

DAZON



SERVICE MANUAL

Raider Pro 250S/D
(Single/Double Seat)

EEC APPROVED ON ROAD



FOREWORD

This service manual has been specially prepared to provide all the necessary information for the proper maintenance and repair of the **RAIDER PRO 250 (EEC-approved for on-road use)**.

The **Buggy** fits the needs of a wide variety of buggy users above 16 years old. Those who will service this **Buggy** should carefully review this manual before performing any repair or service.

All information, illustrations, photographs and specifications contained in this manual are based on the latest product information available at the time of publication. Due to the improvements or other changes, there may be some discrepancies in this manual. Therefore, if the newest information is requested in future, please contact the local distributor.

Distributors reserve the right to make production changes at any time, without prior notice or incurring any obligation to make the same or similar changes for the vehicles previously built or sold.

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1. General Information

1.1 Model Identification

1.1.1 Frame Number

The frame number or VIN is stamped under the seat on the vehicle frame and is stuck behind the seat.

1.1.2 Engine Number

The engine number is located on the upper right rear engine case.



1.2 Fuel and Oil Recommendations

Be sure to use the specified fuel and oil

1.2.1 Fuel

Please use the gasoline of SAE 90# or above.

Also we recommend you to use the unleaded gasoline.

1.2.2 Engine Oil

Please use the high-quality engine oil of SAE 10w/30SF.

1.3 Break-in Procedure

For your first 2 hours of riding, don't exceed 2/3 throttles.

Vary the engine speed for the first 5 hours.

Never hold the engine at full throttle for long periods of time.

1.4 Specifications

DIMENSIONS	SINGLE-SEAT / DOUBLE-SEAT
Overall Length	2250mm / 2270mm
Overall Width	1360mm / 1610mm
Overall Height	1550mm / 1533mm

Wheelbase	1700mm
Ground Clearance	250mm
VIN	accord with GMVR A01-01
Statutory Plate & Safety Labels	accord with GB 7258-1997

ENGINE

Model	PMI172MM
Type	Forced Water-cooled, Single Cylinder, 4-stroke
Engine Capacity	250cc
Displacement	244.3ml
Bore × Stroke	72mm × 60mm
Max. Power	12.5kw or 6500rpm
Max. Torque	17.6N.m or 6000 rpm
Idle Speed	1500±100rpm
CO Emission	7.0g/km
HC Emission	1.5g/km
Fuel Type	SAE 90# or Above (Unleaded)
Min. Fuel Consumption	354g/KW.h
Lubricate Oil Type	SAE 10W / 30SF
Lubrication	Pressure & Splash
Cooling Fluid	Anti-corrosive, Anti-freeze
Cooling	Water-cooled, Electric
Ignition	C.D.I.
Starting	Electric
Spark Plug	D7
Spark Plug Gap	0.6-0.7mm
Transmission	Chain Transmission
Transmission Ratio	F 1:1, B 1:1.758
Primary Transmission Ratio	2.2-0.9
Compression Ratio	10.0 : 1
Reduction Ratio	6.6
Clutch	Automatic, Centrifugal, Dry, Shoe Type
Generator	Outer Rotor, Flywheel
Carburetor	Vacuum Film Type
Absorber	Normal (in 10 ⁶ X10 ⁴ times of experiments)
Air Cleaner	Paper Element, Filtration Type
Gear-Shifting	Automatic, Centrifugal

CAPACITIES

Front/Rear Tire Load Coefficient	77
Front/Rear Tire Speed Level	M
Fuel Tank	9.5L, 130kpa (no leakage in experiments)
Starting Time	15s

Climbing	20%
Top speed	70kmph
Tachometer	33-40kmph
Turning Radius	6m / 5m
Acceleration Noise Level	≤80dB (A)
Horn	12V 3A 105dB, 93<db (A) <112
Headlight	12V 35W/35W
Headlight High Beam Intensity	regulations/law-oriented
Taillight	12V 5W /21W
Turning Light	12V 10W
License Light	12V 5W
Battery	12V 9A
Anti-theft Lock	200N.m
Rearview Mirror	accord with EEC standards

CHASSIS

Front/Rear Brake	Hydraulic Disc, Foot Control
Front Wheel Brake Force	923N / 1258N
Rear Wheel Brake Force	1288N / 1488N
Braking Distance	7 m@30kmph
Parking Brake	Hydraulic Disc, Hand Control
Front Tire	20.5 X 8.0 –10
Rear Tire	20.5 X 8.0 –10

TIRE PRESSURE

Front	175kpa
Rear	200kpa

WEIGHT

Net Weight	295kg / 320kg
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* The specifications are subject to change without prior notice.

1.5 Location of Parts

Double-seat



Single-seat



* Please demand for a copy of the Parts Book from your dealer and locate each component location.

2. Periodic Maintenance and Tune-up Procedures

2.1 Periodical Checks and Services

The maintenance intervals in the following table are based upon average riding conditions. Riding in unusually dusty areas requires more frequent services.

Items \ Time of Service	Initial Service (First Week)	Monthly	Quarterly	Yearly
Tire Pressure/Wear	I	I		
Brake Performance	I	I		
Bolt Tightness	I	I		
Air Cleaner		C	C	I
Carburetor	I	A		C
Spark Plug			C, A	
Drive Chain	I	I	C, A, L	
Brake Fluid			I	
Replacement Of Gearbox Oil		I	R	
Chassis		C, I	L	
Fuel Switch/Fuel Tank				C
Chassis	I		I	
Engine Oil		R		
Valve Clearance Of Engine			A	

Notes: A: Adjust; C: clean; I: inspect, clean or replace if necessary; L: lubricate; R: replace.

2.2 Maintenance and Tune-up Procedures

This section describes the servicing procedures of every item in the Periodic Maintenance Intervals Table above.

2.2.1 Spark Plug

Clear up the carbon around the spark plug to prevent it from dripping into the cylinder when removing the spark plug.

Removing steps:

In general, it should be carried out after the engine has become cold.

- a. If the spark plug is too tight to remove, spray some rust inhibitor on the spark plug washer and the thread part; after the inhibitor has



- soaked the washer and thread part, rotate the spark plug;
- Clear up the filth and carbon accumulation on the spark plug with a steel brush or a blade;
 - Inspect the spark plug gap (in general it should be about 0.6 - 0.7 mm.);
 - If the carbon accumulation or the wear of the spark plug is too serious, replace the spark plug with a new one of the same specification.

2.2.2 Tire Pressure / Wear

Check the tire pressure before each of your driving.

The tire pressure is very important for the riding stability.

Specifications: Front Tire: 175kpa

Rear Tire: 200kpa

2.2.3 Brake Performance

- Always check if there is plenty of brake fluid in the brake fluid reservoir;
- Check if the front/rear brake pad is in good condition;
- Check the brake rotor for abnormal wear.



2.2.4 Air Cleaner

Clean the air cleaner quarterly, or more often when driving in dusty conditions.

If the air cleaner is clogged with dust, its performance will be severely decreased, even the engine damages will probably be caused.



Inspection and Cleaning of Filters

● Paper Filter

- Remove the filter from its housing;
- Lightly tap the filter on an object to knock out the dust;
- Replace the filter element if it is wrinkled or torn.

● Foam Filter

- Remove the filter out of its steel cage;
- Wash the filter in non-flammable cleaning solvent;
- Submerge the filter in oil and squeeze it to remove excess oil;
- Install the filter element back into the air box.

CAUTION

- Before and during the cleaning, inspect the element for tears; replace it if it's torn.
- Make sure that the element is seated properly and no foreign material can pass by it

2.2.5 Nuts and Bolts in Chassis

Inspect the nuts and bolts in the chassis during the first week and every month thereafter.

The nuts and bolts become loose normally after use, please check for the looseness regularly.

2.2.5 Tightening Torque Table

Bolt Diameter (mm)	Conventionally Marked Bolt			8.8 Marked Bolt		
	N•m	Kg•m	lb-ft	N•m	Kg•m	lb-ft
4	1-2	0.1-0.2	0.7-1.5	1.5-3	0.15-0.3	1.0-2.0
5	1-4	0.2-0.4	1.5-3.0	3-6	0.3-0.6	2.0-4.5
6	4-7	0.4-0.7	3.0-5.0	8-12	0.8-1.2	6.0-8.5
8	10-16	1.0-1.6	7.0-11.5	18-28	1.8-2.8	13.0-20.0
10	22-35	2.2-3.5	16.0-25.5	40-60	4.0-6.0	29.0-43.5
12	35-55	3.5-5.5	25.5-40.0	70-100	7.0-10.0	50.5-72.5
14	50-80	5.0-8.0	36.5-58.0	110-160	11.0-16.0	79.5-115.5
16	80-130	8.0-13.0	58.0-94.0	170-250	17.0-25.0	123.0-181.0
18	130-190	13.0-19.0	94.0-137.5	200-280	20.0-28.0	144.5-202.5

2.2.6 Fuel Switch (Petcock)

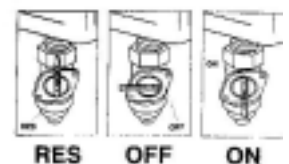
● Fuel Switch Service

- Periodically clean the petcock outside with the grease remover and water;
- Check for any leak or seeping fuel;
- Replace the petcock if there is any leakage.

● Fuel Valve Lever

On this vehicle, there is a manually-operated fuel valve lever with three positions:

- "ON" position: It's the normal operating position where the fuel flows into the carburetor;
- "RES" position: If the fuel lever is in the "ON" position and it is too low for the engine to operate, turn the fuel lever to the "RES" position to use the reserved fuel supply, and refuel as soon as possible;
- "OFF" position: It's the closing position. When the vehicle is not in use, always make sure that the petcock is in the "OFF" position



2.2.7 Final Gear Oil

Inspect the final gear oil monthly and replace it quarterly.

- Check the oil level: remove the oil level screw on the left rear engine case;
- Drain out the oil: remove the drain plug at the rear bottom of the engine case;
Recommendation: before draining the final gear oil, please warm the engine for at least 10 minutes.



Notes: We recommend the Mobile 85w/90 gear oil for the final drive case. However, in extreme cold weather conditions, the vehicle may become hard to start, so we advise some lighter viscous oil, such as 75 wt or the equivalent motorcycle transmission fluid.

Gear Oil Capacity	0.2L	85w/90
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2.2.8 Engine Oil

Inspect the engine oil before every riding and replace it monthly. ■

- Remove the drain plug from the left side bottom of the engine, and drain out the left oil into an oil pan for disposal;
- Remove the large cap on the left bottom of the engine, and remove the screen;
- Wash the screen with some cleaning solvent and reassemble it; make sure that the O-ring is still in good conditions;
- Refill the engine with the SAE10W/30SF engine oil and run the engine for 5 minutes;
- Check the oil level on the filler cap stick to assure that it's proper;
- Screw back the large cap.



2.2.9 Chassis

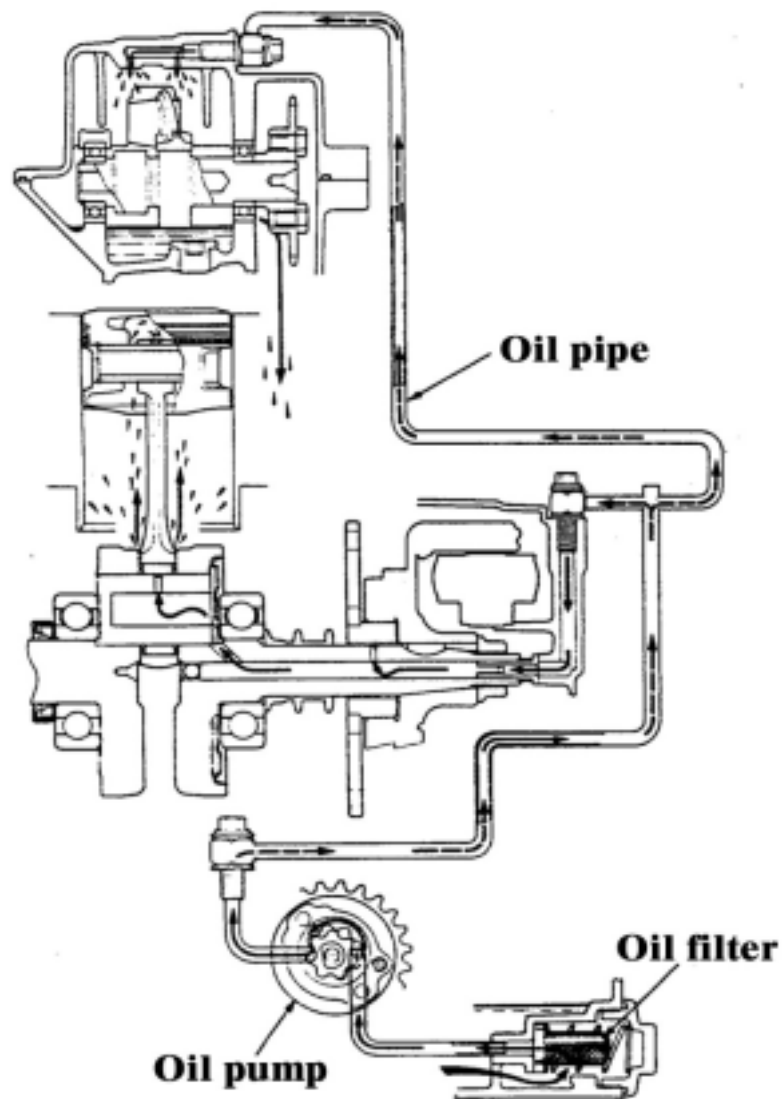
Inspect, clean or replace it monthly if necessary and lubricate it quarterly.

- Grease the chassis bushings and bearings with some grease quarterly to make sure that they can operate smoothly and enjoy an extended life;
- If it's used in extremely wet, muddy or dusty conditions, we recommend you to service it more often.

3. ENGINE

3.1 Lubrication System

3.1.1 Lubrication Diagram



3.1.2 Trouble Shooting

- The engine oil level is too low.
 - a. The engine oil has been consumed naturally;
 - b. The engine oil has leaked;
 - c. The piston rings are worn.
- The engine oil is dirty.
 - a. The engine oil hasn't been replaced in time;
 - b. The cylinder head gasket is damaged.
- The lubrication isn't good.
 - a. The engine oil level is too low;
 - b. The oil filter or oil pipe is clogged;
 - c. The oil pump is damaged.

3.1.3 Specifications

Engine Oil Capacity	1.0L (Disassembling)	0.8L (Replacing)
Engine Oil Type	SAE 10W/30SF	

3.1.4 Engine Oil Services

- Engine Oil Level Inspection
 - a. Stop the engine;
 - b. Stay the vehicle on the flat ground for 2-3 minutes;
 - c. Inspect the engine oil level.

Notes: The engine oil level gauge shouldn't be screwed in.

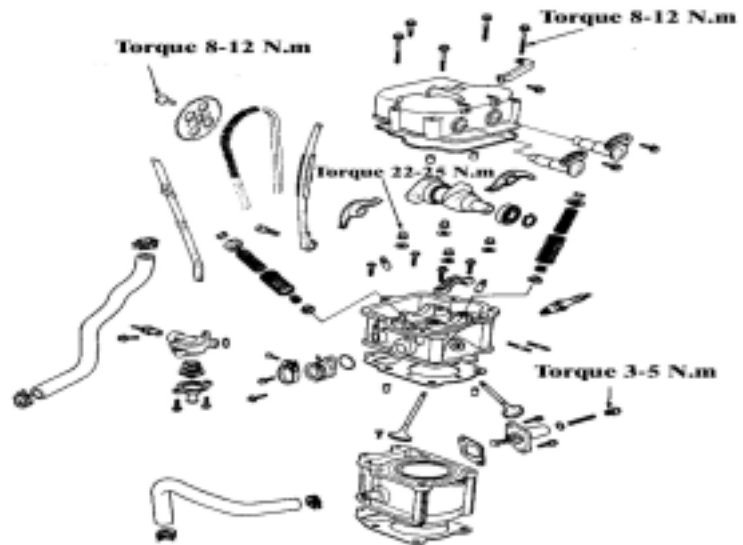


- Engine Oil Replacement
 - a. Remove the engine oil filler cover;
Drain out the engine oil when the engine is warm;
Reassemble the filler cover (Torque: 18-20 N.m.);
 - b. Check if the O-rings are damaged; replace them if necessary;
 - c. Fill in the new engine oil;
Engine oil capacity: 1.0 L (Disassembling)
0.8L (Replacing)
Engine oil type: SAE 10W/30SF
 - d. Start the engine to check if there is any leakage;
Stop the engine and check the oil level again.
- Engine Oil Screen Replacement
 - a. Drain out the engine oil, and take out the filter cap and spring;
 - b. Replace the engine oil screen;
 - c. Reassemble the spring and filter cap;
 - d. Add the specified engine oil into the engine;
 - e. Recheck the engine oil level.



3.2 Cylinder Head & Valve

3.2.1 Disassembly Diagram

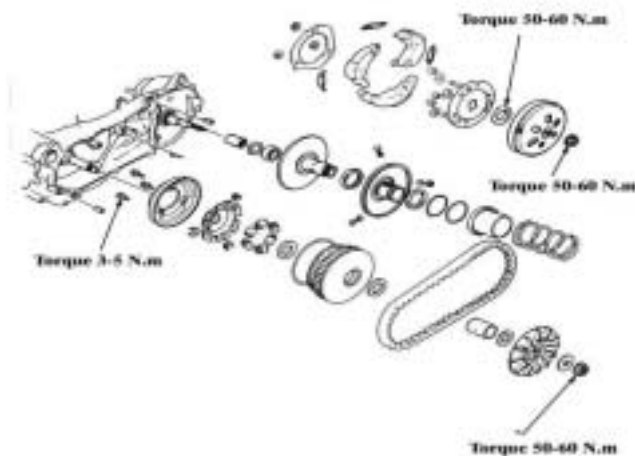


3.2.2 Trouble Shooting

- The compression is too low or not stable.
 - a. Valve
 - The lifter hasn't been adjusted well;
 - The valve is burnt or deformed;
 - The valve spring is damaged;
 - The valve timing is faulty;
 - The valve seat seal is faulty.
 - b. Cylinder Head
 - The cylinder head gasket leaks air;
 - The cylinder head is deformed or cracked.
 - c. Cylinder Piston is faulty.
- The compression is too high.
 - a. There is a carbon accumulation on the piston or in the combustion chamber.
- Noise
 - a. The lifter hasn't been adjusted well;
 - b. The valve is burnt, or the valve spring is damaged or worn;
 - c. The rocker or the rocker shaft is damaged or worn.

3.3 Drive Pulley, Clutch & Driven Pulley

3.3.1 Disassembly Diagram



3.3.2 Inspection and Service

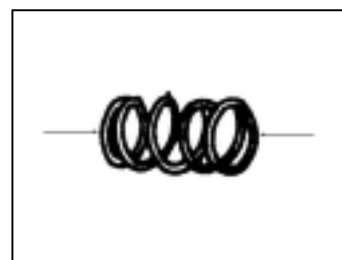
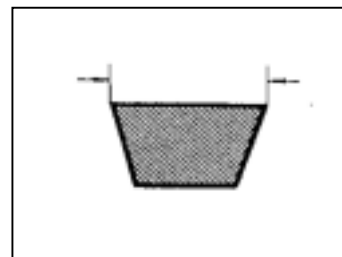
- Drive Belt
 - a. Check if the drive belt is cracked;
Check if there is abnormal worn;
 - b. Measure the width of the drive belt;
Service limit: replace if below 17.5 mm.

- Clutch.
 - a. Check if the clutch cover is worn or damaged;
 - b. Measure the inner diameter of the clutch cover;

Service limit: replace if above 130.5 mm.;

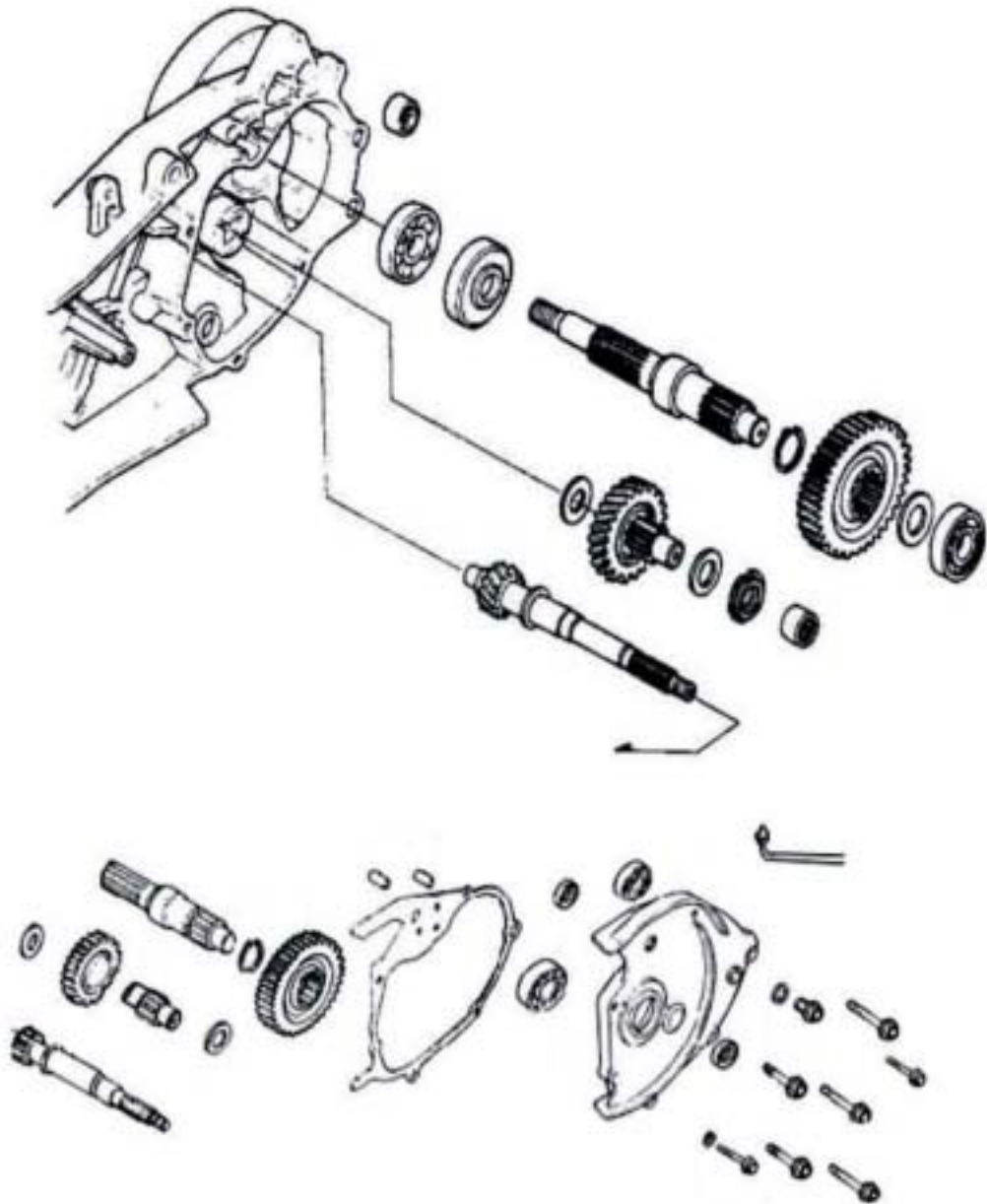
 - c. Check if the clutch shoes are worn or damaged;
 - d. Measure the thickness of the clutch shoes;
Service limit: replace if below 2.0 mm.

- Drive Spring
 - a. Check the free length of the drive spring;
Service limit: replace if below 83.2 mm.



3.4 Gearbox

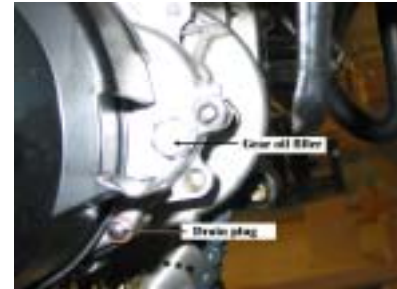
3.4.1 Disassembly Diagram



3.4.2 Inspection and Replacement of Gearbox Oil

- Inspection of Gearbox Oil level
 - a. Stay the vehicle on the flat ground;
 - b. Stop the engine and remove the oil level bolt;
 - c. Inspect the gearbox oil level;
If the oil level parallels with the oil level bolt hole, it's normal.

- Replacement of Gearbox Oil
 - a. Replace the gearbox oil with the specified type;
Gearbox Oil Capacity: 0.2 L
Specified Gearbox Oil: Mobil 85w/90
Gearbox Oil Level Bolt Torque: 14-18 N.m
 - b. Check if there is any oil leakage after running the engine;
Check the oil level again;
 - c. Check if the gearbox oil seal is damaged, and replace it if necessary.



3.4.2 Trouble Shooting

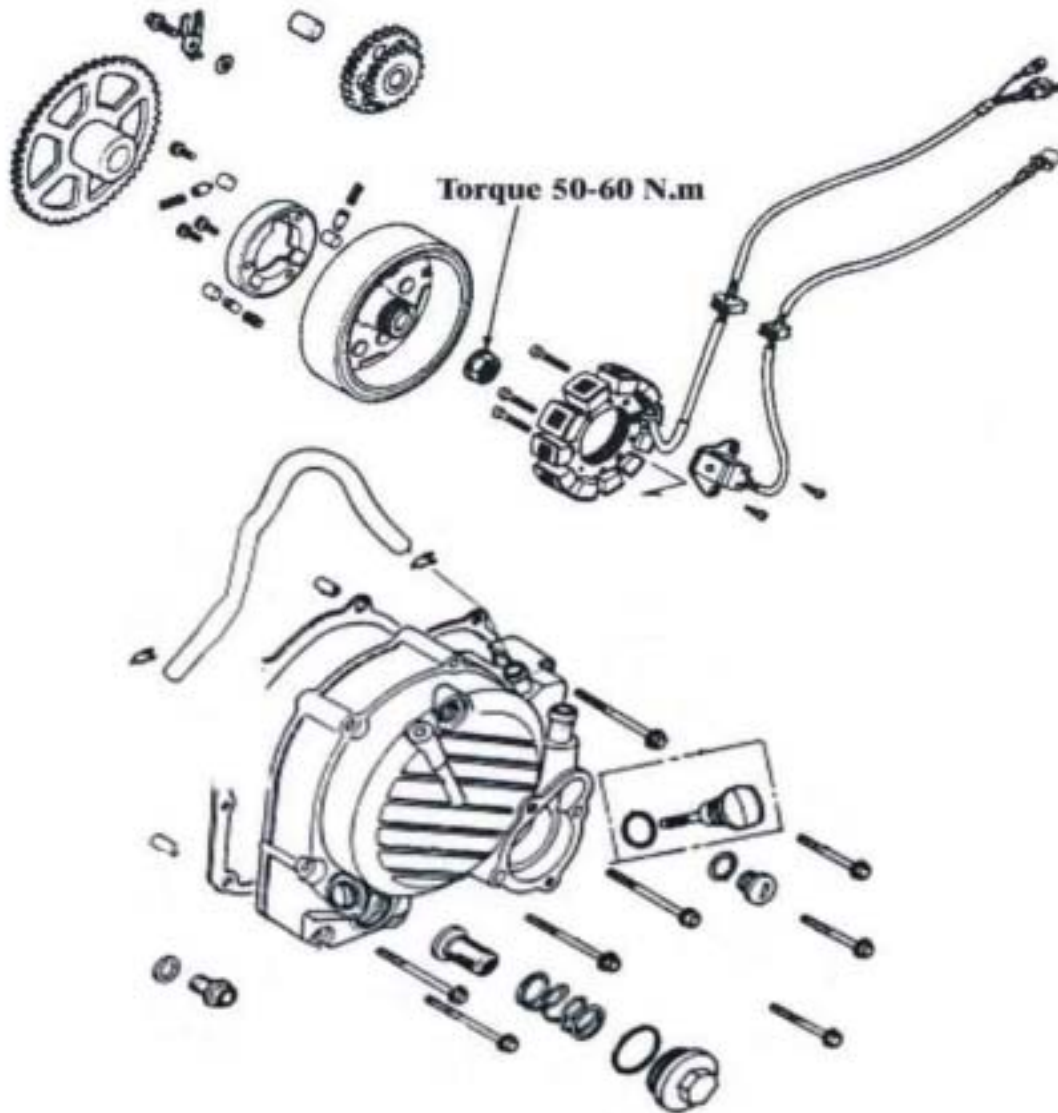
- The engine can be started, but the vehicle can't run.
 - a. The gears are damaged;
 - b. The gears are burnt.

- Noise
 - a. The gears are worn or burnt ,or the gear surface is damaged;
 - b. The bearing is worn or shaking.

- Oil Leakage
 - a. There is too much oil in the gearbox;
 - b. The oil seal is damaged or worn.

3.5 AC Generator & Starter Clutch

3.5.1 Disassembly Diagram

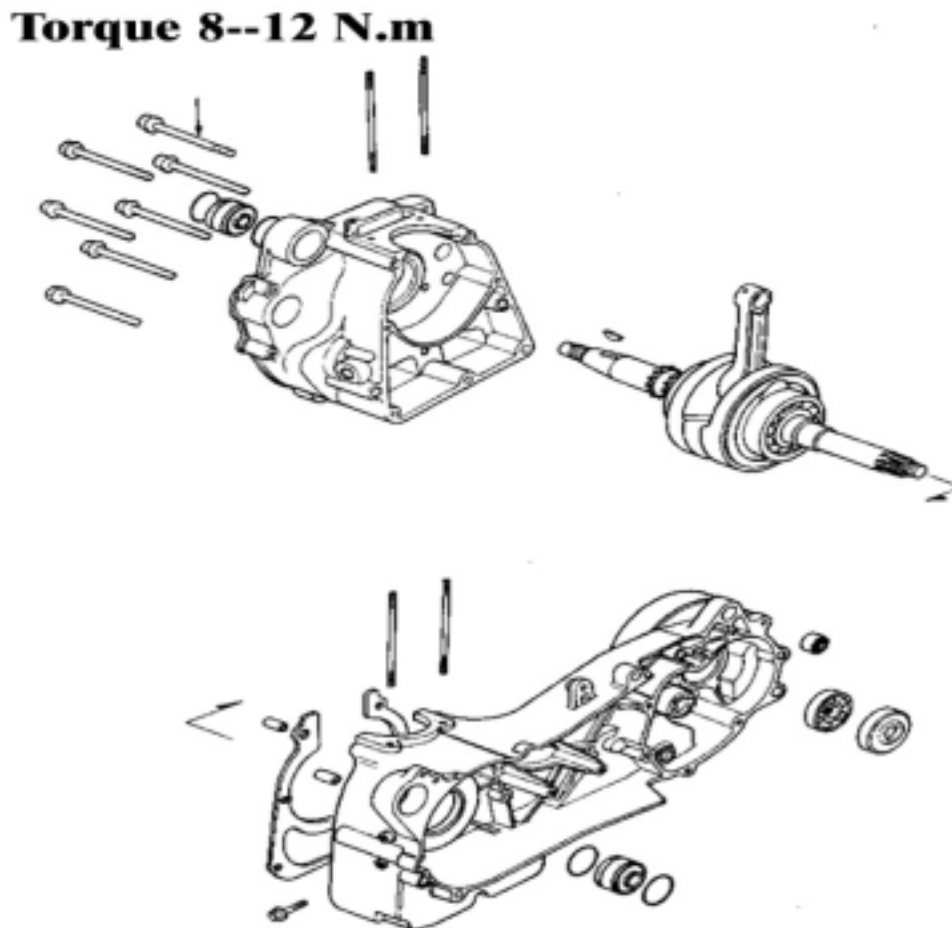


3.5.2 Trouble Shooting

- The AC generator is faulty;
- The starter reduction gear is faulty;
- The starter motor revolves conversely;
- The wires haven't been connected well;
- The starter clutch spring is broken, dirty or locked.

3.6 Crankcase & Crankshaft

3.6.1 Disassembly Diagram

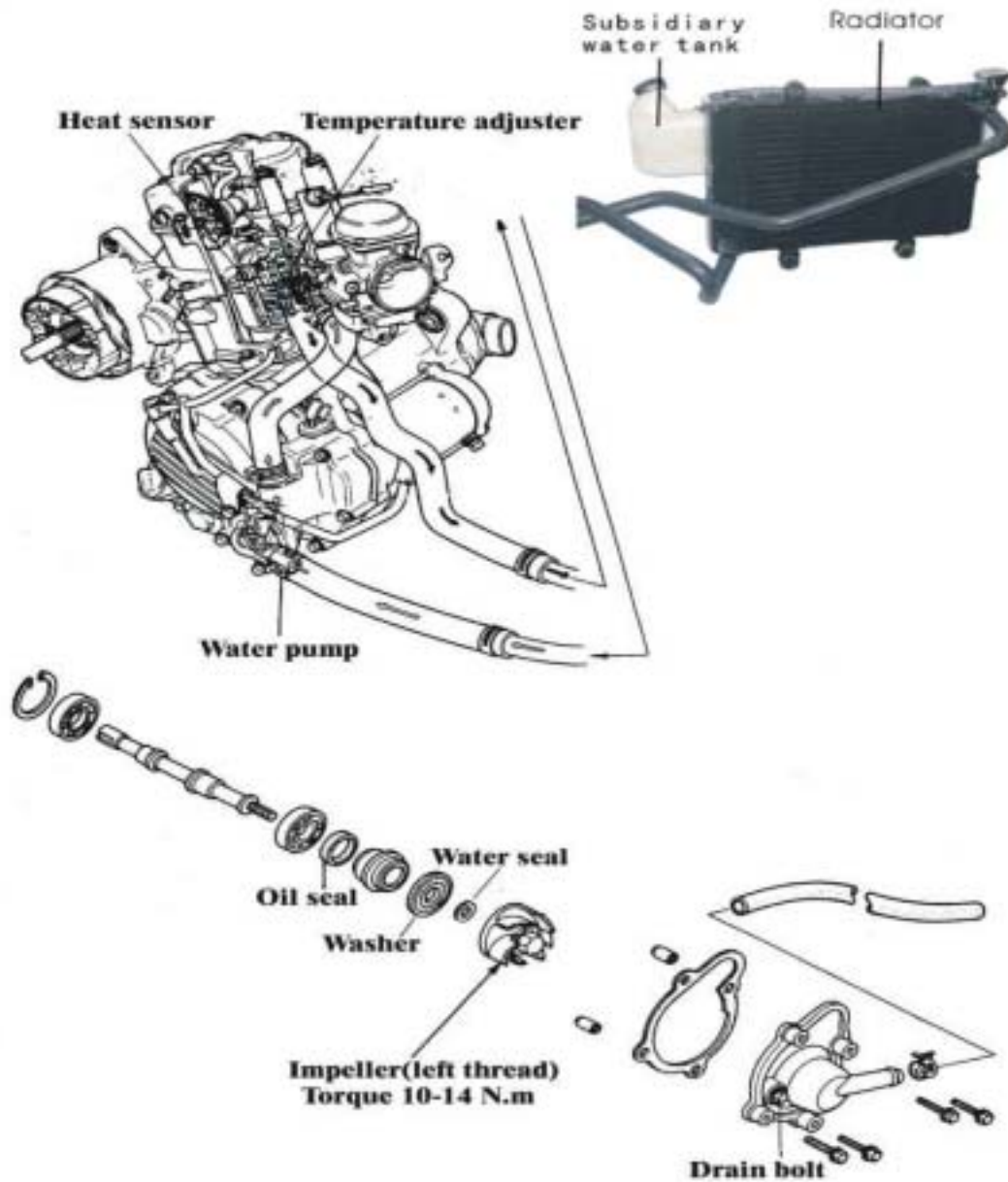


3.6.2 Trouble Shooting

- Engine Noise
 - a. The bearing is loose;
 - b. The crankshaft pin bearing is loose.
 - c. The piston pin and the piston pin hole are loose.

3.7 Cooling System

3.7.1 Disassembly Diagram



3.7.2 Trouble Shooting

- The water temperature rises.
 - a. The heat sensor of the thermometer is faulty;
 - b. The water tank cover is faulty;
 - c. The temperature petcock is faulty;
 - d. The tank fluid is insufficient;
 - e. The water pipe and water sleeve are clogged;

- f. The radiator is clogged;
- g. The inner part of the water tank is clogged;
- h. The water pump is faulty.

- The thermometer doesn't show any signs of rising, but the water temperature rises.
 - a. The heat sensor of the thermometer is faulty;
 - b. The temperature petcock is faulty.

3.7.3 Points for Attention

- The water pump repair and other operations of the cooling system can be carried out on the vehicle;
- Carry out the operations when the engine has cooled down;
- Don't open the water tank cover when the water temperature is above 100 ;
- Don't spread the water tank fluid onto the tank surface paint; if the fluid spreads out, clean up the fluid with water;
- After the inspections and repairs, use a water tank pressure tester to check all the joints and oil seals for leakage.

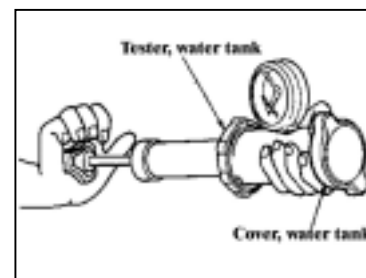
3.7.4 Specifications

Pressure of Water Tank Cover Petcock		0.9+/-0.15 kg/cm2	
Temperature of Adjuster Cock	at Beginning of Opening	72+/- 2	
	Full Opening	90	
	Full Opening Volume	3.5-4.5 mm	
Volume Of Cooling Fluid		about 1190cc	Water Tank: 750 cc Sub. Water Tank: 420-300 cc

- Notes:**
- a. Use the specified water tank fluid;
 - b. Don't mix the fluid of different brands;
 - c. The water tank fluid is poisonous, so don't drink it.

3.7.5 Water Tank

- Inspection of Water Tank Cover-----**Cooling System Pressure Test**
 - a. Apply some water on the surface of the water tank cover oil seal;
 - b. Install the water tank cover on the water tank tester;
 - c. Use the tester to apply the standard pressure on the water tank cover for about 6 seconds to check its stability;
Cover Cock Opening and Closing Pressure: 0.9+/- 0.15kg/cm2.
 - d. Check the water pipe joints for leakage.



- Notes:** The pressure shouldn't exceed 1.05kg/cm2. Otherwise the joints of the water pipe may be damaged.

- Inspection of Water Tank Fluid Level
 - a. Check the water tank fluid level;
 - b. If the fluid level is lower than “F” (the upper limit), add the specified water tank fluid (standard concentration: 30%) up to “F” (the upper limit).

Notes: The water tank fluid level isn't affected by the engine temperature.



- Replacement of Water Tank Fluid
 - a. When the engine has become cold, replace the water tank fluid;|
Specifications: Water Tank Capacity: about 800cc
Sub. Water Tank Capacity: about 350cc



- Inspection of Radiator
 - a. Check if the welding seam of the radiator is damaged or leaking;
 - b. Clean the radiator plates if they are clogged or dirty;
 - c. Repair the radiator plates if they are deformed.



3.7.6 Water pump

- Inspection of Water Pump Water Seal
 - a. Check if the drain hole under the right crankcase cover leaks; If it leaks, the water seal of the water pump is faulty and needs to be replaced;
 - b. Remove the right crankcase cover and replace with a new water seal.

- Replacement of Water Pump Water Seal
 - a. Take out the water seal from the inside of the right crankcase cover;
 - b. Assemble a new water seal into the right crankcase cover.

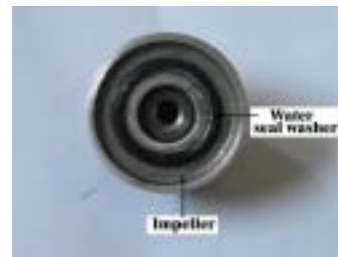


Notes: Before the assembly, apply some water seal agent on the mating surface of the water seal and the right crankcase cover.

- Inspection of Water Pump
 - a. Remove the water pump impeller;
 - b. Check the impeller water seal and water seal washer for damages and wears;



- c. Replace the impeller water seal together with the water seal washer if necessary;
- d. Assemble the water pump shaft and the inner bearing into the right crankcase;



- e. Lock the bearing with the clip;
- f. Assemble the right crankcase cover;



- g. Assemble the water pump impeller;
- h. Replace the water pump water seal together with the impeller water seal if necessary;



- i. Assemble the impeller pin on the shaft;
Torque: 10 N.m



Notes: Fasten the impeller with the left thread.

- j. Assemble the water pump shaft
- k. Assemble a new outer bearing of the water pump shaft inside the right crankcase cover.

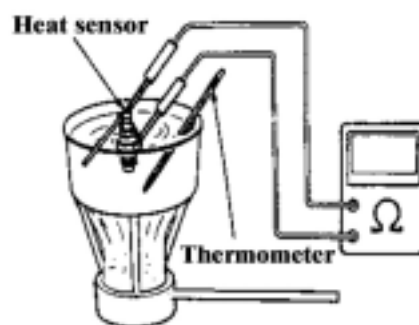
3.7.7 Heat sensor

● Disassembly of Heat Sensor

- a. Remove the rear side cover on the right;
- b. Drain out the water tank fluid;
- c. Disconnect the heat sensor wires;
- d. Remove the heat sensor.

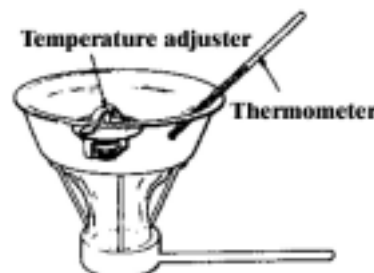
● Inspection of Heat Sensor

- a. Put the heat sensor into the testing container;
- b. Raise the water temperature slowly;
- c. Measure the resistance value of the heat sensor;



Resistance Value of Heat Sensor:

Temperature ()	50	80	100	120
Resistance value (Ω)	154	52	27	16



● Inspection of Temperature Adjuster

- a. Put the temperature adjuster into the testing container;

- b. Raise the water temperature slowly;
- c. Measure the temperature of the opening valve.

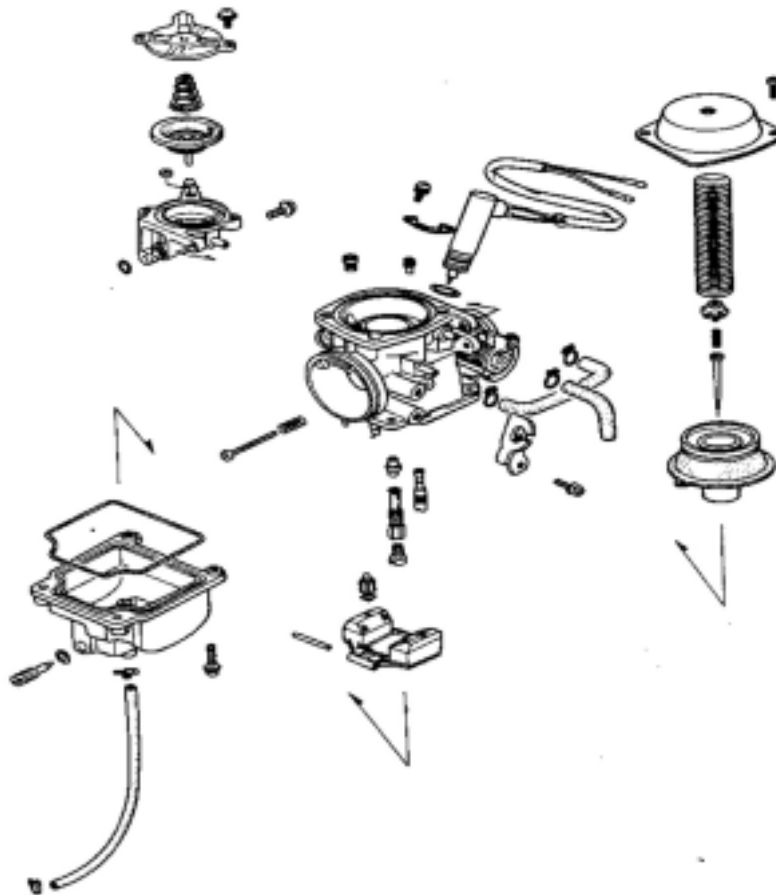
Valve Specifications:

Temperature of Opening Valve	72+/- 2
Temperature of Full-opening Valve	90
Rising Volume of Full-opening Valve	3.5-4.5mm

- Notes:**
- a. The heat adjuster shouldn't touch the testing container directly;
 - b. If the heat sensor opens at the normal temperature, replace it with a new one;
 - c. When the temperature adjuster has been open for 5 minutes at the temperature of 70 , measure again the temperature of the opening valve.

3.8 Carburetor

3.8.1 Disassembly Diagram



3.8.2 Trouble Shooting

- The engine can't start well.
 - a. There is no fuel in the fuel tank;
 - b. The fuel tube is clogged;
 - c. There is too much fuel in the fuel tank;
 - d. The air cleaner is clogged;
 - e. The fuel has deteriorated.

- The engine can't run stably or smoothly at the idle speed.
 - a. The idle speed hasn't been adjusted well;

- b. The gas mixture in the carburetor is too dense;
- c. The gas mixture in the carburetor is too lean.
- d. The air cleaner is clogged;
- e. Some air has been inhaled into the air suction system;
- f. The fuel has deteriorated;
- g. The air valve doesn't work well;
- h. The negative pressure tube is damaged;
- i. The connecting pipe of the carburetor is damaged.

- The engine stalls when the throttle is fully open.

- a. The negative pressure piston film is damaged;
- b. The negative pressure tube is clogged.

- The gas mixture is too lean.

- a. The fuel jet is clogged;
- b. The air hole of the fuel tank cover is clogged;
- c. The fuel filter is clogged;
- d. The fuel tube is clogged;
- e. The float valve doesn't work well;
- f. The fuel level is too low.

- The gas mixture is too dense.

- a. The automatic choke is opened too widely;
- b. The float valve doesn't work well;
- c. The fuel level is too high;
- d. The air cleaner is clogged;
- e. The automatic chock hasn't been assembled correctly.

3.8.3 Points for Attentions

- No smokes or fires in the working places;
- Assemble the O-rings correctly and replace them with new ones if necessary;
- Drain out the fuel in the float chamber before disassembly;
- Don't disassemble the automatic choke by yourself.

3.8.4 Specifications

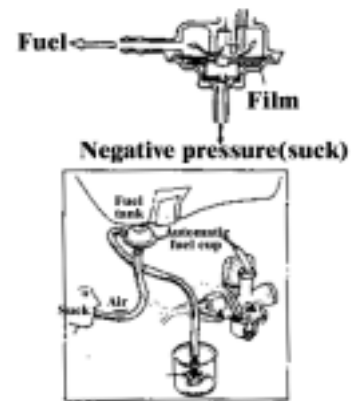
Pipe Diameter	22mm	Main Jet	100
Body Mark	BS26-1245	Low Speed Jet	# 35
Fuel Level	18.5+/-1.0mm	Idle Speed	1500+/-100rpm
Air Adjusting Screw	1 3/4		

3.8.5 Automatic Fuel Cup

No smokes or fires!

- Inspection of Automatic Fuel Cup
 - a. Stop the engine and pull out the fuel tube from the carburetor;
 - b. Drain out all the remaining fuel in the fuel cup and tube (5-10cc);
 - c. If the fuel stops flowing, the fuel cup is normal;
If the fuel continues to flow out, the negative pressure tube is clogged.

- Inspection of Negative Pressure Tube
 - a. Pull out the negative pressure tube from the air intake pipe and suck with mouth to produce the negative pressure on the vacuum film;
 - b. If when the vacuum film produces the negative pressure, the fuel flows out of the fuel tube; and When the negative pressure stops, the fuel stops flowing, the automatic fuel cup is normal; otherwise ,it is abnormal;
 - c. If the automatic fuel cup is abnormal, firstly check if the negative pressure tube is clogged, and clean it at once; then blow the film from the air intake pipe of the automatic fuel cup.



3.8.6 Automatic Side-circuit Starter

- Inspection of Automatic Side-circuit Starter
 - a. Check the conduction of all the automatic side-circuit starter wires;
Standard Resistance Value: below 10Ω (10 minutes after the engine stops)
 - b. Replace the automatic choke if the resistance value exceeds the standard value;

- Inspection of Automatic Choke
 - a. Connect a tube with the fuel-adding line of the carburetor;
 - b. Connect the yellow wire of the choke with the battery + electrode;
Connect the green wire of the choke with the battery – electrode;
Blow the choke with mouth 5 minutes later;
If the air doesn't go smoothly, it is normal;
 - c. Remove the automatic choke wire from the battery;
Blow the choke with mouth 30 minutes later;
If the air goes smoothly, it is normal.

3.8.7 Inspection Of Fuel Level

- a. Check the fuel level of the main jet;
Standard Fuel Level: 18.5+/-1.0mm
- b. Check the float and assemble the float fuel tube.

3.8.8 Adjustment of Idle Speed

- a. Start the engine and warm up for several minutes;
- b. Fasten the fuel adjusting screw fully and turn back the standard 1~ 3/4 turns;
- c. Adjust the fuel adjusting screw to the specified idle speed;



- d. Turn the fuel adjusting screw left and right slightly;
- e. Repeat steps c, d;
- f. Adjust the throttle adjusting screw to the idle speed position (1,500+/-100rpm);
- g. Run the engine from low speed to high speed;
Run the engine at the idle speed for 10~ 15 seconds to see if the idle speed is stable;
- h. If the idle speed changes, repeat steps c~f. ■



3.8.9 Inspection of Air Cleaner

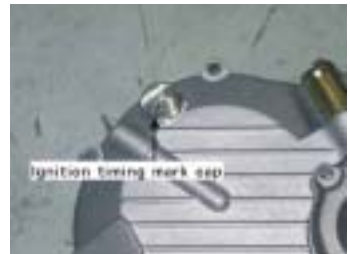
- a. Check if the air cleaner is damaged;
- b. Replace it with a new one if necessary;
- c. Clean the air cleaner every 1,000 km. of running;
- d. Replace the air cleaner every 5,000km,of running. ■



3.8.10 Ignition Timing

● Adjustment of Ignition Timing

The C.D.I. is used, so there is no need to adjust the ignition timing. If the ignition timing isn't normal, check the C.D.I. and AC generator.

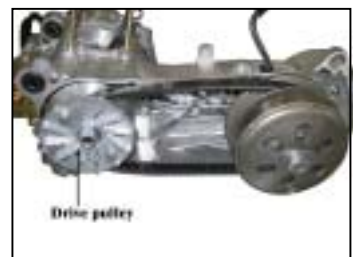


● Inspection of Ignition Timing

- a. Turn on the ignition timing lamp;
- b. Align the mark "F" within the range of +/-3° at the rotation of 1,700rpm;
Ignition Timing: B.T.D.C 13°+/-3 1700rpm.

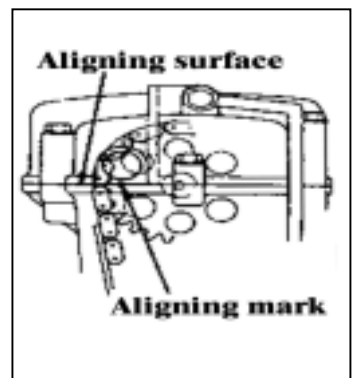


- c. If the rotation is above 3,000rpm, the aligning mark should be located before the advanced ignition mark.



3.8.11 Adjustment of Valve Clearance

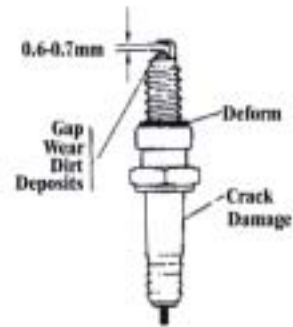
- a. Check and adjust the valve clearance when the engine has become cold;
- b. Turn the drive pulley in the left crankcase in the left direction;
- c. Align the mark on the cam sprocket with the cylinder head cover; at this time, the piston is at T.D.C. (compression top dead point);
- d. Adjust the valve clearance to the standard value (0.06-0.08mm) with special tools;
- e. Fasten the lifter nut.



3.8.11 Inspection of Spark Plug

- a. Check if the spark plug is burnt or has become dirty.
Check if there is any carbon on the spark plug;
- b. Clean the spark plug if necessary;

- ◆ Specifications: Spark Plug: D7
Spark Plug Gap: 0.6-0.7mm



3.8.13 Compression

- ◆ Specification: 11.0-15.0kg/cm² (400rpm).

Trouble Shooting

- The compression is too low.
 - a. The valve leaks;
 - b. The valve clearance is too big;
 - c. The cylinder head gasket is damaged;
 - d. The piston rings are worn;
 - e. The piston rings and the cylinder are worn.
- The compression is too high.
 - a. There is too much carbon in the combustion chamber and on the piston head.

4. Wiring Diagram

