



## Upper Link Modification

### Issue

The bolts used to retain the upper link spacers need secondary retention. This is required to maintain integrity of the connection between the bolt, spacer, and nut in the event of a failure. For example, shearing of the bolt.

### Recommendation

Canrig recommends the following course of action:

1. Visually inspect the upper links and spacers at next inspection interval.
2. Replace the bolts with wired grade 8 bolts.
3. Drill a 3/16" diameter through hole on the end of the bolts. See Figure 1.

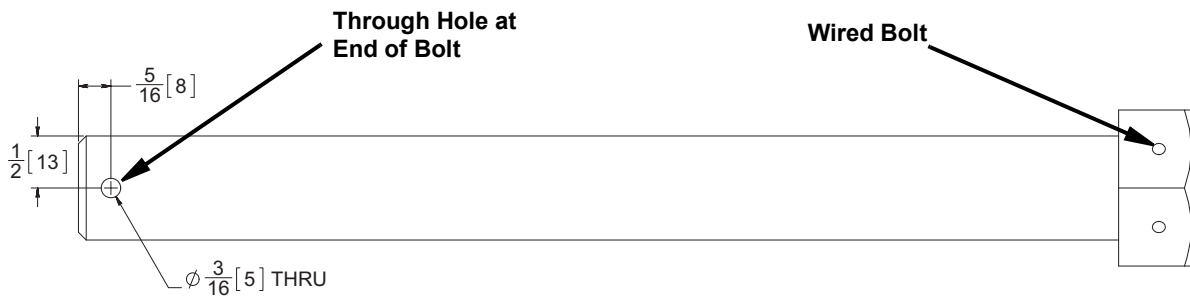


Figure 1: Wired Grade 8 Bolts with Through Hole at End

**Alert**

4. Install safety wire and ferrules on bolts as follows: (See Figure 2)
  - a. Remove washers. Washers are not required for this assembly.
  - b. Torque lock nuts to 400 ft-lbs (360-462 ft-lbs).
  - c. Secure a loop of safety wire through the bolt head and around adjacent upper link and another loop of safety wire through the bolt end and around adjacent upper link. Ensure excess slack is removed.

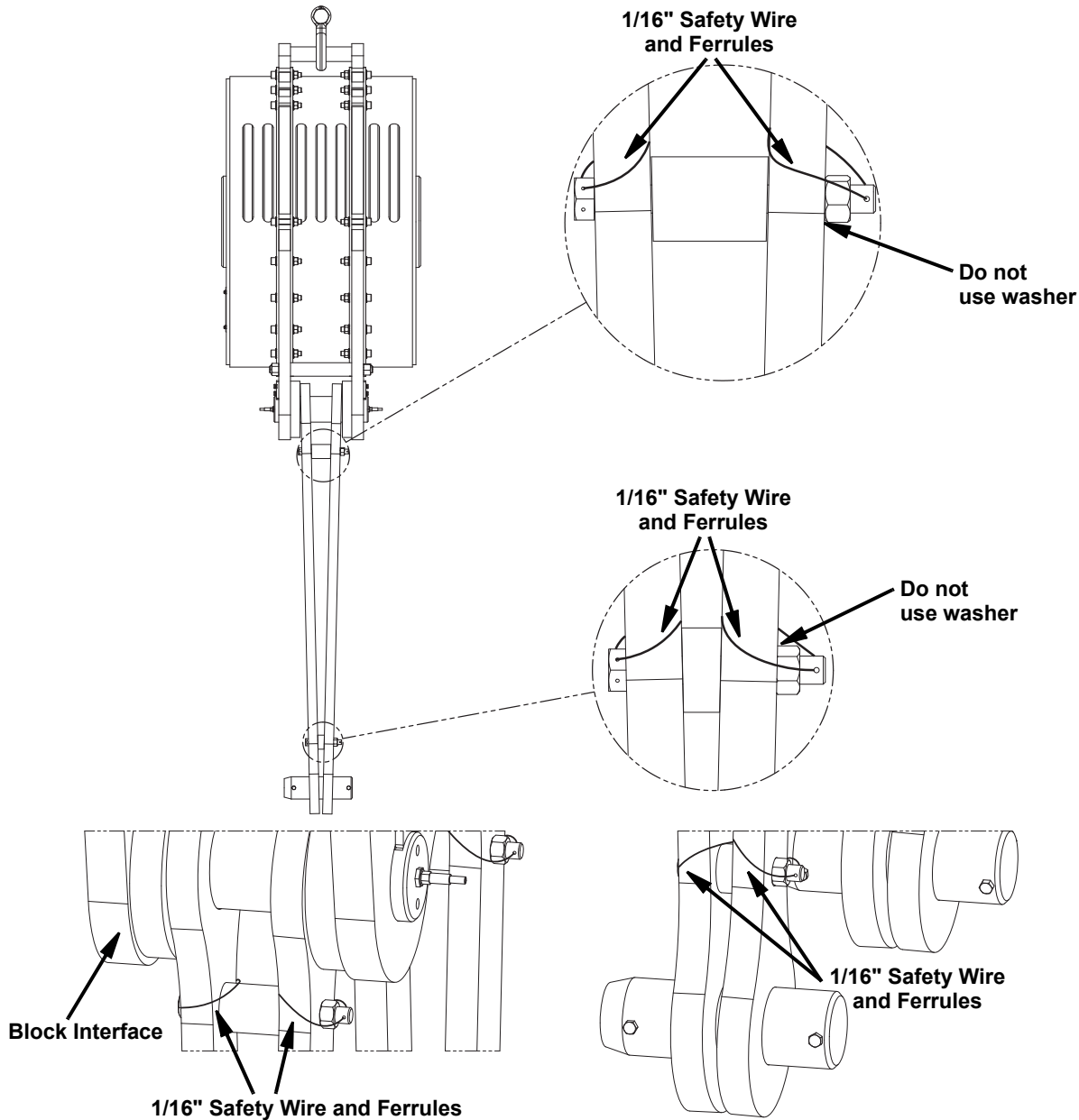


Figure 2: Upper Link Safety Wire Detail