



KJ-2200 Water Jetter Machine



KJ-2200 Water Jetter Machine	
Record Serial Number below and retain product serial number which is located on nameplate.	
Serial No.	

General Safety Information

WARNING! Read and understand all instructions. Failure to follow all instructions listed below may result in carbon monoxide poisoning, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS!

Work Area Safety

- **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep bystanders, children, and visitors away while operating a tool.** Distractions can cause you to lose control.
- **Keep the engine at least one meter (3 feet) away from buildings and other equipment during operation. Do not place flammable objects close to engine.** Procedures should be followed to prevent fire hazards and to provide adequate ventilation.

Personal Safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medications.** A moment of inattention while operating power tools may result in serious personal injury.
- **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
- **Remove adjusting keys or wrenches before turning the tool ON.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- **Do not over-reach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
- **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

- **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.

- **Store idle tools out of the reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- **Maintain tools with care. Keep valves, hoses and nozzles in proper operating condition.** Properly maintained tools are less likely to malfunction and cause injury.
- **Check for misalignment or binding of moving parts, breakage of parts, and any other conditions that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
- **Use only accessories that are recommended by the manufacturer for your tool.** Accessories that may be suitable for one tool may become hazardous when used on another tool.
- **Disconnect the spark plug wire before making any adjustment or repairing tool.** Such preventative measures reduce the risk of starting the tool accidentally.
- **Keep handles dry and clean; free from oil and grease.** Allows for better control of the tool.

Service

- **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified repair personnel could result in injury.
- **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance Section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electrical shock or injury.

Specific Safety Information

▲ WARNING

Read this operator's manual carefully before using the RIDGID KJ-2200 Water Jetter. Failure to understand and follow the contents of this manual may result in carbon monoxide poisoning, fire and/or serious personal injury.

Jetter Safety

- **Do not operate above 2200 psi or 140°F (water temperature).** Tool will do a better and safer job if operated at recommended pressures and temperatures.
- **Never permit the end of hose to rotate out of the**

pipe being cleaned. Hose can whip and nozzle spray can penetrate the skin causing serious injury.

- **Use caution when handling gasoline. Refuel in well-ventilated area. Do not overfill fuel tank and do not spill fuel. Make sure tank cap is closed properly.** Gasoline is extremely flammable and is explosive under certain conditions.
- **Never run the engine in an enclosed or confined area.** Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death. Exhaust also contains chemicals that the State of California believes may cause cancer or reproductive harm.
- **Be careful not to touch the muffler while it is hot. To avoid severe burns or fire hazards, let the engine cool before transporting or storing it indoors.** The muffler becomes very hot during operation and remains hot for a while after stopping the engine.
- **Water spray should not be pointed at any human.** High pressure spray can result in serious injury. If fluid seems to have penetrated skin, seek emergency medical attention at once.
- **Be careful when cleaning drains where cleaning compounds have been used. Avoid direct contact with skin and eyes.** Serious burns can result from some drain cleaning components.
- **Jetter is designed to clean drains. Follow instructions in Operator’s Manual on machine’s uses.** Other uses may increase the risk of injury.
- **Do not spray flammable liquids.** Spraying flammable liquids could cause a fire or explosion.
- **Do not spray toxic chemicals such as insecticide or weed killer.** Chemicals can be harmful to personnel.
- **Never clean the machine using its own spray wand.** High pressure spray may damage machine components.

Description, Specifications and Standard Equipment

Description

The RIDGID KJ-2200 is a portable water jetter designed to use the combination of water pressure and flow to clear grease and sludge out of 1 1/4" to 6" drain lines. The Jetter can be either hand carried or combined with a two wheeled cart and hose reel. The KJ-2200 has a 5.5 HP gasoline engine with a 2200 psi pressure rating and a 2.4 gpm flow rate.

Specifications

Line Capacity.....Recommended for 1 1/4" to 6" drain lines through 200 feet
 Engine5.5 HP Gasoline Engine
 Pump:
 TypeTriplex Plunger
 Pressure2200 PSI
 Flow Rate2.4 GPM
 Weight (Jetter Only)59 lbs. (26.8 kgs.)

Standard Equipment

Catalog No.	Model No.	Description	Wt.
63877	KJ-2200	KJ-2200 Jetter with Pulse – H-61, H-62, and H-64 1/8" NPT Nozzles – H-71 and H-72 1/4" NPT Nozzles – 75' x 1/4" Trap Hose – FV-1 Foot Valve – Nozzle Cleaning Tool	65 lb. (29,5 kg)
63882	KJ-2200-C	Above With: – H-30 Cart – 110' x 1/2" Jet Hose	145 lb. (65,8 kg)

Jetter Nozzles and Hoses

Catalog No.	Model No.	Description	Hose I.D.	Hose O.D.
64772	H-61	Propulsion Nozzle	1/8" NPT	
64777	H-62	Penetrating Nozzle	Fits 1/4" Hose	
64782	H-64	Drop Head Nozzle		
82842	H-65	Spin Nozzle 2200		
64787	H-71	Propulsion Nozzle	1/4" NPT	
64792	H-72	Penetrating Nozzle	Fits 1/2" Hose	
82852	H-75	Spin Nozzle 2200		
47592	H-1425	1/4" x 25'	3/16"	1/4"
47597	H-1435	1/4" x 35'	3/16"	1/4"
47602	H-1450	1/4" x 50'	3/16"	1/4"
49272	H-1475	1/4" x 75'	3/16"	1/4"
49277	H-1400	1/4" x 100'	3/16"	1/4"
64732	H-1415	1/4" x 150'	3/16"	1/4"
50002	HL-1	Flexible Leader, 1/4"	1/8"	3/16"
50007	HL-2	Flexible Leader, 1/2"	1/8"	3/16"
47607	H-1250	1/2" x 50'	1/4"	1/2"
47612	H-1275	1/2" x 75'	1/4"	1/2"
47617	H-1200	1/2" x 100'	1/4"	1/2"
51587	H-1211	1/2" x 110'	1/4"	1/2"
49487	H-1215	1/2" x 150'	1/4"	1/2"
51597	H-1220	1/2" x 200'	1/4"	1/2"

Jetter Accessories

Catalog No.	Model No.	Description
62882	H-5	Mini Hose Reel (No Hose included)
64737	H-30	H-30 Cart with Hose Reel
62877	H-30 WH	H-30 Cart with Hose Reel and 110' x 1/2" Jet Hose
64077	HP-22	Pressure Wash Package, KJ-2200
64767	HW-22	Wash Wand, KJ-2200
51572	H-1235	Wash Wand Hose 1/2" x 35'
48157	FV-1	Foot Valve
66732	HF-4	Quick Connect Hose
48367	H-25	Winterizing Kit
47542	H-21	Nozzle Cleaning Tool
67187	H-32	Jet Vac

Machine Assembly

▲ WARNING

To prevent serious injury, proper assembly of the KJ-2200 Jetter is required. The following procedures should be followed:

Instructions for Engine and Pump

1. Engine is shipped without oil. Fill with oil prior to starting engine with a quart of SAE 10-W-30 (See enclosed Engine Owner's Manual for details).

CAUTION Failure to fill engine with oil will result in engine failure.

2. Remove plug in pump and replace with dipstick/breather cap. Check the pump oil level (jetter is shipped with oil). If oil is low, fill with SAE 30W detergent oil.

Transport Cart

The H-30 Cart and Hose Reel is designed to accept the KJ-2200 without the need of tools. Lift the jetter onto the deck and place over the locator pins. Hold in place and attach front and back clips to jetter base.

Machine Inspection

▲ WARNING



To prevent serious injury, inspect your Jetter. The following inspection procedures should be performed on a daily basis.

1. Check engine crankcase and pump oil level. If low, add oil (See enclosed Engine Owner's Manual for details).
2. Check engine fuel level. If low, add unleaded gasoline with a pump octane rating of 86 or higher. (See enclosed Engine Owner's Manual for details).

▲ WARNING Use caution when handling gasoline. Refuel in well-ventilated area. Do not over-fill fuel tank and do not spill fuel. Make sure tank cap is closed properly.

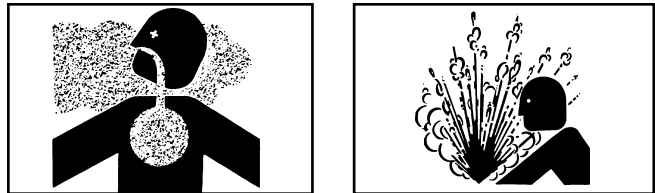
3. Inspect the Jetter for any broken, missing, misaligned or binding parts as well as any other conditions which may affect the safe and normal operation of the machine. If any of these conditions are present, do not use the Jetter until any problem has been repaired.

4. Check inlet filter screen for debris that can restrict water flow into the pump resulting in poor performance. If filter screen is dirty or clogged, remove, clean and replace.
5. Use accessories that are designed for your Jetter and meet the needs of your application. The correct accessories allow you to do the job successfully and safely. Accessories suitable for use with other equipment may be hazardous when used with this machine.
6. Clean any oil, grease or dirt from all equipment handles and controls. This reduces the risk of injury due to a tool or control slipping from your grip.
7. Check the jetter nozzle orifices for debris. If an orifice is blocked, use nozzle cleaning tool to clear and remove debris.
8. Inspect hoses for wear and damage. Hoses should be replaced when they become damaged.

▲ WARNING Damaged hoses can burst causing serious injury. Only use hoses that are rated above 2200 psi.

Machine and Work Area Set-Up

▲ WARNING



To prevent serious injury, proper set-up of the machine and work area is required. The following procedures should be followed to set-up the machine:

1. Check work area for:
 - Adequate lighting.
 - Flammable liquids, vapors or dust that may ignite.
 - Adequate ventilation for engine exhaust.

▲ WARNING Exhaust contains poisonous carbon monoxide gas. Exposure may cause loss of consciousness and may lead to death.

- Water supply

NOTE! If a connection is made to a potable water system, the system should be protected against backflow in accordance with all local codes and ordinances.

2. Connect the quick coupling fitting to the water supply hose. Connect water supply hose to the jetter inlet and close the inlet supply valve (Figure 1).



Figure 1 – Connect water supply hose to jetter. Close inlet supply valve (shown in closed position)

3. Connect the other end of the water supply hose to the water faucet and turn the faucet on. Make sure there are no kinks or unnecessary bends in the supply hose.

CAUTION Hot water improves the jetter’s performance, particularly when clearing grease blockages. Limit water temperature to below 140°F.

4. Connect a jetter hose the jetter’s outlet quick coupling on the end of the connection hose (Figure 2).
 - If a hose reel is used, attach connection to plug fitting on hose reel.
 - If necessary, use trap hose. Refer to *Jetter Hose Selection Chart*
5. Insert jetter hose 6” – 8” into drain without a jetter nozzle.

6. Open the inlet supply valve and run water through the jetter and hoses.
7. Continue to run water through the jetter until all air has been purged.
8. Close the inlet supply valve.



Figure 2 – Connect Jetter Hose

9. Attach a jetter nozzle to the jet hose. (Refer to *Jetter Nozzle Selection Chart*). Hand-tighten for a snug fit. Over-tightening can interfere with water flow through the nozzle orifices causing reduced flow and poor performance.

▲ WARNING Nozzle should not be removed from the drain while pressurized. Mark the hose at a distance of 24” (60cm) from nozzle to indicate the location of the nozzle.

10. Insert the jet hose into the line several feet.
11. Open the inlet supply valve and verify that water flows freely through the nozzle.

JETTER HOSE SELECTION CHART

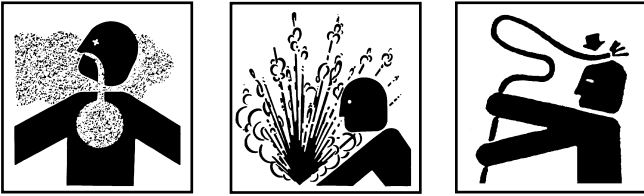
Applications	Pipe Size	Nozzle Size	Hose Size	Hose ID
Bathroom sinks, urinals, and small lines.	1 1/4” – 2”	1/8” NPT	1/8”	1/8”
Kitchen sinks, laundry tubs and stacks, clean-outs, and vents.	2” – 3”	1/8” NPT	1/4”	3/16”
Shower and floor drains, lateral lines, and grease traps.	3” – 4”	1/4” NPT	1/2”	1/4”
Lateral and main lines	4” – 6”	1/4” NPT	1/2”	1/4”

JETTER NOZZLE SELECTION CHART

	Thread Size	1/8” NPT	1/4” NPT
	Hose Size	1/8” & 1/4”	1/2”
	Hose Inside Diameter	1/8” & 3/16”	1/4”
Features three reverse jet thrusts for maximum propulsion to jet long distances. Use this nozzle for most applications.		H-61	H-71
Uses three jet thrusters in reverse plus one jet pointed forward to penetrate solid grease or sludge blockages. The forward jet blasts a small hole in the blockage for the nozzle to follow. It is also very effective when jetting ice blockages.		H-62	H-72
Use the drop head to help negotiate difficult bends. This nozzle has three reverse jet thrusts.		H-64	
Use the spinning nozzle to clean grease and similar blockage from drain.		H-65	H-75

Operating Instructions

▲ WARNING



Always wear eye protection to protect eyes from dirt and other foreign objects. Wear rubber soled, non-slip shoes.

Do not spray flammable liquids or toxic chemicals.

Water spray should not be pointed at any human. Do not hold nozzles when pressurized.

Carbon monoxide poisoning can occur if operated in a confined area.

Engine Start-Up and Pressure Adjustment

NOTE! The KJ-2200 Jetter has a pulse actuator on the pump. This actuator must be in the OFF (rotate counter-clockwise) position prior to starting the jetter (Figure 3). To obtain maximum pressure, the pulse control must be OFF.

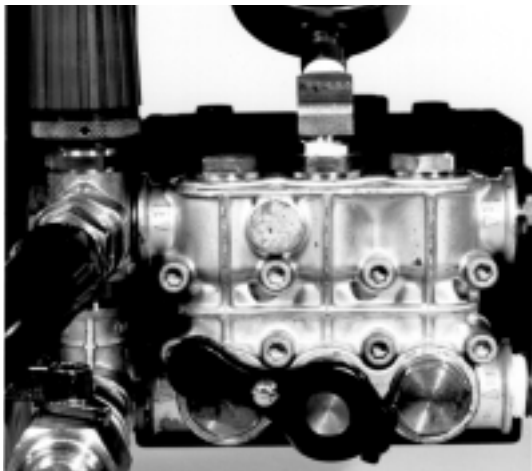


Figure 3 – Pulse Actuator OFF

1. Turn the unloader valve counter-clockwise to insure the pressure is backed down.
2. Turn the fuel valve to the ON position.
3. Move the choke lever to the CLOSE position.

NOTE! Choke may not be needed if engine is warm or the air temperature is high.

4. Move the throttle lever slightly to the left.
5. Start the engine:
 - Turn the engine switch to the ON position.

- Pull the starter grip lightly until resistance is felt, then pull briskly.

6. As the engine warms up, gradually move the choke lever to the OPEN position and adjust the throttle lever for the desired engine speed.

NOTE! For further details on engine operation, see the enclosed Engine Owner's Manual.

7. Adjust the unloading valve so that the pressure gauge shows 2200 PSI (rotate clockwise to increase pressure) (Figure 4).

▲ WARNING Do not operate above 2200 PSI or 140°F water temperature.



Figure 4 – Adjusting the Unloading Valve

8. If the jetter will not generate 2200 PSI:
 - Make sure the engine throttle is adjusted properly.
 - Make sure the water faucet is completely OPEN and the inlet supply valve is OPEN.
 - Check the filter screen at the inlet port to the jetter. Make certain it is clear of debris.
 - Make sure the pulse actuator is in the OFF position.
 - Cycle the pulse actuator ON and OFF several times while the jetter is running to clear any trapped air in the system.
 - Rotate unloader valve clockwise to make sure it increases pressure.

Normal Jetting

1. For normal jetting, turn the pulse actuator to the OFF position and guide the hose into the line by hand.
2. When the jetter nozzle encounters a bend, its advance will usually slow or stop. The jetter hose has a slight bend or set to it. The reverse thrust of the nozzle

zle will advance the jetter hose, but it is also necessary to manually feed and rotate the jetter hose to work the set around the bend.

3. If the hose will not advance, pull back on the hose slightly and rotate the hose a quarter to a half turn so the set will align itself with the bend. Then advance the hose forward.

Using The Pulse Mode To Negotiate Bends And Traps

In some cases, simply rotating the hose will not be enough to negotiate a bend or trap. In these instances, it will be necessary to induce some pulse action. In the pulse mode, the pump induces large pulsation and jetter hose vibration which will ease hose advancement.

1. Rotate the pulse actuator lever clockwise to induce the pulse (*Figure 5*).
2. While in the pulse mode, again rotate the hose to align the set with the bend. This technique will normally overcome stubborn bends and traps.

NOTE! In the pulse mode, the jetter's pressure gauge will read approximately 1800 – 1900 PSI.

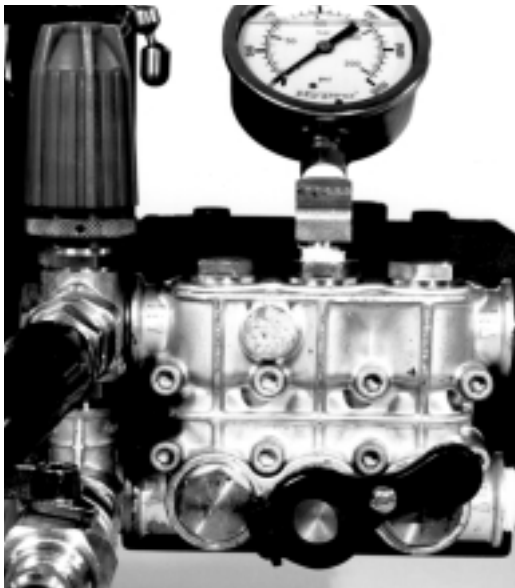


Figure 5 – Pulse Actuator ON

3. Once through the bend or trap, return the pulse control actuator lever to the OFF position. Continue the jetter head's advance.

Encountering Blockages

1. If the jetter nozzle does not pass right through the blockage, combine the pulse action of the pump with manual manipulation of the hose.

2. Once through the obstruction, pass the jetter nozzle back and forth several times (preferably with pulse OFF) through that section of the drain to ensure thorough clearing. Then advance the nozzle several feet further down the line before retrieving the hose.

“Jet Cleaning” or “Jetting” the Line

The jetter's cleaning action occurs by the nozzle orifices directing high pressure water at the walls of the drain line restoring the drain to the full inside line diameter. (This same pressure produces the thrust that pushes the nozzle down the line.) The slower the jetter hose is retrieved, the better the results.

1. Make sure the pulse actuator is OFF. This will maximize the pressure and flow at the nozzle.
2. Slowly retrieve the jetter hose and clean the inside walls of the drain.

▲ WARNING Never permit end of hose to rotate out of the pipe being cleaned. Hose can whip and nozzle spray can penetrate skin causing serious injury.

NOTE! If at any time during the jetting process the pressure oscillates up and down between 100 and 2200 psi, stop the jetter:

- Turn the jetter and water supply OFF. Remove the jetter nozzle and check the nozzle orifices. (They are probably blocked). Clean them with the nozzle cleaning tool by pushing the proper size wire completely through each thruster orifice.
- If the problem persists, remove the nozzle and insert the hose into the drain. Check the inlet filter screen at the inlet port and make sure it is clean. Restart to flush the system of any trapped air or debris that could be hampering the unit's operation.

Pressure Wash Package

(Optional Accessory)

The KJ-2200 can operate as a pressure washer to spray wash service vehicles, tools, drain cleaning equipment and cables. The wash wand mounted to the 1/2" x 35' hose is attached to the jetter outlet port. Detergent can be dispensed for more effective cleaning by using the injector manifold.

To Utilize the Wash Feature

▲ WARNING Water spray should not be pointed at any human.

1. Make sure the pulse actuator is in the OFF position.
2. Attach the wash wand to the 1/2" x 35' hose provided or any 1/2" jetter hose.

3. The black nozzle end has two adjustment. By rotating the nozzle, the wash pattern can be wide or narrow. The nozzle also has a FORWARD (low pressure) and BACK (high pressure) position. Make sure the nozzle is in the BACK (high pressure) position to begin operation.
4. Adjust system pressure with the wash wand activated. Once pressure is achieved, begin washing and adjust the nozzle setting as required.

To Utilize the Detergent Injector

▲ WARNING Do not spray flammable liquids or toxic chemicals.

1. Attach the detergent injector to the outlet port by removing the connection hose and quick coupling on the jetter. Use thread sealant to prevent any leaks. Make sure arrow on manifold is going in the same direction as water flow (away from jetter).
2. Reattach connection hose and attach wash wand hose to quick coupling.
3. Place filter end of siphon hose into the detergent's container and other end on injector manifold.
4. The nozzle must be in the FORWARD (low pressure) position. Activate wash wand to apply detergent.

NOTE! Detergents are only dispensed when wash wand nozzle is in the low pressure position.

5. After application is complete, pull the nozzle back to achieve full pressure and continue normal pressure washing.

Accessories

▲ WARNING Only the following RIDGID products have been designed to function with the Water Jetting Machine. Other accessories suitable for use with other tools may become hazardous when used on the machines. To prevent serious injury, use only the recommended accessories.

Jetter Nozzles and Hoses

Catalog No.	Model No.	Description	Hose I.D.	Hose O.D.
64772	H-61	Propulsion Nozzle	1/8" NPT	
64777	H-62	Penetrating Nozzle	Fits 1/4" Hose	
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Jetter Accessories

Catalog No.	Model No.	Description
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62877	H-30 WH	H-30 Cart with Hose Reel and 110' x 1/2" Jet Hose
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64767	HW-22	Wash Wand, KJ-2200
51572	H-1235	Wash Wand Hose 1/2" x 35'
48157	FV-1	Foot Valve
66732	HF-4	Quick Connect Hose
48367	H-25	Winterizing Kit
47542	H-21	Nozzle Cleaning Tool
67187	H-32	Jet Vac

Maintenance Instructions

▲ WARNING

Disconnect spark plug wire before making any repairs.

Lubrication

Before each use:

- Check engine crankcase oil level. If low, add SAE 10-W-30 detergent oil.
- Check the oil level in the jetter pump. If it is low, fill with SAE 30W detergent oil. The pump manu-

facturer recommends an oil change after 40 hours of break-in operation and every 500 hours thereafter.

Inlet Filter Screen

Before each use:

- Check inlet filter screen for debris that can restrict water flow into the pump resulting in poor performance. If filter screen is dirty or clogged, remove, clean and replace.

Jetter Nozzle Orifice

Before each use:

- Check the jetter nozzle orifices for debris. If an orifice is blocked, use nozzle cleaning tool to clear and remove debris.

Jetter Flushing

After use:

- Run clear water through the jetter and hose(s) in order to flush out debris or detergents. Make sure nozzle is removed from hose for maximum water flow. Flushing should always be done after using the injector in order to flush out detergents.

Winterizing

CAUTION Freezing temperatures can cause serious damage to the pump. If such cold conditions are to be encountered in storage, charge the jetter with RV (non-ethylene glycol) Anti-Freeze.

The winterizing kit (H-25) includes RV Anti-Freeze and a delivery hose that attaches to the inlet valve.

▲ WARNING EPA mandates that no substances containing ethylene glycol can be used in a drainage system.

Machine Storage

▲ WARNING Gasoline engine-driven equipment must be indoors or well covered in rainy weather. Store the machine in a locked area that is out of reach of children and people unfamiliar with water jettors. This machine can cause serious injury in the hands of untrained users.

Service and Repair

▲ WARNING



The “Maintenance Instructions” will take care of most of the service needs of this machine.

WARNING When servicing this machine, only identical replacement parts should be used. Failure to follow these instructions may create a risk of serious injury.