

2012 - Mazda6 - Engine

NO.21 ENGINE NOISE [MZR 2.5]

21	ENGINE NOISE
DESCRIPTION	• Engine noise from under hood.
POSSIBLE CAUSE	Squeal, click or chirp noise: • Improper engine oil level • Improper drive belt tension • Auto tensioner bearing malfunction • Generator installation • Improper installation of purge solenoid valve • Splash shield or under cover looseness (splashed water to drive belts) Rattle sound noise: • Loose parts Hiss sound noise: • Vacuum leakage • Loose spark plug • Air leakage from intake air system Rumble or grind noise: • Improper drive belt tension • Loose parts • Fluid level low or air in power steering fluid Rap or roar noise: • Dynamic dumper looseness • Exhaust system looseness • Intake air system looseness • Variable valve timing actuator malfunction

- Variable tumble control system malfunction
- Improper balancer unit backlash

Other noise:

- Tappet noise
- Timing chain noise

Diagnostic procedure

STEP	INSPECTION	RESULTS	ACTION
1	VERIFY IF THERE IS SQUEAL, CLICK, OR CHIRP SOUND • Is a squealing, click or chirping sound present?	Yes	Inspect the followings: • Engine oil level • Drive belt tension • Splash shield or under cover looseness • Solenoid valve installation • Auto tensioner bearing damaged • Generator installation Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
2	VERIFY IF THERE IS RUMBLE OR GRIND SOUND • Is a rumbling or grinding noise present?	Yes	Inspect the followings: • Drive belt tension • Loose parts in engine compartment • Power steering fluid level Repair or replace the malfunctioning part according to inspection result. • If normal, perform the power steering fluid line air bleeding. (See AIR BLEEDING .)
		No	Go to the next step.
3	VERIFY IF THERE IS RATTLE SOUND • Is a rattling noise present?	Yes	Inspect the rattling location for loose parts. Repair or replace the malfunctioning part according to the inspection results.

		No	Go to the next step.
4	VERIFY IF THERE IS HISS SOUND Is a hissing noise present?	Yes	Inspect the following: - Vacuum leakage - Spark plug looseness - Intake air system leakage Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
5	VERIFY IF THERE IS RAP OR ROAR SOUND Is a rapping or roar noise present?	Yes	Inspect for looseness in the following: - Dynamic dumper - Intake air system - Exhaust system Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
6	VERIFY IF THERE IS KNOCK SOUND Is a knocking noise present?	Yes	Go to the symptom troubleshooting "NO.13 KNOCKING/PINGING-ACCELERATION/CRUISE". (See NO.13 KNOCKING/ PINGING-ACCELERATION/ CRUISE [MZR 2.5] .)
		No	If noise comes from engine internal: - Inspect the following: - Friction gear - Timing chain - Tappet noise - Valve clearance - Variable tumble control system operation - Variable valve timing control actuator - Repair or replace the malfunctioning part according to the inspection

			results.
7	• Verify test results. ▪ If normal, return to diagnostic index to service any additional symptoms. (See SYMPTOM DIAGNOSTIC INDEX [MZR 2.5].) ▪ If malfunction remains, inspect related Service Bulletins and/or On-line Repair Information and perform repair or diagnosis. • If vehicle is repaired, troubleshooting completed. • If vehicle is not repaired or additional diagnostic information is not available, reprogram the PCM if a later calibration is available. Retest.		

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