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Roadranger
SUPPORT

Subject: UltraShift *PLUS* Shift Bar Housing Update

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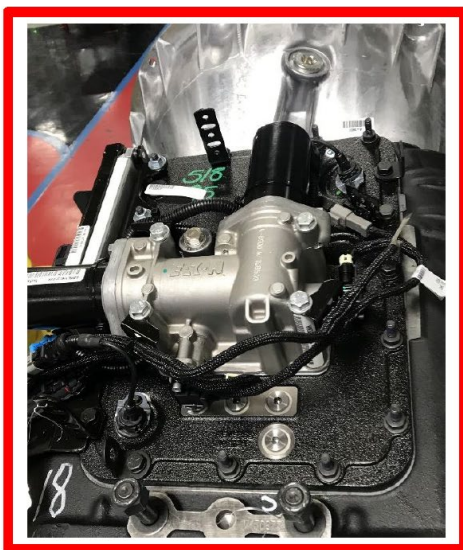
Issue Description:

Eaton Cummins Automated Transmission Technologies has changed the shift bar housing (SBH) material from cast iron to die cast aluminum on the UltraShift *PLUS* family of automated manual transmissions. This change is identified by part number, material type and weight.

The SBH to main case sealing method has changed from a gasket to RTV. Modifications have been made to the main case mating surface to promote RTV adhesion and capture.

Change Summary:

- **Die cast aluminum shift bar housing changes include:**
 - New part numbers are 4308880 and 4309024.
 - Reduced weight by approximately 18.25 lbs. from the cast iron SBH.
 - Various casting and machining changes to maintain component stack-up (speed sensor depths and shift yoke clearances).
 - RTV sealing method replaces SBH gasket.



Cast Iron painted black



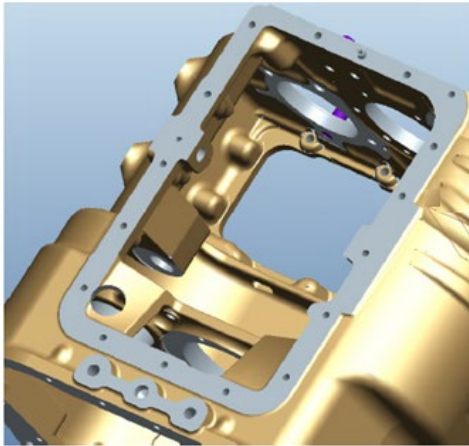
HPDC Aluminum

Service Bulletin – Product

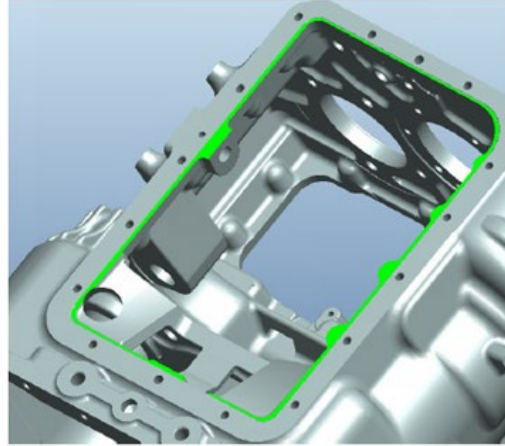
- **Main case changes include:**

- Nine new part numbers
- SBH mating surface finish machining specification widened to promote RTV adhesion.
- SBH mating surface secondary inner perimeter machining cut added for RTV overflow capture.
- Machining of 6 and 8-bolt PTO mounting surfaces was included to allow RTV to be used for sealing

Note: A gasket may still be used.



Main case without RTV capture area



Main case with RTV capture area shown in green

Affected Models/Population:

UltraShift *PLUS* MXP, VXP, MHP, VCS and VMS models

Field Service Strategy:

The UltraShift *PLUS* Automated Transmissions Service Manual (TRSM0940) has been updated to include the aluminum SBH removal and installation procedures. A letter of instruction (L-Letter) is included in all associated service part kits. Aluminum SBH sealant is Loctite 5810A RTV.

Frequently Asked Questions:

- How do I know which SBH, cast iron or aluminum, is used with my main case?
 - All transmission bill-of-materials have been updated.
 - The Inforanger parts website has been updated with the new parts and kits.
 - Letters of instruction (L-Letters) describing the changes are included with all new parts and kits.
 - Reference the UltraShift *PLUS* Automated Transmissions Service Manual (TRSM0940) which has been updated to include aluminum SBH removal and installation procedures.

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- Are the internal parts of the aluminum SBH assembly the same parts used in the cast iron SBH assembly (rails, yokes, interlock, shift blocks, etc.)?
 - Yes, there have been no changes to the internal SBH components.
- Are there any changes to SBH component stack-up (speed sensor depths and shift yoke clearances)?
 - No, the new SBH design has addressed these concerns.
- Can an aluminum SBH be used on an old main case originally built with a cast iron SBH?
 - Yes, the aluminum SBH is backwards compatible however sealing with RTV is required.

Service Bulletin – Product

- If an aluminum SBH is used on a main case that was originally built with a cast iron SBH what sealing method is required?
 - Loctite 5810A RTV
- Can a cast iron SBH be used on a main case designed for an aluminum SBH?
 - No, a new aluminum SBH must be used to achieve a positive seal with the newly designed main case.
- Can gaskets still be used at the PTO covers on a newly designed main case?
Yes, RTV is preferred but a gasket may be used.

Warranty Information

Failure to successfully complete the removal and installation procedures outlined in the UltraShift *PLUS* Automated Transmissions Service Manual (TRSM0940) may result in a shift bar housing to main case oil leak and would not be a warrantable failure.

The material contained in this bulletin is product improvement information. Eaton is not committed to, or liable for, canvassing existing products. FSUD: 2020-FSUD-4196