

2012 - Mazda6 - Engine

DTC P1646:00, P1647:00 [MZI 3.7 V6]

DTC P1646:00 DTC P1647:00	A/F sensor (RH) control chip A/F sensor (LH) control chip
DETECTION CONDITION	- P1646:00 indicates the A/F sensor (RH) control chip. - P1647:00 indicates the A/F sensor (LH) control chip. - The PCM monitors the application-specific integrated circuit that controls and monitors the HO2S. The test fails when the PCM detects an internal circuit or communication concern.
POSSIBLE CAUSE	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	Perform the PCM reprogramming using the M-MDS, then go to the next step.
3	VERIFY TROUBLESHOOTING OF DTC P1646:00, P1647:00 HAVE BEEN COMPLETED	Yes	Replace the PCM, then go to the next step.

	• Verify that all disconnected connectors are reconnected. • Switch the ignition ON (Engine off). • Clear the DTC from the PCM memory using the M-MDS. • Perform the KOEO or KOER self-test. (See KOEO/ KOER SELF TEST [MZI 3.7 V6] .) • Is the PENDING CODE for this DTC present?		(See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
		No	Go to the next step.
4	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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		No	Record FREEZE FRAME DATA on the repair order, then go to the next step.
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		No	Perform the PCM reprogramming using the M-MDS, then go to the next step.
3	VERIFY TROUBLESHOOTING OF DTC P1646:00, P1647:00 HAVE BEEN COMPLETED	Yes	Replace the PCM, then go to the next step.

	• Verify that all disconnected connectors are reconnected. • Switch the ignition ON (Engine off). • Clear the DTC from the PCM memory using the M-MDS. • Perform the KOEO or KOER self-test. (See KOEO/ KOER SELF TEST [MZI 3.7 V6] .) • Is the PENDING CODE for this DTC present?		(See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
		No	Go to the next step.
4	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?		