



900/1400 OIL-FIRED SERIES OPERATING INSTRUCTIONS AND PARTS MANUAL

OPERATOR'S MANUAL



89413660-1



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8.941-366.0

980SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 2000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 5.0
- Machine Voltage: 230Vac/60Hz/1Ph
- Total Machine Amperage: 29 Amps
- Machine Weight: 520 Lbs.
- Shipping Weight: 580 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

990SS-208 SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 2000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 5.0
- Machine Voltage: 208Vac/60Hz/3Ph
- Total Machine Amperage: 20 Amps
- Machine Weight: 520 Lbs.
- Shipping Weight: 580 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

990SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 2000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 5.0
- Machine Voltage: 230Vac/60Hz/3Ph
- Total Machine Amperage: 19 Amps
- Machine Weight: 520 Lbs.
- Shipping Weight: 580 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

993SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 2000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 5.0
- Machine Voltage: 460Vac/60Hz/3Ph
- Total Machine Amperage: 10 Amps
- Machine Weight: 520 Lbs.
- Shipping Weight: 580 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

950SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.8 GPM/228 GPH
- Pump Pressure At Pump Head: 2300 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 6.2
- Machine Voltage: 230Vac/60Hz/1Ph
- Total Machine Amperage: 30 Amps
- Machine Weight: 530 Lbs.
- Shipping Weight: 590 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

950SS-208 SPECIFICATIONS

- Pump Volume At Pump Head: 3.8 GPM/228 GPH
- Pump Pressure At Pump Head: 2300 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 6.2
- Machine Voltage: 208Vac/60Hz/1Ph
- Total Machine Amperage: 33 Amps
- Machine Weight: 530 Lbs.
- Shipping Weight: 590 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

960SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.8 GPM/228 GPH
- Pump Pressure At Pump Head: 2300 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 6.2
- Machine Voltage: 230Vac/60Hz/3Ph
- Total Machine Amperage: 20 Amps
- Machine Weight: 525 Lbs.
- Shipping Weight: 580 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

960SS-208 SPECIFICATIONS

- Pump Volume At Pump Head: 3.8 GPM/228 GPH
- Pump Pressure At Pump Head: 2300 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 6.2
- Machine Voltage: 208Vac/60Hz/3Ph
- Total Machine Amperage: 22 Amps
- Machine Weight: 525 Lbs.
- Shipping Weight: 580 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

963SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.8 GPM/228 GPH
- Pump Pressure At Pump Head: 2300 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 6.2
- Machine Voltage: 460Vac/60Hz/3Ph
- Total Machine Amperage: 9 Amps
- Machine Weight: 525 Lbs.
- Shipping Weight: 580 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

967SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.8 GPM/228 GPH
- Pump Pressure At Pump Head: 2300 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 6.2
- Machine Voltage: 575Vac/60Hz/3Ph
- Total Machine Amperage: 9 Amps
- Machine Weight: 525 Lbs.
- Shipping Weight: 580 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1410SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 7.5
- Machine Voltage: 230Vac/60Hz/1Ph
- Total Machine Amperage: 37 Amps
- Machine Weight: 580 Lbs.
- Shipping Weight: 640 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1420SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 7.5
- Machine Voltage: 230Vac/60Hz/3Ph
- Total Machine Amperage: 25 Amps
- Machine Weight: 580 Lbs.
- Shipping Weight: 640 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1420SS-208 SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 7.5
- Machine Voltage: 208Vac/60Hz/3Ph
- Total Machine Amperage: 25 Amps
- Machine Weight: 580 Lbs.
- Shipping Weight: 640 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1423SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 7.5
- Machine Voltage: 460Vac/60Hz/3Ph
- Total Machine Amperage: 14 Amps
- Machine Weight: 580 Lbs.
- Shipping Weight: 640 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1450SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 8.2
- Machine Voltage: 230Vac/60Hz/1Ph
- Total Machine Amperage: 36 Amps
- Machine Weight: 590 Lbs.
- Shipping Weight: 650 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1450SS-208 SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 8.2
- Machine Voltage: 208Vac/60Hz/1Ph
- Total Machine Amperage: 41 Amps
- Machine Weight: 590 Lbs.
- Shipping Weight: 650 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1460SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 8.2
- Machine Voltage: 230Vac/60Hz/3Ph
- Total Machine Amperage: 24 Amps
- Machine Weight: 585 Lbs.
- Shipping Weight: 645 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1462SS-208 SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 8.2
- Machine Voltage: 208Vac/60Hz/3Ph
- Total Machine Amperage: 25 Amps
- Machine Weight: 585 Lbs.
- Shipping Weight: 645 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1463SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 8.2
- Machine Voltage: 460Vac/60Hz/3Ph
- Total Machine Amperage: 12 Amps
- Machine Weight: 585 Lbs.
- Shipping Weight: 645 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

1467SS SPECIFICATIONS

- Pump Volume At Pump Head: 3.9 GPM/234 GPH
- Pump Pressure At Pump Head: 3000 PSI
- Burner Type: Fuel Oil Fired, 343,000 BTU/Hr.
- Burner Fuel Pressure: 150 PSI
- Motor Hp: 8.2
- Machine Voltage: 575Vac/60Hz/3Ph
- Total Machine Amperage: 11 Amps
- Machine Weight: 585 Lbs.
- Shipping Weight: 645 Lbs.
- Exhaust Stack Size: 8"
- Machine Dimensions: Length=45", Width=18", Height=50"

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Model Number _____

Serial Number _____

Date of Purchase _____

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.

INTRODUCTION & IMPORTANT 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.

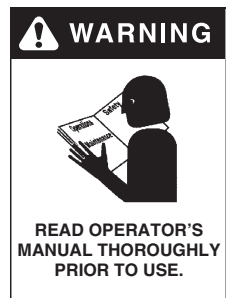
The operator must know how to stop the machine quickly and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.

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

When ordering parts, please specify model and serial number. Use only identical replacement parts.

This machine is to be used only by trained operators.

IMPORTANT SAFETY INFORMATION



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

1. Read the owner's manual thoroughly. Failure to follow instructions could cause malfunction of the machine and result in death, serious bodily injury and/or property damage.
2. Know how to stop the machine and bleed pressure quickly. Be thoroughly familiar with the controls.
3. Stay alert — watch what you are doing.
4. All installations must comply with local codes. Contact your electrician, plumber, utility company or the selling 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.

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



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

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

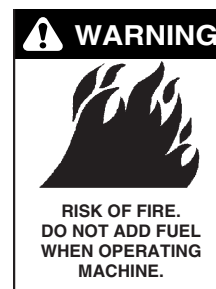
to a UL grounded receptacle of proper voltage and amperage ratings. Do not spray water on or near electrical components. Do not touch machine with wet hands or while standing in water. Always disconnect power before servicing.



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

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

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



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

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

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

IMPORTANT SAFETY INFORMATION

WARNING



USE PROTECTIVE EYE WEAR AND CLOTHING WHEN OPERATING THIS EQUIPMENT.

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

11. Eye, hand, and foot protection must be worn when using this equipment.

WARNING



EAR PROTECTION MUST BE WORN

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

WARNING



RISK OF INJECTION OR SEVERE INJURY TO PERSONS. KEEP CLEAR OF NOZZLE.

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 severe injury or death will result.

WARNING



PROTECT FROM FREEZING

WARNING: Protect machine from freezing.

15. To keep machine in best operating conditions, it is important you protect machine from freezing. Failure to protect machine from freezing could cause malfunction of the machine and result in death,

serious bodily injury, and/or property damage. Follow storage instructions specified in this manual.

WARNING



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

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

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

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

WARNING



Risk Of Injury. Hot Surfaces Can Cause Burns

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.

WARNING



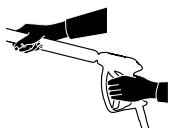
RISK OF ASPHYXIATION. USE THIS PRODUCT ONLY IN A WELL VENTILATED AREA.

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

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

12. To reduce the risk of injury, close supervision is necessary when a machine is used near children. Do not allow children to operate the pressure washer. This machine must be attended during operation.

WARNING



TRIGGER GUN KICKS BACK - HOLD WITH BOTH HANDS

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

13. Never make adjustments on machine while in operation.
14. Be certain all quick coupler fittings are secured before using pressure washer.

WARNING

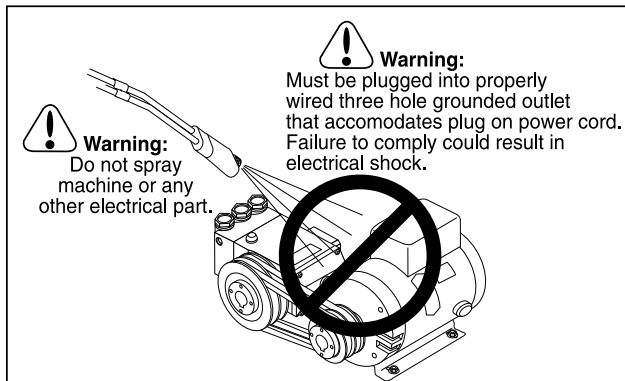


RISK OF INJURY FROM FALLS WHEN USING LADDER.

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.

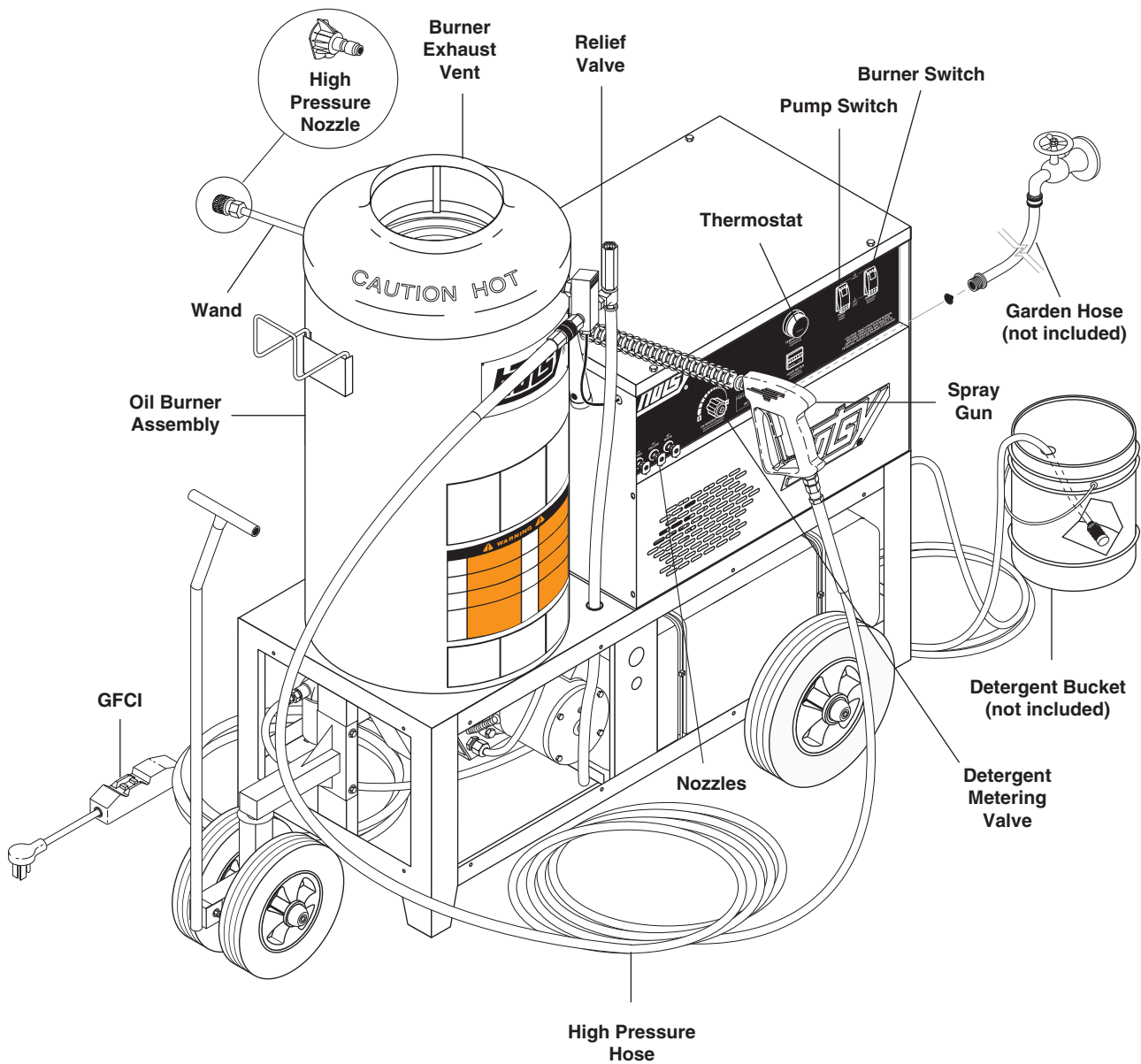
18. Manufacturer will not be liable for any changes made to our standard machines or any components not purchased from us.
19. The best insurance against an accident is precaution and knowledge of the machine.
20. Do not overreach or stand on unstable support. Keep good footing and balance at all times.
21. Do not operate this machine when fatigued or under the influence of alcohol, prescription medications, or drugs.

IMPORTANT SAFETY INFORMATION



Follow the maintenance instructions specified in the manual.

COMPONENT IDENTIFICATION



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

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

Detergent Metering Valve — Controls detergent mixture.

Wand — Must be connected to the spray gun.

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

Relief Valve — Ruptures when pressure exceeds 7000 psi.

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

Pressure Nozzle — Inserted into wand quick coupler to develop pressure

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

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

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

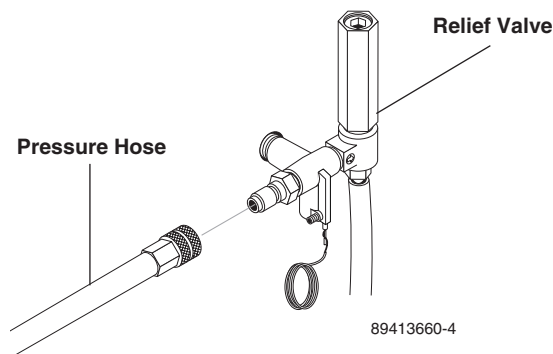
- Pressure Washer
- Pressure Hose
- Hose Hanger
- Wand
- Wand Holder
- Hose Reel Mount W/Hardware
- Trigger Gun
- Porta Gear Kit
- Operating Instructions and Parts Manual

Tools Required

- 10" Adjustable Crescent Wrenches (2 ea.)
- Blade Screwdriver

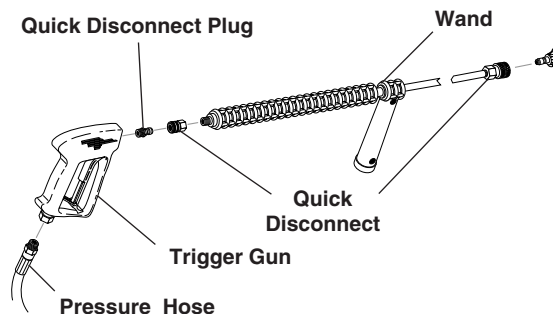
Pressure Hose

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



Wand Components

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

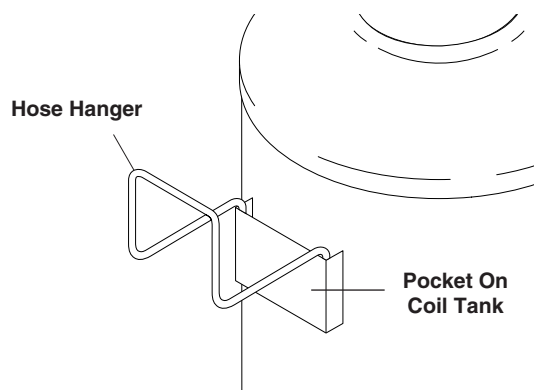


NOTE: The nozzle is not to be installed at this time.

2. Make sure that all plumbing connections are tight.

Hose Hanger

1. Install the hose hanger on the machine coil tank as shown.



INSTALLATION INSTRUCTIONS

Venting

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

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

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

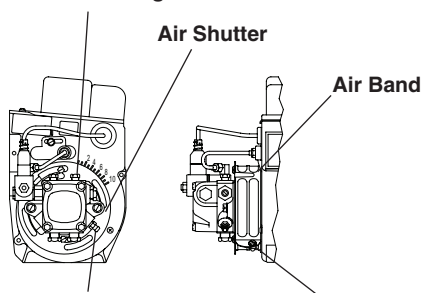
If the pressure washer is to be used in an enclosed area, a flue must be installed to vent burner exhaust to the outside atmosphere. Exhaust gases should not be vented into a wall, a ceiling, or a concealed space of a building. Be sure the flue is the same size as the burner exhaust vent on the pressure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

Oil Burner

Burner Air Adjustment: The oil burner is preset for operation at altitudes below 3000 feet. If operated at higher altitudes, it may be necessary to adjust the air band setting. Adjust the air band for a #1 or #2 smoke spot on the Bacharach scale.

To adjust, start machine and turn burner ON (refer to **Operation** for details). Loosen two locking screws found in the air shutter openings (refer to figure below) and close air shutter until black smoke appears from burner exhaust vent. Note air band position. Next, slowly open the air shutter until white smoke just starts to appear. Turn air shutter halfway back to the black smoke position previously noted. Tighten locking screws.

Air Shutter Locking Screw



Air Shutter Locking Screw Air Band Locking Screw

If the desired position cannot be obtained using only the air shutter, lock the air shutter in as close a position as can be obtained, then repeat the above procedure on the air band setting.

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

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

For additional burner component information, see assembly view. It is recommended that the oil burner be serviced yearly or as needed. Contact your local service center.

Water Supply

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

Electrical

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

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

WARNING: Always disconnect power before servicing your pressure washer.

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

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

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

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

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

INSTALLATION INSTRUCTIONS

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

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

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.

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

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

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

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

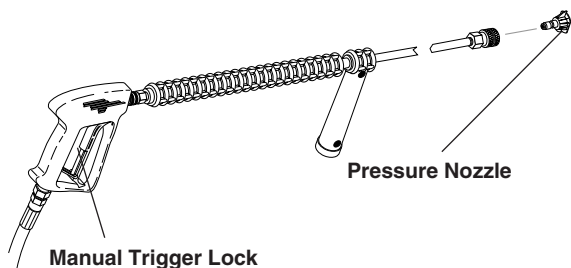
NE PAS UTILISER D'ESSENCE, DE PRODUITS DE VIDANGE NI D'HUILE CONTENANT DE L'ESSENCE OU DES SOLVENTS.

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

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

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

6. Install the pressure nozzle on end of wand, refer to figure below.



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 above. The trigger lock should be used whenever the trigger gun is not in use.

To Start

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

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

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

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

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

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

1. If equipped with a GFCI, test the GFCI using the reset and test procedures provided on the GFCI device. The GFCI must be tested with every use.
2. Turn ON water supply.
3. Hold wand firmly, release trigger of trigger gun and turn pump switch ON. Squeeze trigger of trigger gun and allow air to purge from system.
4. If HOT water is desired, adjust the thermostat to the proper temperature and turn burner switch ON. The burner will light immediately with a small puff of smoke. You may need to initially adjust your burner for peak performance. See **Oil Burner** section under **Installation**. If smoke continues, refer to the **Troubleshooting Guide** in this manual. When the trigger of the trigger gun is released or when the thermostat temperature setting is reached, the burner will automatically turn off.

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

OPERATION INSTRUCTIONS

To Clean

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

SHUTDOWN INSTRUCTIONS

To Stop

1. If detergents were used, draw clear water through the detergent line to purge detergent. Failure to do so may clog detergent injector valve.
2. If burner was used, turn OFF burner switch and allow pump to run cold water through coil for several minutes.
3. Turn pump switch OFF.
4. Turn water supply OFF.
5. Squeeze trigger gun open to relieve system pressure.

STORAGE INSTRUCTIONS

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

IMPORTANT: Machine must be stored indoors.

1. Protect from freezing by storing in a heated area, or by flushing the system with antifreeze (use an automotive engine antifreeze or windshield washer solvent to antifreeze). To flush the system fill the float tank with antifreeze and remove pressure nozzle from wand. Start the machine and allow it to run until antifreeze runs from the end of the wand. Place wand into float tank and circulate the solution through system

for several minutes. Open and close the trigger gun several times to circulate antifreeze through the unloader valve system. Also draw antifreeze through the detergent inlet line to antifreeze the detergent system. For added protection after antifreezing, disconnect the pressure hose from machine and remove the coil drain plug. After coil has drained, replace pressure hose and coil drain plug. If the pressure washer is not to be used for an extended length of time, it is recommended that the system be flushed with antifreeze for rust protection.

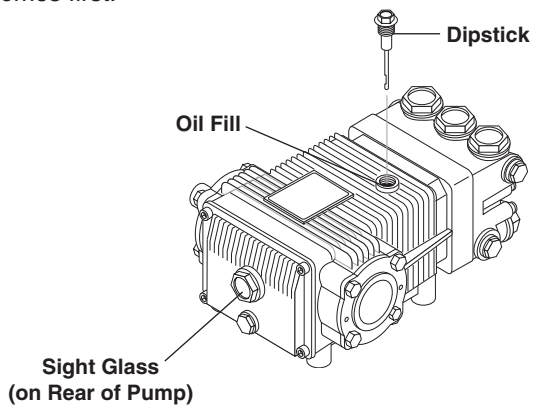
MAINTENANCE

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.*

IMPORTANT: *Machine must be stored indoors.*

Pump

Use Hotsy Pump Oil P/N 315068 or equivalent 30W non-detergent oil for pump crankcase. Crankcase must be filled to the full mark on the dipstick or to center of sight glass window found on the rear of the pump. During the break-in-period, make sure the oil is changed after the first 25 hours of operation. After that, replace oil every 3 months or 300 hours of operation, whichever comes first.



Proper Pump Care:

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

Relief Valve

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

Unloader Valve

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

Burner Fuel Filter

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

Heating Coil

Coil 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

PROBLEM	POSSIBLE CAUSE	SOLUTION
PRESSURE WILL NOT RUN	Pump switch in OFF position	Place switch in ON position.
	Power supply disconnected	Connect power supply.
	Fuse blown or circuit breaker tripped in electrical supply line	Replace fuse or reset circuit breaker. Use only fuses of adequate capacity.
	Motor circuit overload tripped	Reset pump switch.
PRESSURE RUNS BUT WON'T SPRAY.	Trigger of trigger gun released	Squeeze trigger.
	Water supply not turned on	Open water supply valve.
	Clogged pressure nozzle	Clean pressure nozzle opening.
LOW SPRAY PRESSURE AT NOZZLE	Inadequate water supply	Fully open faucet. Check for kinked or damaged hose. Use 5/8 inch minimum hose. Check for debris clogging inlet screen.
	Partially clogged or damaged pressure nozzle	Clean or replace.
	Air being drawn through detergent inlet line	Refill detergent container. Ensure that pick-up screen is fully immersed.
UNEVEN SPRAY PATTERN	Partially clogged or damaged nozzle	Clean or replace.
PRESSURE WASHER WILL NOT PRODUCE HOT WATER	Burner switch in OFF position	Place switch in ON position.
	Inadequate fuel supply	Refill fuel tank. Use only recommended fuels. Refer to Before Starting under Operation .
	Pump switch turned off	Pump must be running before burner will light.
	Inadequate water supply	Fully open faucet. Check for kinked or damaged hose. Use 5/8 inch minimum hose. Check for debris clogging inlet screen.
	Trigger of trigger gun released	Squeeze trigger. Water must be spraying for burner to light.
POOR OR NO DETERGENT FLOW	Inadequate detergent supply.	Refill detergent container. Ensure that pick-up screen is full immersed. Open metering valve.
	Detergent screen or hose clogged	Clean. Always start with a clean detergent container.
	Clogged detergent valve	Clean.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
POOR CLEANING	Improper detergent concentration or mixing	Mix detergent per manufacturer's instructions. Ensure that powdered detergents are fully dissolved.
	Wrong detergent for the application	Select appropriate detergent.
	Rinsing with hot water	A final rinse with cold water will reduce water spotting.

IMPORTANT

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

When ordering from your dealer, please provide the following:

Model Number: _____ **Release:** _____

Machine Serial Number: _____

Component Part Number: _____

Description: _____

900/1400 OIL-FIRED SERIES OPTIONAL EQUIPMENT

924889 8" Draft Regulator



**HOTSY LIMITED NEW PRODUCT WARRANTY
PRESSURE WASHERS
WHAT THIS WARRANTY COVERS**

All Hotsy pressure washers are warranted by Hotsy to the original purchaser to be free from defects in materials and workmanship under normal use, for the periods specified below. This Limited Warranty is subject to the exclusions shown below, is calculated from the date of the original purchase, and applies to the original components only. Any parts replaced under this warranty will assume the remainder of the part's warranty period.

SEVEN YEAR PARTS AND ONE YEAR LABOR WARRANTY:

Components manufactured by Hotsy, such as frames, handles, top and bottom wraps, float tanks, fuel tanks, belt guards, and internal components on the oil-end of HOTSYS manufactured pumps. General, AR, Liberty, Comet and swash and wobble plate pumps have a one year warranty. Heating coils have a five year warranty from date of original machine purchase.

ONE YEAR PARTS AND ONE YEAR LABOR WARRANTY:

All other components, excluding normal wear items as described below, will be warranted for one year on parts and labor. Parts and labor warranty on these parts will be for one year regardless of the duration of the original component manufacturer's part warranty.

WARRANTY PROVIDED BY OTHER MANUFACTURERS:

Motors, generators, and engines, which are warranted by their respective manufacturers, are serviced through these manufacturers' local authorized service centers. Hotsy is not authorized and has no responsibility to provide warranty service for such components.

WHAT THIS WARRANTY DOES NOT COVER

This warranty does not cover the following items:

1. Normal wear items, such as nozzles, spray guns, discharge hoses, wands, quick couplers, seals, filters, gaskets, O-rings, packings, pistons, pump valve assemblies, strainers, belts, brushes, rupture disks, fuses, pump protectors.
2. Damage or malfunctions resulting from accidents, abuse, modifications, alterations, incorrect installation, improper servicing, failure to follow manufacturer's maintenance instructions, or use of the equipment beyond its stated usage specifications as contained in the operator's manual.
3. Damage due to freezing, chemical deterioration, scale build up, rust, corrosion, or thermal expansion.
4. Damage to components from fluctuations in electrical or water supply.
5. Normal maintenance service, including adjustments, fuel system cleaning, and clearing of obstructions.
6. Transportation to service center, field labor charges, or freight damage.

WHAT YOU MUST DO TO OBTAIN WARRANTY SERVICE

In order to obtain warranty service on items warranted by Hotsy, you must return the product to your Authorized Hotsy Distributor, freight prepaid, with proof of purchase, within the applicable warranty period. If the product is permanently installed, you must notify your Authorized Hotsy Distributor of the defect. Your Authorized Hotsy Distributor will file a claim with Hotsy, who must subsequently verify the defect. In most cases, the part must be returned to Hotsy freight prepaid with the claim. For warranty service on components warranted by other manufacturer's, your Authorized Hotsy Distributor can help you obtain warranty service through these manufacturers' local authorized service centers.

LIMITATION OF LIABILITY

Hotsy's liability for special, incidental, or consequential damages is expressly disclaimed. In no event shall Hotsy's liability exceed the purchase price of the product in question. Hotsy makes every effort to ensure that all illustrations and specifications are correct, however, these do not imply a warranty that the product is merchantable or fit for a particular purpose, or that the product will actually conform to the illustrations and specifications. Our obligation under this warranty is expressly limited at our option to the replacement or repair at a service facility or factory designated by us, of such part or parts as inspection shall disclose to have been defective. **THE WARRANTY CONTAINED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.** Hotsy does not authorize any other party, including authorized Hotsy Distributors, to make any representation or promise on behalf of Hotsy, or to modify the terms, conditions, or limitations in any way. It is the buyer's responsibility to ensure that the installation and use of Hotsy products conforms to local codes. While Hotsy attempts to assure that its products meet national codes, it cannot be responsible for how the customer chooses to use or install the product. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

HOTSY

www.hotsy.com

If you are looking for replacement parts for your Hotsy, please contact your local dealer. You can find a dealer by calling Hotsy at 800-525-1976 or by visiting www.hotsy.com.



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