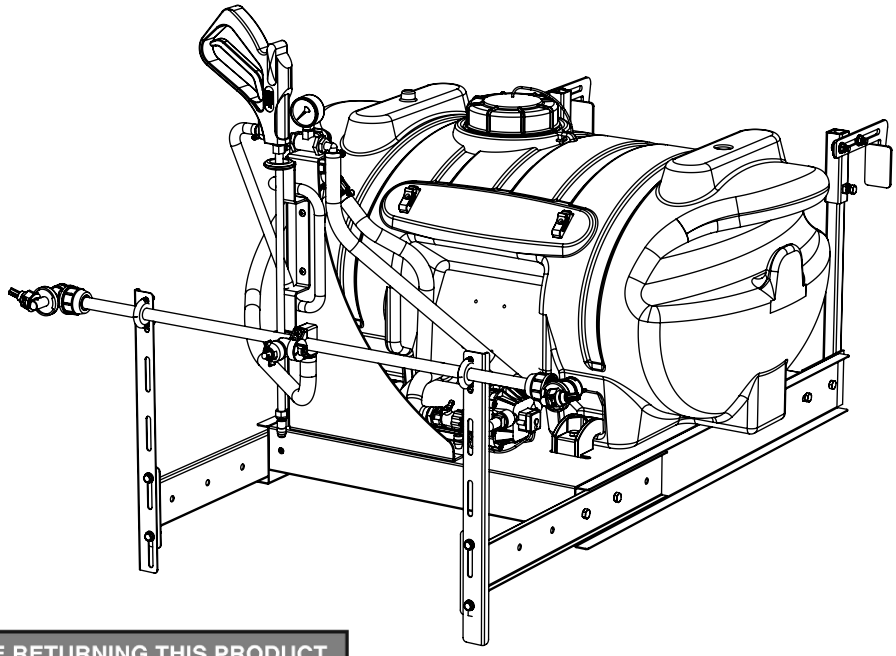
Owner's Manual

Model: UTL-40-12V-BL (5301344)

(40 Gallon Lawn & Garden Utility Sprayer w/ "Boomless" Boom)



BEFORE RETURNING THIS PRODUCT FOR ANY REASON, PLEASE CALL

1-800-831-0027

IF YOU SHOULD HAVE A QUESTION OR EXPERIENCE A PROBLEM WITH YOUR FIMCO INDUSTRIES PRODUCT:

1-800-831-0027

BEFORE YOU CALL, PLEASE HAVE THE FOLLOWING INFORMATION AVAILABLE: SALES RECEIPT & MODEL NUMBER. IN MOST CASES, A FIMCO INDUSTRIES EMPLOYEE CAN RESOLVE THE PROBLEM OVER THE PHONE.

General Information

Thank you for purchasing this product. The purpose of this manual is to assist you in operating and maintaining your utility cart sprayer. Please read it carefully, as it furnishes information which will help you achieve years of trouble-free operation.

Warranty/Parts/Service

For home usage, products are warranted for one year from date of purchase against manufacturer or workmanship defects.

Commercial users have a 90 day warranty.

Your authorized dealer is the best source of replacement parts and service. To obtain prompt, efficient service, always remember to give the following information...

- Correct Part Description and/or part number.
- Model number/Serial number of your sprayer.

Part descriptions and part numbers can be obtained from the illustrated parts list section(s) of this manual.

Whenever you need parts or repair service, contact your distributor/dealer first. For warranty work, always take your original sales slip, or other evidence of purchase date, to your distributor/dealer.

Technical Specifications

- 40 Gallon Corrosion-Resistant Polyethylene Tank
- Deluxe Pistol-Grip Handgun w/25 Ft. Hand Gun Hose
- 3-Nozzle Boomless Nozzle Assembly w/30 Ft. Spray Coverage
- Adjustable Boom Height
- 12 Volt, 3.8 GPM Diaphragm Pump

Assembly

The sprayer is fully assembled at the factory. The only assembly necessary is to thread the pressure gauge in place, and to hook up the wiring to an existing 12 volt power source.

The red wire of the two wire set must be connected to the positive post on the battery or the “Hot” connection on a switch or to the ammeter. The brown wire may be grounded or connected to the negative battery post. Install all parts of the boom assembly to the boom brackets as shown in the exploded view drawing. The in-line switch turns the unit on and off. Running the pump dry will not harm the pump for short periods of time.

Read the operating instructions and then run the sprayer using only water for testing. When everything tests all right, add the desired chemical mixture and water combination and start the spraying operation.

FIMCO INDUSTRIES

www.fimcoindustries.com

1000 FIMCO Lane, P.O. Box 1700, North Sioux City, SD 57049
Toll Free Phone: 800-831-0027 : Toll Free Fax: 800-494-0440

Form No. 871 [5004638 (09/11)] Printed in the U.S.A.

Testing the Sprayer

It is important to test the sprayer with plain water before actual spraying is attempted. This will enable you to check the sprayer for leaks in the plumbing system.
1. Open tank lid and be sure the tank is clean and free of foreign material. Fill the tank about half full with plain water.
2. Open the valve on the filter/valve assembly next to the pump and allow water to flow to the pump. The valve is located at this point to enable the strainer to be taken apart for cleaning.
3. There are two valves located on the valve and handgun bracket. One of these is a shut-off for the boom and the other is for pressure adjustment. Open the valve that controls flow to the boom and open the bypass control valve.
4. You may now start the sprayer.
5. The pressure should now be increased to as desired by closing the bypass valve.
6. During this testing period be sure to observe the spray pattern given by the spray nozzles. Each nozzle should overlap the next nozzle approximately 30%. If there is any pattern distortion, it will be necessary to remove and clean the affected tips.

CAUTION: Never use a metal object or other sharp item for cleaning a nozzle tip. It is better to use a nozzle brush (not wire brush) or compressed air for tip cleaning.

After Spraying

After use, fill the sprayer tank part way with water. Start the sprayer, and allow the clear water to be pumped through the plumbing system and out through the spray nozzles.
Refill the tank about half full with plain water and use FIMCO Tank Neutralizer and Cleaner, and repeat cleaning instructions above. Flush the entire sprayer with the neutralizing/cleaning agent, then flush out one more time with plain water. Follow the chemical manufacturer's disposal instructions of all wash or rinsing water. For the boom, (if applicable) remove the tips and screens from the nozzle assemblies. Wash these items out thoroughly. Blow the orifice clean and dry. If the orifice remains clogged, clean it with a fine bristle (NOT WIRE) brush, or with a toothpick. Do not damage the orifice. Water rinse and dry the tips before storing.

WARNING: Some chemicals will damage the pump valves if allowed to soak untreated for a length of time! ALWAYS flush the pump as instructed after each use.

Winter Storage

Drain all water out of your sprayer, paying special attention to the pump, handgun, and valve(s). These items are especially prone to damage from chemicals and freezing weather.

The sprayer should be winterized before storage by pumping a solution of RV antifreeze through the entire plumbing system. This antifreeze solution should remain in the plumbing system during the winter months. When spring time comes and you are preparing your sprayer for the spray season, rinse the entire plumbing system out, clearing the lines of the antifreeze solution. Proper care and maintenance will prolong the life of your sprayer.

Speed Chart			
	Time Required in seconds to travel a distance of		
Speed in M.P.H. (Miles per Hour)	100 Ft.	200 Ft.	300 Ft.
1.0	68 sec.	136 sec.	205 sec.
2.0	34	68	102
3.0	23	45	68
4.0	17	34	51
5.0	14	27	41
6.0	11	23	34
7.0	9.7	19	29
8.0	8.5	17	26
9.0	7.6	15	23
10.0	6.8	14	20

Operation & Calibration

The performance of any agricultural chemical depends upon the proper application of the correct amount.
Be sure that your equipment has been calibrated before spraying.

DO NOT EXCEED 15 M.P.H. AT ANYTIME.

Initially begin spraying by opening the handgun. This will enable the air in the line to be eliminated through the tip, while building pressure.

The pumping system draws solution from the tank, through the strainer, and to the pump. The pump forces the solution under pressure to the handgun or boom nozzles.

Pressure may be decreased by opening the bypass valve to the tank. When it is closed the highest spraying pressure will be reached.

• Open the handgun by squeezing the handle lever

• Rotating the adjustable nozzle tip on the handgun will change the tip from a straight stream to a cone pattern (finer mist). Be sure the thumb nut on the adjustment nozzle is tight.

• The pump motor's demand switch shuts off the motor when the handgun, bypass valve and boom lines are fully closed.

The system remains pressurized, and the pump motor will restart automatically when the handgun or boom line is opened. If, however, the bypass line is open, the pump will not shut off automatically.
• The 3 nozzles are fixed on 17 1/2" spacing.
• All three nozzles spraying at the same time will allow a maximum coverage of 30 ft. Overlapping of the ends of the spray pattern will not be needed.
• The center nozzle will cover a 80" swath.
• Each of the three nozzles has a means of shutting down, so you may choose the coverage that is needed.

Adjusting Pressure

- When the bypass valve is closed, pressure is at the highest point.
- Opening the valve will decrease pressure.

Rate Chart for Boomless Nozzle (Set of 3)

Gallons per Acre Based on Water - 17 1/2" Spacing Note: The same figures are used for 1, 2, or 3 nozzles.								
Pressure P.S.I.	Capacity G.P.M. (3 Nozzles)	1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	6 MPH	8 MPH
20	1.68	28.0	14.0	9.4	7.0	5.6	4.7	3.5
30	2.05	34.4	17.2	11.4	8.6	6.9	5.7	4.3
40	2.40	39.6	19.8	13.2	9.9	7.9	6.6	5.0

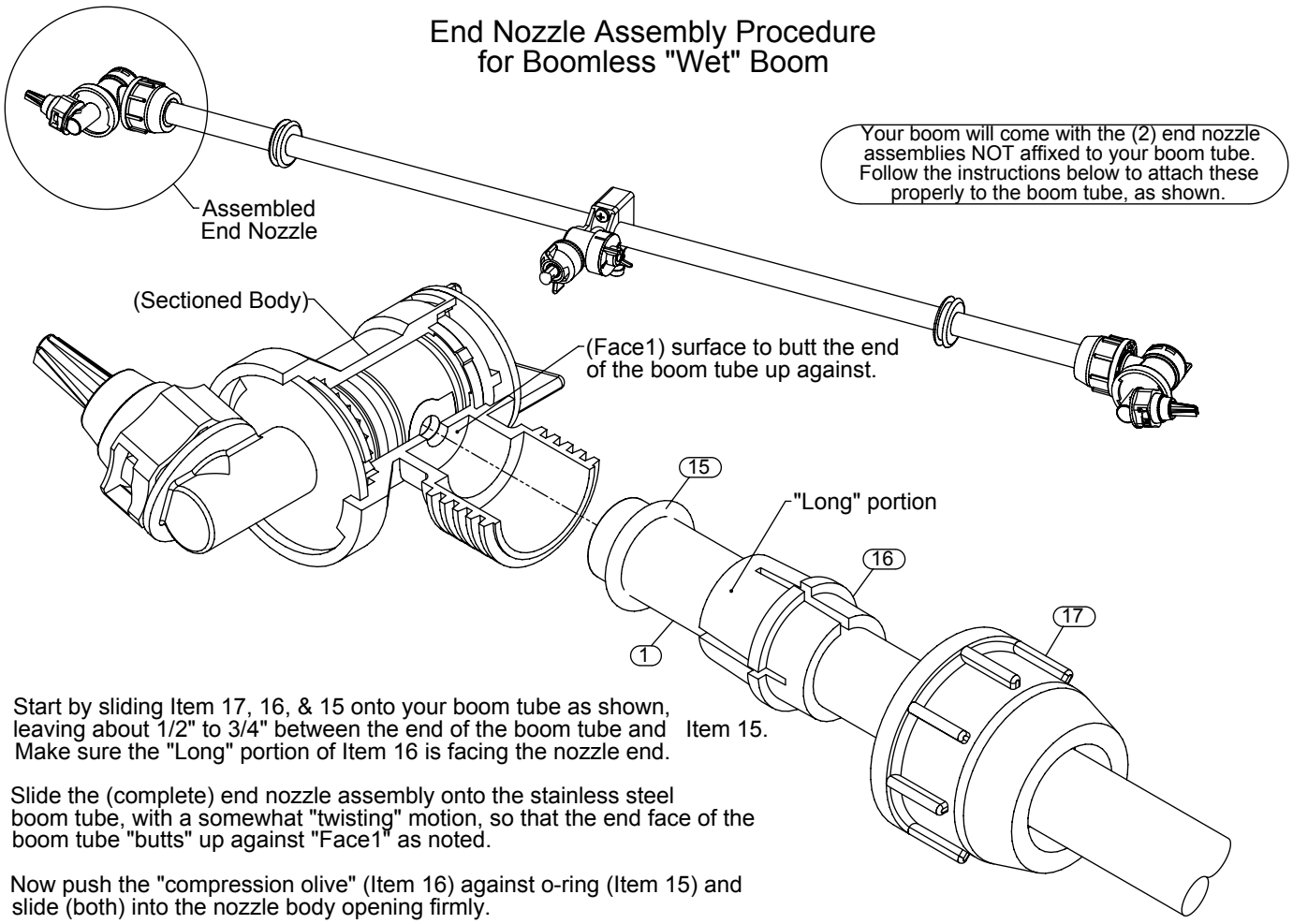
Gallons per 1000 Sq. Ft. Based on Water - 17 1/2" Spacing								
Pressure P.S.I.	Capacity G.P.M. (3 Nozzles)	1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	6 MPH	8 MPH
20	1.68	0.64	0.32	0.21	0.16	0.13	0.11	0.08
30	2.05	0.78	0.39	0.26	0.20	0.16	0.13	0.10
40	2.40	0.90	0.45	0.30	0.23	0.18	0.15	0.12

Gallons per 100 Sq. Ft. Based on Water - 17 1/2" Spacing								
Pressure P.S.I.	Capacity G.P.M. (3 Nozzles)	1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	6 MPH	8 MPH
20	1.68	0.064	0.032	0.021	0.016	0.013	0.011	0.008
30	2.05	0.078	0.039	0.026	0.020	0.016	0.013	0.010
40	2.40	0.090	0.045	0.030	0.023	0.018	0.015	0.012

MPH = Miles Per Hour / FPM = Feet Per Minute
PSI = Pounds Per Square Inch / GPM = Gallons Per Minute

** The rate of spray as shown in the chart will remain the same with 1, 2, or 3 Nozzles. **
The only difference will be with the width of the spray swath.

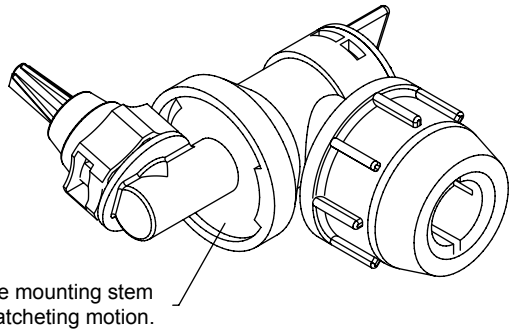
End Nozzle Assembly Procedure for Boomless "Wet" Boom



Your boom will come with the (2) end nozzle assemblies NOT affixed to your boom tube. Follow the instructions below to attach these properly to the boom tube, as shown.

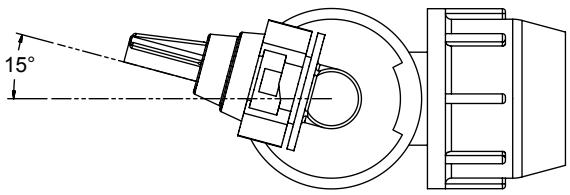
1. Start by sliding Item 17, 16, & 15 onto your boom tube as shown, leaving about 1/2" to 3/4" between the end of the boom tube and Item 15. Make sure the "Long" portion of Item 16 is facing the nozzle end.
2. Slide the (complete) end nozzle assembly onto the stainless steel boom tube, with a somewhat "twisting" motion, so that the end face of the boom tube "butts" up against "Face1" as noted.
3. Now push the "compression olive" (Item 16) against o-ring (Item 15) and slide (both) into the nozzle body opening firmly.
4. Firmly tighten flynut (Item 17) onto threads of nozzle body.
5. Repeat for other side.

End Nozzle Information (#5275122)



This nozzle mounting stem has a ratcheting motion.

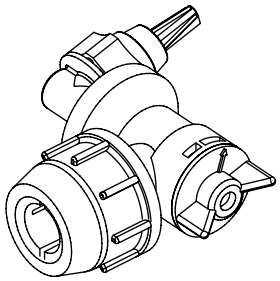
** Each "click" of the ratcheting motion is approx. 15° **



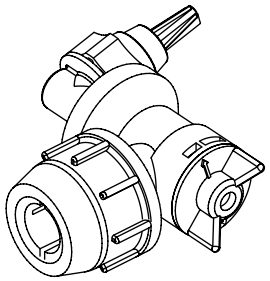
For proper/optimal spray coverage, the nozzle must be at a 15° angle

The 15° angle shown will prevent the outer nozzles from overlapping with the center nozzle.

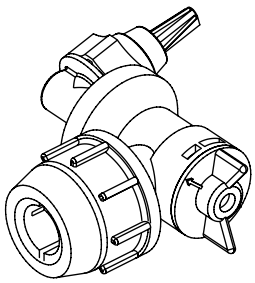
"On/Off" Valve Positions



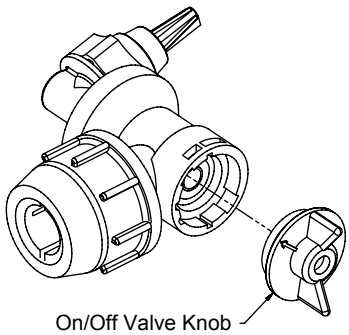
Valve "Open"



Valve "Closed"



Serivce Position



Eliminate line pressure, then pull out to check diaphragm condition.

Note: The check valve & diaphragm can fall out during transport, if the knob is not turned to the "ON" or "OFF" position.

Using the Boom Nozzles

Four things must be considered before spraying with the boom:

1. How much chemical must be mixed in the tank.
2. Rate of spray (gallons per acre to be sprayed)
3. What pressure (p.s.i.) will be used.
4. Speed traveled (mph) while spraying.

- Refer to the chemical label to determine your chemical mixture.
- See the tip chart to determine the pressure to be used. The chart will also show the speed used when spraying.
- Start the pump and open the valve(s) to the boom nozzles.
- Check the spray pattern. Usually you can see the coverage better on a solid concrete surface, such as a driveway.
- The boomless nozzles should be approx. 33" above the objects being sprayed.

⚠ ⚠ CAUTION ⚠ ⚠

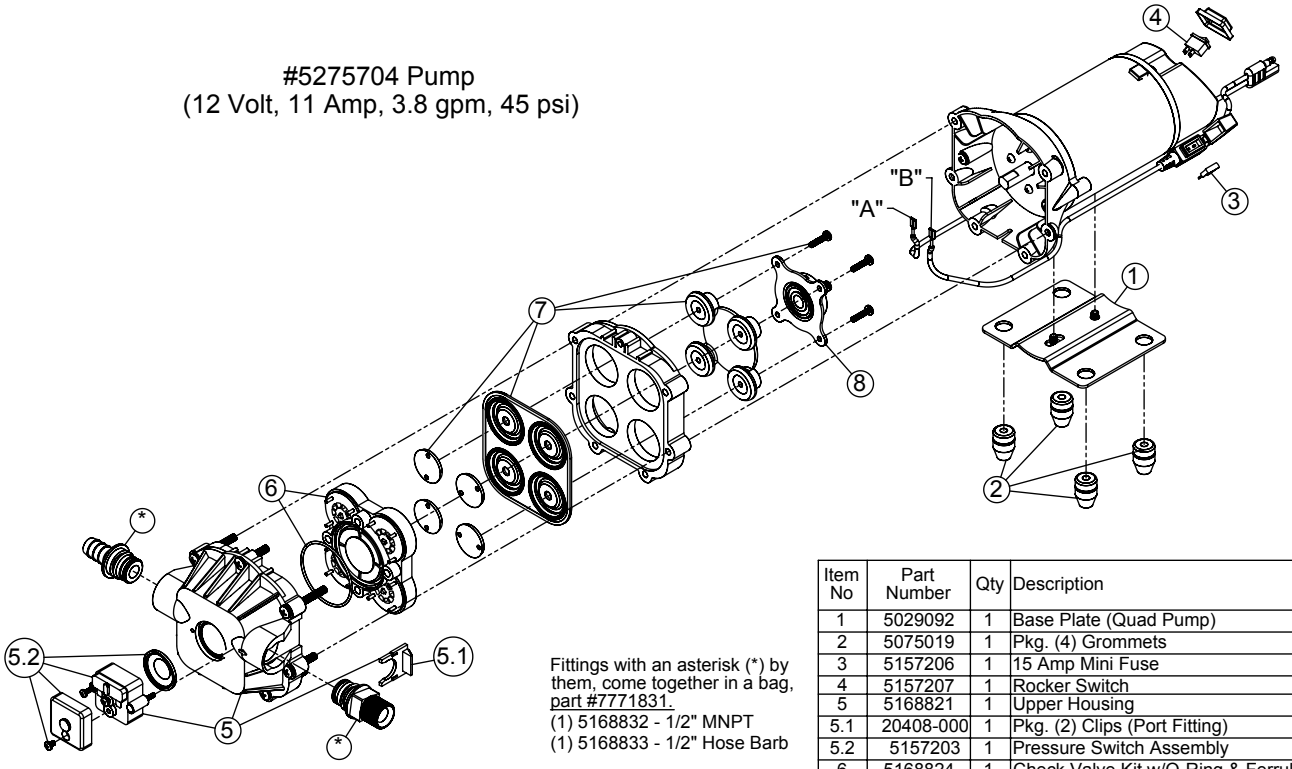
PRESSURE SWITCH OPERATION

Pressure switch is pre-set at the factory. Improper adjustment of the pressure switch, may cause severe overload or premature failure. If the pump is subjected to rapid cycling during normal operation, or infrequent periods, damage may occur.

STOP WARNING STOP

DO NOT USE PUMP IN AN EXPLOSIVE ENVIRONMENT. DO NOT USE TO PUMP FLAMMABLE FLUIDS, GASOLINE, KEROSENE, FUEL, OIL, ETC.

#5275704 Pump
(12 Volt, 11 Amp, 3.8 gpm, 45 psi)



Fittings with an asterisk (*) by them, come together in a bag, part #7771831.
(1) 5168832 - 1/2" MNPT
(1) 5168833 - 1/2" Hose Barb

Item No	Part Number	Qty	Description	List Price
1	5029092	1	Base Plate (Quad Pump)	9.25
2	5075019	1	Pkg. (4) Grommets	2.99
3	5157206	1	15 Amp Mini Fuse	3.99
4	5157207	1	Rocker Switch	6.99
5	5168821	1	Upper Housing	39.95
5.1	20408-000	1	Pkg. (2) Clips (Port Fitting)	3.41
5.2	5157203	1	Pressure Switch Assembly	23.95
6	5168824	1	Check Valve Kit w/O-Ring & Ferrules	24.99
7	5168826	1	Diaphragm Kit w/Pistons & (4) Screws	19.96
8	5168828	1	Cam/Bearing Kit, w/Set Screw	12.95

Troubleshooting a 3.8 g.p.m. Pump:

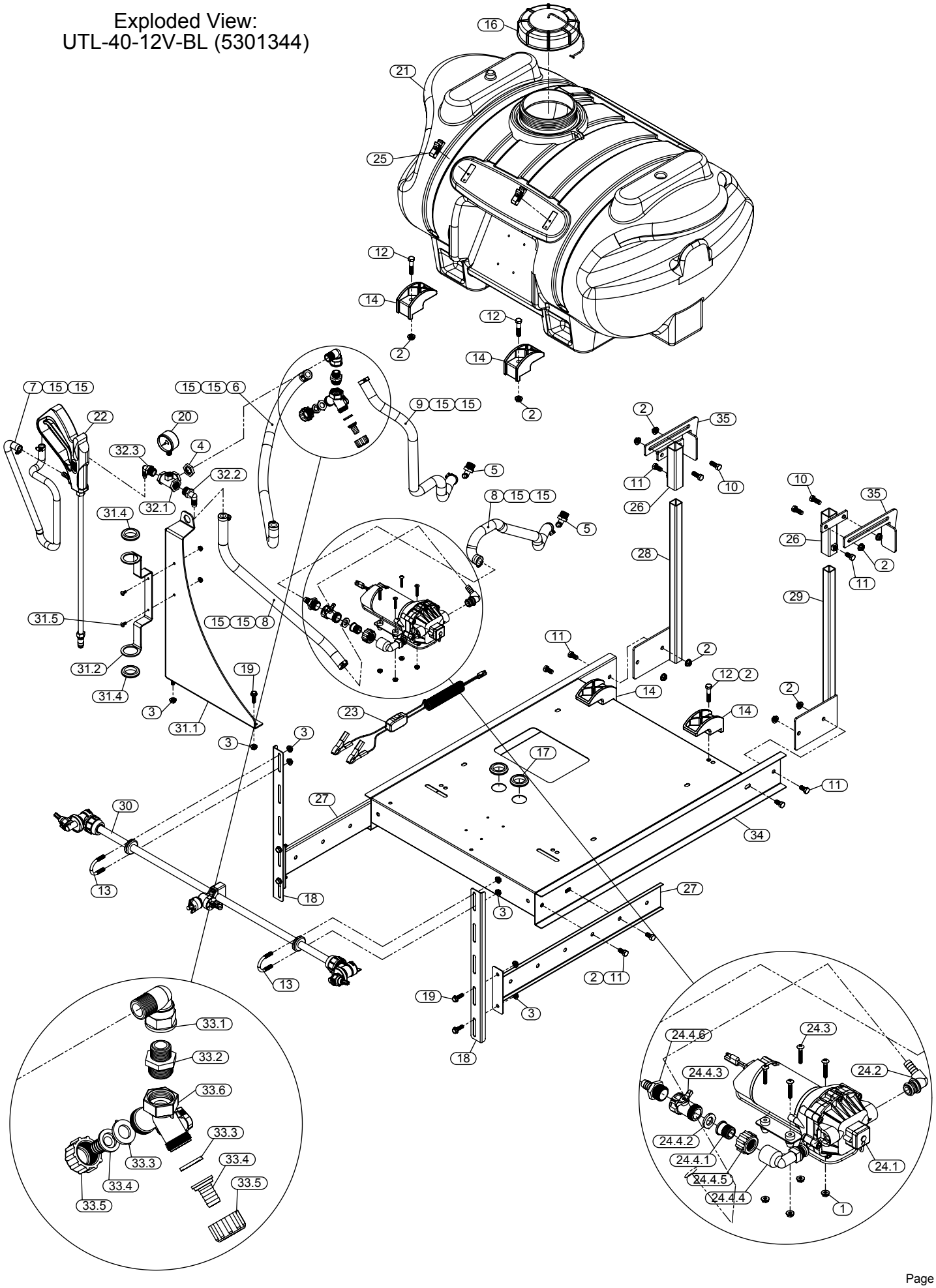
Pump will NOT run:
- Check inline fuse on the wires on the pump. If blown, replace with new fuse. (15 Amp mini-blade fuse #5157206)
- Make sure BOTH on/off switches are in the 'on' position (-).
- Make sure you 12 volt source (battery) is fully charged.
- Insure a tight connection at the battery clips.

If none of the above will work, try pulling wire terminal "A" off of the spade terminal of the pressure switch, and cross it over and touch terminal "B". (You will need to remove the pressure switch cap before doing this) If your pump runs when you do this, you know you will need to replace your pressure switch.

Another thing you can try is to take apart the switch box on the lead wire assembly (#5274443) with the (2) phillips head screws, and 'hot-wire' it together. Take the (2) wires that are screwed to the rocker switch, off of the switch and twist them together. This will insure you are getting the full 12 volts to the pump. If your pump runs after doing this, you will know that your lead wire assembly needs to be replaced.

Pump runs, but does not prime:
- Check line strainer (screen) at the inlet location, at the tank. You will need to unscrew the knurled nut to access this screen. (see exploded view later in this manual) The ON/OFF valve should be closed while performing this, to insure you do not lose any solution. Periodically take the screen at this location out and clean it.
- Make sure the bypass line valve is closed, to allow the pressure to build up in your system.
- Unscrew the head portion of your pump and remove the check valve assembly from inside. You need to make sure the O-Ring comes out with this piece as well. (See the exploded view to help identify these components) These pieces can be cleaned which, in most cases, will help restore some, if not most, of your prime. Soak this check valve in a solution of hot, soapy water. A good name-brand dishsoap works well for this. A little bit of 'scrubbing' with perhaps an old toothbrush may be required to actually break up any build-up that may be on the check valve. Rinse off the pieces and replace them back into your pump. Reassemble the pump. Hook it back up and test.

Exploded View:
UTL-40-12V-BL (5301344)

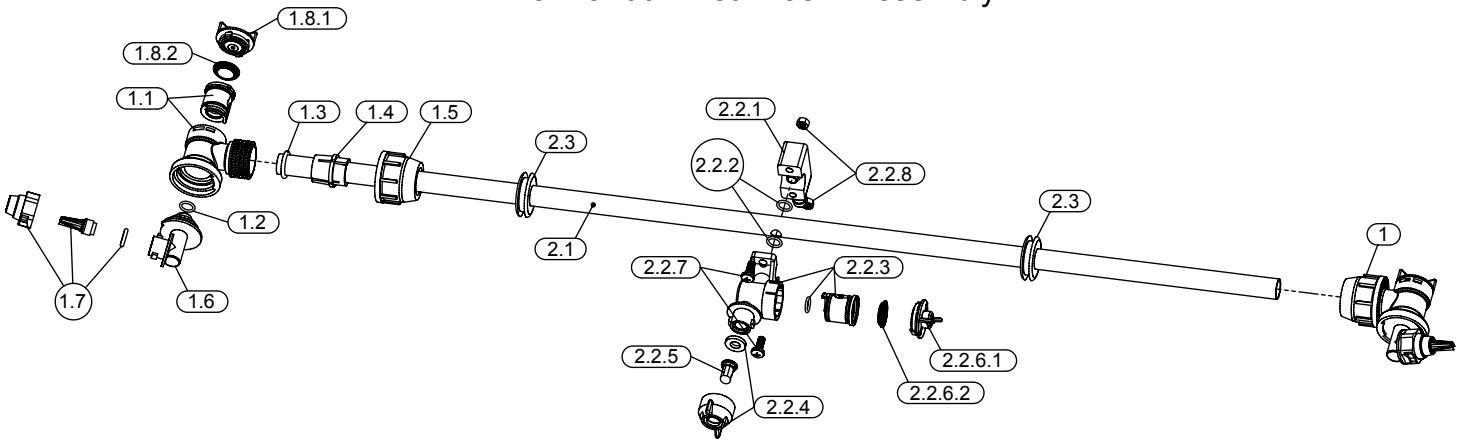


Parts List: UTL-40-12V-BL (5301344)

Item No	Part Number	Qty	Description	List Price
1	5006186	4	#10-24 Hex Whiz (Flange) Locknut	.25
2	5006259	16	3/8"-16 Hex Whiz (Flange) Locknut	.25
3	5006307	10	5/16"-18 Hex Whiz (Flange) Locknut	.25
4	5006351	1	1/2" Poly Nut	.59
5	5010039	2	Nylon Elbow, 1/2" MNPT x 1/2" HB	1.06
6	5020122	1	Hose, 1/2"-1 Brd. x 48"	5.88
7	5020135	1	Hose, 3/8"-1 Brd. x 25 Ft.	17.25
8	5020307	2	Hose, 1/2"-1 Brd. x 23"	3.49
9	5020462	1	Hose, 1/2"-1 Brd. x 31"	2.77
10	5034079	4	H.H.C.S. 3/8"-16nc x 1" Long	.25
11	5034099	10	H.H.C.S., 3/8"-16 x 3/4"	.50
12	5034101	4	H.H.C.S., 3/8"-16 x 1 3/4"	.50
13	5034220	2	Round U-Bolt, 5/16"-18 x 1 5/16" x 1 3/4"	.70
14	5038698	4	Plastic Tank Hold-Down Leg Clip	2.93
15	5051114	10	Hose Clamp (3/8"-1/2")	.63
16	5058188	1	Tank Lid w/Lanyard	10.50
17	5075014	2	Rubber Grommet (Black)	2.79
18	5095176	2	Boom Mount, 40/60 Gallon Utility Sprayer	4.09
19	5117300	6	5/16"-18 x 1" Flange Whiz Lock Screw	.25
20	5167007	1	Pressure Gauge, 0-100 p.s.i.	6.75
21	5169245	1	40 Gallon Elliptical Tank (White)	105.00
22	5273959	1	Deluxe Pistol-Grip Handgun w/X-26 Tip	24.95
23	5274443	1	96" Lead Wire Assembly	9.99
24	5274808	1	Pump Sub-Assembly	175.00
24.1	5275704	1	Gold Series 3.8 g.p.m. Pump	159.00
24.2	5010426	1	90 Deg. Port Elbow x 1/2" HB	2.25
24.3	5117166	4	#10-24 x 1 1/4" Phillips Truss Head Screw	.25
24.4	5275570	1	Filter/Valve Sub-Assembly	11.38
24.4.1	5005241	1	Nylon Swivel Adapter Spud, 1/2" NPT	1.25
24.4.2	5116242	1	Strainer, 1" Filter Washer	.31
24.4.3	5143188	1	Nylon Shut-Off Valve (3/4" GHT)	3.19
24.4.4	5010430	1	Port Kit Elbow, 1/2" FNPT	2.79
24.4.5	5006209	1	Poly Knurled Swivel Nut, 3/4" FGHT	.70
24.4.6	5067121	1	Poly Hose Fitting, 3/4" MGHT 1/2" HB	.81
25	5274880	1	Pkg. (2) Handgun Clips & (2) Screws	2.85
26	5274994	2	Slide Tube Weldment	8.99
27	5274997	2	Boom Mount Bracket Weldment	12.50
28	5275000	1	Upright Tube Weldment (L.H.)	12.01
29	5275001	1	Upright Tube Weldment (R.H.)	12.01
30	5275260	1	"Wet Boom" Assembly	169.00
31	5275405	1	Valve Mount Sub-Assembly	36.33
31.1	5038704	1	Valve Mount Bracket	21.63
31.2	5038638	1	Handgun Holder Bracket	11.83
31.3	5006186	2	#10-24 Hex Whiz (Flange) Locknut	.25
31.4	5075014	2	Rubber Grommet (Black)	2.79
31.5	5117234	2	#10-24 x 1/2" Phillips Truss Head Machine Screw	.25
32	5275501	1	Top Valve Sub-Assembly	12.44
32.1	5010193	1	Nylon Tee, 1/2" FNPT w/1/4" Port (Gauge)	12.08
32.2	5010039	1	Nylon Elbow, 1/2" MNPT x 1/2" HB	1.06
32.3	5010038	1	Nylon Elbow, 1/2" MNPT x 3/8" HB	1.05
33	5275502	1	Bottom Valve Sub-Assembly	11.28
33.1	5010148	1	Nylon Street Elbow, 1/2" MNPT x 1/2" FNPT	3.12
33.2	5005021	1	Nylon Adapter, 1/2" MNPT x 3/4" MGHT	.79
33.3	5016066	2	Garden Hose Washer	.20
33.4	5149011	2	Nylon Swivel, 1/2" Flat Seat Hose Barb	.58
33.5	5006055	2	Nylon Swivel Nut, 3/4" FGHT	.64
33.6	5143204	1	Dual Hose Shut-Off "Y" Valve	4.38
34	5275756	1	40-60 Gallon Utility Frame Weldment (Red)	95.00
35	5277486	2	Clamp Arm	

(List Prices are Subject to Change)

#5275260 "Wet" Boom Assembly



Item No	Part Number	Qty	Description	List Price
1	5275122	2	End Nozzle Assembly (Wet Boom)	56.86
1.1	5002499	1	Boomless Nozzle Body w/Core (Outer)	6.00
1.2	5072518	1	Stem O-Ring	.54
1.3	5072517	1	Compression O-Ring	.54
1.4	5010427	1	Compression Olive	3.40
1.5	5006348	1	Flynut	3.40
1.6	5132073	1	Nozzle Holder Stem	4.99
1.7	5274861	1	XT Spray Nozzle, Cap, & O-Ring	39.95
1.8.1	5088024	1	Yellow ON/OFF Valve Knob	3.18
1.8.2	5063255	1	Diaphragm	1.58
2	5275712	1	Wet Boom Sub-Assembly	55.28
2.1	5100316	1	Boom Tube	23.55

Item No	Part Number	Qty	Description	List Price
2.2	5275123	1	Center Nozzle Assembly (Wet Boom)	15.96
2.2.1	5051137	1	Hose Barb Saddle	3.25
2.2.2	5072509	2	O-Ring	.54
2.2.3	5002500	1	Center Nozzle Body w/Core (Boomless Boom)	5.99
2.2.4	5274862	1	Center Boomless Nozzle Cap w/Gasket	1.43
2.2.5	5018329	1	Red Spray Tip	6.99
2.2.6.1	5088024	1	Yellow ON/OFF Valve Knob	3.18
2.2.6.2	5063255	1	Diaphragm	1.58
2.2.7	5117310	2	SS Screw, 6mm x 16mm (5/8")	1.01
2.2.8	5006347	2	SS Nut, 6mm	1.25
2.3	5075016	2	Rubber Grommet	1.99

(List Prices are Subject to Change)