



**C. E. Niehoff & Co.**  
BRUSHLESS ALTERNATORS

## A4-106 Tension Link Drive Belt Tension Adjuster for 600 Series Alternator on Detroit Diesel Series 60 Engines Installation Instructions

**CAUTION** This symbol is used to indicate presence of hazards that can cause minor property damage.

These instructions will cover installation of A4-106 tension link (drive belt tension adjuster) for use with 600 series alternators installed on Detroit Diesel Series 60 engines used in select fire service applications.

Review Figure 1 to familiarize yourself with arrangement of tension link and basic layout of assembly. Tension plate mounting holes are identified by number on drawing and in steps that follow.

Installation steps are as follows:

1. Release tension on alternator drive belt by loosening alternator attaching hardware on present tension link and alternator mounting lugs (feet).
2. Remove drive belt from alternator pulley.
3. Remove mounting hardware from both ends of present tension link and remove tension link.

**CAUTION** Do not allow unsupported alternator to swing down on mounting lugs and impact mounting bracket or engine. Damage to mounting lugs or alternator may occur.

4. Using holes #1 and #2, mount tension plate (triangular bracket) on gear case cover of engine using 7/16" Grade 8 or M10, Class 10.9, bolts long enough to pass through tension plate and engine gear case cover.

Note: Bolt used in hole #1 will be 3/8" longer than original engine bolt to allow for thickness of tension plate or approximately 4-1/2" long. Bolt used in hole #2 will be 3/4" longer than original engine bolt to allow for thickness of tension plate and thickness of the slotted end of the tension link or approximately 5-1/4" long.

Remove slack in #1 bolt but do not torque bolt at this time.

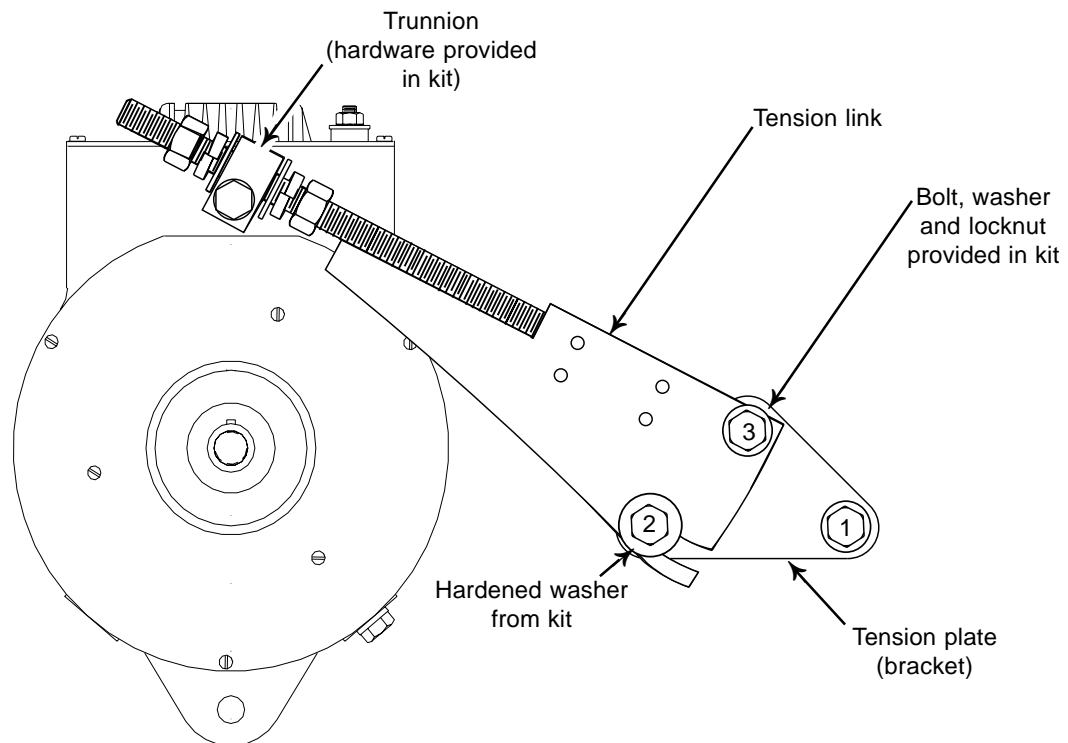


Figure 1 - A4-106 Tension Link Assembly Installed on Alternator

5. Place hardened washer provided in kit on bolt that will be used in hole #2 of tension plate. Install bolt with hardened washer through hole #2 in bracket and through gear case cover. Place nut on bolt but do not remove any slack until tension link is installed. Bolt in hole #2 should be loose enough to allow for insertion of slotted end of tension link.
6. Install nut, lock washer, flat washer, trunnion, flat washer, lock washer and nut on threaded portion of tension link.
7. Attach new tension link to tension plate by first sliding slotted end of tension link between hardened washer and tension plate at hole #2 on tension plate. Install provided ½-13x1.5in USS bolt through hole in tension link and hole #3 of tension plate. Secure with provided washer and locknut. See drawing.  
Remove slack in all attaching fasteners but do not torque fasteners at this time.
8. Rotate alternator into position and place drive belt on alternator pulley.
9. Place trunnion on tension link over threaded hole in control housing of alternator and install provided ½-13x2.0" USS bolt, lockwasher and washer through trunnion and into housing of alternator.  
Remove slack in attaching fastener but do not torque fastener at this time.
10. Adjust alternator drive belt tension to vehicle manufacturer's specification by adjusting nuts on each side of trunnion.
11. Lock trunnion in place by torquing trunnion adjustment nuts to 50lb.ft.
12. Torque all mounting fasteners at this time.  
Tension plate to gear case cover, per engine manufacturer's specification. Tension link to bracket: 50lb.ft.  
Tension trunnion to alternator drive end housing: 50lb.ft.  
Alternator mounting lugs (feet) to vehicle manufacturer's specification.
13. Operate engine and observe alternator operation.
14. Re-tension alternator drive belt as necessary.