

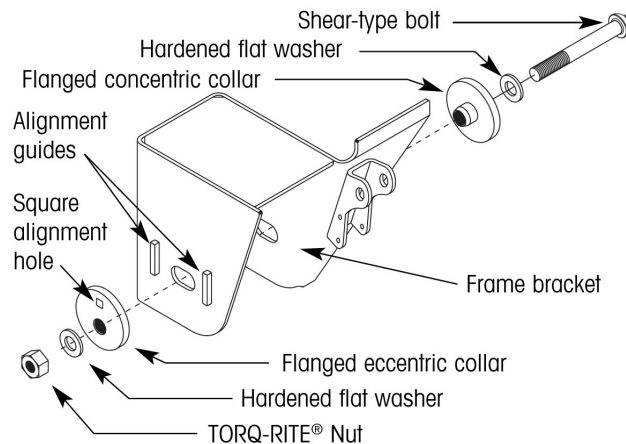


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Subject: QUIK ALIGN FASTENER REPLACEMENT
Date: AUGUST - 2009 Revision: A

INTRODUCTION

1. The introduction of the tamper resistant Hendrickson QUIK-ALIGN pivot connection fastener system, (Figure One) has successfully enabled trailer original equipment manufacturers (OEM's) and logistic support agencies, to guarantee that their wheel alignment settings shall not be able to be adjusted without obvious markings to the pivot connection hardware.
2. Feedback from trailer logistic support organisations has identified however, that adjustment of the trailer wheel alignment, may require the use of grinding equipment to remove the connection. The purpose of this technical bulletin is to detail an efficient procedure to safely remove and replace the Hendrickson QUIK-ALIGN pivot connection system, without the requirement to grind and decant fuel in fuel tankers.
3. The following literature is also applicable to the Hendrickson QUIK-ALIGN pivot connection system:
 - a. L1072 QUICK-ALIGN Pivot Connection Fastener Information,
 - b. B106 Pivot Bushing Inspection Procedures,
 - c. L427 Pivot Bushing Replacement Procedures,
 - d. L579 Alignment Procedure, and
 - e. L750 Bushing Tube Spacer Inspection / Replacement Procedure.

Figure One - QUIK-ALIGN SYSTEM



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QUIK-ALIGN OVERVIEW

4. The QUIK-ALIGN alignment feature incorporates two flanged collars that are inserted into slots located on each side of the frame bracket. The outboard flanged collar is eccentric. Its outside diameter is guided by an adjustment guide. Rotating the eccentric washer clockwise or counter clockwise provides fore or aft movement at the suspension's axle. The pivot connection is clamped together with a torque prevailing heavy hex nut, hardened washer and shear type bolt. The shear type bolt ensures proper torque and eliminates the need for a torque wrench.

DOME HEAD PIVOT BOLT REMOVAL

HENDRICKSON DOES NOT AUTHORISE RE-USE OF THE BOLT



WARNING

THE SHEAR-TYPE BOLT MUST NOT BE RE-USED. WHENEVER THE PIVOT CONNECTION IS DISASSEMBLED, THE EXISTING SHEAR-TYPE BOLT MUST BE REMOVED AND DISCARDED, ALONG WITH THE EXISTING HEX NUT. A NEW SHEAR-TYPE BOLT AND HEX NUT MUST BE INSTALLED AND SHEARED TO ACHIEVE THE PROPER PIVOT CONNECTION TORQUE AND CLAMP FORCE. ANYONE WHO ASSEMBLES OR REASSEMBLES THE PIVOT CONNECTION (OEM'S, DEALERS, REPAIR FACILITIES ETC) IS RESPONSIBLE FOR THE PROPER INSTALLATION OF THE SHEAR-TYPE BOLT.

- 5. Remove the shear head bolt in accordance with the following steps:
 - a. Spray a liberal amount of anti seize onto the inboard hex nut.
 - b. With a 2nd Cut Millsaw file, file a flat on the dome head bolt - Figure Two.
 - c. File an additional flat section on the opposing side - Figure Three.
 - d. Attach Vise Grip style pliers to the filed flat section of the dome head bolt – Figure Four.
 - e. Loosen, remove and discard the dome head bolt / hex head nut.

Figure Two - Initial Filed Section Figure Three - Additional Filed Section Figure Four - Vise Grip Pliers

Opposing Filed Flats



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QUIK-ALIGN PIVOT BOLT REPLACEMENT

6. The replacement QUIK-ALIGN Pivot Bolt is available in a kit, part number S-24679 and consists of replacement bolt, hexagonal nut, and hardened washers. The following steps must be followed to ensure correct fitment of the QUIK-ALIGN Pivot Bolt:

- a. Clean any surface rust from the hanger alignment collars and frame bracket surface and inspect for excess wear.
- b. Install the new QUIK-ALIGN Pivot Bolt, hardened washers and hexagonal nut.

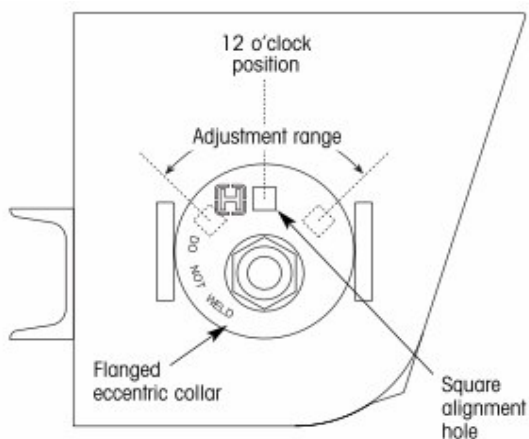


CAUTION

During the replacement process DO NOT APPLY an anti-seize compound to the pivot connection hardware or allow undercoating, paint, lubricant, or any other commonly used compounds to contact the threads of the pivot connection fasteners. These compounds can act like a lubricant, reducing friction between the nut and bolt. This can lead to over tightened fasteners, unpredictable pivot connection clamp loads and unreliable axle alignments.

- c. Inspect the orientation of the square alignment hole in the flanged collar (Figure Five). The commencement point should be with the alignment square hole at the 12 o'clock position, which is the middle of the adjustment range. A 1/2 inch breaker bar can be used in the square flanged eccentric collar to enable the collar to be rotated to the 12 o'clock position.
- d. Gradually tighten the QUIK-ALIGN Pivot Bolt until the flat hardened washers just stop rotating. Any further tightening of the pivot bolt or **rotation** of the eccentric collar (to effect adjustment) must be accompanied by tapping of the concentric collar (inboard side of frame hanger) with a hammer.

Figure Five - Eccentric collar orientation details



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IMPORTANT

Tapping allows the flanged concentric and eccentric collars to move and adjust in unison and enable correct seating - **Figure Six**. If the collars do not move and adjust in unison, the concentric collar may wedge or be partially raised on the frame bracket alignment guides - **Figure 7**. This action can cause an improper pivot connection that could potentially loosen and lead to an inaccurate alignment.

Figure Six – Correctly Installed QUIK-ALIGN Pivot Connection prior to shear.

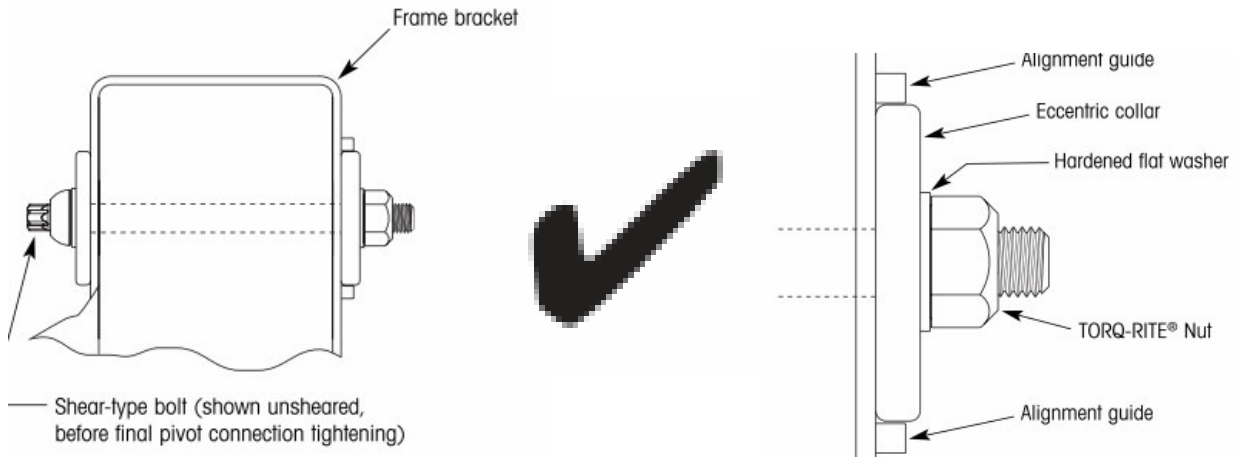
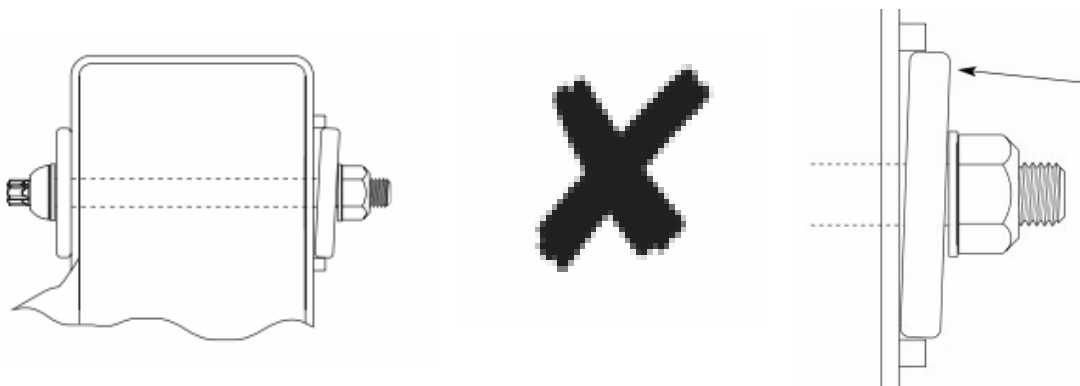


Figure Seven - Partially raised / wedged collar due incorrect tightening process.



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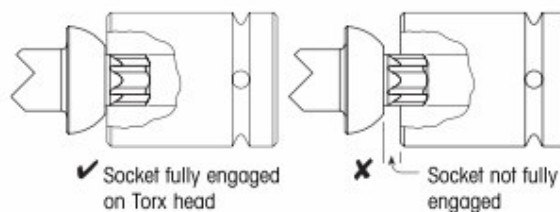


- e. On completion of all wheel alignment adjustments, tighten the QUIK-ALIGN Pivot Bolt using an E20 Torx Socket (see Table One), until the Torx head shears off. This ensures proper torque of 740 N.m (550 ft-lb) plus or minus 60 N.m. To avoid damaging the shear bolts Torx head (regardless of the drive socket being used), the drive socket must fully engage the Torx head. **See Figure Eight.**
- f. Inspect the surface between the concentric – eccentric washers and the frame hanger to ensure correct seating and that there is no evidence of a wedged collar - detailed at **Figure Six.**

Table One - Hendrickson E20 Torx Socket

DESCRIPTION	DRIVE SIZE	PIVOT CONNECTION	COMMENTS
E20 Torx Socket (part # A-24303)	¾"	QUIK-ALIGN®	For occasional use (not recommended for high-volume trailer production environments)
E20 Torx Socket (part # A-24536)	1"	QUIK-ALIGN	For medium-duty use (dealers, repair facilities, etc.)
E20 Torx Socket with sleeve (part # A-25119)	1"	QUIK-ALIGN	For high-volume trailer production environments or manufacturing facilities. The sleeve provides greater operator control.

Figure Eight - Socket Engagement



WARNING

AN IMPROPERLY TORQUED PIVOT CONNECTION CAN RESULT IN INJURY AND /OR PROPERTY DAMAGE

ENSURE IMPACT GUN IS SUPPORTED DURING TIGHTENING PROCESS TO MAINTAIN CONTROL OF THE IMPACT GUN AS THE HEAD OF BOLT SHEARS AWAY.

HENDRICKSON DO NOT AUTHORISE RE-USE OF THE BOLT

Anyone who assembles or re-assembles the pivot connection (OEMs dealers, repair facilities etc) is responsible for the proper installation of the shear bolt.

IMPORTANT

Do not attempt to reuse a shear-type bolt.

Any questions in relation to this Technical Bulletin please forward to the Hendrickson Product Support Group: Telephone (03) 8792 3600 or email to: technicalservice@hendrickson.com.au

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