



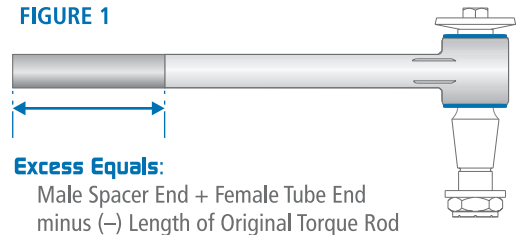
DATE	PRODUCT	SUBJECT
MARCH 2017	TWO-PIECE TORQUE RODS	WELDING INSTRUCTIONS

## Pre-assembly Metal Preparation

Prior to conducting any work, review and follow this technical publication and all applicable installation, preventive maintenance, service and safety instructions issued by the respective vehicle and suspension manufacturers. For other topics, refer to additional URO publications available online at [www.uroproducts.com](http://www.uroproducts.com)

1. Select the appropriate end type for the cross-member end, frame rail and axle end of the existing torque rod.
2. Assemble the male spacer end into the base of the female tube end until it bottoms out in the female tube end. Measure for excess, see Figure 1.

**FIGURE 1**



### **CAUTION**

BE SURE TO WEAR PROPER EYE, AND HEARING PROTECTION AND USE PROPER PERSONAL CLOTHING PROTECTION WHEN PERFORMING STEPS 3 AND 4.

3. Remove the excess male spacer end using abrasive cutting or sawing methods. End face of the male spacer end should be cut square. DO NOT use flame or arc cut methods.
4. Remove all grease, oil, rust or oxides from the metal surfaces to be welded by grinding, filing or power brushing.

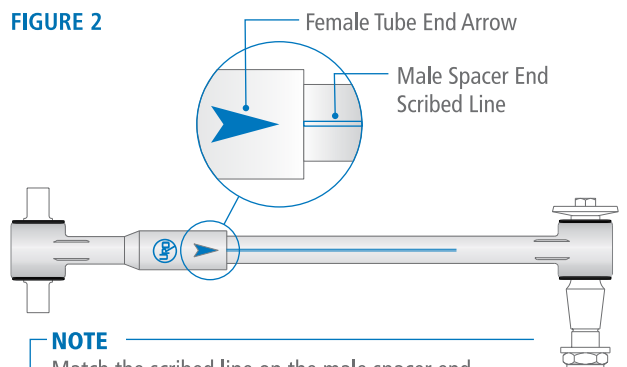
## Welding Procedure

### **WARNING**

THE WELDING PROCEDURE DESCRIBED MUST BE PERFORMED BY AN ASME OR AWS QUALIFIED WELDING OPERATOR. AN EFFECTIVE WELD BETWEEN THE MALE SPACER END AND THE FEMALE TUBE END IS CRITICAL TO THE SAFE OPERATION AND PERFORMANCE OF THESE PARTS. URO SHALL NOT BE RESPONSIBLE FOR WELDING AND FABRICATION PERFORMED BY THE PURCHASER OR THE USER OF THIS PRODUCT.

5. Assemble the male spacer end into the base of the female tube end until it bottoms out in the female tube end. Check for correct fit and length.
6. Rotate the male spacer end until the scribed line is positioned with the arrow on the female tube end. Hold in position for fillet weld, refer to Figure 2.

**FIGURE 2**



**NOTE**

Match the scribed line on the male spacer end with the female tube end arrow and weld

CONTINUED ON BACK



7. Complete assembly by welding a minimum  $\frac{1}{4}$ " convex fillet weld. This weld must obtain full root penetration with equal legs sufficient to provide metallurgical fusion between the weld and the base metal. **DO NOT** undercut or overlap.
- Inspect the welded assembly using dye, fluorescent or magnetic particle NDT (nondestructive testing) techniques. Any weld gaps or voids of  $\frac{1}{16}$ " or larger in size are not acceptable and must be repaired and re-inspected before the torque rod is placed into service.

## WELDING PROCESS

**TYPE: Preferred:** GMAW (Gas Metal Arc Welding), commonly referred to as MIG welding.

**Alternate:** SMAW (Shielded Metal Arc Welding) commonly referred to as stick, arc or coated electrode welding.

**CURRENT:** DC Reverse Polarity

**SHIELDING GAS:** (GMAW process only) 100% CO<sub>2</sub> or 75% Argon - 25% CO<sub>2</sub> (C25) at 30 CFH flow.

**FILLER METAL:** GMAW - AWS #ER70S-6, SMAW - (Coated electrode), AWS #E6010 or E7018.

**COMPONENT POSITION:** All components are to be positioned so welding can be performed in the #1F (Flat Roller Fillet) position only.

**BASE METAL:** Male Spacer End and Female Tube End: SAE 1030

### NOTE:

No preheating or post heating of metal is required.

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