



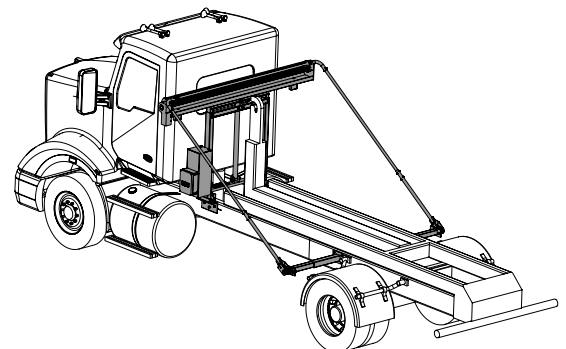
Waste Warrior™

OWNER'S MANUAL

Single and Dual Stage Gantry System

PHONE: Shurco® MI MANUFACTURING - 1.800.249.0297
Shur-co, LLC - 1.866.748.7435 | FAX: 1.605.665.0501
2309 SHURLOCK STREET | YANKTON, SD 57078-0713

SHURCO.com





SAFETY INSTRUCTIONS

At Shurco®, your safety is our top priority. Please read and thoroughly understand all instructions before operating all equipment. Failure to READ AND FOLLOW INSTRUCTIONS may result in system failure, property damage, or personal injury. Pay close attention to warnings, cautions, and operating instructions. The hazard symbol  alerts users of potentially hazardous conditions, and is followed by Caution, Warning, or Danger messages to indicate risk:

- **Danger** : (Red) Indicates an imminently hazardous situation that, if not avoided, **WILL** result in death or serious injury.
- **Warning** : (Orange) Indicates a potentially hazardous situation that, if not avoided, **COULD** result in death or serious injury.
- **Caution** : (Yellow) Indicates a potentially hazardous situation that, if not avoided, **MAY** result in minor or moderate injury or damage to the system.
- **Notice** : (Blue) Indicates operational notes or other essential information without addressing safety.

Regularly inspect equipment to ensure proper performance. Always repair or replace worn or damaged parts immediately to maintain safety. Safety decals are placed at critical locations on the equipment. Keep these decals clean and legible at all times. Replace any decal that is worn, damaged, painted over or otherwise unreadable. Replacement decals can be obtained by your local Shurco dealer.

- Always wear safety glasses during installation and operation.
- Stay clear of moving parts.
- No other use of Shurco equipment is authorized, except as designed.

SHUR-CO, LLC TERMS OF SERVICE

ORDER
TERMS AND CONDITIONS



WARRANTY



PATENTS



SERVICE AND DISTRIBUTION CENTERS

SHURCO.com

LOCATIONS



MESSAGE TO OWNERS

Thank you for choosing Shurco® for your tarping system needs. We appreciate your confidence in our products. Please note that while this manual provides comprehensive installation and operation instructions, your trailer may require minor adjustments to these guidelines.

Visit Shurco.com to access the most current version of these instructions and other important product information.

QUESTIONS?

CALL OUR HELP LINE:

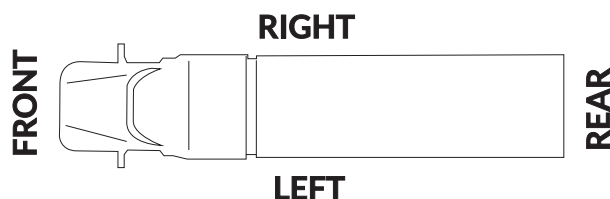
1-800-249-0297

MONDAY-FRIDAY
8 AM-5 PM EASTERN TIME

MAINTENANCE

- Inspect upper gantry frame legs monthly; add grease as necessary
- Inspect system components daily; repair or replace damaged components immediately
- Inspect tarp daily; repair small holes and tears, or replace tarp with significant damage/voids
- Inspect electrical wire and components daily; replace any damaged or corroded components

VEHICLE ORIENTATION



REQUIRED TOOLS

- Fork Truck / Overhead Hoist
- Welder – Steel
- Angle Grinder With Sanding Disc
- Band Saw Or Grinder Cutoff Wheel
- Clamps
- Level
- Cable Cutter / Stripper
- Cable Crimper
- Drill / Mag Drill
- Drill Bits: 5/8", 1/2"
- Center Punch
- Hammer
- Rubber Mallet
- Hex Keys: 3/8"
- Impact
- Ratchet
- Sockets: 15/16", 3/4", 9/16"
- Wrenches: 15/16", 3/4"

NOTICE: This installation requires two people for safe and efficient completion.

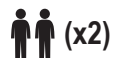
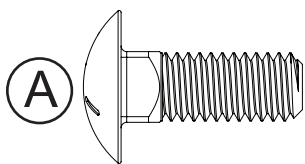


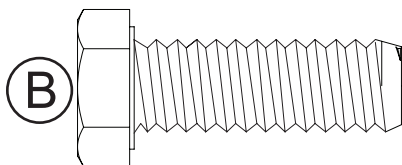
Table of Contents

*PLEASE READ THE COMPLETE MANUAL BEFORE
PROCEEDING WITH INSTALLATION OR USE OF THE TARPING SYSTEM.*

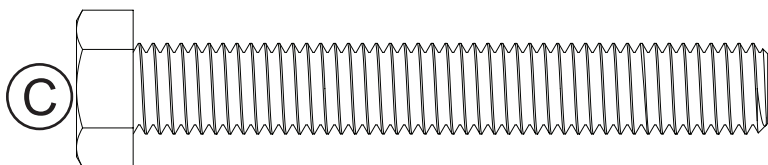
Safety, Legal, and Support Information	2
Product Guide: Tool Requirements, Maintenance, Vehicle Orientation	3
Table of Contents	4
Hardware Identification	5
Installation Instructions	
1. Gantry Kit Alignment & Identification	6
A) Standard Bracket Mounting	7
B) U-Bolt Mounting (Optional Add-on Kit)	8
C) Direct Mounting (Factory-Installed Bracket for Trailer Applications)	9
2. Pivot Point Location	10
3. Pivot Kit Identification	11
A) Single External Offset	12
B) Adjustable External Offset	14
C) Single Top-Mount Offset	17
D) Bridge Top-Mount Offset	19
4. Arm Identification	22
5. Wiring	23
Operation	24



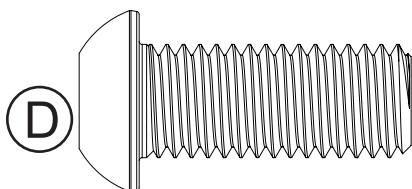
17060 Carriage Bolt - 3/8" x 1" - Grade 5



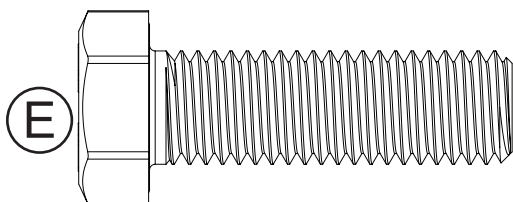
14826 Hex Head Cap Screw - 1/2" x 1-1/2" - Grade 5



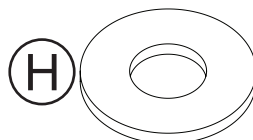
1708088 Hex Bolt 1/2" x 3-1/2" - Grade 5



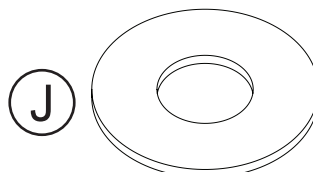
15300 Button Head Bolt - 5/8" x 1-1/2" - Grade 5



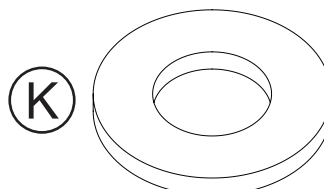
15853 Hex Bolt - 5/8"-11 x 2" - Grade 8



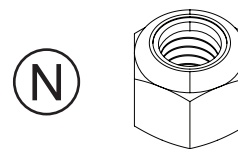
11274 Flat Washer - 3/8"



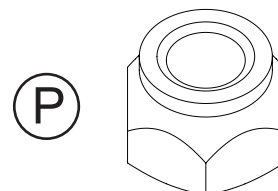
14036 Flat Washer - 1/2"



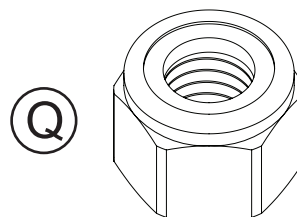
15855 Flat Washer - 5/8"



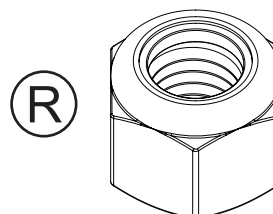
16345 Lock Nut - 3/8" - Grade 5



11271 Nylon Lock Nut - 1/2"



11238 Nylon Lock Nut - 5/8" - Grade 5



15854 Nylon Lock Nut - 5/8"-11 - Grade 8



16548 Hex Nut - 5/8" - Grade 8

GANTRY ALIGNMENT

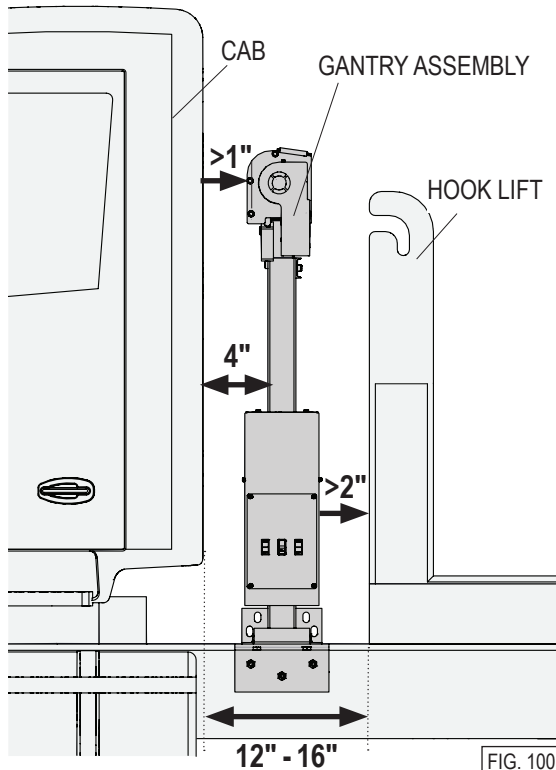


FIG. 100

⚠ WARNING

Failure to properly secure gantry frame with a forklift or hoist during installation could result in serious injury or death

⚠ CAUTION

Do not drill into the top or bottom flanges of the frame rails. Improper frame modification can weaken the vehicle frame. Follow vehicle manufacturer guidelines for frame modifications.

A minimum of 12 inches of clear frame rail space is required to mount a single-stage gantry frame, see Figure 100.

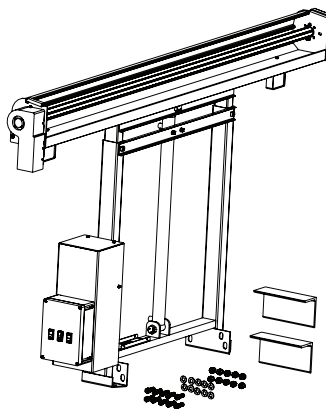
- Position the **gantry assembly** so all moving gantry components maintain a minimum of **1-inch** clearance from the rear of the **cab**.
- Maintain approximately **4 inches** of clearance between the **cab** and **gantry frame** when the gantry is in its settled position.
- Verify the **hook lift** has a minimum of **2 inches** of clearance between all moving parts of the hook lift and all gantry components.
- Allow 16 inches (20 inches for U-Bolt mount) of clear frame rail space when possible to accommodate mounting location adjustments.

GANTRY KIT IDENTIFICATION

Proceed to the applicable mounting instructions below.

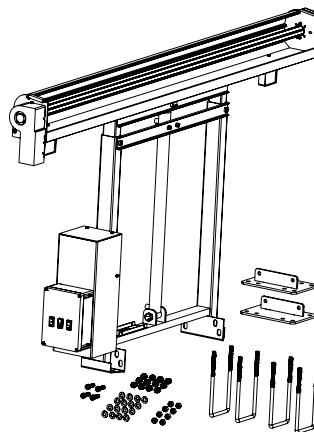
STANDARD BRACKET MOUNTING

Page 7



U-BOLT MOUNTING

Page 8



DIRECT MOUNTING

Page 9

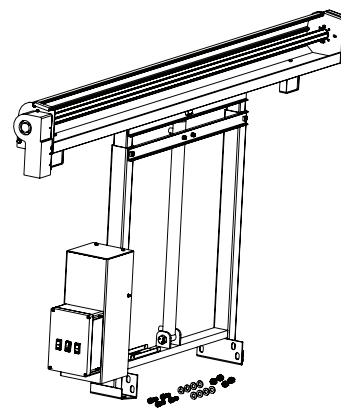


FIG. 101

NOTICE: Read entire gantry mounting instructions section before placing the gantry.

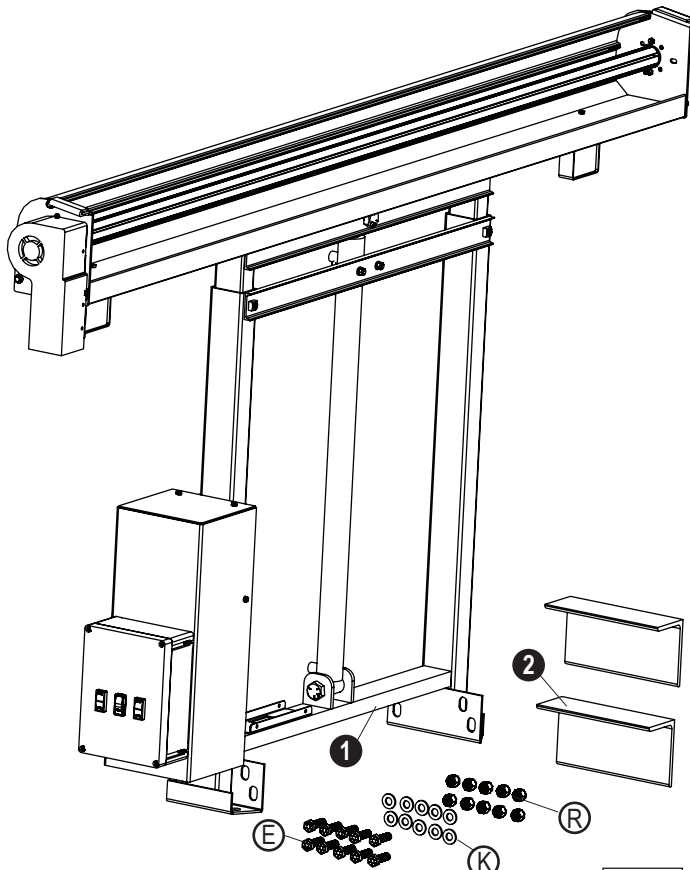


FIG. 103

Item	Part #	Description
1.		Single Stage Gantry Assembly
2.	1708024	Standard Chassis Mounting Bracket - 11-3/4"
E.	15853	Hex Bolt 5/8"-11 x 2" - Grade 8
K.	15855	Flat Washer - 5/8"
R.	15854	Nylon Lock Nut - 5/8"-11 - Grade 8

STEP 1: FASTEN STANDARD BRACKET

- On each side of the gantry, drill through the **standard mounting bracket (2)** and the chassis **frame rail**. Ensure the two brackets are parallel, level, and at the same height.
- Drill 5/8-inch holes and fasten each bracket with three grade 8 **hex bolts (E)**, **washers (K)**, and **nylon lock nuts (R)**, as shown in Figure 104.

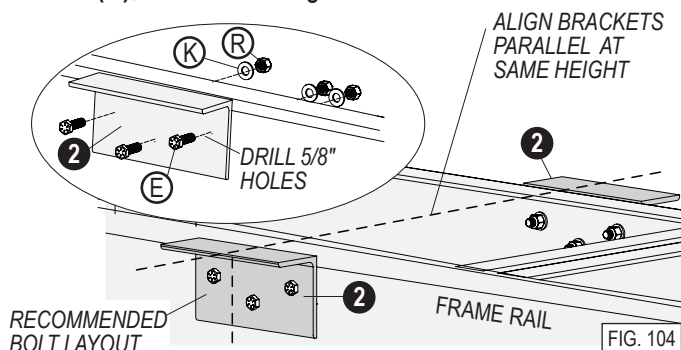


FIG. 104

STEP 2: PLACE GANTRY

- Center the gantry horizontally. Align the **gantry brackets (1)** with the **standard mounting brackets (2)**. Ensure the full mounting surface of each gantry bracket contacts the corresponding chassis mounting bracket. Follow the gantry alignment instructions on page 6. Lower the gantry onto the frame rails.
- Align gantry mounting components level and square.
- Use a forklift, hoist, and clamps to hold the frame securely in position until fully fastened.

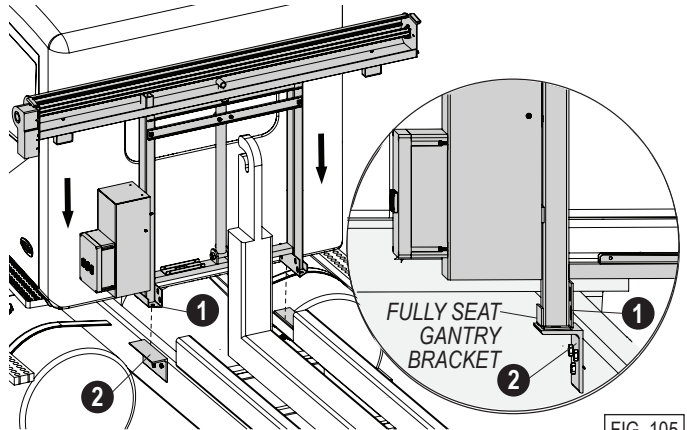


FIG. 105

CAUTION

Do not weld to any part of the chassis frame rails. Welding can weaken or damage the vehicle frame. Follow vehicle manufacturer guidelines for frame mounting.

STEP 3: SECURE GANTRY

- If possible, weld the **gantry brackets (1)** to the **standard brackets (2)**.
- Alternatively, drill 5/8-inch holes and fasten with Grade 8 **hex bolts (E)** and secure with **washers (K)** and **nylon lock nuts (R)**, as shown in Figure 107.

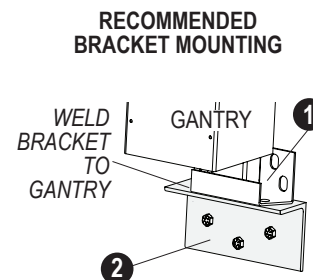


FIG. 106

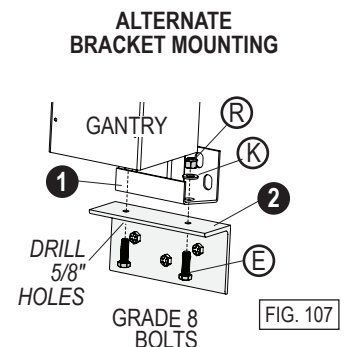


FIG. 107

Continue installation on page 10

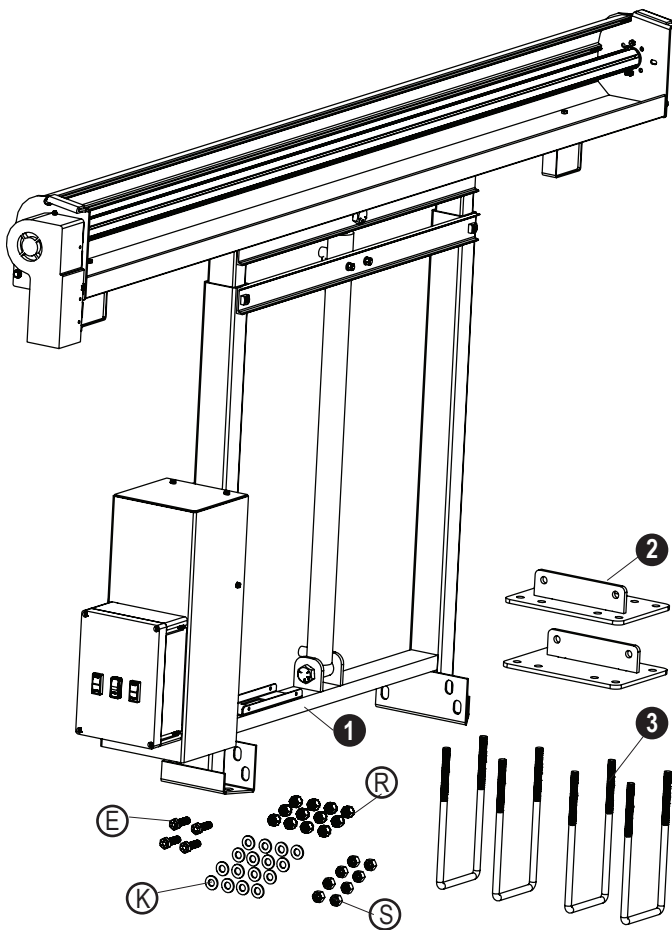


FIG. 110

Item	Part #	Description
1.		Single Stage Gantry Assembly
2.	16442	U-Bolt Mounting Bracket
3.	16443	U-Bolt - 5/8" x 13"
E.	15853	Hex Bolt - 5/8" x 2" - Grade 8
K.	15855	Flat Washer - 5/8"
R.	15854	Nylon Lock Nut - 5/8" - Grade 8
S.	16548	Hex Nut - 5/8" - Grade 8

STEP 1: SECURE U-BOLT BRACKETS

- On each side of the gantry, align a **U-bolt mounting bracket (2)** with a **gantry bracket (1)**.
- Loosely fasten with **hex bolts (E)**, **washers (K)**, and **nylon lock nuts (R)** as shown in Figure 111.

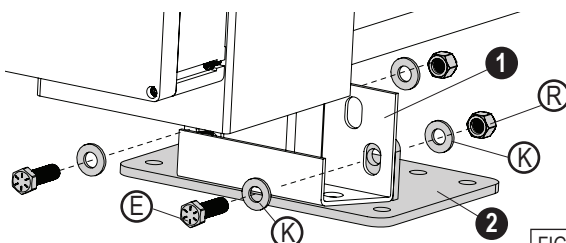


FIG. 111

STEP 2: PLACE GANTRY

- Allow 20 inches of clear frame rail space when possible. Center the gantry horizontally. Follow the gantry alignment instructions on page 6. Lower the **gantry (1)** onto the frame rails.
- Align gantry mounting components level and square.
- Use a forklift, hoist, and clamps to hold the frame securely in position until fully fastened.

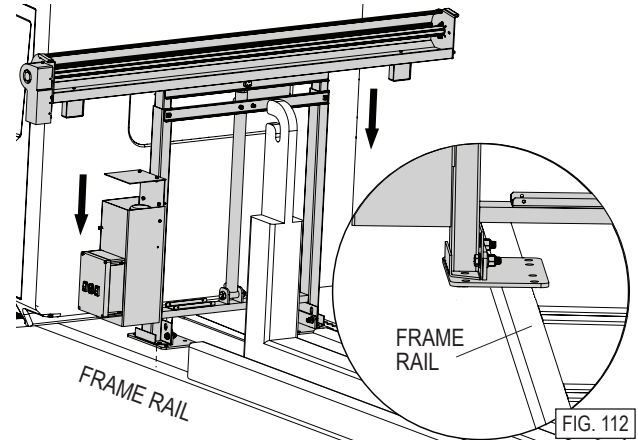


FIG. 112

NOTICE: Do not pinch wires, air lines, hydraulic lines, plumbing, or cables between the U-bolts and the frame rail.

STEP 3: PLACE U-BOLTS

On each side of the gantry, route **U-bolts (3)** through the inner holes in the **mounting bracket (2)** and gantry feet, see Figure 113.

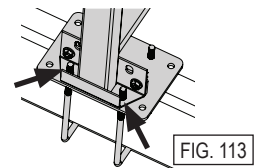


FIG. 113

NOTICE: If interference prevents use of inner holes, use alternate hole sets. If required, flip U-bolt and route through alternate holes. Installer must fabricate additional bracket.

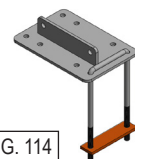


FIG. 114

STEP 4: SECURE U-BOLTS

- Hand tighten **washers (K)**, **hex nuts (S)** and **nylon lock nuts (R)** to hold U-bolts in position.
- Verify gantry frame location. Evenly tighten **hex nuts (D)** to clamp U-bolts uniformly. Tighten with ratchet and socket, then torque to 150 ft-lbs. Ensure one **nylon lock nut (R)** is against each **hex nut (S)** to prevent loosening.
- Tighten all gantry frame foot hardware to mounting plates.

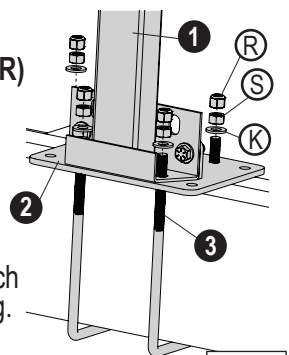


FIG. 115

NOTICE: Re-torque the u-bolts to 150 ft-lbs after 3 months of use.

Continue installation on page 10

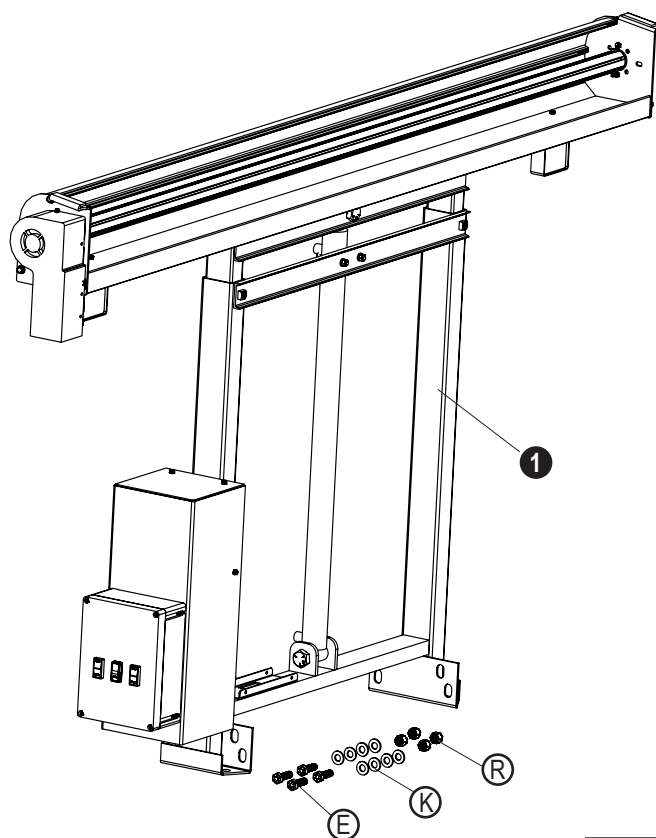


FIG. 116

Item	Part #	Description
1.		Single Stage Gantry Assembly
E.	15853	Hex Bolt - 5/8" x 2" - Grade 8
K.	15855	Flat Washer - 5/8"
R.	15854	Nylon Lock Nut - 5/8" - Grade 8

NOTICE: Two grade 8 bolts (E) are required per gantry bolt plate. Most C-channel frame rails only allow use of the lower vertical mounting holes.

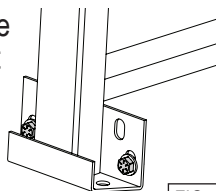


FIG. 117

STEP 1: PLACE GANTRY

- Center the gantry horizontally. Follow the gantry alignment instructions on page 6. Lower the gantry (1) onto the frame rails.
- If necessary, place an equal number of spacers on each side (spacers not included).
- Align gantry mounting components level and square.
- Use a forklift, hoist, and clamps to hold the frame securely in position until fully fastened.

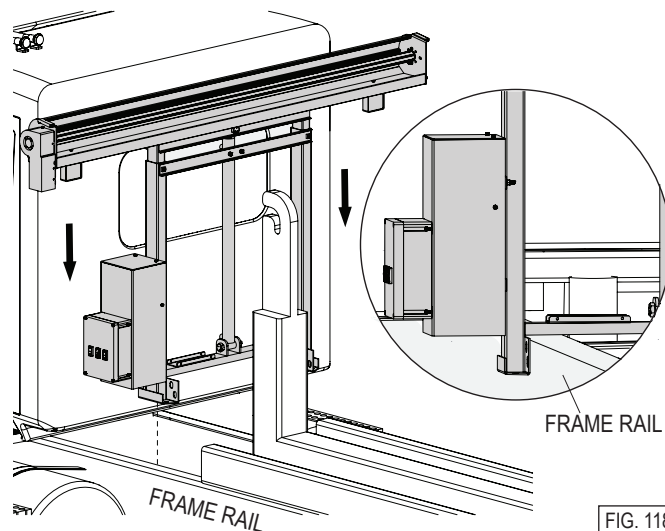


FIG. 118

STEP 2: SECURE GANTRY

- Mark and drill 5/8-inch holes through frame rails in line with the mounting holes in the gantry brackets (1).
- Fasten each bracket with hex bolts (E), washers (K), and nylon lock nuts (R), as shown in Figure 119.

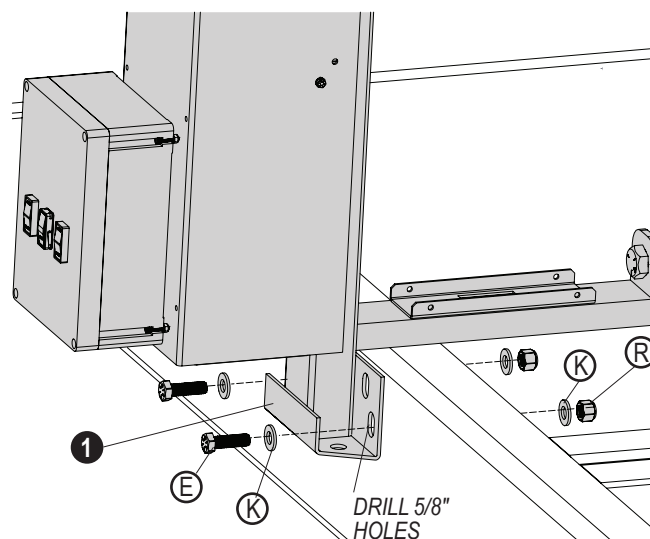


FIG. 119

NOTICE: The gantry frame is now secured and the forklift or hoist can be unattached from the gantry frame.

WITHOUT A CONTAINER

STEP 1: DETERMINE CENTER POINT

- Find distance "X" by measuring between the rear face of the gantry leg and the rear face of the hook or roll off stop bracket. See Figure 120.
- Use the maximum container length "L" specified by the hoist manufacturer.
- Add measurement "X" to the maximum container length "L" in inches and divide by 2 to determine center point "Y" for the pivot location.

$$\frac{X + L}{2} = Y$$

Example:

- X = 12 inches
- 12 inches + 192 inches = 204 inches
- 204 inches ÷ 2 = **102 inches**
- Y = 102 inches

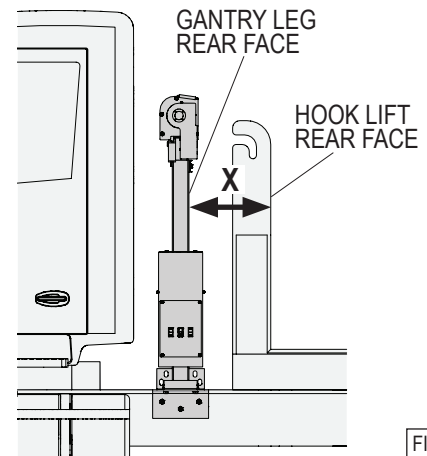


FIG. 120

STEP 2: MARK PIVOT POINT

- Measure distance "Y" from the rear face of the gantry leg and mark the location on the frame rail.
- Repeat on the opposite side of the chassis. See Figure 121.

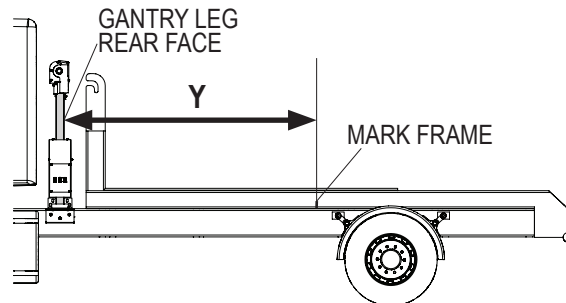


FIG. 121

WITH A CONTAINER

STEP 1: LOAD CONTAINER

Load the longest container onto the hoist.

STEP 2: LOCATE PIVOT POINT

- Using two tape measures, clamp the end of the first tape measure to 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 toward the center of the container near the frame rail until they cross.
- Find the location where the tape measurements are equal. Mark this location on the frame rail. See Figure 122.

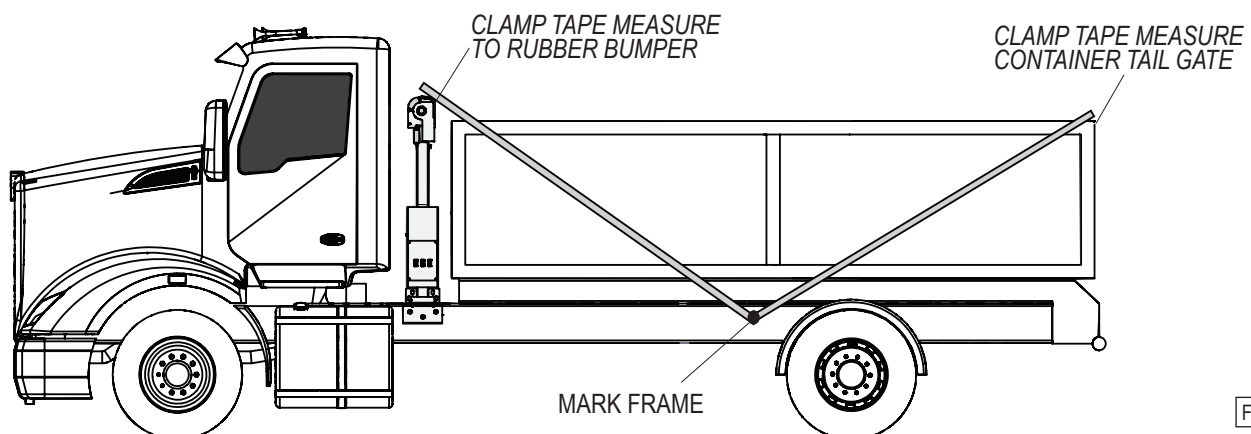
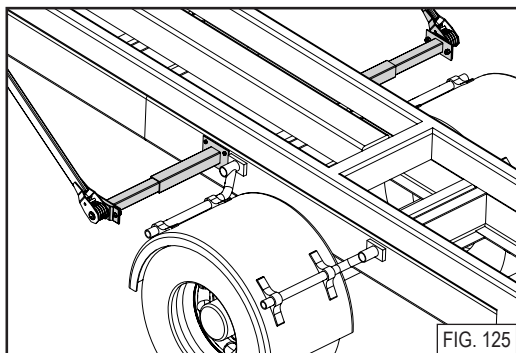


FIG. 122

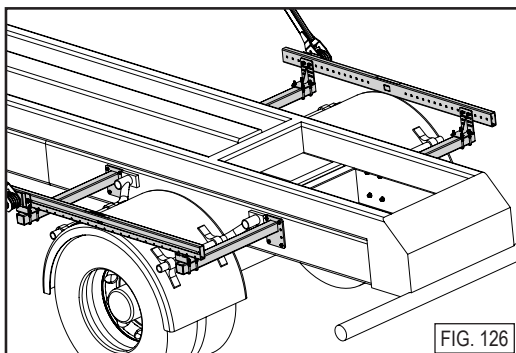
! CAUTION

Do not weld to any part of the chassis frame rails. Welding can weaken or damage the vehicle frame. Follow vehicle manufacturer guidelines for frame mounting.

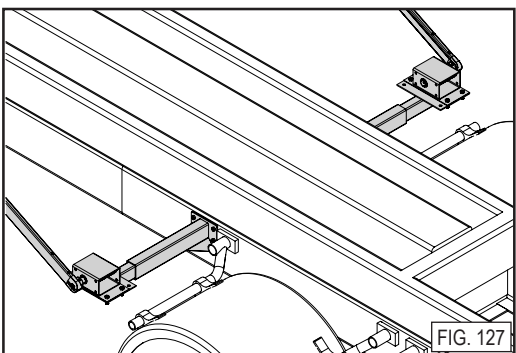
Proceed to the applicable installation instructions below.



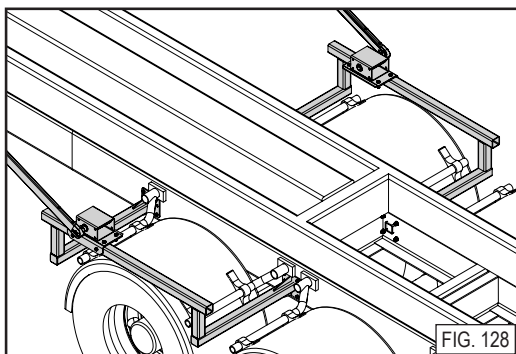
**SINGLE
EXTERNAL OFFSET**
Page 12



**ADJUSTABLE
EXTERNAL OFFSET**
Page 14



**SINGLE
TOP-MOUNT OFFSET**
Page 17



**BRIDGE
TOP-MOUNT OFFSET**
Page 19

NOTICE: Read the entire *Single External Offset Installation* section before installing the offset assembly.

Item	Part #	Description
1.	15084A	Fixed Spring Mount Offset
2.	15084B	Adjustable Spring Mount Offset
3.		Spring Pivot Pin
B.	14826	Hex Head Cap Screw - 1/2" x 1-1/2" - Grade 5
D.	15300	Button Head Bolt - 5/8" x 1-1/2" - Grade 5
J.	14036	Flat Washer - 1/2"
P.	11271	Nylon Lock Nut - 1/2"
Q.	11238	Nylon Lock Nut - 5/8" - Grade 5

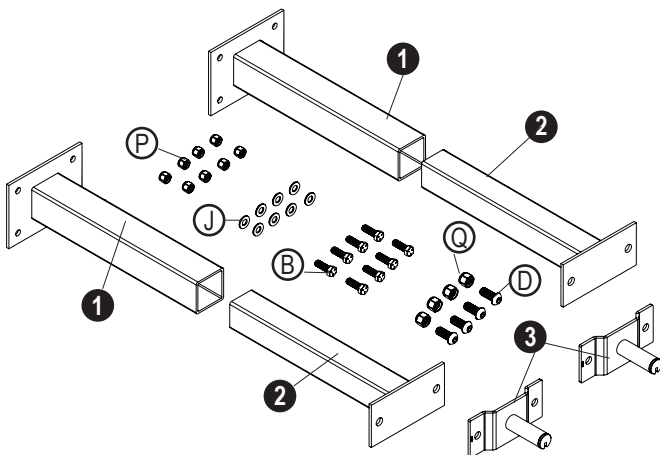


FIG. 130

STEP 1: MEASURE RAIL WIDTH

- Position arm assemblies as wide as possible to maximize container clearance.
- Measure the outside frame rail distance "Z", see Figure 131.

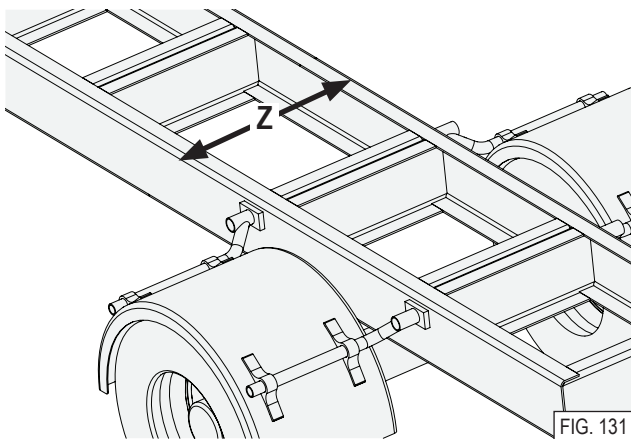


FIG. 131

NOTICE: Federal DOT regulations require the overall system width to not exceed 108 inches. The outside of the pivot pin is the widest point of the tarp system. The offset calculation below allows for pivot pin width.

STEP 2: CALCULATE OFFSET LENGTH

Calculate the offset assembly length using the equations below:

4-Spring Pivot

Example:

Z = 34 inches (Example)

$$\frac{98.5 - Z}{2} = S$$

$$98.5 - 34 = 64.5$$

$$64.5 \div 2 = S = 32.25"$$

In this example, each offset assembly must measure 32.25 inches from outside plate to outside plate.

5-Spring Pivot

Example:

Z = 34 inches (Example)

$$\frac{97 - Z}{2} = S$$

$$97 - 34 = 63$$

$$63 \div 2 = S = 31.5"$$

In this example, each offset assembly must measure 31.5 inches from outside plate to outside plate.

⚠ CAUTION

Do not drill through the chassis frame rail sidewall too close to the top or bottom flange. Doing so may weaken the frame. Follow the chassis manufacturer's minimum distance requirements.

STEP 3: SECURE FIXED OFFSETS

- Place each **fixed offset (1)** against the frame, centered on the pivot point marked in the previous steps.
- Ensure both **fixed offsets (1)** are mounted at the same height and parallel with the truck frame. Use shims if necessary to level the mounting locations, see Figure 132.
- Use the mounting plates as guides to drill 1/2-inch holes through the frame rails.
- Secure each **fixed offset (1)** to the frame rail with Grade 5 hardware. For each plate, install four **bolts (B)**, **washers (J)** and **lock nuts (P)**.

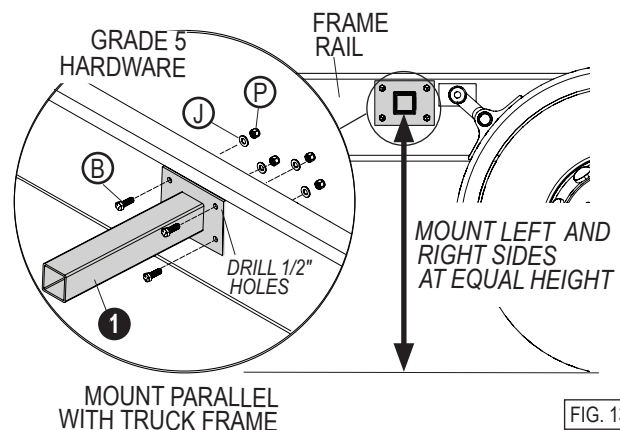
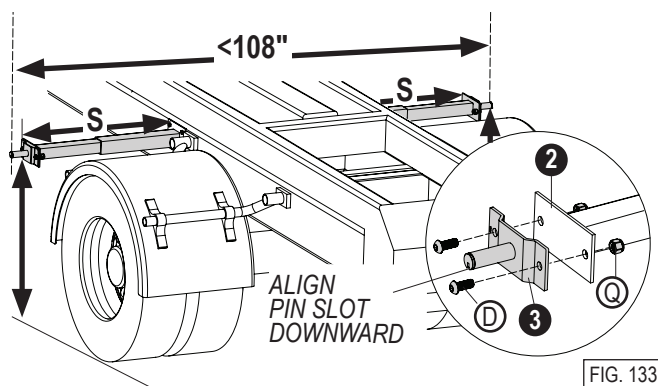


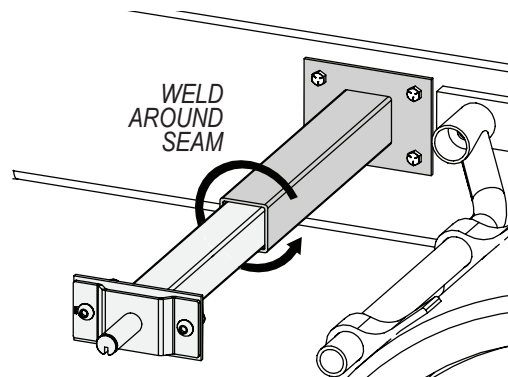
FIG. 132

STEP 4: FASTEN PIVOT PIN

- a) Install a **pivot pin (3)** to each **adjustable offset (2)**. Ensure the **pin pivot slot** faces downward. Fasten the pin bracket with **button head bolt (D)** and **nut (Q)**
- b) Adjust the **adjustable offset (2)** to the measurement "S" calculated in Step 2. Ensure the total distance between pins does not exceed 108 inches, see Figure 133.

**STEP 5: WELD OFFSET JOINT**

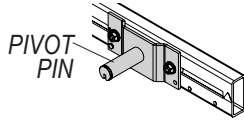
- a) Verify all offset measurements before welding.
- b) Prep and weld completely around the joint between the **adjustable offset (2)** and **fixed offset (1)**.



Continue installation on page 22

Item	Part #	Description
1.		Manual Adjust Spring Pivot Assembly - Left Side
2.		Manual Adjust Spring Pivot Assembly - Right Side
3.	17056	Offset Tube
4.	17057	Bolt Plate
5.	16835	Square Plastic Tube Cap - 2-1/2"
6.	17050	Square U-Bolt - 3/8"
A.	17060	Carriage Bolt - 3/8" x 1" - Grade 5
B.	14826	Hex Head Cap Screw - 1/2" x 1-1/2" Grade 5
H.	11274	Flat Washer- 3/8"
J.	14036	Flat Washer - 1/2"
N.	16345	Lock Nut - 3/8" - Grade 5
P.	11271	Nylon Lock Nut - 1/2"

NOTICE: Do not adjust the pivot pins prior to installation.



NOTICE: Federal DOT regulations require the overall system width to not exceed 108 inches. The outside of the pivot pin is the widest point of the tarp system.

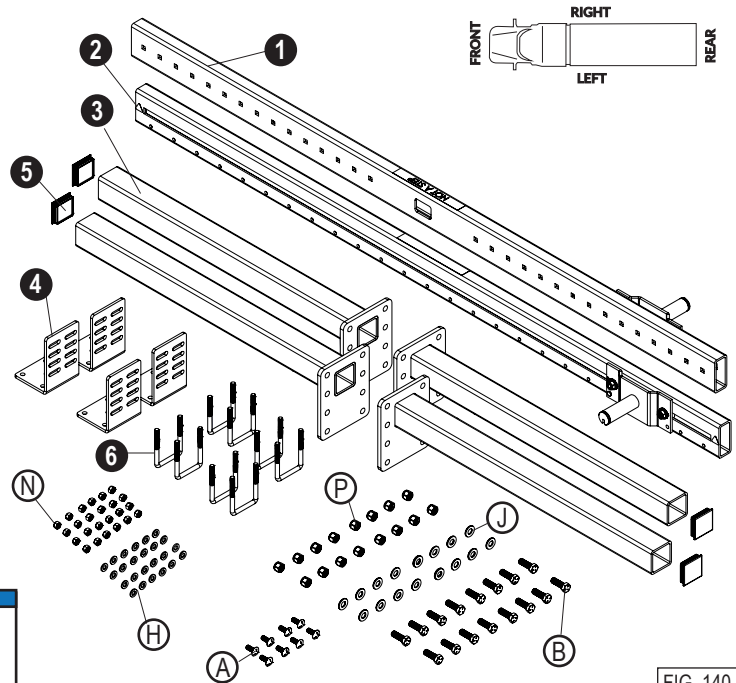


FIG. 140

NOTICE: This installation requires two people for safe and efficient completion. Read the entire **Adjustable External Offset** section before installing the offset.



STEP 1: OFFSET TUBE POSITIONS

The plates on the **offset tubes (3)** must be mounted parallel to the ground and level with each other.

- The offset tube mounting plates can be rotated 90, 180, or 270 degrees to achieve the desired orientation (see Figure 142).

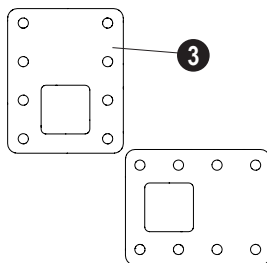


FIG. 142

CAUTION

Do not drill through the chassis frame rail sidewall too close to the top or bottom flange. Doing so may weaken the frame. Follow the chassis manufacturer's minimum distance requirements.

NOTICE: Do not cut the offset tubes. After the remaining components of the kit are installed, the tube depth can be adjusted using the U-bolts.

STEP 2: IDENTIFY OFFSET TUBE LOCATIONS

- With one person holding the **left pivot assembly (1)** on the left side of the trailer, locate the general area on the frame rail where the **offset tubes mounting plates (4)** will be attached.
- Ensure the following:
 - the pivot point marked in previous steps is aligned with the pivot pin on the pivot assembly.
 - Offset tubes are more than 24 inches apart
 - No more than 16 inches of slotted tube cantilever off of the outer tube (see Figure 143).
 - Mount the slotted tube in the **spring pivot assembly (1)** level with or above the lip of the fenders if straddling the tire.
- Mark the approximate mounting location for the offset tubes.

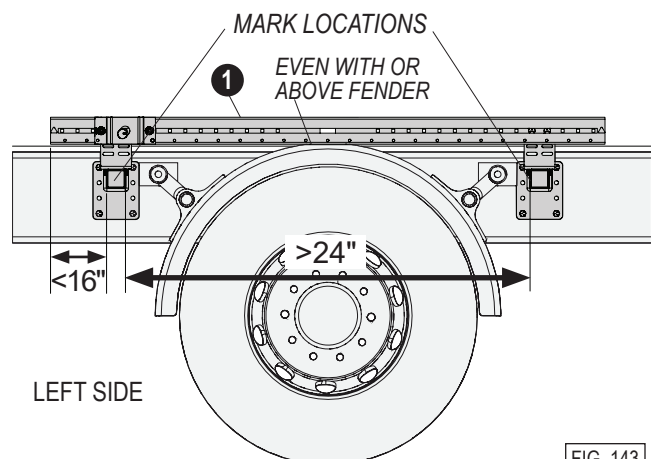


FIG. 143

STEP 3: SECURE OFFSET TUBES

- Ensure that all **offset tube (3)** heights match. If necessary, use shims to ensure level mounting, see Figure 145.
- Use the mounting plates as guides to drill 1/2-inch holes through the frame rails for the mounting hardware.
- Secure each **offset tube (3)** to the frame rails using Grade 5 hardware. For each plate, attach four **bolts (B)** and secure with **washers (J)** and **lock nuts (P)**.

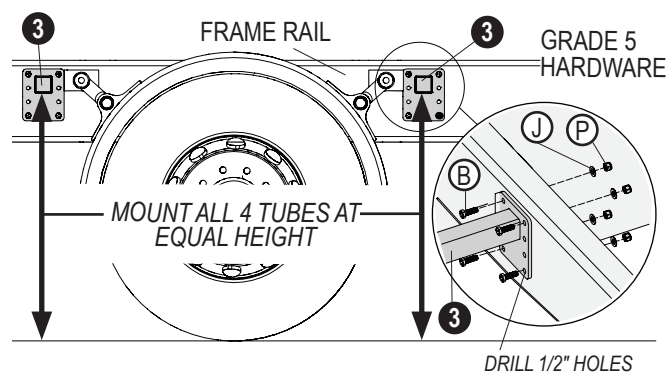


FIG. 145

STEP 4: PREPARE SLOTTED TUBES

- Slide two **U-bolts (6)** onto each **offset tube (3)** and set **bolt plates (4)** onto the U-bolts.
- Add four **washers (H)** and secure by finger-tightening **lock nuts (N)**.

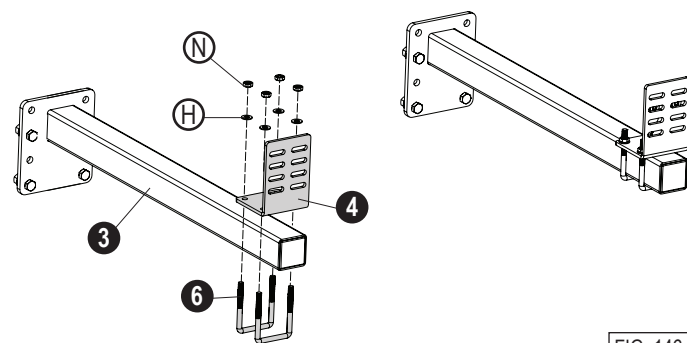


FIG. 146

STEP 5: MOUNT SLOTTED TUBES

- Hold the **pivot pin and pivot assembly (1)** up to the **bolt plates (4)**, aligning the pivot pin with the pivot mark on the frame. See Figure 147.
- Mark the square holes on the back side of the **slotted tube (1)** that will be used for mounting.
- Lift the slotted tube to the bolt plates and insert **bolts (A)** through the slots at the desired height.
- Attach **washers (H)** and finger-tighten **lock nuts (N)** from the back of the bolt plate.

STEP 5: Continued

TIP: Use a small pair of pliers to insert **carriage bolts (A)** into marked square holes by tipping them through the front slot, see inset in Image 147.

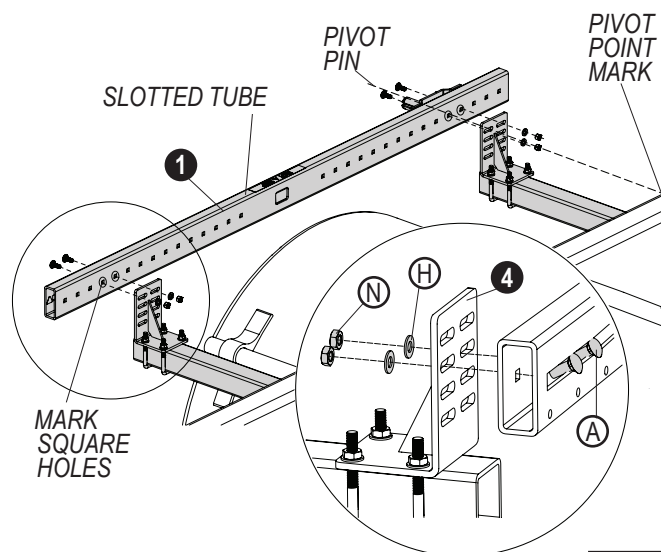


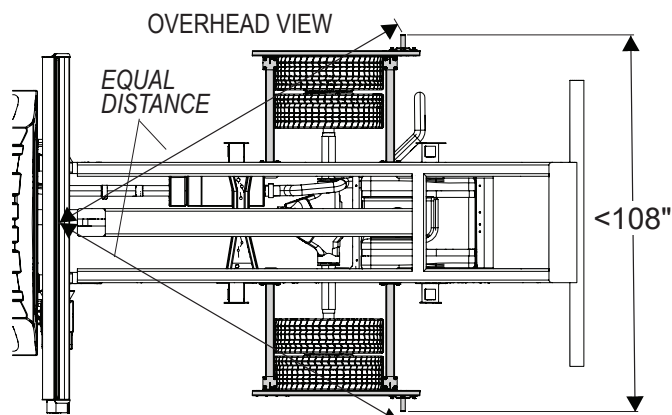
FIG. 147

STEP 6: SECURE PIVOT ON RIGHT SIDE OF TRAILER

Repeat *Adjustable External Offset Installation* steps on the right side of the trailer.

STEP 7: ALIGN & SECURE ASSEMBLIES

- Measure from a common point on the truck or gantry frame to each pivot pin to ensure measurements are within 1/4 inch of each other.
- Verify that:
 - Slotted tubes are parallel to the frame rails.
 - Assemblies are level vertically and horizontally.
 - Pivot pins fall within the 108-inch width limit.

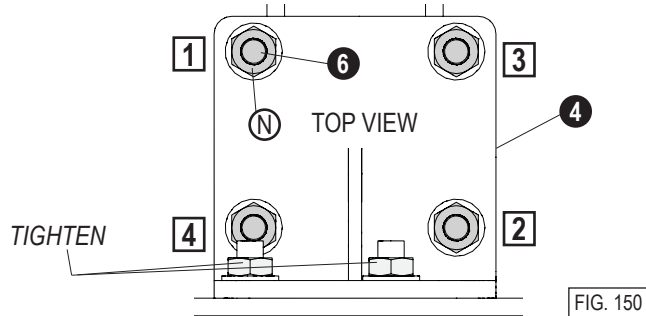


LEVEL ASSEMBLIES VERTICALLY & HORIZONTALLY

FIG. 148

STEP 8: TIGHTEN HARDWARE & FINAL ALIGNMENT

- a) Tighten **lock nuts (N)** on **U-bolts (6)** in the sequence shown in Figure 150 on each **bolt plate (4)**.

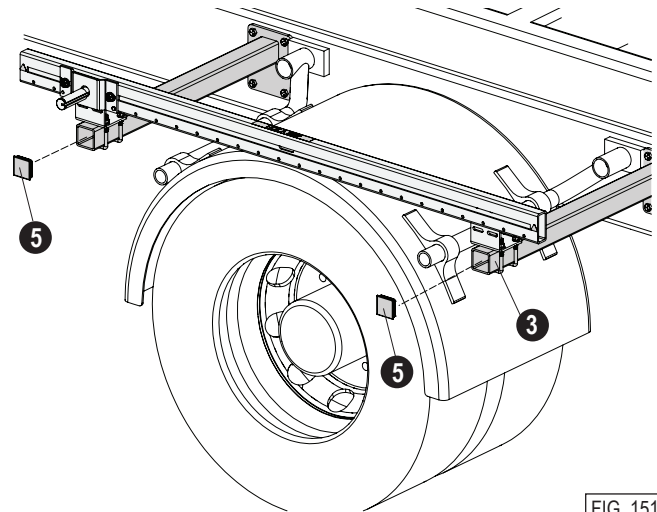


TIP: As a precaution, mark each U-bolt nut and washer with an indicator line using a paint marker or tamper-proof paint to monitor for loosening.

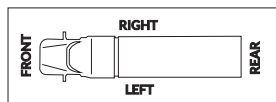
- b) Fully tighten **nuts (N)** installed in Step 5.
c) Re-measure as directed in Step 7 to confirm equal alignment from side to side.

STEP 9: FASTEN TUBE CAPS

Tap the **tube caps (5)** into the **offset tubes (3)**.



Continue installation on page 22



Item	Part #	Description
1.	16817A	Top-Mount Offset Base
2.	16817B	Top-Mount Offset Plate
3.		Top-Mount Assembly - Left Side
4.		Top-Mount Assembly - Right Side
B.	14826	Hex Head Cap Screw - 1/2" x 1-1/2" Grade 5
J.	14036	Flat Washer - 1/2"
P.	11271	Nylon Lock Nut - 1/2"

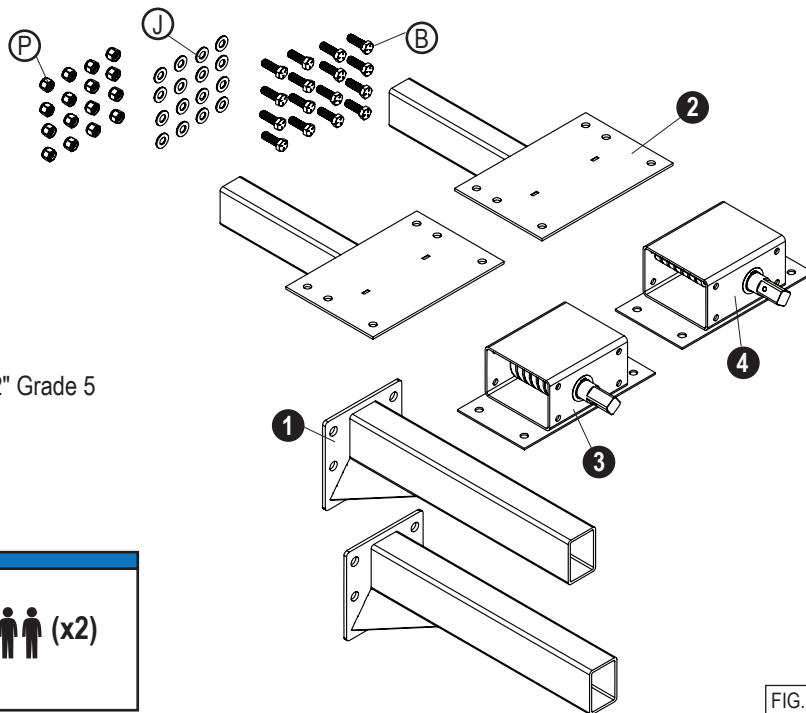


FIG. 155

NOTICE: This installation requires two people for safe and efficient completion. Read the entire **Single Top-Mount Offset Installation** section before installing the offset.



NOTICE: The overall system width increases when the arm assemblies are installed. The installed offset plate-to-offset plate measurement must not exceed 101.5 inches to ensure the overall system width does not exceed the 108-inch Federal DOT width limit.

STEP 1: MEASURE RAIL WIDTH

- Position arm assemblies as wide as possible to maximize container clearance.
- Measure the outside frame rail distance "Z", see Figure 156.

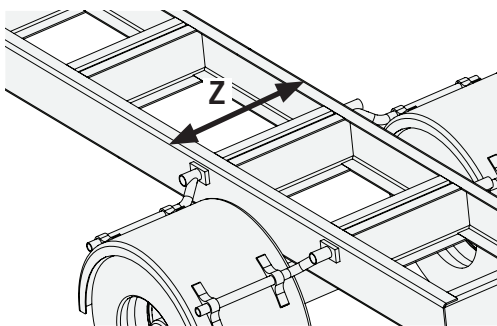


FIG. 156

STEP 2: CALCULATE OFFSET LENGTH

Calculate the offset assembly length using the equation below:

$$\frac{101.5 - Z}{2} = S$$

Example:
 Z = 34 inches (Example)
 $101.5 - 34 = 67.5$
 $67.5 \div 2 = S = 33.75$

In this example, each offset plate must measure 33.75 inches from the outside edges.

CAUTION

Do not drill through the chassis frame rail sidewall too close to the top or bottom flange. Doing so may weaken the frame. Follow the chassis manufacturer's minimum distance requirements.

STEP 3: SECURE OFFSET BASE

- Place each top mount **offset base (1)** against the frame, centered on the pivot point marked in the previous steps.
- Ensure both offset bases (1) are mounted at the same height. Use shims if necessary to level the mounting locations, see Figure 157.
- Use the mounting plates as guides to drill 1/2-inch holes through the frame rails.
- Secure each fixed offset (1) to the frame rail with Grade 5 hardware. For each plate, install four **bolts (B)**, **washers (J)** and **lock nuts (P)**.

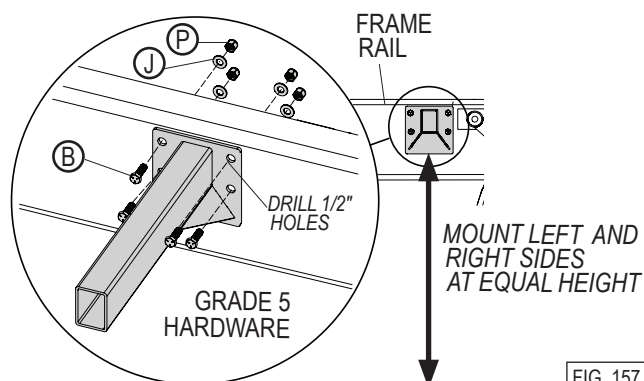


FIG. 157

STEP 4: WELD OFFSET JOINTS

- Slide an **offset plate (2)** into each **offset base (1)**.
- On the left and right side, adjust **plate (2)** to the measurement "S" calculated in Step 2. Ensure the total distance between the plates does not exceed 101.5 inches, see Figure 160.

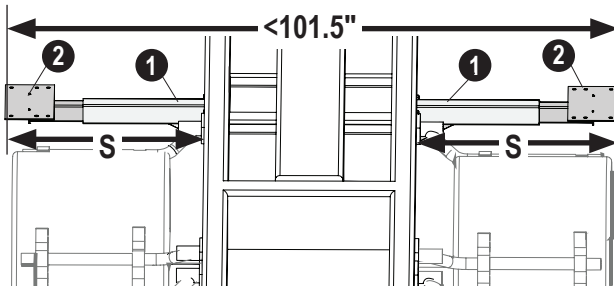


FIG. 160

STEP 5: WELD OFFSET JOINT

- Verify all offset measurements before welding.
- Weld completely around the joint between the **offset plate (2)** into each **offset base (1)**.

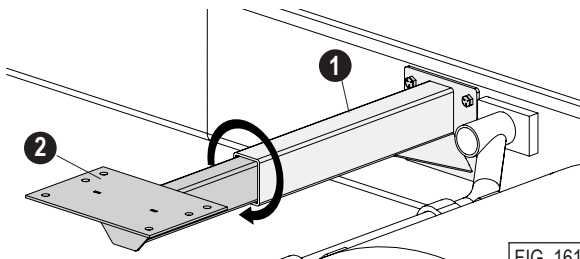


FIG. 161

NOTICE: Verify the left-side and right-side spring boxes are installed correctly.

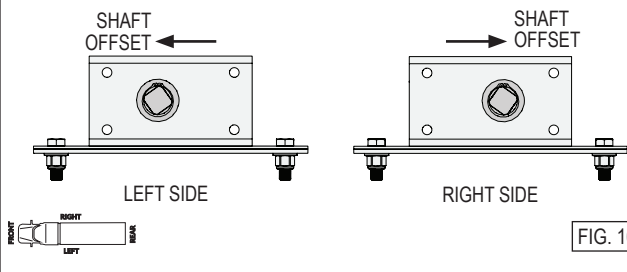


FIG. 162

STEP 6: INSTALL SPRING BOXES

- Install spring boxes labeled "Left" on the left and "Right" on the right sides.
- Verify the spring shafts are offset slightly toward the front of the trailer.
- Align the **spring box** mounting holes with the holes in the **offset plates (2)**. Position each spring box so the square shaft faces outward.
- Install **bolts (B)**, **washers (J)** and **nuts (P)**. Tighten securely. See Figure 163.

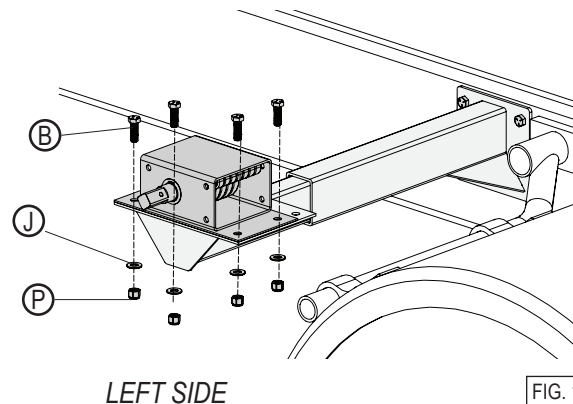
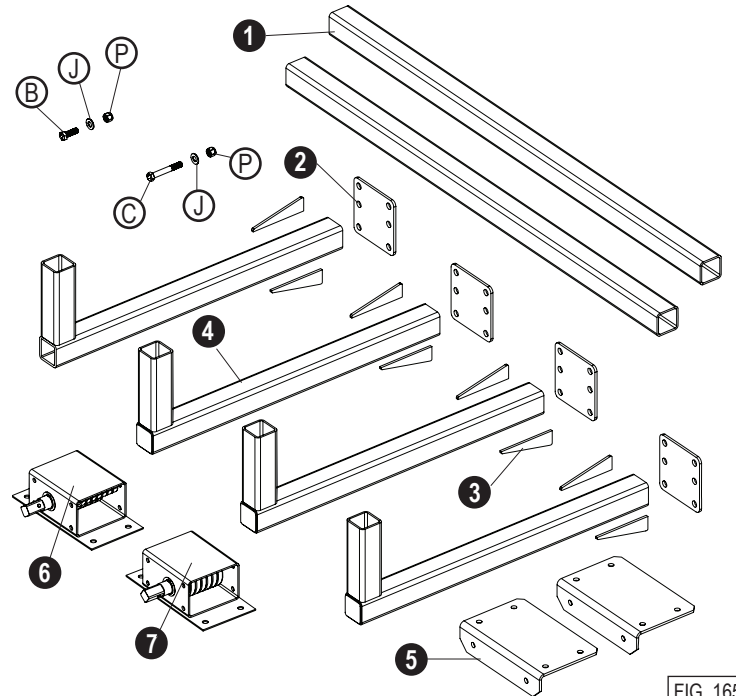
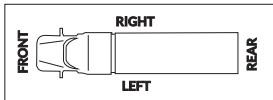


FIG. 163

Continue installation on page 22

Item	Part #	Description
1.	1808679	Bridge Mount Tube
2.	1808673	Offset Mounting Plate
3.	18108646	Frame Gusset
4.	1812296	Bridge Mount Offset Tube
5.	1812279	Bridge Mount Adapter Plate
6.		Top-Mount Assembly - Left Side
7.		Top-Mount Assembly - Right Side
B.	14826	Hex Head Cap Screw - 1/2" x 1-1/2" Grade 5
C.	1708088	Hex Head Cap Screw - 1/2" x 3-1/2"
J.	14036	Flat Washer - 1/2"
P.	11271	Nylon Lock Nut - 1/2"



NOTICE: This installation requires two people for safe and efficient completion. Read the entire **Bridge Top-Mount Offset Installation** section before installing the offset.



NOTICE: The overall system width increases when the arm assemblies are installed. The installed bridge mount tube (1)-to-bridge mount tube (1) measurement must not exceed 101.5 inches to ensure the overall system width does not exceed the 108-inch Federal DOT width limit.

STEP 1: MEASURE RAIL WIDTH

- Position arm assemblies as wide as possible to maximize container clearance.
- Measure the outside frame rail distance "Z", see Figure 166.

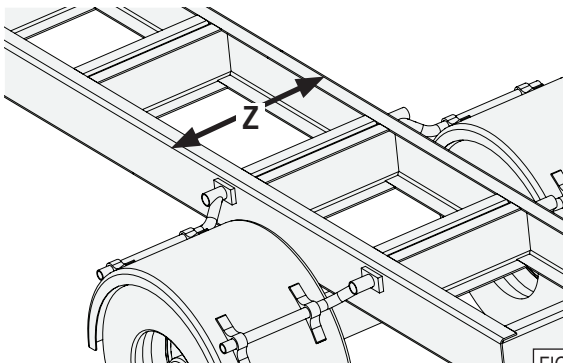


FIG. 166

STEP 2: CALCULATE OFFSET LENGTH

Calculate the offset assembly length using the equation below:

$$\frac{101.5 - Z}{2} = S$$

Example:

$$\begin{aligned} Z &= 34 \text{ inches (Example)} \\ 101.5 - 34 &= 67.5 \\ 67.5 \div 2 &= S = 33.75 \end{aligned}$$

In this example, each offset plate must measure 33.75 inches from the outside edges.

NOTICE:

- Do not weld directly to chassis/frame as this can weaken frame. Weld structure to **offset plates** which are drilled and bolted to chassis/frame.
- Do not use fasteners/hardware below grade 5.
- Make sure fabricated structure is supported and gusseted well. There should be no flexing of structure holding pivot assemblies. Structure must be as rigid as possible.

When mounting, spring assemblies must be:

- Plumb, level and square vertically and horizontally.
- Parallel to chassis/frame.
- High enough to allow access to tires.
- Equally extended from chassis/frame on both sides of truck.

STEP 3: DETERMINE PLATE POSITION

Position **offset plates (2)** so the marked pivot point is between them. See Figure 170.

- **Offset plates (1)** may be mounted at different heights with **offset tubes (4)** modifications, provided that the **bridge mount tubes (1)** on both sides remain parallel, level, and at the same height.

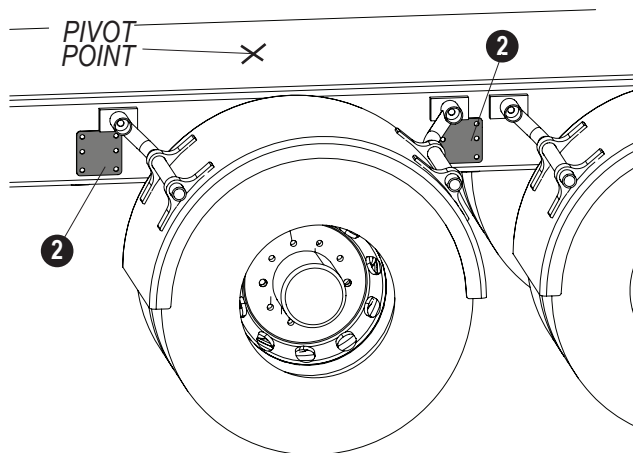


FIG. 170

⚠ CAUTION

Do not drill through the chassis frame rail sidewall too close to the top or bottom flange. Doing so may weaken the frame. Follow the chassis manufacturer's minimum distance requirements.

STEP 4: FASTEN PLATES

- Use the **mounting plates (2)** as guides to drill 1/2-inch holes through the frame rails.
- Secure each **plate (2)** to the frame rail with Grade 5 hardware. For each plate, install four **bolts (B)**, **washers (J)** and **lock nuts (P)**.

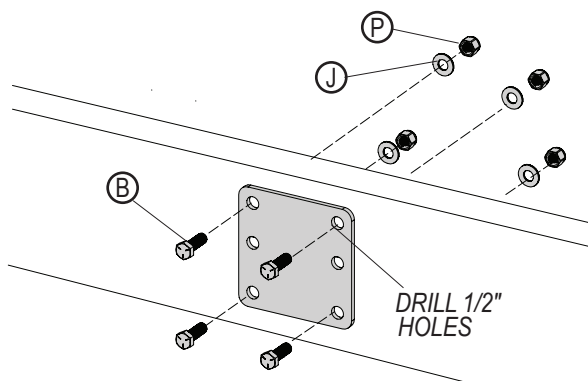


FIG. 171

NOTICE: When setting the offset tubes allow space to add gussets above or below the tubes for additional strength. See Figure 173.

STEP 5: WELD OFFSET TUBES

- Cut **offset tubes (4)** to measurement "S" calculated in Step 2.
- Ensure the total distance between the outside edge of the tubes does not exceed 101.5 inches.
- Verify all offset measurements before welding.
- Weld completely around the joint between the **offset tubes (4)** and **offset plates (1)**, see Figure 172

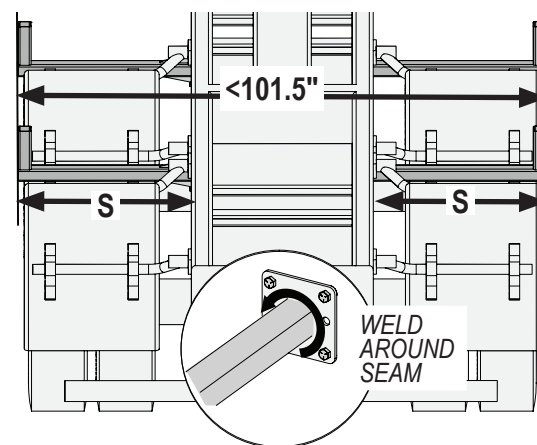


FIG. 172

STEP 6: WELD GUSSETS

Center a **gusset (3)** above and below each **offset tube (4)**, flush with the **offset plate (2)**, as shown in Figure 173. Weld the gussets in place.

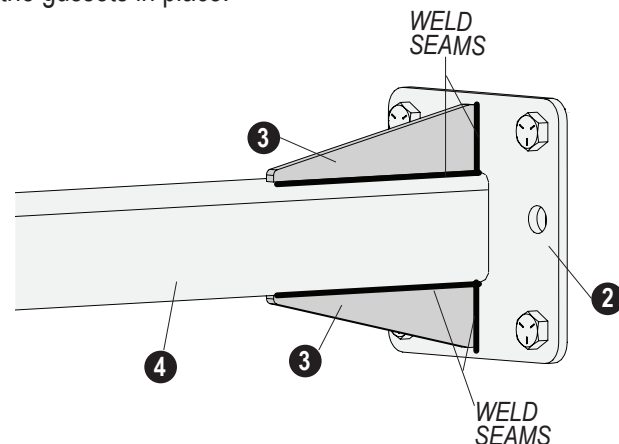


FIG. 173

NOTICE: The top of the mounting tubes must be at or above fender height to maintain clearance for tire changes.

STEP 7: ALIGN BRIDGE MOUNT TUBES

- Ensure the left and right **bridge mount tubes (1)** are not lower than the fenders.
- Ensure both **bridge mount tubes (1)** are mounted at the same height and remain parallel and square.
- If needed, cut the upright **offset tubes (4)** to just above the lip of the fender, see Figure 175.

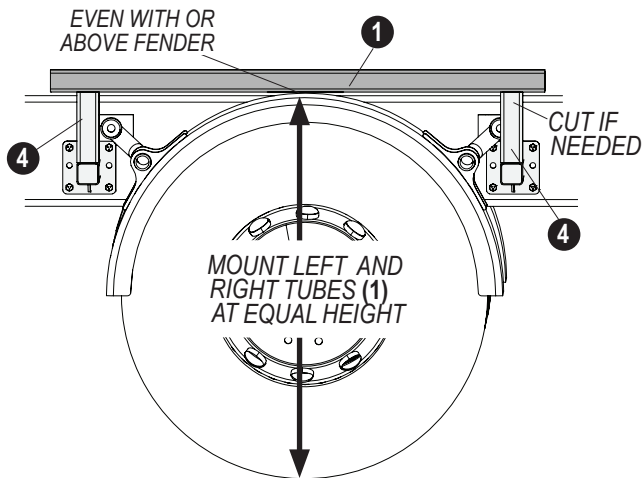


FIG. 175

STEP 8: WELD BRIDGE MOUNT TUBE

- Align each **bridge mount tube (1)** flush with the outside edge of the **offset tubes (4)**.
- Prep and weld completely around the joint between the **offset tubes (4)** and **bridge mount tube (1)**, see Figure 176.

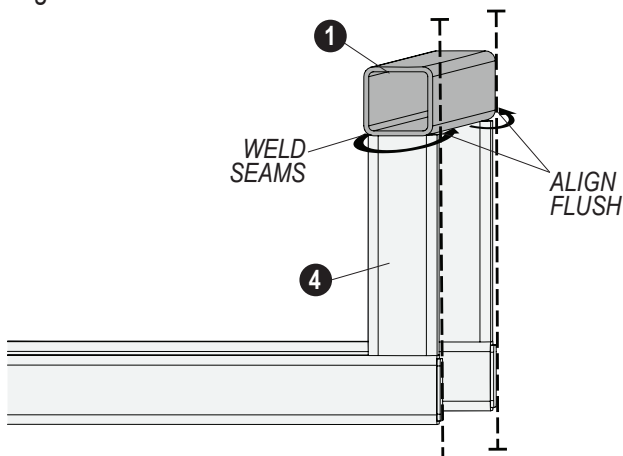


FIG. 176

STEP 9: FASTEN ADAPTER PLATES

- Align **adapter plate (5)** so spring assemblies will align with pivot point location, as noted in Step 3, Figure 170.
- Use the **adapter plate (5)** as a guide to drill 1/2-inch holes through the **bridge mount tube (1)**.
- Secure each **plate (5)** to a **bridge mount tube (1)** with two **bolts (C)**, **washers (J)** and **lock nuts (P)**.

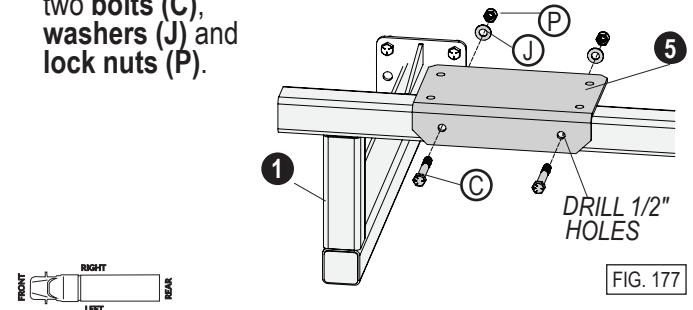
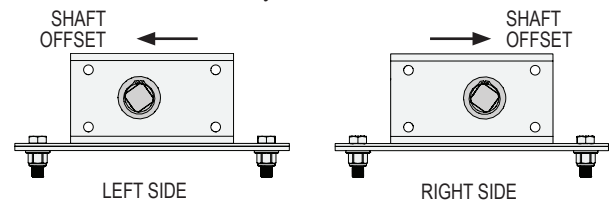


FIG. 177

NOTICE: Verify the left-side and right-side spring boxes are installed correctly.

FIG. 178



NOTICE: To verify pivot points are aligned, measure diagonally from gantry to each spring box shaft.

STEP 10: INSTALL SPRING BOXES

- Install spring boxes labeled "Left" on the left and "Right" on the right sides.
- Verify the spring shafts are offset slightly toward the front of the trailer.
- Use the front two holes in the **adapter plate (5)** as a guide to drill 1/2-inch holes through **bridge mount tube (1)**.
- Align the **spring box** mounting holes with the holes in the **adapter plates (5)**. Position each spring box so the square shaft faces outward.
- Install two **bolts (C)** into the front two holes and secure with **nuts (P)**. Secure the back two holes with **bolts (B)**, **washers (J)** and **nuts (P)**.

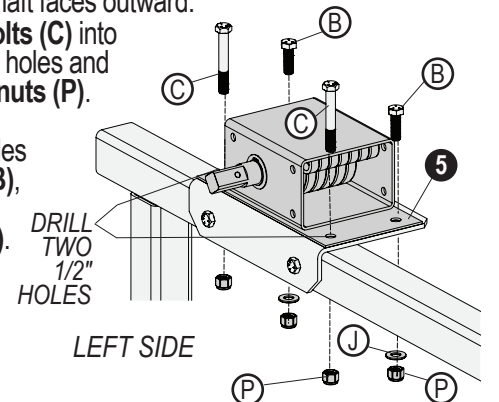
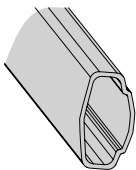
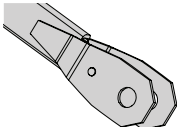
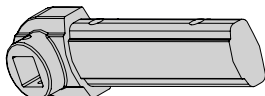
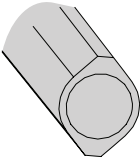
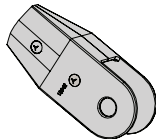
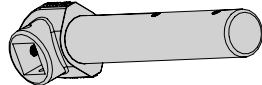
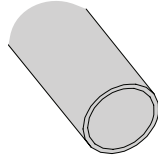
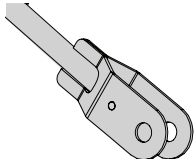
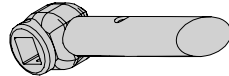


FIG. 179

NOTICE: Continue installation using the arm installation instructions included with the arm kit. If needed, instructions are available at shurco.com.

ARM MATERIAL	MOUNTING STYLE	INSTRUCTIONS
2-PIECE ALUMINUM  FIG. 180	EXTERNAL OFFSET 	P/N 1812549
	TOP MOUNT 	P/N 1812550
1-PIECE ALUMINUM  FIG. 182	EXTERNAL OFFSET 	P/N 1812551
	TOP MOUNT 	P/N 1812552
2-PIECE STEEL  FIG. 184	EXTERNAL OFFSET 	P/N 1812553
	TOP MOUNT 	P/N 1812554

Item	Part #	Description
1	16546	100 AMP Manual Reset Circuit Breaker
		175 AMP Manual Reset Circuit Breaker
2.	11147	6 Ga. Dual Conductor Wire
3.	113890	6 Ga. Ring Terminal - Insulated - 1/4"
4.	13882	6 Ga. Ring Terminal - 5/16"
5.	16283	6 Ga. Ring Terminal - 3/8"



WARNING

Disconnect power when accessing or servicing equipment.

NOTICE: All systems include a pre-wired battery lead. Install the positive lead wire using the supplied inline breaker.

NOTICE: Cut wires to length and strip only enough wire insulation to install ring terminals. Insert bare wire into ring terminals and crimp securely.



STEP 1: CONNECT POWER LEADS

- Disconnect the battery before installing electrical equipment. Always disconnect the battery (-) negative terminal first, then disconnect the battery (+) positive terminal.
- Route the lead wire to the battery box. Crimp properly sized ring terminals onto the wire ends.
- Mount the **breaker** as close to the battery as possible. Connect the red positive lead wire to the "AUX" side of the supplied breaker.
- Using the supplied **1-foot jumper cable**, connect the "BAT" side of the breaker to the battery (+) 12V terminal. Crimp ring terminals onto the jumper cable before installation.
- Connect the black negative lead wire to the battery (-) 12V terminal.
- Reconnect the battery. Always connect the battery (+) positive terminal first, then connect the battery (-) negative terminal.

STEP 2: VERIFY SYSTEM OPERATION

- Operate the tarp system and verify correct switch function.
- If tarp wind and unwind functions operate backwards, reverse the wires on the tarp motor.
- When uncovering/winding the tarp, the tarp must wind over the top of the axle. Rotation should be counterclockwise (CCW) when viewed from the left side. See Figure 185.

- Tarp Uncover/Wind = CCW from left side view
- Tarp Cover/Unwind = CW from left side view

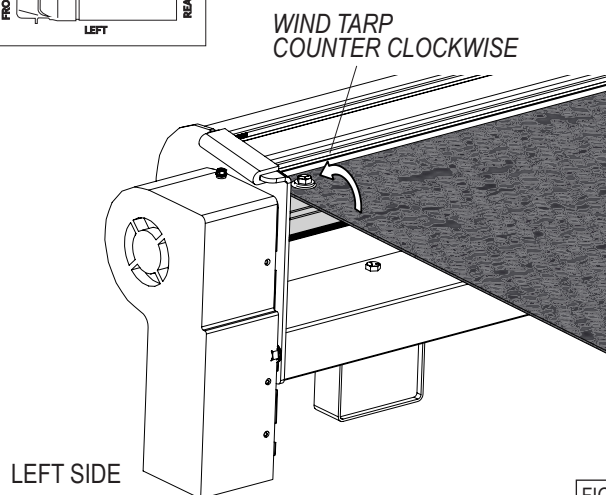
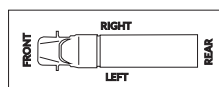


FIG. 186



CAUTION

Ensure all hardware is secure before operating the system. Inspect the complete system at this time and make adjustments as required.

OPTION: WIRELESS REMOTE CONTROL

Customers may upgrade to the optional Waste Warrior wireless remote-control unit, allowing tarp operation from inside the cab. Test all remote functions to ensure proper operation.

NOTICE: Operation can be done with the control box or the optional wireless remote.

⚠ WARNING

Ensure the tarp arm path is clear of individuals and obstructions. Failure to do so may result in serious injury or death.

TARP DEPLOYMENT

Perform tarp deployment after the container is loaded and secured.

1. Turn on the LED work lights using the **LED WORK LIGHT** switch, if necessary.
2. Extend the tarp arms 2–3 feet by pressing and holding the **MASTER ON** switch and **TARP** switch simultaneously.
3. Raise the gantry frame until fully extended by pressing and holding the **MASTER ON** switch and **GANTRY** switch simultaneously.
4. Extend the tarp arms until the cross tube rests on the rear of the container by pressing and holding the **MASTER ON** switch and **TARP** switch simultaneously.
5. Lower the gantry frame until fully retracted by pressing and holding the **MASTER ON** switch and **GANTRY** switch simultaneously.
6. Adjust the tarp inward or outward, if necessary, by pressing and holding the **MASTER ON** switch and **TARP** switch simultaneously.
7. Turn off the **LED** work lights using the **LED WORK LIGHT** switch.
8. Secure the tarp arms with bungees or straps, if desired or if inclement weather conditions are present.

⚠ WARNING

Arms are under spring tension and may move unexpectedly. Read and understand the Owner's Manual before disassembling, operating, servicing, or repairing the arm system. Failure to follow these warnings and all proper safety precautions may result in injury or death.

⚠ WARNING

Contact with power lines will result in serious injury or death. Keep away from power lines.

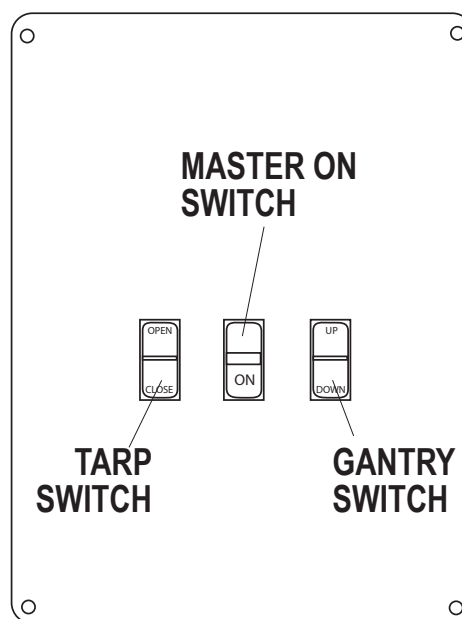


FIG. 190

NOTICE: Operation can be done with the control box or the optional wireless remote.

WARNING

Ensure the tarp arm path is clear of individuals and obstructions. Failure to do so may result in serious injury or death.

RETRACTING TARP

Perform tarp deployment after the container is loaded and secured.

1. Remove all bungees or straps, if applicable.
2. Turn on the **LED** work lights using the **LED WORK LIGHT** switch, if necessary.
3. Raise the gantry frame until fully extended by pressing and holding the **MASTER ON** switch and **GANTRY** switch simultaneously.
4. Retract the tarp arms until they are 2–3 feet from the housing by pressing and holding the **MASTER ON** switch and **TARP** switch simultaneously.
5. Lower the gantry frame until fully retracted by pressing and holding the **MASTER ON** switch and **GANTRY** switch simultaneously.
6. Fully retract the tarp by pressing and holding the **MASTER ON** switch and **TARP** switch simultaneously.
7. Turn off the **LED** work lights using the **LED WORK LIGHT** switch.

WARNING

Arms are under spring tension and may move unexpectedly. Read and understand the Owner's Manual before disassembling, operating, servicing, or repairing the arm system. Failure to follow these warnings and all proper safety precautions may result in injury or death.

WARNING

Contact with power lines will result in serious injury or death. Keep away from power lines.

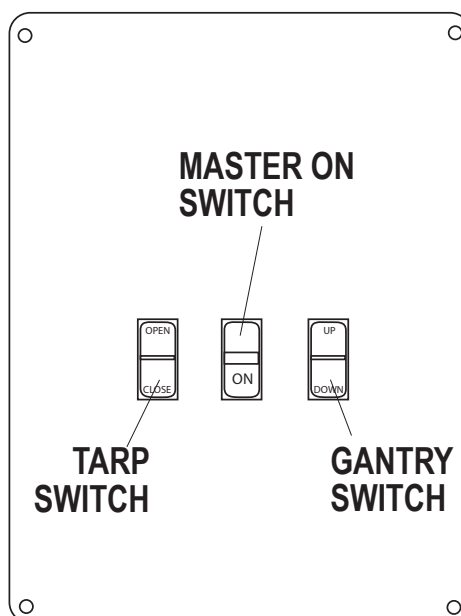


FIG. 191

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