

2012 - Mazda6 - Engine

DTC P0111:00 [MZI 3.7 V6]

DTC P0111:00	IAT sensor circuit range/performance
DETECTION CONDITION	Indicates the IAT rationality test has failed. This DTC indicates that the IAT value is higher than a calibrated value and could prevent 1 or more on-board diagnostic (OBD) monitors from completing. The PCM runs this logic after an engine off and a calibrated soak period (typically 6 hours) This soak period allows IAT and CHT to stabilize and not differ by more than a calibrated value. DTC P0111:00 is set when: the IAT at engine start exceeds the CHT by more than a calibrated value, typically 17 °C {31 °F}.
POSSIBLE CAUSE	IAT sensor malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED Has FREEZE FRAME DATA been recorded?	Yes Go to the next step.
		No Record FREEZE FRAME 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 Service Bulletins available?	Yes Perform repair or diagnosis according to the available Service Bulletins. If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	INSPECT IAT SENSOR Inspect IAT sensor. (See INTAKE AIR	Yes Go to the next step.
		No Replace MAF/IAT sensor, then go to the next step.

	TEMPERATURE (IAT) SENSOR INSPECTION [MZI 3.7 V6] .) Is IAT sensor normal?		(See MASS AIR FLOW (MAF)/ INTAKE AIR TEMPERATURE (IAT) SENSOR REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
4	VERIFY TROUBLESHOOTING OF DTC P0111:00 HAS BEEN COMPLETED - Verify that all disconnected connectors reconnected. - Clear the DTC from the PCM memory using the M-MDS. - Start engine and run engine under FREEZE FRAME DATA condition. - Is the PENDING CODE for this DTC present?	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
		No	Go to the next step.
5	VERIFY AFTER REPAIR PROCEDURE - Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZI 3.7 V6] .) - Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZI 3.7 V6] .)
		No	Troubleshooting completed.

2012 - Mazda6 - Engine

DTC P0111:00 [MZI 3.7 V6]

DTC P0111:00	IAT sensor circuit range/performance
DETECTION CONDITION	Indicates the IAT rationality test has failed. This DTC indicates that the IAT value is higher than a calibrated value and could prevent 1 or more on-board diagnostic (OBD) monitors from completing. The PCM runs this logic after an engine off and a calibrated soak period (typically 6 hours) This soak period allows IAT and CHT to stabilize and not differ by more than a calibrated value. DTC P0111:00 is set when: the IAT at engine start exceeds the CHT by more than a calibrated value, typically 17 °C {31 °F}.
POSSIBLE CAUSE	IAT sensor malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED Has FREEZE FRAME DATA been recorded?	Yes Go to the next step.
		No Record FREEZE FRAME 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 Service Bulletins available?	Yes Perform repair or diagnosis according to the available Service Bulletins. If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	INSPECT IAT SENSOR Inspect IAT sensor. (See INTAKE AIR	Yes Go to the next step.
		No Replace MAF/IAT sensor, then go to the next step.

	TEMPERATURE (IAT) SENSOR INSPECTION [MZI 3.7 V6] .) Is IAT sensor normal?		(See MASS AIR FLOW (MAF)/ INTAKE AIR TEMPERATURE (IAT) SENSOR REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
4	VERIFY TROUBLESHOOTING OF DTC P0111:00 HAS BEEN COMPLETED - Verify that all disconnected connectors reconnected. - Clear the DTC from the PCM memory using the M-MDS. - Start engine and run engine under FREEZE FRAME DATA condition. - Is the PENDING CODE for this DTC present?	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
		No	Go to the next step.
5	VERIFY AFTER REPAIR PROCEDURE - Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZI 3.7 V6] .) - Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZI 3.7 V6] .)
		No	Troubleshooting completed.