

PowerSPRAY™

PRO



25 GALLON TRAILER SPRAYER

Models: 500000, 500004, 500013, 500016, 500055

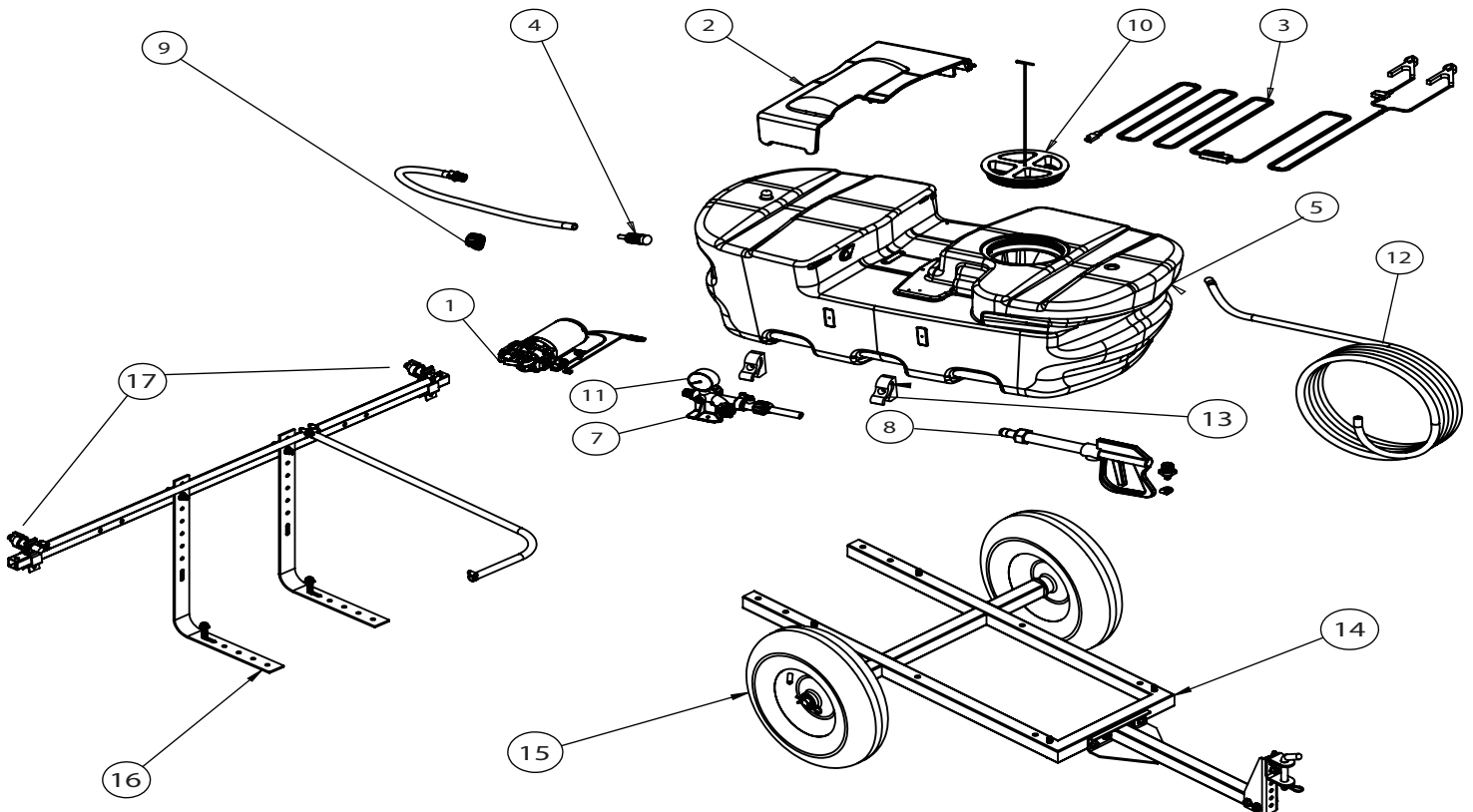
Technical Specifications

All new PowerSPRAY™ and PowerSPRAY Pro™ has been engineered and customized to be the most reliable, longest lasting, spot and boom sprayers in the market. By producing a new line of sprayers with dependability, smooth even spray pattern and durability, Power Spray Sprayer's is leading the charge in landscape excellence.

Please read the manual through before using your pump and sprayer. Safe operation and regular maintenance will ensure your sprayer works efficiently for years. Keep this manual in a safe and convenient place for future reference. If you have any issues please call 1-866-335-2826 and have your model number ready.

Sprayer and Tank Parts List Breakdown

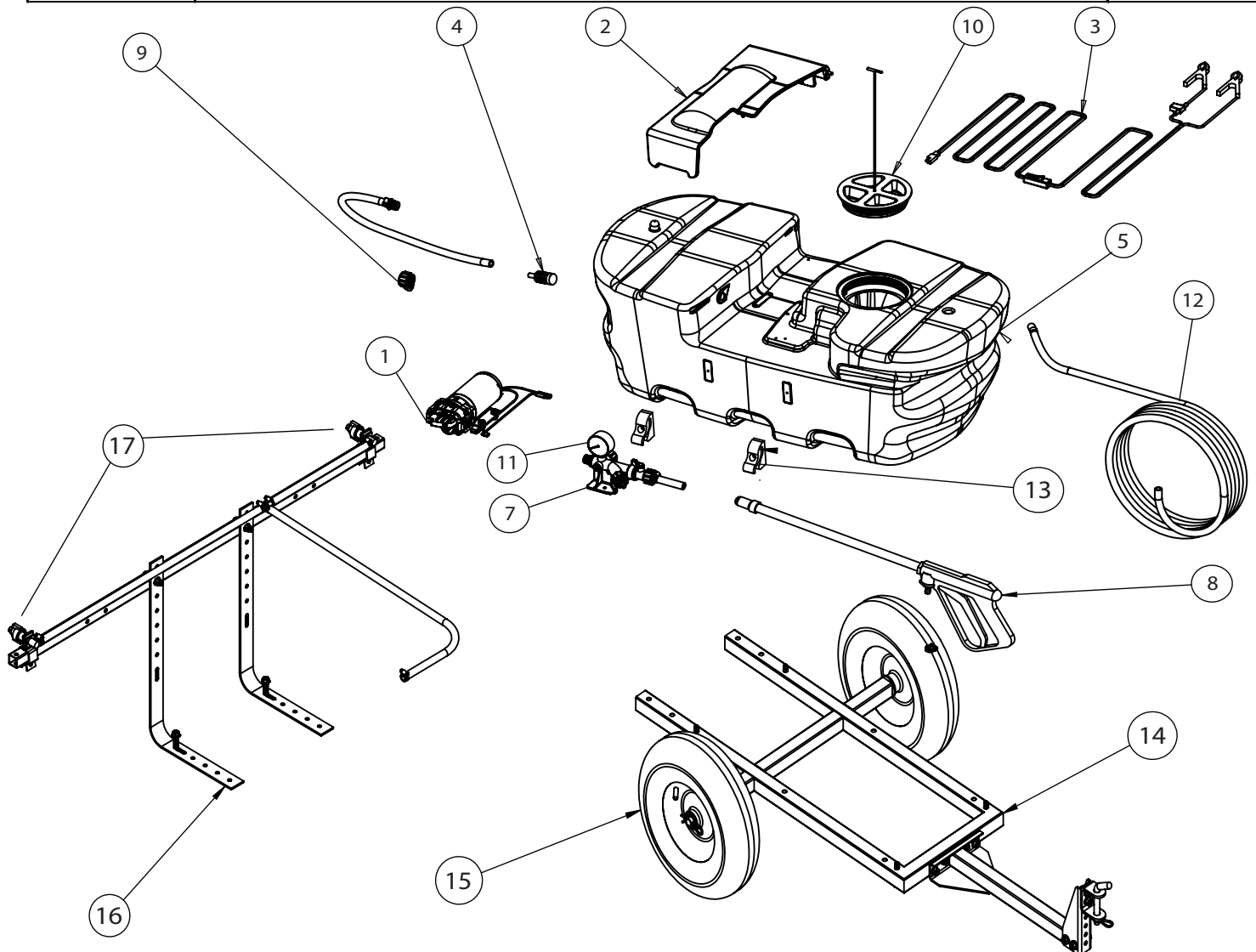
25 GALLON TRAILER PREMIUM PRO1 SPRAYER - MODEL #500004		
Drawing Number(s)	Description	Replacement Part Number
1	3CH PUMP, 2.2GPM SMARTFLO, DEMAND	3222-421F
2	SPRAYER TANK PUMP COVER	100017
3	WIRE HARNESS 120" W/ SWITCH AND BATT CLAMPS	100035
4	INTAKE FILTER, 3/8" BARB	100015
5	PREMIUM MOLDED TANK 25 GAL TANK ONLY Includes Polypropylene Tank and Brass Inserts	100038
5,2,9,10,13	PREMIUM MOLDED TANK 25 GAL ASSEMBLY - Premium Tank and Inserts (5) Tank Tray Lid (2), Drain Cap (9), Tank Lid Assembly (10), Wand Clips (13)	500040
7	MANIFOLD SUB ASSY REPLACEMENT, SIDE PORT	500048
8	13" JET SPRAYER GUN with 3/8" BARB CONNECTOR	100058
9	DRAIN CAP SUB ASSY	100074
10	TANK LID SUB ASSY, 6" RECESS THREADED	100073
11	2" PRESSURE GAUGE 100 PSI 1/4" NPT	100012
12	REPLACEMENT HOSE, 25 FEET, 3/8"	100056-C
14	WELDED TRAILER FRAME 25GAL (NO TIRES)	100002
15	PNEUMATIC TIRE ON RIM - (1 TIRE)	100019
16	TRAILER BOOM KIT WITH 2 NOZZLES - RETAIL	500051
17	NOZZLE ASSEMBLY WITH FLOOD TIP (1 ASSEMBLY)	100039



Parts List Breakdown

25 GALLON PREMIUM PRO SPOT SPRAYER - MODEL #500000

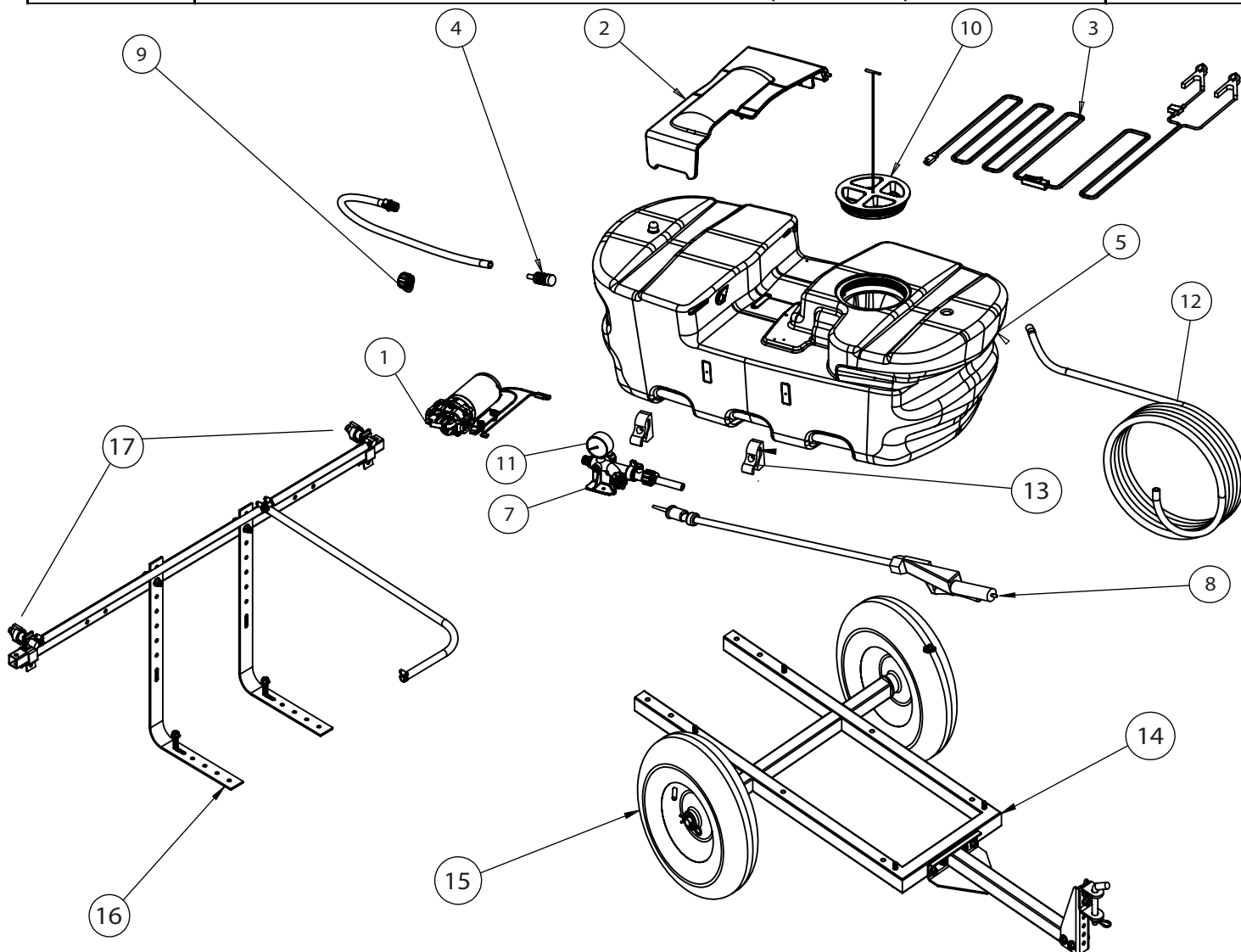
Drawing Number(s)	Description	Replacement Part Number
1	3CH PUMP, 2.0GPM EXTREME DUTY, DEMAND	3220ED-401E
2	SPRAYER TANK PUMP COVER	100017
3	WIRE HARNESS 120" W/ SWITCH AND BATT CLAMPS	100035
4	INTAKE FILTER, 3/8" BARB	100015
5	PREMIUM MOLDED TANK 25 GAL TANK ONLY Includes Polypropelyne Tank and Brass Inserts	100038
5,2,9,10,13	PREMIUM MOLDED TANK 25 GAL ASSEMBLY - Premium Tank and Inserts (5) Tank Tray Lid (2), Drain Cap (9), Tank Lid Assembly (10), Wand Clips (13)	500040
7	MANIFOLD SUB ASSY REPLACEMENT, SIDE PORT	500048
8	24" PRO PISTOL GRIP GUN, 3/8" CONNECTOR	100013
9	DRAIN CAP SUB ASSY	100074
10	TANK LID SUB ASSY, 6" RECESS THREADED	100073
11	2" PRESSURE GAUGE 100 PSI 1/4" NPT	100012
12	REPLACEMENT HOSE, 25 FEET, 3/8"	100056-C
14	WELDED TRAILER FRAME 25GAL (NO TIRES)	100002
15	PNUEMATIC TIRE ON RIM - (1 TIRE)	100019
16	TRAILER BOOM KIT WITH 2 NOZZLES - RETAIL	500051
17	NOZZLE ASSEMBLY WITH FLOOD TIP (1 ASSEMBLY)	100039



Parts List Breakdown

25 GALLON PREMIUM PRO SPOT SPRAYER - MODEL #500055

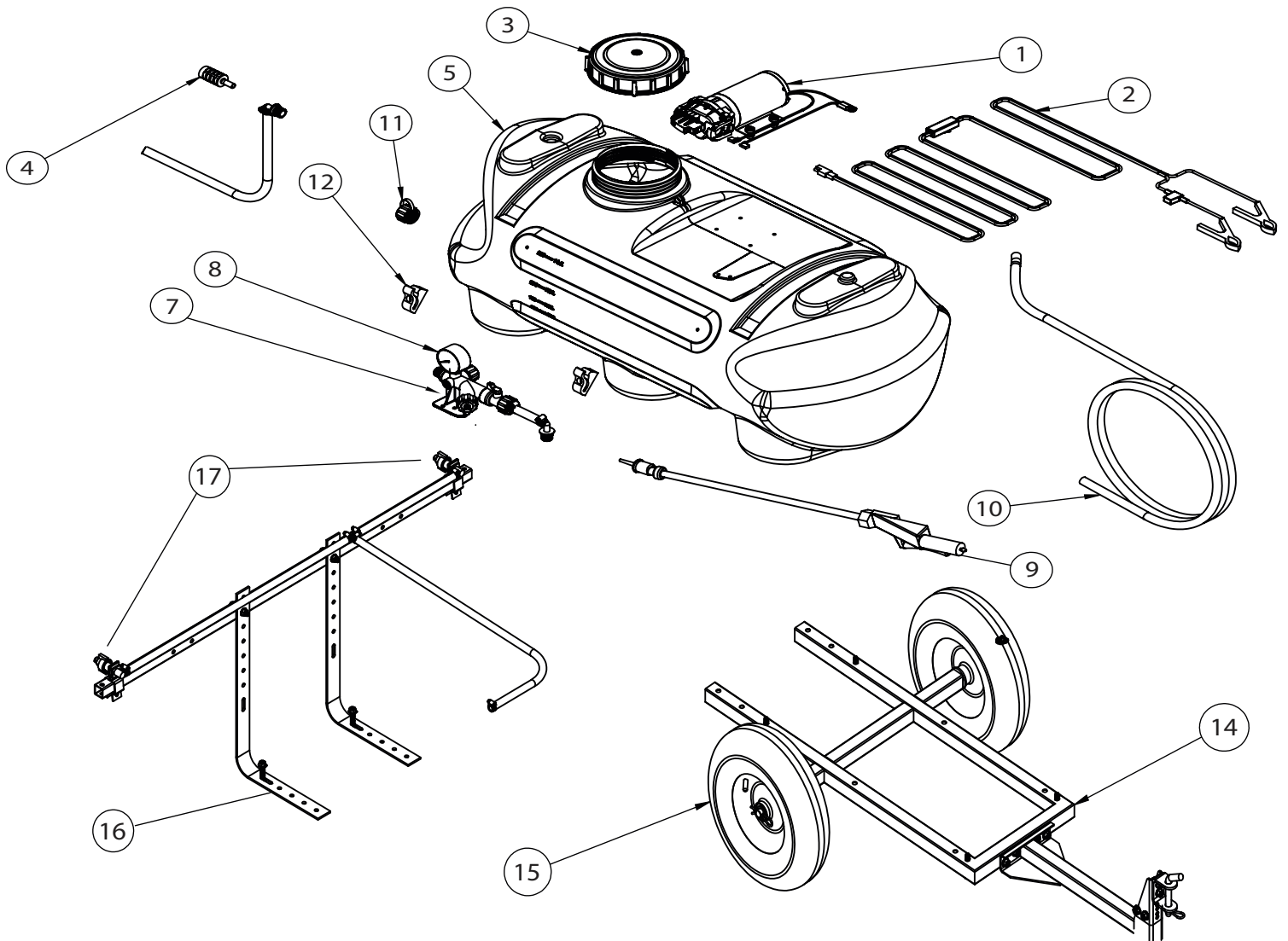
Drawing Number(s)	Description	Replacement Part Number
1	3CH PUMP, 2.0GPM EXTREME DUTY, DEMAND	7822FS-201
2	SPRAYER TANK PUMP COVER	100017
3	WIRE HARNESS 120" W/ SWITCH AND BATT CLAMPS	100035
4	INTAKE FILTER, 3/8" BARB	100015
5	PREMIUM MOLDED TANK 25 GAL TANK ONLY Includes Polypropelyne Tank and Brass Inserts	100038
5,2,9,10,13	PREMIUM MOLDED TANK 25 GAL ASSEMBLY - Premium Tank and Inserts (5) Tank Tray Lid (2), Drain Cap (9), Tank Lid Assembly (10), Wand Clips (13)	500040
7	MANIFOLD SUB ASSY REPLACEMENT, SIDE PORT	500048
8	30" SPRAY WAND with 3/8" HOSE BARB CONNECTION	100013
9	DRAIN CAP SUB ASSY	100074
10	TANK LID SUB ASSY, 6" RECESS THREADED	100073
11	2" PRESSURE GAUGE 100 PSI 1/4" NPT	100012
12	REPLACEMENT HOSE, 25 FEET, 3/8"	100056-C
14	WELDED TRAILER FRAME 25GAL (NO TIRES)	100002
15	PNUEMATIC TIRE ON RIM - (1 TIRE)	100019
16	TRAILER BOOM KIT WITH 2 NOZZLES - RETAIL	500051
17	NOZZLE ASSEMBLY WITH FLOOD TIP (1 ASSEMBLY)	100039



Parts List Breakdown

25 GALLON DELUXE TRAILER SPRAYER - MODEL #500013

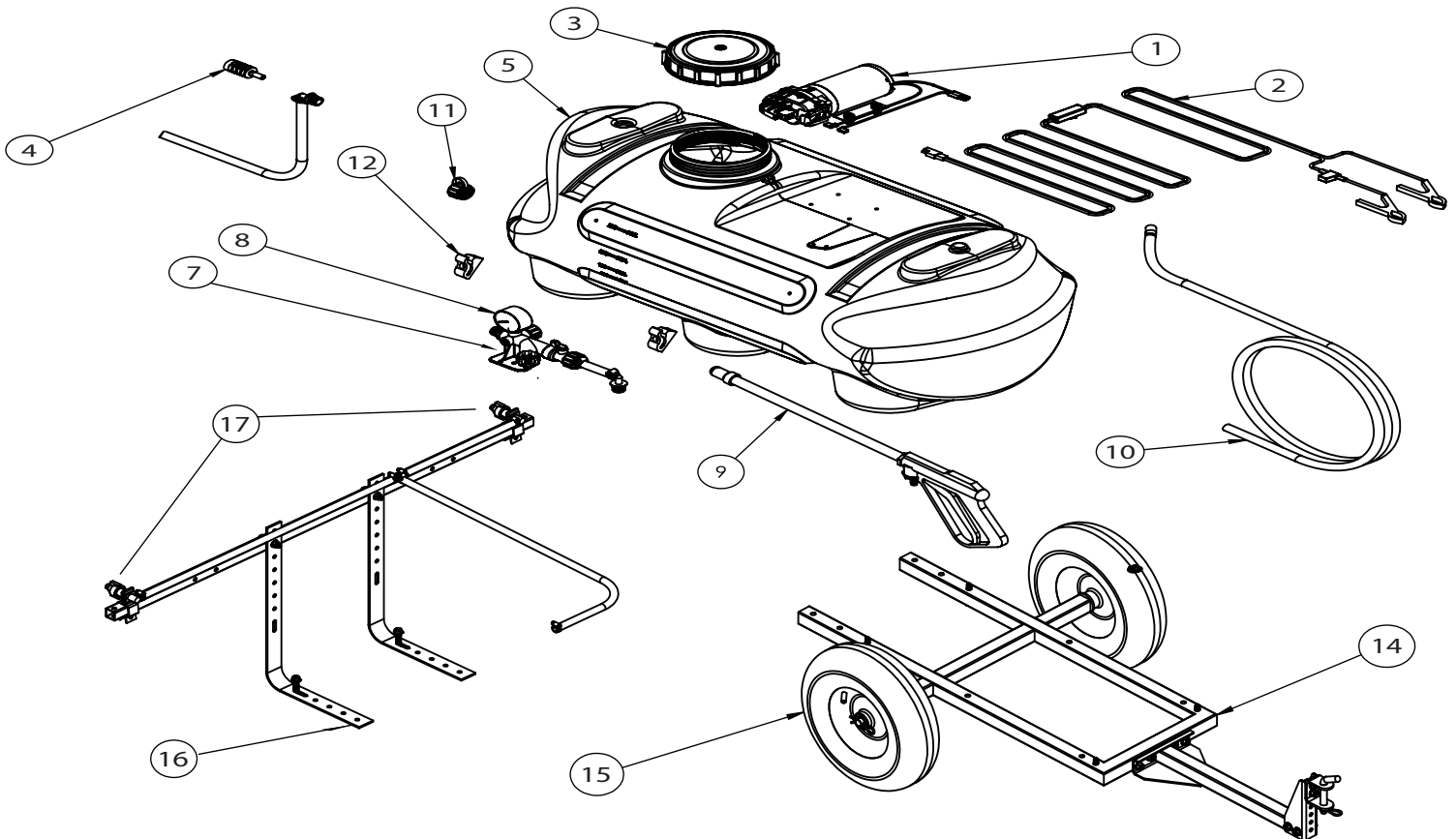
Drawing Number(s)	Description	Replacement Part Number
1	3CH PUMP, 2.2GPM FLEX, DEMAND	7822FS-201
2	WIRE HARNESS 120" W/ SWITCH, BATT CLAMPS	100035
3	TANK LID 6" STD W/ SPRING VENT	100008
4	INTAKE FILTER 3/8" BARB	100015
5	MOLDED TANK 25 GAL STD - TANK ONLY Includes Polypropelyne Tank and Brass Inserts	100037
5,3,11,12	MOLDED TANK 25 GAL STD - REPLACEMENT Includes Premium Tank and Inserts (5), Drain Cap (11), Tank Lid Assembly (3), Wand Clips (12)	500041
7	MANIFOLD SUB ASSY REPLACEMENT, SIDE PORT	500048
8	2" PRESSURE GAUGE 100 PSI 1/4" NPT	100012
9	30" SPRAY WAND with 3/8" HOSE BARB CONNECTION	100044
10	REPLACEMENT HOSE, 15 FEET, 3/8"	100056-D
11	DRAIN CAP SUB ASSY	100074
14	WELDED TRAILER FRAME 25GAL (NO TIRES)	100002
15	PNUEMATIC TIRE ON RIM - (1 TIRE)	100019
16	TRAILER BOOM KIT WITH 2 NOZZLES - RETAIL	500051
17	NOZZLE ASSEMBLY WITH FLOOD TIP (1 ASSEMBLY)	100039



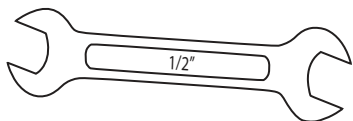
Parts List Breakdown

25 GALLON PRO TRAILER SPRAYER - MODEL #500016

Drawing Number(s)	Description	Replacement Part Number
1	3CH PUMP, 2.0GPM EXTREME DUTY, DEMAND	3220ED-401E
2	WIRE HARNESS 120" W/ SWITCH, BATT CLAMPS	100035
3	TANK LID 6" STD W/ SPRING VENT	100008
4	INTAKE FILTER 3/8" BARB	100015
5	MOLDED TANK 25 GAL STD - TANK ONLY Includes Polypropelyne Tank and Brass Inserts	100037
5,3,11,12	MOLDED TANK 25 GAL STD - REPLACEMENT Includes Premium Tank and Inserts (5), Drain Cap (11), Tank Lid Assembly (3), Wand Clips (12)	500041
7	MANIFOLD SUB ASSY REPLACEMENT, SIDE PORT	500048
8	2" PRESSURE GAUGE 100 PSI 1/4" NPT	100012
9	24" PRO PISTOL GRIP GUN, 3/8 CONNECTOR	100013
10	REPLACEMENT HOSE, 25 FEET, 3/8"	100056-C
11	DRAIN CAP SUB ASSY	100074
14	WELDED TRAILER FRAME 25GAL (NO TIRES)	100002
15	PNUEMATIC TIRE ON RIM - (1 TIRE)	100019
16	TRAILER BOOM KIT WITH 2 NOZZLES - RETAIL	500051
17	NOZZLE ASSEMBLY WITH FLOOD TIP (1 ASSEMBLY)	100039



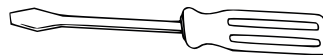
Tools Required for Sprayer Assembly



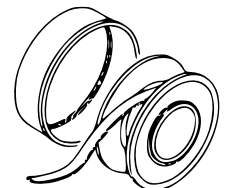
1/2" Wrench



+ Phillips Screw Driver



- Flat Head Screw Driver

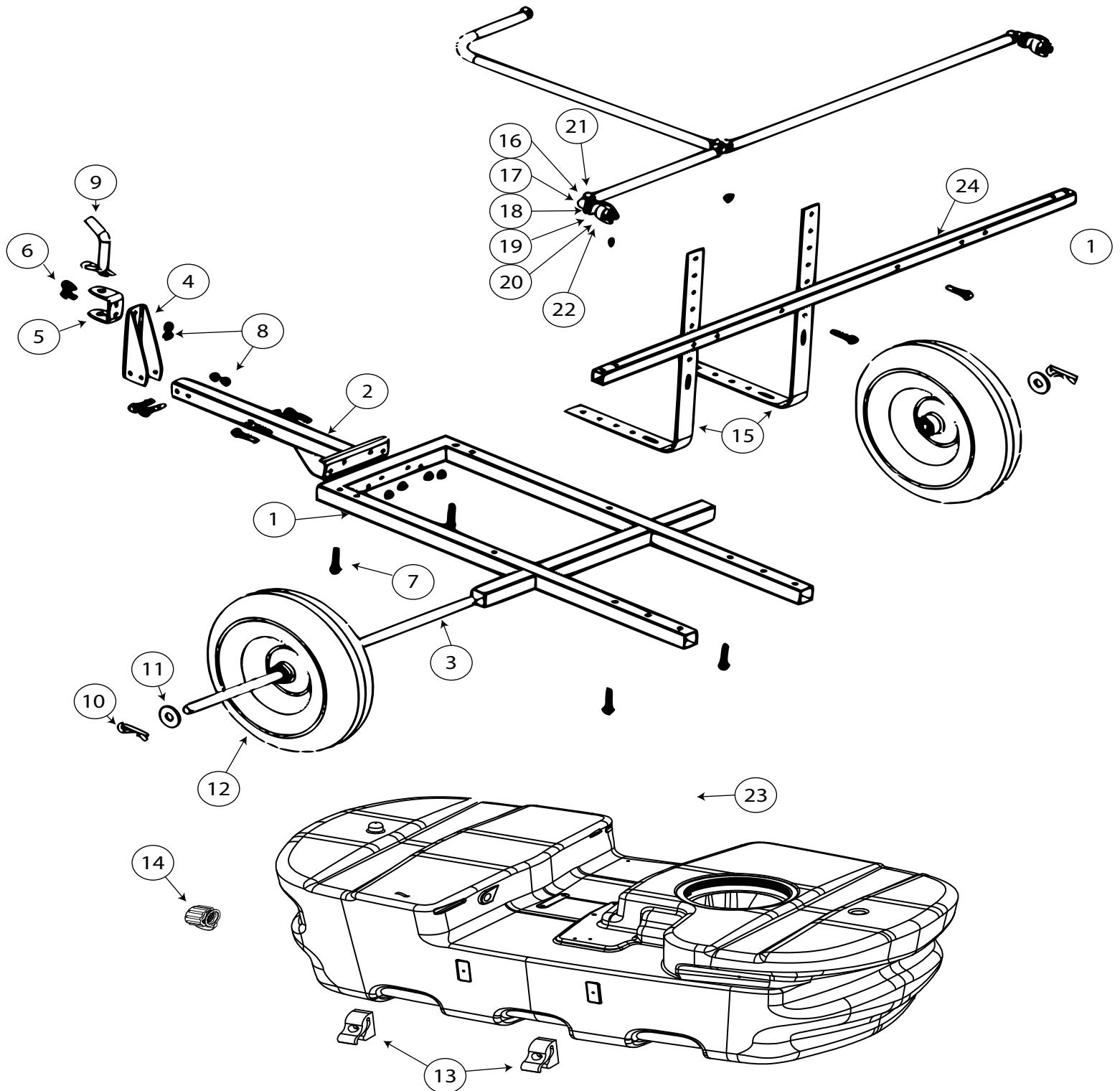


Teflon Tape or other adequate thread sealant

Trailer Assembly Instructions

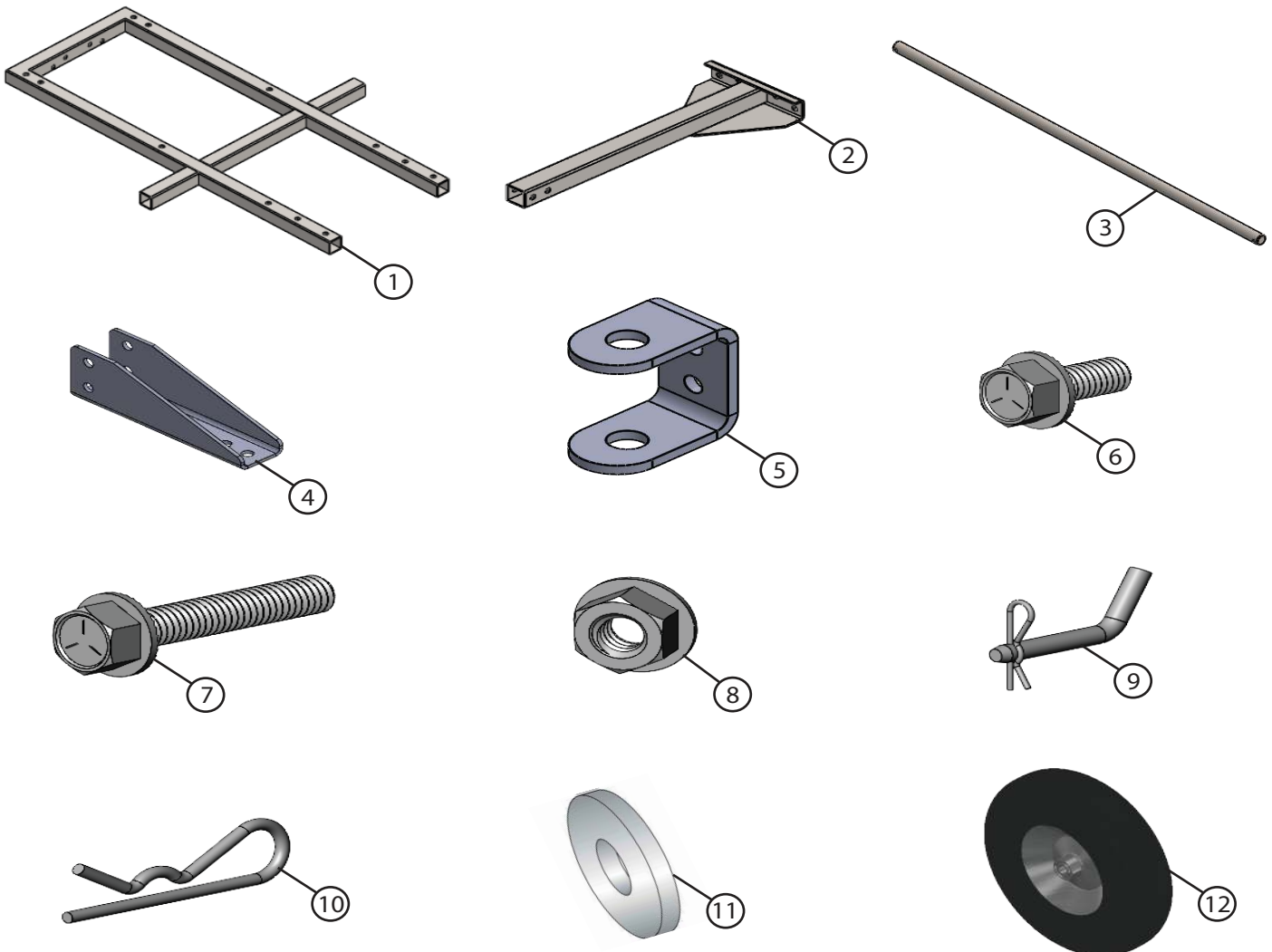
Trailer Assembly Instructions for 25 Gallon Trailer Sprayer Models. Model Number's: 500000, 500004, 500013, 500016

Please note: Tank may appear different in assembly instructions depending on model purchased.



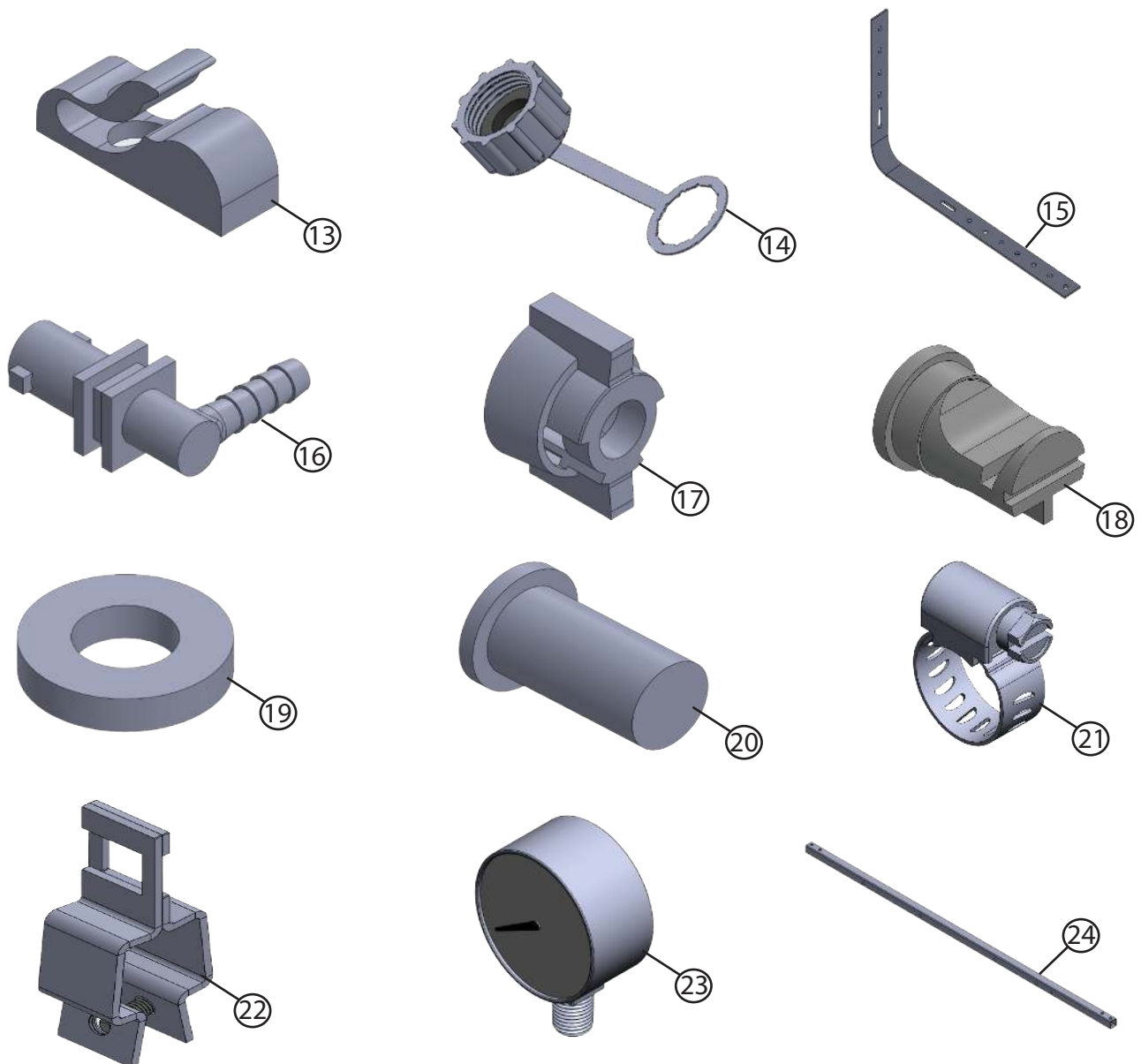
Before beginning assembly of trailer ensure all parts are accounted for. If any parts are missing please call 1-866-335-2826.

Item Number	Description	Quantity
1	Welded Trailer Frame - 25 Gallon	1
2	Trailer Beam Welded	1
3	Trailer Axel	1
4	Trailer Hitch Bracket	1
5	Trailer Clevis	1
6	3/4" Threaded Bolt	2
7	1-3/4" Threaded Bolt	10
8	Lock Nut	8
9	Steel Clevis Pin with Hair Pin	1
10	Hair Pin (Tires)	2
11	5/8" Washer	2
12	Pneumatic Trailer Tires	2



*Items not drawn to scale

Item Number	Description	Quantity
13	Wand Clips	2
14	Drain Plug	1
15	Boom Mounting Bracket	2
16	Nozzle Base	2
17	Nozzle Twist Lock Cap - Blue	2
18	Flood Nozzle - Grey	2
19	Nozzle Gasket	2
20	Nozzle Strainer - 50 Mesh	2
21	Hose Clamp	3
22	Nozzle Mount Assembly with Screw	2
23	Pressure Gauge	1
24	45" Horizontal Spray Boom	1

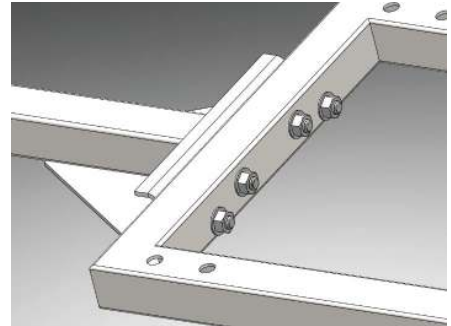
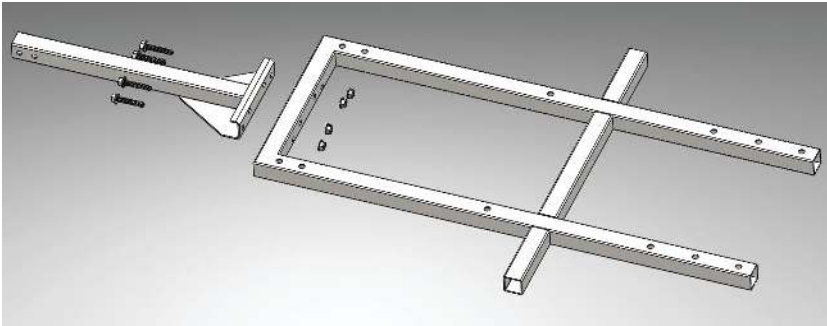


*Items not drawn to scale

Trailer Assembly Instructions

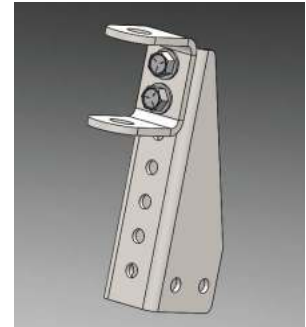
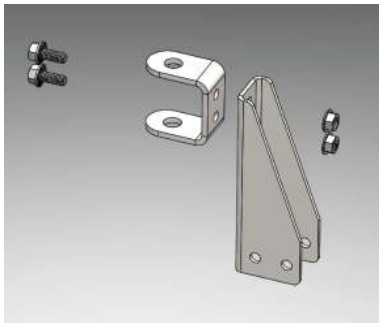
Step 1. Assemble the Trailer Body.

Connect the (#1) Welded Trailer Frame to the (#2) Trailer Beam using four (#7) 1-3/4" Threaded Bolts and four (#8) Lock Nuts.



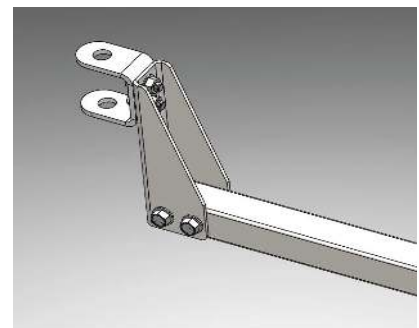
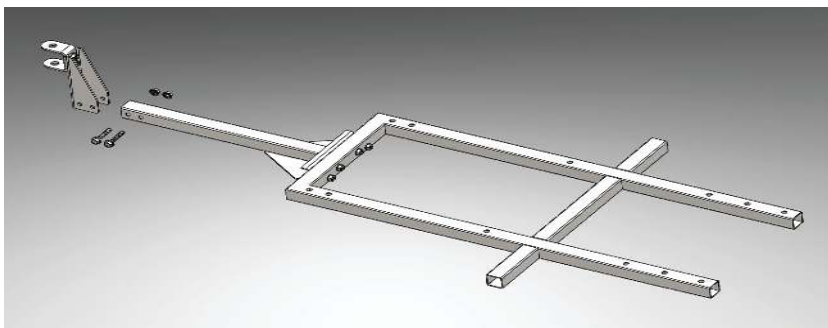
Step 2. Assemble the Trailer Hitch Bracket

Connect the (#5) Trailer Clevis to the (#4) Trailer Hitch Bracket four (#6) 3/4" Threaded Bolts and four (#8) Lock Nuts. Note: End-users will have the option to adjust the height of the clevis to fit their vehicle hitch.



Step 3. Connect the Trailer Body to the Hitch

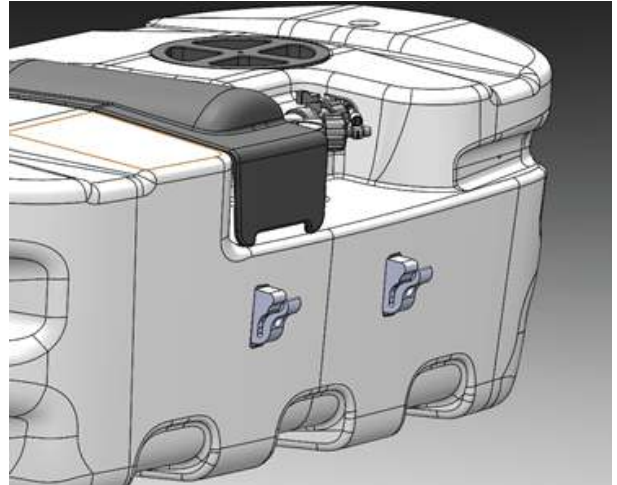
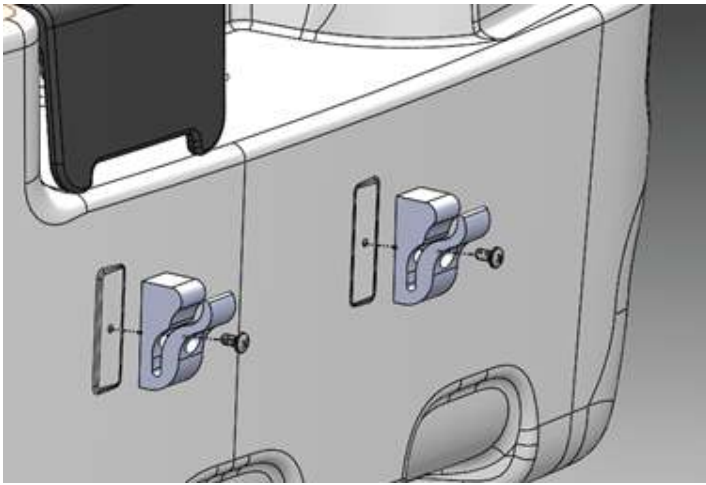
Connect the assembled Trailer Body to Hitch Bracket using two (#7) 1-3/4" Threaded Bolts and two (#8) Lock Nuts.



Trailer Assembly Instructions

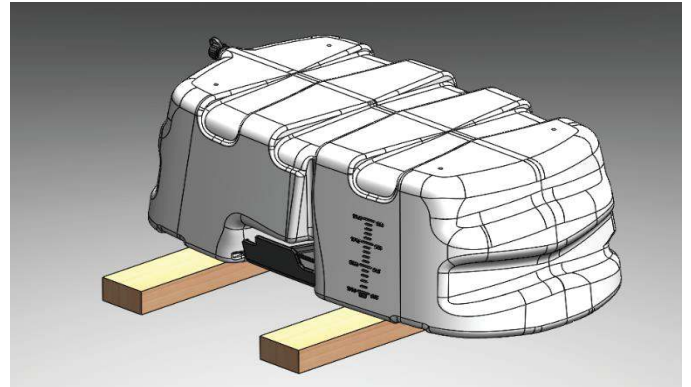
Step 4. Install the Wand Clips

Using a Phillips Head screw driver insert the (#13) Wand Clips into the tank.



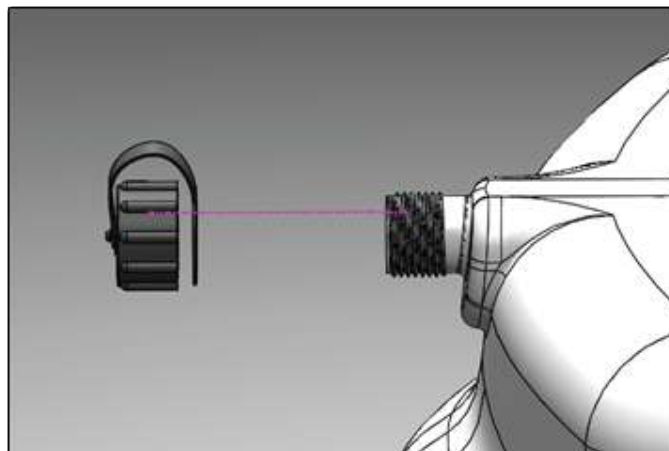
Step 5. Flip the Tank Upside Down

Flip the trailer upside down to prepare for the trailer body installation. Pro-Tip: Use two wooden planks to rest the tank on to avoid damaging or scratching any tank components.



Step 6. Install the Drain Cap

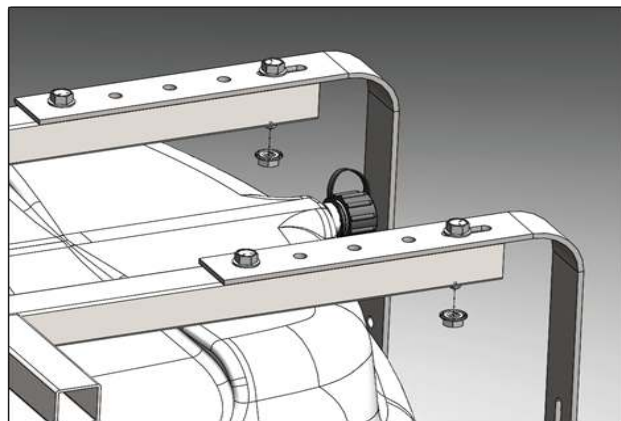
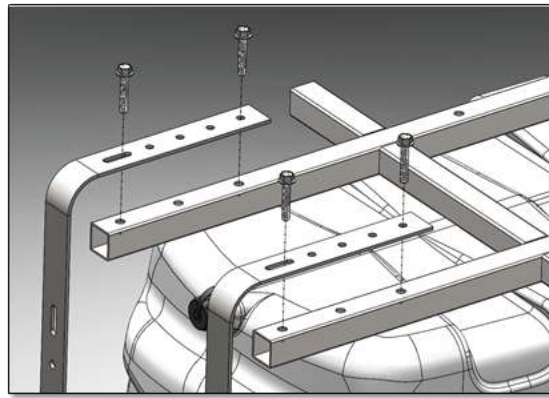
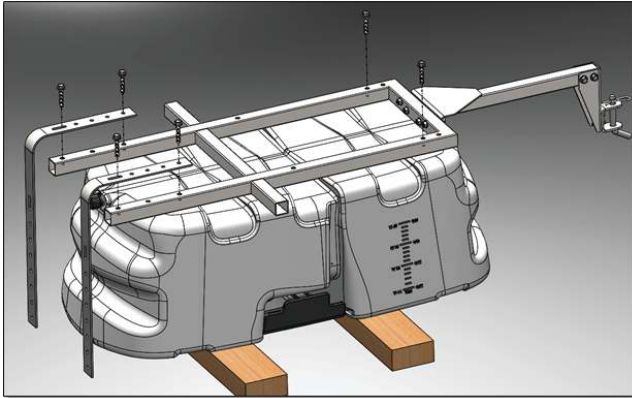
Install the drain plug by threading it on the spout.



Trailer Assembly Instructions

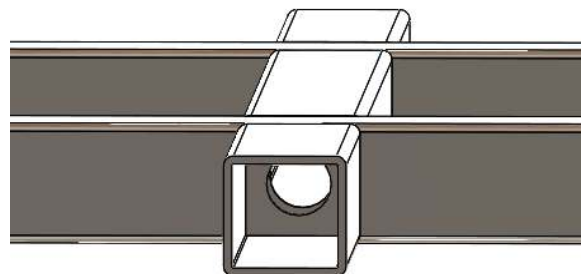
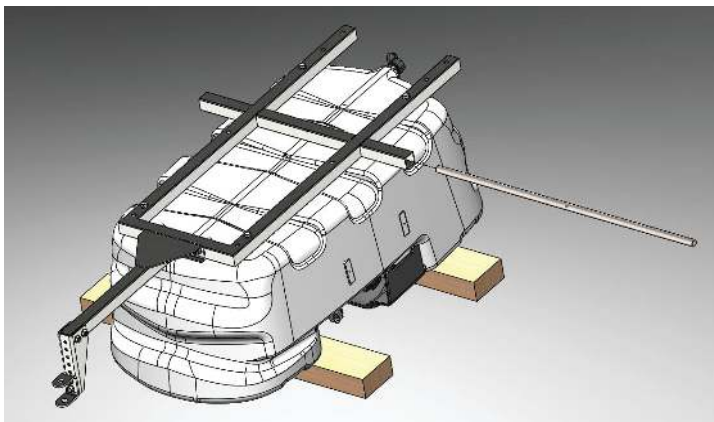
Step 7. Attach Trailer to Tank

Place the assembled trailer frame (#1) and Boom Bracket (#13) to the bottom of tank with the hitch facing the opposite direction of the drain tank. Attach the assembled trailer to the tank using four (#7) 1-3/4" threaded bolts.



Step 8. Insert Axle Shaft

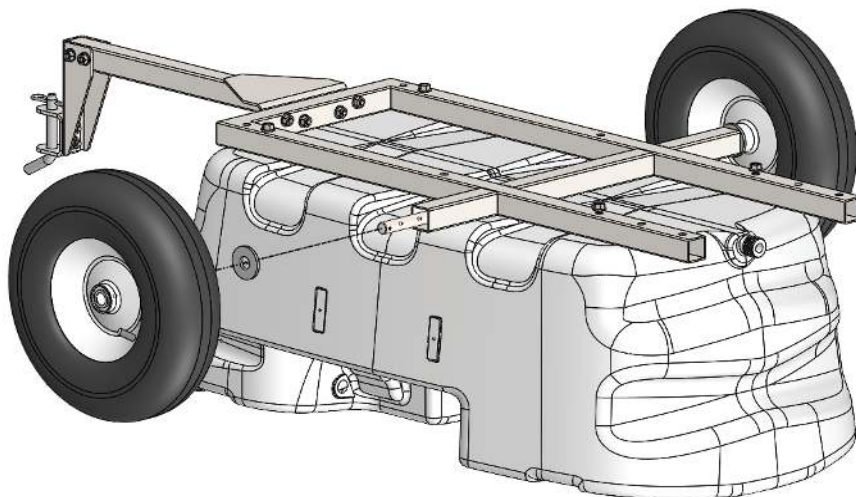
Insert the (#3) Trailer Axle Shaft through the welded trailer frame leaving an equal amount of rod overhanging both sides.



Trailer Assembly Instructions

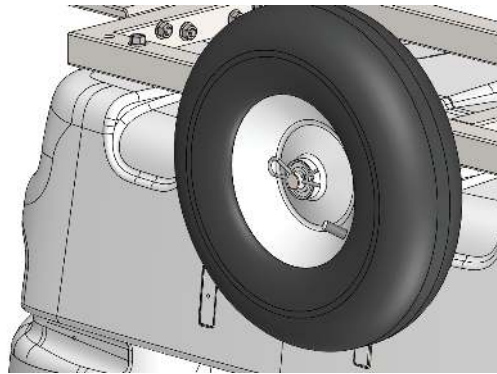
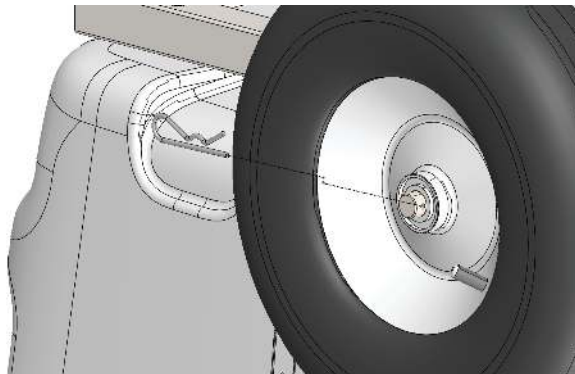
Step 9. Install Tires on Axle

Insert (#11) 5/8" Washer on axle and place on (#12) Tires. Repeat for 2nd Tire.



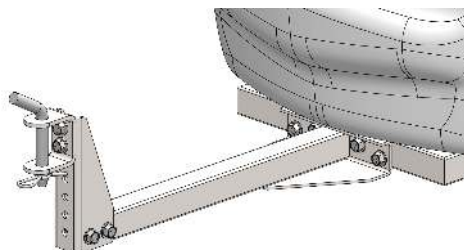
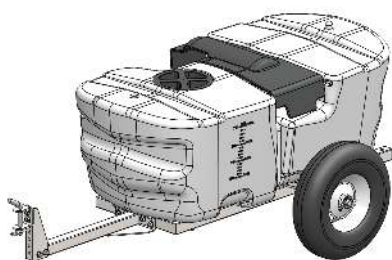
Step 10. Install Hair Pins on Axle

Insert (#10) Hair Pins in axle holes to lock tires in place.



Step 11. Flip Trailer and Insert Clevis Pin.

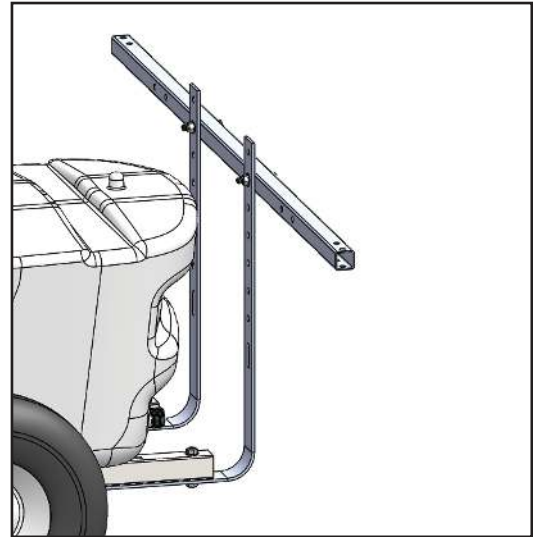
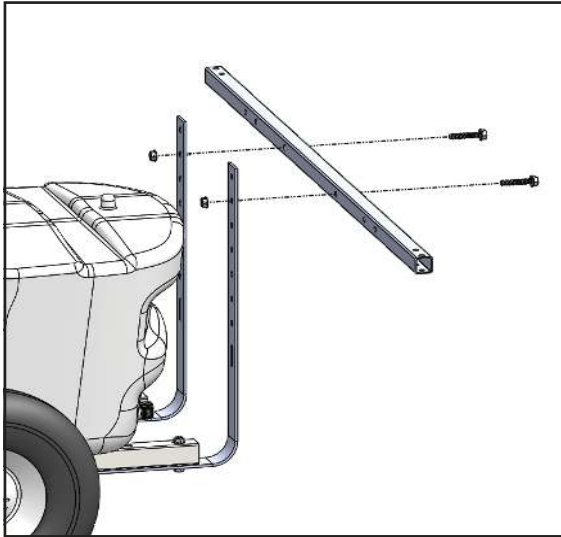
With the help of a second person flip the assembled tank and trailer onto wheels and insert (#9) Steel Clevis Pin with Hair Pin through the trailer clevis.



Trailer Assembly Instructions

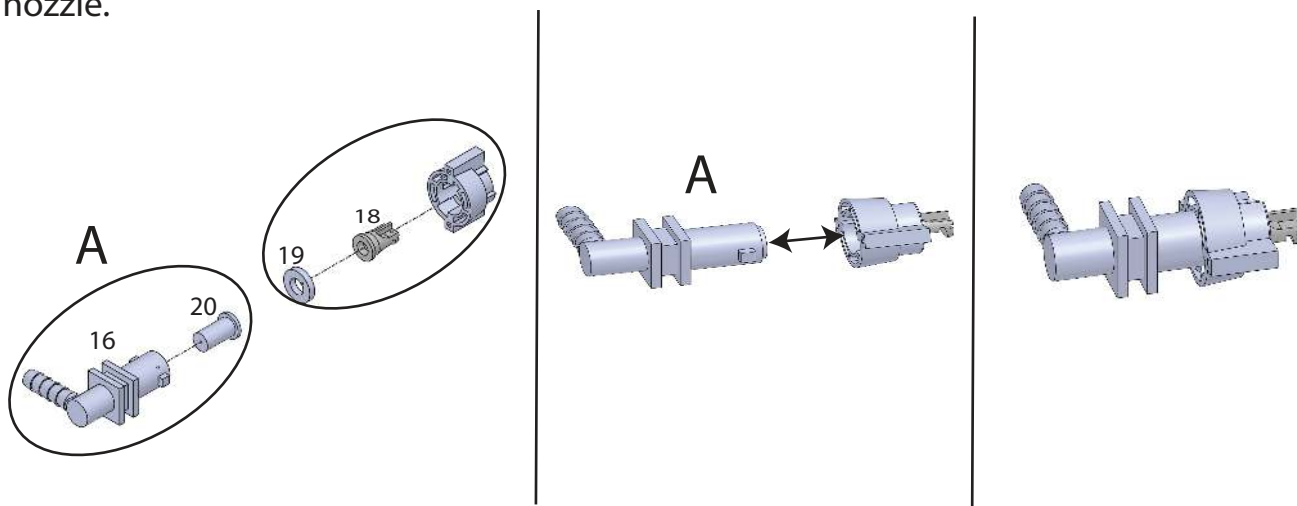
Step 12. Install Horizontal Spray Boom

Secure the (#24) 45" Horizontal Spray Boom with two (#7) 1-3/4" Threaded Bolts and two #8 Lock Nuts. Please note this Horizontal Spray Boom can be adjusted to different heights depending on users preference. Recommended height is 18" off the ground.

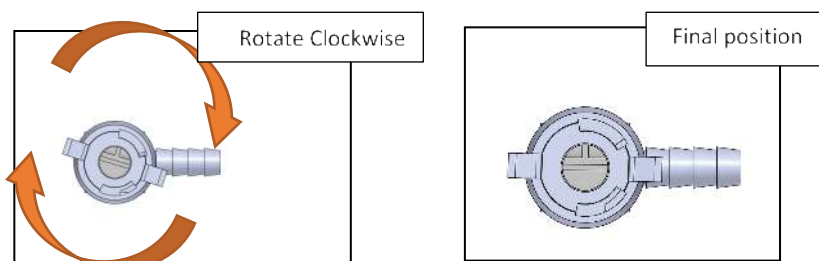


Step 13. Assemble the Spray Nozzles

Use part numbers 16, 17, 18, 19 and 20 to assemble the sprayer nozzles. Best practice, assemble Parts A and B separately and combine together to create the complete sprayer nozzle.



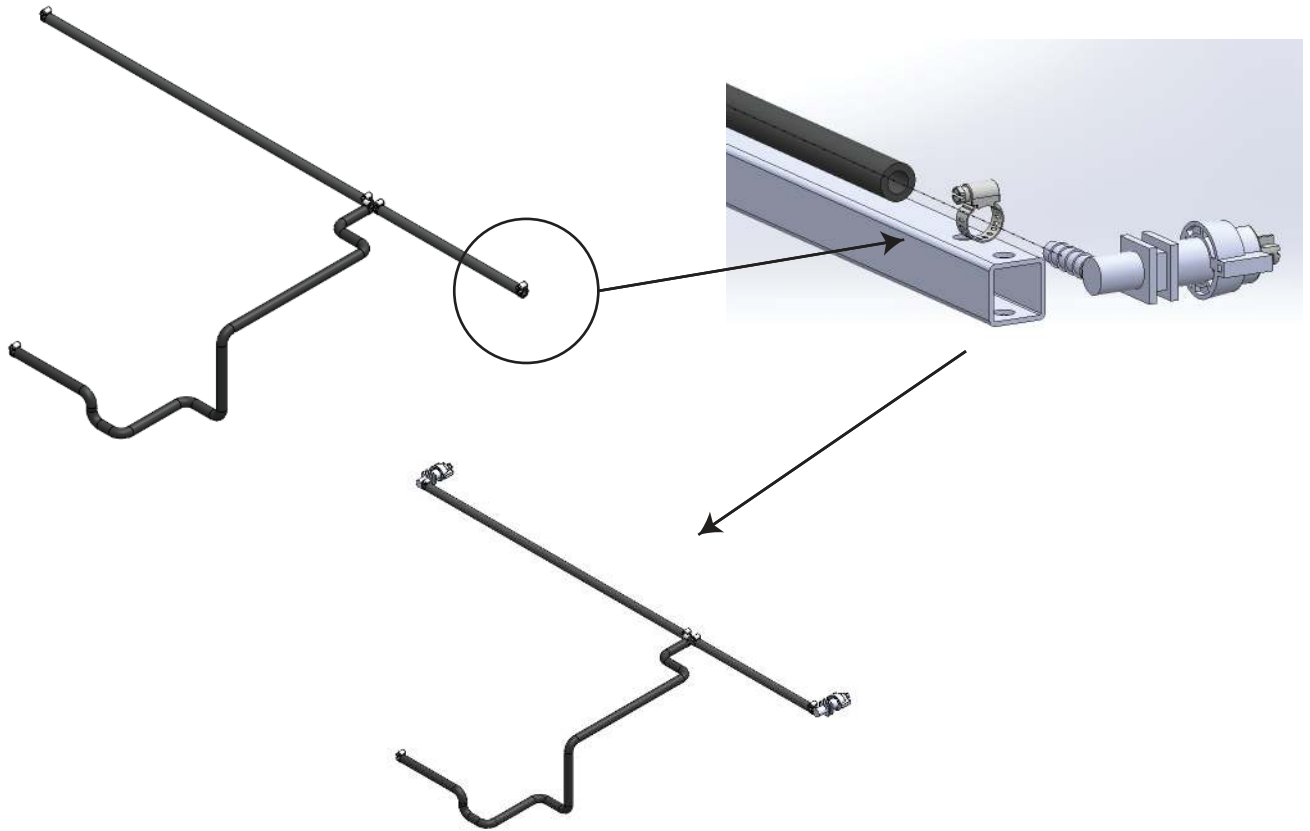
To assemble parts A and B, line up the tabs with the grooves and twist clockwise until in final position.



Trailer Assembly Instructions

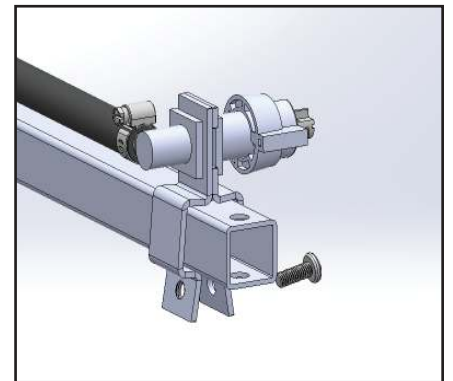
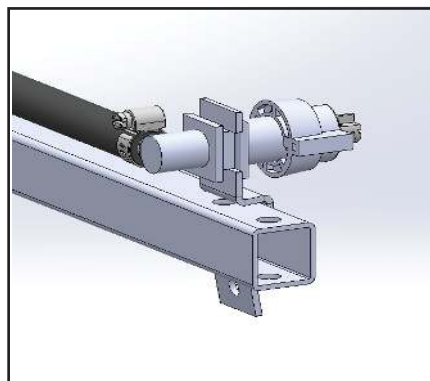
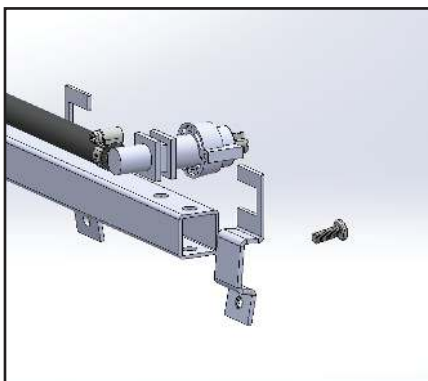
Step 14. Install Nozzles on Boom Hose

Install the two nozzles made in previous step to hose using (#18) hose clamps



Step 15. Attach Nozzles using the Nozzle Mount Assembly with Screw.

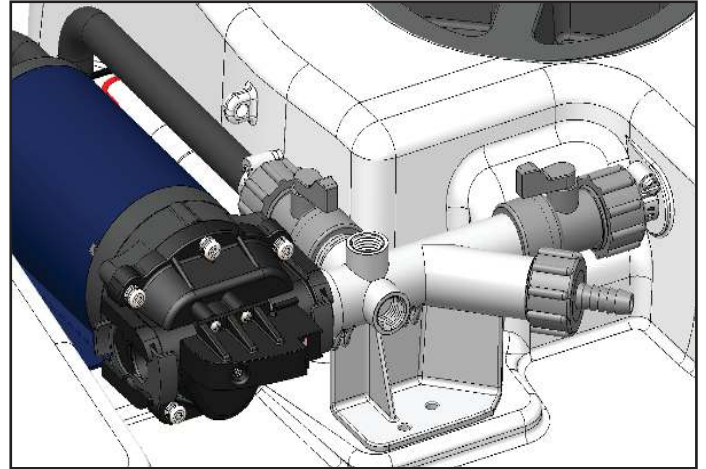
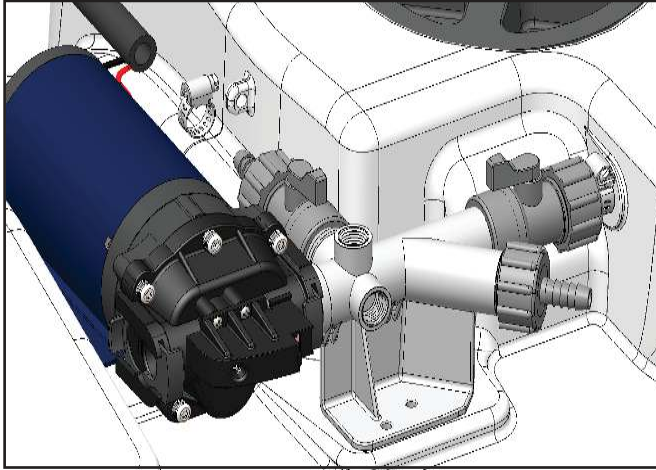
Remove the screw in the (#22) Nozzle Mount Assembly. Clip the two pieces over the assembled nozzle in between the two square tabs. Slide to desired position on the Horizontal Spray Boom and tighten with screw.



Trailer Assembly Instructions

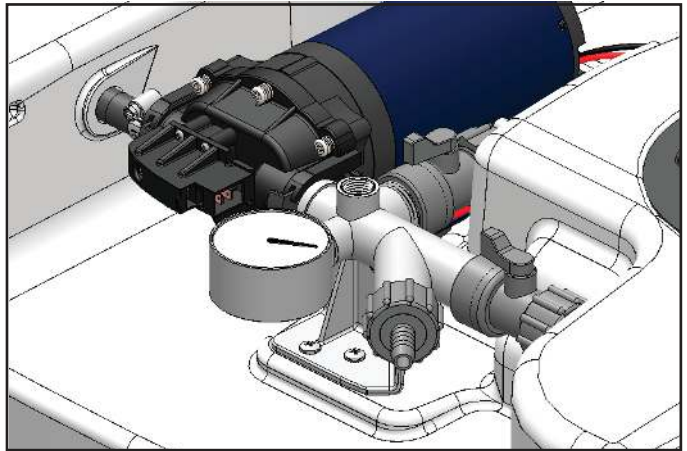
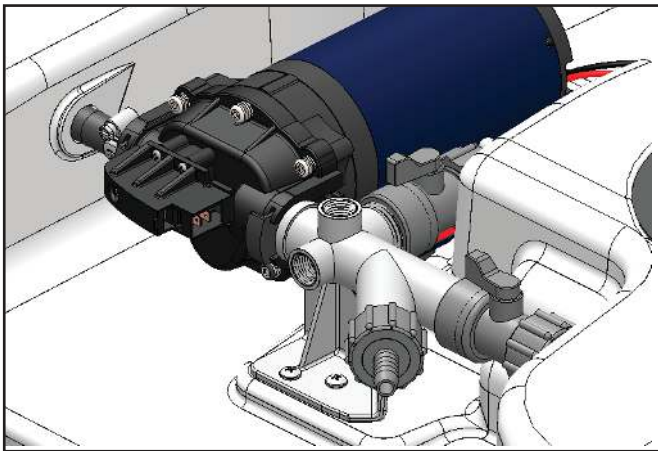
Step 16. Attach Hose to Manifold.

Attach the hose from Horizontal Spray Boom to the sprayer manifold. Secure the hose with a (#21) hose clamp.



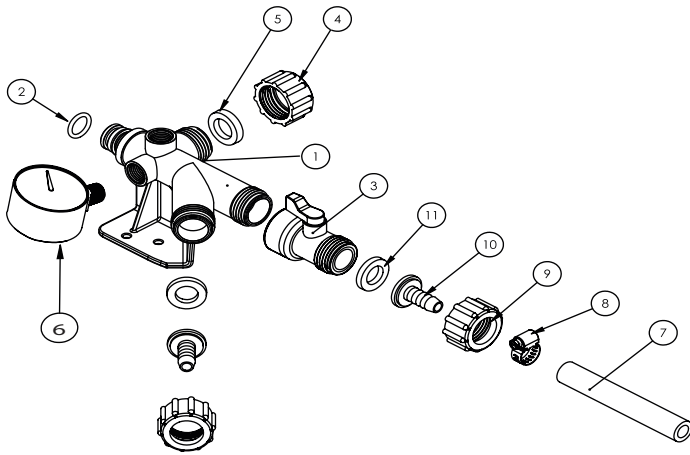
Step 17. Attach Pressure Gauge to Manifold.

Using Teflon Tape or a thread sealant, insert the (#23) Pressure Gauge into the manifold. Please note - over tightening can cause damage to the manifold.



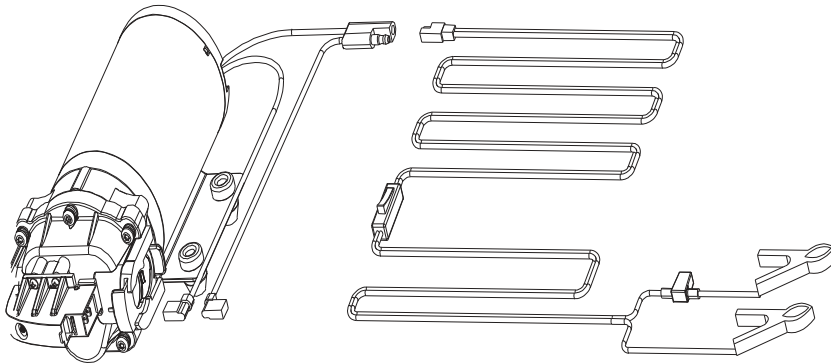
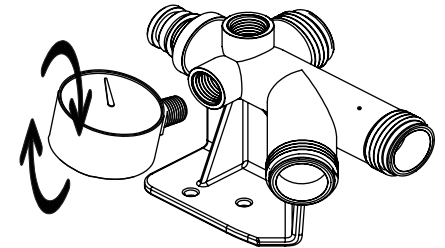
Pump and Manifold Assembly

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	100000-A	SPRAYER MANIFOLD, TOP PORT DRILLED	1
2	V75-113	O-RING #113, DURA 75A, VITON	1
3	100010	BALL VALVE 3/4 FGHT X 3/4 MGHT PLASTIC	1
4	100053	DRAIN CAP 3/4" FGHT	1
5	100055	SEAL, DRAIN CAP 3/4" FGHT	1
6	100012	2" PRESSURE GAUGE 100 PSI 1/4 NPT	1
7	100056-A	3/8" EPDM HOSE - 4IN	1
8	100043	HOSE CLAMP SAE #8 1/2 - 15/16 ID	1
9	100067	3/4" MGHT HOSE BARB FASTENER	2
10	100066	3/8" HOSE BARB W/ FLANGE BASE	2
11	100068	3/4" HOSE FITTING GASKET	2



Manifold Assembly Instructions

Your new sprayer manifold will be fully assembled EXCEPT for the pressure gauge. To install the gauge use the thread sealant provided and wrap it around the gauge threading. Next, screw gauge into manifold top port as shown in diagram. Please note, over-tightening can cause damage to the manifold.



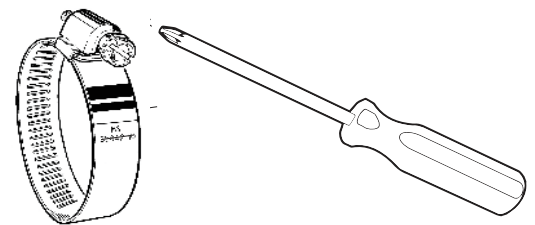
Pump, Wiring Harness and Battery Assembly

Connect your pump to the wiring harness using the two pinned electrical connectors.

Next, attach the red battery clamp to the positive (+) battery terminal and then the black battery clamp to the negative (-) battery terminal.

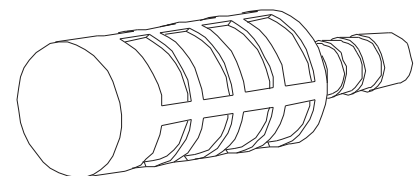
Hose Clamps

Before beginning operation, use a screwdriver to ensure all hose clamps have a water tight seal.



Intake Filter

Please ensure intake filter is functional and cleaned often. Running without a filter can cause debris or sediment to get into the system and cause obstruction. A clogged filter will impact pump priming and system performance. To clean filter, back flush with water or compressed air.



Operation of Boom

PowerSpray recommends that after set-up of your sprayer a test is performed to ensure it is in proper working order. This will help identify any leaks in the system and save any unwanted waste of expensive chemicals.

When you are ready to spray, fill tank halfway full with water. Turn the boom valve on the manifold to the "on" position. Your boom should begin spraying from all connected nozzle tips. You can adjust the pressure by turning the "On/Off" lever on the bypass valve. Do this until you have your desired spray pattern/pressure coming from your boom. This process of opening your "bypass" diverts any unneeded extra flow from your pump back to your tank saving your chemical. If your Boom is "cycling" or "pulsating" more adjustments to the bypass is needed until you have a constant and steady flow.

Once you are at your desired pressure and there are no system leaks, add your chemical and begin spraying.

To use or switch to the spot sprayer, first turn off all the valves on your manifold. At this time the pump should be off and no fluid coming out of any of your nozzles. Turn the valve on your manifold completely open. Next, take the spot spray wand and begin spraying. If you see cycling or pulsating from your wand tip, you will need to adjust the bypass. While holding the trigger of your wand, slowly open your bypass valve until a steady stream and desired pressure is obtained.

A helpful tip to ensure an even spray is to test over a solid concrete surface, (such as a driveway) and examine the spray pattern on the concrete and adjust if there is visible space between spray pattern.

Calibration

When applying chemical please refer to technical data sheets provided by chemical manufacturer. Manufacturer will have data per acre, 1000 sq. ft. or 100 sq. ft. Determine the sq. footage of area to be sprayed, speed of lawn tractor and mix the appropriate amount of water/chemical mixture.

Tip No.	Spray Height	Pressure (PSI)	Capacity GPM	Gallons Per Acre - Based on Water						
				1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	7.5 MPH	10 MPH
3	18"	10	0.30	44.0	22.0	14.9	11.1	8.9	5.9	4.5
		20	0.42	63.0	31.5	20.9	15.7	12.6	8.4	6.3
		30	0.52	76.0	38.0	26.0	19.3	15.4	10.3	7.7
		40	0.60	90.0	45.0	30.0	22.0	17.8	11.8	8.9
Tip No.	Spray Height	Pressure (PSI)	Capacity GPM	Gallons Per 1000 Sq. Ft. - Based on Water						
				1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	7.5 MPH	10 MPH
3	18"	10	0.30	1.01	0.50	0.34	0.25	0.21	0.14	0.10
		20	0.42	1.40	0.72	0.48	0.36	0.29	0.19	0.14
		30	0.52	1.74	0.87	0.60	0.44	0.35	0.24	0.18
		40	0.60	2.06	1.00	0.69	0.50	0.41	0.27	0.20
Tip No.	Spray Height	Pressure (PSI)	Capacity GPM	Gallons per 100 Sq. Ft. - Based on Water						
				1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	7.5 MPH	10 MPH
3	18"	10	0.30	0.100	0.050	0.034	0.025	0.020	0.013	0.010
		20	0.42	0.140	0.072	0.048	0.036	0.029	0.019	0.014
		30	0.52	0.174	0.087	0.059	0.044	0.035	0.024	0.017
		40	0.60	0.216	0.100	0.068	0.050	0.040	0.027	0.021

Speed in MPH (Miles Per Hour)	Time Required in Seconds to Travel Distance		
	100 Ft.	200 Ft.	300 Ft.
1	68	136	205
2	34	68	102
3	23	45	68
4	17	34	51
5	14	27	41
6	11	23	34
7	9.7	19	29
8	8.5	17	26
9	7.6	15	23
10	6.8	14	20

Maintenance

Power Spray Sprayers has designed and built this sprayer to provide many years of dependable service when properly cared for. Please read and follow the directions.

After Spraying: Drain all the remaining chemical mixture from tank. Fill tank part way full with clean, clear water and allow the water to flow through all hoses, nozzles, booms and attachments for approximately 60 seconds. Be sure to use the manifold to control the direction of the flow. Refill the tank and use a chemical neutralizer and repeat. Refer to the chemical manufacturer's safe disposal instructions of excess chemicals.

Warning: Some chemicals will damage the pump valves and diaphragm if allowed to soak untreated for extended periods. Always flush pump after use.

Pump Winterizing and Storage

Before winterizing or storing pumps not in use for extended periods, Power Spray Sprayers recommends;

1. Run fresh water through pumps for 90 seconds to flush any residual chemicals from pump head.
2. Pump RV antifreeze through pump for 30 seconds.
3. Always store pumps indoors in a clean, dry, and vibration-free environment. Preferably in a cabinet or closed storage area that is free of insects and airborne debris.
4. Store pump in climate controlled environment above freezing temperature.
5. If in storage for longer than 3 months, turn pump on intermittently for 30 seconds. Periodically turning on pump prevents the grease in bearings from settling on one side and wear.

Flex-Series Diaphragm Pump - 7822FS-201

Specifications

Motor:

Type: 12 VDC permanent Magnet totally enclosed, non-ventilated.

Leads: 12 AWG, 6" long

Duty Cycle: Continuous use.

Temperature Limits: Motor is not equipped with thermal protection. For user safety, optimal performance, and maximum motor life, the motor temperature should not exceed 180°F (66°C)

Pump

Type: 3 Chamber positive displacement diaphragm pump, self priming, capable of being run dry, with Santoprene Diaphragm.

Liquid Temperature: 140°F (60°C) Max.

Priming Capabilities: 8 feet (2.5m)

Max Pressure: 60 PSI

Inlet/Outlet Ports: 5/8" (with fittings) or 3/4" Quick Attach

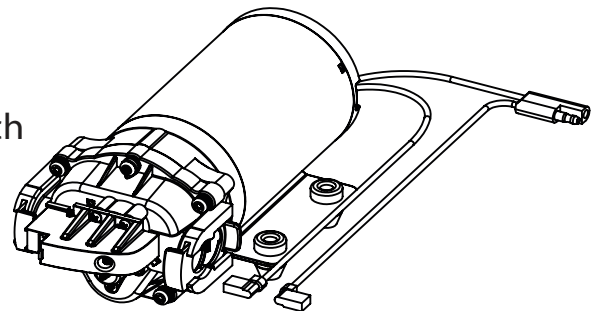
Materials of Construction

Housing: Polypropylene

Diaphragm: Santoprene

Valves: Viton

Fasteners: Stainless Steel



SmartFLO Diaphragm Pump - 3222-421F

Specifications

Motor:

Type: 12 VDC permanent Magnet totally enclosed, non-ventilated.

Leads: 12 AWG, 6" long

Duty Cycle: Continuous use.

Temperature Limits: Motor is not equipped with thermal protection. For user safety, optimal performance, and maximum motor life, the motor temperature should not exceed 180°F (66°C)

Pump

Type: 3 Chamber positive displacement diaphragm pump, self priming, capable of being run dry, demand/bypass.

Liquid Temperature: 140°F (60°C) Max.

Priming Capabilities: 8 feet (2.5m)

Max Pressure: 100 PSI

Inlet/Outlet Ports: 5/8" Quick Attach

Materials of Construction

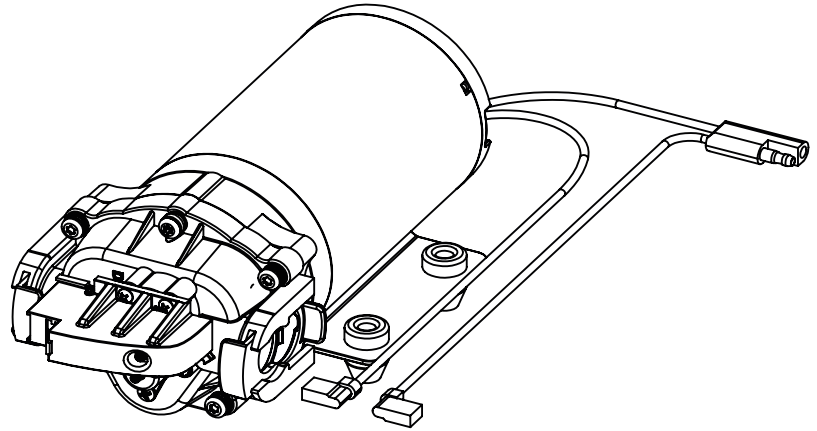
Housing: Polypropylene

Diaphragm: Santoprene

Valves: Viton

Fasteners: Stainless Steel

Weight: 3 Lbs



SMARTFLO Technology:

At Power Spray Sprayers, we're committed to succeeding in today's increasingly challenging marketplace by responding to each varied and dynamic individual customer requirement with an exclusive and custom tailored solution.

SmartFlo technology utilizes both a demand switch and an internal bypass to automatically adapt to your sprayer giving you optimal performance and eliminating pump cycling. You get an open flow of 2.0 GPM with a shut off pressure of 85 PSI. The high torque 12VDC motor provides powerful flow at spraying pressures ensuring smooth and even coverage. The SmartFLO series is the perfect pump or plug and play replacement for anyone looking to upgrade their current sprayer pump.

Electrical:

Ensure Power supply used is adequate for the application.

Pump ratings are based on alternator charged battery which supplies 13.7 volts.

Voltage drop will result in reduced motor speed thus reducing performance. Higher operating flow and pressures increase amp draw.

Extreme Duty Diaphragm Pump - 3220ED-401E

Specifications

Motor:

Type: 12 VDC permanent Magnet totally enclosed, non-ventilated.

Leads: 12 AWG, 6" long

Duty Cycle: Continuous use.

Temperature Limits: Motor is not equipped with thermal protection. For user safety, optimal performance, and maximum motor life, the motor temperature should not exceed 180°F (66°C)

Pump

Type: 3 Chamber positive displacement diaphragm pump, self priming, capable of being run dry, with Extreme Duty Geolast Diaphragm.

Liquid Temperature: 140°F (60°C) Max.

Priming Capabilities: 8 feet (2.5m)

Max Pressure: 60 PSI

Inlet/Outlet Ports: 3/4" Quick Attach

Materials of Construction

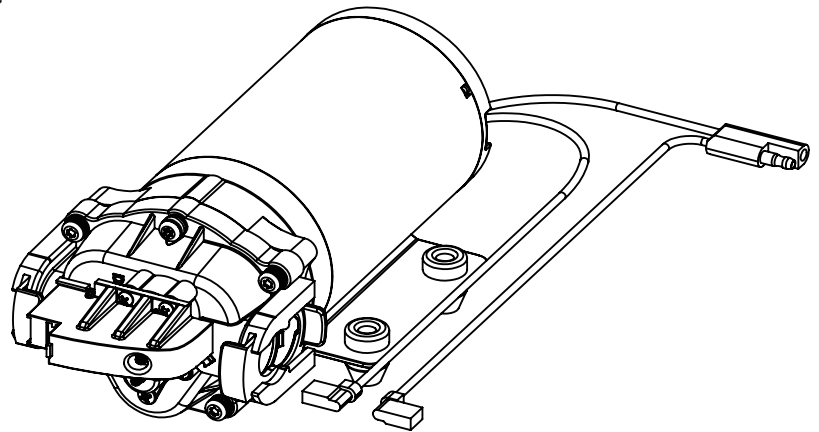
Housing: Polypropylene

Diaphragm: Geolast

Valves: Viton

Fasteners: Stainless Steel

Weight: 3 Lbs



Extreme Duty Pumps:

Extreme Duty pumps are made with stronger and heavier duty Geolast diaphragms. Pumps with Geolast diaphragm exhibit enhanced oil-resistance and low oil swell, making it ideal for oil based applications. Geolast provides moderate flex life and good abrasion resistance over a wide range of temperatures.

Never pump gasoline, flammable liquids or combustible liquids. Pumps with santoprene diaphragms are designed for use with water-based products only. Pumps with Extreme Diaphragm (ED) designation are made with Geolast Diaphragms and are compatible with non-flammable and non-combustible oil-based liquids.

Electrical:

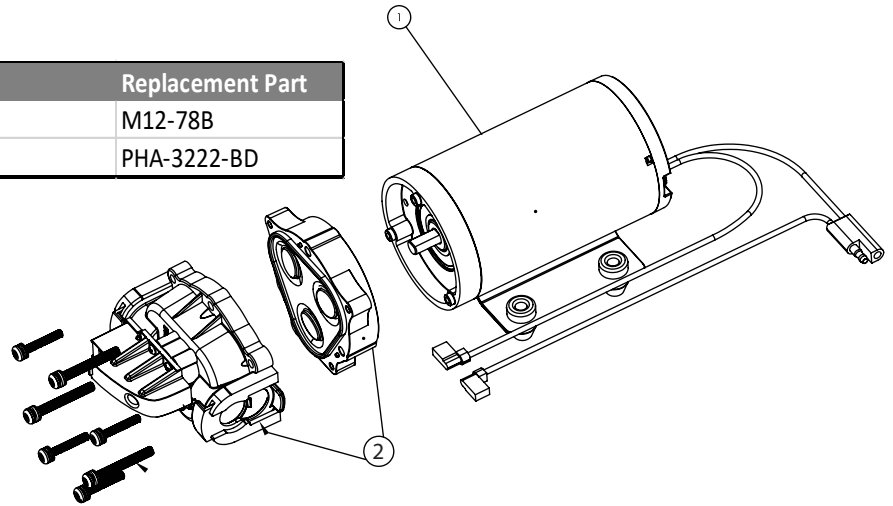
Ensure Power supply used is adequate for the application.

Pump ratings are based on alternator charged battery which supplies 13.7 volts.

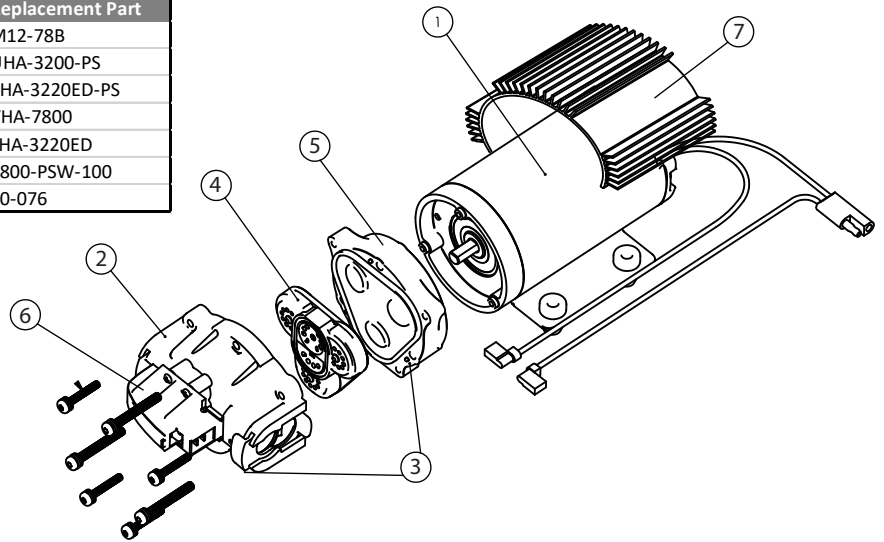
Voltage drop will result in reduced motor speed thus reducing performance. Higher operating flow and pressures increase amp draw.

Diaphragm Pump Replacement Parts

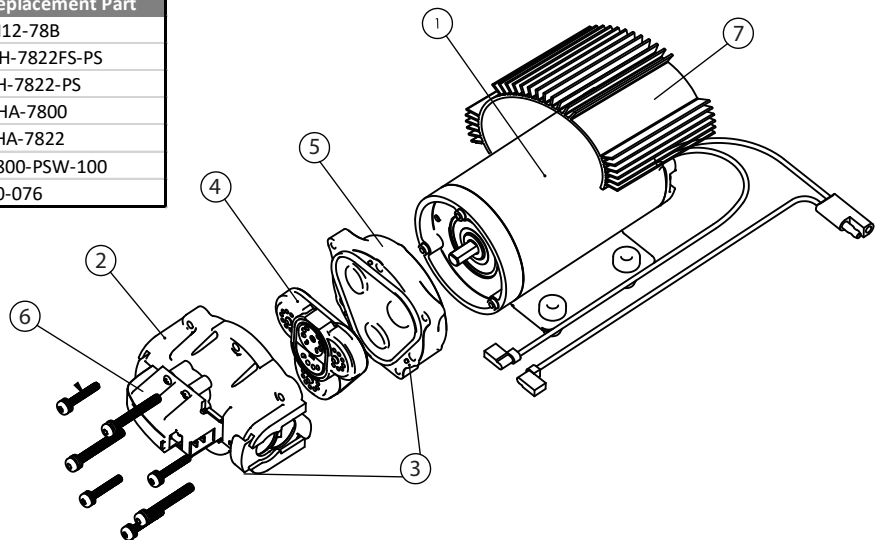
SmartFLO Diaphragm Pump - 3222-421F		Replacement Part
1	Motor, 7800 Series, 12 VDC, 2 Pin Connector	M12-78B
2	Pump Head Assembly - SmartFLO - 3/4" QA	PHA-3222-BD



Extreme Duty Diaphragm Pump - 3220ED-401		Replacement Part
1	Motor, 7800 Series, 12 VDC, 2 Pin Connector	M12-78B
2	Upper Housing Assembly, QA, Demand, 3220ED	UHA-3200-PS
3	Pump Head Assembly, QA, Demand, ED,PS	PHA-3220ED-PS
4	Valve Housing Assembly, 7800 Series	VHA-7800
5	Lower Housing Assembly, 3220 Series, Geolast	LHA-3220ED
6	Pressure Switch Assembly, 7800/5800 Series	7800-PSW-100
7	Heatsink, 5" x 2.95 Dia, 7800,5800,5900 Series (optional)	50-076



Flex Series Diaphragm Pump - 7822FS-201		Replacement Part
1	Motor, 7800 Series, 12 VDC, 2 Pin Connector	M12-78B
2	Upper Housing Assembly, QA, Demand, Flex Series	UH-7822FS-PS
3	Pump Head Assembly, QA, Demand, 7822/7822FS Series	PH-7822-PS
4	Valve Housing Assembly, 7800 Series	VHA-7800
5	Lower Housing Assembly, 7800 Series	LHA-7822
6	Pressure Switch Assembly, 7800/5800 Series	7800-PSW-100
7	Heatsink, 5" x 2.95 Dia, 7800,5800,5900 Series (optional)	50-076



Diaphragm Pump Troubleshooting

My Pump will not start:

- Check all electrical connections, fuses, breakers and wires powering the pump. If you are unsure about how to check components contact a qualified technician.
- Check wire leads and connection located on the pressure switch.
- Test Pressure Switch: Instructions on how to test pressure switch can be found on our website and YouTube. If pressure switch failure please call 1-866-335-2826.
- Use rectifier on Motor for open or ground circuit.

Pump will not Prime (no discharge with motor running):

- Most common reason for pump not priming is an air leak in your system. From the suction side of your pump ensure that all o-rings are in place and all clamps are air tight. Ensure there are no holes in your hoses.
- Examine all filters and strainers. Replace any that are clogged with debris.
- Remove hoses and check for clogs or obstructions by running water through.
- Increase suction hose size to slightly larger than the outlet or discharge side of pump.
- Check Pump Housing for cracks.

Pump will not shut off:

- Most common reason is air trapped in the outlet or discharge side or head of pump head. Disconnect hoses, drain lines and reconnect.
- Check for correct voltage to pump.
- Check for debris or blockages in hose and inlet/outlet valves.
- Check for loose drive assembly or pump head screws.
- Adjust set screw on top of pressure switch using a 1/16" Allen Key. Rotate clockwise to increase pressure and counter clockwise to decrease pressure.

Pump leaks from pump head or switch:

- Check for loose screws or bolts around pressure switch and pump head.
- Check for punctured or torn diaphragm.

Pump is Cycling (Rapidly turning on and off.)

- Pump cycling is always caused by more flow than the application allows. To fix;
- Add a bypass valve or 'return to tank' valve into your spraying system
- Increase the flow of your system with larger nozzles.
- Decrease pressure on pressure switch. Warning: Refer to ESR-001 on delavanfluidpower.com for instructions. Improper adjustments of pressure switch are not covered under Power Spray's standard warranty for manufacturer's defect.

Warnings

Please read and follow operators manual before using and installing Power Spray products.

- Do not use pump outside the parameters listed on the label.
- Never use the pump above 100 PSI at anytime.
- NEVER pump gasoline or other flammable liquids. Pump head materials are designed for use with water based products only. NEVER use with Petroleum based products.
- Do not use in an explosive environment. Arcing from the motor brushes, switch, or excessive heat from an improperly cycled motor may cause an explosion.
- Do not assume fluid compatibility. If the fluid is improperly matched to the pump head, internal damage may occur.
- Always consider electrical shock hazard when working with and handling electrical equipment. If uncertain, consult an Electrician. Electrical wiring should only be done by a qualified electrician per Local and State Electrical Codes.
- Pump to be run between 32°F (0°C) and 115°F (46°C) environmental conditions. Maximum fluid temperature run through pump is 140°F (60°C).
- To prevent electrical shock, disconnect power before initiating any work. In the case of a pump failure, the motor housing and/or pump fluid may carry high voltages to components normally considered safe. Therefore, always consider electrical shock hazard when working with and handling electric equipment. If uncertain consult an electrician. Electrical wiring should only be done by a qualified electrician per local state electrical codes.
- Do not locate the pump motor near low temperature plastics or combustible material. The surface temperature of the motor may exceed 250°F.
- The installation of a 50 mesh strainer is recommended to prevent debris or other foreign material from entering the pump and causing pump failure.
- Power Spray Pumps are designed for intermittent duty, but may run continuously if the motor temperature does not exceed the recommended limit.
- Always inspect pump before each use as directed. Do not use pump if damaged and not in working condition.
- Always assess work area for any hazards before using pump.
- Always understand the hazards of any chemicals used in you pump. Proper personal protective equipment should be worn and Safety Data Sheet read.

If you are having any issues with your product please call 1-866-335-2826 before returning to store. A Technician would be happy to assist you.



POWER SPRAY SPRAYERS STANDARD WARRANTY

Power Spray Sprayers warrants its products for a period of two (2) years for consumer and 90 days for commercial users. The warranty period begins on the date of manufacture or the purchase date (with proof of purchase). The warranty period is not extended if Power Spray repairs or replaces the equipment.

This Power Spray Sprayers warranty will not apply to any subsequent owner or other transferee of the Equipment. Power Spray Sprayers warrants that any new Equipment will be free from defects in workmanship or materials under normal use, maintenance and service (rental use excluded). The Warranty Period is not extended if Power Spray Sprayers repairs or replaces the Equipment. Power Spray Sprayers is not affiliated with and will not honor any 3rd party warranty.

This Limited Warranty does not apply to equipment that has been altered, changed, repaired or treated since its delivery, used equipment, damaged or depreciation due to normal wear and tear. This limited warranty does not apply to defects or damage due to failure to follow Power Spray Sprayer's operator's manual, specifications or other written instructions, improper storage, operation, maintenance, application or installation of parts, defects or damage due to misuse, accident or neglect, "acts of God" or other events beyond Power Spray Sprayers reasonable control. Power Spray Sprayer's warranty does not apply when damaged by accessories, attachments, tools or parts that were not manufactured by Power Spray Sprayers. If the returned product is found not to be defective under the conditions of this warranty, a charge will be made for repair or replacement. If the returned product is found not to be non-defective under the conditions of this warranty, customer is responsible for cost of labor and goods returned. Power Spray Sprayers reserves the right to charge \$90/hour labor on non-defective good.

The sole and exclusive obligation of Power Spray Sprayers under this or any implied warranty shall be to replace or, at its option, to repair, without charge, any product which is determined by Power Spray Sprayers to be defective in workmanship or materials after the product is returned to the Power Spray Sprayers factory, shipping costs prepaid. No credit shall be given for warrantable items.

In no event shall Power Spray Sprayers be liable to any person for indirect or consequential damages or for injury or commercial loss resulting from any use or inability to use any Power Spray Sprayers product.

Power Spray Sprayers expressly negates any other warranty, express or implied, including any warranty of merchantability or fitness for a particular purpose, or arising from any course of dealing or custom or usage of trade.

No person, including any dealer or representative of Power Spray Sprayers, is authorized to make any representation or warranty on behalf of Power Spray Sprayers in addition to or inconsistent with these provisions.

Purchasers to whom these provisions apply agree to hold Power Spray Sprayers harmless from claims by their customers in excess of the obligations of Power Spray Sprayers expressly set forth herein.

Return Policy

For the safety of our employees and handlers, all pumps must be flushed with fresh water for 90 seconds prior to shipping. Power Spray Sprayers reserves the right to request (M)SDS for all chemicals used within. Power Spray Sprayers reserves the right to dispose as scrap any product returned with unknown fluids. Power Spray Sprayers reserves the right to charge returnee for any costs incurred for chemical testing and disposal of unknowns. Please Include complete description of operation problem, such as how pump was used, symptoms of malfunction, etc. to help pinpoint the reason of breakdown.

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- Find more helpful troubleshooting tips on our website at PowerSpraySprayers.com
 - If you are still having trouble with your pump, speak to a technician Toll-Free 1-866-335-2826
 - Follow us on Facebook to stay up to date on whats happening at [Facebook.com/PowerSpraySprayers](https://www.facebook.com/PowerSpraySprayers)