



PREMIER
MANUFACTURING CO.

THE FIRST NAME IN QUALITY COUPLINGS

Installation, Inspection, Operation & Maintenance Guide



Model 640S / 640SA Front End Assembly

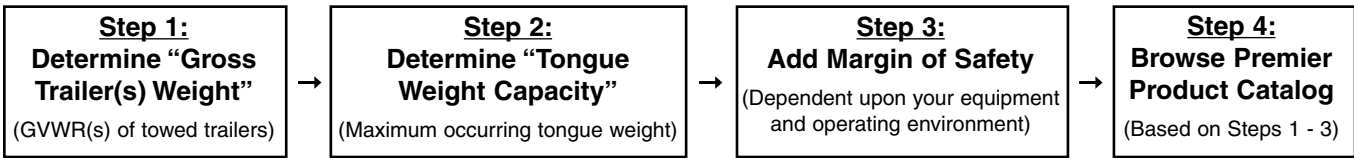
IMPORTANT

Read these instructions completely before installing, using or attempting to repair this product. If you have any questions, call Premier at (800) 255-5387 or (503) 234-9202.

Selecting The Right Equipment

Whatever your application, selecting the proper equipment for the job is very important. Proper selection along with regular inspection and maintenance will help keep operating costs minimal while providing long life to each component. Below are general guidelines for selecting Premier Couplings and Drawbar Eyes. If you feel that your application is unique, please give Premier a call so that we may help you through the selection process.

Follow these four steps to ensure proper selection of Premier Couplings and Drawbar Eyes.



Step 1: Determine "Gross Trailer(s) Weight"

"Gross Trailer(s) Weight" is usually determined by the Gross Vehicle Weight Rating (GVWR). This information is attached to the trailer by the trailer manufacturer.

Double Trailer Configuration



Example only, each application may vary and should be considered unique.

For "Double Trailer" configurations, only the rear trailer is considered when selecting your Premier Coupling or Drawbar Eye. In this example, a Coupling and Drawbar Eye with a "Gross Trailer Weight" rating of 40,000 lbs. (18,143 kg) would be the minimum rating acceptable for normal, over-the-road applications (see Tongue Weight section below).

Triple Trailer Configuration



Example only, each application may vary and should be considered unique.

For "Triple Trailers", only the two most rearward trailers are considered in selecting your Premier Coupling or Drawbar Eye. In this example, a Coupling and Drawbar Eye with a "Gross Trailer Weight" rating of 80,000 lbs. (36,287 kg) would be the minimum acceptable for normal, over-the-road applications (see Tongue Weight section below).

Step 2: Determine "Tongue Weight Capacity"



"**Tongue Weight Capacity**" is the maximum expected weight at the drawbar eye. If a hinged drawbar is used, the maximum weight will be approximately 1/2 the overall drawbar weight. If a non-hinged drawbar is used and the actual tongue weight is not known, you can approximate the weight by multiplying the GVWR of the towed trailer by 15%. However, each application is unique and the best practice is to weigh the tongue when the trailer is loaded to its GVWR.

Step 3: Considering Operating Conditions and Environments

Environments such as rough uneven roads or off-road use can dramatically increase shock loads to both drawbar eyes and couplings. In general, increasing the "Gross Trailer Weight" (Step 1:) and "Tongue Weight Capacity" (Step 2:) by a minimum of 25% will be sufficient for many applications. Even if an application is used off-road occasionally, the minimum increase necessary for Gross Trailer and Tongue Weight is 25%. Certain types of equipment and/or operating practices can also dramatically increase loads through equipment binding and/or improper loading practices. Of special concern is high tongue weight. However, each application is unique and every environment different, therefore your application may require more than 25%.

Once both "Gross Trailers(s) Weight" (Step 1:) and "Tongue Weight Capacity" (Step 2:) have been determined, evaluate your operating conditions and apply an appropriate margin of safety.

Step 4: Browse Premier Product Catalog

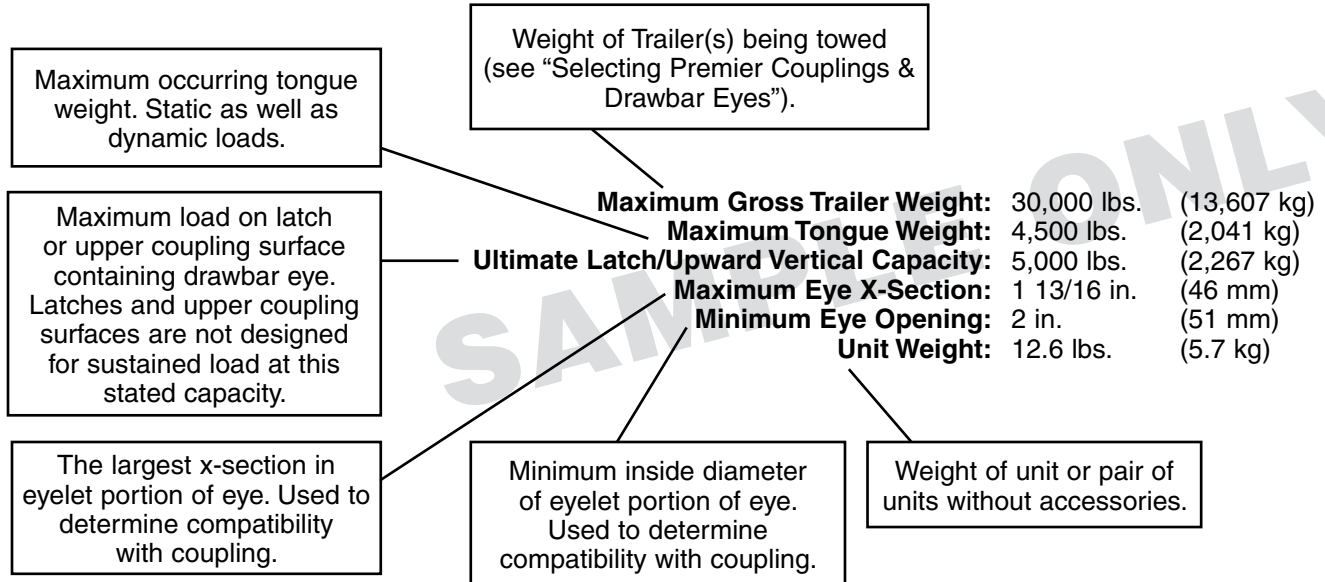
Browse the Premier Product Catalog and refer to the "Specifications" section of each product. Be sure to review the "Understanding Premier Load Specifications" section and "Coupling to Drawbar Eye Cross-Reference" sheet on the next couple pages.



Selecting The Right Equipment

Understanding Premier Load Specifications

Each Premier product undergoes extensive design and testing prior to being introduced. We use the latest in Computer Aided Design and Analysis Software as well as physical destructive tests. Premier's published load specifications are the maximum load a given product or part will withstand without failure. Premier's testing procedures closely follow the Society of Automotive Engineers (SAE) guidelines of Recommended Practice for testing Couplings and Drawbar Eyes (SAE J847 & J849).



Importance of Inspection and Maintenance

Whether you use Premier Jacks, Couplings, Drawbar Eyes, Hinge Assemblies or any other Premier product, regular inspection and maintenance are essential for proper function, keeping repair costs to a minimum and above all, safe and efficient operation.

To determine wear limits, Premier created Wear Gages that help judge the useful life of couplings and drawbar eyes (details in catalog). In accordance with Premier and the Federal Motor Carrier Safety Regulations, these were designed to identify wear at the critical percentages of 18% and 20%, by measuring the cross-section of coupling hooks (horn) and drawbar eye loops. 18% wear indicates that the product should be replaced as soon as possible. At 20% wear, the product is no longer in usable condition and must be taken out of service immediately and replaced. The latch gage bar measures the gap space between the top of the coupling hook and the closed latch. If the 3/8" latch gage bar can pass between this region, then the latch components should be considered worn past safe limits and replaced. Please note that these wear gage specifications are in accordance with Premier Mfg. Co. and the Federal Motor Carrier Safety Regulations (refer to other manufacturer's specifications for wear limits on their products).



Premier also provides Installation Guides for each of our major products. These help guide you through installation, inspection, routine maintenance and part replacement. Another resource is our website at www.premier-mfg.com. Here you will find Installation Guides, Service Guides, distributor locations, online catalogs, product information, trade show schedules and links to trucking resources.

"Premalloy" - Premier's Exclusive Alloy




"The harder you work it, the harder it gets" best describes how Premalloy performs.

Premalloy actually work hardens at the contact surfaces during normal use, which results in longer service life. Premalloy is highly recommended for off-road and aggregate type applications due to its wear resistant characteristics. Many of Premier's couplings are made from this exclusive material. As you are browsing the catalog, look for the Premalloy icon next to the product photos to determine which models are made of this material.



Selecting The Right Equipment

Coupling to Drawbar Eye Cross Reference Chart

|  | Drawbar Eyes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------|---|---|---|------|---|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|--------|--------|----------|-----|-----|-----|-----|-----|-----|-----|-------|-----|---|---|
| | 2* | 3 | 4 | 5 | 6/6A | 8 | 11 | 20 | 21 | 22 | 23 | 107 | 108 | 110 | 123 | 125 | 126 | 127 | 200 | 200L | 203 | 205 | 207 | 238DB† | 245DB† | 245DB-3† | 300 | 304 | 305 | 306 | 307 | 309 | 405 | 407SE | 410 | | |
| Couplings | 16 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | |
| | 24 | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 40 | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 100† | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | |
| | 100-4† | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | |
| | 130 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | | • | • | • | • | | |
| | 135NT | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | • | • | • | • | • | | | • | | | | | |
| | 140 | • | • | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 150 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| | 160 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| | 235NT | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | • | • | • | • | • | • | | | • | | | | |
| | 240 | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | • | • | • | • | • | |
| | 240K | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 270 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 290 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 360 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 370 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 370B | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 470 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 470H | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 480 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 570 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 580 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 580J | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 590 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 690/690T | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 770 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 780 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| | 790 | | | | | | | | | | | | | | | | | | | | | | | | • | | • | • | • | • | • | • | • | • | | | |
| | 880 | | | | | | | | | | | | | | | | | | | | | | | | • | | • | • | • | • | • | • | • | • | | | |
| 890/890C | | | • | • | • | • | • | • | • | • | • | | | • | • | • | • | | • | • | • | • | | • | • | • | • | • | • | | | • | | | | | |
| 2200 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| 2300 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| 2300B | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| 2400 | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| 2400H | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |

† Saf-Tite Product

* Industrial Application

CAUTION: Verify that both the coupling's and drawbar eye's rated capacities meet your application(s) requirements.



Model 640S / 640SA Front End Assembly

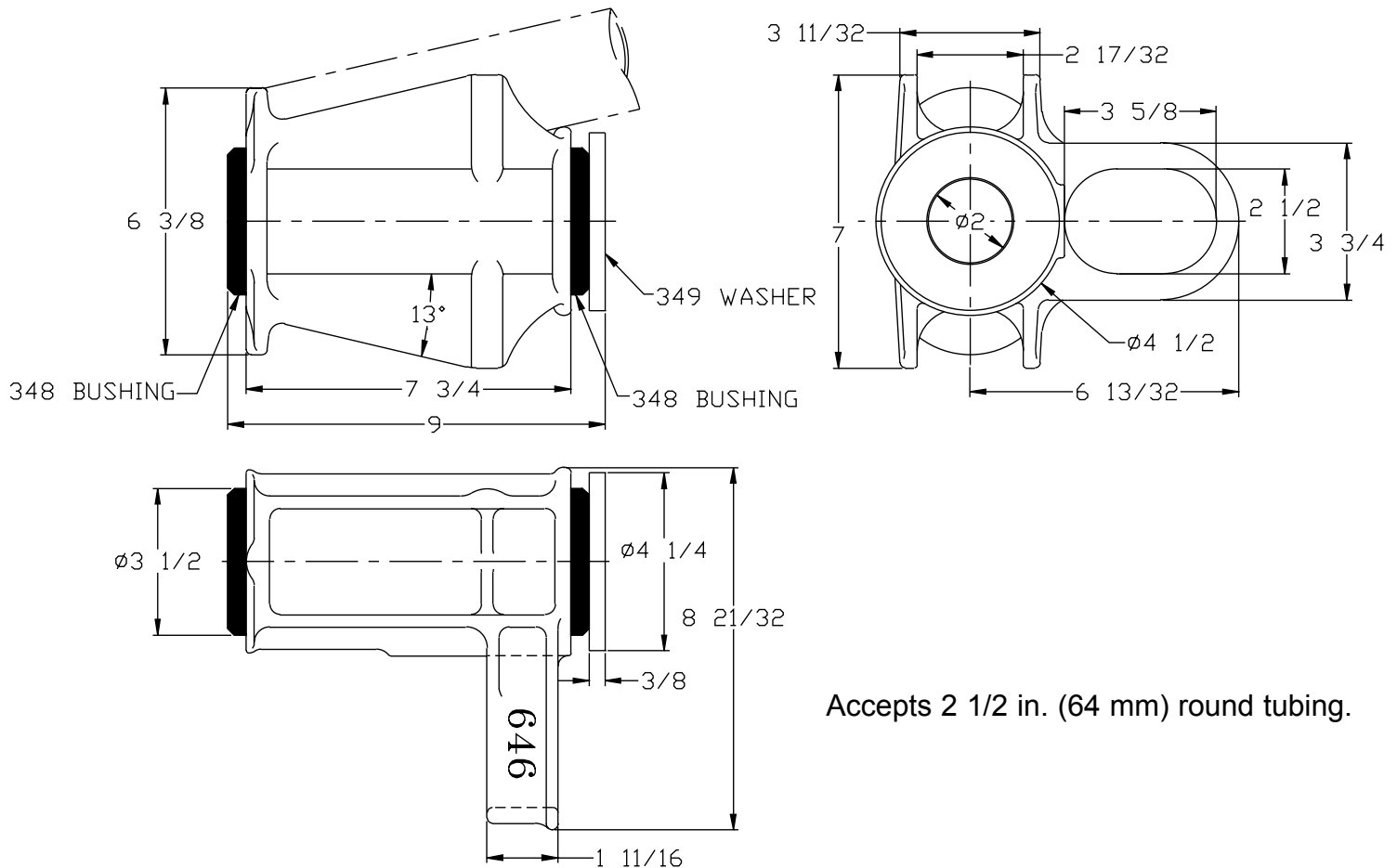
SPECIFICATIONS

SAFETY WARNING

This product is designed for towing under normal conditions within the stated gross trailer weight capacity of the drawbar eye being used. Do not overload or abuse this product. Overloading or abuse may lead to property damage, severe injury, or death.

| | | |
|------------------------|-----------|----------|
| Bushing I.D.: | 2 in. | (51 mm) |
| Bushing O.D.: | 3 1/2 in. | (89 mm) |
| Bushing Length: | 3 1/2 in. | (89 mm) |
| Unit Weight: | 19.3 lbs. | (8.8 kg) |

STANDARD INSTALLATION DRAWING



PARTS & ACCESSORIES

Parts Included

- 646 Housing
- 349 Washer
- 348 or *348A Bushings
(*640SA comes with 348A Poly Bushings)

Drawbar Eye is NOT included

(Use ONLY Premier's Drawbar Eyes):

- 207S Drawbar Eye
- 307S Drawbar Eye
- 405S Drawbar Eye
- 410S Drawbar Eye

Bushing Replacements

(Use ONLY Premier's Bushings):

- 348 (Rubber) or 348A (Poly)



Model 640S / 640SA Front End Assembly

INSTALLATION

These instructions are ONLY for Premier 207S, 307S, 405S and 410S Drawbar Eyes, and Premier 348 and 348A Bushings, installed in a Premier 640S or 640SA Front End Assembly. Any substitution or use of non-Premier components in the 640S/640SA Front End Assembly VOIDS ALL PRODUCT WARRANTY.

Installation Procedure:

1. The 640S and 640SA Front End Assemblies and accompanying drawbar eye must be installed to comply with the Federal Motor Carrier Safety Regulations. Specifically, Section 393.70, Paragraph C: "Towing of Full Trailers." Prior to install or operation, consult with local, State and Federal agencies, as there may be additional applicable laws governing installation and use of this product.
 2. One of the three attached Welding Procedure Specifications; GMAW, SMAW or FCAW, must be followed. Welding should only be performed by a certified welder skilled in structural welding practices.
 3. All weld locations must be clean, paint free and void of any moisture, oil, grease, oxides or loose or thick scale.
 4. The front end structure that the 646 Housing attaches to must be of sufficient strength to withstand the load rating of the drawbar eye it is used with. The housing accommodates a front end structure consisting of two 2 1/2" round tubes with a converging angle of 26° as shown in Figure 1.
 5. Fit-up, between both tubes and the mounting surfaces of the 646 Housing, must be flush as failure to have a flush fit prior to welding will cause the capacities to be negatively affected. Figure 1A shows one possible example of an improper fit-up that must be avoided.
 6. Attach the 646 Housing to the front end tubes with a minimum 3/8" fillet weld that encompasses the entire interface between the housing and each tube as shown in Figure 1.
- ### 640S / 640SA Assembly after Welding
- (Premier 207S, 307S, 405S & 410S Drawbar Eyes only)
(640S: Premier 348 Rubber Bushings only)
(640SA: Premier 348A Poly Bushings only)
7. Allow the finished structure to cool.
 8. Slide the bushings into each end of the 646 Housing.
 9. Using extreme caution to avoid damaging or nicking the threads, slide the drawbar eye all the way through each bushing.
 10. Clean and lubricate all visible threads.
 11. Slide the 349 Washer onto the threaded end of the drawbar eye.
 12. Lubricate the open face of the 349 Washer with 30wt. oil where the 416 Locknut will rotate against it (see Figure 3).
 13. Thread the 416 Locknut onto the drawbar eye just far enough to remove any free play from the 349 Washer.
 14. If an initial gap exists between the flat flanged base of the drawbar eye and the face of the front bushing (see Figure 2), then slowly tighten the 416 Locknut until the gap just disappears as shown in Figure 3.
 15. Note the location of one of the 416 Locknut faces relative to a spot on the 646 Housing (see Figure 3).
 16. Tighten the 416 Locknut:
 - Using 348 Rubber Bushings: Turn the 416 Locknut no fewer than three complete revolutions from the position shown in Figure 3.
 - Using 348A Poly Bushings: Turn the 416 Locknut no fewer than four complete revolutions from the position shown in Figure 3.
 17. Place the 208 Snap Ring in the groove at the end of the drawbar eye shaft to complete the assembly as shown in Figure 4. Use caution when installing the snap ring and make certain not to over expand it as this will cause permanent damage to the snap ring.



Model 640S / 640SA Front End Assembly

INSTALLATION

18. For the final installation instructions of the 640S/640SA Front End Assembly using a 405 or 410 Swivel Drawbar Eye, reference the drawbar eye's specific Installation, Inspection, Operation and Maintenance Guide. These guides include instructions for attaching Premier's 281 or 282 Air Chamber rod to the 405 or 410 Drawbar Eye Pushrod.

19. "IMPORTANT WARNINGS!" sticker was enclosed. This must be attached to the front end, adjacent to the drawbar eye, visible for the end user to read.

Please note: All applications vary and this is a recommended install starting point for bushing tightness at 70°F ambient air temperature. Varying conditions and applications may require a different initial set up.

Figure 1

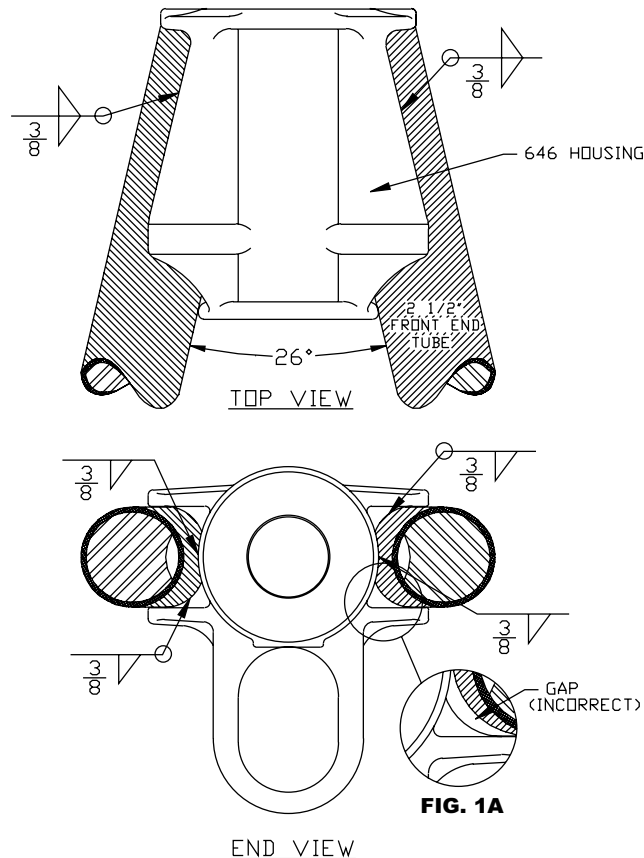
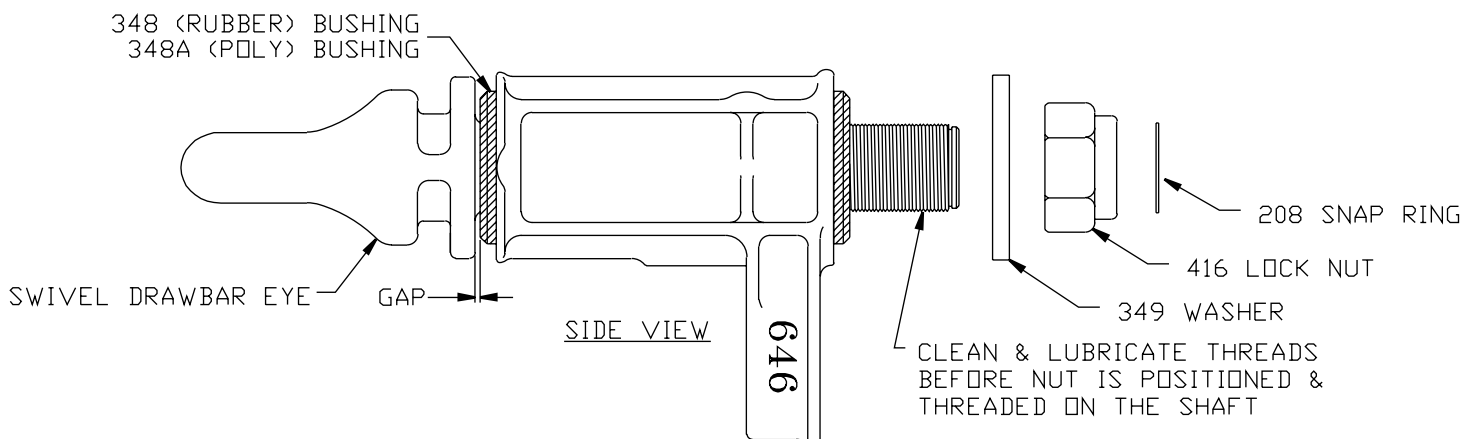


Figure 2



Model 640S / 640SA Front End Assembly

INSTALLATION

Figure 3

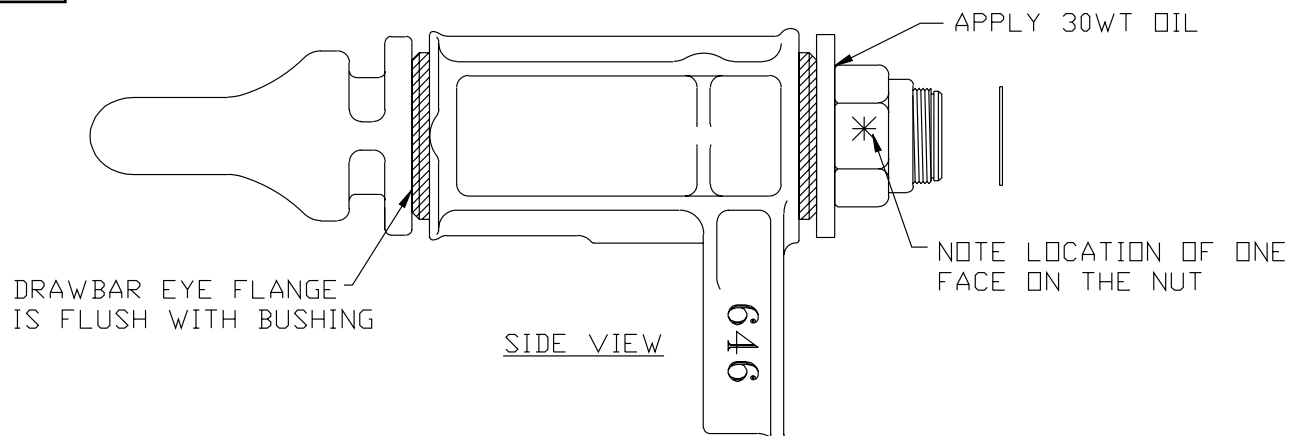
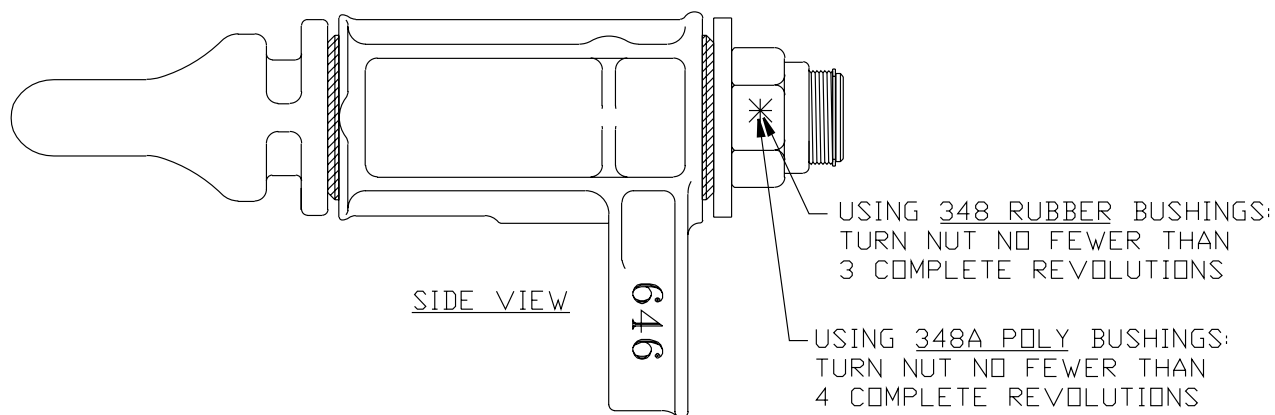


Figure 4



Model 640S / 640SA Front End Assembly

INSPECTION / OPERATION / MAINTENANCE

1. Visually inspect the drawbar eye for cracks, impact damage and/or deformation before each and every use. Do NOT use if any of these conditions exist.
2. If the original cross-section of the eye loop has been reduced by 20% or greater, the drawbar eye is NOT to be used and is considered out-of-service.
3. Over time, slack may develop between the bushings and drawbar eye. Therefore, clean and inspect every 90 days or sooner if your application dictates, and adjust or replace the bushings if slack is noted.
4. This product is designed to be operated within its free rotation limits. It is the responsibility of the vehicle designer/end user to assure that these limits are not exceeded (not binding/jackknife).
5. **WARNING:** Prior to towing, make certain that adequately rated safety chains have been properly connected.
6. Never weld on any Premier drawbar eye in order to repair damaged or worn areas. Field and/or shop weld repairs are inadequate and may further weaken the drawbar eye.

IMPORTANT GUIDELINES that apply to all Premier Front End Assemblies

- Never attempt weld repair of damaged or worn drawbar eyes or front end assemblies
- Clean and inspect drawbar eyes and eye assemblies for damage or excessive wear before each and every use
- All welds should be performed by a certified welder skilled in structural welding practices
- Drawbar structure as well as welds attaching front end assembly to drawbar must be of sufficient strength to withstand the load rating of the drawbar eye
- Do not bind-up (Jackknife) any application as stresses can cause damage to products or components, resulting in failure and detachment of the trailer while in use
- Do not apply lubricants to the coupling hook or drawbar eye loop, as they can cover up possible damage and accelerate wear



Model 640S / 640SA Front End Assembly

WELDING PROCEDURES

WELDING PROCEDURE SPECIFICATION (WPS) Yes (X)
PREQUALIFIED (X) QUALIFIED BY TESTING (X) or PROCEDURE
QUALIFICATION RECORD (PQR) Yes (X)

| | | | |
|---|--|--|---------------------|
| GMAW | | Identification #: PMEM-1 | |
| Revision 0 | | Date: 2/1/00 | By: PI |
| Company Name: Premier Manufacturing Co. | | Authorized By: | |
| Welding Process(es): GMAW | | Type: Manual: | Semi-Automatic: (X) |
| Supporting PQR No.(s): N/A Prequalified | | Machine: | Automatic: |
| JOINT DESIGN USED | | POSITION | |
| Type: All Fillets, Butts (See Attached) | | Position of Groove: 1G, 2G | |
| Single (X) Double Weld (X) | | Vertical Progression: Up (X) Down () | |
| Backing: Yes (X) No (X) | | ELECTRICAL CHARACTERISTICS | |
| Backing Material: M1-P1-S1 Group 1 & 2 | | Transfer Mode (GMAW) short-circuiting () | |
| Root Opening: --- | | Globular (X) Spray (X) | |
| Groove Angle: --- | | Current: AC () DCEP(X) DCEN () Pulsed () | |
| Back Gouging: Yes (X) No (X) Method: Mech/Thermal | | Other: | |
| BASE METALS | | TECHNIQUE | |
| Material Spec.: M1-P1-S1 1026 Carbon Steel | | Stringer or Weave Bead: String or Weave | |
| Type or Grade: Group 1 & 2 | | Multi-Pass or Single Pass (per side): Single, Multiple | |
| Thickness: Groove: 1/8 - 1 1/8" Fillet: Unlimited | | Number of electrodes: Single | |
| Diameter (Pipe): 4" minimum | | Electrode Spacing: | |
| FILLER METALS | | Longitudinal: --- | |
| AWS Specification: A5.18 | | Lateral: --- | |
| AWS Classification: E70S-1 | | Angle: --- | |
| SHIELDING | | Contact Tube to Work Distance: 3/4" ± 1/8" | |
| Flux: | | Peening: Recommended | |
| Gas: CO ₂ | | Interpass Cleaning: Mechanical | |
| Composition: 100% | | POSTWELD HEAT TREATMENT | |
| Electrode-Flux (Class) | | Flow Rate: 30-50 cfh | |
| Gas Cup Size: 1/2" Dia. | | Temp.: --- | |
| PREHEAT | | Time: --- | |
| Preheat Temp.: Min.: 100°F | | | |
| Interpass Temp.: Min.: 100°F Max.: 500°F | | | |

| WELDING PROCEDURE | | | | | | | | |
|-----------------------|---------|---------------|-------|-----------------|-------------------------|-------|--------------|---------------|
| Pass or Weld Layer(s) | Process | Filler Metals | | Current | | Volts | Travel Speed | Joint Details |
| | | Class | Diam. | Type & Polarity | Amps or Wire Feed Speed | | | |
| All | GMAW | E70S-X | 0.035 | DCEP | 190-230 | 22-31 | 13 ± 1 IPM | See Attached |
| All | GMAW | E70S-X | 0.045 | DCEP | 260-290 | 27-31 | 13 ± 1 IPM | |

WELDING PROCEDURE SPECIFICATION (WPS) Yes (X)
PREQUALIFIED (X) QUALIFIED BY TESTING () or PROCEDURE
QUALIFICATION RECORD (PQR) Yes ()

| | | | |
|---|--|---|-----------------|
| SMAW | | Identification #: PMSMA-1 | |
| Revision 0 | | Date: 2/1/00 | By: PI |
| Company Name: Premier Manufacturing Co. | | Authorized By: | |
| Welding Process(es): SMAW | | Type: Manual: (X) | Semi-Automatic: |
| Supporting PQR No.(s): N/A (Pre-Qualified) | | Machine: | Automatic: |
| JOINT DESIGN USED | | POSITION | |
| Type: All Fillets-Butts (See Attached) | | Position of Groove: All | |
| Single (X) Double Weld (X) | | Vertical Progression: Up (X) Down () | |
| Backing: Yes (X) No (X) | | ELECTRICAL CHARACTERISTICS | |
| Backing Material: M1-P1-S1, Group 1 & 2 | | Transfer Mode (GMAW) short-circuiting () | |
| Root Opening: --- | | Globular () Spray () | |
| Groove Angle: --- | | Current: AC () DCEP (X) DCEN () Pulsed () | |
| Back Gouging: Yes (X) No (X) Method: Mech/Thermal | | Other: | |
| BASE METALS | | TECHNIQUE | |
| Material Spec.: M1-P1-S1 1026 Carbon Steel | | Stringer or Weave Bead: String and Weave | |
| Type or Grade: Group 1 and 2 | | Multi-Pass or Single Pass (per side): Multiple/Single | |
| Thickness: Groove: 1/8"-1 1/2" Fillet: Unlimited | | Number of electrodes: Single | |
| Diameter (Pipe): 4" Minimum | | Electrode Spacing: | |
| FILLER METALS | | Longitudinal: N/A | |
| AWS Specification: A5.1 -A5.5 | | Lateral: N/A | |
| AWS Classification: E7018 | | Angle: N/A | |
| SHIELDING | | Contact Tube to Work Distance: N/A | |
| Flux: | | Peening: Recommended | |
| Gas: N/A | | Interpass Cleaning: Mechanical Only | |
| Composition: N/A | | POSTWELD HEAT TREATMENT | |
| Electrode-Flux (Class) | | Flow Rate: N/A | |
| Gas Cup Size: N/A | | Temp.: N/A | |
| PREHEAT | | Time: N/A | |
| Preheat Temp.: Min.: 100°F | | | |
| Interpass Temp.: Min.: 100°F Max.: 500°F | | | |

| WELDING PROCEDURE | | | | | | | | |
|-----------------------|---------|---------------|-------|-----------------|---------------------------|-------|--------------|---------------------------|
| Pass or Weld Layer(s) | Process | Filler Metals | | Current | | Volts | Travel Speed | Joint Details |
| | | Class | Diam. | Type & Polarity | (Amps) or Wire Feed Speed | | | |
| All | SMAW | E7018 | 3/32" | DCEP | 70-110 | 19-22 | As Required | See Attached And AWS D1.1 |
| All | SMAW | E7018 | 1/8" | DCEP | 90-150 | 20-24 | | |
| All | SMAW | E7018 | 5/32" | DCEP | 120-190 | 20-24 | | |

WELDING PROCEDURE SPECIFICATION (WPS) Yes (X)
PREQUALIFIED (X) QUALIFIED BY TESTING () or PROCEDURE
QUALIFICATION RECORD (PQR) Yes ()

| | | | |
|---|--|---|-----------------|
| FCAW | | Identification #: PMFC-1 | |
| Revision 0 | | Date: 2/1/00 | By: PI |
| Company Name: Premier Manufacturing Co. | | Authorized By: | |
| Welding Process(es): FCAW | | Type: Manual: (X) | Semi-Automatic: |
| Supporting PQR No.(s): N/A (Pre-Qualified) | | Machine: | Automatic: |
| JOINT DESIGN USED | | POSITION | |
| Type: All Fillets-Butts (See Attached) | | Position of Groove: All | |
| Single (X) Double Weld (X) | | Vertical Progression: Up (X) Down () | |
| Backing: Yes (X) No (X) | | ELECTRICAL CHARACTERISTICS | |
| Backing Material: M1-P1-S1, Group 1 & 2 | | Transfer Mode (GMAW) short-circuiting () | |
| Root Opening: --- | | Globular (X) Spray (X) | |
| Groove Angle: --- | | Current: AC () DCEP(X) DCEN () Pulsed () | |
| Back Gouging: Yes (X) No (X) Method: Mech/Thermal | | Other: | |
| BASE METALS | | TECHNIQUE | |
| Material Spec.: M1-P1-S1 1026 Carbon Steel | | Stringer or Weave Bead: String and Weave | |
| Type or Grade: Group 1 and 2 | | Multi-Pass or Single Pass (per side): Multiple/Single | |
| Thickness: Groove: 1/8"-1 1/2" Fillet: Unlimited | | Number of electrodes: Single | |
| Diameter (Pipe): 4" Minimum | | Electrode Spacing: | |
| FILLER METALS | | Longitudinal: N/A | |
| AWS Specification: A5.20 | | Lateral: N/A | |
| AWS Classification: E70T-1/E71T-1 | | Angle: N/A | |
| SHIELDING | | Contact Tube to Work Distance: 3/4" ± 1/4" | |
| Flux: | | Peening: Recommended | |
| Gas: CO ₂ | | Interpass Cleaning: Mechanical Only | |
| Composition: 100% | | POSTWELD HEAT TREATMENT | |
| Electrode-Flux (Class) | | Flow Rate: 30-50 cfh | |
| Gas Cup Size: 1/2" Dia. Min. | | Temp.: N/A | |
| PREHEAT | | Time: N/A | |
| Preheat Temp.: Min.: 100°F | | | |
| Interpass Temp.: Min.: 100°F Max.: 500°F | | | |

| WELDING PROCEDURE | | | | | | | | |
|-----------------------|---------|---------------|-------|-----------------|---------------------------|-------|--------------|---------------------------|
| Pass or Weld Layer(s) | Process | Filler Metals | | Current | | Volts | Travel Speed | Joint Details |
| | | Class | Diam. | Type & Polarity | (Amps) or Wire Feed Speed | | | |
| All | FCAW | E70T-1 | 0.045 | DCEP | 180-280 | 24-28 | As Required | See Attached And AWS D1.1 |
| All | FCAW | E71T-1 | 0.052 | DCEP | 190-300 | 24-29 | | |
| All | FCAW | | 0.068 | DCEP | 210-350 | 24-29 | | |
| All | FCAW | | 5/64" | DCEP | 250-400 | 26-30 | | |



ATTENTION !

End Users must read and follow this information.

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- | | |
|---|---|
| <ul style="list-style-type: none">(1) VERIFY THAT BOTH COUPLING'S AND DRAWBAR EYE'S RATED CAPACITIES MEET YOUR APPLICATION(S) REQUIREMENTS.(2) DO NOT OVERLOAD COUPLING OR DRAWBAR EYE.(3) INSPECT COUPLING, LATCH AND DRAWBAR EYE FOR CRACKS, BENDING DAMAGE OR EXCESSIVE WEAR. DO NOT USE IF ANY OF THESE CONDITIONS EXIST!(4) CHECK FOR GAP BETWEEN CLOSED LATCH AND TOP OF HORN OR COUPLING BALL. DO NOT USE IF GAP IS 3/8 IN. OR MORE.(5) MAKE SURE COUPLING IS LATCHED AND THAT LATCH WILL NOT OPEN.(6) PRIOR TO USE, ALWAYS CONNECT SAFETY CHAINS OF ADEQUATE STRENGTH FOR LOAD(S) BEING TOWED.(7) DO NOT BIND-UP (JACKKNIFE) ANY APPLICATION AS STRESSES CAN CAUSE DAMAGE TO THE COUPLING, DRAWBAR EYE, OTHER COMPONENTS OR ANY COMBINATION OF THEM. JACKKNIFING MAY RESULT IN FAILURE OF PRODUCTS OR COMPONENTS, RESULTING IN DETACHMENT OF THE TRAILER WHILE IN USE. | <ul style="list-style-type: none">(8) DO NOT APPLY LUBRICANTS TO THE COUPLING HOOK OR DRAWBAR EYE LOOP, AS THEY CAN COVER UP POSSIBLE DAMAGE AND ACCELERATE WEAR.(9) ALWAYS ABIDE BY ALL APPLICABLE STATE AND FEDERAL REGULATIONS GOVERNING SAFE AND PROPER TRANSPORTATION.(10) NEVER STRIKE ANY OF THESE COMPONENTS WITH A HAMMER OR ANY OTHER DEVICE.(11) ALWAYS VERIFY PROPER OPERATION OF LATCHING SYSTEM AND COUPLING COMPONENTS PRIOR TO DRIVE OFF.(12) NEVER USE A COUPLING THAT YOU DO NOT FULLY UNDERSTAND HOW TO PROPERLY OPERATE AND VERIFY SECURE LATCHING OF.(13) NEVER REPLACE ANY PART IN ANY OF PREMIER'S ASSEMBLIES WITH NON-PREMIER COMPONENTS. DOING SO WILL VOID ALL WARRANTY AND POTENTIALLY COMPROMISE THE UNIT'S INTEGRITY, WHICH COULD RESULT IN PROPERTY DAMAGE, SERIOUS INJURY, OR DEATH. |
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Model 640S/640SA Front End Assembly
Installation, etc.
Revised: 04/09

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