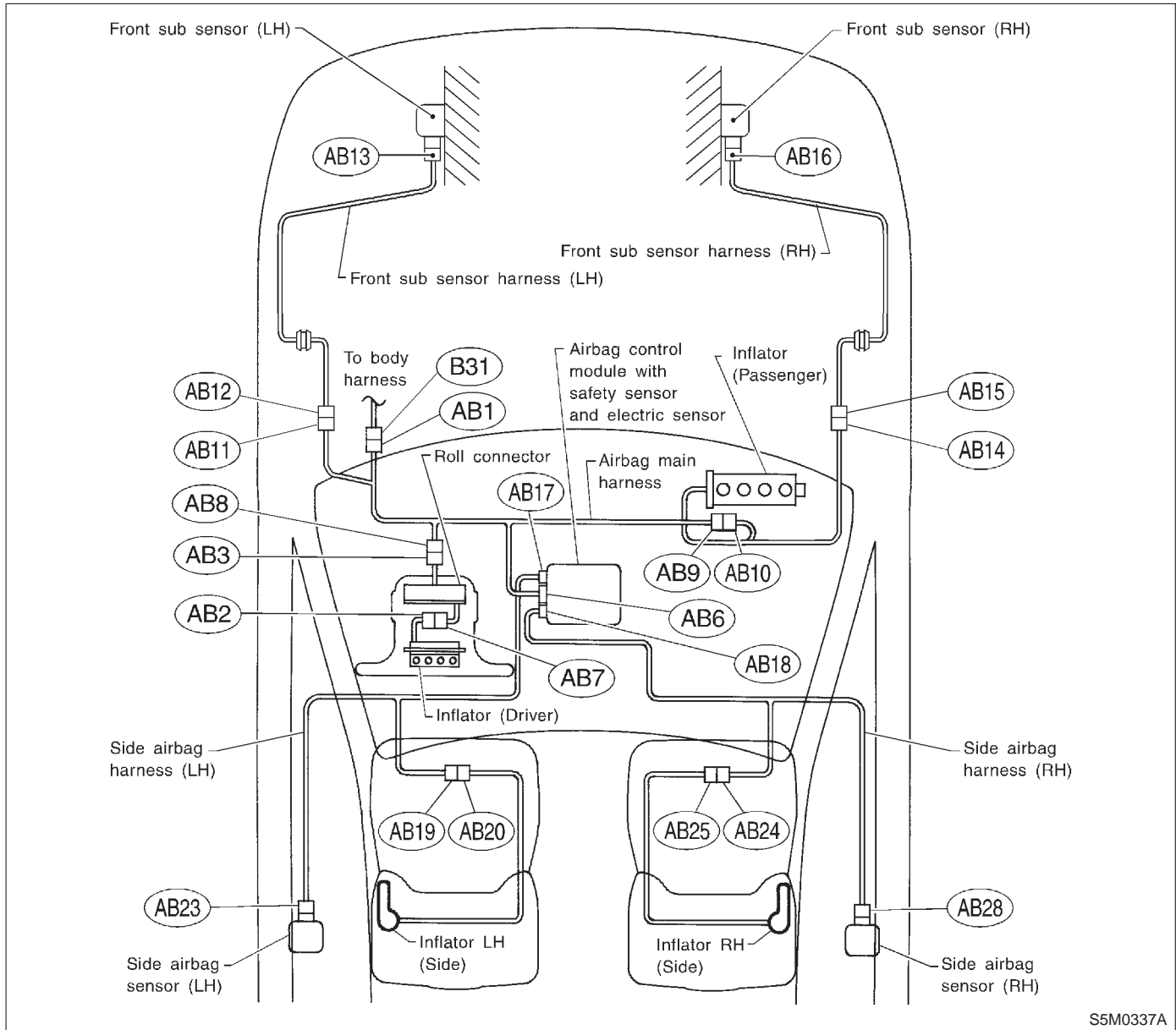


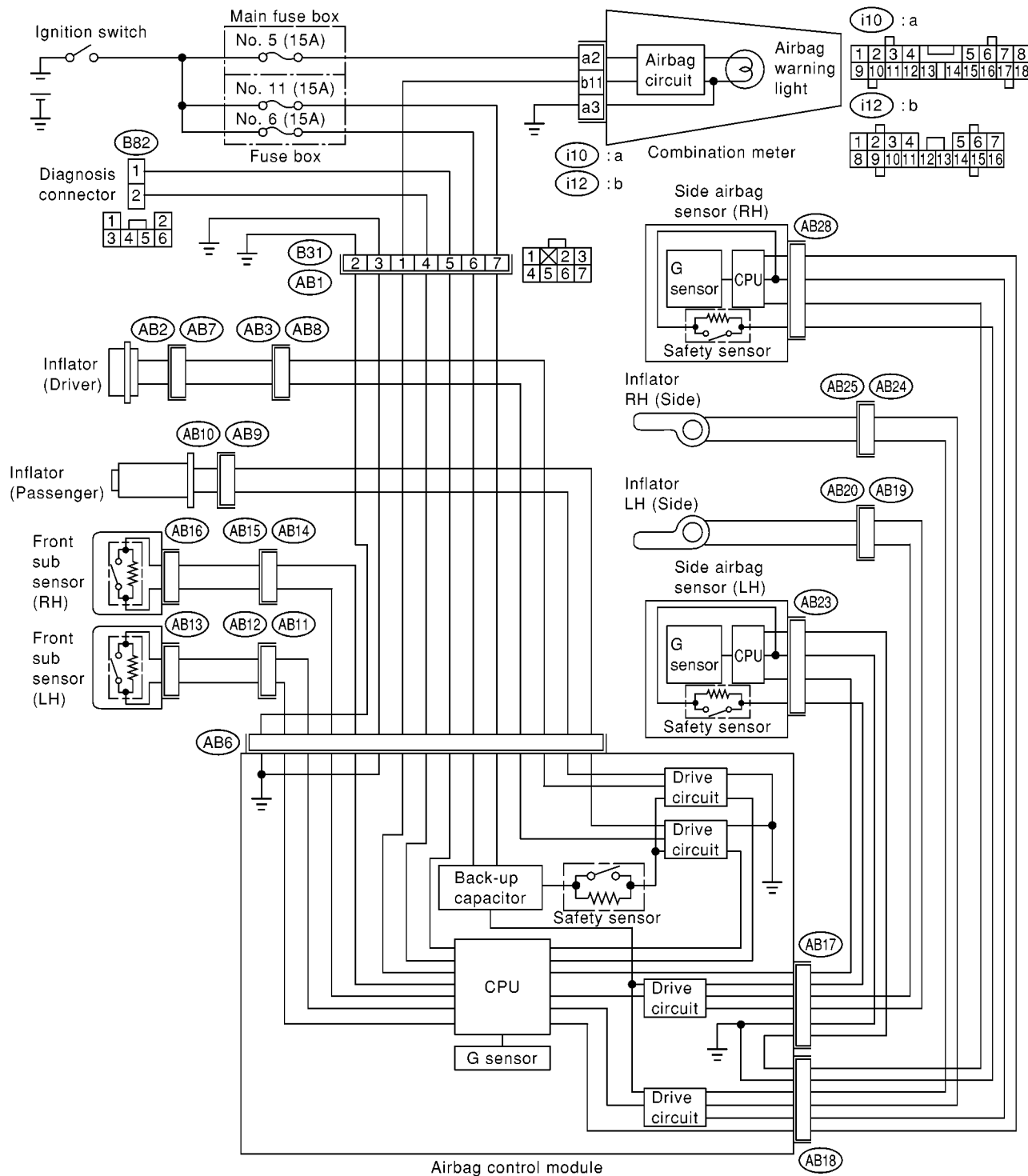
1. Electrical Components Location



S5M0337A

| | | | | | | | | | | | |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Connector No. | (AB1) | (AB2) | (AB3) | (AB6) | (AB7) | (AB8) | (AB9) | (AB10) | (AB11) | (AB12) | (AB13) |
| Pole | 7 | 2 | 2 | 28 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Color | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| Male/Female | Male | Male | Male | Female | Female | Female | Female | Male | Female | Male | Female |
| Connector No. | (AB14) | (AB15) | (AB16) | (AB17) | (AB18) | (AB19) | (AB20) | (AB23) | (AB24) | (AB25) | (AB28) |
| Pole | 2 | 2 | 2 | 12 | 12 | 2 | 2 | 4 | 2 | 2 | 4 |
| Color | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| Male/Female | Female | Male | Female | Female | Female | Female | Male | Female | Female | Male | Female |

2. Schematic



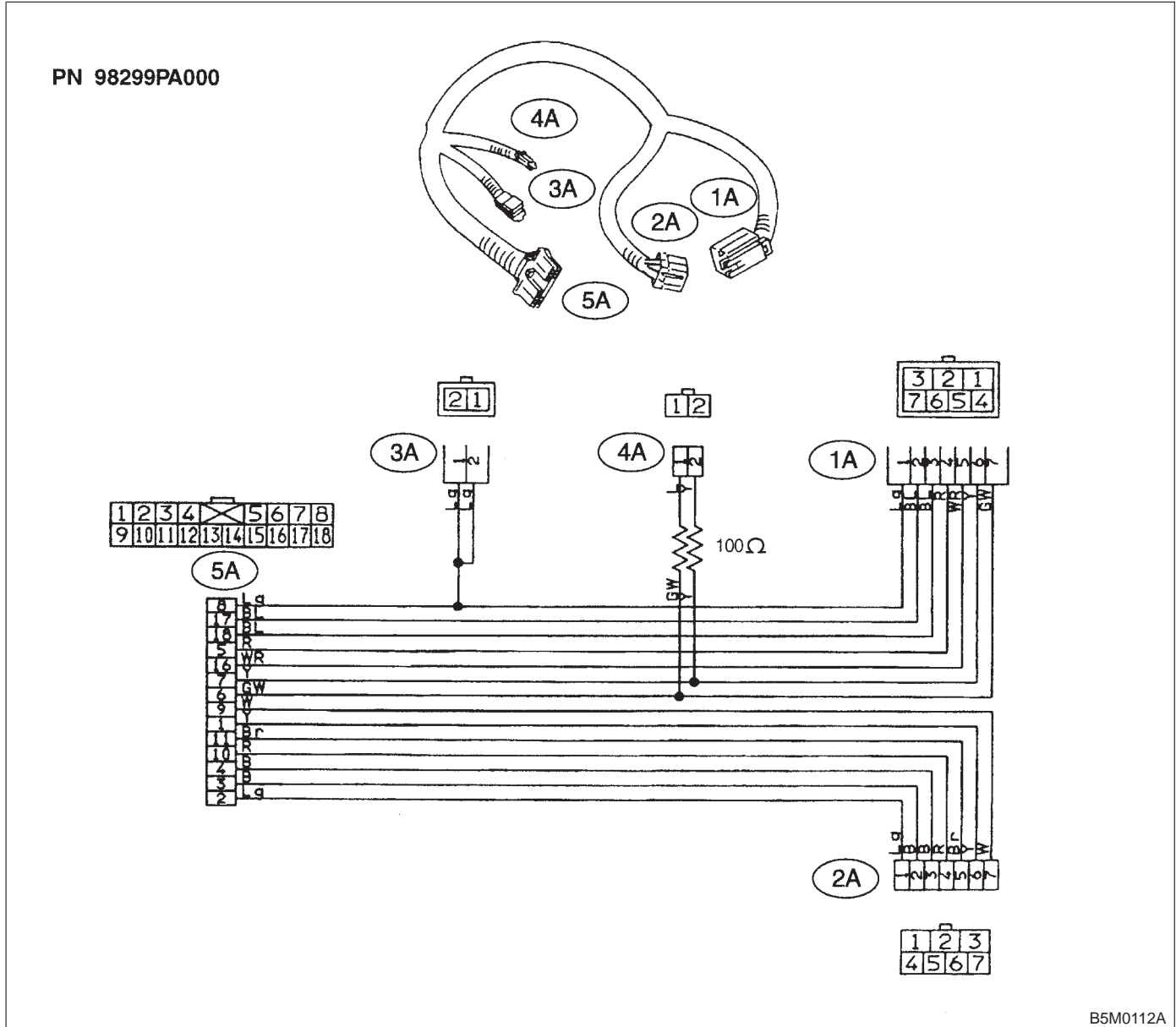
S5M0368A

3. Tools for Diagnostics

CAUTION:

Be sure to use specified test harness A, F, G, H and I or I2 when measuring voltage, resistance, etc. of AIRBAG system component parts.

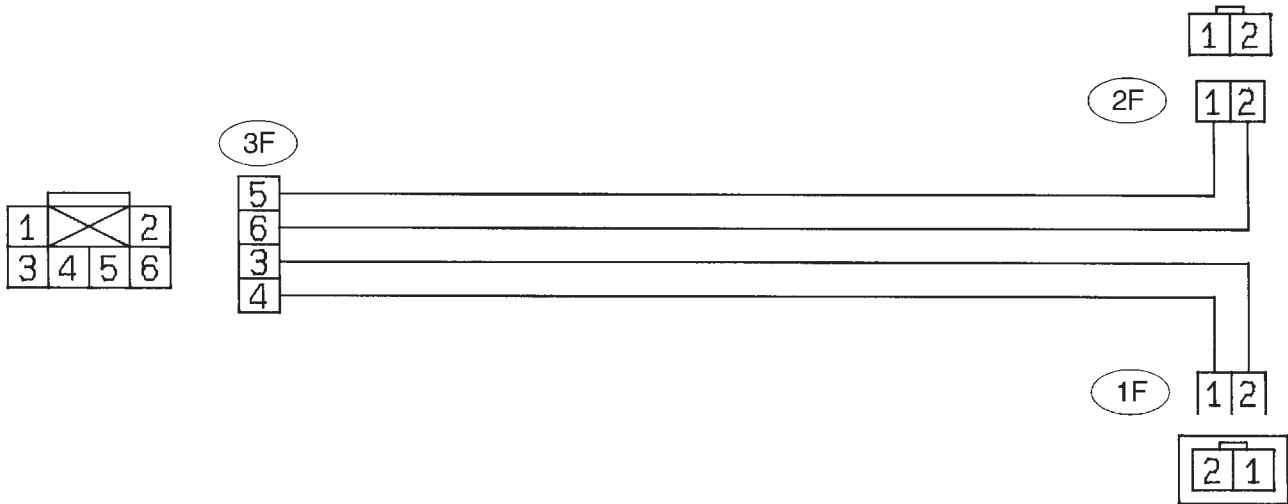
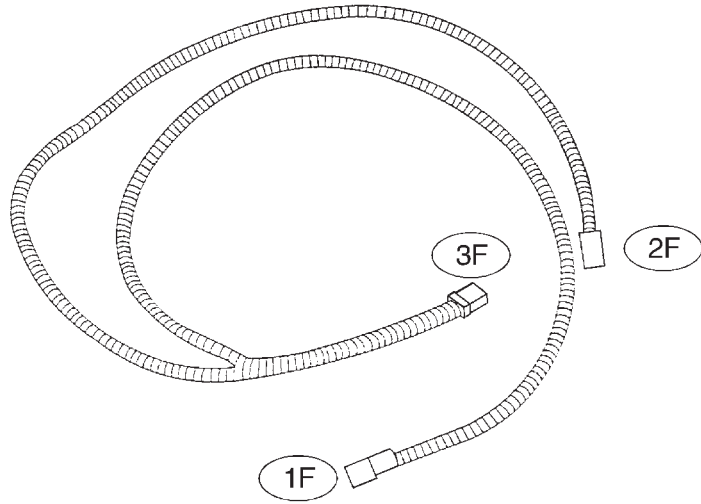
A: TEST HARNESS A



B5M0112A

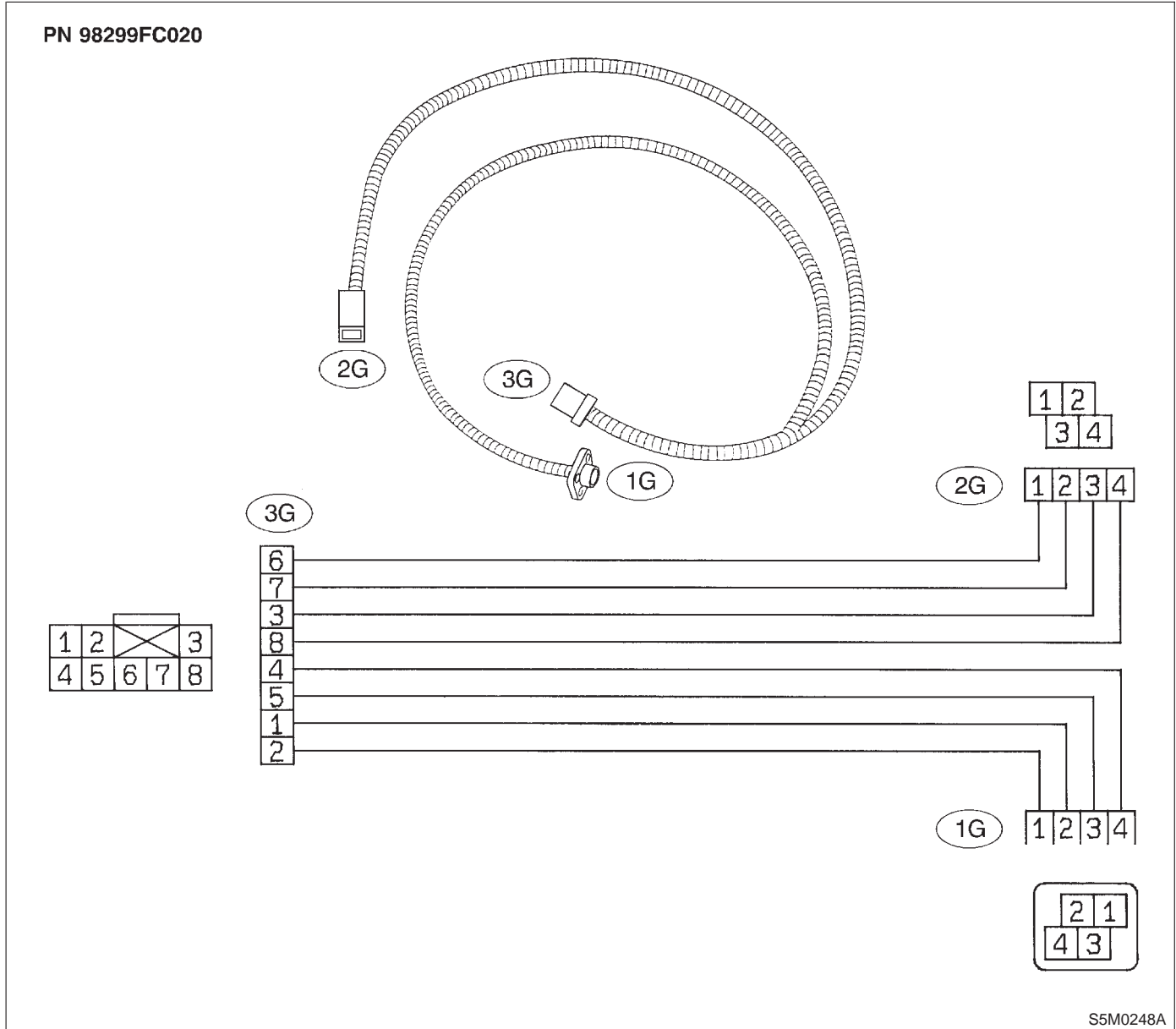
B: TEST HARNESS F

PN 98299FC010



S5M0247A

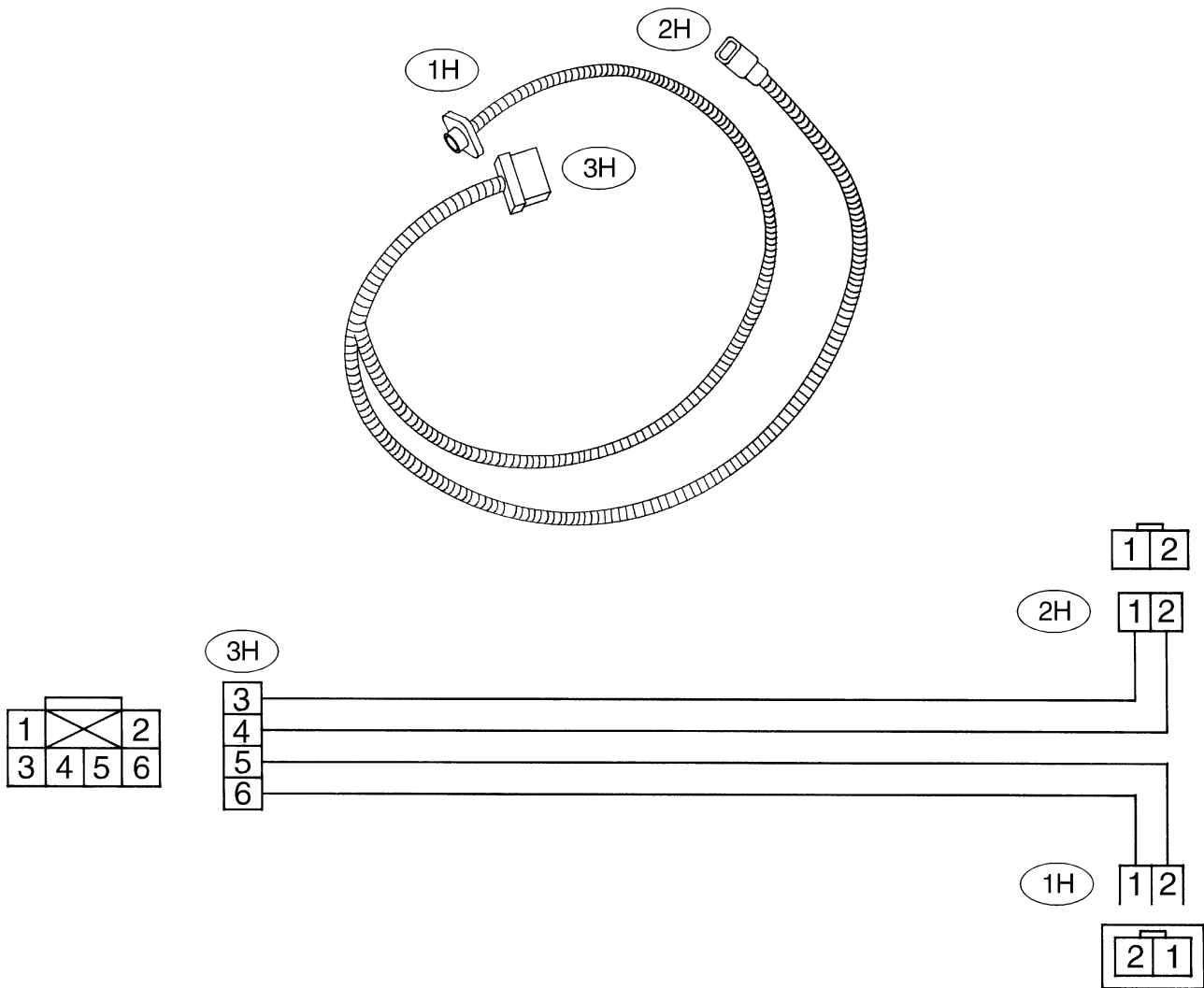
C: TEST HARNESS G



S5M0248A

D: TEST HARNESS H

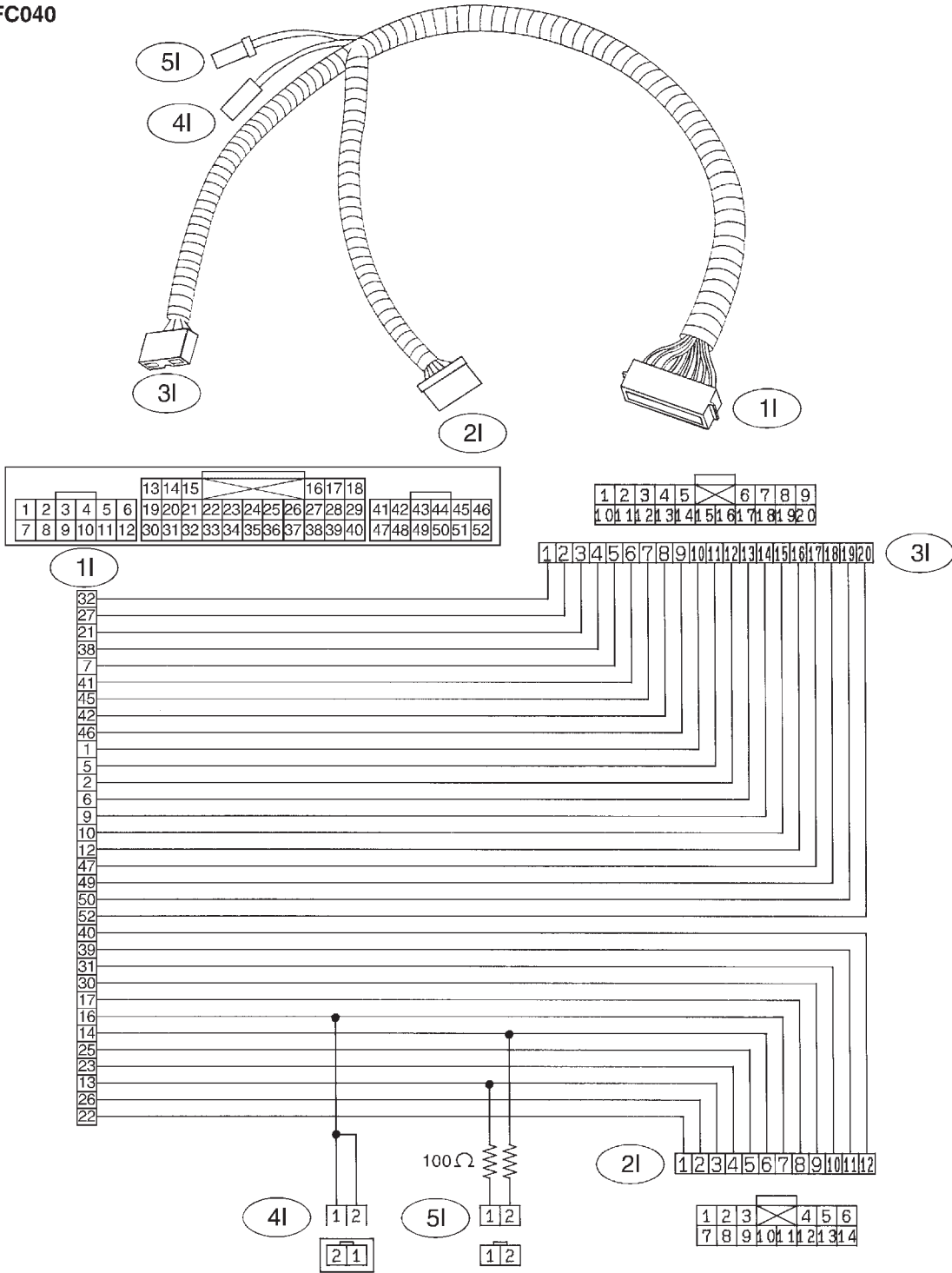
PN 98299FA030



B5M0553B

E: TEST HARNESS I

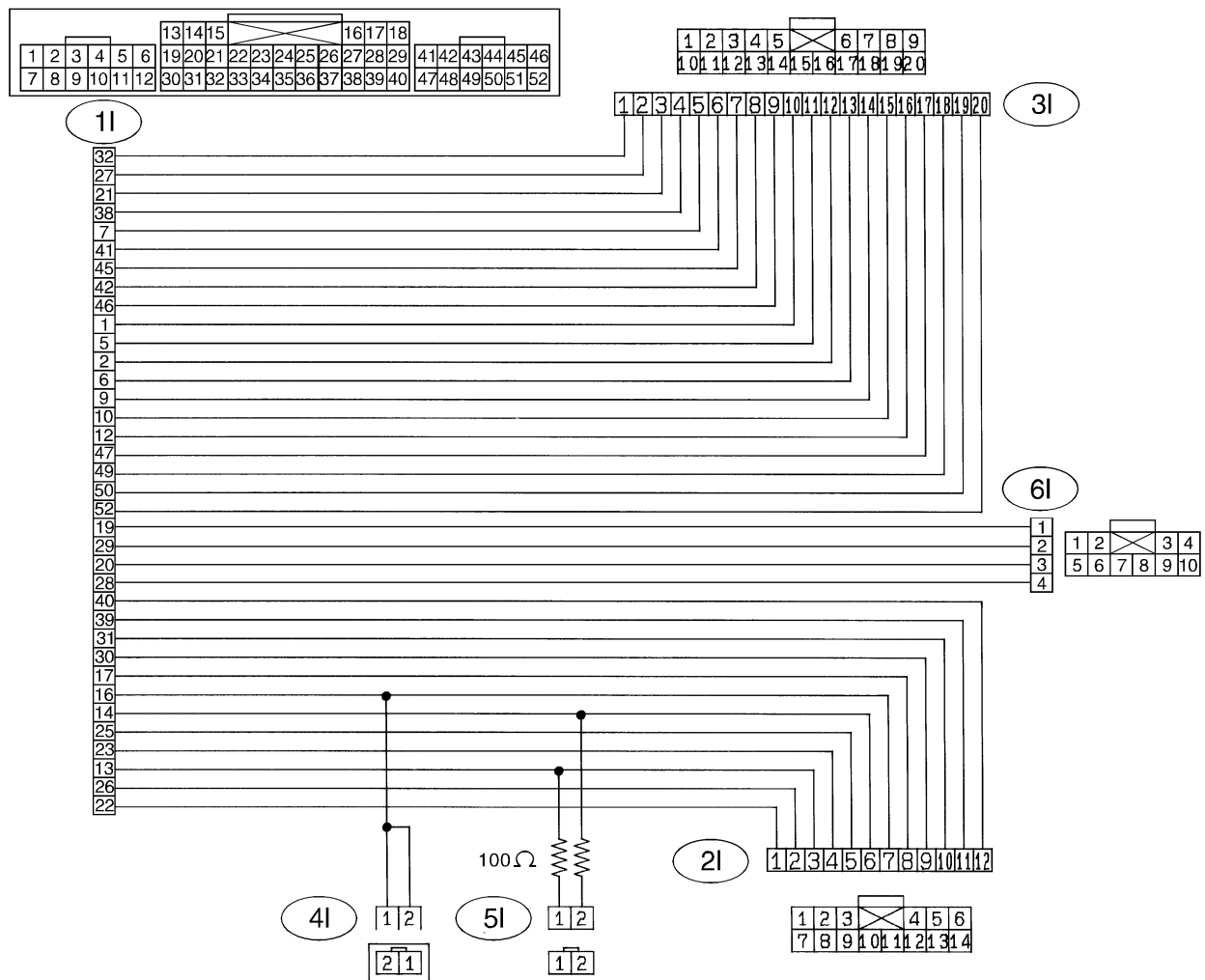
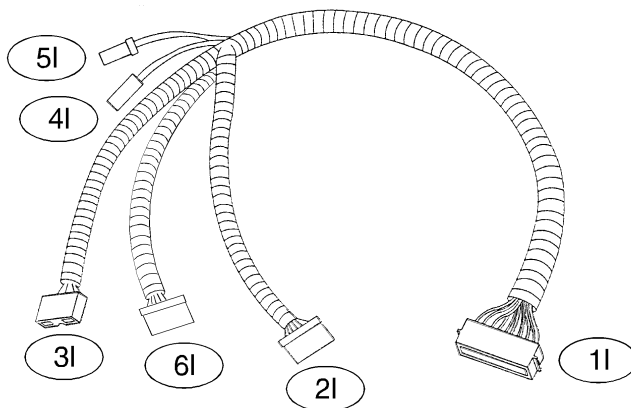
PN 98299FC040



S5M0340A

F: TEST HARNESS I2

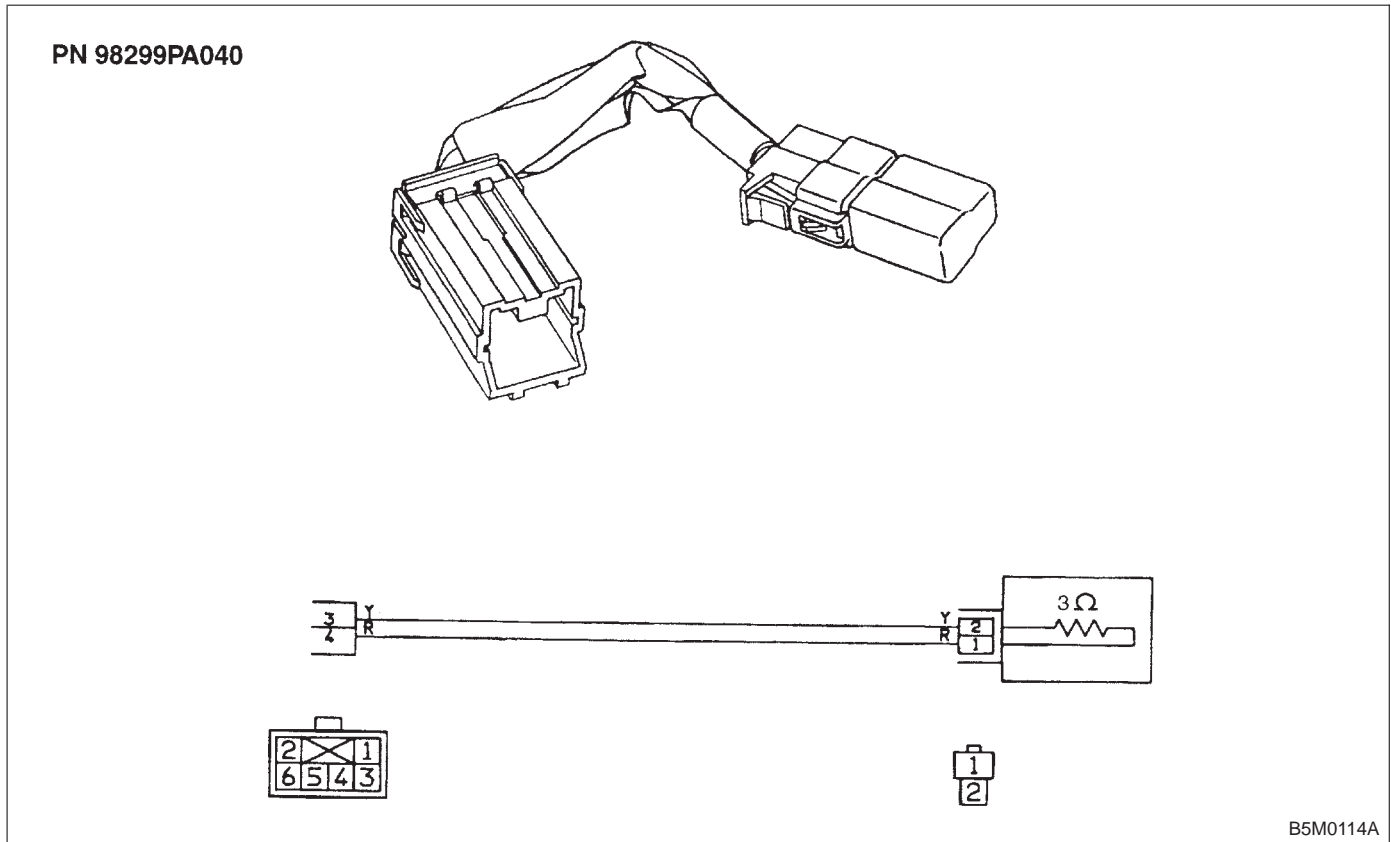
PN 98299FC041



B5M0927A

G: AIRBAG RESISTOR

The airbag resistor is used during diagnostics. The airbag resistor has the same resistance as the airbag module and thus provides safety when used instead of the airbag module. It also makes it possible to finish diagnostics in less time.



4. Diagnostics Chart for On-board Diagnostic System

A: BASIC DIAGNOSTICS PROCEDURE

4A1 : CHECK AIRBAG WARNING LIGHT ILLUMINATES.

- 1) Turn ignition switch to ON (engine OFF).
- 2) Check airbag warning light illuminates.

CHECK : *Does airbag warning light stay ON after about 7 seconds or remain OFF, or come back ON after 30 seconds?*

YES : Repair and replace. <Ref. to 5-5 [T4D0].>

NO : Go to step 4A2.

4A2 : CHECK TROUBLE CODE INDICATES.

Perform ON-BOARD DIAGNOSTICS. <Ref. to 5-5 [T4B0].>

CHECK : *Does trouble code indicate? <Ref. to 5-5 [T5A0].>*

YES : Repair and replace. <Ref. to 5-5 [T5X0].> Go to step 4A3.

NO : Repair and replace. <Ref. to 5-5 [T5Y0].> Go to step 4A3.

4A3 : CHECK AIRBAG WARNING LIGHT ILLUMINATES.

- 1) Turn ignition switch to ON (engine OFF).
- 2) Check airbag warning light illuminates.

CHECK : *Does airbag warning light stay ON after about 7 seconds or come back ON after 30 seconds?*

YES : Repair and replace. <Ref. to 5-5 [T4D0].>

NO : Go to step 4A4.

4A4 : CHECK AIRBAG WARNING LIGHT ILLUMINATES.

Check airbag warning light illuminates.

CHECK : *Does airbag warning light come ON for about 7 seconds, then go out and stay out?*

YES : Perform clear memory. <Ref. to 5-5 [T4C0].>

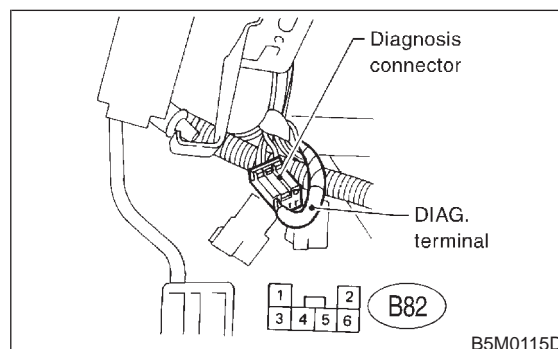
NO : Go to step 4A1.

B: ON-BOARD DIAGNOSTIC

When the airbag system is in functioning condition, the airbag warning light will remain on for about 7 seconds and go out when the ignition switch is set to ON.

If there is any malfunction, the airbag warning light will either stay on or off continuously. In such cases, perform on-board diagnostic in accordance with the specified procedure to determine trouble codes.

- 1) Turn ignition switch ON (with engine OFF).
- 2) Connect DIAG. terminal to No. 1 terminal of diagnosis connector located inside lower cover.



- 3) Check in accordance with the trouble code indicated by the AIRBAG warning light, and record the trouble codes.

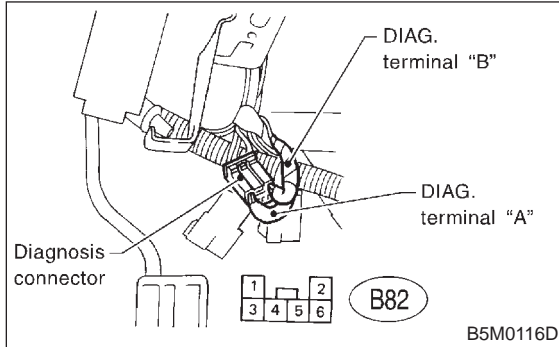
- 4) Turn the ignition switch "OFF" and remove the DIAG. terminal from No. 1 terminal of diagnosis connector.

C: CLEAR MEMORY

After eliminating problem as per trouble code, clear memory as follows:

1) Make sure ignition switch is ON (and engine off). Connect one DIAG. terminal "A" on diagnosis connector terminal No. 1.

While warning light is flashing, contact the other DIAG. terminal "B" on terminal No. 2 for at least three seconds.



2) After memory is cleared, normal warning light flashing rate resumes. (Warning light flashes every 0.6 seconds ON-OFF operation.) Memory cannot be cleared if any problem exists.

3) After clear memory and then DIAG. terminals "A" and "B", extract from diagnosis connector.

D: DIAGNOSTICS PROCEDURE**4D1 : CHECK TROUBLE CODE INDICATES.**

1) Perform on-board diagnostic. <Ref. to 5-5 [T4B0].>

2) Check trouble code indicates.

CHECK : **Are trouble codes 11, 12, 15 or 16 indicated? <Ref. to 5-5 [T5A2].>**

YES : Go to step 4D2.

NO : Perform diagnostics and repair according to indicated trouble code. <Ref. to 5-5 [T5A0].>

4D2 : CHECK TROUBLE CODE INDICATES.

Check trouble code indicates.

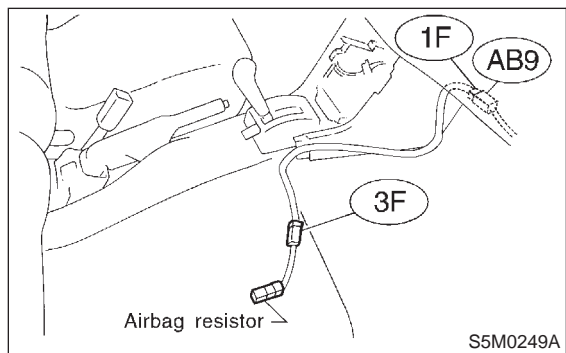
CHECK : **Are trouble codes 12, 16 indicated? <Ref. to 5-5 [T5A2].>**

YES : Go to step 4D3.

NO : Go to step 4D4.

4D3 : CHECK AIRBAG WARNING LIGHT ILLUMINATES.

- 1) Turn ignition switch to OFF. Disconnect battery ground cable, and wait 20 seconds.
- 2) Remove glove box <Ref. to 5-4 [W1A0].> and disconnect passenger's airbag module connector (AB9) to (AB10). <Ref. to 5-5 [W3A2].>
- 3) Connect test harness F connector (1F) to (AB9).
- 4) Connect airbag resistor to test harness F connector (3F).



- 5) Connect battery ground cable and turn ignition switch to ON.
- 6) Check airbag warning light illuminates.

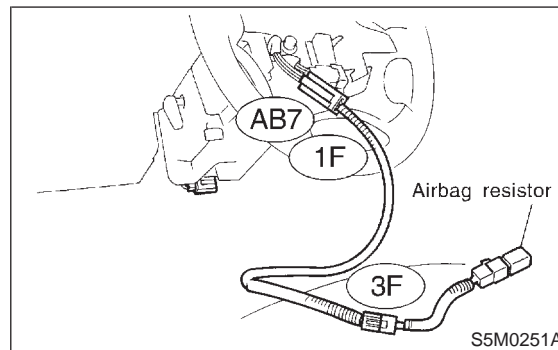
NOTE:

In some cases the airbag warning light will go OFF after about 7 seconds but will turn ON again within 30 seconds. In this case continue diagnostics with the basic diagnostics procedures or trouble code procedures.

- CHECK** : **Does airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**
- YES** : Replace with a new passenger's airbag module. <Ref. to 5-5 [W3A2].> Go to step **4D6**.
- NO** : Perform diagnostics and repair according to indicated trouble code. <Ref. to 5-5 [T5A0].>

4D4 : CHECK AIRBAG WARNING LIGHT ILLUMINATES.

- 1) Turn ignition switch to "OFF". Disconnect battery ground cable, and wait 20 seconds.
- 2) Connect connector (AB8) to (AB3).
- 3) Remove driver's airbag module and connect test harness F connector (1F) to (AB7). <Ref. to 5-5 [W3A1].>
- 4) Connect airbag resistor to test harness F connector (3F).



- 5) Connect battery ground cable and turn ignition switch to ON.
- 6) Check airbag warning light illuminates.

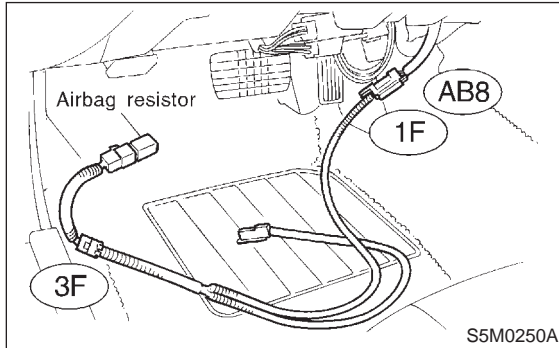
NOTE:

In some cases the airbag warning light will go OFF after about 7 seconds but will turn ON again within 30 seconds. In this case continue diagnostics with the basic diagnostics procedures or trouble code procedures.

- CHECK** : **Does airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**
- YES** : Replace with a new driver's airbag module. <Ref. to 5-5 [W3A1].> Go to step **4D6**.
- NO** : Go to step **4D5**.

4D5 : CHECK AIRBAG WARNING LIGHT ILLUMINATES.

- 1) Turn ignition switch to OFF. Disconnect battery ground cable, and wait 20 seconds.
- 2) Remove lower cover panel and connect test harness F connector (1F) to (AB8) <Ref. to 5-4 [W1A0].> with airbag resistor attached to test harness F connector (3F).



- 3) Connect battery ground cable and turn ignition switch to ON.
- 4) Check airbag warning light illuminates.

NOTE:

In some cases the airbag warning light will go OFF after about 7 seconds but will turn ON again within 30 seconds. In this case continue diagnostics with the basic diagnostics procedures or trouble code procedures.

- CHECK** : **Does airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**
- YES** : Replace with a new roll connector. <Ref. to 5-5 [W800].> Go to step **4D6**.
- NO** : Perform diagnostics and repair according to indicated trouble code. <Ref. to 5-5 [T5A0].>

4D6 : CHECK AIRBAG WARNING LIGHT ILLUMINATES.

- 1) Connect battery ground cable and turn ignition switch to ON.
- 2) Check airbag warning light illuminates.

NOTE:

In some cases the airbag warning light will go OFF after about 7 seconds but will turn ON again within 30 seconds. In this case continue diagnostics with the basic diagnostics procedures or trouble code procedures.

- CHECK** : **Does airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**
- YES** : Perform clear memory. <Ref. to 5-5 [T4C0].>
- NO** : Go to step **4D1**.

5. Diagnostics Chart with Trouble Code

A: TROUBLE CODES

1. LIST OF TROUBLE CODES

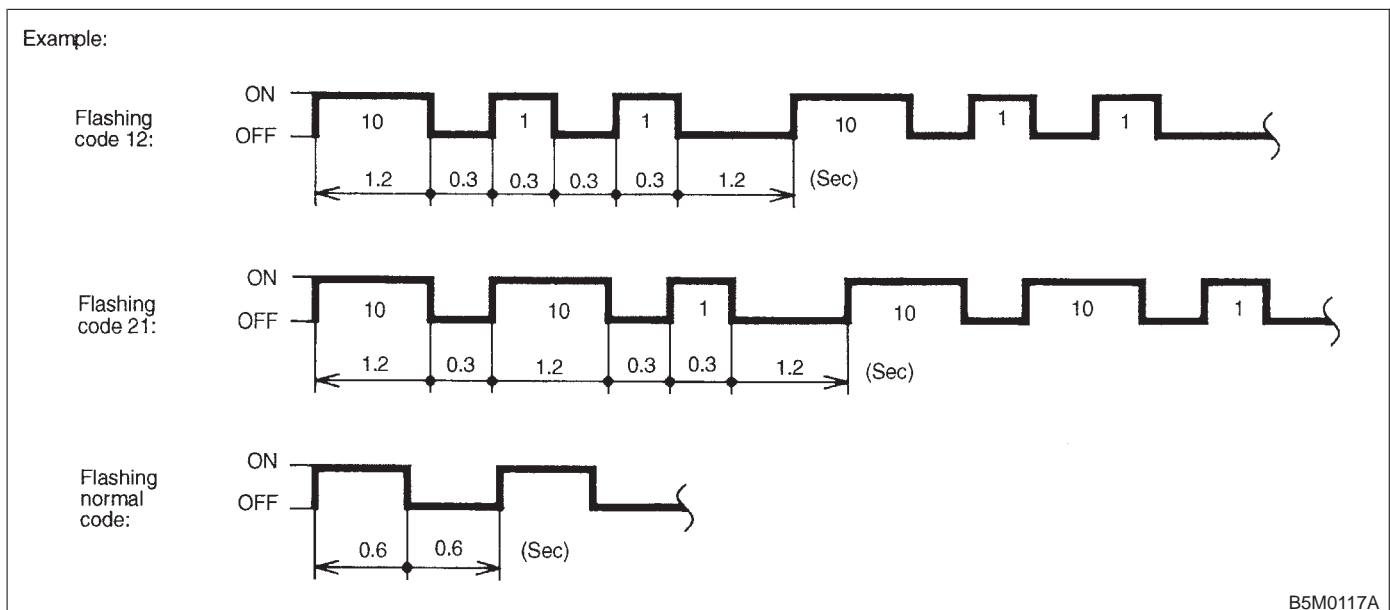
| Trouble code/ Contents of troubles | Memory function | Contents of diagnosis | Index No. |
|---------------------------------------|-----------------|--|-----------------------|
| 11 | Provided. | <ul style="list-style-type: none"> ● Airbag main harness circuit is open, shorted or shorted to ground. ● Airbag module harness (driver) circuit is open, shorted or shorted to ground. ● Roll connector circuit is open, shorted or shorted to ground. ● Airbag control module is faulty. | <Ref. to 5-5 [T5B0].> |
| 12 | Provided. | <ul style="list-style-type: none"> ● Airbag main harness circuit is open, shorted or shorted to ground. ● Airbag module harness (passenger) circuit is open, shorted or shorted to ground. ● Airbag control module is faulty. | <Ref. to 5-5 [T5C0].> |
| 15 | Provided. | <ul style="list-style-type: none"> ● Airbag main harness circuit (driver) is shorted to power supply. ● Airbag module harness (driver) is shorted to power supply. ● Roll connector is shorted to power supply. ● Airbag control module is faulty. | <Ref. to 5-5 [T5D0].> |
| 16 | Provided. | <ul style="list-style-type: none"> ● Airbag main harness circuit (passenger) is shorted to power supply. ● Airbag module harness (passenger) is shorted to power supply. ● Airbag control module is faulty. | <Ref. to 5-5 [T5E0].> |
| 21 | Provided. | Airbag control module is faulty. | <Ref. to 5-5 [T5F0].> |
| 22 | Provided. | Front airbag module is inflated. | <Ref. to 5-5 [T5G0].> |
| 23 | Not provided. | (AB6), (AB17) and (AB18) are not connected properly to airbag control module. | <Ref. to 5-5 [T5H0].> |
| 24 | Not provided. | <ul style="list-style-type: none"> ● Airbag control module is faulty. ● Airbag main harness circuit is open. ● Fuse No. 11 (in joint box) is blown. ● Body harness circuit is open. | <Ref. to 5-5 [T5I0].> |
| 25 | Provided. | <ul style="list-style-type: none"> ● Airbag control module is faulty. ● Airbag main harness circuit is open. ● Fuse No. 6 (in joint box) is blown. ● Body harness circuit is open. | <Ref. to 5-5 [T5J0].> |
| 31 | Provided. | <ul style="list-style-type: none"> ● Front sub sensor harness (RH) circuit is shorted. ● Front sub sensor harness (RH) circuit is open. ● Front sub sensor (RH) is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5K0].> |
| 32 | Provided. | <ul style="list-style-type: none"> ● Front sub sensor harness (LH) circuit is shorted. ● Front sub sensor harness (LH) circuit is open. ● Front sub sensor (LH) is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5L0].> |
| 41 | Provided. | <ul style="list-style-type: none"> ● Side airbag harness (RH) is faulty. ● Side airbag module (RH) is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5M0].> |
| 42 | Provided. | <ul style="list-style-type: none"> ● Side airbag harness (LH) is faulty. ● Side airbag module (LH) is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5N0].> |
| 45 | Provided. | <ul style="list-style-type: none"> ● Side airbag harness (RH) is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5O0].> |

| Trouble code/ Contents of troubles | Memory function | Contents of diagnosis | Index No. |
|--|-----------------|--|-----------------------|
| 46 | Provided. | <ul style="list-style-type: none"> ● Side airbag harness (LH) is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5P0].> |
| 51 | Provided. | <ul style="list-style-type: none"> ● Side airbag sensor (RH) is faulty. ● Side airbag harness (RH) is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5Q0].> |
| 52 | Provided. | <ul style="list-style-type: none"> ● Side airbag sensor (LH) is faulty. ● Side airbag harness (LH) is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5R0].> |
| 53 | Provided. | Side airbag sensor (RH) is faulty. | <Ref. to 5-5 [T5S0].> |
| 54 | Provided. | Side airbag sensor (LH) is faulty. | <Ref. to 5-5 [T5T0].> |
| 55 | Provided. | Side airbag module is inflated. | <Ref. to 5-5 [T5U0].> |
| Airbag warning light remains on. | Not provided. | <ul style="list-style-type: none"> ● Airbag warning light is faulty. ● Airbag control module to airbag warning light harness circuit is shorted or open. ● Grounding circuit is faulty. ● Airbag control module is faulty. ● (AB1) and (B31) are not connected properly. ● (AB6) is not connected properly to airbag control module. | <Ref. to 5-5 [T5V0].> |
| Airbag warning light remains off. | Not provided. | <ul style="list-style-type: none"> ● Fuse No. 5 (in main fuse box) is blown. ● Body harness circuit is open. ● Airbag warning light is faulty. ● Airbag main harness is faulty. ● Airbag control module is faulty. | <Ref. to 5-5 [T5W0].> |
| Warning light indicates trouble code, then normal code. (Flashing trouble code.) | Provided. | Airbag system component parts are faulty. | <Ref. to 5-5 [T5X0].> |
| Warning light indicates trouble code, then normal code. (Flashing normal code.) | Not provided. | <ul style="list-style-type: none"> ● Airbag connector is faulty. ● Fuse No. 11 (in joint box) is blown. ● Airbag main harness is faulty. ● Airbag control module is faulty. ● Body harness is faulty. | <Ref. to 5-5 [T5Y0].> |

2. HOW TO READ TROUBLE CODES

The AIRBAG warning light flashes a code corresponding to the faulty parts.

The long segment (1.2 sec on) indicates a “ten”, and the short segment (0.3 sec on) indicates a “one”.



B: TROUBLE CODE 11

DIAGNOSIS:

- Airbag main harness circuit is open, shorted or shorted to ground.
- Airbag module harness (Driver) circuit is open, shorted or shorted to ground.
- Roll connector circuit is open, shorted or shorted to ground.
- Airbag control module is faulty.

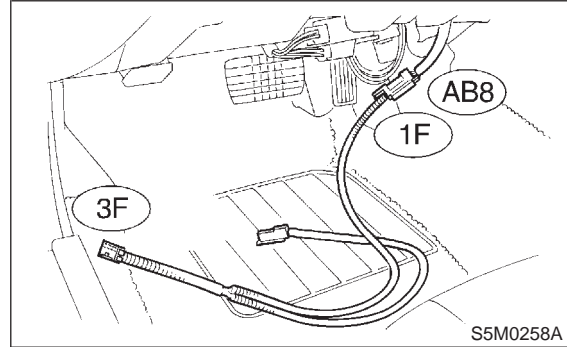
CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

After 20 seconds elapse, remove instrument panel lower cover, and disconnect (AB3) and (AB8), (AB9) and (AB10).

5B1 : AIRBAG MAIN HARNESS INSPECTION

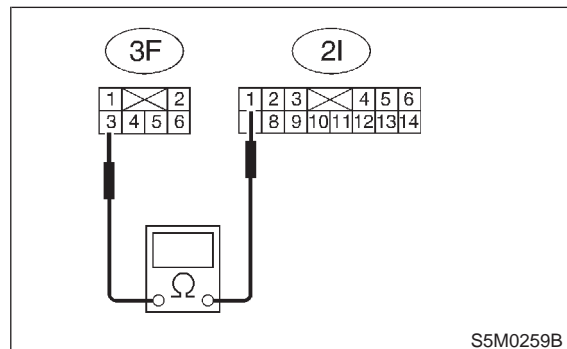
- 1) Remove lower cover panel <Ref. to 5-4 [W1A0].>, and connect connector (AB8) below steering column to test harness F connector (1F).



- 2) Disconnect connector (AB6) <Ref. to 5-5 [W6A0].> from airbag control module, and connect it to test harness I or I2 connector (1I) terminal.
- 3) Measure resistance between test harness I or I2 connector (2I) and test harness F connector (3F) terminals.

Connector & terminal

(2I) No. 1 — (3F) No. 3:



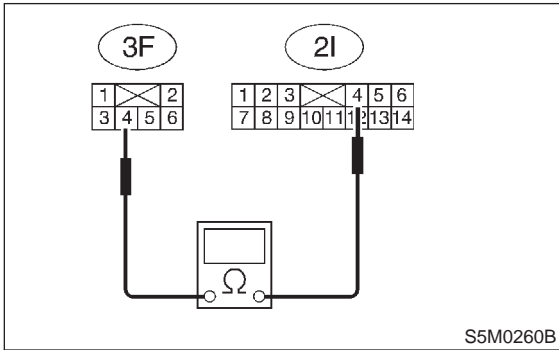
- CHECK** : *Is resistance less than 10 Ω?*
- YES** : Go to step 5B2.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5B2 : AIRBAG MAIN HARNESS INSPECTION

Measure resistance between test harness I or I2 connector (2I) and test harness F connector (3F) terminals.

Connector & terminal

(2I) No. 4 — (3F) No. 4:



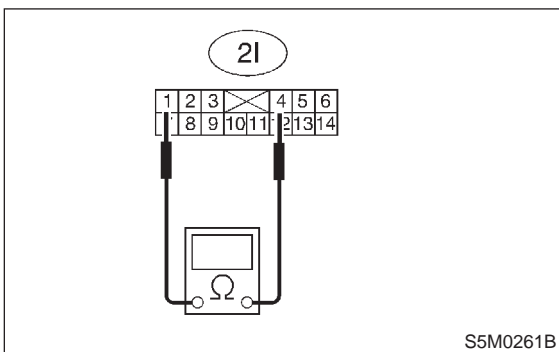
- CHECK** : Is resistance less than 10 Ω?
- YES** : Go to step 5B3.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5B3 : AIRBAG MAIN HARNESS INSPECTION

1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I).
 2) Measure resistance between test harness I or I2 connector (2I) terminal.

Connector & terminal

(2I) No. 1 — No. 4:



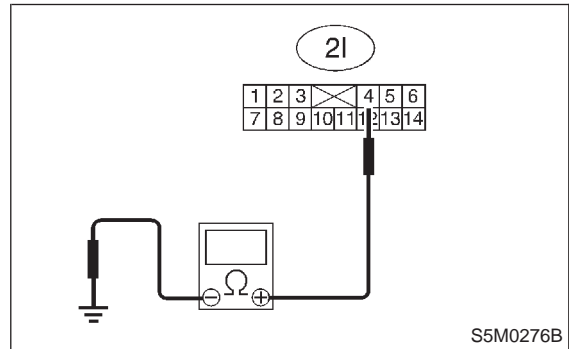
- CHECK** : Is resistance more than 1 MΩ?
- YES** : Go to step 5B4.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5B4 : AIRBAG MAIN HARNESS INSPECTION

1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I).
 2) Measure resistance between test harness I or I2 connector (2I) terminals and chassis ground.

Connector & terminal

(2I) No. 4 (+) — Chassis ground (-):



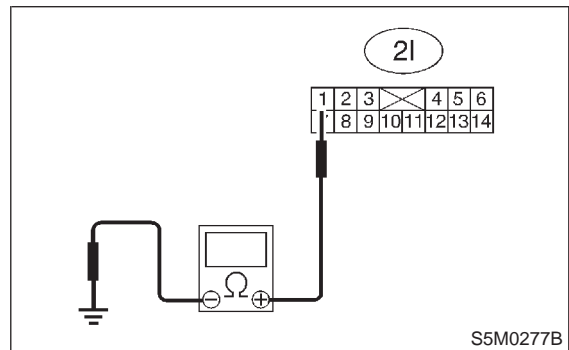
- CHECK** : Is resistance more than 1 MΩ?
- YES** : Go to step 5B5.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5B5 : AIRBAG MAIN HARNESS INSPECTION

Measure resistance between test harness I or I2 connector (2I) terminals and chassis ground.

Connector & terminal

(2I) No. 1 (+) — Chassis ground (-):



- CHECK** : Is resistance more than 1 MΩ?
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

C: TROUBLE CODE 12

DIAGNOSIS:

- Airbag main harness circuit is open, shorted or shorted to ground.
- Airbag module harness (Passenger) circuit is open, shorted or shorted to ground.
- Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

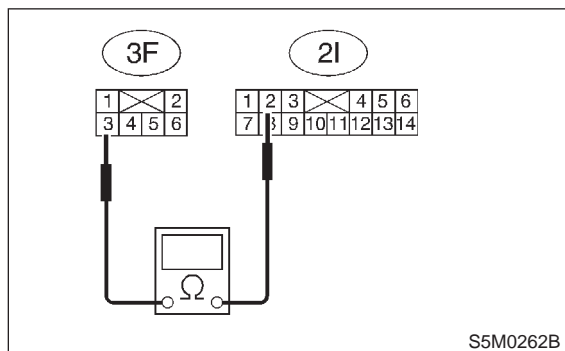
After 20 seconds elapse, remove instrument panel lower cover, and disconnect (AB3) and (AB8), (AB9) and (AB10).

5C1 : AIRBAG MAIN HARNESS INSPECTION

- 1) Remove glove box. <Ref. to 5-4 [W1A0].>
- 2) Disconnect connector (AB9) and (AB10) <Ref. to 5-5 [W3A2].> and connect connector (AB9) to test harness F connector (1F).
- 3) Disconnect connector (AB6) <Ref. to 5-5 [W6A0].> from airbag control module, and connect it to test harness I or I2 connector (1I) terminal.
- 4) Measure resistance between test harness I or I2 connector (2I) and test harness F connector (3F) terminals.

Connector & terminal

(2I) No. 2 — (3F) No. 3:



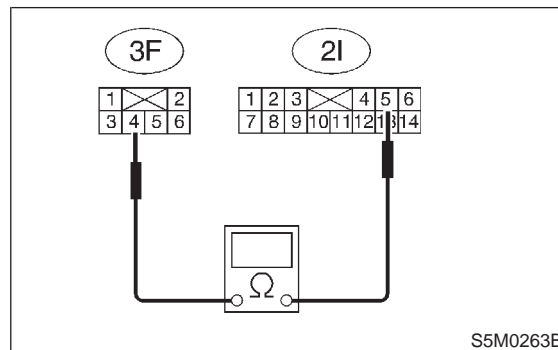
- CHECK** : Is resistance less than 10 Ω?
- YES** : Go to step 5C2.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5C2 : AIRBAG MAIN HARNESS INSPECTION

Measure resistance between test harness I or I2 connector (2I) and test harness F connector (3F) terminals.

Connector & terminal

(2I) No. 5 — (3F) No. 4:



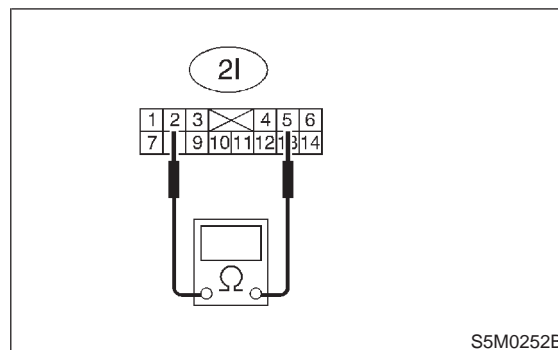
- CHECK** : Is resistance less than 10 Ω?
- YES** : Go to step 5C3.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5C3 : AIRBAG MAIN HARNESS INSPECTION

- 1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I) terminal.
- 2) Measure resistance between test harness I or I2 connector (2I) terminal.

Connector & terminal

(2I) No. 2 — No. 5:



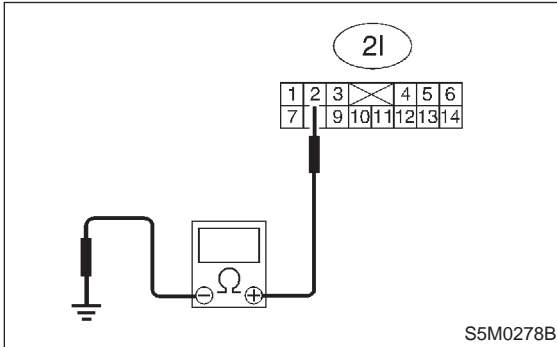
- CHECK** : Is resistance more than 10 kΩ?
- YES** : Go to step 5C4.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5C4 : AIRBAG MAIN HARNESS INSPECTION

- 1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I).
- 2) Measure resistance between test harness I or I2 connector (2I) terminals and chassis ground.

Connector & terminal

(2I) No. 2 (+) — Chassis ground (-):



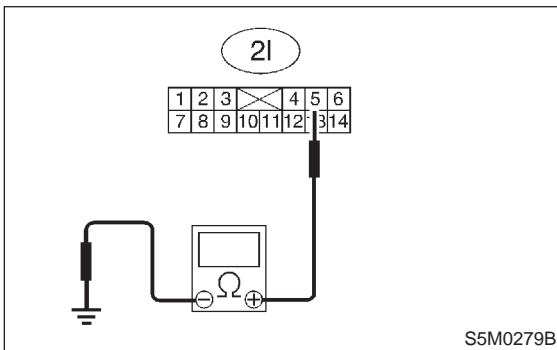
- CHECK** : **Is resistance more than 1 MΩ?**
- YES** : Go to step **5C5**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5C5 : AIRBAG MAIN HARNESS INSPECTION

Measure resistance between test harness I or I2 connector (2I) terminals and chassis ground.

Connector & terminal

(2I) No. 5 (+) — Chassis ground (-):



- CHECK** : **Is resistance more than 1 MΩ?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

D: TROUBLE CODE 15

DIAGNOSIS:

- Airbag main harness circuit (Driver) is shorted to power supply.
- Airbag module harness (Driver) is shorted to power supply.
- Roll connector is shorted to power supply.
- Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch “OFF”, disconnect battery ground terminal and then wait at least 20 seconds.

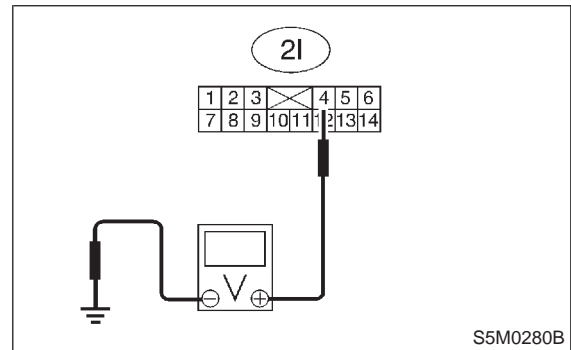
After 20 seconds elapse, remove instrument panel lower cover, and disconnect (AB3) and (AB8), (AB9) and (AB10).

5D1 : AIRBAG MAIN HARNESS INSPECTION

- 1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I).
- 2) Connect battery ground cable and turn ignition switch “ON” (engine off).
- 3) Measure voltage across each test harness I or I2 connector (2I) terminal and chassis ground.

Connector & terminal

(2I) No. 4 (+) — Chassis ground (-):



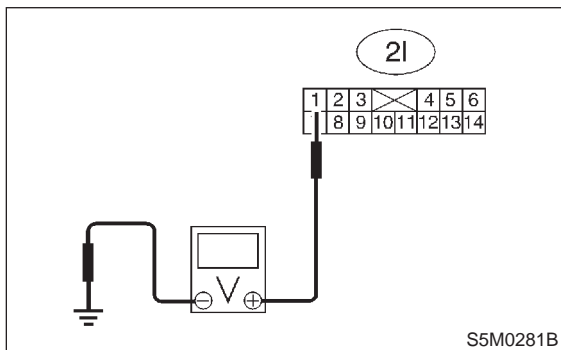
- CHECK** : **Is voltage less than 1 V?**
- YES** : Go to step **5D2**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5D2 : AIRBAG MAIN HARNESS INSPECTION

Measure voltage across each test harness I or I2 connector (2I) terminal and chassis ground.

Connector & terminal

(2I) No. 1 (+) — Chassis ground (-):



- CHECK** : **Is voltage less than 1 V?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

E: TROUBLE CODE 16

DIAGNOSIS:

- Airbag main harness circuit (Passenger) is shorted to power supply.
- Airbag module harness (Passenger) is shorted to power supply.
- Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch “OFF”, disconnect battery ground terminal and then wait at least 20 seconds.

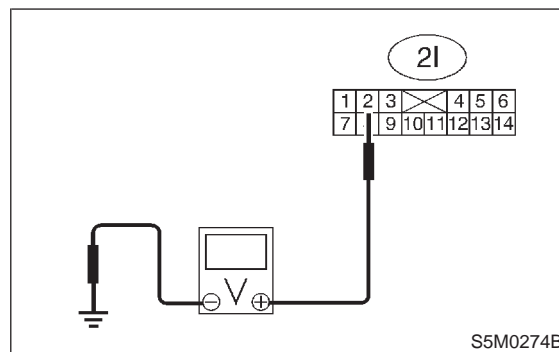
After 20 seconds elapse, remove instrument panel lower cover, and disconnect (AB3) and (AB8), (AB9) and (AB10).

5E1 : AIRBAG MAIN HARNESS INSPECTION

- 1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I).
- 2) Connect battery ground cable and turn ignition switch “ON” (engine off).
- 3) Measure voltage across each test harness I or I2 connector (2I) terminal and chassis ground.

Connector & terminal

(2I) No. 2 (+) — Chassis ground (-):



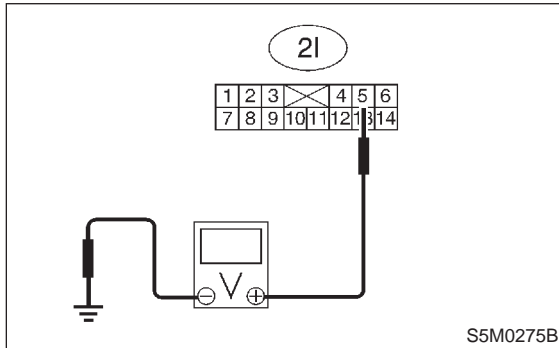
- CHECK** : **Is voltage less than 1 V?**
- YES** : Go to step **5E2**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5E2 : AIRBAG MAIN HARNESS INSPECTION

Measure voltage across each test harness I or I2 connector (2I) terminal and chassis ground.

Connector & terminal

(2I) No. 5 (+) — Chassis ground (-):



- CHECK** : **Is voltage less than 1 V?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

F: TROUBLE CODE 21
DIAGNOSIS:

Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground terminal, and then wait at least 20 seconds.

5F1 : CHECK IF TROUBLE CODE 21 IS INDICATED.

Confirm flashing trouble code according to "BASIC DIAGNOSTICS PROCEDURE". <Ref. to 5-5 [T4A0].>

- CHECK** : **Is airbag warning light trouble code 21 indicated?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Perform clear memory. <Ref. to 5-5 [T4C0].>

G: TROUBLE CODE 22**DIAGNOSIS:**

Front airbag module is inflated.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground terminal, and then wait at least 20 seconds.

5G1 : CHECK IF TROUBLE CODE 22 IS INDICATED.

Confirm flashing trouble code according to "BASIC DIAGNOSTICS PROCEDURE". <Ref. to 5-5 [T4A0].>

- CHECK** : *Is airbag warning light trouble code 22 indicated?*
- YES** : Replace airbag control module <Ref. to 5-5 [W6A0].>, front sub sensor <Ref. to 5-5 [W9A0].> and front airbag module of both sides. <Ref. to 5-5 [W3A0].>
- NO** : Perform clear memory. <Ref. to 5-5 [T4C0].>

H: TROUBLE CODE 23**DIAGNOSIS:**

(AB6), (AB17) and (AB18) are not connected properly to airbag control module.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

5H1 : CHECK POOR CONTACT IN CONNECTORS (AB6), (AB17) AND (AB18).

Check connectors (AB6), (AB17) and (AB18) connected to airbag control module. <Ref. to 5-5 [W6A0].>

- CHECK** : *Is there poor contact in connectors (AB6), (AB17) and (AB18)?*
- YES** : Repair poor contact in connectors (AB6), (AB17) and (AB18).
- NO** : Replace airbag control module. <Ref. to 5-5 [W6A0].>

I: TROUBLE CODE 24

DIAGNOSIS:

- Airbag control module is faulty.
- Airbag main harness circuit is open.
- Fuse No. 11 (in joint box) is blown.
- Body harness circuit is open.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

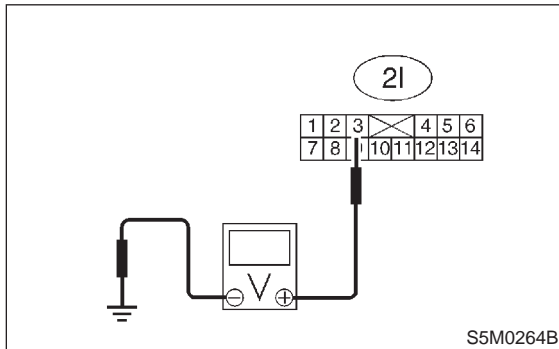
After 20 seconds elapse, remove instrument panel lower cover, and disconnect (AB3) and (AB8), (AB9) and (AB10).

5I1 : AIRBAG CONTROL MODULE INSPECTION

- 1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I).
- 2) Connect battery ground cable and turn ignition switch "ON" (engine off).
- 3) Measure voltage across connector (2I) terminal and chassis ground.

Connector & terminal

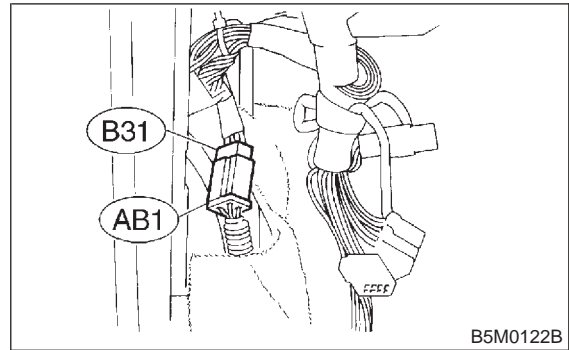
(2I) No. 3 (+) — Chassis ground (-):



- CHECK** : **Is voltage more than 10 V?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Go to step 5I2.

5I2 : AIRBAG MAIN HARNESS INSPECTION

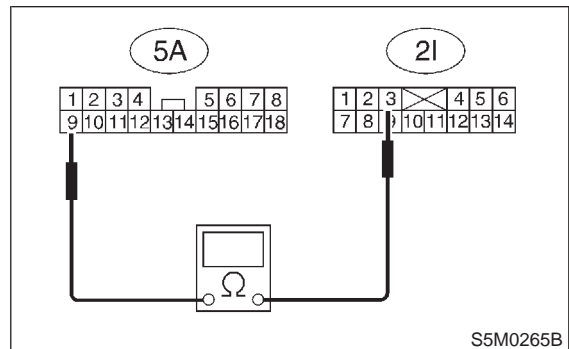
- 1) Go to following procedure after performing diagnostics on airbag system as per diagnosis procedure under "5I1 AIRBAG CONTROL MODULE INSPECTION" <Ref. to 5-5 [T5I1].> previously outlined.
- 2) Turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.
- 3) Disconnect connector (AB1) from body harness connector (B31) located in front pillar lower (driver side), and connect connector (AB1) to test harness A connector (2A).



- 4) Measure resistance between test harness A connector (5A) and test harness I or I2 connector (2I) terminals.

Connector & terminal

(5A) No. 9 — (2I) No. 3:



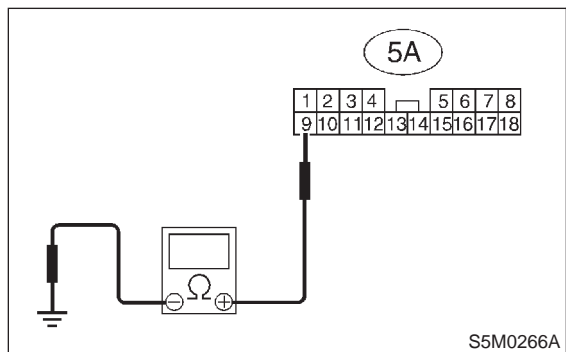
- CHECK** : **Is resistance less than 10 Ω?**
- YES** : Go to step 5I3.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5I3 : AIRBAG MAIN HARNESS INSPECTION

Measure resistance between each terminal of connectors (5A) and chassis ground.

Connector & terminal

(5A) No. 9 (+) — Chassis ground (-):



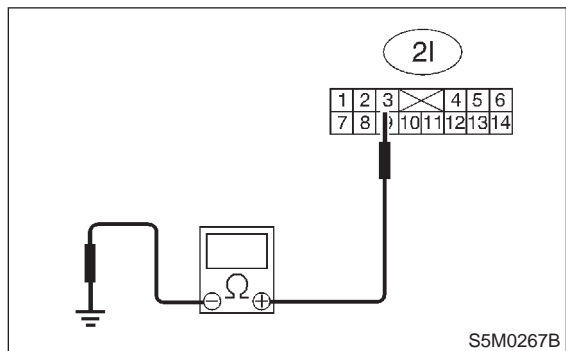
- CHECK** : **Is resistance more than 10 kΩ?**
- YES** : Go to step **5I4**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5I4 : AIRBAG MAIN HARNESS INSPECTION

Measure resistance between each terminal of connectors (2I) and chassis ground.

Connector & terminal

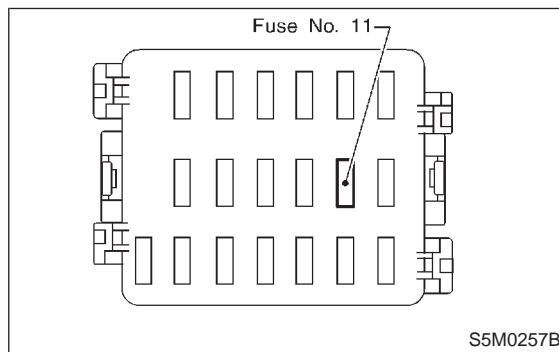
(2I) No. 3 (+) — Chassis ground (-):



- CHECK** : **Is resistance more than 10 kΩ?**
- YES** : Go to step **5I5**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5I5 : FUSE NO. 11 (IN JOINT BOX) INSPECTION

Make sure ignition switch is turned "OFF", then remove and visually check fuse No. 11 (in joint box).



- CHECK** : **Is fuse No. 11 blown?**
- YES** : Replace fuse No. 11. If fuse No. 11 blows again, repair body harness.
- NO** : Repair body harness.

J: TROUBLE CODE 25

DIAGNOSIS:

- Airbag control module is faulty.
- Airbag main harness circuit is open.
- Fuse No. 6 (in joint box) is blown.
- Body harness circuit is open.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

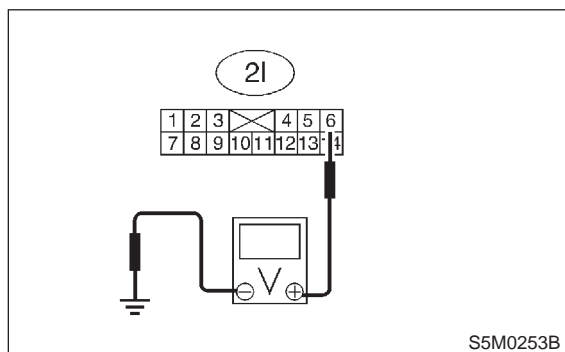
After 20 seconds elapse, remove instrument panel lower cover, and disconnect (AB3) and (AB8), (AB9) and (AB10).

5J1 : AIRBAG CONTROL MODULE INSPECTION

- 1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].> and connect it to test harness I or I2 connector (11).
- 2) Connect battery ground cable and turn ignition switch "ON". (engine off)
- 3) Measure voltage across connector (2I) terminal and chassis ground.

Connector & terminal

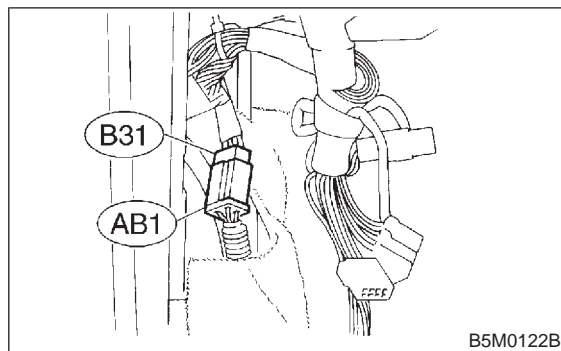
(2I) No. 6 (+) — Chassis ground (-):



- CHECK** : **Is voltage more than 10 V?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Go to step **5J2**.

5J2 : AIRBAG MAIN HARNESS INSPECTION

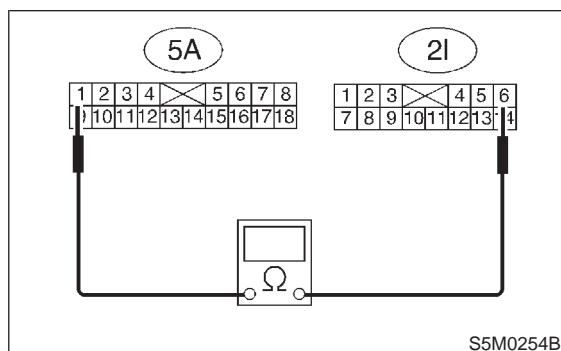
- 1) Go to following procedure after performing diagnostics on airbag system as per diagnosis procedure under "5J1 AIRBAG CONTROL MODULE INSPECTION" <Ref. to 5-5 [T5J1].> previously outlined.
- 2) Turn ignition switch "OFF", disconnect battery ground terminal and then wait at least 20 seconds.
- 3) Disconnect body harness connector (B31) from connector (AB1) located in front pillar lower (driver side), and connect connector (AB1) to test harness A connector (2A).



- 4) Measure resistance between test harness A connector (5A) terminal and test harness I or I2 connector (2I) terminal.

Connector & terminal

(5A) No. 1 — (2I) No. 6:



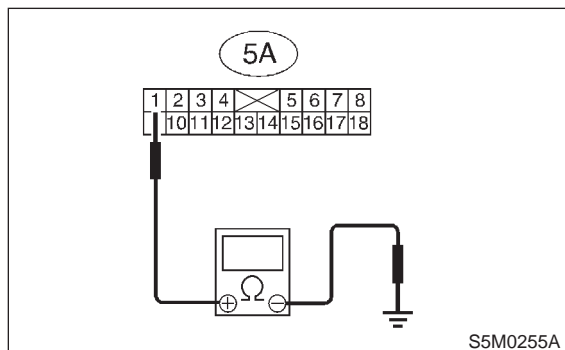
- CHECK** : **Is resistance less than 10 Ω?**
- YES** : Go to step **5J3**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5J3 : AIRBAG MAIN HARNESS INSPECTION

Measure resistance between (5A) connector terminal and chassis ground.

Connector & terminal

(5A) No. 1 (+) — Chassis ground (-):



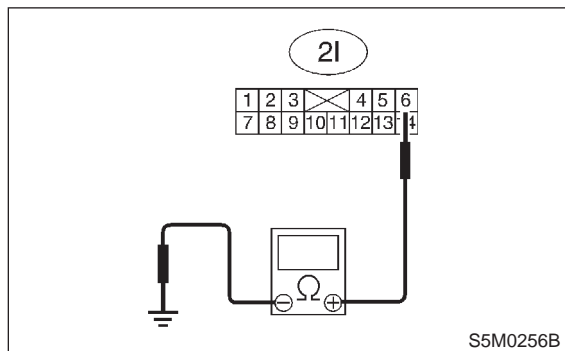
- CHECK** : **Is resistance more than 10 kΩ?**
- YES** : Go to step **5J4**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5J4 : AIRBAG MAIN HARNESS INSPECTION

Measure resistance between (2I) connector terminal and chassis ground.

Connector & terminal

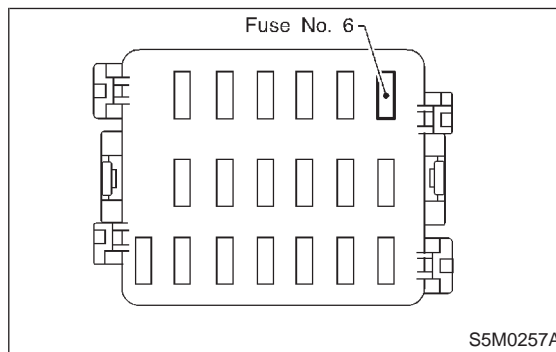
(2I) No. 6 (+) — Chassis ground (-):



- CHECK** : **Is resistance more than 10 kΩ?**
- YES** : Go to step **5J5**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5J5 : FUSE NO. 6 (IN JOINT BOX) INSPECTION

- 1) Turn ignition switch "OFF".
- 2) Remove and visually check fuse No. 6 (in joint box).



- CHECK** : **Is fuse No. 6 blown?**
- YES** : Replace fuse No. 6 if fuse No. 6 blows again, repair body harness.
- NO** : Repair body harness.

K: TROUBLE CODE 31

DIAGNOSIS:

- Front sub sensor harness (RH) circuit is shorted.
- Front sub sensor harness (RH) circuit is open.
- Front sub sensor (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

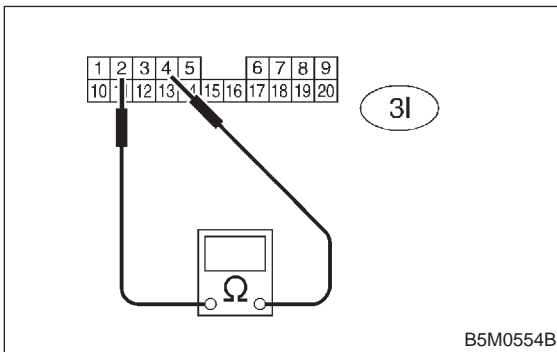
Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground terminal, and then wait at least 20 seconds.

5K1 : FRONT SUB SENSOR (RH) AND FRONT SUB SENSOR HARNESS (RH) INSPECTION

- 1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (11).
- 2) Measure resistance between test harness I or I2 connector (31) terminal.

Connector & terminal

(31) No. 2 — No. 4:



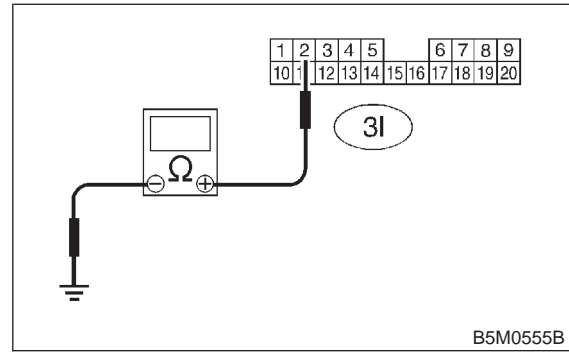
- CHECK** : *Is the resistance between 750 Ω and 1 kΩ?*
- YES** : Go to step 5K2.
- NO** : Go to step 5K4.

5K2 : FRONT SUB SENSOR (RH) AND FRONT SUB SENSOR HARNESS (RH) INSPECTION

Measure resistance across test harness I or I2 connector (31) terminal and chassis ground.

Connector & terminal

(31) No. 2 (+) — Chassis ground (-):



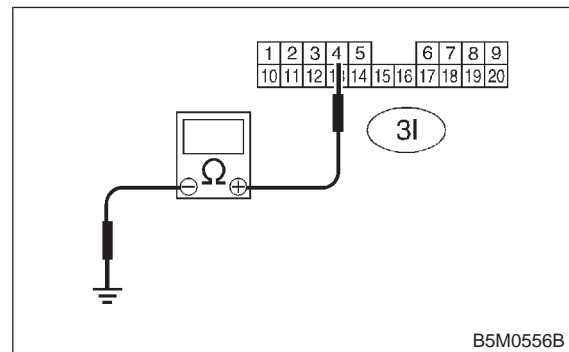
- CHECK** : *Is the resistance more than 10 kΩ?*
- YES** : Go to step 5K3.
- NO** : Go to step 5K4.

5K3 : FRONT SUB SENSOR (RH) AND FRONT SUB SENSOR HARNESS (RH) INSPECTION

Measure resistance across test harness I or I2 connector (31) terminal and chassis ground.

Connector & terminal

(31) No. 4 (+) — Chassis ground (-):

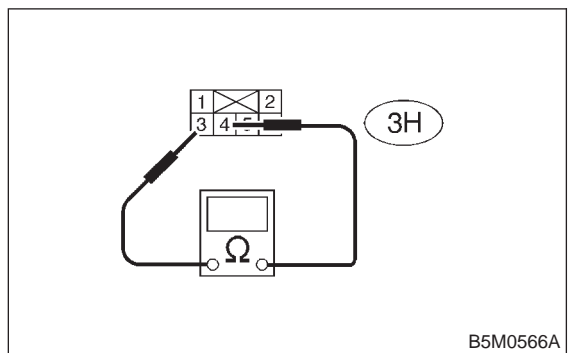


- CHECK** : *Is the resistance more than 10 kΩ?*
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Go to step 5K4.

5K4 : FRONT SUB SENSOR (RH) INSPECTION

- 1) Connect test harness H connector (2H) and front sub sensor (RH).
- 2) Measure resistance between test harness H connector (3H) terminal.

Connector & terminal
(3H) No. 3 — No. 4:

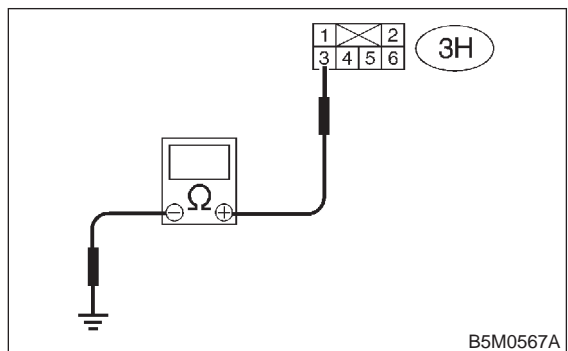


- CHECK** : Is the resistance between 750 Ω and 1 kΩ?
- YES** : Go to step 5K5.
- NO** : Replace front sub sensor (RH). <Ref. to 5-5 [W9A0].>

5K5 : FRONT SUB SENSOR (RH) INSPECTION

Measure resistance across test harness H connector (3H) terminal and chassis ground.

Connector & terminal
(3H) No. 3 (+) — Chassis ground (-):

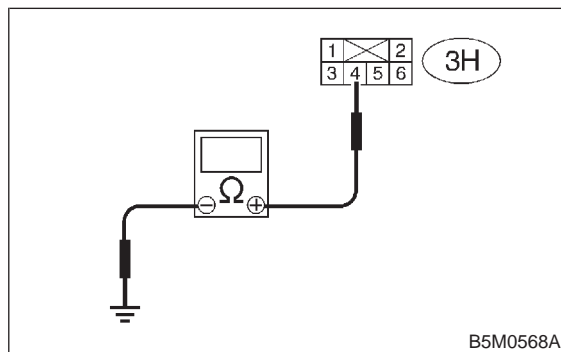


- CHECK** : Is the resistance less than 10 kΩ?
- YES** : Go to step 5K6.
- NO** : Replace front sub sensor (RH). <Ref. to 5-5 [W9A0].>

5K6 : FRONT SUB SENSOR (RH) INSPECTION

Measure resistance across test harness H connector (3H) terminal and chassis ground.

Connector & terminal
(3H) No. 4 (+) — Chassis ground (-):



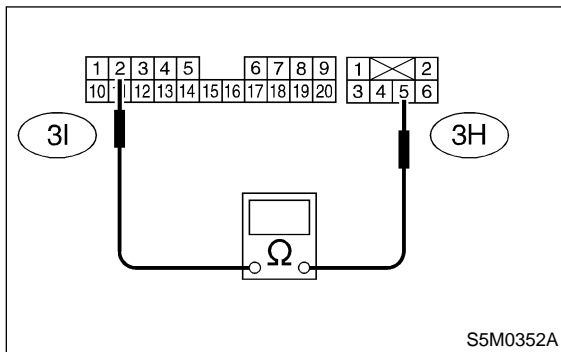
- CHECK** : Is the resistance less than 10 kΩ?
- YES** : Go to step 5K7.
- NO** : Replace front sub sensor (RH). <Ref. to 5-5 [W9A0].>

5K7 : FRONT SUB SENSOR HARNESS (RH) INSPECTION

- 1) Connect test harness I or I2 connector (1I) and connector (AB6).
- 2) Disconnect connector (AB16) from front sub sensor (RH) <Ref. to 5-5 [W9A0].> and then test harness H connector (1H) and connector (AB16).
- 3) Measure resistance between test harness I or I2 connector (3I) terminal and test harness H connector (3H) terminal.

Connector & terminal

(3I) No. 2 — (3H) No. 5:



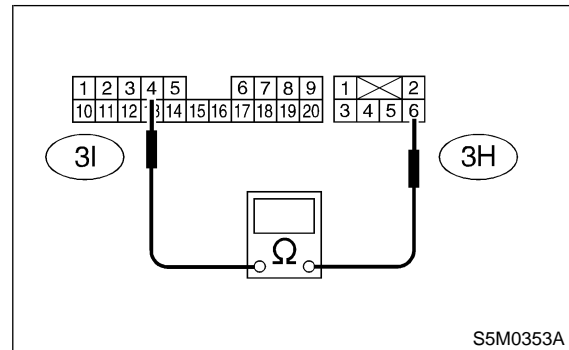
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5K8**.
- NO** : Replace front sub sensor harness (RH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5K8 : FRONT SUB SENSOR HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness H connector (3H) terminal.

Connector & terminal

(3I) No. 4 — (3H) No. 6:



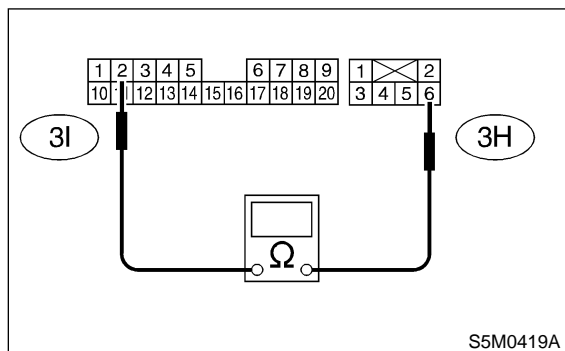
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5K9**.
- NO** : Replace front sub sensor harness (RH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5K9 : FRONT SUB SENSOR HARNESS (RH) INSPECTION

- 1) Connect test harness I or I2 connector (1I) and connector (AB6).
- 2) Disconnect connector (AB16) from front sub sensor (RH) <Ref. to 5-5 [W9A0].> and then test harness H connector (1H) and connector (AB16).
- 3) Measure resistance between test harness I or I2 connector (3I) terminal and test harness H connector (3H) terminal.

Connector & terminal

(3I) No. 2 — (3H) No. 6:



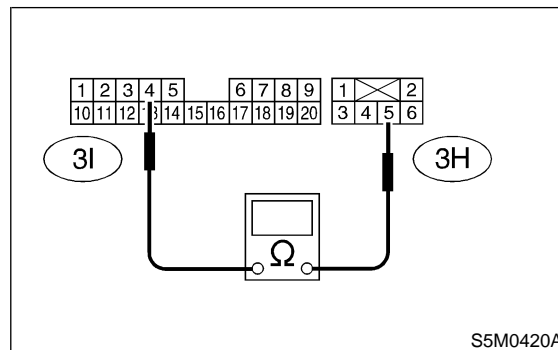
- CHECK** : *Is the resistance more than 1 MΩ?*
- YES** : Go to step **5K10**.
- NO** : Replace front sub sensor harness (RH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5K10 : FRONT SUB SENSOR HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness H connector (3H) terminal.

Connector & terminal

(3I) No. 4 — (3H) No. 5:



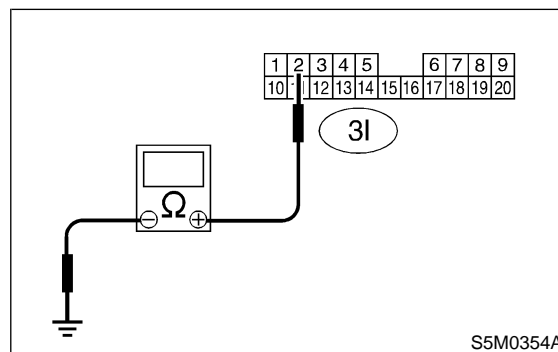
- CHECK** : *Is the resistance more than 1 MΩ?*
- YES** : Go to step **5K11**.
- NO** : Replace front sub sensor harness (RH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5K11 : FRONT SUB SENSOR HARNESS (RH) INSPECTION

Measure resistance across test harness I or I2 connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 2 (+) — Chassis ground (-):



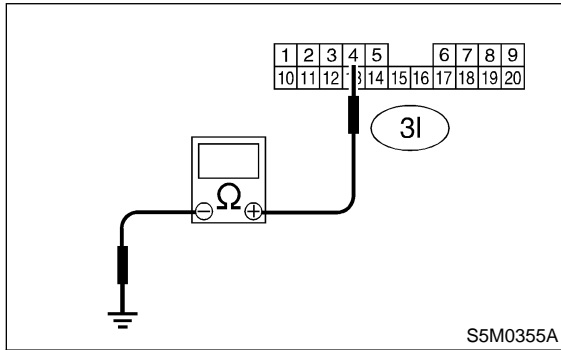
- CHECK** : *Is the resistance more than 10 kΩ?*
- YES** : Go to step **5K12**.
- NO** : Replace front sub sensor harness (RH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5K12 : FRONT SUB SENSOR HARNESS (RH) INSPECTION

Measure resistance across test harness I or I2 connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 4 (+) — Chassis ground (-):



- CHECK** : **Is the resistance more than 10 kΩ?**
- YES** : Go to step **5K13**.
- NO** : Replace front sub sensor harness (RH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5K13 : CHECK POOR CONTACT IN CONNECTORS (AB14) AND (AB15).

Check connectors (AB14) and (AB15).

- CHECK** : **Is there poor contact in connectors (AB14) and (AB15)?**
- YES** : Repair poor contact in connectors (AB14) and (AB15).
- NO** : Replace front sub sensor harness (RH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

L: TROUBLE CODE 32

DIAGNOSIS:

- Front sub sensor harness (LH) circuit is shorted.
- Front sub sensor harness (LH) circuit is open.
- Front sub sensor (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

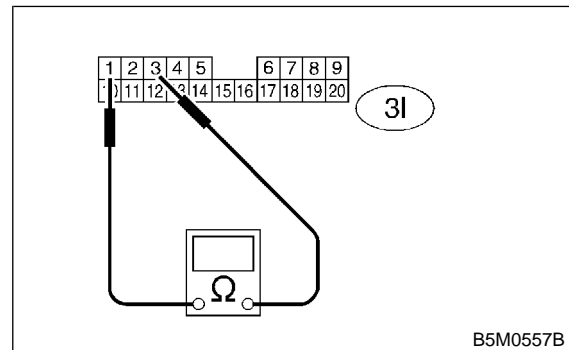
Before performing diagnostics on airbag system, turn ignition switch “OFF”, disconnect battery ground terminal, and then wait at least 20 seconds.

5L1 : FRONT SUB SENSOR (LH) AND FRONT SUB SENSOR HARNESS (LH) INSPECTION

- 1) Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I).
- 2) Measure resistance between test harness I or I2 connector (3I) terminal.

Connector & terminal

(3I) No. 1 — No. 3:



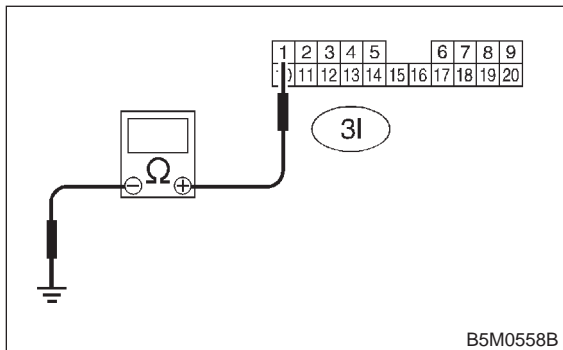
- CHECK** : **Is the resistance between 750 Ω and 1 kΩ?**
- YES** : Go to step **5L2**.
- NO** : Go to step **5L4**.

5L2 : FRONT SUB SENSOR (LH) AND FRONT SUB SENSOR HARNESS (LH) INSPECTION

Measure resistance across test harness I or I2 connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 1 (+) — Chassis ground (-):



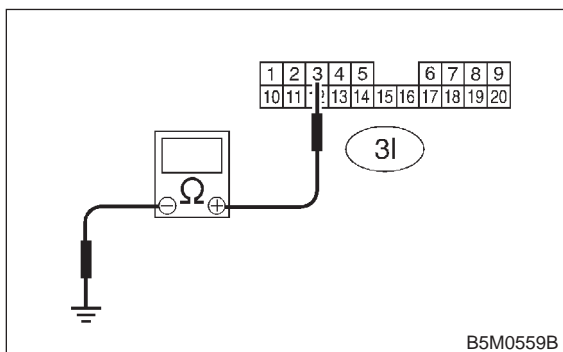
- CHECK** : **Is the resistance more than 10 kΩ?**
- YES** : Go to step 5L3.
- NO** : Go to step 5L4.

5L3 : FRONT SUB SENSOR (LH) AND FRONT SUB SENSOR HARNESS (LH) INSPECTION

Measure resistance across test harness I or I2 connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 3 (+) — Chassis ground (-):



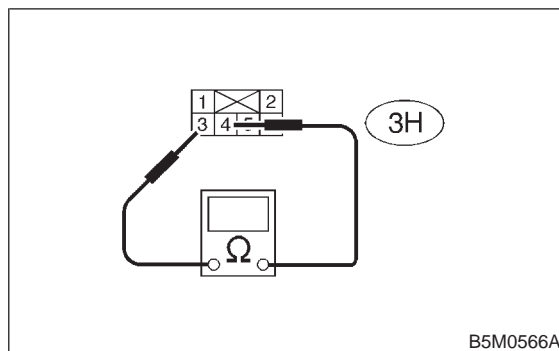
- CHECK** : **Is the resistance more than 10 kΩ?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Go to step 5L4.

5L4 : FRONT SUB SENSOR (LH) INSPECTION

- 1) Connect test harness H connector (2H) and front sub sensor (LH).
- 2) Measure resistance between test harness H connector (3H) terminal.

Connector & terminal

(3H) No. 3 — No. 4:



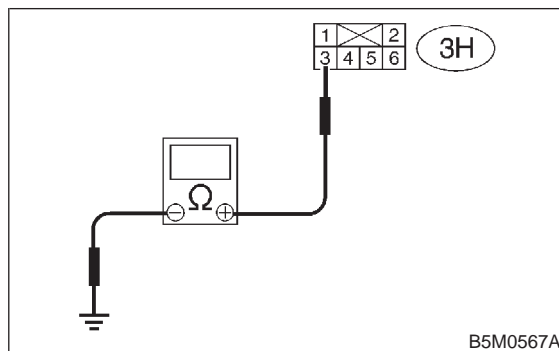
- CHECK** : **Is the resistance between 750 Ω and 1 kΩ?**
- YES** : Go to step 5L5.
- NO** : Replace front sub sensor (LH). <Ref. to 5-5 [W9A0].>

5L5 : FRONT SUB SENSOR (LH) INSPECTION

Measure resistance across test harness H connector (3H) terminal and chassis ground.

Connector & terminal

(3H) No. 3 (+) — Chassis ground (-):



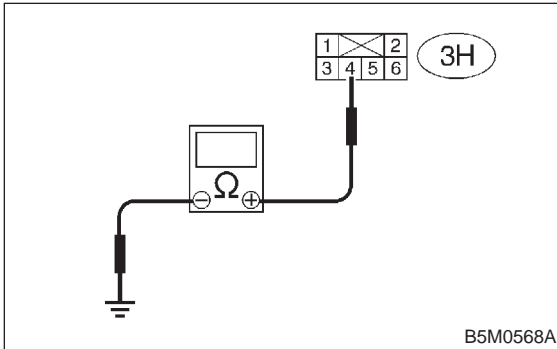
- CHECK** : **Is the resistance less than 10 kΩ?**
- YES** : Go to step 5L6.
- NO** : Replace front sub sensor (LH). <Ref. to 5-5 [W9A0].>

5L6 : FRONT SUB SENSOR (LH) INSPECTION

Measure resistance across test harness H connector (3H) terminal and chassis ground.

Connector & terminal

(3H) No. 4 (+) — Chassis ground (-):



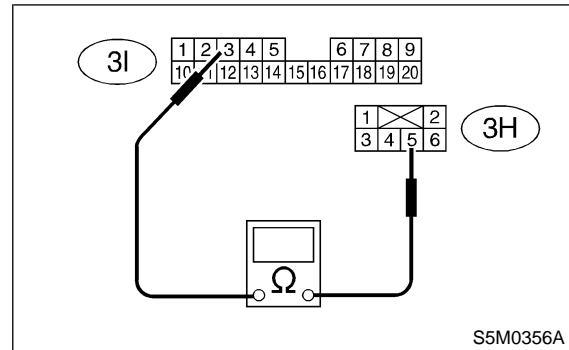
- CHECK** : *Is the resistance less than 10 kΩ?*
- YES** : Go to step 5L7.
- NO** : Replace front sub sensor (LH). <Ref. to 5-5 [W9A0].>

5L7 : FRONT SUB SENSOR HARNESS (LH) INSPECTION

- 1) Connect test harness I or I2 connector (1I) and connector (AB6).
- 2) Disconnect connector (AB13) from front sub sensor (LH) <Ref. to 5-5 [W9A0].> and then test harness H connector (1H) and connector (AB13).
- 3) Measure resistance between test harness I or I2 connector (3I) terminal and test harness H connector (3H) terminal.

Connector & terminal

(3I) No. 3 — (3H) No. 5:



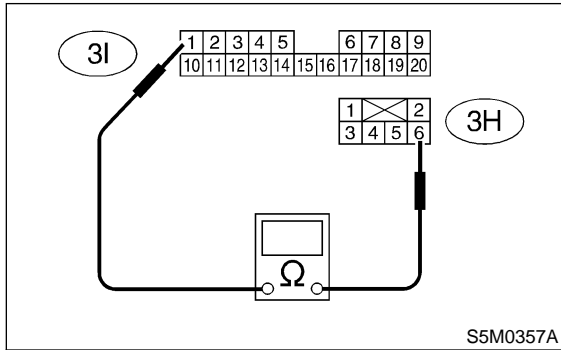
- CHECK** : *Is the resistance less than 10 Ω?*
- YES** : Go to step 5L8.
- NO** : Replace front sub sensor harness (LH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5L8 : FRONT SUB SENSOR HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness H connector (3H) terminal.

Connector & terminal

(3I) No. 1 — (3H) No. 6:



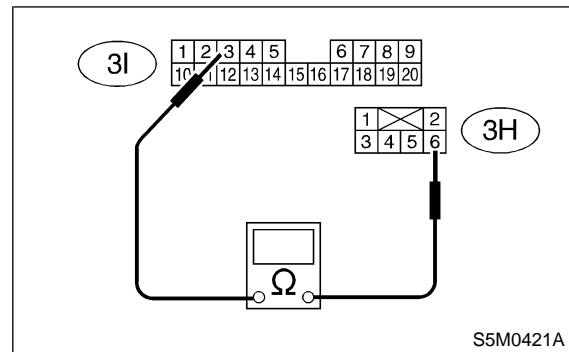
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5L9**.
- NO** : Replace front sub sensor harness (LH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5L9 : FRONT SUB SENSOR HARNESS (LH) INSPECTION

- 1) Connect test harness I or I2 connector (1I) and connector (AB6).
- 2) Disconnect connector (AB13) from front sub sensor (LH) <Ref. to 5-5 [W9A0].> and then test harness H connector (1H) and connector (AB13).
- 3) Measure resistance between test harness I or I2 connector (3I) terminal and test harness H connector (3H) terminal.

Connector & terminal

(3I) No. 3 — (3H) No. 6:



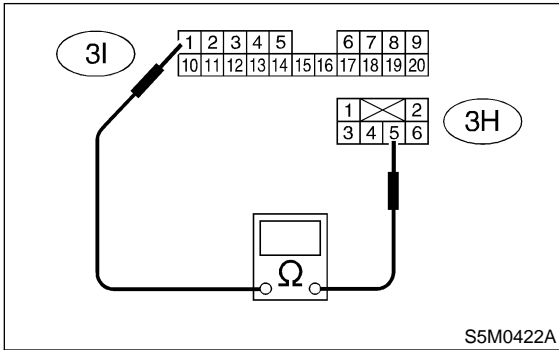
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5L10**.
- NO** : Replace front sub sensor harness (LH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5L10 : FRONT SUB SENSOR HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness H connector (3H) terminal.

Connector & terminal

(3I) No. 1 — (3H) No. 5:



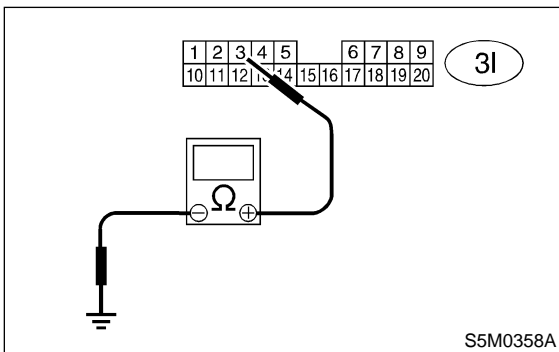
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5L11**.
- NO** : Replace front sub sensor harness (LH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5L11 : FRONT SUB SENSOR HARNESS (LH) INSPECTION

Measure resistance across test harness I or I2 connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 3 (+) — Chassis ground (-):



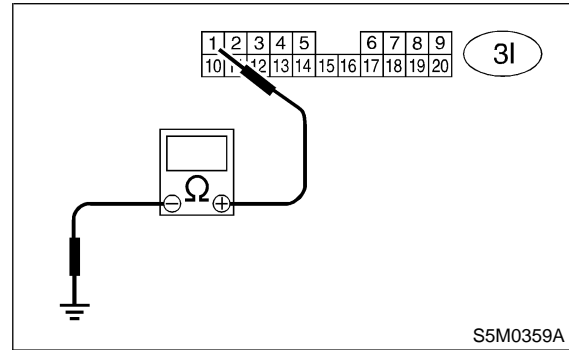
- CHECK** : **Is the resistance more than 10 kΩ?**
- YES** : Go to step **5L12**.
- NO** : Replace front sub sensor harness (LH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5L12 : FRONT SUB SENSOR HARNESS (LH) INSPECTION

Measure resistance across test harness I or I2 connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 1 (+) — Chassis ground (-):



- CHECK** : **Is the resistance more than 10 kΩ?**
- YES** : Go to step **5L13**.
- NO** : Replace front sub sensor harness (LH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

5L13 : CHECK POOR CONTACT IN CONNECTORS (AB11) AND (AB12).

Check connectors (AB11) and (AB12).

- CHECK** : **Is there poor contact in connectors (AB11) and (AB12)?**
- YES** : Repair poor contact in connectors (AB11) and (AB12).
- NO** : Replace front sub sensor harness (LH) <Ref. to 5-5 [W9A0].> and airbag main harness. <Ref. to 5-5 [W4A0].>

M: TROUBLE CODE 41**DIAGNOSIS:**

- Side airbag harness (RH) is faulty.
- Side airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

5M1 : SIDE AIRBAG MODULE INSPECTION

- 1) Disconnect connector (AB24) and (AB25), and then connect connector (AB24) and test harness F connector (1F).
- 2) Connect test harness F connector (3F) and airbag resistor <Ref. to 5-5 [T3G0].>
- 3) Connect battery ground cable and then turn ignition switch ON.

CHECK : **Does the airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**

YES : Replace front seat with side airbag module (RH). <Ref. to 5-3 [W100].>

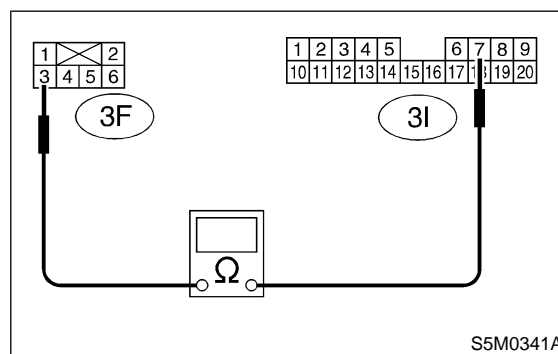
NO : Go to step **5M2**.

5M2 : SIDE AIRBAG HARNESS (RH) INSPECTION

- 1) Turn ignition switch OFF, disconnect battery ground cable and then wait at least 20 seconds.
- 2) Disconnect test harness F and airbag resistor.
- 3) Disconnect connector (AB18) from airbag control module <Ref. to 5-5 [W6A0].> and connect test harness I or I2 connector (1I).
- 4) Measure resistance between test harness I or I2 connector (3I) terminal and test harness F connector (3F) terminal.

Connector & terminal

(3I) No. 7 — (3F) No. 3:



CHECK : **Is the resistance less than 10 Ω?**

YES : Go to step **5M3**.

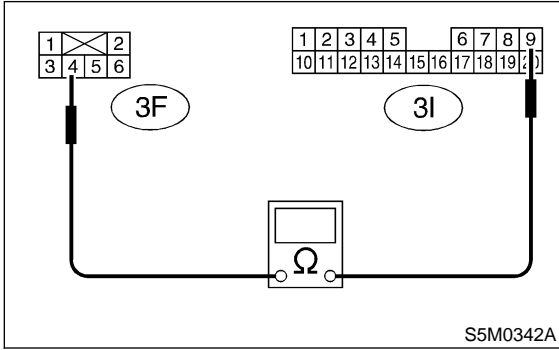
NO : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5M3 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness F connector (3F) terminal.

Connector & terminal

(3I) No. 9 — (3F) No. 4:



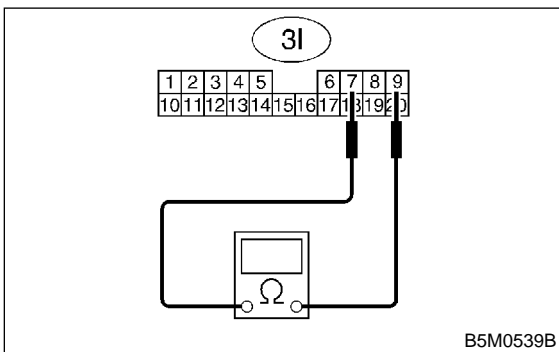
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5M4**.
- NO** : Replace side airbag harness (RH).
<Ref. to 5-5 [W5A0].>

5M4 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance of test harness I or I2 connector (3I) terminal.

Connector & terminal

(3I) No. 7 — No. 9:



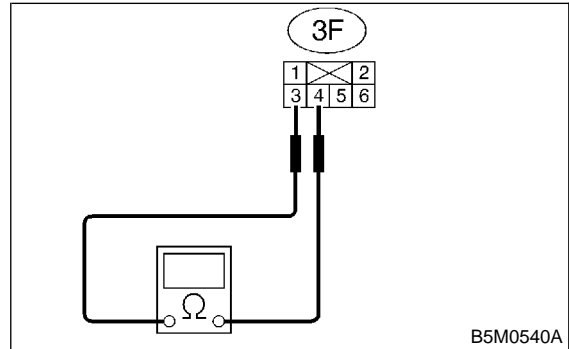
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5M5**.
- NO** : Replace side airbag harness (RH).
<Ref. to 5-5 [W5A0].>

5M5 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance of test harness F connector (3F) terminal.

Connector & terminal

(3F) No. 3 — No. 4:



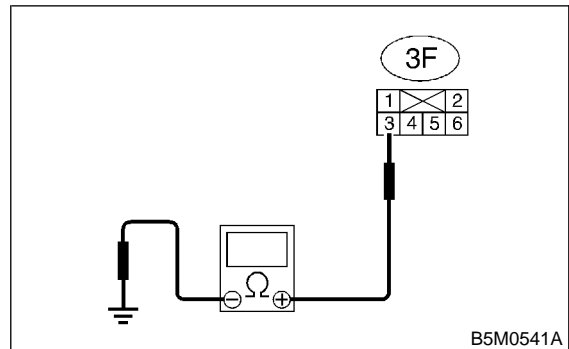
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5M6**.
- NO** : Replace side airbag harness (RH).
<Ref. to 5-5 [W5A0].>

5M6 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between connector (3F) terminal and chassis ground.

Connector & terminal

(3F) No. 3 (+) — Chassis ground (-):



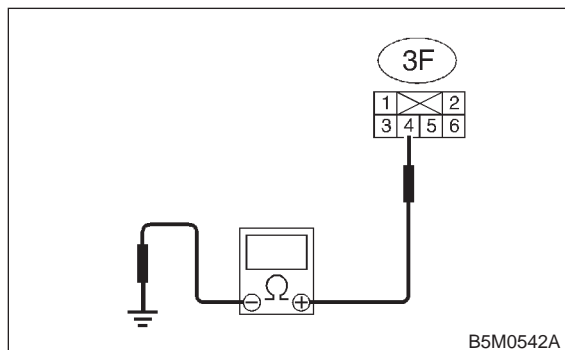
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5M7**.
- NO** : Replace side airbag harness (RH).
<Ref. to 5-5 [W5A0].>

5M7 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between connector (3F) terminal and chassis ground.

Connector & terminal

(3F) No. 4 (+) — Chassis ground (-):



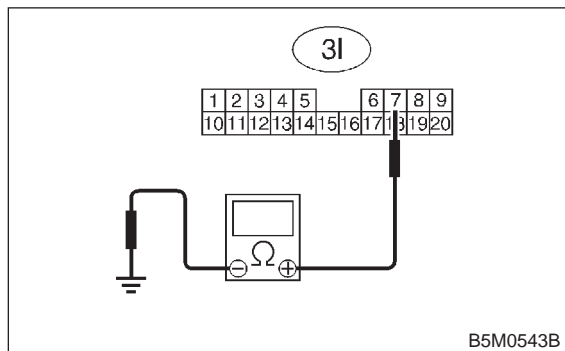
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5M8**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5M8 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 7 (+) — Chassis ground (-):



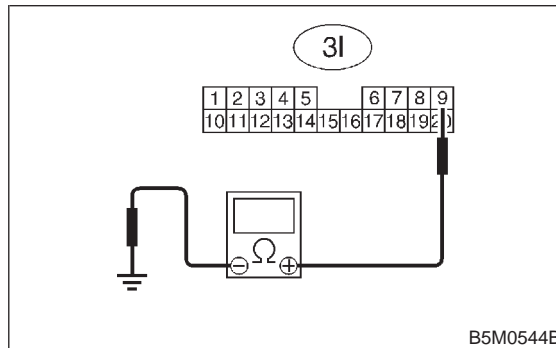
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5M9**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5M9 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 9 (+) — Chassis ground (-):



- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

N: TROUBLE CODE 42**DIAGNOSIS:**

- Side airbag harness (LH) is faulty.
- Side airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

5N1 : SIDE AIRBAG MODULE INSPECTION

- 1) Disconnect connector (AB19) and (AB20), and then connect connector (AB19) and test harness F connector (1F).
- 2) Connect test harness F connector (3F) and airbag resistor. <Ref. to 5-5 [T3G0].>
- 3) Connect battery ground cable and then turn ignition switch ON.

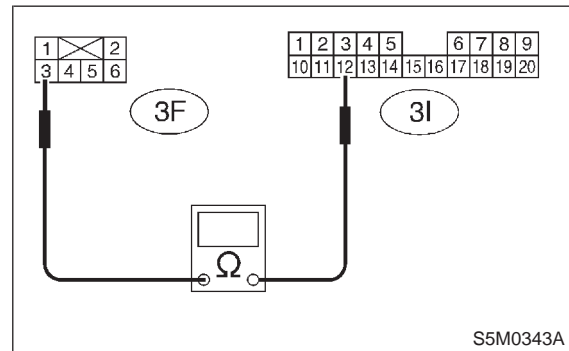
- CHECK** : **Does the airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**
- YES** : Replace front seat with side airbag module (LH). <Ref. to 5-3 [W100].>
- NO** : Go to step **5N2**.

5N2 : SIDE AIRBAG HARNESS (LH) INSPECTION

- 1) Turn ignition switch OFF, disconnect battery ground cable and then wait at least 20 seconds.
- 2) Disconnect test harness F and airbag resistor.
- 3) Disconnect connector (AB17) from airbag control module <Ref. to 5-5 [W6A0].> and connect test harness I or I2 connector (1I).
- 4) Measure resistance between test harness I or I2 connector (3I) terminal and test harness F connector (3F) terminal.

Connector & terminal

(3I) No. 12 — (3F) No. 3:



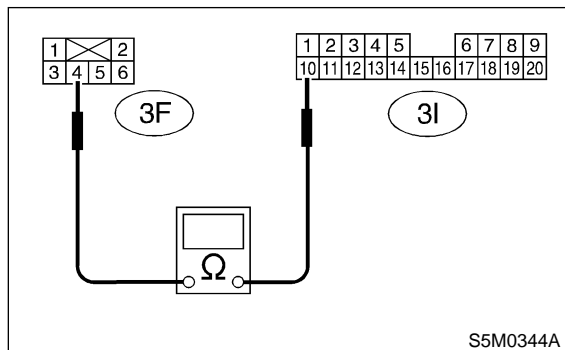
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5N3**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5N3 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness F connector (3F) terminal.

Connector & terminal

(3I) No. 10 — (3F) No. 4:



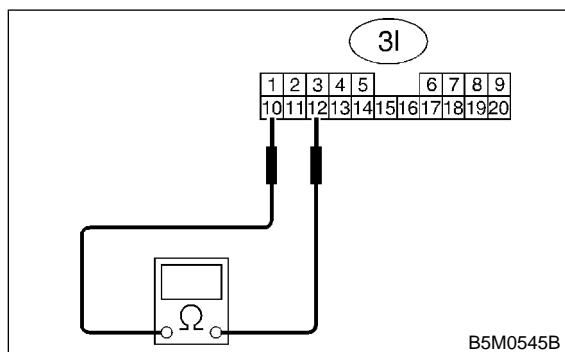
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5N4.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5N4 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance of test harness I or I2 connector (3I) terminal.

Connector & terminal

(3I) No. 10 — No. 12:



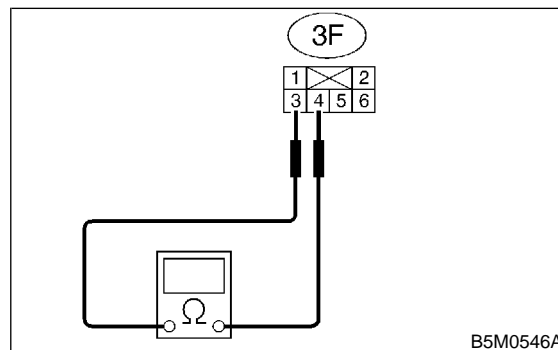
- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 5N5.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5N5 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance of test harness F connector (3F) terminal.

Connector & terminal

(3F) No. 3 — No. 4:



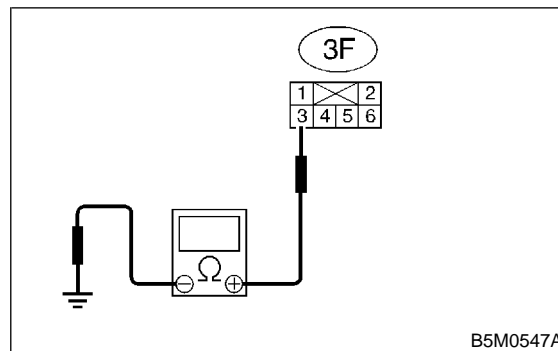
- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 5N6.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5N6 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between connector (3F) terminal and chassis ground.

Connector & terminal

(3F) No. 3 (+) — Chassis ground (-):



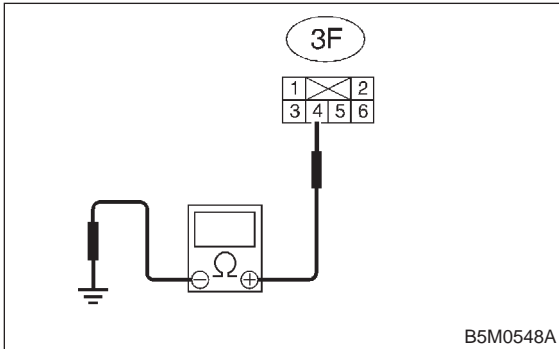
- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 5N7.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5N7 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between connector (3F) terminal and chassis ground.

Connector & terminal

(3F) No. 4 (+) — Chassis ground (-):



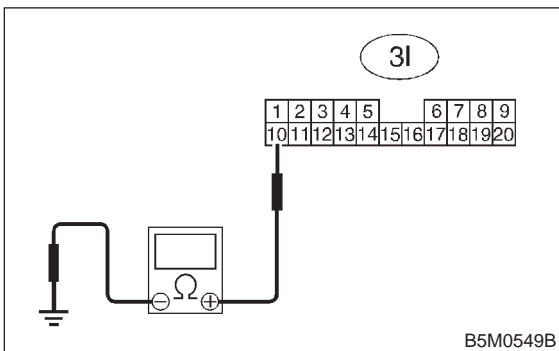
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5N8**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5N8 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 10 (+) — Chassis ground (-):



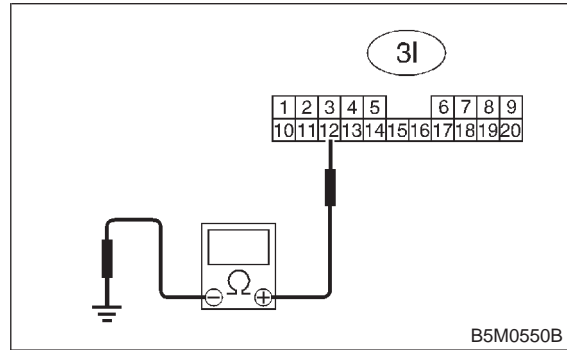
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5N9**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5N9 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 12 (+) — Chassis ground (-):



- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

O: TROUBLE CODE 45**DIAGNOSIS:**

- Side airbag harness (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

501 : SIDE AIRBAG MODULE INSPECTION

1) Disconnect connector (AB24) and (AB25), and then connect connector (AB24) and test harness F connector (1F).

2) Connect test harness F connector (3F) and airbag resistor <Ref. to 5-5 [T3G0].>

3) Connect battery ground cable and then turn ignition switch ON.

CHECK : *Does the airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?*

YES : Replace front seat with side airbag module (RH). <Ref. to 5-3 [W100].>

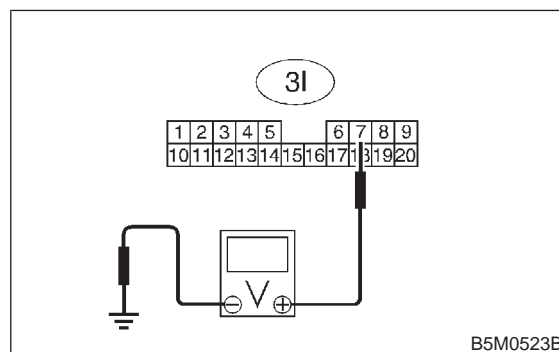
NO : Go to step **502**.

502 : SIDE AIRBAG HARNESS (RH) INSPECTION

- 1) Turn ignition switch OFF, disconnect battery ground cable and then wait at least 20 seconds.
- 2) Disconnect test harness F and airbag resistor.
- 3) Disconnect connector (AB18) from airbag control module and connect it to test harness I or I2 connector (1I).
- 4) Connect battery ground cable and turn ignition switch ON. (engine off)
- 5) Measure voltage across connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 7 (+) — Chassis ground (-):



CHECK : *Is the voltage less than 1 V?*

YES : Go to step **503**.

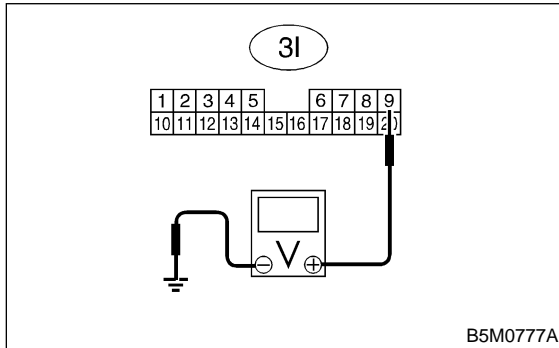
NO : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

503 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure voltage across connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 9 (+) — Chassis ground (-):



- CHECK** : **Is the voltage less than 1 V?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

P: TROUBLE CODE 46

DIAGNOSIS:

- Side airbag harness (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

5P1 : SIDE AIRBAG MODULE INSPECTION

- 1) Disconnect connector (AB19) and (AB20), and then connect connector (AB19) and test harness F connector (1F).
- 2) Connect test harness F connector (3F) and airbag resistor. <Ref. to 5-5 [T3G0].>
- 3) Connect battery ground cable and then turn ignition switch ON.

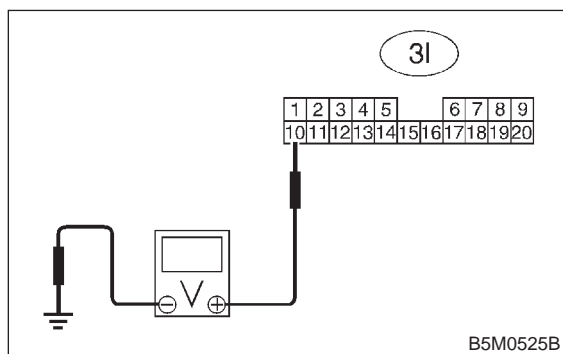
- CHECK** : **Does the airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**
- YES** : Replace front seat with side airbag module (LH). <Ref. to 5-3 [W100].>
- NO** : Go to step **5P2**.

5P2 : SIDE AIRBAG HARNESS (LH) INSPECTION

- 1) Turn ignition switch OFF, disconnect battery ground cable and then wait at least 20 seconds.
- 2) Disconnect test harness F and airbag resistor.
- 3) Disconnect connector (AB17) from airbag control module and connect it to test harness I or I2 connector (11).
- 4) Connect battery ground cable and turn ignition switch ON. (engine off)
- 5) Measure voltage across connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 10 (+) — Chassis ground (-):



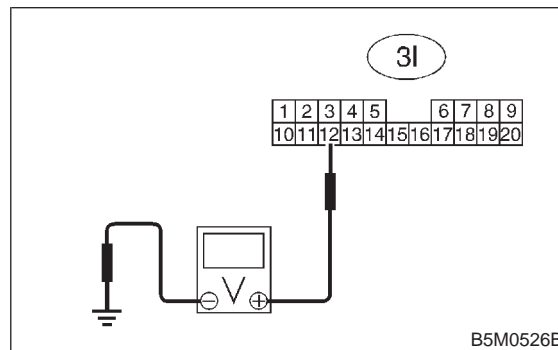
- CHECK** : **Is the voltage less than 1 V?**
- YES** : Go to step **5P3**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5P3 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure voltage across connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 12 (+) — Chassis ground (-):



- CHECK** : **Is the voltage less than 1 V?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

Q: TROUBLE CODE 51

DIAGNOSIS:

- Side airbag sensor (RH) is faulty.
- Side airbag harness (RH) is faulty.

CAUTION:

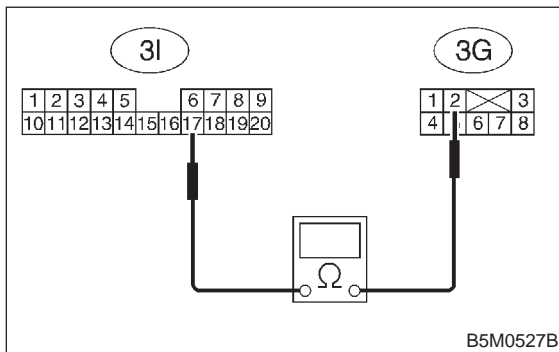
Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

5Q1 : SIDE AIRBAG HARNESS (RH) INSPECTION

- 1) Disconnect connector (AB24) and (AB25) at below front seat on RH side.
- 2) Disconnect connector (AB18) from airbag control module and connect it to test harness I or I2 connector (1I).
- 3) Disconnect connector (AB28) from side airbag sensor (RH) and connect it to test harness G connector (1G).
- 4) Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 17 — (3G) No. 2:



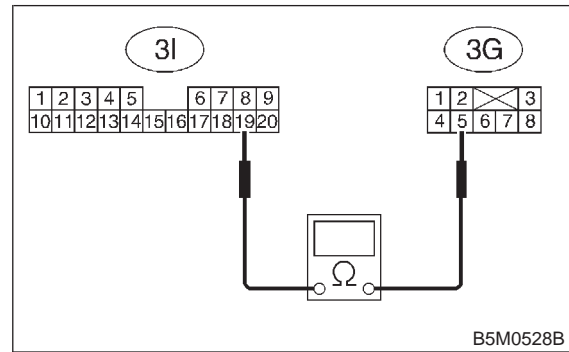
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5Q2.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q2 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 19 — (3G) No. 5:



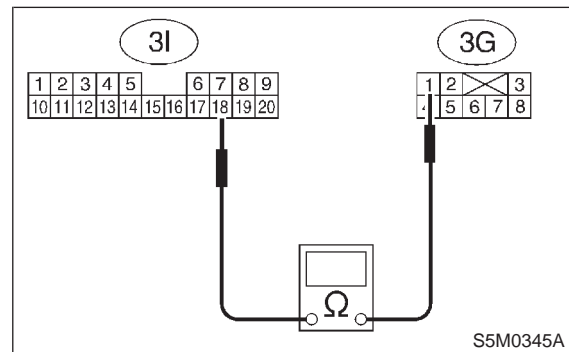
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5Q3.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q3 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 18 — (3G) No. 1:



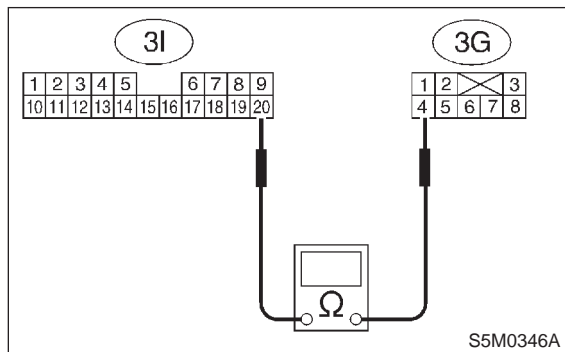
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5Q4.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q4 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 20 — (3G) No. 4:



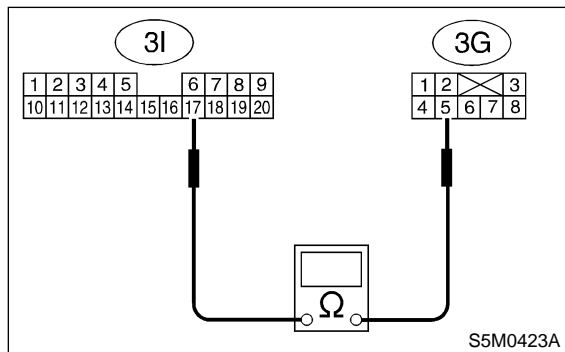
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5Q5**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q5 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 17 — (3G) No. 5:



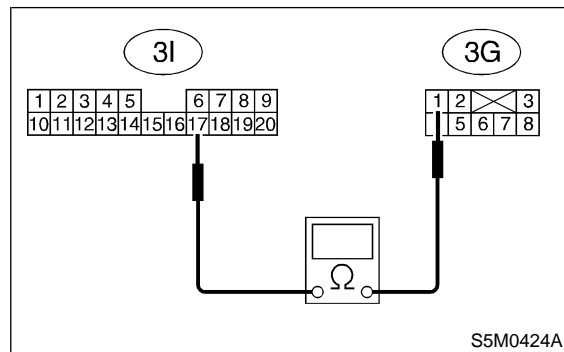
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q6**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q6 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 17 — (3G) No. 1:



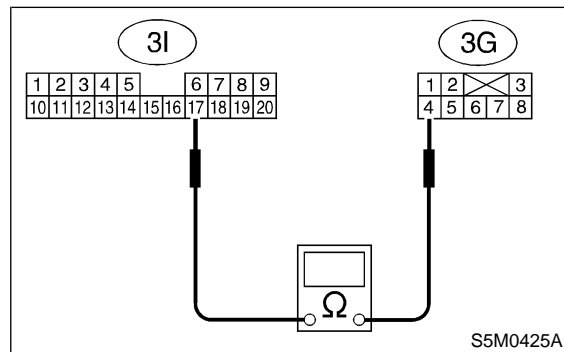
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q7**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q7 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 17 — (3G) No. 4:



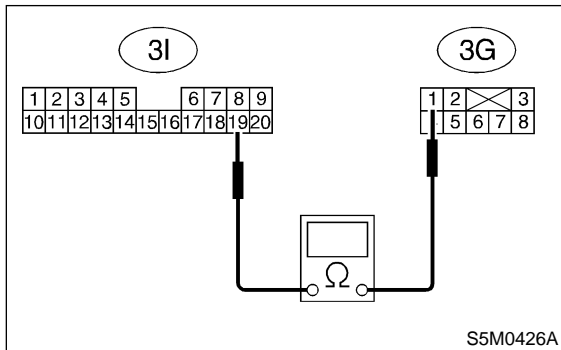
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q8**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q8 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 19 — (3G) No. 1:



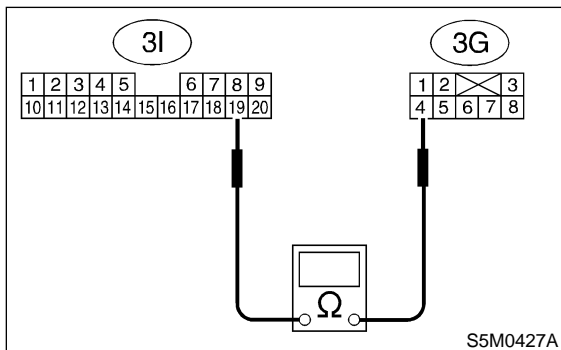
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q9**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q9 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 19 — (3G) No. 4:



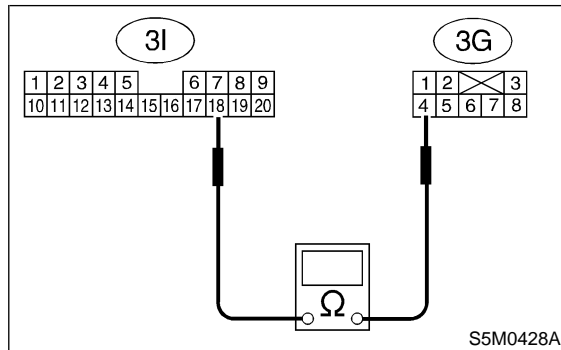
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q10**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q10 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 18 — (3G) No. 7:



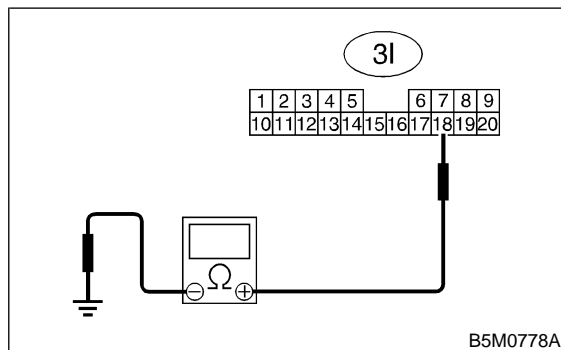
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q11**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q11 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 18 (+) — Chassis ground (-):



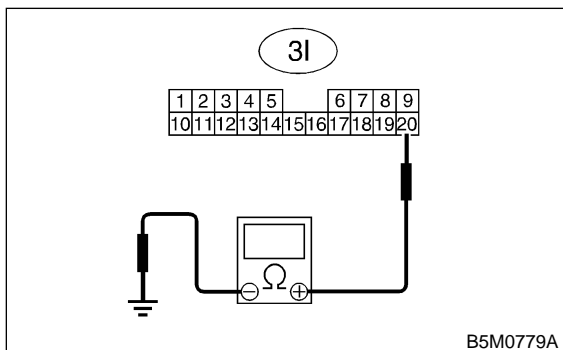
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q12**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q12 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 20 (+) — Chassis ground (-):



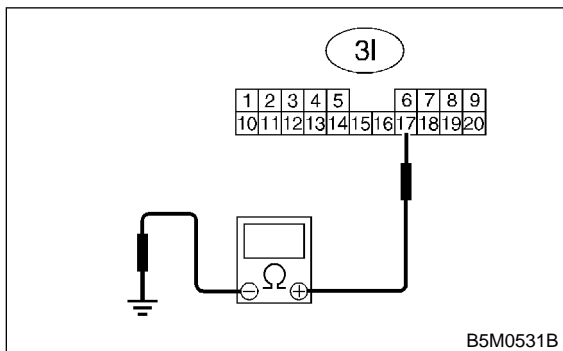
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q13**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q13 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 17 (+) — Chassis ground (-):



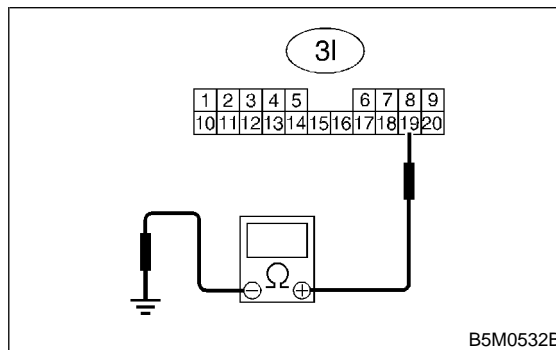
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5Q14**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q14 : SIDE AIRBAG HARNESS (RH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 19 (+) — Chassis ground (-):



- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Replace side airbag sensor (RH). <Ref. to 5-5 [W7A0].> Go to step **5Q15**.
- NO** : Replace side airbag harness (RH). <Ref. to 5-5 [W5A0].>

5Q15 : SIDE AIRBAG HARNESS (RH) INSPECTION

- 1) Connect connector (AB24) and (AB25).
- 2) Connect connector (AB18) and airbag control module.
- 3) Connect connector (AB28) and side airbag sensor.
- 4) Connect battery ground cable and then turn ignition switch to ON (engine OFF).

- CHECK** : **Does the airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**
- YES** : Perform clear memory. <Ref. to 5-5 [T4C0].>
- NO** : Replace airbag control module. <Ref. to 5-5 [W6A0].>

R: TROUBLE CODE 52

DIAGNOSIS:

- Side airbag sensor (LH) is faulty.
- Side airbag harness (LH) is faulty.

CAUTION:

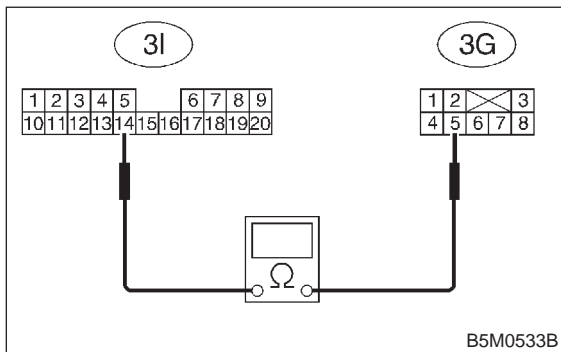
Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

5R1 : SIDE AIRBAG HARNESS (LH) INSPECTION

- 1) Disconnect connector (AB19) and (AB20) at below front seat on LH side.
- 2) Disconnect connector (AB17) from airbag control module and connect it to test harness I or I2 connector (1I).
- 3) Disconnect connector (AB23) from side airbag sensor (LH) and connect it to test harness G connector (1G).
- 4) Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 14 — (3G) No. 5:



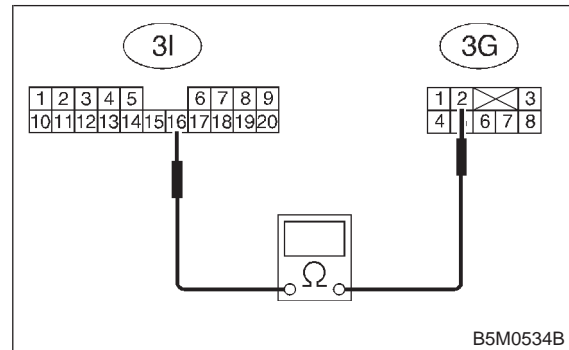
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5R2.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R2 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 16 — (3G) No. 2:



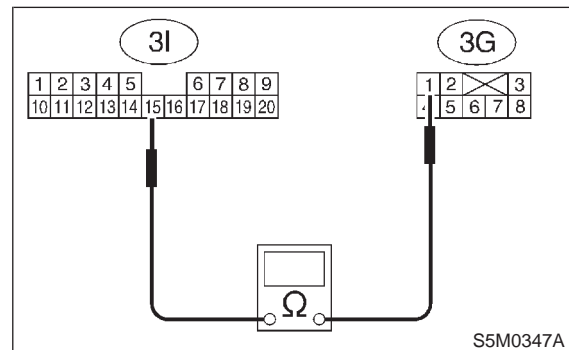
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5R3.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R3 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 15 — (3G) No. 1:



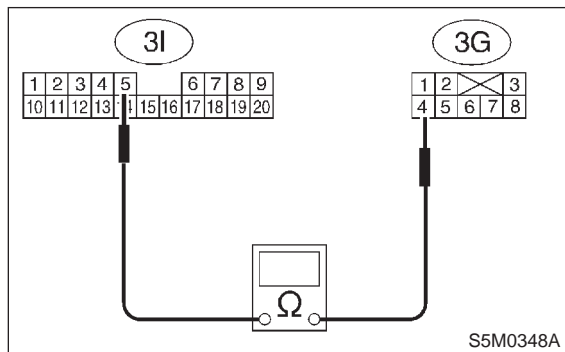
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5R4.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R4 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 5 — (3G) No. 4:



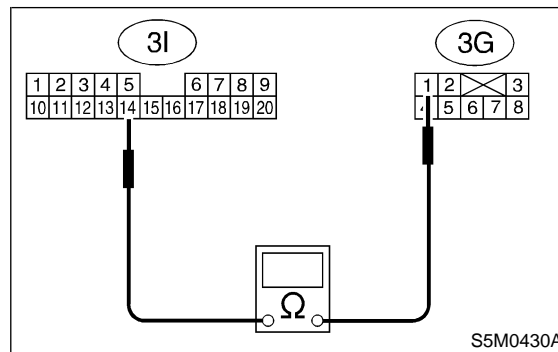
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5R5**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R6 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 14 — (3G) No. 1:



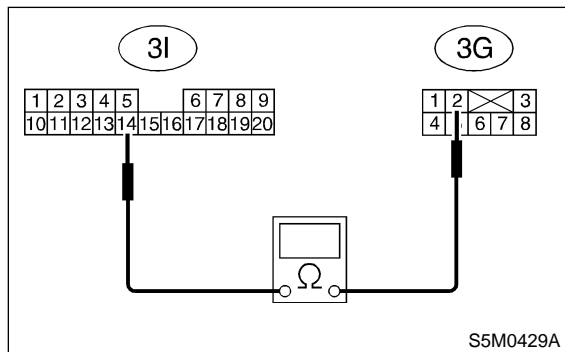
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5R7**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R5 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 14 — (3G) No. 2:



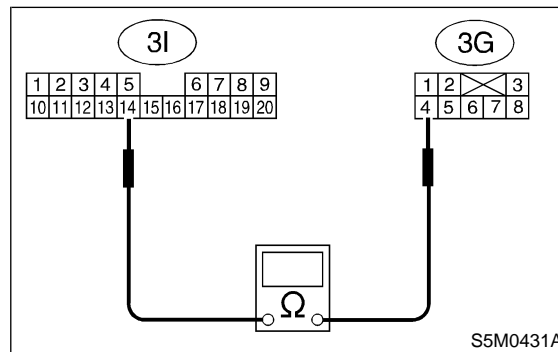
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5R6**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R7 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 14 — (3G) No. 4:



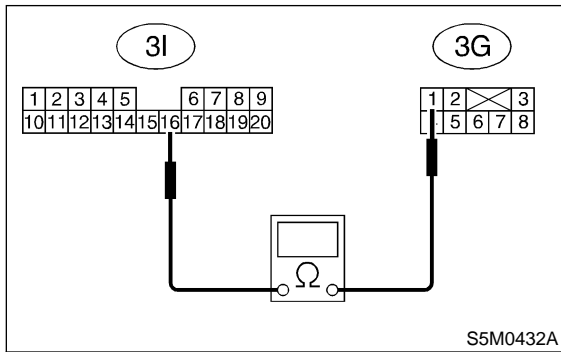
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5R8**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R8 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 16 — (3G) No. 1:



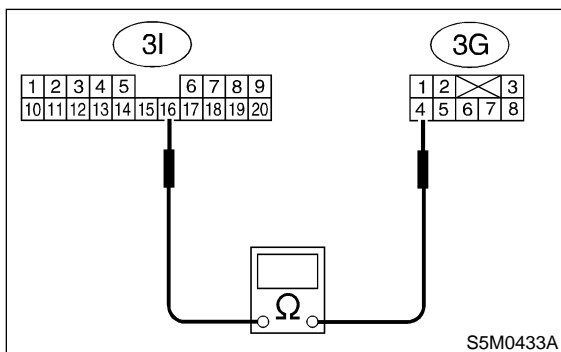
- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 5R9.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R9 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 16 — (3G) No. 4:



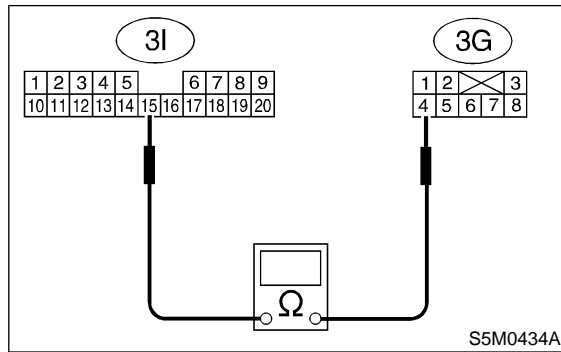
- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 5R10.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R10 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between test harness I or I2 connector (3I) terminal and test harness G connector (3G) terminal.

Connector & terminal

(3I) No. 15 — (3G) No. 4:



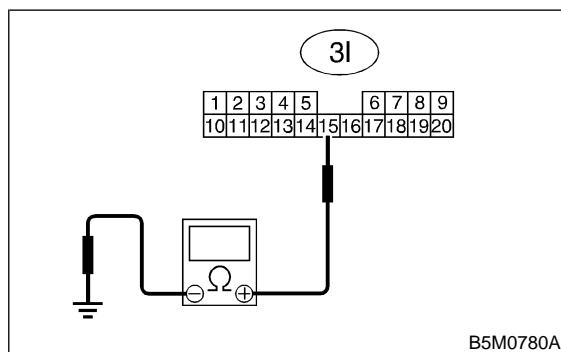
- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 5R11.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R11 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between connector (3G) terminal and chassis ground.

Connector & terminal

(3I) No. 15 (+) — Chassis ground (-):



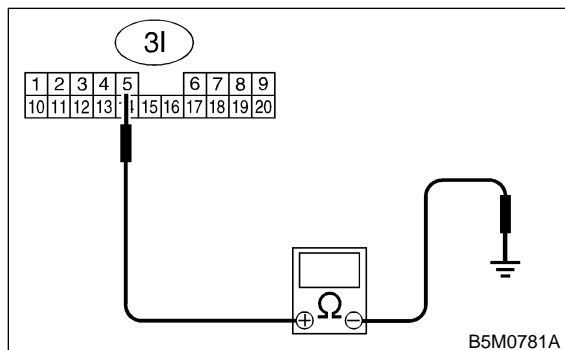
- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 5R12.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R12 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 5 (+) — Chassis ground (-):



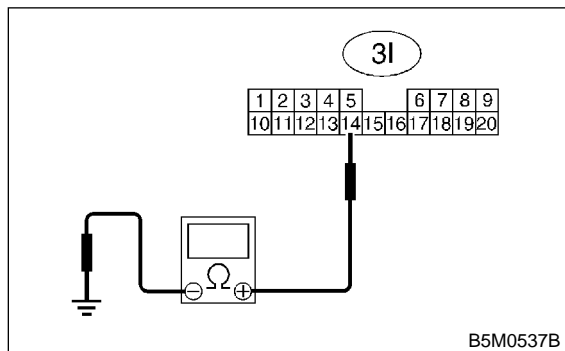
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5R13**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R13 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 14 (+) — Chassis ground (-):



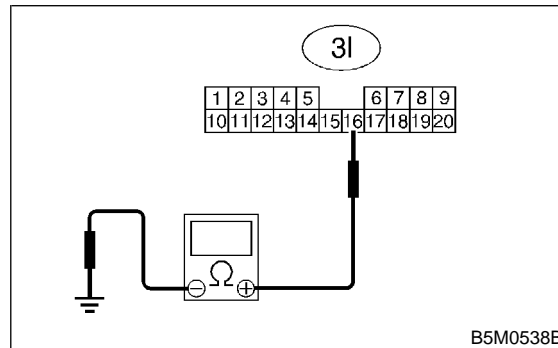
- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **5R14**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R14 : SIDE AIRBAG HARNESS (LH) INSPECTION

Measure resistance between connector (3I) terminal and chassis ground.

Connector & terminal

(3I) No. 16 (+) — Chassis ground (-):



- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Replace side airbag sensor (LH). <Ref. to 5-5 [W7A0].> Go to step **5R15**.
- NO** : Replace side airbag harness (LH). <Ref. to 5-5 [W5A0].>

5R15 : SIDE AIRBAG HARNESS (LH) INSPECTION

- 1) Connect connector (AB19) and (AB20).
- 2) Connect connector (AB17) and airbag control module.
- 3) Connect connector (AB23) and side airbag sensor.
- 4) Connect battery ground cable and then turn ignition switch to ON (engine OFF).

- CHECK** : **Does the airbag warning light go off after about 7 seconds and remain off for more than 30 seconds?**
- YES** : Perform clear memory. <Ref. to 5-5 [T4C0].>
- NO** : Replace airbag control module. <Ref. to 5-5 [W6A0].>

S: TROUBLE CODE 53**DIAGNOSIS:**

Side airbag sensor (RH) is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground terminal, and then wait at least 20 seconds.

5S1 : CHECK IF TROUBLE CODE 53 IS INDICATED.

Confirm flashing trouble code according to "BASIC DIAGNOSTICS PROCEDURE". <Ref. to 5-5 [T4A0].>

- CHECK** : *Is airbag warning light trouble code 53 indicated?*
- YES** : Replace side airbag sensor (RH). <Ref. to 5-5 [W7A0].>
- NO** : Perform clear memory. <Ref. to 5-5 [T4C0].>

T: TROUBLE CODE 54**DIAGNOSIS:**

Side airbag sensor (LH) is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground terminal, and then wait at least 20 seconds.

5T1 : CHECK IF TROUBLE CODE 54 IS INDICATED.

Confirm flashing trouble code according to "BASIC DIAGNOSTICS PROCEDURE". <Ref. to 5-5 [T4A0].>

- CHECK** : *Is airbag warning light trouble code 54 indicated?*
- YES** : Replace side airbag sensor (LH). <Ref. to 5-5 [W7A0].>
- NO** : Perform clear memory. <Ref. to 5-5 [T4C0].>

U: TROUBLE CODE 55**DIAGNOSIS:**

Side airbag module is inflated.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

5U1 : CHECK IF TROUBLE CODE 55 IS INDICATED.

Confirm flashing trouble code according to "BASIC DIAGNOSTICS PROCEDURE". <Ref. to 5-5 [T4A0].>

- CHECK** : *Is airbag warning light trouble code 55 indicated?*
- YES** : Replace front seat with side airbag module (Operating side) <Ref. to 5-3 [W100].>, side airbag sensor (Operating side) <Ref. to 5-5 [W7A0].> and airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Perform clear memory. <Ref. to 5-5 [T4C0].>

V: AIRBAG WARNING LIGHT REMAINS ON.**DIAGNOSIS:**

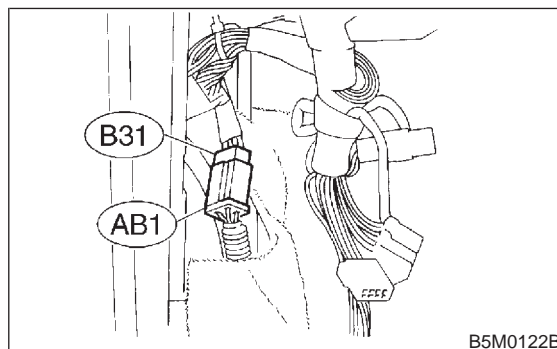
- Airbag warning light is faulty.
- Airbag control module to airbag warning light harness circuit is shorted or open.
- Grounding circuit is faulty.
- Airbag control module is faulty.
- (AB1) and (B31) are not connected properly.
- (AB6) is not connected properly to airbag control module.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.

5V1 : CHECK POOR CONTACT IN CONNECTORS (AB1) AND (B31).

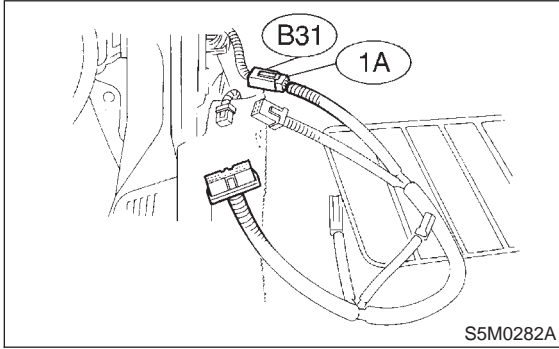
- 1) Remove front pillar lower trim (Driver side).
- 2) Check poor contact in connectors (AB1) and (B31).



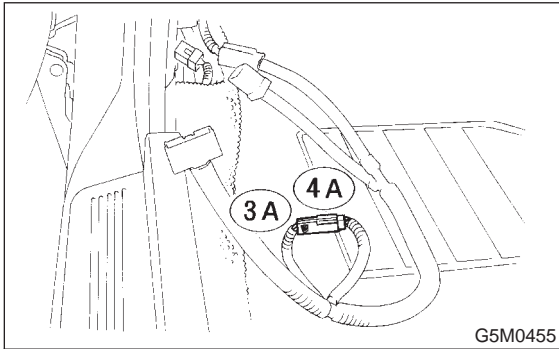
- CHECK** : *Is there poor contact in double lock of connectors (AB1) and (B31)?*
- YES** : Repair poor contact in double lock of connectors (AB1) and (B31).
- NO** : Go to step **5V2**.

5V2 : INSPECTION OF AIRBAG WARNING LIGHT

1) Turn ignition switch "OFF" and connect body harness connector (B31) to test connector A connector (1A).



2) Connect battery ground cable and turn ignition switch "ON", (engine off) and connect connectors (3A) and (4A).



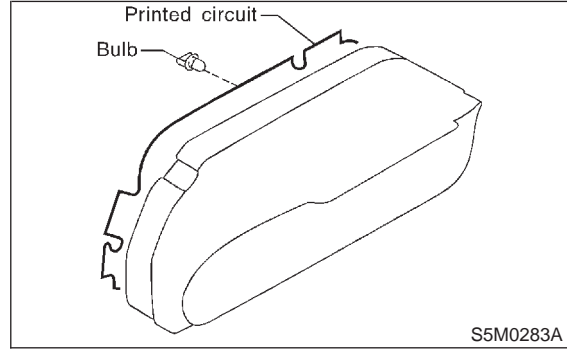
- CHECK** : Does the airbag warning light come off?
- YES** : Go to step 5V4.
- NO** : Go to step 5V3.

5V3 : INSPECTION OF BODY HARNESS

Check body harness.

NOTE:

After problem has been eliminated, disconnect connectors (3A) and (4A).



- CHECK** : Is there anything unusual to body harness?
- YES** : Repair body harness.
- NO** : Replace airbag warning light bulb <Ref. to 6-2 [W8B0].> or combination meter printed circuit.

5V4 : CHECK POOR CONTACT IN CONNECTOR (AB6).

Check connector (AB6) connected to airbag control module. <Ref. to 5-5 [W6A0].>

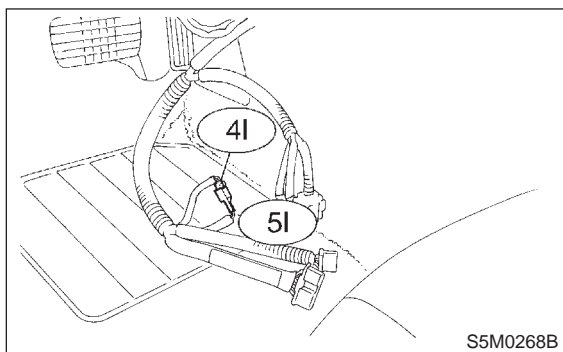
- CHECK** : Is there poor contact in connector (AB6)?
- YES** : Repair poor contact in connector (AB6).
- NO** : Go to step 5V5.

5V5 : INSPECTION OF AIRBAG MAIN HARNESS

- 1) Turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds, and re-connect connectors (AB1) and (B31).
- 2) Remove instrument panel lower cover and disconnect (AB3) with (AB8) and (AB9) with (AB10), then disconnect connector (AB6) from airbag control module, <Ref. to 5-5 [W6A0].> and connect it to test harness I or I2 connector (1I).
- 3) Connect battery ground cable and turn ignition switch "ON", (engine off) and connect connectors (4I) and (5I).

NOTE:

After problem has been eliminated, disconnect connectors (4I) and (5I).



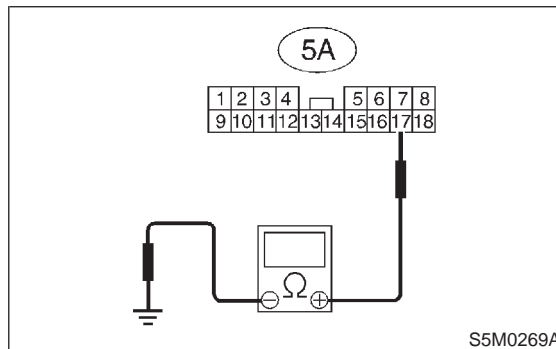
- CHECK** : Does the airbag warning light come off?
- YES** : Go to step 5V6.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5V6 : GROUNDING CIRCUIT INSPECTION

- 1) Turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.
- 2) Disconnect connector (AB1) from body harness connector (B31), and connect connector (B31) to test harness A connector (1A).
- 3) Measure resistance between connector (5A) terminal and chassis ground.

Connector & terminal

(5A) No. 17 (+) — Chassis ground (-):



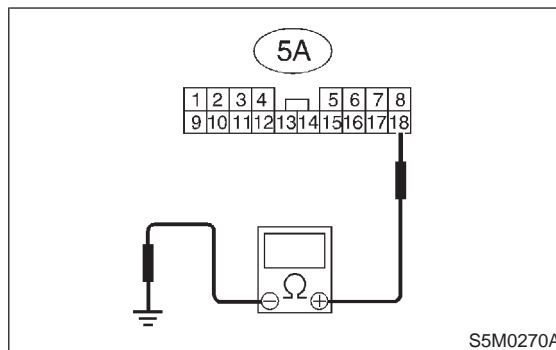
- CHECK** : Is resistance less than 10 Ω?
- YES** : Go to step 5V7.
- NO** : Repair body grounding circuit.

5V7 : GROUNDING CIRCUIT INSPECTION

Measure resistance between connector (5A) terminal and chassis ground.

Connector & terminal

(5A) No. 18 (+) — Chassis ground (-):



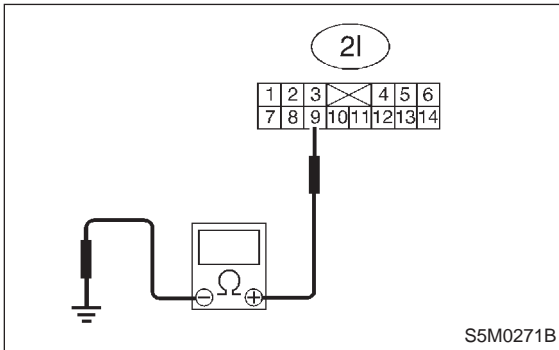
- CHECK** : Is resistance less than 10 Ω?
- YES** : Go to step 5V8.
- NO** : Repair body grounding circuit.

5V8 : INSPECTION OF AIRBAG MAIN HARNESS

- 1) Connect connectors (AB1) and (B31). Disconnect connector (AB6) from airbag control module <Ref. to 5-5 [W6A0].>, and connect it to test harness I or I2 connector (1I).
- 2) Measure resistance between each test harness I or I2 connector (2I) terminal and chassis ground.

Connector & terminal

(2I) No. 9 (+) — Chassis ground (-):



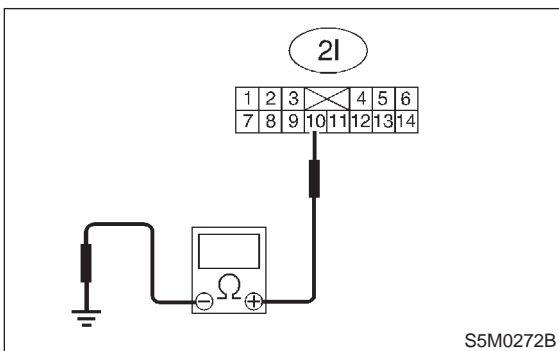
- CHECK** : **Is resistance less than 10 Ω?**
- YES** : Go to step **5V9**.
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

5V9 : INSPECTION OF AIRBAG MAIN HARNESS

Measure resistance between each test harness I or I2 connector (2I) terminal and chassis ground.

Connector & terminal

(2I) No. 10 (+) — Chassis ground (-):



- CHECK** : **Is resistance less than 10 Ω?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

W: AIRBAG WARNING LIGHT REMAINS OFF.

DIAGNOSIS:

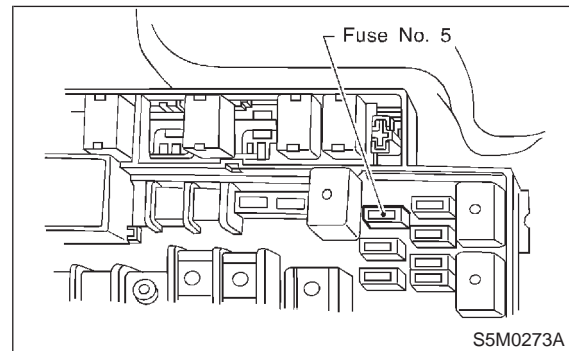
- Fuse No. 5 (in main fuse box) is blown.
- Body harness circuit is open.
- Airbag warning light is faulty.
- Airbag main harness is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch “OFF”, disconnect battery ground terminal, and then wait at least 20 seconds.

5W1 : FUSE NO. 5 (IN MAIN FUSE BOX) INSPECTION

Remove and visually check fuse No. 5 (In main fuse box).



- CHECK** : **Is fuse No. 5 blown?**
- YES** : Replace fuse No. 5. If fuse No. 5 blows again, Go to step **5W2**.
- NO** : Go to step **5W2**.

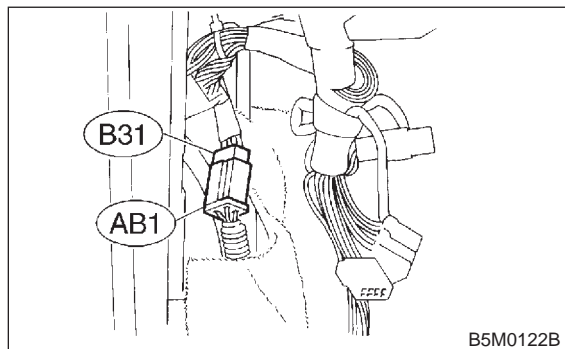
5W2 : BODY HARNESS INSPECTION

Turn ignition switch “ON” (engine off) to make sure other warning lights (in combination meter) illuminate.

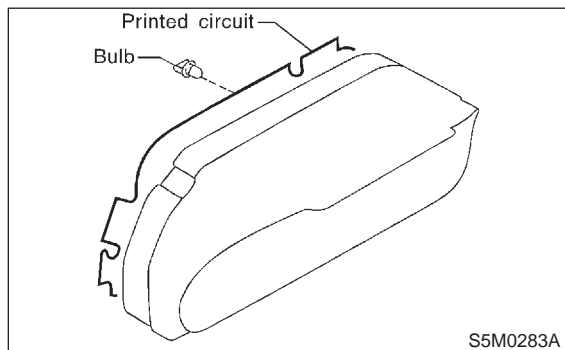
- CHECK** : **Do all the warning lights (in combination meter) except airbag warning light come on?**
- YES** : Go to step **5W3**.
- NO** : Repair body harness.

5W3 : AIRBAG WARNING LIGHT MODULE (IN COMBINATION METER) INSPECTION

- 1) Turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.
- 2) Disconnect body harness connector (B31) from connector (AB1) located at front pillar lower (driver side).



- 3) Connect battery ground cable and turn ignition switch "ON" (engine off) to make sure airbag warning light illuminates.



- CHECK** : **Does the airbag warning light come on?**
- YES** : Go to step **5W4**.
- NO** : Replace airbag warning light bulb <Ref. to 6-2 [W8B0].> or combination meter printed circuit.

5W4 : AIRBAG MAIN HARNESS INSPECTION

- 1) Turn ignition switch "OFF", disconnect battery ground cable and then wait at least 20 seconds.
- 2) Connect body harness connector (B31) and connector (AB1).
- 3) Disconnect connector (AB6) from airbag control module. <Ref. to 5-5 [W6A0].>
- 4) Connect battery ground cable and turn ignition switch "ON" to make sure airbag warning light illuminates.

- CHECK** : **Does the airbag warning light come on?**
- YES** : Replace airbag control module. <Ref. to 5-5 [W6A0].>
- NO** : Replace airbag main harness. <Ref. to 5-5 [W4A0].>

X: WARNING LIGHT INDICATES TROUBLE CODE, THEN NORMAL CODE. (FLASHING TROUBLE CODE.)

DIAGNOSIS:

Airbag system component parts are faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable, and then wait at least 20 seconds.

5X1 : AIRBAG COMPONENT PARTS APPEARANCE INSPECTION

1) Conduct on-board diagnostic and call up trouble codes stored in memory. <Ref. to 5-5 [T4B0].>

2) Select trouble code required to check airbag component parts from those listed in table and reproduce symptom.

| Trouble codes | Check parts | Index. No. |
|---------------|--|--|
| 11 | <ul style="list-style-type: none"> ● Roll connector ● Airbag module (Driver) ● Airbag main harness ● Airbag control module | <Ref. to 5-5 [W800].> <Ref. to 5-5 [W300].> <Ref. to 5-5 [W400].> <Ref. to 5-5 [W600].> |
| 12 | <ul style="list-style-type: none"> ● Airbag module (Passenger) ● Airbag main harness ● Airbag control module | <Ref. to 5-5 [W300].> <Ref. to 5-5 [W400].> <Ref. to 5-5 [W600].> |
| 15 | <ul style="list-style-type: none"> ● Airbag module (Driver) ● Roll connector ● Airbag main harness ● Airbag control module | <Ref. to 5-5 [W300].> <Ref. to 5-5 [W800].> <Ref. to 5-5 [W400].> <Ref. to 5-5 [W600].> |
| 16 | <ul style="list-style-type: none"> ● Airbag main harness ● Airbag module (Passenger) ● Airbag control module | <Ref. to 5-5 [W400].> <Ref. to 5-5 [W300].> <Ref. to 5-5 [W600].> |
| 21 | Airbag control module | <Ref. to 5-5 [W600].> |
| 22 | Airbag control module | <Ref. to 5-5 [W600].> |
| 25 | <ul style="list-style-type: none"> ● Fuse No. 6 ● Airbag main harness ● Airbag control module ● Body harness | <Ref. to 5-5 [T5J5].> <Ref. to 5-5 [W400].> <Ref. to 5-5 [W600].> <Ref. to 5-3 [W100].> |
| 26 | Side airbag module (LH) in front seat | <Ref. to 5-3 [W100].> |
| 31 | <ul style="list-style-type: none"> ● Airbag main harness ● Front sub sensor and front sub sensor harness (RH) | <Ref. to 5-5 [W400].> <Ref. to 5-5 [W900].> |
| 32 | <ul style="list-style-type: none"> ● Airbag main harness ● Front sub sensor and front sub sensor harness (LH) | <Ref. to 5-5 [W400].> <Ref. to 5-5 [W900].> |
| 41 | Side airbag module (RH) in front seat | <Ref. to 5-3 [W100].> |
| 42 | Side airbag module (LH) in front seat | <Ref. to 5-3 [W100].> |
| 45 | <ul style="list-style-type: none"> ● Airbag control module ● Side airbag module (RH) in front seat | <Ref. to 5-5 [W600].> <Ref. to 5-3 [W100].> |
| 46 | <ul style="list-style-type: none"> ● Airbag control module ● Side airbag module (LH) in front seat | <Ref. to 5-5 [W600].> <Ref. to 5-3 [W100].> |
| 51 | <ul style="list-style-type: none"> ● Side airbag sensor (RH) ● Airbag control module | <Ref. to 5-5 [W700].> <Ref. to 5-5 [W600].> |
| 52 | <ul style="list-style-type: none"> ● Side airbag sensor (LH) ● Airbag control module | <Ref. to 5-5 [W700].> <Ref. to 5-5 [W600].> |
| 53 | Side airbag sensor (RH) | <Ref. to 5-5 [W700].> |
| 54 | Side airbag sensor (LH) | <Ref. to 5-5 [W700].> |
| 55 | Side airbag module in front seat | <Ref. to 5-3 [W100].> |

3) Conduct appearance inspection on parts selected.

NOTE:

Also check connector terminals, wiring harness, case, etc. for damage.

CHECK : *Is there anything unusual about the appearance of airbag component parts?*

YES : Replace faulty airbag component parts.

NO : Go to step **5X2**.

5X2 : AIRBAG COMPONENT PARTS VIBRATION INSPECTION

1) Gently shake check parts (to determine faults.).
2) To check airbag module or roll connector, turn and tilt steering wheel.

CAUTION:

Do not shake or vibrate airbag control module.

CHECK : *Does the component malfunction again when shaking?*

YES : Replace faulty airbag component parts.

NO : Go to step **5X3**.

5X3 : SHOWERING INSPECTION TO BODY

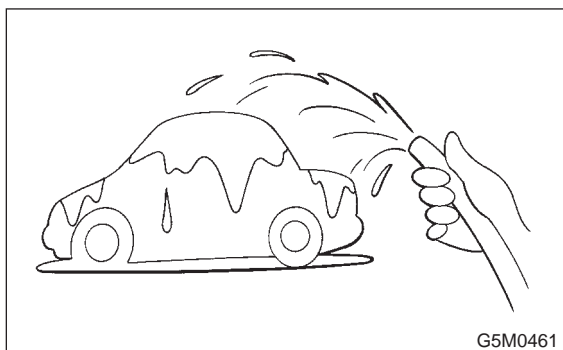
Spray water on vehicle body.

CAUTION:

Do not directly spray water on airbag components.

NOTE:

Also check wiring harnesses as water may leak along them and get airbag component parts wet.



CHECK : *Does water leak into the passenger compartment when showering vehicle?*

YES : Replace faulty airbag component parts.

NO : Perform clear memory. <Ref. to 5-5 [T4C0].>

Y: WARNING LIGHT INDICATES TROUBLE CODE, THEN NORMAL CODE. (FLASHING NORMAL CODE.)

DIAGNOSIS:

- Airbag connector is faulty.
- Fuse No. 11 (in joint box) is blown.
- Airbag main harness is faulty.
- Airbag control module is faulty.
- Body harness is faulty.

CAUTION:

Before performing diagnostics on airbag system, turn ignition switch "OFF", disconnect battery ground cable, and then wait at least 20 seconds.

5Y1 : AIRBAG CONNECTOR APPEARANCE INSPECTION

Conduct appearance inspection on airbag connectors (AB1) through (AB28). <Ref. to 5-5 [T100].>

NOTE:

Check terminals, case and wiring harnesses for damage.

CHECK : *Is there anything unusual about the appearance of connectors (AB1) through (AB28)?*

YES : Replace faulty airbag component parts.

NO : Go to step **5Y2**.

5Y2 : AIRBAG CONNECTOR VIBRATION INSPECTION

Conduct vibration inspection on airbag connectors (AB1) through (AB28). <Ref. to 5-5 [T100].>

NOTE:

Gently shake each airbag connector.

CHECK : *Do the connectors (AB1) through (AB28) malfunction again when shaking?*

YES : Replace faulty airbag component parts.

NO : Go to step **5Y3**.

5Y3 : SHOWERING INSPECTION TO BODY

Spray water on vehicle body.

CAUTION:

Do not directly spray water on airbag components.

NOTE:

If leaks are noted, also check wiring harnesses as water may leak along them and wet airbag connectors.



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CHECK : **Does water leak into the passenger compartment when showering vehicle?**

YES : Replace faulty airbag component parts.

NO : Go to step 5Y4.

5Y4 : FUSE NO. 11 (IN JOINT BOX), AIRBAG MAIN HARNESS, AIRBAG CONTROL MODULE, BODY HARNESS APPEARANCE INSPECTION

Conduct appearance inspection on fuse No. 11 <Ref. to 5-5 [T5I5].>, airbag main harness <Ref. to 5-5 [W4A0].>, airbag control module <Ref. to 5-5 [W6A0].> and body harness.

NOTE:

Also check connectors, terminals, wiring harness and case for damage.

CHECK : **Is there anything unusual about the appearance of fuse No. 11, airbag main harness, airbag control module or body harness?**

YES : Replace faulty airbag component parts.

NO : Go to step 5Y5.

5Y5 : FUSE NO. 11 (IN JOINT BOX), AIRBAG MAIN HARNESS, BODY HARNESS VIBRATION INSPECTION

Conduct vibration inspection on fuse No. 11, airbag main harness and body harness.

CAUTION:

Do not shake or vibrate airbag control module.

NOTE:

Gently shake each part.

CHECK : **Do fuse No. 11, airbag main harness or body harness malfunction again when shaking?**

YES : Replace faulty airbag component parts.

NO : Go to step 5Y6.

5Y6 : SHOWERING INSPECTION TO BODY

Spray water on vehicle body.

CAUTION:

Do not directly spray water on each part.

NOTE:

If leaks are noted, check wiring harnesses as water may leak along them and get parts wet.



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CHECK : **Does water leak into the passenger compartment when showering vehicle?**

YES : Replace faulty airbag component parts.

NO : Go to step 5Y7.

**5Y7 : WARNING LIGHT ILLUMINATION
CHECK**

Turn ignition switch "ON" (engine off) and observe airbag warning light.

CHECK : ***Does the airbag warning light come on for about 7 seconds, then go out and stay out?***

YES : Perform clear memory. <Ref. to 5-5 [T4C0].>

NO : Go to "DIAGNOSTICS PROCEDURE". <Ref. to 5-5 [T4D0].>

MEMO:

1. Combination Meter

A: DIAGNOSTICS PROCEDURE

If speedometer does not operate, or operates abnormally, check combination meter circuit.

CAUTION:

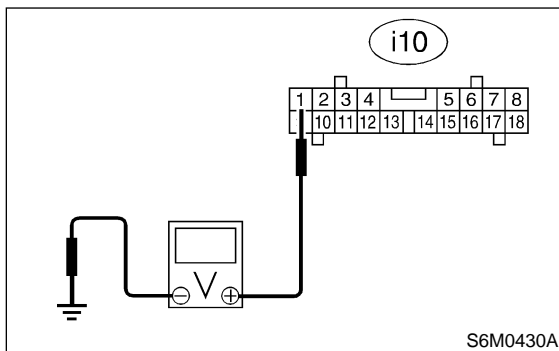
Make sure that trouble code of vehicle speed sensor system appears in electrical system on-board diagnosis.

1A1 : CHECK POWER SUPPLY FOR COMBINATION METER.

- 1) Remove combination meter. <Ref. to 6-2 [W8A0].>
- 2) Turn ignition switch to ON.
- 3) Measure voltage between combination meter connector and chassis ground.

Connector & terminal

(i10) No. 1 (+) — Chassis ground (-):



- CHECK** : Is the voltage more than 10 V?
YES : Go to step 1A2.
NO : Repair harness and connector.

NOTE:

In this case, repair the following:

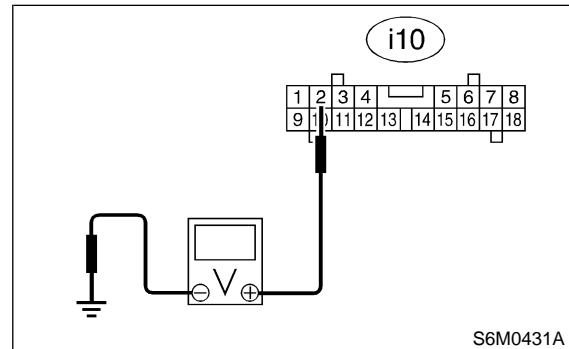
- Open circuit in harness between combination meter and battery.
- Poor contact in coupling connectors (i10) and combination meter connector. <Ref. to FOREWORD [W3C0].>

1A2 : CHECK POWER SUPPLY FOR COMBINATION METER.

Measure voltage between combination meter connector and chassis ground.

Connector & terminal

(i10) No. 2 (+) — Chassis ground (-):



- CHECK** : Is the voltage more than 10 V?
YES : Go to step 1A3.
NO : Repair harness and connector.

NOTE:

In this case, repair the following:

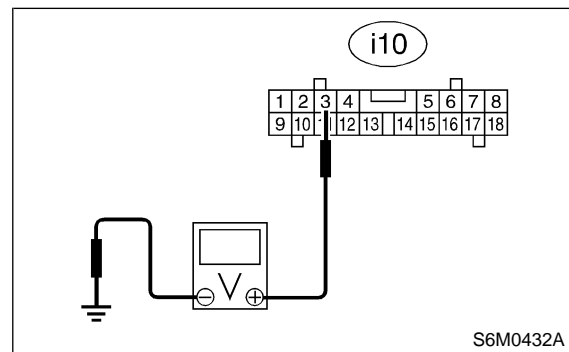
- Open circuit in harness between combination meter and battery.
- Poor contact in coupling connectors (i10) and combination meter connector. <Ref. to FOREWORD [W3C0].>

1A3 : CHECK GROUND CIRCUIT OF COMBINATION METER.

- 1) Turn ignition switch to OFF.
- 2) Measure resistance of harness between combination meter connector and chassis ground.

Connector & terminal

(i10) No. 3 (+) — Chassis ground (-):



- CHECK** : Is the resistance less than 10 Ω?
YES : Go to step 1A4.
NO : Repair harness and connector.

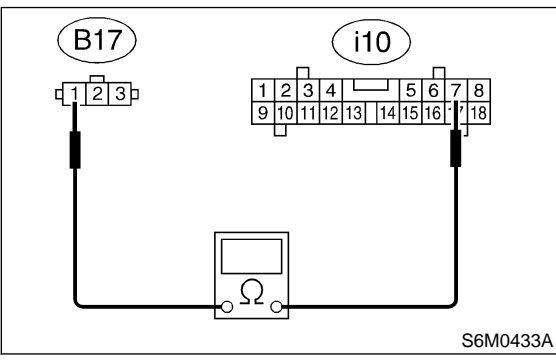
1A4 : CHECK TRANSMISSION TYPE.

- CHECK** : *Is the transmission type MT?*
- YES** : Go to step 1A5.
- NO** : Go to step 1A9.

1A5 : CHECK HARNESS CONNECTOR BETWEEN COMBINATION METER AND VEHICLE SPEED SENSOR.

- 1) Disconnect connector from vehicle speed sensor.
- 2) Measure resistance of harness connector between vehicle speed sensor and combination meter.

Connector & terminal
(B17) No. 1 — (i10) No. 7:

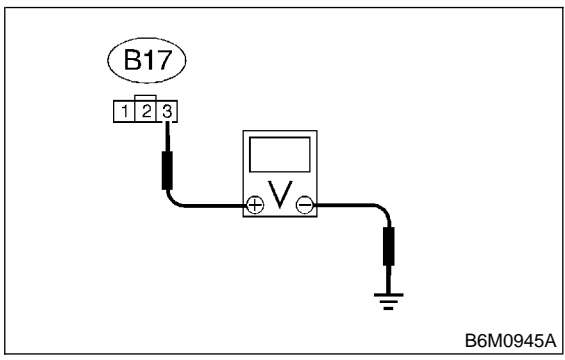


- CHECK** : *Is the resistance less than 10 Ω?*
- YES** : Go to step 1A6.
- NO** : Repair wiring harness.

1A6 : CHECK HARNESS CONNECTOR BETWEEN BATTERY AND VEHICLE SPEED SENSOR.

- 1) Turn ignition switch to ON.
- 2) Measure voltage between vehicle speed sensor connector (B17) and chassis ground.

Connector & terminal
(B17) No. 3 (+) — Chassis ground (-):

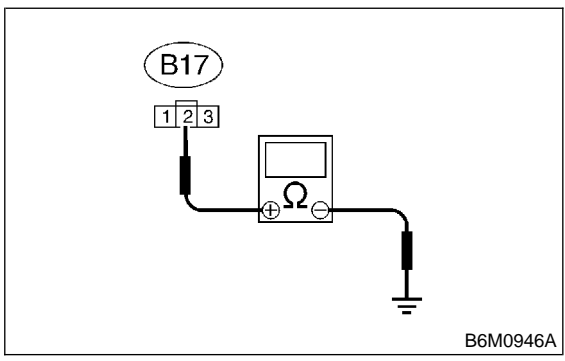


- CHECK** : *Is the voltage more than 10 V?*
- YES** : Go to step 1A7.
- NO** : Repair harness connector between battery and vehicle speed sensor.

1A7 : CHECK HARNESS CONNECTOR BETWEEN VEHICLE SPEED SENSOR AND ENGINE GROUND.

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between vehicle speed sensor connector (B17) and engine ground.

Connector & terminal
(B17) No. 2 (+) — Engine ground (-):



- CHECK** : *Is the resistance less than 10 Ω?*
- YES** : Go to step 1A8.
- NO** : Repair harness connector between vehicle speed sensor and engine ground.

1A8 : CHECK VEHICLE SPEED SENSOR.

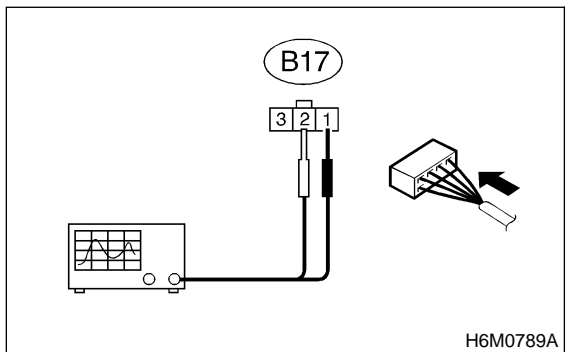
- 1) Connect connector to vehicle speed sensor.
- 2) Set the vehicle on a free roller, or lift-up the vehicle and support with safety stands.

WARNING:

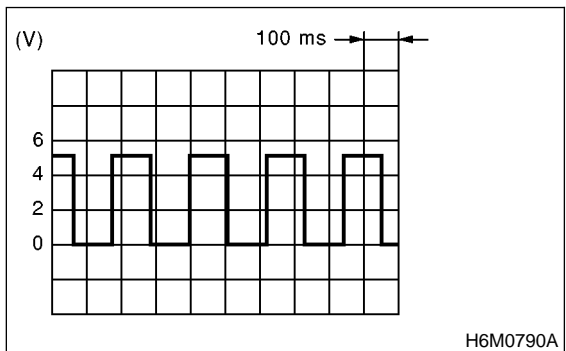
Be careful not to get caught in the rotating wheels.

- 3) Set oscilloscope to vehicle speed sensor connector terminals.

Positive probe; (B17) No. 1
Earth lead; (B17) No. 2



- 4) Drive the vehicle at speed greater than 20 km/h (12 MPH).
- 5) Measure signal voltage indicated on oscilloscope.



- CHECK** : **Is the voltage more than 5 V?**
- YES** : Repair or replace speedometer.
- NO** : Replace vehicle speed sensor. <Ref. to 6-2 [W1100].>

1A9 : CHECK HARNESS CONNECTOR BETWEEN COMBINATION METER AND AUTOMATIC TRANSMISSION CONTROL MODULE.

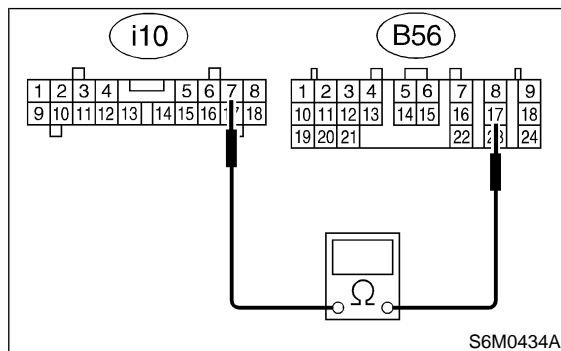
- 1) Disconnect connector from automatic transmission control module.
- 2) Measure resistance between combination meter connector (i10) and automatic transmission control module connector (B56).

CAUTION:

To measure the voltage and/or resistance, use a tapered pin with a diameter of less than 0.64 mm (0.025 in). Do not insert the pin more than 5 mm (0.20 in).

Connector & terminal

(i10) No. 7 — (B56) No. 17:



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step 1A10.
- NO** : Repair harness connector between combination meter and automatic transmission control module.

1A10 : CHECK AUTOMATIC TRANSMISSION CONTROL MODULE.

- 1) Connect connector to automatic transmission control module.
- 2) Set the vehicle on a free roller, or lift-up the vehicle and support with safety stands.

WARNING:

Be careful not to get caught in the rotating wheels.

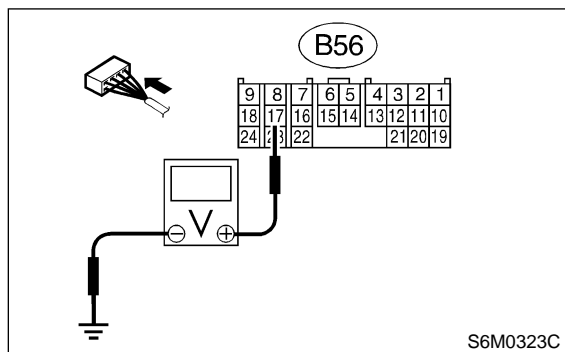
- 3) Drive the vehicle faster than 10 km/h (6 MPH).
- 4) Measure voltage between automatic transmission control module connector (B56) and chassis ground.

CAUTION:

To measure the voltage and/or resistance, use a tapered pin with a diameter of less than 0.64 mm (0.025 in). Do not insert the pin more than 5 mm (0.20 in).

Connector & terminal

(B56) No. 17 (+) — Chassis ground (-):



- CHECK** : Is the voltage less than 1 V ↔ more than 4 V?
- YES** : Go to step 1A11.
- NO** : Replace automatic transmission control module. <Ref. to 3-2 [W2300].>

1A11 : APPEARANCE INSPECTION

Conduct appearance inspection on combination meter.

NOTE:

Check to see if the needle catches.

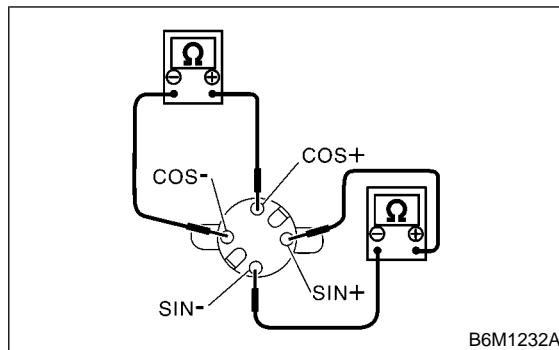
- CHECK** : Is there anything unusual about the appearance of combination meter?
- YES** : Replace combination meter. <Ref. to 6-2 [W8A0].>
- NO** : Go to step 1A12.

1A12 : SPEEDOMETER INSPECTION

- 1) Disassemble combination meter and then remove speedometer assembly.
- 2) Measure resistance between speedometer terminals.

Terminals

SIN+ — SIN-:



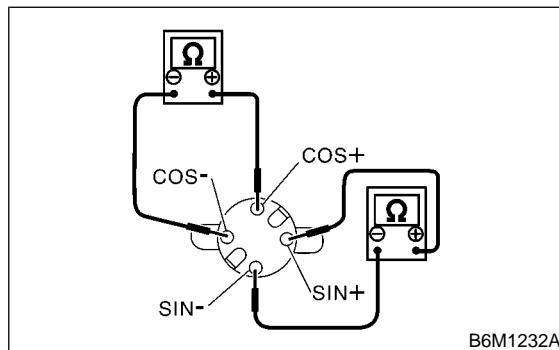
- CHECK** : Is the resistance 200±8 Ω?
- YES** : Replace printed circuit.
- NO** : Go to step 1A13.

1A13 : SPEEDOMETER INSPECTION

Measure resistance between speedometer terminals.

Terminals

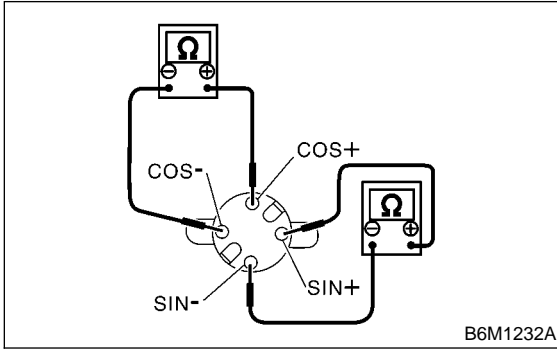
COS+ — COS-:



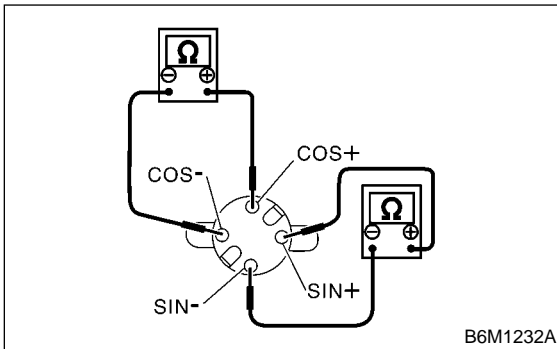
- CHECK** : Is the resistance 200±8 Ω?
- YES** : Replace printed circuit.
- NO** : Replace speedometer assembly. Go to step 1A14.

1A14 : TACHOMETER INSPECTION

- 1) Remove tachometer assembly from combination meter.
- 2) Measure resistance between tachometer terminals.

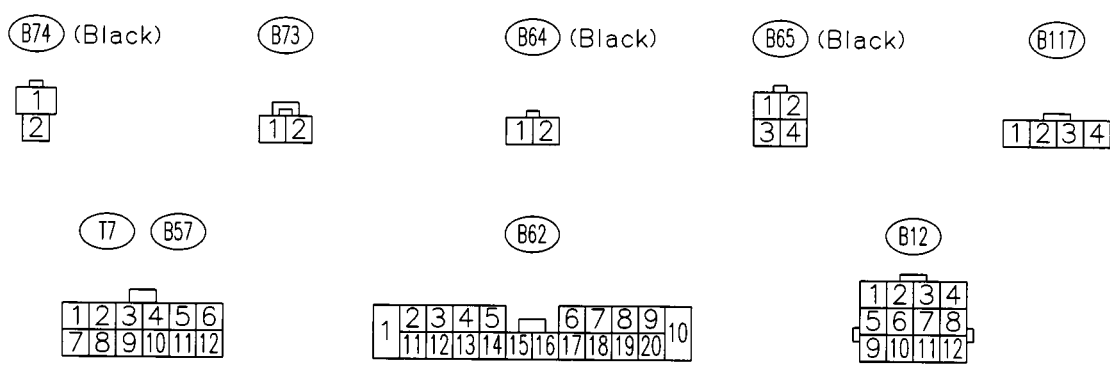
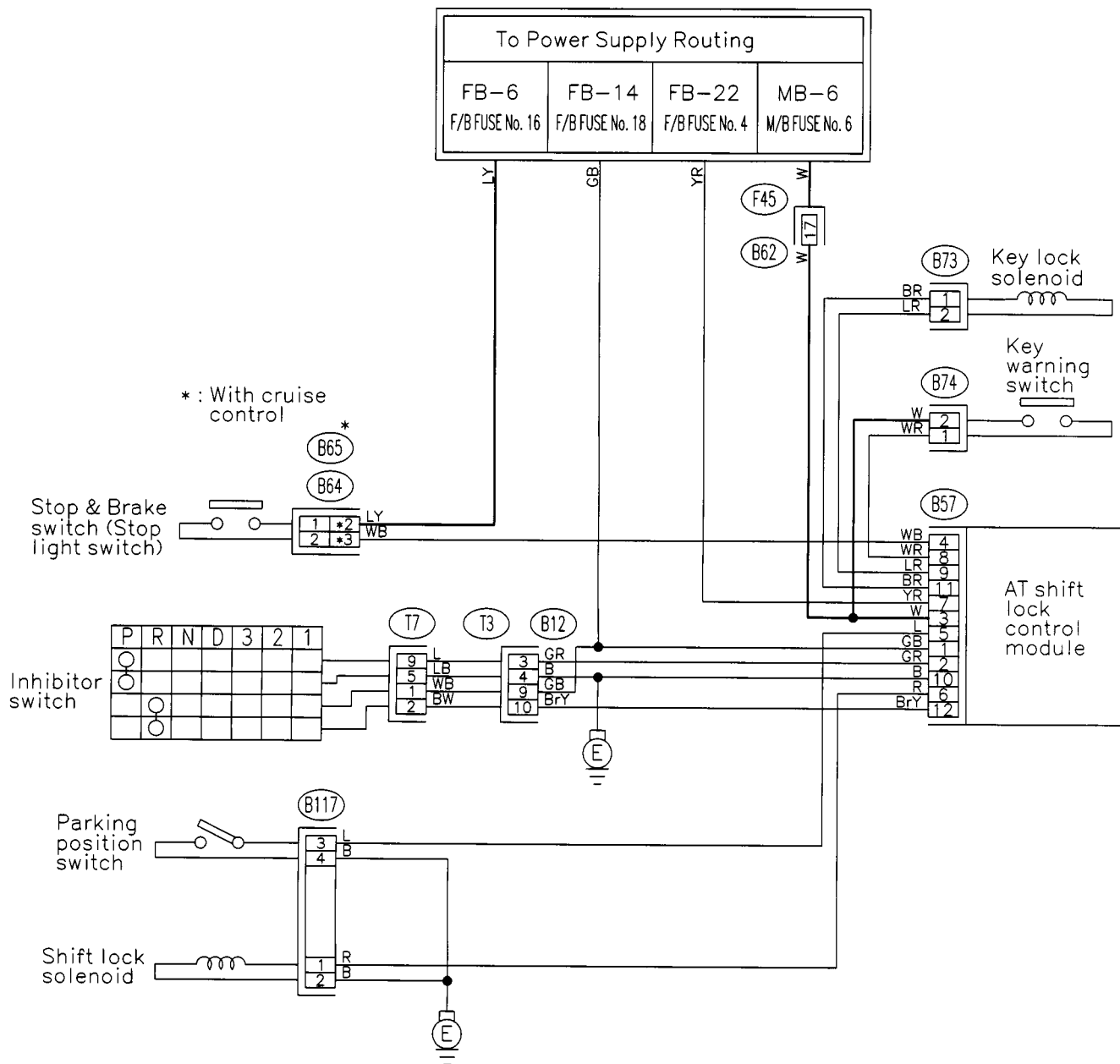
Terminals**SIN+ — SIN-:****CHECK** : **Is the resistance $200 \pm 8 \Omega$?****YES** : Replace printed circuit.**NO** : Go to step **1A15**.**1A15 : TACHOMETER INSPECTION**

- Measure resistance between tachometer terminals.

Terminals**COS+ — COS-:****CHECK** : **Is the resistance $200 \pm 8 \Omega$?****YES** : Replace printed circuit.**NO** : Replace tachometer assembly.

2. AT Shift Lock System

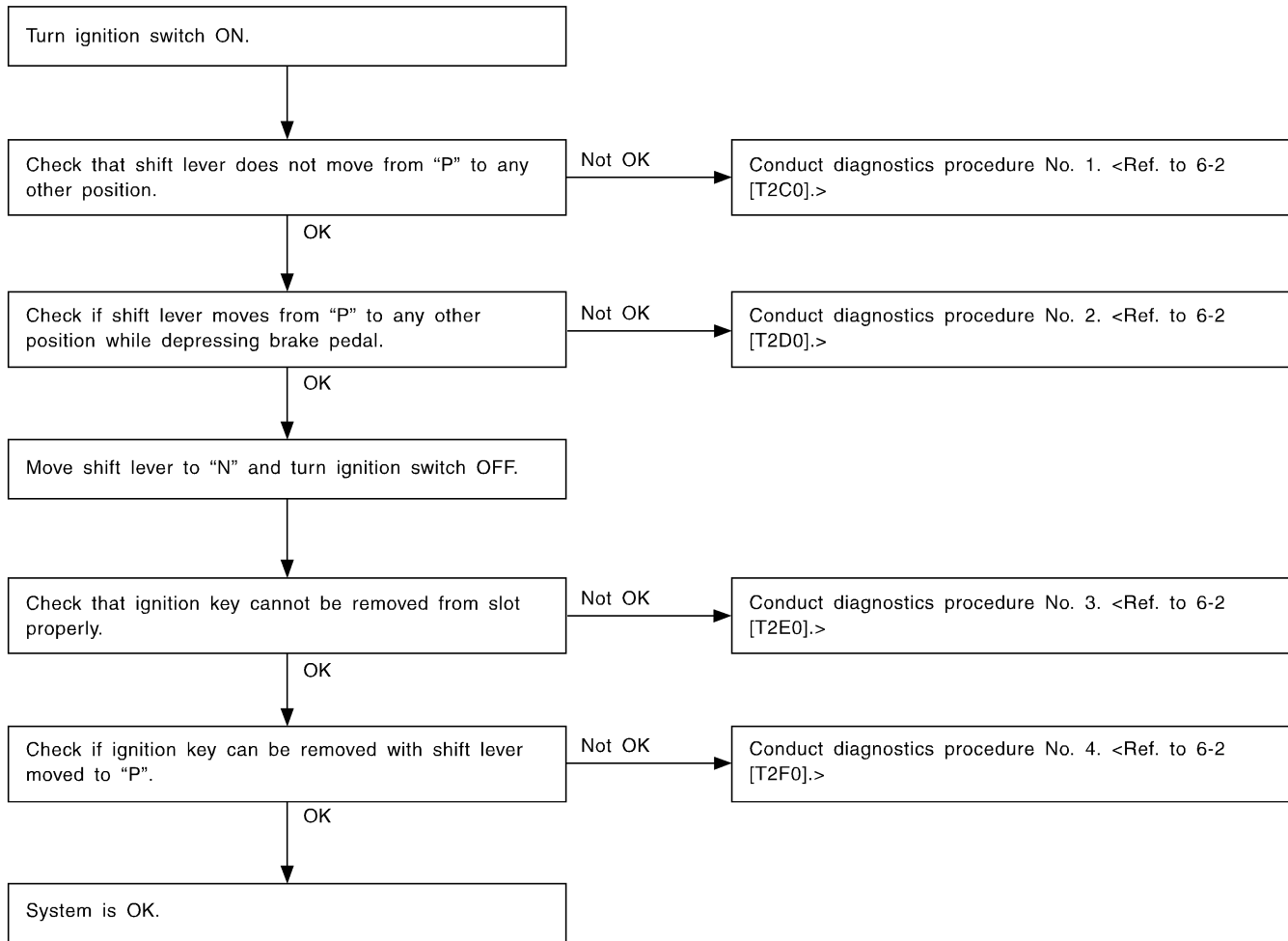
A: WIRING DIAGRAM



SU42-04

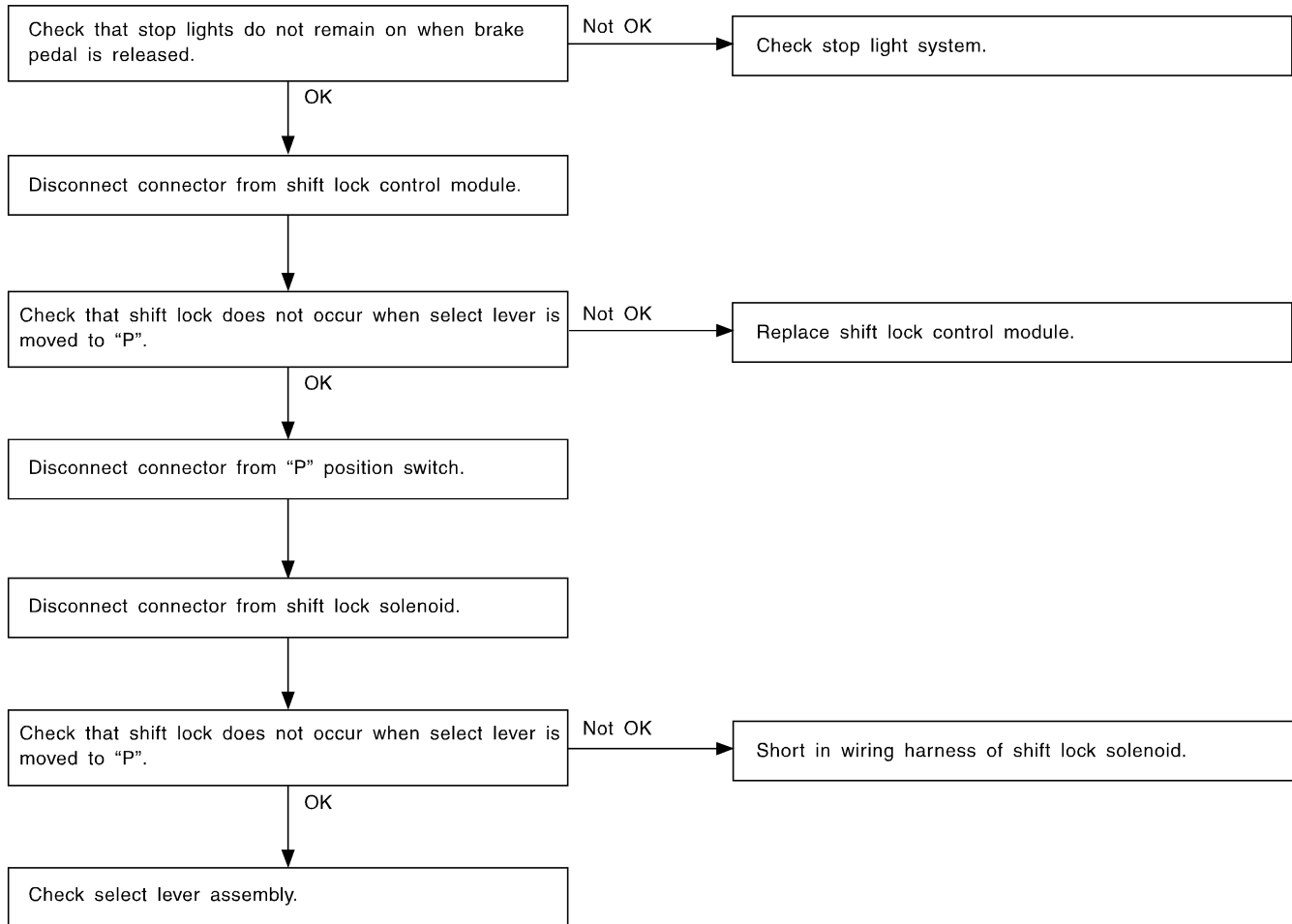
SU42-04

B: BASIC DIAGNOSTICS CHART



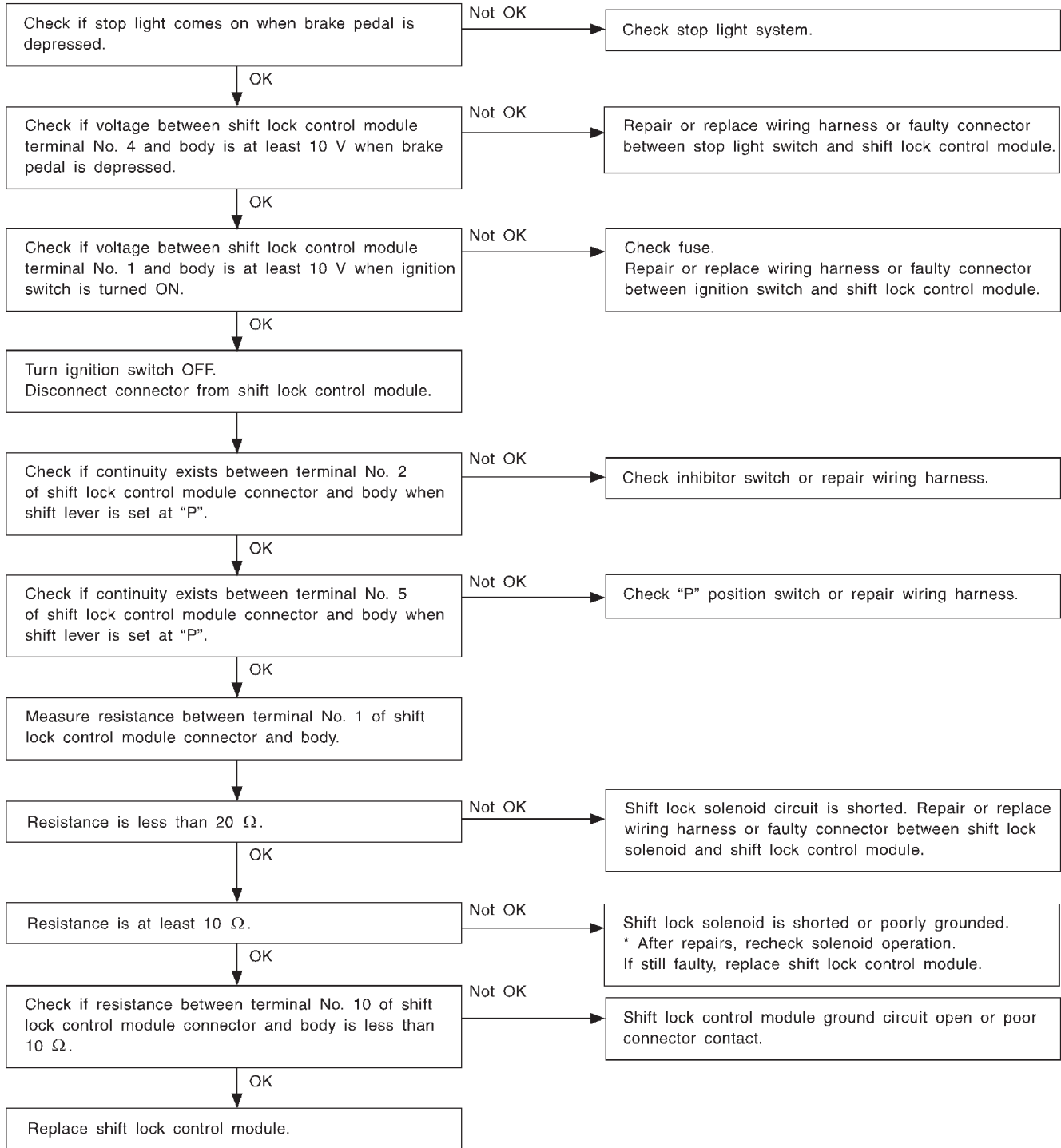
H6M0504B

C: DIAGNOSTICS PROCEDURE NO. 1

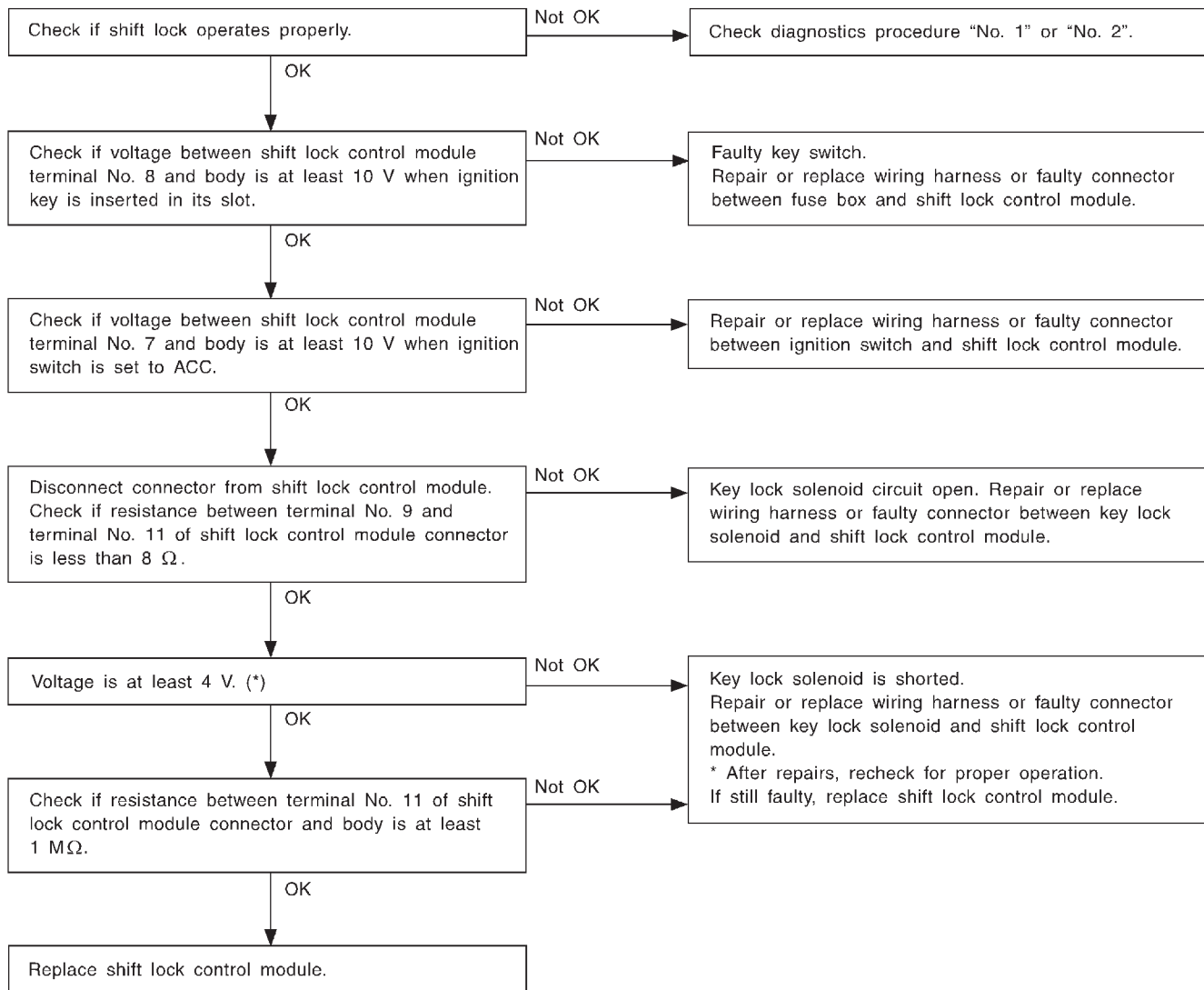


H6M0505A

D: DIAGNOSTICS PROCEDURE NO. 2 (SHIFT LOCK DOES NOT RELEASE.)

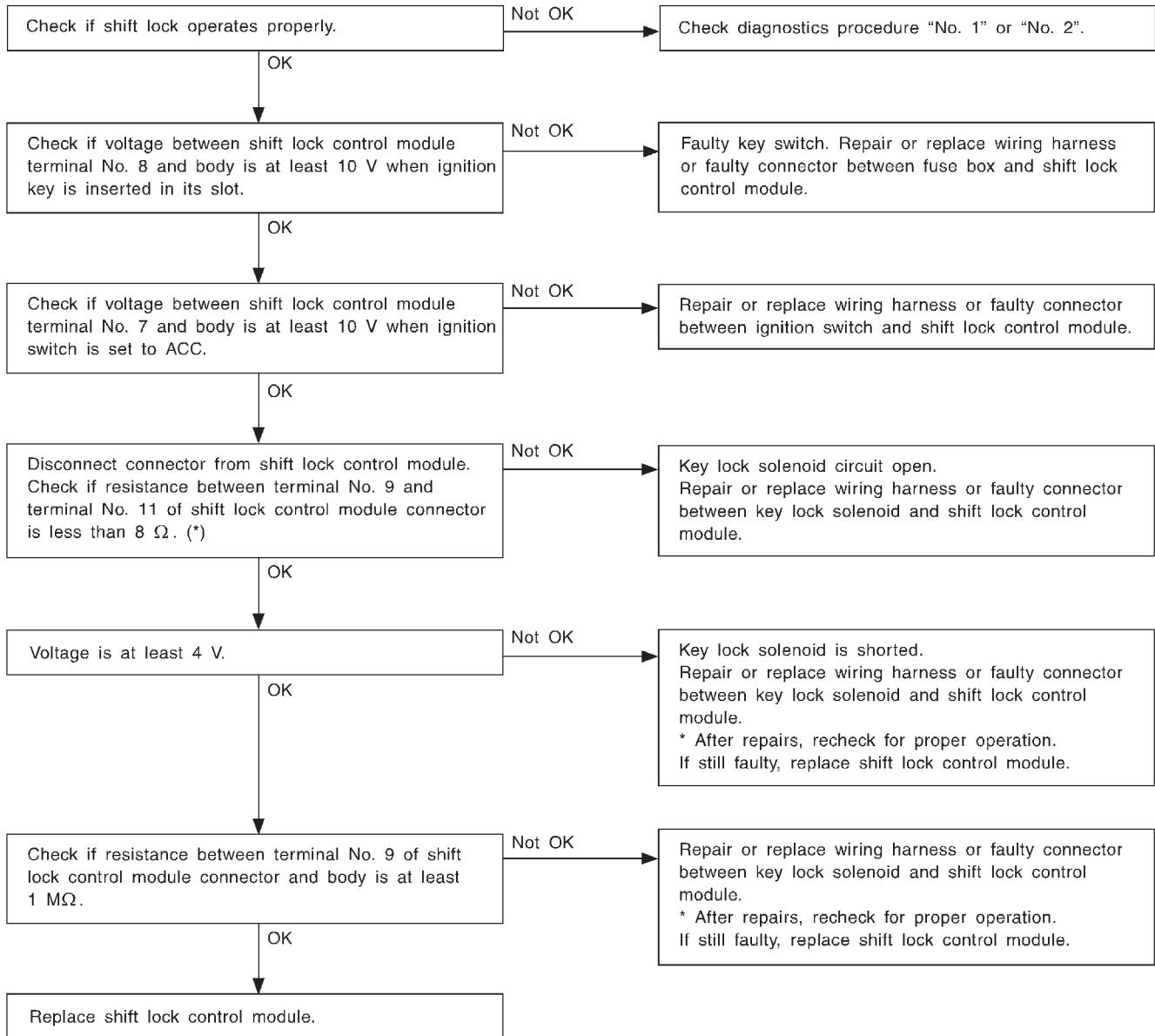


E: DIAGNOSTICS PROCEDURE NO. 3 (KEY INTERLOCK DOES NOT OPERATE.)



***: When conducting operational checks of the key lock solenoid, do not apply 12 V to solenoid for more than one second, since this may break solenoid circuit.**

F: DIAGNOSTICS PROCEDURE NO. 4 (KEY INTERLOCK DOES NOT RELEASE.)



*: When conducting operational checks of the key lock solenoid, do not apply 12 V to solenoid for more than one second, since this may break solenoid circuit.

3. Cruise Control System

A: PRECAUTION

1. SUPPLEMENTAL RESTRAINT SYSTEM “AIRBAG”

Airbag system wiring harness is routed near the cruise control module and cruise control command switch.

CAUTION:

- All airbag system wiring harness and connectors are yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage airbag system wiring harness when servicing the cruise control module and cruise control command switch.

B: PRE-INSPECTION

1. FUNCTION TESTS

Conduct road tests by selecting a smooth, flat road or use free rollers for road test simulation.

● Cruise Control Main Switch

- 1) Turn ignition switch to ON.
- 2) Check that cruise control main switch indicator light comes on when main switch is pressed (ON).
- 3) Check that main switch indicator light goes out when main switch is pressed again (OFF).
- 4) Turn ignition switch to OFF with main switch ON (indicated by illumination). Turn ignition switch ON again to ensure that main switch indicator light remains OFF.

● Cruise Control Command Switch

- 1) Check that cruise control command switch is properly set in “SET/COAST”, “RESUME/ACCEL”, or “CANCEL” mode.
- 2) Also check that command switch returns to the original position when released.

● Constant Speed Test

- 1) Turn cruise control main switch to ON.
- 2) Drive the vehicle at a speed greater than 40 km/h (25 MPH).
- 3) Press command switch to set in “SET/COAST” mode.
- 4) Ensure that vehicle is maintained at the speed set when command switch was pressed.

● Acceleration Test

- 1) Set vehicle speed at a speed greater than 40 km/h (25 MPH).
- 2) Ensure that vehicle continues to accelerate while holding command switch in “RESUME/ACCEL” mode, and that vehicle maintains that optional speed when command switch is released.

● Deceleration Test

- 1) Set vehicle speed at an optional speed greater than 40 km/h (25 MPH).
- 2) Ensure that vehicle continues to decelerate while holding command switch in “SET/COAST” mode, and that it maintains that optional speed when command switch is released.

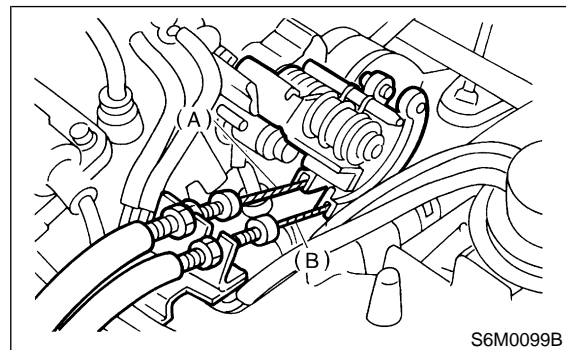
NOTE:

When vehicle speed reaches the lower speed limit of 30 km/h (19 MPH) during deceleration, cruise control will be released.

2. CRUISE CONTROL CABLE

3B21 : CHECK CRUISE CONTROL CABLE.

Check accelerator cable (A) and cruise control cable (B) installation.



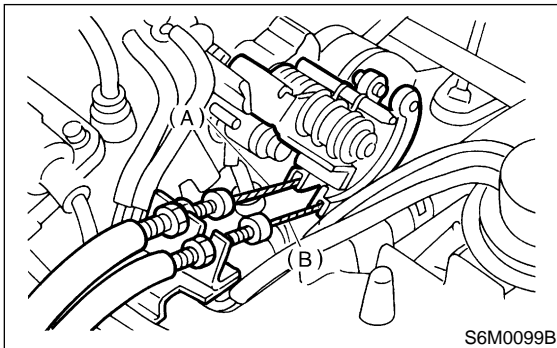
CHECK : *Is the cruise control cable securely installed to the left of the accelerator cable?*

YES : Go to step 3B22.

NO : Install cruise control cable securely. Go to step 3B22.

3B22 : CHECK ACCELERATOR CABLE.

Check function of accelerator cable (A) and cruise control cable (B).



- CHECK** : *Does the accelerator cable throttle cam move when the cruise control throttle is moved by hand?*
- YES** : Repair accelerator cable throttle cam. Go to step **3B23**.
- NO** : Go to step **3B23**.

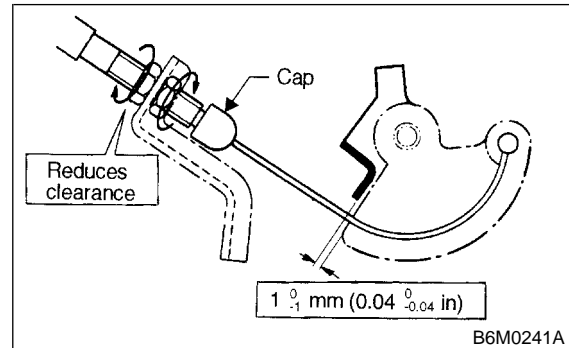
3B23 : CHECK THROTTLE CAM.

Check function of throttle cam.

- CHECK** : *Does the throttle cam move smoothly?*
- YES** : Go to step **3B24**.
- NO** : Repair throttle cam. Go to step **3B24**.

3B24 : CHECK CABLE FREE PLAY.

Ensure that throttle cam-to-lever clearance is within specifications.



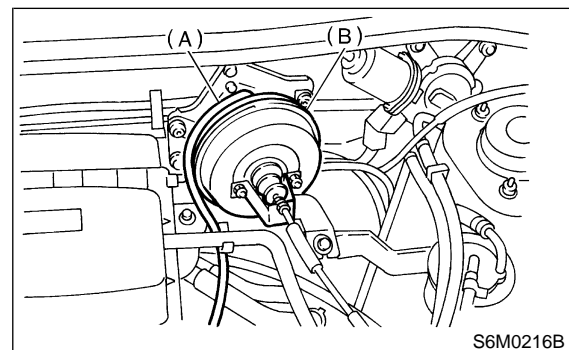
- CHECK** : *Is throttle cam-to-lever clearance between 0 and 1 mm (0 and 0.04 in)?*
- YES** : Go to step **3B31**.
- NO** : Adjust cable end by adjusting nuts. Go to step **3B31**.

NOTE:

Ensure that cap is positioned in groove.

3. VACUUM HOSE**3B31 : CHECK VACUUM HOSE VISUALLY.**

Check vacuum hose (A) (which connects actuator (B) and intake manifold).

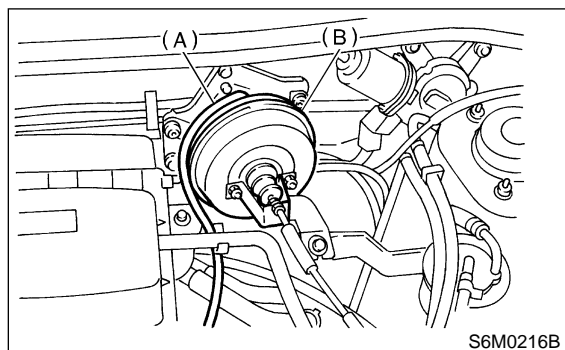


- CHECK** : *Is there disconnection or cracks in vacuum hose?*
- YES** : Replace vacuum hose. Go to step **3B41**.
- NO** : Go to step **3B41**.

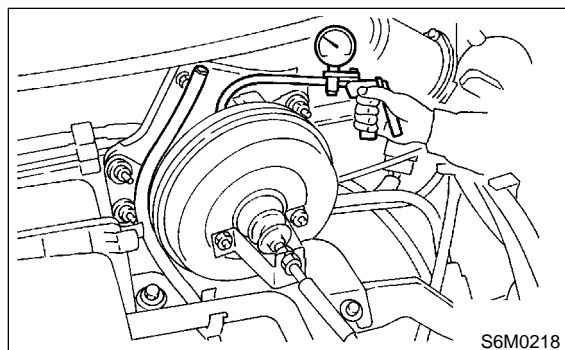
4. ACTUATOR

3B41 : CHECK FUNCTION OF ACTUATOR.

- 1) Disconnect vacuum hose (A) from actuator (B).



- 2) Connect vacuum pump as shown in figure.



- 3) Make sure that cruise control cable moves smoothly and quickly when a vacuum pressure of 40.0 kPa (300 mmHg, 11.81 inHg) is applied to actuator.

- CHECK** : Does cruise control cable have a stroke of 35 mm (1.38 in)?
- YES** : Go to step 3B42.
- NO** : Replace actuator. <Ref. to 6-2 [W12B1].> Go to step 3B42.

NOTE:

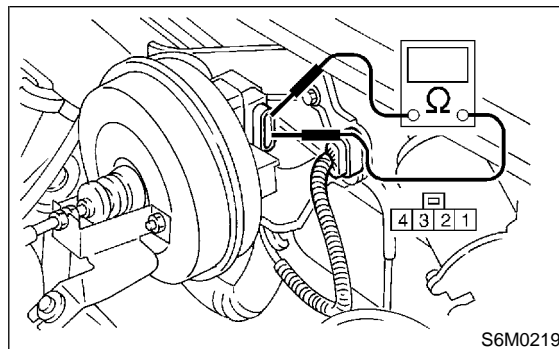
- When vacuum pressure is released from condition 3) above, make sure the cable returns to its original position smoothly and quickly.
- After inspection, disconnect vacuum pump and connect vacuum hose.

3B42 : MEASURE RESISTANCE OF VALVE.

- 1) Disconnect connector from actuator.
2) Measure resistance between terminals of actuator.

Terminals

No. 2 — No. 3:



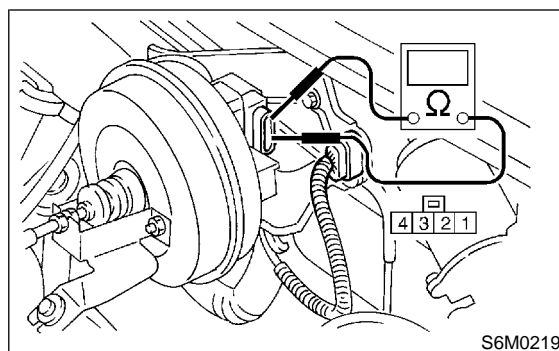
- CHECK** : Is resistance less than 100 Ω?
- YES** : Go to step 3B43.
- NO** : Replace actuator. <Ref. to 6-2 [W12B1].>

3B43 : MEASURE RESISTANCE OF VALVE.

Measure resistance between terminals of actuator.

Terminals

No. 2 — No. 1:



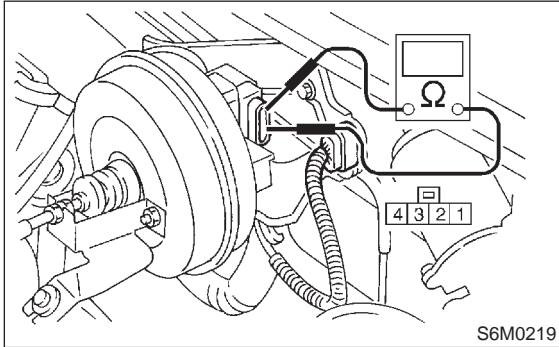
- CHECK** : Is resistance less than 69 Ω?
- YES** : Go to step 3B44.
- NO** : Replace actuator. <Ref. to 6-2 [W12B1].>

3B44 : MEASURE RESISTANCE OF VALVE.

Measure resistance between terminals of actuator.

Terminals

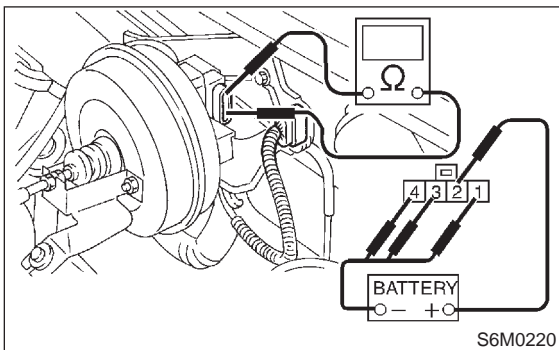
No. 2 — No. 4:



- CHECK** : **Is resistance less than 69 Ω ?**
YES : Go to step **3B45**.
NO : Replace actuator. <Ref. to 6-2 [W12B1].>

3B45 : CHECK FOR LEAKAGE AND STICKING OF VALVES.

- 1) Disconnect connector from actuator.
- 2) Make sure that cruise control cable moves smoothly when connecting + (positive) battery cable to terminal No. 2 and – (negative) battery cable to terminals No. 1, 3 and 4 of actuator connector.



- CHECK** : **Does cruise control cable have a stroke of 35 mm (1.38 in) within 3 seconds?**
YES : Go to step **3B46**.
NO : Replace actuator. <Ref. to 6-2 [W12B1].> Go to step **3B46**.

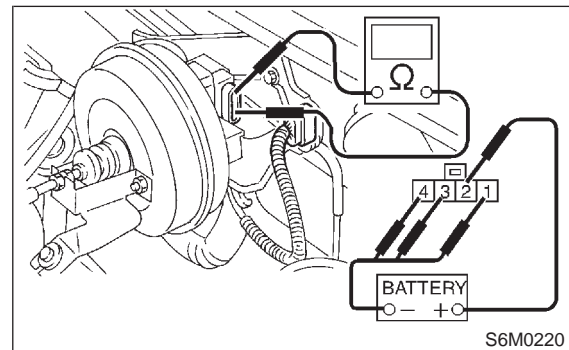
3B46 : CHECK FOR LEAKAGE AND STICKING OF VALVES.

When the battery cable is disconnected from former condition <Ref. to 6-2 [T3B4].> Step 2), make sure the cable returns to its original position smoothly.

- CHECK** : **Does cruise control cable get back to its original position within 1.5 seconds?**
YES : Go to step **3B47**.
NO : Replace actuator. <Ref. to 6-2 [W12B1].> Go to step **3B47**.

3B47 : CHECK CABLE MOVEMENT.

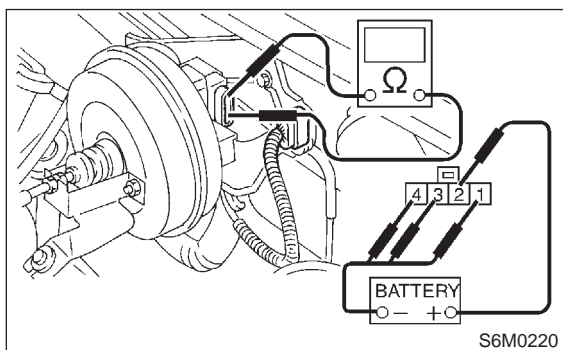
Connect + (positive) battery cable to terminal No. 2 and – (negative) battery cable to terminals No. 1, 3 and 4 of actuator connector.



- CHECK** : **Does cruise control perform pull operation?**
YES : Go to step **3B48**.
NO : Replace actuator. <Ref. to 6-2 [W12B1].> Go to step **3B48**.

3B48 : CHECK CABLE MOVEMENT.

Connect + (positive) battery cable to terminal No. 2 and – (negative) battery cable to terminals No. 1 and 4 of actuator connector.



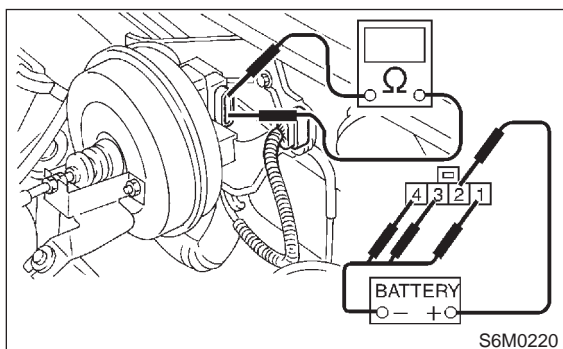
CHECK : *Does cruise control perform hold operation?*

YES : Go to step **3B49**.

NO : Replace actuator. <Ref. to 6-2 [W12B1].> Go to step **3B49**.

3B49 : CHECK CABLE MOVEMENT.

Connect + (positive) battery cable to terminal No. 2 and – (negative) battery cable to terminal No. 4 of actuator connector.



CHECK : *Does cruise control perform release operation?*

YES : Go to step **3B51**.

NO : Replace actuator. <Ref. to 6-2 [W12B1].> Go to step **3B51**.

5. POWER SUPPLY**3B51 : CHECK BATTERY.**

Measure battery specific gravity of electrolyte.

CHECK : *Is battery specific gravity more than 1.250?*

YES : Go to step **3B52**.

NO : Charge or replace battery. <Ref. to 6-2 [W2A0].> Go to step **3B52**.

3B52 : CHECK FUSES, CONNECTORS AND HARNESSSES.

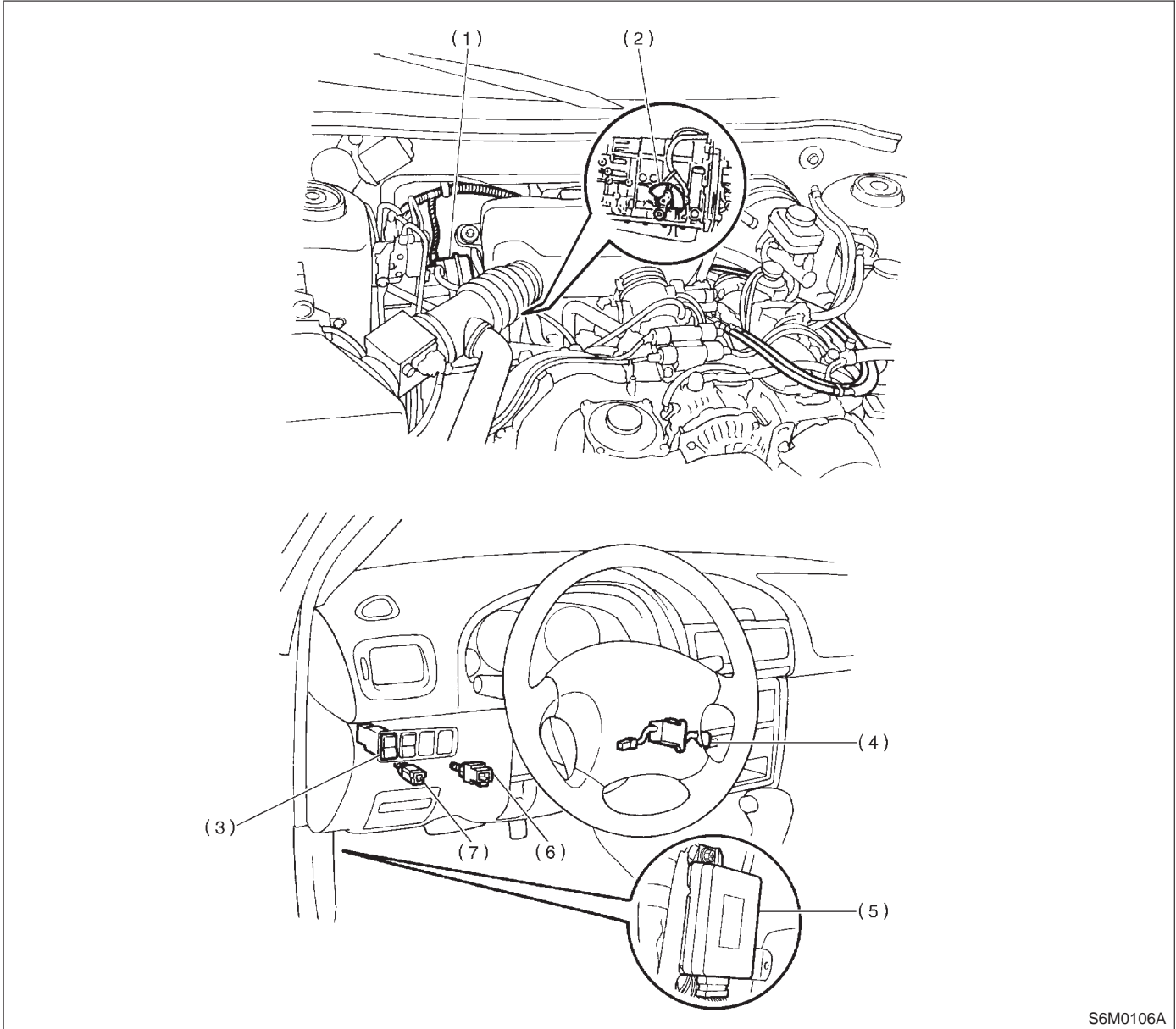
Check the condition of the main and other fuses, and harnesses and connectors. Also check for proper grounding.

CHECK : *Is there anything unusual about the appearance of main fuse, fuse, harness, connector and grounding?*

YES : Repair or replace faulty parts. End of pre-inspection.

NO : End of pre-inspection.

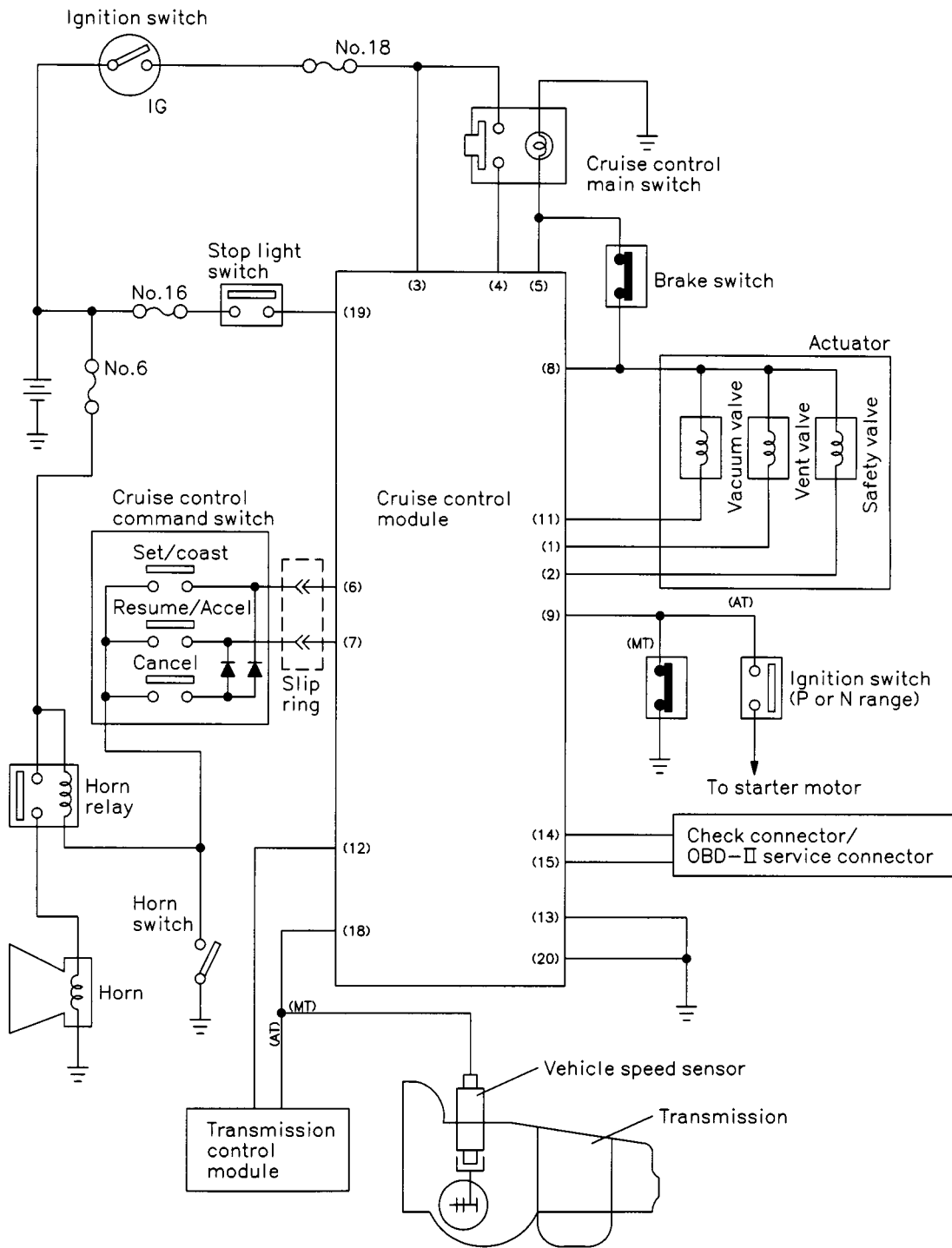
C: ELECTRICAL COMPONENTS LOCATION



S6M0106A

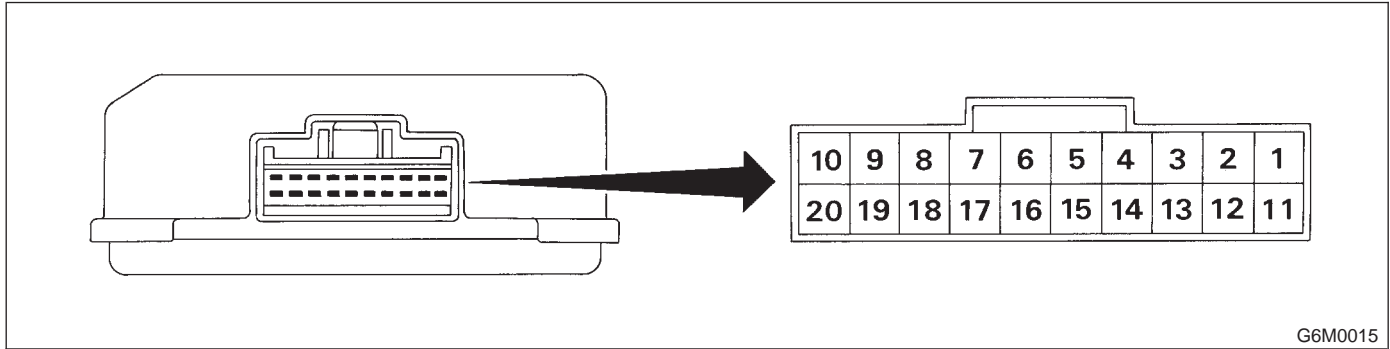
- | | | |
|--------------------------------|-----------------------------------|------------------------|
| (1) Actuator (with valves) | (4) Cruise control command switch | (7) Clutch switch (MT) |
| (2) Inhibitor switch (AT) | (5) Cruise control module | |
| (3) Cruise control main switch | (6) Stop and brake switch | |

D: SCHEMATIC



S6M0390

E: CONTROL MODULE I/O SIGNAL



G6M0015

| Content | Terminal No. | Measuring conditions and I/O signals (ignition switch ON and engine idling) |
|--|--------------|--|
| Vent valve | 1 | <ul style="list-style-type: none"> Power supply is ON when vehicle is stopped. ON-and-OFF ("0"-and-battery voltage) operation is alternately repeated while cruise control is operating. |
| Safety valve | 2 | <ul style="list-style-type: none"> Power supply is ON when vehicle is stopped. ON-and-OFF ("0"-and-battery voltage) operation is alternately repeated while cruise control is operating. |
| Ignition switch | 3 | <ul style="list-style-type: none"> Battery voltage is present when ignition switch is turned ON. "0" volt is present when ignition switch is turned OFF. |
| Cruise control main switch | 4 | <ul style="list-style-type: none"> Battery voltage is present when main power is turned ON. "0" volt is present when main power is turned OFF. |
| Power supply to vacuum valve, vent valve, safety valve and indicator light | 5 | <ul style="list-style-type: none"> Battery voltage is present when main power is turned ON. "0" volt is present when main power is turned OFF. |
| SET/COAST switch | 6 | <ul style="list-style-type: none"> Battery voltage is present when command switch is turned to SET/COAST position. "0" volt is present when command switch is released. |
| RESUME/ACCEL switch | 7 | <ul style="list-style-type: none"> Battery voltage is present when command switch is turned to RESUME/ACCEL position. "0" volt is present when command switch is released. |
| Brake switch | 8 | <p>Set select lever to any position other than "P" or "N" position (AT) / leave clutch pedal released (MT), while cruise control main switch is turned ON. Then check that;</p> <ul style="list-style-type: none"> Battery voltage is present when brake pedal is released. "0" volt is present when brake pedal is depressed, or Battery voltage is present when clutch pedal is released (MT). "0" volt is present when clutch pedal is depressed (MT). Battery voltage is present when select lever is in any position other than "P" or "N" position (AT). "0" volt is present when select lever is set to "P" or "N" position (AT). |
| Clutch switch (MT)/ Inhibitor switch (AT) | 9 | <ul style="list-style-type: none"> Battery voltage is present when clutch pedal is released (MT). "0" volt is present when clutch pedal is depressed (MT). Battery voltage is present when select lever is in any position other than "P" or "N" position (AT). "0" volt is present when select lever is set to "P" or "N" position (AT). |
| Vacuum valve | 11 | <ul style="list-style-type: none"> Power supply is ON when vehicle is stopped. ON-and-OFF ("0"-and-battery voltage) operation is alternately repeated while cruise control is operating. |
| Set signal to transmission control module (AT) | 12 | <ul style="list-style-type: none"> TCM emits a ground-level signal while driving vehicle at least 40 km/h (25 MPH) with SET switch ON. |
| Ground | 13 | — |
| Check connector/ OBD-II service connector | 14 | — |
| Check connector/ OBD-II service connector | 15 | — |

| Content | Terminal No. | Measuring conditions and I/O signals (ignition switch ON and engine idling) |
|--|--------------|---|
| Vehicle speed sensor (MT) Automatic transmission control module (AT) | 18 | Lift-up the vehicle until all four wheels are raised off ground, and then rotate any wheel manually. Approx. 5 and 0 volt pulse signals are alternately input to cruise control module. |
| Stop light switch | 19 | Turn ignition switch to OFF. Then check that; <ul style="list-style-type: none">● Battery voltage is present when brake pedal is depressed.● "0" volt is present when brake pedal is released. |
| Ground | 20 | — |
| NOTE: Voltage at terminals 1, 2, 11 and 12 cannot be checked unless vehicle is driving by cruise control operation. | | |

F: DIAGNOSTICS CHART FOR ON-BOARD DIAGNOSIS SYSTEM

1. BASIC DIAGNOSTIC PROCEDURE

3F11 : CHECK CRUISE CONTROL MAIN SWITCH.

- 1) Trouble occurs.
- 2) Perform pre-inspection. <Ref. to 6-2 [T3B0].>
- 3) Check cruise control main switch.

CHECK : *Does cruise control main switch turn ON?*

YES : Go to step 3F12.

NO : Go to "Diagnostics Chart for Power Line". <Ref. to 6-2 [T3G0].>

3F12 : CHECK CRUISE SPEED IS SET.

CHECK : *Does cruise speed properly set while driving at minimum of 40 km/h (25 MPH)?*

YES : Go to step 3F13.

NO : Go to "Diagnostics Chart with Trouble Code". <Ref. to 6-2 [T3H0].>

3F13 : CHECK CRUISE CONTROL IS RELEASED.

CHECK : *Does cruise control properly release during operation?*

YES : Go to step 3F14.

NO : Go to "Diagnostics Chart with Trouble Code". <Ref. to 6-2 [T3H0].>

3F14 : CHECK CRUISE SPEED IS HELD WITHIN SET SPEED.

CHECK : *Does cruise speed hold within set speed ± 3 km/h (2 MPH)?*

YES : Go to step 3F15.

NO : Go to pre-inspection of actuator. <Ref. to 6-2 [T3B4].>

3F15 : CHECK RESUME/ACCEL SWITCH.

CHECK : *Does RESUME/ACCEL switch function properly?*

YES : Go to step 3F16.

NO : Go to "Diagnostics Chart with Trouble Code". <Ref. to 6-2 [T3H0].>

3F16 : CHECK SET/COAST SWITCH.

CHECK : *Does SET/COAST switch function properly?*

YES : Go to step 3F17.

NO : Go to "Diagnostics Chart with Trouble Code". <Ref. to 6-2 [T3H0].>

3F17 : CHECK CANCEL SWITCH.

CHECK : *Does CANCEL switch function properly?*

YES : Go to step 3F18.

NO : Go to "Diagnostics Chart with Trouble Code". <Ref. to 6-2 [T3H0].>

3F18 : CHECK CRUISE SPEED IS RELEASED.

CHECK : *Does cruise speed release when brake pedal is depressed?*

YES : Go to step 3F19.

NO : Go to "Diagnostics Chart with Trouble Code". <Ref. to 6-2 [T3H0].>

3F19 : CHECK CRUISE SPEED IS RELEASED.

CHECK : *Does cruise speed release when clutch pedal is depressed?*

YES : Cruise control system is in correct order.

NO : Go to "Diagnostics Chart with Trouble Code". <Ref. to 6-2 [T3H0].>

2. ON-BOARD DIAGNOSIS WITH SELECT MONITOR

● General

The on-board diagnosis function of the cruise control system uses an external select monitor.

The on-board diagnosis function operates in two categories, which are used depending on the type of problems;

NOTE:

Select monitor part No.:

<Ref. to 1-6 [G1100].>

- 1) Cruise cancel conditions diagnosis
 - (1) This category of diagnosis requires actual vehicle driving in order to determine the cause, (as when cruise speed is cancelled during driving although cruise cancel condition is not entered).
 - (2) Cruise control module memory stores the cancel condition (Code No.) which occurred during driving. When there are plural cancel conditions (Code No.), they are shown on the select monitor.

CAUTION:

- **The cruise control memory stores not only the cruise “cancel” which occurred (although “cancel” operation is not entered by the driver), but also the “cancel” condition input by the driver.**
- **The content of memory is cleared when ignition switch or cruise main switch is turned OFF.**

2) Real-time diagnosis

The real-time diagnosis function is used to determine whether or not the input signal system is in good order, according to signal emitted from switches, sensors, etc.

- (1) Vehicle cannot be driven at cruise speed because problems occurs in the cruise control system or its associated circuits.
- (2) Monitor the signal conditions from switches and sensors.

● Cruise Cancel Conditions Diagnosis

- 1) Connect select monitor.
- 2) Start the engine and turn cruise control main switch to ON.
- 3) Set select monitor in “All System Diagnosis” mode.

NOTE:

The diagnostic code is also shown in the “Each System Check” mode. This mode is called up on the “Cruise Control Diagnosis” screen by selecting the item “Cancel Code(s) Display”.

- 4) Drive vehicle at least 40 km/h (25 MPH) with cruise speed set.

- 5) If cruise speed is canceled itself (without doing any cancel operations), a diagnostic code will appear on select monitor display.

CAUTION:

- **A diagnostic code will also appear when cruise cancel is effected by driver. Do not confuse.**
- **Have a co-worker ride in vehicle to assist in diagnosis during driving.**

NOTE:

Diagnostic code will be cleared by turning ignition switch or cruise control main switch to OFF.

● Real-Time Diagnosis

- 1) Connect select monitor.
- 2) Turn ignition switch and cruise control main switch to ON.
- 3) Select the “Current Data Display & Save” mode on the select monitor “Cruise Control Diagnosis” screen.
- 4) Ensure that normal indication is displayed when controls are operated as indicated below:
 - Depress/release the brake pedal. (Stop light switch and brake switch turn ON.)
 - Turn ON the “SET/COAST” switch.
 - Turn ON the “RESUME/ACCEL” switch.
 - Depress/release the clutch pedal. (MT)
 - Set the select lever to P or N. (AT)

G: DIAGNOSTICS CHART FOR POWER LINE

1. BASIC DIAGNOSTICS PROCEDURE

3G11 : DRIVE AT CRUISE SPEED.

- CHECK** : *Can cruise speed be set?*
- YES** : Go to "CHECK INDICATOR AND CIRCUIT IN CRUISE CONTROL MAIN SWITCH". <Ref. to 6-2 [T3G2].>
- NO** : Go to "CHECK CRUISE CONTROL MAIN SWITCH". <Ref. to 6-2 [T3G3].>

2. CHECK INDICATOR AND CIRCUIT IN CRUISE CONTROL MAIN SWITCH

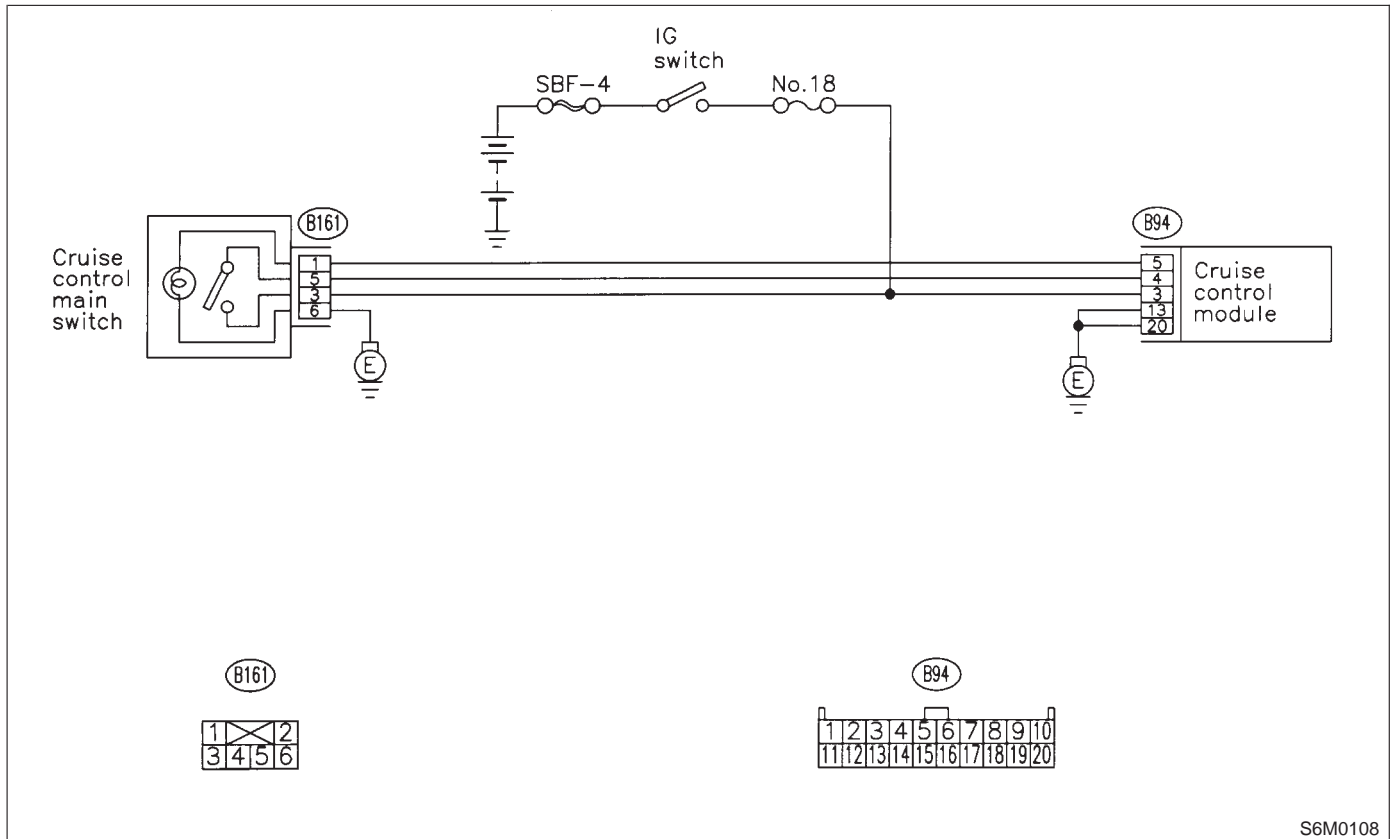
DIAGNOSIS:

- Bulb failure or open harness of the indicator circuit in the cruise control main switch.

TROUBLE SYMPTOM:

- Cruise control can be set, normally indicator does not come on. (When main switch is pressed.)

WIRING DIAGRAM:



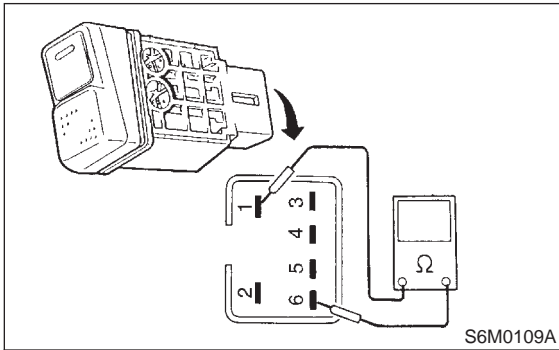
S6M0108

3G21 : CHECK CRUISE CONTROL MAIN SWITCH.

- 1) Remove cruise control main switch.
- 2) Measure resistance between cruise control main switch terminals.

Terminals

No. 1 — No. 6:



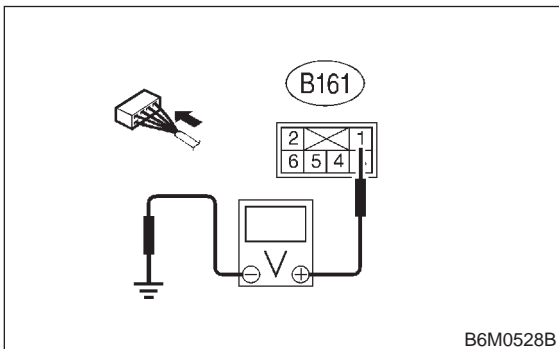
- CHECK** : Is resistance between 10 and 80 Ω?
- YES** : Go to step 3G22.
- NO** : Replace switch illumination bulb. <Ref. to 6-2 [W12B2].>

3G22 : CHECK CIRCUIT BETWEEN CRUISE CONTROL MODULE AND CRUISE CONTROL MAIN SWITCH INDICATOR LIGHT.

- 1) Turn the ignition switch to ON.
- 2) Turn cruise control main switch to ON.
- 3) Measure voltage between cruise control main switch connector and the chassis ground.

Connector & terminal

(B161) No. 1 (+) — Chassis ground (-):



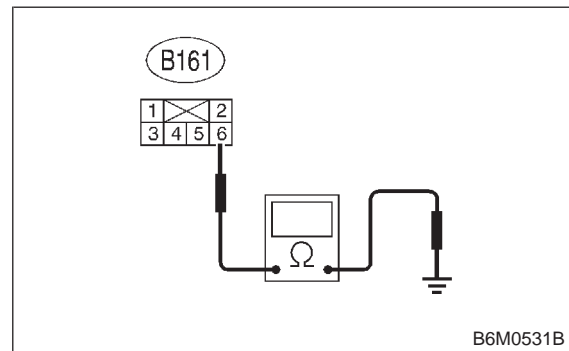
- CHECK** : Is voltage more than 10 V?
- YES** : Go to step 3G23.
- NO** : Repair or replace wiring harness.

3G23 : CHECK CIRCUIT BETWEEN CRUISE CONTROL MODULE AND CRUISE CONTROL MAIN SWITCH INDICATOR LIGHT.

- 1) Turn the ignition switch and cruise control main switch to OFF.
- 2) Remove the connector from the cruise control main switch.
- 3) Measure resistance of ground circuit between the cruise control main switch connector and chassis ground.

Connector & terminal

(B161) No. 6 (+) — Chassis ground (-):



- CHECK** : Is resistance less than 10 Ω?
- YES** : Replace cruise control module. <Ref. to 6-2 [W12B4].>
- NO** : Repair or replace wiring harness.

3. CHECK CRUISE CONTROL MAIN SWITCH

DIAGNOSIS:

- Faulty cruise control main switch, or open harness.

TROUBLE SYMPTOM:

- Cruise control main switch is not turned ON and cruise control cannot be set.

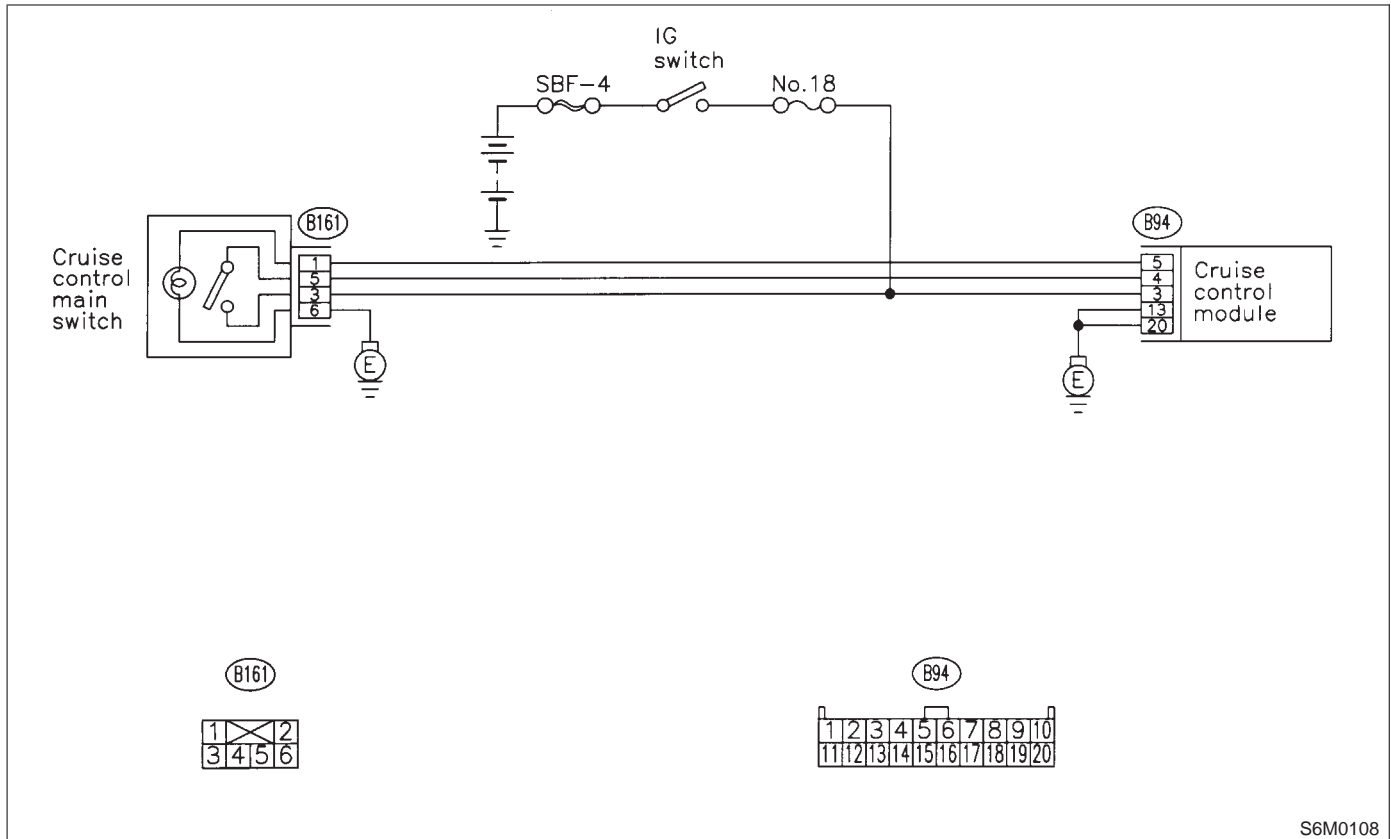
NOTE:

When the main relay (built-in cruise control module) operates, the main switch circuit is in normal condition.

The main relay operation can be checked by hearing the operation sounds.

This operation sounds will be heard when ignition switch and cruise control main switch is turned to ON.

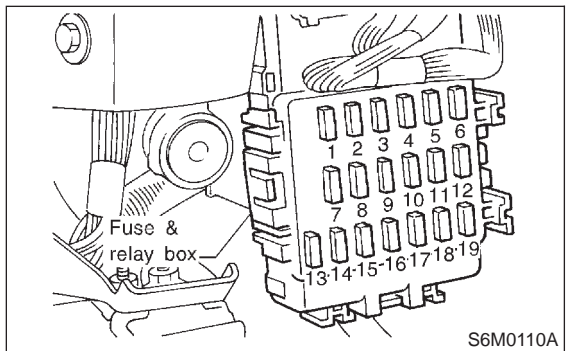
WIRING DIAGRAM:



S6M0108

3G31 : CHECK FUSE.

Check fuse No. 18.



- CHECK** : *Is fuse No. 18 blown?*
- YES** : Replace fuse No. 18. Go to step **3G32**.
- NO** : Go to step **3G32**.

3G32 : CHECK POWER SUPPLY.

- 1) Turn ignition switch to ON.
- 2) Measure voltage between fuse & relay box connector and chassis ground.

Connector & terminal

(B152) No. 5 (+) — Chassis ground (-):

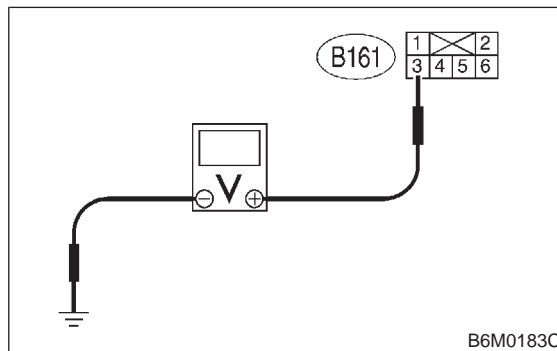
- CHECK** : *Is voltage more than 10 V?*
- YES** : Go to step **3G33**.
- NO** : Replace fuse No. 18. When fuse No. 18 is blown again, repair shorted parts of circuit.

3G33 : CHECK CRUISE CONTROL MAIN SWITCH.

- 1) Turn ignition switch to OFF.
- 2) Remove cruise control main switch and disconnect connector.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between cruise control main switch connector and chassis ground.

Connector & terminal

(B161) No. 3 (+) — Chassis ground (-):



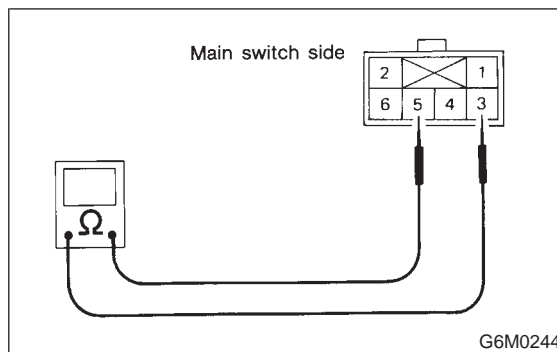
- CHECK** : *Is voltage more than 10 V?*
- YES** : Go to step **3G34**.
- NO** : Replace cruise control main switch. <Ref. to 6-2 [W12B2].>

3G34 : CHECK CRUISE CONTROL MAIN SWITCH.

Measure resistance between cruise control main switch terminals.

Terminals

No. 3 — No. 5:



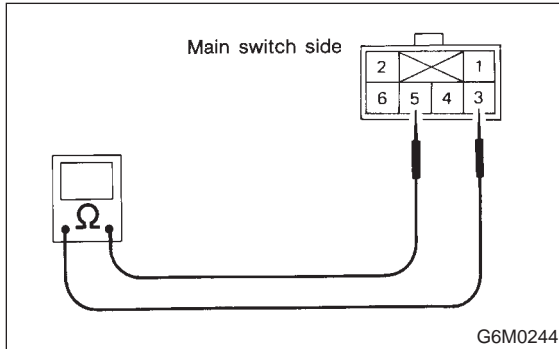
- CHECK** : *Is resistance less than 10 Ω? (When switch is ON.)*
- YES** : Go to step **3G35**.
- NO** : Replace cruise control main switch. <Ref. to 6-2 [W12B2].>

3G35 : CHECK CRUISE CONTROL MAIN SWITCH.

Measure resistance between cruise control main switch terminals.

Terminals

No. 3 — No. 5:



CHECK : Is resistance less than 1 MΩ? (When switch is OFF.)

YES : Go to step 3G36.

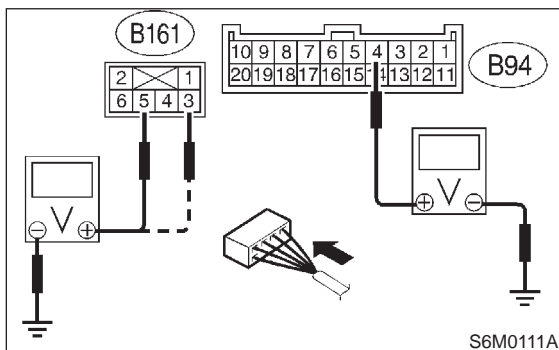
NO : Replace cruise control main switch. <Ref. to 6-2 [W12B2].>

3G36 : CHECK HARNESS BETWEEN CRUISE CONTROL MAIN SWITCH CONNECTOR AND CHASSIS GROUND.

- 1) Connect connector.
- 2) Turn ignition switch to ON.
- 3) Turn cruise control main switch to ON.
- 4) Measure voltage between terminal of cruise control main switch and chassis ground.

Connector & terminal

(B161) No. 3 (+) — Chassis ground (-):



CHECK : Is voltage more than 10 V?

YES : Go to step 3G37.

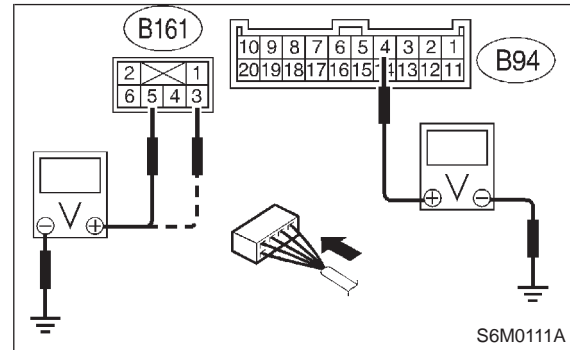
NO : Repair or replace wiring harness.

3G37 : CHECK HARNESS BETWEEN CRUISE CONTROL MAIN SWITCH CONNECTOR AND CHASSIS GROUND.

Measure voltage between terminal of cruise control main switch chassis ground.

Connector & terminal

(B161) No. 5 (+) — Chassis ground (-):



CHECK : Is voltage more than 10 V?

YES : Go to step 3G38.

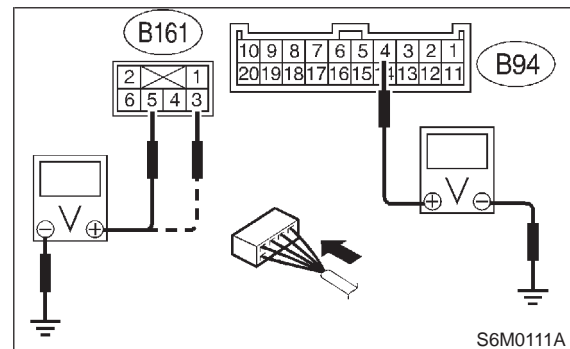
NO : Repair or replace wiring harness.

3G38 : CHECK HARNESS BETWEEN CRUISE CONTROL MODULE CONNECTOR AND CHASSIS GROUND.

Measure voltage between terminal of cruise control module and chassis ground.

Connector & terminal

(B94) No. 4 (+) — Chassis ground (-):



CHECK : Is voltage more than 10 V?

YES : Replace cruise control module. <Ref. to 6-2 [W12B4].>

NO : Repair or replace wiring harness.

NOTE:

Depress cruise control main switch with fingers while measuring voltage between (B161) No. 5 and chassis ground.

H: DIAGNOSTICS CHART WITH DIAGNOSTIC CODE**1. DIAGNOSTIC CODE LIST**

| Diagnostic code | Item | Contents of diagnosis | Index No. |
|-----------------|------------------------|---|-----------------------|
| 11 | BRAKE SW/STOP SW | Input signals from brake switch "OFF", stop light switch "ON" (Brake pedal is depressed.) | <Ref. to 6-2 [T3H2].> |
| 12 | CLUTCH SW/INHIBITOR SW | Input signals from clutch switch "OFF" (MT), or inhibitor switch "P or N" (AT) [Clutch pedal is depressed (MT), or select lever is set to P or N position (AT).] | <Ref. to 6-2 [T3H3].> |
| 13 | LOW SPEED LIMIT | Low-speed control limiter | <Ref. to 6-2 [T3H4].> |
| 14 | CANCEL SW | Input signal from cancel switch (faulty SET/COAST switch or RESUME/ACCEL switch) | <Ref. to 6-2 [T3H5].> |
| 21 | VACUUM VALVE | Faulty vacuum valve or valve drive system | <Ref. to 6-2 [T3H6].> |
| 22 | VENT 2 VALVE | Faulty vent 2 valve or valve drive system | <Ref. to 6-2 [T3H6].> |
| 23 | VENT 1 VALVE | Faulty vent 1 valve or valve drive system | <Ref. to 6-2 [T3H6].> |
| 24 | SPEED SENSOR | Faulty vehicle speed sensor (MT) or transmission control module (AT) | <Ref. to 6-2 [T3H4].> |
| 25 | CONTROL MODULE | Faulty CPU RAM included in cruise control module | <Ref. to 6-2 [T3H7].> |

2. DIAGNOSTIC CODE 11 (BRAKE SWITCH, STOP LIGHT SWITCH)

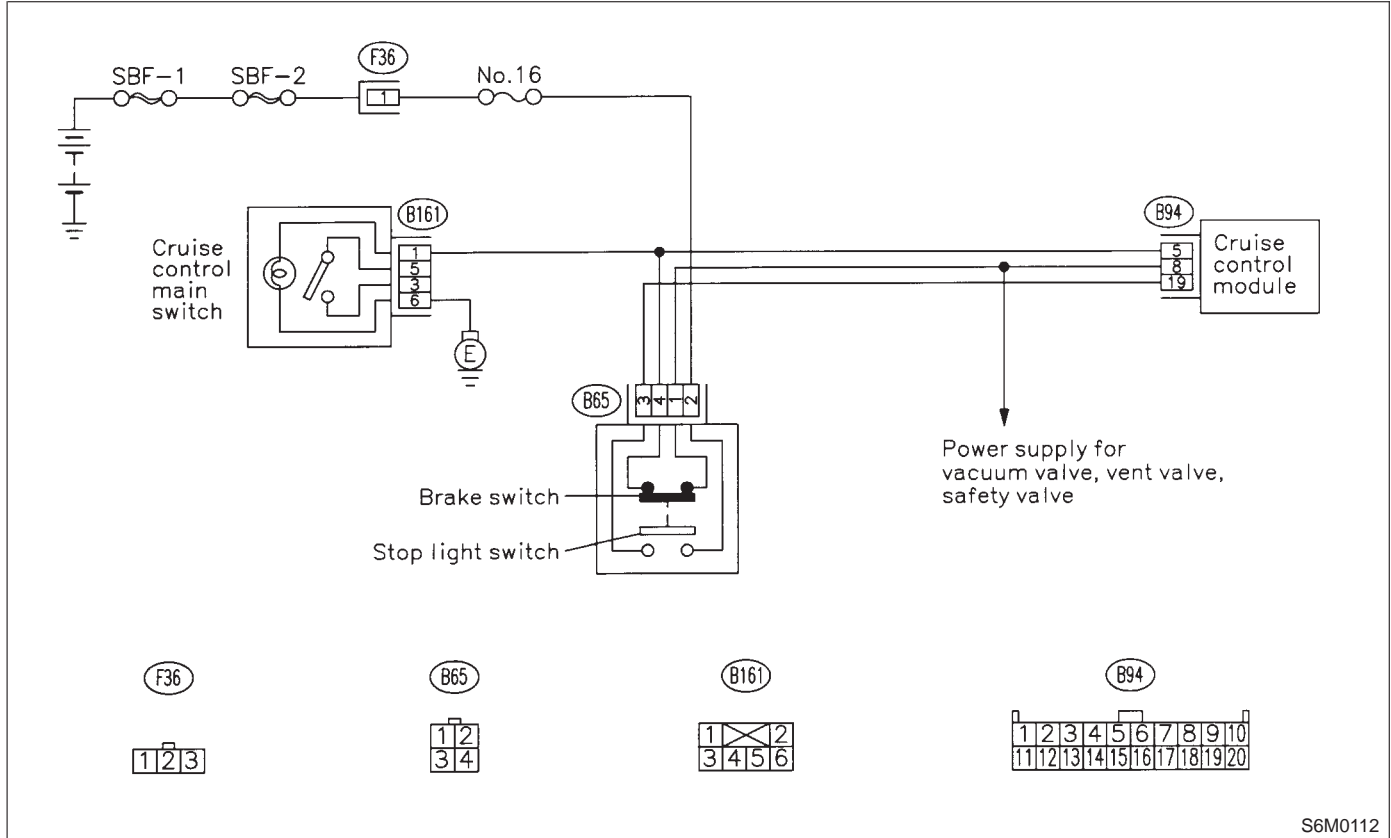
DIAGNOSIS:

- Failure or disconnection of the stop light switch and brake switch.

TROUBLE SYMPTOM:

- Cruise control cannot be set.

WIRING DIAGRAM:



S6M0112

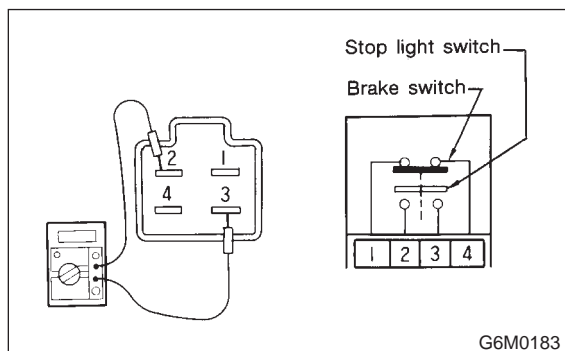
3H21 : CHECK BRAKE SWITCH.

- 1) Turn ignition switch to ON.
- 2) Turn cruise control main switch to ON.
- 3) Apply parking brake securely.
- 4) Set select monitor in "Current Data Display & Save" mode.
- 5) Depress the brake pedal and check signals for proper operation.

(1) The Stop Light Switch shown on the display turns from "OFF" to "ON".

(2) The Brake Switch shown on the display turns from "OFF" to "ON".

- 6) Release the brake pedal.
- 7) Remove connector of stop and brake switch.
- 8) Check circuit between brake switch terminal.

Terminals**No. 1 — No. 4: (Brake switch)**

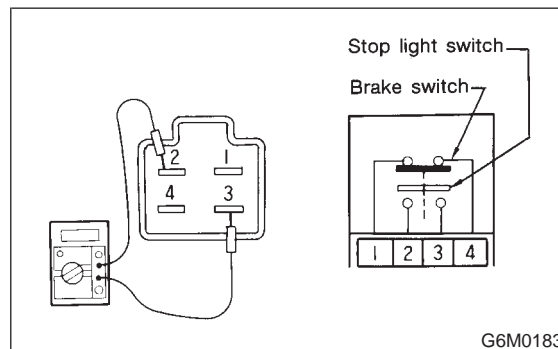
CHECK : *Is resistance less than 1 Ω? (When brake pedal is released.)*

YES : Go to step 3H22.

NO : Replace brake and stop light switch.
<Ref. to 4-5 [C100].>

3H22 : CHECK BRAKE SWITCH.

Check circuit between brake switch terminal.

Terminals**No. 1 — No. 4: (Brake switch)**

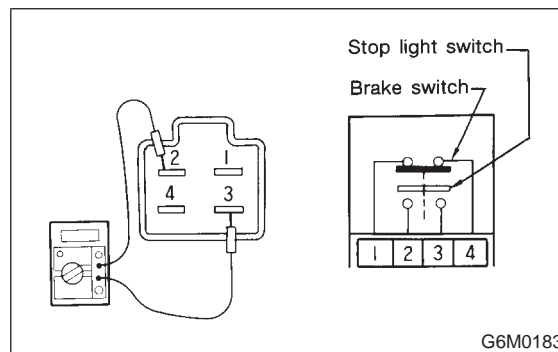
CHECK : *Is resistance more than 1 MΩ? (When brake pedal is depressed.)*

YES : Go to step 3H23.

NO : Replace brake and stop light switch.
<Ref. to 4-5 [C100].>

3H23 : CHECK STOP LIGHT SWITCH.

Check circuit between stop light switch terminal.

Terminals**No. 2 — No. 3: (Stop light switch)**

CHECK : *Is resistance more than 1 MΩ? (When brake pedal is released.)*

YES : Go to step 3H24.

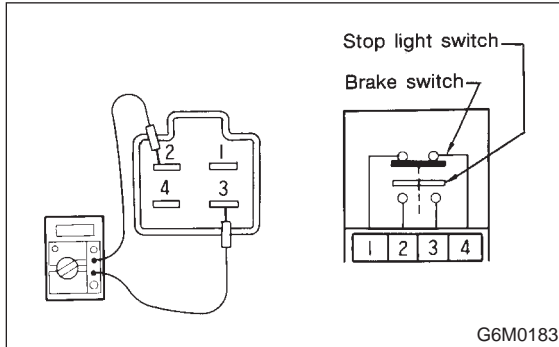
NO : Replace brake and stop light switch.
<Ref. to 4-5 [C100].>

3H24 : CHECK STOP LIGHT SWITCH.

Check circuit between stop light switch terminal.

Terminals

No. 2 — No. 3: (Stop light switch)



- CHECK** : **Is resistance less than 1 Ω ? (When brake pedal is depressed.)**
- YES** : Replace cruise control module. <Ref. to 6-2 [W12B4].>
- NO** : Replace brake and stop light switch. <Ref. to 4-5 [C100].>

MEMO:

3. DIAGNOSTIC CODE 12 (CLUTCH SWITCH, INHIBITOR SWITCH)

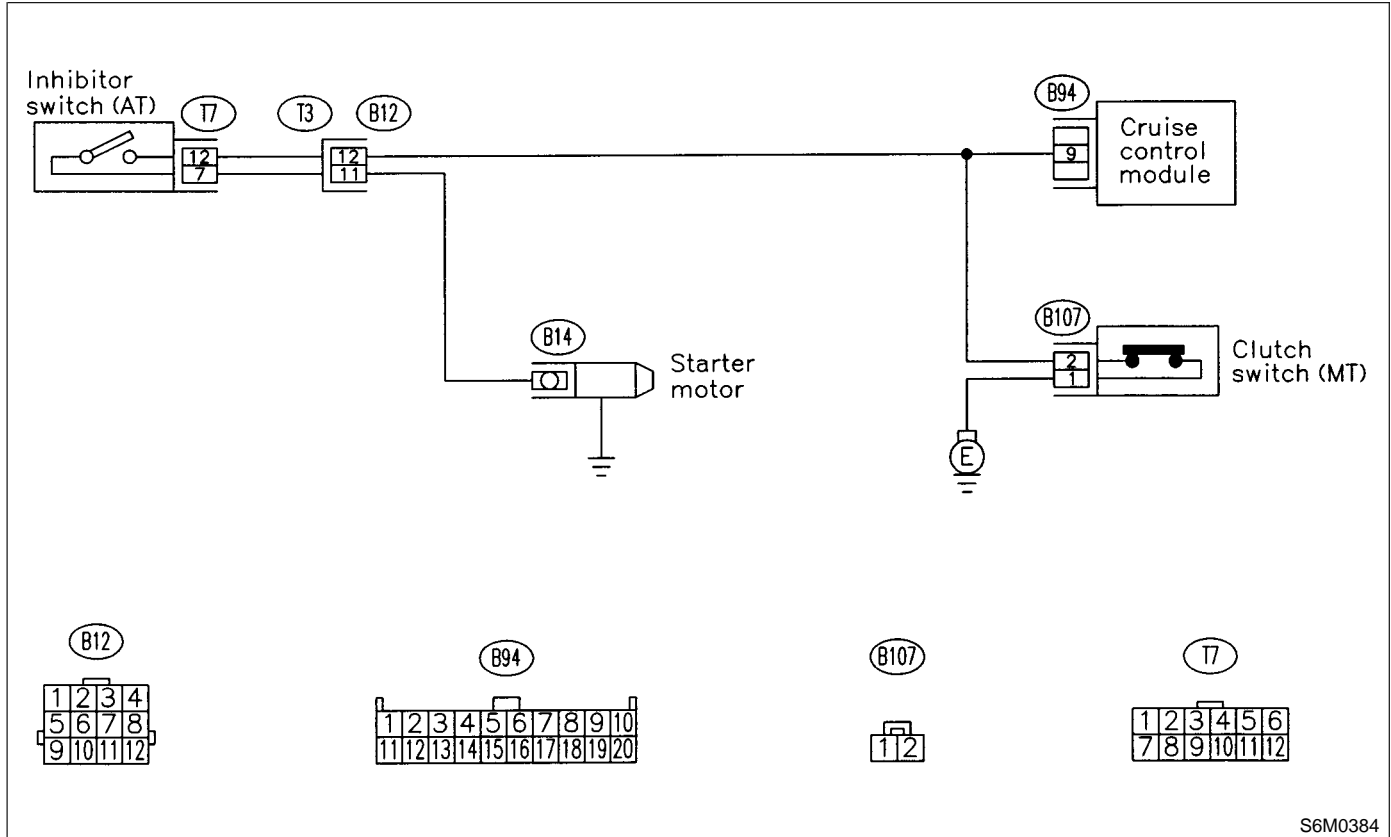
DIAGNOSIS:

- Failure or disconnection of the clutch switch. (MT)
- Failure or disconnection of the inhibitor switch. (AT)

TROUBLE SYMPTOM:

- Cruise control cannot be set.

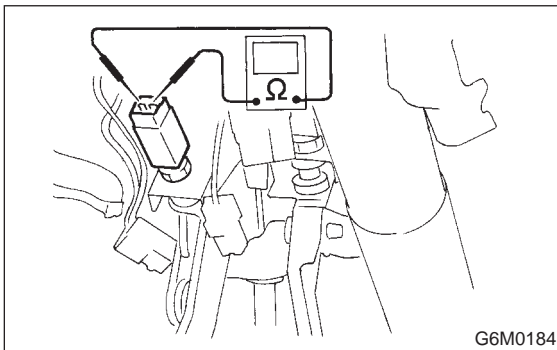
WIRING DIAGRAM:



S6M0384

3H31 : CHECK CLUTCH SWITCH. (MT)

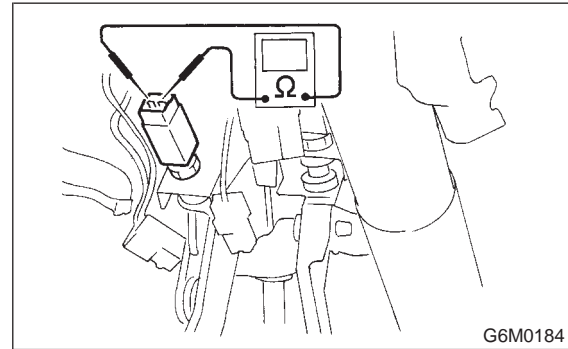
- 1) Turn ignition switch to ON.
- 2) Turn cruise control main switch to ON.
- 3) Apply parking brake securely.
- 4) Set select monitor in "Current Data Display & Save" mode.
- 5) Depress the clutch pedal and check signal for proper operation. (MT)
The Clutch/Inhibitor Switch shown on the display turns from "ON" to "OFF".
- 6) Disconnect connector of clutch switch.
- 7) Check continuity of the clutch switch.

Terminals**No. 1 — No. 2:**

- CHECK** : *Is resistance less than 10 Ω? (When clutch pedal is released.)*
- YES** : Go to step **3H32**.
- NO** : Replace clutch switch. <Ref. to 4-5 [C100].>

3H32 : CHECK CLUTCH SWITCH. (MT)

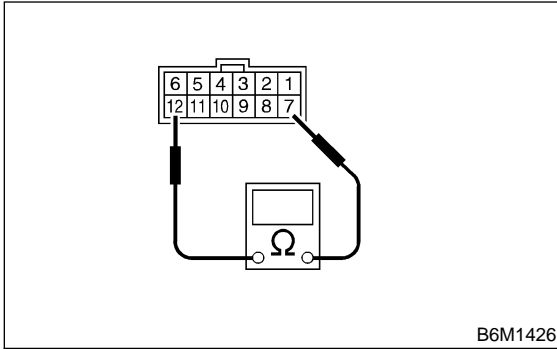
Check continuity of the clutch switch.

Terminals**No. 1 — No. 2:**

- CHECK** : *Is resistance more than 1 MΩ? (When clutch pedal is depressed.)*
- YES** : Replace cruise control module. <Ref. to 6-2 [W12B4].>
- NO** : Replace clutch switch. <Ref. to 4-5 [C100].>

3H33 : CHECK INHIBITOR SWITCH. (AT)

- 1) Turn ignition switch to ON.
- 2) Turn cruise control main switch to ON.
- 3) Apply parking brake securely.
- 4) Set select monitor in "Current Data Display & Save" mode.
- 5) Set the select lever from P or N position to D position and check signal for proper operation. The Clutch/Inhibitor Switch shown on the display turns from "ON" to "OFF".
- 6) Set the select lever to P or N position.
- 7) Disconnect connector of inhibitor switch.
- 8) Check continuity of the inhibitor switch.

Terminals**No. 7 — No. 12:**

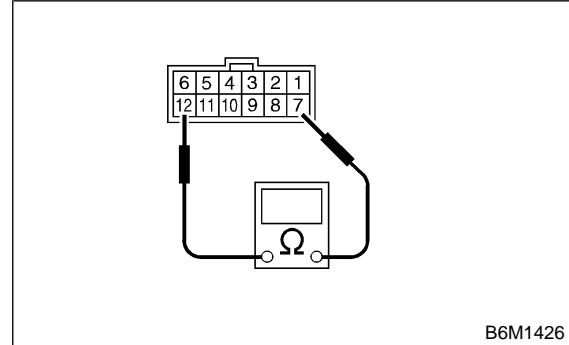
CHECK : **Is resistance less than 10 Ω? (When select lever is in P or N.)**

YES : Go to step **3H34**.

NO : Replace inhibitor switch. <Ref. to 3-2 [W200].> Repair inhibitor switch wiring harness.

3H34 : CHECK INHIBITOR SWITCH. (AT)

Check continuity of the inhibitor switch.

Terminals**No. 7 — No. 12:**

CHECK : **Is resistance more than 1 MΩ? (When select lever is not in P or N.)**

YES : Replace cruise control module. <Ref. to 6-2 [W12B4].>

NO : Replace inhibitor switch. <Ref. to 3-2 [W200].> Repair inhibitor switch wiring harness.

MEMO:

4. DIAGNOSTIC CODE 13 AND 24 (SPEED SENSOR SYSTEM)

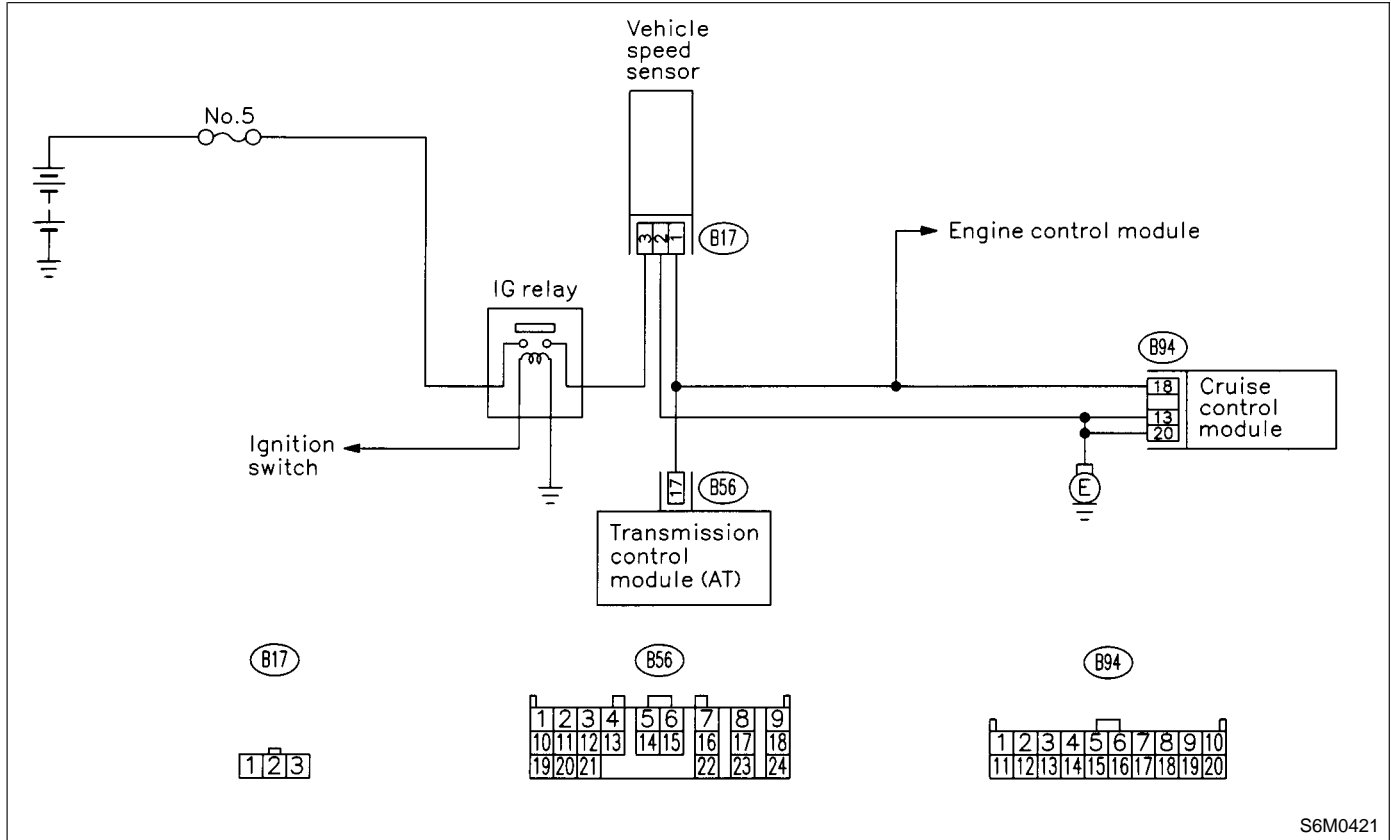
DIAGNOSIS:

- Disconnection or short circuit of vehicle speed sensor (MT model) or transmission control module (AT model).

TROUBLE SYMPTOM:

- Cruise control cannot be set. (Cancelled immediately.)

WIRING DIAGRAM:



S6M0421

3H41 : CHECK TRANSMISSION TYPE.

CHECK : *Is the transmission type MT?*

YES : Go to step 3H42.

NO : Go to step 3H46.

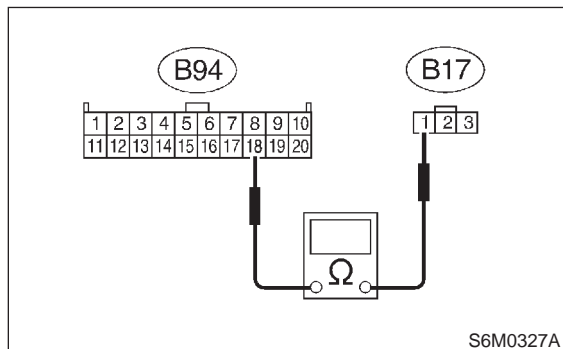
3H42 : CHECK HARNESS CONNECTOR BETWEEN CRUISE CONTROL MODULE AND VEHICLE SPEED SENSOR.

1) Disconnect connector from vehicle speed sensor and cruise control module.

2) Measure resistance of harness connector between vehicle speed sensor and cruise control module.

Connector & terminal

(B17) No. 1 — (B94) No. 18:



CHECK : *Is the resistance less than 10 Ω?*

YES : Go to step 3H43.

NO : Repair wiring harness.

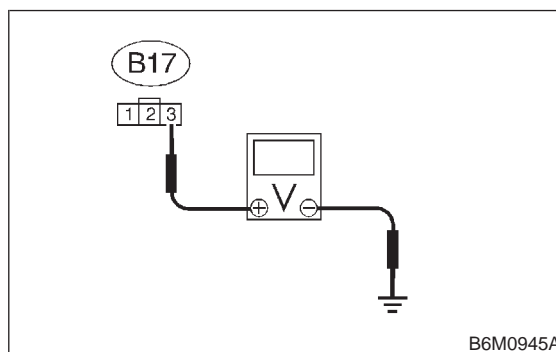
3H43 : CHECK HARNESS CONNECTOR BETWEEN BATTERY AND VEHICLE SPEED SENSOR.

1) Turn ignition switch to ON.

2) Measure voltage between vehicle speed sensor connector (B17) and chassis ground.

Connector & terminal

(B17) No. 3 (+) — Chassis ground (-):



CHECK : *Is the voltage more than 10 V?*

YES : Go to step 3H44.

NO : Repair harness connector between battery and vehicle speed sensor.

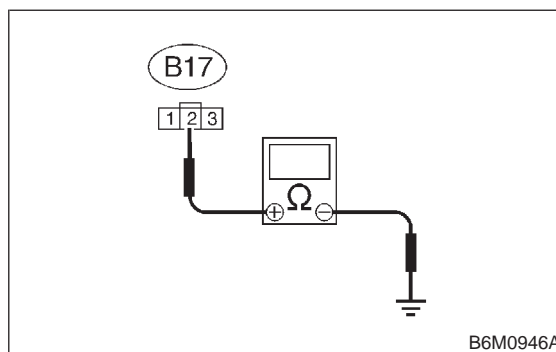
3H44 : CHECK HARNESS CONNECTOR BETWEEN VEHICLE SPEED SENSOR AND ENGINE GROUND.

1) Turn ignition switch to OFF.

2) Measure resistance between vehicle speed sensor connector (B17) and engine ground.

Connector & terminal

(B17) No. 2 (+) — Engine ground (-):



CHECK : *Is the resistance less than 10 Ω?*

YES : Go to step 3H45.

NO : Repair harness connector between vehicle speed sensor and engine ground.

3H45 : CHECK VEHICLE SPEED SENSOR.

- 1) Connect connector to vehicle speed sensor.
- 2) Set the vehicle on free roller, or lift-up the vehicle and support with safety stands.

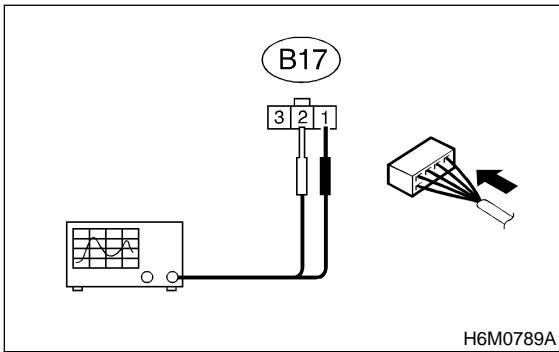
WARNING:

Be careful not to be caught up by the running wheels.

- 3) Set oscilloscope to vehicle speed sensor connector terminals.

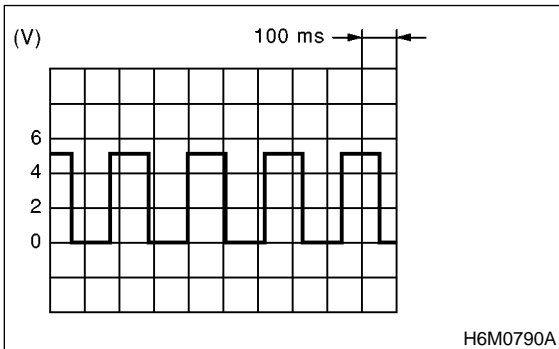
Positive probe; (B17) No. 1

Earth lead; (B17) No. 2



H6M0789A

- 4) Drive the vehicle at speed greater than 20 km/h (12 MPH).
- 5) Measure signal voltage indicated on oscilloscope.



H6M0790A

CHECK : *Is the voltage more than 5 V?*

YES : Replace cruise control module. <Ref. to 6-2 [W12B4].>

NO : Replace vehicle speed sensor. <Ref. to 6-2 [W1400].>

3H46 : CHECK HARNESS CONNECTOR BETWEEN CRUISE CONTROL MODULE AND AUTOMATIC TRANSMISSION CONTROL MODULE.

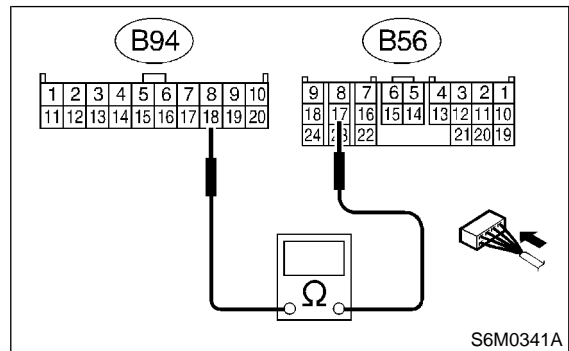
- 1) Disconnect connector from automatic transmission control module and cruise control module.
- 2) Measure resistance between cruise control module connector and automatic transmission control module connector.

CAUTION:

To measure the voltage and/or resistance, use a tapered pin with a diameter of less than 0.64 mm (0.025 in). Do not insert the pin more than 5 mm (0.20 in).

Connector & terminal

(B94) No. 18 — (B56) No. 17:



S6M0341A

CHECK : *Is the resistance less than 10 Ω?*

YES : Go to step 3H47.

NO : Repair harness connector between cruise control module and automatic transmission control module.

3H47 : CHECK AUTOMATIC TRANSMISSION CONTROL MODULE.

- 1) Connect connector to automatic transmission control module.
- 2) Set the vehicle on free roller, or lift-up the vehicle and support with safety stands.

WARNING:

Be careful not to be caught by the running wheels.

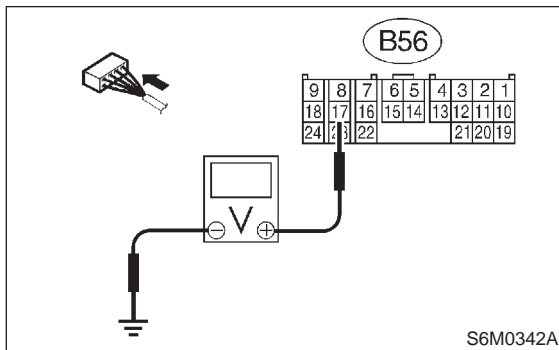
- 3) Drive the vehicle faster than 10 km/h (6 MPH).
- 4) Measure voltage between automatic transmission control module connector (B56) and chassis ground.

CAUTION:

To measure the voltage and/or resistance, use a tapered pin with a diameter of less than 0.64 mm (0.025 in). Do not insert the pin more than 5 mm (0.20 in).

Connector & terminal

(B56) No. 17 (+) — Chassis ground (-):



- CHECK** : *Is the voltage less than 1 V ←→ more than 4 V?*
- YES** : Replace cruise control module. <Ref. to 6-2 [W12B4].>
- NO** : Replace automatic transmission control module. <Ref. to 3-2 [W2200].>

5. DIAGNOSTIC CODE 14 (SET/COAST SWITCH, RESUME/ACCEL SWITCH, CANCEL SWITCH)

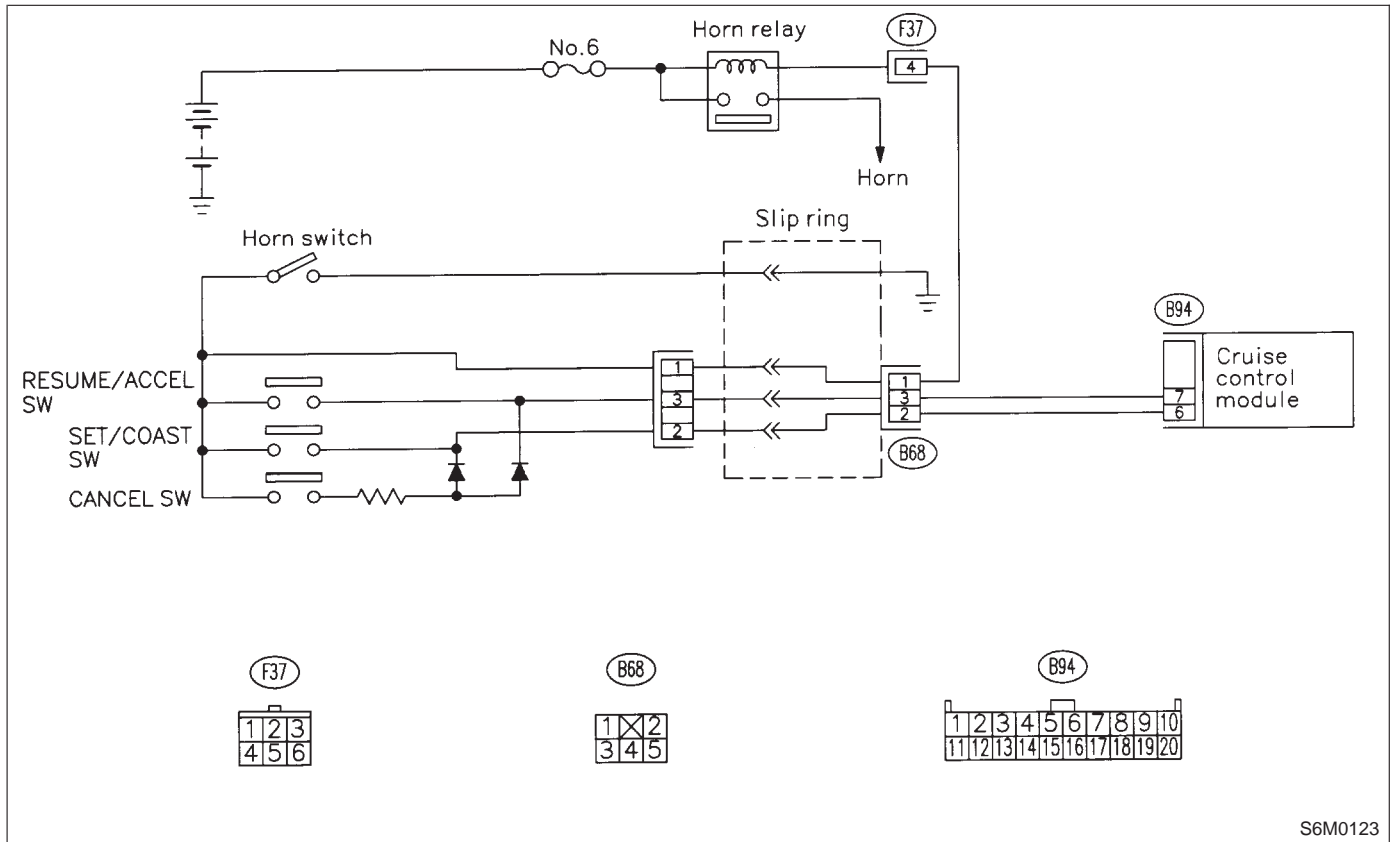
DIAGNOSIS:

- Short circuit inside the SET SW and RESUME SW.

TROUBLE SYMPTOM:

- Cruise control cannot be set. (Cancelled immediately.)

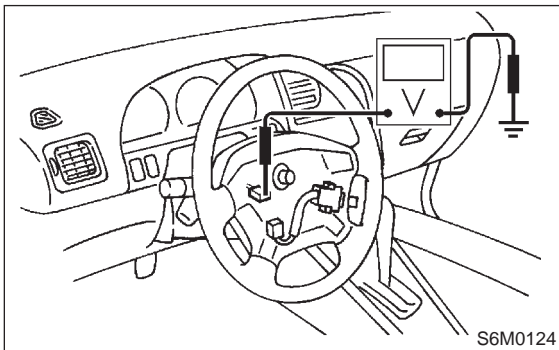
WIRING DIAGRAM:



S6M0123

3H51 : CHECK POWER SUPPLY.

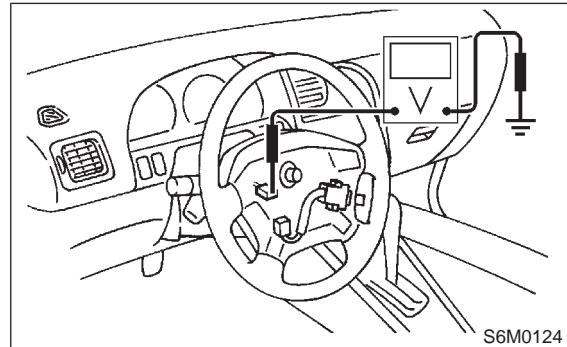
- 1) Turn ignition switch to ON.
- 2) Turn cruise control main switch to ON.
- 3) Set select monitor in "Current Data Display & Save" mode.
- 4) Check signals for proper operation.
 - (1) When pushing the SET/COAST switch:
The SET/COAST switch shown on the display turns from "OFF" to "ON".
 - (2) When pushing the RESUME/ACCEL switch:
The RESUME/ACCEL switch shown on the display turns from "OFF" to "ON".
- 5) Turn ignition switch to OFF.
- 6) Disconnect connector from cruise control command switch.
- 7) Turn ignition switch to ON.
- 8) Measure voltage between cruise control command switch connector and chassis ground.

Terminals**No. 1 (+) — Chassis ground (-):**

- CHECK** : **Is voltage more than 10 V?**
- YES** : Go to step 3H52.
- NO** : Repair or replace wiring harness between fuse & relay box and cruise control command switch. <Ref. to 6-2 [W12B3].>

3H52 : CHECK CRUISE CONTROL COMMAND SWITCH.

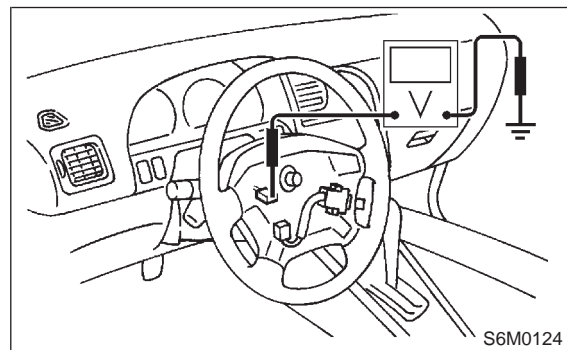
- 1) Turn ignition switch to OFF.
- 2) Connect connector of cruise control command switch.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between cruise control command switch connector and chassis ground.

Terminals**No. 2 (+) — Chassis ground (-):**

- CHECK** : **Is voltage more than 10 V? (When SET/COAST switch is ON.)**
- YES** : Go to step 3H53.
- NO** : Replace cruise control command switch. <Ref. to 6-2 [W12B3].>

3H53 : CHECK CRUISE CONTROL COMMAND SWITCH.

Measure voltage between cruise control command switch connector and chassis ground.

Terminals**No. 3 (+) — Chassis ground (-):**

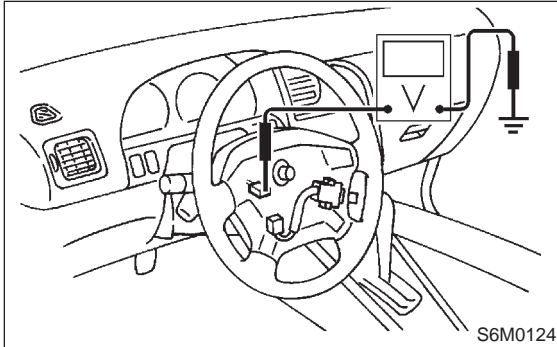
- CHECK** : **Is voltage more than 10 V? (When RESUME/ACCEL switch is ON.)**
- YES** : Go to step 3H54.
- NO** : Replace cruise control command switch. <Ref. to 6-2 [W12B3].>

3H54 : CHECK CRUISE CONTROL COMMAND SWITCH.

Measure voltage between cruise control command switch connector and chassis ground.

Terminals

No. 2 (+) — Chassis ground (-):



CHECK : *Is voltage more than 10 V? (When CANCEL switch is ON.)*

YES : Go to step 3H55.

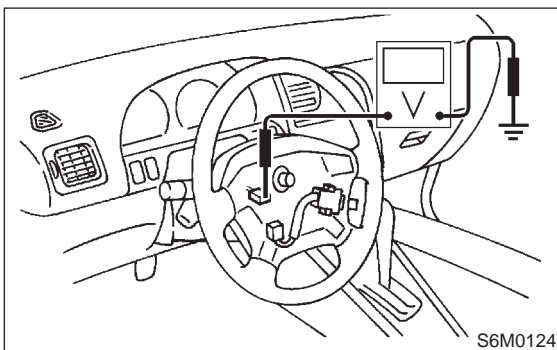
NO : Replace cruise control command switch. <Ref. to 6-2 [W12B3].>

3H55 : CHECK CRUISE CONTROL COMMAND SWITCH.

Measure voltage between cruise control command switch connector and chassis ground.

Terminals

No. 3 (+) — Chassis ground (-):



CHECK : *Is voltage more than 10 V? (When CANCEL switch is ON.)*

YES : Go to step 3H56.

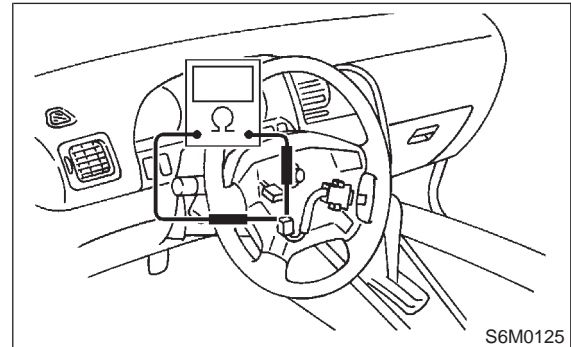
NO : Replace cruise control command switch. <Ref. to 6-2 [W12B3].>

3H56 : CHECK CRUISE CONTROL COMMAND SWITCH.

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from cruise control command switch.
- 3) Measure resistance between terminals of cruise control command switch connector (switch side) to check the switch operation.

Terminals

No. 1 — No. 2:



CHECK : *Is resistance less than 10 Ω? (When SET/COAST switch is ON.)*

YES : Go to step 3H57.

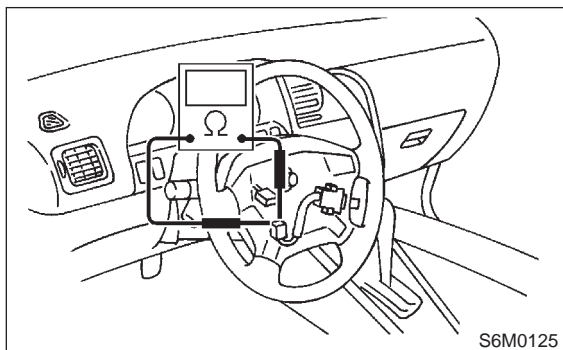
NO : Replace cruise control command switch. <Ref. to 6-2 [W12B3].>

3H57 : CHECK CRUISE CONTROL COMMAND SWITCH.

Measure resistance between terminals of cruise control command switch connector (switch side) to check the switch operation.

Terminals

No. 1 — No. 2:



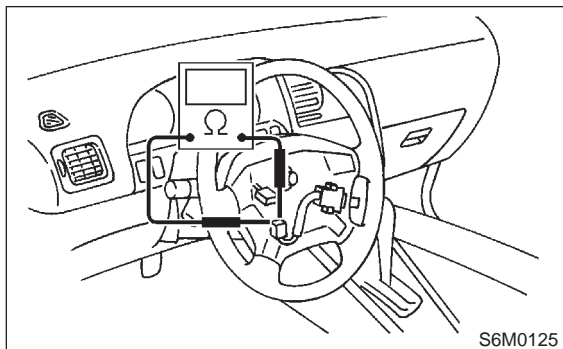
- CHECK** : *Is resistance more than 1 MΩ? (When SET/COAST switch is OFF.)*
- YES** : Go to step 3H58.
- NO** : Replace cruise control command switch. <Ref. to 6-2 [W12B3].>

3H58 : CHECK CRUISE CONTROL COMMAND SWITCH.

Measure resistance between terminals of cruise control command switch connector (switch side) to check the switch operation.

Terminals

No. 1 — No. 3:



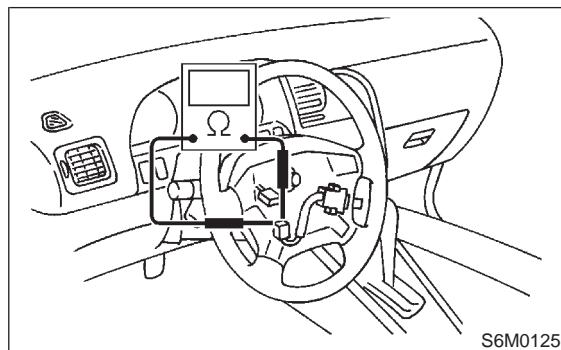
- CHECK** : *Is resistance less than 10 Ω? (When RESUME/ACCEL switch is ON.)*
- YES** : Go to step 3H59.
- NO** : Replace cruise control command switch. <Ref. to 6-2 [W12B3].>

3H59 : CHECK CRUISE CONTROL COMMAND SWITCH.

Measure resistance between terminals of cruise control command switch connector (switch side) to check the switch operation.

Terminals

No. 1 — No. 3:



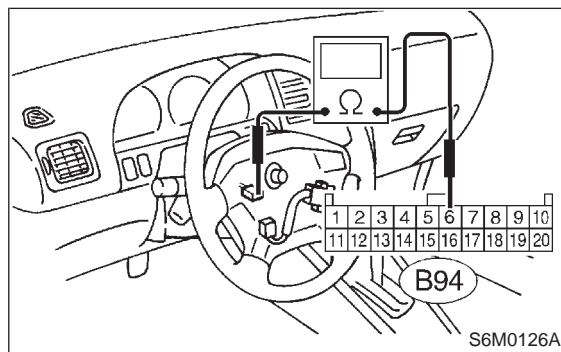
- CHECK** : *Is resistance more than 1 MΩ? (When RESUME/ACCEL switch is OFF.)*
- YES** : Go to step 3H510.
- NO** : Replace cruise control command switch. <Ref. to 6-2 [W12B3].>

3H510 : CHECK HARNESS CONNECTOR BETWEEN CRUISE CONTROL COMMAND SWITCH AND CRUISE CONTROL MODULE.

- 1) Disconnect connector from cruise control module.
- 2) Measure resistance of harness connector between cruise control command switch and cruise control module.

Connector & terminal

No. 2 (command switch) — (B94) No. 6:



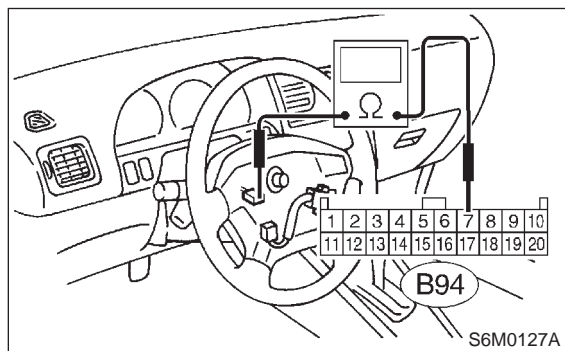
- CHECK** : *Is resistance less than 10 Ω?*
- YES** : Go to step 3H511.
- NO** : Repair or replace wiring harness.

3H511 : CHECK HARNESS CONNECTOR BETWEEN CRUISE CONTROL COMMAND SWITCH AND CRUISE CONTROL MODULE.

Measure resistance of harness connector between cruise control command switch and cruise control module.

Connector & terminal

No. 3 (command switch) — (B94) No. 7:



- CHECK** : **Is resistance less than 10 Ω?**
- YES** : Replace cruise control module. <Ref. to 6-2 [W12B4].>
- NO** : Repair or replace wiring harness.

MEMO:

6. DIAGNOSTIC CODE 21, 22 AND 23 (VACUUM VALVE, VENT 2 VALVE, VENT 1 VALVE)

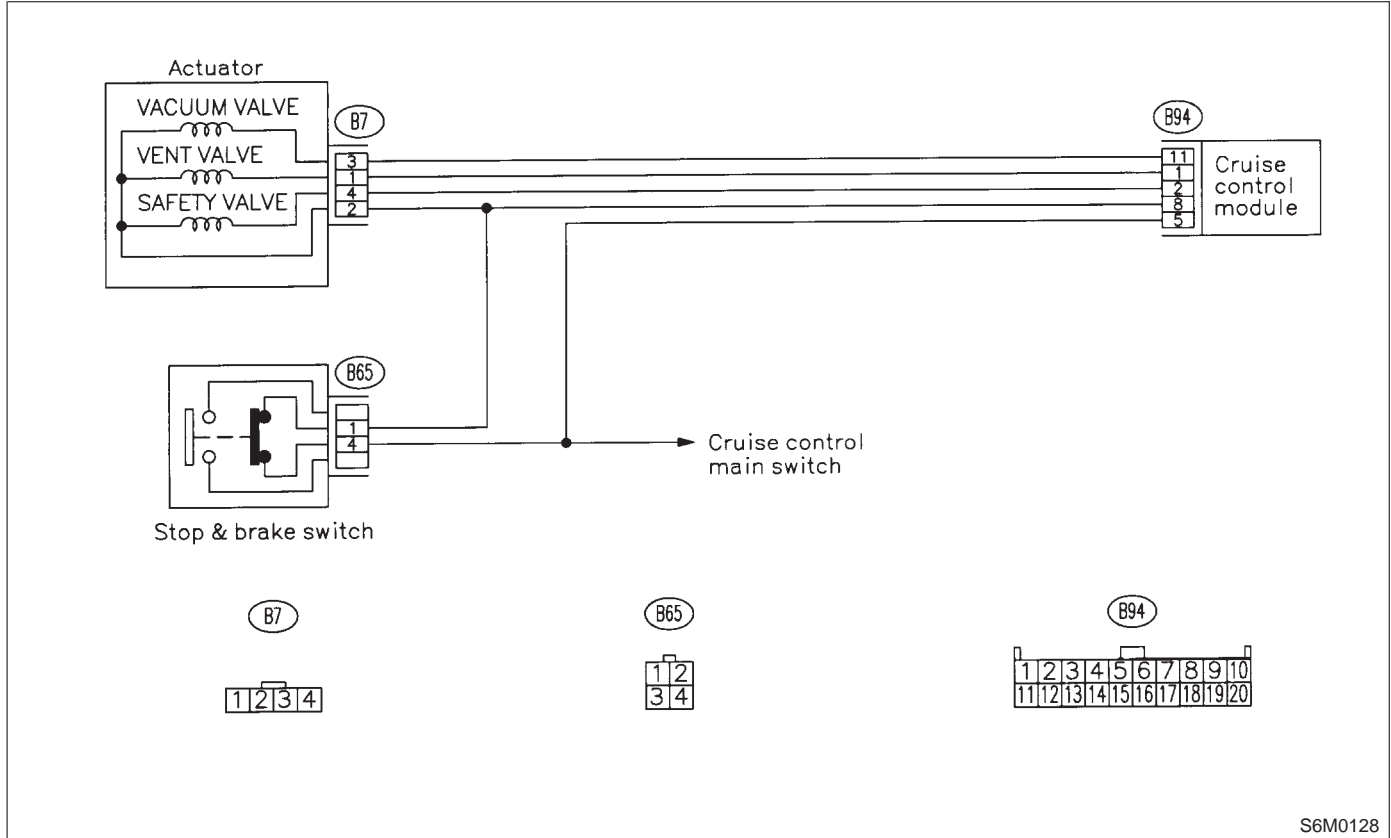
DIAGNOSIS:

- Open or poor contact of vacuum valve, vent 2 valve and vent 1 valve.

TROUBLE SYMPTOM:

- Cruise control cannot be set. (Cancels immediately.)

WIRING DIAGRAM:



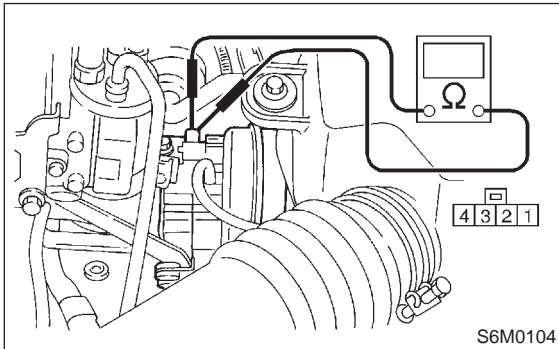
S6M0128

3H61 : MEASURE RESISTANCE OF VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE.

- 1) Disconnect connector from actuator.
- 2) Measure resistance of vacuum valve, vent 2 valve and vent 1 valve.

Terminals

No. 2 — No. 3:



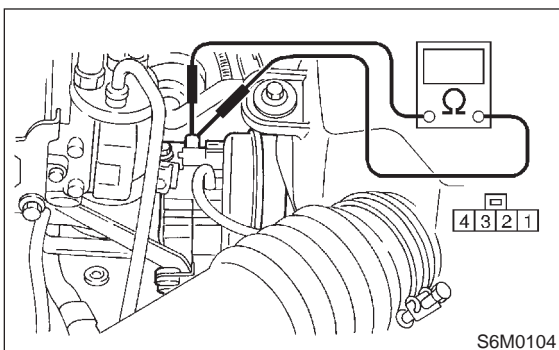
- CHECK** : *Is resistance less than 22 Ω?*
- YES** : Go to step **3H62**.
- NO** : Replace actuator. <Ref. to 6-2 [W12B1].>

3H62 : MEASURE RESISTANCE OF VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE.

Measure resistance of vacuum valve, vent 2 valve and vent 1 valve.

Terminals

No. 2 — No. 1:



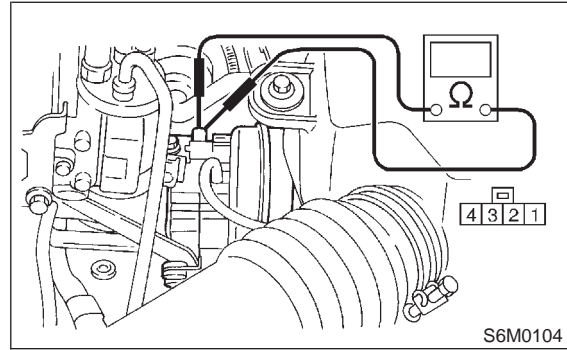
- CHECK** : *Is resistance less than 55 Ω?*
- YES** : Go to step **3H63**.
- NO** : Replace actuator. <Ref. to 6-2 [W12B1].>

3H63 : MEASURE RESISTANCE OF VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE.

Measure resistance of vacuum valve, vent 2 valve and vent 1 valve.

Terminals

No. 2 — No. 4:



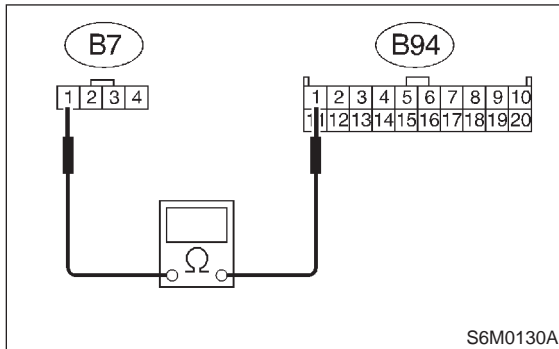
- CHECK** : *Is resistance less than 55 Ω?*
- YES** : Go to step **3H64**.
- NO** : Replace actuator. <Ref. to 6-2 [W12B1].>

3H64 : PERFORM A CIRCUIT TEST IN HARNESS BETWEEN ACTUATOR (VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE) AND CRUISE CONTROL MODULE.

- 1) Disconnect connector from cruise control module.
- 2) Measure resistance of harness connector between cruise control module, vacuum valve, vent 2 valve and vent 1 valve.

Connector & terminal

(B7) No. 1 — (B94) No. 1:



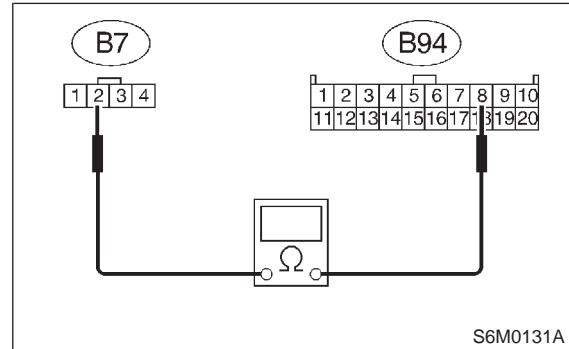
- CHECK** : Is resistance less than 10 Ω?
- YES** : Go to step 3H65.
- NO** : Repair or replace wiring harness between actuator <Ref. to 6-2 [W12B1].> and cruise control module <Ref. to 6-2 [W12B4].>.

3H65 : PERFORM A CIRCUIT TEST IN HARNESS BETWEEN ACTUATOR (VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE) AND CRUISE CONTROL MODULE.

Measure resistance of harness connector between cruise control module, vacuum valve, vent 2 valve and vent 1 valve.

Connector & terminal

(B7) No. 2 — (B94) No. 8:



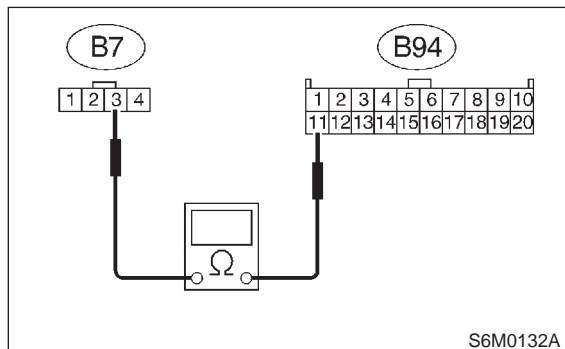
- CHECK** : Is resistance less than 10 Ω?
- YES** : Go to step 3H66.
- NO** : Repair or replace wiring harness between actuator <Ref. to 6-2 [W12B1].> and cruise control module <Ref. to 6-2 [W12B4].>.

3H66 : PERFORM A CIRCUIT TEST IN HARNESS BETWEEN ACTUATOR (VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE) AND CRUISE CONTROL MODULE.

Measure resistance of harness connector between cruise control module, vacuum valve, vent 2 valve and vent 1 valve.

Connector & terminal

(B7) No. 3 — (B94) No. 11:



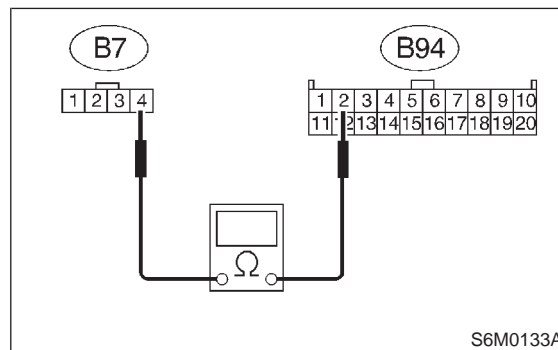
- CHECK** : **Is resistance less than 10 Ω?**
- YES** : Go to step **3H67**.
- NO** : Repair or replace wiring harness between actuator <Ref. to 6-2 [W12B1].> and cruise control module <Ref. to 6-2 [W12B4].>.

3H67 : PERFORM A CIRCUIT TEST IN HARNESS BETWEEN ACTUATOR (VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE) AND CRUISE CONTROL MODULE.

Measure resistance of harness connector between cruise control module, vacuum valve, vent 2 valve and vent 1 valve.

Connector & terminal

(B7) No. 4 — (B94) No. 2:



- CHECK** : **Is resistance less than 10 Ω?**
- YES** : Replace cruise control module.
- NO** : Repair or replace wiring harness between actuator <Ref. to 6-2 [W12B1].> and cruise control module <Ref. to 6-2 [W12B4].>.

7. DIAGNOSTIC CODE 25 (CRUISE CONTROL MODULE BUILT-IN RELAY, CPU RAM)

DIAGNOSIS:

- Poor welding of built-in relay of cruise control module.
- Failure of built-in CPU RAM of cruise control module.

TROUBLE SYMPTOM:

- Cruise control is canceled and memorized cruise speed is also canceled.
- Once cruise control is canceled, cruise control cannot be set until the ignition switch and cruise control main switch turns OFF, and then turns ON again.

NOTE:

Check input/output signal and vehicle speed signal with select monitor. When signals are in good condition, failure is in cruise control module. (Check power supply and ground conditions of cruise control module.)

I: DIAGNOSTICS CHART WITH SELECT MONITOR

1. FUNCTION MODE

NOTE:

Select monitor part No.:
<Ref. to 1-6 [G1100].>

Select the "Cruise Control" system using the select monitor and set the "Current Data Display & Save" mode. The following parameters will then appear on the display.

- Vehicle Speed

The current vehicle speed is shown on the display.

- Stop Light Switch

When the brake pedal is depressed, the stop light switch shown on the display turns from "OFF" to "ON".

- Brake Switch

When the brake pedal is depressed, the brake switch shown on the display turns from "OFF" to "ON".

- "SET/COAST" Switch

When the cruise control command switch is placed in the "SET/COAST" position, the SET/COAST switch shown on the display turns from "OFF" to "ON".

- "RESUME/ACCEL" Switch

When the cruise control command switch is placed in the "RESUME/ACCEL" position, the RESUME/ACCEL switch shown on the display turns from "OFF" to "ON".

- Clutch/Inhibitor Switch

When the clutch pedal is depressed, the clutch/inhibitor switch shown on the display turns from "ON" to "OFF". (MT)

When the select lever is moved from the "N" or "P" position to any other position, the clutch/inhibitor switch shown on the display turns from "ON" to "OFF".

4. Keyless Entry System

A: PRECAUTION

1. SUPPLEMENTAL RESTRAINT SYSTEM "AIRBAG"

Airbag system wiring harness is routed near the keyless entry control module.

CAUTION:

- All airbag system wiring harness and connectors are yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage airbag system wiring harness when servicing the keyless entry control module.

B: PRE-INSPECTION

1. POWER DOOR LOCK

4B11 : CHECK POWER DOOR LOCK.

Perform lock and unlock with door lock switch.

- CHECK** : *Does the power door lock function normally?*
- YES** : Go to step **4B21**.
- NO** : Repair power door lock.

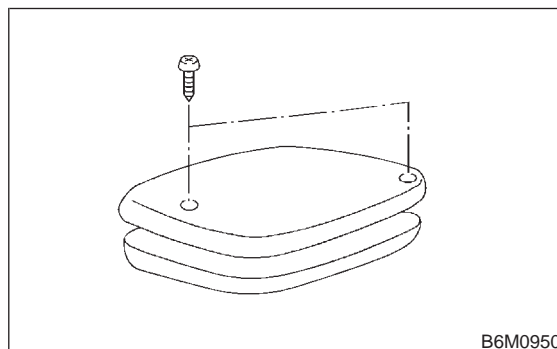
2. TRANSMITTER

4B21 : CHECK TRANSMITTER BATTERY.

- 1) Remove battery from transmitter.

NOTE:

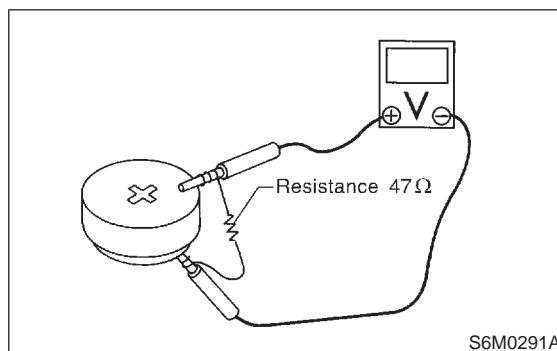
To prevent static electricity damage to transmitter printed circuit board, touch steel area of building with hand to discharge static electricity carried on body or clothes before disassembling transmitter.



- 2) Measure voltage battery.

NOTE:

- Battery discharge occurs during measurement. Complete measurement within 5 seconds.
- During battery voltage measurement, voltage falls more than 1.8 volts during 3 seconds period. Weak battery is indicated. Replace battery.



- CHECK** : *Is the voltage more than 2 V?*
- YES** : Go to step **4B22**.
- NO** : Replace transmitter battery. (Use CR2032 or equivalent.)

4B22 : CHECK LED OF TRANSMITTER.

1) Press either the LOCK/ARM or UNLOCK/DISARM button six times to synchronize with the keyless entry control module.

2) Press the LOCK/ARM button.

CHECK : *Does the LED blink one time?*

YES : Go to step **4B23**.

NO : Replace transmitter.

4B23 : CHECK LED OF TRANSMITTER.

Keep the LOCK/ARM button pressed.

CHECK : *Does the LED blink one time and then turn on?*

YES : Go to step **4B24**.

NO : Replace transmitter.

4B24 : CHECK LED OF TRANSMITTER.

Press the UNLOCK/DISARM button.

CHECK : *Does the LED blink one time?*

YES : Go to step **4B25**.

NO : Replace transmitter.

4B25 : CHECK LED OF TRANSMITTER.

Keep the UNLOCK/DISARM button pressed.

CHECK : *Does the LED blink two times?*

YES : Go to step **4B26**.

NO : Replace transmitter.

4B26 : CHECK POWER DOOR LOCK FUNCTION.

Perform lock and unlock function of power door lock with transmitter.

CHECK : *Does it function normally?*

YES : Go to step **4B27**.

NO : Replace transmitter.

4B27 : CHECK ON/OFF SELECT HORN SIGNAL.

Press the LOCK/ARM or UNLOCK/DISARM button.

CHECK : *Does the horn signal chirp?*

YES : Go to step **4B28**.

NO : Keep both LOCK/ARM and UNLOCK/DISARM buttons pressed for more than 1.5 seconds. Go to step **4B28**.

4B28 : CHECK ON/OFF SELECT HORN SIGNAL.

Keep both LOCK/ARM and UNLOCK/DISARM buttons pressed for more than 1.5 seconds.

CHECK : *Does the horn signal chirp two times?*

YES : Go to step **4B29**.

NO : Replace transmitter.

4B29 : CHECK ON/OFF SELECT HORN SIGNAL.

Press LOCK/ARM or UNLOCK/DISARM button.

CHECK : *Does the horn signal chirp?*

YES : Replace transmitter.

NO : Go to step **4B210**.

4B210 : CHECK ON/OFF SELECT HORN SIGNAL.

Keep both LOCK/ARM and UNLOCK/DISARM buttons pressed for more than 1.5 seconds.

CHECK : *Does the horn signal chirp one time?*

YES : Go to step **4B211**.

NO : Replace transmitter.

4B211 : CHECK ON/OFF SELECT HORN SIGNAL.

Press LOCK/ARM and UNLOCK/DISARM button.

CHECK : *Does the horn signal chirp?*

YES : Go to step **4B212**.

NO : Replace transmitter.

4B212 : CHECK FOR UNCHECKED TRANSMITTER.

Check for an unchecked transmitter.

- CHECK** : *Does an unchecked transmitter exist?*
- YES** : Check for an unchecked transmitter. Go to step **4B21**.
- NO** : Go to step **4B31**.

3. FUSE**4B31 : CHECK FUSE.**

Remove and visually check the fuse No. 3 (in fuse box).

- CHECK** : *Is fuse No. 3 blown?*
- YES** : Replace fuse (15 A).
- NO** : Go to step **4B41**.

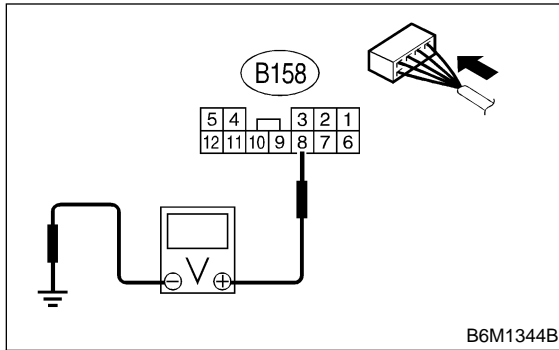
4. POWER SUPPLY CIRCUIT

4B41 : CHECK POWER SUPPLY CIRCUIT.

Measure voltage between fuse box connector (B158) and chassis ground.

Connector & terminal

(B158) No. 8 (+) — Chassis ground (-):



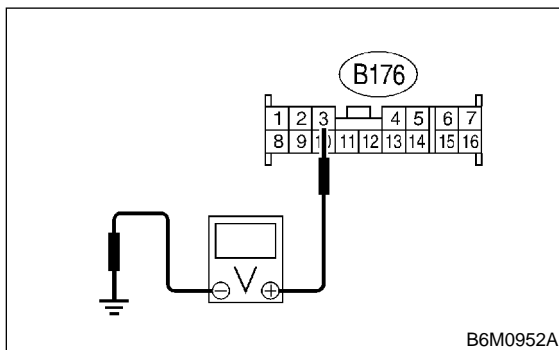
- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step **4B42**.
- NO** : Repair wiring harness between fuse box and battery.

4B42 : CHECK POWER SUPPLY CIRCUIT.

- 1) Disconnect connector from keyless entry control module.
- 2) Measure voltage between keyless entry control module connector (B176) and chassis ground.

Connector & terminal

(B176) No. 3 (+) — Chassis ground (-):



- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step **4B51**.
- NO** : Repair wiring harness between keyless entry control module and fuse box.

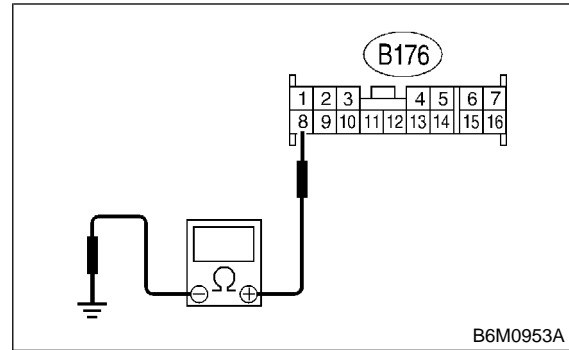
5. GROUND CIRCUIT

4B51 : CHECK GROUND CIRCUIT.

Measure resistance between keyless entry control module connector (B176) and chassis ground.

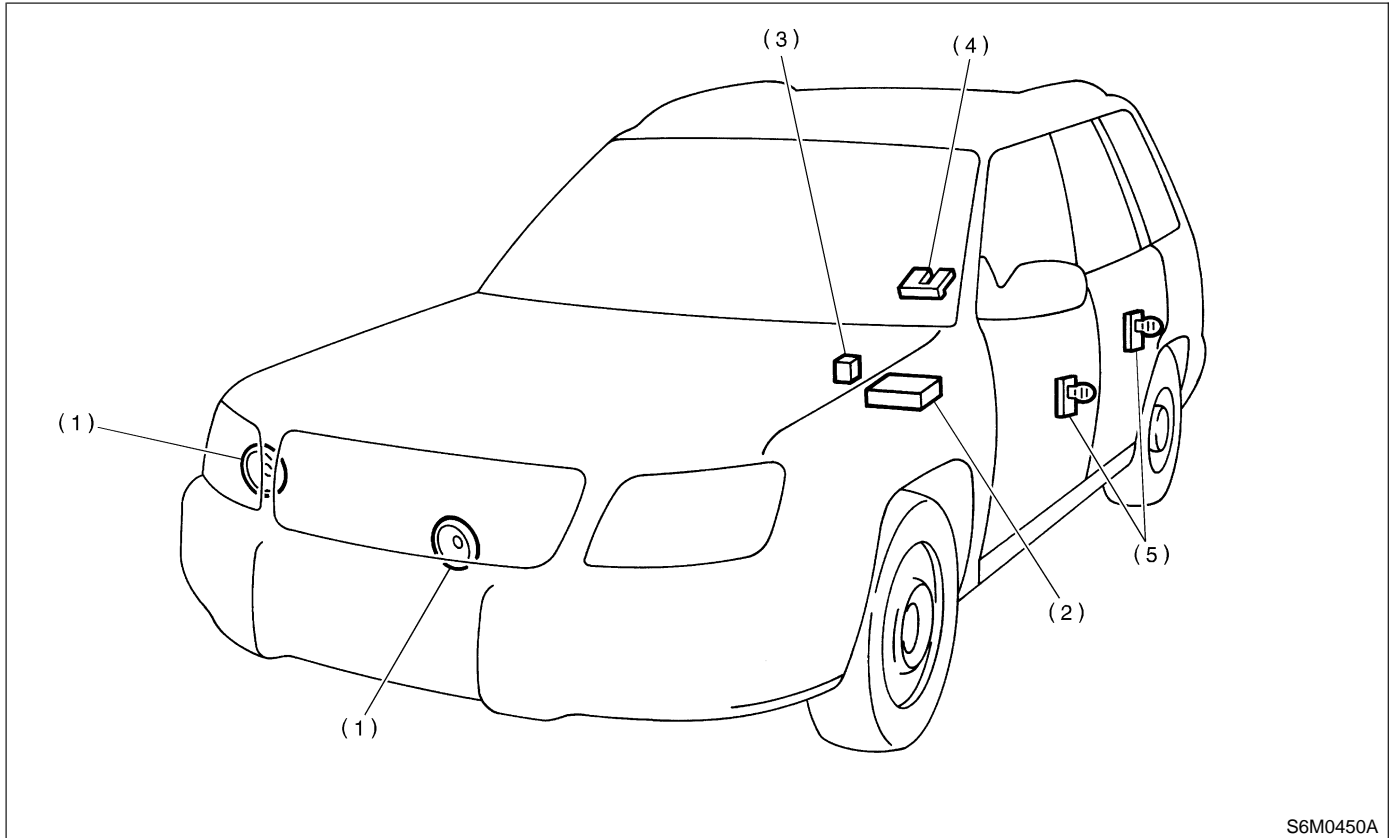
Connector & terminal

(B176) No. 8 (+) — Chassis ground (-):



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **4F11**.
- NO** : Repair wiring harness between keyless entry control module and chassis ground.

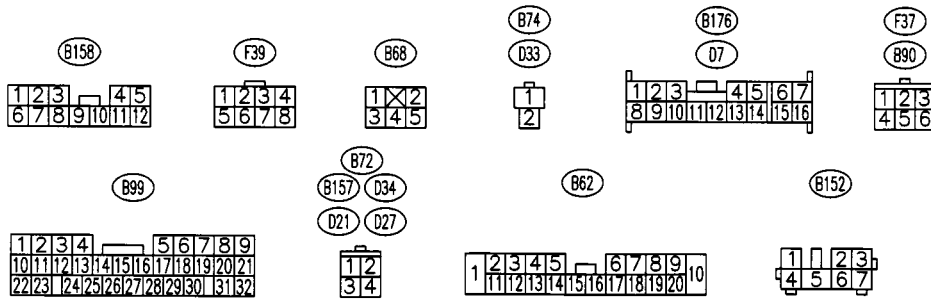
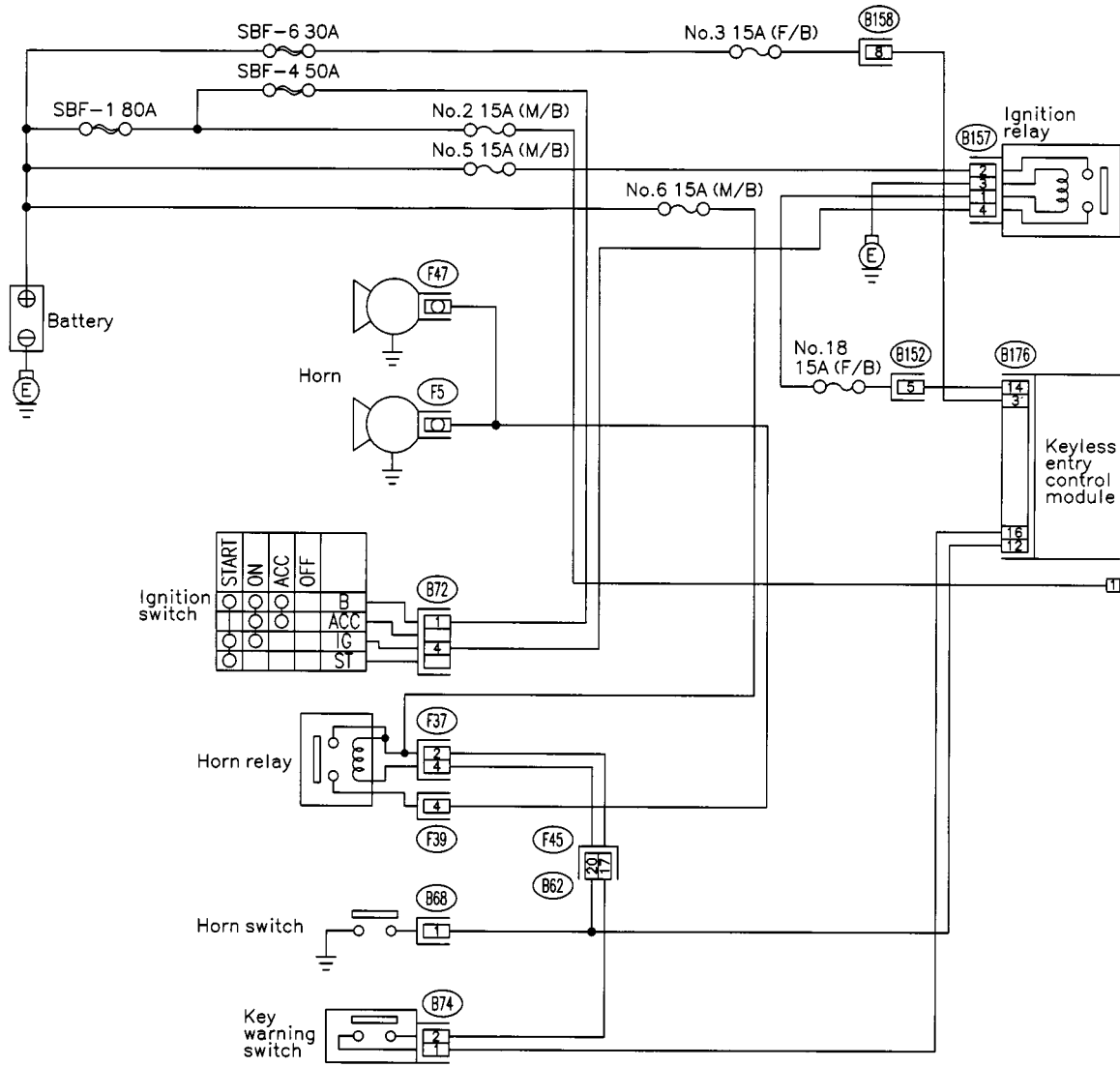
C: ELECTRICAL COMPONENTS LOCATION

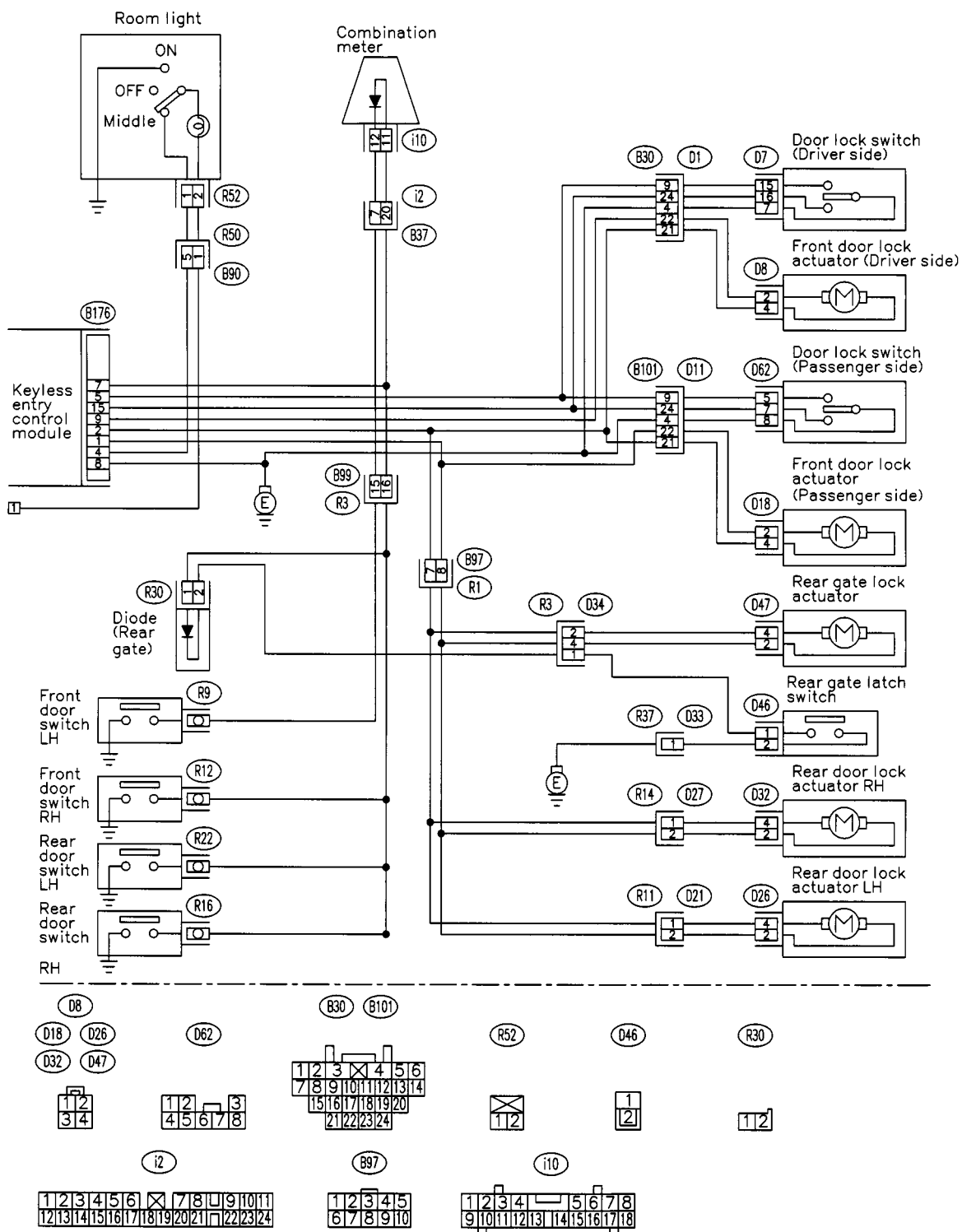


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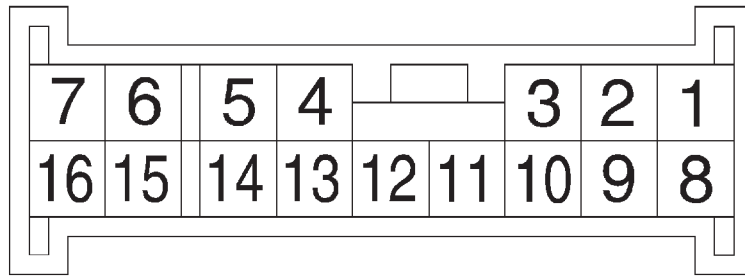
- | | | |
|----------------------------------|-----------------------------------|-----------------|
| (1) Horn | (3) Horn relay (in main fuse box) | (5) Door switch |
| (2) Keyless entry control module | (4) Rear gate latch switch | |

D: SCHEMATIC





S6M0452

E: CONTROL MODULE I/O SIGNAL

B6M0957

| Content | Terminal No. | Measuring condition |
|--|--------------|---|
| Door and rear gate lock actuator (Except driver side) | 1 (OUTPUT) | Battery voltage is present when pressing the transmitter UNLOCK/DISARM button two times. |
| Door and rear gate lock actuator | 2 (OUTPUT) | Battery voltage is present when pressing the transmitter LOCK/ARM button one time. |
| Power supply (Back-up) | 3 | Battery voltage is constantly present. |
| <ul style="list-style-type: none"> Room light Rear gate latch switch | 4 (OUTPUT) | <ul style="list-style-type: none"> 0 V is present when pressing the transmitter UNLOCK/DISARM button one time. Battery voltage is present when opening the rear gate. |
| Door lock switch | 5 (INPUT) | 0 V is present when operating the door lock switch. |
| Door switch | 7 (INPUT) | Battery voltage is present when any door is open. |
| Ground | 8 | — |
| Door lock actuator (Driver side) | 9 (OUTPUT) | Battery voltage is present when pressing the transmitter UNLOCK/DISARM button one time. |
| Security control module | 10 | — |
| Security control module | 11 | — |
| Horn relay | 12 (OUTPUT) | 0 V is present when pressing the transmitter UNLOCK/DISARM or LOCK/ARM button. |
| Security control module | 13 | — |
| Ignition switch (ON) | 14 (INPUT) | Battery voltage is present when ignition switch is turned ON. |
| Door unlock switch | 15 (INPUT) | 0 V is present when operating the door lock switch. |
| Key warning switch | 16 (INPUT) | Battery voltage is present when inserting the key into the ignition switch. |

F: DIAGNOSTICS PROCEDURE**1. BASIC DIAGNOSTICS PROCEDURE****4F11 : CHECK KEYLESS ENTRY FUNCTION.**

- 1) Perform pre-inspection.
<Ref. to 6-2 [T4B0].>
- 2) Remove ignition key from ignition switch.
- 3) Set the room light switch in the middle position.
- 4) Close all doors and the rear gate.
- 5) Press the LOCK/ARM button one time.

CHECK : **Do all doors and rear gate lock normally?**

YES : Go to step **4F12**.

NO : Replace keyless entry control module.
<Ref. to 6-2 [W10A1].>

4F12 : CHECK KEYLESS ENTRY FUNCTION.

Check if the horn signal chirps.

CHECK : **Does the horn chirp one time?**

YES : Go to step **4F13**.

NO : Go to step **4F21**.

4F13 : CHECK KEYLESS ENTRY FUNCTION.

Press the UNLOCK/DISARM button one time.

CHECK : *Does the driver's door unlock normally?*

YES : Go to step 4F14.

NO : Replace keyless entry control module.
<Ref. to 6-2 [W10A1].>

4F14 : CHECK KEYLESS ENTRY FUNCTION.

Check if the horn signal chirps.

CHECK : *Does the horn chirp two times?*

YES : Go to step 4F15.

NO : Replace keyless entry control module.
<Ref. to 6-2 [W10A1].>

4F15 : CHECK KEYLESS ENTRY FUNCTION.

Check if the room light is turned on.

CHECK : *Does the room light turn on for 30 seconds, and then turn off?*

YES : Go to step 4F16.

NO : Go to step 4F31.

4F16 : CHECK KEYLESS ENTRY FUNCTION.

- 1) Press the LOCK/ARM button one time.
- 2) Press the UNLOCK/DISARM button two times.

CHECK : *Do all doors and rear gate unlock normally?*

YES : Go to step 4F17.

NO : Replace keyless entry control module.
<Ref. to 6-2 [W10A1].>

4F17 : CHECK KEYLESS ENTRY FUNCTION.

Keep the LOCK/ARM button pressed for more than 1.5 seconds.

CHECK : *Does the horn sound for 30 seconds, and then turns off?*

YES : Go to step 4F18.

NO : Replace keyless entry control module.
<Ref. to 6-2 [W10A1].>

4F18 : CHECK KEYLESS ENTRY FUNCTION.

1) Keep the LOCK/ARM button pressed for more than 1.5 seconds.

2) Horn will sound, and then press the LOCK/ARM button.

CHECK : *Does the horn turn off?*

YES : Go to step 4F19.

NO : Replace keyless entry control module.
<Ref. to 6-2 [W10A1].>

4F19 : CHECK KEYLESS ENTRY FUNCTION.

1) Keep the LOCK/ARM button pressed for more than 1.5 seconds.

2) Horn will sound, and then press the UNLOCK/DISARM button.

CHECK : *Does the horn turn off?*

YES : Go to step 4F110.

NO : Replace keyless entry control module.
<Ref. to 6-2 [W10A1].>

4F110 : CHECK DOOR SWITCH FUNCTION.

Open the front left door.

CHECK : *Does the room light turn on?*

YES : Go to step 4F111.

NO : Go to step 4F41.

4F111 : CHECK DOOR SWITCH FUNCTION.

1) Close the front left door.

2) Open the front right door.

CHECK : *Does the room light turn on?*

YES : Go to step 4F112.

NO : Go to step 4F41.

4F112 : CHECK DOOR SWITCH FUNCTION.

1) Close the front right door.

2) Open the rear left door.

CHECK : *Does the room light turn on?*

YES : Go to step 4F113.

NO : Go to step 4F41.

4F113 : CHECK DOOR SWITCH FUNCTION.

- 1) Close the rear left door.
- 2) Open the rear right door.

CHECK : *Does the room light turn on?*

YES : Go to step 4F114.

NO : Go to step 4F41.

4F114 : PERFORM PROGRAMMING.**NOTE:**

Finish operation from step 1) through 4) within 45 seconds.

- 1) Sit on the driver's seat and close all doors and the rear gate.
- 2) Open the driver's door.
- 3) Close the driver's door.
- 4) Turn the ignition switch from ON to LOCK ten times in rapid succession (within 15 seconds).

NOTE:

Do not start the engine at this time.

- 5) The horn chirps one time to indicate that the system has been in the programming mode.
- 6) Open the driver's door.
- 7) Close the driver's door.
- 8) Press any button on the transmitter that you wish to program into the system.
- 9) Horn will chirp two times to indicate that the transmitter has been programmed.

NOTE:

Any additional transmitter can also be programmed at this time. Repeat steps 6) through 9) for an additional transmitter.

- 10) Remove the ignition key from the ignition switch.
- 11) The horn will chirp three times to indicate that the system has exited the programming mode.
- 12) Check the keyless entry system properly operates by operating each transmitter.

CHECK : *Does the transmitter operate normally?*

YES : Go to step 4F115.

NO : Go to step 4F51.

4F115 : CHECK IGNITION KEY SWITCH.

- 1) Insert the ignition key to the ignition switch (at LOCK position).
- 2) Perform lock and unlock with transmitter.

CHECK : *Does the power door lock function normally?*

YES : Go to step 4F61.

NO : End of basic diagnostics procedure.

2. DIAGNOSTICS ITEM 1

4F21 : SELECT HORN SIGNAL OPERATION.

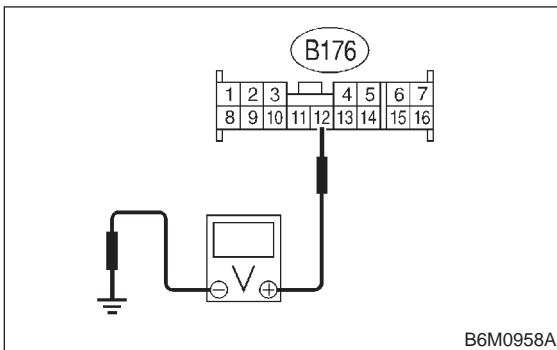
Keep both LOCK/ARM and UNLOCK/DISARM buttons pressed for more than 1.5 seconds.

- CHECK** : *Does the horn chirp one time?*
- YES** : Go to step 4F22.
- NO** : Replace keyless entry control module.
<Ref. to 6-2 [W10A1].>

4F22 : CHECK HORN SIGNAL OUTPUT SIGNAL.

- 1) Disconnect connector from keyless entry control module.
- 2) Measure voltage between keyless entry control module connector (B176) and chassis ground.

Connector & terminal
(B176) No. 12 (+) — Chassis ground (-):

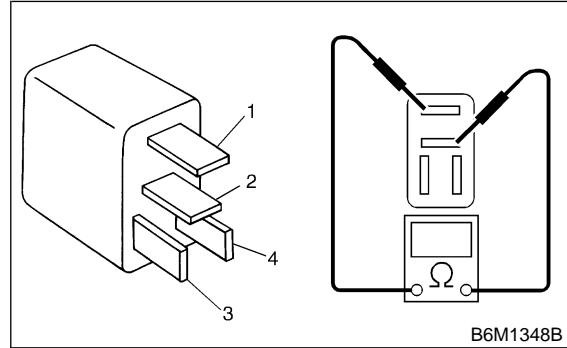


- CHECK** : *Is the voltage more than 10 V?*
- YES** : Go to step 4F23.
- NO** : Go to step 4F26.

4F23 : CHECK HORN RELAY.

- 1) Remove horn relay from main fuse box.
- 2) Check continuity between horn relay terminals.

Terminals
No. 1 — No. 2:

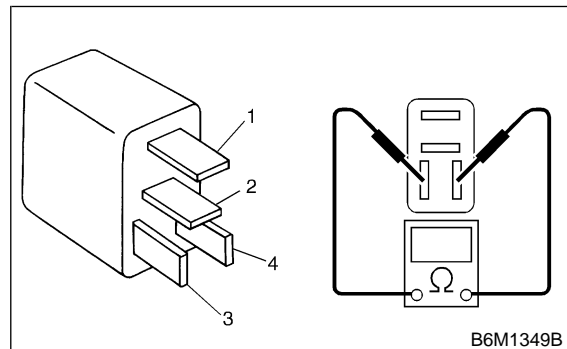


- CHECK** : *Does continuity exist?*
- YES** : Replace horn relay.
- NO** : Go to step 4F24.

4F24 : CHECK HORN RELAY.

Check continuity between horn relay terminals.

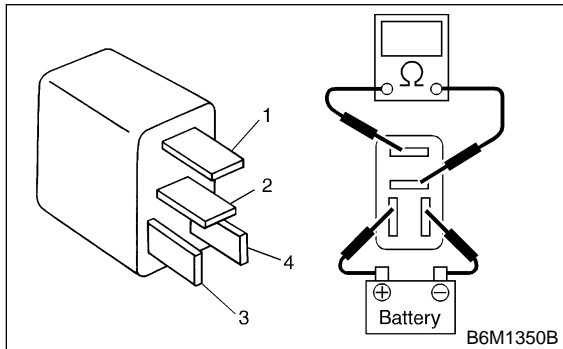
Terminals
No. 3 — No. 4:



- CHECK** : *Does continuity exist?*
- YES** : Go to step 4F25.
- NO** : Replace horn relay.

4F25 : CHECK HORN RELAY.

- 1) Connect the battery to horn relay terminals No. 3 and No. 4.
- 2) Check continuity between horn relay terminals.

Terminals**No. 1 — No. 2:**

- CHECK** : **Does continuity exist?**
YES : Repair wiring harness of horn circuit.
NO : Replace horn relay.

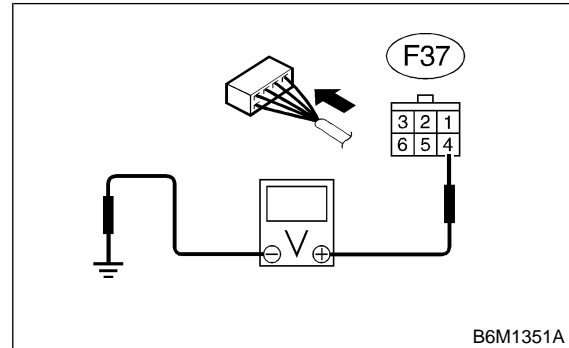
4F26 : CHECK FUSE.

Remove and visually check the fuse No. 6 (in main fuse box).

- CHECK** : **Is the fuse No. 6 blown?**
YES : Replace fuse (15 A).
NO : Go to step **4F27**.

4F27 : CHECK POWER SUPPLY FOR HORN RELAY.

- 1) Install horn relay to main fuse box.
- 2) Measure voltage between main fuse box connector (F37) and chassis ground.

Connector & terminal**(F37) No. 4 (+) — Chassis ground (-):**

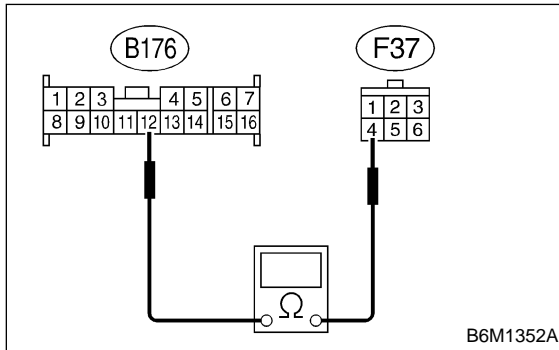
- CHECK** : **Is the voltage more than 10 V?**
YES : Go to step **4F28**.
NO : Repair wiring harness between main fuse box and battery.

4F28 : CHECK RESISTANCE BETWEEN HORN RELAY AND KEYLESS ENTRY CONTROL MODULE.

- 1) Disconnect connector from main fuse box and keyless entry control module.
- 2) Measure resistance between keyless entry control module connector (B176) and main fuse box connector (F37).

Connector & terminal

(B176) No. 12 — (F37) No. 4:



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace keyless entry control module. <Ref. to 6-2 [W10A1].>
- NO** : Repair wiring harness between main fuse box and keyless entry control module.

3. DIAGNOSTICS ITEM 2

4F31 : CHECK FUSE.

Remove and visually check the fuse No. 2 (in main fuse box).

- CHECK** : **Is fuse No. 2 blown?**
- YES** : Replace fuse (15 A).
- NO** : Go to step 4F32.

4F32 : CHECK ROOM LIGHT BULB.

Remove and visually check the room light bulb.

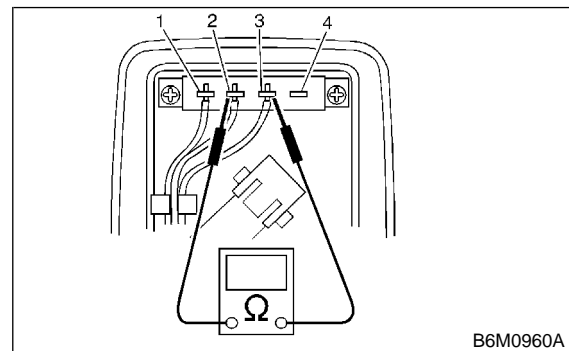
- CHECK** : **Is the bulb blown?**
- YES** : Replace bulb.
- NO** : Go to step 4F33.

4F33 : CHECK ROOM LIGHT SWITCH.

- 1) Remove room light.
- 2) Measure resistance of room light switch terminal at the middle position.

Terminals

No. 2 — No. 3:



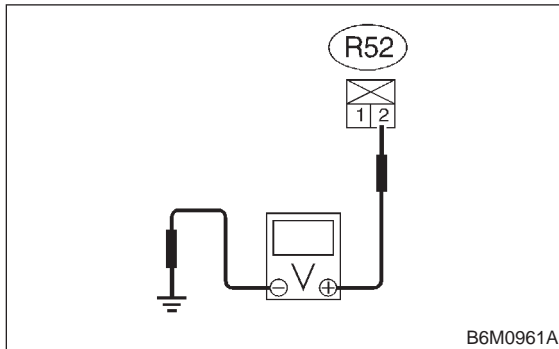
- CHECK** : **Is the resistance less than 1 Ω?**
- YES** : Repair or replace room light.
- NO** : Go to step 4F34.

4F34 : CHECK POWER SUPPLY FOR ROOM LIGHT.

- 1) Disconnect connector from room light.
- 2) Open any door.
- 3) Measure voltage between room light connector (R52) and chassis ground.

Connector & terminal

(R52) No. 2 (+) — Chassis ground (-):



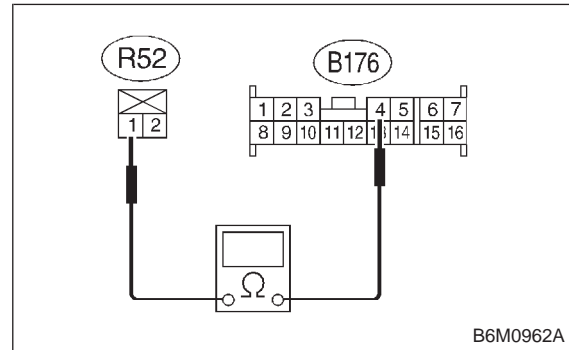
- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step **4F35**.
- NO** : Repair wiring harness between room light and battery.

4F35 : CHECK HARNESS CONNECTOR BETWEEN ROOM LIGHT AND KEYLESS ENTRY CONTROL MODULE.

- 1) Disconnect connector from keyless entry control module.
- 2) Measure resistance between room light connector (R52) and keyless entry control module connector (B176).

Connector & terminal

(R52) No. 1 — (B176) No.4:

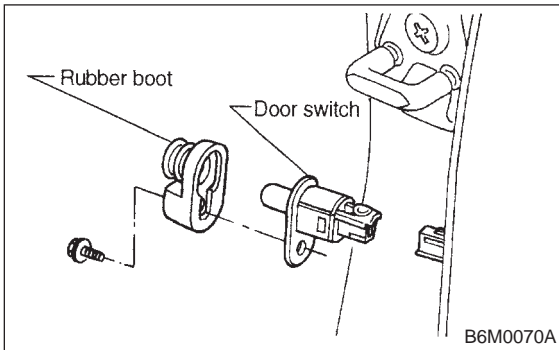


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace keyless entry control module. <Ref. to 6-2 [W10A1].>
- NO** : Repair wiring harness between room light and keyless entry control module.

4. DIAGNOSTICS ITEM 3

4F41 : CHECK DOOR SWITCH.

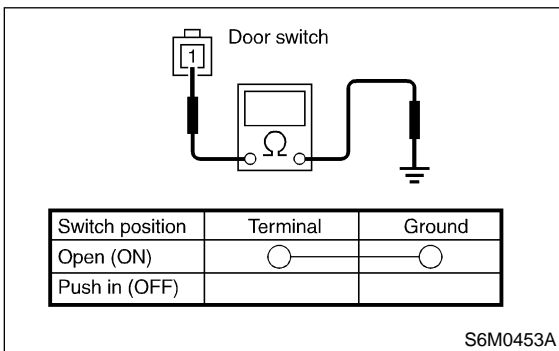
1) Remove door switch.



2) Move switch and check continuity between terminals of door switch.

Terminals

No. 1 — Chassis ground



CHECK : Does any fault exist in the door switch?

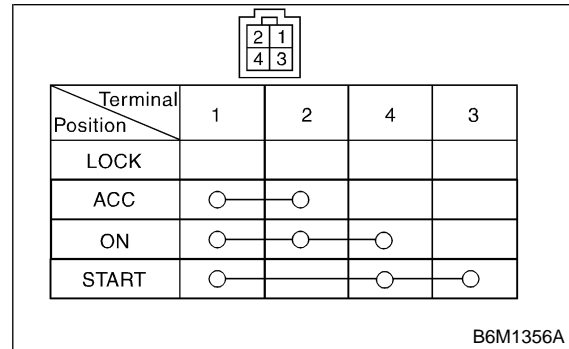
YES : Replace door switch.

NO : Replace keyless entry control module. <Ref. to 6-2 [W10A1].>

5. DIAGNOSTICS ITEM 4

4F51 : CHECK IGNITION SWITCH.

1) Remove ignition switch. <Ref. to 6-2 [W3A1].>
2) Turn ignition key to each position and check continuity between terminals of ignition switch connector.



CHECK : Is the ignition switch faulty?

YES : Replace ignition switch. <Ref. to 6-2 [W3A1].>

NO : Replace keyless entry control module. <Ref. to 6-2 [W10A1].>

6. DIAGNOSTICS ITEM 5

4F61 : CHECK FUSE.

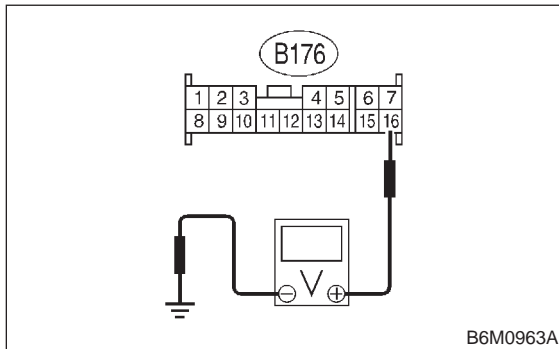
Remove and visually check the fuse No. 6 (in main fuse box).

- CHECK** : *Is fuse No. 6 blown?*
YES : Replace fuse (15 A).
NO : Go to step **4F62**.

4F62 : CHECK KEYLESS ENTRY CONTROL MODULE.

- 1) Disconnect connector from keyless entry control module.
- 2) Insert the key to ignition switch (LOCK position).
- 3) Measure voltage between keyless entry control module connector (B176) and chassis ground.

Connector & terminal
(B176) No. 16 (+) — Chassis ground (-):

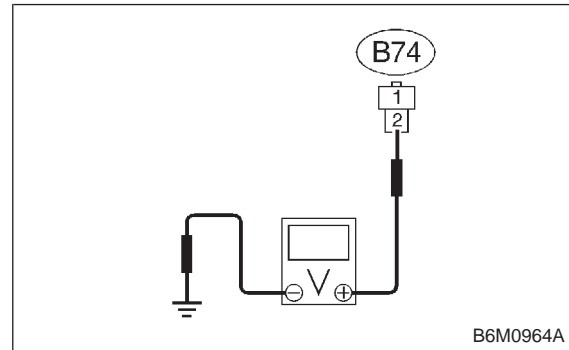


- CHECK** : *Is the voltage more than 10 V?*
YES : Replace keyless entry control module.
 <Ref. to 6-2 [W10A0].>
NO : Go to step **4F63**.

4F63 : CHECK HARNESS CONNECTOR BETWEEN BATTERY AND KEY WARNING SWITCH.

- 1) Disconnect connector from key warning switch.
- 2) Measure voltage between key warning switch connector (B74) and chassis ground.

Connector & terminal
(B74) No. 2 (+) — Chassis ground (-):

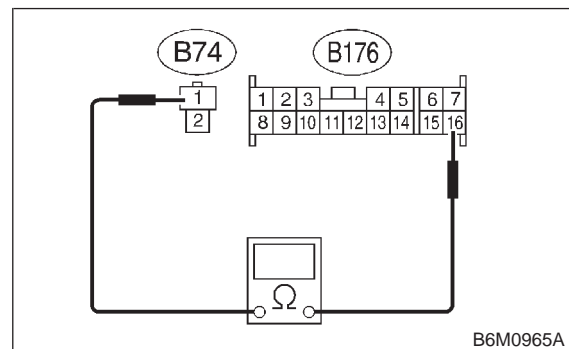


- CHECK** : *Is the voltage more than 10 V?*
YES : Go to step **4F64**.
NO : Repair wiring harness between battery and key warning switch.

4F64 : CHECK HARNESS CONNECTOR BETWEEN KEY WARNING SWITCH AND KEYLESS ENTRY CONTROL MODULE.

Measure resistance between key warning switch connector (B74) and keyless entry control module connector (B176).

Connector & terminal
(B74) No. 1 — (B176) No. 16:



- CHECK** : *Is the resistance less than 10 Ω?*
YES : Replace key warning switch.
NO : Repair wiring harness between key warning switch and keyless entry control module.

5. Security System

A: PRECAUTION

1. SUPPLEMENTAL RESTRAINT SYSTEM “AIRBAG”

Airbag system wiring harness is routed near the security control module.

CAUTION:

- All airbag system wiring harness and connectors are yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage airbag system wiring harness when servicing the security control module.

B: PRE-INSPECTION

1. FUSE

5B11 : CHECK FUSE.

Remove and visually check the fuse No. 7 (in main fuse box).

- CHECK** : *Is fuse No. 7 blown?*
YES : Replace fuse (20 A).
NO : Go to step **5B12**.

5B12 : CHECK FUSE.

Remove and visually check the fuse No. 2 (in main fuse box).

- CHECK** : *Is fuse No. 2 blown?*
YES : Replace fuse (15 A).
NO : Go to step **5B21**.

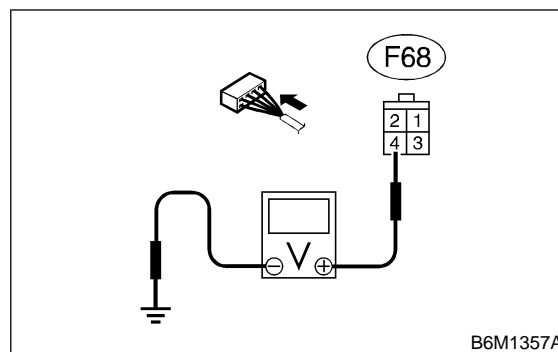
2. POWER SUPPLY CIRCUIT

5B21 : CHECK POWER SUPPLY CIRCUIT.

Measure voltage between main fuse box connector (F68) and chassis ground.

Connector & terminal

(F68) No. 4 (+) — Chassis ground (-):



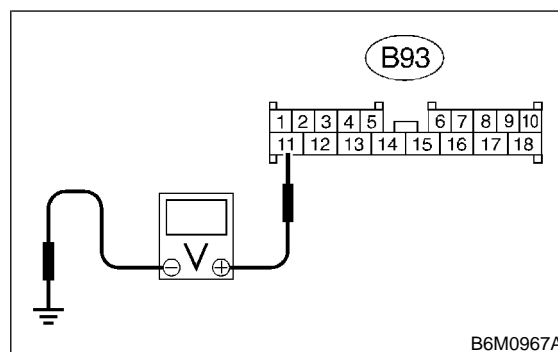
- CHECK** : *Is the voltage more than 10 V?*
YES : Go to step **5B22**.
NO : Repair wiring harness between main fuse box and battery.

5B22 : CHECK POWER SUPPLY CIRCUIT.

- 1) Disconnect connector from security control module.
- 2) Measure voltage between security control module connector (B93) and chassis ground.

Connector & terminal

(B93) No. 11 (+) — Chassis ground (-):



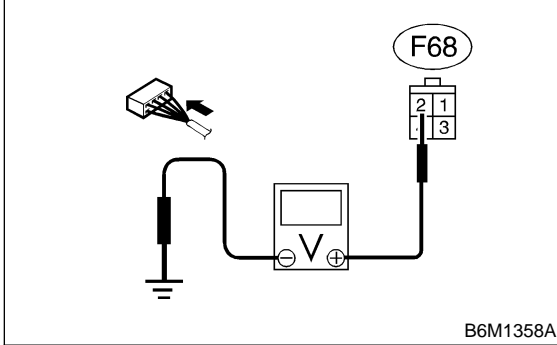
- CHECK** : *Is the voltage more than 10 V?*
YES : Go to step **5B23**.
NO : Repair wiring harness between security control module and main fuse box.

5B23 : CHECK POWER SUPPLY CIRCUIT.

Measure voltage between main fuse box connector (F68) and chassis ground.

Connector & terminal

(F68) No. 2 (+) — Chassis ground (-):



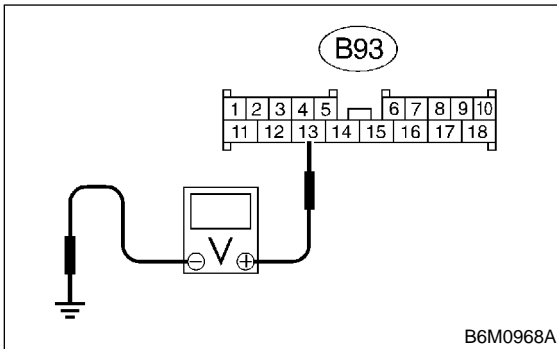
- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step **5B24**.
- NO** : Repair wiring harness between main fuse box and battery.

5B24 : CHECK POWER SUPPLY CIRCUIT.

Measure voltage between security control module connector (B93) and chassis ground.

Connector & terminal

(B93) No. 13 (+) — Chassis ground (-):



- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step **5B31**.
- NO** : Repair wiring harness between security control module and main fuse box.

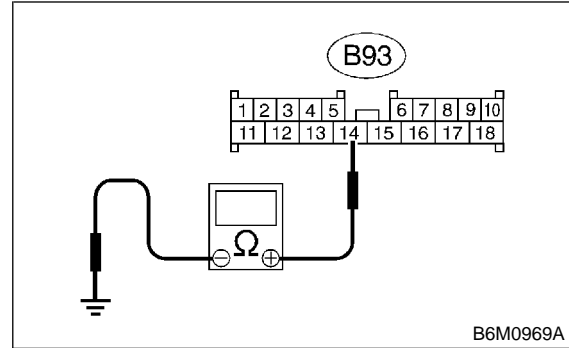
3. GROUND CIRCUIT

5B31 : CHECK GROUND CIRCUIT.

Measure resistance between security control module connector (B93) and chassis ground.

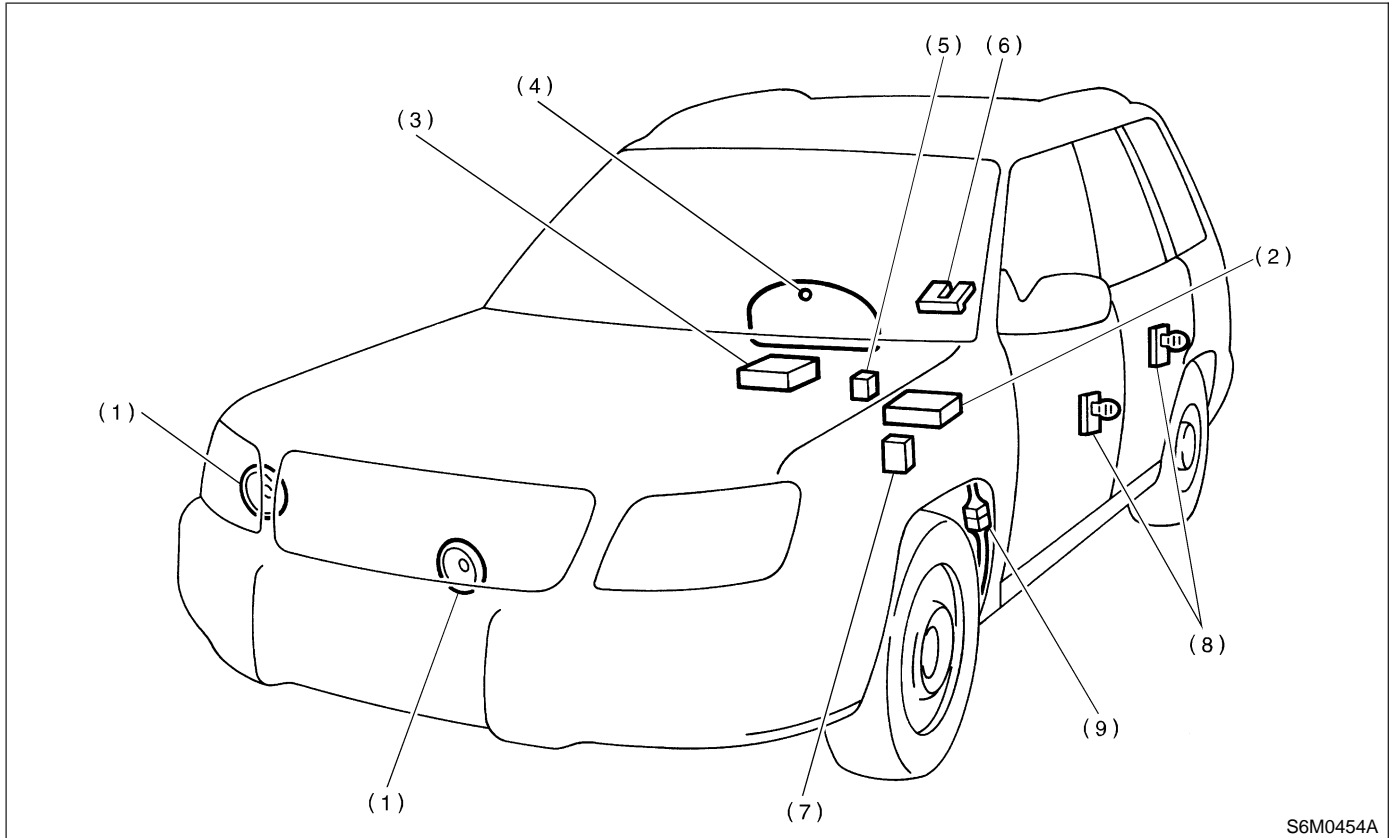
Connector & terminal

(B93) No. 14 (+) — Chassis ground (-):



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F11**.
- NO** : Repair wiring harness between security control module and chassis ground.

C: ELECTRICAL COMPONENTS LOCATION



- | | | |
|---|---|---|
| (1) Horn | (5) Horn relay (in main fuse box) | (9) Passive arm connector (on driver side front lower pillar) |
| (2) Keyless entry control module | (6) Rear gate latch switch | |
| (3) Security control module (under console box) | (7) Interrupt relay (behind the fuse box) | |
| (4) Security indicator light (in combination meter) | (8) Door switch | |

D: SCHEMATIC

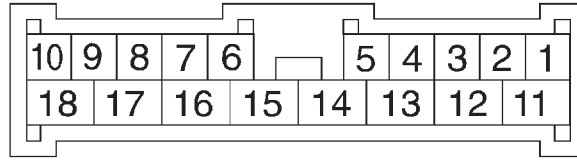
s6m0455

S6M0455

s6m0456

S6M0456

E: CONTROL MODULE I/O SIGNAL



B6M0972

| Content | Terminal No. | Measuring condition |
|--|--------------|---|
| Empty | 1 | — |
| Ignition switch (ON) | 2 (INPUT) | Battery voltage is present when ignition switch is turned ON. |
| Passive arm | 3 | — |
| Empty | 4 | — |
| Door switch and rear gate latch switch | 5 (INPUT) | 0 V is present when any door is open. |
| Empty | 6 | — |
| Keyless entry control module | 7 | — |
| Keyless entry control module | 8 | — |
| Security indicator light | 9 (OUTPUT) | 0 V is present when activating the alarm operation. |
| Keyless entry control module | 10 | — |
| Power supply for clearance light (Back-up) | 11 | Battery voltage is constantly present. |
| Clearance light | 12 (OUTPUT) | Battery voltage is present when activating the alarm operation. |
| Power supply (Back-up) | 13 | Battery voltage is constantly present. |
| Ground | 14 | — |
| Interrupt relay | 15 (OUTPUT) | 0 V is present when activating the alarm operation. |
| Empty | 16 | — |
| Empty | 17 | — |
| Empty | 18 | — |

F: DIAGNOSTICS PROCEDURE

1. BASIC DIAGNOSTICS PROCEDURE

5F11 : CHECK SECURITY SYSTEM FUNCTION.

- 1) Perform basic diagnostics procedure of keyless entry system. <Ref. to 6-2 [T4F1].>
- 2) Perform pre-inspection. <Ref. to 6-2 [T5B0].>
- 3) Open all windows.
- 4) Remove ignition key from ignition switch.
- 5) Set the room light switch in the middle position.
- 6) Close all doors and the rear gate.
- 7) Press the LOCK/ARM button one time.

CHECK : **Does the clearance light blink one time?**

YES : Go to step 5F12.

NO : Go to step 5F21.

5F12 : CHECK SECURITY SYSTEM FUNCTION.

Check if the security indicator light blinks.

CHECK : **Does the security indicator light blink every 2 seconds?**

YES : Go to step 5F13.

NO : Go to step 5F31.

5F13 : CHECK SECURITY SYSTEM FUNCTION.

Press the UNLOCK/DISARM button one time.

CHECK : **Does the clearance light blink two times?**

YES : Go to step 5F14.

NO : Replace security control module. <Ref. to 6-2 [W14A1].>

5F14 : CHECK SECURITY SYSTEM FUNCTION.

Check if the room light activates.

CHECK : **Does the room light turn on for 30 seconds and then turn off?**

YES : Go to step 5F15.

NO : Replace security control module. <Ref. to 6-2 [W14A1].>

5F15 : CHECK SECURITY SYSTEM FUNCTION.

- 1) Unlock all doors with door locking switch in the front door.

- 2) Open the front left door.

CHECK : **Does the security indicator light blink every 1/8 seconds?**

YES : Go to step 5F16.

NO : Go to step 5F41.

5F16 : CHECK SECURITY SYSTEM FUNCTION.

Check if the clearance light activates.

CHECK : **Does the clearance light blinking remain?**

YES : Go to step 5F17.

NO : Replace security control module. <Ref. to 6-2 [W14A1].>

5F17 : CHECK SECURITY SYSTEM FUNCTION.

Check if the horn activates.

CHECK : **Does the horn sound remain?**

YES : Go to step 5F18.

NO : Replace security control module. <Ref. 6-2 [W14A1].>

5F18 : CHECK SECURITY SYSTEM FUNCTION.

Turn on starter.

CHECK : **Does the starter motor activate?**

YES : Go to step 5F51.

NO : Go to step 5F19.

5F19 : CHECK SECURITY SYSTEM FUNCTION.

Close the front left door.

CHECK : **Does the horn sound and clearance light blinking deactivate, and starter motor activate after approximately 30 seconds?**

YES : Go to step 5F110.

NO : Replace security control module. <Ref. to 6-2 [W14A1].>

5F110 : CHECK SECURITY SYSTEM FUNCTION.

Check if the security indicator light activates.

CHECK : *Does the security indicator light blink every 2 seconds?*

YES : Go to step 5F111.

NO : Replace security control module. <Ref. to 6-2 [W14A1].>

5F111 : CHECK SECURITY SYSTEM FUNCTION.

Open the front right door.

CHECK : *Does the security indicator light blink every 1/8 seconds, the horn sound, the clearance light blink, and the starter motor deactivate?*

YES : Go to step 5F112.

NO : Go to step 5F61.

5F112 : CHECK SECURITY SYSTEM FUNCTION.

Press the UNLOCK/DISARM button.

CHECK : *Does the security indicator light blink, the horn and clearance light deactivate, and the starter motor activate?*

YES : Go to step 5F113.

NO : Replace security control module. <Ref. to 6-2 [W14A1].>

5F113 : CHECK SECURITY SYSTEM FUNCTION.

- 1) Close the front right door.
- 2) Press the LOCK/ARM button.
- 3) Open the rear left door.

CHECK : *Does the security indicator light blink every 1/8 seconds, the horn sound, the clearance light blink, and the starter motor deactivate?*

YES : Go to step 5F114.

NO : Go to step 5F71.

5F114 : CHECK SECURITY SYSTEM FUNCTION.

- 1) Close the rear left door.
- 2) Open the rear right door.

CHECK : *Does the security indicator light blink every 1/8 seconds, the horn sound, the clearance light blink, and the starter motor deactivate?*

YES : Go to step 5F115.

NO : Go to step 5F81.

5F115 : CHECK SECURITY SYSTEM FUNCTION.

- 1) Close the rear right door.
- 2) Open the rear gate.

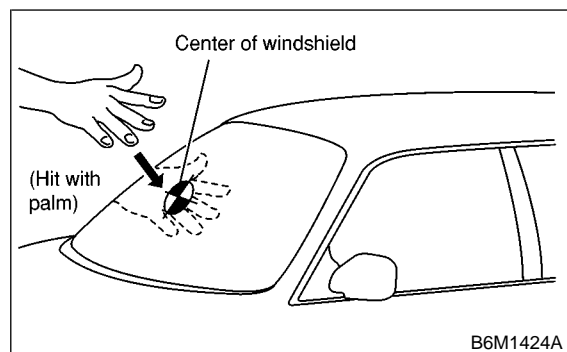
CHECK : *Does the security indicator light blink every 1/8 seconds, the horn sound, the clearance light blink, and the starter motor deactivate?*

YES : Go to step 5F116.

NO : Go to step 5F91.

5F116 : PERFORM IMPACT SENSITIVITY TEST.

- 1) Close the rear gate.
- 2) Close all windows.
- 3) Perform arming.
- 4) Perform impact sensitivity test.



CHECK : *Does the horn chirp?*

YES : Go to step 5F117.

NO : Go to step 5F101.

5F117 : CHECK PASSIVE ARM.

- 1) Remove the driver's side sill cover. <Ref. to 5-3 [W5A0].>
- 2) Connect the white connector (1-pin) at driver side front lower pillar.
- 3) Close all doors and the rear gate.

CHECK : **Does the arming automatically function after 1 minute?**

YES : Go to step 5F118.

NO : Go to step 5F111.

5F118 : CHECK BATTERY DISCONNECT PROTECTION.

- 1) Press the UNLOCK/DISARM button.
- 2) Connect the white connector (1-pin) at front pillar lower.
- 3) Install the driver's side sill cover. <Ref. to 5-3 [W5A0].>
- 4) Open the front hood.
- 5) Press the LOCK/ARM button.
- 6) Disconnect the ground cable from battery.
- 7) Connect the ground cable to battery.

CHECK : **Does re-arming function automatically?**

YES : End of basic diagnostics procedure. Press the UNLOCK/DISARM button, and then close all doors and the rear gate. Perform ignition switch position turned LOCK to ON to LOCK.

NO : Replace security control module. <Ref. to 6-2 [W14A1].>

2. DIAGNOSTICS ITEM 1**5F21 : CHECK FUSE.**

Remove and visually check fuse No. 7 (in main fuse box).

CHECK : **Is fuse No. 7 blown?**

YES : Replace fuse (20 A).

NO : Go to step 5F22.

5F22 : CHECK FUSE.

Remove and visually check fuse No. 5 (in fuse box).

CHECK : **Is fuse No. 5 blown?**

YES : Replace fuse (10 A).

NO : Go to step 5F23.

5F23 : CHECK CLEARANCE LIGHT BULB.

Remove and visually check each clearance light bulb.

CHECK : **Is the bulb blown?**

YES : Replace clearance light bulb.

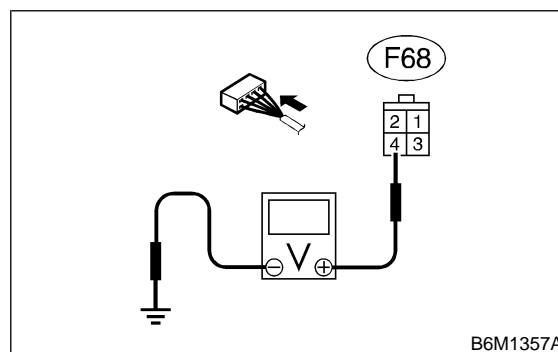
NO : Go to step 5F24.

5F24 : CHECK POWER SUPPLY FOR CLEARANCE LIGHT.

Measure voltage between main fuse box connector (F68) and chassis ground.

Connector & terminal

(F68) No. 4 (+) — Chassis ground (-):



CHECK : **Is the voltage more than 10 V?**

YES : Go to step 5F25.

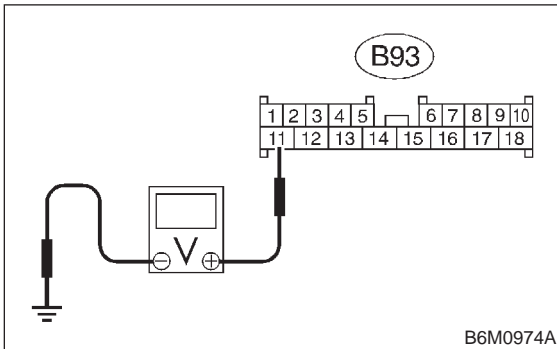
NO : Repair wiring harness between main fuse box and battery.

5F25 : CHECK POWER SUPPLY FOR CLEARANCE LIGHT.

- 1) Disconnect connector from security control module.
- 2) Measure voltage between security control module connector (B93) and chassis ground.

Connector & terminal

(B93) No. 11 (+) — Chassis ground (-):



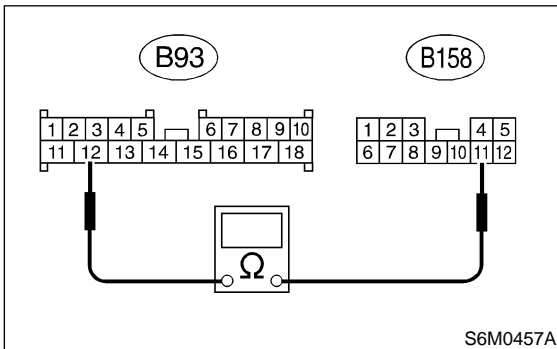
- CHECK** : Is the voltage more than 10 V?
- YES** : Go to step 5F26.
- NO** : Repair wiring harness between security control module and main fuse box.

5F26 : CHECK HARNESS CONNECTOR BETWEEN SECURITY CONTROL MODULE AND FUSE BOX.

- 1) Disconnect connector (B158) from fuse box.
- 2) Measure resistance between security control module connector (B93) and fuse box connector (B158).

Connector & terminal

(B93) No. 12 — (B158) No. 11:



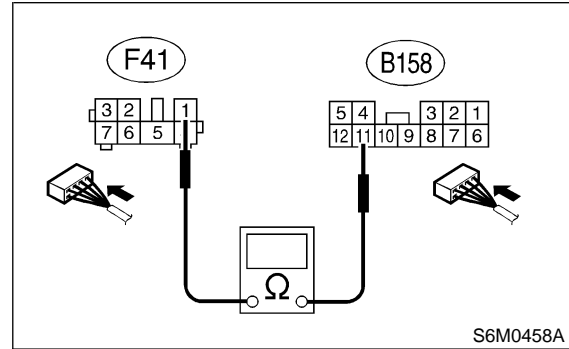
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5F27.
- NO** : Repair wiring harness between security control module and fuse box.

5F27 : CHECK FUSE BOX CIRCUIT.

- 1) Connect connector (B158) to fuse box.
- 2) Measure resistance between fuse box connector (B158) and (F41).

Connector & terminal

(B158) No. 11 — (F41) No. 1:



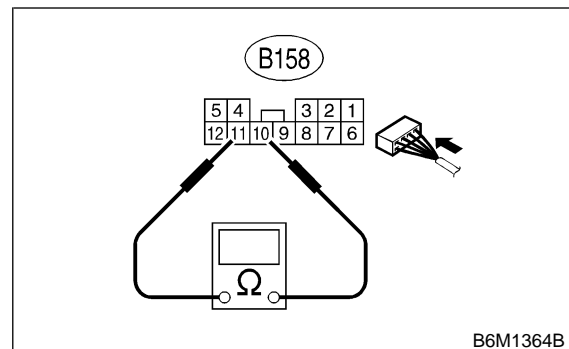
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5F28.
- NO** : Repair or replace fuse box.

5F28 : CHECK FUSE BOX CIRCUIT.

Measure resistance between fuse box connector (B158).

Connector & terminal

(B158) No. 10 — No. 11:

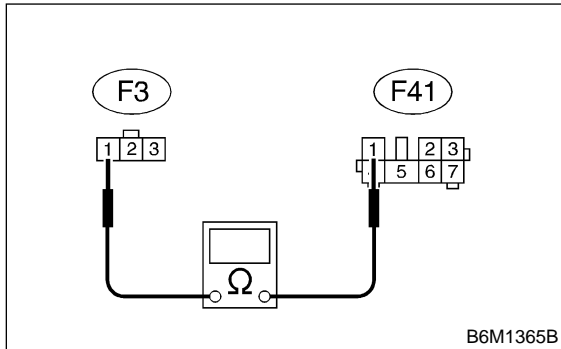


- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 5F29.
- NO** : Repair or replace fuse box.

5F29 : CHECK HARNESS CONNECTOR BETWEEN FRONT CLEARANCE LIGHT AND FUSE BOX.

- 1) Disconnect connector from front clearance light RH and fuse box.
- 2) Measure resistance between front clearance light RH connector (F3) and fuse box connector (F41).

Connector & terminal
(F3) No. 1 — (F41) No. 1:

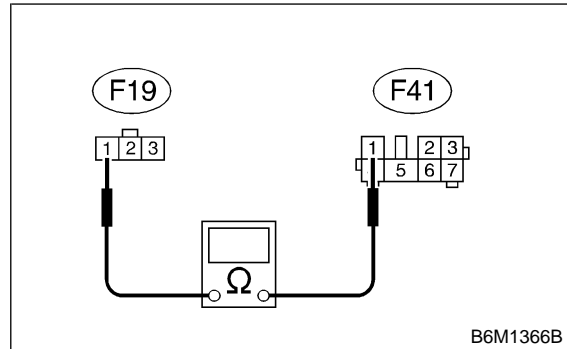


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F210**.
- NO** : Repair wiring harness between front clearance light RH and fuse box.

5F210 : CHECK HARNESS CONNECTOR BETWEEN FRONT CLEARANCE LIGHT AND FUSE BOX.

- 1) Disconnect connector from front clearance light LH.
- 2) Measure resistance between front clearance light LH connector (F19) and fuse box connector (F41).

Connector & terminal
(F19) No. 1 — (F41) No. 1:

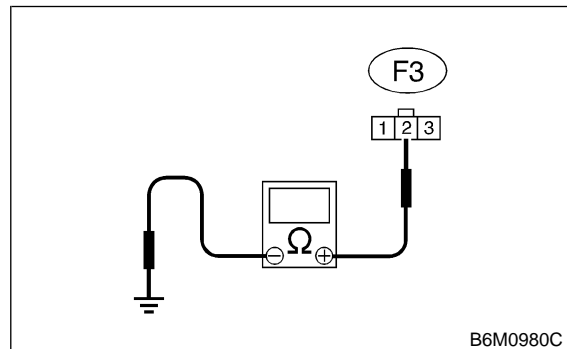


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F211**.
- NO** : Repair wiring harness between front clearance light LH and fuse box.

5F211 : CHECK HARNESS CONNECTOR BETWEEN FRONT CLEARANCE LIGHT AND CHASSIS GROUND.

Measure resistance between front clearance light RH connector (F3) and chassis ground.

Connector & terminal
(F3) No. 2 (+) — Chassis ground (-):



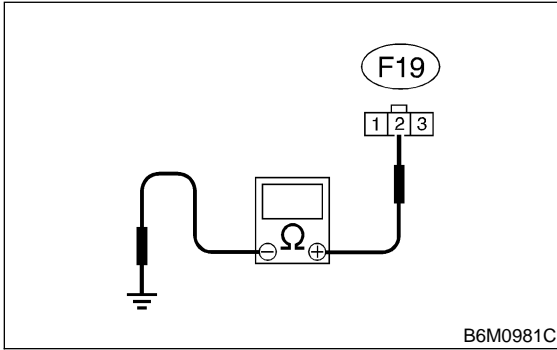
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F212**.
- NO** : Repair wiring harness between front clearance light RH and chassis ground.

5F212 : CHECK HARNESS CONNECTOR BETWEEN FRONT CLEARANCE LIGHT AND CHASSIS GROUND.

Measure resistance between front clearance light LH connector (F19) and chassis ground.

Connector & terminal

(F19) No. 2 (+) — Chassis ground (-):



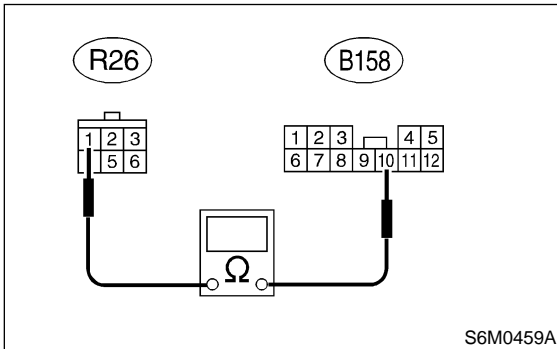
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F213**.
- NO** : Repair wiring harness between front clearance light LH and chassis ground.

5F213 : CHECK HARNESS CONNECTOR BETWEEN REAR CLEARANCE LIGHT AND FUSE BOX.

- 1) Disconnect connector from rear clearance light RH and fuse box.
- 2) Measure resistance between rear clearance light RH connector (R26) and fuse box connector (B158).

Connector & terminal

(R26) No. 1 — (B158) No. 10:



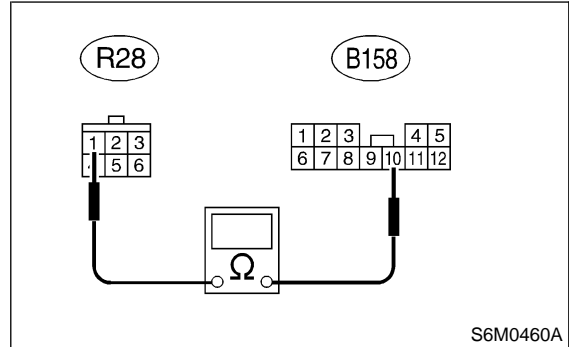
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F214**.
- NO** : Repair wiring harness between rear clearance light RH and fuse box.

5F214 : CHECK HARNESS CONNECTOR BETWEEN REAR CLEARANCE LIGHT AND FUSE BOX.

- 1) Disconnect connector from rear clearance light LH.
- 2) Measure resistance between rear clearance light LH connector (R28) and fuse box connector (B158).

Connector & terminal

(R28) No. 1 — (B158) No. 10:



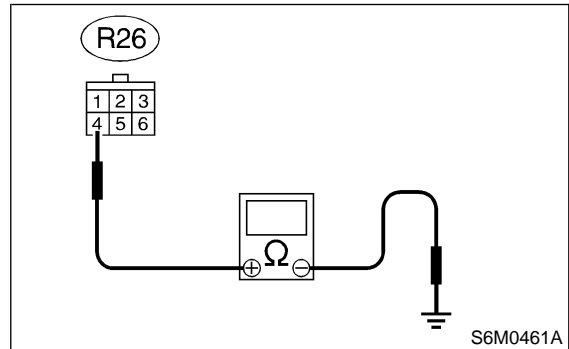
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F215**.
- NO** : Repair wiring harness between rear clearance light LH and fuse box.

5F215 : CHECK HARNESS CONNECTOR BETWEEN REAR CLEARANCE LIGHT AND CHASSIS GROUND.

Measure resistance between rear clearance light RH connector (R26) and chassis ground.

Connector & terminal

(R26) No. 4 (+) — Chassis ground (-):



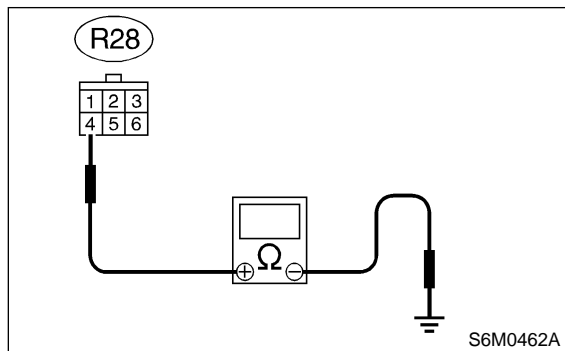
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F216**.
- NO** : Repair wiring harness between rear clearance light RH and chassis ground.

5F216 : CHECK HARNESS CONNECTOR BETWEEN REAR CLEARANCE LIGHT AND CHASSIS GROUND.

Measure resistance between rear clearance light LH connector (R28) and chassis ground.

Connector & terminal

(R28) No. 4 (+) — Chassis ground (-):



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Repair wiring harness between rear clearance light LH and chassis ground.

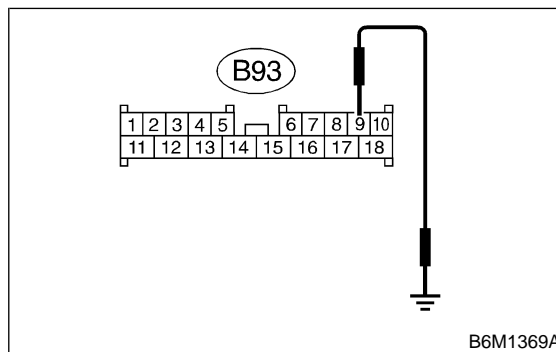
3. DIAGNOSTICS ITEM 2

5F31 : CHECK SECURITY INDICATOR LIGHT COMES ON.

- 1) Disconnect connector from security control module.
- 2) Measure resistance between security control module connector (B93) and chassis ground.

Connector & terminal

(B93) No. 9 (+) — Chassis ground (-):



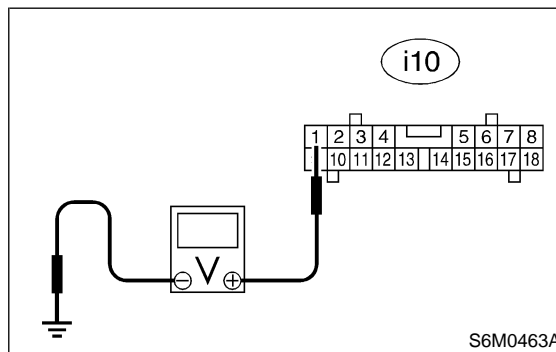
- CHECK** : **Does the indicator light come on?**
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Go to step 5F32.

5F32 : CHECK POWER SUPPLY FOR SECURITY INDICATOR LIGHT.

- 1) Disconnect connector from combination meter.
- 2) Measure voltage between combination meter connector (i10) and chassis ground.

Connector & terminal

(i10) No. 1 (+) — Chassis ground (-):

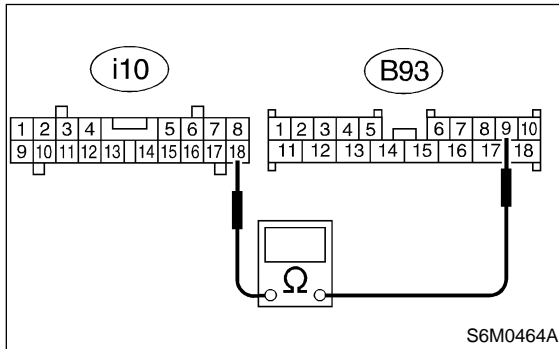


- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step 5F33.
- NO** : Repair wiring harness between security indicator light and main fuse box.

5F33 : CHECK HARNESS CONNECTOR BETWEEN SECURITY INDICATOR LIGHT AND SECURITY CONTROL MODULE.

Measure resistance between combination meter connector (i10) and security control module connector (B93).

Connector & terminal
(i10) No. 18 — (B93) No. 9:



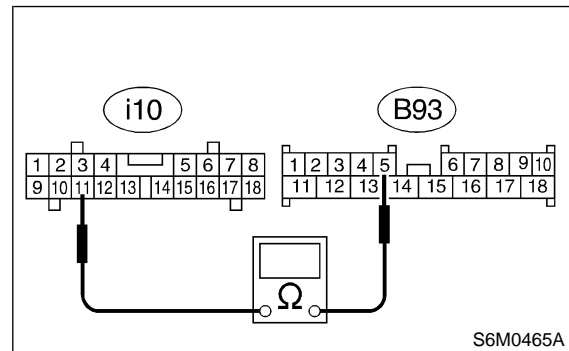
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace combination meter printed circuit.
- NO** : Repair wiring harness between security indicator light and security control module.

4. DIAGNOSTICS ITEM 3

5F41 : CHECK HARNESS CONNECTOR BETWEEN SECURITY CONTROL MODULE AND COMBINATION METER.

- 1) Disconnect connector from security control module and combination meter.
- 2) Measure resistance between security control module connector (B93) and combination meter connector (i10).

Connector & terminal
(B93) No. 5 — (i10) No. 11:



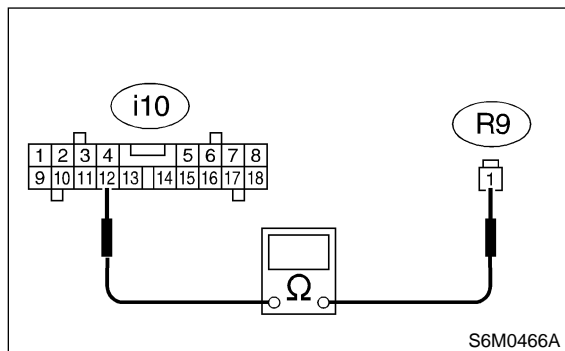
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F42**.
- NO** : Repair wiring harness between security control module and combination meter.

5F42 : CHECK HARNESS CONNECTOR BETWEEN FRONT DOOR SWITCH LH AND COMBINATION METER.

- 1) Disconnect connector from front door switch LH.
- 2) Measure resistance between front door switch LH connector (R9) and combination meter connector (i10).

Connector & terminal

(R9) No. 1 — (i10) No. 12:



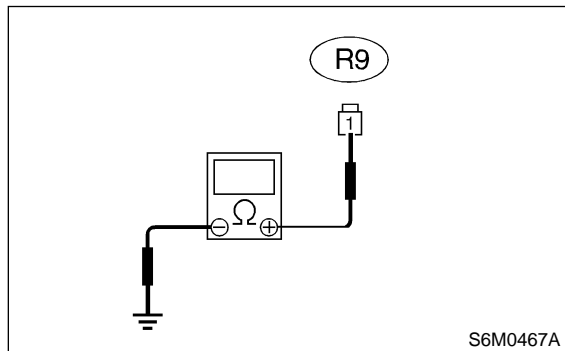
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F43**.
- NO** : Repair wiring harness between front door switch LH and combination meter.

5F43 : CHECK HARNESS CONNECTOR BETWEEN FRONT DOOR SWITCH LH AND CHASSIS GROUND.

Measure resistance between front door switch LH (R9) and chassis ground.

Connector & terminal

(R9) No. 1 (+) — Chassis ground (-):



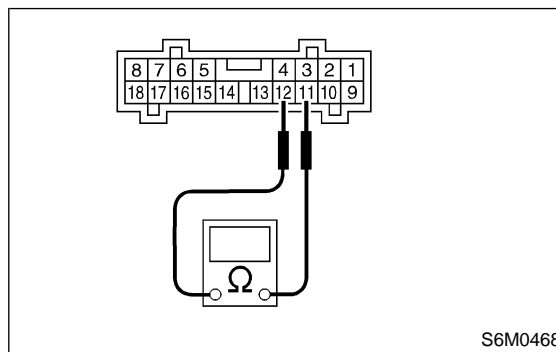
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F44**.
- NO** : Repair wiring harness between front door switch LH and chassis ground.

5F44 : CHECK COMBINATION METER CIRCUIT.

- 1) Remove combination meter. <Ref. to 6-2 [W8A0].>
- 2) Measure resistance between combination meter terminals.

Terminals

No. 11 — No. 12:

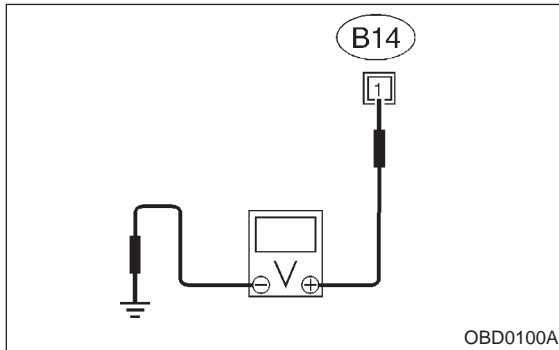


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Repair or replace combination meter. <Ref. to 6-2 [W800].>

5. DIAGNOSTICS ITEM 4

5F51 : CHECK INPUT SIGNAL FOR STARTER MOTOR.

- 1) Disconnect connector from starter motor.
- 2) Turn ignition switch to START.
- 3) Measure voltage between starter motor connector (B14) and engine ground.

Connector & terminal**(B14) No. 1 (+) — Engine ground (-):****NOTE:**

- On AT vehicles, place the select lever in the P or N position.
- On MT vehicles, depress the clutch pedal.

- CHECK** : **Is the voltage more than 10 V?**
YES : Go to step **5F52**.
NO : Go to step **5F53**.

5F52 : CHECK GROUND CIRCUIT OF STARTER MOTOR.

- 1) Turn ignition switch to OFF.
- 2) Disconnect terminal from starter motor.
- 3) Measure resistance between ground cable terminal and engine ground.

- CHECK** : **Is the resistance less than 5 Ω?**
YES : Check starter motor. <Ref. to 6-1 [W100].>
NO : Repair or replace ground cable.

5F53 : CHECK FUSE.

Remove and visually check the fuse SBF-1 (in main fuse box).

- CHECK** : **Is fuse SBF-1 blown?**
YES : Replace SBF fuse (80 A).
NO : Go to step **5F54**.

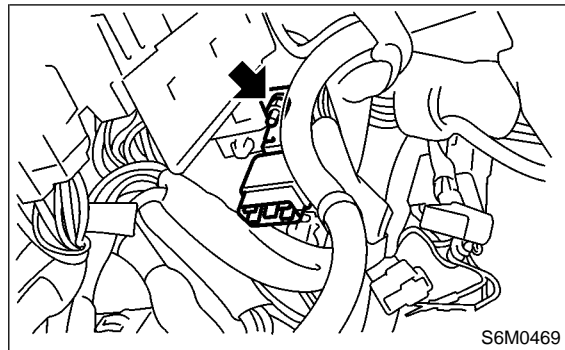
5F54 : CHECK FUSE.

Remove and visually check the fuse SBF-4 (in main fuse box).

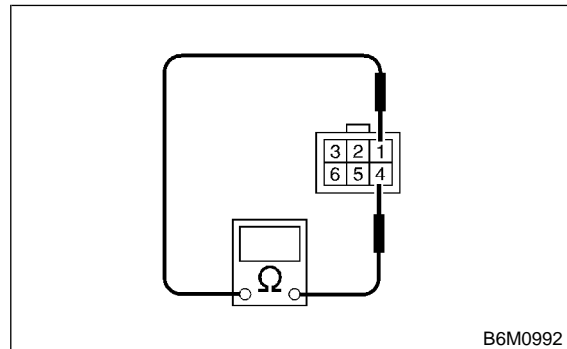
- CHECK** : **Is fuse SBF-4 blown?**
YES : Replace SBF fuse (50 A).
NO : Go to step **5F55**.

5F55 : CHECK INTERRUPT RELAY.

- 1) Turn ignition switch to OFF.
- 2) Remove interrupt relay (behind the fuse box).



- 3) Check continuity between interrupt relay terminals.

Terminals**No. 1 — No. 4:**

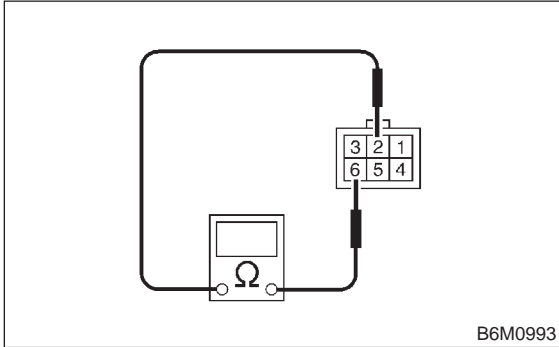
- CHECK** : **Does continuity exist?**
YES : Go to step **5F56**.
NO : Replace interrupt relay.

5F56 : CHECK INTERRUPT RELAY.

Check continuity between interrupt relay terminals.

Terminals

No. 2 — No. 6:



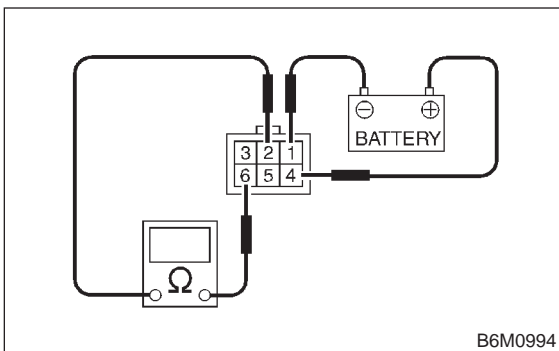
- CHECK** : Does continuity exist?
- YES** : Go to step 5F57.
- NO** : Replace interrupt relay.

5F57 : CHECK INTERRUPT RELAY.

- 1) Connect the battery to interrupt relay terminals No. 1 and No. 4.
- 2) Check continuity between interrupt relay terminals.

Terminals

No. 2 — No. 6:



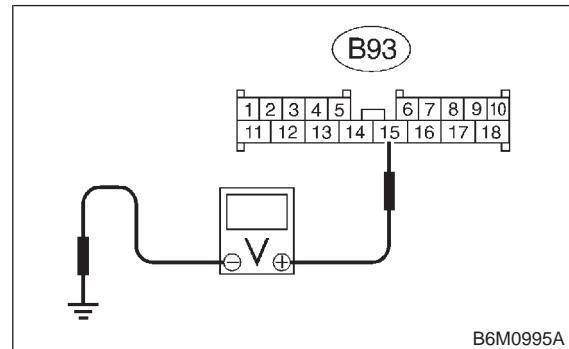
- CHECK** : Does continuity exist?
- YES** : Replace interrupt relay.
- NO** : Go to step 5F58.

5F58 : CHECK HARNESS CONNECTOR BETWEEN BATTERY AND SECURITY CONTROL MODULE.

- 1) Install the SBF-4 to main fuse box.
- 2) Install the interrupt relay.
- 3) Disconnect connector from security control module.
- 4) Turn ignition switch to START.
- 5) Measure voltage between security control module connector (B93) and chassis ground.

Connector & terminal

(B93) No. 15 (+) — Chassis ground (-):



- CHECK** : Is the voltage more than 10 V?
- YES** : Go to step 5F59.
- NO** : Repair wiring harness between security control module and battery.

5F59 : CHECK TRANSMISSION TYPE.

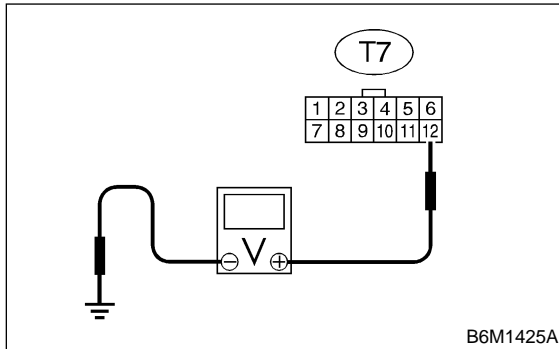
- CHECK** : Is the transmission type AT?
- YES** : Go to step 5F510.
- NO** : Go to step 5F513.

5F510 : CHECK HARNESS CONNECTOR BETWEEN INTERRUPT RELAY AND INHIBITOR SWITCH.

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from inhibitor switch.
- 3) Turn ignition switch to START.
- 4) Measure voltage between inhibitor switch connector (T7) and chassis ground.

Connector & terminal

(T7) No. 12 (+) — Chassis ground (-):



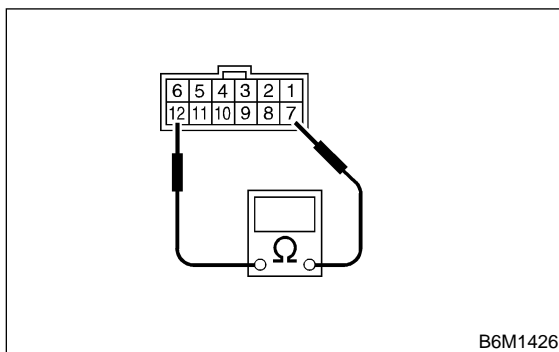
- CHECK** : Is the voltage more than 10 V?
- YES** : Go to step 5F511.
- NO** : Repair wiring harness between interrupt relay and inhibitor switch.

5F511 : CHECK INHIBITOR SWITCH.

- 1) Place the select lever in the P or N position.
- 2) Measure resistance between inhibitor switch terminals.

Terminals

No. 7 — No. 12:



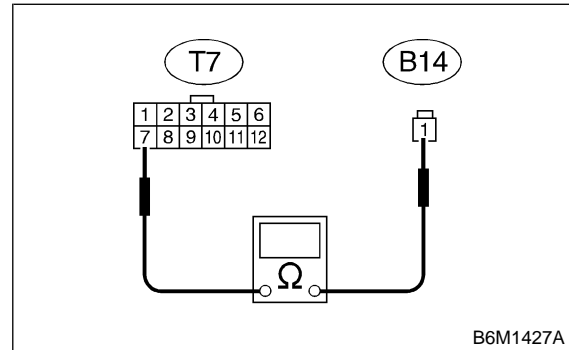
- CHECK** : Is the resistance less than 1 Ω?
- YES** : Go to step 5F512.
- NO** : Replace inhibitor switch. <Ref. to 3-2 [W200].>

5F512 : CHECK HARNESS BETWEEN INHIBITOR SWITCH AND STARTER MOTOR.

Measure resistance between inhibitor switch connector (T7) and starter motor connector (B14).

Connector & terminal

(T7) No. 7 — (B14) No. 1:



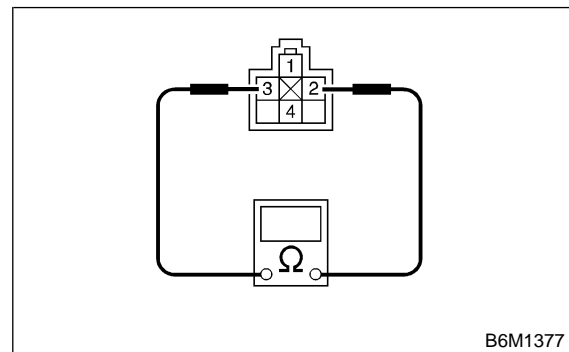
- CHECK** : Is the resistance less than 10 Ω?
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Repair wiring harness between inhibitor switch and starter motor.

5F513 : CHECK STARTER INTERLOCK RELAY.

- 1) Turn ignition switch to OFF.
- 2) Remove starter interlock relay.
- 3) Check continuity between starter interlock relay terminals.

Terminals

No. 3 — No. 2:



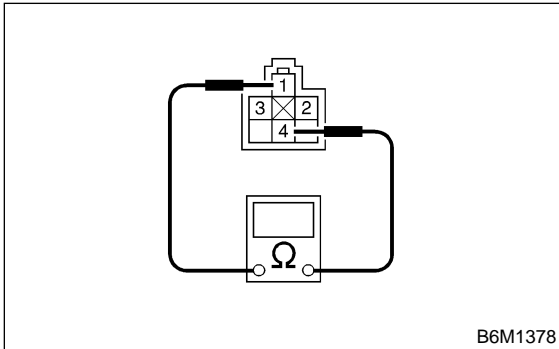
- CHECK** : Does continuity exist?
- YES** : Go to step 5F514.
- NO** : Replace starter interlock relay.

5F514 : CHECK STARTER INTERLOCK RELAY.

Check continuity between starter interlock relay terminals.

Terminals

No. 1 — No. 4:



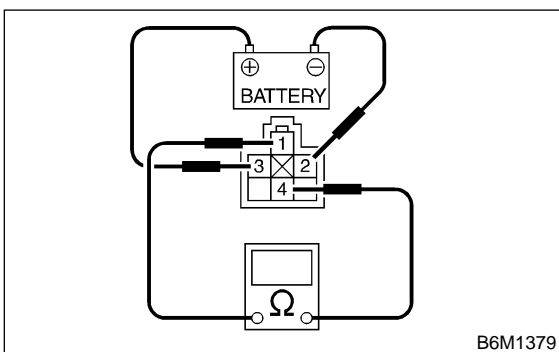
- CHECK** : **Does continuity exist?**
- YES** : Replace starter interlock relay.
- NO** : Go to step **5F515**.

5F515 : CHECK STARTER INTERLOCK RELAY.

- 1) Connect the battery to starter interlock relay terminals No. 3 and No. 2.
- 2) Check continuity between starter interlock relay terminals.

Terminals

No. 1 — No. 4:



- CHECK** : **Does continuity exist?**
- YES** : Go to step **5F516**.
- NO** : Replace starter interlock relay.

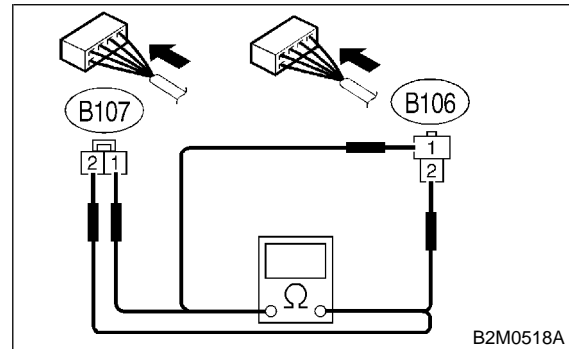
5F516 : CHECK CLUTCH SWITCH.

- 1) Install starter interlock relay.
- 2) Measure resistance between clutch switch connector (B106) and (B107) terminals while depressing the clutch pedal.

Connector & terminal

With cruise control
(B107) No. 1 — No. 2:

Without cruise control
(B106) No. 1 — No. 2:

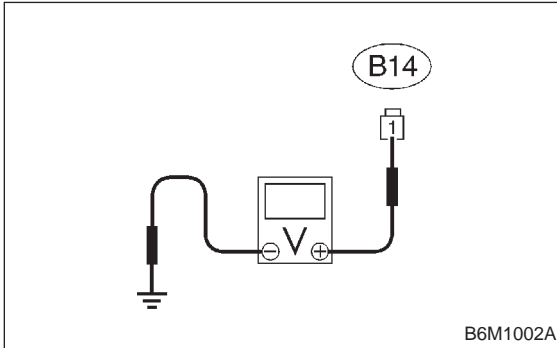


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F517**.
- NO** : Replace clutch switch.

5F517 : CHECK HARNESS BETWEEN INTERRUPT RELAY AND STARTER MOTOR.

- 1) Disconnect connector from starter motor.
- 2) Turn ignition switch to START.
- 3) Measure voltage between starter motor connector (B14) and chassis ground while depressing the clutch pedal.

Connector & terminal
(B14) No. 1 (+) — Chassis ground (-):



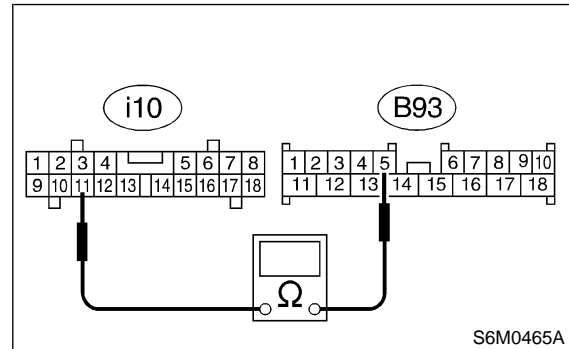
- CHECK** : **Is the voltage more than 10 V?**
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Repair wiring harness between interrupt relay and starter motor.

6. DIAGNOSTICS ITEM 5

5F61 : CHECK HARNESS CONNECTOR BETWEEN SECURITY CONTROL MODULE AND COMBINATION METER.

- 1) Disconnect connector from security control module and combination meter.
- 2) Measure resistance between security control module connector (B93) and combination meter connector (i10).

Connector & terminal
(B93) No. 5 — (i10) No. 11:



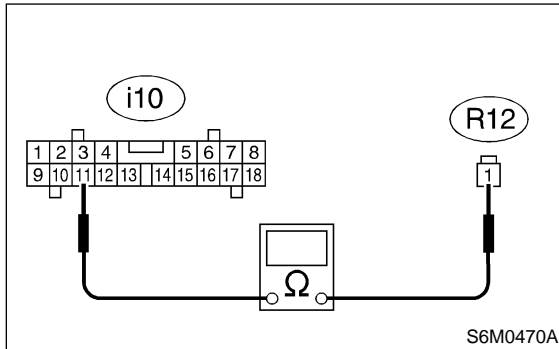
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F62**.
- NO** : Repair wiring harness between security control module and combination meter.

5F62 : CHECK HARNESS CONNECTOR BETWEEN FRONT DOOR SWITCH RH AND COMBINATION METER.

- 1) Disconnect connector from front door switch RH.
- 2) Measure resistance between front door switch RH connector (R12) and combination meter connector (i10).

Connector & terminal

(R12) No. 1 — (i10) No. 11:



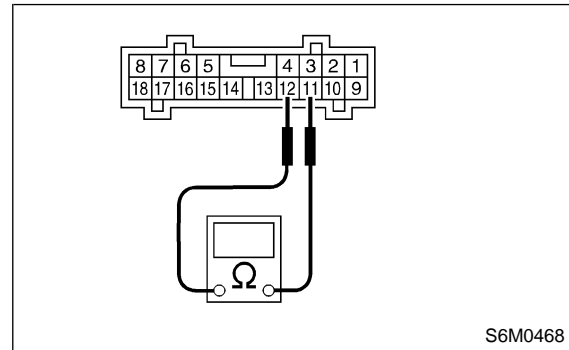
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F63**.
- NO** : Repair wiring harness between front door switch RH and combination meter.

5F63 : CHECK COMBINATION METER CIRCUIT.

- 1) Remove combination meter.
<Ref. to 6-2 [W8A0].>
- 2) Measure resistance between combination meter terminals.

Terminals

No. 11 — No. 12:



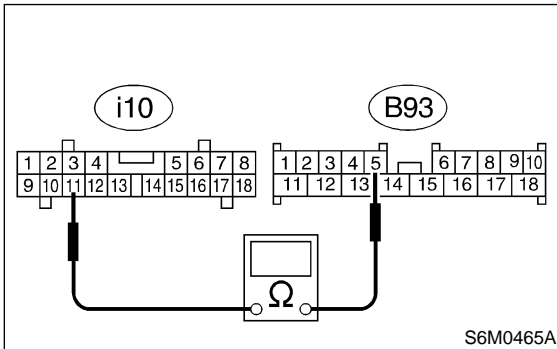
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Repair or replace combination meter. <Ref. to 6-2 [W800].>

7. DIAGNOSTIC ITEM 6

5F71 : CHECK HARNESS CONNECTOR BETWEEN SECURITY CONTROL MODULE AND COMBINATION METER.

- 1) Disconnect connector from security control module and combination meter.
- 2) Measure resistance between security control module connector (B93) and combination meter connector (i10).

Connector & terminal
(B93) No. 5 — (i10) No. 11:

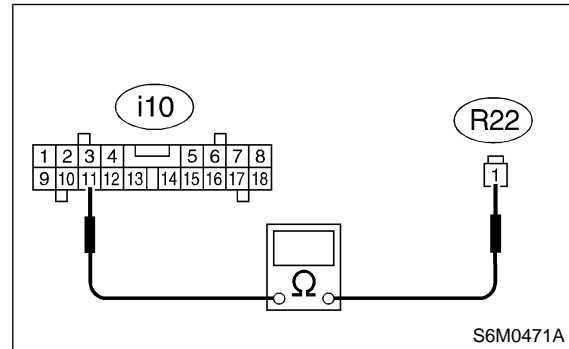


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F72**.
- NO** : Repair wiring harness between security control module and combination meter.

5F72 : CHECK HARNESS CONNECTOR BETWEEN REAR DOOR SWITCH LH AND COMBINATION METER.

- 1) Disconnect connector from rear door switch LH.
- 2) Measure resistance between rear door switch LH connector (R22) and combination meter connector (i10).

Connector & terminal
(R22) No. 1 — (i10) No. 11:

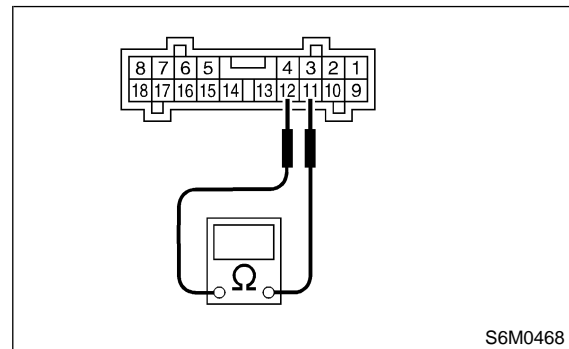


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F73**.
- NO** : Repair wiring harness between rear door switch LH and combination meter.

5F73 : CHECK COMBINATION METER CIRCUIT.

- 1) Remove combination meter. <Ref. to 6-2 [W8A0].>
- 2) Measure resistance between combination meter terminals.

Terminals
No. 11 — No. 12:



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Repair or replace combination meter. <Ref. to 6-2 [W800].>

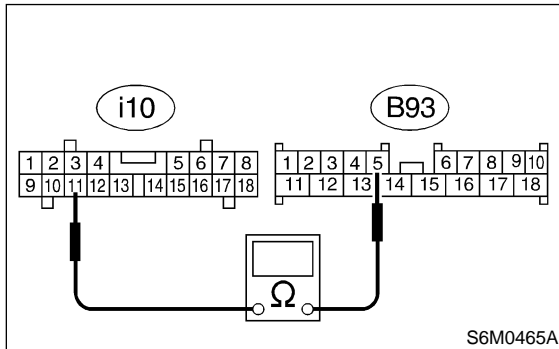
8. DIAGNOSTIC ITEM 7

5F81 : CHECK HARNESS CONNECTOR BETWEEN SECURITY CONTROL MODULE AND COMBINATION METER.

- 1) Disconnect connector from security control module and combination meter.
- 2) Measure resistance between security control module connector (B93) and combination meter connector (i10).

Connector & terminal

(B93) No. 5 — (i10) No. 11:



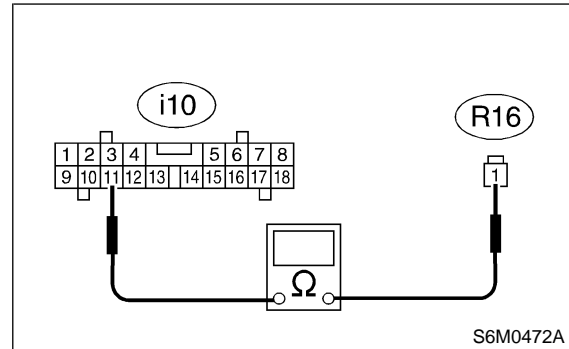
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F82**.
- NO** : Repair wiring harness between security control module and combination meter.

5F82 : CHECK HARNESS CONNECTOR BETWEEN REAR DOOR SWITCH RH AND COMBINATION METER.

- 1) Disconnect connector from rear door switch RH.
- 2) Measure resistance between rear door switch RH connector (R16) and combination meter connector (i10).

Connector & terminal

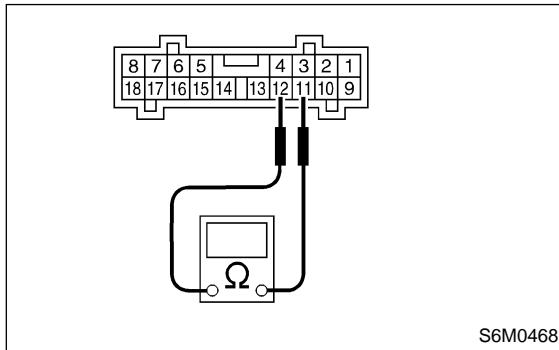
(R16) No. 1 — (i10) No. 11:



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F83**.
- NO** : Repair wiring harness between rear door switch RH and combination meter.

5F83 : CHECK COMBINATION METER CIRCUIT.

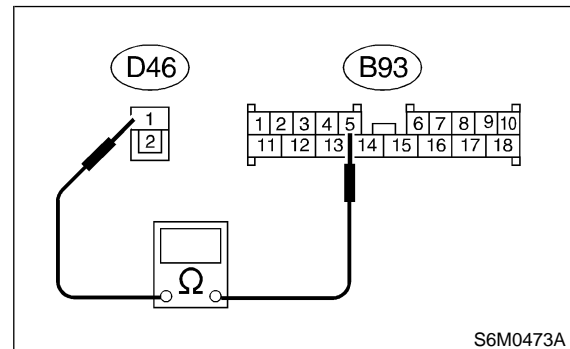
- 1) Remove combination meter. <Ref. to 6-2 [W8A0].>
- 2) Measure resistance between combination meter terminals.

Terminals
No. 11 — No. 12:


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Repair or replace combination meter. <Ref. to 6-2 [W800].>

9. DIAGNOSTIC ITEM 8
5F91 : CHECK HARNESS CONNECTOR BETWEEN REAR GATE LATCH SWITCH AND SECURITY CONTROL MODULE.

- 1) Disconnect connector from rear gate latch switch and security control module.
- 2) Measure resistance between rear gate latch switch connector (D46) and security control module connector (B93).

Connector & terminal
(D46) No. 1 — (B93) No. 5:


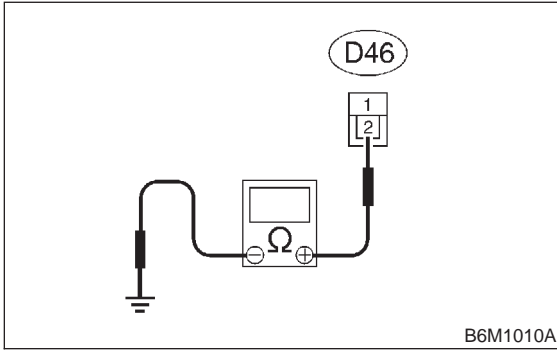
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F92**.
- NO** : Repair wiring harness between rear gate latch switch and security control module.

5F92 : CHECK HARNESS CONNECTOR BETWEEN REAR GATE LATCH SWITCH AND CHASSIS GROUND.

Measure resistance between rear gate latch switch connector (D46) and chassis ground.

Connector & terminal

(D46) No. 2 (+) — Chassis ground (-):



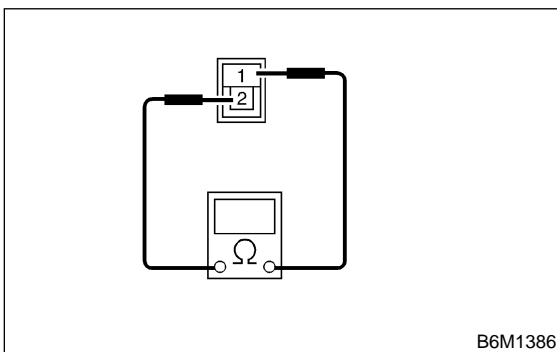
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F93**.
- NO** : Repair wiring harness between rear gate latch switch and chassis ground.

5F93 : CHECK REAR GATE LATCH SWITCH.

Measure resistance between rear gate latch switch terminals.

Terminals

No. 1 — No. 2:



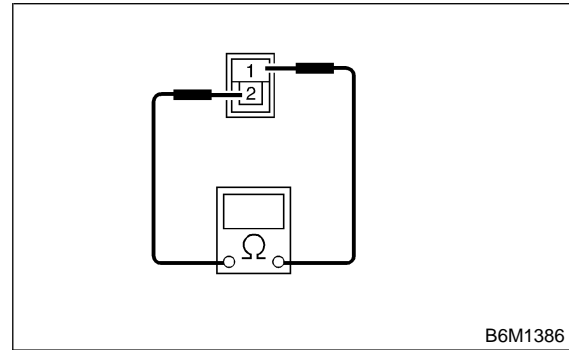
- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Go to step **5F94**.
- NO** : Replace rear gate latch switch.

5F94 : CHECK REAR GATE LATCH SWITCH.

Measure resistance between rear gate latch switch terminals while pushing the switch.

Terminals

No. 1 — No. 2:



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace rear gate latch switch.
- NO** : Replace security control module. <Ref. to 6-2 [W14A1].>

10. DIAGNOSTIC ITEM 9

5F101 : CHECK SECURITY CONTROL MODULE.

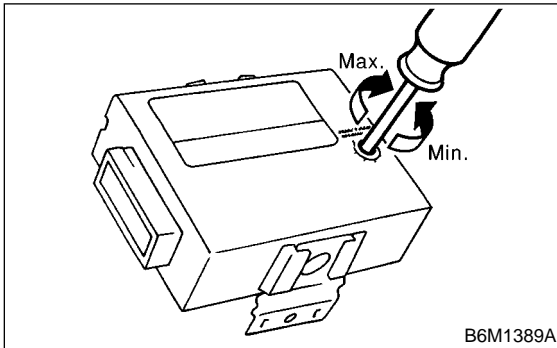
Check and ensure that security control module is installed on the bracket. <Ref. to 6-2 [W14A1].>

- CHECK** : *Is the security control module securely installed?*
- YES** : Go to step **5F102**.
- NO** : Securely install security control module. <Ref. to 6-2 [W14A1].>

5F102 : ADJUST SENSITIVITY.

- 1) Remove security control module. <Ref. to 6-2 [W14A1].>
- 2) Adjust the sensitivity adjust screw in security control module.

NOTE:
After adjusting, be sure to plug the adjust screw hole.



- 3) Install security control module. <Ref. to 6-2 [W14A1].>
- 4) Perform impact sensitivity test. <Ref. to 6-2 [T5F1].>

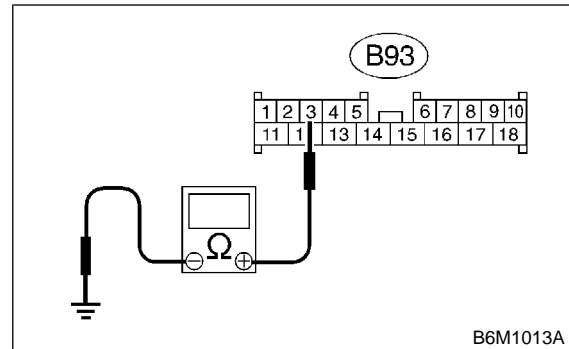
- CHECK** : *Is sensitivity adjustment possible?*
- YES** : Impact sensitivity is normal.
- NO** : Replace security control module. <Ref. to 6-2 [W14A1].>

11. DIAGNOSTIC ITEM 10

5F111 : CHECK PASSIVE ARM CIRCUIT.

- 1) Connect connector (B183) and (B184) at driver side front lower pillar.
- 2) Disconnect connector from security control module.
- 3) Measure resistance between security control module (B93) and chassis ground.

Connector & terminal
(B93) No. 3 (+) — Chassis ground (-):



- CHECK** : *Is the resistance less than 10 Ω?*
- YES** : Replace security control module. <Ref. to 6-2 [W14A1].>
- NO** : Repair wiring harness between security control module and chassis ground.

1. Precaution

A: SUPPLEMENTAL RESTRAINT SYSTEM "AIRBAG"

Airbag system wiring harness is routed on and along body panels.

CAUTION:

- All airbag system wiring harness and connectors are yellow. Do not use electrical test equipment on these circuit.
- Be careful not to damage airbag system wiring harness when repairing the body panel.

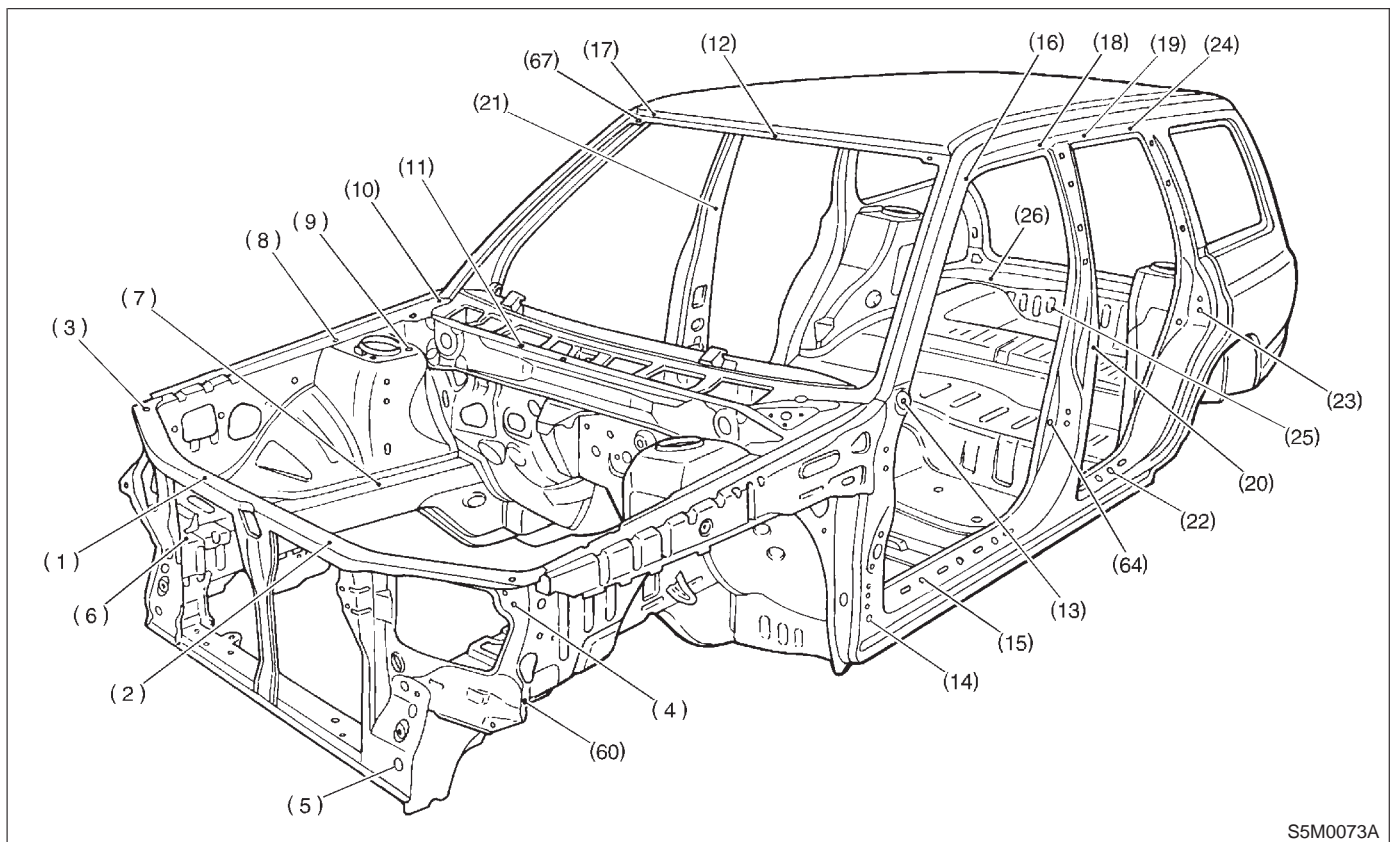
2. Body Datum Points

Various master repair locations are established as datum points used during body repairs. In addition, guide holes, locators and indents are provided to facilitate panel replacement and achieve alignment accuracy.

NOTE:

Left and right datum points are all symmetrical to each other.

A: ENGINE COMPARTMENT AND ROOM



S5M0073A

1. Precaution

A: SUPPLEMENTAL RESTRAINT SYSTEM "AIRBAG"

Airbag system wiring harness is routed on and along body panels.

CAUTION:

- All airbag system wiring harness and connectors are yellow. Do not use electrical test equipment on these circuit.
- Be careful not to damage airbag system wiring harness when repairing the body panel.

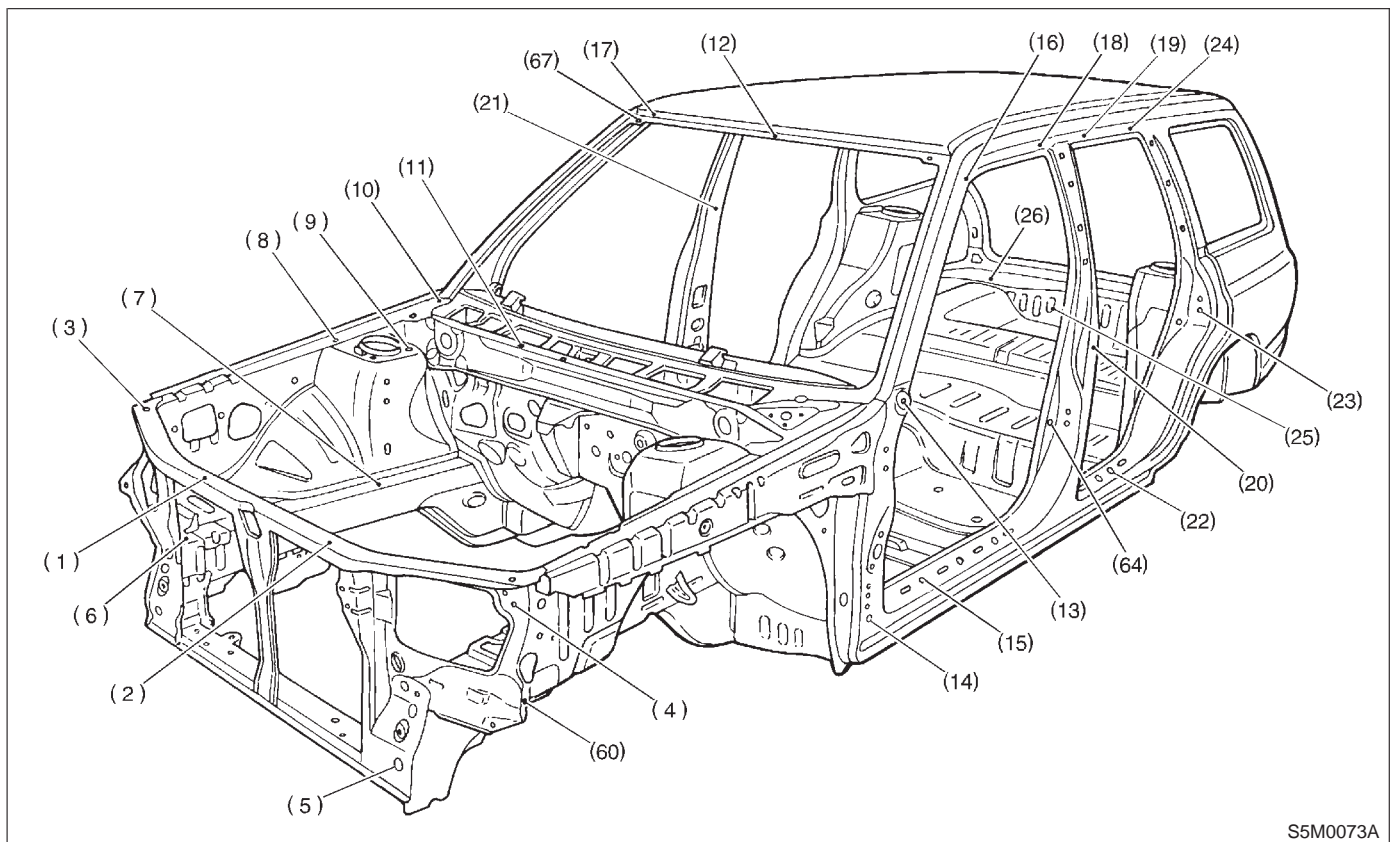
2. Body Datum Points

Various master repair locations are established as datum points used during body repairs. In addition, guide holes, locators and indents are provided to facilitate panel replacement and achieve alignment accuracy.

NOTE:

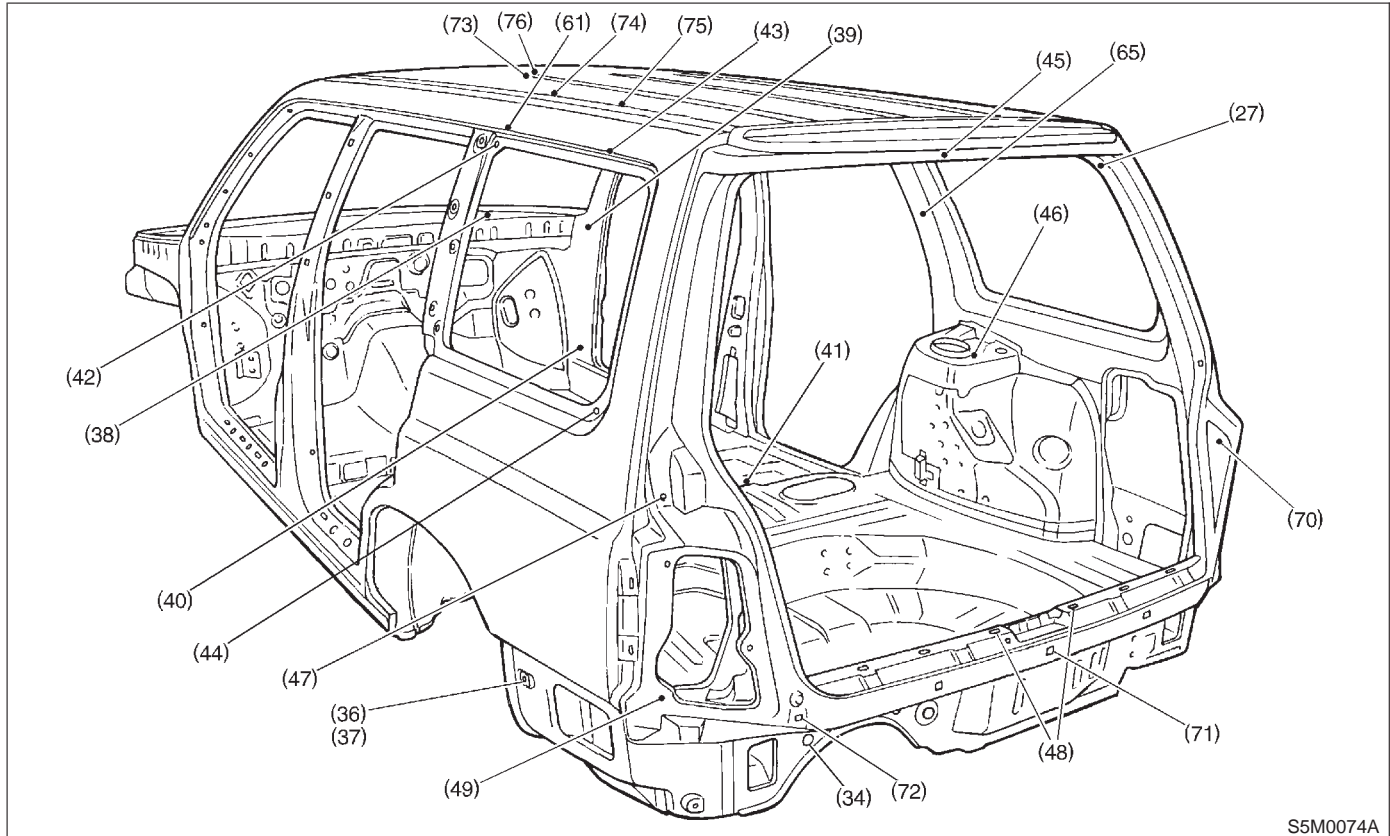
Left and right datum points are all symmetrical to each other.

A: ENGINE COMPARTMENT AND ROOM



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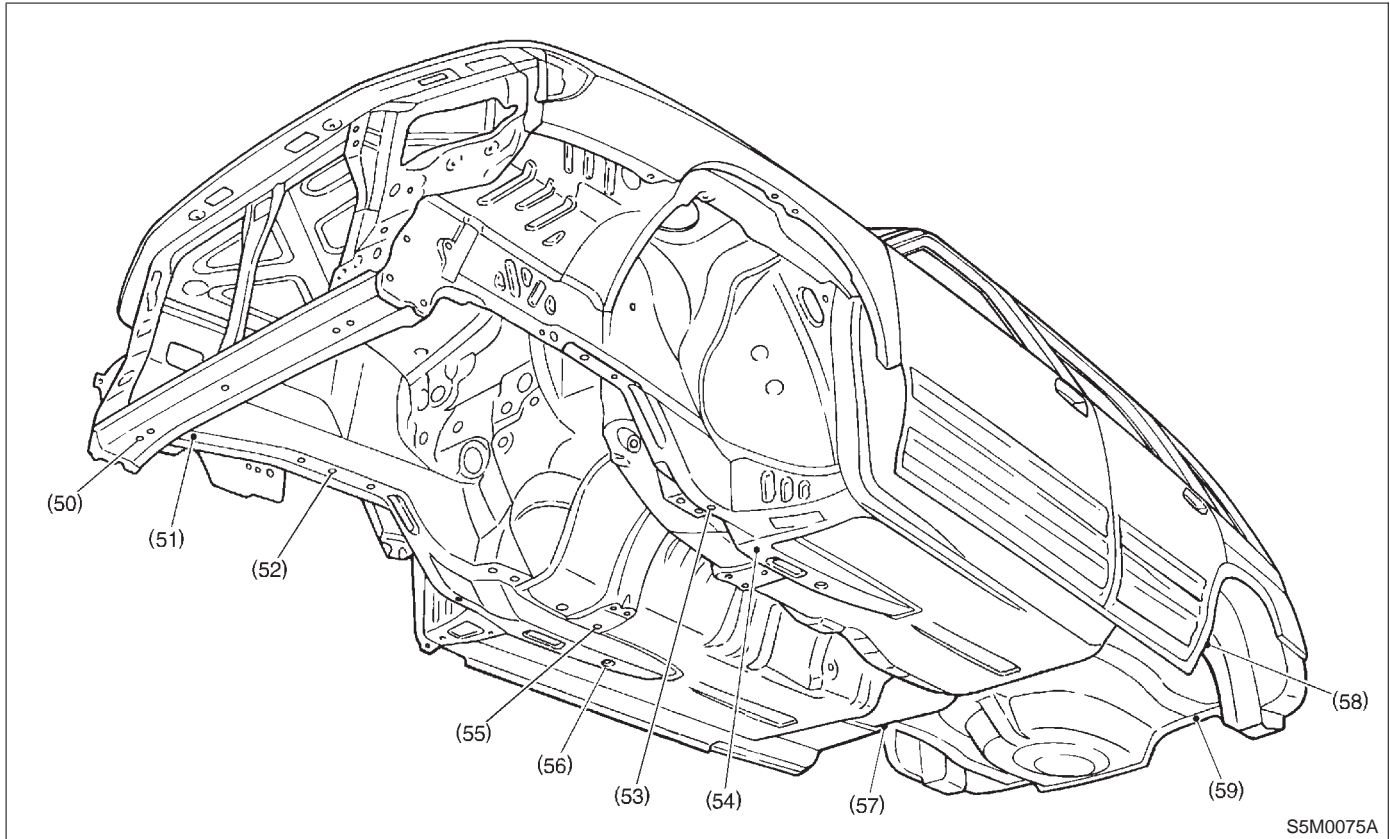
- | | | |
|---|--|--|
| <p>(1) Radiator panel (UPR) repair bolt hole M8 (Right)</p> <p>(2) Radiator panel (UPR) repair bolt hole M8 (Left)</p> <p>(3) Fender attaching bolt hole M6 (Symmetrical)</p> <p>(4) Repair locator 8 mm (0.31 in) dia. (Symmetrical)</p> <p>(5) Radiator panel side gauge hole 24 mm (0.94 in) dia. (Symmetrical)</p> <p>(6) Front bumper mounting hole 14 × 17 mm (0.55 × 0.67 in) dia. (Symmetrical)</p> <p>(7) Front crossmember attaching bolt hole 12.4 mm (0.488 in) dia. (Symmetrical)</p> <p>(8) Fender attaching bolt hole M6 (Symmetrical)</p> <p>(9) Front strut mounting hole 10 mm (0.39 in) dia. (Symmetrical)</p> | <p>(10) Hood hinge attaching bolt hole M8 (Symmetrical)</p> <p>(11) Cowl panel mounting hole 6 mm (0.24 in) dia. (Symmetrical)</p> <p>(12) Roof inner trim attaching bolt hole 8 mm (0.31 in) dia.</p> <p>(13) Fender attaching bolt hole M6 (Symmetrical)</p> <p>(14) Front pillar gauge hole 20 mm (0.79 in) dia. (Symmetrical)</p> <p>(15) Wax coat hole 20 mm (0.79 in) dia. (Symmetrical)</p> <p>(16) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)</p> <p>(17) Sun visor attaching hole 20 mm (0.79 in) dia. (Symmetrical)</p> <p>(18) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)</p> <p>(19) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)</p> | <p>(20) Center pillar gauge hole 12 mm (0.47 in) dia. (Symmetrical)</p> <p>(21) Belt anchor attaching bolt hole 12 mm (0.47 in) dia. (Symmetrical)</p> <p>(22) Wax coat hole, 20 mm (0.79 in) dia. (Symmetrical)</p> <p>(23) Rear door switch attaching hole 20 mm (0.79 in) dia. (Symmetrical)</p> <p>(24) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)</p> <p>(25) Spare tire attaching bolt hole M8</p> <p>(26) Air draw hole 7 mm (0.28 in) dia. (Symmetrical)</p> <p>(60) Fender attaching bolt hole M6 (Symmetrical)</p> <p>(64) Door switch attaching hole 13.5 mm (0.531 in) dia. (Symmetrical)</p> <p>(67) Front glass attaching hole Right 6.5 mm (0.256 in) dia. Left 6.5 × 10 mm (0.256 × 0.39 in) dia.</p> |
|---|--|--|

B: LUGGAGE COMPARTMENT AND ROOM

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- | | | |
|--|---|--|
| (27) Rear pillar (Inner) harness clip attaching hole 8 mm (0.31 in) dia. (Symmetrical) | (43) Roof rail attaching square hole 9 mm (0.35 in) dia. (Symmetrical) | (65) Seat belt anchor attaching bolt hole 12 mm (0.47 in) dia. (Symmetrical) |
| (34) Rear skirt gauge hole 20 mm (0.79 in) dia. (Symmetrical) | (44) Rear quarter glass attaching hole 8 mm (0.31 in) dia. (Symmetrical) | (70) Buffer attaching hole M6 (Symmetrical) |
| (36) Rear quarter bumper side gauge hole 20 mm (0.79 in) dia. (Left) | (45) Rear locator hollow 4 mm (0.16 in) dia. | (71) Bumper face attaching square hole 8 × 9 mm (0.31 × 0.35 in) |
| (37) Rear quarter bumper side gauge hole 20 mm (0.79 in) dia. (Right) | (46) Rear strut mounting hole 10 mm (0.39 in) dia. (Symmetrical) | (72) Rear quarter and square hole 8 × 9 mm (0.31 × 0.35 in) (Symmetrical) |
| (38) Instrument panel attaching square hole 22 × 34.5 mm (0.87 × 1.358 in) (Right) | (47) Rear gate stay attaching bolt hole M8 (Symmetrical) | (73) Head console attaching hole 8 mm (0.31 in) dia. |
| (39) Steering support beam attaching bolt hole M8 (Symmetrical) | (48) Inner trim clip attaching hole 8 × 20 mm (0.31 × 0.79 in) dia. (Symmetrical) | (74) Inner shim carrier attaching bolt hole M6 (Symmetrical) |
| (40) Front pillar (Inner) gauge hole 10 mm (0.39 in) dia. (Symmetrical) | (49) Rear combination light mounting hole 8 mm (0.31 in) dia. (Symmetrical) | (75) Inner shim carrier attaching bolt hole M6 (Symmetrical) |
| (41) Floor mat attaching clip hole 8 mm (0.31 in) dia. (Symmetrical) | (61) Side rail (Inner) gauge hole 8 mm (0.31 in) dia. (Symmetrical) | (76) Head console attaching hole 8 mm (0.31 in) dia. |
| (42) Rear quarter glass attaching hole 8 × 15 mm (0.31 × 0.59 in) dia. (Symmetrical) | | |

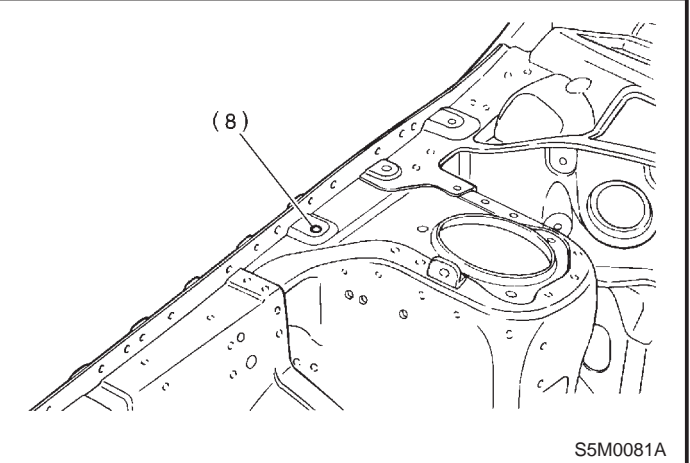
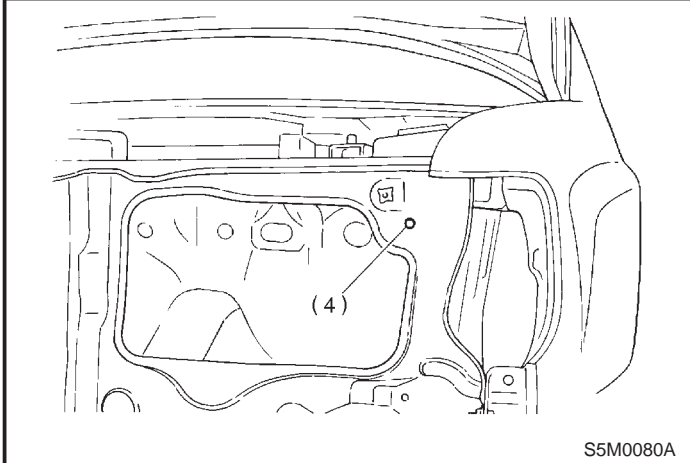
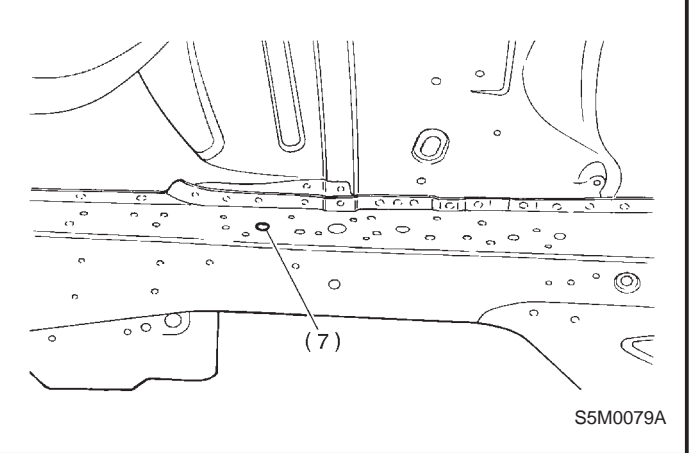
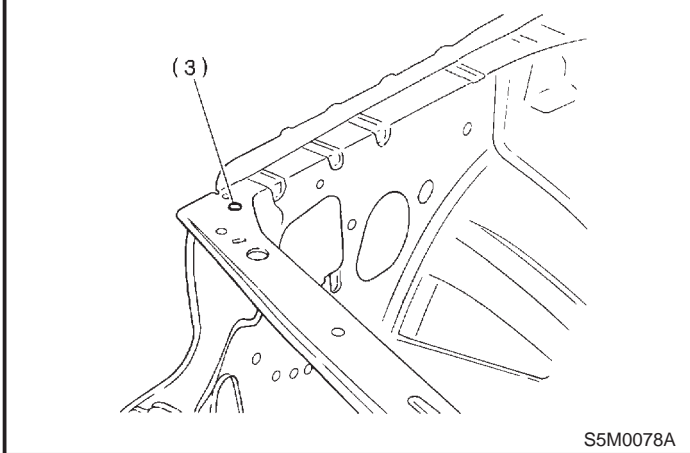
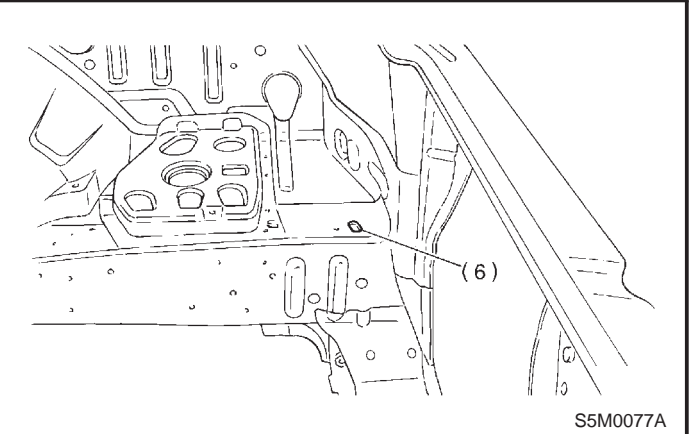
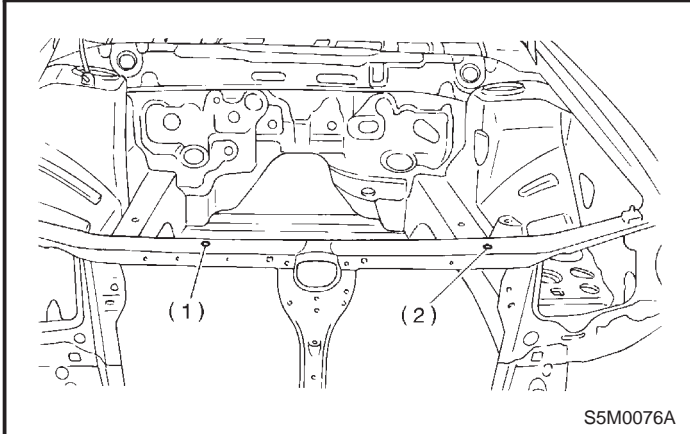
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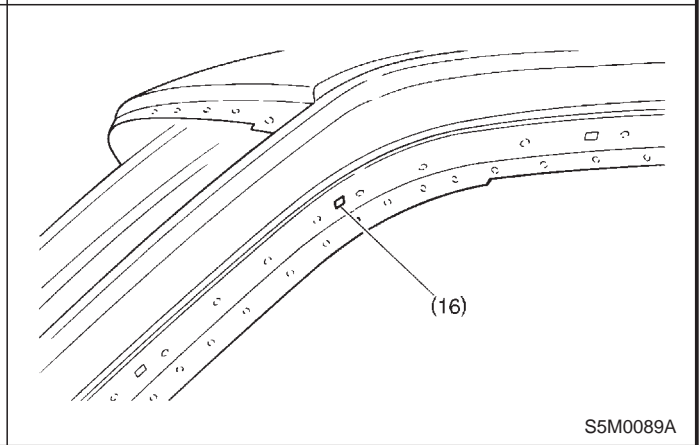
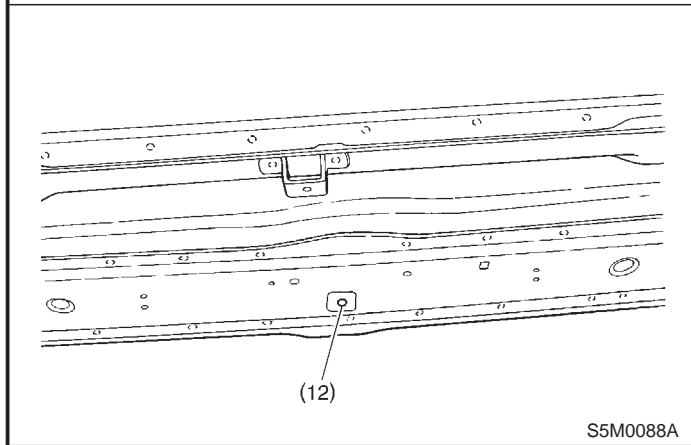
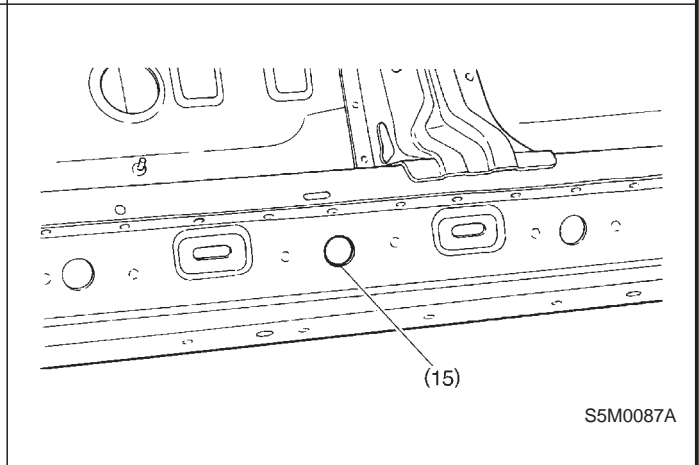
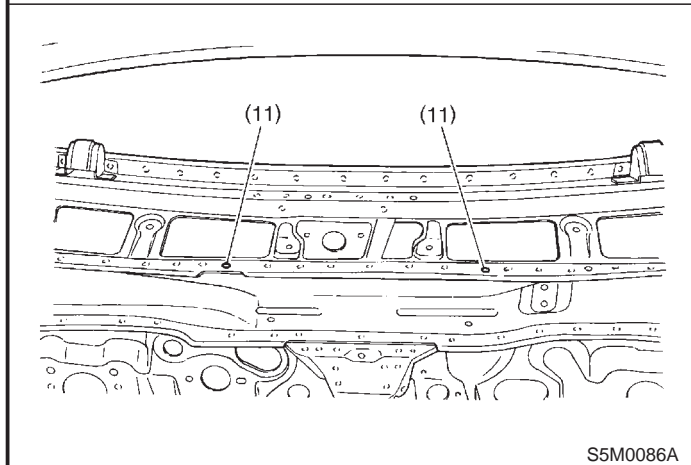
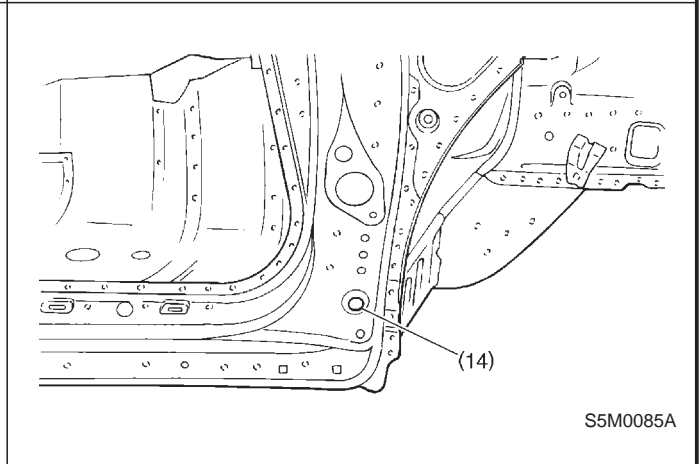
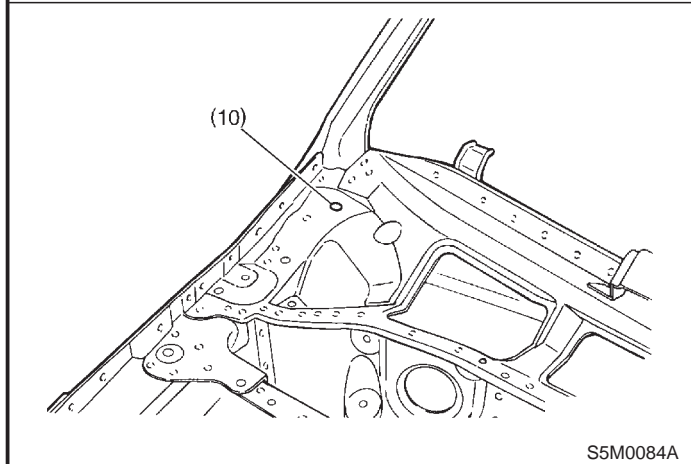
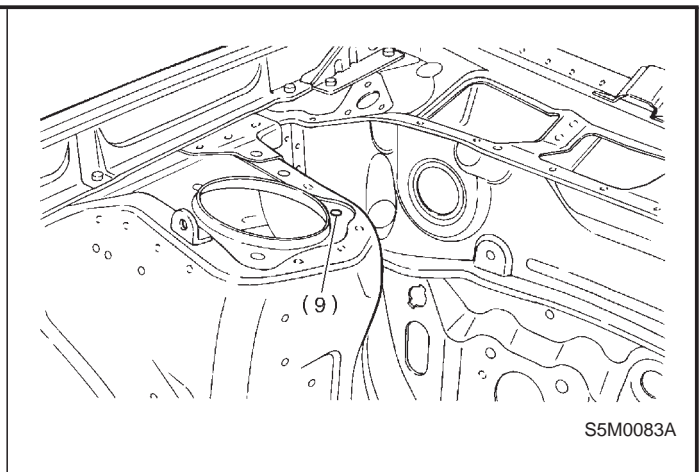
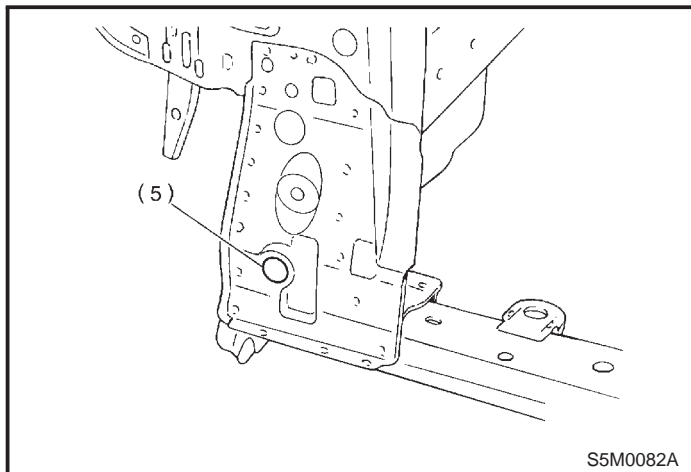


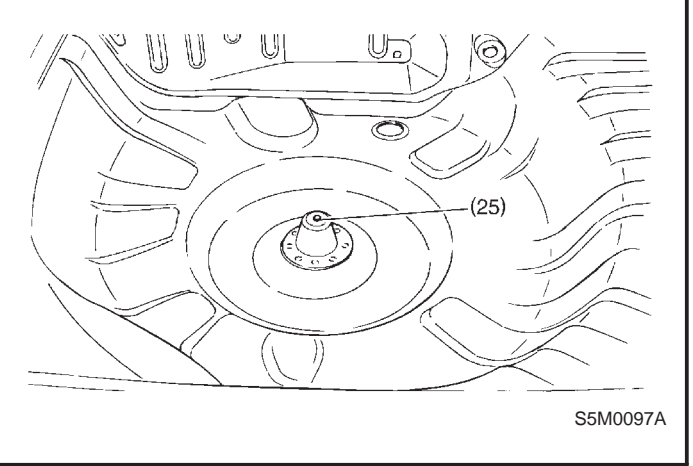
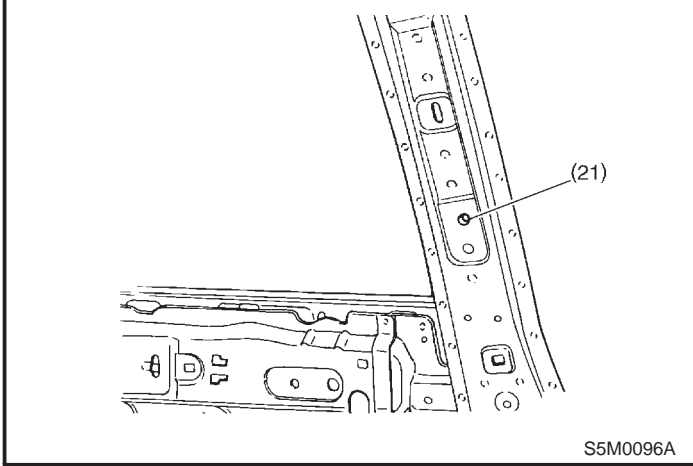
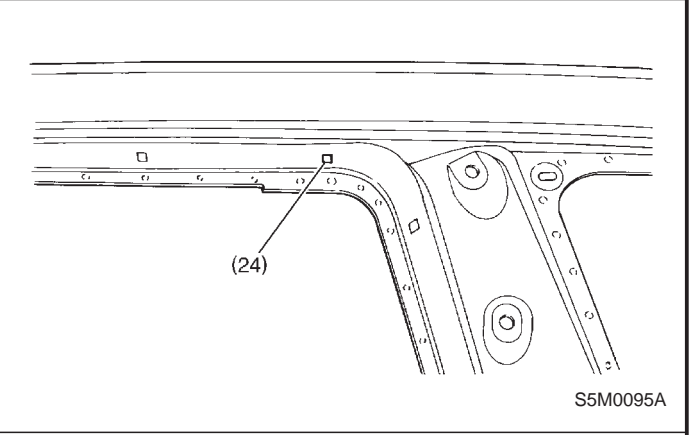
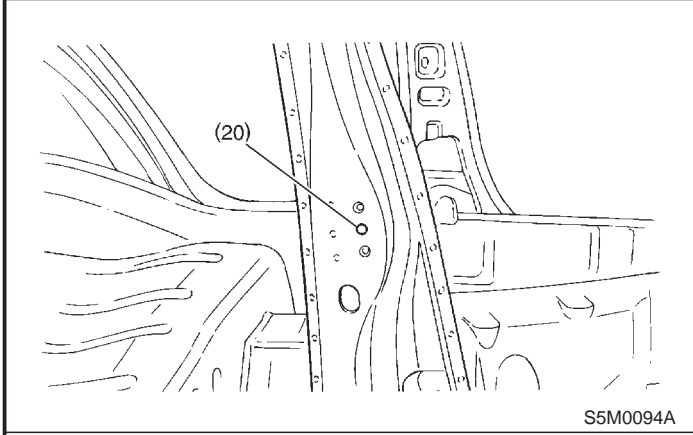
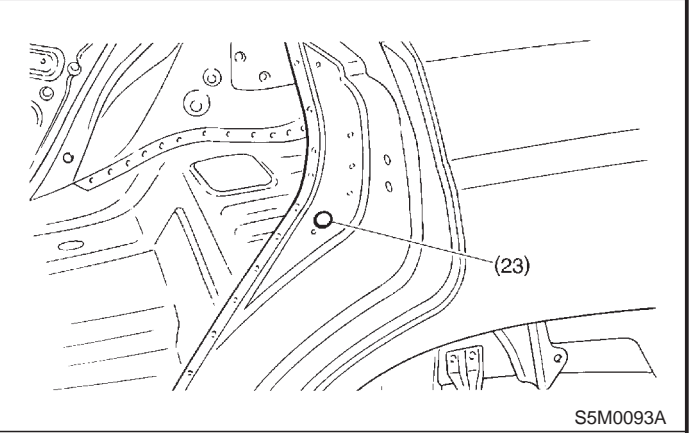
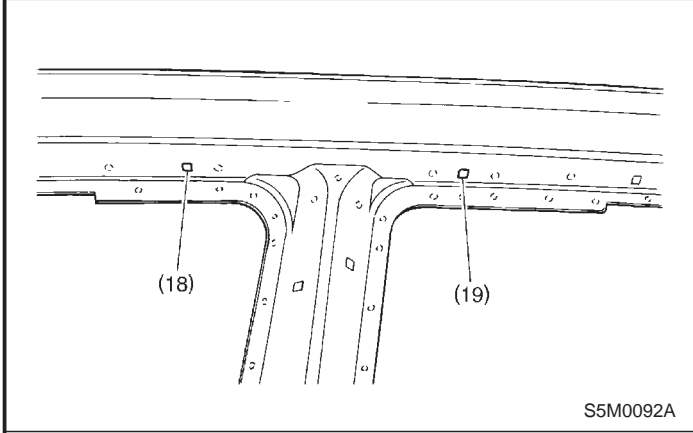
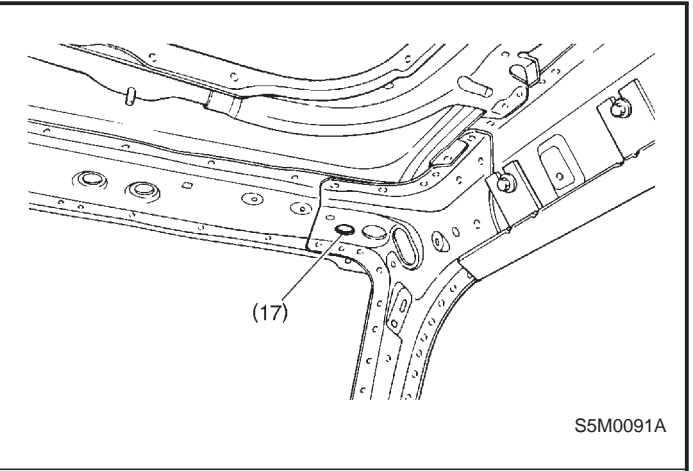
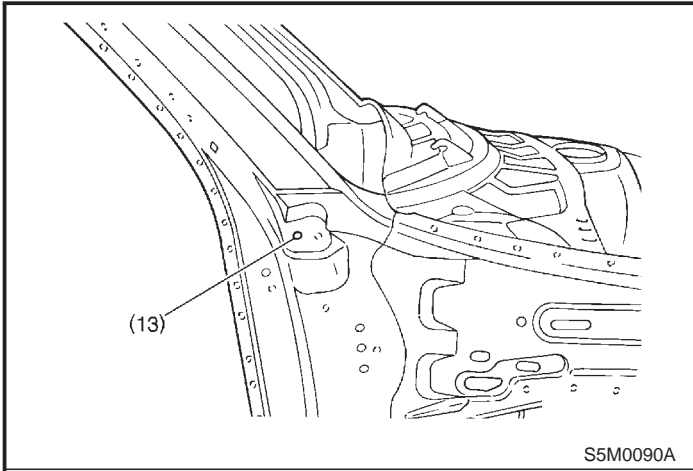
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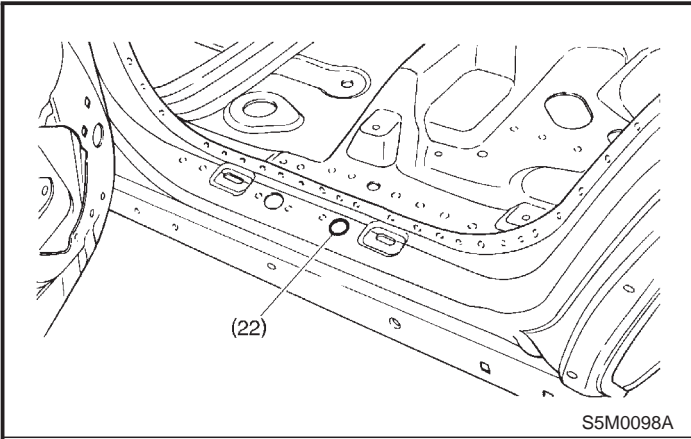
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|---|--|---|
| (50) Radiator panel (LWR) frame gauge hole 15 mm (0.59 in) dia. (Symmetrical) | (53) Front suspension attaching bolt hole M14 | (56) Side frame gauge hole 15 mm (0.59 in) dia. (Symmetrical) |
| (51) Front side frame gauge hole 20 mm (0.79 in) dia. (Symmetrical) | (54) Side frame gauge hole 20 mm (0.79 in) dia. (Symmetrical) | (57) Rear differential attaching bolt hole 12 mm (0.47 in) dia. (Symmetrical) |
| (52) Front crossmember attaching hole 12.4 mm (0.488 in) dia. (Symmetrical) | (55) Transmission mount attaching bolt hole 10 mm (0.39 in) dia. (Symmetrical) | (58) Rear suspension attaching bolt hole M12 (Symmetrical) |
| | | (59) Rear side frame gauge hole 15 mm (0.59 in) dia. (Symmetrical) |

D: DATUM POINT LOCATION

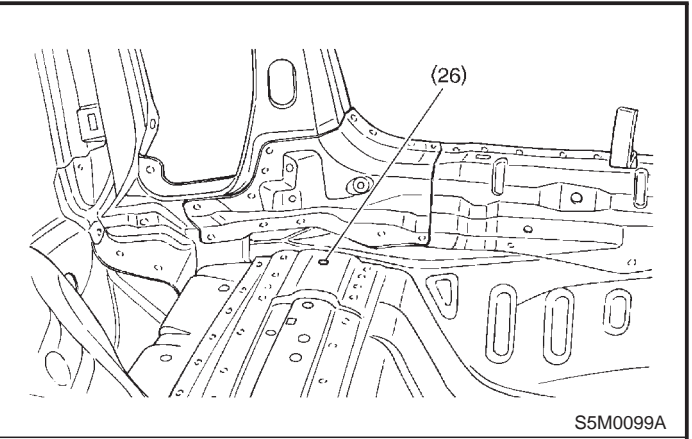




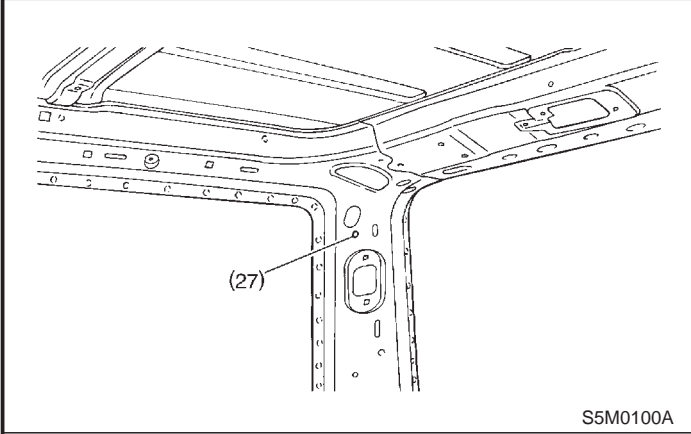




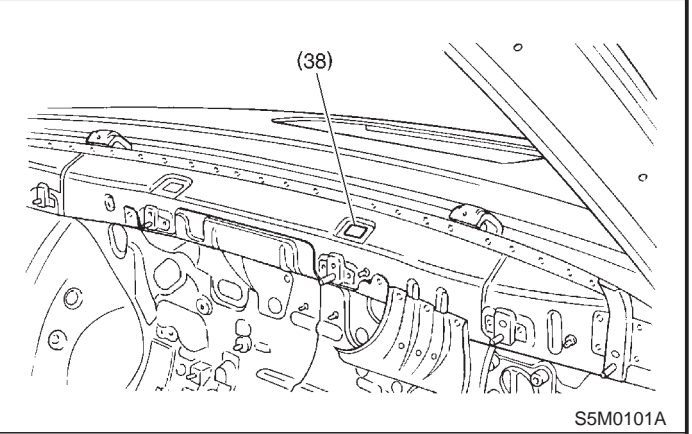
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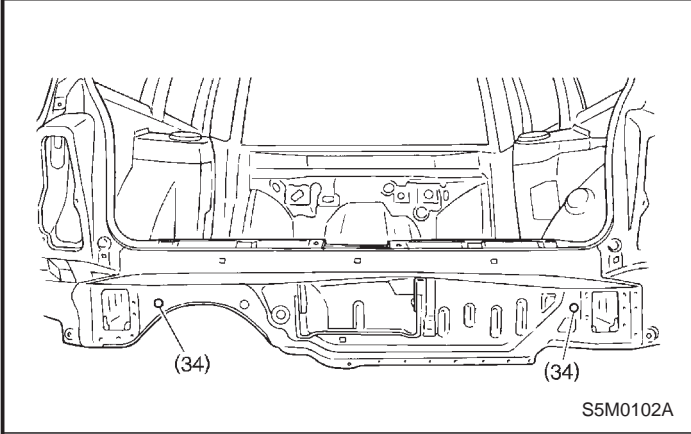
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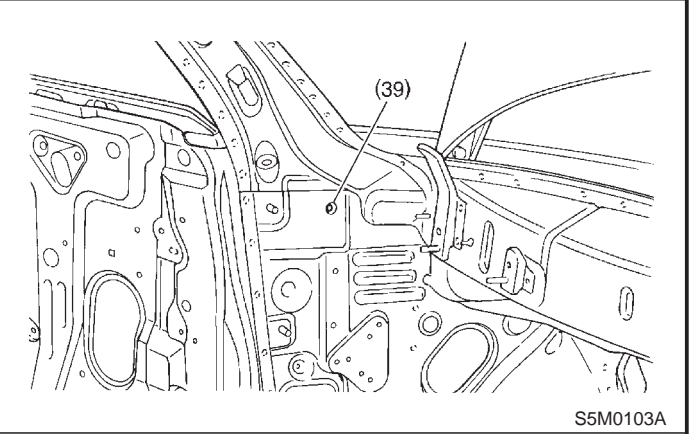
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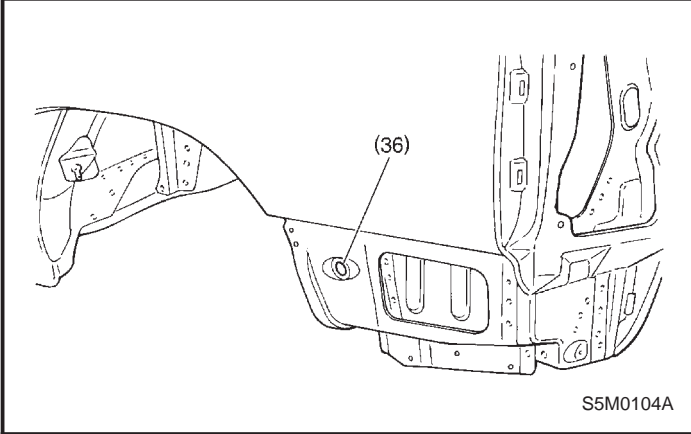
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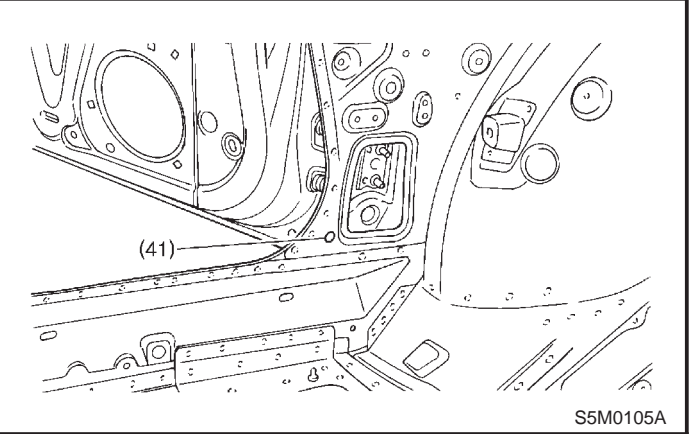
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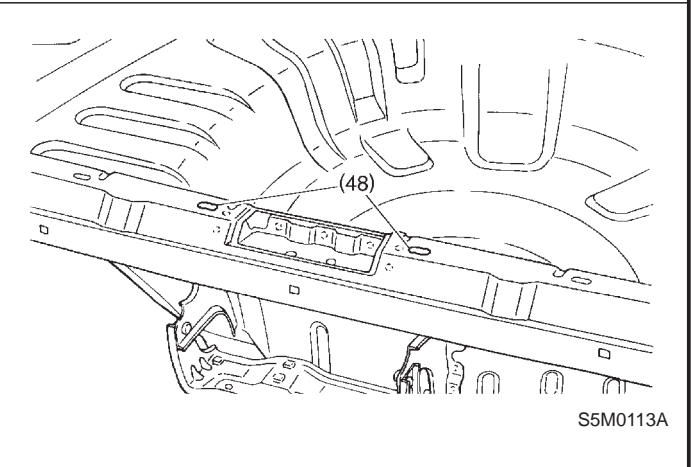
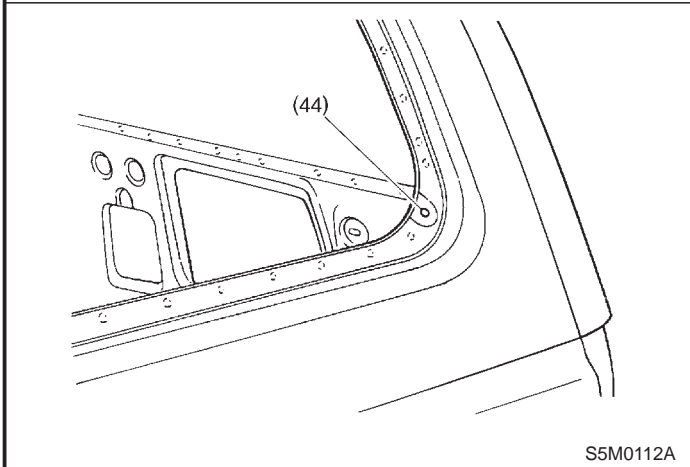
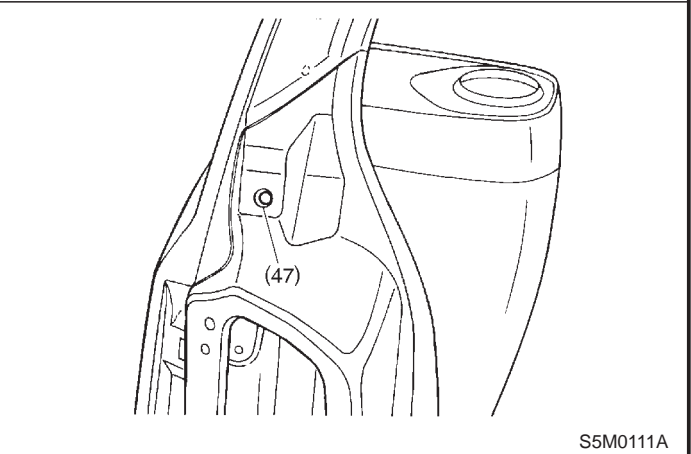
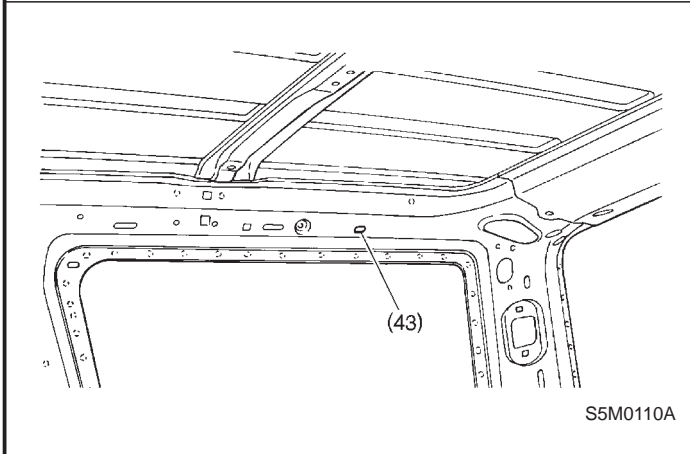
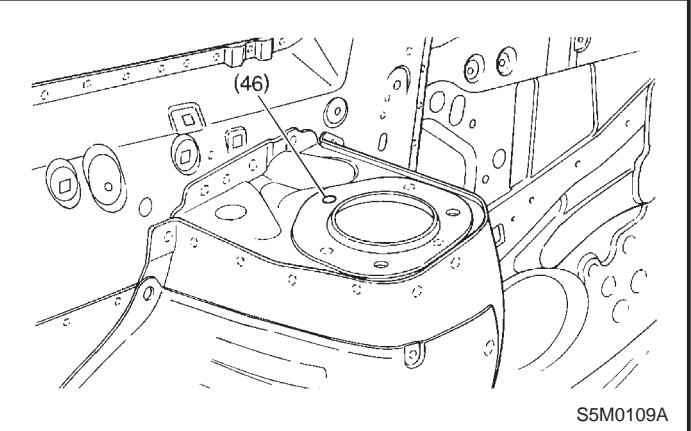
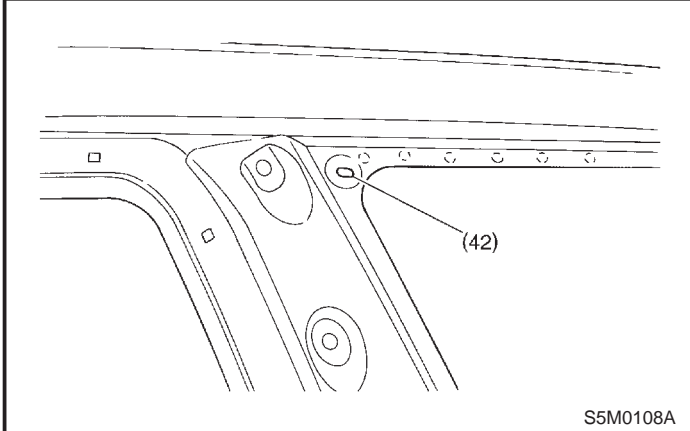
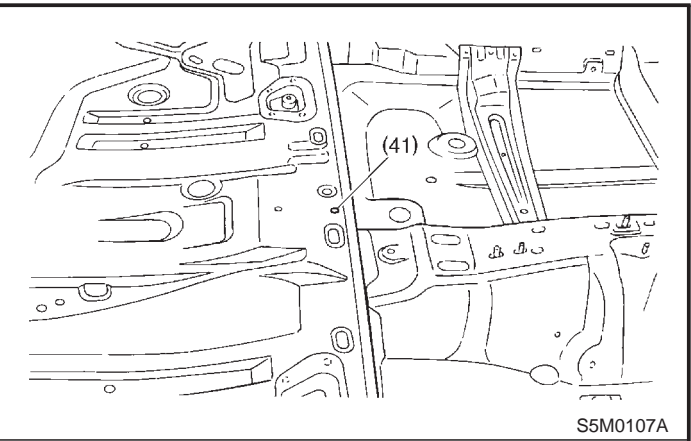
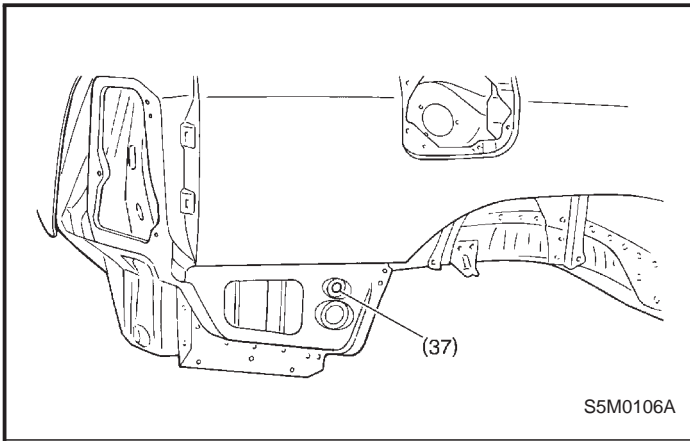
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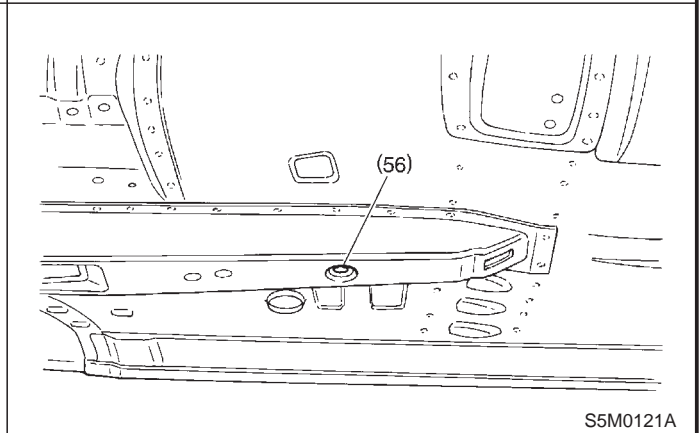
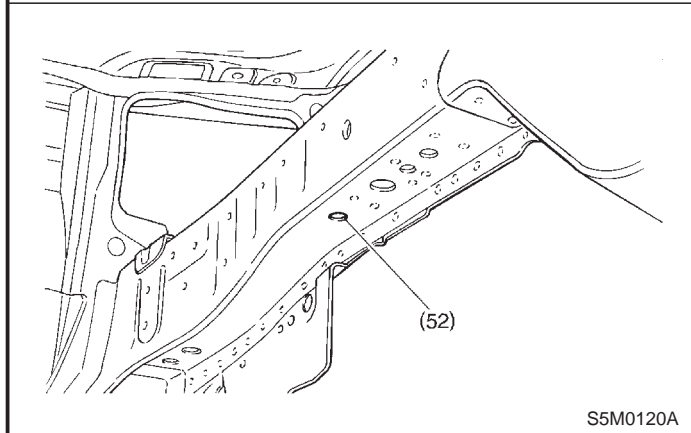
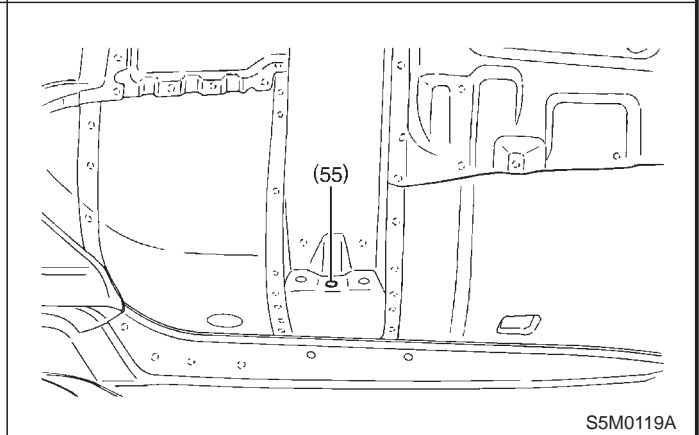
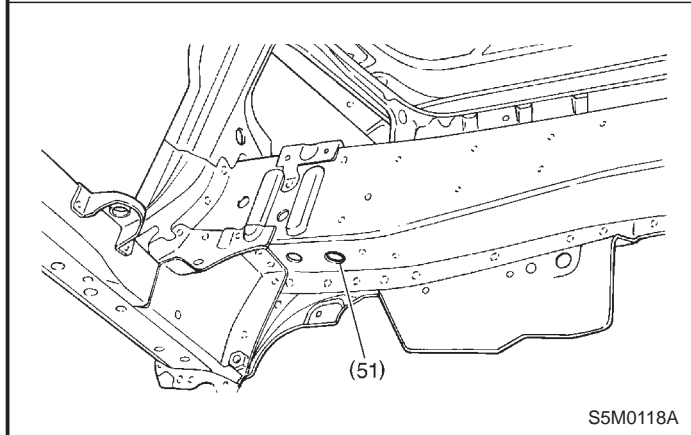
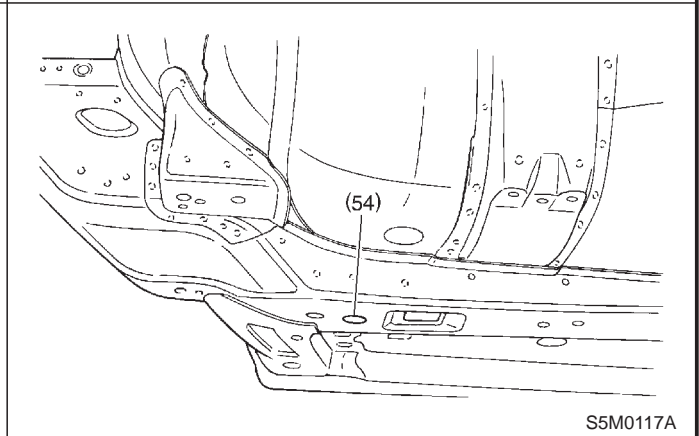
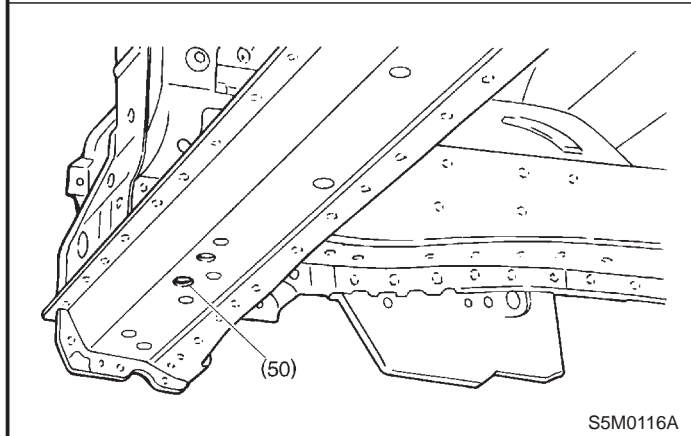
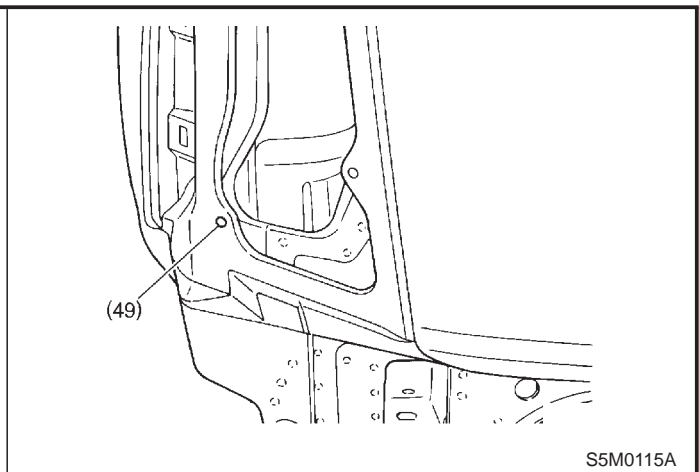
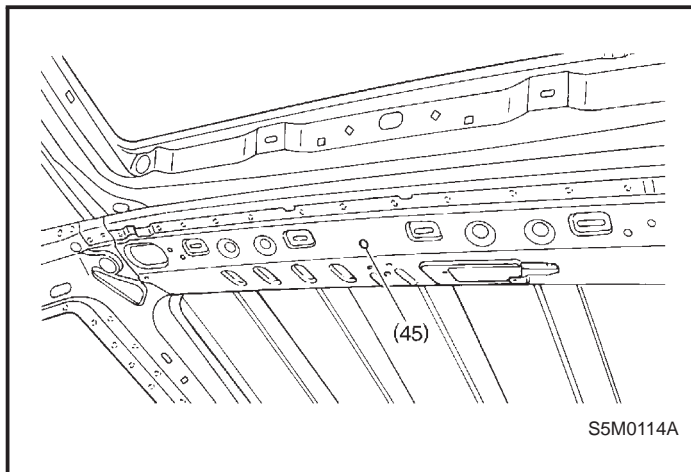


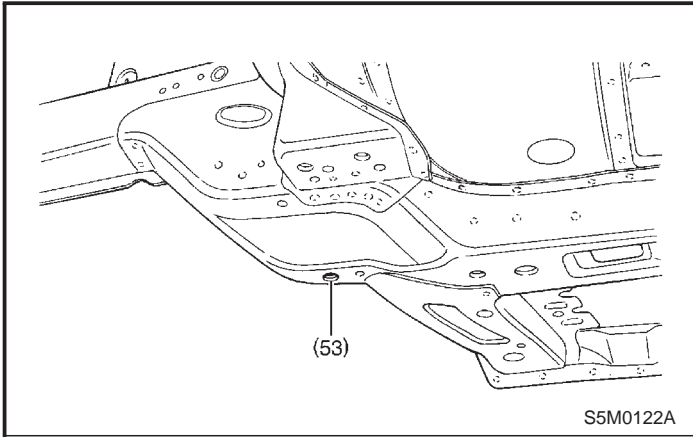
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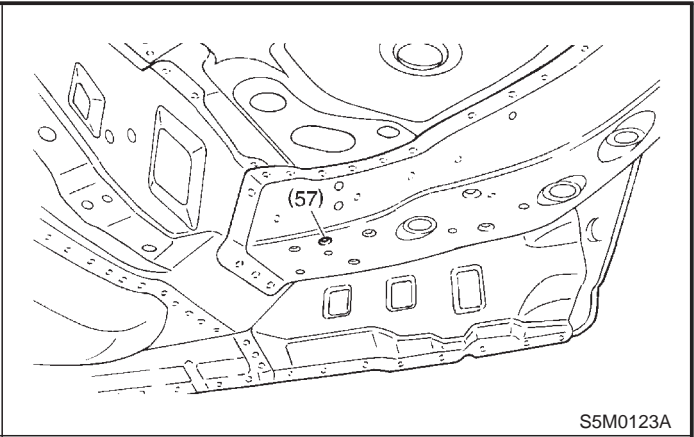
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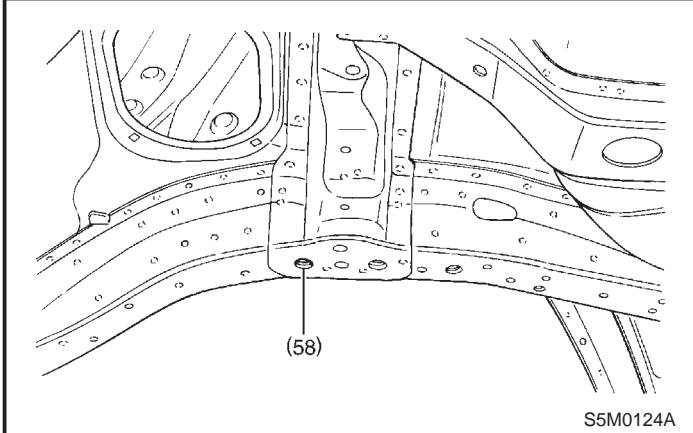




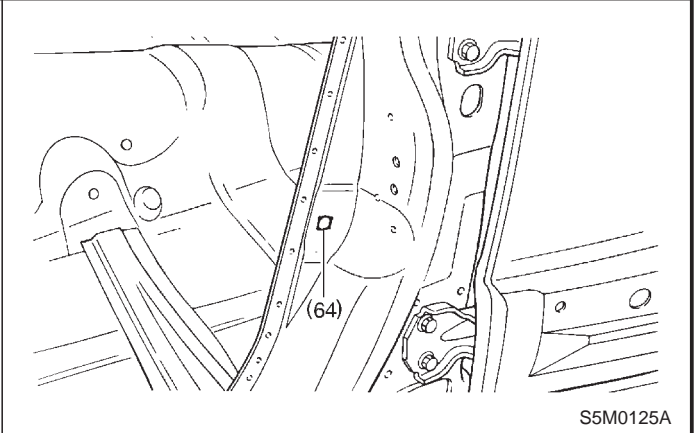
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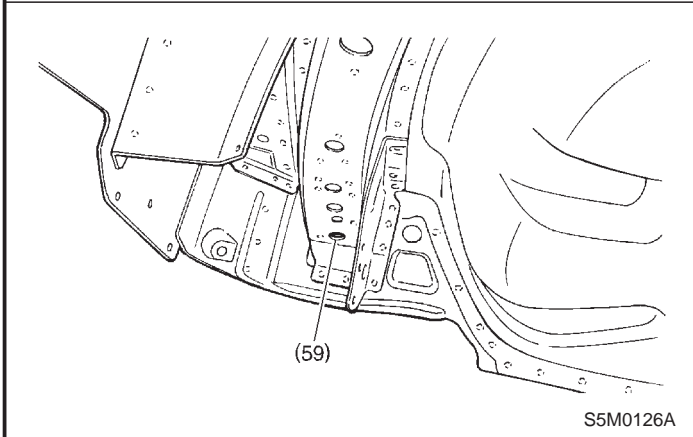
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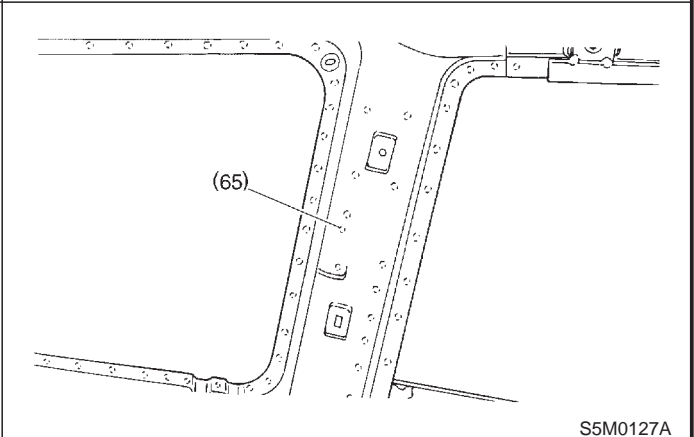
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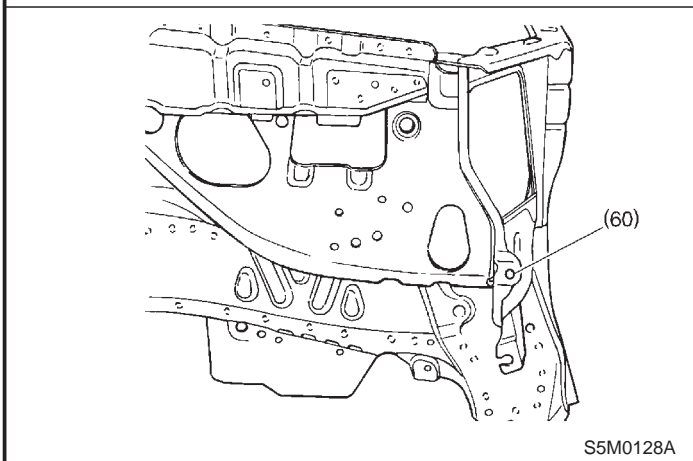
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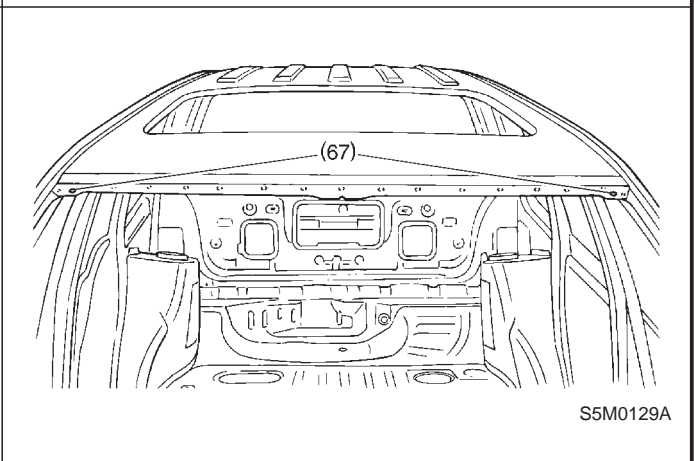
S5M0126A



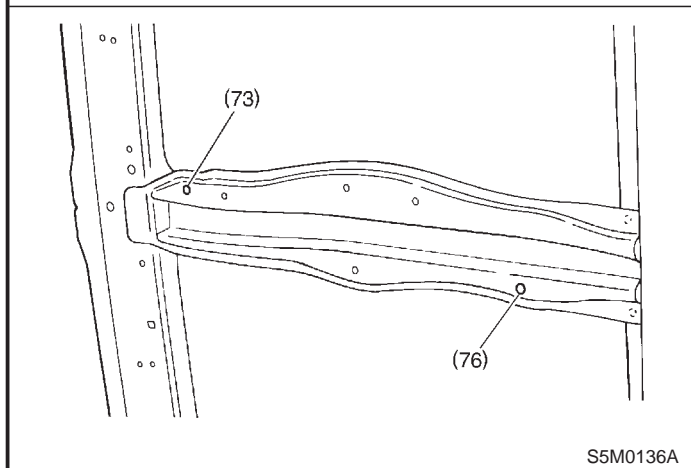
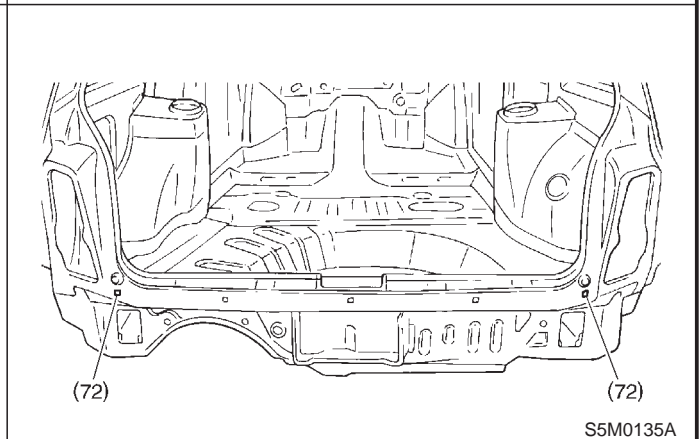
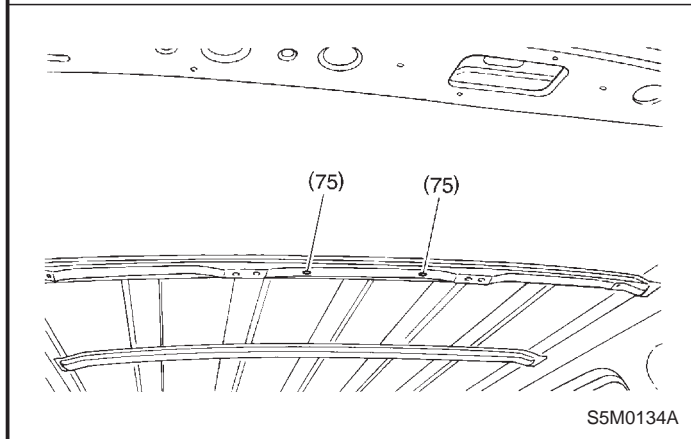
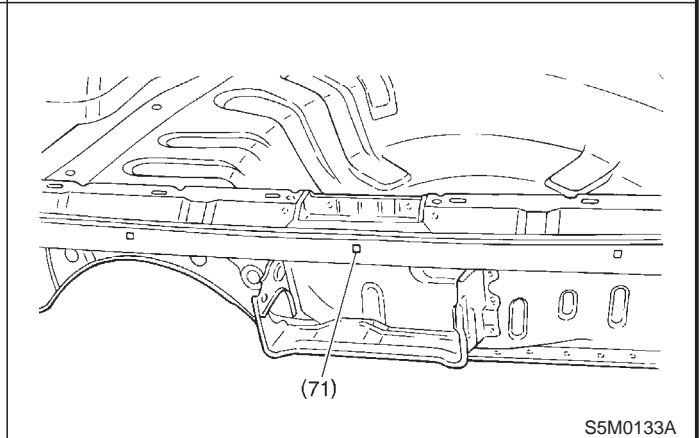
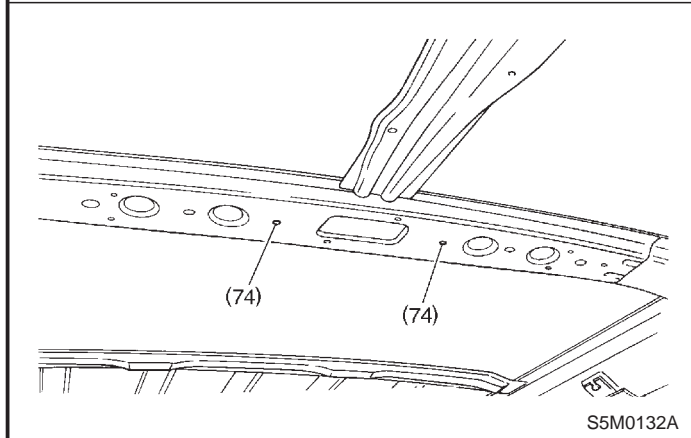
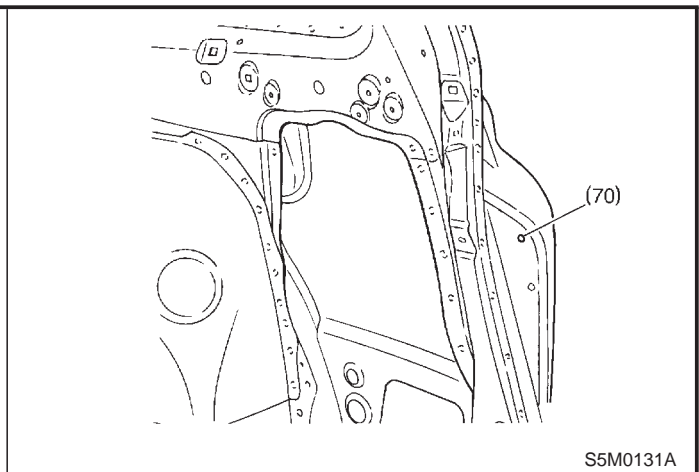
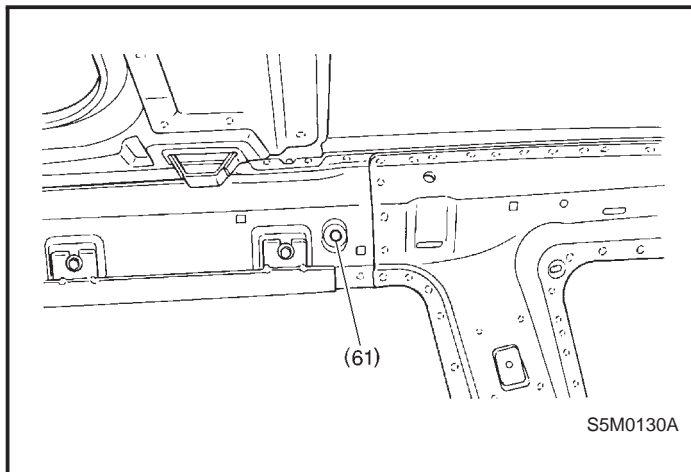
S5M0127A



S5M0128A



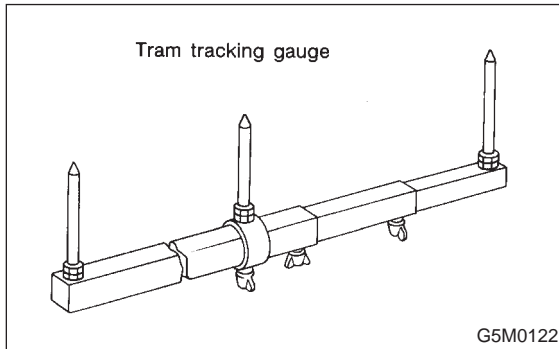
S5M0129A



MEMO:

3. Datum Dimensions

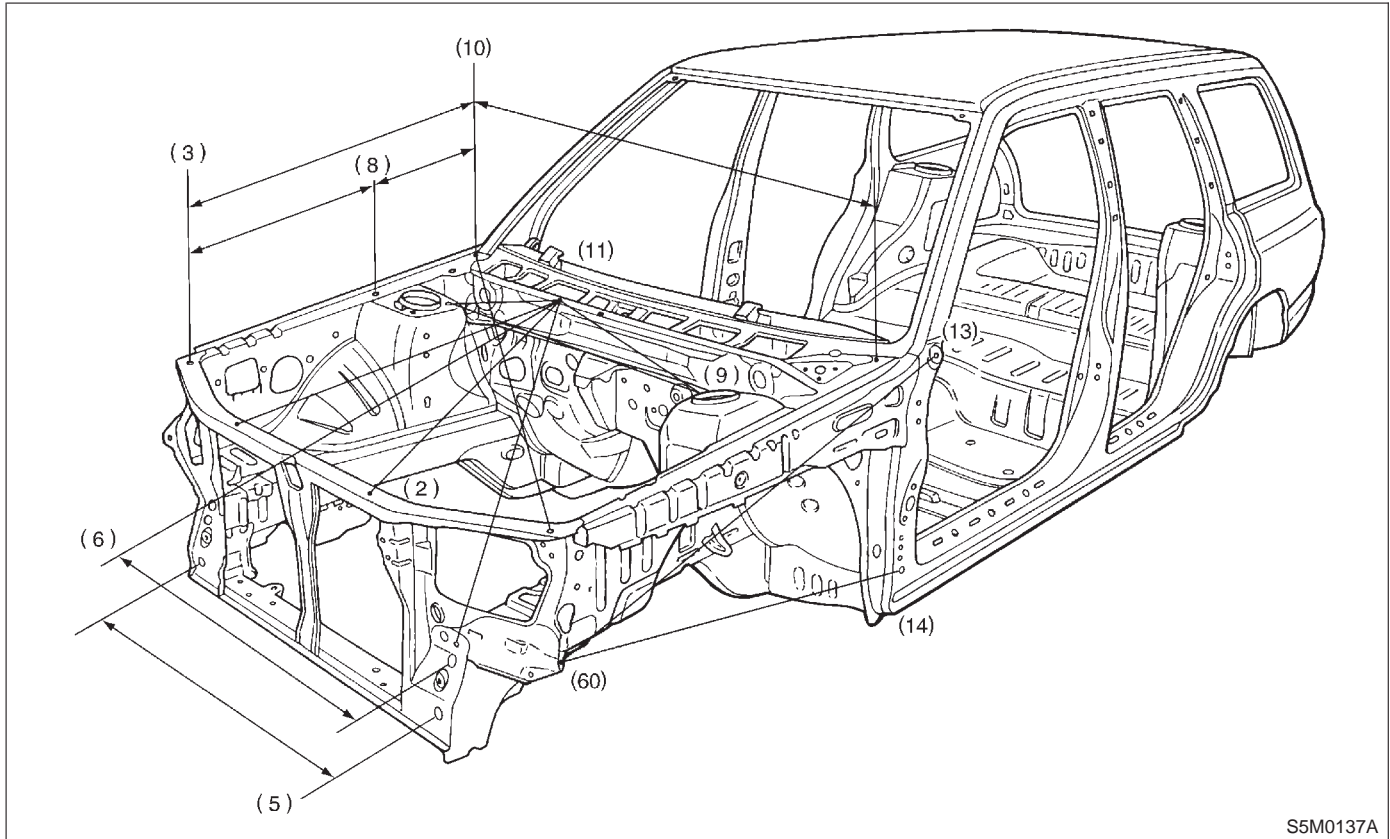
Use a tram tracking gauge to measure all dimensions. If a measuring tape is used, be extremely careful because it tends to deflect or twist, which results in a false reading.



NOTE:

- A suffix character "R" or "L" refers to the right or the left.
- All dimensions refer to the distance between the centers of holes measured in a straight line.
- Each dimension indicates a projected dimension between hole centers.

A: FRONT STRUCTURE

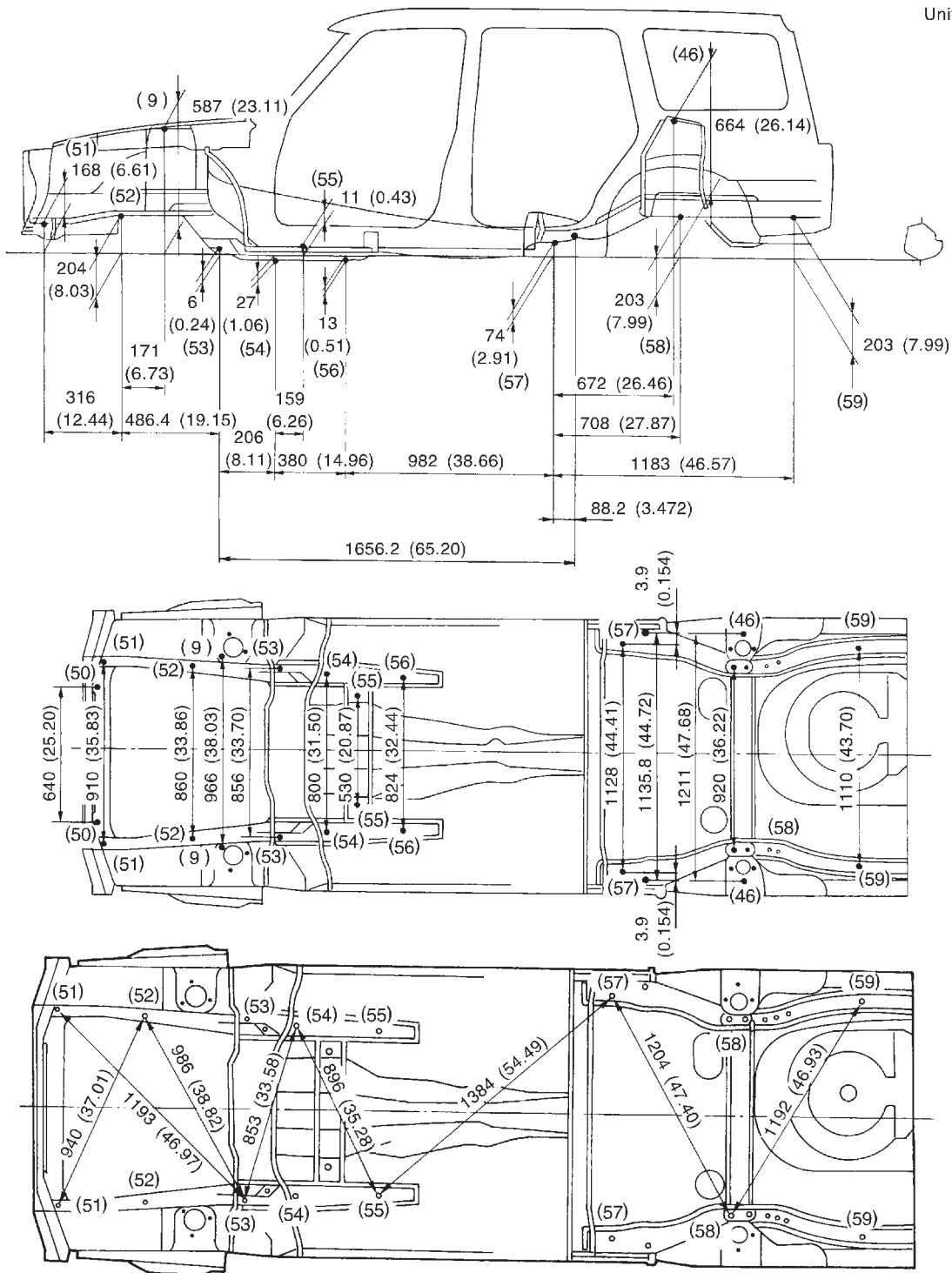


S5M0137A

| | | Unit: mm (in) | |
|------------------|---------------|-----------------|---------------|
| Point to point | Dimension | Point to point | Dimension |
| (11) R to (1) | 851 (33.50) | (10) R to (8) R | 388 (15.28) |
| (11) L to (1) | 912 (35.91) | (10) L to (8) L | 388 (15.28) |
| (11) R to (2) | 960 (37.80) | (11) L to (9) R | 658 (25.91) |
| (11) L to (2) | 864 (34.02) | (11) R to (9) L | 658 (25.91) |
| (11) R to (9) R | 391 (15.39) | (9) R to (9) L | 965 (37.99) |
| (11) L to (9) L | 391 (15.39) | (11) L to (6) R | 1,058 (41.65) |
| (11) R to (6) R | 924 (36.38) | (11) R to (6) L | 1,058 (41.65) |
| (11) L to (6) L | 924 (36.38) | (6) R to (6) L | 914 (35.98) |
| (11) R to (3) R | 891 (35.08) | (6) R to (10) L | 1,549 (60.98) |
| (11) L to (3) L | 891 (35.08) | (6) L to (10) R | 1,549 (60.98) |
| (10) R to (3) R | 915 (36.02) | (8) R to (3) R | 528 (20.79) |
| (10) L to (3) L | 915 (36.02) | (8) L to (3) L | 528 (20.79) |
| (10) R to (10) L | 1,374 (54.09) | (10) L to (3) R | 1,636 (64.41) |
| (3) R to (3) L | 1,338 (52.68) | (8) R to (8) L | 1,396 (54.96) |
| (5) R to (5) L | 924 (36.38) | (8) R to (10) L | 1,438 (56.61) |
| (4) R to (4) L | 1,296 (51.02) | (8) L to (10) R | 1,438 (56.61) |
| (5) R to (4) L | 1,167 (45.94) | (3) R to (8) L | 1,465 (57.68) |
| (5) L to (4) R | 1,167 (45.94) | (3) L to (8) R | 1,465 (57.68) |
| (60) R to (13) R | 1,174 (46.22) | (7) R to (7) L | 860 (33.86) |
| (60) L to (13) L | 1,174 (46.22) | (7) R to (6) L | 982 (38.66) |
| (60) R to (14) R | 1,076 (42.36) | (7) L to (6) R | 982 (38.66) |
| (60) L to (14) L | 1,076 (42.36) | (7) R to (10) L | 1,301 (51.22) |
| (10) R to (3) L | 1,636 (64.41) | (7) L to (10) R | 1,301 (51.22) |

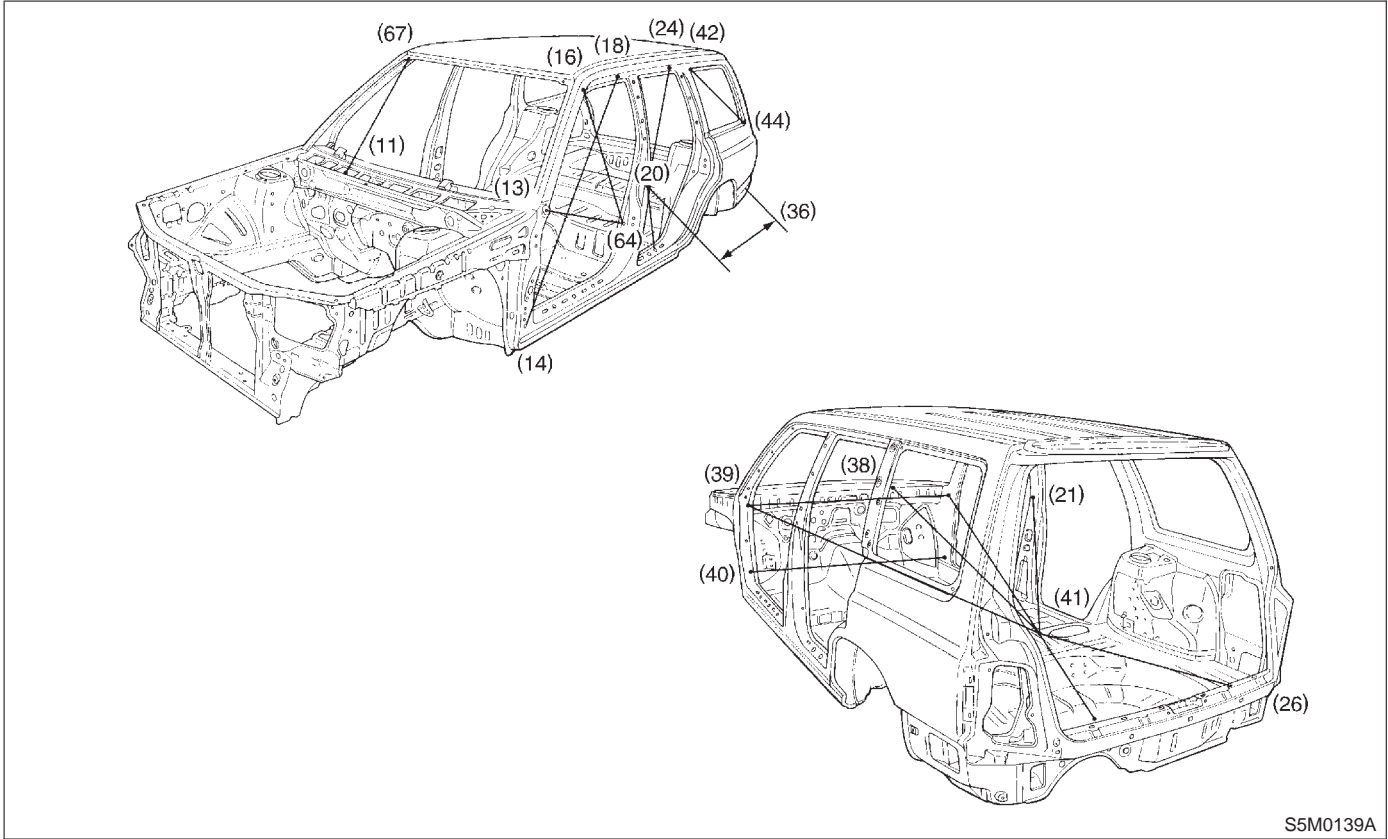
B: CENTER STRUCTURE

Unit: mm (in)



S5M0138A

C: DOORS AND PASSENGER COMPARTMENT



S5M0139A

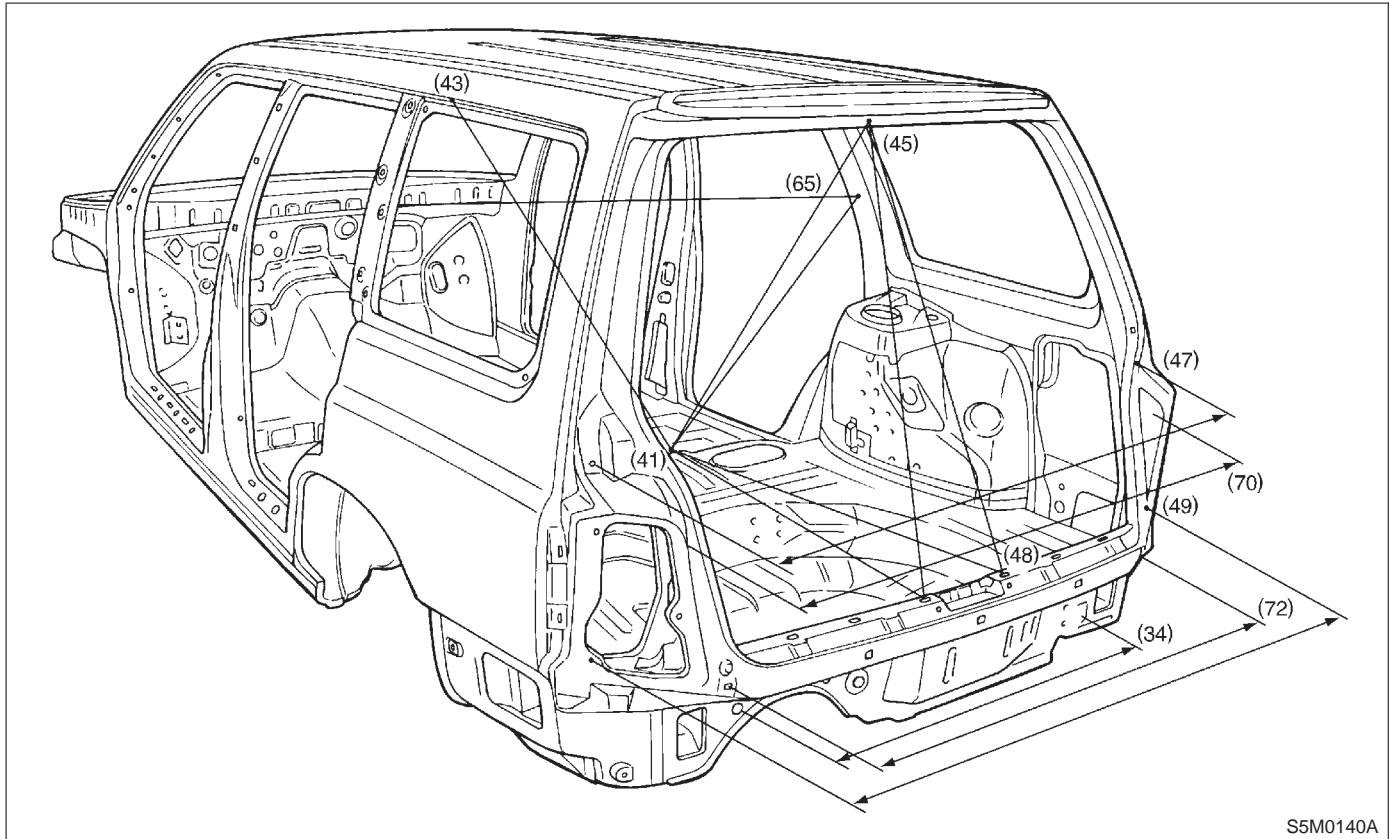
SPECIFICATIONS AND SERVICE DATA

[S3C0] **5-1**

3. Datum Dimensions

| | | Unit: mm (in) | |
|------------------|---------------|------------------|---------------|
| Point to point | Dimension | Point to point | Dimension |
| (14) L to (18) L | 1,454 (57.24) | (16) L to (64) L | 860 (33.86) |
| (14) R to (18) R | 1,454 (57.24) | (16) R to (64) R | 860 (33.86) |
| (13) L to (64) L | 944 (37.17) | (20) L to (23) L | 845 (33.27) |
| (13) R to (64) R | 944 (37.17) | (20) R to (23) R | 845 (33.27) |
| (20) L to (24) L | 660 (25.98) | (19) L to (23) L | 885 (34.84) |
| (20) R to (24) R | 660 (25.98) | (19) R to (23) R | 885 (34.84) |
| (20) L to (36) | 1,484 (58.43) | (11) L to (67) R | 1,170 (46.06) |
| (20) R to (37) | 1,487 (58.54) | (11) R to (67) L | 1,170 (46.06) |
| (42) L to (44) L | 769 (30.28) | (41) to (38) | 1,518 (59.76) |
| (42) R to (44) R | 769 (30.28) | (41) to (39) R | 1,581 (62.24) |
| (11) R to (12) | 920 (36.22) | (41) to (39) L | 1,581 (62.24) |
| (11) L to (12) | 920 (36.22) | (41) to (40) R | 1,499 (59.02) |
| (67) R to (67) L | 1,045 (41.14) | (41) to (40) L | 1,499 (59.02) |
| (11) R to (67) R | 1,040 (40.94) | (41) to (15) R | 1,186 (46.69) |
| (11) L to (67) L | 1,040 (49.94) | (41) to (15) L | 1,186 (46.69) |
| (12) to (67) L | 503 (19.80) | (41) to (22) R | 733 (28.86) |
| (12) to (67) R | 503 (19.80) | (41) to (22) L | 733 (28.86) |
| (12) to (10) L | 1,027 (40.43) | (41) to (26) R | 1,568 (61.73) |
| (12) to (10) R | 1,027 (40.43) | (41) to (26) L | 1,568 (61.73) |
| (21) R to (21) L | 1,322 (52.05) | (41) to (25) | 1,211 (47.68) |
| (15) R to (15) L | 1,452 (57.17) | (41) to (12) | 1,299 (51.14) |
| (22) R to (22) L | 1,452 (57.17) | (41) to (21) R | 962 (37.87) |
| (39) R to (39) L | 1,392 (54.80) | (41) to (21) L | 962 (37.87) |
| (40) R to (40) L | 1,402 (55.20) | (41) to (17) R | 1,333 (52.48) |
| (11) L to (17) R | 1,149 (45.24) | (41) to (17) L | 1,333 (52.48) |
| (11) R to (17) L | 1,149 (45.24) | | |

D: LUGGAGE COMPARTMENT



S5M0140A

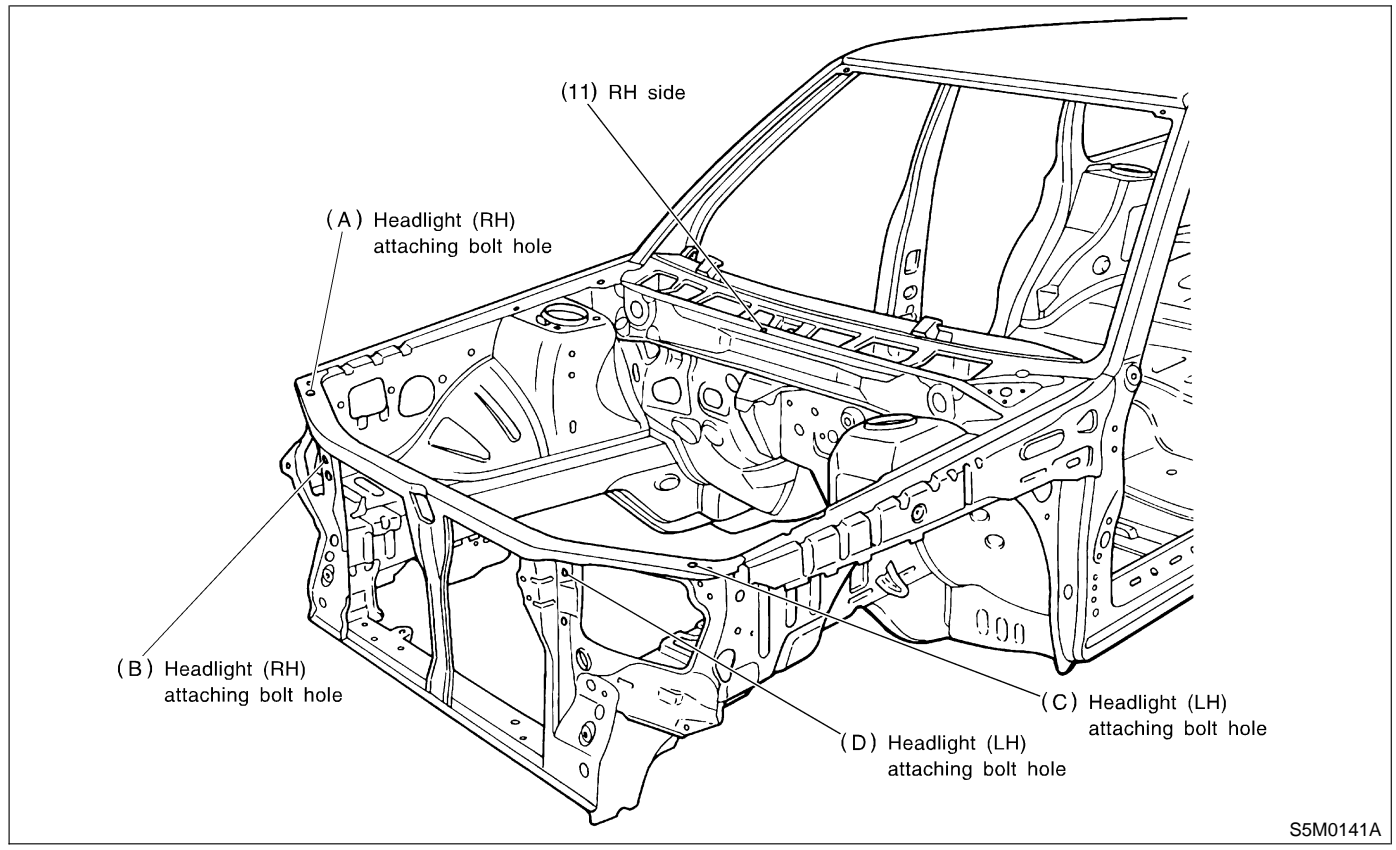
| | | Unit: mm (in) | |
|------------------|---------------|------------------|---------------|
| Point to point | Dimension | Point to point | Dimension |
| (45) to (48) L | 913 (35.94) | (41) to (65) R | 1,105 (43.50) |
| (45) to (48) R | 913 (35.94) | (41) to (65)L | 1,105 (43.50) |
| (45) to (47) L | 876 (34.49) | (41) to (45) | 1,570 (61.81) |
| (45) to (47) R | 876 (34.49) | (41) to (43) R | 1,436 (56.54) |
| (47) R to (47) L | 1,426 (56.14) | (41) to (43) L | 1,436 (56.54) |
| (49)R to (49) L | 1,478 (58.19) | (41) to (48) L | 1,576 (62.05) |
| (34) R to (34) L | 945 (37.20) | (41) to (48) R | 1,576 (62.05) |
| (48) R to (46) R | 992 (39.06) | (65) R to (65) L | 1,268 (49.92) |
| (48) L to (46) L | 992 (39.06) | (17) R to (76) | 627 (24.68) |
| (70) R to (70) L | 1,218 (47.95) | (17) L to (76) | 680 (26.77) |
| (61) R to (75) R | 448 (17.64) | (72) R to (72) L | 1,118 (44.02) |
| (61) L to (75) L | 448 (17.64) | (74) R to (75) R | 480 (18.90) |
| (17) R to (75) R | 705 (27.76) | (74) L to (75) L | 480 (18.90) |
| (17) L to (75) L | 705 (27.76) | (17) R to (73) | 518 (20.39) |
| (45) to (71) | 913 (35.94) | (17) L to (73) | 476 (18.74) |

4. Datum Points and Dimensions Concerning On-Board Aiming Adjustment

If headlight aiming is misaligned due to a damaged body panel, repair headlight mating surface using body and headlight datum points as a guide.

NOTE:

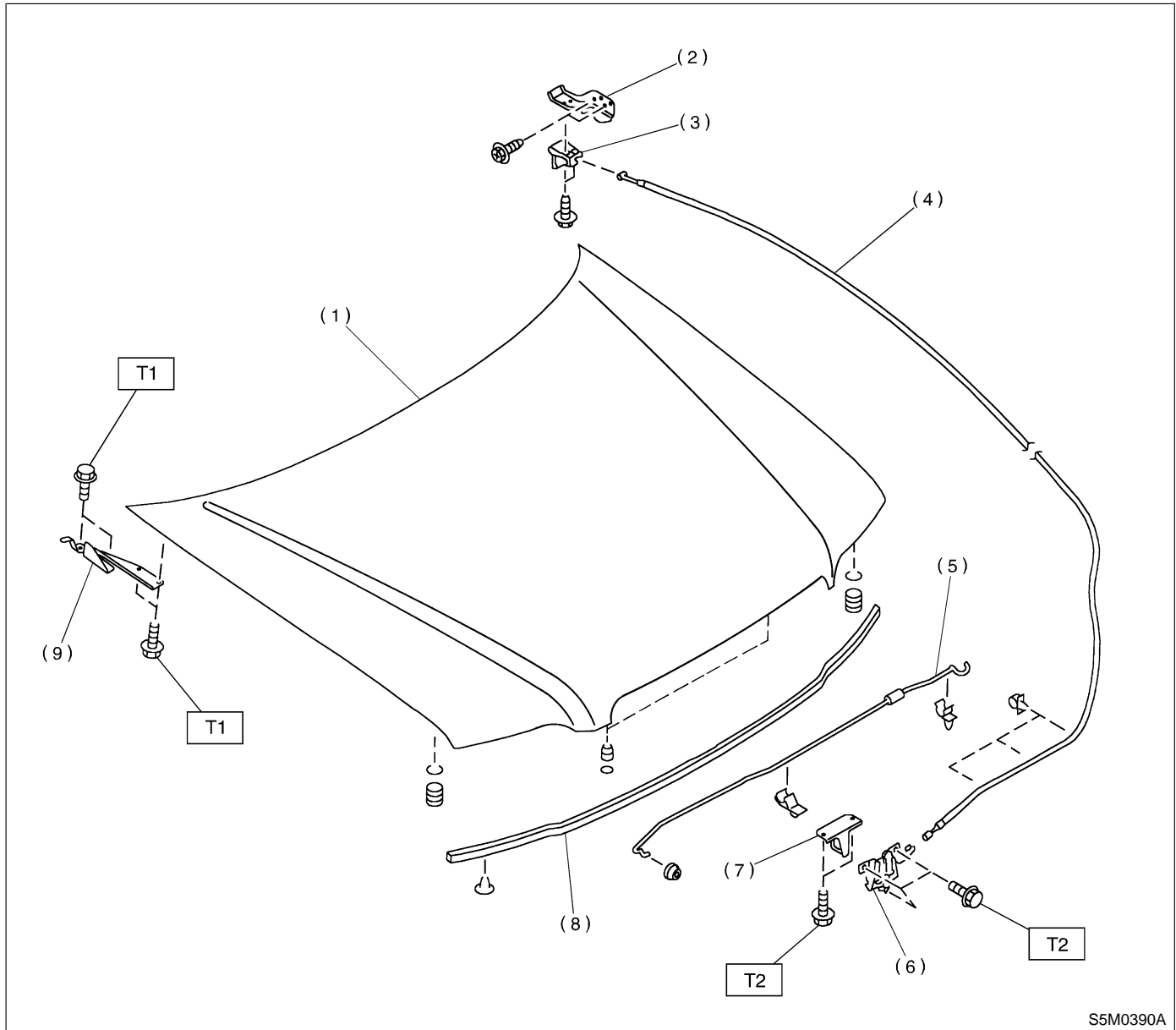
It is recommended to conduct on-board aiming adjustment with headlights turned OFF. If turned ON during the adjustment, the duration should be within two minutes.



S5M0141A

| | | Unit: mm (in) | |
|----------------|---------------|----------------|-----------------|
| Point to point | Dimension | Point to point | Dimension |
| (11) to (A) | 890.6 (35.06) | (11) to (C) | 1,087.7 (42.82) |
| (11) to (B) | 913.4 (35.96) | (11) to (D) | 1,023.7 (40.30) |

1. Front Hood and Hood Lock



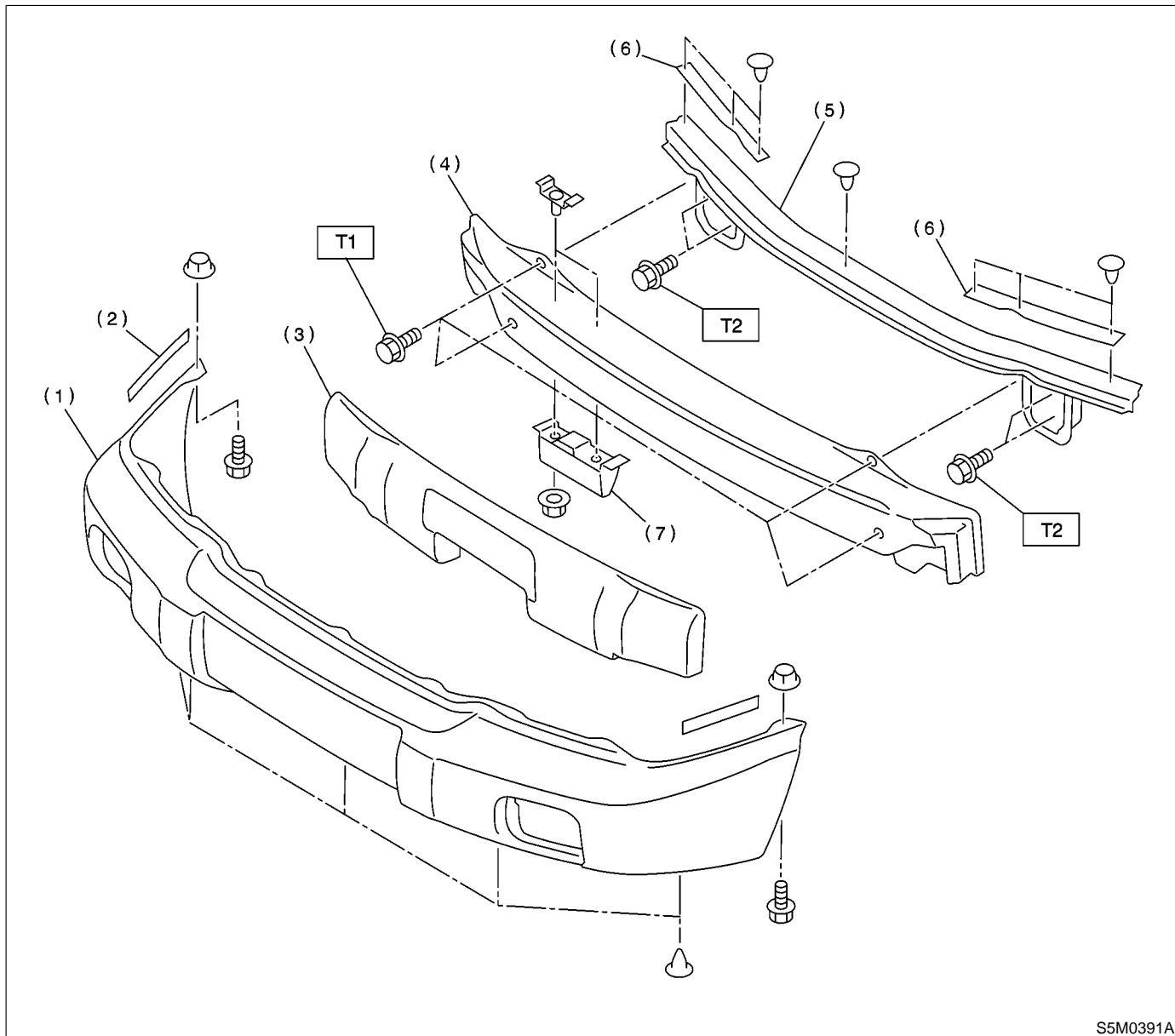
- (1) Front hood
- (2) Opener bracket
- (3) Lever ASSY
- (4) Cable
- (5) Front hood stay
- (6) Hood lock ASSY
- (7) Striker
- (8) Seal (Front hood)
- (9) Hinge (RH, LH)

Tightening torque: N-m (kg-m, ft-lb)

T1: 14±5 (1.4±0.5, 10.1±3.6)

T2: 33±10 (3.3±1.0, 23.9±7)

2. Front Bumper



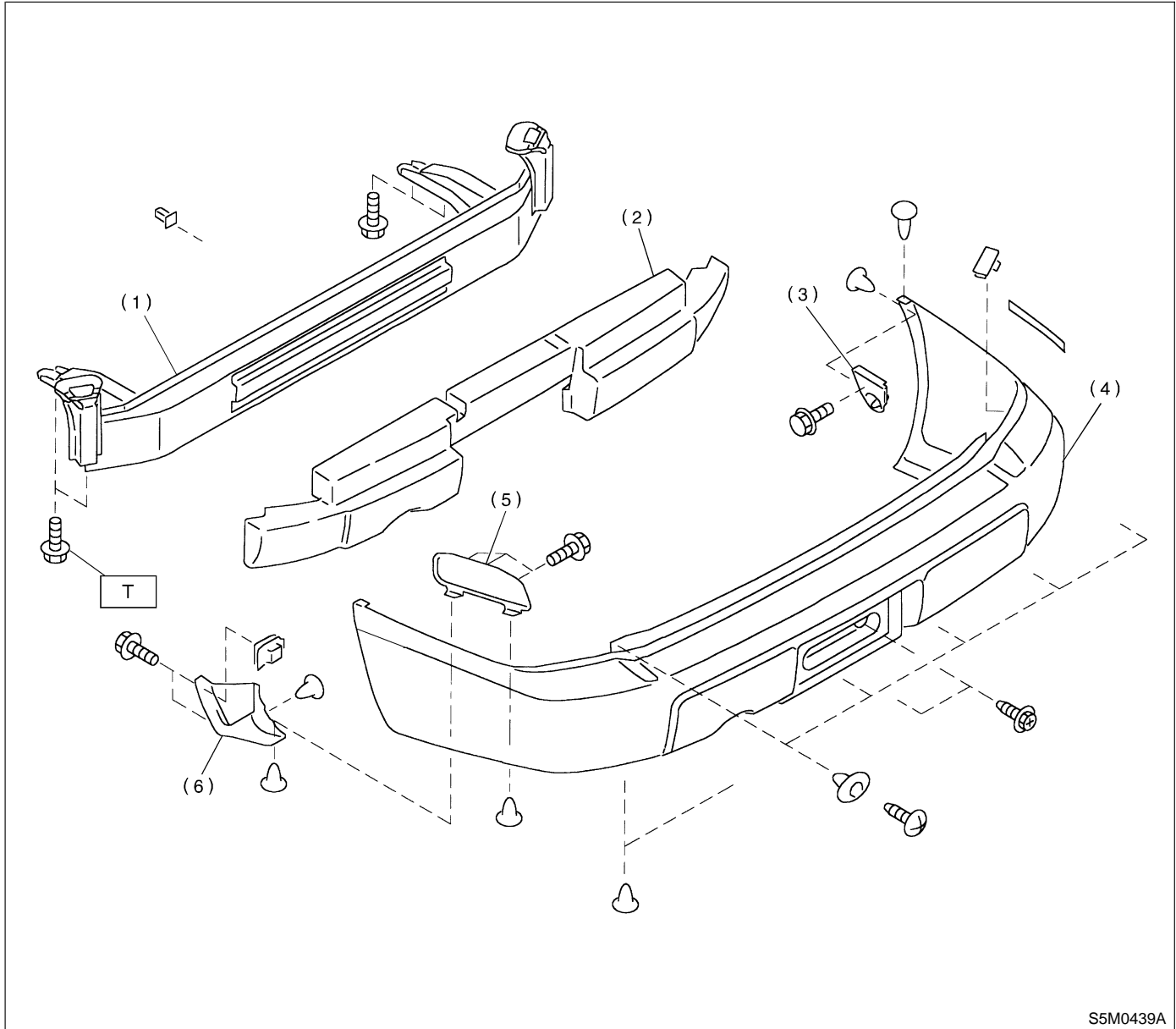
- | | |
|--|---|
| (1) Bumper face | (5) Beam upper |
| (2) Spacer | (6) Plate |
| (3) E/A foam (Front airbag equipped vehicle) | (7) Bracket (Front airbag equipped vehicle) |
| (4) Back beam | |

Tightening torque: N·m (kg·m, ft·lb)

T1: 33±1 (3.4±0.1, 24.6±0.7)

T2: 70±1 (7.1±0.1, 51.4±0.7)

3. Rear Bumper

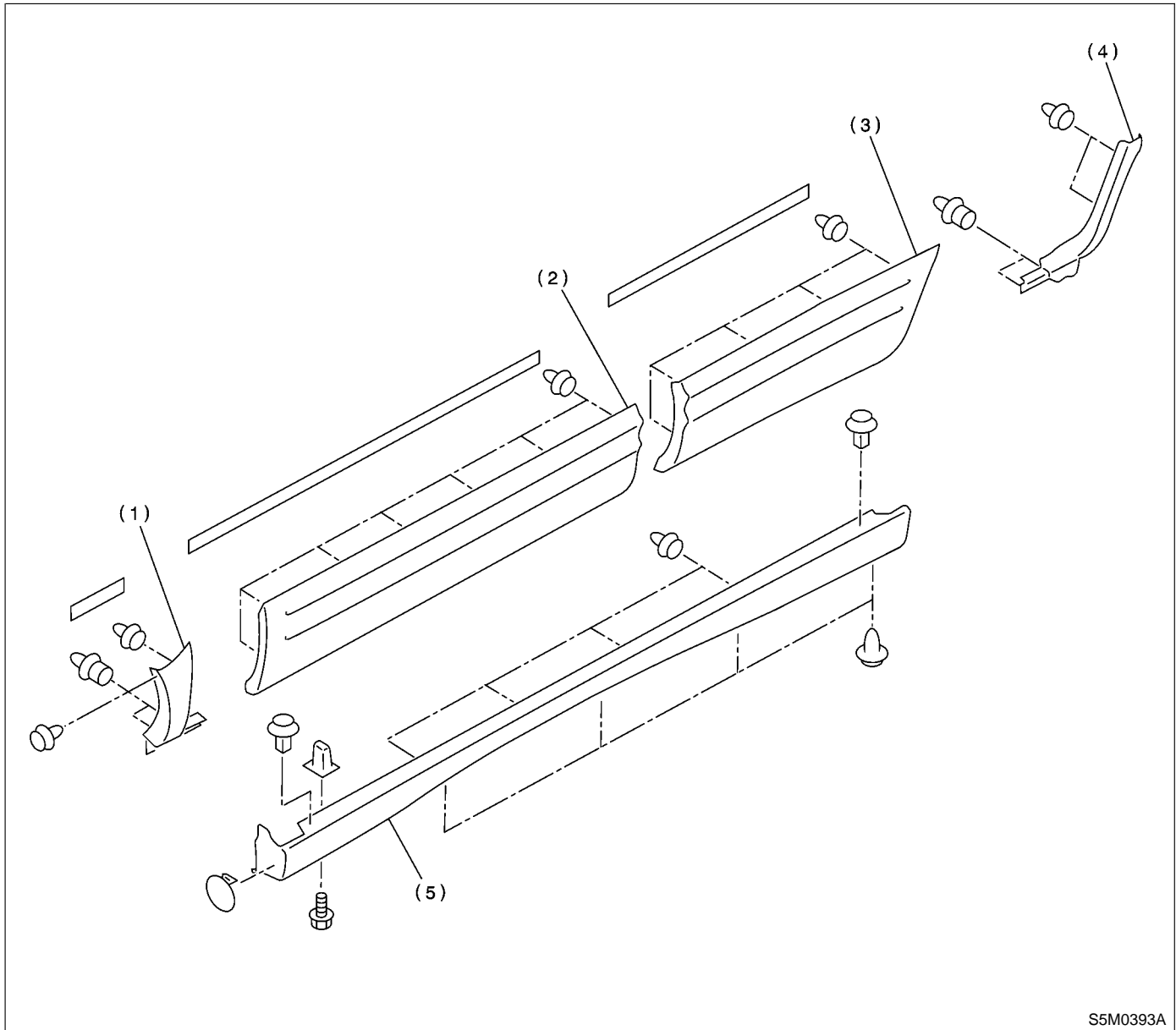


S5M0439A

- (1) Bumper beam
- (2) E/A foam
- (3) Side upper bracket
- (4) Bumper face
- (5) Bumper side plate
- (6) Rear arch cover

Tightening torque: N-m (kg-m, ft-lb)
T: 93±25 (9.5±2.5, 69±18)

4. Side Protector



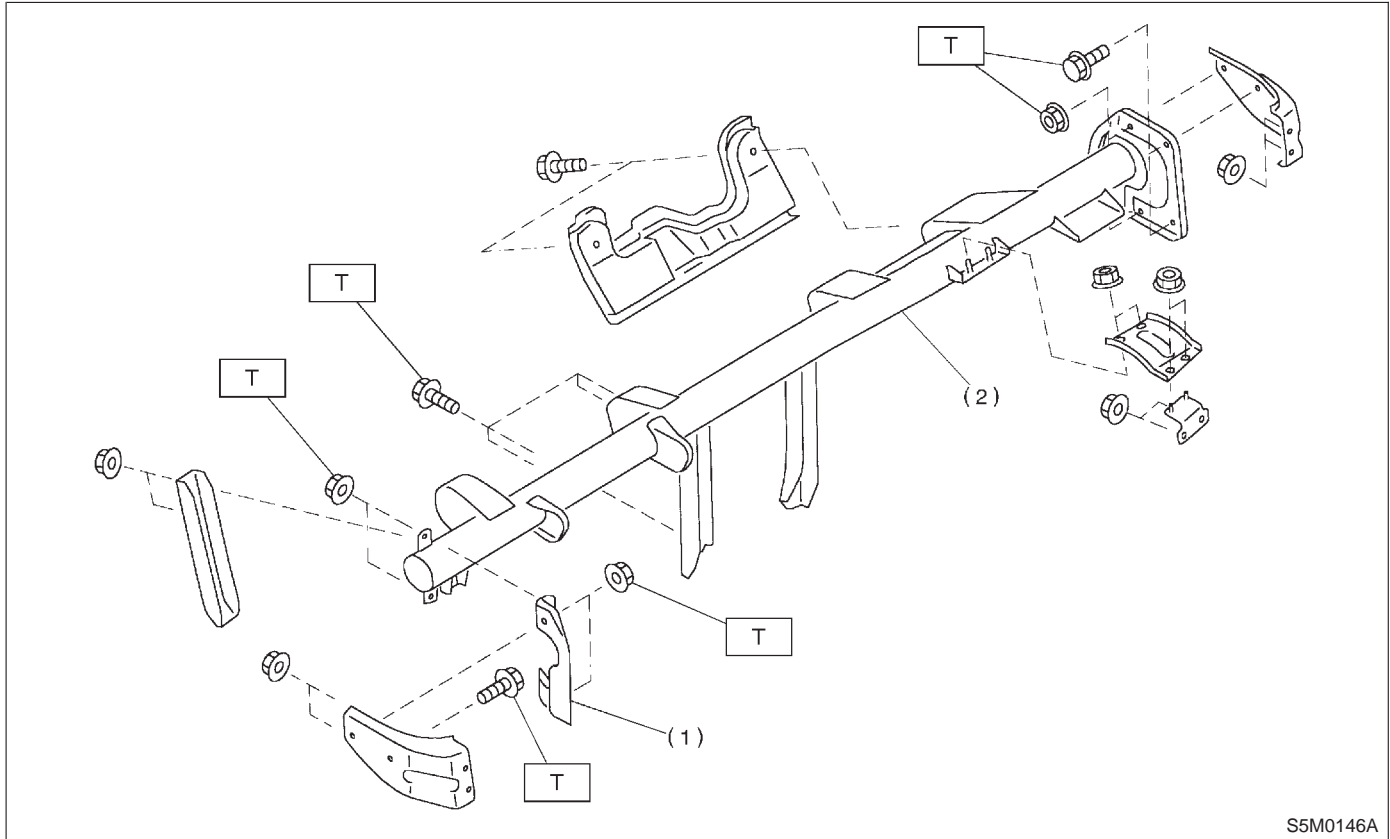
S5M0393A

(1) Side protector (Front fender)
(2) Side protector (Front door)

(3) Side protector (Rear door)
(4) Side protector (Rear quarter)

(5) Side protector (Side sill)

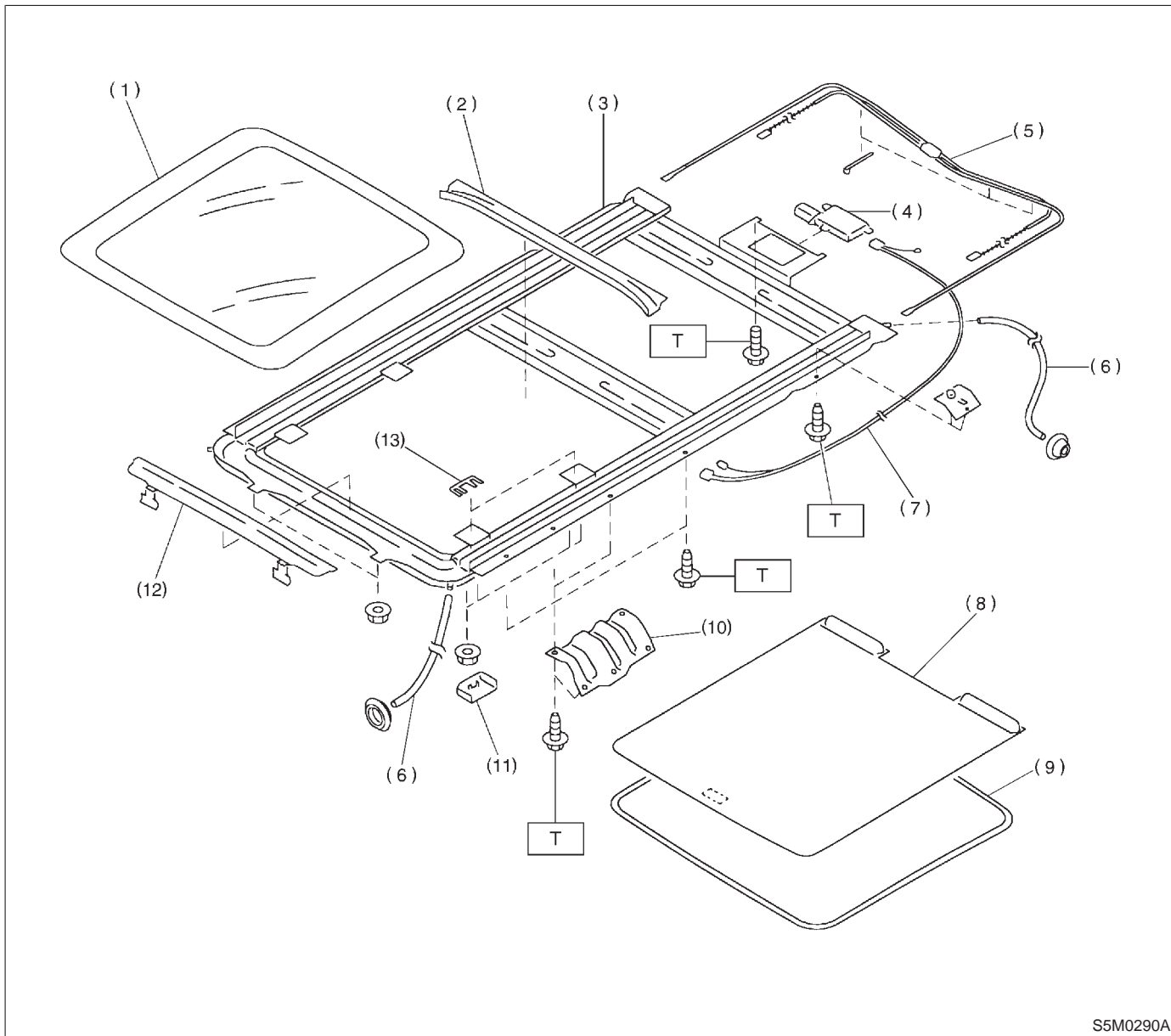
5. Steering Support Beam



- (1) Bracket
- (2) Steering beam

Tightening torque: N·m (kg·m, ft·lb)
T: 25±7 (2.5±0.7, 18.1±5.1)

6. Sunroof



S5M0290A

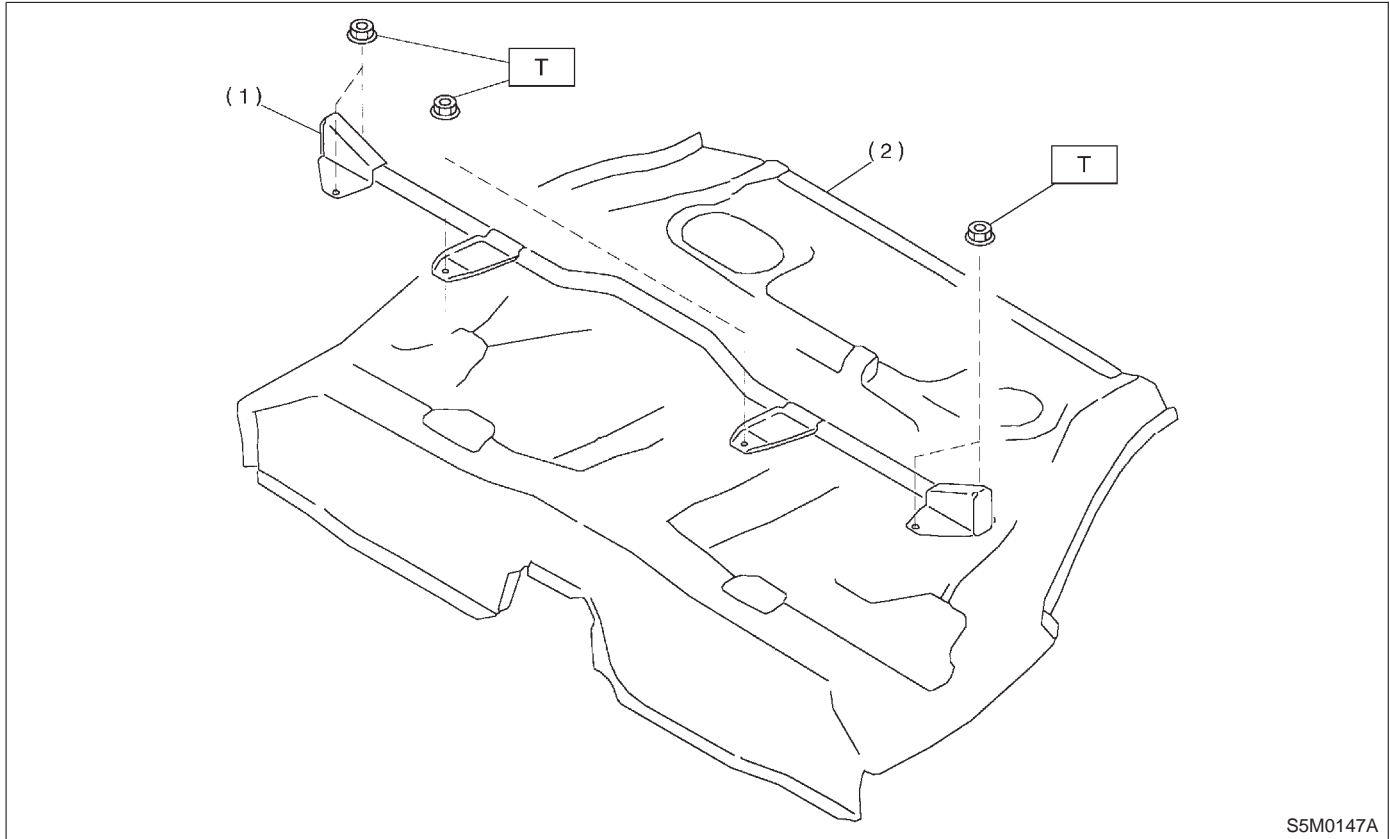
- (1) Glass lid
- (2) Rear drain ASSY
- (3) Frame ASSY
- (4) Motor ASSY
- (5) Drive unit
- (6) Drain tube

- (7) Harness
- (8) Sunshade
- (9) Garnish
- (10) Frame bracket
- (11) Cover
- (12) Deflector

- (13) Shim

Tightening torque: N·m (kg·m, ft·lb)
T: 7.4±2.0 (0.75±0.2, 5.4±1.4)

7. Guard Pipe



S5M0147A

- (1) Guard pipe
- (2) Rear floor panel

Tightening torque: N·m (kg·m, ft·lb)
T: 32±10 (3.3±1.0, 23.9±7.2)

1. Hood

A: REMOVAL AND INSTALLATION

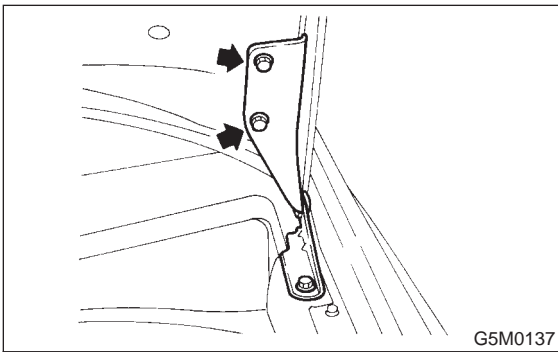
NOTE:

The hood lock has a dual locking design which consists of a main lock and a safety lock mechanism. When the release knob located at the front pillar on the driver's side is pulled back, the main lock is released through the cable attached to the knob.

The safety lock can be released by pushing the lever protruding above the front grill while opening the hood.

1. HOOD

- 1) Open front hood, and remove washer hose.
- 2) Remove attaching bolts.



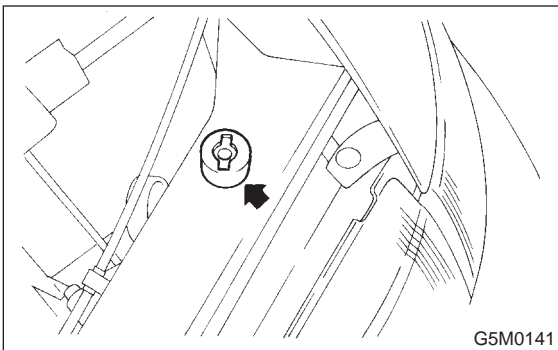
- 3) Detach front hood from hinges.
- 4) Install in the reverse order of removal.

CAUTION:

Adjust buffer assembly on each end so that main lock is applied securely when hood is released from a height of approx. 20 mm (0.79 in).

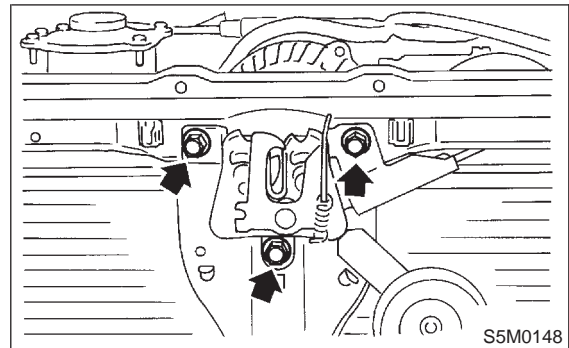
NOTE:

Align the center of striker with lock during installation. Make sure safety lever is properly caught by the striker under the hood's own weight.



2. HOOD LOCK

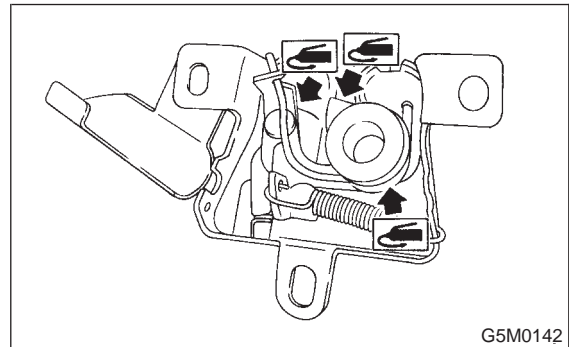
- 1) Open front hood and remove front grille. <Ref. to 5-1 [W12A0].>
- 2) Remove bolts which secure lock assembly to radiator panel, and remove lock assembly.



- 3) Disconnect release cable from lock assembly.
- 4) Install in the reverse order of removal.

NOTE:

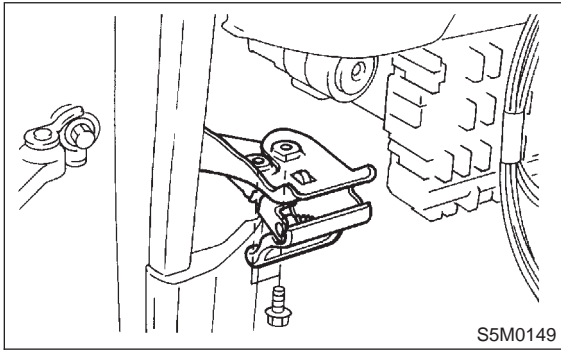
- Route hood lock release cable and hold with clips.
- After installing release cable, ensure that it operates smoothly.
- Apply grease to sliding surfaces of parts.



1. Hood

3. RELEASE CABLE

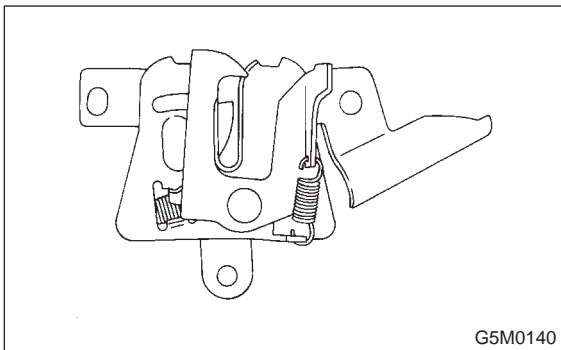
- 1) Remove front grille. <Ref. to 5-1 [W12A0].>
- 2) Remove release cable from lock assembly. <Ref. to 5-1 [W1A2].>
- 3) Remove cable clip from engine compartment.
- 4) While disengaging cable from opener lever, remove opener lever from front pillar.



- 5) Remove release cable.
- 6) Install in the reverse order of removal.

B: POINTS TO CHECK

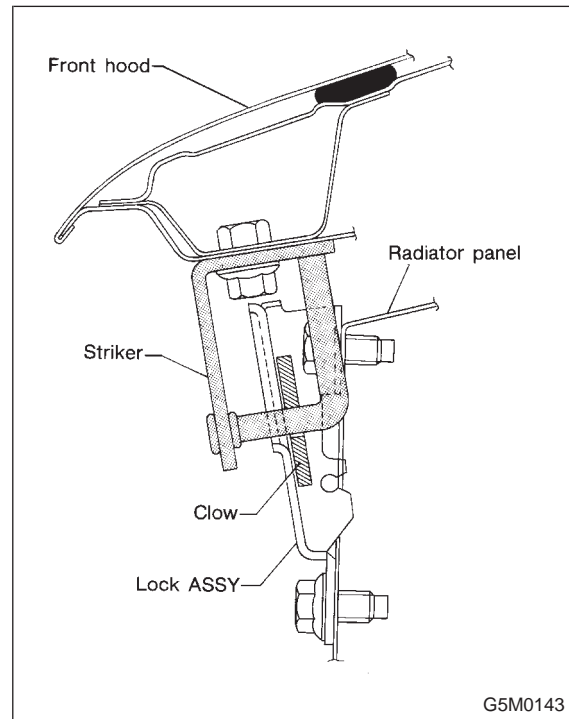
- 1) Check striker for bending or abnormal wear.
- 2) Check safety lever for improper movement.
- 3) Check other levers and spring for rust formation and rough movement.

**C: ADJUSTMENT**

- 1) Fore-aft and left-right adjustments
Loosen striker mounting bolts and adjust fore-and-aft position of striker.

CAUTION:

Do not adjust striker position using the lock. Doing so may result in a misaligned front grille.



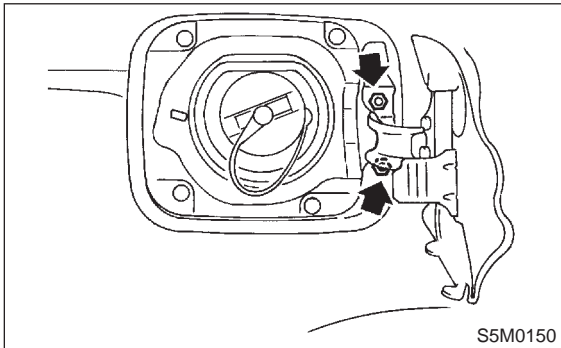
- 2) Up-down adjustment
Make up-and-down adjustment of striker only when hood does not properly contact buffer or hood is not flush with fender, or when release cable does not properly operate. Adjustment can be made by adjusting the stroke length of the striker after lock assembly mounting screws are removed.

2. Fuel Flap

A: REMOVAL AND INSTALLATION

1. FUEL FLAP

- 1) Remove bolts which hold hinge to vehicle body, and detach fuel flap and hinge as a unit.



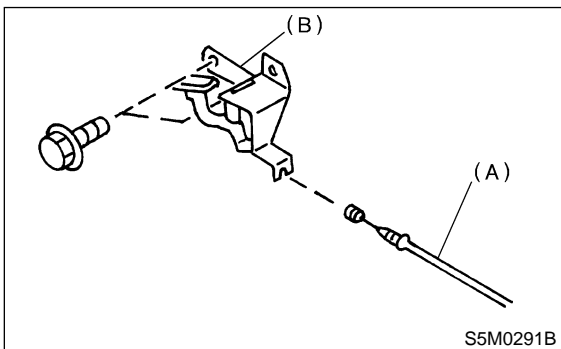
- 2) Install in the reverse order of removal.

CAUTION:

Make sure the clearance between the fuel flap and vehicle body is equal at all points.

2. FUEL FLAP OPENER

- 1) Remove driver's seat and rear seat cushion.
- 2) Turn over the floor mat (driver's side).
- 3) Remove all clips which hold cable.
- 4) Disconnect cable (A) from pull handle (B).
- 5) Detach pull handle by removing bolts.



- 6) Detach fuel lock holder by turning it.
- 7) Install in the reverse order of removal.

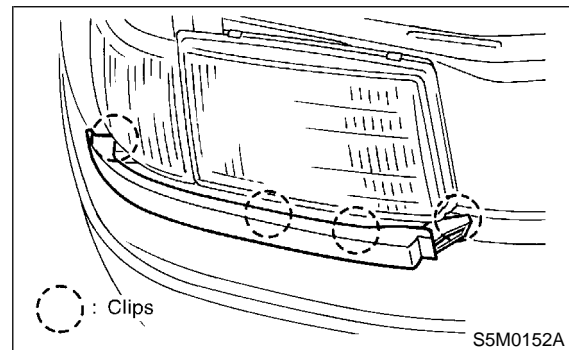
CAUTION:

After installing opener cable, ensure it moves smoothly.

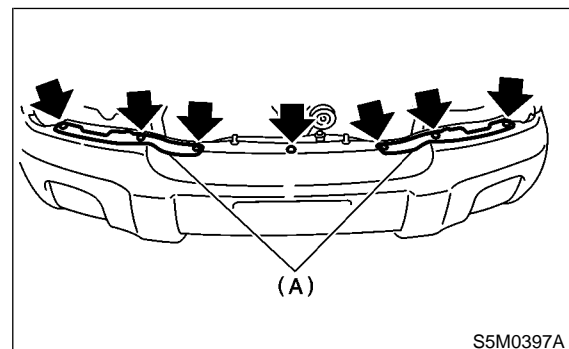
3. Front Bumper

A: REMOVAL AND INSTALLATION

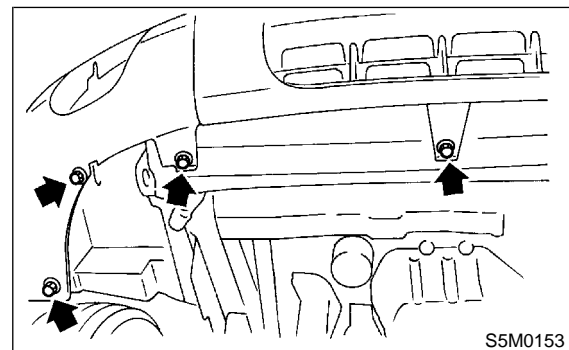
- 1) Disconnect the ground cable from the battery.
- 2) Remove front fog light. <Ref. to 6-2 [W13A0].>
- 3) Remove the front grille. <Ref. to 5-1 [W12A0].>
- 4) Remove the extension of both sides.



- 5) Remove the seven clips and then detach plate (A).



- 6) Remove under cover. <Ref. to 5-1 [W13A0].>
- 7) Remove the seven clips from under side of bumper.

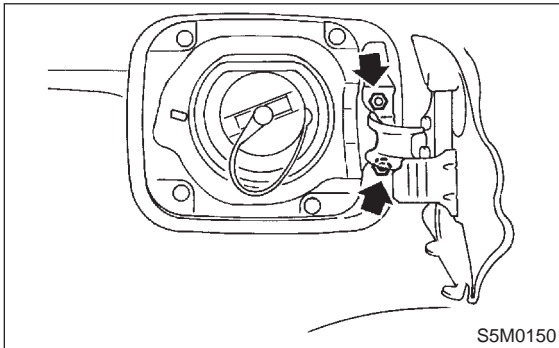


2. Fuel Flap

A: REMOVAL AND INSTALLATION

1. FUEL FLAP

- 1) Remove bolts which hold hinge to vehicle body, and detach fuel flap and hinge as a unit.



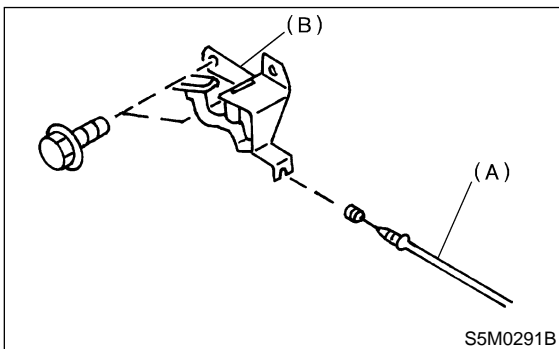
- 2) Install in the reverse order of removal.

CAUTION:

Make sure the clearance between the fuel flap and vehicle body is equal at all points.

2. FUEL FLAP OPENER

- 1) Remove driver's seat and rear seat cushion.
- 2) Turn over the floor mat (driver's side).
- 3) Remove all clips which hold cable.
- 4) Disconnect cable (A) from pull handle (B).
- 5) Detach pull handle by removing bolts.



- 6) Detach fuel lock holder by turning it.
- 7) Install in the reverse order of removal.

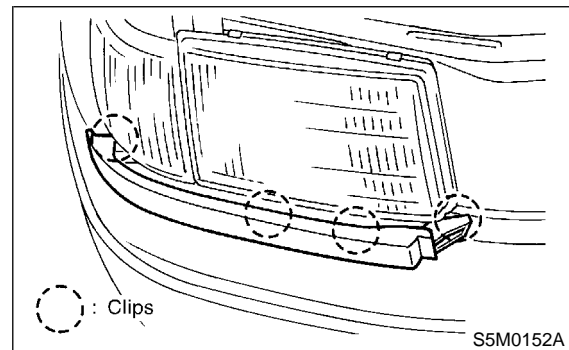
CAUTION:

After installing opener cable, ensure it moves smoothly.

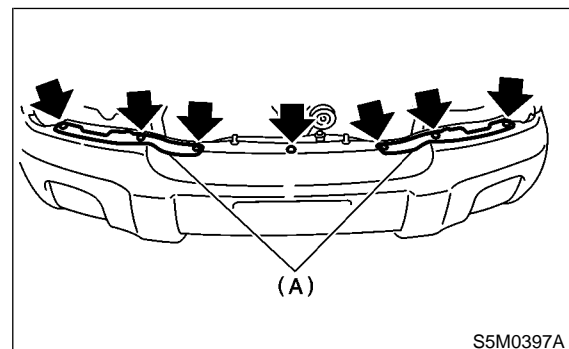
3. Front Bumper

A: REMOVAL AND INSTALLATION

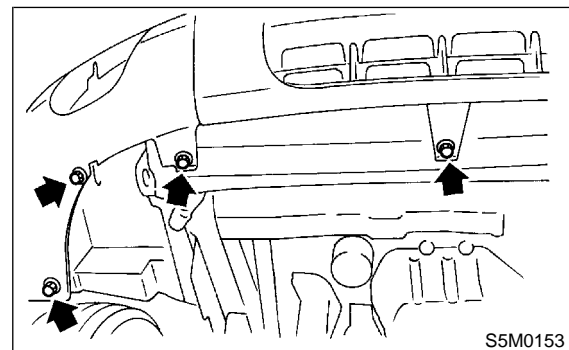
- 1) Disconnect the ground cable from the battery.
- 2) Remove front fog light. <Ref. to 6-2 [W13A0].>
- 3) Remove the front grille. <Ref. to 5-1 [W12A0].>
- 4) Remove the extension of both sides.



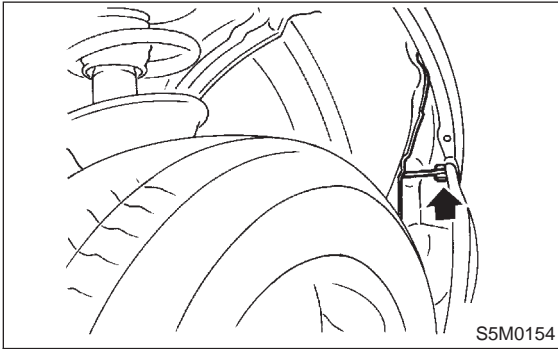
- 5) Remove the seven clips and then detach plate (A).



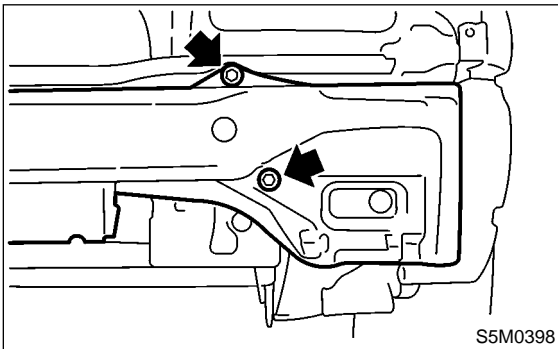
- 6) Remove under cover. <Ref. to 5-1 [W13A0].>
- 7) Remove the seven clips from under side of bumper.



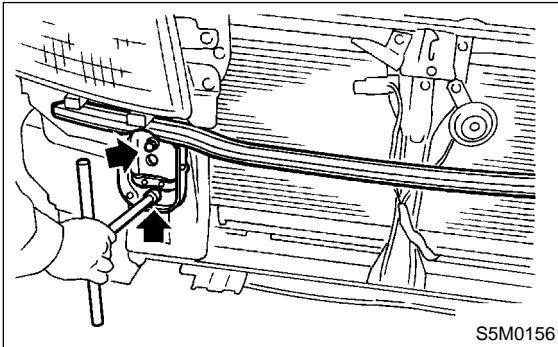
- 8) Turn over the front mud guard of the front portion and then remove bolt.



- 9) Remove bumper face and E/A foam.
10) Remove the four bolts and then detach the back beam.



- 11) Remove the four bolts and then detach the beam upper.



- 12) Install in the reverse order of removal.

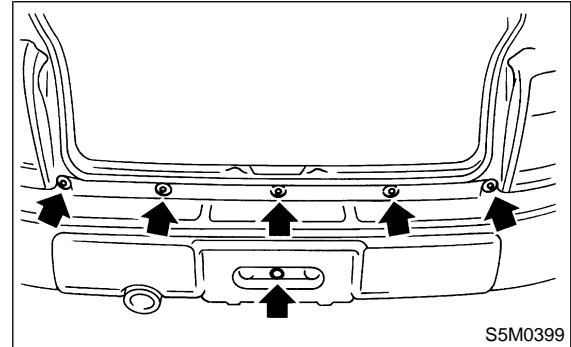
CAUTION:

- Be extremely careful to prevent scratches on bumper face as it is made of resin.
- Be careful not to scratch the body when removing or installing the bumper.

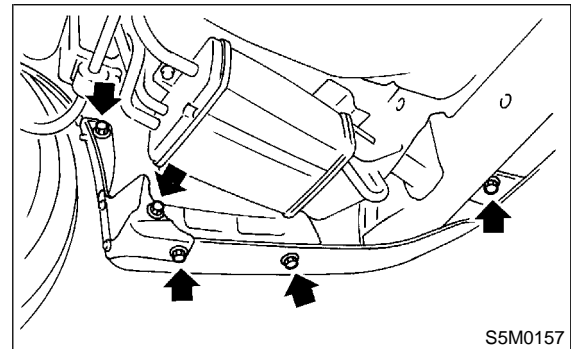
4. Rear Bumper

A: REMOVAL AND INSTALLATION

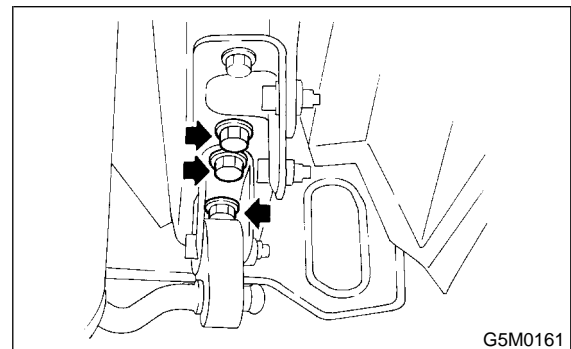
- 1) Disconnect the ground cable from the battery.
- 2) Open rear gate.
- 3) Remove the five screws and the clip from the rear bumper.



- 4) Disconnect license plate light connector.
- 5) Remove bolts and clips from under side of bumper.



- 6) Remove bumper face and E/A foam.
- 7) Remove canister. <Ref. to 2-1 [W3A0].>
- 8) Remove bolts from bumper stay.

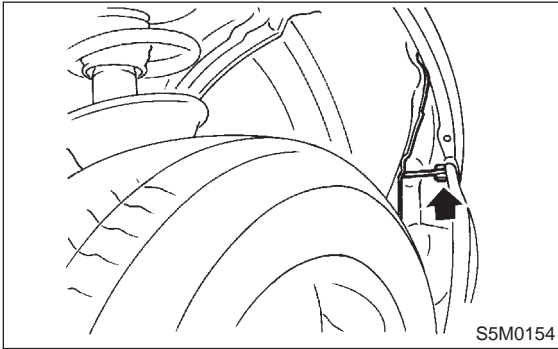


- 9) Remove rear bumper beam.
- 10) Install in the reverse order of removal.

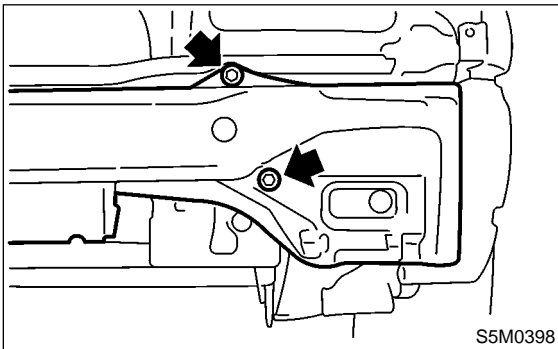
CAUTION:

- Be extremely careful to prevent scratches on bumper face as it is made of resin.
- Be careful not to scratch the body when removing or installing bumper.

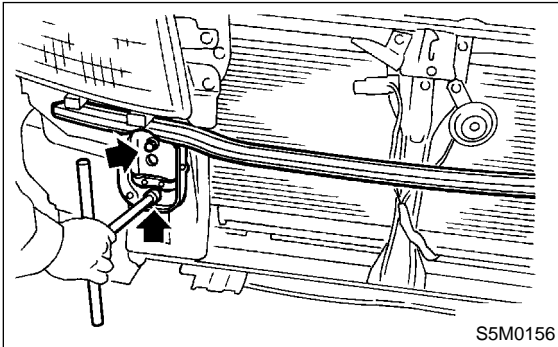
- 8) Turn over the front mud guard of the front portion and then remove bolt.



- 9) Remove bumper face and E/A foam.
10) Remove the four bolts and then detach the back beam.



- 11) Remove the four bolts and then detach the beam upper.



- 12) Install in the reverse order of removal.

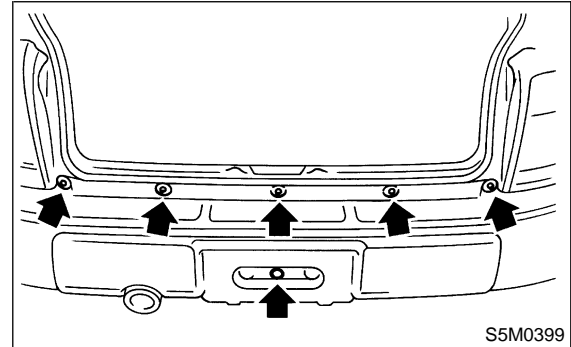
CAUTION:

- Be extremely careful to prevent scratches on bumper face as it is made of resin.
- Be careful not to scratch the body when removing or installing the bumper.

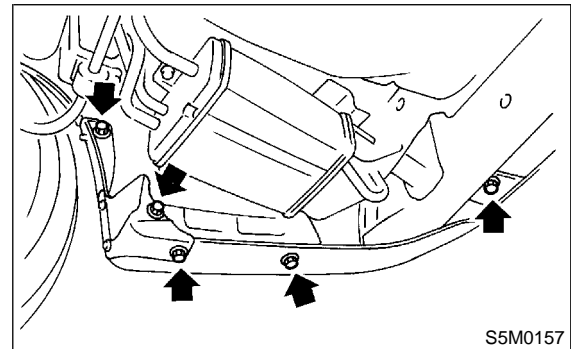
4. Rear Bumper

A: REMOVAL AND INSTALLATION

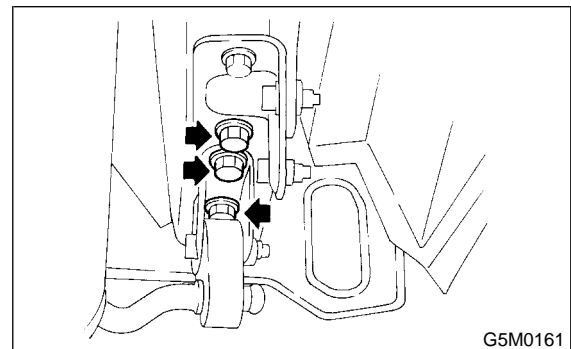
- 1) Disconnect the ground cable from the battery.
- 2) Open rear gate.
- 3) Remove the five screws and the clip from the rear bumper.



- 4) Disconnect license plate light connector.
- 5) Remove bolts and clips from under side of bumper.



- 6) Remove bumper face and E/A foam.
- 7) Remove canister. <Ref. to 2-1 [W3A0].>
- 8) Remove bolts from bumper stay.



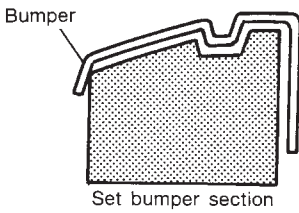
- 9) Remove rear bumper beam.
- 10) Install in the reverse order of removal.

CAUTION:

- Be extremely careful to prevent scratches on bumper face as it is made of resin.
- Be careful not to scratch the body when removing or installing bumper.

5. Coating Method for PP Bumper

A: PROCESS STEPS

| Process No. | Process name | Job contents | |
|-------------|----------------------|---|---|
| 1 | Bumper mounting | Set bumper on paint worktable if required. Use paint worktable conforming to inner shape of bumper when possible. |  <p style="text-align: right;">G5M0164</p> |
| 2 | Masking | Mask specified part (black base) with masking tape. Use masking tape for PP (example, Nichiban No. 533, etc.). | |
| 3 | Degreasing, cleaning | Clean all parts to be painted with white gasoline, normal alcohol, etc. to remove dirt, oil, fat, etc. | |
| 4 | Primer paint | Apply primer one to all parts to be painted, using air gun. Use primer (clear). | |
| 5 | Drying | Dry at normal temperature [10 to 15 min. at 20°C (68°F)]. In half-dried condition, PP primer paint is dissolved by solvent, e.g. thinner, etc. Therefore, if dust or dirt must be removed, use ordinary alcohol, etc. | |
| 6 | Top coat paint (I) | Solid color | Metallic color |
| | | Use section (block) paint for top coat. ● Paint in use (for each color): Solid paint Hardener PB Thinner T-301 ● Mixing ratio: Main agent vs. hardener = 4:1 ● Viscosity: 10 — 13 sec/20°C (68°F) ● Film thickness: 35 — 45μ ● Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kg/cm ² , 36 — 50 psi) | Use section (block) paint for top coat. ● Paint in use (for each color): Metallic paint Hardener PB Thinner T-306 ● Mixing ratio: Main agent vs. hardener = 10:1 ● Viscosity: 10 — 13 sec/20°C (68°F) ● Film thickness: 15 — 20μ ● Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kg/cm ² , 36 — 50 psi) |
| 7 | Drying | Not required. | Dry at normal temperature [10 min. or more at 20°C (68°F)]. In half-dried condition, avoid dust, dirt. |
| 8 | Top coat paint (II) | Not required. | Apply a clear coat to parts with top coat paint (I), three times, at 5 — 7 minutes intervals. ● Paint in use: Metallic paint Hardener PB Thinner T-301 ● Mixing ratio: Clear vs. hardener = 6:1 ● Viscosity: 14 — 16 sec/20°C (68°F) ● Film thickness: 25 — 30μ ● Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kg/cm ² , 36 — 50 psi) |
| 9 | Drying | 60°C (140°F), 60 min. or 80°C (176°F), 30 min. If higher than 80°C (176°F), PP may be deformed. Keep maximum temperature of 80°C (176°F). | |
| 10 | Inspection | Paint check. | |
| 11 | Masking removal | Remove masking in process No. 2. | |

6. Repair Instructions for Colored PP Bumper

All PP bumpers are provided with a grained surface, and if the surface is damaged, it cannot normally be restored to its former condition. Damage limited to shallow scratches that cause only a change in the lustre of the base material or coating, can be almost fully restored. Before repairing a damaged area, explain this point to the customer and obtain his or her understanding. Repair methods are outlined below, based on a classification of the extent of damage.

A: MINOR DAMAGE CAUSING ONLY A CHANGE IN THE LUSTRE OF THE BUMPER DUE TO A LIGHT TOUCH

Almost restorable.

| Process No. | Process name | Job contents | |
|-------------|--------------|---|--|
| 1 | Cleaning | Clean the area to be repaired using water. | |
| 2 | Sanding | Grind the repairing area with #500 sand paper in a "feathering" motion. | |
| 3 | Finish | Resin section | Coated section |
| | | Repeatedly apply wax to the affected area using a soft cloth (such as flannel). Recommended wax: NITTO KASEI Soft 99 TIRE WAX BLACK, or equivalent. | Perform either the same operation as for the resin section or process No. 18 and subsequent operations in the "(3)" section, depending on the degree and nature of damage. |
| | | Polish the waxed area with a clean cloth after 5 to 10 minutes. | |

B: DEEP DAMAGE CAUSED BY SCRATCHING FENCES, ETC.

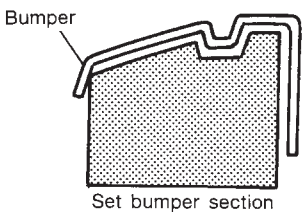
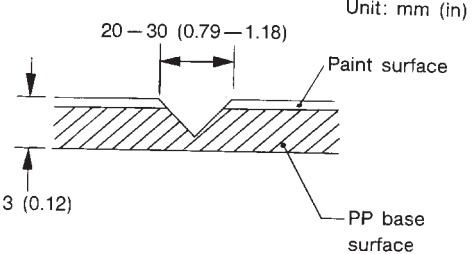
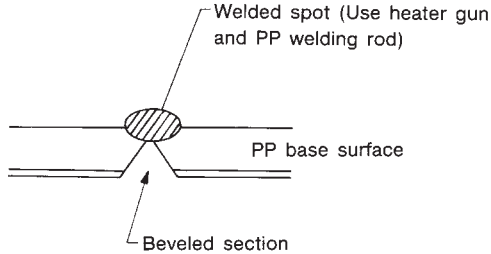
A dent cannot be repaired but a whitened or swelled part can be removed.

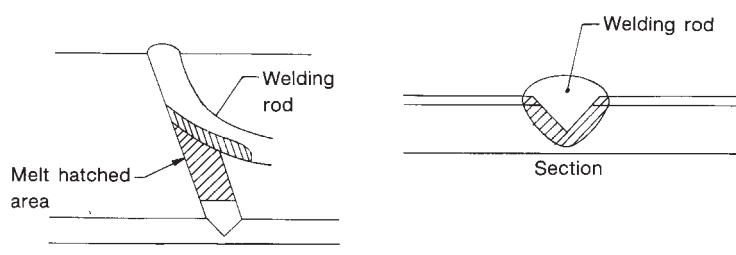

| Process No. | Process name | Job contents | |
|-------------|-------------------------|---|--|
| 1 | Cleaning | Clean damaged area with water. | |
| 2 | Removal of damaged area | Cut off protruding area, if any, due to collision, using a putty knife. | |
| 3 | Sanding | Grind the affected area with #100 to #500 sand paper. | |
| 4 | Finish | Resin section | Coated section |
| | | Same as Process No. 3 in the "(1)" section. | Perform Process No. 12 and subsequent operations in the "(3)" section. |

C: DEEP DAMAGE SUCH AS A BREAK OR HOLE THAT REQUIRES FILLING

Much of the peripheral grained surface must be sacrificed for repair, and the degree of restoration may not be worth the expense. (The surface, however, will become almost flush with adjacent areas.)

Recommended repair kit: PP Part Repair Kit (NRM)

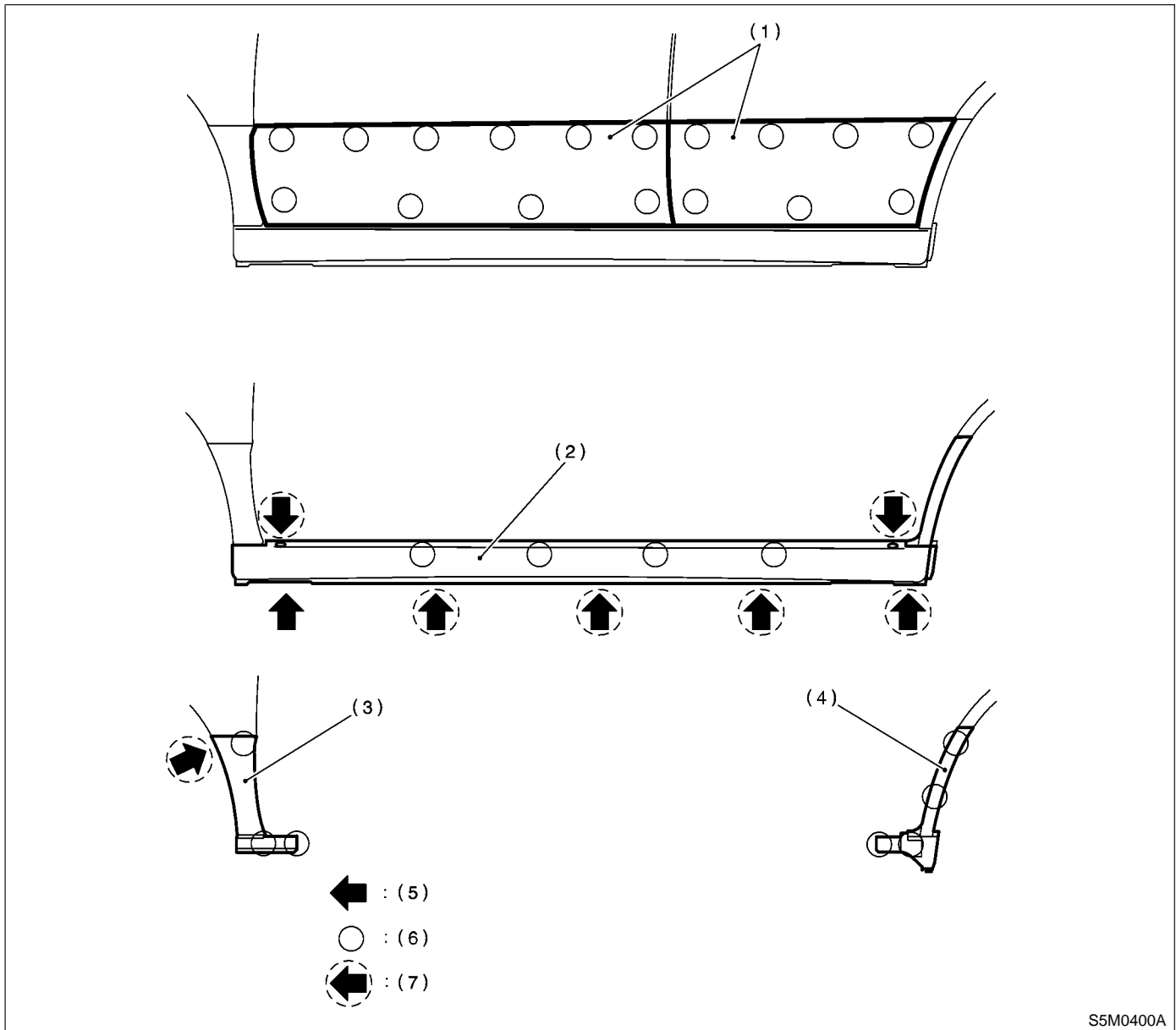
| Process No. | Process name | Job contents | |
|-------------|---------------------|---|--|
| 1 | Bumper removal | Remove bumper as required. | |
| 2 | Part removal | Remove parts built into bumper as required. | |
| 3 | Bumper placement | Place bumper on a paint worktable as required. It is recommended that contour of worktable accommodate internal shape of bumper. |  <p style="text-align: right;">G5M0164</p> |
| 4 | Surface preparation | Remove dust, oil, etc. from areas to be repaired and surrounding areas, using a suitable solvent (NRM No. 900 Precleno, white gasoline, or alcohol). | |
| 5 | Cutting | If damage includes cracks or holes, cut a guide slit of 20 to 30 mm (0.79 to 1.18 in) in length along the crack or hole up to the bumper's base surface. Then, bevel or "vee-out" the affected area using a knife or grinder. |  <p style="text-align: right;">G5M0165</p> |
| 6 | Sanding (I) | Grind beveled surface with sand paper (#40 to #60) to smooth finish. | |
| 7 | Cleaning | Clean the sanded surface with the same solvent as used in Process No. 4. | |
| 8 | Temporary welding | Grind the side just opposite the beveled area with sand paper (#40 to #60) and clean using a solvent. Temporarily spot-weld the side, using a PP welding rod and heater gun. |  <p style="text-align: right;">G5M0166</p> |
| | | <p>NOTE:</p> <ul style="list-style-type: none"> ● Do not melt welding rod until it flows out. This results in reduced strength. ● Leave the welded spot unattended until it cools completely. | |

| Process No. | Process name | Job contents |
|-------------|-------------------------|---|
| 9 | Welding | Using a heater gun and PP welding rod, weld the beveled spot while melting the rod and damaged area. |
| | |  <p style="text-align: right;">G5M0167</p> <p>NOTE:</p> <ul style="list-style-type: none"> ● Melt the sections indicated by hatched area. ● Do not melt welding rod until it flows out, in order to provide strength. ● Always keep the heater gun 1 to 2 cm (0.4 to 0.8 in) away from the welding spot. ● Leave the welded spot unattended until it cools completely. |
| 10 | Sanding (II) | Remove excess part of weld with a putty knife. If a drill or disc wheel is used instead of the knife, operate it at a rate lower than 1,500 rpm and grind the excess part little by little. A higher rpm will cause the PP substrate to melt from the heat. |
| | |  <p style="text-align: right;">G5M0168</p> <p>Sand the welded spot smooth with #240 sand paper.</p> |
| 11 | Masking | Mask the black substrate section using masking tape. Recommended masking tape: Nichiban No. 533 or equivalent |
| 12 | Cleaning/degreasing | Completely clean the entire coated area, using solvent similar to that used in Process No. 4. |
| 13 | Primer coating | Apply a coat of primer to the repaired surface and its surrounding areas. Mask these areas, if necessary. Recommended primer: Mp/ 364 PP Primer NOTE: Be sure to apply one coat of primer at a spraying pressure of 245 to 343 kPa (2.5 to 3.5 kg/cm ² , 36 to 50 psi) with a spray gun. |
| 14 | Leave unattended. | Leave the repaired area unattended at 20°C (68°F) for 10 to 15 minutes until primer is half-dry. NOTE: If dirt or dust gets on the coated area, wipe it off with a cloth dampened with alcohol. (Do not use thinner since the coated area tends to melt.) |
| 15 | Primer surfacer coating | Apply a coat of primer surfacer to the repaired area two or three times at an interval of 3 to 5 minutes. Recommended surfacer: <ul style="list-style-type: none"> ● UPS 300 Flex Primer ● No. 303 UPS 300 Exclusive hardener ● NPS 725 Exclusive Reducer (thinner) ● Mixing ratio: 2 : 1 (UPS 300: No. 303) ● Viscosity: 12 — 14 sec/20°C (68°F) ● Coated film thickness: 40 — 50μ |
| 16 | Drying | Allow the coated surface to dry for 60 minutes at 20°C (68°F) [or 30 minutes at 60°C (140°F)]. |
| 17 | Sanding (III) | Sand the coated surface and its surrounding areas using #400 sand paper and water. |
| 18 | Cleaning/degreasing | Same as Process No. 12. |

| Process No. | Process name | Job contents | |
|-------------|---------------------|--|---|
| | | Solid color | Metallic color |
| | | Use a "block" coating method. <ul style="list-style-type: none"> ● Recommended paint: Suncryl (SC) No. 307 Flex Hardener SC Reducer (thinner) ● Mixing ratio: 3 : 1 Suncryl (SC) vs. No. 307 Flex Hardener ● Viscosity: 11 — 13 sec/20°C (68°F) ● Coated film thickness: 40 — 50μ ● Spraying thickness: 245 — 343 kPa (2.5 — 3.5 kg/cm², 36 — 50 psi) | Use a "block" coating method. <ul style="list-style-type: none"> ● Recommended paint: Suncryl (SC) No. 307 Flex Hardener SC Reducer (thinner) ● Mixing ratio: 3 : 1 Suncryl (SC) vs. No. 307 Flex Hardener ● Viscosity: 11 — 13 sec/20°C (68°F) ● Coated film thickness: 20 — 30μ ● Spraying thickness: 245 — 343 kPa (2.5 — 3.5 kg/cm², 36 — 50 psi) |
| 20 | Leave unattended. | Not required. | Leave unattended at 20°C (68°F) for at least 10 minutes until the topcoated area is half-dry. NOTE: Be careful to keep dust or dirt from getting on the affected area. |
| 21 | Top coat (II) | Not required. | Apply a clear coat three times at an interval of 3 to 5 minutes. <ul style="list-style-type: none"> ● Recommended paint: SC710 Overlay Clear No. 307 Flex Hardener SC Reducer (thinner) ● Mixing ratio: 3 : 1 Suncryl (SC) vs. No. 307 Flex Hardener ● Viscosity: 10 — 13 sec/20°C (68°F) ● Coated film thickness: 20 — 30μ ● Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kg/cm², 36 — 50 psi) |
| 22 | Drying | Allow the coated surface to dry at 20°C (68°F) for two hours or 60°C (140°F) for 30 minutes. NOTE: Do not allow the temperature to exceed 80°C (176°F) since this will deform the PP substrate. | |
| 23 | Inspection | Carefully check the condition of the repaired area. | |
| 24 | Masking removal | Remove masking tape applied in Process No. 11 and 13. | |
| 25 | Parts installation | Install parts on bumper in reverse order of removal. | |
| 26 | Bumper installation | Install bumper. | |

7. Side Protector

A: REMOVAL AND INSTALLATION



- (1) Side protector (Door)
- (2) Side protector (Side sill)
- (3) Side protector (Front fender)

- (4) Side protector (Rear quarter)
- (5) Screw
- (6) Clip

- (7) Clip

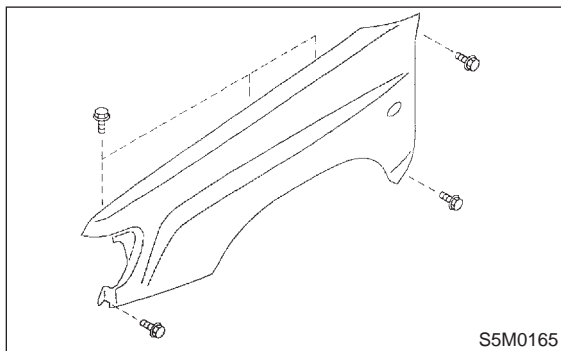
8. Front Fender

A: REMOVAL AND INSTALLATION

- 1) Disconnect ground cable from battery.
- 2) Remove mud guard. <Ref. to 5-1 [W9A0].>
- 3) Remove parking light and headlight. <Ref. to 6-2 [W4B1].>
- 4) Remove front bumper face. <Ref. to 5-1 [W3A0].>
- 5) Remove side protector. (Front fender) <Ref. to 5-1 [W7A0].>
- 6) Remove attaching bolt then remove fender.

CAUTION:

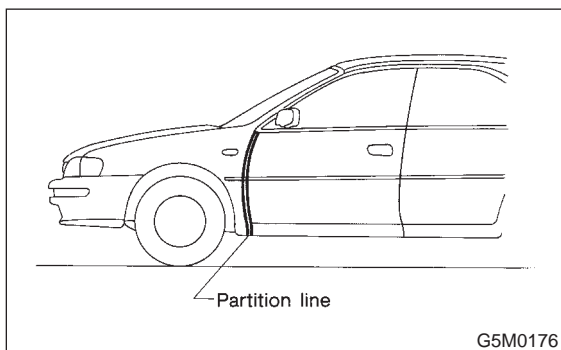
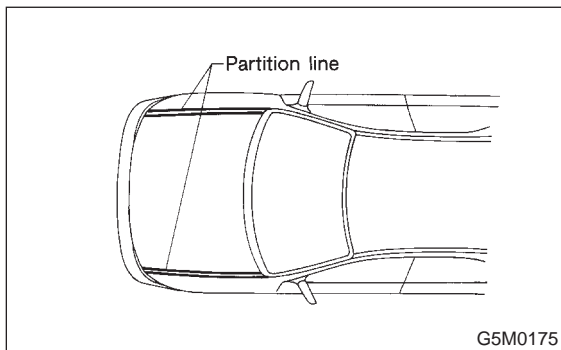
Be careful not to scratch body panels with fender edges when removing it.



- 7) Install in the reverse order of removal.

NOTE:

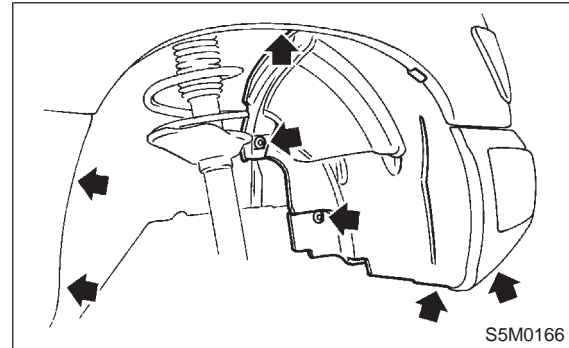
Check for alignment of front fender with hood and front door with front fender at all points. Adjust, if necessary.



9. Mud Guard

A: REMOVAL AND INSTALLATION

- 1) Jack-up vehicle and remove tire.
- 2) Remove screws and clips. Move mud guard toward the center of the body and remove mud guard.



- 3) Install in the reverse order of removal.

CAUTION:

Only use new nuts and clips.

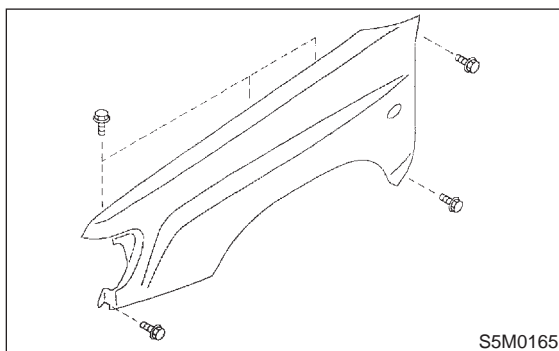
8. Front Fender

A: REMOVAL AND INSTALLATION

- 1) Disconnect ground cable from battery.
- 2) Remove mud guard. <Ref. to 5-1 [W9A0].>
- 3) Remove parking light and headlight. <Ref. to 6-2 [W4B1].>
- 4) Remove front bumper face. <Ref. to 5-1 [W3A0].>
- 5) Remove side protector. (Front fender) <Ref. to 5-1 [W7A0].>
- 6) Remove attaching bolt then remove fender.

CAUTION:

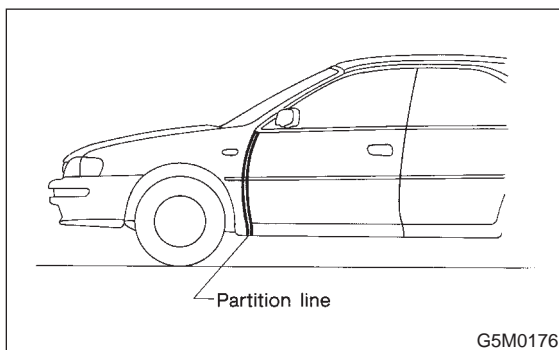
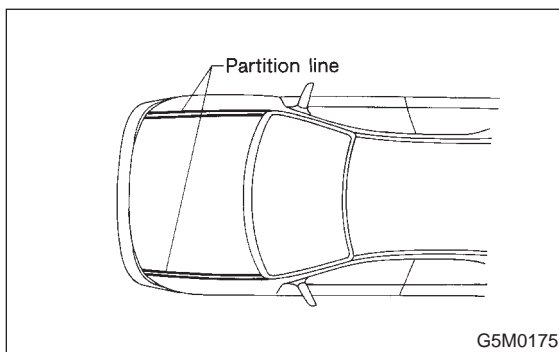
Be careful not to scratch body panels with fender edges when removing it.



- 7) Install in the reverse order of removal.

NOTE:

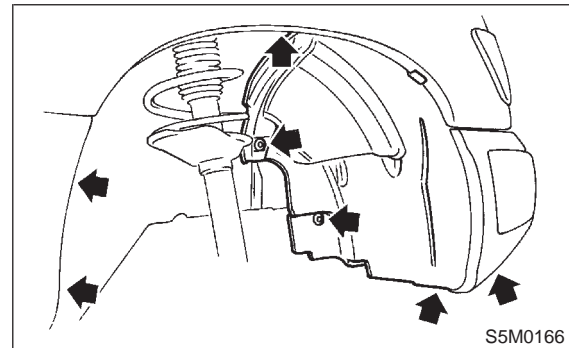
Check for alignment of front fender with hood and front door with front fender at all points. Adjust, if necessary.



9. Mud Guard

A: REMOVAL AND INSTALLATION

- 1) Jack-up vehicle and remove tire.
- 2) Remove screws and clips. Move mud guard toward the center of the body and remove mud guard.



- 3) Install in the reverse order of removal.

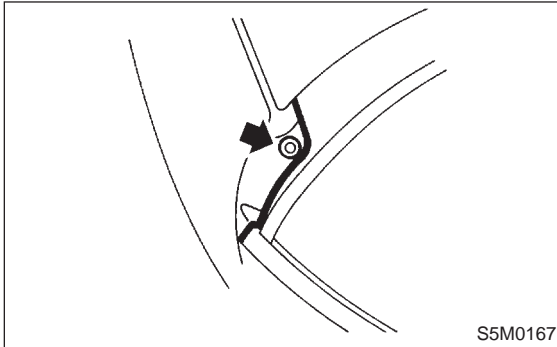
CAUTION:

Only use new nuts and clips.

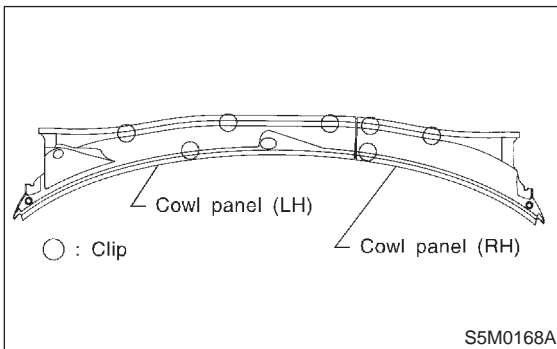
10. Cowl Panel

A: REMOVAL AND INSTALLATION

- 1) Remove cowl panel side.



- 2) Open front hood.
- 3) Remove wiper arms.
- 4) Lift cowl panel (RH) and then lift cowl panel (LH).

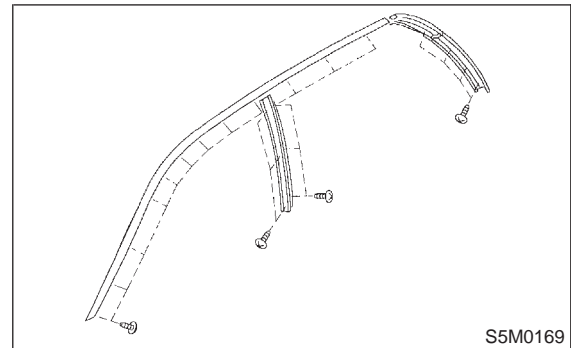


- 5) Install in the reverse order of removal.

11. Molding and Retainer

A: REMOVAL AND INSTALLATION

- 1) Remove weatherstrip.
- 2) Remove tapping screws.

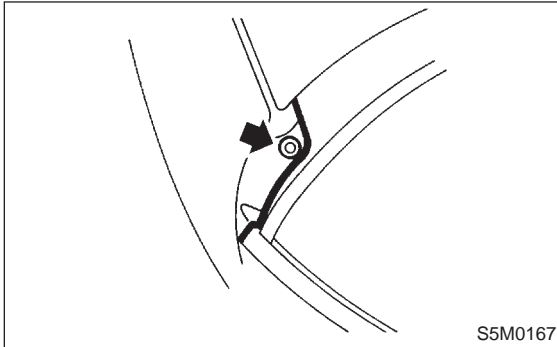


- 3) Install in the reverse order of removal.

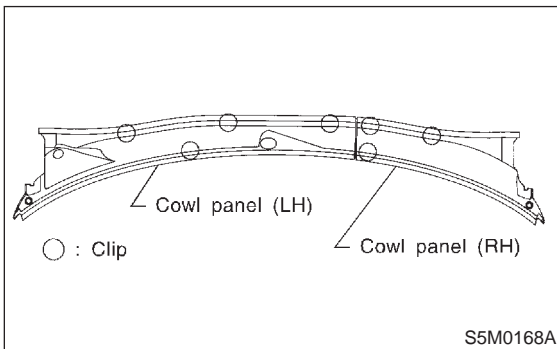
10. Cowl Panel

A: REMOVAL AND INSTALLATION

- 1) Remove cowl panel side.



- 2) Open front hood.
- 3) Remove wiper arms.
- 4) Lift cowl panel (RH) and then lift cowl panel (LH).

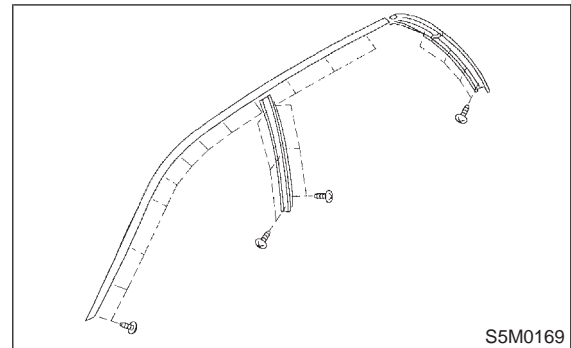


- 5) Install in the reverse order of removal.

11. Molding and Retainer

A: REMOVAL AND INSTALLATION

- 1) Remove weatherstrip.
- 2) Remove tapping screws.

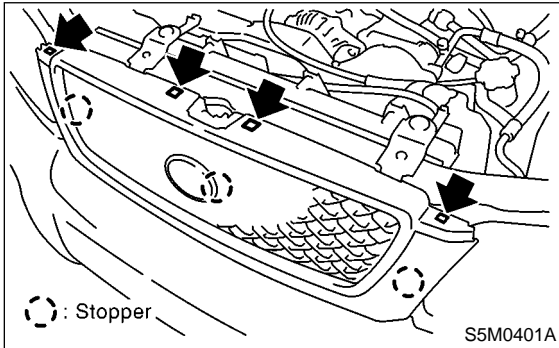


- 3) Install in the reverse order of removal.

12. Front Grille

A: REMOVAL AND INSTALLATION

1) Remove the four upper clips from body panel. To facilitate removal, press portion shown in the figure using screwdriver while lightly pulling front grille.



2) Install in the reverse order of removal.

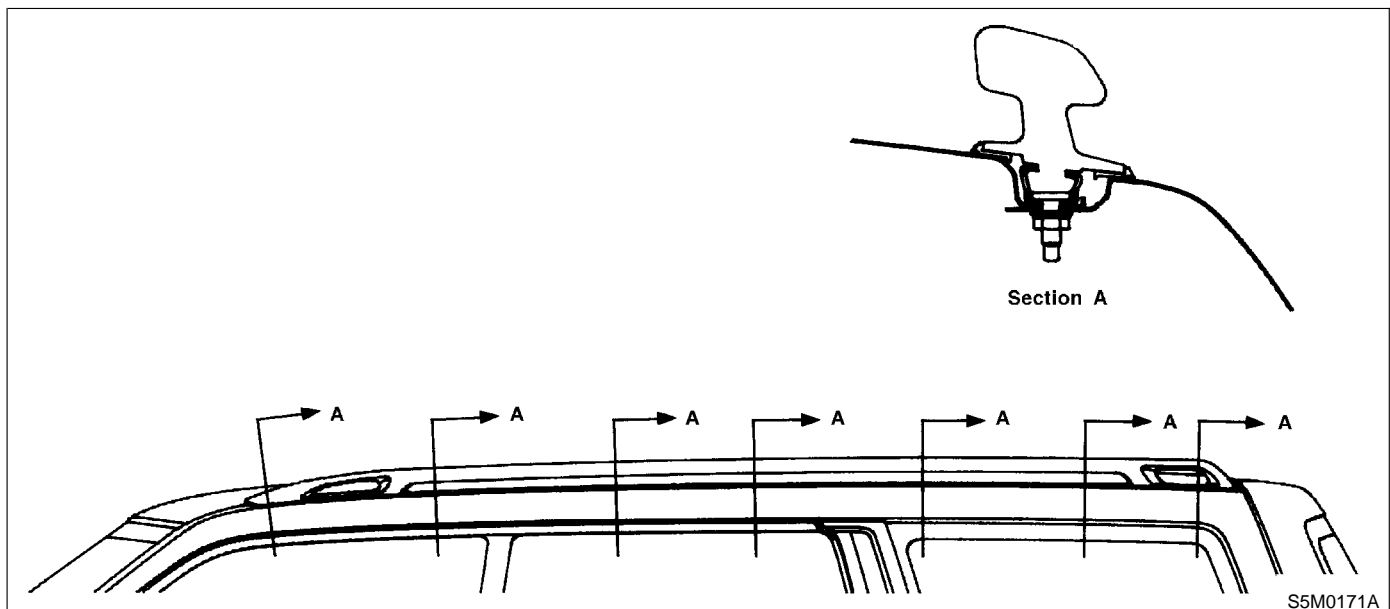
NOTE:

Attach all clips to grille. Align them with clip hole in body and push them into place.

14. Roof Rail

A: REMOVAL AND INSTALLATION

1) Remove roof trim. <Ref. to 5-3 [W5A4].>
2) Remove the seven attaching bolts and then carefully detach roof rail.



3) Install in the reverse order of removal.

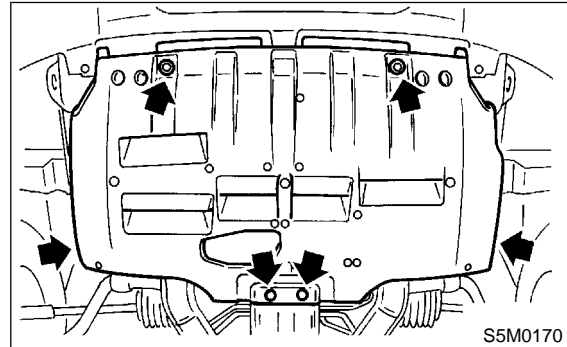
CAUTION:

Be careful not to scratch body panels with roof rail stud bolts when removing and installing them.

13. Under Cover

A: REMOVAL AND INSTALLATION

1) Lift-up the vehicle.
2) Remove bolts and clips then detach under cover.

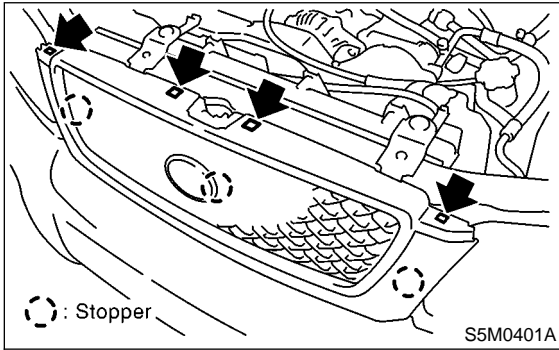


3) Install in the reverse order of removal.

12. Front Grille

A: REMOVAL AND INSTALLATION

1) Remove the four upper clips from body panel. To facilitate removal, press portion shown in the figure using screwdriver while lightly pulling front grille.



2) Install in the reverse order of removal.

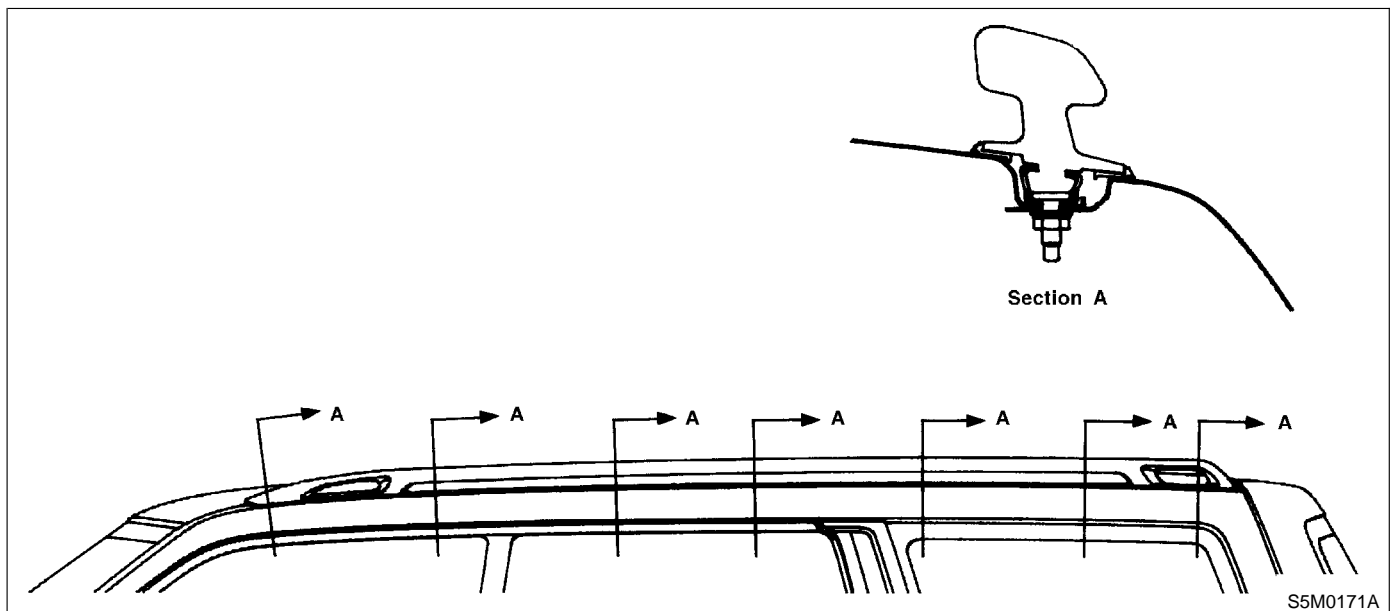
NOTE:

Attach all clips to grille. Align them with clip hole in body and push them into place.

14. Roof Rail

A: REMOVAL AND INSTALLATION

1) Remove roof trim. <Ref. to 5-3 [W5A4].>
2) Remove the seven attaching bolts and then carefully detach roof rail.



3) Install in the reverse order of removal.

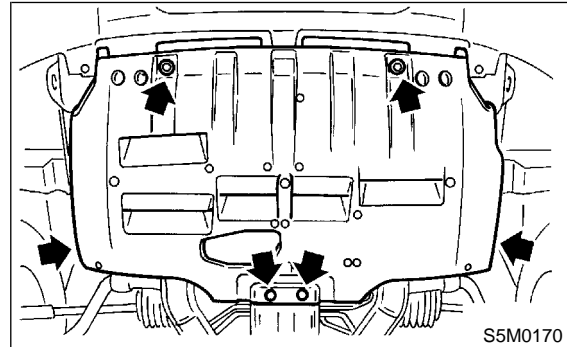
CAUTION:

Be careful not to scratch body panels with roof rail stud bolts when removing and installing them.

13. Under Cover

A: REMOVAL AND INSTALLATION

1) Lift-up the vehicle.
2) Remove bolts and clips then detach under cover.

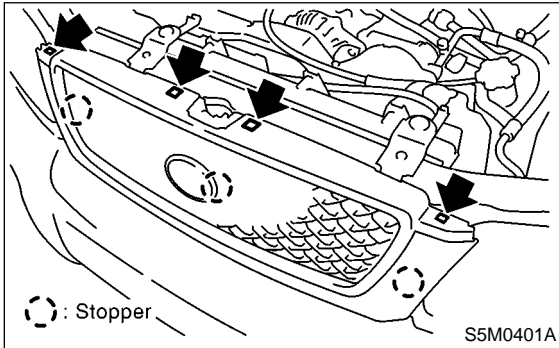


3) Install in the reverse order of removal.

12. Front Grille

A: REMOVAL AND INSTALLATION

1) Remove the four upper clips from body panel. To facilitate removal, press portion shown in the figure using screwdriver while lightly pulling front grille.



2) Install in the reverse order of removal.

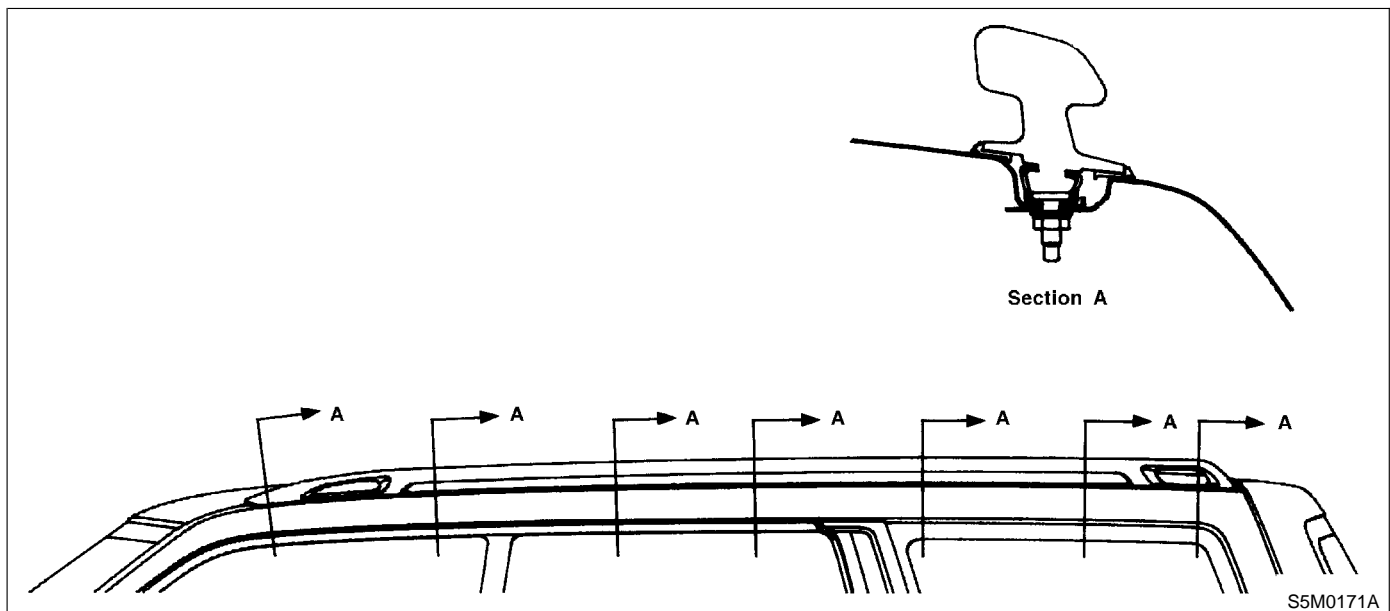
NOTE:

Attach all clips to grille. Align them with clip hole in body and push them into place.

14. Roof Rail

A: REMOVAL AND INSTALLATION

1) Remove roof trim. <Ref. to 5-3 [W5A4].>
2) Remove the seven attaching bolts and then carefully detach roof rail.



3) Install in the reverse order of removal.

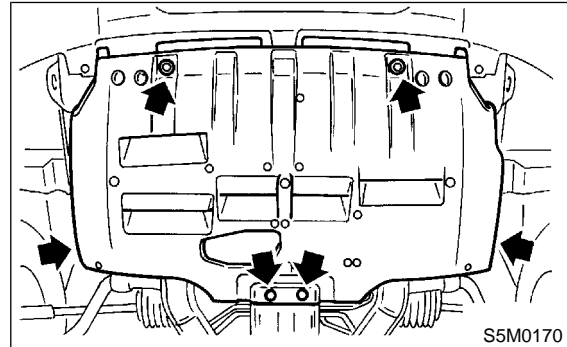
CAUTION:

Be careful not to scratch body panels with roof rail stud bolts when removing and installing them.

13. Under Cover

A: REMOVAL AND INSTALLATION

1) Lift-up the vehicle.
2) Remove bolts and clips then detach under cover.



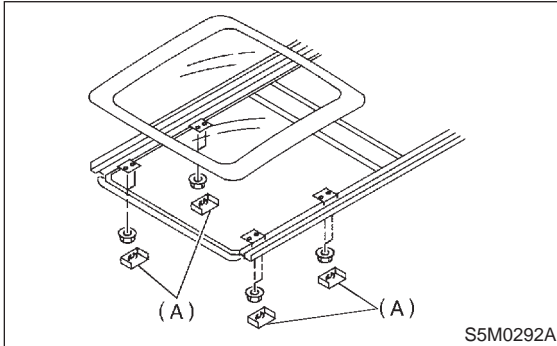
3) Install in the reverse order of removal.

15. Sunroof

A: REMOVAL AND INSTALLATION

1. GLASS LID

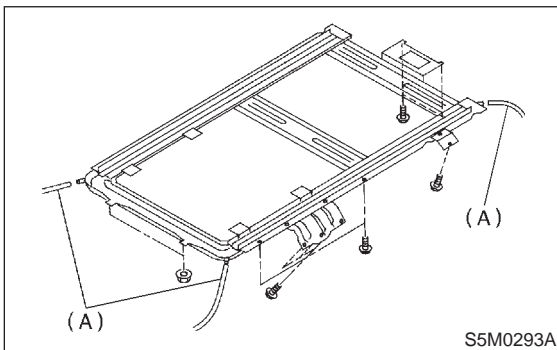
- 1) Completely close glass lid and open sunshade.
- 2) Detach the four covers (A) and then remove eight nuts.



- 3) Carefully remove glass lid.
- 4) Install in the reverse order of removal.

2. SUNROOF FRAME

- 1) Remove roof trim. <Ref. to 5-3 [W5A4].>
- 2) Remove glass lid.
- 3) Disconnect the four drain tubes (A) from sunroof frame.
- 4) Disconnect sunroof harness connector.
- 5) Remove installation bolts and nuts and then detach sunroof frame.



- 6) Install in the reverse order of removal.

CAUTION:

Be careful not to snag the harness.

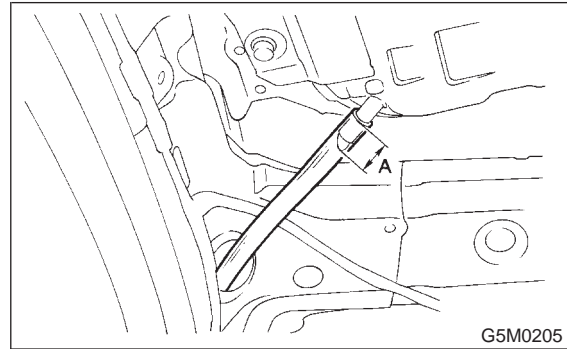
NOTE:

- Make sure to connect harness connector.

- When installing drain tube, insert it securely into drain pipe.

Length A:

15 mm (0.59 in) or more



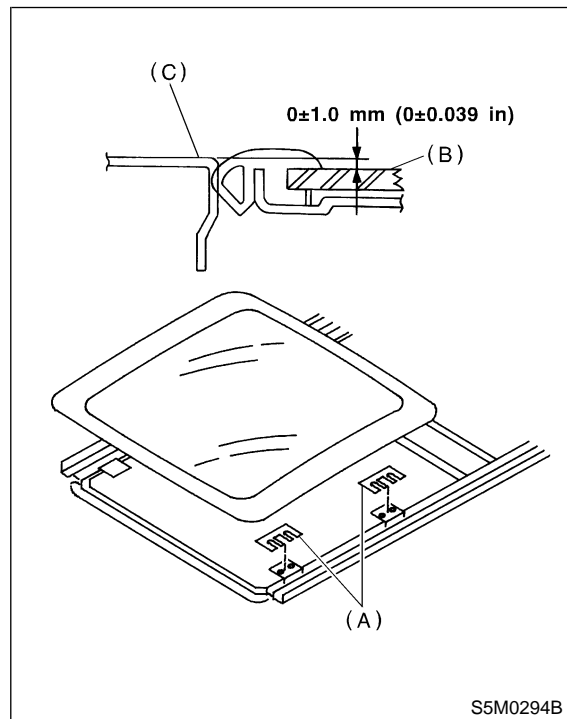
B: ADJUSTMENT

1. ALIGNMENT OF HEIGHT BETWEEN SUNROOF GLASS LID AND ROOF PANEL

Loosen sunroof glass lid installation nuts and then adjust height by adding (max: two pieces) and extracting (max: one piece) shim(s) (A) (standard: one piece) between sunroof glass lid (B) and roof panel (C).

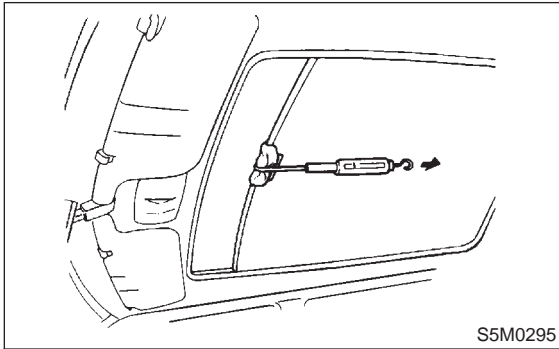
Difference in height between sunroof glass lid and roof panel:

$0 \pm 1.0 \text{ mm } (0 \pm 0.039 \text{ in})$



2. CHECKING FOR MOVEMENT OF SUNROOF PANEL ITSELF

- 1) Place a cloth on sunshade, and attach a spring scale to sunshade edge using the cloth.



- 2) Pull spring scale to measure force required to move sunshade.

Force required to move sunshade:
Less than 24.5±4.9 N (2.5±0.5 kg, 5.5±1.1 lb)

NOTE:

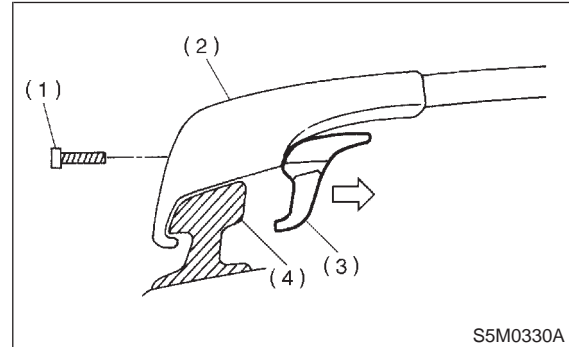
Considerable effort is required to start sunshade moving, so take scale reading while sunroof panel is moving smoothly.

- 3) If force required exceeds specifications, check the sunroof glass lid, sunshade and deflector, and guide rail assembly for improper installation.

16. Crossbar

A: REMOVAL

- 1) Loosen and remove TORX bolt T30 from the top of each crossbar end support, and then remove inner clamp.



- (1) TORX bolt T30
- (2) End support
- (3) Inner clamp
- (4) Roof rail

- 2) Remove crossbar.

NOTE:

When removing the front crossbar from the roof rail, first move the front crossbar to the center of the roof rail.

B: INSTALLATION

1. FRONT CROSSBAR

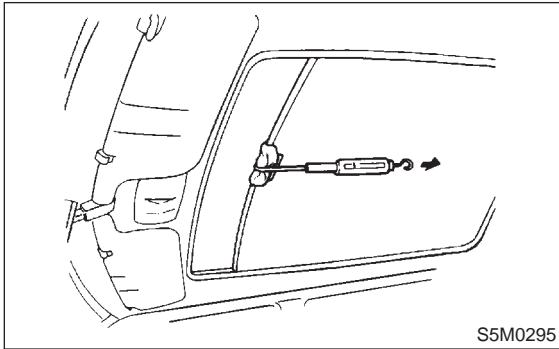
NOTE:

Front crossbar has "MAXIMUM LOAD ROOF RACK-150LBS. EVENLY DISTRIBUTED ROOF SURFACE-100LBS. EVENLY DISTRIBUTED" label on LH side.

- 1) Loosen and remove TORX bolt T30 from the top of each crossbar end support, and then remove the inner clamp.

2. CHECKING FOR MOVEMENT OF SUNROOF PANEL ITSELF

- 1) Place a cloth on sunshade, and attach a spring scale to sunshade edge using the cloth.



- 2) Pull spring scale to measure force required to move sunshade.

Force required to move sunshade:
Less than 24.5±4.9 N (2.5±0.5 kg, 5.5±1.1 lb)

NOTE:

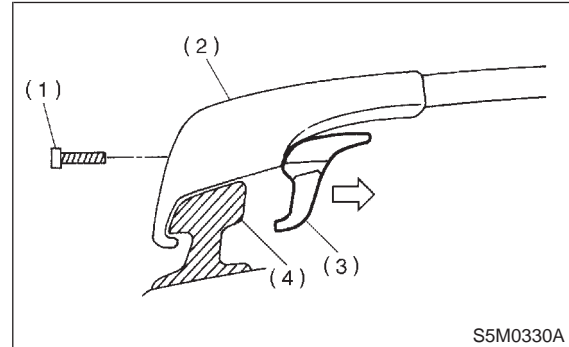
Considerable effort is required to start sunshade moving, so take scale reading while sunroof panel is moving smoothly.

- 3) If force required exceeds specifications, check the sunroof glass lid, sunshade and deflector, and guide rail assembly for improper installation.

16. Crossbar

A: REMOVAL

- 1) Loosen and remove TORX bolt T30 from the top of each crossbar end support, and then remove inner clamp.



- (1) TORX bolt T30
- (2) End support
- (3) Inner clamp
- (4) Roof rail

- 2) Remove crossbar.

NOTE:

When removing the front crossbar from the roof rail, first move the front crossbar to the center of the roof rail.

B: INSTALLATION

1. FRONT CROSSBAR

NOTE:

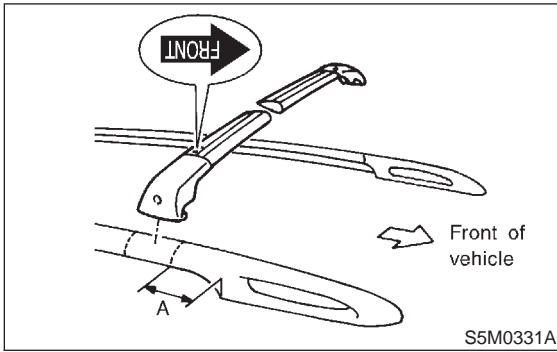
Front crossbar has "MAXIMUM LOAD ROOF RACK-150LBS. EVENLY DISTRIBUTED ROOF SURFACE-100LBS. EVENLY DISTRIBUTED" label on LH side.

- 1) Loosen and remove TORX bolt T30 from the top of each crossbar end support, and then remove the inner clamp.

2) With the front direction arrow label on the top right side of the crossbar pointing toward the front of the vehicle, carefully place the crossbar across the top of the vehicle so that the crossbar end supports rest on the top of the roof rails approximately 152.4 mm (6 in) rearward in the front radius of the roof rail.

Length:

A: 152.4 mm (6 in)



3) Rotate the end support and inner clamp to hook under the bottom of the roof rail on both sides and loose assemble the TORX bolt T30, through the side of the end support and into the threaded insert in the inner clamp on each end of the crossbar.

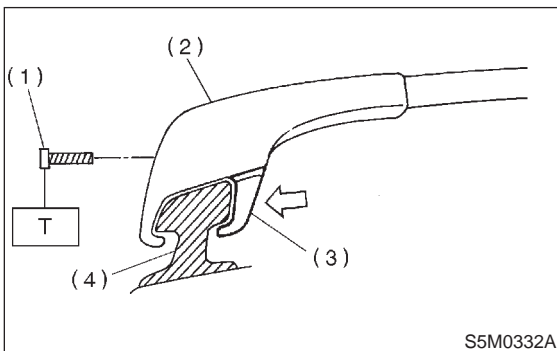
NOTE:

It may be necessary to start the inner clamp and the end support at the center of the roof rail for better installation of the pieces, then move the crossbar forward.

4) Tighten TORX bolt T30.

Tightening torque:

$3.7 \pm 0.3 \text{ N}\cdot\text{m}$ ($0.38 \pm 0.03 \text{ kg}\cdot\text{m}$, $2.75 \pm 0.22 \text{ ft}\cdot\text{lb}$)



- (1) TORX bolt T30
- (2) End support
- (3) Inner clamp
- (4) Roof rail

2. REAR CROSSBAR

NOTE:

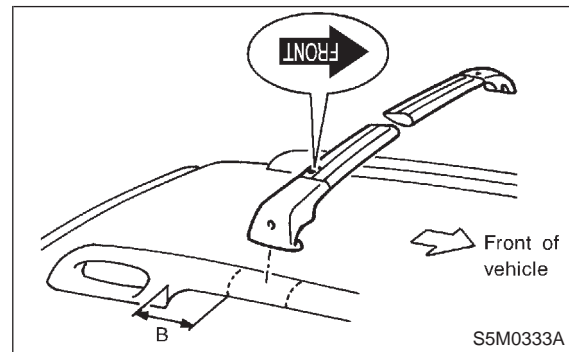
Rear crossbar does not have the "MAXIMUM LOAD ROOF RACK-150LBS. EVENLY DISTRIBUTED ROOF SURFACE-100LBS. EVENLY DISTRIBUTED" label.

1) Loosen and remove TORX bolt T30 from the top of each crossbar end support, and then remove the inner clamp.

2) With the front direction arrow label on the top right side of the crossbar pointing toward the front of the vehicle, carefully place the crossbar across the top of the vehicle so that the crossbar end supports rest on the top of the roof rails approximately 152.4 mm (6 in) forward in the rear radius of the roof rail.

Length:

B: 152.4 mm (6 in)

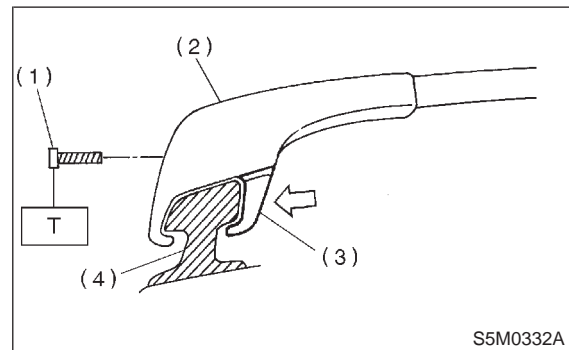


3) Rotate the end support and inner clamp to hook under the bottom of the roof rail on both sides and loose assemble the TORX bolt T30, through the side of the end support and into the threaded insert in the inner clamp on each end of the crossbar.

4) Tighten TORX bolt T30.

Tightening torque:

$3.7 \pm 0.3 \text{ N}\cdot\text{m}$ ($0.38 \pm 0.03 \text{ kg}\cdot\text{m}$, $2.75 \pm 0.22 \text{ ft}\cdot\text{lb}$)



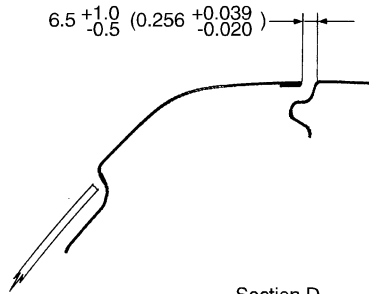
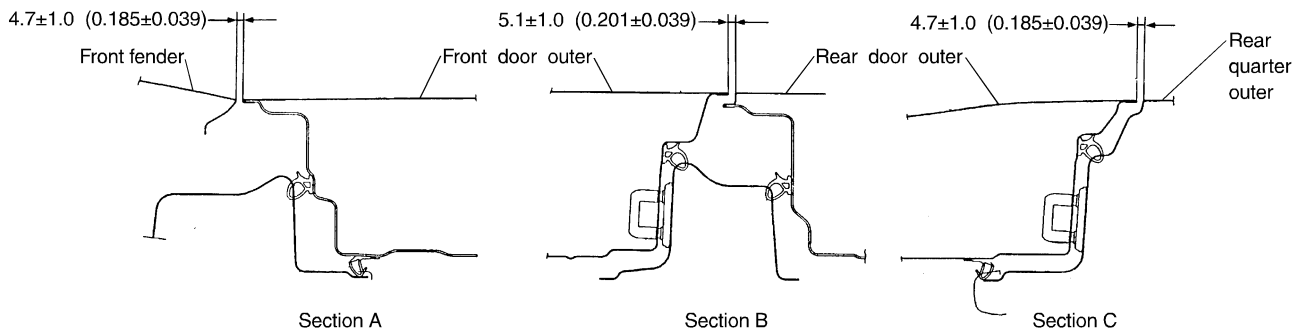
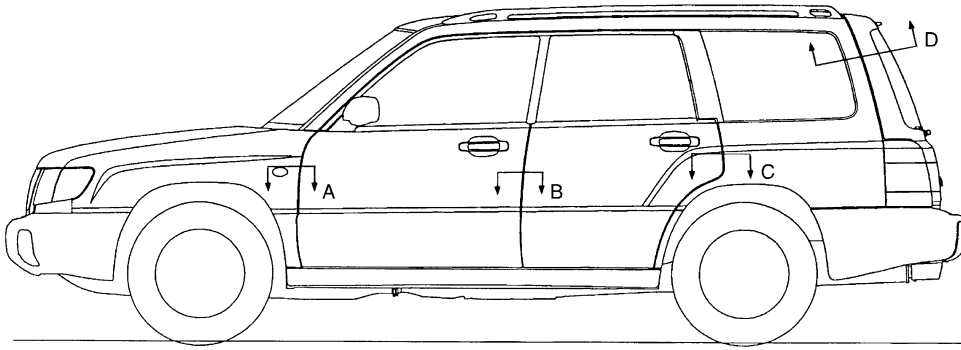
- (1) TORX bolt T30
- (2) End support
- (3) Inner clamp
- (4) Roof rail

1. Sunroof

| | |
|--|---|
| Entry of water into compartment | <ol style="list-style-type: none"> (1) Check roof panel and sunroof glass lid for improper or poor sealing. (2) Check drain tube for clogging. (3) Check sunroof frame seal and body for improper fit. |
| Booming noise | <ol style="list-style-type: none"> (1) Check sunroof glass lid and roof panel for improper clearance. (2) Check sunshade and roof trim for improper clearance. |
| Abnormal motor noise | <ol style="list-style-type: none"> (1) Check motor for looseness. (2) Check gears and bearings for wear. (3) Check cable for wear. (4) Check cable pipe for deformities. |
| Failure of sunroof to operate (Motor operates properly.) | <ol style="list-style-type: none"> (1) Check guide rail for foreign particles. (2) Check guide rail for improper installation. (3) Check parts for mutual interference. (4) Check cable slider for improper clinching. (5) Check cable for improper installation. (6) Check clutch adjustment nut for improper tightness. |
| Motor does not rotate or rotates improperly. (Use sunroof wrench to check operation.) | <ol style="list-style-type: none"> (1) Check fuse for blowout. (2) Check switch for improper function. (3) Check motor for incorrect terminal voltage. (4) Check relay for improper operation. (5) Check poor grounding system. (6) Check cords for discontinuity and terminals for poor connections. (7) Check limit switch for improper operation. |

MEMO:

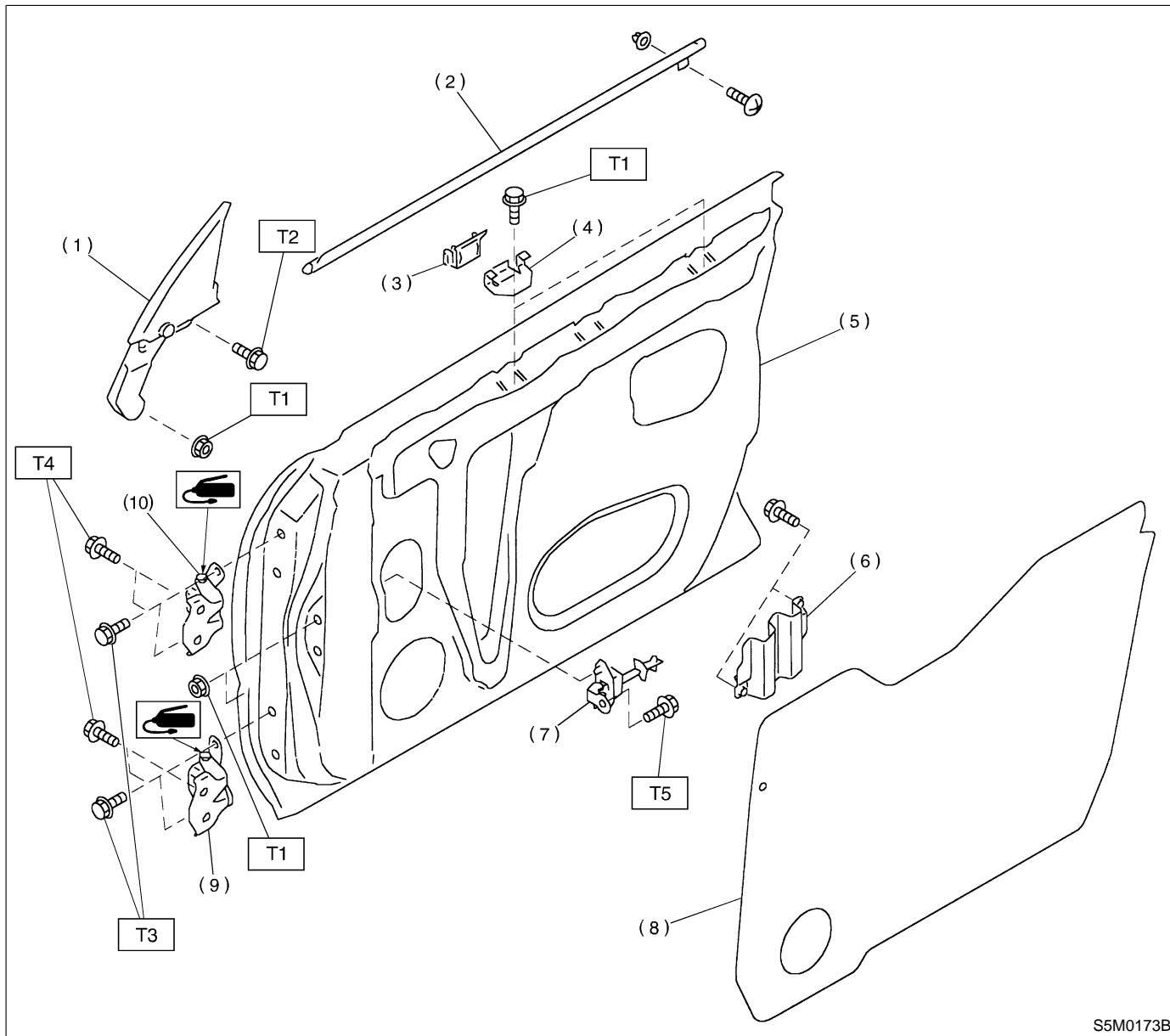
1. Door Alignment



Unit: mm (in)

S5M0380A

1. Front Door



- (1) Gusset
- (2) Weatherstrip
- (3) Stabilizer (Outer)
- (4) Stabilizer (Inner)
- (5) Door panel
- (6) Plate
- (7) Checker
- (8) Sealing cover
- (9) Lower hinge
- (10) Upper hinge

Tightening torque: N-m (kg-m, ft-lb)

T1: 7.4±2.0 (0.75±0.2, 5.4±1.4)

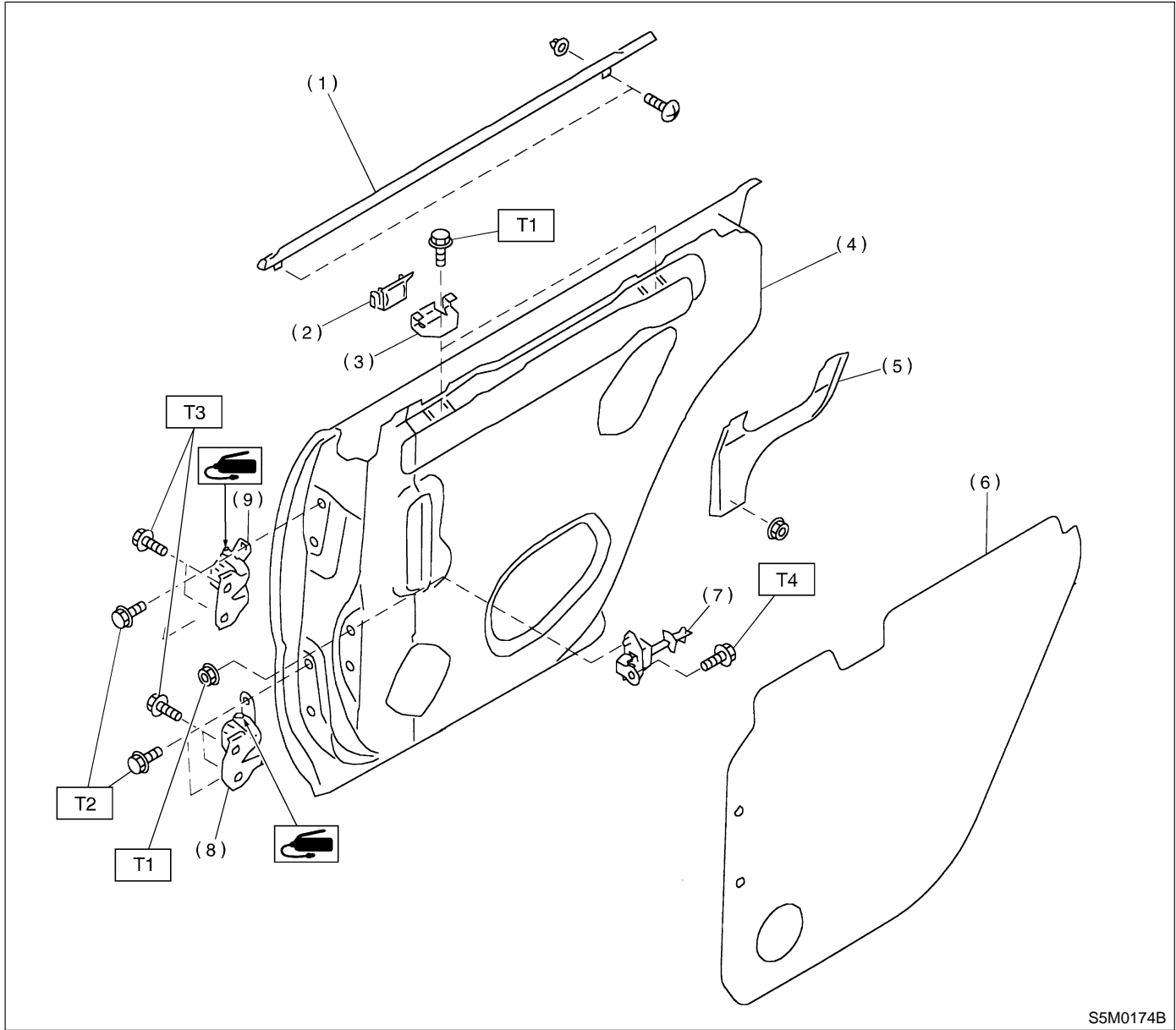
T2: 13±3 (1.3±0.3, 9.4±2.2)

T3: 25±3 (2.5±0.3, 18.1±2.2)

T4: 29±5 (3.0±0.5, 21.7±3.6)

T5: 32±10 (3.3±1.0, 23.9±7.2)

2. Rear Door



S5M0174B

- | | |
|------------------------|-----------------|
| (1) Weatherstrip | (7) Checker |
| (2) Stabilizer (Outer) | (8) Lower hinge |
| (3) Stabilizer (Inner) | (9) Upper hinge |
| (4) Door panel | |
| (5) Plate | |
| (6) Seating cover | |

Tightening torque: N·m (kg·m, ft·lb)

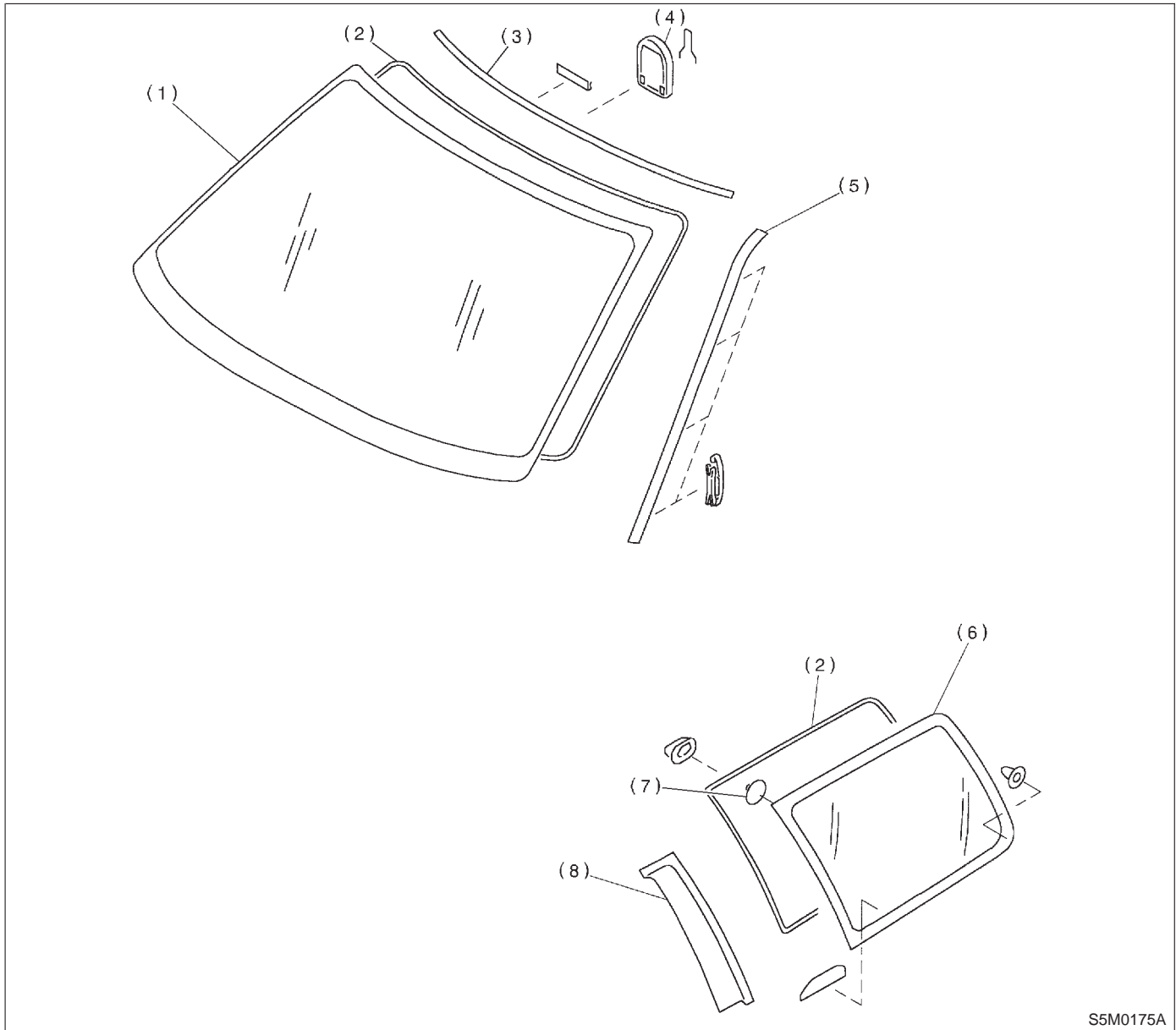
T1: 7.4±2.0 (0.75±0.2, 5.4±1.4)

T2: 25±3 (2.5±0.3, 18.1±2.2)

T3: 29±5 (3.0±0.5, 21.7±3.6)

T4: 32±10 (3.3±1.0, 23.9±7.2)

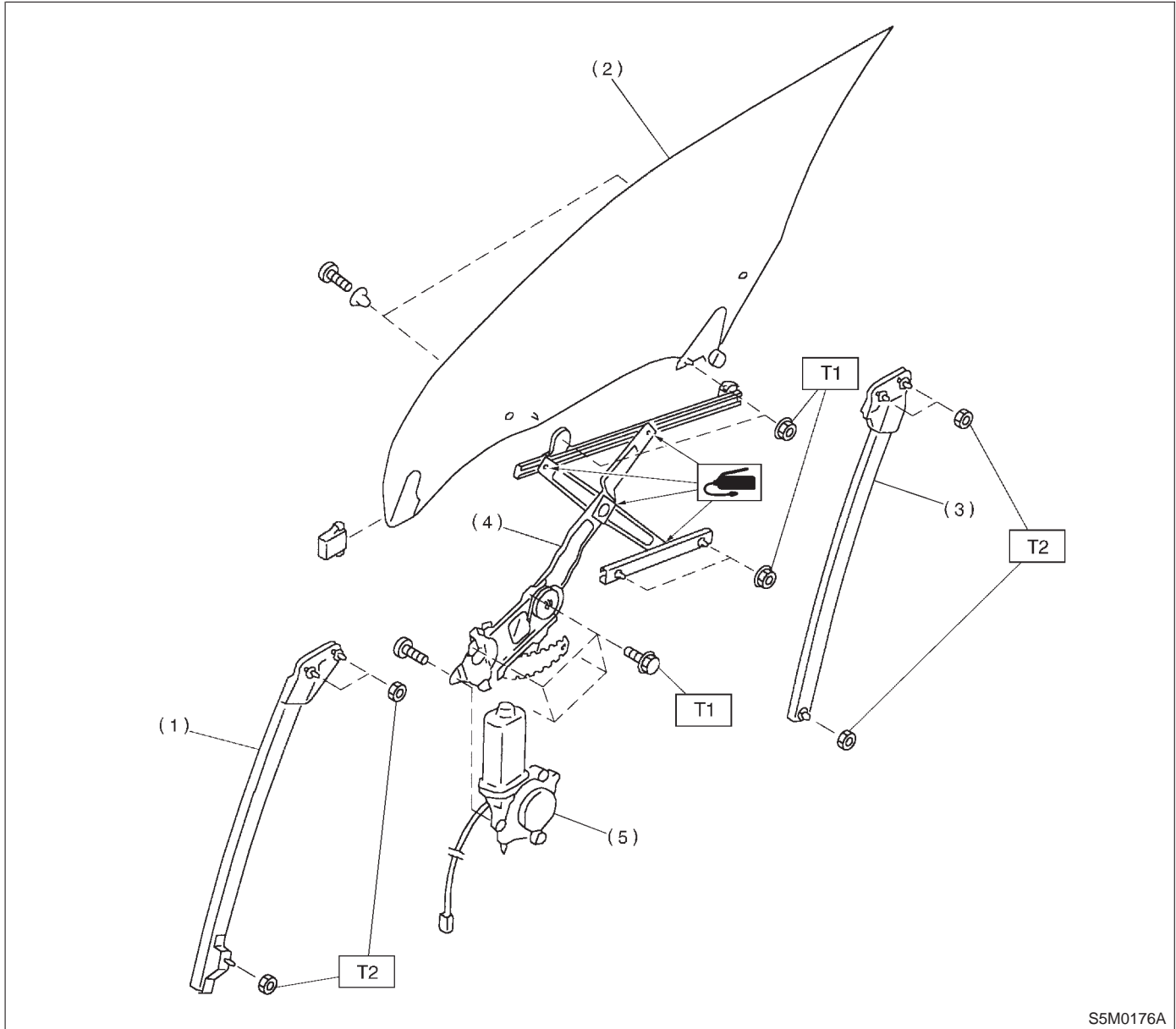
3. Fixed Glass



S5M0175A

- | | | |
|----------------------|---------------------------|--------------------------|
| (1) Windshield glass | (4) Rearview mirror mount | (7) Locate pin |
| (2) Dam rubber | (5) Side molding | (8) Rear quarter garnish |
| (3) Molding | (6) Rear quarter glass | |

4. Front Door Glass

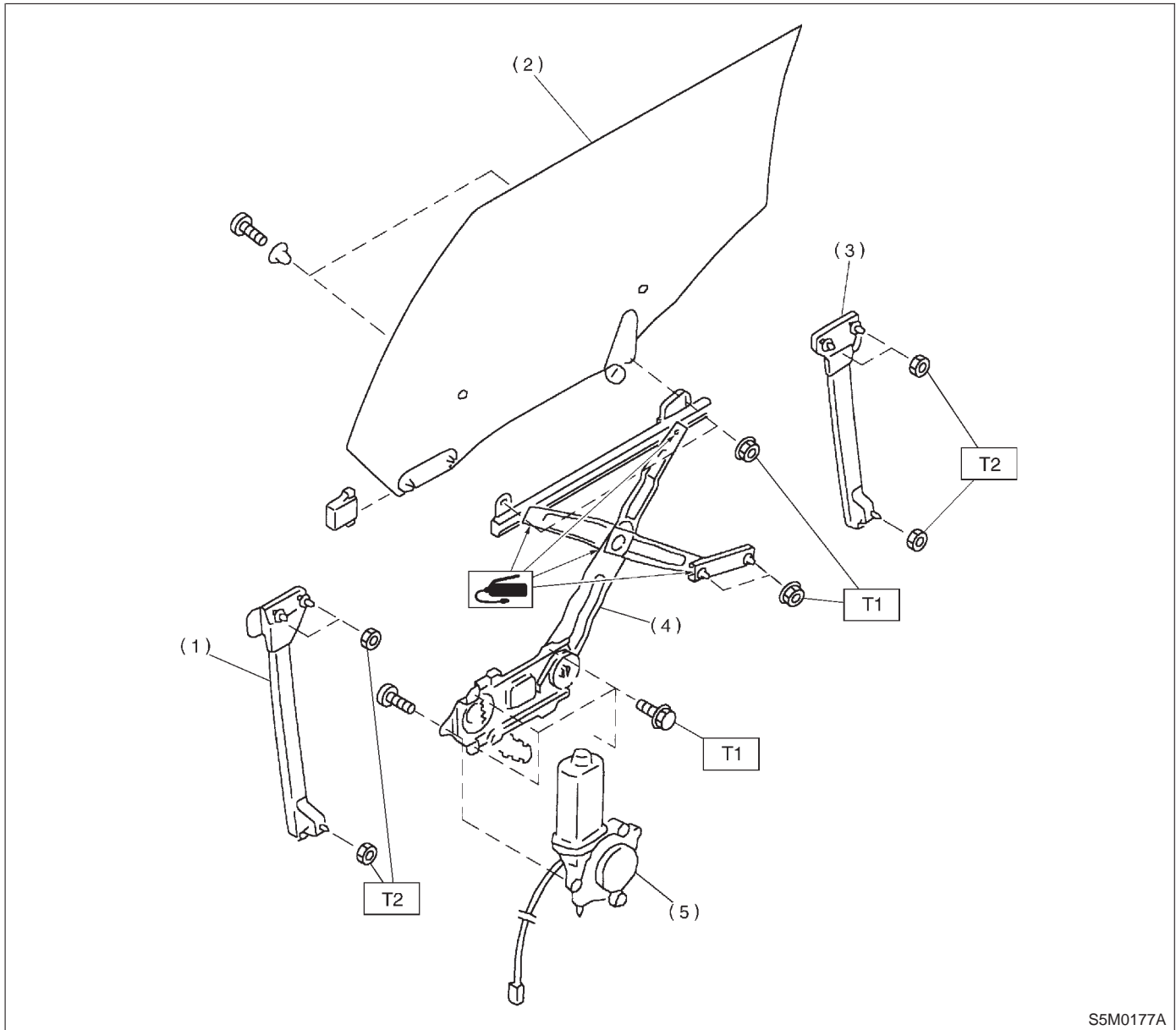


- (1) Door sash (Front)
- (2) Glass
- (3) Door sash (Rear)
- (4) Regulator ASSY

- (5) Motor ASSY

Tightening torque: N-m (kg-m, ft-lb)
T1: 7.4±2.0 (0.75±0.2, 5.4±1.4)
T2: 14±4 (1.4±0.4, 10.1±2.9)

5. Rear Door Glass

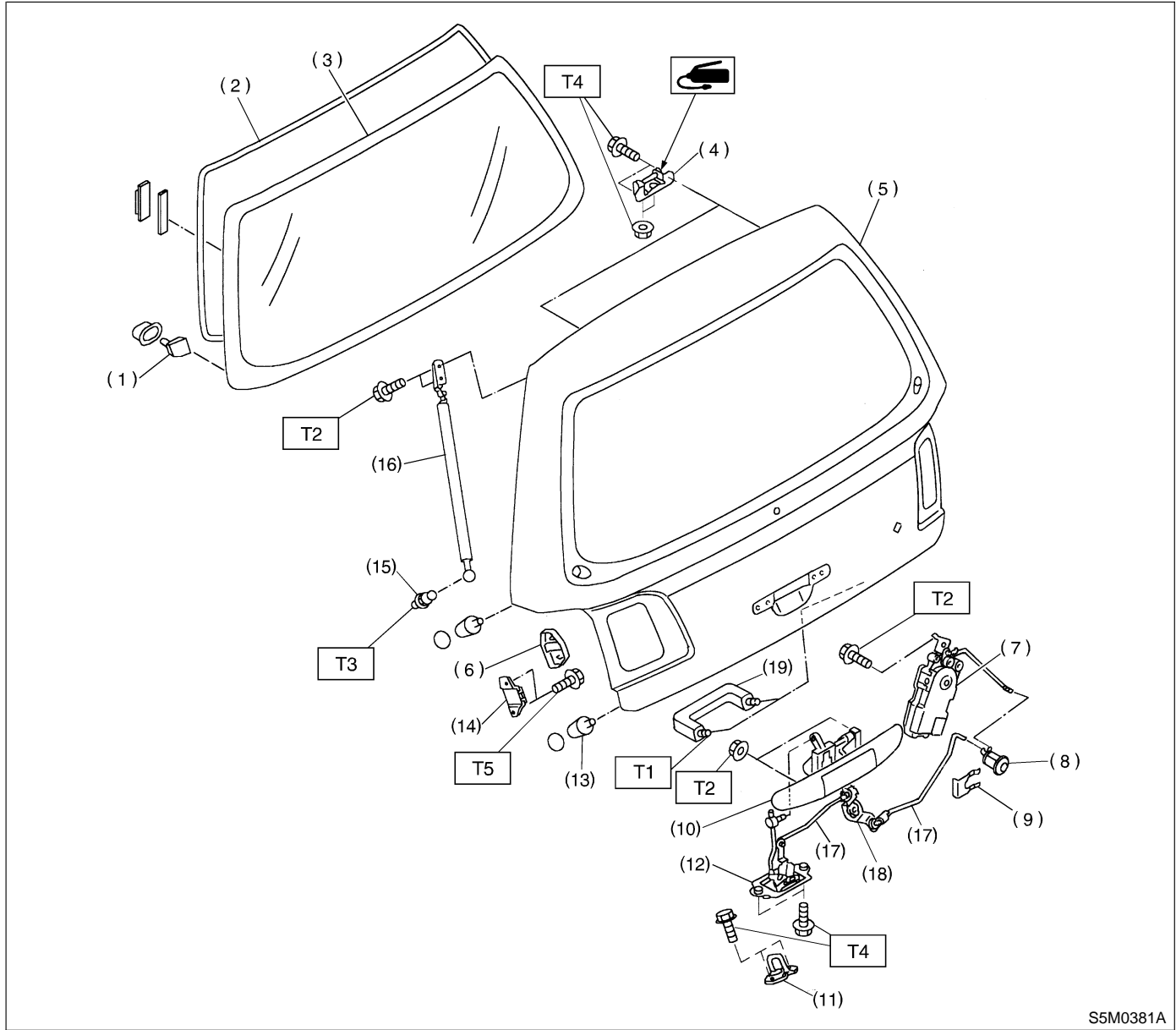


- (1) Door sash (Front)
- (2) Glass
- (3) Door sash (Rear)
- (4) Regulator ASSY

- (5) Motor ASSY

Tightening torque: N-m (kg-m, ft-lb)
T1: 7.4±2.0 (0.75±0.2, 5.4±1.4)
T2: 14±4 (1.4±0.4, 10.1±2.9)

6. Rear Gate and Glass



S5M0381A

- (1) Locate pin
- (2) Dam rubber
- (3) Glass
- (4) Hinge
- (5) Rear gate
- (6) Buffer cover
- (7) Auto-door lock actuator
- (8) Key cylinder
- (9) Clip

- (10) Outer handle
- (11) Striker
- (12) Latch
- (13) Stopper
- (14) Buffer
- (15) Stud
- (16) Gas stay
- (17) Rod
- (18) Link

- (19) Rear gate inner handle

Tightening torque: N·m (kg·m, ft·lb)

T1: 2.0±0.5 (0.2±0.05, 1.4±0.4)

T2: 7.4±2.0 (0.75±0.2, 5.4±1.4)

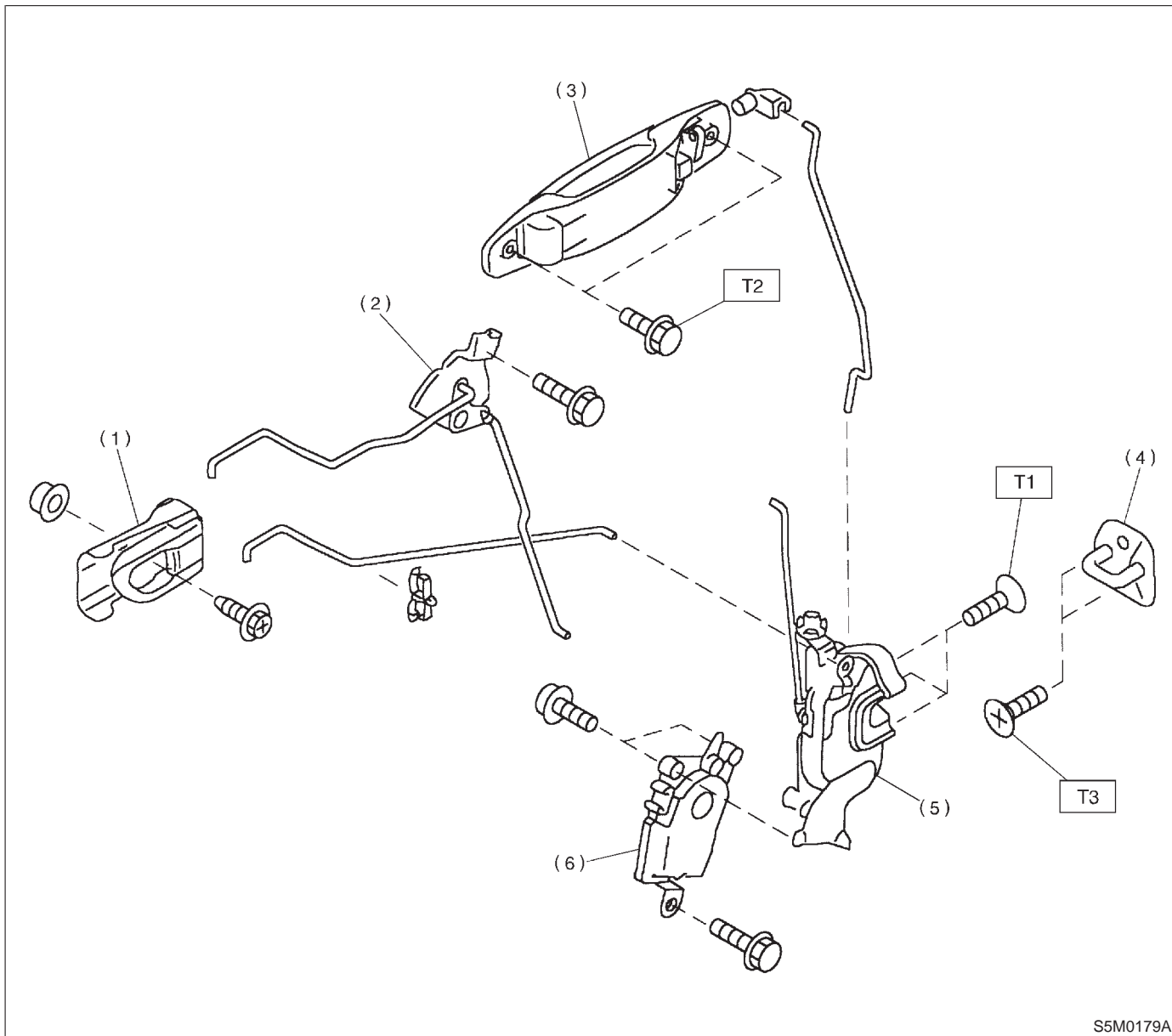
T3: 14±4 (1.4±0.4, 10.1±2.9)

T4: 25±5 (2.5±0.5, 18.1±3.6)

T5: 13±3 (1.3±0.3, 9.4±2.2)

7. Door Lock Assembly

A: FRONT DOOR



S5M0179A

- | | |
|-----------------------|-----------------------------|
| (1) Inner remote ASSY | (5) Door latch |
| (2) Bell crank | (6) Auto-door lock actuator |
| (3) Door outer handle | |
| (4) Striker | |

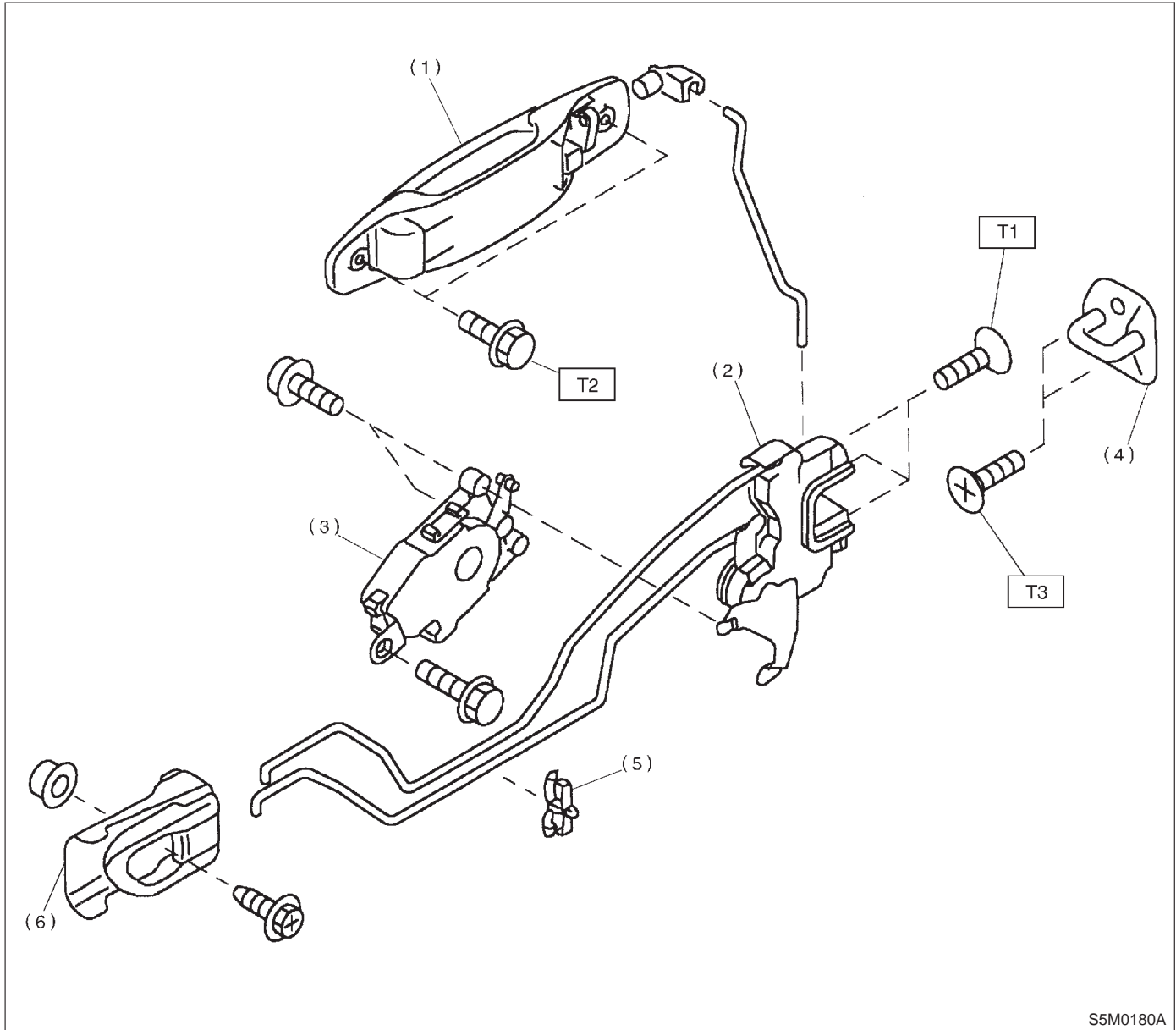
Tightening torque: N·m (kg·m, ft·lb)

T1: 6.4±2.0 (0.65±0.2, 4.7±1.4)

T2: 7.4±2.0 (0.75±0.2, 5.4±1.4)

T3: 18±4 (1.8±0.4, 13.0±2.9)

B: REAR DOOR



- (1) Door outer handle
- (2) Door latch
- (3) Auto-door lock actuator
- (4) Striker

- (5) Rod holder
- (6) Inner remote ASSY

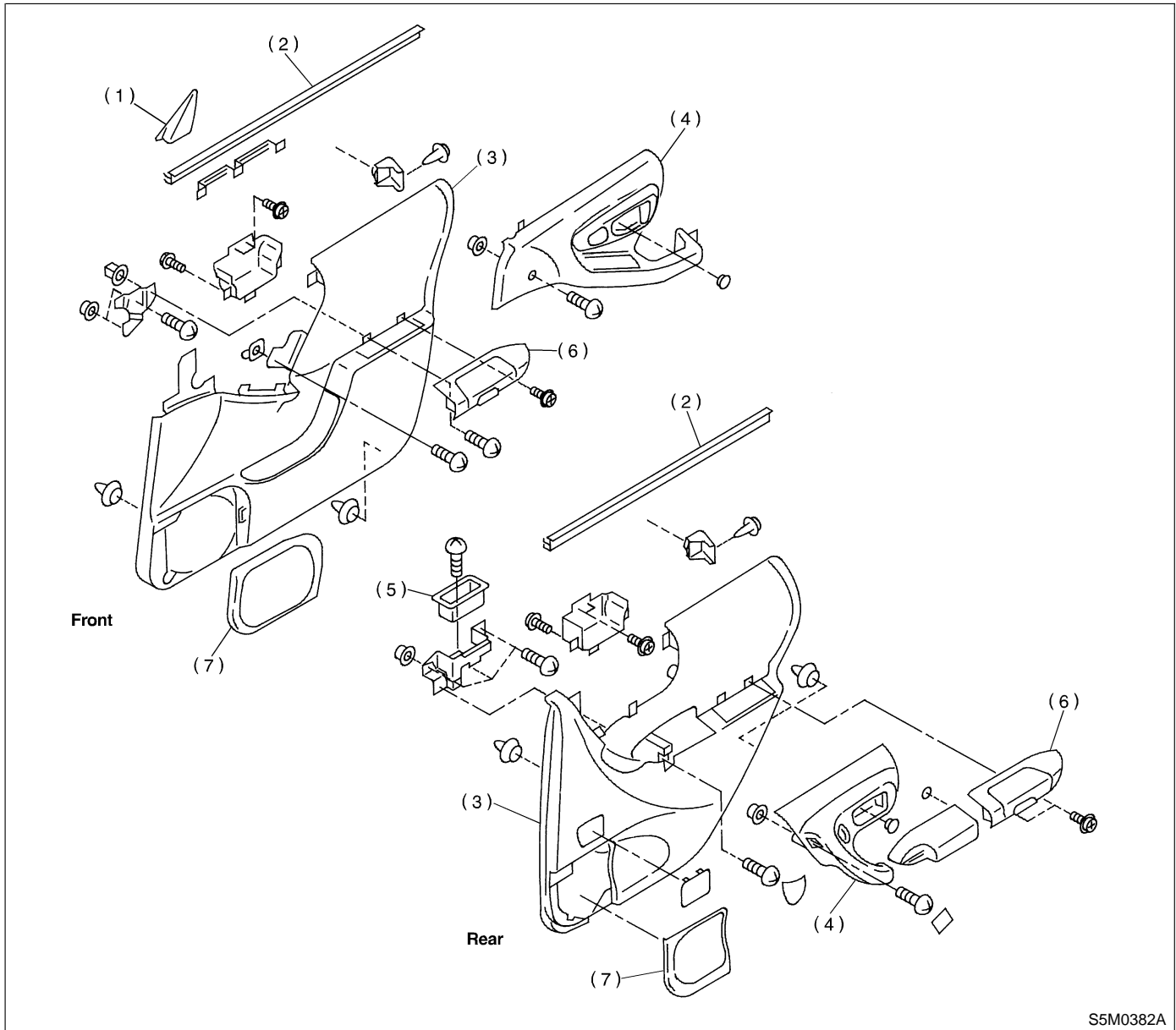
Tightening torque: N·m (kg·m, ft·lb)

T1: 6.4±2.0 (0.65±0.2, 4.7±1.4)

T2: 7.4±2.0 (0.75±0.2, 5.4±1.4)

T3: 18±4 (1.8±0.4, 13.0±2.9)

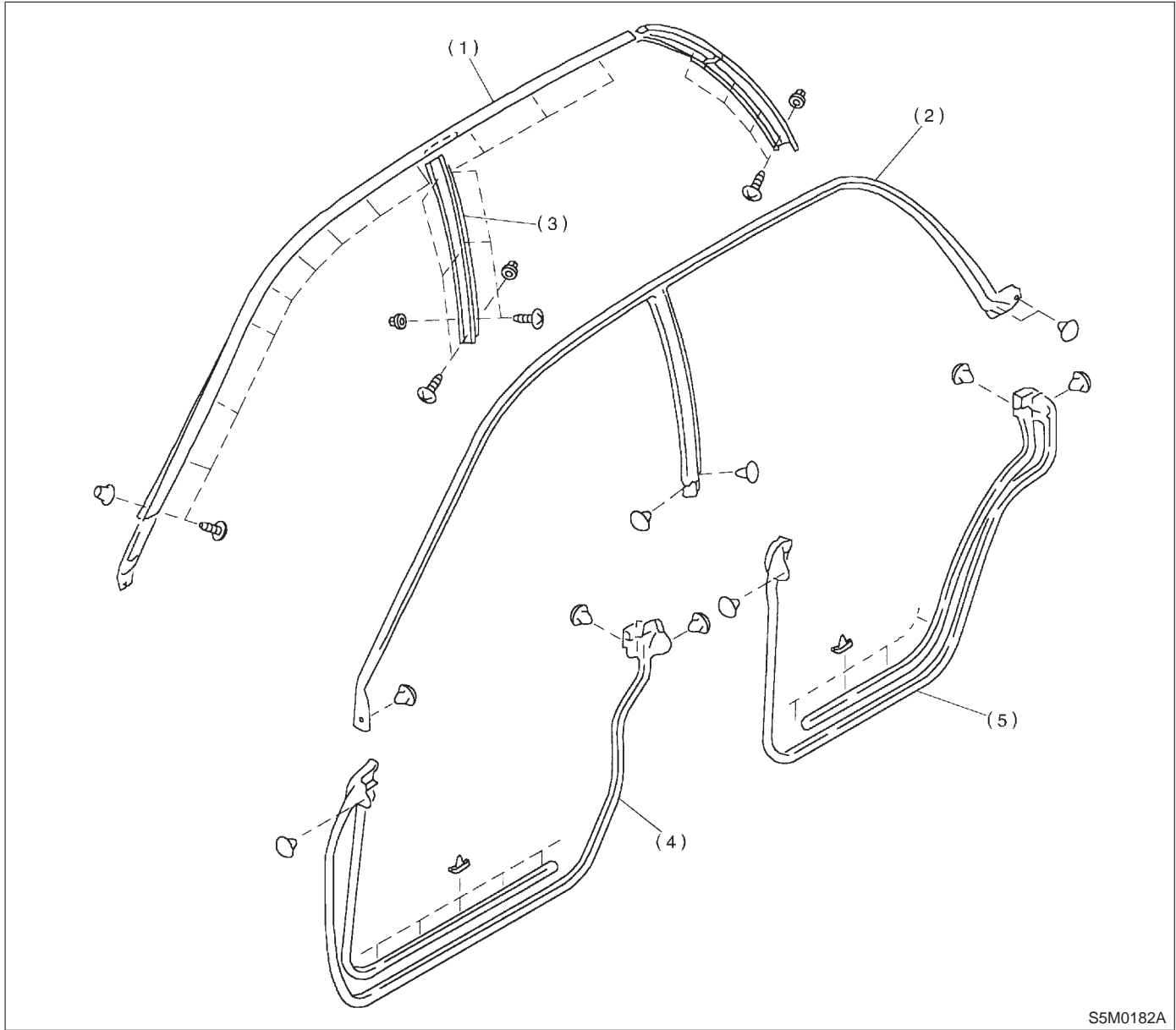
8. Door Trim



S5M0382A

- | | | |
|------------------|-----------------|--------------------|
| (1) Gusset cover | (4) Pull handle | (7) Speaker grille |
| (2) Weatherstrip | (5) Handle | |
| (3) Trim panel | (6) Pocket | |

9. Weatherstrip



S5M0182A

(1) Retainer and molding
(2) Upper and side weatherstrip

(3) Retainer (Center)
(4) Weatherstrip (Front door)

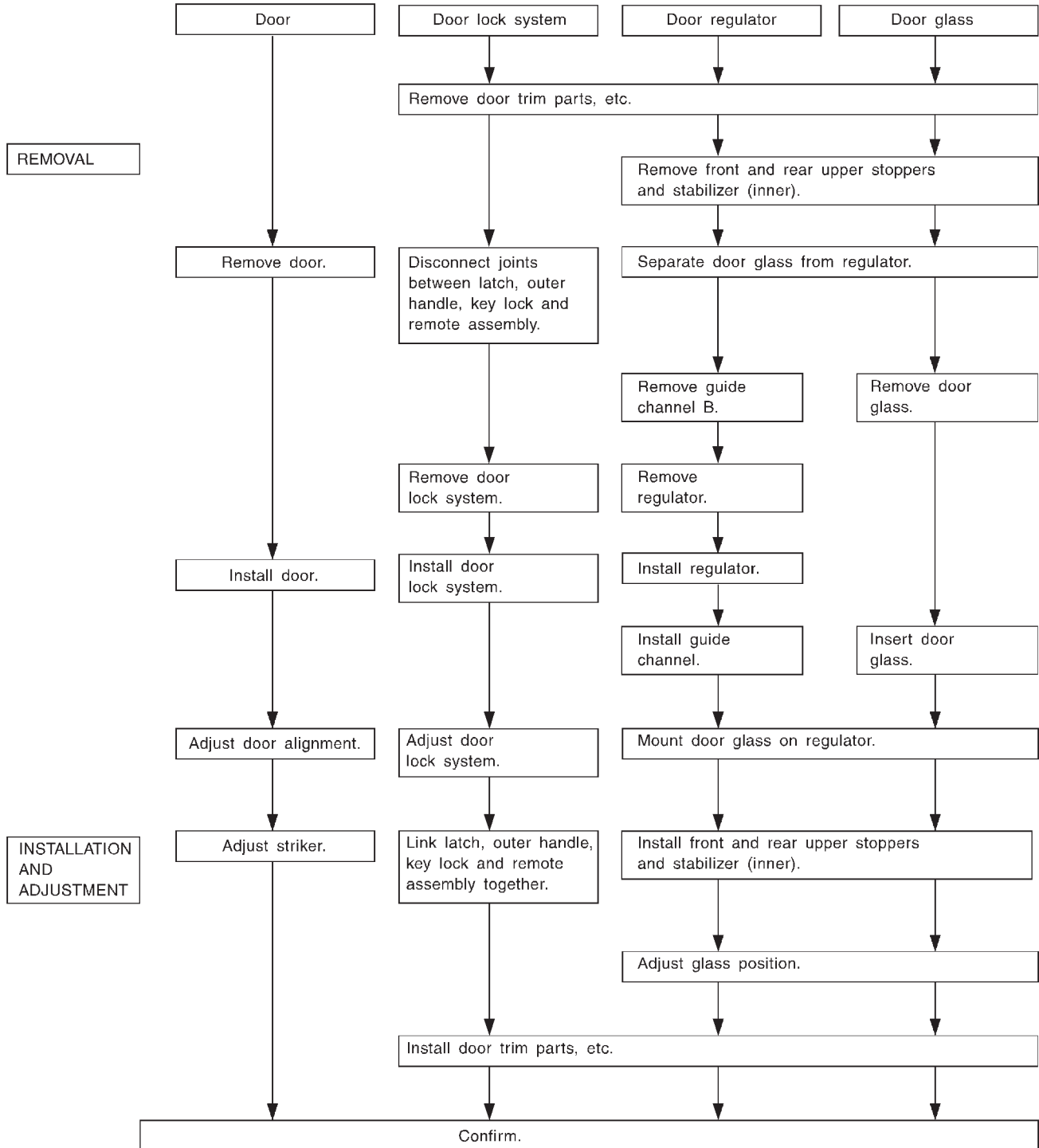
(5) Weatherstrip (Rear door)

1. Door and Related Parts

A: PROCEDURE CHART FOR REMOVING AND INSTALLING

NOTE:

This flowchart shows the main procedures for removing and installing the door and its related parts. For details, refer to the text.

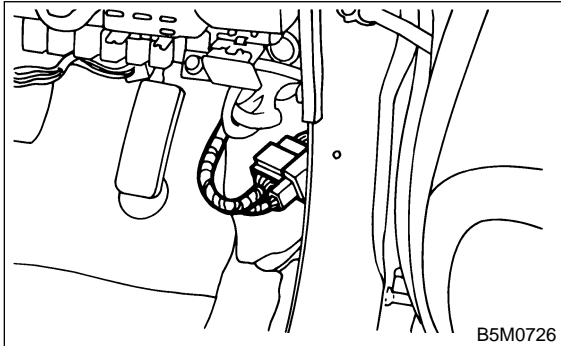


2. Door

A: REMOVAL AND INSTALLATION

1. DOOR ASSEMBLY

1) Remove front pillar lower trim <Ref. to 5-3 [W5A1].> and disconnect connectors from body harness.

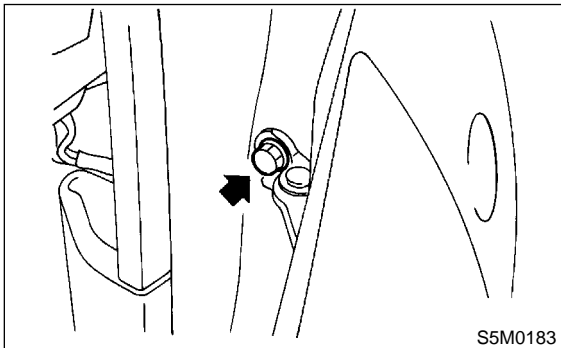


2) Place a cloth or a wood block under door to prevent damage, and support it with a jack.

3) Remove checker bolt.

Tightening torque:

$32 \pm 10 \text{ N}\cdot\text{m}$ ($3.3 \pm 1.0 \text{ kg}\cdot\text{m}$, $23.9 \pm 7.2 \text{ ft}\cdot\text{lb}$)



4) Remove bolts (M8) securing upper and lower hinges to door, and remove door from hinges.

Tightening torque:

$25 \pm 3 \text{ N}\cdot\text{m}$ ($2.5 \pm 0.3 \text{ kg}\cdot\text{m}$, $18.1 \pm 2.2 \text{ ft}\cdot\text{lb}$)

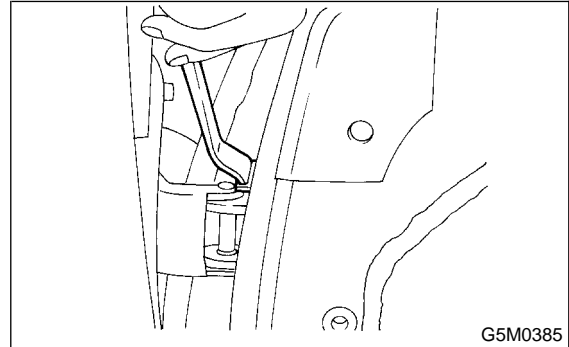
5) Remove hinges by loosening hinges mounting bolt (M8) off of body.

Tightening torque:

$29 \pm 5 \text{ N}\cdot\text{m}$ ($3.0 \pm 0.5 \text{ kg}\cdot\text{m}$, $21.7 \pm 3.6 \text{ ft}\cdot\text{lb}$)

CAUTION:

Work carefully to avoid damaging door.



6) Install in the reverse order of removal.

NOTE:

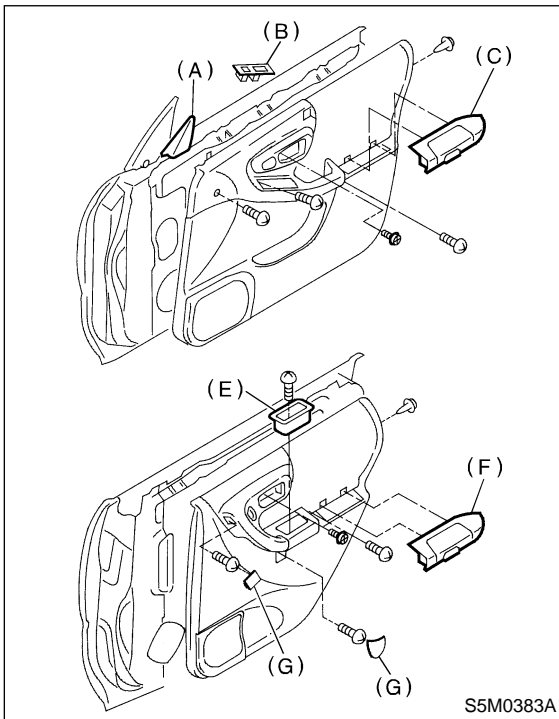
Apply grease to moving parts of door hinges.

2. TRIM PANEL

CAUTION:

Be careful not to break clip by applying undue force.

- 1) Front door trim:
 - (1) Remove gusset cover (A), power window switch assembly (B) and pocket (C).
 - (2) Remove screws and then disengage the clips.
 - (3) Detach trim panel and then disconnect connector.
 - (4) Install in the reverse order of removal.
- 2) Rear door trim:
 - (1) Remove handle (E), pocket (F) and clips (G).
 - (2) Remove screws and then disengage the clips.
 - (3) Detach trim panel and then disconnect connector.
 - (4) Install in the reverse order of removal.

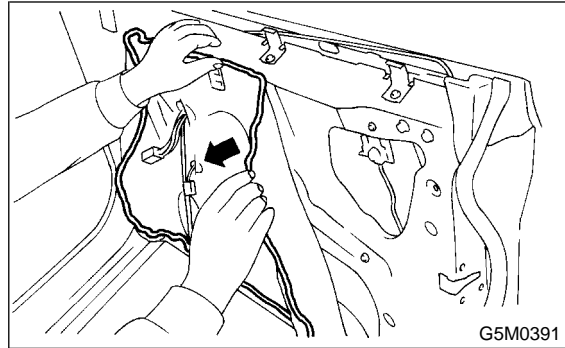


3. SEALING COVER

- 1) Remove trim panel. <Ref. to 5-2 [W2A2].>
- 2) Remove speaker, trim bracket, remote assembly and disconnect connectors.
- 3) Remove sealer with a spatula.

CAUTION:

Be careful because cover may break if sealer is removed forcefully.



- 4) Install in the reverse order of removal.

NOTE:

- Confirm that sealer is properly applied without breaks. Then install sealing cover.
- When repairing or replacing sealing cover, use "CEMEDINE 5430L" as sealer. It may be overlaid on existing sealer.

Sealer:

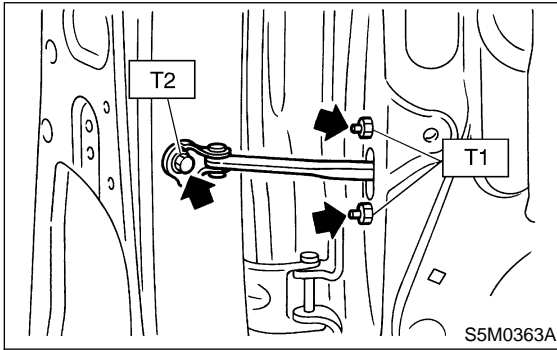
CEMEDINE 5430L

CAUTION:

- Any breaks in sealer can cause water leakage or entry of air and dust. Be sure sealer is applied in a continuous line.
- Make sure sealing cover bonded areas are free from wrinkles or openings.

4. CHECKER

- 1) Completely close door glass.
- 2) Remove trim panel.
- 3) Remove sealing cover.
- 4) Remove attaching bolt to body.
- 5) Loosen two nuts securing checker, and take out checker through access hole in underside.



- 6) Install in the reverse order of removal.

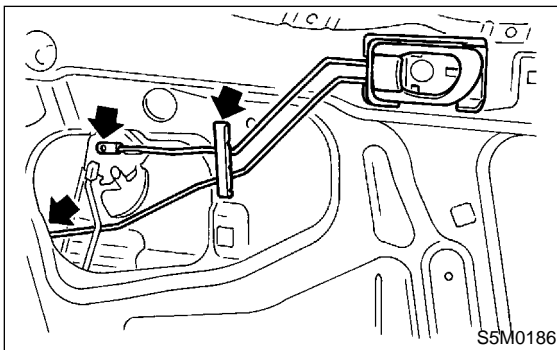
Tightening torque:

T1: 7.5±2.0 N·m (0.75±0.2 kg·m, 5.4±1.4 ft·lb)

T2: 32±10 N·m (3.3±1.0 kg·m, 23.9±7.2 ft·lb)

5. INNER REMOTE

- 1) Remove trim panel.
- 2) Remove sealing cover.
- 3) Disconnect joints of two rods.
- 4) Unlatch rod holder.
- 5) Remove inner remote assembly.



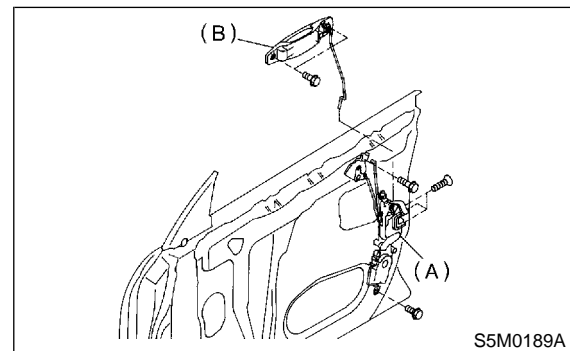
- 6) Install in the reverse order of removal.

NOTE:

If rear door is equipped with child safety lock, check that child lock lever moves without dragging.

6. DOOR LATCH AND OUTER HANDLE

- 1) Completely close door glass.
- 2) Remove door trim panel.
- 3) Remove inner remote assembly.
- 4) Remove sealing cover around latch service hole.
- 5) Remove latch and actuator assembly (A):
 - (1) Turn rod holder to disconnect joint between key lock and rod.
 - (2) Turn rod holder to disconnect joint between outer handle and rod.
 - (3) Turn rod holder to disconnect joint between crank and rod.
 - (4) Loosen screws securing both latch and actuator, then remove latch and actuator assembly through service hole in bottom.



- (5) Install in the reverse order of removal.

Tightening torque (screw):

6.4±2.0 N·m (0.65±0.2 kg·m, 4.7±1.4 ft·lb)

NOTE:

- Check operation of each part.
- Check each sliding part for proper lubrication.

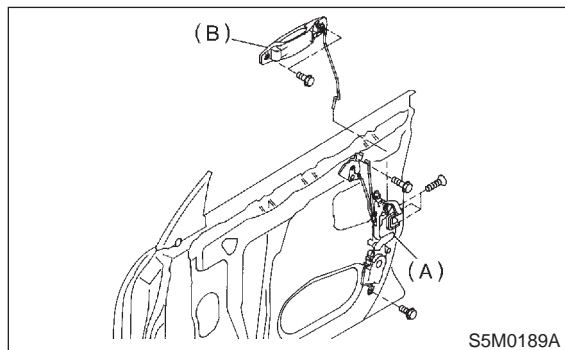
CAUTION:

After installation, be sure lock mechanism operates normally.

- 6) Remove outer handle (B):
 - (1) Remove trim panel.
 - (2) Remove sealing cover.
 - (3) Loosen bolts securing outer handle and then remove outer handle from outside.

CAUTION:

Be careful not to damage door.



- (4) Install in the reverse order of removal.

Tightening torque:

$7.4 \pm 2.0 \text{ N}\cdot\text{m}$ ($0.75 \pm 0.2 \text{ kg}\cdot\text{m}$, $5.4 \pm 1.4 \text{ ft}\cdot\text{lb}$)

7. KEY LOCK

- 1) Remove trim panel.
- 2) Remove sealing cover.
- 3) Completely close door glass.
- 4) Remove outer handle.
- 5) Loosen spring securing key lock.
- 6) Remove key lock from outer handle.
- 7) Install in the reverse order of removal.

8. GUSSET

- 1) Be sure window is all the way down.
- 2) Remove gusset cover.
- 3) Remove trim panel.
- 4) Remove door rearview mirror.
- 5) Remove outer weatherstrip.
- 6) Remove sealing cover.

NOTE:

Be careful not to drop nuts inside the door.

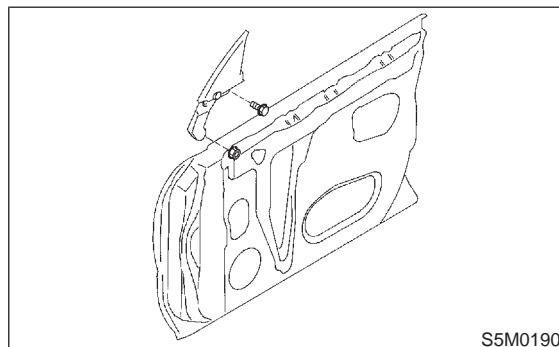
- 7) Remove bolts and nuts which secure gusset.

Tightening torque: Bolt

$13 \pm 3 \text{ N}\cdot\text{m}$ ($1.3 \pm 0.3 \text{ kg}\cdot\text{m}$, $9.4 \pm 2.2 \text{ ft}\cdot\text{lb}$)

Tightening torque: Nut

$7.4 \pm 2.0 \text{ N}\cdot\text{m}$ ($0.75 \pm 0.2 \text{ kg}\cdot\text{m}$, $5.4 \pm 1.4 \text{ ft}\cdot\text{lb}$)



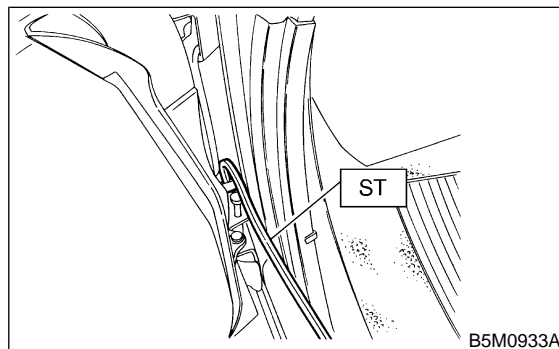
- 8) Lift out gusset.
- 9) Install in the reverse order of removal.

B: ADJUSTMENT

1. DOOR ASSEMBLY

- 1) Using ST, loosen bolts securing upper and lower hinges to body, and adjust fore-and-aft and vertical alignment of door.

ST 925610000 DOOR HINGE WRENCH



- 2) Loosen screw one complete rotation, and adjust opening/closing direction of door using a hammer covered with a cloth.

CAUTION:

Be careful not to damage striker.

Hinge tightening torque (body side):

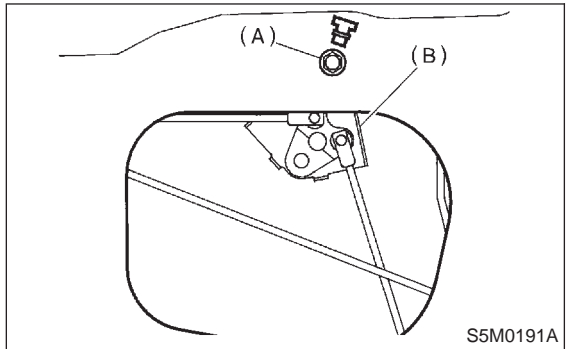
$29 \pm 5 \text{ N}\cdot\text{m}$ ($3.0 \pm 0.5 \text{ kg}\cdot\text{m}$, $21.7 \pm 3.6 \text{ ft}\cdot\text{lb}$)

Striker tightening torque:

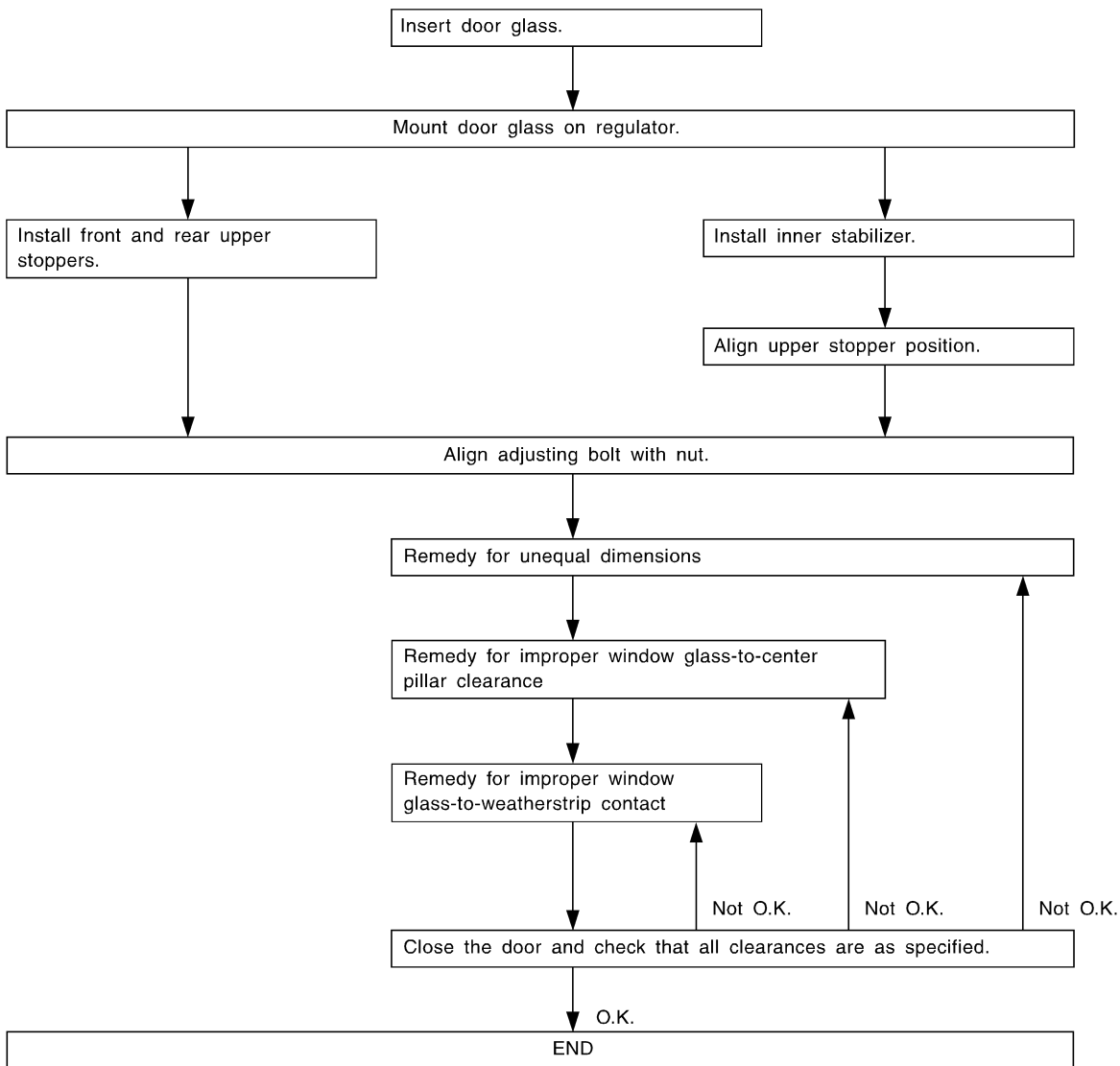
$18 \pm 4 \text{ N}\cdot\text{m}$ ($1.8 \pm 0.4 \text{ kg}\cdot\text{m}$, $13.0 \pm 2.9 \text{ ft}\cdot\text{lb}$)

2. INNER REMOTE

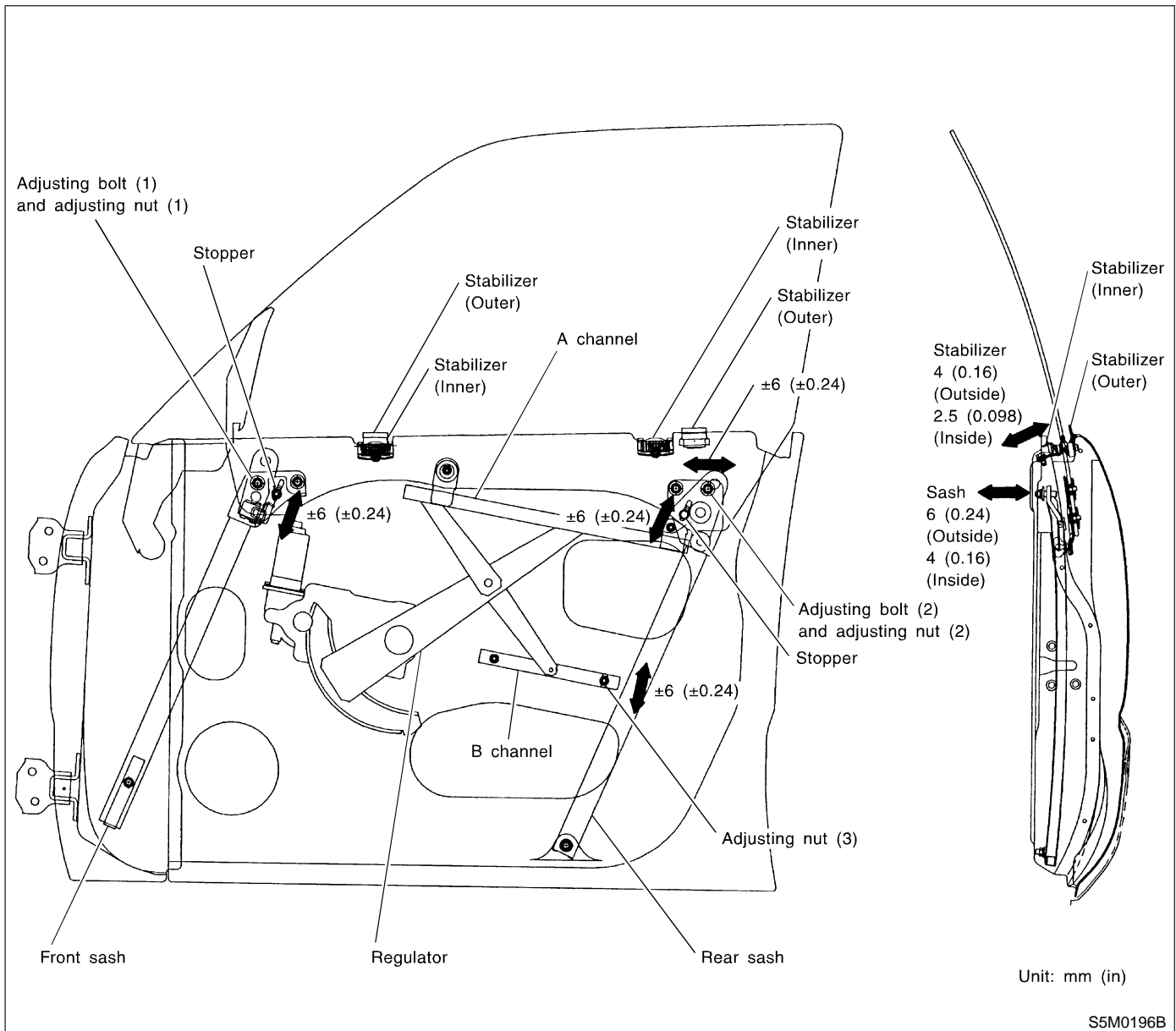
- 1) Lock the door.
- 2) Loosen bolt (A).
- 3) Lower bell crank (B) and then tighten bolt (A).



3. PROCEDURE CHART FOR ADJUSTING DOOR GLASS



4. FRONT DOOR GLASS



● Door glass fit adjustment

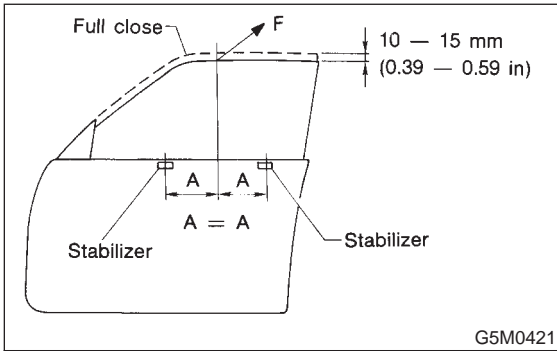
Before adjusting door glass alignment, ensure adjusting bolts for stabilizers, upper stoppers and sashes are loose and glass is raised so that it is in contact with upper and side weatherstrip.

- 1) Temporarily tighten one of the two rear sash adjusting bolts, at midpoint of oblong hole on inner panel.
- 2) Temporarily tighten regulator B channel at a position slightly lower than midpoint of oblong hole on inner panel.
- 3) Lower door glass 10 to 15 mm (0.39 to 0.59 in) from fully closed position. While applying outward pressure (load) to upper edge of glass above midpoint of two outer stabilizers, push in inner stabilizer to glass with 10 ± 5 N (1.0 ± 0.5 kg, 2.2 ± 1.1 lb) force, then secure it.

Load: F

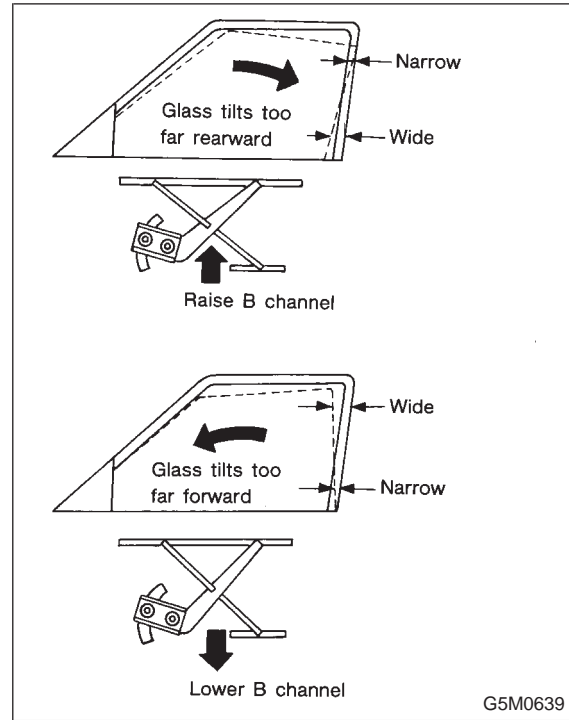
Front door glass 44.1 ± 4.9 N (4.5 ± 0.5 kg, 9.9 ± 1.1 lb)

Rear door glass 44.1 ± 4.9 N (4.5 ± 0.5 kg, 9.9 ± 1.1 lb)



● Remedy for unequal dimensions, between upper, lower and center pillar sides

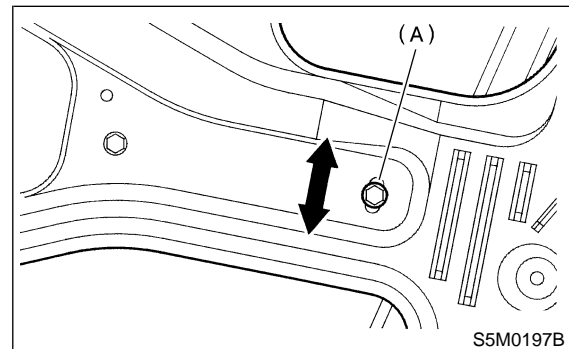
- 1) Close front door and raise door glass.
- 2) Check for unequal dimensions.



- 3) If glass tilts too far rearward, loosen adjusting nut (3) (A) and adjust glass to be parallel with center pillar, then after adjustment, tighten adjusting nut (3).

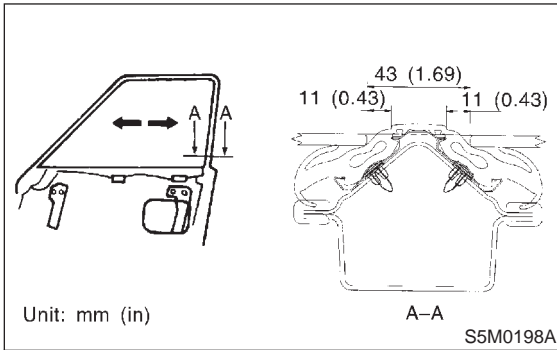
Tightening torque:

7.4 ± 2.0 N-m (0.75 ± 0.2 kg-m, 5.4 ± 1.4 ft-lb)

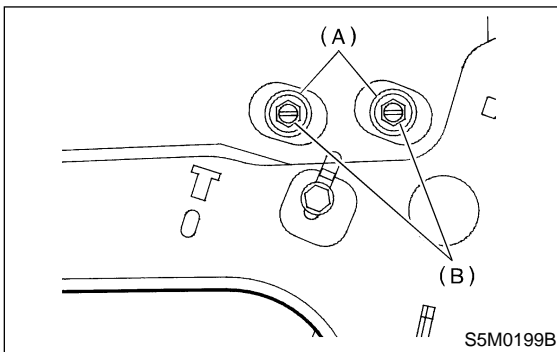


● Remedy for improper glass-to-center pillar clearance

- 1) Close front door and raise door glass.
- 2) Check for improper clearance.

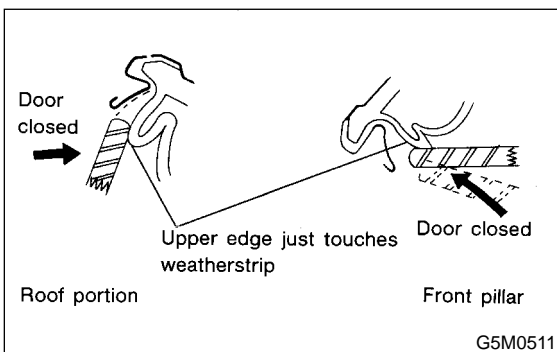


- 3) If clearance is improper, loosen adjusting nut (2) (A), adjusting bolt (2) (B) and adjust glass to center pillar.



● Remedy for improper upper stop point of door glass

- 1) Loosen front and rear sash stoppers.
- 2) Increase the upward travel of window glass up to the position where upper edge just touches weatherstrip surface with door closed.



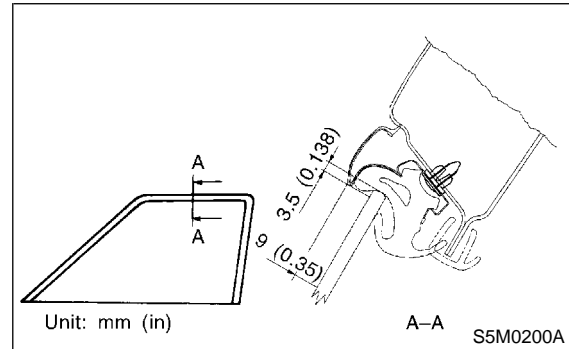
- 3) After adjustment, temporarily tighten stoppers.

NOTE:

Make sure that each glass stopper is touching.

● Remedy for incorrect contact of door glass to weatherstrip

- 1) Close front door and raise door glass.
- 2) If clearance is below specifications, loosen adjusting bolt (2) and adjusting bolt (1).
- 3) If clearance is over specifications, tighten adjusting bolt (2) and adjusting bolt (1).



● Fit adjustment

Door glass fit is adjusted by displacing the glass front edge with a stabilizer.

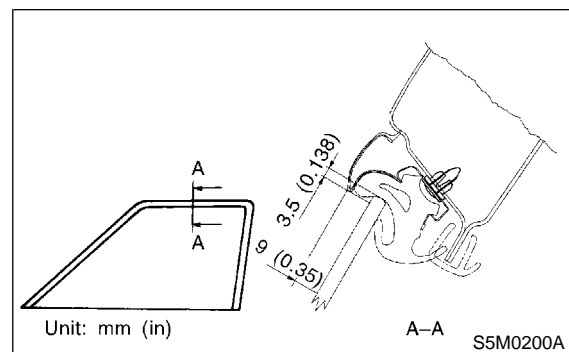
NOTE:

Before adjusting glass fit, visually check to determine relative adjusting positions of retainer and molding (on roof side) and glass surface.

- 1) Alternately adjust the two rear sash adjusting bolts (2) until dimensions are obtained.

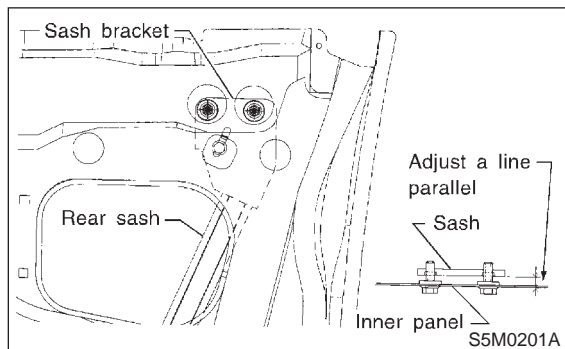
CAUTION:

Do not loosen the two adjusting nuts (2) at the same time, as this moves sash fore and aft, creating unequal glass-to-sash clearance. During adjustment, loosen only one nut and keep the other tightened.



NOTE:

Always adjust the two rear sash adjusting bolts (2) by the same amount. Do not adjust the adjusting bolts with the sash bracket inclined toward the inner panel, as this increases effort required to operate the regulator.



2) Adjust the front sash fit using the rear sash adjustment procedure outlined in the former procedure as a guide. The two adjusting bolts must be adjusted by the same amount.

NOTE:

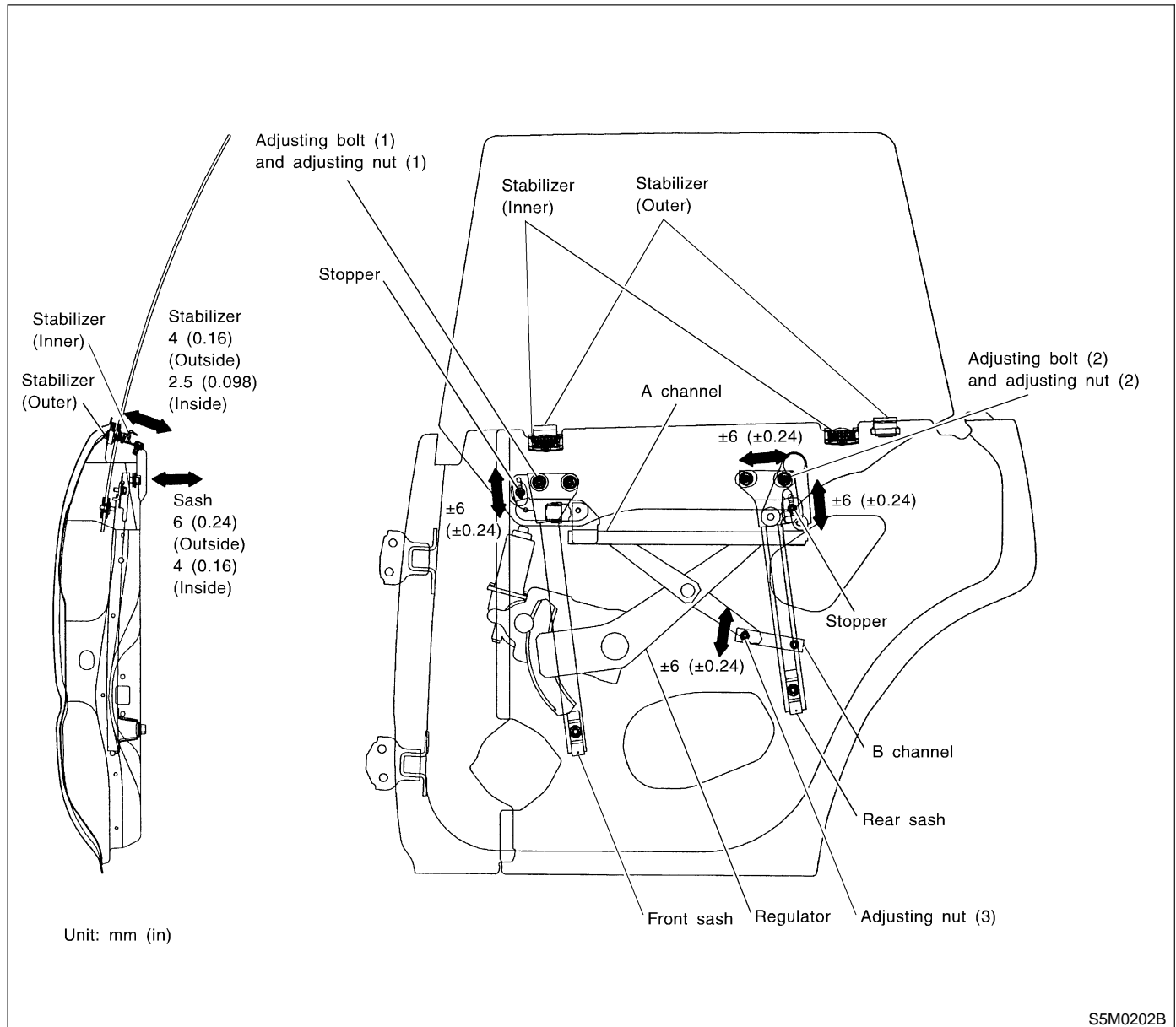
- Front and rear sash adjustment procedures are basically the same; however, the amount of adjustment is not always the same due to alignment dispersion of individual doors.

- Adjust front and rear sash fit, as equally as possible. Otherwise, effort required to operate regulator may increase.

3) After adjusting front sash-to-glass fit, secure front sash.

5. REAR DOOR GLASS

Alignment of rear door glass is basically the same as for the front door glass. Due to slight difference in adjustment dimensions for fore-aft, up-down, and in-out alignments, key points for rear door adjustment are described.

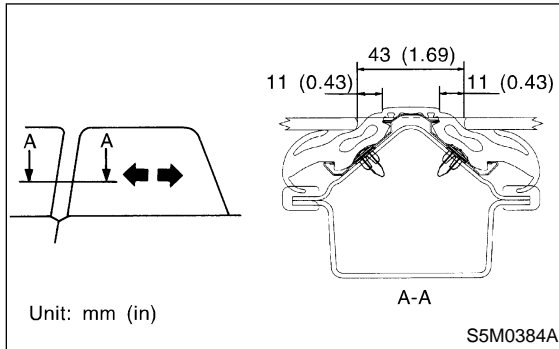


● Fore-aft adjustment

1) Door glass alignment must be adjusted so that glass-to-center pillar fit is equal at all points. Always use dimensions as a guide during adjustment.

NOTE:

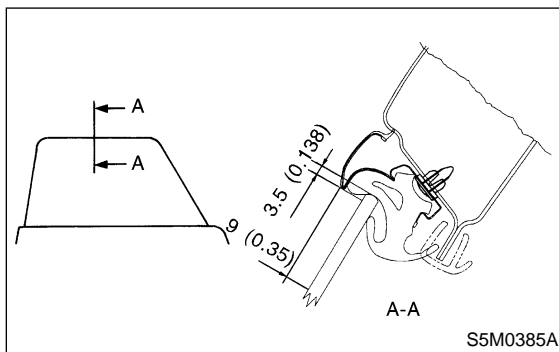
If dimensions are smaller than those indicated, glass will be caught in weatherstrip and may not raise to the fully closed position.



2) After making fore-aft adjustment, raise and lower glass to ensure it is free from any binding.

● Fit adjustment

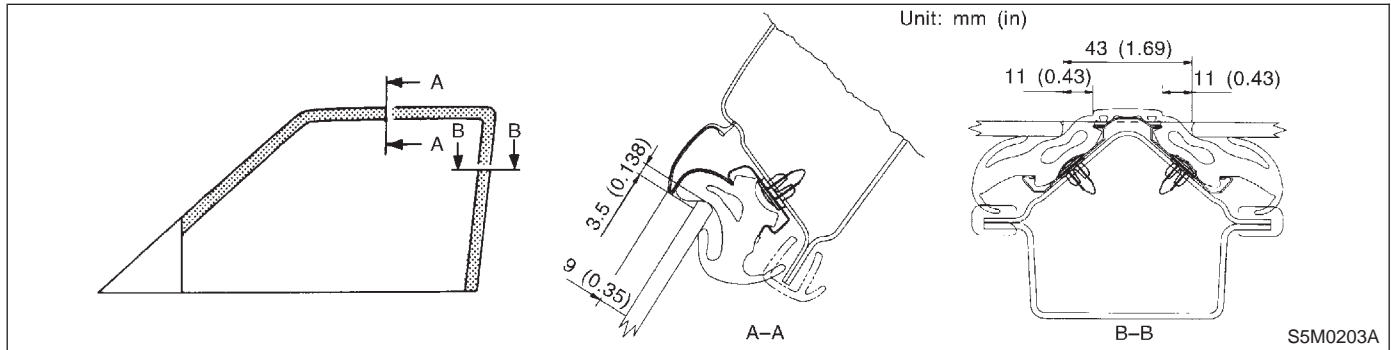
Increasing contact pressure causes rear door glass to be caught in upper center pillar and lower weatherstrip; this will cause premature weatherstrip wear. For this reason, always use dimensions indicated below as a guide during glass fit adjustment.



C: INSPECTION

1. FRONT DOOR GLASS

1) Close front door and check all clearances.



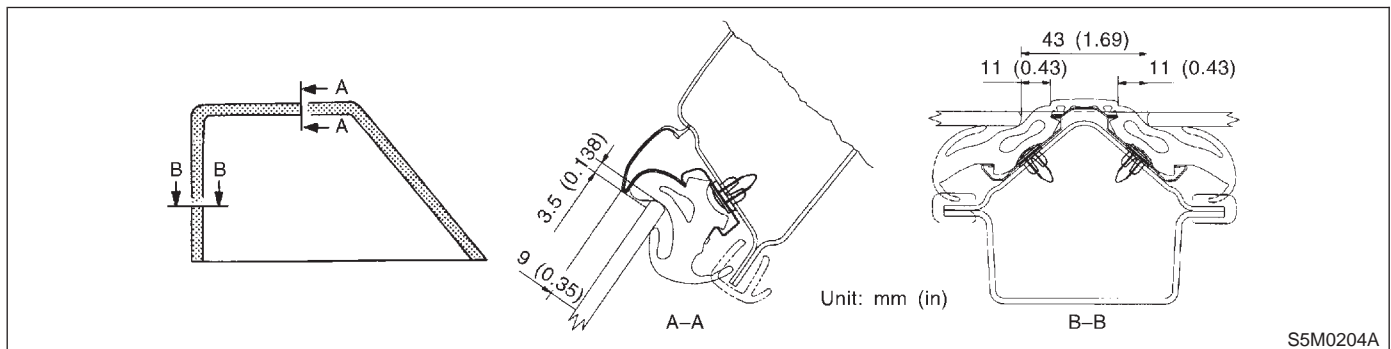
2) If any clearance is not correct, adjust affected parts. Re-check that all clearances are correct.

CAUTION:

- Repeatedly adjust parts until all clearances are correct.
- After clearance adjustment, make sure that all adjusting bolts and nuts are tightened.

2. REAR DOOR GLASS

1) Close rear door and check all clearances.



2) If any clearance is not correct, adjust affected parts. Re-check that all clearances are correct.

CAUTION:

- Repeatedly adjust parts until all clearances are correct.
- After clearance adjustment, make sure that all adjusting bolts and nuts are tightened.

3. Rear Gate

A: REMOVAL AND INSTALLATION

CAUTION:

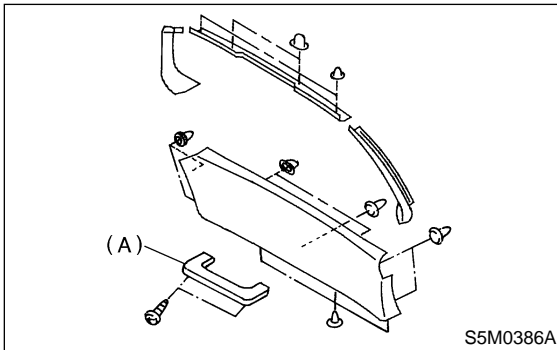
- Be careful not to scratch coated surfaces of vehicle body and window glass during removal. Place a cloth over the affected area.
- Be careful not to damage trim panels.
- Use an assistant when handling heavy parts.
- Be careful not to damage or lose small parts.

1. REAR GATE ASSEMBLY

- 1) Remove rear gate inner handle (A) from rear gate and then detach trim panel.

CAUTION:

Be careful not to damage clips or their holes.



- 2) Disconnect connectors and terminal.
- 3) Disconnect rear washer hose from wiper motor.
- 4) If disconnected harness is re-used, tie connector with a string and place on the upper side of rear gate for ready use.

CAUTION:

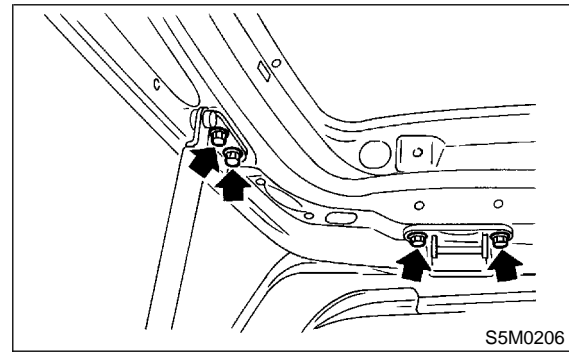
Do not forcefully pull cords, lead wires, etc. since damage may result; carefully extract them in a wavy motion while holding connectors.

- 5) Remove both rubber ducts and then extract washer hose and harness connector.
- 6) Gas stay:
 - (1) Completely open rear gate.
 - (2) Remove bolts which hold gas stay to rear gate.

CAUTION:

- Be careful because rear gate drops while removing bolts. Have an assistant support it while removing bolts.
- Be sure to place a folded cloth between rear gate and body to prevent scratches.

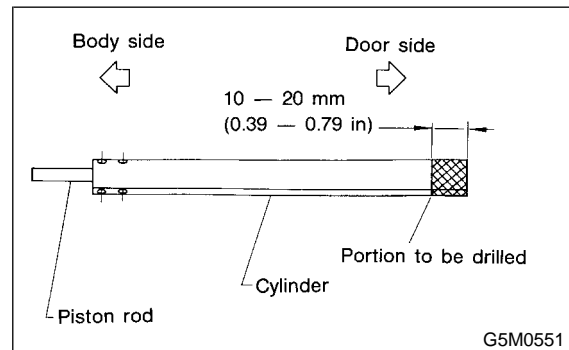
- 7) Remove the bolts which hold rear gate to hinge and then detach rear gate.



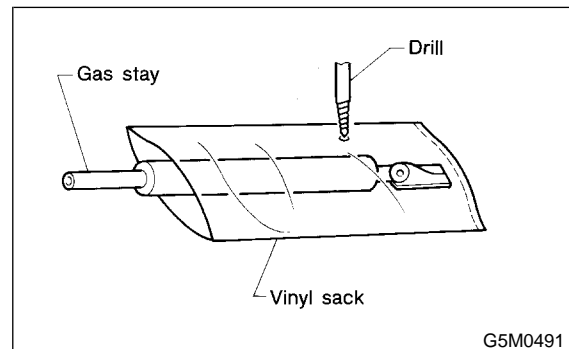
- 8) General precautions in handling rear gate gas stay are as follows.

CAUTION:

- Do not attempt to disassemble gas stay because its cylinder is filled with gas.
- Before discarding gas stay, place it at a slight angle with the cylinder body side facing up and drill a 2 to 3 mm (0.08 to 0.12 in) dia. hole to completely discharge the content. (Gas is odorless, colorless and harmless; however, metal powder may come out of the hole.)



- It is good practice to place a vinyl sack over it before drilling the hole because oil may spurt out. Be careful to prevent the vinyl cover from becoming entangled on the drill.



- Be careful not to scratch the exposed section of piston rod or allow oil or paint to come in contact with it.

- Do not attempt to rotate the extended piston rod.

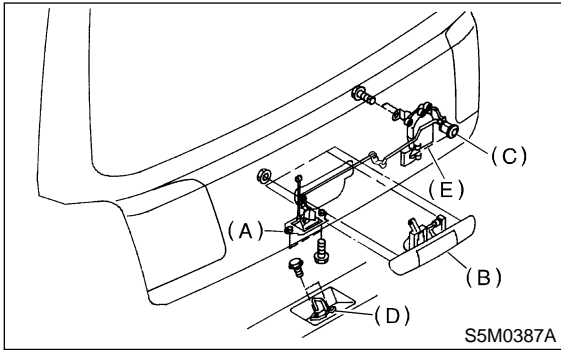
9) Install in the reverse order of removal.

CAUTION:

- Be careful not to mistake RH and LH body side buffers.
- Be sure to add sealer to hinge.
- When installing rear gate, be careful not to damage coating on body and rear gate.

2. LATCH

- 1) Remove trim panel. <Ref. to 5-2 [W3A1].>
- 2) Disengage rod (latch to link) from latch (A).
- 3) Disengage rod (latch to outer handle) from outer handle (B).
- 4) Remove bolts from latch (A).



- 5) Disconnect rear gate switch connector from latch (A).
- 6) Detach latch.
- 7) Install in the reverse order of removal.

CAUTION:

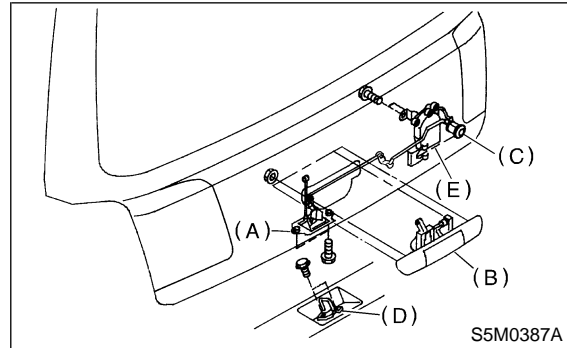
Firmly join latch with rod (to key cylinder) and outer handle.

3. OUTER HANDLE

- 1) Remove trim panel. <Ref. to 5-2 [W3A1].>
- 2) Disconnect rod (latch to outer handle) from outer handle (B).
- 3) Remove the four nuts used to hold outer handle (B) to the inside of rear gate, and detach outer handle.

CAUTION:

Be careful not to damage packing when removing outer handle.



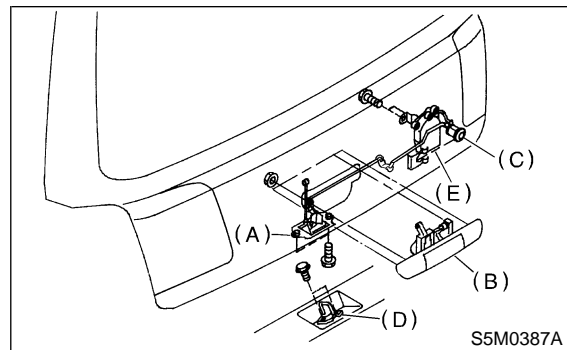
- 4) Install in the reverse order of removal.

CAUTION:

Completely insert latch pin into handle lever.

4. KEY CYLINDER

- 1) Remove trim panel. <Ref. to 5-2 [W3A1].>
- 2) Remove actuator (E).
- 3) Disengage rod from key cylinder (C).
- 4) Remove retaining spring from key cylinder (C), and detach key cylinder from outside.

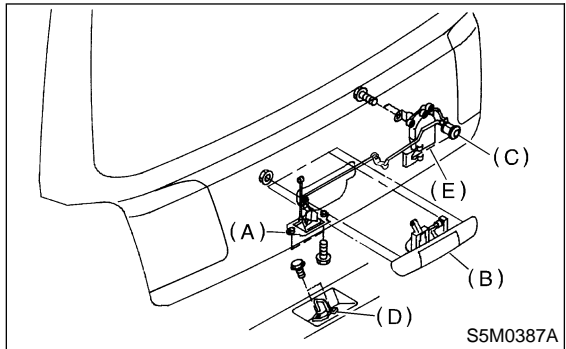


- 5) Install in the reverse order of removal.

3. Rear Gate

5. STRIKER

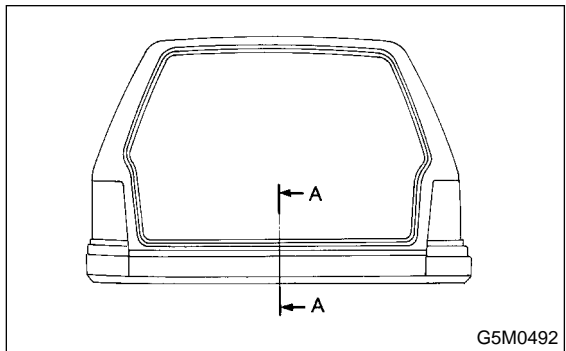
- 1) Remove rear skirt trim.
- 2) Remove the two bolts from striker (D) and detach striker.



- 3) Install in the reverse order of removal.

6. WEATHERSTRIP

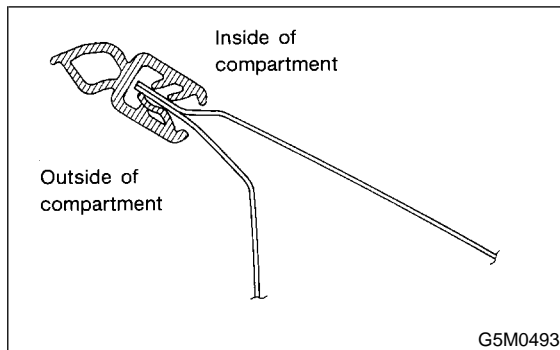
- 1) Place weatherstrip so that its joints meet at lower center of vehicle body, and install by inserting flanged portion from below, as shown in section A—A in the figure.



- 2) Tap along entire length with a rubber hammer to firmly insert body flange into weatherstrip.

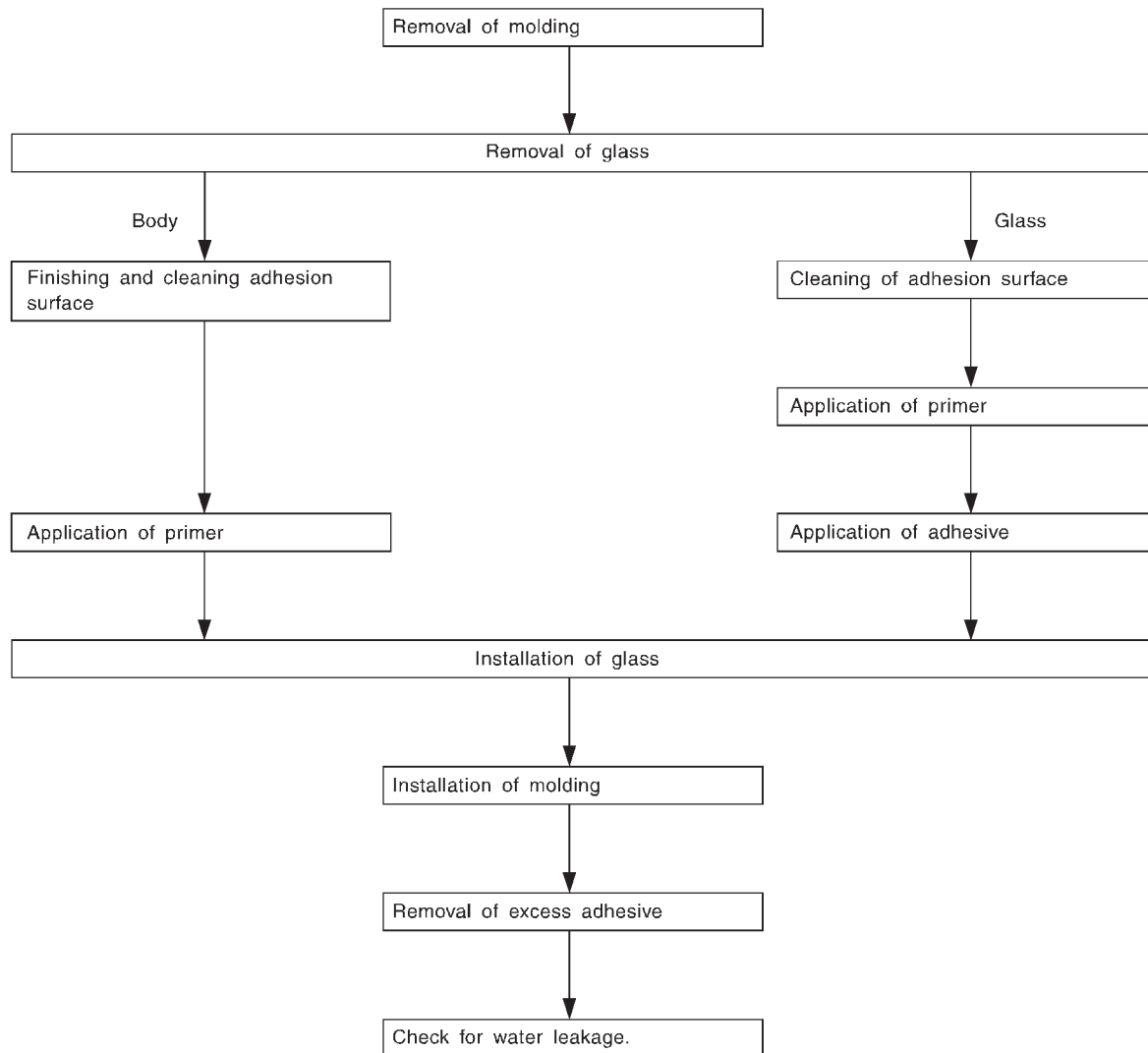
CAUTION:

- Be careful not to install in wrong direction.
- Install weatherstrip carefully and firmly.



4. Procedure Chart for Removal and Installation of Window Glass

A: REMOVAL AND INSTALLATION



H5M0914A

1. MATERIALS REQUIRED FOR APPLICATION

| Description | Remarks |
|--|--|
| Repair adhesive set ● Cartridge of single liquid urethane adhesive ● Primer for glass and body | Sunstar No. 580 or Essex Chemical Corp's Urethane E Sunstar No. 435-580 |
| Windshield knife or piano wire | For cutting windshield. |
| Sealant gun | For applying adhesive. |
| Suction cups | For holding glass. |
| Putty knife | For finishing adhesion surface and cutting spacer. |
| Sponge | For applying primer. |
| Gauze or cloth | For cleaning. |
| Alcohol or white gasoline | For cleaning adhesion surface. |
| Tape | For preventing damage to painted surface. |

5. Windshield

A: REMOVAL

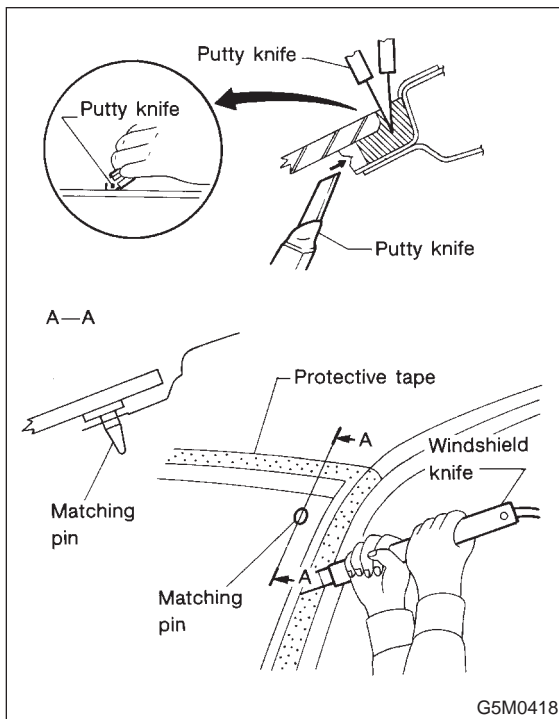
1. USING WINDSHIELD KNIFE

The following procedure for the front windshield can also be applied to other window glass.

- 1) Remove wiper arm and cowl panel.
- 2) Remove front side molding and upper front molding.
- 3) Remove glass:
 - (1) Put protective tape on body to prevent damage.
 - (2) Apply soapy water to the surface of the adhesive agent so the knife blade slides smoothly.
 - (3) Cut off excess adhesive agent.
 - (4) Put windshield knife into layer of adhesive.
 - (5) Cut adhesive layer with the windshield knife.

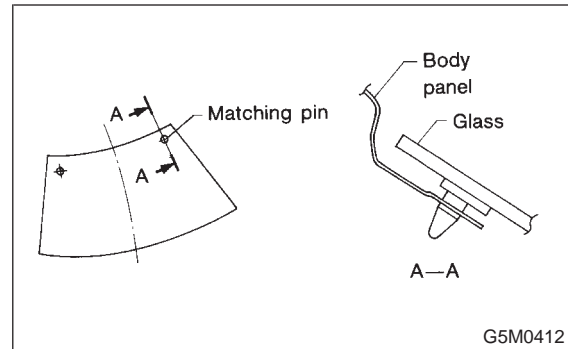
CAUTION:

- Keep knife edge along glass surface and end face.
- When first putting knife into layer of adhesive, select point with wide gap between body and glass.



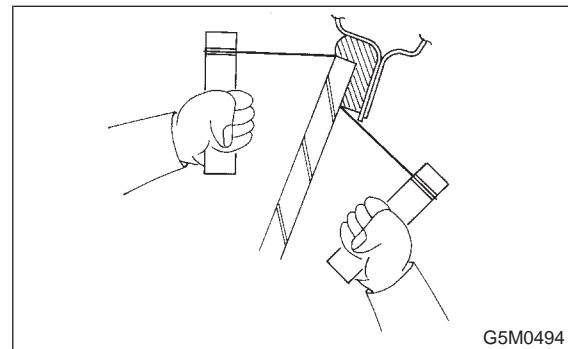
NOTE:

A matching pin is cemented to corners of glass on compartment side.
Use a piano wire when cutting each pin.



2. USING PIANO WIRE

- 1) Remove wiper arm and cowl panel.
- 2) Remove roof molding and upper front window molding.
- 3) Remove glass:
 - (1) Put protective tape on body to prevent damage.
 - (2) Using drill or putty knife, make through-hole (one place) in adhesive agent.
 - (3) Pass piano wire through the hole from inside the compartment, and connect both ends of wire securely to wooden blocks.



- (4) Cut adhesive layer with the wire by pulling it back and forth.

CAUTION:

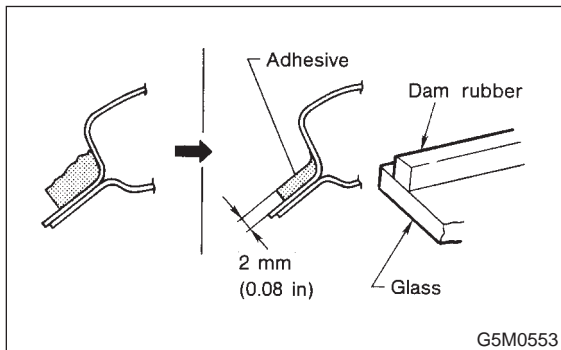
When making through-hole into adhesive layer and cutting the adhesive, be careful not to damage interior and exterior parts.

B: INSTALLATION

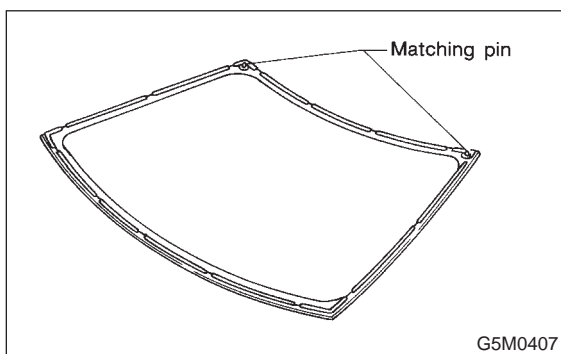
- 1) After cutting layer of adhesive, remove dam rubber remaining on body.
- 2) Finishing adhesion surface on body side:
Using a cutter knife etc., cut layer of adhesive sticking firmly to body, and finish it to a smooth surface of about 2 mm (0.08 in) in thickness.

CAUTION:

Take extra care not to cause damage to body paint.



- 3) Cleaning body surface:
 - (1) Thoroughly remove chips, dirt and dust from body surface.
 - (2) Clean body wall surface and upper surface of layer of adhesive with a solvent such as alcohol or white gasoline.
- 4) Positioning glass:
 - (1) Mount glass on body.
 - (2) Adjust position of glass so that gap between body and glass is uniform on all sides.
 - (3) Put matching pin on body and glass in several places.

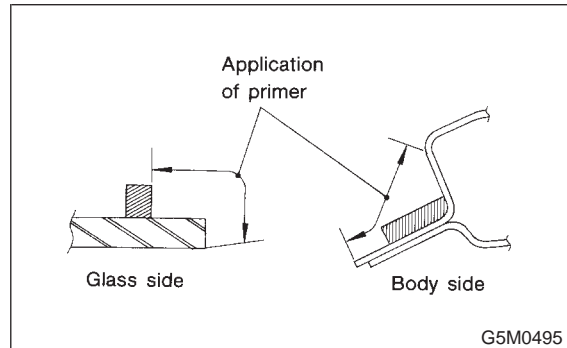


- 5) Cleaning glass:
 - (1) Dismount glass from body.
 - (2) Clean surface of glass to be adhered with alcohol or white gasoline.

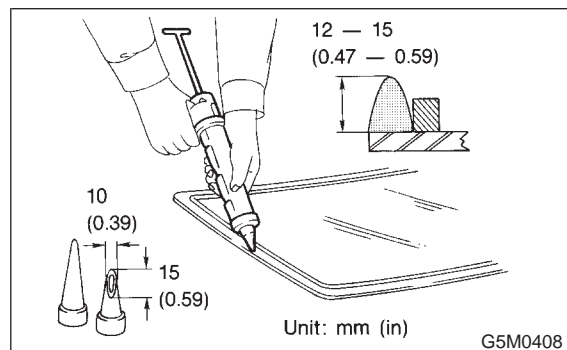
- 6) Application of primer:
 - (1) Using a sponge, apply primer to part of glass to be adhered.
 - (2) Apply primer to part of body to be adhered.

CAUTION:

- Primer is hard to wipe off of body paint, instrument panel, inner trim, etc. So put masking around these areas for protection.
- After application, let 1st primer dry naturally for about 10 minutes.
- Do not touch primer-coated surface under any circumstances.

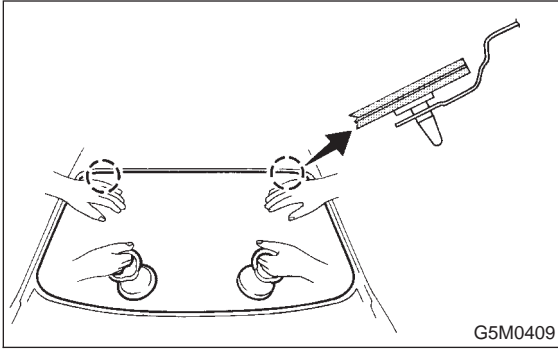


- 7) Application of adhesive:
 - (1) Cut nozzle tip of cartridge as shown in figure.

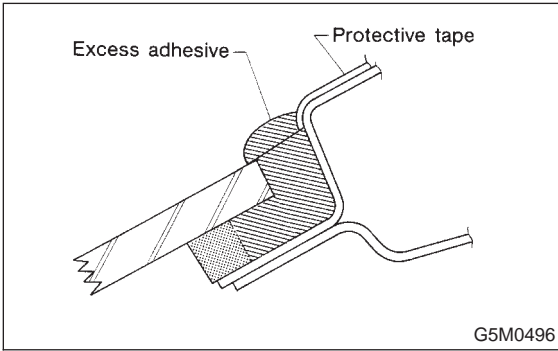


- (2) Open cartridge and put it into a gun with nozzle attached.
- (3) Apply adhesive uniformly to all sides of adhesion surface while operating gun along glass end face.

- 8) Installation of glass:
 (1) Hold glass with rubber suction cups.
 (2) Mount glass on body with matching pin aligned.

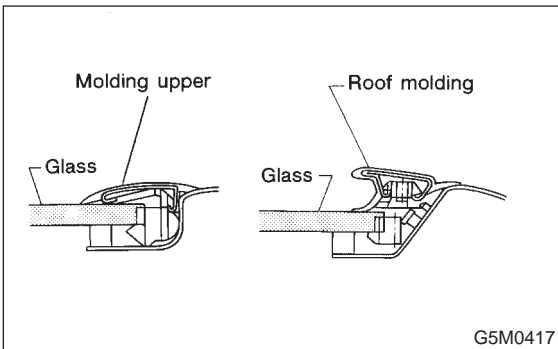


- (3) Stick them fast by pressing all sides lightly.
 9) Installation of molding:
 (1) Remove adhesive overflowing from outside of glass until it becomes level with outer height of glass. Then, add adhesive to portions that need it, and clean with alcohol or white gasoline.



- (2) Firstly, press-fit upper front window molding and lastly, roof molding.

CAUTION:
 Do not open and close door after moldings have been installed. When opening and closing door for unavoidable reasons, lower door glass and gently move door.



- 10) Water leakage test:
 Test for water leakage about one hour after installation.

CAUTION:
 ● Move vehicle very gently.
 ● Do not squirt strong hose stream on vehicle.

- 11) Natural drying:
 After completing all operations, leave vehicle alone for 24 hours.

CAUTION:
 When delivering vehicle to user, tell him or her that vehicle should not be subjected to heavy shock for at least three days.

- 12) Install cowl panel and wiper arm.

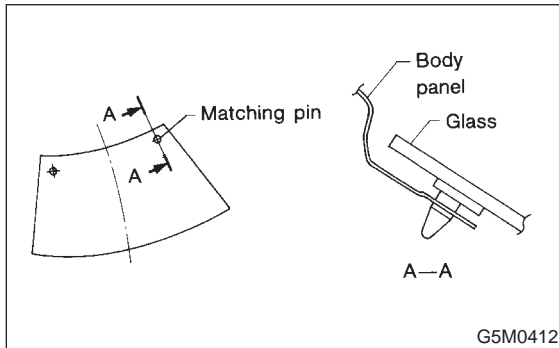
6. Rear Gate Glass

A: REMOVAL

- 1) Remove rear wiper and rear gate trim.
- 2) Disconnect connector from rear defogger terminal.
- 3) Remove glass in the same manner as windshield.

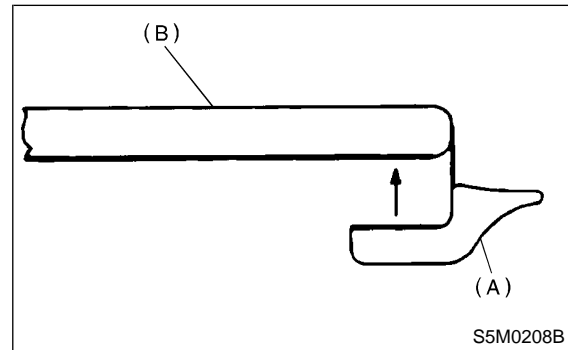
NOTE:

A matching pin is cemented to corners of the glass on the compartment side. Use a piano wire when cutting each pin.

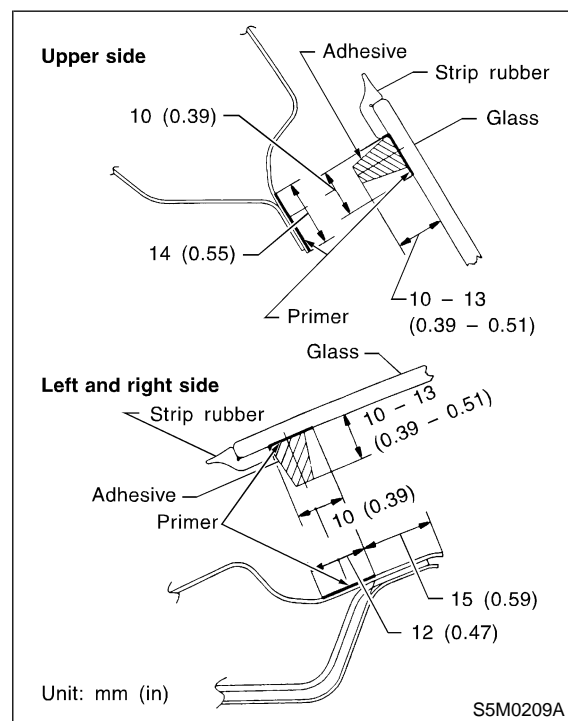


B: INSTALLATION

- 1) Install a new rubber strip (A) by aligning it with the end of the rear gate glass (B).



- 2) Install glass in the same manner as windshield.

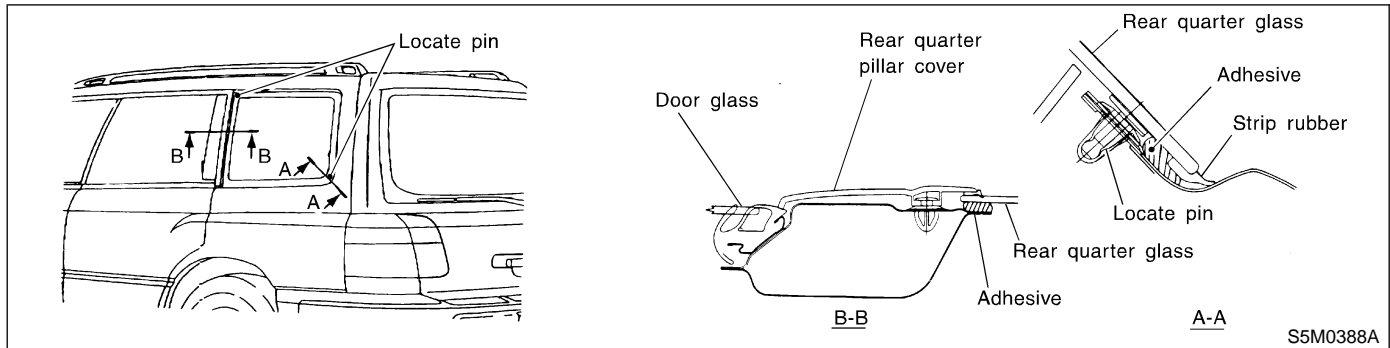


- 3) About one hour after installation, test for water leakage. Leave vehicle for 24 hours before using it.
- 4) Connect rear defogger connections.
- 5) Install rear gate trim and rear wiper.

7. Rear Quarter Glass

A: REMOVAL

- 1) Remove rear quarter molding on corner.
- 2) Remove glass in the same manner as windshield.

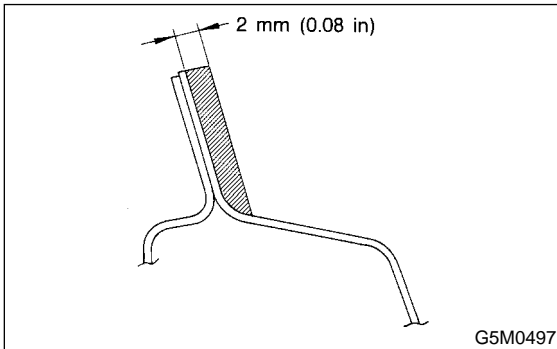


B: INSTALLATION

- 1) Finish surface of adhesive layer on body:
Using a putty knife, etc., cut layer of adhesive stick firmly to body and finish it into a smooth surface of about 2 mm (0.08 in) in thickness.

CAUTION:

Be careful not to damage body finish.



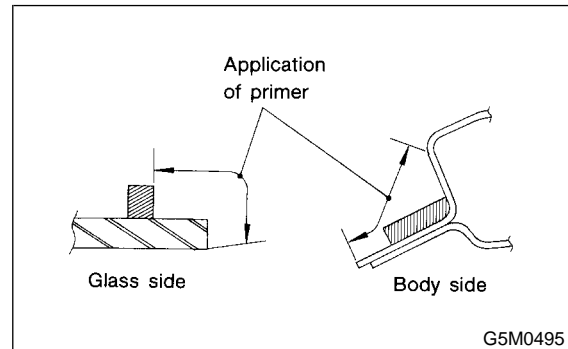
- 2) Cleaning of body surface:
 - (1) Remove chips, dirt and dust from body surface.
 - (2) Clean body wall surface and upper surface of adhesive layer with a solvent such as alcohol or white gasoline.
- 3) Cleaning glass:
 - (1) Remove dirt and dust from surface of glass to be adhered.
 - (2) Clean surface of glass to be adhered with alcohol or white gasoline.

- 4) Application of primer:

- (1) Using a sponge, apply primer to surface of glass to be adhered.
- (2) Apply primer to surface of body to be adhered.

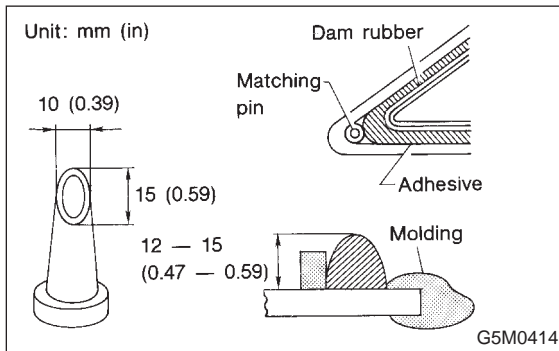
CAUTION:

- If primer has dropped on body finish, it is hard to wipe it off. So protect with masking.
- Primer must not project from black frame of glass.
- After applying primer, let it dry naturally for about 10 minutes.



5) Application of adhesive:

- (1) Cut nozzle tip as shown in the figure.



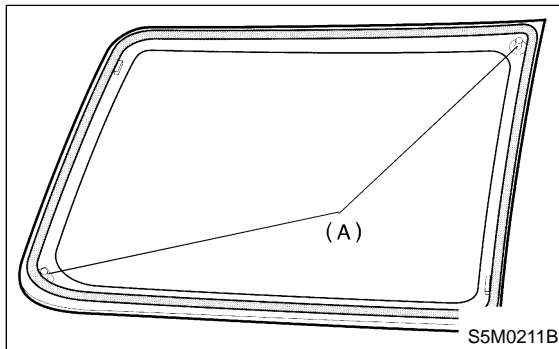
(2) Open cartridge and put it into a gun with nozzle attached.

(3) Apply adhesive uniformly to all sides of adhesion surface while operating gun along glass end face.

6) Installation of glass:

(1) Hold glass with rubber suction cups.

(2) Mount glass on body with matching pins (A) aligned.



(3) Attach quickly and press all sides lightly.

7) Water leakage test:

After installing glass, test for water leakage after about one hour.

CAUTION:

- Move vehicle slowly.
- When opening and closing door, lower door glass and move door gently.
- Do not squirt strong hose stream on vehicle.

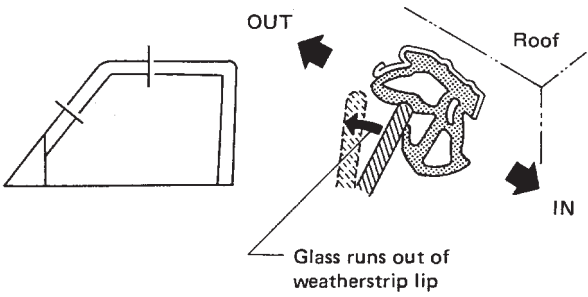
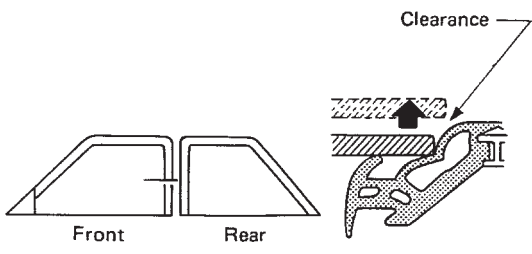
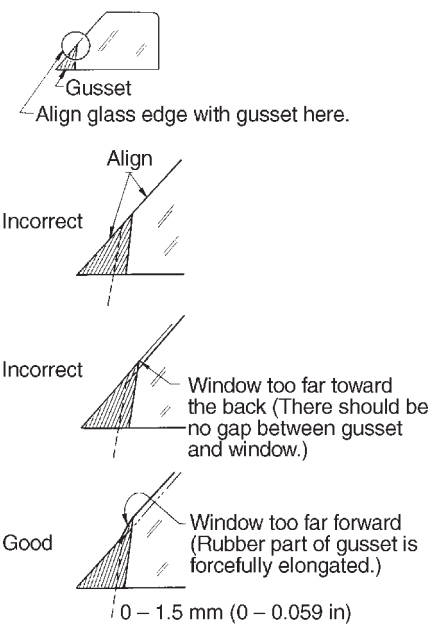
8) Natural drying:

After completing all operations, leave vehicle alone for 24 hours.

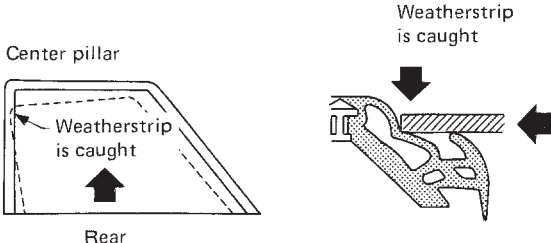
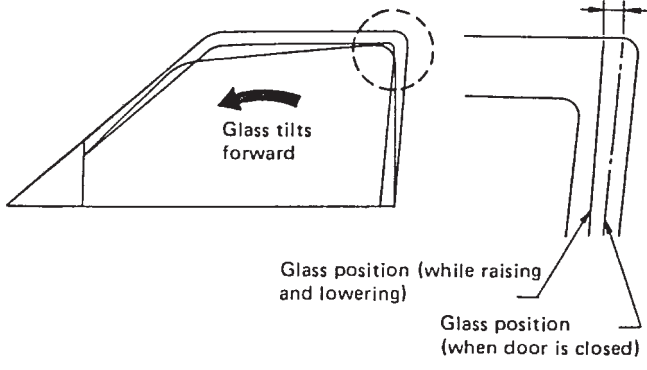
CAUTION:

When delivering vehicle to user, tell him or her that vehicle should not be subjected to heavy shock for at least three days.

1. Door Glass

| | Condition | Apparent cause/Correction |
|---------------------------------------|--|---|
| <p>Glass in fully closed position</p> | <p>1) Glass runs out of weatherstrip lip when considerable hand pressure is applied to it from inside.</p>  <p style="text-align: right;">G5M0502</p> <p>(This condition may cause wind/booming noise during high-speed operation.)</p> | <ul style="list-style-type: none"> ● Insufficient upward travel of glass Increase upward travel of glass. |
| | <p>2) Clearance exists between glass and weatherstrip when light hand pressure is applied to it at center and rear pillar locations.</p>  <p style="text-align: right;">G5M0503</p> <p>(This condition may cause wind noise and/or water leakage.)</p> | <ul style="list-style-type: none"> ● Insufficient glass-to-door weatherstrip contact Check stabilizer and glass for proper contact. Increase contact using upper sash adjustment bolt. ● Improper adjustment of striker in in-out direction Close door and check for alignment of striker with vehicle body. |
| | <p>3) Adjust door glass so that it is aligned with door rearview mirror gusset.</p>  <p style="text-align: right;">H5M0672A</p> | <ul style="list-style-type: none"> ● Window is not properly adjusted in up-down/fore-aft direction. Adjust window. If necessary, move B channel regulator to eliminate window tilt. ● Gusset is not properly adjusted in fore-aft direction. Adjust gusset after loosening all bolts and nuts which tighten it. |

| | Condition | Apparent cause/Correction |
|--|---|---|
| <p>Door in fully closed/ open position</p> | <p>1) Glass rides over weatherstrip lip when door is closed.</p> <div style="text-align: center;"> </div> <p style="text-align: right; font-size: small;">G5M0505</p> <p>(This condition increases wind/booming noise, leakage and/or effort required to close door.)</p> | <ul style="list-style-type: none"> ● Improper up-down and in-out glass alignments <p>Adjust glass for up-down and in-out alignments (incl. rear sash, upper stopper adjustment, etc.). If necessary, correct glass tilt by moving B channel regulator.</p> |
| | <p>2) Edge of glass contacts retainer when door is fully closed.</p> <div style="text-align: center;"> </div> <p style="text-align: right; font-size: small;">G5M0506</p> | <ul style="list-style-type: none"> ● Improper glass-to-center pillar weatherstrip or excessive glass contact with weatherstrip ● Excessive adjusting of contact with weatherstrip <p>Causes rear edge of glass to tilt inboard closer to center pillar. Adjust rear sash adjustment bolt to reduce glass contact with weatherstrip.</p> |

| | Condition | Apparent cause/Correction |
|------------------------------------|--|---|
| <p>Raise or lower window glass</p> | <p>1) Center pillar weatherstrip is caught by rear window glass when glass is raised.</p>  <p style="text-align: right;">G5M0508</p> | <ul style="list-style-type: none"> ● Improper fore-aft or in-out alignment of window glass Lower B channel regulator to tilt window glass back. |
| | <p>2) Window glass tilts forward by more than 2 mm (0.08 in).</p>  <p style="text-align: right;">G5M0509</p> <p>Excessive forward tilt of glass is due to excessive glass contact which causes reaction of center pillar weatherstrip. Glass can be tilted forward due to increase in reaction of shoulder weatherstrip or free play between sash and roller. Taking these symptoms into account, glass should be aligned.</p> | <ul style="list-style-type: none"> ● Excessive glass contact pressure or improper in-out alignment <ol style="list-style-type: none"> 1) Lower B channel regulator to tilt window glass rearward. 2) Reduce contact pressure using upper sash adjustment bolt. |

2. Door Lock System

| No. | Trouble | Possible cause | Remedy |
|-----|--|--|--|
| 1 | Door cannot be opened by outer handle. (Door can be opened by inner handle.) | Disconnect outer handle rod. | Connect firmly. |
| 2 | Door cannot be opened by inner handle. (Door can be opened by outer handle.) | a. Joint of lower rod is disconnected. b. Rear door child lock lever is set to lock side. | Connect firmly. Functionally normal. |
| 3 | Door does not open when outer or inner handle is operated with inner lock knob set to unlock position. | a. Joint of upper rod is disconnected. b. Lock is not released due to improper adjustment of upper rod. | Connect firmly. Remove rod from latch. Adjust rod so that lock knob is set in "lock" position. |
| 4 | Door opens even when inner lock knob is set to lock position. (Keyless locking is impossible.) | a. Upper rod joint is separated. b. Door is not locked due to improperly adjusted upper rod. | Same as a in No. 3. Same as a in No. 3. |
| 5 | Child lock lever will not come up. | a. Inner handle fails to return completely. b. Joint of lower rod is disconnected. | Refer to No. 6. |
| 6 | Inner handle stops halfway. | Contact of lower rod with inner handle mounting case. | Eliminate contact by bending upper rod properly. |
| 7 | Door cannot be locked or unlocked by key. | Joint of key lock rod is disconnected. | Connect firmly. |
| 8 | Auto door-lock switch does not react when inner lock knob is pushed. | Auto door-lock switch does not react due to improperly adjusted lower rod. | Same as a in No. 3. |

3. Power Window

| | Symptom | | | |
|-----------------------------------|--------------------------|-------------------------------------|--|--------------------------------------|
| | All windows do not move. | Driver's door window does not move. | Driver's door window does not move at "AUTO" down. | Neither passenger side windows move. |
| Battery | (1) | | | |
| Fuse in fuse box | (2) | | | |
| Circuit breaker and relay | (3) | | | |
| Main switch | (4) | (1) | (1) | (1) |
| Sub switch of each passenger side | | | | (2) |
| Motor of driver side | | (2) | (2) | |
| Motor of each passenger side | | | | (3) |
| Regulator assembly of each window | | | | (4) |
| Power supply line of main switch | (5) | (3) | (3) | |
| Ground line | (6) | | | |
| Harness and connector | (7) | (4) | (4) | (5) |

(): Figures in a parenthesis refer to diagnostics procedures.

2. Door Lock System

| No. | Trouble | Possible cause | Remedy |
|-----|--|--|--|
| 1 | Door cannot be opened by outer handle. (Door can be opened by inner handle.) | Disconnect outer handle rod. | Connect firmly. |
| 2 | Door cannot be opened by inner handle. (Door can be opened by outer handle.) | a. Joint of lower rod is disconnected. b. Rear door child lock lever is set to lock side. | Connect firmly. Functionally normal. |
| 3 | Door does not open when outer or inner handle is operated with inner lock knob set to unlock position. | a. Joint of upper rod is disconnected. b. Lock is not released due to improper adjustment of upper rod. | Connect firmly. Remove rod from latch. Adjust rod so that lock knob is set in "lock" position. |
| 4 | Door opens even when inner lock knob is set to lock position. (Keyless locking is impossible.) | a. Upper rod joint is separated. b. Door is not locked due to improperly adjusted upper rod. | Same as a in No. 3. Same as a in No. 3. |
| 5 | Child lock lever will not come up. | a. Inner handle fails to return completely. b. Joint of lower rod is disconnected. | Refer to No. 6. |
| 6 | Inner handle stops halfway. | Contact of lower rod with inner handle mounting case. | Eliminate contact by bending upper rod properly. |
| 7 | Door cannot be locked or unlocked by key. | Joint of key lock rod is disconnected. | Connect firmly. |
| 8 | Auto door-lock switch does not react when inner lock knob is pushed. | Auto door-lock switch does not react due to improperly adjusted lower rod. | Same as a in No. 3. |

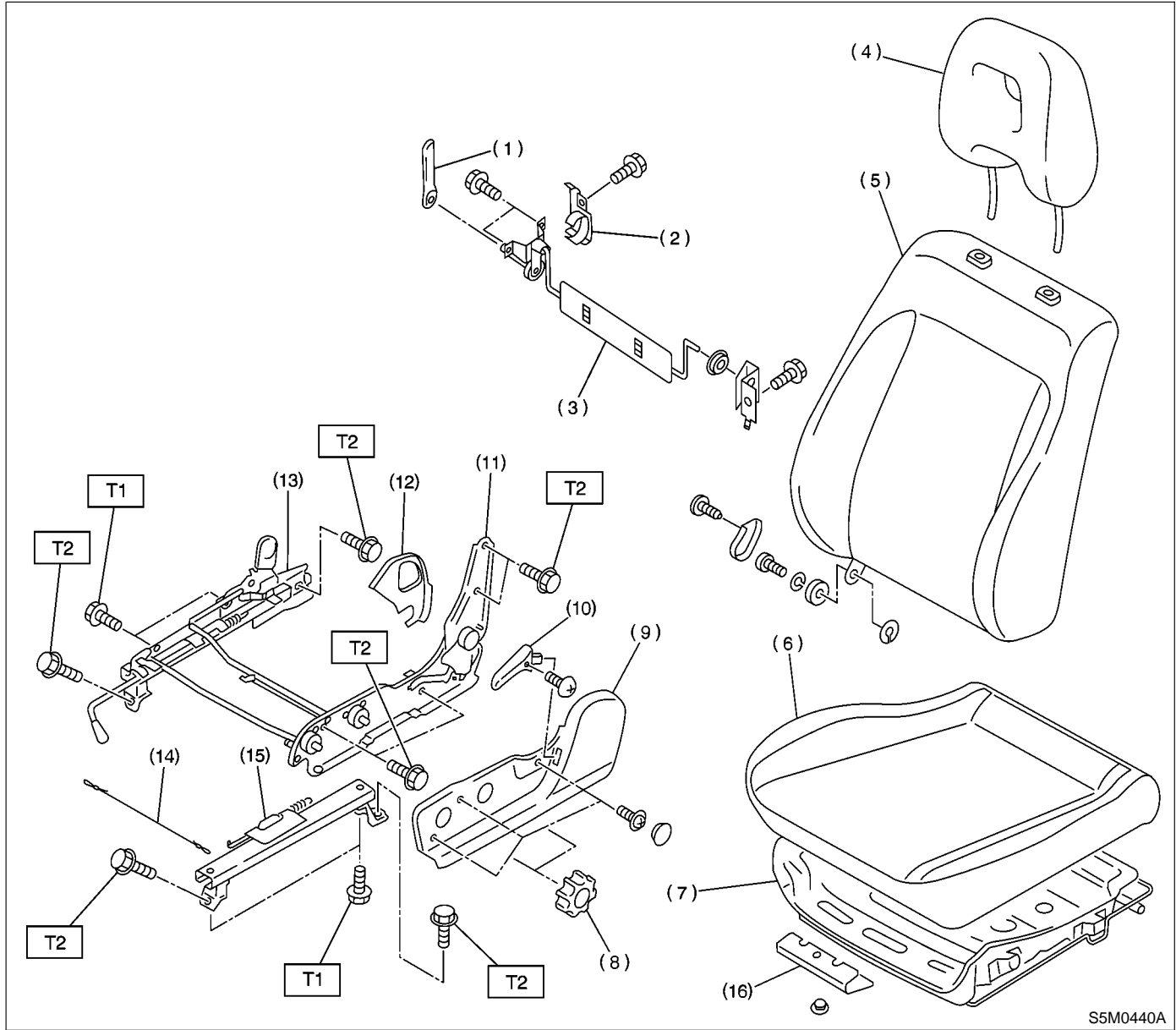
3. Power Window

| | Symptom | | | |
|-----------------------------------|--------------------------|-------------------------------------|--|--------------------------------------|
| | All windows do not move. | Driver's door window does not move. | Driver's door window does not move at "AUTO" down. | Neither passenger side windows move. |
| Battery | (1) | | | |
| Fuse in fuse box | (2) | | | |
| Circuit breaker and relay | (3) | | | |
| Main switch | (4) | (1) | (1) | (1) |
| Sub switch of each passenger side | | | | (2) |
| Motor of driver side | | (2) | (2) | |
| Motor of each passenger side | | | | (3) |
| Regulator assembly of each window | | | | (4) |
| Power supply line of main switch | (5) | (3) | (3) | |
| Ground line | (6) | | | |
| Harness and connector | (7) | (4) | (4) | (5) |

(): Figures in a parenthesis refer to diagnostics procedures.

MEMO:

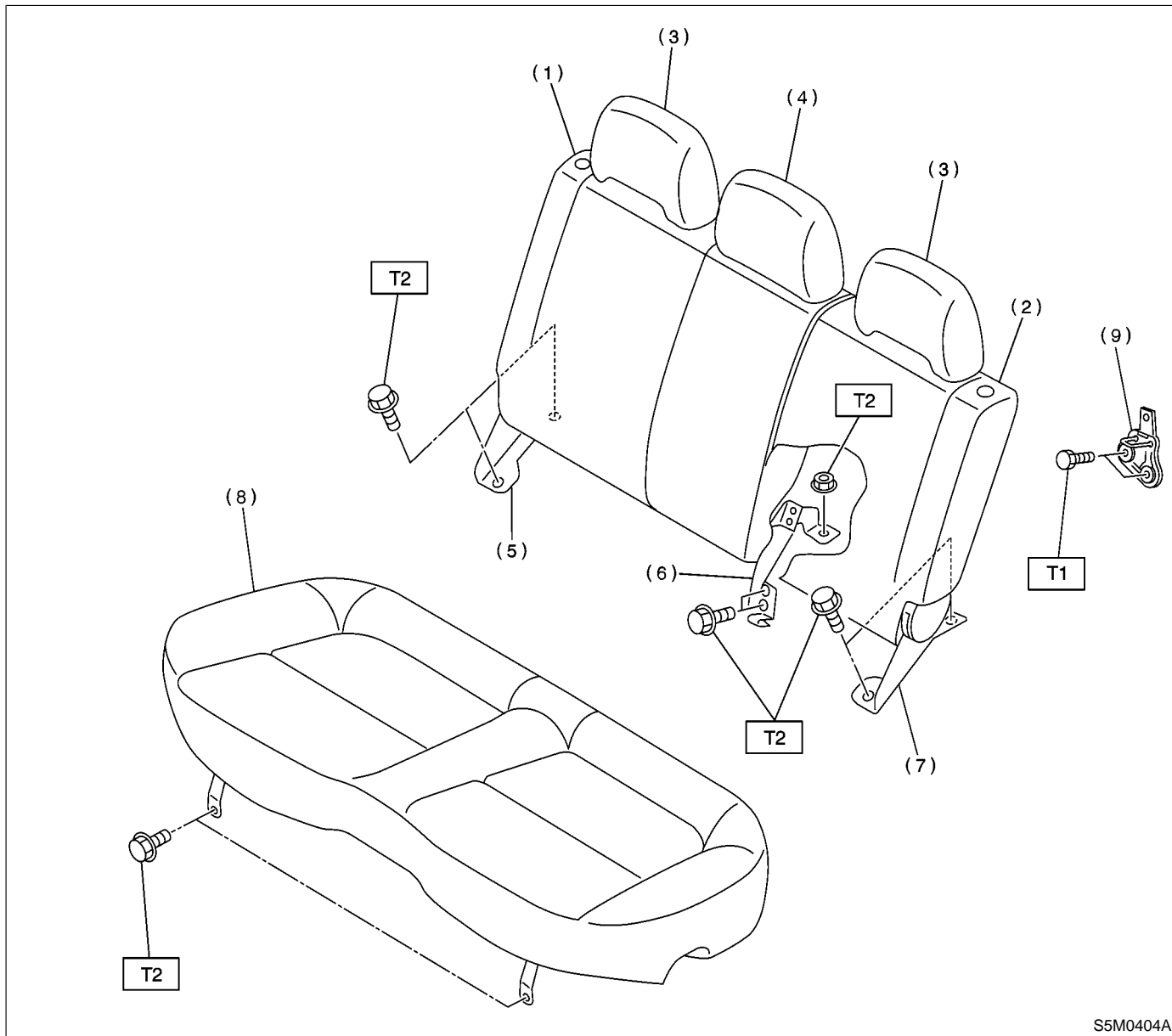
1. Front Seat



- | | | |
|-------------------|-------------------------|--------------------------|
| (1) Lumbar lever | (8) Lifter dial | (15) Slide rail ASSY OUT |
| (2) Lumbar cover | (9) Hinge cover OUT | (16) Bracket |
| (3) Lumbar unit | (10) Reclining lever | |
| (4) Headrest | (11) Hinge ASSY | |
| (5) Backrest | (12) Hinge spring cover | |
| (6) Cushion | (13) Slide rail ASSY IN | |
| (7) Cushion frame | (14) Connecting wire | |

Tightening torque: N·m (kg·m, ft·lb)
T1: 18⁺¹⁰/₀ (1.8⁺¹/₀, 13⁺⁷/₀)
T2: 52±10 (5.3±1.0, 38±7)

2. Rear Seat

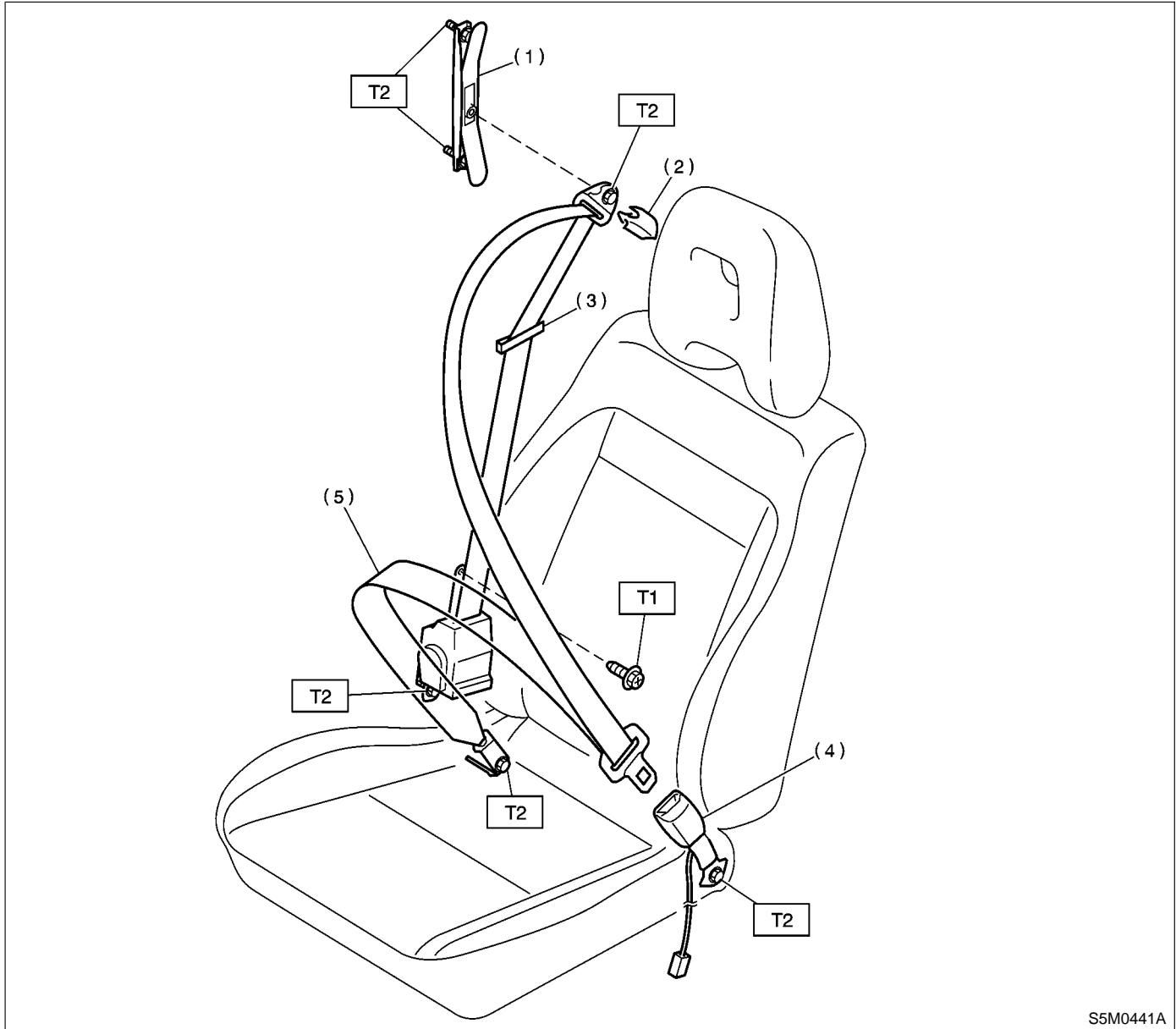


S5M0404A

- | | |
|----------------------|------------------|
| (1) Backrest RH | (6) Hinge CENTER |
| (2) Backrest LH | (7) Hinge LH |
| (3) Headrest OUTSIDE | (8) Cushion |
| (4) Headrest CENTER | (9) Striker |
| (5) Hinge RH | |

Tightening torque: N-m (kg-m, ft-lb)
T1: 10±3 (1.0±0.3, 7.2±2.2)
T2: 25±7 (2.5±0.7, 18.1±5.1)

3. Front Seat Belt

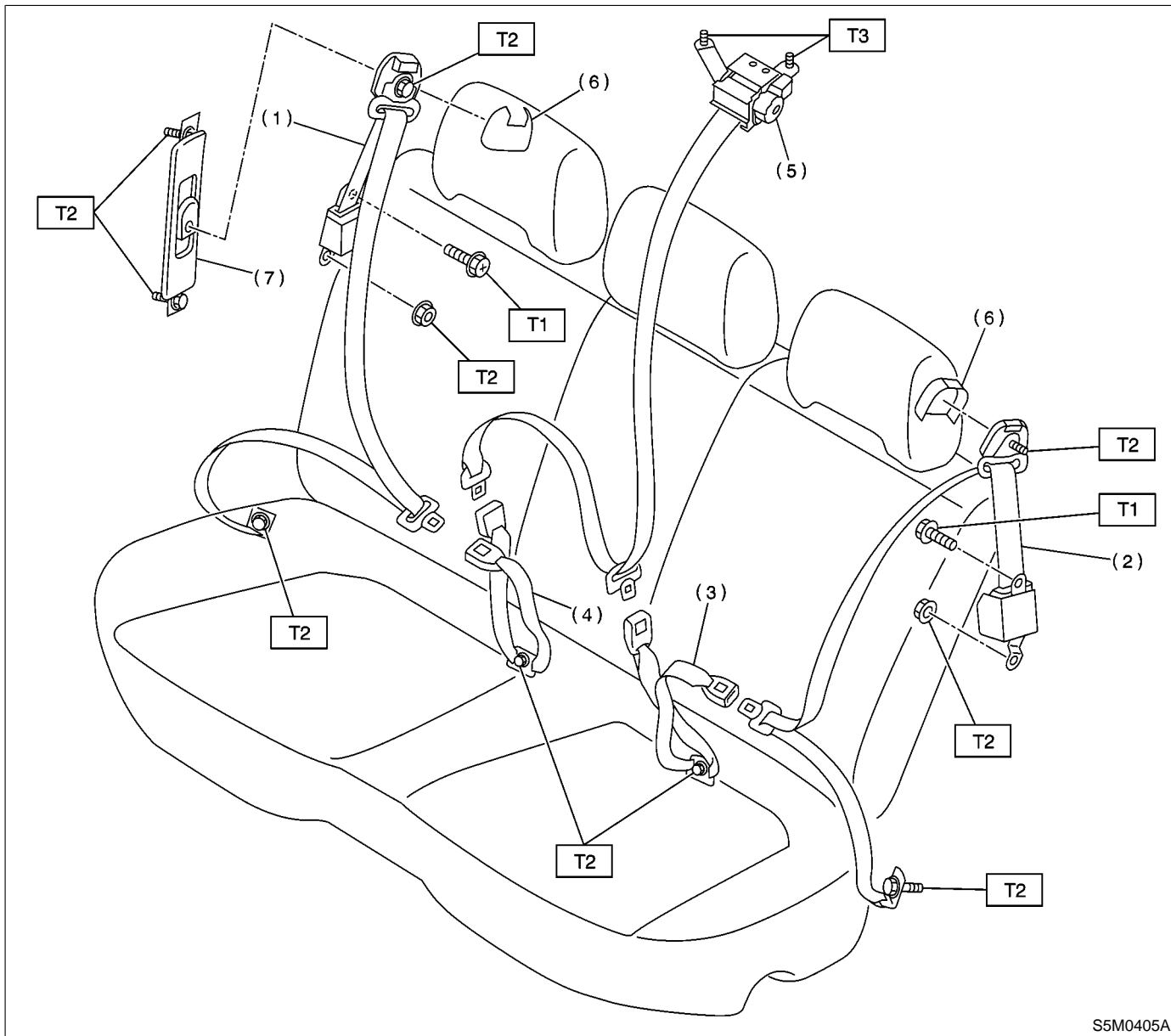


S5M0441A

- (1) Adjuster anchor ASSY
- (2) Anchor cover
- (3) Webbing guide
- (4) Inner belt ASSY
- (5) Outer belt ASSY

Tightening torque: N·m (kg·m, ft·lb)
T1: 7.4±2.0 (0.75±0.2, 5.4±1.4)
T2: 29⁺²⁰/₋₇ (3.0^{+2.0}/_{-0.7}, 21.7^{+14.5}/_{-5.1})

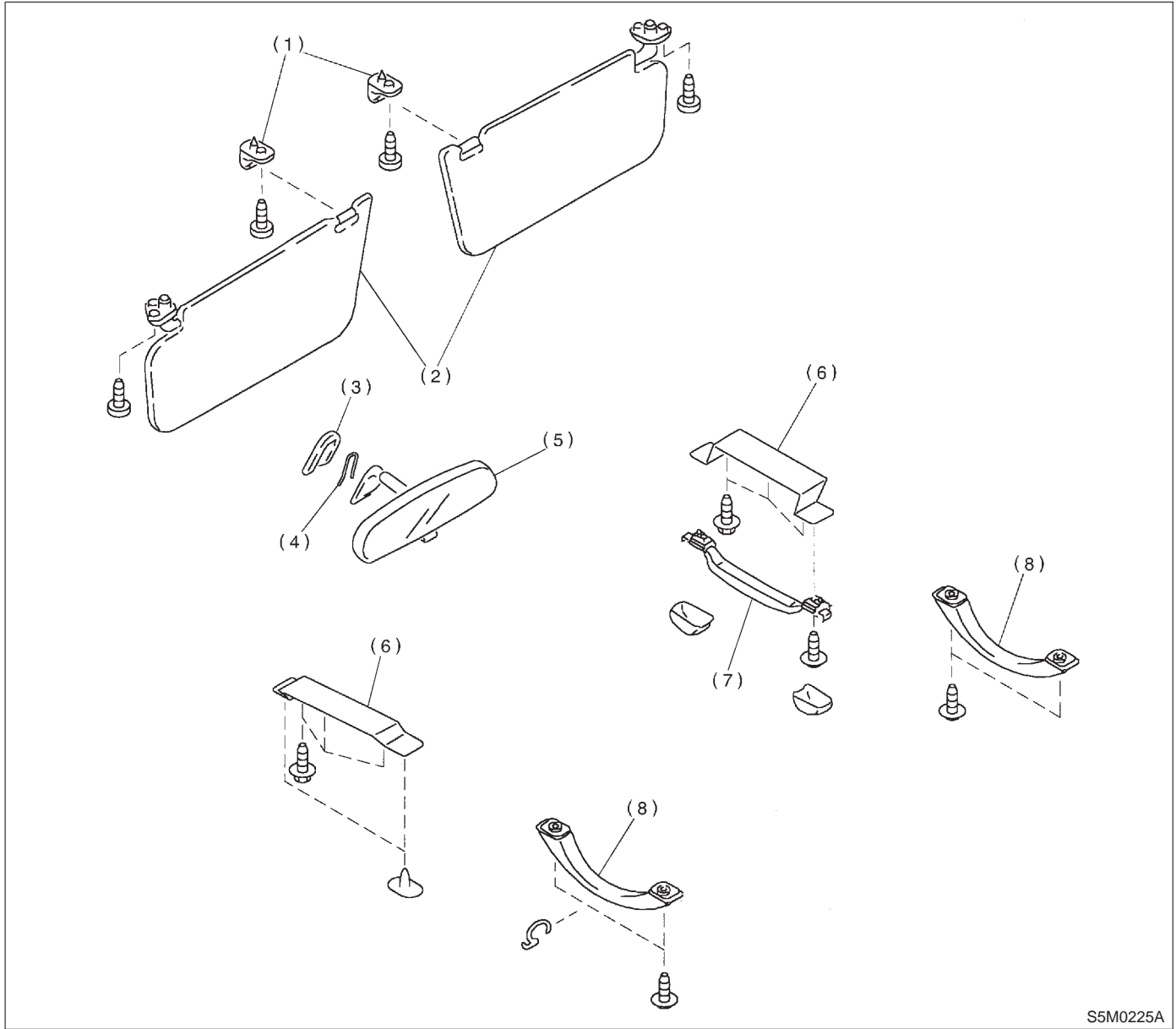
4. Rear Seat Belt



- (1) Outer belt ASSY RH
- (2) Outer belt ASSY LH
- (3) Inner belt ASSY LH
- (4) Inner belt ASSY RH
- (5) Outer belt ASSY CENTER
- (6) Anchor cover
- (7) Adjustable anchor ASSY

Tightening torque: N-m (kg-m, ft-lb)
T1: 7.4±2.0 (0.75±0.2, 5.4±1.4)
T2: 29⁺²⁰/₋₇ (3.0^{+2.0}/_{-0.7}, 21.7^{+14.5}/_{-5.1})
T3: 52±10 (5.3±1.0, 38.3±7.2)

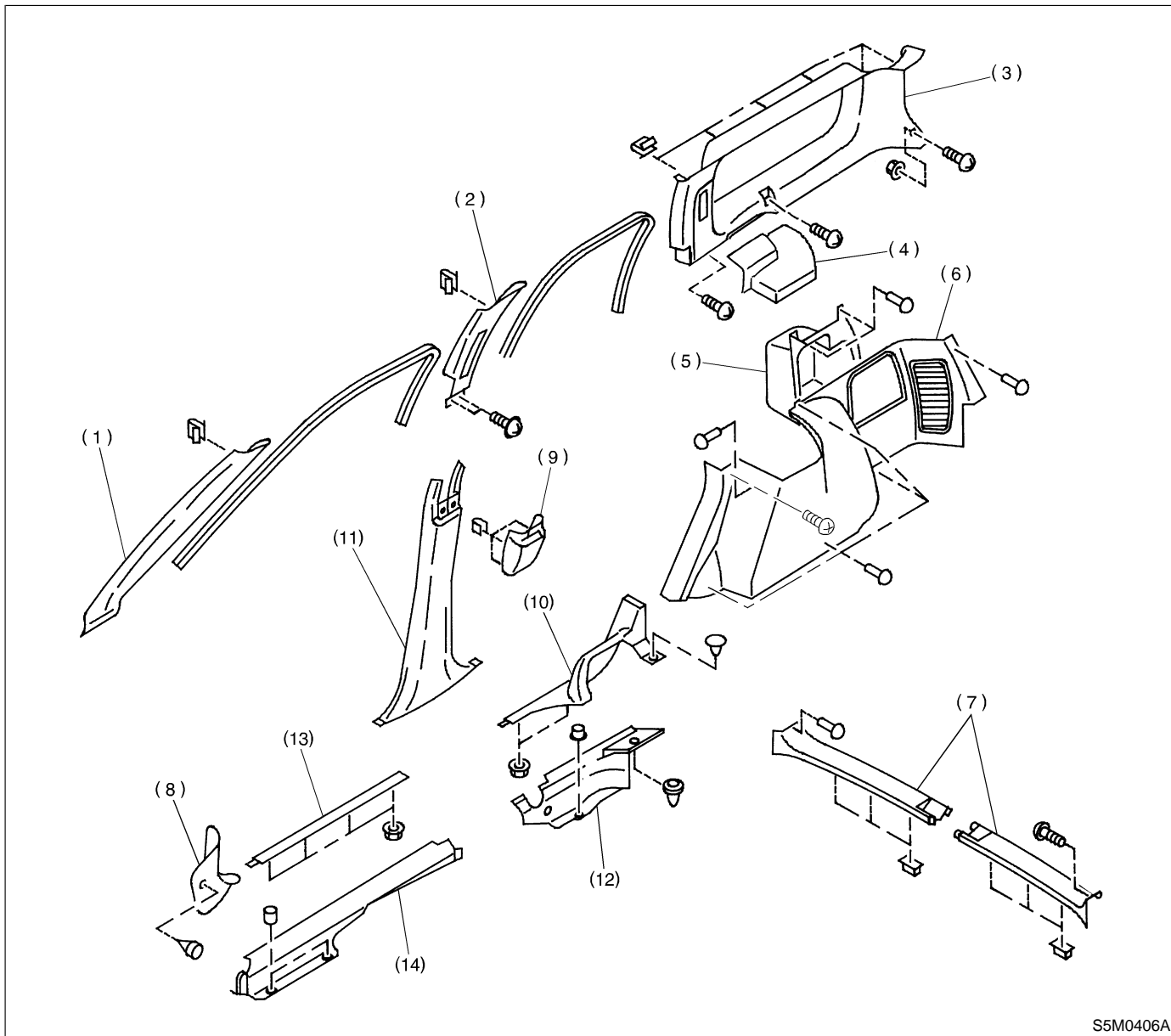
5. Inner Accessories



S5M0225A

- | | | |
|---------------|-------------------------|-------------------------------|
| (1) Hook | (4) Spring | (7) Assist grip (retractable) |
| (2) Sun visor | (5) Rearview mirror | (8) Assist grip (fixed) |
| (3) Mount | (6) Assist rail bracket | |

6. Inner Trim



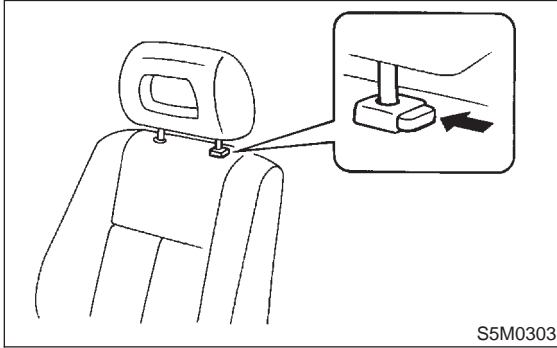
S5M0406A

- | | | |
|------------------------------|---------------------------------|----------------------------------|
| (1) Front pillar upper trim | (6) Rear quarter lower trim | (11) Center pillar lower trim |
| (2) Center pillar upper trim | (7) Rear skirt trim | (12) Side sill rear lower cover |
| (3) Rear pillar upper trim | (8) Front pillar lower trim | (13) Side sill front upper cover |
| (4) Cover | (9) Center pillar cover | (14) Side sill front lower cover |
| (5) Pocket | (10) Side sill rear upper cover | |

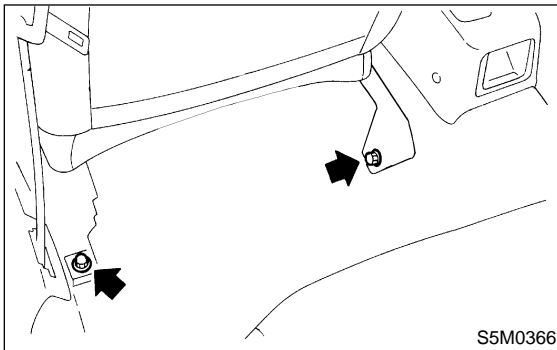
1. Front Seat

A: REMOVAL

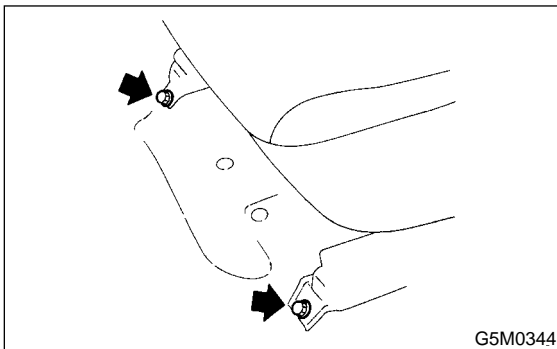
1) While operating button (located on top of backrest), lift headrest out with hand placed between backrest and headrest.



- 2) Pull reclining lever back to fold backrest all the way forward. While pulling slide adjuster lever, move seat all the way forward.
- 3) Remove bolt cover at rear end of slide rail.
- 4) Remove bolts securing seat rear.



- 5) While pulling slide adjuster lever, slide seat all the way back.
- 6) Remove bolts securing front of seat.



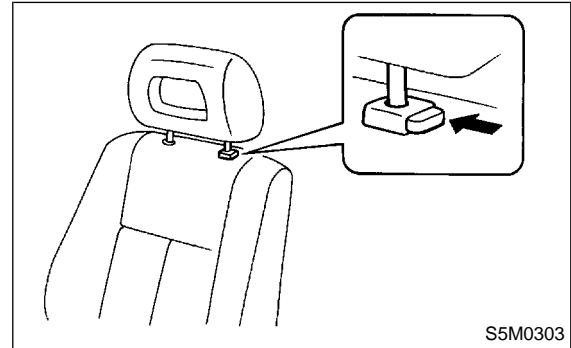
7) While disconnecting side airbag connector, detach front seat. (Side airbag equipped vehicle) <Ref. to 5-5 [M2F2].> and inner belt connector.

CAUTION:

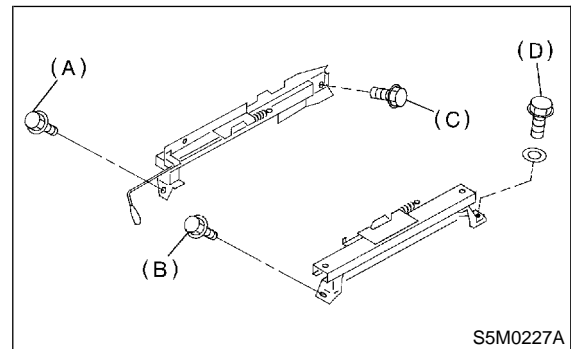
- Be careful not to scratch seat when removing it from vehicle.
- After the front seat has been removed from side airbag equipped vehicle, store it as instructed in section 5-5 AIRBAG REPAIR SECTION. <Ref. to 5-5 [W3A0].>

B: INSTALLATION

1) While operating button (located on top of backrest), lift headrest out by placing your hand between backrest and headrest.



- 2) Pull reclining lever back to fold backrest all the way forward. Pull slide adjuster lever and move lower slide rail all the way backward.
- 3) Position seat in compartment and align the holes on the seat with the holes on the vehicle body side.
- 4) Secure the front of seat using inward and outward bolts (A) and (B) in that order.
- 5) While pulling slide adjuster lever, move seat all the way forward.
- 6) Secure the rear of seat using inward and outward bolts (C) and (D).



- 7) Connect inner belt connector.
- 8) Connect side airbag connector. (Side airbag equipped model)

CAUTION:

Check that all lock plate pawls are completely and equally inserted into the holes in the slide rail brackets.

9) After installation, ensure that all mechanisms operate properly and lock.

10) If any mechanism does not function properly, loosen bolts (C) and (D), slide seat as required, insert all lock plate pawls into holes in slide rail brackets, and tighten bolts (C) and (D) in that order.

11) Install bolt cover on rear end of slide rail.

12) Install headrest on backrest.

NOTE:

Tighten bolts in the designated order.

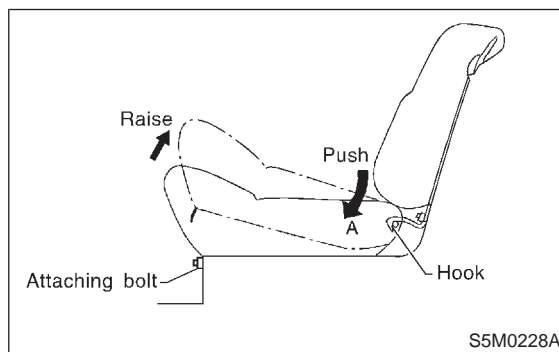
2. Rear Seat

A: REMOVAL AND INSTALLATION

1. CUSHION

1) Remove bolts securing hinges (located at front of cushion) to body.

2) Slightly raise front of cushion while pushing down on cushion in the direction of "A". With cushion held in that position, move it forward until it is unhooked.



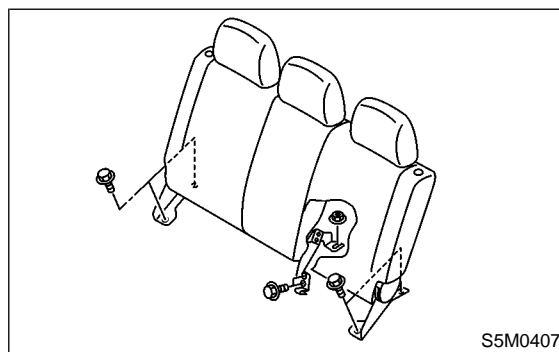
3) Install in the reverse order of removal.

2. BACKREST

1) Remove cushion. <Ref. to 5-3 [W2A1].>

2) Remove rear quarter lower trim. <Ref. to 5-3 [W5A2].>

3) Remove bolts and nuts.



4) Detach backrest.

5) Install in the reverse order of removal.

CAUTION:

- Before installing seat, ensure that seat belt is placed on cushion.
- Confirm that winding of three-point type seat belt can operate regularly.

10) If any mechanism does not function properly, loosen bolts (C) and (D), slide seat as required, insert all lock plate pawls into holes in slide rail brackets, and tighten bolts (C) and (D) in that order.

11) Install bolt cover on rear end of slide rail.

12) Install headrest on backrest.

NOTE:

Tighten bolts in the designated order.

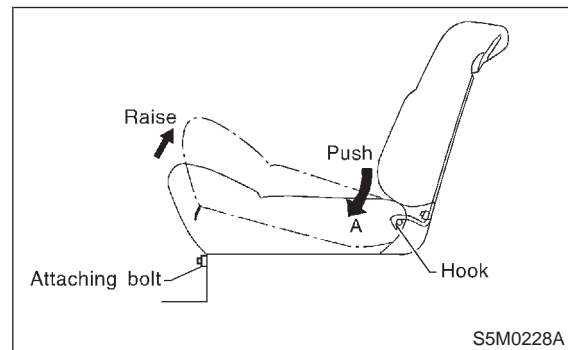
2. Rear Seat

A: REMOVAL AND INSTALLATION

1. CUSHION

1) Remove bolts securing hinges (located at front of cushion) to body.

2) Slightly raise front of cushion while pushing down on cushion in the direction of "A". With cushion held in that position, move it forward until it is unhooked.



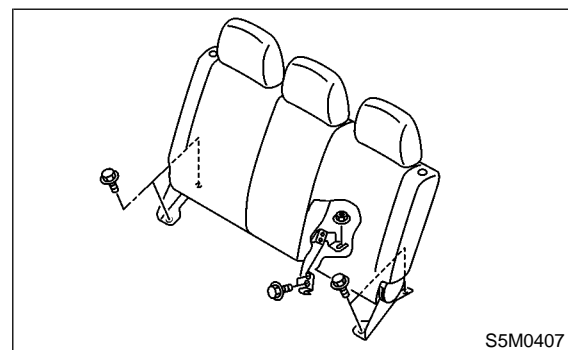
3) Install in the reverse order of removal.

2. BACKREST

1) Remove cushion. <Ref. to 5-3 [W2A1].>

2) Remove rear quarter lower trim. <Ref. to 5-3 [W5A2].>

3) Remove bolts and nuts.



4) Detach backrest.

5) Install in the reverse order of removal.

CAUTION:

- Before installing seat, ensure that seat belt is placed on cushion.
- Confirm that winding of three-point type seat belt can operate regularly.

3. Front Seat Belt

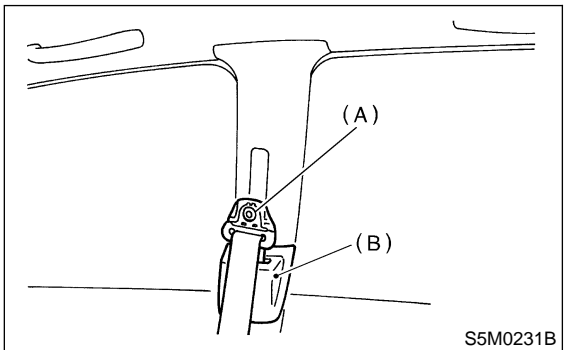
A: REMOVAL AND INSTALLATION

WARNING:

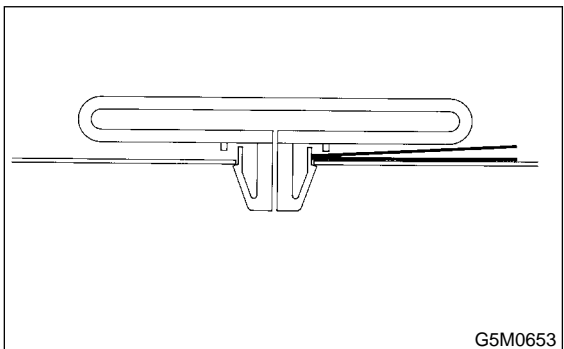
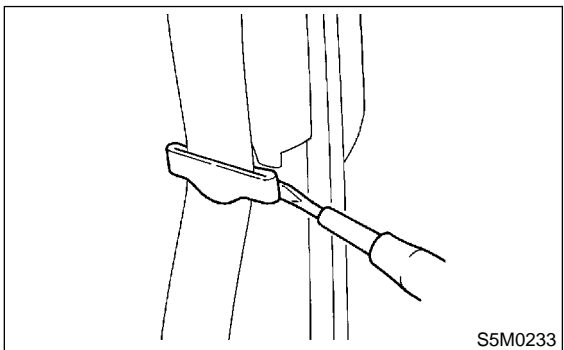
Replace front seat belt worn by occupants of a vehicle that has been in a serious accident. The entire assembly should be replaced even if damage is not obvious.

1. OUTER BELT

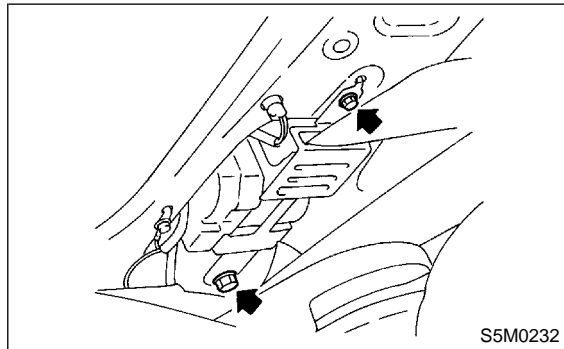
- 1) Remove anchor cover.
- 2) Remove shoulder anchor bolt (A).
- 3) Remove center pillar cover (B). <Ref. to 5-3 [W5A1].>



- 4) Remove center lower pillar trim panel. <Ref. to 5-3 [W5A1].>
- 5) Remove webbing guide.



- 6) Remove lap anchor bolt.
- 7) Remove belt retractor and outer belt.



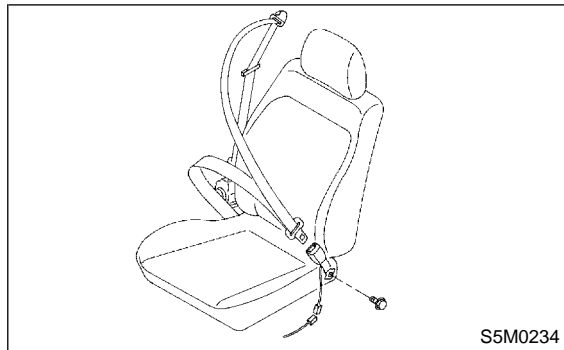
- 8) Install in the reverse order of removal.

CAUTION:

- The left and right ELR's are not mutually interchangeable because different sensors are used.
- Be careful not to twist belts during installation.

2. INNER BELT

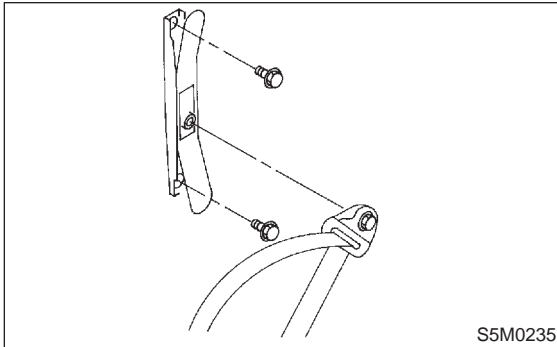
- 1) Disconnect connector.
- 2) Remove anchor bolt and then detach inner belt.



- 3) Install in the reverse order of removal.

3. ADJUSTABLE SHOULDER ANCHOR

- 1) Remove shoulder anchor bolt. <Ref. to 5-3 [W3A1].>
- 2) Remove center pillar cover. <Ref. to 5-3 [W5A1].>
- 3) Remove center pillar upper trim. <Ref. to 5-3 [W5A1].>
- 4) Remove adjustable shoulder anchor assembly.



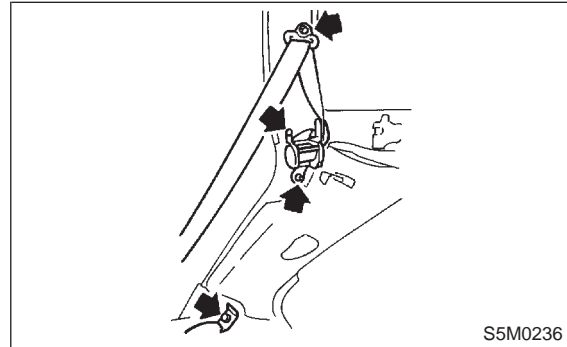
- 5) Install in the reverse order of removal.

4. Rear Seat Belt**A: REMOVAL AND INSTALLATION****WARNING:**

Replace rear seat belt worn by occupants of a vehicle that has been in a serious accident. The entire assembly should be replaced even if damage is not obvious.

1. OUTER BELT (OUTSIDE)

- 1) Remove rear cushion. <Ref. to 5-3 [W2A1].>
- 2) Remove rear backrest. <Ref. to 5-3 [W2A2].>
- 3) Remove rear quarter upper trim and rear quarter lower trim. <Ref. to 5-3 [W5A2].>
- 4) Remove anchor cover and then remove anchor bolt.
- 5) Remove bolt and nut and then detach outer belt assembly.



- 6) Install in the reverse order of removal.

NOTE:

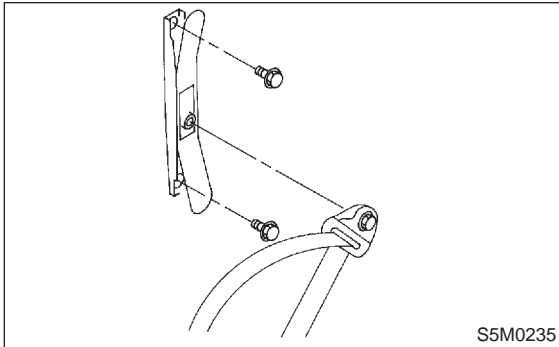
Ensure that seat belt is properly reeled on and off after installation of ELR.

CAUTION:

- Be extremely careful not to confuse center seat anchor plate with outer seat anchor plate during installation.
- Ensure that seat belts are free from twisting after installation.
- Ensure that tongues, buckles and belts are properly placed on seat.

3. ADJUSTABLE SHOULDER ANCHOR

- 1) Remove shoulder anchor bolt. <Ref. to 5-3 [W3A1].>
- 2) Remove center pillar cover. <Ref. to 5-3 [W5A1].>
- 3) Remove center pillar upper trim. <Ref. to 5-3 [W5A1].>
- 4) Remove adjustable shoulder anchor assembly.



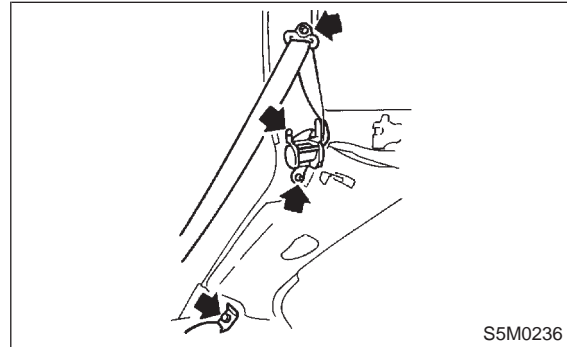
- 5) Install in the reverse order of removal.

4. Rear Seat Belt**A: REMOVAL AND INSTALLATION****WARNING:**

Replace rear seat belt worn by occupants of a vehicle that has been in a serious accident. The entire assembly should be replaced even if damage is not obvious.

1. OUTER BELT (OUTSIDE)

- 1) Remove rear cushion. <Ref. to 5-3 [W2A1].>
- 2) Remove rear backrest. <Ref. to 5-3 [W2A2].>
- 3) Remove rear quarter upper trim and rear quarter lower trim. <Ref. to 5-3 [W5A2].>
- 4) Remove anchor cover and then remove anchor bolt.
- 5) Remove bolt and nut and then detach outer belt assembly.



- 6) Install in the reverse order of removal.

NOTE:

Ensure that seat belt is properly reeled on and off after installation of ELR.

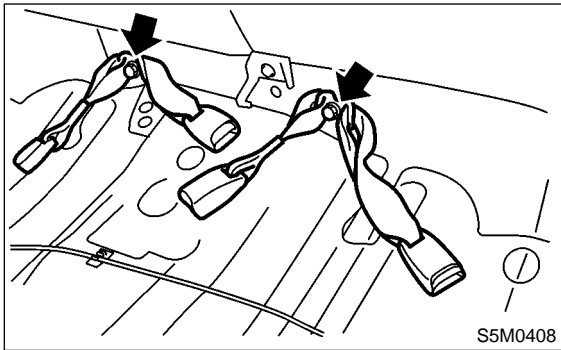
CAUTION:

- Be extremely careful not to confuse center seat anchor plate with outer seat anchor plate during installation.
- Ensure that seat belts are free from twisting after installation.
- Ensure that tongues, buckles and belts are properly placed on seat.

4. Rear Seat Belt

2. INNER BELT

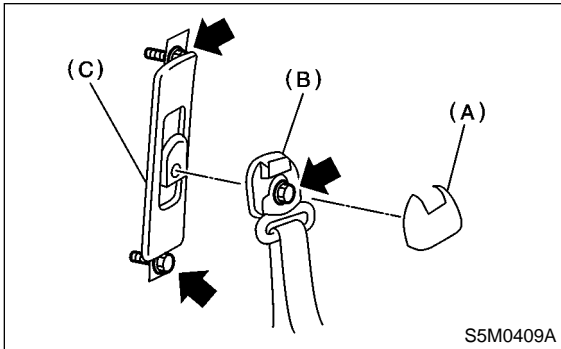
- 1) Remove rear cushion. <Ref. to 5-3 [W2A1].>
- 2) Remove bolts and then remove inner belt.



- 3) Install in the reverse order of removal.

3. ADJUSTABLE SHOULDER ANCHOR

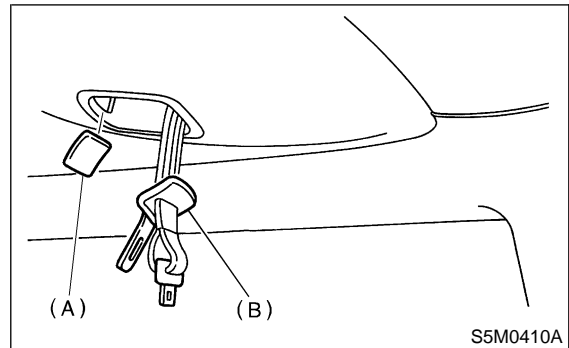
- 1) Remove anchor cover (A) and anchor (B). <Ref. to 5-3 [W4A1].>
- 2) Remove rear quarter upper trim. <Ref. to 5-3 [W5A2].>
- 3) Remove adjustable shoulder anchor (C).



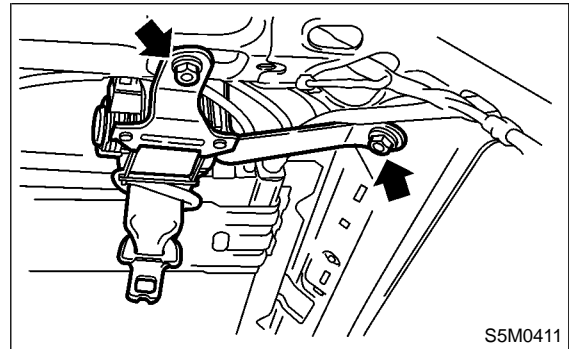
- 4) Install in the reverse order of removal.

4. OUTER BELT (CENTER)

- 1) Remove rear end of roof trim, then hang down roof trim. <Ref. to 5-3 [W5A4].>
- 2) Remove cover (A), then pass the tongue (B) from roof trim hole.



- 3) Loosen bolts and then detach outer belt center.



- 4) Install in the reverse order of removal.

NOTE:

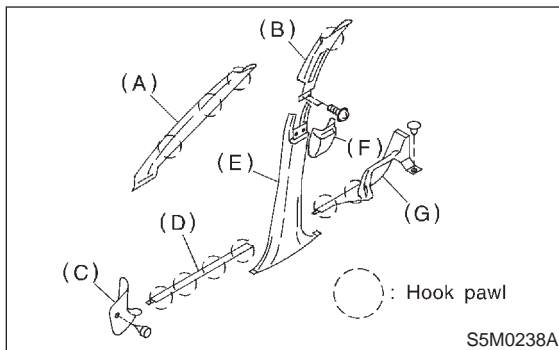
Ensure that seat belt is properly reeled on and off after installation of ELR.

5. Inner Trim Panel

A: REMOVAL AND INSTALLATION

1. FRONT SECTION

- 1) Removal order of trim panel:
 - (1) Remove front pillar upper trim (A).
 - (2) Remove front pillar lower trim (C).
 - (3) Remove side sill front upper cover (D).
 - (4) Remove rear seat cushion and then remove side sill rear upper cover (G).
 - (5) Remove center pillar cover (F).
 - (6) Remove front seat belt anchor. <Ref. to 5-3 [W3A1].>
 - (7) Remove screws and then remove center pillar upper trim (B).
 - (8) Remove center pillar lower trim (E).



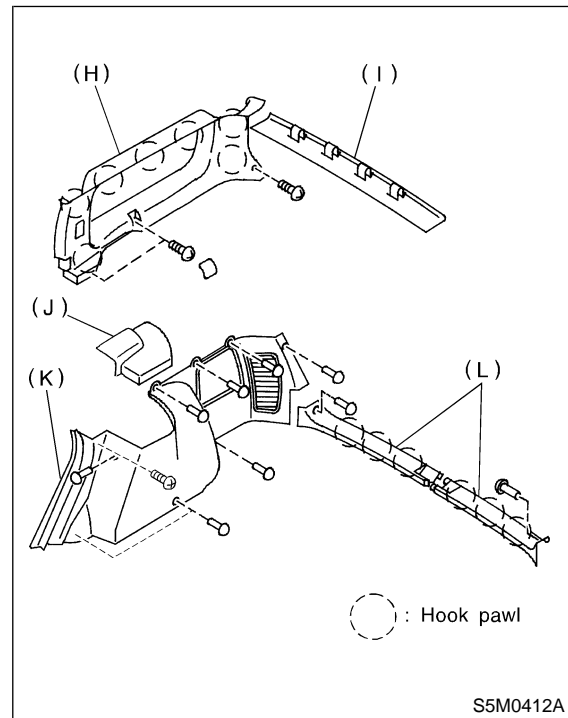
- 2) Install in the reverse order of removal.

CAUTION:

Be sure to securely hook pawls of inner trim panel on body flange.

2. REAR SECTION

- 1) Removal order of trim panel:
 - (1) Remove rear rail trim (I).
 - (2) Remove strut cover (J).
 - (3) Remove rear outside seat belt anchor. <Ref. to 5-3 [W4A1].>
 - (4) Remove caps and screws then remove rear quarter upper trim (H).
 - (5) Remove rear skirt trim (L).
 - (6) Remove rear floor box and then remove rear quarter lower trim (K).



- 2) Install in the reverse order of removal.

CAUTION:

Be sure to securely hook pawls of inner trim panel on body flange.

3. FLOOR SECTION

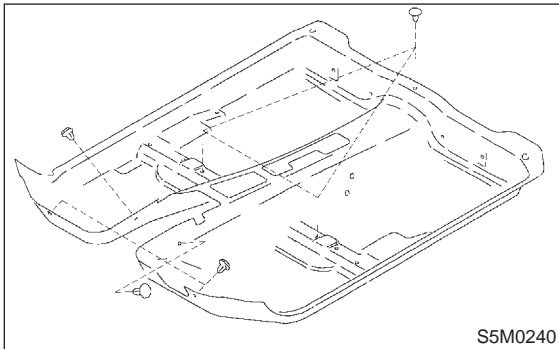
1) Removal order of floor mat:

- (1) Remove front seats. <Ref. to 5-3 [W1A0].>
- (2) Remove rear seat cushion. <Ref. to 5-3 [W2A1].>
- (3) Remove console box, depending on the specifications. <Ref. to 5-4 [W1A0].>
- (4) Remove front pillar lower trim panel. <Ref. to 5-3 [W5A1].>
- (5) Remove center pillar lower trim panel. <Ref. to 5-3 [W5A1].>
- (6) Remove side sill cover. <Ref. to 5-3 [W5A1].>
- (7) Remove clips from floor mat.

NOTE:

When pulling out edge, do not pull mat alone; pull mat together with edge. Pry off two steel clips on side sill front cover and one on side sill rear cover using screwdriver.

- (8) Remove mat hook.
- (9) Remove mat from toe board area.
- (10) Remove mat from rear heater duct.
- (11) Roll mat, and take it out of opened rear door.



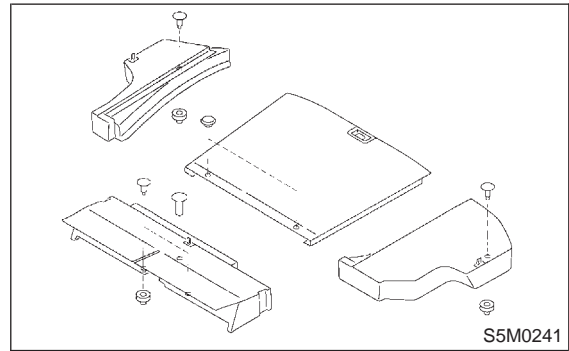
(12) Install in the reverse order of removal.

NOTE:

- Secure mat firmly with hook and velcro tape.
- Insert mat edge firmly into the groove of side sill cover.

2) Removal order of rear floor box:

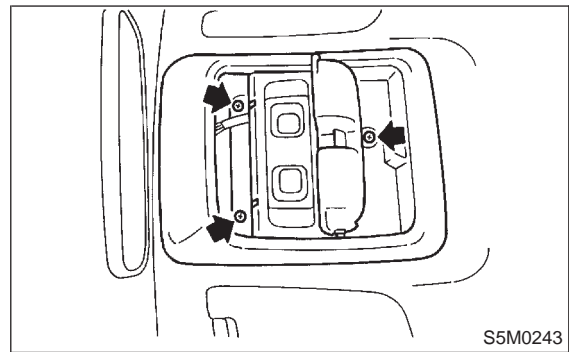
(1) Remove clips and then detach rear floor boxes.



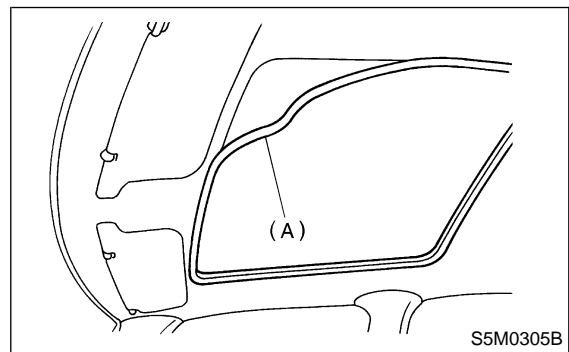
(2) Install in the reverse order of removal.

4. ROOF TRIM

1) Remove head console.

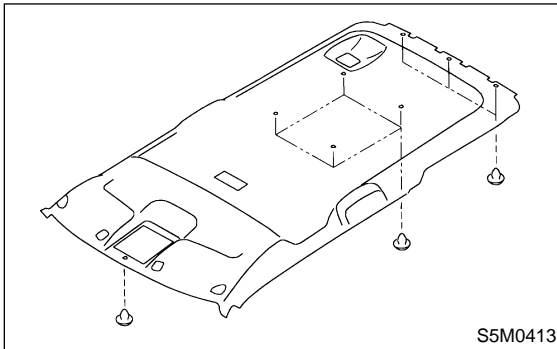
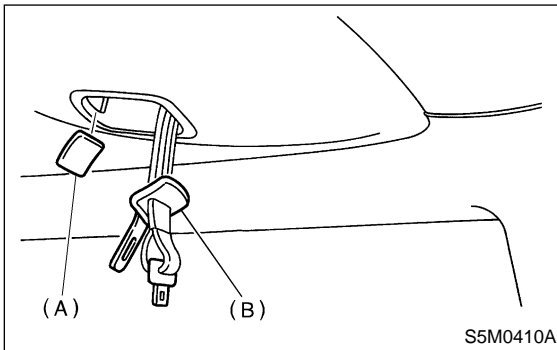


- 2) Remove sunvisor and assist rail.
- 3) Remove front pillar upper trim and center pillar upper trim <Ref. to 5-3 [W5A1].>, rear quarter upper trim and rear rail trim. <Ref. to 5-3 [W5A2].>
- 4) Detach sunroof garnish (A). (Sunroof equipped model)



5) Using ST, remove clips.
ST 925580000 PULLER

6) While detaching snap lock carefully, remove cover (A). Pass outer belt center tongue (B) through hole on roof trim, then remove roof trim.



7) Install in the reverse order of removal.

CAUTION:

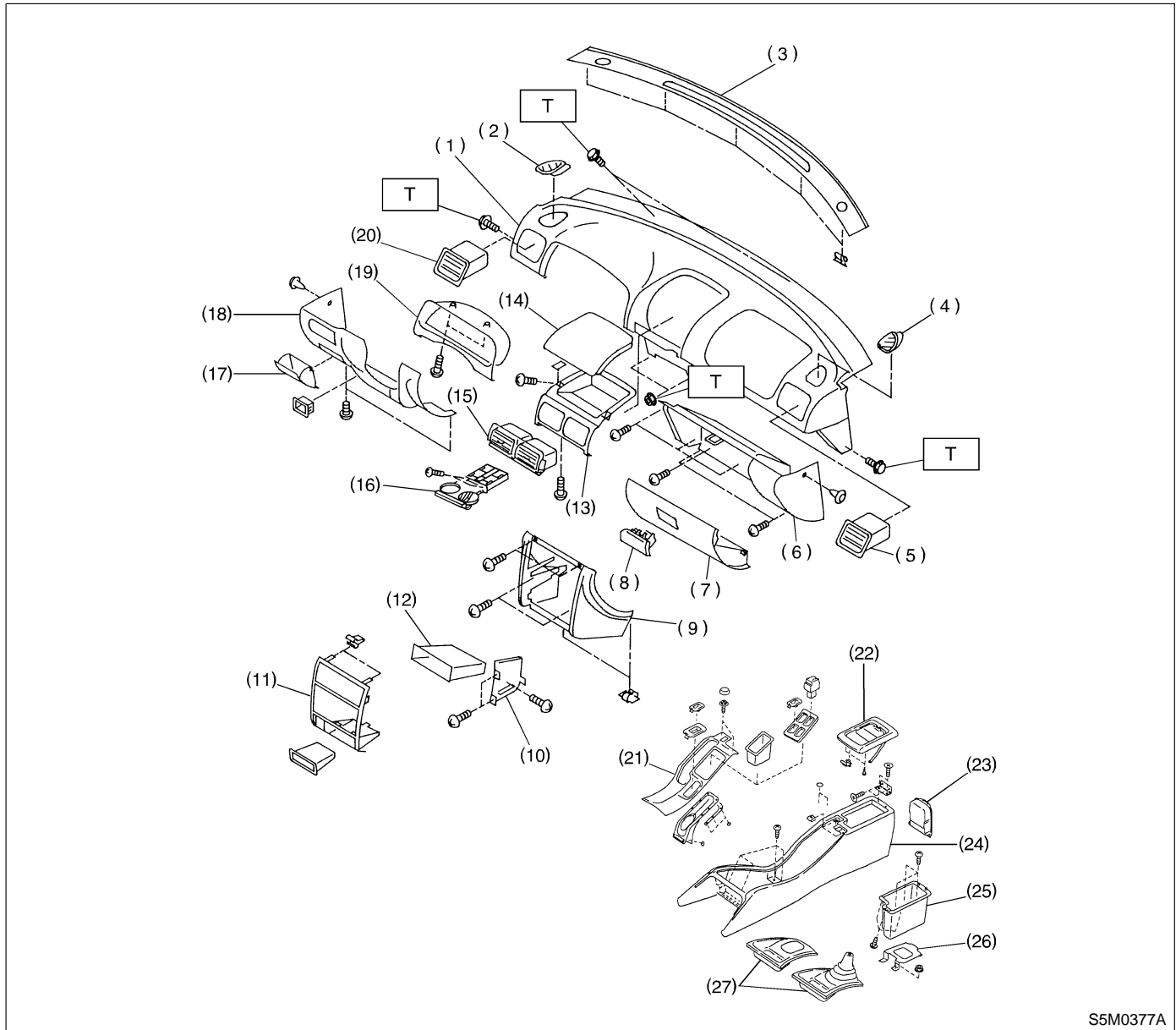
When removing clip, use great care to prevent damaging the roof trim.

NOTE:

When installing roof trim, pass the outer belt center tongue through hole on roof trim.

MEMO:

1. Instrument Panel



S5M0377A

- | | | |
|-------------------------------------|------------------------|------------------------|
| (1) Pad & frame | (12) Pocket | (23) Rear cup holder |
| (2) Grille side (D) | (13) Panel center | (24) Console box |
| (3) Front def. grille | (14) Center pocket lid | (25) Console pocket |
| (4) Grille side (P) | (15) Grille center | (26) Rear console BRKT |
| (5) Grille vent (P) | (16) Cup holder | (27) Front cover |
| (6) Glove box panel | (17) Side pocket | |
| (7) Glove box lid | (18) Lower cover ASSY | |
| (8) Knob | (19) Meter visor | |
| (9) Instrument panel center console | (20) Grille vent (D) | |
| (10) BRKT (Radio) | (21) Console cover | |
| (11) Center console cover | (22) Console lid | |

Tightening torque: N·m (kg·m, ft·lb)

T: 7±1 (0.7±0.1, 5.1±0.7)

1. Instrument Panel **AIRBAG**

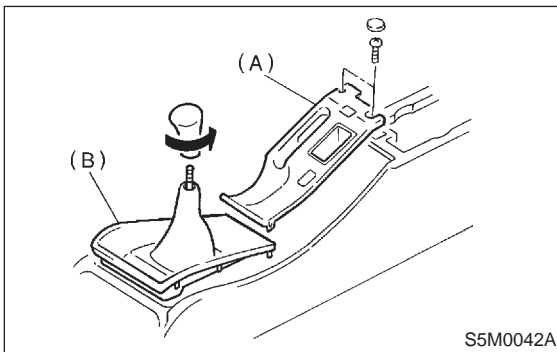
A: REMOVAL

Airbag system wiring harness is routed near combination meter.

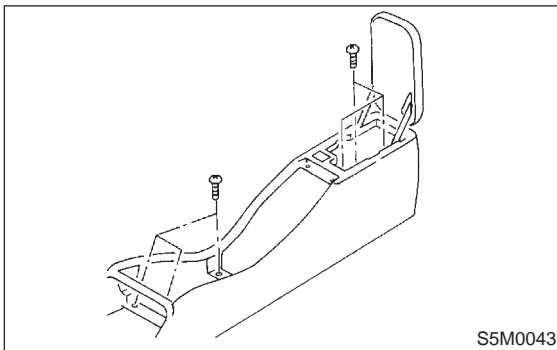
CAUTION:

- All airbag system wiring harness and connectors are yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage airbag system wiring harness when servicing the instrument panel.

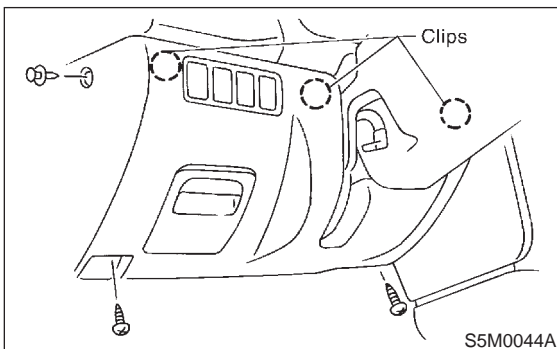
- 1) Disconnect ground cable from battery.
- 2) Remove shift knob. (MT model)
- 3) Remove console cover (A) and front cover (B).



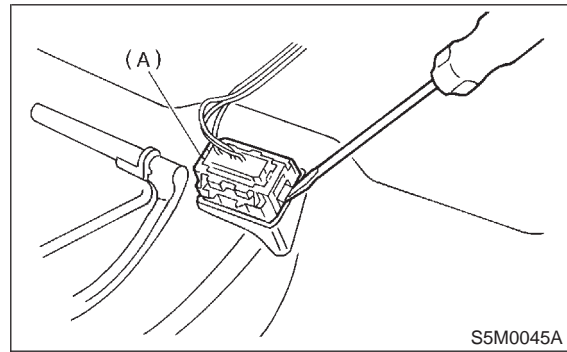
- 4) Remove console box.



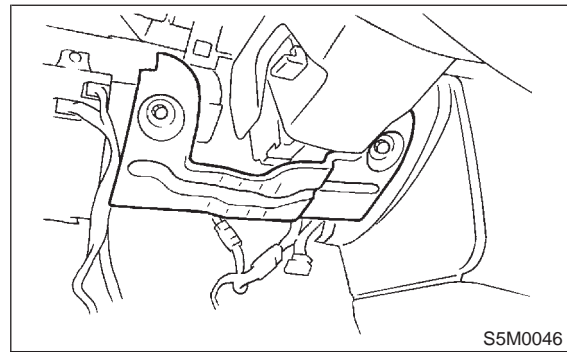
- 5) Remove lower cover and then disconnect connector.



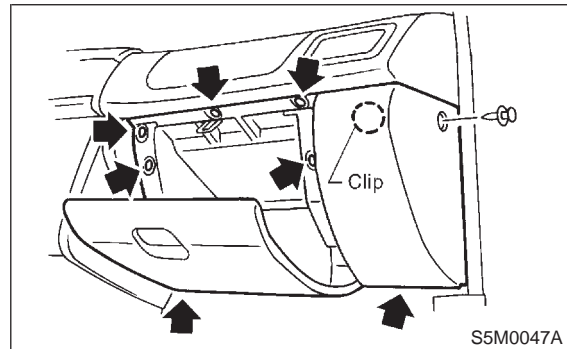
- 6) Disconnect data link connector (A) from lower cover.



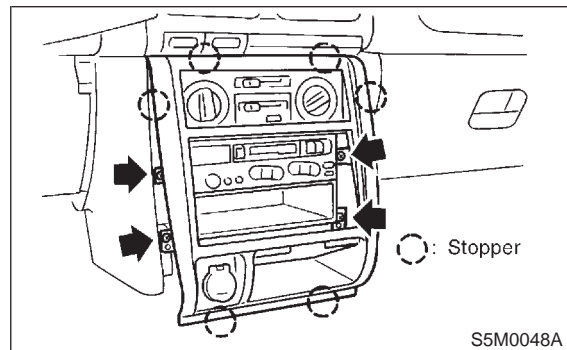
- 7) Remove knee panel.



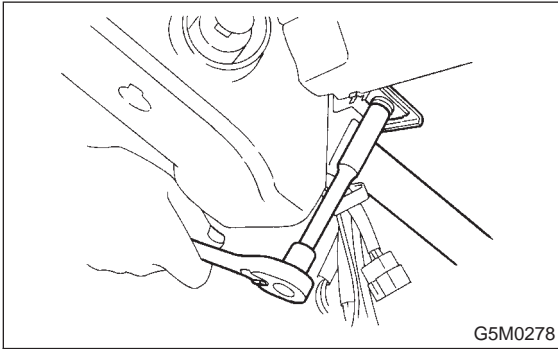
- 8) Remove glove box.



- 9) Remove center panel and disconnect connector.
- 10) Remove audio.



11) Remove the two bolts and lower steering column.

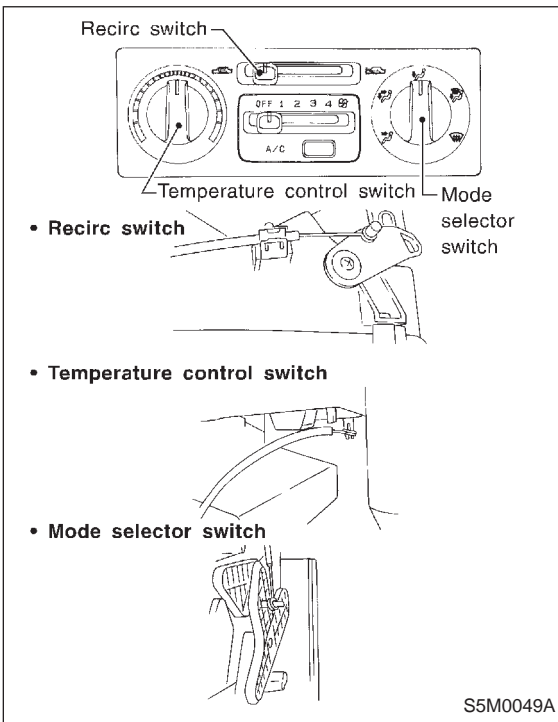


12) Set temperature control switch to “FULL HOT”, mode selector switch to “DEF” position and recirc switch to “FRESH” position.

13) Disconnect temperature control cable and mode control cable from heater unit then disconnect recirc control cable from intake unit.

NOTE:

Do not move switch and link when installing.



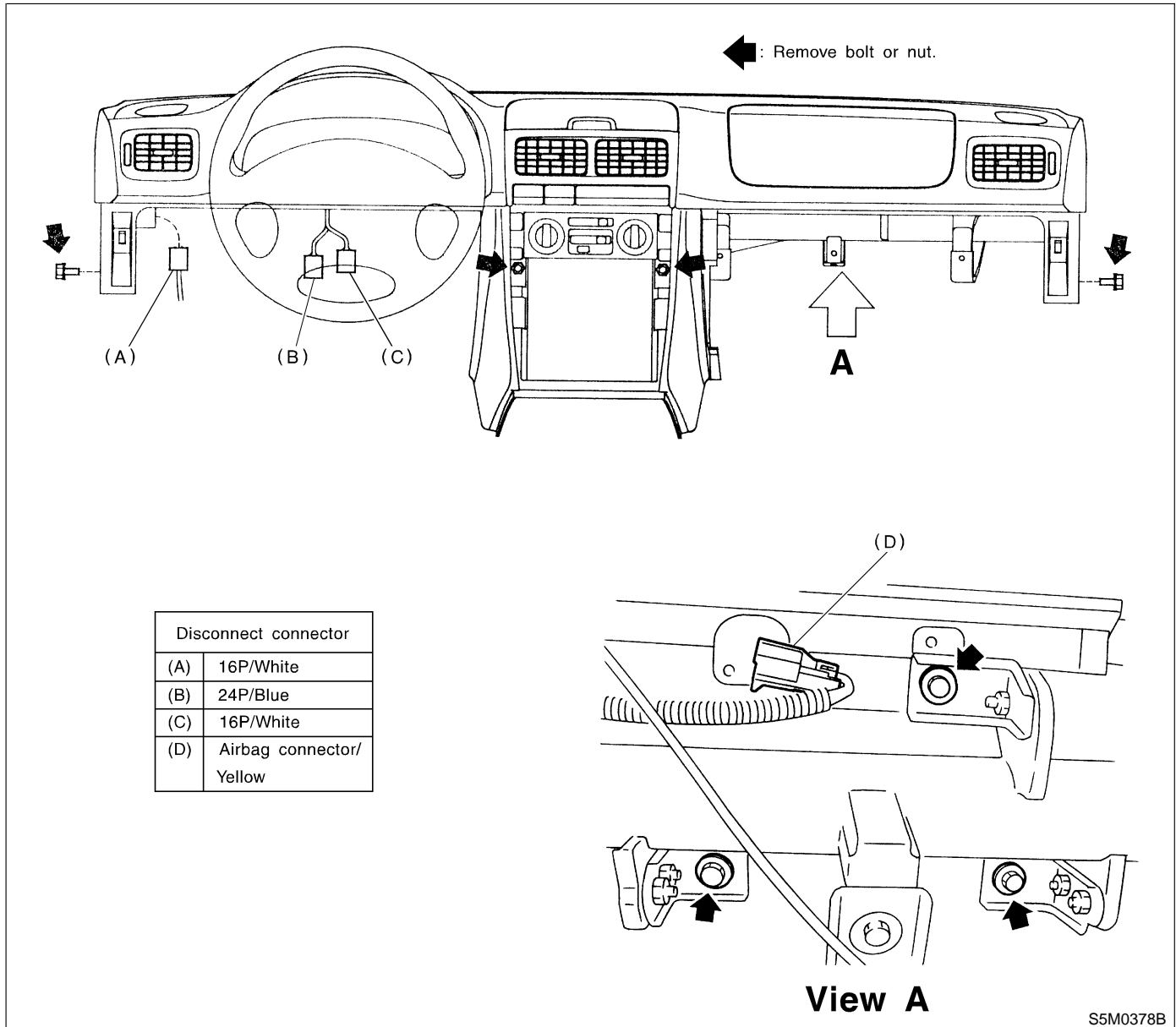
14) Disconnect harness connectors and then remove the installing bolts and nuts.

CAUTION:

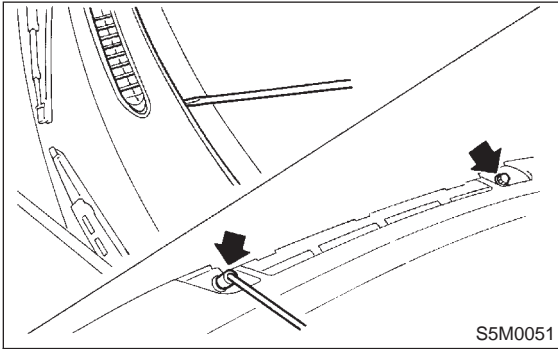
Be sure to hold socket section and not harness when disconnecting.

NOTE:

Put matching mark, if necessary, for easy reassembly.



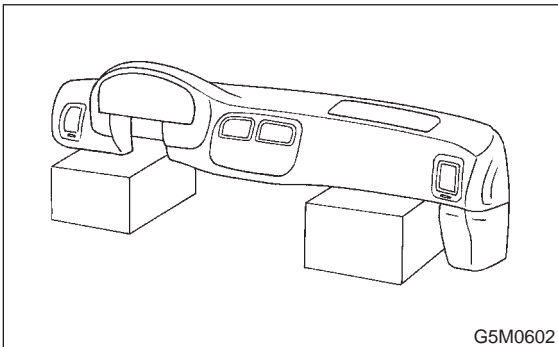
15) Remove front defroster grille and the two bolts.



16) Remove instrument panel carefully from the body.

CAUTION:

- Take care not to scratch the instrument panel and related parts.
- When storing removed instrument panel with passenger airbag module, place it standing up on the floor.

**B: INSTALLATION**

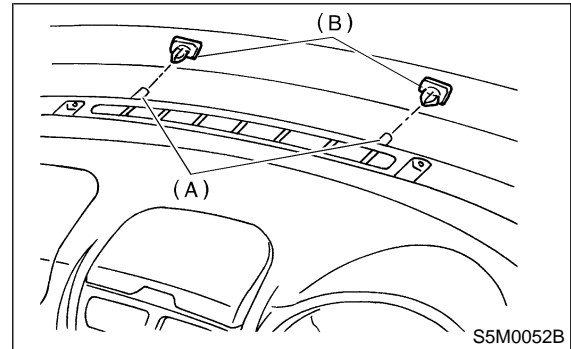
Install in the reverse order of removal.

CAUTION:

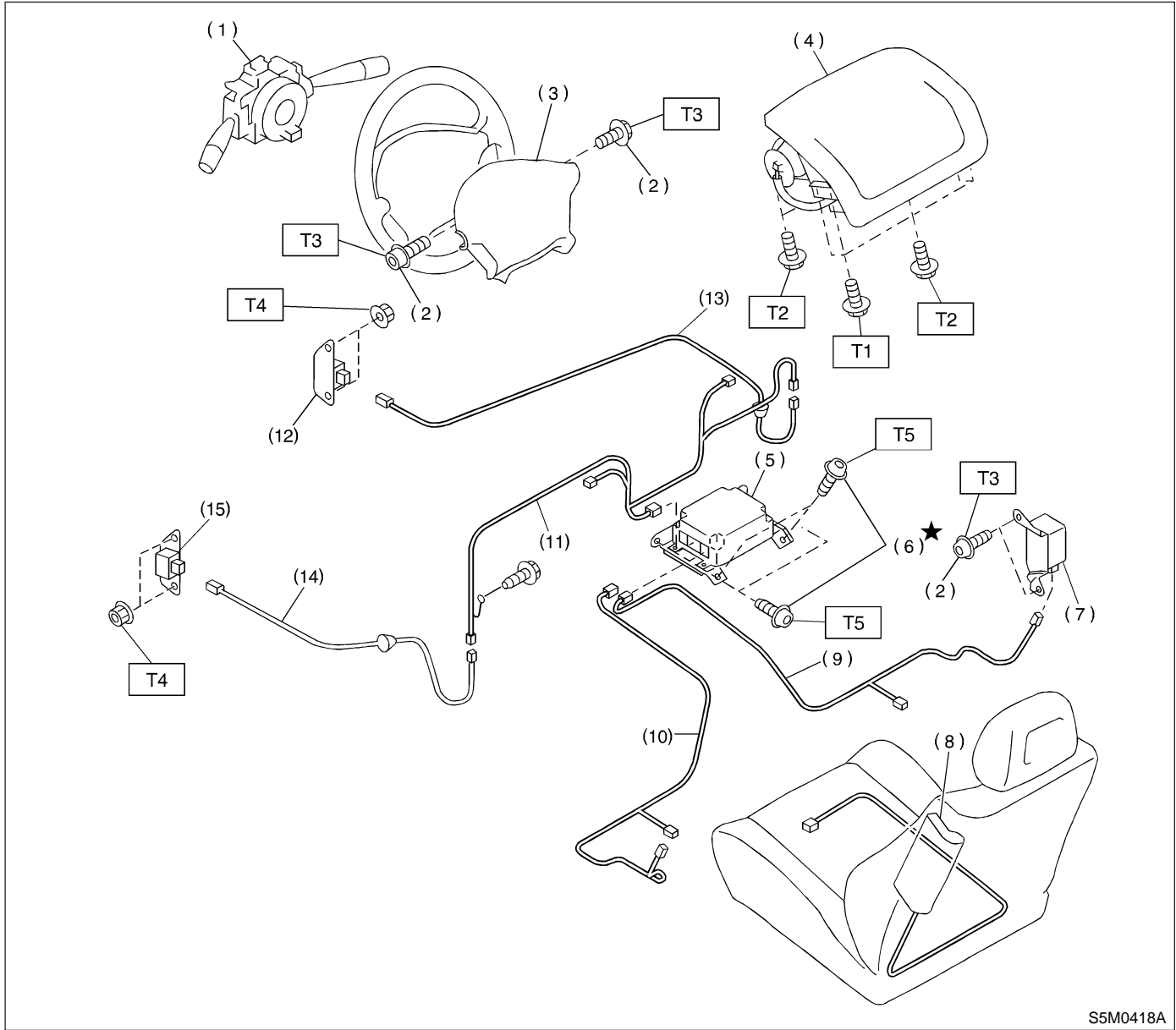
- Be careful not to snag the harness.
- Make sure to connect harness connectors.
- Take care not to scratch the instrument panel and related parts.

NOTE:

When setting instrument panel into position, push two pins (A) into grommet (B) on body panel.



1. SRS Airbag



S5M0418A

- | | |
|---|------------------------------------|
| (1) Combination switch ASSY with roll connector | (8) Side airbag module |
| (2) TORX® bolt T30 | (9) Side airbag harness (RH) |
| (3) Airbag module ASSY (Driver) | (10) Side airbag harness (LH) |
| (4) Airbag module ASSY (Passenger) | (11) Airbag main harness |
| (5) Airbag control module | (12) Front sub sensor (RH) |
| (6) TORX® bolt T40 | (13) Front sub sensor harness (RH) |
| (7) Side airbag sensor | (14) Front sub sensor harness (LH) |
| | (15) Front sub sensor (LH) |

Tightening torque: N·m (kg·m, ft·lb)

T1: 4.4±1.5 (0.45±0.15, 3.3±1.1)

T2: 7.4±2.0 (0.75±0.2, 5.4±1.4)

T3: 10±2 (1.0±0.2, 7.2±1.4)

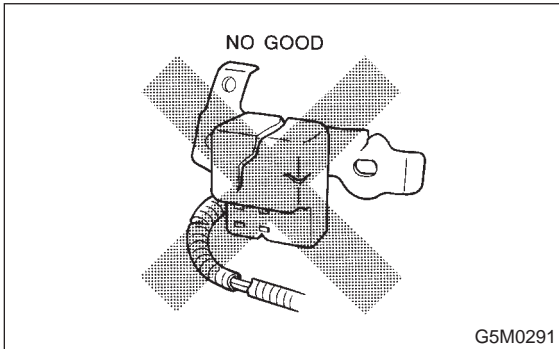
T4: 20±4 (2.0±0.4, 14.5±2.9)

T5: 25±2 (2.5±0.2, 18.1±1.4)

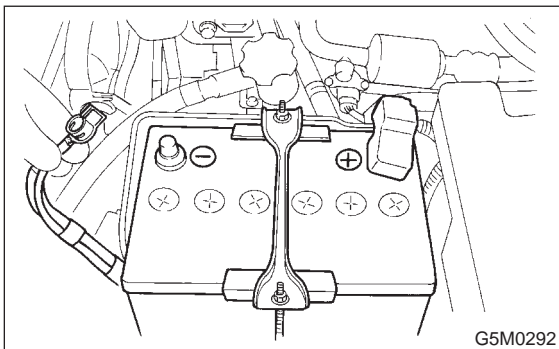
1. General

A: PRECAUTION

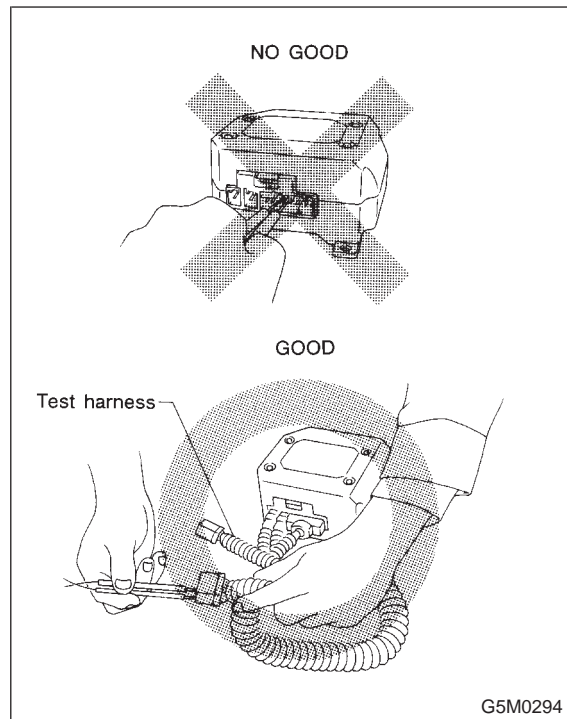
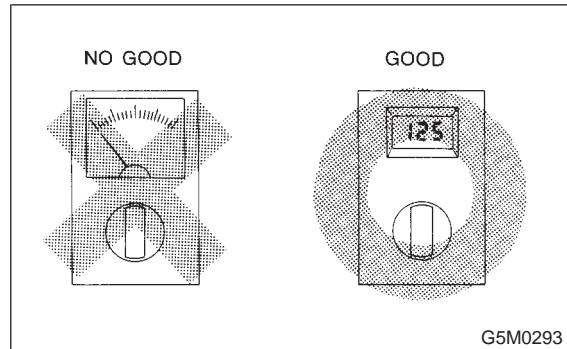
● If any of the airbag system parts such as sensors, airbag module, airbag control module and harness are damaged or deformed, replace with new genuine parts.



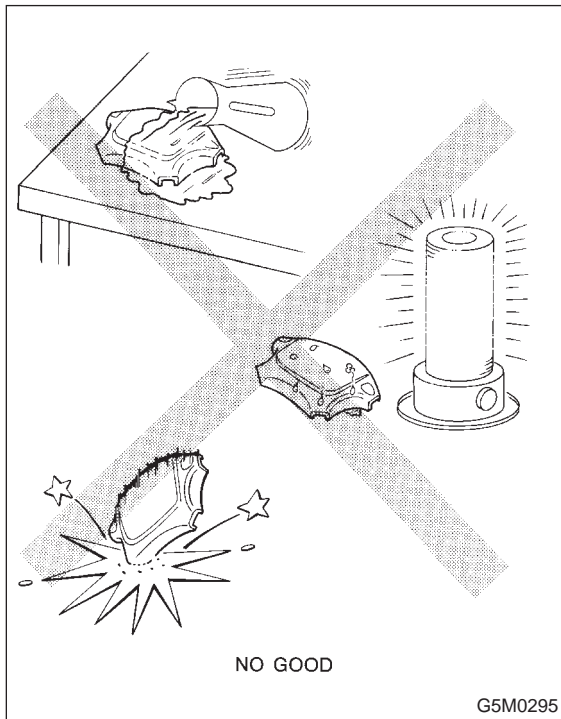
● When servicing, be sure to turn the ignition switch off, disconnect the negative (-) battery terminal then the positive (+) terminal in advance, and wait for more than 20 seconds before starting work.



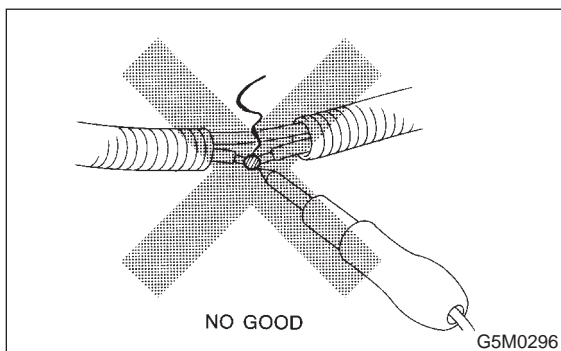
● When checking the system, be sure to use a digital circuit tester. Use of an analog circuit tester may cause the airbag to activate erroneously. Do not directly apply the tester probe to any connector terminal of the airbag. When checking, use a test harness.



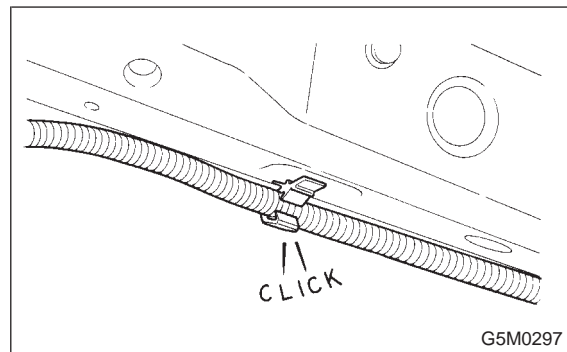
- Do not drop the airbag modulator parts, subject it to high temperatures over 90°C (194°F), or apply oil, grease, or water to it; otherwise, the internal parts may be damaged and its reliability greatly lowered.



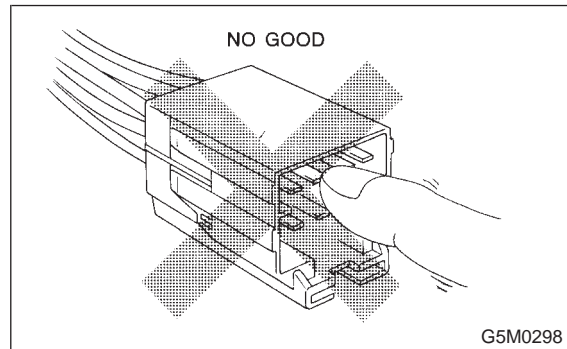
- If any damage or open is found on the SRS airbag system wire harness, do not attempt to repair using soldering, etc. Be sure to replace the faulty harness with a new genuine part.



- Install the wire harness securely with the specified clips so as to avoid interference or jamming with other parts.



- Before connecting the airbag system to ground, make sure that the grounding terminal is free from paint and contamination.
- Do not allow water or oil to come in contact with the connector terminals. Do not touch the connector terminals.



- When connecting or disconnecting airbag connector, make sure ignition switch is OFF.

2. Inspection and Replacement Standards

A: VEHICLES WHICH BECOME INVOLVED IN A COLLISION

If the vehicle equipped with an SRS airbag system is damaged in a collision, the airbag system parts must be checked and replaced in accordance with the following standards:

- After faulty parts are replaced, the warning light operation must be checked.
- When the ignition switch is turned ON, it lights up for about 7 seconds and then it goes out for at least 30 seconds.
- The trouble code stored in memory must be erased after the check.

B: AIRBAG MODULE (DRIVER AND PASSENGER)

1. INSPECTION STANDARD

- The vehicle damaged in a collision (regardless of whether or not airbag is deployed).
- The designated trouble code is output during self-diagnosis. <Ref. to 5-5 [T4A0].>

2. REPLACEMENT STANDARD

- Airbag is deployed.
- The pad surface is scratched or cracked.
- Harness and/or connector is deformed or cracked, their circuits are broken, lead wire is exposed, etc.
- Mounting bracket is cracked or deformed.
- The module surface is fouled with foreign matter. (grease, oil, water, cleaning solvent, etc.)
- Airbag module dropped to the floor/ground.
- Airbag module determined as faulty during self-diagnosis.

C: AIRBAG MODULE (SIDE)

1. INSPECTION STANDARD

- The vehicle damaged in a side collision (regardless of whether or not airbag is deployed).
- The designated trouble code is output during self-diagnosis. <Ref. to 5-5 [T4A0].>

2. REPLACEMENT STANDARD

- Side airbag is deployed.
- The front seat assembly is damaged or deformed.
- Harness and/or connector is deformed or cracked, their circuits are broken, lead wire is exposed, etc.
- Mounting bracket is cracked or deformed.

- Side airbag module determined as faulty during self-diagnosis.

D: MAIN HARNESS

1. INSPECTION STANDARD

- A vehicle damaged in a collision (regardless of whether or not airbag is deployed).
- The designated trouble code is output during self-diagnosis. <Ref. to 5-5 [T4A0].>

2. REPLACEMENT STANDARD

- Harness circuit is broken, lead wire is exposed, corrugated tube is cracked, etc.
- Connector is scratched or cracked.
- The designated trouble code is output during self-diagnosis.

E: AIRBAG CONTROL MODULE

1. INSPECTION STANDARD

- A vehicle damaged in a collision (regardless of whether or not airbag is deployed).
- The designated trouble code is output during self-diagnosis. <Ref. to 5-5 [T4A0].>

2. REPLACEMENT STANDARD

- Control module is cracked or deformed.
- Mounting bracket is cracked or deformed.
- Connector is scratched or cracked.
- Control module dropped to the floor/ground.
- Control module determined as faulty during diagnostics.
- Front or side airbag is deployed.

F: ROLL CONNECTOR

1. INSPECTION STANDARD

- A vehicle damaged in a collision (regardless of whether or not airbag is deployed).
- The designated trouble code is output during self-diagnosis. <Ref. to 5-5 [T4A0].>

2. REPLACEMENT STANDARD

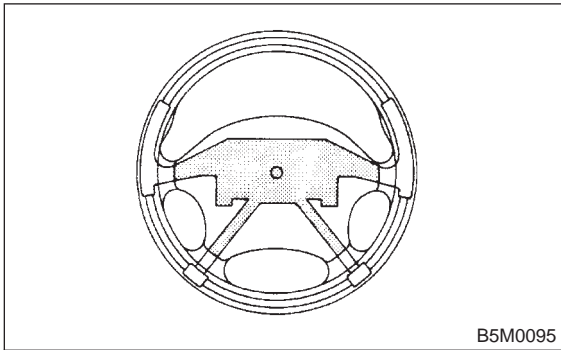
- Combination switch or steering roll connector is deformed or cracked.

G: STEERING WHEEL**1. INSPECTION STANDARD**

- A vehicle damaged in a collision (regardless of whether or not airbag is deployed).

2. REPLACEMENT STANDARD

- Check steering wheel insert for cracks or deformities.
- Check to ensure that new airbag module is properly installed in steering wheel.
- After installing airbag module, check to ensure that it is free of interference with steering wheel and that clearance between the two is equal at all points.



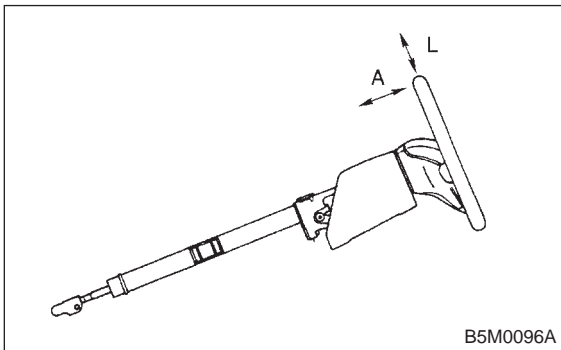
- Check steering wheel distortion in axial and radial directions.

Specifications:**Axial free play A**

Less than ± 6 mm (± 0.24 in)

Radial free play L

Less than ± 7 mm (± 0.28 in)

**H: STEERING COLUMN ASSEMBLY****1. INSPECTION STANDARD**

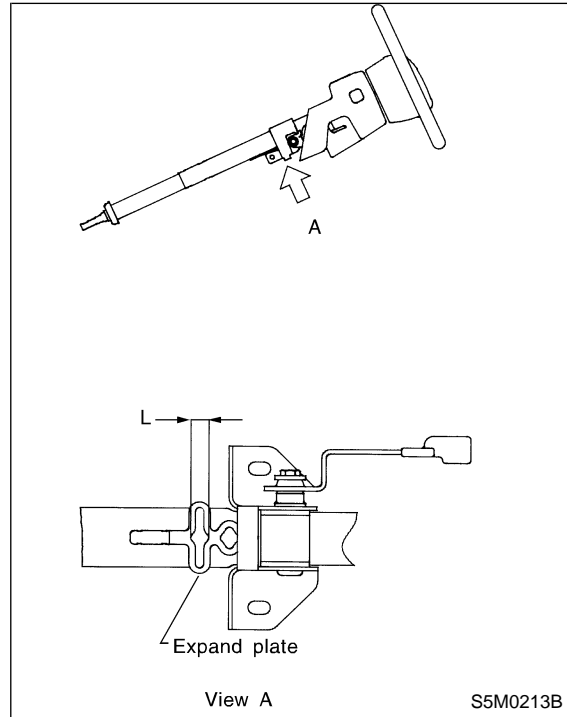
- A vehicle damaged in a collision (regardless of whether or not airbag is deployed).

2. REPLACEMENT STANDARD

- Check to ensure that clearance of expand plate on steering column under side is within specifications.

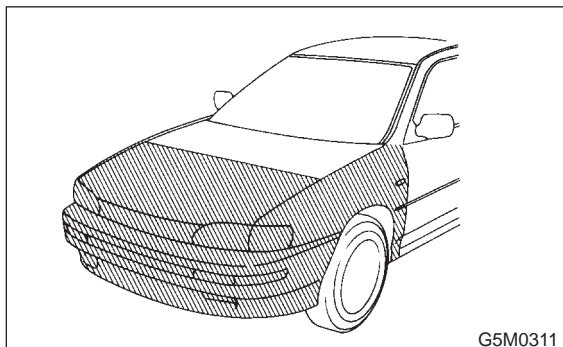
Clearance of expand plate: L

More than 15 mm (0.59 in)



I: FRONT SUB SENSOR**1. INSPECTION STANDARD**

- Check the front section (Refer to shaded area of vehicle in figure) for damage, regardless of whether or not airbag is deployed.



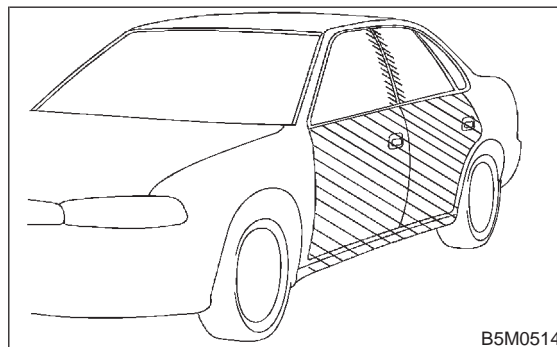
- The designated trouble code is output during self-diagnosis. <Ref. to 5-5 [T4A0].>

2. REPLACEMENT STANDARD

- Bracket is deformed.
- Housing is cracked or deformed.
- The label (that identifies the manufacturing number) is peeled or deteriorated.
- Harness circuit is broken, lead wire is exposed, corrugated tube is cracked, etc.
- Front sub sensor determined as faulty as a result of Diagnostics.
- Airbag is deployed (replace all front sub sensors).
- Front sub sensor dropped to the floor/ground.

J: SIDE AIRBAG SENSOR**1. INSPECTION STANDARD**

- Check the side section (Refer to shaded area of vehicle in figure) for damage, regardless of whether or not airbag is deployed.



- The designated trouble code is output during self-diagnosis. <Ref. to 5-5 [T4A0].>

2. REPLACEMENT STANDARD

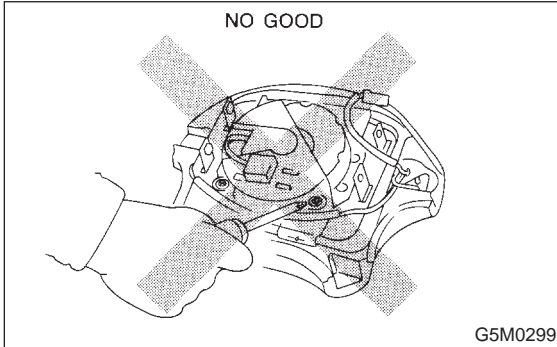
- Bracket is deformed.
- Housing is cracked or deformed.
- The label (that identifies the manufacturing number) is peeled or deteriorated.
- Harness circuit is broken, lead wire is exposed, corrugated tube is cracked, etc.
- Side airbag sensor determined as faulty as a result of Diagnostics.
- Side airbag is deployed (replace side airbag sensor on the deployed side).
- Side airbag sensor dropped to the floor/ground.

3. Airbag Module

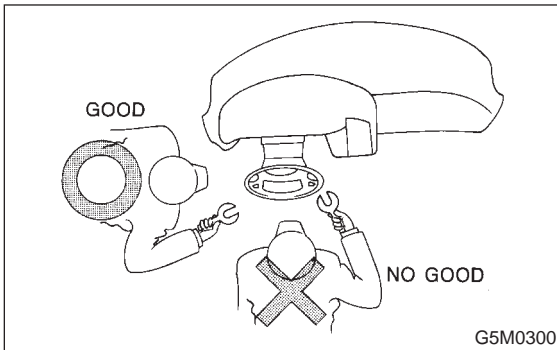
A: REMOVAL AND INSTALLATION

CAUTION:

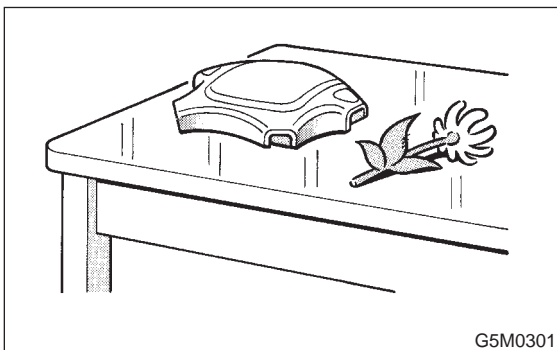
- The airbag module (driver, passenger and side) must not be disassembled. The airbag module cannot be used again once inflated.



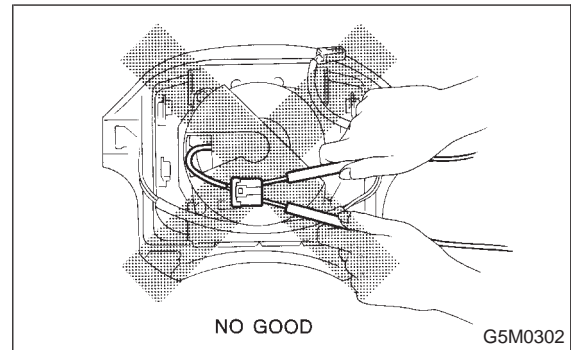
- When removing and installing the airbag module (driver, passenger and side), the operator should stand, as much as possible, on the side of the airbag module.



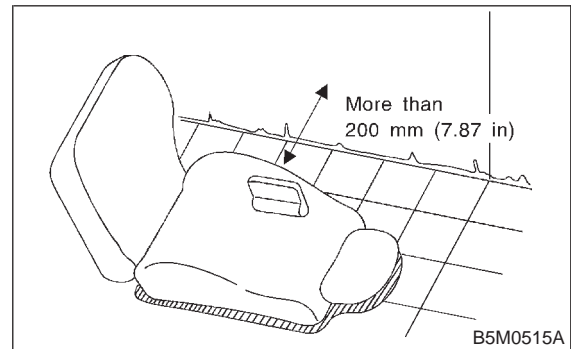
- After removal, the airbag module (driver, passenger and side) should be kept away from heat and light sources, and stored on a clean, flat surface to prevent from any damage to its lower structure.



- Do not check airbag module (driver, passenger and side) continuity with airbag removed from the vehicle body.



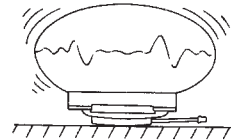
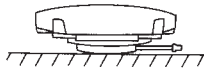
- Replace airbag module (driver, passenger and side) with a new one, should any of the following conditions develop:
 - Pad surface is scratched or cracked.
 - Connector harness is damaged.
 - Inflator side structure of module is cracked or deformed.
 - Module is excessively stained with water, oil, etc.
 - Module was accidentally dropped.
 - The front seat assembly is damaged or deformed.
- The removed front seat with the airbag module must be kept on its back. At this time, keep the module side at least 200 mm (7.87 in) away from walls or other objects.



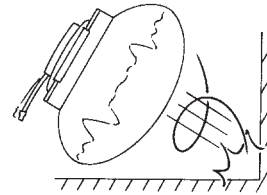
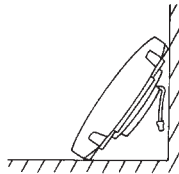
● When storing a removed airbag module (driver and passenger), be sure to place it in parallel with floor with the pad facing up. Do not place it against a wall, or place anything on the pad; otherwise, a dangerous condition may be created if the module malfunctions.

Driver side

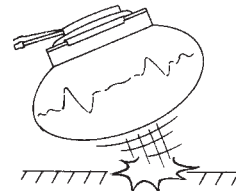
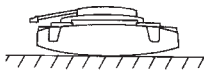
GOOD



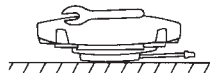
NO GOOD



NO GOOD

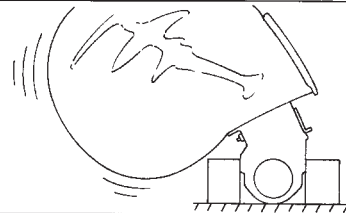
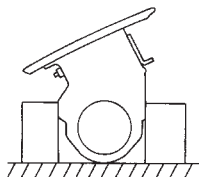


NO GOOD

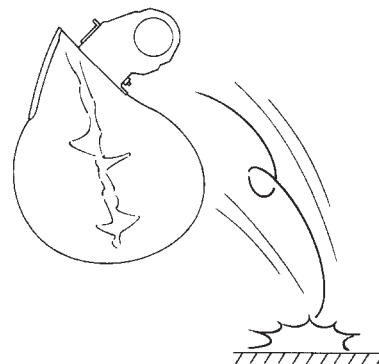
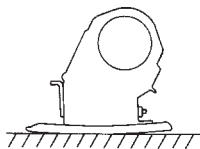


Passenger side

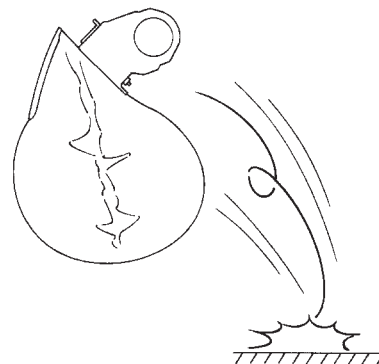
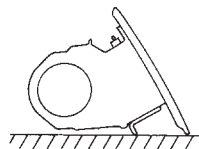
GOOD



NO GOOD

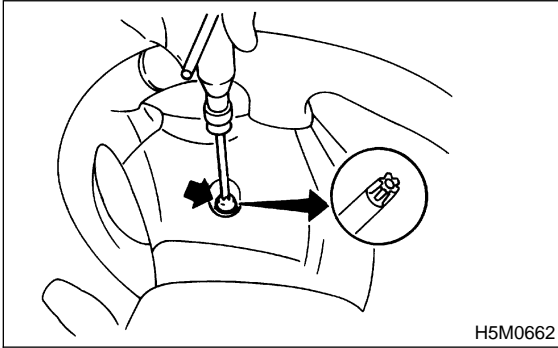


NO GOOD

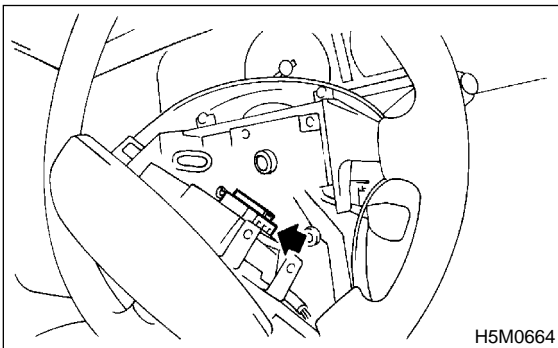


1. DRIVER'S AIRBAG MODULE

- 1) Set front wheels in straight ahead position.
- 2) Turn ignition switch off.
- 3) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 4) Using TORX® BIT T30, remove the two TORX® bolts.



- 5) Disconnect airbag connector on back of airbag module. <Ref. to 5-5 [M2F2].>

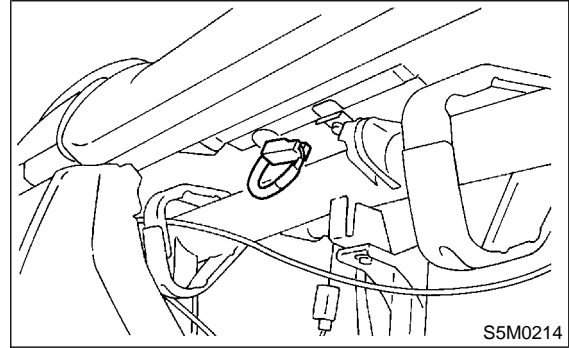


- 6) Refer to "CAUTION" for handling of a removed airbag module. <Ref. to 5-5 [W3A0].>
- 7) Install in the reverse order of removal.

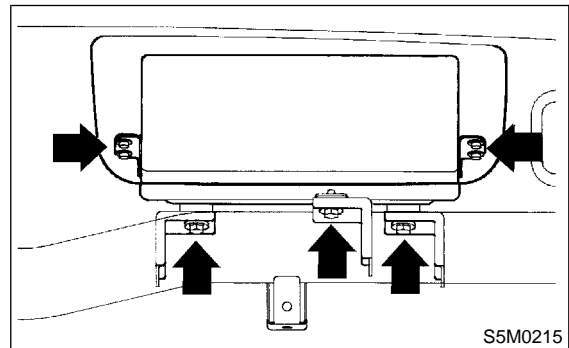
CAUTION:
Do not allow harness and connectors to interfere or get caught with other parts.

2. PASSENGER'S AIRBAG MODULE

- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove glove box. <Ref. to 5-4 [W1A0].>
- 4) Disconnect airbag connector. <Ref. to 5-5 [M2F2].>



- 5) Remove the seven bolts and then carefully remove airbag module.



- 6) Refer to "CAUTION" for handling of a removed airbag module. <Ref. to 5-5 [W3A0].>
- 7) Install in the reverse order of removal.

CAUTION:
Do not allow harness and connectors to interfere or get caught with other parts.

3. SIDE AIRBAG MODULE

The side airbag module cannot be detached from the front seat assembly. When replacing side airbag module, replace front seat assembly. <Ref. to 5-3 [W100].>

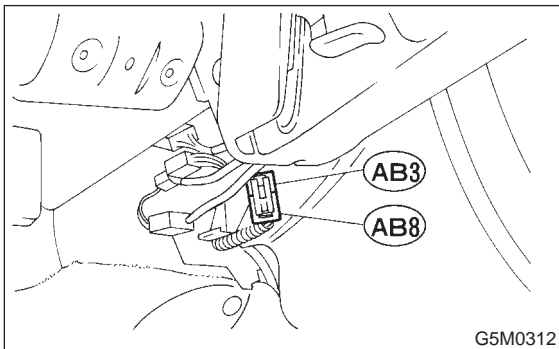
4. Main Harness

A: REMOVAL AND INSTALLATION

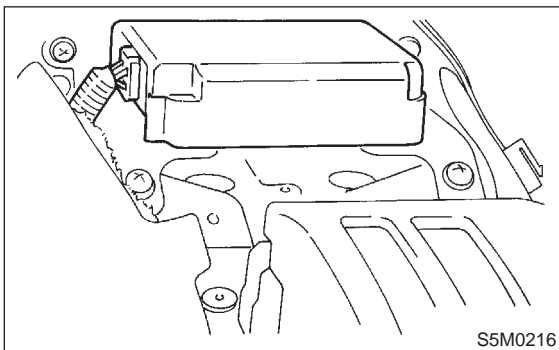
- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove lower cover. <Ref. to 5-4 [W1A0].>
- 4) Disconnect airbag connector (AB3) and (AB8) below steering column. <Ref. to 5-5 [M2F2].>

CAUTION:

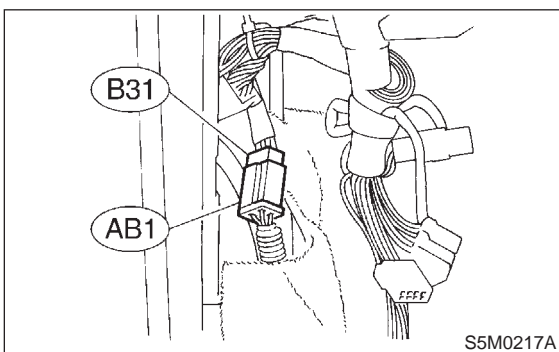
Do not reconnect airbag connector at steering column until main harness are securely re-installed.



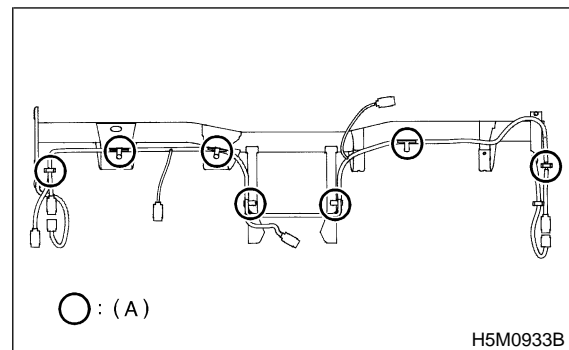
- 5) Remove instrument panel. <Ref. to 5-4 [W1A0].>
- 6) Disconnect connector from airbag control module.



- 7) Disconnect body harness connector (B31) from airbag connector (AB1) located at front pillar lower (driver side). <Ref. to 5-5 [M2F3].>



- 8) Disconnect front sub sensor connector (yellow) from airbag main harness located at front pillar lower (both sides). <Ref. to 5-5 [M2F5].>
- 9) Detach clips (A) from steering support beam and remove main harness.

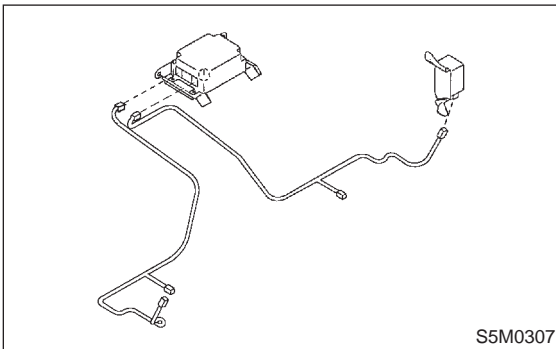


- 10) Install in the reverse order of removal.

5. Side Airbag Harness

A: REMOVAL AND INSTALLATION

- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove front seat <Ref. to 5-3 [W100].> and roll up floor mat <Ref. to 5-3 [W5A3].>
- 4) Remove console box. <Ref. to 5-4 [W1A0].>
- 5) Disconnect the two 12-pin yellow connectors from airbag control module.
- 6) Remove side airbag sensor <Ref. to 5-5 [W7A0].> and then disconnect connector from side airbag sensor. <Ref. to 5-5 [M2F3].>
- 7) Detach clips and then remove side airbag harness.



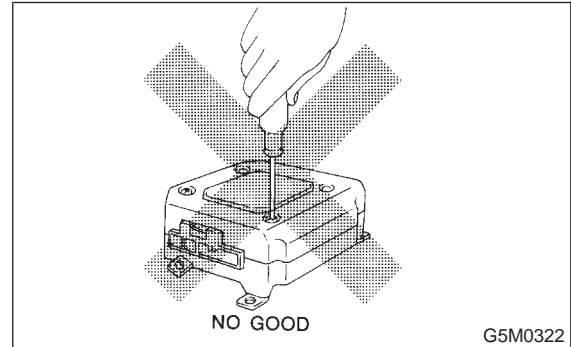
- 8) Install in the reverse order of removal.

6. Airbag Control Module

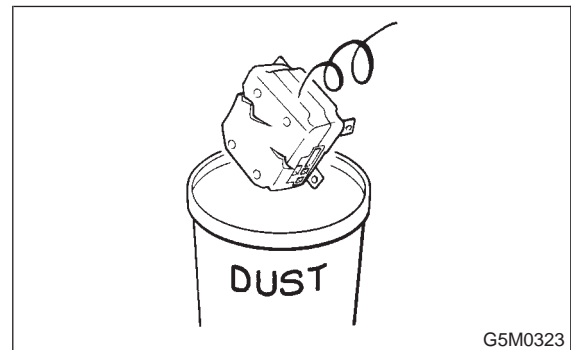
A: REMOVAL AND INSTALLATION

CAUTION:

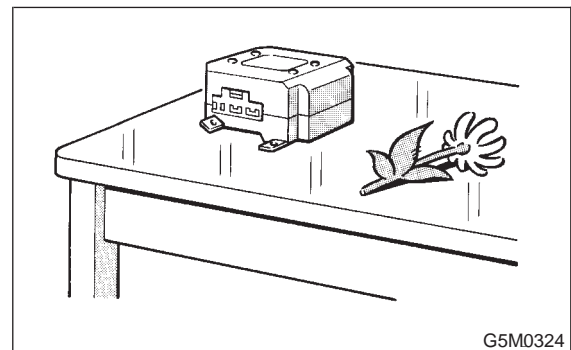
- Do not disassemble the airbag control module.



- If the airbag control module is deformed, or if water damage is suspected, replace the airbag control module with a new genuine part.



- After removal, keep the airbag control module on a dry, clean surface away from heat and light sources, and moisture and dust.

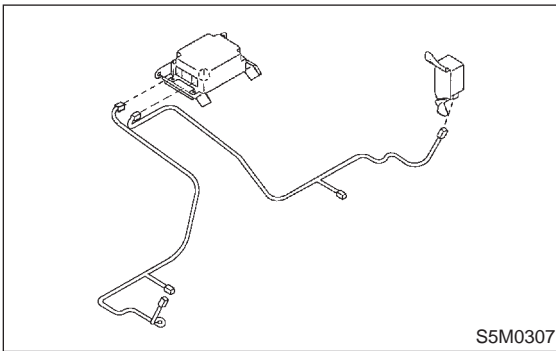


- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove lower cover. <Ref. to 5-4 [W1A0].>
- 4) Remove instrument panel console. <Ref. to 5-4 [W1A0].>
- 5) Disconnect connector from airbag control module.

5. Side Airbag Harness

A: REMOVAL AND INSTALLATION

- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove front seat <Ref. to 5-3 [W100].> and roll up floor mat <Ref. to 5-3 [W5A3].>
- 4) Remove console box. <Ref. to 5-4 [W1A0].>
- 5) Disconnect the two 12-pin yellow connectors from airbag control module.
- 6) Remove side airbag sensor <Ref. to 5-5 [W7A0].> and then disconnect connector from side airbag sensor. <Ref. to 5-5 [M2F3].>
- 7) Detach clips and then remove side airbag harness.



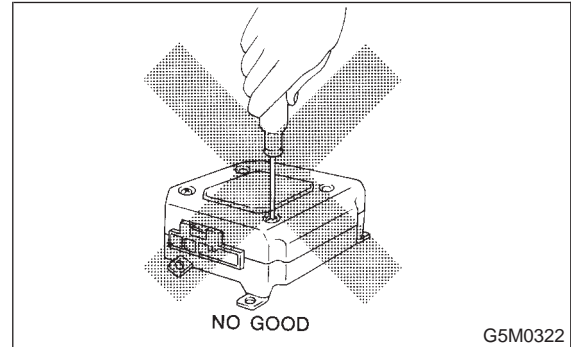
- 8) Install in the reverse order of removal.

6. Airbag Control Module

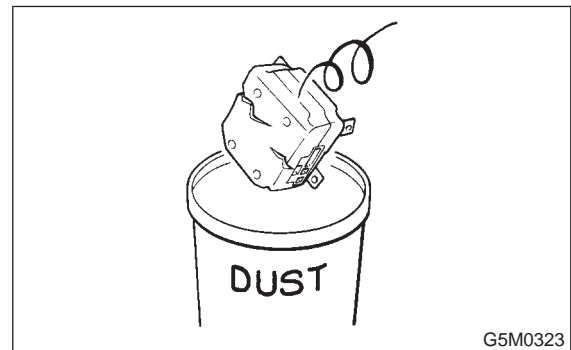
A: REMOVAL AND INSTALLATION

CAUTION:

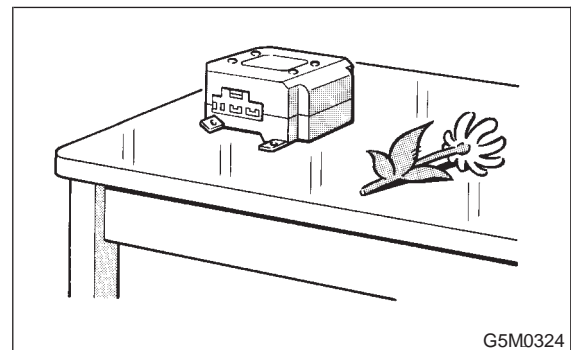
- Do not disassemble the airbag control module.



- If the airbag control module is deformed, or if water damage is suspected, replace the airbag control module with a new genuine part.



- After removal, keep the airbag control module on a dry, clean surface away from heat and light sources, and moisture and dust.

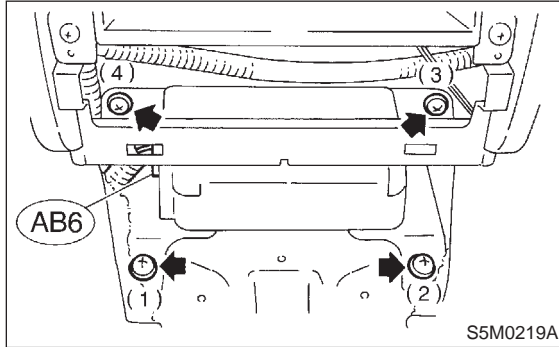


- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove lower cover. <Ref. to 5-4 [W1A0].>
- 4) Remove instrument panel console. <Ref. to 5-4 [W1A0].>
- 5) Disconnect connector from airbag control module.

6) Using T40 TORX® bit (Tamper resistant type), remove the four TORX® bolts in numerical sequence shown in figure. Discard the old TORX® bolts.

CAUTION:

Use new TORX® bolts during re-assembly.



7) Install in the reverse order of removal.

7. Side Airbag Sensor

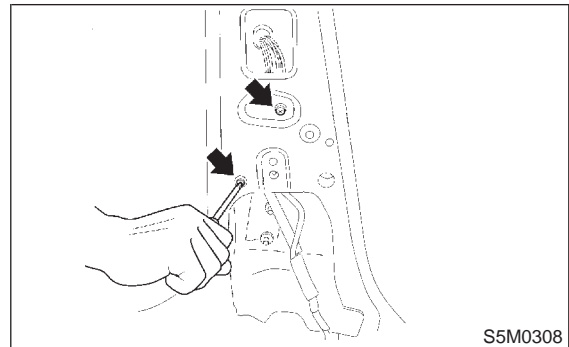
A: REMOVAL AND INSTALLATION

CAUTION:

● If the side of the vehicle body is damaged by a collision, be sure to check the left and right side airbag sensors, even if the airbag was not inflated. If any damage to the sensor or any deformation of the sensor mount is found, replace with a new genuine part.

● When painting or performing sheet metal work on the side part of vehicle body, including the side sill, center pillar, front and rear doors, take utmost care not to apply dryer heat, painting mist, or the flame of the welding burner directly to the side airbag sensors and wire harness of the airbag system.

- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove center pillar lower trim. <Ref. to 5-3 [W5A1].>
- 4) Detach ELR of front seat belt. <Ref. to 5-3 [W3A0].>
- 5) Remove the two TORX® bolts and then detach side airbag sensor while disconnecting connector. <Ref. to 5-5 [M2F4].>

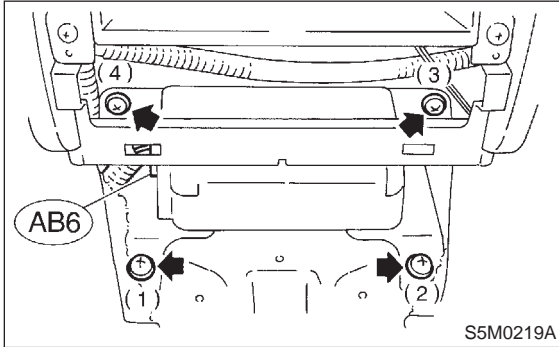


6) Install in the reverse order of removal.

6) Using T40 TORX® bit (Tamper resistant type), remove the four TORX® bolts in numerical sequence shown in figure. Discard the old TORX® bolts.

CAUTION:

Use new TORX® bolts during re-assembly.



7) Install in the reverse order of removal.

7. Side Airbag Sensor

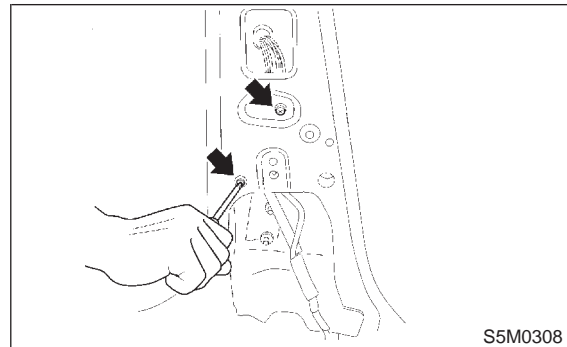
A: REMOVAL AND INSTALLATION

CAUTION:

- If the side of the vehicle body is damaged by a collision, be sure to check the left and right side airbag sensors, even if the airbag was not inflated. If any damage to the sensor or any deformation of the sensor mount is found, replace with a new genuine part.

- When painting or performing sheet metal work on the side part of vehicle body, including the side sill, center pillar, front and rear doors, take utmost care not to apply dryer heat, painting mist, or the flame of the welding burner directly to the side airbag sensors and wire harness of the airbag system.

- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove center pillar lower trim. <Ref. to 5-3 [W5A1].>
- 4) Detach ELR of front seat belt. <Ref. to 5-3 [W3A0].>
- 5) Remove the two TORX® bolts and then detach side airbag sensor while disconnecting connector. <Ref. to 5-5 [M2F4].>



6) Install in the reverse order of removal.

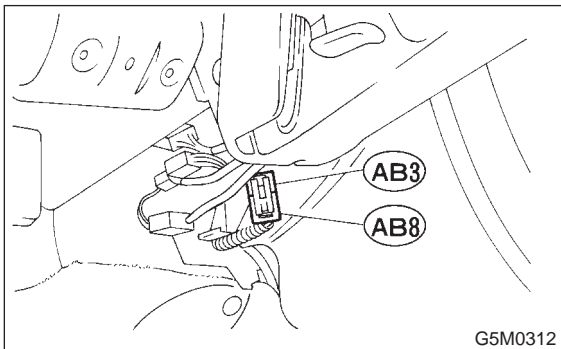
8. Roll Connector

A: REMOVAL

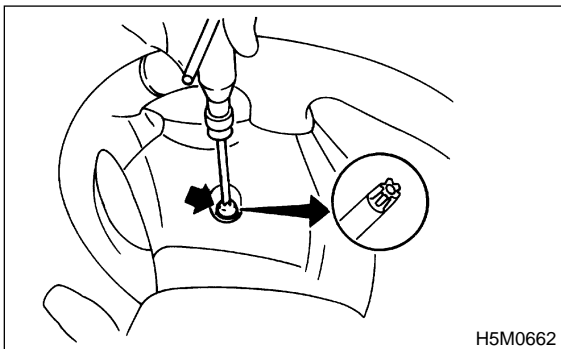
- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove lower cover. <Ref. to 5-4 [W1A0].>
- 4) Disconnect airbag connector (AB3) and (AB8) below steering column. <Ref. to 5-5 [M2F2].>

CAUTION:

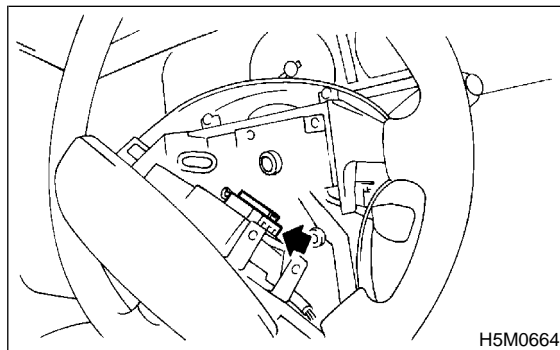
Do not reconnect airbag connector at steering column until combination switch is securely re-installed.



- 5) Disconnect combination switch connectors from body harness connector.
- 6) Set front wheels in straight ahead position. Using T30 TORX® bit, remove the two TORX® bolts.



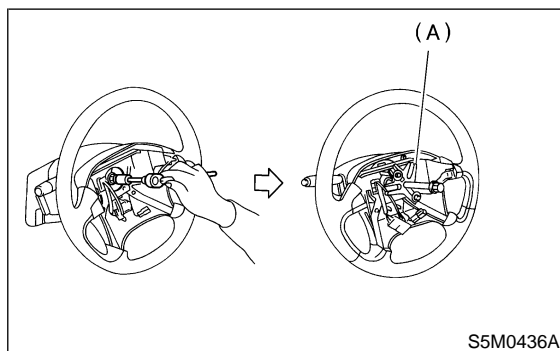
- 7) Disconnect airbag connector on back of airbag module. <Ref. to 5-5 [M2F2].> Remove airbag module, and place it with pad side facing upward. <Ref. to 5-5 [W3A0].>



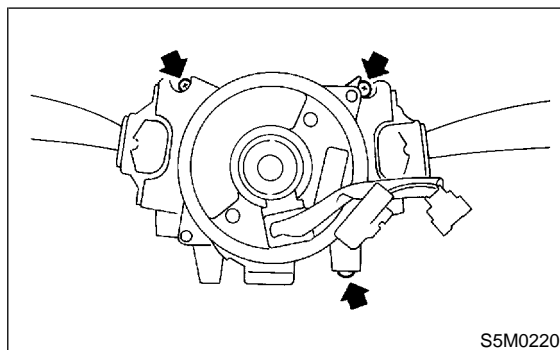
- 8) Using steering puller (A), remove steering wheel.

CAUTION:

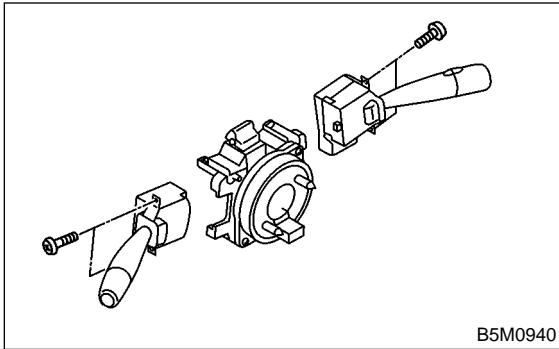
Do not allow connector to interfere when removing steering wheel.



- 9) Remove steering column covers.
- 10) Removing the three retaining screws, remove combination switch.



- 11) Disconnect connectors and then detach combination switch assembly.
- 12) Remove lighting switch and wiper switch from roll connector.

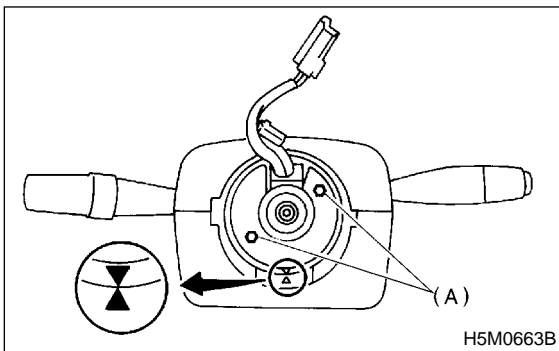


B: ADJUSTMENT

1. CENTERING ROLL CONNECTOR

Before installing steering wheel, make sure to center roll connector built into combination switch.

- 1) Make sure that front wheels are positioned straight ahead.
- 2) Install steering gearbox, steering shaft and combination switch properly. Turn roll connector pin (A) clockwise until it stops.
- 3) Then, back off roll connector pin (A) approximately 2.5 turns until “▲” marks aligned.

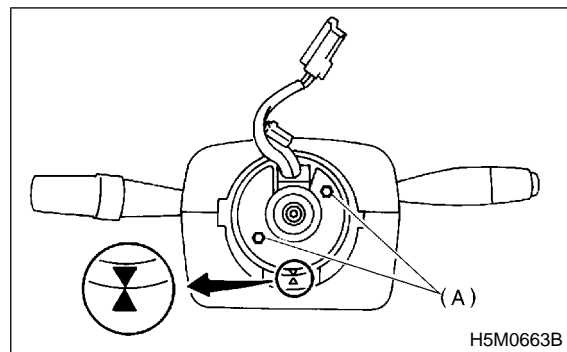


C: INSTALLATION

CAUTION:
Failure to do this might damage roll connector.

- 1) Install lighting switch and wiper switch to roll connector.
- 2) Before installing combination switch, check to ensure that combination switch is off and front wheels are set in the straight ahead position.
- 3) Install combination switch assembly and then connect connectors.
- 4) Install column cover and centering roll connector. <Ref. to 5-5 [W8B1].>
- 5) Install steering wheel in neutral position. Carefully insert roll connector pin (A) into hole on steering wheel.

NOTE:
If steering wheel angle requires fine adjustment, adjust tie-rod.



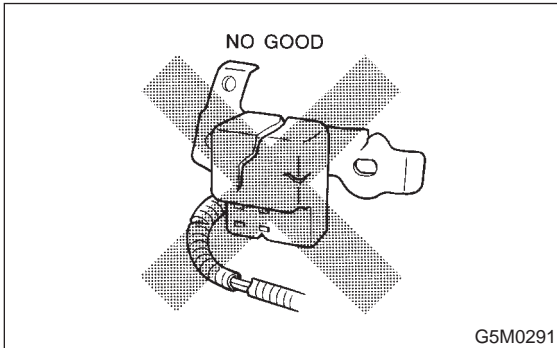
- 6) Install airbag module and lower cover in the reverse order of removal.

9. Front Sub Sensor

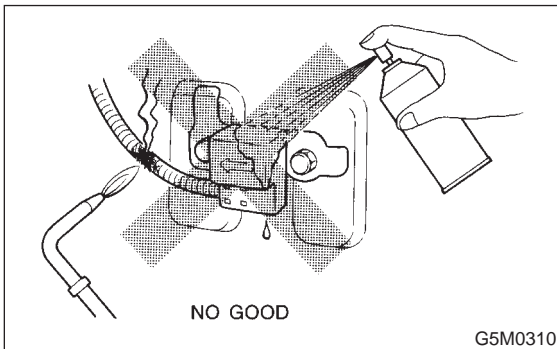
A: REMOVAL AND INSTALLATION

CAUTION:

● If the front end of the vehicle body is damaged by a collision, be sure to check the left and right front sub sensors, even if the airbag was not inflated. If any damage to the sensor or any deformation of the sensor mount is found, replace with a new genuine part.



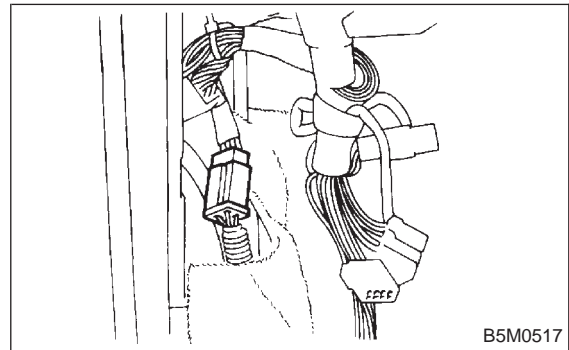
● When painting or performing sheet metal work on the front part of vehicle body, including the front wheel apron, front fender and front side frame, take utmost care not to apply dryer heat, painting mist, or the flame of the welding burner directly to the front sub sensors and wire harness of the airbag system.



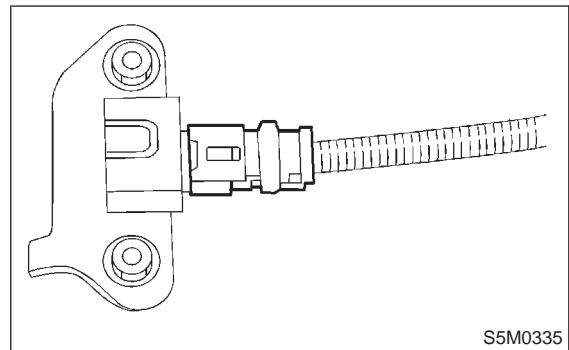
1. FRONT SUB SENSOR HARNESS

- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.

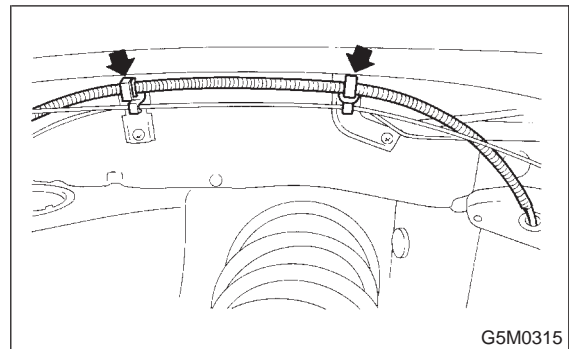
- 3) Remove front side sill cover and then disconnect front sub sensor connector. <Ref. to 5-5 [M2F5].>



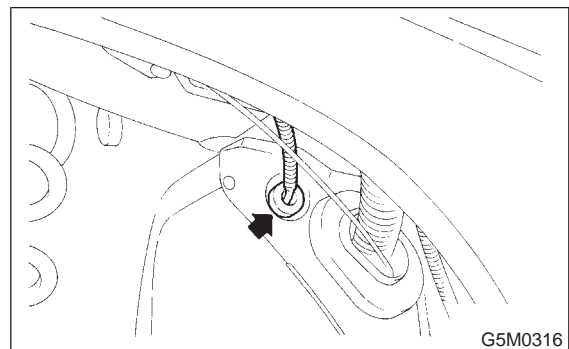
- 4) Remove front wheel and mud guard.
- 5) Disconnect connector from front sub sensor assembly. <Ref. to 5-5 [M2F4].>



- 6) Remove wiring harness clips.



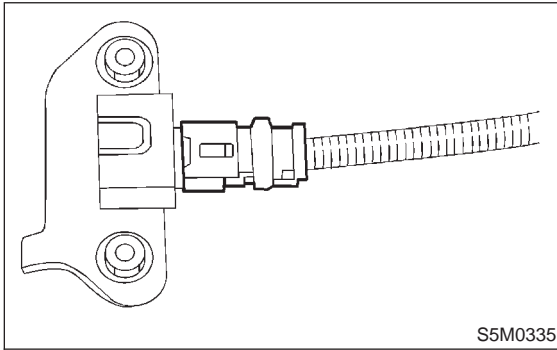
- 7) Remove grommet and then detach front sub sensor harness.



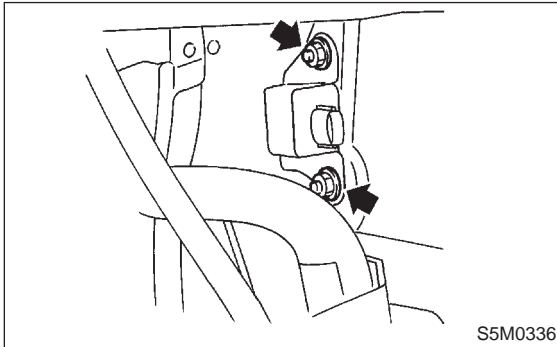
- 8) Install in the reverse order of removal.

2. FRONT SUB SENSOR ASSEMBLY

- 1) Turn ignition switch off.
- 2) Disconnect ground cable from battery and wait for at least 20 seconds before starting work.
- 3) Remove front wheel and mud guard.
- 4) Disconnect connector from front sub sensor assembly. <Ref. to 5-5 [M2F4].>



- 5) Remove front sub sensor.



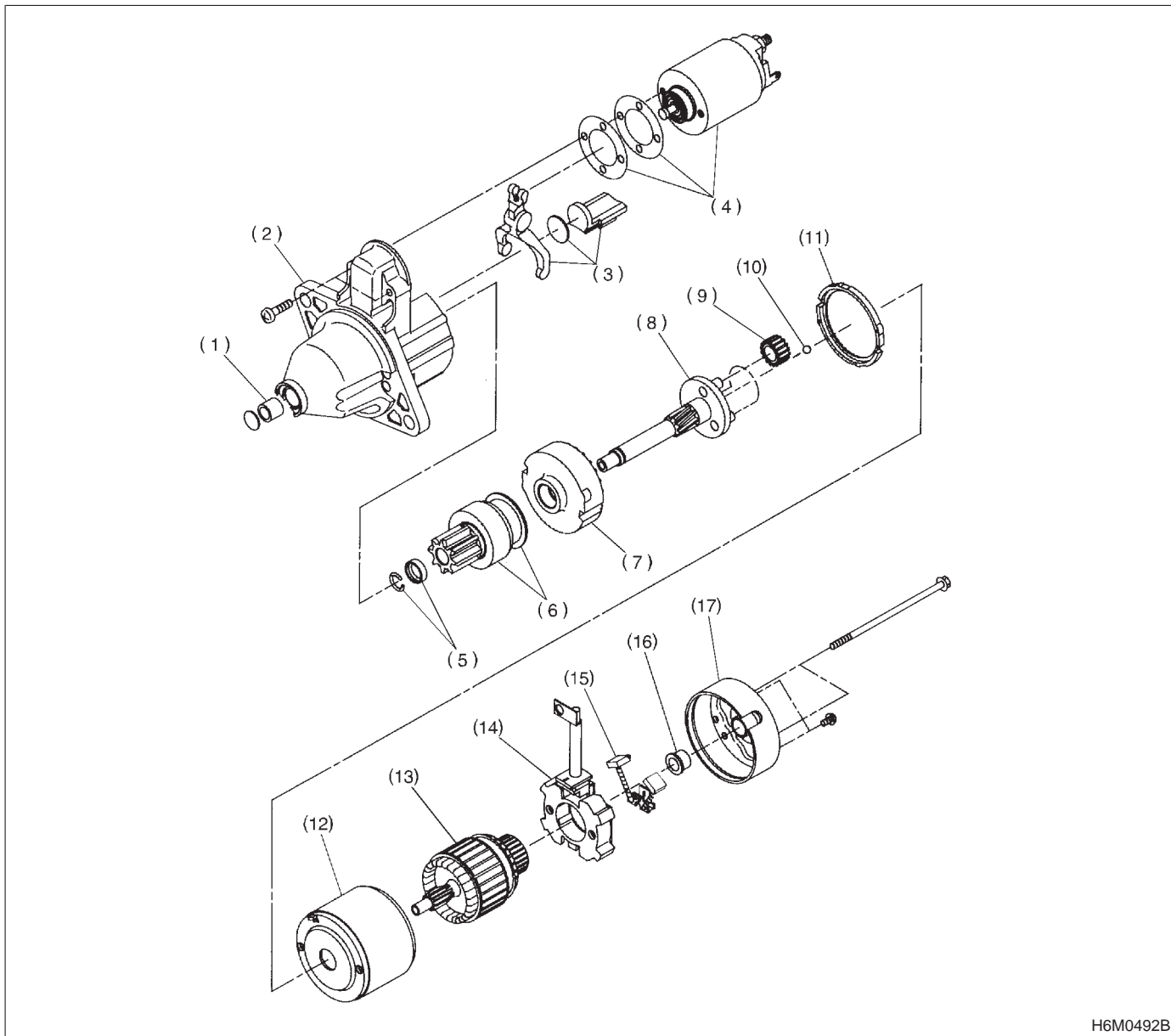
- 6) Install in the reverse order of removal.

MEMO:

1. Specifications

| Item | | Designation | | |
|---|---------------------------|---|---|--|
| Starter | Type | Reduction type | | |
| | Vehicle type | MT vehicles | AT vehicles | |
| | Model | M000T81681 | M000T84481, M001T84481 | |
| | Manufacturer | Mitsubishi Electric | | |
| | Voltage and output | 12 V — 1.0 kW | 12 V — 1.4 kW | |
| | Direction of rotation | Counterclockwise (when observed from pinion) | | |
| | Number of pinion teeth | 8 | 9 | |
| | No-load characteristics | Voltage | 11 V | |
| | | Current | 90 A or less | |
| | | Rotating speed | 2,800 rpm or more | 2,400 rpm or more |
| | Load characteristics | Voltage | 7.5 V | 7.7 V |
| | | Current | 300 A | 400 A |
| | | Torque | 8.73 N·m (0.89 kg-m, 6.4 ft-lb) or more | 16.0 N·m (1.63 kg-m, 11.8 ft-lb) or more |
| | | Rotating speed | 890 rpm or more | 740 rpm or more |
| | Lock characteristics | Voltage | 4 V | 3.5 V |
| Current | | 780 A or less | 940 A or less | |
| Torque | | 15.7 N·m (1.60 kg-m, 11.6 ft-lb) or more | 28.9 N·m (2.95 kg-m, 21.3 ft-lb) or more | |
| Generator | Type | Rotating-field three-phase type, Voltage regulator built-in type, with load response control system | Rotating-field three-phase type, Voltage regulator built-in type, with load response control system | |
| | Model | A2TB2991 | | |
| | Manufacturer | Mitsubishi Electric | | |
| | Voltage and output | 12 V — 75 A | | |
| | Polarity on ground side | Negative | | |
| | Rotating direction | Clockwise (when observed from pulley side) | | |
| | Armature connection | 3-phase Y-type | | |
| | Output current | 1,500 rpm — 30 A or more 2,500 rpm — 64 A or more 5,000 rpm — 76 A or more | | |
| | Regulated voltage | 14.1 — 14.8 V [20°C (68°F)] | | |
| Ignition coil & Ignitor assembly | Model | FH0137-01R | | |
| | 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 100 MΩ | | |
| Spark plug | Type and manufacturer | Standard | RC10YC4 CHAMPION | |
| | | Alternate | RC8YC4 CHAMPION, BKR6E-11 NGK, K20PR-U11 NIPPONDENSO | |
| | Thread size | 14, P = 1.25 mm | | |
| | Spark gap | 1.0 — 1.1 mm (0.039 — 0.043 in) | | |

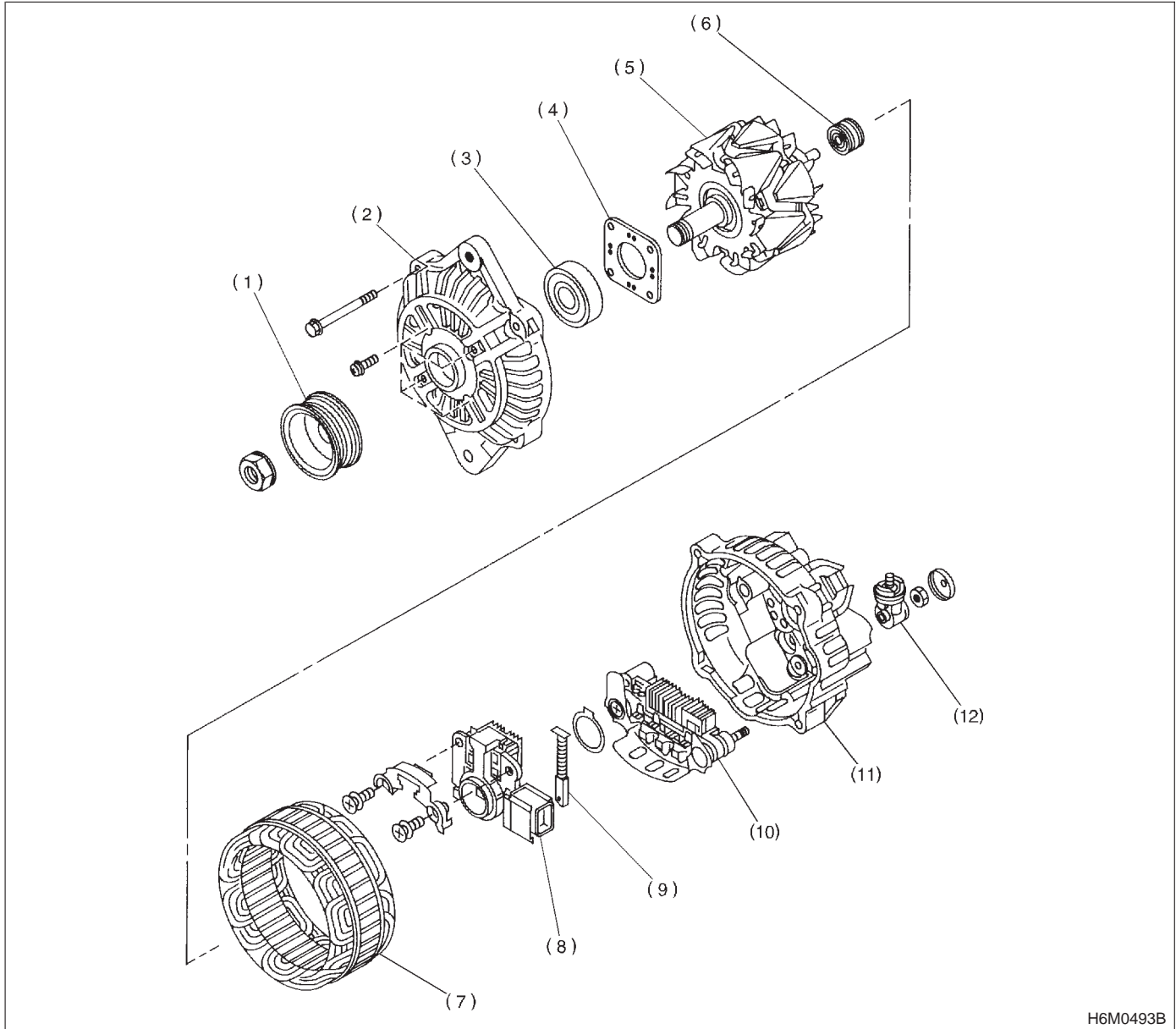
1. Starter



H6M0492B

- | | | |
|-------------------------|------------------------|---------------------|
| (1) Sleeve bearing | (7) Internal gear ASSY | (13) Armature |
| (2) Front bracket | (8) Shaft ASSY | (14) Brush holder |
| (3) Lever set | (9) Gear ASSY | (15) Brush |
| (4) Magnet switch ASSY | (10) Ball | (16) Sleeve bearing |
| (5) Stopper set | (11) Packing | (17) Rear bracket |
| (6) Over running clutch | (12) Yoke | |

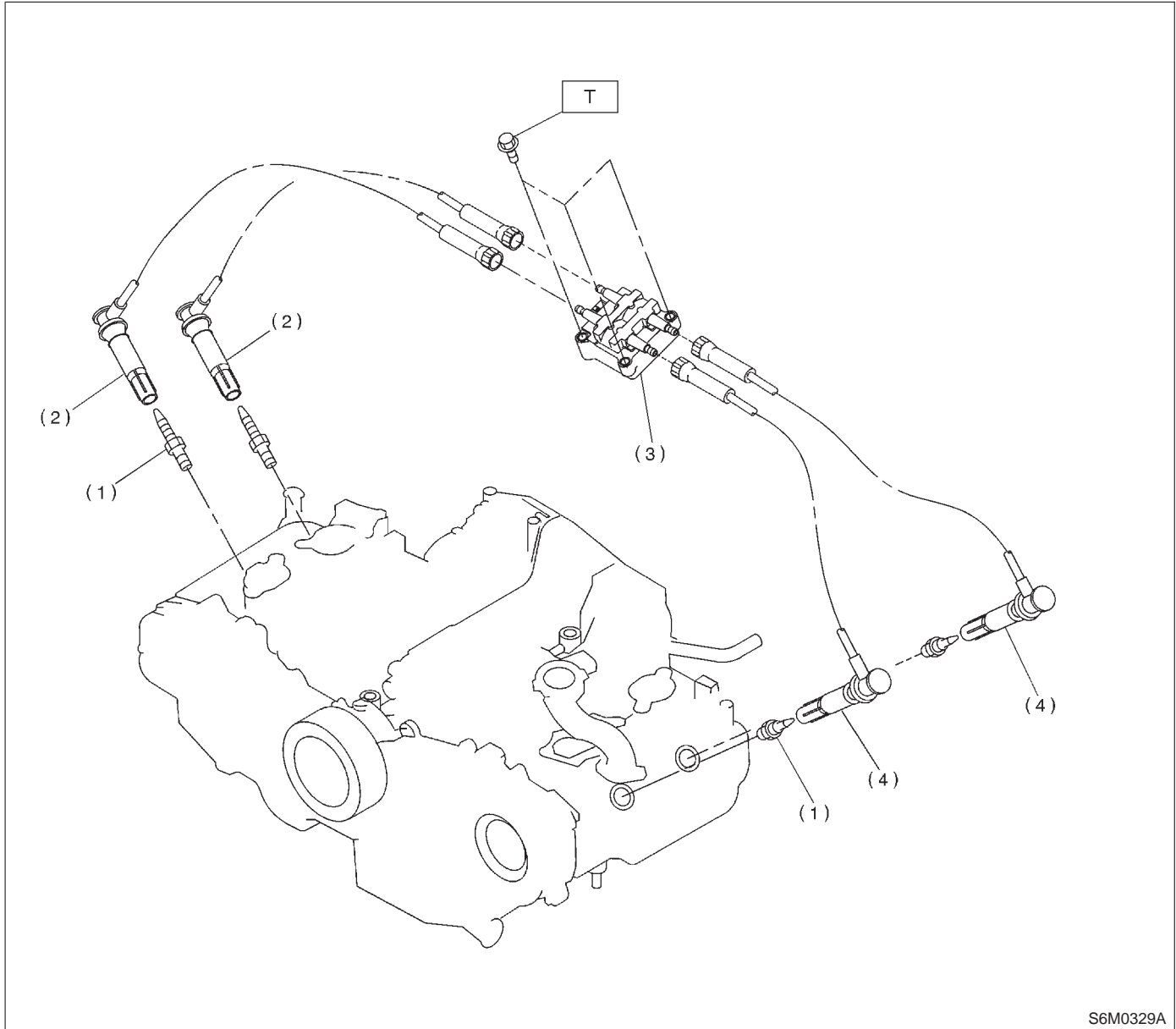
2. Generator



H6M0493B

- | | | |
|----------------------|-----------------------------|-----------------|
| (1) Pulley | (5) Rotor | (9) Brush |
| (2) Front cover | (6) Bearing | (10) Rectifier |
| (3) Ball bearing | (7) Stator coil | (11) Rear cover |
| (4) Bearing retainer | (8) IC regulator with brush | (12) Terminal |

3. Ignition System



S6M0329A

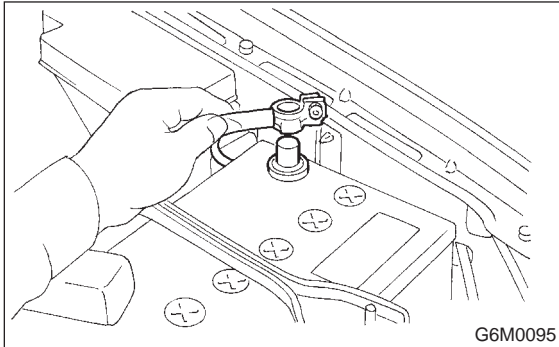
- (1) Spark plug
- (2) Spark plug cord (#1, #3)
- (3) Ignition coil and ignitor ASSY
- (4) Spark plug cord (#2, #4)

Tightening torque: N·m (kg·m, ft·lb)
T: 22±2 (2.2±0.2, 15.9±1.4)

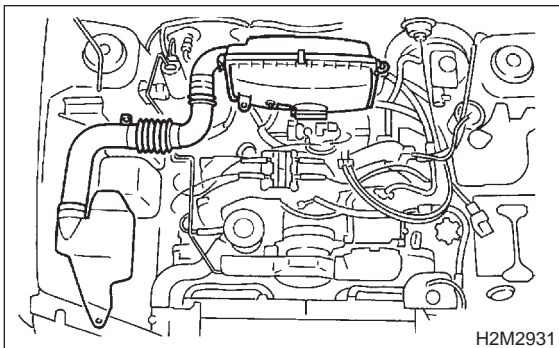
1. Starter

A: REMOVAL AND INSTALLATION

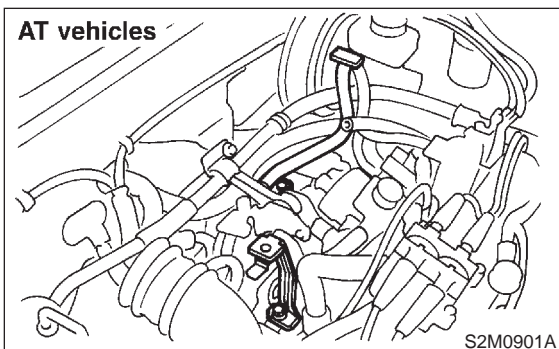
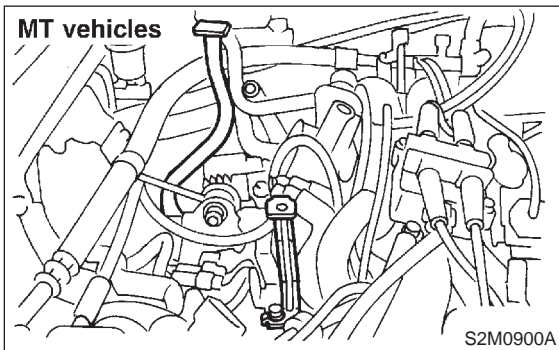
- 1) Disconnect battery ground cable.



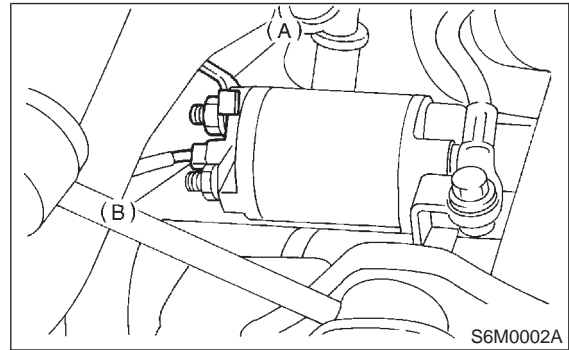
- 2) Remove air cleaner case and air intake duct.
<Ref. to 2-7 [W1A0].>



- 3) Remove air intake chamber stay.

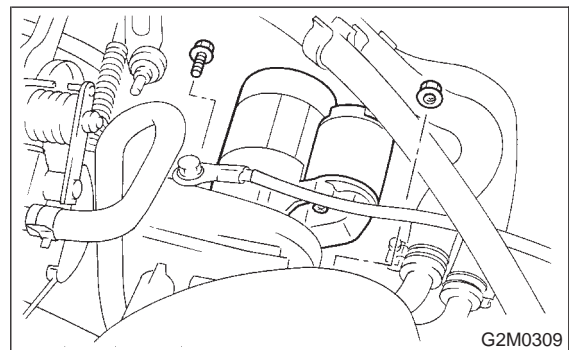


- 4) Disconnect connector and terminal from starter.



- (A) Terminal
(B) Connector

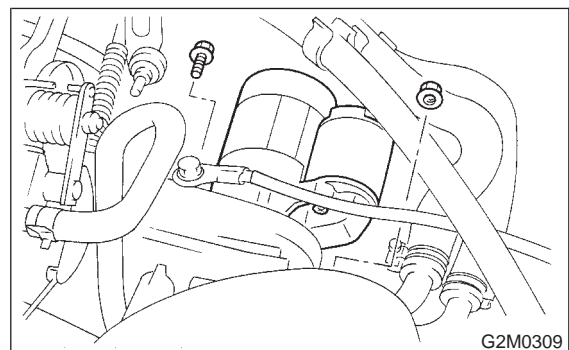
- 5) Remove starter from transmission.



- 6) Install in the reverse order of removal.

Tightening torque:

50±4 N·m (5.1±0.4 kg·m, 37±2.9 ft·lb)



B: TEST

1. SWITCH ASSEMBLY OPERATION

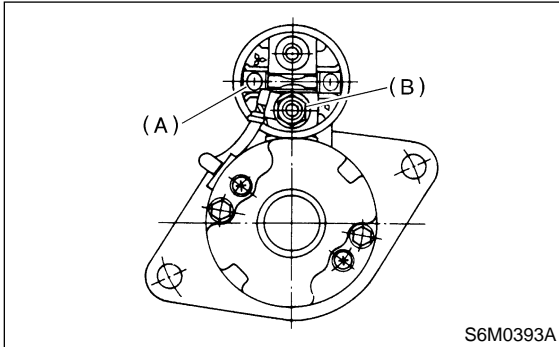
- 1) Connect terminal S of switch assembly to positive terminal of battery with a lead wire, and starter body to ground terminal of battery. Pinion should be forced endwise on shaft.

CAUTION:

With pinion forced endwise on shaft, starter motor can sometimes rotate because current flows, through pull-in coil, to motor. This is not a problem.

2) Disconnect connector from terminal M, and connect positive terminal of battery and terminal M using a lead wire and ground terminal to starter body.

In this test set up, pinion should return to its original position even when it is pulled out with a screwdriver.



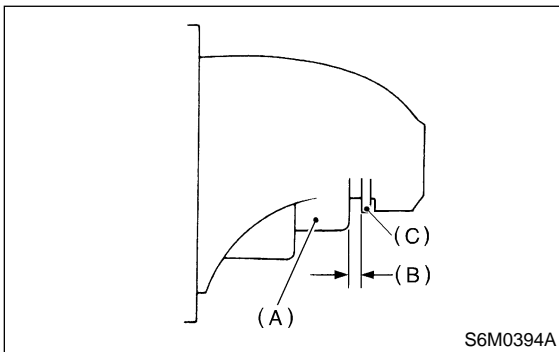
- (A) Terminal S
- (B) Terminal M

2. PINION GAP

1) With pinion forced endwise on shaft, as outlined in step 1) before <Ref. to 6-1 [W1B1]> measure pinion gap.

Pinion gap:

0.5 — 2.0 mm (0.020 — 0.079 in)



- (A) Pinion
- (B) Gap
- (C) Stopper

If motor is running with the pinion forced endwise on the shaft, disconnect connector from terminal M of switch assembly and connect terminal M to ground terminal (-) of battery with a lead wire. Next, gently push pinion back with your fingertips and measure pinion gap.

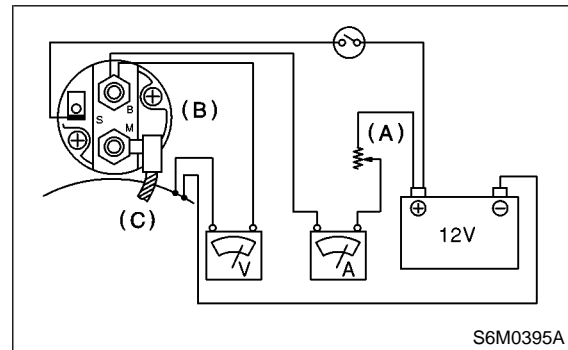
2) If pinion gap is outside specified range, remove or add number of adjustment washers used on the mounting surface of switch assembly until correct pinion gap is obtained.

3. PERFORMANCE TEST

The starter should be submitted to performance tests whenever it has been overhauled, to assure its satisfactory performance when installed on the engine.

Three performance tests, no-load test, load test, and lock test, are presented here; however, if the load test and lock test cannot be performed, carry out at least the no-load test.

For these performance tests, use the circuit shown in figure.



- (A) Variable resistance
- (B) Magnetic switch
- (C) Starter body

1) No-load test

With switch on, adjust the variable resistance to obtain 11 V, take the ammeter reading and measure the starter speed. Compare these values with the specifications.

No-load test (Standard):

Voltage / Current

11 V / 90 A max.

Rotating speed

MT vehicles

2,800 rpm or more

AT vehicles

2,400 rpm or more

2) Load test

Apply the specified braking torque to starter. The condition is satisfactory if the current draw and starter speed are within specifications.

Load test (Standard):

Voltage / Load

MT vehicles

7.5 V/8.7 N-m (0.89 kg-m, 6.4 ft-lb)

AT vehicles

7.7 V/16.0 N-m (1.63 kg-m, 11.8 ft-lb)

Current / Speed

MT vehicles

300 A/890 rpm or more

AT vehicles

400 A/740 rpm or more

1. Starter

3) Lock test

With starter stalled, or not rotating, measure the torque developed and current draw when the voltage is adjusted to the specified voltage.

Lock test (Standard):**Voltage / Current****MT vehicles**

4 V/780 A or less

AT vehicles

3.5 V/940 A or less

Torque**MT vehicles**

15.7 N·m (1.60 kg·m, 11.6 ft·lb) or more

AT vehicles

28.9 N·m (2.95 kg·m, 21.3 ft·lb) or more

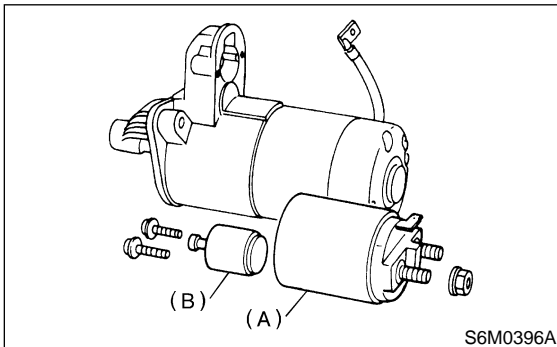
C: DISASSEMBLY**1. STARTER ASSEMBLY**

1) Loosen nut which holds terminal M of switch assembly, and disconnect connector.

2) Remove bolts which hold switch assembly, and remove switch assembly, plunger and plunger spring from starter as a unit.

CAUTION:

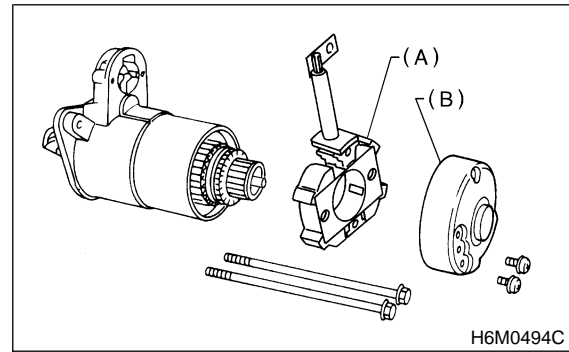
Be careful because pinion gap adjustment washer may sometimes be used on the mounting surface of switch assembly.



(A) Switch ASSY

(B) Plunger

3) Remove both through-bolts and brush holder screws, and detach rear bracket and brush holder.



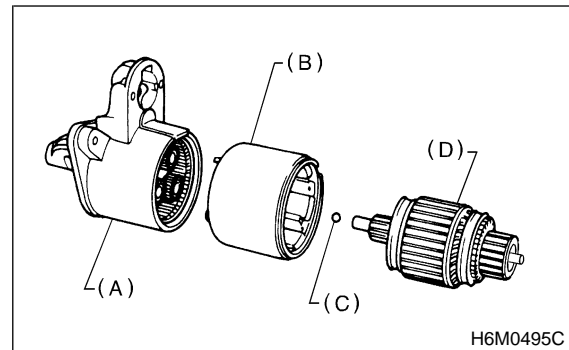
(A) Brush holder

(B) Rear bracket

4) Remove armature and yoke. Ball used as a bearing will then be removed from the end of armature.

CAUTION:

Be sure to mark an alignment mark on yoke and front bracket before removing yoke.



(A) Front bracket

(B) Yoke

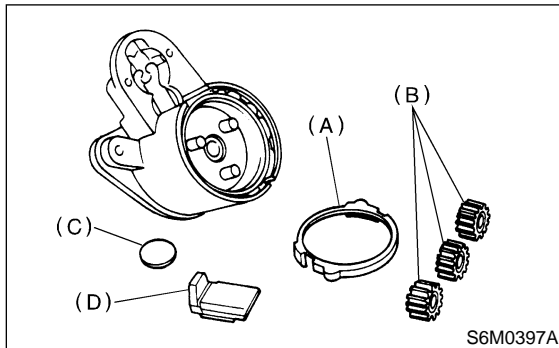
(C) Ball

(D) Armature

5) Remove packing A, three planetary gears, packing B and plate.

CAUTION:

Record the position of packing A before removing.

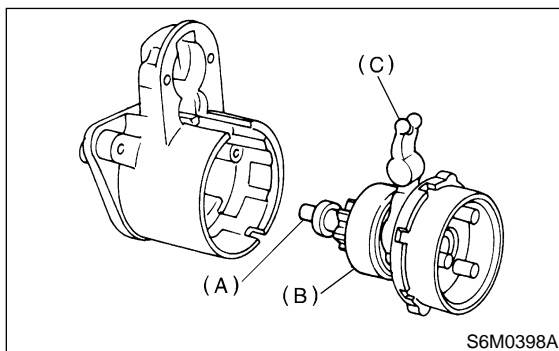


- (A) Packing A
- (B) Planetary gear
- (C) Plate
- (D) Packing B

6) Remove shaft assembly and overrunning clutch as a unit.

CAUTION:

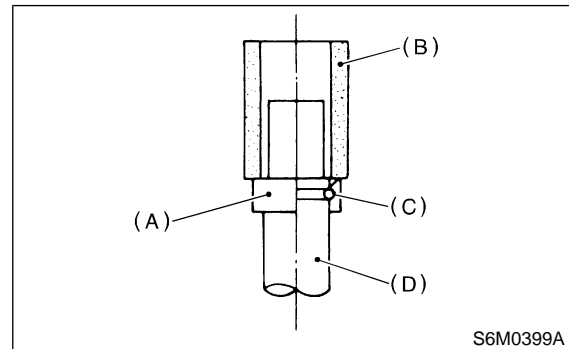
Record the direction of lever before removing.



- (A) Shaft ASSY
- (B) Overrunning clutch
- (C) Lever

7) Remove overrunning clutch from shaft assembly as follows:

- (1) Remove stopper from ring by lightly tapping a fit tool placed on stopper.
- (2) Remove ring, stopper and clutch from shaft.



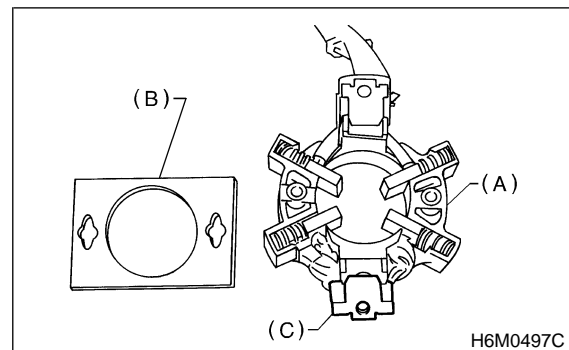
- (A) Stopper
- (B) Tool
- (C) Ring
- (D) Shaft

2. BRUSH HOLDER

Slightly open the metal fitting holding the insulating plate to the brush holder. Remove the insulating plate.

NOTE:

The brush and spring can be easily removed from the brush holder at this time.



- (A) Brush holder
- (B) Insulating plate
- (C) Metal fitting

D: INSPECTION

1. ARMATURE

1) Check commutator for any sign of burns or rough surfaces or stepped wear. If wear is of a minor nature, correct it by using sand paper.

1. Starter

2) Run-out test

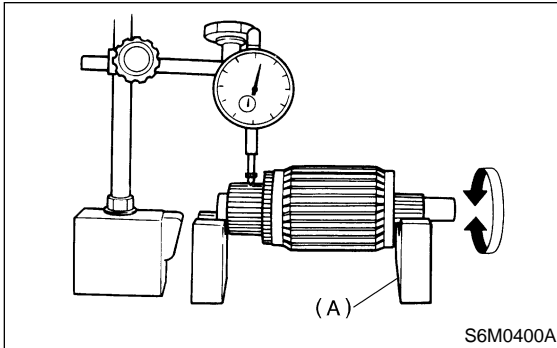
Check the commutator run-out and replace if it exceeds the limit.

Commutator run-out:**Standard**

0.05 mm (0.0020 in)

Service limit

Less than 0.10 mm (0.0039 in)



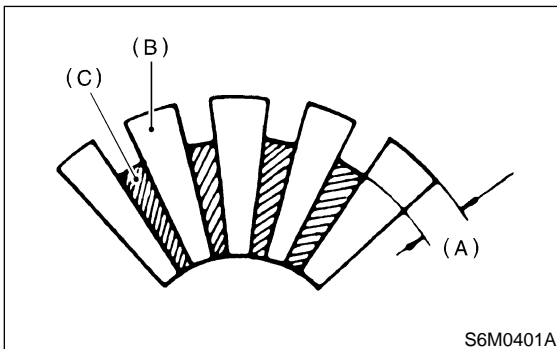
(A) V-block

3) Depth of segment mold

Check the depth of segment mold.

Depth of segment mold:

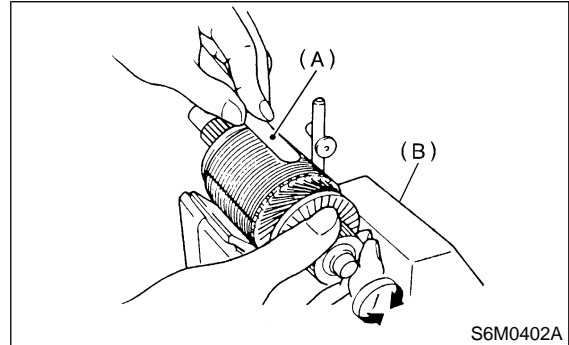
0.5 mm (0.020 in)



(A) Depth of mold
(B) Segment
(C) Mold

4) Armature short-circuit test

Check armature for short-circuit by placing it on growler tester. Hold a hacksaw blade against armature core while slowly rotating armature. A short-circuited armature will cause the blade to vibrate and to be attracted to core. If the hacksaw blade is attracted or vibrates, the armature, which is short-circuited, must be replaced or repaired.

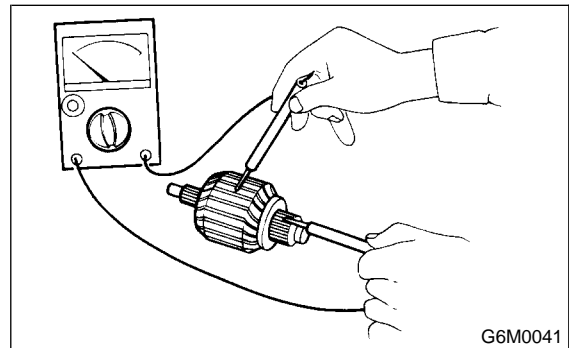


(A) Iron sheet
(B) Growler tester

5) Armature ground test

Using circuit tester, touch one probe to the commutator segment and the other to shaft. There should be no continuity. If there is a continuity, armature is grounded.

Replace armature if it is grounded.



G6M0041

2. YOKE

Make sure pole is set in position.

3. OVERRUNNING CLUTCH

Inspect teeth of pinion for wear and damage. Replace if it is damaged. Rotate pinion in direction of rotation (counterclockwise). It should rotate smoothly. But in opposite direction, it should be locked.

CAUTION:

Do not clean overrunning clutch with oil to prevent grease from flowing out.

4. BRUSH AND BRUSH HOLDER

1) Brush length

Measure the brush length and replace if it exceeds the service limit.

Replace if abnormal wear or cracks are noticed.

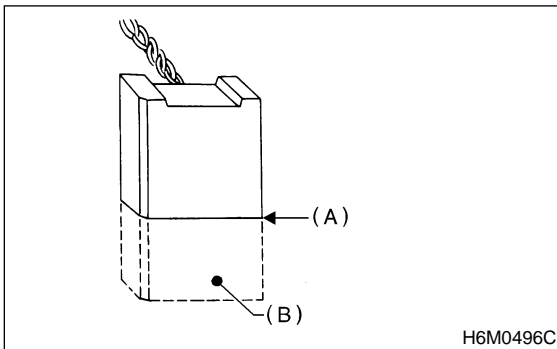
Brush length:

Standard

12.3 mm (0.484 in)

Service limit

7.0 mm (0.276 in)



- (A) Service limit line
- (B) Brush

2) Brush movement

Be sure brush moves smoothly inside brush holder.

3) Brush spring force

Measure brush spring force with a spring scale. If it is less than the service limit, replace brush holder.

Brush spring force:

Standard

21.6 N (2.2 kg, 4.9 lb) (when new)

Service limit

5.9 N (0.6 kg, 1.3 lb)

5. SWITCH ASSEMBLY

Be sure there is continuity between terminals S and M, and between terminal S and ground. Use a circuit tester (set in "ohm").

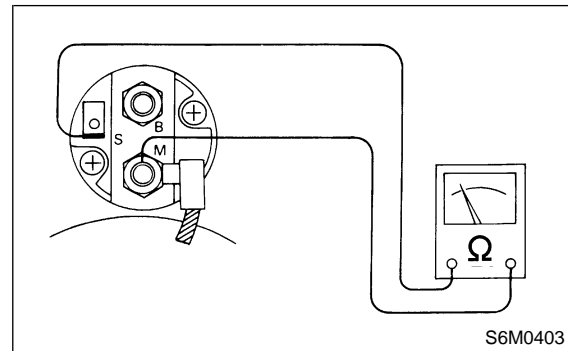
Also check to be sure there is no continuity between terminal M and B.

Terminal / Specified resistance:

S — M / Continuity

S — Ground / Continuity

M — B / No continuity



E: ASSEMBLY

Assemble in the reverse order of disassembly. Do the following:

1) Carefully assemble all parts in the order of assembly and occasionally inspect nothing has been overlooked.

2) Apply grease to the following parts during assembly.

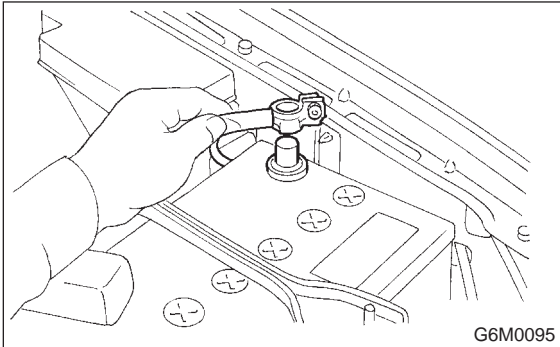
- Front and rear bracket sleeve bearing
- Armature shaft gear
- Outer periphery of plunger
- Mating surface of plunger and lever
- Gear shaft splines
- Mating surface of lever and clutch
- Ball at the armature shaft end
- Internal and planetary gears

3) After assembling parts correctly, check to be sure starter operates properly.

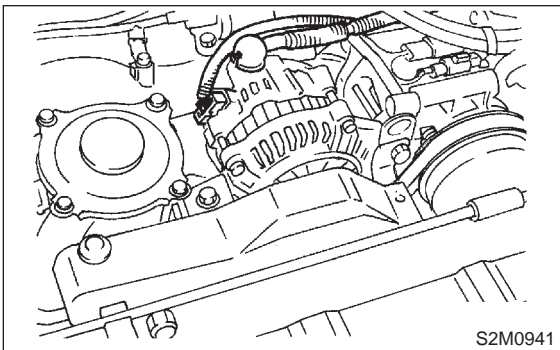
2. Generator

A: REMOVAL AND INSTALLATION

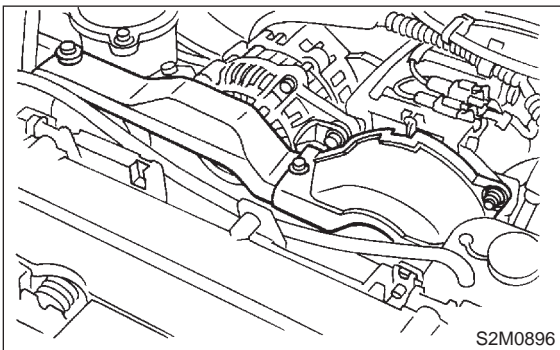
- 1) Disconnect battery ground cable.



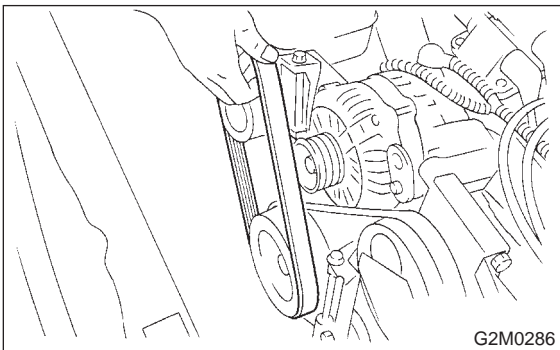
- 2) Disconnect connector and terminal from generator.



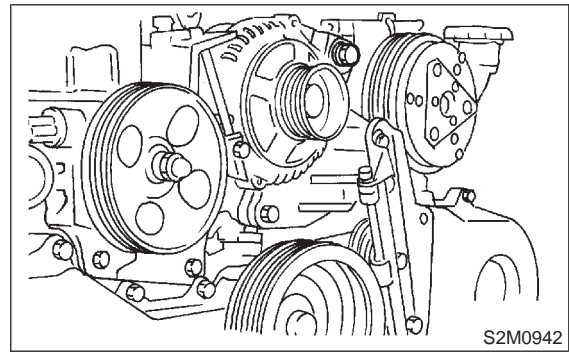
- 3) Remove V-belt cover.



- 4) Remove front side V-belt.

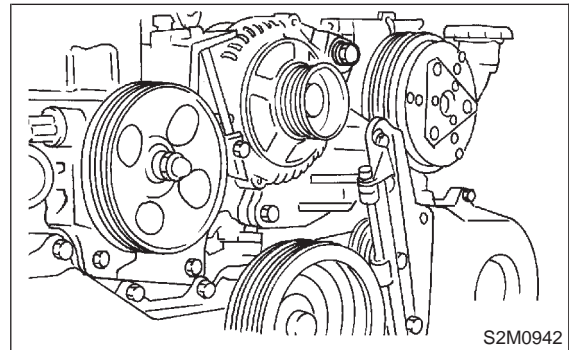


- 5) Remove bolts which install generator onto bracket.



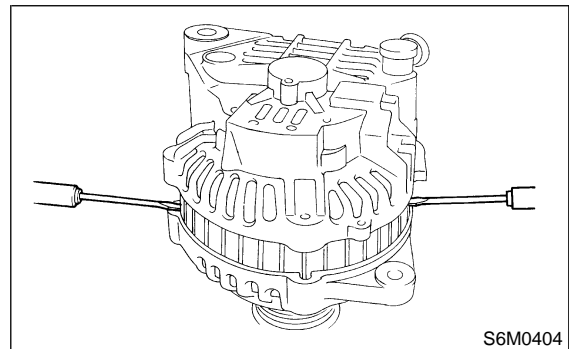
- 6) Install in the reverse order of removal.

CAUTION:
Check and adjust V-belt tension. <Ref. to 1-5 [G2A0].>

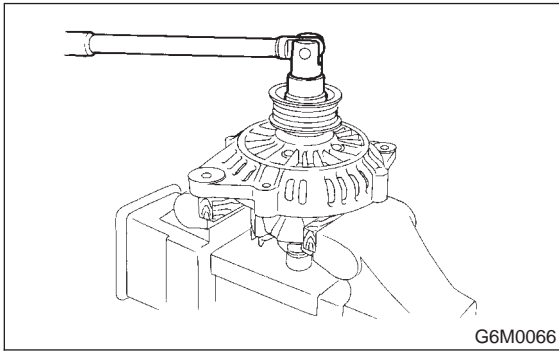


B: DISASSEMBLY

- 1) Remove the four through bolts. Then insert the tip of a flat-head screwdriver into the gap between the stator core and front bracket. Pry then apart to disassemble.



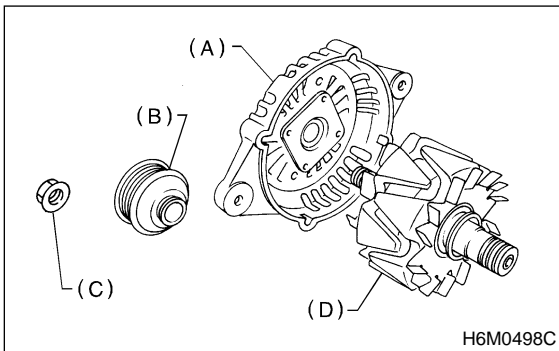
2) Hold rotor with a vise and remove pulley nut.



G6M0066

CAUTION:

When holding rotor with vise, insert aluminum plates or wood pieces on the contact surfaces of the vise to prevent rotor from damage.



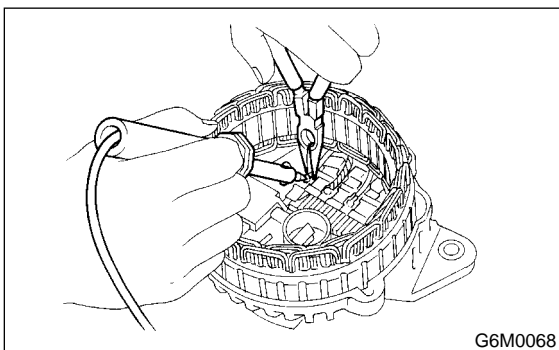
H6M0498C

- (A) Front bracket
- (B) Pulley
- (C) Nut
- (D) Rotor

3) Unsolder connection between rectifier and stator coil to remove stator coil.

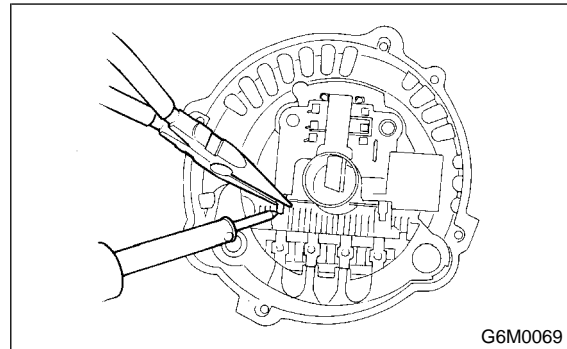
CAUTION:

Finish the work rapidly (less than three seconds) because the rectifier cannot withstand heat very well.



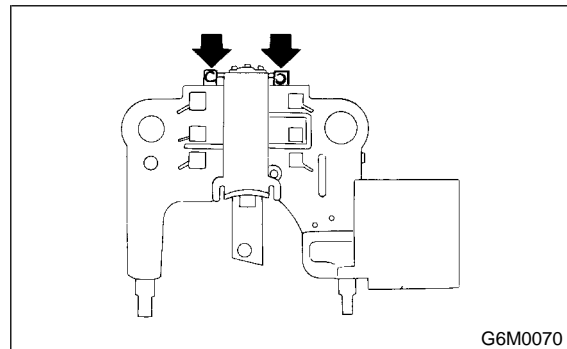
G6M0068

4) Remove screws which secure IC regulator to rear cover, and unsolder connection between IC regulator and rectifier to remove IC regulator.



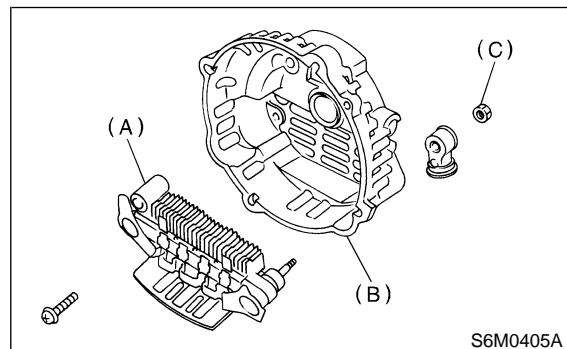
G6M0069

5) Remove the brushes by unsoldering at the pig-tails.



G6M0070

6) Remove the nut and insulating bushing at terminal B, and remove rectifier.



S6M0405A

- (A) Rectifier
- (B) Rear cover
- (C) Nut

C: INSPECTION AND REPAIR

1. DIODE

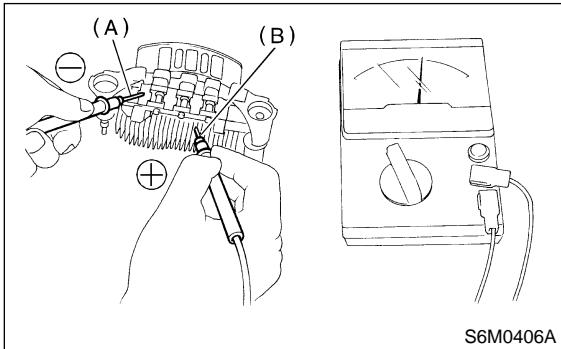
CAUTION:

Never use a megger tester (measuring use for high voltage) or any other similar measure for this test; otherwise, the diodes may be damaged.

2. Generator

1) Checking positive diode

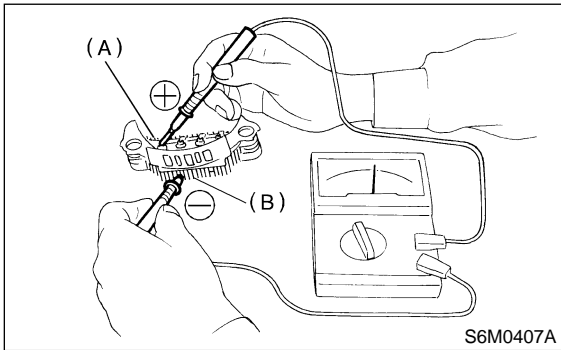
Check for continuity between the diode lead and the positive side heat sink. The positive diode is in good condition if continuity exists only in the direction from the diode lead to the heat sink.



- (A) Diode lead
(B) Heat sink (Positive side)

2) Checking negative diode

Check for continuity between the negative side heat sink and diode lead. The negative diode is in good condition if continuity exists only in the direction from the heat sink to the diode lead.



- (A) Diode lead
(B) Heat sink (Negative side)

2. ROTOR

1) Slip ring surface

Inspect slip rings for contamination or any roughness of the sliding surface. Repair slip ring surface using a lathe or sand paper.

2) Slip ring outer diameter

Measure slip ring outer diameter. If slip ring is worn replace rotor assembly.

Slip ring outer diameter:**Standard**

22.7 mm (0.894 in)

Limit

22.1 mm (0.870 in)

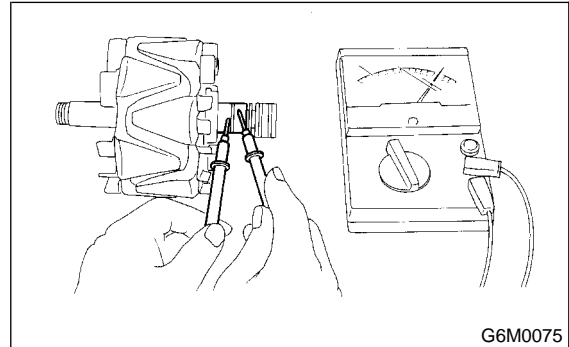
3) Continuity test

Check resistance between slip rings using circuit tester.

If the resistance is not within specification, replace rotor assembly.

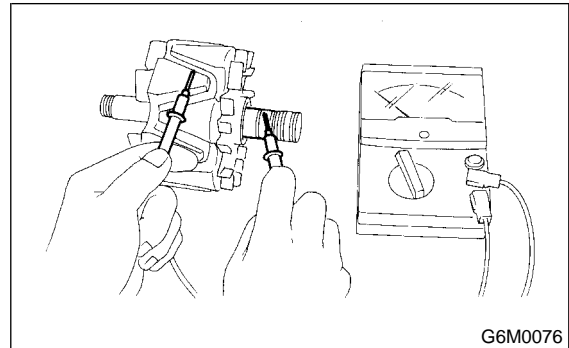
Specified resistance:

Approx. 2.7 — 3.2 Ω



4) Insulation test

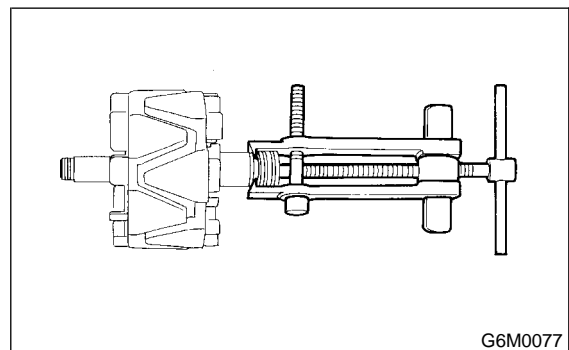
Check continuity between slip ring and rotor core or shaft. If continuity exists, the rotor coil is grounded, and so replace rotor assembly.



5) Ball bearing (rear side)

(1) Check rear ball bearing. Replace if it is noisy or if rotor does not turn smoothly.

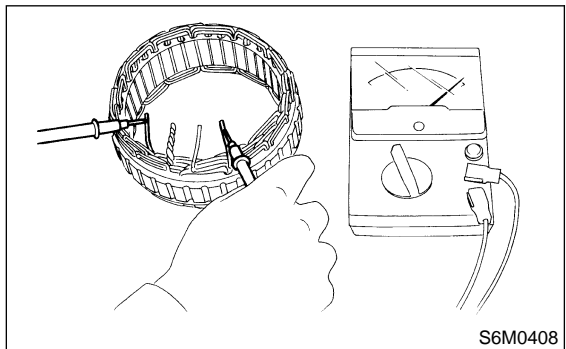
(2) The rear bearing can be removed by using common bearing puller.



3. STATOR

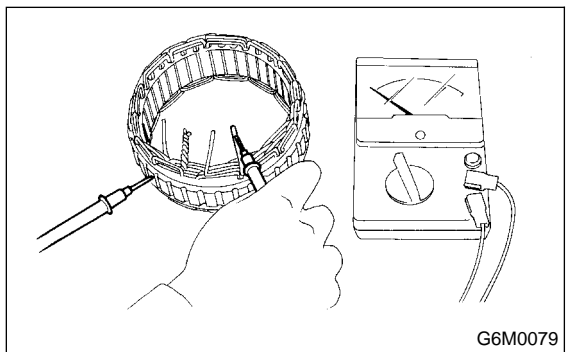
1) Continuity test

Inspect stator coil for continuity between each end of the lead wires. If there is no continuity between individual lead wires, the lead wire is broken, and so replace stator assembly.



2) Insulation test

Inspect stator coil for continuity between stator core and each end of the lead wire. If there is continuity, the stator coil is grounded, and so replace stator assembly.



4. BRUSH

1) Measure the length of each brush. If wear exceeds the service limit, replace the brush. Each brush has the service limit mark (A) on it.

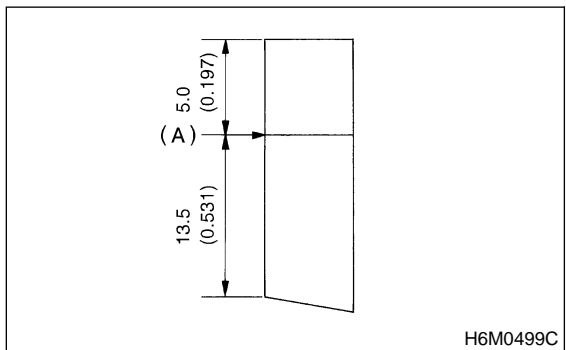
Brush length:

Standard

18.5 mm (0.728 in)

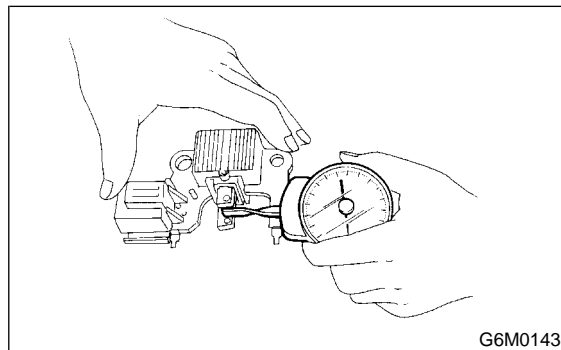
Service limit

5.0 mm (0.197 in)



2) Checking brush spring for proper pressure

Using a spring pressure indicator, push the brush into the brush holder until its tip protrudes 2 mm (0.08 in). Then measure the pressure of the brush spring. If the pressure is less than 2.648 N (270 g, 9.52 oz), replace the brush spring with a new one. The new spring must have a pressure of 4.609 to 5.786 N (470 to 590 g, 16.58 to 20.81 oz).



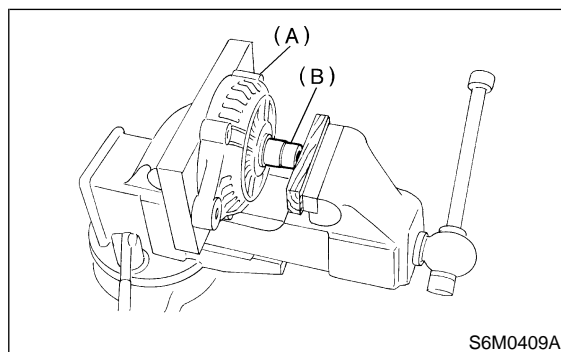
5. BEARING (FRONT SIDE)

1) Check front ball bearing. If resistance is felt while rotating, or if abnormal noise is heard, replace the ball bearing.

2) Replacing front bearing

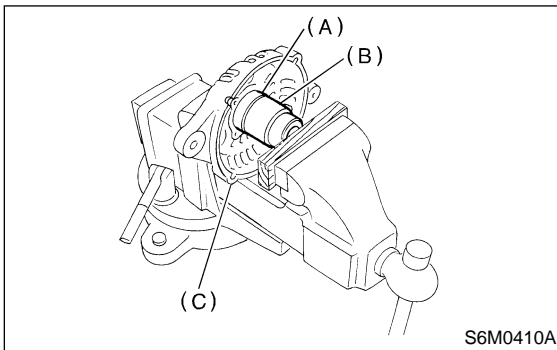
(1) Remove front bearing retainer.

(2) Closely install a fit tool on the bearing inner race. Press the bearing down out of front bracket with a hand press or vise. A socket wrench can serve as the tool.



- (A) Front bracket
- (B) Socket wrench

- (3) Set a new bearing and closely install a fit tool on the bearing outer race. Press the bearing down into place with a hand press or vise. A socket wrench can serve as the tool.
- (4) Install front bearing retainer.



- (A) Bearing
- (B) Socket wrench
- (C) Front bracket

D: ASSEMBLY

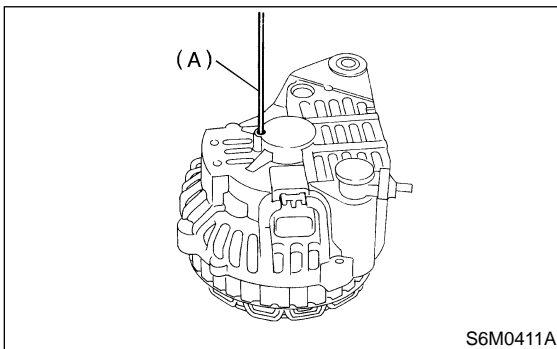
Assemble in the reverse order of disassembly.

- 1) Pulling up brush

Before assembling, press the brush down into the brush holder with your finger and secure in that position by passing a [2 mm (0.08 in) dia. length 4 to 5 cm (1.6 to 2.0 in)] wire (A) through the hole shown in the figure.

CAUTION:

Be sure to remove the wire after reassembly.



- 2) Heat the bearing box in the rear bracket [50 to 60°C (122 to 140°F)] and press the rear bearing into the rear bracket.

CAUTION:

Grease should not be applied for the rear bearing. Remove oil completely if it is found on the bearing box.

- 3) After reassembly, turn the pulley by hand to check that the rotor turns smoothly.

3. Spark Plug

A: REMOVAL AND INSTALLATION

CAUTION:

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

Spark plug:

CHAMPION: RC10YC4

(Alternate)

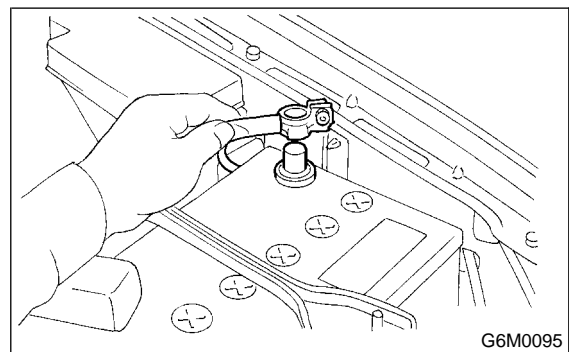
CHAMPION: RC8YC4

NGK: BKR6E-11

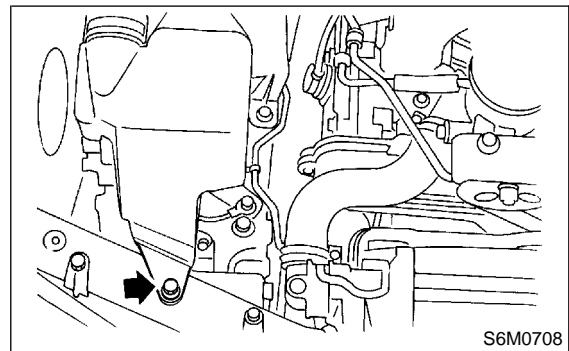
NIPPONDENSO: K20PR-U11

1. #1 SPARK PLUG

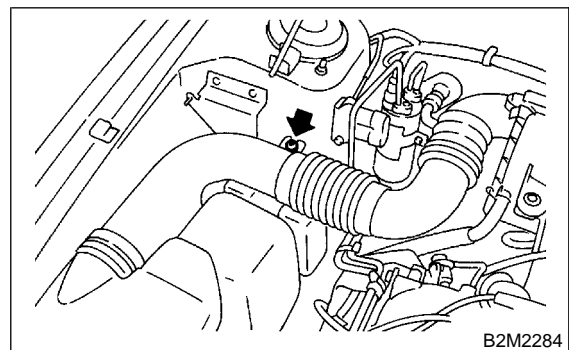
- 1) Disconnect battery ground cable.



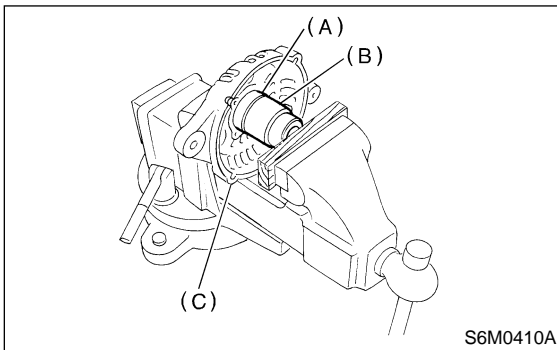
- 2) Remove air intake duct and resonator chamber.
 - (1) Remove bolt which installs air intake duct on the front side of body.



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



- (3) Set a new bearing and closely install a fit tool on the bearing outer race. Press the bearing down into place with a hand press or vise. A socket wrench can serve as the tool.
- (4) Install front bearing retainer.



- (A) Bearing
- (B) Socket wrench
- (C) Front bracket

D: ASSEMBLY

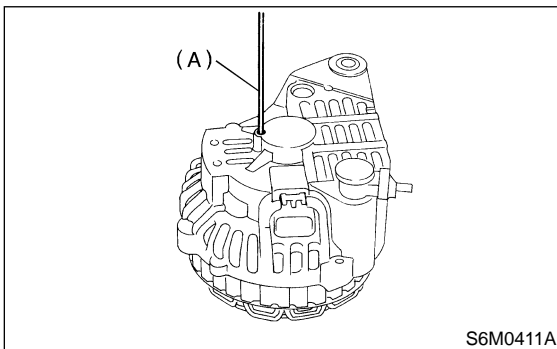
Assemble in the reverse order of disassembly.

- 1) Pulling up brush

Before assembling, press the brush down into the brush holder with your finger and secure in that position by passing a [2 mm (0.08 in) dia. length 4 to 5 cm (1.6 to 2.0 in)] wire (A) through the hole shown in the figure.

CAUTION:

Be sure to remove the wire after reassembly.



- 2) Heat the bearing box in the rear bracket [50 to 60°C (122 to 140°F)] and press the rear bearing into the rear bracket.

CAUTION:

Grease should not be applied for the rear bearing. Remove oil completely if it is found on the bearing box.

- 3) After reassembly, turn the pulley by hand to check that the rotor turns smoothly.

3. Spark Plug

A: REMOVAL AND INSTALLATION

CAUTION:

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

Spark plug:

CHAMPION: RC10YC4

(Alternate)

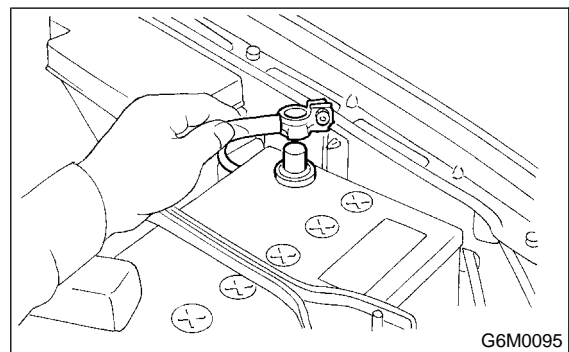
CHAMPION: RC8YC4

NGK: BKR6E-11

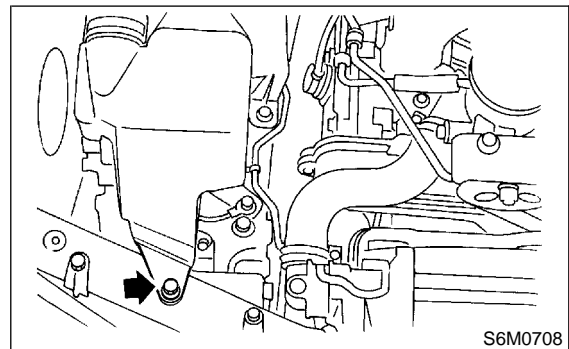
NIPPONDENSO: K20PR-U11

1. #1 SPARK PLUG

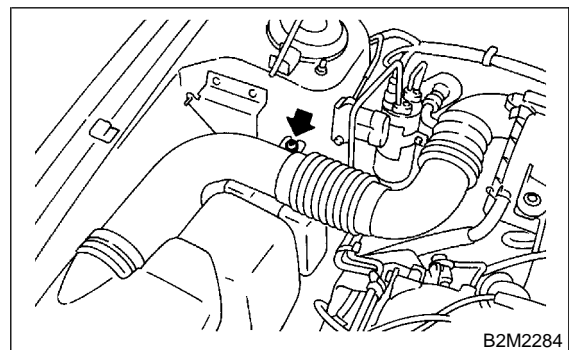
- 1) Disconnect battery ground cable.



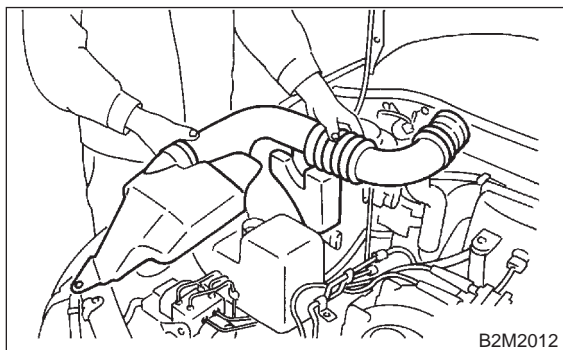
- 2) Remove air intake duct and resonator chamber.
 - (1) Remove bolt which installs air intake duct on the front side of body.



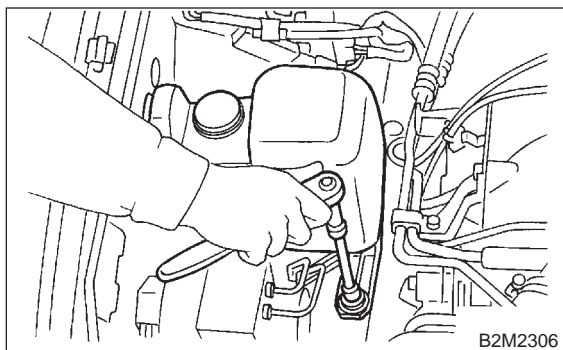
- (2) Remove bolt which installs air intake duct on body.



(3) Remove air intake duct as a unit.



(4) Remove resonator chamber.



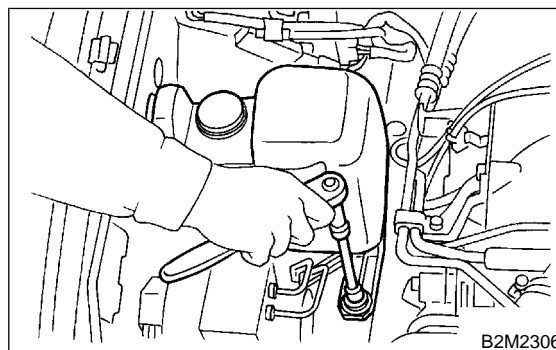
5) Install in the reverse order of removal.

Tightening torque (Spark plug):

20.6 ± 2.9 N-m (2.10 ± 0.30 kg-m, 15.19 ± 2.14 ft-lb)

Tightening torque (Resonator chamber):

32 ± 10 N-m (3.3 ± 1.0 kg-m, 24 ± 7 ft-lb)

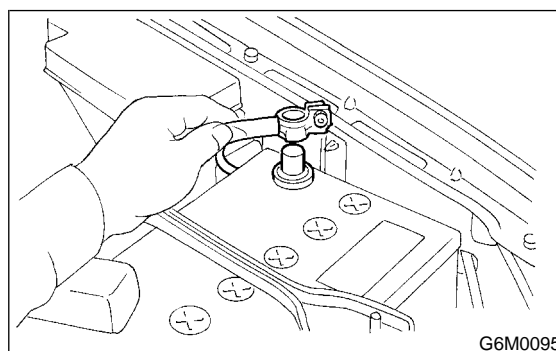


CAUTION:

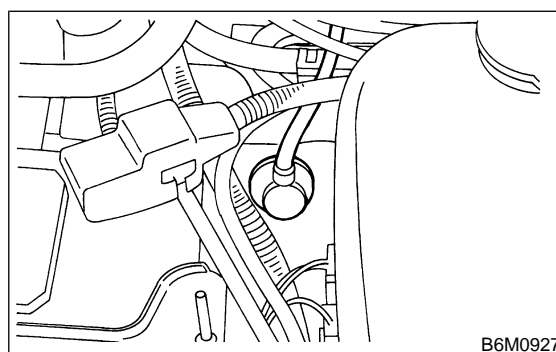
The above torque should be only applied to new spark plugs without oil on their threads. In case their threads are lubricated, the torque should be reduced by approximately 1/3 of the specified torque in order to avoid over-stressing.

2. #2 SPARK PLUG

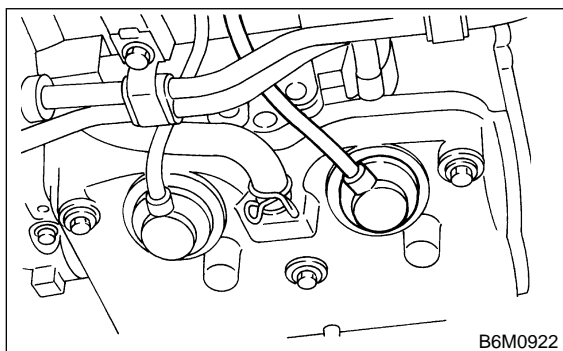
1) Disconnect battery ground cable.



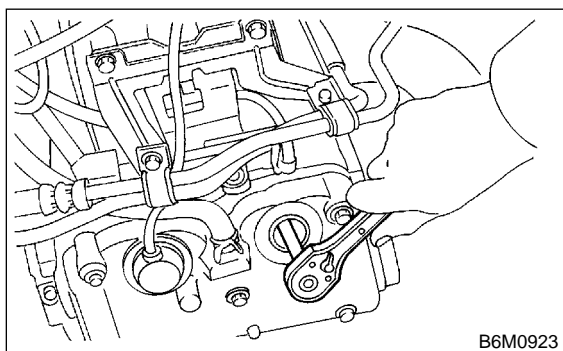
2) Remove #2 spark plug cord by pulling boot, not cord itself.



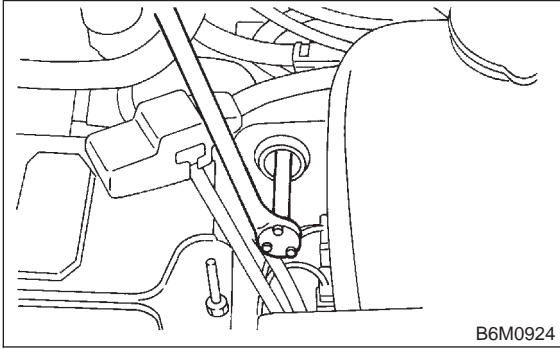
3) Remove #1 spark plug cord by pulling boot, not the cord itself.



4) Remove spark plug with the spark plug socket.



- 3) Remove spark plug with the spark plug socket.



- 4) Install in the reverse order of removal.

Tightening torque (Spark plug):

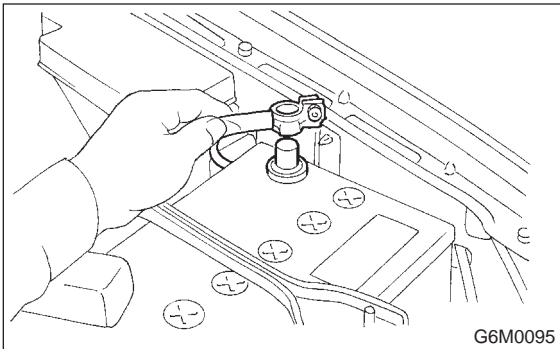
20.6±2.9 N·m (2.10±0.30 kg·m, 15.19±2.14 ft·lb)

CAUTION:

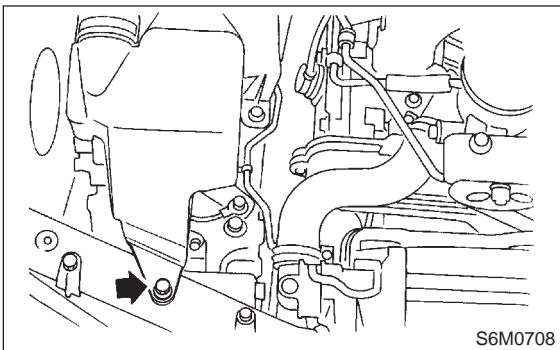
The above torque should be only applied to new spark plugs without oil on their threads. In case their threads are lubricated, the torque should be reduced by approximately 1/3 of the specified torque in order to avoid over-stressing.

3. #3 SPARK PLUG

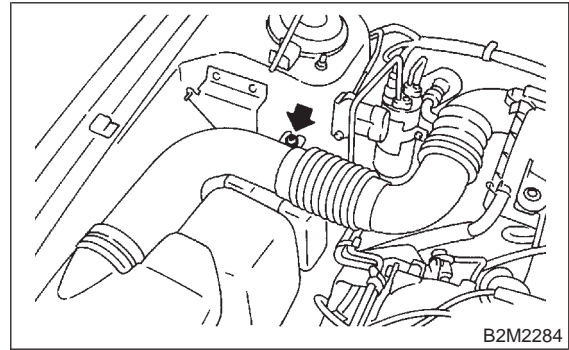
- 1) Disconnect battery ground cable.



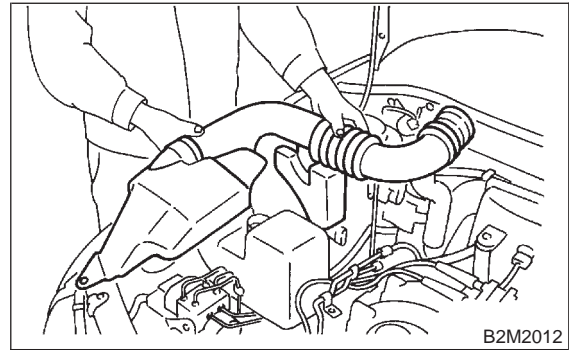
- 2) Remove air intake duct and resonator chamber.
(1) Remove bolt which installs air intake duct on the front side of body.



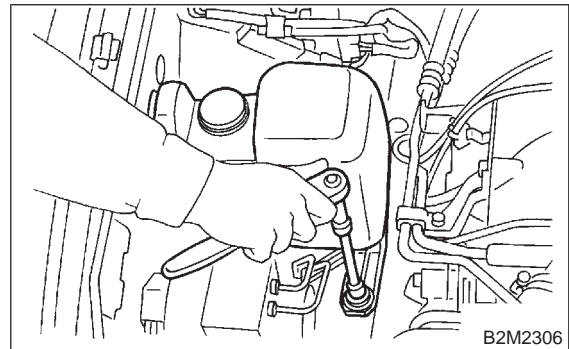
- (2) Remove bolt which installs air intake duct on body.



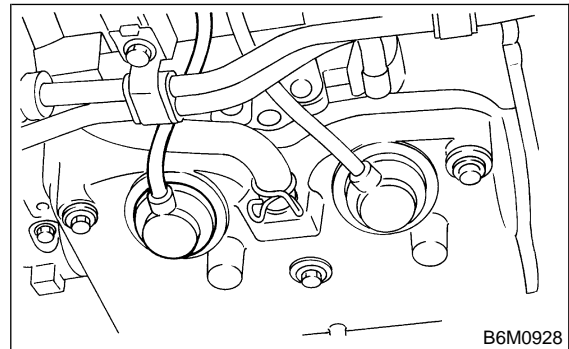
- (3) Remove air intake duct as a unit.



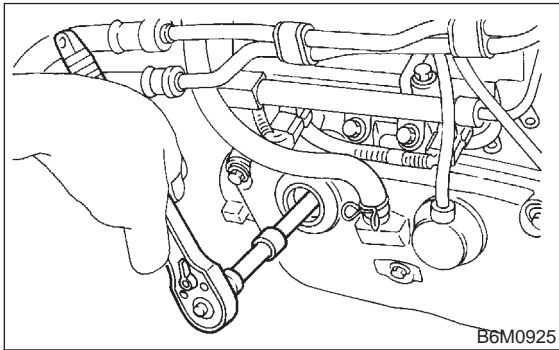
- (4) Remove resonator chamber.



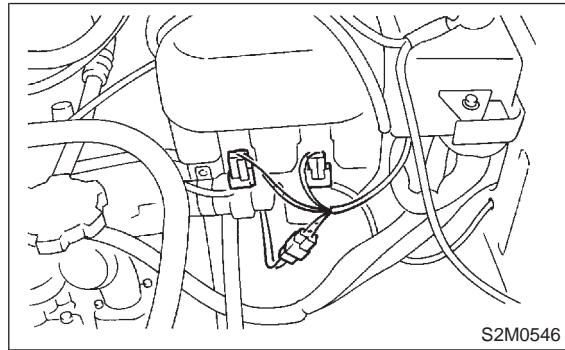
- 3) Remove #3 spark plug cord by pulling boot, not cord itself.



- 4) Remove spark plug with the spark plug socket.



- 2) Disconnect washer motor connector.



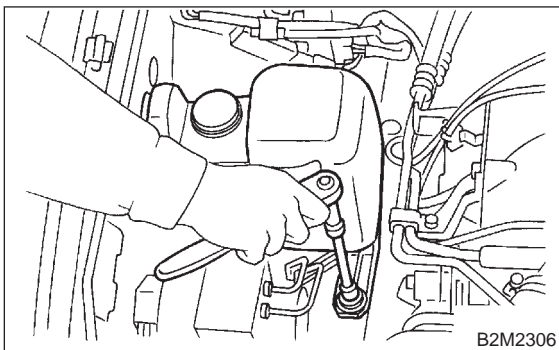
- 5) Install in the reverse order of removal.

Tightening torque (Spark plug):

20.6 ± 2.9 N·m (2.10 ± 0.30 kg·m, 15.19 ± 2.14 ft·lb)

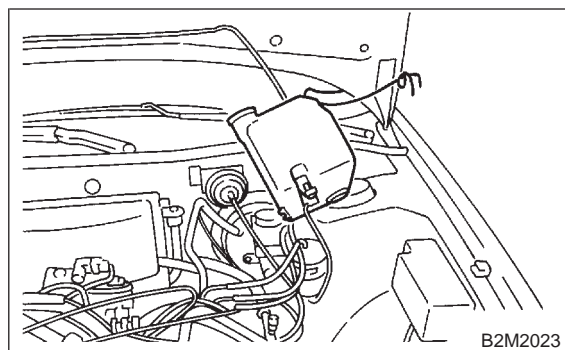
Tightening torque (Resonator chamber):

32 ± 10 N·m (3.3 ± 1.0 kg·m, 24 ± 7 ft·lb)



- 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.

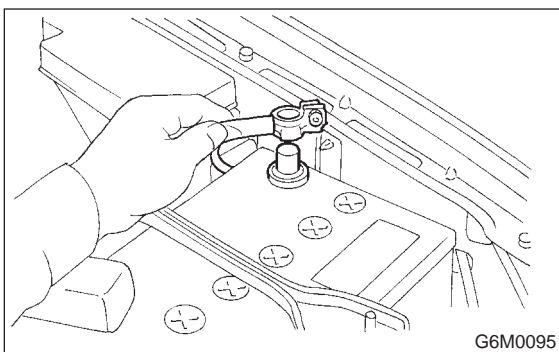


CAUTION:

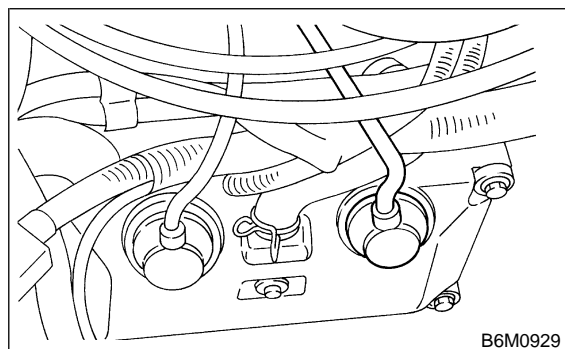
The above torque should be only applied to new spark plugs without oil on their threads. In case their threads are lubricated, the torque should be reduced by approximately 1/3 of the specified torque in order to avoid over-stressing.

4. #4 SPARK PLUG

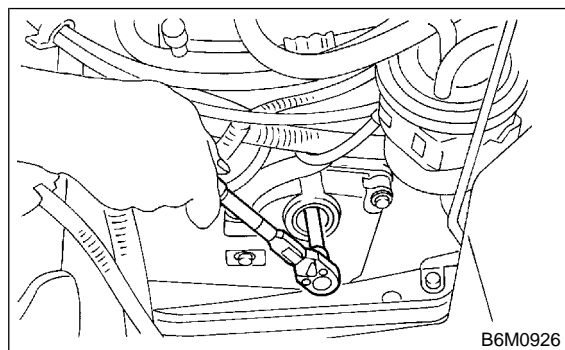
- 1) Disconnect battery ground cable.



- 5) Remove #4 spark plug cord by pulling boot, not cord itself.



- 6) Remove spark plug with the spark plug socket.



3. Spark Plug

7) Install in the reverse order of removal.

Tightening torque (Spark plug):

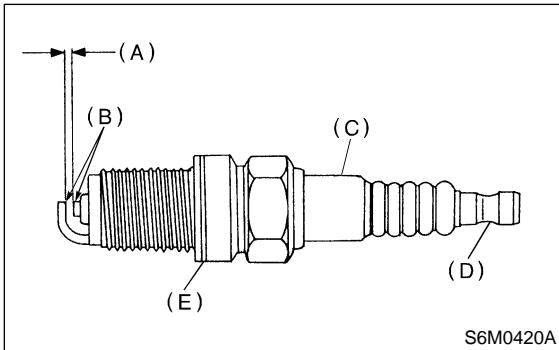
20.6±2.9 N-m (2.10±0.30 kg-m, 15.19±2.14 ft-lb)

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.

B: INSPECTION

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

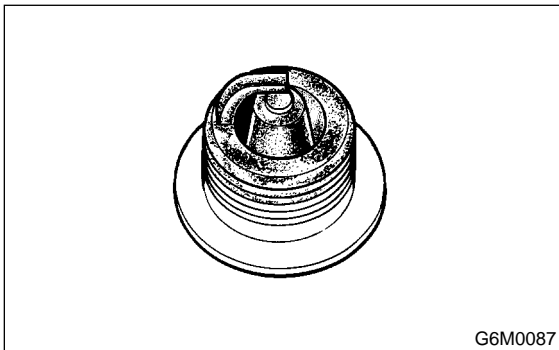


S6M0420A

- (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.

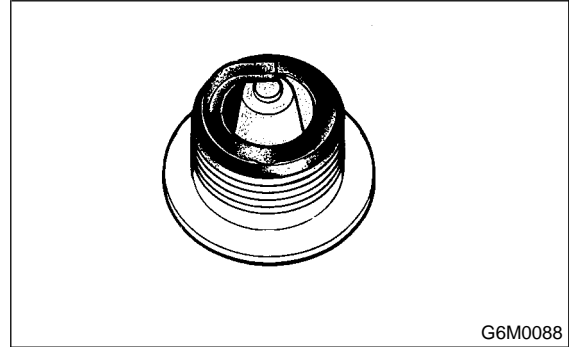


G6M0087

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.

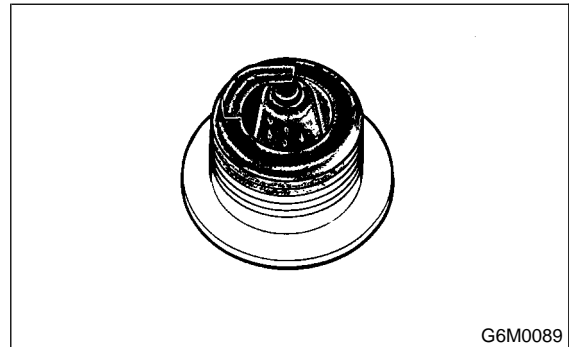
It is advisable to replace with plugs having hotter heat range.



G6M0088

3) Oil fouled

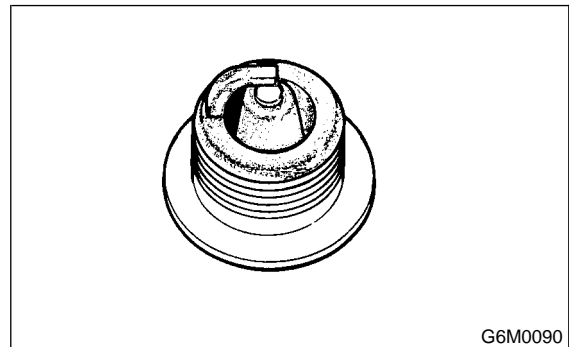
Wet black deposits show excessive oil entrance into combustion chamber through worn rings and pistons or excessive clearance between valve guides and stems. If same condition remains after repair, use a hotter plug.



G6M0089

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.



G6M0090

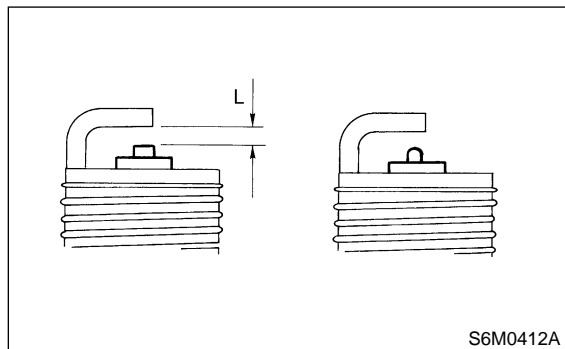
C: CLEANING AND REGAPPING

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, discard plugs. After cleaning spark plugs, recondition firing surface of electrodes with file. Then correct the spark plug gap using a gap gauge.

Spark plug gap: L

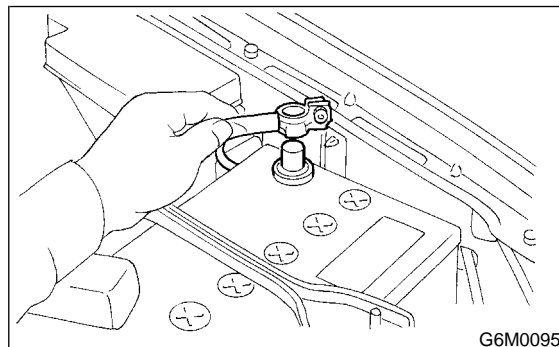
1.0 — 1.1 mm (0.039 — 0.043 in)

**NOTE:**

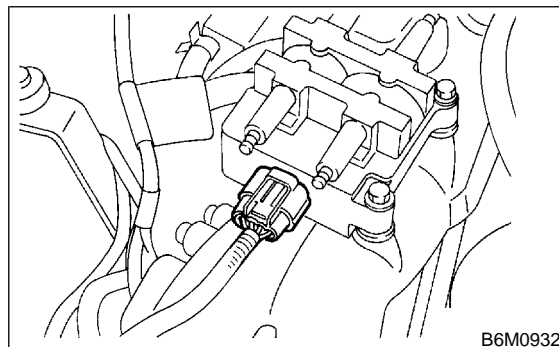
Replace with new spark plug if this area is worn to "ball" shape.

4. Ignition Coil and Ignitor Assembly**A: REMOVAL AND INSTALLATION**

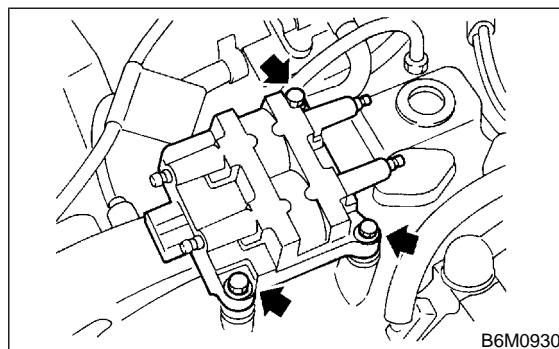
- 1) Disconnect battery ground cable.



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



- 4) Remove ignition coil and ignitor assembly.



- 5) Install in the reverse order of removal.

CAUTION:

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

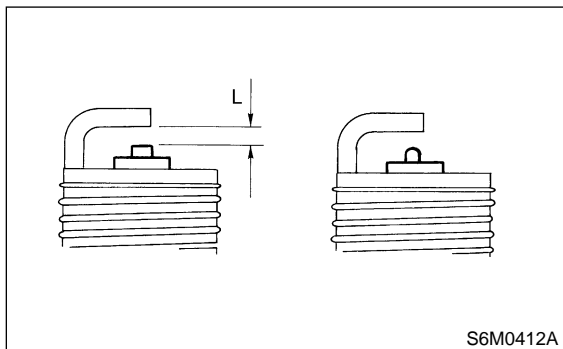
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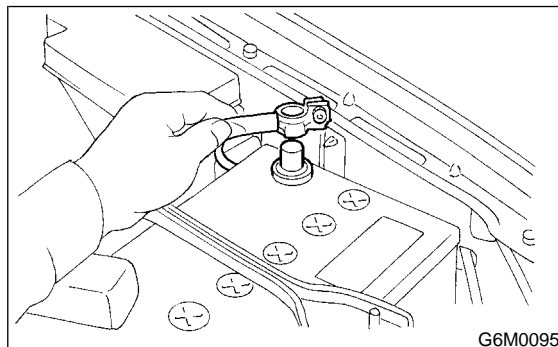
1.0 — 1.1 mm (0.039 — 0.043 in)

**NOTE:**

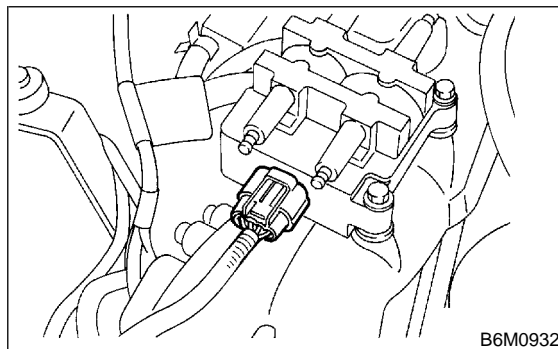
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4. Ignition Coil and Ignitor Assembly**A: REMOVAL AND INSTALLATION**

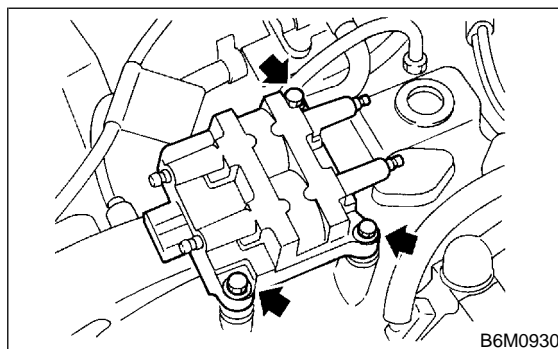
- 1) Disconnect battery ground cable.



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



- 4) Remove ignition coil and ignitor assembly.



- 5) Install in the reverse order of removal.

CAUTION:

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

B: INSPECTION

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:

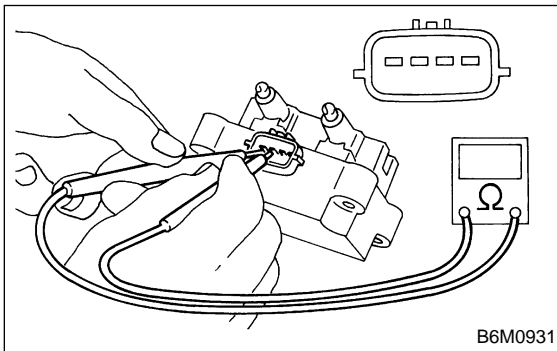
[Primary side]

Between terminal No. 1 and No. 2

0.73 Ω ± 10%

Between terminal No. 2 and No. 4

0.73 Ω ± 10%



[Secondary side]

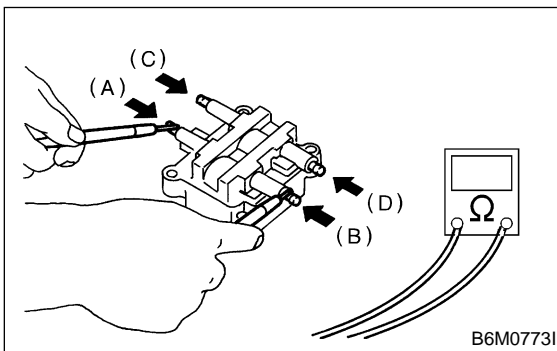
Between (A) and (B)

12.8 k Ω ± 15%

Between (C) and (D)

12.8 k Ω ± 15%

- 3) Insulation between primary terminal and case:
10 M Ω or more.



5. Spark Plug Cord

A: INSPECTION

Check for:

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

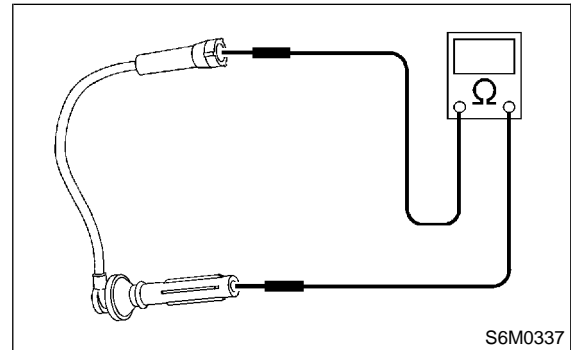
Resistance value:

#1 cord: 7.40 — 17.27

#2 cord: 6.24 — 14.56

#3 cord: 6.54 — 15.25

#4 cord: 6.59 — 15.37



B: INSPECTION

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:

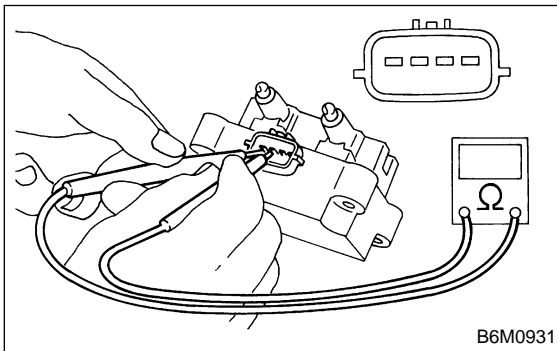
[Primary side]

Between terminal No. 1 and No. 2

0.73 Ω ± 10%

Between terminal No. 2 and No. 4

0.73 Ω ± 10%



[Secondary side]

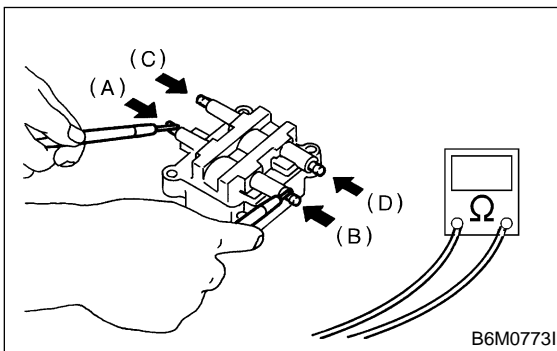
Between (A) and (B)

12.8 k Ω ± 15%

Between (C) and (D)

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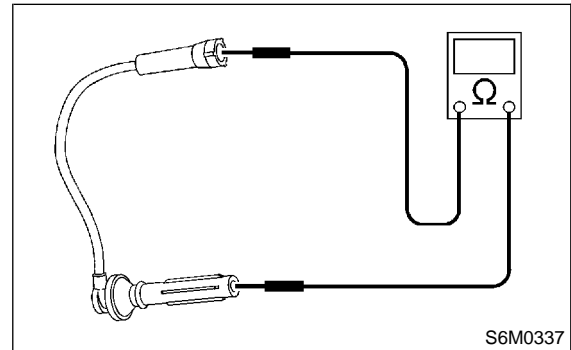
Resistance value:

#1 cord: 7.40 — 17.27

#2 cord: 6.24 — 14.56

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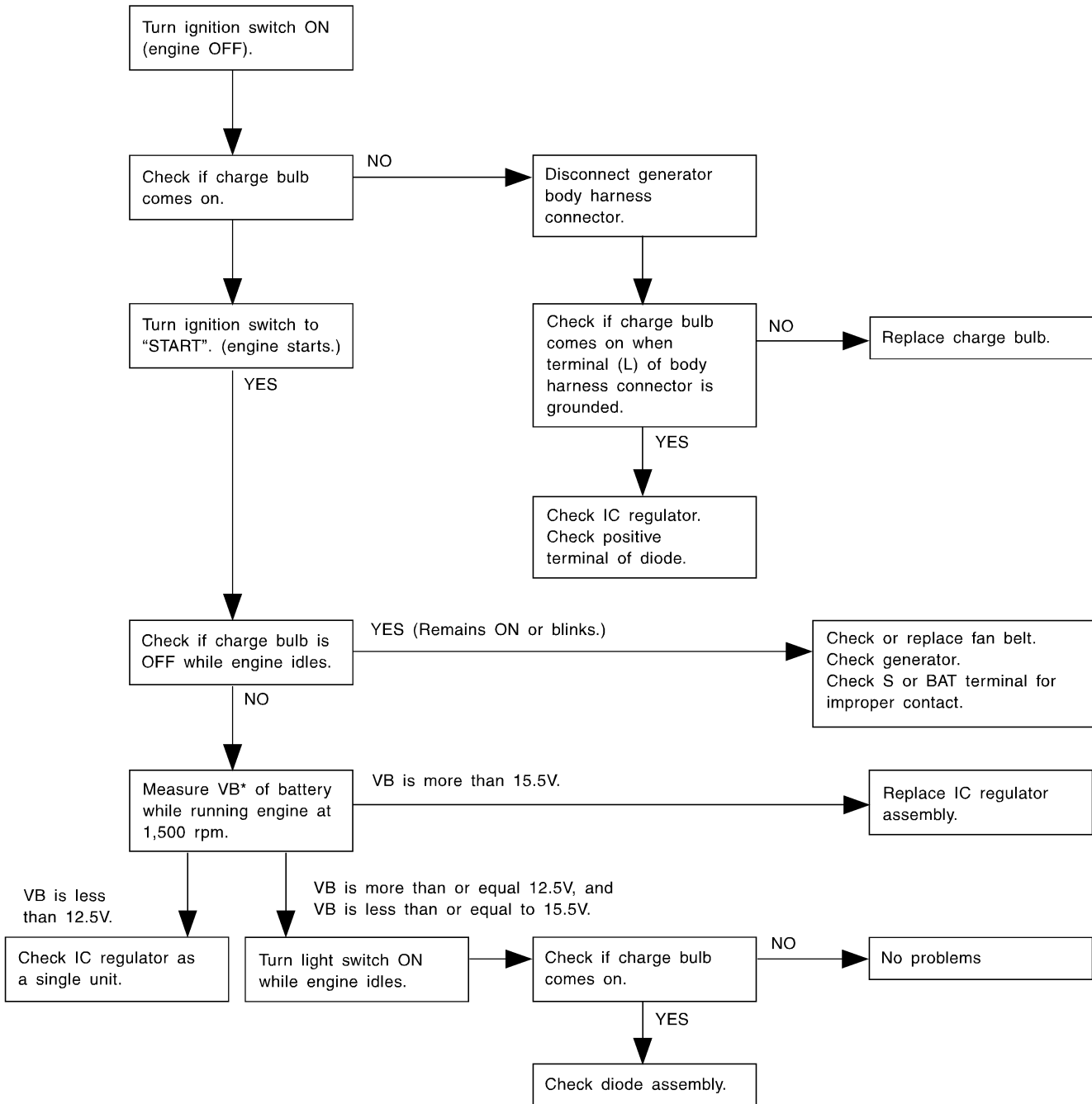
#4 cord: 6.59 — 15.37



1. Starter

| Trouble | | Probable cause |
|--|--|---|
| Starter does not start. | Magnet switch does not operate. (no clicks are heard.) | Magnet switch poor contact or discontinuity of pull-in coil circuit |
| | | Improper sliding of magnet switch plunger |
| | Magnet switch operates. (clicks are issued.) | Poor contact of magnet switch's main contact point |
| | | Layer short of armature |
| | | Contaminants on armature commutator |
| | | High armature mica |
| | | Improper grounding of yoke field coil |
| | | Insufficient carbon brush length |
| Insufficient brush spring pressure | | |
| Starter starts but does not crank engine. | Failure of pinion gear to engage ring gear | Worn pinion teeth |
| | | Improper sliding of overrunning clutch |
| | Improper adjustment of stud bolt | |
| Clutch slippage | Faulty clutch roller spring | |
| Starter starts but engine cranks too slowly. | | Poor contact of magnet switch's main contact point |
| | | Layer short of armature |
| | | Discontinuity, burning or wear of armature commutator |
| | | Poor grounding of yoke field coil |
| | | Insufficient brush length |
| | | Insufficient brush spring pressure |
| Abnormal brush wear | | |
| Starter overruns. | | Magnet switch coil is a layer short. |

2. Generator



*: Terminal voltage

1. Body Electrical

1. Body Electrical

| Battery | Type | | MT model: 55D23L (MF) | AT model: 75D23L (MF) |
|--|---|--------------------------|----------------------------|-----------------------|
| | Capacity | Reverse capacity | MT model: 99 minutes | AT model: 118 minutes |
| | | Cold cranking ampere | MT model: 356 amperes | AT model: 520 amperes |
| Combination meter | Speedometer | | Electric pulse type | |
| | Temperature gauge | | Thermistor cross coil type | |
| | Fuel gauge | | Resistance cross coil type | |
| | Tachometer | | Electric impulse type | |
| | Turn signal indicator light | | 12 V — 1.4 W | |
| | Charge indicator light | | 12 V — 1.4 W | |
| | Oil pressure indicator light | | 12 V — 1.4 W | |
| | ABS warning light | | 12 V — 1.4 W | |
| | CHECK ENGINE warning light (Malfunction indicator light) | | 12 V — 1.4 W | |
| | HI-beam indicator light | | 12 V — 1.4 W | |
| | Door open warning light | | LED | |
| | Seat belt warning light | | 12 V — 1.4 W | |
| | Brake fluid and parking brake warning light | | 12 V — 1.4 W | |
| | FWD indicator light | | 12 V — 1.4 W | |
| | AIRBAG warning light | | 12 V — 1.4 W | |
| | Meter illumination light | | 12 V — 3 W, 1.4 W | |
| | AT OIL TEMP. warning light | | 12 V — 1.4 W | |
| | Security indicator light | | LED | |
| Low fuel warning light | | 12 V — 1.4 W | | |
| Headlight | | 12 V — 60/55 W (Halogen) | | |
| Front turn signal light/side marker, parking light | | 12 V — 27 W/8 W | | |
| Front fog light | | 12 V — 55 W | | |
| Rear combination light | Tail/Stop light | | 12 V — 8/27 W | |
| | Turn signal light | | 12 V — 27 W | |
| | Back-up light | | 12 V — 27 W | |
| License plate light | | 12 V — 5 W | | |
| High-mounted stop light | | 12 V — 13 W | | |
| Room light | | 12 V — 8 W | | |
| Spot light | | 12 V — 8 W | | |
| Luggage room light | | 12 V — 5 W | | |
| Front wiper motor | Input | | 12 V — 54 W or less | |
| Rear wiper motor | Input | | 12 V — 42 W or less | |
| Front washer motor | Pump type | | Centrifugal | |
| | Input | | 12 V — 36 W or less | |
| Rear washer motor | Pump type | | Centrifugal | |
| | Input | | 12 V — 36 W or less | |
| Horn | | 12 V — 350 Hz/420 Hz | | |
| Accessory socket | Input | | 12 V — 120 W | |
| Rear window defogger | Input | | 12 V — 160 W | |
| | Indicator light | | 12 V — 50 mA | |
| Cargo socket | Input | | 12 V — 120 W | |

1. Precautions

- Before disassembling or reassembling parts, always disconnect battery ground cable. When repairing radio, control units, etc. which are provided with memory functions, record memory contents before disconnecting battery ground cable. Otherwise, these contents will be cancelled upon disconnection.
- Reassemble parts in reverse order of disassembly unless otherwise indicated.
- Adjust parts to specifications contained in this manual if so designated.
- Connect connectors and hoses securely during reassembly.
- After reassembly, ensure functional parts operate smoothly.

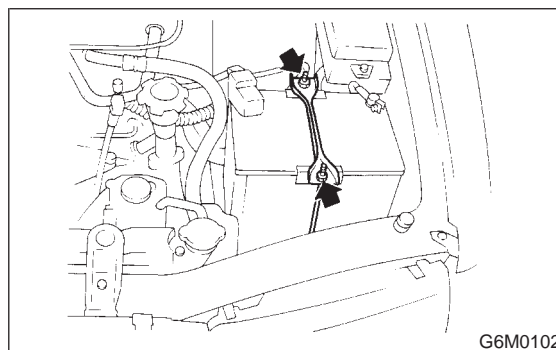
CAUTION:

- Airbag system wiring harness is routed near the electrical parts and switch.
- All airbag system wiring harness and connectors are yellow. Do not use electrical test equipment on these circuit.
- Be careful not to damage airbag system wiring harness when servicing the ignition key cylinder.

2. Battery

A: REMOVAL AND INSTALLATION

- 1) Disconnect the positive (+) terminal after disconnecting the negative (-) terminal of battery.
- 2) Remove flange nuts from battery rods and take off battery holder.



- 3) Remove battery.
- 4) Install in the reverse order of removal.

Tightening torque:

$3.4 \pm 1.0 \text{ N}\cdot\text{m}$ ($0.35 \pm 0.1 \text{ kg}\cdot\text{m}$, $2.5 \pm 0.7 \text{ ft}\cdot\text{lb}$)

NOTE:

- Clean battery cable terminals and apply grease to retard the formation of corrosion.
- Connect the positive (+) terminal of battery and then the negative (-) terminal of the battery.

B: INSPECTION

WARNING:

- Electrolyte has toxicity; be careful handling the fluid.
- Avoid contact with skin, eyes and clothing. Especially when fluid comes in contact with eyes, flush with water for 15 minutes and get prompt medical attention.
- Batteries produce explosive gasses. Keep sparks, flame, cigarettes away.
- Ventilate when charging or using in enclosed space.
- For safety, in case an explosion does occur, wear eye protection or shield your eyes when working near any battery. Never lean over a battery.
- Do not let battery fluid contact eyes, skin, fabrics, or paint-work because battery fluid is corrosive acid.
- To lessen the risk of sparks, remove rings, metal watch-bands, and other metal jewelry. Never allow metal tools to contact the positive battery terminal and anything connected to it while you are at the same time in contact with any other metallic portion of the vehicle, which may short a circuit.

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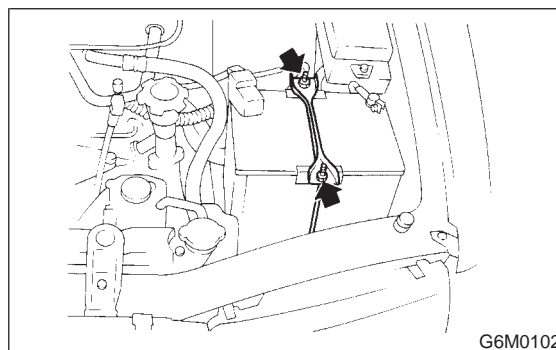
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2. Battery

1. BATTERY

1) External parts:

Check for the existence of dirt or cracks on the battery case, top cover, vent plugs, and terminal posts. If necessary, clean with water and wipe with a dry cloth.

Apply a thin coat of grease on the terminal posts to prevent corrosion.

2) Electrolyte level:

Check the electrolyte level in each cell. If the level is below MIN LEVEL, bring the level to MAX LEVEL by pouring distilled water into the battery cell. Do not fill beyond MAX LEVEL.

3) Specific gravity of electrolyte:

(1) Measure specific gravity of electrolyte using a hydrometer and a thermometer.

Specific gravity varies with temperature of electrolyte so that it must be corrected at 20°C (68°F) using the following equation:

$$S_{20} = St + 0.0007 \times (t - 20)$$

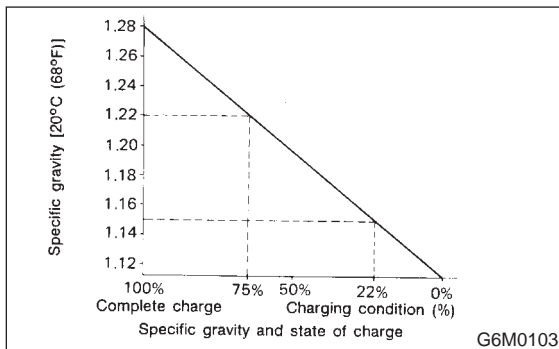
S_{20} : Specific gravity corrected at electrolyte temperature of 20°C

St : Measured specific gravity

t : Measured temperature (°C)

Determine whether or not battery must be charged, according to corrected specific gravity.

Standard specific gravity: 1.220 — 1.290 [at 20°C (68°F)]



(2) Measuring the specific gravity of the electrolyte in the battery will disclose the state of charge of the battery. The relation between the specific gravity and the state of charge is as shown in the figure.

C: CHARGING

WARNING:

● Do not bring an open flame close to the battery at this time.

CAUTION:

● Prior to charging, corroded terminals should be cleaned with a brush and a common baking soda solution.

- Be careful since battery electrolyte may overflow while the battery is charging.
- Observe instructions when handling battery charger.
- Before charging the battery on the vehicle, disconnect the battery ground terminal. Failure to do so may damage the alternator's diodes or other electrical units.

1. NORMAL CHARGING

Charge the battery at current value specified by manufacturer or at approximately 1/10 of battery's ampere-hour rating.

2. QUICK CHARGING

Quick charging is a method in which the battery is charged in a short period of time with a relatively large current by using a quick charger.

Since a large current flow raises electrolyte temperature, the battery is subject to damage if the large current is used for a prolonged time. For this reason, quick charging must be carried out within a current range that will not increase the electrolyte temperature above 40°C (104°F).

It should be also remembered that the quick charging is a temporary means to bring battery voltage up to a fair value and, as a rule, a battery should be charged slowly with a low current.

CAUTION:

● Observe the items in 1. NORMAL CHARGING.

● Never use more than 10 amperes when charging the battery because that will shorten battery life.

3. JUDGMENT OF BATTERY IN CHARGED CONDITION

1) Specific gravity of electrolyte is held at a specific value in a range from 1.250 to 1.290 for more than one hour.

2) Voltage per battery cell is held at a specific value in a range from 2.5 to 2.8 volts for more than one hour.

4. CHECK HYDROMETER FOR STATE OF CHARGE

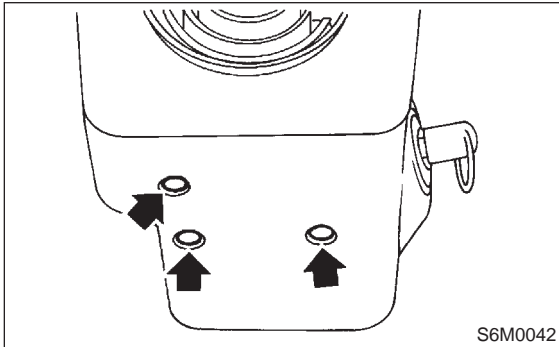
| Hydrometer indicator | State of charge | Required action |
|----------------------|-----------------|--|
| Green dot | Above 65% | Load test |
| Dark dot | Below 65% | Charge battery |
| Clear dot | Low electrolyte | Replace battery* (If cranking complaint) |

*: Check electrical system before replacement.

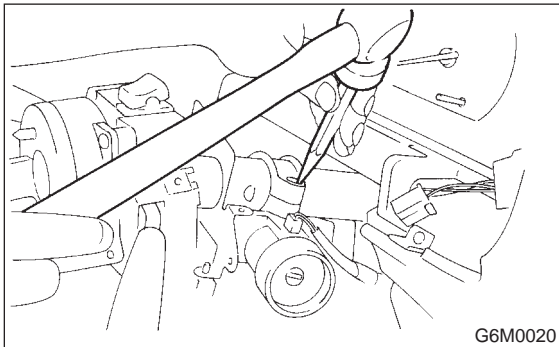
3. Ignition Switch

A: REMOVAL AND INSTALLATION

- 1) Disconnect ground cable from battery.
- 2) Remove instrument panel lower cover. <Ref. to 5-4 [W1A0].>
- 3) Remove screws, separate upper column cover and lower column cover.



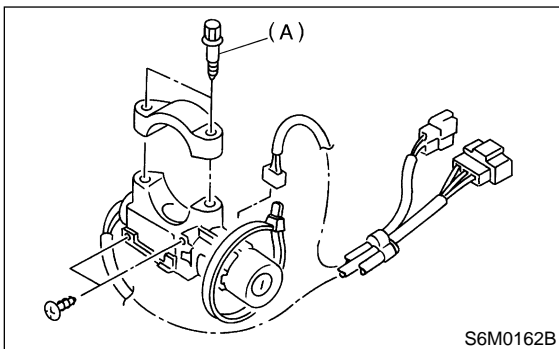
- 4) Remove knee protector.
- 5) Remove meter visor.
- 6) Disconnect ignition switch connector from body harness.
- 7) Using a drift and hammer, hit the torn bolt head to loosen and remove the ignition switch.



- 8) Install in the reverse order of removal.

NOTE:

When installing, tighten the connecting bolt (A) until its head twists off.



4. Lighting

A: ADJUSTMENT

1. HEADLIGHT AIMING

NOTE:

As this headlight is the "VISUAL AIMING TYPE", it is possible to adjust aiming only in the vertical direction. It cannot be adjusted in the horizontal direction.

CAUTION:

Turn off the light before adjusting headlight aiming. If the light is necessary to check aiming, do not turn on for more than two minutes.

NOTE:

Before checking the headlight aiming, be sure of the following:

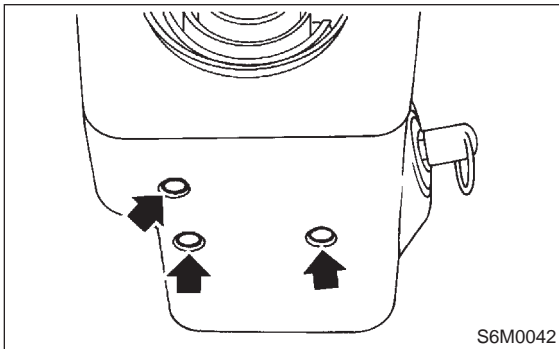
- The area around the headlight has not sustained any accident, damage or other type of deformation.
- Vehicle is parked on level ground.
- The inflation pressure of tires is correct.
- Vehicle's gas tank is fully charged.
- Bounce the vehicle several times to normalize the suspension.
- Make certain that someone is seated in the driver's seat.

- 1) Place a cloth over the headlight that does not require aiming adjustment.

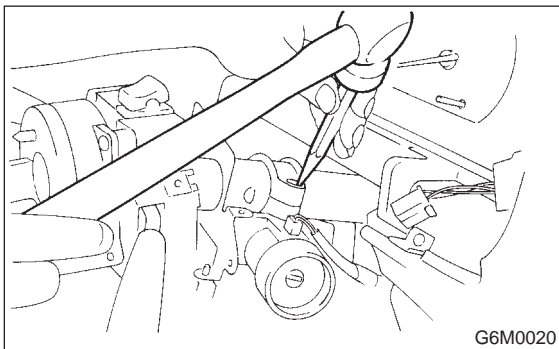
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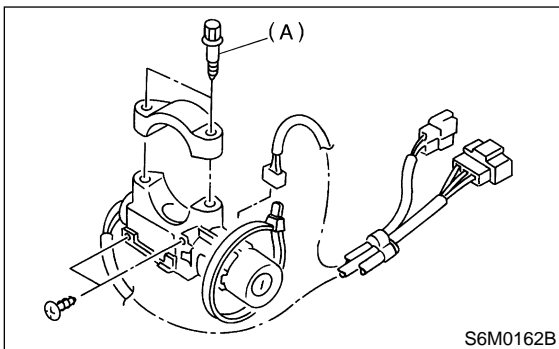
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NOTE:

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4. Lighting

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CAUTION:

Turn off the light before adjusting headlight aiming. If the light is necessary to check aiming, do not turn on for more than two minutes.

NOTE:

Before checking the headlight aiming, be sure of the following:

- The area around the headlight has not sustained any accident, damage or other type of deformation.
- Vehicle is parked on level ground.
- The inflation pressure of tires is correct.
- Vehicle's gas tank is fully charged.
- Bounce the vehicle several times to normalize the suspension.
- Make certain that someone is seated in the driver's seat.

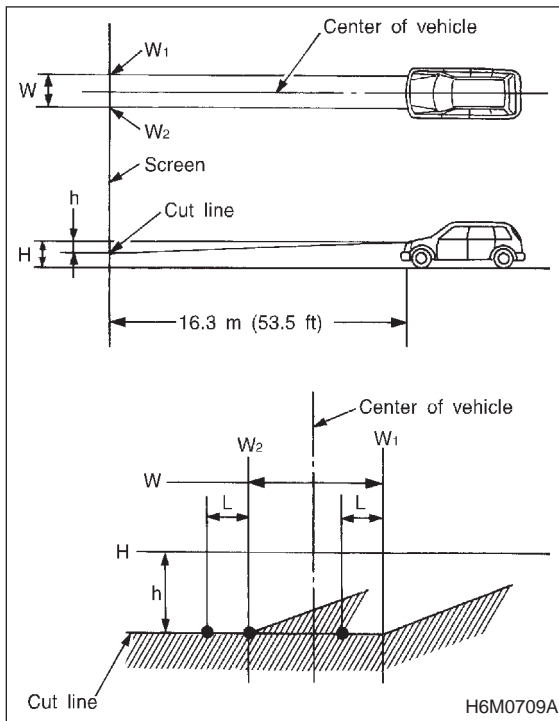
- 1) Place a cloth over the headlight that does not require aiming adjustment.

4. Lighting

2) Turn the headlights on. Perform the aiming adjustment for the other headlight as follows:

CAUTION:

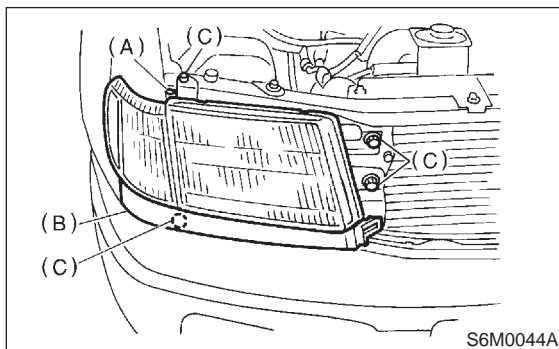
Do not perform lateral headlight aiming adjustment.



| W | H | L | h |
|------------------------|----------------------|----------------------|---------------------|
| 1,060 mm (41.73 in) | 710 mm (27.95 in) | 712 mm (28.03 in) | 114 mm (4.49 in) |

B: REMOVAL AND INSTALLATION**1. HEADLIGHT AND SIDE MARKER LIGHT**

- 1) Disconnect ground cable from battery.
- 2) Remove front grille <Ref. to 5-1 [W12A0].> and disconnect connector from headlight.
- 3) Remove screw (A) then remove side marker light while disconnecting connector.
- 4) Remove extension (B) <Ref. to 5-1 [W3A0].>
- 5) Remove bolts (C) which secure headlight and remove headlight.



- 6) Install in the reverse order of removal.

Tightening torque:

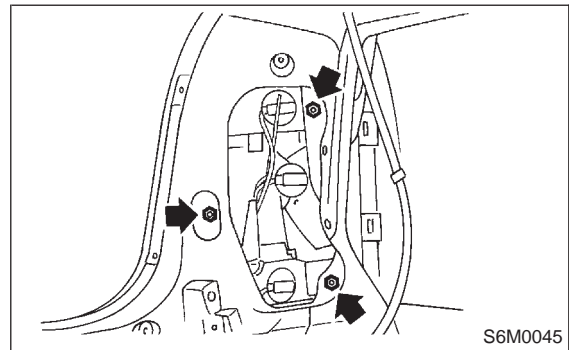
$6.4 \pm 0.5 \text{ N}\cdot\text{m}$ ($0.65 \pm 0.05 \text{ kg}\cdot\text{m}$, $4.7 \pm 0.4 \text{ ft}\cdot\text{lb}$)

NOTE:

When installing, securely fit clip (on fender side) into locating (on front turn signal light side).

2. REAR COMBINATION LIGHT

- 1) Disconnect ground cable from battery.
- 2) Remove rear quarter upper and lower trim.
- 3) Remove nuts and disconnect connector.



- 4) Attach adhesive cloth tape to body area around rear combination light.
- 5) Using a standard screwdriver, carefully pry rear combination light off and away from the front of the vehicle.
- 6) Install in the reverse order of removal.

Tightening torque:

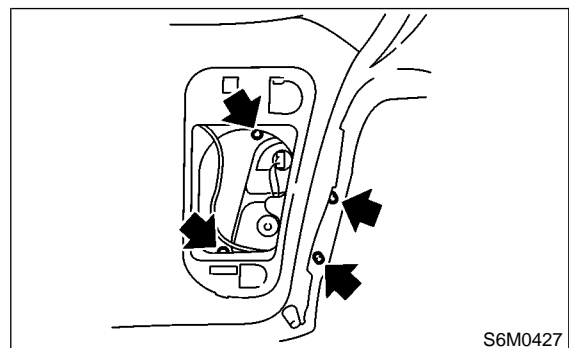
$6.4 \pm 0.5 \text{ N}\cdot\text{m}$ ($0.65 \pm 0.05 \text{ kg}\cdot\text{m}$, $4.7 \pm 0.4 \text{ ft}\cdot\text{lb}$)

CAUTION:

- Do not pry on the rear combination light forcefully as this may scratch the vehicle body.
- Remove all traces of adhesive tape from body before installation.
- Attach butyl rubber tape to back of rear combination light before installing rear combination light on body for sealing purposes.

3. REAR FINISHER LIGHT

- 1) Disconnect ground cable from battery.
- 2) Remove rear gate trim access hole cover.
- 3) Remove the four nuts.

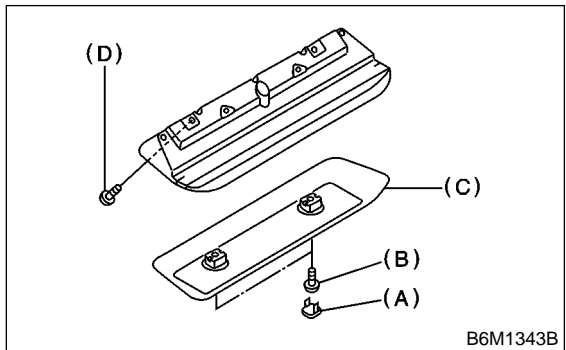


- 4) Detach rear finisher light while disconnecting connector.

5) Install in the reverse order of removal.

4. HIGH-MOUNTED STOP LIGHT

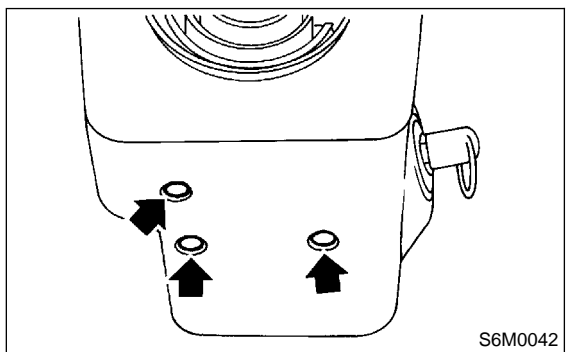
- 1) Disconnect ground cable from battery.
- 2) Remove cap (A) by prying on the edge with a screwdriver.
- 3) Remove screws (B) and then detach cover (C).
- 4) Remove screws (D) and then detach high-mounted stop light while disconnecting connector.



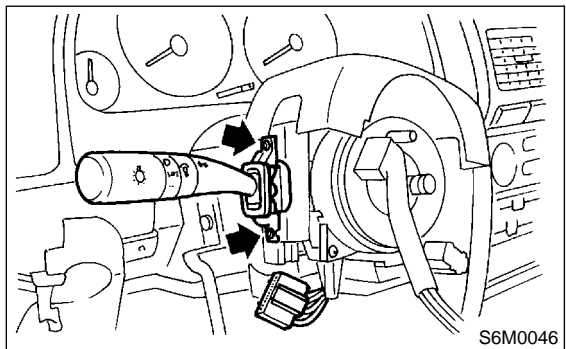
5) Install in the reverse order of removal.

5. COMBINATION SWITCH

- 1) Disconnect ground cable from battery.
- 2) Remove instrument panel lower cover. <Ref. to 5-4 [W1A0].>
- 3) Remove screws which secure upper column cover to lower column cover.



- 4) Disconnect connector from combination switch.
- 5) Remove screws which secure switch and remove switch.



6) Install in the reverse order of removal.

C: INSPECTION

1. COMBINATION SWITCH (LIGHTING)

Move combination switch to respective positions and check continuity between terminals.

• LIGHTING SWITCH

| Terminal | 16 | 14 | 13 |
|-----------------|----|----|----|
| Switch position | | | |
| OFF | | | |
| Tail | ○ | ○ | |
| Head | ○ | ○ | ○ |

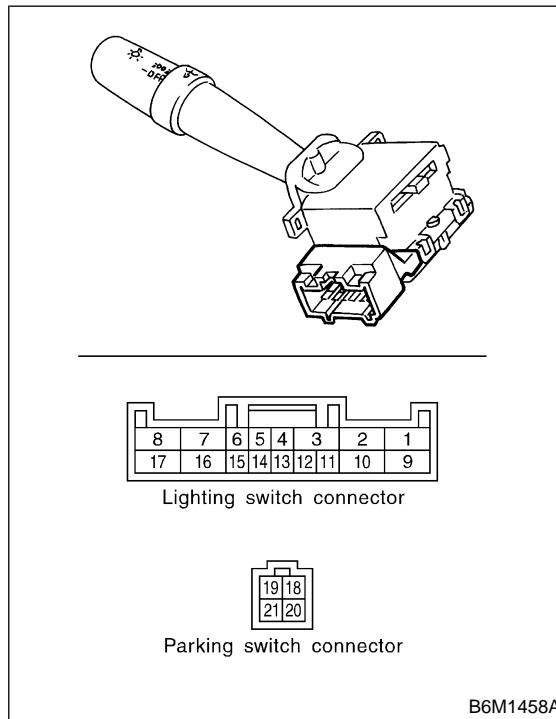
• PARKING SWITCH

| Terminal | 19 | 21 | 18 |
|-----------------|----|----|----|
| Switch position | | | |
| OFF | ○ | ○ | |
| ON | | ○ | ○ |

• DIMMER AND PASSING SWITCH

| Terminal | 16 | 17 | 7 | 8 |
|-----------------|----|----|---|---|
| Switch position | | | | |
| Flash | ○ | | ○ | ○ |
| Low beam | ○ | ○ | | |
| HI-beam | ○ | | ○ | |

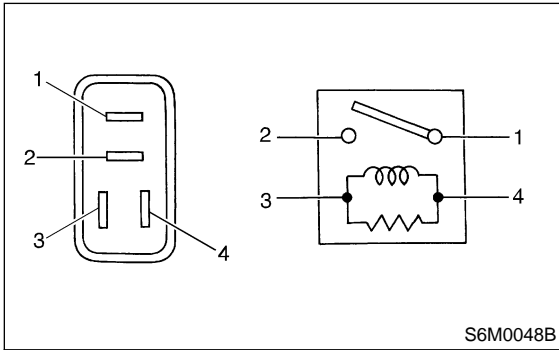
H6M0500B



2. HEADLIGHT RELAY

Check continuity between terminals when terminal No. 4 is connected to battery and terminal No. 3 is grounded.

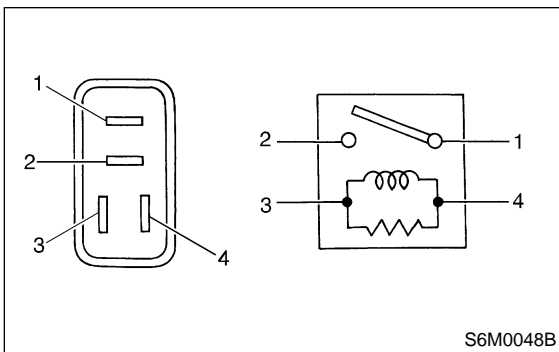
| | | |
|----------------------------|-----------------------------------|----------------------------|
| When current flows | Between terminals No. 1 and No. 2 | Continuity exists. |
| When current does not flow | Between terminals No. 1 and No. 2 | Continuity does not exist. |
| | Between terminals No. 3 and No. 4 | Continuity exists. |



3. TAIL AND ILLUMINATION RELAY

Check continuity between terminals (indicated in table below) when terminal No. 4 is connected to battery and terminal No. 3 is grounded.

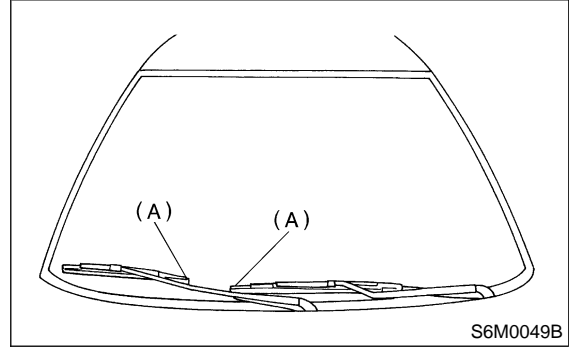
| | | |
|----------------------------|-----------------------------------|----------------------------|
| When current flows | Between terminals No. 1 and No. 2 | Continuity exists. |
| When current does not flow | Between terminals No. 1 and No. 2 | Continuity does not exist. |
| | Between terminals No. 3 and No. 4 | Continuity exists. |



5. Front Wiper and Washer

A: ADJUSTMENT

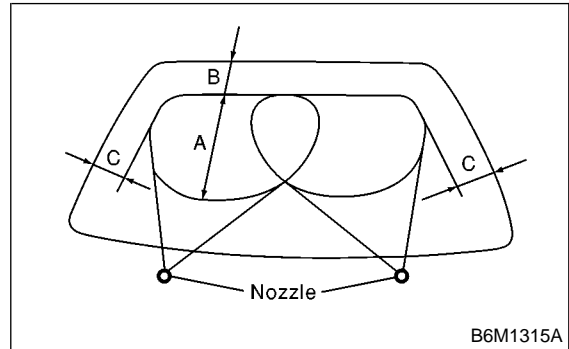
- 1) Turn the wiper switch to OFF position.
- 2) Adjust so that the blades meet the ceramic print point mark (A).



- 3) Adjust washer ejecting area on windshield glass as shown in the figure when vehicle stops.

Ejecting area:

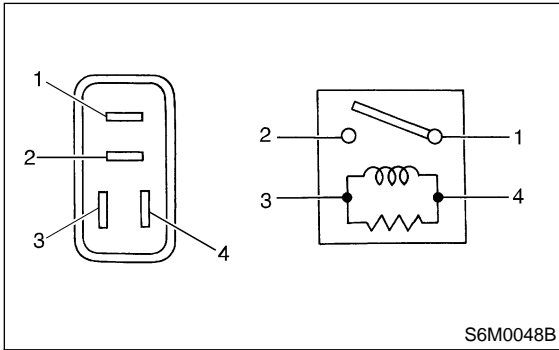
- A: 350 mm (13.78 in)**
- B: 100 mm (3.94 in)**
- C: 60 mm (2.36 in)**



2. HEADLIGHT RELAY

Check continuity between terminals when terminal No. 4 is connected to battery and terminal No. 3 is grounded.

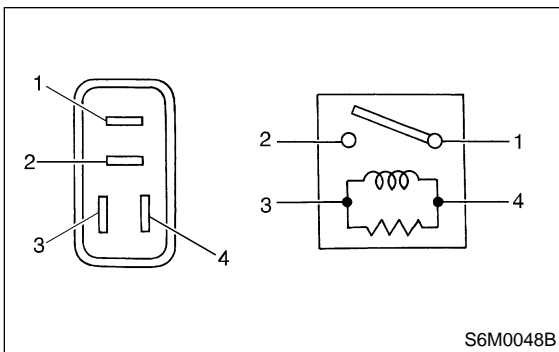
| | | |
|----------------------------|-----------------------------------|----------------------------|
| When current flows | Between terminals No. 1 and No. 2 | Continuity exists. |
| When current does not flow | Between terminals No. 1 and No. 2 | Continuity does not exist. |
| | Between terminals No. 3 and No. 4 | Continuity exists. |



3. TAIL AND ILLUMINATION RELAY

Check continuity between terminals (indicated in table below) when terminal No. 4 is connected to battery and terminal No. 3 is grounded.

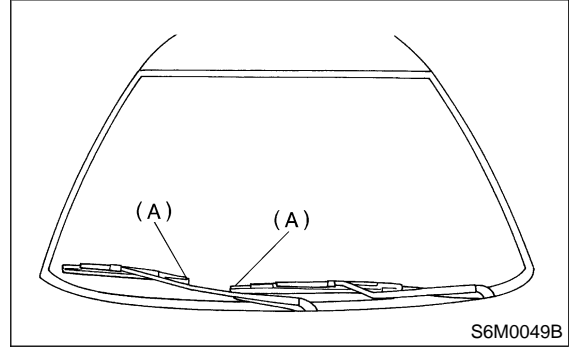
| | | |
|----------------------------|-----------------------------------|----------------------------|
| When current flows | Between terminals No. 1 and No. 2 | Continuity exists. |
| When current does not flow | Between terminals No. 1 and No. 2 | Continuity does not exist. |
| | Between terminals No. 3 and No. 4 | Continuity exists. |



5. Front Wiper and Washer

A: ADJUSTMENT

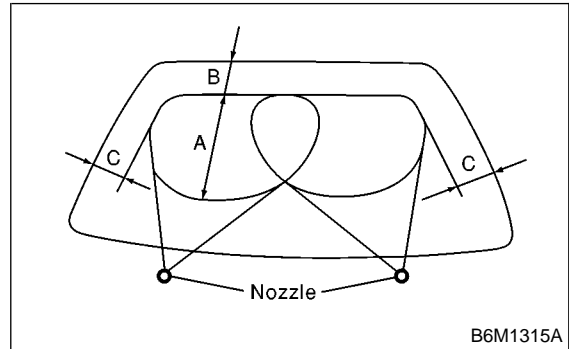
- 1) Turn the wiper switch to OFF position.
- 2) Adjust so that the blades meet the ceramic print point mark (A).



- 3) Adjust washer ejecting area on windshield glass as shown in the figure when vehicle stops.

Ejecting area:

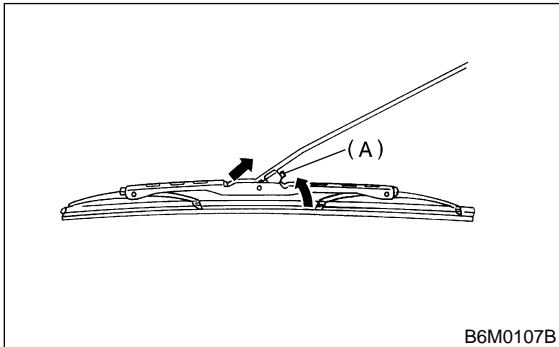
- A: 350 mm (13.78 in)**
- B: 100 mm (3.94 in)**
- C: 60 mm (2.36 in)**



B: REMOVAL AND INSTALLATION

1. BLADE

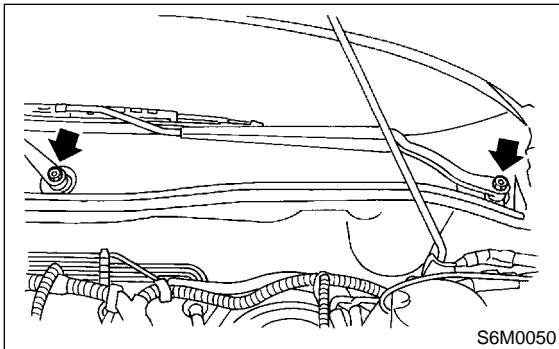
1) Pull out blade following the arrow direction, from arm while pushing up locking clip (A).



2) Install in the reverse order of removal.

2. WIPER ARM

1) Open front hood.
2) Remove cap. Remove the nut which secure wiper arm, and remove wiper arm.



3) Install in the reverse order of removal.

NOTE:
Remove metal sludge from the wiper arm fixture before installing it.

Tightening torque:
 $20 \pm 3 \text{ N-m (2.0} \pm 0.3 \text{ kg-m, 14.5} \pm 2.2 \text{ ft-lb)}$

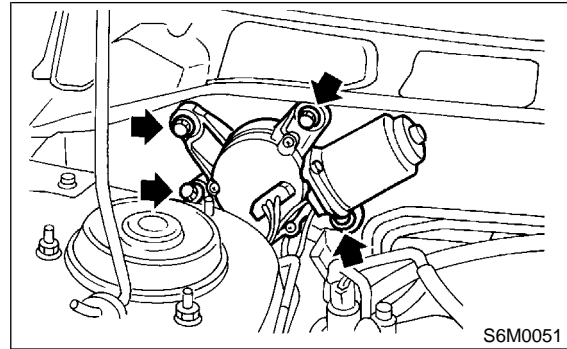
3. WIPER MOTOR AND LINK

1) Disconnect ground cable from battery.
2) Detach cowl panel. <Ref. to 5-1 [W10A0].>

NOTE:
Apply silicone oil or soap water to both sides of cowl net to facilitate removal.

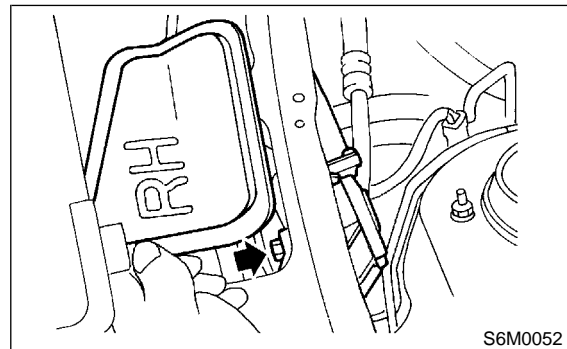
3) Disconnect electric connector, and remove motor attaching bolts.

Tightening torque:
 $5.9 \pm 1.5 \text{ N-m (0.6} \pm 0.15 \text{ kg-m, 4.3} \pm 1.1 \text{ ft-lb)}$



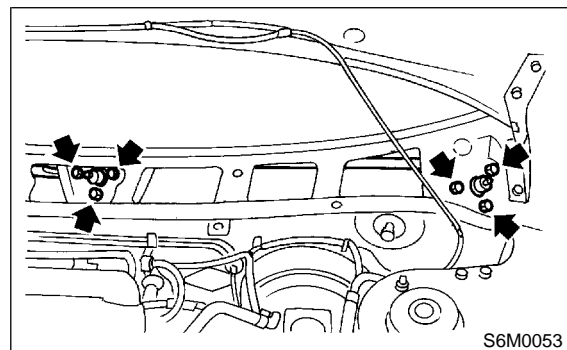
4) Remove cowl cover.
5) Remove nut securing motor link on the back side of motor.

Tightening torque:
 $15 \pm 3 \text{ N-m (1.5} \pm 0.3 \text{ kg-m, 11} \pm 2.2 \text{ ft-lb)}$

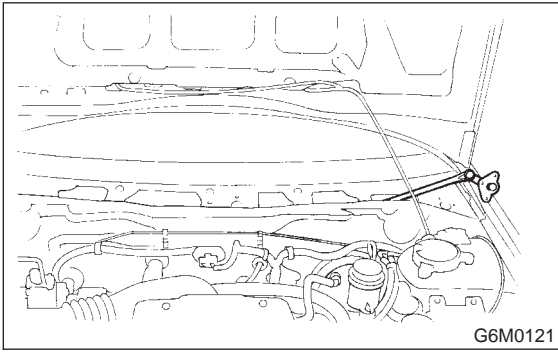


6) Remove bolts which secure sleeve unit.

Tightening torque:
 $5.9 \pm 1.5 \text{ N-m (0.6} \pm 0.15 \text{ kg-m, 4.3} \pm 1.1 \text{ ft-lb)}$



7) Remove wiper link from service hole in front panel.



G6M0121

8) Install in the reverse order of removal.

C: INSPECTION

1. COMBINATION SWITCH (FRONT WIPER)

Set wiper switch to each position and check continuity between terminals.

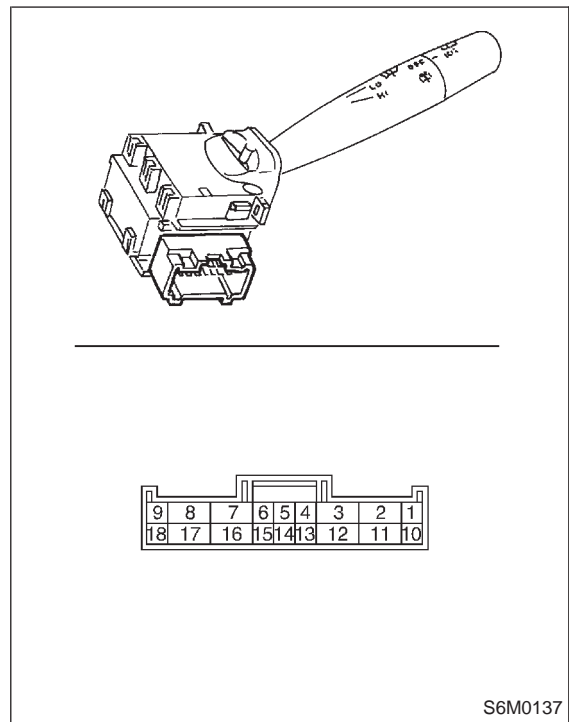
• Wiper switch

| Terminal | | 16 | 7 | 17 | 8 | INT1 | INT2 |
|-----------------|------|-----|-----|-----|-----|------|------|
| Switch position | | | | | | | |
| OFF | OFF | ○—○ | | | | | |
| | MIST | ×—× | ×—× | | | | |
| INT | OFF | ○—○ | | | | ○—○ | |
| | MIST | ×—× | ○—○ | ×—× | | ○—○ | |
| | | ×—× | | ×—× | | | |
| LO | OFF | | ○—○ | ○—○ | | | |
| | MIST | | ○—○ | ○—○ | | | |
| HI | OFF | | | ○—○ | ○—○ | | |
| | MIST | | ○—○ | ○—○ | ○—○ | | |

• Washer switch

| Terminal | | 11 | 2 |
|-----------------|--|-----|-----|
| Switch position | | | |
| OFF | | | |
| ON | | ○—○ | ○—○ |

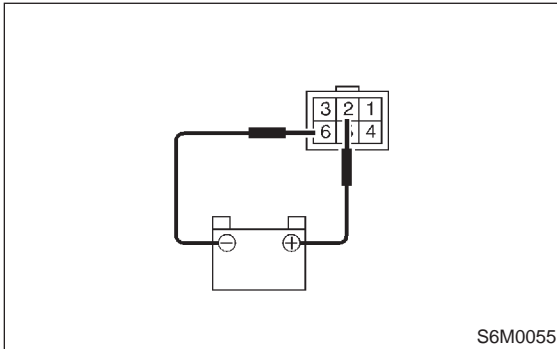
H6M0501B



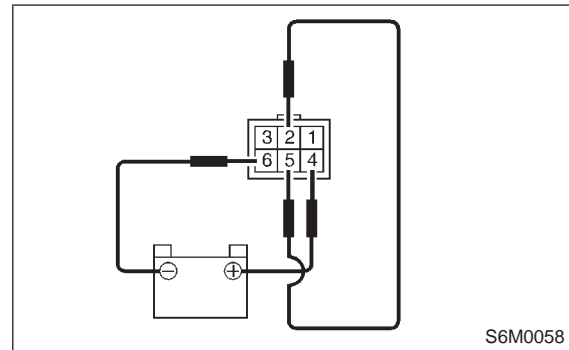
S6M0137

2. WIPER MOTOR

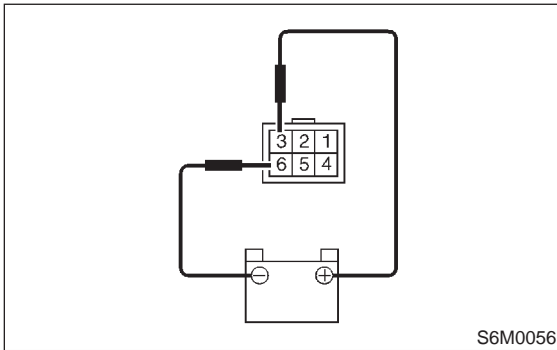
1) Check wiper motor operation at low speed:
Connect battery to wiper motor. Check wiper motor for proper operation at low speed.



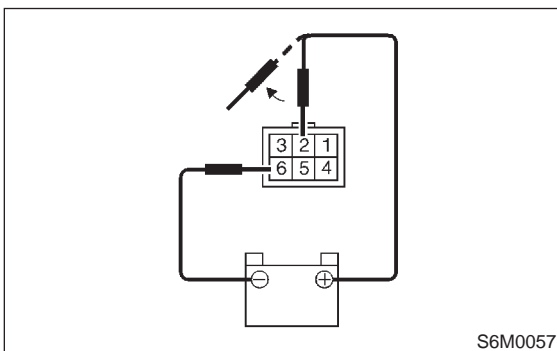
4) Reconnect battery and ensure that wiper motor stops at "AUTO STOP" after operating at low speed.



2) Check wiper motor operation at high speed:
Connect battery wiper motor. Check wiper motor for proper operation at high speed.



3) Check wiper motor for proper stoppage:
Connect battery to wiper motor. After operating wiper motor at low speed, disconnect battery to stop it.



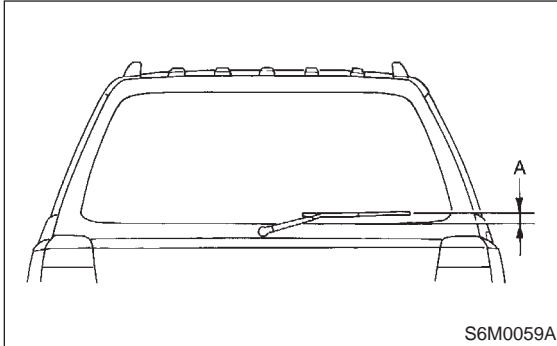
6. Rear Wiper and Washer

A: ADJUSTMENT

1) Adjust wiper blade in original position as shown in figure by changing wiper arm installation.

Original position:

A: 30 ± 5 mm (1.18 ± 0.20 in)

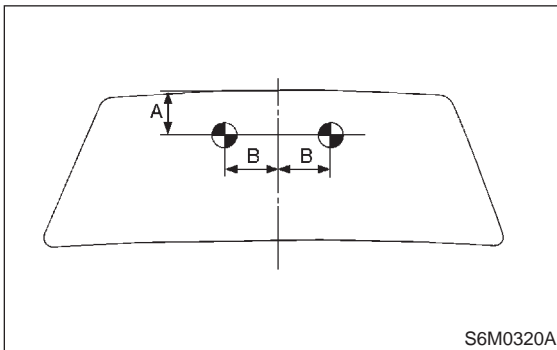


2) Adjust washer ejecting point on rear gate window as shown in the figure when the vehicle stops.

Ejecting point:

A: 80 mm (3.15 in)

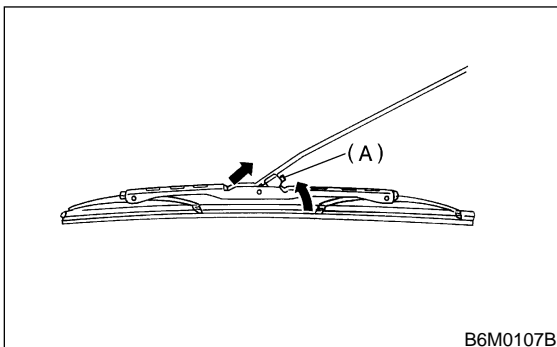
B: 70 mm (2.76 in)



B: REMOVAL AND INSTALLATION

1. BLADE

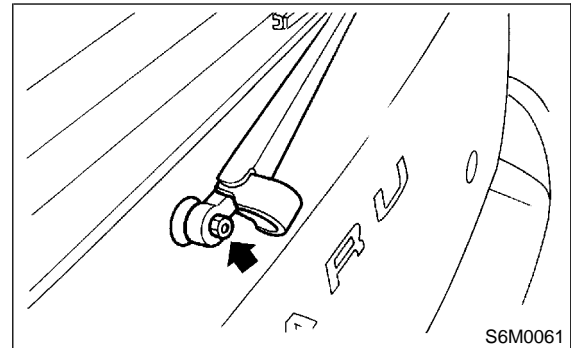
1) Pull out blade following the arrow direction, from arm while pushing up locking clip (A).



2) Install in the reverse order of removal.

2. WIPER ARM

- 1) Remove head cover.
- 2) Remove nut and wiper arm.



- 3) Install in the reverse order of removal.

NOTE:

Remove metal sludge from the wiper arm fixture before installing it.

Tightening torque:

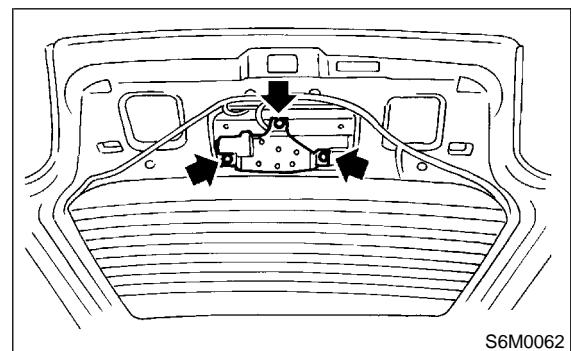
7.8 ± 1.5 N-m (0.8 ± 0.15 kg-m, 5.8 ± 1.1 ft-lb)

3. WIPER MOTOR

- 1) Disconnect ground cable from battery.
- 2) Remove wiper arm.
- 3) Remove rear gate trim.
- 4) Undo clips which secure harness, and disconnect connector of wiper motor.
- 5) Remove attaching screws and take out wiper motor assembly.

CAUTION:

Be careful not to damage O-ring when removing wiper motor assembly.



- 6) Install in the reverse order of removal.

Tightening torque:

5.9 ± 1.5 N-m (0.6 ± 0.15 kg-m, 4.3 ± 1.1 ft-lb)

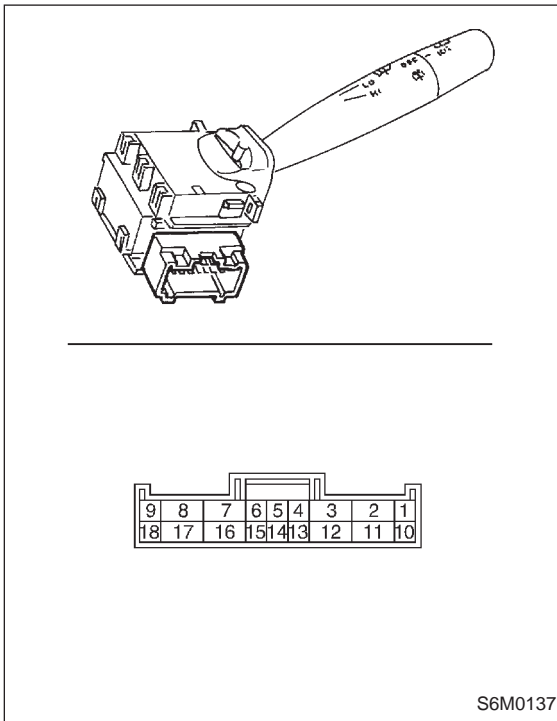
C: INSPECTION

1. COMBINATION SWITCH (REAR WIPER)

Set rear wiper and washer switch to each position and check continuity between terminals.

| Terminal Switch position | 10 | 12 | | 2 |
|-----------------------------|----|----|---|---|
| WASH | ○ | ○ | — | ○ |
| OFF | | | | |
| ON | ○ | — | — | ○ |
| WASH | ○ | ○ | — | ○ |

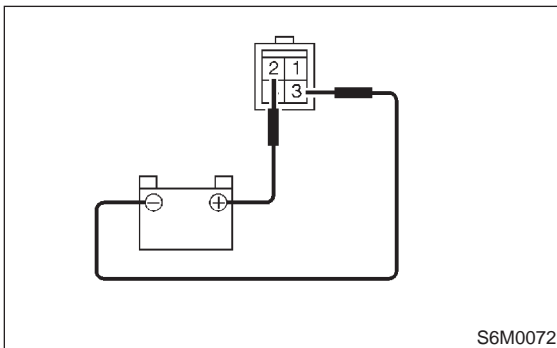
H6M0502C



S6M0137

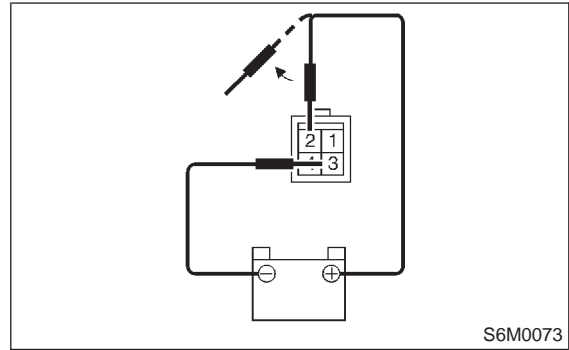
2. WIPER MOTOR

1) Operational check:
Connect battery to wiper motor and check operation of wiper motor.



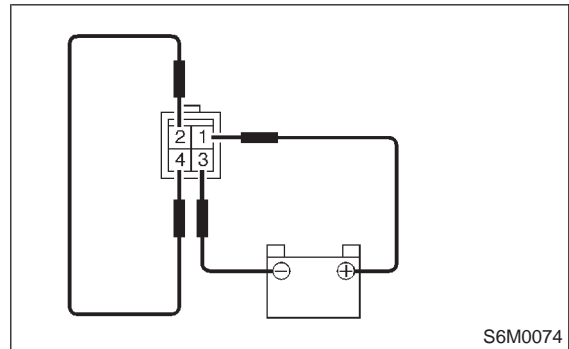
S6M0072

2) Check wiper motor for proper stoppage:
After operating wiper motor, disconnect battery from wiper motor.



S6M0073

3) Reconnect battery and ensure that wiper motor stops at "AUTO STOP" after it has been operated.

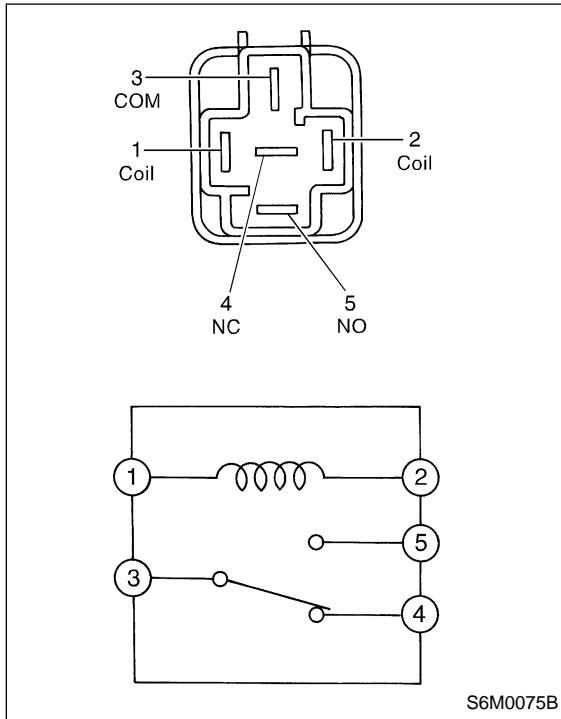


S6M0074

3. REAR WIPER RELAY

- 1) Connect battery to terminal No. 1 and ground terminal No. 2.
- 2) Check continuity between terminals.

| | | |
|----------------------------|-----------------------------------|----------------------------|
| When current flows | Between terminals No. 3 and No. 4 | Continuity does not exist. |
| | Between terminals No. 3 and No. 5 | Continuity exists. |
| When current does not flow | Between terminals No. 3 and No. 4 | Continuity exists. |
| | Between terminals No. 3 and No. 5 | Continuity does not exist. |
| | Between terminals No. 1 and No. 2 | Continuity exists. |



7. Rear Window Defogger

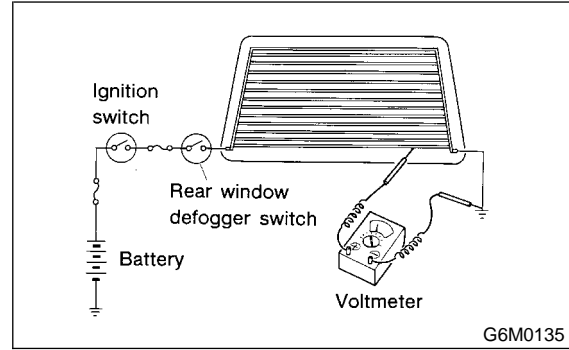
A: INSPECTION

1. HEAT WIRES

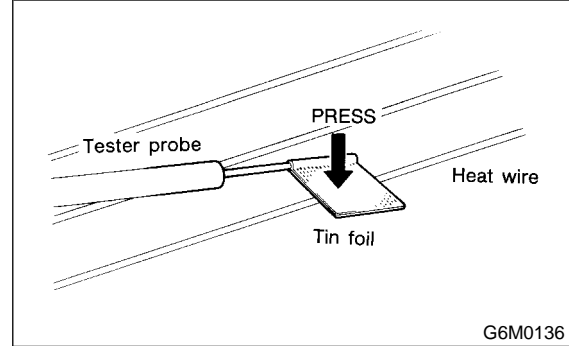
- 1) Start the engine so that battery is being charged.
- 2) Turn defogger switch to ON.
- 3) Check each heat wire at its center position for discontinuity by setting direct current voltmeter.

NOTE:

- Normal indication is about 6 volts.



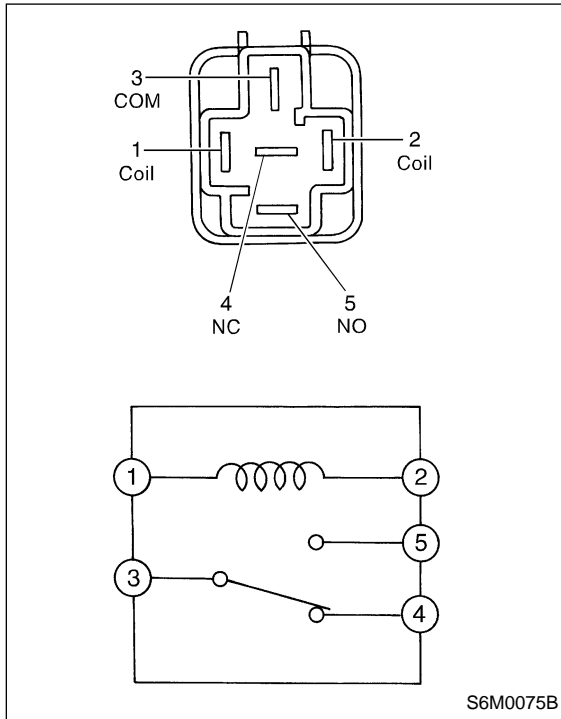
- When measuring voltage, wind a piece of tin foil around the tip of the tester probe and press the foil against the wire with your finger.



3. REAR WIPER RELAY

- 1) Connect battery to terminal No. 1 and ground terminal No. 2.
- 2) Check continuity between terminals.

| | | |
|----------------------------|-----------------------------------|----------------------------|
| When current flows | Between terminals No. 3 and No. 4 | Continuity does not exist. |
| | Between terminals No. 3 and No. 5 | Continuity exists. |
| When current does not flow | Between terminals No. 3 and No. 4 | Continuity exists. |
| | Between terminals No. 3 and No. 5 | Continuity does not exist. |
| | Between terminals No. 1 and No. 2 | Continuity exists. |



7. Rear Window Defogger

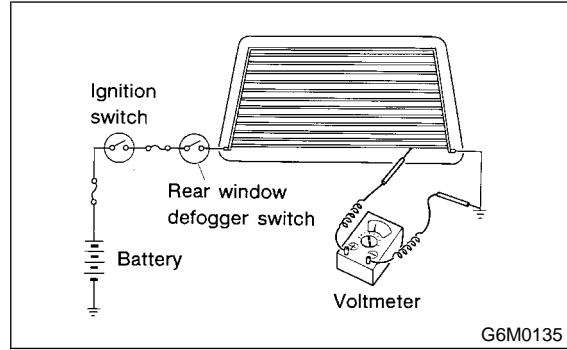
A: INSPECTION

1. HEAT WIRES

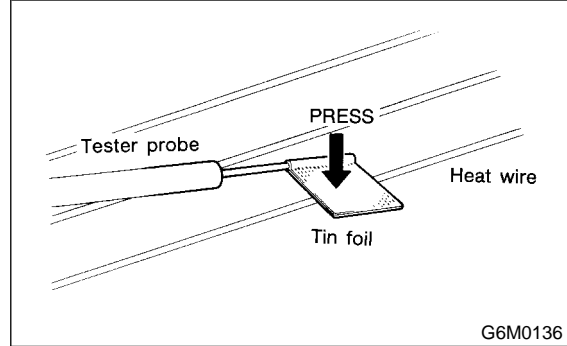
- 1) Start the engine so that battery is being charged.
- 2) Turn defogger switch to ON.
- 3) Check each heat wire at its center position for discontinuity by setting direct current voltmeter.

NOTE:

- Normal indication is about 6 volts.

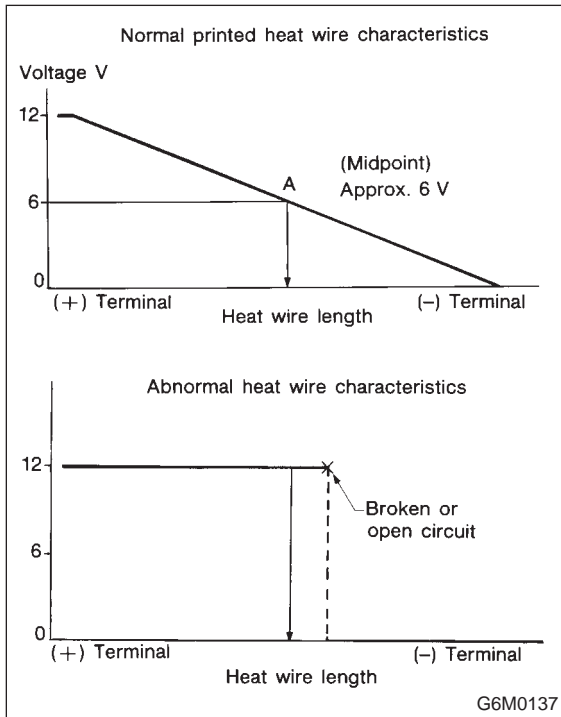


- When measuring voltage, wind a piece of tin foil around the tip of the tester probe and press the foil against the wire with your finger.



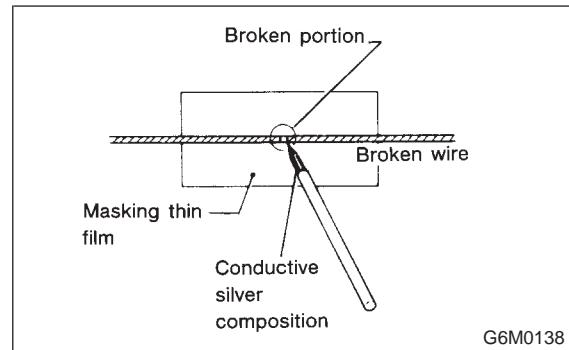
4) When tester indicates 12 volts when its probe reaches point "A", a broken circuit occurs between point "A" and the negative terminal. Slowly move tester probe toward the negative terminal while contacting it on heat wire to locate point where tester indication changes abruptly (0 volts). This is the point where a broken circuit occurs.

When tester indicates 0 volts when its probe reaches point "A", a broken circuit occurs between point "A" and the positive terminal. Locate a point where tester indication changes abruptly (12 volts) while slowly moving tester probe toward the positive terminal.



B: REPAIR

- 1) Clean broken wire and the surrounding area.
- 2) Cut off slit on (used) thin film by 0.5 mm (0.020 in) width and 10 mm (0.39 in) length.
- 3) Place the slit on glass along the broken wire, and deposit conductive silver composition (DUPONT No. 4817) on the broken portion.

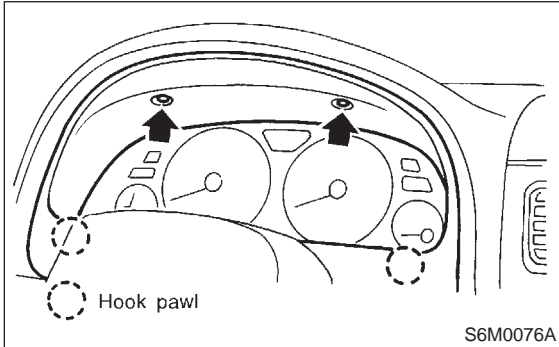


- 4) Dry out the deposited portion.
- 5) Inspect the repaired wire for continuity.

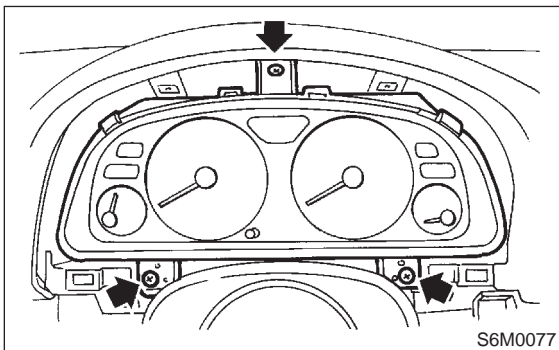
8. Combination Meter

A: REMOVAL AND INSTALLATION

- 1) Disconnect ground cable from battery.
- 2) Move steering wheel most down.
- 3) Remove screws which secure visor and remove visor.



- 4) Remove screws which secure combination meter, and pull combination meter out.

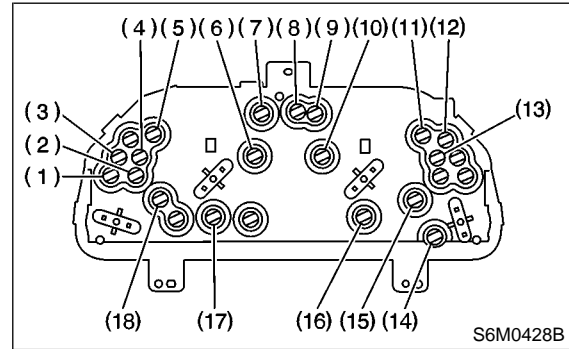


- 5) Disconnect connector from top of combination meter.
- 6) Install in the reverse order of removal.

CAUTION:

When installing the combination meter, be sure to connect the connectors to the top of combination meter.

B: BULB REPLACEMENT



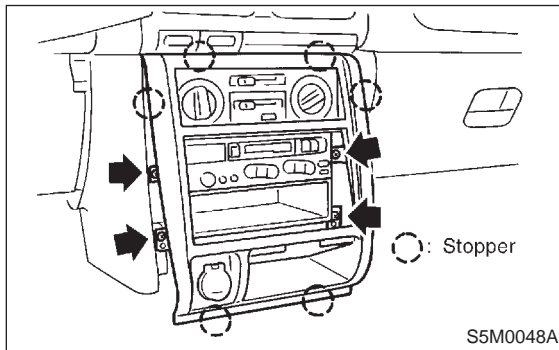
- (1) Check engine
- (2) Oil pressure
- (3) Charge
- (4) AT oil temp.
- (5) Brake
- (6) Tachometer
- (7) Turn RH
- (8) HI-beam
- (9) Turn LH
- (10) Speedometer
- (11) FWD
- (12) Seat belt
- (13) ABS
- (14) Low fuel
- (15) Speedometer and fuel gauge
- (16) Odometer and trip meter
- (17) Outside air temperature display
- (18) Tachometer and temperature gauge

9. Radio

A: REMOVAL AND INSTALLATION

1. RADIO BODY

- 1) Disconnect ground cable from battery.
- 2) Remove console box. <Ref. to 5-4 [W1A0].>
- 3) Remove AT cover (AT model).
- 4) Remove center panel.
- 5) Remove fitting screws, and slightly pull radio out from center console.



- 6) Disconnect electric connectors and antenna feeder cord.
- 7) Install in the reverse order of removal.

2. FRONT SPEAKER

- 1) Remove front door trim speaker grille.
- 2) Remove screws which secure front speaker.
- 3) Remove speaker and disconnect connector.
- 4) Install in the reverse order of removal.

3. REAR SPEAKER

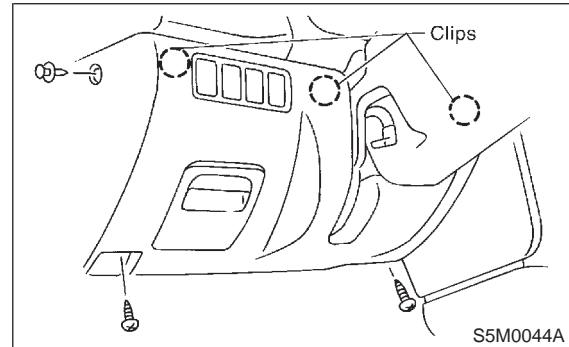
- 1) Remove rear door trim speaker grille.
- 2) Remove screws which secure rear speaker.
- 3) Remove speaker and disconnect connector.
- 4) Install in the reverse order of removal.

10. Keyless Entry System

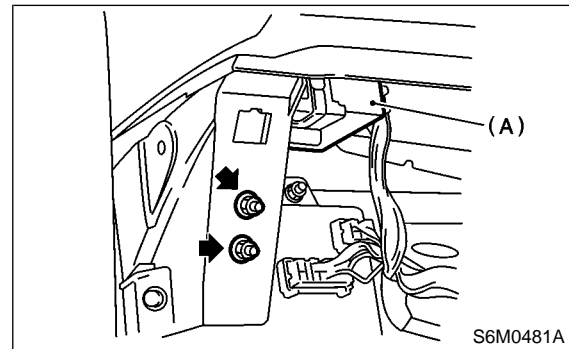
A: REMOVAL AND INSTALLATION

1. KEYLESS ENTRY CONTROL MODULE

- 1) Disconnect battery ground cable.
- 2) Remove instrument panel lower cover and knee panel. <Ref. to 5-4 [W1A0].>



- 3) Remove the two nuts, then remove keyless entry control module (A) while disconnecting connector.



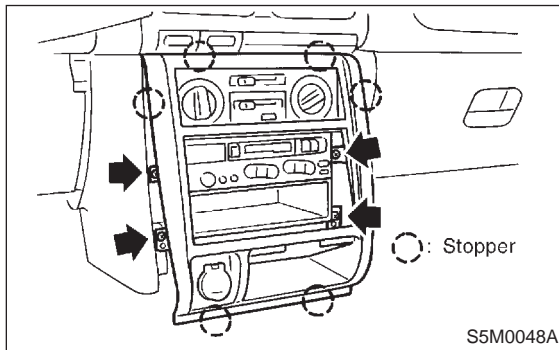
- 4) Install in the reverse order of removal.

9. Radio

A: REMOVAL AND INSTALLATION

1. RADIO BODY

- 1) Disconnect ground cable from battery.
- 2) Remove console box. <Ref. to 5-4 [W1A0].>
- 3) Remove AT cover (AT model).
- 4) Remove center panel.
- 5) Remove fitting screws, and slightly pull radio out from center console.



- 6) Disconnect electric connectors and antenna feeder cord.
- 7) Install in the reverse order of removal.

2. FRONT SPEAKER

- 1) Remove front door trim speaker grille.
- 2) Remove screws which secure front speaker.
- 3) Remove speaker and disconnect connector.
- 4) Install in the reverse order of removal.

3. REAR SPEAKER

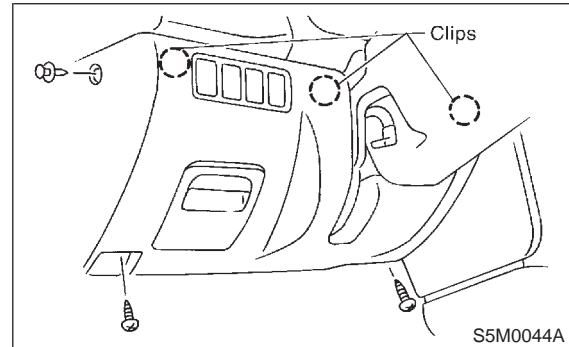
- 1) Remove rear door trim speaker grille.
- 2) Remove screws which secure rear speaker.
- 3) Remove speaker and disconnect connector.
- 4) Install in the reverse order of removal.

10. Keyless Entry System

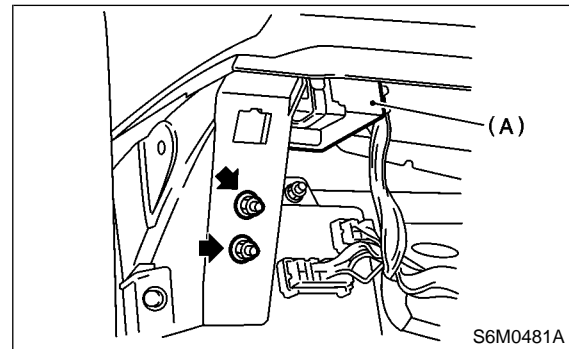
A: REMOVAL AND INSTALLATION

1. KEYLESS ENTRY CONTROL MODULE

- 1) Disconnect battery ground cable.
- 2) Remove instrument panel lower cover and knee panel. <Ref. to 5-4 [W1A0].>



- 3) Remove the two nuts, then remove keyless entry control module (A) while disconnecting connector.

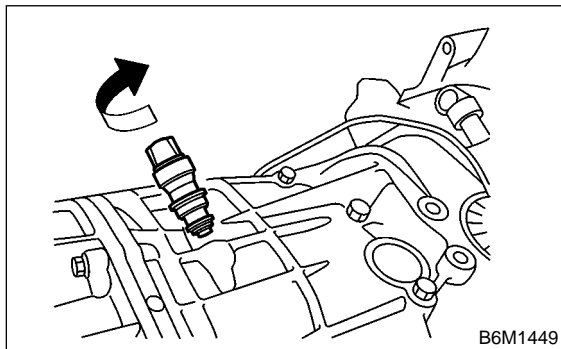


- 4) Install in the reverse order of removal.

11. Vehicle Speed Sensor (For MT Vehicle)

A: REMOVAL

- 1) Disconnect ground cable from battery.
- 2) Lift-up the vehicle.
- 3) Remove front and center exhaust pipes. <Ref. to 2-9 [W1A0].>
- 4) Disconnect connector from vehicle speed sensor.
- 5) Turn and remove vehicle speed sensor.



B: INSTALLATION

NOTE:

- Discard vehicle speed sensor and after removal, replace with a new one.
- Ensure sensor mounting hole is clean and free of foreign matter.
- Align tip end of key with key groove on end of speedometer shaft during installation.

- 1) Hand tighten vehicle speed sensor.
- 2) Tighten vehicle speed sensor using suitable tool.

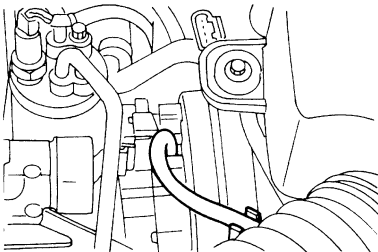
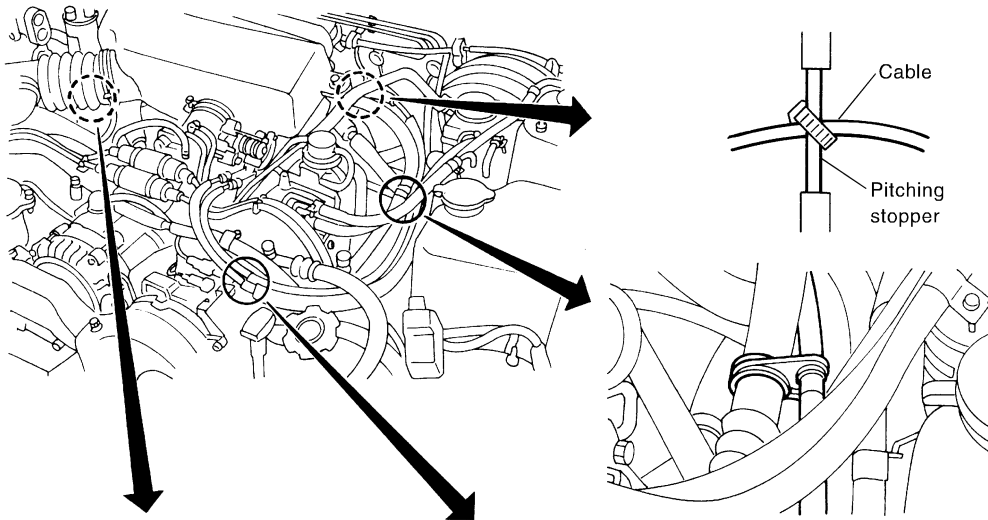
Tightening torque:

$5.9 \pm 0.5 \text{ N}\cdot\text{m}$ ($0.6 \pm 0.05 \text{ kg}\cdot\text{m}$, $4.3 \pm 0.4 \text{ ft}\cdot\text{lb}$)

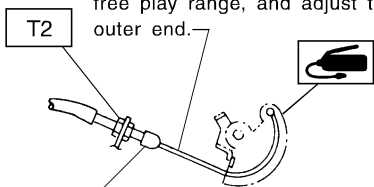
- 3) Connect connector to vehicle speed sensor.
- 4) Install front and center exhaust pipes. <Ref. to 2-9 [W1B0].>

12. Cruise Control

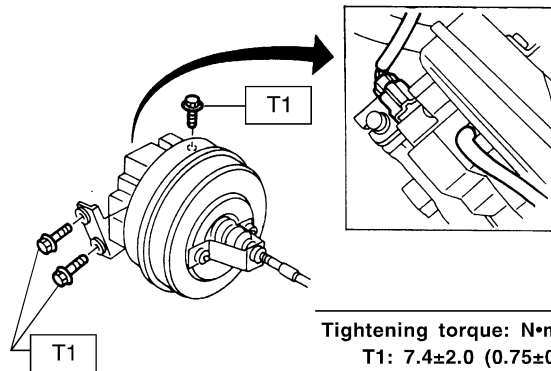
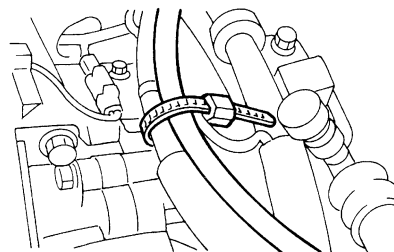
A: ADJUSTMENT



Adjust so that cable deflects 1 – 8 mm (0.04 – 0.31 in) within the specified throttle link free play range, and adjust the outer end.



Cover must be inserted securely, until top of cable touches cover stopper.

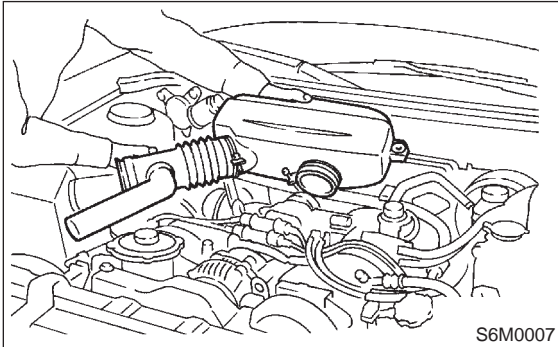


Tightening torque: N•m (kg-m, ft-lb)
T1: 7.4±2.0 (0.75±0.2, 5.4±1.4)
T2: 13±3 (1.3±0.3, 9.4±2.2)

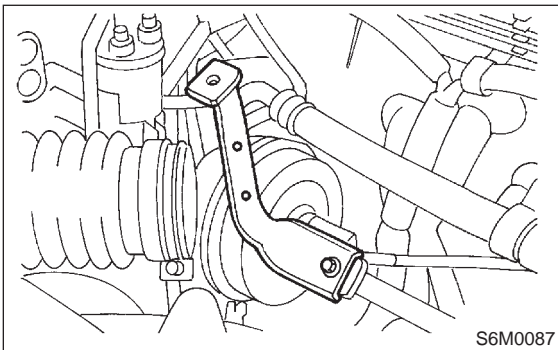
B: REMOVAL AND INSTALLATION

1. ACTUATOR

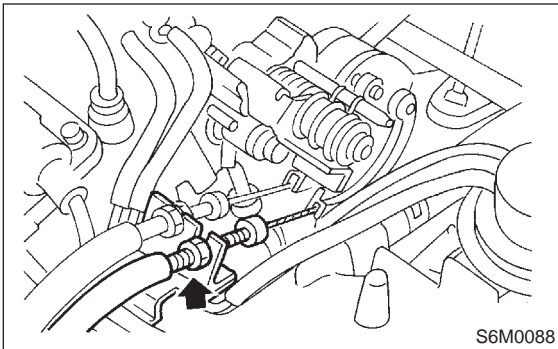
- 1) Disconnect ground cable from battery.
- 2) Remove air intake chamber.



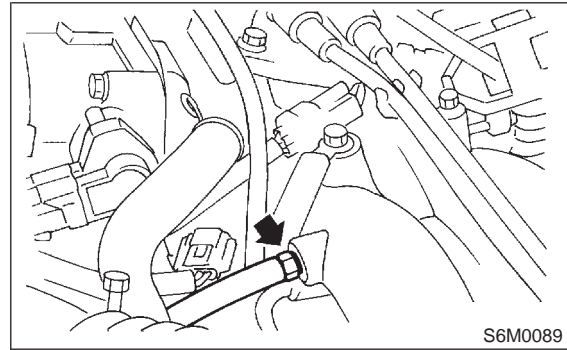
- 3) Remove air intake chamber stay.
- 4) Remove clip bands from cruise control cable.



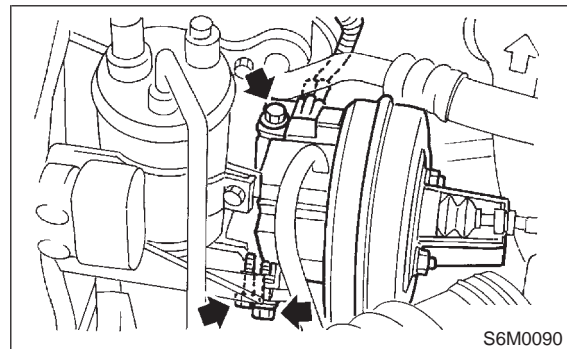
- 5) Remove cruise control cable end from throttle cam.



- 6) Disconnect cruise control vacuum hose from intake manifold.



- 7) Remove actuator attaching bolts.
- 8) Disconnect connector from actuator, then remove the actuator.



- 9) Install in the reverse order of removal.

Tightening torque:

$7.4 \pm 2.0 \text{ N}\cdot\text{m}$ ($0.75 \pm 0.2 \text{ kg}\cdot\text{m}$, $5.4 \pm 1.4 \text{ ft}\cdot\text{lb}$)

CAUTION:

When inserting vacuum hose to intake manifold, apply sealant to the fitting hose.

Fluid packing:

THREE BOND 1105 or equivalent

CAUTION:

- Be careful not to apply excessive load to the wire cable when adjusting and/or installing; otherwise, the actuator may be deformed or damaged.

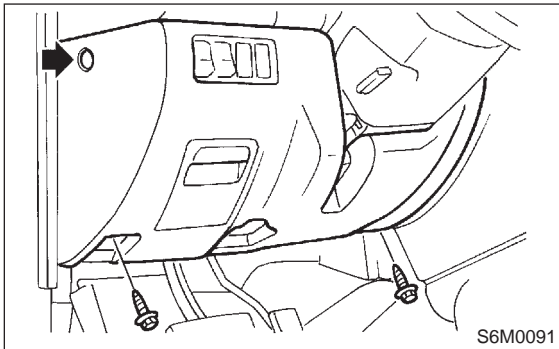
- Do not bend cable sharply with a radius less than 100 mm (3.94 in); otherwise, the cable may bend permanently, resulting in poor performance.

- When installing the cable, be careful not to sharply bend or pinch the inner cable; otherwise, the cable may break.

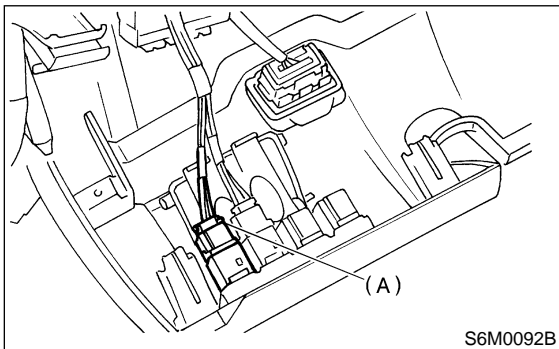
2. CRUISE CONTROL MAIN SWITCH

- 1) Disconnect ground cable from battery.

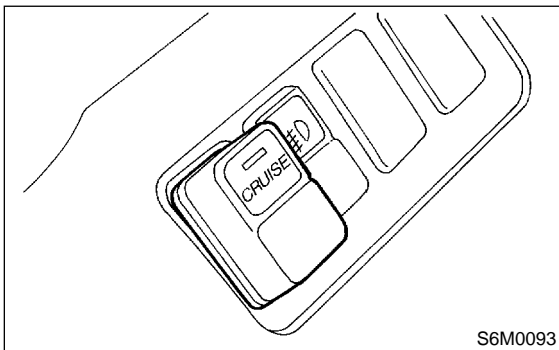
- 2) Remove screws and clip from instrument panel lower cover.
- 3) Remove panel lower cover.



- 4) Disconnect connector from cruise control main switch (A).



- 5) Remove main switch by pushing it outward.



- 6) Install in the reverse order of removal.

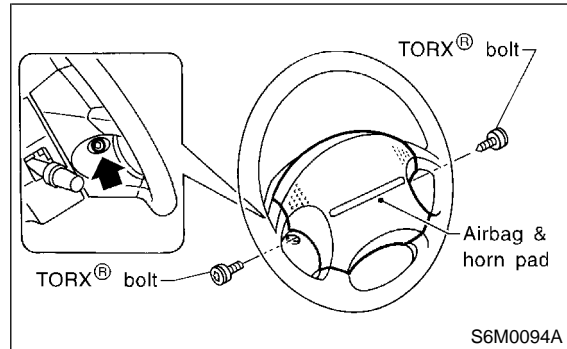
3. CRUISE CONTROL COMMAND SWITCH

CAUTION:

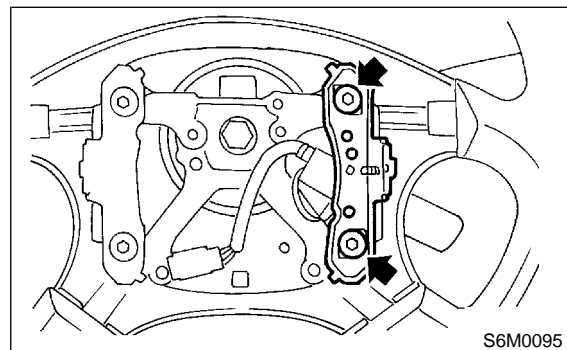
Before starting operation carefully read the notes given in Chapter 5-5 for proper handling of the airbag module. <Ref. to 5-5 [W3A0].>

- 1) Disconnect ground cable from battery.
- 2) Set front wheels in straight ahead position.
- 3) Turn ignition switch OFF.
- 4) Disconnect battery ground cable from battery and wait for at least 20 seconds before starting work.

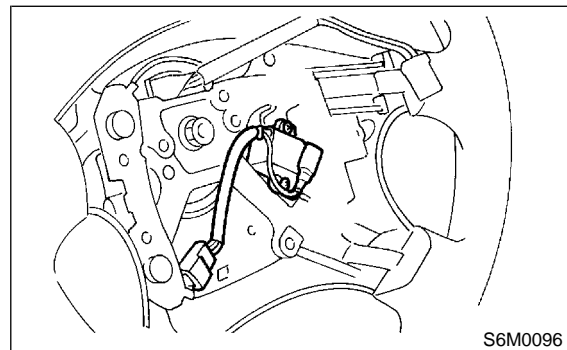
- 5) Using TORX® BIT T30 (Tamper resistant type), remove the two TORX® bolts which secure driver's airbag module.



- 6) Disconnect airbag module connector on back of airbag module.
- 7) Remove horn switch from steering wheel as shown.



- 8) Disconnect horn and cruise control command switch connector, then remove cruise control command switch.

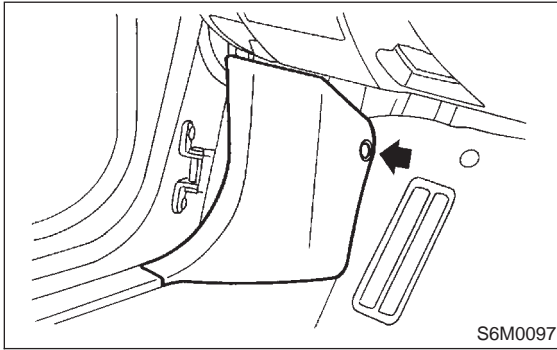


- 9) Install in the reverse order of removal.

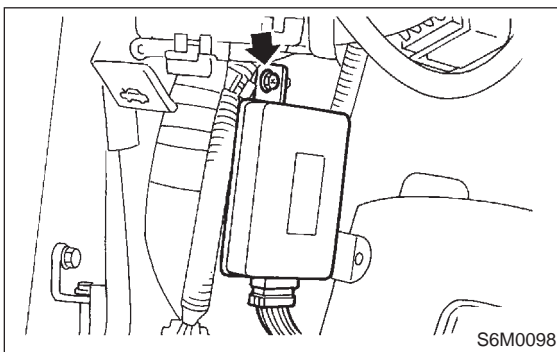
4. CRUISE CONTROL MODULE

- 1) Disconnect ground cable from battery.

- 2) Remove front pillar lower trim.



- 3) Disconnect connector from cruise control module.
- 4) Remove bolt, then remove cruise control module.



- 5) Install in the reverse order of removal.

5. STOP AND BRAKE SWITCH

- 1) Disconnect ground cable from battery.
- 2) Disconnect connector from switch, then remove the switch. <Ref. to 4-5 [C100].>
- 3) Install in the reverse order of removal.

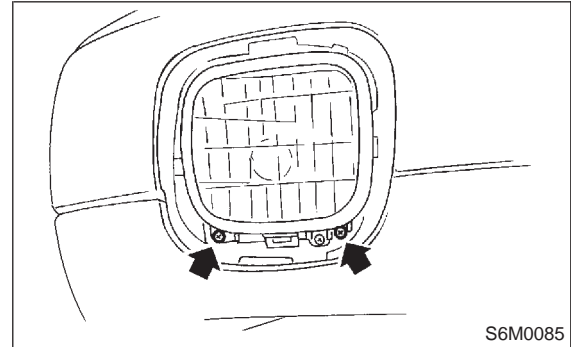
6. CLUTCH SWITCH

- 1) Disconnect ground cable from battery.
- 2) Disconnect connector from switch, then remove the switch. <Ref. to 4-5 [C100].>
- 3) Install in the reverse order of removal.

13. Front Fog Light

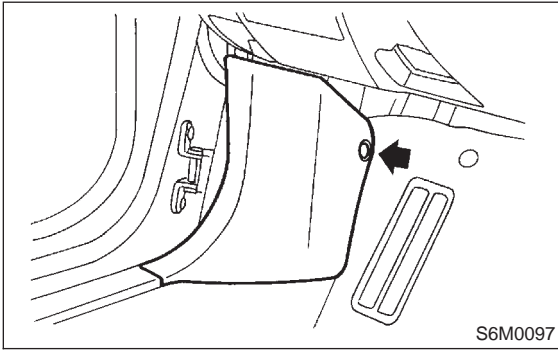
A: REMOVAL AND INSTALLATION

- 1) Disconnect ground cable from battery.
- 2) Remove the two screws, then draw out the front fog light from front bumper.

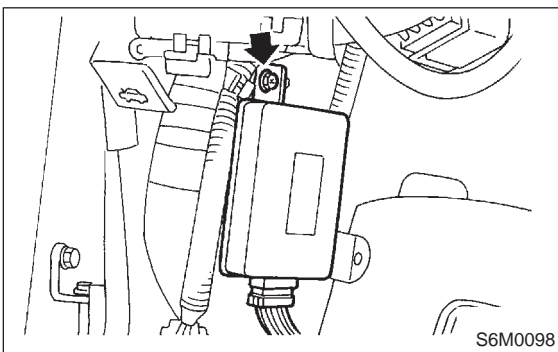


- 3) Disconnect the connector.
- 4) Install in the reverse order of removal.

- 2) Remove front pillar lower trim.



- 3) Disconnect connector from cruise control module.
- 4) Remove bolt, then remove cruise control module.



- 5) Install in the reverse order of removal.

5. STOP AND BRAKE SWITCH

- 1) Disconnect ground cable from battery.
- 2) Disconnect connector from switch, then remove the switch. <Ref. to 4-5 [C100].>
- 3) Install in the reverse order of removal.

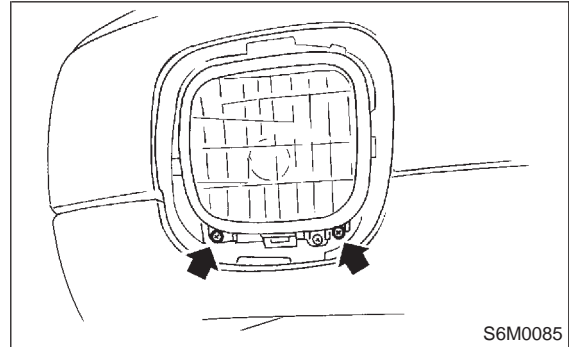
6. CLUTCH SWITCH

- 1) Disconnect ground cable from battery.
- 2) Disconnect connector from switch, then remove the switch. <Ref. to 4-5 [C100].>
- 3) Install in the reverse order of removal.

13. Front Fog Light

A: REMOVAL AND INSTALLATION

- 1) Disconnect ground cable from battery.
- 2) Remove the two screws, then draw out the front fog light from front bumper.



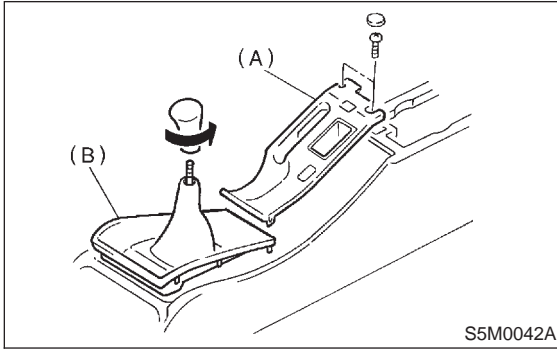
- 3) Disconnect the connector.
- 4) Install in the reverse order of removal.

14. Security System

A: REMOVAL AND INSTALLATION

1. SECURITY CONTROL MODULE

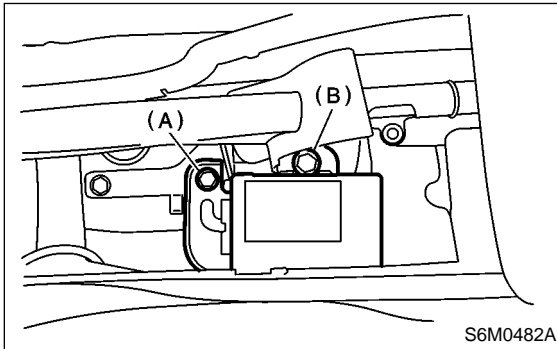
- 1) Disconnect battery ground cable.
- 2) Remove shift knob (MT model).
- 3) Remove console cover (A) and front cover (B) while disconnecting connector.



- 4) Disconnect connector from security control module.
- 5) Remove bolt (A) and loosen bolt (B).

NOTE:

Loosen bolt (B) without completely removing it.



- 6) Remove security control module.
- 7) Install in the reverse order of removal.

NOTE:

To install the security control module, tighten bolts securely so that the bolts do not come loose.

B: INSPECTION

1. IMPACT SENSOR

Perform impact sensitivity test.
<Ref. to 6-2 [T5F1].>

MEMO: