ON–VEHICLE INSPECTION

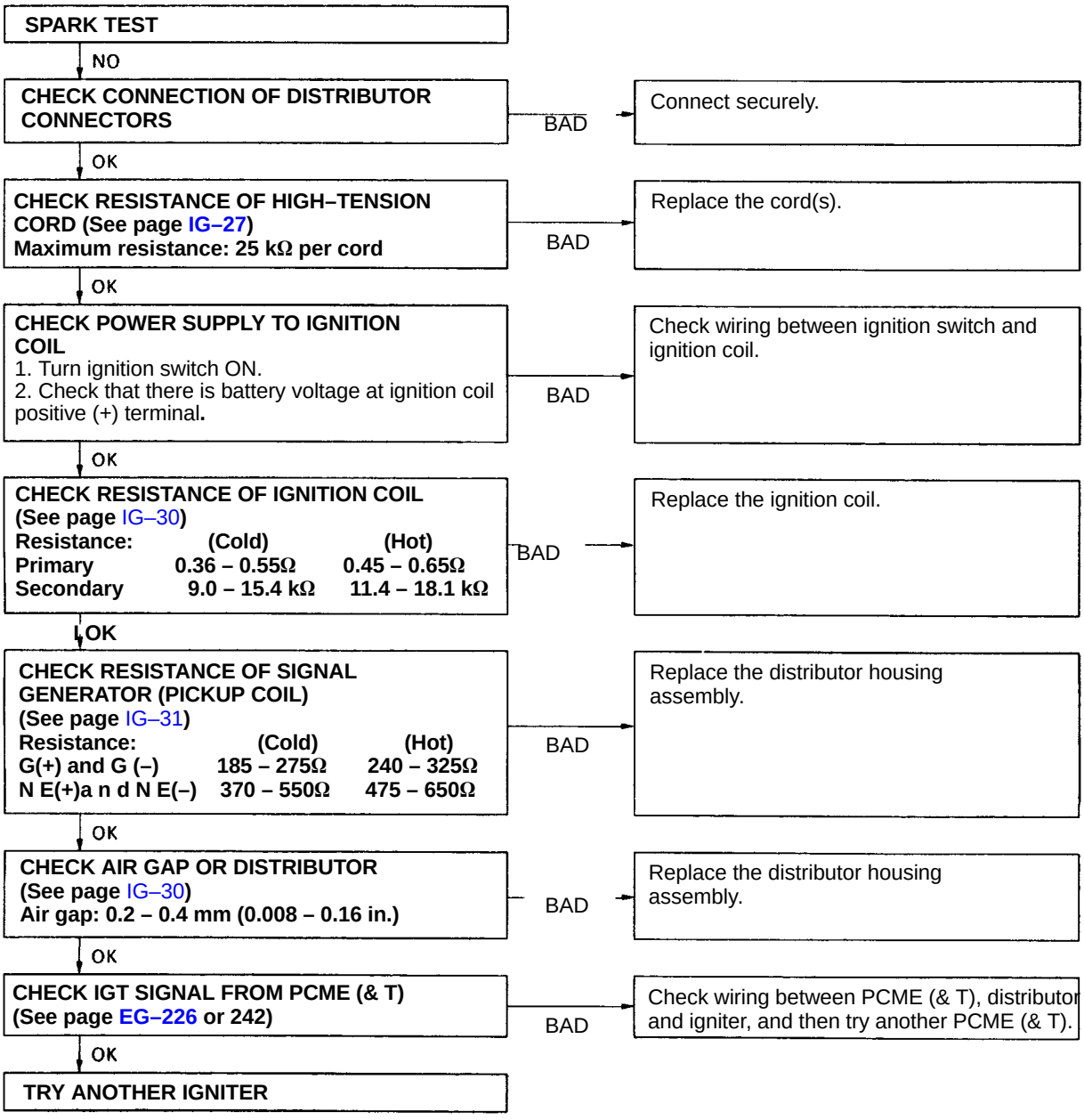
IG038–01

SPARK TEST

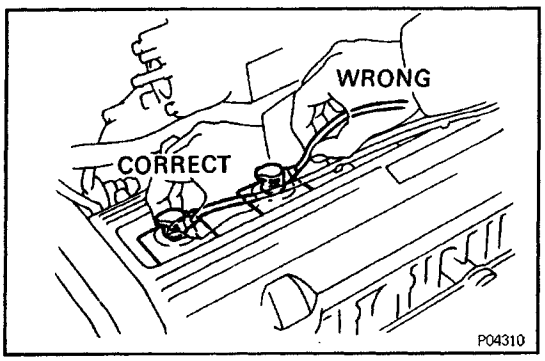
CHECK THAT SPARK OCCURS

(a) Disconnect the high–tension cords from the spark plugs.
(b) Remove the spark plugs.
(c) Install the spark plugs to the each high–tension cord.
(d) Ground the spark plug.
(e) Check 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 a time.If the spark does not occur, perform the test as follows:



V01053



HIGH–TENSION CORDS INSPECTION

IG03T–01

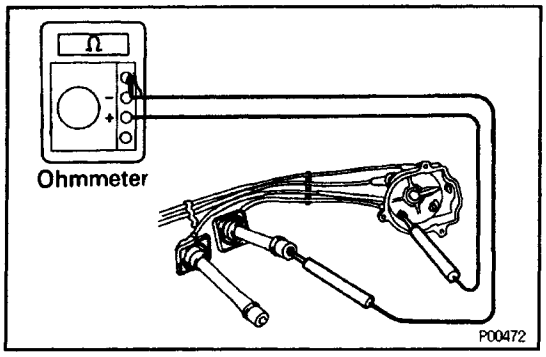
1. DISCONNECT HIGH–TENSION CORDS FROM SPARK PLUGS

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. REMOVE DISTRIBUTOR CAP WITHOUT DISCONNECTING HIGH–TENSION CORDS



3. INSPECT HIGH –TENSION CORD RESISTANCE

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

Maximum resistance:

25 kΩ per cord

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

4. REINSTALL DISTRIBUTOR CAP

5. RECONNECT HIGH–TENSION CORDS TO SPARK PLUGS

IG00X–02

SPARK PLUGS INSPECTION

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

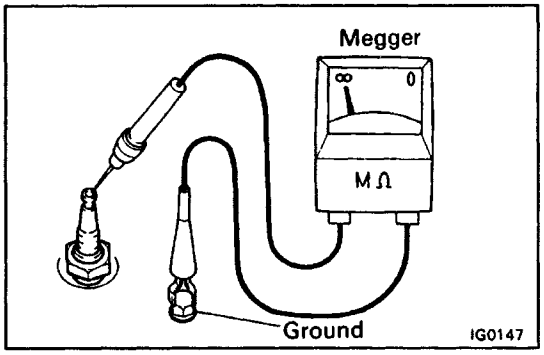
Using a megger (insulation resistance meter), measure the insulation resistance.

Standard correct insulation resistance:

10 MΩ or more

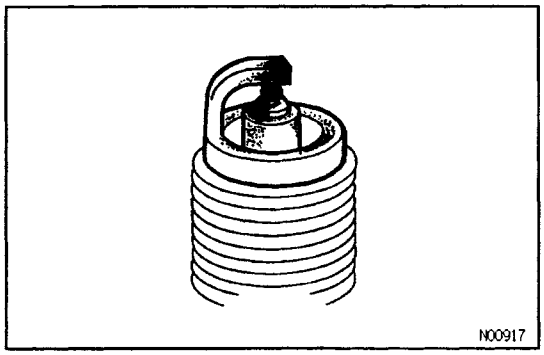
If the resistance is less than specified, proceed to step 3.

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



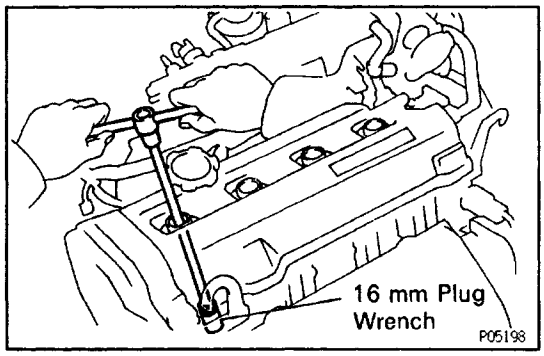
(Simple Method)

(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)



3. REMOVE SPARK PLUGS

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



4. VISUALLY INSPECT SPARK PLUGS

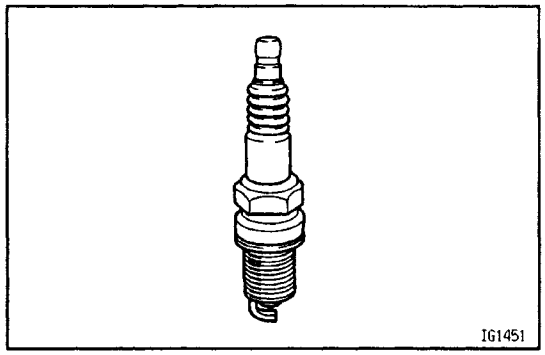
Check the spark plug for thread damage and insulator damage.

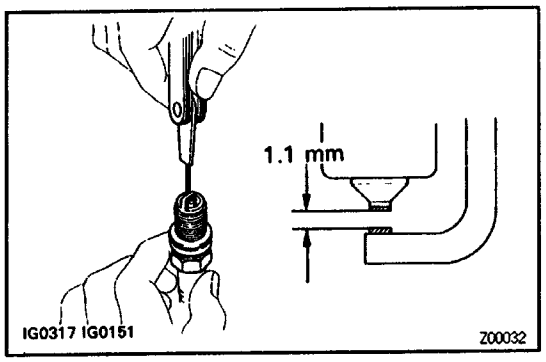
If abnormal, replace the spark plug.

Recommended spark plug:

ND PK20R11

NGK BKR6EP–11





5. INSPECT ELECTRODE GAP

Maximum electrode gap:

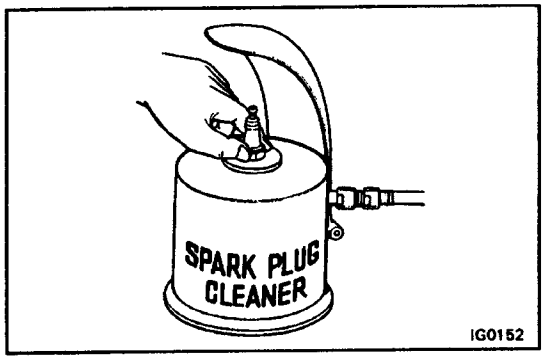
1.3 mm (0.051 in.)

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 bas a 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.

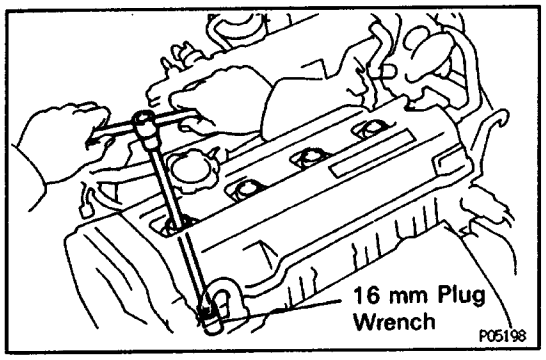
Air pressure:

Below 588 kPa (6 kgf/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.



7. INSTALL SPARK PLUGS

Using a 1 6 mm plug wrench, install the spark plug.

Torque: 18 N–m (180 kgf–cm, 13 ft–tbf)

8. RECONNECT HIGH–TENSION CORDS TO SPARK PLUGS

IG03U–01

DISTRIBUTOR INSPECTION

NOTICE: "Cold" and "Hot' in the following sentences express the temperature of the coils themselves. 'Cold' is from –10˚C (14˚F) to 50˚C (104˚F) and 'Hot" is from 50˚C (104˚F) to 100˚C (212˚F).

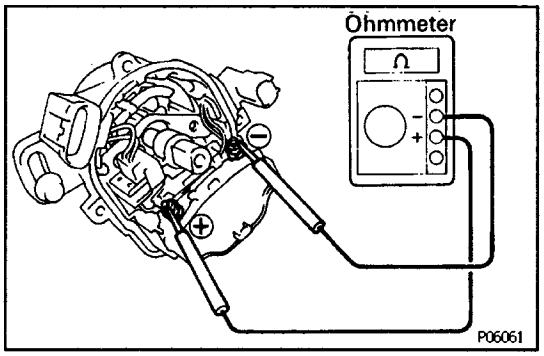
1. DISCONNECT DISTRIBUTOR CONNECTORS

2. REMOVE 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 the positive (+) and
negative (–) terminals.

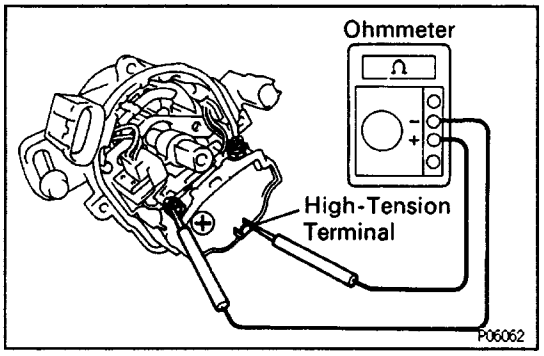
Primary coil resistance (Cold):

0.36–0.55Ω

Primary coil resistance (Hot):

0.45 – 0.65Ω

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):

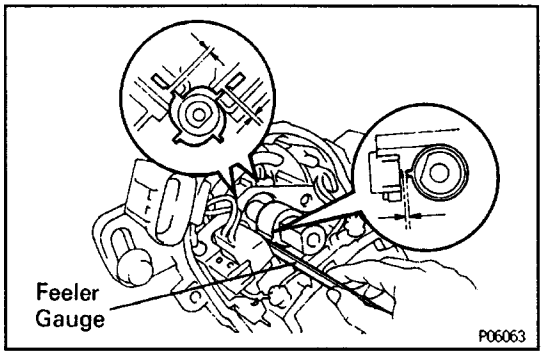
9.0 – 15.4 kΩ

Secondary coil resistance (Hot):

11.4 – 18.1 kΩ

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

Distributor



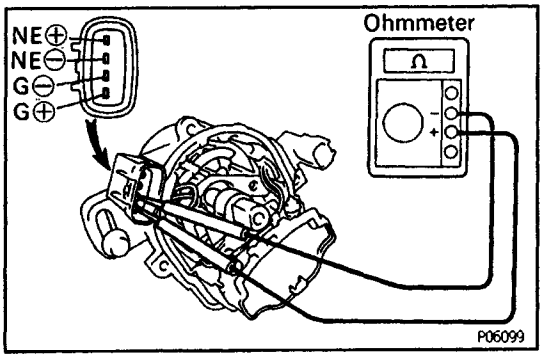
7. INSPECT AIR GAP

Using a feeler 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.

Pickup coil resistance (Cold):

G(+) and G(–)

185–275Ω

NE(+) and NE (–)

370–550Ω

Pickup coil resistance (Hot):

G(+) and G(–)

240–325Ω

NE(+) and G(–)

475–650Ω

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

IG00Z–02

IGNITER INSPECTION

(See procedure Spark Plug)