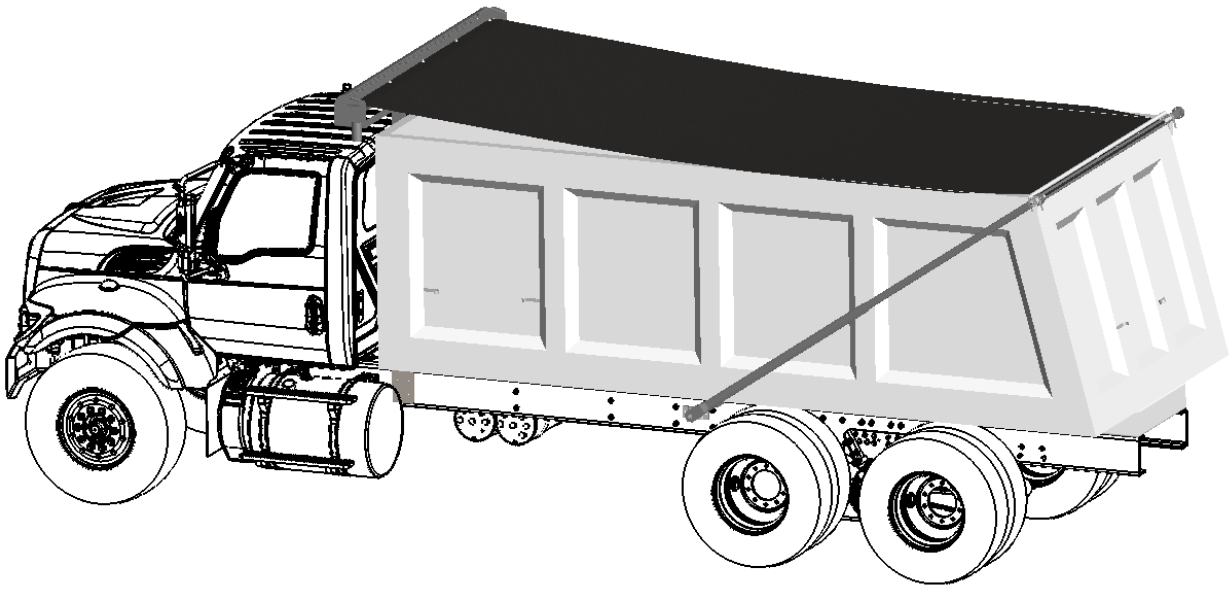
SHUR-CO®

WASTE WARRIOR™
SINGLE & DUAL STAGE GANTRY

INSTALLATION INSTRUCTIONS



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SAFETY

Read this section carefully before proceeding. The following symbols may appear prior to certain safety related assembly and installation steps described in this manual.

FAILURE TO OPERATE AND INSTALL THIS UNIT AS INSTRUCTED MAY RESULT IN SERIOUS INJURY OR DEATH.

DANGER

Indicates an immediately hazardous situation which, if not avoided, will result in serious injury or death.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.

CAUTION

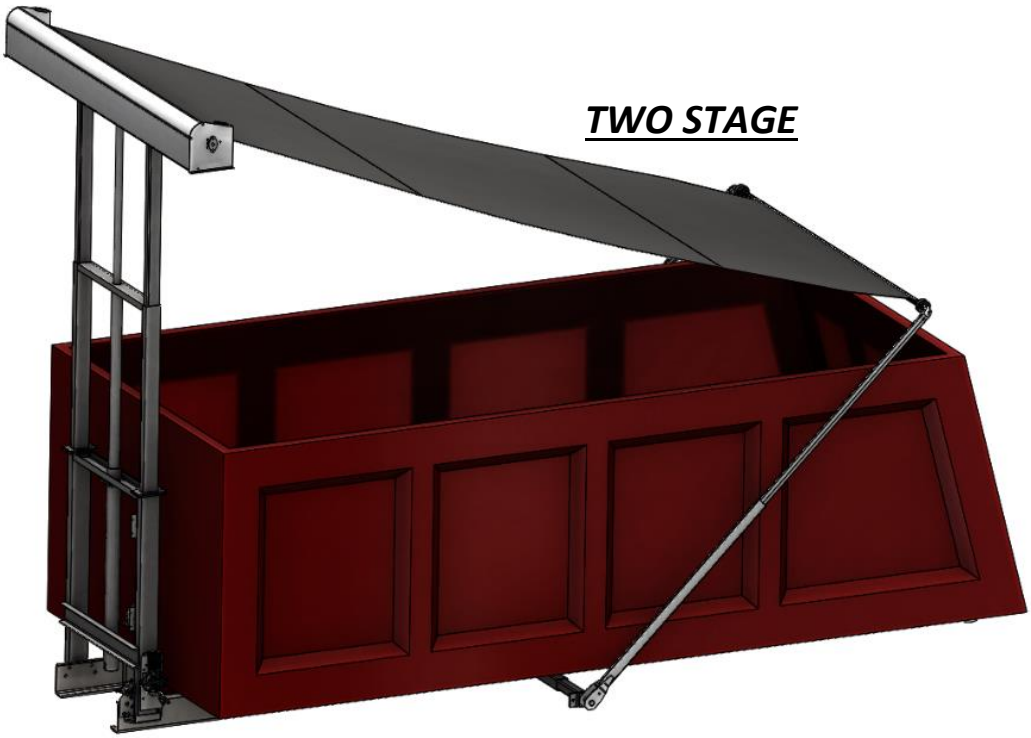
Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage.

NOTICE

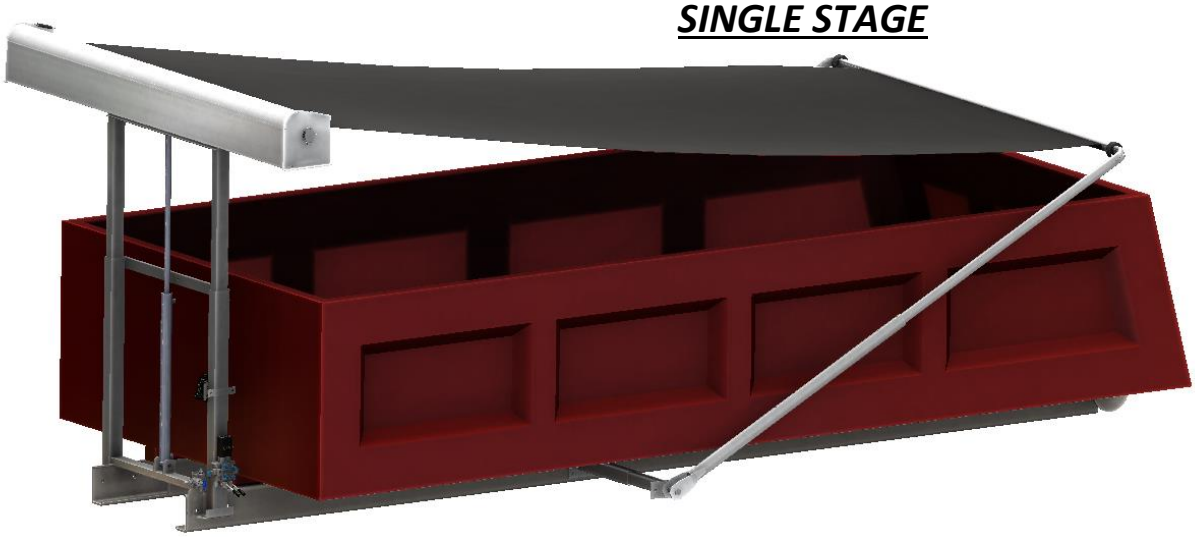
Indicates information about a subject that is not safety related.

SINGLE & DUAL STAGE GANTRY SYSTEM INSTALLATIONS

TWO STAGE



SINGLE STAGE



STEP 1: INSTALL THE GANTRY FRAME

Waste Warrior™ gantry frames are designed to be mounted to a variety of chassis and frame types. Mounting methods include U-bolts, chassis bolts, and welding. **If the optional U-Bolt Kit was purchased with the gantry, reference *U-Bolt Kit Installation* instructions for mounting the gantry frame.**

Single and Dual Stage gantry frames have a 10" footprint. They require a minumum of 12" of clear frame rail space to mount. 16" of clear frame rail space is recommended to accommodate adjustments in desired mounting location. Keep a minimum of 1 inch between the rear of the cab and any moving components on the gantry frame or about 4" between the cab (in its settled position) and main gantry frame. See *Figure 1.1*.

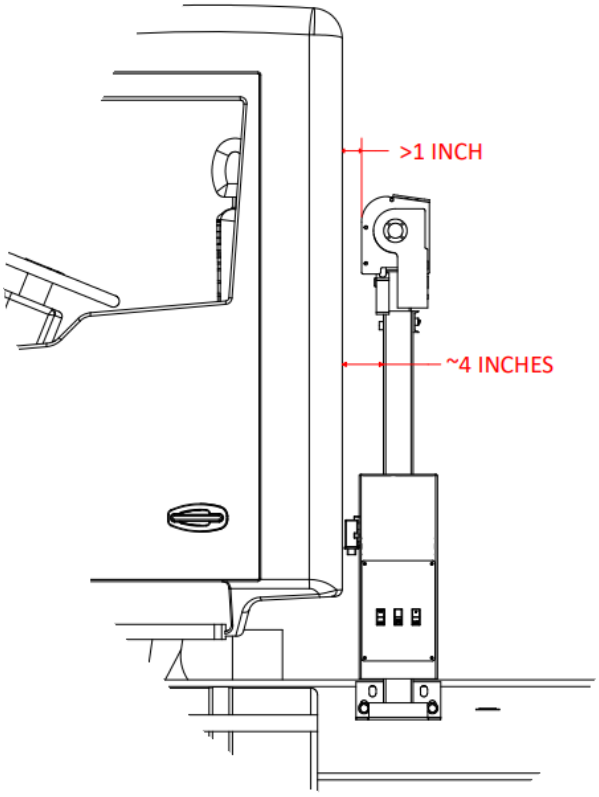


FIGURE 1.1: CLEARANCES

Chassis Bolt (Integrated Bracket)

⚠ CAUTION

DO NOT DRILL INTO THE TOP OR BOTTOM FLANGE OF THE FRAME RAILS. FOLLOW MANUFACTURERS GUIDANCE FOR DRILLING HOLES INTO THE SIDEWALLS OF THE FRAME RAILS.

Single and dual stage gantry frames (4) come with integrated thru-bolt brackets (3) which are designed to bolt through the sides of the chassis or trailer frame rails. To install, lower the gantry frame (4) onto the frame rails (1). Center the frame horizontally. Place an equal number of spacers (if necessary) on each side (spacers not included). Align parts for level and squareness and ensure clearance between truck cab and all other components.

Use clamps to hold frame securely in position, mark, and drill holes (2) through frame rails in line with the mounting holes of gantry bolt brackets (3). See *Figure 1.2.*

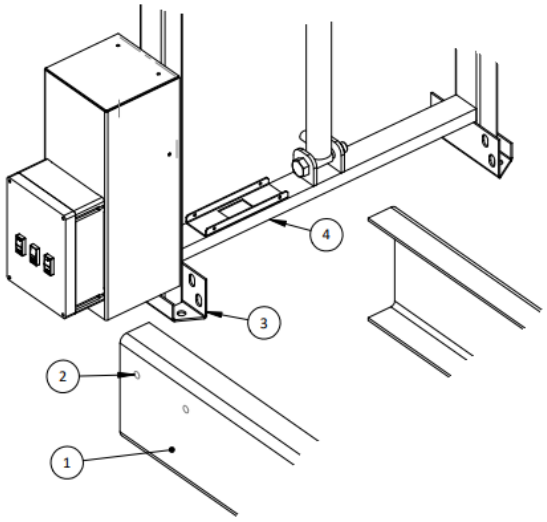


FIGURE 1.2: GANTRY FRAME INSTALLATION

NOTICE

TWO GRADE 8 BOLTS PER GANTRY BOLT PLATE ARE REQUIRED. MOST C-CHANNEL FRAME RAILS WILL ONLY ALLOW THE LOWER VERTICAL MOUNTING HOLES TO BE USED ON EACH SIDE.

Using supplied 5/8" x 2" grade 8 bolts (4), nuts (5) and washers (6), bolt the gantry frame to the chassis. See *Figure 1.3*.

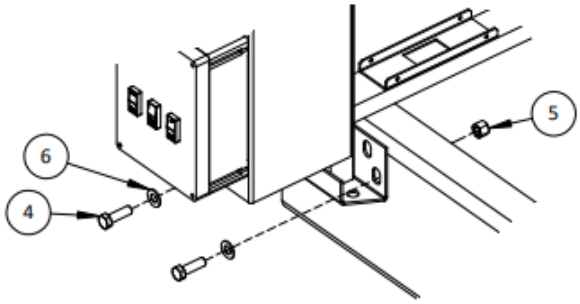


FIGURE 1.3: MOUNTING THE GANTRY

NOTE: For fully hydraulic models, position the relief valve assembly (3) as shown and insert hardware. For C-Channel frame installations, use the bottom two holes with 5/8" x 2" grade 8 bolts (4), nuts (5), and washers (6). See Figure 1.4.

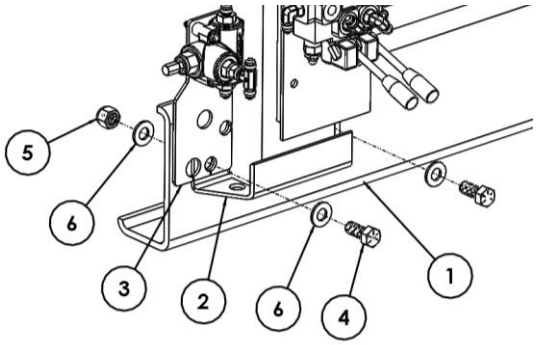


FIGURE 1.4: FULLY HYDRAULIC FRAME INSTALLATION

Welding

The lower bolt brackets can be welded to a chassis bolt bracket (7) if the integrated brackets interfere with any other components mounted to the chassis frame rails (bracket not supplied).

⚠ CAUTION

DO NOT WELD TO ANY PART OF THE CHASSIS FRAME RAILS. FOLLOW MANUFACTURERS GUIDELINES FOR MOUNTING TO FRAME RAILS.

Shown below is an example of how the frame can be installed. It is recommended that the gantry bolt bracket gets welded to the bolt plate (7) or bolted through the horizontal holes (8) on the integrated bolt bracket (3), see *Figure 1.5*.

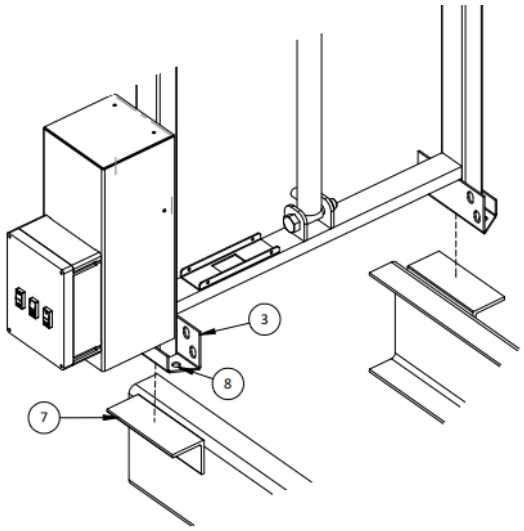


FIGURE 1.5: ALTERNATIVE MOUNTING

STEP 2: PULL-STYLE INSTALLATION

NOTE: If installing a system with an arm kit, skip to step 3.

Waste Warrior™ gantry pull-style systems, have the tarp pre-installed if ordered at the same time.

Pull Rope Installation

Pull-Style tarps have a rear centered grommet for the pull rope. Insert rope end of the pull rope into the center grommet. Tie a double knot on the end of the rope that was inserted into the grommet. See *Figure 2.1*.

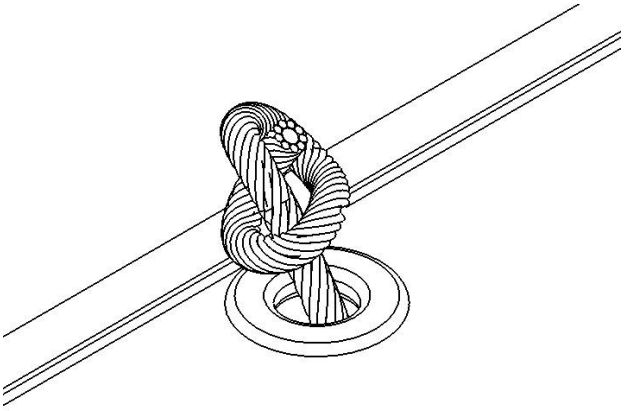


FIGURE 2.1: TYING THE PULL ROPE

Bungee cord and rings on the opposing end of rope are used to tie off the rope on the j-hooks.

J-Hook and Tailgate Latch Installation

Find a location at the front of the system to install the first set of J-Hooks. Front J-Hooks should not be installed on the detachable container or any moving part. J-Hooks can be installed to the vertical face of the frame rail on the driver side. Use the supplied #12 self-drilling screws (2) to attach the J-Hooks (1). These can be substituted for through bolts if desired. J-Hooks should face outward and get installed at least 12 inches apart. See *Figure 2.2*.

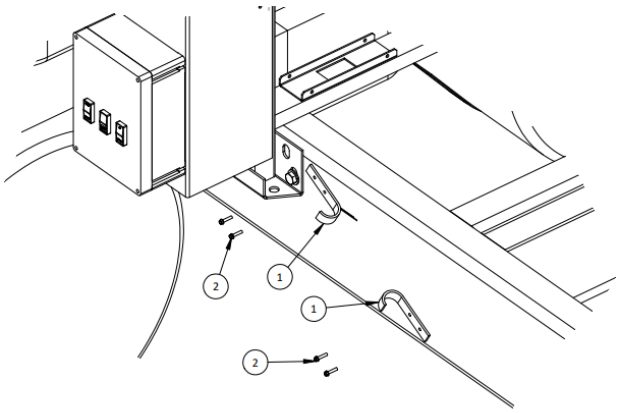


FIGURE 2.2: MOUNTING FRONT J-HOOKS

NOTICE

USING PULL-STYLE SYSTEMS WITH DETACHABLE CONTAINERS REQUIRES A SET OF J-HOOKS AND TAILGATE LATCHES TO BE INSTALLED ON EACH CONTAINER. ADDITIONAL PARTS MAY BE NEEDED.

Install a set of J-Hooks (2) on the rear tailgate of each detachable container as needed. J-Hooks should face outward and get installed at least 12 inches apart. See *Figure 2.3*.

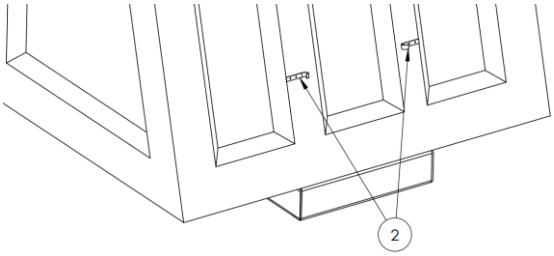


FIGURE 2.3: REAR J-HOOKS

Install a set of rear tailgate latches at the top rear of each detachable container as needed. Latches must face the rear to catch the pull bar installed on the tarp. See *Figure 2.4*.

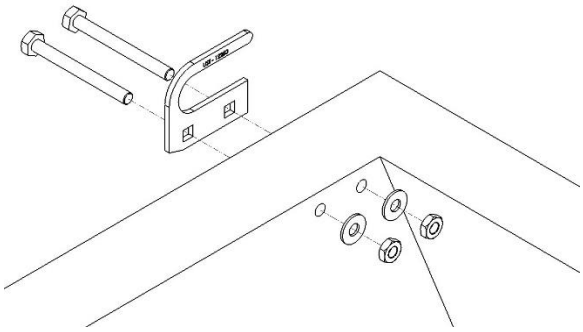


FIGURE 2.4: TAILGATE LATCHES

STEP 3: OPTIONAL ARM KIT

***NOTE*: If installing a two-piece aluminum arm kit with Manual Adjust Pivot, reference *Manual Adjust Pivot Add-On Installation Instructions* for mounting the pivots.**

Finding the Arm Pivot Point:

To install the arm kit, you must first locate the pivot point.

With A Container

The pivot point is found using the longest container. If the longest container is available, load the container on the hoist. Using two tape measures, clamp the end of the first tape measure on the rear tailgate of the container. Clamp the end of the second tape measure to the rubber bumper on the gantry housing. Pull both tape measures towards the center of the container until they cross. Find where the lengths of the tape measures match and mark this location on the chassis, see *Figure 3.1*.

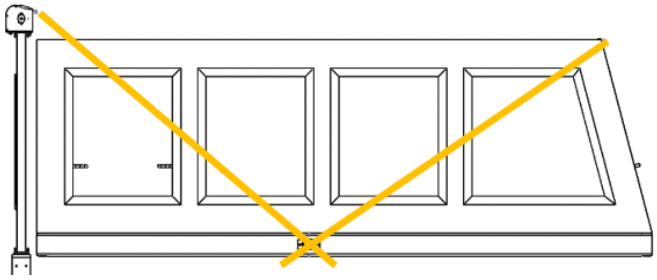


FIGURE 3.1: FINDING PIVOT POINT

Without A Container

If the longest container is not available, the pivot point is found using the longest container specification given by the hoist manufacturer. In this example we will use 16 feet (or 192 inches) as the maximum container length for the hoist.

Measure the distance, "X" between the rear face of the gantry leg to the rear face of the hook or rolloff stop bracket. See *Figure 3.2.*

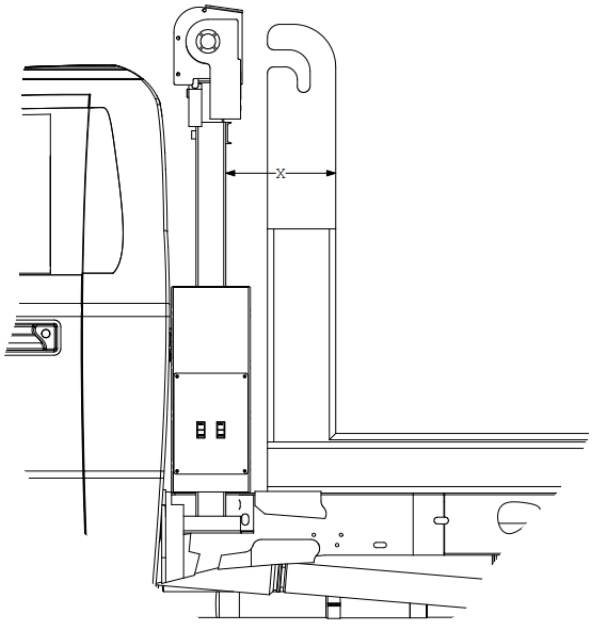


FIGURE 3.2: MEASUREMENT "X"

Add the measurement "X" to the maximum container length (in inches) and divide by 2. This will give you the center point "Y" for the pivot location.

Example: X = 12 inches
12 inches + 192 inches = 204 inches
204 inches ÷ 2 = **102 inches**

Measure from the rear face of the gantry leg and mark this measurement on the frame rail. Make the same measurement and mark on the opposite side. See *Figure 3.3.*

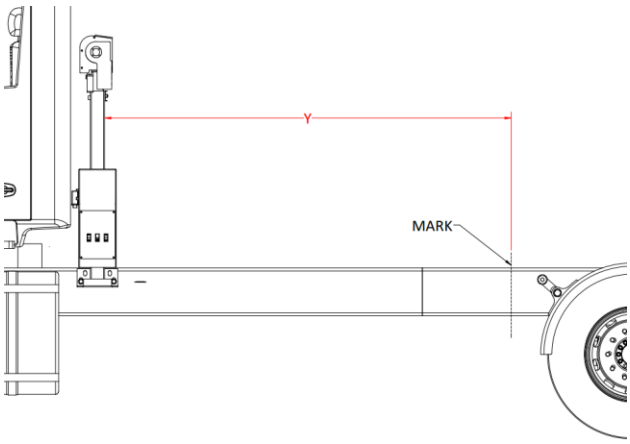


FIGURE 3.3: MEASUREMENT "Y"

Installing the Pivots and Lower Arms

There are two arm mounting options offered with Waste Warrior™ Gantry systems. The first is an external mount arm with a pivot pin mounting bracket. The second is a fender mount arm with a pre-assembled spring box.

For External Mount Arms

External mount spring arms include an offset mounting bracket that allows the pivot pin to be offset from the frame rails. Pivot offsets are supplied, standard, in a two-piece arrangement. This allows for the offset measurement to vary based on frame rail width and desired mounting width.

NOTICE

FEDERAL REGULATIONS STATE THAT SAFETY EQUIPMENT CANNOT EXCEED 108 INCHES IN WIDTH. CHECK LOCAL REGULATIONS FOR ANY VARIATIONS TO THIS REGULATION.

It is recommended to mount the arms as wide as possible for maximum container clearance.

To calculate the offset bracket length, measure the outside frame rail distance, "Z". See *Figure 3.4.*

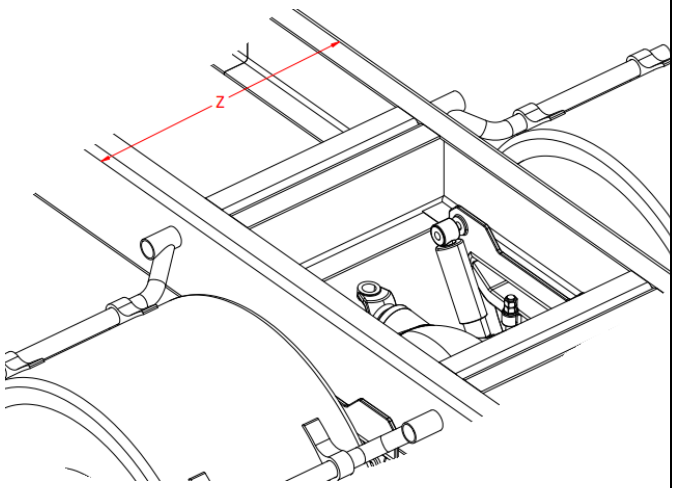


FIGURE 3.4: MEASUREMENT "Z"

Use measurement "Z" in this equation below. In this example, Z = 34 inches:

Example: 108 inches – 9.5 inches – 34 inches = 64.5 inches ÷ 2 = **32.25 inches**.

Index each offset assembly so it measures what was calculated. In our example, each offset needs to be 32.25 inches long (outside plate measurement). Weld all the way around the extension joint, see *Figure 3.5*.

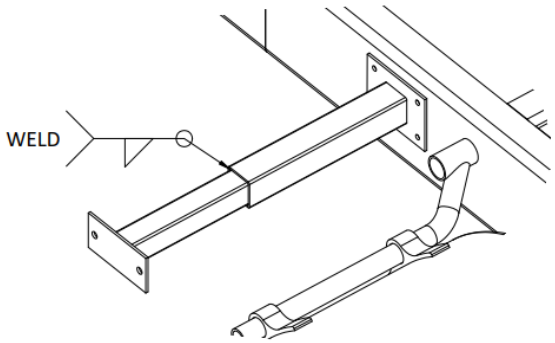


FIGURE 3.5: MOUNTING OFFSET

When assembled with the pivot pins, the outside pivot pin to pivot pin measurement should be about 107-1/2". The pivot pins are the widest part of the system. Ensure this measurement does not violate the 108" federal regulation (or local regulations, if applicable).

Bolt the offsets to the frame rail at the marked locations from the previous step using the supplied 1/2" x 1-1/2" bolts (1), washers (2), and nuts (3). See *Figure 3.6.*

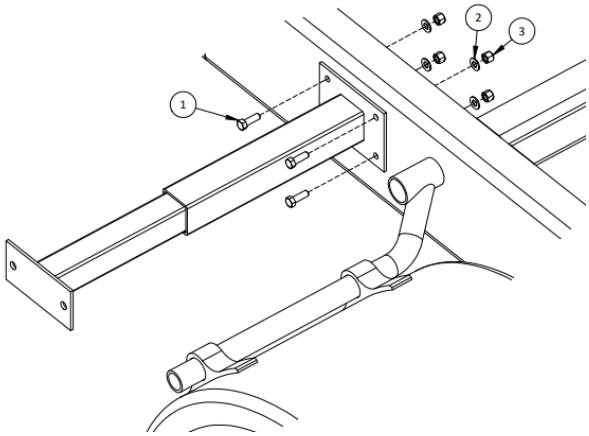


FIGURE 3.6: MOUNT OFFSETS

Install the pivot pins on either offset bracket. Ensure the slot on the pivot shaft is facing downward. Use supplied 5/8 x 1-1/2” bolts (1) and nuts (2) to mount the pivot pin to the offset. See *Figure 3.7*.

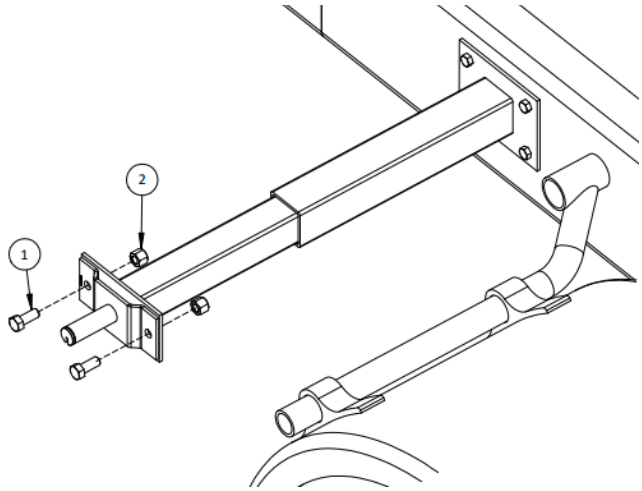


FIGURE 3.7: MOUNTING PIVOT PINS

Begin assembling the arms on the pivot by installing the flat bushing (1) onto the pivot pin. Slide the first arm plate (2) onto the pivot pin and install the springs (3) one at a time. Spring tab should insert into pivot pin slot. See *Figure 3.8*.

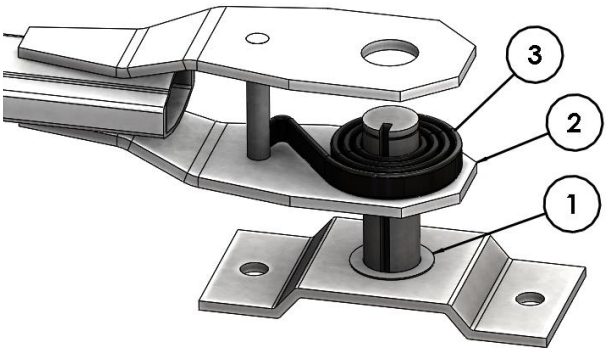


FIGURE 3.8: ASSEMBLING LOWER ARM

Slide the second arm plate onto pin, followed by another flat bushing (1) and a snap ring (4). See *Figure 3.9*.

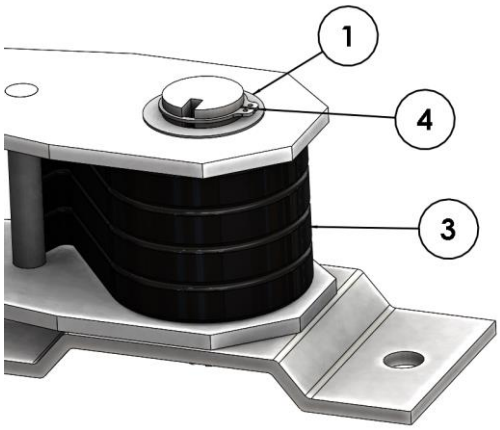


FIGURE 3.9: ASSEMBLING LOWER ARM

Repeat on the opposite side. Skip to *Installing the Upper Arms* step once completed.

For Fender Mount Arms

Fender mount springs boxes are intended to be mounted on a horizontal surface, such as a steel fender or bracket. If steel fenders are not used, it is recommended to use the Fender Mount Offset Bracket kit, #16833. Fender mount offset brackets for the fender mount spring boxes are not included in standard kits but can be purchased separately.

In this instructional, we will cover the installation using the optional Fender Mount Offset kit.

NOTICE

FEDERAL REGULATIONS STATE THAT SAFETY EQUIPMENT CANNOT EXCEED 108 INCHES IN WIDTH. CHECK LOCAL REGULATIONS FOR ANY VARIATIONS TO THIS REGULATION.

It is recommended to mount the arms as wide as possible for maximum container clearance.

To calculate the offset bracket length, measure the outside frame rail distance, “Z”. See *Figure 3.10*.

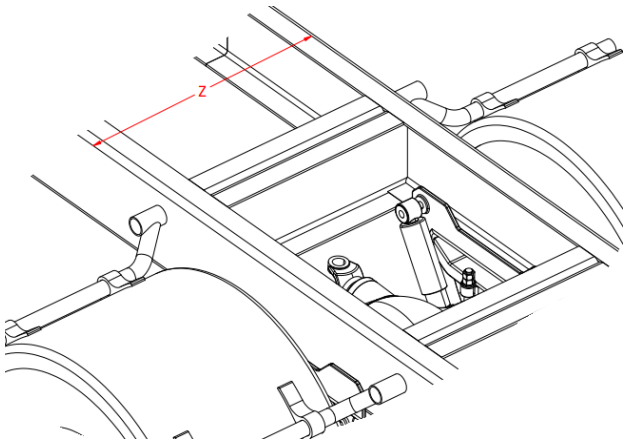


FIGURE 3.10: MEASUREMENT "Z"

Use measurement "Z" in this equation below. In this example, Z = 34 inches:

Example: 108 inches – 6.5 inches – 34 inches = 67.5 inches ÷ 2 = **33.75 inches**.

Index each offset assembly so it measures what was calculated. In our example, each offset needs to be 33.75 inches long (outside plate edge measurement). Weld all the way around the extension joint, see *Figure 3.11*.

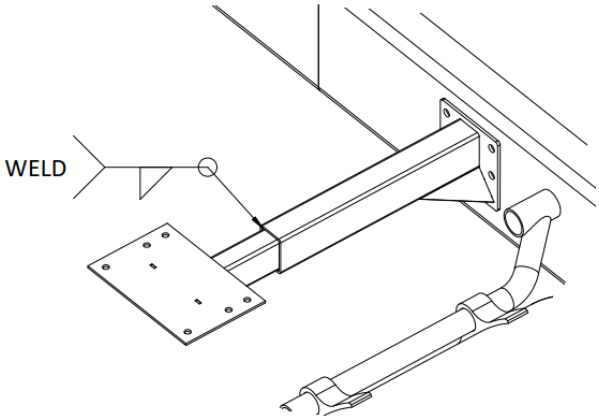


FIGURE 3.11: WELD OFFSET AT LENGTH

When assembled with the lower arm castings, the outside measurement should be about 107-1/2". The lower castings are the widest part of the system. Ensure this measurement does not violate the 108" federal regulation (or local regulations, if applicable).

Bolt the offsets to the frame rail at the marked locations from the previous step using 5/8", grade 8 hardware (not supplied). See *Figure 3.12.*

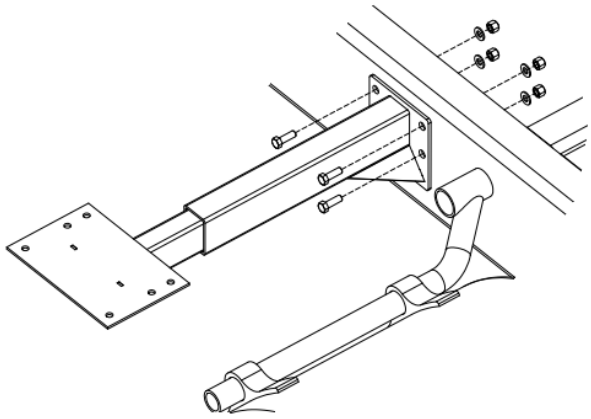


FIGURE 3.12: MOUNTING OFFSETS

Driver and Passenger side spring boxes are labeled accordingly. For reference, the spring shafts are offset slightly toward the front of the spring box on either side, see *Figure 3.13*.

FIGURE 3.13: SPRING ASSEMBLIES

Align mounting holes on spring boxes with holes on offset mounting brackets; square connector should face outward. Install provided 1/2" x 1-1/2" bolts (1) and nuts (2), and tighten, see *Figure 3.14*.

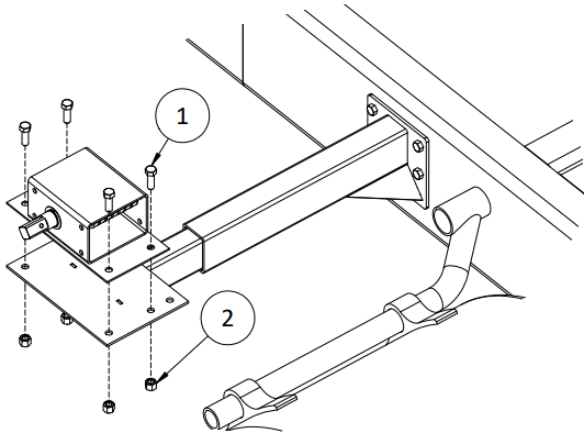


FIGURE 3.14: MOUNTING SPRING BOXES

NOTICE

BEFORE INSTALLING STEEL LOWER CASTINGS, THE BOLT HOLES MUST BE DRILLED IN THE LOWER ARM. THIS IS EASIER DONE PRIOR TO ASSEMBLY.

Most lower castings for the two-piece aluminum arms have pre-tapped holes to mount the lower arm to the casting with a 5/16" x 1" bolt. Lower castings for two-piece steel and one-piece bulletproof arms use 5/16" x 2" through bolts to secure the arm to the casting.

Measure the hole locations on casting and mark on lower arm. Make sure holes are getting drilled on the end of the arm that doesn't have pre-drilled and tapped holes. If both ends of lower arms are pre-drilled and tapped, that indicates the arm and casting are secured using set screws rather than bolts. Drill holes (if applicable) using an 11/32" drill bit. Test fit for alignment but to not install.

Rotate the square shaft by hand until the spring tails engage the upper surface of the spring box. See *Figure 3.15*.

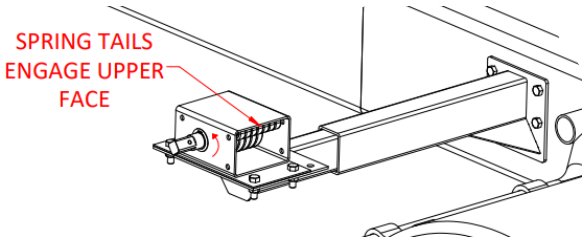


FIGURE 3.15: ENGAGE SPRINGS

Slide the steel casting on to the square connector of the shaft so that the casting is facing downward and to the rear of the truck or trailer. Insert ¼" x 2-1/2" bolt and nut, and tighten. See *Figure 3.16*.

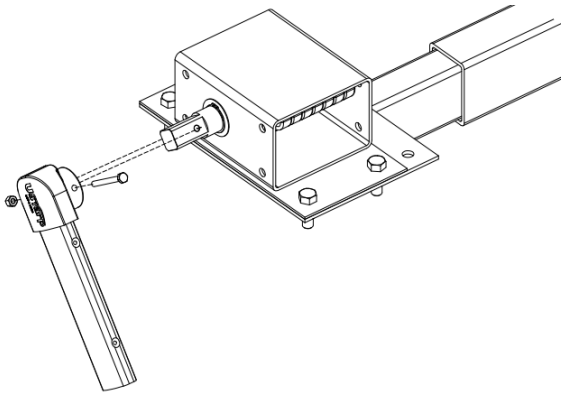


FIGURE 3.16: MOUNTING LOWER CASTING

Slide the lower arms onto the installed casting. Depending on the mounting height of the spring boxes, the casting may need to be rotated upward to slide the lower arm on. Using the provided hardware, secure the lower arm to the casting on either side. See *Figure 3.17.*

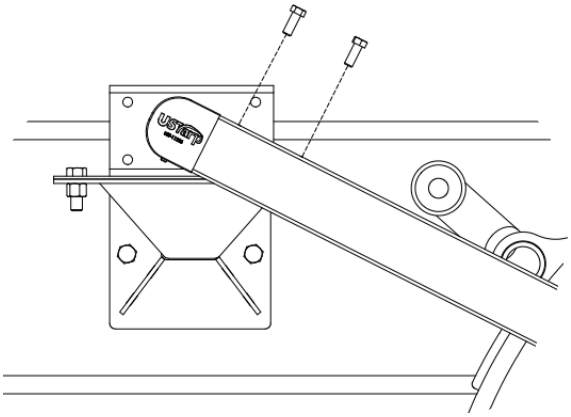


FIGURE 3.17: ATTACH LOWER ARM

Installing the Upper Arms

If installing a 2-piece arm set which includes an upper and lower telescopic arm, rotate the lower arm upward and insert the upper arm.

For steel upper arms that do not have the 90° corners installed, assemble them now. If the bolt holes on the upper arms for the corners are not pre-drilled, mark and drill using an 11/32" drill bit.

NOTICE

IF INSTALLING THE ONE-PIECE BULLETPROOF ARM SET WITH THE FORMED CROSS TUBE, 90° CORNERS WILL NOT BE INCLUDED.

Take a measurement “M” from the center of the rubber bumper on the gantry to the center of the pivot pin. See *Figure 3.18*.

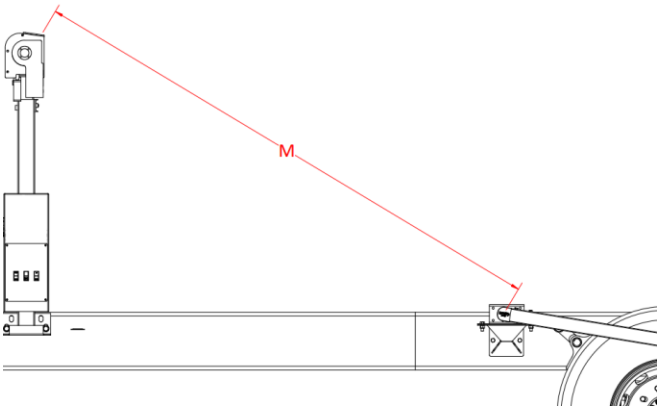


FIGURE 3.18: MEASUREMENT “M”

Using measurement “M”, measure from the center of the pivot to the top of the 90° corner on the upper arm. Adjust upper arm in or out to match this measurement. For aluminum arms that have pre-tapped holes, insert provided 1/2" set screws (1) to the upper 2 holes on each lower arm and secure in position. For steel arms with thru-holes, mark and drill through the upper arms using an 11/32” drill bit, insert provided 5/16” x 1-3/4” bolt and nut, and tighten. Our example shows set screws being added. See *Figure 3.19.*

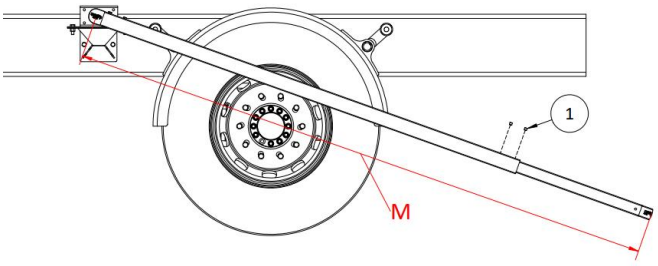


FIGURE 3.19: INSTALL UPPER ARM

NOTICE

ARM LENGTHS MUST MATCH WITHIN 1/4" OF EACH OTHER FOR THE TARP TO ROLL PROPERLY.

If installing one-piece Bulletproof arm system, subtract 3 inches from measurement “M”. Measure from center of pivot down the arm and mark the arm at the calculated measurement. Cut the arms at this measurement.

Installing the Tarp and Cross Tube

Tarp Installation

Unbox and unfold the tarp. Outer webbing reinforcement should face downward once installed. The front of the tarp has 5 evenly spaced grommets, the rear of the tarp has a 5” sewn pocket.

Most Waste Warrior™ gantry systems have pre-installed tarp hardware located on the tarp axle in the housing. Loosen the pre-installed hardware and space out the bolts, washers and nuts on the axle. See *Figure 3.20*.

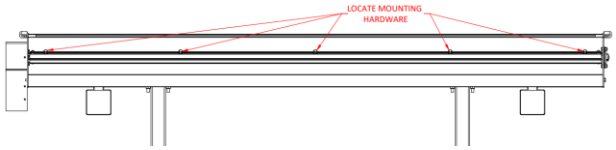


FIGURE 3.20: TARP MOUNTING HARDWARE

Remove the 5/16” bolts and washers from the axle slot. Line front tarp grommets up with the nuts in the axle slot, insert the bolts with washers but do not tighten. Adjust tarp to center, measure from each housing end plate to each side of the tarp and adjust to match. Make sure the tarp front is pulled tight when doing so. Tighten the center bolt. Work outward while keeping the front of the tarp pulled tight between each bolt. See *Figure 3.21*.

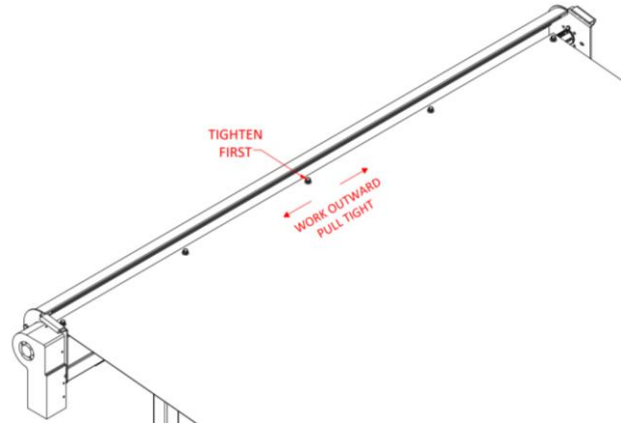


FIGURE 3.21: MOUNTING THE TARP

Cross Tube Installation

With the arms laying on the ground at the rear of the system, take a measurement "N" between the 90° elbow shoulders (or bends). See *Figure 3.22*.

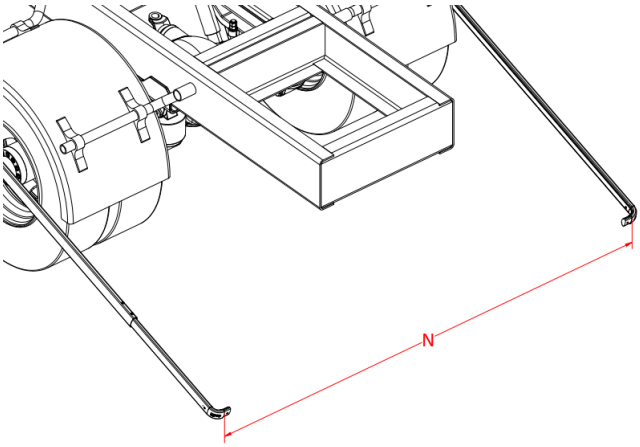


FIGURE 3.22: MEASUREMENT "N"

Cut the cross tube to match measurement "N". Deburr cut edge on cross tube. Test fit on upper arm corners to ensure the cross tube length is good. Measure and mark the cross tube for the mounting bolts on either end. Using an 11/32" drill bit, add holes to cross tube.

Slide cross tube through the rear pocket of the tarp, slide centering flanges on either end of the cross tube. For two-piece aluminum arm sets, install two plastic flanges on either end of the cross tube. See *Figure 3.23*.

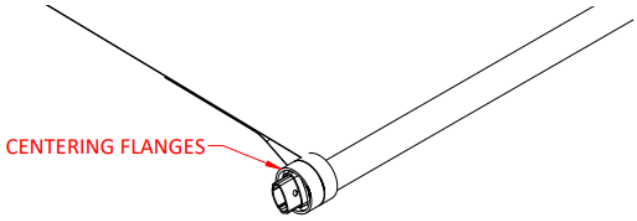


FIGURE 3.23: INSTALL CENTERING FLANGES

Insert arm corners into cross tube, insert the provided 5/16" x 1-3/4" bolts and nuts, and tighten. Once arms and cross tube are connected, adjust centering flanges so they pinch the tarp at center. Tighten set screws or bolts on centering flange to secure in place. See *Figure 3.24*.

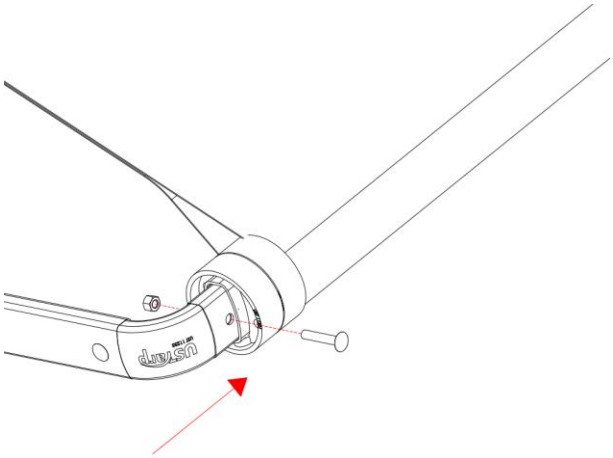


FIGURE 3.24: CONNECT ARMS AND CROSS TUBE

STEP 4: WIRING INSTRUCTIONS

Disconnect battery prior to installing electrical equipment. Always disconnect battery (-) negative terminal first, then disconnect battery (+) positive cable.

NOTICE

ALL WASTE WARRIOR™ SINGLE AND DUAL STAGE UNITS COME PRE-WIRED WITH A BATTERY LEAD. THE POSITIVE LEAD WIRE MUST BE INSTALLED WITH SUPPLIED INLINE BREAKER.

Route lead wire to battery box. Crimp properly sized ring terminals to ends of wire lead. Connect red, positive wire lead to "AUX" side of provided breaker.

Kits are sent with 1 foot of cable to jumper from "BAT" side of breaker to the (+) 12v terminal of the battery. Crimp ring terminals on jumper and connect between battery and breaker. Connect the black, negative lead wire to the battery (-) 12v terminal. Always connect battery (+) positive cable first, then connect battery (-) negative cable.

Operate tarp system and verify correct switch function. If tarp wind and unwind functions are backwards, wires on the tarp motor must be switched. When uncovering/winding the tarp, the tarp should be winding over the top of the axle. Counter-Clockwise from the driver side view. See *Figure 4.1*.

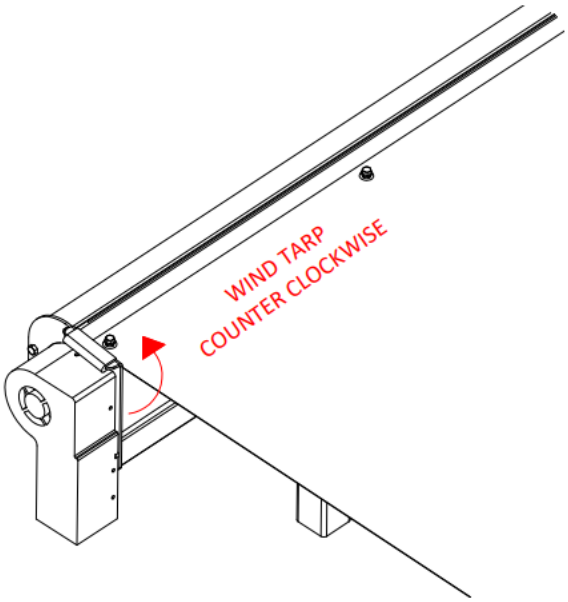


FIGURE 4.1: TARP WIND DIRECTION

Tarp Uncover/Wind = **CCW** from driver side view
Tarp Cover/Unwind = **CW** from driver side view

NOTE: Additional wiring details are provided in the schematics shown in Appendix A-D.

OPTION: Wireless Remote Control

Customers may elect to upgrade to the Waste Warrior™ optional wireless remote-control unit which provides easy, effective, reliable operation from inside the cab, enabling operators to remain in the cab while operating tarp system. Test the functions on the remote and ensure they work as intended.

NOTE: For troubleshooting purposes, the wiring schematics for the complete circuit is shown in Appendix A-D.

STEP 5: HYDRAULIC SYSTEM INSTALL

NOTE: Fully hydraulic systems still require a 12v battery connection for the control box that operates the electric solenoids. Follow steps for wiring shown in STEP 4.

DANGER

HIGH PRESSURE FLUID HAZARD.
HIGH PRESSURE FLUID WILL PIERCE SKIN AND CAUSE SERIOUS INJURY OR DEATH.

Gantry systems which come equipped with hydraulic options such as vertical lift and hydraulic winding use hydraulic pressure and flow from the pre-existing PTO system. They incorporate a dual section hydraulic control valve. See *Figure 5.1*. The valve work section is controlled by an electric solenoid and features a manual lever as a secondary control option.

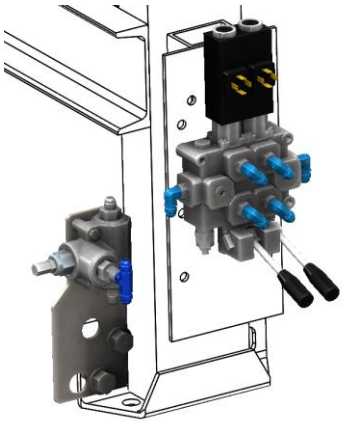


FIGURE 5.1: HYDRAULIC VALVING

The control valve gets pressure from a supplied priority flow control valve, see *Figure 5.2*. This

priority valve is connected in line with the truck hydraulics and diverts a small portion of the total hydraulic flow to the tarp control valve. Connections are outlined as (1) **Pump Pressure** – flow/pressure from truck hydraulic pump; (2) **Priority Flow** – 6 GPM flow/pressure to tarp hydraulic system; (3) **Excess Flow** – flow to truck/trailer hydraulics.

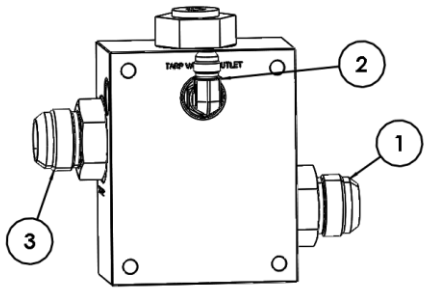


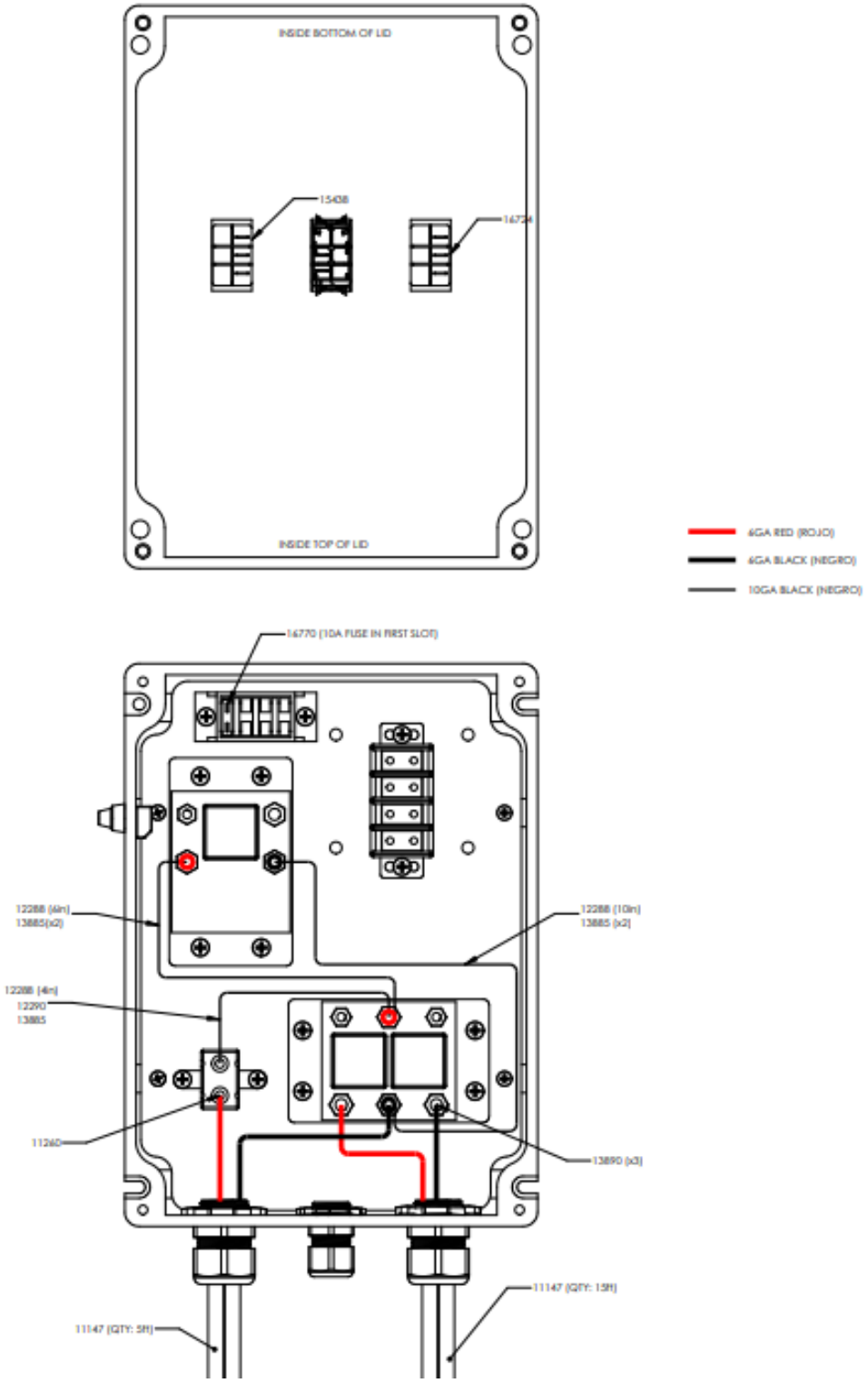
FIGURE 5.2: PRIORITY FLOW CONTROL

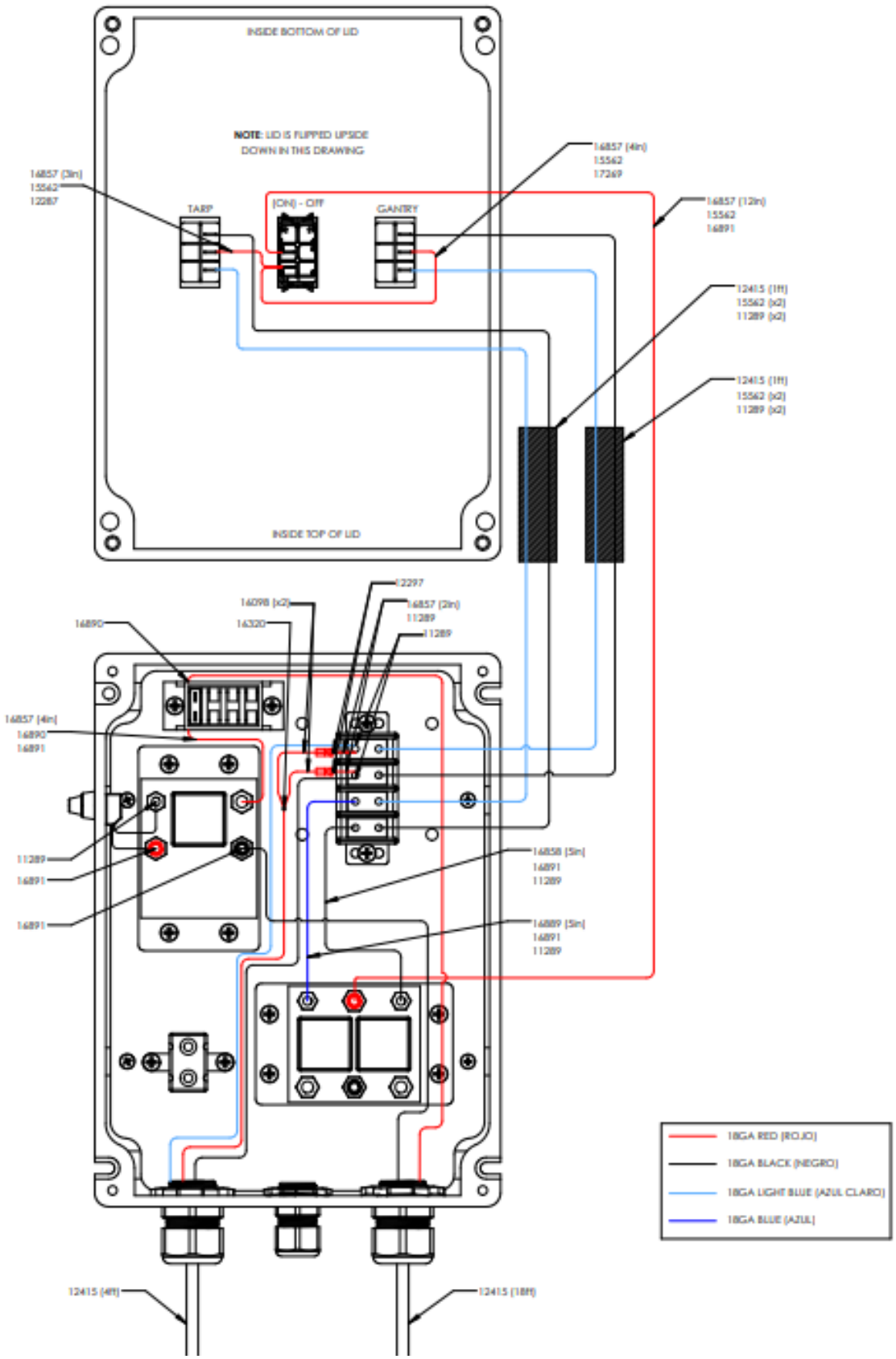
To install the hydraulic hoses, follow the schematic and/or diagram shown in Appendix E. Valve can be installed between on pressure line between PTO and hoist control valve if operating pressures are below 3000psi.

For pressures greater than 3000psi, install the priority flow control in a power beyond connection with the hoist control valve. Route the excess flow port back to tank in this scenario.

APPENDIX A

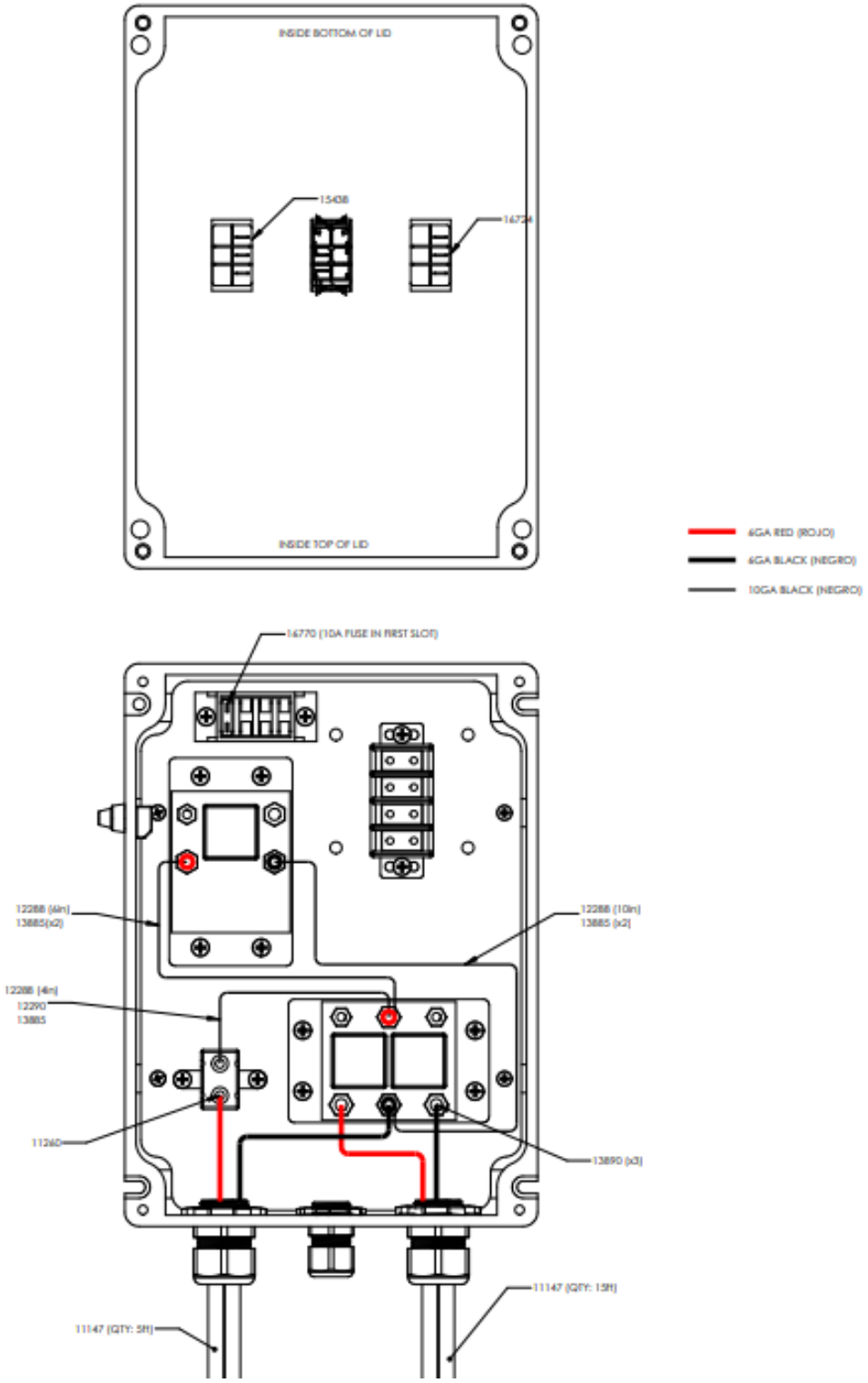
Wiring Schematic: Control Box without Remote-Control (for Gantry S/N: 1492 and after)

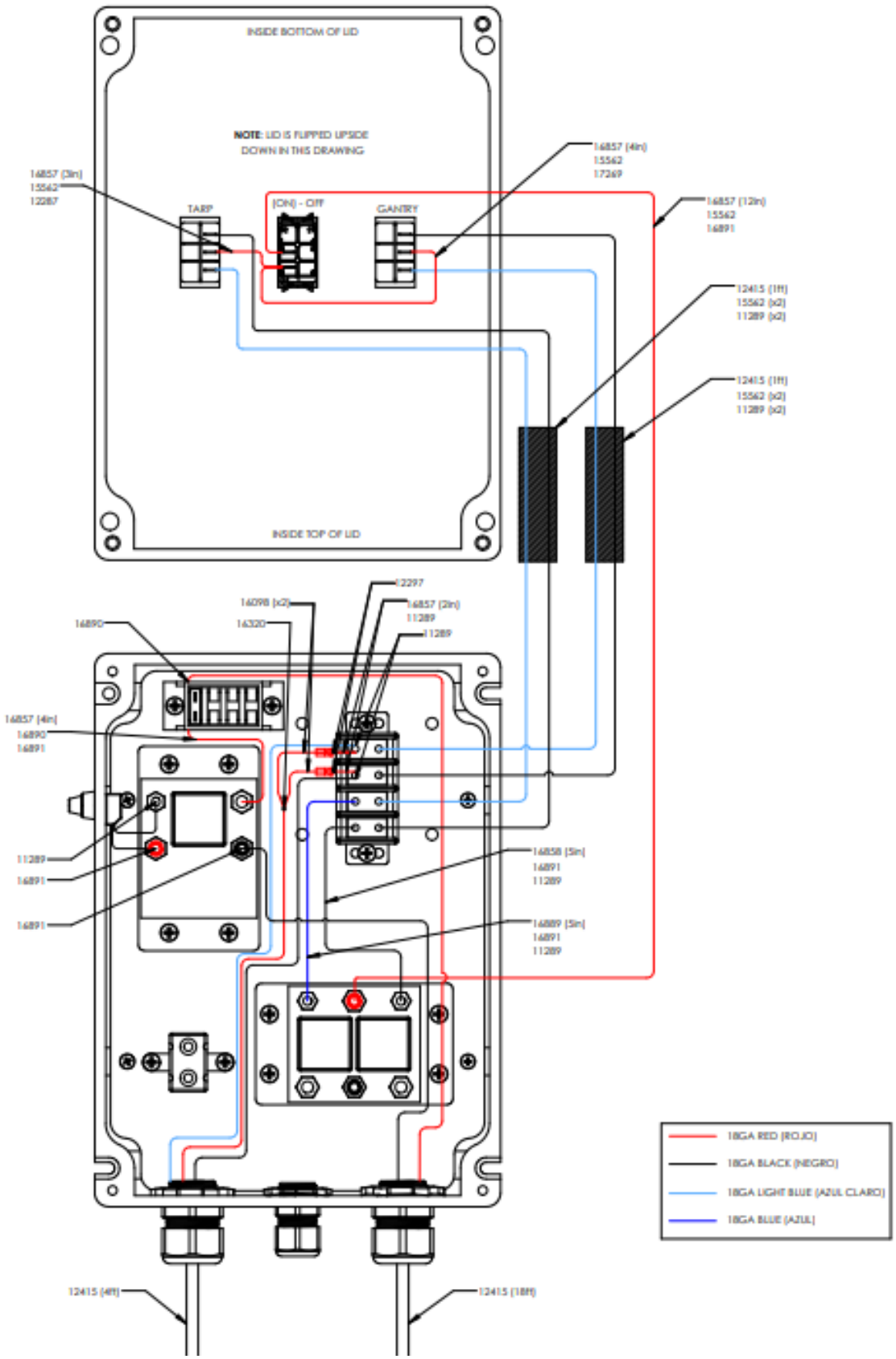


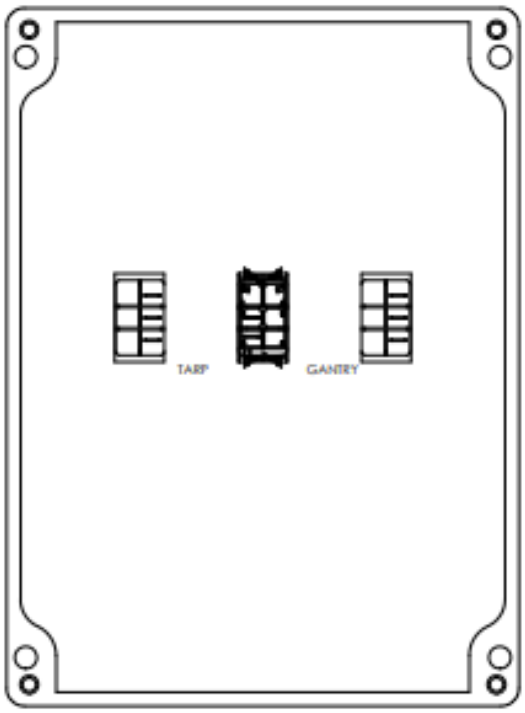

INSIDE BOTTOM OF LID
NOTE: LID IS FLIPPED UPSIDE DOWN IN THIS DRAWING
16857 (3in)
15562
12287
TARP
(ON) - OFF
GANTRY
16857 (4in)
15562
17269
16857 (12in)
15562
16891
12415 (1ft)
15562 (x2)
11289 (x2)
12415 (1ft)
15562 (x2)
11289 (x2)
INSIDE TOP OF LID
12297
16857 (2in)
11289
11289
16098 (x2)
16320
16890
16857 (4in)
16890
16891
11289
16891
16891
16858 (5in)
16891
11289
16889 (5in)
16891
11289
12415 (4ft)
12415 (18ft)
18GA RED (ROJO)
18GA BLACK (NEGRO)
18GA LIGHT BLUE (AZUL CLARO)
18GA BLUE (AZUL)

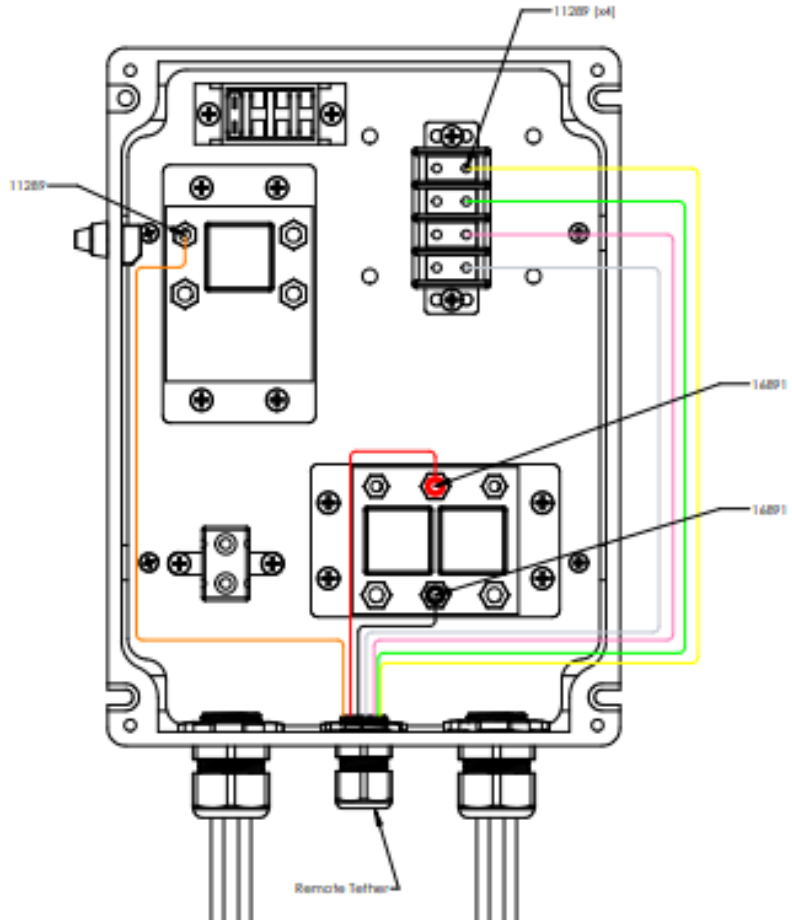
APPENDIX B

Wiring Schematic: Control Box with Remote-Control (for Gantry S/N:1492 and after)




INSIDE BOTTOM OF LID
NOTE: LID IS FLIPPED UPSIDE DOWN IN THIS DRAWING
16857 (3in)
15562
12287
TARP
(ON) - OFF
GANTRY
16857 (4in)
15562
17269
16857 (12in)
15562
16891
12415 (1ft)
15562 (x2)
11289 (x2)
12415 (1ft)
15562 (x2)
11289 (x2)
INSIDE TOP OF LID
12297
16857 (2in)
11289
11289
16098 (x2)
16320
16890
16857 (4in)
16890
16891
11289
16891
16891
16858 (5in)
16891
11289
16889 (5in)
16891
11289
12415 (4ft)
12415 (18ft)
18GA RED (ROJO)
18GA BLACK (NEGRO)
18GA LIGHT BLUE (AZUL CLARO)
18GA BLUE (AZUL)

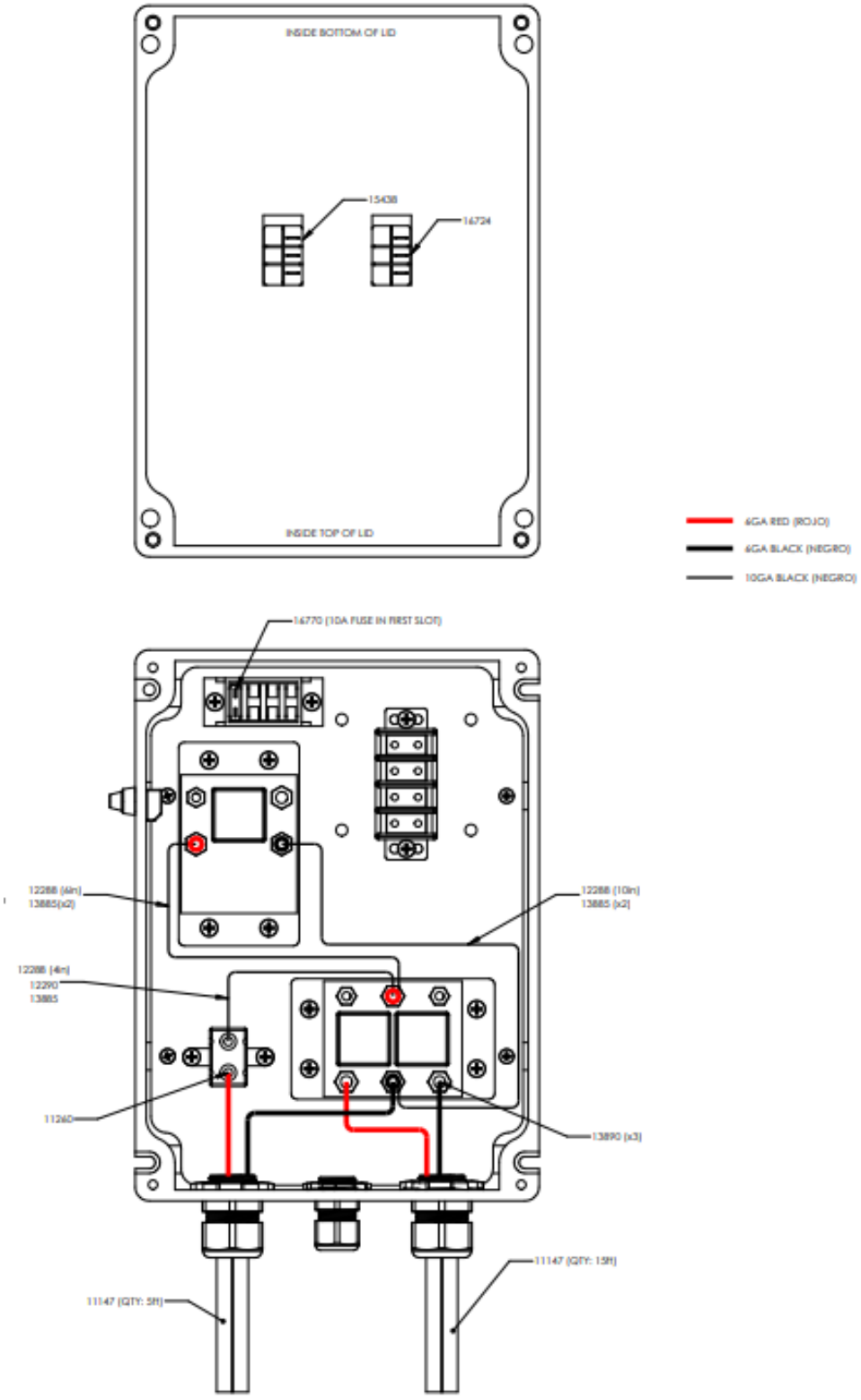


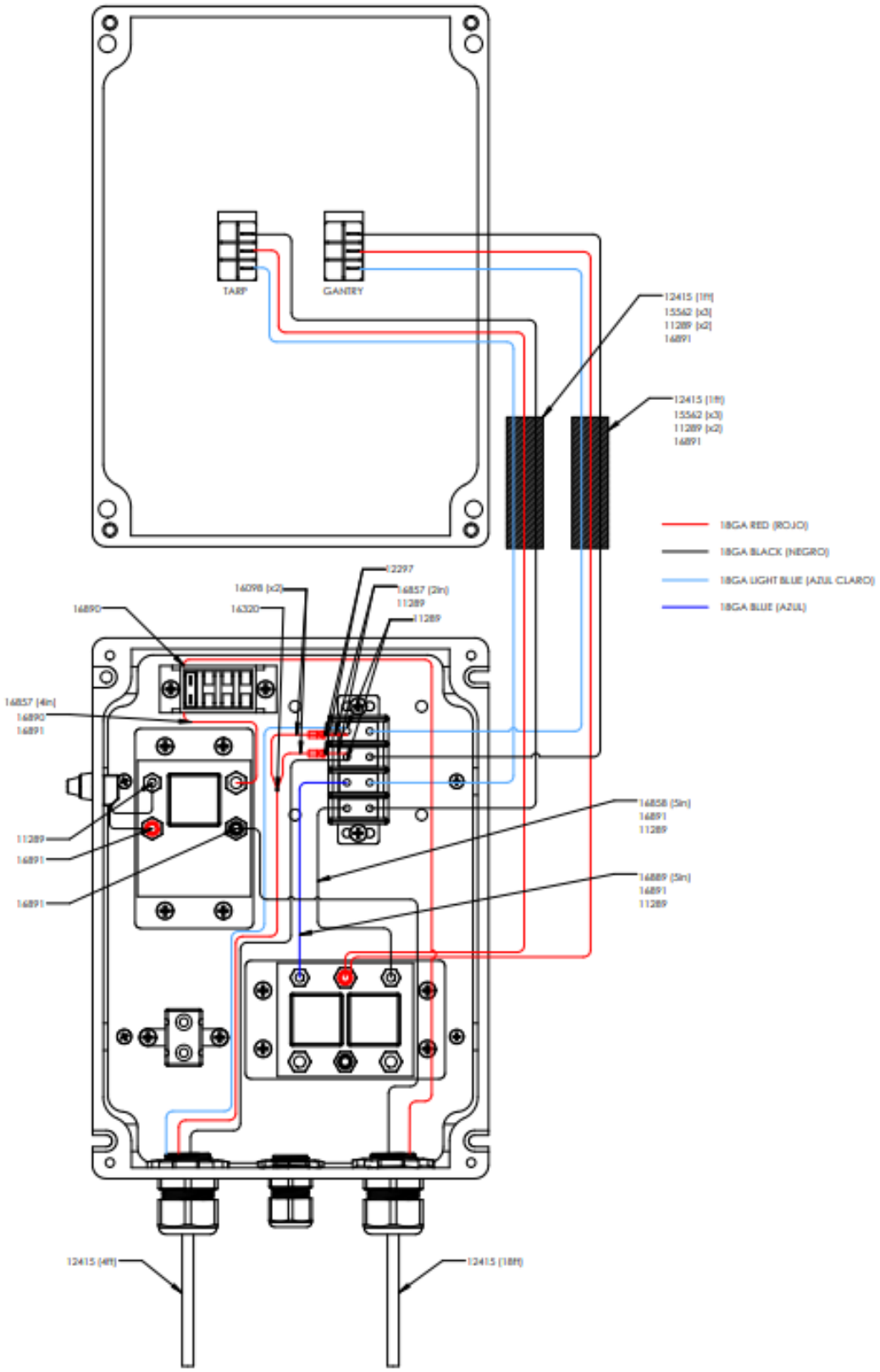


18GA RED (ROJO)
18GA BLACK (NEGRO)
18GA LIGHT BLUE (AZUL CLARO)
18GA GRAY (GRIS)
18GA PINK (ROSADO)
18GA GREEN (VERDE)
18GA YELLOW (AMARILLO)
18GA ORANGE (ANARANJADO)

APPENDIX C

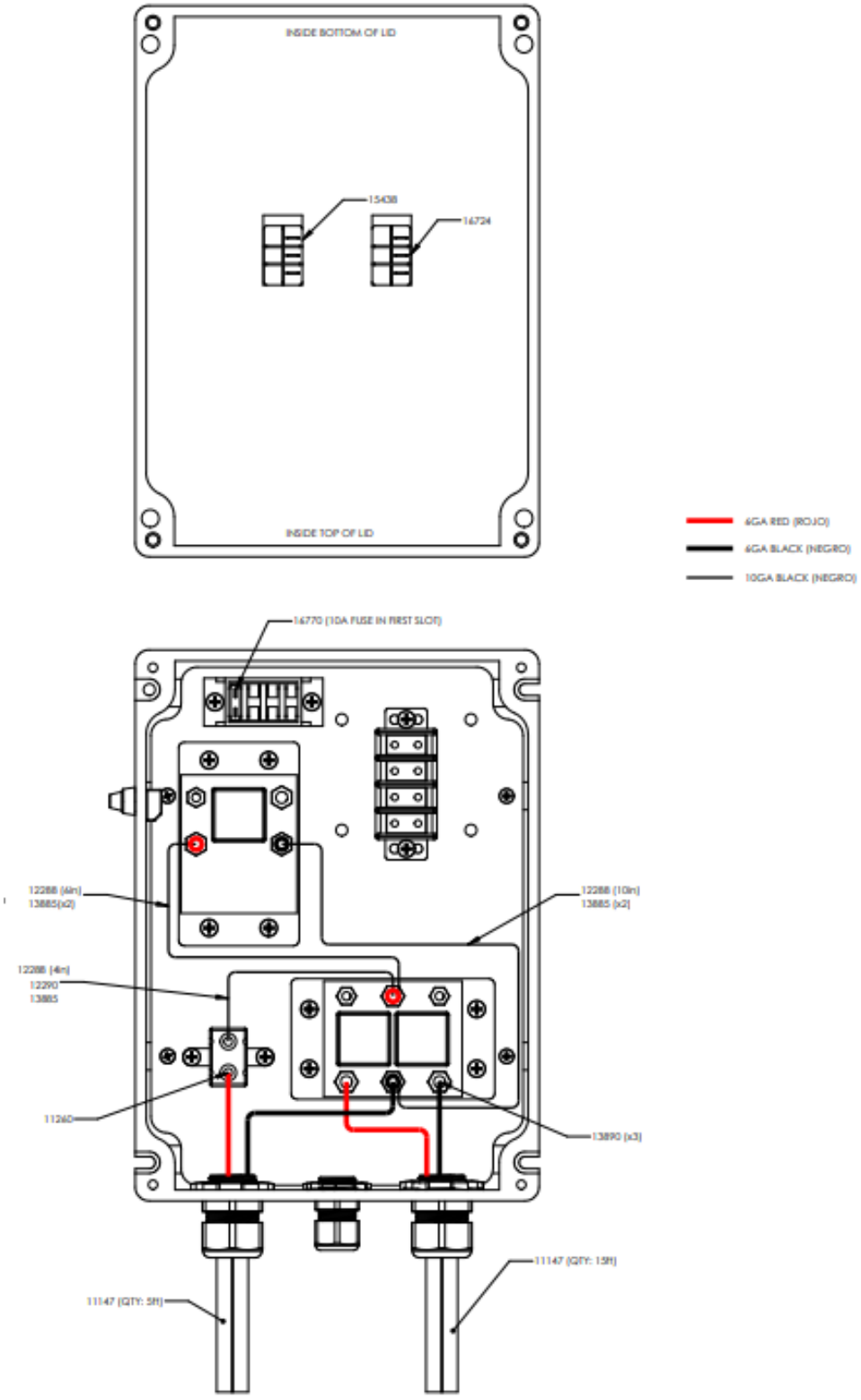
Wiring Schematic: Control Box without Remote-Control (for Gantry S/N 0615-1491)

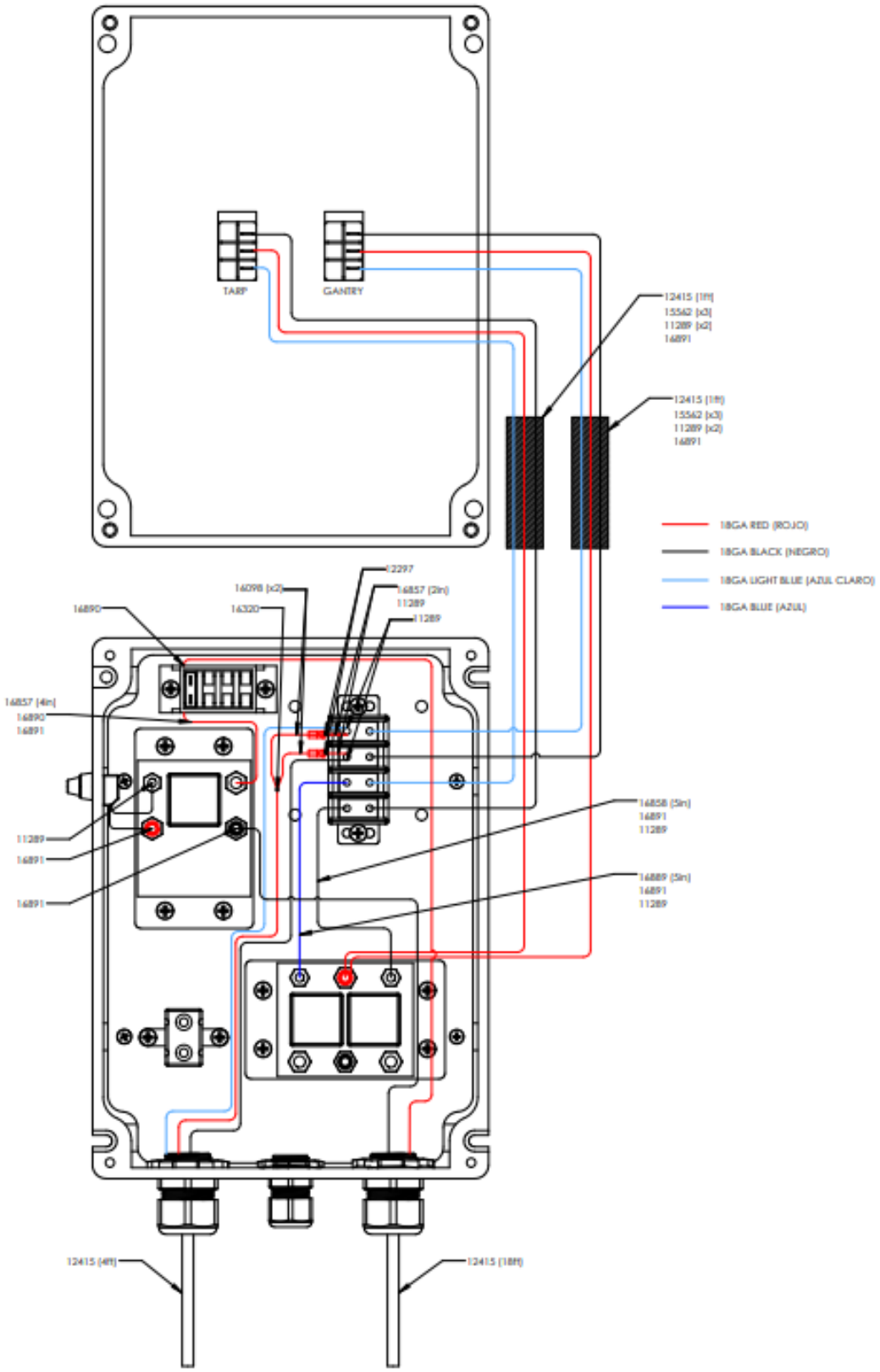


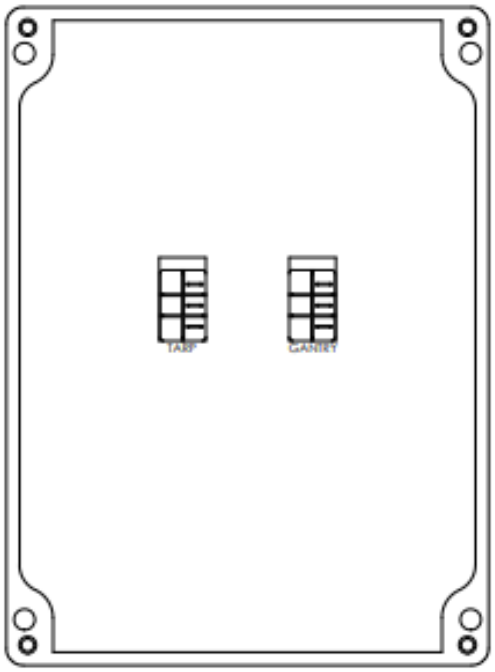

TARP
GANTRY
12415 [1ft]
15562 [x3]
11289 [x2]
16891
12415 [1ft]
15562 [x3]
11289 [x2]
16891
18GA RED (ROJO)
18GA BLACK (NEGRO)
18GA LIGHT BLUE (AZUL CLARO)
18GA BLUE (AZUL)
12297
16098 [x2]
16857 [2in]
16320
11289
11289
16890
16857 [4in]
16890
16891
16858 [5in]
16891
11289
16889 [5in]
16891
11289
11289
16891
16891
12415 [4ft]
12415 [18ft]

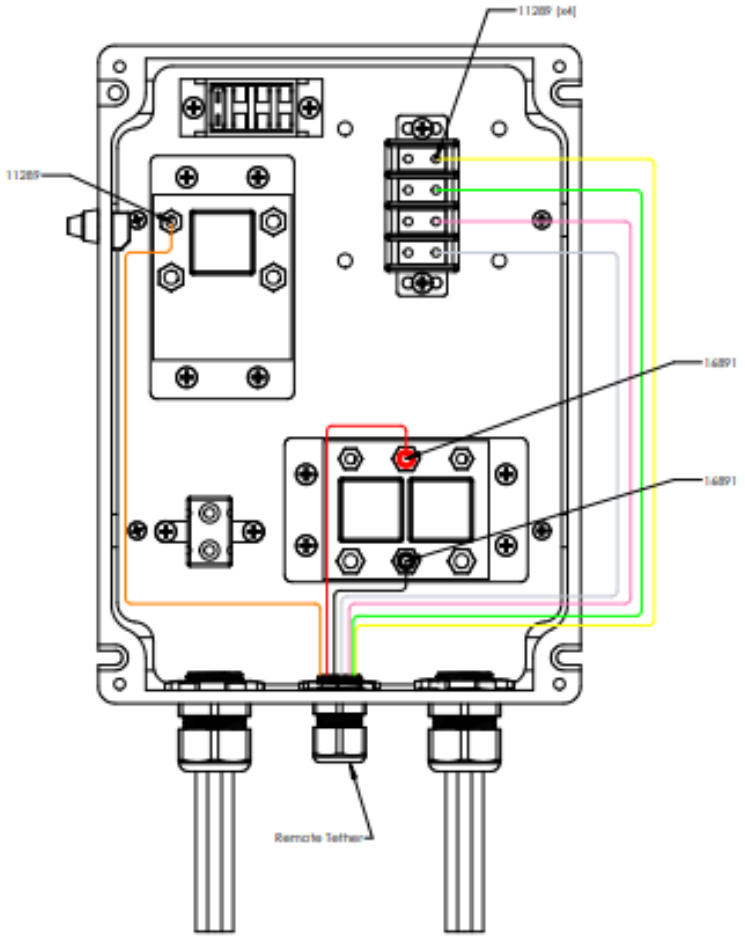
APPENDIX D

Wiring Schematic: Control Box with Remote-Control Option (for Gantry S/N 0615-1491)




TARP
GANTRY
12415 [1ft]
15562 [x3]
11289 [x2]
16891
12415 [1ft]
15562 [x3]
11289 [x2]
16891
18GA RED (ROJO)
18GA BLACK (NEGRO)
18GA LIGHT BLUE (AZUL CLARO)
18GA BLUE (AZUL)
12297
16098 [x2]
16857 [2in]
16320
11289
11289
16890
16857 [4in]
16890
16891
16858 [5in]
16891
11289
16889 [5in]
16891
11289
11289
16891
16891
12415 [4ft]
12415 [18ft]

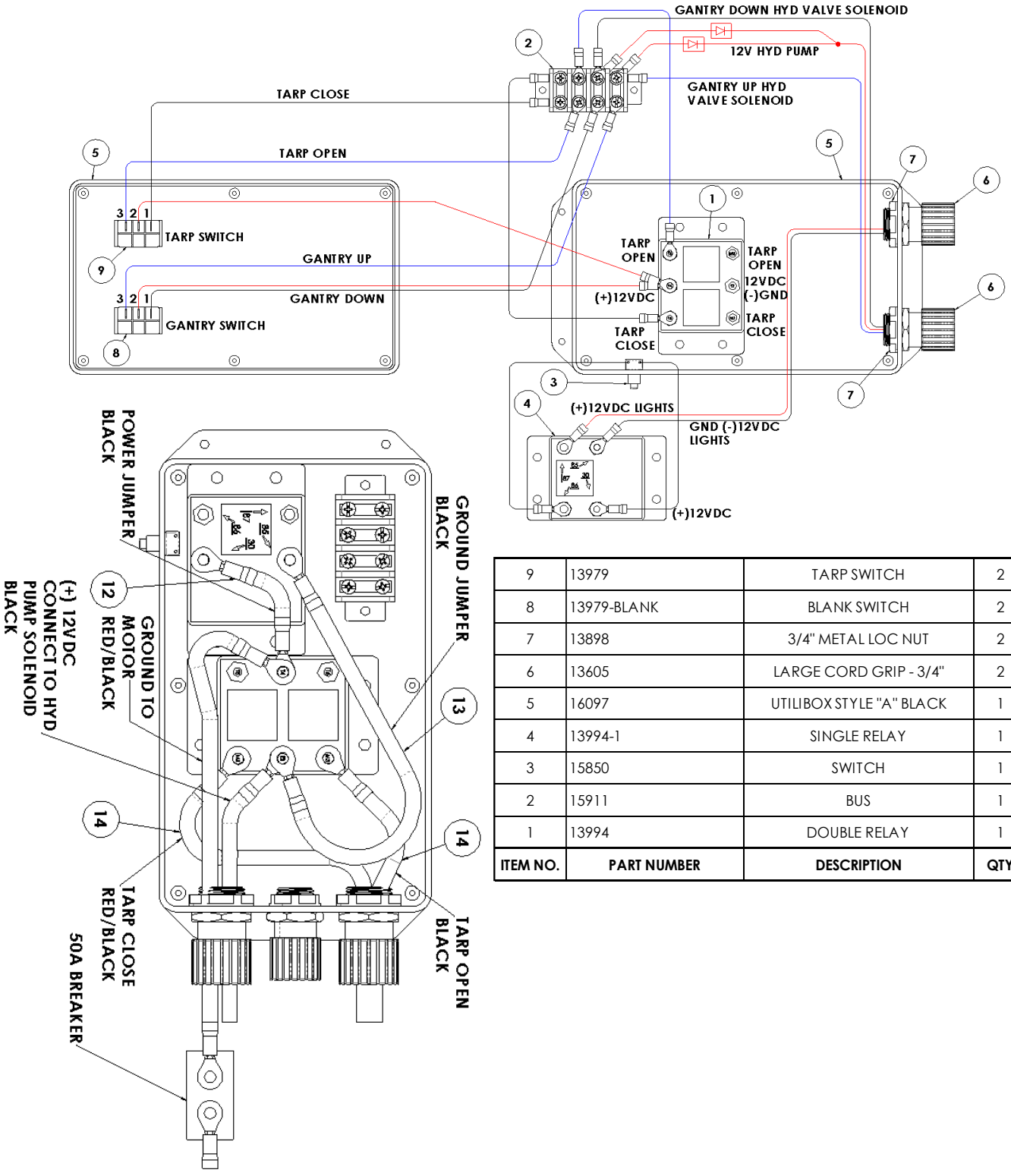




18GA RED (ROJO)
18GA BLACK (NEGRO)
18GA LIGHT BLUE (AZUL CLARO)
18GA GRAY (GRIS)
18GA PINK (ROSADO)
18GA GREEN (VERDE)
18GA YELLOW (AMARILLO)
18GA ORANGE (ANARANJADO)

APPENDIX E

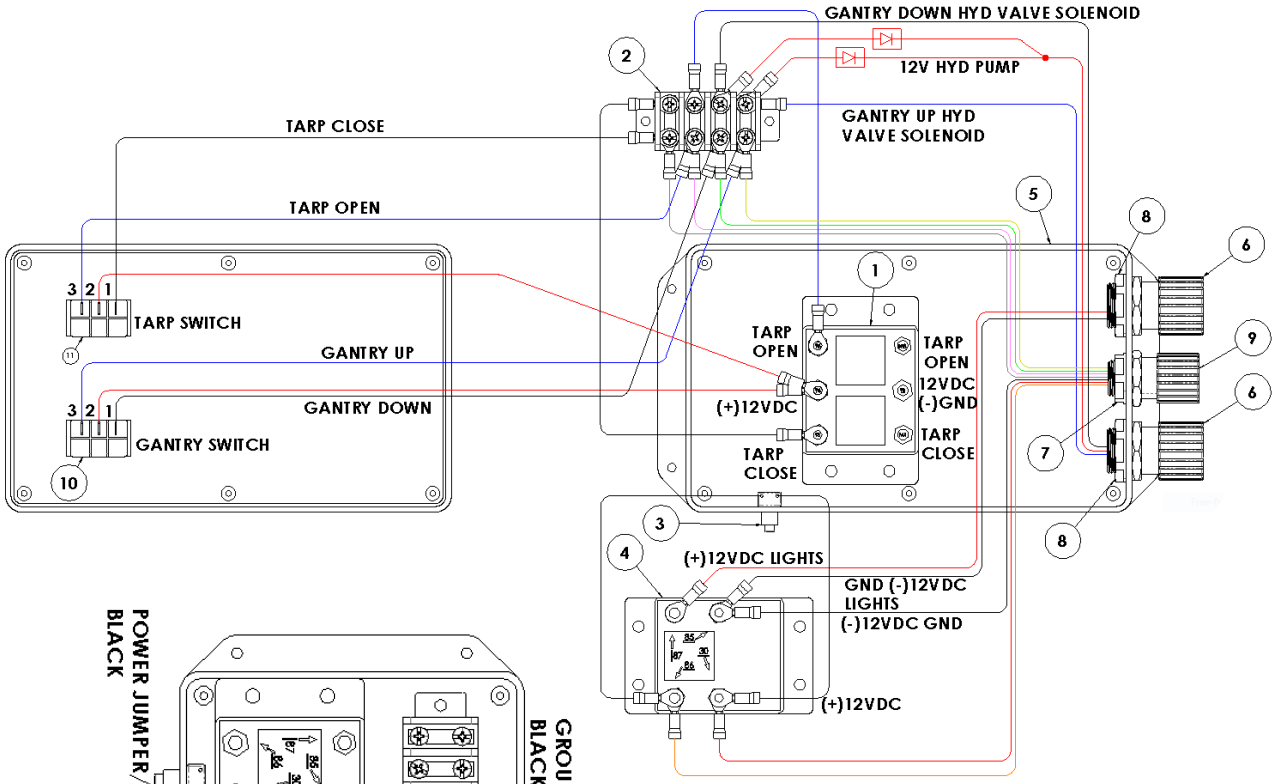
Wiring Schematic: Control Box without Remote-Control (for Gantry S/N up to 0615)

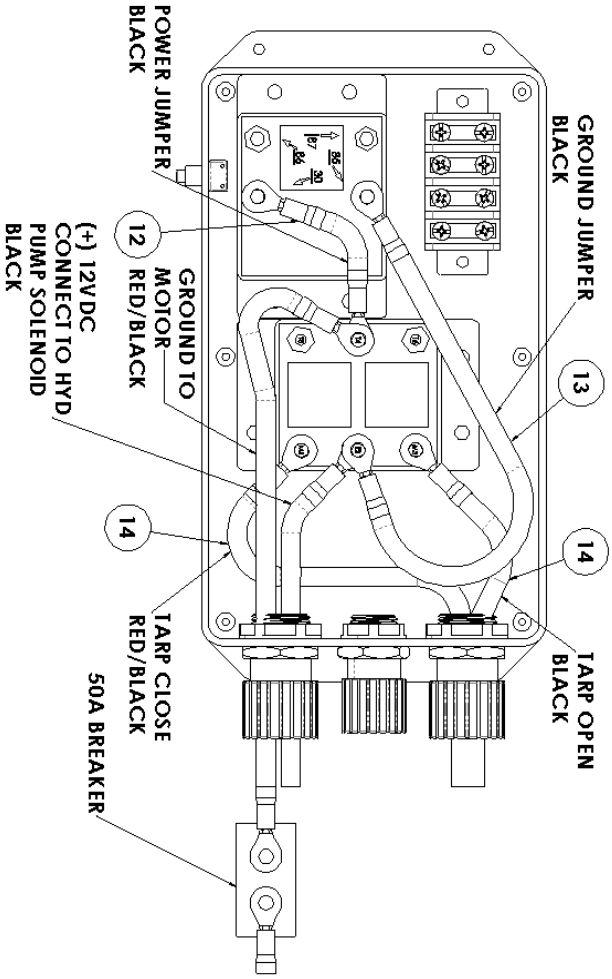


9	13979	TARP SWITCH	2
8	13979-BLANK	BLANK SWITCH	2
7	13898	3/4" METAL LOC NUT	2
6	13605	LARGE CORD GRIP - 3/4"	2
5	16097	UTILIBOX STYLE "A" BLACK	1
4	13994-1	SINGLE RELAY	1
3	15850	SWITCH	1
2	15911	BUS	1
1	13994	DOUBLE RELAY	1
ITEM NO.	**PART NUMBER**	**DESCRIPTION**	**QTY**

APPENDIX F

Wiring Schematic: Control Box with Remote-Control Option (for Gantry S/N up to 0615)



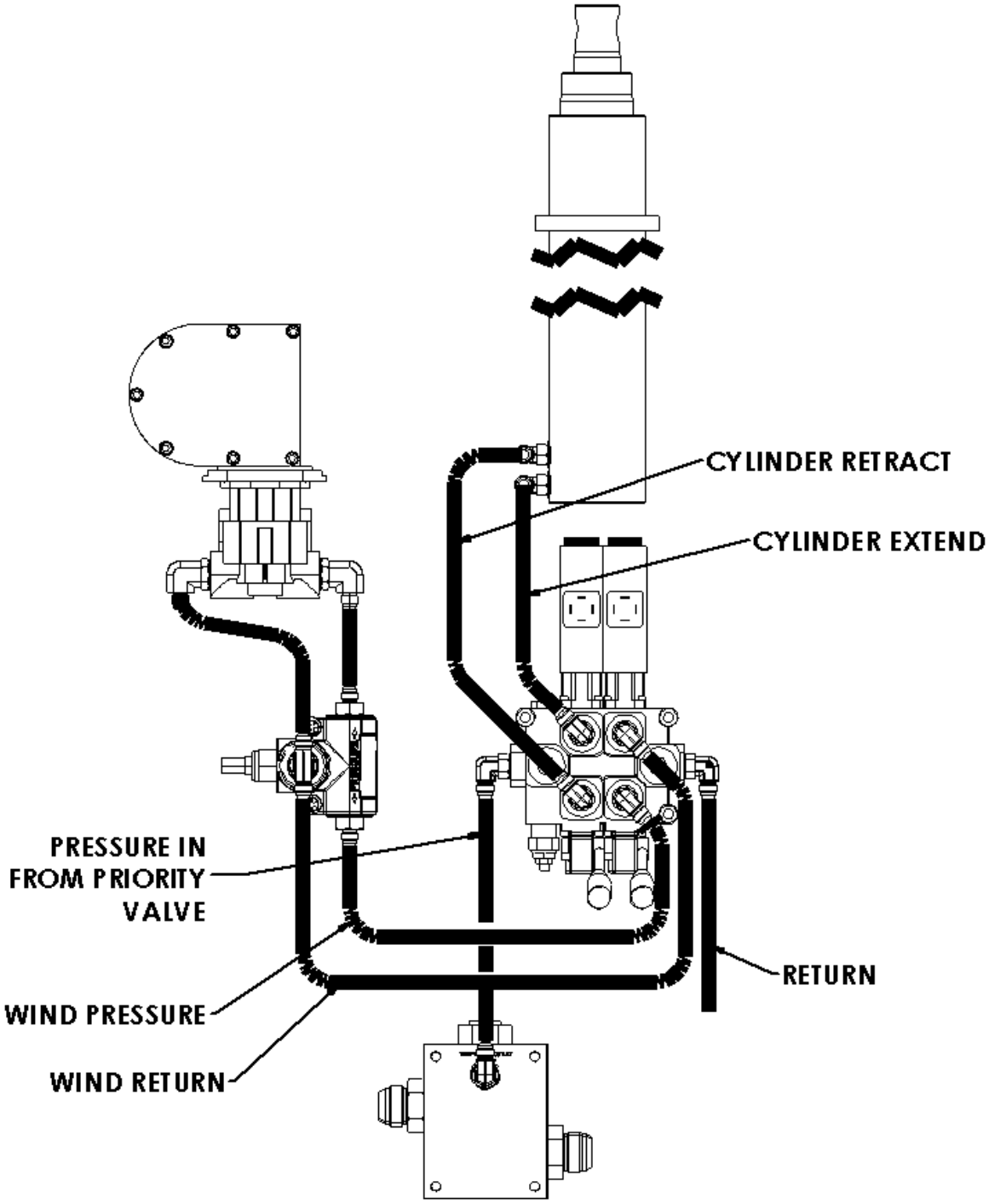


ITEM NO.	PART NUMBER	DESCRIPTION	
16	ENCLOSURE COVER	ENCLOSURE	1
15	16251	BONDED CABLE	1
14	16250	ASSY - 6 GA CABLE - 157" LG	1
13	16249	CABLE - GROUND JUMPER	1
12	16248	CABLE - POWER JUMPER	1
11	13979	TARP SWITCH	2
10	13979-BLANK	BLANK SWITCH	2
9	12286	SMALL CORD GRIP - 1/2"	1
8	13898	3/4" METAL LOC NUT	2
7	13897	1/2" METAL LOC NUT	1
6	13605	LARGE CORD GRIP - 3/4"	2
5	16097	UTILIBOX STYLE "A" BLACK	1
4	13994-1	SINGLE RELAY	1
3	15850	SWITCH	1
2	15911	BUS	1
1	13994	DOUBLE RELAY	1

APPENDIX G

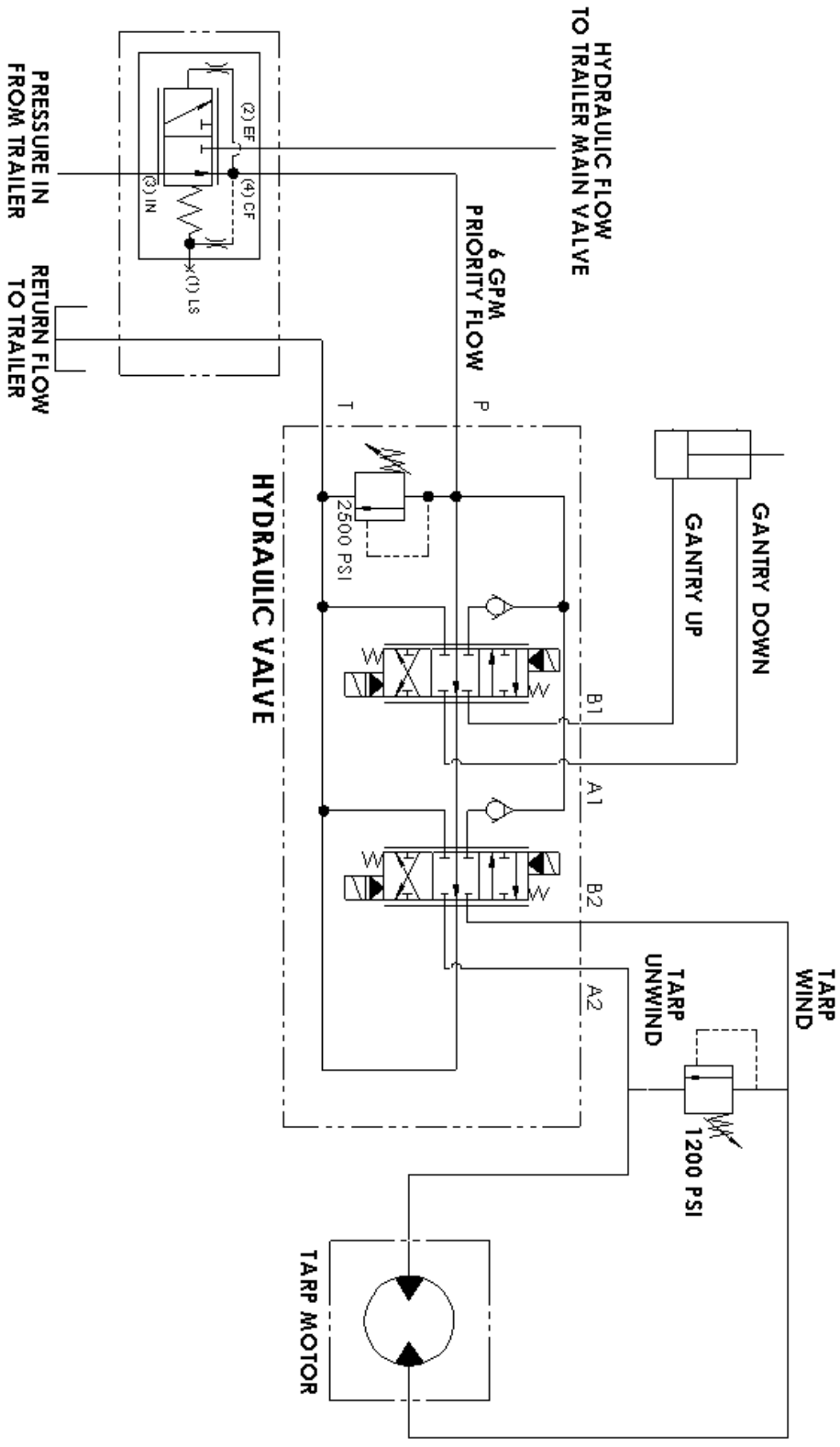
Hydraulic Hose Connection Diagram

Single and Dual Stage Tarp Systems with Hydraulic Tarp Motor



Hydraulic Schematic

Single and Dual Stage Tarp Systems



NOTES

Gantry System Part Number: _____

Purchase Date: _____

Installation Date: _____

Gantry Frame S/N: _____

Electric Motor S/N: _____

Other Notes: _____