

# OWNER'S MANUAL





## **PREFACE**

Thank you for purchasing the motorcycle and sincerely welcome you to be our user. In order to enjoy a safe and pleasant driving, please make sure to get familiar with the manual first before driving. Your safety depends not only on the vigilance and experienced operation skill, but also whether you know well about the technical specifications. Periodical check-up and maintenance are basically essential. If maintenance service needed, please go to our after-sale service center. If you know technique and have tools, dealers can support you in maintenance and repair, for instance, provide the parts catalog and relevant spare parts.

The manual explains detailed motorcycle operation and maintenance knowledge, with sincere expectation for your long-time use. Modification of specifications may cause some figures and content discrepancy in the manual, we feel sorry for that and keep the final right of interpretation.

Have a good enjoyment and thanks again for your support..

## Important Attention Points

- Driver and passenger:

This motorcycle is limited to one driver and one passenger (only children younger than 12 years old permitted). Never exceed the max load capacity.

- Safety: avoid driving the motorcycle in extreme weather and cold weather below -12°C.

- Road condition

Only drive on the highroad.

The caution banners about the safety or environment protection stick to the sundries box cover, the rear carrier, and fuel tank cap. (Visible before or during driving)

- Please read the user's manual carefully

You must pay attention on the warning sentence or paragraph.

### **WARNING**

Not following the operation instruction in this manual may cause injury to you and the vehicle.

### **ATTENTION**

Regard this manual as a permanent part, even when transferring the vehicle to a new owner , transfer the manual at the same time.

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# **I Notice for safe driving**

## **Rules for safe driving**

1. Many traffic accidents are caused by the inability of car driver to notice the motorcyclist, so the motorcyclist should try his best to be noticed by other drivers.
  - ※Put on the specialized coat in bright color or warning mark.
  - ※Drive with great caution in the place with dazzling light or in blind spot.
2. Particular care should be exercised at the level crossing of roads, entrance and exit of parking lot or on the automobile lane.
3. Never over speed, otherwise accident may occur.
4. You must get the driving license and be familiar with the vehicle. Never lend the vehicle to the man without driving license or who is unfamiliar with motorcycle.
5. Avoid driving on the rough road. This can easily result in operation failure and structural damage to the vehicle frame.
6. Check up before driving. (See page 12)
7. When driving, hold the handle bar and put feet on the footrest.
8. Don't drive too close to other vehicles. Never contend for lane, and strictly observe the local traffic.

## **Payload**

- **Admonition:**

Only put light goods in sundry boxes or other deposited space.

The deposited space can't be over weighted, details according to the following blank 1:

<b>Blank 1</b>	
Deposited position	Stated Weight (kg)
Carrier	5kg

- **The max payload of this motorcycle is 150kg, including the weight of the driver, passenger and goods.**
- **If the motorcycle is over loaded, it will affect the stability and operation of the motorcycle.**
- **Tie all the goods needed to be carried on the motorcycle.**
- **On the rear shelf seats no child allowed.**

## II. Various Parts Name and Instruction

### Parts & sub assemblies (Fig1)

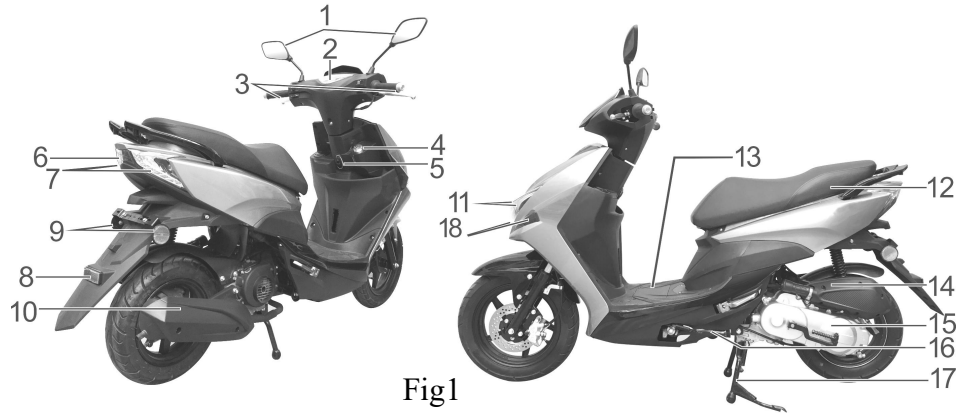


Fig1

1. Rear view mirror

2. Speedometer

3. Front and rear brake

4. Ignition switch

5. Helmet hook

6. Tail light

7. Rear L. & R. turn light

8. Rear reflector

9. Side reflector

10. Muffler

11. Headlight

12. Fuel tank cap

13. Battery location

14. Air cleaner

15. Kick starter

16. Side stand

17. Center stand

18. Front L&R. turn light



## Instrument panel (Fig2)


1. Left turn signal indicator: Blinks when the left turn signal is activated.
2. High beam indicator: Illuminates when the high beam is activated.
3. Right turn signal indicator: Blinks when the right turn signal is activated.
4. Speedometer: Displays the current speed of the vehicle.
5. Odometer/Tripmeter: Odometer displays the total distance the vehicle has traveled; Tripmeter displays the distance traveled for a specific trip or journey.
6. Fuel level indicator: Displays the remaining fuel volume in the tank. When only one bar remains, it indicates that approximately 1.1 L of fuel are left. When no bars remain and the “” symbol flashes, it indicates that you must refuel immediately.
7. Fault indicating lamp: When EFI system has functional problem, the lamp will flash. The flashing frequency and times will help to judge the actual EFI malfunction type.



Fig2 Version A

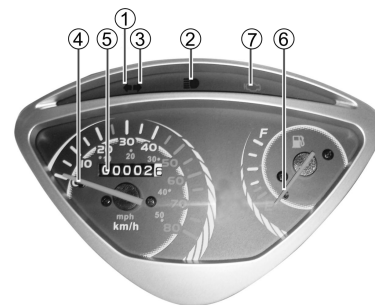


Fig2 Version B

8. Tachometer: Displays the engine's rotational speed in RPM (Revolutions Per Minute).

9. Press the twist instructions

(1) Time setting, hold down the left button for 3s to enter the clock setting, the time bit flashes, short press the right button to add 1, short press the left button to switch to the minute bit flashing to set the minute, and then short press the left button to save and exit or no operation 10s to automatically save the Settings.

(2) Short press the left button to switch the total subtotal. In the total state, long press the right button to switch the British system.

(3) The subtotal is cleared to zero, in the subtotal state. Long press the right button to clear 3s subtotal.

### Ignition switch (Fig3)

- (1)Open(○)—when the switch turns to this position,  
engine is started and do not pull out the key.
- (2)Close(✕)—when the switch turns to this position,  
engine is stopped and take out the key.
- (3)Lock(🔒)—when the switch turns to lock (🔒) position,  
take out the key, don't turn the handlebar, and don't start the engine  
or turn on any light.

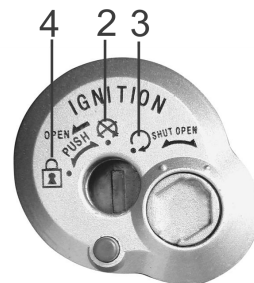


Fig3

### Ignition switch (Fig 4)

- (1)Open(○)—when the switch turns to this position,  
engine is started and do not pull out the key.
- (2)Close(✕)—when the switch turns to this position,  
engine is stopped and take out the key.
- (3)Lock(🔒)—when the switch turns to lock (🔒)  
position, take out the key, don't turn the handlebar,  
and don't start the engine or turn on any light.



Fig4

### Steering lock (Fig 5)

Turn handle left to end, press down ignition key to (🔒), the steering setting is locked. Do the above oppositely, it is unlocked.

### Cushion lock (Fig 5)

- Insert the key into the key hole , then turn the key anti-clockwise as the arrow guide and open the cushion.
- Press down the cushion until a close down voice is heard. Pull up the cushion's rear side to make sure the cushion is locked well, then take out the key.



Fig5

### Flame out switch (1) (Fig 6)

When the switch is on “○”, the electric starting can be operable;

When the switch is on “🔌”, the electric starting can not be operable.





Fig6



## **Electric Starting button (2) (Fig 7)**

Press this button, the engine starts.

## **Headlight dimmer switch 1 (Fig7)**

Press“”button, to get high beam; Press“”button, to get low beam.

## **Turning signal light switch 2 (Fig7)**

When the switch is on“”turn left, When the switch is on“”button, turn right. Press it down the light turn off.

## **Horn switch 3 (Fig7)**

Press this switch to make the horn work.



Fig7

### III. Operation Instruction

#### Check up before driving (Fig8)

For safety and preventing trouble or accident, check up is necessary.

#### Gasoline

When the pointer or fuel meter is close to red section, replenish oil.

And check whether the tank and the carburetor are in good condition.

- Gasoline tank contains max. 5.3L
- Turn the tank cover anti-clockwise to open the fuel tank .
- Proposal gasoline, octane number is above 90.
- Do not replenish oil together with water, dust or other things.

#### NOTICE:

- Gasoline is inflammable, it possibly causes fire even exploding on certain condition, replenish oil only in an airiness place after stopping the engine, no fire in the place of oil replenishment or oil storage.
- Don't make the top level of fuel above the inlet tube of fuel tank when replenishing, lock the tank well after replenishment.
- Gasoline is poisonous, keep your skin or eyes away from it, and put it out of touch of children. If swallow any gasoline unconsciously, see the doctor at once.

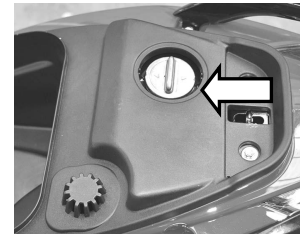


Fig 8

## Inspect the engine oil level (Fig9)

1. Keep the motor steady on the ground, screw up the oil dip rod and clean it, then reinsert and inspect oil.
2. If the oil level reach down limit sign 2, replenish the standard oil to the level below upper limit sign3, then insert and screw down the lid back.

Check if it's in good situation.

## Suggested engine oil number:

SF SAE 15W/40

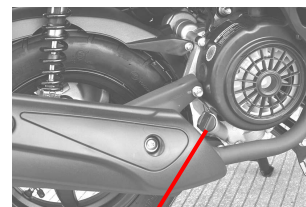


Fig9

## The free path of rear brake handle (Fig 10、 Fig 11)

Measure the distance of rear brake pedal before braking function,

The free path should between 10-20mm, take the tail of brake handle as standard.

- Adjust nut: (A) increase the distance of free path.  
(B) reduce the distance of free path

After adjusting, the axle pin (2) should touch closely with nut (1) groove after adjust.

## Abrasion mark of the brake (Fig 12)

- (1) Reference marks
- (2) Indicate marks.

If fully brake. Change the brake block when reference marks and indicate marks are situated in a straight line.

**Notice: Once maintenance for brake system is needed, find a nearest professional repair department . Make sure the parts for replacement were made by our company.**



Fig 10

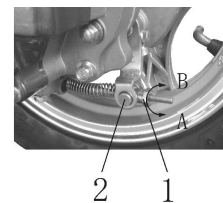


Fig11

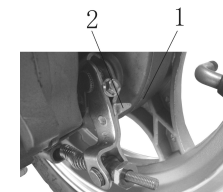


Fig12



**WARNING:**

**When the front disc gets worn to the limit (see the notice on the disc: MIN.TH.3mm),the old disc must be changed in order not to influence the brake performance.**

**Tire:**

Check the tire pressure regularly and adjust if necessary.

Front tire pressure: 220kPa   Rear tire pressure: 225kPa

- Check when the tire cooled
- Check if the motorcycle has a flat tire, mend it immediately when it has.
- Check if any metal trash or gravel in the groove of tires.
- Replace the tire when it wears out to the abrasion mark.

**ADMONITION:**

- **If the tire pressure dose not accord with the standard, it will possibly cause traffic accidents.**
- **It is dangerous to use a worn tire because the friction between tire and road will be affected which will possibly bring trouble to driving or even cause an accident.**

## Start engine (Fig 13)

- Put the key into the key hole and turn to “Q”.
- Electric starter: press start button (2) to start engine, don't keep the start button pressed more than 5 seconds each time.

### NOTICE:

- **Electric starting is based on grasping the brake handle.**
- **If electric starting doesn't work, there must be a break for 30 seconds before you start the engine with it again.**
- **When start the engine in cold condition, please warm up engine for 3 minutes before running.**
- **The engine will be over heated if it works for a long time at idle speed in an extremely hot day, you need to power off the engine immediately.**



Fig13

## **Drive motorcycle**

### **WARNING:**

- The temperature of exhaust pipe is much high during driving, you will be injured if touching with it carelessly, even within little time after stopping, the temperature can also cause injury, so wear trousers to protect your legs against injury.
- Wear helmet, glasses, and gloves when driving.
- Loose or unsuitable clothes may cause an accident during driving.
- All device must be installed according to requirement of the traffic rule. Take the license with you when driving , each equipment of the motorcycle should accord with the local traffic law.

### **NOTICE:**

Control the speed and payload during the first 1000km. Payload lower than 100kg is appropriate (including the weight of driver), over speed or over loading will shorten the life of engine.

Control the speed according to blank 2

Log (km)	Blank 2	
	0~200	200~500
Speed (km/h)	≤30	≤45

## **Driving operation**

- Release Main-Stand and sit on the saddle, step on the ground by left foot to make motorcycle plumb with floor.
- Turn the throttle when start, put your left leg back to footrest and control the throttle to make the motorcycle reach good speed. close the acceleration to slow down.

### **Notice:**

- **Do not make a sudden speedup or speed-down with the throttle grip to prevent that motorcycle rush out unexpectedly.**
- **Driver must release the side stand before driving and try to know the status of running road**

## **Brake operation**

1. Control the throttle grip

You must control the throttle grip and use both of the brake systems to slow down.

**Notice: Drive with care when driving in bad situation like on moist or runny road, in a rainy day.**

**Do brake operation, speedup operation or turning operation carefully.**

2. Front brake and rear brake work at the same time.

**Notice: When driving down on a cliff brae, close the acceleration entirely and use both of the brake system to make the speed lower. Don't do brake operation continuously to make it too hot, which will affect the performance of brake.**

**Warning: When driving on a smooth or curving road at a high speed, don't use only one brake**

system, you must use both rear and front brake system at the same time to avoid an accident.

### **Power off the engine (Fig 14/Fig 15)**


- Close acceleration: revolve to the end as the direction of the picture showing (commonly, the engine will become in idle situation at the moment when you release the throttle grip)
- Turn the ignition switch to (  )



Fig14

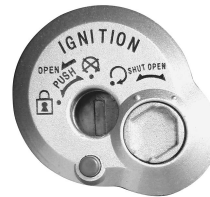



Fig15

### **Parking operation:**

When parking, turn the key to (  ) position, put down the support and lock the handle well.

**Admonition: Park the motor on a flat ground, or it may fall down and cause injury.**

### **Notice for anti-theft**

- Lock the steering and do not leave key in the key hole before you leave.
- Park the motor in a car barn if possible.

## **IV、 Maintenance and Service**

### **Maintenance periodic form**

This maintenance is based on the odometer, See the Maintenance periodic form as an important guide for your motor's maintenance on schedule. You should increase the frequency of maintenance if you use the motor at a high speed in a bad situation for a long time. Some main parts of your motor should be inspected by a career man after a repair for most parts or collision, like Frame, hanger, or turning parts , Repair or replace broken parts to secure your safety.

**Notice:** For the safety and dependability , Never refit. Use the parts of us or parts of same quality as ours for replacement. Otherwise, the performance and operation function will be affected.

**Warning:** For the safety of personnel, no matter whatever maintenance work carries on, first power off the engine, park the motor on a good ground and support the motor with stands well.

**Notice:** the motor without use in winter or having been parking for longer than one month needs maintenance before driving to check if the fuel, tire or battery were bad or corrupted.

## Maintenance periodic form (Blank 3)

Check before maintenance

I: Check and adjust it when need.

C: Clean

R: Change

Blank3

Item \ Cycle				speedometer (×1000km)				
				1	4	8	12	Ref page
*	Fuel pipe			I	I	I	I	
*	Core of the air cleaner		(Note1)	C/1000km, if need: R				21
*	Spark plug			C/2000km, if need: R				24
*	Valve			I	I	I	I	
*	Engine oil		(300km) R	R	(3000 km) R			22
*	Engine oil filter				When change oil: C If need R			22
*	Cold system				I	I		
*	Rotate the belt			C/1000km, if need: R				
	Gearbox engine oil	(Note3)	(300km) R			I		23

### Blank3 continue

<div style="display: flex; align-items: center;"> <div style="transform: rotate(-45deg); transform-origin: left top; white-space: nowrap;">Cycle Item</div> <div></div> </div>				speedometer (×1000km)				
				1	4	8	12	Ref page
	Brake system			I	I	I	I	9
	Brake cock				I	I	I	
*	Head light				I	I	I	
*	Hanging system				I	I	I	
*	Nuts\bolts	(Note2)		I		I		
**	Wheel, tire				I	I	I	10
**	Turning bearing			I			I	

\* Unless you are an expert on machine and hold a full set of tools and maintenance data, or leave your motor to a mechanic person to maintain or repair;

\*\* For safety, we claim all of items done by mechanic person.

Note: 1. You'd better shorten the period of maintenance if use the motor in a particularly moist or dusty area, and when the fuel consumption becomes more and more, and accelerated effect is bad, you should change some parts.  
 2. If you usually drive the motor on rugged roads, please go for a maintenance to protect the performance of the vehicle .  
 3. Change as the season changes in a cold area.



### Solution for troubles (Blank 4)

### Blank4

Trouble	reason		solution
Can't start the engine	Spark plug no spark	Spark plug wear out	Change
		Ignition wire wear out	Change
		ECU wear out	Change
		Ignition switch wear out	Change
		Ignition come off or become flexible	Connect well or firm and tight
	The spark is weak	Spark plug gap too small or big	Adjust
		Spark plug pole burn	Change
		The spark plug accumulates carbons seriously	Clear out
		No spark to consult the spark plug	
	No mixed air in cylinder	No fuel	Replenish
		Oil mouth stop up	Dredge
		The oil passage stops up	Dredge
		Air cleaner stop up	Clean
		Take in system leak	Check and clear out
	The cylinder compresses strength low	Spark plug seat leak	Screw up spark
		Cylinder cover leak	Change spacer
		Valve seat washer worn out	Polish
		The piston-ring or the cylinder block worn seriously	Change them
		The piston-ring is broken or stored up the carbon to hinder very much	Change piston-ring or clear carbon

Blank 4 continue

Trouble phenomenon	Fuel tank pressed the switch to damage Trouble reason	solution
The vehicle has bad acceleration performance	The octane value of the fuel is too low	Change fuel
	Oil path blocked	Clean oil path
	Ignition in wrong time	Check wire and change ECU
	Spark too weak or flame out	Check ignition and clear out
	Mixed air too dense or too thin	Adjust map
	Air leak from the engine	Check and clear out
	Muffler blocked	Dredge
	Belt wear and tear	Change
	The automatic clutch roller wear and tear	Change
The electric start does not work	See “ can’t start the engine” as reference	
	The clutch is broken	Change
	the relay is broken	Change
Riding unsteady	Battery electricity not enough	Charge
	gap between turning bearings is too big	Adjust
	tire pressure not enough	Pump
the brake does not work	Front and rear axle released	Screw up nut
	The brake block wear and tear superlatively	Change
	brake cam wear and tear	Change
	Brake cable is broken	Change
	Free path too big	Adjust

## Clean the air filter (Fig16)

- Take down the fixing bolt of air cleaner cover.
- Take out the core from the air cleaner box.
- Clean the filter element using compress air or dry brush or put a new filter in the air clean box.
- Do the above oppositely to install the air filter.

### NOTICE:

- Never use gasoline or low burning point solvent to clean.

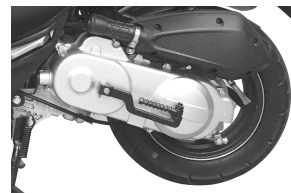


Fig16

## Battery maintenance (Fig17)

It is adopted the airtight battery (don't add water)

**NOTICE: Never take apart upper cover of the electrolyte.**

- If you don't use the motor for a long time, please take off the battery and keep it in a ventilated and dry place. Fuel tank pressed the switch to damage
- If the peg of battery is corroded. Please take it off and clean.(use boiled water)

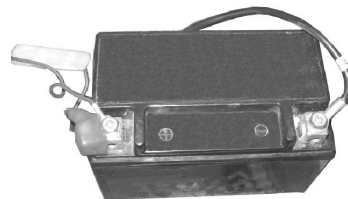


Fig17

**NOTICE: Turn off the ignition switch before taking apart the battery. Taking negative terminal first and positive terminal next, when installing, just opposite to above procedure.**

## Change oil (Fig18)

Change oil only when the engine is not cooled yet and the vehicle is supported by jiffy Stand, to pour out all the oil completely and quickly.

### Clean the oil filter net(Fig18)

- Screw out the the cover of oil hole /oil dip rod and the cover of oil filter screen,Take out oil hole cover and oil filter 1 then take strainer 2 and spring 3.
- Clean the oil filter net using liquor
- Fill in the oil filter net,spring and the cover of oil filter screen.
- Inject standard oil into the engine, not exceeding the upper mark,
- When measuring the oil level, do not screw down the cover of oil hole / oil dip rod.
- Fill in the cover of oil hole / oil dip rod
- Start engine and keep it working at idle speed for few minutes, then turn it off.
- Measure the oil volume of engine again to make sure it does not leak.

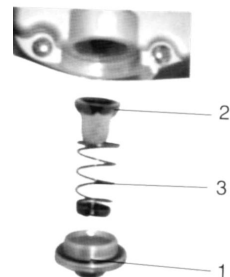


Fig18

## Change gear oil (Fig 19)

**We suggest oil octane number:**

**SAE 80W/90 (you can use anti-freezing oil in very cold area)**

Oil capacity

Resolving capacity

Changing capacity: 0.10L

- Place the vehicle by the main stand.
- Screw out the immersion bolt 1 and oil-drain bolt 2.

**NOTICE: When draining the oil, the engine needs a certain temperature, use the main stand to support the motor, make sure all the oil is drained.**

- Clean the drain bolt and then re-install it.
- Inject oil into the hole of the immersion bolt slowly till the oil spill over.
- Fix the immersion bolt and screw it tight.

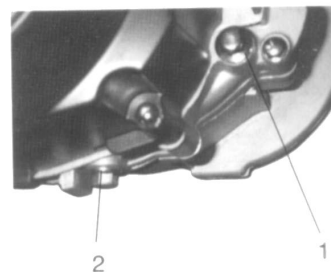


Fig19

## Spark plug (Fig20)

### Spark plug specification

**Standard:** CR7HSA

- Disconnect the joint of the spark plug cover and take apart the spark plug with special spanner.
- Check if there is any burning ash or accumulated dirt on electrode or porcelain head, if it singed badly, replace the spark plug, Clean the ash or dirt with plug cleanser or a brush.
- Normally the gap between side electrode (1) and Center electrode (2) is 0.6-0.8 mm.
- Don't use other kind of spark plug with different specification.

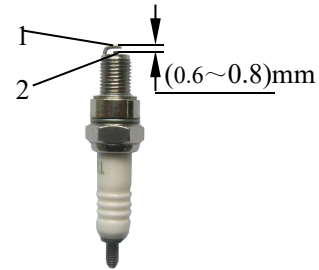


Fig20

## Fuse replacement

The rated electric current of the fuse is 15A. If the fuse often burns down, it indicates the short circuit or overload in the electric system. Ask the serviceman to repair it, and never use the brass wires to replace the fuse.

## V.Vehicle Storage

### STORAGE

If the vehicle hasn't been used for a long time, some steps should be taken to prevent malfunction and damage to the parts. Besides, before the long-time storage, proper repairs should also be done.

- Change the engine oil.
- Drain out the fuel in the fuel tank and oil in the carburetor.

**Warning:** Gasoline is inflammable and may cause fire and even explosion on certain conditions. Therefore, no fire when draining.

- Take apart the spark plug, inject about 15~20ml oil into the cylinder, step down the kick pedal several times and then fix the spark back on.
- Take apart the battery and place it in a place without strong light or frozen ice, charge it every month.
- Clean the vehicle and wipe it dry, coat the wax on the surface of the paint, and anti-rust oil on other metal parts.
- Cover the vehicle and put it in a cool place.

### Use the vehicle after long-time storage

- Take off the cover and clean the vehicle. You should change the oil after 4 months above storage.
- Charge the battery if necessary, and fix it on.
- Check all the parts before driving. Ride motorcycle in a low speed in non-busy area, make sure the safety.

## VI. Vehicle Identification

### Position of the model code, vehicle identification number and engine number (Fig 21)

Provide the numbers above when register to get the license,do yearly inspection, and enjoy the The rivet for fixing name plate is on the right side of main frame.

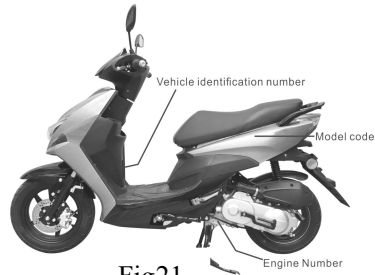


Fig21



Fig22

## VII. Tool Kit

### Tool kit bag (Fig 22)

Tool kit bag is placed in the luggage box under the saddle, and tool kit contains the following tools:  
Wrench 8-10mm; Wrench 10-12mm; Hexagonal wrench; Screwdriver; Sleeve wrench 18.



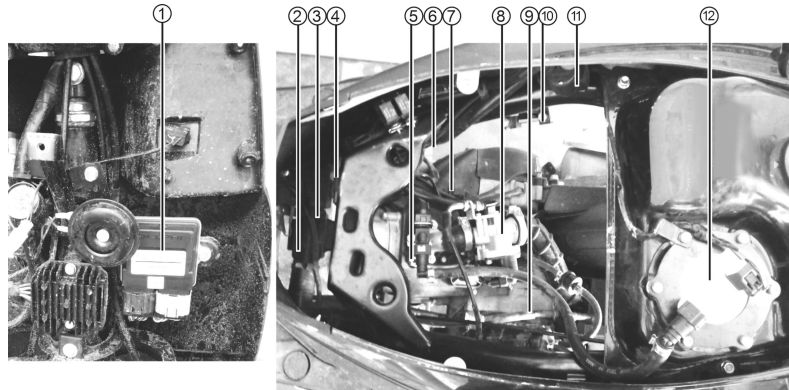
## VIII. Main Technique Parameter

Item	Parameter	Item	Parameter
L×W×H (mm)	1860×660×1130	Specification of Spark Plug	CR7HSA
Wheel Base (mm)	1270	Spark Plug Gap(mm)	0.6~0.8
Ground Clearance (mm)	120	Idling Speed r/min	(1600±100)
Net Weight (kg)	85	Compression Ratio	10.4: 1
Max Payload (kg)	150	Lubrication Brand	SF 15W/40
Front Tire	90/90-12	Ignition way	ECU
Rear Tire	90/90-10	Lubrication Capacity L	0.70L
Pressure Of Front Tire(kpa)	220	Engine type	JJ1P39QMB
Pressure Of Rear Tire (kpa)	225	Bore/stroke(mm)	39.0×41.4
Left 45/Right25	Left 38/Right 35	Displacement ml	41.5
Max speed (km/h) 45/25	45/25	Clutch	Automatically centrifugal
Economic Oil Consumption L/100km	≤2.8	Gear Oil Brand	SAE 80W/90
Climbing Performance	18 °	Lubricating Way	Pressure spray
Start way	Electric/kick start	Valve Play	0.08-0.10
Fuel capacity (L)	5.0L	Oil Capacity, Gearbox L	0.13L
Battery	12V 7Ah	Max Torque N.m/r/min 45/25	3.0/6000 2.8/5700
Fuel Brand	Above RQ90	Max Power kW/r/min 45/25	2.2/7500 1.8/6500

## IX.EFI system owner's manual

### 1. Introduction

Because of the EFI, there are many possibilities for the engine issues. In other word, one issue may be caused by the mechanical problem or the EFI components. And the diagnostic tools cannot 100% indicate the root cause. So this manual shows the way to dig out the root cause with the help of the diagnostic tools.



## **2. Precautions**

1) Do not disassemble the components arbitrarily. It may damage the components if the water or the oil seep into the parts.

2) Turn the ignition off, before connect or disconnect the connectors.

3) Make sure the temperature of the ECU is below 80°C.

4) The fuel pressure is much high ( about 250kPa), so please do not disassemble the fuel pipe arbitrarily. If have to, please release the pressure at first, and make sure the operation is delivered in the ventilated environment by the the professional maintenance persons.

5) When disassemble the fuel pump from the pump, make sure the power is off. Or it may cause the fire.

6) The fuel pump cannot work in air or water, it will shorten the service life. And the positive and negative connectors cannot be exchanged.

7) The ignition system check only could be delivered when it is necessary. When check the spark plug out of the engine, if start the engine, please make sure the throttle is closed. Or too much unburned gasoline coming to the catalyst may damage the catalyst.

8) The idle speed is adjusted by the ECU. The idle pintle is not allowed to adjust.

- 9) The Positive and Negative of the battery cannot be reversed. It may damage the EFI components.
- 10) It is forbidden to remove the battery when the engine is running.
- 11) Cannot measure the signal by pierce the harness.

### **3. Tools**

- 1) Multi-meter: measure the voltage, the resistance and the harness connection.
- 2) Diagnostic tool: reading the malf code, and engine parameters.
- 3) Oil pressure garge: measure the fuel pressure.
- 4) Cylinder pressure garge: measure the pressure garge.

### **4. Maintenance depending on the malfcode.**

#### Description

- 1) If the issue cannot repeat, the issue analysis may be wrong.
- 2) The multi-meter below means the digital type. Pointer-type is forbidden.
- 3) If the malfcode shows the voltage is low, it means maybe the wire is short to ground. If the malfcode shows the voltage is high, it means maybe the wire is short to battery. If the malfcode shows the components signal abnormal, it means the wire is open or short to other wires.

**Diagnostic help:**

- 1) If the malcode shows again after clearance, check whether the connector is connected well.
- 2) Do not ignore the affect of the engine maintenance situation, the cylinder pressure, and the mechanical ignition timing.
- 3) Change another ECU to do the test. If the malcode disappears, the root cause is the ECU. If the malcode is still there, then use the old ECU to do the test.

**5. Maintenance depending on the performance.**

Before issue analysis, please check:

- 1) The MIL works well.
- 2) Clear the history malcode.
- 3) When the malcode comes again, note the conditions.

**Check the appearance**

- 1) Whether there is leakage of the fuel pipe or not.
- 2) Whether there is block/leakage or damage of the intake pipe.
- 3) Aging level of the high-voltage cable.

- 4) Whether the ground connection is strong enough.
- 5) All the connectors connected well.

**Note: if any item above exists, please do the fix it at first before issue analysis.**

**Diagnostic Help:**

- 1) Make sure there is no any issue record of the engine.
- 2) Make sure the issue could repeat.
- 3) Have checked follow the instructions above and no cause found.
- 4) Do not ignore the maintenance situation, cylinder pressure, mechanical timing and fuel quality.
- 5) Change the ECU and repeat the test, if the issue is gone, then the root cause is the ECU. Or change the old one back to check the root cause.



