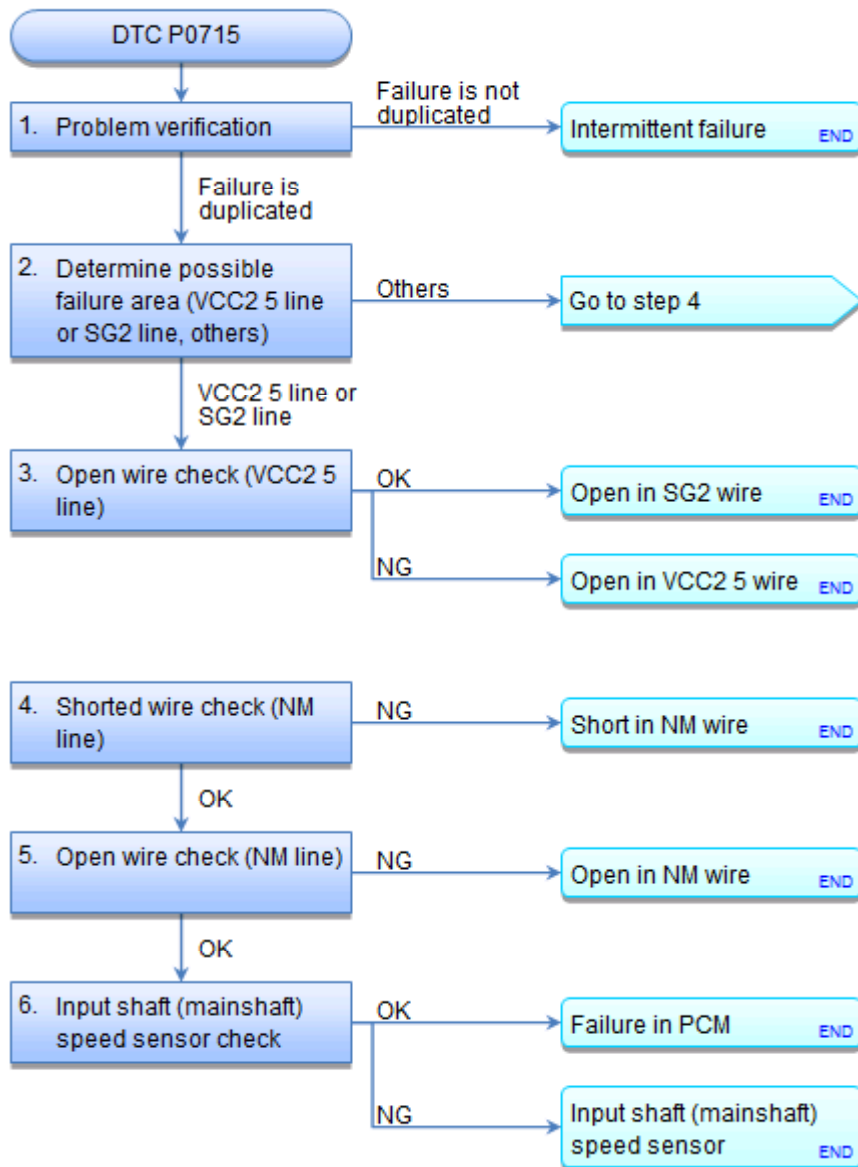


DTC Troubleshooting: P0715**DTC P0715: Input Shaft (Mainshaft) Speed Sensor Circuit Malfunction**

NOTE: Before you troubleshoot, [review the general troubleshooting information](#).

DTC Description	Confirmed DTC	Pending DTC
P0715 Input Shaft (Mainshaft) Speed Sensor Circuit Malfunction		

DTC (PGM-FI)**1. Problem verification:**

- 1. Start the engine.
- 2. Hold the engine speed at 3,000 rpm without load (in neutral) until the radiator fan comes on.
- 3. Test-drive at a steady speed of 9 mph (15 km/h) or more for several minutes.

- 4. Check the parameter(s) below with the HDS.

Signal	Current conditions	
	Values	Unit
M SHAFT SPD		

Is the mainshaft speed indicated?

YES Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the input shaft (mainshaft) speed sensor and the PCM. [If the on-board snapshot of this DTC is recorded, try to reproduce the failure under the same conditions with the on-board snapshot.](#) ■

NO The failure is duplicated. Go to step 2.

2. Determine possible failure area (VCC2 5 line or SG2 line, others):

- 1. Turn the vehicle to the OFF (LOCK) mode.
- 2. Disconnect the following connector.
Input shaft (mainshaft) speed sensor 3P connector
- 3. Turn the vehicle to the ON mode.
- 4. Measure the voltage between test points 1 and 2.
Test condition Vehicle ON mode
Input shaft (mainshaft) speed sensor 3P connector: disconnected
Test point 1 Input shaft (mainshaft) speed sensor 3P connector (female terminals) No. 1:
①
Test point 2 Input shaft (mainshaft) speed sensor 3P connector (female terminals) No. 3:
①



Is there about 5.0 V?

YES Go to step 4.

NO Go to step 3.

3. Open wire check (VCC2 5 line):

- 1. Measure the voltage between test points 1 and 2.
Test condition Vehicle ON mode
Input shaft (mainshaft) speed sensor 3P connector: disconnected
Test point 1 Input shaft (mainshaft) speed sensor 3P connector (female terminals) No. 3:
①
Test point 2 Body ground



Is there about 5.0 V?

YES The VCC2 5 wire is OK. Repair an open in the SG2 wire between PCM connector No. 1 terminal No. 58 and the input shaft (mainshaft) speed sensor.■

NO Repair an open in the VCC2 5 wire between PCM connector No. 1 terminal No. 83 and the input shaft (mainshaft) speed sensor.■

4. Shorted wire check (NM line):

- 1. Turn the vehicle to the OFF (LOCK) mode.
- 2. Jump the SCS line with the HDS, and wait more than 1 minute.

SCS Short

- 3. Disconnect the following connector.
PCM connector No. 1 (96P)
- 4. Check for continuity between test points 1 and 2.
 Test condition Vehicle OFF (LOCK) mode
 Input shaft (mainshaft) speed sensor 3P connector: disconnected
 PCM connector No. 1 (96P): disconnected
 Test point 1 [PCM connector No. 1 \(96P\) No. 69](#)
 Test point 2 Body ground

Is there continuity?

YES Repair a short in the NM wire between PCM connector No. 1 terminal No. 69 and the input shaft (mainshaft) speed sensor.■

NO The NM wire is not shorted. Go to step 5.

5. Open wire check (NM line):

- 1. Check for continuity between test points 1 and 2.
 Test condition Vehicle OFF (LOCK) mode
 Input shaft (mainshaft) speed sensor 3P connector: disconnected
 PCM connector No. 1 (96P): disconnected
 Test point 1 Input shaft (mainshaft) speed sensor 3P connector (female terminals) No. 2:
 ①
 Test point 2 [PCM connector No. 1 \(96P\) No. 69](#)



Is there continuity?

YES Go to step 6.

NO Repair an open in the NM wire between PCM connector No. 1 terminal No. 69 and the input shaft (mainshaft) speed sensor.■

6. Input shaft (mainshaft) speed sensor check:

- 1. [Substitute a known-good input shaft \(mainshaft\) speed sensor.](#)
- 2. Reconnect all connectors.
- 3. Clear the DTC with the HDS.

Clear DTC

- 4. Start the engine.
- 5. Hold the engine speed 3,000 rpm without load (in neutral) until the radiator fan comes on.
- 6. Test-drive at a steady speed of 9 mph (15 km/h) or more for several minutes.
- 7. Check for Pending or Confirmed DTCs with the HDS.

DTC Description	Confirmed DTC	Pending DTC
P0715 Input Shaft (Mainshaft) Speed Sensor Circuit Malfunction		

Is DTC P0715 indicated?

YES The input shaft (mainshaft) speed sensor is OK. Check for any authorized service information related to the DTCs or symptoms you are troubleshooting, or [substitute a known-good PCM](#), then recheck. If DTC P0715 goes away and the PCM was substituted, [replace the original PCM](#).■

NO [Replace the original input shaft \(mainshaft\) speed sensor.](#)■