

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"> • Valve mechanism is defective. • Incorrect cam clearance • Worn camshaft • Broken valve spring • Defective valve shim
Heavy and dull clank	Oil pressure is low.	<ul style="list-style-type: none"> • Worn crankshaft bearing • Worn connecting rod bearing
	Oil pressure is normal.	<ul style="list-style-type: none"> • Loosened flywheel mounting bolt • Damaged engine mounting
High-pitched clank	Sound is noticeable when accelerating with an overload condition.	<ul style="list-style-type: none"> • Ignition timing advanced • Accumulation of carbon inside combustion chamber • Wrong heat range of spark plug • Improper octane value gasoline
Clank when engine speed is between 1,000 and 2,000 rpm.	Sound is reduced when the fuel injector connector of the noisy cylinder is disconnected.*	<ul style="list-style-type: none"> • Worn crankshaft bearing • Worn connecting rod bearing
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"> • Worn cylinder liner and piston ring • Broken or stuck piston ring • Worn piston pin and piston pin hole of piston
	Sound is not reduced if each fuel injector connector is disconnected in turn.*	<ul style="list-style-type: none"> • Unusually worn valve rocker • Unusually worn valve shim • Worn cam sprocket • Worn journal of cam carrier and camshaft cap
Squeaky sound	—	<ul style="list-style-type: none"> • Insufficient generator lubrication
Rubbing sound	—	<ul style="list-style-type: none"> • Poor contact of generator brush and rotor
Gear scream when starting engine	—	<ul style="list-style-type: none"> • Defective ignition starter switch • Worn gear and starter pinion
Sound like polishing glass with a dry cloth	—	<ul style="list-style-type: none"> • Defective automatic belt tensioner adjuster assembly (Loose V-belt) • Defective water pump shaft
Hissing sound	—	<ul style="list-style-type: none"> • Insufficient compression • Air leakage in air intake system, hose, connection or manifold
Timing chain noise	—	<ul style="list-style-type: none"> • Loose timing chain • Timing chain contacting with adjacent part
Valve noise	—	<ul style="list-style-type: none"> • Incorrect cam clearance

* 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)-56, OPERATION, Clear Memory Mode.> and Inspection Mode <Ref. to EN(H4DO)(diag)-44, PROCEDURE, Inspection Mode.> after connecting the fuel injector connector.

EXHAUST

EX(H4DO)

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