ON–VEHICLE INSPECTION (5S–FE)

SPARK TEST

CHECK THAT SPARK OCCURS

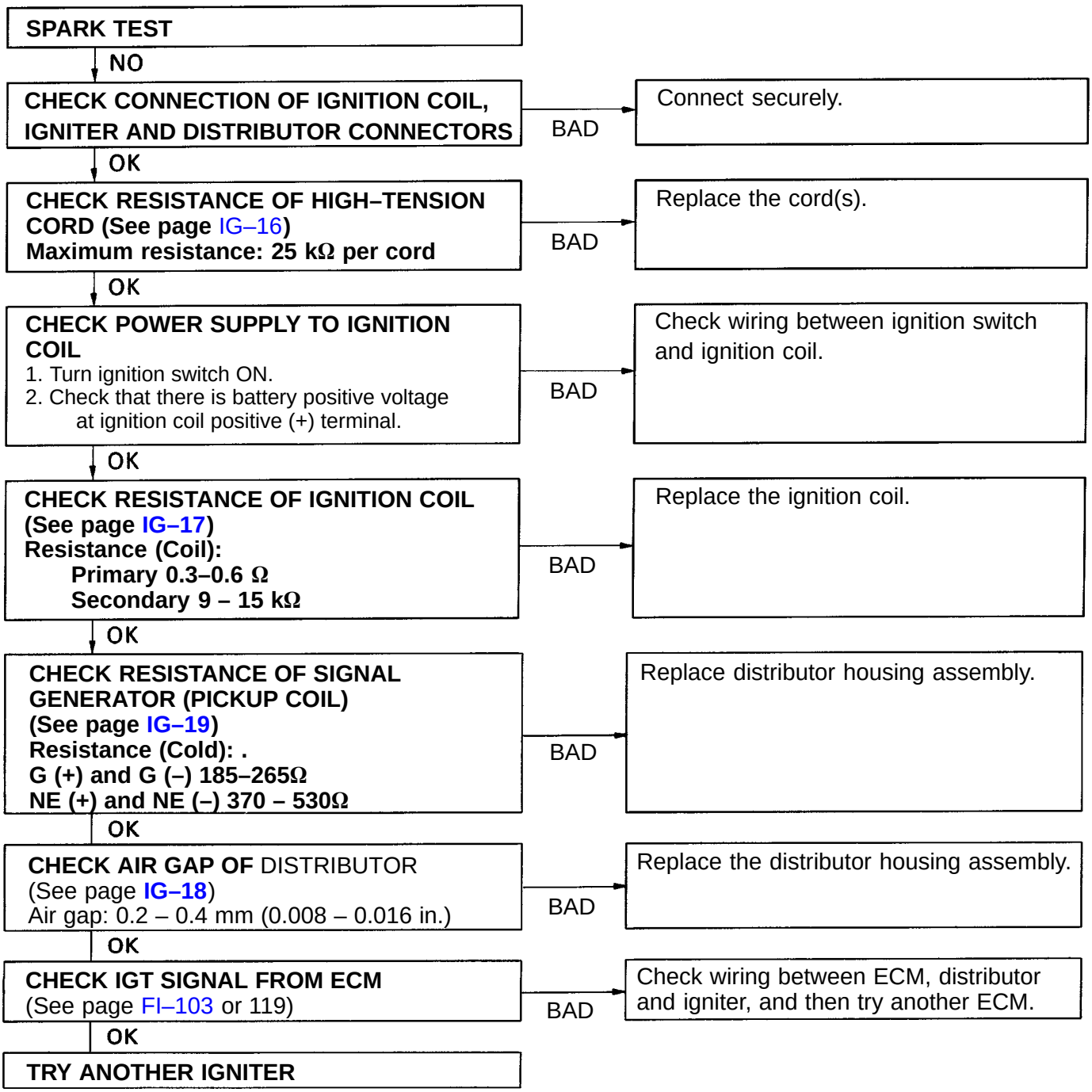
(a) Disconnect the high–tension cord from the distributor. (See page IG–16)

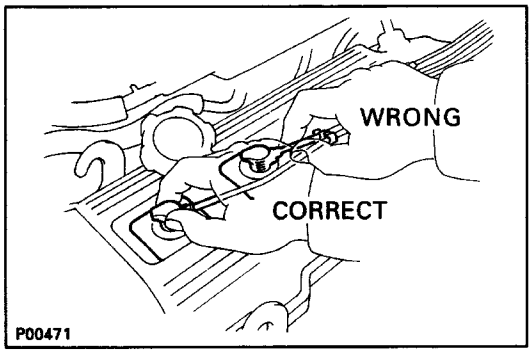
(b) Hold the end about 12.5 mm (0.50 in.) from the body of car.

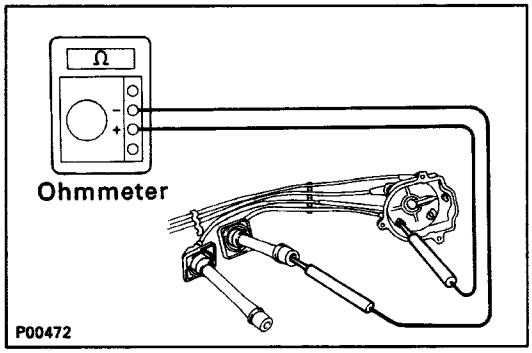
(e) Check if spark occurs while engine is being cranked.

HINT: To minimize the amount of fuel injected into the cylinders during this test, crank the engine for no more than 1 – 2 seconds at a time.

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







INSPECTION OF HIGH–TENSION CORDS

1. 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.

2. DISCONNECT HIGH–TENSION CORD FROM IGNITION COIL (See step 3 on pages IG–30 and 31)

3. REMOVE DISTRIBUTOR CAP WITHOUT DISCONNECTING HIGH–TENSION CORDS

4. INSPECT HIGH–TENSION CORD RESISTANCE

Using an ohmmeter, measure the resistance without dis–connecting the distributor cap.

Maximum resistance: 25 kΩ per cord

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

5. REINSTALL DISTRIBUTOR CAP

6. RECONNECT HIGH–TENSION CORD TO IGNITION COIL (See step 3 on pages IG–32 and 33)

7. RECONNECT HIGH–TENSION CORDS TO SPARK PLUGS

INSPECTION OF SPARK PLUGS

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. DISCONNECT HIGH–TENSION CORDS FROM SPARK PLUGS

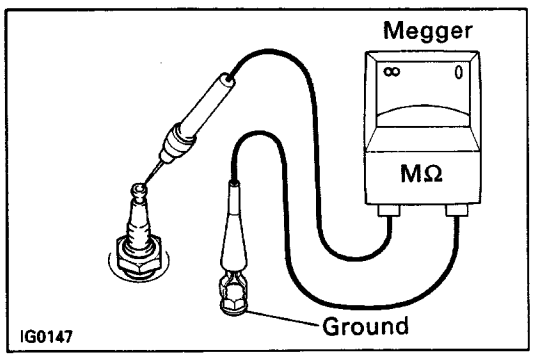
2. INSPECT ELECTRODE

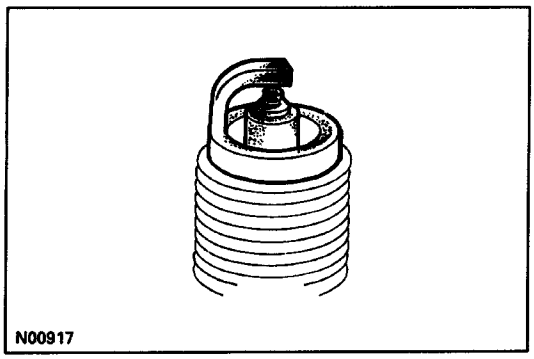
Using a megger (insulation resistance meter), measure the insulation resistance.

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 3)

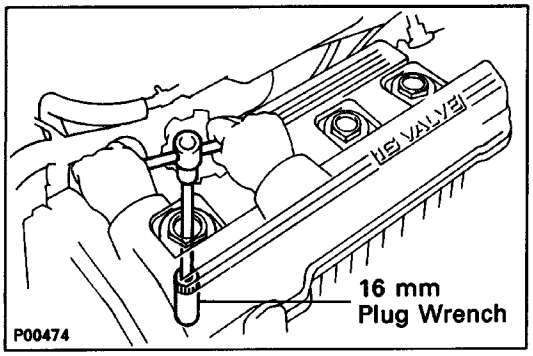
(c) Visually check the spark plug.

If the electrode is dry ... Okay

If the electrode is wet ... Proceed to step 4

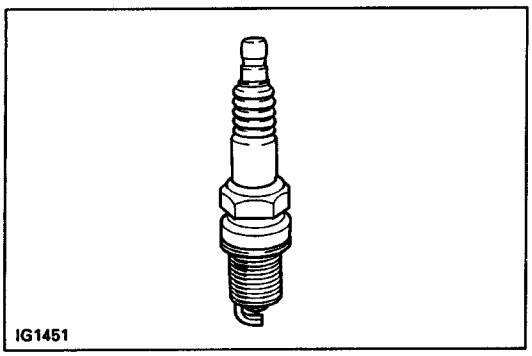
(d) Reinstall the spark plug.

(See step 7 on page IG–18)



3. REMOVE SPARK PLUGS

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

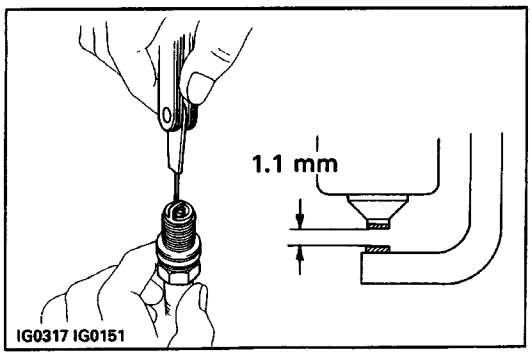


4. VISUALLY INSPECT SPARK PLUGS

Check the spark plug for thread damage and insulator damage.

If abnormal, replace the spark plug.

Recommended spark plug: ND PK20R11
NGK BKR6EP–11



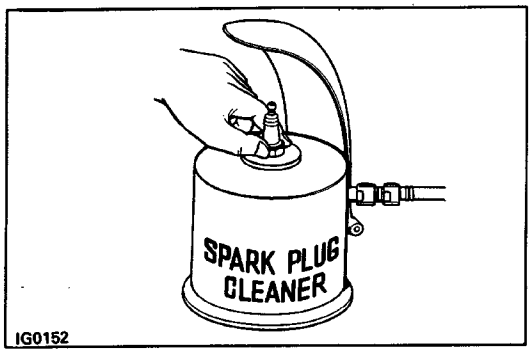
5. INSPECT ELECTRODE CAP

Maximum electrode gap: 1.3 mm (0.051 in.)

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

Correct electrode gap of new spark plug:
1.1 mm (0.043 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.

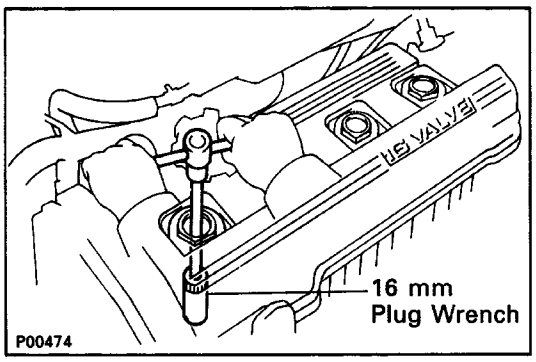


6. CLEAN SPARK PLUGS

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^2, 85 psi)
Duration: 20 seconds or less

HINT: If there are traces of oil, remove it with gaso–line before using the spark plug cleaner.



7. INSTALL SPARK PLUGS

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

Torque: 18 N–m (180 kgf–cm,13 ft–lbf)

8. RECONNECT HIGH–TENSION CORDS TO SPARK PLUGS

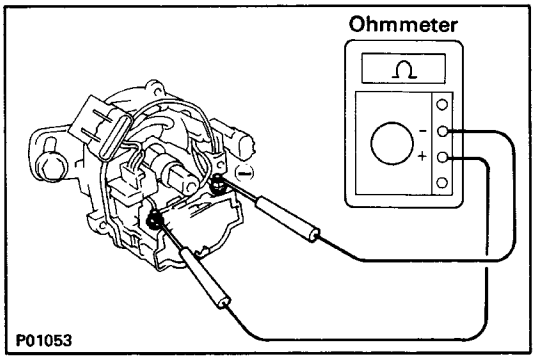
INSPECTION OF DISTRIBUTOR

1. DISCONNECT DISTRIBUTOR CONNECTORS

2. DISCONNECT DISTRIBUTOR CAP

3. REMOVE ROTOR

4. REMOVE IGNITION COIL DUST COVER



Ignition Coil

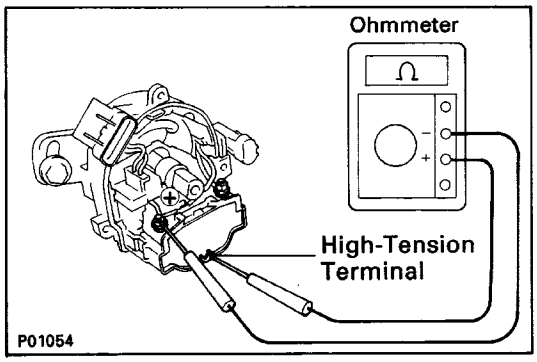
5. INSPECT PRIMARY COIL RESISTANCE

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

Primary coil resistance (Cold):

0.3 ~ 0.6 Ω at –10 ~ +40°C (14 ~ 104°F)

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



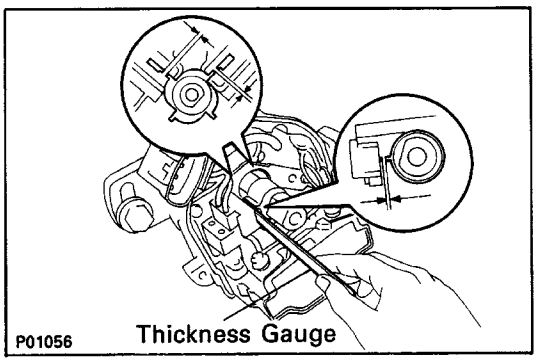
6. INSPECT SECONDARY COIL RESISTANCE

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

Secondary coil resistance (Cold):

9 ~ 15 kΩ at –10 ~ +40°C (14 ~ 104°F)

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



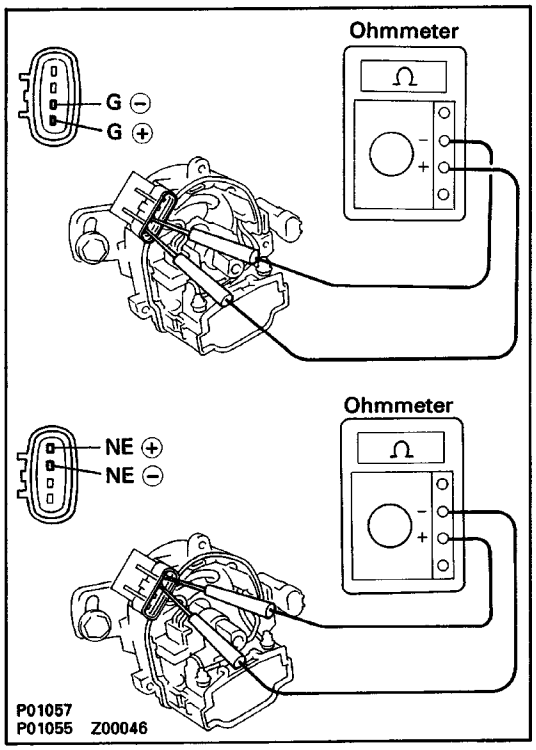
Distributor

7. INSPECT AIR GAP

Using a thickness gauge, measure the air gap between the signal rotor and pickup coil projection.

Air gap: 0.2 – 0.4 mm (0.008 – 0.016 in.)

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



8. INSPECT SIGNAL GENERATOR (PICKUP COIL) RESISTANCE

Using an ohmmeter, measure the resistance between the terminals (G (+) and G (–) , NE (+) and NE (–)).

Pickup coil resistance (Cold):

G (+) and G (–)

185 ~ 265Ω at –10 ~ +40˚C (14 ~ 104˚F)

NE (+) and NE (–)

370 ~ 530 Ω at –10 ~ +40˚C (14 ~ 104˚F)

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

9. REINSTALL IGNITION COIL DUST COVER

10. REINSTALL ROTOR

11. REINSTALL DISTRIBUTOR CAP

12. RECONNECT DISTRIBUTOR CONNECTORS

INSPECTION OF IGNITER

(See Spark Test procedure on page IG–15)