

2012 - Mazda6 - Engine

DTC P0457:00 [MZR 2.5]

DTC P0457:00	EVAP system leak detected (fuel cap loose/off)
DETECTION CONDITION	- P0457:00 indicates that the initial vacuum could not be achieved after a refueling event and the purge vapor flow is excessive (gross leak). Diagnostic support note - This is an intermittent monitor (EVAP system). - A check cap light will be illuminated after a malfunction has been detected on one driving cycle. The check cap light will be extinguished after the monitor has run without a malfunction (same or subsequent drive cycle). - The MIL will be illuminated after a malfunction has been detected on three consecutive driving cycles. The MIL will be extinguished after three consecutive driving cycles where the monitor was run without a malfunction. - PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle. - FREEZE FRAME DATA (Mode 2)/Snapshot data is available. - The DTC is stored in the PCM memory.
POSSIBLE CAUSE	- Missing or loose fuel filler cap - PCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA AND DIAGNOSTIC MONITORING TEST RESULTS HAVE BEEN RECORDED	Yes Go to the next step.
	Have the FREEZE FRAME DATA (Mode 2)/snapshot data and DIAGNOSTIC MONITORING TEST RESULTS (EVAP system related) been recorded?	No Record the FREEZE FRAME DATA (Mode 2)/snapshot data and DIAGNOSTIC MONITORING TEST RESULTS on the repair order, then go to the next step.

2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related repair information available?	Yes	Perform repair or diagnosis according to the available repair information. If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	VERIFY RELATED PENDING AND STORED DTC - Switch the ignition to off, then to ON (engine off). - Verify pending and stored DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].) - Are any other DTCs present? NOTE: - If the DTC P0455:00 is present, diagnose the DTC P0455:00 first.	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5] .)
		No	Go to the next step.
4	INSPECT FUEL FILLER CAP FOR MISSING OR LOOSENESS - Visually inspect the fuel filler cap for missing or looseness. - Is there any malfunction?	Yes	Repair or replace the fuel filler cap, then go to the next step.
		No	Go to the next step.
5	EVAP SYSTEM LEAK INSPECTION - Perform the EVAP system leak Inspection. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZR 2.5].) - Is the test result normal?	Yes	Go to the next step.
		No	Leakage still exists. Perform the DTC P0455:00 inspection. (See DTC P0442:00, P0455:00, P0456:00 [MZR 2.5].)
6	VERIFY DTC TROUBLESHOOTING COMPLETED - Make sure to reconnect all disconnected connectors. - Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) - Perform the Drive Mode 06 (EVAP System Repair Verification Drive Mode).	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to the next step.
		No	Go to the next step.

	(See OBD-II DRIVE MODE [MZR 2.5].) • Is the PENDING CODE for this DTC present?		
7	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZR 2.5].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5] .)
		No	DTC troubleshooting completed.

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POSSIBLE CAUSE	- Missing or loose fuel filler cap - PCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA AND DIAGNOSTIC MONITORING TEST RESULTS HAVE BEEN RECORDED	Yes Go to the next step.
	Have the FREEZE FRAME DATA (Mode 2)/snapshot data and DIAGNOSTIC MONITORING TEST RESULTS (EVAP system related) been recorded?	No Record the FREEZE FRAME DATA (Mode 2)/snapshot data and DIAGNOSTIC MONITORING TEST RESULTS on the repair order, then go to the next step.

2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related repair information available?	Yes	Perform repair or diagnosis according to the available repair information. If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	VERIFY RELATED PENDING AND STORED DTC - Switch the ignition to off, then to ON (engine off). - Verify pending and stored DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].) - Are any other DTCs present? NOTE: - If the DTC P0455:00 is present, diagnose the DTC P0455:00 first.	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5] .)
		No	Go to the next step.
4	INSPECT FUEL FILLER CAP FOR MISSING OR LOOSENESS - Visually inspect the fuel filler cap for missing or looseness. - Is there any malfunction?	Yes	Repair or replace the fuel filler cap, then go to the next step.
		No	Go to the next step.
5	EVAP SYSTEM LEAK INSPECTION - Perform the EVAP system leak Inspection. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZR 2.5].) - Is the test result normal?	Yes	Go to the next step.
		No	Leakage still exists. Perform the DTC P0455:00 inspection. (See DTC P0442:00, P0455:00, P0456:00 [MZR 2.5].)
6	VERIFY DTC TROUBLESHOOTING COMPLETED - Make sure to reconnect all disconnected connectors. - Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) - Perform the Drive Mode 06 (EVAP System Repair Verification Drive Mode).	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to the next step.
		No	Go to the next step.

	(See OBD-II DRIVE MODE [MZR 2.5].) Is the PENDING CODE for this DTC present?		
7	VERIFY AFTER REPAIR PROCEDURE - Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZR 2.5].) - Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5] .)
		No	DTC troubleshooting completed.