

DTC P0816 the TCM detects the downshift circuit active for an extended period of time

Circuit Description

The TAP Shift system allows the driver to manually shift gears by using the TAP Shift switches located on the Automatic Transmission Shifter. Pushing the Up switch will command an upshift and pushing the Down switch will command a downshift. The TAP Shift system is activated when the gear selector is in the manual, M, position and is deactivated in all other positions. If the TCM detects the downshift circuit active for an extended period of time, then DTC P0816 sets. DTC P0816 is a type C DTC.

Conditions for Running the DTC

- No TAP up/ TAP down DTC P0826 or P1876.
- No IMS DTCs P1815, P1820, P1822, P1823, P1825 or P1826.
- The engine run time is greater than 5 seconds.
- The time since last gear selector range change is greater than 6 seconds.

Conditions for Setting the DTC

The TCM detects a downshift request for 2 seconds in PARK or for 600 seconds in D4.

Action Taken When the DTC Sets

- The TCM does not request the ECM to illuminate the malfunction indicator lamp (MIL).
- The TCM records the operating conditions when the Conditions for Setting the DTC are met. The TCM stores this information as a Failure Record.
- The TCM stores DTC P0816 in PCM history.

Conditions for Clearing the DTC

- A scan tool can clear the DTC.
- The TCM clears the DTC from TCM history if the vehicle completes 40 warm-up cycles without a non-emission related diagnostic fault occurring.

- The TCM cancels the DTC default actions when the fault no longer exists and the DTC passes.

DTC P0816

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check – Vehicle?	—	Go to Step 2	Go to Diagnostic System Check -Vehicle in Vehicle DTC Information
2	<ol style="list-style-type: none"> 1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. Important: Before clearing the DTC, use the scan tool in order to record the Failure Records. Using the Clear DTC Information function erases the Failure Records from the TCM. 3. Record the DTC Failure Records. 4. Clear the DTC. 5. Select Driver Shift Request Status on the scan tool. Does the scan tool Driver Shift Request parameter display None?	—	Go to Intermittent Conditions in Engine Controls – 4.6L	Go to Step 3
3	<ol style="list-style-type: none"> 1. Select Driver Shift Request status on the scan tool. 2. Disconnect the Floor Shift Control connector. Does the Driver Shift Request Status change to None?	—	Go to Step 6	Go to Step 4
4	<ol style="list-style-type: none"> 1. Using the J 35616-C GM terminal test kit, connect a DMM between the ignition 1 voltage circuit and the TAP Up/TAP Down signal circuit of the Floor Shift Control. 2. Measure the resistance of the Floor Shift Control. Is the resistance within the specified range?	8.11–8.3 9K W	Go to Step 6	Go to Step 5

Step	Action	Value(s)	Yes	No
5	Test signal circuit for a short to voltage condition. Refer to Testing for a Short to Voltage and Wiring Repairs in Wiring Systems. Did you find and correct a condition?	—	Go to Step 8	Go to Step 7
6	Replace the Floor Shift Control. Refer to Floor Shift Control Replacement. Did you complete the replacement?	—	Go to Step 8	—
7	Replace the TCM. Refer to Transmission Control Module Replacement. Did you complete the replacement?	—	Go to Step 8	—
8	Perform the following procedure in order to verify the repair: 1. Select DTC. 2. Select Clear DTC Information. 3. Operate the vehicle under the following conditions: • Start the engine. • Observe Driver Shift Request on the scan tool. • Ensure the Driver Shift Request is not downshift or up and downshift for at least 1 second. 4. Select Specific DTC. 5. Enter DTC P0816. Has the test run and passed?	—	Go to Step 9	Go to Step 2
9	With a scan tool, observe the stored information, capture info and DTC info. Does the scan tool display any DTCs that you have not diagnosed?	—	Go to Diagnostic Trouble Code (DTC) List -Vehicle in Vehicle DTC Information	System OK