



Service Bulletin

File In Section: 04 - Driveline Axle

Bulletin No.: 99-04-21-005B

Date: September, 2002



TECHNICAL

Subject: Transfer Case Shudder (Flush and Replace Transfer Case Fluid)

Models: 1999-2003 Chevrolet Astro (AWD)
1999-2003 GMC Safari (AWD)
1999-2001 Oldsmobile Bravada
with All-Wheel Drive (NV136) Transfer Case (RPO NP4)

This bulletin is being revised to add model years. Please discard Corporate Bulletin Number 99-04-21-005A (Section 04 — Driveline Axle).

Condition

Some customers may comment about a vibration (shudder) during tight turning maneuvers on dry pavement at vehicle speeds less than 8 km/h (5 mph).

Cause

This condition may be caused by a slip-stick of the clutch plates in the transfer case clutch pack. On 1999 and newer models, the preload that is designed into the clutch pack may contribute to the condition. In addition, contamination of the fluid may interfere with the friction modifiers.

Correction

Flush and replace the transfer case fluid on affected vehicles using the following procedure and the part number listed below.

Perform the following diagnosis prior to flushing and replacing the transfer case fluid in order to properly identify the shudder.

Diagnosis

1. Verify the shudder in the vehicle. The vehicle needs to be at operating temperature (driven at least 5 miles) for proper diagnosis. After the vehicle is at operating temperature, drive in a tight circle just short of steering wheel lock, at a speed less than 8 km/h (5 mph) in order to identify the shudder.
2. Identify what rear axle type the vehicle has.
 - If the vehicle has a standard rear axle, then proceed to step 3.

- If the vehicle has a locking rear axle, remove the front propeller shaft. Refer to the Propeller Shaft subsection in the Service Manual. Drive the vehicle as outlined in step 1.

- If the shudder goes away, install the front propeller shaft and proceed to step 3. Refer to the Propeller Shaft subsection in the Service Manual.

- If the shudder does not go away, the locking rear axle may be the cause. Review the owner's records and determine if the rear axle was serviced at the first scheduled oil change. If records indicate that the axle service was done, then reevaluate the condition using diagnostic information in the appropriate Service Manual. If the rear axle was not serviced, service the rear axle. **INFORM THE CUSTOMER THAT THE AXLE SERVICE IS AN OWNER'S MAINTENANCE ITEM NOT COVERED UNDER THE VEHICLE'S WARRANTY.**

- Install the front propeller shaft. Refer to the Propeller Shaft subsection in the Service Manual.

3. Flush the transfer case with the blue colored fluid (AUTO-TRAK II) using the procedure and part number listed below. Perform the flush procedure even if the transfer case contains the blue colored AUTO-TRAK II fluid in order to remove any possible contaminants. The AUTO-TRAK II fluid contains an improved friction modifier that should correct the slip-stick condition. Refer to the Transfer Case subsection in the Service Manual for information on draining and filling the transfer case.

Flush Procedure

Important: Refer to Corporate Bulletin Number 99-04-21-001, dated April 1999, for important information on removing the transfer case drain and fill plugs.

1. Drain the transfer case fluid.
2. Refill the transfer case with 2 L (2 qts) of new fluid, P/N 12378508 (Canadian P/N 10953626).

3. After refilling the transfer case, drive the vehicle a minimum of 8 km (5 mi).
4. With the transfer case at operating temperature, drain the transfer case fluid again.
5. Refill the transfer case with new fluid.

Important: The vehicle may require approximately 160 km (100 miles) of driving before the condition is completely corrected.

6. If this procedure does not correct the shudder condition, please call the Technical Assistance Center for further instructions.

Parts Information

Part Number	Description	Qty
12378508 (Canadian P/N 10953626)	AUTO-TRAK II Transfer Case Fluid	4 (1 L) containers

Parts are currently available from GMSPO.

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
K4450	Test Drive Vehicle to Identify Shudder	0.4 hr
Add	To Diagnose Shudder with Locking Rear Axle	0.6 hr
Add	To Flush/Replace Transfer Case Fluid	0.7 hr

This is a unique labor operation number for use only with this bulletin. This number will not be published in the Labor Time Guide.

