IGNITION SYSTEM (2TR–FE)

1806M–04

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 any DTC is present, perform 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 4 injector connectors.

(5) Ground the spark plugs.

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

NOTICE:

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

If spark does not occur, do the following test:

SPARK TEST

↓ NG

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

↓ OK

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

↓ NG

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

NG → 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**

NG → Replace VVT sensor.

↓ OK

CHECK RESISTANCE IN CRANKSHAFT POSITION SENSOR (See page 05–4)

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

NG → Replace crankshaft position sensor.

↓ OK

CHECK IGT SIGNAL FROM ECM (See page) — NG → Check ECM (See page 01–36)

↓ 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: 9.0 N·m (92 kgf·cm, 80 in.·lbf)