

2012 - Mazda6 - Engine

DTC P2108:00 [MZR 2.5]

DTC P2108:00	Throttle valve actuator control module performance error
DETECTION CONDITION	- If the PCM detects either of the following conditions, the PCM determines that throttle valve actuator control system has a malfunction. - TP sensor power supply voltage below 4.4 V - TP sensor No.1 output voltage below 0.2 V or above 4.85 V (DTC P0122:00 or P0123:00) - PCM internal circuit for TP sensor No.1 input circuit 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	- Throttle body connector or terminal malfunction - PCM connector or terminal malfunction - TP sensor No.1 malfunction - TP sensor No.2 malfunction - PCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED	Yes Go to the next step.
	Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	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	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].) • Is the DTC P0122:00, P0123:00, P0222:00 or P0223:00 also present?	Yes	Go to the applicable DTC inspection. (See DTC P0122:00 [MZR 2.5] .) (See DTC P0123:00 [MZR 2.5] .) (See DTC P0222:00 [MZR 2.5] .) (See DTC P0223:00 [MZR 2.5] .)
		No	Go to the next step.
4	INSPECT THROTTLE BODY CONNECTOR CONDITION • Switch the ignition to off. • Disconnect the throttle body 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.
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 9.
		No	Go to the next step.
6	VERIFY INTERMITTENT MALFUNCTION AT TP SENSOR NO.1 CIRCUIT • Perform the "INTERMITTENT CONCERN TROUBLESHOOTING" procedure to TP sensor No.1 related harnesses and connectors. (See INTERMITTENT CONCERN TROUBLESHOOTING [MZR 2.5].) • Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to the inspection results, then go to Step 9.
		No	Go to the next step.
7	VERIFY INTERMITTENT MALFUNCTION AT TP SENSOR NO.2 CIRCUIT	Yes	Repair or replace the malfunctioning part according to the inspection results, then

	Perform the "INTERMITTENT CONCERN TROUBLESHOOTING" procedure to TP sensor No.2 related harnesses and connectors. (See INTERMITTENT CONCERN TROUBLESHOOTING [MZR 2.5].) Is there any malfunction?	go to Step 9.
		No Go to the next step.
8	INSPECT TP SENSOR - Reconnect all disconnected connectors. - Inspect the TP sensor No.1 and No.2. (See THROTTLE POSITION (TP) SENSOR INSPECTION [MZR 2.5].) - Is there any malfunction?	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.
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 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.
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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POSSIBLE CAUSE	- Throttle body connector or terminal malfunction - PCM connector or terminal malfunction - TP sensor No.1 malfunction - 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	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].) • Is the DTC P0122:00, P0123:00, P0222:00 or P0223:00 also present?	Yes	Go to the applicable DTC inspection. (See DTC P0122:00 [MZR 2.5] .) (See DTC P0123:00 [MZR 2.5] .) (See DTC P0222:00 [MZR 2.5] .) (See DTC P0223:00 [MZR 2.5] .)
		No	Go to the next step.
4	INSPECT THROTTLE BODY CONNECTOR CONDITION • Switch the ignition to off. • Disconnect the throttle body 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.
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 9.
		No	Go to the next step.
6	VERIFY INTERMITTENT MALFUNCTION AT TP SENSOR NO.1 CIRCUIT • Perform the "INTERMITTENT CONCERN TROUBLESHOOTING" procedure to TP sensor No.1 related harnesses and connectors. (See INTERMITTENT CONCERN TROUBLESHOOTING [MZR 2.5].) • Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to the inspection results, then go to Step 9.
		No	Go to the next step.
7	VERIFY INTERMITTENT MALFUNCTION AT TP SENSOR NO.2 CIRCUIT	Yes	Repair or replace the malfunctioning part according to the inspection results, then

	Perform the "INTERMITTENT CONCERN TROUBLESHOOTING" procedure to TP sensor No.2 related harnesses and connectors. (See INTERMITTENT CONCERN TROUBLESHOOTING [MZR 2.5].) Is there any malfunction?	go to Step 9.
		No Go to the next step.
8	INSPECT TP SENSOR - Reconnect all disconnected connectors. - Inspect the TP sensor No.1 and No.2. (See THROTTLE POSITION (TP) SENSOR INSPECTION [MZR 2.5].) - Is there any malfunction?	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.
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 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.
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.