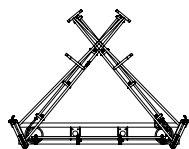
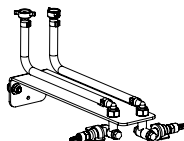


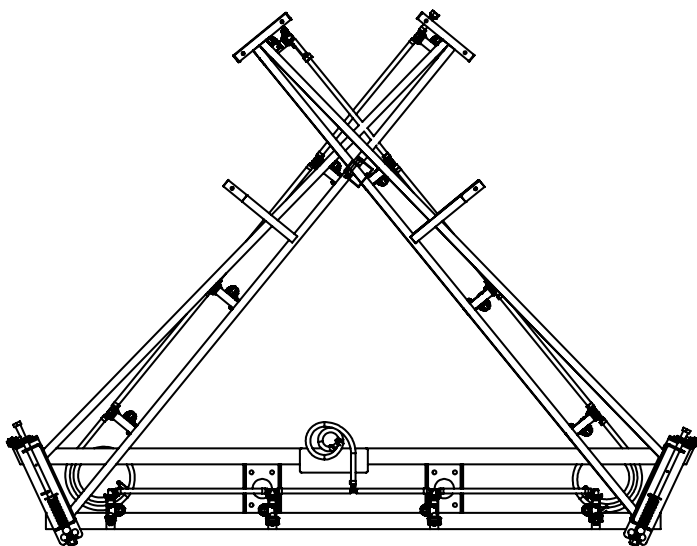
STEEL BOOM



BOOMLESS NOZZLE KIT



OWNER'S MANUAL



Product Codes:

ASBS12SS, ASBS20SS, ASBS30SS, ASBB30P

Version 1.9

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INTRODUCTION

Congratulations! You now own an Enduraplas boom. Durable design and construction assure you a lifetime of extreme performance. No boom is tougher. No boom will last longer.

Take a look through this owner's manual to learn how the pros use their Enduraplas boom

GETTING STARTED

Mounting Your Boom

1) To install boom brackets to the sprayer, insert the 3/8" x 1" bolts through the bracket and place plastic washers over bolts to hold them in place. The plastic washer will hold the bolt in place when connecting slide brackets to the C-bracket in step 2.



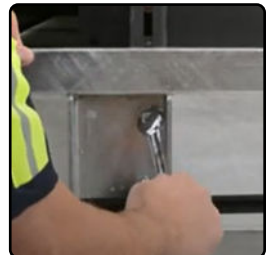
2) Connect the brackets by sliding the 3/8" x 1" bolts through the C-bracket on unit and install 3/8" washer and 3/8" lock nuts loosely. Leaving these bolts loose allows the bracket to adjust in step 3.



3) To install your boom to the brackets, loosen the carriage bolts on the boom (leaving nuts and washers on bolts). Align carriage bolts with quick attach brackets and slide them into the bracket slots, then lower the boom down to desired height.



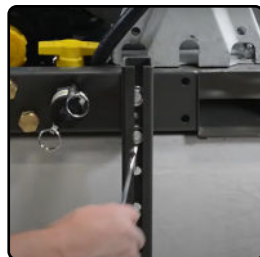
4) When the boom is set to desired height, tighten the hardware listed in steps 2 & 3, making sure the square neck on the carriage bolt is fully inserted through the slot.



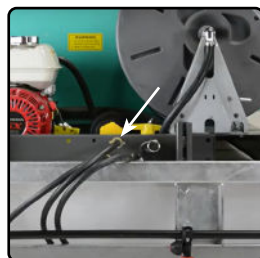
GETTING STARTED

Mounting Your Boom

5) Once the boom is secure, tighten the hardware on the boom brackets from step 2 to make sure they are also secure.

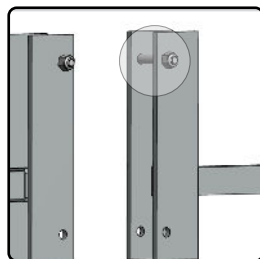


6) Take the feed hoses from boom and connect to male brass hose fittings on spray unit. Hook hoses up to the appropriate section control; 12', 20' and 30' booms have 3 hose hookups and boomless nozzle has 2 hose hookups.

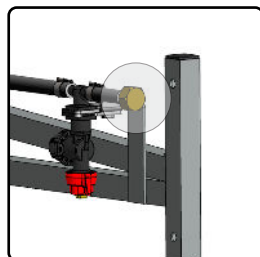


Installing 30' Wing Extension

7) If you got the 30' boom extensions, once the 20' boom is mounted, bolt on the extensions to the 20' boom ends with provided 5/16" x 2" bolts, installing them through the wing extension and boom end.



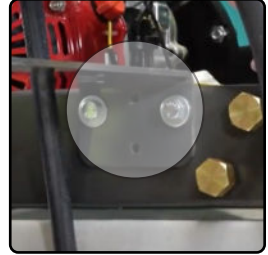
8) Then, hook up the wing extension hoses to the end of boom using the brass threaded connectors. Make sure the rubber washer is in the female brass fitting to prevent leaking.



GETTING STARTED

Mounting Your Boomless Nozzle

9) If you got the 30' boomless nozzle kit, bolt the boomless nozzle bracket to the back of sprayer frame using provided 5/16" x 1" bolts.





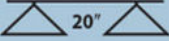
10) Hook up hoses, with female brass fitting, from boomless nozzle to male brass ports on back of sprayer. Make sure washer is installed in female fitting to prevent leaking.



GETTING STARTED

Nozzle Chart

STEEL BOOM NOZZLE TIPS

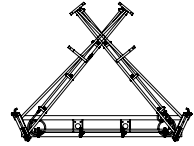
		DROP SIZE		CAPACITY ONE NOZZLE IN GPM	CAPACITY ONE NOZZLE IN OZ./MIN.	 20°							
						GPA							
		80°	110°			4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	12 MPH	15 MPH	20 MPH
TP6502†	30	F	F	0.17	22	12.6	10.1	8.4	6.3	5.0	4.2	3.4	2.5
TP8002	35	F	F	0.19	24	14.1	11.3	9.4	7.1	5.6	4.7	3.8	2.8
TP11002	40	F	F	0.20	26	14.9	11.9	9.9	7.4	5.9	5.0	4.0	3.0
(50)	50	F	F	0.22	28	16.3	13.1	10.9	8.2	6.5	5.4	4.4	3.3
	60	F	F	0.24	31	17.8	14.3	11.9	8.9	7.1	5.9	4.8	3.6

BOOMLESS NOZZLE TIPS

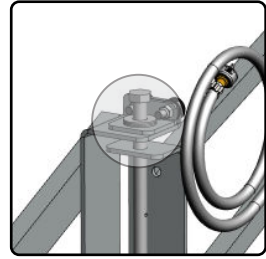
Tip Size	Pressure (PSI)	Flow Rate (GPM)	Gallons per Acre at swath shown MPH							
			4	5	6	8	10	12	15	20
10 (1/4')	30	0.9	9.3	7.4	6.2	4.6	3.7	3.1	2.5	1.9
	40	1.0	10.3	8.3	6.9	5.2	4.1	3.4	2.8	2.1
	50	1.1	11.3	9.1	7.6	5.7	4.5	3.8	3.0	2.3
	60	1.2	12.4	9.9	8.3	6.2	5.0	4.1	3.3	2.5

GETTING STARTED

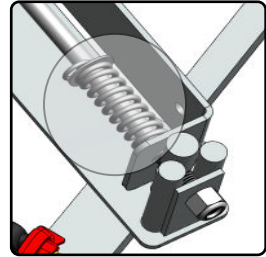
Assembling 20/30' Steel Boom



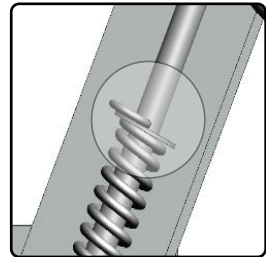
1) Lay out the boom arms on each side of the centerpiece. Insert the bolt through the L shaped bracket, then the top hole of the centerpiece and the top of the boom. You can level boom wing by installing washers between L shaped bracket and center boom section.



2) When bolt is through top section of hinge, then slide on the first washer, the spring and the second washer. Then insert the bolt through the bottom two holes, or bottom section of hinge point.



3) Insert the hitch pin into the hole on the bolt just above the top washer and hammer it into place. This will prevent the spring from sliding up the bolt.



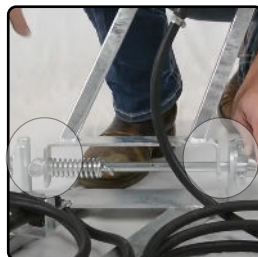
4) Screw the nut onto the bolt, under the hinge point until nut is flush with the bottom of bolt, making sure the locking part of the nut is onto the bolt.



GETTING STARTED

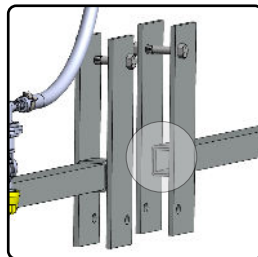
Assembling 20/30' Steel Boom

5) Flip the boom arm up to a 90° angle and tighten each side of the boom until the spring is compressed. This will ensure there is enough pressure on the spring to hold the boom in fold out position.

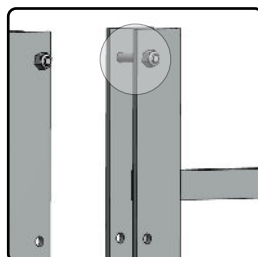


INSTALLING THE 30' EXTENSIONS

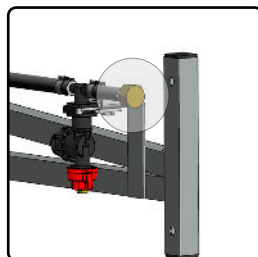
6) Mount the 30' arm extension to the existing 20' boom wing end.



7) Insert the bolt through the top hole of both the 20' and 30' wing ends and tighten securely. This will allow the 30' wing extension to fold up over the 20' wing.

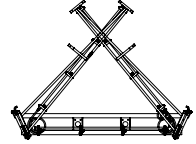


8) Take the hose extension and screw it to the existing brass fitting on the 20' wing. Follow the same procedure for the boom on the other side. Your 30' extension is now plumbed to the 20' boom.

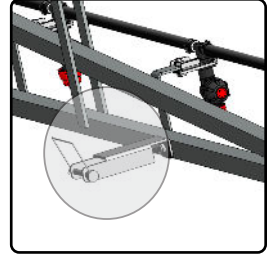


GETTING STARTED

Assembling 20/30' Steel Boom



9) Install bracket shown in picture to the boom wing using supplied bolt. When folding up the boom arms, remove the clip pin and cradle the opposite wing frame into bracket and reinsert clip pin locking the booms in folded position.



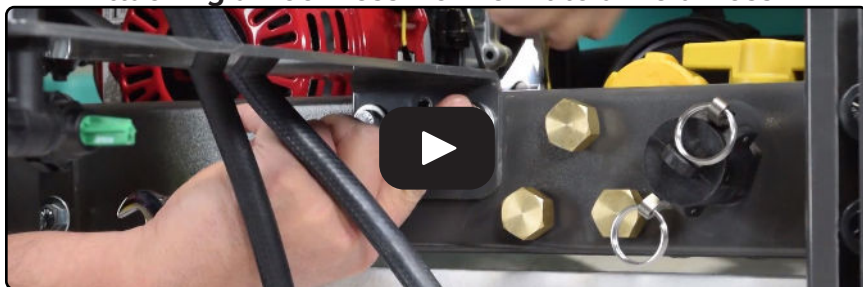
ATTACHING TO A SPRAYER

Please visit our YouTube channel to learn how to attach your spray boom or boomless nozzle kit to an Enduraplas sprayer.

Attaching a Spray Boom to a Field Boss™



Attaching a Boomless Nozzle Kit to a Field Boss™



Attaching a Spray Boom to a Land Champ™



Attaching a Boomless Nozzle Kit to a Land Champ™



CALIBRATING

1) Measure Nozzle Spacing

Measure the distance between each nozzle to determine the length of your travel distance.

Nozzle spacing = Distance to travel

(16" = 255') (18" = 227') (20" = 204')

(22" = 185') (24" = 170')

*Distances shown with 110° nozzles



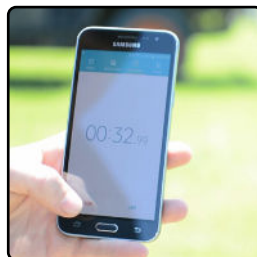
2) Measure Appropriate Travel Distance

Mark the distance with flags or between fence posts. A tape measure capable of measuring farther than 200 ft. will make this step easier.



3) Drive Measured Distance - Timed

Driving the sprayer at the intended spraying speed, time how long it takes to travel between the marked distance. Repeat this procedure and average the two measurements.



4) Set Correct Spraying Pressure

With the sprayer parked and the pump running, set the ideal or intended pressure.



5) Catch Output From Each Nozzle

Catch the output in a container (marked in ounces) for the same number of seconds it took to drive in step 3. Calculate the ‘average nozzle output’ by adding the individual outputs and then dividing by the number of nozzles tested.



6) Clean Nozzles - If Needed

If any one nozzle's output deviates from the manufacturers' guidelines by more than 10%, the nozzle should be replaced or cleaned. A toothbrush works perfect.



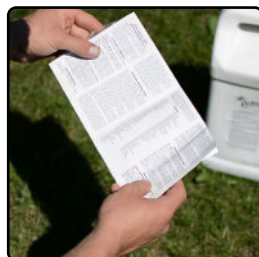
7) Analyze Results

The ounces captured per nozzle equals the gallons-per-acre application rate. (eg: 16 ounces = 16 gallons-per-acre)



8) Compare Recommended Rate

If the gallons-per-acre rate is not within 5% of the intended rate, you will have to adjust the pressure you spray at or the speed you travel. You will have to repeat steps 3 - 7.



MAINTAINING

Keeping your boom in good condition will help you lengthen its life. Everyone knows a well maintained piece of equipment ensures a longer life span.

The information applies in normal operating conditions. The specific intervals must be shortened accordingly for longer daily working hours. If the machine is only used occasionally, the intervals can be extended accordingly.		Visual inspection (condition, leaks)	Before starting work	At the end of work and/or daily operating hours	Weekly or every 40 operating hours	After the first 5 operating hours	Every 250 operating hours o once a year	If damaged	If required	
			X							
		Complete boom/boom kit	Clean		X					
			Clean		X					
			Drain		X					
		Nozzles	Clean							X
			Replace						X	
All accessible screws and nuts		Retighten							X	

WINTERIZING

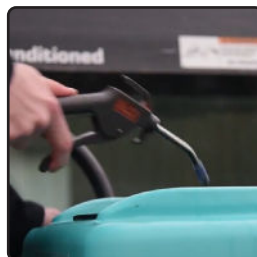
1) Drain Tank

Fill the tank with clean water, start the pump and open all spray ends. If you have a spray gun or boom, make sure you spray until clean water is coming through.



2) Blow out Plumbing Lines

Using compressed air, blow out the hose lines on sprayer and boom to remove all water from the system.



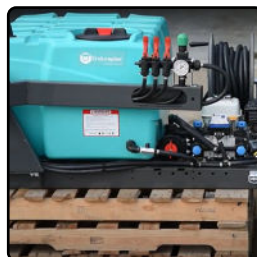
3) Flush with Anti-freeze

Pour a small amount of anti-freeze into the tank and run the pump until there is no more of this colored liquid coming through the spray ends.



4) Store Sprayer Inside

Turn off the sprayer ends so the remaining anti-freeze does not leak out. If you have a boom attachment that hangs lower than the sprayer, we would suggest you set the sprayer on a few pallets.



WARRANTY

1. Poly Tank Limited Warranty - Subject to other terms in this Limited Warranty, Manufacturer warrants to the original end user that this Tank will be free from material defects caused during the manufacturing process for a period of 5 years from the Purchase Date provided such warranty to the original end user shall be extended to 10 years from the Purchase Date if the original end user registers the Tank with Manufacturer within 30 days of the Purchase Date. To register the Limited Warranty, registration must be completed in accordance with the requirements set forth at enduraplaswarranty.com

Other Products and Parts Limited Warranty - Subject to other terms in this Limited Warranty, Manufacturer warrants to the original end user that products and parts manufactured by Manufacturer (other than tanks) will be free from material defects caused during the manufacturing process for a period of 1 year from the Purchase Date unless otherwise expressly stated in writing by Manufacturer that an extended warranty applies.

2. Other Warranties Disclaimed and Excluded

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE LIMITED WARRANTY HEREIN STATED, AND MANUFACTURER EXPLICITLY DISCLAIMS AND EXCLUDES ANY AND ALL OTHER WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, CUSTOM OR USAGE OF TRADE, AND COURSE OF DEALING. NO AGENT, EMPLOYEE OR REPRESENTATIVE OF MANUFACTURER HAS AUTHORITY TO BIND MANUFACTURER TO ANY REPRESENTATION OR WARRANTY EXCEPT AS STATED IN THIS LIMITED WARRANTY.

WARRANTY

3. Limitation of Liability under the Limited Warranty - In addition to those warranties disclaimed and excluded in clause 2 above, Manufacturer expressly further limits its warranty and liability under the Limited Warranty as set forth below in this clause 3.

3.1. The liability of Manufacturer under this Limited Warranty is excluded to the extent that any defect has been caused or contributed to by:

- a) any accident, contamination, tampering, willful damage, abuse, modification, improper storage, improper use (including but without limitation the storage of material) or negligent act of, or omission by, any person other than Manufacturer;
- b) the improper installation of the Goods, or deterioration of the base on which any of the Goods rest or are mounted to;
- c) any damage to the Goods caused by storm, wash away, landslide, mudslide, lightning, or any other natural phenomenon, vermin or other pests, and any undermining of the base of the Tank through any cause whatsoever;
- d) the repositioning of the Goods from their original installation;
- e) weathering or degradation of the Goods due to extreme climatic conditions;
- f) improper installation of extra fittings;
- g) any staining or discoloration, including from trees or ash fall-out from fires or other causes;
- h) a Tank not being placed on a base that is free of any protruding objects of any kind;
- i) a Tank being used for any purpose other than the storage of suitable liquids at the ambient temperatures.

WARRANTY

3.2. Without limiting the generality of clause 3.1:

- a) Manufacturer will not be liable for any personal injury, indirect or incidental damages, consequential losses, loss of liquids, loss of profit or any like claims whatsoever arising from any use of, or incidental to, or repairs to any of the Goods by a party other than Manufacturer;
- b) to the extent that any component or material (including, but without limitation the polyethylene) used in the manufacture of any of the Goods is supplied and/or manufactured by a third party, the liability of Manufacturer is limited to Manufacturer's right of redress (if any) against the third-party supplier/manufacturer;
- c) Tanks feature a vented lid at the time of manufacture. Any subsequent pressurization of the Tank by removing the vent, sealing the vent, or otherwise will cause this Limited Warranty as to such Tank to be null and void.
- d) The liability of Manufacturer under this Limited Warranty is limited to, at Manufacturer's discretion:
- e) providing a replacement Good (including shipping but excluding other replacement costs);
- f) refunding an amount equal to a sum equal to the current Retail price divided by the months in the warranty, multiplied by the months remaining in the warranty period;
- g) repairing the Good at no cost.

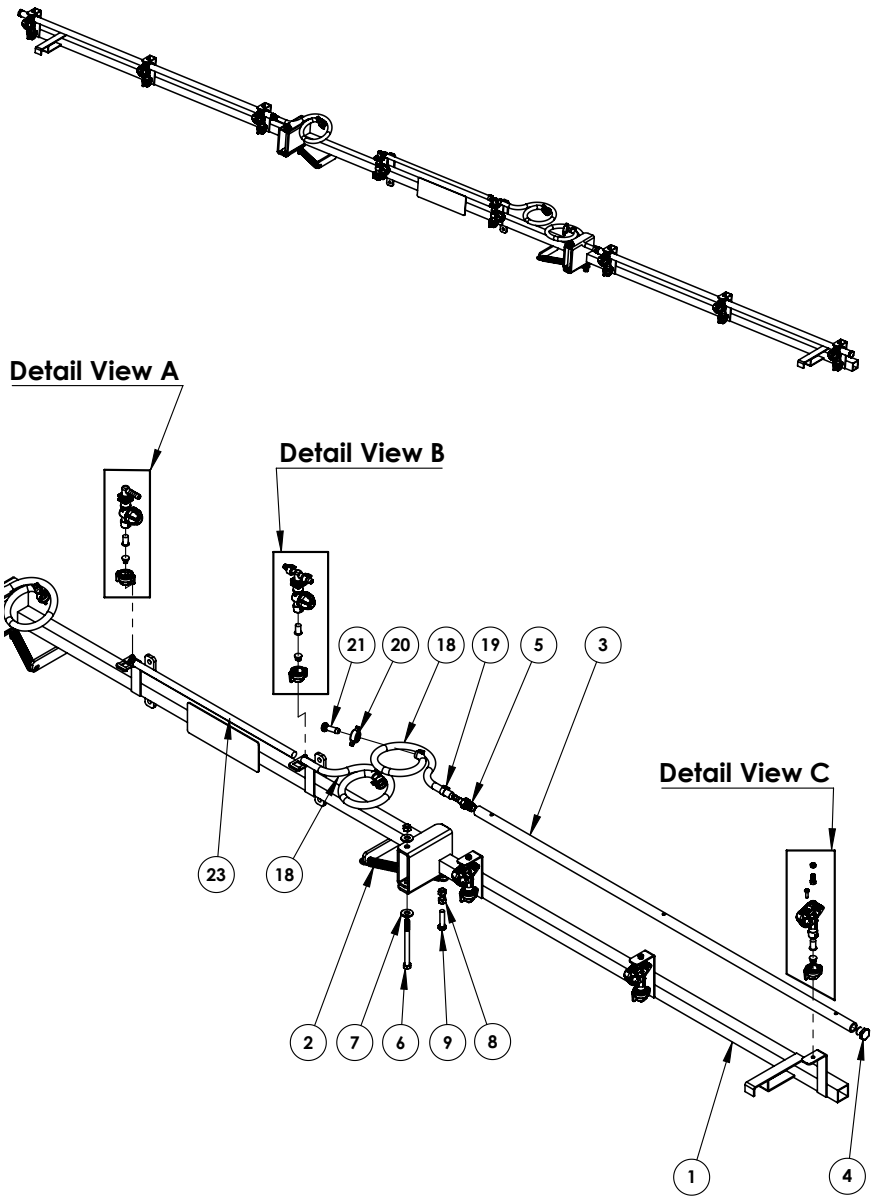
4. Proof of Purchase - The original invoice or other similar proof of purchase of the applicable must be provided by Purchaser to Manufacturer when making a claim under this Limited Warranty. Warranty claims must be received in writing by Manufacturer within the Limited Warranty period.

WARRANTY

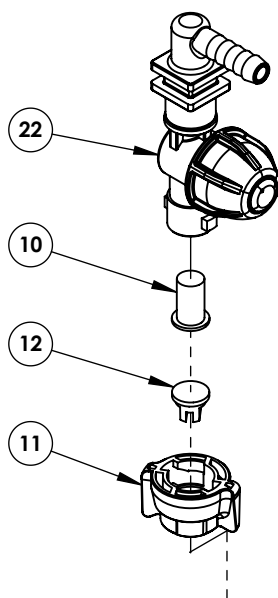
5. Claims and Questions - If you have questions about this Limited Warranty or to make a warranty claim, contact Manufacturer at: customercare@enduraplas.com
6. Definitions - For this Limited Warranty the following definitions apply:
 - a) Manufacturer means Enduraplas LLC.
 - b) Purchase Date means the date upon which the applicable goods were purchased by the original end user.
 - c) Purchase Price means the actual price paid for the Tank by the original Purchaser.
 - d) Tank means the storage Tank manufactured by Manufacturer and purchased by the original end user Purchaser being the subject matter of the Limited Warranty.
 - e) Good(s) mean Tanks and/or other products or parts manufactured by Enduraplas LLC.
 - f) Limited Warranty means this written Limited Warranty.
7. State Law - Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to certain parties. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to certain parties. This limited warranty gives specific legal rights and other rights, which vary from state to state, may also apply.
8. Governing Law - This Limited Warranty will be governed by the laws of the State of Minnesota, without giving effect to any choice of law rule that would cause the application of the laws of any other jurisdiction.

12' STEEL BOOM OVERVIEW

12' STEEL BOOM



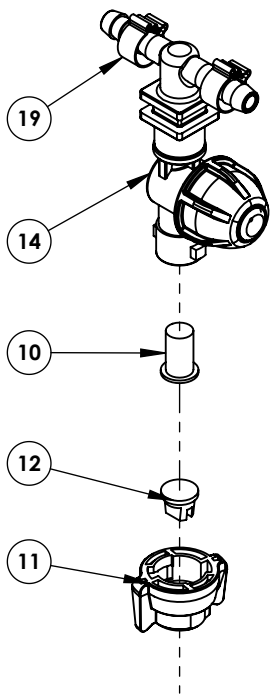
DETAIL VIEW A



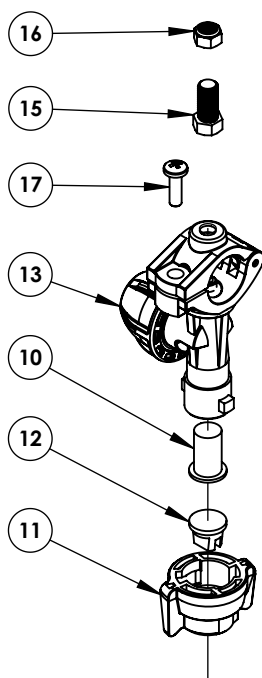
12' STEEL BOOM

DETAIL VIEW B

12' STEEL BOOM



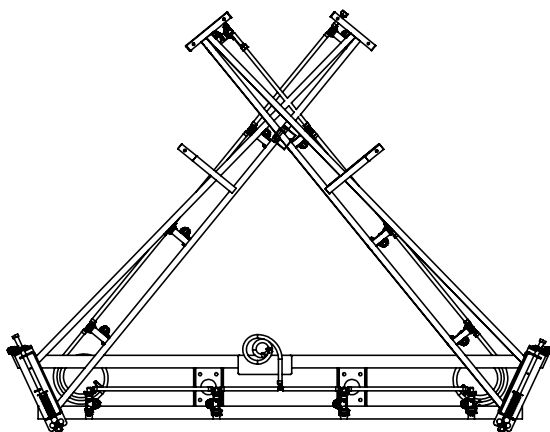
DETAIL VIEW C



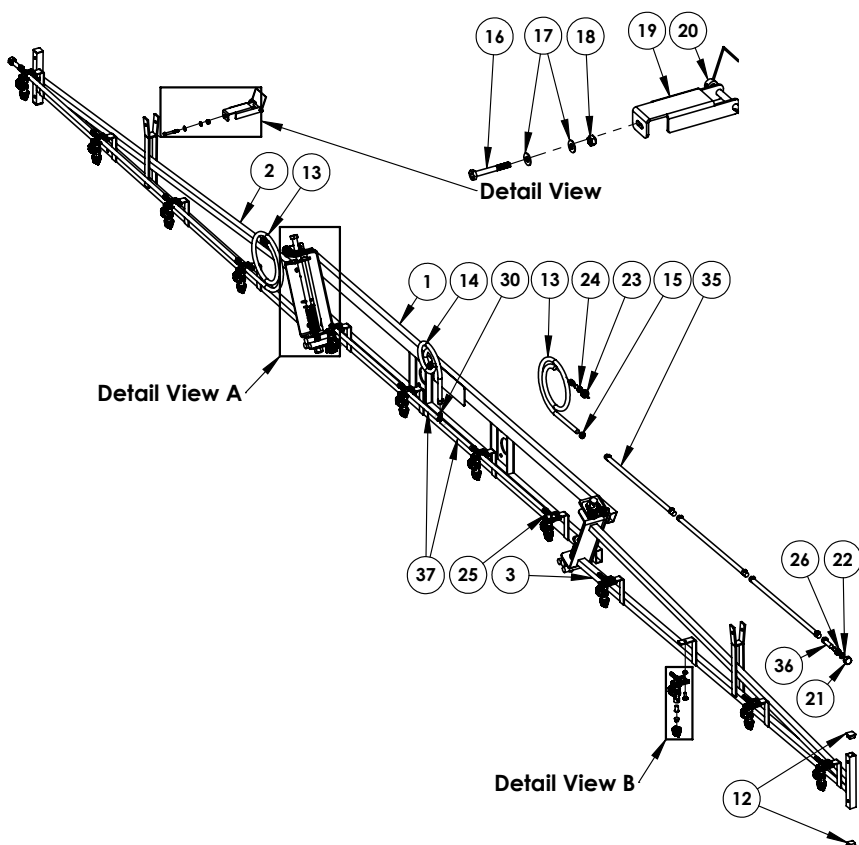
PARTS LIST

ITEM NO.	PART #	DESCRIPTION	QTY.
1	ASBS12SSBO	12 Ft Steel Boom Only-Powdercoated	1
2	CHPZFE	FB Extension Spring 302 SS	2
3	ASBP002	Poly Pipe Section 44 IN	2
4	CFPP01M	3-8 MPT Poly Hex Plug	2
5	CFPS01M01B	3/8 MPT x 3/8 Hose Barb Straight	2
6	CHBZ031925	.375 x 4.5 Bolt	2
7	CHWZF035	3/8" Flat Washer	4
8	CHNZN0325	3/8" Nylock Nut	6
9	CHBZ030725	3/8 x 1.5 Bolt	2
10	CNSS100	100 Mesh Nozzle Screen	8
11	CA40290003	Quick Fitting Cap Red	8
12	CNSNP002	Teejet Polymer Spray Tip 0.2 GPM	8
13	CA402235	Spray Boom Nozzle Body Clam Shell	6
14	CA413221	3-8 Single Barb x QA with Check Valve	1
15	CHBZ7012085	6 X 1.0 X 16MM HEX 8.8 ZINC	8
16	CHNZN0685	6MM Nyloc Nut	8
17	CB12625	Screw 6.75in Stainless Steel	6
18	CLUESB020001	3-8 hose from center boom to supply	3
19	CFCC002	CLAMP FOR 3/8" HOSE	8
20	CFBU02WN	Union .5 Wing Nut	3
21	CFBU01BW	.375 Union Nipple-washer	3
22	CA413211	3-8 Single Barb Qck Cap w/ck	1
23	CLUESB020001	3-8 Hose between center nozzles	1

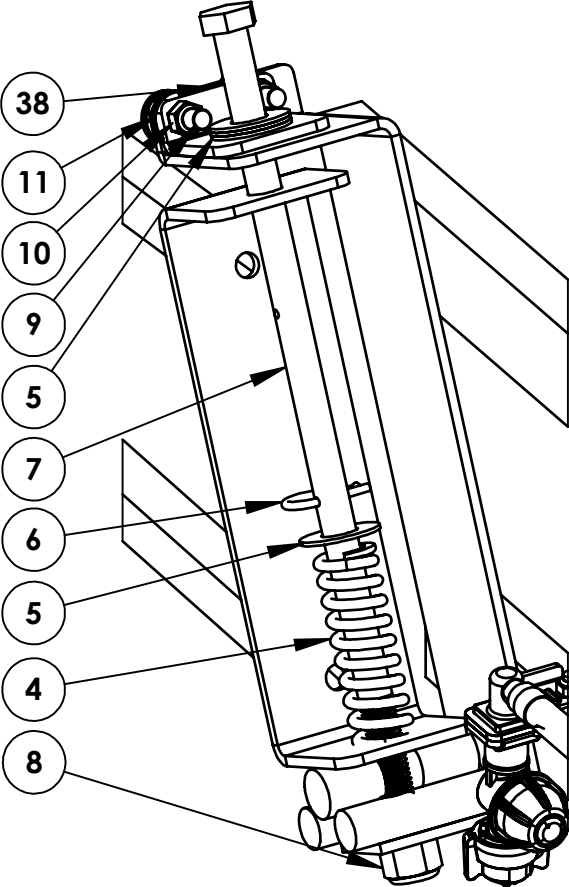
20' STEEL BOOM OVERVIEW



20' Steel Boom



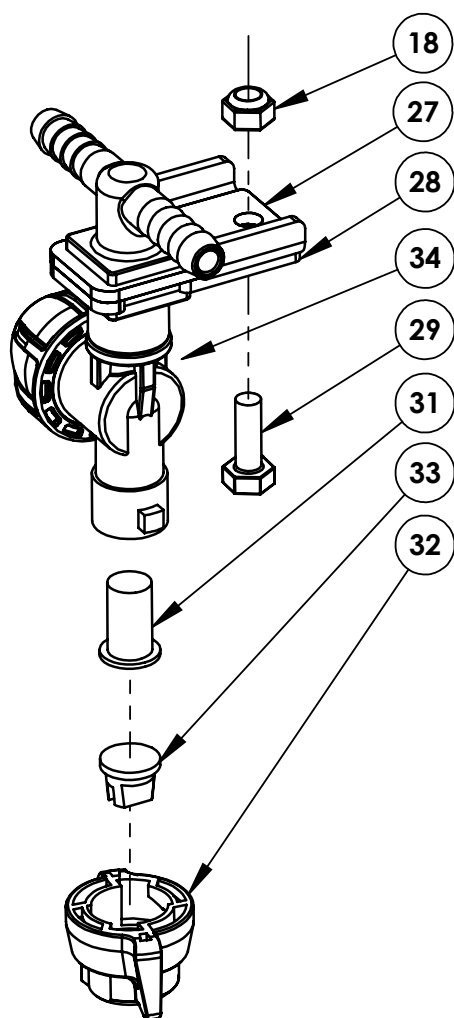
DETAIL VIEW A



20' STEEL BOOM

DETAIL VIEW B

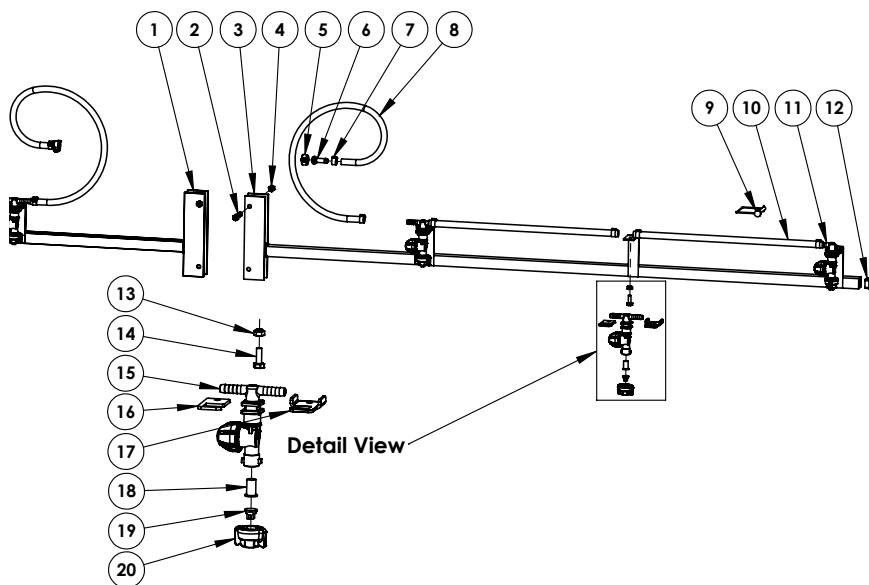
20' STEEL BOOM



PARTS LIST

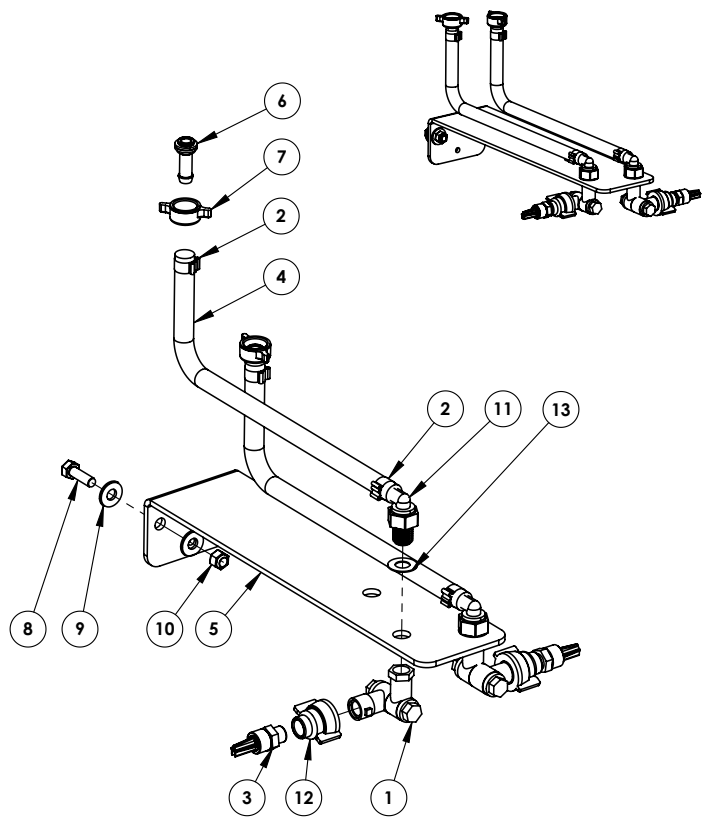
ITEM NO.	PART #	DESCRIPTION	QTY.
1	ASBS20SSRC	20 FT Steel Boom Frame Center	1
2	ASBS20SSRL	20 FT Steel Boom Frame Left Wing	1
3	ASBS20SSRR	20 FT Steel Boom Frame Right Wing	1
4	CHPZBP	Spring for steel boom	2
5	CHWGF065	5-8 / 16mm Flat Washer	8
6	CHCZ0007	1-8 in cotter pin	2
7	CHBG064525	5-8 Bolt for boom wings	2
8	CHNZN0625	5-8 Nyloc Nut	2
9	CHBZ030725	3/8 x 1.5 Bolt	4
10	CHNZN0325	3/8" Nylock Nut	4
11	CHWZF035	3/8" Flat Washer	16
12	CPFP05	1" Square Plug	4
13	CLUESB020001	3-8 Hose from Boom wing to supply-steel boom	2
14	CLUESB020001	3-8 Hose from Boom center to supply-steel boom	1
15	CFCC002	CLAMP FOR 3/8" HOSE	26
16	CHBZ010925	.25 x 2 IN Bolt	1
17	CHWZF015	1/4" Flat Washer	2
18	CHNZN0125	1/4 Nylock nut	13
19	AZKB0003	Bracket for SS Booms	1
20	CV904PA	.25 by 2in overcenter lynch pin	1
21	CFBU02C	Brass Cap-GH	2
22	CFBU02G	rubber washer for brass cap	2
23	CFBU02WN	Union .5 Wing Nut	3
24	CFBU01BW	.375 Union Nipple-washer	3
25	CA413211	3-8 Single Barb Qck Cap w/ck	2
26	CFBU01B02M	3/8 Union nipple 1/2 male thread	2
27	CSLC676	11ga bent tab for steel boom adaptor	12
28	CSLC677	10 ga straight tab for SB	12
29	CHBZ010325	1/4 X 3/4 Bolt	12
30	CFPT01B	3/8 Hose Barb Tee	1
31	CNSS100	100 Mesh Nozzle Screen	12
32	CA40290003	Quick Fitting Cap Red	12
33	CNSNP002	Teejet Polymer Spray Tip 0.2 GPM	12
34	CA413221	3-8 Single Barb x QA with Check Valve	10
35	CLUESB020001	3-8 EPDM Hose 18.5 IN Long	8
36	CLUESB020001	3-8 EPDM Hose 2 IN Long	2
37	CLUESB020001	3-8 EPDM Hose 9IN Long	2
38	CSLC084	Steel Boom Wing Bracket Adjuster	2

30' STEEL BOOM OVERVIEW



ITEM NO.	PART #	DESCRIPTION	QTY.
1	ASBS5LSS	5 Ft LH Wing Tip	1
2	CHBZ020925	5-16 x 2 Bolt	2
3	ASBS5RSS	5 Ft RH Wing Tip	1
4	CHNZN0225	5/16 Nylock nut	2
5	CFBU02WN	Union .5 Wing Nut	2
6	CFBU01BW	.375 Union Nipple-washer	2
7	CFCC002	CLAMP FOR 3/8" HOSE	12
8	CLUESB020001	.375 hose for wing tip extensions	2
9	CV904PA	.25 by 2in overcenter lynch pin	2
10	CLUESB020001	3-8 EPDM Hose 18.5 IN Long	4
11	CA413211	3-8 Single Barb Qck Cap w/ck	2
12	CPFP05	1" Square Plug	2
13	CHNZN0125	1/4 Nylock nut	6
14	CHBZ010325	1/4 X 3/4 Bolt	6
15	CA413221	3-8 Single Barb x QA with Check Valve	4
16	CSLC677	10 ga straight tab for SB	6
17	CSLC676	11ga bent tab for steel boom adaptor	6
18	CNSS100	100 Mesh Nozzle Screen	6
19	CNSNP002	Teejet Polymer Spray Tip 0.2 GPM	6
20	CA40290003	Quick Fitting Cap Red	6

30' BOOMLESS NOZZLE KIT OVERVIEW



30' BOOMLESS NOZZLE

ITEM NO.	PART #	DESCRIPTION	QTY.
1	CA404072N	1/4"NPT X QA Swivel	2
2	CFCC002	CLAMP FOR 3/8" HOSE	4
3	CNBC001	Hypro Boomless nozzle 1 GPM	2
4	CLUESB020001	3/8 EPDM Hose 3'	2
5	AZKS0006	Steel Bracket FBBN30	1
6	CFBU01BW	.375 Union Nipple-washer	2
7	CFBU02WN	Union .5 Wing Nut	2
8	CHBZ020525	5-16 x 1 Bolt	2
9	CHWZF025	5/16 Flat washer	4
10	CHNZN0225	5/16 Nylock nut	2
11	CBHB02503890	1/4 MNPT x 3/8 Hose Barb	2
12	CA40291001	Quick fit cap .25 in npt	2
13	CEGN01	Seal Washer .5 IN Seal Drain Plug	2

