TROUBLESHOOTING

To begin a successful diagnosis, fill out the questions.

DRIVESHAFT CONDITION : Noise ☐ Vibration ☐

Balance Weights Missing/Other Visual Defects? **Yes / No**

Maximum Allowable Runout : _____

Actual Runout : Front _____ Middle _____ Rear _____

Two-Piece Driveshaft Runout : Front _____ Rear _____

Middle Support Bearing : Loose ☐ Damaged ☐ Worn ☐ Others _____

Suspect Driveshaft Balanced ? **Yes / No**

Pinion Angle : Engine Height : Specification _____ Actual _____

Pinion Angle : Specification _____ Actual _____

Driveshaft Angle - Truck : Specification _____ Actual _____

Once the concern is narrowed down to a symptom/condition, proceed to condition and Symptom Categories below.

Condition and Symptom Categories.

Operation Condition Vehicle is moving

Depends more one how the vehicle is operated

1. Speed related
   - Related to vehicle speed
   A. Noise occurs at specific vehicle speed. A high pitch noise (whine).
      Go to troubleshooting.
   B. Loudness proportional to vehicle speed. Low frequency noise at high speeds, noise and ludness increase with speed. Go to Troubleshooting.
2. Acceleration
   - Light/moderate acceleration
   A. Driveline shudder. Go to Troubleshooting.
3. Cruising speeds
   - Driveline vibration. Go to Troubleshooting.

Symptom	Cause	Remedy (See page)
Hub howling or whine - Hub or transfer case	Axle lubricant low	Check the lubricant level. Fill the axle to specification

	Damaged or worn wheel bearings or axle bearings	Check for abnormal wheel bearing play or roughness. Refer to wheel Bearing Check in this section. See page DS-26. Adjust or Install new wheel bearings as necessary. See page DS-23 for front bearings or DS-29 for rear bearings.
Driveline clunk - loud clunk when shifting from reverse to drive	Excessive backlash in the axle or transmission	Carry out a total backlash check
	Loosen suspension components	Inspect the suspension for damage or wear. Repair or Install new components as necessary. See page SS-27, SS-43.
	Broken powertrain mounts	Inspect the powertrain mounts. Install new mounts as necessary.
	Idle speed too high	Check for the correct idle speed
Driveline clunk-occurs as the vehicle starts to move forward following a stop	Worn driveshaft joints with excessive play	Inspect the joints for a worn condition. Install a new driveshaft as necessary. See page DS-8.

Driveline clunk-occurs during acceleration or from cruise to coast/deceleration	Damaged or worn tripod joints	Inspect the joint and boot. Repair or Install a new joint as necessary. See page DS-8.
Quirer-noise from the rear hub, occurs when driving on rugged roads	Cap seperation from the hub bearing	Remove the rear hub check the hub bearing cap. Install a new cap if necessary.
Clicking, popping or grinding-occurs while vehicle is turning	Inadequate or contaminated lubrication in the joints	Check the joint boots and joints for wear or damage. Repair or Install new components as necessary. See page DS-14, 21.
	Another component contacting the driveshaft	Check the driveshafts and the are around the driveshafts. Repair as necessary.
	Brake components	Inspect the front brakes for wear or damage. Repair as necessary. See page BR-25.
	Suspension components	Inspect the lower arm ball joints for wear or damage. Repair as necessary. See page SS-33 for ball joints.

	Damaged or worn wheel bearings	Check for abnormal wheel bearing play or roughness. Refer to wheel bearing check in this section. See page DS-26. Adjust or Install new wheel bearings as necessary. See page DS-26 for front wheel bearings.
Clicking or snapping-occurs when accelerating around a corner	Damaged or worn birfield joints	Inspect the Birfield joints and boots. Repair or Install a new joint as necessary. See page DS-14 or 21.
Buzz-buzzing noise is the same at cruise or coast/deceleration	Damaged or worn tires	Check for abnormal tire wear or damage. Install a new tire as necessary. See page SS-63.
Driveline shudder-occurs during acceleration from a slow speed or stop	Rear axle assembly mispositioned	Check the axle mounts and the rear suspension for damage or wear. Repair as necessary.
	Loose rear axle bolts	Inspect the bolts. Tighten the bolt nuts to specification.

	Damaged or worn front suspension components	Check for a loose stabilizer bar, damaged or loose strut/strut bushings or loose or worn ball joints. Inspect the steering linkage for wear or damage. Repair or Install new components as necessary. See page SS-1.
	Binding the driveshaft joint	Inspect the driveshaft shaft joint for worn, or damaged condition. Install a new driveshaft assembly as necessary. Repair as necessary. See page DS-8.
	Loose rear axle bolts	Inspect the bolts. Tighten the bolts to specification.
Driveline vibration-occurs at cruising speeds	Binding or damaged driveshaft joint	Inspect the driveshaft joint for wear or damage. Install a new driveshaft assembly as necessary. See page DS-8.

	Incorrect lateral and radial tire/wheel runout	Inspect the tire and wheels. Measure tire runouts. Repair or Install new components as necessary. See page SS-59.
	Incorrectly seated joint in the front wheel hub	Check the Birfield joint for correct seating into the hub. Repair as necessary. See page DS-14, DS-21 for front joints.