

IGNITION

IG(SOHC)

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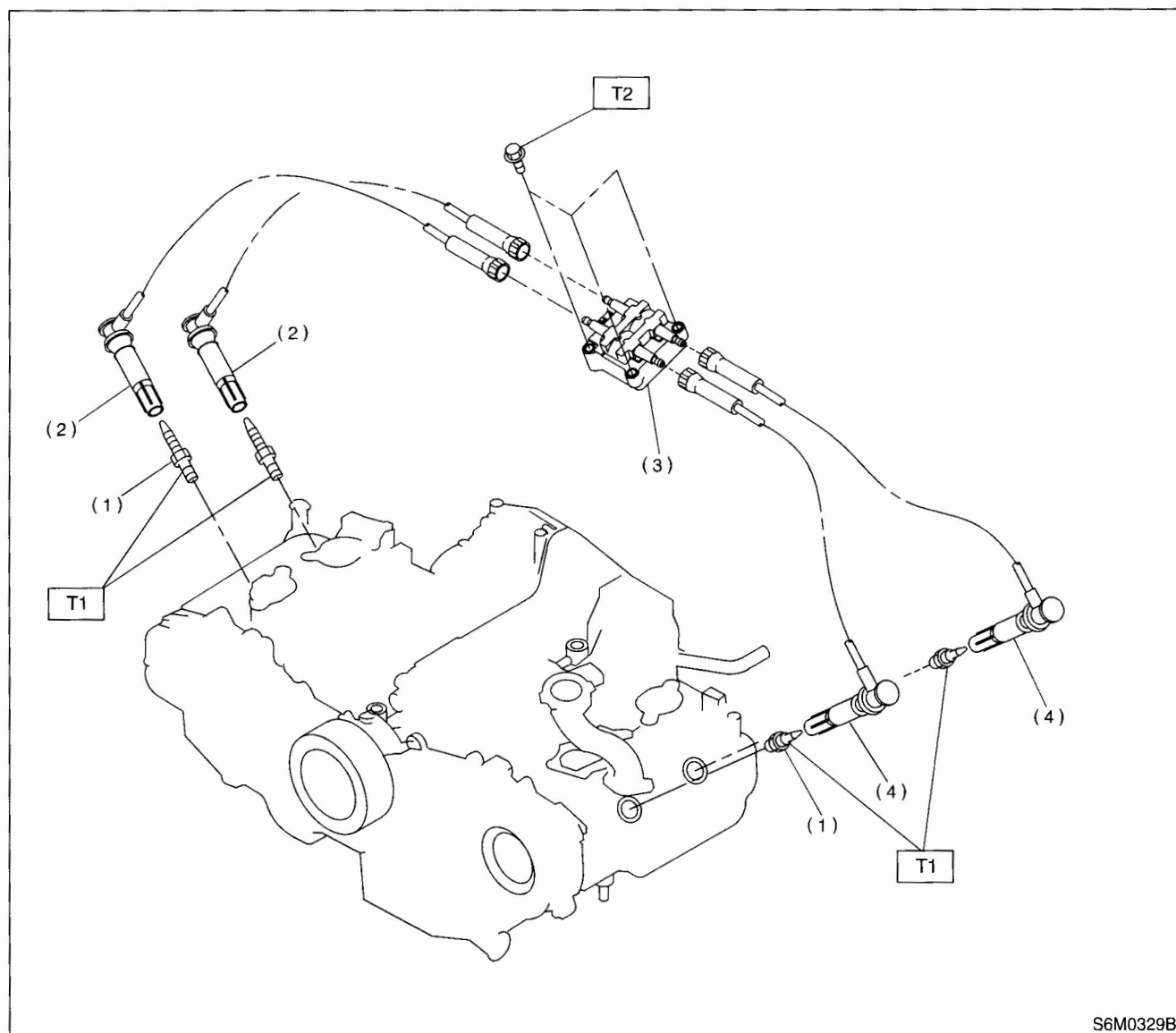
GENERAL DESCRIPTION

IGNITION

1. General Description

A: SPECIFICATIONS

Item		Designation	
Ignition coil and ignitor assembly	Model	FH0137	
	Manufacturer	DIAMOND	
	Primary coil resistance	0.73 $\Omega \pm 10\%$	
	Secondary coil resistance	12.8 k $\Omega \pm 15\%$	
	Insulation resistance between primary terminal and case	More than 10 M Ω	
Spark plug	Type and manufacturer	RC10YC4: CHAMPION	
		Alternate	BKR5E-11: NGK BKR6E-11: NGK
	Thread size	mm	14, P = 1.25
	Spark gap	mm (in)	1.0 — 1.1 (0.039 — 0.043)

B: COMPONENT

S6M0329B

- (1) Spark plug
 (2) Spark plug cord (#1, #3)
 (3) Ignition coil and ignitor ASSY
 (4) Spark plug cord (#2, #4)

Tightening torque: N·m (kgf-m, ft-lb)**T1: 21 (2.1, 15)****T2: 6.4 (0.65, 4.7)****C: CAUTION**

- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.

- Be careful not to burn your hands, because each part on the vehicle is hot after running.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect the negative terminal from battery.

SPARK PLUG

IGNITION

2. Spark Plug

A: REMOVAL

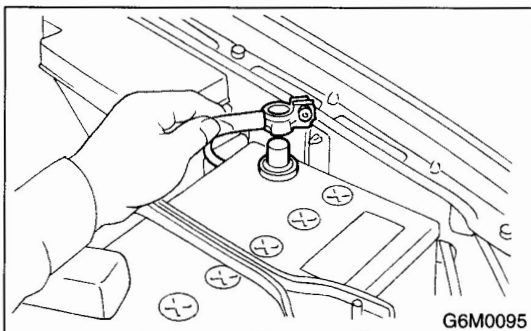
CAUTION:

All spark plugs installed on an engine, must be of the same heat range.

Spark plug
CHAMPION: RC10YC4
NGK: BKR5E-11 (Alternate)
NGK: BKR6E-11 (Alternate)

1. RH SIDE

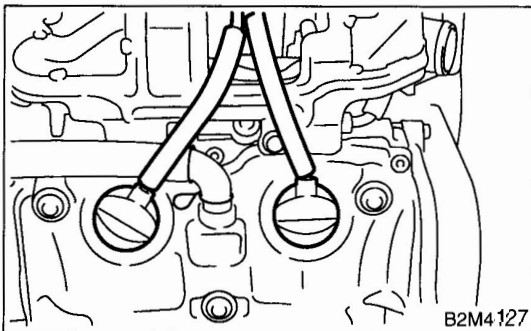
- 1) Disconnect the ground terminal from battery.



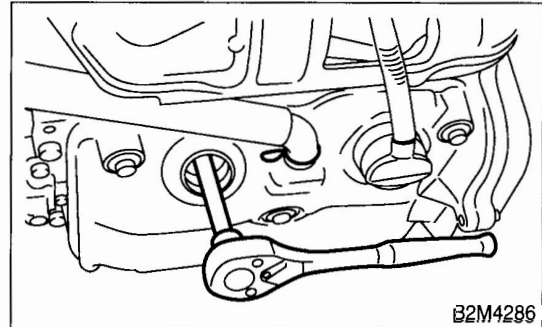
- 2) Remove the air intake duct. <Ref. to IN(SOHC)-8, REMOVAL, Resonator Chamber.>

(1) Remove the resonator chamber. <Ref. to IN(SOHC)-8, REMOVAL, Resonator Chamber.>

- 3) Remove the spark plug cords by pulling boot, not cord itself.

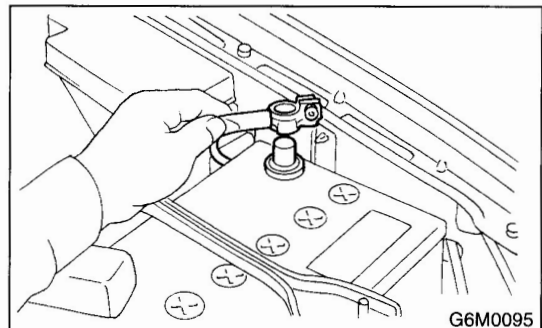


- 4) Remove the spark plugs with the spark plug sockets.

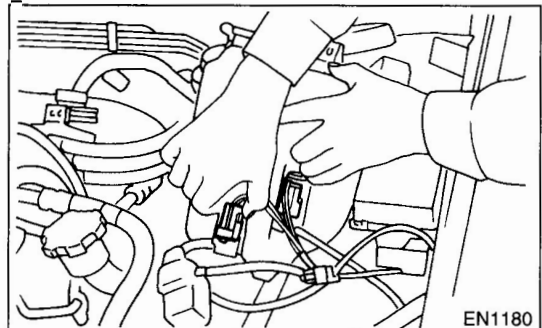


2. LH SIDE

- 1) Disconnect the ground terminal from battery.

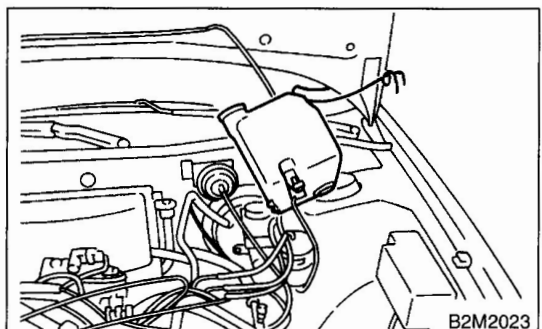


- 2) Disconnect the washer motor connector.



- 3) Disconnect the rear window glass washer hose from washer motor, then plug connection with a suitable cap.

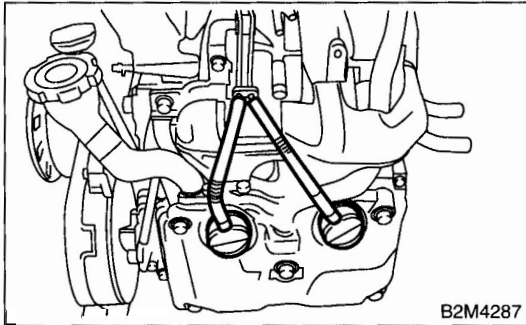
- 4) Remove the two bolts which hold the washer tank, then take the tank away from the working area.



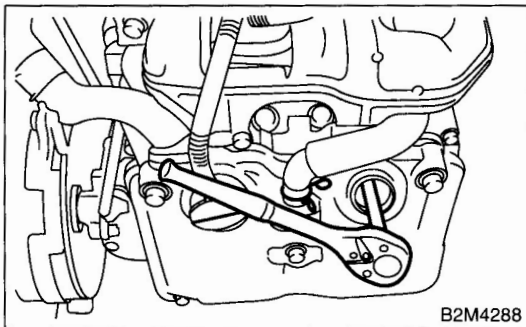
SPARK PLUG

IGNITION

5) Remove the spark plug cords by pulling boot, not cord itself.



6) Remove the spark plugs with the spark plug sockets.



B: INSTALLATION

1. RH SIDE

1) Install in the reverse order of removal.

Tightening torque (Spark plug):
21 N·m (2.1 kgf-m, 15 ft-lb)

CAUTION:

The above torque should be only applied to new spark plugs without oil on their threads. In case their threads are lubricated, the torque should be reduced by approximately 1/3 of the specified torque in order to avoid over-stressing.

2. LH SIDE

1) Install in the reverse order of removal.

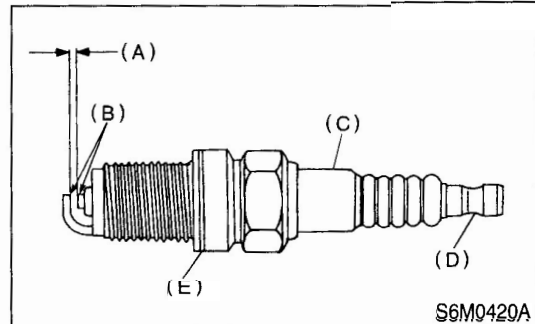
Tightening torque (Spark plug):
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CAUTION:

The above torque should be only applied to new spark plugs without oil on their threads. In case their threads are lubricated, the torque should be reduced by approximately 1/3 of the specified torque in order to avoid over-stressing.

C: INSPECTION

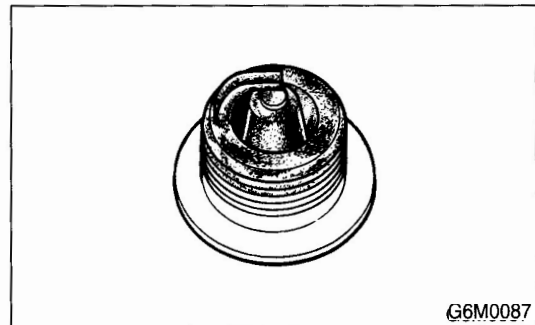
Check the electrodes and inner and outer porcelain of plugs, noting the type of deposits and the degree of electrode erosion.



- (A) Electrode gap
- (B) Carbon accumulation or wear
- (C) Cracks
- (D) Damage
- (E) Damaged gasket

1) Normal:

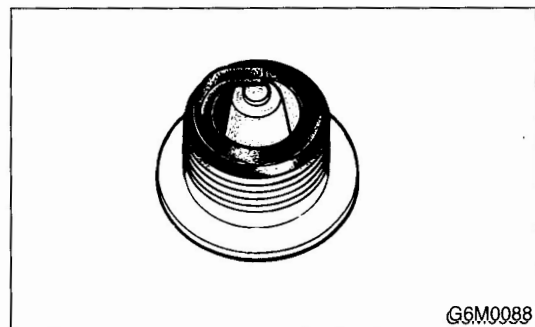
Brown to grayish-tan deposits and slight electrode wear indicate correct spark plug heat range.



2) Carbon fouled:

Dry fluffy carbon deposits on insulator and electrode are mostly caused by slow speed driving in city, weak ignition, too rich fuel mixture, dirty air cleaner, etc.

It is advisable to replace with plugs having hotter heat range.

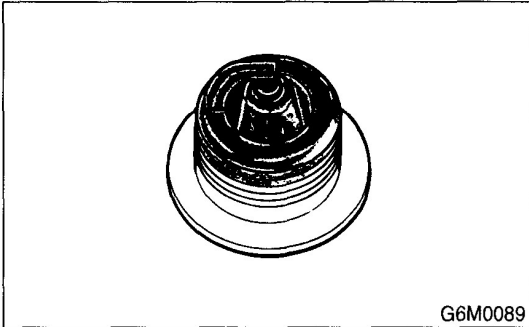


SPARK PLUG

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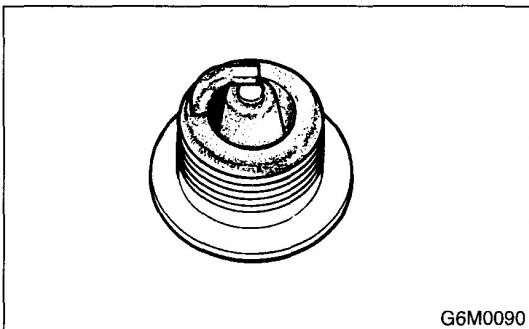
3) Oil fouled:

Wet black deposits show excessive oil entrance into combustion chamber through worn rings and pistons or excessive clearance between valve guides and stems. If the same condition remains after repair, use a hotter plug.



4) Overheating:

White or light gray insulator with black or gray brown spots and bluish burnt electrodes indicate engine overheating. Moreover, the appearance results from incorrect ignition timing, loose spark plugs, wrong selection of fuel, hotter range plug, etc. It is advisable to replace with plugs having colder heat range.



D: CLEANING

Clean the spark plugs in a sand blast type cleaner. Avoid excessive blasting. Clean and remove the carbon or oxide deposits, but do not wear away porcelain.

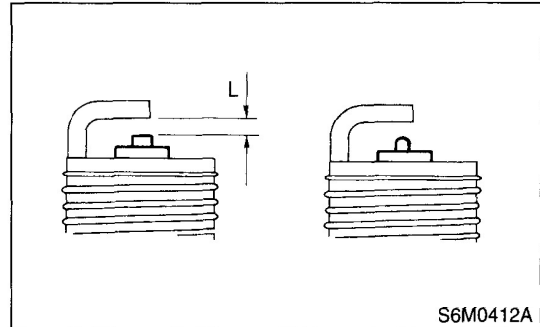
If deposits are too stubborn, replace the plugs.

E: ADJUSTMENT

Correct it if the spark plug gap is measured with a gap gauge, and it is necessary.

Spark plug gap: L

1.0 — 1.1 mm (0.039 — 0.043 in)



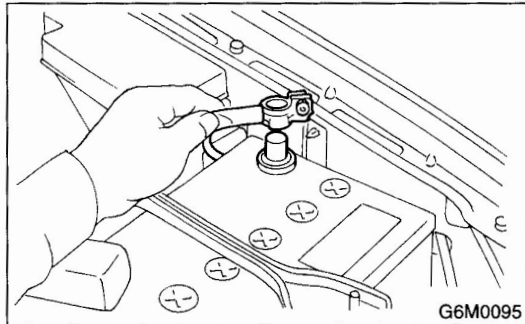
NOTE:

Replace with a new spark plug if this area is worn to "ball" shape.

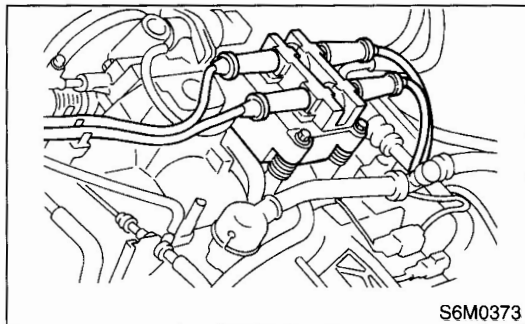
3. Ignition Coil and Ignitor Assembly

A: REMOVAL

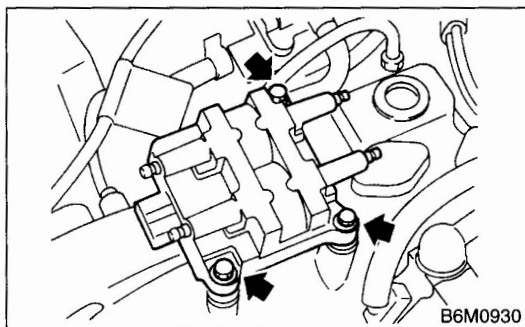
- 1) Disconnect the ground terminal from battery.



- 2) Disconnect the spark plug cords from ignition coil and ignitor assembly.



- 3) Disconnect the connector from ignition coil and ignitor assembly.
- 4) Remove the ignition coil and ignitor assembly.



B: INSTALLATION

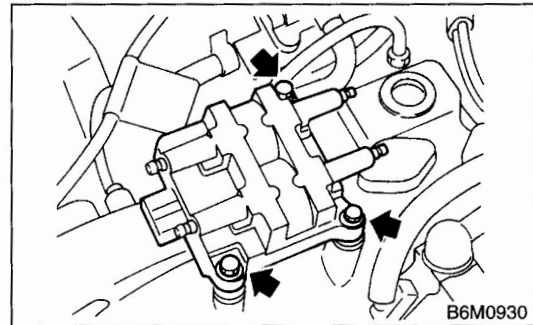
- 1) Install in the reverse order of removal.

Tightening torque:

6.4 N·m (0.65 kgf-m, 4.7 ft-lb)

CAUTION:

Be sure to connect wires to their proper positions. Failure to do so will damage the unit.



IGNITION COIL AND IGNITOR ASSEMBLY

IGNITION

C: INSPECTION

Using an accurate tester, inspect the following items, and replace if defective.

- 1) Primary resistance
- 2) Secondary coil resistance

CAUTION:

If the resistance is extremely low, this indicates the presence of a short-circuit.

Specified resistance:

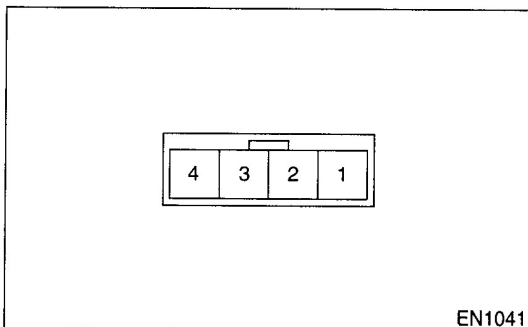
[Primary side]

Between terminal No. 1 and No. 2

$0.73 \Omega \pm 10\%$

Between terminal No. 2 and No. 4

$0.73 \Omega \pm 10\%$



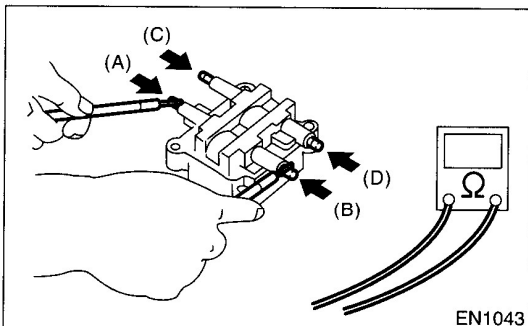
[Secondary side]

Between (A) and (B)

$12.8 \text{ k}\Omega \pm 15\%$

Between (C) and (D)

$12.8 \text{ k}\Omega \pm 15\%$



- 3) Insulation between primary terminal and case:
 $10 \text{ M}\Omega$ or more.

4. Spark Plug Cord

A: INSPECTION

Check for:

- 1) Damage to cords, deformation, burning or rust formation of terminals
- 2) Resistance values of cords

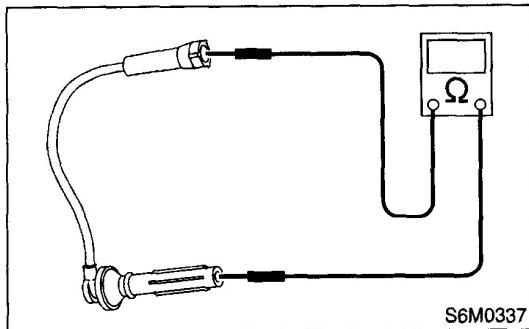
Resistance value:

#1 cord: 5.6 — 10.6 k Ω

#2 cord: 7.3 — 13.7 k Ω

#3 cord: 5.9 — 11.1 k Ω

#4 cord: 7.3 — 13.7 k Ω



SPARK PLUG CORD

IGNITION

IG(SOHC)-10

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