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Operation Manual



All 'FarmBoy' products are sold without any warranty or guarantee. Please satisfy yourself before buying this product. No returns, exchanges or refunds allowed.

Note: The purchase is not contingent upon a product demonstration. The purchaser shall satisfy himself with the product, including any product demonstration or verification of any function, before buying. KisanKraft Limited or its authorized dealers, including online sellers, shall not be liable to give any on-site demonstration after purchase of any of the product

KisanKraft Limited

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KisanKraft has a large range of products to serve the farmers. A list of our products is given below:

| | |
|--|---|
| <p>Brush Cutters and Accessories</p> <ul style="list-style-type: none"> Brush Cutter/Power Weeder Backpack Brush Cutter Tea Pruner Pole pruner with Engine Reaper Attachment Blades-Circular Blades (2 & 3 points) Baffle Nylon Rope Tap & Go <p>Chainsaws</p> <ul style="list-style-type: none"> Petrol Chainsaw Electric Chainsaw Chain Sharpening Machine <p>Engines and Water Pumps</p> <ul style="list-style-type: none"> Engine –Diesel-(Horizontal) Engine –Diesel(Vertical) Engine-Kerosene Water Pump with Petrol Engine Water Pump with Kerosene Engine Water Pump with Diesel Engine <p>Hand Tools</p> <ul style="list-style-type: none"> Secateurs Folding Saw Garden Rake Garden Shovel Hedge Shear Lopper Telescopic Hedge Shear Telescopic Lopping Shear Tree Pruner Telescopic Steel Pipe & Fruit Picker Bag Sheep Shear <p>Garden Tools</p> <ul style="list-style-type: none"> Electric Pressure Washer Hedge Trimmer Lawn Mower (Electric, Petrol & Manual) Leaf Blower | <p>Cultivators and Accessories</p> <ul style="list-style-type: none"> Petrol and Diesel <p>Sprayers and Accessories</p> <ul style="list-style-type: none"> Battery Sprayer Portable Power Sprayer Trolley Sprayer Manual Knapsack Sprayer Manual Pressure Sprayer Rose Cans Hose Crimping Machine HTP Sprayer HTP Delivery Hose HTP Hose Reel HTP Stand HTP Gun / Lance(Brass Rod) Knapsack Power Sprayer Mister / Duster / Granuel Spreader HTP Sprayer Set with Diesel Engine HTP Sprayer Set with Kerosene Engine Fogging Machine <p>Milking Machine</p> <ul style="list-style-type: none"> Wood Shredder Fodder Ensiling Chaff Cutter Fodder Grinder Chaff Cutter Fodder Mini Chaff Cutter <p>Harvester</p> <ul style="list-style-type: none"> Maize Sheller Maize Sheller + Dehusker Maize Combine Harvester Onion Digger Carlotti Italy Tea Leaf Harvester Sugarcane Combine Harvester Sugarcane Leaf Stripper <p>Transplanter and Post Hole Digger</p> <ul style="list-style-type: none"> Paddy Transplanter (2 & 8 Rows) Transplanter-Vegetable & Tobacco Post Hole Digger(4" to 14" Augers) |
|--|---|

BEFORE GETTING STARTED

Thank you for your purchase and use of our products. In order to avoid accidents or injury, please read this manual carefully before using the machine. After reading, preserve it for further reference.

This Water pump is characterized by light weight, simple structure high efficiency, convenient use and flexible movement. It can be used for agricultural irrigation, drainage construction and pumping, especially widely used in recurrent irrigation of small area for agricultural production at present.

SAFETY INSTRUCTIONS

1. Read the operation manual carefully before starting the engine in order to avoid any accident and damage.
2. Please do not use this engine inside an enclosed area. Ensure adequate ventilation while Engine is in operation.
3. To prevent fire hazard, please keep the Engine in operation at least 1-meter (3 feet) away from Combustible or Inflammable materials, buildings and equipment.
4. When refueling you must STOP the Engine. Please do not smoke near Engine. Wipe the spilled fuel after refueling.
CAUTION: Spilled fuel is a fire hazard.
5. Always place the engine horizontally. Do NOT tilt the Engine more than 21 degrees Overturning or inclining the engine may cause oil spillage and result in fire hazard.
6. Do NOT cover the Engine when in operation.
7. Children are strictly not allowed near the engine operation area.

OPERATION

PREPARATION BEFORE OPERATION:

1. Connect the suction pipe:
 - Place the filter into the empennage of the suction pipe with the tie-in.
 - Place another end into the input with the tie-in.
2. Connect the discharging pipe:
 - Place the discharging pipe into the output with the tie-in.
3. Check the oil:
 - Check the oil lever in the case that the engine is off and horizontal.
4. Check the fuel level:
 - Open the crankcase cover to check the fuel level. Please add fuel when the lever is low.
5. Check the air cleaner:
 - Disconnect the papilionaceous (flower petal like) nut washer and air cleaner filter.

| Sl. No | Part Name | Part No |
|--------|--------------------------------------|----------|
| 1 | Fuel tank Assembly. | 12-1 |
| 1.1 | Fuel tank cover Assembly. | 12-1.1 |
| 1-1.1 | Fuel tank cover | 12-1.1.1 |
| 1-1.2 | Rubber seal, Fuel tank cover 38x56x3 | 12-1.1.2 |
| 1.2 | Fuel filter Assembly | 12-1.2 |
| 1-2.1 | Support, Fuel filter | 12-1.2.1 |
| 1-2.2 | Fuel filter | 12-1.2.2 |
| 1.3 | Fuel tank | 12-1.3 |
| 1.4 | Fuel joint Assembly | 12-1.4 |
| 1-4.1 | Nut M10 | 12-1.4.1 |
| 1-4.2 | Fuel joint | 12-1.4.2 |
| 2 | Fuel tube 8.5x4.5 | 12-2 |
| 3 | Clip Fuel tube | 12-3 |
| 4 | Bolt M6 x 28 | 12-4 |
| 5 | Nut M6 | 12-5 |
| 6 | Fuel joint | 12-6 |
| 7 | Bracket | 12-7 |
| 8 | Fuel tube 8.5x4.5 | 12-8 |

- Check whether the foam filter element is dirty or air logged. Clean it if necessary.
 - Newly equip the air cleaner and operate the engine until it is well equipped.
 - It would accelerate the abrasion if the dust or the pollutant is absorbed into the engine through carburetor.
6. Check the water pump:
- Check whether the water is added into the pump.
 - The pump must be fully filled with water before operating.
 - Operate the pump until the water is added so as to protect the air proof from the overheating in lasting operation without water.

STARTING THE ENGINE

1. Keep the fuel valve to "ON" position.
2. Shut down the throttle (throttle may be partly closing or open when the engine is warm or in the case of high temperature).
3. Keep the switch in the ON position.
4. Slowly move the regulating handle to the left.
5. Pull the start handgrip when feeling the resistance, then drawback swiftly.

USE

The use of the water pump:

1. Gradually open the throttle when the engine's warm.
2. Set a scheduled rotation speed.

STOPPING THE ENGINE

1. Move the regulating handle to the right.
2. Keep the switch in the "OFF" position.
3. Turn off the fuel valve.

MAINTENANCE

Oil:

Change the oil and quickly discharge the oil when the engine is hot. Replace the oil for the first time after 50 hours of cumulative operation. After that, replace the oil per 500 hours operation. The specific procedure is as follows:

- Disconnect the oil cap and drain plug, then discharge the oil, newly equip the drain plug and screw it down.
- Add the clean oil to the appointed oil level.

Air cleaner filter:

Air flow in the carburetor is reduced if air cleaner is dirty. In order to clean it:

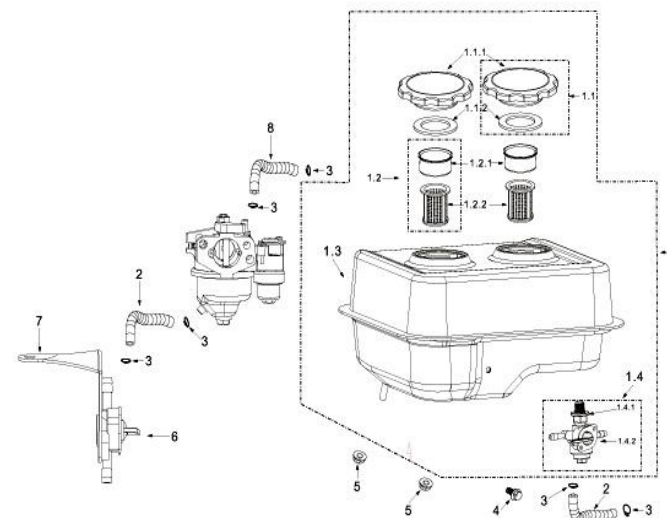
- Move the papilionaceous nut, and disconnect the air cleaner filter cover and the foam filter element with apyrous cleaning and then air dry it.
- Dip the foam filter element into the clean oil and extrude the additional oil. Newly equip the foam filter element and air cleaner filter.

Spark plug:

It would be kept 0.7-0.8 mm between the spark plug and no carbon so as to assure the normal running

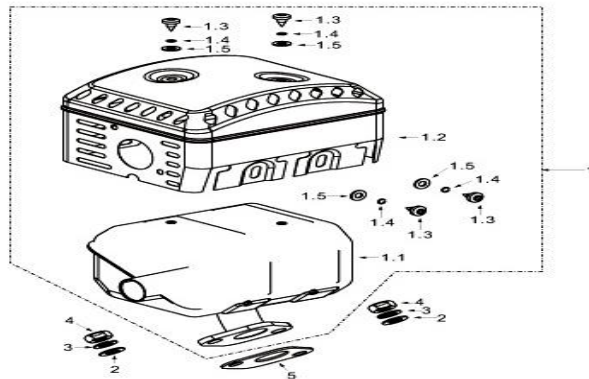
| SI. No | Part Name | Part No |
|--------|-----------------------|---------|
| 1 | Muffler Assembly | 11-1 |
| 1.1 | Muffler body | 11-1.1 |
| 1.2 | Protector Muffler -A | 11-1.2 |
| 1.3 | Screw M5 x 8 | 11-1.3 |
| 1.4 | Spring washer Φ5 | 11-1.4 |
| 1.5 | Washer Φ 5 | 11-1.5 |
| 2 | Washer Φ 8 | 11-2 |
| 3 | Spring Φ 8 | 11-3 |
| 4 | Nut M8 | 11-4 |
| 5 | Gasket (Exhaust Part) | 11-5 |

Fuel Tank-kerosene Engine



| | | |
|-------|-------------------|----------|
| 1-1.3 | Cover board | 10-1.1.3 |
| 1-1.4 | Screw M4 x 12 | 10-1.1.4 |
| 1-2 | Filter Assembly | 10-1.2 |
| 1-2.1 | Foam Filter | 10-1.2.1 |
| 1-2.2 | Papery Filter | 10-1.2.2 |
| 1-2.3 | Rubber Fixer | 10-1.2.3 |
| 1-2.4 | Decal Washer | 10-1.2.4 |
| 1.3 | Filter Case | 10-1.3 |
| 1.4 | Butter Fly nut M6 | 10-1.4 |
| 1.5 | Seal Ring 32x47x3 | 10-1.5 |
| 1.6 | Air duck | 10-1.6 |
| 2 | Nut M6 | 10-2 |

Muffler Parts



STORAGE

Cool the engine and keep the fuel valve in the "OFF" position before moving or storing indoors to avoid the burning or fire.

1. Keep the storage place dry and less dust.
2. Clean the inner parts of the engine.
3. Replace the oil after completely discharging the fuel tank and the carburetor.
4. Disconnect the spark plug to infuse 2-3 grams of oil into the cylinder and rotate the engine 3-4 times and then equip the spark plug.
5. Cover the pump cover to avoid dust.

TROUBLESHOOTING

| Problem | Probable cause | Action to be taken |
|-----------------------------|--|--|
| The Engine can't be started | Refer the Engine manual | Refer the Engine manual |
| The pump cannot pump water | The water infused is not enough | Fill the pump with enough water. |
| | The filter is air – logged. | Clear the air from the filter. |
| | The tie-in is not firmly equipped , Suction pile is leaking. | Ensure proper suction Packing is proper and leak free. |
| | The pipe is damaged. | Replace the pipe. |
| Insufficient flux | Whether the head lift is too high | Never exceed the rated max. Lift, if so lower the head lift. |
| | Any block with impeller or strainer | Remove the blockage in the strainer |
| | Gas leakage in inlet pipe | Fix any leakage in the pipe |
| | Damage in impeller | Replace the impeller |

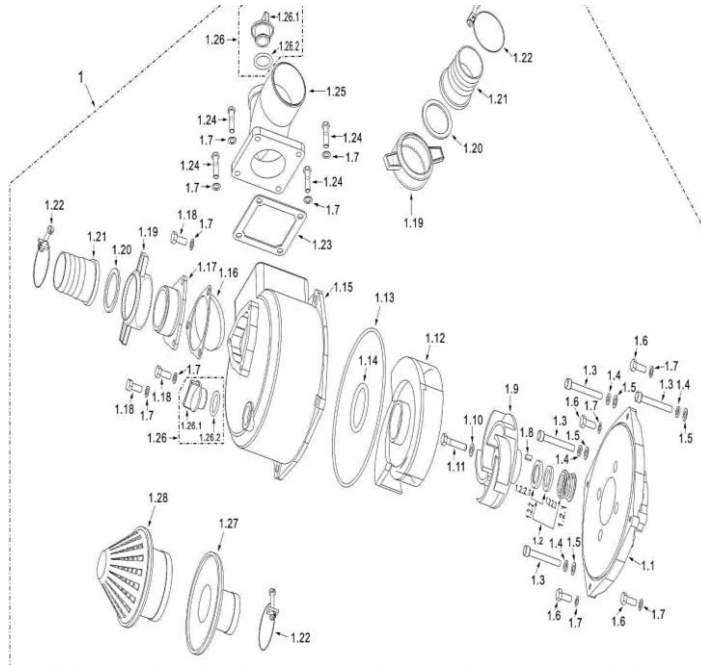
TECHNICAL SPECIFICATIONS

| Model | FB-WPK-20 | FB-WPK-30 |
|--------------|----------------|-------------|
| Rated power | 2.5kW (3.3 hp) | 3 kW(4.1hp) |
| Displacement | 163 cc | 196 cc |
| Engine Type | 4-stroke | |

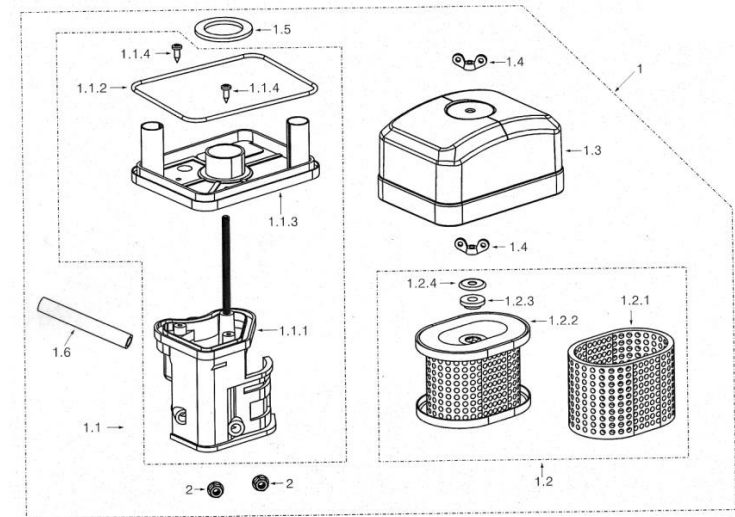
| Model | FB-WPK-20 | FB-WPK-30 |
|------------------------------------|--------------------------------------|-------------------------------------|
| Matching Engine | FB-GE-160 | FB-GE-200 |
| Rated rotation speed | 3600 (rpm) | |
| Fuel Used | Petrol start & kerosene run | |
| Fuel Tank Capacity | 100 ml (Petrol) & 3 Litre (Kerosene) | |
| Oil | For Engine 750 ml (20W 40 Grade) | For Engine 550 ml (20W 40 Grade) |
| Total head lift | 20 m | 27 m |
| Suction head lift | 8 m | 5 m |
| Diameter of suction discharge pipe | 50 mm (2") | 80 mm (3") |

| Sl. No | Part Name | Part No |
|--------|-----------------------|---------|
| 1-24 | Spring Washer- big | 9-1.24 |
| 1-25 | Upper cover | 9-1.25 |
| 1-26 | Spring washer-small 3 | 9-1.26 |
| 1-27 | Screw M3x7 | 9-1.27 |
| 2 | Steel gasket | 9-2 |
| 3 | Gasket carburetor | 9-3 |
| 4 | Block Carburetor | 9-4 |
| 5 | Gasket, inlet port | 9-5 |

WATER PUMP PARTS DIAGRAM



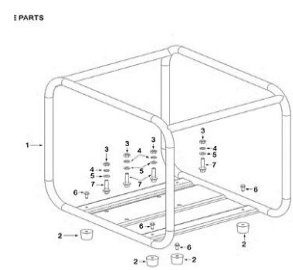
Air Cleaner (Hemi -Dry type)



| Sl. No | Part Name | Part No |
|--------|-----------------------|----------|
| 1 | Air Cleaner Assembly | 10-1 |
| 1-1 | Air Cleaner Seat Ass. | 10-1.1 |
| 1-1.1 | Air Cleaner seat | 10-1.1.1 |
| 1-1.2 | Seal Ring | 10-1.1.2 |

| Sl. No | Part Name | Part No |
|--------|---|---------|
| 1-3.3 | Chock Valve | 9-1.3.3 |
| 1-4 | Measure hole Assembly idle speed | 9-1.4 |
| 1-4.1 | Measure hole, idle speed | 9-1.4.1 |
| 1-4.2 | O-ring 4.7x1 | 9-1.4.2 |
| 1-5 | Adjustment Screw Assembly mixture ratio | 9-1.5 |
| 1-5.1 | Adjustment screw, mixture ratio M4x12 | 9-1.5.1 |
| 1-5.2 | Spring | 9-1.5.2 |
| 1-6 | Adjustment screw Idle speed | 9-1.6 |
| 1-7 | Fuel Floater | 9-1.7 |
| 1-8 | Pin Fuel Floater | 9-1.8 |
| 1-9 | Needle Valve Assembly | 9-1.9 |
| 1-9.1 | Needle Valve seat | 9-9.1 |
| 1-9.2 | Needle Valve | 9-9.2 |
| 1-9.3 | Spring, Needle valve | 9-9.3 |
| 1-10 | Main Jet | 9-1.10 |
| 1-11 | Main Measuring hole | 9-1.11 |
| 1-12 | Fuel inlet Tube | 9-1.12 |
| 1-13 | Rubber seal (Fuel cup) | 9-1.13 |
| 1.14 | Fuel cup | 9-1.14 |
| 1-15 | Fuel drain plug | 9-1.15 |
| 1-16 | Gasket fuel drain plug | 9-1.16 |
| 1-17 | Tighten bolt (Fuel cup) | 9-1.17 |
| 1-18 | O-ring 11x1.5 | 9-1.18 |
| 1-19 | Hand grip chock valve Assembly | 9-1.19 |
| 1-20 | Sediment cup | 9-1.20 |
| 1-21 | O-ring 21x2 | 9-1.21 |
| 1-22 | Fuel Valve | 9-1.22 |
| 1-23 | Handle Bar | 9-1.23 |

WATER PUMP PARTS LIST

| Part No | Part Name | Part No | Part Name |
|------------|--------------------------------|---|--------------------------------------|
| 13-1 | Water Pump Parts | 13-1.14 | O-Ring |
| 13-1.1 | Pump Cover | 13-1.15 | Pump body |
| 13-1.2 | Water Seal ass. | 13-1.16 | rubber gasket, Triangle flange |
| 13-1.2.1 | Static water seal ass. | 13-1.17 | Triangle flange |
| 13-1.2.2 | Dynamic water seal ass. | 13-1.18 | Bolt |
| 13-1.2.2.1 | Rubber seal, Ceramic seal body | 13-1.19 | Flange nut |
| 13-1.2.2.2 | Ceramic seal body | 13-1.2 | Rubber gasket, inlet and outlet pipe |
| 13-1.3 | Bolt | 13-1.21 | Inlet and outlet pipe |
| 13-1.4 | Rubber gasket | 13-1.22 | Pipe hoop |
| 13-1.5 | washer | 13-1.23 | Rectangular rubber gasket |
| 13-1.6 | Bolt | 13-1.24 | Bolt |
| 13-1.7 | washer | 13-1.25 | Pump Elbow |
| 13-1.8 | Flat Key | 13-1.26 | Rubber Plug ass. |
| 13-1.9 | Impeller | 13-1.26.1 | Rubber Plug ass. |
| 13-1.1 | washer | 13-1.26.2 | O-Ring |
| 13-1.11 | Bolt | 13-1.27 | Cover, Taper filter |
| 13-1.12 | Turbine | 13-1.28 | Taper filter |
| 13-1.13 | O-Ring | | |
| Part No | Part Name |  | |
| 14-1 | Water Pump Parts | | |
| 14-2 | Frame absorber | | |
| 14-3 | Nut | | |
| 14-4 | Spring washer | | |
| 14-5 | washer | | |
| 14-6 | Bolt | | |
| 14-7 | Bolt | | |

OPERATION MANUAL KERSENE ENGINE



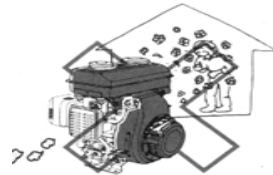
BEFORE GETTING STARTED

Thank you for your purchase and use of our products. In order to avoid accidents or injury, **please read this manual carefully** before using the machine. After reading, preserve it for further reference.

SAFETY INSTRUCTIONS

1. Please do not use this engine inside an enclosed area. Ensure adequate ventilation while Engine is in operation.

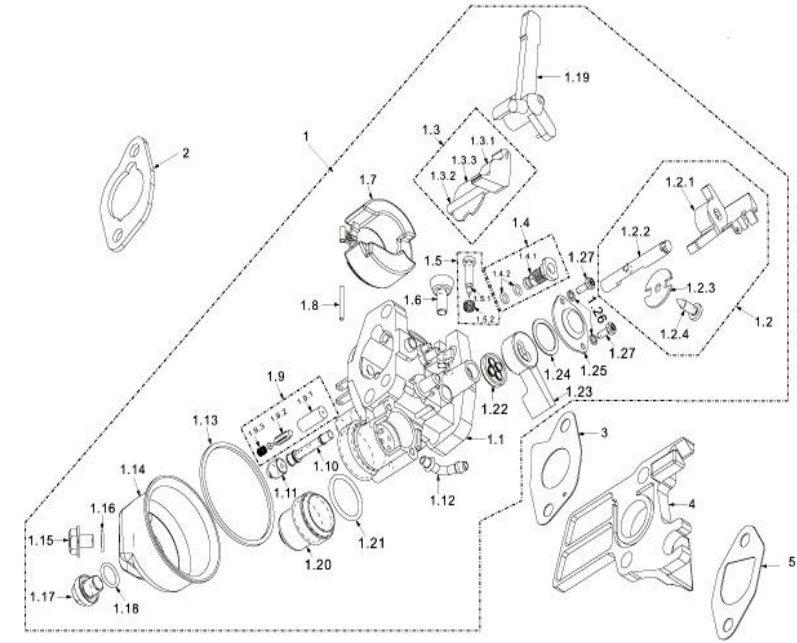
CAUTION: Exhaust contains POISONOUS Carbon Mono Oxide gas



2. To prevent fire hazard, please keep the Engine in operation at least 1-meter (3 feet) away from Combustible or Inflammable materials, buildings and equipment.

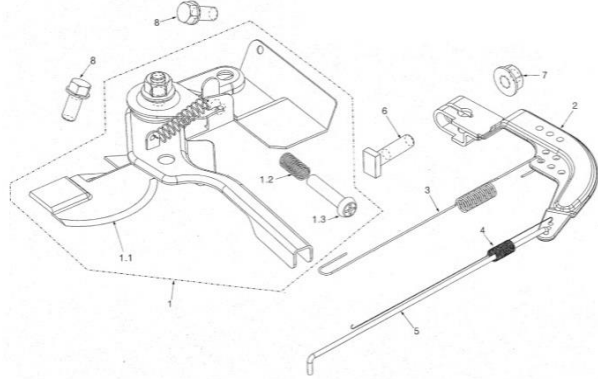


Carburetor Parts



| Sl. No | Part Name | Part No |
|--------|-------------------------|---------|
| 1 | Carburetor Assembly | 9-1 |
| 1-1 | Carburetor Body oil | 9-1.1 |
| 1-2 | Throttle Valve Assembly | 9-1.2 |
| 1-2.1 | Throttle Valve Cap | 9-1.2.1 |
| 1-2.2 | Throttle Valve axis | 9-1.2.2 |
| 1-2.3 | Throttle Valve | 9-1.2.3 |
| 1-2.4 | Screw M4x12 | 9-1.2.4 |
| 1-3 | Chock Valve Assembly | 9-1.3 |
| 1-3.1 | Chock Valve cap | 9-1.3.1 |
| 1-3.2 | Chock Valve axis | 9-1.3.2 |

Speed Adjustment Base Parts



| Sl. No | Part Name | Part No |
|--------|----------------------------|---------|
| 1 | Speed Adjustment base part | 8-1 |
| 1-1 | Speed Adjustment Base Ass. | 8-1.1 |
| 1-2 | Adjustment Spring | 8-1.2 |
| 1-3 | Adjustment Screw | 8-1.3 |
| 2 | Speed Adjustment arm | 8-2 |
| 3 | Return Spring | 8-3 |
| 4 | Fine Adjustment Spring | 8-4 |
| 5 | Pulling Rod | 8-5 |
| 6 | Quadrate bolt M6x21 | 8-6 |
| 7 | Nut M6 | 8-7 |
| 8 | Bolt M6 x 12 | 8-8 |

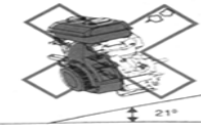
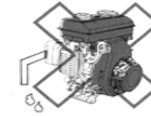
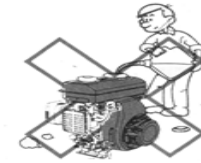
- When refueling you must STOP the Engine. Please do not smoke near Engine. Wipe the spilled fuel after refueling.

CAUTION: Spilled fuel is a fire hazard.

- Do NOT cover the Engine when in operation!

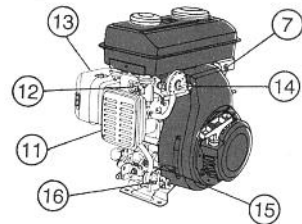
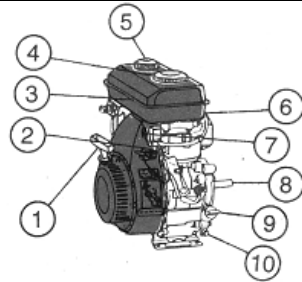
- Do NOT connect any pipe to exhaust muffler!

- Do NOT tilt the Engine more than 21 degrees.



ENGINE COMPONENTS

1. Recoil Starter
2. Engine Switch
3. Fuel Tank
4. Kerosene Tank Cap
5. Petrol Tank Cap
6. Spark Plug
7. Oil Alert Lamp
8. PTO Shaft
9. Engine Oil Filter Cap
10. Engine Oil Drain Bolt
11. Air Cleaner
12. Choke
13. Muffler
14. Fuel Cock
15. Throttle Weaver
16. Drain Cock

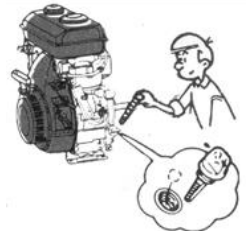


OPERATION

Pre-Operation Checks

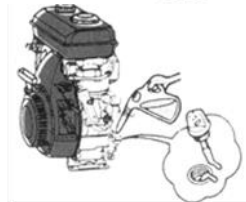
Oil Level:

Please check the Engine Oil Level by putting the engine on a flat surface

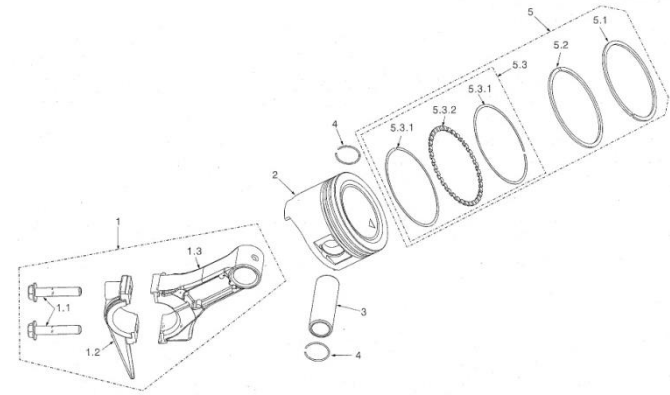


If the oil level looks low, please check the Oil Level.

Add oil to the recommended level

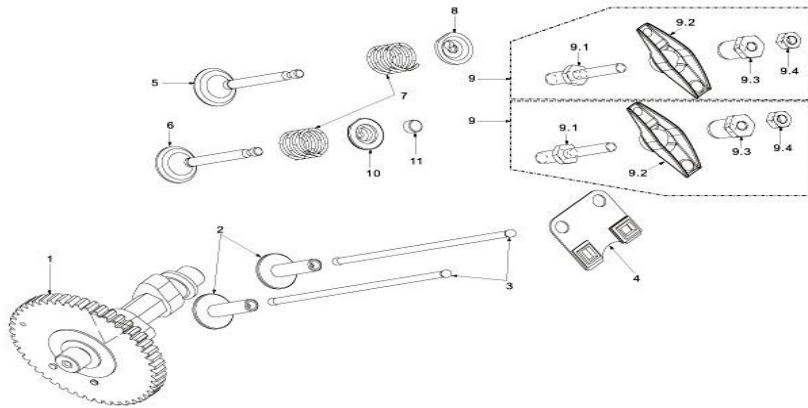


Piston



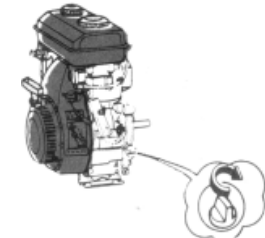
| Sl. No | Part Name | Part No |
|--------|---------------------------|---------|
| 1 | Connecting rod Assembly | 7-1 |
| 1-1 | Bolt connecting rod M7x35 | 7-1.1 |
| 1-2 | Cover, connecting rod | 7-1.2 |
| 1-3 | Body, connecting rod | 7-1.3 |
| 2 | Piston | 7-2 |
| 3 | Piston Pin | 7-3 |
| 4 | Clip Piston Pin | 7-4 |
| 5 | Piston Ring Assembly | 7-5 |
| 5-1 | First air ring | 7-5.1 |
| 5-2 | Second air ring | 7-5.2 |
| 5-3 | Oil ring Ass. | 7-5.3 |
| 5-3.1 | Scraper ring | 7-5.3.1 |
| 5-3.2 | Set off ring | 7-5.3.2 |

Cam Shaft



| Sl. No | Part Name | Part No |
|--------|---------------------------|---------|
| 1 | Cam Shaft Assembly | 6-1 |
| 2 | Tappet | 6-2 |
| 3 | Pusher | 6-3 |
| 4 | Pusher guide | 6-4 |
| 5 | Intake Valve | 6-5 |
| 6 | Exhaust Valve | 6-6 |
| 7 | Valve Spring | 6-7 |
| 8 | Spring seat Intake Valve | 6-8 |
| 9 | Rocker Ass. | 6-9 |
| 9-1 | Stud Rocker Assembly | 6-9.1 |
| 9-2 | Rocker | 6-9.2 |
| 9-3 | Adjust Nut Sphere | 6-9.3 |
| 9-4 | Lock Nut | 6-9.4 |
| 10 | Spring Seat Exhaust Valve | 6-10 |
| 11 | Cap Exhaust valve | 6-11 |

Remember to tighten the Oil cap!



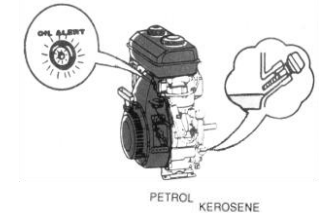
Recommended Engine Oil

If the OIL level in crankcase falls below a safe limit, then Oil Alert level system will automatically turn off the Engine.

NOTE: The Engine will not start if the Oil Alert Level System has turned off the Engine.

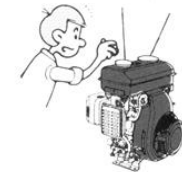
You will need to fill OIL to the recommended level, before you can restart the Engine.

SAE 10W-40 or SAE 20W-40
API Classification: SF Minimum



Fuel Level:

Check the fuel level before starting the Engine.



Add fuel, if the level is low

Fill fuel to the shoulder of fuel filter.

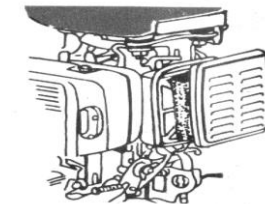
CAUTION:

- (1) Do not put Kerosene in Petrol tank, otherwise Engine will be very hard to start.
- (2) Do not put Petrol with Oil-mixed in it.
- (3) Do not put dirty, contaminated fuel

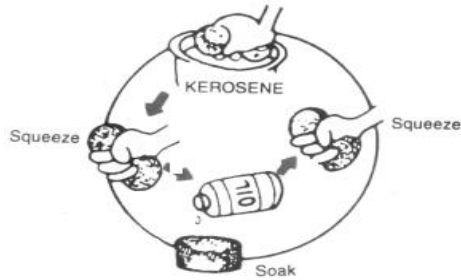
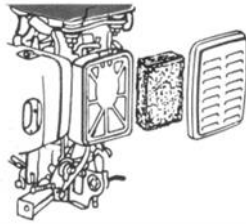


Air Filter:

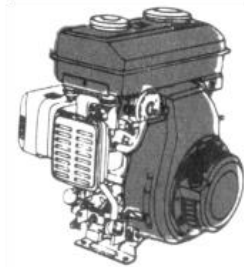
Open Air-cleaner cover and remove the air cleaner element.



Check for dust/dirt in the air filter.
If it is dirty you should clean it as shown below.

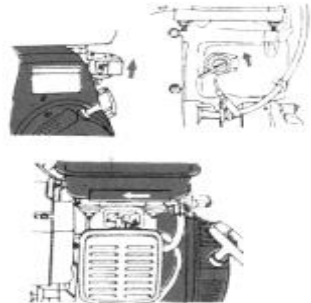


Clean air filter element and refit it in the Air-filter of the engine.



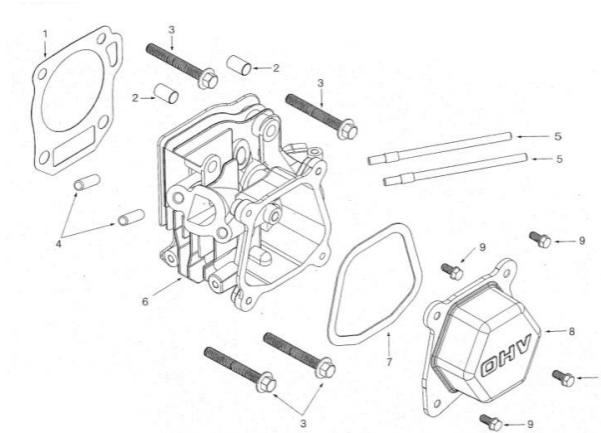
Starting the Engine (COLD START):

1. Turn the Engine switch to ON position
2. Put the choke in the shown position.



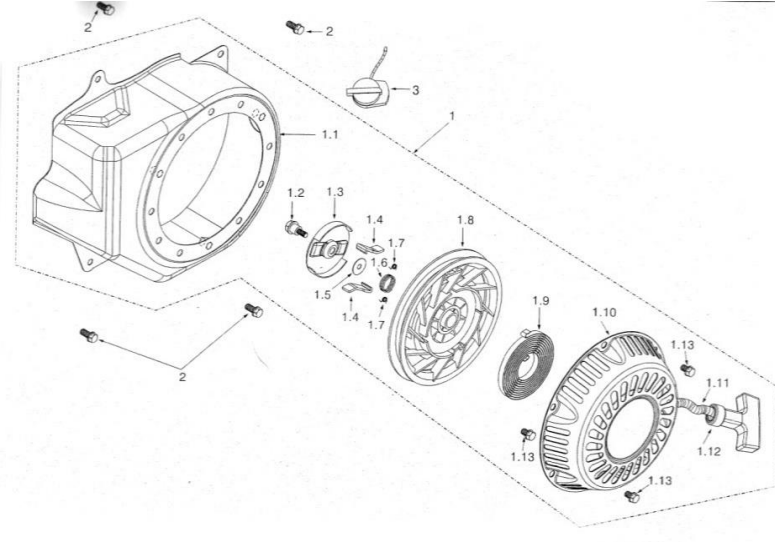
| Sl. No | Part Name | Part No |
|--------|---------------|---------|
| 1-13 | Bolt M6X8 | 4-1.13 |
| 2 | Bolt M6x12 | 4-2 |
| 3 | Engine switch | 4-3 |

Cylinder Head



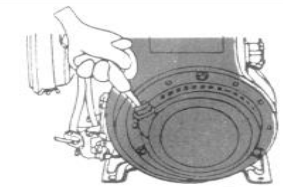
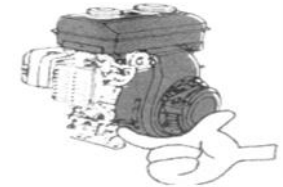
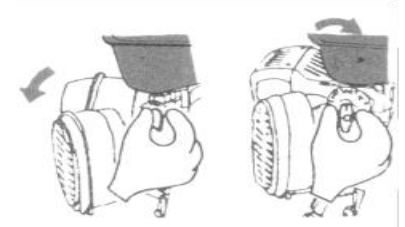
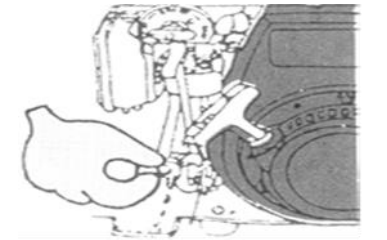
| Sl. No | Part Name | Part No |
|--------|----------------------------|---------|
| 1 | Gasket Cylinder head | 5-1 |
| 2 | Set pin 10x14 | 5-2 |
| 3 | Bolt M8 x 60, 22 | 5-3 |
| 4 | Stud Exhaust M8 x 32 | 5-4 |
| 5 | Stud Intake M6 x 113 | 5-5 |
| 6 | Cylinder head Assembly | 5-6 |
| 7 | Gasket Cylinder head cover | 5-7 |
| 8 | Cylinder head cover | 5-8 |
| 9 | Bolt M6x12 | 5-9 |

Recoil Starter

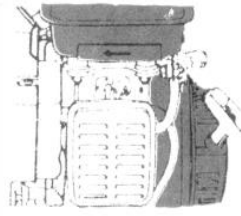


| Sl. No | Part Name | Part No |
|--------|---|---------|
| 1 | Recoil Starter Assembly (Without fan Cover) | 4-1 |
| 1-1 | Fan cover | 4-1.1 |
| 1-2 | Pivot bolt M5 x 17 | 4-1.2 |
| 1-3 | Ratchet guide | 4-1.3 |
| 1-4 | Ratchet | 4-1.4 |
| 1-5 | Washer - recoil 5x17x0.5 | 4-1.5 |
| 1-6 | Friction Spoil 16x1 | 4-1.6 |
| 1-7 | Ratchet Spring 5.5x0.2 | 4-1.7 |
| 1-8 | Roller | 4-1.8 |
| 1-9 | Starter spring | 4-1.9 |
| 1-10 | Starter cover | 4-1.10 |
| 1-11 | Rope | 4-1.11 |
| 1-12 | Pulley handle | 4-1.12 |

- Turn the Drain Cock to ON position and drain the Kerosene from the carburetor.
- Turn the Drain Cock to OFF position after you have drained the Kerosene.
- Return the Kerosene to the Kerosene Tank.
- Turn the Fuel Cock to START / ON position
- Increase the throttle (accelerator) level slightly
- Make sure that there is no (minimum) load attached to the Engine
- Pull the starter grip, until you feel the resistance
- Then pull the rope fast
- Do not leave the rope. Do not allow rope to snap back.
- Return the rope slowly, by hand, to the recoil starter
- Turn the fuel cock to RUN position.



- Close the choke as indicated on the Engine.

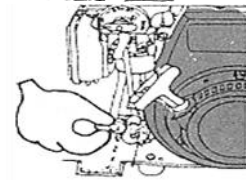
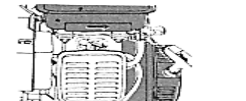


Starting the Engine (HOT START):

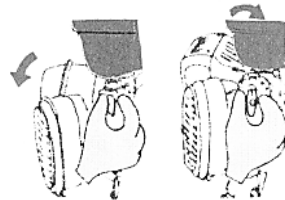
- Turn the Engine switch to ON position
- Close the choke as indicated on the Engine



- Raise the throttle lever slightly
- Make sure that there is no (minimum) load attached to the Engine.

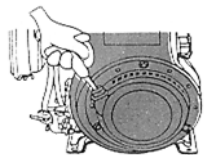


- Turn the Fuel Cock to RUN / ON position.



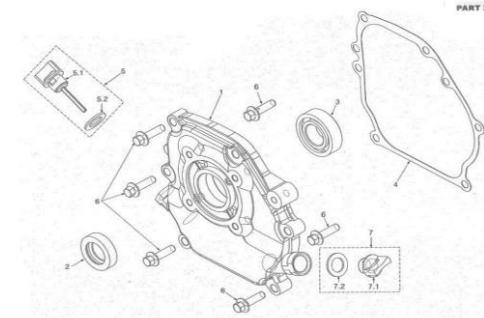
- Pull the starter grip, until you feel the resistance
- Then pull the rope fast.
- Do not leave the rope. Do not allow the rope to snap back.

Return the rope slowly, by hand, to the recoil starter



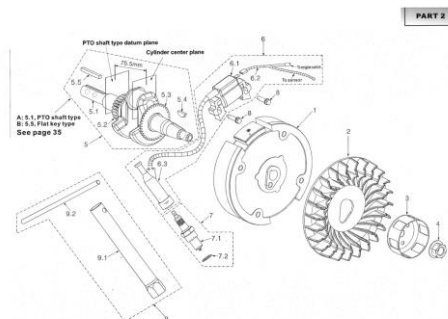
| Sl. No | Part Name | Part No |
|--------|--------------------|---------|
| 9 | Tools | 2-9 |
| 9.1 | Wrench, Spark plug | 2-9.1 |
| 9.2 | Handle | 2-9.2 |

Crankcase Cover Parts



| Sl. No | Part Name | Part No |
|--------|---------------------|---------|
| 1 | Crankcase cover | 3-1 |
| 2 | Oil Seal 25x41.25x6 | 3-2 |
| 3 | Ball Bearing 6205 | 3-3 |
| 4 | Gasket crankcase | 3-4 |
| 5 | oil gauge assembly | 3-5 |
| 5-1 | Oil Gauge | 3-5.1 |
| 5-2 | seal-oil gauge | 3-5.2 |
| 6 | Bolt M8 x 30 | 3-6 |
| 7 | Oil Plug assembly | 3-7 |
| 7-1 | Oil plug | 3-7.1 |
| 7-2 | Seal Oil Plug | 3-7.2 |

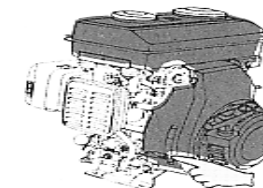
Crankshaft (Oil Sensor)



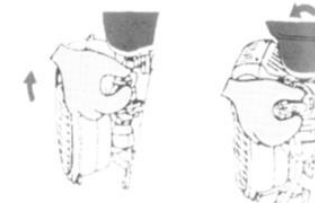
| Sl. No | Part Name | Part No |
|--------|------------------------|---------|
| 1 | Fly Wheel Assembly | 2-1 |
| 2 | Fly Wheel Fan | 2-2 |
| 3 | Starter Sleeve | 2-3 |
| 4 | Nut Fly wheel Assembly | 2-4 |
| 5 | Crankshaft Assembly. | 2-5 |
| 5-1 | Crank Shaft | 2-5.1 |
| 5-2 | Timing Gear | 2-5.2 |
| 5-3 | Governor Gear | 2-5.3 |
| 5-4 | Woodruff key | 2-5.4 |
| 5-5 | Flat Key | 2-5.5 |
| 6 | Ignition Coil Assembly | 2-6 |
| 6-1 | Ignition Coil | 2-6.1 |
| 6-2 | Stop lead | 2-6.2 |
| 6-3 | Spark Plug Cap | 2-6.3 |
| 7 | Spark Plug Assembly. | 2-7 |
| 7-1 | Spark plug | 2-7.1 |
| 7-2 | Washer, Spark Plug | 2-7.2 |
| 8 | Bolt 6 x 25 | 2-8 |

Stopping the Engine:

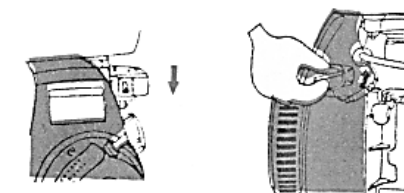
1. Move the throttle (accelerator) lever fully down.



2. Turn the Fuel Cock to STOP / OFF position



3. Turn the Engine switch to OFF position.



NOTE: In case of emergency, in order to stop the engine just turn the switch to OFF position.

MAINTENANCE

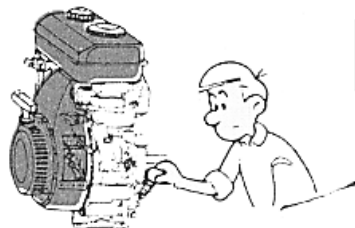
| Item \ Period | Before Each Use | First Month | Every 3-Months | Every 6-Months | 1-Year | 3-Years |
|-------------------------|-----------------|-------------|----------------|------------------------|-----------------|---------|
| Engine Oil | Check | Change | | Change | | |
| Air Cleaner | Check | | Clean | | | |
| Spark Plug | | | | Check, Clean, Readjust | | |
| Muffler | | | | | Clean | |
| Cylinder Head | | | | | Clean | |
| Fuel Filter & Fuel Pipe | | | | | Clean | Change |
| Valves | | | | | Check, Readjust | |

Important:

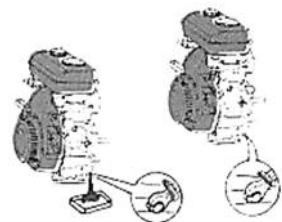
- Oil should be changed after first 20 hours of use. After that OIL should be changed every 100-hours of use.
- If you are in dusty environment, service more frequently
- Always use genuine spare parts and take it for servicing to authorized dealers.

Oil Change:

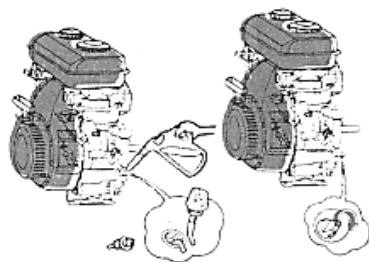
Remove Oil Filter cap



Remove the drain bolt, and drain the old oil.



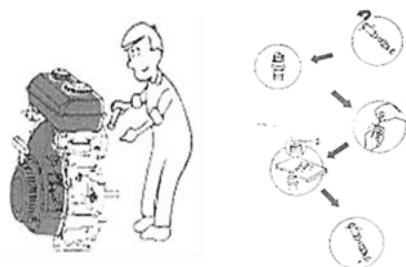
1. Tighten the drain bolt.
2. Fill the new Recommended Oil to the maximum level (neck of the oil filler)
3. Tighten the Oil Filler cap.



Spark Plug:

1. Remove the Spark Plug
2. Clean the carbon deposits
3. Measure the gap – it should be 0.6-0.7 mm
4. If necessary, replace the spark plug

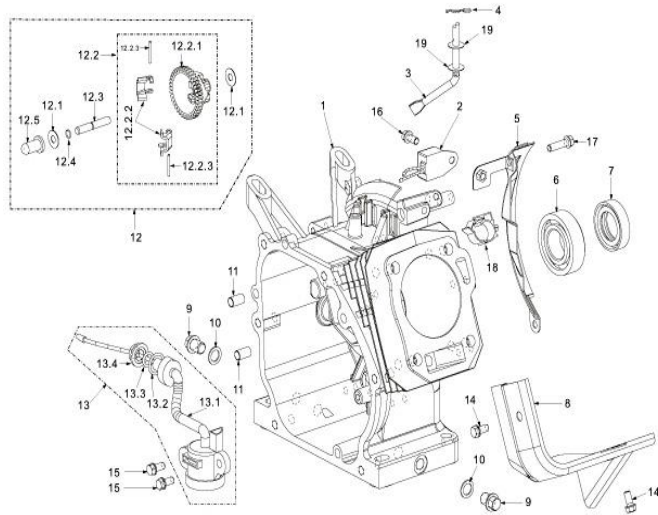
Note: Always use genuine spare parts only.



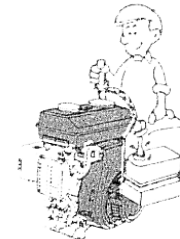
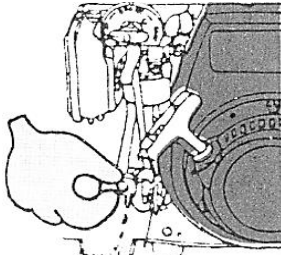
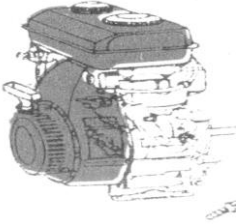
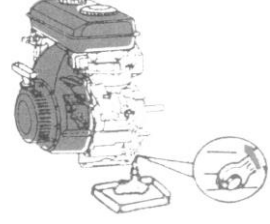
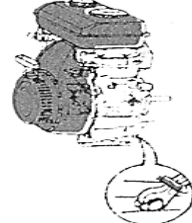
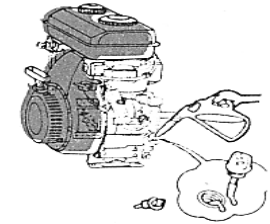
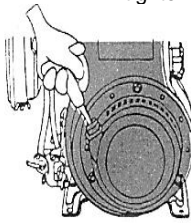
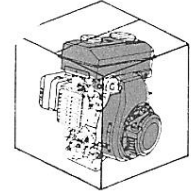
STORAGE

| Sl. No | Part Name | Part No |
|--------|---------------------------|----------|
| 12-1 | Washer, slip cap 6x15x0.5 | 1-12.1 |
| 12-2 | Centrifugal gear Assembly | 1-12.2 |
| 12-2-1 | centrifugal gear | 1-12.2.1 |
| 12-2-2 | Centrifugal block | 1-12.2.2 |
| 12-2-3 | pin, centrifugal block | 1-12.2.3 |
| 12-3 | Centre axis | 1-12.3 |
| 12-4 | Clip centre axis | 1-12.4 |
| 12-5 | Slip cap | 1-12.5 |
| 13 | Oil sensor Assembly | 1-13 |
| 13-1 | Oil sensor Body | 1-13.1 |
| 13-2 | O-Ring 17 x 2 | 1-13.2 |
| 13-3 | O-Ring 11 x 2 | 1-13.3 |
| 13-4 | Nut M10 | 1-13.4 |
| 14 | Bolt M6 x 10 | 1-14 |
| 15 | Bolt M6 x 14 | 1-15 |
| 16 | Bolt M6 x 12 | 1-16 |
| 17 | Bolt M6 x 20 | 1-17 |
| 18 | Rubber wire hoop | 1-18 |
| 19 | Washer Slip Cap 6x15x0.5 | 1-19 |

PARTS DIAGRAM & LIST-FB-GE-160/200 CRANKCASE



| Sl. No | Part Name | Part No |
|--------|------------------------|---------|
| 1 | Crankcase Body | 1-1 |
| 2 | Current Amplifier | 1-2 |
| 3 | Sway bar | 1-3 |
| 4 | Split Clip | 1-4 |
| 5 | Side Plate | 1-5 |
| 6 | Ball Bearing 6205 | 1-6 |
| 7 | Oil seal 25x41.25x6 | 1-7 |
| 8 | Wind guide | 1-8 |
| 9 | Drain bolt | 1-9 |
| 10 | Washer Drain bolt | 1-10 |
| 11 | Set pin 8x14 | 1-11 |
| 12 | Centrifugal gear (set) | 1-12 |

- 
- 
1. Drain the fuel from 2 fuel tanks
 2. Drain fuel from Carburetor
 3. Remove the Oil Filter cap
 4. Remove the drain bolt and drain the oil
 5. Close the oil drain bolt and tighten it
 6. Fill new recommended oil to the max level
 7. Pull the recoil starter slowly until resistance is left
 8. Pack it in a closed box and store it.
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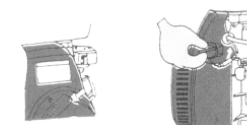
TECHNICAL SPECIFICATIONS

| Model | FB-GE-160 | FB-GE-200 |
|--------------------|--|--------------------------|
| Engine Type | 4-Stroke, Air-cooled, 1-Cylinder, Side Valve | |
| Displacement | 163 cc | 197 cc |
| Bore x Stroke | 68 x 45 mm | 67 x 56 mm |
| Compression Ratio | 6 : 1 | 4.5 : 1 |
| Fuel | Petrol Start – Kerosene Run | |
| Max Power | 3.3 HP @ 3000 RPM | 4.6kW (6.5HP) @ 3600 RPM |
| Rated Power | 2.7 HP @ 2500 RPM | 3 kW (4.1 HP) @ 3600 RPM |
| Max Torque | 1.05 Kg.m./2500 RPM | 13.2 Nm./3600 RPM |
| Ignition System | Non-contact TCI | |
| Ignition Timing | 20° BTDC | |
| Air Cleaner | Semi-dry, oil bath, dual, double silent and cyclone type | |
| Kerosene Tank | 3.8 L | 4 L |
| Petrol Tank | 0.2 L | 0.4 L |
| Lube Oil Tank | 0.6 L | 0.7 L |
| PTO Shaft | Keyway and internal | |
| PTO Shaft Rotation | Counter clockwise from drive's end | |

TROUBLE SHOOTING

The engine does not start:

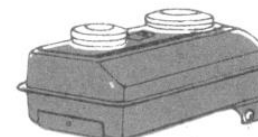
1. Is the Engine SWITCHED – OFF?



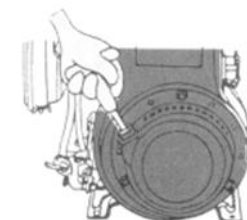
2. Check Engine OIL level. Is it low?



3. Check both fuel levels



4. Is the fuel reaching the carburetor?



5. Is there good spark in the Spark Plug?



6. If you are still not able to start it, please take the engine to the authorized dealer.

