IGNITION

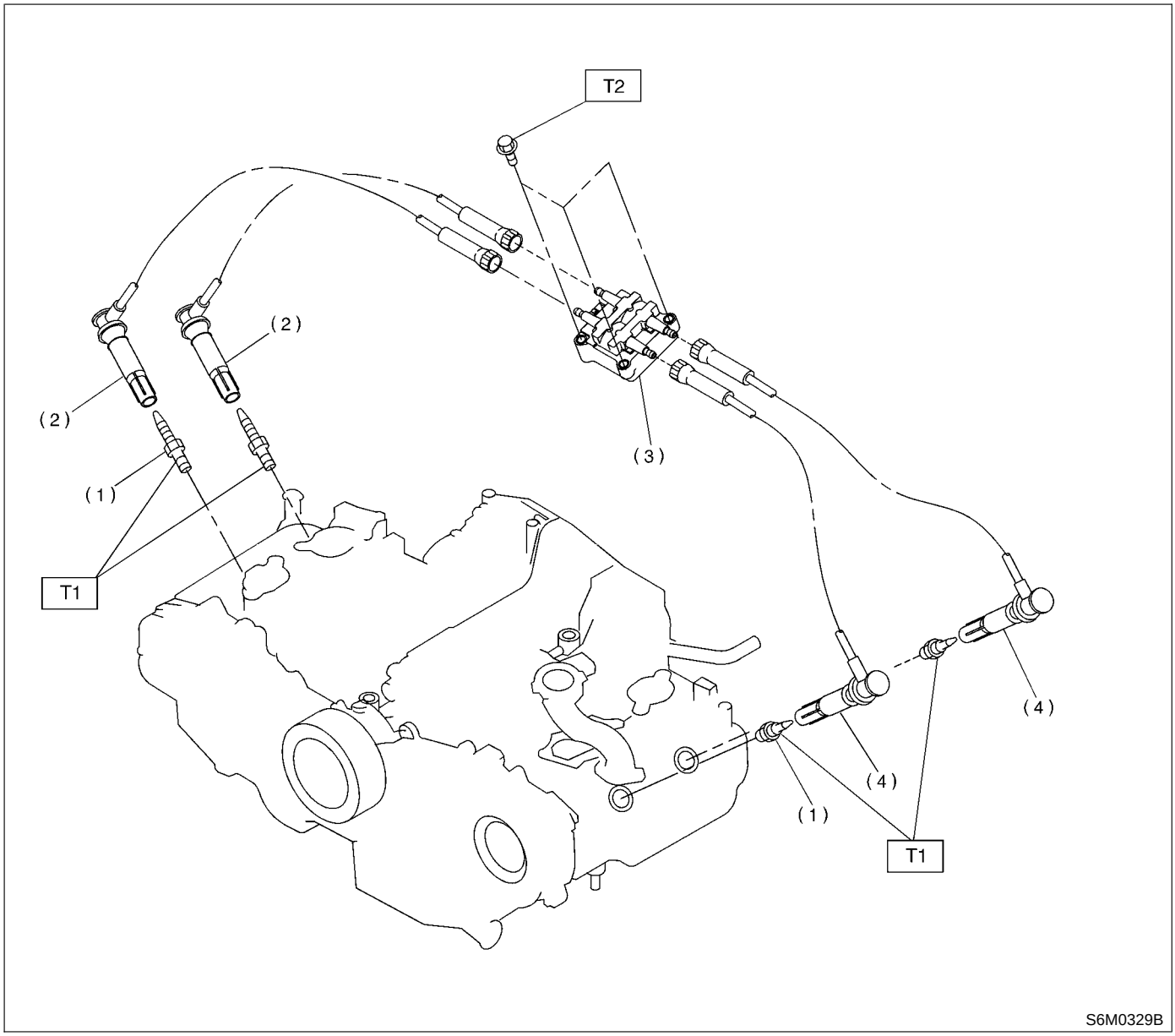
IG(SOHC)

1. General Description S151001

A: SPECIFICATIONS S151001E49

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

B: COMPONENT S151001A05



(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 S151001A03

- 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 negative terminal from battery.

2. Spark Plug S151003

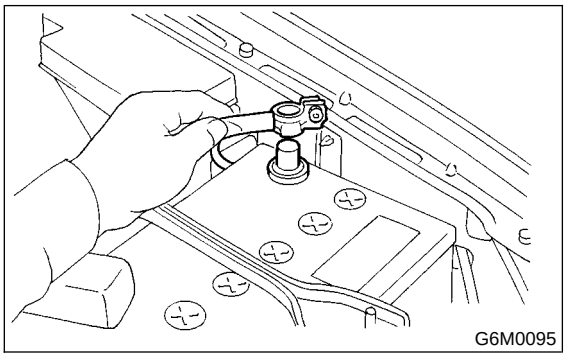
A: REMOVAL S151003A18

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

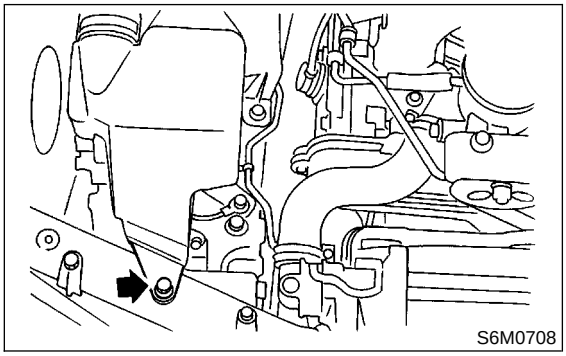
Spark plug:
CHAMPION: RC10YC4
(Alternate)
NGK: BKR5E-11

1. RH SIDE S151003A1805

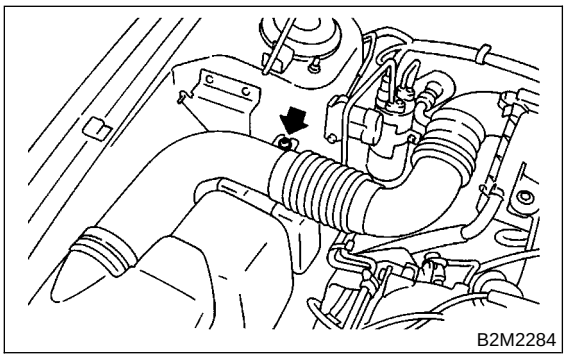
1) Disconnect battery ground cable.


G6M0095

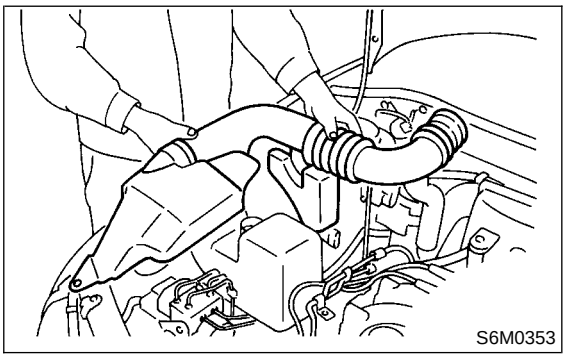
2) Remove air intake duct and resonator chamber.
(1) Remove bolt which installs air intake duct on the front side of body.


S6M0708

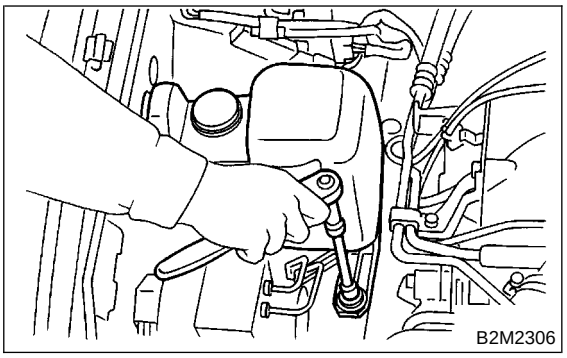
(2) Remove bolt which installs air intake duct on body.


B2M2284

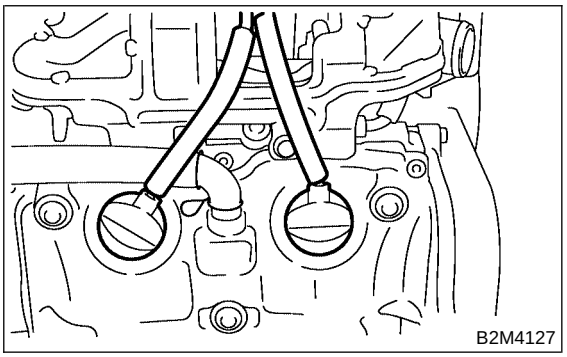
(3) Remove air intake duct as a unit.


S6M0353

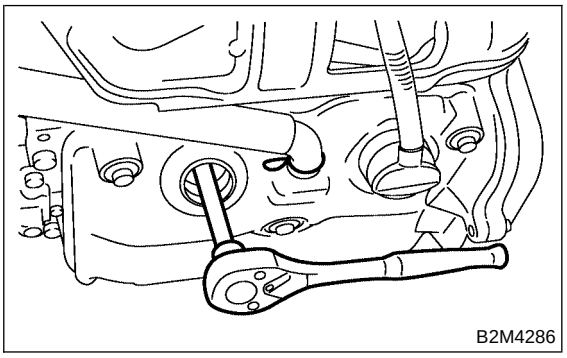
(4) Remove resonator chamber.


B2M2306

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

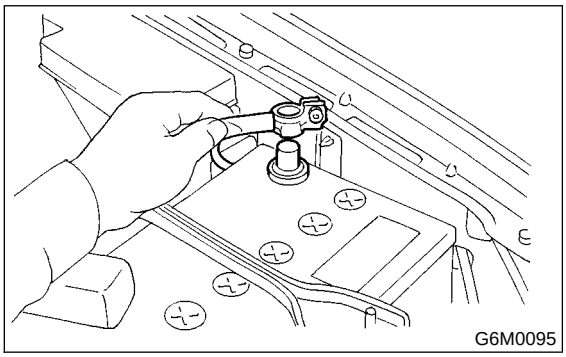

B2M4127

4) Remove spark plugs with the spark plug socket.

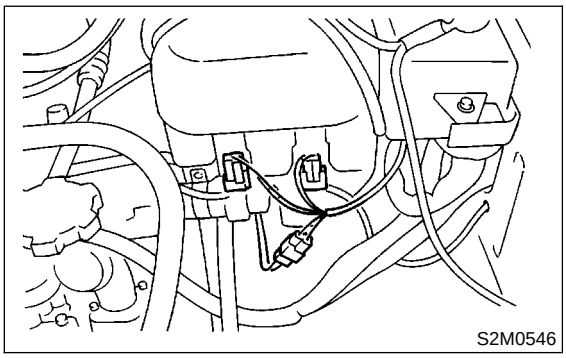

B2M4286

2. LH SIDE S151003A1806

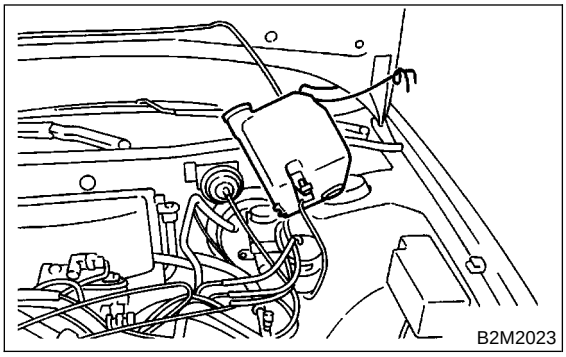
1) Disconnect battery ground cable.


G6M0095

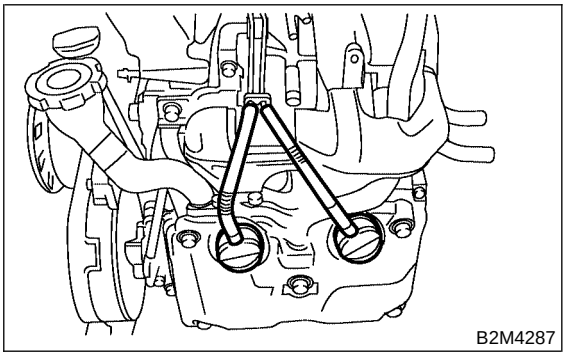
2) Disconnect washer motor connector.


S2M0546

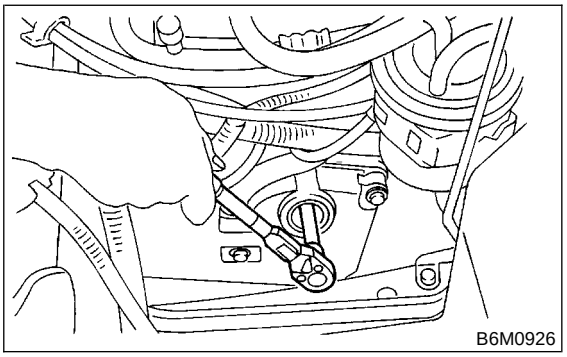
3) Disconnect rear window glass washer hose from washer motor, then plug connection with a suitable cap.
4) Remove the two bolts which hold the washer tank, then take the tank away from the working area.


B2M2023

5) Remove spark plugs cord by pulling boot, not cord itself.


B2M4287

6) Remove spark plug with the spark plugs socket.


B6M0926

B: INSTALLATION S151003A11

1. RH SIDE S151003A1105

Install in the reverse order of removal.

Tightening torque (Spark plug):
20.6 N·m (2.10 kgf-m, 15.2 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.

Tightening torque (Resonator chamber):
32 N·m (3.3 kgf-m, 24 ft-lb)

2. LH SIDE S151003A1106

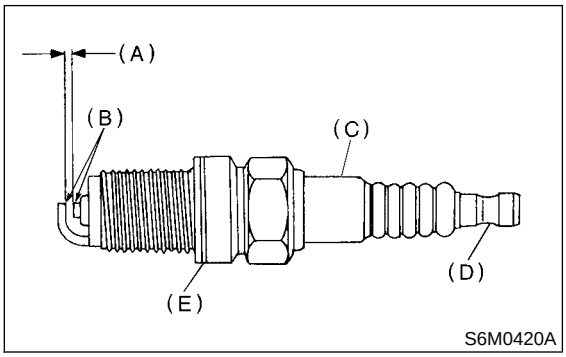
Install in the reverse order of removal.

Tightening torque (Spark plug):
20.6 N·m (2.10 kgf-m, 15.2 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.

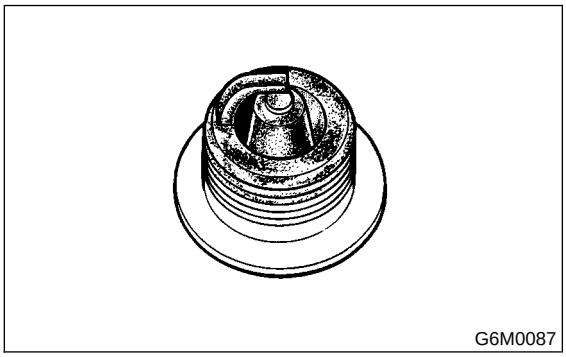
C: INSPECTION S151003A10

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

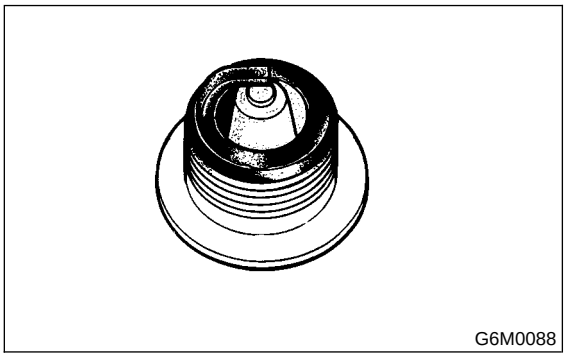


(A) Electrode gap
(B) Carbon accumulation or wear
(C) Cracks
(D) Damage
(E) Damaged gasket

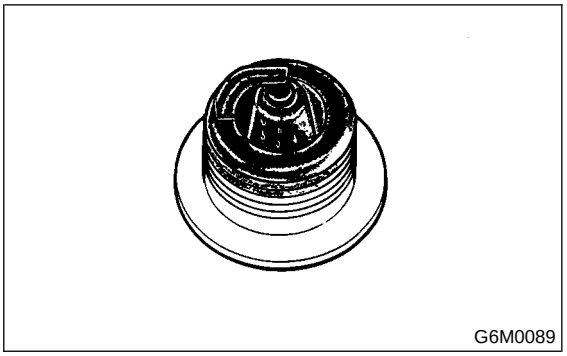
1) Normal
Brown to grayish-tan deposits and slight electrode wear indicate correct spark plug heat range.



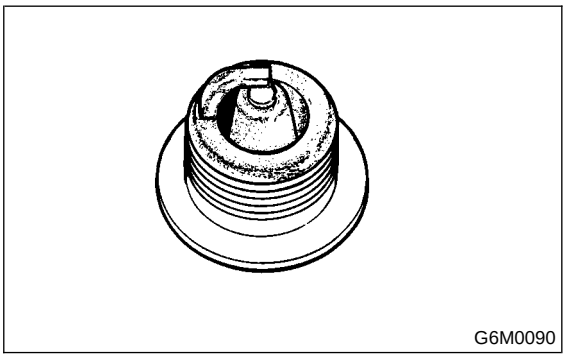
2) Carbon fouled
Dry fluffy carbon deposits on insulator and electrode are mostly caused by slow speed driving in city, weak ignition, too rich fuel mixture, dirty air cleaner, etc.
It is advisable to replace with plugs having hotter heat range.



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 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.



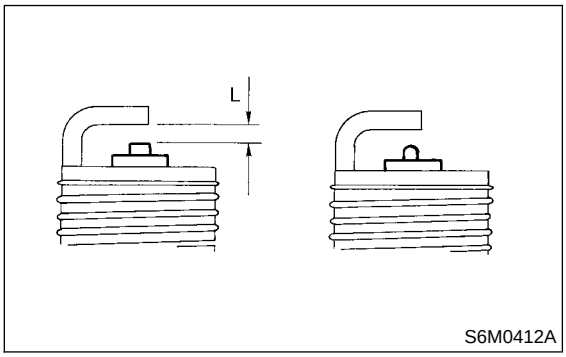
D: CLEANING S151003E56

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

E: ADJUSTMENT S151003A01

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)

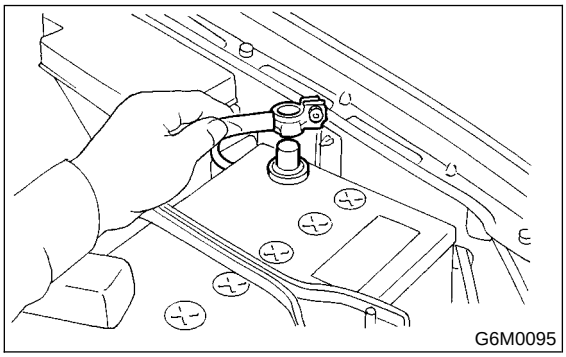


NOTE:
Replace with new spark plug if this area is worn to “ball” shape.

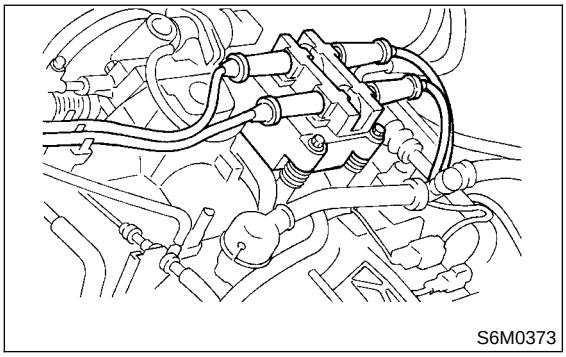
3. Ignition Coil and Ignitor Assembly S151015

A: REMOVAL S151015A18

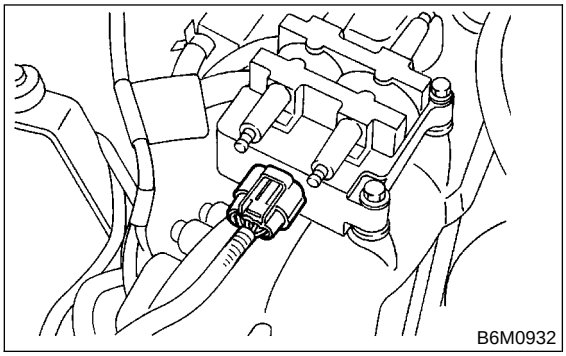
1) Disconnect battery ground cable.


G6M0095

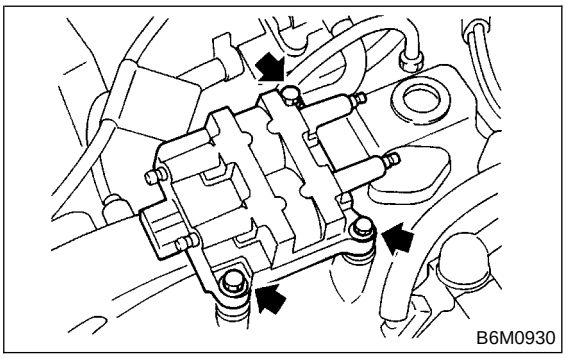
2) Disconnect spark plug cords from ignition coil and ignitor assembly.


S6M0373

3) Disconnect connector from ignition coil and ignitor assembly.


B6M0932

4) Remove ignition coil and ignitor assembly.

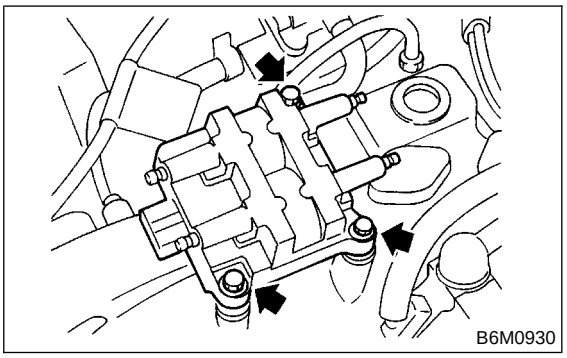

B6M0930

B: INSTALLATION S151015A11

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 unit.


B6M0930

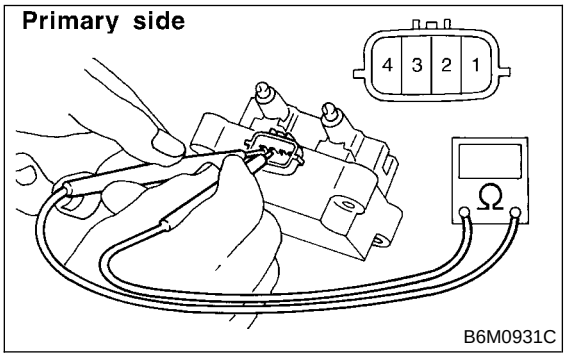
C: INSPECTION S151015A10

Using accurate tester, inspect the following items, and replace if defective.
1) Primary resistance
2) Secondary coil resistance

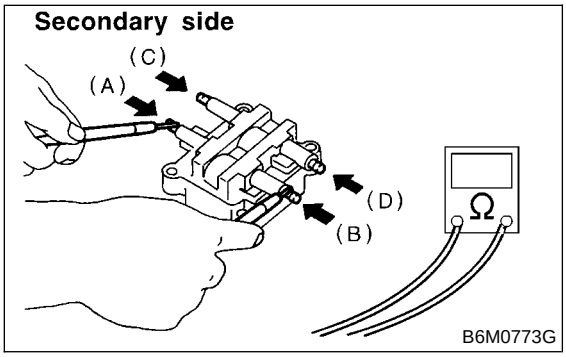
CAUTION:
If the resistance is extremely low, this indicates the presence of a short-circuit.

Specified resistance:

[Primary side]
Between terminal No. 1 and No. 2
0.73 Ω±10%
Between terminal No. 2 and No. 4
0.73 Ω±10%



[Secondary side]
Between (A) and (B)
12.8 kΩ±15%
Between (C) and (D)
12.8 kΩ±15%



3) Insulation between primary terminal and case: 10 MΩ or more.

4. Spark Plug Cord S151014

A: INSPECTION S151014A10

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
#2 cord: 7.3 — 13.7
#3 cord: 5.9 — 11.1
#4 cord: 7.3 — 13.7