Excessive Idle Vibration or “Click” Sound

**SYMPTOMS**
- Engine vibration at idle.
- A single “click” or “pop” sound is heard when coming to a stop (automatic transmission only).

**PROBABLE CAUSES**

**Idle Vibration:**
- The upper bushing in the torque rod is cracked or torn (manual or automatic transmission).
- The vacuum-controlled rear engine mount is defective (automatic transmission only).

**“Click” Sound (automatic transmission only):**
- The vacuum-controlled rear engine mount is defective.

**PARTS INFORMATION**

**Torque rod:**
- For manual transmission
  
P/N 50830-SM4-020, H/C 3594991
  
For automatic transmission
  
P/N 50830-SM4-A81, H/C 3594983

**Vacuum-actuated rear engine mount:**
  
P/N 50810-SV4-J82, H/C 4710133

**CORRECTIVE ACTION**

- **Idle Vibration:** Begin with **Torque Rod Inspection**.
- **“Click” Sound:** Begin with **Diagnosis B**.

**Torque Rod Inspection**

1. Inspect the torque rod upper bushing for cracks or tears. On A/T-equipped models, remove the upper mounting bolt and rotate the torque rod away from the engine.

2. **Inspect for cracks and tears.**

   **UPPER BUSHING**

   - If the bushing is bad, continue to step 2 to replace the torque rod.
   - If the bushing is OK, and the vehicle has an automatic transmission, go to **Diagnosis A**.
   - If the bushing is OK, and the vehicle has a manual transmission, investigate other causes.
2. Remove the upper mounting bolt (if not done in step 1). Remove the lower mounting bolt. Remove the torque rod.

3. Install the new torque rod (see PARTS INFORMATION). Torque both mounting bolts to 65 N·m (47 lb-ft).
   NOTE: The upper mounting bolt should easily slide into the torque rod. If it does not, the front beam may be bent.

4. Start the engine and check for idle vibration.
   - Manual Transmission: If idle vibration is still excessive, investigate other causes.
   - Automatic Transmission: If idle vibration is still excessive, go to Diagnosis A.

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**Diagnosis A (Excessive Idle Vibration)**

1. Warm the engine to normal operating temperature (cooling fan comes on at least twice).

2. Disconnect the upper hose from the engine mount solenoid. Attach a vacuum gauge to the solenoid.

3. With engine speed at 770 rpm or less, check for manifold vacuum.
   - If there is no vacuum, troubleshoot the engine mount control system (see section 23 of the appropriate service manual).
   - If there is vacuum, continue to step 4.

4. Disconnect the vacuum gauge from the engine mount solenoid and plug the hose port.

5. Connect a vacuum pump to the upper hose you disconnected in step 2. Apply 15 inches of vacuum for several seconds.
   - If there is a vacuum leak, inspect the hose and engine mount diaphragm.
   - If there is no vacuum leak, continue to step 6.
6. Turn on the air conditioning and put the transmission in Drive.

7. Have an assistant apply 15 inches of vacuum for approximately 10 seconds, then release the vacuum for 10 seconds. Repeat this several times.
   - If the level of idle vibration changes with the vacuum application, investigate other causes for the idle vibration.
   - If the level of idle vibration does not change, go to Engine Mount Replacement.

Diagnosis B ("Click" Sound)
1. Test drive the vehicle and verify that a single "click" or "pop" sound is heard when coming to a stop.

2. Disconnect the upper hose from the engine mount solenoid. Plug the hose and the port on the solenoid.

3. Drive the vehicle again and listen for the same sound.
   - If the sound is still there, investigate other causes.
   - If the sound has disappeared, go to Engine Mount Replacement.

Engine Mount Replacement
1. Remove the air intake duct.

2. Disconnect the vacuum hose from the rear engine mount diaphragm. Remove the mounting bolt.

3. Remove two of the three rear engine mount mounting bolts.

4. Remove the bracket between the engine and transmission.

5. Raise the vehicle on a hoist.
6. Remove the center beam (five bolts).

7. Remove the cotter pin and castle nut from the left lower control arm. Use the special tool to separate the lower control arm from the steering knuckle.

8. Disconnect the left drive shaft from the intermediate shaft.

9. Remove the intake manifold bracket.
10. Remove the remaining rear engine mount mounting bolt.
11. Remove the oil filter.
12. *EX model only*: Remove the oxygen sensor.
13. Remove the rear engine mount by sliding it to the left side of the vehicle.
14. Install the new rear engine mount. Torque the bolts as shown.

15. Reinstall all removed parts.

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**WARRANTY CLAIM INFORMATION**

**In warranty:** The normal warranty applies.

**Out of warranty:** Any repair performed after warranty expiration may be eligible for goodwill consideration by the District Service Manager or your Zone Office. You must request consideration, and get a decision, before starting work.

<table>
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<tr>
<th>OPERATION NUMBER</th>
<th>DESCRIPTION</th>
<th>FLAT RATE TIME</th>
<th>TEMPLATE ID</th>
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<td>112113</td>
<td>Inspect and replace torque rod, manual transmission</td>
<td>0.5 hour</td>
<td>96-005A</td>
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<tr>
<td>112113</td>
<td>Inspect and replace torque rod, automatic transmission</td>
<td>0.5 hour</td>
<td>96-005B</td>
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<tr>
<td>112114</td>
<td>Diagnose and replace rear engine mount</td>
<td>1.9 hours</td>
<td>96-005C</td>
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Failed part: P/N 50830-SM4-A81
H/C 3594983
Defect code: 042
Contention code: B07