

771/772 SERIES
Hot Water - Gas Fired



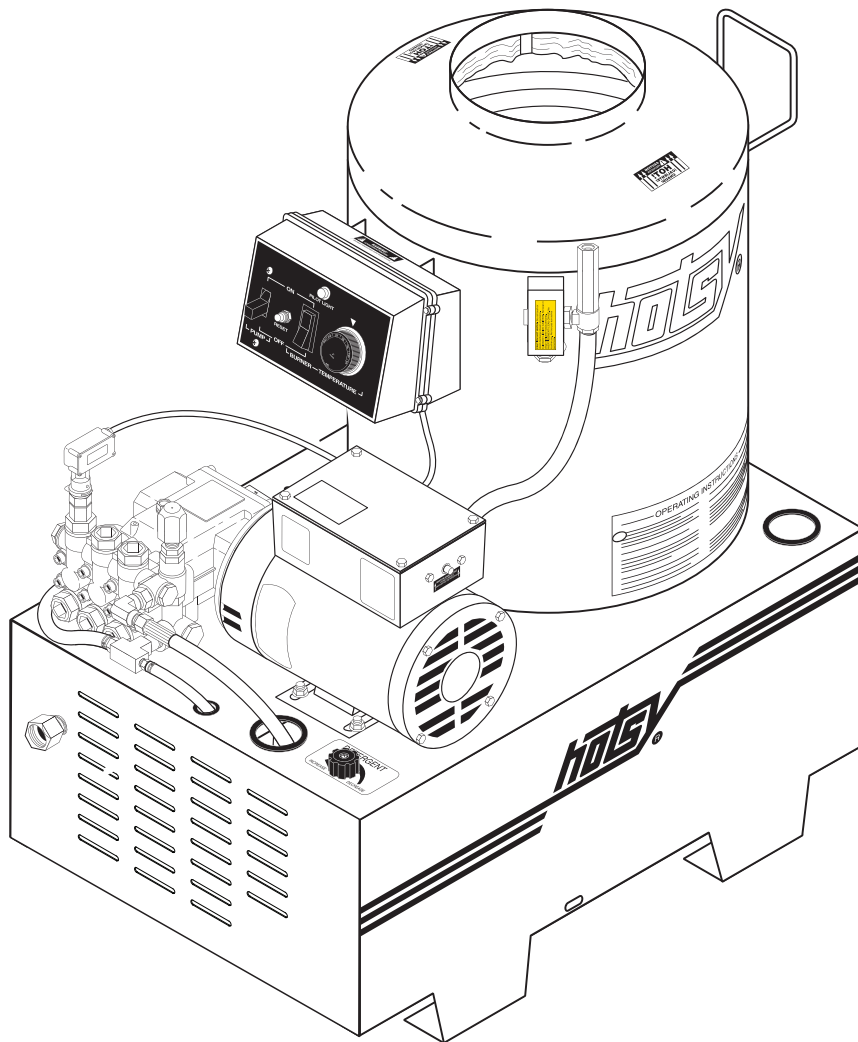
Operator's Manual

Pressure Washer

MODELS:

771
1.109-611.0

772
1.109-037.0



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: _____

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HOW TO USE THIS MANUAL

This manual contains the following sections:

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

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:

- Storage
- Pump
- Heating Coil
- Troubleshooting

The PARTS LIST section contains assembled parts illustrations and corresponding parts list. The parts lists include a number of columns of information:

REF – column refers to the reference number on the parts illustration.

PART NO. – column lists the part number for the part.

QTY – column lists the quantity of the part used in that area of the machine.

DESCRIPTION – column is a brief description of the part.

NOTES – column for information not noted by the other columns.

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.

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

SAFETY

Introduction

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.

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. Do not replace LP tank while machine is running.
5. All installations must comply with local codes. Contact your electrician, plumber, utility company

or the selling distributor for specific details. If your machine is rated 250 volts or less, single phase will be provided with a ground fault circuit interrupter (GFCI). If rated more than 250 volts, or more than single phase this product should only be connected to a power supply receptacle 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.*

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 adaptor 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.*

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

6. 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.

IMPORTANT SAFETY INFORMATION



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 — Operate only where open flame or torch is permitted.*

AVERTISSEMENT: *Risque d'explosion-Utiliser uniquement dans des endroits où l'utilisation d'une flamme nue ou d'une torche est permise.*



WARNING: *Risk of fire — Do not change tanks when the product is operating or still hot.*

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

WARNING: *Use vapor fuel only.*

AVERTISSEMENT: *Utiliser des vapeurs de carburant seulement.*

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. Keep operating area clear of all persons and animals.



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.

9. Always wear properly rated eye protection such as safety goggles or face shield while spraying.

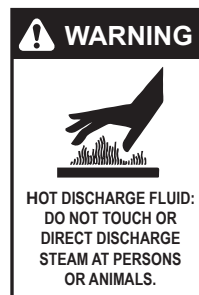
(Safety glasses do not provide full protection.)

10. 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: *This machine exceeds 85 db . Appropriate ear protection must be worn.*

AVERTISSEMENT: *Cette machine excède 85 dB et une protection de l'ouïe appropriée doit être portée.*



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

AVERTISSEMENT: *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.*

IMPORTANT SAFETY INFORMATION

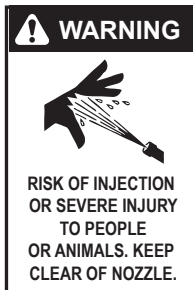


WARNING: Grip cleaning wand securely with both hands before starting. Failure to do this could result in injury from a whipping wand.

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.

11. Never make adjustments on machine while in operation.
12. 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.

13. 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.

14. Inlet water must be clean fresh water and no hotter than 145°F.



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

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

15. Avoid installing machines in small areas or near exhaust fans.

Adequate oxygen is needed for combustion or dangerous carbon monoxide will result.

16. Manufacturer will not be liable for any changes made to our standard machines or any components not purchased from us.
17. 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.

18. Do not overreach or stand on unstable support. Keep good footing and balance at all times.
19. Do not operate this machine when fatigued or under the influence of alcohol, prescription medications, or drugs.
20. Follow the maintenance instructions specified in the manual.
21. Do not replace LP tank while machine is running. Serious injury could result.

WARNING: Use vapor fuel only.

AVERTISSEMENT: Utiliser des vapeurs de carburant seulement.

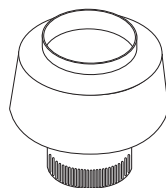
22. The LP models are designed to run on vapor propane fuel. Do not use liquid fuel. Have a qualified serviceman install and service your equipment.
23. Never expose a spark or flame where there may be unburned gas present.
24. This product incorporates parts that produce sparks and therefore when located in a garage, it

IMPORTANT SAFETY INFORMATION

should be in a room or enclosure provided for the purpose, or should be 18" or more above the floor. Install on noncombustible flooring and have a 36" minimum working clearance.

25. When making repairs disconnect from electrical source and shut off gas valve.
26. Install this machine on non combustibile flooring.
27. Do not allow acids, caustic or abrasive fluids to pass through the pump.
28. Never run pump dry or leave spray gun closed longer than 1-2 minutes.
29. 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.
30. Exhaust gases should not be vented into a wall, a ceiling or a concealed space within a building. A draft diverter must be installed to prevent down draft and to allow for the cooling of exhaust temperatures. It is recommended to install the draft diverter 36" above the pressure washer stack; however, it can be installed at a lower height in special cases, such as when low ceilings are present. The draft diverter being right on top of the machine in cold freezing environments could potentially allow the coil to be frozen and damage the coil. Check local codes and standards for specific installation requirements. Exhaust gases that exceed 470°F (243°C) are not suitable for connection to Type B gas vents.

Example Of Down Draft Diverter For Gas Fired Machines



Follow the maintenance instructions specified in the manual.



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

AVERTISSEMENT: Si une connexion est établie avec un réseau d'eau potable, le réseau doit être protégé contre le retour d'eau.



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.

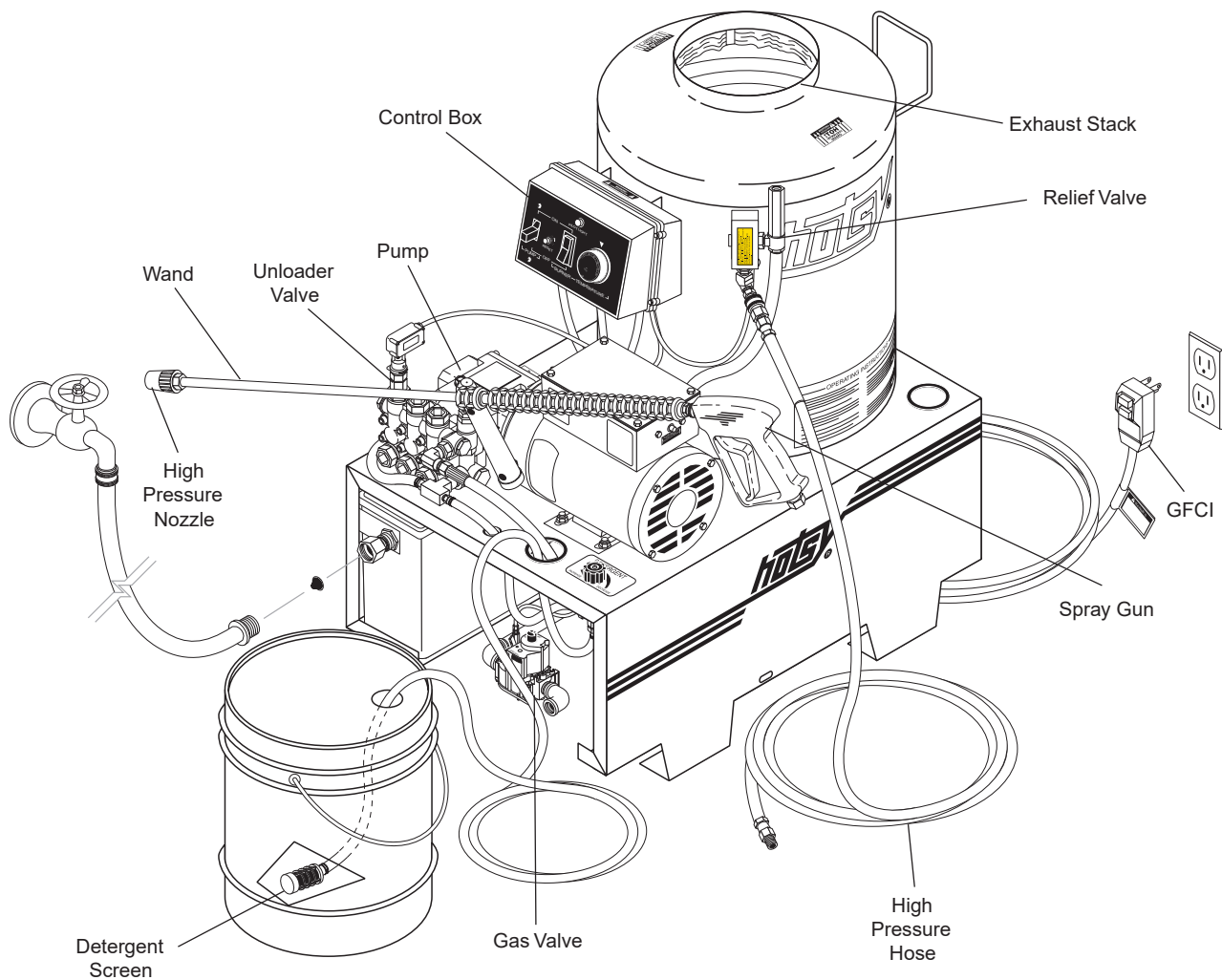
OPERATIONS

Technical Specifications

MODEL #	PUMP VOLUME @ PUMP HEAD	PUMP PRESSURE @ PUMP HEAD	BURNER TYPE	MACHINE VOLTAGE	TOTAL MACHINE AMPERAGE
771	3.0 GPM / 180 GPH	1500 PSI	LP GAS FIRED, 376,000 BTU/HR.	230VAC/60HZ/1PH	13 AMPS
772	3.0 GPM / 180 GPH	1500 PSI	NATURAL GAS FIRED, 378,000 BTU/HR.	230VAC/60HZ/1PH	13 AMPS

MODEL #	MACHINE WEIGHT	SHIPPING WEIGHT	EXHAUST STACK SIZE	MACHINE DIMENSIONS
771	355 LBS	390 LBS	10"	L 31.5" X W 20" X H 36.5"
772	355 LBS	390 LBS	10"	L 31.5" X W 20" X H 36.5"

COMPONENT IDENTIFICATION



Pump — Delivers a specific gpm to the high pressure nozzle which develops pressure.

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

Wand — Must be connected to the spray gun.

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

Relief Valve — Secondary pressure release in the unlikely event the unloader valve fails.

Unloader Valve — Safety device which, when the spray gun closes, prevents over pressurization.

GFCI - Designed to prevent electrical shock. Has test and reset button. Reset button must be pushed in for operation.

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 distributor or carrier concerning discrepancies.

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

Parts Included

- Hotsy High Pressure Washer
- High Pressure Hose
- Hose/GFCI Cord Hanger
- Wand
- Trigger Gun
- Operating Instruction and Parts Manual
- Parts Bag Containing:
 - Pressure Nozzle
 - Quick Disconnect
 - Quick Disconnect Plug

Tools Required

- 10" Adjustable Wrench (1 ea.)
- Medium Phillips Head Screwdriver (1 ea.)
- Large Slotted Head Screwdriver (1 ea.)
- 3/16" Allen Wrench (1 ea.)
- Pipe Thread Sealing Compound For Gas Connectors
- Teflon Tape

1. Install Hose/GFCI Cord Hanger on coil tank as shown in Figure 1.

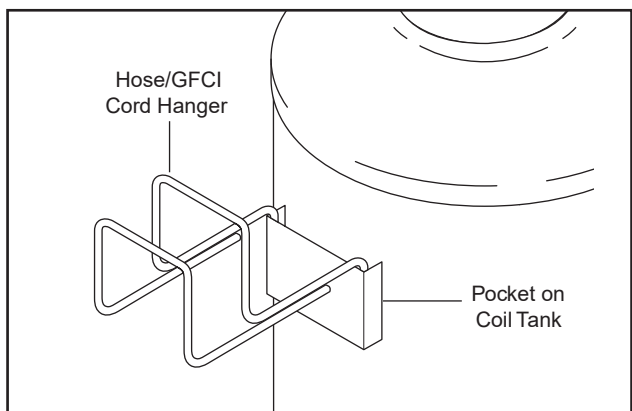


Figure 1 - Hose-GFI Cord Hanger

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 in Figure 2.

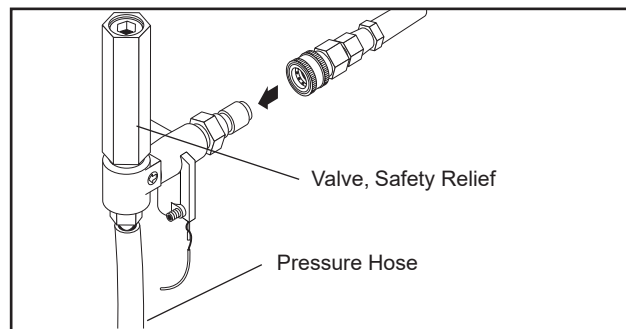


Figure 2 - Pressure Hose

3. Assemble wand components as shown in Figure 3.

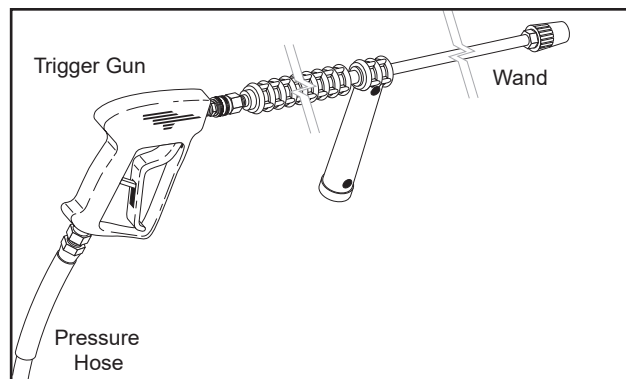


Figure 3 - Trigger Gun/Wand Assembly

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

4. Make sure all plumbing connections are tight.

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 backflow-preventer on the water supply hose is recommended and may be required by local codes.

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 should comply with the local codes covering such installations.

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

DANGER: Some gases are heavier than air and will spill out on the floor in the time required for the safety pilot valve to close off gas supply. Therefore, always provide adequate space and ventilation around this pressure washer.

DANGER: Certains gaz sont plus lourds que l'air et s'accumuleront au sol le temps requis pour la soupape de sûreté de la veilleuse pour couper l'alimentation en gaz.

CAUTION: All venting must be in accordance with applicable federal and state laws, and local ordinances. 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 événement 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. This gas fired pressure washer must have a draft diverter installed in the flue (available from most heating contractors). A draft diverter will permit proper upward flow of exhaust flue gases.

Using LP Vapor Fuel From A Portable Bottle

CAUTION: Have a qualified gas service technician install and service your equipment.

The model 771 has been factory built to use LP Vapor fuel. **DO NOT USE LIQUID FUEL.**

You will need the following items:

- LP vapor fuel tank. We recommend using a minimum 30-40 lb. bottle. Bottle must have a shut-off valve.
- LP gas hose. Four foot long minimum, 3/4" inside diameter. Must have 3/4" male NPT thread end to attach to machine. Available through Hotsy 707452. This hose is supplied in the 771 Portable Gear/LP Bottle Rack Kit, Part Number 280771.
- Gas primary regulator. Controls the pressure from the gas bottle into the gas valve. Regulator must be capable of handling 376,000 BTU/Hr. with an adjustment range of 12.0 to 14.0

INSTALLATION INSTRUCTIONS

water column inches. Available through Hotsy, Part Number 860178.

- Gas pressure gauge or gas manometer
- 10" Adjustable wrench
- Medium Phillips head screwdriver
- Large slot head screwdriver
- 3/16" Allen wrench
- Pipe thread sealing compound for gas connections

1. Disconnect the machine from the power source.
2. Remove the chassis front panel to gain access to the gas valve. Refer to Figure 4.

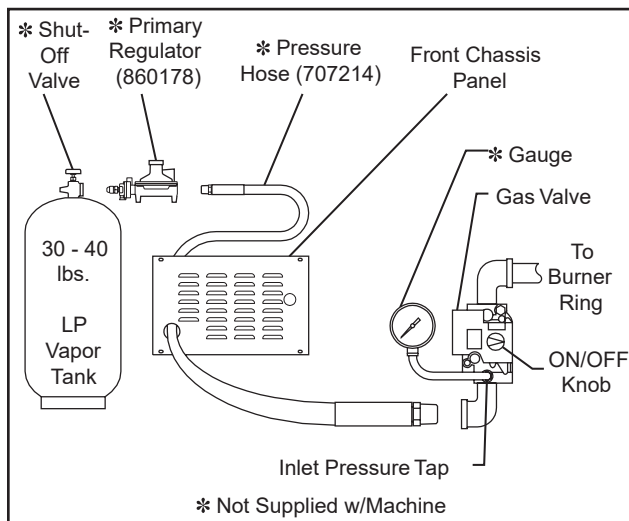


Figure 4 - LP Vapor Gas

3. Turn the gas valve ON/OFF knob to the OFF position.
4. Use pipe thread sealing compound at all hose connections and at gauge port pipe plugs to prevent leaks. **DO NOT** use teflon plumbing tape.
5. Attach a 3/4" inside minimum diameter LP gas hose to the inlet port of the machine. Make sure you use a hose that is suitable for LP gas.
6. Install the gas pressure gauge or manometer into the gas valve inlet pressure tap. The reading at this location will indicate the incoming gas pressure from your gas bottle primary regulator. It is very important that the incoming gas pressure be between 12.0-14.0 water column inches (.43 - .50 PSI).

WARNING: Maximum inlet pressure to machine 14.0 water column inches (.50 PSI).

AVERTISSEMENT : Pression d'entrée maximale de la machine 14,0 pouces de colonne d'eau (0,50 PSI).

To control the pressure from the LP bottle you must have a primary regulator. If you purchase a regulator from Hotsy, Part Number 860178, it will be preset from the manufacturer and should not require adjustment. If your primary regulator does not produce the correct pressure range contact your local Hotsy Service Representative. After connecting the gas hose to your regulator, install the regulator on the bottle. The regulator 860178 has a POL fitting which will screw directly into an LP Vapor fuel bottle.

7. The gas pressure coming out of the regulator and going to the burner ring has been factory set for elevations of 0 to 2000 ft. Altitudes greater than 2000 ft will require adjustments to the gas manifold pressures. Consult your local service dealer/distributor for high altitude adjustments. In Canada, certification for installation at altitudes over 4500 feet above sea level is the jurisdiction of local authorities. You should not readjust the burner ring gas pressure. If you replace your gas valve, you will need to adjust the new valve. Refer to your machine's **specification plate** for the correct pressure setting. Follow the installation and adjustment instructions provided with your replacement valve.

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

8. After correct pressures have been established, remove gauge and replace with pipe plug.
9. Always check new gas line connections for leaks with soapy water.
10. Reinstall the chassis front panel on the machine.

Converting From LP to Natural Gas Fuel

CAUTION: Have a qualified gas service technician modify, install and service your equipment.

ATTENTION: La modification, l'installation et l'entretien de l'équipement doivent être confiés à un technicien d'entretien qualifié dans le domaine du gaz.

The Model 771 has been factory built to use LP Vapor fuel, however this model can be field converted to run on natural gas fuel. It is very important to follow these instructions when converting the unit for natural gas fuel.

Modifications will need to be made to several components within the washer. Before starting, disconnect gas and electrical power supply from the machine.

INSTALLATION INSTRUCTIONS

You will need the following items:

- Gas pressure gauge or gas manometer
- 10" Adjustable wrench
- Medium Phillips head screwdriver
- Large slot head screwdriver
- 3/16" Allen wrench
- Pipe thread sealing compound for gas connections
- Drill and drill bit #55 (.052)
- Natural gas orifice, Part Number 753141
- LP To Natural Gas Regulator Valve Conversion Kit Part Number 753142

1. Remove both the chassis front and rear panels from the machine to gain access to the burner assembly.
2. Turn the gas valve ON/OFF knob to the OFF position. Refer to **Figure 5**.

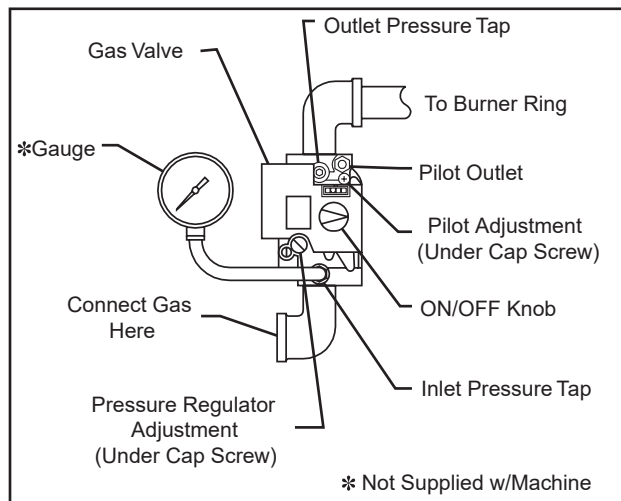


Figure 5 - Gas Valve

3. Disconnect the wire leads to the gas valve.
4. Remove the burner ring assembly from the machine by removing the U-bolt and the two nuts. Save all hardware for reassembly after modifications are made.
5. Disconnect the aluminum gas line from the pilot. (Refer to Burner Assembly).
6. Carefully remove the LP gas pilot from the burner ring (Refer to **Figure 6**).

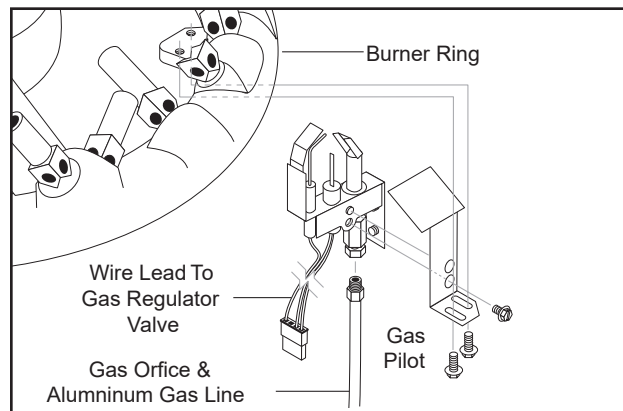


Figure 6 - LP Gas Pilot

7. Remove the LP gas orifice from the pilot (Refer to **Figure 6**).
8. Install natural gas orifice, Part Number 753141.
9. Carefully remove burner nozzles from burner ring.
10. Enlarge the diameter of each nozzle using a #55 drill bit (.052"). Make sure the holes are drilled straight and all metal shavings are cleared from inside nozzles. Carefully reinstall the nozzles into the burner ring, do not over tighten, do not use pipe thread sealing compound.
11. Remove regulator cap screw, pressure regulator adjustment screw and spring. (Refer to **Figure 7**.)
12. Install the replacement spring, supplied in the Natural Gas Conversion Kit. (Refer to **Figure 7**.)

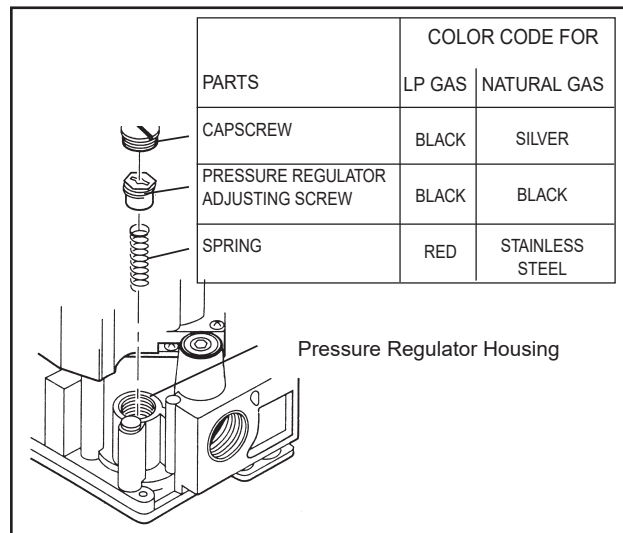


Figure 7 - Pressure Regulator

13. Install the new plastic pressure regulator adjustment screw. Assure that the screw top is flush with the regulator top.
14. Replace the natural gas pilot. Inspect compression fittings on aluminum gas line. If fittings are damaged, replace with compression fitting supplied with orifice kit. To replace compression fittings cut

INSTALLATION INSTRUCTIONS

the aluminum gas line as close to the old compression fitting as possible. Install new compression fitting. Install aluminum gas line into pilot and tighten.

15. Install the burner ring assembly into the chassis and secure.
16. Connect your natural gas supply to the inlet port of the machine gas plumbing. (Refer to **Figure 5**.)

IMPORTANT: This gas line must be provided with a shut off valve.

17. Install the gas pressure gauge or manometer into the gas valve inlet pressure tap. This reading will indicate the incoming gas pressure from your gas supply.
18. It is very important that the incoming gas pressure be between 4.5 - 14.0 water column inches (.16 - .50 PSI). If adjustment is necessary, it must be done by a qualified gas service technician.

WARNING: Maximum inlet pressure to machine 14.0 water column inches (.50 PSI).

AVERTISSEMENT : Pression d'entrée maximale de la machine 14,0 pouces de colonne d'eau (0,50 PSI).

19. Next, install the gas gauge or manometer in the outlet pressure tap port of the gas valve. (Refer to **Figure 5**.) This reading will indicate the gas pressure going to the burner ring.
20. Because of the safety features within the gas valve, adjustment of the burner ring gas pressure can only be made while the machine is running and the burner is lit. Follow the instructions under **Before Starting** and **To Start** for details to operate burner.
21. Turn pressure regulator adjustment screw clockwise to increase gas pressure. Adjust gas pressure to 3.5 water column inches (.13 PSI).
22. Turn off the burner and pump. Shut off gas supply to the machine before removing the gas gauges or manometers. Always check new gas line connections with soapy water for leaks.
23. Install the new cap screw. (Refer to **Figure 7**.)
24. Remove LP gas label on gas valve.
25. Reinstall the chassis front and rear panels on the machine.

Converting from Natural Gas to LP Vapor Gas

CAUTION: Have a qualified gas service technician install and service your equipment.

ATTENTION: La modification, l'installation et l'entretien de l'équipement doivent être confiés à un technicien d'entretien qualifié dans le domaine du gaz.

To convert back to LP vapor fuel, it is important to follow the following instructions.

Modifications will need to be made to several components within the washer. Before starting, disconnect gas and electrical power supply from the machine.

You will need the following items:

- Gas pressure gauge or gas manometer
- 10" Adjustable wrench
- Medium Phillips head screwdriver
- Large slot head screwdriver
- 3/16" Allen wrench
- 44 gas nozzles #66 orifice Part Number 908260
- LP Vapor gas pilot
- LP Vapor gas conversion kit
- LP Vapor fuel tank. We recommend using a minimum 30 - 40 lb bottle. Bottle must have a shut-off valve.
- LP gas hose - four feet long minimum, 3/4" inside diameter. Must have 3/4" male NPT thread end to attach to machine. Available through Hotsy, Part Number 707432. This hose is supplied in the 771 portable gear/LP bottle Rack Kit
- Gas primary regulator. Controls the pressure from the gas bottle into the gas valve. Regulator must be capable of handling 376,000 BTU/Hr. with an adjustment range of 12.0 to 14.0 inches Water Column. Available through Hotsy, Part Number 860178.

1. Refer to **Converting to Natural Gas** and follow steps 1 through 6.
2. Discard pilot and replace with LP vapor gas pilot, Hotsy Part Number 829858.
3. Carefully remove burner ring nozzles.
4. Replace the natural gas nozzles with the #66 gas nozzles. It is important to replace them as LP vapor gas is required to use smaller orifice gas nozzles than natural gas. When installing the nozzles into the burner ring, do not over tighten and do not use pipe thread sealing compound.
5. Refer to **Converting to Natural Gas** and follow steps 11 through 13 except use LP Vapor Conversion Kit instead of Natural Gas Conversion Kit. (Refer to **Figure 6**.)
6. Refer to **Converting to Natural Gas** and follow steps 14 and 15.
7. To complete LP vapor conversion reference **LP Vapor Gas From A Portable Bottle** and follow steps 4 through 11.

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.

WARNING: *Make sure all switches and controls are in the OFF position prior to plugging in electrical cord.*

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

DANGER: *Do not stand in water while plugging or unplugging electrical cord.*

DANGER: *Ne pas se tenir debout dans l'eau au moment de brancher ou de débrancher le cordon électrique.*

CAUTION: *This pressure washer is equipped with a UL approved ground fault circuit interrupter (GFCI) power cord. Use UL grounded type receptacles of proper voltage and amperage ratings. Where a properly grounded receptacle is not available, it is the personal responsibility of the owner to have one installed. Always disconnect power before servicing your pressure washer.*

ATTENTION: *La laveuse à pression est équipée d'un cordon d'alimentation de disjoncteur différentiel de fuite à la terre (DDFT) approuvé par l'UL. Utiliser des prises de type UL mises à la masse de tension et d'intensité de courant nominales appropriées. Lorsqu'une prise correctement mise à la masse n'est pas disponible, il incombe au propriétaire d'en faire installer une. Toujours débrancher l'alimentation avant d'effectuer des opérations d'entretien sur la machine.*

CAUTION: *This machine is equipped with a 35 foot long power cord protected by a ground fault circuit interrupter (GFCI). DO NOT use extension cords because of possible severe electrical shock and/or damage to the machine.*

ATTENTION : *Cette machine est équipée d'un cordon d'alimentation de 35 pieds de long protégé par un disjoncteur de fuite à la terre (GFCI). N'utilisez PAS de rallonges en raison du risque de choc électrique grave et/ou de dommages à la machine.*

DANGER: *This equipment is designed to run on vapor fuel. DO NOT use liquid fuel. Have a qualified serviceman install and service your equipment.*

DANGER : *Cet équipement est conçu pour fonctionner avec du carburant à vapeur. N'utilisez PAS de carburant liquide. Faites appel à un technicien qualifié pour installer et entretenir votre équipement.*

2. Connect electrical cord to an overload protected 230VAC/60Hz/1PH grounded circuit, minimum 15 ampere rated. Test the GFCI using the reset and test procedure located on the GFCI device. Do not use machine if GFCI fails test. The GFCI must be reset and tested with every use.

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 machine's front. The water faucet and supply hose must be capable of providing a minimum of 3.0 gallons per minute (GPM).
4. Connect proper gas supply. See instructions under **Using LP Vapor Fuel and Converting to Natural Gas.**
5. Check pump oil level.
6. 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.*

7. Install the pressure nozzle on end of wand, (refer to Figure 8).

OPERATION INSTRUCTIONS

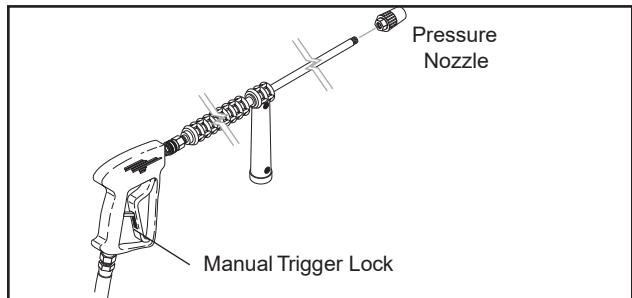


Figure 8 - Nozzle Installation-Manual Trigger Lock

NOTE: To prevent damage to the pressure nozzle, only place the wrench on hex area when tightening.

IMPORTANT: The trigger gun provided with this pressure washer is equipped with a manual trigger lock to prevent accidental operation of the trigger gun, (refer to Figure 8). The trigger lock should be used whenever the trigger gun is not in use.

IMPORTANT: Pump may require priming the first time the pressure washer is run. See step 8.

8. If you are running the machine for the first time, or the machine has been sitting for a period of time, the pump may require priming. To prime the pump, run pressure washer with only the pump switch on.

IMPORTANT: On initial start up or if a new gas bottle is installed it is necessary to bleed the air from the gas line before the pilot will light. Refer to step 9 for details.

9. If you are running the machine for the first time, have changed the gas bottle, or have performed maintenance to the burner assembly, there will be air in the gas line. To bleed out the air from the gas line, run pressure washer with pump and burner switch on and thermostat on highest setting. Squeeze trigger gun for 15 seconds. If the burner has not ignited, release trigger for 5 seconds and re-squeeze. If the burner has not ignited after 10 tries, see the **Troubleshooting Guide** in this manual.

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 pointez pas la baguette ou le pistolet à gâchette vers vous-même ou vers une autre personne ou des animaux. L'eau sous haute pression peut entraîner des blessures 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 trigger gun released for more than 10 minutes at any one time or damage to pump may occur.

WARNING: If ignition or flame failure is experienced, discontinue use of burner at once by turning burner switch off. Have cause of failure corrected by an authorized service technician.

AVERTISSEMENT : En cas de panne d'allumage ou de flamme, cessez immédiatement d'utiliser le brûleur en éteignant l'interrupteur du brûleur. Faites corriger la cause de la panne par un technicien de service agréé.

After corrections are made, refer to OPERATION for start-up instructions.

1. Connect electrical cord and test GFCI device.
2. Turn on water supply.
3. Turn on gas supply.
4. Grasp wand firmly. Turn on pump switch.
5. Turn on burner switch, and adjust thermostat to desired temperature.
6. Squeeze trigger of trigger gun. The pilot will automatically ignite, quickly followed by the firing of the burner ring. If ignition does not take place within 5 to 7 seconds see **Troubleshooting Guide** in this manual. When the trigger of the trigger gun is released or thermostat setting is reached, the burner will turn off.

To Clean

DANGER: Do not place hands or fingers in front of high pressure spray. Bodily injury may result.

DANGER : Ne placez pas les mains ou les doigts devant le jet haute pression. Des blessures corporelles peuvent en résulter.

1. Insert the detergent inlet line into the container of mixed detergent. The detergent metering valve on the chassis allows the detergent flow to be controlled.

OPERATION INSTRUCTIONS

- Adjust the width of the pressure nozzle spray pattern to meet your cleaning needs. Adjustment is made by rotating the outer housing of the pressure nozzle, (refer to **Figure 9**). The spray pattern can be adjusted from 0 degrees solid stream to 80° fan spray. Release the trigger of the trigger gun prior to making any spray pattern adjustments.

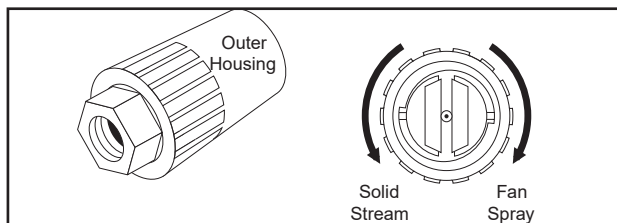


Figure 9 - Pressure Hose

- 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.
- Do not wash at a 90° angle to 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.
- Use the full 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.
- 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.
- Small parts should be washed in a basket so the pressure does not push them away. Larger, lightweight parts should be clamped down so the pressure does not push them away.
- To rinse, turn the detergent metering valve clockwise. Always rinse with cold water after using detergent. 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.

To Stop

NOTE: If the machine is unplugged, the GFCI must be reset prior to use. Always test GFCI before each use.

- If detergents were used, draw clean water through the detergent inlet line to purge detergent. Failure to do so may clog detergent metering valve.
- Turn burner switch off and continue spraying, allowing the water to cool to below 100°F..

- Turn OFF pump switch.
- Turn OFF water supply.
- Squeeze trigger of trigger gun to relieve system pressure.
- Turn off main shut-off valve on gas supply.

STORAGE

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

DANGER : Ne stockez pas de liquides inflammables (essence, gazole, solvants, etc.) à proximité du nettoyeur haute pression ou dans des zones non ventilées.

- 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. Start machine and allow to run until antifreeze flows from the end of the wand. Squeeze and release 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 (refer to **Figure 1** for location). 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: Toute modification non autorisée de la machine ou utilisation de pièces de rechange non approuvées peut entraîner des blessures corporelles et/ou des dommages matériels et annulera la garantie du fabricant.

Pump

Lubrication: To lubricate pump, use 10W-40 Non-Foaming oil for pump crankcase. Crankcase must be filled to center of sight glass window found on the rear of the pump, (refer to **Figure 10). During the break-in-**

MAINTENANCE

period, make sure the oil is changed after the first 50 hours of operation. After that, replace oil every year or 500 hours of operation, whichever comes first.

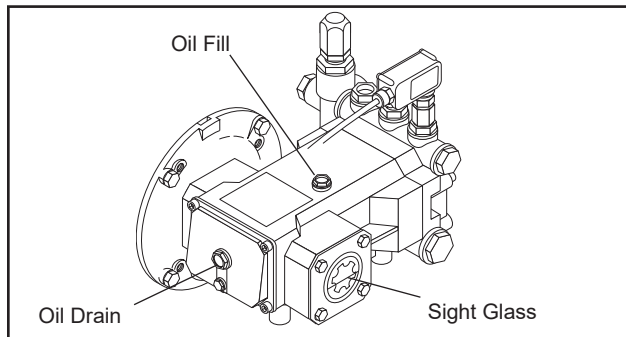


Figure 10 - Pump Lubrication

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 clean water immediately after using detergent solutions.
- Clean filter screen on detergent inlet line periodically.
- Flush the pressure washer system with antifreeze 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.*

Gas Burner

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

Pressure Relief Valve

Each machine is equipped with a relief valve to relieve pressure in the system when higher than normal operating pressures are encountered or if the unloader valve should fail. Unusually high pressures come from an object plugging the spray nozzle. If operating pressure is found to be normal and the relief valve continues to leak, repair or replace valve. The Safety Relief Valve should be opened to release any sediment yearly. Start the pressure washer and use an Allen wrench to turn the pressure relief valve

counter clockwise until water is pouring out the valve. Then turn the adjustment nut/bolt until the valve stops leaking. Open and close the trigger gun and if water squirts out the valve when you close the trigger gun turn clockwise one full turn until there is no leaking when the trigger gun is closed.

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.*

For replacement refer to parts section VBT Unloader Valve.

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 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.
	Electric plug not fully inserted into wall receptacle	Insert plug fully into known working receptacle.
	GFCI tripped.	Reset GFCI. Refer to instructions on GFCI.
	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. Depress red thermal protector reset button, located on pump motor.
PRESSURE WASHER RUNS BUT WON'T SPRAY.	Trigger of trigger gun released	Squeeze trigger.
	Water supply not turned on	Open water supply valve.
	Clogged nozzle	Clean nozzle opening.
	Inlet water screen clogged	Check screen and clean if necessary.
	Pump lost its prime	Refer to Before Starting, Step 9.
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 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.
POOR OR NO DETERGENT FLOW.	Inadequate detergent supply	Refill detergent container. Ensure that pick-up screen is fully immersed.
	Detergent screen or hose clogged	Clean. Always start with a clean detergent container.
	Detergent metering valve not opening	Check that handle or knob is not slipping on shaft.
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.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
BURNER WILL NOT IGNITE WHEN TRIGGER GUN IS OPEN	Burner switch is off	Turn switch on.
	Loose electrical connections	Tighten electrical connection.
	Gas valve off	Turn gas valve on.
	Pressure switch not operative	Test pressure switch and replace if defective.
	Manual valve on gas supply line is closed	Open valve.
	Low service supply pressure	Refer to Using LP Vapor Gas From A Portable Bottle or Converting To Natural Gas , and sections on how to check and set incoming pressure.
	Air in gas line	Refer to Before Starting , step 10.
	Defective pilot flame rod	Replace.
	Defective primary regulator	Replace.
	Defective gas valve	Replace.
	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.
Adjustable thermostat setting is too low	Raise temperature setting.	
BURNER SMOKES OR HAS OBNOXIOUS ODOR	Stack restriction	Refer to Venting under Installation .

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 or by calling 1-800-525-1976.

When ordering from your dealer, please provide the following:

Model Number: 771/772

Machine Serial Number: _____

Component Part Number: _____

Description: _____

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.

