

## 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 cam clearance</li> <li>• Worn camshaft</li> <li>• Broken valve spring</li> <li>• Defective valve shim</li> </ul>
Heavy and dull clank	Oil pressure is low.	<ul style="list-style-type: none"> <li>• Worn crankshaft bearing</li> <li>• Worn connecting rod bearing</li> </ul>
	Oil pressure is normal.	<ul style="list-style-type: none"> <li>• Loosened flywheel mounting bolt</li> <li>• Damaged engine mounting</li> </ul>
High-pitched clank	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 heat range of spark plug</li> <li>• Improper octane value gasoline</li> </ul>
Clank when engine speed is between 1,000 and 2,000 rpms.	Sound is reduced when the fuel injector connector of the noisy cylinder is disconnected.*	<ul style="list-style-type: none"> <li>• Worn crankshaft bearing</li> <li>• Worn connecting rod bearing</li> </ul>
Knocking sound when engine is operating under idling speed and engine is warm	Sound is reduced when the fuel injector connector of the noisy cylinder is disconnected.*	<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 piston pin hole of piston</li> </ul>
	Sound is not reduced if each fuel injector connector is disconnected in turn.*	<ul style="list-style-type: none"> <li>• Unusually worn valve rocker</li> <li>• Unusually worn valve shim</li> <li>• Worn cam sprocket</li> <li>• Worn journal of cam carrier and camshaft cap</li> </ul>
Squeaky sound	—	<ul style="list-style-type: none"> <li>• Insufficient generator lubrication</li> </ul>
Rubbing sound	—	<ul style="list-style-type: none"> <li>• Poor contact of generator brush and rotor</li> </ul>
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>• Defective automatic belt tensioner adjuster assembly (Loose V-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 chain noise	—	<ul style="list-style-type: none"> <li>• Loose timing chain</li> <li>• Timing chain contacting with adjacent part</li> </ul>
Valve noise	—	<ul style="list-style-type: none"> <li>• Incorrect cam clearance</li> </ul>

\* 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(H4DO)(diag)-57, OPERATION, Clear Memory Mode.> and Inspection Mode <Ref. to EN(H4DO)(diag)-43, PROCEDURE, Inspection Mode.> after connecting the fuel injector connector.

# Engine Noise

MECHANICAL

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# EXHAUST

# *EX(H4DO)*

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