

IGNITION SYSTEM

ON-VEHICLE INSPECTION

IGOEP-03

NOTICE:

"Cold" and "Hot" in these sentences express 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 (WITH IGNITER) AND SPARK TEST

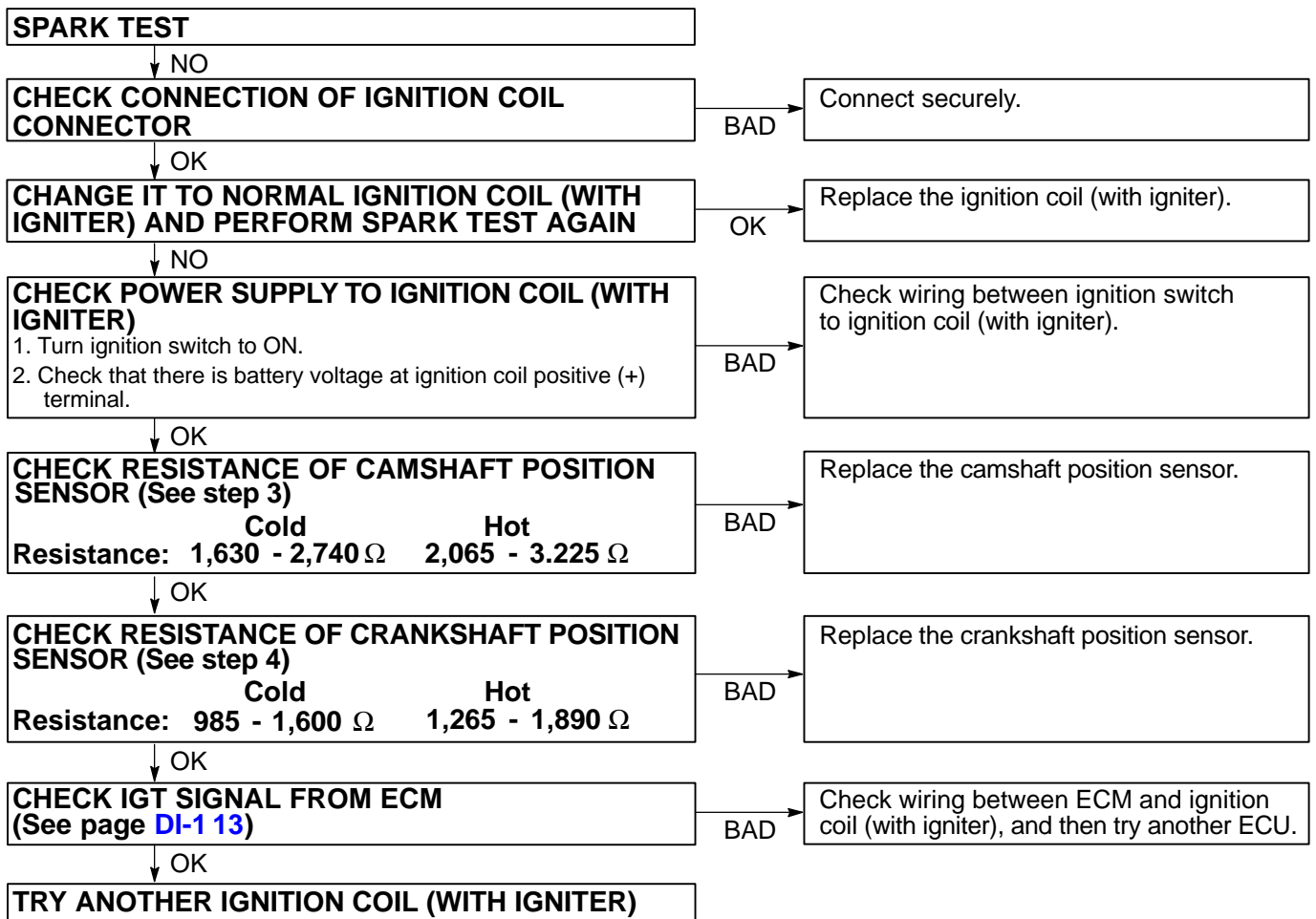
Check that the spark occurs.

- (1) Remove the ignition coils (with igniter).
(See page [IG-6](#))
- (2) Using a 16 mm (0.63 in.) plug wrench, remove the spark plugs.
- (3) Install the spark plugs to each ignition coils (with igniter), and connect the ignition coil connectors.
- (4) Disconnect the 4 injector connectors.
- (5) Ground the spark plugs.
- (6) Check if spark occurs while engine is being cranked.

NOTICE:

To prevent gasoline from being injected from injectors during this test, crank the engine for no more than 5 - 10 seconds at time.

If the spark does not occur, do the test as follows:



- (7) Using a 16 mm (0.63 in.) plug wrench, install the spark plugs.

Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)

- (8) Install the ignition coils (with igniter).

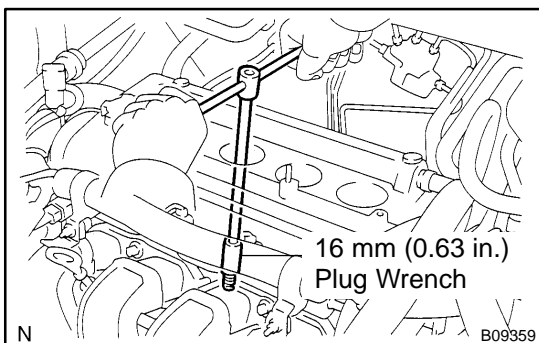
(See page IG-7)

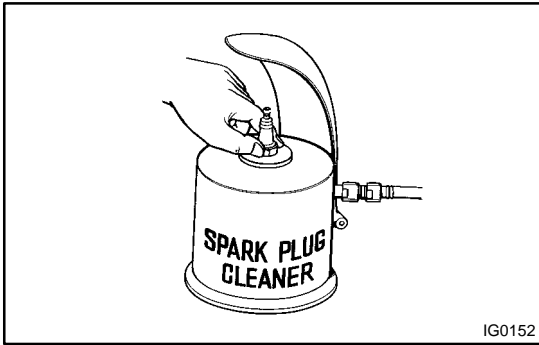
2. INSPECT SPARK PLUGS

- (a) Remove the ignition coils (with igniter).

(See page IG-6)

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





IG0152

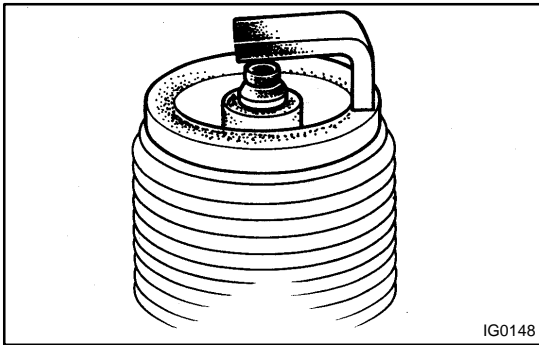
(c) Clean the spark plugs.
If the electrode has traces of wet carbon, allow it to dry and then clean with a spark plug cleaner.

Air pressure: Below 588 kPa (6 kgf/cm², 85 psi)

Duration: 20 seconds or less

HINT:

If there are traces of oil, remove it with gasoline before using the spark plug cleaner.



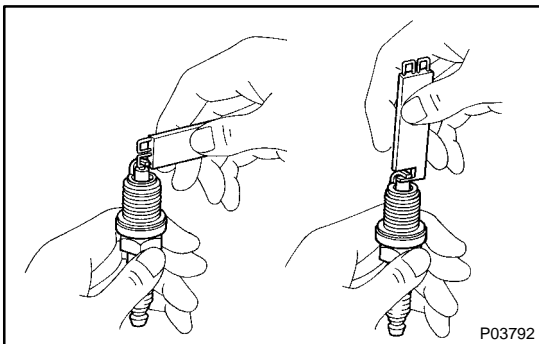
IG0148

(d) Check the spark plug for thread damage and insulator damage.

If abnormal, replace the spark plug.

Recommended spark plug:

DENSO made	SK16R11
NGK made	IFR5A11



P03792

(e) Adjust electrode gap.

Carefully bend the outer electrode to obtain the correct electrode gap.

Electrode gap: 1.1 mm (0.043 in.)

(f) Using a 16 mm (0.63 in.) plug wrench, install the spark plugs.

Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)

(g) Install the ignition coils (with igniter).

(See page [IG-7](#))

3. INSPECT CAMSHAFT POSITION SENSOR



N

B08807

(a) Disconnect the camshaft position sensor connector.



N

B08808

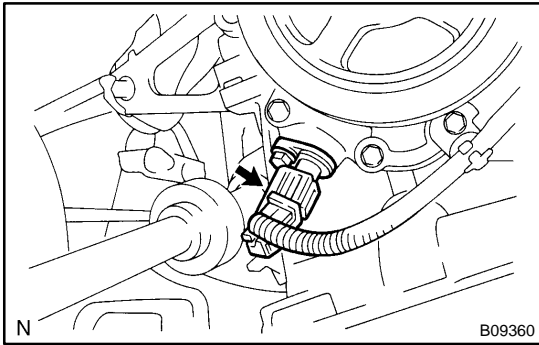
(b) Using an ohmmeter, measure the resistance between terminals.

Resistance:

Cold	1,630 - 2,740 Ω
Hot	2,065 - 3,225 Ω

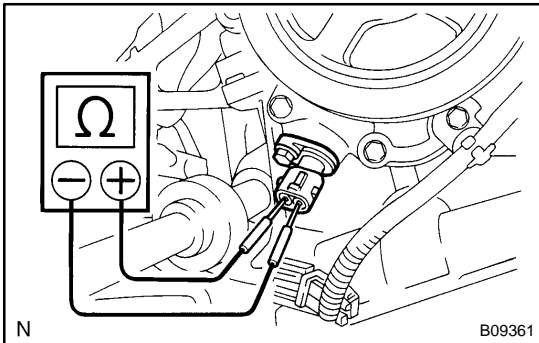
If the resistance is not as specified, replace the camshaft position sensor.

(c) Connect the camshaft position sensor connector.



4. INSPECT CRANKSHAFT POSITION SENSOR

- (a) Remove the engine under cover RH.
- (b) While sliding the connector lock, remove the connector.



- (c) Using an ohmmeter, measure the resistance between the terminals.

Resistance:

Cold	985 - 1,600 Ω
Hot	1,265 - 1,890 Ω

If the resistance is not as specified, replace the crankshaft position sensor.

- (d) Install the connector.
- (e) Install the engine under cover RH.