothly, the oil channel first options with proper viscosity, in order to ensure the oil has good liquidity in a certain temperature range. Use a premium quality 4-stroke engine oil to ensure longer service life of your motorcycle, so the oil should be replaced periodically, timing keep oil insurable, the best lubrication condition. Use only oils which are rated, SE or SF under the API service classification. The recommended viscosity is SAE15W-40. If a SAE15W-40 engine oil is not available, select an alternative according to the following chart.

### Consult example



## API attributive classification standard

Code	SD	SE	SF	SG	...
Grade	Low → High				

### ! WARNING:

Fuel oil, engine oil and grease must be preserved in a place where children do not touch, and notice corresponds to the warning nameplate in the container, or else there is a danger to health for people.

## FIVE、MOTORCYCLE RUNNING-IN

In preface, we describe such fact new motorcycle , running in correctly can extend its service life, but also bring its performance into play sufficiently. Now we will list correct running in methods.

### Maximum speed

The table below show the maximum recommended engine speed during the running-in

Initial 1000Km	Below 5000r/min
Up to 1000-1600km	Below 6000r/min
Over 1600km	Below 10000r/min

#### ! NOTICE:

After driving 1000KM ,it is necessary to replace the engine oil and filter element of air cleaner.

### Vary the engine speed

The engine speed should be varied and not held at a constant speed. This allows the parts to be “loaded” with pressure, and then unloaded , allowing the parts to cool. This aids the mating process of the parts. It is essential that some stress be placed on the engine components during running-in to ensure this mating process. Do not, though, apply excess load on the engine.

### Avoid constant low speed

In the event that the engine run a long time at constant low speed, components and parts may wear out to cause improper fitting. As long as recommended Max speed isn't exceeded, the driver can enable each shift to accelerate the engine. Initial period within 1000KM, do not over loading and you must avoid throttle valve open operation for a long time or any conditions will lead engine overheating.

## SIX、INSPECTION BEFORE RIDING

### Allow the engine oil to circulate before bidding

Allow sufficient idling time after warm or cold engine start up before applying load or revving the engine. This allows time for the lubricating oil to reach all critical engine components.

### First regular maintenance and check

The 1000km service is the most important service your motorcycle will receive. During running-in all of the engine components will have worn in and all of the other parts will have seated in. All adjustments will be restored, all fasteners will be tightened, and the dirty engine oil and engine oil filter will be replaced. Timely performance of the 1000km service will ensure optimum service life and performance of the engine.

Before riding the motorcycle, be sure to check the following items. Never underestimate the importance of these checks. Perform all of them before riding the machine.

Test item	Test details
Steering	<ul style="list-style-type: none"><li>① Smoothness</li><li>② No restriction of movement.</li><li>③ No gap or looseness.</li></ul>
Clutch	<ul style="list-style-type: none"><li>① Check the handle clearance.</li><li>② Adjust when necessary.</li><li>③ When necessary lubricant to the steel filament.</li></ul>
Fuel oil	<ul style="list-style-type: none"><li>① Check the fuel tank oil.</li><li>② Add oil when needed.</li><li>③ Check the fuel pipe.</li></ul>

Engine oil	<ul style="list-style-type: none"> <li>① Check the engine oil.</li> <li>② If needed, please add engine oil.</li> <li>③ Check the engine oil leaking or not.</li> </ul>	Transmission	<ul style="list-style-type: none"> <li>① Appropriate tension.</li> <li>② Adjust when necessary.</li> <li>③ Proper lubrication.</li> </ul>
Tire	<ul style="list-style-type: none"> <li>① Check if any broken.</li> <li>② Check the tire pattern depth.</li> <li>③ Check the tire air pressure.</li> <li>④ Added pressure or change the tire when necessary.</li> </ul>	Throttle	<ul style="list-style-type: none"> <li>① Throttle dragline has appropriate play</li> <li>② Feed fuel smoothly and cut off fuel supply rapidly.</li> </ul>
Brake	<ul style="list-style-type: none"> <li>① Check the front brake rocker arm backlash.</li> <li>② Check if any wear in the brake disk.</li> <li>③ Check the oil level in the brake reservoir.</li> <li>④ Check if any oil leaking in the hydraulic system.</li> <li>⑤ Check the brake pedal backlash , and adjust when necessary.</li> </ul>	Side stand	<ul style="list-style-type: none"> <li>① Mark sure the operation is smooth.</li> <li>② Lubricate the side stand connection point when necessary.</li> </ul>
		Light	Operable all light, Frontlight, Tail light, Brakelight, Panellight, turninglight
		Indicator light	High beam indicator light, Neutral position indicator light, Turning indicator light, Gear indicator light
		Horn and Brake switch	Proper function

## SEVEN、RIDING TIPS

### ! WARNING:

If you are first driving this motorcycle, we suggest you'd better look for a off highway road to practice until you are fully familiar with the control and operation.

Removing your hands from the handlebars or feet from the footrests during operation can be hazardous. If you remove even one hand or foot from the motorcycle, you can reduce your ability to control the motorcycle. Always keep both hands on the handlebars and both feet on the footrests of your motorcycle during operation.

To not shift gears as turning and slow down before turning. And the brake and turning ability reduce if the roads damp and tire friction coefficient small, so you must slow down ahead.

Observe the transportation rules and limit the speed.

### Start the engine

Check the side bracket whether or not to correct position, and the check the engine flameout switch is in the “” position, then the ignition key inserted switch lock according to a clockwise direction around to “

### ! WARNING:

Shift into neutral and grasp the clutch before you start the engine. in case that it turns on as shift in wrong gear.

### Electric start

Before press the engine start button and ignition, please check if the side stand return right firstly, otherwise the engine will not be able to start. When press the start button, do not rotate the throttle control lever violently.

### **! NOTICE:**

After the engine be started ,loosen the starter immediately to avoid to damaging the engine.

If you pressed the starter for 5 seconds but engine can't be started ,you should start after 10 seconds.

Turn the throttle grip 1/8-1/4 and then start when you failed to start engine after 2-3 times.

It would cause to start hardly if lay up for a long time or using poor fuel .Do not turn the throttle grip but start again and again.

### **! NOTICE:**

The idling time can not be too long as not driving. otherwise it would damage the inner parts for the hot engine.

## **Starting**

After moving the side stand to the fully up position, pull the clutch lever in and pause momentarily. Engage first gear by depressing the gearshift lever downward. Turn the throttle grip toward you and at the same time release the clutch lever gently and smoothly .As the clutch engages, the motorcycle will start moving forward.

### **! WARNING:**

Running the engine indoors or in a garage can hazardous .Exhaust gas contains carbon monoxide, a gas that is colorless and odorless and can cause death or sever injury. Do not run it on when nobody there.

To shift to the next higher gear, accelerate gently, then close the throttle and pull the clutch lever in simultaneously. Lift the gearshift lever upward to select the next gear and open the throttle again. Select the gears in this manner until top gear is reached.

## Using the transmission

The transmission is provided to keep the engine operating smoothly in its normal operating range. The gear ratios have been carefully chosen to meet the characteristics of the engine. The rider should always select the most suitable gear for the prevailing conditions. Never slip the clutch to control road speed, but rather downshift to allow the engine to run within its normal operational range.

### ! WARNING:

Never allow the engine rev into the red zone in any gear.

### ! NOTICE:

Don't slide on and dragged the motorcycle over long distances when engine closed for a long time, even transmission in neutral position. Only when the engine is running can you add lubricant to transmission, the improper lubricating will damage transmission.

## Riding on hills

When climbing steep hills, the motorcycle may begin to slow down and show lack of power. At this point you should shift to a lower gear so that the engine will again be operating in its normal power range. Shift rapidly to prevent the motorcycle from losing momentum. When riding down a hill, the engine may be used for braking by shifting to a lower gear. Be careful, not to allow the engine to overrevy.

### ! NOTICE:

Using transmission shift correctly enables you to control the engine power when accelerating, climbing and so on.

## Stopping and parking

1. Turn the throttle grip away from yourself to close the throttle completely.
2. Evenly using the front and rear brake at the same time, to be sure compensating used at the same time.

3. Using transmission device in low gear position to reduce the speed.
4. Select neutral with the clutch lever squeezed toward the grip(disengaged position) just before the motorcycle stops. Neutral position can be confirmed by observing the neutral indicator light.
5. If the motorcycle is to be parked on the side stand on a slight slope, the front end of the motorcycle should face "up" the incline to avoid rolling forward off the side stand. You may leave the Motorcycle in 1 gear to help prevent it from rolling off the side stand. Return to neutral before starting engine.
6. Turn the ignition key to the “” (off) position.
7. Remove the ignition key from the switch. Lock the steering for security.

**! WARNING:**

1. As vehicle speeds stopping distance increases progressively. Be sure you have a safe stopping distance between you and the vehicle.
2. Inexperienced riders tend to use the rear brake. This can cause excessive stopping distance and lead to a collision.
3. Using only the front brake or rear brake is hazardous, it is hard to brake on wet, loose rough, or other slippery surfaces it can cause wheel skid and loss of control.

## EIGHT、INSPECTION AND MAINTENANCE

It is the driver's obligation to make sure safety. Regular checking, adjusting, lubricating your bike, to promise the highest safety, the most efficient condition. Below we will introduce the point of checking, adjusting and lubricating. Each regular checking should set the one as the right which come first, the used months or the mileage. Each checking should follow the method asked, and check the lubricate system and other items carefully. The time of regular checking and lubricate should be the general principle of the normal driving condition. however, it may need to shorten your maintain time according to the weather, landform, location and personal uses difference.

If you motorcycle runs in harsh environment such as sand storm or a condition under which the throttle has to open widely, you should perform special maintenance to ensure its reliability. In this case, your distributor may provide you with further consultation. Because steering system, shock absorber and wheel axel are key parts, they must be serviced and maintained by specially trained technicians. For the sake of safety, we recommend this work be entrusted to your distributor.

### ! NOTICE:

The maintenance is the neccessary process when the new motorcycle finish running in at 1000 km. It could help you using motorcycle safely and had a good specification. You must do the periodic maintenance according to the manual.

### ! CAUTION:

Periodic maintenance may need to change one or two parts, when changing the parts, we suggest you use the original manufactory's parts or the same quality standard parts. Whether you are professional for motorcycle or you have the experience for repairing the motorcycle, you'd better to ask the appointed dealer or the standard maintenance worker to deal with the problem which marked ★ . For the other points which didn't have any mark, you could do it yourself according to our manual.

## MAINTENANCE CHART

Interval	KM	1000	3000	6000
Item	Months	5	12	24
Battery	I	I	I	
★ Cylinder head nuts and exhaust pipe bolts	T	T	T	
★ Camshaft drive chain tensioner	I	I	I	
air cleaner	I	Every 3000KM C		
★ Valve clearance	I	I	I	
★ Spark plug	I	Every 3000KM C		
★ Fuel hose	I	I	I	
	Replace every four years			
★ Engine oil	Every 1000KM I or R			

Clutch	I	I	I
Fuel strainer cup	—	C	R
Drive chain	I	I	I
Wsah and lubricate it every 1000KM			
★ Brake	I	I	I
★ Braking oil hose	I	I	—
Replace every 4 years			
★ Brake oils	Replace every 2 years		
Tyre	I	I	I
★ Steering gear	—	I	I
Front fork and rear shock absorber	I	—	I
★ Bolts and nuts of body	T	T	T

NOTE: I: Inspect C: Clean R: Replace T: Tighten

## LUBRICATION CHART

Item	Time interval	Initial 6000KM or 6 months	Every 12000KM or 12 months
Throttle handle (Sliding parts)	—	Lubricating grease	
Throttle cable	Machine oil	Machine oil	
Clutch handle (Active joints)	Lubricating grease	Lubricating grease	
Clutch cable	—	Machine oil	
Drive chain	Add the oil each 1000KM		
Side stand (Rotating pivot point)	—	Lubricating grease	
Brake pedal shaft strength	Lubricating grease or Machine oil	—	

Gear shift pedal	—	Machine oil
Front and rear axle sleeve	—	Lubricating grease
★ Steering	Lubricate every 2 years or 20000KM	

## TOOLS

10\*12mm、13\*16mm open end wrench;

Inner hexagonal tool (No.four and No.six)

Spark plug turnbuckle

Combination all purpose screwdriver,(can knock down the spark plug together with spark plug turnbuckle;

Screwdrivers' handle

## BATTERY



The battery is located on the right side of the cover. This motorcycle is equipped with the battery maintenance free type of electrolyte, for the first time please allow dealers to fill the electrolyte, the future will not need to add electrolyte.

### ! NOTICE:

For the first time, please refer to the instruction manual of the battery.

## Installation

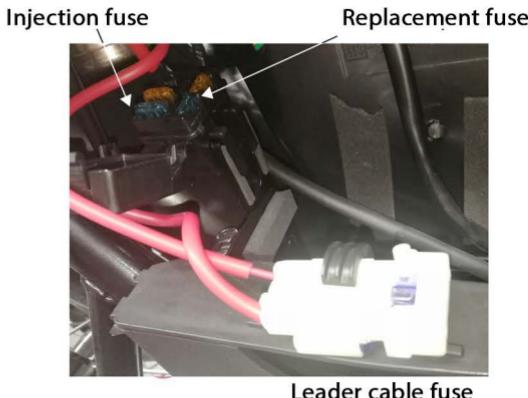
1. When connecting two poles of the battery by using battery lead, connect positive and negative poles correctly: red lead to positive(+) and black lead to negative pole(-); in the event of incorrect connection, this may cause damage to charging system and the battery itself.
2. Tighten bolts, then coat lubricating grease on bolts, nuts and terminals.

## Use and maintenance

1. Each starting time cannot exceed 5s. If several starting fails in succession, check fuel supply system and starting and ignition system.
2. Frequent starting; short driving distance, Running at low speed for long time, Electrical appliance or bulb beyond rated power, all will may cause insufficient discharge or charge to shorten service life.
3. In the case of difficult start-up, dimmed light or horn at low sound level, charge the battery immediately.
4. If you want to leave your motorcycle in non-service state for a long time, you'd better charge the battery full and then charge it monthly.

## FUSE

The motorcycle install fuses to protect the main electrical equipment (the rated flipping off current is 15A), and the fuse is in the positive pole red line at the end of main cable. There are one reserve fuse in the box to replace when the original one is break. If the motor is suddenly flameout when running, or circuit impassibility, or oil pump stop working, please check the fuses first.



If the fuse burn-out, follow these steps to change.

1. Using the key and turn to the "OFF"Switch(closed) ,disconnect the circuit which has problem.

2. Remove the blown fuse, and then install the new fuse with specified specifications.
3. Using the key and turn to the "ON"switch(open) ,connected with problematic circuit to check whether they are in normal operation.
4. If the fuse fusing once again, pleaseask the dealer to check the electronic systems.

If the fuse often barn off, there must exist short circuit or an overload situation, and please find the serrice station to check.

### ! WARNING:

Do not use a fuse whose the rated current is higher than the recommended one ,in order to avoid significant damage to electronic systems , even a fire.

### ! NOTICE:

Do turn off the ignition switch when checking or replacing the fuse ,to avoid short circuit.It must conform to the provisions. When replacing the fuse, and don't replace it by other by other materials.

## AIR CLEANER

Motorcycle air filter is the respiratory system, its role is to clear the air entering the engine contained is the dust and impurities to reduce abnormal wear of the cylinder, piston and piston rings, extending engine life. If the air filter is clogged with dust, intake resistance will become larger, the engine output power will decline, increased fuel consumption, but also make the engine difficult to start, easy to turn off, severe dust into the interior of the cylinder, will aggravate the wear of engine components. So after driving 3000KM per the method according to the following steps to check the air filter element and clean.



② Case  
cover

1. Take down the right side cover.
2. Open the air filter cover screws ① , removal of the outer cover ② , remove empty air filter paper filter.
3. Using the method of tapping or vibration blew the whistle on most of the dust, and the brush with a dry filter paper along the lines sequentially brushing the dust. Or blown out with compressed air from the inside of the filter cleaning method, the internal dust blowing.
4. Clear and clean, it should look at the filter is damaged ,if breakage, you can use an adhesive patch, if the filter can not be cleaned of serious damage, you should get a new piece.
5. Wipe dry with a clean cloth air filter cartridge shell and lumen.
6. Reinstall the air cleaner element in reverse order of the removal. Be absolutely sure that the element is securely in position and is sealing properly.

### **! WARNING:**

This motorcycle air filter using a paper filter, must not use liquid cleaning.

### **! NOTICE:**

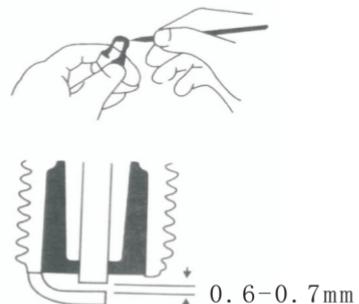
If the motorcycle often used in dusty conditions, you should clean or replace the filter element frequently. Do not wait until the maintenance time. Before cleaning and in cleaning, must pay attention to check whether there is any crack on foamed plastics, you should replace it immediately once the crack was found.

### **! CAUTION:**

Don't start the engine when the air cleaner is not installed. To start the engine without installing the air cleaner will result in the engine wear-out frequently, Because this component has a large influence on the life of the engine.

## **SPARK PLUG**

There spark plug is an important engine components, it is easy to check. Due to heat and sediment, spark plug will be corroded slowly, please remove the spark plug for inspection according to the regular maintenance and lubrication list. In addition, the status of the spark plug also can reflect the situation of the engine. Remove accumulated carbon attached on spark plug by using hard iron wire or steel needle, and adjust the clearance of spark plug by using feeler gauge to be between 0.6-0.7mm. Please clean the spark plug after each 6000km. Spark plug type for each of engine is different, is many the calorific value, thread size different. So be sure to use the appropriate provisions type spark plug.



When removing the carbon deposits observe the operational color of the spark plug's porcelain tip. This color tells you whether or not the standard spark plug is suitable for use. A normal operating spark plug should be light brown in color. If the spark plug becomes black, then please change the spark plug to high pressure type; if the spark plug is become white or flaring it proved the spark plug was works under the over heat condition, so now please change the spark plug to cold type.

#### **! WARNING :**

- 1.The spark plug cannot twist it too tightly of threaded oriss cross to a void damage the thread of cylinder head. Don't make the impurity go into the engine through the spake play. When dismantling the spark plug.
- 2.The spark plug used for this motorcycle is chosen carefully, and it can adopt to the majority of the work scope. if the color of the spark plug is not same with the stardord one. Ther negotiate with the distribution unit before change the spark plug which in different heat-resistant ranges.

3.Choose spark play of other brands will make he operation difficult. So negotiate with the distribution unit first. Then choose spark play of other brands.

#### **! WARNING :**

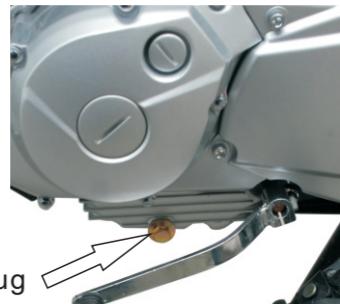
If the spark plug is obviously different in color , then the engine may be in malfunction. Don't try to self-check such problems.

## ENGINE OIL RENEWAL

Loft depends on the selection of a good quality oil and the periodic changing of the engine oil. Daily engine oil level checks and periodic changes are two of the most important maintenance to be performed.

The engine oil should be renewed when the engine is on so that the engine oil will drain thoroughly from engine. The procedure is as follows.

1. Put up the motorcycle center stand.
2. Remove the drain plug and drain plug and drain out the engine oil.
3. Screw off the drain plug, open the oil filler cap and add the new oil about 1.0-1.1L and screw on the cap.
4. Start the engine and let it to idle for a few minutes.
5. Turn off the engine and check the oil position from the oil inspection window after about one minute, The oil level should be above the “F” (FULL) If the oil lever under the “F”, add oil till correct oil level reaches “ F ” .



Drain plug

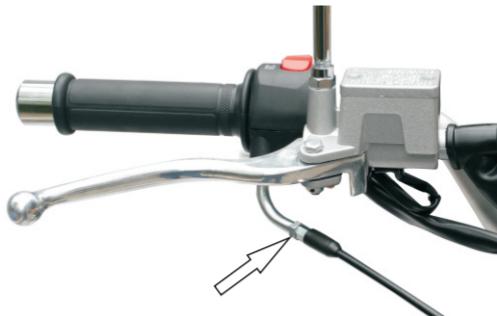


Oil filler

### ! NOTICE :

Please often use the engine oil recommend in the section fuel and oil guideline.

## ADJUSTING THE THROTTLE CABLE



- 1.loosen the lock nut,
2. Move the adjuster to adjust the gap to be 0. 5-1. 0mm.
3. After finishing the adjusting, tighten the lock nut.
4. After the cable adjustment, throttle rolling should be rotating flexible, the reliable free travel is 2-6mm.

### ! WARNING :

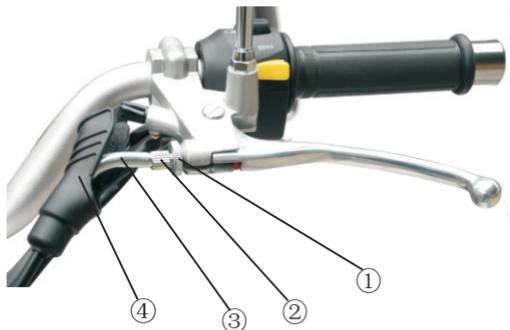
You should recheck the moving condition of throttling rolling handle after finishing checking the throttle cable. Don't make the idling speed up engine when you make this adjusting. And meanwhile, you should make the throttling rolling flexible.

## CLUTCH

The way of adjusting the clutch is to change the strain of the clutch cable ③ ,the gap of the clutch lever should be about 4mm as measured at the clutch lever end. If you find the gap of the clutch incorrect adjust it in the following way.

Loosen the lock nut ① and turn in the adjuster ② as far as it will go. Loosen the lock ⑤ nut and turn the adjuster ⑥ to obtain the correct gap arrive at about 4mm. minor adjustment can adjust the clutch lever side adjuster ② , after adjuster well then tighten the lock nut ① and ⑤ then put well the rubber cover.

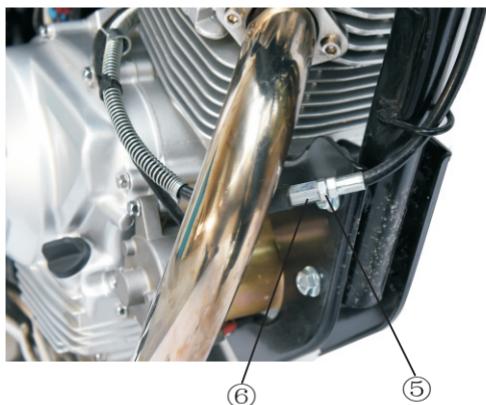
## DRIVE CHAIN



Transmission chain is one of the main components of the motorcycle on its quality directly affect the durability of the motorcycle, comfort and reliability.

### ! WARNING :

To guarantee safety, the drive chain check and adjustments should be done before in driving. As to the new chain change and the correct method of lubrication, please refer to our company's recommended contents.



We advise that you'd better look for the distributor to change new chain if it wears off. When inspecting the chain, look for the following:

1. Loose pins
2. Damaged rollers
3. Dry or rusted chain
4. Kinked or binding links
5. Excessive wear
6. Improper chain adjustment

## Maintenance of the drive chain

### **! WARNING:**

Improper relaxation of transmission chain can make the engine and other important components of the motorcycle overload, chain skid or fracture. To avoid this situation, transmission chain relaxation should keep within the prescribed limit.

Damage to the drive chain means that the sprockets may also be damaged. Inspect the sprockets for the following:

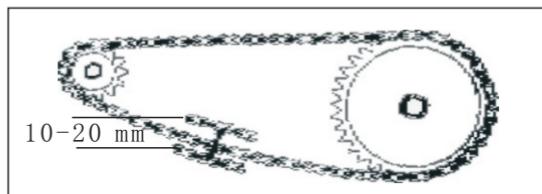
1. Excessively wear of the gear.
2. Broken or damaged teeth.
3. Loose sprocket fixing nuts.

After the dirt drive chain, will accelerate the drive chain and sprocket wear itself, so each traveling 1000KM ,use cleaning fluid to clean the drive chain with a clean brush or a special chain oil lubricant evenly with a good drop formed in the middle of the roller chain drive on a thin layer of film on the drive chain play a protective role, after a period of time, to be the film drying and then drops again and keep the drive chain tension moderately so the transmission chain and sprocket clean and durable so that it will be in accordance with regular maintenance and lubrication intervals specified in the table, cleaning and lubricating the drive chain, otherwise the drive chain wear quickly, especially driving in dusty or wet areas when.



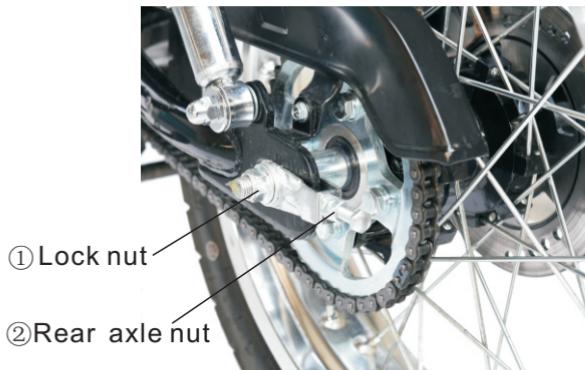
## Drive chain adjustment

Motorcycle drive chain should be required to be adjusted periodically to make adjustments to maintain a normal state in the process of asking them to maintain good lines and tightness. To adjust the tightness of the right hand should be down stubbs drive chain ,drive chain moves up and down so that the distance in the 10-20mm range as standard. Such as driving conditions are not ideal, the number should be adjusted more frequently than the annual regular maintenance.



If traveling a long time does not make adjustments, the drive chain. Will be stretched due to wear or deformation . Link cause excessive slack off the chain and lead to accidents or serious damage to the engine. Please press the following method to adjust the drive chain.

1. Place the motorcycle on the center stand.
2. Loosen the rear axle nut.
3. Lossen the lock nut.
4. Adjust the drive chain slack by turning the right and left chain adjuster bolt. At the same time that the chain is being adjusted, the rear sprocket must be kept in perfect alignment with the front sprocket To assist you in performing this procedure, there are reference marks on the swing arm and each chain adjuster which are to be aligned with each other and to be used as a reference from one side to the other and keep the laxation between at 10-20mm then tighten the lock nut.
5. Final, tighten the lock nut of rear axle shaft again.



### ! NOTICE:

When you changing the chain, you should also check the sprocket wear condition to see if it needs to be replaced.

### ! NOTICE:

Except when adjusting the drive chain before and after a good drive chain adjusting the tone scale, but also the application of eye observation chainring and transmission chain is in the same line.

### ! CAUTION:

Our chain a the special material. If changing it, you should choose the original one from manu factory or the higher standard one. It may cause problem if you use other brand.

## BRAKE SYSTEM

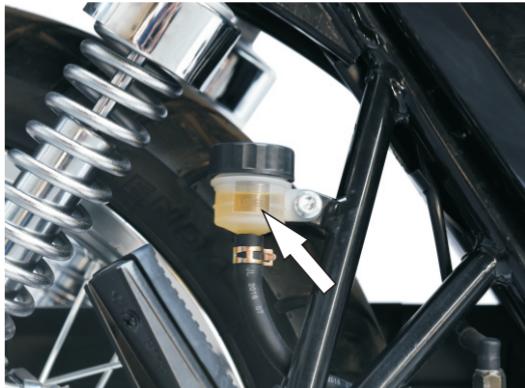
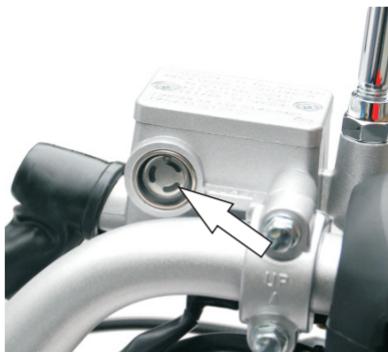
This motorcycle is front disc and rear disc. The correct brake operation is very important for driving safely. Please pay attention to check the brake system , and it need to be checked by the professional qualified dealer.

### ! WARNING:

If the brake system need to have maintenance, we are strongly recommend you to hand this job to your dealer shop. They had the complete tools and expert skill. Meanwhile, they could finish this job by the most safely and most economic way.

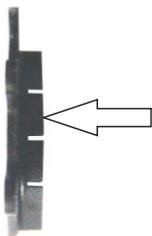
## Brake oil

Pay attention to check the front and the rear brake fluid volume, if the liquid level reduced, adding our factory assigned brake fluid. When the brake pads wear loss, the remaining liquid inject into oil tube automatic and liquid surface decreases. Adding brake fluid should be considered as an important program of periodical maintenance. You should replace the brake fluid according to the provisions of the periodical maintenance schedule time interval. In addition, the brake master cylinder, caliper brake oil seal and brake hose should also be in accordance with the time interval, or change it when damaged or leaked.



Brake fluid enough air into the brake system will probably lead to brake invalid. Before cycling, check whether the brake fluid is above the minimum oil level mark, add brake fluid if necessary.

## Brake pad



Inspect the front, rear brake pads by noting whether or not the friction pads are worn down to the grooved limit line. If a pad is worn to the grooved limit line it must be replaced with a new one, the inspection items as below.

3. Brake lever and pedal keep the elasticity all the time.
4. Checking of the wear condition to front and rear break pad.

### ! WARNING :

Do not drive the vehicle when just put on the new brake pad. Tighten and loosen the brake grip for several times to get the brake pad be normal and have the brake fluid circle completely.

1. Inspect the front, rear brake system whether or not fluid leakage.
2. Inspect the brake hose whether or not leakage or crack.

## Disc tray

Brake disk is an important part of braking system. Check if its thickness is within safe scope. When the disk is worn out 1mm or more, must replace with new one.

### ! WARNING:

No grease or dirt attaches on friction surface of a brake disk to avoid deterioration of braking quality and safety accident.



Front disc tray



Rear disc tray

### ! WARNING:

Disk braking system is based on high-pressure brake. For the sake of safety, you must replace oil pipe and brake oil strictly at interval time specified in Maintenance section in this "Manual".

## Rear wheel brake:

the adjustment of the rear brake pedal.

When adjusting rear wheel brake system, you should adjust the pedal at the most comfortable position. This kind of fixed position could move the adjusting nut of pedal. Then twist the adjusting nut ①, to make the run-length to keep in 20-30 mm.



### ! WARNING :

After adjust the brake pedal gap, to check the operation of the brake lamp.

## Front brake light switch

The front brake light switch is located under the brake lever. To hold the front brake lever lightly the brake light switch will come on.



## Rear brake light switch

The rear brake light switch is located beside the rear brake oil hose. It would be lighten when the brake pedal is depressed.



## TIRES

Every time before driving, the tires must be checked, if the middle of the tread pattern depth attained the limit, or a nail, shards of glass in the tire, or tires have crack, please contact dealers to replace tires immediately. Preventive maintenance, be sure to check the tires pressure and tread depth. In order to ensure largest safety and long service life, except the regular maintenance, you need check regularly.

### Tire pressure

Every time before driving, you should check the tire pressure, adjust it if necessary. Low tire pressure not only increase the tire worn, but also affect the driving stability. Low pressure would cause to turn difficultly. High pressure would cause tire slip and even lose control for the small contact area with the ground. The tire pressure should be within the regulated pressure. And adjusting the tire pressure should be carried in normal temperature condition.

Name		Front tire	Rear tire
Basic parameter			
tire pressure (kPa)	Just driver	225	225
	two people	225	21 €

### ! WARNING :

Because loading have great influence for the operation, braking, performance and security characteristics of the motorcycle, so be sure to keep in mind the following considerations:

1. Do not overload ! Overloaded motorcycle driving could lead to damage of tires, the motorcycle go out of control, or serious personal injure. Ensure that the total weight of motorcycle driver, passenger, goods and accessories shall not exceed the stipulated maximum weight.
2. Do not carrying goods in loose pack age, as goods will be easy to move in the process of driving.
3. Every time before driving, check the tire condition and air pressure.

## Tire thread

Using the excessive worn tire would reduce the stability and may lose control. Change a new tire when front tire thread depth below 1.6mm and rear below 2mm.

### ! NOTICE:

Your motorcycle use the tire type are:

Astor/Sprint: 110/70-17 Sirio: 100/80-18

Astor/Sprint: 130/70-17 Sirio: 130/80-17

It would bring some problems when using substandard tires . we sincerely recommend that you use the standard tires.The vehicle tire inflation pressure in terms of functionality and security is very important. check tire thread wear condition and tire pressure frequently.

## Light bulb replacement

The rated wattage shows as below list. when changing the broken bulb, then you should use the same wattage. If using different ones, then it may cause the overload electric system or the lamp broken easily.

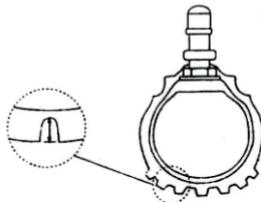
Front lamp	12V 35W/35W
Rear lamp/Braking lamp	12V 5W/21W
turnning / signal lamp	12V 10W
front position lamp	12V 4W

## Change the front headlight bulb

1. Remove the nuts in the sides of hood ① ,and then remove the front part of headlight.
2. Pull out the front headlight bulb and the position light base.
3. Remove the front headlight bulb, and put the new bulb.
4. Use the opposite process to fix the front headlight.



## The main points of headlight bulb



### ! NOTICE:

In order to avoid the oil contamination, don't touch the glass components of headlight bulb. Otherwise, the light transmittance of glass, the brightness of the light bulb, and the using time of the light bulb will be adversely affected. Cloth stained with alcohol or diluents, carefully wipe the dust and fingerprints of light bulbs.

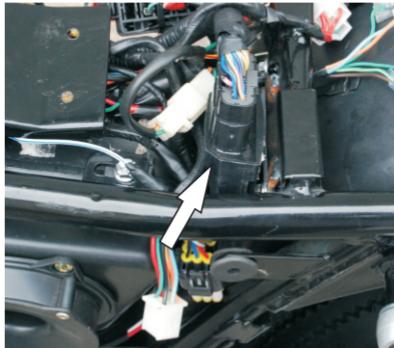
### ! NOTICE:

Prior to operation of any electrical component, you must turn it off to avoid short circuit. When replacing a bulb, you must comply with manufacturer's instruction to avoid injury and damage.

## NINE、EFI SYSTEM

### ECU

ECU is located in the rear of below the seat cushion, air filter. Open the seat cushion can be seen. ECU is the engine electronic control system of control center, its effect is according to the procedure in storage of ECU for operations of the information under various working conditions of the engine sensor input, processing, judgment, and then the output instructions, actuators associated with control of work, reach the purpose of rapid accurate, automatic control engine. ECU damage will result in unable to operation of the vehicle.

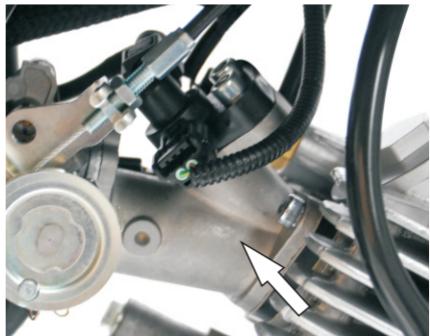


### Throttle body assembly



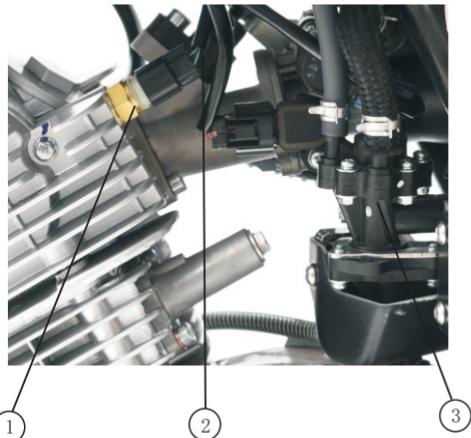
Throttle body assembly includes idle speed control valve, throttle position sensor intake temperature/pressure sensor. The idle speed control valve to control the speed of air flow; solar term door opening is oil throttle position sensor, decided amount of air into the engine; intake air temperature/pressure sensor is used to sampling inlet temperature, inlet pressure, atmospheric pressure. Throttle position sensor damage will cause the vehicle to be unable to operate normally, throttle valve body throttle control is not smooth will lead to serious safety accident, must be immediately repaired.

## Intake pipe assembly



The intake pipe assembly is connected with a solar term valve assembly between the parts of the engine assembly, the inlet channel provides gas mixture of air and fuel to the engine, so as to ensure the normal operation of engine under various working conditions. Must check the intake pipe regularly to see if there is any leakage, whether the installation is tight or not.

## EFI system components



### ① Cylinder temperature sensor

The cylinder temperature sensor is the sensing cylinder head temperature components, ECU according to current state of that information to determine the engine is hot or cold in the car, and the engine fuel injection quantity for repair under. This sensor fault will lead to a lack of power or high fuel consumption.

## ② Injector

The fuel injector is based on the electric pulse signal provided by ECU, which can be used to spray out the right amount of atomized fuel, and is mixed with the air flowing through the air inlet pipe assembly, so as to provide the engine with a fuel mixture

## ③ Oil pump

Oil pump with two connecting pipe of the interface, one is oil inlet, and the oil tank out of the connecting fuel nozzle; a is the oil return port, and bottom of the tank back to the oil pipe connection. Two interface of the oil pipe can not be reversed, should not be tubing is pressed, bent or bent around to high, in case the oil circuit is blocked or pipeline in a large number of bubbles.

## Oxygen sensor



The oxygen sensor is installed on the front end of the exhaust pile, which is to detect the concentration of oxygen in the exhaust gas, and ECU adjusts the fuel injection quantity according to the information in a timely manner to keep the air fuel ratio under the condition of the best. Oxygen sensor failure will lead to high fuel consumption or lack of power, please timely replacement.

## The maintenance of EFI system

1. Regularly check the air filter element and the surrounding physical or dirt, dirt and impurities, such as should be removed or with compressed air blowing from the inside to the outside, and replace if necessary.
2. Regularly check the intake pipe and solar term valve assembly at both ends of the connection are secured, whether there is a leak if it is found that the loosening of the air inlet pipe is connected with the fastening, must be timely, otherwise there will be a system due to the unstable vehicle can not run normally.

3. Regularly check the connection of the inlet pipe and the return pipe, check whether the connection between the two ends of the fastener, the tubing is cracked or damaged, if necessary, to replace. Is closely related to the stability of the circuit layout and the injector, the bubbles in the oil and gas separation chamber must can smoothly automatically into the fuel, so the air bubble pile oil return pipe must be kept to and shall not be pressure were broken.
4. ECU belongs to the electronic components, is generally not easy to failure, such as a failure, the need for special equipment can be detected, but also in general can only replace the module. Users in the use of the process can not be arbitrarily removed Unloading, so as not to damage ECU. Maintenance only need to check whether the wire out or worn, wire harness plug connection is in place can prevent damage to ECU due to severe vibration under, in order to prevent the ECU of the outside cover parts rupture, percussion vibration, disassembly should gently. When the first motorcycle to pay attention to the protection of ECU, must not use tap water to wash, so as to avoid ECU caused by a short circuit or a short circuit or poor contact and other phenomena caused by the vehicle can not be normal
5. Regularly check the sensor have obvious damage, if any should be replaced with new parts( not repair);connecting wires are loose or broken, wires are worn or line to line short circuit, open circuit phenomena, wire connector is inserted in place, oxidation corrosion phenomenon, abnormal must rule out; and in conditions permit terminal voltages of the sensor and the resistance values were measured to see whether within the scope of the provisions.
6. Regularly check the intake pipe and solar term valve assembly at both ends of the connection are secured, whether there is a leak if it is found that the loosening of the air inlet pipe is connected with the fastening, must be timely, otherwise there will be a system due to the unstable vehicle can not run normally.
7. Solar term door maintenance is very important for the vehicle to maintain good running state, solar term door body to carry out maintenance regularly, the body will affect the dirty air intake, resulting in vehicle power down, idle instability, increased fuel consumption problem. If the above problems, please through the professional maintenance personnel to clean and restore the normal operation of the throttle body.

8. At any time check the fuel supply system, should first turn off the switch lock switch, remove wiring battery, every step should be careful. Oil pump and injector as long as the normal work, can not be easily removed, but check the reliability of the wire harness plug is necessary. if there is a fault by the professional staff.
3. Solar term valve assembly on the idle speed regulating screw has been set at the factory, the user does not need to be adjusted; solar term door position sensor fixed screw loosening, remove the ban, otherwise it will affect the normal idle speed; solar term body integrated installation components are important parts, disassembly is strictly prohibited, otherwise it will affect the normal moving vehicle turn.

## Matters needing attention

1. Replacement or disassembly and assembly of the electrical system in any kind of spare part, must first switch lock key is turned off position, disconnect the battery terminal to replace or assembly and disassembly, to prevent a short circuit or system damage caused by poor contact.
2. ECU is the core component of EFI system, driving operation to avoid collision, rain soaked, avoid storing in strong electromagnetic environment; ECU and harness connector assembly, make sure that the power supply is off, do not open the ignition switch under the condition of plug ECU should be avoided in the charged state with any part of the body high contact ECU pin or ECU wire harness exposed parts. In the car, such as the replacement of the new ECU, please restart the power switch 2 times before the stepper motor reset, when the engine is bad, direct plug ECU.
4. The intake pipe as to ensure the reliability of the connection, to minimize the number of injector plug; the oil inlet and the high-pressure tubing before connecting should prevent the entry of foreign matter, to prevent blockage of the injector; if not specified, the assembly does not allow unauthorized disassembly.
5. No lead pull sensor, prevent terminals and wiring is cracking, braking. In the installation or replacement, part of the cylinder temperature sensor wire should be synchronized with the rotation of the screw rotation, to avoid distortion of the wire root deformation; oxygen sensor screw thread to be coated with anti lock agent, in order to prevent sintering.

6. When replacing the fuel pipe, attention should be paid to the prevention of foreign body and dust. Remove fuel filter, use the special tool, don't make the fuel flow everywhere, should be included in the container should be away from the fireworks, and do not close any fire or heat source.
7. If it is after the first fuel starting or demolition fuel line or replacement pump after starting, the circuit may will have bubbles, please wait a minute or repeated several times power switching key until hear sound of self pumping gradually become smaller , can start normally.
8. The new pump or put oil in the oil, may need to start a few times to discharge the air in the pipeline restart, if the start times time still do not see a car, please check the pump or the fuel filter is working. If the oil pump is working properly, please check whether the fuel injection.
9. System reset instructions: insert the ignition key, press the engine to turn off the ignition switch and turn on the ignition key and wait for 2 seconds after the shutdown, shut down for about 5 seconds, or hear the sound of the relay closed, open the key to start agin(if the stepper motor deviation is large, can be carried out in accordance with the above method multiple times to ensure full reset).
10. Failure is often associated with a circuit to check the EFI system, the general circuit fault. Circuit system most prone to failure is bad contact, the fault sometimes no, cannot be locked, please check may be poor contact part of the, such as battery connection, insurance tube, ignition coil plug terminal and the connector.

## TEN、TROUBLESHOOTING

Although we have carried out a comprehensive inspection before motorcycles loading, the possible faults exist in the operation process. The problem of fuel oil, compress or ignition system may result in the power loss and cannot be started.

Troubleshooting table as following provide the quick and easy operating procedures, you can inspect on these important system yourself. However, when motorcycle needs repair, please send the motorcycle to the dealer, their professional technical personnel have the necessary tools and professional knowledge they can repair the motorcycle better.

If the engine refuses to start, perform the following inspections to determine the cause.

1. Make sure there is enough fuel in the fuel tank.
- 2.Oil pump failure, does the injector work.
- 3.Whether the oil outlet is blocked, whether the fuel filter is blocked or not.
4. Battery power is sufficient.
- 5.The fuse of vehicle and the EFI system is the fuse.
- 6.The EFI system is normal charging.

- 7.The port of the vehicle siring harness is connected tightly, especially the ECU port connection, if the ECU connection is not normal, the vehicle will not be able to start.
- 8.If you can determine the fuel supply and power supply system is no problem, then the next step should be to check the ignition system.
- 9.Remove the spark plug and reattach it to the high-tension cable.
- 10.While fastening the spark plug firmly against the engine, push the starter switch or depress the kick start with the ignition switch in the “” position, the engine stop switch in the “” position too, the transmission in neutral, and the clutch disengaged. If the ignition system is operating properly, a blue spark should jump across the spark plug gap. If there is no spark, consult your across dealer for repairs.

### ! WARNING :

When you inspect or operate of the fuel system, please keep away from the fire, don't smoke.

### **! CAUTION:**

Don't make the fuel flow everywhere, any fuel should be collected in a container. No fuel approaches engine and exhaust pipe at high temperature. This check should be performed as far from fire as possible. Meanwhile no fuel approaches fire or heat.

Don't fix spark plug close to cylinder head when performing the check, because vaporising fuel in the cylinder may ignite by spark and to cause a fire. To minimize possibility of electric shock, metal part of spark plug casing should attach to bared metal part of motorcycle. To avoid electric shock, a person suffering heart disease or wearing cardiac frequency modulator is forbidden from doing this work.

### **! NOTICE:**

Before troubleshooting, it's better to consult with the dealer. If your motorcycle is still in the guarantee period. Before you are readying to repair, you must be consult your dealer. For it may affect the warranty content when you disturb the vehicle during the guarantee period.

## **ENGINE STALLING**

1. Check the fuel and oil supply in the fuel tank.
2. Check the ignition system for intermittent spark.
3. Check the engine idle speed.

## Troubleshooting example

Malfunclion	Cause	Remedy
Engine refuse start	1.Engine stop switch didn't open. 2.No fuel in the fuel tank. 3.Fuel hose was clogged. 4.Spark plug failure.	1.Open the engine stop switch. 2.Fill the fuel oil. 3.Replace the fuel hose 4.Replace spark plug.
Poor sparking or no sparking	1.Dirty spark plug. 2.Defective magneto. 3.Turn off ignition coil. 4.High tension cable leakage. 5.Matter of ignition coil.	1.Clean spark plug and dry it. 2.Maintain magneto or replace 3.Inspect the circuitry and connect. 4.Replace high tension cable. 5.Replace ignition coil.

## Troubleshooting example

Ignite the engine but still can not start		<ol style="list-style-type: none"><li>1. Intake pipe leakage.</li><li>2. Wrong ignition timing.</li><li>3. The battery is low or no power.</li><li>4. Wire port is unconnected.</li><li>5. Throttle position sensor fault</li><li>6. Temperature sensor fault</li></ol>
Ignite the engine but still can not start	Remove the spark plug , and check the electrode	<ol style="list-style-type: none"><li>1. If the spark plug is wet</li><li>2. If the spark plug is dry</li></ol> <ol style="list-style-type: none"><li>1. Using dry cloth to wipe, and calibrate the spark plug gap, or replace the spark plugs.</li><li>2. Please ask the dealer to check your motorcycle.</li></ol>

## Troubleshooting example

	Poor engine low idling speed	1.Wrong valve clearance. 2.Wrong ignition timing. 3.in-take tube loose or gasket leak. 4.Weak sparking plug or no sparking.	1.Adjust valve clearance to 0.05mm, and check screw of rocker whether damaged or not. change if it be 2.Readjust the ignition timing. 3.Change the in-take tube gasket and fasten screw. 4.Handle it refer to “weak sparking plug or no sparking”
	Poor performance of engine high-speed	1.Wrong ignition timing. 2.Wrong valve clearance. 3.Fuel used up. 4.Oil tube blocking 5.Wrong valve timing. 6.Valve spring failure.	1.Readjust the ignition timing. 2.Readjust the valve clearance to 0.05mm. 3.Fuel charging. 4.Change the oil tube. 5.Readjust the valve timing. 6.Change the spring.
Engine run badly	Valve noise	1.Valve clearance is big. 2.Valve wear	1.Readjust the valve clearance 2.Repair or change the valve clearance

## Troubleshooting example

Engine noise		<ol style="list-style-type: none"><li>1.Piston, valve wear.</li><li>2.Cylinder carbon deposit.</li><li>3.Piston pin and hole wear.</li><li>4.Clutch spring failure.</li><li>5.Chain wear.</li></ol>	<ol style="list-style-type: none"><li>1.Change piston, valve. (professional staff)</li><li>2.Clear the carbon deposit.</li><li>3.Replace the piston and piston pin. (professional staff)</li><li>4. Replace</li><li>5. Replace</li></ol>
Normal spark plug	Bad cylinder compression	<ol style="list-style-type: none"><li>1.Loose starting arm assembly can not drive the engine.</li><li>2.Valve clearance is too small.</li><li>3.Valve block.</li><li>4.Cylinder or piston ring wear.</li><li>5.Damaged cylinder head gasket.</li></ol>	<ol style="list-style-type: none"><li>1.Retighten the starting arm; change if damaged.</li><li>2.Adjust the clearance to 0.05mm.</li><li>3.Clean the carbon deposit. (professional staff)</li><li>4.Change gasket. (professional staff)</li><li>5.Replace the sealing gasket. (professional staff)</li></ol>

## ELEVEN、CLEANING AND MAINTENANCE

Prop the main stand before cleaning the motorcycle, and be sure that stop steadily be ready for buckets, towels, and neutral detergent, and successive cleaning various parts of the body. After cleaning, dry all parts of the body with a clean rag gently do not wash by increasing the water pressure. And be careful not to immerse the carburetor, fuel tank electric equipment muffler and other components into water.

If you do not use motorcycle exceeded 60 days, clean it first and do some measures for maintenance to avoid damaging the motorcycle.

### Cleaning

- 1.After the engine cooled, use the plastic bag to cover the emission hole.
- 2.Use the water, towel(if hard to clean, then could use booth brush or bottlebrush), detergent to wash motorcycle and the oil stain on crankcase. But do not paint this kind of wash material on seal, gasket, sprocket, driving chain or axle. It must wash the dirty and detergent cleanly.
- 3.After cleaning, it should dry the motorcycle by using leather or good water absorbability towel.

- 4.Dry the transmission chain at once, and coat lubrication to prevent rust.
- 5.To prevent rust, we suggest to paint the rust inhibitor on all metal cover, including the chrome and nickel plating surface.
- 6.Use the spray lubricant as the cleaner, to remove all rest dirty.
- 7.To wax on all painting surface.
- 8.After the motorcycle dried all ,then to start the second keeping.

### Carefully

- 1.Cover the emission hole by plastic bags to prevent the water and gas into.
2. Drain oil tank、oil pump、fuel filter and oil in the oil pipe.
3. Take down the empty fuel tank and add a cup of four-stroke oil, shake so that the fuel tank completely be put a layer of oil. pour the oil, and replace the fuel tank.

4. Remove the spark plug and pour a spoon of oil into the cylinder, replace the spark plug and run the engine several times (ground the spark plug and high voltage respectively), so that distribute the oil on the cylinder wall well.

5. Lubricant all control cables.

6. After inflating the front and rear tire, use the appropriate to prop up the front and real wheels . make sure that motorcycle be in a stable position and maintain the tire inflation regularly.

7. If kept in place where high humidity or salt. Please coal a thin layer of oil on all the metal surfaces. Pay attention not to coat the rubber parts and seat to prevent the aging.

8. Remove the battery to charge and put in a dry place. charge one atleast, and do not put at hot(exceed 30)or cold(below 10)place.

**! NOTICE :**

Please make the necessary repairs before storing the motorcycle.

## TWELVE、TECHNICAL SPECIFICATION

Carload parameter		Wheel and brake	
Overall length	2040mm	Front shock-absorber	Hydraulically telescoping
Overall width	800 or 760mm	Rear shock-absorber	Spring oil resistance
Overall height	1110 or 1060mm	Turn angle	left/right≤48°
Wheelbase	1330mm	Front tyre type	Astor/Sprint: 110/70-17 Sirio: 100/80-18
Minimum ground clearance	195mm	Rear tyre type	Astor/Sprint: 130/70-17 Sirio: 130/80-17
Unloading weight	126kg	Front tire pressure	280kPa
Max loading capacity	150kg	Rear tire pressure	280kPa
Max. speed	≥90km/h	Tire rim (front/rear)	Light alloy/Light alloy
Max. accelerated noise	≤77dB (A)	Front rim type	17×MT2.50
Minimum oil consumption	≤367g/kw. h	Rear rim type	17×MT3.50
Climbing ability	≥20°	Front brake	Disk brake
Starting performance	≤15s	Rear brake	Disk brake
		Brake fluid	Dot3 / Dot4

Engine	Transmission system		
Model	Air cooling, four-stroke	Clutch	wet type, multi-plate
Cylinder	single	Transmission gear ratio	(five-gear international)
Bore×stroke	54.0mm×54.0mm	Primary reduction ration	3.400
Displacement	124ml	Final reduction ration	3.214
Comprssion ratio	10. 0 : 1		
Spark plug	A6RTC	Transmission gear ratio	
Standard power	7.1kw/8000 (r/min)	One gear	2.643
Max torque	9.5N·m/6500 (r/min)	Two gear	1.788
Ldling speed	1500±100 (r/min)	Three gear	1.316
Ignition mothod	Ecu controlled ignition	Four gear	1.045
Lubricant method	Pressure and spray	Five gear	0.875
Lubricant	SAE15W-40		

Electric system	Fuel and capacity
Start method	Electrical start
Headlight	12V 35W/35W
Front position light	12V 4W
Tail light/barke lamp	12V 5W/21W
Turn signal lamp	12V 10W
Speedometer	12V 0.3W
Horm	12V 3A
Battery	12V 9Ah
Fuse	Leader cable 15A



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