

2012 - Mazda6 - Engine

NO.21 ENGINE NOISE [MZI 3.7 V6]

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 • Improper installation of purge solenoid valve • Generator installation (alignment) • 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 • Improper P/S fluid level Rap or roar noise: • Dynamic dumper looseness • Exhaust system looseness • Intake-air system looseness • Variable valve timing actuator malfunction Other noise:

- Camshaft friction gear noise or 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 for the followings: • Engine oil level • Drive belt tension • Purge solenoid valve installation • Auto tensioner bearing damaged • Splash shield or under cover looseness • Generator installation (alignment) 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 for the followings: • Drive belt tension • P/S fluid level Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
3	VERIFY IF THERE IS RUMBLE OR GRIND SOUND • Is a rattling noise present?	Yes	Inspect 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 for 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 looseness for followings: - 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 [MZI 3.7 V6] .)
		No	Inspect for followings: - Valve clearance (See VALVE CLEARANCE INSPECTION/ ADJUSTMENT [MZI 3.7 V6] .) - Variable valve timing actuator Repair or replace the malfunctioning part according to the inspection results. - If there are normal, noise comes from the engine internal, inspect for friction gear, timing chain or tappet noise.
7	Verify test results. - If normal, return to diagnostic index to service any additional symptoms. (See SYMPTOM DIAGNOSTIC INDEX [MZI 3.7 V6] .) - 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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