OWNER'S MANUAL

Model: ATV-20-2 (5301551)

(20 Gallon Lawn & Garden/ATV Sprayer)

Technical Specifications

- 20 Gal. Corrosion-Resistant Polyethylene Tank
- 12 Volt Diaphragm Pump, 2.1 g.p.m.—60 psi
- 15 Ft. Handgun Hose (3/8" I.D.)
- 15 Ft. Vertical throw, 30 Ft. Horizontal Throw
- Pressure Gauge
- 2-Nozzle Boom Assembly (80" Spray Coverage)
- Corrosion-Resistant Nylon Nozzles
- Bypass (Recirculation) Line

Caution: When fully filled with water, this sprayer will weigh 205 lbs.. Consult the owner's manual for your vehicle to verify that you are within it's load carrying capacity.

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 lawn & garden/ATV sprayer. Please read it carefully, as it furnishes information which will help you achieve years of trouble-free operation.

Warranty

Products are warranted for one year from date of purchase against manufacturer or workmanship defects for home owner usage and 90 days for commercial usage.

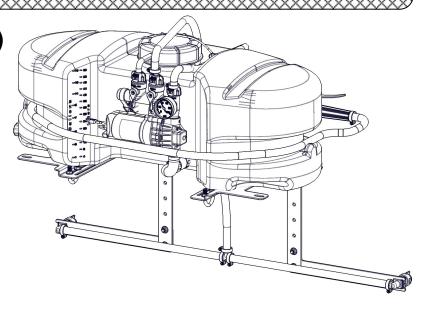
For technical assistance, visit our website @ www.fimcoindustries.com or call: TOLL FREE @ 1-800-831-0027

Our Technical Support Representatives will be happy to help you.

To obtain prompt, efficient service, always remember to give the following information...

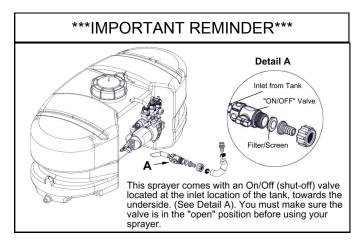
- Correct Part Description and/or part number
 - Model #/Serial # of your sprayer

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



Assembly Instructions

- Make sure the contents of the sprayer's carton match the items shown on page 2 of the manual.
- Follow the steps on pages 3, 4 & 5 to properly assemble the sprayer.
- After assembly is complete and before testing your sprayer, make sure you connect the electrical hook-up to the end of your pump and clip the clips to a fully charged battery. The red wire must be connected to the positive (+) and the black wire should be connected to the negative (-).
- The drain plug assembly should already be attached to the tank

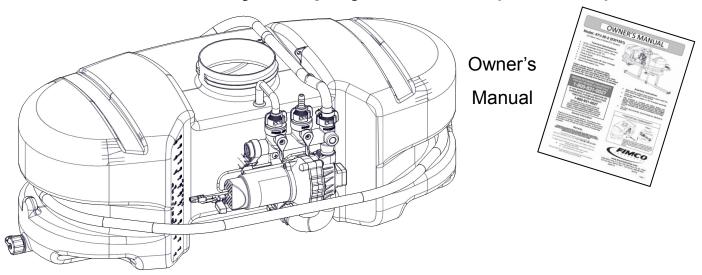




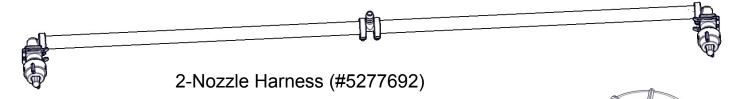
www.fimcoindustries.com

1000 FIMCO Lane, P.O. Box 1700, North Sioux City, SD 57049 Toll Free Phone: 800-831-0027 : Toll Free Fax: 800-494-0440 [5004770 (05/15)]

Contents of your sprayer's carton (ATV-20-2):



Tank/Frame Pre-Assembly



Tank Lid & Lanyard Contents of Parts Bag #5278320 Ref. # Part # Description 5278114 Lead Wire Assembly w/15A Fuse & 30A Clips (96" Long) 5157238 | 15 Amp Regular Blade Fuse 5167097 2" Dry 100# Back Mount Gauge 5051144 Hose Clamp (3/8"-1/2") 5053111 Plastic Retaining Clip (11 Ga.) 5117334 #10-24 x 1/2" Phillips Round Head Machine Screw 5053096 Handgun Clip 5034531 5/16"-18 x 5/8" Flange Lock Screw 5117300 5/16"-18 x 1" Flange Whiz Lock Screw 5117323 H.H.C.S. 5/16"-18nc x 3/4" Long 5006307 5/16"-18 Hex Whiz (Flange) Locknut 5034065 Round U-Bolt, 5/16"-18 x 1 1/2" x 2 3/16

5034220 Round U-Bolt, 5/16"-18 x 1 5/16" x 1 3/4'

Contents of Bracket Kit #5277781 Qty Ref. # Part # Description

Tank Mounting Plate (R.H.)

Tank Mounting Plate (L.H.)

2-Nozzle Boom Bracket (QJ100)

Boom Mounting Bracket

5020538 Hose, 3/8"-1 Brd. x 43"

1

2

2

(#5058188)

5038725

5038667

5038506

5038826

Step 1 5034531 5038667 Slot to use 5038667 (Outer Slots) ***) 'Long' portion of the brackets should be NOTE: The Spray Wand will

already be attached to

facing towards the 'back' side of the tank.

5006307

5038826

(opposite of the pump/manifold assembly) the spray line hose Step 2 (RH Side) (LH Side) 5038725 5038667 5038506 5117300 5038506 Detail A Step 3 Alt. Position for Nozzle Bracket 5038506

0

5117323

Assembly Procedure (ATV-20-2)

Normally, the sprayer will be mounted on an ATV with the pump assembly at the operator's back and the spray wand will be at the rear of the unit. Right Hand (RH) and Left Hand (LH) sides of the sprayer are determined as if you are standing behind the sprayer, looking at it (facing forward)

After removing the tank from the box, start the assembly procedure by turning the tank upside on a stable, flat surface.

A 1/2" socket or wrench is required for this step.

(**) Mount the tank brackets (LH: 5038667) & (RH: 5038724) to the underside of the tank as shown in Step 1. Use (4) bolts (5034531) to secure it to the tank. The tank will rest on the surface of the brackets which have the six small slots. You will not be using the two outer slots on each bracket, as they are used for other sprayers. Make sure the brackets are parallel with each other before tightening down the bolts. Do not over-tighten.

After your tank brackets, both RH & LH, are secured to the tank, turn the tank assembly over and position it so that the tabs which extend beyond the back of the tank are facing you and just hanging over the edge of the table or flat surface you are assembling this on.

A 1/2" socket or wrench is required for this step.

Secure the boom mounting brackets (5038506) to the RH & LH tank mounting brackets with flange bolts (5117300) and whiz nuts (5006307). You can position them as needed within the slot on the tab. Just be sure that the surfaces of both brackets, with the 5 mounting holes, are even with each other.

Detail A shows the (RH side) bracket in the 'middle' of the slot. If you were to position this bracket at this location, make sure the LH side bracket is positioned in the same position.

After your boom mounting brackets (5038506) are secured in place, bolt the 2-nozzle boom brackets (5038826) in place with bolts (5117323) and whiz nuts (5006307).

A 1/2" socket or wrench is required for this step.

These brackets can be positioned as shown or in a few alternate positions. The lighter (top) bracket shown in the view is an example of the bracket in one alternate position. Opposite side bracket should be on the same level, if positioned as such.

Try to maintain approximately 18-22 inches above the items being sprayed, for optimal coverage. This is considered where the nozzles will mount, at the end of these brackets.

Step 4 Tank not shown. 5006307 --for clarity 5034220 5034065 These tubes represent the cross members of a 'typical' ATV rack system 5006307 Step 5 5053111 Nozzle Harness Assembly 5053111 Step 6 Manifold Connection 5020538 **Boom Connection**

Assembly Procedure (ATV-20-2)

After all the brackets are securely attached together, you are now ready to mount this to an ATV rack system. Remember that all rack systems are not alike and this was designed to fit 'most' rack systems. There is a chance it may not fit your particular rack.

It may be beneficial to have a helper or 2nd person, while doing this step. Place the sprayer on to the ATV rack and find the most optimal place for the u-bolts to attach through the rack and then through the long slots on the tank brackets. Once the position is determined, feed the u-bolt up from the underside of the rack and secure in place with the whiz nuts (5006307). Make sure the threads of the u-bolts do not puncture the tank at any point. Manually adjust the u-bolts slightly if they get too close to the tank. Do this prior to fully tightening the brackets to the rack.

A 1/2" socket or wrench is required for this step.

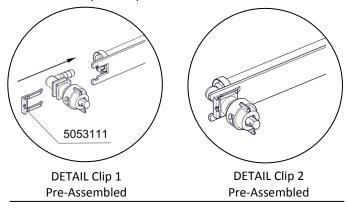
U-bolts (5034065 & 5034220) may be placed where they will fit best on your particular rack setup. The u-bolts could actually be 'swapped' from what is shown on the drawing.

With all the brackets secure and the unit is mounted on the ATV unit, the nozzle harness can now be attached.

The end (elbow) nozzle assemblies slide into the cutout of the horizontal brackets.

Locate the (2) clips (5053111) from the parts bag.

Once the nozzles are in the cutouts, slide each clip in the gap between the steel bracket and the plastic nozzle. These can be mounted on the front or rear side of the bracket. These should 'snap' in place and hold the nozzle securely. See Details Clip 1 & Clip 2.

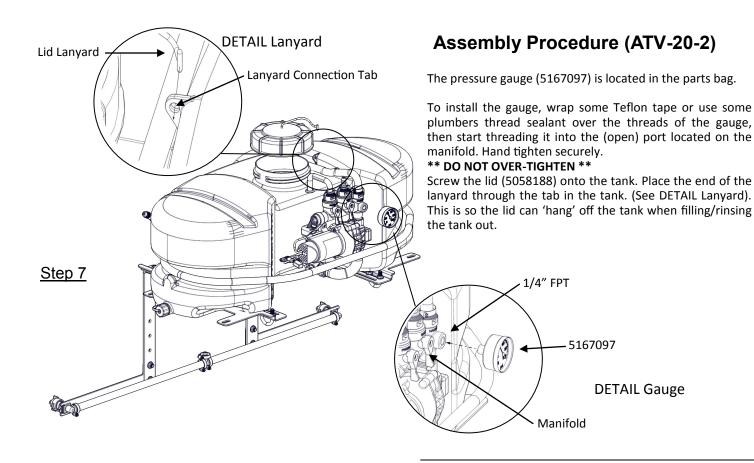


After your nozzle harness is attached to the boom brackets, locate the 43" hose and the (2) hose clamps from the parts bag.

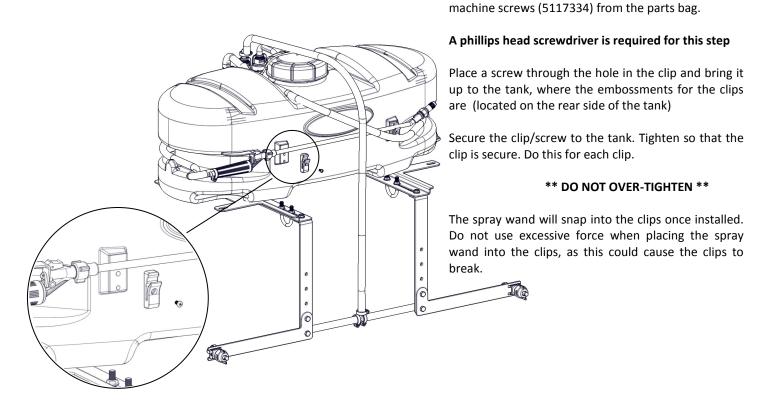
Place the hose clamps over each end of the hose loosely. Slip the ends of the hose over the hose barbs on both the manifold and the 'Tee' fitting on the nozzle harness. Use a twisting motion, if necessary, to get the hose fully onto each barb. Bring the hose clamps to the connection point and tighten securely.

NOTE:

Make sure this boom feeder hose does not end up on the 'outside' of the spray wand hose, otherwise unwrapping the spray wand hose from around the tank may be difficult.



Step 8



The only thing left to assemble is the spray wand clips

Locate the (2) clips (5053096) and (2) phillips head

to the tank.

Testing the Sprayer

NOTE: It is VERY important for to test your sprayer with plain water before actual spraying is attempted. This will enable you to check 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. 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 bypass line valve. 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 bypass valve. Regulating pressure is done in this manner.

Read the operating instructions and initially begin spraying by closing the 'bypass' valve (this is the valve marked Press. Adj. on your manifold assembly) and opening the boom line valve (this is the center valve on the manifold). 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!

Calibration

Chemical labels may show application rates in gallons per acre, gallons per 1000 square feet or gallons per 100 square feet. You will note that the tip chart shows 3 of these rating systems.

Once you know how much you are going to spray, then determine (from the tip chart) the 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					
	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

Your sprayer is equipped with (1) ON/OFF switch in the wire assembly that you hook up to your battery. The "-" is the "ON" position and the "o" is the "OFF" position for the switch. Make sure the switch is depressed in the "-" position for operation. The pump is equipped with a pressure switch that is factory pre-set for it to shut off at 60 p.s.i. This switch assembly is the 'square box' on the head portion of the pump.

Always fill the tank 1/2 full with water first and then add the chemical slowly, mixing as you pour the chemical into the tank and then fill the rest of the way. You may use the bypass in order to mix the chemical and water.

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

- Activate the handgun by squeezing the handle lever
- Rotating the adjustable nozzle tip on the handgun will change the tip pattern from a straight stream to a cone pattern (fine mist)

Adjusting Pressure

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

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.
- * Raise or lower the nozzles so that you will have a good coverage pattern. Generally the proper height will be about 18 inches from the object(s) being sprayed.

Tip Chart for TKT-VP3, TF-VP3 & 30DT3.0 Tips										
Tip	,	_		Gallons Per Acre - Based on Water						
No.	Spray	Pressure	Capacity	1	2	3	4	5	7.5	10
(Color)	Height	(psi)	(GPM)	MPH	MPH	MPH	MPH	MPH	MPH	MPH
		10	.30	44	22	14.9	11.1	8.9	5.9	4.5
3 (Gray)	18"	20	.42	63	31.5	20.9	15.7	12.6	8.4	6.3
		30	.52	76	38	26	19.3	15.4	10.3	7.7
		40	.60	90	45	30	22	17.8	11.8	8.9
Tip	C	D	Capacity (GPM)	Gallons Per 1000 Sq. Ft Based on Water						
No. (Color)	Spray			1	2	3	4	5	7.5	10
	пеідпі		(GPIVI)	MPH	MPH	MPH	MPH	MPH	MPH	MPH
3 (Gray)	18"	10	.30	1.01	.5	.34	.254	.204	.135	.103
		20	.42	1.4	.72	.48	.36	.29	.19	.14
		30	.52	1.74	.87	.596	.44	.35	.236	.176
		40	.60	2.06	1.00	.688	.50	.408	.27	.20
Tip				Gallons Per 100 Sq. Ft Based on Water						
No.	Spray Height	Pressure	Capacity (GPM)	1	2	3	4	5	7.5	10
(Color)	пеідііі	(psi)	(GPIVI)	MPH	MPH	MPH	MPH	MPH	MPH	MPH
3 (Gray)	18"	10	.30	.10	.05	.034	.025	.02	.013	.01
		20	.42	.14	.072	.048	.036	.029	.019	.014
		30	.52	.174	.087	.059	.044	.035	.023	.017
		40	.60	.206	.10	.068	.05	.04	.027	.02

Maintenance During/After Spraying

Periodically check the strainer and clean the screen at the bottom of your intake tube.

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

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.

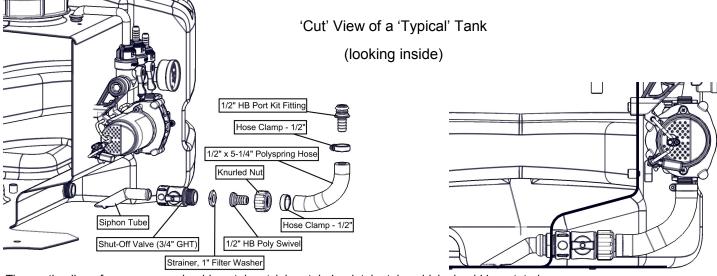
WARNING: Some chemicals will damage the pump valves if allowed to soak untreated for a length of time! ALWAYS flush the pump as instructed after each use. DO NOT allow chemicals to sit in the pump for extended times of idleness. Follow the chemical manufacturer's instructions on disposal of all waste water from the sprayer.

Winter Storage

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.

Intake/Siphon Tube/Screen Detail of a Typical L&G/ATV Sprayer (not including the 'EC'Units)

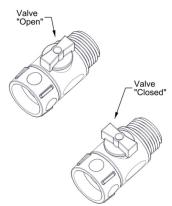


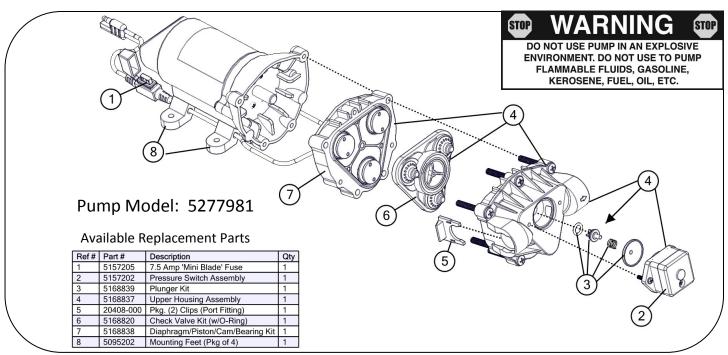
The suction line of your sprayer should contain a 'siphon tube' or intake tube which should be rotated so that it just touches the bottom of the tank surface. (see Detail Views). Reach in and rotate it, as needed, if not already in this position.

A nylon shut-off valve is threaded onto the pipe nipple at the intake location on the tank. It is at this location so you can shut off the flow of solution to access your system's screen for cleaning.

Checking/Cleaning the sprayer's filter/screen:

- Start your pump and before it shuts off, reach down and Shut the nylon valve to the 'Closed' position (lever is perpendicular to the flow of fluid), then shut off your pump.
- Unscrew the knurled nut from the shut-off valve, leaving the valve connected to the tank.
- Swing (swivel) the intake assembly towards you. Look in the nut you JUST unscrewed. There is a screen/washer there.
- 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.







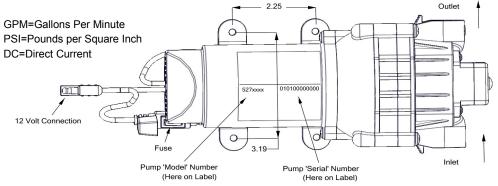
- Clean and rinse your pump after each use with Fimco Tank Neutralizer
- Winterize your pump or sprayer by rinsing, draining and running RV Antifreeze through it before storing for the winter.
- Use clean water for your spray mixture
- Store inside a building when not in use.

DON'T



- 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

Pump Specifications			
Current:	4.5 Amps @ 30 PSI		
Check Valve:	Viton		
Wetted Parts Housing:	Polypropylene		
Diaphragm:	Santoprene		
Liquid Temperature:	130° F max.		



A CAUTION

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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.

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 pressure switch. Make sure you are connected to a good 12 volt power source. Make sure any on/off switches are in the 'on' position.
- Remove the cap to the pressure switch. Pull both red wires off of their terminals, and touch the two ends together. If your pump runs when you do this, your pressure switch will need to be replaced.
- Check the fuse.
- Check for low voltage at the power supply.

Pump does not prime:

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

Pulsating flow (surging):

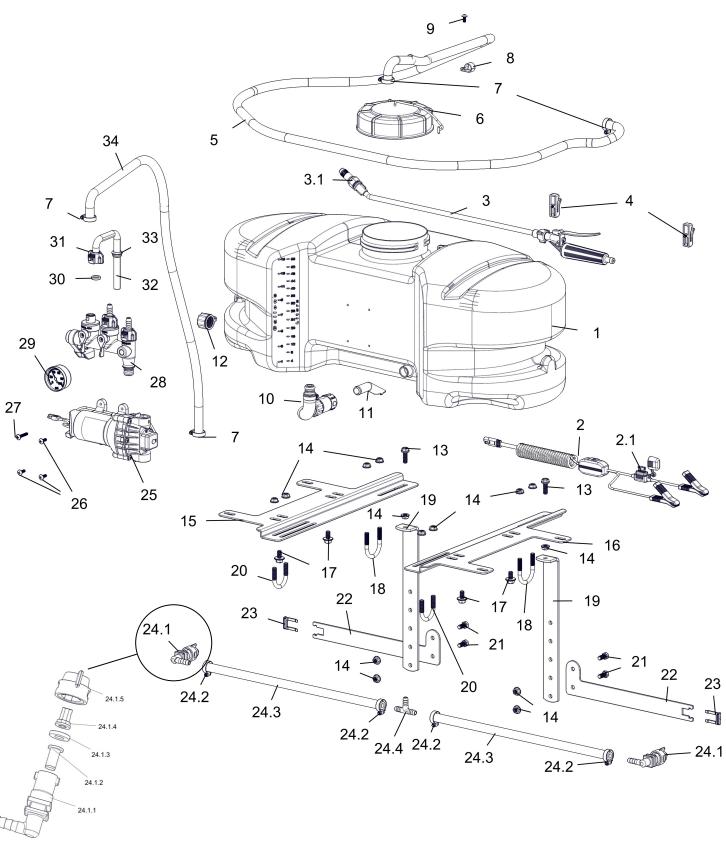
- Check for defective pressure switch.
- Check for leaks in the discharge line.
- Check for restriction in the discharge line.
- Check for debris in nozzle orifice.
- Discharge hose may be too long.
- Check for clogged strainer.

Motor continues to run after discharge is shut off:

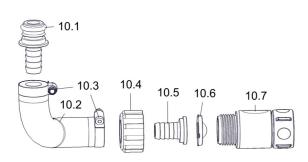
- Check for empty product supply.
- Check for open bypass valve. (if equipped)
- Check for low voltage.
- Check for leak in discharge line.
- Check for defective or dirty check valve.
- Check for defective pressure switch.

Exploded View/Parts List:

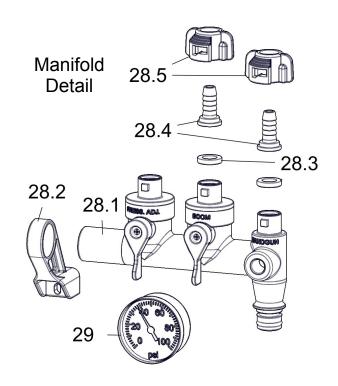
ATV-20-2 (5301551)



Parts List: ATV-20-2 (5301551)



Intake Assembly Detail



Ref. #	Part #	Description	Qty
1	5169241	20 Gallon Tank (White)	1
2	5278114	Lead Wire Assembly w/15A Fuse & 30A Clips (96" Long)	1
2.1	5157238	15 Amp Regular Blade Fuse	1
3	5163100	Low-Flow Handgun w/X-26 Tip	1
3.1	5018330	Handgun Tip (X-26)	1
4	5274880	Handgun Clips & Screws (Pkg/2) (#10-24 Thread)	1
5	5020524	Hose, 3/8"-1 Brd. x 15 Ft.	1
6	5058188	Tank Lid w/Lanyard	1
7	5051144	Hose Clamp (3/8"-1/2")	4
8	5051122	5/8" Black Nylon Loom Cable Clamp	1
9	5117234	#10-24 x 1/2" Phillips Truss Head Machine Screw	1
10	5275877	Intake Sub-Assembly	1
10.1	5168833	Port Kit Fitting, 1/2" Hose Barb	1
10.2	5020557	1/2" Polyspring Hose x 5-1/4"	1
10.3	5051114	Hose Clamp - 1/2"	2
10.4	5006209	Poly Knurled Swivel Nut, 3/4" FGHT	1
10.5	5149035	Poly Swivel, 1/2" Hose Barb	1
10.6	5116242	Strainer, 1" Filter Washer	1
10.7	5143419	Swivel Shut-Off Valve	1
11	5100452	Siphon Tube	1
12	5274373	Drain Plug Cap, Tether, and Washer Assembly	1
13	5117300	5/16"-18 x 1" Flange Whiz Lock Screw	2
14	5006307	5/16"-18 Hex Whiz (Flange) Locknut	14
15	5038725	Tank Mounting Plate (R.H.) (ATV)	1
16	5038667	Tank Mounting Plate (L.H.) (ATV)	1
17	5034531	5/16"-18 x 5/8" Flange Lock Screw	4
18	5034065	Round U-Bolt, 5/16"-18 x 1 1/2" x 2 3/16"	2
19	5038506	Boom Mounting Bracket	2
20	5034220	Round U-Bolt, 5/16"-18 x 1 5/16" x 1 3/4"	2

Ref. #	Part #	Description	Qty
21	5117323	H.H.C.S. 5/16"-18nc x 3/4" Long	4
22	5038826	2-Nozzle Boom Bracket (QJ100)	2
23	5053111	Plastic Retaining Clip (11 Ga.)	2
24	5277692	2-Nozzle Harness (3/8")	1
24.1	5277688	ELL Nozzle Sub-Assembly (3/8")	2
24.1.1	5056113	Single Hose Shank (3/8" Hose)	1
24.1.2	5116019	Nozzle Strainer, Red (50 Mesh)	1
24.1.3	5016157	Seat Washer (QJ Caps)	1
24.1.4	5018274	Turbo FloodJet Tip (TF-VP3)	1
24.1.5	5046251	QJ Cap Only (Black)	1
24.2	5051144	Hose Clamp (3/8"-1/2")	4
24.3	5020531	Hose, 3/8"-1 Brd. x 19-3/8"	2
24.4	5086025	Poly Hose Tee, 3/8" HB	1
25	5277981	High Flo Gold Series 2.1 GPM Pump	1
26	5117167	#10-24 x 5/8" Phillips Truss Head Machine Screw	3
27	5117168	#10-24 x 1" Truss Head Machine Screw	1
28	5302793	Quick Connect Manifold Assembly	1
28.1	5302347	Quick Connect Manifold	1
28.2	5143422	QC Manifold - Support Bracket	1
28.3	5143430	Flat Washer	2
28.4	5143431	QC Manifold - 3/8" Hose Barb - Straight	2
28.5	5143429	QC Manifold - QC Quarter Turn Cap	2
29	5167097	2" Dry 100# Back Mount Gauge	1
30	5143430	Flat Washer	1
31	5143429	QC Manifold - QC Quarter Turn Cap	1
32	5100804	Rigid By-Pass Tube Assembly	1
33	5075018	Grommet	1
34	5020538	Hose, 3/8"-1 Brd. x 43"	1