Driveshaft

Principles of Operation

Inspection and Verification

1. Verify the customer concern.
2. Visually inspect for obvious signs of mechanical or electrical damage.
3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step
4. If the cause is not visually evident, verify the symptom and refer to the Symptom Chart.

Symptom Chart(s)

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.
REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

Symptom Chart: NVH

Symptom Chart

Condition	Possible Sources	Actions
Driveline clunk - loud clunk when shifting from REVERSE to DRIVE	• Damaged or worn driveshaft CV joint and/or u-joint	• INSPECT the driveshaft CV joint and/or u-joint for wear or damage. INSTALL a new driveshaft as necessary. REFER to: Driveshaft (205-01 Driveshaft, Removal and Installation).
Driveline clunk — occurs as the vehicle starts to move forward following a stop	• Worn driveshaft CV joint and/or u-joint with excessive play	• INSPECT the driveshaft CV joint and/or u-joint for a worn condition. INSTALL a new driveshaft if necessary. REFER to: Driveshaft (205-01 Driveshaft, Removal and Installation).
Buzz – buzzing noise is the same at cruise or coast/deceleration	• Incorrect driveline angles	• CHECK for correct driveline angles. REFER to: Driveshaft Angle Measurement (205-01 Driveshaft, General Procedures). REPAIR as necessary.
Rumble or Boom – noise occurs at coast/deceleration, usually driveshaft speed-related and noticeable over a wide range of speeds	• Driveshaft out of balance	• CHECK the driveshaft for damage, missing weights or undercoating. INSTALL a new driveshaft as necessary. REFER to: Driveshaft (205-01 Driveshaft, Removal and Installation).
Grunting — normally associated with a shudder experienced during acceleration from a complete stop	• Driveshaft CV joint and/or u-joint binding	• INSTALL a new driveshaft as necessary. REFER to: Driveshaft (205-01 Driveshaft, Removal and Installation).

Condition	Possible Sources	Actions
Driveline shudder – occurs during acceleration from a slow speed or stop	• Driveline angles out of specification	• CHECK for correct driveline angles. REFER to: Driveshaft Angle Measurement (205-01 Driveshaft, General Procedures).
	• Binding or damaged driveshaft CV joint and/or u-joint	• INSPECT the driveshaft CV joint and/or u-joint and coupling shaft for wear or damage. INSTALL a new driveshaft as necessary. REFER to: Driveshaft (205-01 Driveshaft, Removal and Installation).
Driveline vibration - occurs at cruising speeds	• Worn or damaged driveshaft center bearing support	• CHECK the insulator for damage or wear. ROTATE the driveshaft and CHECK for rough operation. INSTALL a new driveshaft as necessary. REFER to: Driveshaft (205-01 Driveshaft, Removal and Installation).
	• Loose axle pinion flange bolts	• INSPECT the axle pinion flange. TIGHTEN the pinion flange bolts to specification. REFER to: Driveshaft (205-01 Driveshaft, Removal and Installation).
	• Excessive axle pinion flange runout	• CARRY OUT a runout check. REPAIR as necessary. REFER to: Specifications (205-01) .
	• Driveshaft is out of balance	• CHECK the driveshaft for damage , missing balance weights or undercoating. CHECK the driveshaft balance. REFER to: Driveshaft Runout and Balancing (205-01 Driveshaft, General Procedures).
	• Binding or damaged driveshaft CV joint and/or u-joint	• INSPECT the driveshaft CV joint and/or u-joint for wear or damage. INSTALL a new driveshaft as necessary. REFER to: Driveshaft (205-01 Driveshaft, Removal and Installation).
	• Excessive driveshaft runout	• CARRY OUT a runout check. REFER to: Driveshaft Runout and Balancing (205-01 Driveshaft, General Procedures).
	• Driveline angles out of specification	• CHECK for correct driveline angles. REFER to: Driveshaft Angle Measurement (205-01 Driveshaft, General Procedures). REPAIR as necessary.