**DTC P0335**

## CIRCUIT DESCRIPTION

The crankshaft position (CKP) sensor signal indicates the crankshaft speed and position. The CKP sensor circuits are connected directly to the powertrain control module (PCM) and consists of the following circuits:

- The **12-volt** reference circuit
- The low reference circuit
- The CKP sensor signal circuit

If the PCM detects there is no signal from the CKP sensor for **8 seconds** , DTC P0335 sets.

## CONDITIONS FOR RUNNING THE DTC

- DTCs P0101, P0102 , P0103, P0341, P0342, or P0343 are not set.
- The camshaft position (CMP) sensor signal is incrementing.
- The mass air flow (MAF) is more than **3 g/s** .
- The ignition switch is in the Crank position.

## CONDITIONS FOR SETTING THE DTC

The PCM detects there is no signal from the CKP sensor for **8 seconds** .

## ACTION TAKEN WHEN THE DTC SETS

- The control module illuminates the malfunction indicator lamp (MIL) on the second consecutive ignition cycle that the diagnostic runs and fails.
- The control module records the operating conditions at the time the diagnostic fails. The first time the diagnostic fails, the control module stores this information in the Failure Records. If the diagnostic reports a failure on the second consecutive ignition cycle, the control module records the operating conditions at the time of the failure. The control module writes the operating conditions to the Freeze Frame and updates the Failure Records.

## CONDITIONS FOR CLEARING THE MIL/DTC

- The control module turns OFF the malfunction indicator lamp (MIL) after 3 consecutive ignition cycles that the diagnostic runs and does not fail.
- A current DTC, Last Test Failed, clears when the diagnostic runs and passes.
- A history DTC clears after 40 consecutive warm-up cycles, if no failures are reported by this or any other emission related diagnostic.
- Clear the MIL and the DTC with a scan tool.

**TEST DESCRIPTION**

| Step | Action | Values | Yes | No |
|---|---|---|---|---|
| 1 | Did you perform the Diagnostic System Check–Computers and Control Systems? | — | Go to Step 2 | Go to Diagnostic System Check - Computers and Control Systems |
| 2 | Attempt to start the engine. Does the engine start and continue to run? | — | Go to Step 3 | Go to Step 4 |

Steps 1-2

| Step | Action | Values | Yes | No |
|---|---|---|---|---|
| 3 | 1. Observe the Freeze Frame/Failure Records for this DTC.<br>2. Turn OFF the ignition for 30 seconds.<br>3. Start the engine.<br>4. Operate the vehicle within the conditions for Running the DTC. You may also operate the vehicle within the conditions that you observed from the Freeze Frame/Failure Records.<br><br>Did the DTC fail this ignition? | — | Go to Step 4 | Go to Intermittent Conditions |
| 4 | 1. Turn ON the ignition, with the engine OFF.<br>2. Raise the vehicle. Refer to Vehicle Lifting.<br><br>3. Disconnect the crankshaft position (CKP) sensor harness connector.<br>4. Measure the voltage from the 12-volt reference circuit of the CKP sensor to a good ground with a DMM.<br><br>Is the voltage within the specified value? | B+ | Go to Step 5 | Go to Step 7 |
| 5 | Measure the voltage between the 12-volt reference circuit of the CKP sensor and the low reference circuit of the CKP sensor with a DMM. Is the voltage within the specified value? | B+ | Go to Step 6 | Go to Step 8 |
| 6 | Momentarily connect a test lamp between the CKP sensor signal circuit and the 12-volt reference of the CKP sensor. Does the fuel pump operate when the test lamp is applied to the CKP sensor signal circuit? | — | Go to Step 10 | Go to Step 9 |

Steps 3-6

| Step | Action | Values | Yes | No |
|---|---|---|---|---|
| 7 | Test the 12-volt reference circuit for the following conditions:<br>• An open<br>• High resistance<br>• A short to ground<br>Did you find and correct the condition? | — | Go to Step 16 | Go to Step 12 |
| 8 | Test the low reference circuit for the following conditions:<br>• An open<br>• High Resistance<br>• A short to voltage<br>Did you find and correct the condition? | — | Go to Step 16 | Go to Step 12 |
| 9 | Test the CKP sensor signal circuit for the following conditions:<br>• High resistance<br>• An open<br>• A short to ground<br>• A short to voltage<br>Did you find and correct the condition? | — | Go to Step 16 | Go to Step 12 |

Steps 7-9

| Step | Action | Values | Yes | No |
|---|---|---|---|---|
| 10 | 1. Remove the CKP sensor.<br>2. Visually inspect the CKP sensor for the following conditions:<br>• Physical damage<br>• Loose or improper installation<br>• Wiring routed too closely to the secondary ignition components<br>3. The following conditions may cause this DTC to set:<br>• Excessive air gap between the CKP sensor and the reluctor wheel<br>• The CKP sensor coming in contact with the reluctor wheel<br>• Foreign material passing between the CKP sensor and the reluctor wheel<br>• Insufficient fuel<br>Did you find and correct the condition? | — | Go to Step 16 | Go to Step 11 |

Step 10

| Step | Action | Values | Yes | No |
|---|---|---|---|---|
| 11 | Visually inspect the CKP sensor reluctor wheel for the following conditions:<br>• Physical damage<br>• Excessive play or looseness<br>Refer to Crankshaft and Bearings Cleaning and Inspection in Engine. Did you find and correct the condition? | — | Go to Step 16 | Go to Step 14 |
| 12 | Test for poor connections at the CKP sensor. Did you find and correct the condition? | — | Go to Step 16 | Go to Step 13 |
| 13 | Test for poor connections at the PCM. Did you find and correct the condition? | — | Go to Step 16 | Go to Step 15 |
| 14 | Replace the CKP sensor. Did you complete the replacement? | — | Go to Step 16 | — |
| 15 | Replace the PCM. Did you complete the replacement? | — | Go to Step 16 | — |
| 16 | 1. Clear the DTCs with a scan tool.<br>2. Turn OFF the ignition for 30 seconds.<br>3. Start the engine.<br>4. Operate the vehicle within the Conditions for Running the DTC. You may also operate the vehicle within the conditions that you observed from the Freeze Frame/Failure Records.<br>Did the DTC fail this ignition? | — | Go to Step 2 | Go to Step 17 |
| 17 | Observe the Capture Info with a scan tool. Are there any DTCs that have not been diagnosed? | — | Go to Diagnostic Trouble Code (DTC) List | System OK |

Steps 11-17

The numbers below refer to the step numbers on the diagnostic table.

3. This step determines if the fault is present.

6. This step simulates a CKP sensor signal to the PCM. If the PCM receives the signal, the fuel pump will operate for about **two seconds** .