STAR ONLINE PUBLICATION

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Symptom/Vehicle Issue: Moaning, Grinding, or Groaning Type Noise From The Driveline Between 50-70 MPH (80-112 kph).

Discussion: Some customers may experience a moaning, grinding, or groaning type noise while driving between 50-70 MPH (80-112 kph). Upon further inspection, the technician may note that the noise happens more as the ambient temperatures become colder. Typically, there will not be any diagnostic trouble codes (DTCs) set when this happens.

The cause of the concern may be due to surface imperfections in the bearing races internal to the transfer case, leading to undesirable noise. An additional cause of the concern may be an issue with the rear driveshaft center bearing. If a technician is working on a vehicle with the above condition, please perform the following repair procedure to verify if the transfer case or rear driveshaft center bearing is the cause.

Repair Procedure:

1. Using suitable chassis ears, attach the microphone sensors to the transfer case near the front output shaft and at the rear driveshaft center bearing.
2. Test drive the vehicle under the conditions where the noise is present and duplicate the concern. Was the noise heard the loudest at the transfer case output shaft or the driveshaft center bearing?

Contact STAR Center, or your Technical Assistance Center Via TechConnect, eCONTACT or Service Library entry if no solution is found.

a. Driveshaft Center Bearing>>> Please refer to (Step 6).
b. Transfer Case Output Shaft>>> Please refer to (Step 3).
c. Noise is not heard the loudest in any of these locations>>> This document no longer applies. Please refer to normal published diagnostics for the concern and repair as necessary.

NOTE: Once the Font Axle Disconnect (FAD) Engagement/Disengagement routine has been initiated to place the vehicle in 2wd mode, do not cycle the key until the test drive has been completed. Cycling the key will place the vehicle back into default 4wd mode.

3. Using wiTECH, navigate to the Drivetrain Control Module (DTCM) “Misc Functions” and perform the “Front Axle Disconnect Engagement/Disengagement” routine. Follow all onscreen prompts and disengage the FAD to place the vehicle in 2wd mode.
4. Test drive the vehicle in the conditions that the noise would be present while the vehicle is in 2wd mode. Is the noise still present?
   a. Yes>>> This document no longer applies. Please refer to normal published diagnostics for the concern and repair as necessary.
   b. No>>> Proceed to (Step 5).
5. The noise may be due to the surface imperfections in the bearing races in the transfer case. Replace the transfer case assembly. For detailed repair procedures, please refer to Service Library Service Information Section 21 – Transmission and Transfer Case > Transfer Case, MPT3015C (One Speed), or MPT3028C (Two Speed) > Removal and Installation. Document is complete. No further action is required.

6. Inspect the rear driveshaft center bearing for signs of damage. Please see (Figure 1) for the area to inspect. Were there any visible issues with the center bearing found?
   a. Yes>>> Replace the rear driveshaft. For detailed repair procedures, please refer to Service Library Service Information Section 03 – Differential and Driveline > Shafts, Axle/Drive/Half > Removal and Installation > Rear Driveshaft.
   b. No>>> This document no longer applies. Please refer to normal published diagnostics for the concern and repair as necessary.

Figure 1

Contact STAR Center, or your Technical Assistance Center Via TechConnect, eCONTACT or Service Library entry if no solution is found.