

2012 - Mazda6 - Engine

NO.20 FUEL ODOR (IN ENGINE COMPARTMENT) [MZR 2.5]

20	FUEL ODOR (IN ENGINE COMPARTMENT)
DESCRIPTION	Gasoline fuel smell or visible leakage.
POSSIBLE CAUSE	- Excessive or insufficient fuel pressure - Fuel pump relay or fuel pump circuit malfunction - Restriction in fuel line - Pressure regulator malfunction (built-into fuel pump unit) - Fuel pump malfunction - Fuel leakage from fuel system - Fuel injector malfunction - Fuel tank vent system blockage - Purge solenoid valve malfunction - PCM DTC is stored. - Charcoal canister malfunction WARNING: The following troubleshooting flow chart contains the fuel system diagnosis and repair procedures. Read the following warnings before performing the fuel system services: - Fuel vapor is hazardous. It can easily ignite, causing serious injury and damage. Always keep sparks and flames away from fuel. - Fuel line spills and leakage are dangerous. Fuel can ignite and cause serious injuries or death and damage. Fuel can also irritate skin and eyes. To prevent this, always complete "BEFORE SERVICE PRECAUTION" and "AFTER SERVICE PRECAUTION" described in this manual. (See BEFORE SERVICE PRECAUTION [MZR 2.5].) (See AFTER SERVICE PRECAUTION [MZR 2.5].) CAUTION: Disconnecting/ connecting the quick release connector without cleaning it may possibly cause damage to the fuel pipe and the quick release connector. Always clean the quick release connector joint area before disconnecting/ connecting, and make sure that it is free of foreign material.

Diagnostic procedure

STEP	INSPECTION	RESULTS	ACTION
1	INSPECT FUEL LINE PRESSURE - Inspect the fuel line pressure. (See FUEL LINE PRESSURE INSPECTION [MZR 2.5] .) - Is the fuel line pressure correct?	Yes	Go to the next step.
		No	Zero or low: - Inspect the following: - Fuel pump relay - Fuel pump circuit - Fuel line for clogging

			If there is no malfunction, replace the fuel pump unit. (See FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZR 2.5].) High: Replace the fuel pump unit. (See FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZR 2.5].)
2	INSPECT FUEL SYSTEM FOR FUEL LEAKAGE - Visually inspect for fuel leakage at the fuel injector O-ring and fuel line. - Service if necessary. - Is the fuel line pressure held after ignition is off? (See FUEL LINE PRESSURE INSPECTION [MZR 2.5].)	Yes Go to the next step.	No Inspect the fuel injector. (See FUEL INJECTOR INSPECTION [MZR 2.5].) If the fuel injector is normal, replace the fuel pump unit. (See FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZR 2.5].)
3	INSPECT FUEL TANK VENT SYSTEM - Inspect the following: - Blockage/restriction or an open circuit in the wiring harness between engine vacuum port and charcoal canister - Blockage in the fuel tank vent system - Is there any malfunction?	Yes Replace the vacuum hose.	No Go to the next step.
4	INSPECT PURGE SOLENOID VALVE - Inspect the purge solenoid valve. (See PURGE SOLENOID VALVE INSPECTION [MZR 2.5].) - Is the solenoid operating properly?	Yes Go to the next step.	No Replace the purge solenoid valve. (See PURGE SOLENOID VALVE REMOVAL/ INSTALLATION [MZR 2.5].)
5	VERIFY PCM DTC - Retrieve any DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].) - Are there any DTCs displayed?	Yes Go to the appropriate DTC inspection. (See DTC TABLE [MZR 2.5].)	No Inspect the charcoal canister for fuel saturation. If an excess amount of liquid fuel is present, replace the charcoal canister. (See CHARCOAL CANISTER, CANISTER VENT (CV) SOLENOID VALVE, AIR FILTER COMPONENT REMOVAL/ INSTALLATION [MZR 2.5].)
6	- 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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			If there is no malfunction, replace the fuel pump unit. (See FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZR 2.5].) High: Replace the fuel pump unit. (See FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZR 2.5].)
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