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SL1500 PUMP PARTS DIAGRAM

FIG. 22

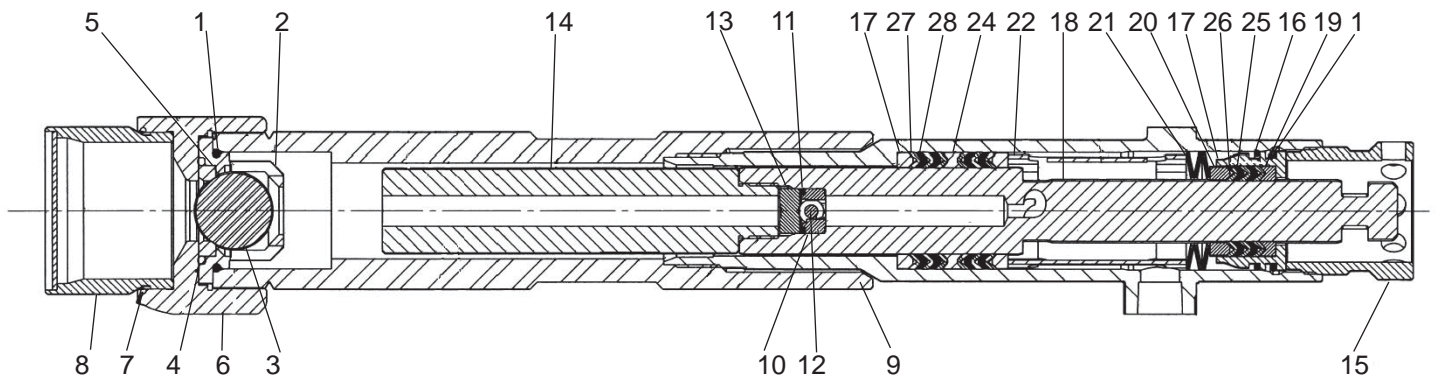
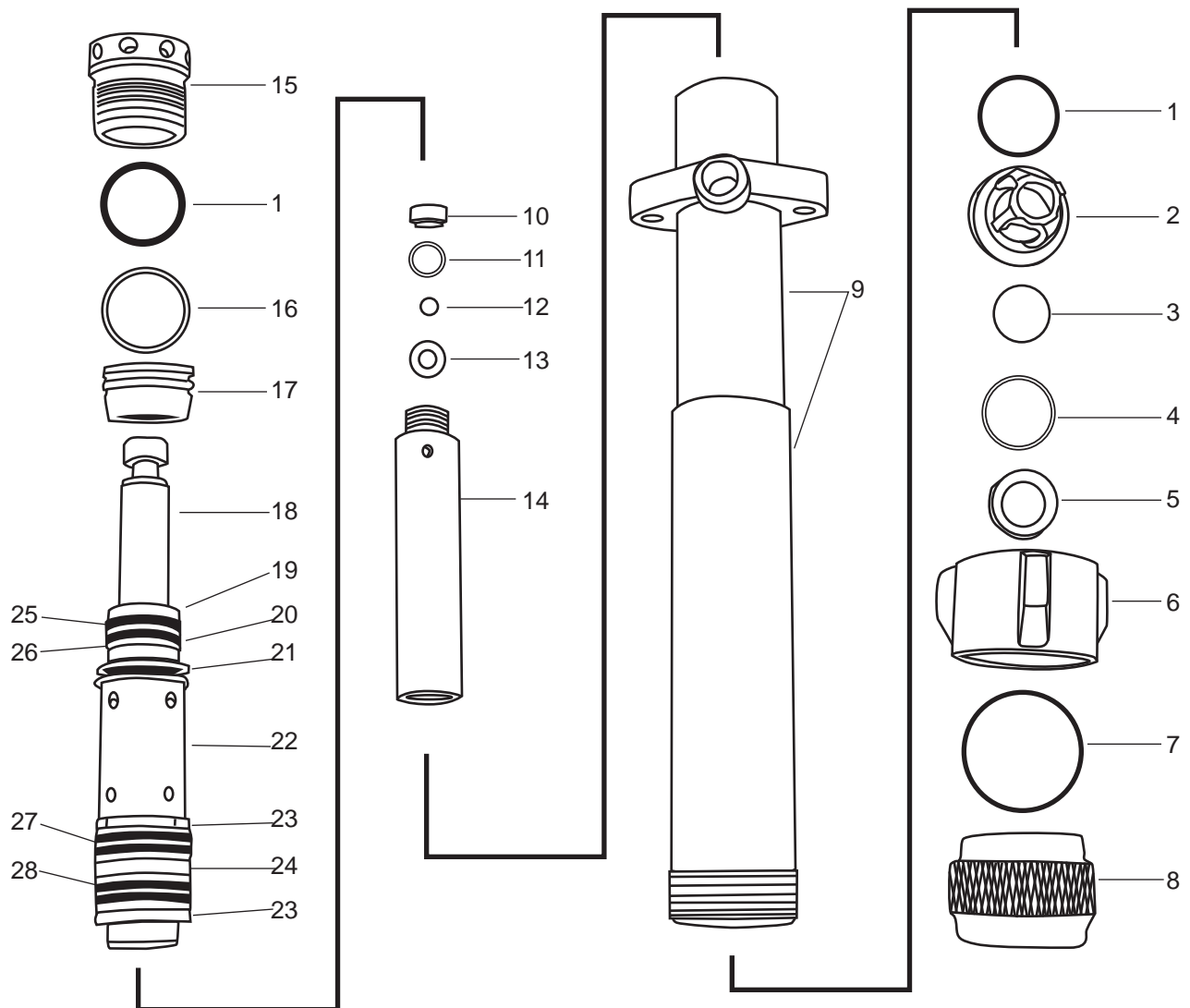


FIG. 23



SL PUMP PARTS LIST (187-411)

PARTS LIST FIGURE 22 & 23

Item No.	Part No.	Description
1	106-013*	Viton O-Ring (2)
2	187-087	1" Ball Retainer
3	187-092*	Stainless Steel Ball
4	106-008*	PTFE O-Ring
5	187-086	Tungsten Carbide Seat
6	187-084	Inlet Valve Nut
7	119-110*	Viton O-Ring
8	119-092	Strainer Assembly
9	187-335	Pump Body
10	187-062	Retainer
11	106-021*	PTFE O-Ring
12	115-022*	Tungsten Carbide Ball
13	187-061	Tungsten Carbide Seat
14	187-314	Piston Extension
15	187-046	Collar Screw
16	106-012*	O-Ring
17	187-047	V-Packing Holder

PARTS LIST FIGURE 22 & 23 CONT

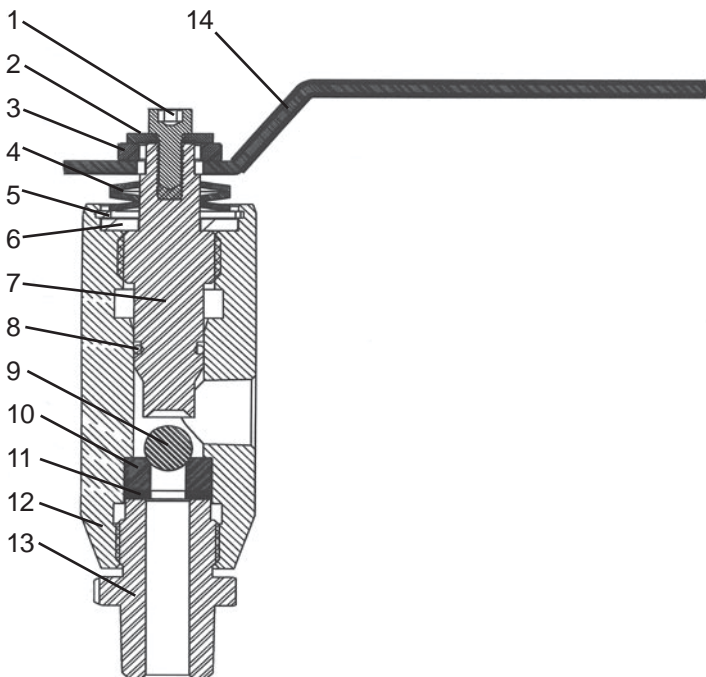
Item No.	Part No.	Description
18	187-330+	SL 2" Stroke Piston
19	187-026	PTFE Female Adapter
20	187-025	Male Adapter
21	187-031	Belleville Springs (3)
22	187-315	Stainless Steel Spacer
23	187-037	Short Male Adapter (2)
24	187-058*	Female Double Adapter
25	187-060*	Leather V-Packings (2)
26	187-030*	Polyethethylene V-Packings (3)
27	187-029*	Polyethethylene V-Packings (6)
28	187-059*	Leather V-Packings (4)

SL 1500 PUMP REPAIR KITS

Part No.	Description	
301-443	Packing Kit	*
301-444	Major Repair Kit	+*
187-411	Replacement Pump	

PRIME VALVE (119-083)

FIG. 24

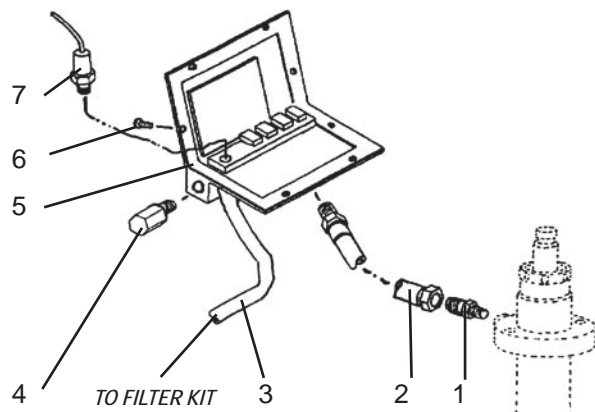


PARTS LIST FIGURE 24

Item No.	Part No.	Description
1	117-046	Screw
2	115-063	Washer
3	115-072	Spacer
4	115-064	Belleville Spring (3)
5	115-065	Retaining Ring
6	115-067	Washer
7	115-071	Valve Stem
8	115-068	O-Ring Black
9	115-069	Ball
10	115-029	Valve Seat
11	115-012	Washer
12	115-073	Valve Body
13	115-074	Inlet Fitting
14	115-303	Handle with Label

PAINT SYSTEM

FIG. 25

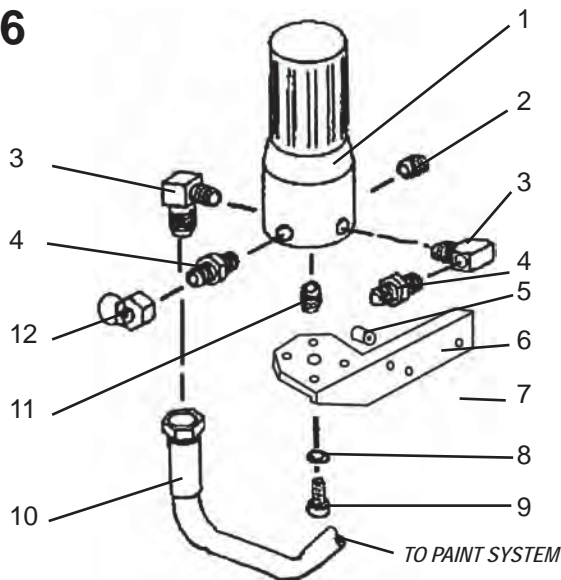


PARTS LIST FIGURE 25

Item No.	Part No.	Description
1	169-010	Nipple
2	301-308	Hose
3	100-123	Hose
4	100-280	Safety Valve
5	301-318-99 301-364-99	Pressure Control Assy (110V) Pressure Control Assy (230V)
6	111-034	Screw (8)
7	331-249-99	Sensor

OPTIONAL FILTER KIT (301-440)

FIG. 26

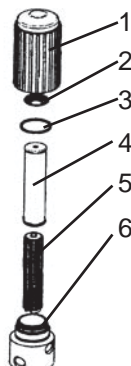


PARTS LIST FIGURE 26

Item No.	Part No.	Description
1	111-200	Manifold Filter
2	100-329	Plug (3/8")
3	169-013	Elbow
4	100-109	Nipple (3/8"-1/4")
5	301-290	Spacer
6	305-140	Filter Bracket
7	100-371	Screw
8	331-103	Washer
9	100-312	Screw
10	100-123	Hose
11	100-028	Plug (1/4")
12	100-160	Cap Plug Set

OPTIONAL MANIFOLD FILTER (111-200)

FIG. 27

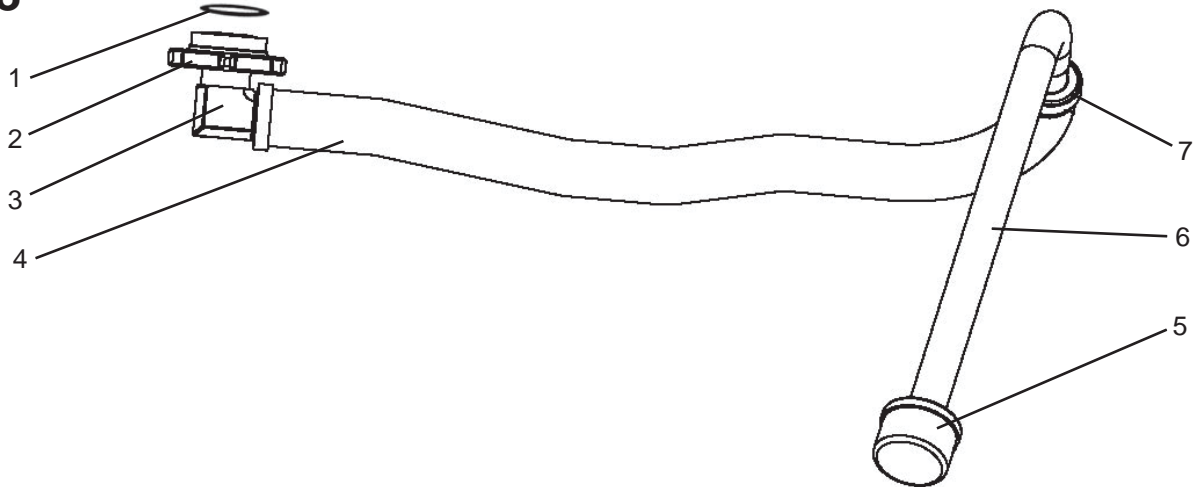


PARTS LIST FIGURE 27

Item No.	Part No.	Description
1	111-202	Base
2	301-356	Spring
3	106-007	O-Ring
4	111-204	Filter 60 Mesh
5	111-203	Support
6	111-201	Base

SUCTION ASSEMBLY - 5 GALLON (119-108)

FIG. 28



PARTS LIST FIGURE 28

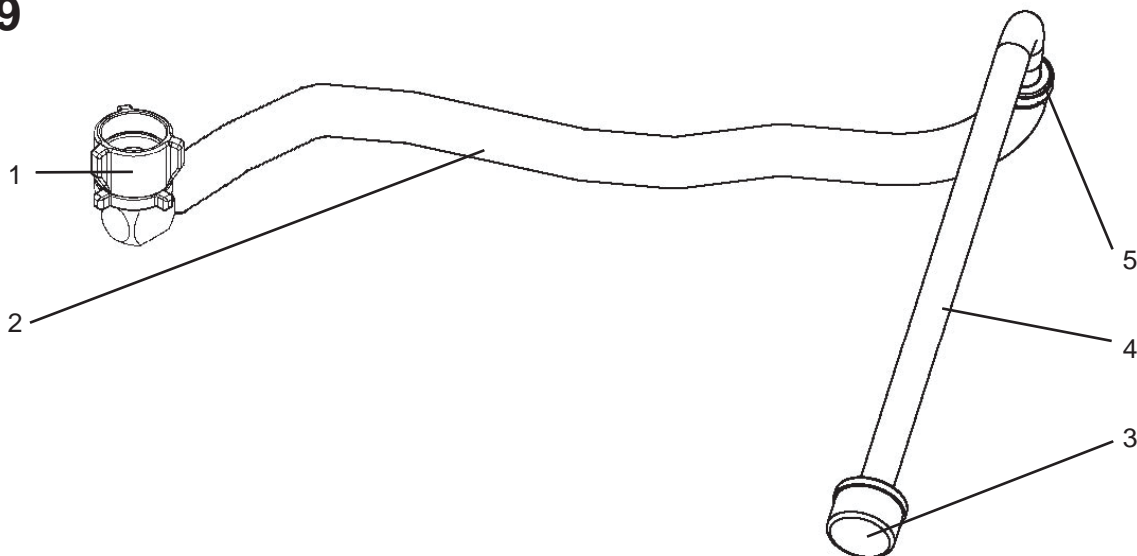
Item No.	Part No.	Description
1	119-110	Black O-Ring
2	189-587	Suction Nut
3	100-668	Suction Elbow
4	100-664	1" ID Suction Hose

PARTS LIST FIGURE 28 CONT

Item No.	Part No.	Description
5	141-008	Filter Basket
5	301-514	5 Gal Suction Tube
7	250-116	Clamp (2)

SUCTION ASSEMBLY - 55 GALLON (119-087)

FIG. 29



PARTS LIST FIGURE 29

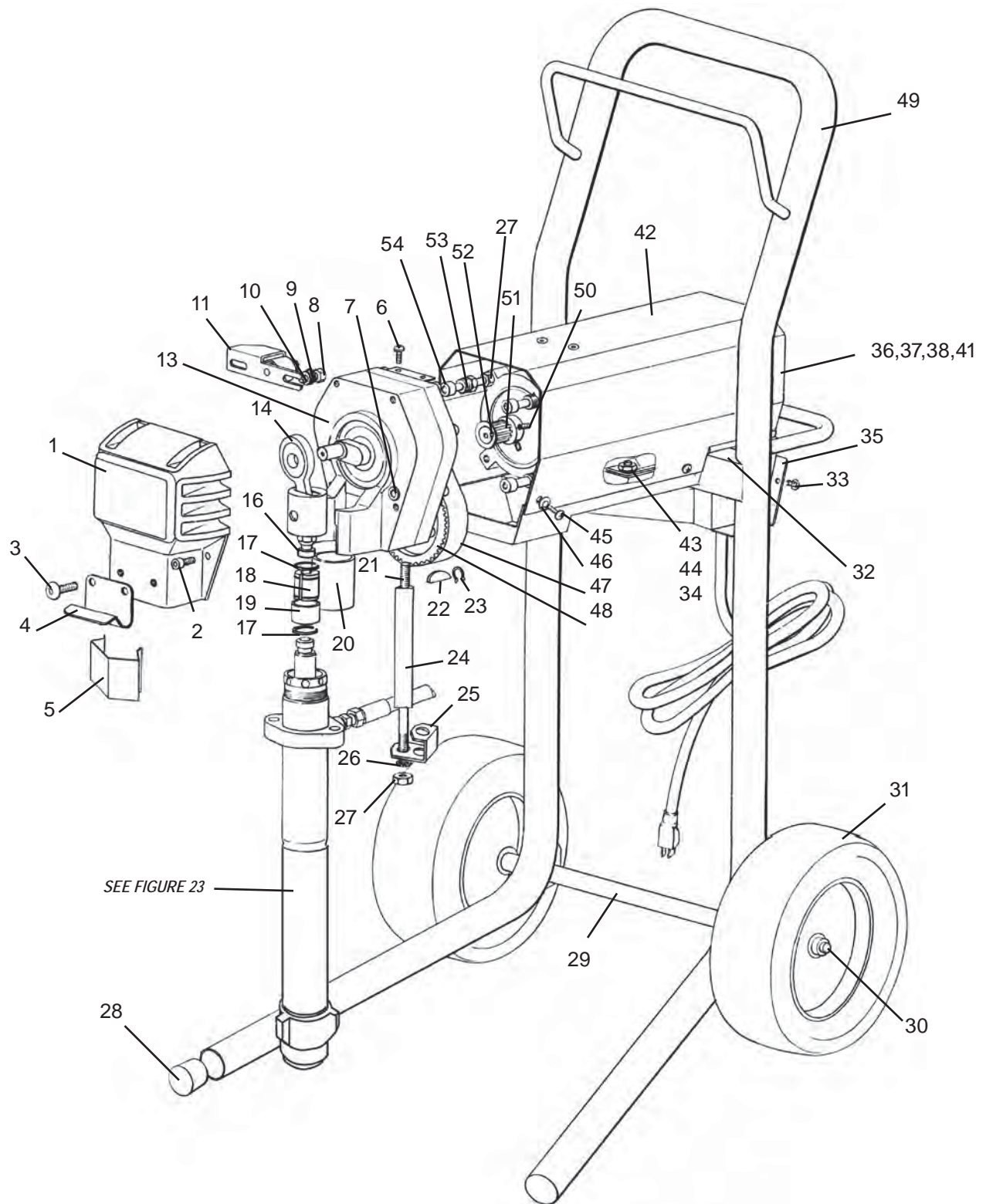
Item No.	Part No.	Description
1	119-107	Swivel Fitting Assy
2	100-664	1" ID Suction Hose
3	141-008	Filter Basket

PARTS LIST FIGURE 29 CONT

Item No.	Part No.	Description
4	301-545	55 Gal Suction Tube
5	250-116	Clamp

COMPLETE SPRAYER

FIG. 30



COMPLETE SPRAYER PARTS LIST

PARTS LIST FIGURE 30

Item No.	Part No.	Description
1	301-320	Cover
2	100-312	Screw (4)
3	100-360	Screw (2)
4	301-105	Hook
5	301-467	Front Shield
6	301-337	Screw (2)
7	100-028	Plug 1/4 NPT
8	111-044	Screw (2)
9	113-023	Lock Washer (2)
10	100-344	Washer (2)
11	301-193	Tensioner Assembly
13	301-675	Gearbox 1"
14	301-333	Connecting Rod Assy
16	301-046	Rod End
17	189-048	Retaining Ring (2)
18	189-046	Coupling Set
19	189-047	Retaining Sleeve
20	301-047	Sleeve Bearing
21	100-328	Stud (2)
22	301-139	Woodruff Key
23	100-332	Retaining Ring
24	301-059	Spacer (2)
25	301-173	Bracket-Return Tube
26	140-035	Lock Washer (2)
27	140-051	Nut (2)
28	301-134	Stopper (2)
29	113-056	Axle

PARTS LIST FIGURE 30 CONT

Item No.	Part No.	Description
30	143-029	Set Collar (2)
31	301-165	Wheel (2)
32	301-316	Rubber Edge 1.17' (makes 2)
33	111-037	Screw (4)
34	140-029	Washer
35	101-060	High Voltage Label
36	117-019	Fan
37	301-191	Retaining Clip Fan
38	117-052	Screw (3)
41	117-042	Fan Cover
42	301-321	Cover
43	113-022	Nut (4)
44	113-023	Lock Washer (4)
45	111-037	Screw (4)
46	301-135	Grommet (6)
47	301-231	Cog Belt
48	301-237	Cog Pully
49	301-206	Frame
50	136-652	Set Screw (2)
51	301-674	Sheave
52	112-029	Key
53	301-099	Retainer (3)
54	301-044	Screw (3)
55	119-092	Inlet Strainer

SL1500 Labels

Part No.	Description
101-281	SL1500 Decal, Left
101-283	SL1500 Decal, Right
101-232	Decal, Center Stripe

TROUBLESHOOTING - MACHINE DOES NOT START

Cause	Steps
Control Settings	STEP 1: After making sure that the machine is plugged into the wall, verify that the on-off switch is in the ON position and that the pressure control knob is turned all the way to the right (clockwise for maximum pressure).
35A Circuit Breaker	STEP 2: Using your multi-meter, test the breaker for continuity or replace with a new breaker. If the breaker reads good, move on to step three.
Power Source	STEP 3: Using a Phillips Head screwdriver, remove the eight screws holding the pressure control assembly. Locate the light on the board indicating that there is power (it will be red or green). If the light is OFF proceed to step four. If the light is ON go to step six.
Power Source	STEP 4: Locate the L1 and L2 terminals on the board, and then using your multi-meter check to make sure you have 110 volts AC across the two terminals (the cord wires will still be attached). If there is no voltage at these leads, there is no power getting to the machine. Check your power source (outlet, circuit breaker, extension cord, and power cord). If you have AC voltage at the L1 and L2 terminals, go to step 5.
Thermal Overload	STEP 5: Disconnect the two red motor leads (S1 & S2) and test for continuity between them. No continuity means that the thermal coupler has opened due to excessive motor heat. If the motor is still hot to the touch, allow it to cool and then retest. If the motor is cool and there is not continuity on the red leads, contact your local Airlessco Technical Support to repair/replace the thermal coupler. Continuity shows that the motor's thermal coupler has not tripped. Proceed to step six.
Pressure Control Assembly (Board)	STEP 6: If everything checks out in steps one through five and the power indicating light is still out, replace the pressure control assembly.
Motor	STEP 7: Remove the motor brush covers and turn the machine on. Set the potentiometer (POT) at maximum pressure and check for DC voltage across both brush terminals. You should read greater than 80 volts DC. IF YOU DO NOT HAVE DC VOLTAGE GO TO STEP EIGHT. If you have DC voltage, turn the machine off and unplug it from the wall. Check to make sure that the brushes are making good contact with the armature. Replace the brushes if they are less than 5/8" long. If the brushes are good, replace the motor.
Sensor	STEP 8: Plug another sensor into the board and perform the zero calibration procedure. If the machine starts to run, the sensor was bad. If there is no replacement sensor available, use a multi-meter to test the resistance across the red and black wires of the sensor (be sure to test at the plug). You should read 1.5 - 3.5k ohms. A faulty sensor usually reads no continuity (open). If the sensor passes all the tests move to step nine.
Pressure Control Knob (Potentiometer)	STEP 9: Plug another potentiometer (POT) into the control board. If the machine starts, the old POT is bad. When a replacement POT is not available, remove the POT lead (with the machine turned off) from the control board and test the resistance between the red and black wires (be sure to test at the plug). The resistance should read between 8-12k ohms if it is outside of this range replace the POT.
Pressure Control Assembly (Board)	STEP 10: If you have DC voltage at the motor brushes and all of the components check out fine in steps eight and nine, replace the pressure control assembly.

PRESSURE CONTROL ASS'Y CALIBRATION

NOTE: ANYTIME A SENSOR OR PRESSURE CONTROL ASSEMBLY (BOARD) OR BOTH ARE REPLACED, THE FOLLOWING CALIBRATIONS MUST BE PERFORMED.

NOTE: PRESSURE CONTROL ASSEMBLIES (BOARDS) ARE NOW BEING EQUIPPED WITH A GREEN GROUNDING WIRE ATTACHED. CONTECT THE GROUNDING WIRE TO TERMINAL BOX USING THE SAME SCREW THAT HOLDS THE GROUNDING WIRE FROM THE POWER CORD.

1. ZERO CALIBRATION

1. Place prime/pressure relief valve in the prime (open) position.
2. Set the pressure control knob to the minimum setting (CCW).
3. Remove the screws and lower the pressure control assembly.
4. Remove any jumper on the "P-ZR" terminal. Note: This Jumper is no longer used.
5. Turn machine "ON" and ensure it is not cycling.
6. If the yellow light on the electrical board is ON and you have "0000" on the LCD display, the Zero Calibration is complete no further adjustment is necessary. If the light is ON and there are numbers on the display, use an insulated screwdriver to turn the "ZERO" trimpot counter-clockwise until the light goes out. Then turn it clockwise until the yellow light comes on, continue to turn the trimpot and the numbers will reduce untill the LCD shows "0000." The Zero Calibration is now complete. If you adjust beyond "0000" the numbers will start to increse.

If the digital display shows "- - -" and no yellow light, you should turn the Zero trimpot clockwise until the yellow light is on, continue turning until "0000" is shown.

The goal is to see "0000" on the digital display, this is when you have Zero Calibration. Relying on the yellow light is no longer used.

2. PRESSURE CALIBRATION

1. Complete the ZERO calibration, as per "ZERO CALIBRATION" prior to commencing this calibration.
2. Attach a 50', 1/4" airless hose, airless gun with 0.017 tip and a 5000 psi glycerin filled pressure gauge to pump.
3. Place the suction tube into a bucket of Coro-chek and water.
4. Turn prime/pressure relief valve to the prime (open) position.
5. Turn pressure control knob clockwise until machine starts to prime.
6. Place the prime/pressure relief valve in the pressure (closed) position.
7. While watching pressure gauge, slowly adjust the pressure trimpot (clockwise to increase and counter clockwise to decrease) until the maximum static pressure is 3000 psi, with the pressure control knob fully clockwise. Trigger the gun several times to ensure pressure returns to 3000 psi .

3. LCD DISPLAY CALIBRATION

1. Complete the "ZERO CALIBRATION" and "PRESSURE CALIBRATION" procedures prior to commencing this calibration.
2. Turn pressure control knob up until system pressure is above 2500 psi (as indicated on glycerin filled pressure gauge) and the machine is not cycling.
3. Use an insulated screwdriver to adjust the Set trimpot. Turn trimpot CCW until it clicks, then adjust to match pressure against pressure gauge reading.
4. Move the pressure control knob to different settings and trigger the gun several times to ensure that the LCD continues to match the pressure gauge reading.

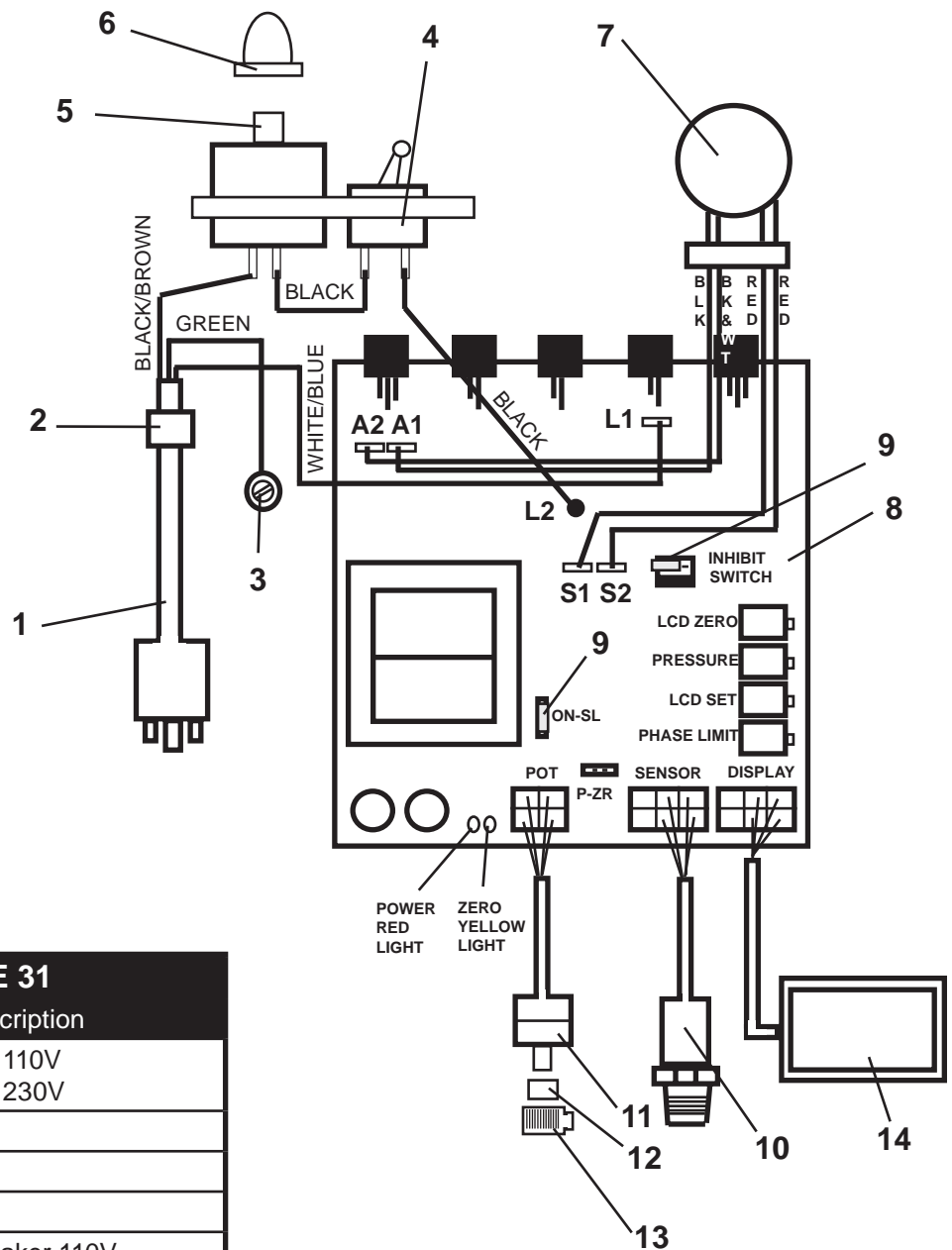
4. PASE LIMIT CALIBRATION

FORMERLY KNOWN AS THE LOW VOLTAGE OR MASTER VOLTAGE CALIBRATION

1. Attach a 50', 1/4" airless hose, airless gun with .017 tip and a 5000 psi glycerin filled pressure gauge to the pump.
2. Place the suction tube into a bucket of anti-freeze and water.
3. Turn pump on and turn up pressure control until the machine starts to prime.
4. Place the prime/pressure relief valve in the pressure (closed) position.
5. Pressurize pump to 600 psi.
6. Trigger the gun several times noting the deadband (the amount of pressure drop before the pump rebuilds to set pressure).
7. If deadband is greater than 150 psi, adjust the phase limit trimpot so that the deadband is less than 150 psi and the pressure increase after the gun trigger is released is less than 250 psi. These pressures are guidelines and may vary slightly from pump to pump.
8. Reattach pressure control assembly to unit.

ELECTRICAL SYSTEM

FIG. 31



PARTS LIST FIGURE 31

Item No.	Part No.	Description
1	331-168 301-101	Electrical Cord 110V Electrical Cord 230V
2	331-185	Strain Relief
3	331-138	Screw
4	301-083	Toggle Switch
5	301-518 301-084B	35A Circuit Breaker 110V 15A Circuit Breaker 230V
6	117-035	Rubber Boot
7	301-106A 301-127A	1.25HP Motor 110V 1.75HPDC Motor 230V
8	301-318-99 301-364-99	Pressure Control Assy 110V Pressure Control Assy 230V
9	117-207	Jumper
10	331-294-99	Sensor
11	331-297	Potentiometer
12	331-184	Spacer
13	117-044	Knob
14	331-377 301-397	LCD PSI Display LCD BAR Display

REPLACEMENT OF ELECTRICAL COMPONENTS

WARNING: ALWAYS UNPLUG THE ELECTRICAL CORD BEFORE SERVICING MACHINE!

NOTE: ANYTIME THE PRESSURE CONTROL ASSEMBLY, SENSOR, OR BOTH ARE REPLACED, PERFORM THE CALIBRATIONS.

PRESSURE CONTROL ASSEMBLY (ELECTRICAL CONTROL BOARD)

1. Unplug machine's power cord.
2. Remove eight screws (Fig. 30, Item 33) and lower the pressure control assembly.
3. Disconnect all leads from pressure control assembly.
4. Reassemble in reverse order.

SENSOR

1. Remove the screws (Fig. 30, Item 33) and lower the pressure control assembly.
2. Disconnect sensor lead from the board.
3. Unscrew sensor (Fig. 25 Item 7) from pressure control assembly using a 7/8" wrench.
4. Reassemble in reverse order. Use telfon tape on the sensor threads prior to reinstalling it into the pressure control assembly.

POTENTIOMETER

1. Lower pressure control assembly as described above.
2. Disconnect potentiometer lead from pressure control assembly.
3. Use a 1/16" allen wrench, loosen set screw in the potentiometer knob (Fig. 31, Item 13) and remove knob and spacer. (Fig. 31, Item 12).
4. Using a 1/2" wrench or deep socket, remove the nut from the potentiometer shaft assembly.
5. Pull entire potentiometer assembly out of the frame.
6. Replace in reverse order.

ON-OFF TOGGLE SWITCH

1. Lower the pressure control assembly as described above.
2. Disconnect the two wires on the toggle switch (Fig. 31, Item 4).
3. Use a 9/16" wrench to loosen the nut on the toggle switch shaft.
4. Reassemble in reverse order.

CIRCUIT BREAKER

1. Lower pressure control assembly as described above.
2. Disconnect the two wires on breaker (Fig. 31, Item 5).
3. Unscrew rubber boot (Fig. 31, Item 6) from breaker shaft.
4. Remove breaker from frame.

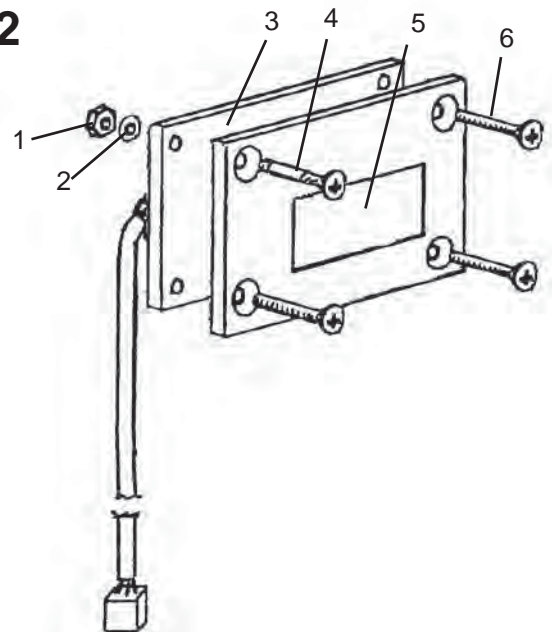
LIQUID CRYSTAL DISPLAY (LCD)

1. Ensure that the power switch is OFF and that the machine is unplugged.
2. Detach the pressure control assembly (Fig. 30) from the frame by unscrewing eight screws (Item 33).
3. Disconnect the LCD lead from the the pressure control assembly.
4. Separate the LCD assembly from the frame by undoing the four screws (Fig. 32, Item 6)
5. Disassemble Items 1-6 (Fig 32)
6. Remove and replace LCD Display (Fig. 32 Item 3).
7. Reassemble in reverse order.

NOTE: DO NOT OVER TIGHTEN THE SCREW AND NUTS (ITEM 1 & 6). THIS CAN WARP THE LCD AND DAMAGE IT.

8. Perform "LCD Display Calibration Procedure".
See page 25.

FIG. 32



PARTS LIST FIGURE 32

Item No.	Part No.	Description
1	117-128	Nut (4)
2	120-048	Plastic Washer (4)
3	331-337	Display Board Assy
4	117-281	Spacer (4)
5	331-360	Window
6	100-362	Screw (4)
	331-304-99	LCD Kit PSI
	331-305-99	LCD Kit BAR

OPTIONAL AIR ATOMIZER (120-117)

OPERATING INSTRUCTIONS

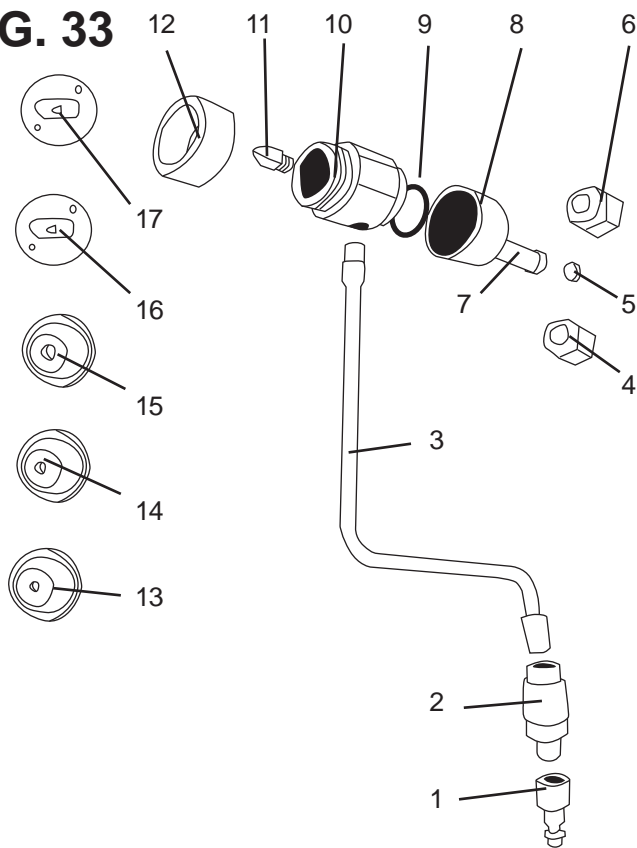
- For best performance use at least a minimum 1 gallon per minute paint sprayer
- For fog finish and fine orangepeel use tip #13 or 16 and apply maximum air flow
- For medium orangepeel and splatter coat, use tip # 14 or 17 and apply medium air flow
- For heavy splatter coat and knockdown finish use tip # 15 or 17 and apply less air flow

WARNING

Operator must clean atomizer after each use, any debris will cause poor spray performance

Always turn on the air first, this eliminates back flow of material into the air system.

FIG. 33

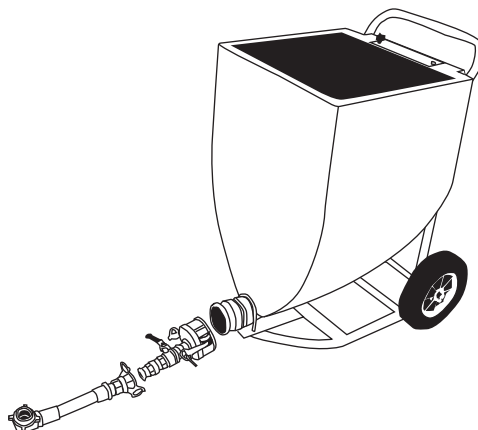


PARTS LIST FIGURE 33

Item No.	Description
1	Air Fitting
2	Air Flow Tube
3	Air Tube
4	Nut F 11/16-16
5	Fluid Seal
6	Nut G 7/8-14
7	Stem
8	Back Housing
9	Viton O-Ring
10	Front Housing
11	Air Nozzle
12	Tip Retainer
13	1/8" Spray Tip
14	3/16" Spray Tip
15	1/4" Spray Tip
16	3/16" Fine Tip
17	1/4" Fine Tip

OPTIONAL HOPPER SYSTEM (301-441)

FIG. 34



NOTES

[illegible]

Quick Flush™

- The only clean water flushing system
- Cuts sprayer clean-up time in half!
- Connects to standard garden hose to backflush sprayer through gun
- Includes "F" and "G" adapters to work with all brands of gun



Part # 170-005



PAINT HOPPER

For use on small jobs where paint is kept in smaller than 5 gallon containers. Threads onto pick-up tube of carry or LoBoy framed Airlessco sprayers.

331-775 6 Liter Paint Hopper



PUMP CONDITIONER

Should be used on piston pumps between uses to prevent paint from drying on the piston & causing packing wear.

010-001 Display of 48 - 1 oz. bottles
010-009 1 quart bottle
010-019 1 Gallon bottle

Case quantity: 12 on quarts, 4 on gallons



PAINT STRAINERS

Pre-filter your paint using strainer bags. One dozen per pack.

100-064 Used to cover suction filter
100-065 5 Gallon strainer



HOSE COVER

4 mil poly protects your airless hose from paint and abrasion damage. Comes in 1000' roll with perforations each 50'.

100-219 Hose Cover Roll
100-426 Case of 6 Rolls



HIGH PRESSURE AIRLESS HOSE

Strong yet flexible, for airless sprayers up to 3300 PSI

Part No:	Hose Description
100-012	3/16" Whip Hose, 4 Ft.
100-040	1/4" Whip Hose, 3 Ft.
100-204	1/4" Whip Hose, 5 Ft.
100-199	3/8" Whip Hose, 6 Ft.
100-011	1/4" Hose, 50 Ft.
100-023	3/8" Hose, 50 Ft.
100-037	1/2" Hose, 50 Ft.
100-010	1/4" Hose Connector
100-009	3/8" Hose Connector



STAY CLEAN™

Spray protectant for machine to prevent paint from sticking to it. Keeps your sprayer looking new for years!

114-030 20 oz. can
Case quantity: 12 cans



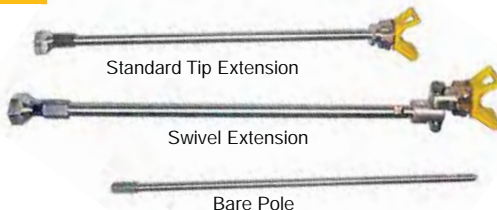
THROAT SEAL OIL

Used in the wet cup of a piston pump to prevent paint from drying on the piston & causing damage to the upper packing. Use with all piston pumps.

188-187 6 oz. Bottle
188-392 1 qt. Bottle



XTEND-A-POLE SYSTEM



STANDARD TIP EXTENSION, "G" Thread

032-170 6" Long
032-171 12" Long
032-172 18" Long
032-173 24" Long

SWIVEL EXTENSION, "G" Thread

032-184 36" Long

BARE POLE

Add Tip Extension or Swivel Extension to create desired length

032-053 24" Long
032-054 36" Long

SWIVEL "G" THREAD

032-035-55 7/8" x 14 Swivel



ADAPTERS



90° Pole to Gun Adapter
032-042



Gun Nut "F" Thread 11/16-16
032-010



Gun Nut "G" Thread 7/8-14
032-011



"F to G" Gun adapter to attach Graco® tips to Airlessco guns.
032-012