

LANDA[®] SEHW

OPERATOR'S MANUAL

■ SEHW6-3500



For technical assistance or the Landa Dealer nearest you,
consult our web page at www.landa.com

8.913-932.0

CONTENTS

Introduction & Important Safety Information	3-5
Component Identification	6
Assembly Instructions	7
Operation Instructions	8
Detergents & General Cleaning Techniques	9
Shut Down Instructions	10
Storage	10
Troubleshooting	11-14
Preventative Maintenance	15-16
Maintenance & Service	17-18
Coil Removal & Installation	18-19
Exploded View	20-21
Exploded View Parts List	22-23
Float Tank Assembly & Parts List	24-25
Control Panel Assembly & Parts List	26-27
Hose, Spray Gun & Wand Assembly & Parts List	28
Specifications	29-31
LT Pump Exploded View and Parts List	32-33
VRT 3 Unloader	34
VB8 Unloader	35

Warranty

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.

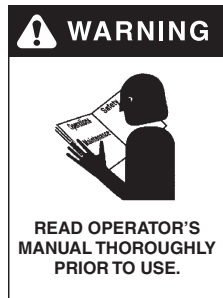
The operator must know how to stop the machine quickly and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.

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
READ OPERATOR'S MANUAL THOROUGHLY PRIOR TO USE.

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 WATER SPRAY AWAY FROM ELECTRICAL WIRING.

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.

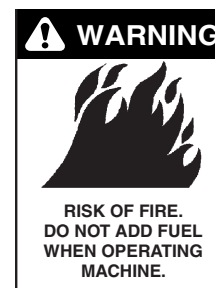


WARNING
RISK OF EXPLOSION: OPERATE ONLY WHERE OPEN FLAME OR TORCH IS PERMITTED

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 OPERATING MACHINE.

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



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.

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.

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 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.

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

WARNING



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

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

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

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

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

WARNING



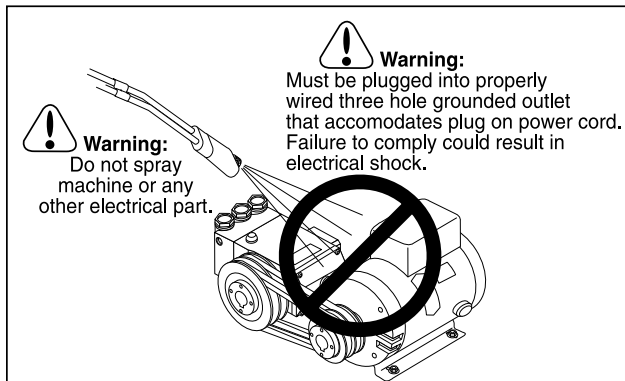
RISK OF INJURY FROM FALLS WHEN USING LADDER.

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.

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

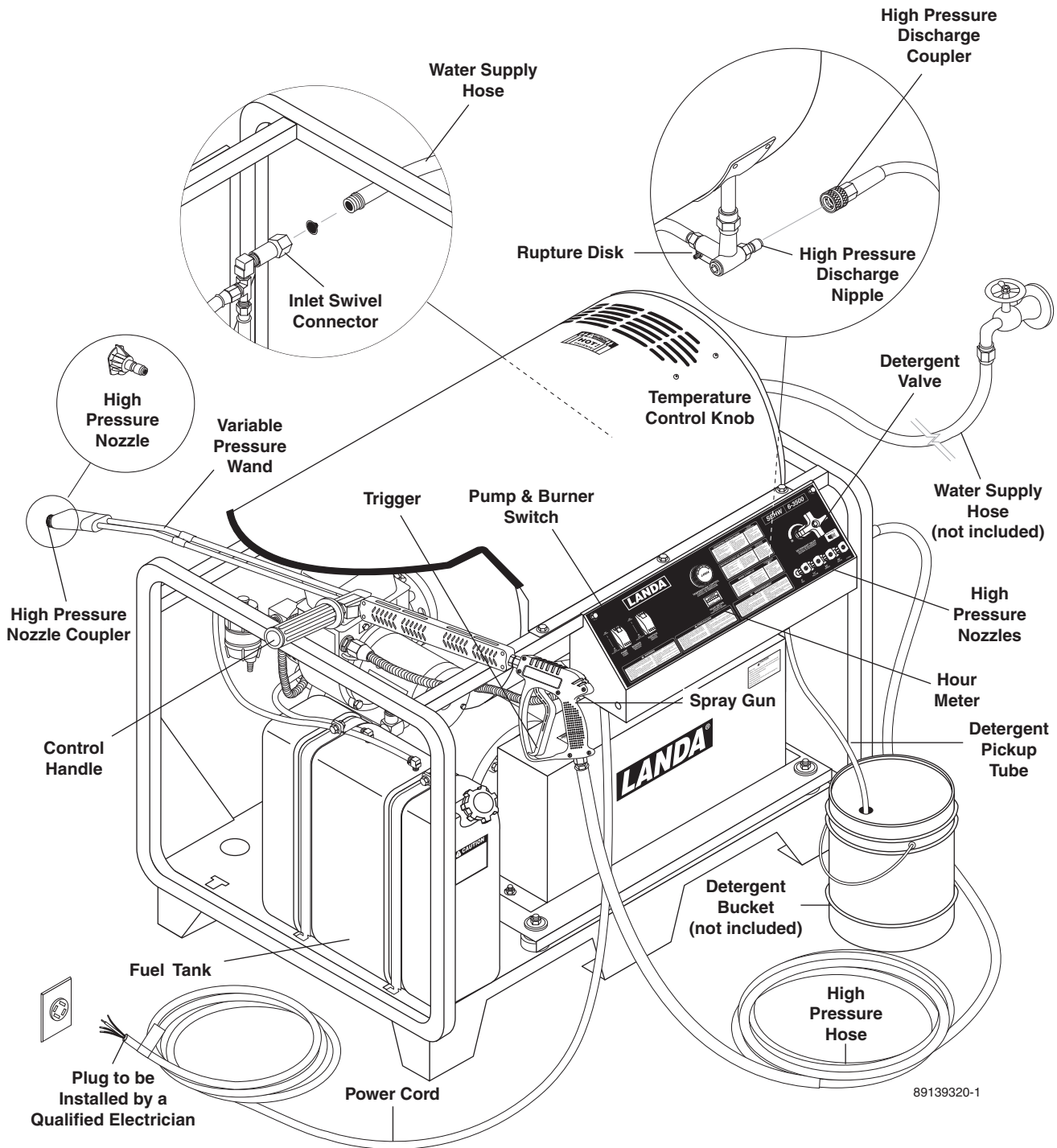
21. Do not operate this machine when fatigued or under the influence of alcohol, prescription medications, or drugs.

IMPORTANT SAFETY INFORMATION



Follow the maintenance instructions specified in the manual.

COMPONENT IDENTIFICATION



Pump — Delivers a specific gpm to the high pressure nozzle which develops pressure (Not Shown).

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

Detergent Valve — Allows you to siphon and mix detergents.

Wand — Must be connected to the spray gun.

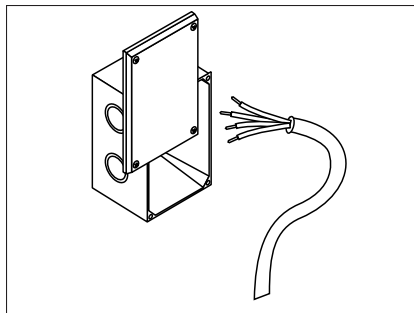
High Pressure Hose — Connect one end to water pump high pressure discharge nipple and the other end to spray gun.

Rupture Disk — Secondary pressure release in the unlikely event the unloader valve fails.

Unloader Valve — Safety device which, when the spray gun closes, prevents over pressurization (Not Shown).

NOTE: If trigger on spray gun is released for more than 2 minutes, water will leak from the pump protector. Warm water will discharge from pump protector onto floor. This system prevents internal pump damage.

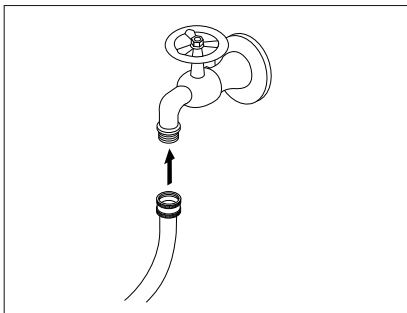
ASSEMBLY INSTRUCTIONS



STEP 1: Place machine in a convenient location providing ample support, drainage and room for maintenance.

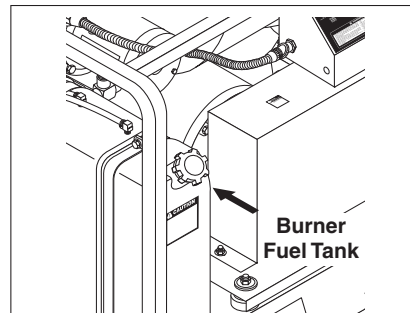
Location of machine is important. Avoid installing near combustible material or in poorly ventilated areas. Machines are intended to be protected from the outside environment.

Electrical connection to machine should be the proper voltage, phase and amperage. See specifications for particular model. A power plug is not provided to ensure proper connection by an electrician.



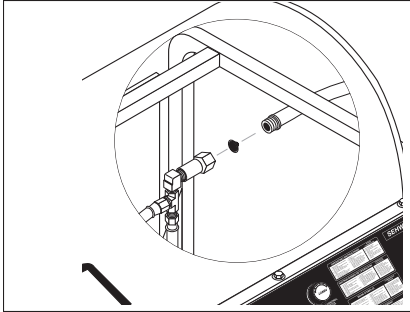
STEP 2: Water source for machines should be supplied by a 5/8" I.D. garden hose with a city water pressure of not less than 30 PSI. If the water supply is inadequate, or if the garden hose is kinked, the machine will run very rough and the burner will not fire.

CAUTION: Use only fresh water in pressure washer.

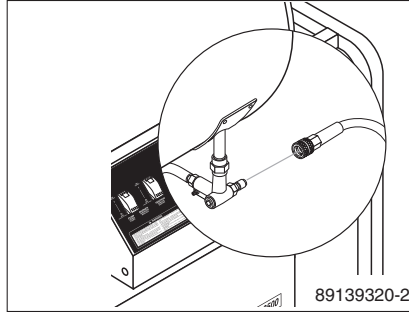


STEP 3: Fill fuel tank with proper fuel.

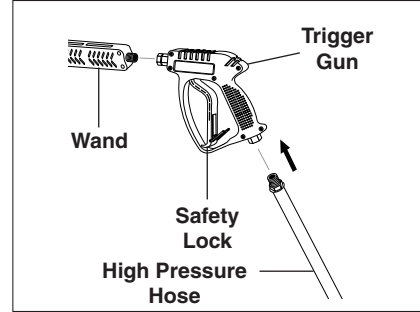
OPERATION INSTRUCTIONS



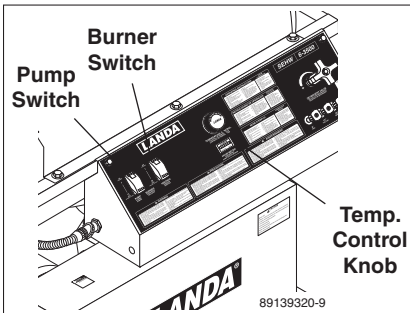
STEP 1: Read safety, installation and preventative maintenance instructions before starting machine. Connect the water supply hose to the float tank inlet swivel connector and turn on water supply.



STEP 2: Connect the high pressure hose quick coupler to the discharge nipple by sliding quick coupler collar back and inserting the quick coupler onto the coupler nipple and pushing the quick coupler collar forward to secure it.



STEP 3: Attach wand to spray gun using teflon tape on threads to prevent leakage. Attach swivel connector on discharge hose to spray gun using teflon tape on threads. Attach swivel connector on high pressure hose to spray gun using teflon tape on threads.

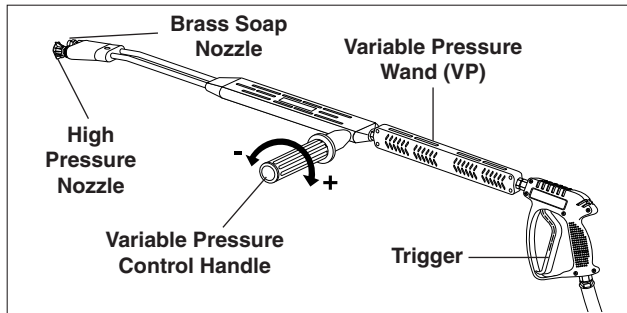


STEP 4A: Grip spray gun and wand handle securely.

Press the pump switch "ON" and then pull trigger on the spray gun to activate pressure switch which starts machine. (For auto start machines only.)

When a steady stream of water flows from the spray gun and wand, turn the thermostat knob to the 200° mark, then push the burner switch. (Burner will light automatically.)

STEP 4B: For time delay shut down machines simply press pump switch "ON" and the machine will start. Before installing pressure nozzle. Run machine allowing water to flush through the system until clear. Then insert high pressure nozzle.



STEP 5: With spray nozzle pointed away from you or anybody else, press trigger on spray gun to obtain pressurized cold water spray.

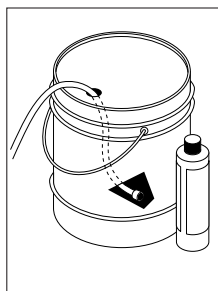
Selection of high or low pressure is accompanied by turning the handle. **NOTE:** High pressure nozzle must be inserted at end of wand to obtain high pressure. To apply soap read operator's manual. Note: Engage safety latch when inserting high pressure nozzle to prevent from triggering gun.

DETERGENTS & GENERAL CLEANING TECHNIQUES

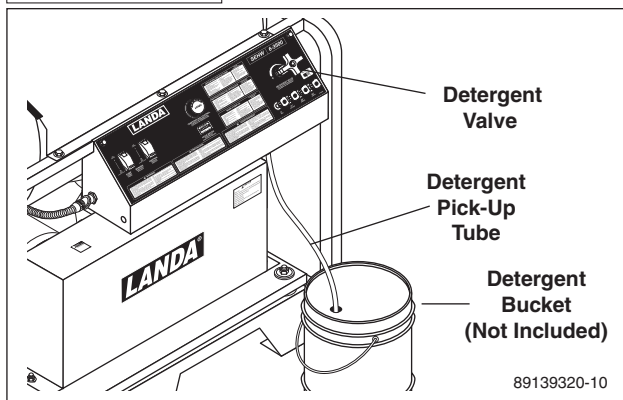
WARNING



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

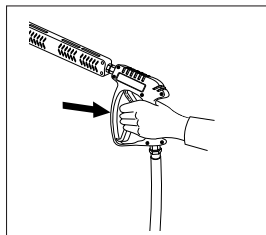


STEP 1: Use detergent designed specifically for pressure washers. Household detergents could damage the pump. Prepare detergent solution as required by the manufacturer. Fill a container with pressure washer detergent. Place the filter end of detergent suction tube into the detergent container.



STEP 2: Apply safety latch to spray gun trigger. Secure black detergent nozzle into quick coupler. **NOTE:** Detergent cannot be applied using the Yellow nozzle.

STEP 3: With the motor running, pull trigger to operate machine. Liquid detergent is drawn into the machine and mixed with water. Apply detergent to work area. Do not allow detergent to dry on surface.



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

THERMAL PUMP PROTECTION

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

water onto the ground. This thermal device prevents internal damage to the pump.

CLEANING TIPS

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

Recommendations:

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

CAUTION - Never use:

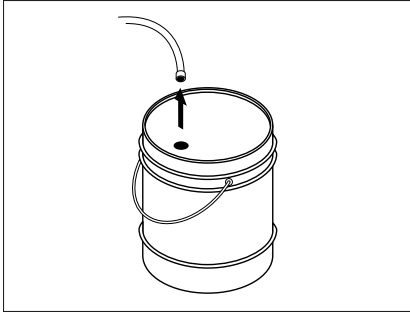
- Bleach, chlorine products and other corrosive chemicals
- Liquids containing solvents (i.e., paint thinner, gasoline, oils)
- Tri-sodium phosphate products
- Ammonia products
- Acid-based products

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

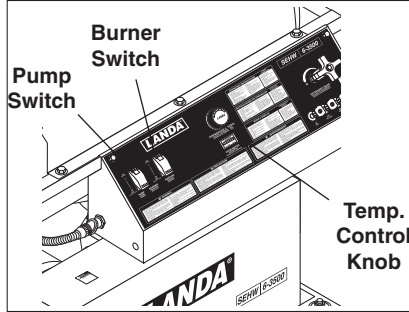
RINSING

It will take a few seconds for the detergent to clear. Apply safety latch to spray gun. Remove black soap nozzle from the quick coupler. Select and install the desired high pressure nozzle. **NOTE:** You can also stop detergent from flowing by simply removing detergent siphon tube from bottle.

SHUTDOWN INSTRUCTIONS

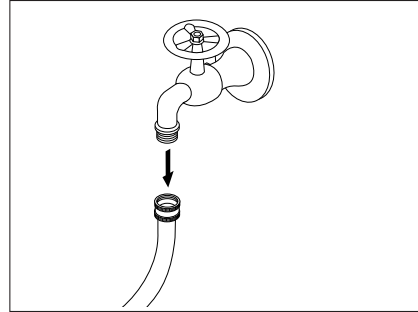


STEP 1: Place detergent line in a bucket of clear water allowing detergent to be flushed from system. Then turn detergent valve off.

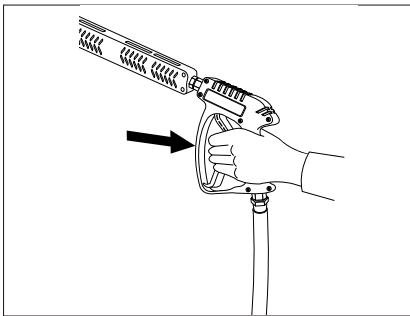


STEP 2: Push burner switch off and pull spray gun allowing water to flow which will cool down the heating coil.

After water has cooled, release the trigger on the spray gun which will activate a timer to shut the machine off after one minute. Turn the pump switch off if the machine is going to be left unattended.



STEP 3: Turn water off and remove water supply hose.



STEP 4: Open spray gun to relieve remaining pressure.

STORAGE



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

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



After Extended Storage

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

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
LOW OPERATING PRESSURE	Faulty pressure gauge	Test with 2nd gauge. If bad install new gauge.
	Insufficient water supply	Use larger garden hose; clean water filter at inlet. Clean screen inside float tank.
	Old, worn or incorrect spray nozzle	Match nozzle number to machine and/or replace with new nozzle.
	Belt slippage	Tighten or replace; use correct belt.
	Plumbing or hose leak	Check plumbing system for leaks. Retape leaks with teflon tape.
	Faulty or mis-adjusted unloader valve (Where applicable)	Adjust unloader for proper pressure. Install repair kit when needed. Test PSI with unloader removed, taking pressure directly off the pump.
	Worn packing in pump	Install new packing kit.
	Fouled or dirty inlet or discharge valves in pump	Clean inlet and discharge valves.
	Worn inlet or discharge valves	Replace with valve kit.
	Low power supply	Check voltage of building and compare with requirements. Obtain a different power source.
	Detergent metering valve left open sucking air, or faulty metering valve	Close and/or replace metering valve.
BURNER WILL NOT LIGHT	Little or no fuel	Fill tank with fuel.
	Improper fuel or water in fuel	Drain fuel tank and fill with proper fuel.
	Plugged fuel filter	Replace as needed.
	Misadjusted burner air bands	Readjust air bands for clean burn.
	Little or no fuel pressure from fuel pump	Increase fuel pressure to specification on fuel pump and/or replace fuel pump.
	Faulty burner transformer	Test transformer for proper arc between contacts. Replace as needed.
	Disconnected or short in electrical wiring	All wire contacts should be clean and tight. No breaks in wire.
	Burner motor thermal protector tripped	If tripped, check voltage, connections, and extensions for cause. Check fuel pump shaft rotation for binding causing motor to overheat.
	Flex-coupling slipping on fuel pump shaft or burner motor shaft	Replace if needed.
	On-Off switch defective	Check continuity through burner switch.
	Heavy sooting on coil and burner, can cause interruption of air flow and shorting of electrodes	Clean as required.
	Improper electrode setting	Clean and set according to diagram in Operators Manual.
	Fuel not reaching combustion chamber	Check fuel pump for proper flow. Check solenoid flow switch on units with spray gun control, for proper on-off fuel flow control.
	Clogged burner nozzle	Replace.
	Water not flowing through unloader	Open spray gun to allow water to flow.
	Flow switch malfunction	Remove test for continuity and replace as needed.
Fuel solenoid malfunction	Replace if needed	

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
MACHINE SMOKES	Improper fuel or water in fuel	Drain tank and replace contaminated fuel.
	Improper air adjustment	Readjust air bands on burner assembly.
	Low fuel pressure	Adjust fuel pump pressure to specification on fuel pump.
	Air leaks in fuel lines	Check fuel lines for leaks or air bubbles. Tighten or replace as needed.
	Plugged or dirty burner nozzle	Replace.
	Faulty burner nozzle spray pattern	Replace nozzle.
	Heavy accumulation of soot on coils and burner assembly	Remove coils and burner assembly. Clean thoroughly.
	Misaligned electrode	Realign electrodes to specifications.
	Obstruction in smoke stack	Check for insulation blockage or other foreign objects.
LOW WATER TEMPERATURE	Improper fuel or water in fuel	Drain fuel tank and replace with proper fuel.
	Low fuel pressure	Increase fuel pressure.
	Weak fuel pump	Check fuel pump pressure. Replace pump if needed.
	Fuel filter partially clogged	Replace as needed.
	Soot build up on coils	Clean coils with soot remover.
	Lime build up in coils	Clean inside of coils with coil clean.
	Improper burner nozzle	See parts list.
WATER TEMPERATURE TOO HOT	Incoming water to machine warm or hot	Lower incoming water temperature.
	Fuel pump pressure too high	See specifications on fuel pump for proper fuel pressure.
	Fuel pump defective	Replace fuel pump.
	Detergent line sucking air	Tighten all clamps. Check detergent line for holes.
	Defective high limit switch	Replace.
	Incorrect fuel nozzle size	See specifications for proper size.
	Insufficient water supplied	Check G.P.M. to machine.
	Restricted water flow	Check nozzle for obstruction, proper size.
PUMP MOTOR STOPS AFTER A FEW MINUTES OF OPERATION, OR STARTS SLOW	Insufficient voltage	Use heavier drop cord and check voltage at receptacle. Check name plate for amperage draw.
	Plugged nozzle	Remove and clean nozzle. Turn on water pump and flush lines, replace nozzle.
	Wrong spray nozzle	See serial plate for minimum nozzle size.
	Automatic overload switch tripped	Allow motor to cool - switch will automatically reset.
	Motor wet	Allow to dry.
	Short in electrical wiring	Wire contacts should be clean and tight. No breaks in wires.
	Coil liming up causing excessive pressure	See section on Preventative Maintenance.
	Water pump low or out of oil causing pump to bind up	Fill to correct level

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
RELIEF VALVE OUT LEAKS OR SPRAYS WATER	Spray nozzle plugged	Remove nozzle and clean out obstruction.
	Mis-adjusted or defective relief valve	Adjust or replace as needed.
	Scale or dirt plugging inside of coils	See "Preventative Maintenance Cleaning of Coil".
DETERGENT NOT DRAWING	Air leak	Tighten all clamps. Check detergent lines for holes.
	Detergent metering valve packing not tight or packing worn	Tighten nut. Replace valve or packing.
	Filter screen on detergent suction hose plugged	Clean or replace.
	Dried up detergent plugging metering valve or injector	Clean and flush.
	Restrictor in float tank missing	Install restrictor.
	High viscosity of detergent	Dilute detergent to specifications.
MACHINE WILL NOT DRAW UP DETERGENT	Clamps holding detergent lines are loose	Tighten clamps.
	Hole in detergent line(s)	Repair hole.
	Strainer basket plugged	Remove and clean.
BURNER MOTOR WILL NOT RUN	Overload protector tripped	Push reset button.
	Fuel pump seized	Replace fuel pump.
	Burner fan loose or misaligned	Position correctly, tighten set screw.
	Defective control switch	Replace switch.
	Loose wire	Check and replace or tighten wiring.
	Defective burner motor	Replace motor.
EXCESSIVE VIBRATION IN DELIVERY LINE	Irregular function of check valves, metering valves	Check and replace if necessary.
TEMPERATURE RELIEF VALVE LEAKS WATER (PUMP PROTECTOR)	Spray gun in OFF position with machine operating for an extended period of time	Open spray gun to cool circulating water.
	Relief valve defective	Replace valve.
	Particle between valve and seat	Remove internal parts and clean.
BURNER STAYS ON WHEN SPRAY GUN IS IN OFF POSITION	Fuel pump pressure too high	Lower fuel pressure to specifications.
	Flow switch malfunction	Test for continuity and replace as needed.
	Fuel solenoid defective	Replace fuel solenoid.
PUMP RUNNING NORMALLY BUT PRESSURE LOW	Pump sucking air	Check water supply and possibility of air seepage.
	Valves sticking	Check and clean or replace if necessary.
	Unloader valve seat faulty	Check and replace if necessary.
	Nozzle incorrectly sized	See serial plate for minimum nozzle size.
	Worn piston packing	Check and replace if necessary

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
PUMP NOISY	Air in suction line	Check water supply and connections on suction line.
	Broken or weak inlet or discharge valve springs	Check and replace if necessary.
	Excessive temperature of liquid	Reduce to below 60°C (140°F).
	Foreign matter in valves	Check and clean if necessary.
	Worn bearings	Check and replace if necessary.
PRESENCE OF WATER IN OIL	Oil seal worn	Check and replace if necessary.
	High humidity in air	Check and change oil twice as often.
	Piston packing worn	Check and replace if necessary.
WATER DRIPPING FROM UNDER PUMP	Piston packing worn	Check and replace if necessary.
	O.R. Plunger retainer worn	Check and replace if necessary.
	Cracked ceramics	Check and replace if necessary.
OIL DRIPPING	Oil seal worn	Check and replace if necessary.
	Cracked manifold	Check and replace if necessary.

PREVENTATIVE MAINTENANCE

This pressure washer was produced with the best available materials and quality craftsmanship. However, you as the owner have certain responsibilities for the correct care of the equipment. Attention to regular preventative maintenance procedures will assist in preserving the performance of your equipment. Contact your Landa dealer for maintenance. Regular preventative maintenance will add many hours to the life of your pressure washer. Perform maintenance more often under severe conditions.

MAINTENANCE SCHEDULE		
Pump Oil	Inspect	Oil level daily
	Change	After first 50 hours, then every 500 hours or annually
Check and Tighten Belts		Every 3 months
Remove Burner Soot		Annually
Burner Adjustment/Cleaning		Annually
Replace Burner Nozzle		Annually
Descale Coil		Annually (More often if required)
Replace High Pressure Nozzle		Every 6 months
Replace Quick Couplers		Annually
Clean Water Screen/Filter		Weekly
Replace HP Hose		Annually (If there are any signs of wear)
Grease Motor		Every 10,000 hours
Check Fuel Filter		Every 3 months
Check Safety Controls		Daily

OIL CHANGE RECORD

Date Oil Changed Month/Day/Year	Estimated Operating Hours Since Last Oil Change

Date Oil Changed Month/Day/Year	Estimated Operating Hours Since Last Oil Change

PREVENTATIVE MAINTENANCE

1. Use clean fuel — kerosene, No. 1 home heating fuel, or diesel. Clean or replace fuel filter every 100 hours of operation. Avoid water contaminated fuel as it will cause the fuel pump to seize. De-soot coils monthly or use an additive if diesel is being used.
2. Check to see that water pump is properly lubricated (see pump lubrication below).
3. Follow winterizing procedures to prevent freeze damage to pump and coils.
4. Always flush detergent from system after use.
5. If water is known to be high in mineral content, use a water softener on your water system or use a Landa recognized coil cleaning detergent.
6. Do not allow acidic, caustic or abrasive fluids to be pumped through system.
7. Always use high grade quality Landa cleaning detergents.
8. Never run pump dry for extended periods of time.
9. Periodically delime coils as per instructions.
10. If machine is operated with smoky or eye-burning exhaust, coils will soot up, preventing water from reaching maximum operating temperature. (See section on Burner Adjustments).

MAINTENANCE & SERVICE

Pump Lubrication:

Use only SAE 30 weight non-detergent oil. Change oil after first 50 hours of use. Thereafter, change oil every three months or at 500 hour intervals. Oil level should be checked through use of dipstick found on top of pump or red dot visible through oil gauge window. Oil should be maintained at that level.

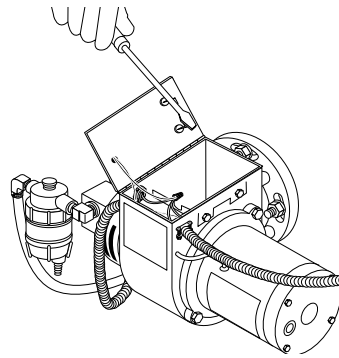
Fuel:

Use clean fuel oil that is not contaminated with water and debris. Use kerosene, No. 1 home heating fuel or diesel. Drain fuel tank and replace fuel filter every 100 hours of operation.

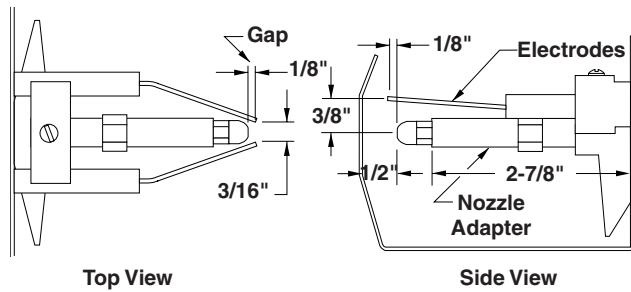
Ignition Circuit:

Periodically inspect wires, spring contact and electrodes for condition, security and proper spacing. Transformer test: **(CAUTION 10,000 VOLTS)** use defect free insulated screwdriver and keep fingers off blade! Lay blade across one contact: OK if arc will span 1/2" between end of blade and other contact. (See illustration.)

TRANSFORMER CHECK

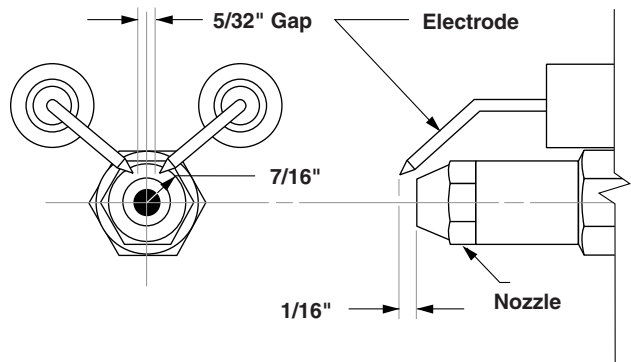


ELECTRODE SETTING: WAYNE



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

ELECTRODE SETTING: BECKETT



Fuel Control System:

These machines utilize a fuel solenoid valve located on the fuel pump to control the flow of fuel to the combustion chamber. This solenoid valve, which is normally closed, is activated by a flow switch when water is flowing through it. When an operator releases the trigger on the spray gun, the flow of water through the flow switch stops, turning off the current to the fuel solenoid. The solenoid then closes, shutting off the supply of fuel to the combustion chamber. Controlling the flow of fuel in this way allows for an instantaneous burn or no burn situation, thereby eliminating high and low water temperatures, and combustion smoke normally associated with machines incorporating a spray gun.

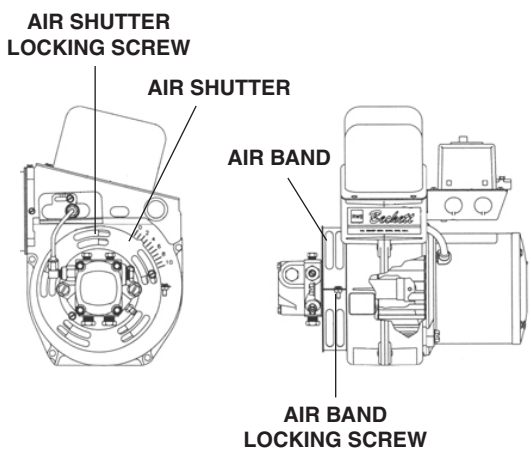
MAINTENANCE & SERVICE

CAUTION: Periodic inspection is recommended to insure that the fuel solenoid valve functions properly. This can be done by operating the machine and checking to see that when the trigger on the spray gun is in the off position, the burner is not firing.

Fuel Pressure Adjustment:

To adjust fuel pressure, turn the pressure adjusting screw clockwise to increase, counterclockwise to decrease. Do not exceed 200 psi. **NOTE:** When changing fuel pump, a by-pass plug must be installed in return line port or fuel pump will not prime. (See illustration)

Air Adjustment:



The oil burner on this machine is preset for operation at altitudes below 1000 feet. If operated at higher altitudes, it may be necessary to adjust the air band setting. Adjust air band for a #1 or #2 smoke spot on the Bacharach scale. A one-time initial correction for your location will pay off in economy, performance, and extended service life. If a smoky or eye-burning exhaust is being emitted from the stack, two things should be checked. First, check the fuel to be certain that kerosene or No. 1 home heating fuel is being used. Next, check the air adjustment on the burner. An oily, smoky fire indicates a lack of air and the air band should be moved to allow the air to flow through the burner. Sharp eye-burning fumes indicate too much air flowing through the combustion chamber. The air band should be readjusted to allow less air to flow through the burner.

To adjust: start machine and turn burner ON. Loosen two locking screws found in the air shutter openings (refer to illustration on page 8) 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.

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.

Burner Nozzle:

Keep the tip free of surface deposits by wiping it with a clean, solvent-saturated cloth, being careful not to plug or enlarge the nozzle. For maximum efficiency, replace the nozzle each season.

Rupture Disk:

If pressure from pump or thermal expansion should exceed safe limits, the rupture disk will burst, allowing high pressure to be discharged through hose to ground. When disk ruptures it will need to be replaced.

Cleaning of Coils:

In alkaline water areas, lime deposits can accumulate rapidly inside the coil pipes. This growth is increased by the extreme heat build up in the coil. The best preventative for liming conditions is to use high quality cleaning detergents. In areas where alkaline water is an extreme problem, periodic use of Landa Deliming Powder (Landa Part #9-028008) will remove lime and other deposits before coil becomes plugged. (See Deliming Instructions for use of Landa Deliming Powder.)

Deliming Coils:

Periodic flushing of coils is recommended.

- Step 1 Fill the float tank with 4 gallons of water, then add 1 lb. of deliming powder. Mix thoroughly.
- Step 2 Remove nozzle from the wand assembly and put the wand and spray gun into float tank. Attach a nylon stocking to the end of the wand to collect debris.
- Step 3 Turn pump switch on, allowing solution to be pumped through coils and back into the float tank. Solution should be allowed to circulate 2 - 4 hours.
- Step 4 After circulating solution, clean and drain float tank and flush entire system with fresh water. Replace nozzle in wand.

Spray Nozzles:

Each machine is equipped with one spray nozzle. Different spray nozzles are calibrated for each machine depending on the flow and pressure of that particular model. Spray nozzles vary in bore size and angle of spray. Popular spray angles are 0°, 15°, 25°, 40°. When ordering, please specify size and angle of nozzle. Nozzle size for each machine is located on the serial plate.

MAINTENANCE & SERVICE

Unloader Valve:

The unloader valve traps pressure in the line when the spray gun is closed. Machines with unloader valves are preset and tested at the factory before shipping. Tampering with the factory setting may cause personal injury and/or property damage, and will void the manufacturer's warranty. Occasional adjustment of the unloader may be necessary to maintain correct pressure. Consult your local Landa Dealer for the correct procedure in adjusting the unloader valve.

Winterizing Procedure:

Damage due to freezing is not covered by warranty. Adhere to the following cold weather procedures whenever the washer must be stored or operated outdoors under freezing conditions.

During winter months, when temperatures drop below 32°F, protecting your machine against freezing is necessary. Siphoning a small amount of antifreeze into the system is recommended. This is done by pouring a 50/50 mix of antifreeze and water into the float tank and then siphoning 100% antifreeze through the detergent line with the pump on. If compressed air is available, an air fitting can be screwed into float tank strainer fitting and, by injecting compressed air, all water will be blown out of the system.

Low Pressure Diagnosis:

Refer to Troubleshooting Chart for low pressure. If, by referring to the chart, the trouble is found to be either the unloader or pump, your next step is to determine which is the problem. This can be done by eliminating the unloader from the system and attaching the discharge hose directly to the pump. If high pressure is present, then the unloader needs repairing.

CAUTION: *When using this procedure to test components, keep spray gun open at all times.*

Removal of Soot and Heating Coil:

In the heating process, fuel residue in the form of soot deposits may develop between the heating coil pipe and block air flow which will affect burner combustion. When soot has been detected on visual observation, the soot on the coil must be washed off after following the coil removal steps which follow.

Coil Removal:

Removal of the coil, because of freeze breakage or to clean soot from it, can be done quickly and easily.

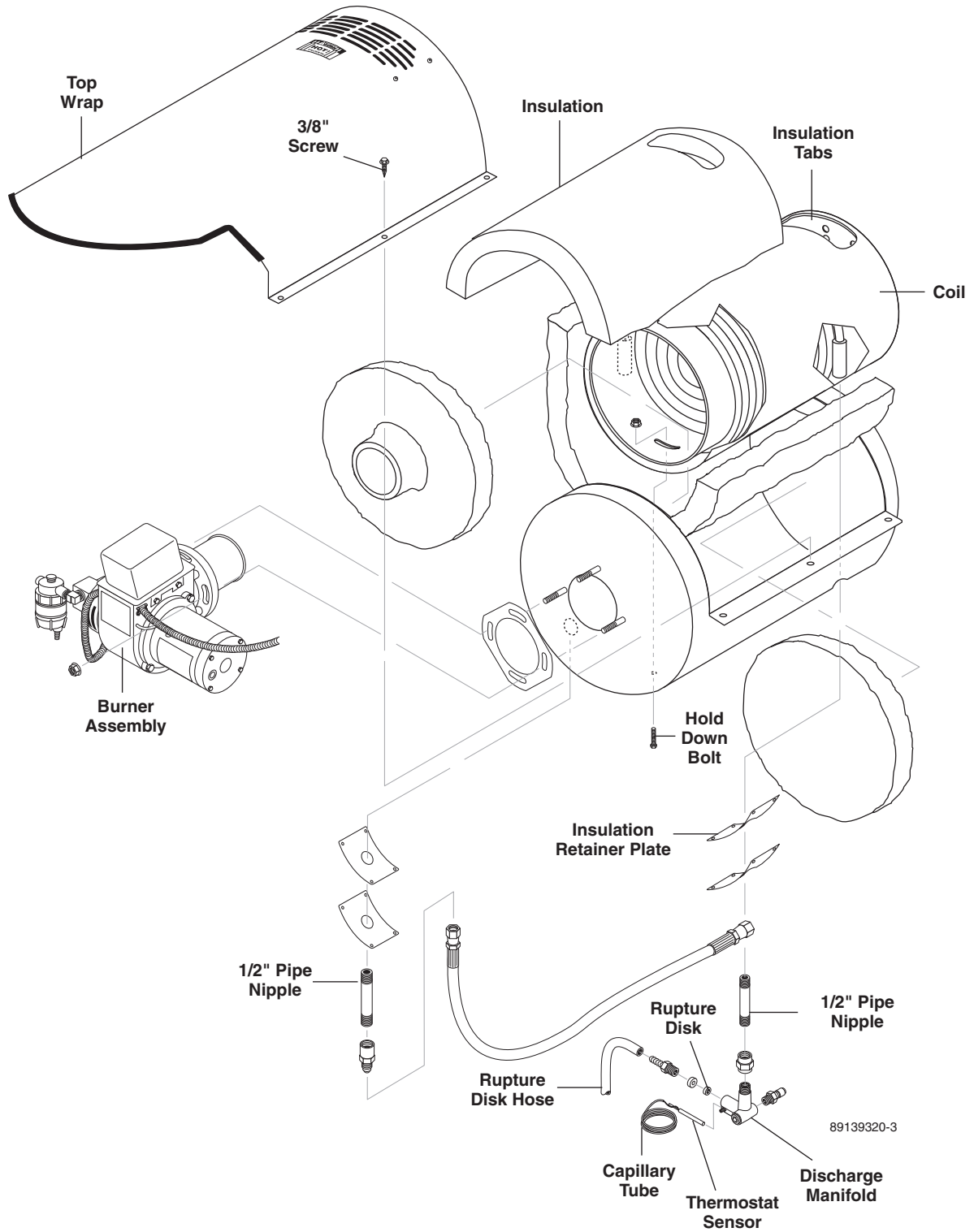
1. Disconnect hose from pump to inlet side of the coil.
2. Carefully disconnect thermostat sensor, making sure you do not crimp capillary tube.
3. Remove all the fittings from the inlet and discharge side of coil.
4. Remove the burner assembly from the combustion chamber.
5. Remove the 3-3/8" bolts from each side of coil and tank assembly (these bolts are used to fasten tank and handles to chassis).
6. Remove the two bolts which are underneath the bottom wrap (to keep the coil from moving).
7. Remove tank top wrap exposing insulation and coil.
8. Bend back insulation tabs.
9. Carefully fold back the insulation and remove insulation retainer plates and coil.
10. Replace or repair any insulation found to be torn or broken.
11. To reinstall new or cleaned coil, reverse steps 9 through 1.

High Limit Hot Water Thermostat:

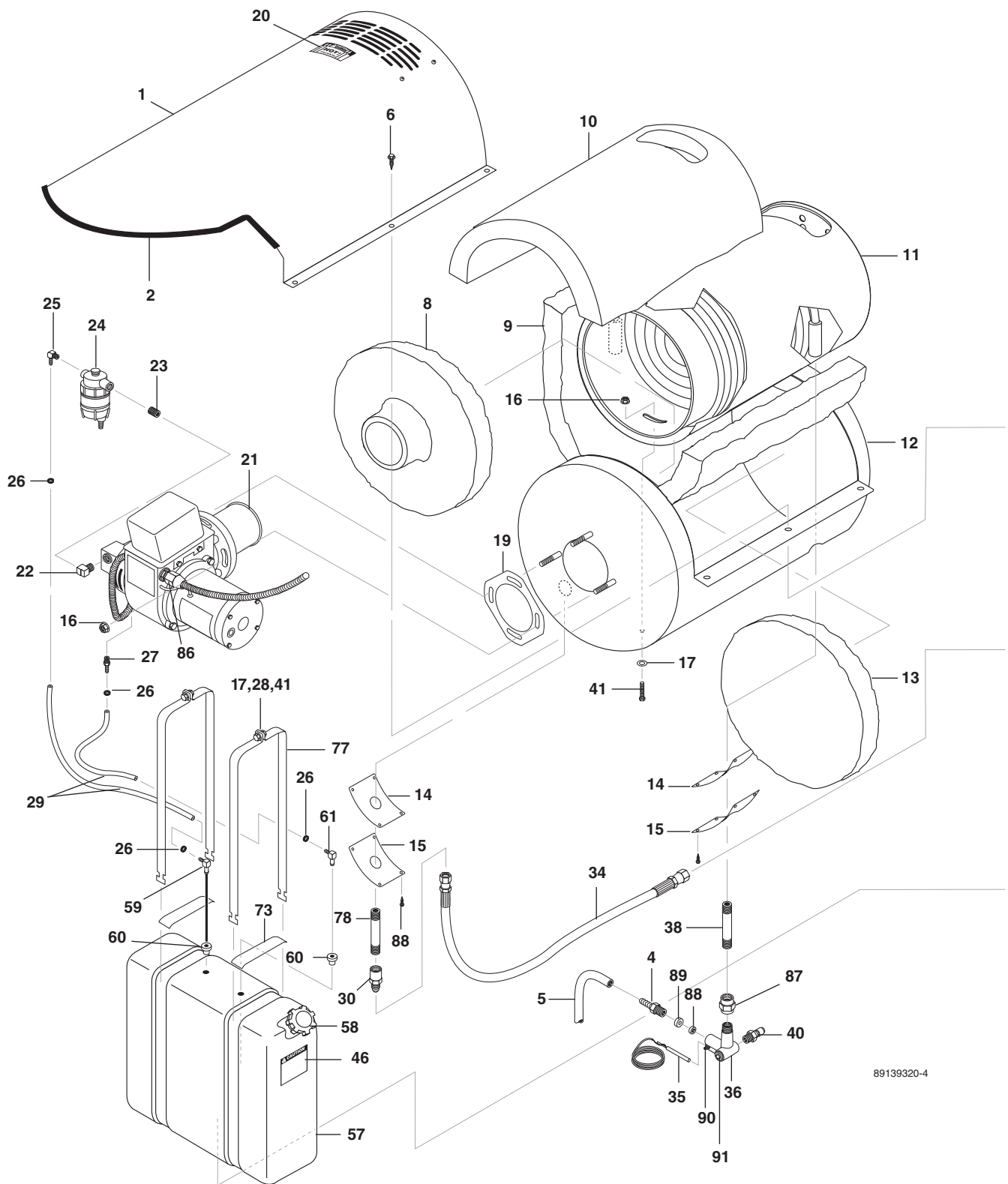
For safety, each machine is equipped with a high limit control switch. In the event the temperature of the water should exceed its operating temperature the high limit control will turn the burner off until the water cools.

CAUTION: *The thermostat uses a capillary tube. Do not bend or strike with any object.*

COIL REMOVAL & INSTALLATION

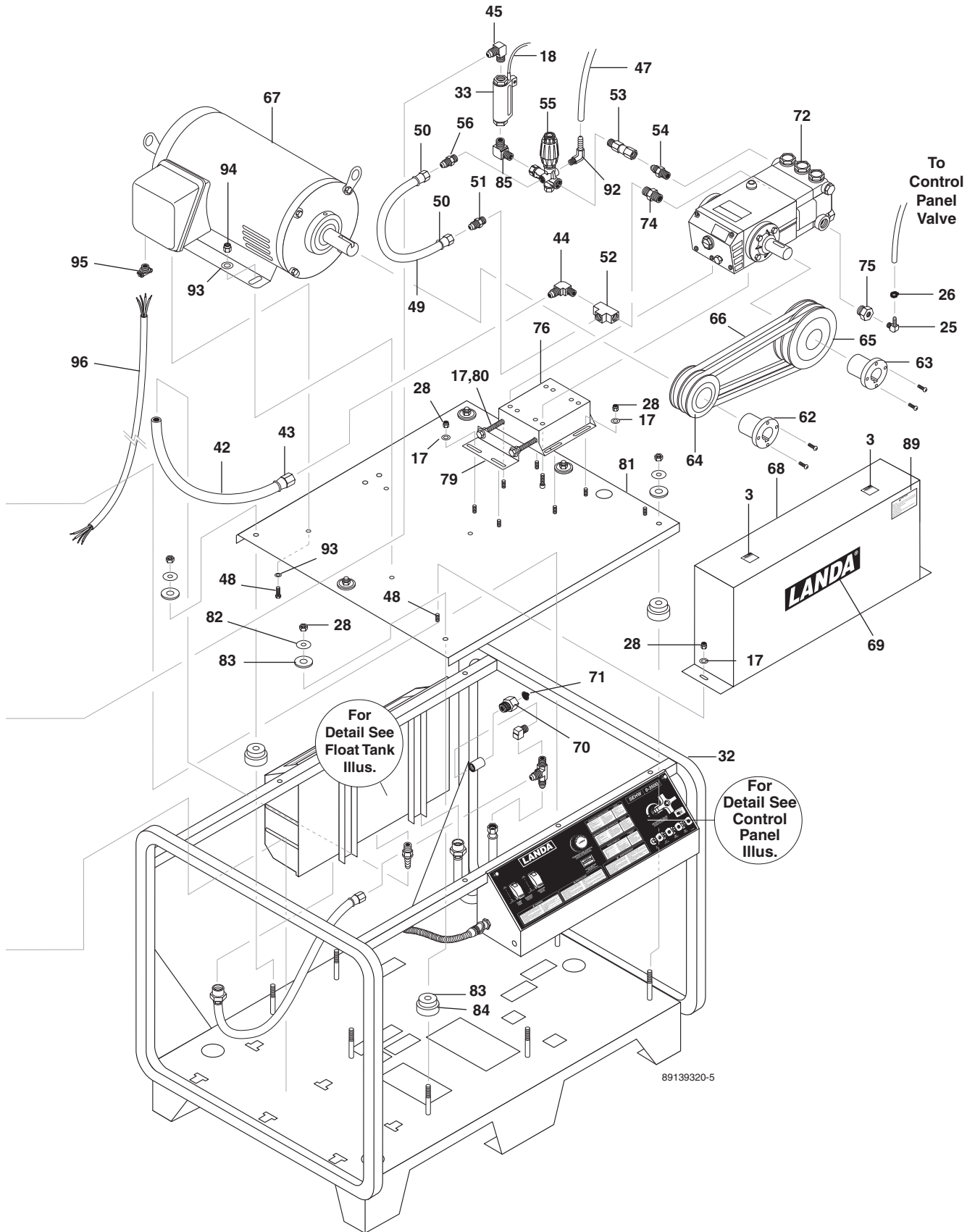


EXPLODED VIEW - LEFT SIDE



89139320-4

EXPLODED VIEW - RIGHT SIDE



89139320-5

EXPLODED VIEW PARTS LIST

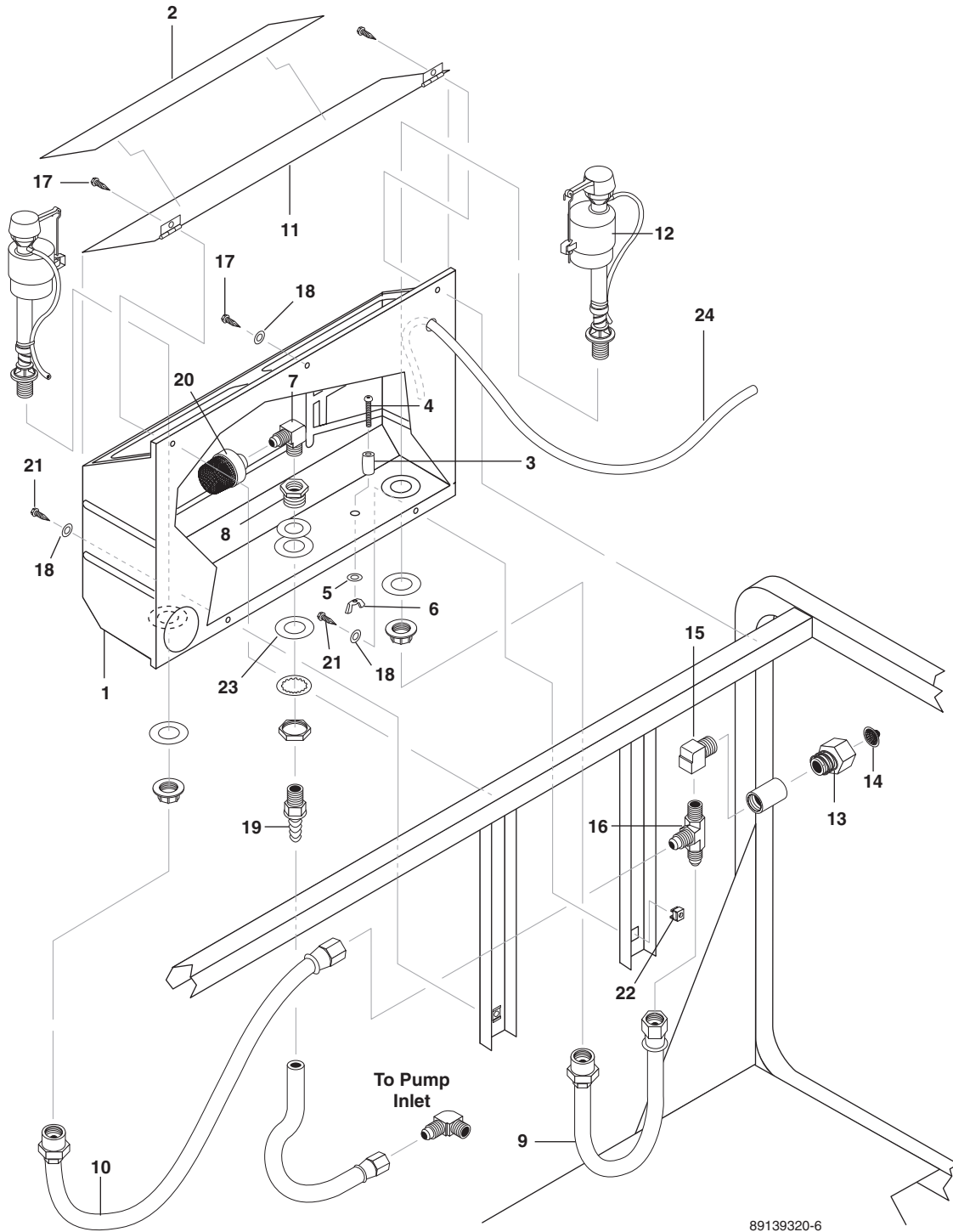
ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	8.912-192.0	Top Wrap, SS	1	37	8.716-547.0	Connector, Straight	1
2	9.802-071.0	Trim, 1/16" Black	36"	38	9.802-014.0	Nipple, 1/2" x 3", Galvanized	2
3	8.932-965.0	Label, Warning - Exposed Pulleys	2	39	9.802-797.0	Screw, #10 x 1/2" Hex Head, Tek, SS	8
4	8.707-019.0	Hose Barb, 1/2" Barb x 3/8" MPT, Push-On	1	40	9.802-171.0	Nipple, 3/8" x 3/8" Male ST	1
5	9.802-259.0	Hose, 1/2" Push-on	21"	41	9.802-727.0	Bolt, 3/8"x 1-3/4" Tap	4
6	9.802-766.0	Screw, 3/8" x 1" HX Wash Head Sheet Metal	6	42	9.802-261.0	Hose, 3/4", Push-On	24"
7	8.706-168.0 9.802-024.0	Elbow, 3/8" Male Elbow, Street, 3/8" x 1/2 m Steel (Auto Start Only)	1 1	43	9.802-152.0	Swivel, 3/4" JIC Fem, Push-On	1
8	9.802-894.0	Insulation, Burner Head, w/Hole	1	44	9.802-132.0	Elbow, 3/4" JIC x 1/2" Pipe	1
9	9.802-896.0	Insulation, Blanket - No Foil, 24" x 57"	1	45	9.802-039.0	Elbow, 1/2" JIC x 3/8" 90°	1
10	9.802-902.0	Insulation, Blanket - Die Cut, 28" x 24"	1	46	9.800-002.0	Label, Use Only Kerosene	1
11	8.912-239.0	Coil, Schedule 80 w/Mild Wrap	1	47	9.802-254.0	Hose, 1/4" Push-On	34"
12	8.916-486.0	Bottom Wrap, Weldment, Wrinkle Black	1	48	8.725-201.0	Bolt, 1/2" x 1 1/2"	4
13	9.802-883.0	Insulation, Front Head, No Hole	1	49	9.802-259.0	Hose, 1/2", Push-On	18"
14	8.933-009.0	Gasket, Burner Plate	2	50	9.802-151.0	Swivel, 1/2" JIC Fem, Push-On	2
15	9.803-132.0	Insulation Retainer Plate	2	51	9.802-128.0	Nipple, 1/2" JIC x 1/2" Pipe	1
16	9.802-781.0	Nut, 3/8" Flange, Whiz Loc, NC 5	1	52	8.706-844.0	Tee, 1/2" Female, Pipe	1
17	9.802-807.0	Washer, 3/8" Flat, SAE	26	53	9.802-048.0 9.802-036.0	Swivel, 1/2" JIC Fem, 3/8" Pipe ▲ Nipple, 1/2" JIC, 3/8" NPT (Auto Start Only)	1 1
18	8.724-844.0	Switch, Reed, Replacement, MV60	1	54	9.802-036.0 9.802-048.0	Nipple, 1/2" JIC, 3/8" Pipe ▲ Swivel, 1/2" JIC Female, 3/8" Male (Auto Start Only)	1 1
19	9.802-651.0	Gasket, Standard - Large	2	55	8.750-299.0 8.715-489.0	Unloader, VRT 3, 8 GPM @ 4500 PSI ▲ Unloader, VB9 w/Switch (Auto Start Only)	1 1
20	9.800-006.0	Label, "Hot/Caliente" w/Arrows Warning	1	56	9.802-127.0	Nipple, 1/2" JIC x 3/8"	1
21	Burner Assembly, See Specifications Pages 29-31			57	8.706-603.0	Tank, Fuel, 10 Gallon, Poly, Green	1
22	8.706-827.0	Elbow, 1/4" Street	1	58	9.802-089.0	Cap, Fuel Tank, Plastic	1
23	8.706-777.0	Nipple, 1/4" Close	1	59	8.706-496.0	Dip Tube, Plastic, w/Elbow	1
24	8.709-158.0	Filter, Fuel/Oil H ₂ O Separator	1	60	9.802-053.0	Bushing, Rubber, Nitrile	2
25	8.706-958.0	Hose Barb, 1/4" Barb x 1/4" Pipe, 90°	2	61	9.802-054.0	Elbow, Fuel Tank	1
26	6.390-126.0	Clamp, Hose, .46-, .54 ST	5	62	Motor Bushing, See Specifications Pages 29-31		
27	8.706-941.0	Hose Barb, 1/4" Barb x 1/4" Pipe	1	63	Pump Bushing, See Specifications Pages 29-31		
28	9.802-779.0	Nut, 3/8", ESNA, NC	22	64	Motor Pulley, See Specifications Pages 29-31		
29	9.802-254.0	Hose, 1/4", Push-On	36"	65	Pump Pulley, See Specifications Pages 29-31		
30	8.706-319.0	Adapter, 1/2" JIC x 1/2" Female	1	66	Motor Belt, See Specifications Pages 29-31		
31	8.706-207.0	Elbow, 3/8" Street	1	67	Motor, See Specifications Pages 29-31		
32	8.912-260.0	Cage, SEHW	1	68	8.912-273.0	Belt Guard Cmpl, SEHW	1
33	8.933-006.0	Switch, Flow MV60	1	69	8.900-271.0	Label, Landa	1
34	8.918-424.0	Hose, 25" x 3/8", 100R2, Pressure Loop	1	70	9.802-146.0	Swivel, 1/2" MP x 3/4" GHF w/Strainer	1
35	8.750-095.0	Thermostat, 302°	1	71	8.707-055.0	Strainer, Inlet GH	1
36	9.149-003.0	Discharge Manifold	1	72	Pump Assembly, See Specifications Pages 29-31		
				73	9.802-193.0	Gasket, 1/4" Neoprene	15"
				74	8.706-797.0	Nipple, 1/2" Hex	1

EXPLODED VIEW PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
75	8.706-915.0	Bushing, 1/2" x 1/4" Pipe	1
76	9.803-131.0	Rail Pump or Generator Combo	1
77	8.912-699.0	Strap, Fuel Tank w/Hole	4
78	9.802-015.0	Nipple, 1/2" x 4" Galv. Sch 80	1
79	9.803-136.0	Retainer, Pump Take Up	1
80	9.802-733.0	Bolt, 3/8" x 3-1/2", Tap	2
	9.802-789.0	▲ Nut, 3/8", Hex, NC	2
81	8.912-347.0	Platform, Power	1
82	9.802-811.0	Washer, 3/8" x 1-1/2", Fender, SAE	8
83	9.802-067.0	Bumper Pad, Engine	16
84	9.802-066.0	Pad, Soft Rubber, 50 Duro	8
85	8.716-547.0	Connector, Straight	1
86	9.800-049.0	Label, Manufacturer's Cleaning Solutions	1
87	8.706-141.0	Coupling 1/2"	1
88	8.725-944.0	Rupture Disk #8000	1
89	9.184-030.0	Spacer, Rupture Disk	1
90	9.196-012.0	Screw, 10-24 x 1/4"	1
91	8.706-248.0	Plug, 3/8"	1
92	8.706-965.0	Hose Barb, 1/4" Barb x 38" NPT 90°	1
93	9.802-809.0	Washer, 1/2" Flat	8
94	8.718-829.0	Nut, 1/2", ESNA	4
95	9.802-522.0	Srain Relief, 1"	1
96	8.715-933.0	Cord, Service, SO, 6/4 (1.109-521.0)	5 ft.
	9.802-437.0	Cord, Service, SEO, 10/4 (1.109-522.0)	5 ft.

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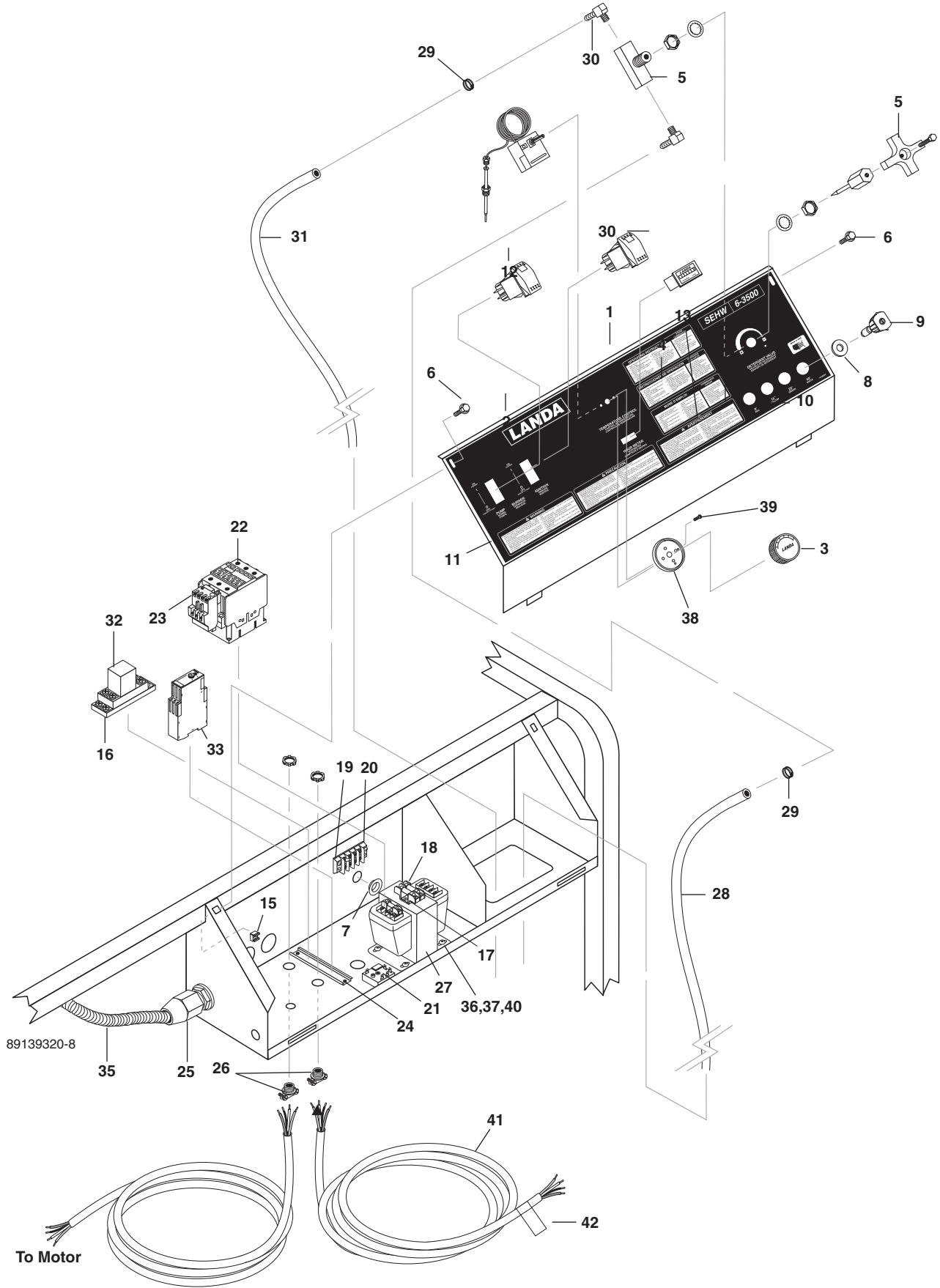
FLOAT TANK ASSEMBLY



FLOAT TANK ASSEMBLY PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	9.802-084.0	Tank, Plastic Universal	1
2	8.900-832.0	Label, Stripe	1
3	9.802-106.0	Plug, Float Tank (Items 3 - 6)	1
	9.802-263.0	Tubing, 5/16" x 9/16" Rubber	1
4	9.802-822.0	Screw, 5/16" - 18 x 1-1/2" SS, Button Socket	1
5	9.802-824.0	Washer, 5/16", SS	1
6	9.802-823.0	Nut, 5/16" - 18, Wing, SS	1
7	9.802-131.0	Elbow, 1/2" JIC x 1/2", 90°	1
8	8.707-000.0	Connector, 1/2" Anchor	1
9	8.711-775.0	Inlet Hose, 13" Supply Water	1
10	9.802-257.0	Inlet Hose, 30" Supply Water	1
11	8.912-233.0	Lid and Hinges	1
12	9.802-185.0	Valve, Float Tank, Vertical	2
13	9.802-146.0	Swivel, 1/2" MP x 3/4" GHF w/Strainer	1
14	8.707-055.0	Strainer, Inlet Garden Hose	1
15	8.706-829.0	Elbow, 1/2" Street, Brass	1
16	9.802-134.0	Tee, 1/2" x 1/2" JIC #51	1
17	9.802-799.0	Screw, #14 x 1", Tek, Black	3
18	9.804-082.0	Washer, 1/4", SAE, Black	3
19	8.707-020.0	Push-on, 1/2" MPT x 3/4" Barb	1
20	8.707-061.0	Strainer, 1/2" Basket	1
21	9.802-770.0	Screw, 1/4" x 1" BH, SOC	2
22	9.802-794.0	Nut, Cage, 1/4" x 12 Gauge	2
23	8.719-039.0	Washer, 1-3/16" x 2-1/4" Rubber	1
24	9.802-254.0	Hose, 1/4" Push-On	34"

CONTROL PANEL ASSEMBLY



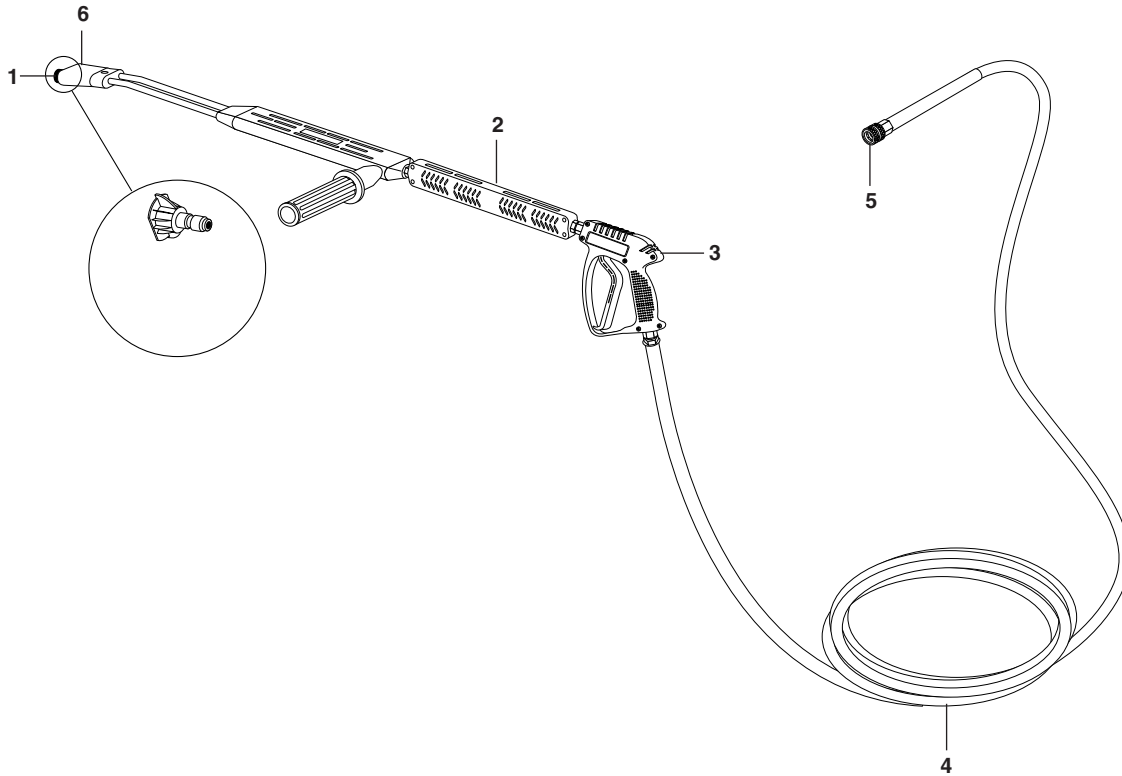
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To Motor

CONTROL PANEL PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	9.802-451.0	Switch, Rocker, Black, Burner (Green Lens)	1	23		Overload Relay, See Specifications Pages 29-31	
2	9.802-452.0	Switch, Rocker, Red, Pump On/Off	1	24	9.802-457.0	Din Rail Track	6"
	9.802-451.0	Switch, Rocker, Black, Burner Green Lens (Auto Start Only)	1	25	8.716-547.0	Connector, Straight	1
3	8.900-224.0	Knob, Thermostat 150/302 F	1	26	9.802-522.0	Strain Relief, 1" (1.109-521.0)	2
4	9.802-283.0	Hour Meter	1		9.802-520.0	Strain Relief, 3/4" (1.109-522.0)	2
5	8.707-317.0	Valve, Control, Metering	1	27		Transformer, See Specifications Pages 29-31	
	9.802-810.0	▲ Washer, 5/8" SAE, Flat Zinc	1	28	9.802-251.0	Tube, 1/4" x 1/2" Clear Vinyl	10 ft.
	8.719-011.0	▲ Washer, 5/8" Internal Star-Zinc	1		8.707-058.0	Strainer, 1/4" Brass	1
6	9.802-764.0	Screw, 10/32" x 3/4" Hex Wash Slot Black	2	29	6.390-126.0	Clamp, Hose, .46-, .54 ST	2
7	9.802-103.0	Bushing, Snap, 5/8"	1	30	8.706-958.0	Hose Barb, 1/4" Barb x 1/4" Pipe, 90°	2
8	9.802-064.0	Grommet, 1/8" Rubber	4	31	9.802-254.0	Hose, 1/4" Push-On	27"
9	8.712-357.0	Nozzle, SAQCMEG, 00055, Red	1	32	9.802-468.0	Relay, 120V RH2B-UL-AC	1
	8.712-358.0	Nozzle, SAQCMEG, 15055, Yellow	1	33	8.751-306.0	Timer, Multi-Function	1
	8.712-359.0	Nozzle, SAQCMEG, 25055, Green	1	34	9.802-762.0	▲ Screw, 10/32" x 1-1/4" (Ground)	1
	8.712-360.0	Nozzle, SAQCMEG, 40055, White	1		9.802-695.0	▲ Nut, 10/32"	3
10	8.912-359.0	Panel, SEHW Control Panel	1		9.800-040.0	▲ Label, Ground	1
11	8.900-295.0	Label, SEHW Control Panel	1	35	9.802-448.0	Conduit, Flex	15"
12	8.750-095.0	Thermostat, 302°	1	36	9.802-759.0	Screw, 10/32" x 3/4"	3
13	8.900-254.0	Label, SEHW	1	37	9.802-771.0	Nut, 10/32" Keps	3
14	8.900-418.0	Label, 6-3500	1	38	8.712-190.0	Bezel, Thermostat	1
15	9.802-791.0	Nut, Cage, 10/32" x 16 Gauge	2	39	8.718-779.0	Screw, 4 mm x 6 mm	2
16	9.802-467.0	Base, Relay SH2B-05	1	40	9.804-082.0	Washer, 1/4 Flat, Zinc	3
17		Primary Transformer Fuse, See Specifications Pages 29-31		41	8.715-933.0	Cord, Service, SO, 6/4 (1.109-521.0)	11 ft.
18		Secondary Transformer Fuse, See Specifications Pages 29-31			9.802-437.0	Cord, Service, SEO, 10/4 (1.109-522.0)	11 ft.
19	9.802-494.0	Bar, Jumper	2	42	8.932-969.0	Label, Warning, Service Cord	1
20	9.802-491.0	Block, Strip, Terminal, 4-Pole	1			▲ Not Shown	
	9.802-749.0	▲ Screw, 8/32" x 3/4"	2				
	9.802-785.0	▲ Nut, 8/32"	2				
21	9.802-472.0	Timer, Solid State 120V, 5-60 Min Adj. (Auto Start Only)	1				
22		Contactor, See Specifications Pages 29-31					

HOSE, SPRAY GUN & WAND ASSEMBLY



HOSE, SPRAY GUN & WAND PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	9.802-165.0	Quick Coupler, 1/4", Male	1	4	8.739-072.0	Hose, 3/8" x 50', 2 Wire Tuff-Skin	1
	9.802-096.0	▲ Quick Coupler O-Ring, 1/4" Replacement Only	1	5	9.802-166.0	Quick Coupler, 3/8", Female	1
2	8.711-293.0	Wand, VP Zinc 1/4", AL344 w/Coupler, w/Soap Nozzle	1		9.802-100.0	Quick Coupler O-Ring, 3/8" Replacement Only (All Models)	1
	83-SSVPKIT	▲ Repair Kit, AR SS	1	6	9.802-286.0	▲ Nozzle Only, Brass Soap Nozzle, 1/8"	1
3	8.751-234.0	Gun, Landa, L1050, 5000 PSI, 10.4 GPM	1				

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SPECIFICATIONS - BURNERS

BECKETT SPECIFICATIONS

Model No.	Burner Assy No.	Fuel Nozzle	Transformer	Burner Motor	Fuel/Pump Solenoid/Cord	Fuel Solenoid Coil	Electrode
SEHW6-35024B	9.802-556.0	8.717-366.0	7-51824	9.803-056.0	7-21844U	7-21755U	8.740-110.0
SEHW6-35024C	9.802-556.0	8.717-366.0	7-51824	9.803-056.0	7-21844U	7-21755U	8.740-110.0

SPECIFICATIONS

PARTS SPECIFICATIONS: LANDA PUMP

Machine	PSI	PUMP						MOTOR					
		Model	Part #	Pulley	Part #	Bushing	Part #	Size	Voltage/PHertz	Part #	Pulley	Part #	
6-35024B	5.5	LT6035/L	8.904-883.0	2BK60H	9.802-387.0	25mm	9.802-403.0	15-3 HP	230V/3PH	60	8.751-006.0	2TB40H	8.715-598.0
6-35024C	5.5	LT6035/L	8.904-883.0	2BK60H	9.802-387.0	25mm	9.802-403.0	15-3 HP	460V/3PH	60	8.751-006.0	2TB40H	8.715-598.0

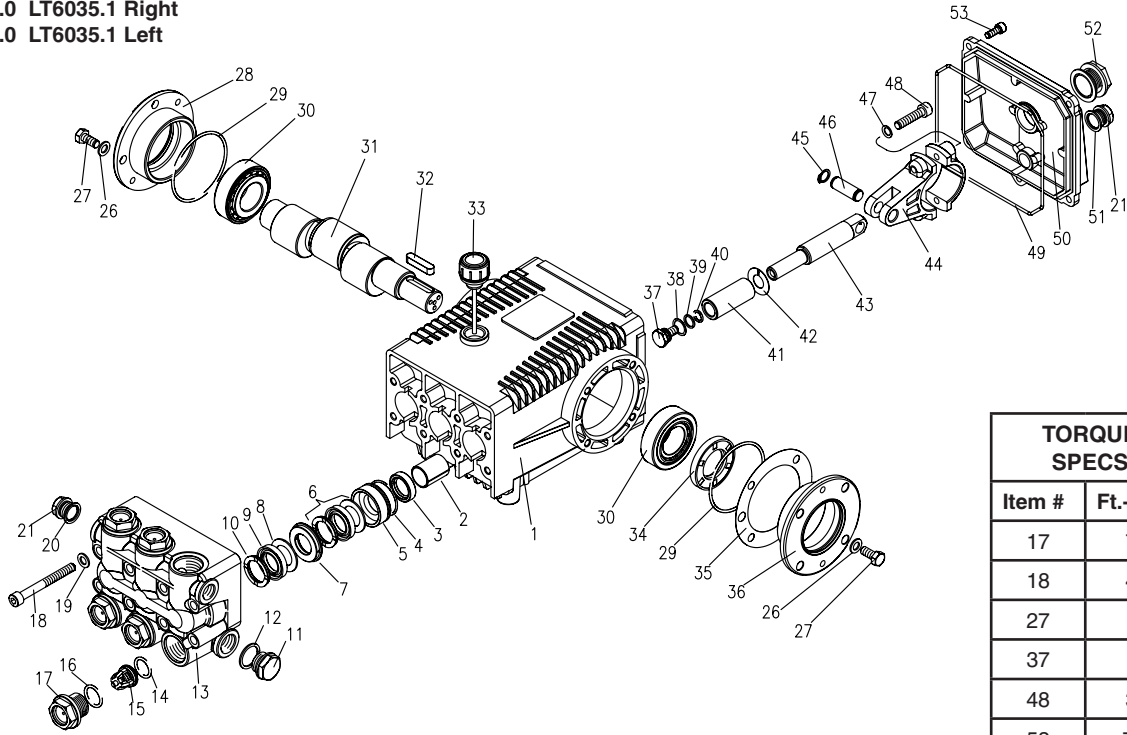
SPECIFICATIONS

MOTOR (CON'T)						CONTROLS					
Model	Bushing	Belt	Belt	Motor	Motor	Stepdown	Primary	Primary	Secondary	Secondary	
(Con't)	Bushing	Part #	Size/Qty	Part #	Contactora	Overload	Transformer	Fuse	Fuse Part #	Fuse	Fuse Part #
6-35024B	P1x1-5/8"	9.803-980.0	BX41 (2)	8.715-702.0	8.724-281.0	8.724-307.0	9.802-550.0	3 Amp	9.802-465.0	(2)8 Amp	9.802-460.0
6-35024C	P1x1-5/8"	9.803-980.0	BX41 (2)	8.715-702.0	8.724-276.0	8.724-304.0	9.802-550.0	3 Amp	9.802-465.0	(2)8 Amp	9.802-460.0

LT.1 SERIES PUMP EXPLODED VIEW

- 8.904-869.0 LT4035.1 Right
- 8.904-870.0 LT4035.1 Left
- 8.904-871.0 LT4040.1 Right
- 8.904-872.0 LT4040.1 Left
- 8.904-874.0 LT5030.1 Right
- 8.904-879.0 LT5030.1 Left
- 8.904-881.0 LT6035.1 Right
- 8.904-883.0 LT6035.1 Left

G3 Evolution



TORQUE SPECS	
Item #	Ft.-Lbs.
17	75
18	45
27	18
37	10
48	30
53	7.6

LT.1 SERIES PUMP EXPLODED VIEW PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	9.803-163.0	Crankcase	1	19	9.802-890.0	Washer	8
2	9.803-195.0	Plunger Guide	3	20	9.803-198.0	Copper Washer 3/8"	1
3*	See Kit	Plunger Oil Seal	3	21	9.802-925.0	Brass Plug 3/8"	1
4*	See Kit	O-Ring Ø1.78 x 31.47	3	26	9.802-884.0	Washer	8
5*	See Kit	"Pressure Ring, Brass	3	27	9.802-944.0	Hexagonal Screw	8
6*	See Kit	"U" Seal Low Pressure	3	28	9.803-182.0	Closed Bearing Housing	1
7*	See Kit	Intermediate Ring, Brass	3	29	9.803-186.0	O-Ring Ø2.62 x 71.12	2
8*	See Kit	Support Ring, Teflon Bronze	3	30	9.803-160.0	Roller Bearing, Tapered	2
9 *	See Kit	"U" Seal High Pressure	3	31	9.803-148.0	Crankshaft (GT4040.1, 5030.1, 6035.1)	1
10*	See Kit	Support Ring	3		9.803-149.0	Crankshaft (GT 4035.1)	1
11	9.802-926.0	Brass Plug, 1/2"	1	32	9.803-167.0	Crankshaft Key	1
12	9.803-199.0	Copper Washer 1/2"	1	33	9.802-923.0	Oil Dip Stick	1
13	9.802-933.0	Manifold Head	1	34	9.803-139.0	Crankshaft Seal	1
14*	See Kit	O-Ring Ø2.62 x 17.13	6	35	9.803-177.0	Shim	2
15*	See Kit	Valve Assembly	6	36	9.803-181.0	Bearing Housing	1
16*	See Kit	O-Ring Ø2.62 x 20.29	6	37*	See Kit	Plunger Bolt	3
17	9.802-928.0	Valve Plug	6	38*	See Kit	Copper Spacer	3
18	9.802-943.0	Manifold Stud Bolt	8				

LT.1 SERIES PUMP PARTS LIST (CONT)

ITEM	PART NO.	DESCRIPTION	QTY
39*	See Kit	O-Ring Ø1.78 x10.82	3
40*	See Kit	Teflon Ring	3
41*	See Kit	Plunger	3
42*	See Kit	Copper Spacer	3
43	9.803-143.0	Plunger Rod	3
44	9.803-157.0	Connecting Rod	3
45	9.802-912.0	Snap Ring	6
46	9.802-915.0	Connecting Rod Pin	3
47	9.802-889.0	Spring Washer	6
48	9.802-937.0	Connecting Rod Screw	6
49	9.803-194.0	O-Ring Ø2.62 x 152.07	1
50	9.803-166.0	Crankcase Cover	1
51	9.803-197.0	Gasket, G3/8	1
52	9.803-202.0	Sight Glass G3/4	1
53	9.802-939.0	Cover Screw	5

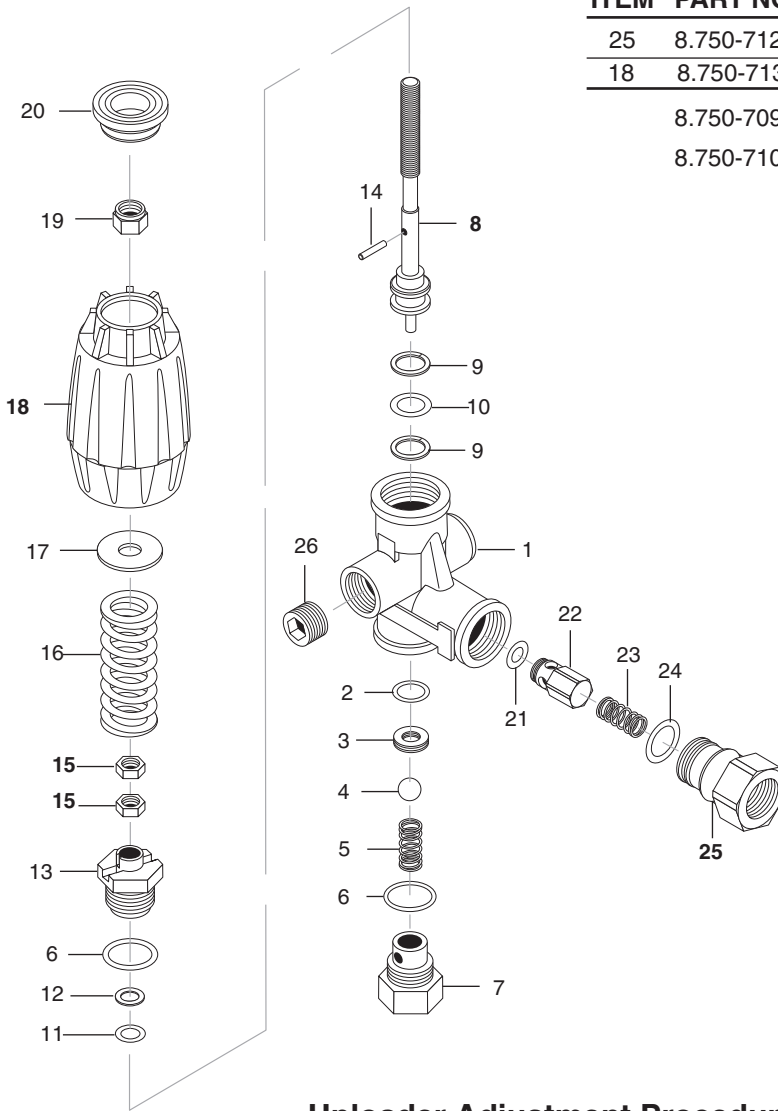
* Part available in kit (See below)

REPAIR KIT NUMBER	8.916-488.0	8.916-487.0	8.916-322.0	8.916-323.0	9.802-607.0	9.802-611.0
KIT DESCRIPTION	Plunger "U" Seal 20mm LT-4040.1, LT-6035.1 LT-4035.1	Plunger "U" Seal 22mm LT-5030.1	"U" Seal Packing Assy 20mm LT-4040.1 LT-6035.1 LT-4035.1	"U" Seal Packing Assy 22mm LT-5030.1	Plunger 20mm LT-4040.1 LT-6035.1 LT-4035.1	Plunger 22mm LT-5030.1
ITEM NUMBERS INCLUDED	4, 6, 8, 9, 10	4, 6, 8, 9, 10	4, 5, 6, 7, 8, 9,10	4, 5, 6, 7, 8, 9,10	37, 38, 39, 40, 41, 42	37, 38, 39, 40, 41, 42
NUMBER OF CYLINDERS KIT WILL SERVICE	3	3	1	1	1	1

REPAIR KIT NUMBER	9.802-603.0	9.802-606.0
KIT DESCRIPTION	Complete Valve (all pumps)	Plunger Oil Seals (all pumps)
ITEM NUMBERS INCLUDED	14, 15, 16	3
NUMBER OF CYLINDERS KIT WILL SERVICE	6	3

VRT3 UNLOADER EXPLODED VIEW AND PARTS LIST

8.750-297.0, 8 GPM, 2320 PSI
 8.750-298.0, 8 GPM, 3630 PSI
 8.750-299.0, 8 GPM, 4500 PSI



ITEM	PART NO.	DESCRIPTION	QTY
25	8.750-712.0	Outlet Fitting	1
18	8.750-713.0	Knob, Unloader	1
	8.750-709.0	Repair Kit, VRT3, 2320/3630 PSI	
	8.750-710.0	Repair Kit, VRT3, 4500 PSI	
		(Kit Items: 1, 4, 8-12, 16, 21-22)	

Unloader Adjustment Procedures

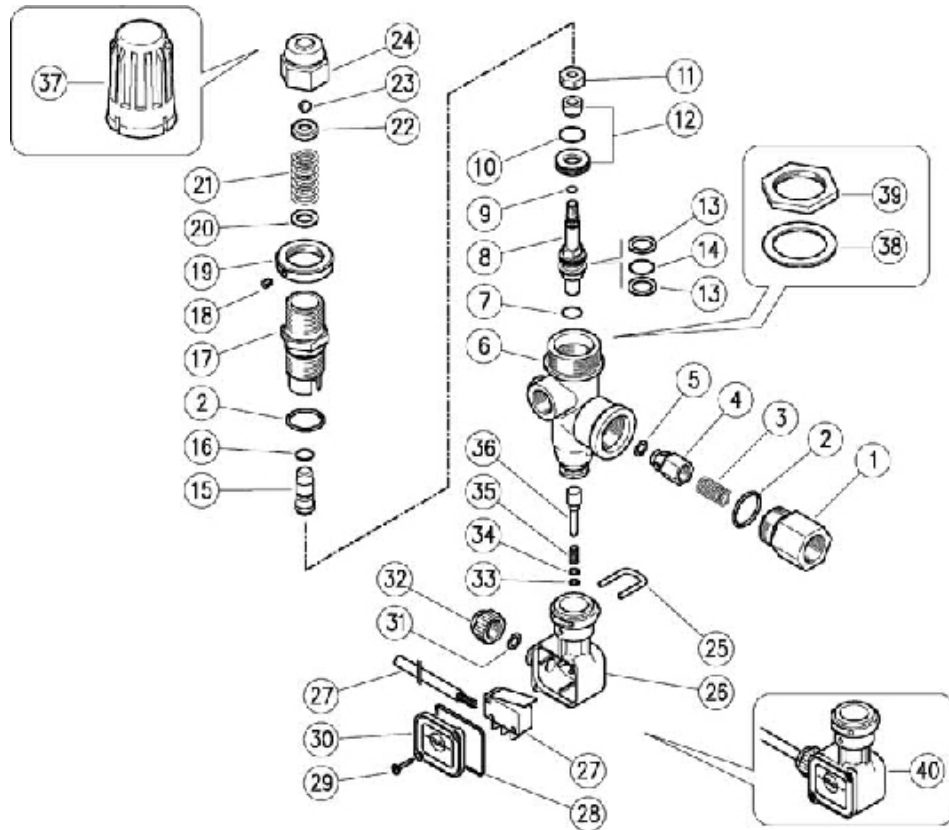
1. Remove lock nut (Item 19).
2. Remove adjustment knob (Item 18).
3. Loosen the two (2) nuts (Item 15), move them upward on stem (Item 8) until you see 4 or more threads below the nut.
4. Re-attach adjusting knob (Item 18).
5. Start machine. Open the trigger of the spray gun. Increase pressure by turning adjustment knob (Item 18) clockwise until pressure is at the desired operating pressure.
6. Remove the adjustment knob (Item 18), tighten the lower nut (Item 15) tightly against the upper nut (Item 15). Re-attach adjustment knob (Item 18) and screw down until contact is made with the nuts (Items 15). Screw down lock nut (Item 19) onto the stem (Item 8) until the threads cut into the nylon insert of the lock nut (Item 19).

*If adjustment knob (Item 18) **DOES NOT** make contact with upper nut (Items 15), remove adjusting knob (Item 18), re-adjust (raise) nuts (Items 15) on stem (Item 8) and re-attach adjustment knob (Item 18), then repeat step #6.

If adjustment knob (Item 18) **DOES make contact with upper nut; release the trigger of the spray gun and watch the pressure gauge for the pressure increase ("spike"). This "spike" **SHOULD NOT** exceed 500 psi above the operating pressure. If "spike" pressure exceeds the 500 psi limit, remove the adjusting knob (Item 18) and re-adjust (lower) the nuts (Items 15) on the stem (Item 8). Re-attach the adjusting knob (Item 18), then repeat step #6.

VB8 UNLOADER EXPLODED VIEW AND PARTS LIST

#5-3027



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	12-60005831	3/8" Bsp F Outlet Fitting	1	21	12-60120861	Spring 3 x 33mm	1
2	12-10307002	‡ O-Ring 1.78 x 18.77mm	2	22	12-60121031	Upper Frame	1
3	12-60005351	Spring	1	23	12-14742100	1/4" Ball	1
4	12-60005231	Check Valve	1	24	12-60120931	Brass Cap	1
5	12-10321300	‡ O-Ring 3 x 6mm	1	25	12-29008751	Sst Clip	1
6	12-60120135	VB8 Brass Body	1	26	12-29008984	Plastic Housing	1
7	12-10317008	‡ O-Ring 2.62 x 7.6	1	27	12-12500600	El. Cable & Micro Switch	1
8	12-60120631	Piston	1	28	12-10320601	O-Ring 2.62 x 28.25mm	1
9	12-10300101	‡ O-Ring 1 x 4mm	1	29	12-16302000	2.5 x 12mm Screw	2
10	12-10306601	‡ O-Ring 1.78 x 15.6mm	1	30	12-29008884	Cover	1
11	12-60120531	M6 Nut	1	31	12-10316900	O-Ring 2.62 x 6.02mm	1
12	12-60222120	‡ VB8 Seat & Shutter	1	32	12-29008284	Black Nut - 40 Bar	1
13	12-10402100	‡ Back Ring 11.4 x 15.9	2	33	12-10303800	O-Ring 1.78 x 3.68	1
14	12-10317500	‡ O-Ring 2.62 x 10.77mm	1	34	12-14351900	Washer 4 x 8mm	1
15	12-60120431	Spring Guide	1	35	12-60230351	Spring	1
16	12-10316701	‡ O-Ring 2.62 x 5.23mm	1	36	12-60128131	PR 5 Pin	1
17	12-60120331	Piston Housing	1	37	12-60120284	Plastic Handle (83-60129000)	1
18	12-16210000	M4 x 4mm Dowel	1	38	12-14358200	Washer D. 30mm (8360129000)	1
19	12-60170431	M22 Nut	1	39	12-60225431	M30 Nut (83-60129000)	1
20	12-14371900	Washer 9 x 15mm	1	40	12-29009624	PR5 Pl. Housing Kit	1
					12-60121224	‡ VB8 Repair Kit	



LANDA LIMITED NEW PRODUCT WARRANTY PRESSURE WASHERS

WHAT THIS WARRANTY COVERS

All LANDA pressure washers are warranted by LANDA 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.

SEVENYEAR PARTS AND ONE YEAR LABOR WARRANTY:

Components manufactured by LANDA, such as frames, handles, top and bottom wraps, float tanks, fuel tanks, belt guards, and internal components on the oil-end of Landa 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. LANDA 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

While not required for warranty service, we request that you register your LANDA pressure washer by returning the completed registration card. In order to obtain warranty service on items warranted by LANDA, you must return the product to your Authorized LANDA Dealer, freight prepaid, with proof of purchase, within the applicable warranty period. If the product is permanently installed, you must notify your Authorized LANDA Dealer of the defect. Your Authorized LANDA Dealer will file a claim with Landa, who must subsequently verify the defect. In most cases, the part must be returned to LANDA freight prepaid with the claim. For warranty service on components warranted by other manufacturer's, your Authorized LANDA Dealer can help you obtain warranty service through these manufacturers' local authorized service centers.

LIMITATION OF LIABILITY

LANDA'S liability for special, incidental, or consequential damages is expressly disclaimed. In no event shall LANDA'S liability exceed the purchase price of the product in question. LANDA 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.** LANDA does not authorize any other party, including authorized LANDA Dealers, to make any representation or promise on behalf of LANDA, 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 LANDA products conforms to local codes. While LANDA 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.

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