

2012 - Mazda6 - Engine

DTC P0315:00 [MZI 3.7 V6]

DTC P0315:00	CKP system variation not learned
DETECTION CONDITION	The PCM is unable to learn and correct for mechanical inaccuracies in the crankshaft pulse wheel tooth spacing. This DTC disables the misfire monitor.
POSSIBLE CAUSE	- Crankshaft pulse wheel teeth malfunction - CKP sensor 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 RELATED PENDING CODE OR STORED DTCs - Switch the ignition to off then to the ON position (Engine off). - Verify related pending code or stored DTCs. - Are other DTCs present?	Yes Go to the appropriate DTC troubleshooting. (See DTC TABLE [MZI 3.7 V6] .)
		No Go to the next step.

4	INSPECT PHYSICAL CONDITION OF CRANKSHAFT PULSE WHEEL NOTE: • DTC P0315:00 is set when the PCM is unable to learn and correct for the mechanical variations in the crankshaft pulse wheel tooth spacing (the allowable correction tolerances are exceeded). • Inspect the crankshaft pulse wheel for damaged teeth. • Inspect the crankshaft pulse wheel for wobble. • Check for a loose crankshaft pulse wheel. • Check the CKP sensor for damage. • Are the CKP sensor and crankshaft pulse wheel normal?	Yes Go to the next step. No Repair if necessary. Then go to Step 6.
5	INSPECT DAMPER AND PULLEY ASSEMBLY NOTE: • This step is for engines that have damper mounted pulse rings. Remove the front cover if necessary to observe the crank pulley. • Observe the crank pulley for wobble. • Examine the EI pulse ring fastened to the harmonic dampener. • Does the crank pulley wobble or is the pulse ring loose or damaged?	Yes Disconnect the negative battery terminal for 5 min to allow the PCM to learn the new profile. Install a new pulley or damper assembly. Then go to the next step. No Go to the next step.
6	VERIFY TROUBLESHOOTING OF DTC P0315:00 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. • 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.

7	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 Record FREEZE FRAME DATA on the repair order, then go to the next step.
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		No Go to the next step.
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		No	Troubleshooting completed.