



SEA

OPERATOR'S MANUAL

■ SEA3-1100

■ SEA4-2000

■ SEA4-3000



LANDA, INC. ■ 4275 N.W. Pacific Rim Blvd. ■ Camas, WA 98607 ■ USA

For technical assistance or the Landa Dealer nearest you, call 800-LANDA-4-U (800-526-3248) or (360) 833-9100
or consult our web page at www.landa-inc.com

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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

Thank you for purchasing a Landa Pressure Washer.

This manual covers the operation and maintenance of the SEA3-11021D, SEA4-20021A, SEA4-20021B, SEA4-20021C, SEA4-20021F, SEA4-20021G, SEA4-20021H, SEA4-30021B, SEA4-30021C, SEA4-30021F, and SEA4-30021H washers. All information in this manual is based on the latest product information available at the time of printing.

Landa, Inc. reserves the right to make changes at any time without incurring any obligation.

The SEA Series was designed for maximum use of 8 hours per day, 5 days per week.

Owner/User Responsibility:

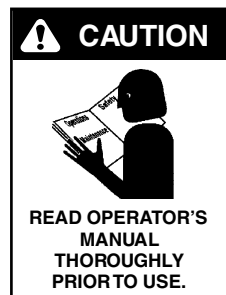
The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this Landa pressure washer. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be 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.

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.

IMPORTANT SAFETY INFORMATION



CAUTION: 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.

To comply with the National Electrical code (NFPA 70) and provide additional protection from risk of electric shock, these pressure washers are equipped with a UL approved ground fault circuit interrupter (GFCI) power cord.



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

WARNING: Risk of explosion — do not spray flammable liquids.

5. Risk of explosion — do not spray flammable liquids or operate in an explosive location.



WARNING: Keep water spray away from electrical wiring or fatal electric shock may result.

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

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

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



WARNING: High pressure stream of fluid that this equipment can produce can pierce skin and its underlying tissues, leading to serious injury and possible amputation.

8. High pressure developed by these machines will cause personal injury or equipment damage. Use caution when operating. Do not direct discharge stream at people, or severe injury or death will result.

9. Never make adjustments on machine while in operation.

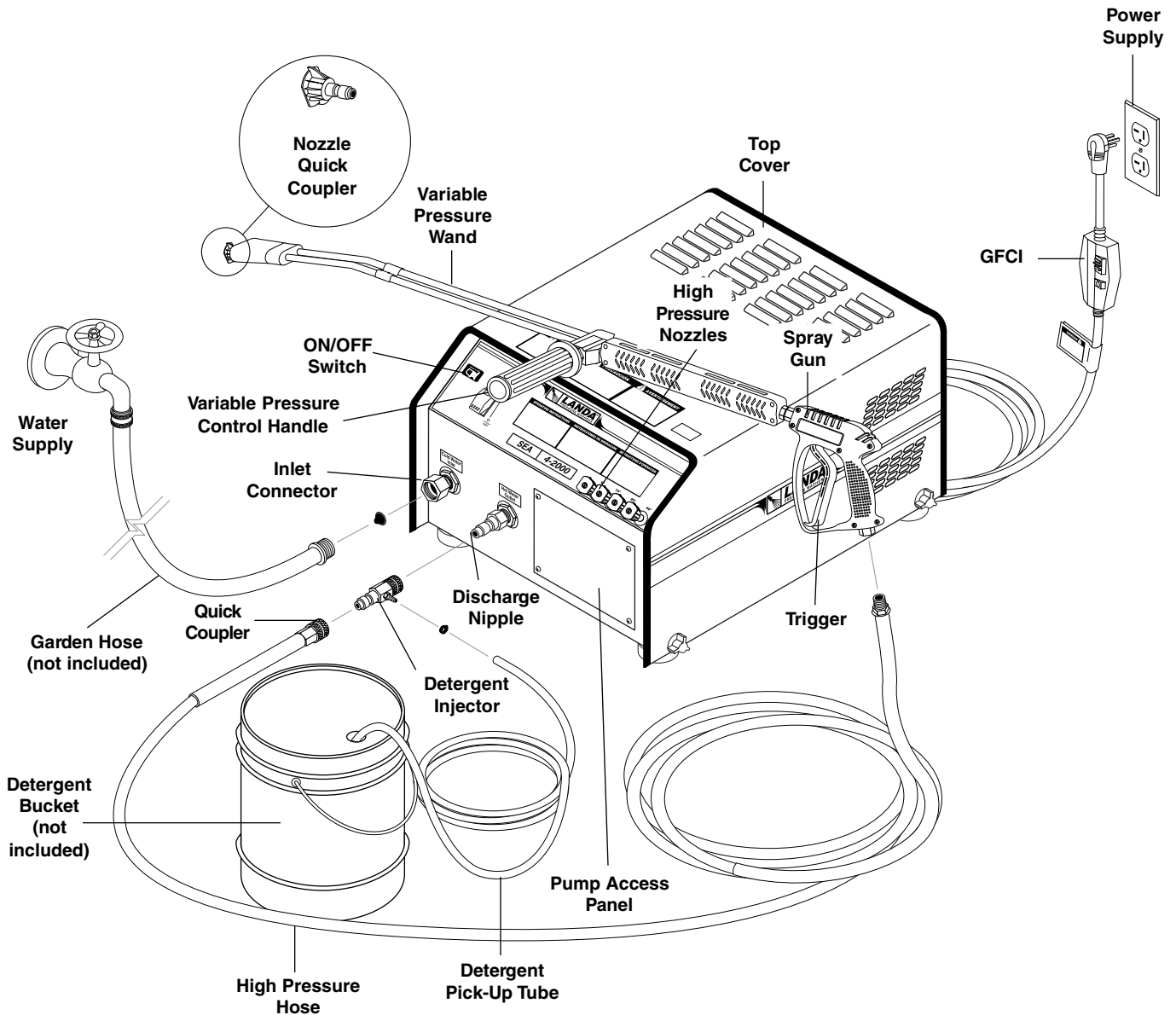


WARNING: High pressure spray can cause paint chips or other particles to become airborne and fly at high speeds.

10. Eye safety devices and foot protection must be worn when using this equipment.

11. When the machine is working, do not cover or place in a closed space where ventilation is insufficient.
12. Protect from freezing.
13. Be certain all quick coupler fittings are secured before using pressure washer.
14. Do not allow acids, caustic or abrasive fluids to pass through the pump.
15. Inlet water must be no hotter than 90° and clean fresh water.
16. The best insurance against an accident is precaution and knowledge of the machine.
17. LANDA will not be liable for any changes made to our standard machines or any components not purchased from LANDA.
18. 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.**
19. Do not operate this machine when fatigued or under the influence of alcohol or drugs.
20. Keep operating area clear of all persons.

COMPONENT IDENTIFICATION



21. Do not overreach or stand on unstable support. Keep good footing and balance at all times.
22. Follow the maintenance instructions specified in the manual.

PRE-OPERATION CHECK

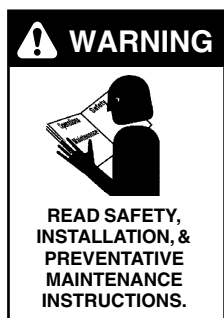
- Read machine safety warnings
- Pump oil (SAE 30W non-detergent oil)
- Cold water supply (6 gpm • 5/8" • 20 psi)
- Proper power supply and circuit protection
- Hose, wand, nozzle (nozzle size per serial plate)
- Water filter (intact, non restrictive)
- Read operating instructions

SET-UP PROCEDURES

These machines are designed for indoor use. Machine must be stored indoors when not in use.

1. Attach a 5/8" garden hose to inlet connector. Minimum flow should be 5 gpm.
2. Attach high pressure hose to discharge nipple using quick coupler. Lock coupler securely into place by pulling back coupler collar and inserting it onto discharge nipple, then pushing collar forward to lock in place.
3. Attach wand to spray gun using teflon tape on threads to prevent leakage.
4. Attach swivel connector on discharge hose to spray gun using teflon tape on threads.
5. Remove top cover and check oil level on sight glass on side of pressure washer pump. Oil should be visible half way up sight glass (30W non-detergent).
6. For operator safety and to comply with electrical standards, the SEA3-11021D comes with a 120V 20 amp plug end that will fit only into a 20 amp receptacle.
7. On 230V, 460V and 575V machines, attach appropriate plug end (not included) to power cord.

OPERATING INSTRUCTIONS



1. Read safety, installation and preventative maintenance instructions before starting machine.
2. With power switch in OFF position, plug power cord into a grounded type of receptacle of proper voltage and amperage reading. Then push GFCI reset button at end of power cord if required (SEA3-11021D, SEA4-20021A).

3. Turn on water at faucet and pull trigger on spray gun allowing water to flow until all air has discharged from system. Check for water leaks; tighten as needed.
4. Pull wand coupler collar back and insert pressure nozzle into coupler then secure by pushing collar forward.
5. Place rocker switch in the ON position and then pull trigger on spray gun to activate pressure switch which will then start machine. The OFF position is for manual shut down.
6. Turn the variable pressure control handle clockwise to increase pressure.
7. To stop machine, release spray gun trigger. Machine will automatically stop.
8. If machine is going to be unattended for long periods of time, turn water supply off and place rocker switch in OFF position. Trigger spray gun to relieve trapped pressure.
9. Protect from freezing.

SHUT DOWN PROCEDURES

1. Rinse with clean water to remove any soap residue, by placing detergent hose into fresh water bucket and operating injector as described on page 6.
2. Release the trigger on the spray gun which will activate a timer to shut the machine off. Turn the switch off if the machine is going to be left unattended.
3. Turn off water supply.
4. Turn rocker switch off.
5. Open spray gun to relieve remaining pressure.
6. Remove water supply hose.
7. In freezing conditions, disconnect water supply and open spray gun to allow water to drain, then turn off motor. Place machine in a heated storage area.

CAUTION: Do not allow pump to run longer than one (1) minute without water. Disconnect all hoses to allow water to drain.

HOW TO USE THE DETERGENT INJECTOR



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.

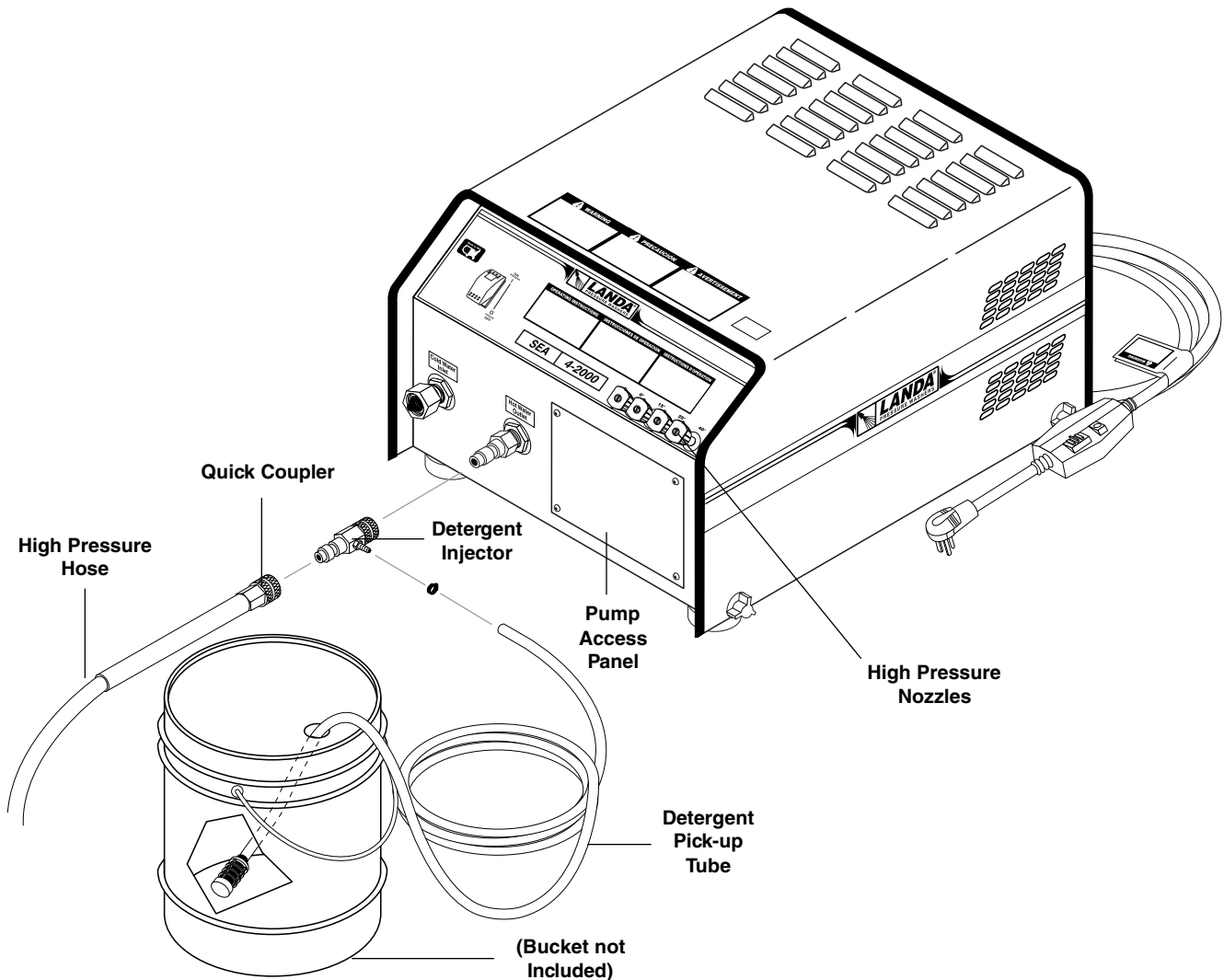
This machine can siphon and mix detergents with the use of Landa's detergent injector kit.

1. Pull injector quick coupler collar back and secure on discharge nipple by pushing collar forward. Injector valve body arrow should point in direction of flow.
2. Connect high pressure hose to injector nipple securing quick coupler.

3. Start machine as outlined in Operating Instructions.
4. Place detergent pick-up tube into container of detergent solution.
5. Turn variable pressure control handle counterclockwise to lower pressure and divert water flow through the soap nozzle.
6. Pull trigger on spray gun. Water detergent ratio is approximately 15 to 1.
7. When you finish washing, rinse by simply turning variable pressure control handle clockwise.

NOTE: The detergent injector will not siphon with water flowing through the high pressure nozzle at end of wand.

8. For clean up, place detergent pick-up tube into container of clear water and follow steps 5 - 8 to prevent detergent deposits from damaging the injector.



GENERAL WASHING TECHNIQUES

1. Hold spray nozzle approximately one foot from the surface being cleaned. Spray at an angle to get under the material and lift it off.
2. When washing large objects, use detergent injector to apply detergent (see section "How to Use the Detergent Injector"). Start washing from the bottom and work up. Better detergent economy and faster results will be obtained by allowing the detergent to set 5-10 minutes. After washing, rinse from the top down.
3. Cleaning heavy dirt or material away with a hard stream of clear water is recommended before using a cleaning agent.

MAINTENANCE

Pump Lubrication

LANDA PUMPS: The pump on your Landa Pressure Washer is a triplex ceramic plunger pump. As the plungers move back, water flows through the inlet valve into the manifold chamber. Then, when the plungers move forward, the inlet valves close and the discharge valves open to produce discharge pressure.

Use only Landa SAE 30 weight non-detergent oil; change oil after first 50 hours of use. Thereafter, change oil at three months or 500 hour intervals. Oil level should be checked through the use of the dipstick found on top of the pump, or half way up on the oil gauge window. Oil should be maintained at that level.

Unloader Valves

The unloader valve is connected directly to the discharge port of the pump. Its purpose is to allow recirculation back into the pump inlet when the trigger on the spray gun is closed.

Nozzles

Each machine is equipped with one spray nozzle depending on the flow and pressure of that particular model. Spray nozzles vary in bore size and angle of spray. When ordering replacement nozzles, please specify size and angle of nozzle. Nozzle size for each machine is located on the serial plate.

Winterizing Procedure

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

During winter months, when the temperature drops below 32°F, it is necessary to protect your machine against freezing. A blowout valve, which can be screwed into the garden hose swivel connector to blow water out of the system, is available from Landa. When compressed air is not available or is impractical, siphon a 50/50 mixture of anti-freeze into the pump by using a bucket with a short section of garden hose attached to the bottom, then elevate. Run the pump dry for a few seconds and disconnect all hoses to allow water to drain.

Low Pressure Diagnosis

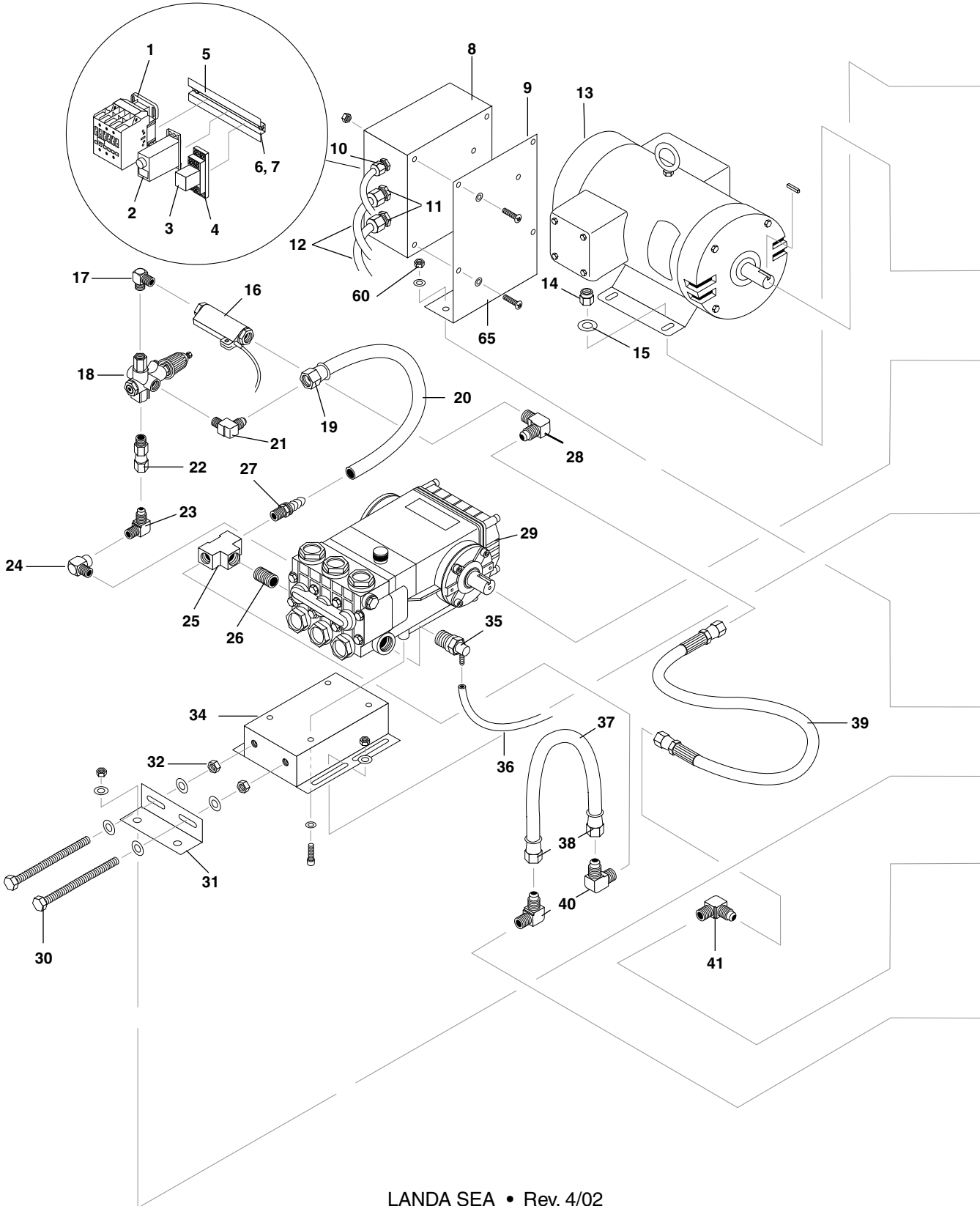
Refer to Troubleshooting Chart for low pressure. If, by referring to the chart, the trouble is found to be either the unloader or the pump, your next step is to determine whether in fact the unloader or the pump is the problem. This can be done by eliminating the unloader from the system and attaching the discharge hose directly to the pump. If high pressure is developed in this manner the pump is good and the unloader needs to be repaired or replaced. If low pressure is developed in this manner, the pump is good, and the unloader needs to be repaired or replaced. If low pressure is still present, the pump needs repairing.

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

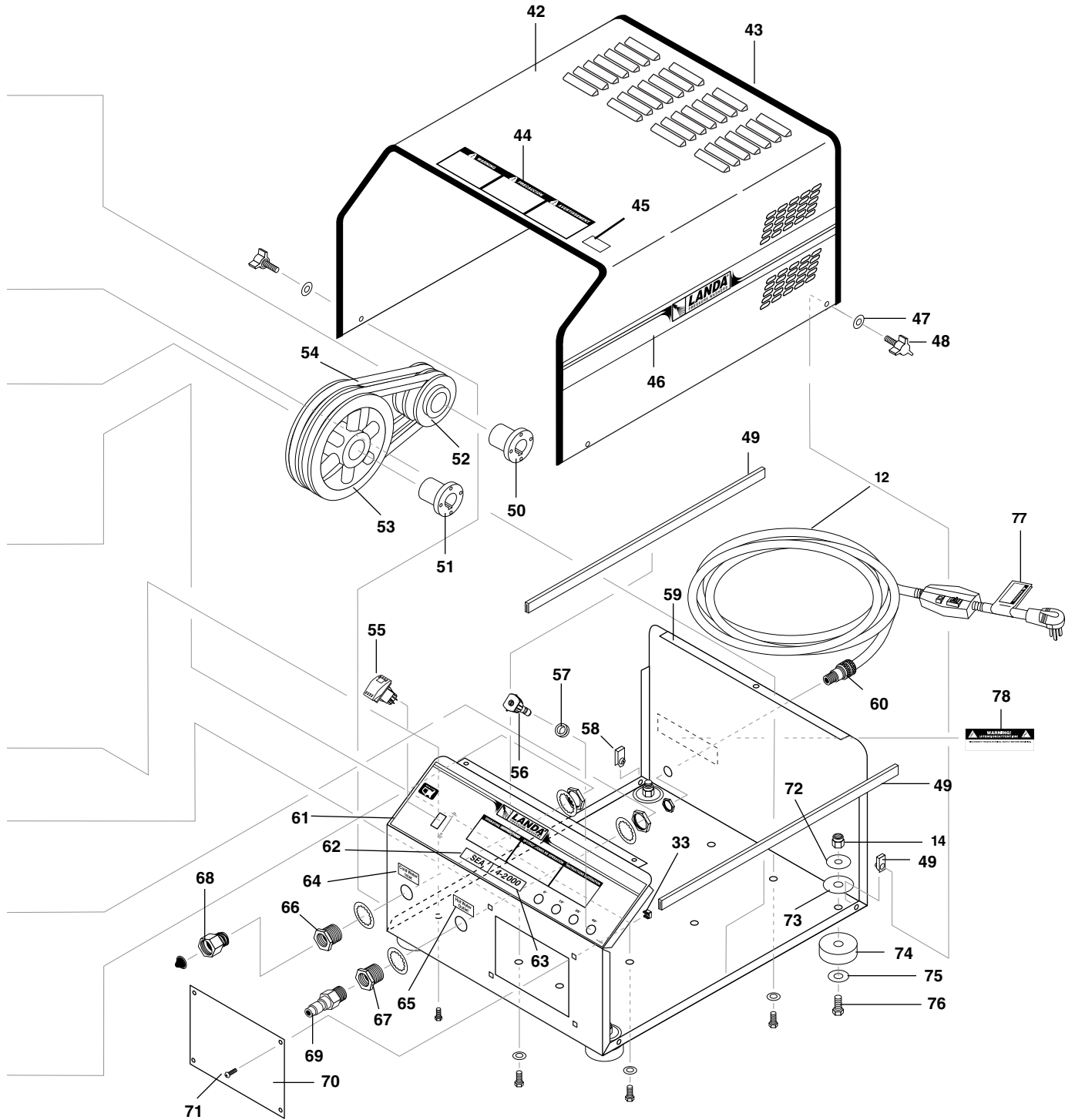
TIME DELAY SHUTDOWN OPERATION

Once the spray gun trigger is released, the shutdown timer becomes activated. The machine will continue to run in by-pass mode until the timer reaches its preset time, 1-10 minutes. When that time is reached, the machine shuts down. To reset, push the pump switch forward.

EXPLODED VIEW
LEFT SIDE • ALL MODELS



**EXPLODED VIEW
RIGHT SIDE • ALL MODELS**



EXPLODED VIEW PARTS LIST
ALL MODELS

ITEM	PART NO.	DESCRIPTION	QTY
1	6-4013	Contact, 120V, CH CE15FNS3AB (3-1100)	1
	6-4018	Contact, 120V, CH CE15HNS3AB-09 (4-2000A,G)	1
	6-4007	Contact, 120V, CH CE15DNS3AB (4-2000B,A)	1
	6-4000	Contact, 120V, CH CE15BNS3AB (4-2000C,F)	1
	6-4010	Contact, 120V, CH CE15ENS3AB (4-3000B,H)	1
	6-4004	Contact, 120V, CH CE15CNS3AB (4-3000C,F)	1
	6-5009	▲ Overload, 7.50-11.00 amp, CH C316FNA3P (4-2000C,F)	1
	6-5010	Overload, 10.00-14.00 amp, CH C316FNA3Q (4-3000C,F,H)	1
	6-5013	Overload, 24.00-32.00 amp, CH C316FNAJT (4-3000B,H)	1
	6-60101	▲ Transformer, Micron, 240/480, 220/440-120/115/110, .050KVA (4-2000A,B,C, 4-3000C)	1
	6-6013	Transformer, Micron 230/460/575- 95/115, .050KVA (4-2000F, 4-3000F)	1
	6-6014	Transformer, Micron, 208/277-120 .050KVA (4-2000G,H, 4-3000H)	1
	6-02294	▲ Fuse, ATMR 1 amp, 240V	2
	6-02295	Fuse, ATMR 1/2 amp, 480V	2
	6-02297	Fuse, GDC 1/2 amp, 120V	1
2	6-03700	Timer, Multi-Function, 24V-120/240V	1
3	6-03621	Relay, 120V, RH2B-UL-AC120	1
4	6-03541	Base, Relay, SH2B-05, 1DEC	1
5	6-021595	Rail Track /inch	6
6	90-19996	Screw, 10/32" x 1/2" BH SOC, SS	2
7	90-020	Nut, 10/32" NF ST STKEP	7
8	6-03907	Box, Plastic 8" x 8" x 4" (3-1100)	1
	6-03909	Box, Plastic 10" x 8" x 6" w/Lid (4-2000, 4-3000)	1
9	95-07603907	Bracket, Support for Elec. Box	1
10	6-05152	Strain Relief, STRT, Small	1
11	6-051595	Strain Relief, STRT, Large	2

ITEM	PART NO.	DESCRIPTION	QTY
12	6-0105	Cord, Service, SEO, 12/4 (4-2000C,F,N) /ft.	13
	6-01059	GFCI, 240V 30A, w/36' 10-3 Cord (4-2000A,G)	1
	6-01060	GFCI, 120V 20A, w/36' 12-3 Cord (3-1100)	1
	6-0109	Cord, Service, SEO, 10/4 (4-2000B,H, 4-3000B,C,F,H,N) /ft.	13
	6-010631	Cord, Service, 240V 1PH 36' GFCI (3-1100K, 4-2000K)	1
13	5-10402	Motor, 6HP 1PH 200V 1800RPM (4-2000G)	1
	5-10401	Motor, 6HP 1PH 230V 1725 RPM (4-2000A)	1
	5-10111	Motor, 6HP 3PH 200V 1800RPM (4-2000H)	1
	5-10144	Motor, 7.5HP 3PH 200V, M3311T-8 (4-3000H)	1
	5-1011	Motor, 6HP 3PH 1725RPM (4-2000B,C)	1
	5-10145	Motor, 7.5HP 3PH 1725RPM M3311T (4-3000B,C)	1
	5-10146	Motor, 7.5HP 3PH M3311T (4-3000F)	1
	5-1027	Motor, 5HP 3PH 1725RPM M3218T-5 (4-2000F)	1
	5-1047	Motor, 2HP 1PH (3-1100)	1
14	90-20063	Nut, 3/8" Whiz Loc SS	10
15	90-40021	Washer, 3/8", SAE, SS	10
16	6-021730	Switch, Flow MV60	1
17	2-00270	Elbow, 3/8", Male, Pipe	1
18	5-3207	Unloader, AL606, 7.8 GPM @ 3650PSI	1
19	2-11050	Swivel, 3/4" SAE Fem, Push-on	1
20	4-02120000	Hose, 3/4" Push-on, per/ft.	1.66
21	2-10622	Elbow, 3/4" JIC x 1/2", 90°	1
22	2-0079	Swivel, 1/2" JIC Fem, 3/8" Male	1
23	2-0053	Elbow, 1/2" JIC, 3/8", 90°	2
24	2-0031	Elbow, 3/8", Street	1
25	2-1032	Tee, 1/2" Female, Pipe	1
26	2-1006	Nipple, 1/2" Close	1
27	2-11080	Push-on, 3/4" x 1/2" Male	1
28	2-0053	Nipple, 1/2" JIC, 3/8" Pipe	1

EXPLODED VIEW PARTS LIST ALL MODELS (CONTINUED)

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
29	5-23020	Pump, General T-991 w/Hot Kit (3-1100)	1	53	5-40107401	Pulley, AK74H (3-1100)	1
	5-2304	Pump, General, T-1011 (4-2000)	1		5-40208401	Pulley, 2AK84H (4-2000)	1
	5-2307	Pump, General, TS-2021 (4-3000)	1		5-40508001	Pulley, 2BK80H (4-3000)	1
29	1-100	Kit 100 (HOTKIT) 190° (4-2000, 4-3000)	1	54	5-602033	Belt, AX33 (3-1100)	1
	1-0101	Kit Valve, Hot Kit (3-1100)	1		5-602036	Belt, AX36 (4-2000)	2
	1-660041	Packing, Teflon, T-991 (3-1100)	6		5-604036	Belt, BX36 (4-3000)	2
30	90-102201	Bolt, 3/8" x 3-1/2", Tap, SS	2	55	6-020241	Switch, Rocker, Carling M-Circuit, Red	1
31	95-07141110	Retainer, Pump Take UP	1	56	4-12805500	Nozzle, 00055, Red (3-1100)	1
32	90-50056	Nut, 3/8", SS	2	56	4-12805515	Nozzle, 15055, Yellow (3-1100)	1
33	2-0114	Nut, 1/4" Square Head Grommet, Nylon	4		4-12805525	Nozzle, 25055, Green (3-1100)	1
34	95-07121112	Rail, Pump	1		4-12805540	Nozzle, 40055, White (3-1100)	1
35	2-3008150	Pump Protector, 1/2" 190°	1		4-12806000	Nozzle, 0006, Red (4-2000)	1
36	4-02100000	Hose, 1/4", Push-on /in.	9.5		4-12806015	Nozzle, 1506, Yellow (4-2000)	1
37	4-02110000	Hose, 1/2", Push-on /ft.	2.5		4-12806025	Nozzle, 2506, Green (4-2000)	1
38	2-1105	Swivel, 1/2" JIC Fem, Push-on	2		4-12806040	Nozzle, 4006, White (4-2000)	1
39	4-02047720	Hose, 3/8" x 20", 2 Wire, Pressure Loop	1		4-12804000	Nozzle, 0004, Red (4-3000)	1
40	2-1062	Elbow, 1/2" JIC x 3/8", 90°	2		4-12804015	Nozzle, 1504, Yellow (4-3000)	1
41	2-0053	Elbow, 1/2" JIC x 3/8", 90°	1		4-12804025	Nozzle, 2504, Green (4-3000)	1
42	95-07111011	Cover, SEA, Stainless Steel	1		4-12804040	Nozzle, 4004, White (4-3000)	1
43	2-01104	Trim, 1/16", Black /Ft.	8.25	57	2-0103	Grommet, Rubber, Nozzle Holder	4
44	10-99072	Label, Warning Inst.	1	58	90-2015	Nut, 5/16", Speed	4
45	10-02028	Label, Warning - Exposed Pulleys	1	59	95-07111010	Cabinet, SEA, SS	1
46	10-99079	Label, SEA Platinum Series Stripe	2	60	6-05153	Strain Relief, STRT, LQ Tite, Med (3-1100)	1
47	90-40061	Washer, 5/16" x 1-1/4", Fender SS	4		6-051595	Strain Relief, STRT, LQ Tite, Large (4-2000)	1
48	90-50031	Knob, 5/16" - 18 x 1", Black /3 Pt	4		6-0517	Strain Relief, 3/4" (4-3000)	1
49	2-01107	Weatherstrip, 1/8" x 1/2"	6	61	10-03000	Label, SEA Control Panel	1
50	5-511113	Bushing, H X 1-1/8" (4-2000)	1	62	10-020SEA	Label, SEA	1
	5-511138	Bushing, H X 1-3/8" (4-3000)	1	63	10-2031100	Label, 3-1100	1
51	5-512024	Bushing, H X 24mm	1		10-2042000	Label, 4-2000	1
52	5-40102558	Pulley, Bore, AK25 X 5/8" (3-1100)	1		10-2043000	Label, 4-3000	1
	5-40205101	Pulley, 2AK51H (4-2000)	1	64	10-09003	Label, Cold Water Inlet	1
	5-40504501	Pulley, 2BK45H (4-3000)	1	65	10-09002	Label, Cold Water Outlet	1
				66	2-11041	Connector, 1/2" Anchor	1
				67	2-11039	Connector, 3/8" Anchor	1
				68	2-10942	Swivel, 1/2" MP x 3/4" GHP w/Strainer	1

EXPLODED VIEW PARTS LIST
ALL MODELS (CONTINUED)

ITEM	PART NO.	DESCRIPTION	QTY
69	2-2007	Nipple, 3/8" x 3/8" NPT ST Male	1
70	95-07111016	Cover, Access Hole, SEA	1
71	90-19923	Screw, 1/4" x 1/2", BH SOL C/S SS	4
72	90-40071	Washer, 7/16" x 2-1/2", Zinc	4
73	2-0108	Bumper Pad, Engine	4
74	2-0104	Pad, Hand Rubber	4
75	90-401250	Washer, 3/8" x 1", SS	4
76	90-10181	Bolt, 3/8" x 1-1/2", HH NC, SS	4
77	10-08018	Label, GFCI, Warning (3-1100D,K, 4-2000A,K, 4-2000G)	1
78	10-08021	Label, Electrical Disconnect Warning	1

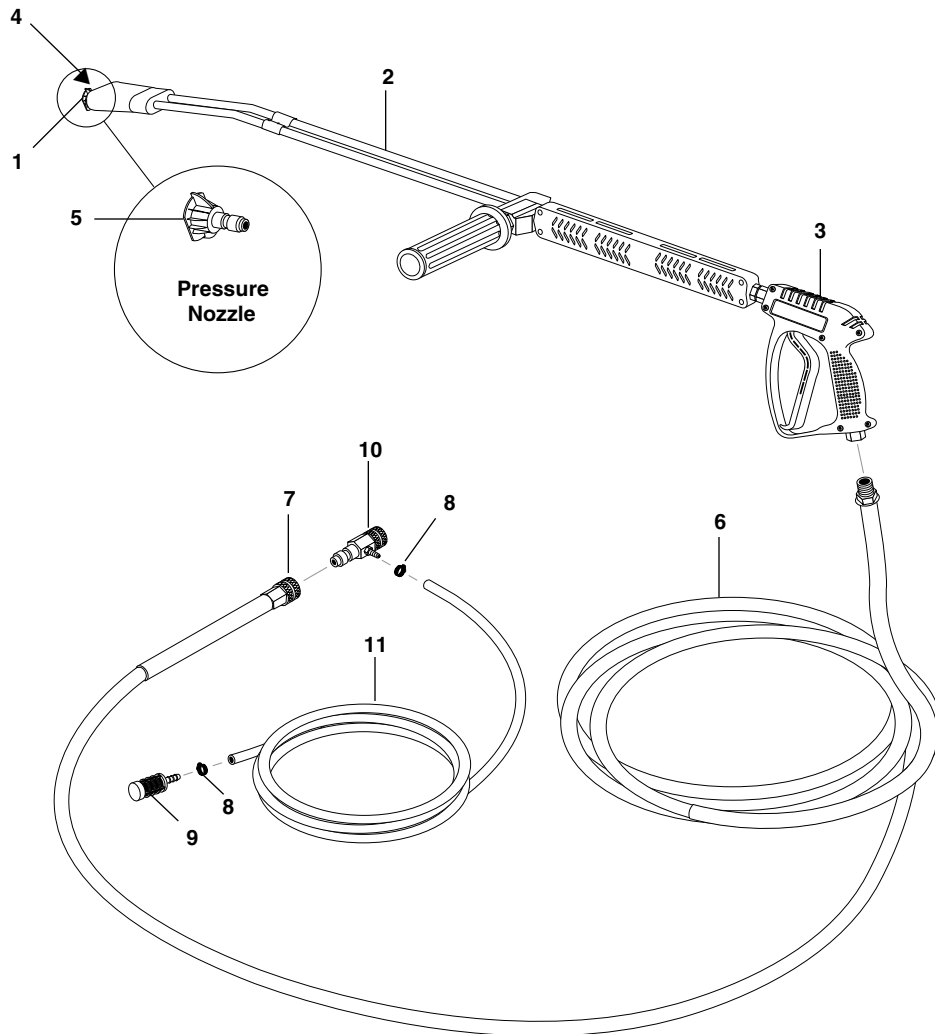
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HOSE, SPRAY GUN, WAND & NOZZLE ALL MODELS

INJECTOR ASSEMBLY

ASSY #2 • 4-011183 • (3-1100)

ASSY #3 • 4-011184 • (4-2000, 4-3000)



ITEM	PART NO.	DESCRIPTION	QTY
1	2-2001	Coupler, 1/4" Male	1
	2-0119	▲ Quick Coupler, O-Ring, Sm.	1
2	4-011143A	Wand, SS, Variable Pressure	1
	83-SSVPKIT	Repair Kit, AR Stainless Seat	1
3	4-01212	Spray Gun, Shut-Off, Series 2000	1
4	4-06540	Soap Nozzle Only, 1/8", Brass	1
5	Nozzle	See Page 11 for Correct Nozzle	1
6	4-02043450C	Hose, 3/8" x 50' Tuff Skin, w/Coupler	1

ITEM	PART NO.	DESCRIPTION	QTY
7	2-2002	Coupler, 3/8", Female	1
	2-0121	▲ Quick Coupler, O-Ring Lg.	1
8	2-9000	Clamp, Screw, #4	2
9	2-1904	Strainer, 1/4" Hose Barb	1
10	3-1202	Injector, Detergent, Non Adjust, #2	1
	3-12021	Injector, Detergent, Non Adjust, #3	1
11	4-02080000	Tube, 1/4" x 1/2", Clear Vinyl /ft.	6

▲ Not Shown

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
PUMP RUNNING NORMALLY BUT PRESSURE LOW ON INSTALLATION	Pump sucking air	Check water supply and possibility of air seepage.
	Check valves sticking	Check and clean or replace if necessary.
	Unloader valve seat faulty	Check and replace if necessary.
	Nozzle incorrectly sized	Check and replace if necessary.
	Worn piston packing	Check and replace if necessary.
FLUCTUATING PRESSURE	Valves worn	Check and replace if necessary.
	Blockage in valve	Check and clean out if necessary.
	Pump sucking air	Check water supply connections.
	Worn piston packing	Check and replace if necessary.
	Insufficient water	Check filter and hose for breakage.
PRESSURE LOW AFTER PERIOD OF NORMAL USE	Nozzle worn	Check and replace if necessary.
	Suction or delivery valves worn	Check and replace if necessary.
	Suction or delivery valves blocked	Check and clean if necessary.
	Unloader valve seat worn	Check and replace if necessary.
	Unloader adjusted improperly	Call local Landa dealer.
	Worn piston packing	Check and replace if necessary.
	Bypass valve within unloader is obstructed or leaking	Remove and clean bypass cartridge.
PUMP NOISY	Air in suction line	Check water supply and connections on suction line.
	Broken or weak suction or delivery valve spring	Check and replace if necessary.
	Foreign matter in valves	Check and clean if necessary.
	Worn bearings	Check and replace if necessary.
	Excessive temperature of water	Reduce to below 140° F.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
PRESENCE OF WATER IN PUMP 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-Ring plunger retainer worn	Check and replace if necessary.
OIL DRIPPING FROM PUMP	Oil seal worn	Check and replace if necessary.
EXCESSIVE VIBRATION IN HIGH PRESSURE HOSE	Irregular functioning of the pump valves	Check and replace if necessary.
	Obstruction in filter	Clean inlet filter.
MOTOR WILL NOT RUN	Motor overload	Push in the overload button located on the motor (single phase) or the overload button on the magnetic start switch (three phase).
	Stepdown transformer fuses	Check fuses and voltage. Replace if necessary.
	Coil of magnetic starter defective	Replace coil after the timer and unloader switch have been tested.
MACHINE WILL NOT TURN ON WHEN SWITCH IS PUSHED	Timer is defective	Join wires 15 and 16 together on timer. If works, replace timer.



LANDA LIMITED NEW PRODUCT WARRANTY PRESSURE WASHERS

WHAT THIS WARRANTY COVERS

All LANDA pressure washers are warranted by LANDA, INC. 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.

FIVE YEAR 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 heating coils. Internal components on the oil-end of all branded pumps have a five year warranty.

ONE YEAR MINIMUM ON 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 cannot provide warranty on these items.

WHAT THIS WARRANTY DOES NOT COVER

This warranty does not cover the following items:

1. Normal wear items, such as nozzles, 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. If you are unable to resolve the warranty claim satisfactorily, write to LANDA at 4275 N.W. Pacific Rim Blvd., Camas, WA 98607, ATTN: Warranty Dept., detailing the nature of the defect, the name of the Authorized LANDA Dealer, and a copy of the purchase invoice.

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. **THE WARRANTY CONTAINED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.** 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.



4275 NW Pacific Rim Blvd. • Camas, WA 98607 USA

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