

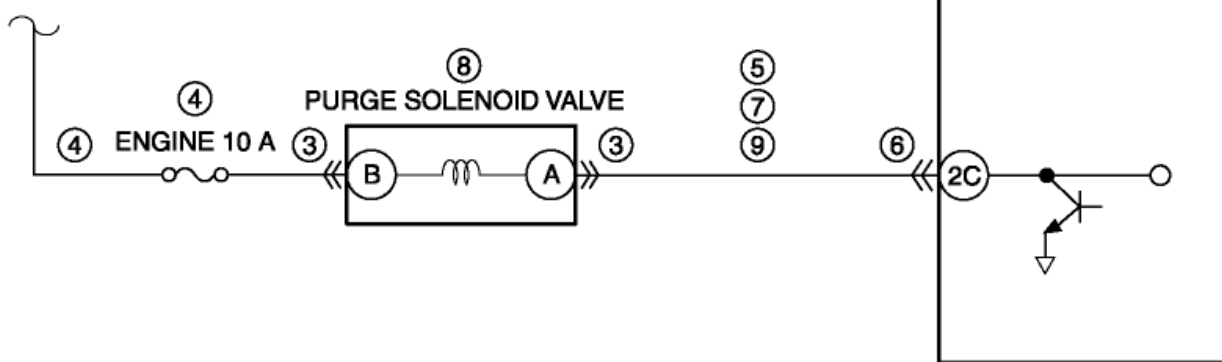
2012 - Mazda6 - Engine

DTC P0443:00 [MZR 2.5]

DTC P0443:00	Purge solenoid valve circuit problem
DETECTION CONDITION	• The PCM monitors the purge solenoid valve control signal voltage and current. If the following conditions are met, the PCM determines that there is the purge solenoid valve control circuit problem. ▪ The PCM turns the purge solenoid valve off, but the voltage of the purge solenoid valve control signal remains low. ▪ The PCM turns the purge solenoid valve on, but the current of the purge solenoid valve control signal remains high. 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. • FREEZE FRAME DATA is available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• Purge solenoid valve connector or terminal malfunction • Short to ground or open circuit in purge solenoid valve power supply circuit ▪ Short to ground in wiring harness between main relay terminal D and purge solenoid valve terminal B ▪ ENGINE 10 A fuse malfunction ▪ Open circuit in wiring harness between main relay terminal D and purge solenoid valve terminal B • Short to ground in wiring harness between purge solenoid valve terminal A and PCM terminal 2C • PCM connector or terminal malfunction • Short to power supply in wiring harness between purge solenoid valve terminal A and PCM terminal 2C • Purge solenoid valve malfunction • Open circuit in wiring harness between purge solenoid valve terminal A and PCM terminal 2C • PCM malfunction

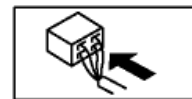
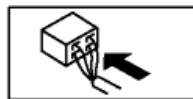
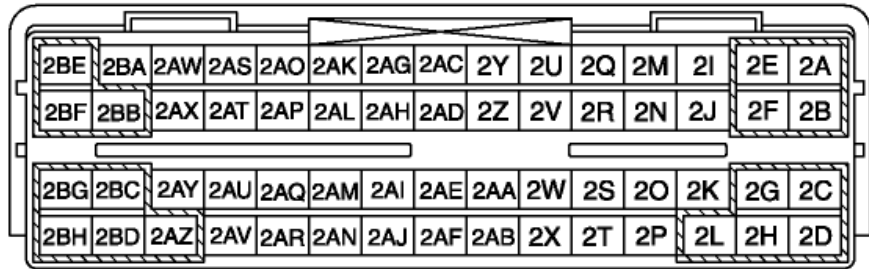
MAIN RELAY
TERMINAL D

PCM



PURGE SOLENOID VALVE
WIRING HARNESS-SIDE
CONNECTOR

PCM WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	Yes Go to the next step.
		No Record the FREEZE FRAME DATA (Mode 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	INSPECT PURGE SOLENOID VALVE CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the purge solenoid valve connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes Repair or replace the terminal and/or connector, then go to Step 10.
		No Go to the next step.
4	INSPECT PURGE SOLENOID VALVE POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT - Purge solenoid valve connector is disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between purge solenoid valve terminal B (wiring harness-side) and body ground.	Yes Go to the next step.
		No Inspect the ENGINE 10 A fuse. - If the fuse is melt: - Repair or replace the wiring harness

	Is the voltage B+ ?		for a possible short to ground. - Replace the fuse. - If the fuse is deterioration: - Replace the fuse. - If the fuse is normal: - Repair or replace the wiring harness for a possible open circuit. Go to Step 10.
5	INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO GROUND - Purge solenoid valve connector is disconnected. - Switch the ignition to off. - Inspect for continuity between purge solenoid valve terminal A (wiring harness-side) and body ground. - Is there continuity?	Yes	If the short to ground circuit could be detected: - Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected: - Replace the PCM (short to ground in PCM internal circuit). (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to Step 10.
		No	Go to the next step.
6	INSPECT PCM CONNECTOR CONDITION - Disconnect the PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the terminal and/or connector, then go to Step 10.
		No	Go to the next step.
7	INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY - Purge solenoid valve and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between purge solenoid valve terminal A (wiring harness-side) and body ground. - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 10.
		No	Go to the next step.
8	INSPECT PURGE SOLENOID VALVE - Inspect the purge solenoid valve. (See PURGE SOLENOID VALVE INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes	Replace the purge solenoid valve, then go to Step 10. (See PURGE SOLENOID VALVE REMOVAL/ INSTALLATION [MZR 2.5].)
		No	Go to the next step.
9	INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR OPEN CIRCUIT - Purge solenoid valve and PCM connectors are disconnected. - Switch the ignition to off. - Inspect for continuity between purge solenoid valve terminal A (wiring harness-side) and PCM terminal 2C (wiring harness-side).	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.

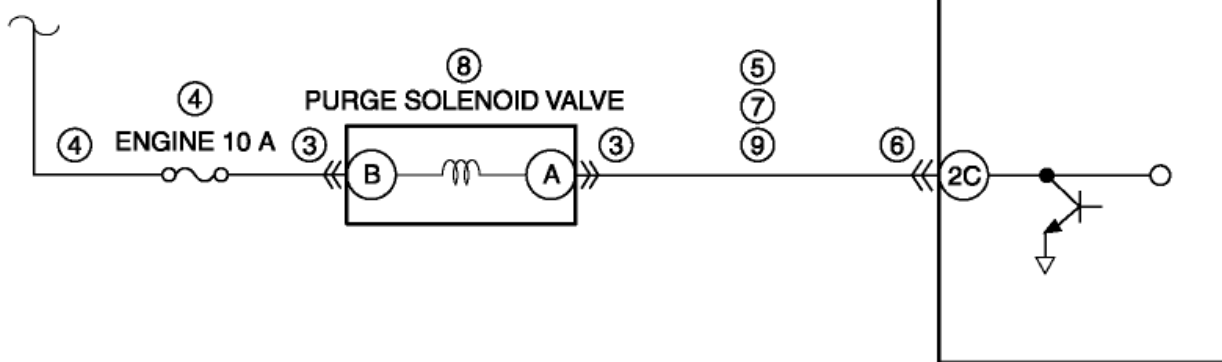
	Is there continuity?		
10	VERIFY DTC TROUBLESHOOTING COMPLETED • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) • Perform the KOEO or KOER self test. (See KOEO/ KOER SELF TEST [MZR 2.5].) • Is the PENDING CODE for this DTC present?	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.
11	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.

2012 - Mazda6 - Engine

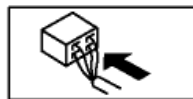
DTC P0443:00 [MZR 2.5]

DTC P0443:00	Purge solenoid valve circuit problem
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POSSIBLE CAUSE	- Purge solenoid valve connector or terminal malfunction - Short to ground or open circuit in purge solenoid valve power supply circuit - Short to ground in wiring harness between main relay terminal D and purge solenoid valve terminal B - ENGINE 10 A fuse malfunction - Open circuit in wiring harness between main relay terminal D and purge solenoid valve terminal B - Short to ground in wiring harness between purge solenoid valve terminal A and PCM terminal 2C - PCM connector or terminal malfunction - Short to power supply in wiring harness between purge solenoid valve terminal A and PCM terminal 2C - Purge solenoid valve malfunction - Open circuit in wiring harness between purge solenoid valve terminal A and PCM terminal 2C - PCM malfunction

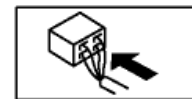
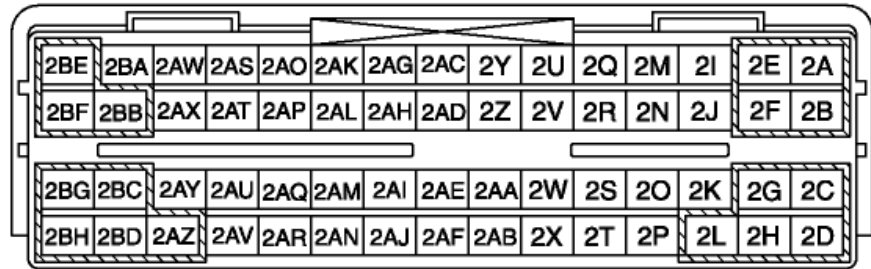
MAIN RELAY
TERMINAL D



PURGE SOLENOID VALVE
WIRING HARNESS-SIDE
CONNECTOR



PCM WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	Yes Go to the next step.
		No Record the FREEZE FRAME DATA (Mode 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	INSPECT PURGE SOLENOID VALVE CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the purge solenoid valve connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes Repair or replace the terminal and/or connector, then go to Step 10.
		No Go to the next step.
4	INSPECT PURGE SOLENOID VALVE POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT - Purge solenoid valve connector is disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between purge solenoid valve terminal B (wiring harness-side) and body ground.	Yes Go to the next step.
		No Inspect the ENGINE 10 A fuse. - If the fuse is melt: - Repair or replace the wiring harness

	Is the voltage B+ ?		for a possible short to ground. - Replace the fuse. - If the fuse is deterioration: - Replace the fuse. - If the fuse is normal: - Repair or replace the wiring harness for a possible open circuit. Go to Step 10.
5	INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO GROUND - Purge solenoid valve connector is disconnected. - Switch the ignition to off. - Inspect for continuity between purge solenoid valve terminal A (wiring harness-side) and body ground. - Is there continuity?	Yes	If the short to ground circuit could be detected: - Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected: - Replace the PCM (short to ground in PCM internal circuit). (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to Step 10.
		No	Go to the next step.
6	INSPECT PCM CONNECTOR CONDITION - Disconnect the PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the terminal and/or connector, then go to Step 10.
		No	Go to the next step.
7	INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY - Purge solenoid valve and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between purge solenoid valve terminal A (wiring harness-side) and body ground. - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 10.
		No	Go to the next step.
8	INSPECT PURGE SOLENOID VALVE - Inspect the purge solenoid valve. (See PURGE SOLENOID VALVE INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes	Replace the purge solenoid valve, then go to Step 10. (See PURGE SOLENOID VALVE REMOVAL/ INSTALLATION [MZR 2.5].)
		No	Go to the next step.
9	INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR OPEN CIRCUIT - Purge solenoid valve and PCM connectors are disconnected. - Switch the ignition to off. - Inspect for continuity between purge solenoid valve terminal A (wiring harness-side) and PCM terminal 2C (wiring harness-side).	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.

	Is there continuity?		
10	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 KOEO or KOER self test. (See KOEO/ KOER SELF TEST [MZR 2.5].) • Is the PENDING CODE for this DTC present?	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.
11	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.