

PHW

Hot Water - Electric Powered - Diesel/Oil Heated

LANDA®

Kärcher Group

Service Manual

Pressure Washer



MODELS:

PHW3-11024D
1.109-078.0

PHW4-22024A
1.109-079.0

PHW4-22024B
1.109-080.0

PHW4-22024C
1.109-081.0

PHW4-22024F
1.109-082.0

PHW4-22024G
1.109-083.0

PHW4-22024H
1.109-084.0

PHW4-30024A
1.109-085.0

PHW4-30024B
1.109-086.0

PHW4-30024C
1.109-087.0

PHW4-30024F
1.109-088.0

PHW4-30024G
1.109-089.0

PHW4-30024H
1.109-090.0

PHW5-30024B
1.109-091.0

PHW5-30024C
1.109-092.0



WARNING:

This product and accessories may contain a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information about this regulation: www.P65Warnings.ca.gov

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



Machine Data Label

Model: _____

Date of Purchase: _____

Serial Number: _____

Dealer: _____

Address: _____

Phone Number: _____

Sales Representative: _____

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How To Use This Manual

This manual contains the following sections:

- How to Use This Manual
- Maintenance
- Parts List

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

Model: _____
Date of Purchase: _____
Serial Number: _____
Dealer: _____
Address: _____
Phone Number: _____
Sales Representative: _____

The model and serial number will be found on a decal attached to the pressure washer.

The SAFETY section contains important information regarding hazardous or unsafe practices of the machine. Levels of hazards are identified that could result in product damage, personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Troubleshooting

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

- **REF** – column refers to the reference number on the parts illustration.
- **PART NO.** – column lists the part number for the part.
- **QTY** – column lists the quantity of the part used in that area of the machine.
- **DESCRIPTION** – column is a brief description of the part.
- **NOTES** – column for information not noted by the other columns.

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.

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

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 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	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.
	Obstruction in spray nozzle	Remove obstruction.
	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 specifications 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 burner switch for continuity.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Burner Will Not Light (Continued)	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 Operator's Manual.
	Fuel not reaching combustion chamber	Check fuel pump for proper flow. Check solenoid flow switch on machines with spray gun control for proper on-off fuel flow control.
	Clogged burner nozzle	Replace.
	Water not flowing through flow switch	Open spray gun to allow water to flow.
	Flow switch malfunction	Remove reed and test for continuity. Replace if needed.
	Fuel solenoid malfunction	Replace if needed.
Unit Smokes While Burner Is Running Or Smokes At Cold-start When Burner Is Off Adjust For Local Altitude, Humidity, And Ambient Air Temperature.	Improper fuel or water in fuel	Drain tank and replace contaminated fuel.
	Improper air adjustment	Readjust air bands on burner assembly.
	Low fuel pressure if below 140 psi	Adjust higher.
	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.
	Obstruction in smoke stack while burner is running	Check for insulation blockage or other foreign objects.
High fuel pressure if above 140 psi, when unit is cold started and burner is off	Reduce fuel pressure, but not below 140 psi	
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 if needed.
	Soot build-up on coils	Clean coils with soot remover.
Water Temperature Too Hot	Incoming water to machine warm or hot	Lower incoming water temperature.
	Fuel pump pressure too high	Readjust 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 exploded view parts list for proper size.
	Insufficient water supplied	Check GPM to machine.
	Restricted water flow	Check nozzle for obstruction and proper size.

PROBLEM	POSSIBLE CAUSE	SOLUTION
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 the pump to bind up	Fill to correct level.
Relief Valve Leaks Or Sprays Out 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 Coils."
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. Read detergent label.
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 and 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 functioning of check valves, metering valves	Check and replace if necessary.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Burner Stays On When Spray Gun Is In Off Position	Fuel pump pressure too high	Readjust fuel pressure.
	Pressure switch defective	Check for proper operation, replace if necessary.
	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.
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.
Won't Start	Faulty timer	By-pass timer by joining wires 15 & 16 on timer together. If it starts, replace timer.
Won't Timeout	Faulty reed switch	Check for continuity. Replace if necessary.
	Faulty relay or base	Check relay cube or relay base for proper continuity. Replace if necessary.

Unloader Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
System Will Not Come Up To Full Designated Pressure	Spray nozzle worn or nozzle orifice is too large in relation to pump flow rate	See serial plate for correct nozzle size.
	Adjusted improperly	Readjust unloader with pressure gauge.
	Bypass valve (within unloader) is obstructed or leaking	Remove and clean bypass cartridge or replace.
	Flow rate of pump inadequate	Assure designated flow rate of pump is adequate in relation to spray nozzle size.
Pressure Spikes In Discharge Line During Bypass Mode	Pressure adjustment too tight	Call technical support.
	Restricted bypass line	Bypass line should be 1/2" inside diameter (I.D.), 12" long and of low pressure flexible hose.
	Flow rate higher than 8 gpm	Unloader flow rate is 7.8 gpm maximum.
Unloader Cycles While In Bypass Mode	External leak on unloader or in downstream fittings	Inspect all high pressure lines (including spray gun and hose) for any signs of leakage and repair as necessary.
	Discharge valve (within the unloader) damaged, obstructed or worn	Inspect and replace as necessary.
	Weep gun is being used	The unloader is not designed for use with a weep gun.

Parts

LANDA PHW

PHW3-11024D 1.109-078.0

PHW4-22024A 1.109-079.0

PHW4-22024B 1.109-080.0

PHW4-22024C 1.109-081.0

PHW4-22024F 1.109-082.0

PHW4-22024G 1.109-083.0

PHW4-22024H 1.109-084.0

PHW4-30024A 1.109-085.0

PHW4-30024B 1.109-086.0

PHW4-30024C 1.109-087.0

PHW4-30024F 1.109-088.0

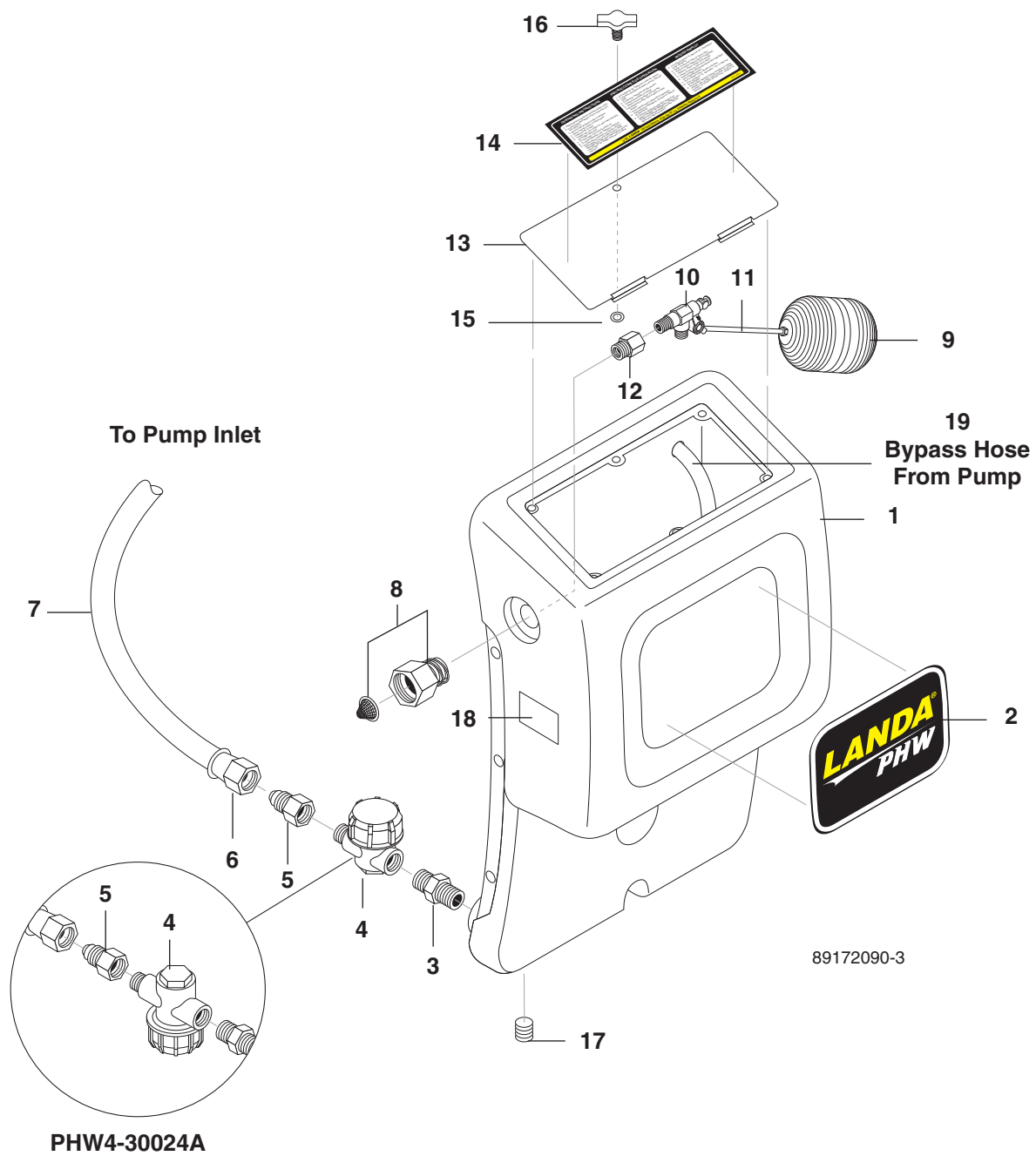
PHW4-30024G 1.109-089.0

PHW4-30024H 1.109-090.0

PHW5-30024B 1.109-091.0

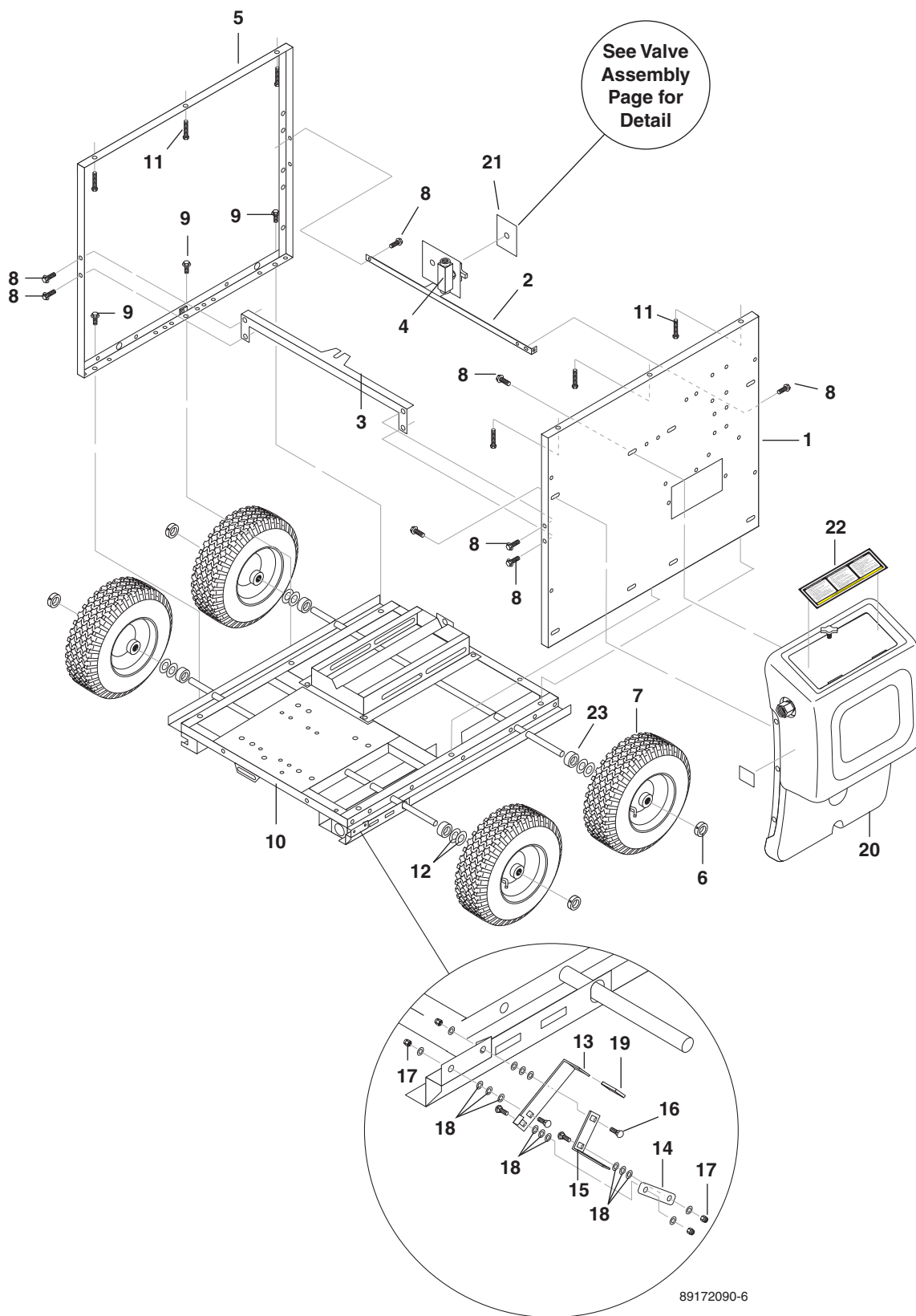
PHW5-30024C 1.109-092.0

Float Tank Assembly

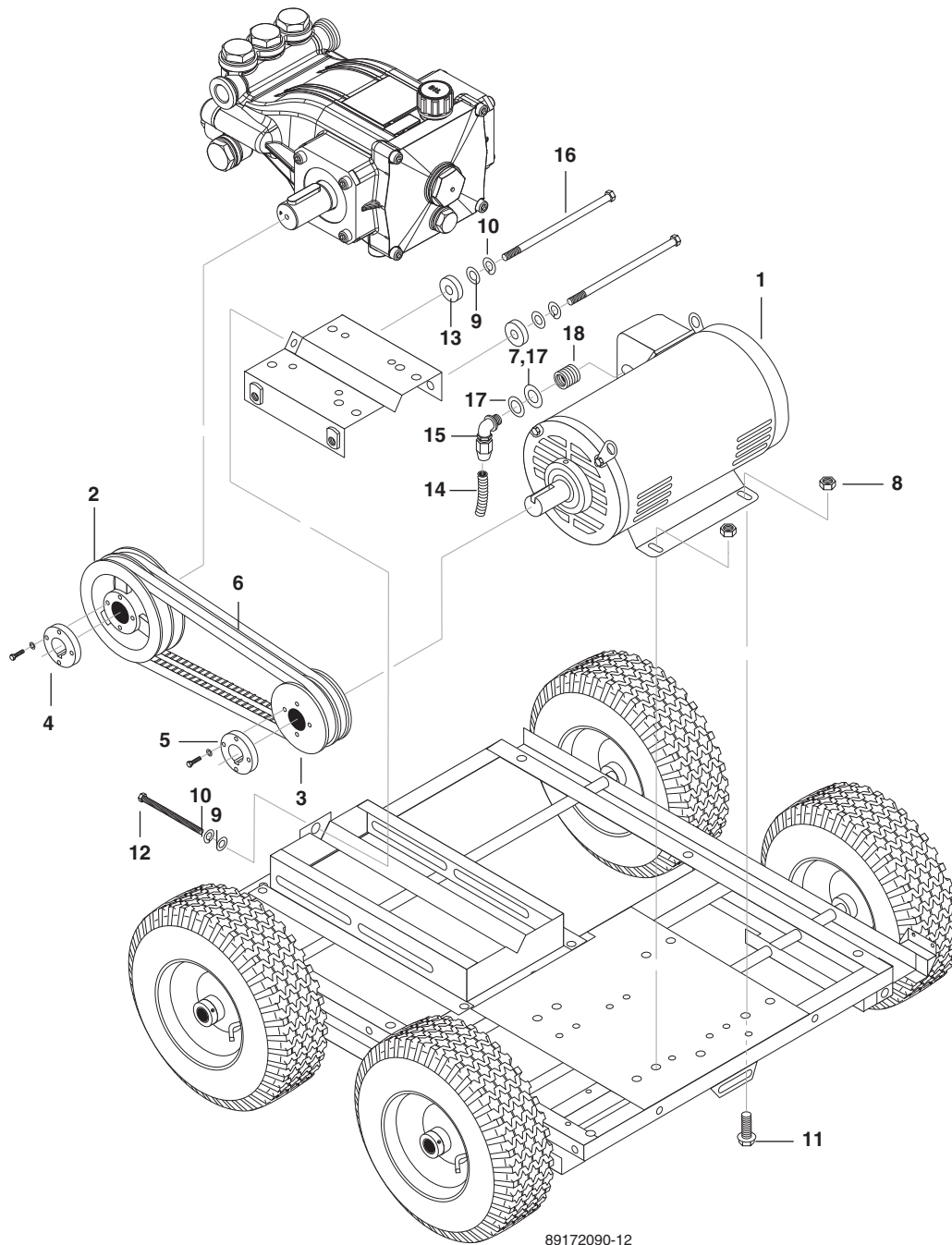


REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.750-163.0	1	TANK, WATER FLOAT PHW_09	
2	8.917-705.0	1	LABEL, LANDA LOGO, PHW_09, FLOAT	
3	8.706-797.0	1	NIPPLE, 1/2" HEX, BRASS	
4	9.802-163.0	1	FILTER, 1/2" MPT, PA	
5	8.725-987.0	1	ADAPTER, 3/4" JIC x 1/2" FPT, BRASS	
6	9.802-152.0	1	SWIVEL, 3/4" SAE FEM, PUSH-ON	
7	9.802-261.0	44"	HOSE, 3/4" PUSH-ON, /FT	
8	9.802-146.0	1	SWIVEL, 1/2" MP x 3/4" GHF W/STRAINER	
9	8.706-512.0	1	BALL, FLOAT, BLACK PLASTIC	
10	8.749-328.0	1	FLOAT VALVE, 1/2" KERICK PVC	
11	8.718-612.0	1	STUD, 1/4-20 BRASS W/GROOVE	
12	8.706-984.0	1	ADAPTER, 1/2" FPT x 1/2" MPT, BRASS	
13	8.917-613.0	1	COVER, FLOAT TANK PHW_09	
14	8.917-587.0	1	LABEL, OPERATING PHW_09	
15	8.718-976.0	1	WASHER, 1/4 RETAINER	
16	9.802-746.0	1	SCREW, 1/4-20 X 1/2", THUMB	
17	8.706-865.0	1	PLUG, 1/4" NPT COUNTERSUNK	
18	9.800-020.0	1	LABEL, COLD WATER INLET	
19	9.802-252.0	44"	HOSE, 1/4" x 1/2", BRAIDED VINYL, /F	

Frame Assembly

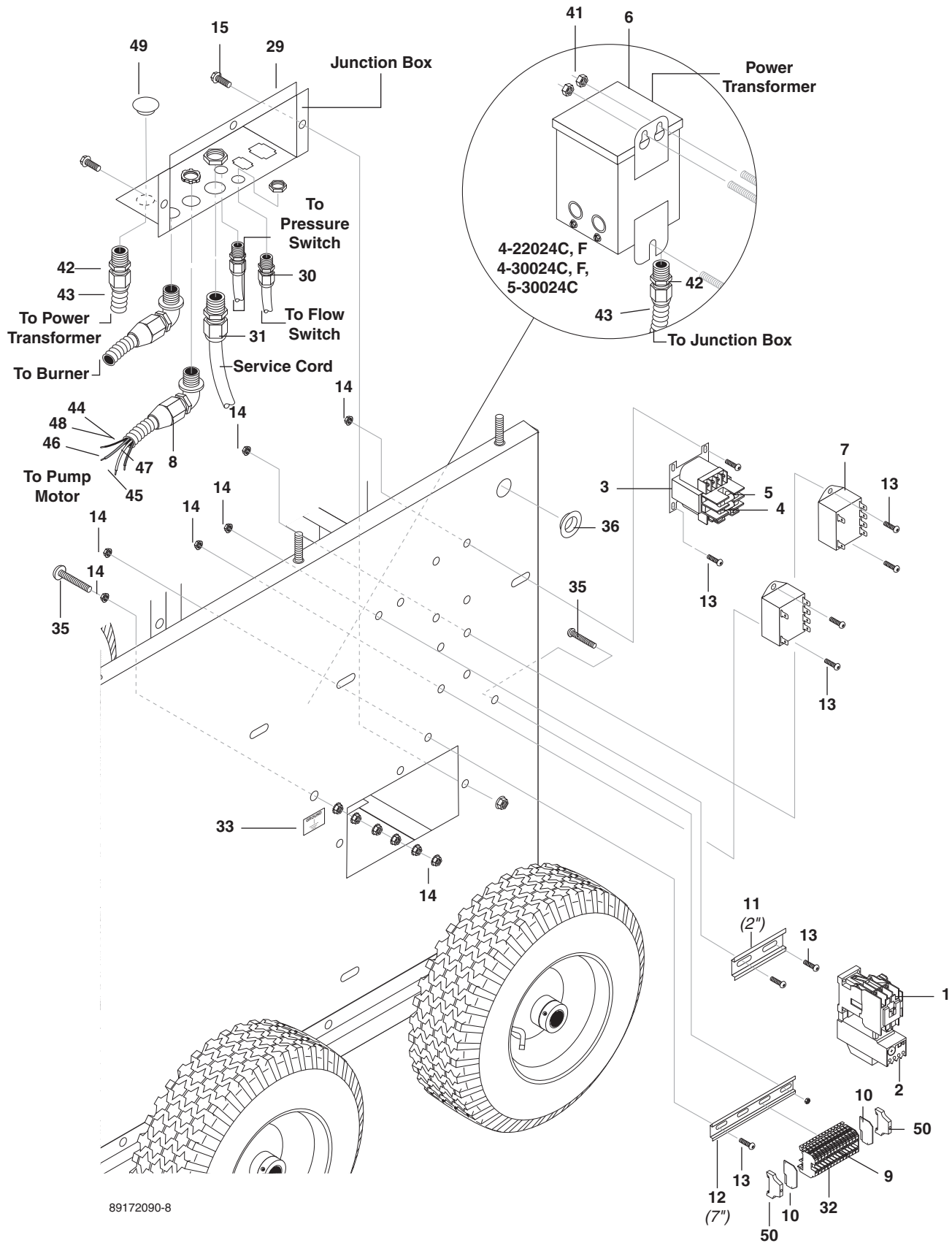


REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.917-589.0	1	WELDMENT, SIDE, EBOX, PHW_09	
2	8.917-592.0	1	ANGLE, FRONT, PHW_09	
3	8.917-724.0	1	WELDMENT, ANGLE, BACK UPPER, PHW_09	
4	8.917-734.0	1	VALVE ASSY, DETERGENT PHW_09	
5	8.917-591.0	1	WELDMENT, SIDE, FUEL, PHW_09	
6	9.802-782.0	4	COLLAR, 5/8" BORE SHAFT 3010	
7	8.754-435.0	4	WHEEL & PU TIRE ASSY, 12" STEEL RIM	
8	8.750-246.0	9	SCREW, 1/4" x 1/2" NC, WHIZ LOC BLK CAD	
9	9.802-767.0	6	SCREW, 3/8" x 3/4" NC, WHIZ LOC FLANGE	
10	8.923-676.0	1	WLMT, BASE, PHW	
11	8.718-674.0	6	BOLT, 3/8-16 X 2-1/4", GR8.2 WHIZ LOC	
12	9.802-810.0	8	WASHER, 5/8", FLAT, SAE ZINC	
13	9.803-111.0	1	LEVER, BRAKE, BLACK	
14	9.802-997.0	1	LEVERAGE	
15	9.802-996.0	1	BRACKET, BRAKE PAD	
16	9.802-705.0	4	BOLT, 1/4"-20 x 1" CARRIAGE ZINC	
17	9.802-773.0	4	NUT, 1/4-20 ESNA NC	
18	9.802-802.0	16	WASHER, 1/4" FLAT SAE ZINC	
19	9.804-608.0	1	CAP, VINYL FLAT (YELLOW).125X1.0X1.875	
20	8.917-226.0	1	ASSY, FLOAT TANK, PHW_09	
21	8.900-825.0	1	LABEL, DETERGENT CONTROL VALVE	
22	8.917-587.0	1	LABEL, OPERATING PHW_09	
23	9.802-820.0	4	SLEEVE, 0,656X1,25X0,65 NYLON	

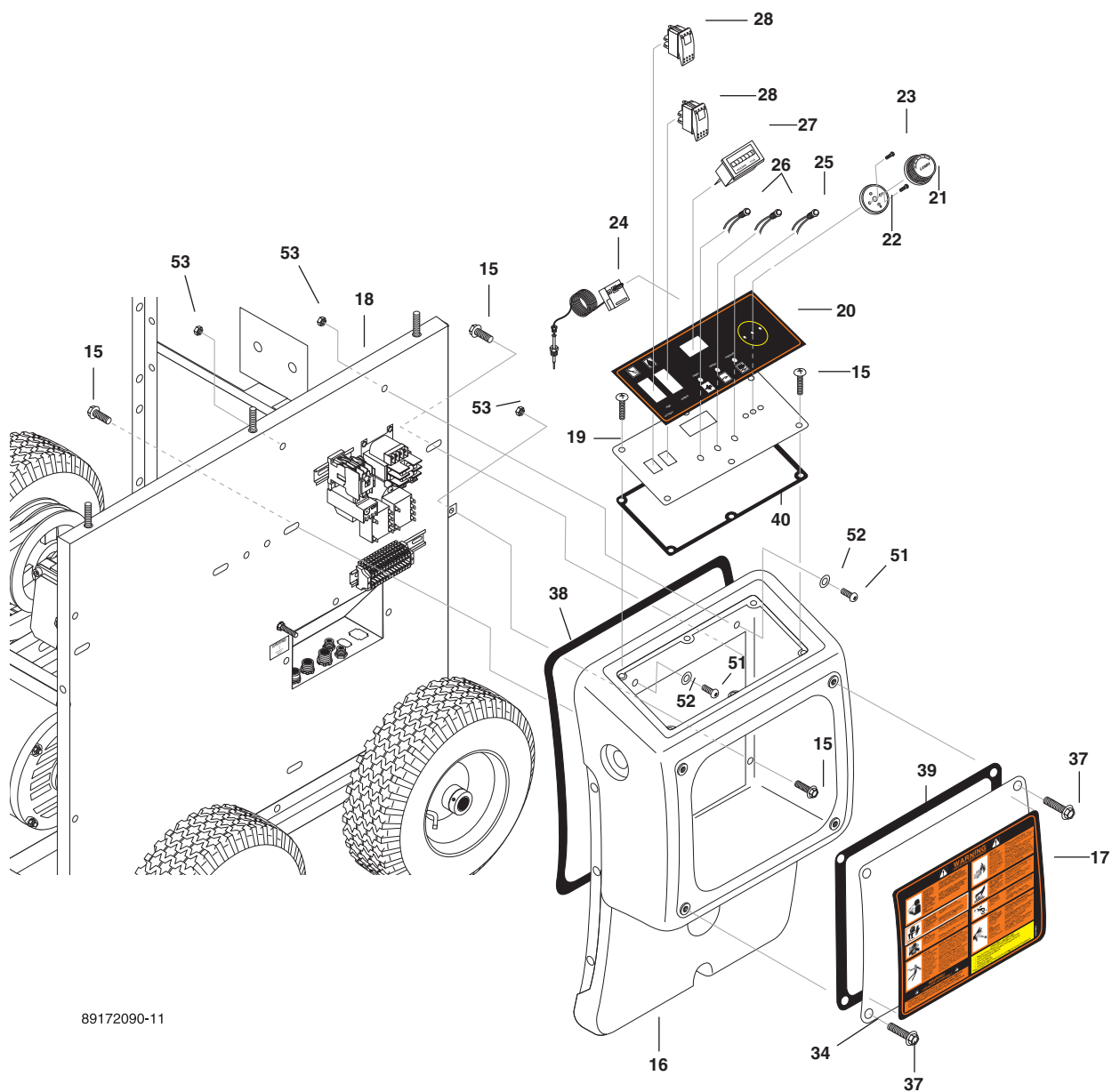


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REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.754-710.0	1	MOTOR, 2HP 1PH 115/230V 3470 RPM ODP	
-	9.802-336.0	1	MOTOR,6.2HP 1PH,230V 1725RPM, 36K907T466	4-22024A
-	8.751-004.0	1	MOTOR, 6.2HP 3PH 208/230/460V, 1750RPM,	4-22024B,C
-	8.751-009.0	1	MOTOR, 5HP 3PH 575V, 1800RPM, EM3218T-5	4-22024F
-	9.802-337.0	1	MOTOR,6.2HP 1PH,200V 1725RPM, 36J468Y852	4-22024G
-	8.756-426.0	1	MOTOR, 6.2 HP 3PH 200V, 1750 RPM	4-22024H
-	8.725-973.0	1	MOTOR, 8.2HP 230V 1PH, 1740 RPM	4-30024A
-	8.750-999.0	1	MOTOR, 8.2HP 3PH 230/460V, 1760RPM, EE	4-30024B,C
-	8.751-010.0	1	MOTOR, 7.5HP 3PH 575V, 1800RPM, EM3311T-	4-30024F
-	8.726-137.0	1	MOTOR, 8.2HP 1PH 208V 1740 RPM	4-30024G
-	8.750-998.0	1	MOTOR, 8.2HP 3PH 208V, 1760RPM, EE	4-30024H
-	8.751-015.0	1	MOTOR, 10HP 3PH 230/460V, 1800RPM, EM331	5-30024B,C
2	9.804-029.0	1	PULLEY, AK 64 H	3-11024D
-	8.715-592.0	1	PULLEY, 2BK 80H	4-30024A,B,C,F,G,H
-	9.802-388.0	1	PULLEY, 2BK 67 H	5-30024B,C
-	9.802-374.0	1	PULLEY, 2AK 74 H	4-22024A,B,C,F,G,H
3	9.804-028.0	1	PULLEY, BORE, AK 28 X 5/8	3-11024D
-	8.715-546.0	1	PULLEY, 2AK 44 H	4-22024A,B,C,G,H
-	8.715-545.0	1	PULLEY, 2AK 41 H	4-22024F
-	8.715-582.0	1	PULLEY, 2BK 47H	4-3002A,B,C,G,H
-	9.802-385.0	1	PULLEY, 2BK 45 H	4-3000F; 5-3002B,C
4	9.802-402.0	1	BUSHING, H X 24MM	3-11024D
-	9.802-403.0	1	BUSHING, H X 25MM	4-22024A,B,C,F,G,H; 4-30024A,B,C,F,G,H; 5-30024B, C
5	9.802-400.0	1	BUSHING, H X 1-1/8	4-22024A,B,C,F,G,H
-	9.802-401.0	1	BUSHING, H X 1-3/8	4-30024A,B,C,F,G,H; 5-30024B,C
6	9.802-408.0	1	BELT AX 36	4-2200A,B,C,G,H 3-11024D
-	9.802-410.0	2	BELT, AX38	4-2200F
-	9.802-417.0	2	BELT, BX38	4-30024A,B,C,F,G
-	9.802-415.0	2	BELT, BX35	5-30024B,C
7	8.726-099.0	2	WASHER, REDUCING 1" x 1/2" ELECTRICAL	4-30024B,C,H; 5-30024B,C
8	9.802-778.0	4	NUT, 5/16" WHIZ LOC FLANGE	3-11024D
-	9.802-781.0	4	NUT, 3/8" NC, WHIZ LOC FLANGE	4-2, 4-3, 5-3
9	9.802-807.0	3	WASHER, 3/8", SAE, FLAT ZINC	
10	9.802-814.0	3	WASHER, 3/8" SPLIT RING LOCK, ZINC	
11	9.803-551.0	4	SCREW, 5/16" x 3/4" WHIZ LOC FLANGE	3-11024D
-	9.802-767.0	4	SCREW, 3/8" x 3/4" NC, WHIZ LOC FLANGE	4-22024, 4-30024, 5-30024
12	9.802-735.0	1	BOLT, 3/8" x 5-1/2", NC HH TAP	
13	8.719-047.0	2	WASHER, NYLON, .390 ID X 1 OD X .25 THK	
14	9.802-448.0	13"	CONDUIT,WTR. TIGHT,FLEX,1/2 100'/BOX	4-22024A,B,C,F,G,H; 4-30024B,C,F,H; 5-30024B,C
-	9.802-448.0	24"	CONDUIT,WTR. TIGHT,FLEX,1/2 100'/BOX	2-11024D,4-30024A,G
15	9.802-517.0	1	CONNECTOR, 1/2" L/T, 90 DGR, BLACK	
16	8.725-549.0	2	BOLT, 3/8" X 7-1/2" HH	
17	9.803-834.0	1	WASHER, REDUCING 3/4" x 1/2"	3-11024D; 4-22024B,C,F,G,H; 4-30024A,F,G
18	8.716-579.0	1	BUSHING, 3/4' X 1/2', RB321S	1.109-079.0 ONLY



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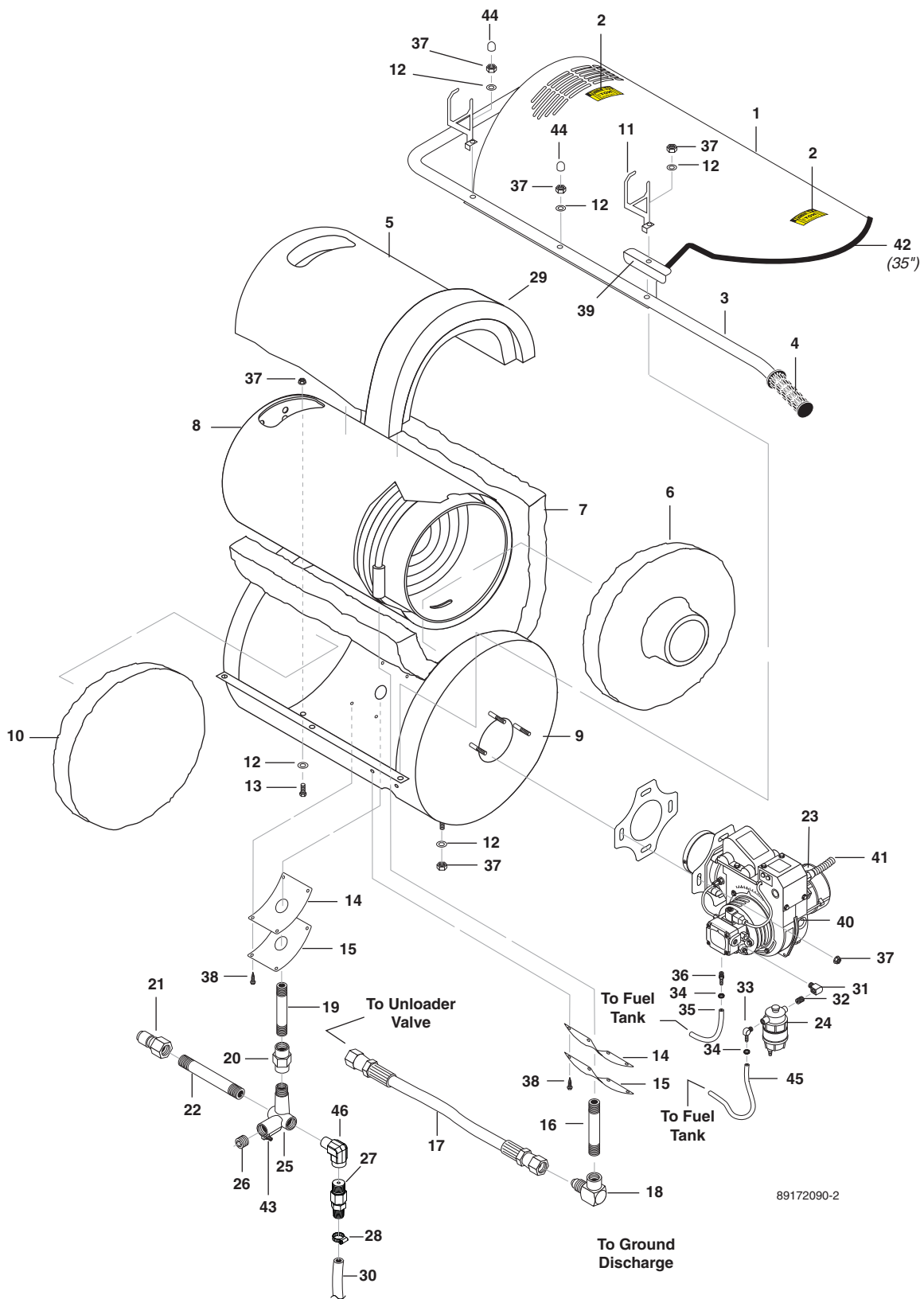
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Electrical & Control Panel

REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.724-269.0	1	CONTACTOR, DP C25DNY152TL, 25 AMP	3-11024D, 4-22024C, 4-22024F, 4-30024C, 4-30024F, 5-30024C
-	8.724-275.0	1	CONTACTOR, DP C25DNY153TL, 30 AMP	4-22024B, 4-22024H, 4-30024B, 4-30024H
-	8.724-280.0	1	CONTACTOR, DP C25DNY154TL, 40 AMP	4-22024A, 4-22024G, 5-30024B
-	8.724-283.0	1	CONTACTOR, DP C25DNY155TL, 50 AMP	4-30024A, 4-30024G
2	8.724-304.0	1	OVERLOAD, XTOB024CC1DP, 16.0 - 24.0	4-22024B, 4-22024H
-	8.724-305.0	1	OVERLOAD, XTOB032CC1DP, 24.0 - 32.0	5-30024B
-	8.724-306.0	1	OVERLOAD, XTOB040DC1DP, 24.0 - 40.0	4-22024A, 4-22024G, 4-30024A, 4-30024B, 4-30024G, 4-30024H
-	8.724-312.0	1	OVERLOAD, XTOB016CC1DP, 10.0 - 16.0	4-22024C, 4-22024F, 4-30024C, 4-30024F, 5-30024C NOT USED ON 3-11024D
3	9.802-553.0	1	TRANSFORMER, 120/240V-24V,.050KVA	
-	8.716-883.0	1	TRANSFORMER,208/230/460V-24/115V,.050KVA	4-3000C,G,H; 5-3000C
-	8.716-884.0	1	TRANSFORMER,.100KVA,575-24 w/FUSE BLOCK	4-2200F, 4-3000F
4	8.716-199.0	1	FUSE, FNM-6.25	
5	9.803-663.0	1	FUSE, KTK-R2(amp) 600V MIDGET FUSE	
6	8.750-104.0	1	TRANSFORMER, 230/460-120, .5 KVA	4-22024C; 4-30024C; 5-30024C
-	8.750-248.0	1	TRANS, 575V-240/120V, .500kVA, DRY	4-22024F; 4-300224F
7	8.716-086.0	2	RELAY, 24V, DPST NO	
8	9.802-517.0	2	CONNECTOR, 1/2" L/T, 90 DGR, BLACK	
9	8.749-977.0	8	BAR, JUMPER, PHOENIX FBS 2-5GY	
10	8.749-980.0	2	TERMINAL BLOCK, END CAP, PHOENIX	
11	9.802-457.0	2"	DIN RAIL,35MM	
12	9.802-457.0	11"	DIN RAIL,35MM	
13	9.802-759.0	11	SCREW, 10/32" x 1/2" BHSOC BLK	
14	9.802-695.0	19	NUT, 10/32" KEPS	
15	8.750-246.0	13	SCREW, 1/4" x 1/2" NC, WHIZ LOC BLK CAD	
16	8.750-164.0	1	COVER, ELECTRIC BOX PHW_09	
17	8.917-588.0	1	LABEL, WARNING PHW_09	
18	8.917-589.0	1	WELDMENT, SIDE, EBOX, PHW_09	
19	8.917-404.0	1	PANEL, CONTROL PHW	
20	8.917-586.0	1	LABEL, CONTROL PANEL, PHW_09	
21	8.750-097.0	1	KNOB, THERMOSTAT 120C/248F	
22	8.712-190.0	1	BEZEL, PLASTIC, THERMOSTAT (915390)	
23	8.718-779.0	2	SCREW, 4MM X 6 MM, PAN HEAD	
24	8.750-095.0	1	THERMOSTAT, 120C/240F, 2 METER CAPILLARY	
25	8.750-251.0	1	LIGHT, INDICATOR, LED, AMBER, 28V	

REF	PART NO.	QTY	DESCRIPTION	NOTES
25	8.751-445.0	1	PLUG, DOME PLUG .312, BLACK	3-11024D ONLY
26	8.750-250.0	2	LIGHT, INDICATOR, LED, GREEN, 28V	
27	9.802-283.0	1	HOUR METER, 24-240VAC 50/60HZ	
28	8.716-037.0	2	SWITCH, ROCKER, 10A/250V-15A/125V, 24VLT	
29	8.917-706.0	1	WLMT, BOX, ELECTRICAL JUNCTION, PHW-09	
30	8.716-598.0	2	STRAIN RELIEF, .18-.31 (.51 HOLE)	
31	9.802-522.0	1	STRAIN RELIEF, 1"	
32	8.749-976.0	14	TERMINAL BLOCK, FEED-THROUGH, PHOENIX	
33	9.800-040.0	1	LABEL, GROUND SYMBOL	
34	8.917-765.0	1	PANEL, ELECTRIC BOX ACCESS PHW_09	
35	8.718-730.0	2	SCREW, 10/32" X 2-1/2", RND HD MCH	
36	9.802-103.0	1	BUSHING, 5/8" SNAP, P/N 2123	
37	8.726-103.0	4	SCREW, 1/4-20 x 5/8", WHIZ LOC BLK CAD	
38	9.802-073.0	40"	WEATHERSTRIP, 1/8" x 1/2" x 75'	
39	8.725-550.0	1	GASKET, ELEC BOX, PHW_09	
40	8.725-551.0	1	GASKET, CONTROL PANEL PHW_09	
41	9.802-775.0	3	NUT, 1/4" FLANGE, ZN	4-22024C,F;4-30024C,F; 5-30024C
42	8.716-547.0	1	CONNECTOR, 1/2" L/T, STRAIGHT, BLACK	4-22024C,F;4-30024C,F; 5-30024C
43	9.802-448.0	12"	CONDUIT,WTR. TIGHT,FLEX,1/2 100'/BOX	4-22024C,F; 4-30024C,F;5-30024C
44	8.715-999.0	38"	WIRE, MTW, 10 GA, BLACK /FT	3-11024D
-	8.715-999.0	38"	WIRE, MTW, 10 GA, BLACK /FT	4-30024A,G 2 REQUIRED
-	8.715-999.0	38"	WIRE, MTW, 10 GA, BLACK /FT	4-30024B,C,F,H; 4-30024B,C,F,H; 5-30024B,C 3 REQUIRED
45	8.715-976.0	38"	WIRE, MTW, 10 GA, WHITE /FT	3-11024D
46	8.725-953.0	42"	WIRE, MTW, 10 GA, GREEN /FT	
47	8.725-950.0	42"	WIRE, MTW, 8 GA, GREEN /FT	4-30024A,G
48	8.716-002.0	38"	WIRE, THHN, 8 GA, BLACK /FT	2 REQUIRED
49	9.802-105.0	1	PLUG, 7/8", HOLE	3-11024D; 4-22024A,B,G,H; 4-30024AB,G,H; 5-30024B
50	9.804-595.0	2	END BRACKET, ENTRELEC, 103-002-26	
51	9.802-770.0	2	SCREW, 1/4" X 1", BH SOC CS	
52	9.802-803.0	2	WASHER, 1/4" FLAT, SAE BLK ZINC	
53	9.802-775.0	2	NUT, 1/4" FLANGE, ZN	

Combustion Assembly

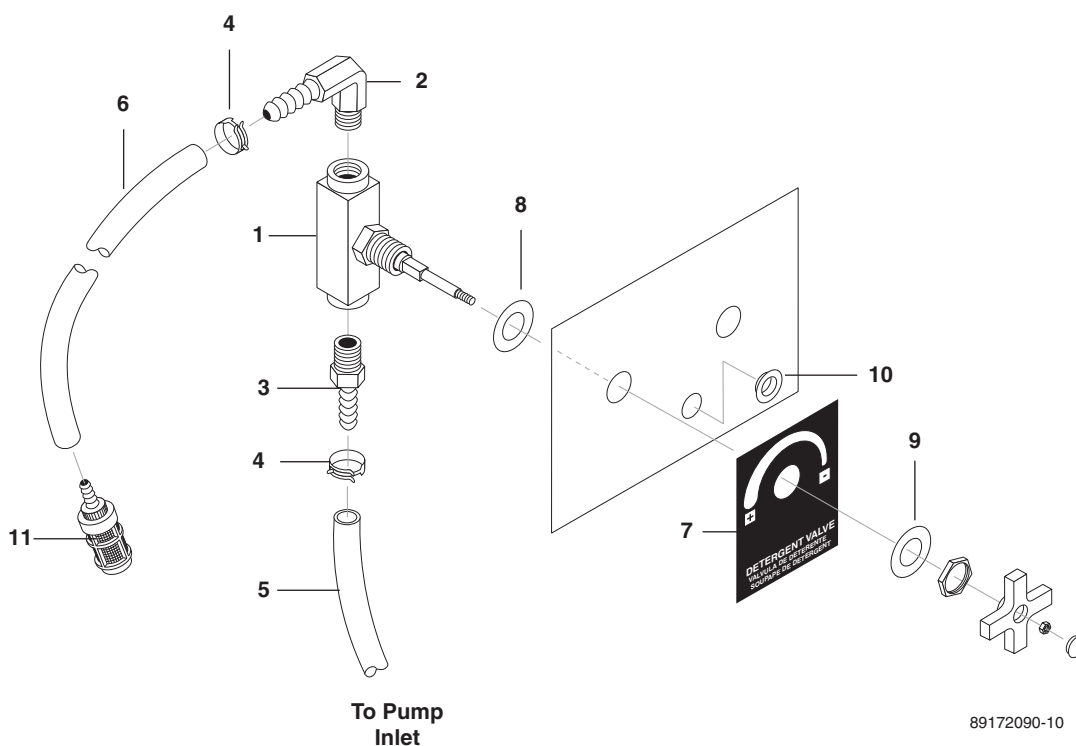


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REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.912-192.0	1	WRAP, TOP, STAINLESS STEEL	
2	9.800-006.0	2	LABEL, HOT/CALIENTE w/ARROWS	
3	8.917-448.0	1	HANDLE, PHW WELDMENT	
4	9.802-069.0	2	GRIP, 1", HANDLE (WAFFLE)	
5	9.802-902.0	1	INSUL/BLANKET-DIE CUT 28" x 24" x 1" THK	
6	9.802-894.0	1	INSULATION,BURNER HEAD,W/HOLE	
7	9.802-896.0	1	INSULATION, BLANKET-NO FOIL, 24" x 57"	
8	8.912-239.0	1	COIL,LANDA,DURA,SCH 80 W/ALUMZD STL WRAP	
9	8.916-486.0	1	WLMT, BOTTOM WRAP, WRINKLE BLACK	
10	9.802-883.0	1	INSULATION,FRONT HEAD,NO HOLE	
11	8.917-729.0	2	BRACKET, WAND HOLDER, PHW_09	
12	9.802-807.0	8	WASHER, 3/8", SAE, FLAT ZINC	
13	9.802-727.0	2	BOLT, 3/8" x 1-3/4", TAP	
14	8.933-009.0	2	GASKET, BURNER PLATE	
15	9.803-132.0	2	RETAINER PLATE, INSULATION PHW/VNG	
16	9.802-015.0	1	NIPPLE, 1/2" x 4" GALV SCH 80 MPT	
17	8.918-424.0	1	HOSE, 3/8" x 25", 2 WIRE, PRES LOOP	
18	9.802-043.0	1	ELBOW, 1/2 JIC X 1/2 FEM 90DGR	
19	9.802-014.0	1	NIPPLE, 1/2" x 3" SCH 80 ZINC	
20	8.706-141.0	1	COUPLING, 1/2" STEEL PIPE	
21	9.802-170.0	1	COUPLER, 3/8"PLUG, FEMALE, STEEL/ZINC	
22	8.725-553.0	1	NIPPLE, 3/8" x 8" SCH 80 GALVINIZED	
23	8.716-547.0	1	CONNECTOR, 1/2" L/T, STRAIGHT, BLACK	
24	8.709-158.0	1	FILTER, LANDA, FUEL OIL/H2O SEPARATOR	MDL140
25	9.149-003.0	1	MANIFOLD COIL OUTLET DISCHARGE	
26	8.706-248.0	1	PLUG, 3/8" ALLEN COUNTER SUNK	
27	8.707-381.0	1	RUPTURE DISC ASSY, 8500#	
28	9.803-559.0	1	CLAMP,SCREW,9/16"W, 1-1/4"OD, SS	
29	8.755-185.0	1	INSULATION, BLANKET-NO FOIL,3"x 57"X 1"	
30	9.802-260.0	18"	HOSE 5/8"	
31	8.706-827.0	1	ELBOW, 1/4" STREET, BRASS	
32	8.706-777.0	1	NIPPLE, 1/4" CLOSE-P/N-3326-4	
33	8.706-958.0	1	HOSE BARB, 1/4" BARB x 1/4" MPT, 90 DGR	
34	6.390-126.0	2	CLAMP, HOSE, .46-, .54 ST	
35	9.802-254.0	1	HOSE, 1/4" PUSH-ON, /FT	
36	8.706-941.0	1	HOSE BARB, 1/4" BARB x 1/4" MPT, BRASS	
37	9.802-781.0	11	NUT, 3/8" NC, WHIZ LOC FLANGE	
38	9.802-797.0	8	SCREW, #10 x 1/2" HEX HEAD TEK SS	
39	8.919-836.0	2	BRACKET, HANDLE SUPPORT	

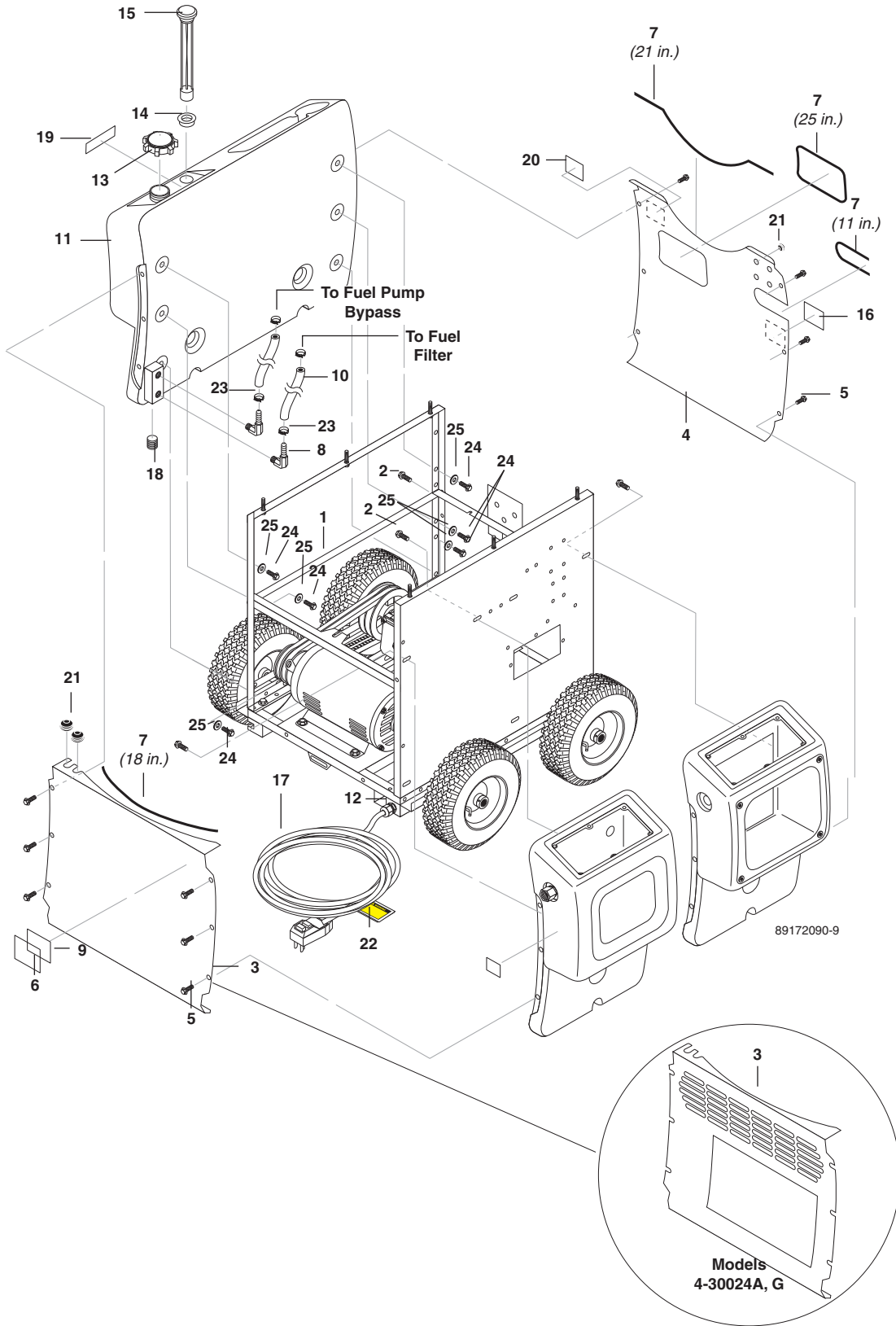
Combustion Assembly (cont.)

REF	PART NO.	QTY	DESCRIPTION	NOTES
40	8.756-644.0	1	BURNER, MSR 120V 2T 24V S	1.109-078.0
-	8.755-762.0	1	FUEL NOZZLE, 1.75 X 70 AR-D W/ 100 PSI CHECK VALVE	NOT SHOWN
-	8.756-384.0	1	BURNER, EHASR 230VAC 2T 24V S	1.109-091.0
-	8.756-383.0	1	BURNER, EHASR 120VAC 2T 24V S	1.109-092.0
-	8.756-697.0	1	FUEL NOZZLE, 2.50 X 80 B W/ 100 PSI CHECK VALVE	NOT SHOWN
-	8.756-336.0	1	BURNER, EHASR 230V 2T 24V S	1.109-079.0, 1.109-080.0, 1.109-083.0, 1.109-084.0, 1.109-085.0, 1.109-086.0, 1.109-089.0, 1.109-090.0
-	8.756-335.0	1	BURNER, EHASR 120V 2T 24V S	1.109-081.0, 1.109-082.0, 1.109-087.0, 1.109-088.0
-	8.756-491.0	1	FUEL NOZZLE, 2.25 X 80 B W/ 100 PSI CHECK VALVE	NOT SHOWN
41	9.802-448.0	50"	CONDUIT,WTR. TIGHT,FLEX,1/2 100'/BOX	
42	9.802-071.0	35"	TRIM, 750 B2 X 1/16. BLACK	
43	9.196-012.0	1	SCREW, 10-24 x 1/4" HEX SET	
44	8.750-435.0	4	CAP, BLACK VINYL .364 X 1/2	
45	9.802-254.0	30"	HOSE, 1/4" PUSH-ON, /FT	
46	9.802-024.0	1	ELBOW, 3/8" MPT x 1/2" FPT STREET, STEEL	
47	8.756-410.0	2	CONNECTOR, LEVER NUT, 3-WIRES	NOT SHOWN
48	8.756-409.0	1	CONNECTOR, LEVER NUT, 2-WIRES	NOT SHOWN



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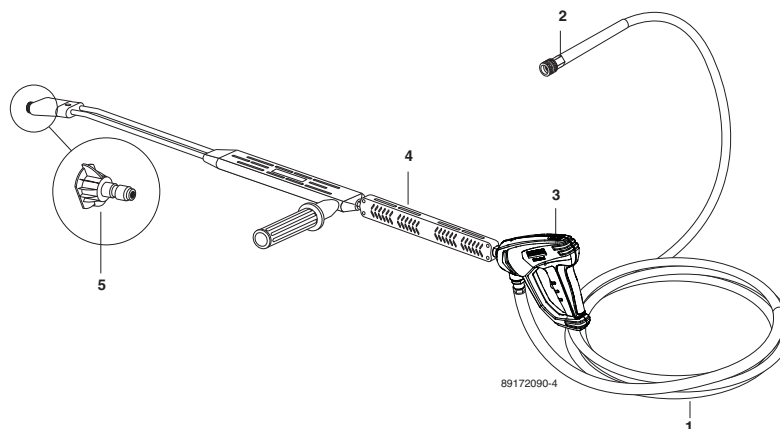
REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.707-317.0	1	VALVE, FLOW CONTROL	
2	8.706-958.0	1	HOSE BARB, 1/4" BARB x 1/4" MPT, 90 DGR	
3	8.706-941.0	1	HOSE BARB, 1/4" BARB x 1/4" MPT, BRASS	
4	6.390-126.0	2	CLAMP, HOSE, .46-, .54 ST	
5	9.802-252.0	1'	HOSE, 1/4" x 1/2", BRAIDED VINYL, /FT	
6	9.802-251.0	6'	TUBE 1/4" x 1/2", CLEAR VINYL /FT	
7	8.900-825.0	1	LABEL, DETERGENT CONTROL VALVE	
8	8.719-011.0	1	WASHER, 5/8" STAR	
9	9.802-810.0	1	WASHER, 5/8", FLAT, SAE ZINC	
10	9.802-104.0	1	BUSHING, 1.00" SNAP, P/N 2140	
11	8.707-058.0	1	STRAINER, 1/4" BRASS W/ CHECK VALVE	



REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.917-728.0	1	SUPPORT, FUEL TANK, PHW_09	
2	8.750-246.0	2	SCREW, 1/4" x 1/2" NC, WHIZ LOC BLK CAD	
3	8.917-593.0	1	PANEL, REAR, PHW_09	3-11024D; 4-22024A,B,C,F,G,H; 4-30024B,C,F,H; 5-30024B,C
-	8.917-726.0	1	PANEL, REAR, W/HOLE, PHW_09	4-30024A,G
4	8.917-594.0	1	PANEL, FRONT, PHW_09	
5	8.726-103.0	12	SCREW, 1/4-20 x 5/8", WHIZ LOC BLK CAD	
6	9.800-034.0	1	LABEL, CLEAR LEXAN, 4.3" X 5.5"	
7	9.802-071.0	75"	TRIM, 750 B2 X 1/16. BLACK	
8	8.706-958.0	2	HOSE BARB, 1/4" BARB x 1/4" MPT, 90 DGR	
9	8.932-968.0	1	LABEL, INTENDED FOR OUTDOOR USE - USA	
10	9.802-254.0	38"	HOSE, 1/4" PUSH-ON, /FT	2 REQUIRED
11	8.750-162.0	1	TANK, FUEL PHW_09	
12	9.802-518.0	1	STRAIN RELIEF, LT, STR, 3/4 NPT .49-.71D	3-11024D; 4-2200A,B,C,G,H,F; 4-3000B,C,H,F; 5-3000B,C
-	9.802-522.0	1	STRAIN RELIEF, 1"	4-3000A, G
13	9.802-089.0	1	CAP, FUEL, PLASTIC H60-AV1	
14	9.803-604.0	1	SLEEVE, FUEL LEVEL/SWITCH	
15	8.750-115.0	1	GAUGE, FUEL LEVEL PHW_09	
16	9.800-021.0	1	LABEL, HOT WATER OUTLET	
17	9.802-431.0	1	GFCI, 125V 20A, 36' 12-3 CORD (981000)	
-	9.804-071.0	2	DISCONNECT, FEM FULLY INS .250, YELLOW	3-11024D; 4-22024A,G NOT SHOWN
-	8.716-376.0	1	TERMINAL, RING TONGUE, 10RC-10	3-11024D; 4-22024A,G 4-22024B,C,F,H; 4-30024B,C,F,H; 5-30024B,C NOT SHOWN
-	9.802-430.0	1	GFCI, 240V 1PH 30A, 36' 10-3 CORD	
-	9.804-071.0	3	DISCONNECT, FEM FULLY INS .250, YELLOW	4-22024B,C,F,H; 4-30024B,C,F,H; 5-30024B,C NOT SHOWN
-	9.802-434.0	1	GFCI, 240V 1PH 40A, 36' 8-3 CORD	4-30024A,G
-	8.716-368.0	1	TERMINAL, RING TONGUE P/N PV8-10R-Q	4-30024A,G NOT SHOWN
-	8.750-060.0	2	FERRULE, INSULATED, 8 AWG	4-30024A,G NOT SHOWN

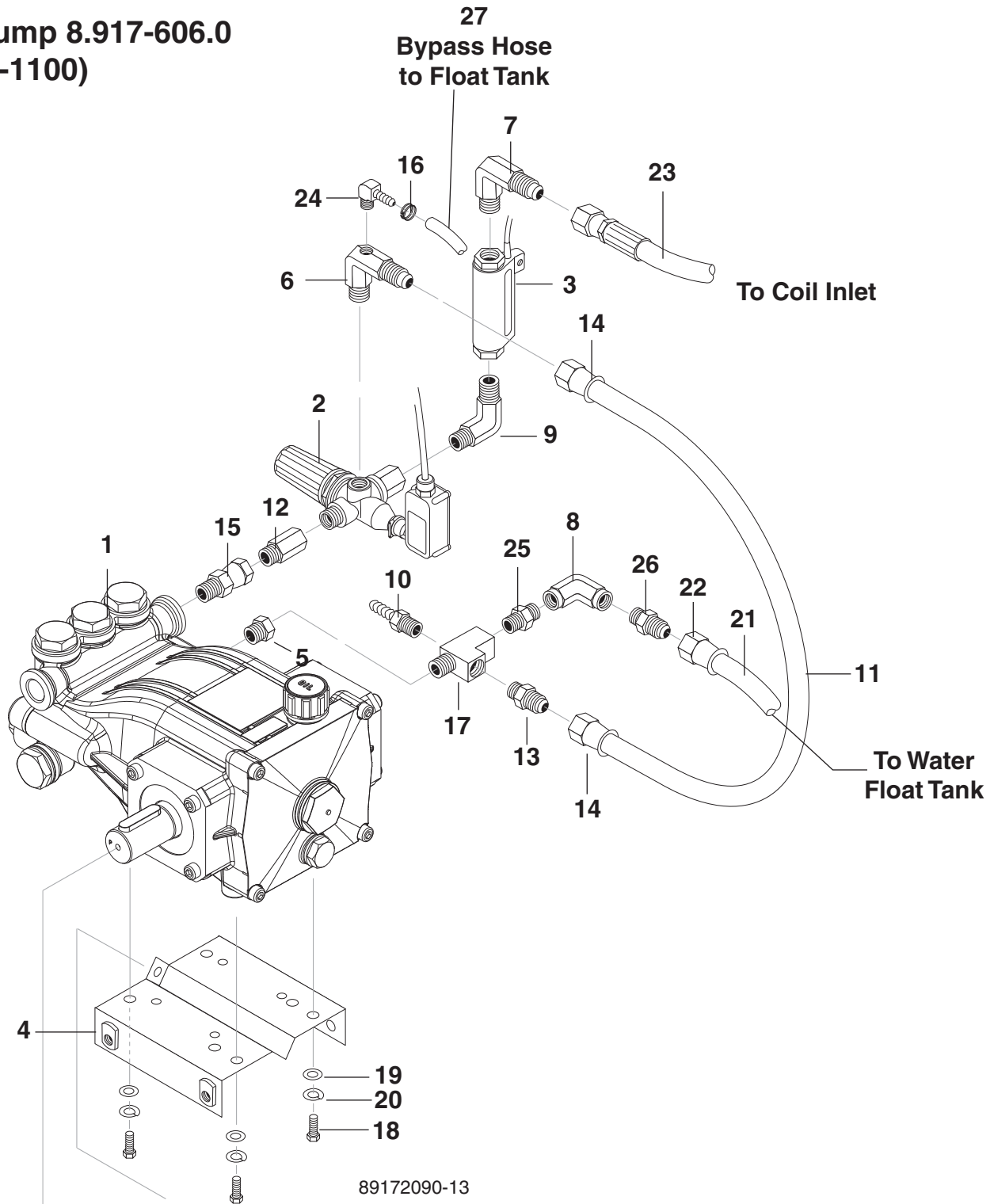
Chassis (cont)

REF	PART NO.	QTY	DESCRIPTION	NOTES
17	9.802-437.0	15'	CORD, SERV, 10/4, SEOW, /FT	4-22024B,C,F,H 4-30024B,C,F,H 5-30024B,C
18	8.706-865.0	1	PLUG, 1/4" NPT COUNTERSUNK	
19	8.932-960.0	1	LABEL, DIESEL, BLACK ON YELLOW	
20	8.932-965.0	1	LABEL, WARNING-EXPOSED PULLEYS	
21	9.802-064.0	6	GROMMET, RUBBER, NOZZLE HOLDER	
22	8.932-969.0	1	LABEL, WARNING, SERVICE CORD	
23	8.709-069.0	2	CLAMP, SCREW,5/16"W, 1/4-5/8"D, SS	
24	9.802-754.0	6	SCREW, 1/4" x 1/2" NC, WHIZ LOC FLANGE	
25	9.802-802.0	6	WASHER, 1/4" FLAT SAE ZINC	



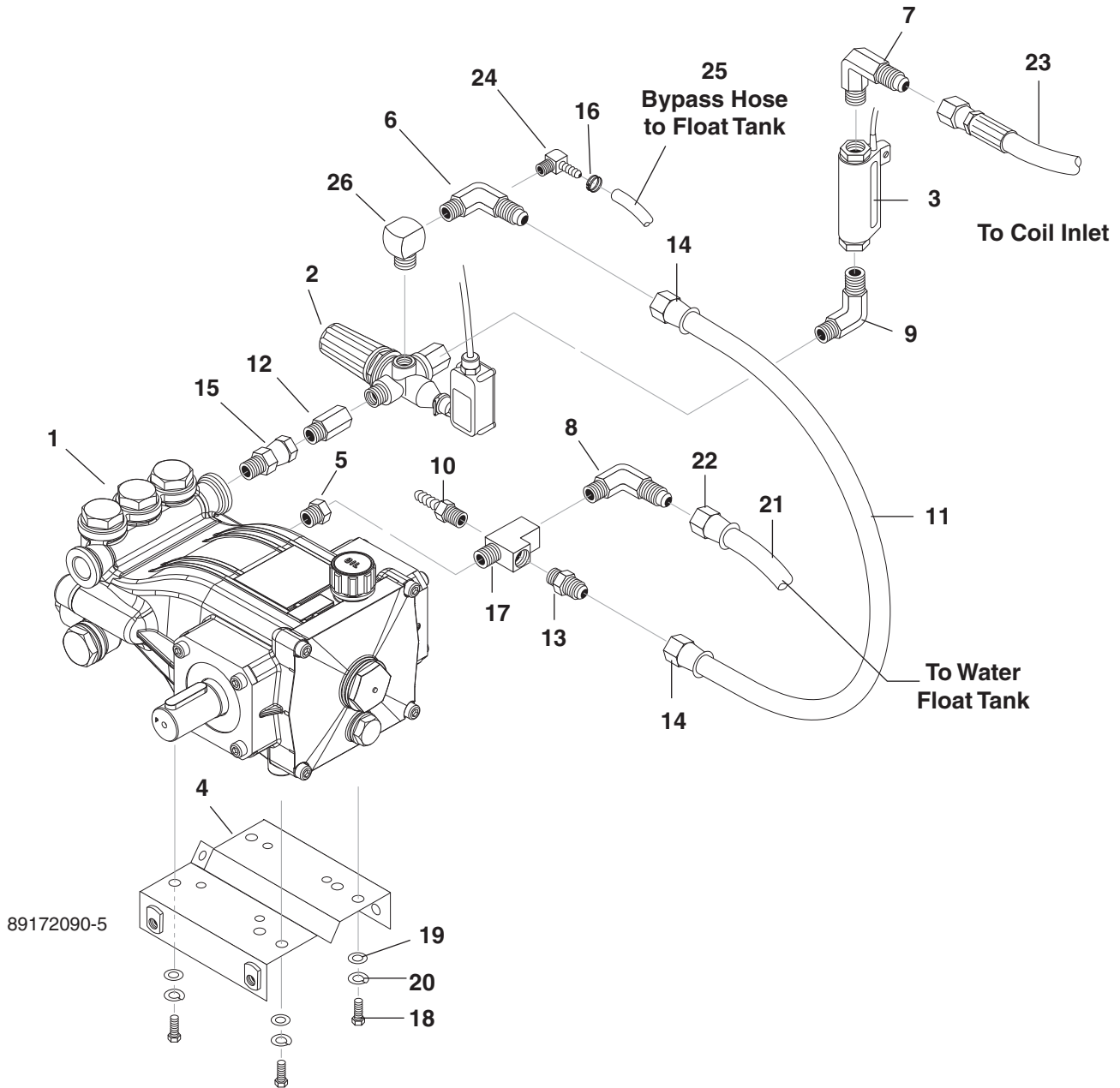
REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.916-740.0	1	HOSE, 3/8" X 50', 1W, TS, SOXSW	
-	8.917-057.0	1	HOSE 3/8"X50,1W,TS,SO-SW, CP	REPLACEMENT ONLY
2	9.802-166.0	1	COUPLER, 3/8"SOCKET, FEMALE, BRASS	
3	4.775-054.0	1	EASY! FORCE ADVANCED KNA	
4	8.711-293.0	1	WAND,VP ZNC1/4"AL 344W/CPLR W/SOAP NZZ	
5	8.712-353.0	1	NOZZLE, SAQCMEG 0005, RED	3-11024D; 4-22024A,B,C,G,H; 5-30024B,C
-	8.712-354.0	1	NOZZLE, SAQCMEG 1505, YELLOW	3-11024D; 4-22024A,B,C,G,H; 5-30024B,C
-	8.712-355.0	1	NOZZLE, SAQCMEG 2505, GREEN	3-11024D; 4-22024A,B,C,G,H; 5-30024B,C
-	8.712-356.0	1	NOZZLE, SAQCMEG 4005, WHITE	3-11024D; 4-22024A,B,C,G,H; 5-30024B,C
-	8.712-349.0	1	NOZZLE, SAQCMEG 0004.5, RED	4-30024A,B,C,F,G,H; 4-22024F
-	8.712-350.0	1	NOZZLE, SAQCMEG 15045, YELLOW	4-30024A,B,C,F,G,H; 4-22024F
-	8.712-351.0	1	NOZZLE, SAQCMEG 25045, GREEN	4-30024A,B,C,F,G,H; 4-22024F
-	8.712-352.0	1	NOZZLE, SAQCMEG 4004.5, WHITE	4-30024A,B,C,F,G,H; 4-22024F
-	8.712-345.0	1	NOZZLE, SAQCMEG 0004, RED	4-30024F
-	8.712-346.0	1	NOZZLE, SAQCMEG 1504, YELLOW	4-30024F
-	8.712-347.0	1	NOZZLE, SAQCMEG 2504, GREEN	4-30024F
-	8.712-348.0	1	NOZZLE, SAQCMEG 4004, WHITE	4-30024F
-	8.712-357.0	1	NOZZLE, SAQCMEG 0005.5, RED	3-11024D; 5-30024B,C
-	8.712-358.0	1	NOZZLE, SAQCMEG 1505.5, YELLOW	3-11024D; 5-30024B,C
-	8.712-359.0	1	NOZZLE, SAQCMEG 2505.5, GREEN	3-11024D; 5-30024B,C
-	8.712-360.0	1	NOZZLE, SAQCMEG 4005.5, WHITE	3-11024D; 5-30024B,C
6	8.707-139.0	1	COUPLER, 1/4"PLUG, MALE, STEEL/ZINC	NOT SHOWN
7	9.802-164.0	1	COUPLER, 1/4"SOCKET, FEMALE, BRASS	NOT SHOWN

Pump 8.917-606.0 (3-1100)

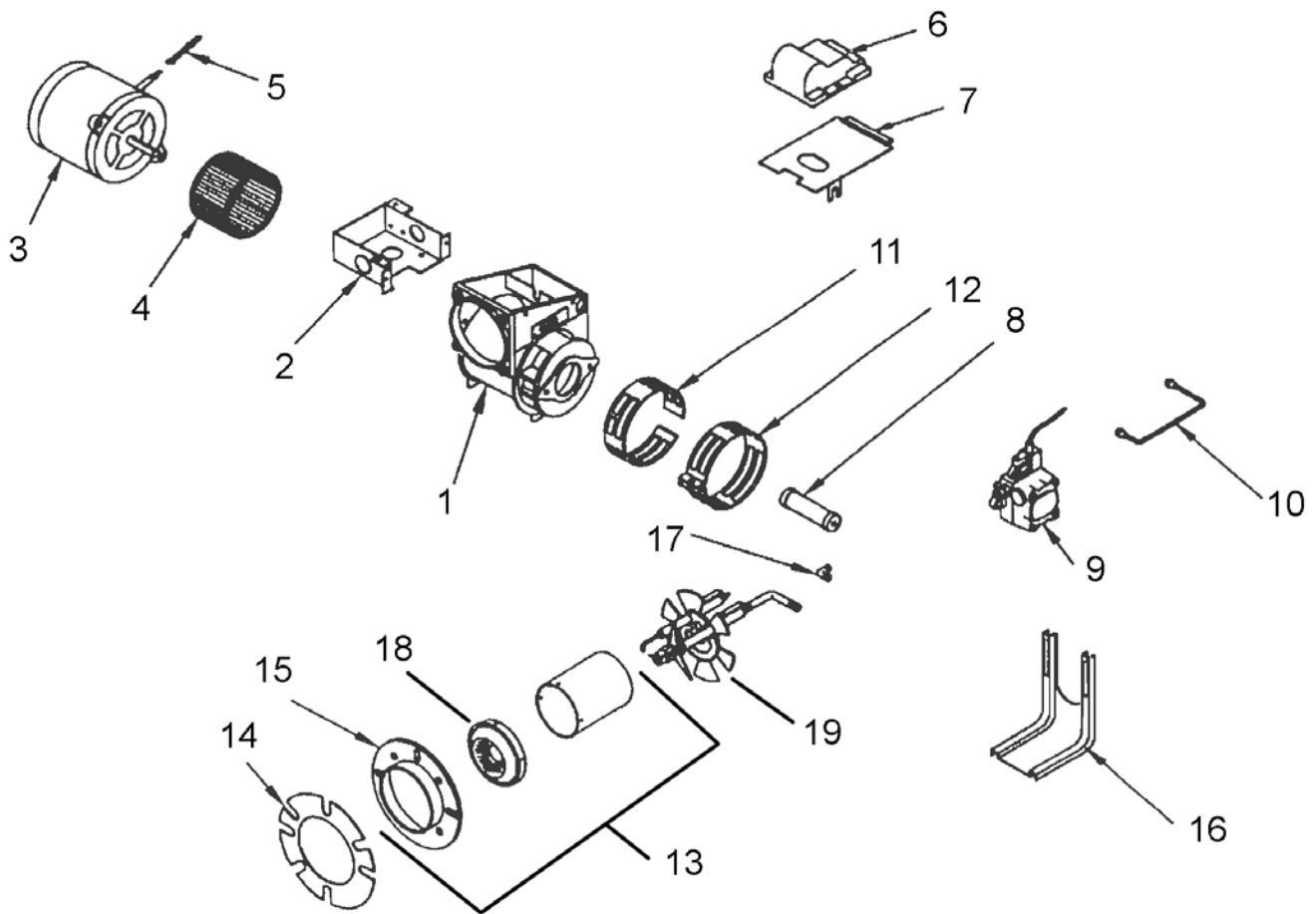


REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.923-753.0	1	PUMP, LANDA LB3030R, 3.0@3000, 1650 RPM	
2	9.802-362.0	1	UNLOADER, PA 8@3650, VB8 W/SWITCH (N/C)	
3	8.933-006.0	1	SWITCH, FLOW MV60	
4	8.917-387.0	1	MOUNT, PUMP RAIL WELDAMENT	
5	8.706-984.0	1	ADAPTER, 1/2" FPT x 1/2" MPT, BRASS	
6	8.753-391.0	1	ELBOW, 1/2 JIC X 3/8 MPT, W/1/8 NPT HOLE	
7	9.802-039.0	1	ELBOW, 1/2" JIC x 3/8" MPT STEEL	
8	8.706-820.0	1	ELBOW, 1/2" FPT, BRASS	
9	8.706-168.0	1	ELBOW, 3/8" MPT-P/N-TF3529X6 STEEL	
10	8.706-940.0	1	HOSE BARB, 1/4" BARB x 1/8" MPT	
11	9.802-259.0	18"	HOSE, 1/2" PUSH-ON, /FT	
12	9.802-037.0	1	NIPPLE, 1/2 JIC x 3/8 FPT, STEEL	
13	9.802-128.0	1	NIPPLE, 1/2" JIC x 1/2" MPT BRASS	
14	9.802-151.0	2	SWIVEL, 1/2" BARB x 1/2"JIC, FEM/BRASS	
15	9.802-048.0	1	SWIVEL, 1/2" JIC FPT, 3/8" MPT STEEL	
16	6.390-126.0	1	CLAMP, HOSE, .46-, .54 ST	
17	9.802-123.0	1	TEE, 1/2" W/ (1) HOLE, TAP 1/8"-27NPT	
18	9.802-741.0	4	BOLT, 8MM X 16MM HEX HEAD	3-1100
19	8.718-980.0	4	WASHER, 5/16" FLAT, SAE (780452)	
20	9.802-813.0	4	WASHER, 5/16" SPLIT RING LOCK, ZINC	
21	9.802-261.0	44"	HOSE, 3/4" PUSH-ON, /FT	
22	9.802-152.0	1	SWIVEL, 3/4" SAE FEM, PUSH-ON	
23	9.802-241.0	1	HOSE, 3/8" x 25", 2 WIRE, PRES LOOP	
24	8.706-955.0	1	HOSE BARB 1/4" BARB X 1/8" MPT, 90 DEG	
25	9.802-111.0	1	NIPPLE, 1/2" NPT HEX MODIFIED, 5/16" ID	
26	8.706-902.0	1	NIPPLE, 3/4" JIC x 1/2" PIPE	
27	9.802-252.0	44"	HOSE, 1/4" x 1/2", BRAIDED VINYL, /FT	

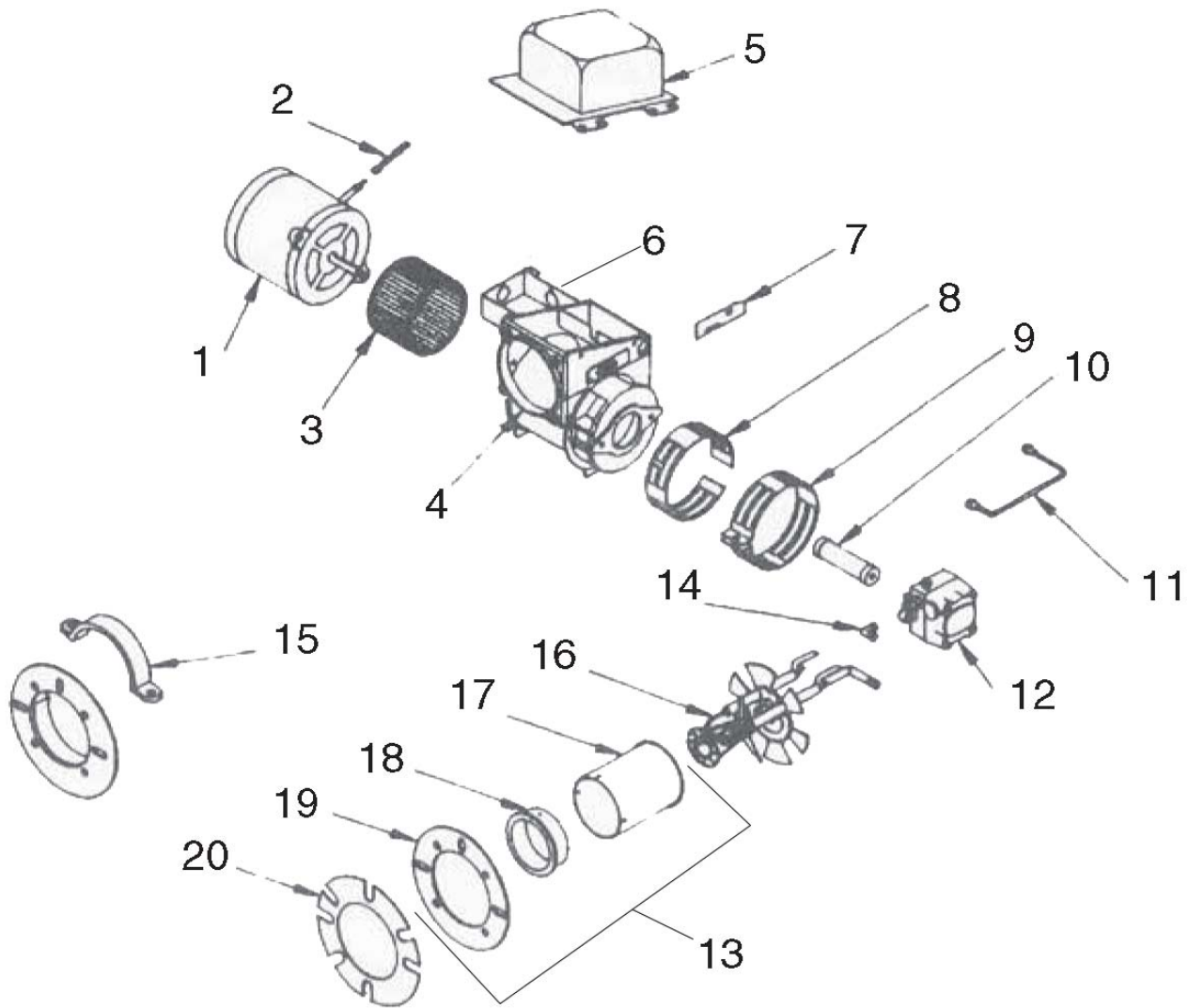
**Pump Assy 8.917-607.0
(4-2200, 4-3000, 5-3000)**



REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.921-712.0	1	PUMP, LANDA LT6036R.2 6.0@3600, 1450RPM	4-2200, 4-3000, 5-3000
2	9.802-362.0	1	UNLOADER, PA 8@3650, VB8 W/SWITCH (N/C)	
3	8.933-006.0	1	SWITCH, FLOW MV60	
4	8.917-387.0	1	MOUNT, PUMP RAIL WELDAMENT	
5	8.706-984.0	1	ADAPTER, 1/2" FPT x 1/2" MPT, BRASS	
6	8.753-391.0	1	ELBOW, 1/2 JIC X 3/8 MPT, W/1/8 NPT HOLE	
7	9.802-039.0	1	ELBOW, 1/2" JIC x 3/8" MPT STEEL	
8	9.802-132.0	1	ELBOW, 3/4" MSAE X 1/2" MPT, BRASS	
9	8.706-168.0	1	ELBOW, 3/8" MPT-P/N-TF3529X6 STEEL	
10	8.706-940.0	1	HOSE BARB, 1/4" BARB x 1/8" MPT	
11	9.802-259.0	18"	HOSE, 1/2" PUSH-ON, /FT	
12	9.802-037.0	1	NIPPLE, 1/2 JIC x 3/8 FPT, STEEL	
13	9.802-128.0	1	NIPPLE, 1/2" JIC x 1/2" MPT BRASS	
14	9.802-151.0	2	SWIVEL, 1/2" BARB x 1/2" JIC, FEM/BRASS	
15	9.802-048.0	1	SWIVEL, 1/2" JIC FPT, 3/8" MPT STEEL	
16	6.390-126.0	1	CLAMP, HOSE, .46-, .54 ST	
17	9.802-123.0	1	TEE, 1/2" W/ (1) HOLE, TAP 1/8"-27NPT	
18	9.802-744.0	4	BOLT, 10mm x 20mm, HH ZINC	4-2200, 4-3000, 5-3000
19	9.802-807.0	4	WASHER, 3/8", SAE, FLAT ZINC	
20	8.718-961.0	4	WASHER, M10 SPLT RNG LCK8.8CLSS ZINC PLTD	
21	9.802-261.0	44"	HOSE, 3/4" PUSH-ON, /FT	
22	9.802-152.0	1	SWIVEL, 3/4" SAE FEM, PUSH-ON	
23	9.802-241.0	1	HOSE, 3/8" x 25", 2 WIRE, PRES LOOP	
24	8.706-955.0	1	HOSE BARB 1/4" BARB X 1/8" MPT, 90 DEG	
25	9.802-252.0	44"	HOSE, 1/4" x 1/2", BRAIDED VINYL, /FT	
26	8.706-828.0	1	ELBOW, 3/8" STREET, BRASS	

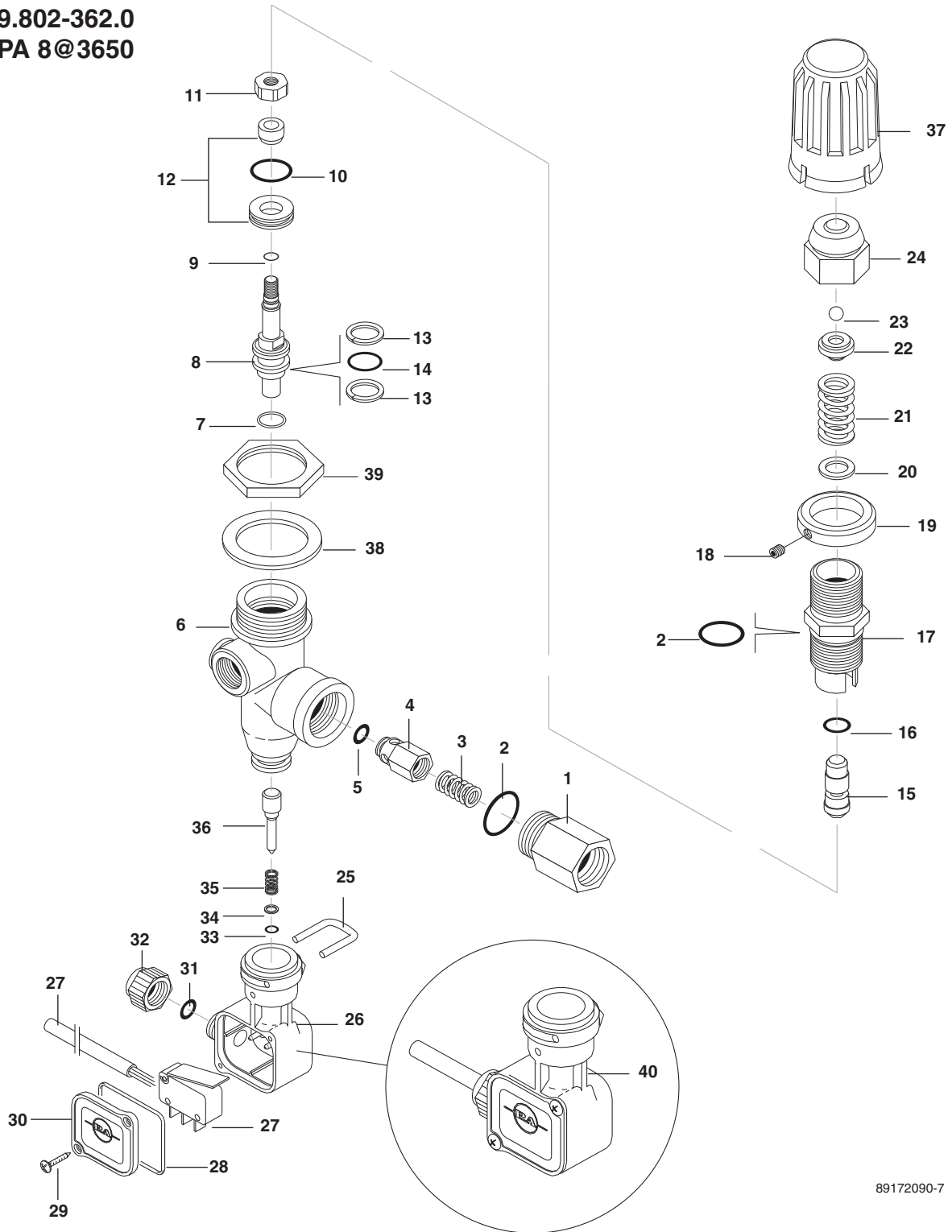


REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.717-939.0	1	FAN HOUSING, MODEL M	
2	8.756-740.0	1	JUNCTION BOX, MSR, BLACK BODY	
-	8.756-739.0	1	JUNCTION BOX, MSR, BLACK COVER	
-	8.756-743.0	1	PLUG, HOLE, JUNCTION BOX, M&E	
3	8.756-292.0	1	MOTOR, BURNER, 1/7 HP 120/60	
4	8.700-728.0	1	BLOWERWHEEL EG1/MSR3.44x4.25STAR MET MTR	
5	13029	1	MOTOR CORD COVER	
6	8.700-803.0	1	IGNITOR, 120V, BACK/M-MSR MOUNT	
7	21723-003	1	COVER	
8	8.700-822.0	1	COUPLING	
9	8.756-437.0	1	PUMP - COMBO/W SOLENOID 12V/24V	
10	8.700-704.0	1	6" OIL LINE ASSEMBLY	
11	8.700-707.0	1	AIR BAND INNER MSR/MSRDC	
12	8.700-708.0	1	AIR BAND OUTER MSR/MSRDC	
13	8.756-658.0	1	WLMT, AIR TUBE FLANGE 1.63" "M"	
14	8.700-692.0	2	GASKET, E & M SERIES BURNERS	
15	2689-011	1	ADJUSTABLE FLANGE	
16	21760-011	1	PEDESTAL MOUNT	
17	13494	1	ELBOW	
18	8.700-724.0	1	CONE 4A FOR/307000,003,007	
19	8.756-328.0	1	BURNER GUN ASSEMBLY	



REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.756-436.0	1	MOTOR, 1/4 120V 50-60HZ	
-	8.700-745.0	1	MOTOR, BURNER 1/4HP-230V/50-60	
2	13121	1	MOTOR CORD COVER	
3	8.756-438.0	1	FAN - 4.00"W X 6.25"D 1/2" BORE	
4	8.700-735.0	1	BURNER HOUSING EHASR	
5	8.700-802.0	1	IGNITOR - "E" 120V	
-	8.756-291.0	1	IGNITOR - "E" 240 50-60	
6	8.756-742.0	1	JUNCTION BOX, EHASR, BLACK BODY	
-	8.756-741.0	1	JUNCTION BOX, EHASR, BLACK COVER	NOT SHOWN
-	8.756-743.0	1	PLUG, HOLE, JUNCTION BOX, M&E	NOT SHOWN
7	13392	1	SLOT COVER PLATE	
8	8.700-732.0	1	BAND, AIR BURNER INNER EHA/SR	
9	8.700-729.0	1	AIR BAND 8 HOLE OUTER EHA/SR	
10	8.700-776.0	1	COUPLING 5/16 X 1/2"FS	
11	8.700-704.0	1	OIL LINE, 6'	
12	8.756-437.0	1	PUMP - COMBO/W SOLENOID 12V/24V	
13	8.756-305.0	1	FLANGE, AIR TUBE, WELDED 1.75" "E"	
14	13494	1	BRASS 90° ELBOW	
15	2689-SER	1	ADJUSTABLE FLANGE	
16	8.756-450.0	1	GUN ASSEMBLY, BURNER-RG/*CST/GBB1	
-	8.756-704.0	1	ASSY, BURNER GUN, RG/SST/2"BB	PHW-5 ONLY
17	8.756-442.0	1	AIR TUBE 3"	
18	8.756-302.0	1	AIR CONE #8A	
-	8.700-724.0	1	CONE 4A FOR/307000,003,007	PHW-5 ONLY
19	8.700-692.0	1	GASKET, E & M SERIES BURNERS	2 EACH
20	8.756-443.0	1	MOUNTING FLANGE COUNTER SUNK	

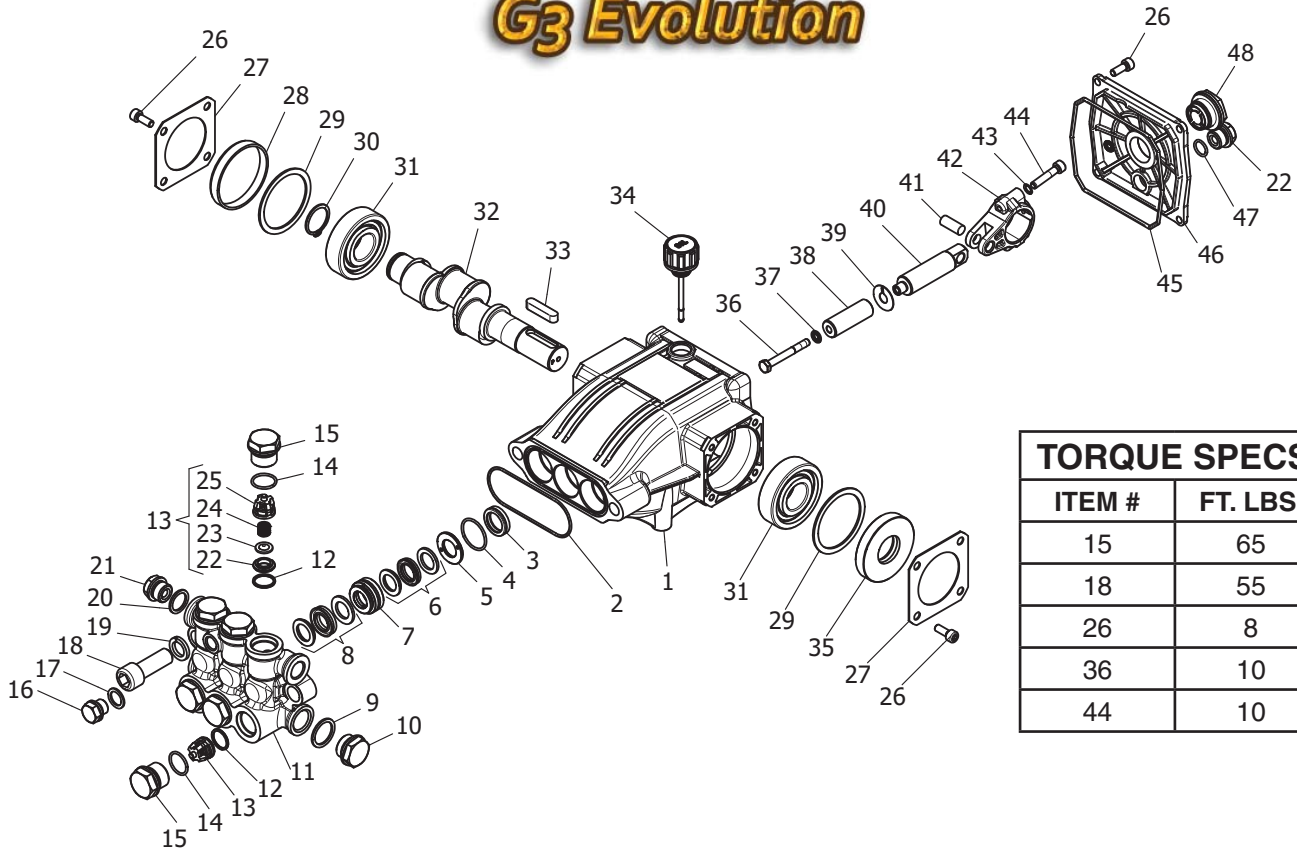
9.802-362.0
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REF	PART NO.	QTY	DESCRIPTION	NOTES
1	60.0059.31	1	DELIVERY COUPL., 3/8F BSP BRASS	
2	10.3070.02	2	O-RING 1.78 X 18.77 MM	PART OF REPAIR KIT
3	60.0053.51	1	SPRING, 0.7 X 9 X 20 MM SST.	
4	60.0052.31	1	CHECK VALVE	
5	10.3213.00	1	O-RING, 3 X 6 MM	PART OF REPAIR KIT
6	60.1215.35	1	HOUSING-BB8, 3/8 M BSP C/SUNK, BRASS	
7	10.3170.08	1	O-RING, 2.62 X 7.6 MM	PART OF REPAIR KIT
8	60.1206.51	1	PISTON, M6 BRASS	
9	10.3001.01	1	O-RING, 1 X 4 MM	PART OF REPAIR KIT
10	10.3066.01	1	O-RING, 1.78 X 15.6 MM	PART OF REPAIR KIT
11	60.1205.31	1	SPECIAL NUT, M6 BRASS	
12	60.2221.20	1	SEAT,10 MM + O-RING, 1.78 NM NBR 85+SHUTT.	PART OF REPAIR KIT
13	10.4021.00	2	BACK-UP RING, OPN. 11.5 X 15.9 X 1.2 MM	PART OF REPAIR KIT
14	10.3175.00	1	O-RING 2.65 X 10.77 MM	PART OF REPAIR KIT
15	60.1204.31	1	SPRING GUIDE	
16	10.3167.01	1	O-RING, 2.62 X 5.23 MM	PART OF REPAIR KIT
17	60.1203.31	1	PISTON HOLDER, BRASS	
18	16.2100.00	1	SET SCREW, DIN914M 4 X 4 MM	
19	60.1207.31	1	RING NUT, M22 X 1 BRASS	
20	14.3719.00	1	WASHER, 9 X 15 X 1, 5 MM SST.	
21	60.1208.61	1	SPRING, 3.2 X15.4 X 33 MM Z.PL	
22	60.1210.31	1	SPRING GUIDING RING	
23	14.7421.50	1	BALL, 1/4" SST.	
24	60.1209.31	1	VALVE REGULATING INSERT, BRASS	
25	29.0087.51	1	U-BOLT, SST.	
26	29.0089.84	1	HOUSING, PR5 PA BLACK	
27	8.750-169.0	1	SWITCH, MICRO VB8 UNLOADER	
28	10.3206.01	1	O-RING, 2.62 X 28.25 MM	
29	16.3020.00	2	S/TAPP. SCREW, DIN7981 2.5 X 12MM NICK. PL.	
30	29.0088.84	1	LID, PR5 PA BLACK	
31	10.3169.00	1	O-RING, 2.62 X 6.02 MM	
32	29.0082.84	1	LOCKNUT FOR CABLE GLAND, PA BLACK	
33	10.3038.00	1	O-RING, 1.78 X 3.68 MM	
34	14.3519.53	1	WASHER, 4 X 8 X 0.8 MM SST.	
35	60.2303.51	1	SPRING, 1.1 X 8 X 20 MM SST.	
36	60.1281.31	1	MICRO-SWITCH PISTON, BRASS	
37	60.1202.84	1	VALVE REGULATING KNOB, PA BLACK (1)	
38	14.3582.00	1	WASHER, 30.5 X 42 X 2 MM	
39	60.2254.31	1	RING NUT , M30 BRASS (1)	
40	29.0096.24	1	SWITCH KIT	
-	8.750-168.0	-	REPAIR KIT-VB8	

G3 Evolution



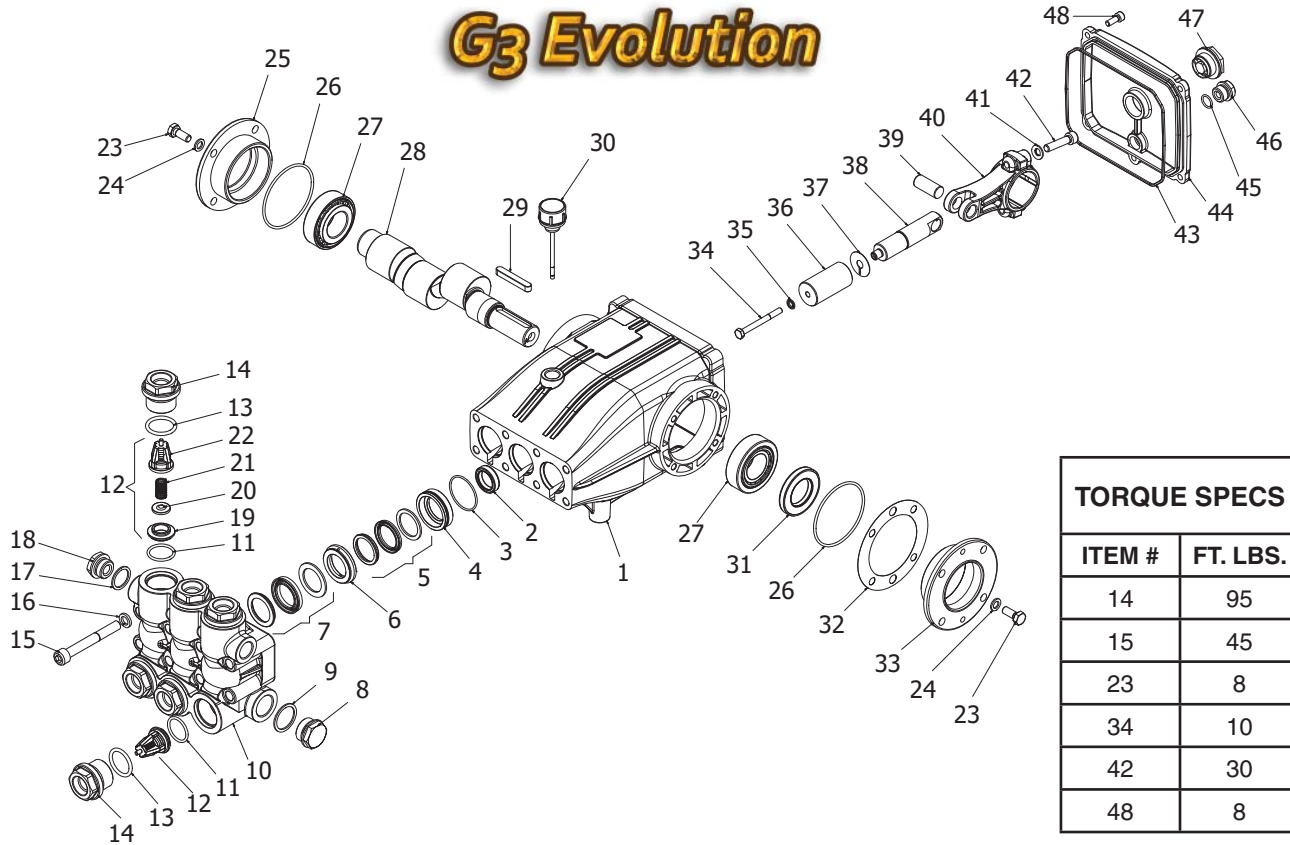
TORQUE SPECS	
ITEM #	FT. LBS.
15	65
18	55
26	8
36	10
44	10

REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.754-841.0	1	CRANKCASE	
2	8.754-846.0	1	O-RING Ø1.78 X 72.75	
3	-	3	PLUNGER OIL SEAL	SEE TABLE KITS
4	-	3	O-RING Ø1.78 X 26.7	SEE TABLE KITS
5	-	3	WASHER, PRESSURE RING 16 MM	SEE TABLE KITS
6	-	3	U-SEAL, 16 MM	SEE TABLE KITS
7	-	3	PRESSURE RING, 16 MM	SEE TABLE KITS
8	9.803-199.0	3	U-SEAL, 16 MM	SEE TABLE KITS
9	9.803-199.0	1	WASHER, COPPER G1/2	
10	9.802-926.0	1	PLUG, BRASS G1/2	
11	8.754-852.0	1	MANIFOLD	
12	8.717-233.0	6	O-RING Ø1.78 X 15.6	SEE TABLE KITS
13	-	6	VALVE ASSEMBLY	SEE TABLE KITS
14	9.803-948.0	6	O-RING Ø1.78 X 18.77	SEE TABLE KITS
15	9.803-949.0	6	VALVE PLUG	
16	8.754-851.0	1	PLUG, BRASS G1/4	
17	8.718-973.0	1	WASHER, COPPER G1/4	
18	8.754-854.0	2	BOLT, MANIFOLD M14 X 40	
19	8.754-850.0	2	WASHER, LOCK	

REF	PART NO.	QTY	DESCRIPTION	NOTES
20	9.803-198.0	1	WASHER, COPPER G3/8	
21	8.707-262.0	2	PLUG, BRASS G3/8	
22	-	6	VALVE SEAT	SEE TABLE KITS
23	-	6	VALVE PLATE	SEE TABLE KITS
24	-	6	VALVE SPRING	SEE TABLE KITS
25	-	6	VALVE CAGE	SEE TABLE KITS
26	9.802-939.0	12	SCREW, M6 X 16	
27	8.717-137.0	2	BEARING COVER	
28	9.803-954.0	1	BEARING SEAL	
29	8.754-843.0	2	SEAL SPACER, CRANKSHAFT	
30	9.802-914.0	1	SNAP RING, 25 MM	
31	9.803-955.0	2	BEARING, BALL	
32	8.754-829.0	1	SHAFT, 24 MM 3030	
-	8.754-830.0	1	SHAFT, 24 MM 4025	
33	9.803-167.0	1	KEY, CRANKSHAFT	
34	8.754-219.0	1	OIL DIPSTICK	
35	8.933-010.0	1	SEAL, CRANKSHAFT	
36	8.754-855.0	3	BOLT, PLUNGER	SEE TABLE KITS
37	8.754-092.0	3	SPACER, COPPER	SEE TABLE KITS
38	8.754-848.0	3	PLUNGER, 16 MM	SEE TABLE KITS
39	9.803-962.0	3	SPACER, COPPER	SEE TABLE KITS
40	8.754-827.0	3	PLUNGER ROD	
41	9.803-965.0	3	CONNECTING ROD PIN	
42	9.803-966.0	3	CONNECTING ROD	
43	9.803-218.0	6	WASHER, 6 MM	
44	8.933-020.0	6	SCREW, CONNECTING ROD	
45	8.754-847.0	1	O-RING Ø2.62 X 111.62	
46	8.754-842.0	1	COVER, CRANKCASE	
47	9.803-906.0	1	O-RING Ø1.78 X 14	
48	9.803-202.0	1	SIGHT GLASS, G3/4	

KIT NUMBERS	8.754-856.0	8.754-857.0	8.754-858.0	8.754-859.0	9.803-937.0
KIT DESCRIPTION	Plunger Seals 16 mm	Seal Packing 16 mm	Plunger 16 mm	Complete Valve	Plunger Oil Seals
ITEM NUMBERS INCLUDED	4, 6, 8	4, 5, 6, 7, 8	36, 37, 38, 39	12, 13, 14	3
NUMBER OF CYLINDERS KIT WILL SERVICE	3	1	1	6	3

G3 Evolution



TORQUE SPECS	
ITEM #	FT. LBS.
14	95
15	45
23	8
34	10
42	30
48	8

REF	PART NO.	QTY	DESCRIPTION	NOTES
1	8.752-825.0	1	CRANKCASE	
2	-	3	PLUNGER OIL SEAL	SEE KITS TABLE
3	-	3	O-RING Ø1.78 X 37.82	SEE KITS TABLE
4	-	3	PRESSURE RING, 18MM	SEE KITS TABLE
5	-	3	U-SEAL, 18MM	SEE KITS TABLE
6	-	3	INTERMEDIATE RING, 18MM	SEE KITS TABLE
7	-	3	U-SEAL, 18MM	SEE KITS TABLE
8	9.802-926.0	1	BRASS PLUG, G1/2	
9	9.803-199.0	1	COPPER WASHER 1/2	
10	8.753-816.0	1	MANIFOLD HOUSING	
11	9.804-498.0	6	O-RING Ø2.62 X 25.1	SEE KITS TABLE
12	-	6	VALVE ASSEMBLY	SEE KITS TABLE
13	9.803-193.0	6	O-RING 3068	SEE KITS TABLE
14	9.802-928.0	6	VALVE PLUG	
15	8.753-817.0	8	MANIFOLD STUD BOLT	
16	9.802-890.0	8	LOCK WASHER	
17	8.719-008.0	1	COPPER WASHER 3/8	
18	8.707-262.0	1	BRASS PLUG 3/8	
19	-	6	VALVE SEAT	SEE KITS TABLE
20	-	6	VALVE PLATE	SEE KITS TABLE

REF	PART NO.	QTY	DESCRIPTION	NOTES
21	-	6	VALVE SPRING	SEE KITS TABLE
22	-	6	VALVE CAGE	SEE KITS TABLE
23	8.752-830.0	8	HEX SCREW	
24	9.802-884.0	8	WASHER	
25	9.803-182.0	1	CLOSED BEARING HOUSING	
26	9.803-186.0	2	O-RING Ø2.62 X 71.12	
27	9.803-160.0	2	ROLLER BEARING	
28	8.753-818.0	1	CRANKSHAFT Ø25 (4540)	
-	8.752-827.0	1	CRANKSHAFT Ø25 (6036)	
29	9.803-167.0	1	CRANKSHAFT KEY	
30	8.752-834.0	1	OIL DIP STICK	
31	9.803-139.0	1	CRANKSHAFT SEAL	
32	9.803-177.0	2	SHIM	
33	9.803-181.0	1	BEARING HOUSING	
34	8.752-841.0	3	PLUNGER BOLT	SEE KITS TABLE
35	8.752-820.0	3	BONDED SEAL	SEE KITS TABLE
36	8.753-819.0	3	PLUNGER, 18MM	SEE KITS TABLE
37	8.752-823.0	3	COPPER SPACER	SEE KITS TABLE
38	8.753-820.0	3	PLUNGER ROD	
39	8.752-822.0	3	CONNECTING ROD PIN	
40	8.752-821.0	3	CONNECTING ROD	
41	9.802-889.0	6	SPRING WASHER	
42	9.802-937.0	6	CONNECTING ROD SCREW	
43	9.803-194.0	1	O-RING Ø2.62 X 152.07	
44	8.752-826.0	1	CRANKCASE COVER	
45	9.803-906.0	1	O-RING Ø1.78 X 14.00	
46	8.707-262.0	1	BRASS PLUG G3/8	
47	9.803-202.0	1	SIGHT GLASS G3/4	
48	8.752-824.0	5	COVER SCREW	

KIT NUMBERS	8.753-821.0	8.753-822.0	8.753-823.0	8.753-824.0	8.752-825.0
KIT DESCRIPTION	Plunger Seals 16 mm	Seal Packing 16 mm	Plunger 16 mm	Complete Valve	Plunger Oil Seals
ITEM NUMBERS INCLUDED	3, 5, 7	3, 4, 5, 6, 7	34, 35, 36, 37	11, 12, 13	2
NUMBER OF CYLINDERS KIT WILL SERVICE	3	1	1	6	3

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