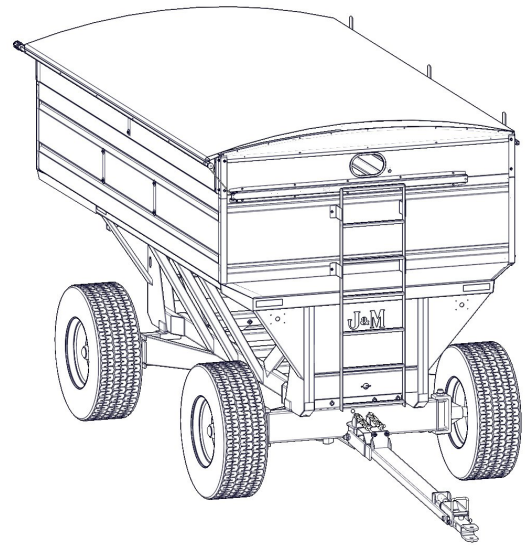


OPERATORS MANUAL

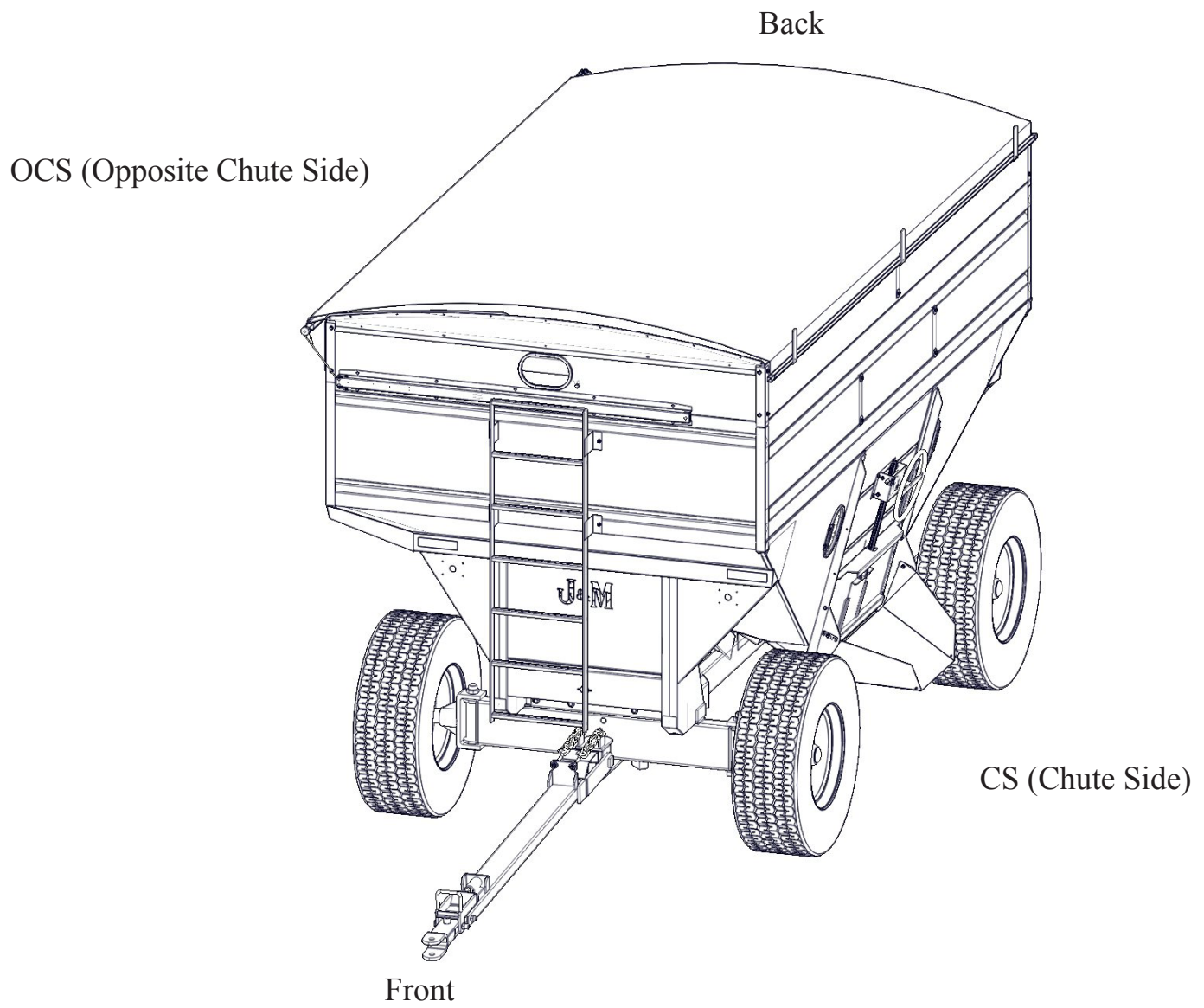


STANDARD GRAVITY BOX TARP INSTALLATION

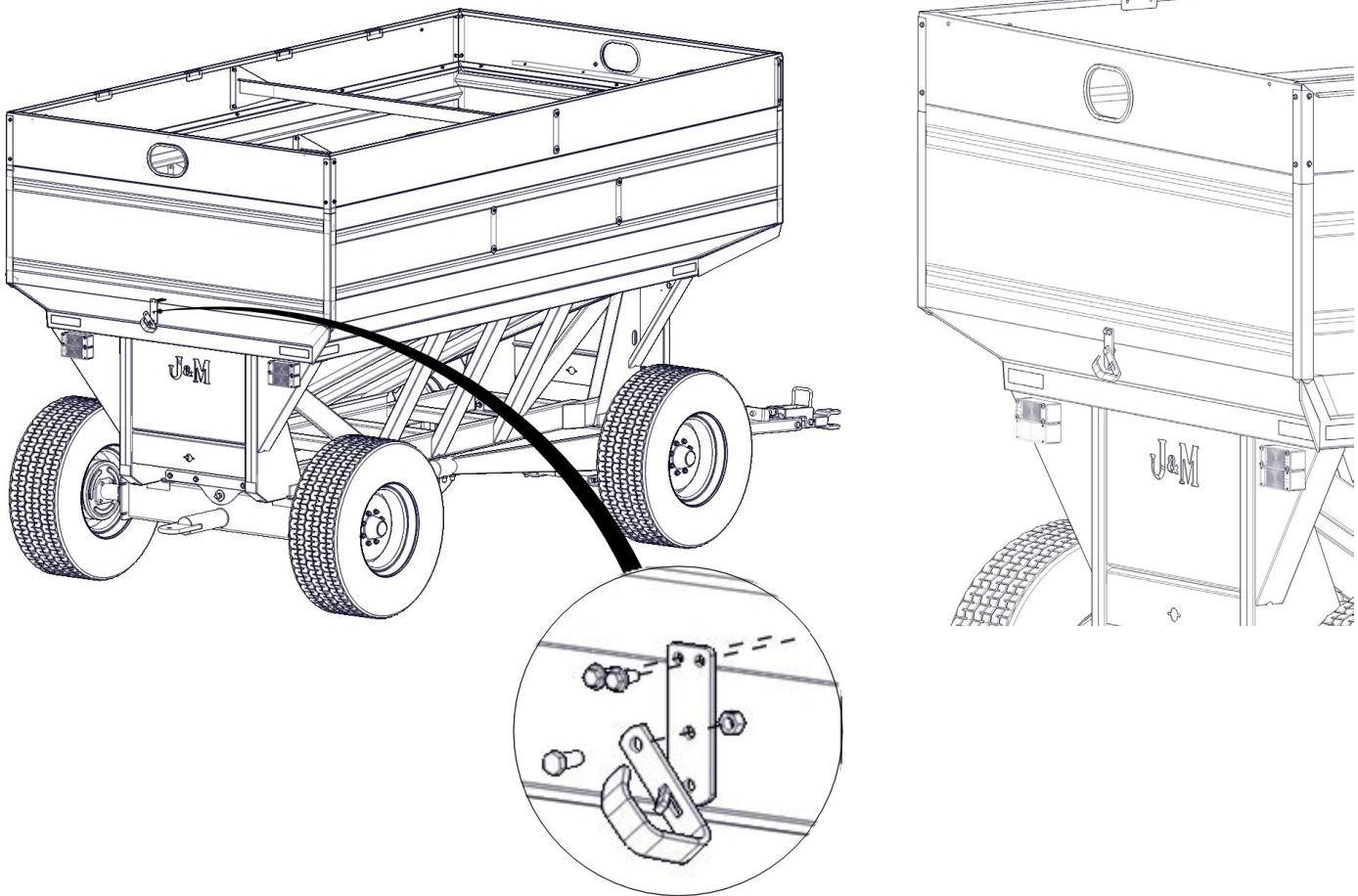


Rev. 9.9.2016

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Step 1 - Hanger

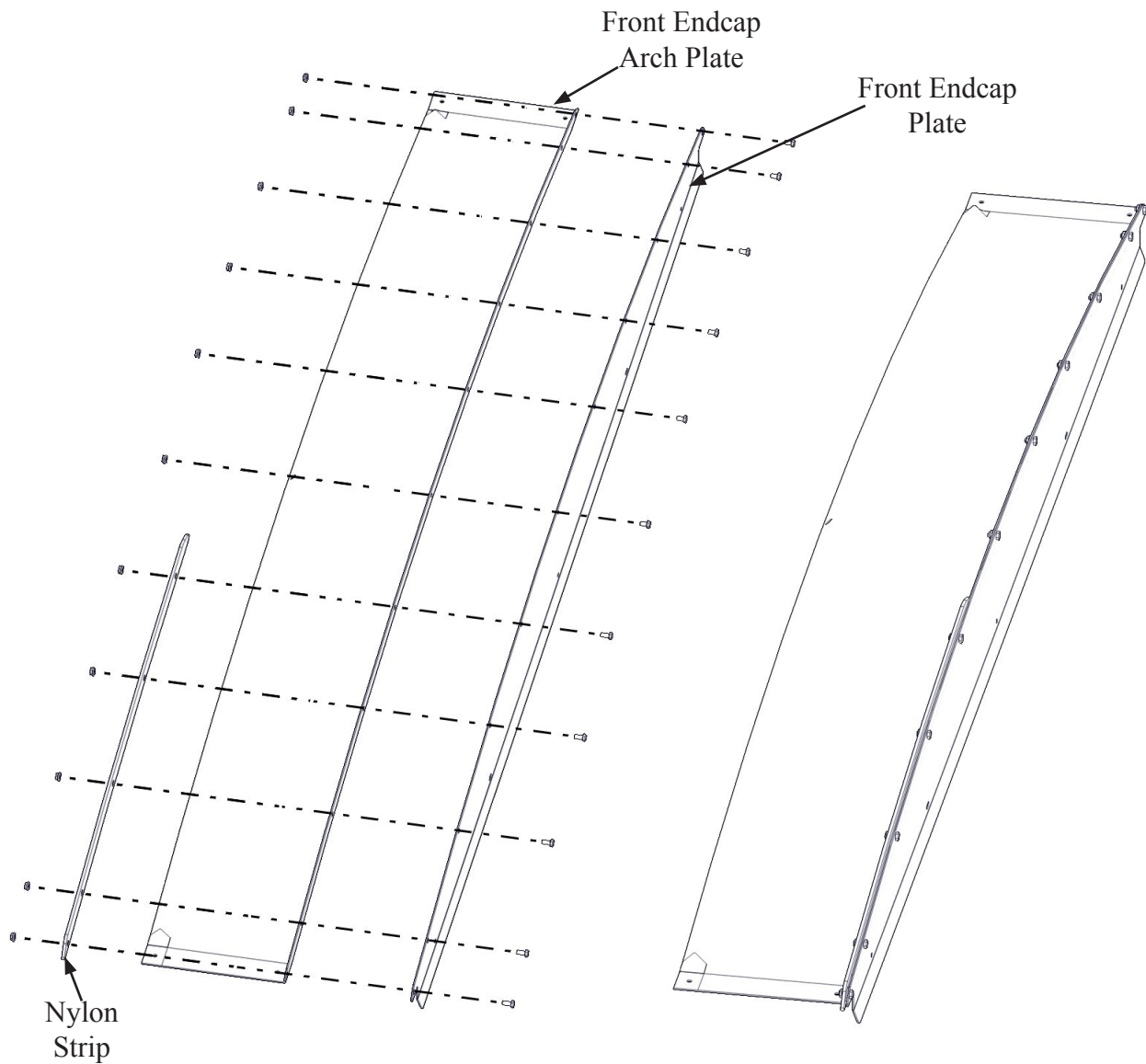


1.1 Mark two holes using the Hanger Bracket as a template and drill with a 7/16" drill bit. These holes should be centered on the back vertical face of the gravity box as low as possible.

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.

Step 2 - Endcaps Assembly



2.1 Aside from the gravity box, match up the holes on the Front Endcap Arch with the top Front Endcap Plate holes.

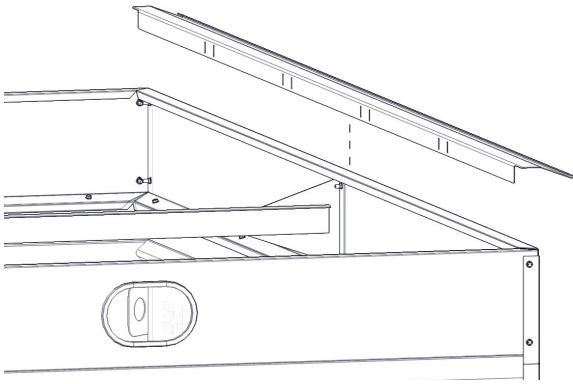
2.2 Install the Nylon Strip on the Opposite Chute Side (OCS) using 1/4" x 5/8" bolts and 1/4" serrated flange nuts.

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 & Endcaps



3.1 Center the lip lock on top of the OCS.

3.2 Rest the assembled front and back Endcaps in place.

* For the 655 & 755 there will be a front and back lip lock.

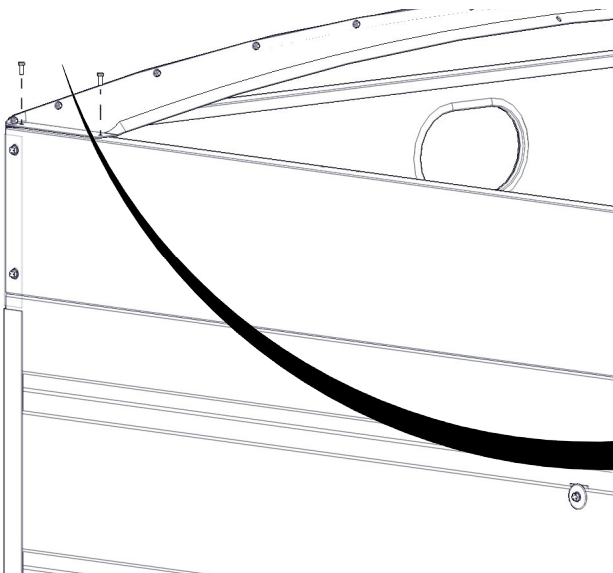
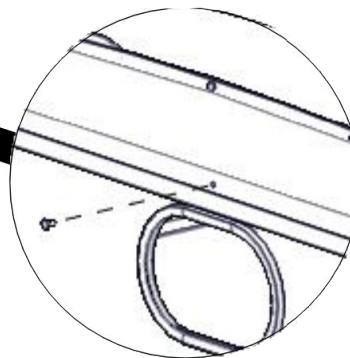
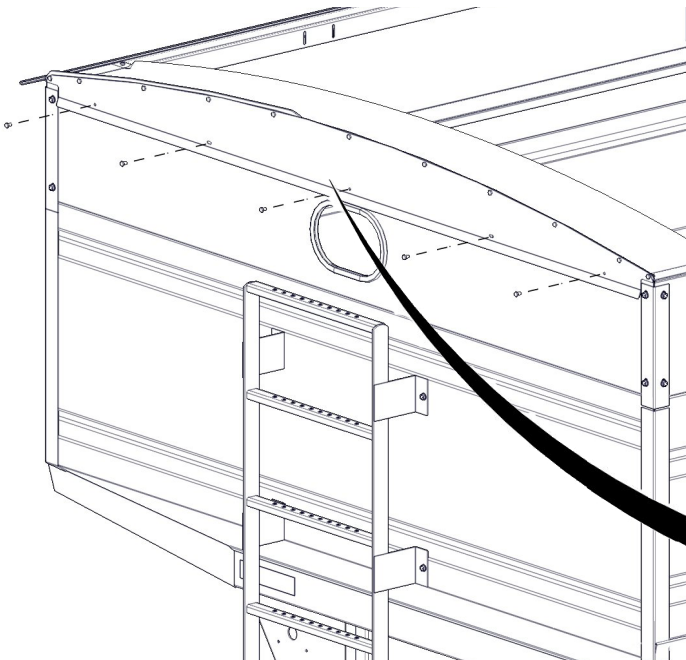
Step 4 - Endcaps

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 5/16" drill bit.

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

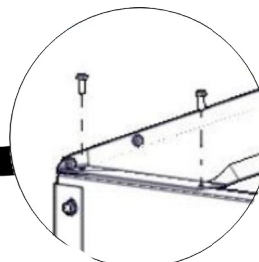
4.3 Repeat steps 4.1 & 4.2 for the back Endcap.



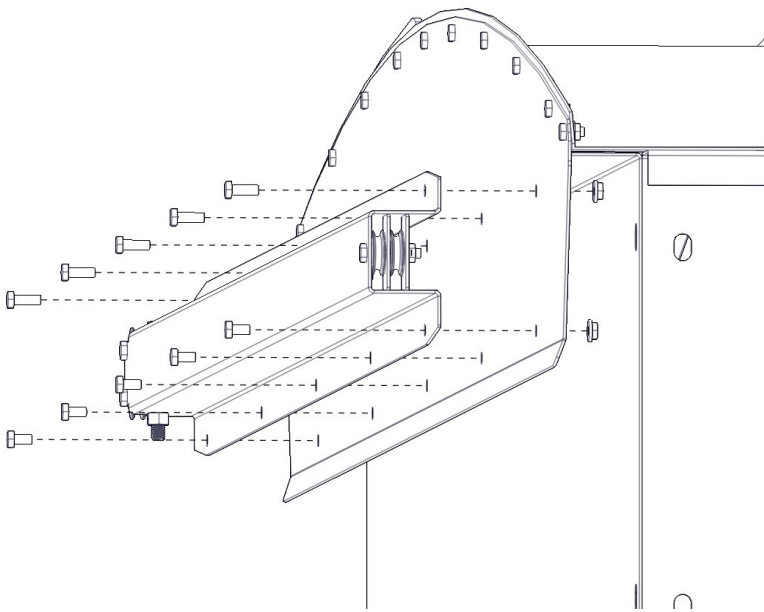
5.1 Use the four holes on the top of the front Endcap as a guide to drill four holes from the top using a 5/16" drill bit.

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



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.

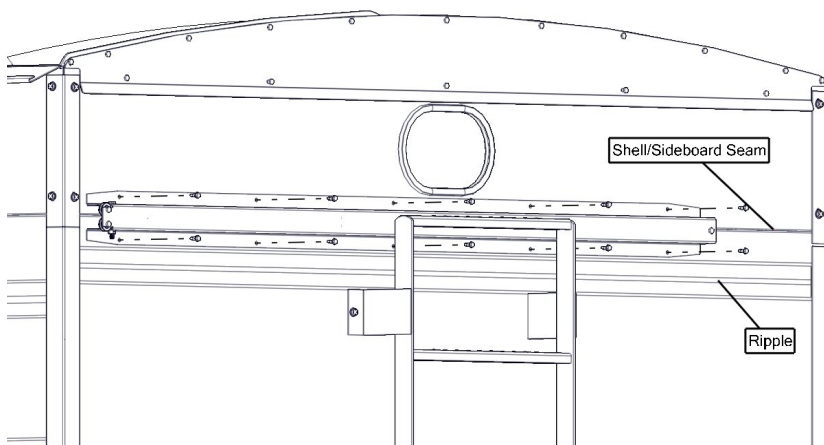
4.2 Drill holes with a 5/16" drill bit through the outer lip of the sideboard using the top five holes of the Endplate/Spring Return as a guide.

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.

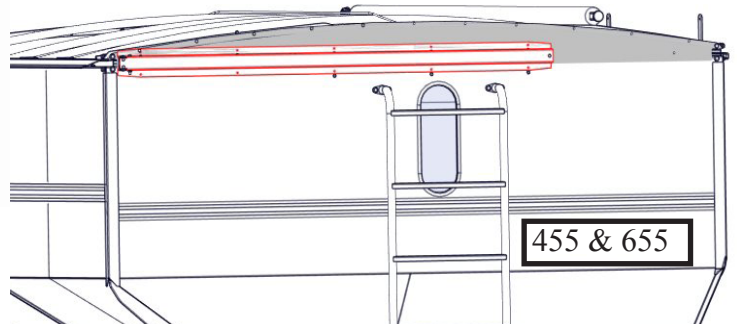
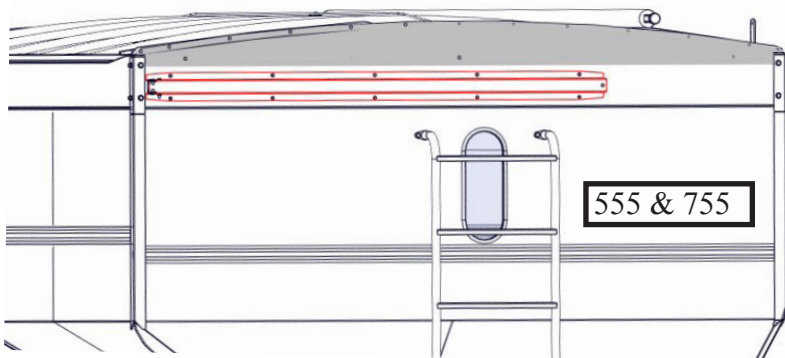
-NOTE: No spring return is installed on the back so only 1/4" x 1/2" bolts should be used.

NOTE: This step only pertains to 440/540, 680/760 & 55 Series Models

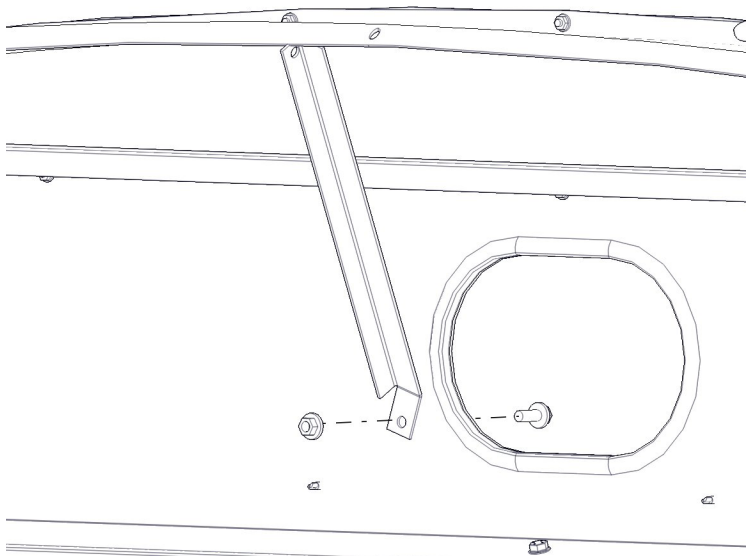


Install the Spring Return on the front of the gravity box using ten 1/4" x 3/4" self tapping bolts. Be sure the end with the cable loop is located on the OCS. It should be positioned up against the OCS corner brace. See the chart below for model specific Spring Return locations.

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)
455 & 655	Straddling the End Cap and pushed up all the way possible
555 & 755	Right below the End Cap



Step 7 - Knee Braces



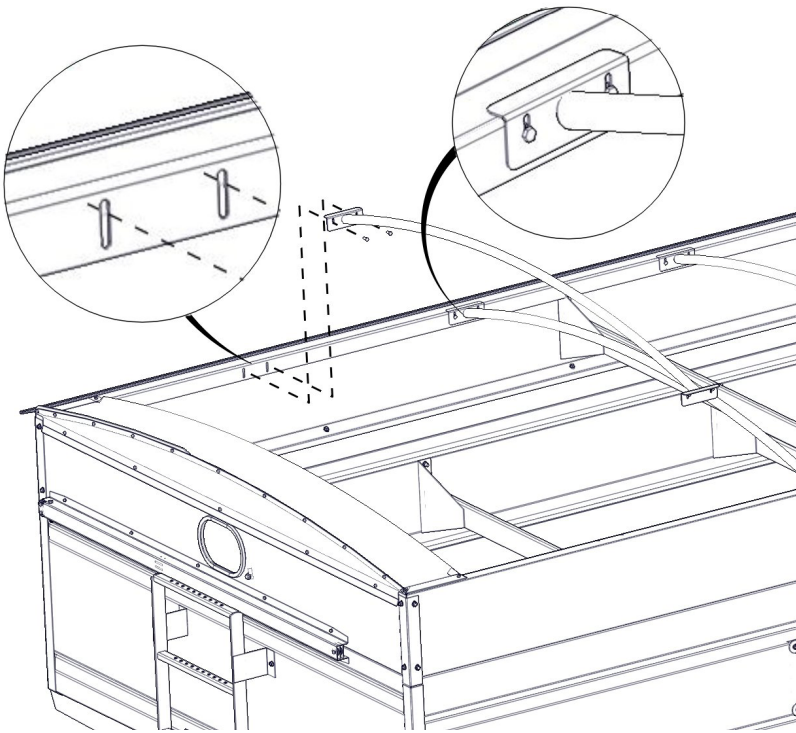
7.1 Mark the hole for the Knee Brace as centered as possible using the Knee Brace as a guide. When marking the hole push up on the Endcap to keep it from sagging.

7.2 Drill the hole using a 7/16" 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



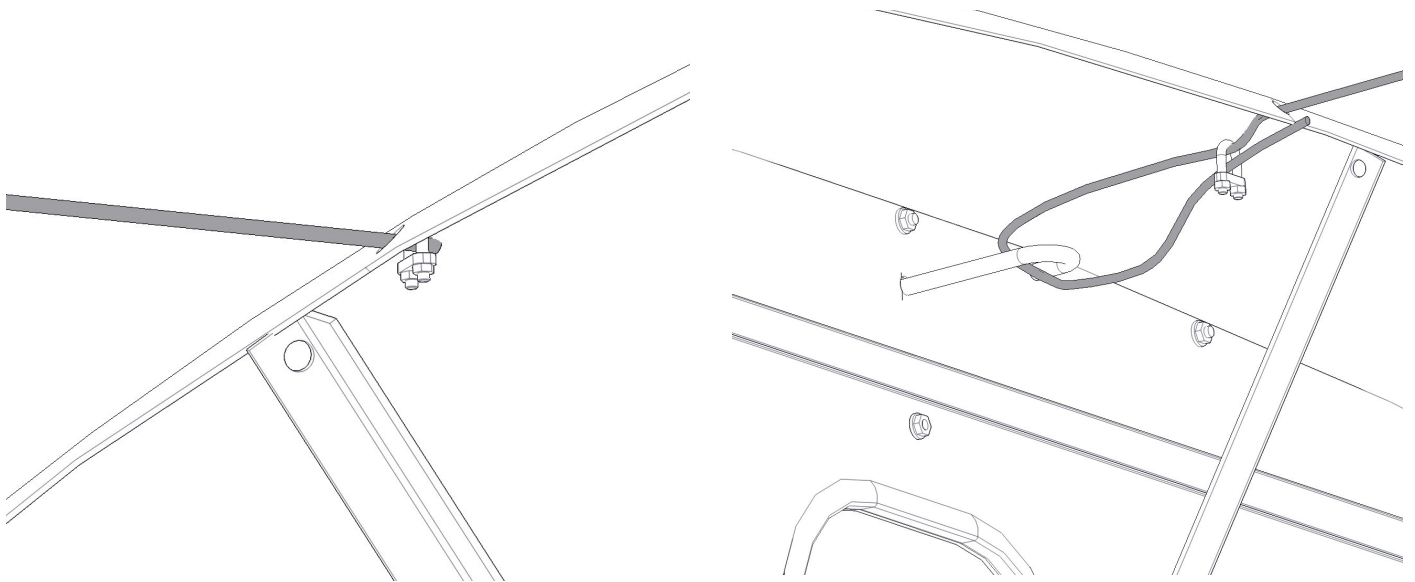
8.1 Position the Tarp Bows on top of the Gravity Box. Be sure to spread the Bows out evenly from front to back.

8.2 Using the Tarp Bows as a guide, drill holes with a 5/16" 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.

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

Step 9 - Cable



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

9.2 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.

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

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

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

9.6 With the cable pulled tight, tighten both locknuts.

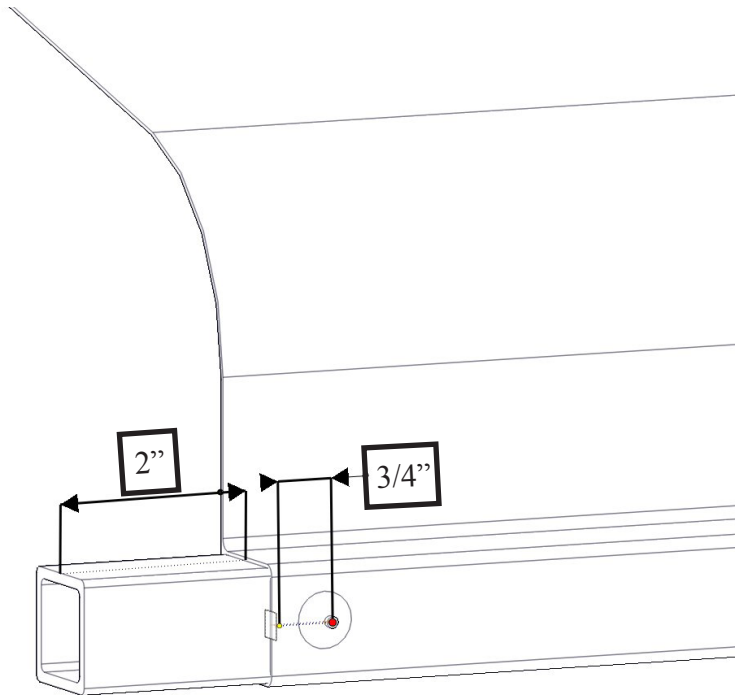
-NOTE: Use a vise grips on the J-Bolt while tightening to keep it from spinning.

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.

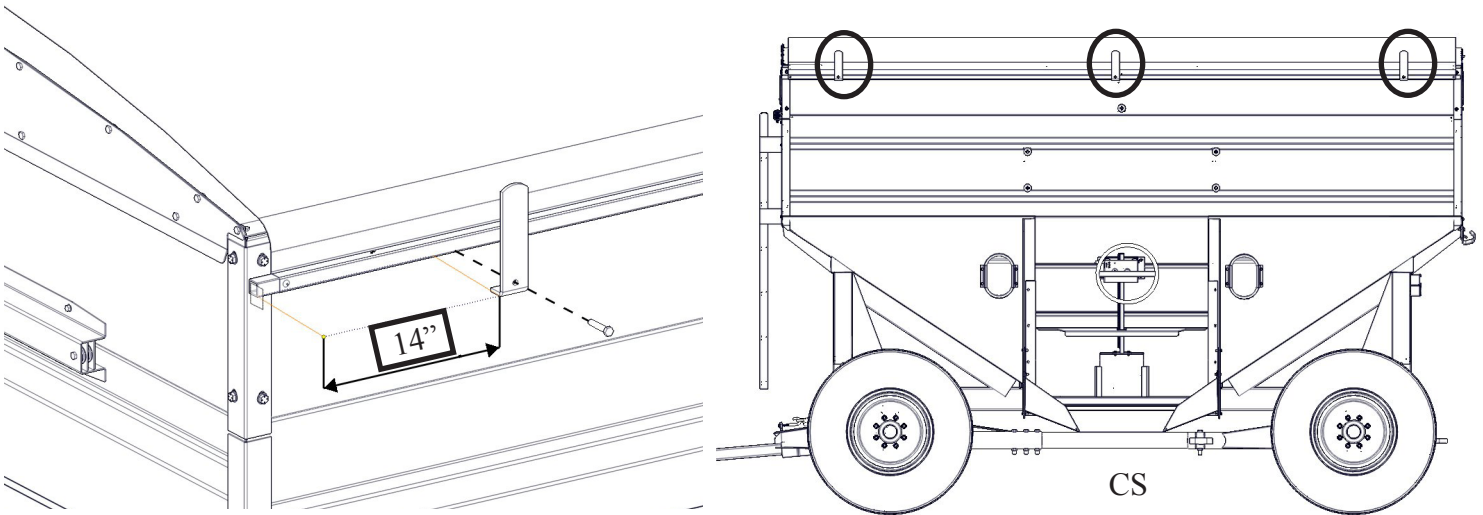
11.3 Use a 1/4" drill bit to drill a hole through the Canvas Tarp and one wall of the 1" Square Tube. The hole should be around 3/4" from the edge of the tarp.

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 between the Rivets.

Step 12 - Stop Brackets

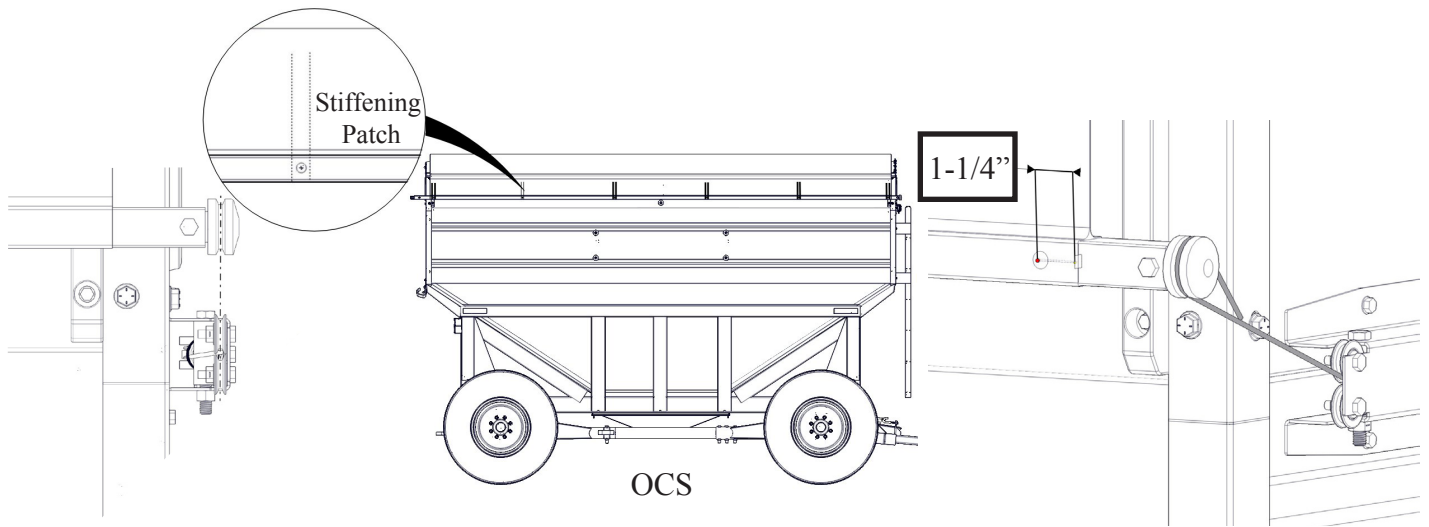


12.1 Center the 1" Square Tube that is riveted to the Canvas Tarp on the CS of the gravity box. Allow the Square Tube to hang below the top bolts on the corner brackets (around 2 1/2" below top of the Gravity Box).

12.2 Drill two 7/16" 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. Tighten hardware.

Step 13 - 1 1/4" Square Tube



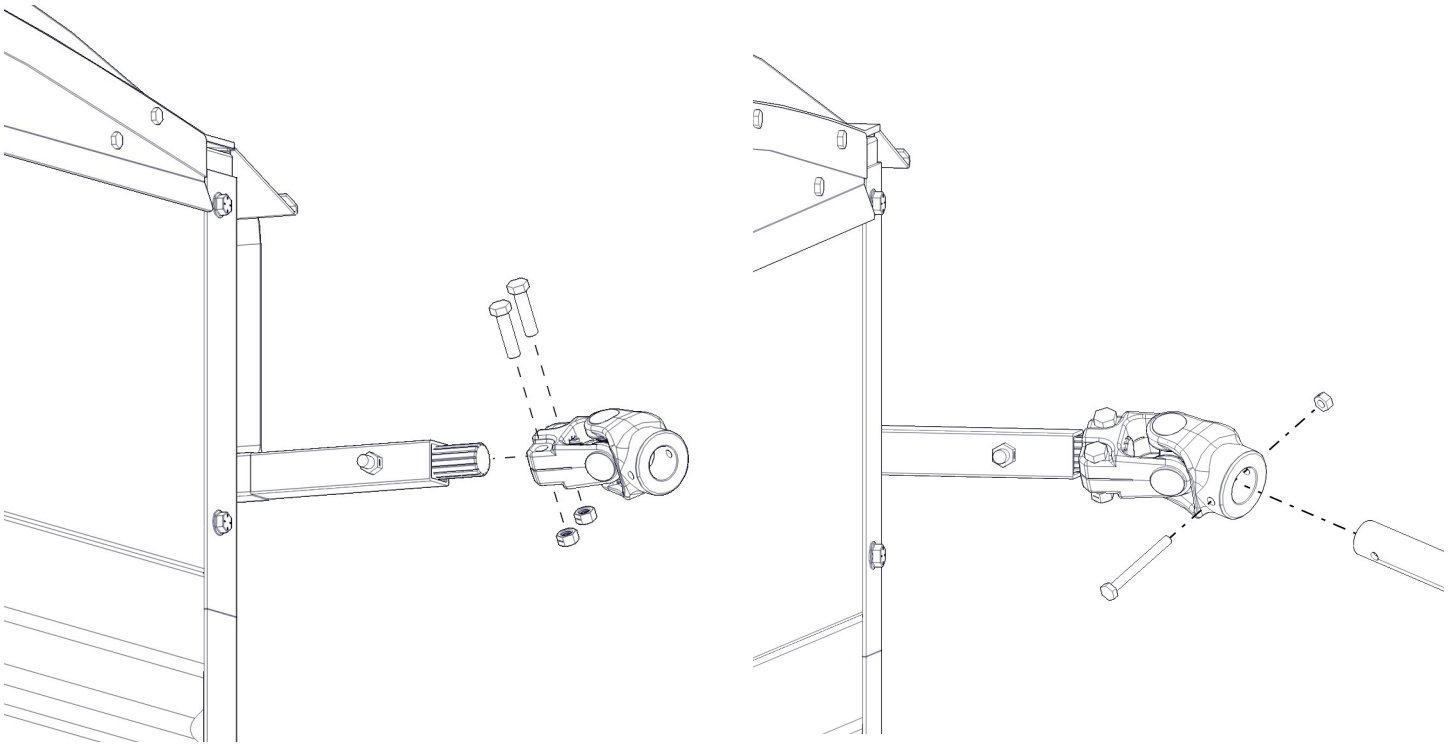
13.1 On the opposite side of the Canvas Tarp, slide the 1-1/4" Square Tube into the remaining sleeve until the spool lines up with the pulleys on the Spring Return. The splined end of the 1-1/4" Square Tube should be towards the back of the Gravity Box.

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.

Step 14 - U-Joint & Crank Handle

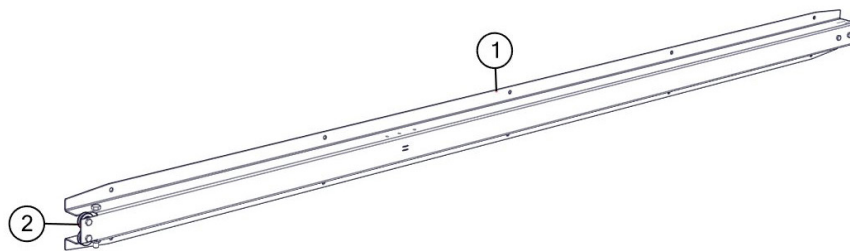


14.1 Install the Universal Joint using two 3/8" x 2" bolts and two 3/8" locknuts.

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.

Spring Return



#	Description	Part. No.
1	Spring Return Assembly	JM0002437
2	Spring Return Cable	JM0010307

Roll Tarp Part Numbers

#	Description: 250	Part. No.
1	Front Arched End Plate (250 Box - 84")	JM0001545
2	Tarp Nylon Riser	JM0000196
3	Front Arched Endcap (250 Box - 84")	JM0001543
4	1/4"-20 x 1/2" Gr5 Z Hex Bolt	JM0001481
5	1/4"-20 Gr5 Z Serrated Flange Hex Nut	JM0001630
6	1/4"-20 x 5/8" Gr5 Z Hex Bolt	JM0001479
7	Back Arched Endcap (250 Box - 84")	JM0001546
8	3/8"-16 Gr5 Z J-Bolt	JM0001519
9	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
10	Rear End Panel for 250 Roll Tarp	JM0001549
11	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
12	Tarp Standoff	JM0001889
13	1/4" x 1 1/2" Self Tapping Screw	JM0001571
14	Knee Brace	JM0000917
15	3/8"-16 Gr5 Z Serrated Flange Nut	JM0002152
16	3/8"-16 x 1" Gr5 Z Serrated Flange Hex Bolt	JM0002092
17	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
18	1/4"-20 Gr5 Z Centerlock Hex Nut	JM0001505
19	Universal Joint	JM0001517
20	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
21	1/4"-20 x 2-1/2" Gr5 Z Hex Bolt	JM0001506
22	Roll Tarp Hanger Bracket	JM0000815
23	Handle Hanger Rubber Flap	JM0002551
24	Pinless Crank Holder	JM0002967
25	1/2" Z Flat Washer	JM0003082
26	1/2"-13 x 1 1/4" Gr5 Z Hex Bolt	JM0001513
27	Tie-Down Tube for Roll Tarp (250 Gravity Box)	JM0001531
28	Tarp	JM0001589
29	Tube for Roll Tarp (250 Gravity Box)	JM0027765
30	3/16" Cable x 126" Long (250-7S)	JM0001525
31	Lip Lock x 123" (250 Box)	JM0017219
32	Tarp Bow for 250	JM0001583
33	Crank handle	JM0002907
34	Yellow Cap	JM0018963
35	3/8"-16 x 2" Gr5 Z Hex Bolt	JM0001510
36	Tarp Stop	JM0000187
37	1/8" Cable Clamp	JM0001514

#	Description: 385	Part. No.
1	385 Front Face Plate	JM0001555
2	Tarp Nylon Riser	JM0000196
3	385 Endcap Front (Top)	JM0001550
4	1/4"-20 x 1/2" Gr5 Z Hex Bolt	JM0001481
5	1/4"-20 Gr5 Z Serrated Flange Hex Nut	JM0001630
6	1/4"-20 x 5/8" Gr5 Z Hex Bolt	JM0001479
7	385 Endcap Rear (Top)	JM0001554
8	3/8"-16 Gr5 Z J-Bolt	JM0001519
9	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
10	385 Rear Faceplate	JM0001551
11	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
12	Tarp Standoff	JM0001889
13	1/4" x 1-1/2" Self Tapping Screw	JM0001571
14	Knee Brace	JM0000917
15	3/8"-16 Gr5 Z Serrated Flange Nut	JM0002152
16	3/8"-16 x 1" Gr5 Z Serrated Flange Hex Bolt	JM0002092
17	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
18	1/4"-20 Gr5 Z Centerlock Hex Nut	JM0001505
19	Universal Joint	JM0001517
20	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
21	1/4"-20 x 2-1/2" Gr5 Z Hex Bolt	JM0001506
22	Roll Tarp Hanger Bracket	JM0000815
23	Handle Hanger Rubber Flap	JM0002551
24	Pinless Crank Holder	JM0002967
25	1/2" Z Flat Washer	JM0003082
26	1/2"-13 x 1 1/4" Gr5 Z Hex Bolt	JM0001513
27	Tie-Down Tube for 385GB Roll Tarp	JM0001534
28	385 Canvas Tarp	JM0001588
29	385 GB Roll Tube Weldment	JM0027902
30	148" Cable	JM0001524
31	Roll Tarp Lip Lock	JM0001552
32	385 Tarp Bow Weldment	JM0001584
33	Crank handle	JM0002907
34	Yellow Cap	JM0018963
35	3/8"-16 x 2" Gr5 Z Hex Bolt	JM0001510
36	Tarp Stop	JM0000187
37	1/8" Cable Clamp	JM0001514

Roll Tarp Assembly

#	Description: 455/555	Part. No.
1	455/555 Front Face Plate	JM0033224
2	Tarp Nylon Riser	JM0000196
3	455/555 Endcap Front (Top)	JM0033227
4	1/4"-20 x 1/2" Gr5 Z Hex Bolt	JM0001481
5	1/4"-20 Gr5 Z Serrated Flange Hex Nut	JM0001630
6	1/4"-20 x 5/8" Gr5 Z Hex Bolt	JM0001479
7	455/555 Endcap Rear (Top)	JM0033233
8	3/8"-16 Gr5 Z J-Bolt	JM0001519
9	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
10	455/555 Rear Faceplate	JM0033231
11	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
12	Tarp Standoff	JM0001889
13	1/4" x 1-1/2" Self Tapping Screw	JM0001571
14	Knee Brace	JM0000917
15	3/8"-16 Gr5 Z Serrated Flange Nut	JM0002152
16	3/8"-16 x 1" Gr5 Z Serrated Flange Hex Bolt	JM0002092
17	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
18	1/4"-20 Gr5 Z Centerlock Hex Nut	JM0001505
19	Universal Joint	JM0001517
20	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
21	1/4"-20 x 2-1/2" Gr5 Z Hex Bolt	JM0001506
22	Roll Tarp Hanger Bracket	JM0000815
23	Handle Hanger Rubber Flap	JM0002551
24	Pinless Crank Holder	JM0002967
25	1/2" Z Flat Washer	JM0003082
26	1/2"-13 x 1-1/4" Gr5 Z Hex Bolt	JM0001513
27	Square Tie-Down Tube for 455/555 Roll Tarp	JM0033480
28	455/555 Canvas Tarp	JM0033471
29	Square Roll Tube Weldment for 455/555 Roll Tarp	JM0033478
30	192" Cable	JM0022194
31	455/555 Roll Tarp Lip Lock	JM0033253
32	455/555 Tarp Bow Weldment	JM0033272
33	Crank handle	JM0002907
34	Yellow Cap	JM0018963
35	3/8"-16 x 2" Gr5 Z Hex Bolt	JM0001510
36	Tarp Stop	JM0000187
37	1/8" Cable Clamp	JM0001514

#	Description: 655/755	Part. No.
1	655/755 Front Face Plate	JM0034329
2	Tarp Nylon Riser	JM0000196
3	655/755 Endcap Front (Top)	JM0034331
4	1/4"-20 x 1/2" Gr5 Z Hex Bolt	JM0001481
5	1/4"-20 Gr5 Z Serrated Flange Hex Nut	JM0001630
6	1/4"-20 x 5/8" Gr5 Z Hex Bolt	JM0001479
7	655/755 Endcap Rear (Top)	JM0034334
8	3/8"-16 Gr5 Z J-Bolt	JM0001519
9	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
10	655/755 Rear Faceplate	JM0034327
11	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
12	Tarp Standoff	JM0001889
13	1/4" x 1-1/2" Self Tapping Screw	JM0001571
14	Knee Brace	JM0000917
15	3/8"-16 Gr5 Z Serrated Flange Nut	JM0002152
16	3/8"-16 x 1" Gr5 Z Serrated Flange Hex Bolt	JM0002092
17	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
18	1/4"-20 Gr5 Z Centerlock Hex Nut	JM0001505
19	Universal Joint	JM0001517
20	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
21	1/4"-20 x 2-1/2" Gr5 Z Hex Bolt	JM0001506
22	Roll Tarp Hanger Bracket	JM0000815
23	Handle Hanger Rubber Flap	JM0002551
24	Pinless Crank Holder	JM0002967
25	1/2" Z Flat Washer	JM0003082
26	1/2"-13 x 1 1/4" Gr5 Z Hex Bolt	JM0001513
27	Square Tie-Down Tube for 655/755 Roll Tarp	JM0034383
28	655/755 Canvas Tarp	JM0034386
29	Square Roll Tube Weldment for 655/755 Roll Tarp	JM0034394
30	210" Cable	JM0036045
31	655/755 Roll Tarp Lip Lock (Front)	JM0034342
31	655/755 Roll Tarp Lip Lock (Rear)	JM0034542
32	655/755 Tarp Bow Weldment	JM0034349
33	Crank handle	JM0002907
34	Yellow Cap	JM0018963
35	3/8"-16 x 2" Gr5 Z Hex Bolt	JM0001510
36	Tarp Stop	JM0000187
37	1/8" Cable Clamp	JM0001514

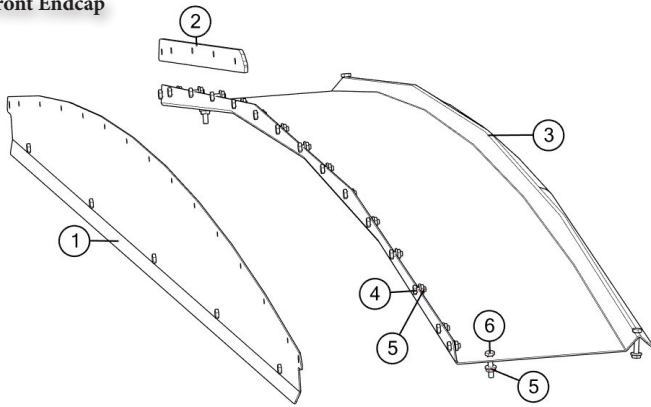
Roll Tarp Assembly

#	Description: 440/540	Part. No.
1	440 & 540 Front FacePlate	JM0001566
2	Tarp Nylon Riser	JM0000196
3	440 & 540 Endcap Front (Top)	JM0001563
4	1/4"-20 x 1/2" Gr5 Z Hex Bolt	JM0001481
5	1/4"-20 Gr5 Z Serrated Flange Hex Nut	JM0001630
6	1/4"-20 x 5/8" Gr5 Z Hex Bolt	JM0001479
7	440 & 540 Endcap Rear (Top)	JM0001565
8	3/8"-16 Gr5 Z J-Bolt	JM0001519
9	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
10	440 & 540 Rear Faceplate	JM0001564
11	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
12	Tarp Standoff	JM0001889
13	1/4" x 1-1/2" Self Tapping Screw	JM0001571
14	Knee Brace	JM0000917
15	3/8"-16 Gr5 Z Serrated Flange Nut	JM0002152
16	3/8"-16 x 1" Gr5 Z Serrated Flange Hex Bolt	JM0002092
17	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
18	1/4"-20 Gr5 Z Centerlock Hex Nut	JM0001505
19	Universal Joint	JM0001517
20	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
21	1/4"-20 x 2-1/2" Gr5 Z Hex Bolt	JM0001506
22	Roll Tarp Hanger Bracket	JM0000815
23	Handle Hanger Rubber Flap	JM0002551
24	Pinless Crank Holder	JM0002967
25	1/2" Z Flat Washer	JM0003082
26	1/2"-13 x 1-1/4" Gr5 Z Hex Bolt	JM0001513
27	Square Tie-Down Tube for 440/540 Roll Tarp	JM0001535
28	Gravity Box Tarp - 440/540	JM0001587
29	Square Roll Tube Weldment for 440/540 Roll Tarp	JM0028394
30	Stainless Steel Cable 1/8" Dia X 180"	JM0001526
31	440/540 Tarp Lip Lock	JM0001567
32	540 Tarp Bow Weldment	JM0000812
33	Crank Handle	JM0002907
34	Yellow Cap	JM0018963
35	3/8"-16 x 2" Gr5 Z Hex Bolt	JM0001510
36	Tarp Stop	JM0000187
37	1/8" Cable Clamp	JM0001514

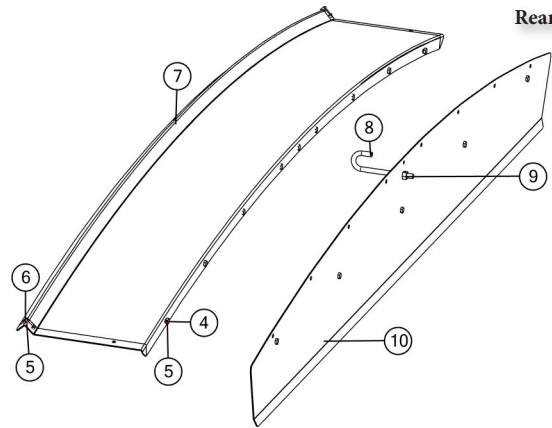
#	Description: 680/760	Part. No.
1	680 & 760 Endcap (Front)	JM0001573
2	Tarp Nylon Riser	JM0000196
3	680 & 760 Endcap Front (Top)	JM0001572
4	1/4"-20 x 1/2" Gr5 Z Hex Bolt	JM0001481
5	1/4"-20 Gr5 Z Serrated Flange Hex Nut	JM0001630
6	1/4"-20 x 5/8" Gr5 Z Hex Bolt	JM0001479
7	680 & 760 Endcap Rear (Top)	JM0001574
8	3/8"-16 Gr5 Z J-Bolt	JM0001519
9	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
10	680 & 760 Endcap (Back)	JM0001575
11	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
12	Tarp Standoff	JM0001889
13	1/4" x 1-1/2" Self Tapping Screw	JM0001571
14	Knee Brace	JM0000917
15	3/8"-16 Gr5 Z Serrated Flange Nut	JM0002152
16	3/8"-16 x 1" Gr5 Z Serrated Flange Hex Bolt	JM0002092
17	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
18	1/4"-20 Gr5 Z Centerlock Hex Nut	JM0001505
19	Universal Joint	JM0001517
20	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
21	1/4"-20 x 2-1/2" Gr5 Z Hex Bolt	JM0001506
22	Roll Tarp Hanger Bracket	JM0000815
23	Handle Hanger Rubber Flap	JM0002551
24	Pinless Crank Holder	JM0002967
25	1/2" Z Flat Washer	JM0003082
26	1/2"-13 x 1 1/4" Gr5 Z Hex Bolt	JM0001513
27	Square Tie-Down Tube (680-760SD)	JM0001536
28	Gravity Box Tarp - 680/760	JM0001586
29	Square Roll Tube Weldment for 680/760 Roll Tarp	JM0029620
30	Stainless Steel Cable 1/8" Dia X 198"	JM0001527
31	680/760 Roll Tarp Lip Lock	JM0001576
32	760 Tarp Bow Weldment	JM0001585
33	10FT Crank Handle	JM0000185
34	Yellow Cap	JM0018963
35	3/8"-16 x 2" Gr5 Z Hex Bolt	JM0001510
36	Tarp Stop	JM0000187
37	1/8" Cable Clamp	JM0001514

Roll Tarp Assembly

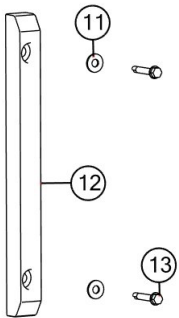
Front Endcap



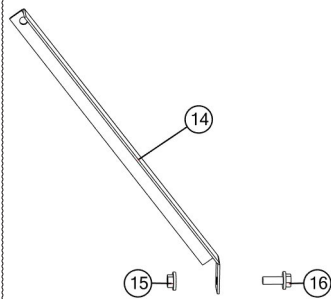
Rear Endcap



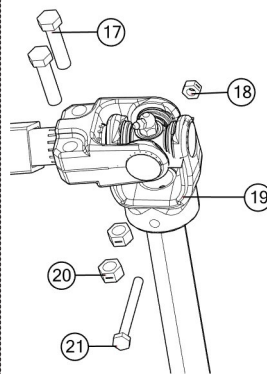
Tarp Stand-Off



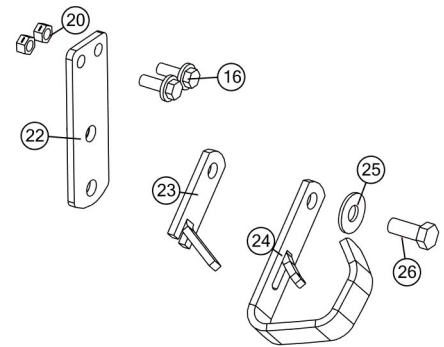
Bow Support



Crank Handle U-Joint



Crank Handle Holder



Tarp Assembly

