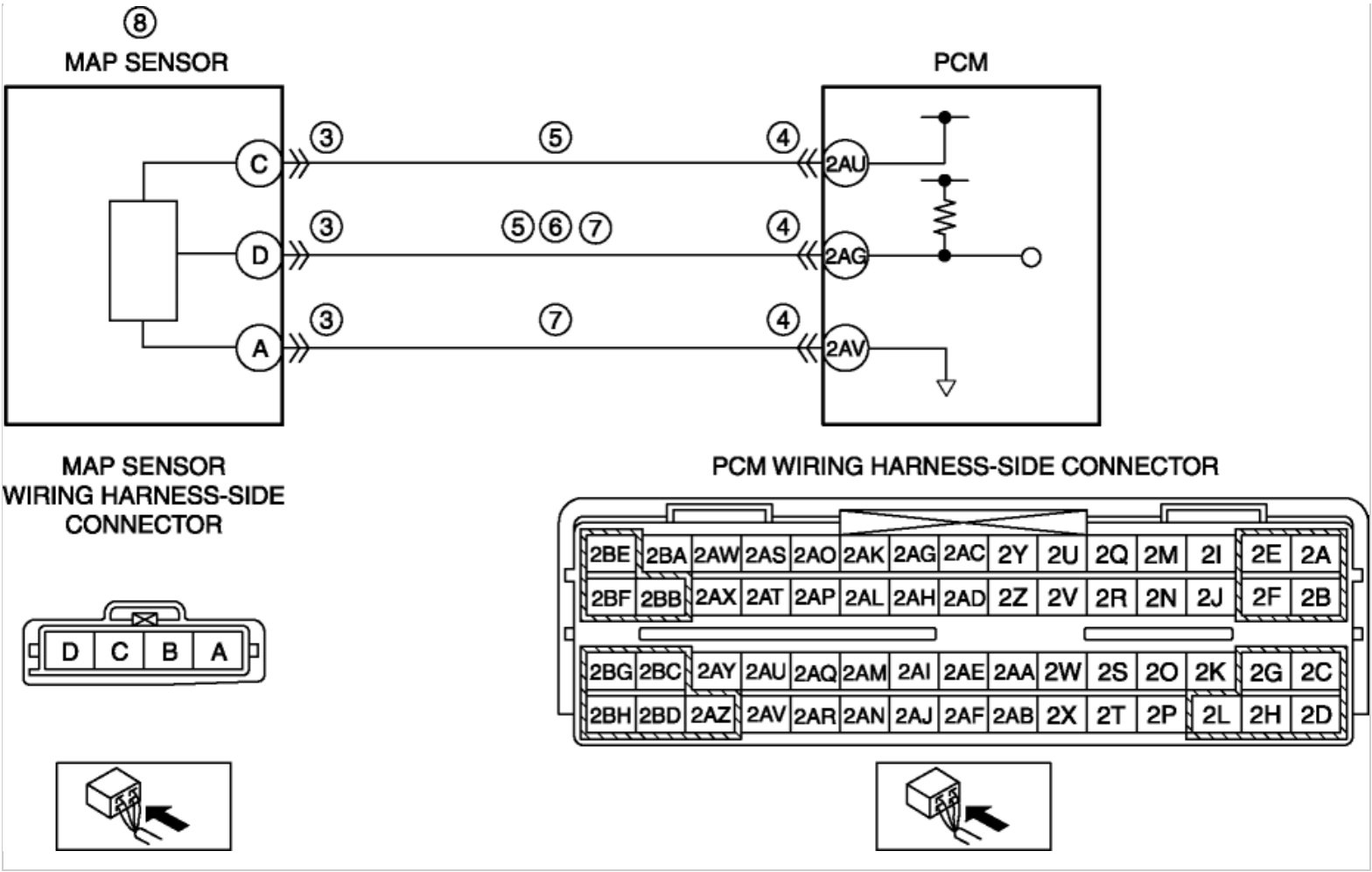
2012 - Mazda6 - Engine

DTC P0108:00 [MZR 2.5]

DTC P0108:00	MAP sensor circuit high input
DETECTION CONDITION	• The PCM monitors the input voltage from the MAP sensor. If input the voltage is **above 4.9 V** for **5 s**, the PCM determines that the MAP sensor 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 first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• MAP sensor connector or terminal malfunction • PCM connector or terminal malfunction • Short circuit in MAP sensor signal circuit and power supply circuit each other • Short to power supply in wiring harness between MAP sensor terminal D and PCM terminal 2AG • Open circuit in wiring harness between MAP sensor terminal A and PCM terminal 2AV • Open circuit in wiring harness between MAP sensor terminal D and PCM terminal 2AG • MAP sensor 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 (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 MAP SENSOR CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the MAP sensor 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 9.
		No	Go to the next step.
4	**INSPECT PCM CONNECTOR CONDITION**	Yes	Repair or replace the terminal and/or connector, then

	Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?		go to Step 9.
		No	Go to the next step.
5	**INSPECT MAP SENSOR SIGNAL AND POWER SUPPLY CIRCUITS FOR SHORT EACH OTHER** • MAP sensor and PCM connectors are disconnected. • Inspect for continuity between MAP sensor terminals C and D (wiring harness-side). • Is there continuity?	Yes	Repair or replace the malfunctioning wiring harness, then go to Step 9.
		No	Go to the next step.
6	**INSPECT MAP SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • MAP sensor and PCM connectors are disconnected. • Switch the ignition to ON (engine off). • Measure the voltage between MAP sensor terminal D (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 9.
		No	Go to the next step.
7	**INSPECT MAP SENSOR CIRCUIT FOR OPEN CIRCUIT** • MAP sensor and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between the following terminals: ▪ MAP sensor terminal A (wiring harness-side) and PCM terminal 2AV (wiring harness-side) ▪ MAP sensor terminal D (wiring harness-side) and PCM terminal 2AG (wiring harness-side) • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
8	**INSPECT MAP SENSOR** • Reconnect all disconnected connectors. • Inspect the MAP sensor. (See **MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR INSPECTION [MZR 2.5]**.) • Is there any malfunction?	Yes	Replace the MAP sensor, then go to the next step. (See **MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR REMOVAL/ INSTALLATION [MZR 2.5]**.)
		No	Go to the next step.
9	**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.	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.

	(See **KOEO/ KOER SELF TEST [MZR 2.5]**.) • Is the same DTC present?	No	Go to the next step.
10	**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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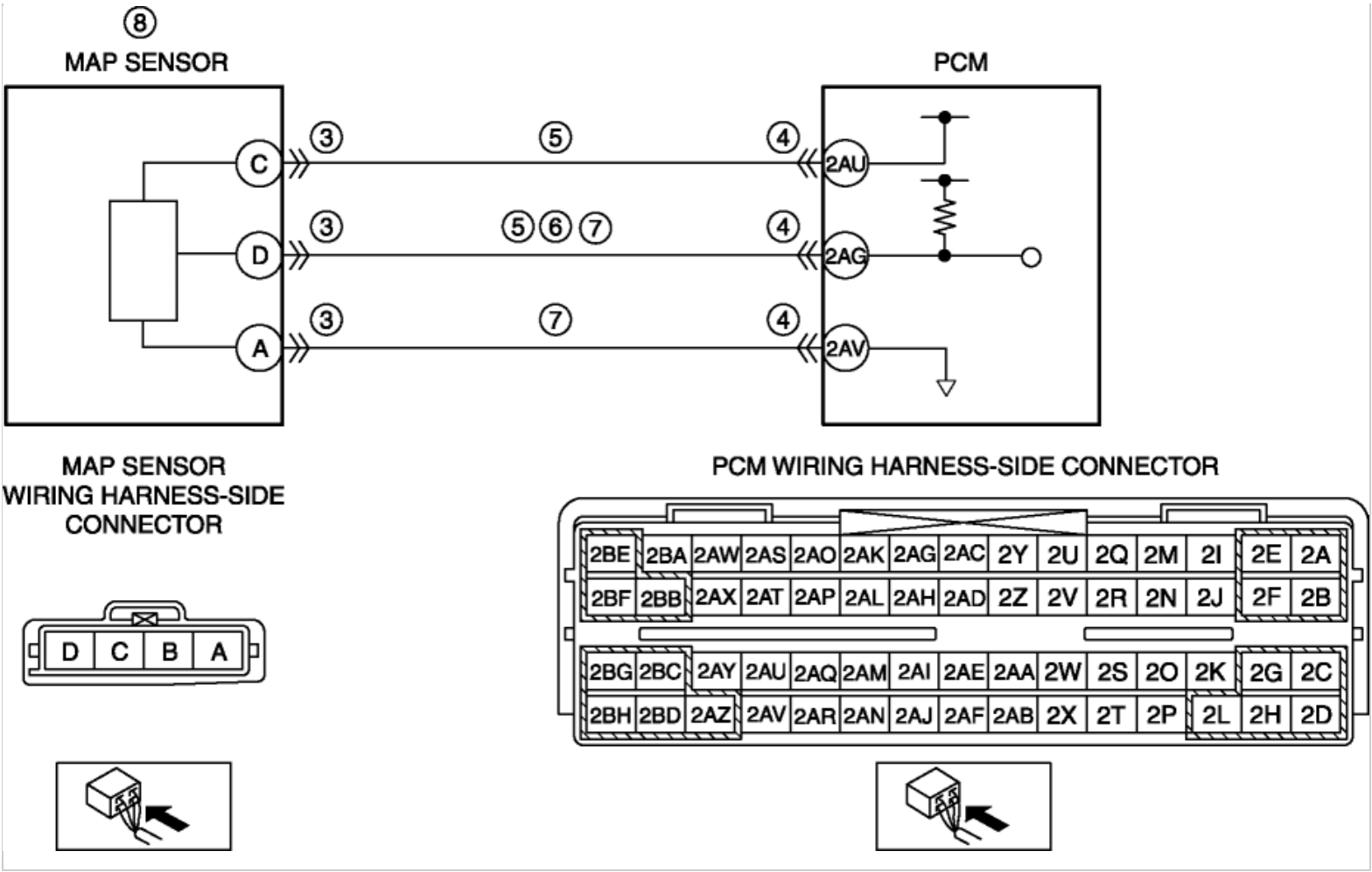
DTC P0108:00	MAP sensor circuit high input
DETECTION CONDITION	• The PCM monitors the input voltage from the MAP sensor. If input the voltage is **above 4.9 V** for **5 s**, the PCM determines that the MAP sensor circuit has a malfunction. **Diagnostic support note** • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition during first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• MAP sensor connector or terminal malfunction • PCM connector or terminal malfunction • Short circuit in MAP sensor signal circuit and power supply circuit each other • Short to power supply in wiring harness between MAP sensor terminal D and PCM terminal 2AG • Open circuit in wiring harness between MAP sensor terminal A and PCM terminal 2AV • Open circuit in wiring harness between MAP sensor terminal D and PCM terminal 2AG • MAP sensor 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 (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 MAP SENSOR CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the MAP sensor 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 9.
		No	Go to the next step.
4	**INSPECT PCM CONNECTOR CONDITION**	Yes	Repair or replace the terminal and/or connector, then

	Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?		go to Step 9.
		No	Go to the next step.
5	**INSPECT MAP SENSOR SIGNAL AND POWER SUPPLY CIRCUITS FOR SHORT EACH OTHER** • MAP sensor and PCM connectors are disconnected. • Inspect for continuity between MAP sensor terminals C and D (wiring harness-side). • Is there continuity?	Yes	Repair or replace the malfunctioning wiring harness, then go to Step 9.
		No	Go to the next step.
6	**INSPECT MAP SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • MAP sensor and PCM connectors are disconnected. • Switch the ignition to ON (engine off). • Measure the voltage between MAP sensor terminal D (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 9.
		No	Go to the next step.
7	**INSPECT MAP SENSOR CIRCUIT FOR OPEN CIRCUIT** • MAP sensor and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between the following terminals: ▪ MAP sensor terminal A (wiring harness-side) and PCM terminal 2AV (wiring harness-side) ▪ MAP sensor terminal D (wiring harness-side) and PCM terminal 2AG (wiring harness-side) • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
8	**INSPECT MAP SENSOR** • Reconnect all disconnected connectors. • Inspect the MAP sensor. (See **MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR INSPECTION [MZR 2.5]**.) • Is there any malfunction?	Yes	Replace the MAP sensor, then go to the next step. (See **MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR REMOVAL/ INSTALLATION [MZR 2.5]**.)
		No	Go to the next step.
9	**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.	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.

	(See **KOEO/ KOER SELF TEST [MZR 2.5]**.) • Is the same DTC present?	No	Go to the next step.
10	**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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