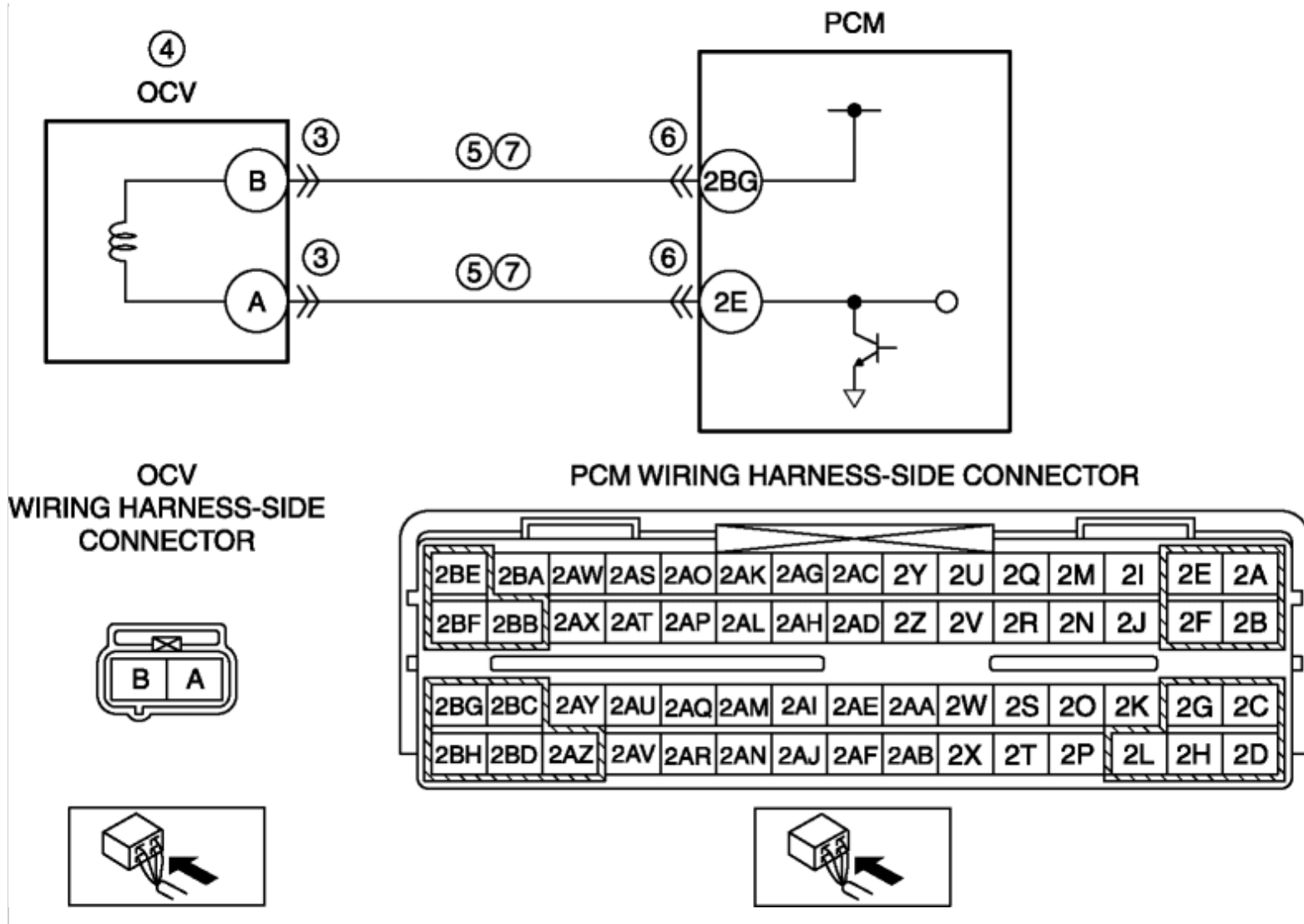


2012 - Mazda6 - Engine

DTC P2088:00 [MZR 2.5]

DTC P2088:00	OCV circuit low input
DETECTION CONDITION	• The PCM monitors the OCV voltage. If the PCM detects the OCV control voltage (calculated from the OCV) is below the threshold voltage (calculated from the battery positive voltage), the PCM determines that the OCV circuit has a malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates 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	• OCV connector or terminals malfunction • OCV malfunction • Short to ground in wiring harness between the following terminals: ▪ OCV terminal B—PCM terminal 2BG ▪ OCV terminal A—PCM terminal 2E • PCM connector or terminals malfunction • Open circuit in wiring harness between the following terminals: ▪ OCV terminal B—PCM terminal 2BG ▪ OCV terminal A—PCM terminal 2E • PCM malfunction



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 OCV CONNECTOR CONDITION	Yes Repair or replace the terminal and/or

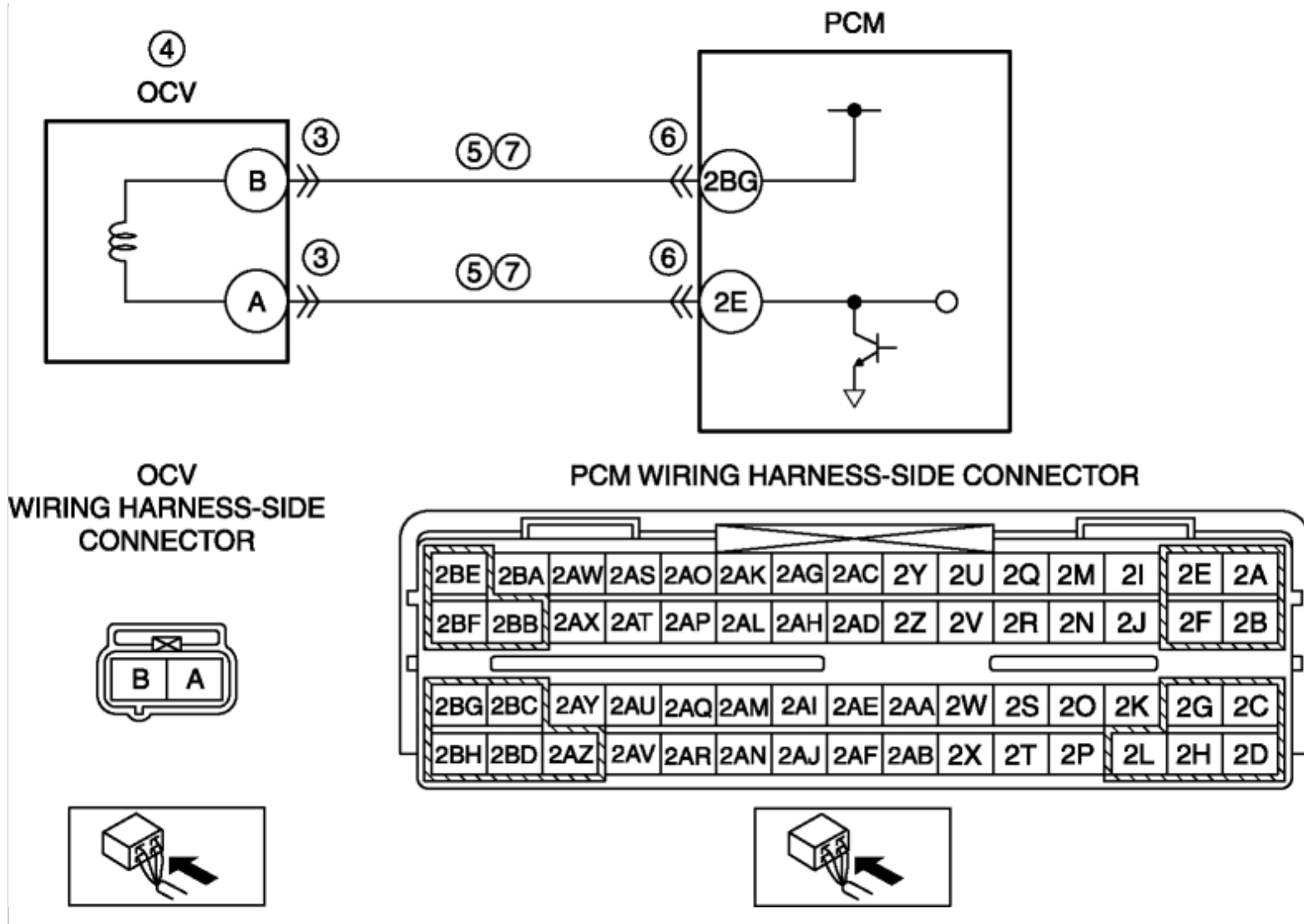
	Switch the ignition to off. • Disconnect the OCV connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?		connector, then go to Step 8.
		No	Go to the next step.
4	INSPECT OCV • Inspect the OCV. (See OIL CONTROL VALVE (OCV) INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes	Replace the OCV, then go to Step 8. (See OIL CONTROL VALVE (OCV) REMOVAL/ INSTALLATION [MZR 2.5].)
		No	Go to the next step.
5	INSPECT OCV CIRCUIT FOR SHORT TO GROUND • OCV connector is disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: ▪ OCV terminal B ▪ OCV terminal A • 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 the PCM internal circuit). (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to Step 8.
		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 8.
		No	Go to the next step.
7	INSPECT OCV CIRCUIT FOR OPEN CIRCUIT • OCV and PCM connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): ▪ OCV terminal B—	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.

	PCM terminal 2BG ■ OCV terminal A— PCM terminal 2E • Is there continuity?		
8	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 same 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.
9	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 P2088:00 [MZR 2.5]

DTC P2088:00	OCV circuit low input
DETECTION CONDITION	- The PCM monitors the OCV voltage. If the PCM detects the OCV control voltage (calculated from the OCV) is below the threshold voltage (calculated from the battery positive voltage), the PCM determines that the OCV circuit has a malfunction. Diagnostic support note - This is a continuous monitor (CCM). - The MIL illuminates 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	- OCV connector or terminals malfunction - OCV malfunction - Short to ground in wiring harness between the following terminals: - OCV terminal B—PCM terminal 2BG - OCV terminal A—PCM terminal 2E - PCM connector or terminals malfunction - Open circuit in wiring harness between the following terminals: - OCV terminal B—PCM terminal 2BG - OCV terminal A—PCM terminal 2E - PCM malfunction



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 OCV CONNECTOR CONDITION	Yes Repair or replace the terminal and/or

	Switch the ignition to off. • Disconnect the OCV connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?		connector, then go to Step 8.
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		No	Go to the next step.
5	INSPECT OCV CIRCUIT FOR SHORT TO GROUND • OCV connector is disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: ▪ OCV terminal B ▪ OCV terminal A • 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 the PCM internal circuit). (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to Step 8.
		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 8.
		No	Go to the next step.
7	INSPECT OCV CIRCUIT FOR OPEN CIRCUIT • OCV and PCM connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): ▪ OCV terminal B—	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.

	PCM terminal 2BG ■ OCV terminal A— PCM terminal 2E • Is there continuity?		
8	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 same 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.
9	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.