

## NO.21 ENGINE NOISE [LF]

B3E010318881W23

21	ENGINE NOISE
DESCRIPTION	Engine noise from under hood
POSSIBLE CAUSE	<p><b>Squeal, click or chirp noise:</b></p> <ul style="list-style-type: none"> <li>• Improper engine oil level</li> <li>• Improper drive belt tension</li> <li>• Generation installation (alignment)</li> <li>• Splash shield or under cover looseness (splashed water to drive belts)</li> </ul> <p><b>Rattle sound noise:</b></p> <ul style="list-style-type: none"> <li>• Loose parts</li> </ul> <p><b>Hiss sound noise:</b></p> <ul style="list-style-type: none"> <li>• Vacuum leakage</li> <li>• Loose spark plug</li> <li>• Air leakage from intake-air system</li> </ul> <p><b>Rumble or grind noise:</b></p> <ul style="list-style-type: none"> <li>• Improper drive belt tension</li> <li>• Improper P/S fluid level</li> </ul> <p><b>Rap or roar sound noise:</b></p> <ul style="list-style-type: none"> <li>• Dynamic dumper looseness</li> <li>• Exhaust system looseness</li> <li>• Intake-air system looseness</li> </ul> <p><b>Other noise:</b></p> <ul style="list-style-type: none"> <li>• Camshaft friction gear noise or MLA noise</li> <li>• Timing chain noise</li> </ul>

### Diagnostic procedure

STEP	INSPECTION	RESULTS	ACTION
1	Is a squealing, click or chirping sound present?	Yes	Inspect for the following: <ul style="list-style-type: none"> <li>• Engine oil level</li> <li>• Drive belt tension</li> <li>• Splash shield or under cover looseness</li> <li>• Generator installation (alignment)</li> </ul>
		No	Go to the next step.
2	Is a rumbling or grinding sound present?	Yes	Inspect the drive belts or P/S fluid level.
		No	Go to the next step.
3	Is a rattling sound present?	Yes	Inspect rattling location for loose parts.
		No	Go to the next step.
			Inspect for the following:

4	Is a hissing sound present?	Yes	<ul style="list-style-type: none"> <li>• Vacuum leakage</li> <li>• Spark plug looseness</li> <li>• Intake-air system leakage</li> </ul>
		No	Go to the next step.
5	Is a rapping or roaring sound present?	Yes	Inspect looseness for the following: <ul style="list-style-type: none"> <li>• Dynamic damper</li> <li>• Intake-air system</li> <li>• Exhaust system</li> </ul>
		No	Go to the next step.
6	Is a knocking sound present?	Yes	Go to symptom troubleshooting "No.11 Knocking/pinging". (See <a href="#">NO.13 KNOCKING/PINGING-ACCELERATION/CRUISE [LF]</a> .)
		No	If the noise comes from the engine internal, inspect for friction gear, timing chain or MLA noise.
7	Verify test results. <ul style="list-style-type: none"> <li>• If normal, return to diagnostic index to service any additional symptoms. (See <a href="#">ENGINE SYMPTOM TROUBLESHOOTING [LF]</a>.)</li> <li>• If malfunction remains, inspect related Service information perform repair or diagnosis.</li> </ul> - If vehicle repaired, troubleshooting completed. - If vehicle not repaired or additional diagnostic information not available, replace the PCM. (See <a href="#">PCM REMOVAL/INSTALLATION [LF]</a> .)		