

Alternator Installation



North American
Bus Industries, Inc.

Prepared by: Randy Maye

Approved by:

Property name and Top bus number: LA 45CLFW, 218000

Issue: Alternator Installation

Reason/ cause: To aid production installation

Solution: Follow the steps of this SOI.

Alternator Installation



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Number of buses affected: All

Estimate repair hours/bus: N/A

Engineering Documentation: 507-1030-000 and 500-1030-001

Necessary parts: See Engineering Drawings

Necessary tools:

- 3/4" Flat Open End Wrench (Special Tool)
- 3/4" Deep Wall Socket (3/8" Drive)
- 7/16" Standard Socket (3/8" Drive)
- 3/8" Drive Ratchet
- 3/8" Drive Torque Wrench (Ft. Lbs.)
- 7/16" Wrench
- 9/16" Wrench
- 5/8" Wrench
- 11/16" Wrench
- 3/4" Wrench
- 1-3/8" Wrench

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Step 1) Set alternator into Cummins supplied mounting bracket and rotate alternator so that the bottom fitting is at the 3:00 position before removing hole plug. NOTE: This is done so that when the plug is removed, fluid will not leak out. See figure 1

Step 2) Install hose fitting onto alternator at this location and connect hose. Rotate alternator so that the fitting and hose is at the 6:00 position and install (4) mounting bolts. NOTE: Refer to dwg. 507-1030-000 for torque value. See figure 2

Figure 1



Fluid fitting plug. Remove, install fitting and hose.

Figure 2



Mounting bolts. Two on each side of the alternator. The back bolt on the left side is not visible in this pic. Apply torque seal after torquing.

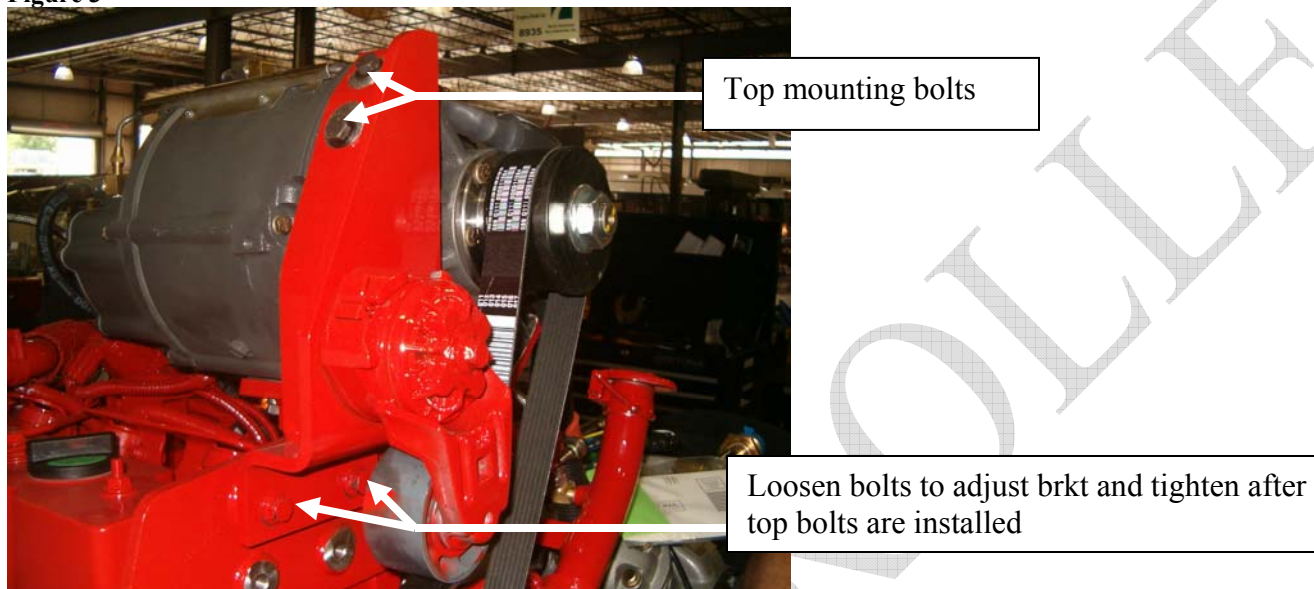
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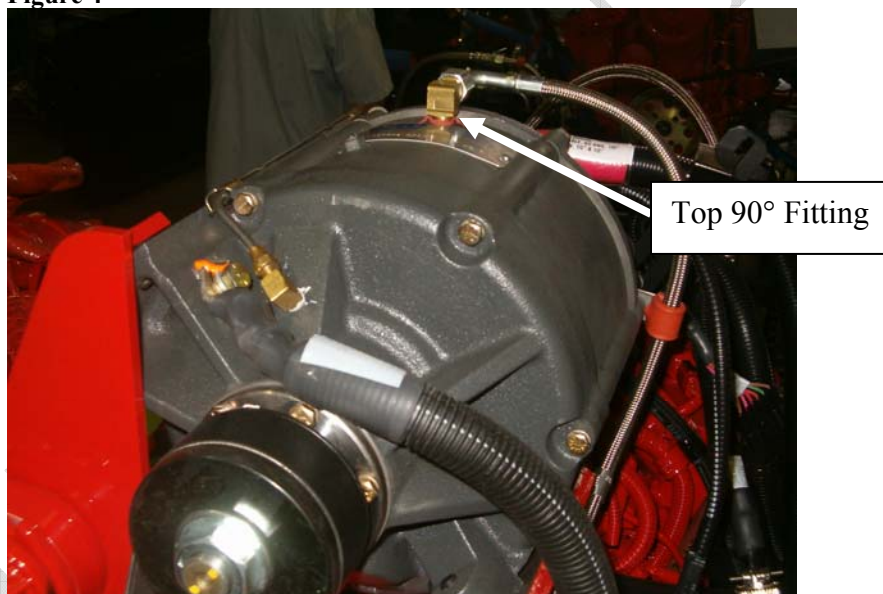
Step 3) Loosen the idler pulley bracket at the engine, position pulley bracket against the top left side of the alternator, align top mounting holes, install and tighten (2) bolts into the top holes, and retighten the (2) bottom bolts that were previously loosened. NOTE: Torque to hardware size standards.

Figure 3



Step 4) Install 90° fitting into top of alternator.

Figure 4

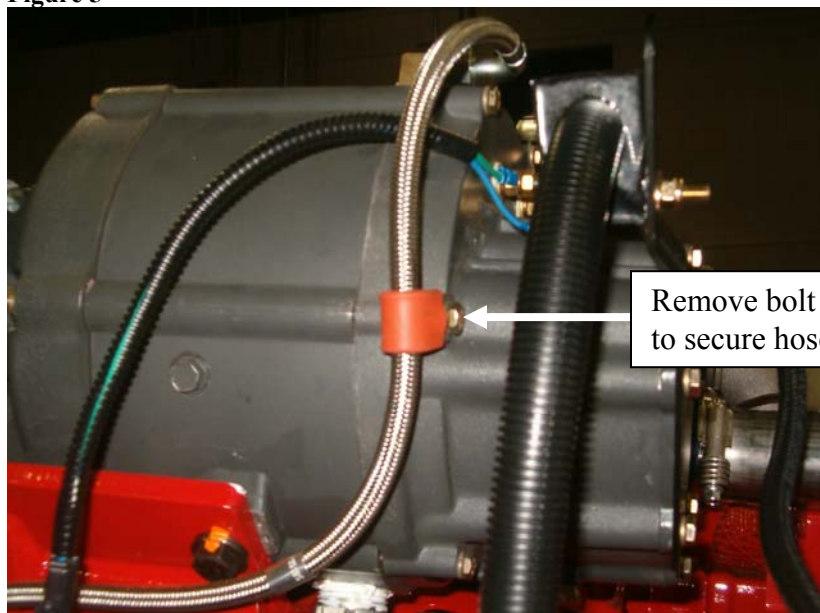


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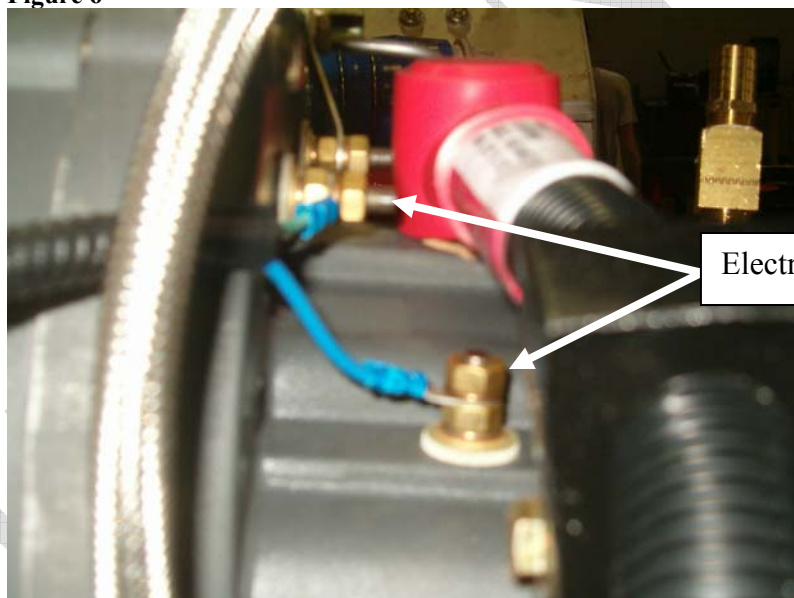
Step 5) Route and install steel braded hose onto the 90° fitting. Secure hose by removing bolt on backside of alternator, install p-clamp, reinstall bolt, and tighten. NOTE: Torque to hardware size standards.

Figure 5



Step 6) Install a two wire harness (500-1689-005) onto electrical connection studs on backside of alternator. NOTE: Make sure the lock washer is between the nut and ring terminal.

Figure 6

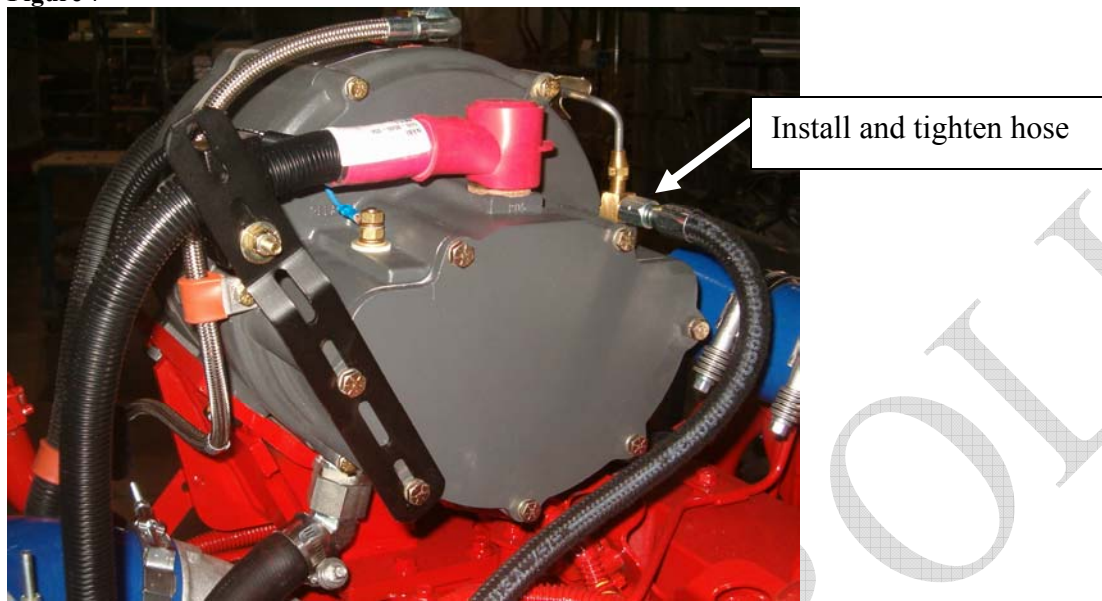


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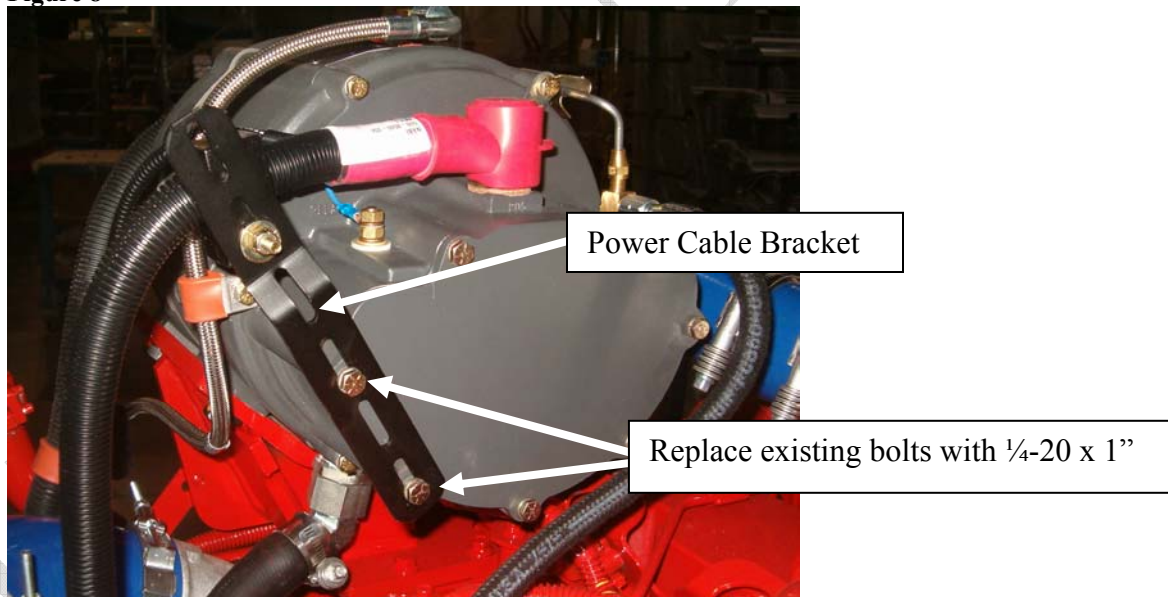
Step 7) Install the Cummins supplied black fluid hose.

Figure 7



Step 8) Remove (2) bolts supplied with alternator and discard, position power cable bracket and install (2) new 1/4-20 x 1" bolts. NOTE: Reuse lock washers supplied with alternator and torque to hardware size standards.

Figure 8



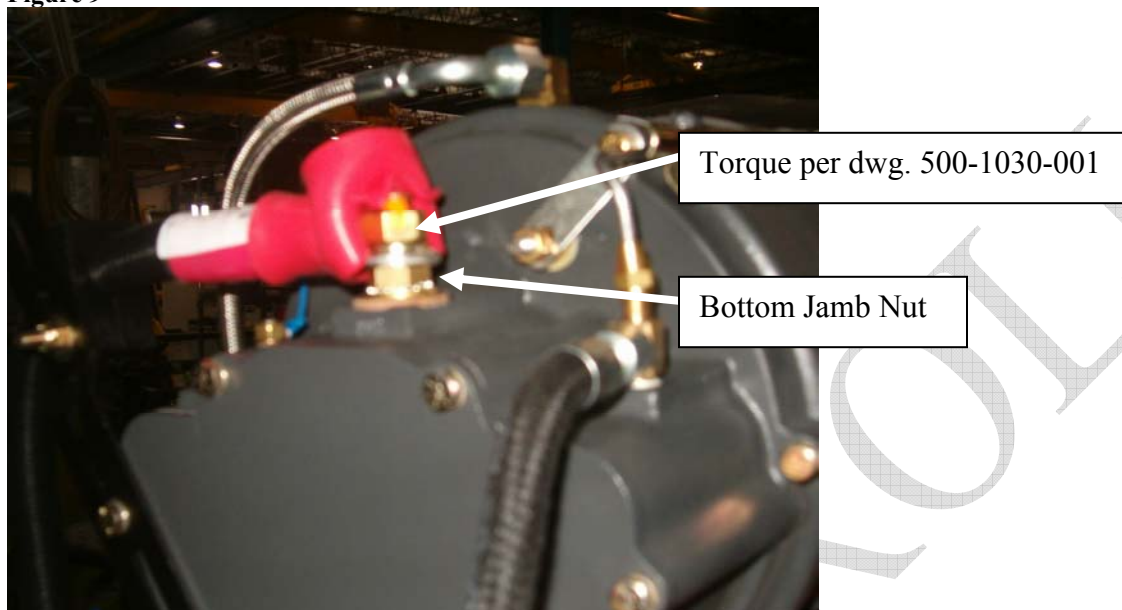
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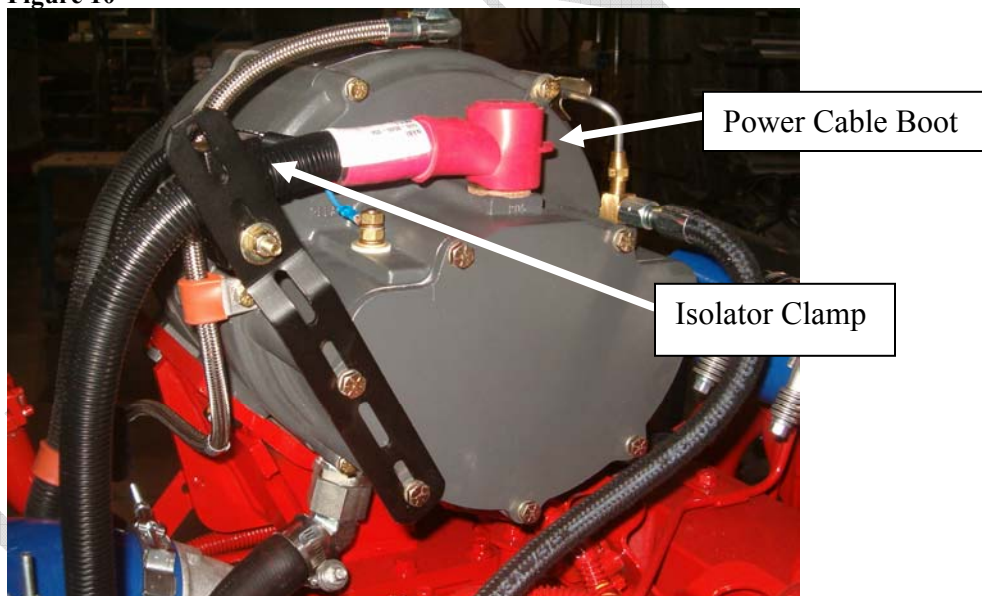
Step 9) Install power cable onto power stud and refer to dwg. 500-1030-001 for torque value. NOTE: Hold bottom jamb nut with $\frac{3}{4}$ " flat wrench during torque. This must be done to insure stud does not twist while torquing.

Figure 9



Step 10) Secure power cable to bracket, previously install, with isolator and position red cable boot over electrical stud.

Figure 10



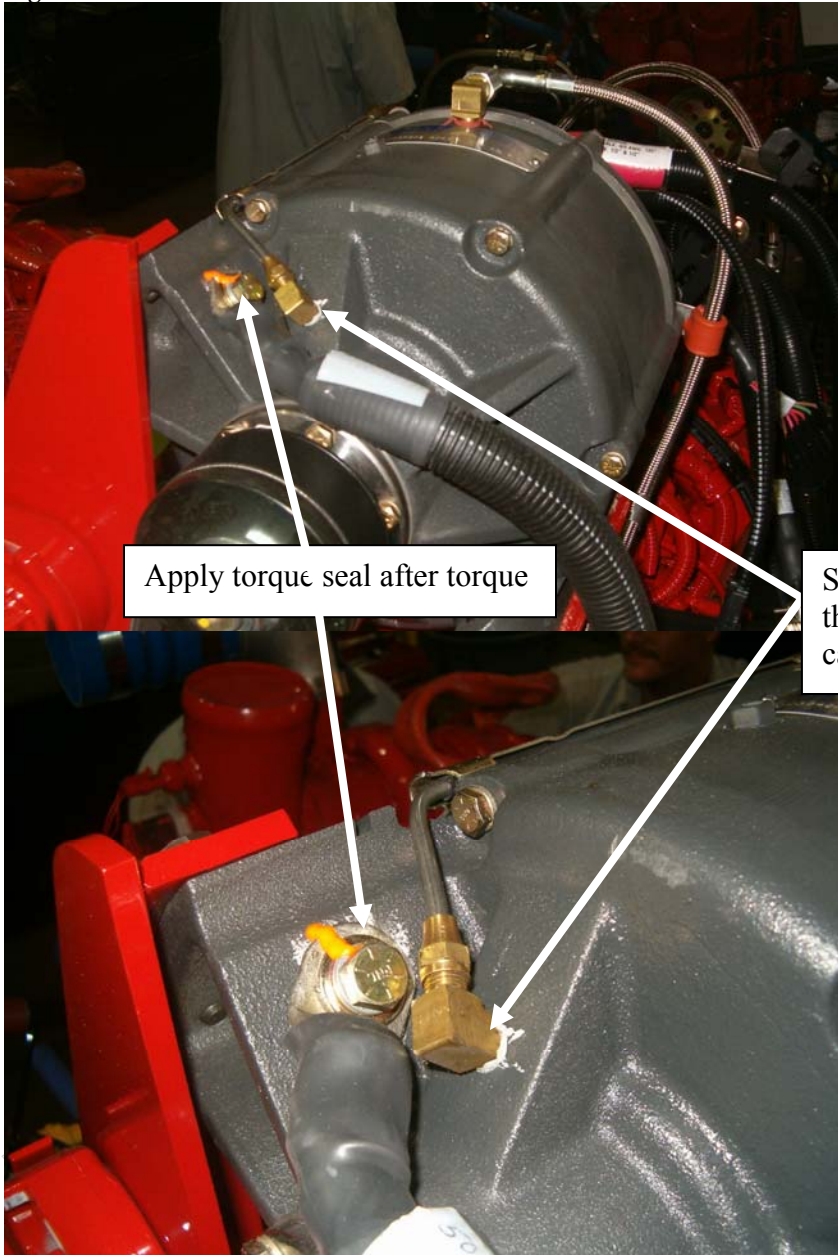
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Step 11) Install ground cable onto front side of alternator and refer to dwg. 500-1030-001 for torque value. NOTE: The fitting supplied installed into the alternator must be disconnected from the tube and turned clockwise ¼ turn in order install and tighten cable bolt. Reposition fitting and reconnect tube after ground cable has been tightened.

Figure 11



Apply torque seal after torque

Supplied fitting must be clocked out of the way during installation of ground cable nut

Step 12) This completes the installation of the alternator. Make sure all HDW is tight prior to releasing for engine installation.