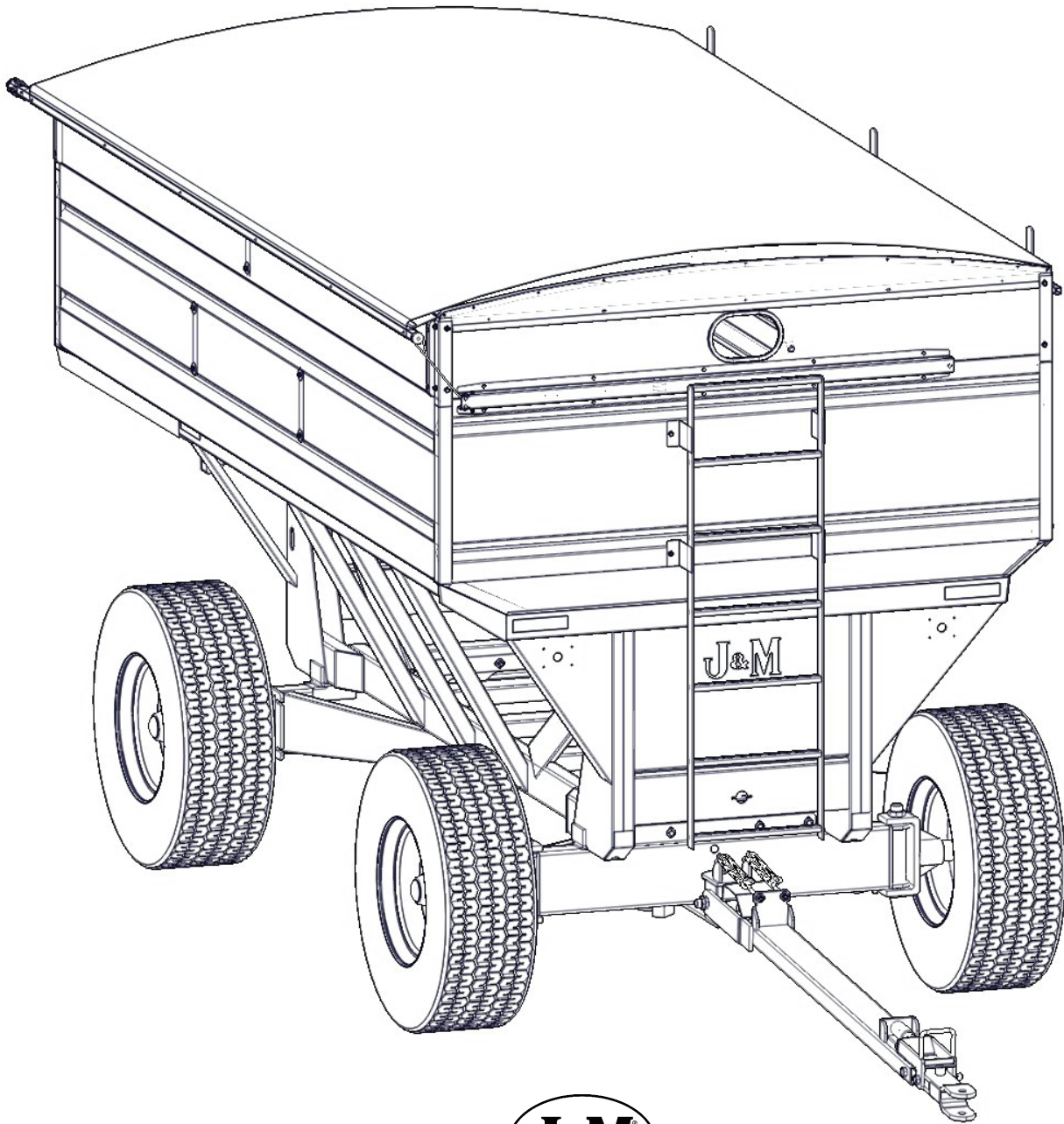


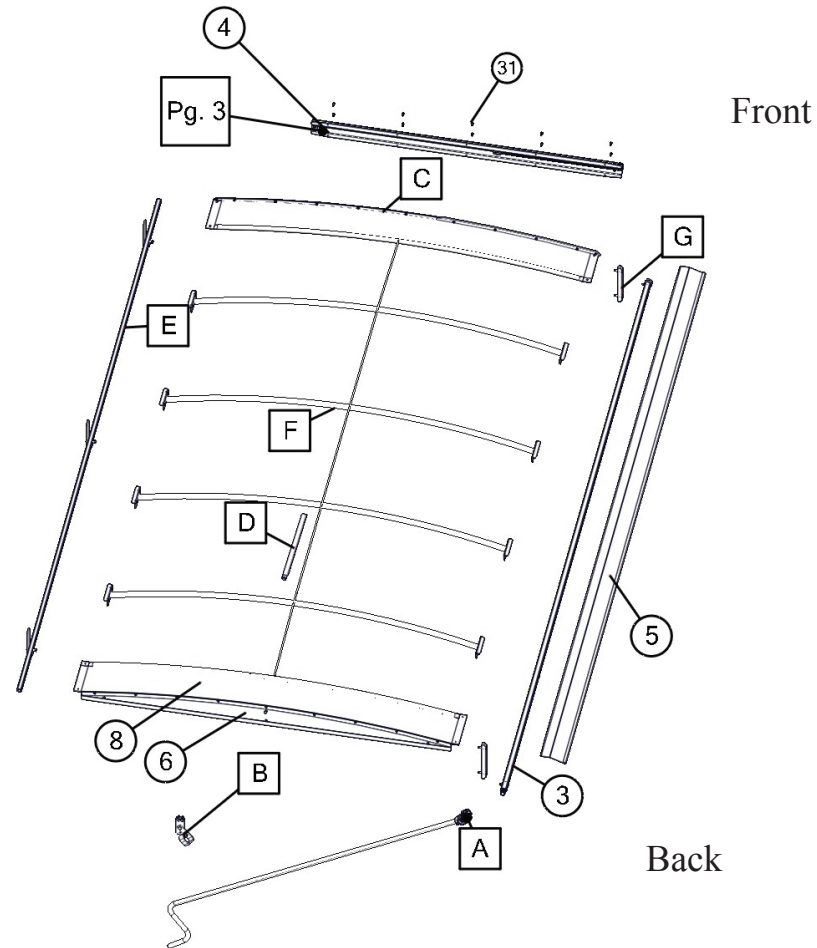


STANDARD GRAVITY BOX TARP INSTALLATION MANUAL



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ROLL TARP ASSEMBLY

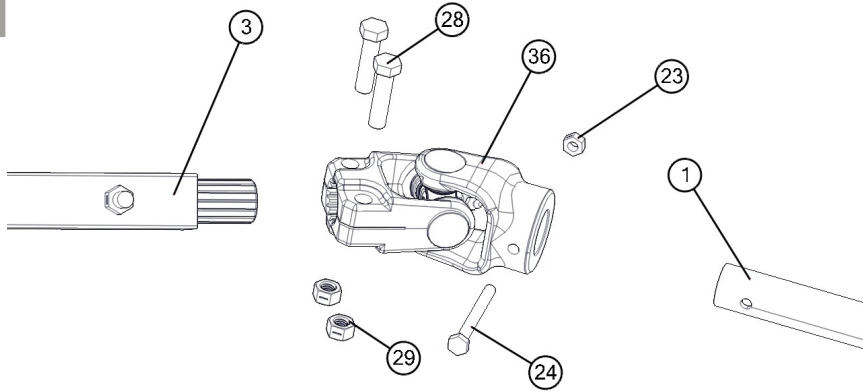


#	Description
1	Tarp Crank Handle Small
2	1" x 1" 14 GA Square Tubing
3	1.25" x 1.25" Roll Tube
4	Spring Return
5	Lip Lock
6	Back End Plate
7	Front End Plate
8	Back Endcap Arch
9	Front Endcap Arch
10	Nylon Strip
11	Tarp Bows
12	3/16" Diameter Ridge Cable
13	Stop Bracket
14	Prop Up Bar
15	Plastic Standoffs
16	J-Bolt
17	Canvas Tarp
18	Hanger Bracket
19	Hanger Bracket Hook

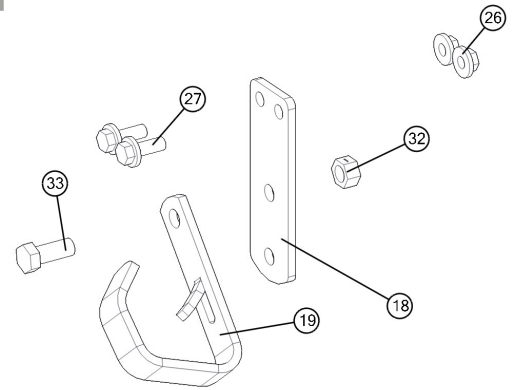
#	Description
20	1/4" Flange Nuts
21	1/4" x 1/2"
22	1/4"x 5/8"
23	1/4" Locknut
24	1/4" x 2 1/2"
25	1/4" x 3/4"
26	3/8" Flange Nuts
27	3/8" x 1" Flange
28	3/8" x 2"
29	3/8" locknut
30	1/4" x 1 1/2" Self Tapping
31	*1/4" x 3/4" Self Tapping
32	1/2" Locknut
33	1/2" x 1 1/4"
34	Small Cable Clamp
35	Large Cable Clamp
36	Universal Joint
37	1/4" Drive Rivet

ROLL TARP ASSEMBLY

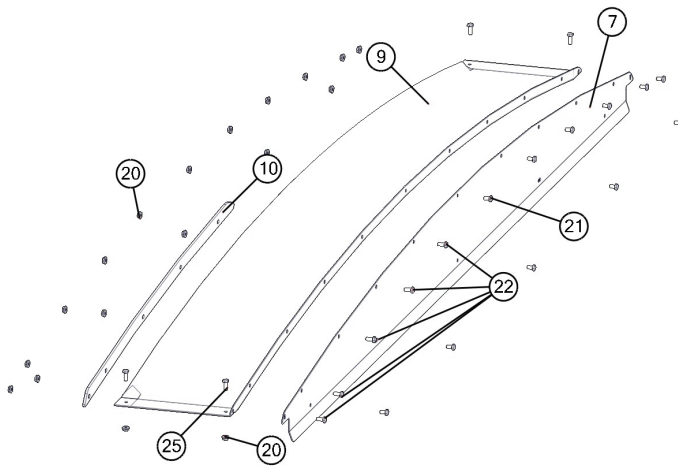
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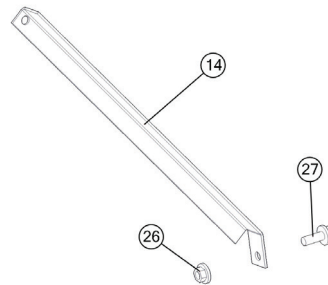
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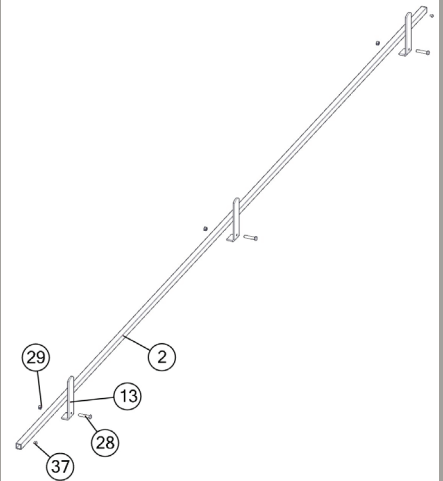
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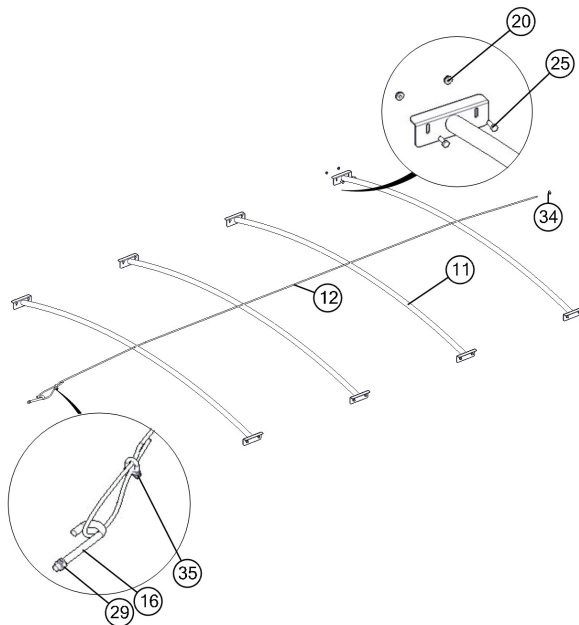
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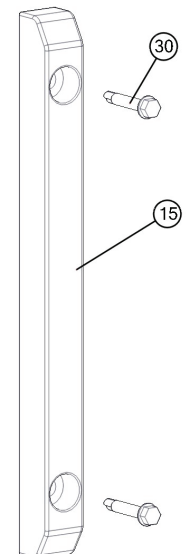
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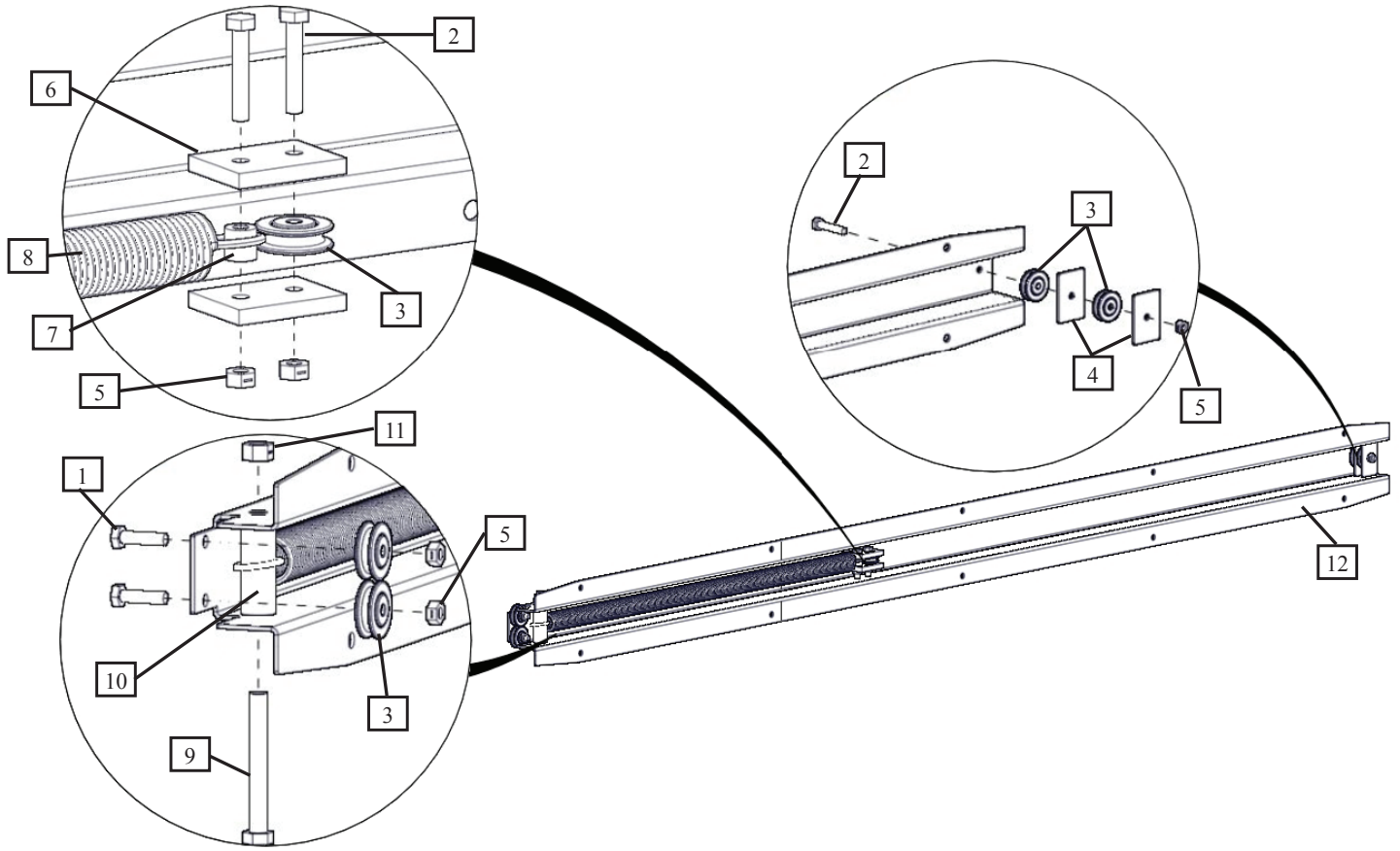
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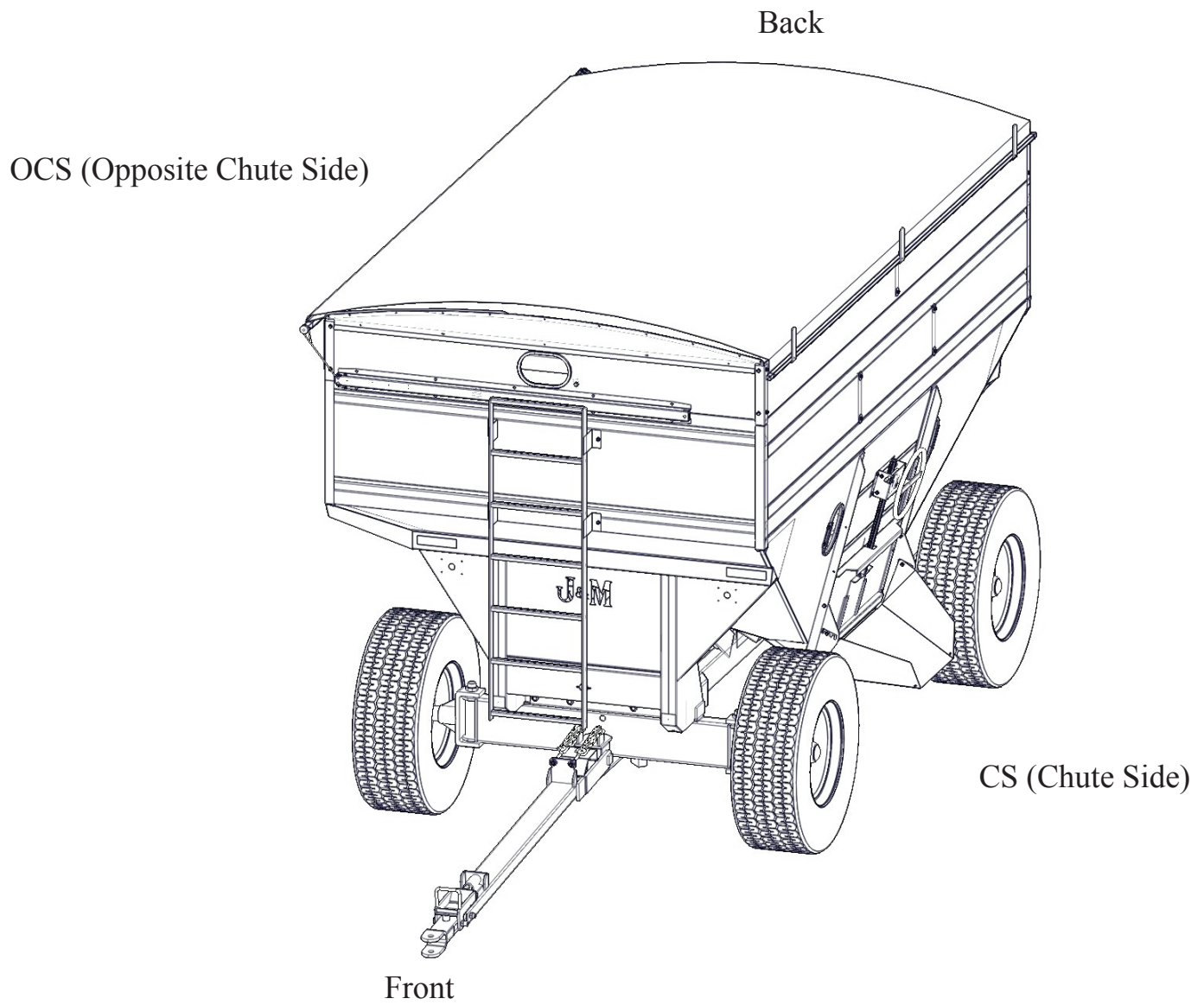
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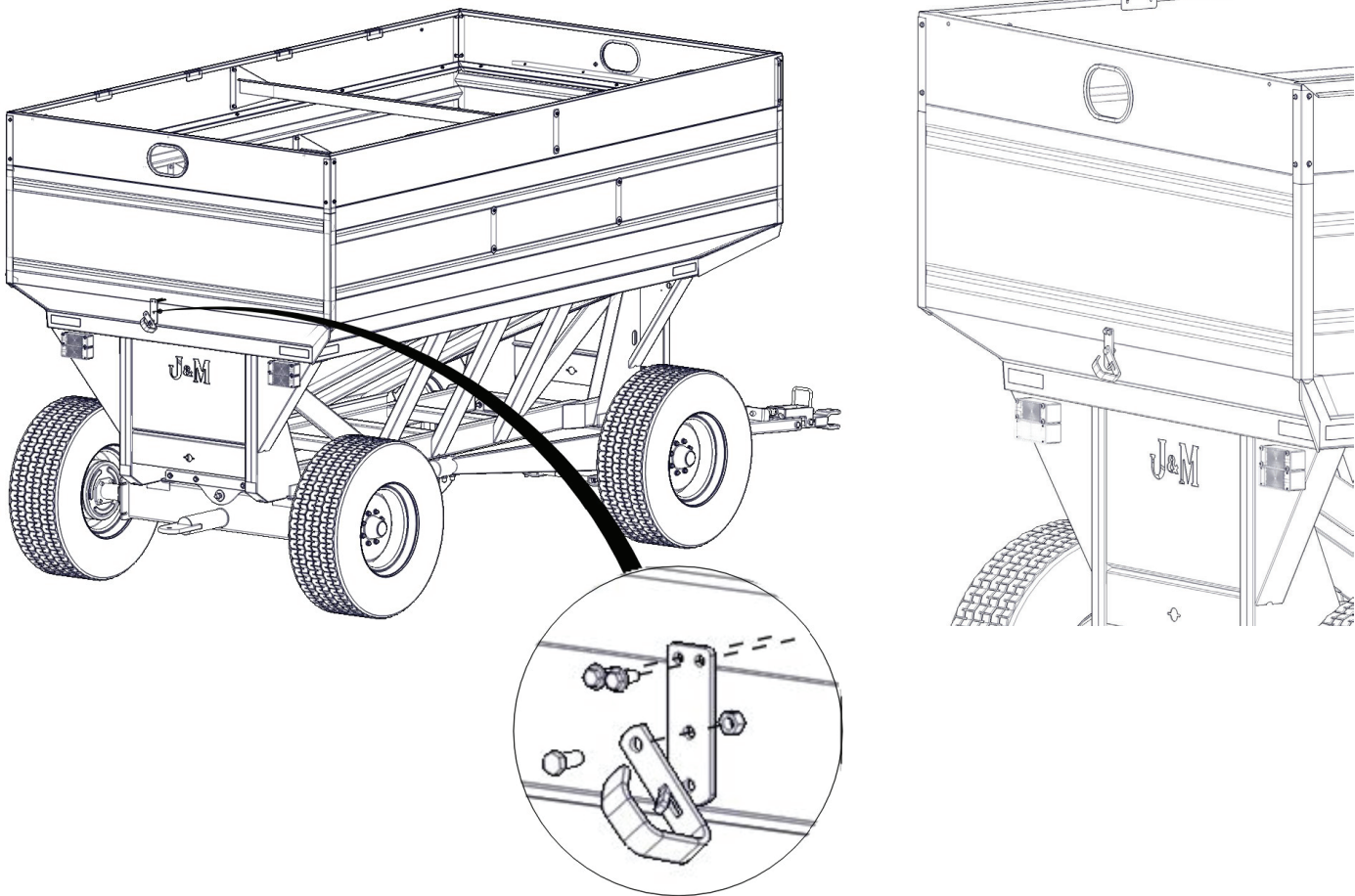


SPRING RETURN ASSEMBLY



#	Description	Part #	Qty.
1	1/4-20 X 1.0 Grade 5 Zinc Hex Bolt	JM0002095	2
2	1/4-20 X 1 1/2 Grade 5 Zinc Hex Bolt	JM0002447	1
3	Roller Small	JM0000200	5
4	Aluminum Spacer Square	JM0000202	2
5	1/4-20 Grade 5 Zinc Centerlock Nut	JM0001505	5
6	Rectangular Plastic Spacer	JM0000205	2
7	Short Plastic Spacer	JM0000206	1
8	Spring Return Spring	JM0000207	1
9	3/8-16 X 3.0 Grade 5 Zinc Hex Bolt	JM0001666	1
10	Tall Plastic Spacer	JM0000209	1
11	3/8-16 Grade 5 Zinc Centerlock Nut	JM0001512	1
12	Spring Return Housing	JM0002446	1

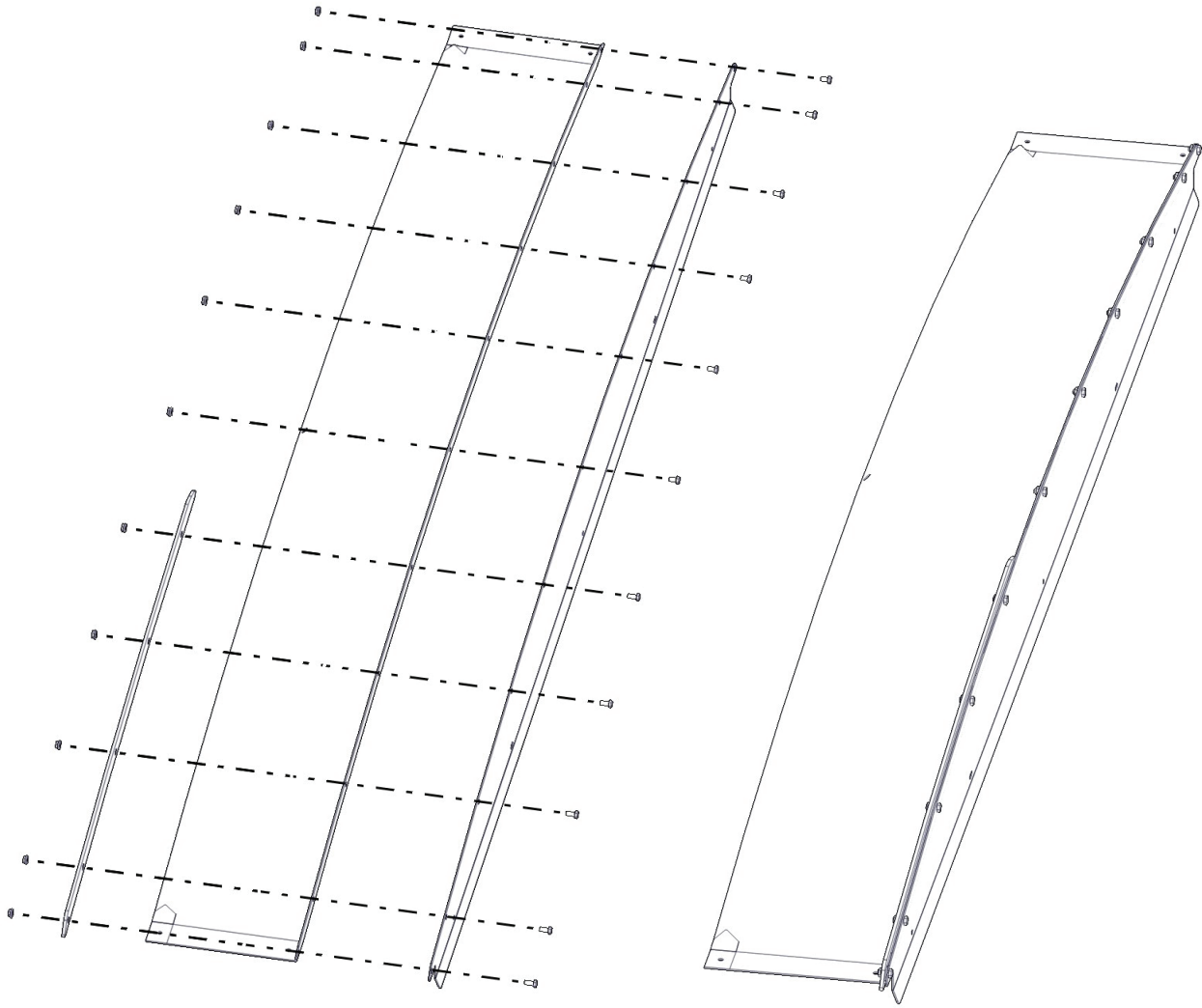




1.1 Mark two holes using the Hanger Bracket as a template and drill with a 3/8" drill bit. These holes should be centered on the back vertical face of the gravity box as low as possible.

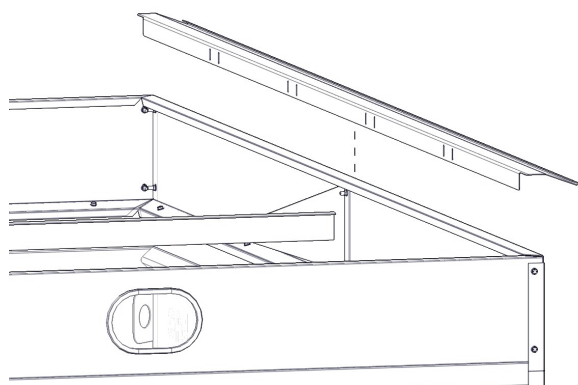
1.2 Fasten the Hanger Bracket to the gravity box using two 3/8" x 1" serrated flange bolts and two 3/8" serrated flange nuts.

1.3 Fasten the Hanger Hook to the Hanger Bracket as shown above with a 1/2" x 1 1/4" bolt and a 1/2" locknut. This should not be tightened all the way. The Hanger Hook needs to be able to swivel on the Hanger Bracket.



- 2.1** Aside from the gravity box, match up the holes on the Front Endcap Arch with the top Front Endcap Plate holes.
- 2.2** Install the Nylon Strip Opposite Chute Side (OCS) using 1/4" x 5/8" bolts and 1/4" serrated flange nuts.
- 2.3** Insert 1/4" x 1/2" bolts in the remaining holes. Fasten with 1/4" serrated flange nuts.
- 2.4** Repeat Steps 2.1 - 2.3 for the back endcap arch and plate.
 - NOTE: Since there is no wind lip on the back endcap, it doesn't include a Nylon Strip so only 1/4" x 1/2" bolts should be used.

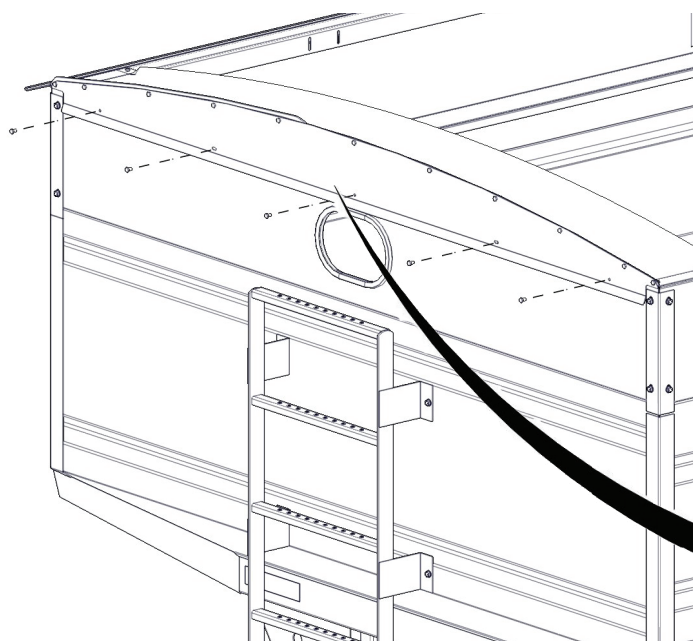
STEP 3 - PLACE LIP LOCK AND ENDCAPS



3.1 Rest the lip lock OCS and centered on the top of the Gravity Box.

3.2 Rest the assembled front and back Endcaps in place.

STEP 4 - ENDCAPS

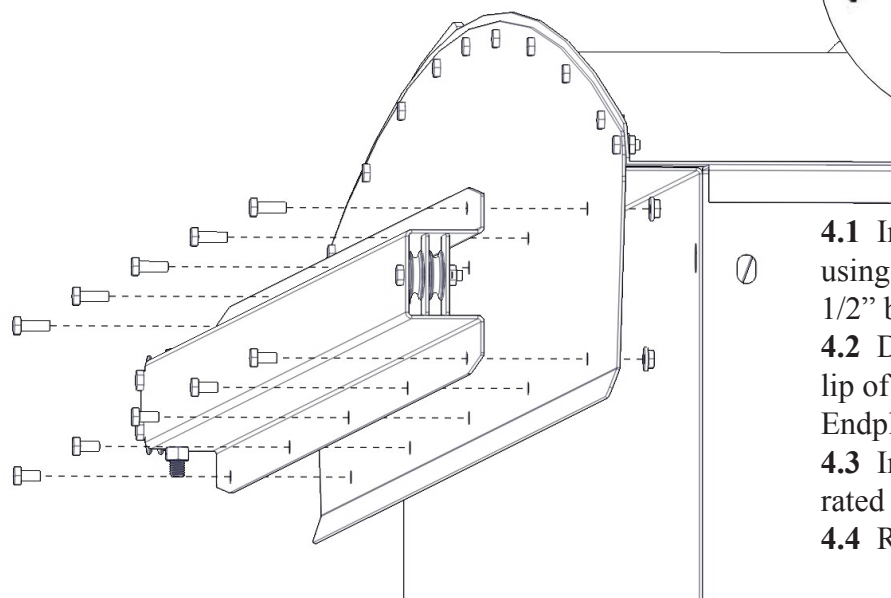
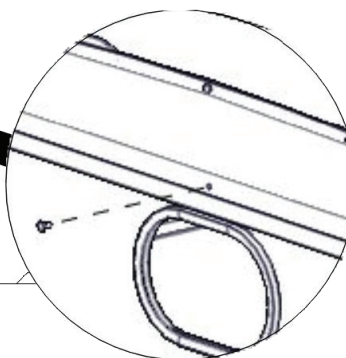


440/540 & 680/760 Models

4.1 Using the lower holes on the front Endcap Plate as a guide, drill holes through the front using a 1/4" drill bit.

4.2 Insert 1/4" x 1/2" bolts and fasten using 1/4" serrated flange nuts.

4.3 Repeat steps 4.1 & 4.2 for the back Endcap.



250 & 385 Models

4.1 Install the Spring Return onto the front Endcap using only the bottom five holes. Fasten using 1/4" x 1/2" bolts and 1/4" serrated flange nuts.

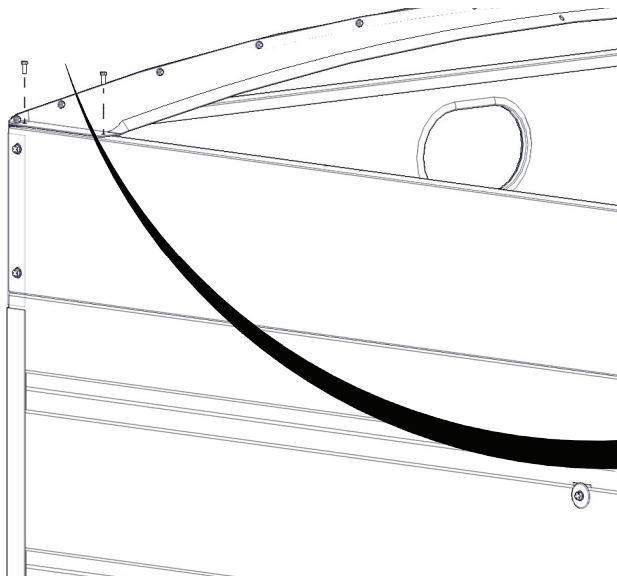
4.2 Drill holes with a 1/4" drill bit through the outer lip of the sideboard using the top five holes of the Endplate/Spring Return as a guide.

4.3 Insert 1/4" x 3/4" bolts and fasten using 1/4" serrated flange nuts.

4.4 Repeat Steps 4.2 & 4.3 for the back endcap.

-NOTE: No spring return is installed on the back so only 1/4" x 1/2" bolts should be used.

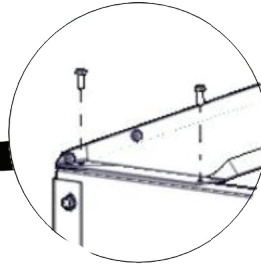
STEP 5 - ENDCAPS CONTINUED



5.1 Use the four holes on the top of the front Endcap as a guide to drill four holes from the top using a 1/4" drill bit.

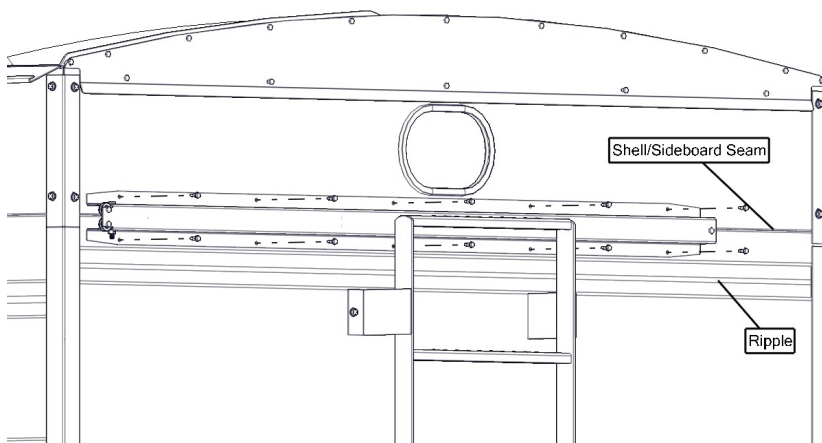
5.2 Insert 1/4" x 3/4" bolts and fasten with 1/4" serrated flange nuts.

5.3 Repeat Steps 5.1 & 5.2 for the back Endcap.



STEP 6 - SPRING RETURN

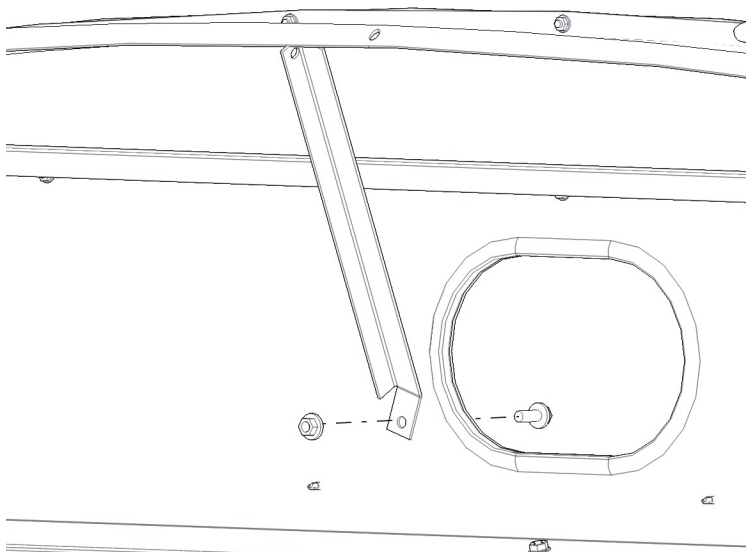
NOTE: This step is only pertains to **440/540 & 680/760 Models**



Install the Spring Return on the front of the gravity box using ten 1/4" x 3/4" self tapping bolts. Be sure the end with the cable loop is OCS. It should be positioned up against the OCS corner brace. See the chart below for model specific Spring Return locations.

Model	Spring Return Location
440	Above ladder - straddling Ripple
680	Below ladder - straddling Ripple
540 & 760	Above ladder - straddling Shell/Sideboard Seam (as shown on left)

STEP 7 - KNEE BRACES



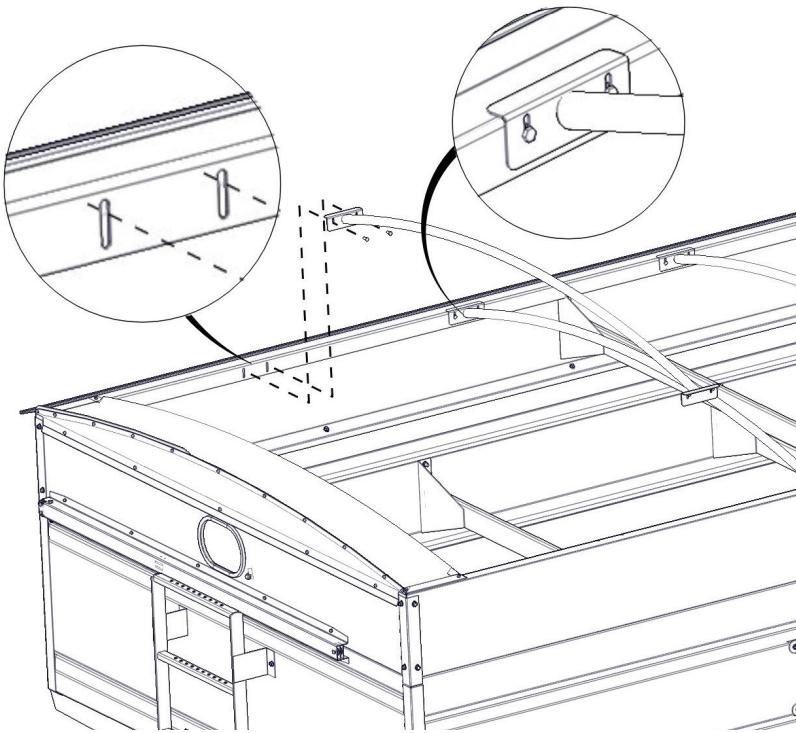
7.1 Mark the hole for the Knee Brace as centered as possible using the Knee Brace as a guide. When marking the hole push up on the Endcap to keep it from sagging.

7.2 Drill the hole using a 3/8" bit.

7.3 Use a 3/8" x 1" serrated flange bolt and a 3/8" serrated flange nut to fasten the knee brace. Be sure that the knee brace applies upward pressure to the Endcap.

7.4 Repeat Steps 7.1-7.3 for the remaining knee brace under the opposite Endcap.

STEP 8 - TARP BOWS



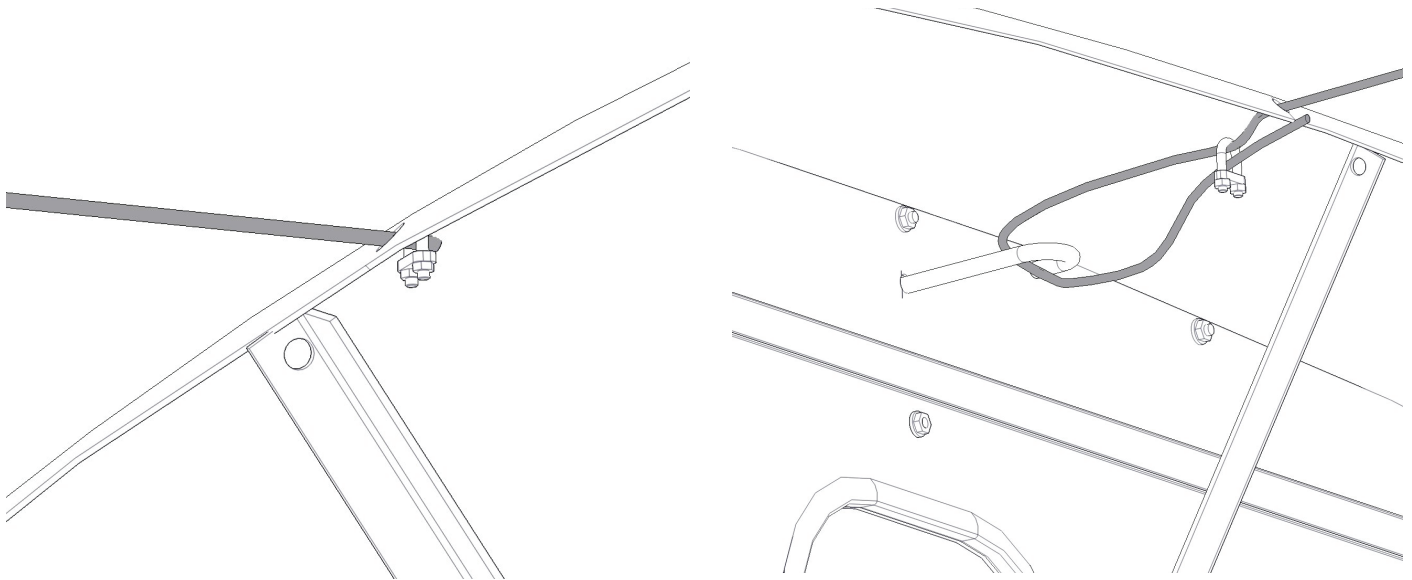
9.1 Position the Tarp Bows on top the Gravity Box. Be sure to spread the Bows out evenly from front to back.

9.2 Using the Tarp Bows as a guide, drill holes with a 1/4" drill bit.

-NOTE: There may be existing holes in the Lip Lock for the bows. If these holes are not in the correct location, new holes will have to be drilled through the lip lock.

9.3 Insert 1/4" x 3/4" bolts and fasten with 1/4" serrated flange nuts.

STEP 9 - CABLE



8.1 Tighten the Small Cable Clamp close to one end of the 3/16" diameter cable.

8.2 Pull the opposite end through the center hole of the front Endcap, over all of the Tarp Bows, then through the center hole on the back Endcap.

8.3 With the remaining cable pulled through the back endcap, make the cable into a loop using the large cable clamp but do not tighten.

8.4 Insert the J-Bolt into the the remaining center hole on the back Endplate and hand tighten it with a 3/8" locknut.

8.5 Hook the cable loop around the J-Bolt and pull the cable taught over the Bows before tightening the Large Cable Clamp .

8.6 Tighten the locknut until the cable is well taught over the bows.

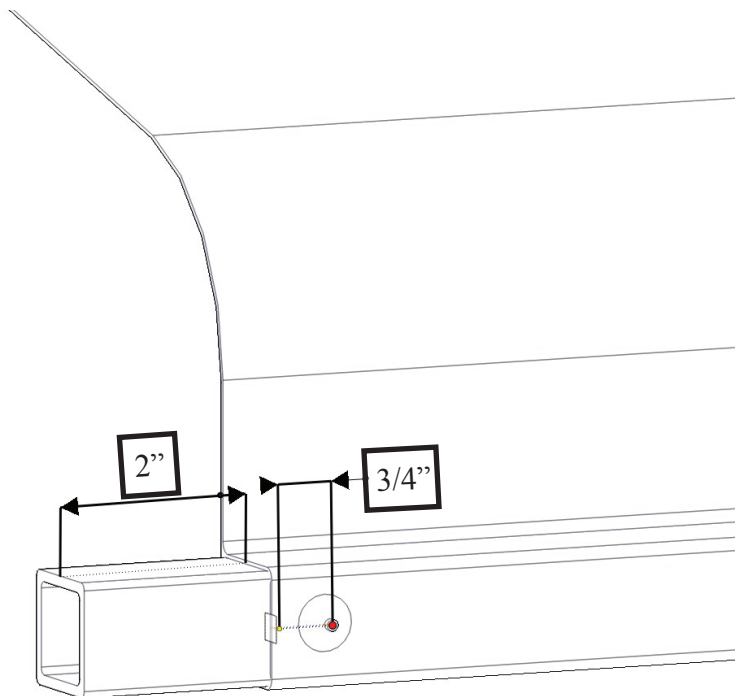
-NOTE: Use a vise grips on the J-Bolt while tightening to keep it from spinning.

STEP 10 - PLASTIC STANDOFFS



Using 1/4" x 1 1/2" self tapping screws mount the Plastic Standoffs 2" below the drip edge and right up against the corner brace as shown on the left.

STEP 11 - 1" SQUARE TUBE



11.1 Insert the 1" 14 ga Square Tube into the tarp sleeve on the opposite side of the stiffening patch (see pg. 11, Step 13 for a picture of the stiffening patch).

11.2 Center the 1" Square Tube inside the sleeve. This should leave around 2" of the tube sticking out of the sleeve on each side as shown above.

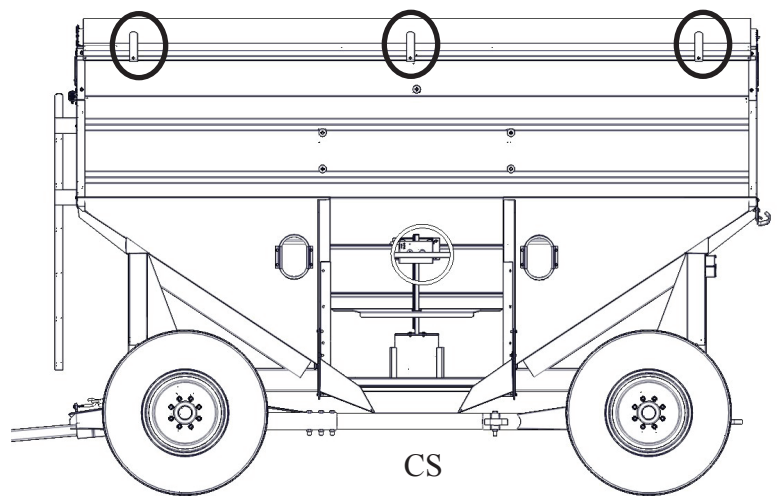
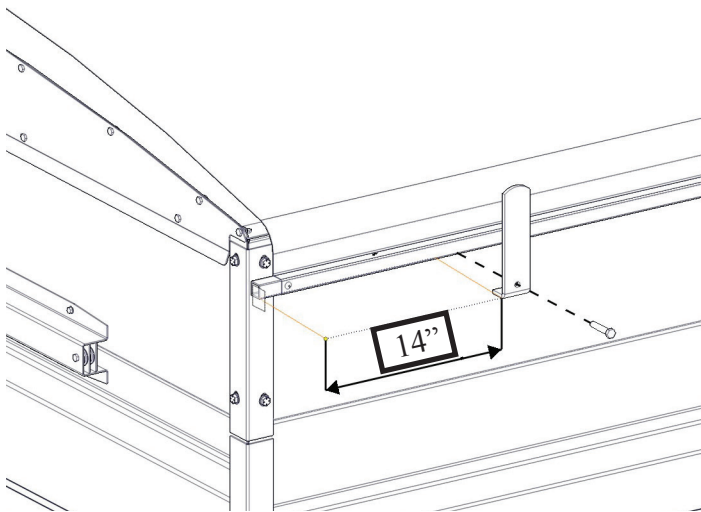
11.3 Use a 1/4" drill bit to drill a hole through the Canvas Tarp and one wall of the 1" Square Tube. The hole should be around 3/4" from the edge of the tarp.

11.4 Use a hammer to install a 1/4" Drive Rivet.

11.5 Repeat Steps 11.3 & 11.4 at the same location on the other end of the Square Tube.

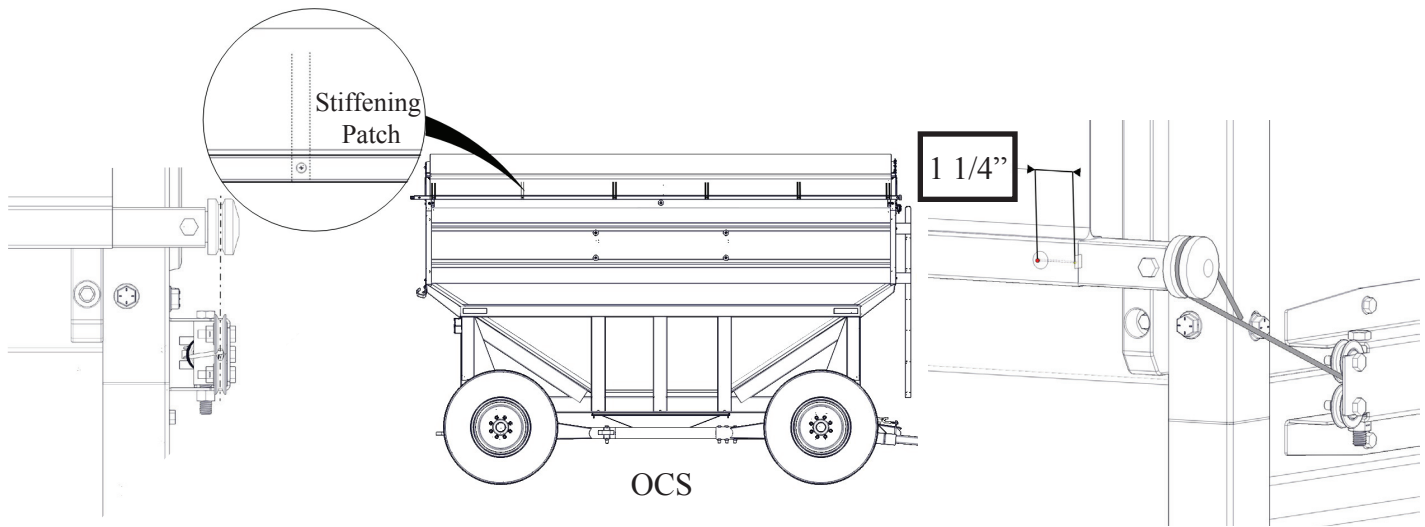
-NOTE: Be sure the Tarp is pulled tight over the Square Tube in between the Rivets.

STEP 12 - STOP BRACKETS

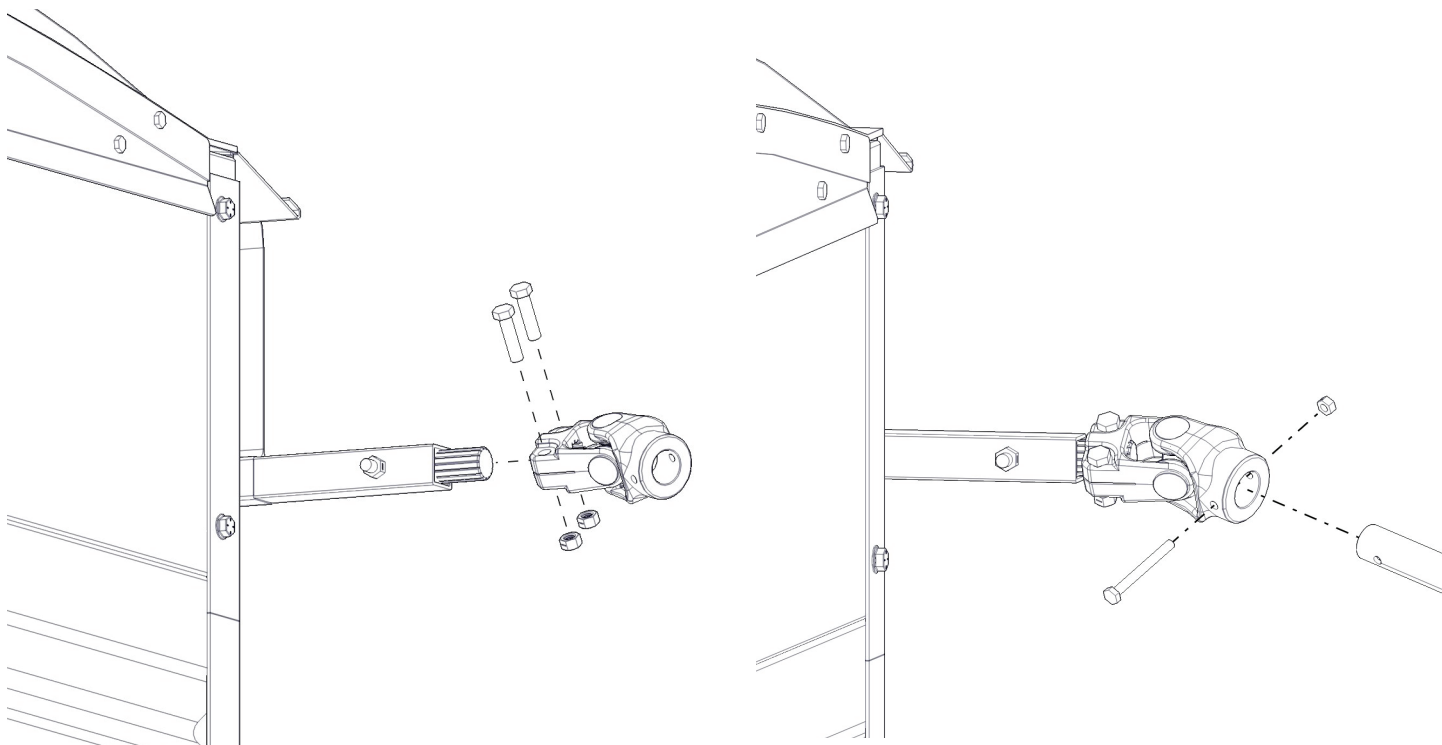


- 12.1** Center the 1" Square Tube that is riveted to the Canvas Tarp on the CS of the gravity box. Allow the Square Tube to hang below the top bolts on the corner brackets (around 2 1/2" below top of the Gravity Box).
- 12.2** Drill two holes around 14" from the end of the Tube through the Tubing and sideboard wall. A third hole should be drilled as centered on the tube as possible. Avoid drilling through the center brace inside the gravity box.
- 12.3** Install each stop bracket with a 3/8" x 2" bolt and a 3/8" locknut.

STEP 13 - 1 1/4" SQUARE TUBE



- 13.1** On the opposite side of the Canvas Tarp, slide the 1 1/4" Square Tube into the remaining sleeve until the spool lines up with the pulleys on the Spring Return. The splined end of the 1 1/4" Square Tube should be towards the back of the Gravity Box.
- 13.2** With a 1/4" drill bit, drill a hole through each of the stiffening patches and one wall of the 1 1/4" Square Tube. Also drill a hole at each end of the 1 1/4" Square Tube around 1 1/4" from the edge of the Canvas Tarp.
- 13.3** Use a hammer to install 1/4" drive rivets into each of the drilled holes.
- 13.4** Slip the Spring Return cable loop over the spool.



14.1 Install the Universal Joint using two 3/8" x 2" bolts and two 3/8" locknuts.

14.2 Install the Crank Handle using one 1/4" x 2 1/2" bolt and one 1/4" locknut.

-NOTE: Universal Joint may be pre-assembled to the Crank Handle.

ROLL TARP PART NUMBERS

Common Roll Tarp Parts		
Description	Part No.	Qty.
Nylon Strip	JM0001471	1
Stop Bracket	JM0001494	3
Prop Up Bar	JM0000917	2
Plastic Standoffs	JM0001496	2
J-Bolt-Small	JM0001519	1
Hanger Bracket	JM0000815	1
Hanger Bracket Hook	JM0001497	1
1/4" Flange Nuts	JM0001499	52*
1/4" x 1/2"	JM0001481	27
1/4"x 5/8"	JM0001479	5
1/4" Locknut	JM0001505	1
1/4" x 2 1/2"	JM0001506	1
1/4" x 3/4"	JM0001507	20*
3/8" Flange Nuts	JM0001508	4
3/8" x 1" Flange	JM0001509	4
3/8" x 2"	JM0001510	5
3/8" Locknut	JM0001512	6
1/2" Locknut	JM0001511	1
1/2" x 1 1/4"	JM0001513	1
1/8" Cable Clamp	JM0001514	1
3/16" Cable Clamp	JM0001515	1
Universal Joint	JM0001517	1
1/4" Drive Rivet	JM0001518	10
1/4" x 1 1/2" Self Tapping	JM0001571	4

***Add 4 to quantity for every tarp bow added after 3 total.**

Model Specific Roll Tarp Parts		
Description	Part No.	Qty.
250 Roll Tarp		
Tarp Crank Handle Small	JM0000889	1
1" x 1" 14 ga Square Tubing x 120"	JM0001531	1
1.25" x 1.25" Roll Tube 126"	JM0001537	1
Drip Edge 120"	JM0001549	1
Back Endcap Arch 84"	JM0001546	1
Front Endcap Arch 84"	JM0001543	1
Back End Plate 84"	JM0001549	1
Front End Plate 84"	JM0001545	1
250 Tarp Bows	JM0001583	3
3/16" Diameter Ridge Cable 120"	JM0001525	1
250 Canvas Tarp	JM0001589	1
385 Roll Tarp		
Tarp Crank Handle Small	JM0000889	1
1" x 1" 14 ga Square Tubing x 148"	JM0001534	1
1.25" x 1.25" Roll Tube 154"	JM0001538	1
Drip Edge 148"	JM0001552	1
Back Endcap Arch 94"	JM0001554	1
Front Endcap Arch 94"	JM0001550	1
Back End Plate 94"	JM0001555	1
Front End Plate 94"	JM0001551	1
385 Tarp Bows	JM0001584	3
3/16" Diameter Ridge Cable 148"	JM0001524	1
385 Canvas Tarp	JM0001588	1
440/540 Roll Tarp		
Tarp Crank Handle Small	JM0000889	1
1" x 1" 14 ga Square Tubing x 180"	JM0001535	1
1.25" x 1.25" Roll Tube 186"	JM0001539	1
Drip Edge 180"	JM0001567	1
Back Endcap Arch 100"	JM0001565	1
Front Endcap Arch 100"	JM0001563	1
Back End Plate 100"	JM0001566	1
Front End Plate 100"	JM0001564	1
440 Tarp Bows	JM0021006	3
540 Tarp Bows	JM0000812	3
3/16" Diameter Ridge Cable 180"	JM0001526	1
1/4" x 3/4" Self Tapping	JM0001570	4
440/540 Canvas Tarp	JM0001587	1
680/760 Roll Tarp		
Tarp Crank Handle Medium	JM0001541	1
1" x 1" 14 ga Square Tubing x 198"	JM0001536	1
1.25" x 1.25" Roll Tube 204"	JM0001540	1
Drip Edge 198"	JM0001576	1
Back Endcap Arch 114"	JM0001574	1
Front Endcap Arch 114"	JM0001572	1
Back End Plate 114"	JM0001575	1
Front End Plate 114"	JM0001573	1
680 Tarp Bows	JM0021010	4
760 Tarp Bows	JM0001585	4
3/16" Diameter Ridge Cable 198"	JM0001527	1
1/4" x 3/4" Self Tapping	JM0001570	4
680/760 Canvas Tarp	JM0001586	1