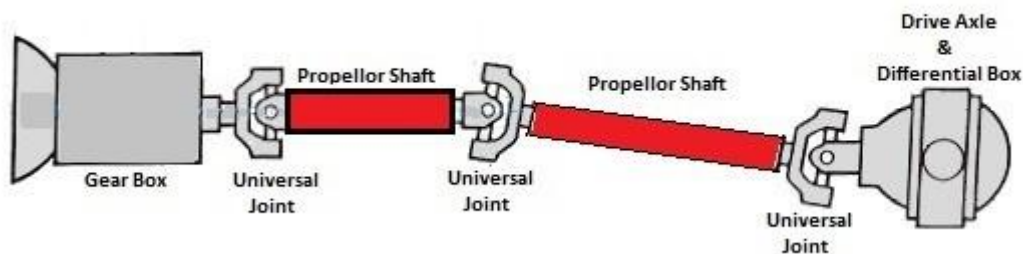




MAINTENANCE AND SERVICING OF PROPELLER SHAFT AND DIFFERENTIAL SYSTEM

UNIVERSAL JOINT AND PROPELLER SHAFT MAINTENANCE:

- ✚ Universal joints and propeller shaft do not require maintenance in normal use.
- ✚ Some universal joints are pre-lubricated for life during original assembly. When wear (or) noise occurs, the universal joints have to be replaced. However, some manufacturers recommend lubricating the universal joints every time chassis lubrication is performed.
- ✚ The drive shaft and universal joints are carefully balanced during original assembly. Always mark the position and alignment of the parts before dismantling. Then after reassembly and installation, they should be still in balance. A drive shaft can often be balanced by installation of two worm-type hose clamps.



PROPELLER SHAFT TROUBLE DIAGNOSIS

- 1. Turning Issue:** The most obvious symptom of a bad driveshaft is when you have trouble turning your vehicle. Your wheels won't receive the proper amount of torque due to a U-joint issue at the end of the driveshaft, so making turns will be very difficult due to the additional resistance. Once you confirm it's the driveshaft at fault, you need to get it replaced quickly or risk an accident due to not being able to control the vehicle.
- 2. Squeaking Noise:** If there is a squeaking sound present that will just not go away, then you may have problems with the driveshaft. This could be due to worn out internal components such as bushings or bearings within the shaft or U-joint or possibly an imbalance in the shaft. Usually the noise increases as you go faster.
- 3. U-Joint Rotation Issues:** Your driveshaft has a U-joint which rotates at a steady pace. If the rotation fails or speeds up too quickly, then it will cause issues with your driveshaft. Perhaps you have a bad U-joint or your bearings have rust on the cap seals. This may require you to replace your entire driveshaft if the damage is too significant.
- 4. Clunking Sound:** A failing driveshaft could cause clunking sounds to be heard as you step on the gas pedal or drive in reverse. These may be in addition to the squeaking sounds that you normally hear all the time. At this point, you should feel more than motivated to want to replace your shaft before



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some real damage occurs.

5. Vibrations: When you have a worn ut driveshaft, it may cause vibrations to come from underneath the vehicle which can be felt through the steering wheel or floor board. These vibrations coupled with another symptom should be a clear sign that your shaft needs to be replaced. In most of these cases, the shaft may have bushings which are worn out. Remember that the shaft is held in place by the bushings. If the bushings are loose, damaged, or worn out, then your shaft will vibrate because of it. Then it could lean to your shaft getting damaged.

6. Shuddering while Accelerating: If you experience shuddering or shaking when attempting to accelerate from a stop or low speed, you may have a worn U-joint or center bearing inside the driveshaft. This will usually be accompanied by strange noises as well.

DIFFERENTIAL TROUBLE DIAGNOSIS:

The first sign of differential trouble is usually noise.

HUMMING:

- ✚ A humming noise is often due to incorrect internal adjustment of drive pinion or the ring gear.
- ✚ Incorrect adjustment causes rapid tooth wear or even failure of differential.
- ✚ This humming noise will take on a growling noise as wear progresses.

NOISE ON ACCELERATION:

- ✚ Noise from differential is louder when the car is accelerating since there is heavy contact on the ends of the gear teeth.
- ✚ Noise is louder when the car is coasting since there is heavy toe contact and both these conditions must be corrected.

NOISE ON CURVES:

- ✚ If the noise is heard only when the car is going around a curve, the trouble is inside the differential case.
- ✚ Pinion gears tight on the pinion shaft, damaged gears or pinions, too much backlash between gears could be cause for this problem.
- ✚ When the car turns along a curve, the parts inside the differential case more relative to each other.

LIMITED-SLIP DIFFERENTIAL:

- ✚ The limited slip differential requires a special type of lubricant. The wrong lubricant can cause clutch surfaces to grab. This may produce chattering noise during a turn.
- ✚ The remedy is to drain the old lubricant and fill specified lubricant designed for limited-slip differential. In such cases wheel spin can also occur, even though differential is in good



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condition.

