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SUPPORT

Subject: Electronic Clutch Actuator (ECA) Lubrication Procedure for UltraShift *PLUS* Transmissions

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Issue Description:

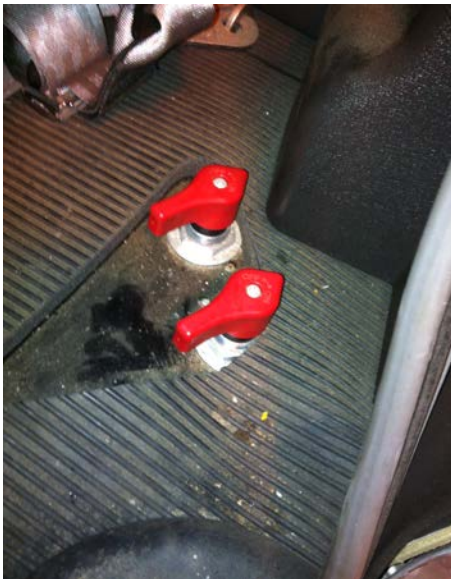
The Electronic Clutch Actuator (ECA) is a non-serviceable sealed component that is internally greased during initial assembly. This process is designed to extend the life of the ECA by redistributing the grease within the internal gearing.

Procedure:

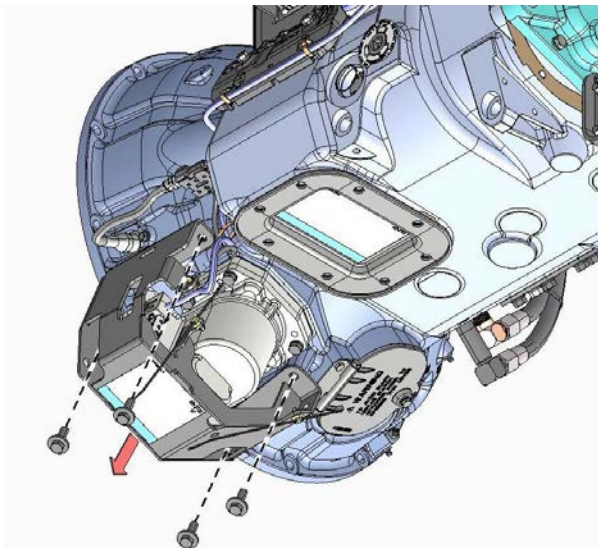
This procedure is also outlined in the Heavy-Duty Clutch Service Manual (*CLSM0200*) on Roadranger.com. This procedure should be performed any time the Heavy-Duty ECA Clutch requires replacement and/or the UltraShift *PLUS* transmission is removed and reinstalled.

ECA Removal:

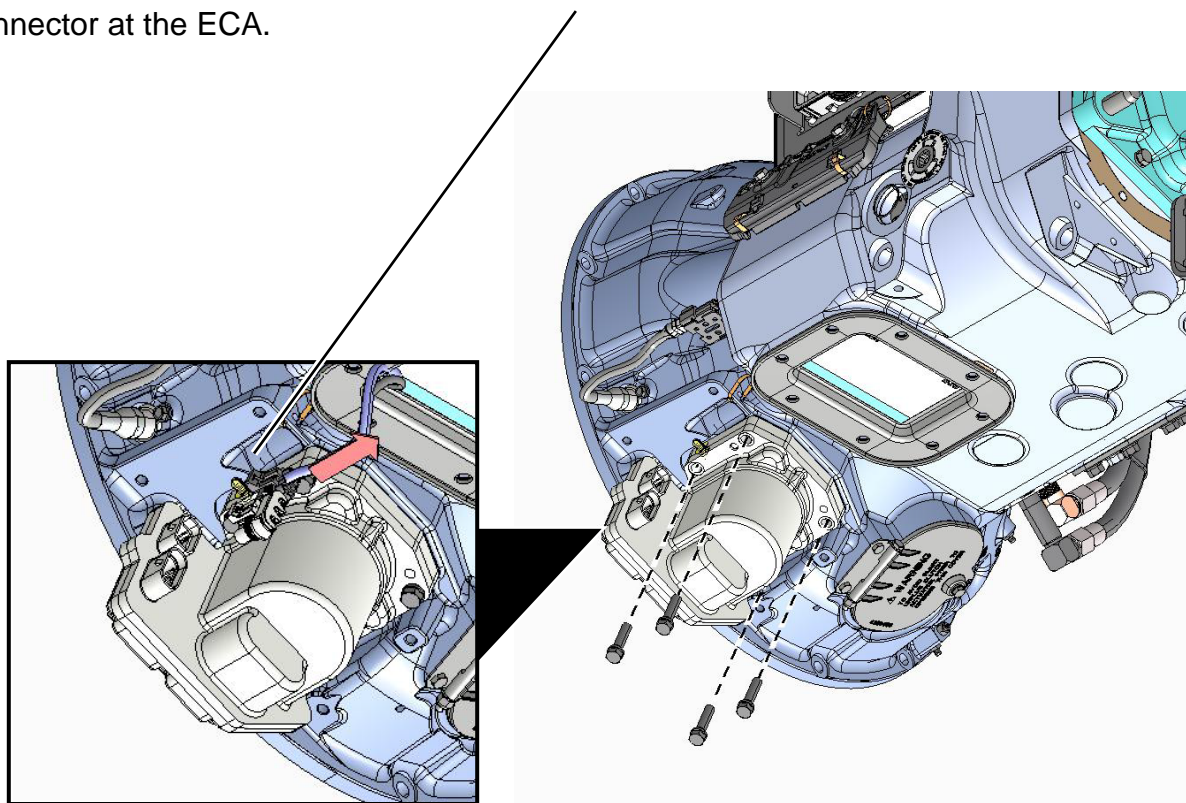
1. Key off.
2. Remove the negative 12-volt battery cable or switch the battery disconnect switch off (if equipped).



3. Remove all 4 cap screws that secure the ECA Shield to the transmission clutch housing.

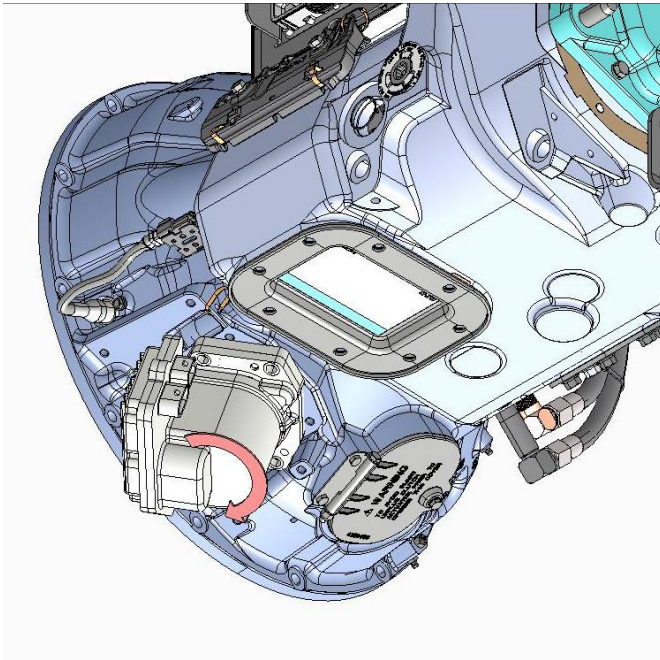


4. Disconnect 3-way vehicle harness connector and 8-way transmission harness connector at the ECA.



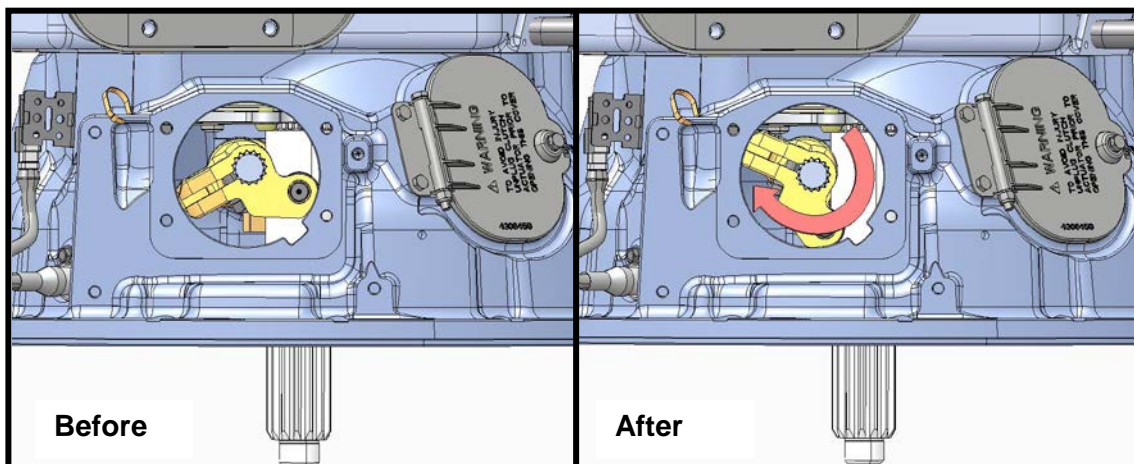
5. Remove all 4 cap screws that secure the ECA to the transmission clutch housing.

- Drop ECA straight down until the alignment tab engages the clutch housing. Rotate the ECA where the connectors plug in towards the rear of the transmission (clockwise motion) to allow the alignment tab allowing the ECA to be removed.

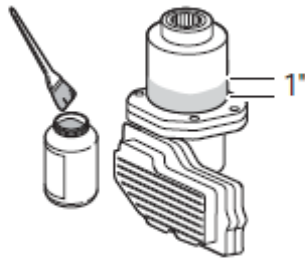


ECA Installation:

- Key off.
- Rotate clutch cross-shaft approximately 45° to make contact with the Low Capacity Inertia Brake (LCIB).

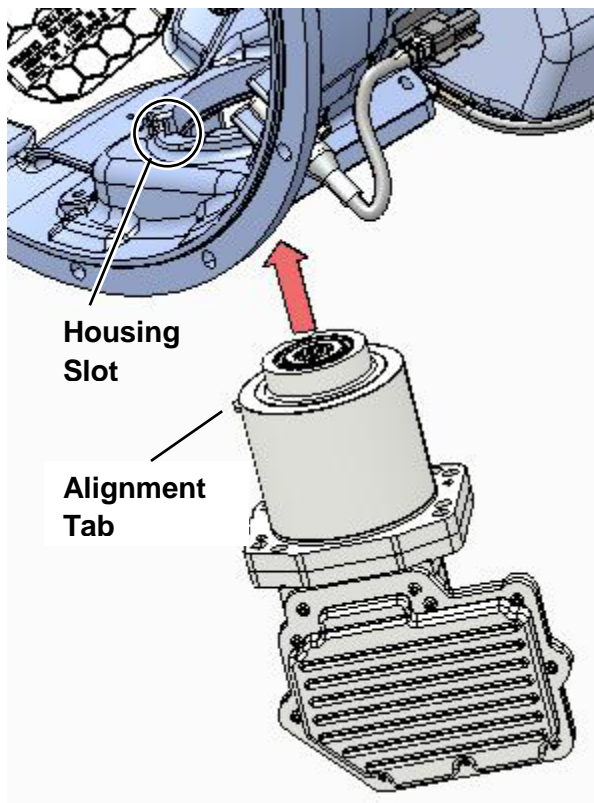


3. Apply a 1" band of anti-seize to the barrel of the ECA.

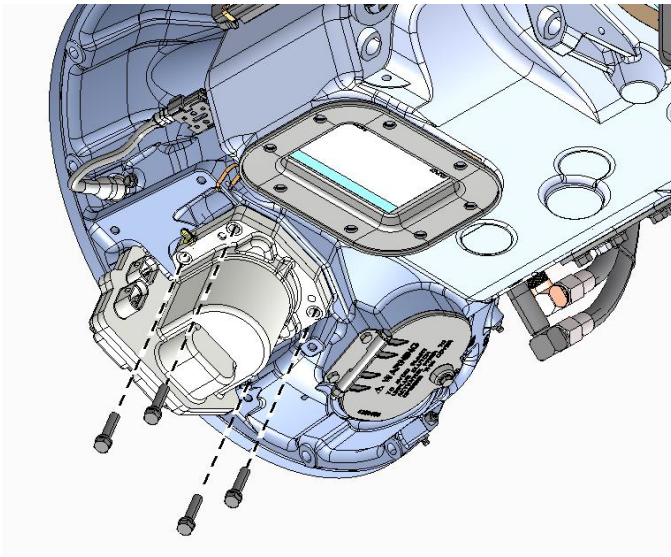


4. Install ECA into the clutch housing bore. Position the ECA so the alignment tab will engage the slot in the clutch housing. Push the ECA straight up far enough that the alignment tab will clear the clutch housing and the ECA can be rotated to align the holes for the cap screws.

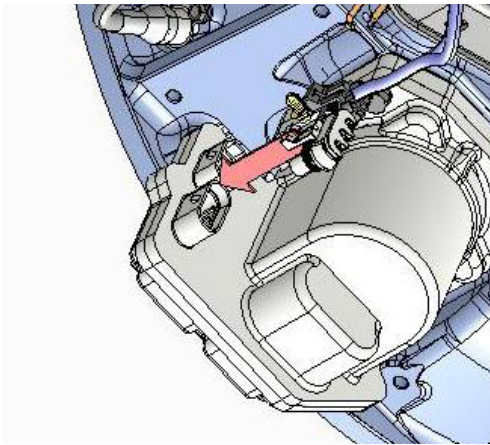
⚠ Important: When installing ECA, ensure the cross shaft does not rotate away from the LCIB while aligning the alignment tab of the ECA into the slot of the clutch housing.



5. Align all four cap screw holes and install cap screws to secure the ECA to the transmission clutch housing and tighten to 35–45 lb-ft (47-61 Nm).



6. Apply Eaton lubricant (P/N 5564527) to the 3-way and 8-way connectors at the ECA and reconnect. Ensure connections are secure and properly fastened.

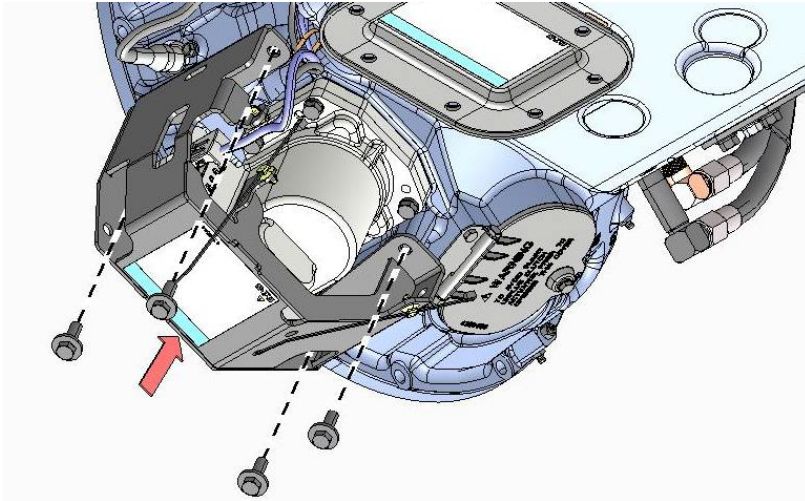


7. Install a cable tie to both 3-way and 8-way connectors.



⚠ Important: Ensure that the cable tie locking mechanism is positioned directly over the locking tab of each connector.

8. Install 4 cap screws to secure ECA Shield and tighten to 35–45 lb-ft (47-61 Nm). Ensure the OEM Vehicle Interface harness and transmission harness cable ties (if equipped) are secured to the ECA Shield.



9. Reconnect the negative 12-volt battery cable or switch the battery disconnect switch on (if equipped).

10. Key on.

Note: As the ECA powers back up with the engine running, an Inertia Brake Touch Point (IBkTp) measurement is performed and grease is redistributed within the ECA internal gearing.

11. Road test vehicle to confirm proper operation.

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