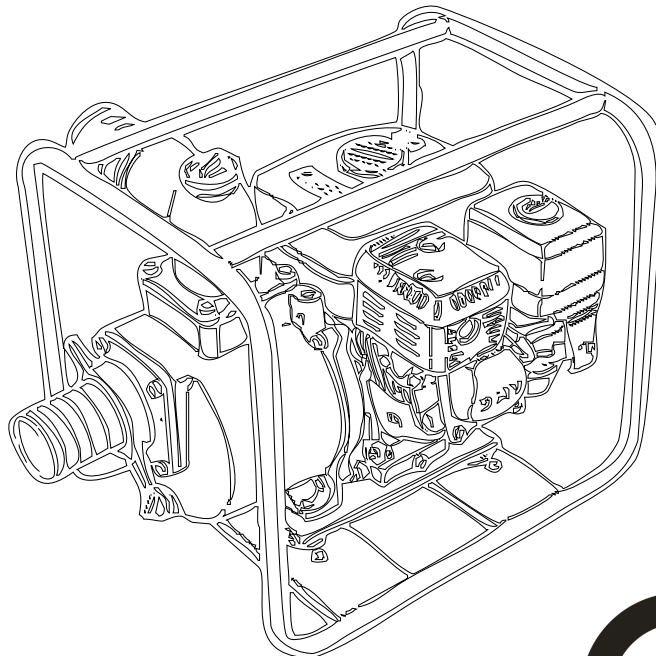




2" PETROL WATER PUMP CT0848

OWNER'S MANUAL



BEFORE OPERATING THIS EQUIPMENT
PLEASE READ THESE INSTRUCTIONS CAREFULLY

Cannon Tools Limited
Address: 20 Station Road, Rowley Regis, West Midlands, B65 0JU. UNITED KINGDOM

EC DECLARATION OF CONFORMITY

We CANNON TOOLS LTD
20 Station Road, Rowley Regis, West Midlands, B65 0JU.U.K

Declare that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us.

In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity.

Product description: **2" PETROL WATER PUMP**
Model: **CT0848**

Appropriate EC directives:
EC-Machinery directive 2006/42/EC
EC-Directive on electromagnetic compatibility(EMC)2014/30/EU
EU- Noise Directive 2000/14/EC & 2002/88/EC

Applicable harmonized
EN ISO 12100:2010, EN 55012:2007+A1:2009, EN 809:1998+A1:2009/AC:2010
EN ISO 3744:1995

20 Station Road, Rowley Regis, West Midlands, B65 0JU.U.K.
Mr. Gurcharan Tony Singh Sanghera
Managing Director

CANNON TOOLS LTD



2020-07-02

SAFETY INFORMATION

Read and understand this owner's manual before operating your water pump. You can help prevent accidents by being familiar with your water pump's controls, and by observing safe operating procedures.

Operator Responsibility

- Know how to stop the engine quickly in case of emergency.
- Understand the use of all water pump controls.
- Do not let children operate the water pump without parental supervision. Keep children and pets away from the area of operation.

Refuel With Care

Gasoline is extremely flammable, and gasoline vapor can explode. Refuel outdoors, in a well-ventilated area, with the engine stopped. Never smoke near gasoline, and keep other flames and sparks away.

Hot Exhaust

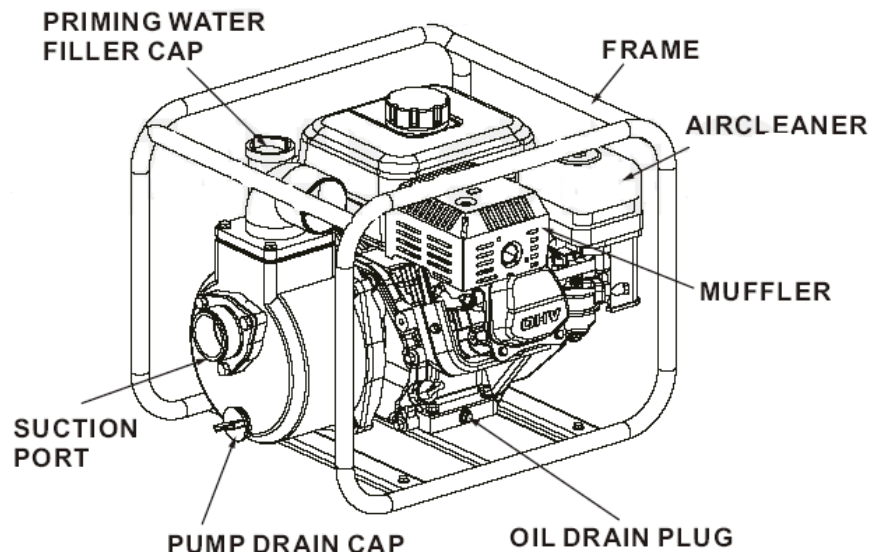
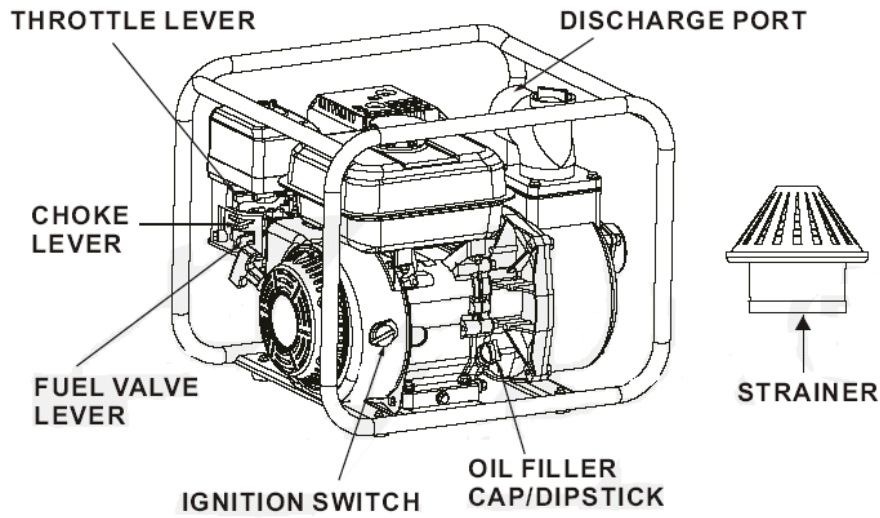
- The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Let the water pump cool before storing it indoors.
- To prevent fire hazards, keep the water pump at least 3 feet (1meter) away from building walls and other equipment during operation.

Carbon Monoxide Hazards

- Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust directly can cause loss of consciousness and may lead to death.
- If you run the water pump in an area that is confined, the air you breathe could contain a dangerous amount of exhaust gas. To keep exhaust gas from accumulating, provide adequate ventilation.

CONTROLS & FEATURES

COMPONENT & CONTROL LOCATION



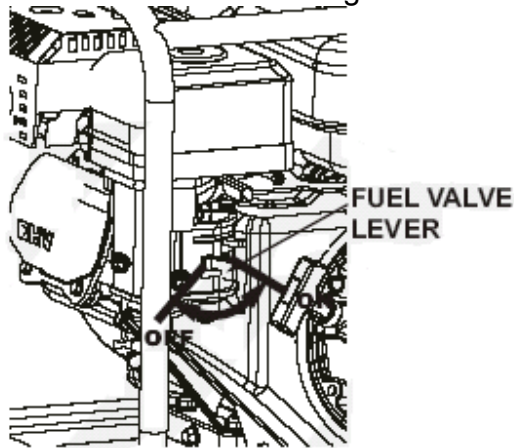
CONTROLS

Fuel Valve Lever

The fuel valve opens and closes the passage between the fuel tank and the carburetor.

The fuel valve lever must be in the **ON** position for the engine to run.

When the engine is not in use, leave the fuel valve lever in the **OFF** position to prevent carburetor flooding and to reduce the possibility of fuel leakage.

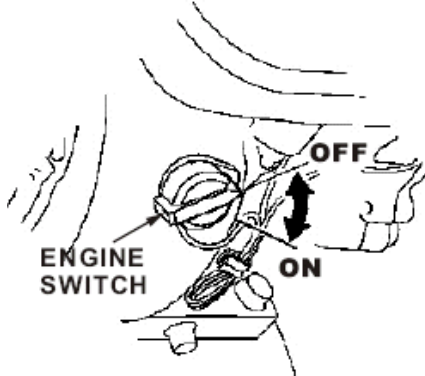


Engine Switch

The engine switch enables and disables the ignition system.

The engine switch must be in the **ON** position for the engine to run.

Turning the engine switch to the **OFF** position stops the engine.

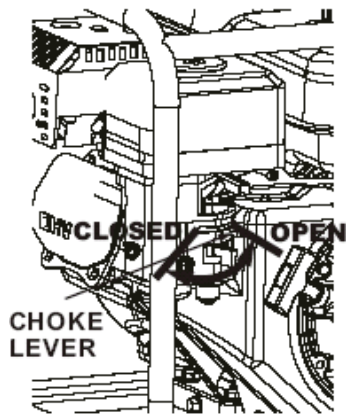


Choke Lever

The choke lever opens and closes the choke valve in the carburetor.

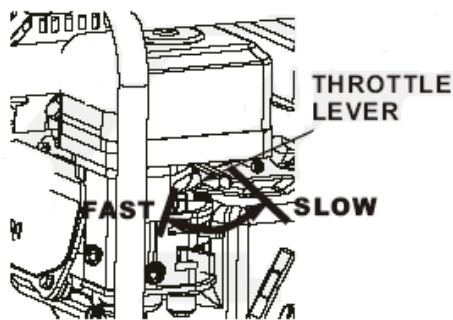
The **CLOSED** position enriches the fuel mixture for starting a cold engine.

The **OPEN** position provides the correct fuel mixture for operation after starting, and for restarting a warm engine.



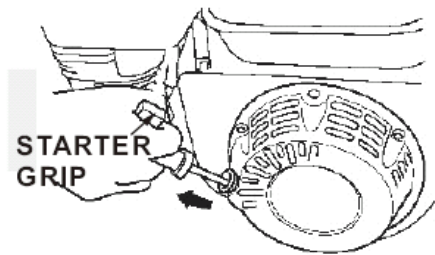
Throttle Lever

The throttle lever controls engine speed. Moving the throttle lever in the directions shown makes the engine run faster or slower.



Recoil Starter Grip

Pulling the starter grip operates the recoil starter to crank the engine.



FEATURES

Oil Alert System

The Oil Alert system is designed to prevent engine damage caused by an insufficient amount of oil in the crankcase. Before the oil level in the crankcase can fall below a safe limit, the Oil Alert system will automatically stop the water pump.

BEFORE OPERATION CHECKS

Check the Suction and Discharge Hoses

- Remember that the suction hose must be reinforced construction to prevent hose collapse.
- Check that the sealing washer in the suction hose connector is in good condition.
- Check that the hose connectors and clamps are securely installed.
- Check that the strainer is in good condition and is installed on the suction hose.

Check the Engine

- Check the oil level.
- Check the air filter.
- Check the fuel level.

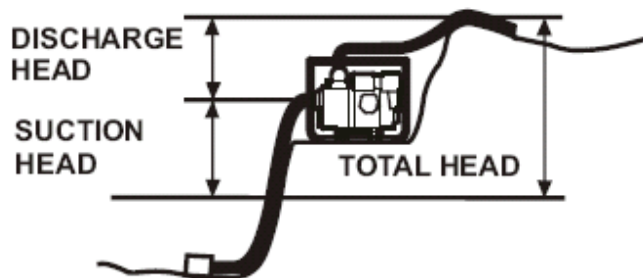
OPERATION

PUMP PLACEMENT

For best pump performance, place the pump near the water level, and use hose that are no longer than necessary. That will enable the pump to produce the greatest output with the least self-priming time.

As head (pumping height) increases, pump output decrease. The length, type, and size of the suction and discharge hoses can also significantly affect pump output.

Minimizing suction head (placing the pump near the water level) is also very important for reducing self-priming time. Self-priming time is the time it takes the pump to bring water the distance of the suction head during initial operation.



SUCTION HOSE INSTALLATION

Do not use a hose smaller than the pump's suction port size.

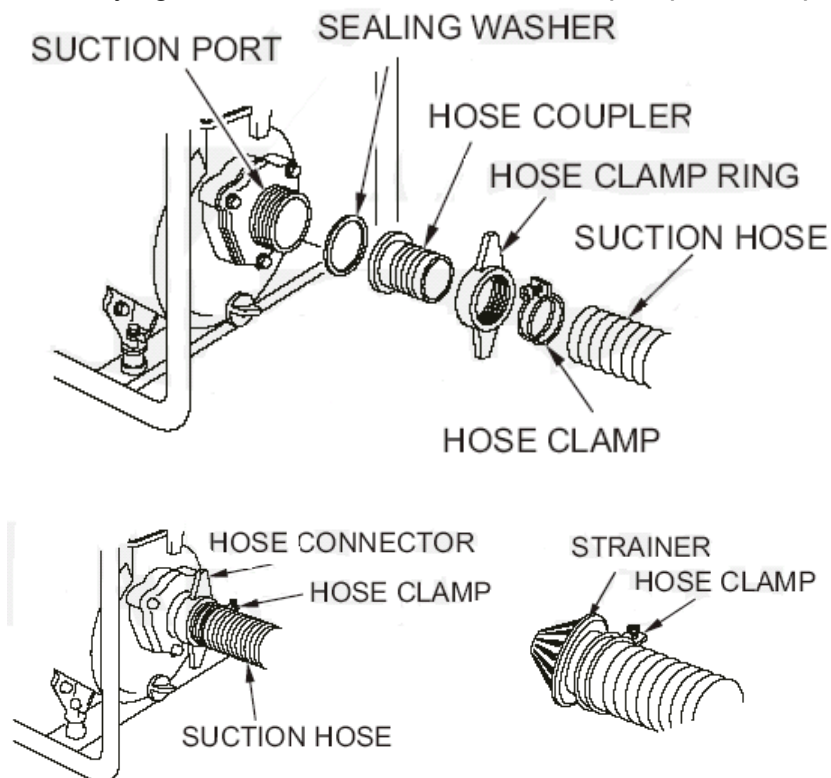
Pump performance is best when the pump is near the water level, and the hoses are short.

Minimum hose size: 50 mm

Use a hose clamp to securely fasten the hose connector to the suction hose in order to prevent air leakage and loss of suction. Verify that the hose connector sealing washer is in good condition.

Install the strainer on the other end of the suction hose, and secure it with a hose clamp. The strainer will help to prevent the pump from becoming clogged or damaged by debris.

Securely tighten the hose connector on the pump suction port.

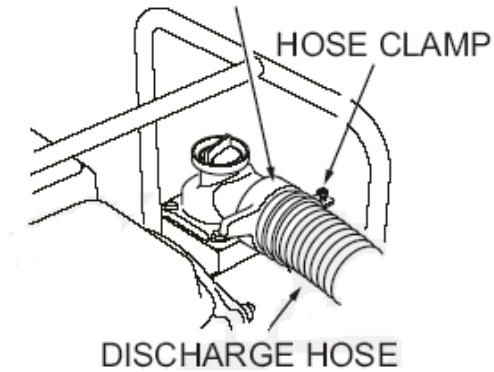


DISCHARGE HOSE INSTALLATION

It is best to use a short, large-diameter hose, because that will reduce fluid friction and improve pump output.

Tighten the hose clamp securely to prevent the discharge hose from disconnecting under pressure.

HOSE CONNECTOR



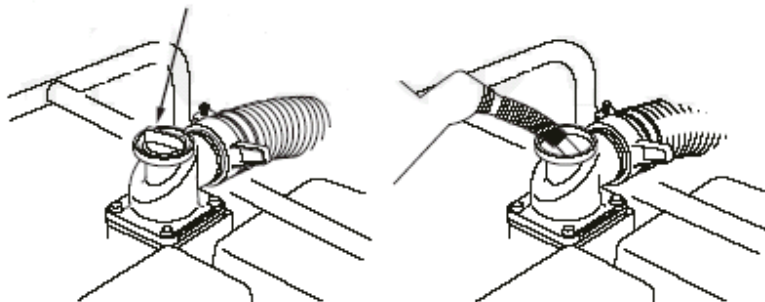
PRIMING THE PUMP

Before starting the engine, remove the filler cap from the pump chamber, and completely fill the pump chamber with water. Reinstall the filler cap, and tighten it securely.

NOTICE

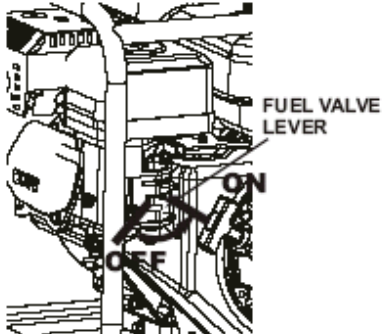
Operating the pump dry will destroy the pump seal. If the pump has been operated dry, stop the engine immediately, and allow the pump to cool before priming.

PRIMING WATER FILLER CAP

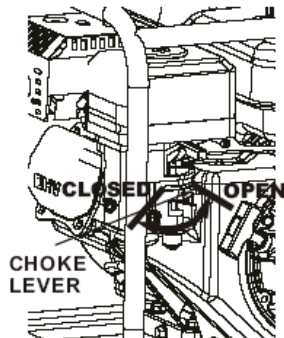


STARTING THE ENGINE

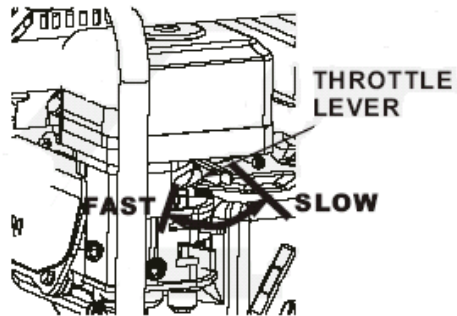
1. Prime the pump.
2. Move the fuel valve lever to the **ON** position.



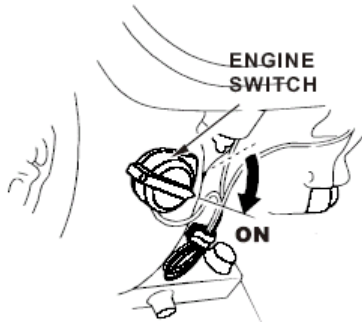
3. To start a cold engine, move the choke lever to the **CLOSED** position. To restart a warm engine, leave the choke lever in the **OPEN** position.



4. Move the throttle lever from the **SLOW** position about 1/3 of the way toward the **FAST** position.

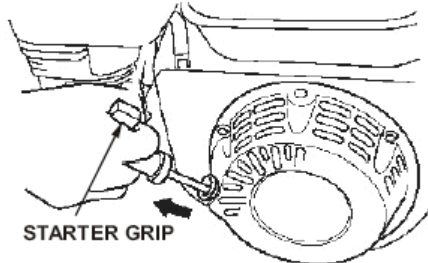


5. Turn the engine switch to the **ON** position.

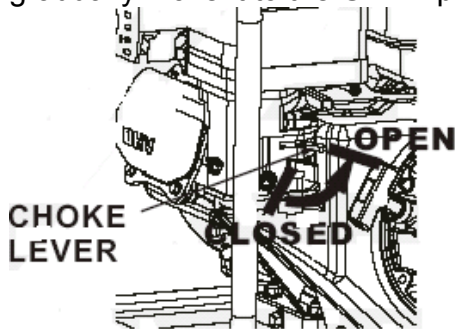


6. Operate the starter.

Pull the starter grip lightly until you feel resistance, then pull briskly.
Return the starter grip gently.



7. If the choke lever has been moved to the **CLOSED** position to start the engine, gradually move it to the **OPEN** position as the engine warms up.

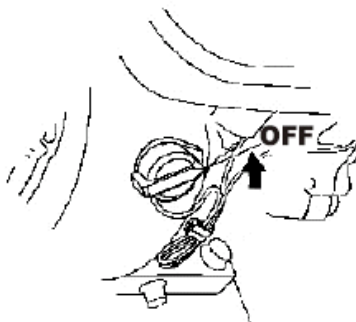
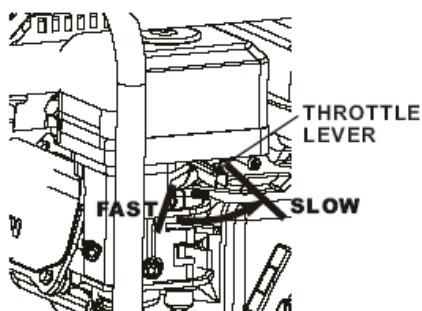


STOPPING THE ENGINE

To stop the engine in an emergency, simply turn the engine switch to the **OFF** position.

Under normal conditions, use the following procedure.

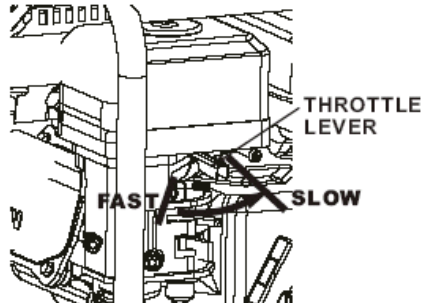
1. Move the throttle lever to the **SLOW** position.
2. Turn the engine switch to the **OFF** position.
3. Turn the fuel valve lever to the **OFF** position.



SETTING ENGINE SPEED

Position the throttle lever for the desired engine speed.

For engine speed recommendations, refer to the instructions provided with the equipment powered by this engine.



SERVICING YOUR PUMP

If you operate your water pump under severe conditions, such as sustained high-load or high-temperature operation, or use in unusually wet or dusty conditions, consult your technician for recommendations applicable to your individual needs and use.

To ensure the best quality and reliability, use only new, genuine parts or their equivalents for repair and replacement.

SAFETY PRECAUTIONS

Make sure the engine is off before you begin any maintenance or repair.

This will eliminate several potential hazards:

- Carbon monoxide poisoning from engine exhaust.

Be sure there is adequate ventilation whenever you operate the water pump.

- Burns from hot parts.

Let the water pump cool before touching.

- Injury from moving parts.

Do not run the water pump unless instructed to do so.

Read the instructions before you begin, and make sure you have the tools and skills required.

To reduce the possibility of fire or explosion, be careful when working around gasoline. Use only a nonflammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks and flames away from all fuel related parts.

Remember that a technician knows your water pump best and is fully equipped to maintain and repair it.

MAINTENANCE SCHEDULE

Item \ Service period	Each use	20Hrs. or First monty (3)	50Hrs. or Every 3 months (3)	100Hrs. or Every 6 months (3)	300Hrs. or Every 1 year (3)
● Engine oil	Check				
		Change		Change	
● Air filter	Check				
			Clean(1)	Clean(1)	
● Sediment cup				Clean	
● Spark plug				Check Adjust	
					Change
● Idle speed					Check Adjust (2)
● Valve clearance			Check Adjust		Check Adjust (2)
● Combustion Chamber	After every 500 Hrs(2)				
● Fuel tank				Clean(2)	
● Fuel filter				Clean(2)	
● Fuel tube	Every 2 years (Replace if necessary) (2)				
Impeller					Check (2)
Impeller clearance					Check (2)
Pumpinlet valve					Check (2)

● Emission related items.

(1) Service more frequently when used in dusty areas.

(2) These items should be serviced by an technician.

(3) For commercial use, log hours of operation to determine proper maintenance intervals.

REFUELING

Use unleaded gasoline with a pump octane rating of 86 or higher. Unleaded gasoline produces fewer engine and spark plug deposits and extends exhaust system life.

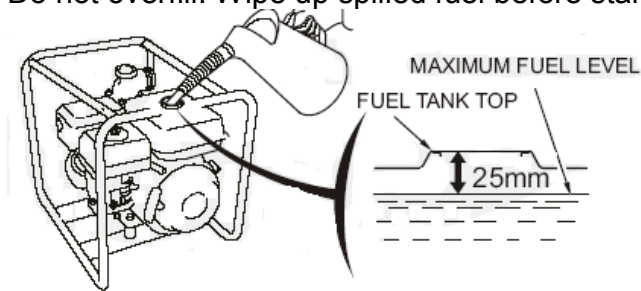
WARNING !

Gasoline is highly flammable and explosive, and you can be burned or seriously injured when refueling.

- **Stop engine and keep heat, sparks, and flame away.**
- **Refuel only outdoors.**
- **Wipe up spills immediately.**

Adding Fuel

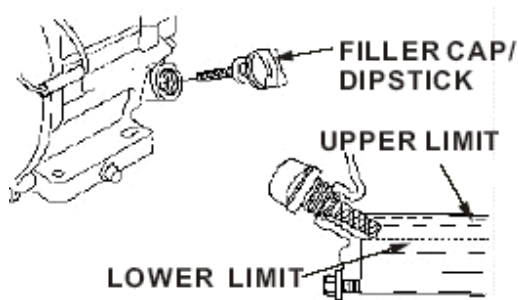
1. Remove the fuel tank cap.
2. Add fuel to the bottom of the fuel level limit in the neck of the fuel tank. Do not overfill. Wipe up spilled fuel before starting the water pump.



ENGINE OIL LEVEL CHECK

Check the engine oil level with the engine stopped and in a level position.

1. Remove the filler cap/dipstick and wipe it clean.
2. Insert and remove the dipstick with out screwing it into the filler neck. Check the oil level shown on the dipstick.
3. If the oil level is low, fill to the edge of the oil filler hole with the recommended oil.
4. Screw in the filler cap/dipstick securely.

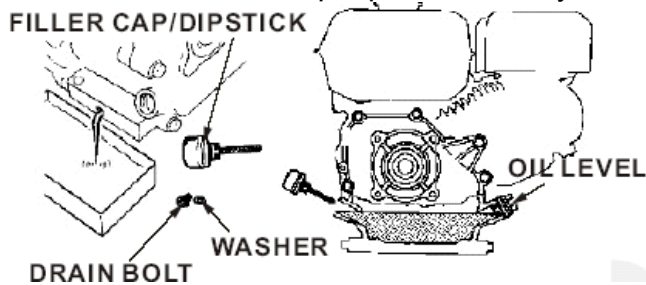


ENGINE OIL CHANGE

Drain the used oil while the engine is warm. Warm oil drains quickly and completely.

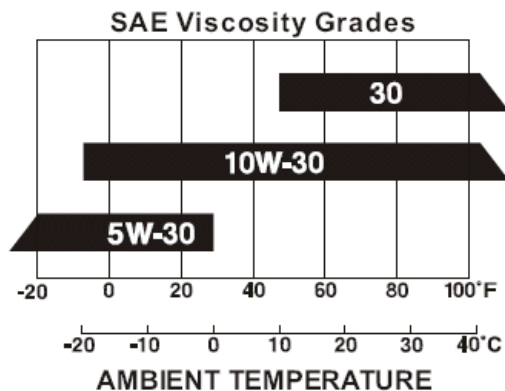
Warning! Pay attention that the engine oil may be very hot if it is drained off directly after the engine is shut off, or allow the engine to cool a few minutes before draining the oil.

1. Place a suitable container below the engine to catch the used oil, then remove the filler cap/dipstick, drain plug, and washer.
2. Allow the used oil to drain completely, then reinstall the drain plug, washer, and tighten drain plug securely.
3. With the engine in a level position, fill to the outer edge of the oil filler hole with the recommended oil .
4. Screw in the filler cap/dipstick securely.



ENGINE OIL RECOMMENDATIONS

Oil is a major factor affecting performance and service life. Use 4-stroke automotive detergent oil. SAE 10W-30 is recommended for general use.



Warning! We suggest you take used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash, pour it on the ground, or down a drain as the oil or gasoline concerning the toxicity.

AIR CLEANER SERVICE

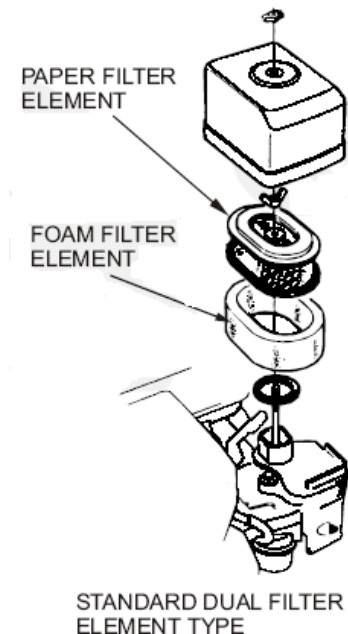
A dirty air filter will restrict air flow to the carburetor, reducing engine performance. If you operate the engine in very dusty areas, clean the air filter more often than specified in the MAINTENANCE SCHEDULE.

NOTICE

Operating the engine without an air filter, or with a damaged air filter, will allow dirt to enter the engine, causing rapid engine wear.

Dual Filter Element Types

1. Remove the wing nut from the air cleaner cover, and remove the cover.
2. Remove the wing nut from the air filter, and remove the filter.
3. Remove the foam filter from the paper filter.
4. Inspect both air filter elements, and replace them if they are damaged.
5. Clean the air filter elements if they are to be reused.



Paper air filter element: Tap the filter element several times on a hard surface to remove dirt.

Never try to brush off dirt; brushing will force dirt into the fibers.

Foam air filter element: Clean in warm soapy water, rinse, and allow to dry thoroughly.

Dip the filter element in clean engine oil, then squeeze out all excess oil.

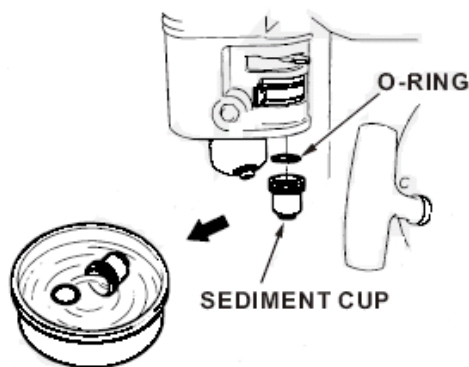
6. Wipe dirt from the inside of the air cleaner base and cover, using a moist rag.

7. Place the foam air filter element over the paper element, and reinstall the assembled air filter. Be sure the gasket is in place beneath the air filter. Tighten the air filter wing nut securely.

8. Install the air cleaner cover, and tighten the cover wing nut securely.

SEDIMENT CUP CLEANING

1. Move the fuel valve to the **OFF** position, then remove the fuel sediment cup and O-ring.
2. Wash the sediment cup and O-ring in nonflammable solvent, and dry them thoroughly.
3. Place the O-ring in fuel valve, and install the sediment cup. Tighten the sediment securely.
4. Move the fuel valve to the **ON** position, and check for leaks. Replace the O-ring if there is any leakage.

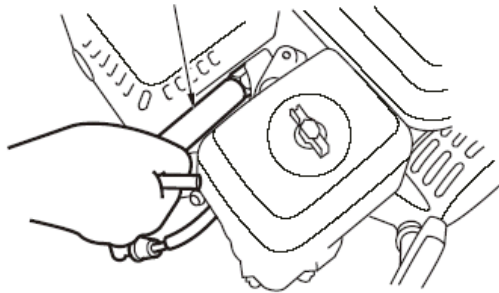


SPARK PLUG SERVICE

Recommended spark plug: F6RTC

1. Disconnect the spark plug cap, and remove any dirt from around the spark plug area.
2. Remove the spark plug with a spark plug wrench.

SPARK PLUG WRENCH



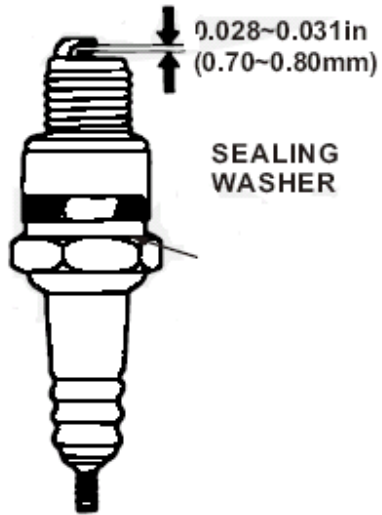
3. Inspect the spark plug. Replace it if the electrodes are worn, or if the insulator is cracked or chipped.
 4. Measure the spark plug electrode gap with a suitable gauge. The gap should be 0.028~0.031 in (0.70~0.80mm). Correct the gap if necessary, by carefully bending the side electrode.
 5. Install the spark plug carefully, by hand, to avoid cross-threading.
 6. After the spark plug seats, tighten with a spark plug wrench to compress the sealing washer.
- If reinstalling the used spark plug, tighten 1/8-1/4 turn after the spark plug seats.
If installing a new spark plug, tighten 1 / 2 turn after the spark plug seats.

NOTICE

A loose spark plug can overhand and damage the engine.

Overtightening the spark plug can damage the threads in the cylinder head.

7. Attach the spark plug cap.



STORING YOUR WATER PUMP

Storage Preparation

Proper storage preparation is essential for keeping your water pump troublefree and looking good.

Cleaning

If the water pump has been running, allow it to cool for at least half an hour before cleaning. Clean all exterior surfaces, touch up any damaged paint, and coat other areas that may rust with a light film of oil.

Fuel

Gasoline will oxidize and deteriorate in storage. Old gasoline will cause hard starting, and it leaves gum deposits that clog the fuel system.

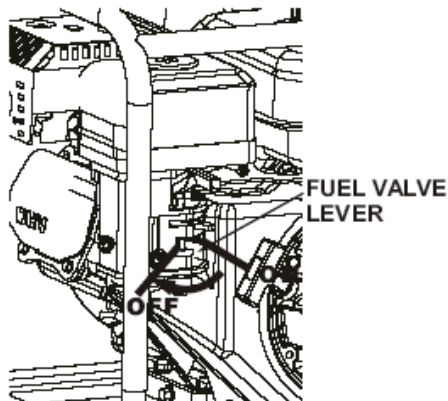
If the gasoline in your water pump deteriorates during storage, you may need to have the carburetor and other fuel system components serviced or replaced.

You can extend fuel storage life by adding a fuel stabilizer, or you can avoid fuel deterioration problems by draining the fuel tank and carburetor.

ADDING A FUEL STABILIZER TO EXTEND FUEL STORAGE LIFE

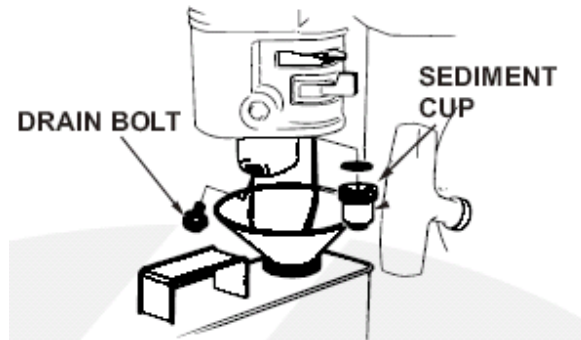
When adding a fuel stabilizer, fill the fuel tank fresh gasoline.

1. Add fuel stabilizer following the manufacturer's instructions.
2. After adding a fuel stabilizer, run the water pump outdoors for 10 minutes to be sure that treated gasoline has replaced the untreated gasoline in the carburetor.
3. Stop the engine, and move the fuel valve to the **OFF** position.



DRAINING THE FUEL AND CARBURETOR

1. Place an approved gasoline container below the carburetor, and use a funnel to avoid spilling fuel.
2. Remove the carburetor drain bolt and sediment cup, then move the fuel valve lever to the ON position.



ENGINE OIL

1. Change the engine oil.
2. Remove the spark plugs.
3. Pour a tablespoon (5~10cc) of clean engine oil into the cylinder.
4. Pull the starter rope several times to distribute the oil in the cylinder.
5. Reinstall the spark plug.
6. Pull the starter rope slowly until resistance is felt. This will close the valves so moisture cannot enter the engine cylinder. Return the starter rope gently.

Storage Precautions

Select a well ventilated storage area away from any appliance that operates with a flame, such as a furnace, water heater, or clothes dryer.

Also avoid any area with a spark-producing electric motor, or where power tools are operated.

If possible, avoid storage areas with high humidity, because that promotes rust and corrosion.

Unless all fuel has been drained from the fuel tank, leave the fuel valve lever in the OFF position to reduce the possibility of fuel leakage.

With the engine cool, cover the engine to keep out dust.

Do not use sheet plastic as a dust cover. A nonporous cover will trap moisture around the engine, promoting rust and corrosion.

Removal From Storage

Check your engine as described in the BEFORE OPERATION chapter of this manual.

If the fuel was drained during storage preparation, fill the tank with fresh gasoline. Gasoline oxidizes and deteriorates over time, causing hard starting.

TRANSPORTING

If the engine has been running, allow it to cool for at least 15 minutes before loading the engine-powered equipment on the transport vehicle. A hot engine and exhaust system can burn you and can ignite some materials.

Keep the engine level when transporting to reduce the possibility of fuel leakage. Move the fuel valve lever to the **OFF** position.

TAKING CARE OF UNEXPECTED PROBLEMS

ENGINE WILL NOT START

ENGINE WILL NOT START	Possible Cause	Correction
1. Check control positions.	Fuel valve OFF.	Move lever to ON.
	Choke OFF.	Move the choke / throttle lever to CHOKE ON position unless engine is warm.
	Ignition switch OFF.	Move the throttle lever to FAST position.
2. Check fuel.	Out of fuel.	Refuel
	Bad fuel; engine stored without treating or draining gasoline, or refueled with bad gasoline.	Drain the fuel tank and carburetor. Refuel with fresh gasoline.
3. Remove and inspect spark plug.	Spark plug faulty, fouled, or improperly gapped.	Replace the spark plug.
	Spark plug wet with fuel (flooded engine).	Dry and reinstall spark plug. Start engine with choke / throttle lever in FAST position.
4. Take engine to a technician.	Fuel filter clogged, carburetor malfunction, ignition malfunction, valves stuck, etc.	Replace or repair faulty components as necessary.

ENGINE LACKS POWER

ENGINE LACKS POWER	Possible Cause	Correction
1. Check air cleaner.	Air cleaner elements clogged.	Clean or replace air cleaner elements.
2. Check fuel.	Bad fuel; engine stored without treating or draining gasoline, or refueled with bad gasoline.	Drain the fuel tank and carburetor. Refuel with fresh gasoline.
3. Take engine to a technician.	Fuel filter clogged, carburetor malfunction, ignition malfunction, valves stuck, etc.	Replace or repair faulty components as necessary.

NO PUMP OUTPUT

NO PUMP OUTPUT	Possible Cause	Correction
1. Check pump chamber.	Pump not primed.	Prime pump.
2. Check suction hose.	Hose collapsed, cut or punctured.	Replace suction hose.
	Strainer not completely underwater.	Sink the strainer and the end of a suction hose completely underwater.
	Air leak at connector.	Replace sealing washer if missing or damaged. Tighten hose connector and clamp.
	Strainer clogged.	Clean debris from strainer.
3. Measure suction and discharge head.	Excessive head.	Relocate pump and / or hoses to reduce head.
Check engine.	Engine lacks power.	See page 21.

LOW PUMP OUTPUT

LOW PUMP OUTPUT	Possible Cause	Correction
1. Check suction hose.	Hose collapsed, damaged, too long, or diameter too small.	Replace suction hose.
	Air leak at connector.	Replace sealing washer if missing or damaged. Tighten hose connector and clamp.
	Strainer clogged.	Clean debris from strainer.
2. Check discharge hose.	Hose damaged, too long, or diameter too small	Replace discharge hose.
3. Measure suction and discharge head.	Marginal head.	Relocate pump and / or hoses to reduce head.
4. Check engine.	Engine lacks power.	See page 21.

SPECIFICATIONS

Engine design and performance

Model	168F-1
Engine type	4-stroke, OHV, single cylinder
Displacement	196 cc
Bore×stroke	68× 54 mm
Fuel tank capacity	3.0l
Rated output	4.75kW/3600/min
Engine oil capacity	0.6l
Fuel consumption	395g/kW.h
Cooling system	Forced air cooling
Ignition system	Transistorized magneto
PTO shaft rotation	Counterclockwise

Pump

Model	CT0848
Max. Head	26m
Suction head	6m
Flow	30m ³ /h
Self-priming times(s/4m)	80mm
Engine type	QS168F-1
Rated output power	4.75kW/3600/min
Net weight	21kg

Cannon Tools Limited

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Made in China