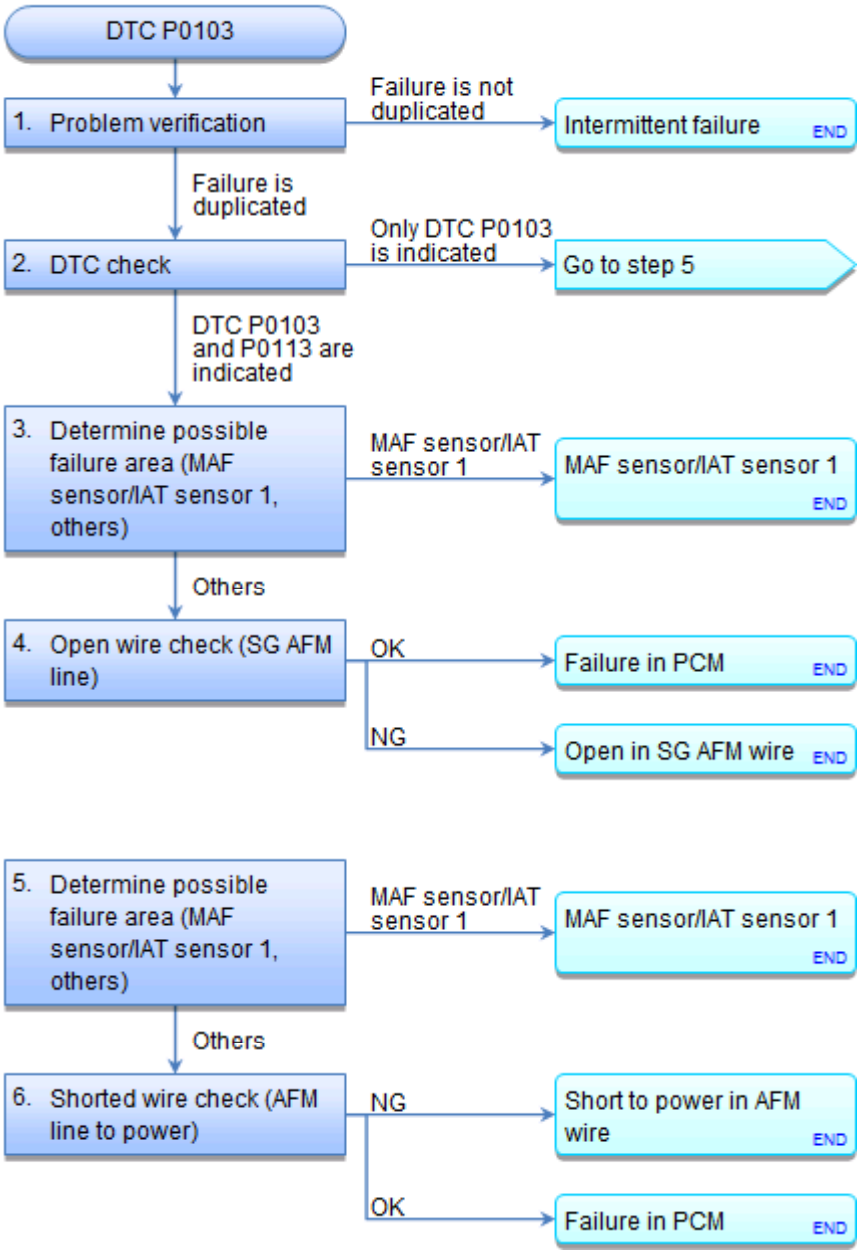
DTC Troubleshooting: P0103



DTC P0103: MAF Sensor Circuit High Voltage

NOTE: Before you troubleshoot, review the general troubleshooting information.

DTC Description	Confirmed DTC	Pending DTC
P0103 MAF Sensor Circuit High Voltage		

DTC (PGM-FI)

1. Problem verification:

-1. Turn the vehicle to the ON mode.

-2. Check the parameter(s) below with the HDS.

Signal	Threshold		Current conditions	
	Values	Unit	Values	Unit
MAF Sensor	More than 4.95	V		

Do the current condition(s) match the threshold?

YES The failure is duplicated. Go to step 2.

NO Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at MAF sensor/IAT sensor 1 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.■

2. DTC check:

-1. Check for Pending or Confirmed DTCs with the HDS.

DTC Description	Confirmed DTC	Pending DTC
P0103 MAF Sensor Circuit High Voltage		
P0113 IAT Sensor Circuit High Voltage		

Are DTC P0103 and P0113 indicated at the same time?

YES Go to step 3.

NO Go to step 5.

3. Determine possible failure area (MAF sensor/IAT sensor 1, others):

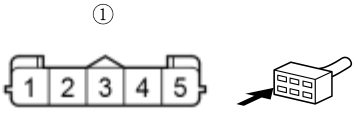
-1. Turn the vehicle to the OFF (LOCK) mode.

-2. Disconnect the following connector.
MAF sensor/IAT sensor 1 5P connector

-3. Turn the vehicle to the ON mode.

-4. Measure the voltage between test points 1 and 2.

Test condition	Vehicle ON mode MAF sensor/IAT sensor 1 5P connector: disconnected
Test point 1	MAF sensor/IAT sensor 1 5P connector (female terminals) No. 2: ①
Test point 2	MAF sensor/IAT sensor 1 5P connector (female terminals) No. 4: ①



Is there about 5.0 V?

YES Replace MAF sensor/IAT sensor 1.■

NO Go to step 4.

4. Open wire check (SG AFM 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 MAF sensor/IAT sensor 1 5P connector: disconnected PCM connector No. 1 (96P): disconnected
Test point 1	MAF sensor/IAT sensor 1 5P connector (female terminals) No. 2: ①
Test point 2	PCM connector No. 1 (96P) No. 35

Is there continuity?

YES The SG AFM wire 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 P0103 goes away and the PCM was substituted, replace the original PCM.■

NO Repair an open in the SG AFM wire between PCM connector No. 1 terminal No. 35 and MAF sensor/IAT sensor 1.■

5. Determine possible failure area (MAF sensor/IAT sensor 1, others):

-1. Turn the vehicle to the OFF (LOCK) mode.

-2. Disconnect the following connector.
MAF sensor/IAT sensor 1 5P connector

-3. Turn the vehicle to the ON mode.

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

Signal	Current conditions	
	Values	Unit
MAF Sensor		

Is there any voltage?

YES Go to step 6.

NO Replace MAF sensor/IAT sensor 1.■

6. Shorted wire check (AFM line to power):

-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. Turn the vehicle to the ON mode.

-5. Measure the voltage between test points 1 and 2.

Test condition	Vehicle ON mode
	MAF sensor/IAT sensor 1 5P connector: disconnected
	PCM connector No. 1 (96P): disconnected
Test point 1	MAF sensor/IAT sensor 1 5P connector (female terminals) No. 1: ①
Test point 2	Body ground

Is there any voltage?

YES Repair a short to power in the AFM wire between PCM connector No. 1 terminal No. 53 and MAF sensor/IAT sensor 1.■

NO The AFM wire 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 P0103 goes away and the PCM was substituted, replace the original PCM.■