DIAGNOSIS

Transaxle Noise

Gear Rattle is a repetitive metallic impact or rapping noise which occurs on a manual transaxle powertrain when the vehicle is lugging in gear. The rattle noise intensity generally increases with transaxle operating temperature and engine torque, and decreases with increasing vehicle speed. Since the gear ratios have been designed to achieve maximum fuel economy, there may be instances when gear rattle is distinctly noticeable under lugging condition.s This, however, is not detrimental to the engine or transaxle provided that the appropriate gear ratio is selected for the vehicle speed.

NOTE: Replacement of transaxle components will not correct this condition.

Neutral Rollover Rattle has the same characteristics as gear rattle except rollover now occurs with the engine idling, transaxle in neutral and the clutch engaged. The rollover noise intensity increases with transaxle operating temperature and engine torque load resulting from engine driven accessories (air conditioning and alternator). Neutral rollover noise is inherent in manual transaxles and is not detrimental to the engine or transaxle. In vehicles where the engine idle speed is below specification or rough, a harsh clattering noise similar to loose marbles in the transaxle will become audible.

Neutral Rollover Noise caused by engine torsional vibrations, and clutch release bearing noise are sometimes mistaken for bearing noise. Neutral rollover noise will disappear when the transaxle is engaged in gear. Due to a constant running clutch release bearing (used for the self-adjusting clutch mechanism) noise caused by a worn or damaged clutch release bearing will be noticeable with the clutch engaged or disengaged. Release bearing noise can be checked by removing the clutch release cable and sliding the clutch release bearing away from contact with the pressure plate (by movement of the clutch release arm) if the noise is eliminated, then the clutch release bearing is worn or damaged. When concerns of this nature are encountered, it will be necessary to check the vehicle to determine if bearing noise exists. Transaxle service will not eliminate neutral rollover noise or clutch release bearing noise.

TRANSAXLE DIAGNOSIS

CONDITION	POSSIBLE SOURCE	ACTION
• Clicking Noise in Reverse Gear	• Damaged or rough gears. • Damaged linkage preventing complete gear travel.	• Replace damaged gears. • Check for damaged or misaligned shift linkage or other causes of shift linkage travel restrictions.
• Gear Clash into Reverse	• Owner not familiar with manual transaxle shift techniques. • Damaged linkage preventing complete gear travel.	• Instruct customer to refer to Owner Guide on proper shifting and the time-lapse required before a shift into reverse. • Check for damaged or misaligned shift linkage or other causes of shift linkage bind.
• Gears Clash When Shifting From One Forward Gear to Another	• Improper clutch disengagement. • Clutch disc installed improperly with damper springs toward flywheel. • Worn or damaged shift forks, synchro-teeth (usually high mileage phenomenon).	• Refer to Section 08-01. • Refer to Section 08-01. • Check for damage, and service or replace as required.
• Leaks	• False report. (Do not assume that lube on lower case surfaces is from gasket material leakage or seals.) • Slight mist from vent. • Other components leaking. • Excessive amount of lubrication on transaxle — wrong type. • Worn or damaged internal components	• Remove all traces of lube on exposed transaxle surfaces. Operate transaxle and inspect for new leakage. • Normal condition that does not require service. If dripping, check lubricant level. • Identify leaking fluid at engine, power steering, or transaxle. • Check lube level and type. Fill to bottom of filler plug opening. • Remove transaxle clutch housing lower dust cover and inspect for lube inside housing. Inspect for leaks at the shift lever shaft seal, differential seals and input shift shaft seal. Service as required.