

**3. Exhaust system hangs too low**

- a. Check the exhaust hangers, brackets and mounts. Replace broken, missing or damaged mounts.
- b. Check the exhaust routing and alignment. Check and replace bent or damaged components. If the exhaust is not routed properly, loosen and reposition the exhaust system.

**4. Exhaust sounds loud**

- a. Check the system for looseness and leaks. Check the exhaust pipes, clamps, flange bolts and manifold fasteners for tightness. Check and replace any failed gaskets.

- b. Check and replace exhaust silencers that have a loss of efficiency due to internally broken baffles or worn packing material.
- c. Check for missing mufflers and silencers that have been replaced with straight pipes or with non-original equipment silencers.

**NOTE: Exhaust system rattles, vibration and proper alignment should not be overlooked. Excessive vibration caused by collapsed engine mounts, damaged or missing exhaust hangers and misalignment may cause surface cracks and broken welds, creating exhaust leaks or internal damage to exhaust components such as the catalytic converter, creating a restriction to exhaust flow and loss of power.**

**2. DRIVE TRAIN****2-A. Automatic Transmission****1. Transmission shifts erratically**

- a. Check and if not within the recommended range, add or remove transmission fluid to obtain the correct fluid level. Always use the recommended fluid type when adding transmission fluid.
- b. Check the fluid level condition. If the fluid has become contaminated, fatigued from excessive heat or exhibits a burning odor, change the transmission fluid and filter using the recommended type and amount of fluid. A fluid which exhibits a burning odor indicates that the transmission has been slipping internally and may require future repairs.
- c. Check for an improperly installed transmission filter, or missing filter gasket, and repair as necessary.
- d. Check for loose or leaking gaskets, pressure lines and fittings, and repair or replace as necessary.
- e. Check for loose or disconnected shift and throttle linkages or vacuum hoses, and repair as necessary.

**2. Transmission will not engage**

- a. Check the shift linkage for looseness, wear and proper adjustment, and repair as necessary.
- b. Check for a loss of transmission fluid and top off as needed with the recommended fluid.
- c. If the transmission does not engage with the shift linkage correctly installed and the proper fluid level, internal damage has likely occurred, requiring transmission removal and disassembly.

**3. Transmission will not downshift during heavy acceleration**

- a. On computer controlled transmissions, check for failed sensors or control units and repair or replace defective components.
- b. On vehicles with kickdown linkages or vacuum servos, check for proper linkage adjustment or leaking vacuum hoses or servo units.

**NOTE: Many automatic transmissions use an electronic control module, electrical sensors and solenoids to control transmission shifting. When troubleshooting a vehicle with this type of system, be sure the electrical connectors are fully connected, clean and not physically**

**damaged. If necessary, clean the electrical contacts using electrical contact cleaner. The use of cleaning agents not specifically designed for electrical contacts could leave a film or damage the insulation of the wiring.**

**2-B. Manual Transmission****1. Transmission grinds going into forward gears while driving**

- a. Check the clutch release system. On clutches with a mechanical or cable linkage, check the adjustment. Adjust the clutch pedal to have 1 inch (25mm) of free-play at the pedal.
- b. If the clutch release system is hydraulically operated, check the fluid level and, if low, top off using the recommended type and amount of fluid.
- c. Synchronizers worn. Remove transmission and replace synchronizers.
- d. Synchronizer sliding sleeve worn. Remove transmission and replace sliding sleeve.
- e. Gear engagement dogs worn or damaged. Remove transmission and replace gear.

**2. Transmission jumps out of gear**

- a. Shift shaft detent springs worn. Replace shift detent springs.
- b. Synchronizer sliding sleeve worn. Remove transmission and replace sliding sleeve.
- c. Gear engagement dogs worn or damaged. Remove transmission and replace gear.
- d. Crankshaft thrust bearings worn. Remove engine and crankshaft, and repair as necessary.

**3. Transmission difficult to shift**

- a. Verify the clutch adjustment and, if not properly adjusted, adjust to specification.
- b. Synchronizers worn. Remove transmission and replace synchronizers.
- c. Pilot bearing seized. Remove transmission and replace pilot bearing.
- d. Shift linkage or bushing seized. Disassemble the shift linkage, replace worn or damaged bushings, lubricate and reinstall.