IGNITION SYSTEM (1GR–FE)

1806M–02

ON–VEHICLE INSPECTION

NOTICE:

"Cold" and "Hot" in this section mean the temperature of the coils themselves."Cold" is from –10°C (14°F) to 50 °C (122 °F) and "Hot" is from 50 °C (122 °F) to 100 °C (212 °F).

1. INSPECT IGNITION COIL ASSY AND SPARK TEST

(a) Check for DTCs.

NOTICE:

If DTC is present, perform a troubleshooting in accordance with a procedure for that DTC.

(b) Check that spark occurs.

(1) Remove the ignition coils.

(2) Using a 16mm (0.63 in) plug wrench, remove the spark plugs.

(3) Install the spark plugs to each ignition coil, and connect the ignition coil connectors.

(4) Disconnect the 6 injector connectors.

(5) Ground the spark plugs.

(6) Check if spark occurs at each spark plug while engine is being cranked.

NOTICE:

- **Be sure to ground the spark plug when checking.**
- **Replace the ignition coil if it is given impact.**
- **Do not crank the engine for more than 2 seconds.**

If sparks does not occur, do the following test:

SPARK TEST

NO

CHECK CONNECTION OF IGNITION COIL CONNECTOR — BAD → Connect securely.

OK

CHANGE IT TO NORMAL IGNITION COIL AND PERFORM SPARK TEST AGAIN — OK → Replace ignition coil assy.

NO

CHECK POWER SUPPLY TO IGNITION COIL
1. Turn ignition switch ON.
2. Check that there is battery positive voltage at ignition coil positive (+) terminal.

BAD → Check wiring between ignition switch and ignition coil assy.

OK

CHECK RESISTANCE IN VVT SENSOR (See page 18–3)

	Cold	HOT
Resistance:	835 to 1,400 Ω	1,060 to 1,645 Ω

BAD → Replace VVT sensor.

OK

CHECK RESISTANCE IN CRANKSHAFT POSITION SENSOR (See page 18–3)

	Cold	HOT
Resistance:	1,630 to 2,740 Ω	2,065 to 3,225 Ω

BAD → Replace crankshaft position sensor.

OK

CHECK IGT SIGNAL FROM ECM (See page 05–129) — BAD → Check ECM (See page 01–35)

OK

REPAIR WIRING BETWEEN IGNITION COIL AND ECM

(c) Using a 16 mm (0.63 in.) plug wrench, install the spark plugs.
Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)

(d) Install the ignition coils.
Torque: 7.5 N·m (76 kgf·cm, 66 in.·lbf)