

2012 - Mazda6 - Engine

DTC P050A:00 [MZR 2.5]

DTC P050A:00	Cold start idle air control system performance problem
DETECTION CONDITION	- The actual idle speed is lower than expected by specified for 8.4 s when the target idle speed correction value for cold start is above 0 rpm. NOTE: - If intake air temperature is below –10 °C {14 °F}, the PCM cancels diagnosis of P050A:00. Diagnostic support note - This is a continuous monitor (cold start emission reduction strategy monitoring). - The MIL illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. - PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle. - FREEZE FRAME DATA (Mode2)/Snapshot data is not available. - The DTC is stored in the PCM memory.
POSSIBLE CAUSE	- Air suction in intake air system - Drive-by-wire control system malfunction - Throttle valve stuck or blockage - PCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	IDENTIFY TRIGGER DTC FOR FREEZE FRAME DATA (MODE 2)	Yes Go to the next step.
	Is the P050A:00 on FREEZE FRAME DATA (Mode 2)?	No Go to troubleshooting procedures for DTC on FREEZE FRAME DATA (Mode 2).

			(See DTC TABLE [MZR 2.5] .)
2	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.
3	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.
4	INSPECT INTAKE AIR SYSTEM FOR AIR SUCTION - Start the engine. - Inspect for air leakage between MAF sensor and intake manifold. NOTE: - Engine speed may change when rust penetrating agent is sprayed on the air suction area. - Is there any leakage?	Yes	Repair or replace the malfunctioning part according to inspection results, then go to Step 7.
		No	Go to the next step.
5	INSPECT DRIVE-BY-WIRE CONTROL SYSTEM OPERATION - Perform the Drive-by-wire Control System Inspection. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to inspection results, then go to Step 7.
		No	Go to the next step.
6	INSPECT THROTTLE VALVE - Switch the ignition to off. - Remove the throttle valve with connector connected. - Access the ETC_DSD PID using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].)	Yes	Go to the next step.
		No	Clean or replace the throttle valve and retest, then go to the next step. (See INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZR 2.5].)

	• Move the throttle valve using the ETC_DSD PID simulation function. • Does the throttle valve move smoothly?		
7	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].) • Start the engine and warm it up completely. • Perform the KOER self test. (See KOEO/ KOER SELF TEST [MZR 2.5].) • Is the PENDING CODE for this 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.	
8	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 P050A:00 [MZR 2.5]

DTC P050A:00	Cold start idle air control system performance problem
DETECTION CONDITION	- The actual idle speed is lower than expected by specified for 8.4 s when the target idle speed correction value for cold start is above 0 rpm. NOTE: - If intake air temperature is below –10 °C {14 °F}, the PCM cancels diagnosis of P050A:00. Diagnostic support note - This is a continuous monitor (cold start emission reduction strategy monitoring). - The MIL illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. - PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle. - FREEZE FRAME DATA (Mode2)/Snapshot data is not available. - The DTC is stored in the PCM memory.
POSSIBLE CAUSE	- Air suction in intake air system - Drive-by-wire control system malfunction - Throttle valve stuck or blockage - PCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	IDENTIFY TRIGGER DTC FOR FREEZE FRAME DATA (MODE 2)	Yes Go to the next step.
	Is the P050A:00 on FREEZE FRAME DATA (Mode 2)?	No Go to troubleshooting procedures for DTC on FREEZE FRAME DATA (Mode 2).

			(See DTC TABLE [MZR 2.5] .)
2	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.
3	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.
4	INSPECT INTAKE AIR SYSTEM FOR AIR SUCTION - Start the engine. - Inspect for air leakage between MAF sensor and intake manifold. NOTE: - Engine speed may change when rust penetrating agent is sprayed on the air suction area. - Is there any leakage?	Yes	Repair or replace the malfunctioning part according to inspection results, then go to Step 7.
		No	Go to the next step.
5	INSPECT DRIVE-BY-WIRE CONTROL SYSTEM OPERATION - Perform the Drive-by-wire Control System Inspection. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to inspection results, then go to Step 7.
		No	Go to the next step.
6	INSPECT THROTTLE VALVE - Switch the ignition to off. - Remove the throttle valve with connector connected. - Access the ETC_DSD PID using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].)	Yes	Go to the next step.
		No	Clean or replace the throttle valve and retest, then go to the next step. (See INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZR 2.5] .)

	• Move the throttle valve using the ETC_DSD PID simulation function. • Does the throttle valve move smoothly?		
7	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].) • Start the engine and warm it up completely. • Perform the KOER self test. (See KOEO/ KOER SELF TEST [MZR 2.5].) • Is the PENDING CODE for this 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.	
8	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.	