

2012 - Mazda6 - Engine

DTC P0021:00 [MZI 3.7 V6]

DTC P0021:00	CMP timing over-advanced (LH)
DETECTION CONDITION	The PCM monitors the variable valve timing position for an over-advanced camshaft timing. The test fails when the camshaft timing exceeds a maximum calibrated value or remains in an advanced position.
POSSIBLE CAUSE	- Spool valve in OCV (LH) is stuck in advanced position - Improper valve timing due to timing chain slippage - OCV (LH) 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	VERIFY TIMING CHAIN INSTALLATION - Stop the engine. - Remove the front cover. - Is the camshaft timing mark at the	Yes Go to the next step.
		No Reinstall the timing chain, then go to Step 5.

	correct point? (See TIMING CHAIN REMOVAL/ INSTALLATION [MZI 3.7 V6].)		
4	INSPECT OCV (LH) - Inspect the OCV (LH). (See OIL CONTROL VALVE (OCV) INSPECTION [MZI 3.7 V6].) - Is there any malfunction?	Yes	Replace the OCV (LH), then go to the next step. (See OIL CONTROL VALVE (OCV) REMOVAL/ INSTALLATION [MZI 3.7 V6].)
		No	Go to the next step.
5	VERIFY TROUBLESHOOTING OF DTC P0021:00 HAS BEEN COMPLETED - Make sure to reconnect all disconnected connectors. - Clear the DTC from the PCM memory using the M-MDS. - Switch the ignition to off. - Start the engine and warm it up completely. - 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.
6	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	Go to the next step.
6	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.