2008 DRIVELINE/AXLE

Propeller Shaft - Acadia, Enclave & Outlook

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Application	Specification	
	Metric	English
Center Bearing-to-Vehicle Underbody Bolts	25 N.m	19 lb ft
Propeller Shaft-to-Rear Differential Flange Bolts	50 N.m	37 lb ft
Propeller Shaft-to-Transfer Case Flange Bolts	25 N.m	18 lb ft

DIAGNOSTIC INFORMATION AND PROCEDURES

DIAGNOSTIC STARTING POINT - PROPELLER SHAFT

Begin the propeller shaft system diagnosis with Diagnostic Starting Point - Vibration Diagnosis and Correction . The use of the Diagnostic Starting Point will determine if the concern is related to the propeller shaft. When instructed to exit the Vibration Diagnosis and Correction diagnostic and return to the Diagnostic Starting Point - Propeller Shaft, proceed to **Propeller Shaft Diagnosis** in order to isolate and identify propeller shaft related concerns.

PROPELLER SHAFT DIAGNOSIS

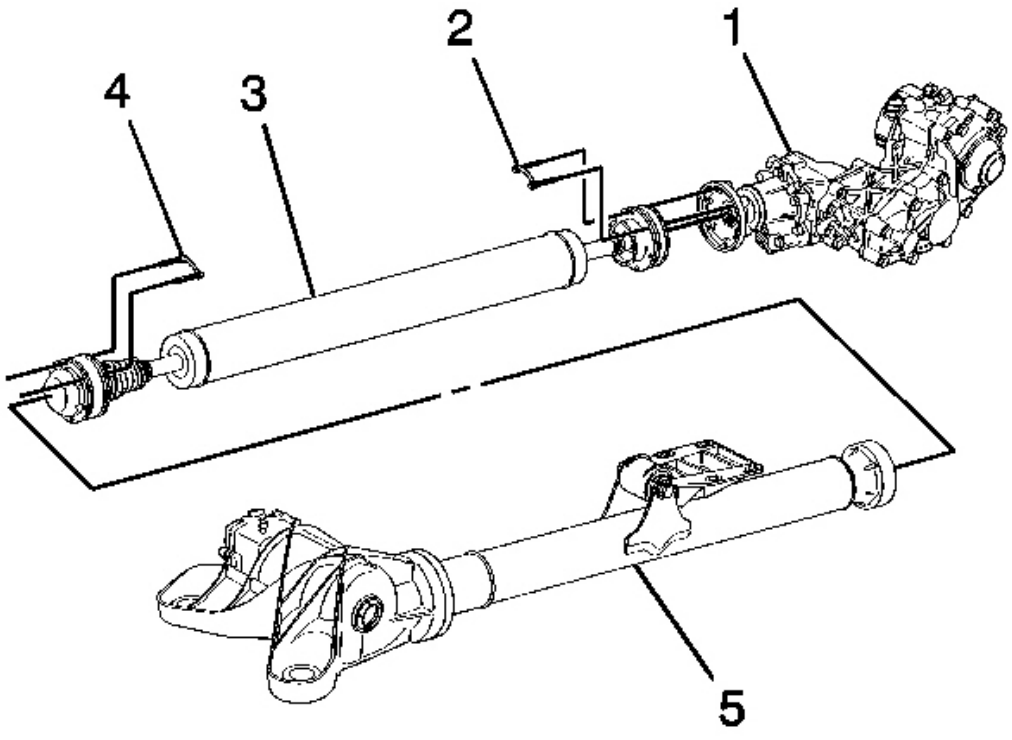

Fig. 1: View Of Propeller Shaft
Courtesy of GENERAL MOTORS CORP.

Review the propeller shaft system function. Refer to **Propeller Shaft Description and Operation**.

Inspect for loose or missing propeller shaft-to-flange bolts (2) and (4). Tighten or replace as necessary. Refer to **Propeller Shaft Replacement**.

The propeller shaft (3) and the constant velocity (CV) joints are not serviceable. The CV joints and seals should be inspected periodically, whenever the vehicle is serviced.

The CV joint seals should be inspected for the following:

- Tears
- Cracks
- Contamination of the lubricating grease

  Carefully pinch the seal and feel for the presence of grit

- Loose or missing seal clamps
- Leakage of lubricating grease from the seals

The CV joints should be inspected for the following conditions:

- Binding or impeded motion during axial movement of the front and rear CV joints
- Binding or impeded motion during lateral movement of the rear CV joint
- Loose or missing crimped-on end caps
- Leakage of lubricating grease from the end caps

The propeller shaft must be replaced if any of the above conditions exist. This will ensure that the propeller shaft continues to operate as intended, and does not damage the other driveline components.

REPAIR INSTRUCTIONS

PROPELLER SHAFT REPLACEMENT

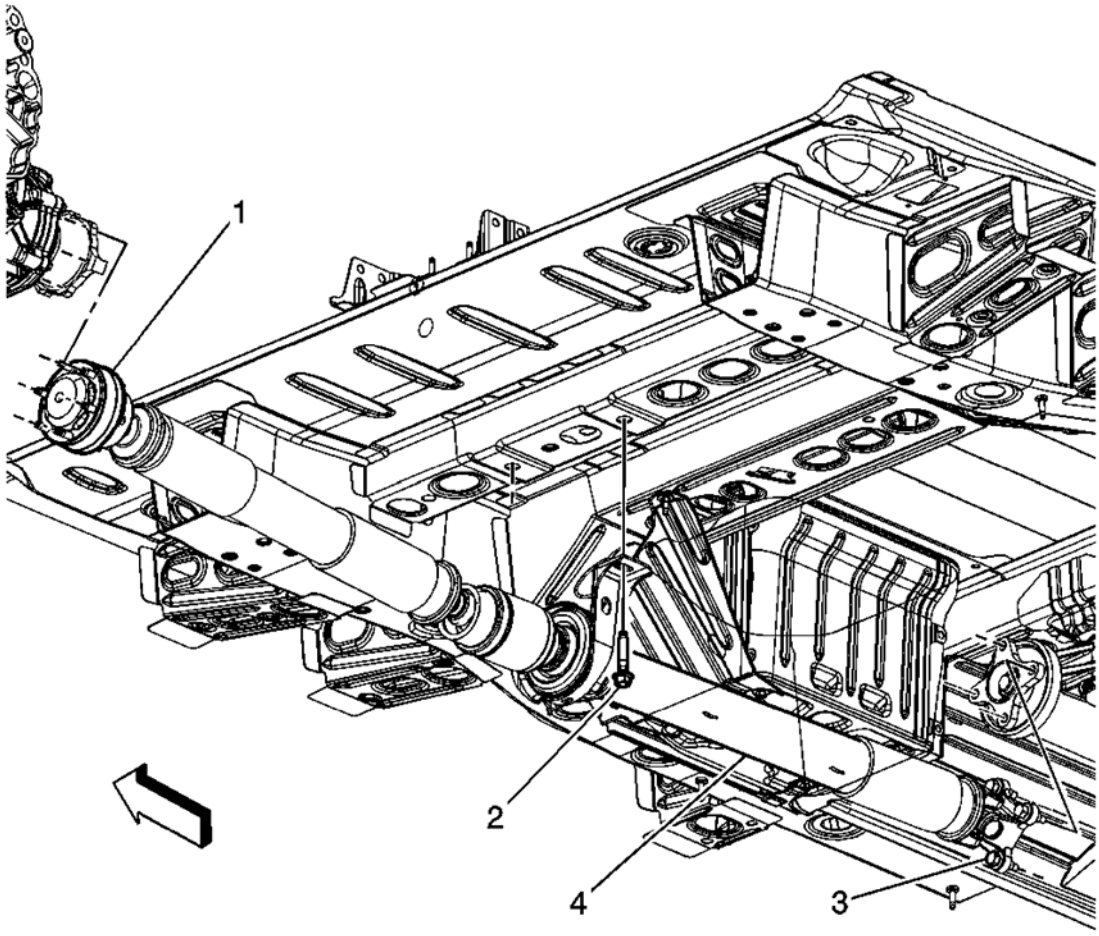

Fig. 2: Identifying Propeller Shaft & Components
Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedure: Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .	
1	Front Propeller Shaft Bolt (Qty: 6) **NOTE:** **Refer to Fastener Notice .** **Note:** DO NOT reuse the propeller shaft bolts or washers. Replace with NEW. **Procedure** 1. Paint or scribe reference marks on the transfer case flange to the propeller shaft flange to ensure minimal driveline system imbalance. 2. Support the front of the propeller shaft with a jack stand. **Tighten:** 40 N.m (30 lb ft)
2	Center Support Bearing Bolt (Qty: 2) **Tip:** Support the center bearing with a jack stand. **Tighten:** 58 N.m (43 lb ft)
3	Rear Propeller Shaft Bolt (Qty: 4) **Tip:** Paint or scribe reference marks on the rear propeller shaft flange to the rear differential drive flange to ensure minimal driveline system imbalance. **Tighten:** 60 N.m (44 lb ft)
4	Propeller Shaft

DESCRIPTION AND OPERATION

PROPELLER SHAFT DESCRIPTION AND OPERATION

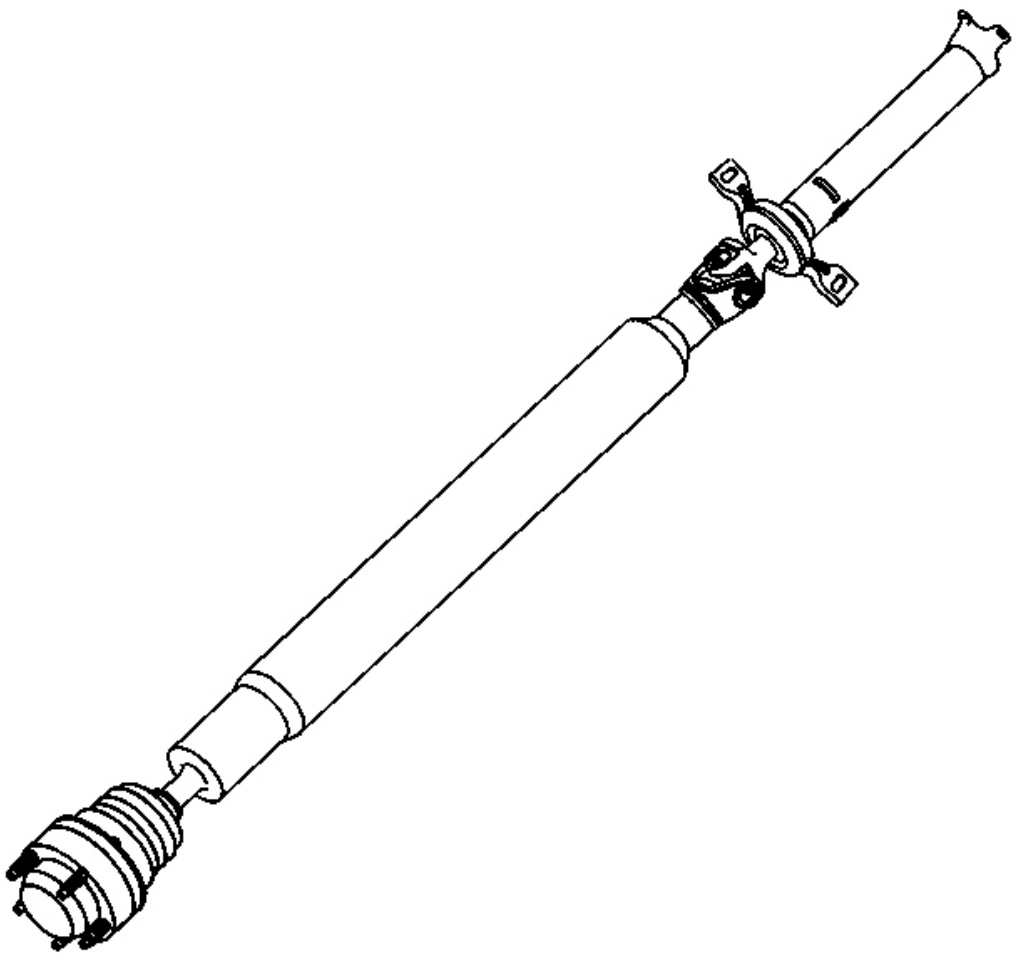

Fig. 3: View Of Propeller Shaft Assembly
Courtesy of GENERAL MOTORS CORP.

The propeller shaft assembly is a 2-piece design. The front shaft consists of a plunging A-type constant velocity joint at the front and a universal joint and yoke at the rear.

The rear shaft consists of a center bearing and a center yoke, which are pressed onto the rear half of the propeller shaft and retained by a snap ring. The front and rear shafts are joined together at the yokes with a universal joint. The rear shaft attaches to the axle with a flange which is attached to the rear shaft with a universal joint.

The center bearing provides support where the front and rear shafts mate and is bolted to the underbody. The front constant velocity joint is bolted to the transfer case, and the rear universal joint flange is bolted to the rear differential.

There are no serviceable parts on the propeller shaft. The propeller shaft is serviced as an assembly.