

# ON-VEHICLE INSPECTION

IG01R-03

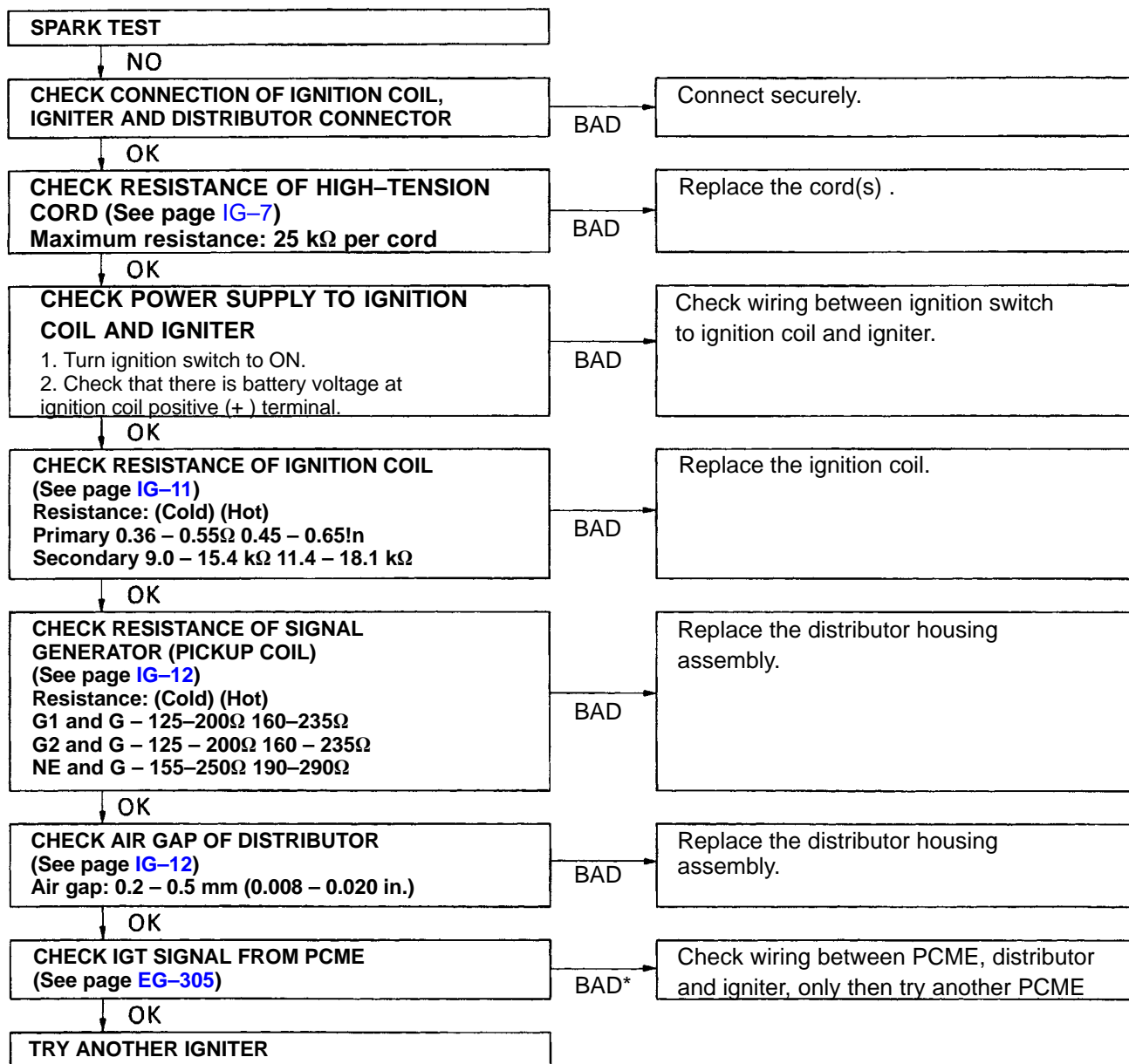
## SPARK TEST

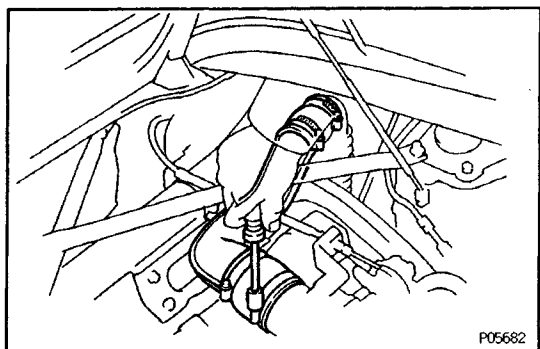
### CHECK THAT SPARK OCCURS

- (a) Disconnect the high-tension cord (from the ignition coil) from the distributor cap.
- (b) Hold the end approx. 12.5 mm (0.50 in.) from the body ground.
- (c) See if spark occurs while engine is being cranked.

HINT: To prevent gasoline from being injected from injectors during this test, crank the engine for no more than 1 - 2 seconds at time.

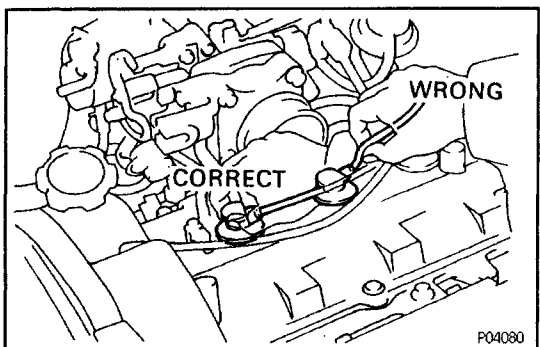
If the spark does not occur, perform the test as follows:





## HIGH-TENSION CORDS INSPECTION

### 1. REMOVE NO.1 INTAKE AIR CONNECTOR

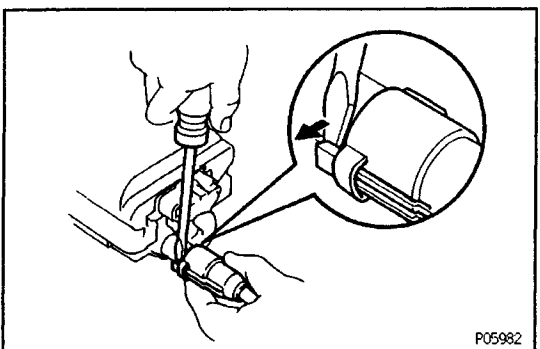


### 2. DISCONNECT HIGH-TENSION CORDS FROM SPARK PLUGS

Disconnect the high - tension cords at the rubber boot.

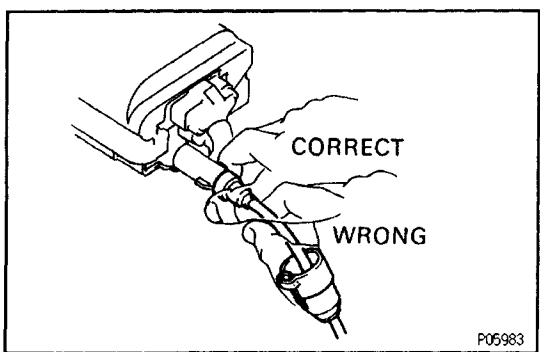
Do not pull on the high-tension cords.

**NOTICE:** Pulling on or bending the cords may damage the conductor inside.



### 3. DISCONNECT HIGH-TENSION CORDS FROM IGNITION COIL

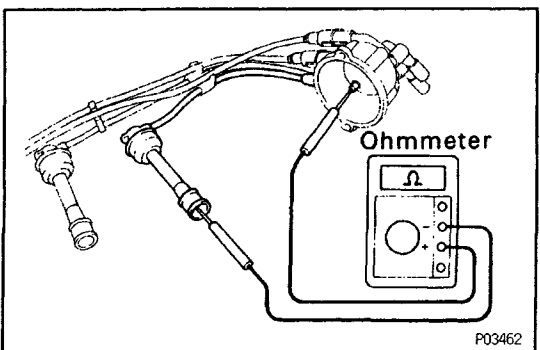
(a) Using a screwdriver, lift up the lock claw and disconnect the holder from the ignition coil.



(b) Disconnect the high-tension cord at the grommet.  
Do not pull on the cord.

**NOTICE:** Pulling on or bending the cords may damage the conductor inside.

### 4. REMOVE DISTRIBUTOR CAP WITHOUT DISCONNECTING HIGH-TENSION CORDS



### 5. INSPECT HIGH-TENSION CORD RESISTANCE

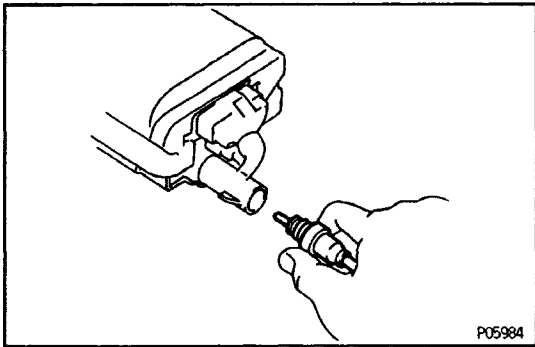
Using an ohmmeter, measure the resistance without disconnecting the distributor cap.

**Maximum resistance:**

**25 k  $\Omega$  per cord**

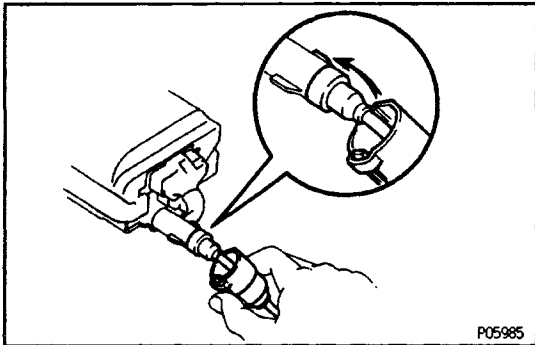
If the resistance is greater than maximum, check the terminals. If necessary, replace the high-tension cord and/or distributor cap.

### 6. REINSTALL DISTRIBUTOR CAP

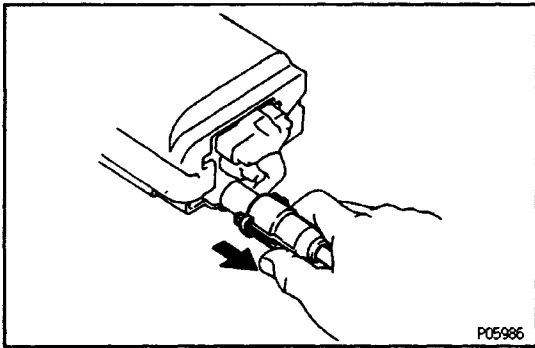


## 7. RECONNECT HIGH-TENSION CORDS TO IGNITION COIL

(a) Insert the grommet portion into the terminal hole of the ignition coil.

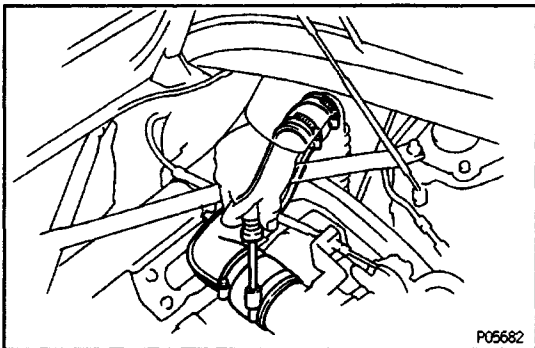


(b) Align the spline of the ignition coil with the spline of the holder, and slide on the holder.



(c) Check that the lock claw of the holder is engaged by lightly pulling the holder.

## 8. RECONNECT HIGH-TENSION CORDS TO SPARK PLUGS



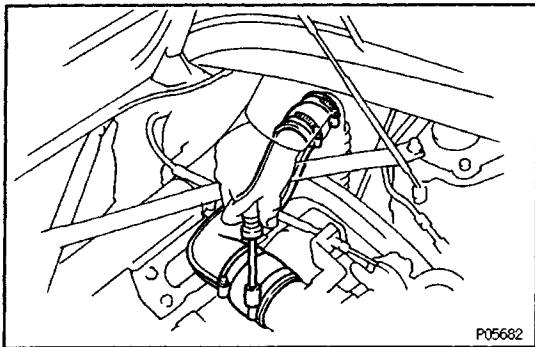
## 9. REINSTALL NO.1 INTAKE AIR CONNECTOR

## SPARK PLUGS INSPECTION

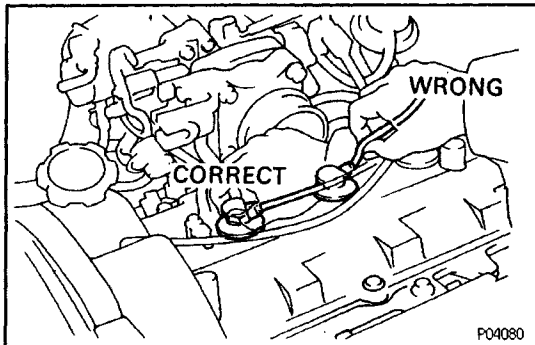
1200K-01

### NOTICE:

- Never use a wire brush for cleaning.
- Never attempt to adjust the electrode gap on used spark plug.
- Spark plug should be replaced every 100,000 km (60,000 miles).



**1. REMOVE NO.1 INTAKE AIR CONNECTOR**

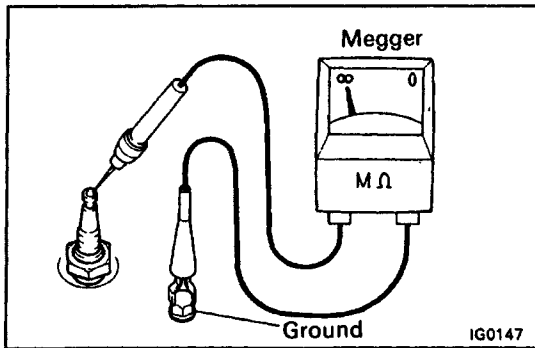


**2. DISCONNECT HIGH-TENSION CORDS FROM SPARK PLUGS**

Disconnect the high - tension cords at the rubber boot.

Do not pull on the cords.

**NOTICE:** Pulling on or bending the cords may damage the conductor inside.



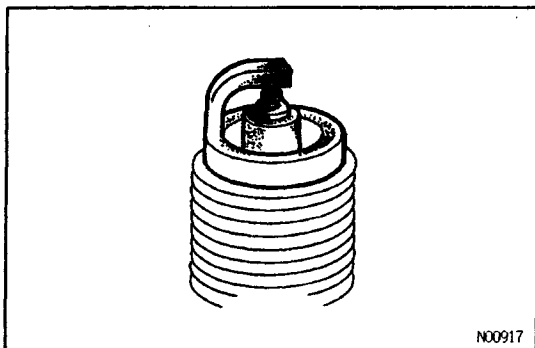
**3. INSPECT ELECTRODE**

Using a megger (insulation resistance meter), measure the insulation resistance.

**Standard correct insulation resistance:**  
**10 MΩ or more**

If the resistance is less than specified, proceed to step 4.

**HINT:** If a megger is not available, the following simple method of inspection provides fairly accurate results.

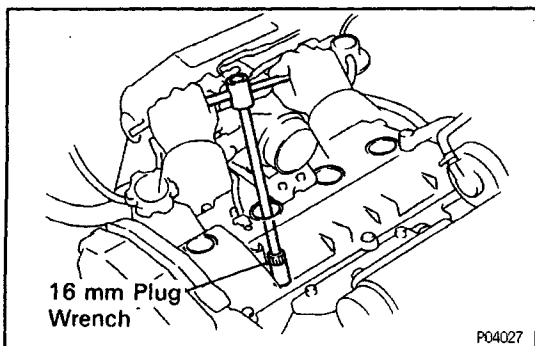


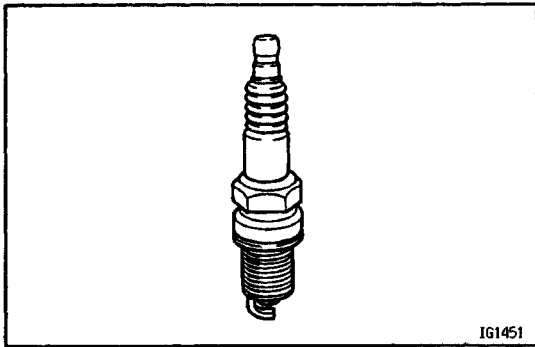
**(Simple Method)**

- (a) Quickly race the engine to 4,000 rpm five times.
- (b) Remove the spark plug. (See step 4)
- (c) Visually check the spark plug.
  - If the electrode is dry ... Okey
  - If the electrode is wet ... Proceed to step 5
- (d) Reinstall the spark plug. (See step 8)

**4. REMOVE SPARK PLUGS**

Using a 16 mm plug wrench, remove the spark plug.





### 5. VISUALLY INSPECT SPARK PLUGS

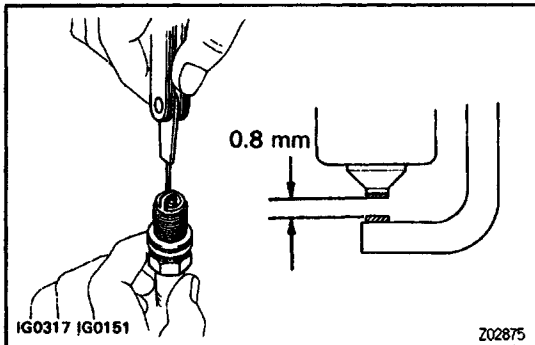
Check the spark plug for thread damage and insulator damage.

If abnormal, replace the spark plug.

**Recommended spark plug:**

**PK20R8 for ND**

**BKR6EP8 for NGK**



### 6. INSPECT ELECTRODE GAP

**Maximum electrode gap:**

**1.0 mm (0.039 in.)**

If the gap is greater than maximum, replace the spark plug.

**Correct electrode gap of new spark plug:**

**0.8 mm (0.031 in.)**

**NOTICE:** If adjusting the gap of a new spark plug, bend only the base of the ground electrode. Do not touch the tip. Never attempt to adjust the gap on the used plug.

### 7. CLEAN SPARK PLUGS

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

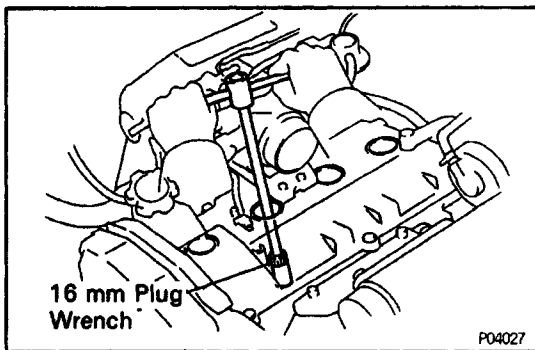
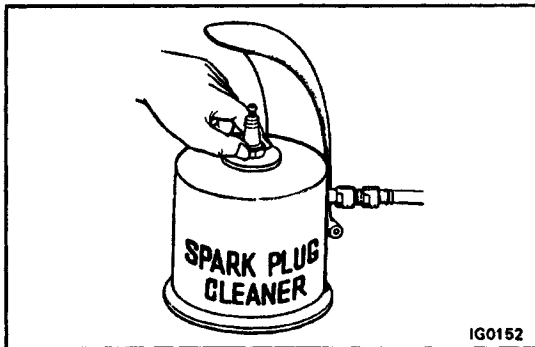
**Air pressure:**

**Below 588 kPa (6 kgf/cm<sup>2</sup>, 85 psi)**

**Duration:**

**20 seconds or less**

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

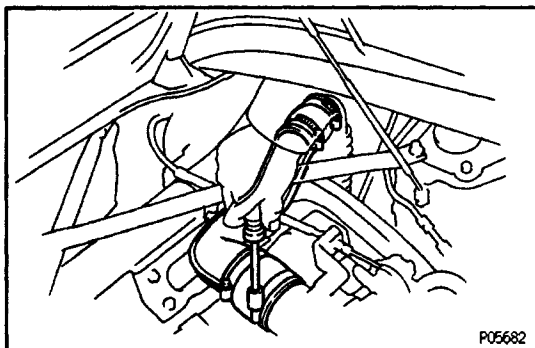


### 8. REINSTALL SPARK PLUGS

Using a 16 mm plug wrench, install the spark plug.

**Torque: 18 N-m (180 kgf-cm, 13 ft-lbf)**

### 9. RECONNECT HIGH-TENSION CORDS TO SPARK PLUGS

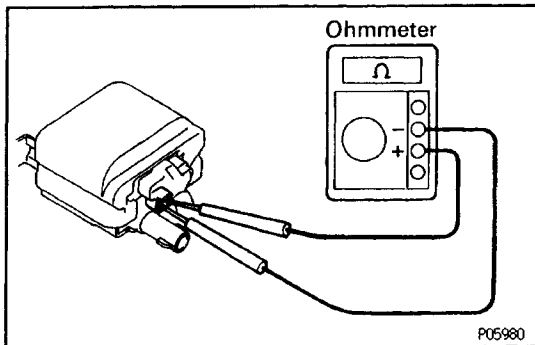


### 10. REINSTALL NO.1 INTAKE AIR CONNECTOR

## IGNITION COIL INSPECTION

**NOTICE:** "Cold" and "Hot" in the following sentences express the temperature of the coils themselves. "Cold" is from  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ) to  $50^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ) and "Hot" is from  $50^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ) to  $100^{\circ}\text{C}$  ( $212^{\circ}\text{F}$ ).

1. DISCONNECT IGNITION COIL CONNECTOR
2. DISCONNECT HIGH-TENSION CORD FROM IGNITION COIL



### 3. INSPECT PRIMARY COIL RESISTANCE

Using an ohmmeter, measure the resistance between the positive (+) and negative (-) terminals.

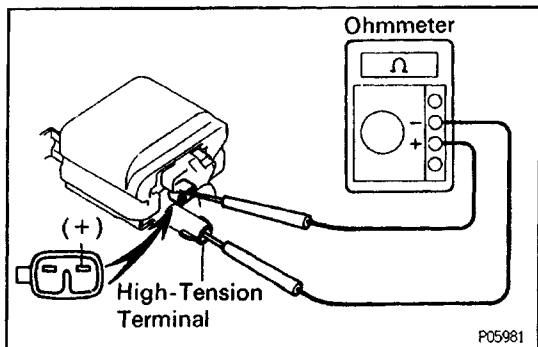
**Primary coil resistance (Cold):**

**0.36–0.55  $\Omega$**

**Primary coil resistance (Hot):**

**0.45 – 0.65  $\Omega$**

If the resistance is not as specified, replace the ignition coil.



### 4. INSPECT SECONDARY COIL RESISTANCE

Using an ohmmeter, measure the resistance between the positive (+) and high-tension terminals.

**Secondary coil resistance (Cold):**

**9.0 – 15.4  $\text{k}\Omega$**

**Secondary coil resistance (Hot):**

**11.4 – 18.1  $\text{k}\Omega$**

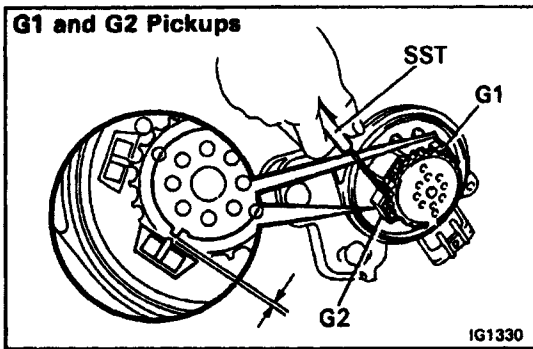
If the resistance is not as specified, replace the ignition coil.

5. RECONNECT HIGH-TENSION CORD TO IGNITION COIL
6. RECONNECT IGNITION COIL CONNECTOR

## DISTRIBUTOR INSPECTION

**NOTICE:** "Cold" and "Hot" in the following sentences express the temperature of the coils themselves. "Cold" is from  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ) to  $50^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ) and "Hot" is from  $50^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ) to  $100^{\circ}\text{C}$  ( $212^{\circ}\text{F}$ ).

1. DISCONNECT DISTRIBUTOR CONNECTOR
2. REMOVE DISTRIBUTOR CAP
3. REMOVE ROTOR

**G1 and G2 Pickups****4. INSPECT AIR GAP**

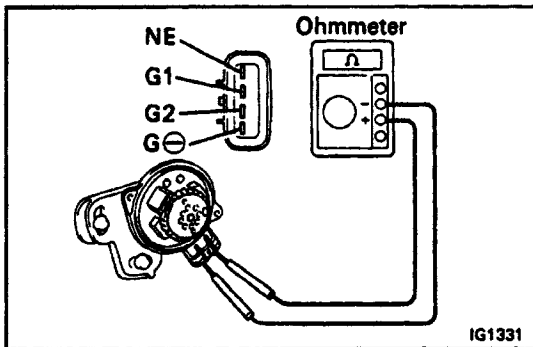
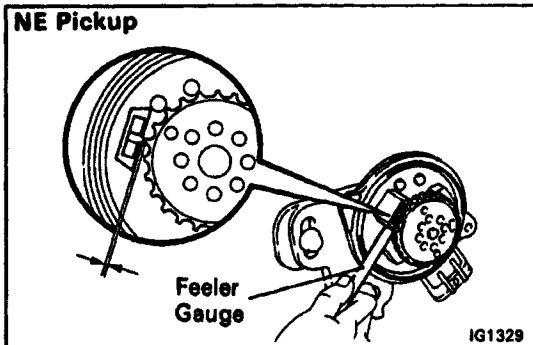
Using SST (G1 and G2 pickups) and a feeler gauge (NE pickup), measure the air gap between the signal rotor and pickup coil projection.

SST 09240-00020 for G1 and G2 pickups

**Air gap:**

**0.2 – 0.5 mm (0.008 – 0.020 in.)**

If the air gap is not as specified, replace the distributor housing assembly.

**NE Pickup****5. INSPECT SIGNAL GENERATOR (PICKUP COIL) RESISTANCE**

Using an ohmmeter, measure the resistance between terminals.

**Pickup coil resistance (Cold):**

**G1 and G (-)**  
125–200Ω

**G2 and G (-)**  
125–200Ω

**NE and G (-)**  
155–250Ω

**Pickup coil resistance (Hot):**

**G1 end G (-)**

160–235Ω

**G2 and G (-)**

160–235Ω

**NE and G (-)**

190–290Ω

If the resistance is not as specified, replace the distributor housing assembly.

**6. REINSTALL ROTOR****7. REINSTALL DISTRIBUTOR CAP****8. RECONNECT DISTRIBUTOR CONNECTOR****IGNITER INSPECTION**

(See procedure Spark Test)