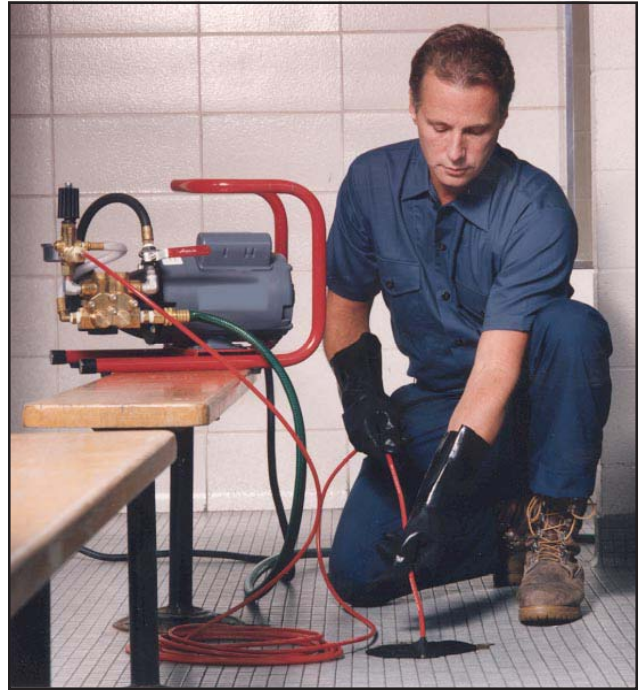


# OPERATOR'S MANUAL TO OPERATE YOUR JETTER



## IMPORTANT


Please make certain that everyone who uses the Jetter thoroughly reads and understands these instructions prior to operation.



1-800-333-9274

[www.1800333wash.com](http://www.1800333wash.com)

# FORWARD

Thank you for purchasing a  Jetter.

Please take a moment to familiarize yourself with the proper operation and maintenance procedures in order to maximize the safe and efficient use of this product. Due to constant efforts to improve our products, certain procedures and specifications are subject to change without notice.

When ordering spare parts, always give us the **MODEL AND SPECIFICATION** of your engine or pump.

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## ASSEMBLY INSTRUCTIONS

Portable Frame Mounted Models: install top portion of handle and tighten to secure

Remove the machine and all parts from the carton. The carton contains:

- Water Cannon Jetter
- 1 or more jetter hose(s)
- Jetter nozzles
- Ball valve on quick connects
- Any accessories as ordered separate










Some Products Can Be Shipped From Multiple Water Cannon Facilities



Read and understand operating instruction manual completely before operation. **Concealed freight damage must be reported to freight carrier immediately.** It is the customer's responsibility to file freight claim.

### International Symbols

This is a Warning/Caution symbol. It is used to call your attention to procedures or operations that could be dangerous to you or other operators of this equipment. Please pay special attention to the instructions following this symbol.

			
	....Read Owner's Manual		.....No Smoking
	.....Fast		...No Open Flames
	.....Slow		.....Oil
	.....Choke		.....Fuel



# IMPORTANT PRECAUTIONS AND SAFETY WARNINGS

Read Operator's Manual completely before proceeding to use this machine! Provide a copy to anyone using the machine and emphasize these precautions and safety warnings to prevent possible personal injury to the user or others. Know your machine -- consider it's limitations and potential hazards!

## CAUTION:

If skin is hit by sprayed liquid, contact a physician immediately. Skin penetration can cause permanent injury.

## NOTE TO PHYSICIAN:

Injection into the skin is a serious, traumatic injury. Contact the National Poison Control Center Network , (800) 962-1253 for treatment regimen.



Always wear safety glasses or goggles when operating or performing maintenance. Wear protective clothing such as gloves, rubber boots, rubber suits, etc.



Do not wear loose clothing, jewelry, or anything that may be caught in the starter or other rotating parts.



Do not operate this equipment if you have consumed alcohol or taken medication.



Never put your hand or fingers in front of spray nozzle (tip). Never point spray nozzle at yourself, another person or any animal.



Always remove the spark plug or cable from the spark plug to prevent accidental starting, when not in use, or prior to detaching the high pressure hose.



Water spray must never be directed towards any electric wiring or directly towards the Jetter machine itself or fatal electric shock may occur.



Do not allow hose to come in contact with hot muffler.



Do not use an undersize discharge nozzle. Use only nozzle(s) supplied with this machine.



Never disconnect the high pressure discharge hose from the machine or from the gun/wand assembly while the system is pressurized. To depressurize the machine, turn off water and power supply and open ball valve 5-6 times.



Never operate this machine without sufficient water supply to the pump. This will result in serious damage to the pump.



Never leave the wand unattended while the machine is running.



Never tie knots or kink the high pressure hose, as damage could result.



Prior to starting the Jetter in cold weather, be sure ice has not formed in any part of the equipment.



Avoid extending the hose across high traffic areas while using the Jetter, and never leave the hose where it may be run over by vehicles of any type.



Never pull on the hose to move the machine.



Never pull the hose around a tight corner or force it into a small loop, and should not be forced into any small bend.



When lifting or transporting Jetter, secure and lift with appropriate lifting handles.



Never operate gas unit in an enclosed area. Always operate this or any gas engine in a well ventilated area. Failure to do so could result in serious injury or death.



Never operate machine without ALL components properly connected to the machine.



**Never adjust unloader valve to a pressure in excess of machine rating. The pressure is factory preset and should never be tampered with.**



Never operate this machine in or near an explosive environment. 



Never alter or bypass manufacturer's design or any safety device on this machine. Use only high pressure hose provided with this machine.




Never operate machine on unstable surface (Operate and store only on stable surfaces).

Never operate machine with broken or missing parts, or without protective housing and/or covers.



Engine must not be run at excessive speeds. Operating an engine at excessive speeds increases the hazard of personal injury. Do not tamper with parts which may increase or decrease the governed speed.



Check the fuel system periodically for leaks or signs of deterioration such as chaffed or spongy hose, loose or missing parts or damaged tank or cap. All defects should be corrected before operation. 



Always stop engine if unit is not to be operated within 10 minutes.



Keep the Jetter clean and free of oil, mud, and other foreign matter.



Store the Jetter in a well ventilated area with the fuel tank empty. Fuel should not be stored near the Jetter. 




Clean up spilled soap, fuel or oil immediately to avoid falls.



Keep clutter out of work area to avoid falls.



Use only genuine  parts for any and all repairs of your Jetter. Failure to do so may result in injury or cause hazardous operating conditions to exist. Failure to use genuine parts will void warranty.

Your Jetter should never be operated under these conditions:


- Change in engine speed
- Engine misfire
- Excessive vibration
- Flame or smoke
- Enclosed compartment
- Rain or inclement weather

# BEFORE OPERATION

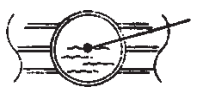
NOTE: The engine and pump on your



Jetter will often have improved performance after a break-in period of several hours.


CAUTION: Remove the plastic shipping plug from the oil fill tube and replace it with the vented cap  provided or damage to your pump may occur. Some models have tape over the vent hose. Remove tape prior to use. Other models have a vented oil plug with no dipstick indicator. Before starting the Jetter, check for loose or missing parts and for any damage which may have occurred during shipment.

LUBRICATION: DO NOT attempt to start the Jetter engine without filling the engine crank case with the proper amount and type of oil. (See the accompanying engine manual for this information).



proper  
oil level

The pump has been shipped with oil. Before operating the Jetter, check the oil level in the pump. The oil level should be at the center of the sight glass on the side of the pump. Add SAE 30 WT non detergent oil if required.

FUEL: Fill the tank with clean, fresh unleaded automotive gasoline. Regular grade gasoline may be used, provided a high octane rating is obtained (at least 87-93 pump octane). 

## SELECTION OF GARDEN HOSE

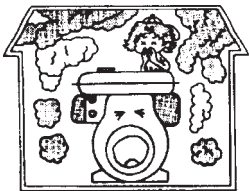
Up to 3 gallon per minute models use minimum 5/8" x 50 ft garden hose.

Up to 5 1/2 gallon per minute models use minimum 3/4" x 50 ft garden hose.

## SAFETY PRECAUTIONS (For Gasoline Engines)

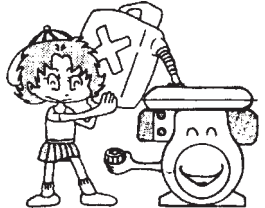
Please make sure you review each precaution carefully.

### EXHAUST PRECAUTIONS



- Never inhale exhaust gases. They contain carbon monoxide, a colorless, odorless and extremely dangerous gas which can cause unconsciousness or death.
- Never operate the engine indoors or in a poorly ventilated area, such as tunnel, cave, etc.
- Exercise extreme care when operating the engine near people or animals.
- Keep the exhaust pipe free of foreign objects.

### REFUELING PRECAUTIONS

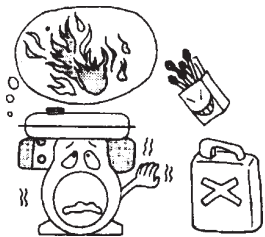


- Be sure to stop the engine prior to refueling.
- Do not overfill the fuel tank.
- If fuel is spilled, wipe it away carefully and wait until the fuel has dried before starting the engine.
- When changing oil, make sure that the fuel cap is secure to prevent spillage.

### REFUELING PRECAUTIONS

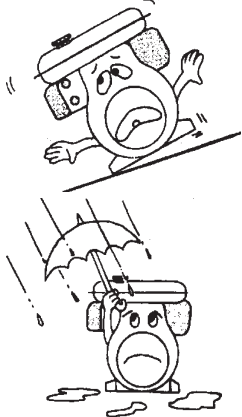


- Do not operate while smoking or near an open flame.
- Do not use around dry brush, twigs, cloth rags, or other flammable materials.
- Keep the engine at least 3 feet (1 meter) away from flammables and other hazardous materials (trash, rags, lubricants, explosives).
- **BE CAREFUL OF HOT PARTS.** The muffler and other engine parts become very hot while the engine is running or just after it has stopped. Operate the engine in a safe area and keep children away from the running engine.



- Never make adjustments on the machinery while it is connected to the engine, without first removing the ignition cable from the spark plug. Turning the crankshaft by hand during adjusting or cleaning might start the engine, and machinery with it, causing serious injury to the operator.
- Never run the engine with governor disconnected, or operate at speeds in excess of 3400 rpm load.

## SURROUNDINGS

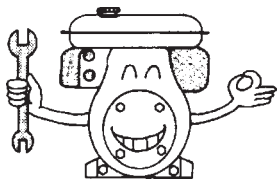


- **Operate the engine on a stable, level surface** free of small rocks, loose gravel, etc. If the engine is tilted, fuel spillage may result.

*Note: Operating the engine at a steep incline may cause seizure due to improper lubrication even with a maximum oil level.*

- **Be careful of fuel spillage when transporting the engine.** Tighten the fuel tank cap securely and close the fuel strainer cock before transit.
- **Do Not move the engine while in operation.**
- Keep the unit dry (do not operate it in rainy conditions).

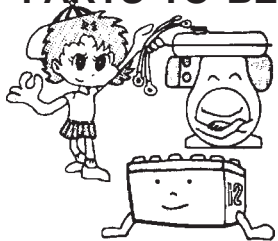
## PRE-OPERATION CHECKS



- Carefully check fuel pipes & joints for looseness and fuel leakage. Leaked fuel creates a potentially dangerous situation.
- Check bolts & nuts for looseness. A loose bolt or nut may cause serious engine trouble.
- Check the engine oil and refill if necessary.
- Take care not to overfill the tank.

## ELECTRIC STARTER MODELS

### PARTS TO BE PREPARED



- In Case your engine has the electric starter, please prepare the following accessories:
- Use a battery rated 12V-24AH or larger.
  - Install red cable to positive terminal of battery and black cable to negative.
  - Tighten bolts and nuts on terminals securely so they will not be loosened by vibration.

## EASY TROUBLE SHOOTING

### WHEN ENGINE DOES NOT START:



- Perform the following checks before you take the engine to your engine dealer.
- If you still have trouble after completing the checks, take the engine to your nearest authorized engine dealer.

### IS THERE ENOUGH COMPRESSION?



Pull the starter handle slowly and check if resistance is felt. If little force is required to pull the starter handle, check if the spark plug is tightened firmly. If the spark plug is loose, tighten it.

## IS THE SPARK PLUG WET WITH GASOLINE?



- Choke (pull the choke knob) and pull the starter handle five or six times. Remove the plug and check if it's electrode is wet. If the electrode is wet, fuel is supplied to your engine.
- When the electrode is dry, check where the fuel stops. (Check the fuel intake of the carburetor and fuel strainer intake).
- In case the engine does not start with well supplied fuel, try using fresh fuel.

*WARNING: Before testing, carefully wipe up spilled gasoline. Hold the plug as far away from the spark plug hose as possible. Ground the side of the electrode to any engine ground.*

## IS THERE A STRONG SPARK ACROSS THE ELECTRODE?



- Remove the plug and connect it to the plug cap. Pull the starter handle while touching the plug against the ground.
- Try with a new plug if the spark is weak or there is no spark.
- The ignition system is faulty if there is no spark with a new plug. Take your engine to the nearest engine dealer.

*NOTE: Engines with oil sensor will stop automatically when the oil level falls below the prescribed limit. The engine cannot be started unless the oil level is raised above the prescribed limit.*

## IS YOUR BATTERY WELL CHARGED?



- If your battery for the electric starter is overly discharged, your engine will not start. Re-charge your battery or replace as necessary.

## OIL SENSOR INSTRUCTIONS



The engine will stop automatically when the oil level falls below the safety limit. The engine cannot be started unless the level is raised above the prescribed limit.

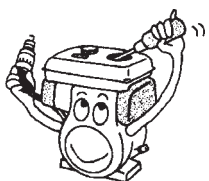
Fill the crankcase with oil up to the proper level.

*Note: Do not remove the oil sensor from the unit from the engine when checking the oil level and refilling.*

*Not all models have a low oil shutdown.*

## RESTARTING

## PREPARATIONS FOR STORAGE



Slowly pull the recoil starter knob until resistance is felt and leave it in that position. Clean the engine thoroughly with an oiled cloth, put the cover on, and store the engine.

## CLEAN & STORE

# READY TO BEGIN OPERATION AND START YOUR WATER CANNON

## How Jets Work

High pressure water jet cleaning is the combination of high pressure water with sufficient flow to remove debris in sewer & drain pipes or from surfaces to be cleaned.

A water jet consists of an engine or motor, a pump, a water source, optional hose reel, a length of hose, and various types of nozzles. Water pressure, flow and the angle of the hoses in the nozzle propel a jet hose through a sewer line. Pressure cuts through the stoppage, and flow clears it away.

Jets work well on grease and other soft stoppages. They also clear lines clogged by ice. But they will not clear lines clogged with tree roots. The only reliable way to cut roots is with a cable machine.

## ELECTRIC MACHINE WARNINGS

Be sure that the unit is plugged into a 110 volt, 20 amp, properly grounded receptacle. If in doubt, check receptacle before plugging in machine. Check power cord to see that there are no cuts or frays, and that the grounding prong on the plug is still in place.

If power cord supplied with machine is not long enough, be sure to use a 3 wire 14 gauge heavy duty extension cord that is in good condition. Using lighter cords can result in sever power loss and motor overheating. Do not use an extension cord that is more than 50 foot long.

Wear rubber boots, and rubber glove inserts when work area is wet. Do not operate machine if operator or machine is standing in water.

Test the ground fault circuit interrupter (GFCI) before each use. With the GFCI reset button depressed, if the machine doesn't start, stops running, or if the operator experiences a mild shock, **do not use the machine.** Take it to a motor repair center or return it to the factory for repairs. Keep in mind that the section of the cord between the wall plug and the GFCI is not in the protected circuit.

## BEFORE OPERATION

The machine is meant to be used at or near the working area and under operator supervision.

Locate the equipment on a solid level area with slopes for drainage. Avoid areas where water can build up.

Before using the Jet, make sure there are no impurities in the incoming water supply. Turn on the water source for at least 15 seconds to remove any possible debris in the water before connecting hose to machine.

# HOSE SELECTION GUIDE

Select the proper hose diameter for the line to be cleaned. When using new hose, run water through it to clean it out before attaching the nozzle.

Hose Size, I.D. (inside diameter)	Pipe Size	Typical Applications
3/8" or 5/16"	4" to 8"	Floor drains, septic lines, and long runs
1/4"	2" to 4"	Kitchen sinks, laundry drains, and clean outs
1/8"	1-1/2" to 2"	Small lines, bathroom sinks, and tight bends.

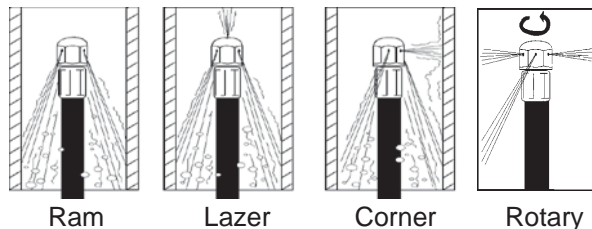
When selecting hose size, consider that pressure is lost as the water travels down the length of the hose. As the length increases, the pressure decreases. In addition, the smaller the diameter of the hose, the greater the loss of pressure per foot will be. As an example, at 2 GPM, a 1/4" hose will lose 180 lbs. of pressure over a 100 ft of hose, yet a 3/8" hose will lose only 25 lbs of pressure over the same length at the same flow rate. At 4 GPM, a 3/8" hose will lose 90 lbs. of pressure over a 100 ft length. It is important to select the largest possible hose size in order to have as much pressure as possible at the end of the hose.

Hoses of the same diameter may be coupled together using a coupling, but it is not recommended for use in lines smaller than 8" in diameter. The long length of the hose connectors and coupling together can get caught in bends in the line.

It is not advisable to have two different hose sizes coupled in a drain line. There is a tremendous loss of pressure when combined, aside from the difficulty of getting around bends.

Often, the 1/8" hose is used in conjunction with a trigger gun to give the operator finger tip control. An optional foot pedal valve is available that can be used as a safety shutoff valve for all hose sizes.

# NOZZLE SELECTION GUIDE



A number of types of nozzles are available for drain cleaning. Each has a different characteristic. Some nozzles may have a hole in the front to cut through stoppage. All will have holes in the back to drive the hose down the line and clean the walls of the pipe. A combination of nozzles may be required to clear a line. Always turn off the machine and shut off valve before changing nozzles.

Make sure the nozzle you are using matches the pump size. A 3000 PSI pump requires a different nozzle orifice than a 1500 PSI pump. Mismatching nozzles with pump size will either cause too little pressure, which may not clear the drain, or too much pressure which may damage the machine.

**Ram Nozzle:** Designed to clean a partially obstructed line.

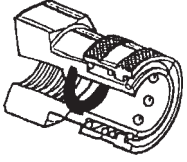
**Lazer Nozzle:** Designed for a blocked line. Back thrusters push through the line, while the forward one blasts a hole in the obstruction (not including hard objects such as roots).

**Corner Nozzle:** Designed to maneuver tight corners more easily.

**Rotary Nozzle:** Useful as a finishing tool. After the line has been cleared, you may switch to the rotary nozzle to more thoroughly clean the walls of the pipe. Use these nozzles only in a predominately straight run since they are longer than regular nozzles and may get caught in tight bends.

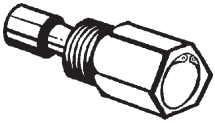
## QUICK-DISCONNECTS

The pump, hose, and gun (or foot valve) are equipped with Quick-Disconnects. Quick-Disconnects allow for fast and easy changes of hoses, guns, and foot valves without tools. *CAUTION: Make sure that the couplers are locked together securely before starting the unit.*



There is an O-ring seal inside the female quick connect which will deteriorate or be blown out occasionally. This may occur if the unit is allowed to pump without the hose attached. Simply insert a replacement O-ring to correct the leak.

## THERMAL RELIEF VALVE



The thermal relief valve is designed to open and release hot water that exceeds 145 degrees when system is in the bypass mode. The releasing of hot water allows cold water to enter system and keeps unit operating within temperature limits. Temperature that exceeds 145 degrees in your pump will cause premature packing seal failure. If this occurs and the pump overheats, the valve should be replaced. **SOME MODELS DO NOT REQUIRE THIS FEATURE.**

## INLET WATER SCREEN

The Jetter is equipped with a stainless steel water inlet screen to protect the pump.



**CAUTION:** If the screen is not kept clean, it will restrict the flow of water to the Jetter and may cause damage to the pump.

Remove screen and back-flush to remove impurities from the screen. Replace immediately.



**CAUTION:** Do not damage the screen while removing or cleaning it. Any foreign particles entering the pump may damage the it.

## ADJUSTABLE PRESSURE



On some models, the pressure is adjustable by turning the pressure adjustment knob located on the outside of the Jetter. The knob must be set at the extreme clockwise position for maximum pressure and turned several turns counter clockwise for minimum pressure.

*NOTE: With the pressure adjustment knob turned to the maximum pressure position (clockwise), the pump pressure may exceed the rated pressure of the machine which could overload the engine. **Do not force adjustment past factory setting.***

Adjust the knob counterclockwise to reduce the pressure and lower the power requirements of your Jetter pump.

On electric models, the higher power requirements of higher pressure may cause the breaker to be thrown. If this occurs, simply reduce the pressure.

*NOTE: Some models have a different type of pressure adjustment knob, or certain models do not have a pressure adjustment.*

The pressure may also be regulated by the use of the engine throttle on gas models.

## OPERATION

BE SURE YOU HAVE READ AND UNDERSTAND THE WARNINGS LISTED PREVIOUSLY. Failure to follow instructions can cause serious injury and damage to equipment.

Check all hoses for wear and damage. Tighten all connections securely.

Check oil level of pump and gear reducer. On gas Jetters, check engine fuel and oil levels.

To begin, turn the water faucet on fully and purge air from the system.

Insert the end of the jet hose 2 to 3 feet into the drain line, then open the ball or foot valve, or pull the trigger.



**NEVER POINT THE END OF THE JET HOSE AT A PERSON WHILE OPERATING!**

## GAS ENGINE STARTUP

- 1) Make sure that the ball or foot valve, or trigger is open and water is flowing.
- 2) Turn fuel valve to the open position.
- 3) Move choke lever to the closed position.
- 4) Move the throttle lever to the midpoint position.
- 5) Turn the engine switch to the on position.
- 6) Pull the starter grip lightly until resistance is felt, then pull briskly.
- 7) As the engine warms up, gradually move the choke lever to the open position.
- 8) Position the throttle to the desired engine speed.

## ELECTRIC MACHINE START UP

FOLLOW ALL SAFETY WARNINGS ON PAGE 8

- 1) Check that the machine is plugged into 110 volt, 20 amp circuit.
- 2) Test ground fault circuit interrupter.
- 3) Make sure the ball or foot valve, or trigger is turned on and flowing.
- 4) Turn motor switch to on position.

## OPERATION CONTINUED

As the engine starts, the hose will start to advance down the drain line. Allow the Jetter hose to enter the line a few feet and then pull the hose back one half the distance advanced. The actual cleaning of the line takes place when the hose is pulled back toward the operator. By carefully moving the hose forward and backward, you can reduce the likelihood of catching the jet hose on the line.

If the hose fails to advance or has difficulty getting around bends, rotate the hose. To do this, simply form a loop of hose near the drain opening, then rotate the loop 90 to 180 degrees until the hose advances. If the hose still fails to advance, switch to a smaller diameter hose (see Hydro Pulse also).

Ideally, a line should be cleaned from the lower end or down stream side. By sending a jet hose to the top of the line and slowly removing it, the water pressure and flow cleans the line effectively. However, it is not always possible to clean with water flow. When you work from the upstream side, it is best to clean the line several times to insure that all debris is removed. It takes approximately twice as long to properly clean against gravity flow as cleaning with the flow.

## HYDRO PULSE

Pulsation makes the hose vibrate, helping the Jetter go longer distances and around tight bends easier. It is particularly helpful for the smaller electric jets.

The pulse causes a pressure drop when it's engaged. The pulse is most effective in a 1/8" hose. You'll notice less vibration with a 1/4" hose and almost none with a 3/8" hose. However, the pulse is still effective, causing the water to burst from the nozzle hundreds of times per second.

If you are still having difficulty getting a hose around a tight bend, switch to a smaller diameter hose.

Turn the pulse off before turning the machine off.



## TO DISCONTINUE OPERATION

After drain cleaning or spray washing is completed, run clear water through the system. Always leave the ball or foot valve, or trigger in the open position when turning off the motor. On gas machines, first reduce engine to idle, turn off engine, then be sure to turn off fuel valve. Turn off water supply and drain as much water from pump as possible. Remove water supply hose from inlet. Wrap hose to avoid crimping and kinking. **PROTECT FROM FREEZING.**



**WARNING:** DO NOT disconnect any components while power supply or water supply is still engaged.

Failure to adhere to this WARNING could result in severe bodily injury and/or result in damage to your Jetter, including loss of parts such as O-rings and fittings.

## OPTIONAL FOOT PEDAL

The optional foot pedal may be used with any Jetter. It interrupts the flow of water between the pump and nozzle while leaving both hands free to guide the hose. The pump will continue to run in bypass mode. Do not leave pump in bypass for more than a few minutes, or the pump can be damaged.

## ICE BLOCKAGES

High pressure water can be used to clear an ice blockage. A 3000 PSI gas Jetter can clear a 4" line at an approximate rate of one foot per minute. The smaller electric Jetter will take twice as long. Ambient air temperature will affect these times. DO NOT allow the incoming water supply to exceed 140 degrees F or it could cause damage to the pump. The water may be heated downstream of the pump by using the optional Hot Box, a diesel fired unit which can instantly heat the water to nearly 200 degrees F.

# CARE OF YOUR PUMP

Before running the pump, check the oil level by viewing the sight glass on the end of the pump. When properly filled, the oil will be at the halfway point in the sight glass, when sitting on a level surface.

Do not overfill. Add 30 weight non-detergent oil if necessary.



Oil should be changed after the first twenty (20) hours of operation, with subsequent changes every one hundred (100) hours of operation. To drain oil, simply remove the oil plug from the undercarriage or back drain plug of the pump using a wrench.

**IMPORTANT: If oil in the pump begins to look “milky”, you are getting water in the oil and it must be changed immediately to avoid damage to the pump’s crankcase. In geographical areas of high humidity, oil change may be necessary more frequently.**

After starting your machine, it may be necessary to prime the pump. Simply open and close the trigger gun several times. If the pump does not prime within a few seconds, stop the engine and inspect installation for suction leaks or obstructions.

Do not let the pump run dry. Make sure the strainer is not clogged. Be sure the suction line is not obstructed, kinked or blocked.

## STORAGE

### Pump Storage



**CAUTION:** Always store your Jetter in a location where the temperature will not fall below 32 degrees F. The pump in this machine is susceptible to permanent damage if frozen. FREEZE DAMAGE IS NOT COVERED UNDER WARRANTY.

If you must store your Jetter in a location where the temperature is below 32 degrees F, you can minimize the chance of damage to your machine by utilizing the following procedure:

- Shut off water supply and relieve pressure in the system by depressing the trigger, ball or foot valve. Disconnect the garden hose from the Jetter, but leave the high pressure hose connected.
- Tip the unit on it’s side with the inlet connection pointing up at a 45 degree angle. Insert a funnel into the inlet and pour in approximately 2 cups of antifreeze. Disconnect the spark plug wire.
- Without connecting garden hose, pull the recoil several times to circulate the antifreeze into the pump system. Continue to add antifreeze and pull the recoil until the antifreeze is expelled when the trigger is pulled. Disconnect the high pressure hose. The antifreeze will serve as a rust preventative during storage and help prevent the valves from sticking.
- Turn the unit upright.

### Engine Storage

When the Jetter is not being operated or is being stored for more than one month, follow these instructions:

- Replenish engine oil to upper level.
- Drain gasoline from fuel tank, fuel line, fuel valve and carburetor.
- Cover the Jetter and store in a clean dry place that is well ventilated and away from open flame or sparks.

**NOTE:** The use of a fuel additive, such as STA-BIL, or equivalent, will minimize the formulation of fuel gum deposits during storage. Such an additive may be added to the gasoline in the fuel tank or the gasoline in a storage container.

### After Extended Storage



**CAUTION:** Prior to restarting, thaw out any possible ice from the Jetter, tips, ball valve, trigger gun, or foot valve.

# TROUBLE SHOOTING



SYMPTOM	CAUSE	SOLUTION
Engine won't start	No Fuel	Check and fill
	Spark plug	Replace spark plug
	Low oil level	Add oil to engine to fill level
Engine is overloaded	Nozzle partially blocked	Clean nozzle
	Excessive pressure	Reduce pressure by turning adjustable unloader valve counterclockwise
Pump running normally, but pressure does not achieve maximum rating	Water supply restricted	Check water supply and filter screen for blockage. Check hoses for blockage, kinks, leaks, etc
	Open faucet	Thaw out unit completely, including hose, gun, ball valve, and foot valve. Unit may have been stored in freezing temperature
	Closed faucet	
	Pump sucking air	Check that hoses and fittings are air tight
	Unloader valve seat faulty or worn	Check and replace
	Nozzle incorrect or worn	Check and replace
Worn piston packing	Check and replace	
Fluctuating pressure	Valves worn, dirty or stuck	Check, clean or replace
	Pump sucking air	Check that hoses and fittings are air tight. Purge air from garden hose
Pressure drops after period of normal use	Nozzle worn	Check and replace
	Valves worn, dirty or stuck	Check, clean or replace
	Nozzle clogged or partially obstructed	Clean or replace
	Worn piston packing	Check and replace
Pump noisy	Pump sucking air	Check that hoses and fittings are air tight.
	Worn bearings	Check and replace if necessary
	Water too hot	Reduce temperature below 140 degrees F, or replace thermal relief valve is necessary
Presence of water in oil (oil is milky)	High humidity	Check and replace oil
	Piston packing & oil seals worn	Check and replace oil
Water dripping from pump	Piston packing worn	Check and replace
	O-rings of piston guide or retainer worn	Check and replace
	Fittings loose	Check and tighten
Oil dripping	Oil seal worn	Check and replace. A small amount of leakage is normal
	Oil level too high	Drain level to center of sight glass
Recoil starter hard to pull	Static back pressure built up in outlet hose	Relieve pressure by squeezing trigger, ball or foot valve, or turn adjustable unloader counter clockwise during starting

# WARRANTIES

Warranty shall not apply to any unit or part damage due to normal wear, alteration, misuse, misapplication or operated in a manner not recommended by Water Cannon. Also, equipment damaged or worn because of the use of caustic materials or the operation in abrasive or corrosive environments or under any conditions which causes cavitation are not operating procedures or maintenance will also void warranty.

Water Cannon's responsibility is to repair or replace defective parts only. We will not be responsible for loss of use of the unit, loss of rental, inconvenience or consequential damages. This warranty is in lieu of all other warranties, expressed or implied or statutory.

Water Cannon does not authorize any other person or party to make any additional obligation or promise on our behalf, unless made in writing and signed by an officer of Water Cannon.

## LIMITED WARRANTY

The user shall determine the suitability of the product for its intended use prior to placing the unit in service. Said user assumes all risk and liability to connection with determining the suitability of the unit for its particular use. Neither the seller nor the manufacturer shall be liable for any injury, loss, or damage arising out of the improper use of operation of said unit.

The following items (normal wear parts) are covered for ninety (90) days from the date of purchase:

Regulating valve/unloader	Quick coupling
High pressure hose(s)	Pump packings
Pump valves	Pressure gauge

Engines and motors sold to Water Cannon and then sold to you are subject to the warranty of that company and should be directed to their service facility for warranty evaluation and determination.

Pump and accessories are warranted by the manufacturer of the specific product, and subject to the manufacturer's limited warranty. Pumps on the Water Cannon product are warranted against manufacturer's defects to the original owner for two or five years from date of purchase. Water Cannon accessories of the Water Cannon products are warranted for ninety days after date of purchase.

# TROUBLE SHOOTING



SYMPTOM	CAUSE	SOLUTION
Engine won't start	No Fuel	Check and fill
	Spark plug	Replace spark plug
	Low oil level	Add oil to engine to fill level
Engine is overloaded	Nozzle partially blocked	Clean nozzle
	Excessive pressure	Reduce pressure by turning adjustable unloader valve counterclockwise
Pump running normally, but pressure does not achieve maximum rating	Water supply restricted	Check water supply and filter screen for blockage. Check hoses for blockage, kinks, leaks, etc
	Open faucet	Thaw out unit completely, including hose, gun, ball valve, and foot valve. Unit may have been stored in freezing temperature
	Closed faucet	
	Pump sucking air	Check that hoses and fittings are air tight
	Unloader valve seat faulty or worn	Check and replace
	Nozzle incorrect or worn	Check and replace
Worn piston packing	Check and replace	
Fluctuating pressure	Valves worn, dirty or stuck	Check, clean or replace
	Pump sucking air	Check that hoses and fittings are air tight. Purge air from garden hose
Pressure drops after period of normal use	Nozzle worn	Check and replace
	Valves worn, dirty or stuck	Check, clean or replace
	Nozzle clogged or partially obstructed	Clean or replace
	Worn piston packing	Check and replace
Pump noisy	Pump sucking air	Check that hoses and fittings are air tight.
	Worn bearings	Check and replace if necessary
	Water too hot	Reduce temperature below 140 degrees F, or replace thermal relief valve is necessary
Presence of water in oil (oil is milky)	High humidity	Check and replace oil
	Piston packing & oil seals worn	Check and replace oil
Water dripping from pump	Piston packing worn	Check and replace
	O-rings of piston guide or retainer worn	Check and replace
	Fittings loose	Check and tighten
Oil dripping	Oil seal worn	Check and replace. A small amount of leakage is normal
	Oil level too high	Drain level to center of sight glass
Recoil starter hard to pull	Static back pressure built up in outlet hose	Relieve pressure by squeezing trigger, ball or foot valve, or turn adjustable unloader counter clockwise during starting