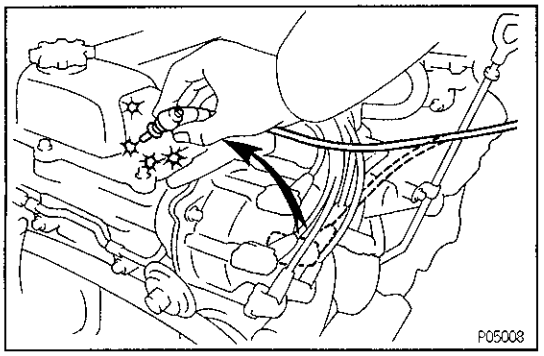


ON–VEHICLE INSPECTION

IG00V-02

SPARK TEST

CHECK THAT SPARK OCCURS

(a) Disconnect the high–tension cords (from the ignition coil) from the distributor cap.

(b) Hold the end approx. 12.5 mm (0.50 in.) from the body ground.

(c) Check if spark occurs while engine is being cranked. If the spark does not occur, perform the test as follows:

IG

SPARK TEST

↓ NO

CHECK CONNECTION OF DISTRIBUTOR CONNECTOR → BAD → Connect securely.

↓ OK

CHECK RESISTANCE OF HIGH-TENSION CORD (See page IG-27)
Maximum resistance: 25 kΩ per cord → BAD → Replace the cord(s).

↓ OK

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

→ BAD → Check wiring between ignition switch and ignition coil.

↓ OK

CHECK RESISTANCE OF IGNITION COIL (See page IG-31)
Resistance (Cold):
Primary 0.36 – 0.55 Ω
Secondary 9.0 – 15.4 kΩ
Resistance (Hot):
Primary 0.45 – 0.65 Ω
Secondary 11.4 – 18.1 kΩ

→ BAD → Replace the ignition coil.

↓ OK

CHECK RESISTANCE OF SIGNAL GENERATOR (PICKUP COIL) (See page IG-32)
Resistance (Cold): 185 – 275 Ω
Resistance (Hot): 240 – 325 Ω

→ BAD → Replace the signal generator (pickup coil).

↓ OK

CHECK AIR GAP OF DISTRIBUTOR (See page IG-32)
Air gap: 0.2 – 0.4 mm (0.008 – 0.016 in.)

→ BAD → Adjust the air gap.

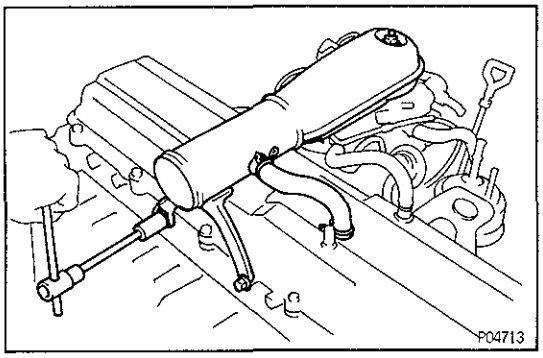
↓ OK

TRY ANOTHER IGNITER

IG

HIGH–TENSION CORDS INSPECTION

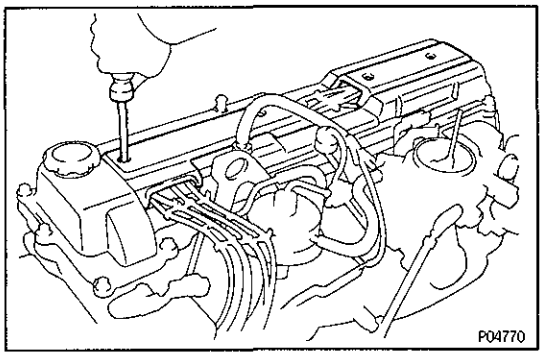
IG035–01



1. REMOVE INTAKE AIR CONNECTOR

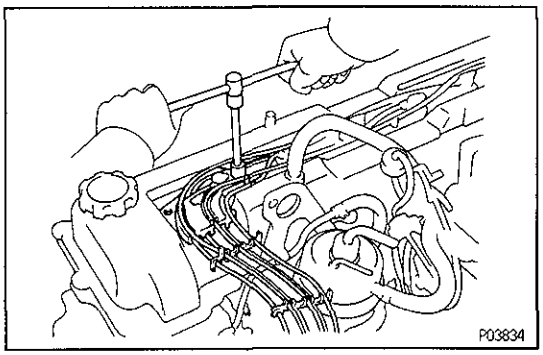
(a) Disconnect the PCV hose.

(b) Remove the two bolts, nut and air connector.



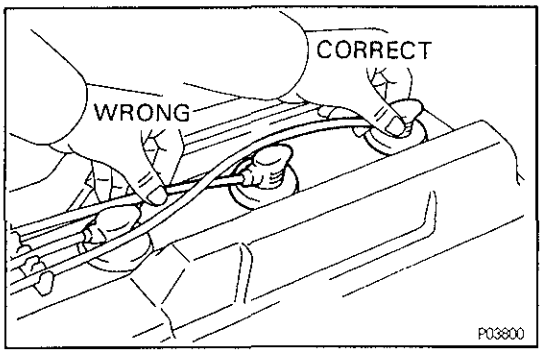
2. REMOVE NO. 2 AND NO. 3 CYLINDER HEAD COVERS

Remove the four bolts and head covers.



3. DISCONNECT HIGH – TENSION CORDS FROM SPARK PLUGS

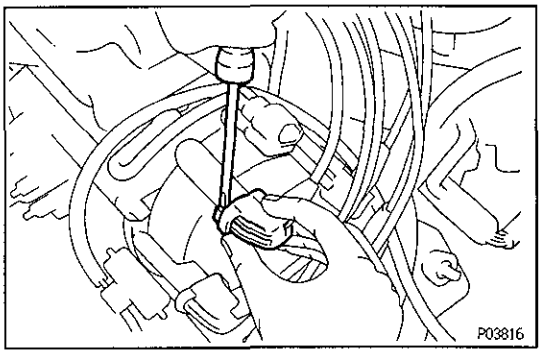
(a) Remove the No.1 cord clamp mounting bolt.



(b) Disconnect the high – tension cords at the rubber boot.

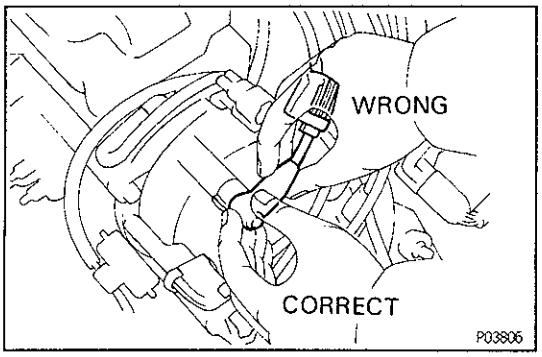
DO NOT pull on the cords.

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



4. DISCONNECT HIGH–TENSION CORDS FROM DISTRIBUTOR CAP AND IGNITION COIL

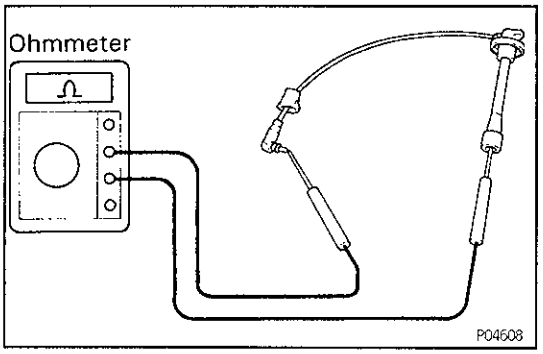
(a) Using a screwdriver, lift up the lock claw and disconnect the holder from the distributor cap (ignition coil).



(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.**
- **Do not wipe any of the oil from the grommet after the high–tension cord is disconnected.**



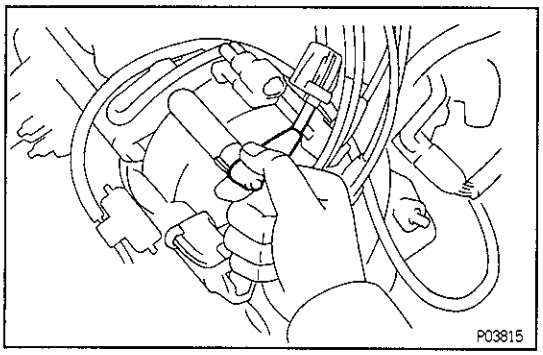
5. INSPECT HIGH–TENSION CORD RESISTANCE

Using an ohmmeter, measure the resistance.

Maximum resistance:

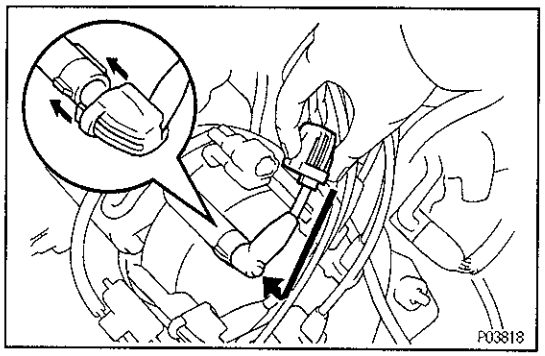
25 kΩ per cord

If the resistance is greater than maximum, check the terminals. If necessary, replace the high – tension cord.

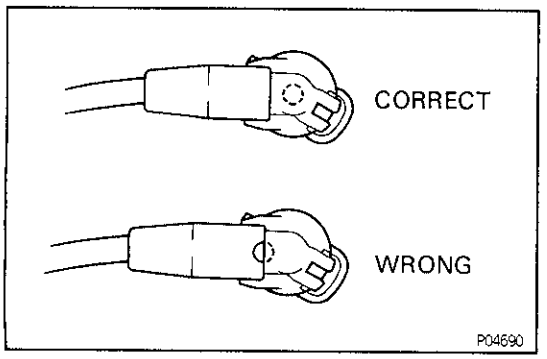


6. RECONNECT HIGH–TENSION CORDS TO DISTRIBUTOR CAP AND IGNITION COIL

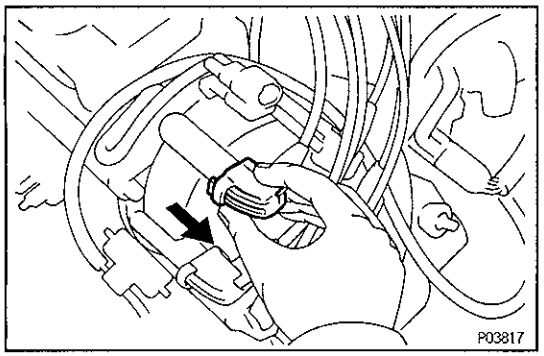
(a) Insert the grommet portion into the terminal hole of the distributor cap (ignition coil).



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



NOTICE: Check that the holder is corretly installed to the grommet and distributor cap as shown in the illustration.

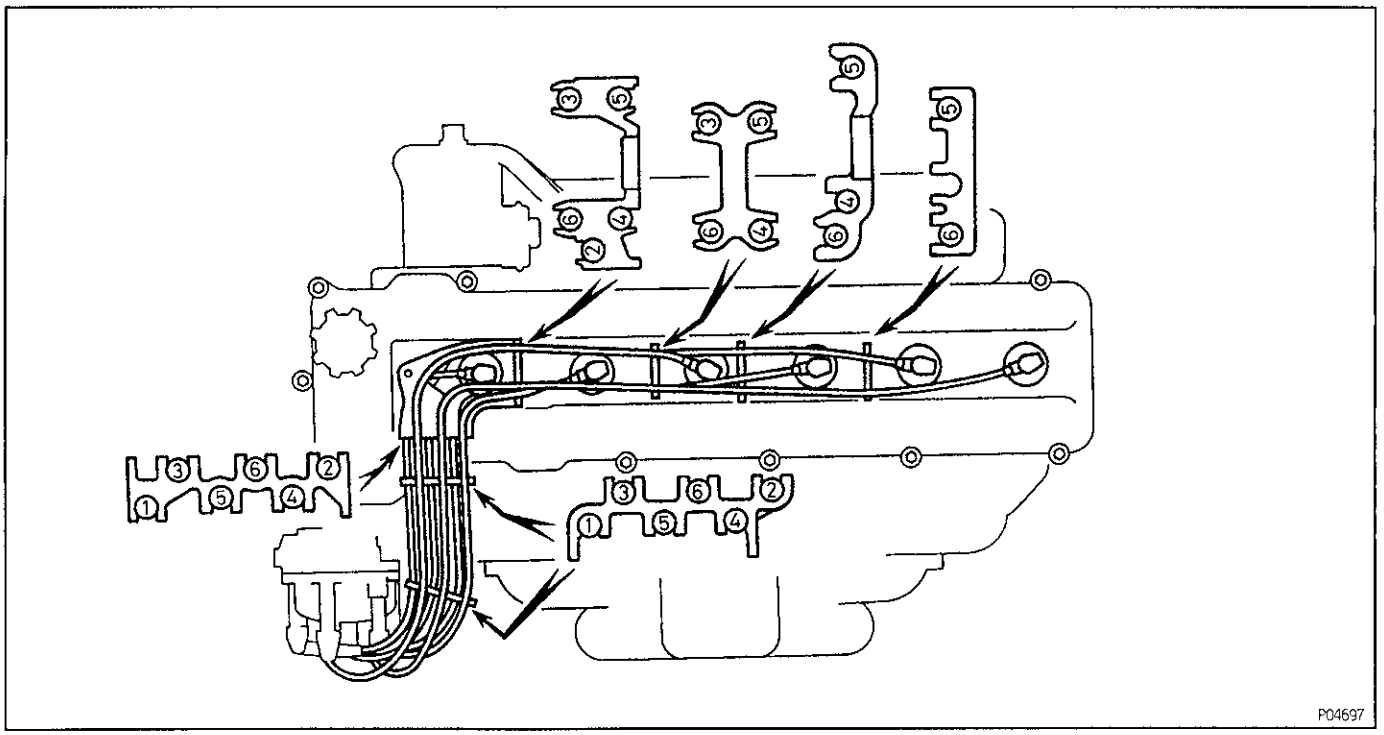


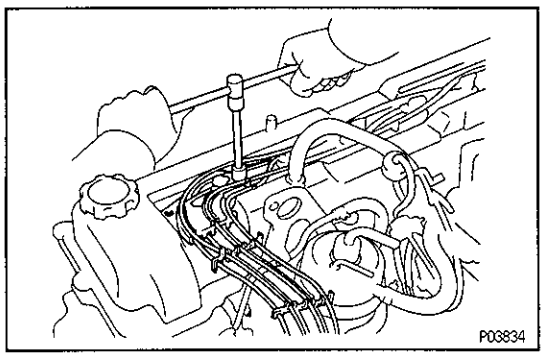
(c) Check that the lock claw of the holder is engaged by lightly pulling the holder.
(d) Insert the grommet and holder together.

IG

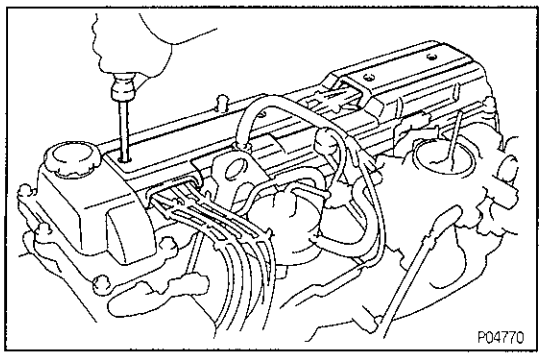
7. RECONNECT HIGH–TENSION CORDS TO SPARK PLUGS

(a) Secure the high–tension cords with the clamps as shown in the illustration.



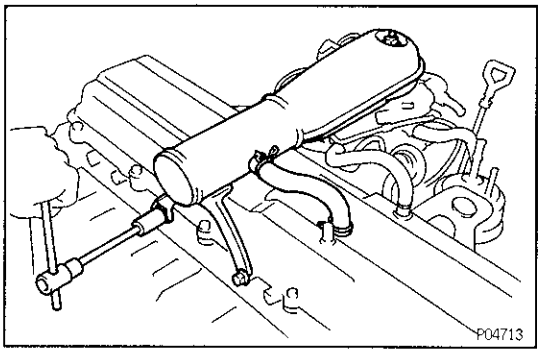


(b) Install the No.1 cord clamp with the bolt.



8. INSTALL NO. 2 AND NO. 3 CYLINDER HEAD COVERS

Install the head covers with the four bolts.



9. INSTALL INTAKE AIR CONNECTOR

(a) Install the air connector with the two bolts and nut.

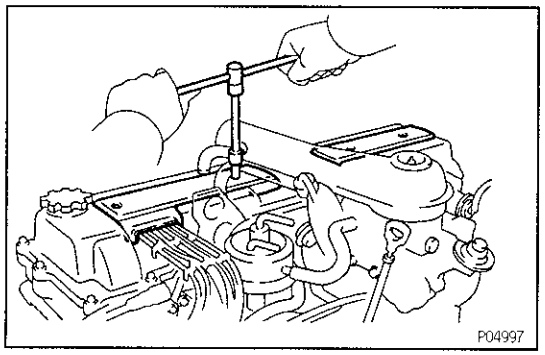
Bolt

Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

Nut

Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)

(b) Connect the PCV hose.

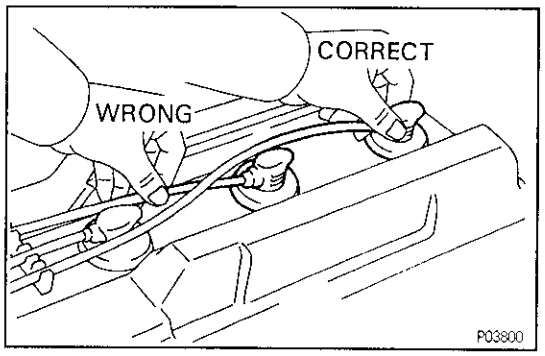


SPARK PLUGS INSPECTION

IG03F–01

1. REMOVE NO. 2 AND NO. 3 CYLINDER HEAD COVERS

Remove the four bolts and head covers.

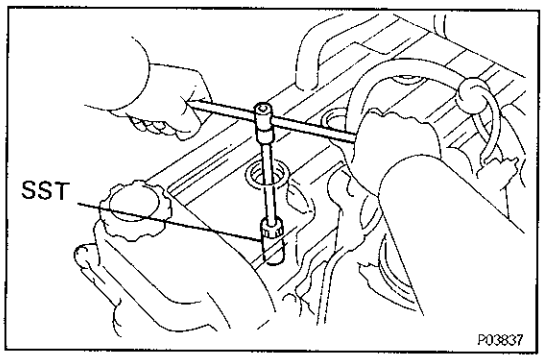


2. DISCONNECT HIGH – TENSION CORDS FROM SPARK PLUGS

Disconnect the high – tension cords at the rubber boot.

DO NOT pull on the cords.

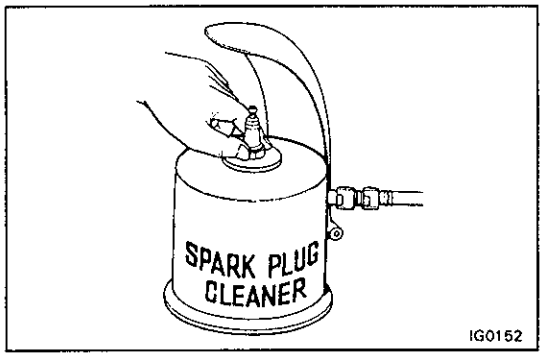
NOTICE: Pulling on or bending the cords may damage the conductor inside.



3. REMOVE SPARK PLUGS

Using SST, remove the spark plug.

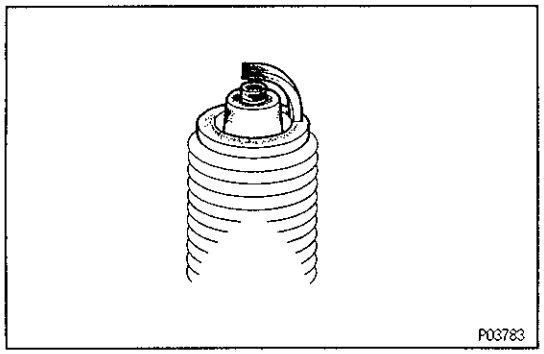
SST 09155–16100



IG

4. CLEAN SPARK PLUGS

Using a spark plug cleaner or wire brush, clean the spark plug.



5. VISUALLY INSPECT SPARK PLUGS

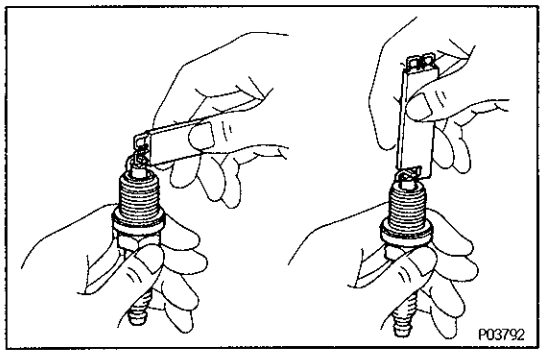
Check the spark plug for electrode wear, threads damage and insulator damage.

If abnormal, replace the plugs.

Recommended spark plugs:

ND K16R–U

NGK BKR5EYA

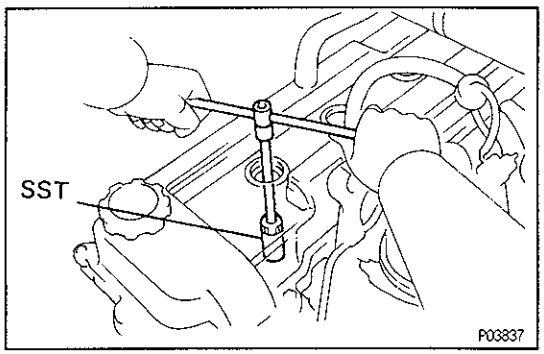


6. ADJUST ELECTRODE GAP

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

Correct electrode gap:

0.8 mm (0.031 in.)



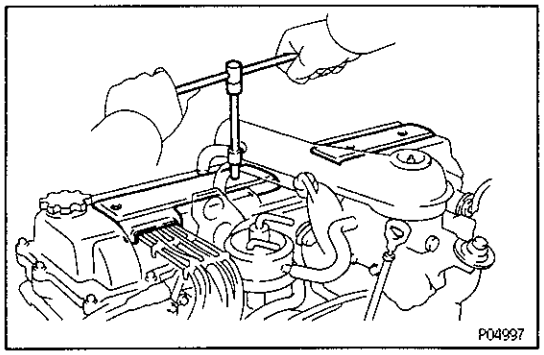
7. INSTALL SPARK PLUGS

Using SST, install the spark plug.

SST 09155–16010

Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

8. RECONNECT HIGH–TENSION CORDS TO SPARK PLUGS



9. INSTALL NO. 2 AND NO. 3 CYLINDER HEAD COVERS

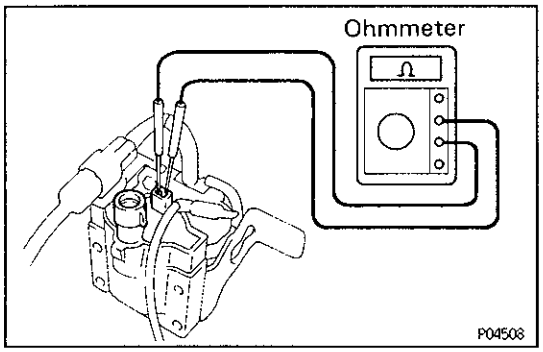
Install the head covers with the four bolts.

IG036–01

IGNITION COIL 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 (122°F) and "Hot" is from 50°C (122°F) to 100°C (212°F).

1. **DISCONNECT IGNITION COIL CONNECTOR**
2. **DISCONNECT HIGH–TENSION CORD**



3. **INSPECT PRIMARY COIL RESISTANCE**

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

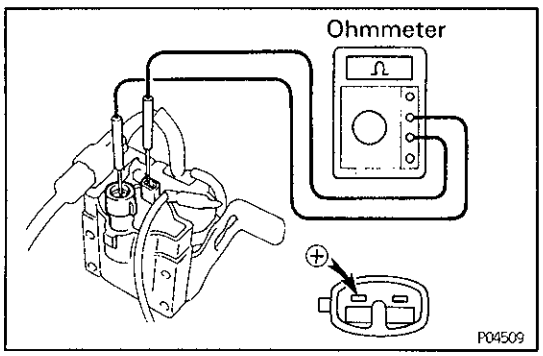
Primary coil resistance (Cold):

0.36 – 0.55 Ω

Primary coil resistance (Hot):

0.45 – 0.65 Ω

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 kΩ

Secondary coil resistance (Hot):

11.4 – 18.1 kΩ

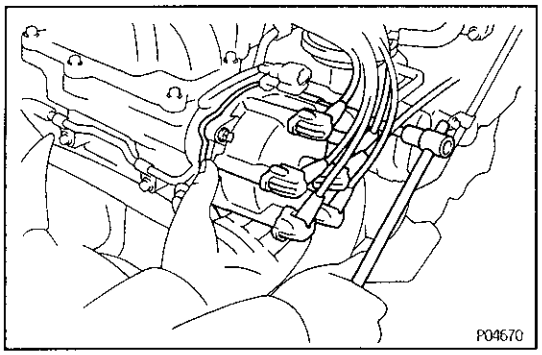
If the resistance is not as specified, replace the ignition coil.

5. **RECONNECT HIGH–TENSION CORD**
6. **RECONNECT IGNITION COIL CONNECTOR**

IG037–01

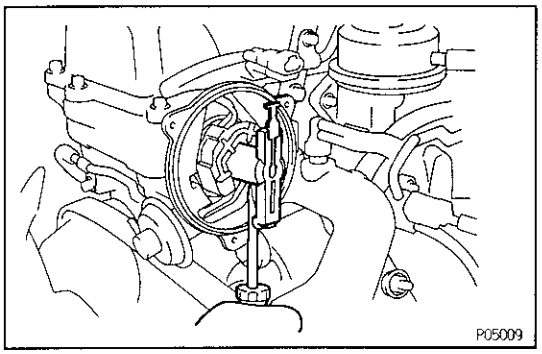
DISTRIBUTOR INSPECTION

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 (122°F) and "Hot" is from 50°C (122°F) to 100°C (212°F).



1. DISCONNECT DISTRIBUTOR CONNECTOR

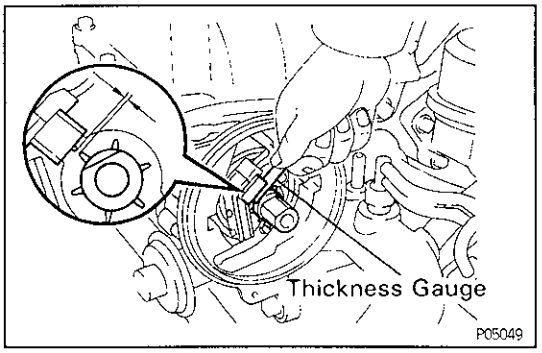
2. REMOVE DISTRIBUTOR CAP WITHOUT DISCONNECTING HIGH–TENSION CORDS



3. REMOVE ROTOR

Remove the screw and rotor.

4. REMOVE DUST PROOF COVER



5. INSPECT AIR GAP

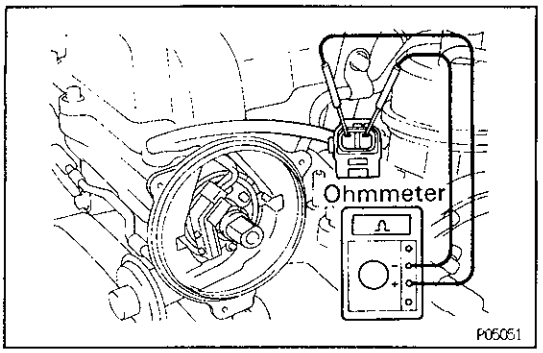
Using a thickness gauge, measure the gap between the signal rotor and the pickup coil projection.

Air gap:

0.2 – 0.4 mm (0.008 – 0.016 in.)

If the gap is not within specification, adjust the gap.

- Loosen the two screws and move the signal generator (pickup coil) until the gap is correct. Tighten the screws and recheck the gap.



6. INSPECT SIGNAL GENERATOR (PICKUP COIL) RESISTANCE

Using an ohmmeter, check that the resistance of the pickup coil.

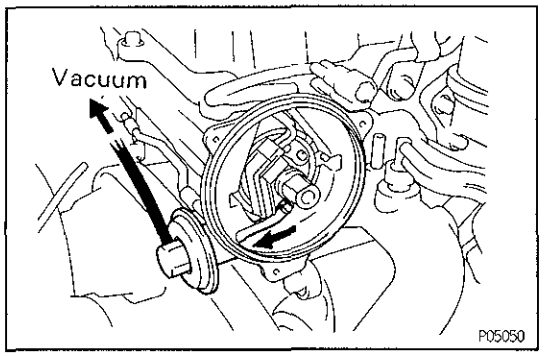
Pickup coil resistance (Cold):

185 – 275 Ω

Pickup coil resistance (Hot):

240 – 325 Ω

If the resistance is not as specified, replace the signal generator (pickup coil).

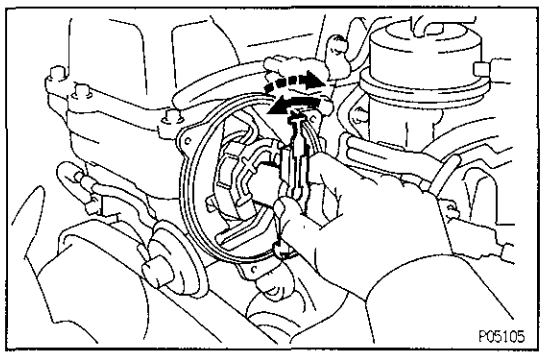


7. INSPECT VACUUM ADVANCE

(a) Disconnect the vacuum hose and connect a vacuum pump to the vacuum advancer.

(b) Apply vacuum and check that the vacuum advancer moves.

If the vacuum advancer does not work, repair or replace if necessary.

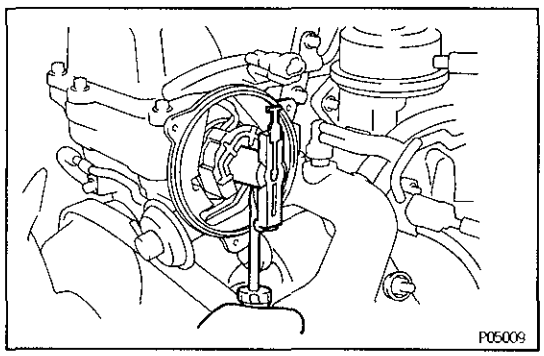


8. INSPECT GOVERNOR ADVANCE

(a) Turn the rotor shaft counterclockwise, release it and check that the rotor returns quickly clockwise.

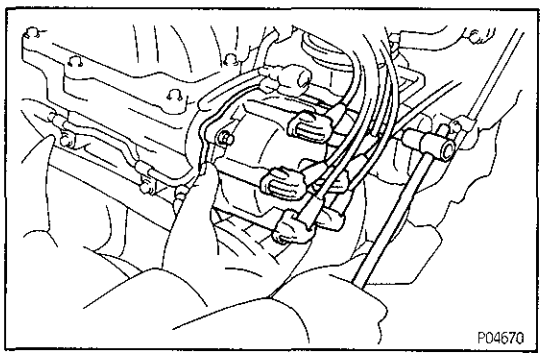
(b) Check that the rotor is not excessively loose.

9. INSTALL DUST PROOF COVER



10. REINSTALL ROTOR

Install the rotor with the screw.



11. REINSTALL DISTRIBUTOR CAP

12. RECONNECT DISTRIBUTOR CONNECTOR

IGNITER INSPECTION

IG00Z-01

(See Spark Test procedure on page IG–25)