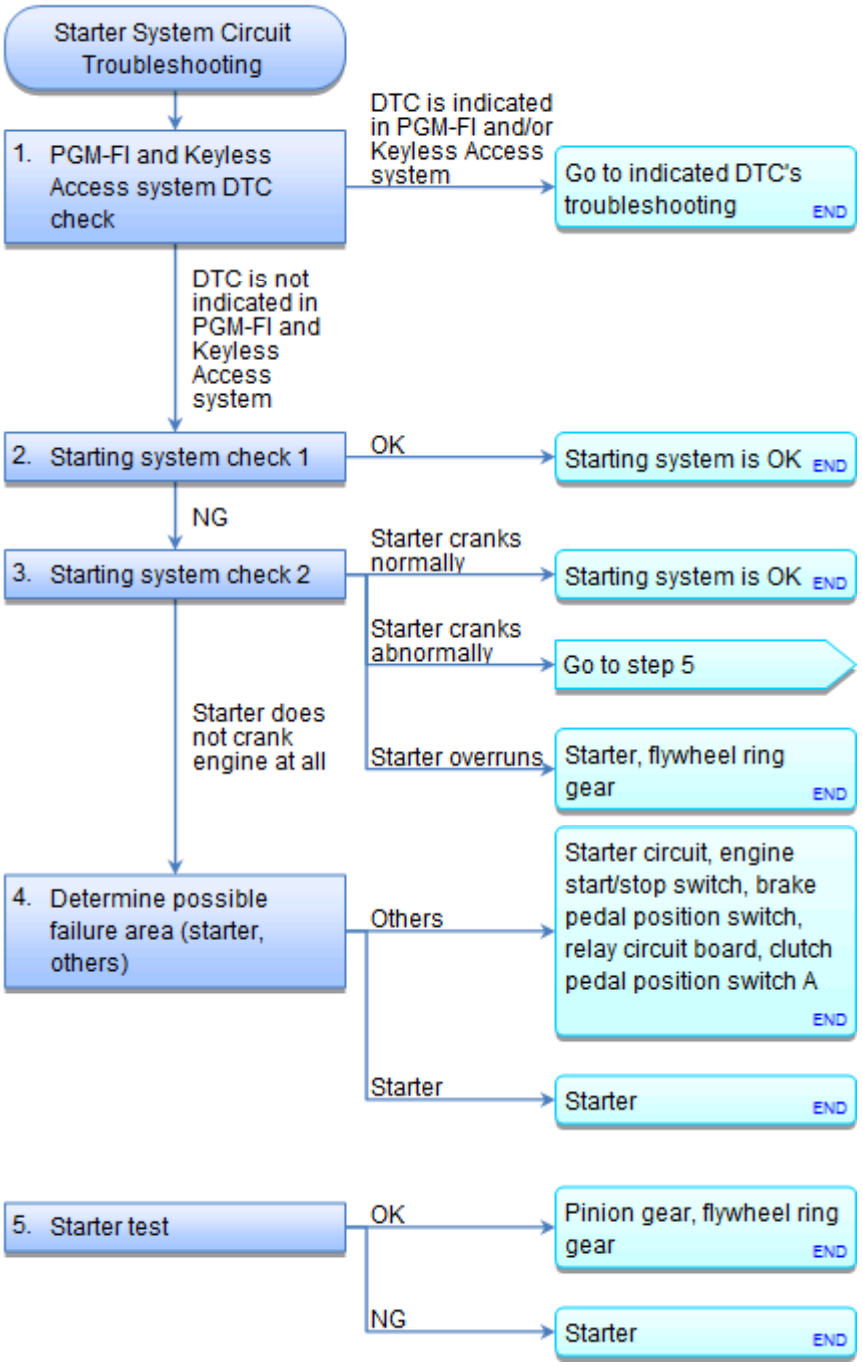
Starter System Circuit Troubleshooting



Starter System Circuit Troubleshooting

Special Tools Required

Alternator, Regulator, Battery, and Starter Tester OTC3131*

*: Available through the Honda Tool and Equipment Program 888-424-6857

NOTE:

- Air temperature must be between 59—100 °F (15—38 °C) during this procedure.
- After the inspection, you must reset the PCM. Otherwise, the PCM will continue to stop the fuel injectors from operating.
- The 12 volt battery must be in good condition and fully charged.

1. PGM-FI and Keyless Access system DTC check:

-1. Connect the HDS to the DLC.

-2. Check for PGM-FI and Keyless Access system DTCs with the HDS. If you fail to enter the SYSTEM SELECTION MENU with the HDS, go to the keyless access system symptom troubleshooting "Cannot select ON mode with keyless access and with the keyless remote touching the engine start/stop switch".

PGM-FI system

DTC Description	Confirmed DTC	Pending DTC

Keyless Access system

DTC Description	DTC

Are any DTCs indicated?

YES Go to the indicated DTC's troubleshooting.■

NO Go to step 2.

2. Starting system check 1:

-1. Select ALL INJECTORS STOP in the PGM-FI INSPECTION menu with the HDS.

ALL INJECTORS STOP

-2. With the transmission in neutral and with the clutch pedal pressed, turn the vehicle to the START mode to crank the engine.

Did the starter crank the engine?

YES Do the PCM reset in the PGM-FI mode menu to cancel ALL INJECTORS STOP with the HDS.■

NO Go to step 3.

3. Starting system check 2:

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

-2. Check the 12 volt battery condition. Check the electrical connections at the 12 volt battery, the 12 volt battery negative cable to the body, the engine ground cables, and the starter for looseness and corrosion. Then try starting the engine again.

Did the starter crank the engine?

Starter cranks normally	Check for loose connection and repair as needed. Do the PCM reset in the PGM-FI mode menu to cancel ALL INJECTORS STOP with the HDS.■
Starter does not crank engine at all	If the starter does not crank the engine at all, go to step 4.
Starter cranks abnormally	If the starter cranks the engine erratically or too slowly, go to step 5.
Starter overruns	If the starter does not disengage from the flywheel ring gear when you release the button, replace the starter, or remove and disassemble it, and check for the following.■ ● Dirty drive gear or damaged overrunning clutch ● Damaged flywheel ring gear

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

-1. Make sure the transmission is in neutral.

-2. Disconnect the following connector.
Starter S terminal 1P connector

-3. Connect terminals A and B with a jumper wire.
Terminal A Starter S terminal 1P connector (male terminal) No. 1 ①
Terminal B 12 volt battery positive terminal ②

①

②

Did the starter crank the engine?

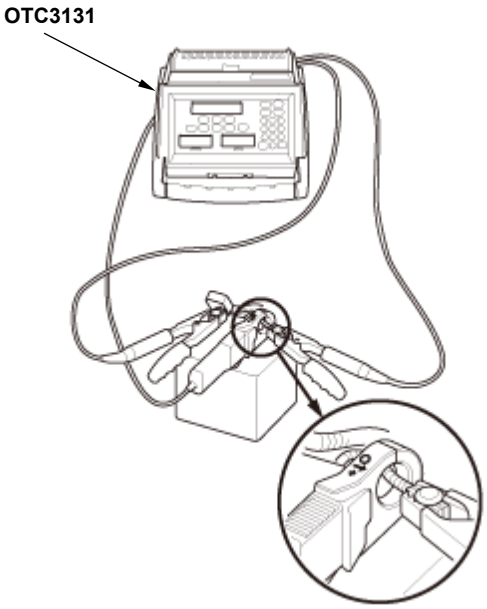
YES Check the following items in the order listed until you find the problem in the circuit:■

- Check the engine start/stop switch.
- Check the brake pedal position switch.
- Check the relay circuit board.
- Blown No. A1-7 (125 A) fuse, No. A2-2 (30 A) fuse, No. A2-4 (60 A) fuse, No. A3-5 (30 A) fuse, No. A8 (10 A) fuse, and No. A18 (10 A) fuse in the under-hood fuse/relay box.
- Blown No. B21 (10 A) fuse and No. B30 (10 A) fuse in the under-dash fuse/relay box.
- Check for an open or short in the wire between the 12 volt battery and the starter.
- Check for an open or short in the wire and connectors between the No. A2-2 (30 A) fuse, the IG1A relay circuit, and the body control module.
- Check for an open or short in the wire and connectors between the No. A3-5 (30 A) fuse and the relay circuit board.
- Check for an open or short in the wire and connectors between the No. A8 (10 A) fuse, the brake pedal position switch, the body control module, and the PCM.
- Check for an open or short in the wire and connectors between No. B21 (10 A) fuse and the relay circuit board.
- Check for an open or short in the wire and connectors between No. B21 (10 A) fuse, the brake pedal position switch, and the PCM.
- Check for an open or short in the wire and connectors between the relay circuit board and the starter.
- Check for an open or short in the wire and connectors between the relay circuit board and PCM.
- Check for an open or short in the wire and connectors between the body control module and the PCM (STS line).
- Check for faulty clutch pedal position switch A.
- Check for an open or short in the wire and connectors between the PCM, the body control module, clutch pedal position switch A, and ground (G302).

NO Check for an open or short in the wire and connectors between the 12 volt battery and the starter. Replace the starter, or remove and disassemble it, as necessary.■

5. Starter test:

-1. Connect the alternator, regulator, battery, and starter tester to the 12 volt battery.



-2. Do the STARTING TEST, check the cranking voltage and the current draw from the following service limit table.

Voltage (V)	Current (A)
8.5 or more	380 or less

Are the cranking voltage and the current draw within the service limits?

YES Remove the starter, and inspect its pinion gear and the flywheel ring gear for damage. Replace any damaged parts.■

NO Replace the starter or remove and disassemble it, and check for these problems:■

- Excessive drag in the engine
- Drag in the starter armature
- Shorted armature winding
- Open circuit in the starter armature commutator segments
- Excessively worn starter brushes
- Open circuit in the starter brushes
- Dirty or damaged helical splines or drive gear
- Faulty overrunning clutch