

2012 - Mazda6 - Engine

DTC P0506:00 [MZI 3.7 V6]

DTC P0506:00	IAC system RPM lower than expected
DETECTION CONDITION	This DTC is set when the PCM detects an engine idle speed that is less than the desired engine speed.
POSSIBLE CAUSE	- Engine mechanical concern - Intake air restriction - Vacuum leakage - Exhaust restriction - Sludged throttle body - Throttle body malfunction - PCM 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, then go to the next step.
		No Go to the next step.
3	VERIFY RELATED PENDING OR STORED DTCS	Yes Repair applicable DTCs. (See DTC TABLE [MZI 3.7 V6] .)

	- Switch the ignition off then to the ON position (Engine off). - Verify pending code or stored DTCs using the M-MDS. - Is other DTC present?		No Go to the next step.
4	INSPECT AIR CLEANER ELEMENT - Remove air cleaner element with the engine running. - Is the engine speed increased?	Yes	Replace the air cleaner element, then go to Step 7.
		No	Go to the next step.
5	INSPECT INTAKE AIR SYSTEM FOR EXCESSIVE AIR SUCTION - Visually inspect the hose in intake air system for damages. - Is there any malfunction?	Yes	Repair or replace the malfunctioning part, then go to Step 7.
		No	Go to the next step.
6	INSPECT THROTTLE BODY PASSAGE Is the throttle body clogged?	Yes	Clean or replace the throttle body passage, then go to the next step.
		No	Go to the next step.
7	VERIFY TROUBLESHOOTING OF DTC P0506:00 HAS BEEN COMPLETED - Verify that all disconnected connectors reconnected. - Start the engine. - Clear the DTC from the PCM memory using the M-MDS. - Depress brake pedal for 14 s or more. - 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 [MZI 3.7 V6] .) 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 [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.

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