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BK20T - 20 foot (6m) OPEN BOOM ELECTRIC FOLD



NOTE: Picture includes ground follow wheels and 8 foot (2m) extensions.

Assembly, Parts and Operator's Manual

Version BK20T-1403

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Visit our website, www.rogerssprayers.com, for additional models.

Safety

Whenever pesticides are changed or before sprayer storage, clean sprayers thoroughly with a cleaning solution that neutralizes the chemical to prevent cross contamination. The solution used depends on the chemical to be removed from the sprayer. Check the chemical label for cleaning instructions.

Review all instructions and procedures outlined in this manual annually. Every operator must familiarize himself with the operating instructions of the sprayer.

Assembly Safety

- Clear large area to fold booms out in field position.
- A minimum of two people are required for the assembly of large equipment, especially when lifting or exertion is
- required.
- Always use clean tools of the proper size and specification to match the hardware and specific job.

Operational Safety

- Shut down sprayer and power unit then wait for all parts to stop before adjusting, cleaning, or lubricating the power unit or sprayer.
- Before spraying an area familiarize yourself with any rocks, debris, trees, traps, ditches, or gullies that may be potentially dangerous. Plan the spraying route to avoid these hazards. When spraying, use individual section controls to reduce the amount of double spraying.
- Keep sprayer boom width in mind at all times. When turning, exercise caution and avoid any obstacles or other persons. Remember the boom takes a wider swing going around corners.
- Spray only chemicals that unit was designed for, (ie turf application). Do not use products for which unit was not designed, (ie PAINT, sealants, cleaning fluids, dust inhibitors, ice surfaces).
- Stay clear of the pinch points and areas where the sprayer moves under power or by pivot pins. Areas of concern include but are not limited to the following: 1) Wing lift arms on the center during lifting the wings. 2) The stopper and the wing frame during lifting.
- Any maintenance intervention, in particular welding, shall only be undertaken after the spray boom has been thoroughly rinsed.

Transport Safety

- Reduce speed on rough terrain.
- For all sprayers ensure that booms are folded and/or locked securely for transport.

Minimize Chemical Drift

Drift can blow off a field after it has been sprayed, especially in high winds. Even though this boom can be equipped with low drift air induction nozzles, reasonable caution should be taken in order to spray effectively and safely.

General Spraying Information

Application Tips
Always use clean filtered water in the sprayer tank.

Check the flow rate from all nozzles using the capacity calibration technique; see the Calibration section for tables and instructions. Use only clear water with no trace of chemicals when performing all calibration tests. Adjust the sprayer pressure to get the proper flow rate.

Nozzles

Despite being the most important component for accurate uniform spraying application, nozzles are often neglected and abused. Nozzle flow rate depends on effective orifice size and the pressure.

The spray patterns must overlap for even coverage but should not interfere with one another. Nozzles are set at a 10° angle so that one edge of its pattern will be just behind the edge of its adjacent spray pattern, evading interference with each other.

The BK20T spray boom can use either 110° or 80° tips, adjust the height of the sprayer to obtain full double or triple overlap pattern as required.

Diaphragm Check Valve Nozzle Bodies

Diaphragm check valves close at approximately 15 psi (1 bar) to prevent excessive dripping. Should the cap on the valve loosen or the check valve diaphragm become misaligned the body may leak. Stop the leak by tightening the check valve cap or remove the cap and inspect the seal for damage or improper assembly. (The check valve seal is an item that should be regularly replaced. Over time the seal in the check valve becomes brittle, as this happens the nozzle body will slowly begin to leak more. To check for defective check valves when the spraying stop control has been actuated, the volume that drips from each nozzle should not exceed 2ml timed over a 5 minute period. The measuring is to start 8 seconds after the flow to the spray boom is shut off.

Nozzle caps are attached by engaging the cap and turning clockwise about a third of a turn. Self-aligning caps have a slot to align the tips. Ensure that the tips fit down into the slotted hole before installing caps on the diaphragm nozzle body assembly with the tip screen

Calibration

As a tip wears the spray pattern distorts, output volumes usually increase and the droplet characteristics change. Recalibration may correct for output changes but cannot correct for spray pattern changes or the drop size generated.

Use only clear water with no trace of chemicals when performing all calibration tests. 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 has a visibly distorted pattern.

Actual sprayer speed, as determined from the tables below, will differ from the sprayer speedometer readings because of wheel slippage. Run a speed test in the field to be sprayed, and have the sprayer tank half full. The sprayer must be at full speed before starting the test run. To determine the speed discrepancy, mark off a distance as found on one of the tables. Run the power unit over this distance, carefully noting the speedometer reading and recording the time to cover the distance. The actual speed traveled can be found for the specific distance and time to travel, using the table.

After the nozzles have been individually checked and matched, the sprayer should be calibrated to determine the correct speed for the desired application volume.

Table 5: Time (seconds) to travel a distance of:

km/h	10m	25m	50m	100m	200m
1	36.0	90.0	180.0	360.0	720.0
1.5	24.0	60.0	120.0	240.0	480.0
2	18.0	45.0	90.0	180.0	360.0
2.5	14.4	36.0	72.0	144.0	288.0
3	12.0	30.0	60.0	120.0	240.0
4	9.0	22.5	45.0	90.0	180.0
5	7.2	18.0	36.0	72.0	144.0
6	6.0	15.0	30.0	60.0	120.0

Table 6: Time (seconds) to travel a distance of:

mph	10ft	20ft	50ft	100ft	200ft
1	6.8	17.0	34.1	68.2	136.0
1.5	4.5	11.4	22.7	45.5	90.9
2	3.4	8.5	17.0	34.1	68.2
2.5	2.7	6.8	13.6	27.3	54.5
3	2.3	5.7	11.4	22.7	45.5
4	1.7	4.3	8.5	17.0	34.1
5	1.4	3.4	6.8	13.6	27.3
6	1.1	2.8	5.7	11.4	22.7

Application Rate Tables

Table 1: American Application Rates at 20” Nozzle Spacing – 110 Degree Tips

Rogers Part #	Tip Number	Tip Mfg	Liquid Press psi	Liq. Press bars	Cap. /noz. gpm	U. S. GALLONS PER ACRE					U. S. GALLONS PER 1000 SQ. FT.				
						2.5 mph	3 mph	4 mph	5 mph	7 mph	2.5 mph	3 mph	4 mph	5 mph	7 mph
01369	8001VS (100 mesh)	Teejet	30	2.07	0.087	10.3	8.6	6.4	5.1	3.7	0.24	0.20	0.15	0.12	0.08
			40	2.76	0.100	11.9	9.9	7.4	5.9	4.2	0.27	0.23	0.17	0.14	0.10
			50	3.45	0.112	13.3	11.1	8.3	6.6	4.7	0.30	0.25	0.19	0.15	0.11
			60	4.14	0.122	14.5	12.1	9.1	7.3	5.2	0.33	0.28	0.21	0.17	0.12
00827	80015VS	Teejet	30	2.07	0.130	15.4	12.9	9.6	7.7	5.5	0.35	0.29	0.22	0.18	0.13
	or		40	2.76	0.150	17.8	14.9	11.1	8.9	6.4	0.41	0.34	0.26	0.20	0.15
13351	API-80015 (100 mesh)	Albuz	50	3.45	0.168	19.9	16.6	12.5	10.0	7.1	0.46	0.38	0.29	0.23	0.16
			60	4.14	0.184	21.8	18.2	13.6	10.9	7.8	0.50	0.42	0.31	0.25	0.18
05876	8002VS	Teejet	30	2.07	0.173	20.6	17.1	12.9	10.3	7.3	0.47	0.39	0.29	0.24	0.17
	or		40	2.76	0.200	23.8	19.8	14.9	11.9	8.5	0.54	0.45	0.34	0.27	0.19
14384	AXI-8002 (50 mesh)	Albuz	50	3.45	0.224	26.6	22.1	16.6	13.3	9.5	0.61	0.51	0.38	0.30	0.22
			60	4.14	0.245	29.1	24.2	18.2	14.5	10.4	0.67	0.56	0.42	0.33	0.24
05877	8003VS	Teejet	30	2.07	0.260	30.9	25.7	19.3	15.4	11.0	0.71	0.59	0.44	0.35	0.25
	or		40	2.76	0.300	35.6	29.7	22.3	17.8	12.7	0.82	0.68	0.51	0.41	0.29
14385	AXI-8003 (50 mesh)	Albuz	50	3.45	0.335	39.8	33.2	24.9	19.9	14.2	0.91	0.76	0.57	0.46	0.33
			60	4.14	0.367	43.6	36.4	27.3	21.8	15.6	1.00	0.83	0.62	0.50	0.36
05878	8004VS	Teejet	30	2.07	0.346	41.2	34.3	25.7	20.6	14.7	0.94	0.79	0.59	0.47	0.34
	or		40	2.76	0.400	47.5	39.6	29.7	23.8	17.0	1.09	0.91	0.68	0.54	0.39
14061	AXI-8004 (50 mesh)	Albuz	50	3.45	0.447	53.1	44.3	33.2	26.6	19.0	1.22	1.01	0.76	0.61	0.43
			60	4.14	0.490	58.2	48.5	36.4	29.1	20.8	1.33	1.11	0.83	0.67	0.48
05879	8005VS	Teejet	30	2.07	0.433	51.4	42.9	32.2	25.7	18.4	1.18	0.98	0.74	0.59	0.42
	or		40	2.76	0.500	59.4	49.5	37.1	29.7	21.2	1.36	1.13	0.85	0.68	0.49
14386	AXI-8005 (50 mesh)	Albuz	50	3.45	0.559	66.4	55.3	41.5	33.2	23.7	1.52	1.27	0.95	0.76	0.54
			60	4.14	0.612	72.7	60.6	45.5	36.4	26.0	1.67	1.39	1.04	0.83	0.59
05880	8006VS	Teejet	30	2.07	0.520	61.7	51.4	38.6	30.9	22.0	1.41	1.18	0.88	0.71	0.50
	or		40	2.76	0.600	71.3	59.4	44.6	35.6	25.5	1.63	1.36	1.02	0.82	0.58
14387	AXI-8006 (50 mesh)	Albuz	50	3.45	0.671	79.7	66.4	49.8	39.8	28.5	1.82	1.52	1.14	0.91	0.65
			60	4.14	0.735	87.3	72.7	54.6	43.6	31.2	2.00	1.67	1.25	1.00	0.71
05881	8008VS (50 mesh)	Teejet	30	2.07	0.693	82.3	68.6	51.4	41.2	29.4	1.88	1.57	1.18	0.94	0.67
			40	2.76	0.800	95.0	79.2	59.4	47.5	33.9	2.18	1.81	1.36	1.09	0.78
			50	3.45	0.894	106.3	88.5	66.4	53.1	37.9	2.43	2.03	1.52	1.22	0.87
			60	4.14	0.980	116.4	97.0	72.7	58.2	41.6	2.67	2.22	1.67	1.33	0.95
13674	ER8010	Wilger	30	2.07	0.866	102.9	85.7	64.3	51.4	36.7	2.36	1.96	1.47	1.18	0.84
	or		40	2.76	1.000	118.8	99.0	74.3	59.4	42.4	2.72	2.27	1.70	1.36	0.97
14414	XR8010SS	Teejet	50	3.45	1.118	132.8	110.7	83.0	66.4	47.4	3.04	2.53	1.90	1.52	1.09
			60	4.14	1.225	145.5	121.2	90.9	72.7	52.0	3.33	2.78	2.08	1.67	1.19
14330	ER80125	Wilger	30	2.07	1.083	128.6	107.2	80.4	64.3	45.9	2.94	2.45	1.84	1.47	1.05
			40	2.76	1.250	148.5	123.8	92.8	74.3	53.0	3.40	2.83	2.13	1.70	1.21
			50	3.45	1.398	166.0	138.4	103.8	83.0	59.3	3.80	3.17	2.38	1.90	1.36
			60	4.14	1.531	181.9	151.6	113.7	90.9	65.0	4.16	3.47	2.60	2.08	1.49
14040	MR8015	Wilger	30	2.07	1.299	154.3	128.6	96.5	77.2	55.1	3.53	2.94	2.21	1.77	1.26
	or		40	2.76	1.500	178.2	148.5	111.4	89.1	63.6	4.08	3.40	2.55	2.04	1.46
14415	XR8015SS	Teejet	50	3.45	1.677	199.2	166.0	124.5	99.6	71.2	4.56	3.80	2.85	2.28	1.63
			60	4.14	1.837	218.2	181.9	136.4	109.1	77.9	5.00	4.16	3.12	2.50	1.78
14195	MR8020	Wilger	30	2.07	1.732	205.8	171.5	128.6	102.9	73.5	4.71	3.93	2.94	2.36	1.68
			40	2.76	2.000	237.6	198.0	148.5	118.8	84.9	5.44	4.53	3.40	2.72	1.94
			50	3.45	2.236	265.6	221.4	166.0	132.8	94.9	6.08	5.07	3.80	3.04	2.17
			60	4.14	2.449	291.0	242.5	181.9	145.5	103.9	6.66	5.55	4.16	3.33	2.38

Table 2: Metric Application Rates at 20” Nozzle Spacing (0.5 meters) – 110 Degree Tips

Rogers Part #	Tip Number	Tip Mfg	Liquid Press psi	Liquid Press bars	Cap /noz. gpm	U. S. GALLONS PER ACRE					Liters/Hectare				
						2.5 mph	3 mph	4 mph	5 mph	7 mph	4 kph	4.8 kph	6.4 kph	8 kph	11.2 kph
01369	8001VS	Teejet	30	2.07	0.087	10.3	8.6	6.4	5.1	3.7	96	80	60	48	34
	(100 mesh)		40	2.76	0.100	11.9	9.9	7.4	5.9	4.2	111	93	69	56	40
			50	3.45	0.112	13.3	11.1	8.3	6.6	4.7	124	103	78	62	44
			60	4.14	0.122	14.5	12.1	9.1	7.3	5.2	136	113	85	68	49
00827	80015VS	Teejet	30	2.07	0.130	15.4	12.9	9.6	7.7	5.5	144	120	90	72	52
	or		40	2.76	0.150	17.8	14.9	11.1	8.9	6.4	167	139	104	83	60
13351	API-80015	Albuz	50	3.45	0.168	19.9	16.6	12.5	10.0	7.1	186	155	116	93	67
	(100 mesh)		60	4.14	0.184	21.8	18.2	13.6	10.9	7.8	204	170	128	102	73
05876	8002VS	Teejet	30	2.07	0.173	20.6	17.1	12.9	10.3	7.3	192	160	120	96	69
	or		40	2.76	0.200	23.8	19.8	14.9	11.9	8.5	222	185	139	111	79
14384	AXI-8002	Albuz	50	3.45	0.224	26.6	22.1	16.6	13.3	9.5	248	207	155	124	89
	(50 mesh)		60	4.14	0.245	29.1	24.2	18.2	14.5	10.4	272	227	170	136	97
05877	8003VS	Teejet	30	2.07	0.260	30.9	25.7	19.3	15.4	11.0	289	240	180	144	103
	or		40	2.76	0.300	35.6	29.7	22.3	17.8	12.7	333	278	208	167	119
14385	AXI-8003	Albuz	50	3.45	0.335	39.8	33.2	24.9	19.9	14.2	373	310	233	186	133
	(50 mesh)		60	4.14	0.367	43.6	36.4	27.3	21.8	15.6	408	340	255	204	146
05878	8004VS	Teejet	30	2.07	0.346	41.2	34.3	25.7	20.6	14.7	385	321	240	192	137
	or		40	2.76	0.400	47.5	39.6	29.7	23.8	17.0	444	370	278	222	159
14061	AXI-8004	Albuz	50	3.45	0.447	53.1	44.3	33.2	26.6	19.0	497	414	310	248	177
	(50 mesh)		60	4.14	0.490	58.2	48.5	36.4	29.1	20.8	544	453	340	272	194
05879	8005VS	Teejet	30	2.07	0.433	51.4	42.9	32.2	25.7	18.4	481	401	301	240	172
	or		40	2.76	0.500	59.4	49.5	37.1	29.7	21.2	555	463	347	278	198
14386	AXI-8005	Albuz	50	3.45	0.559	66.4	55.3	41.5	33.2	23.7	621	517	388	310	222
	(50 mesh)		60	4.14	0.612	72.7	60.6	45.5	36.4	26.0	680	567	425	340	243
05880	8006VS	Teejet	30	2.07	0.520	61.7	51.4	38.6	30.9	22.0	577	481	361	289	206
	or		40	2.76	0.600	71.3	59.4	44.6	35.6	25.5	666	555	417	333	238
14387	AXI-8006	Albuz	50	3.45	0.671	79.7	66.4	49.8	39.8	28.5	745	621	466	373	266
	(50 mesh)		60	4.14	0.735	87.3	72.7	54.6	43.6	31.2	816	680	510	408	292
05881	8008VS	Teejet	30	2.07	0.693	82.3	68.6	51.4	41.2	29.4	770	641	481	385	275
	(50 mesh)		40	2.76	0.800	95.0	79.2	59.4	47.5	33.9	889	741	555	444	317
			50	3.45	0.894	106.3	88.5	66.4	53.1	37.9	994	828	621	497	355
			60	4.14	0.980	116.4	97.0	72.7	58.2	41.6	1088	907	680	544	389
13674	ER8010	Wilger	30	2.07	0.866	102.9	85.7	64.3	51.4	36.7	962	802	601	481	344
	or		40	2.76	1.000	118.8	99.0	74.3	59.4	42.4	1111	926	694	555	397
14414	XR8010SS	Teejet	50	3.45	1.118	132.8	110.7	83.0	66.4	47.4	1242	1035	776	621	444
			60	4.14	1.225	145.5	121.2	90.9	72.7	52.0	1360	1134	850	680	486
14330	ER80125	Wilger	30	2.07	1.083	128.6	107.2	80.4	64.3	45.9	1202	1002	752	601	429
			40	2.76	1.250	148.5	123.8	92.8	74.3	53.0	1388	1157	868	694	496
			50	3.45	1.398	166.0	138.4	103.8	83.0	59.3	1552	1294	970	776	554
			60	4.14	1.531	181.9	151.6	113.7	90.9	65.0	1701	1417	1063	850	607
14040	MR8015	Wilger	30	2.07	1.299	154.3	128.6	96.5	77.2	55.1	1443	1202	902	721	515
	or		40	2.76	1.500	178.2	148.5	111.4	89.1	63.6	1666	1388	1041	833	595
14415	XR8015SS	Teejet	50	3.45	1.677	199.2	166.0	124.5	99.6	71.2	1863	1552	1164	931	665
			60	4.14	1.837	218.2	181.9	136.4	109.1	77.9	2041	1701	1275	1020	729
14195	MR8020	Wilger	30	2.07	1.732	205.8	171.5	128.6	102.9	73.5	1924	1603	1202	962	687
			40	2.76	2.000	237.6	198.0	148.5	118.8	84.9	2222	1851	1388	1111	793
			50	3.45	2.236	265.6	221.4	166.0	132.8	94.9	2484	2070	1552	1242	887
			60	4.14	2.449	291.0	242.5	181.9	145.5	103.9	2721	2267	1701	1360	972

Installation Instructions

Setting up the BK20T spray boom

Your new BK20T although made mainly from aluminum still requires a minimum of 2 people for lifting and installing.
Remove shrink wrap and cut all plastic straps holding the wing frames (and options) to center frame.
To begin make sure you have plenty of space in your work area.

1) Mount the center section of the boom to the sprayer frame with the mounting tabs provided. Note depending on what sprayer this is mounted to you might need to fabricate additional brackets.
2) Loosen the 5/8" bolt on the ends of the left and right wings and bolt them to the ends of the center frame. Make sure that the bushings are installed in the tubes of the center frame (part #14127).
3) Using a wrench, lift the breakaway catch (part # 14630) on the center frame and slide the breakaway tube in the latch. Note the breakaway bushing (part# 14713) should be what rubs on the breakaway catch and center frame.
4) Loosen the 5/16" bolt that is located approximately in the center of the wing frame and bolt one end of the chain to the wing frame.
5) Connect the other end of the chain using the quick link (part # 14904) to the center frame eyebolt (part#14990). Using the nut on the back side of the eye bolt, loosen or tighten the bolt to adjust the height of the wing frame so that it is in line and level with the center frame.
6) To engage the wing lifts, break the wing frame away and lower the wing lifts (part # 15284, 15285). Slowly engage the wing back into the breakaway so that the wing pivot bushing (part # 13553) is above the lower tab of the wing lift.
7) As you lift and lower the wing, the wing lift should engage the pivot bushing. At the top of the lift the wing frame should slightly compress the rubber stopper (part#15317) and spring behind it.
8) See the attached drawings at the back of the manual for installing options. (Extension kit and Ground follow wheel kit (part #'s 15349, 15350)

Table 1 Component weights

Model	Weight (lbs)	Weight (kgs)
BKS20T	130	59
Part # 15350 - Wheel Kit	20	8
Part # 15349 - Extension Kit	12	5.5

Final Assembly Checklist

Testing After Assembly

After assembling the spray boom, check for field readiness. Points to consider are:

a) Remove the nozzle body caps with the spray tips and the tip screens. Flush the entire system with clear water. Install the tip screens and nozzle caps with spray tips. Check for proper alignment of the nozzle caps. Pressure test all the booms inspecting hose connections, nozzle caps, spray pattern and diaphragm nozzle bodies.
b) Move all hinge or swivel joints through the full arc of movement. Check for interference, ease of movement.
c) Check all fasteners to see that they are tightened firmly, or allowed to pivot if required.
d) Calibrate the sprayer

Check For Leaks: Ensure all connections are leak free. If leaks occur check connection to ensure it is tight.

General Maintenance

Cleaning

Sprayers need to be cleaned to prevent corrosion, cross contamination of chemicals and crop injury. Trace amounts of one chemical can react with another or carry over to the next spraying and cause crop damage, especially with pesticides. Long exposures with even small amounts of some chemicals can damage sprayer components either by corrosion or deposits of gums, etc. If you spray chemicals, such as RoundUp®, that will damage turf always clean the unit especially well.

Always try to end the day with an empty tank; avoid contamination of water supplies and injury to plants or animals. Wash the sprayer in a wash area that properly contains the wash water. Flush with clean water, preferably after each day's operation. However, if you plan to use the same material over several days, most chemicals may be kept in the tank overnight; the label usually indicates which may not. Rinse the outside of the sprayer. Surfactants combined with chemicals, when they are compatible, will provide some cleaning action in the sprayer. Spray the rinse over the application area.

Some chemical combinations (especially if oil is used) may produce a putty type paste (buttering out) in the sprayer tank and components, flushing with water after each load may prevent this accumulation. If water alone does not dissolve and remove the buildup, add a solvent. Allow paste to dissolve, then agitate and flush. Flush with detergent and finally with clean water. Check with your chemical agent.

Whenever pesticides are changed, or before sprayer storage, clean sprayers thoroughly with a cleaning solution that neutralizes the chemical to prevent cross contamination. The solution used depends on the chemical to be removed from the sprayer. Check the chemical label for cleaning instructions.

Remove nozzle tips and screens, clean them in a strong detergent solution (or kerosene) using a soft brush. Never use a metal probe to clean the orifice of a spray tip.

Follow the same safety precautions during cleaning as for applications. Use a respirator, rubber gloves, or other protective gear as may be directed by label instructions.

Sunshine

Many plastic sprayer parts are degraded by ultra violet light, especially the nozzle flow indicators. Store the sprayer in the shade to extend the length of service.

Winterizing

After the sprayer is thoroughly cleaned, put 2 to 5 gallons (7-19 litres) of rust inhibitor or RV antifreeze in the tank prior to the final flushing to help prevent corrosion. As the water is pumped from the sprayer, the antifreeze will leave a protective coating on the inside of the tank, pump, and plumbing.

Trouble Shooting

Leaking Nozzles

If 1 or 2 tips drip until the line is empty, check:
For deteriorated diaphragms
⇒ For material under the diaphragm
⇒ For a weak spring
⇒ For a deterioration of the diaphragm sealing surface

If all tips spray for more than 3 seconds after shut off, check:
⇒ To see if the sprayer shut off valve is leaking

If all tips spray for less than 3 seconds after shut off, check:
⇒ For air accumulation in the line
⇒ For swelling of the feed hoses

If the diaphragm leaks out the diaphragm spring body, check:
⇒ For loose spring body
⇒ For ruptured diaphragms
⇒ For misaligned diaphragm
⇒ For broken diaphragm body

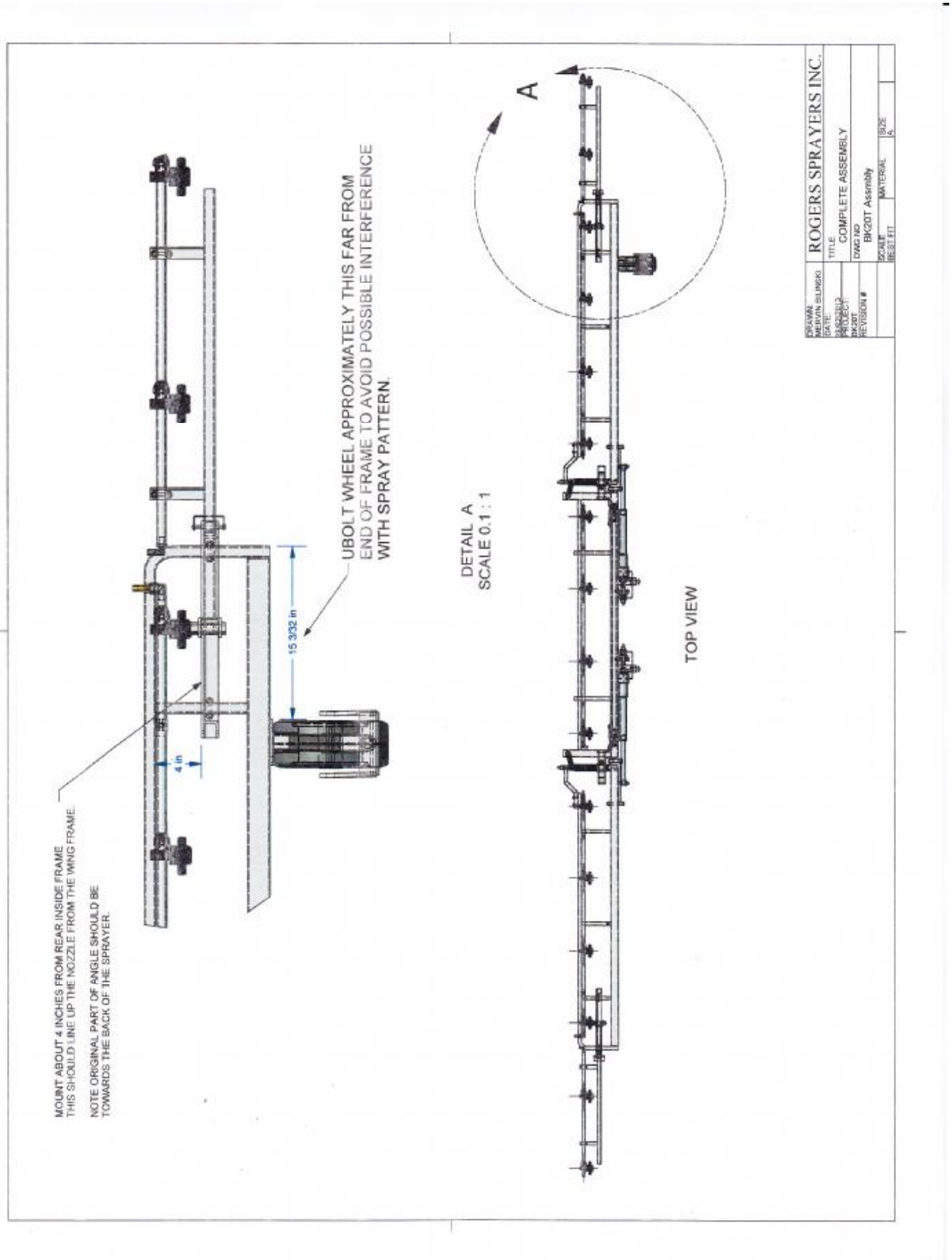
Wings Breaks Away Too Easily

There is 1 nylock nut holding down the spring on center section. This adjusts the tension on the breakaway of the wings. To tighten, compress the spring. Note that this cannot be fully compressed the wing must be allowed to move up to breakaway, make sure there is enough room in the spring to allow wing to move up when broken away.

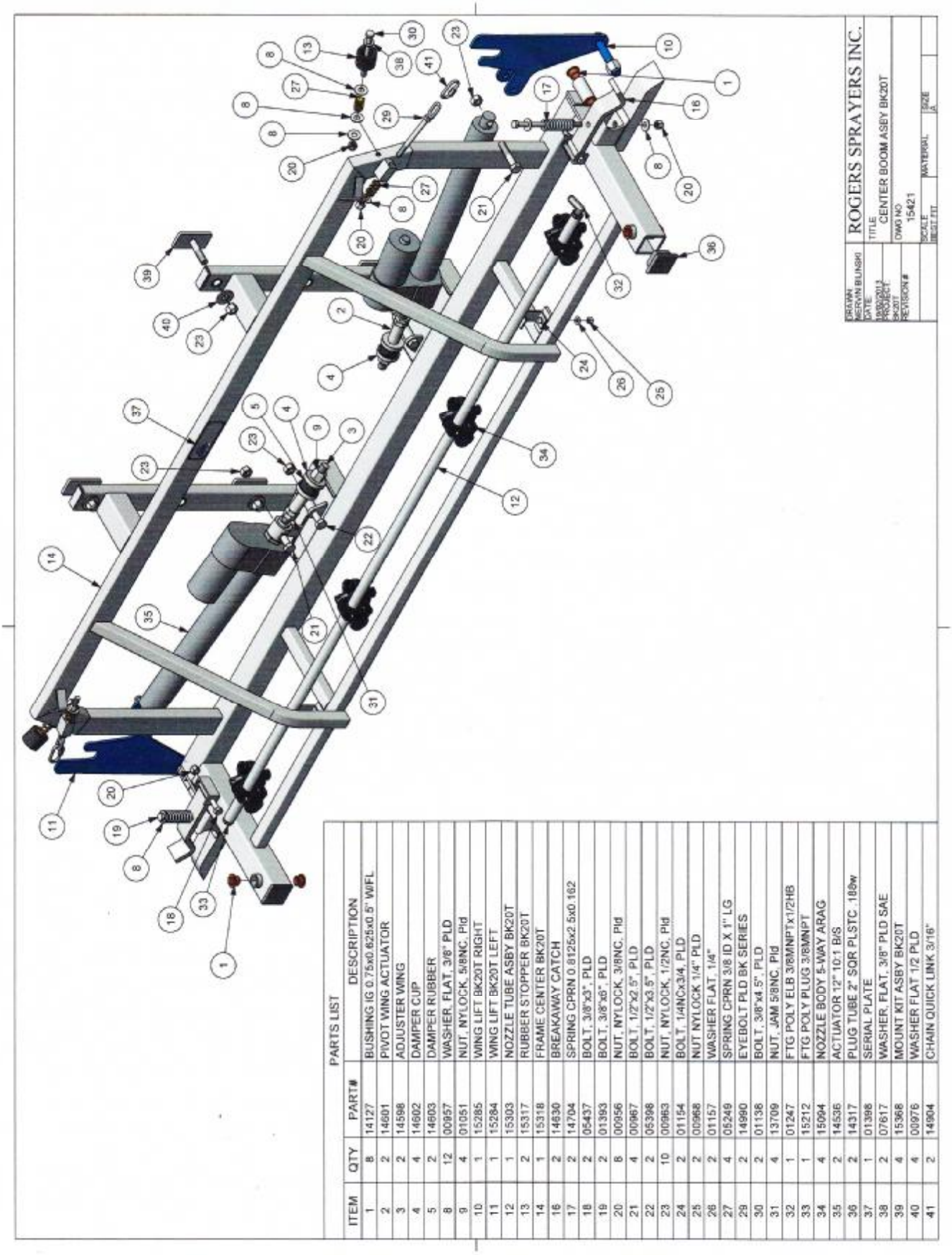
Blocked Nozzles

If a nozzle becomes blocked, turn the sprayer off and point the nozzle in a safe direction. Note that the spray lines could still be pressurized. Therefore prior to removing the cap on the nozzle body, proper safety equipment should be worn, (ie gloves, eye protection, etc).

BK20T Assembly



BK20T Center Frame Assembly

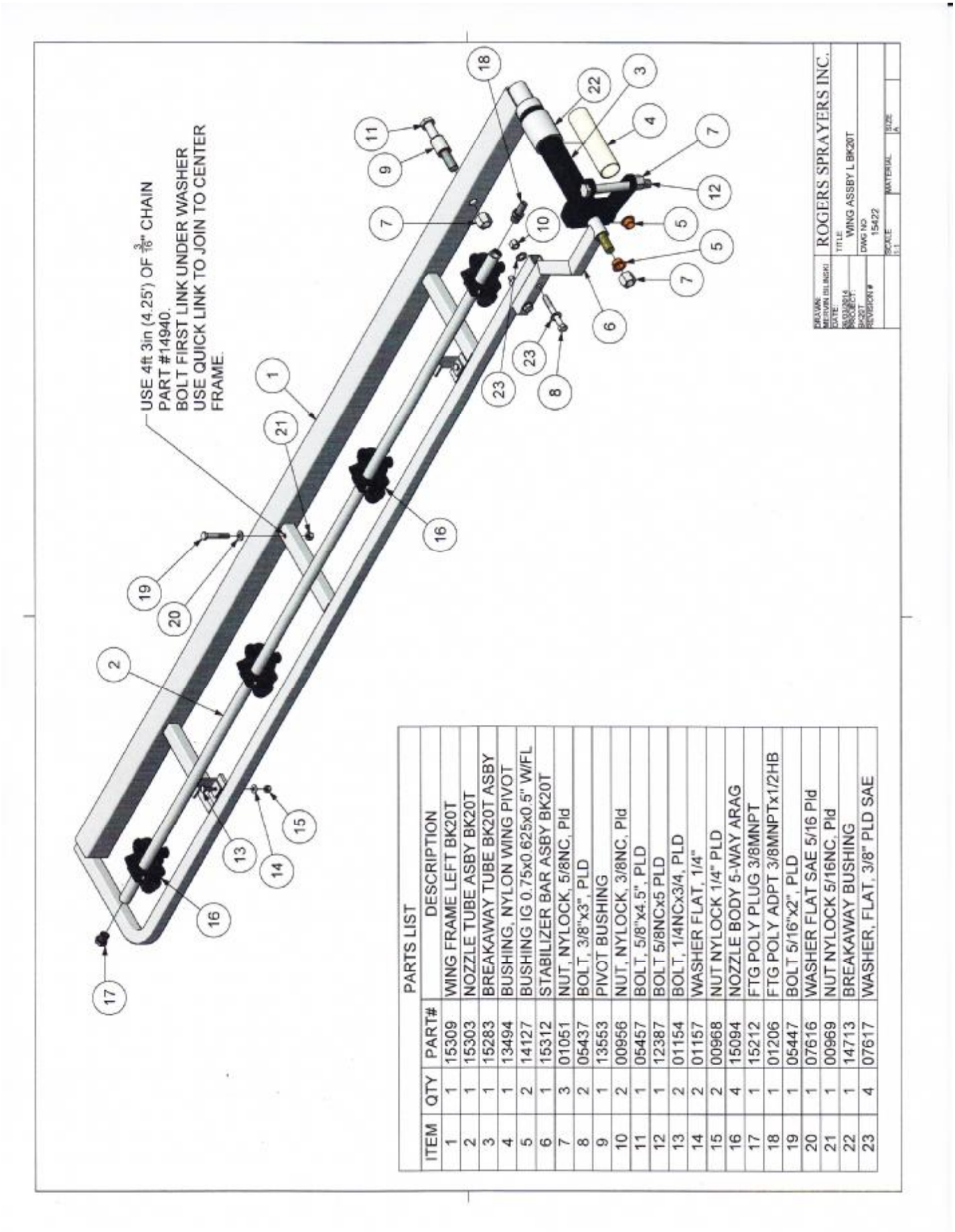


PARTS LIST

ITEM	QTY	PART#	DESCRIPTION
1	8	14127	BUSHING IG 0.75x0.625x0.5" W/FL
2	2	14601	PIVOT WING ACTUATOR
3	2	14598	ADJUSTER WING
4	4	14602	DAMPER CUP
5	2	14603	DAMPER RUBBER
8	12	00957	WASHER, FLAT, 3/8" PLD
9	4	01051	NUT, NYLOCK, 5/8NC, Pld
10	1	15285	WING LIFT BK20T RIGHT
11	1	15284	WING LIFT BK20T LEFT
12	1	15303	NOZZLE TUBE ASBY BK20T
13	2	15317	RUBBER STOPPER BK20T
14	1	15318	FRAME CENTER BK20T
16	2	14630	BREAKAWAY CATCH
17	2	14704	SPRING CPRN 0.8125x2.5x0.162
18	2	05437	BOLT, 3/8"x3", PLD
19	2	01393	BOLT, 3/8"x6", PLD
20	8	00956	NUT, NYLOCK, 3/8NC, Pld
21	4	00967	BOLT, 1/2"x2.5", PLD
22	2	06398	BOLT, 1/2"x3.5", PLD
23	10	00963	NUT, NYLOCK, 1/2NC, Pld
24	2	01154	BOLT, 1/4NCx3/4, PLD
25	2	00968	NUT NYLOCK 1/4" PLD
26	2	01157	WASHER FLAT, 1/4"
27	4	05249	SPRING CPRN 3/8 ID X 1" LG
29	2	14990	EYEBOLT PLD BK SERIES
30	2	01138	BOLT, 3/8"x4.5", PLD
31	4	13709	NUT, JAM 5/8NC, Pld
32	1	01247	FTG POLY ELB 3/8MNPTx1/2HB
33	1	15212	FTG POLY PLUG 3/8MNPT
34	4	15094	NOZZLE BODY 5-WAY ARAG
35	2	14536	ACTUATOR 12" 10:1 B/S
36	2	14317	PLUG TUBE 2" SQR PLSTC .188w
37	1	01398	SERIAL PLATE
38	2	07617	WASHER, FLAT, 3/8" PLD SAE
39	4	15368	MOUNT KIT ASBY BK20T
40	4	00976	WASHER FLAT 1/2 PLD
41	2	14904	CHAIN QUICK LINK 3/16"

DRAWN: MERVYN BLINSHI
DATE: 10/30/2013
PROJECT: BK20T
REVISION #:
ROGERS SPRAYERS INC.
TITLE: CENTER BOOM ASBY BK20T
DWG NO: 15421
SCALE: WEIGHT FIT
MATERIAL:
SIZE: A

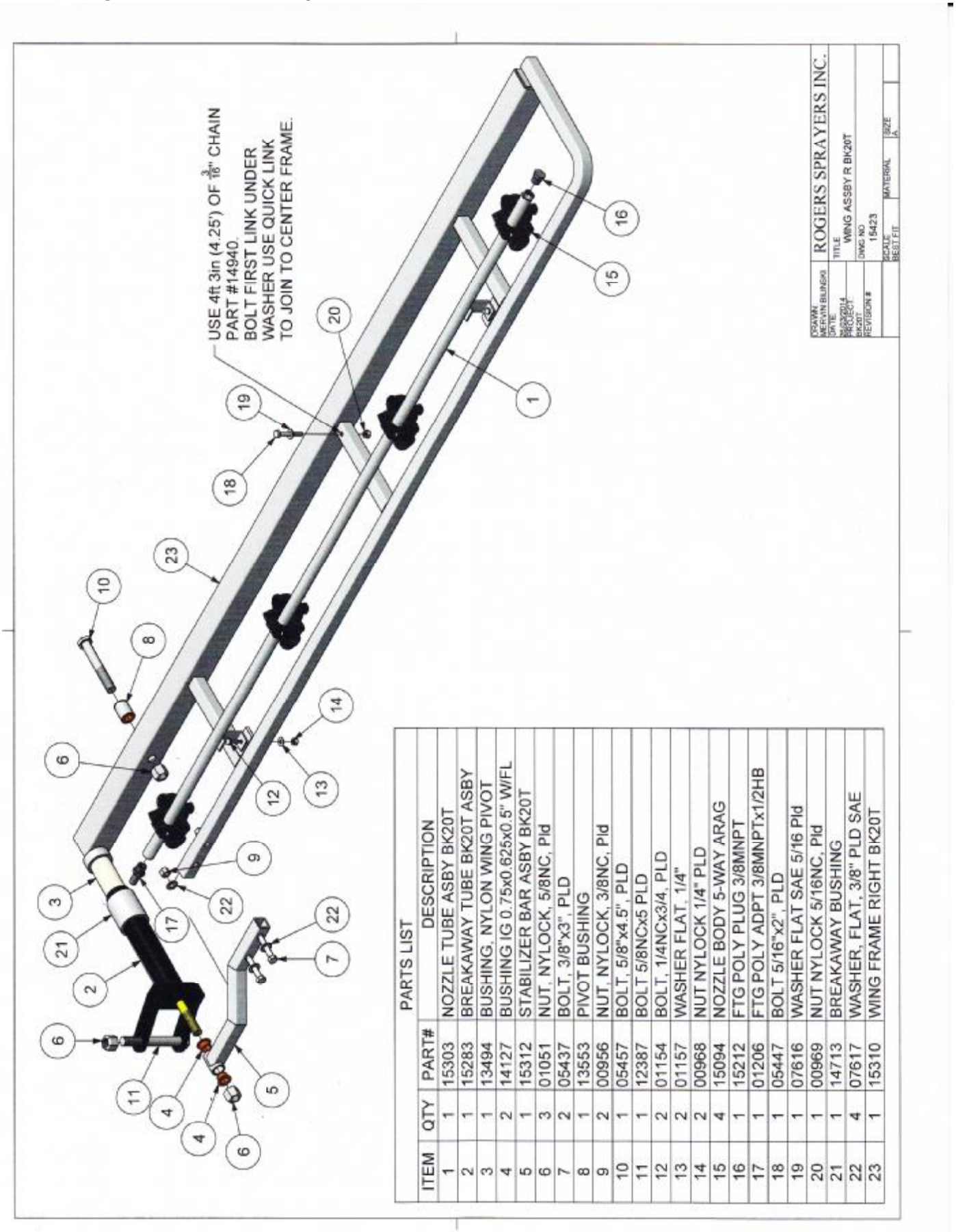
BK20T Wing Frame L Assembly



PARTS LIST

ITEM	QTY	PART#	DESCRIPTION
1	1	15309	WING FRAME LEFT BK20T
2	1	15303	NOZZLE TUBE ASBY BK20T
3	1	15283	BREAKAWAY TUBE BK20T ASBY
4	1	13494	BUSHING, NYLON WING PIVOT
5	2	14127	BUSHING IG 0.75x0.625x0.5" W/FL
6	1	15312	STABILIZER BAR ASBY BK20T
7	3	01051	NUT, NYLOCK, 5/8NC, Pld
8	2	05437	BOLT, 3/8"x3", PLD
9	1	13553	PIVOT BUSHING
10	2	00956	NUT, NYLOCK, 3/8NC, Pld
11	1	05457	BOLT, 5/8"x4.5", PLD
12	1	12387	BOLT 5/8NCx5 PLD
13	2	01154	BOLT, 1/4NCx3/4, PLD
14	2	01157	WASHER FLAT, 1/4"
15	2	00968	NUT NYLOCK 1/4" PLD
16	4	15094	NOZZLE BODY 5-WAY ARAG
17	1	15212	FTG POLY PLUG 3/8MNPT
18	1	01206	FTG POLY ADPT 3/8MNPTx1/2HB
19	1	05447	BOLT 5/16"x2", PLD
20	1	07616	WASHER FLAT SAE 5/16 Pld
21	1	00969	NUT NYLOCK 5/16NC, Pld
22	1	14713	BREAKAWAY BUSHING
23	4	07617	WASHER, FLAT, 3/8" PLD SAE

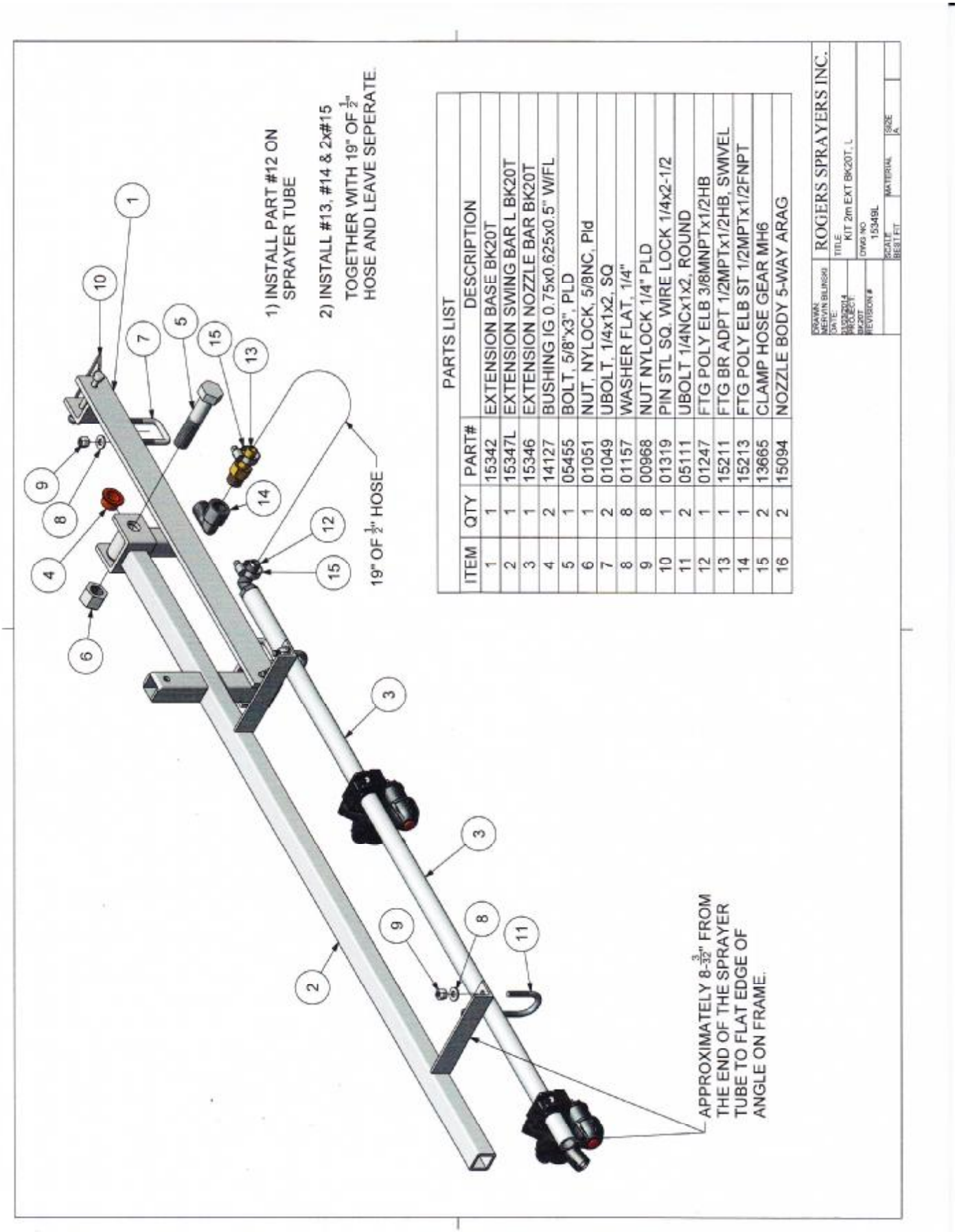
BK20T Wing Frame R Assembly



PARTS LIST

ITEM	QTY	PART#	DESCRIPTION
1	1	15303	NOZZLE TUBE ASBY BK20T
2	1	15283	BREAKAWAY TUBE BK20T ASBY
3	1	13494	BUSHING, NYLON WING PIVOT
4	2	14127	BUSHING IG 0.75x0.625x0.5" W/FL
5	1	15312	STABILIZER BAR ASBY BK20T
6	3	01051	NUT, NYLOCK, 5/8NC, Pld
7	2	05437	BOLT, 3/8"x3", PLD
8	1	13553	PIVOT BUSHING
9	2	00956	NUT, NYLOCK, 3/8NC, Pld
10	1	05457	BOLT, 5/8"x4.5", PLD
11	1	12387	BOLT 5/8NCx5 PLD
12	2	01154	BOLT, 1/4NCx3/4, PLD
13	2	01157	WASHER FLAT, 1/4"
14	2	00968	NUT NYLOCK 1/4" PLD
15	4	15094	NOZZLE BODY 5-WAY ARAG
16	1	15212	FTG POLY PLUG 3/8MNPT
17	1	01206	FTG POLY ADPT 3/8MNPTx1/2HB
18	1	05447	BOLT 5/16"x2", PLD
19	1	07616	WASHER FLAT SAE 5/16 Pld
20	1	00969	NUT NYLOCK 5/16NC, Pld
21	1	14713	BREAKAWAY BUSHING
22	4	07617	WASHER, FLAT, 3/8" PLD SAE
23	1	15310	WING FRAME RIGHT BK20T

BK20T 2m Extension L Assembly

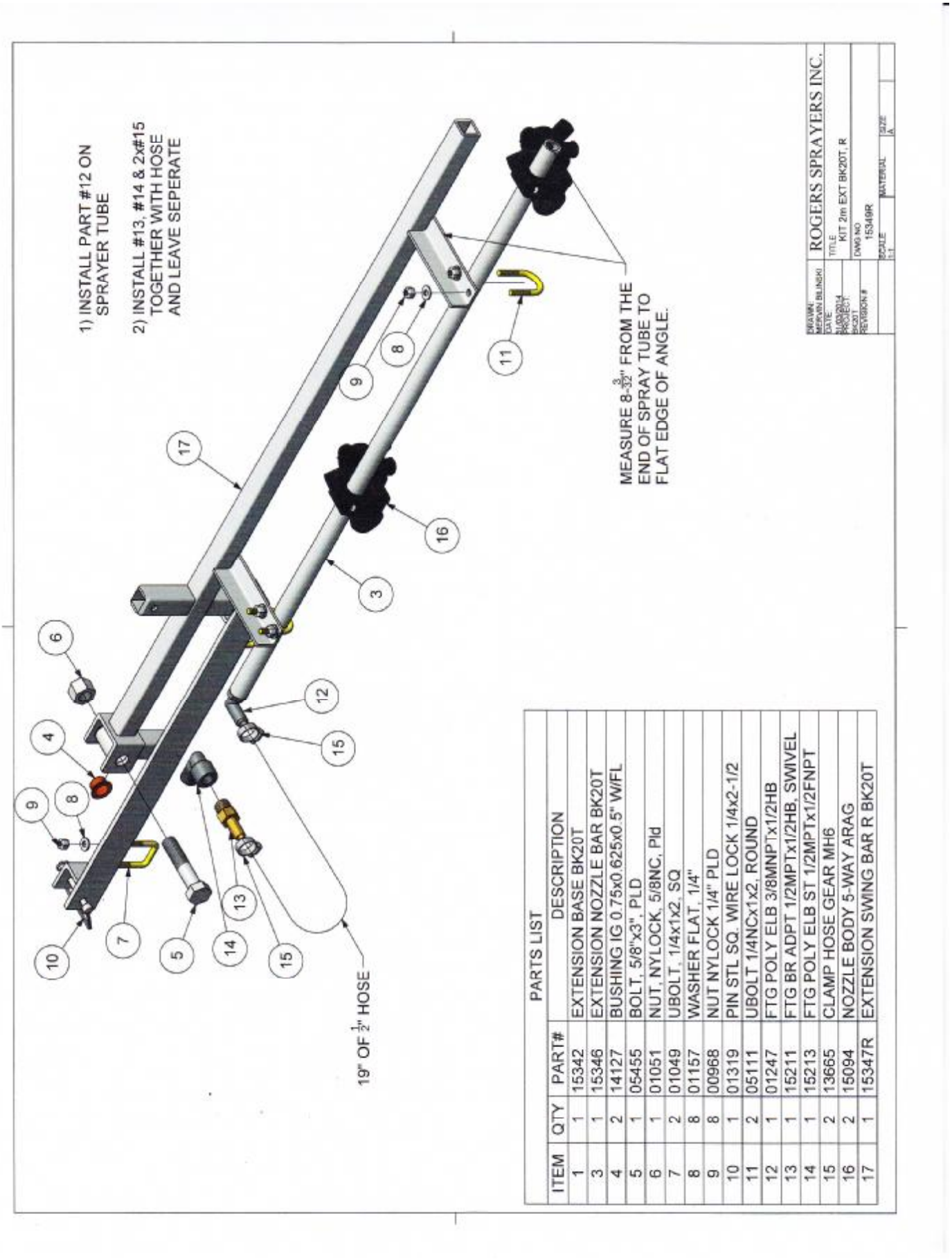


PARTS LIST

ITEM	QTY	PART#	DESCRIPTION
1	1	15342	EXTENSION BASE BK20T
2	1	15347L	EXTENSION SWING BAR L BK20T
3	1	15346	EXTENSION NOZZLE BAR BK20T
4	2	14127	BUSHING IG 0.75x0.625x0.5" W/FL
5	1	05455	BOLT, 5/8"x3", PLD
6	1	01051	NUT, NYLOCK, 5/8NC, Pld
7	2	01049	UBOLT, 1/4x1x2, SQ
8	8	01157	WASHER FLAT, 1/4"
9	8	00968	NUT NYLOCK 1/4" PLD
10	1	01319	PIN STL SQ. WIRE LOCK 1/4x2-1/2
11	2	05111	UBOLT 1/4NCx1x2, ROUND
12	1	01247	FTG POLY ELB 3/8MNPTx1/2HB
13	1	15211	FTG BR ADPT 1/2MPTx1/2HB, SWIVEL
14	1	15213	FTG POLY ELB ST 1/2MPTx1/2FNPT
15	2	13665	CLAMP HOSE GEAR MH6
16	2	15094	NOZZLE BODY 5-WAY ARAG

DRAWN: MERVIN BRUNSH	ROGERS SPRAYERS INC.
DATE: 01/30/2014	TITLE: KIT 2m EXT BK20T, L
PROJECT: BK20T	DWG NO: 15349L
REVISION: #	SCALE: BEST FIT / MATERIAL / SIZE: A

BK20T 2m Extension R Assembly



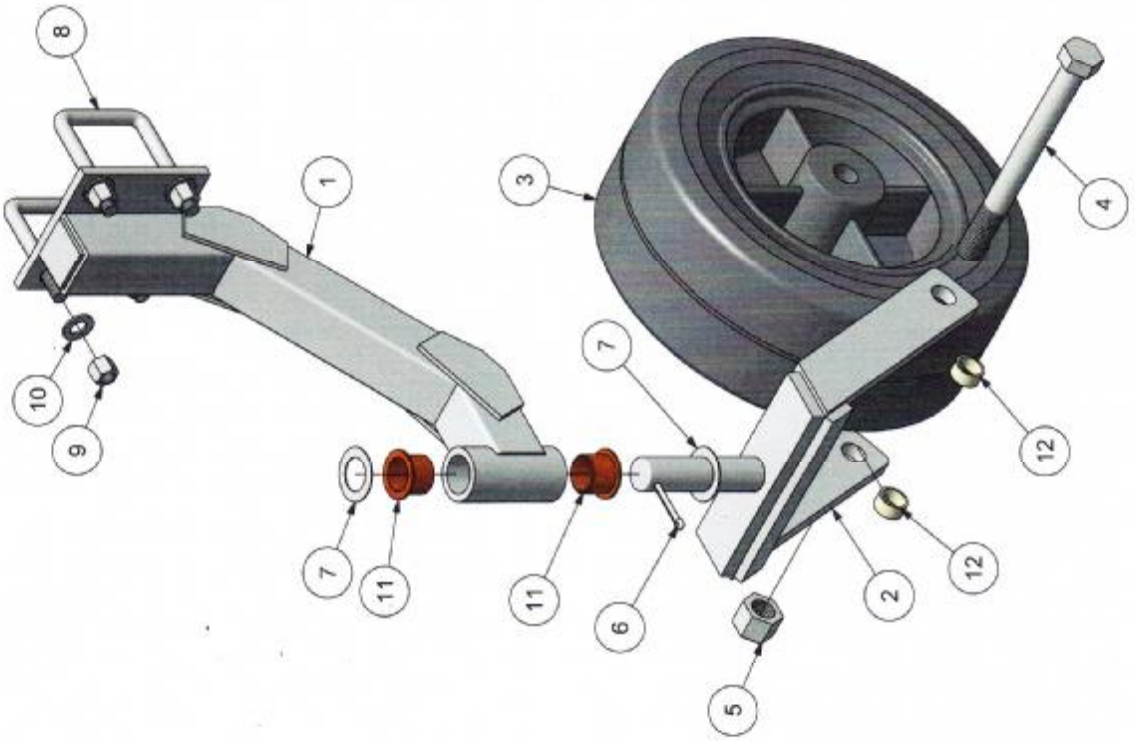
PARTS LIST

ITEM	QTY	PART#	DESCRIPTION
1	1	15342	EXTENSION BASE BK20T
3	1	15346	EXTENSION NOZZLE BAR BK20T
4	2	14127	BUSHING IG 0.75x0.625x0.5" W/FL
5	1	05455	BOLT, 5/8"x3", PLD
6	1	01051	NUT, NYLOCK, 5/8NC, Pld
7	2	01049	UBOLT, 1/4x1x2, SQ
8	8	01157	WASHER FLAT, 1/4"
9	8	00968	NUT NYLOCK 1/4" PLD
10	1	01319	PIN STL SQ. WIRE LOCK 1/4x2-1/2
11	2	05111	UBOLT 1/4NCx1x2, ROUND
12	1	01247	FTG POLY ELB 3/8MNPTx1/2HB
13	1	15211	FTG BR ADPT 1/2MPTx1/2HB, SWIVEL
14	1	15213	FTG POLY ELB ST 1/2MPTx1/2FNPT
15	2	13665	CLAMP HOSE GEAR MH6
16	2	15094	NOZZLE BODY 5-WAY ARAG
17	1	15347R	EXTENSION SWING BAR R BK20T

BK20T Castor Assembly

PARTS LIST			
ITEM	QTY	PART#	DESCRIPTION
1	1	15294	CASTOR MOUNT ASBY BK20T
2	1	15289	CASTOR FORK BK20T ASBY
3	1	14475	WHEEL POLY LD
4	1	01166	BOLT, 5/8"x6.5", PLD
5	1	01051	NUT, NYLOCK, 5/8NC, Pld
6	1	00965	PIN STL COTTER 3/16"x1-1/2"
7	2	05593	WASHER MACHINE, 1-3/8x7/8
8	2	12587	UBOLT, 3/8" x2"x3", PLD
9	4	00956	NUT, NYLOCK, 3/8NC, Pld
10	4	07617	WASHER, FLAT, 3/8" PLD SAE
11	2	14212	BUSHING IG 1.0x0.875x0.75W/FL
12	2	15425	SPACER WHEEL BK20T

NOTE:
CASTOR ASSEMBLY PART # 15350
INCLUDES 2 COMPLETE ASSEMBLIES.



DRAWN: KEITH ELLINGS	ROGERS SPRAYERS INC.		
DATE:	TITLE: KIT BK20T CASTOR ASBY		
PROJECT: BK20T	DWG NO: 15350		
REVISION #	SCALE: WEIGHT: FIT	MATERIAL:	SIZE: A

Rogers Sprayers Inc. (RSI)
141 - 105th Street East
Saskatoon, SK S7N 1Z2 Canada

Tel.: (306) 975-0500 or (888) 975-8294
Fax: (306) 975-0499
Email: info@rogerssprayers.com

ROGERS SPRAYERS INC OWNER WARRANTY AGREEMENT

Windfoil Drift Containment Spray Systems (DCSS) are warranted to be free of factory defects under normal and intended use for a period of one (1) year from date of purchase to the original purchaser. Equipment must be setup in accordance with factory instructions and operated, maintained and used in accordance with the operator's manual. Equipment used for rental has a warranty period of forty five (45) days. Any customization or modifications to the original equipment voids warranty immediately.

RSI reserves the right not to warranty any items that are not directly manufactured by RSI. Such components need to be returned to the factory for inspection and tested by either RSI or the original manufacturer for defects. Examples of these parts include actuators, engines, pumps and electrical systems.

All warranty Claims must be pre-authorized by the factory!

To obtain warranty, all defective parts must be returned to the factory; in some cases, location of part might require only photo of defective part. RSI must be contacted to determine which route is required. RSI through its designated dealer or factory appointed representative will repair or replace, at its option, any or all parts that are proven to be defective free of charge.

RSI DOES NOT pay or reimburse for any travel time or investigation time to determine the defective part. Warranty labor will be based on the time required for RSI to replace only the part. Warranty labor rates and replacement times will be assessed yearly and will be included in a labor replacement sheet.

This warranty does not apply to damage caused by misuse, accident, acts of god, and/or operation without proper servicing. RSI will not be responsible for consequential damages; its liability is limited to replacement of parts.

Standard wear components (see list) such as belts, nozzles, screens, bearings, wheels, flow indicator bodies or flow indicator parts are only warranted for 30 days after original purchase.

RSI makes no other expressed, implied or statutory warranty; nor is anyone authorized to make any on our behalf.

Complete your Warranty Registration online at www.rogerssprayers.com

The warranty registration is found on the Contact page of our website. The warranty registration **MUST** be filled out completely and submitted to RSI to activate the warranty. If you would prefer, a printable copy is also available online.

It is our intention to manufacture durable, user-friendly products. Any suggestions you have as to how we may improve our equipment are greatly appreciated.



Rogers Sprayers Inc.

141 - 105th Street East
Saskatoon, SK S7N 1Z2
Canada

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Web: www.rogerssprayers.com