Checking the Harness Connections on Eaton AutoShift™ and UltraShift™ Transmissions

FLA COE
FLB COE
> FLD Conventional
Business Class
FLC 112 Conventional
> Century Class Conventional
> Argosy COE
Cargo
> Columbia
> Coronado
> Business Class M2
> Cascadia

Freightliner Service Bulletin

General Information

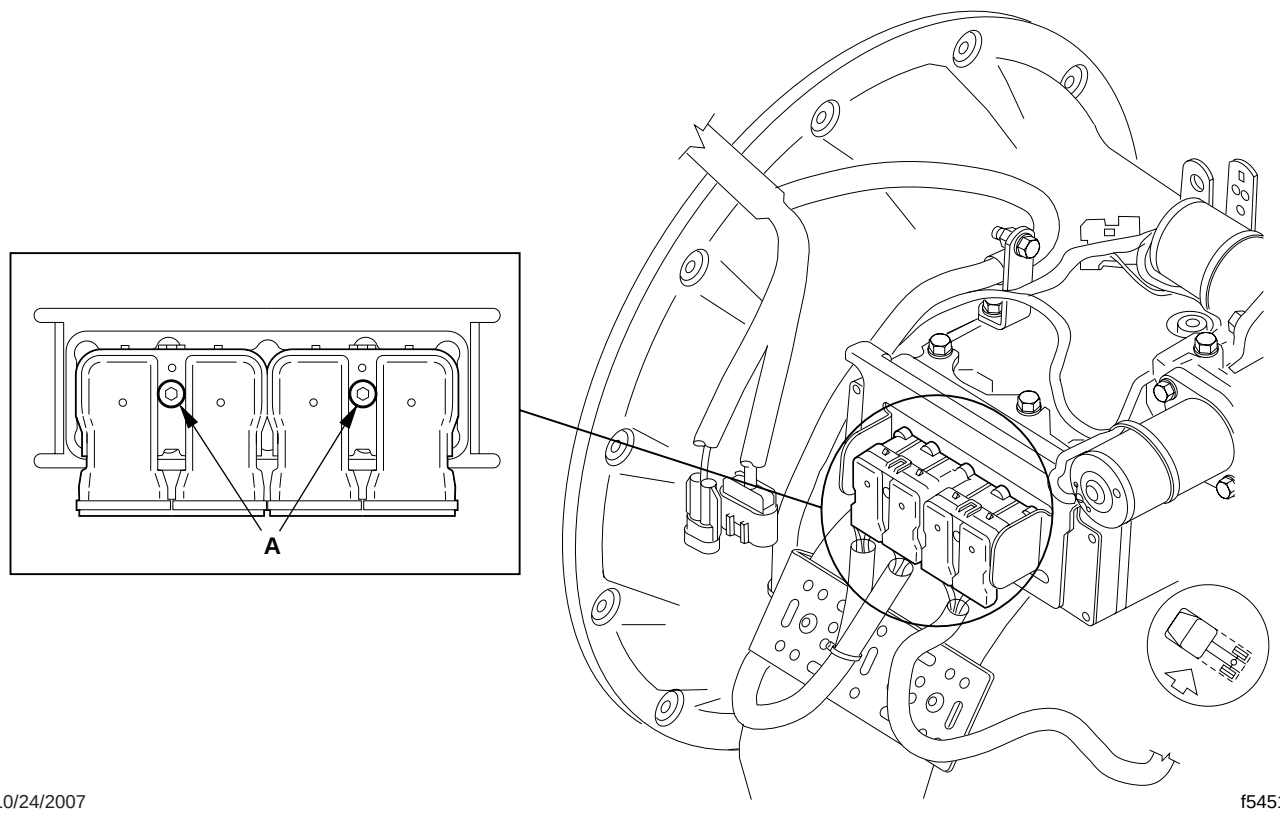
The electrical connections between the transmission ECU and the transmission harness are critical to the correct operation of the transmission. A poor connection can cause a variety of transmission problems, such as rough or delayed shifting, or failure to shift.

Before doing any troubleshooting procedures on Eaton AutoShift or UltraShift transmissions, check the electrical connections, as this may be the cause of the problem. Follow the instructions under "Electrical Connector Checking".

Electrical Connector Checking

1. If not already done, shut down the engine, set the parking brake, and chock the tires.
2. Find the transmission ECU on the left side of the transmission.
3. Using a torque wrench with a 5/32 inch (4 mm) Allen wrench attached, check the tightness of the two Allen screws that connect the transmission harness connectors to the transmission ECU. See **Fig. 1**.

   The torque should be 22 to 28 lbf·in (240 to 320 N·cm).



A. Make sure these Allen screws are correctly tightened.

Fig. 1, Transmission Electrical Connections

4. If the Allen screws are tightened correctly, continue with the troubleshooting procedure.

If either of the Allen screws is incorrectly tightened, remove the connector and check the harness and ECU terminals for signs of corrosion. If any corrosion is found, go to the next step; otherwise, attach the connector to the control unit, and tighten the Allen screw 22 to 28 lbf·in (240 to 320 N·cm). Continue with the troubleshooting procedure.

5. If corrosion is found, try cleaning the terminal(s) with an electrical contact cleaner. If you cannot remove the corrosion from the harness terminal, replace the terminal. If you cannot remove the corrosion from the ECU terminal, replace the ECU.

   Attach the connector to the ECU, and tighten the Allen screw 22 to 28 lbf·in (240 to 320 N·cm).

IMPORTANT: Do not clean electrical contacts with sandpaper as this can damage or remove the conductive coating of the contact. This will affect the quality of the circuit.

6. After completing the troubleshooting procedure, make sure both Allen screws are tightened 22 to 28 lbf·in (240 to 320 N·cm).
7. Remove the chocks.

Warranty

This is an informational bulletin only; warranty does not apply.