

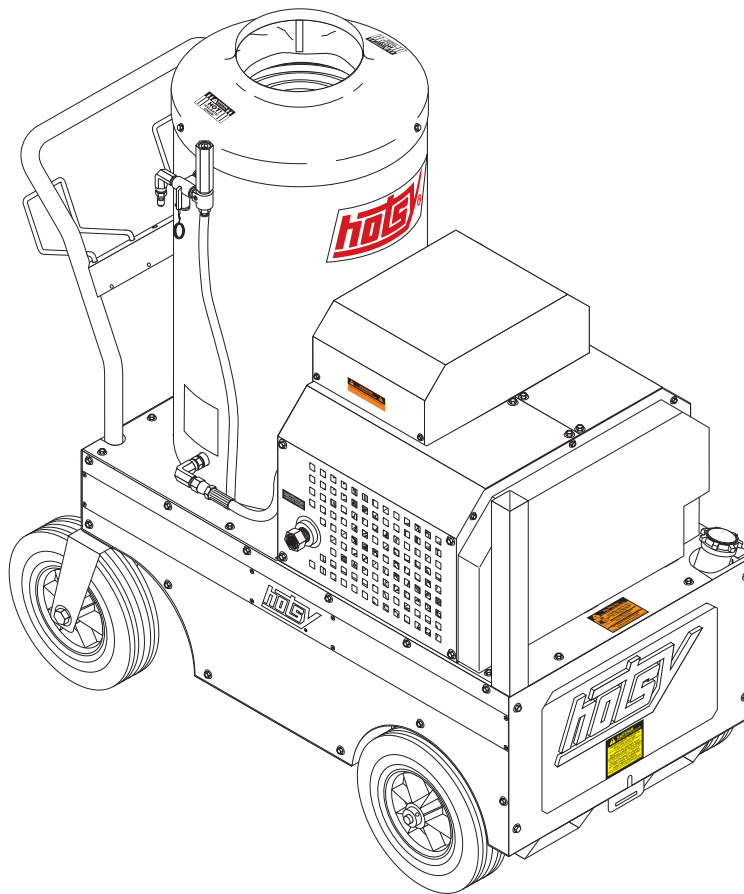
800 Series

Mobile - Hot Water - Oil-Fired

Operator's Manual



Pressure Washer



MODELS:

821 1.109-120.0	874 1.109-132.0
842 1.109-121.0	852 1.109-126.0
843 1.109-122.0	853 1.109-127.0
844 1.109-123.0	854 1.109-128.0
845 1.109-124.0	855 1.109-129.0
851 1.109-125.0	856 1.109-130.0
873 1.109-131.0	

For the Hotsy Dealer nearest you,
consult our web page at
www.hotsy.com



8.921-206.0-B 5/31/17

Machine Data Label

Model: _____

Date of Purchase: _____

Serial Number: _____

Dealer: _____

Address: _____

Phone Number: _____

Sales Representative: _____

Machine Data Label2
Table of Contents3
How To Use This Manual4

Safety

Introduction & Safety Information5
 IMPORTANT SAFETY INFORMATION6

Operations

Technical Specification9
 Component Identification10
 Assembly Instructions12
 Installation Instructions14
 Hotsy Crossfire Burner Air Adjustment15
 Operations Instructions16
 Detergents & General Washing Techniques19
 Shut Down And Clean Up20

Maintenance

Pump21
 Burner Fuel Filter21
 Heating Coil21
 Brake21
 Troubleshooting22

How To Use This Manual

This manual contains the following sections:

- How to Use This Manual
- Safety
- Operations
- Maintenance

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

Model: _____
Date of Purchase: _____
Serial Number: _____
Dealer: _____
Address: _____
Phone Number: _____
Sales Representative: _____

The model and serial number of your machine is located on the back of the machine.

The SAFETY section contains important information regarding hazardous or unsafe practices of the machine. Levels of hazards are identified that could result in product damage, personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Pump
- Pump Motor
- Burner Fuel Filter
- Heating Coil
- Brake
- Troubleshooting

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.

NOTE: The manual part number is located on the lower right corner of the front cover.

Introduction & Safety Information

Thank you for purchasing this Pressure Washer. We reserve the right to make changes at any time without incurring any obligation.

Owner/User Responsibility:

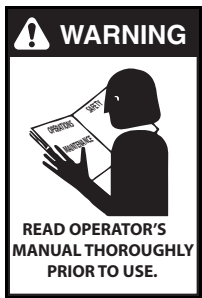
The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this pressure washer. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents. Owner and/or user must study and maintain for future reference the manufacturers' instructions. The operator must know how to stop the machine quickly and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.

SAVE THESE INSTRUCTIONS

This manual should be considered a permanent part of the machine and should remain with it if machine is resold.

When ordering parts, please specify model and serial number. Use only identical replacement parts. This machine is to be used only by trained operators.

IMPORTANT SAFETY INFORMATION



WARNING: To reduce the risk of injury, read operating instructions carefully before using.

1. Read the owner's manual thoroughly. Failure to follow instructions could cause malfunction of the machine and result in death, serious bodily injury and/or property damage.
2. Know how to stop the machine and bleed pressure quickly. Be thoroughly familiar with the controls.
3. Stay alert — watch what you are doing.
4. All installations must comply with local codes. Contact your electrician, plumber, utility company or the selling dealer for specific details. If your machine is rated 250 volts or less, single phase a ground fault circuit interrupter (GFCI) will be provided. If rated more than 250 volts, or more than single phase this product should only be connected to a power supply protected by a GFCI.

WARNING: Must be plugged into properly wired three hole grounded outlet that accommodates plug on power cord. Failure to comply could result in electrical shock.

DANGER: Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Do not use any type of adapter with this product.



DANGER: Keep wand, hose, and water spray away from electric wiring or fatal electric shock may result.

5. To protect the operator from electrical shock, the machine must be electrically grounded. It is the responsibility of the owner to connect this machine to a UL grounded receptacle of proper

voltage and amperage ratings. Do not spray water on or near electrical components. Do not touch machine with wet hands or while standing in water. Always disconnect power before servicing.

WARNING: Flammable liquids can create fumes which can ignite, causing property damage or severe injury.



WARNING: Risk of explosion — Operate only where open flame or torch is permitted.

6. In oil burning models, use only kerosene, No. 1 home heating fuel, or diesel. If diesel is used, add a soot remover to every tankful.



WARNING: Risk of fire — Do not add fuel when the product is operating or still hot.

WARNING: Do not use gasoline crankcase draining or oil containing gasoline, solvents or alcohol. Doing so will result in fire and/or explosion.

7. Oil burning appliances shall be installed only in locations where combustible dusts and flammable gases or vapors are not present. Do not store or use gasoline near this machine.
8. Do not allow acids, caustic or abrasive fluids to pass through the pump.
9. Never run pump dry or leave spray gun closed longer than 1-2 minutes.
10. Keep operating area clear of all persons.



WARNING: High pressure spray can cause paint chips or other particles to become airborne and fly at high speeds. To avoid personal injury, eye, hand and foot safety devices must be worn.

11. Wear properly rated eye protection such as safety goggles or face shield while spraying.

(Safety glasses do not provide full protection.)



WARNING: This machine exceeds 85 db appropriate ear protection must be worn.



WARNING: Hot discharge fluid. Do not touch or direct discharge stream at persons.

WARNING: This machine produces hot water and must have insulated components attached to protect the operator.



WARNING: Risk of injury. Hot surfaces can cause burns. Use only designated gripping areas of spray gun and wand. Do not place hands or feet on non-insulated areas of the pressure washer.

12. To reduce the risk of injury, close supervision is necessary when a machine is used near

children. Do not allow children to operate the pressure washer. **This machine must be attended during operation.**



WARNING: Grip cleaning wand securely with both hands before starting. Failure to do this could result in injury from a whipping wand.

13. Never make adjustments on machine while in operation.

14. Be certain all quick coupler fittings are secured before using pressure washer.



WARNING: High pressure developed by these machines will cause personal injury or equipment damage. Keep clear of nozzle. Use caution when operating. Do not direct discharge stream at people and animals, or severe injury or death will result.



WARNING: Protect machine from freezing.

15. To keep machine in best operating conditions, it is important you protect machine from freezing. Failure to protect machine from freezing could cause malfunction of the machine and result in death, serious bodily injury, and/or property damage. Follow storage instructions specified in this manual.

16. Inlet water must be clean fresh water and no hotter than 90°F.



WARNING: Risk of asphyxiation. Use this product only in a well ventilated area.

17. Avoid installing machines in small areas or near exhaust fans. Adequate oxygen is needed for combustion or dangerous carbon monoxide will result.

18. Manufacturer will not be liable for any changes made to our standard machines or any components not purchased from us.

19. The best insurance against an accident is precaution and knowledge of the machine.



WARNING: Be extremely careful when using a ladder, scaffolding or any other relatively unstable location. The cleaning area should have adequate slopes and drainage to reduce the possibility of a fall due to slippery surfaces.

20. Do not overreach or stand on unstable support. Keep good footing and balance at all times.

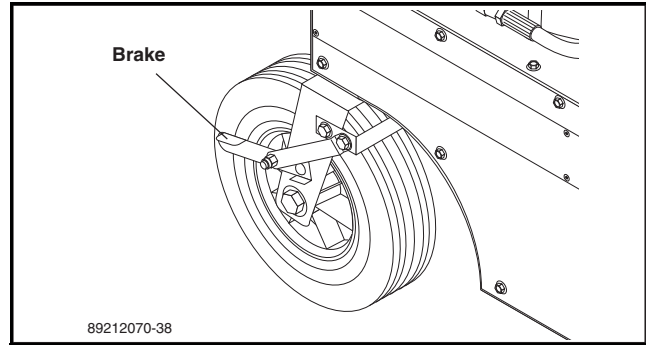
21. Do not operate this machine when fatigued or under the influence of alcohol, prescription medications, or drugs.



WARNING: If connection is made to a potable water system, the system shall be protected against back flow.



Follow the maintenance instructions specified in the manual.



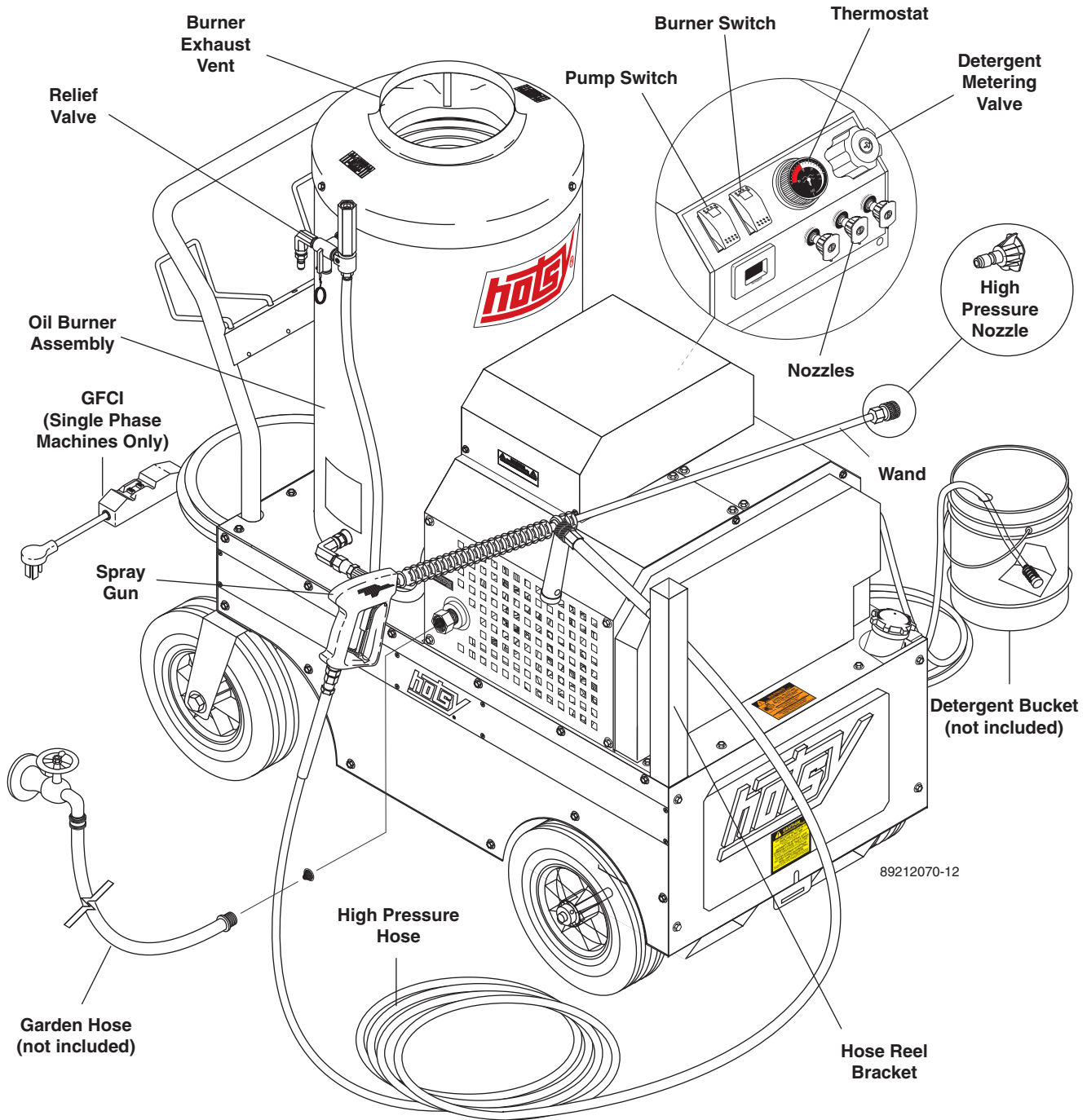
WARNING: To prevent damage or injury. Keep brake engaged during machine operation and storage.

Technical Specification

Model #	Pump Volume @ Pump Head	Pump Pressure at Pump Head	Burner Type	Burner Fuel Pressure	Motor HP	Machine Voltage	Total Machine Amperage
821	4 GPM / 228 GPH	2300 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	6.2	208VAC/ 60Hz/1Ph	33 Amps
842	4 GPM / 234 GPH	2000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	5.0	208VAC/ 60Hz/3Ph	20 Amps
843	4 GPM / 234 GPH	2000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	5.0	230VAC/ 60Hz/1Ph	29 Amps
844	4 GPM / 234 GPH	2000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	5.0	230VAC/ 60Hz/3Ph	19 Amps
845	4 GPM / 234 GPH	2000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	5.0	460VAC/ 60Hz/3Ph	10 Amps
851	4 GPM / 234 GPH	3000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	8.2	208VAC/ 60Hz/1Ph	41 Amps
852	4 GPM / 234 GPH	3000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	7.5	208VAC/ 60Hz/3Ph	25 Amps
853	4 GPM / 234 GPH	3000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	7.5	230VAC/ 60Hz/1Ph	37 Amps
854	4 GPM / 234 GPH	3000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	7.5	230VAC/ 60Hz/3Ph	25 Amps
855	4 GPM / 234 GPH	3000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	7.5	460VAC/ 60Hz/3Ph	14 Amps
856	4 GPM / 234 GPH	3000 PSI	Fuel Oil Fired, 381,000 BTU/Hr.	NOT TO EXCEED 200 PSI	8.2	575VAC/ 60Hz/3Ph	11 Amps
873	5 GPM / 300 GPH	3000 PSI	Fuel Oil Fired, 404,000 BTU/Hr.	NOT TO EXCEED 200 PSI	10	230VAC/ 60Hz/3Ph	42 Amps
874	5 GPM / 300 GPH	3000 PSI	Fuel Oil Fired, 404,000 BTU/Hr.	NOT TO EXCEED 200 PSI	10	230VAC/ 60Hz/3Ph	29 Amps

Model #	Machine Weight	Shipping Weight	Exhaust Stack Size	Machine Dimensions
821	582 Lbs	632 Lbs	8"	L 51" X W 28" X H 52"
842	572 Lbs	622 Lbs	8"	L 51" X W 28" X H 52"
843	572 Lbs	622 Lbs	8"	L 51" X W 28" X H 52"
844	572 Lbs	622 Lbs	8"	L 51" X W 28" X H 52"
845	641 Lbs	691 Lbs	8"	L 51" X W 28" X H 52"
851	625 Lbs	675 Lbs	8"	L 51" X W 28" X H 52"
852	615 Lbs	665 Lbs	8"	L 51" X W 28" X H 52"
853	615 Lbs	665 Lbs	8"	L 51" X W 28" X H 52"
854	615 Lbs	665 Lbs	8"	L 51" X W 28" X H 52"
855	615 Lbs	665 Lbs	8"	L 51" X W 28" X H 52"
856	630 Lbs	680 Lbs	8"	L 51" X W 28" X H 52"
873	760 Lbs	760 Lbs	8"	L 51" X W 28" X H 52"
874	765 Lbs	765 Lbs	8"	L 51" X W 28" X H 52"

Component Identification



Pump — Develops high pressure by pumping water volume through nozzle (Not shown).

Spray Gun — Controls the application of water and detergent onto cleaning surface with trigger device. Includes safety latch.

Detergent Metering Valve — Controls detergent mixture.

Wand — Must be connected to the spray gun.

GFCI — Provided on all single phase machines. Trips when there is current leakage.

Relief Valve — Ruptures when pressure exceeds 7000 psi.

High Pressure Hose — Connect one end to water pump discharge nipple and the other end to spray gun.

Pressure Nozzle — Inserted into wand quick coupler to develop pressure

Adjustable Thermostat — Prevents water temperature from exceeding high temperatures. Is not used to maintain constant temperature setting.

Oil Burner Assembly— Converts fuel oil from a liquid state into a combustible mixture.

Hose Reel Bracket — Mounts optional hose reel.

Assembly Instructions

Unpacking

Unpack carefully. Wear safety glasses or goggles while unpacking, assembling or operating pressure washer. If there are missing components or hidden damage immediately contact dealer or carrier concerning discrepancies.

1. Cut strapping band from pressure washer and pallet.
2. Remove pressure washer from pallet.

Parts Included

- Pressure Washer
- Pressure Hose
- Wand
- Hose Reel Mount W/Hardware
- Trigger Gun
- Operating Instructions and Parts Manual

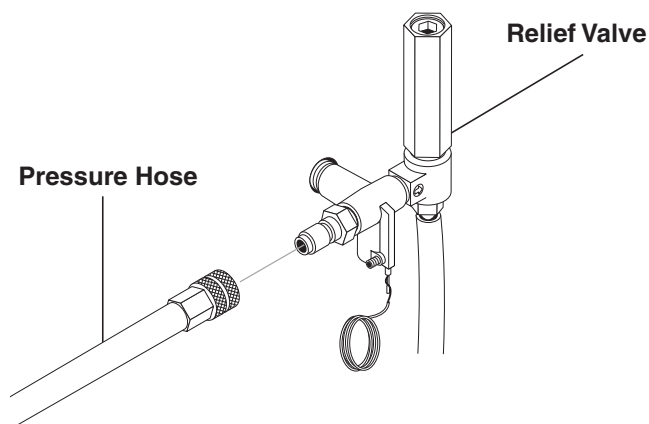
Tools Required

10" Adjustable Crescent Wrenches (2 ea.) ?

Blade Screwdriver

Pressure Hose

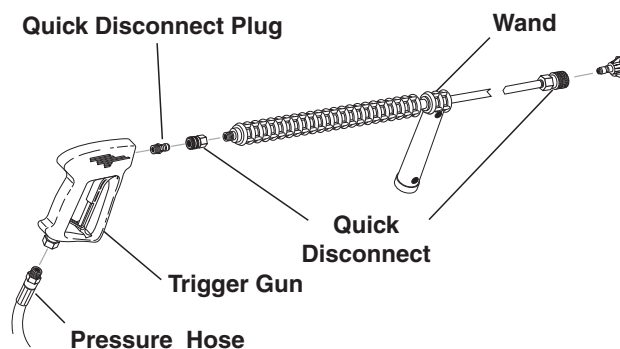
1. Use teflon tape on plumbing connections to prevent leakage.
2. Install pressure hose on machine as shown.



NOTE: The safety relief valve must be inspected and tested annually.

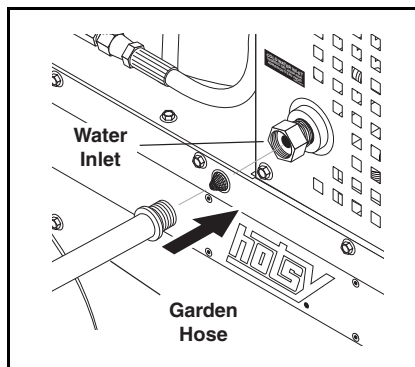
Wand Components

1. Assemble wand components as shown. Connect pressure hose to trigger gun.

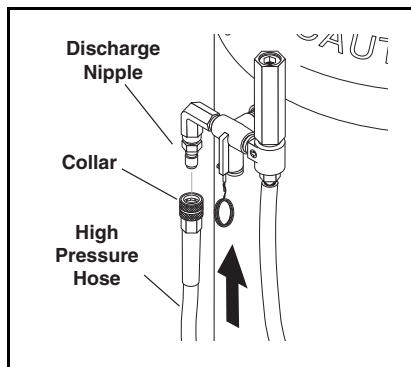


NOTE: The nozzle is not to be installed at this time.

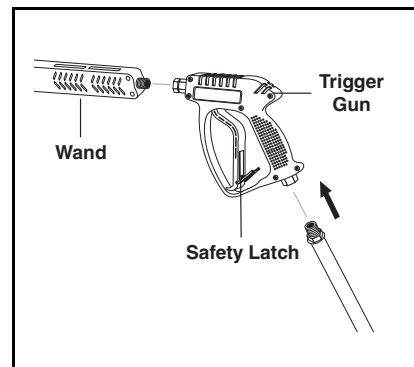
2. Make sure that all plumbing connections are tight.



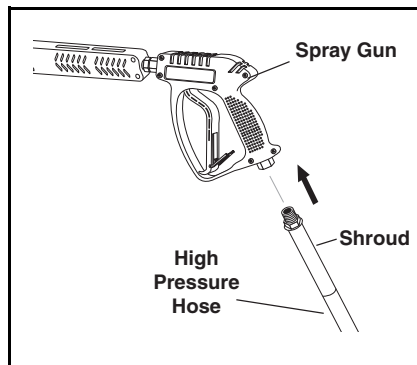
STEP 1: Attach a 5/8" water supply hose to inlet connector. Minimum flow should be 5 GPM depending on model of machine. Do not exceed 65 psi incoming water pressure.



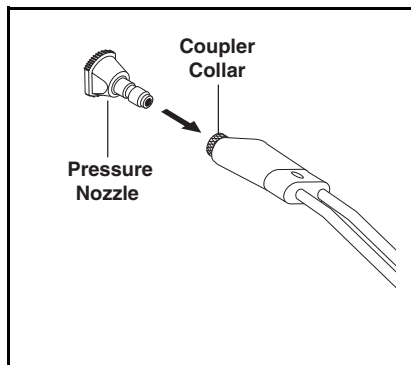
STEP 2: Attach high pressure hose to discharge nipple using quick coupler. Lock coupler securely by pulling back coupler collar, inserting onto discharge nipple and pushing collar forward until secure.



STEP 3: Attach variable pressure control wand to spray gun using teflon tape on threads to prevent leakage.

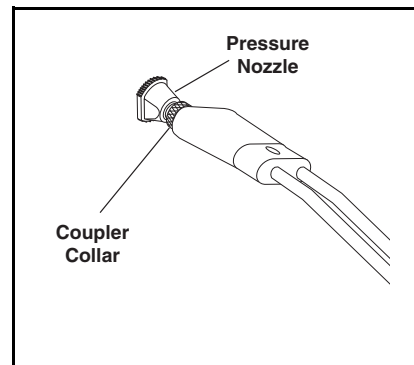


STEP 4: Attach the high pressure hose to the spray gun using teflon tape on hose threads. The end with the longest shroud or bend restrictor is attached to spray gun.

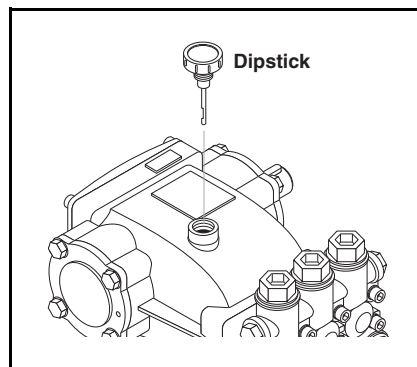


STEP 5: Before installing nozzle, turn on water supply and run machine allowing water to flush through the system until clear. Pull the spring-loaded collar of the wand coupler collar back to insert your choice of pressure nozzle.

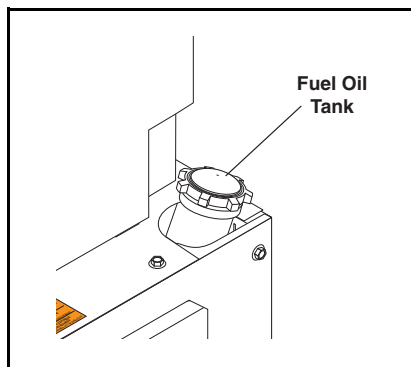
CAUTION: Never replace nozzles without engaging the safety latch on the spray gun trigger.



STEP 6: Release the coupler collar and push the nozzle until the collar clicks. Pull the nozzle to make sure it is seated properly.



STEP 7: Check oil level by using supplied dip-stick. Use SAE 10W-40 non-detergent only.



STEP 8: Fill fuel oil tank. Do not confuse gasoline and fuel oil tanks. Keep proper fuel in proper tank.

Installation Instructions

Venting

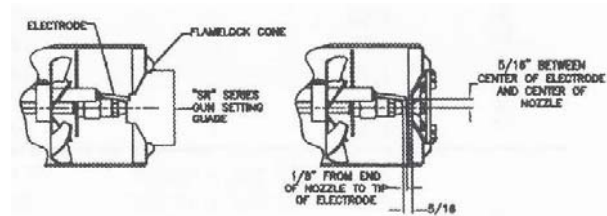
CAUTION - RISK OF ASPHYXIATION: Do not run machine indoors or in an enclosed area without the required venting, as exhaust fumes may be hazardous to your health.

CAUTION: All venting must be in accordance with applicable federal and state laws, and local ordinances. Consult local heating contractors.

IMPORTANT: A draft regulator shall be installed. INSTALLER UNE HOTTE DE TIRAGE.

If the pressure washer is to be used in an enclosed area, a flue must be installed to vent burner exhaust to the outside atmosphere. Exhaust gases should not be vented into a wall, a ceiling, or a concealed space of a building. Be sure the flue is the same size as the burner exhaust vent on the pressure washer. Poor draft will cause the pressure washer to soot and not operate properly. When selecting the location for installation, beware of poorly ventilated locations or areas where exhaust fans may cause an insufficient supply of oxygen available for the amount of fuel being burned. If it is necessary to install the machine in a poorly ventilated area, outside fresh air may have to be piped to the burner and a fan installed to bring sufficient air into the machine. Locate the pressure washer so that the flue will be as straight as possible and protrude through the roof at a proper height and location to provide adequate draft. This oil fired pressure washer must have a draft regulator installed in the flue (available from most heating contractors). A draft regulator will permit proper upward flow of exhaust flue gases.

Electrode Setting:



Periodically Check Wiring Connections. If Necessary To Adjust Electrodes, Use Diagram.

Burner Air Adjustment

The oil burner on this machine is preset for operation at altitudes below 500 feet. If operated at higher altitudes, it may be necessary to adjust the air band for a #1 or #2 smoke spot on the Bacharach scale.

To adjust, start machine and turn burner ON. Loosen two locking screws found on the air band and close air band until black smoke appears from burner exhaust vent. Note air band position. Next, slowly open the air band until white smoke just starts to appear. Turn air band halfway back to the previously noted position. Tighten locking screws.

For higher altitudes, the air band opening may need to be increased; for lower altitude, the air band may need to be decreased.

For higher humidity, the air band opening may need to be increased; for lower relative humidity, the air band may need to be decreased.

For higher ambient temperatures the air band opening may need to be increased; for lower ambient temperatures, the air band opening may need to be decreased.

Adjust to your operating location's environment as-needed for best smoke spot and performance compliant with local, state, and federal regulations.

CAUTION: If white smoke appears from burner exhaust vent during start-up or operation, discontinue use and readjust air bands.

NOTE: If a flue is installed, have a professional serviceman adjust your burner for a #1 or #2 smoke spot on the Bacharach scale.

For additional burner component information, see **Burner Assembly Exploded View page**. It is recommended that the oil burner be serviced yearly or as needed. Contact your local service center.

Fuel Pressure Air Adjustment

To adjust fuel pressure, First install a pressure gage into the port just after the pump fuel exit. Turn the adjusting screw (located at the regulator port) clockwise to increase, and counterclockwise to decrease. Do not exceed 200 psi or lower the pressure below 130 PSI, when checked at the post-pump pressure port.

The fuel pressure may need to be adjusted due to altitude. For every 500 ft altitude above sea level, the boiling point of water goes down 1 °F. At high altitude environments, this boiling point change may require the heat input to be lowered so the water input does not turn to steam earlier than at the factory settings and activate the pressure sensors and pressure relief equipment when the unit is operated and much higher altitudes from factory settings or local dealer site settings. Check with your dealer before making local site fuel pressure adjustments.

Also, as ambient temperature changes seasonally, the fuel temperature in the feed tank and air temperature inlet can impact fuel flow. In more extreme temperatures, this local-site adjustment may also require different fuel nozzles for fuel inlet temperatures that are at seasonal extremes (higher or lower) in locations where the temperature changes are beyond moderate temperatures of between 40°F and 90°F. Colder temperatures will make for a thicker flow and less fine a fuel spray while hotter temperatures will make for a thinner flow a more fine spray with the same nozzle. Consider alternate nozzle configurations from the baseline factory-supplied nozzle for operating in such temperature extremes if performance is not meeting needs with air band and fuel pressure settings alone.

NOTE: When changing fuel pump, a by-pass plug must be installed in return line port or fuel pump will not prime.

Water Supply

Connect water supply hose to water inlet. The water faucet and supply hose must be capable of providing a minimum of 4.0 gallons per minute (GPM) and a maximum pressure of 65 psi.

Electrical

WARNING: Make sure all switches and controls are in the OFF position prior to connecting electrical supply.

WARNING: DO NOT stand in water while connecting and disconnecting electrical supply.

WARNING: Always disconnect power before servicing your pressure washer.

IMPORTANT: Consult local building codes for exact electrical requirements. Licensed contractors may be required.

IMPORTANT: This machine must be electrically grounded. LA MACHINE DOIT ÊTRE MISE À LA TERRE.

Grounding Instructions

This product must be electrically grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER: Improper connection of the equipment grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded.

DANGER: Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician. DO NOT use any type of adapter with this product.

Extension Cords: The models 980SS and 1410SS should not be used with extension cords. All other models must be used only with UL listed extension cords that are rated for the voltage and amperage requirements of the machine. In no case should more than one cord be used and cord length should be kept to a minimum to reduce the risk of severe electrical shock and/or damage to the machine.

WARNING: To reduce the risk of electrocution, keep all connections dry and off the ground. DO NOT touch plug with wet hands.

Operations Instructions

Before Starting

1. Read all manuals provided with this pressure washer. Become familiar with location and function of all operating and safety controls.

DANGER: Improper wiring connections of the equipment can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded.

WARNING: Check hoses, fittings, wand, trigger gun and fuel connections daily for signs of wear, cracks and looseness, and replace as required.

2. Connect water supply hose to the standard garden hose connector. The water faucet and supply hose must be capable of providing 4.0 GPM.
3. Fill oil burner fuel tank. Use kerosene, #1 grade home heating oil, #1 or #2 diesel fuel.

IMPORTANT: Do not use gasoline, crankcase draining, used oil or oil containing gasoline or solvents.

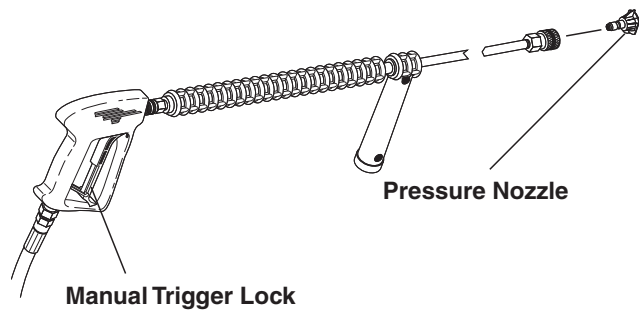
NE PAS UTILISER D'ESSENCE, DE PRODUITS DE VIDANGE NI D'HUILE CONTENANT DE L'ESSENCE OU DES SOLVENTS.

4. Check pump oil level.
5. If detergents are to be used, only use detergents intended for pressure washers. Follow instructions on the detergent container.

IMPORTANT: Before installing pressure nozzle on initial start-up, turn on the water supply, start the pump by pressing the pump ON switch, and hold the trigger gun open until water appears at the end of the wand. Allow water to run from the end of the wand until clear to prevent the nozzle from clogging.

IMPORTANT: If the pressure washer has not been used for an extended period of time, remove the pressure nozzle from the end of the wand and turn on water supply, and start the pump by pressing the pump ON switch. Hold the trigger gun open and allow water to run from the end of the wand until clear.

6. Install the pressure nozzle on end of wand.



IMPORTANT: The trigger gun provided with this pressure washer is equipped with a manual trigger lock to prevent accidental operation of the trigger gun. The trigger lock should be used whenever the trigger gun is not in use.

To Start

WARNING: Risk of injection or severe injury - Keep clear of nozzle - DO NOT direct discharge stream at persons - This machine is to be used only by qualified operators.

AVERTISSEMENT: RISQUE D'INJECTION ET DE BLESSURES GRAVES. SE TENIR À L'ÉCART DU JET. NE PAS DIRIGER LE JET DE SORTIE VERS D'AUTRES PERSONNES. CONFIER L'UTILISATION DE CE MATÉRIEL À UN OPÉRATEUR QUALIFIÉ.

WARNING: Wear eye, ear, hand, foot and skin protection at all times while operating pressure washer.

WARNING: Before changing pressure nozzle, engage manual trigger gun lock.

IMPORTANT: The water must be turned on before starting. Running the pump dry will cause damage and void warranty.

IMPORTANT: Do not allow the machine to run with trigger of the trigger gun released for more than 10 minutes at any one time or damage to pump may occur.

1. If equipped with a GFCI, test the GFCI using the reset and test procedures provided on the GFCI device. The GFCI must be tested with every use.
2. Turn ON water supply.
3. Hold wand firmly, release trigger of trigger gun and turn pump switch ON. Squeeze trigger of trigger gun and allow air to purge from system.

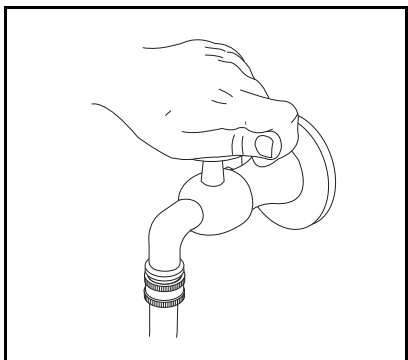
4. If HOT water is desired, adjust the thermostat to the proper temperature and turn burner switch ON. The burner will light immediately with a small puff of smoke. You may need to initially adjust your burner for peak performance. See **Oil Burner** section under **Installation**. If smoke continues, refer to the **Troubleshooting Guide** in this manual. When the trigger of the trigger gun is released or when the thermostat temperature setting is reached, the burner will automatically turn off.

IMPORTANT: If ignition or flame failure is experienced, discontinue use of pressure washer at once. Turn off burner and shut off fuel supply. Have cause of failure corrected by an authorized service technician before use of pressure washer is continued.

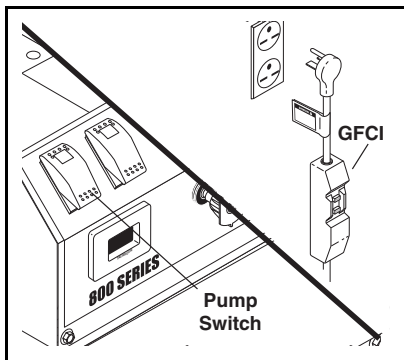
To Clean

1. Insert detergent inlet line into container of mixed detergent. Open detergent ON/OFF valve. The detergent will be pulled automatically into the system. Allow detergent to reach end of wand before proceeding to step 3.
2. Select pressure nozzle with spray pattern that matches your cleaning needs. Engage manual trigger lock and install selected nozzle.
3. Wash from the bottom to the top, using side to side motions. This washes away heavy dirt and allows the detergent to soak as you work toward the top.
4. Do not wash at a 90° angle to the work (straight at it). This will allow water to splash back at you and reduces your cleaning power. Wash at a 30° to 60° angle to the work. This will allow the water to splash away from you and the water will wash the dirt away faster and easier.
5. Use the width of the spray pattern to wash in a wide path. Overlap spray paths for complete coverage. Wash from side to side, using slow, steady motions.
6. The nozzle should be 12" to 24" from work, closer for tough areas. Be careful on painted or delicate surfaces, the pressure may damage surface if nozzle is too close.
7. Small parts should be washed in a basket so the pressure does not push them away. Larger, light weight parts should be clamped down so the pressure does not push them away.
8. Close the detergent ON/OFF valve to permit rinse. Always rinse with cold water after using detergents. Rinse from the top to the bottom to prevent detergent from dripping onto a rinsed area. For the best results, contact your Hotsy dealer to help you select the best detergent for your application.

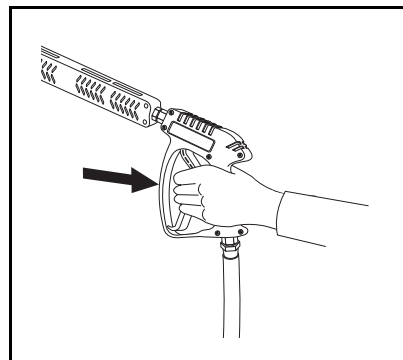
Operations Instructions



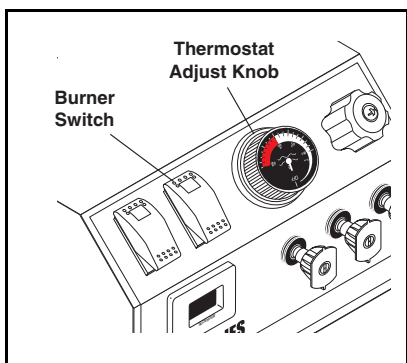
STEP 1: Turn on the water. Check for water leaks, tighten as needed.



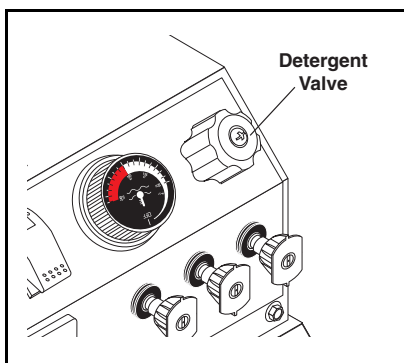
STEP 2: Plug unit into power source and activate pump switch. Push re-set button on GFCI.



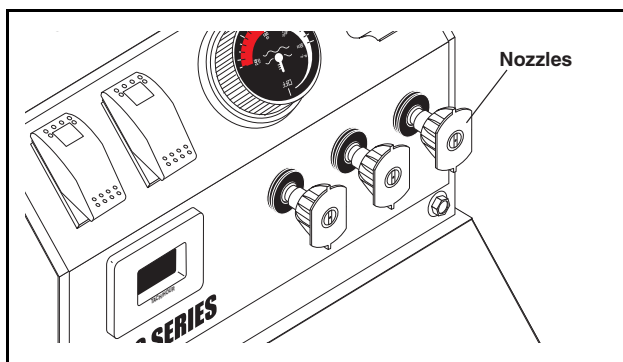
STEP 3: With the spray nozzle pointed away from you or anybody else, press the trigger on the spray gun to obtain pressurized cold water spray.



STEP 4: For hot water, turn the thermostat knob to 210° then push the burner switch to ON when a steady stream of water flows out of the spray gun. Burner will now light automatically. **NOTE:** Do not start machine with burner switch on.



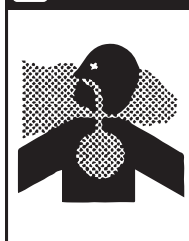
STEP 5: For steam, open the steam valve counterclockwise. This lowers the pressure and raises the temperature.



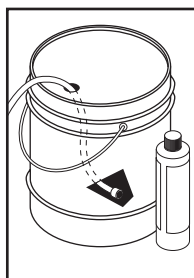
STEP 6: The four color-coded quick connect nozzles provide a wide array of spray widths from 0° to 40° and are easily accessible when placed in the convenient rubber nozzle holder, which is provided on the front of the machine. **NOTE:** For a more gentle rinse, select the white 40° nozzle. To scour the surface, select the yellow 15° or red 0° nozzle.

Detergents & General Washing Techniques

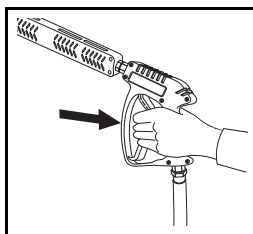
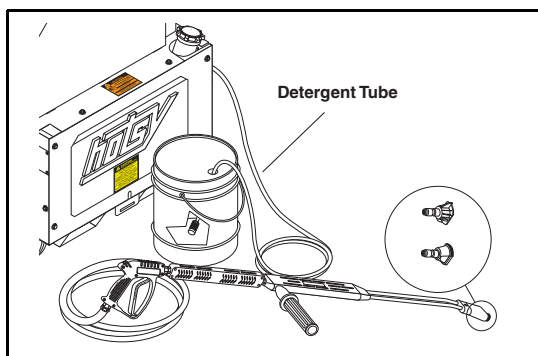
! WARNING



WARNING: Some detergents may be harmful if inhaled or ingested, causing severe nausea, fainting or poisoning. The harmful elements may cause property damage or severe injury.



STEP 1: Use detergent designed specifically for pressure washers. Household detergents could damage the pump. Prepare detergent solution as required by the manufacturer. Fill a container with pressure washer detergent. Place the filter end of detergent suction tube into the detergent container.



STEP 2: With the engine running, pull trigger to operate machine. Liquid detergent is drawn into the machine and mixed with water. Apply detergent to work area. Do not allow detergent to dry on surface.

IMPORTANT: You must flush the detergent after each use by placing the suction tube into a bucket of clean water, open detergent valves then run the pressure washer for 1-2 minutes.

Thermal Pump Protection

If you run your pressure washer for 3-5 minutes without pressing the trigger on the spray gun, circulating water in the pump can reach high temperatures. When the water reaches this temperature, the pump protector engages and cools the pump by discharging the warm water onto the ground. This thermal device prevents internal damage to the pump.

Cleaning Tips

Pre-rinse cleaning surface with fresh water. Place detergent suction tube directly into cleaning solution and apply to surface at low pressure (for best results, limit your work area to sections approximately 6 feet square and always apply detergent from bottom to top). Allow detergent to remain on surface 1-3 minutes. Do not allow detergent to dry on surface. If surface appears to be drying, simply wet down surface with fresh water. If needed, use brush to remove stubborn dirt. Rinse at high pressure from top to bottom in an even sweeping motion keeping the spray nozzle approximately 1 foot from cleaning surface. Use overlapping strokes as you clean and rinse any surface. For best surface cleaning action spray at a slight angle.

Recommendations

- Before cleaning any surface, an inconspicuous area should be cleaned to test spray pattern and distance for maximum cleaning results.
- If painted surfaces are peeling or chipping, use extreme caution as pressure washer may remove the loose paint from the surface.
- Keep the spray nozzle a safe distance from the surface you plan to clean. High pressure wash a small area, then check the surface for damage. If no damage is found, continue to pressure washing.

! CAUTION - Never use:

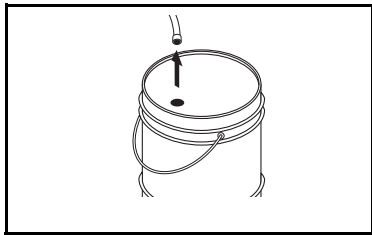
- Bleach, chlorine products and other corrosive chemicals
- Liquids containing solvents (i.e., paint thinner, gasoline, oils)
- Tri-sodium phosphate products
- Ammonia products
- Acid-based products

These chemicals will harm the machine and will damage the surface being cleaned.

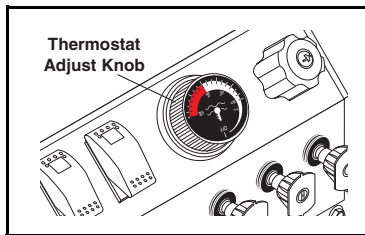
Rinsing

It will take a few seconds for the detergent to clear. Apply safety latch to spray gun and close detergent valve. Select and install the desired high pressure nozzle.

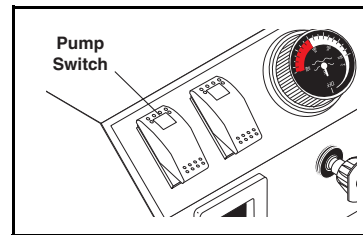
Shut Down And Clean Up



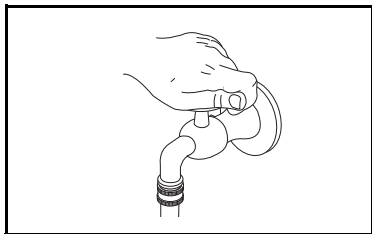
STEP 1: Remove detergent suction tube from container and insert into one gallon of fresh water. Open detergent valve, pull trigger on spray gun and siphon water for one minute.



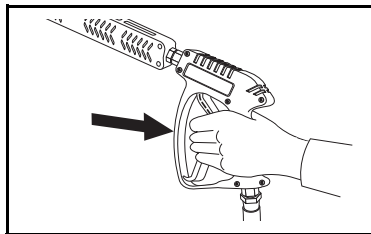
STEP 2: Turn thermostat adjust knob off and continue spraying, allowing the water to cool to below 100°.



STEP 3: Turn pump switch off.



STEP 4: Turn off water supply.



STEP 5: Squeeze trigger on spray gun to relieve remaining pressure.

Storage

CAUTION: Always store your pressure washer in a location where the temperature will not fall below 32°F (0°C). The pump in this machine is susceptible to permanent damage if frozen. **FREEZE DAMAGE IS NOT COVERED BY WARRANTY.**

1. Stop the pressure washer, squeeze spray gun trigger to release pressure.
2. Detach water supply hose and high pressure hose.
3. Turn on the machine for a few seconds, until remaining water exits. Turn engine off immediately.
4. Drain the fuel and oil from the engine.
5. Do not allow high pressure hose to become kinked.
6. Store the machine and accessories in a room which does not reach freezing temperatures.

CAUTION: Failure to follow the above directions will result in damage to your pressure washer.

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

1. Replenish engine oil to upper level.
2. Drain diesel from fuel tank, fuel line, fuel valve and carburetor.
3. Cover the pressure washer and store in a clean, dry place that is well ventilated away from open flame or sparks.

After Extended Storage

CAUTION: Prior to restarting, thaw out any possible ice from pressure washer hoses, spray gun or wand.

DANGER: Do not store flammable liquids (gasoline, fuel oil, petroleum, solvents, etc.) near pressure washer, or in non-ventilated areas.

IMPORTANT: Machine must be stored indoors.

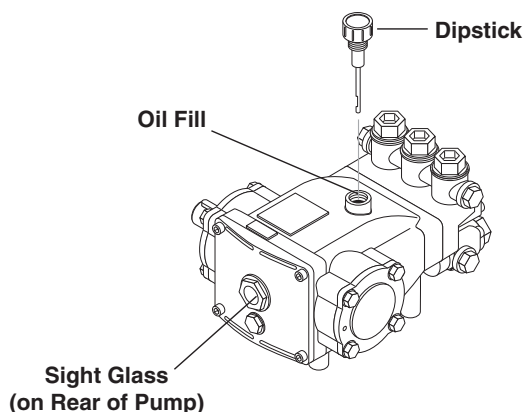
1. Protect from freezing by storing in a heated area, or by flushing the system with antifreeze (use an automotive engine antifreeze or windshield washer solvent to antifreeze). To flush the system fill the float tank with antifreeze and remove pressure nozzle from wand. Start the machine and allow it to run until antifreeze runs from the end of the wand. Place wand into float tank and circulate the solution through system for several minutes. Open and close the trigger gun several times to circulate antifreeze through the unloader valve system. Also draw antifreeze through the detergent inlet line to antifreeze the detergent system. For added protection after antifreezing, disconnect the pressure hose from machine and remove the coil drain plug. After coil has drained, replace pressure hose and coil drain plug. If the pressure washer is not to be used for an extended length of time, it is recommended that the system be flushed with antifreeze for rust protection.

WARNING: Unauthorized machine modification or use of non-approved replacement parts may cause personal injury and/or property damage and will void the manufacturer warranty.

IMPORTANT: Machine must be stored indoors.

Pump

Use Hotsy Pump Oil (8.923-422.0) or equivalent 10W-40 non-detergent oil for pump crankcase. Crankcase must be filled to the full mark on the dipstick or to center of sight glass window found on the rear of the pump. During the break-in-period, make sure the oil is changed after the first 25 hours of operation. After that, replace oil every 3 months or 300 hours of operation, whichever comes first.



Proper Pump Care

- **DO NOT** pump acids.
- **DO NOT** allow pump to run dry.
- Winterize if storing in freezing temperatures, refer to **Storage** for details.
- Use a water softener on the water system if known to be high in mineral content.
- Use only high quality detergents and follow manufacturer's mix recommendations.
- Flush the system with clear water immediately after using detergent solutions.
- Clean filter screen on detergent inlet line periodically.
- Flush the pressure washer system with anti-freeze if storing for an extended period of time, refer to **Storage** for details.

Pump Motor

On a yearly basis, oil pump motor per instructions on motor nameplate.

NOTE: Some motors may be equipped with permanently lubricated bearings and will not require additional lubrication.

Relief Valve

WARNING: The relief valve on this pressure washer has been factory set and sealed and is a field nonadjustable part. Tampering with the factory setting may cause personal injury and/or property damage, and will void the manufacturer warranty.

Unloader Valve

WARNING: The unloader valve on this pressure washer has been factory set and sealed and is a field nonadjustable part. Tampering with the factory setting may cause personal injury and/or property damage, and will void the manufacturer warranty. For replacement refer to Pump Assembly page.

Burner Fuel Filter

Drain any water which has accumulated in fuel filter and clean or replace filter element as needed.

Heating Coil

Coil De-scaling: In hard water areas, scale buildup within the heating coil will occur. Scale deposits will decrease the water temperature rise and may eventually clog the heating coil. Contact your local service center when de-scaling is needed.

Coil De-sooting: Poor grades of fuel oil or inadequate combustion air will cause heavy soot buildup on the outside surface of the heating coil. These deposits will insulate the coil. This will restrict the air flow through the coil, further aggravating the soot buildup. Contact your local service center when de-sooting is needed.

Brake

Every 50 hours inspect brake components for proper operation. Repair or replace if needed.

Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
PRESSURE WILL NOT RUN	Pump switch in OFF position	Place switch in ON position.
	Power supply disconnected	Connect power supply.
	Fuse blown or circuit breaker tripped in electrical supply line	Replace fuse or reset circuit breaker. Use only fuses of adequate capacity.
	Motor circuit overload tripped	Reset pump switch.
PRESSURE RUNS BUT WON'T SPRAY	Trigger of trigger gun released	Squeeze trigger.
	Water supply not turned on	Open water supply valve.
	Clogged pressure nozzle	Clean pressure nozzle opening.
LOW SPRAY PRESSURE AT NOZZLE	Inadequate water supply	Fully open faucet. Check for kinked or damaged hose. Use 5/8 inch minimum hose. Check for debris clogging inlet screen.
	Partially clogged or damaged pressure nozzle	Clean or replace.
	Air being drawn through detergent inlet line	Refill detergent container. Ensure that pick-up screen is fully immersed.
UNEVEN SPRAY PATTERN	Partially clogged or damaged nozzle	Clean or replace.
PRESSURE WASHER WILL NOT PRODUCE HOT WATER	Burner switch in OFF position	Place switch in ON position.
	Inadequate fuel supply	Refill fuel tank. Use only recommended fuels. Refer to Before Starting under Operation .
	Pump switch turned off	Pump must be running before burner will light.
	Inadequate water supply	Fully open faucet. Check for kinked or damaged hose. Use 5/8 inch minimum hose. Check for debris clogging inlet screen.
	Trigger of trigger gun released	Squeeze trigger. Water must be spraying for burner to light.
POOR OR NO DETERGENT FLOW	Inadequate detergent supply	Refill detergent container. Ensure that pick-up screen is full immersed. Open metering valve.
	Detergent screen or hose clogged	Clean. Always start with a clean detergent container.
	Clogged detergent valve	Clean.
MACHINE SMOKES WHILE BURNER UNIT IS RUNNING OR UNIT SMOKES AT COLD START ONLY WHEN BURNER IS OFF	Improper fuel or water in fuel	Drain tank and replace contaminated fuel
	Fuel pressure is low <140 psi for burner	Adjust fuel pump pressure to specifications
	Burner nozzle is plugged or dirty	Replace nozzle. Check parts breakdown for nozzle size
	Burner nozzle spray pattern is faulty	Replace nozzle. Check parts breakdown for nozzle size
	Heavy accumulation of soot on coils and burner assembly	Remove coils and burner assembly, clean thoroughly Call local dealer
	Misaligned electrode setting	Realign electrodes to specifications
	Obstruction in smoke stack	Check for insulation blockage or other foreign objects

PROBLEM	POSSIBLE CAUSE	SOLUTION
MACHINE SMOKES WHILE BURNER UNIT IS RUNNING OR UNIT SMOKES AT COLD-START ONLY WHEN BURNER IS OFF CONTINUED	Low engine RPM	Increase RPM to correct specs. See serial plate
	Fuel Pressure is too high for clean burn (fuel PSI above 140 and below 200) and smokes when burner is off	Reduce fuel pressure PSI/Increase air band set for cleaner without max water heat loss
POOR CLEANING	Improper detergent concentration or mixing	Mix detergent per manufacturer's instructions. Ensure that powdered detergents are fully dissolved.
	Wrong detergent for the application	Select appropriate detergent.
	Rinsing with hot water	A final rinse with cold water will reduce water spotting.

IMPORTANT

If the pressure washer demonstrates other symptoms or the corrective actions listed do not correct the problem, contact the local authorized Hotsy Service Center. The Hotsy Service Center can be identified by visiting www.hotsy.com.

IMPORTANT

When ordering from your dealer, please provide the following:

Model Number: _____ **Release:** _____

Machine Serial Number: _____

Component Part Number: _____

Description: _____

800 OIL-FIRED SERIES OPTIONAL EQUIPMENT

924889 8" Draft Regulator

If you need **SERVICE** on your pressure washer, contact your local Hotsy dealer or visit www.Hotsy.com. Smart phone users scan the code below to link directly to the Service Request page.



To **REGISTER** your pressure washer, please visit our Warranty Registration page at www.hotsy.com/WarrantyRegistration.aspx or scan the code below with your smart phone.

