

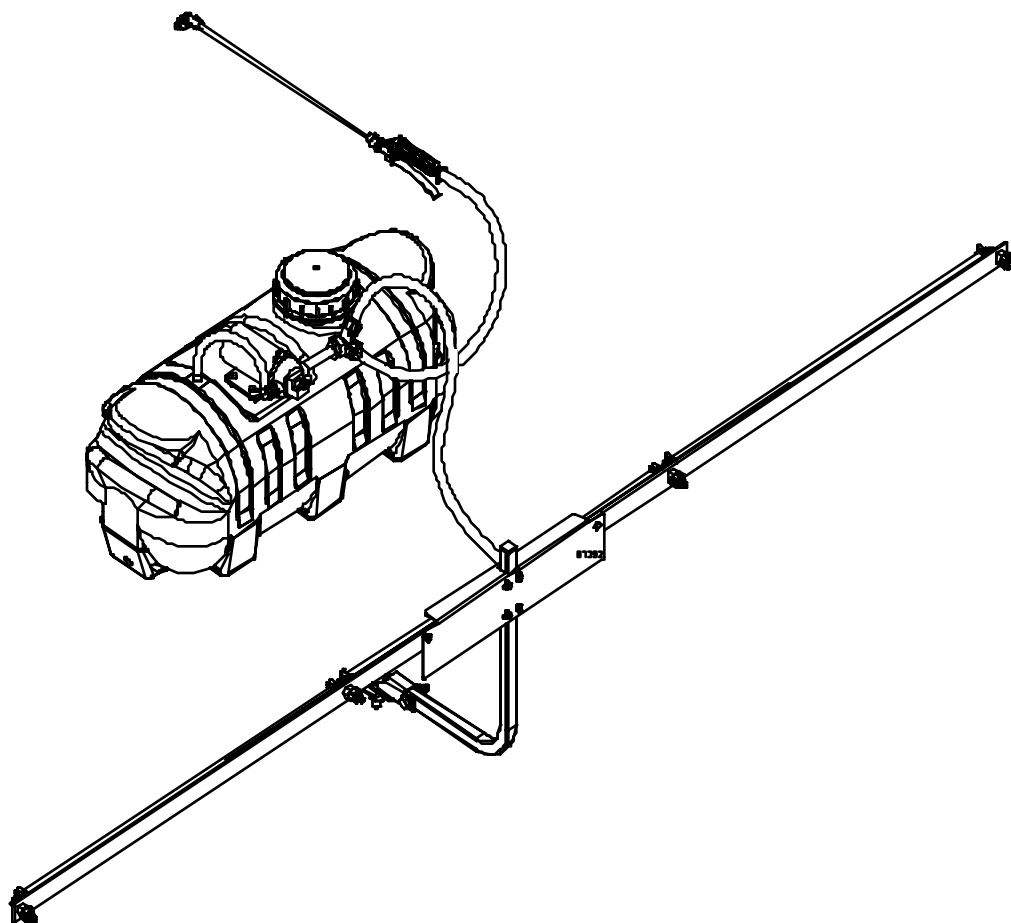


ATV BOOM KIT

ITEM #273011

M273011J

OWNER'S MANUAL



SHOWN ATTACHED TO ATV SPOT SPRAY KIT #268199 (NOT INCLUDED)

Any Questions, Comments or Problems

Call Customer Service 1-800-270-0810

Hours: Monday - Friday 7:00 AM to 5:00 PM CST

Saturday 7:30 AM to 11:30 AM

THANK YOU

Thank you for purchasing the North Star ATV Boom Kit. The assembly instructions that follow will help you attach the kit to your existing North Star Spot Sprayer. The numbers in parenthesis throughout the manual refer to the diagram number on the parts explosion and corresponding component list. You will need a wrench set (up to 1-1/8"), standard screw driver, and phillips screw driver to assemble your boom kit. Your new boom kit is designed for long life, dependability, and the top performance you demand. Please take time now to read through this manual so you can better understand the boom kit's operation, maintenance and safety precautions. The time you take now to thoroughly read and understand this manual will prolong your boom kit's life and prepare you for its safe operation. Enjoy the exceptional performance of your North Star ATV Boom Kit.

IMPORTANT

If this boom kit is used by anyone who is not the owner or is loaned or rented, make certain the operator:

- Is instructed in safe and proper operation of this boom kit and sprayer .
- Reads and understands the manuals pertaining to this boom kit and sprayer.

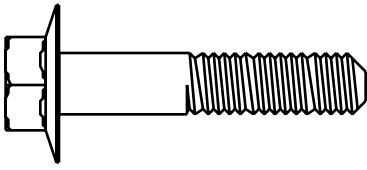
NOTICE

K-BAR Industries Incorporated reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

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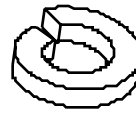
FASTENERS-273011



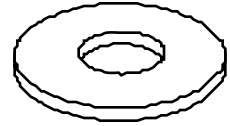
3/4"-10 x 2-1/2" Flange Head Bolt
Qty-1



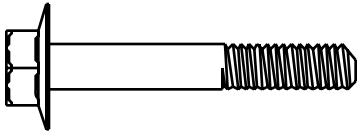
3/4 - 10 Hex Nut
Qty - 1



3/4" Lock Washer
Qty - 1



3/4" Flat Washer
Qty - 1



1/2 - 13 x 2 - 1/2 Flange Head Bolt
Qty - 1



1/2 -13 Flange Nut
Qty - 1



1/2" Flat Washer
Qty - 2



5/16-18 x 1" Hex Head Bolt
Qty - 2



5/16" Nyloc Nut
Qty - 2



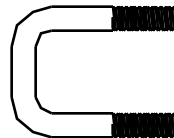
1/4-20 Flange Nut
Qty - 4



5/16" Flat Washer
Qty - 4



Small Hose Clamp
Qty - 12



1-1/8" x 1-3/8" x 1/4-20 U-Bolt
Qty- 2

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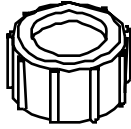
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PARTS



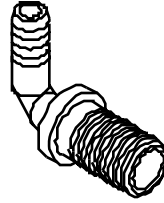
11/16 " Swivel
Nut
Qty. 4



3/4" Swivel
Nut
Qty. 2



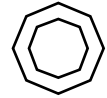
Nozzle
Strainer
Qty. 4



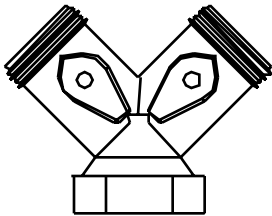
11/16" x 3/8"
Hose Barb
Qty 2



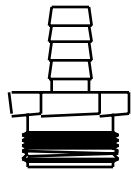
Nozzle
Qty. 4



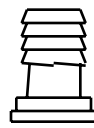
Rubber Washer
Qty. 2



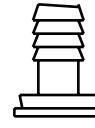
Ball Valve
Qty. 1



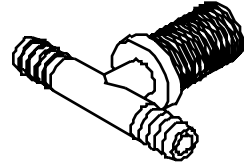
3/8" Hose Barb x
3/4" MGHT
Qty. 1



1/2" Flat Seat
Hose Barb
Qty. 1



3/8" Flat Seat
Hose Barb
Qty. 2



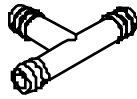
11/16" x 3/8"
Hose Barb Tee
Qty. 2



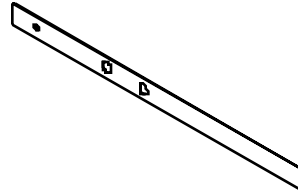
Square Tube Plug
Qty. 2



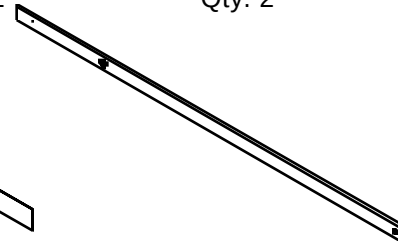
Nozzle Nut
Qty. 4



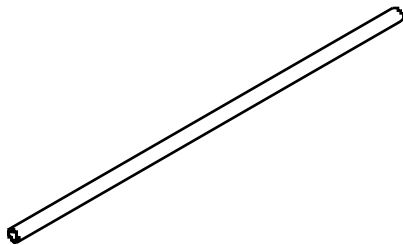
3/8" Hose Barb Tee
Qty. 1



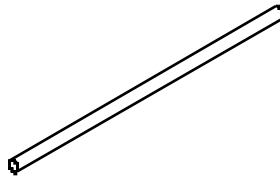
Boom Arm Support
Qty. 2



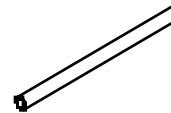
Boom Arm
Qty. 2



3/8" x 48"
Boom Supply Hose
Qty. 1



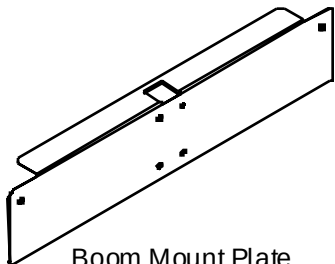
3/8" x 35-1/2"
Outside Boom Hose
Qty. 2



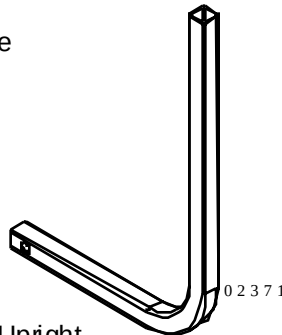
3/8" x 17-1/2"
Center Boom Hose
Qty. 2



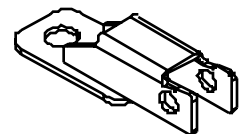
3/8" x 4"
Supply Hose
Qty. 1



Boom Mount Plate
Qty. 1



Boom Upright
Qty. 1

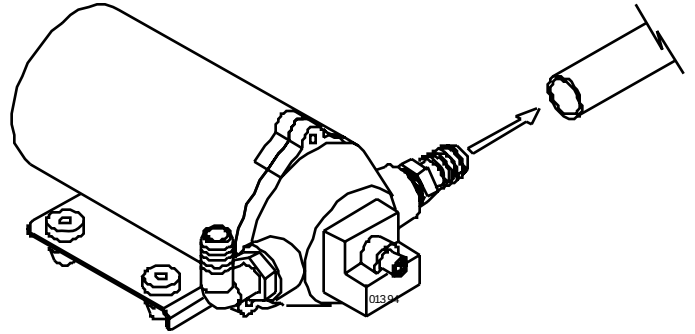


Boom Mount Pivot
Qty. 1

PRE-ASSEMBLY

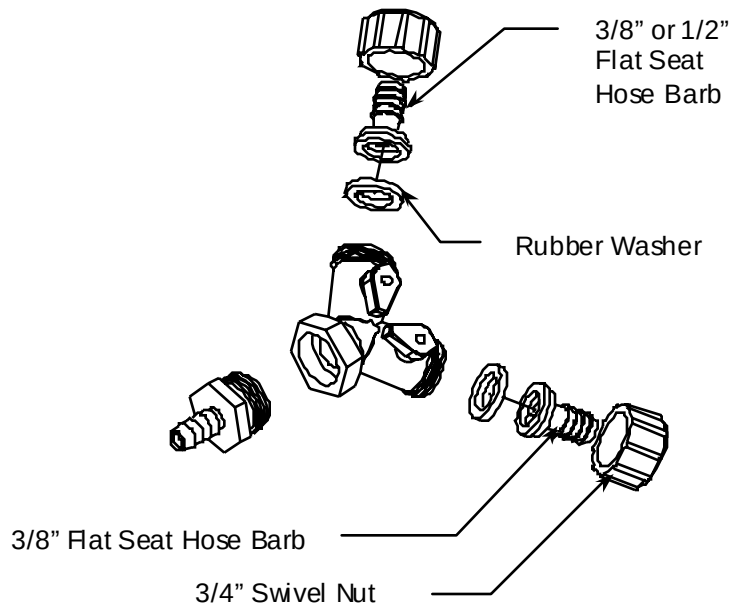
STEP 1:

Loosen the hose clamp on the existing gun hose. Remove the hose from the pump. Save the hose clamp for step 3.



STEP 2:

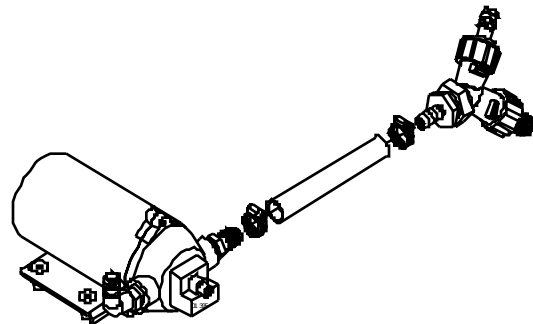
Screw the 3/4" x 3/8" hose barb into the base of the three-way ball valve. Place a rubber washer between the 3/8" flat seat hose barb and the ball valve. Tighten the 3/4" swivel nut onto one branch of the "Y". On the remaining branch you will need to use either the 3/8" or 1/2" flat seat hose barb depending on what size your gun hose is. Place a rubber washer between the hose barb and ball valve and tighten with the remaining 3/4" swivel nut. You can discard the flat seat hose barb that you do not use.



02366

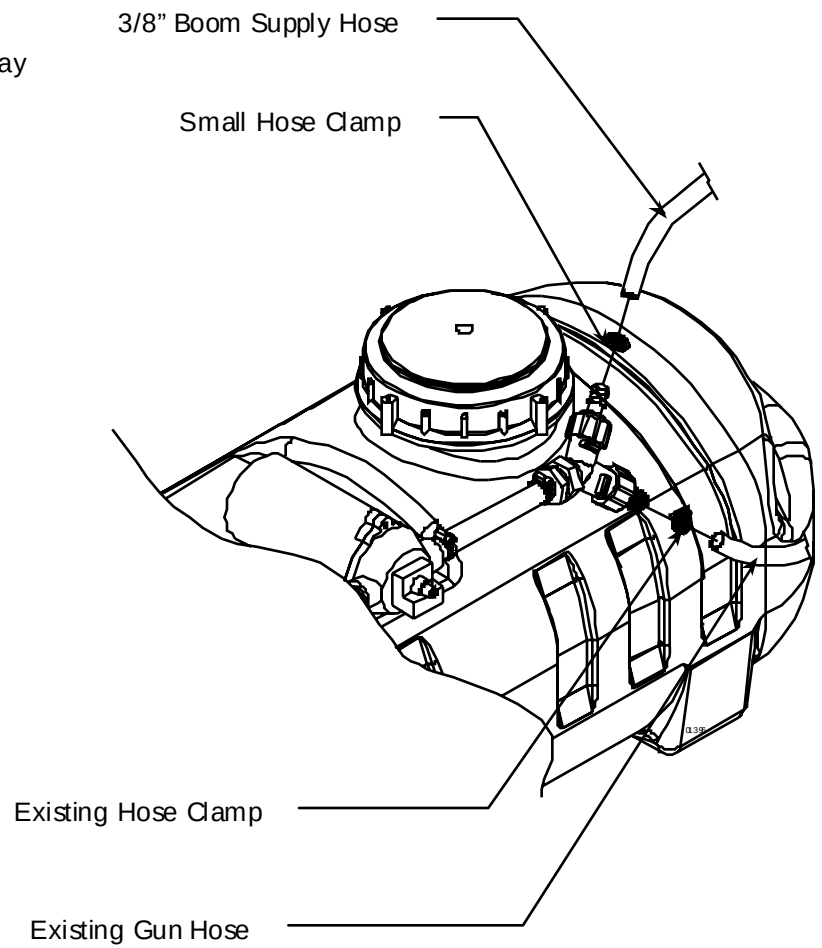
STEP 3:

Slide on one hose clamp onto one end of the supply hose. Push the hose onto the outlet of the pump. Slide another hose clamp onto the supply hose. Push the inlet hose barb of the three-way ball valve assembly onto the free end of the supply hose. Tighten both hose clamps.



STEP 4:

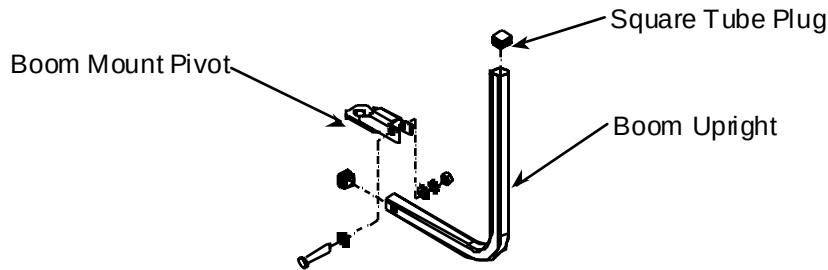
Connect your existing gun hose to the 3-way valve with the existing hose clamp.



BOOM KIT ASSEMBLY

STEP 1:

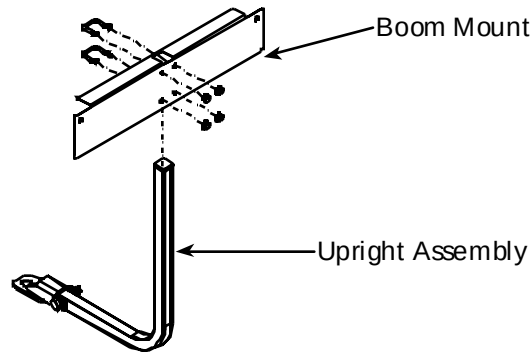
Attach boom mount pivot to boom upright as shown using the 1/2" bolt, nut, lock washer, and 1/2" flat washers provided, **moderately tighten**. Next, press or hammer in the square tube plugs into the ends of the boom upright.



00236

STEP 2:

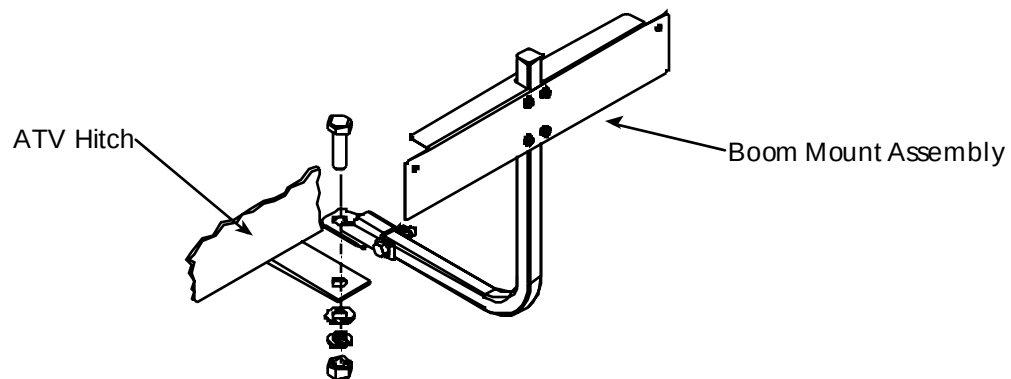
Attach the boom mount plate to the boom upright assembly, using the two u-bolts and four 1/4-20 flange nuts.



00237

STEP 3:

Attach the boom mount assembly just completed, to the ATV hitch, using the 3/4" bolt, nut, lock washer and flat washers provided (**DO NOT Tighten yet**). Adjust the position of the boom mount so that it is parallel with the back of the ATV, or perpendicular to the line of travel. Then tighten the bolted joint.



00238

Insert the elbow hose barb into the boom arm as shown. Fasten to the boom arm using the nozzle nut. Insert the nozzle strainer into the hose barb. Place the nozzle on top of the strainer. Be sure that the opening on the nozzle is positioned so that when the unit is assembled, the opening points at the ground. Tighten the nozzle and nozzle strainer into the hose barb using the swivel nut. Insert the "T" hose barb into the holes in the boom arm and the boom arm support as shown. Install the nozzle nut, nozzle strainer, nozzle and swivel nut. Make sure that both nozzles points in the same direction. Repeat this step for the other boom arm switching the direction of the nozzles.

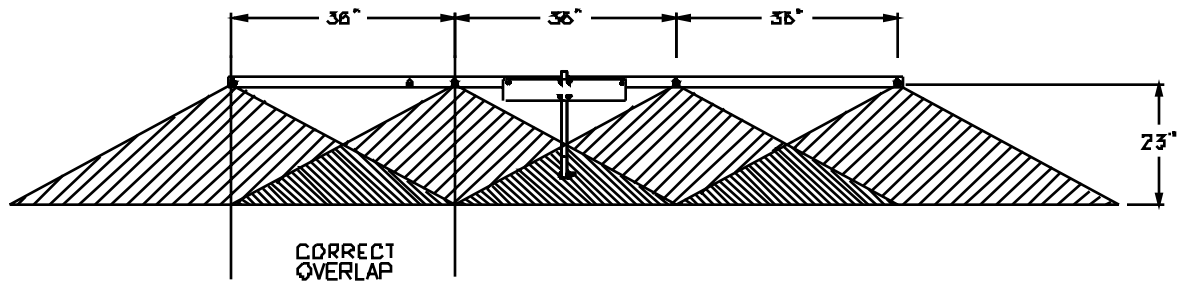


Slide a small hose clamp over both ends of the outside boom hoses and over one end of the center boom hoses. Slide the outside boom hoses, and the center boom hoses onto the hose barb ends of the nozzle bodies which are already assembled to the boom arms. Tighten the hose clamps. Attach the boom arms to the boom mount assembly, using the 5/16" bolts, nyloc nuts, and flat washers as shown. **Make sure the nozzles are pointing down.** Next slide a small hose clamp over the free ends of the center boom hoses, and the boom supply hose. Connect these three hose ends by sliding them on to the insert tee and tightening the clamps. Complete the final adjustment of the boom mount pivot by rotating the boom assembly until the **bottom leg** of the upright is parallel to the ground. Tightening the 1/2" bolt to 50-55 ft-lbs will clamp it in position (the pivot is to accommodate angled hitches).



STEP 5:

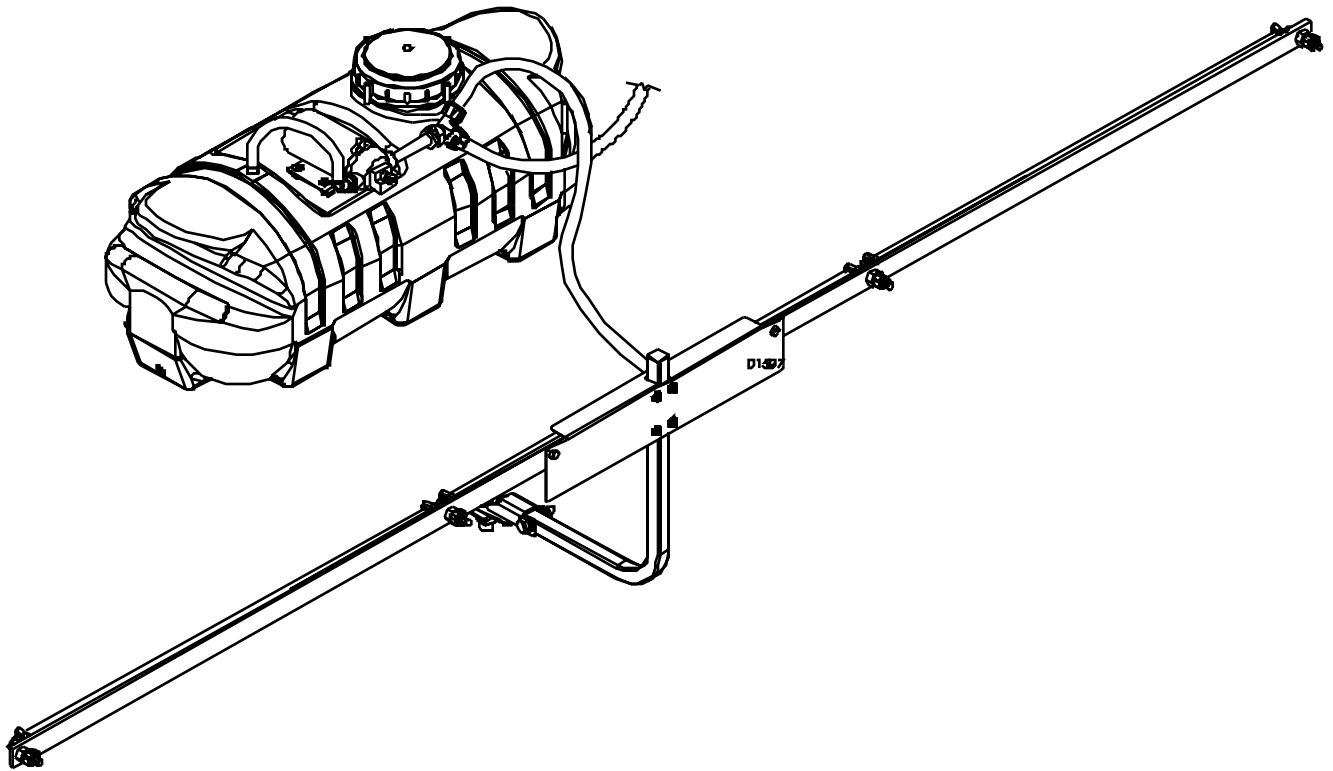
Loosen the u-bolts and slide the boom mount plate up or down on the upright until you get the correct spray overlap. The nozzle height should be approximately 23" above ground.



00642

STEP 6:

Attach the tank to the ATV as described in your spot sprayer manual. Attach the boom supply hose to the remaining hose barb on the y-valve.



REMOVING THE BOOM KIT

1. Make sure the pump is unplugged, and the valve to the boom supply hose is closed.
2. Unscrew the y-valve fitting connected to the boom supply hose.
3. Remove the 3/4" bolt attaching the boom kit to the ATV hitch.

OPERATING INSTRUCTIONS

1. With the unit turned **OFF**, check nozzles for debris or damage. also check for worn hoses and system leaks. Repair before operating.
2. Unfold the left and right boom arms.
3. Once the water and chemicals are well mixed in your sprayer tank, open the valve that is attached to the boom supply hose. Use the valve to turn the boom on and off as desired(*If you have the 268180 you can also use the remote switch to turn the boom on and off*). If you use the spray gun while the boom is operating, you will not get the correct coverage from your boom.
4. Drive at the desired speed, as calculated by tables 1 and 2 on the next page.
5. To operate the spray gun, close the valve leading to the boom and make sure the valve leading to the gun is open.

BOOM KIT CALIBRATION

Below are some guidelines to help you calibrate your boom sprayer. This is a very important step in operating your boom sprayer so that you don't apply too much or too little chemical.

1. Use the suggested application rate (i.e. gallons per acre, 1000 sq.ft., or 100 sq.ft.)
2. Using **Table 1**, find an application rate that corresponds to your chemical manufacturers suggested application rate, and pressure at which your sprayer is operating.
3. Follow this application rate up the chart to find the speed at which to drive your ATV.

TABLE 1

Spray Height	Tip #	Pressure (PSI)	Flow (GPM)	GALLONS PER ACRE - <i>Based on water</i>						
				1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	7 MPH	10MPH
23"	1.5	15	.18*	29.7	14.9	9.9	7.4	5.9	4.2	3.0
23"	1.5	25	.24*	39.6	19.8	13.2	9.9	7.9	5.7	4.0
23"	1.5	35	.28*	46.2	23.1	15.4	11.6	9.2	6.7	4.6

Spray Height	Tip #	Pressure (PSI)	Flow (GPM)	GALLONS PER 1000 SQ.FT. - <i>Based on water</i>						
				1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	7 MPH	10MPH
23"	1.5	15	.18*	.68	.34	.23	.17	.14	.10	.07
23"	1.5	25	.24*	.91	.46	.30	.23	.18	.13	.09
23"	1.5	35	.28*	1.06	.53	.35	.27	.21	.15	.11

Spray Height	Tip #	Pressure (PSI)	Flow (GPM)	GALLONS PER 100 SQ.FT. - <i>Based on water</i>						
				1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	7 MPH	10MPH
23"	1.5	15	.18*	.068	.034	.023	.017	.014	.010	.007
23"	1.5	25	.24*	.091	.046	.030	.023	.018	.013	.009
23"	1.5	35	.28*	.106	.053	.035	.027	.021	.015	.011

* Flow from one nozzle

4. Use **Table 2** to choose the throttle setting on your vehicle.

TABLE 2

Speed (MPH)	Time required in seconds to travel a distance of:		
	100 ft.	200 ft.	300 ft.
1	68	136	205
2	34	68	102
3	23	45	68
4	17	34	51
5	14	28	41
7	9.5	19	29
10	7	14	20

5. The coverage area can be found by dividing 16 gallons for the 2681 / 268199 or 26 gallons for the 26812 (a full tank) by the application rate.

Example: 16 gallons divided by 30 gallons/acre $\approx$ 1/2 acre of coverage per tank.

273011 - PARTS BREAKDOWN REV. J

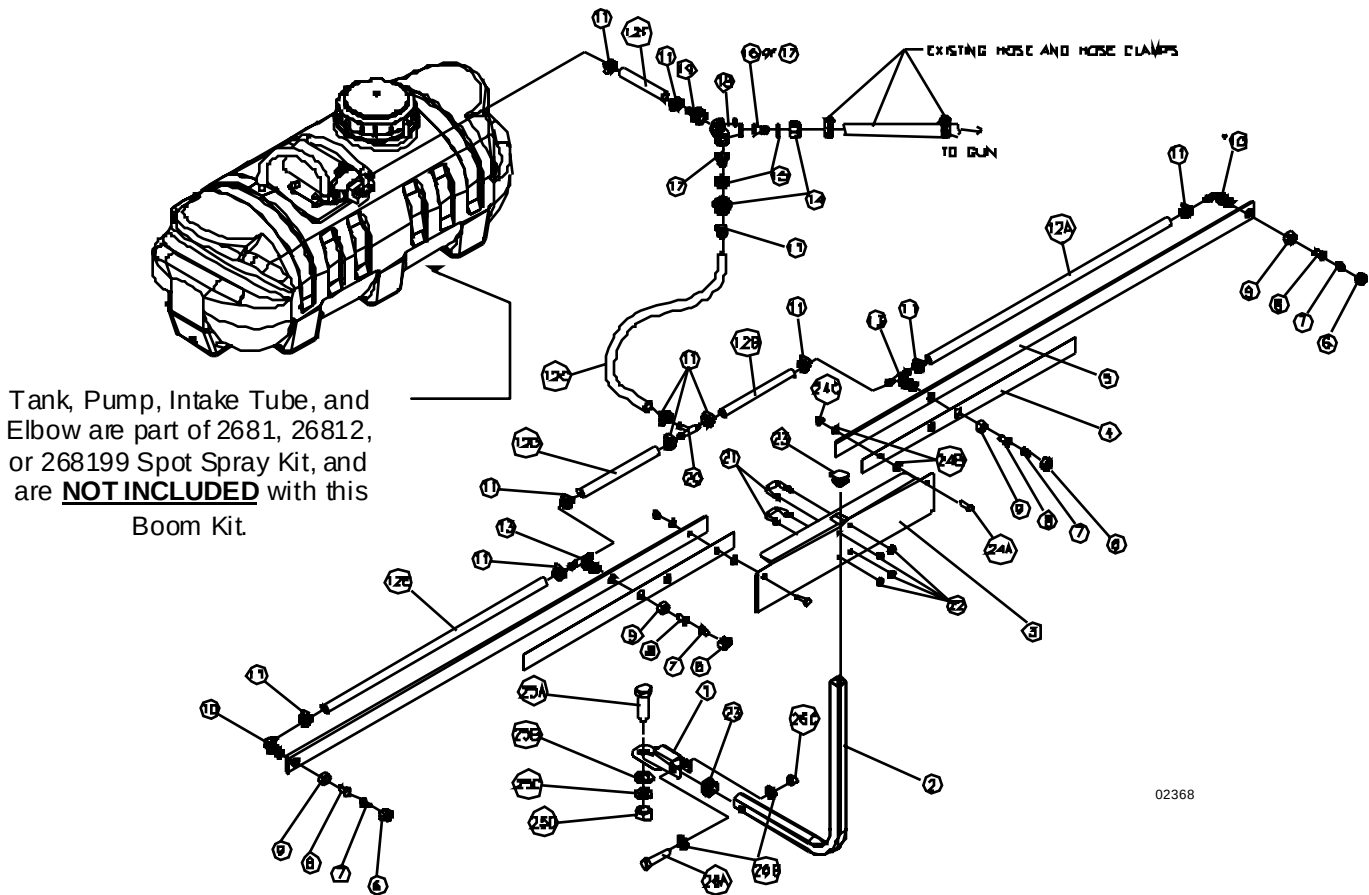


Fig. #	Part #	Description	Qty.
1	31406	Boom Mount Pivot	1
2	31426	Boom Upright	1
3	31405	Boom Mount Plate	1
4	30310	Boom Arm Support	2
5	30168	Lexan Boom Arm	2
6	777853	11/16" Swivel Nut	4
7	253421	Nozzle	4
8	38734	Nozzle Strainer	4
9	5230	11/16" Retainer Nut	4
10	5383	11/16"x3/8" Hose Barb Elbow	2
11	30746	Small Hose Clamp	12
12A	30290	3/8" Outside Boom Hose	35.5"
12B	30290	3/8" Center Boom Hose	17.5"
12C	30290	3/8" Boom Supply Hose	48"
12D	30290	3/8" Center Boom Hose	17.5"
12E	30290	3/8" Outside Boom Hose	35.5"
12F	30290	3/8" Supply Hose	4"
13	5382	11/16" X 3/8 Hose Barb Tee	2
14	777850	3/4" Thread Swivel Nut	2

Fig. #	Part #	Description	Qty.
15	5232	Rubber Washer	2
16	5212	1/2" Flat Seat Hose barb	1
17	5380	3/8" Flat Seat Hose barb	2
18	777849	3 Way Ball Valve	1
19	5387	3/8" Hose Barb x 3/4" MGHT	1
20	5329	3/8" Hose Barb Insert Tee	1
21	82145	1-1/8" x 1-3/8" x 1/4-20 U-Bolt	2
22	82013	1/4-20 Flange Nut	4
23	777657	Square tube Plug	2
24A	82091	5/16-18x1" Hex Head Bolt	2
24B	82021	5/16" Flat Washer	4
24C	82020	5/16" Nyloc Nut	2
25A	82039	3/4-10 X 2-1/2" Flange Bolt	1
25B	82042	3/4" Flat Washer	1
25C	82041	3/4" Lock Washer	1
25D	82040	3/4-10 Hex Nut	1
26A	82035	1/2-13 X 2-1/2" Flange Bolt	1
26B	82038	1/2" Flat Washer	2
26C	82036	1/2-13 Hex Nut	1

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