

2012 - Mazda6 - Engine

DTC P0148:00 [MZI 3.7 V6]

DTC P0148:00	Fuel delivery error
DETECTION CONDITION	At least 1 bank is lean at wide open throttle (WOT).
POSSIBLE CAUSE	- Damaged or worn fuel pump - Damaged or contaminated MAF sensor - Severely restricted fuel filter - Severely restricted fuel supply line - 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, go to the next step.
		No Go to the next step.
3	INSPECT SYSTEM INTEGRITY - Visually inspect the complete fuel delivery system for damage and leakage. - Check the following:	Yes Repair if necessary. Then go to Step 11.
		No Go to the next step.

	▪ Fuel lines and connections ▪ Relays ▪ Fuel tank ▪ Fuel pump ▪ Fuel pressure regulator ▪ Fuel pulse damper ▪ Fuel rail at fuel injectors ▪ Damaged connector pins ▪ Electrical connectors not fully engaged • Verify that the vehicle has followed the maintenance schedule (For Mexico specs.). • Verify that the fuse integrity. • Verify that the battery is fully charged. • Verify that there is clean sufficient fuel. • Is a concern present?		
4	INSPECT FUEL PRESSURE • Switch the ignition to off. • Relieve the fuel pressure. Refer to the Workshop Manual Fuel System Pressure Release procedure. • Connect the mechanical fuel pressure gauge. • Switch the ignition to ON (Engine off) • Pressurize the fuel system. Refer to the "FUEL LINE PRESSURE INSPECTION". • Compare the fuel pressure reading to the Fuel line pressure Specification. Fuel line pressure 331—485 kPa {3.38—4.94 kgf/cm ² , 48.1—70.3 psi} • Is the fuel pressure within range?	Yes	Go to Step 8.
		No	Go to the next step.
5	INSPECT FUEL PUMP GROUND CIRCUIT FOR OPEN CIRCUIT IN WIRING HARNESS	Yes	Go to the next step.

	NOTE: • Refer to the Wiring Diagrams Manual for schematic and connector information. • Disconnect the fuel pump connector. • Measure the resistance between fuel pump connector terminal D (wiring harness-side) and body ground. • Is the voltage less than 0.5 ohm?	No	Repair or replace suspected part, Then go to Step 11.
6	INSPECT FUEL PUMP POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT IN WIRING HARNESS • Access the fuel pump connector. • Switch the ignition to ON (Engine running) • Measure the voltage between fuel pump connector terminal B (wiring harness-side) and body ground. • Is the voltage more than 10 V?	Yes	Go to the next step.
		No	Repair or replace suspected part, Then go to Step 11.
7	INSPECT FUEL PRESSURE LEAK • Connect the mechanical fuel pressure gauge. • Switch the ignition to ON (Engine running) • Allow the fuel pressure to stabilize. • Record the stabilized reading. • Switch the ignition to off. • Monitor the fuel pressure for 1 min. • Does the fuel pressure remain within 34 kPa {255 mmHg, 10.0 inHg} of the recorded reading after 1 min?	Yes	Perform the KOEO self-test. (See KOEO/ KOER SELF TEST [MZI 3.7 V6] .) Go to Step 9.
		No	Go to the next step.
8	INSPECT FUEL INJECTOR OPERATION • Perform the Fuel Injector Operation Inspection. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6] .) • Do the fuel injectors operate properly?	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results, then go to Step 11.

9	INSPECT FUEL SUPPLY LINE FOR RESTRICTION NOTE: - Observe the Warnings, Cautions, and Notes, referring to "BEFORE SERVICE PRECAUTION" and "AFTER SERVICE PRECAUTION". - Disconnect the fuel supply line at the fuel rail. - Disconnect the fuel supply line at the fuel pump. - Check the fuel supply line for restriction. - Apply 21—34 kPa {2142—3467 mmHg, 84.34—136.4 inHg} air pressure to the fuel supply line. - Does air flow freely through the line?	YesGo to the next step. NoRepair the cause of the restriction. Then go to Step 12.
10	VERIFY THE REPAIR WARNING: - Strict observance of posted speed limits and attention to driving conditions are mandatory when carrying out the road test. Failure to follow these instructions may result in personal injury. - Switch the ignition to ON, Key ON, engine running. Engine at normal operating temperature Monitor the mechanical gauge From a stop, accelerate to 89 km/h (55 mph) at full throttle. Repeat this 3 times. Is the fuel pressure always greater than 240 kPa {2.45 kgf/cm², 34.8 psi}?	YesThe test is complete and no concerns are present. NoReplace the fuel pump module. Then go to the next step.
11	VERIFY TROUBLESHOOTING OF DTC P0148:00 HAS BEEN COMPLETED - Verify that all disconnected connectors are reconnected. - Switch the ignition to ON (Engine off). - Clear the DTC from the PCM memory using the M-MDS. - Start the engine and run it at idle. - Retrieve DTCs using the M-MDS.	YesRepeat 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. NoGo to the next step.

	• Is the PENDING CODE for this DTC present?		
12	VERI FY AFTER REPAI R PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAI R PROCEDURE [MZI 3.7 V6] .)	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZI 3.7 V6] .)
		No	Troubleshooting completed.
	• Are any DTCs present?		

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		No	Troubleshooting completed.
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