

OWNER'S MANUAL

Model: FSUTV-45-12V (5302903)

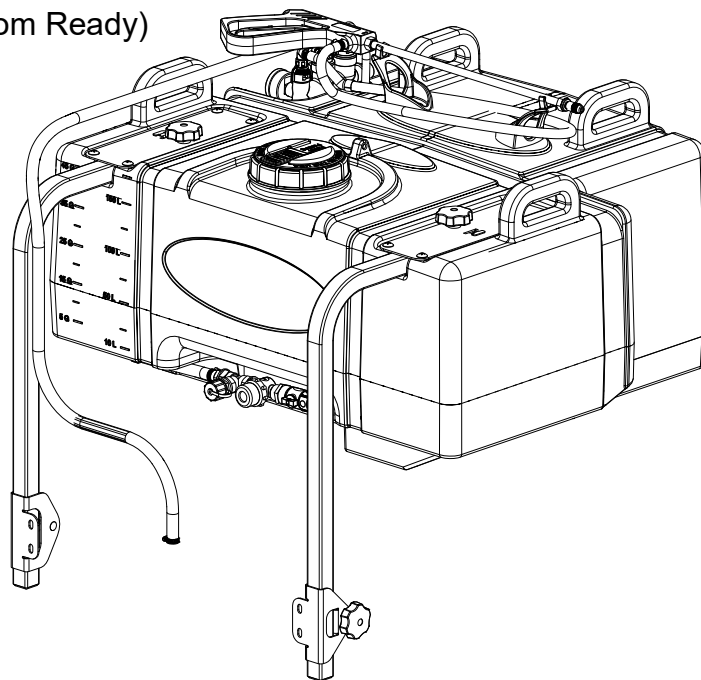
(45 Gallon Lawn & Garden UTV Sprayer, Boom Ready)

Technical Specifications

- 45 Gal. Corrosion-Resistant Polyethylene Tank
- Deluxe Pistol-Grip Handgun
- 25 Ft. Handgun Hose
- 26 Ft. max. vertical throw, 35 Ft. horizontal throw
- 12 Volt, 4.0 GPM ShurFlo Pump, Viton
- Multi-Lid to accurately measure and pour chemicals

Caution: When fully filled with water, this sprayer will weigh approx. 460 lbs.. Consult the owner's manual for your vehicle to verify that you are within it's load carrying capacity.

Secure unit in your UTV, using tie-down straps (NOT INCLUDED)



Assembly Instructions

The sprayer is partially assembled at the factory. Follow the assembly instructions on page 2 and hook up the wiring to an existing 12 volt power source to complete your sprayer.

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.

General Information

Thank you for purchasing this product. The purpose of this manual is to assist you in operating and maintaining your UTV sprayer.

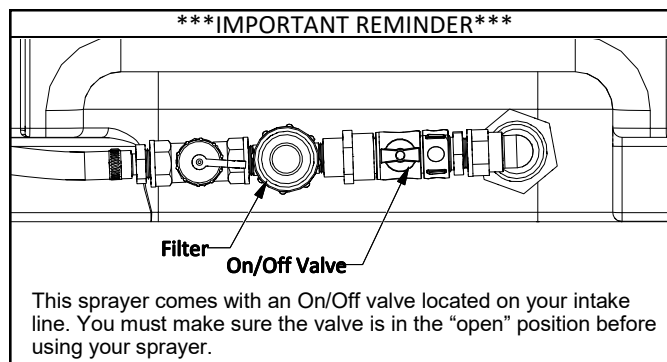


WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

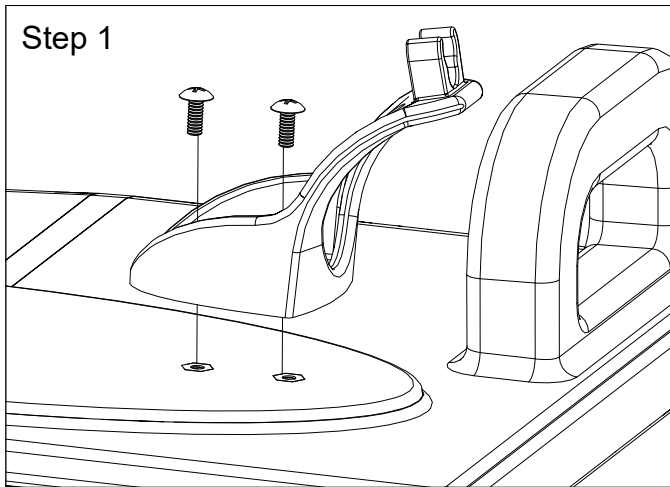


WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov

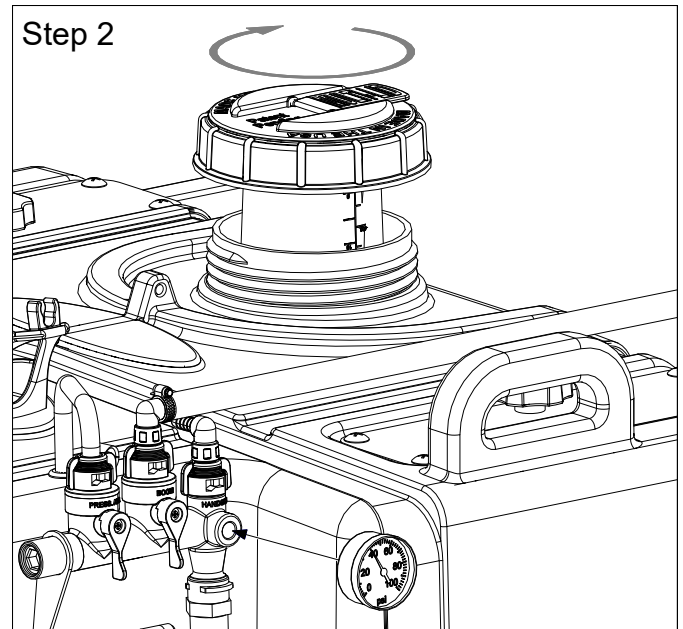
Retain a copy of your receipt for your unit, as it will be required to validate any warranty service
Products are warranted against manufacturer or workmanship defects for one year from date of purchase for home owner usage and 90 days for commercial usage.



This sprayer comes with an On/Off valve located on your intake line. You must make sure the valve is in the "open" position before using your sprayer.

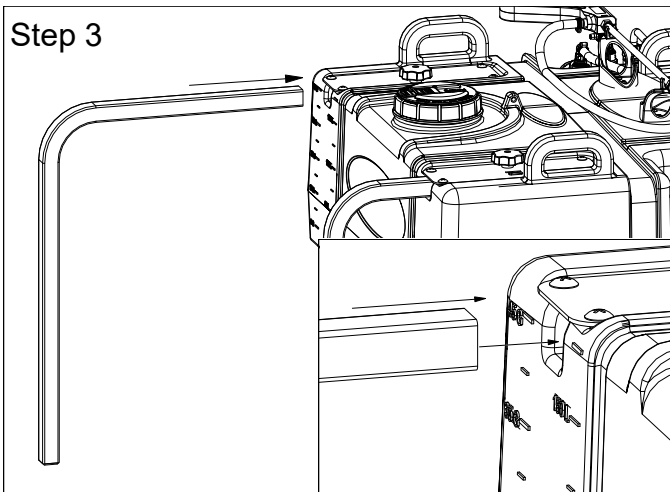


Attach the (2) Hose Wraps to the top of the tank with (4) Phillips Head Screws



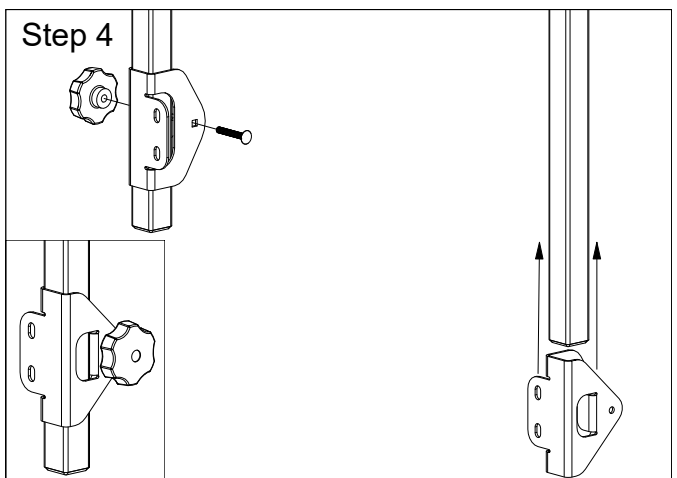
Thread Pressure Gauge into open port on manifold, as shown.

Thread Multi-Lid on to tank.



With the unit in a UTV Box, slide the boom mount tubes in to the tank mounts and tighten the lobe knob.

* Secure tank using tie-down straps (NOT INCLUDED)



Slide the boom clamps up the boom mount tubes and install the 1/4" carriage bolt and Lobe Knob, make sure the boom clamps are installed with the square carriage bolt holes or two boom mount holes to the inside and the lobe knob to the outside.

To install a boom (not included):

Using U-bolts and nuts, attach the boom to the boom clamps.

Finally attach your boom feeder hose. Slip (2) hose clamps onto the hose. Attach one end of the hose to the boom and the other end to the manifold.

Once fully assembled, to remove the sprayer from a UTV Box, disconnect the boom supply hose from the manifold, using the quick connect fitting. Then loosen the two lobe knobs on the tank mounts and slide the boom out and set aside. Then the tank can be removed and set on the ground without damaging the tank or boom. The handles can be used to lift the empty tank in and out of the box. Tie down straps can be installed through the handles to secure the tank.



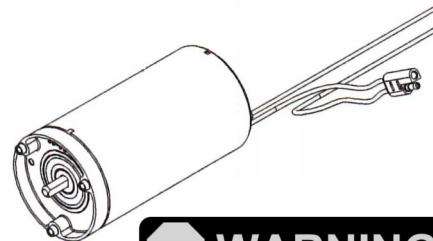
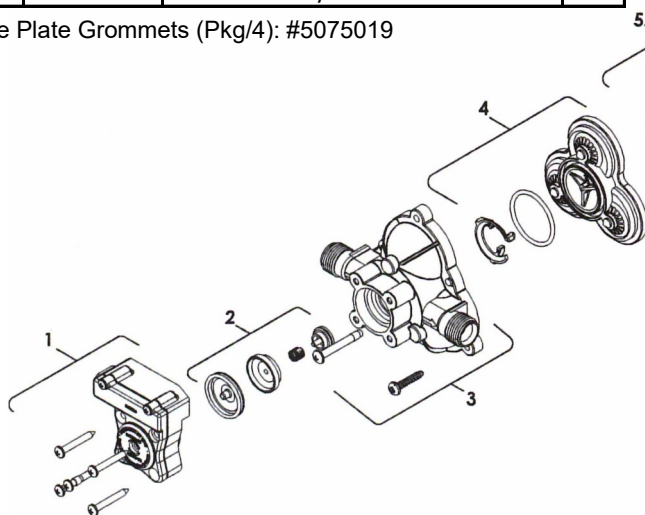
- Clean and rinse your pump after each use with Fimco Tank Neutralizer
- Winterize your pump or sprayer by rinsing, draining and running RV Antifreeze through it before storing for the winter.
- Use clean water for your spray mixture
- Store inside a building when not in use.



- Use to pump bleach.
- Use to pump petroleum products, such as diesel fuel, gasoline or kerosene
- Leave your pump sit with spray mixture in it for extended periods
- Use dirty or unfiltered water for spraying

Ref. #	Mfg. Part #	Description	Qty.
1	94-230-56	Pressure Switch Assembly	1
2	94-237-05	Check Valve Assembly	1
3	94-231-30	Upper Housing	1
4	94-232-05	Valve Assembly	1
5	94-226-17	Drive Assembly	1

Base Plate Grommets (Pkg/4): #5075019



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

Exploded View/Parts List:
SHURflo 12 Volt Pump
4.0 GPM, 45 PSI
(Model: 5151066)

Troubleshooting the Pump:

Motor does not run:

- Check for loose wiring connection(s).
- Make sure the 'ON/OFF' switch in the lead wire assembly is in the 'ON' position. "I" is the 'ON' position and 'O' is the 'OFF' position.
- Check for defective switch assembly. Make sure you are connected to a good 12 volt power source. Make sure any on/off switches are in the 'on' position. Disconnect the wires off of switch assembly and short them out. If your pump runs when you do this, your switch assembly will need to be replaced.
- Check the fuse, if applicable.
- Check for low voltage at the power supply.

Pump does not prime:

- Check for air leaks in supply line.
- Check for debris in the valve assembly.
- Check for defective valve assembly.
- Check for clogged strainer/filter.
- Check for cracks in the pump housing.
- Check for empty product supply.

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.

Pulsating flow (surging):

- Check for defective switch assembly.
- Check for leaks in the discharge line.
- Check for restriction in the discharge line.
- Check for debris in nozzle orifice.
- Discharge hose may be too long.
- Check for clogged strainer.

Motor continues to run after discharge is shut off:

- Check for empty product supply.
- Check for open bypass valve. (if equipped)
- Check for low voltage.
- Check for leak in discharge line.
- Check for defective or dirty valve assembly.
- Check for defective switch assembly.

IMPORTANT: Remove tank lid and be sure the tank is clean and free of any foreign material. Rinse tank out of any tank residue before filling with water to test.

Testing the Sprayer

NOTE:

It is VERY important for you to test your sprayer with plain water before actual spraying is attempted. This will enable you to check the sprayer for leaks without the possibility of losing any expensive chemicals.

Fill the tank about 1/2 full with plain water and drive to the starting place for spraying.

When you are ready to spray, turn the boom valve to the "on" position (Detail A). This will start solution spraying from the tips of the boom. The pressure will decrease slightly when the boom is spraying.

Adjust the pressure by turning the "ON/OFF" valve lever on the pressure adjust valve (Detail B). Make sure your pattern is sufficient. You may down-pressure the system by 'bypassing' solution back into the tank. This is achieved by opening the pressure adjust valve. Regulating pressure is done in this manner.

Read the operating instructions and initially begin spraying by closing the 'Pressure Adjust' valve and opening the boom line valve (Detail A). This will enable the air in the line to be eliminated (purged) through all the tips, while building pressure. When everything tests all right (no leaks and good pressure), add the desired chemicals to the mixture and water combination and start your spraying operation. Adjust the pressure and spray as you did in the testing procedure.

Conditions of weather and terrain must be considered when setting the sprayer. Do not spray on windy days. Protective clothing must be worn in some cases.

Be sure to read the chemical label(s) before application!

Operation

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.

Connect the lead wire to a fully charged 12 volt battery. You may use either a stand-alone battery or the battery on your towing vehicle. Connect to the positive (red) terminal first, then connect to the negative (black) terminal. Then connect the end of the lead wire to the end of the pump. When disconnecting, disconnect the end of the pump wire from the lead wire, then disconnect the negative (black) connection and finally the positive (red) connection. The lead wire has an On/Off switch to activate the pump. "-" is on and "O" is off.

Fill the tank part way with water and then add the desired amount of chemical to be sprayed. Finish filling tank to proper level. Turn the pump on and by depressing the "-" side of the rocker switch. The pump is equipped with a pressure switch that is pre-set at the factory to shut the pump off when all discharges are closed.

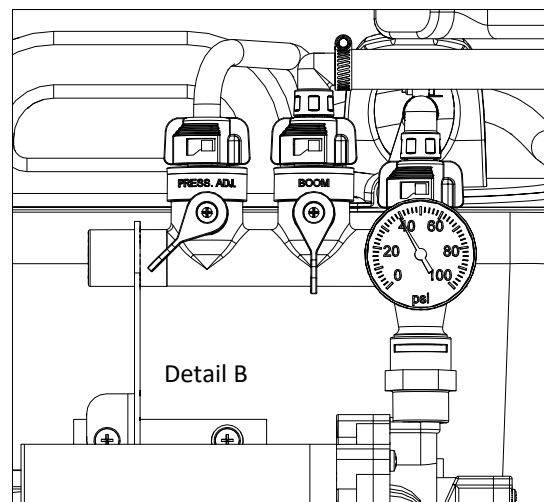
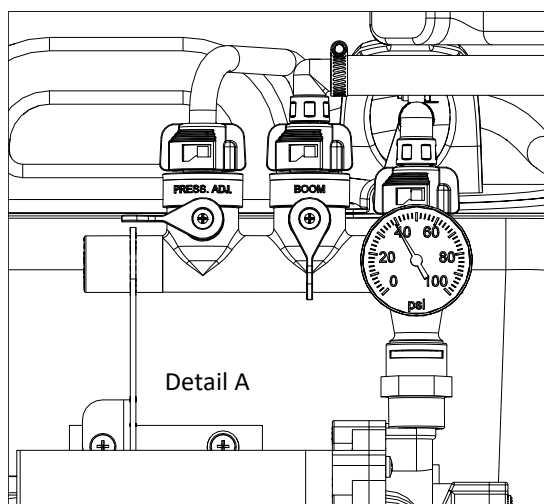
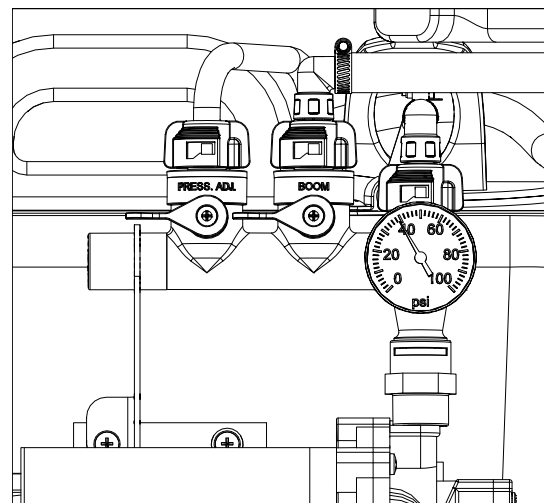
The pump will turn back on when one of the following actions occurs:

- ◆ Handgun lever is squeezed to spray the handgun.
- ◆ Boom valve is opened to broadcast spray with the boom.
- ◆ Pressure adjust valve is opened to re-circulate solution back into the tank.

When spraying with either the boom or the handgun, pressure may be reduced by slowly opening the pressure adjust valve until desired pressure is achieved. Opening the valve decreases pressure, closing the valve increases pressure. When spraying with the boom, the proper method to set the pressure is to open the boom valve completely and if a lower pressure is desired, then slowly open the pressure adjust valve until that pressure is obtained.

For the safest and most efficient chemical application, you will need to calibrate your sprayer using the tip and speed charts. Once you have determined the proper speed and pressure settings, you will need to consult your chemical label for the amount of chemical to be added to the tank. Read the entire label. Use only according to label directions.

Manifold Valves CLOSED



Calibration

Chemical labels may show application rates in gallons per acre, gallons per 1000 square feet or gallons per 100 square feet. Once you know how much you are going to spray, then determine your spraying pressure (PSI), and the spraying speed (MPH).

Determining the proper speed of the pulling vehicle can be done by marking off 100, 200 & 300 feet. The speed chart indicates the number of seconds it takes to travel the distances. Set the throttle and with a running start, travel the distances. Adjust the throttle until you travel the distances in the number of seconds indicated by the speed chart. Once you have reached the throttle setting needed, mark the throttle location so you can stop and go again, returning to the same speed.

Add water and proper amount of chemical to the tank and drive to the starting place for spraying.

Speed Chart			
Speed in M.P.H. (Miles Per Hour)	Time Required in seconds to travel a distance of		
	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

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 to the boom nozzles.
 - * Check the spray pattern. Usually you can see the coverage better on a solid concrete surface, such as a driveway.

Maintenance During/After Spraying

Periodically check the strainer and clean the screen on your intake line.

Proper care and maintenance will prolong the life of your sprayer.

After use, drain the tank and store or dispose of chemical properly. Fill the sprayer half way with clean water. Start the pump and allow the water to pump through the entire plumbing system and nozzles. Drain and then refill half full, add the recommended amount of a good quality tank cleaner, such as FIMCO Tank Neutralizer and Cleaner. (If no tank cleaner is available, you may substitute dish soap for this step, about 1-2 oz. per gallon). Turn pump on and circulate through system for 15 minutes and then spray out through boom and handgun nozzles. Refill sprayer half way with clean water and repeat. Follow the chemical manufacturer's disposal instructions of all wash or rinsing water.

If boom or handgun nozzles need cleaning, remove them from the sprayer and soak in warm soapy water. Clean with a soft bristled brush or toothpick if necessary. Never use a metal object. Even the slightest damage can change the flow rate and spray distribution. 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. DO NOT allow chemicals to sit in the pump for extended times of idleness. Follow the chemical manufacturer's instructions on disposal of all waste water from the sprayer.

Winter Storage

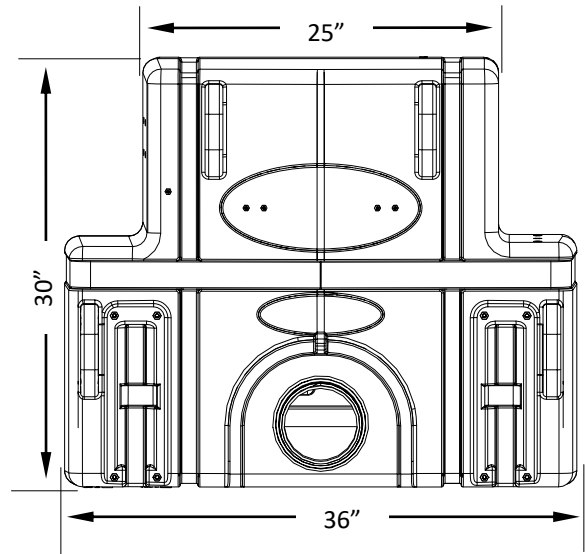
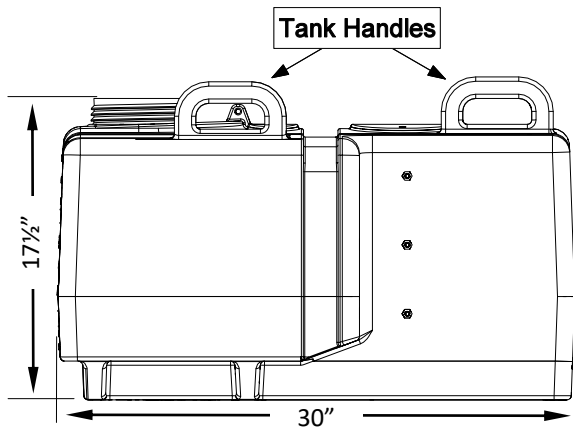
Prepare the sprayer for end-of-season storage by running RV antifreeze through the system. This will keep internal parts lubricated, protect against corrosion and keep the unit from freezing. *Note: RV antifreeze is non-toxic and biodegradable and generally safer for the environment than automotive antifreeze.*

Before storing your sprayer for winter or long term storage, thoroughly clean and drain it as much as possible. Then pour enough pink RV antifreeze into the tank so that when the pump is turned on you can pump the antifreeze throughout the entire plumbing system, including the pressure adjust (bypass) line. Make sure to operate the boom and handgun until you see pink fluid spraying from the nozzles. Leave any remaining antifreeze in the tank. Before your next usage, rinse the antifreeze from the sprayer with clean water.

It is nearly impossible to drain all of the water from the sprayer and any trapped water can freeze in cold weather and damage parts of the sprayer. Pumping the antifreeze through the system will displace the water and help prevent this damage.

Removing from storage: drain the antifreeze. Fill the tank with fresh water and run through the system. Dispose of antifreeze and flush water properly.

Technical Specifications

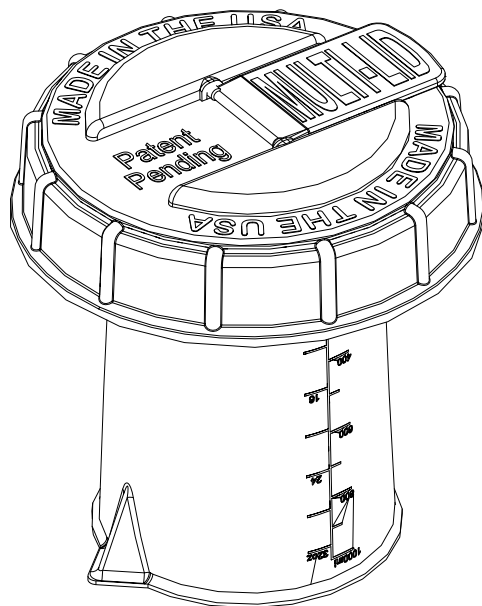
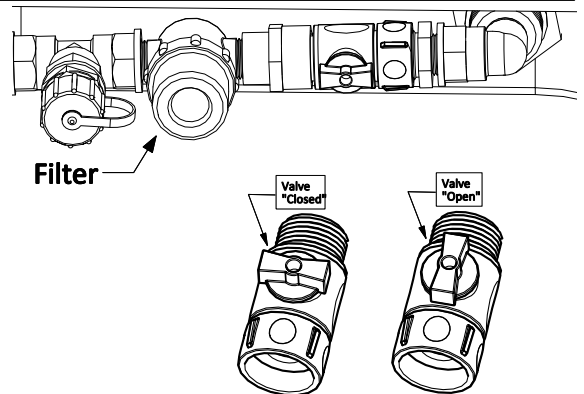


- ◆ Properly secure the tank to your utility vehicle, using tie-down or ratchet straps (Not Included).
- ◆ Tank straps may be installed through the handles to help prevent straps from slipping off tank if too loose.
- ◆ Handles can be used to lift the empty tank in and out of the box.
- ◆ Stay within your utility vehicle's weight limits. This unit when filled with water weighs approximately: 460 lbs. Consult the owner's manual for your vehicle.

There is a shut-off valve on the intake line. It is at this location so you can shut off the flow of solution to access your system's filter screen for cleaning.

Checking/Cleaning the sprayer's filter/screen:

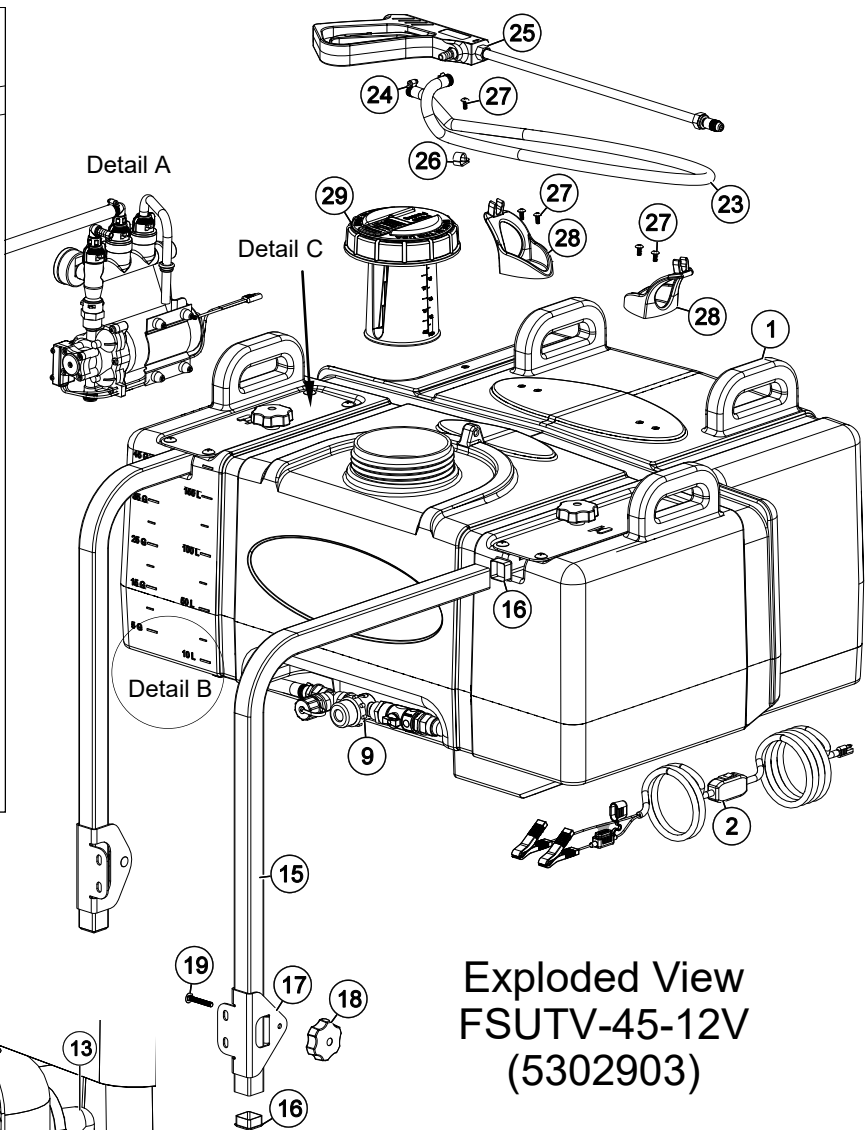
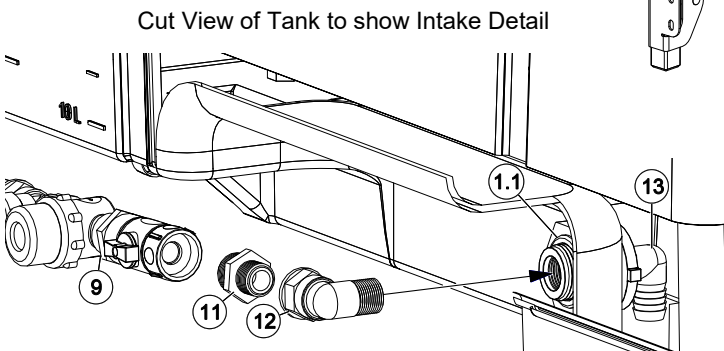
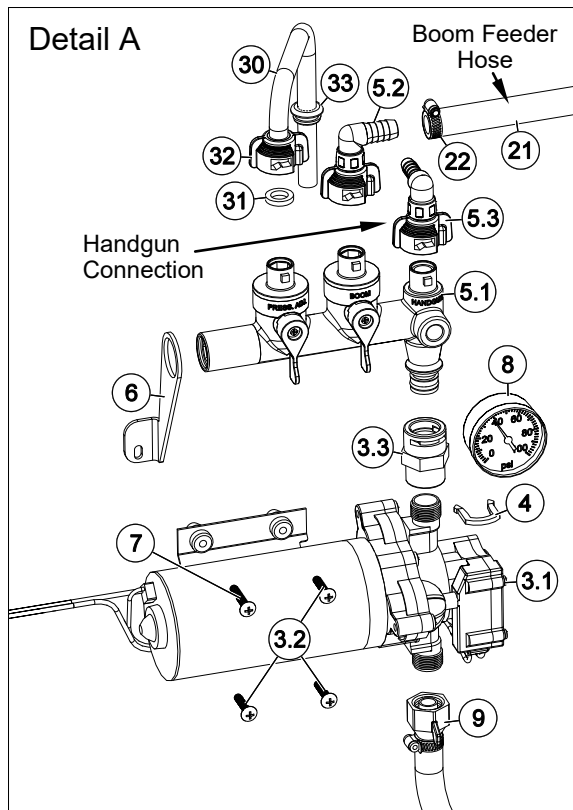
- ◆ Start your pump and before it shuts off, reach down and shut the valve to the 'Closed' position (lever is perpendicular to the flow of fluid), then shut off your pump.
- ◆ Unscrew the bowl of the filter to access the screen.
- ◆ Remove the screen and clean as necessary. Replace when done and reassemble the entire assembly.
- ◆ Make sure the valve is turned to the 'Open' position before restarting your pump.



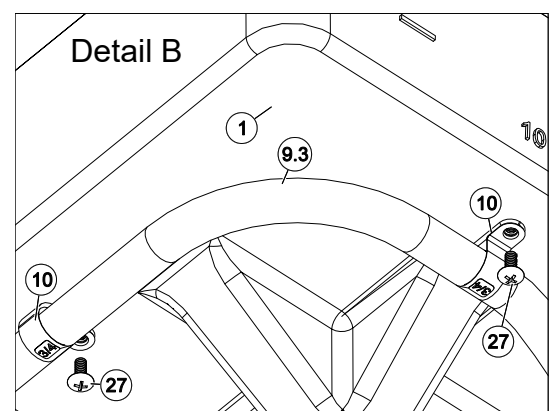
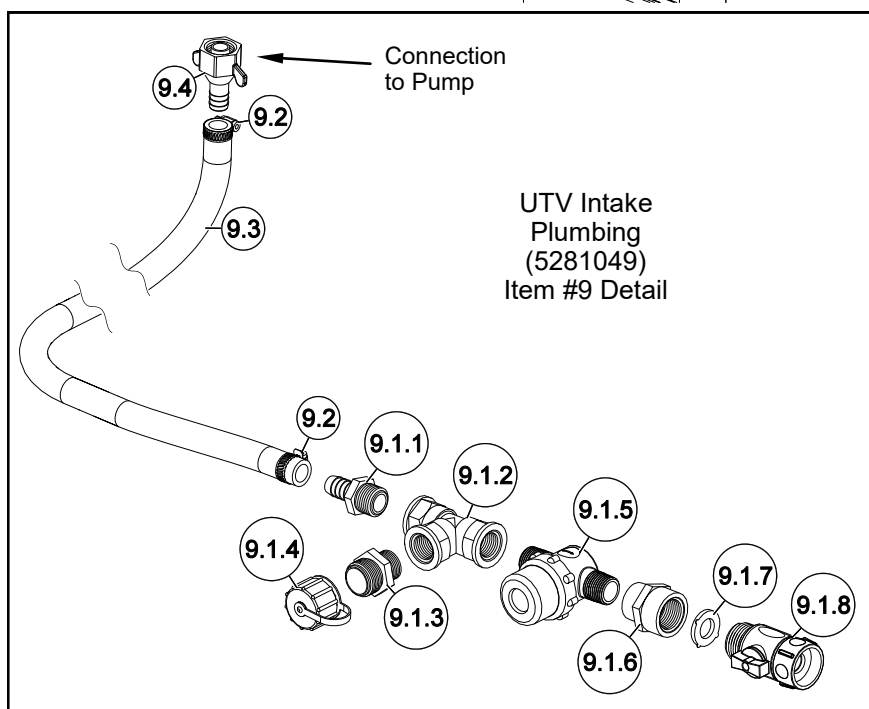
Multi-Lid Directions

1. Open fill cap and place garden hose into tank. Fill tank to desired gallon marker, if marker is above the bottom of calibration container, stop before water reaches calibration container. This is done to help chemical mix better and keep foaming of chemical to a minimum later.
2. Remove Multi-Lid and use calibration container to measure the correct amount of chemical for the water being used.
3. Pour chemical into tank and tighten Multi-Lid back onto tank. If desired amount of water was added in step 1, you are done. Be sure to press firmly on fill cap to seal with Multi-Lid. If desired amount of water was not met in step 1, proceed to step 4.
4. Open fill cap and place garden hose into tank. Add water to the desired gallon marker. Close fill cap, pressing firmly to seal cap to Multi-Lid.

NOTE: If water and chemical has not mixed properly, use the pressure adjustment control on the manifold to recirculate the mixture through tank.



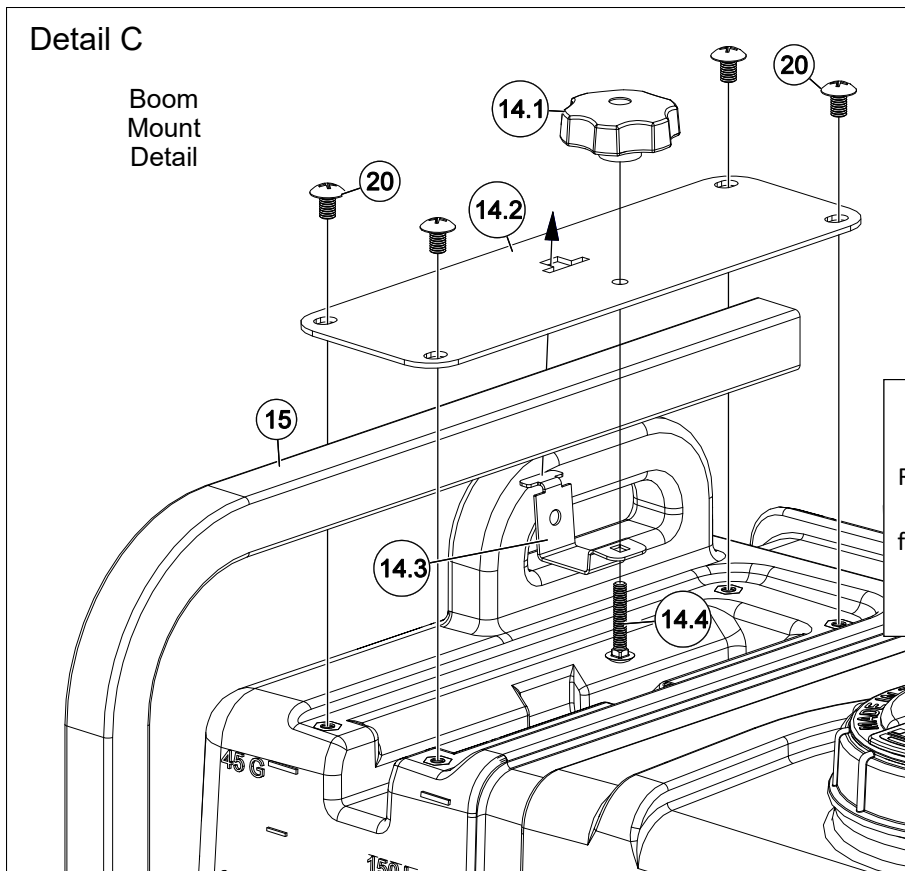
Exploded View FSUTV-45-12V (5302903)



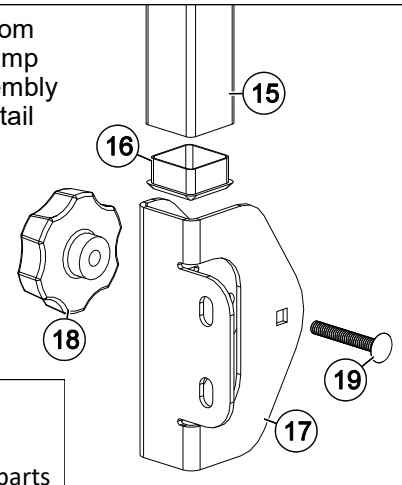
Refer to the parts list on next page
for part numbers.

Detail C

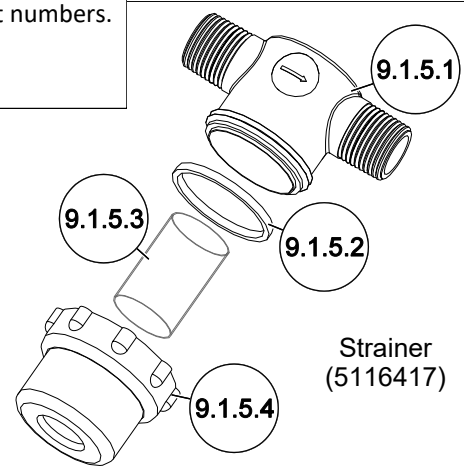
Boom Mount Detail



Boom Clamp Assembly Detail



Refer to the parts list below for part numbers.



Parts List: FSUTV-45-12V (5302903)

Ref. #	Part #	Description	Qty
1	5169332	45 Gal. UTV Tank w/Bulkhead (Yellow)	1
1.1	TF50DTN	Polypro 1/2" Fem Bulkhead Fitting	1
2	5277040	Lead Wire Assembly (14 ga, w/Switch), 120"	1
2.1	5157238	15 Amp Regular Blade Fuse	1
3	5281346	SHURflo 4.0 Pump w/Port Adapter Fitting	1
3.1	5151066	SHURflo Pump: 12V, 4 GPM, 45 PSI	1
3.2	5117168	#10-24 x 1" Phillips Truss Head Machine Screw	3
3.3	5005456	3/4" Port to 1/2" Female NPT Adapter	1
4	5005457	Port Adapter Clip	1
5	5278781	Quick Connect Manifold Assembly	1
5.1	5302347	Quick Connect Manifold	1
5.2	5302354	QC Manifold 1/2 Swivel 90° Elbow Assembly	1
5.3	5302802	QC Manifold 3/8 Swivel 90° Elbow Assembly	1
6	5037943	Manifold Support Brace	1
7	5117166	#10-24 x 1 1/4" Phillips Truss Head Mach. Screw	1
8	5167097	2" Dry, 100#, Back Mount Pressure Gauge	1
9	5281049	45 Gal. UTV Intake Plumbing - SHURflo	1
9.1	5278717	UTV Intake Plumbing	1
9.1.1	5067131	Poly Fitting, 1/2" MNPT x 1/2" HB	1
9.1.2	5010230	Poly Tee, 1/2" FNPT	1
9.1.3	5005195	Poly Adapter, 1/2" MNPT x 3/4" MGHT	1
9.1.4	5274373	Drain Plug Cap, Tether & Washer Assembly	1
9.1.5	5116417	Poly Inline Strainer 1/2" MNPT	1
9.1.5.1	5046451	Poly Cap, Inline Strainer	1
9.1.5.2	5072533	O-Ring, Inline Strainer	1
9.1.5.3	5116452	Screen, Inline Strainer	1
9.1.5.4	5058205	Clear Bowl, Inline Strainer	1
9.1.6	5005190	Poly Adapter Coupler, 3/4" FGHT x 1/2" FNPT	1
9.1.7	5016066	Garden Hose Washer	1
9.1.8	5143419	Swivel Shut-Off	1
9.2	5051114	Hose Clamp, 1/2"	2
9.3	5020578	1/2" Polyspring Hose x 31"	1

Ref. #	Part #	Description	Qty
9.4	5002502	Fitting, 1/2" FNPT x 1/2" Swivel HB	1
10	5051152	3/4" Black Nylon Loom Clamp	2
11	5005195	Poly Adapter, 1/2" MNPT x 3/4" MGHT	1
12	5010243	Poly Street Elbow, (90°) 1/2" MNPT x 1/2" FNPT	1
13	5010205	Poly Elbow, 1/2" MNPT x 3/4" HB	1
14	5278715	UTV Boom Mount	2
14.1	5088026	5 Lobe Knob 1/4-20 UNC	1
14.2	5095394	Tank Boom Mount	1
14.3	5095393	Boom Clamp	1
14.4	5034527	1/4-20nc x 1.5" Carriage Bolt	1
15	5095395	UTV Boom Mount	2
16	5046448	Square Cap, Black, 1 1/4"	4
17	5051151	Boom Clamp	2
18	5088026	5 Lobe Knob 1/4-20 UNC	2
19	5034807	1/4-20nc X 1.75" Carriage Bolt	2
20	5117342	5/16"-18 x 1/2 Machine Screw, Phillip Truss	8
21	5020152	Hose, 1/2"-1 Brd. x 6 Ft. (72")	1
22	5051114	Hose Clamp, 1/2"	2
23	5020527	Hose, 3/8"-1 Brd. x 25 Ft.	1
24	5051144	Hose Clamp, 3/8"	2
25	5273959	Deluxe Pistol-Grip Handgun w/X-26 Tip	1
25.1	5018331	Brass Handgun Tip (X-26)	1
26	5051122	5/8" Black Nylon Loom Cable Clamp	1
27	5117234	#10-24 x 1/2" Phillips Truss Head Mach. Screw	7
28	5133276	Hose Wrap	2
29	5058200	32 oz -1000 ml Multi-LID	1
30	5149157	Rigid By-Pass Tube	1
31	5143430	Flat Washer	1
32	5143429	Quick Connect Quarter Turn Cap	1
33	5075018	Grommet	1

NOTES: