

2012 - Mazda6 - Engine

NO.20 FUEL ODOR (IN ENGINE COMPARTMENT) [MZI 3.7 V6]

20	FUEL ODOR (IN ENGINE COMPARTMENT)
DESCRIPTION	Gasoline fuel smell or visible leakage.
POSSIBLE CAUSE	- Fuel leakage from fuel system - Excessive fuel line pressure - Pressure regulator malfunction (built-in fuel pump unit) - 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 servicing the fuel system: - 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 [MZI 3.7 V6] .) (See AFTER SERVICE PRECAUTION [MZI 3.7 V6] .) CAUTION: - Disconnecting/connecting quick release connector without cleaning it may cause damage to fuel pipe and quick release connector. Always clean 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 - Install the fuel pressure gauge between the fuel pipe and fuel distributor. - Start engine and idle it. - Measure the fuel line pressure during idle. (See FUEL LINE PRESSURE INSPECTION [MZI 3.7 V6] .) - Is the fuel line pressure correct during idle?	Yes No	Go to the next step. - Inspect for the following: - Fuel pump relay - Fuel pump circuit - Fuel line for clogging - If there is no malfunction, replace the fuel pump unit. (Fuel pump or pressure regulator malfunction) (See FUEL PUMP UNIT REMOVAL/INSTALLATION

			[MZI 3.7 V6] .) High: Replace the fuel pump unit. (Pressure regulator malfunction) (See FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
2	INSPECT FUEL SYSTEM FOR FUEL LEAKAGE - Visually inspect for fuel leakage at fuel injector O-ring and fuel line. - Service if necessary. - Is the fuel line pressure held after ignition is switched to off? (See FUEL LINE PRESSURE INSPECTION [MZI 3.7 V6] .)	Yes Go to the next step.	No Inspect the fuel injector. (See FUEL INJECTOR INSPECTION [MZI 3.7 V6] .) If the fuel injector is normal, replace the fuel pump unit. (See FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
3	INSPECT FUEL TANK VENT SYSTEM - Inspect for the following: - Blockage/restriction or open circuit in wiring harness between engine vacuum port and charcoal canister - Blockage in 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 [MZI 3.7 V6] .) - Is the solenoid operating properly?	Yes Go to the next step.	No Replace the purge solenoid valve. (See PURGE SOLENOID VALVE REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
5	VERIFY PCM DTC - Switch the ignition to ON (Engine off). - Retrieve any DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6] .) - Are there any DTCs displayed?	Yes DTC is displayed: Go to the appropriate DTC inspection. (See DTC TABLE [MZI 3.7 V6] .)	No No DTC is displayed: - Inspect the charcoal canister for fuel saturation. - If excess amount of liquid fuel is present, replace the charcoal canister. (See CHARCOAL CANISTER, CANISTER VENT (CV) SOLENOID VALVE, AIR FILTER COMPONENT REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
6	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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