

2012 - Mazda6 - Engine

DTC P0346:00 [MZI 3.7 V6]

DTC P0346:00	CMP sensor (LH) circuit-range/performance
DETECTION CONDITION	The PCM monitors the CMP sensor (LH) for a noisy signal.
POSSIBLE CAUSE	- Radio frequency interference/electromagnetic interference (RFI/EMI) - Camshaft phaser and sprocket 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	CLEAR AND ATTEMPT TO RETRIEVE DTC NOTE: - If DTC P0346:00 is present, ignition, alternator noise, radio frequency interference (RFI) and CKP concerns should be considered. - For vehicles with the variable valve timing control system, concerns with the engine oil level, oil filter, oil	Yes Go to the next step.
		No

	contamination, or the variable valve timing system may cause camshaft positioning errors. • Switch the ignition to ON (Engine off). • Clear the DTC from the PCM memory using the M-MDS. • Start the engine. • Increase engine speed to greater than 1,500 rpm for 10 s. Repeat this 3 times. • Retrieve DTCs using the M-MDS. • Is the same DTC present?		Perform the "INTERMITTENT CONCERN TROUBLESHOOTING". Then go to Step 9.
4	INSPECT GENERATOR FOR EXCESSIVE ELECTRICAL NOISE NOTE: • If the generator is electrically noisy, the noise decreases when the generator terminal B is disconnected. • Start the engine. • Monitor the generator for an audible electric noise. • Switch the ignition off. • Disconnect the generator terminal B. • Start the engine. • With the engine running, determine if the generator is still noisy. • Does the noise remain constant when generator terminal B is disconnected?	Yes	Go to the next step.
		No	Perform the "INTERMITTENT CONCERN TROUBLESHOOTING". (Generator is noisy symptom.) Then go to Step 9.
5	INSPECT FOR DTC • Retrieve DTCs using the M-MDS. • Is the same DTC present?	Yes	Go to the next step.
		No	Go to Step 9. (Unable to duplicate or identify the concern at this time.)
6	INSPECT WIRING HARNESS • Switch the ignition off. • Inspect the wiring harness for routing, alterations, incorrect shielding, or electrical interference from other systems.	Yes	Repair as necessary. Then go to Step 9.
		No	

	- Inspect the CMP sensor (LH) connector for damage or corrosion. - Are there any malfunction?		Go to the next step.
7	INSPECT THE VARIABLE VALVE TIMING CONTROL SYSTEM - Perform the Variable Valve Timing Control System Operation Inspection for the left bank. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6].) - Are there any malfunction?	Yes	Repair as necessary. Then go to Step 9.
		No	Go to the next step.
8	INSPECT FOR CORRECT PCM OPERATION - Disconnect all the PCM connectors. - Visually inspect for: - Pushed out pins - Corrosion - Connect all the PCM connectors and verify that they seat correctly. - Retrieve DTCs using the M-MDS. - Is the same DTC present?	Yes	Go to the next step.
		No	Go to the next step. (The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.)
9	VERIFY TROUBLESHOOTING OF DTC P0346:00 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. - Retrieve DTCs using the M-MDS. - Is the same 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.
10	VERIFY AFTER REPAIR PROCEDURE Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR 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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2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related Service Bulletins available?	YesPerform repair or diagnosis according to the available Service Bulletins. If the vehicle is not repaired, go to the next step.
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	contamination, or the variable valve timing system may cause camshaft positioning errors. • Switch the ignition to ON (Engine off). • Clear the DTC from the PCM memory using the M-MDS. • Start the engine. • Increase engine speed to greater than 1,500 rpm for 10 s. Repeat this 3 times. • Retrieve DTCs using the M-MDS. • Is the same DTC present?		Perform the "INTERMITTENT CONCERN TROUBLESHOOTING". Then go to Step 9.
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		No	Perform the "INTERMITTENT CONCERN TROUBLESHOOTING". (Generator is noisy symptom.) Then go to Step 9.
5	INSPECT FOR DTC • Retrieve DTCs using the M-MDS. • Is the same DTC present?	Yes	Go to the next step.
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	- Inspect the CMP sensor (LH) connector for damage or corrosion. - Are there any malfunction?		Go to the next step.
7	INSPECT THE VARIABLE VALVE TIMING CONTROL SYSTEM - Perform the Variable Valve Timing Control System Operation Inspection for the left bank. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6].) - Are there any malfunction?	Yes	Repair as necessary. Then go to Step 9.
		No	Go to the next step.
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		No	Go to the next step. (The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.)
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