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Service Bulletin

File In Section: 04 - Driveline Axle

Bulletin No.: 02-04-21-005A

Date: February, 2003



TECHNICAL

Subject: Slips in 4-Wheel Drive, Noise, Vibration, Leaks, Hot Odor
(Diagnose and Repair Front Differential and/or Transfer Case)

Models: 1999-2000 Cadillac Escalade
1998-2002 Chevrolet S-10, Silverado, Blazer, Suburban, Tahoe
2002 Chevrolet Avalanche
1998-2002 GMC Sierra, Sonoma, Jimmy, Suburban, Yukon, Yukon XL
with Autotrak Transfer Case (RPO NP8) (Selector Pad on Instrument Panel
Must Have Auto 4WD, 4HI, 4LO, and 2HI Selections)

This bulletin is being revised to incorporate changes to the diagnostic procedure. Please discard Corporate Bulletin Number 02-04-21-005 (Section 04 — Driveline Axle).

Condition

Some customers may comment on any of the following conditions:

- Slips in 4WD
- Noise
- Vibration
- Leaks
- Hot odor

Cause

The front axle may have excessive preload in the pinion or carrier bearings or may be locked up not allowing the pinion to rotate freely. Vehicles with a NVG 236 or 246 transfer case (RPO NP8) have a preload in the clutch pack of the transfer case that supplies torque to the front driveshaft at all times. The front and rear driveshafts should be rotating at approximately the same speed (the front driveshaft display on the Tech 2® may be slightly higher but never less than the rear).

Diagnostic Tips

1. Position the vehicle on the hoist and raise the hoist until all four wheels are off the ground.
2. Connect the Tech 2® to the vehicle.
3. Start the engine.
4. Select the following screens on the Tech 2®:
 - F0; Diagnostics
 - Vehicle model year
 - LD truck; MPV; Incomplete
 - F0; Powertrain
 - Vehicle engine
 - 4-speed automatic
 - 2 speed Active
 - F1; Data Display
 - F2; ATC Data Display
 - F0; Transfer Case Data

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5. Select 2 HI with the transfer case selector switch.
6. Apply the service brake and move the transmission selector lever in any forward gear.
7. Release the service brake.
8. Observe the front and rear propeller shaft speeds displayed on the Tech 2[®]. The front and rear driveshafts should be rotating at approximately the same speed (the front driveshaft display on the Tech 2[®] may be slightly higher but never less than the rear). If they are not, skip to the Correction section below. If the driveshaft speeds are approximately the same, diagnose for other conditions that may be causing the concern. If the vehicle is stationary, the front propeller shaft should not rotate freely. It may take up to 54 N·m (40 lb ft) of torque to turn the front output shaft of the transfer case. If the front axle for any reason does not allow the front propeller shaft to spin while in the 2WD setting, the clutch pack in the transfer case will overheat because of the speed difference (slip) across the clutch pack between the stationary front driveshaft and the rotating rear driveshaft.

Correction

For vehicles with the NP8 transfer case option (Autotrak with push-button selections for 2HI, Auto 4WD, 4HI, 4LO and Neutral) only, when a vehicle comes in for issues with the front axle, the transfer case should also be inspected for overheating by inspecting for burned fluid or a free rotating front driveshaft. In addition to correcting front axle concerns, necessary repairs should be made to the transfer case.

Parts Information

Parts are available from GMSPO. Order as required.

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Usage	Labor Time
F4002	Front Differential and Transfer Case - Recondition	T Trucks	9.0 hrs
		K Trucks (Old Style)	7.8 hrs
		K Trucks (New Style)	7.8 hrs

