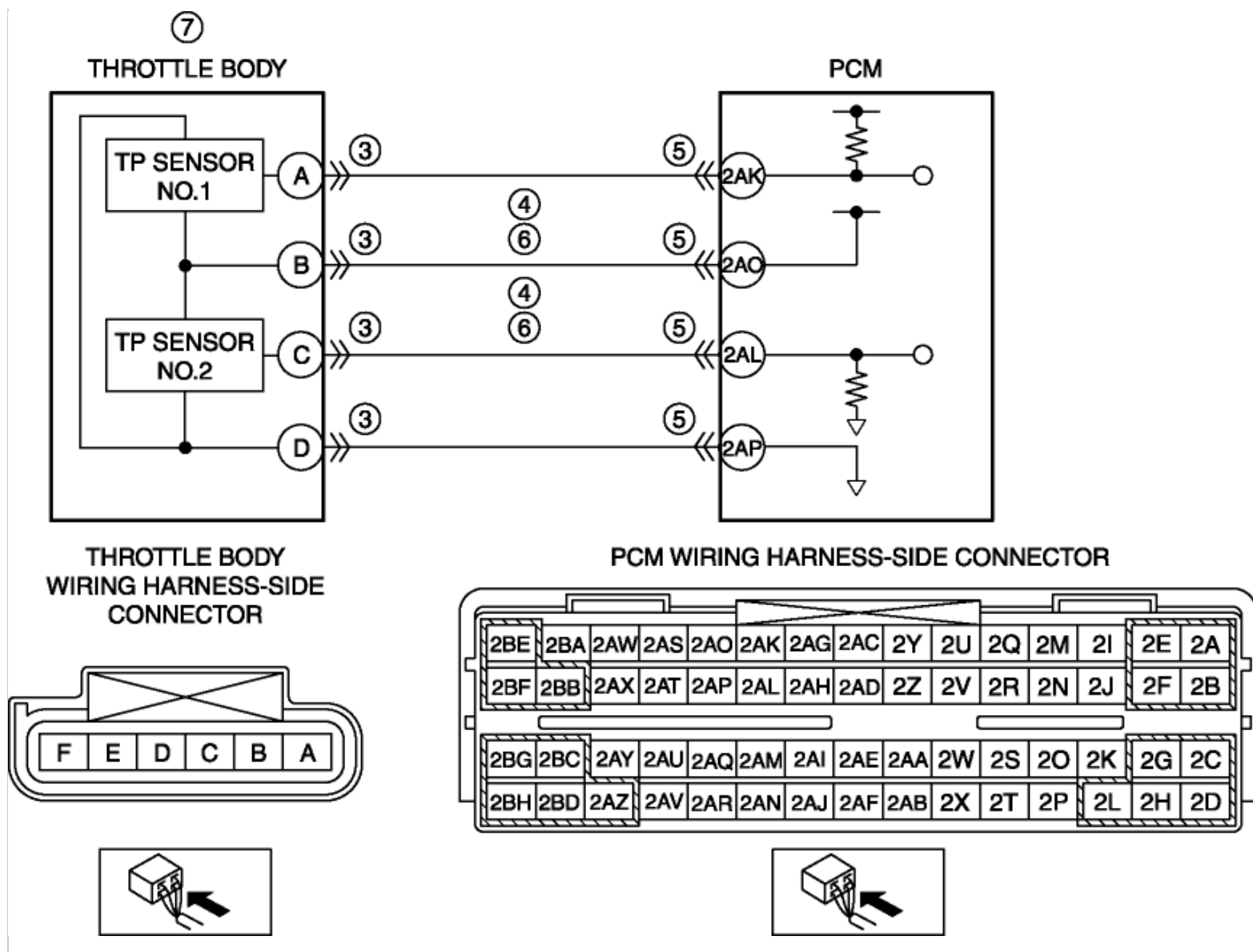


2012 - Mazda6 - Engine

DTC P0222:00 [MZR 2.5]

DTC P0222:00	TP sensor No.2 circuit low input
DETECTION CONDITION	• If the PCM detects TP sensor No.2 voltage is to be below 0.2 V after switch the ignition to ON, the PCM determines that TP circuit has a malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition in the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• Throttle body connector or terminal malfunction • Short to ground in wiring harness between throttle body terminal B and PCM terminal 2AO • Short to ground in wiring harness between throttle body terminal C and PCM terminal 2AL • PCM connector or terminal malfunction • Open circuit in wiring harness between throttle body terminal B and PCM terminal 2AO • Open circuit in wiring harness between throttle body terminal C and PCM terminal 2AL • TP sensor No.2 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 THROTTLE BODY CONNECTOR CONDITION Switch the ignition to off.	Yes Repair or replace the terminal and/or connector, then go to Step 8.

	• Disconnect the throttle body connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	No	Go to the next step.
4	INSPECT TP SENSOR NO.2 CIRCUIT FOR SHORT TO GROUND • Throttle body connector is disconnected. • Inspect for continuity between the following terminals and body ground: ▪ Throttle body terminal B (wiring harness-side) ▪ Throttle body terminal C (wiring harness-side) • 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 8.
		No	Go to the next step.
5	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.
6	INSPECT TP SENSOR NO.2 CIRCUIT FOR OPEN CIRCUIT • Throttle body and PCM connectors are disconnected. • Inspect for continuity between the following terminals: ▪ Throttle body terminal B (wiring harness-side) and PCM terminal 2AO (wiring harness-side) ▪ Throttle body terminal C (wiring harness-side) and PCM terminal 2AL (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 8.
7	INSPECT TP SENSOR NO.2 • Reconnect the throttle body and PCM connectors. • Inspect the TP sensor No.2. (See THROTTLE POSITION (TP) SENSOR INSPECTION [MZR 2.5] .)	Yes	Replace the throttle body, then go to the next step. (See INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZR 2.5] .)
		No	Go to the next step.

	• Is there any malfunction?		
8	VERI FY 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	VERI FY 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.

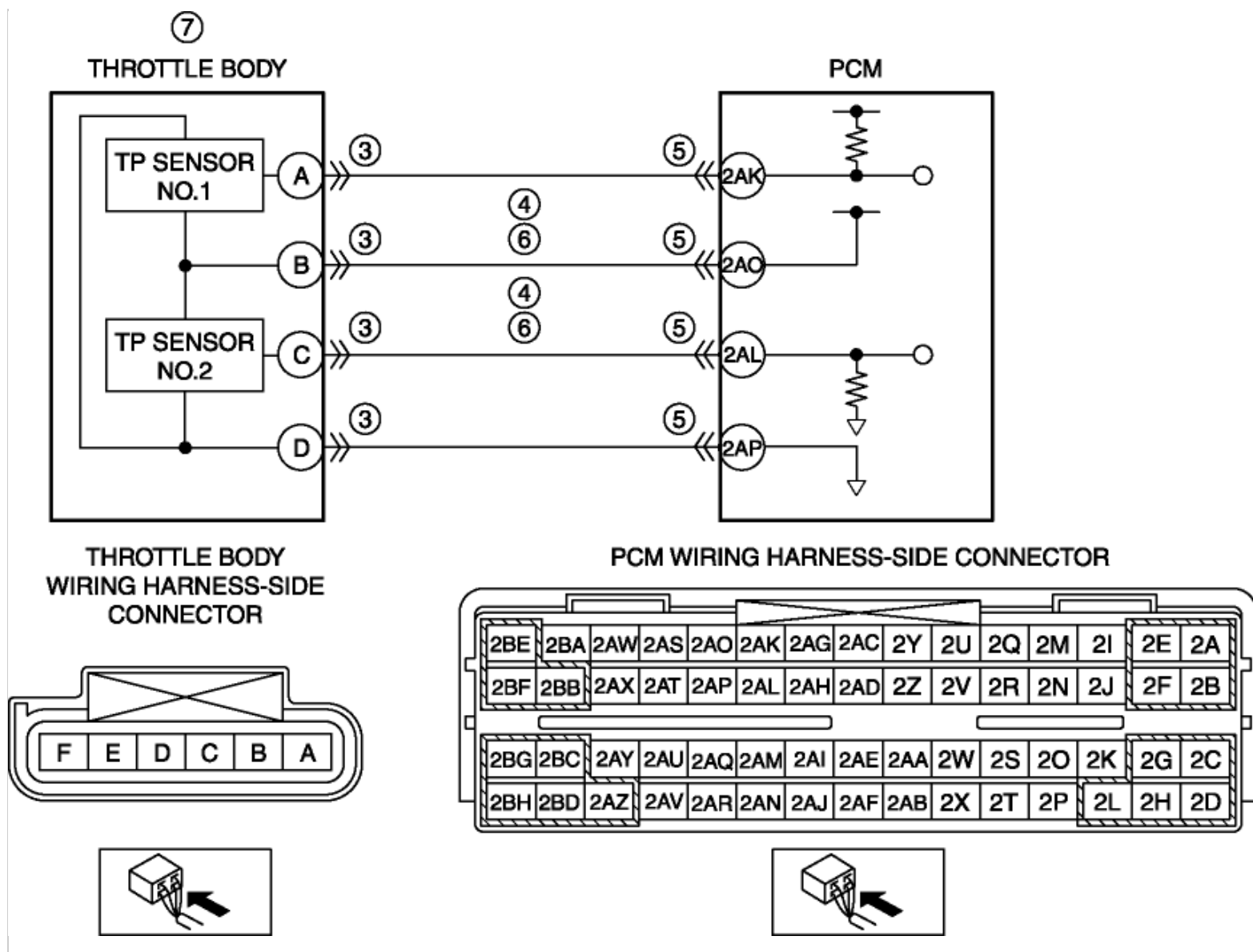
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2012 - Mazda6 - Engine

DTC P0222:00 [MZR 2.5]

DTC P0222:00	TP sensor No.2 circuit low input
DETECTION CONDITION	• If the PCM detects TP sensor No.2 voltage is to be below 0.2 V after switch the ignition to ON, the PCM determines that TP circuit has a malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition in the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• Throttle body connector or terminal malfunction • Short to ground in wiring harness between throttle body terminal B and PCM terminal 2AO • Short to ground in wiring harness between throttle body terminal C and PCM terminal 2AL • PCM connector or terminal malfunction • Open circuit in wiring harness between throttle body terminal B and PCM terminal 2AO • Open circuit in wiring harness between throttle body terminal C and PCM terminal 2AL • TP sensor No.2 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 THROTTLE BODY CONNECTOR CONDITION Switch the ignition to off.	Yes Repair or replace the terminal and/or connector, then go to Step 8.

	• Disconnect the throttle body connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	No	Go to the next step.
4	INSPECT TP SENSOR NO.2 CIRCUIT FOR SHORT TO GROUND • Throttle body connector is disconnected. • Inspect for continuity between the following terminals and body ground: ▪ Throttle body terminal B (wiring harness-side) ▪ Throttle body terminal C (wiring harness-side) • 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 8.
		No	Go to the next step.
5	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.
6	INSPECT TP SENSOR NO.2 CIRCUIT FOR OPEN CIRCUIT • Throttle body and PCM connectors are disconnected. • Inspect for continuity between the following terminals: ▪ Throttle body terminal B (wiring harness-side) and PCM terminal 2AO (wiring harness-side) ▪ Throttle body terminal C (wiring harness-side) and PCM terminal 2AL (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 8.
7	INSPECT TP SENSOR NO.2 • Reconnect the throttle body and PCM connectors. • Inspect the TP sensor No.2. (See THROTTLE POSITION (TP) SENSOR INSPECTION [MZR 2.5] .)	Yes	Replace the throttle body, then go to the next step. (See INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZR 2.5] .)
		No	Go to the next step.

	• Is there any malfunction?		
8	VERI FY 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	VERI FY 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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