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FY425

1.5m Farm Yard Sprayer



Assembly, Parts and Operator's Manual

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Minimize Chemical Drift

The *Windfoil* sprayer has been designed in wind tunnels to control airflow around and behind the sprayer to minimize drift, allowing safe spraying in windy conditions. Drift can blow off a field after it has been sprayed, especially in high winds. Reasonable caution should be taken, in order to spray effectively and safely. **For maximum drift control, keep curtain in contact with the**

Nozzles

The FY325 and FY425 are equipped with 80° spray tips respectively, spaced at 16". Tips are mounted with self-aligning ¼ turn caps for easy removal or change.

Trouble Shooting

If dripping occurs, caused by the diaphragm not seating properly, the diaphragm may be hard, cracked, or the seating may be damaged.

Cleaning

Sprayers need to be cleaned to prevent corrosion, to prevent cross contamination of chemicals, and to prevent any grit or solids in the liquid that will reduce pressure. Flush with clean water, preferably after each day's operation. Rinse the outside of the sprayer.

Winterizing

After the sprayer is thoroughly cleaned, put 2 to 5 quarts of rust inhibitor or antifreeze in the tank for final system flushing to help prevent corrosion.

Calibration

To calibrate, operate the sprayer at the desired pressure. Collect the output from each nozzle for 60 seconds, using an accurate measuring cup. Record the output from each nozzle. Replace nozzles that are more than 5% above or below the average reading, or have a visibly distorted spray pattern.

Run a speed test in the area to be sprayed, with a full tank. The sprayer must be at operating speed before starting the test run. To determine the speed, mark off a distance as found on one of the tables below. Spray this distance, carefully noting and recording the time to cover the distance. The actual speed can be found for the specific distance traveled and time to travel, using the table.

After the nozzles have been individually checked, the sprayer should be calibrated to determine the correct speed for the desired application volume. To get area covered, multiply the width of the boom by the distance traveled [FY325 = 52"(1m)] and [FY425 = 64"(1.5m)]. (Area Covered) = (width of boom)x(distance).

Table 1: Time in seconds to travel a distance of:

Mph	10'	25'	50'	100'
2.5	2.7	6.8	13.6	27.3
3	2.3	5.7	11.4	22.7
4	1.7	4.3	8.5	17.0

Table 2: Time in seconds to travel a distance of:

Km/h	10m	25m	50m	100m
3	12.0	30.0	60.0	120.0
4	9.0	22.5	45.0	90.0
5	7.2	18.0	36.0	72.0

Application Rate Tables

Table 3: Acceptable Tip Sizes for Standard and High Flow Pump

FARM YARD	PUMP		OPEN FLOW (gpm)	TIPS (80 degree only)						
	BOOM	Part #		Description	8001	80015	8002	8003	8004	8005
FY425	14498	STANDARD DEL	2.0	YES	YES	YES	NO	NO	NO	NO
FY425HF	14181	HIGH FLOW DEL	5.0	YES	YES	YES	YES	YES	YES	NO
SPRAY TIME TO EMPTY(MINUTES)				63	42	31	21	16	13	N/A

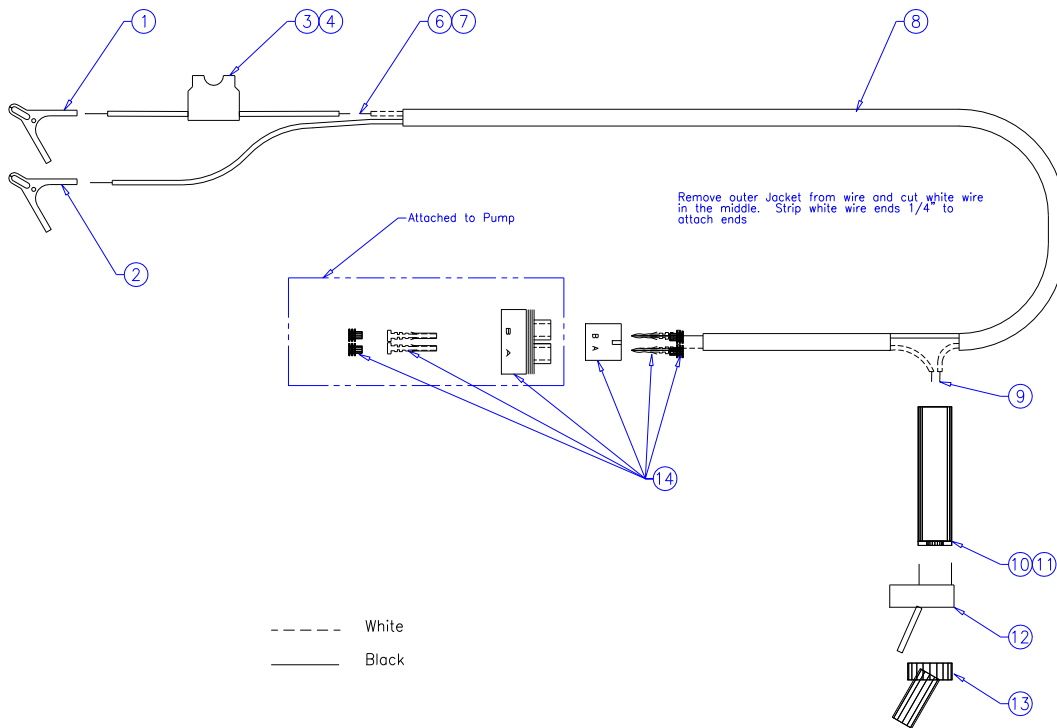
Table 4: Nozzle Application Rates for 16" (40cm) Spacing

Rogers Part #	Tip Number	Liquid Press psi	Capacity 1 nozzle gpm	U. S. GALLONS PER ACRE					U. S. GALLONS PER 1000 SQ. FT.					Press bars
				2.5	3	4	5	7	2.5	3	4	5	7	
				mph	mph	mph	mph	mph	mph	mph	mph	mph	mph	
05872	800067SS (200 mesh)	30	0.058	8.6	7.2	5.4	4.3	3.1	0.20	0.16	0.12	0.10	0.07	2.07
		40	0.067	9.9	8.3	6.2	5.0	3.6	0.23	0.19	0.14	0.11	0.08	2.76
		50	0.075	11.1	9.3	7.0	5.6	4.0	0.25	0.21	0.16	0.13	0.09	3.45
		60	0.082	12.2	10.2	7.6	6.1	4.4	0.28	0.23	0.17	0.14	0.10	4.14
01369	8001VS (100 mesh)	30	0.087	12.9	10.7	8.0	6.4	4.6	0.29	0.25	0.18	0.15	0.11	2.07
		40	0.100	14.9	12.4	9.3	7.4	5.3	0.34	0.28	0.21	0.17	0.12	2.76
		50	0.112	16.6	13.8	10.4	8.3	5.9	0.38	0.32	0.24	0.19	0.14	3.45
		60	0.122	18.2	15.2	11.4	9.1	6.5	0.42	0.35	0.26	0.21	0.15	4.14
00827	80015VS or	30	0.130	19.3	16.1	12.1	9.6	6.9	0.44	0.37	0.28	0.22	0.16	2.07
		40	0.150	22.3	18.6	13.9	11.1	8.0	0.51	0.43	0.32	0.26	0.18	2.76
13351	API-80015 (100 mesh)	50	0.168	24.9	20.8	15.6	12.5	8.9	0.57	0.48	0.36	0.29	0.20	3.45
		60	0.184	27.3	22.7	17.1	13.6	9.7	0.62	0.52	0.39	0.31	0.22	4.14
05876	8002VS or	30	0.173	25.7	21.4	16.1	12.9	9.2	0.59	0.49	0.37	0.29	0.21	2.07
		40	0.200	29.7	24.8	18.6	14.9	10.6	0.68	0.57	0.43	0.34	0.24	2.76
12422	API-8002 (50 mesh)	50	0.224	33.2	27.7	20.8	16.6	11.9	0.76	0.63	0.48	0.38	0.27	3.45
		60	0.245	36.4	30.3	22.7	18.2	13.0	0.83	0.69	0.52	0.42	0.30	4.14

FOLLOWING TIPS ARE FOR HIGH FLOW PUMP ONLY

05877	8003VS or	30	0.260	38.6	32.2	24.1	19.3	13.8	0.88	0.74	0.55	0.44	0.32	2.07
		40	0.300	44.6	37.1	27.8	22.3	15.9	1.02	0.85	0.64	0.51	0.36	2.76
13352	API-8003 (50 mesh)	50	0.335	49.8	41.5	31.1	24.9	17.8	1.14	0.95	0.71	0.57	0.41	3.45
		60	0.367	54.6	45.5	34.1	27.3	19.5	1.25	1.04	0.78	0.62	0.45	4.14
05878	8004VS or	30	0.346	51.4	42.9	32.2	25.7	18.4	1.18	0.98	0.74	0.59	0.42	2.07
		40	0.400	59.4	49.5	37.1	29.7	21.2	1.36	1.13	0.85	0.68	0.49	2.76
12423	API-8004 (50 mesh)	50	0.447	66.4	55.3	41.5	33.2	23.7	1.52	1.27	0.95	0.76	0.54	3.45
		60	0.490	72.7	60.6	45.5	36.4	26.0	1.67	1.39	1.04	0.83	0.59	4.14
05879	8005VS or	30	0.433	64.3	53.6	40.2	32.2	23.0	1.47	1.23	0.92	0.74	0.53	2.07
		40	0.500	74.3	61.9	46.4	37.1	26.5	1.70	1.42	1.06	0.85	0.61	2.76
12424	API-8005 (50 mesh)	50	0.559	83.0	69.2	51.9	41.5	29.6	1.90	1.58	1.19	0.95	0.68	3.45
		60	0.612	90.9	75.8	56.8	45.5	32.5	2.08	1.74	1.30	1.04	0.74	4.14

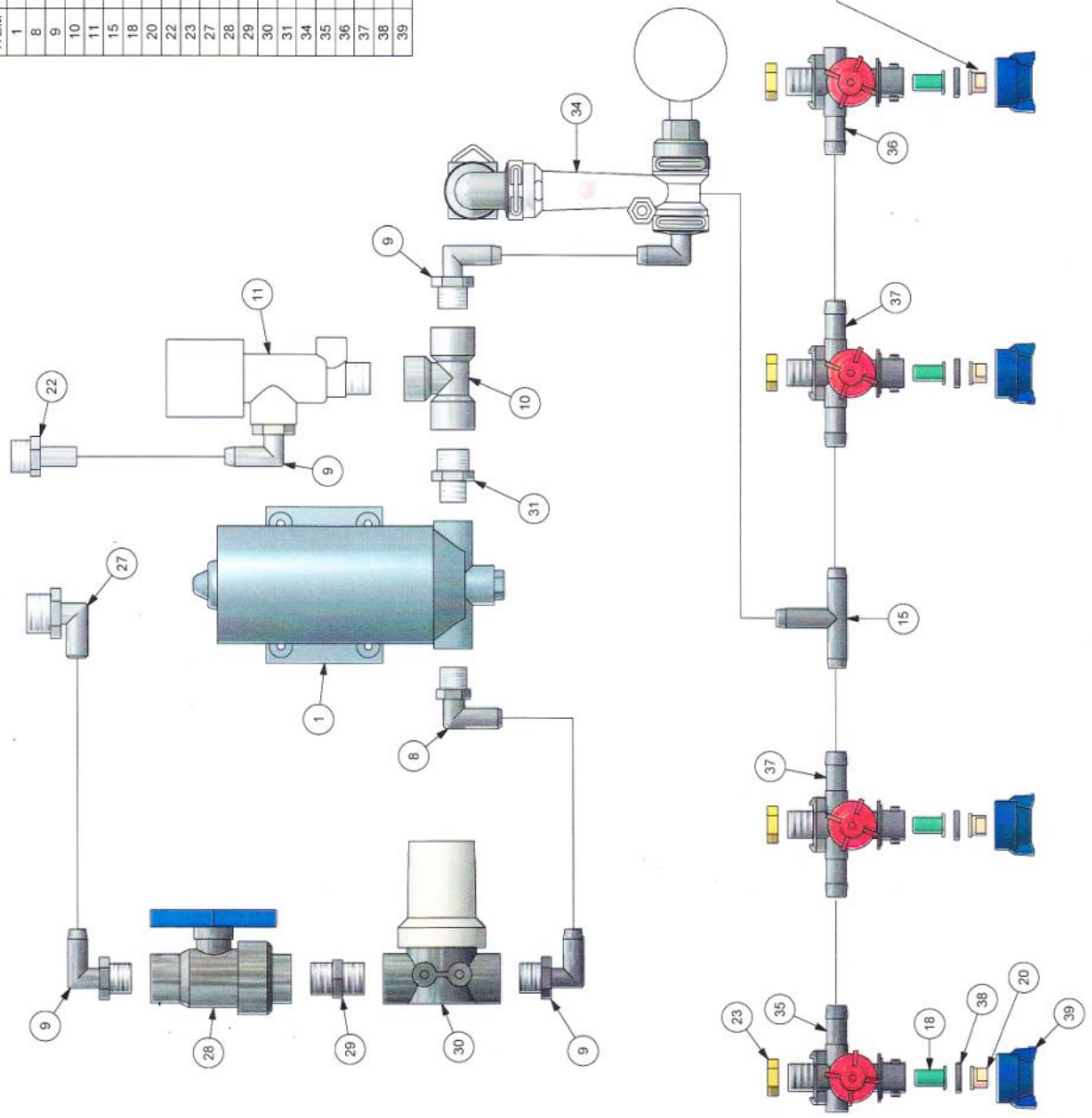
Electrical Assembly



Item	Description	Part #	Qty
1	Battery Clamp, Red	13257	1
2	Battery Clamp, Black	13256	1
3	Fuse, Blade, 10A, 12V	05106	1
4	Fuse Holder, Blade Type, Inline	01268	1
6	Butt Connector, 14-16Ga, Insulated	09323	2
7	Heat Shrink	12297	2
8	Cable, 14/2X180, Black, Rubber Jacketed	13325	1
9	Ring Connector, 14/16GaX.170	01303	2
10	Switch Handle, FY1000	13323	1
11	Heat Shrink	12298	1
12	Toggle Switch, 6V/35A	13324	1
13	Switch Boot, Rubber	12736	1
14	Connector Kit, Weather-Pak, 2M/F	11823	1

Parts List		
ITEM	QTY	DESCRIPTION
1	1	Pump 12V DEL 7812 Series
8	1	FTG POLY ELB 3/8MNPTx1/2HB
9	4	FTG POLY ELB 1/2MNPTx1/2HB
10	1	FTG POLY TEE 1/2NPT F/F/F
11	1	REGULATOR PRESSURE NYLON 1/2"
15	1	FTG NYL TEE 1/2HB/HB/HB
18	4	SCREEN, TIP 100 MESH
20	4	TIP 8001VS ORANGE
22	1	FTG POLY ADPT 1/2MNPTx1/2HB
23	4	NUT BRASS, 11/16"
27	1	FTG POLY ELB 3/4MNPTx1/2HB
28	1	VALVE BALL POLY 1/2FNPT
29	1	FTG POLY NIPPLE 1/2MNPT/MNPT
30	1	STRAINER LINE 1/2 COMPACT W/MIT
31	1	FTG POLY NIPPLE 3/8 x1/2MNPT
34	1	FLOW ASSY FY425/325
35	1	NOZZLE BODY TJ15R
36	1	NOZZLE BODY, TJ15L
37	2	NOZZLE BODY, TJ15T
38	4	SEAL NOZZLE CAP, TJ
39	4	CAP T-J-NB BLUE

FITTINGS ATTACHED TO TANK

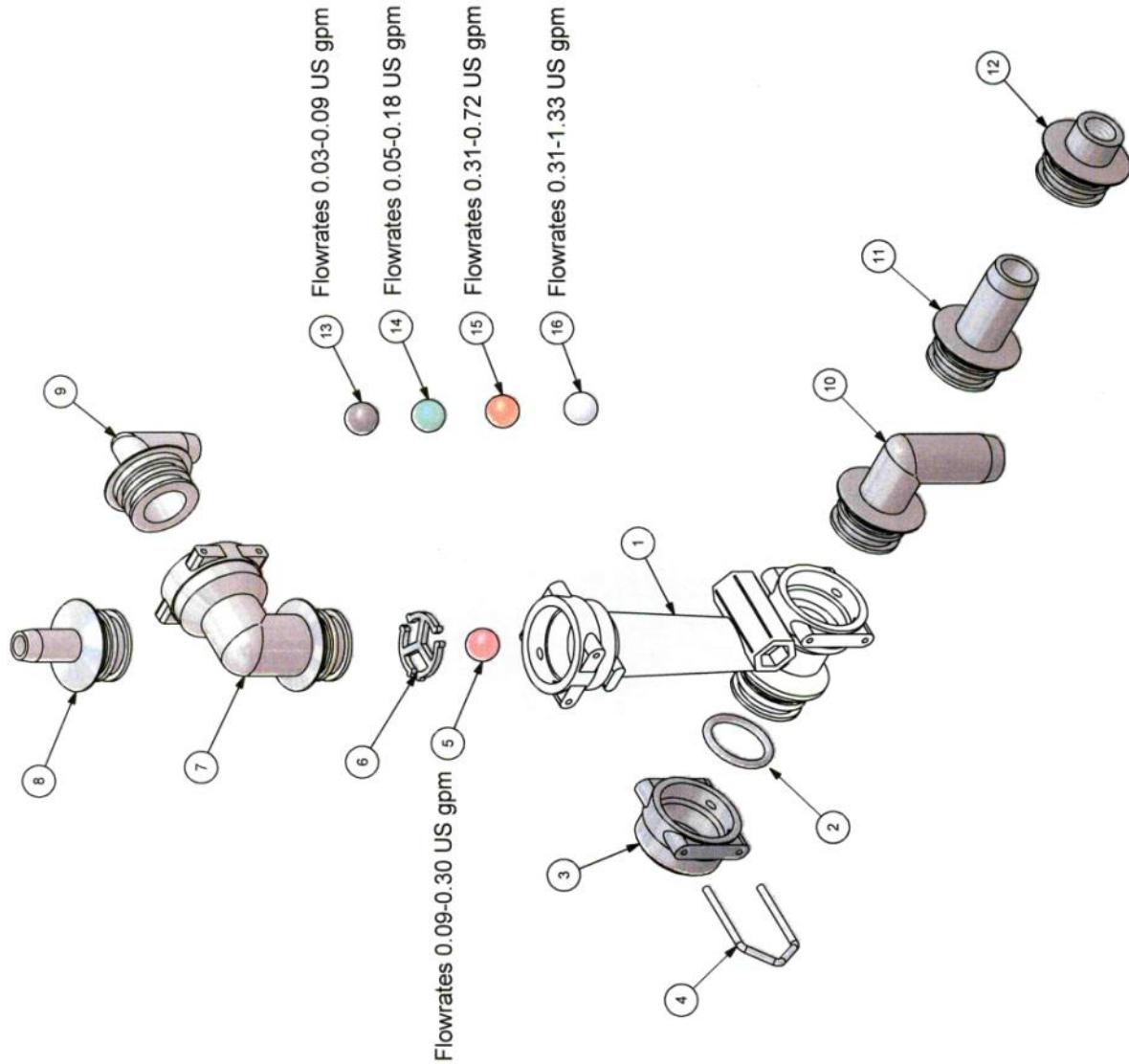


NOTE: THE TIP IN YOUR PARTICULAR UNIT MAY BE DIFFERENT FROM WHAT IS DISPLAYED IN THE DRAWING. SEE APPLICABLE APPLICATION RATE CHART FOR TIP USED IN UNIT

DRAWN: BILL INSKI	ROGERS SPRAYERS INC.
DATE: 1/22/07	TITLE: FLOW KIT FY325/425
LOCATION: PLUMBING	DWG NO: 14880
REVISION #	SCALE: BEST FIT
	MATERIAL: A
	SIZE: A

ORC Assembly

Parts List			
ITEM	QTY	PART#	DESCRIPTION
1	1	00889	FLOWMONITOR ORC BODY
2	1	11984	O-RING ORC
3	1	00909	FTG POLY ORC CAP
4	1	11976a	ORC CLIP
5	1	11990	BALL FI CELCON 0.09-0.3 USGPM
6	1	11989	ORC BALL RETAINER
7	1	01115	FTG POLY ELB ST.MORC x FORC
8	1	11975	FTG POLY ADPT MORC x 1/2HB
9	1	00906	FTG POLY ELB MORC x 1/2HB
10	1	00905	FTG POLY ELB .MORC x 3/4HB
11	1	00903	FTG POLY ADPT MORC x 3/4HB
12	1	12727	FTG POLY ADPT MORC x 1/4FNPT
13	1	01118	BALL FI POLY 0.03-0.09 USGPM
14	1	01119	BALL FI POLY 0.05-0.18 USGPM
15	1	11965	BALL FI GLASS 0.31-0.72 USGPM
16	1	11991	BALL FI SS 1/2" 0.31-1.3 USGPM



DRAWN: MERV BILINSKI		ROGERS SPRAYERS INC.	
DATE:		TITLE	
DESIGNED: MERV BILINSKI		ORC ROTOMETER PARTS	
CHECKED: MERV BILINSKI		DWG NO	
REVISION #		11992	
SCALE	BEST FIT	MATERIAL	SIZE
			A



Figure 1: Wheel assembly

Figure 2: Wheel assembly

First take components out of box. With boom upside down on saw horses or table install wheel assemblies. Return to upright position and mount airfoil as shown in figure 3. Take pressure gauge out of box and install on flow monitor. Position flow monitor vertically as shown in figure 4 and connect feed hose. *** If installing a wand kit see figures 11-16 on pages 10 and 11***

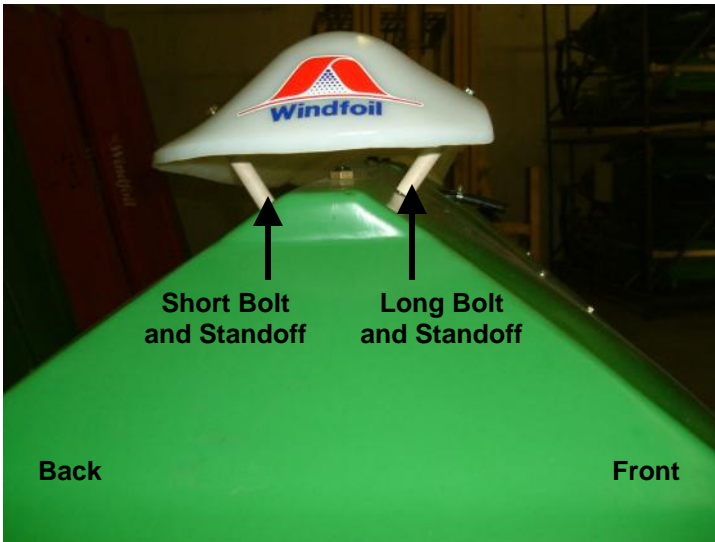


Figure 3: Airfoil assembly



Figure 4: Flow monitor and pressure gauge



Figure 5: Mounting hitch on boom



Figure 6: Mount tank and secure with strap



Figure 7: Attaching return line from Pressure Regulator



Figure 8: Attaching feed line from tank to valve



Figure 9: Attaching nozzle feed hose to flow monitor



Figure 10: Main plumbing Assembly

*****The following instructions and pictures are for the installation of the wand kit*****

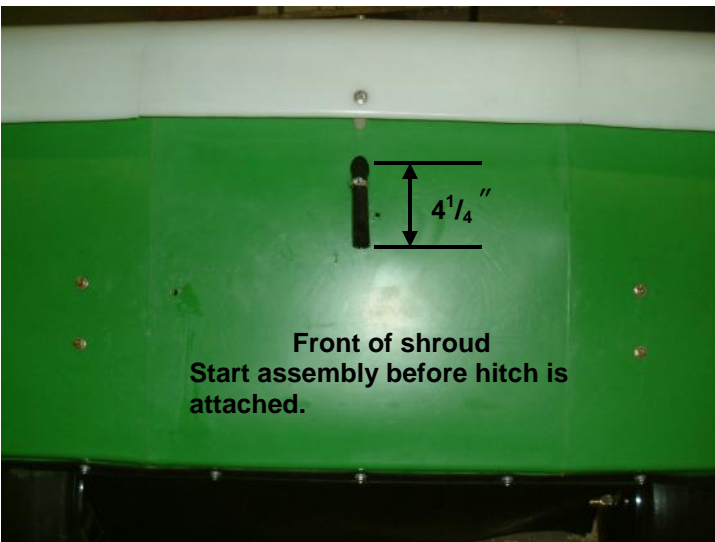


Figure 11: Boom feed hose

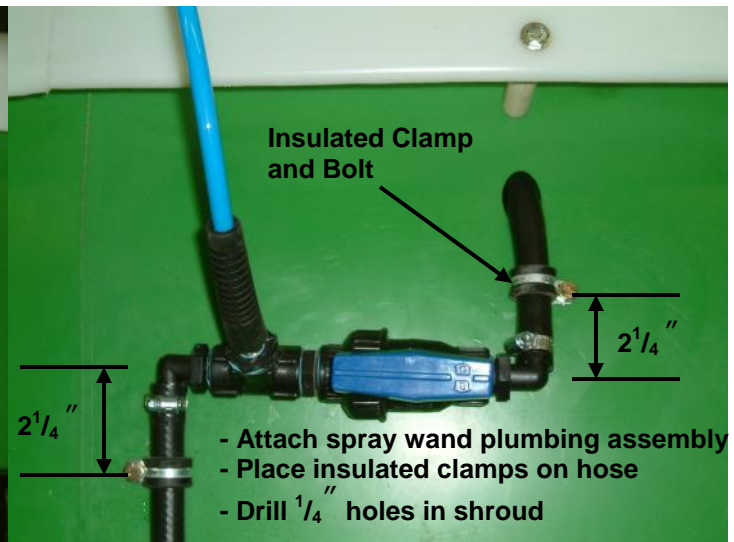


Figure 12: Spray wand plumbing assembly



Figure 13: Spray wand holding clamps



Figure 14: Spray wand holding clamps

Use existing airfoil mounting bolt to attach insulated clamp for holding spray wand. Position wand so tip is clear from the front of the boom and drill hole for second holding clamp. Now continue with the rest of the assembly from figure 4.

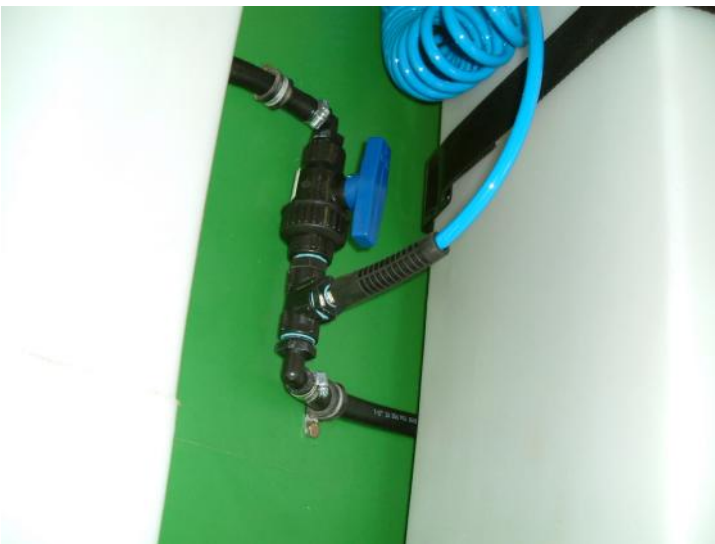


Figure 15: Assembled FY 425 with wand kit



Figure 16: Assembled FY 425 with wand kit

Adjust spray wand plumbing assembly if necessary to ensure free movement of valve and wand hose.



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