

## 28.Engine Noise

### A: INSPECTION

Type of sound	Condition	Possible cause
Regular clicking sound	Sound increases as engine speed increases.	<ul style="list-style-type: none"> <li>• Valve mechanism is defective.</li> <li>• Incorrect valve clearance</li> <li>• Worn valve rocker</li> <li>• Worn camshaft</li> <li>• Broken valve spring</li> </ul>
Heavy and dull clank	Oil pressure is low.	<ul style="list-style-type: none"> <li>• Camshaft journal wear</li> <li>• Worn connecting rod bearing (large end)</li> </ul>
	Oil pressure is normal.	Damaged engine mounting
High-pitched clank (Spark knock)	Sound is noticeable when accelerating with an overload condition.	<ul style="list-style-type: none"> <li>• Ignition timing advanced</li> <li>• Accumulation of carbon inside combustion chamber</li> <li>• Wrong spark plug</li> <li>• Improper gasoline</li> </ul>
Clank when engine speed is 1,000 to 2,000 rpm	Sound is reduced when fuel injector connector of noisy cylinder is disconnected. (NOTE*)	<ul style="list-style-type: none"> <li>• Camshaft journal wear</li> <li>• Worn connecting rod bearing (large end)</li> </ul>
Knocking sound when engine is operating under idling speed and engine is warm	Sound is reduced when fuel injector connector of noisy cylinder is disconnected. (NOTE*)	<ul style="list-style-type: none"> <li>• Worn cylinder liner and piston ring</li> <li>• Broken or stuck piston ring</li> <li>• Worn piston pin and hole at piston end of connecting rod</li> </ul>
	Sound is not reduced if each fuel injector connector is disconnected in turn. (NOTE*)	<ul style="list-style-type: none"> <li>• Worn cam sprocket</li> <li>• Worn camshaft journal bore in cylinder head assembly</li> </ul>
Squeaky sound	—	Insufficient generator lubrication
Rubbing sound	—	Poor contact of generator brush and rotor
Gear scream when starting engine	—	<ul style="list-style-type: none"> <li>• Defective ignition starter switch</li> <li>• Worn gear and starter pinion</li> </ul>
Sound like polishing glass with a dry cloth	—	<ul style="list-style-type: none"> <li>• Loose drive belt</li> <li>• Defective water pump shaft</li> </ul>
Hissing sound	—	<ul style="list-style-type: none"> <li>• Insufficient compression</li> <li>• Air leakage in air intake system, hose, connection or manifold</li> </ul>
Timing belt noise	—	<ul style="list-style-type: none"> <li>• Loose timing belt</li> <li>• Belt contacting with case/adjacent part</li> </ul>
Valve noise	—	Incorrect valve clearance

**NOTE\*)**

When disconnecting the fuel injector connector, the malfunction indicator light illuminates and DTC is stored in ECM memory. Therefore, perform the Clear Memory Mode <Ref. to EN(H4SO)(diag)-44, OPERATION, Clear Memory Mode.> and Inspection Mode <Ref. to EN(H4SO)(diag)-35, PROCEDURE, Inspection Mode.> after connecting the fuel injector connector.

# Engine Noise

MECHANICAL

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