Service Bulletin

File In Section: 07 - Transmission/Transaxle
Bulletin No.: 02-07-30-024B
Date: August, 2005

INFORMATION

Subject: **Diagnosis of Cracked or Broken Transmission Case**

Models: **2006 and Prior Cars and Light Duty Trucks**
2006 and Prior HUMMER H2
2006 HUMMER H3
2005–2006 Saab 9-7X
with 4L60/4L60-E/4L65-E or 4L80-E/4L85-E or Allison® Series 1000 Automatic Transmission

This bulletin is being revised to add models and model years. Please discard Corporate Bulletin Number 02-07-30-024A (Section 07 — Transmission/Transaxle).

Diagnosing the cause of a cracked or broken transmission case requires additional diagnosis and repair or a repeat failure will occur.

A cracked or broken transmission case is most often the result of abnormal external torsional forces acting on the transmission case. If none of the conditions listed below are apparent, an internal transmission component inspection may be required. Repairs of this type may be the result of external damage or abuse for which General Motors is not responsible. They are not the result of defects in materials or workmanship. If in doubt, contact your General Motors Service Representative.

The following items should be considered:

- It is important to inspect the vehicle for signs of an out of line condition, impact damage or foreign material to the following components:
  - The transmission
  - The engine mounts
  - The transmission rear mount and crossmember
  - Vehicle frame damage that alters the front to rear alignment of the driveshaft
  - The driveshafts (both front and rear)
  - The wheels (caked with mud, concrete, etc.)
  - The tires (roundness, lack of cupping, excessive balance weights)
  - The transfer case (if the vehicle is 4WD)

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- A worn or damaged driveshaft U-Joint has shown to be a frequent cause of transmission case cracking, especially on vehicles that see extended periods of highway driving. Always inspect the U-joint condition when diagnosing this condition.
- For driveshaft damage or imbalance, Inspect the driveshafts (both front and rear) for dents, straightness/runout or signs of missing balance weights. Also, inspect for foreign material such as undercoat sprayed on the driveshaft.
- The driveshaft working angles may be excessive or non-canceling, especially if the vehicle carrying height has been altered (lifted or lowered) or if the frame has been extended or modified.
- Damaged or worn upper or lower rear control arms or bushings.
- A rear axle that is not seated in the rear spring properly (leaf spring vehicles).
- Broken rear springs and or worn leaf spring bushings.

In some cases, the customer may not comment about a vibration but it is important to test drive the vehicle while using the electronic vibration analysis tool in an attempt to locate the cause of the torsional vibration. Refer to the Vibration Diagnosis and Correction sub-section of the appropriate Service Manual for more details on diagnosing and correcting vibrations.