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# Service Bulletin

File In Section: 04 - Driveline Axle

Bulletin No.: 03-04-17-001

Date: February, 2003



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## TECHNICAL

**Subject:** Whine Noise From Rear Axle (Diagnose and Replace Rear Shaft With A Tuned Torsional Damper Rear Propeller Shaft)

**Models:** 2002-2003 Cadillac Escalade EXT ✓  
 2000-2003 Chevrolet Suburban ✓  
 2002-2003 Chevrolet Avalanche -  
 2000-2003 GMC Yukon XL, Yukon XL Denali ✓

### Condition

Some customers may comment on a slight axle whine heard only at certain speeds, typically between 72-96 km/h (45-60 mph).

### Cause

"Inherent" ring and pinion gear whine.

All gear driven units, such as automotive rear axles, produce some level of noise that cannot be eliminated with conventional adjustments and repairs. "Inherent" axle noise can be described as a slight noise heard only at a certain speed (typically between 72-96 km/h (45-60 mph) on most General Motors® trucks). The presence of this noise is not indicative of a functional concern with the axle assembly. However, some customers may find that this "inherent" axle noise is unacceptable.

### Correction

Replace the rear propeller shaft with a tuned torsional damper shaft ONLY after diagnosis concludes that it is an "inherent" rear axle noise and no physical damage or incorrect adjustment exists.

**Important:** If the noise is not correctly diagnosed as "inherent" and having a peak in the narrow speed range of 72-86 km/h (45-60 mph), the addition of a tuned torsional damper propeller shaft can aggravate the perceptible noise level. It is extremely important to first diagnose the rear axle noise as "inherent" before installing a new tuned torsional damper propeller shaft.

### Diagnostic Information and Procedure for Rear Axle Noise

1. Diagnostic Starting Point - Rear Drive Axle. Refer to SI Document ID #696972.
2. Symptoms - Rear Drive Axle. Refer to SI Document ID #697220.
3. Rear Drive Axle Noises. Refer to SI Document ID #700560.
4. Noisy In Drive. Refer to SI Document ID #698120.

### Rear Propeller Shaft Replacement

1. Raise the vehicle. Refer to Lifting and Jacking the Vehicle in General Information. Refer to SI Document ID #737171.
2. Remove the bolts and the yoke retainers from the rear axle pinion yoke.

**Notice:** When removing the propeller shaft, do not attempt to remove the shaft by pounding on the yoke ears or using a tool between the yoke and the universal joint. If the propeller shaft is removed by using such means, the injection joints may fracture and lead to premature failure of the joint.

3. Slide the propeller shaft forward in order to disconnect the propeller shaft from the rear axle pinion yoke.

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4. Slide the propeller shaft rearward in order to disconnect the propeller shaft from the transmission or transfer case.
5. Remove the propeller shaft from the vehicle and discard.
6. Install the new tuned torsional damper propeller shaft (see Parts Information below) into the transmission or transfer case.
7. Install the propeller shaft to the rear axle pinion yoke.
8. Install the yoke retainers and bolts.  
**Tighten**  
Tighten the yoke retainer bolts to 25 N·m (19 lb ft).
9. Lower the vehicle.
10. Road test the vehicle.

### Parts Information

**Important:** Only small quantities of parts are available. Please DO NOT order for stock only.

Part Number	Description
15075235	Rear Prop Shaft with Tuned Torsion Damper (2WD Suburban, Avalanche, Yukon XL)
1576717B	Rear Prop Shaft with Tuned Torsion Damper (4WD Suburban, Avalanche, Yukon XL and 2003 only AWD Yukon XL Denali, Escalade EXT, with NP3 Transfer Case)
15084596	Rear Prop Shaft with Tuned Torsion Damper (2001 and 2002 only AWD Yukon XL Denali, Escalade EXT with NP3 Transfer Case)

Parts are expected to be available from GMSPO on February 17, 2003.

### Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
F1280	Propeller Shaft Assembly (Rear) - Replace	Use published labor operation time
Add A	Diagnosis Time	0.0-0.3 hr

