Safety Recall

Subject: ALLISON 3000 SERIES SPACER COUPLING BOLTS

Date: 04/30/2010

Bulletin #: R0035

Campaign #: M0160

Affected Models: Certain 2008, 2009, and 2010 NV8J (338) Hino Conventional Trucks with Allison 3000 Series Transmissions

Important: Verify on the Hino DCS Warranty System that the vehicle still needs to have this work performed.

Description:
This bulletin includes the instructions for replacing the Allison 3000 transmission spacer coupling bolts.

Condition:
The drive coupling bolts may have not been properly tightened during the manufacturing process. If the bolts were to loosen it could cause a vibration in the driveline. If this vibration were ignored, the drive coupler bolts could shear and the drive coupling between the engine and torque convertor would not transmit power. This ultimately could result in an accident.

Subject Vehicles:
Certain 2008, 2009, and 2010 NV8J (338) Hino conventional trucks assembled at the Williamstown, WV assembly plant built between October 29, 2007 and July 15, 2009.

Before You Begin:
Read and understand all instructions and procedures before you begin. Read and observe all Caution and Warning safety alerts that precede these instructions while following these procedures. The alerts help to avoid serious personal injury, damage to components, or both.

Vendor Ref: QA100323-M1

HINO TRUCKS™
A Toyota Group Company

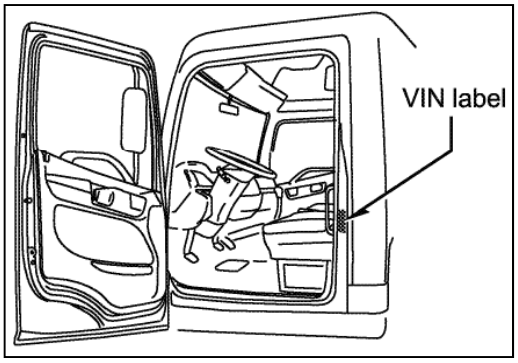
Safety Recall

!!! WARNING !!!

- Read and understand all instructions and procedures before you begin the work.
- Read and follow all WARNINGS set forth below. These alerts help to avoid damage to components, serious personal injury, or both.
- Park the vehicle on a flat and level surface.
- Shift transmission to NEUTRAL.
- Apply the parking brake. Confirm parking brake activation.
- Confirm the engine is stopped, the starter switch is in the off (LOCK) position, and the key is removed.
- Place wheel chocks in front of and behind all wheels.
- Use care when working around surfaces which may be hot.
- Wear safety glasses to prevent eye injuries.
- When opening and closing the hood, make sure no one is around the hood to prevent opening / closing the hood onto anyone.
- Use a suitable container when collecting draining fluids.
- Dispose of fluids in a manner that is pursuant to local regulations.
- Clean up spilled fluid immediately.

Once Recall Is Completed

Complete a recall sticker and affix to the left door jam above the V.I.N. decal.



Required Parts:

Part Number	Description	Qty.
SZ10110130	BOLT	6
S478371230	BAND, CLAMP	2
S374411040	STRAP, U-JOINT	2
SZ10712002	BOLT	4
21598E0010	RETAINER	2

Claim Application:

CAMPAIGN NUMBER: M0160
TIME ALLOWANCE: 3.5 Hours
WARRANTY CODE: 2612937
OPERATION CODE: 26550AOT
ORIGINAL PART NUMBER: 9999999992

Procedure:

1. Park the vehicle on a level surface.

2. Confirm the engine is stopped, the starter switch is in the off (LOCK) position, and the key is removed.

3. Apply the parking brakes.

4. Chock all wheels.

5. Remove the automatic transmission dipstick mounting bracket bolt.

6. Remove both transmission cooler line covers on the radiator by cutting the clamp bands and removing the rubber dust covers.

7. Remove the retaining bolts at each cooler line.

8. Place a drain pan under the lines and remove the retainers. Discard the retainers. Remove the lines from the radiator.

NOTE:
Cap the lines to minimize fluid loss.

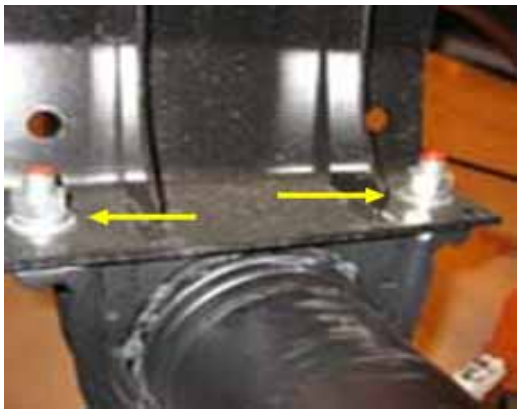
9. Remove the four transmission cooler line clamp nuts and clamps.

10. Remove the front propeller shaft and U-joint from the transmission yoke by removing the four bolts and two straps.

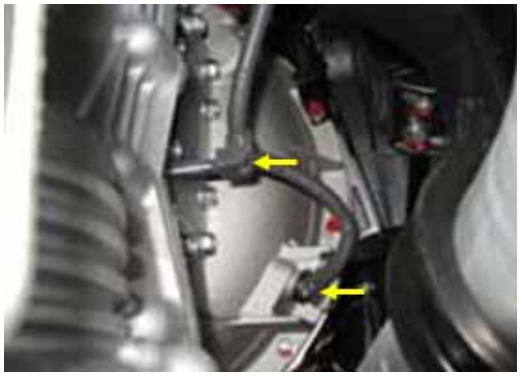
Discard the straps and bolts.

11. Remove the two nuts and bolts from the #1 carrier bearing.

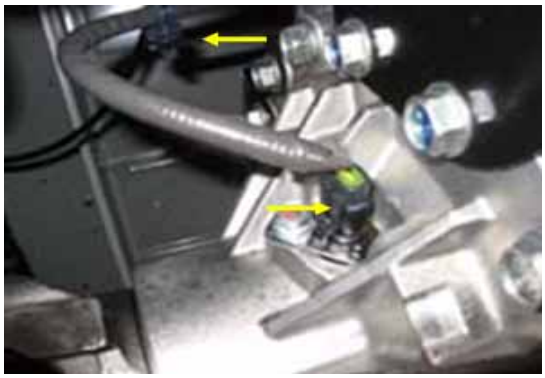
NOTE:
Position the driveshaft towards the right side frame rail supported by a jack stand.



12. Remove the turbine shaft speed sensor harness connector and remove the two harness clips from the brackets.



13. Remove the speed sensor harness connector and the harness clip from the rear of the transmission.



14. Remove the feed-through wiring harness connector and hold down nut from the top of the transmission. Remove the wiring harness from the transmission.

15. Remove the inspection cover from the flywheel housing.

16. Remove the six flywheel coupling bolts through the inspection cover.

NOTE:
Turn the flywheel manually to remove each bolt through the inspection hole.

17. Position a transmission jack under the transmission and secure the transmission to the jack. Remove the 12 mounting bolts from the torque convertor housing.

18. Ensure that the transmission cooler lines are clear from the brackets and slowly separate the transmission from the flywheel housing. Slide the transmission back far enough to allow access (6 to 8 inches) to the spacer coupling bolts.

WARNING:
Make sure that the transmission is secured to the jack and is balanced correctly to eliminate slippage.

19. Remove and replace, **one at a time,** the six spacer coupling bolts.

Torque the new bolts to 50 lb ft (68 Nm).

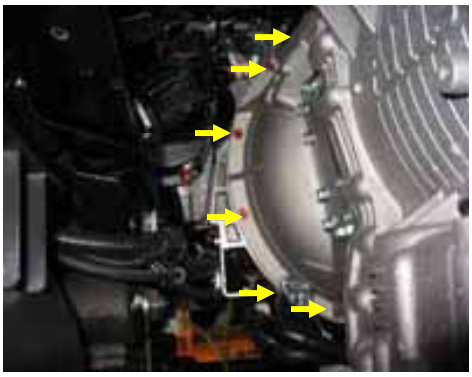
WARNING:
If all bolts are removed at once the spacer coupling could fall off.

20. Install the spacer coupling guide (SST 09657-1370) into the spacer coupling and rotate the torque converter so that the guide faces down.

21. Slowly align the torque converter housing to the flywheel housing, and ensure that the spacer coupling guide lines up with the flywheel bolt hole seen through the inspection hole.

WARNING:
Make sure that the transmission is secured to the jack and is balanced correctly to eliminate slippage.

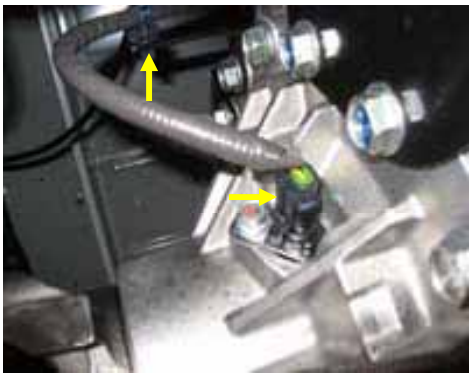
22. Reinstall, *hand tight*, the 12 torque converter housing bolts. Once all 12 bolts are installed, torque all 12 bolts to 35 lb ft (47 Nm) and remove the transmission jack.



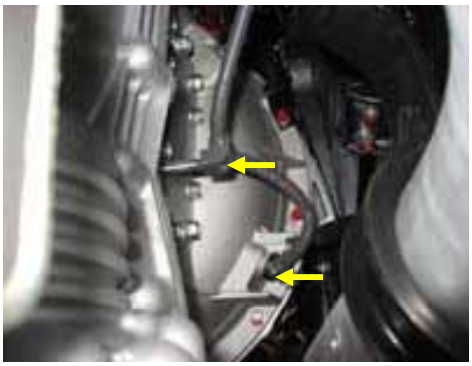
23. Reconnect the transmission feed-through wiring harness, harness hold down nut, and wiring harness retainers.

Torque the harness retainer nut to 16 lb ft (22 Nm).

24. Reconnect the speed sensor harness connector and harness retainer clip onto the rear of the transmission.

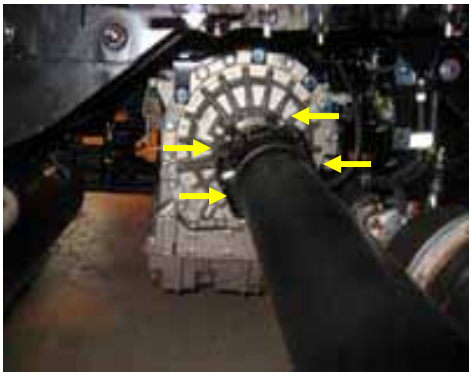


25. Reconnect the turbine shaft speed sensor harness connector, then reinstall the harness clips on the front end of the transmission.



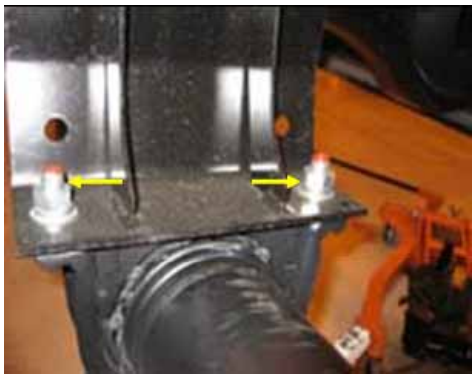
26. Reinstall the propeller shaft onto the transmission yoke using the two new straps and four new bolts.

Torque the propeller shaft bolts to 125 lb ft (169 Nm).



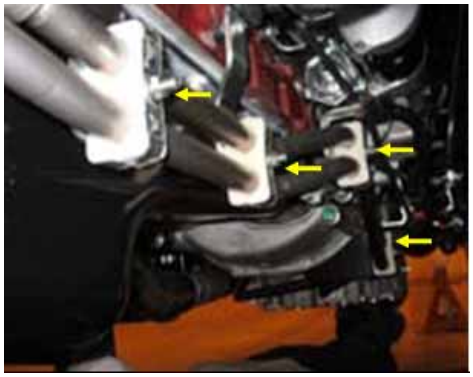
27. Reinstall the #1 carrier bearing using the previously removed nuts and bolts.

Torque the bolts to 105 lb ft (142 Nm).



28. Reinstall the four transmission cooler line clamps and nuts previously removed.

Torque the clamp nuts to 16 lb ft (22 Nm).



29. Reinstall the transmission cooler lines into the radiator. Install new retainers.

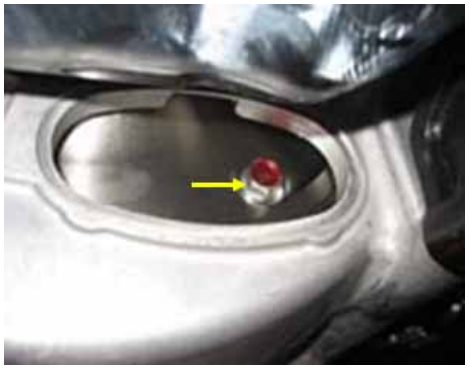
30. Reinstall the retaining bolt for each cooler line.

Torque the retaining bolts to 16 lb ft (22 Nm).

31. Replace the transmission cooler line covers and secure with new clamp bands.

32. Remove the spacer coupling guide from the spacer coupling through the flywheel inspection cover. Reinstall, *hand tight*, one coupling bolt and manually rotate the engine to reinstall all six bolts through the inspection cover.

Torque all six flywheel coupling bolts to 55 lb ft (75 Nm).



33. Reinstall the flywheel housing inspection cover.

34. Reinstall the dipstick mount and bolt to the bracket.

Torque the bolt to 16 lb ft (22 Nm).

35. Start the vehicle and check the fluid level. Top off as necessary and check for any leaks.