2012 - Mazda6 - Engine

DTC P0460:00 [MZR 2.5]

DTC P0460:00	Fuel level sensor circuit malfunction
DETECTION CONDITION	• The PCM monitors the fuel level input communications network message for a concern. The test fails when the PCM determines that the value of the fuel level input signal is stuck. The PCM calculates the amount of fuel used during operation. If the fuel level input signal does not change or does not correspond with the calculated fuel usage, the DTC is set. **Diagnostic support note** • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. • 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	• Instrument cluster malfunction ▪ Incorrectly installed fuel gauge ▪ Fuel level input signal circuit malfunction • Amount of fuel is empty or overfilled • Fuel gauge sender unit malfunction • PCM malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED** • Has the FREEZE FRAME DATA	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode

	(Mode 2)/snapshot data been recorded?		2)/snapshot data 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?	Yes	Go to the applicable DTC inspection. (See **DTC TABLE [MZR 2.5]**.)
		No	Go to the next step.
4	**VERIFY STORED DTC IN INSTRUMENT CLUSTER** • Switch the ignition to off, then to ON (engine off). • Perform the instrument cluster DTC inspection. (See **DTC INSPECTION [INSTRUMENT CLUSTER]**.) • Are any DTCs present?	Yes	Go to the appropriate DTC inspection. (See **DTC TABLE [INSTRUMENT CLUSTER]**.)
		No	Go to the next step.
5	**INSPECT AMOUNT OF FUEL** • Visually inspect the amount of fuel. • Is the amount of fuel normal?	Yes	Go to the next step.
		No	Do the amount of the fuel to a proper level, then go to Step 7.
6	**INSPECT FUEL GAUGE SENDER UNIT** • Inspect the fuel gauge sender unit. (See **FUEL GAUGE SENDER UNIT INSPECTION**.) • Is there any malfunction?	Yes	Replace the fuel gauge sender unit, then go to the next step. (See **FUEL GAUGE SENDER UNIT REMOVAL/ INSTALLATION**.)
		No	Go to the next step.
7	**VERIFY DTC TROUBLESHOOTING COMPLETED**	Yes	Repeat the inspection from Step 1.

	• 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 KOER self test. (See **KOEO/ KOER SELF TEST [MZR 2.5]**.) • Is the PENDING CODE for this DTC present?		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.
8	**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	• Instrument cluster malfunction ▪ Incorrectly installed fuel gauge ▪ Fuel level input signal circuit malfunction • Amount of fuel is empty or overfilled • Fuel gauge sender unit malfunction • PCM malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED** • Has the FREEZE FRAME DATA	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode

	(Mode 2)/snapshot data been recorded?		2)/snapshot data 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.
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4	**VERIFY STORED DTC IN INSTRUMENT CLUSTER** • Switch the ignition to off, then to ON (engine off). • Perform the instrument cluster DTC inspection. (See **DTC INSPECTION [INSTRUMENT CLUSTER]**.) • Are any DTCs present?	Yes	Go to the appropriate DTC inspection. (See **DTC TABLE [INSTRUMENT CLUSTER]**.)
		No	Go to the next step.
5	**INSPECT AMOUNT OF FUEL** • Visually inspect the amount of fuel. • Is the amount of fuel normal?	Yes	Go to the next step.
		No	Do the amount of the fuel to a proper level, then go to Step 7.
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		No	Go to the next step.
7	**VERIFY DTC TROUBLESHOOTING COMPLETED**	Yes	Repeat the inspection from Step 1.

	• 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 KOER self test. (See **KOEO/ KOER SELF TEST [MZR 2.5]**.) • Is the PENDING CODE for this DTC present?		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.
8	**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]**.)
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