



HAOJIN MOTOR

User's Manual

HAWK II

GUANGZHOU HAOJIN MOTORCYCLE COMPANY LIMITED

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FOREWORD

Thank you for your purchasing motorcycle.

This manual covers the main data, basic structure, and main procedures of operation, adjustment, maintenance and troubleshooting of motorcycle. It will help you familiarize yourself with all the necessary skills so that you will bring your vehicle into full, best play with minimized trouble for a long service life.

Products are always subject to further improvement, which will cause some difference between the vehicle and this manual, without further notice.

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I .SAFE DRIVE

Rules for Safe Drive

Check must be conducted,before starting the engine,to prevent mishaps and damage to components.

Only the qualified person,who has passed the drive examination and to whom a drive license has been issued ,is permitted to drive the vehicle but not anybody else without a drive license.

Full preoccupation is required during drive,paying attention to the following points to avoid any possible burt to you by other motorized vehicles:

Do not drive too close to lther vehicles;

Never contend for lane.

Strictly observi the local traffic rules.

As driving at overspeed is the cause of many accidents,do not drive at a speed the actual situation does not permit.

Turn on the turnlight when making a turn or changing the lane.

Particular care should be exercised at the level crossing of roads,entance and exit of parking lot or on the automobile lane.

During drive,grasp the left handlebar by the left hand and the throttle twist grip by the right one,with feet on the footrests.

The luggage carrier is designed for carrying light goods,which should be securely fastened to prevent loose movement that may cause mishaps during drive.

1

Protective Wear

1.Protective wear such as helmet with protective mask,dustproof glasses and gloves shoule be worn during drive for the sake of personal safety.

2.The passenger should wear hight boots or long clothes to protect legs from hurt by the heated exhaust silencer during ride.

3.Loose clothes are not suitable for motorcycle drive or ride as they may get caught on the operating lever,kick lever,footrest or wheel,resulting in danger.

Modification of the vehicle

Caution:

Any unauthorized modification of the vehicle or replacement of the original parts can not ensure drivingsafety and is illicit.The user must observe the regulations of the traffic control authorities.We are not responsible for any vehicle with unauthorized modification.

Loading of goods

Caution:

The design of the motorcycle requires distribution of the carried goods in certain extent of equilibrium and improper arrangement of goods will adversely affect the performance and stability of the vehicle.The manufacturer shall not take any responsibility due to the reason mentioned above.

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II .MAIN DATA

Data in bracket is HAWK II , the rest are interchangeable

Overall length	2090mm	Cylinder bore × stroke	61.×63.1mm
Overall width	810mm	Compression ratio	9.5: 1
Overall height	1180mm	Output,max. (kw/rpm)	12.0/7500
Wheelbase	1360mm	Torque,max (n.m/rpm)	16.0/6000
Dry weight	132kg	Idling speed	1500±100min ⁻¹
Max. load	150kg(including the driver)	Displacement of cylinder	184 cm ³
Front wheel	2.75-21	Spark plug	B8RTC-9
Rear wheel	4.10-18	Spark plug gap	0.6-0.7mm
Speed, Max	≥ 100km/h	Cap of air Valve	Intake valve: 0.03-0.07mm
Brake distance	≤ 7m(30km/h)		Exhaust valve: 0.03-0.07mm
Climbability	≥ 30°		

To Be Continued...

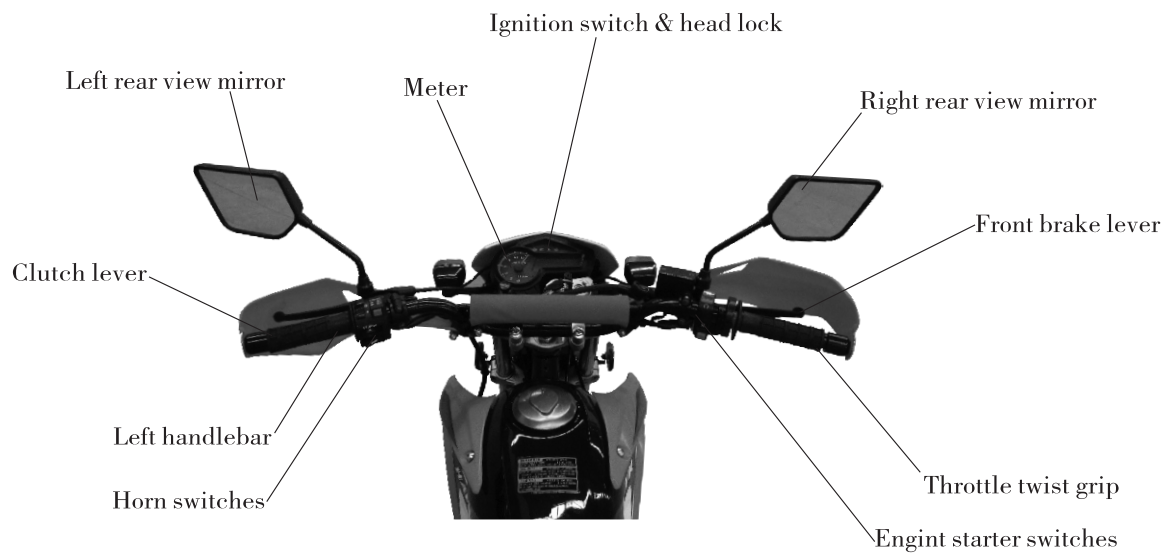
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MAIN DATA

Volume of lubricating oil	1.1L	Fuse	10A
Capacity of gasoline tank	8.0L	Front light illuminator	12V-35W/35W
Transmission ratio		Taillight/Braking light	12V-5W/21W
1st gear	3.077	Braking light	12V-5W
2nd gear	1.789	Turnlight	12V-0.5W × 4
3rd gear	1.300	Neutral light	12V-3W
4th gear	1.067	Turn indicator	12V-3.4W × 2
5th gear	0.917	Meter light	12V-3W × 2
Transmission ratio of sprocket	3.267	High beam indicator	12V-3W
Primary transmission ratio	2.818	Ignition means	C.D.I
Battery	12V6Ah		

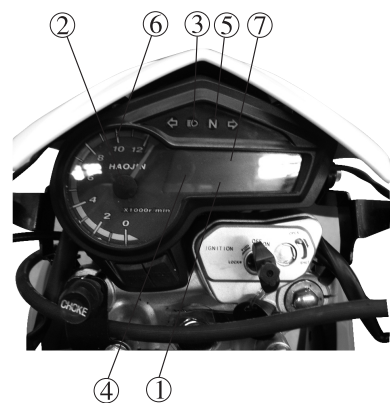
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III .PARTS&SUBASSEMBLIES



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Ser.No	Name	Description
①	Speedometer	In km/h
②	Turn indicator	The left indicator is lit up when the turnlight is to the left and the right one lit up as the latter to the right.
③	Hight beam indicator	It is lit up when in the neutral position.
④	Gear position display	The gear position is displayed.
⑤	Neutral indicator	It is lit up when in the neutral position.
⑥	Tachometer	It shows the speed(rpm) of the engine.
⑦	Trip mileometer	It shows the mileage of trip.



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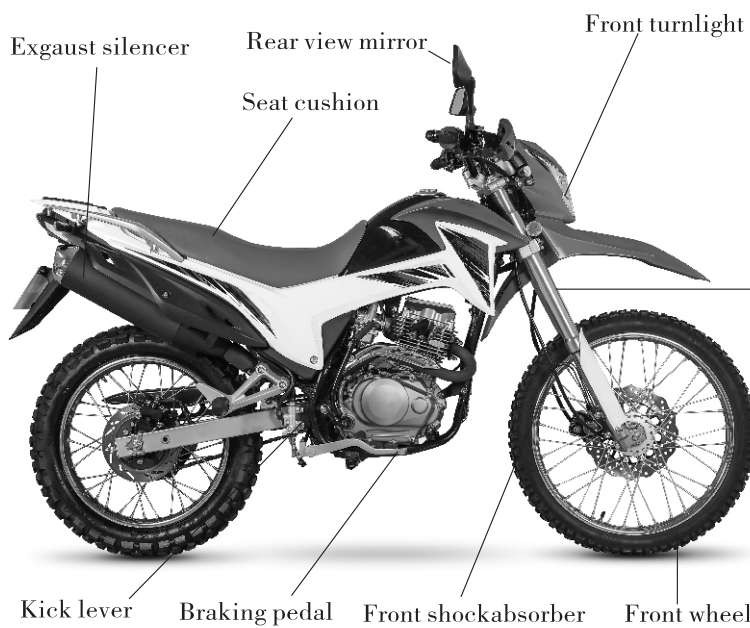
The ser. No. of frame [Vehicle Identification No.(VIN)] is on the right side and the brand on the front



Can choice



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Can choice



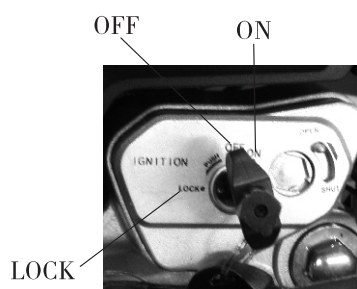
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IV.OPERATION

Ignition Switch

★ Ignition switch

Position	Function	Remarks
OFF	To stop the vehicle (switching off all circuits)	The key can be removed
ON	For starting or driving the vehicle(making all the main circuits)	The key can not be removed
LOCK	To lock the steering handle	The key can be taken out



Fuel Cock

① Fuel filling

The capacity of the fuel tank is 12.5L in total including 1.1L of reserve. Leadless gasoline of No. 93 or above or low_lead gasoline is required for the motorcycle. To fuel the vehicle, support it by the main stand, open the lock cover of the fuel tank and fill fuel through the opening, and then close the tank by the cover with the two on them in good alignment.

② Operation of the fuel cock(the valve of fuel tank)

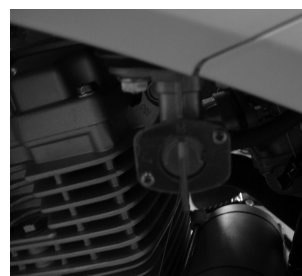
∪: With the handle of the fuel cock to “∪” position, the fuel circuit is through for fuel supply.

●: With the handle of the fuel cock to “●” position, the fuel circuit is cut off without

supply.

∪: With the handle of the fuel cock to ∪ position, the fuel is supplied from the reserve.

(Note: The reserved fuel can only be used when the normal supply is run out.) In this case, refueling should be carried out as soon as possible, for there is only some 1.1L of fuel reserve for use.



Fuel cock handle

Engine Starting

- ① Set the key of the ignition switch to “ON” position.
- ② Set the emergency stop switch to “Q” position.
- ③ Ascertain the neutral position, where it should be displayed.

④ Ascertain the amount of fuel in the tank.

⑤ Set the fuel cock handle to “ON” position.

★ To start a cold engine:

① Pull up the choke bar of the carburetor (to close the choke).

② Rotate the throttle twist grip by 1/8 to 1/4 turn.

③ Start the engine by the electric or the kick starting system.

④ Slightly turn the throttle twist grip to increase the speed of the engine so as to warm up the engine.

⑤ Turn the carburetor choke bar downward to “B”, fully open the choke when the engine is sufficiently warmed up.

★ Caution:

The engine can only be started after the neutral position is ascertained. Otherwise accident will happen.

Unnecessary idle running(especially at a high speed)is harmful to the engine.

★ Procedures of stopping engine:

① Release the throttle twist grip to slow down the engine.

② Turn to the neutral position.

③ Set the ignition switch key to “OFF” position.

④ Set the fuel cock(the fuel tank valve)handle to “OFF” position.

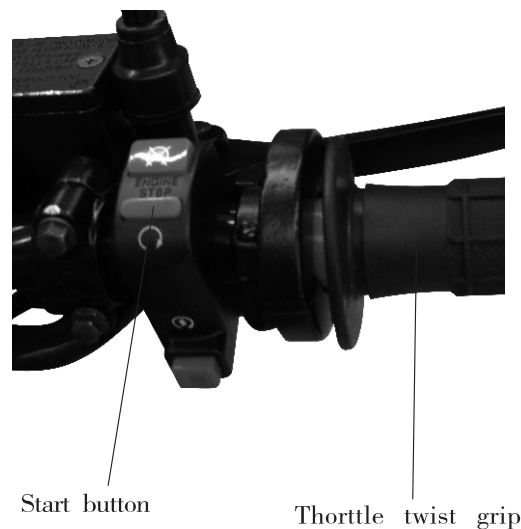
Switches on Right Handlebar

① Electric start button (no such device for the vehicle of kick start mode only)

The electric start button is located below the headlight switch. The engine will be started by Pressing down this button.

② Emergency stop switch

When starting the engine, set the emergency stop switch in "X" position to directly stop the engine by cutting off the electric power.



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Switches on Left Handlebar

① Headlight switch

The Headlight switch has three positions "☀", and "•" (a white point).

"☀": When the switch is in this position, the headlight and meter lights are all lit up.

"•": When it is in this position, the headlight, tail, brake, and meter lights are all off.

The headlight and taillight will be lit up only after the vehicle is started.

② Light changing switch

☷ position, Headlight is in high beam.

☶ position, Headlight is in low beam.

③ Turnlight switch

⇐ Position, Left

⇒ Position, Right

④ Horn button

press this button to horn.



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Gear Shifting

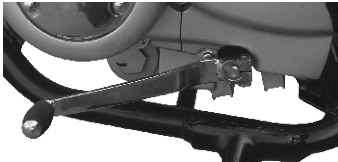
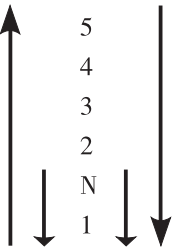
Warm up the engine for normal runing.

① When the engine is idling,disengage the clutch and tread the gear_shifting pedal to et the gear to the 1st position.

② Gradually increase the speed of the engine and slowly release the clutch lever,with a good coordination between the two operations to ensure a natural driving start.

③ When the motorcycle reaches a balanced state of running,slow down the engine,disengage the clutch again and tread the shifting pedal to change the gear to the 2nd position.The gear canbe shifted to other positions in the same way.

Shifting forward



Shifting backward4

V.Check-ups,Adjustments and Maintenance

Machine Oil Checking

The vehicle should be checked for machine oil before drive by supporting it with the main stand on a flat ground.The oil level should be between the upper and lowerlines of the oil gauge,which is not screwed into the filling orifice.

High quality 4-stroke machine oil,as Class SE or SD in API classification,of SAE 15W-40OE in viscosity will help maintain a long service life of the engine.In case those are not available,a substitute suitable for the ambient temperature of application should be selected according to the table on the right side.

Machine oil											
	20W. 50										
	5W. 40 15W. 50										
	10W. 40 10W. 50										
Machine oil	10W. 30										
°C		-30	-20	-10	0	10	20	30	40		
°F		-22	-4	14	32	50	68	86	104		



Machine oil gauge

Renewal of Machine oil

Machine oil plays a very important role in the normal operation of the engine and for that reason,it is necessary to check the motorcycle for machine oil periodically and renew the oil once every 800-1000 km of drive by the following procedures.

Remove the svrew plug from the bottom of the hot engine to drain off all old oil.

Wash the oil filter screen clean and re-mount it really to position.Then fill in 1.1L fresh machine oil and start the enging for idle running 2-3 minutes.

Let the engine stop for 2-3 minutes,and check to see whither the oil level is in between the upper and lower line the oil gauge.

Do not use any machine lil of a different grade than the specified one to avoid machinery failure.

Cleaning of Machine Oil Tank

① Drain off all the run-in machine oil from the oil tank.

② Dismount the related parts.

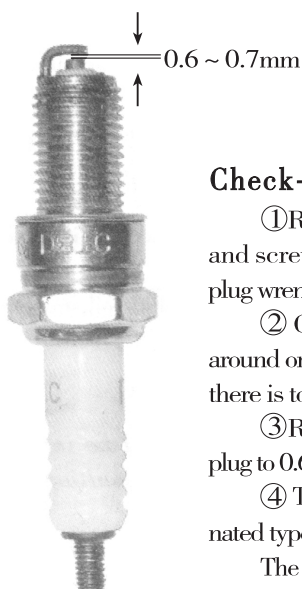
③ Wash clean all the related parts.

④ Fill in the required oil.

*This job should not be done by any untrained persons but shall be done at an authorized service center.



Screw plug for oil draining



Check-up of Spark Plug

① Remove the cap of spark plug and screw off the spark plug by the plug wrench.

② Clean the spark plug all around or replace it if it is corroded or there is too much deposit on it.

③ Regulate the gap of the spark plug to 0.6–0.7mm.

④ The spark plug of the designated type should be used.

The applicable type of spark plug as fallowing:

DESA

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Check-up, Cleaning of Air Filter

Take out the air filter and check if it is contaminated.

Dismounting:

Remove the left side cover screw of the filter, open the left cover and disassemble the air filter.

Cleaning:

Wash the filter in clean washing oil and wipe it dry with dry cloth.

Soak the filter element in clean machine oil, squeeze it dry and fit it back to position.

Recommended oil: 15W/400E

Caution:

The air filter element for use must be intact or the engine will suck in dust and dirt, resulting in a shorter service life of the engine.

Water should be prevented from entering into the filter in washing the vehicle.

The filter shall never be cleaned with gasoline or any other agent of a low ignition point.



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Adjustment of Throttle Cable

Make sure that the adjusting nut of the throttle cable works normally.

Check to see if the throttle twist grip is with the required free operating movement.

The required free operating movement: 2–6mm.

If the grip can not be so moved freely, turn the adjusting nut to ensure it.

****After adjustment, start the engine and check for the free operating movement again. Repeat the adjustment if necessary until it is as required.***



Adjusting nut Locking nut

Adjustment of Carburetor

Caution:

The idling speed adjustment of the engine should be carried out with a hot engine.

Set the idling speed to the required value by the help of the idling speed adjusting screw with the vehicle standing on a flat ground.

The required idling speed: 1,500r/min.



Idling speed adjusting screw

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Check-up & Adjustment of Air Valve Gap

Noise will stem from too big gap of the air valve. However if there is too small gap or even no gap at all, closing of the valve will be hindered, which will cause burn of the valve and output drop. Therefore, the air valve gap must be checked periodically.

The gap of the air valve should be inspected and adjusted with a cold engine by the following procedures:

① Remove the caps of the central hole and the top hole (the ignition timing observation hole) in the left crankcase cover.

② Remove the caps of the two air valves on the cylinder head.

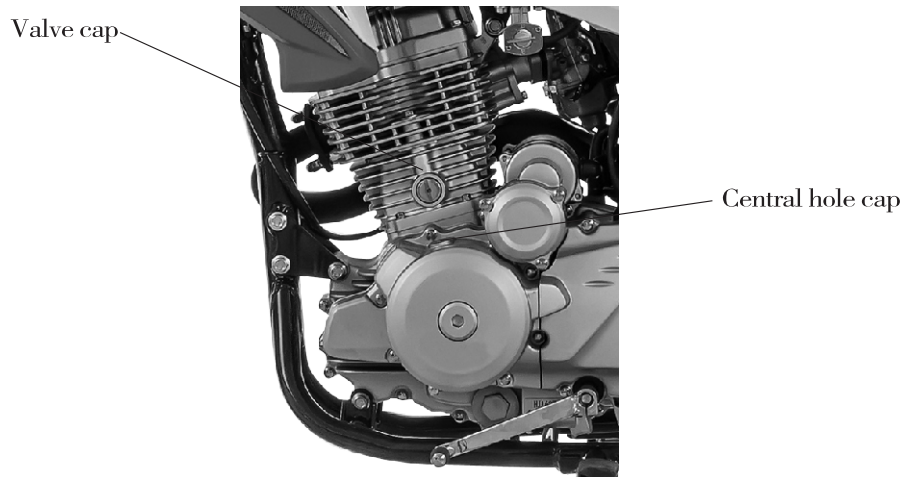
③ Insert the "T" key into the central hole of the crankcase cover, jam it against the nut of the flying wheel and then turn the flying wheel clockwise until the engraved "T" mark on the flying wheel aligns with the engraved line on the top of the crankcase cover. Swing the rocking arm slightly. A loose rocking arm (which indicates the existence of clearance) shows that the piston is in the lower stop position of the compressing stroke. In this case, continuously turn the "T" key clockwise for 360 degrees until the alignment of those engraved marks, where the valve can be adjusted. Afterwards, check the valve gap by inserting a feeler in between the valve adjusting screw and the end of the valve.

The specified air valve gap: 0.03–0.07mm for the intake and exhaust valves respectively.

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④ If the adjustment needed, loosen the locking nut of the valve, turn the adjusting nut till a slight resistance is felt on inserting the feeler.

At the end of the adjustment, tighten the "Locking nut" to prevent loosening and conduct another check to make sure that the valve gap is OK before all those dismantled caps are refitted on.



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Adjustment of Clutch

★ The clutch should be adjusted with the engine in stopped state.

There should be a free operating movement of 10–20mm at the end of the clutch lever as shown in the figure on the right side.

When adjustment is needed, loosen the locking nut on the clutch operating cable and set the clutch lever to the required range of free operating movement. In case of adjustment to be made to a great extent, turn the clutch adjusting screw stud on the right crankcase.

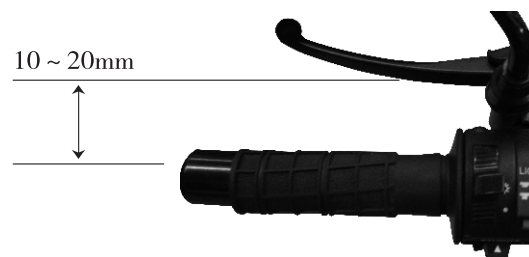
Is start the engine to ascertain whether the adjusted clutch works normally.

★ Readjustment has to be made if there is slipping of clutch or difficulty in the engagement of gears.

Brake Checking

(1) Pull up the front and rear brakes respectively and check for wear of the brake shoes. If the mark " " on the brake drum cover aligns with that " " on the brake cam, it means that the brake shoes are already worn to the limit and have to be.

(2) Replacement should be carried out at a designated service center and it is recommended that the parts made by our company are used there in 10–20mm.



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Adjustment of Front Brake

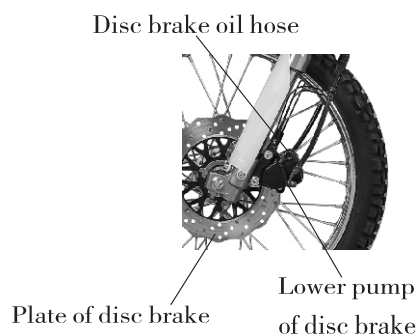
(1)The front brake lever has a free operating movement of 10–20mm as shown in the figure on the right side.

(2)If adjustment is needed,turn the adjusting nut near the lower side of the front hub,clockwise to reduce and counterclockwise to increase the free operating movement of the brake lever.

(3)After adjustment,the groove of the adjusting nut should be aligned with the pin of the brake arm.

Caution:

After adjustment,check the front braking system.The braking light should be lit up on time when the front brake is applied by gripping the brake lever.



Can choice



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Adjustment of Rear Brake

★ The vehicle should be supported by the main stand for check.

(1)The rear brake pedal has a free operating movement of 20–30mm as shown in the figure on the right side.

(2)To make adjustment,turn the rear brake adjusting nut clockwise to reduce and counterclockwise to increase the free operating movement of the brake pedal.

(3)After adjustment,the groove of the adjusting nut should be aligned with the pin of the brake arm.

Caution:

After regulation,check the rear braking system.The braking light should be lit on time when the rear brake is applied by stepping down the brake pedal.

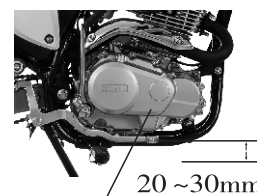
Adjustment of Chain

★ Check the chain for wear,tension and lubrication.

(1)With the motorcycle supported by the main stand,turn the upper and lower portions of the chain by hand to check for its tension to see if the sag is within the specified range of 10–20mm.

(2)When regulation is needed,loosen the axle nut and locking nut of the rear wheel,then set the chain to the required tension by turning the adjusting nut.

(3)Apply a little grease to the chain.



Rear brake pedal

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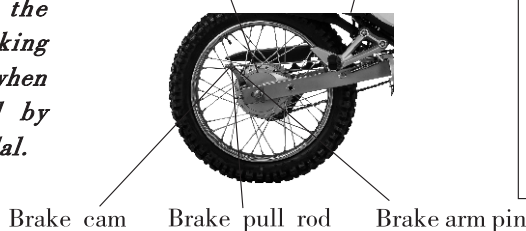
Disc brake oil hose



Plate of disc brake
Lower pump of disc brake

Adjusting nut

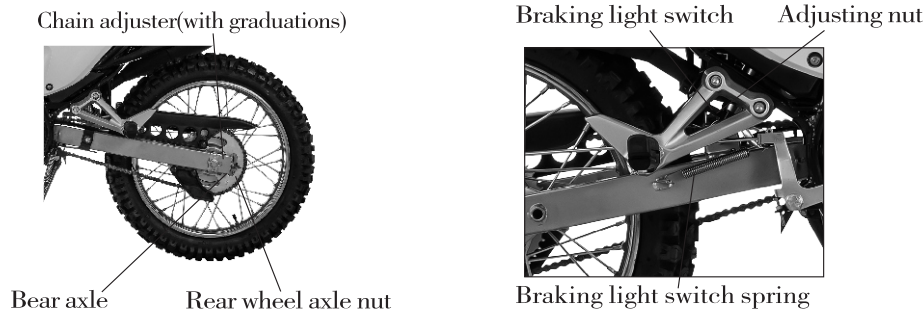
Rear brake arm



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Caution:

At the end of regulation, the marks on the chain adjuster should be in good coordination with the engraved line on the horizontal fork as the position is concerned.



Adjustment of Braking Light Switch

★ The braking light should be lit up on time as soon as the rear wheel is braked. If not, regulation shall be made by turning the adjusting nut.

★ With the braking light switch in "ON" position, the braking light should be lit up. If not, check should be carried out to see whether the braking lamp, circuit and switch work normally. Make replacement if needed.

Caution:

For the adjustment of the braking light switch, the brake needs to be first checked to make sure that the free operating movement is ensured within the specified range.

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Battery Vhecking

- ① Open the right side cover.
- ② Clean away dust and corrosive from the surface of the battery.
- ③ Seriously corroded conductor connectors of the battery shall be replaced.

Caution:

To dismantle battery, disconnect the negative(-) electrode before the positive(+) one, and vice versa in installation. Ensure against any contact of the positive(+) electrode with the vehicle body.

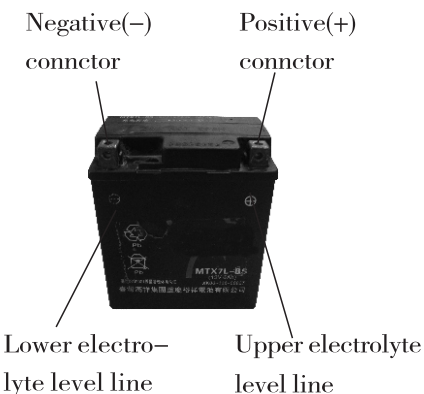
Never have the electrolyte level come over the upper mark line when adding distilled water. Otherwise overflow and corrosion will occur.

The electrolyte contains

sulfuric acid and will cause serious hurt to skin and eyes by contact. In case of contact with it, wash it off for 5 minutes and see a doctor immediately.

Foreign matter should be prevented from entering into the battery during dismantling and installation.

The breathing pipe must be kept unblocked.



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Replacement of Fuse

Set the ignition switch to "OFF" position. The specified fuse tube of 15A should be used for replacement.

Open the left side cover, remove the fuse holder on the side of the battery and replace the fuse tube.

If the new fuse tube is broken again as soon as it is fitted on, it means that there is some trouble with other electric parts.

Caution:

Do not use any fuse over 10A

Be sure not to wash the battery when washing the vehicle.

Vehicle Washing

Cleaning the vehicle regularly can slow down the color fading of its body make it easier to check if there is any damage and any oil leakage with it.

Caution:

Washing the motorcycle with over-pressurized water may cause damage to some of its components. Therefore, do not jet over-pressurized water directly on to –the following parts:

- Wheel hub
- Exhaust pipe
- Fuel tank and lower portion of cushion
- Carburetor
- Head lock and ignition switch
- Meters

(1) After pre-wiping, the vehicle should be washed with clean water to remove dirty residues so as to prevent corrosion. Plastic subassemblies should be cleaned by wiping with cloth or sponge soaked in neutral detergent solution, followed by washing with clean water.

(2) After the cleaned vehicle is air dried, grease the chain and run the engine at idling speed for a few minutes.

(3) Prior to driving, carefully check braking system repeatedly and repair or adjust it if necessary.

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Maintenance in Non-use Time

Storage and Maintenance

For the motorcycle to be stored for a long period of time, attention should be paid to the prevention of moisture, sunshine and rain attack in order to protect it from unnecessary damage. Special check-ups should be carried out on those important parts and subassemblies before storage.

- ① Change lubricating oil.
- ② Grease the chain.
- ③ Drain off fuel from the fuel tank and carburetor (for the vehicle not to be used for over a month, the fuel in the latter must be thoroughly drained away), turn off the fuel cock and fill antirust solution into the fuel tank, followed by closing the tank with the cover.

Caution:

As fuel is inflammable, the engine should be stopped before filling or drain fuel and it is prohibited to smoke at the fuel storing, filling or draining location.

- ④ Take out the spark plug, fill about 15–20ml of clean lubricating oil into the cylinder, step down the kick lever repetitively for several times and finally fit the spark plug back on.

Attention:

The ignition switch key must be set to "OFF" position before stepping down the kick lever. To protect the ignition system from damage, the spark plug should be put on its cap and earthed.

- ⑤ Dismantle the battery and put it in a shady, cool and well-ventilated place. It is suggested that the battery be charged once a month.

- ⑥ Clean the vehicle, spray the colored part with color fastening agent and apply antirust oil to the part vulnerable to rust.

- ⑦ Inflate the tyre as required and pad the vehicle up with the two wheels clear of the ground.

- ⑧ Put the covering over the motorcycle.

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Resumption of Service

① Remove the cover and clean the vehicle. Change the lubricating oil if the vehicle has been off service for over 4 months.

② Charge the battery and remount it.

③ Drain off the antirust solution from the fuel tank, followed by filling fuel therein to the required level.

④ Prior to driving, test the vehicle at low speed in a safe place.

Maintenance Routine Diagram

The vehicle should be under good maintenance as specified in the following table, where;

"I" means: Check, cleaning, adjustment, lubrication and/or replacement are needed.

"C" means: Cleaning is needed.

"R" means: Replacement is needed.

"A" means: Adjustment is needed.

"L" means: Lubrication is needed.

"*" means: This item of maintenance should be carried out at a service center. It may be also done by the user himself with reference to this manual provided he has special tools, sparts and is capable of this job.

"**" means: This item can only be carried out by the serviceman at General Accessories Corp. service center in order to ensure safety.

Notes: 1. Maintenance should be conducted more frequently when the motorcycle drives in dusty areas.

2. When the read-out of the odometer exceeds the maximum figures specified in the table, maintenance should be still cycled according to the interval of mileage stated herein.

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Frequency		item / Frequency	Odometer km (Note 2)				Remark
Item	of Maintenance		1000km	4000km	8000km	12000km	
*	Circuit of fuel system			I	I	I	
*	Fuel filter		C	C	C	C	
*	Throttle operating system		I	I	I	I	
*	Choke of carburetor			I	I	I	
	Air filter element	R – yearly		C	C	C	
	Spark plug	R – yearly	I	I	I	R	
*	Air valve gap		I	I	I	I	
	Air valve gap		I		I	I	
	Engine lubricating oil		R	One replacement every 2000km			
	Lubricating oil screen	Monthly		C	C	C	
*	Tension of chain		A	A	A	A	
*	Idling speed of carburetor			I	I	I	
	Driving chain	R – 4year		I, Every 500km			
	Battery		I	I	I	I	
	Wear of brake shoes	r-2year		I	I	I	
	Rear braking system		I	I	I	I	
**	Braking liquid hose			I	I	I	also for disc style
**	Cup of braking liquid	I	I	I	I	I	
**	Braking liquid		One replacement every two year				
**	Front braking system		I	I	I	I	
*	Rear braking light switch		I	I	I	I	
*	Light changing of headlight		I	I	I	I	
	Clutch		I	I	I	I	
	Side stand			I	I	I	
*	Suspension		I	I	I	I	
*	Nuts, bolts & other fasteners		I	I	I	I	
**	Wheel / spokes		I	I	I	I	
**	Bearing of steering handle		I			I	

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Remote-Controller's Function Operation And Instructions

Function operation:

- Set acousto-optic anti-theft:

Press the button The horn will sound & the turnlight flash once. three seconds later, be in the warning state of acousto-optic anti-theft.

- Anti-theft sensing:

In the state of anti-theft, any shock to the motorcycle makes the system present impedance followed with horn sounding once & turnlight flashing once. in case of further harassing activities within the following three seconds, the system is to sound the alarm immediately; horn ringing, turnlight flashing and engine being locked automatically. remain warning state after the alarm stopped automatically. in case the motorcycle is stolen, electric switch shall flashing and engine being locked automatically.

- Anti-theft relieving:

In the state of anti-theft, press the button and the horn will sound twice & the light flash twice to relieve the state of anti-theft.

- Remote-control starting:

Press the button to ignite and drive the motorcycle without start. if difficult, press the button longer till starting.

Press the button to stop the motorcycle in the state of remote-control starting.

- Anti-rob:

In the state that the engine is working, press the button to stop the motorcycle in such emergencies as being robbed of or stolen.

- Acousto-optically target-seeking:

Set acousto-optic anti-theft, three seconds later, press the button for horn and light flash so as to find the motorcycle at the parking lot.

Instructions to remote-controller use.

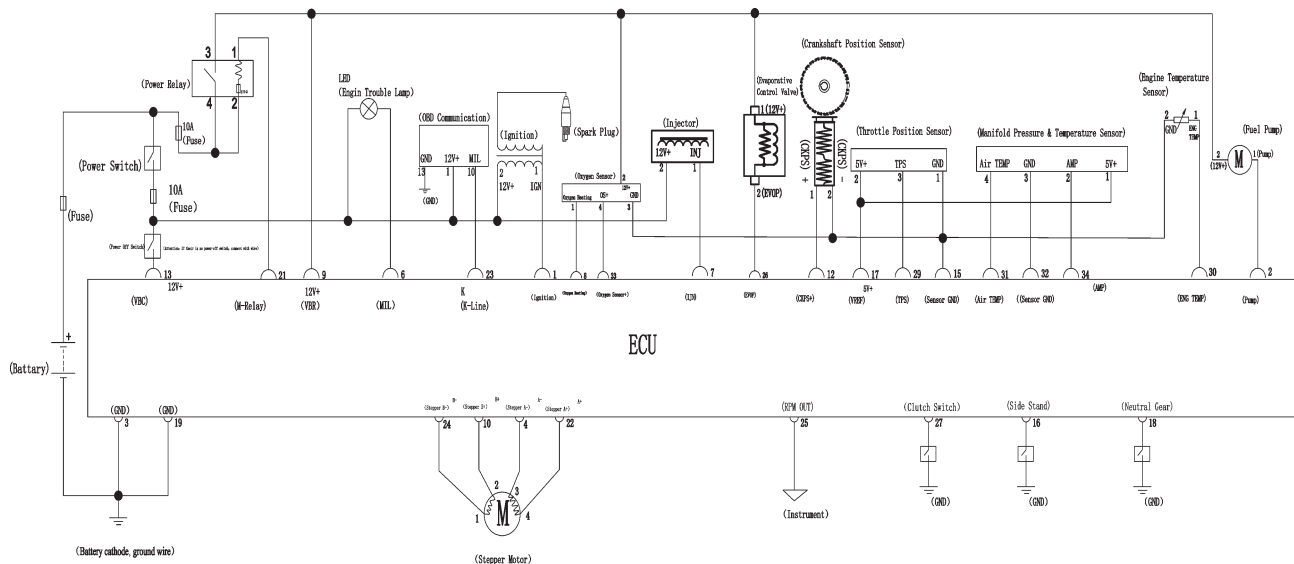
- The function of remote-control starting only applies to the motorcycles which is equipped with automatic transmission or able to electrically start.

- Pay attention to the prevention of soaking, hard throwing and high temperature to avoid natural loss of electrical power.

- Do not put the keys to the remote-controller into the lock.

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ELECTRICAL DIAGRAM

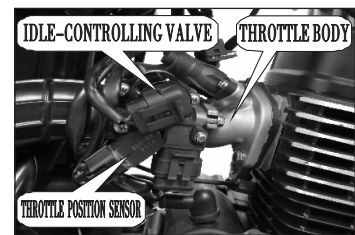


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1. **THROTTLE BODY:** Controlling the air intake of the engine. If the throttle position sensor is broken, the motorcycle can not perform well, it must be replaced (Checking the fault codes to find the problem).

① **IDLE-CONTROLLING VALVE:** Linear type stepping motor, controlling the air intake in Idle condition

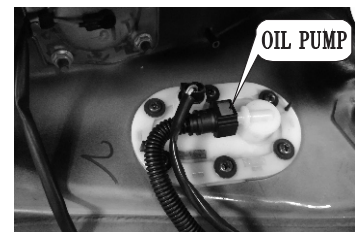
② **THROTTLE POSITION SENSOR:** Measuring the opening degree of the throttle



2. **INJECTION UNIT:** Spraying accurate amount of fuel according to the calculation of ECU to make sure that the fuel is fully burnt. When it is in trouble, please replace it with a new one. (You can detect different faults according to the fault code of the attached file.)



3. **OIL PUMP:** Sucking the fuel into the pump from the fuel tank and injecting it into the oil pipe by high pressure. (If the oil can't get into the engine or the acceleration is not good, you need to check the pump)



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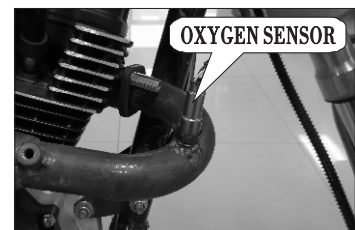
4. **ECU:** By getting the information from all sensors, ECU can check the condition of the engine and generate the signal of injecting oil or igniting. The motorcycle can't work if the ECU is in trouble. In this condition you need to replace it with a new one. (You can detect different faults according to the fault code of the attached file.)



5. **MIL Light :** The MIL Light will light up if there is any problem for the EFI system. (You can detect different faults according to the fault code of the attached file.)

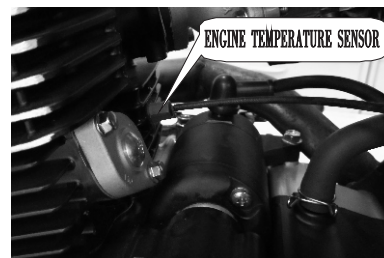


6. **OXYGEN SENSOR:** It can test the concentration of the oxygen in the exhaust gas. According to it, ECU will adjust the amount of the fuel to inject and always keep the air-fuel ratio in the best condition. If the oxygen sensor is in trouble, it will result in the higher fuel consumption and insufficient power. (You can detect different faults according to the fault code of the attached file.)



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7. ENGINE TEMPERATURE SENSOR: It can sense the temperature of the head cylinder. According to it, the ECU can check the condition of the engine to adjust the amount of injecting oil. If the engine temperature sensor is in trouble, it will result in difficult in starting and higher oil consumption. In this condition you need to replace it with a new one. (You can detect different faults according to the fault code of the attached file.)



FAULT CODES LIST

Sensor Name	Trouble Code	trouble lamp flashing code	Definition	describe
Intake Air Temperature & pressure sensor	P0112	31	Intake Air Temperature Sensor 1 Circuit Low	short to ground
	P0113	32	Intake Air Temperature Sensor 1 Circuit High	short to battery
	P0107	41	Manifold Absolute Pressure/Barometric Pressure Circuit Low Input	short to ground
	P0108	42	Manifold Absolute Pressure/Barometric Pressure Circuit High Input	short to battery
Oxygen Sensor	P0131	51	O2 Sensor Circuit Low Voltage	short to ground
	P0132	52	O2 Sensor Circuit High Voltage	short to battery
	P0134	53	O2 Sensor Circuit No Activity Detected	open load
	P0030	57	H02S Heater Control Circuit	open load
	P0031	55	H02S Heater Control Circuit Low	short to ground
	P0032	56	H02S Heater Control Circuit High	short to battery
Crankshaft Position Sensor	P0335	63	Crankshaft Position Sensor "A" Circuit	Abnormal signal
Throttle Position Sensor	P0122	21	Throttle/Pedal Position Sensor/Switch "A" Circuit Low	short to ground
	P0123	22	Throttle/Pedal Position Sensor/Switch "A" Circuit High	short to battery
Engine temperature sensor	P0117	11	Engine Coolant Temperature Circuit Low	short to ground
	P0118	12	Engine Coolant Temperature Circuit High	short to battery
Injector	P0201	17	Injector Circuit/Open - Cylinder 1	open load
	P0261	15	Cylinder 1 Injector Circuit Low	short to ground
	P0262	16	Cylinder 1 Injector Circuit High	short to battery
Ignition Coil	P2300	27	Ignition Coil "A" Primary Control Circuit Low	open load
	P2301	26	Ignition Coil "A" Primary Control Circuit High	short to battery
Evaporative Emission Control Valve	P0444	77	Evaporative Emission System Purge Control Valve Circuit Open	open load
	P0458	75	Evaporative Emission System Purge Control Valve Circuit Low	short to ground
	P0459	76	Evaporative Emission System Purge Control Valve Circuit High	short to battery
Idle Air Control Stepper Motor	P0505	47	Idle Air Control System	open load
	P0508	45	Idle Air Control System Circuit Low	short to ground
	P0509	46	Idle Air Control System Circuit High	short to battery
Fuel Pump	P0627	37	Fuel Pump "A" Control Circuit Open	open load
	P0629	36	Fuel Pump "A" Control Circuit High	short to battery
ECU Power Relay	P0685	67	ECM/PCM Power Relay Control Circuit Open	open load
	P0687	66	ECM/PCM Power Relay Control Circuit High	short to battery
ECU	P0601	94	Internal Control Module Memory Check Sum Error	ECU Trouble