

1800/5700 Series
Hot Water - Electric - Oil Fired



Operator's Manual

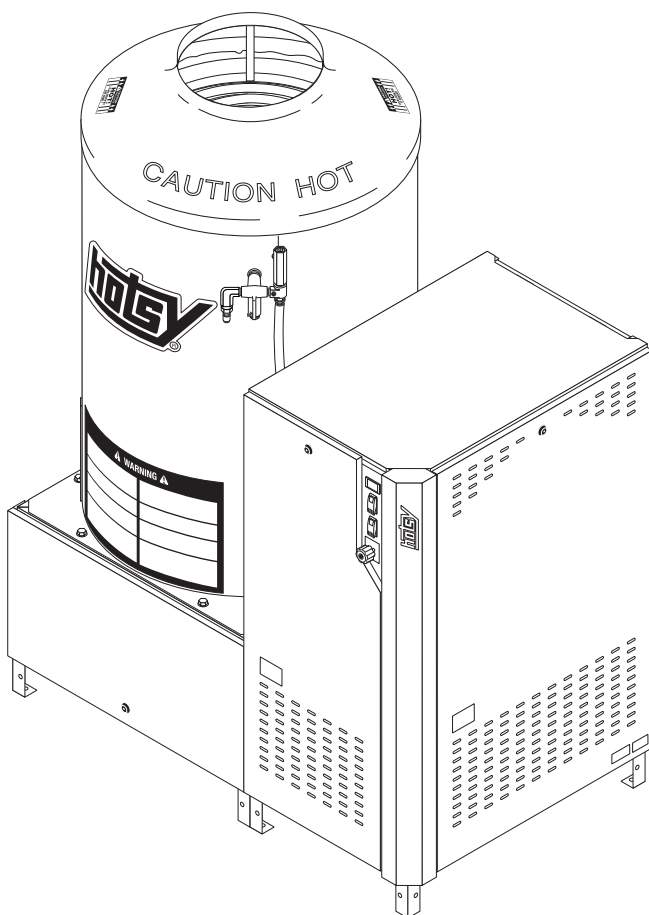
Stationary Pressure Washer

- MODELS:**
- 1830SS**
1.109-665.0

 - 1833SS**
1.109-666.0

 - 5730SS**
1.109-658.0

 - 5733SS**
1.109-659.0



Scan or Click to View
The Hotsy Safety Video



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



Machine Data Label

Model: _____

Date of Purchase: _____

Serial Number: _____

Dealer: _____

Address: _____

Phone Number: _____

Sales Representative: _____

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**.

When ordering from your dealer, please provide the following:

Model Number: _____ **Date of Purchase:** _____

Machine Serial Number: _____

Component Part Number: _____

Description: _____

The model and serial numbers will be found on a decal attached to the pressure washer. You should record both serial number and date of purchase and keep in a safe place for future reference.

Machine Data Label2
Table of Contents3
How To Use This Manual4

Safety

Introduction & Safety Information5
IMPORTANT SAFETY INFORMATION6

Operations

.9
Component Identification10
Assembly Instructions11
Installation Instructions12
Electrical12
Venting12
Exhaust Stack13
Water Source14
Oil Burner15
Burner Air Adjustment:15
Fuel Pressure Adjustment:15
Operation Instructions16
Cleaning Techniques17
Storage17

Maintenance

Pump18
Pump Motor18
Oil Burner18
Pressure Relief Valve18
Unloader Valve18
Heating Coil18
Troubleshooting19

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
- Oil Burner
- Heating Coil
- Troubleshooting

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: If you do not follow these instructions exactly, a fire or explosion may result, causing property damage, personal injury or loss of life.

AVERTISSEMENT: Si ces directives ne sont pas suivies à la lettre, un incendie ou une explosion pourrait survenir et entraîner des dommages à la propriété, des lésions corporelles ou la mort.



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

AVERTISSEMENT: Pour réduire le risque de blessures, lire attentivement les instructions de fonctionnement avant l'utilisation.

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.

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

AVERTISSEMENT: Doit être raccordé dans une sortie à trois trous mise à la masse et correctement câblée qui peut accueillir une fiche sur un cordon d'alimentation. Le non-respect de cette consigne pourrait causer un choc électrique.

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: Une mauvaise connexion du conducteur de terre de l'équipement peut entraîner un risque d'électrocution. Vérifier auprès d'un électricien qualifié ou du personnel d'entretien si vous avez

des doutes quant à savoir si la sortie est correctement mise à la masse. Ne pas modifier la fiche fournie avec le produit - si elle n'entre pas dans la sortie, faire installer une sortie appropriée par un électricien qualifié. Ne jamais utiliser un adaptateur avec ce produit.



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

AVERTISSEMENT: Garder la lance, le boyau et le jet d'eau à l'écart de tout câblage électrique ou des chocs électriques mortels pourraient survenir.

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.

AVERTISSEMENT: Des liquides inflammables peuvent produire des vapeurs qui peuvent s'enflammer, causant ainsi des dommages à la propriété ou des blessures graves.



WARNING: Risk of explosion — Do not Spray flammable liquids. Operate only where open flame or torch is permitted.

AVERTISSEMENT: Risque d'explosion - Ne pas pulvériser de liquides inflammables. Utiliser uniquement dans des endroits où l'utilisation d'une flamme nue ou d'une torche est permise.



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

AVERTISSEMENT: Risque d'incendie - Ne pas changer les réservoirs pendant que le produit est en marche ou encore chaud.

6. 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.

- 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.

AVERTISSEMENT: Un jet haute pression peut écailler la peinture ou provoquer l'émission d'autres particules dans l'air et leur

projection à hautes vitesses. Pour éviter les lésions corporelles, une protection des yeux, du visage, des mains et des pieds doit être portée lors de l'utilisation de cet équipement.

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

(Safety glasses do not provide full protection.)



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

ATTENTION: Liquide de décharge chaud. Ne pas toucher ou décharger directement le jet vers des personnes ou des animaux

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

AVERTISSEMENT: Cette machine produit de l'eau chaude et doit comporter des composants isolés attachés pour protéger l'opérateur.



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.

AVERTISSEMENT: Risque de blessures. Les surfaces chaudes peuvent causer des brûlures.

Utiliser uniquement les zones de prise désignées du pistolet pulvérisateur et de la lance. Ne pas placer les mains ou les pieds sur des endroits non isolés de la laveuse à pression.

- 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.

AVERTISSEMENT: Agripper la lance de nettoyage avec les deux mains avant de commencer. Le non-respect de cette consigne pourrait mener à des blessures causées par le mouvement violent de la lance.

- Never make adjustments on machine while in operation.
- 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 or animals or severe injury or death will result.

AVERTISSEMENT: La haute pression générée par ces machines causera des lésions corporelles ou des dommages à l'équipement. Se tenir à l'écart de la buse. Faire preuve de prudence lors de l'utilisation. Ne pas décharger directement le jet vers des personnes ou des animaux, car cela risquerait de causer des blessures graves ou même la mort



WARNING: Protect machine from freezing.

AVERTISSEMENT: Protéger la machine contre le gel.

12. 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.

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



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

DANGER: Risque d'asphyxie.
Utiliser ce produit uniquement dans un endroit bien ventilé.

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

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

16. 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.

AVERTISSEMENT: Faire preuve d'une extrême prudence au moment d'utiliser une échelle,

des échafaudages ou toute autre surface relativement instable. La zone de nettoyage doit avoir une pente et un drainage adéquats pour réduire la possibilité d'une chute due à une surface glissante.

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

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

19. Follow the maintenance instructions specified in the manual.

20. Never expose a spark or flame where there may be unburned gas present.

21. This product incorporates parts that produce sparks and therefore when located in a garage, it should be in a room or enclosure provided for the purpose, or should be 18" or more above the floor. Install on non combustible flooring and have a 36" minimum working clearance.

22. Do not allow acids, caustic or abrasive fluids to pass through the pump.

23. Never run pump dry or leave spray gun closed longer than 1-2 minutes.



WARNING: If connection is made to portable water supply, a back flow device must be provided.

AVERTISSEMENT: Si une connexion est établie avec un approvisionnement en eau potable, un dispositif de protection contre le retour d'eau doit être fourni.



WARNING: Do not spray machine or any people, animals or electrical parts.

AVERTISSEMENT: Ne pas vaporiser sur la machine ou les gens, les animaux ou les pièces électriques.



Follow the maintenance instructions specified in the manual.

Suivre les instructions d'entretien spécifiées dans le manuel.

24. Before disconnecting discharge hose from water outlet, turn burner off and open spray gun to allow water to cool below 100° before stopping the machine. Then open the spray gun to relieve pressure. Failure to properly cool down or maintain the heating coil may result in a steam explosion.

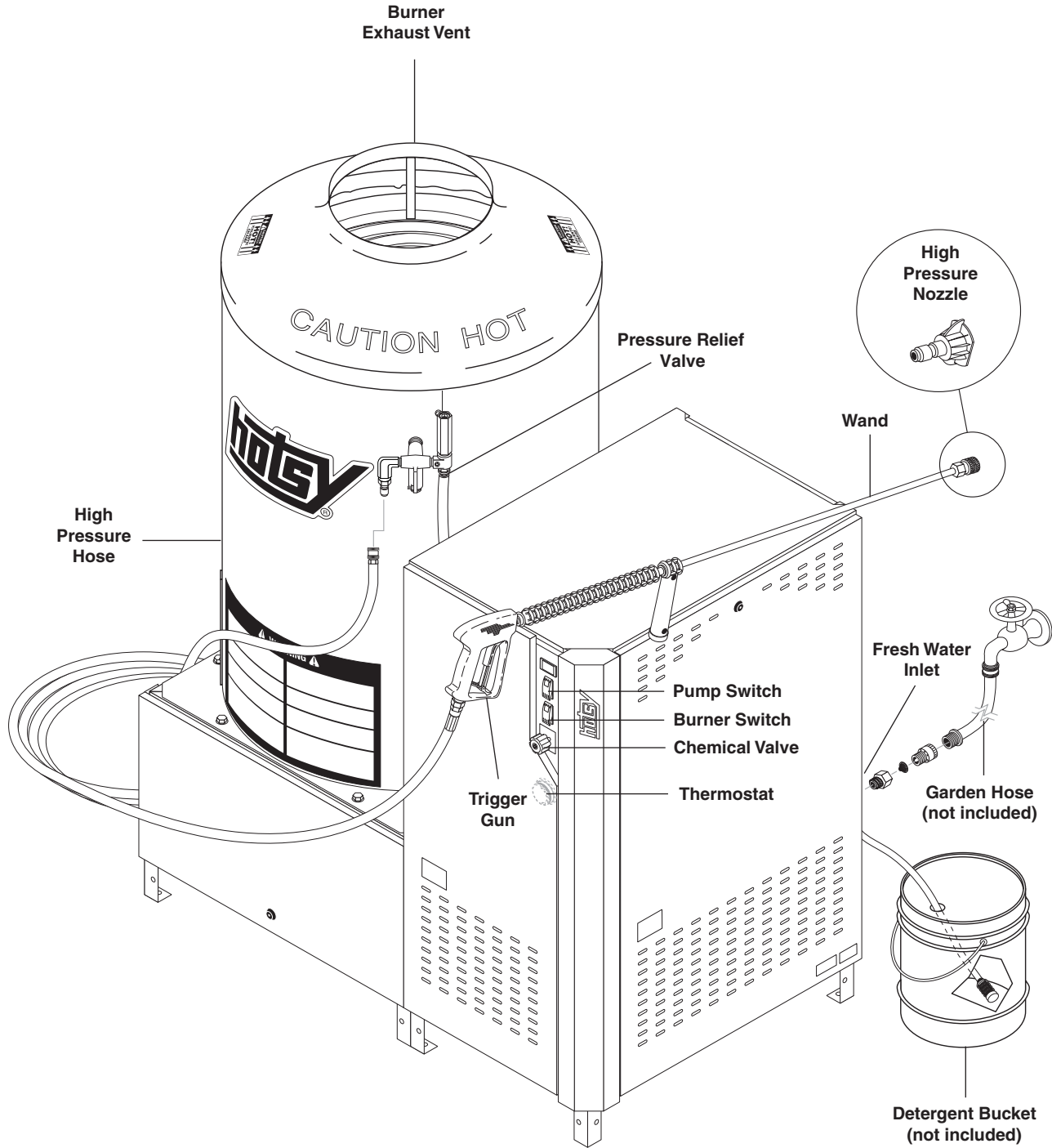
Technical Specifications

Model #	Pump Volume @ Pump Head	Pump Pressure at Pump Head	Burner Type	Machine Voltage	Total Machine Amperage	Motor Amps	Machine Weight
1830SS	6.0 GPM / 360 GPH	3000 PSI	Fuel Oil Fired 550,872 BTU/Hr.	230VAC/ 60Hz/3Ph	35 Amps	38 Amps	825Lbs
1833SS	6.0 GPM / 360 GPH	3000 PSI	Fuel Oil Fired 550,872 BTU/Hr.	460VAC/ 60Hz/3Ph	21 Amps	19 Amps	825Lbs
5730SS	7.8 GPM / 480 GPH	3000 PSI	Fuel Oil Fired 720,603 BTU/Hr.	230VAC/ 60Hz/3Ph	44 Amps	50 Amps	1,020Lbs
5733SS	7.8 GPM / 480 GPH	3000 PSI	Fuel Oil Fired 720,603 BTU/Hr.	460VAC/ 60Hz/3Ph	23 Amps	25 Amps	1,020Lbs

Model #	Shipping Weight	Exhaust Stack Size	Machine Dimensions
1830SS	1070 Lbs	10"	L 51" X W 31" X H 54"
1833SS	1070 Lbs	10"	L 51" X W 31" X H 54"
5730SS	1471 Lbs	12"	L 51" X W 31" X H 54"
5733SS	1471 Lbs	12"	L 51" X W 31" X H 54"

Operations

Component Identification



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 carrier concerning discrepancies.

1. Remove the two bolts that secure the pressure washer to the pallet.
2. Remove pressure washer from pallet.

Parts Included

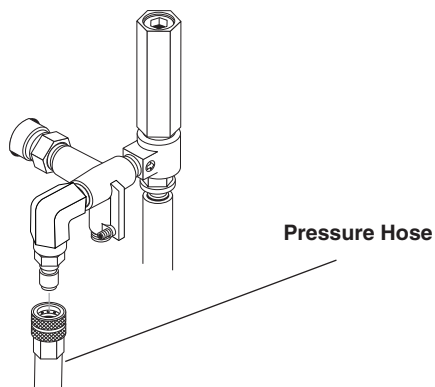
- Pressure Washer
- Pressure Hose
- Wand
- Trigger Gun
- Hose Hangers (2 Ea.)
- Operating Instructions and Parts Manual
- Oil Burner Manual

Tools Required

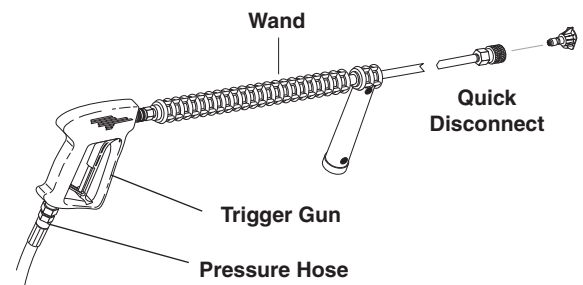
- 10" Adjustable Wrenches (2 Ea.)
- Teflon Tape

Pressure Hose, Trigger Gun and Wand

1. When assembling, use teflon tape on all plumbing connections to prevent leakage.
2. Install the pressure hose on the pressure washer as shown.

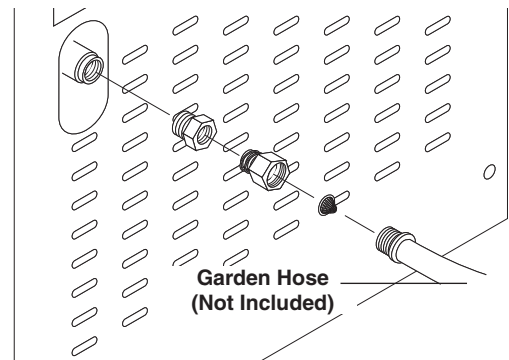


3. Assemble wand components as shown.



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

4. Install garden hose adapter on float tank as shown.
5. Make sure all plumbing connections are tight.



Operations

Installation Instructions

Getting Started

IMPORTANT: Proper initial installation of equipment will assure more satisfactory performance, longer service life, and lower maintenance cost.

IMPORTANT: The use of a back flow preventer on the water supply hose is recommended and may be required by local code.

The pressure washer should be run on a level surface and in a protected area where it is not readily influenced by outside forces such as strong winds, freezing temperatures, rain, etc. The pressure washer should be located to assure easy access for filling of fluids, adjustments and maintenance. Normal precautions should be taken by the operator to prevent moisture from reaching the pressure washer. It is recommended that a partition be made between the wash area and the pressure washer to prevent direct spray from the wand from coming in contact with the pressure washer. Moisture reaching the equipment will reduce the pressure washer's service life. All installations must comply with the local codes covering such installations.

Electrical

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

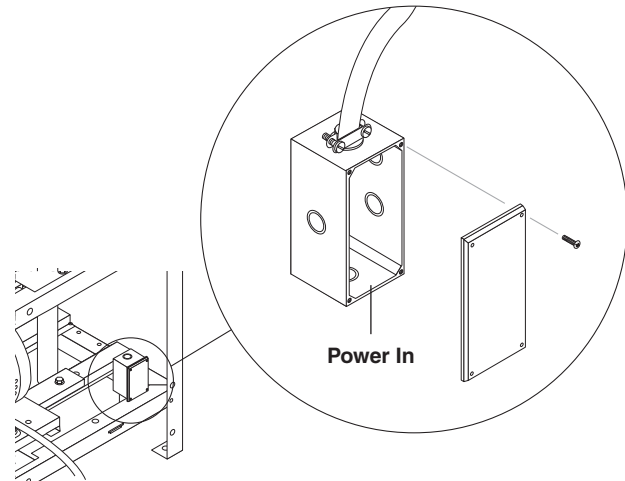
AVERTISSEMENT: S'assurer que tous les commutateurs et tous les contrôles se trouvent en position d'arrêt avant de raccorder l'alimentation électrique.

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

AVERTISSEMENT: NE PAS se tenir debout dans l'eau au moment de brancher ou de débrancher l'alimentation électrique.

CAUTION: Hazard of electric shock - More than one disconnect switch is required to disconnect all power.

ATTENTION: Risque de choc électrique. - Plus d'un sectionneur est requis pour débrancher toutes les sources d'alimentation.



CAUTION: Use copper conductors only.

ATTENTION: Utiliser des conducteurs en cuivre seulement.

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

This machine is designed for connection to an overload protected grounded circuit. It is recommended this circuit be protected by a UL approved ground fault circuit interrupter (GFCI). An electrical disconnect must be provided in this circuit. All wiring must be of proper voltage and amperage rating and conform to applicable codes. A hole has been provided in the control box for attachment of 1 inch electrical conduit.

For proper operation the motor rotation is to be counter-clockwise as viewed looking towards the rear of the motor (opposite pump attachment). If the rotation is incorrect, interchange any two of the power supply connections to reverse rotation.

Venting

DANGER: DO NOT run machine indoors or in an enclosed area without proper ventilation, as exhaust fumes may be hazardous to your health.

DANGER: NE PAS faire fonctionner la machine à l'intérieur ou dans un endroit fermé sans une ventilation appropriée, car les gaz d'échappement pourraient comporter des dangers pour la santé.

DANGER: DO NOT operate machine in areas where flammable vapors (gasoline, solvents, etc.) may be present, as this machine may ignite the vapors.

DANGER: NE PAS utiliser la machine dans des endroits où des vapeurs inflammables (essence, solvants, etc.) pourraient être présentes, car cette machine pourrait enflammer les vapeurs.

CAUTION: All venting must be in accordance with applicable federal and state laws, and local ordinances. This machine is not to be connected to a type B gas vent. Consult local heating contractors.

ATTENTION: Toute la ventilation doit être conforme aux lois fédérales et de l'État ou de la province, et aux réglementations locales applicables. Cette machine ne doit pas être raccordée à un évent de gaz de type B. Consulter les entrepreneurs de chauffage locaux.

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. Be sure the flue is the same size as the burner exhaust vent on the pressure washer lid. 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. Proper combustion can only be obtained when there is a sufficient 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. The burner air setting must be adjusted after installation of vent and set to a #2 or better smoke spot on the Bacharach scale.

This operator's manual indicates this machine is to be vented through the ceiling using straight pipe or 45° elbows. It also discourages the use of any 90° venting elbows which restrict air flow through the burner causing poor burner conditions. If this machine is going to be installed to a 90° or extended exhaust vent run length which may restrict air flow it is recommended that a contractor install a power vent. When a contractor has found it impossible to vent through the ceiling then power venting can be calculated to help eliminate exhaust restriction on this natural draft machine. This draft inducer (power vent) must be installed by a licensed contractor who can calculate size, operation connections and associated dampeners. Hotsy is not a licensed contractor and as such we are unable to make recommendations for suitable make and model of power vents.

It is important that the licensed contractor consult local building codes. Hotsy can only make recommendations and the selection of the venting must take into account the type of roof or wall material it contacts which could change the vent requirement for compliance with local building codes.

Room Vents for Combustion and Ventilation Air

Properly sized vents are vital for the safe and efficient operation of a pressure washer installed in a confined space. When combustion and ventilation air are supplied from inside the building, each opening must have an area of one square inch for every 1,000 BTUH input. When combustion air is supplied from the outside, each opening must have an area of one square inch for every 2,000 BTUH for horizontal ducts and one square inch for every 4,000 BTUH for vertical ducts (refer to NFPA 54).

NOTE: Air vents for combustion and ventilation and exhaust flue sizing must conform to methods outlined in current American Standard (ANSI-Z223.1), National Fuel Gas Code of National Standard of Canada CSA-149.1 and CSA-149.2 "Installation Code for Gas Burner Appliances".

Exhaust Stack

The purpose of venting a gas-fired pressure washer is to completely remove all products of combustion and to vent gasses to the outside air without condensation in the vent or spillage at the draft hood (except in cases of downdraft or poor stack conditions). Always use strong, gas-tight, insulated pipe.

The design of this pressure washer depends on natural draft (heat induced) to pull combustion gas out of the combustion chamber. The design of the exhaust stack can have a significant impact on the proper operation of the burner and coil.

During vent installation, avoid sharp turns, long horizontal runs and improper pitches. Maintain proper support of vent connectors and joints, observe clearances from all combustibles and top the vent outlet with an approved cap.

All venting installations must conform to local codes. In the absence of local codes, refer to "National Fuel Gas Code" NFPA 54 and be constructed of materials approved by the Uniform Building Code.

Vents penetrating ceilings or walls should be double-wall approved appliance vents and should be one to two inches from combustibles. Vents passing through enclosed spaces and vents exposed to the weather

Operations

should also be the double-wall type. Sometimes vents have to be built of such great length that they come apart at their joints under their own weight. These should be screwed together at the joints with sheet metal screws, usually three per joint. If the inspector indicates that the vent is too close to combustibles, it may be necessary to chisel away some of the combustible or route the vent pipe around the combustible. The cross-sectional area of any flue shall not be less than the cross-sectional area of the flue vent connection outlet of machine.

Ventilation

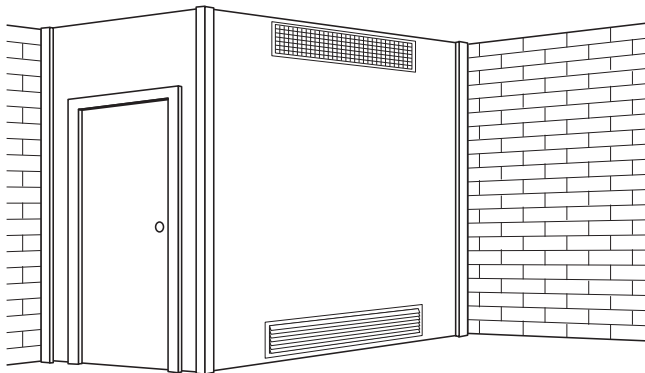
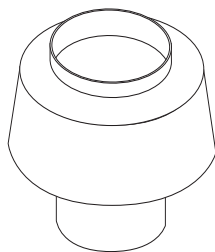


Illustration showing air openings necessary to supply air for combustion when installed in an enclosed room.

The pressure washer includes a collar that will mate with standard HVAC ducting. The user will be responsible for installation of an exhaust stack. The exhaust stack should include a Draft Diverter/Inducer, Damper, Sampling Port and Rain Cap. An adapter can be installed between the collar and stack to adjust the diameter from 10" to 8" or 12" to 10".

Size the stack according to the following (see also applicable local and national standards regarding installation of gas-fired appliances):

- 3.5 to 4.4 gpm 10" Collar 8" Stack
- 4.5 to 5.5 gpm 10" Collar 10" Stack
- 6.3 gpm 12" Collar 10" Stack
- 8 – 10 gpm 12" Collar 12" Stack



Draft Diverter Required

8.717-728.0 8"
 9.801-040.0 10"
 8.717-730.0 12"

Draft Diverter/Hood The draft required to vent combustion gases is created by the heat inside the pressure washer coil. A draft diverter helps improve draft into the stack without pulling more air through the combustion box and decreasing combustion efficiency. The draft diverter can also help prevent back drafting that can inhibit combustion. The draft diverter should be installed a minimum of 36" above the flue collar.

Power Vent (Draft Inducer) If this machine is going to be installed on a 90° or extended exhaust vent run length which may restrict air flow it is recommended that a contractor install a power vent. When a contractor has found it impossible to vent straight through the roof power venting is recommended to help eliminate exhaust restriction of this natural draft machine. This draft inducer (power vent) must be installed by a licensed contractor who can calculate size, operation connections and associated dampeners. Since we are a manufacturer and not a licensed contractor and as such we are unable to make recommendations for suitable make and model of power vents and compliance with local building codes.

Damper An exhaust stack can reduce thermal efficiency by drawing in too much combustion air. This can be controlled by adding a damper just below the draft diverter. 8.753-473.0 - 8" Damper, 8.753-474.0 - 10" Damper, 8.753-418.0 - 12" Damper.

NOTE: Closing the damper can create high levels of CO in the exhaust. Adjustments to the damper should only be performed by a trained technician using a flue gas analyzer. If an analyzer is not used the damper should be set in the fully open position.

Sampling Port A port for sampling flue gases and measuring the flue gas temperature should be placed 18" above the flue collar. The port should be covered when sampling is not being performed. The size of the port should be only slightly larger than the probe for the flue gas analyzer.

Rain Cap A rain cap should be installed on top of the stack to prevent rain water, leaves and debris from entering the stack. Your installer may also recommend specialty caps for high wind areas or cold weather zones to help prevent back drafting. 8.717-731.0 - 10" Raincap, 8.717-732.0 - 12" Raincap

Water Source

The water source for the machine should be supplied by a 5/8" I.D. garden hose with a city water pressure of not less than 30 PSI. If the water supply is inadequate, or if the garden hose is kinked, the machine will run very rough and the burner will not fire.

Water Connection

Connect the high pressure hose by pulling the coupler collar back and then inserting it onto the discharge nipple. Secure it by pushing the collar forward.

Attach the wand into the spray gun using teflon tape on the pipe threads to avoid leaks.

Oil Burner

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.

It is recommended that the oil burner be serviced yearly or as needed. Contact your local service center.

Fuel Pressure 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.

Operations

Operation Instructions

Before Starting

1. Read all manuals provided with this pressure washer. Become familiar with location and function of all operating and safety controls.
2. Check pump oil level.

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

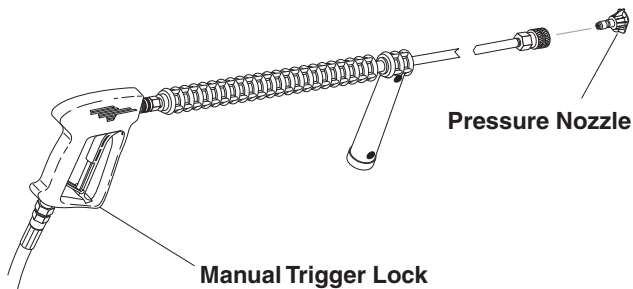
AVERTISSEMENT: Vérifier les boyaux, les raccords, le pistolet à gâchette et les connexions de carburant pour la présence de traces d'usure, de fissures et de desserrement; remplacer au besoin.

3. Connect water supply hose to the garden hose connector located on the float tank. The water faucet and supply hose must be capable of providing a minimum of 8.0 gallons per minute (GPM).
4. Fill oil burner fuel tank. Use kerosene, #1 grade home heating oil, #1 or #2 diesel fuel. **DO NOT USE GASOLINE, CRANKCASE OIL DRAININGS, OR WASTE OIL.**
5. If detergents are to be used, only use detergents intended for pressure washers. Follow instructions on the detergent container.

IMPORTANT: Before installing nozzle on initial start-up, turn on the water supply and pump switch and 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 nozzle from the end of the wand and turn on water supply and pump switch. Allow water to run from the end of the wand until clear.

6. Install the proper pressure nozzle on end of wand for your cleaning needs.



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

DANGER: DO NOT point wand or trigger gun at yourself or at any person or animal. Bodily injury may result from water under high pressure.

DANGER: NE PAS pointer la lance ou le pistolet pulvérisateur dans votre direction ou la direction d'une autre personne ou d'un animal. L'eau sous haute pression peut causer des lésions corporelles.

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

AVERTISSEMENT: Porter une protection des yeux, des mains, des pieds et de la peau en tout temps en utilisant la laveuse à pression.

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 5 minutes at any one time or damage to pump may occur.

1. Turn ON water supply.
2. Hold wand firmly, release trigger of trigger gun and press pump start switch. Squeeze trigger of trigger gun and allow air to purge from system.
3. 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 **Oil Burner Manual** (P/N 783879) provided with this pressure washer. When the trigger of the trigger gun is released or when the thermostat temperature setting is reached, the burner will automatically turn off.

To Stop

1. If detergents were used, draw clear water through the detergent inlet line to purge detergent. Failure to do so may clog detergent metering valve.
2. If burner was used, turn **OFF** burner switch and allow pump to run cold water through coil for several minutes.

3. Press pump **STOP** switch.
4. Turn water supply **OFF**.
5. Squeeze trigger of trigger gun to relieve system pressure.

Cleaning Techniques

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 or acid-based products

ATTENTION: Ne jamais utiliser :

- Eau de Javel, produits à base de chlore et autres produits chimiques corrosifs
- Liquides contenant des solvants (c.-à-d. diluant à peinture, essence, huiles, etc.)
- Produits à base de triphosphosphate de sodium
- Ammoniac ou produits à base d'acide

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. Select and install desired high pressure nozzle. **NOTE:** You can also stop detergent from flowing by removing detergent siphon tube from bottle.

Storage

DANGER: DO NOT store flammable liquids (gasoline, diesel fuel, solvents, etc.) near pressure washer, or in non-ventilated areas.

DANGER: Ne pas entreposer de liquides inflammables (essence, mazout, pétrole, solvants, etc.) à proximité de la laveuse à pression ou dans des endroits non ventilés.

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 flows from the end of the wand. Place end of wand into float tank and circulate the antifreeze through system for several minutes. Squeeze and release the trigger of the trigger gun several times to antifreeze the unloader 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.

Maintenance

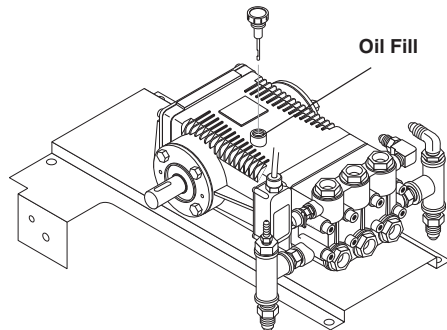
WARNING: Unauthorized machine modification or use of non-approved replacement parts may cause personal injury and/or property damage and will void the manufacturer warranty.

AVERTISSEMENT: Une modification non autorisée de la machine ou l'utilisation de pièces de rechange non approuvées peut causer des lésions corporelles et/ou des dommages à la propriété, et annulera la garantie du fabricant.

Maintenance

Pump

Lubrication: To lubricate pump, use 10W-40 non-detergent oil for pump crankcase. Crankcase must be filled 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** to details.

Pump Motor

Inspect the pump motor at regular intervals. The exterior of the motor should be kept free of dirt, oil, grease, water, etc. Keep all ventilation openings free from debris. If the motor is equipped with grease fittings, lubricate the motor after every 1000 hours of operation with Chevron SRI #2 lubricant or equivalent. If the motor is not equipped with grease fittings, the pump motor bearings are permanently lubricated and will not require any additional lubrication.

Oil Burner

Refer to **Oil Burner Manual** provided with this pressure washer for recommended maintenance.

Pressure 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.

AVERTISSEMENT: La soupape de décharge sur cette laveuse à pression a été réglée en usine, puis scellée, et est une pièce non réglable. L'altération du paramètre de l'usine pourrait causer des lésions corporelles et/ou des dommages à la propriété, et annulera la garantie du fabricant. Ce dispositif de sécurité doit être inspecté et testé une fois par année.

NOTE: This valve must be inspected and tested annually by a certified Hotsy technician.

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.

AVERTISSEMENT: La soupape de décompression sur cette laveuse à pression a été réglée en usine, puis scellée, et est une pièce non réglable. L'altération du paramètre de l'usine pourrait causer des lésions corporelles et/ou des dommages à la propriété, et annulera la garantie du fabricant.

Burner Fuel Filter (Oil fired models only)

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

Heating Coil

Coil Descaling: 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 descaling is needed.

Coil Desooting: 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 desooting is needed.

Troubleshooting

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
PRESSURE WASHER 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 circuits of adequate capacity.
	Motor circuit overload tripped	Allow sufficient time for motor to cool down. Place pump switch in ON position.
PRESSURE WASHER 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.
	Inlet water screen clogged	Check screen and clean if necessary.
	Pump sucking air	Fill the detergent container and check for loose hose clamps or fittings.
LOW SPRAY PRESSURE AT NOZZLE	Inadequate water supply	Fully open faucet. Check for kinked or damaged hose. Use 5/8" 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 pressure nozzle	Clean or replace.
PRESSURE WASHER WILL NOT PRODUCE HOT WATER	Burner switch in OFF position	Place switch in ON position.
	Inadequate fuel supply	Check fuel supply.
	Pump switch turned off	Pump must be running before burner will light.
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
	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

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.

