P0335

CIRCUIT DESCRIPTION
The Crankshaft Position **(CKP)** sensor signal indicates the crankshaft speed and position. The CKP sensor is 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

CONDITIONS FOR RUNNING THE DTC

- DTCs P0101, P0102, P0103, or P0341 are not set.
- The Camshaft Position Sensor **(CMP)** is transitioning.
- The Mass Airflow **(MAF)** is more than **3 g/s** in crank mode.
- The MAF is more than **5 g/s** in Run mode.

CONDITIONS FOR SETTING THE DTC
The CKP sensor signal is not detected for more than **3 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 tails. 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.
- Use a scan tool in order to clear the MIL and the DTC.

TEST DESCRIPTION

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Step	Action	Value(s)	Yes	No
Schematic Reference: *Engine Controls Schematics*				
1	Did you perform the Diagnostic System Check–Computers and Control Systems?	—	Go to *Step 2*	Go to *Diagnostic System Check* - Computers
2	Does the vehicle start and continue to run?	—	Go to *Intermittent Conditions*	Go to *Step 3*
3	1. Disconnect the crankshaft position (CKP) sensor. 2. Turn ON the ignition, with the engine OFF. 3. Probe the CKP sensor harness connector 12-volt reference circuit with a test lamp connected to a ground. Does the test lamp illuminate?	—	Go to *Step 4*	Go to *Step 6*
4	Connect a test lamp between the 12-volt reference voltage circuit in the CKP sensor harness connector and the sensor low reference circuit. Does the test lamp illuminated?	—	Go to *Step 5*	Go to *Step 7*
5	1. Turn OFF the ignition. 2. Connect the gray jumpers from the *J 35616-A* Connector Test Kit between the engine harness connector and the sensor connector of the 12-volt reference circuit and low reference circuits. 3. Connect a DMM set to the duty cycle position between the sensor signal circuit and a ground circuit. Select AC voltage and press HZ button twice in order to display duty cycle. 4. Crank the engine. Is the duty cycle within the specified range?	40–60%	Go to *Step 8*	Go to *Step 9*

Steps 1-5

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Step	Action	Value(s)	Yes	No
6	Repair the open or high resistance in the 12-volt reference voltage circuit. Refer to *Wiring Repairs* in *Diagrams*. Did you complete the repair?	—	Go to *Step 15*	—
7	1. Repair the open or high resistance in the low reference circuit. 2. Repair the circuit as necessary. Refer to *Wiring Repairs* in *Diagrams*. Did you find and correct the condition?	—	Go to *Step 15*	Go to *Step 13*
8	1. Repair the open, high resistance and short in the sensor signal circuit. 2. Repair the circuit as necessary. Refer to *Wiring Repairs* in *Diagrams*. Did you find and correct the condition?	—	Go to *Step 15*	Go to *Step 11*
9	Check the CKP sensor and the crankshaft reluctor wheel for damage. Refer to *Crankshaft Position (CKP) Sensor Replacement* or *Crankshaft Position (CKP) Reluctor Ring Replacement*. Did you find and correct the condition?	—	Go to *Step 10*	Go to *Step 12*
10	Replace the CKP sensor or the crankshaft reluctor wheel. Refer to *Crankshaft Position (CKP) Sensor Replacement* or *Crankshaft Position (CKP) Reluctor Ring Replacement* in Engine. Did you complete the replacement?	—	Go to *Step 15*	—
11	1. Check for a faulty connection at the CKP sensor. 2. Repair the connector as necessary. Refer to *Connector Repairs* in *Diagrams*. Did you find and correct the condition?	—	Go to *Step 15*	Go to *Step 13*
12	**Important:** Inspect the CKP sensor mounting surface to ensure the surface is clean and free of debris. Replace the CKP sensor. Did you find and correct the condition?	—	Go to *Step 15*	—
13	1. Check for a faulty connection at the powertrain control module (PCM). 2. Repair the connector as necessary. Refer to *Connector Repairs* in *Diagrams*. Did you find and correct the condition?	—	Go to *Step 15*	Go to *Step 14*
14	Replace the PCM. Did you complete the replacement?	—	Go to *Step 15*	—
15	1. Use the scan tool in order to clear the DTCs. 2. Turn OFF the ignition for 30 seconds. 3. Start the engine. 4. Operate the vehicle within the Conditions for Running the DTC as specified in the supporting text. Does the DTC run and pass?	—	Go to *Step 16*	Go to *Step 2*
16	With the scan tool, observe the stored information, Capture Info. Does the scan tool display any DTCs that you have not diagnosed?	—	Go to *Diagnostic Trouble Code (DTC) List*	System OK

Steps 6-16

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

2. This step determines if the DTC P0336 is an intermittent.
3. This step checks the ignition 1 voltage circuit to the crankshaft position sensor.
4. This step checks the crankshaft position sensor low reference circuit.
5. This step checks the crankshaft position sensor.