GTX550 GRAIN TARP POWER KIT INSTALLATION INSTRUCTIONS

ATTENTION **DURING INSTALLATION, SOME FABRICATION MAY BE REQUIRED.**

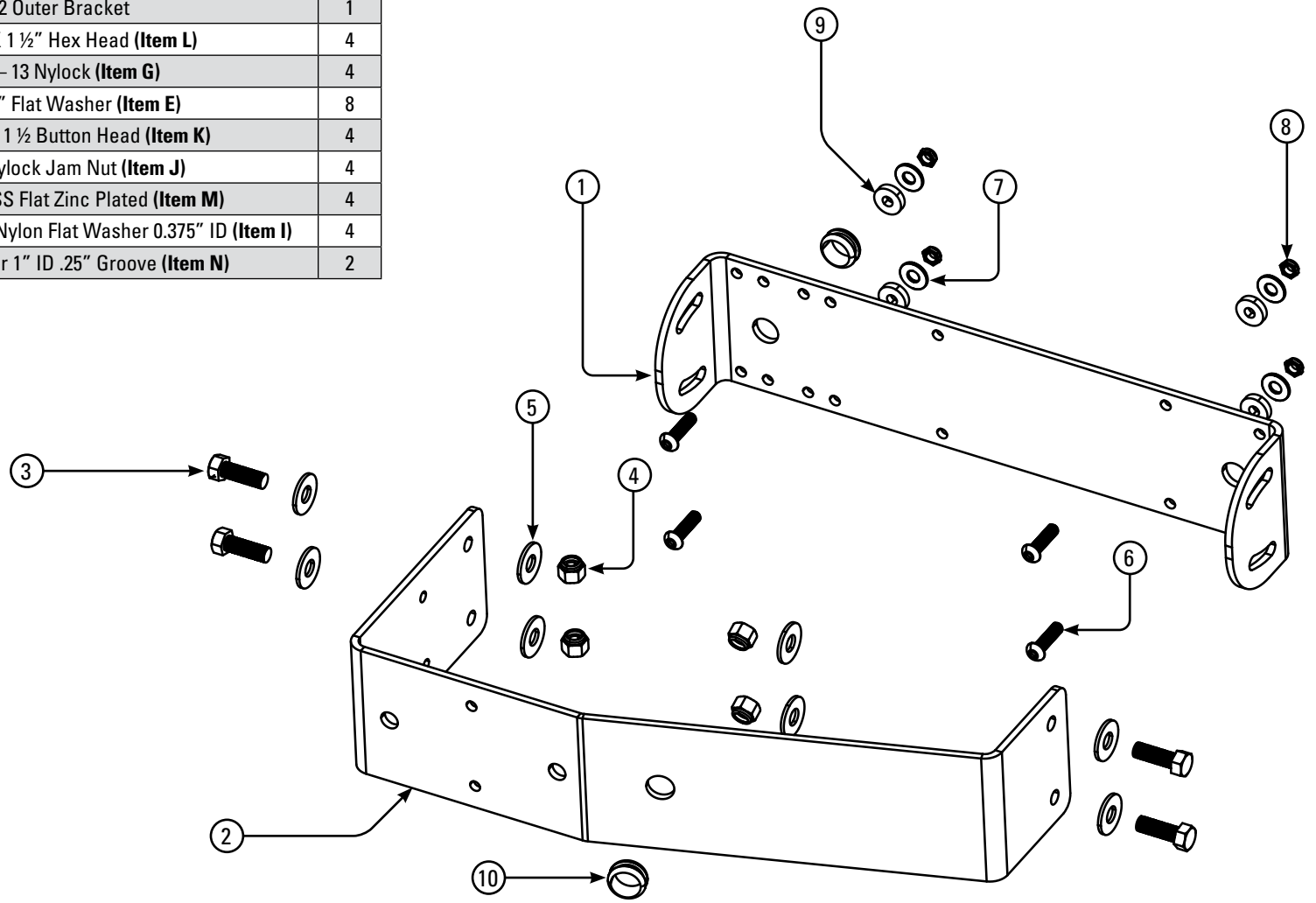
Part #: 101203
Revised: 10/12/26 - WLH

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Universal External Pivot Mount
P/N #47270

ITEM	PART #	DESCRIPTION	QTY
1	47271	47271 Inner Bracket	1
2	47272	47272 Outer Bracket	1
3	18296	Bolt, ½"-13 X 1 ½" Hex Head **(Item L)**	4
4	18631	Nut, ½" – 13 Nylock **(Item G)**	4
5	18412	Washer, ½" Flat Washer **(Item E)**	8
6	101026	Bolt, 3/8"-16 X 1 ½ Button Head **(Item K)**	4
7	18628	Nut, 3/8" Nylock Jam Nut **(Item J)**	4
8	18410	Washer, 3/8" USS Flat Zinc Plated **(Item M)**	4
9	18418	Washer, 1" X .25" thick Nylon Flat Washer 0.375" ID **(Item I)**	4
10	16418	Grommet, Rubber 1" ID .25" Groove **(Item N)**	2



ANSI Warning/Caution Label Installation Requirements and Instructions

⚠ WARNING

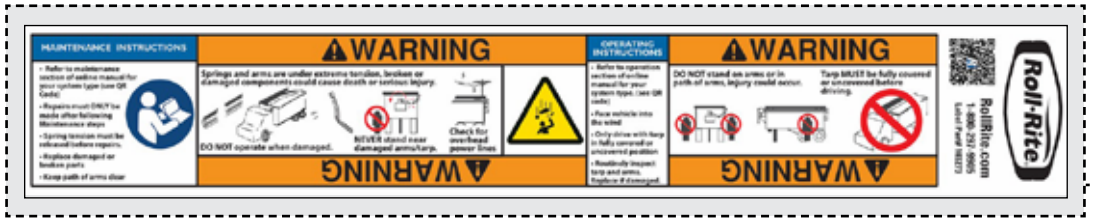
- Failure to follow installation requirements may result in potentially hazardous condition
- Read all product information and instructions before proceeding with installation
- ANSI labelling shall be installed in compliance with the requirements

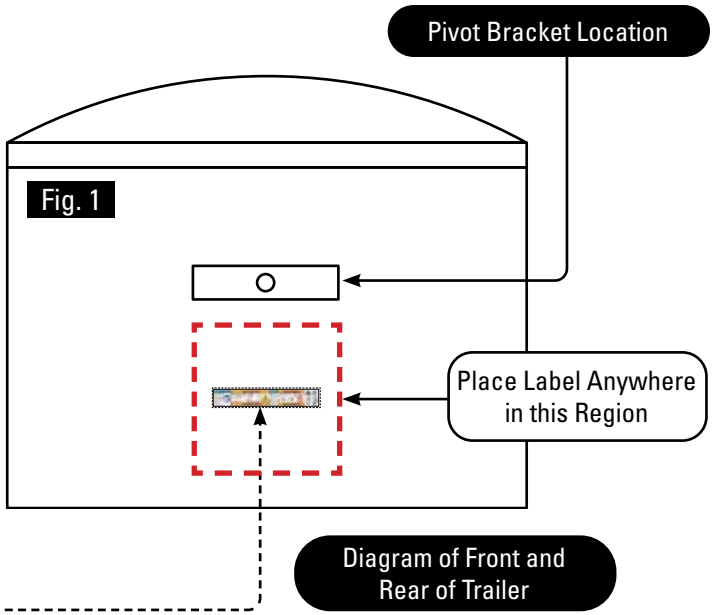
⚠ CAUTION

- During and after installation, spring energy will be stored in the front arm and rear arm of the tarp system
- ANSI compliant Warning/Caution labels have been created to communicate potential hazards of the system
- The Warning/Caution label shall be installed according to all direction and diagrams in this document

ASNI Label Installation Requirements

1. Install label under the front arm pivot bracket and rear arm pivot bracket (Fig. 1)
2. Using appropriate cleaning agent, thoroughly clean and rinse the trailer surface below the Arm Pivot Bracket as shown in *Diagram of the Front and Rear of Trailer*
3. Peel the label backing from the ANSI Warning/Caution label
4. Align and affix the label on trailer surface such that the label is in the orientation shown in *Diagram of the Front and Rear of Trailer*
5. **Complete Steps 2 through 5 for FRONT & REAR of Trailer**





Pivot Installation

Step 1: On the FRONT & REAR of the trailer measure from the top of the trailer, straight down approximately 23 1/2" and put a mark on the front and rear face of the trailer (If this interferes with the catwalk the arm can be mounted higher.) This line should be as close to center as possible (Fig. 2).

Step 2: Line up the top of the inner bracket with the mark made in the previous step. Remove existing rivets that will be behind bracket (6 total). Align the holes in the inner bracket with holes on nose of trailer and bolt in place, using (4) 3/8" button head bolts, (4) 3/8" ID Nylon Washer between trailer wall and bracket, (4) 3/8" washer and (4) 3/8" Nylok nuts provided.

Step 3: On the rear of the trailer remove four rivets (leave middle rivets in place) bolt in place using (4) 3/8" bolt, (4) 3/8" ID Nylon Washer between trailer wall and bracket, (4) 3/8" washer, and (4) 3/8" Nylock nuts provided.

Step 4: If you have a square nose trailer bolt the outer brackets to the inner bracket using (4) ½" Hex Head bolt, (8) ½" Flat washer & (4) 1/2"-13 Nylock nuts. Align the outer bracket so that the top is parallel with top of trailer. Tighten bolts when top of outer bracket is parallel to top of trailer (Fig. 3 & 4).

Fig. 2

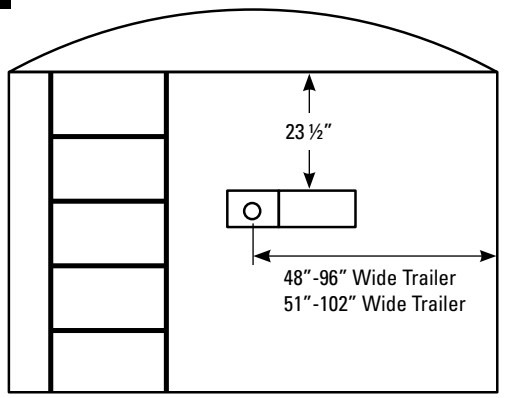


Fig. 3

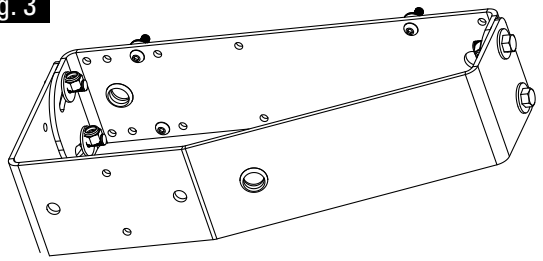
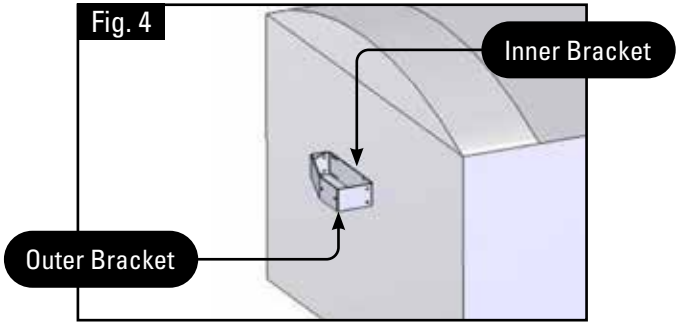


Fig. 4



Pivot Installation

Fig. 5



Fig. 6



Note: The angle of the bracket is opposite the ladder side on both the nose and rear of the trailer (Fig. 5 & 6).

Step 5: If you have a slope nose trailer bolt the outer brackets on using (4) ½" Hex Head bolt, (8) ½" Flat washer, & (4) 1/2"-13 Nylock nut. Rotate the brackets down until the top of the outer bracket is parallel to the top of the trailer (Fig. 7). Tighten bolts when top of outer bracket is parallel to top of trailer.

Step 6: Mount the pivot pins that are in the arms to the Outer bracket through the provided holes in the face of the outer bracket (Fig. 8) Note the groove in the pin should point down.

Step 7: Drill 7/8" hole in the nose of trailer using hole in Inner Bracket as a guide. This will be used for wire to pass safely through the Front wall. Install a 16419 Rubber 7/8" ID .125" groove grommet (Item V) into this hole. This grommet is in Electric Kit Bag.

Step 8: At the trailer nose side, insert a 16418 Rubber 1" ID .25" groove grommet (Item N) into both the outer and inner 15/16" bracket holes (Fig. 8)

Fig. 7

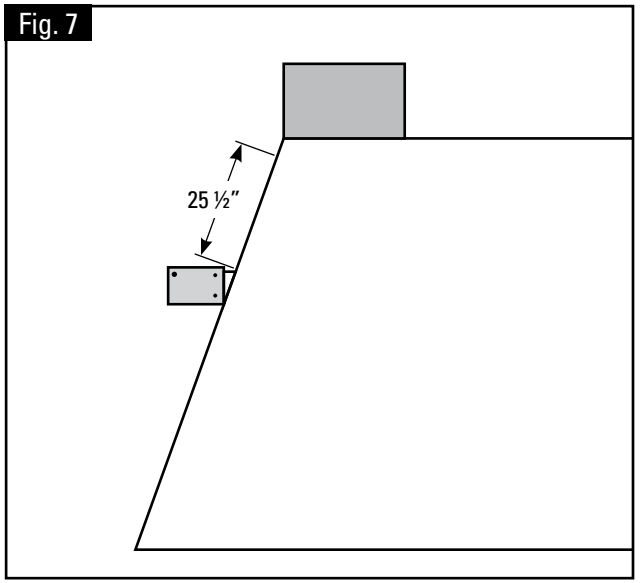
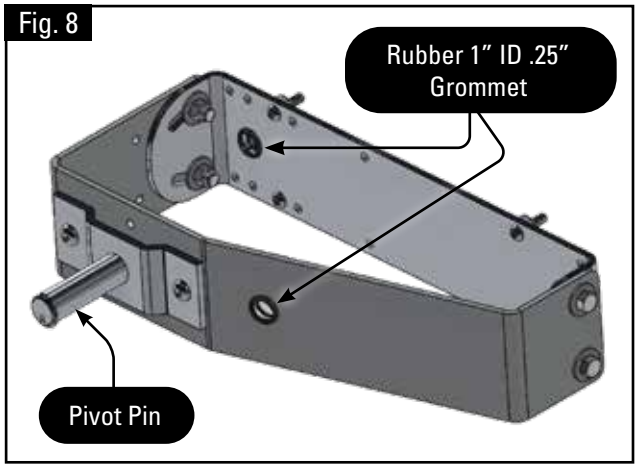


Fig. 8



Arm Assembly

Step 1: Locate the knuckle arm assembly. Passenger stowing (Fig. 9) and driver stowing (Fig. 10).

Step 2: Rotate the upper section until you can get the short pin thru under the springs. Once in place install cotter pin.

Fig. 9

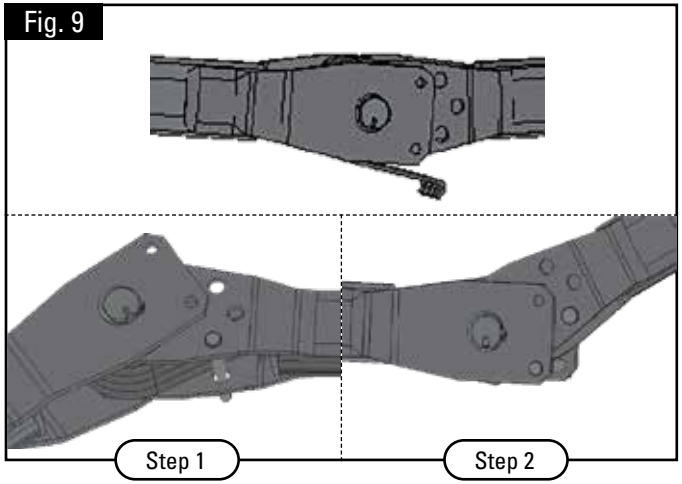
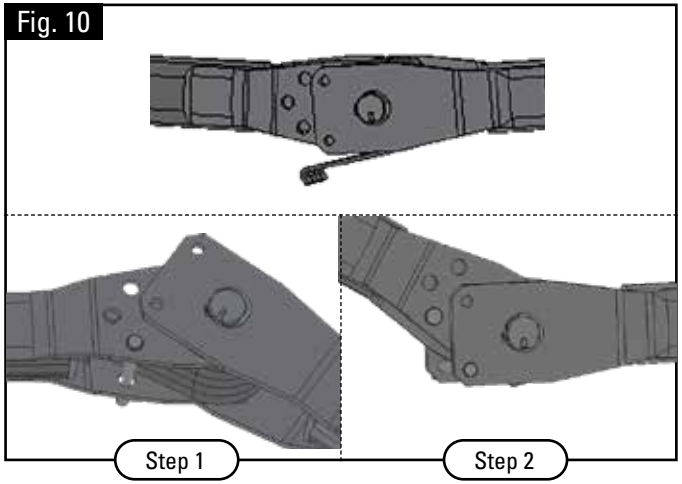


Fig. 10



Arm Assembly

Step 3: Rotate the upper arm against the spring pressure until you can get the long clevis pin thru the holes under the upper pivot tube. Refer to Step 2 on page 7 in Fig. 9 and Fig. 10, depending on your system. Once in place install cotter pin.

Step 4: Slide the arm onto the pivot pin and setscrew it in place. This is what the arm looks like if you are looking at the front of the trailer and have a passenger stowing system (Fig. 11), and this is what your arm looks like if you are looking at the front of the trailer and have a driver side stowing system (Fig. 12).

Step 5: Bolt the motor to the pivot arm depending on your system.

Fig. 11

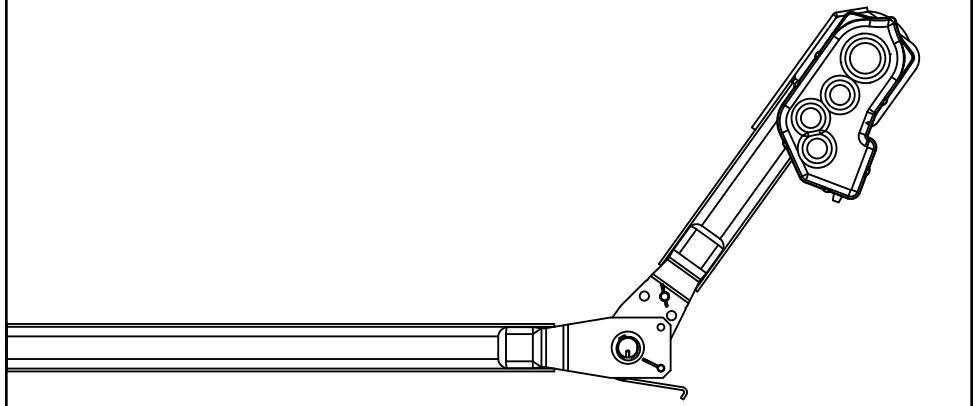
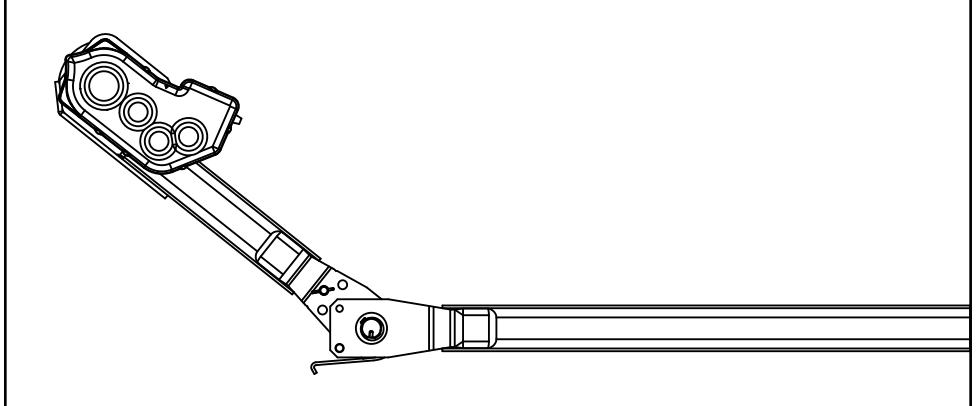


Fig. 12



Tarp Axle Extension (Install if Necessary)

Step 1: Locate the following components:Locate the 3' Axle Extension Pipe. It will be swedged on one end (Fig. 13 & 14).

Fig. 13

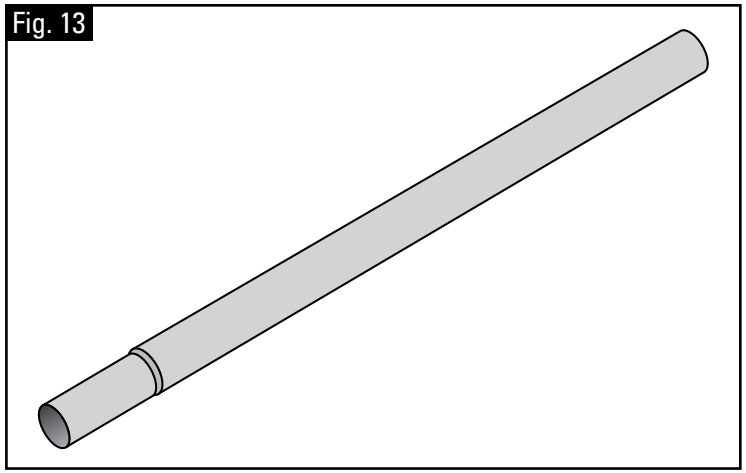
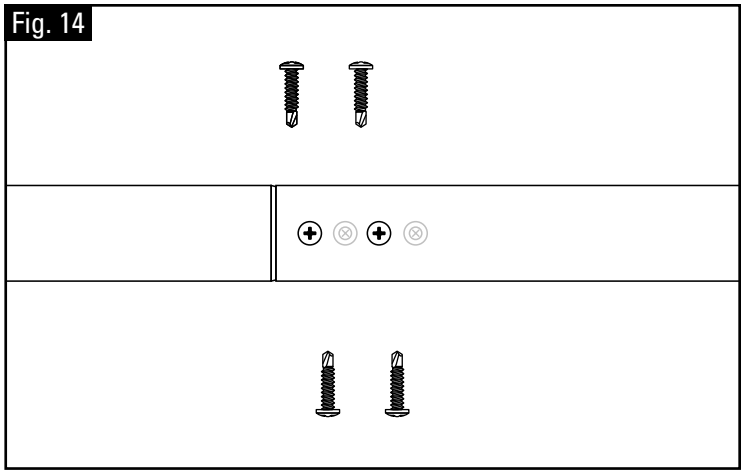


Fig. 14



Step 2: If you're current manual tarp system has a front bungee return remove the entire bungee pack from the front of your axle pipe.

Step 3: Remove tarp clips and slide axle back into tarp until the front end of the axle extension is 2"- 4" in front of the top lip of your front cap.

Step 4: Insert the swedged end of the axle extension into the front of your tarp axle. If possible weld axle extension to tarp axle and let cool fully before proceeding to next step. If unable to weld, use the supplied self-drilling fasteners ¼" X 1-1/4" Pan Phillips Head to attach the extension axle to the existing axle. Use a minimum of 8 fasteners 90 degrees apart from one another and equally spaced along the swedge zone to ensure a secure attachment (Fig. 14).

Step 5: (Make sure the weld has cooled before sliding back into the tarp!) Slide the axle back into the tarp, then go to the rear of the trailer. Slide the tarp axle back until the end of the spline on the back of the axle is 19"-22" away from the end of the tarp and for the front measure 15"-17" from the front of the tarp. If it is a slanted rear system, then the distance is 33"-36" from the rear and 19 ½" from the front of the tarp to the extension end. Mark at all measurements, then proceed to remove excess material as well as any burrs left from the end of the axle that was cut.

Step 6: Replace the tarp clips securing the tarp back to the tarp axle.

Adapter Assembly

Fig. 15

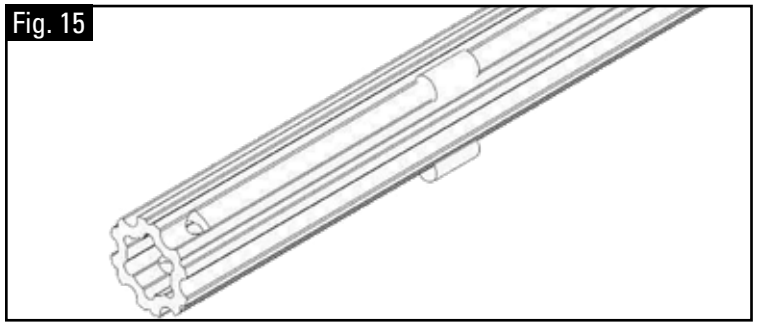
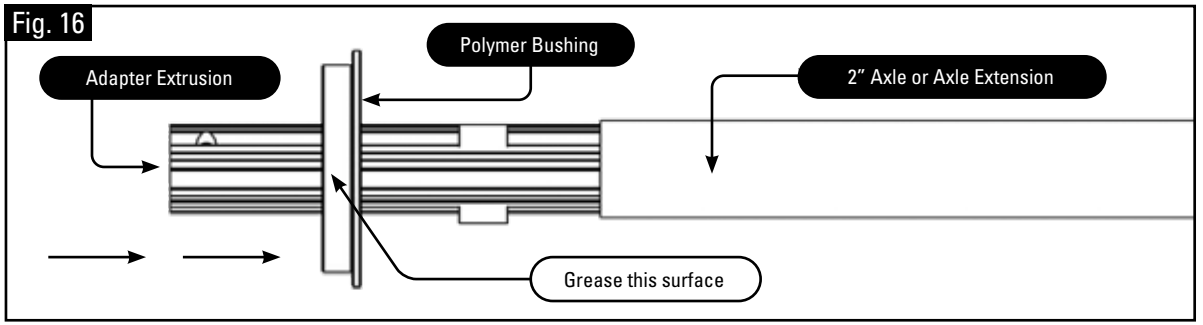


Fig. 16



Step 1: Locate the adapter extrusion (Fig. 15).

Step 2: Install the long end of the adapter into the front of the existing tarp Axle or Axle Extension.

Step 3: Install the polymer bushing that was taped to the arm onto the adapter (Fig. 16). Bushing should slide on the end of the adapter that is closest to the stops that are welded on the adapter.

Step 4: Add a film of grease around the exterior mating surface of the Polymer Bushing.

Step 5: Lift the front knuckle arm up to the axle. Pull the axle into the axle bushing and slide it over the motor shaft. Rotate the axle to align the hole in the axle with the motor shaft hole. Bolt the axle to the motor using the 3/8" x 2 ¾" bolt & Nylock nut supplied in the motor shaft end. Note: the motor may need to be powered to turn the axle (Fig. 17). to a position that both ends of the bolt are accessible.

Fig. 17



Step 6: Once in place, attach the adapter to the existing axle using the supplied self-drilling fasteners 1/4" X 1-1/4" Pan head. Use a minimum of 10 fasteners 90 degrees apart from one another and equally spaced along the adapter zone to ensure a secure attachment (Fig. 18A & B). Alternatively, you may Rivet the Aluminum Adapter to the existing steel axle using a minimum of 10 rivets.

Fig. 18A

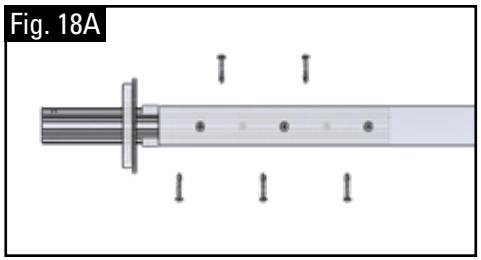
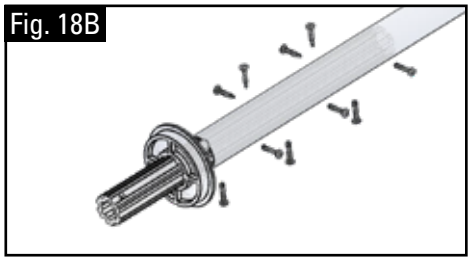


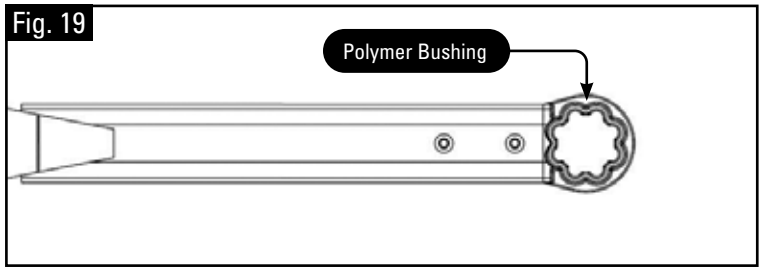
Fig. 18B



Rear Arm Installation

Step 1: Locate the Rear knuckle arm assembly (Fig. 19). Notice that there is a polymer bushing bolted to it.

Fig. 19



Step 2: Take the short clevis pin out of the upper knuckle section. Rotate the upper section until you can get the pin back thru under the springs (Fig. 20A).

Step 3: Rotate the upper arm against the spring pressure until you can get the long clevis pin thru the holes under the upper pivot tube (Fig. 20B).

Fig. 20A

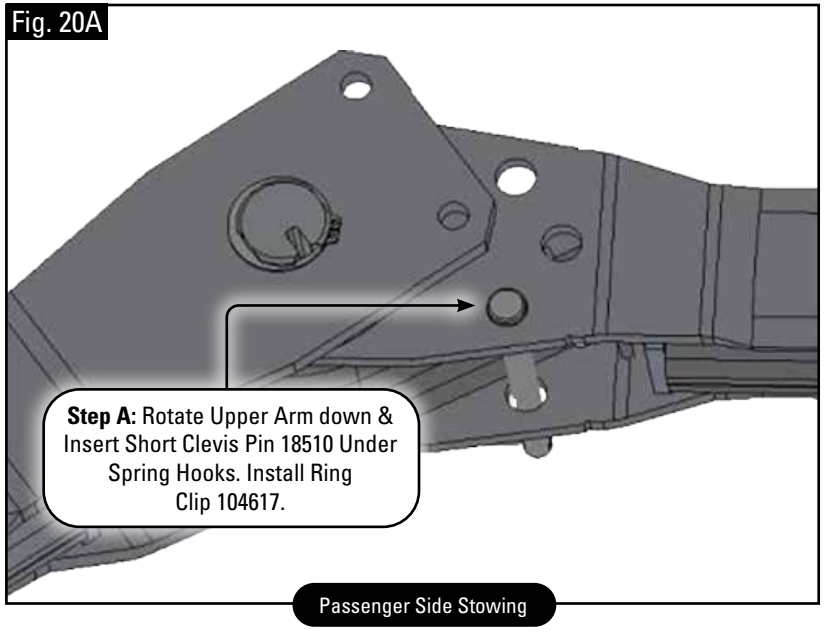
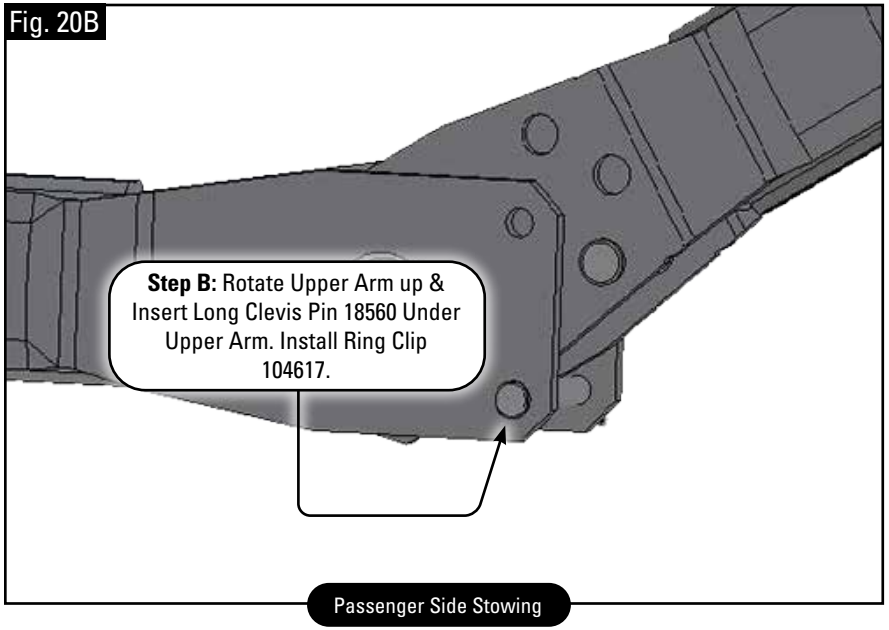


Fig. 20B



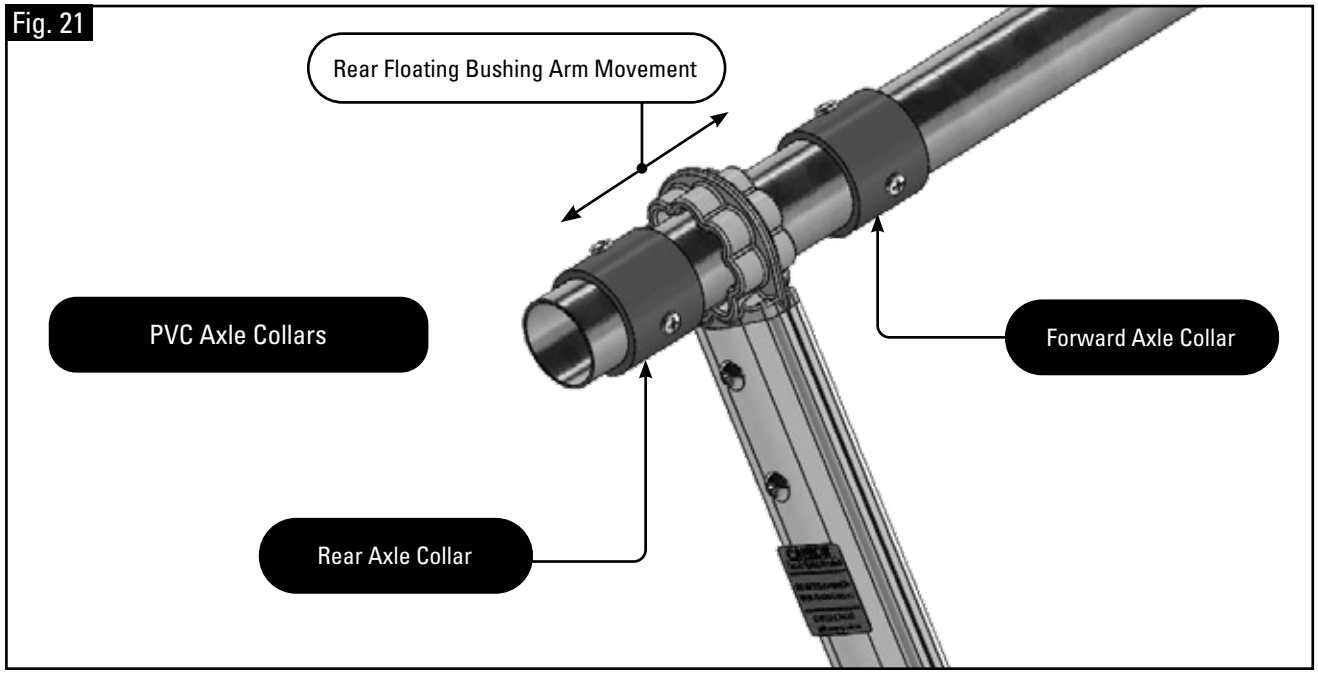
Rear Arm Installation

Step 4: Attach the lower arm to the pivot pin and secure with set screws or the supplied snap ring depending on pivot type.

Step 5: Remove the polymer bushing from the rear arm. Before installing the rear polymer bushing onto the axle slide one of the Axle collars onto the axle ahead of the bushing. The second Axle collar will be positioned behind the polymer bushing. These components may have to be tapped with a rubber mallet to get them past the weld of the spline. Rotate the Rear arm up to the axle then reinstall the Polymer Bushing to the rear arm using the 3/8" button head fasteners. This should allow the hand crank spline to protrude through the back arm allowing the use of the hand crank handle.

Step 6: Position the rear collar near the axle end ahead of the spline stub insert ensuring the fasteners will clear the inserted stub. Attach the rear PVC Axle Collar to the axle using three supplied 1/4" X 1-1/4" Pan Head screws equally spaced around the circumference of the PCV Collar. The Axle Collar located ahead of the Polymer Bushing should be fastened similarly to the axle but only **AFTER** observing Rear Arm "float / drift" on the axle during motion. This arm travel is expected while the system is running and proper collar placement is important to allow free travel of the rear arm. The forward Axle Collar should be secured to the axle ½" ahead of the maximum arm travel position observed during your test run (Fig. 21).

Fig. 21



Wiring the System

The Roll Rite Motor Reversing Relay & RF Receiver Switch shall be installed in accordance with the Installation Requirements and the Wiring Diagram references provided in the following documents.

- Roll Rite RF RECEIVER / RF TRANSMITTER Instruction (P/N 105563)
- Electrical Component Installation Guide, Instructions (P/N 105568)

Safety Requirements

⚠ WARNING

Failure to comply with requirements outlined in this document may result in serious injury or property damage

The following requirements shall be met when installing or servicing electrical components in Roll Rite Automated Tarp Systems:

- All connections to vehicle battery systems, vehicle battery chargers, and external power supplies shall be disconnected during all installation procedures
- Prior to installing wiring on positive terminals, check voltage on all wires and connection points using a voltmeter.
- The following personal protective equipment shall be worn at all times while installing components:
- Safety Glasses or Prescription Glasses with Side Shields
- Steel or Composite Toe Protective Shoes

Tools and Equipment Required for Wiring

The following tools are required for installation of electrical components

- Torque Wrench with range between 50 to 150 in.lb
- Nut Driver Set
- Wire Cutters up to 2AWG size wire
- Wire Insulation Stripping Tool for wire size range from 2 to 8 AWG
- Wire Insulation Stripping Tool for wire size range from 16 to 18 AWG
- Wire Terminal Crimping Tool for wire size range from 2 to 8 AWG
- Wire Terminal Crimping Tool for wire size range from 2 to 8 AWG
- Wire Terminal Tool for wire size range from 16 to 18 AWG
- Heat Gun for application of heat shrink insulation
- Multi-meter with DC voltage measurement capability
- Tie Straps
- Vehicle Chassis Wiring insulated c-clamps capable of carrying 2 to 8 AWG wiring

Wiring the System

Rite-Touch® Solid State Reversing Relay Requirements

Refer to the Roll Rite Electrical Component Installation Guide, Instructions (P/N 105568)

- The Motor Reversing Relay shall be installed on a vertical plane with the wires from terminals (B+, B-, M2, M1) facing down. This is the only approved orientation of the motor reversing relay.
- Mount the relay in a location that it is protected from road debris, ice, snow, and road spray or bombardment
- Use the terminal boots supplied with the motor reversing relay, according to the following color codes:
- B+ is RED indicating the terminal is un-switched, fused, and hot at all times
- B- is Black
- M2 is Blue
- M1 is Yellow
- All terminals shall be coated with dielectric grease to prevent corrosion and long term connection from debris between electrical terminals
- Install the motor reversing relay such that the terminals are facing the vertical mounting surface on the vehicle body
- The motor reversing relay shall be attached to the surface using only threaded fasteners with torque specification consistent with the fastener size and type
- All terminal wires shall be strain relieved using insulated C-clamps attached to vehicle body to prevent wire vibration and torque loading from loosening electrical connections
- Roll Rite GTX550 Installation Instruction (P/N 101203)
- Roll Rite, LLC Roll Rite GTX550 Installation Instruction (P/N 101203)
- 650 Industrial Drive, Gladwin, MI 48624
- 800-297-9905 www.RollRite.com
- Page 17 of 27
- Route all electrical wires from the Motor Reversing Relay in a manner that will avoid wire insulation chafing, pinching, and wear from other items on the truck chassis or wear from the environment.
- Spade terminals for switch signals shall be coated with dielectric grease to prevent corrosion
- Spade terminals from switch harness shall be fully seated on terminals
- **Torque all electrical connection fasteners to minimum 8-11 ft.lb**

Radio Frequency (RF) Switch with Hand Held Transmitter

Refer to the Roll Rite Electrical Component Installation Guide, Instructions (P/N 105568)

- RF switch shall be mounted with controller body connected to the Motor Reversing Relay, in the Motor Reversing Relay required orientation. No other orientation is permissible.
- Ring and spade terminals shall be fully seated with no conductive material exposed.
- Ring and spade terminals shall be coated with protective dielectric grease to prevent corrosion

Tarp System Orientation for Side to Side Systems

The wiring diagrams are presented with the following two system orientations relative to driver facing forward in the vehicle

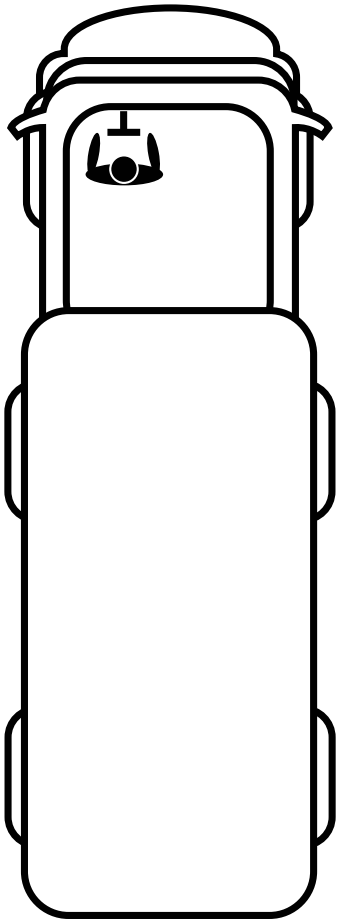
Left Side Uncovering

Tarp System is fully uncovered and the axle is on the left side of the driver.

Tarp System is fully covered and the axle is in lock-down position on to the right of the driver.







Right Side Uncovering

Tarp System is fully uncovered and the axle is on the right side of the driver.

Tarp System is fully covered and the axle is in lock-down position on to the left of the driver.





For Front to Back, flip style tarp systems, follow the orientation of the Right Side Opening Side to Side Systems.

Wiring Diagrams

Reference Pics for Wire Routing (Fig. 22 & 23)

Fig. 22



Fig. 23



Suggested Wire Routing using the Universal Bracket (White Reference Line)

Operating the System

- Factory Pairing is included in Gen1+ RF Receivers / RF Transmitters.
- Refer to the included Owners Guide for Installation Requirements, Power up / Power Down Functions, Pairing Procedure, Operating Modes & System Operations.

Optional Arm Spring Pressure Adjustments

Different types of loads and conditions may require your tarp to operate differently. That is why Roll Rite has designed your tarp system to be very versatile. Please see the steps below to adjust your arm if need be.

- To make arm carry higher over heaped loads: Increase the knuckle pressure or reduce the pressure in the base pivot box. Adjusting both will offer even more noticeable results.
- To make the arm follow the profile of the end caps: Decrease the knuckle pressure or increase the pressure in the base pivot box. Adjusting both will offer more noticeable results.

Maintenance Manual

Roll Rite, LLC designs its tarping systems and power kits to be as maintenance free as possible, contributing to the overall value of the product.

Maintenance intervals vary based on environmental conditions.

Roll Rite, LLC recommends that:

- *All electrical connections should be cleaned and greased regularly to prevent corrosion (fill all electrical boots, limit switch boots, etc. with dielectric grease). Electrical connections can be found at all motors, switches, contactors, limit switches, control boxes and batteries.*
- *All bearings with grease fittings and tower legs must be greased regularly.*
- *Check and tension all set screws. Set screws should be tightened until they touch and then torque them ¾ of a revolution beyond that.*
- *Check motor mounting bolts and torque to 70 in-lbs. (5.8 ft-lbs).*
- *All mounting hardware should be checked to insure all system components are securely fastened.*
- *Visually inspect all moving parts for abnormal or excessive wear.*

Once Again Roll Rite, LLC would like to Thank You for your business and offer you not only the finest product in our industry, but the best customer service as well. We would like to invite you to visit our web site at ***www.rollrite.com****, where you can find a complete set of parts diagrams.*

Additionally we would love to hear from you if you have any questions or issues:
Phone: (800)-297-9905
Fax: (989)-246-1035
Email: info@rollrite.com