

**Incidental / Consequential Loss:** KisanKraft Limited or its manufacturers will not be liable for general damages, including bodily injuries, or for incidental or consequential damages including, but not limited to, loss of use, loss of profits, loss of production, expense of substitute equipment or other commercial loss or damage.

**Limitation of Liability:** This limited warranty is in lieu of all other express warranties, obligations, or liabilities. Any implied warranties, obligations or liabilities, including, but not limited to, any implied warranty of merchantability shall be limited in duration to the applicable warranty period. Any action for breach of any warranties hereunder, including, but not limited to, any implied warranty of merchantability must be brought within the applicable warranty period.

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**KisanKraft Limited**

Product	<b>Centrifugal Water Pump for Agriculture</b>	KisanKraft Invoice Date	
Brand	<b>KisanKraft</b>	KisanKraft Invoice No.	
Model	<input type="checkbox"/> KK-WPP-20, <input type="checkbox"/> KK-WPP-30 <input type="checkbox"/> KK-WPP-60080, KK-WPCI-4520		
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- (3) Lack of maintenance,
- (4) Negligence,
- (5) Accident or physical damage,
- (6) Repairs made by unauthorized parties and/or with unauthorized parts,
- (7) Improper set up, adjustments, tampering or altered products
- (8) Any modification to the product what-so-ever.

**Important:** (1) Normal maintenance and adjustments to the product is the responsibility of the customer. (2) Normal wear and tear are not covered under warranty. (3) Rubber/plastic parts and consumables such as blades, clutch and clutch-bell, sparkplugs, nylon line, air-filters, fuel-filters, oil seals and gaskets etc. are not covered under the warranty. (4) Electrical Motor, Electrical Parts, Battery Etc. are not covered under the warranty.

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**KisanKraft Limited**



Wide Range of Products for Every Need



For more information give **MISSED CALL: 07676065555**



Many of our products have BIS: ISI certification.



# User Manual



**KisanKraft Limited**

**Warehouse:** 818 3B1 to 818 3B18, Podalukur - Sangam Road, Prabagiripatnam, Podalukur, Nellore - 524345, Andhra Pradesh, INDIA

**Head Office:** #4, 1<sup>st</sup> Main, 7-A Cross, Maruthi Layout, Dasarahalli, HAF Post, Hebbal, Bangalore 560024, Karnataka, INDIA

- ◆ Bangalore (HO) ◆ Ahmedabad ◆ Bhopal ◆ Bhubaneswar ◆ Coimbatore
- ◆ Guwahati ◆ Hubli ◆ Hyderabad ◆ Jaipur ◆ Karnal
- ◆ Kolkata ◆ Lucknow ◆ Nellore ◆ Pune ◆ Raipur



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

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

If the engine is not used for a long time, do the necessary maintenance before its storage.

- Firstly, take off the fuel tank, drain out all fuel, and clean the dirt and water inside the tank. Open the fuel cock, unscrew the drain plug at the bottom of carburetor, drain out fuel in carburetor thoroughly, and then tighten the drain plug.
- Secondly, unscrew the drain plug at the bottom of the crankcase and drain out the lubricant oil in the crankcase thoroughly, then tighten the drain plug.
- Finally, clean the surface of the engine with clean cloth, remove the dirt and dust etc. Then store the engine in a well-ventilated, dirt-free place.

### TRANSPORTATION

- Contact with the hot engine or exhaust system can cause serious burns or fires. Allow the engine to cool down before transporting or storing the engine.
- During transport of the engine, turn the engine switch and the fuel valve to OFF. Keep the engine cool.

### TROUBLESHOOTING

#### 4. The Engine Can't Startup

- Have the engine checked if it is hard to or cannot be started.
- Firstly, check the fuel level of the fuel tank. Turn fuel valve to (2), Fuel should flow from the drain when the fuel valve is turned ON. Tighten the drain plug. (Refer to starting of the engine)

#### 5. Spark Plug

Check the spark plug. Remove the spark plug cap and clean any dirt around it. If the engine still cannot be started after repeating several times, please see the authorized dealer. Users are not allowed to dismantle or reassemble the unit by themselves.

#### 6. Not Enough Power

- Check the air-cleaners. Please refer the maintenance inspection book to clear the air-cleaner.
- Check the fuel. Please strain out the gasoline in fuel tank and in carburetor, and fill in new gasoline.
- For any other trouble, please contact our dealer.

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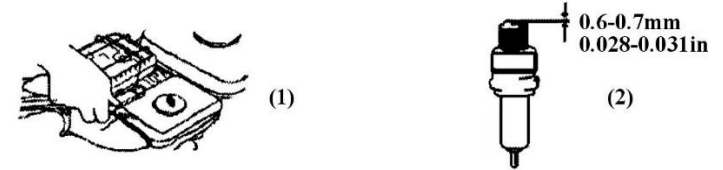
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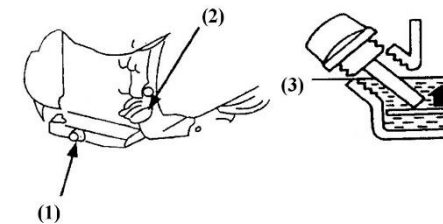
- Reinstall the drain plug and sealing washer. Tighten the plug securely.
- Refill with the recommended oil and check the oil level.



(1) Dismantle Spark Plug

(2) Adjust Clearance

8. Clean the fuel tank and filter when working time reaches 100hrs: Remove the fuel cover, drop out filter, and wash it with brush slightly. Remove fuel tank, clean the fouling and water inside fuel tank. Reinstall fuel tank, place filter from fill-in hole, filling the clean fuel to red line level.



4) Drain plug

5) Engine switch

6) Lower level

Check aging of fuel pipe every 2 years. If ageing, hardening and cracking is detected, have it replaced. Tighten the joints, and check leakage.

Before storing the unit for an extended period:

- 3. Make sure the storage area is free of excessive humidity and dust.
- 4. Service according to the table below.

Storage Time	Recommended Service Procedure To Prevent Hard Starting
Less than 1 month	No preparation required
1 to 2 months	Fill with fresh gasoline and add gasoline conditioner
2 months to 1 year	<ul style="list-style-type: none"> <li>• Fill with fresh gasoline and add gasoline conditioner</li> <li>• Drain the carburetor float bowl</li> <li>• Drain the fuel sediment cup</li> </ul>

(1) Throttle knob

(2) Throttle is at OFF

### ! DANGER:

- Gasoline is extremely flammable and explosive under certain conditions.
- Refuel in well-ventilated places with the engine stopped. Do not smoke or allow flames or sparks near the places where the engine is refueled or gasoline is stored.
- Do not add fuel over the shoulder of strainer. After fueling, tighten the tank cover.
- Fuel vapors are extremely flammable and may ignite after the engine has started. Make sure that any fuel spillage has been wiped off before starting the engine.
- Avoid skin coming in contact with gasoline for a long time, avoid breathing in gasoline vapors. Keep children away from them.

### NOTE:

Fuel can damage paint and plastics. Be careful when refueling. Damage caused by spilling fuel is not covered under warranty.

## MAINTENANCE

Do periodic maintenance to keep the engine in good condition. Always follow the inspection and maintenance recommendation and schedules given in this manual.

### ! WARNING:

Stop the engine before doing any maintenance work. If the engine must be operated, provide adequate ventilation. Breathing in exhaust can cause loss of consciousness and even lead to death.

### Everyday Maintenance:

5. **Air cleaner:** A dirty air cleaner will restrict air flow into the carburetor. To prevent carburetor malfunction, service the air cleaner regularly. Service more frequently when operating the generator in extremely dusty areas.
  - Check air cleaner core, get rid of fouling, and keep the core clean.
  - Check bolts, fasten the loose ones.
  - Check whether lubricant oil level is within the limits.
6. Clean the core after 25hrs of engine run
7. Clean carbon fouling of the spark plug after working up to 50hrs. Check the clearance, and adjust the gap to 0.6-0.7mm (see figure 4-1). Check radiator, and clean fouling among radiators.
  - Drain the oil while the engine is warm to assure rapid and complete draining.
  - Remove the drain plug and sealing washer, remove the oil filler cap, and drain the oil.

## 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.
  - 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

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

### USE

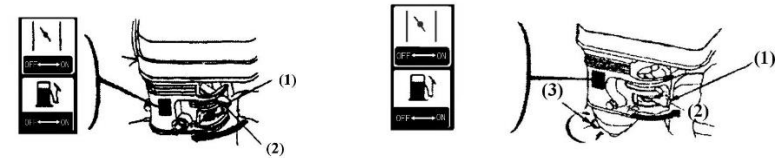
The use of the water pump:

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

### STOPPING THE ENGINE

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

- Once the engine got started, let it run for 1-3 minutes at idle speed, check whether it is balanced, cracked, then pull the throttle to open position, adjust choke rod to OPEN.



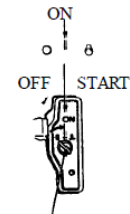
(1) Auto-Throttle

(2) Off Position

(3) Starter Knob

### Electrical Starting:

Turn the engine switch to START position and hold a while until the engine started

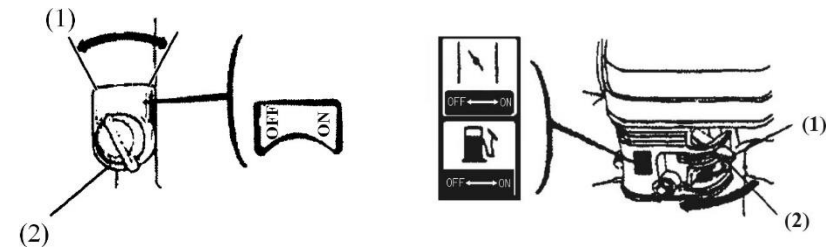


ENGINE SWITCH

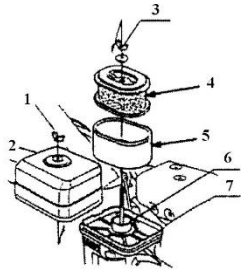
**NOTE:** Restrict the starting time within 5 seconds to avoid engine damage. If engine cannot be started, release starter knob, retry after 10 seconds.

### STOPPING THE ENGINE

Adjust throttle to proper position. Reduce engine speed, close the choke. Turn engine switch to OFF position.







- 8) Butterfly nut
- 9) Air cleaner cover
- 10) Butterfly nut
- 11) Paper element
- 12) Foam element
- 13) Seal washer
- 14) Silencer plate

### ! WARNING:

Do not run the engine without air cleaner.

### ! DANGER

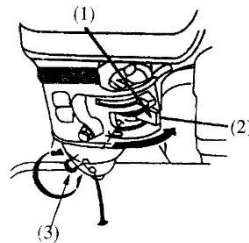
Using gasoline or flammable solvent to clean the filter element can cause a fire or explosion.

### ! CAUTION:

Do not run the engine without air cleaner core, otherwise dust and/or other foreign matters may get into the engine through carburetor, and results in rapid engine worn-out.

### STARTING THE ENGINE

- Turn the fuel valve to ON position, unscrew the drain plug on carburetor bottom, and fasten the drain plug until oil spills out.
- Pull the choke rod to the CLOSE position. Adjust throttle to proper position. Pull the starter grip lightly until resistance is felt, then pull it rapidly



(1) Fuel Valve

(2) Start Level

(3) Drain Plug

### NOTE:

- Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.

### 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

### 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**

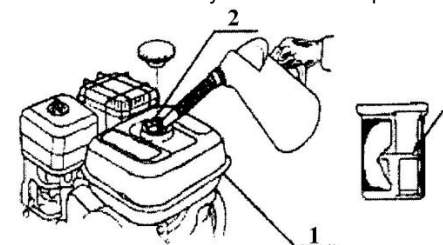
Problem	Probable cause	Action to be taken
The Engine can't be started	Refer the Engine manual	Refer the Engine manual
The pump cannot pump water	The water infused is not enough	Fill the pump with enough water.
	The filter is air – logged.	Clear the air from the filter.
	The tie-in is not firmly equipped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

**Fuel Level**

- Check the fuel gauge, and refill the tank if the fuel level is low. Do not fill above the shoulder of the fuel strainer. The fuel 90# gasoline is recommended.
- Unleaded gasoline produces less engine and spark plug fouling and extends exhaust system life.
- Never use stale or contaminated gasoline or oil/gasoline mixture. Avoid dirt, rubbish and water from getting into the fuel tank.
- If spark knock or pinging occurs at a steady engine speed under normal load, change brands of gasoline. If spark knock or pinging persists, see an authorized dealer.

**! WARNING:**

- Running the engine with persistent spark knock or pinging can cause engine damage.
- If persistent spark knocks or pinging is caused by improper usage of the unit, the Distributor's Limited Warranty does not cover parts damaged by that.

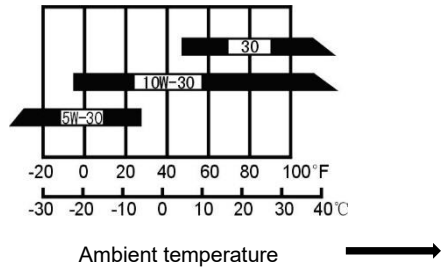


(1) Fuel tank (2) Fill in hole (3) Red line level

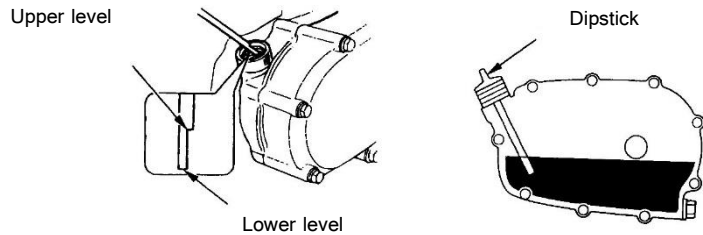
**Air Cleaner**

The air cleaner is a dry type including paper element and foam element.

- Remove the clip and dismantle the air cleaner housing or remove the wing nuts and air cleaner cover.
- Wash the element in solution of household detergent and warm water, then rinse thoroughly, or wash in nonflammable or high flash point solvent. Allow the element to dry thoroughly

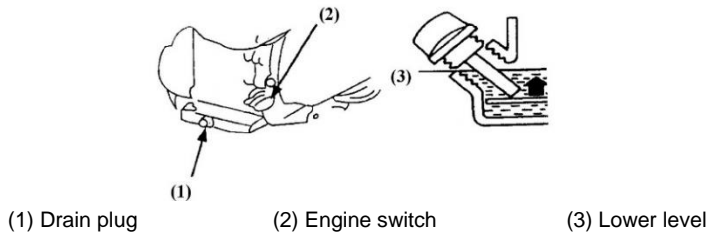


- Before checking engine lubricant oil, place the engine on level surface
- Turn out the oil filler cap and clean the dipstick with a clean cloth.
- Insert the dipstick back into the oil filler hole without turning it in.
- If oil level is below the lower mark of the dipstick, fill oil to the upper level of the dipstick.
- Reinstall the oil filler cap properly.



**Engine oil alert system (optional function):**

The oil alert system is designed to prevent engine damage caused by insufficient oil in the crankcase. When the oil level in the crankcase falls below the safe limit, the oil alert system will automatically stop the engine even if the engine switch remains at the ON position. If the engine stops and cannot be restarted, check the engine oil level before troubleshooting in other areas.

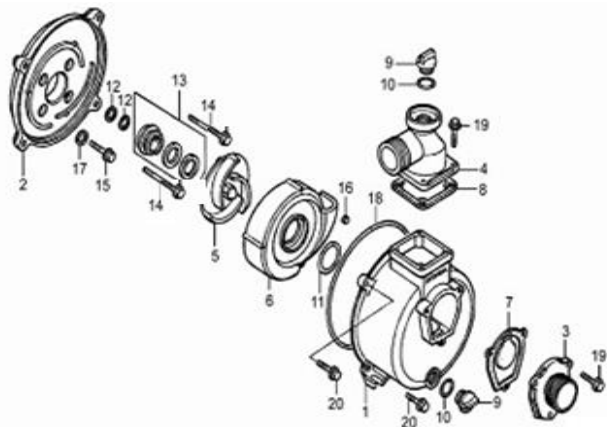


**TECHNICAL SPECIFICATIONS**

Model	KK-WPP-20	KK-WPP-30	KK-WPP-60080	KK-WPCI-4530
Displacement	212			
Bore * Stoke (mm)	70*55			
Rated Power (kw)	4.1			
Fuel Tank (L)	3.6			
Max Torque (N/m)	14.5			
Oil Tank	0.55			
Dimension (mm)	505*430*432			
Head Lift (m)	26	26	80	75
Suction (m)	8	8	8	8
Max Flow (M2/h)	36	60	16	38
Diameter of suction (mm)	50	80	50	50
Discharge Pipe	50	80	50	50
Engine Power	4.1	4.1	4.1	4.1
Engine Torque	14.5	14.1	14.5	14.5
Inlet / Outlet Size	50	50	50	50
Max Head	26	26	50	75

### PUMP PARTS DIAGRAM & LIST-KK-WPP-20/30

#### Pump Set Contents



SL-No	KK-No	KK-Name	Qty
1	E1-01	Pump body	1
2	E1-02	Pump Cover	1
3	E1-03	Triangle flange	1
4	E1-04	Pump Elbow	1
5	E1-05	Impeller	1
6	E1-06	Turbine	1
7	E1-07	rubber gasket, Triangle flange	1
8	E1-08	Rectangular rubber gasket	1
9	E1-09	Rubber Plug	2
10	E1-10	O-Ring(Rubber Plug)	2
11	E1-11	O-ring(Turbine)	1
12	E1-12	Rubber gasket(Bolt)	5

### SAFETY INSTRUCTIONS

- Please perform some pre-operation checks before operation to avoid human injury and equipment damage.
- Keep the engine in good ventilated places at least 1 meter away from buildings and other equipment's during operation and keep the flammable substances away from the engine to avoid fire.
- Keep children and pets away from the operation area.
- Make sure that the person who operates the engine receives proper instruction.
- Keep the flammable substances (gasoline, matches) away from the operating engine.
- As gasoline is extremely flammable and explosive under certain conditions, please refuel in a well-ventilated area with the engine stopped.
- Do not fill above the shoulder of the fuel strainer.
- Make sure the fuel cover is tightened.
- Make sure that any spilled fuel has been wiped off before starting the engine.
- Do not smoke or allow flames or sparks where the engine is refueled or where gasoline is stored.
- Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death. Do not operate the engine without good ventilation or in enclosed room.
- If you run the engine in an area that is confined, or even partially enclosed, the air you breathe could contain a dangerous amount of exhaust gas. Provide adequate ventilation so as to keep exhaust gas from accumulation.
- Place the engine on flat (level) surface, tilting angle of the engine should not be more than 20°, otherwise it will lead to fuel spilling out.
- Do not cover the engine so as to avoid fire occurrence.
- The muffler becomes very hot during and immediately after operation. Be careful not to touch the muffler while it is hot. Let the engine cool down before storing the engine indoor.

### PRE-OPERATION CHECKS

#### Check the Oil Level

#### Lubricating oil:

- Engine lubricant oil is a major factor affecting engine performance and service life.
- The use of the lubricating oil free of cleaning agent or the lubricating oil for the two-stroke engine will shorten the life of the gasoline engine.
- The operating temperature range recommended for the gasoline engine is - 5°C~40°C.
- Use 4-stroke motor lubricant oil. 20W-40 is recommended in general, at all temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.

**USER MANUAL-**



**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 manual is a part of the gasoline engine and should be transferred when the machine is resold.

**SAFETY LABELS**

**! DANGER**

Indicates a hazard, if not avoided, can result in human injury or death.

**! WARNING**

Indicates a hazard, if not avoided, could result in human injury and/or property damage.

**CAUTION**

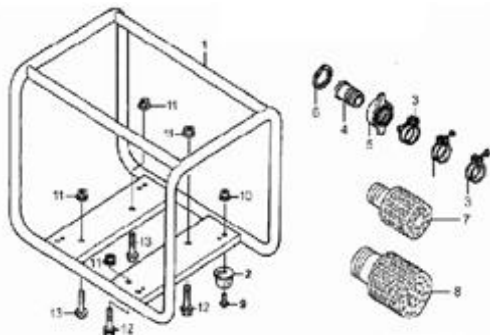
Indicates a hazard, if not avoided, might result in slight injury and/or property damage.



Please read and understand this owner's manual before operation of the engine to avoid accidents by familiarizing yourself with your engine's controls and safe operation procedures.

SL-No	KK-No	KK-Name	Qty
13	E1-13	Water Seal assy	1
14	E1-14	Bolt M8x55 Flanged Hex	4
15	E1-15	Bolt M8x25 Flanged Hex(SPL)	4
16	E1-16	N/A	1
17	E1-17	Washer 8-Plain	4
18	E1-18	O-Ring(Pump body)	1
19	E1-19	Bolt M8x20 Hex	7
20	E1-20	Bolt M8x25 Hex	5

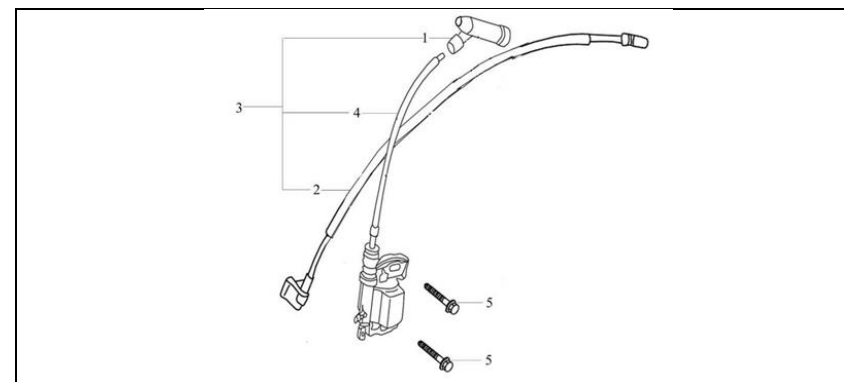
### Frame



SL-No	KK-No	KK-Name	Qty
1	E2-01	Frame assembly	1
2	E2-02	Rubber Bedding	4
3	E2-03	Clamp(Hose)	3
4	E2-04	Inlet and outlet pipe	1
5	E2-05	Flange nut	1
6	E2-06	Rubber gasket, inlet and outlet pipe	1
7	E2-07	Filter	1
8	***	N/A	1
9	E2-09	Bolt M6x12 Flanged Hex	4
10	E2-10	N/A	4
11	E2-11	Nut M8 Flange	2
12	E2-12	Bolt M8x45 Flanged Hex	4
13	E2-13	N/A	2

SI No.	Part No.	Description
3	12-3	Flywheel
4	12-4	Nut M12x1.25

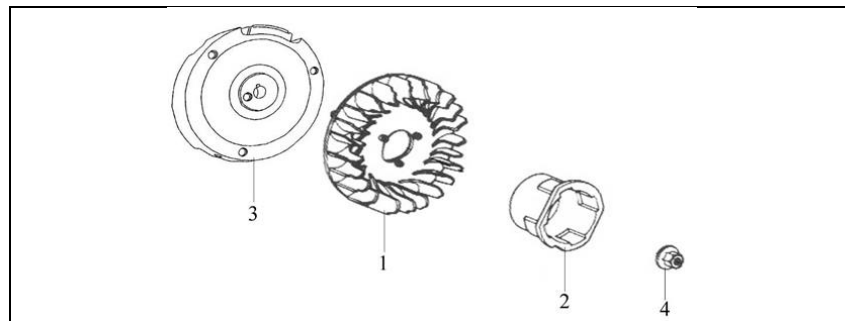
### IGNITION COIL



SI. No.	Part No.	Description
1	13-1	Cap, spark plug
2	13-2	Cable, engine stop
3	13-3	Ignition coil sub-Assembly
4	13-4	Ignition coil
5	13-5	Bolt M6x25

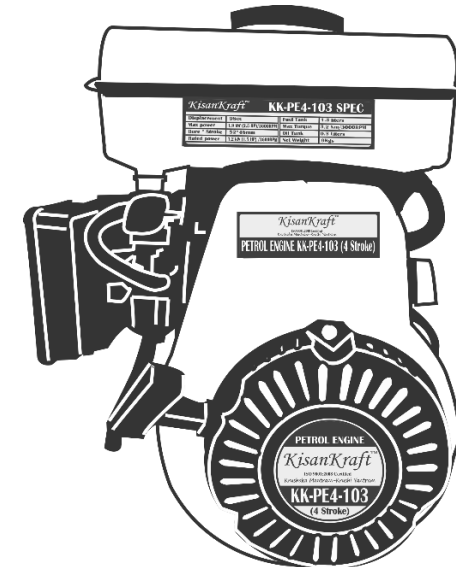
SI No.	Part No.	Description
4	11-4	Return spring
5	11-5	Assistant spring, governor
6	11-6	Mount, governor
7	11-7	Handle
8	11-8	Positioning plate
9	11-9	Spring, governor
10	11-10	Wave washer
11	11-11	Washer
12	11-12	Supporting plate unit
13	11-13	Pressure plate
14	11-14	Nut M6
15	11-15	Bolt M5x25
16	11-16	Bolt M6x14
17	11-17	Bolt M5x16

### FLYWHEEL



SI No.	Part No.	Description
1	12-1	Fan, flywheel
2	12-2	Starter Sleeve /flange

### USER MANUAL-4-STROKE PETROL 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. This manual is a part of the gasoline engine and should be transferred when the machine is resold.

### SAFETY LABELS

**! DANGER**

Indicates a hazard, if not avoided, can result in human injury or death.

**! WARNING**

Indicates a hazard, if not avoided, could result in human injury and/or property damage.

**CAUTION**

Indicates a hazard, if not avoided, might result in slight injury and/or property damage.



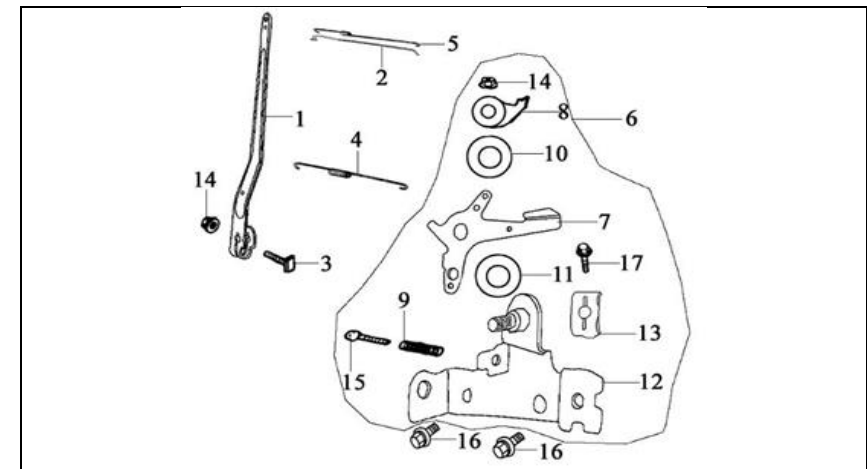
Please read and understand this owner's manual before operation of the engine to avoid accidents by familiarizing yourself with your engine's controls and safe operation procedures.

### SAFETY INSTRUCTIONS

1. Please perform some pre-operation checks before operation to avoid human injury and equipment damage.
2. Keep the engine in good ventilated places at least 1 meter away from buildings and other equipment's during operation and keep the flammable substances away from the engine to avoid fire.
3. Keep children and pets away from the operation area.
4. Make sure that the person who operates the engine receives proper instruction.
5. Keep the flammable substances (gasoline, matches) away from the operating engine.
6. As gasoline is extremely flammable and explosive under certain conditions, please refuel in a well-ventilated area with the engine stopped.
7. Do not fill above the shoulder of the fuel strainer.
8. Make sure the fuel cover is tightened.
9. Make sure that any spilled fuel has been wiped off before starting the engine.
10. Do not smoke or allow flames or sparks where the engine is refueled or where gasoline is stored.
11. Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death. Do not operate the engine without good ventilation or in enclosed room.
12. If you run the engine in an area that is confined, or even partially enclosed, the air you breathe could contain a dangerous amount of exhaust gas. Provide adequate ventilation so as to keep exhaust gas from accumulation.
13. Place the engine on flat (level) surface, tilting angle of the engine should not be more than 20°, otherwise it will lead to fuel spilling out.
14. Do not cover the engine so as to avoid fire occurrence.
15. The muffler becomes very hot during and immediately after operation. Be careful not to touch the muffler while it is hot. Let the engine cool down before storing the engine indoor.

SI No.	Part No.	Description
8	10-8	Guide Plate
9	10-9	Rope Reel
10	10-10	Starter Handle
11	10-11	Starter Cover
12	10-12	N/A
13	10-13	Engine switch
14	10-14	Bolt M6x10
15	10-15	Bolt M6x14
16	10-16	Ratchet Spring

### GOVERNING CONTROL SYSTEM

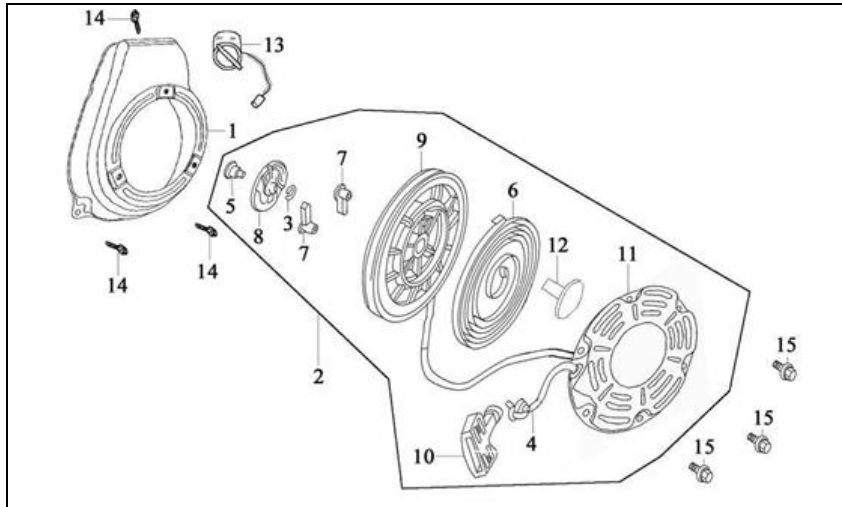


SI No.	Part No.	Description
1	11-1	Governor arm
2	11-2	Pull-rod, governor
3	11-3	Lock bolt



SI No.	Part No.	Description
1	9-1	Gasket, exhaust port
2	9-2	Exhaust muffler
3	9-3	Nut M6
4	9-4	Muffler Protector (Wire Net)

### RECOIL STARTER



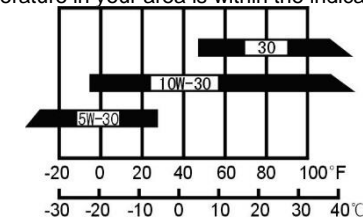
SI No.	Part No.	Description
1	10-1	Fan Cover
2	10-2	Recoil starter Assembly
3	10-3	Friction spring
4	10-4	Rope
5	10-5	Shoulder screw
6	10-6	Recoil Spring/Spiral spring
7	10-7	Ratchet

### PRE-OPERATION CHECKS

#### Check the Oil Level

#### Lubricating oil:

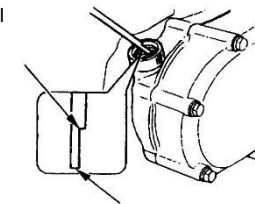
- Engine lubricant oil is a major factor affecting engine performance and service life.
- The use of the lubricating oil free of cleaning agent or the lubricating oil for the two-stroke engine will shorten the life of the gasoline engine.
- The operating temperature range recommended for the gasoline engine is -5°C~40°C.
- Use 4-stroke motor lubricant oil. 20W-40 is recommended in general, at all temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.



Ambient temperature →

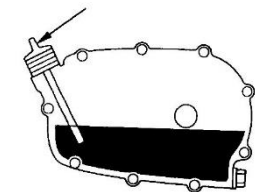
- Before checking engine lubricant oil, place the engine on level surface
- Turn out the oil filler cap and clean the dipstick with a clean cloth.
- Insert the dipstick back into the oil filler hole without turning it in.
- If oil level is below the lower mark of the dipstick, fill oil to the upper level of the dipstick.
- Reinstall the oil filler cap properly.

Upper level



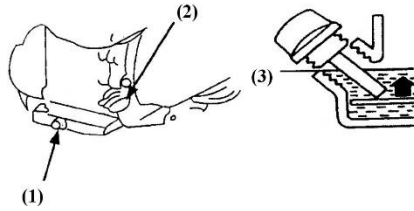
Lower level

Dipstick



### Engine oil alert system (optional function):

The oil alert system is designed to prevent engine damage caused by insufficient oil in the crankcase. When the oil level in the crankcase falls below the safe limit, the oil alert system will automatically stop the engine even if the engine switch remains at the ON position. If the engine stops and cannot be restarted, check the engine oil level before troubleshooting in other areas.



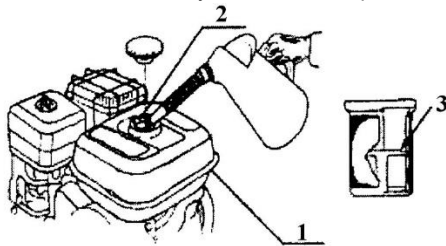
(1) Drain plug                      (2) Engine switch                      (3) Lower level

### Fuel Level

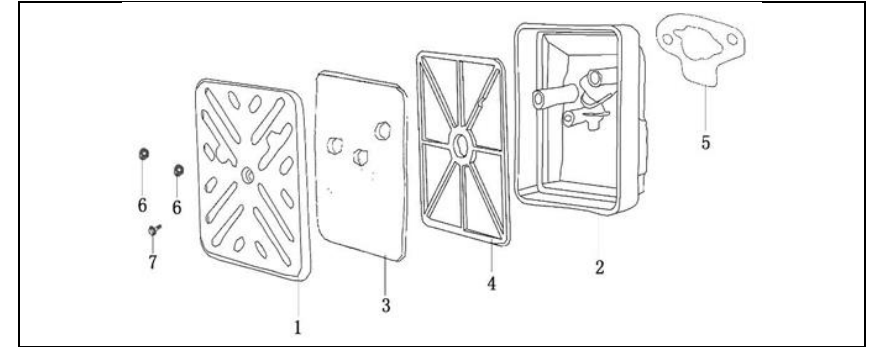
- Check the fuel gauge, and refill the tank if the fuel level is low. Do not fill above the shoulder of the fuel strainer. The fuel 90# gasoline is recommended.
- Unleaded gasoline produces less engine and spark plug fouling and extends exhaust system life.
- Never use stale or contaminated gasoline or oil/gasoline mixture. Avoid dirt, rubbish and water from getting into the fuel tank.
- If spark knock or pinging occurs at a steady engine speed under normal load, change brands of gasoline. If spark knock or pinging persists, see an authorized dealer.

### ! WARNING:

- Running the engine with persistent spark knock or pinging can cause engine damage.
- If persistent spark knocks or pinging is caused by improper usage of the unit, the Distributor's Limited Warranty does not cover parts damaged by that.

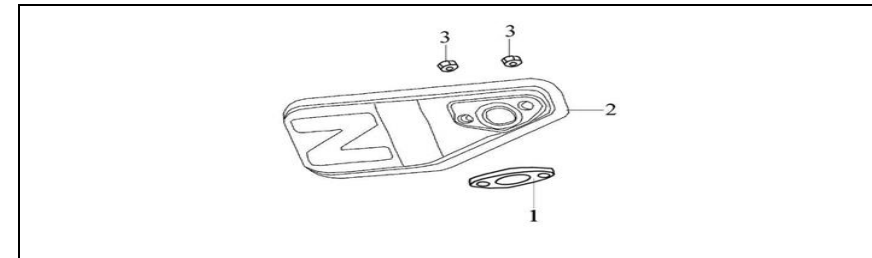


### AIR CLEANER ASSEMBLY



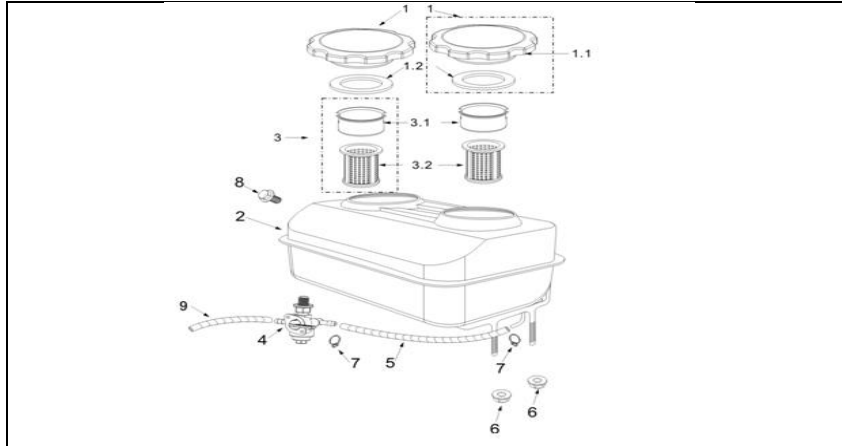
SI No.	Part No.	Description
1	8-1	Cover, air cleaner
2	8-2	Housing, air cleaner
3	8-3	Foam, air cleaner
4	8-4	Bracket, air cleaner
5	8-5	Gasket, air cleaner
6	8-6	Nut M5
7	8-7	Self-tapping screw ST4x10

### MUFFLER



31	6-31	Nut M6
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### FUEL TANK ASSEMBLY



SI No.	Part No.	Description
1	7-1	Fuel filler cap sub-Assembly
1.1	7-1.1	Fuel filler cap
1.2	7-1.2	Packing ring
2	7-2	Fuel tank
3	7-3	Fuel Filter(Upper)
4	7-4	Fuel Cock
5	7-5	Fuel Tube 200mm
6	7-6	Nut M6
7	7-7	Pipe clamp
8	7-8	Bolt M4x6
9	7-9	Fuel Tube 130mm

(1) Fuel tank

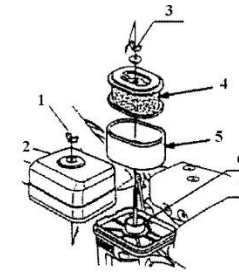
(2) Fill in hole

(3) Red line level

### Air Cleaner

The air cleaner is a dry type including paper element and foam element.

- Remove the clip and dismantle the air cleaner housing or remove the wing nuts and air cleaner cover.
- Wash the element in solution of household detergent and warm water, then rinse thoroughly, or wash in nonflammable or high flash point solvent. Allow the element to dry thoroughly



- 1) Butterfly nut
- 2) Air cleaner cover
- 3) Butterfly nut
- 4) Paper element
- 5) Foam element
- 6) Seal washer
- 7) Silencer plate

#### ! WARNING:

Do not run the engine without air cleaner.

#### ! DANGER

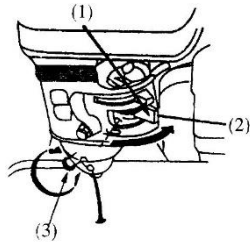
Using gasoline or flammable solvent to clean the filter element can cause a fire or explosion.

#### ! CAUTION:

Do not run the engine without air cleaner core, otherwise dust and/or other foreign matters may get into the engine through carburetor, and results in rapid engine worn-out.

### STARTING THE ENGINE

- Turn the fuel valve to ON position, unscrew the drain plug on carburetor bottom, and fasten the drain plug until oil spills out.
- Pull the choke rod to the CLOSE position. Adjust throttle to proper position. Pull the starter grip lightly until resistance is felt, then pull it rapidly



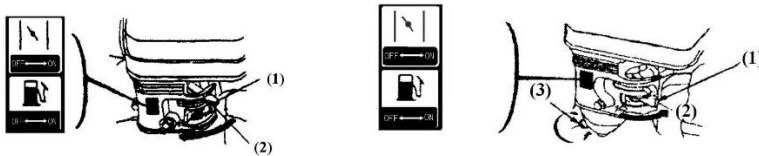
(1) Fuel Valve

(2) Start Level

(3) Drain Plug

#### NOTE:

- Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.
- Once the engine got started, let it run for 1-3 minutes at idle speed, check whether it is balanced, cracked, then pull the throttle to open position, adjust choke rod to OPEN.



(1) Auto-Throttle

(2) Off Position

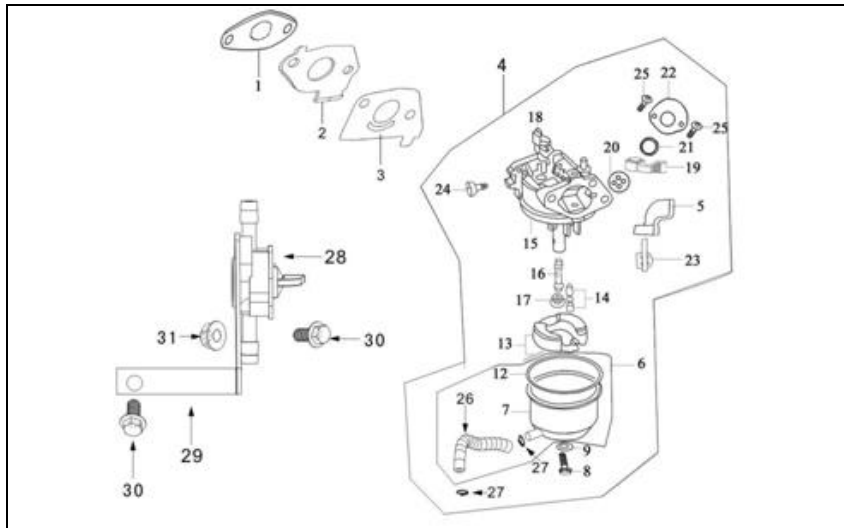
(3) Starter Knob

#### Electrical Starting:

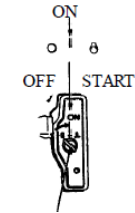
S/N	Part No.	Description
1	6-1	Gasket, intake port
2	6-2	Connecting block
3	6-3	Gasket, carburetor
4	6-4	Carburetor Assembly
5	6-5	Choke lever
6	6-6	Float chamber sub-Assembly
7	6-7	Float chamber
8	6-8	Screw
9	6-9	Seal, screw
12	6-12	Gasket, float chamber
13	6-13	Float sub-Assembly
14	6-14	Needle valve
15	6-15	Mixture chamber body
16	6-16	Main nozzle
17	6-17	Main jet
18	6-18	Throttle unit
19	6-19	Throttle lever
20	6-20	Airproof washer
21	6-21	Washer
22	6-22	Cover
24	6-24	Idle adjusting screw
25	6-25	Screw M4x6
26	6-26	Tubing
27	6-27	Pipe clamp
28	6-28	Oil switch
29	6-29	A mounting block
30	6-30	Bolt M6x14

SI No.	Part No.	Description
1	5-1	Camshaft
2	5-2	Washer, camshaft
3	5-3	Tappet
4	5-4	Intake valve
5	5-5	Exhaust valve
6	5-6	Oil seal, valve stem
7	5-7	Spring seat, valve
8	5-8	Valve spring
9	5-9	Cap (Valve)

### CARBURETOR ASSEMBLY



Turn the engine switch to START position and hold a while until the engine started

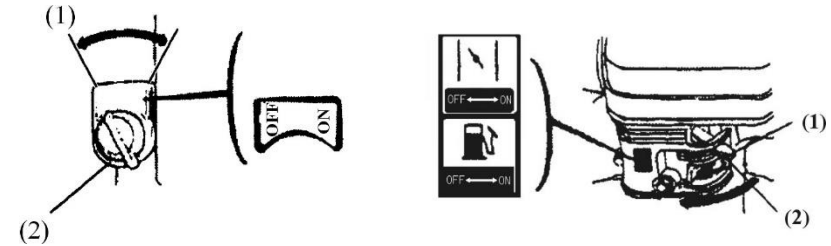


**ENGINE SWITCH**

**NOTE:** Restrict the starting time within 5 seconds to avoid engine damage. If engine cannot be started, release starter knob, retry after 10 seconds.

### STOPPING THE ENGINE

Adjust throttle to proper position. Reduce engine speed, close the choke. Turn engine switch to OFF position.



(1) Throttle knob

(2) Throttle is at OFF

### ! DANGER:

- Gasoline is extremely flammable and explosive under certain conditions.
- Refuel in well-ventilated places with the engine stopped. Do not smoke or allow flames or sparks near the places where the engine is refueled or gasoline is stored.
- Do not add fuel over the shoulder of strainer. After fueling, tighten the tank cover.
- Fuel vapors are extremely flammable and may ignite after the engine has started. Make sure that any fuel spillage has been wiped off before starting the engine.
- Avoid skin coming in contact with gasoline for a long time, avoid breathing in gasoline vapors. Keep children away from them.

**NOTE:**

Fuel can damage paint and plastics. Be careful when refueling. Damage caused by spilling fuel is not covered under warranty.

### MAINTENANCE

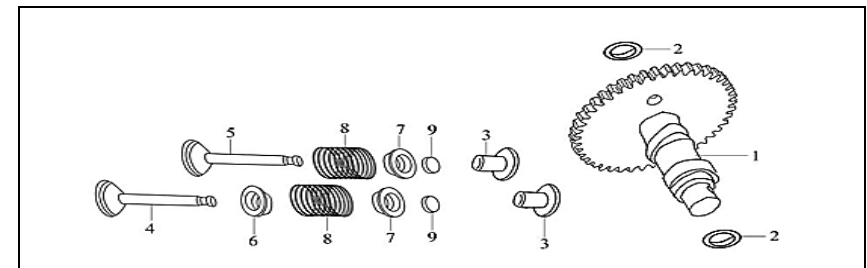
Do periodic maintenance to keep the engine in good condition. Always follow the inspection and maintenance recommendation and schedules given in this manual.

#### ! WARNING:

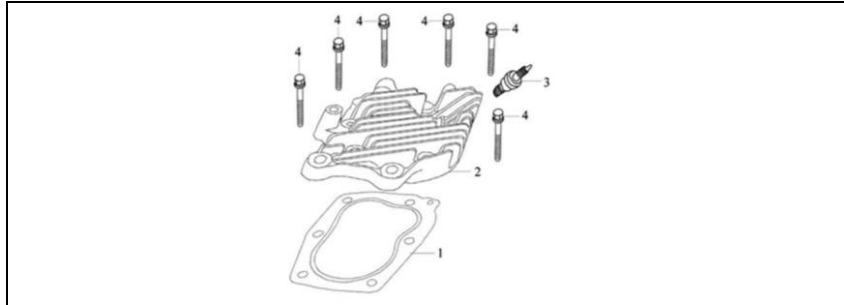
Stop the engine before doing any maintenance work. If the engine must be operated, provide adequate ventilation. Breathing in exhaust can cause loss of consciousness and even lead to death.

SI No.	Part No.	Description
1	4-1	Crankshaft sub-Assembly
2	4-2	Crankshaft
3	4-3	Woodruff key
4	4-4	Connecting rod
5	4-5	Shank
6	4-6	Cap connecting rod
7	4-7	Bolt M5x24
8	4-8	Piston
9	4-9	Piston pin
10	4-10	Circlip, piston pin
11	4-11	Piston ring set
12	4-12	<b>N/A</b>
13	4-13	
14	4-14	
15	4-15	
16	4-16	
17	4-17	Timing driving gear
18	4-18	Bearing 6203
19	4-19	Key(pulley) 5x5x35

### COMBINATION OF CAMSHAFT & VALVE

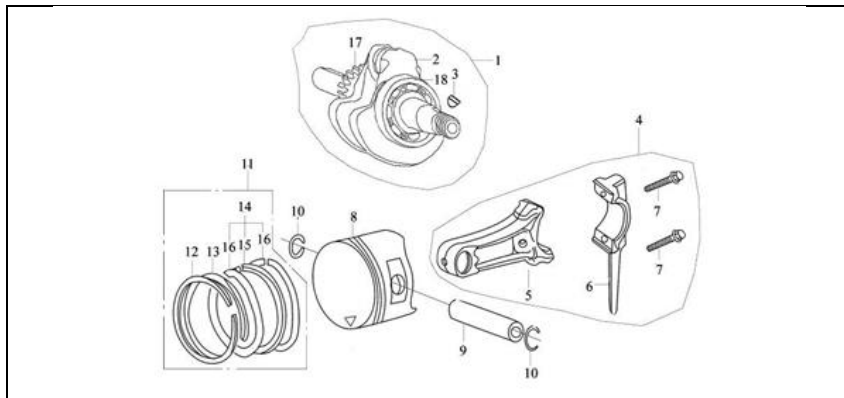


### CYLINDER COVER



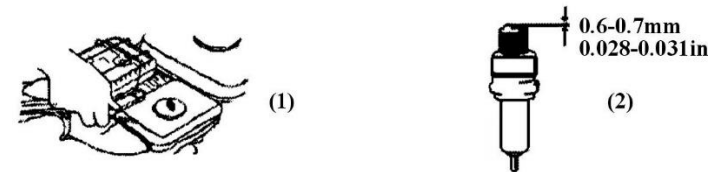
SI No.	Part No.	Description
1	3-1	Gasket, cylinder head
2	3-2	Cylinder cover
3	3-3	Spark plug
4	3-4	Bolt M6x35

### CRANKSHAFT, PISTON & CONNECTING ROD



### Everyday Maintenance:

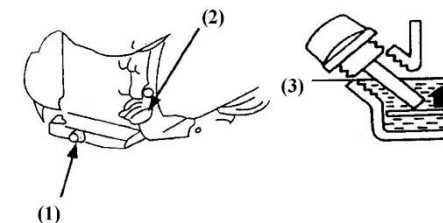
- Air cleaner:** A dirty air cleaner will restrict air flow into the carburetor. To prevent carburetor malfunction, service the air cleaner regularly. Service more frequently when operating the generator in extremely dusty areas.
  - Check air cleaner core, get rid of fouling, and keep the core clean.
  - Check bolts, fasten the loose ones.
  - Check whether lubricant oil level is within the limits.
- Clean the core after 25hrs of engine run
- Clean carbon fouling of the spark plug after working up to 50hrs. Check the clearance, and adjust the gap to 0.6-0.7mm (see figure 4-1). Check radiator, and clean fouling among radiators.
  - Drain the oil while the engine is warm to assure rapid and complete draining.
  - Remove the drain plug and sealing washer, remove the oil filler cap, and drain the oil.
  - Reinstall the drain plug and sealing washer. Tighten the plug securely.
  - Refill with the recommended oil and check the oil level.



(1) Dismantle Spark Plug

(2) Adjust Clearance

- Clean the fuel tank and filter when working time reaches 100hrs: Remove the fuel cover, drop out filter, and wash it with brush slightly. Remove fuel tank, clean the fouling and water inside fuel tank. Reinstall fuel tank, place filter from fill-in hole, filling the clean fuel to red line level.



- 1) Drain plug                      2) Engine switch                      3) Lower level

Check aging of fuel pipe every 2 years. If ageing, hardening and cracking is detected, have it replaced. Tighten the joints, and check leakage.

Before storing the unit for an extended period:

1. Make sure the storage area is free of excessive humidity and dust.
2. Service according to the table below.

Storage Time	Recommended Service Procedure To Prevent Hard Starting
Less than 1 month	No preparation required
1 to 2 months	Fill with fresh gasoline and add gasoline conditioner
2 months to 1 year	<ul style="list-style-type: none"> <li>• Fill with fresh gasoline and add gasoline conditioner</li> <li>• Drain the carburetor float bowl</li> <li>• Drain the fuel sediment cup</li> </ul>

### STORAGE

If the engine is not used for a long time, do the necessary maintenance before its storage.

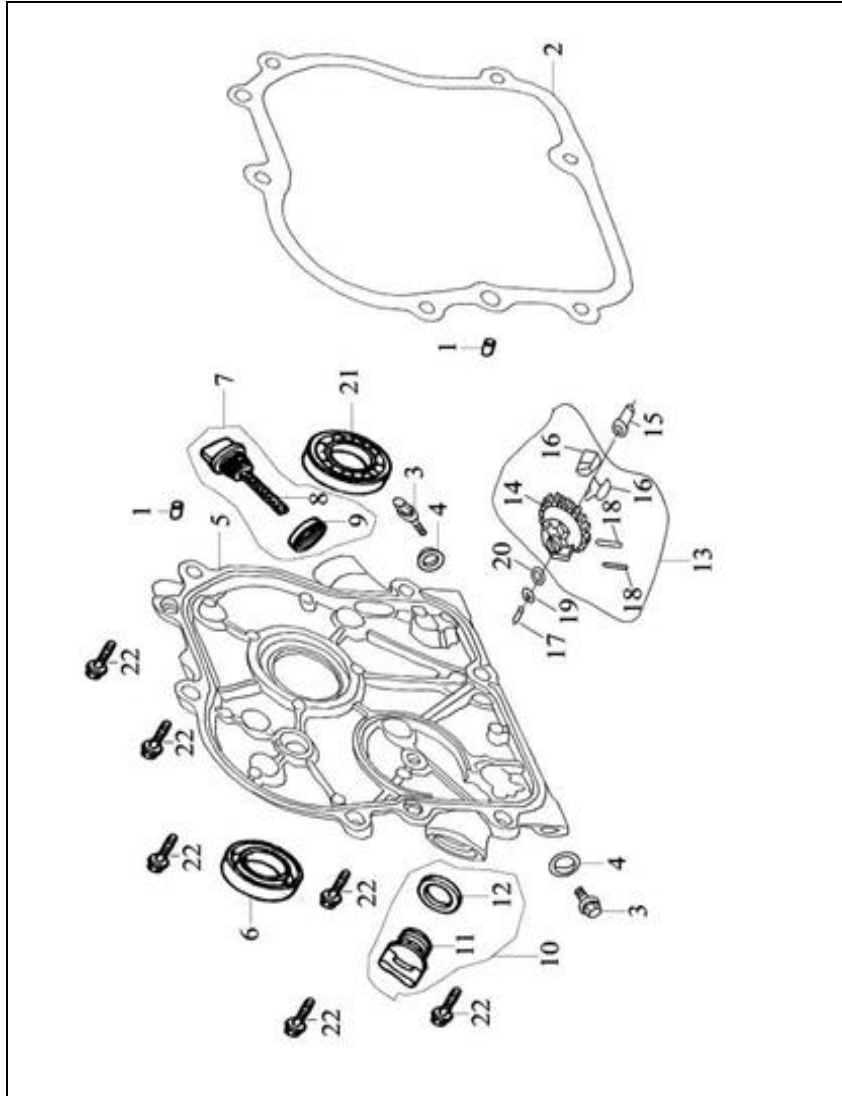
- Firstly, take off the fuel tank, drain out all fuel, and clean the dirt and water inside the tank. Open the fuel cock, unscrew the drain plug at the bottom of carburetor, drain out fuel in carburetor thoroughly, and then tighten the drain plug.
- Secondly, unscrew the drain plug at the bottom of the crankcase and drain out the lubricant oil in the crankcase thoroughly, then tighten the drain plug.
- Finally, clean the surface of the engine with clean cloth, remove the dirt and dust etc. Then store the engine in a well-ventilated, dirt-free place.

### TRANSPORTATION

- Contact with the hot engine or exhaust system can cause serious burns or fires. Allow the engine to cool down before transporting or storing the engine.
- During transport of the engine, turn the engine switch and the fuel valve to OFF. Keep the engine cool.

SI No	Part No.	Description
1	2-1	Set pin $\phi 8 \times 14$
2	2-2	Gasket, crankcase
3	2-3	Drain plug
4	2-4	Washer -Drain Plug
5	2-5	Crankcase cover
6	2-6	Oil seal( $17 \times 30 \times 6$ ), crankshaft
7	2-7	Dipstick sub-Assembly
8	2-8	OIL Dipstick
9	2-9	Seal, dipstick
10	2-10	Oil plug sub-Assembly
11	2-11	Oil plug
12	2-12	Seal, oil plug
13	2-13	Driven gear sub-Assembly, governor
14	2-14	Driven gear, governor
15	2-15	Sliding sleeve
16	2-16	Flyweight
17	2-17	Governing shaft
18	2-18	Pin, flyweight
19	2-19	Snap ring
20	2-20	Washer, driven gear
21	2-21	Bearing 6203
22	2-22	Bolt $M6 \times 29$



**CRANKCASE COVER ASSEMBLY****TROUBLESHOOTING****1. The Engine Can't Startup**

- Have the engine checked if it is hard to or cannot be started.
- Firstly, check the fuel level of the fuel tank. Turn fuel valve to (2), Fuel should flow from the drain when the fuel valve is turned ON. Tighten the drain plug. (Refer to starting of the engine)

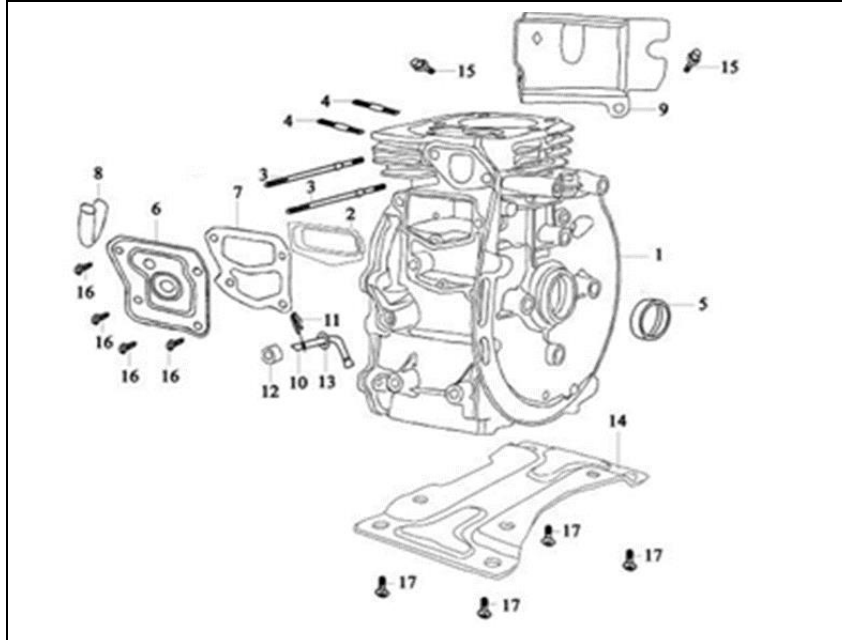
**2. Spark Plug**

Check the spark plug. Remove the spark plug cap and clean any dirt around it. If the engine still cannot be started after repeating several times, please see the authorized dealer. Users are not allowed to dismantle or reassemble the unit by themselves.

**3. Not Enough Power**

- Check the air-cleaners. Please refer the maintenance inspection book to clear the air-cleaner.
- Check the fuel. Please strain out the gasoline in fuel tank and in carburetor, and fill in new gasoline.
- For any other trouble, please contact our dealer.

**ENGINE PARTS DIAGRAM & LIST  
CRANKCASE ASSEMBLY**



SI No	Part No.	Description
1	1-1	Crankcase
2	1-2	Valve chamber clapboard sub-Assembly
3	1-3	Stud M5×118
4	1-4	Stud M6×52
5	1-5	Oil seal(17×30×6), crankshaft
6	1-6	Cover, oil filter
7	1-7	Gasket-Cover Oil Filter
8	1-8	Return pipe
9	1-9	Flow guard, lower
10	1-10	Sway bar
11	1-11	Keeper, sway bar
12	1-12	Oil seal, sway bar
13	1-13	Washer, sway bar
14	1-14	Bottom plate
15	1-15	Bolt M6×14
16	1-16	Bolt M5×10
17	1-17	Bolt M8×14
18	1-18	Oil Sensor