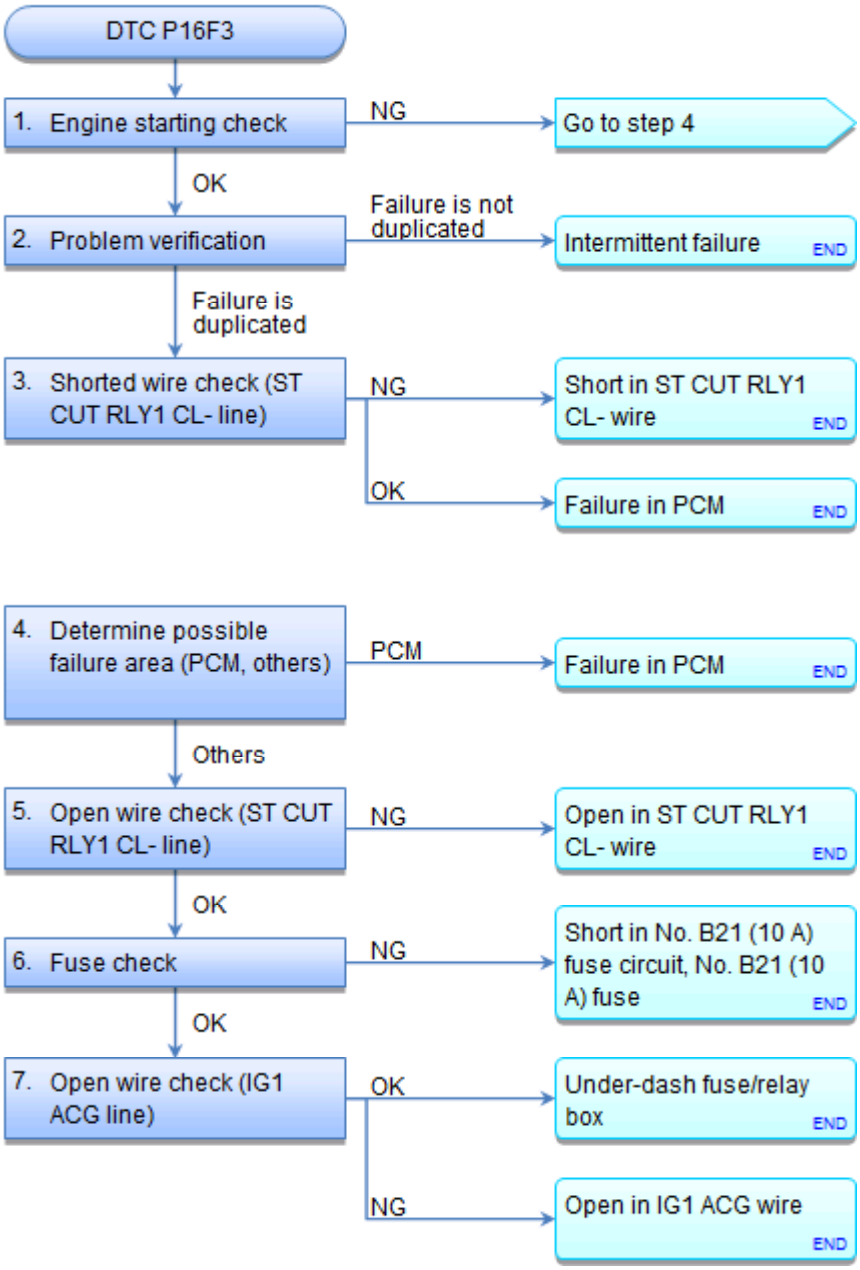
DTC Troubleshooting: P16F3



DTC P16F3: Starter Cut Relay 1 Control Circuit Low Voltage

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

DTC Description	Confirmed DTC	Pending DTC
P16F3 Starter Cut Relay 1 Control Circuit Low Voltage		

DTC (PGM-FI)

1. Engine starting check:

-1. Try to start the engine.

Does the engine start?

YES Go to step 2.

NO Go to step 4.

2. Problem verification:

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

-2. Turn the vehicle to the ON mode.

-3. Clear the DTC with the HDS.

Clear DTC

-4. Check for Pending or Confirmed DTCs with the HDS.

DTC Description	Confirmed DTC	Pending DTC
P16F3 Starter Cut Relay 1 Control Circuit Low Voltage		

Is DTC P16F3 indicated?

YES The failure is duplicated. Go to step 3.

NO Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the relay circuit board (starter cut relay 1 circuit) 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.■

3. Shorted wire check (ST CUT RLY1 CL- 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 connectors.
PCM connector No. 2 (58P)
Relay circuit board connector A (8P)

-4. Check for continuity between test points 1 and 2.

Test condition	Vehicle OFF (LOCK) mode PCM connector No. 2 (58P): disconnected Relay circuit board connector A (8P): disconnected
Test point 1	PCM connector No. 2 (58P) No. 49
Test point 2	Body ground

Is there continuity?

YES Repair a short in the ST CUT RLY1 CL- wire between PCM connector No. 2 terminal No. 49 and the relay circuit board.■

NO The ST CUT RLY1 CL- 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 P16F3 goes away and the PCM was substituted, replace the original PCM.■

4. Determine possible failure area (PCM, others):

-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. 2 (58P)

-4. Turn the vehicle to the ON mode.

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

Test condition	Vehicle ON mode
	PCM connector No. 2 (58P): disconnected
Test point 1	PCM connector No. 2 (58P) No. 49
Test point 2	Body ground

Is there battery voltage?

YES 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 P16F3 goes away and the PCM was substituted, replace the original PCM.■

NO Go to step 5.

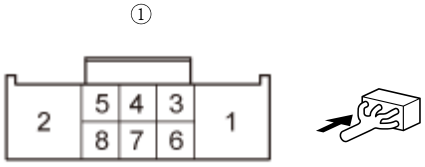
5. Open wire check (ST CUT RLY1 CL- line):

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

-2. Disconnect the following connector.
Relay circuit board connector A (8P)

-3. Check for continuity between test points 1 and 2.

Test condition	Vehicle OFF (LOCK) mode
	PCM connector No. 2 (58P): disconnected
	Relay circuit board connector A (8P): disconnected
Test point 1	Relay circuit board connector A (8P) (female terminals) No. 5: ①
Test point 2	Body ground



Is there continuity?

YES Go to step 6.

NO Repair an open in the ST CUT RLY1 CL- wire between PCM connector No. 2 terminal No. 49 and the relay circuit board.■

6. Fuse check:

-1. Check the following fuse.

Fuse	No. B21 (10 A)
Location	Under-dash fuse/relay box

Is the fuse OK?

YES Go to step 7.

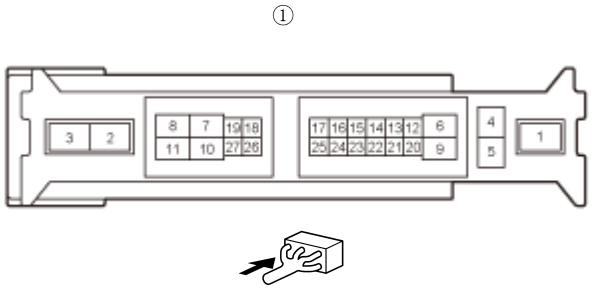
NO Check for a short in the No. B21 (10 A) fuse circuit, and repair it if needed. Also replace the No. B21 (10 A) fuse.■

7. Open wire check (IG1 ACG line):

-1. Disconnect the following connectors.
Relay circuit board connector B (6P)
Under-dash fuse/relay box connector C (27P)

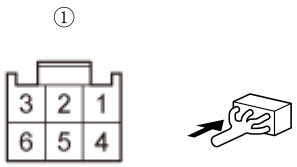
-2. Connect terminals A and B with a jumper wire.

Terminal A	Under-dash fuse/relay box connector C (27P) (female terminals) No. 6: ①
Terminal B	Body ground



-3. Check for continuity between test points 1 and 2.

Test condition	Vehicle OFF (LOCK) mode
	PCM connector No. 2 (58P): disconnected
	Relay circuit board connector A (8P): disconnected
	Relay circuit board connector B (6P): disconnected
	Under-dash fuse/relay box connector C (27P): disconnected
	Under-dash fuse/relay box connector C (27P) No. 6: jumped to body ground
Test point 1	Relay circuit board connector B (6P) (female terminals) No. 4: ①
Test point 2	Body ground



Is there continuity?

YES Replace the under-dash fuse/relay box.■

NO Repair an open in the IG1 ACG wire between the relay circuit board and the under-dash fuse/relay box.■