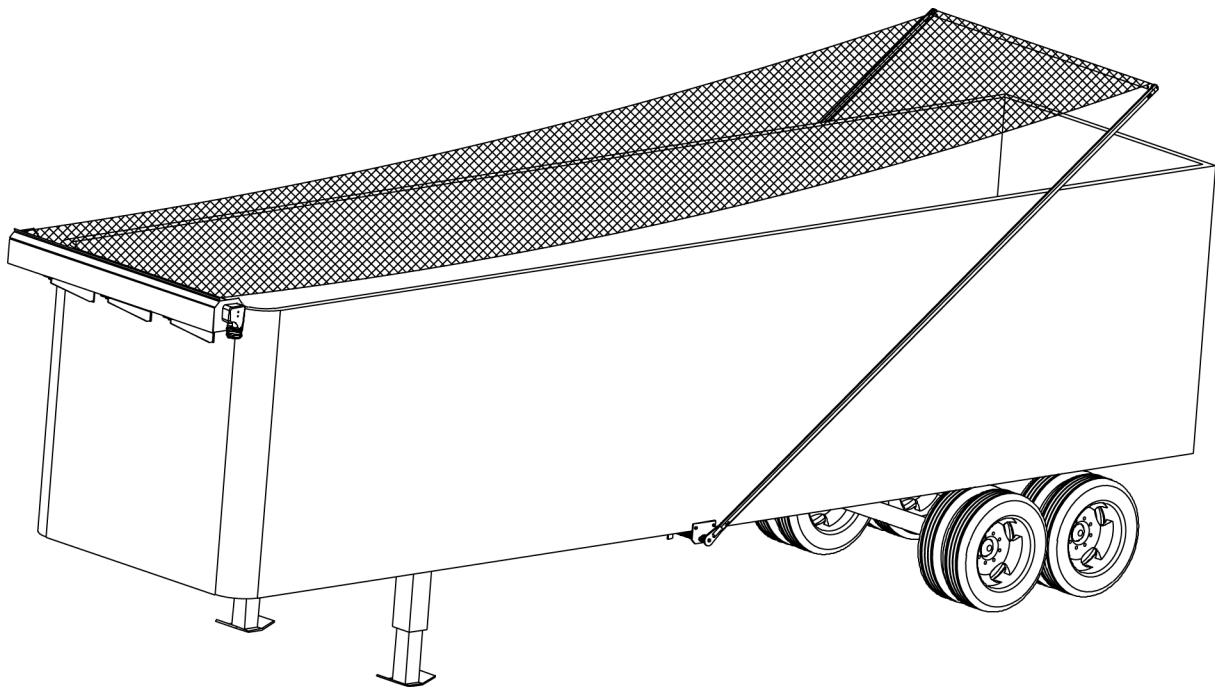




LONG ARM JR.

(PART# 1164 / 1164-102)

FOR TRAILERS
UP TO 38' LONG



CE **OWNER'S MANUAL**

FEBRUARY 2010

Donovan Enterprises, 3353 SE Gran Park Way, Stuart FL 34997

800-327-8287

www.donovan-ent.com

PACKING LIST OF LONG ARM JR. SYSTEM PARTS AND HARDWARE

(BALLOONS ARE SHOWN ON DRAWING ON PAGE 3)

ITEM #	BALLOON	DESCRIPTION	QTY.
4278	2	MOTOR COVER (SEE NOTE 1)	1
61G	3	MOTOR (SEE NOTE 1)	1
3023 / 3033	4	102" or 96" HOUSING SHELL	1
3807R	5	EXTRUDED ROLLER BAR	1
1752R	6	3/4" ID BEARING	1
2838	7	3/4" EXTENSION SHAFT	1
1076	8	REAR CROSS BAR	1
1888	9	90° ALUMINUM DIE CAST ELBOW	2
3218B	10	PIVOT ARM REST	2
1166	11	DRIVER'S SIDE SPRING ASSEMBLY	1
1165	11	PASSENGER'S SIDE SPRING ASSEMBLY	1
1854	12	HOUSING BRACKET	2
2780	13	UNDERBODY MOUNT PLATE	2
2795	14	SPRING LEVER WELDMENT	2
1037	15	DRIVER'S SIDE SPRING (22 Coil)	1
1039	15	PASSENGER'S SIDE SPRING (22 Coil)	1
2784	16	RETENTION PLATE WELDMENT	2
3346	17	BEARING	2
1167	18	SHAFT ASSEMBLY	2
1172	19	ARM EXTRUSION	2
3017	20	SHIM PLATE	2
2141	NOT SHOWN	ROLL OF TWO CONDUCTOR WIRE	1
85N	NOT SHOWN	ROTARY SWITCH KIT	1
1379A	NOT SHOWN	CONTACT PLATE	1
3848	NOT SHOWN	HEAVY DUTY TRAILER CONNECTOR	1

HOUSING ASSEMBLY AND BRACKET HARDWARE

2705	NOT SHOWN	1/2" - 13 X 2 1/2" BOLTS	6
2735	NOT SHOWN	1/2" - 13 X 2" BOLTS	4
2878	NOT SHOWN	1/2" FLAT WASHER	10
2877	NOT SHOWN	1/2" - 13 LOCK NUT	10

PIVOT MOUNT PLATE HARDWARE

2705	NOT SHOWN	1/2" - 13 X 2 1/2" BOLTS	4
2878	NOT SHOWN	1/2" FLAT WASHER	4
2877	NOT SHOWN	1/2" - 13 LOCK NUT	4

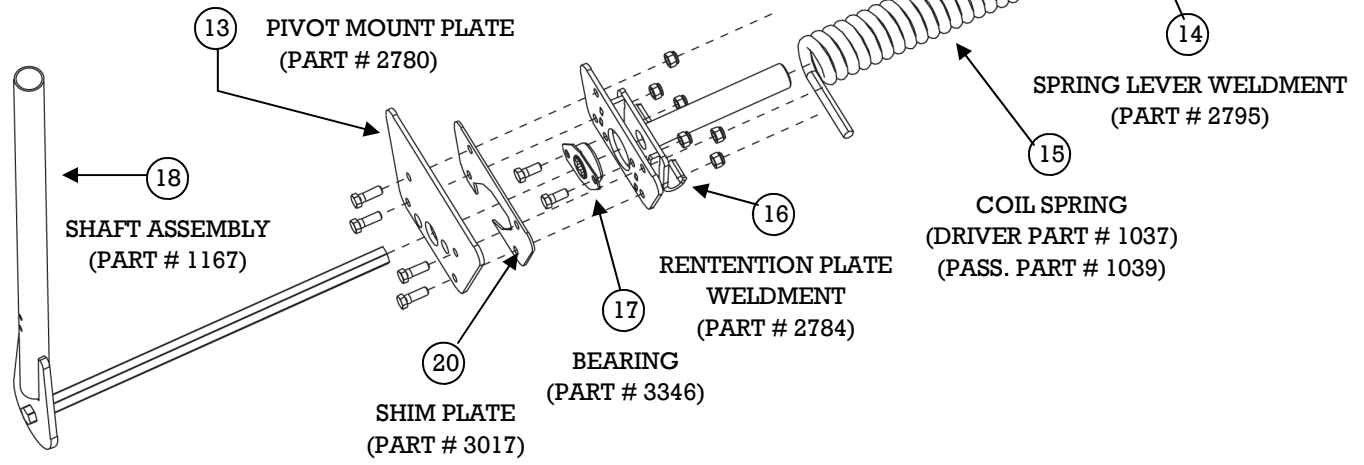
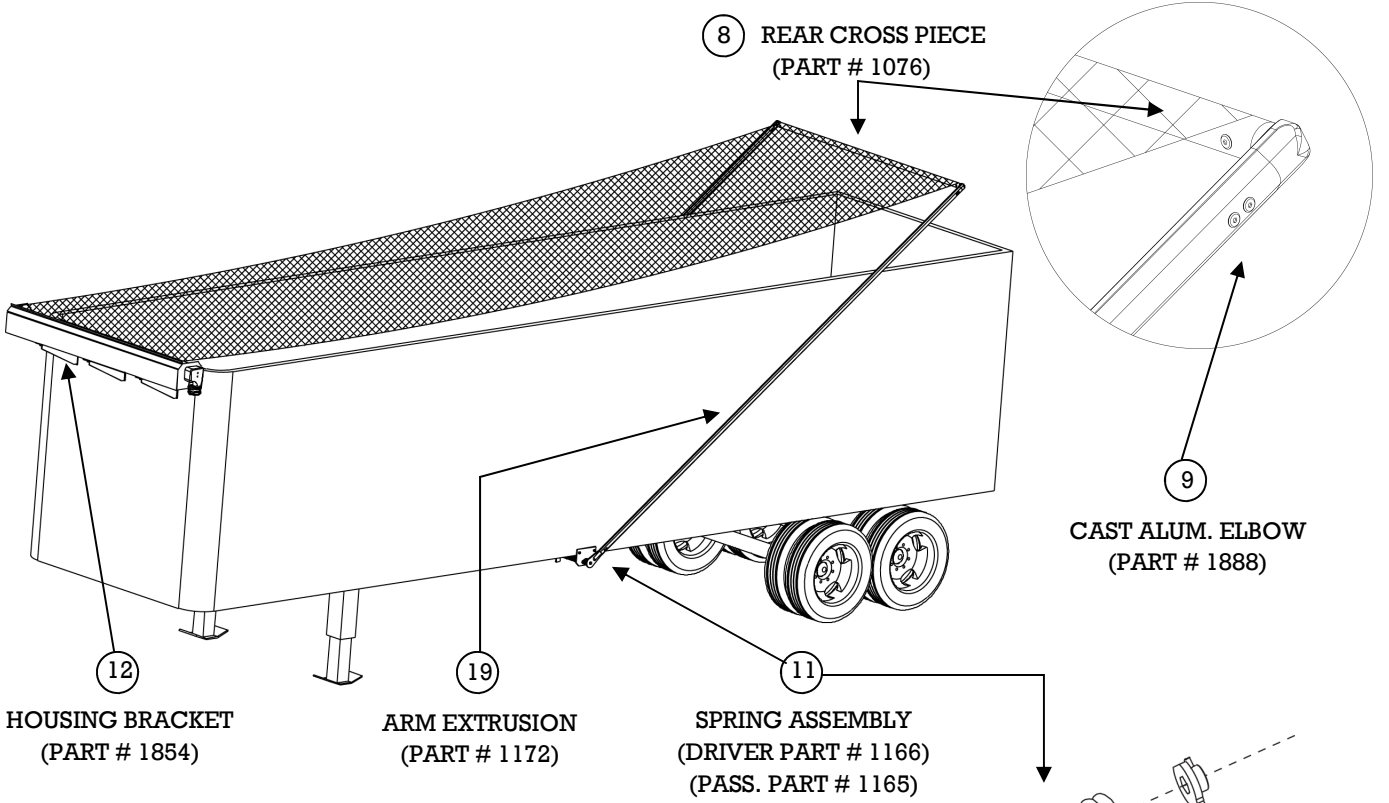
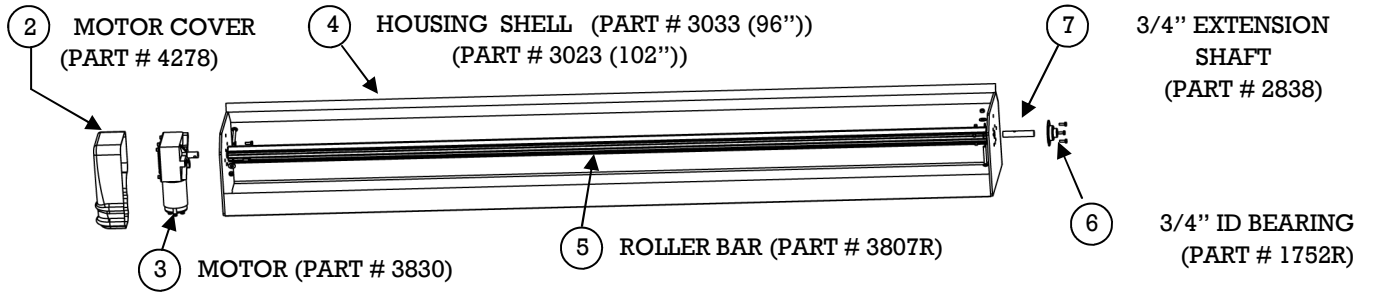
EXTRUDED ARM TO SHAFT ASSEMBLY HARDWARE

989	NOT SHOWN	5/16" - 18 X 2 1/2" PAN HEAD BOLT	4
2868	NOT SHOWN	5/16" LOCK NUT	4

UPPER BENT TUBE TO EXTRUDED ARM AND REAR CROSS PIECE HARDWARE

1917	NOT SHOWN	1/4" - 20 X 1 7/8" 'T' BOLT	6
1915	NOT SHOWN	1/4" - 20 X 7/16" 'T' NUT	6

NOTE 1: PART #61G IS A MOTOR KIT THAT INCLUDES: MOTOR HARDWARE, MOTOR (PART# 3830), AND COVER (PART# 4040)



LONG ARM JR. SYSTEM INSTALLATION INSTRUCTIONS

BEFORE YOU BEGIN INSTALLATION

- Read and understand all of the owner's manual prior to starting the installation.
- Unpack system and check to ensure you have all the parts and hardware as shown on pages 2 and 3. Contact your dealer if you are missing any parts.

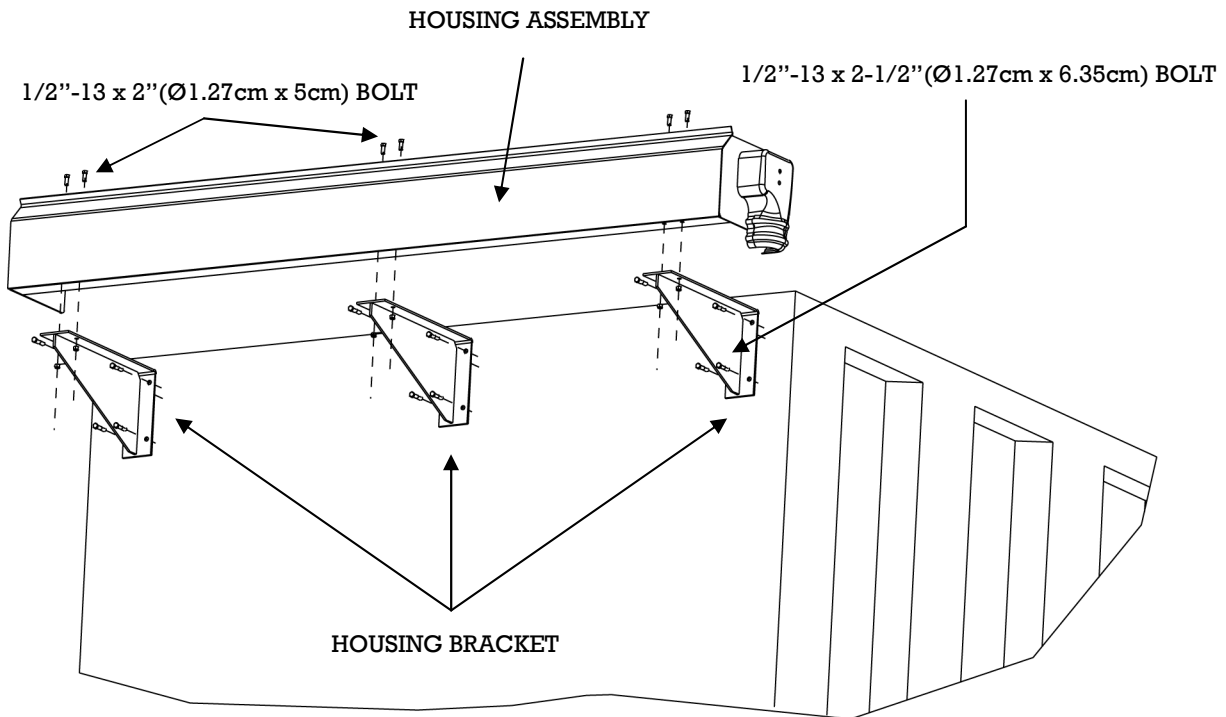


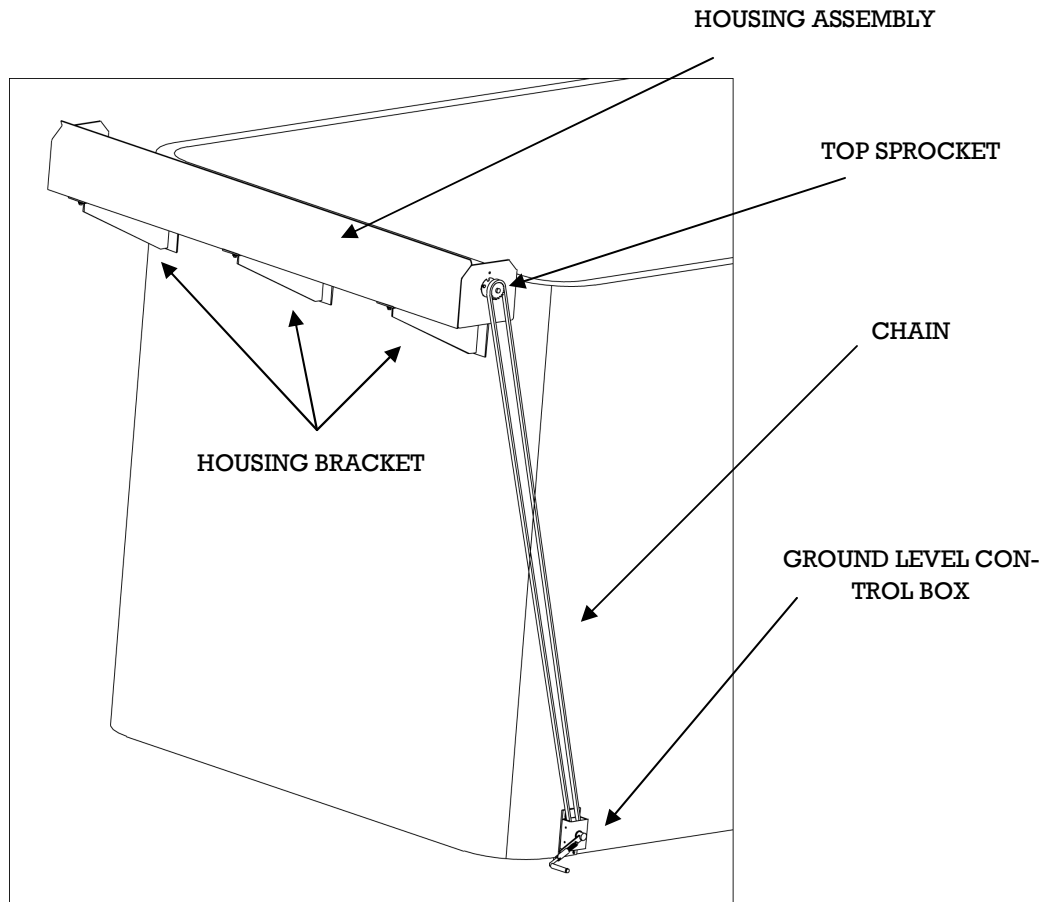
Figure 4

MOUNTING THE HOUSING ASSEMBLY

- **Caution:** Housing assembly weighs approximately 72 lbs (33 kg). Seek help when lifting.
- Choosing the Mounting Location: In general, the housing assembly should be mounted as far forward as possible so that the DD motor and pivot arms will be less likely to be damaged by loaders.
- You may either place the housing on top of the front rail (not shown), or use the supplied brackets (recommended), 1/2" - 13 x 2" (Ø1.27 CM x 5 CM) bolts, flat washers, and lock nuts to mount it in front of the trailer (see figure 4). Due to the many variations in trailer configurations, you may choose to use extra brackets, angle iron, or some other technique that works well with your particular trailer design to help support the housing assembly.
- **NOTE:** When bolting or welding the housing brackets, the shorter pre-drilled plate attaches to the trailer front wall.

GROUND LEVEL CRANK OPTION

Note: If you purchased the motor driven system, then you can skip this page. Continue with the installation on the next page.



Mounting the GL Control Box

1. Determine suitable position for mounting GL control box to front driver's side of trailer. Keep in mind that the top sprocket and bottom sprocket must be aligned vertically without any obstacles to obstruct movement of the chain or crank handle. If necessary, tilt control box to prevent chain from rubbing sides of box. Use holes in control box as guide and drill 4 mounting holes in side wall of body.
2. Mount control box to side wall of body using 3/8" x 1 1/2" bolts, lock nuts, and flat washers, do not tighten.
3. Install chain. remove links on chain as necessary to make chain as tight as possible with crank box up as far as possible. Push down on crank box and tighten bolts holding crank box in place.
4. Test crank handle to ensure smooth, easy operation.

MOUNTING THE PIVOT MOUNTS

- To find the pivot point, pull one tape measure from point “A” (corner of housing assembly) and a separate tape measure from point “B” (rear of trailer). Cross the tape measures at the bottom-middle of the trailer body. Move point where the two tape measures cross until both distances (DIM 1 = DIM 2) on the tape measures are equal. **Write down this dimension below to be used later.** Mark the spot beneath the tape measures where they cross. This is your pivot point. (See Figure 6)

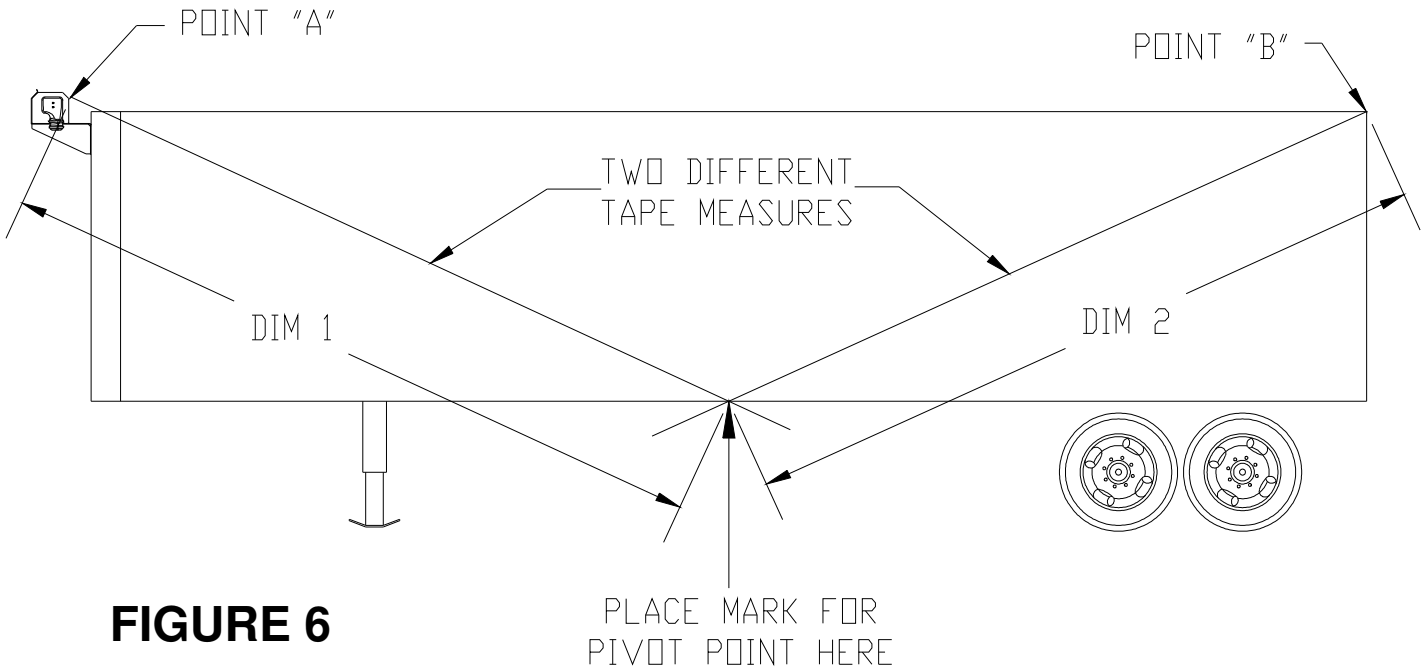


FIGURE 6

DIM 1: _____ = DIM 2: _____

(For proper coverage of trailer, DIM 1 should equal DIM 2)

- If you are welding the pivot mounts to the trailer skip this step. Use the pivot mount as a guide to mark your hole locations on the truck. Ensure the pivot mount is centered on the mark you just made and there is at least 1/2” (1.3 CM) between the underbody of the truck and the top of the spring. Drill a clearance hole for a 1/2” (Ø1.27 CM) bolt at the locations you just marked. Bolt the pivot mount to the truck using the supplied 1/2” - 13 x 2 1/2” (Ø1.27 CM x 6.35 CM) bolts, flat washers, and lock nuts.
- If you bolted the pivot mount in place skip this step. Ensure the pivot mount is centered on the mark you just made and there is at least 1/2” (1.3 CM) between the underbody of the truck and the top of the spring. Weld the pivot mount in place.

INSTALLING THE ARMS

NOTE: When cutting the extrusion, cut off the end of the extrusion that does not already have holes drilled in it.

- Take the dimension you wrote down on page 6 and subtract 12" (30.5cm) from this dimension. (DIM 1 from page 6) - 12" (30.5cm) = _____. Cut the arm extrusion to this length.

- Slide the arm extrusion over the shaft on the spring assembly. Align the holes in the arm with the holes in the spring shaft assembly. Attach shaft to arm using the supplied 5/16" - 18 x 2 1/2" (Ø.8cm x 6.35cm) (pan head bolts, and lock nuts

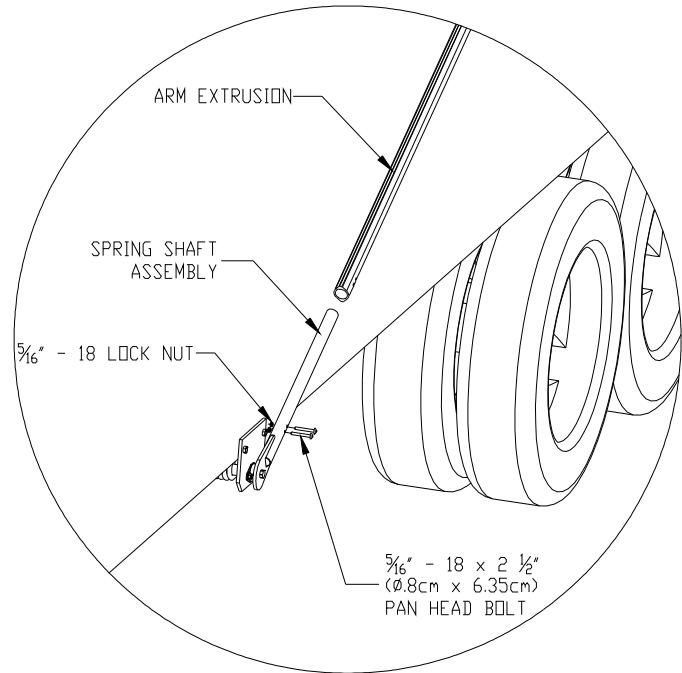


FIGURE 7A

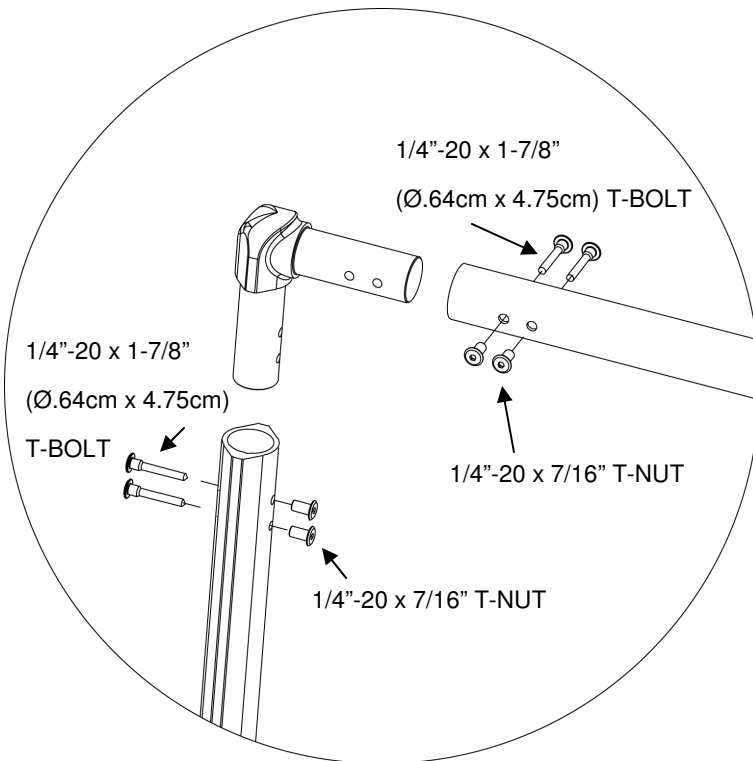


FIGURE 7B

- Slide an upper bent tube into each end of the rear cross bar and into both arm extrusions. Adjust bent arms so that rear cross bar is centered between sides of trailer and parallel with rear of trailer. Rear cross bar should now be at point "B" as shown on figure 6 on page 6.
- Drill two 3/8" (Ø1cm) holes completely through the extruded arms and upper bent tubes where they overlap (4 holes total 2 on each arm) (see figure 7B).
- Drill two 3/8" (Ø1cm) hole completely through the rear cross bar and upper bent tubes where they overlap (4 holes total 2 on each end of rear cross bar) (see figure 7B).
- Do not bolt together at this time. You will need to take apart rear cross bar to install tarp.

Installing Contact Plate Assembly

- Follow the instructions that come with the contact plate assembly to install your contact plate and properly hook up the electrical wires that will operate your tarping system.

Installing the electrical switch kit

- Follow the instructions that come with the electrical switch kit to install your switch and properly hook up the electrical wires that will operate your tarping system.

Installing the tarp

- Thread the tarp spline into the slot in the center of the aluminum roller bar (remove excess spline sticking out past ends of roller bar to prevent it from hindering the system's operation).
- Remove one upper bent tube from rear cross bar.
- Thread the tarp pocket (sewn into the tarp) onto the rear cross bar and reinstall upper bent tube.
- Center the tarp on both aluminum roller bar and rear cross bar.
- Attach upper bent tube to arm extrusion and rear cross bar using the supplied 1/4" - 20 x 7/16" T-nut and 1/4" - 20 x 1 7/8" T-bolt at the six holes you previously drilled.

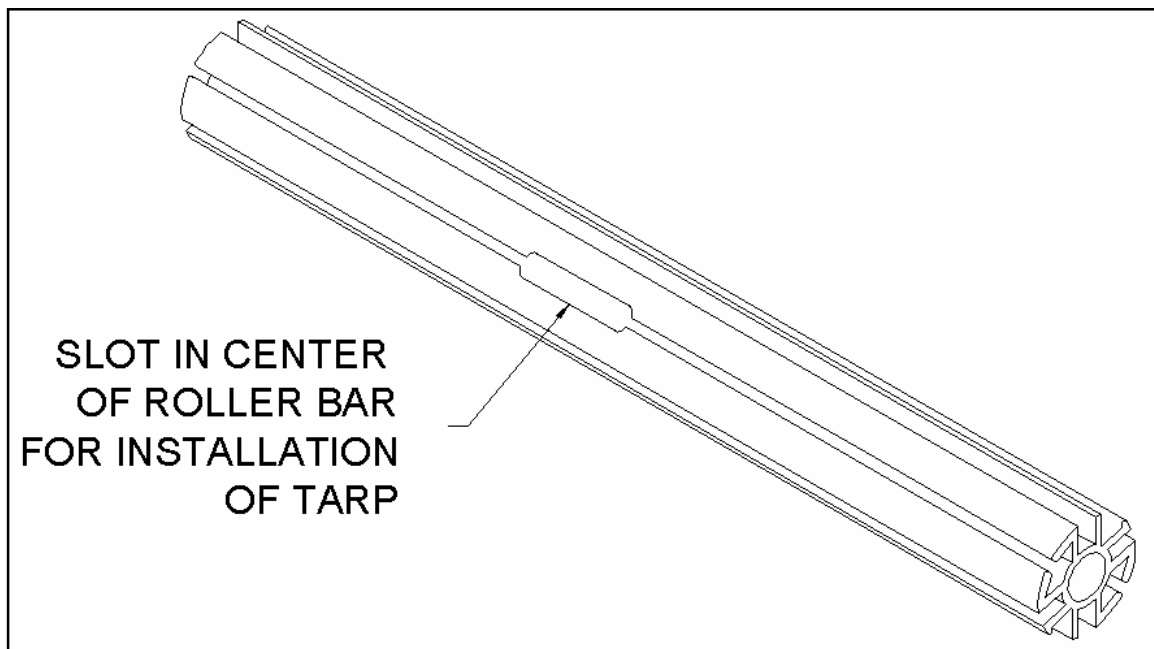


FIGURE 8

Installing pivot arm rests

- Unwind tarp so that the rear cross bar is resting on the back of the trailer.
- Position the pivot arm rest on the side of the trailer pushing up on the arm extrusion so they just lift the rear cross bar off the back of the trailer.
- Weld or bolt (bolts not supplied) the pivot arm rests to the side of the trailer.

CAUTION: When activating the control, make sure that all moving parts are in view of your sight, and no one is present on the side that is not in your direct view. Do not operate the system under overhead electric lines and when lightning strike danger is present.

WARNING AND OPERATIONAL LABEL LOCATIONS

The warning and operational labels must be placed near the toggle switch location.



Thank You for Your Purchase

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