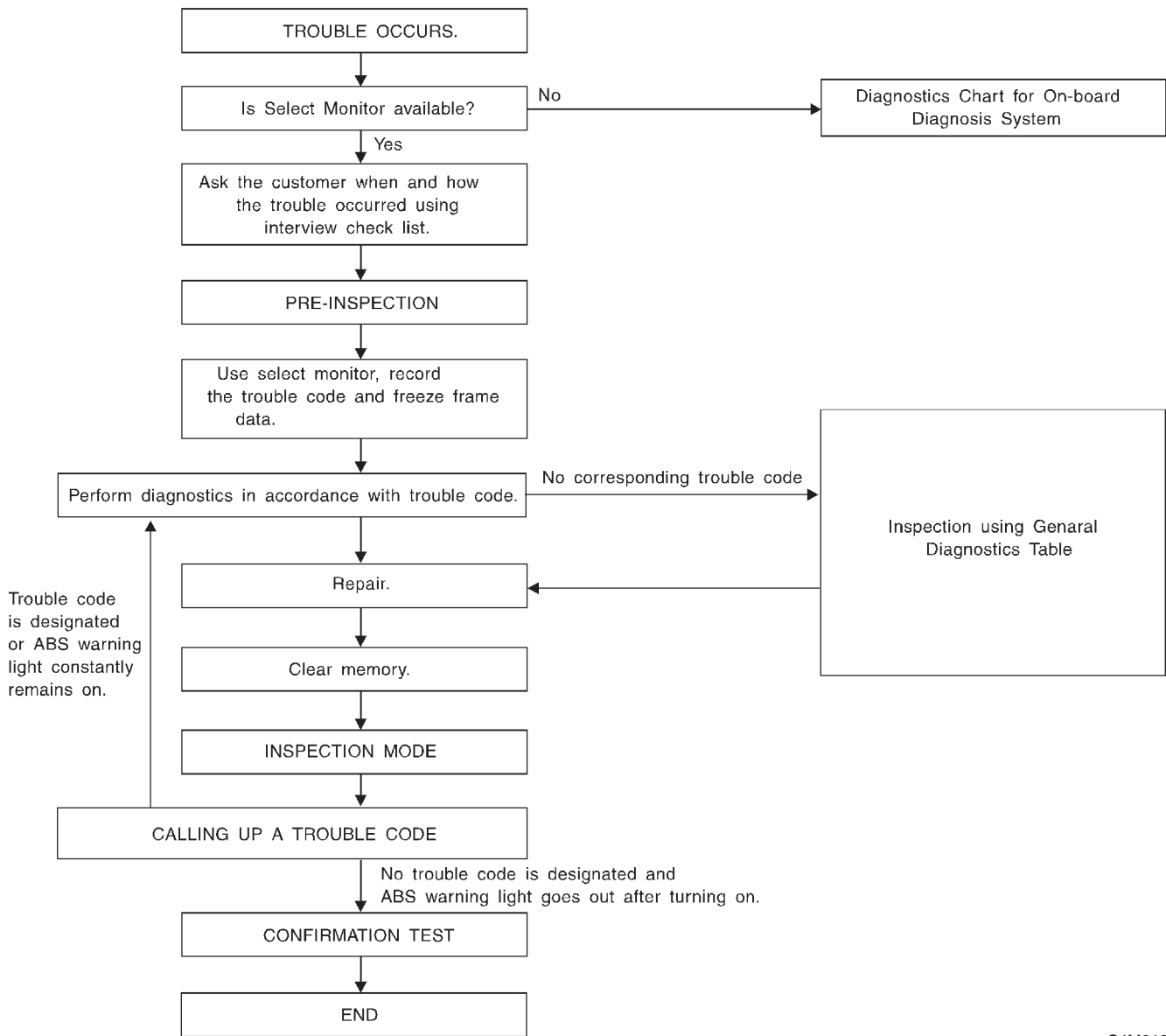


# 10. Diagnostics Chart with Select Monitor

## A: BASIC DIAGNOSTIC CHART



S4M0180B

**CAUTION:**

Remove foreign matter (dust, water, etc.) from the ABSCM&H/U connector during removal and installation.

**NOTE:**

To check harness for broken wires or short circuits, shake it while holding it or the connector.

**B: LIST OF DIAGNOSTIC TROUBLE CODE**

Code	Display screen	Contents of diagnosis	Ref. to
—	Communication for initializing impossible	Select monitor communication failure	<Ref. to 4-4 [T10C0].>
—	No trouble code	Although no trouble code appears on the select monitor display, the ABS warning light remains on.	<Ref. to 4-4 [T10D0].>
21	Open or short circuit in front right ABS sensor circuit	Open or short circuit in front right ABS sensor circuit	<Ref. to 4-4 [T10E0].>
22	Front right ABS sensor abnormal signal	Front right ABS sensor abnormal signal	<Ref. to 4-4 [T10I0].>
23	Open or short circuit in front left ABS sensor circuit	Open or short circuit in front left ABS sensor circuit	<Ref. to 4-4 [T10F0].>
24	Front left ABS sensor abnormal signal	Front left ABS sensor abnormal signal	<Ref. to 4-4 [T10J0].>
25	Open or short circuit in rear right ABS sensor circuit	Open or short circuit in rear right ABS sensor circuit	<Ref. to 4-4 [T10K0].>
26	Rear right ABS sensor abnormal signal	Rear right ABS sensor abnormal signal	<Ref. to 4-4 [T10C0].>
27	Open or short circuit in rear left ABS sensor circuit	Open or short circuit in rear left ABS sensor circuit	<Ref. to 4-4 [T10H0].>
28	Rear left ABS sensor abnormal signal	Rear left ABS sensor abnormal signal	<Ref. to 4-4 [T10L0].>
29	Abnormal ABS sensor signal on any one of four sensor	Abnormal ABS sensor signal on any one of four	<Ref. to 4-4 [T10M0].>
31	Front right inlet valve malfunction	Front right inlet valve malfunction	<Ref. to 4-4 [T10N0].>
32	Front right outlet valve malfunction	Front right outlet valve malfunction	<Ref. to 4-4 [T10R0].>
33	Front left inlet valve malfunction	Front left inlet valve malfunction	<Ref. to 4-4 [T10O0].>
34	Front left outlet valve malfunction	Front left outlet valve malfunction	<Ref. to 4-4 [T10S0].>
35	Rear right inlet valve malfunction	Rear right inlet valve malfunction	<Ref. to 4-4 [T10P0].>
36	Rear right outlet valve malfunction	Rear right outlet valve malfunction	<Ref. to 4-4 [T10T0].>
37	Rear left inlet valve malfunction	Rear left inlet valve malfunction	<Ref. to 4-4 [T10Q0].>
38	Rear left outlet valve malfunction	Rear left outlet valve malfunction	<Ref. to 4-4 [T10U0].>
41	ABS control module malfunction	ABS control module and hydraulic control unit malfunction	<Ref. to 4-4 [T10V0].>
42	Power supply voltage too low	Power supply voltage too low	<Ref. to 4-4 [T10W0].>
42	Power supply voltage too high	Power supply voltage too high	<Ref. to 4-4 [T10X0].>
44	ABS-AT control (Non Controlled)	ABS-AT control (Non Controlled)	<Ref. to 4-4 [T10Y0].>
44	ABS-AT control (Controlled)	ABS-AT control (Controlled)	<Ref. to 4-4 [T10Z0].>
51	Valve relay malfunction	Valve relay malfunction	<Ref. to 4-4 [T10AA0].>
51	Valve relay ON failure	Valve relay ON failure	<Ref. to 4-4 [T10AB0].>
52	Open circuit in motor relay circuit	Open circuit in motor relay circuit	<Ref. to 4-4 [T10AC0].>
52	Motor relay ON failure	Motor relay ON failure	<Ref. to 4-4 [T10AD0].>
52	Motor malfunction	Motor malfunction	<Ref. to 4-4 [T10AE0].>
54	Stop light switch signal circuit malfunction	Stop light switch signal circuit malfunction	<Ref. to 4-4 [T10AF0].>
56	Open or short circuit in G sensor circuit	Open or short circuit in G sensor circuit	<Ref. to 4-4 [T10AG0].>
56	Battery short in G sensor circuit	Battery short in G sensor circuit	<Ref. to 4-4 [T10AH0].>
56	Abnormal G sensor high $\mu$ output	Abnormal G sensor high $\mu$ output	<Ref. to 4-4 [T10AI0].>
56	Detection of G sensor stick	Detection of G sensor stick	<Ref. to 4-4 [T10AJ0].>

**NOTE:**

High  $\mu$  means high friction coefficient against road surface.

**C: COMMUNICATION FOR INITIALIZING IMPOSSIBLE  
— SELECT MONITOR COMMUNICATION FAILURE —**

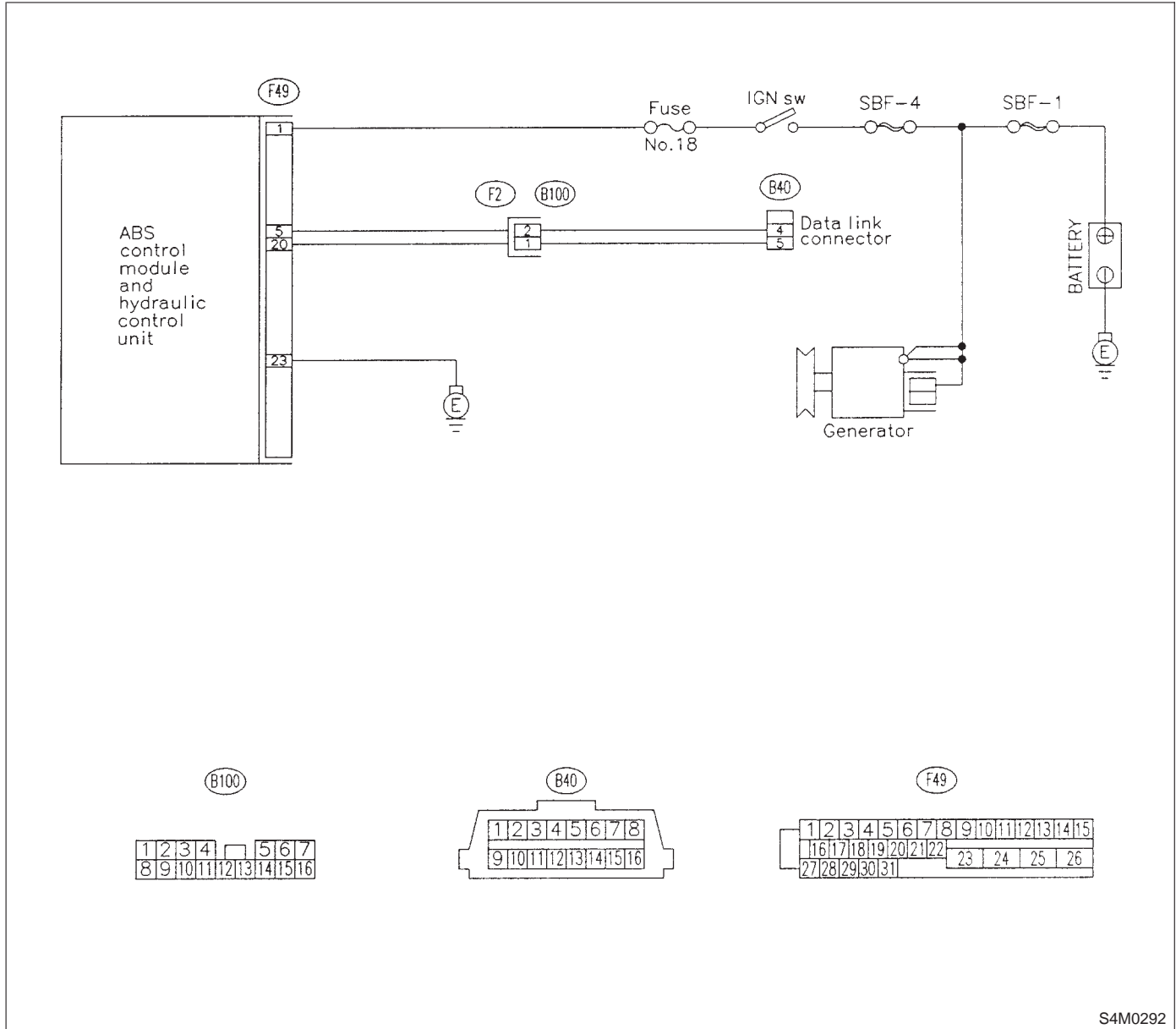
**DIAGNOSIS:**

- Faulty harness connector

**TROUBLE SYMPTOM:**

- ABS warning light remains on.

**WIRING DIAGRAM:**



S4M0292

**10C1 : CHECK IGNITION SWITCH.**

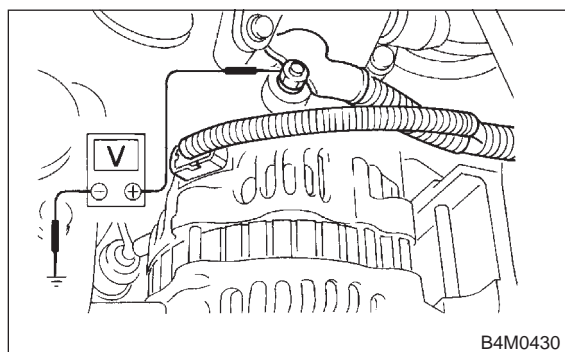
- CHECK** : *Is ignition switch ON?*
- YES** : Go to step **10C2**.
- NO** : Turn ignition switch to ON, and select brake control mode using the select monitor.

**10C2 : CHECK GENERATOR.**

- 1) Start the engine.
- 2) Idle the engine.
- 3) Measure voltage between generator and chassis ground.

**Terminals**

**Generator B terminal (+) — Chassis ground (-):**



- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step **10C3**.
- NO** : Repair generator. <Ref. to 6-1 [W2A0].>

**10C3 : CHECK BATTERY TERMINAL.**

Turn ignition switch to OFF.

- CHECK** : *Is there poor contact at battery terminal?*
- YES** : Repair battery terminal.
- NO** : Go to step **10C4**.

**10C4 : CHECK COMMUNICATION OF SELECT MONITOR.**

Using the select monitor, check whether communication to other system (such as engine, AT, etc.) can be executed normally.

- CHECK** : *Are the name and year of the system displayed on the select monitor?*
- YES** : Go to step **10C5**.
- NO** : Repair select monitor communication cable and connector.

**10C5 : CHECK INSTALLATION OF ABSCM&H/U CONNECTOR.**

Turn ignition switch to OFF.

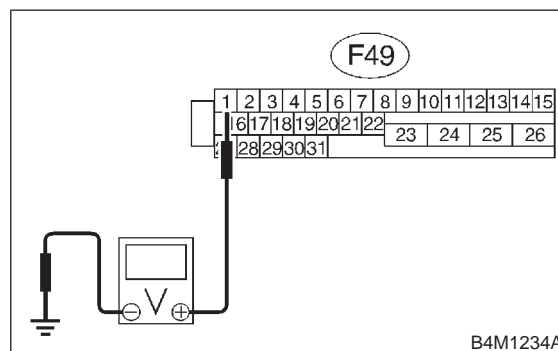
- CHECK** : *Is ABSCM&H/U connector inserted into ABSCM&H/U until the clamp locks onto it?*
- YES** : Go to step **10C6**.
- NO** : Insert ABSCM&H/U connector into ABSCM&H/U until the clamp locks onto it.

**10C6 : CHECK POWER SUPPLY OF ABSCM&H/U.**

- 1) Disconnect connector from ABSCM&H/U.
- 2) Start engine.
- 3) Idle the engine.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 1 (+) — Chassis ground (-):**



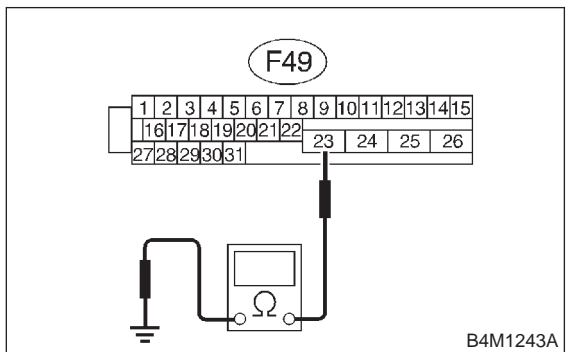
- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step **10C7**.
- NO** : Repair ABSCM&H/U power supply circuit.

**10C7 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 23 — Chassis ground:**



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Repair harness/connector between ABSCM&H/U and select monitor.
- NO** : Go to step **10C8**.

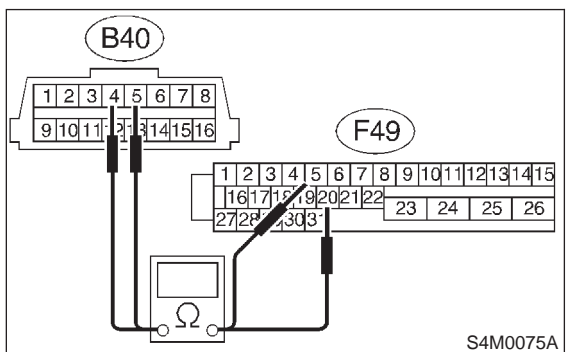
**10C8 : CHECK HARNESS/CONNECTOR BETWEEN ABSCM&H/U AND DATA LINK CONNECTOR.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and data link connector.

**Connector & terminal**

**(F49) No. 20 — (B40) No. 5:**

**(F49) No. 5 — (B40) No. 4:**



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Repair harness and connector between ABSCM&H/U and data link connector.
- NO** : Go to step **10C9**.

**10C9 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connectors between ABSCM&H/U and data link connector? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**MEMO:**

**D: NO TROUBLE CODE**

**— ALTHOUGH NO TROUBLE CODE APPEARS ON THE SELECT MONITOR DISPLAY, THE ABS WARNING LIGHT REMAINS ON. —**

**DIAGNOSIS:**

- ABS warning light circuit is shorted.

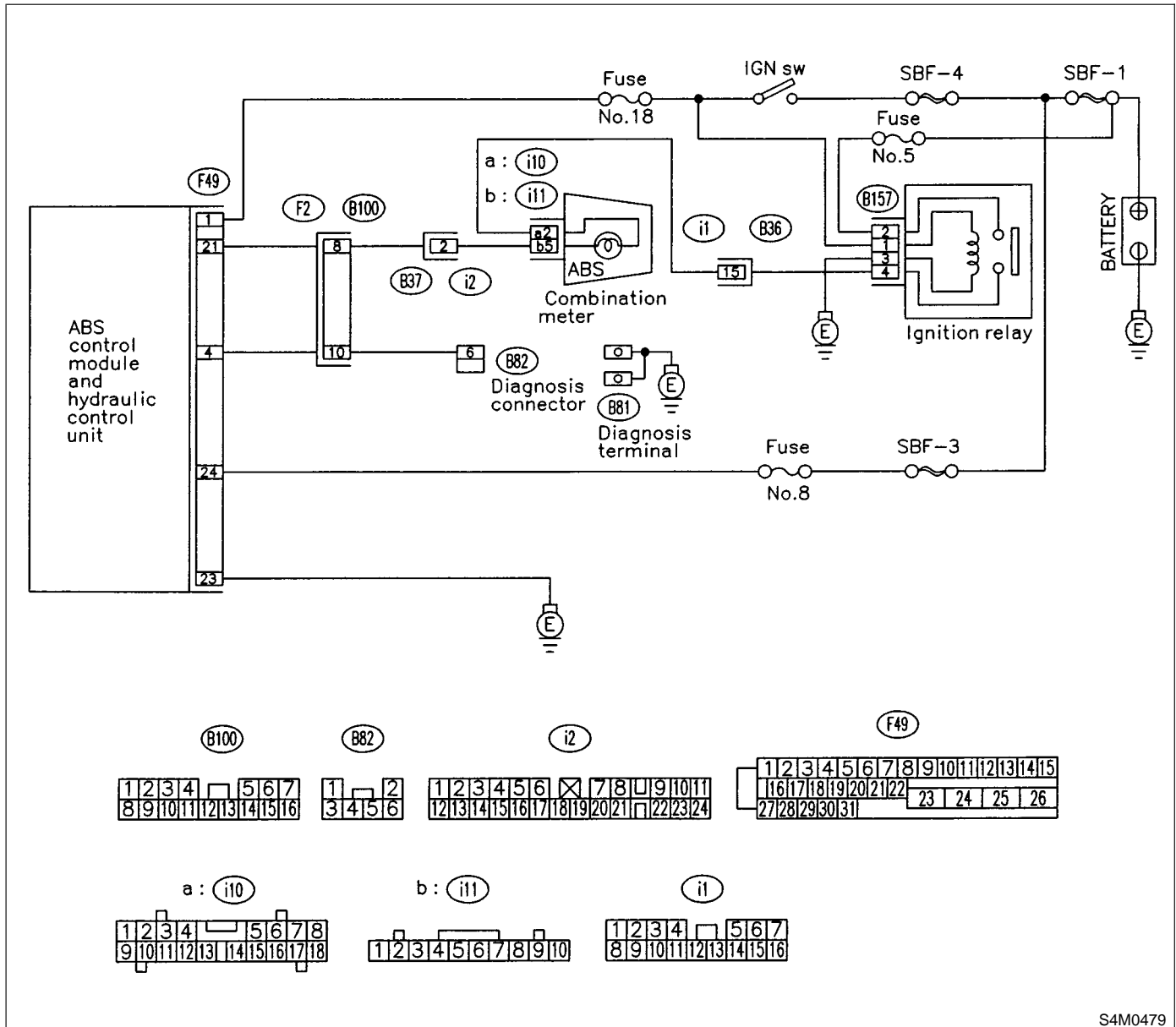
**TROUBLE SYMPTOM:**

- ABS warning light remains on.
- NO TROUBLE CODE displayed on the select monitor.

**NOTE:**

When the ABS warning light is OFF and "NO TROUBLE CODE" is displayed on the select monitor, the system is in normal condition.

**WIRING DIAGRAM:**



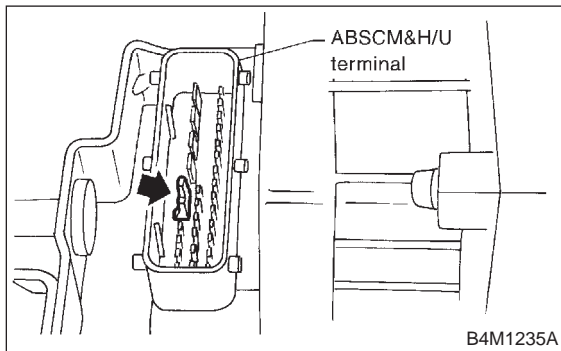
**10D1 : CHECK WIRING HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector (F2) from connector (B100).
- 3) Turn ignition switch to ON.

- CHECK** : Does the ABS warning light remain off?
- YES** : Go to step 10D2.
- NO** : Repair front wiring harness.

**10D2 : CHECK PROJECTION AT ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Check for broken projection at the ABSCM&H/U terminal.

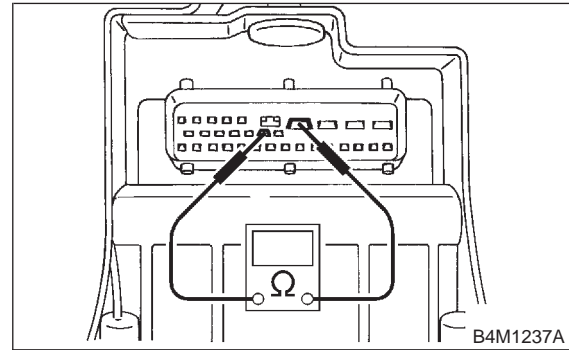


- CHECK** : Are the projection broken?
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step 10D3.

**10D3 : CHECK ABSCM&H/U.**

Measure resistance between ABSCM&H/U terminals.

**Terminals**  
No. 21 — No. 23:

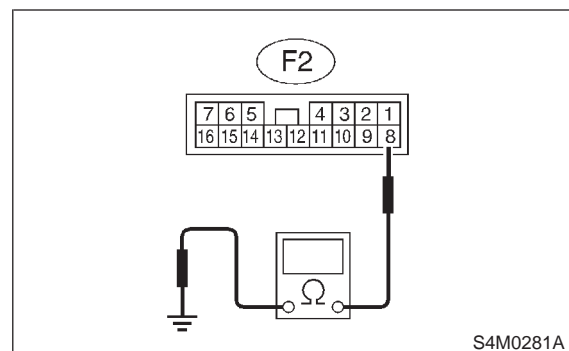


- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 10D4.
- NO** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**10D4 : CHECK WIRING HARNESS.**

Measure resistance between connector (F2) and chassis ground.

**Connector & terminal**  
(F2) No. 8 — Chassis ground:

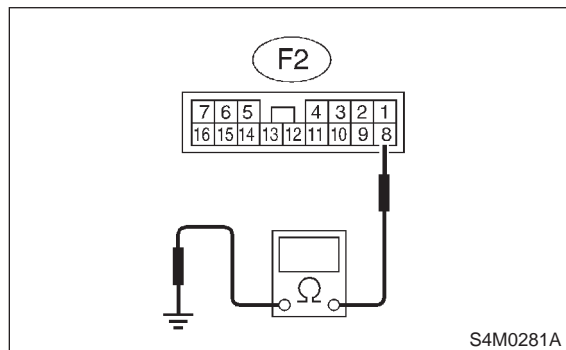


- CHECK** : Is the resistance less than 0.5 Ω?
- YES** : Go to step 10D5.
- NO** : Repair harness.



**10D5 : CHECK WIRING HARNESS.**

- 1) Connect connector to ABSCM&H/U.
- 2) Measure resistance between connector (F2) and chassis ground.

**Connector & terminal****(F2) No. 8 — Chassis ground:**

- CHECK** : *Is the resistance more than 1 MΩ?*
- YES** : Go to step **10D6**.
- NO** : Repair harness.

**10D6 : CHECK POOR CONTACT IN ABSCM&H/U CONNECTOR.**

- CHECK** : *Is there poor contact in ABSCM&H/U connector? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**MEMO:**

**E: TROUBLE CODE 21 OPEN OR SHORT CIRCUIT IN FRONT RIGHT ABS SENSOR CIRCUIT**

**F: TROUBLE CODE 23 OPEN OR SHORT CIRCUIT IN FRONT LEFT ABS SENSOR CIRCUIT**

**G: TROUBLE CODE 25 OPEN OR SHORT CIRCUIT IN REAR RIGHT ABS SENSOR CIRCUIT**

**H: TROUBLE CODE 27 OPEN OR SHORT CIRCUIT IN REAR LEFT ABS SENSOR CIRCUIT**

**— ABNORMAL ABS SENSOR (OPEN OR SHORT CIRCUIT IN ABS SENSOR CIRCUIT) —**

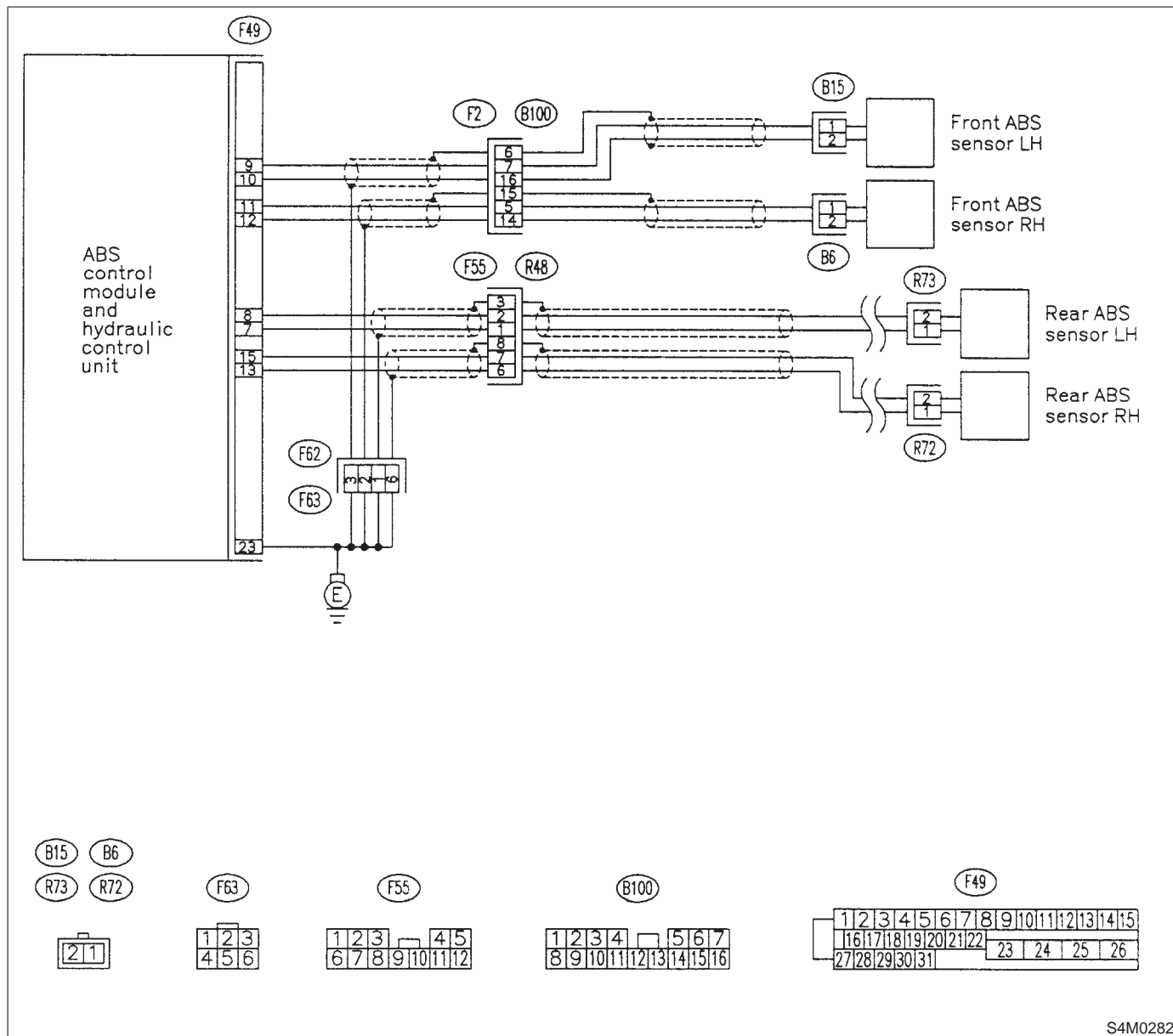
**DIAGNOSIS:**

- Faulty ABS sensor (Broken wire, input voltage too high)
- Faulty harness connector

**TROUBLE SYMPTOM:**

- ABS does not operate.

WIRING DIAGRAM:



S4M0282

**10H1 : CHECK OUTPUT OF ABS SENSOR USING SELECT MONITOR.**

- 1) Select "Current data display & Save" on the select monitor.
- 2) Read the ABS sensor output corresponding to the faulty system in the select monitor data display mode.

**CHECK** : Does the speed indicated on the display change in response to the speedometer reading during acceleration/deceleration when the steering wheel is in the straight-ahead position?

**YES** : Go to step 10H2.

**NO** : Go to step 10H10.

**10H2 : CHECK INSTALLATION OF ABS SENSOR.****Tightening torque:**

**32±10 N·m (3.3±1.0 kg·m, 24±7 ft·lb)**

**CHECK** : Are the ABS sensor installation bolts tightened securely?

**YES** : Go to step 10H3.

**NO** : Tighten ABS sensor installation bolts securely.

**10H3 : CHECK TROUBLE CODE.**

**CHECK** : Is the trouble code 21 and/or 23?

**YES** : Go to step 10H5.

**NO** : Go to step 10H4.

**10H4 : CHECK INSTALLATION OF REAR TONE WHEEL.****Tightening torque:**

**13±3 N·m (1.3±0.3 kg·m, 9±2.2 ft·lb)**

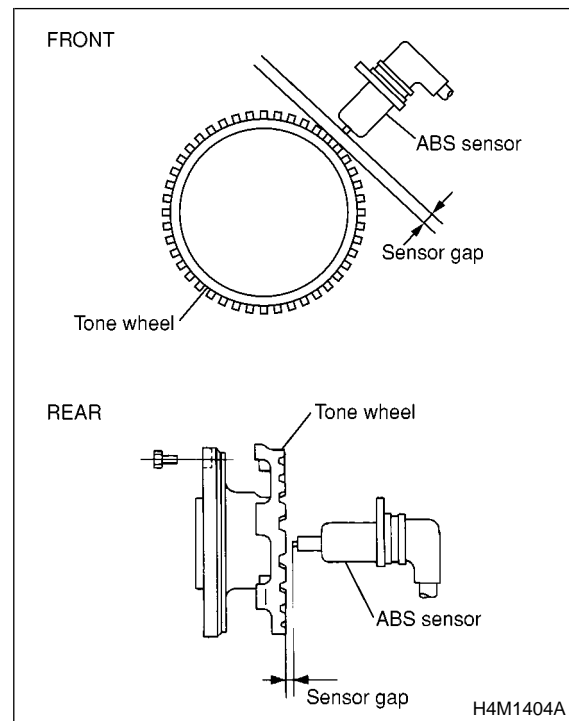
**CHECK** : Are the rear tone wheel installation bolts tightened securely?

**YES** : Go to step 10H5.

**NO** : Tighten rear tone wheel installation bolts securely.

**10H5 : CHECK ABS SENSOR GAP.**

Measure tone wheel-to-pole piece gap over entire perimeter of the wheel. <Ref. to 4-4 [W13C0].>



	Front wheel	Rear wheel
Specifications	0.3 — 0.8 mm (0.012 — 0.031 in)	0.7 — 1.2 mm (0.028 — 0.047 in)

**CHECK** : Is the gap within the specifications?

**YES** : Go to step 10H6.

**NO** : Adjust the gap.

**NOTE:**

Adjust the gap using spacers (Part No. 26755AA000). If spacers cannot correct the gap, replace worn sensor or worn tone wheel.

**10H6 : CHECK HUB RUNOUT.**

Measure hub runout.

**CHECK** : Is the runout less than 0.05 mm (0.0020 in)?

**YES** : Go to step 10H7.

**NO** : Repair hub.

**10H7 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

**CHECK** : *Is there poor contact in connectors between ABSCM&H/U and ABS sensor? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step 10H8.

**10H8 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step 10H9.

**10H9 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

NOTE:

Check harness and connectors between ABSCM&H/U and ABS sensor.

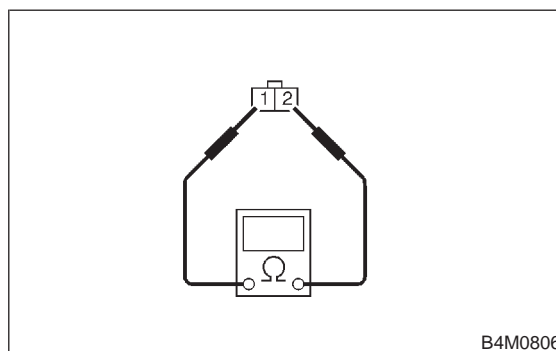
**10H10 : CHECK FRONT ABS SENSOR.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from front ABS sensor.
- 3) Measure resistance of front ABS sensor connector terminals.

**Terminals**

**RH No. 1 — No. 2:**

**LH No. 1 — No. 2:**



**CHECK** : *Is the resistance between 1.0 and 1.5 kΩ?*

**YES** : Go to step 10H11.

**NO** : Replace front ABS sensor.

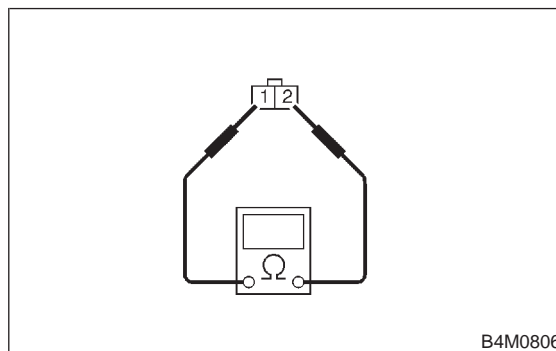
**10H11 : CHECK REAR ABS SENSOR.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from rear ABS sensor.
- 3) Measure resistance of rear ABS sensor connector terminals.

**Terminals**

**RH No. 1 — No. 2:**

**LH No. 1 — No. 2:**



**CHECK** : *Is the resistance between 0.8 and 1.2 kΩ?*

**YES** : Go to step 10H12.

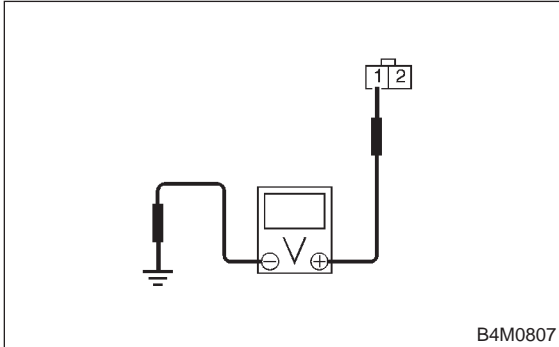
**NO** : Replace rear ABS sensor.

**10H12 : CHECK BATTERY SHORT OF ABS SENSOR.**

- 1) Disconnect connector from ABSCM&H/U.
- 2) Measure voltage between ABS sensor and chassis ground.

**Terminals**

- Front RH No. 1 (+) — Chassis ground (-):
- Front LH No. 1 (+) — Chassis ground (-):
- Rear RH No. 1 (+) — Chassis ground (-):
- Rear LH No. 1 (+) — Chassis ground (-):



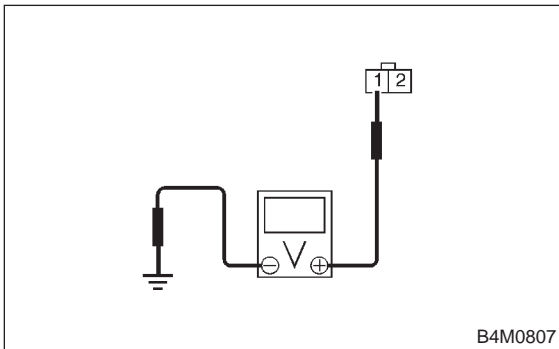
- CHECK** : Is the voltage less than 1 V?
- YES** : Go to step 10H13.
- NO** : Replace ABS sensor.

**10H13 : CHECK BATTERY SHORT OF ABS SENSOR.**

- 1) Turn ignition switch to ON.
- 2) Measure voltage between ABS sensor and chassis ground.

**Terminals**

- Front RH No. 1 (+) — Chassis ground (-):
- Front LH No. 1 (+) — Chassis ground (-):
- Rear RH No. 1 (+) — Chassis ground (-):
- Rear LH No. 1 (+) — Chassis ground (-):



- CHECK** : Is the voltage less than 1 V?
- YES** : Go to step 10H14.
- NO** : Replace ABS sensor.

**10H14 : CHECK TROUBLE CODE.**

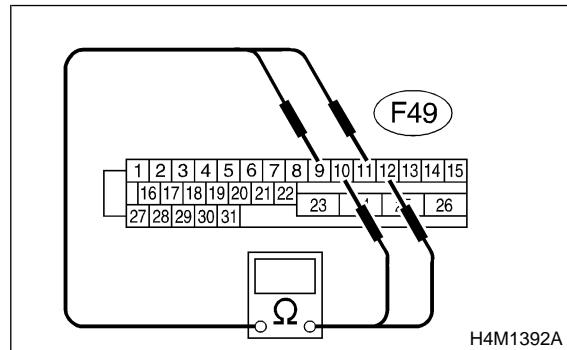
- CHECK** : Is the trouble code 21 and/or 23?
- YES** : Go to step 10H15.
- NO** : Go to step 10H16.

**10H15 : CHECK HARNESS/CONNECTOR BETWEEN ABSCM&H/U AND ABS SENSOR.**

- 1) Turn ignition switch to OFF.
- 2) Connect connector to ABS sensor.
- 3) Measure resistance between ABSCM&H/U connector terminals.

**Connector & terminal**

- Trouble code 21 / (F49) No. 11 — No. 12:
- Trouble code 23 / (F49) No. 9 — No. 10:



- CHECK** : Is the resistance between 1.0 and 1.5 kΩ?
- YES** : Go to step 10H17.
- NO** : Repair harness/connector between ABSCM&H/U and ABS sensor.

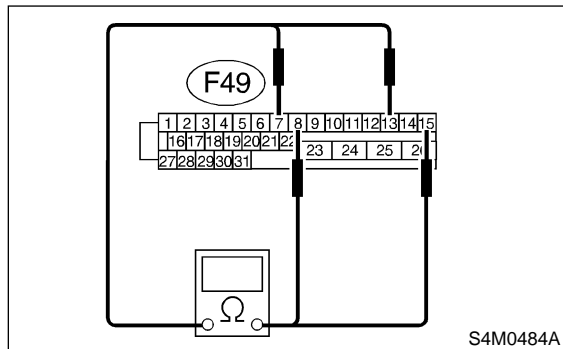
**10H16 : CHECK HARNESS/CONNECTOR BETWEEN ABSCM&H/U AND ABS SENSOR.**

- 1) Turn ignition switch to OFF.
- 2) Connect connector to ABS sensor.
- 3) Measure resistance between ABSCM&H/U connector terminals.

**Connector & terminal**

**Trouble code 25 / (F49) No. 13 — No. 15:**

**Trouble code 27 / (F49) No. 7 — No. 8:**



- CHECK** : **Is the resistance between 0.8 and 1.2 kΩ?**
- YES** : Go to step 10H17.
- NO** : Repair harness/connector between ABSCM&H/U and ABS sensor.

**10H17 : CHECK BATTERY SHORT OF HARNESS.**

Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**Trouble code 21 / (F49) No. 11 (+) —**

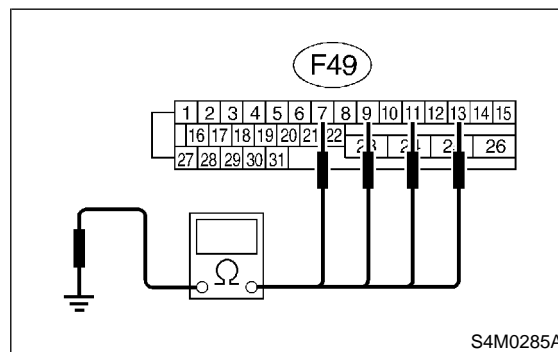
**Chassis ground (-):**

**Trouble code 23 / (F49) No. 9 (+) — Chassis ground (-):**

**Trouble code 25 / (F49) No. 13 (+) —**

**Chassis ground (-):**

**Trouble code 27 / (F49) No. 7 (+) — Chassis ground (-):**



- CHECK** : **Is the voltage less than 1 V?**
- YES** : Go to step 10H18.
- NO** : Repair harness between ABSCM&H/U and ABS sensor.

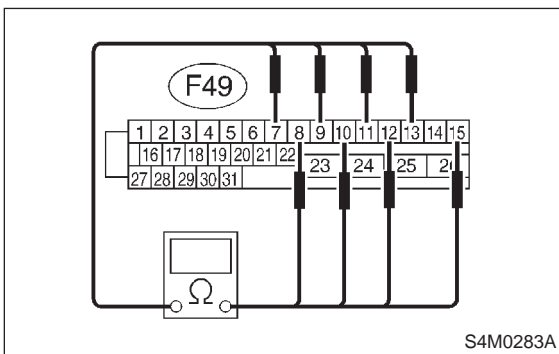


**10H18 : CHECK BATTERY SHORT OF HARNESS.**

- 1) Turn ignition switch to ON.
- 2) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**Trouble code 21 / (F49) No. 11 (+) — Chassis ground (-):**  
**Trouble code 23 / (F49) No. 9 (+) — Chassis ground (-):**  
**Trouble code 25 / (F49) No. 13 (+) — Chassis ground (-):**  
**Trouble code 27 / (F49) No. 7 (+) — Chassis ground (-):**



- CHECK** : *Is the voltage less than 1 V?*
- YES** : Go to step **10H19**.
- NO** : Repair harness between ABSCM&H/U and ABS sensor.

**10H19 : CHECK INSTALLATION OF ABS SENSOR.**

**Tightening torque:**  
**32±10 N·m (3.3±1.0 kg·m, 24±7 ft·lb)**

- CHECK** : *Are the ABS sensor installation bolts tightened securely?*
- YES** : Go to step **10H20**.
- NO** : Tighten ABS sensor installation bolts securely.

**10H20 : CHECK TROUBLE CODE.**

- CHECK** : *Is the trouble code 21 and/or 23?*
- YES** : Go to step **10H22**.
- NO** : Go to step **10H21**.

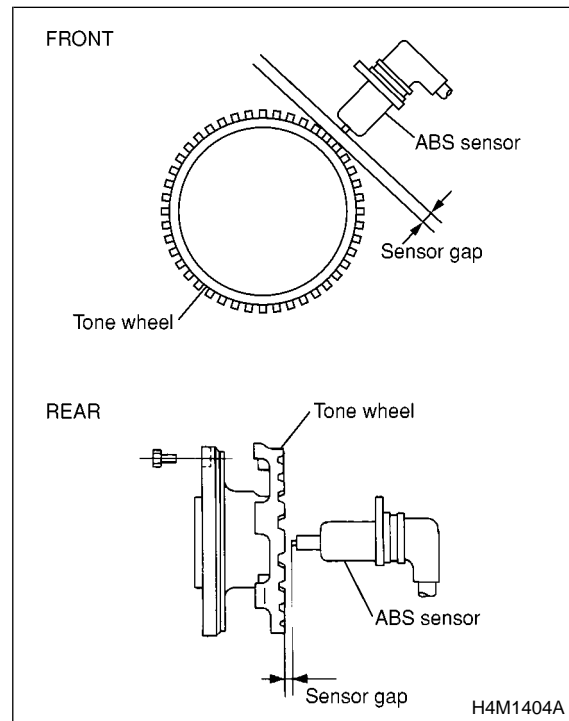
**10H21 : CHECK INSTALLATION OF REAR TONE WHEEL.**

**Tightening torque:**  
**13±3 N·m (1.3±0.3 kg·m, 9±2.2 ft·lb)**

- CHECK** : *Are the rear tone wheel installation bolts tightened securely?*
- YES** : Go to step **10H22**.
- NO** : Tighten rear tone wheel installation bolts securely.

**10H22 : CHECK ABS SENSOR GAP.**

Measure tone wheel-to-pole piece gap over entire perimeter of the wheel. <Ref. to 4-4 [W13C0].>



	Front wheel	Rear wheel
Specifications	0.3 — 0.8 mm (0.012 — 0.031 in)	0.7 — 1.2 mm (0.028 — 0.047 in)

- CHECK** : *Is the gap within the specifications?*
- YES** : Go to step **10H23**.
- NO** : Adjust the gap.

**NOTE:**  
 Adjust the gap using spacers (Part No. 26755AA000). If spacers cannot correct the gap, replace worn sensor or worn tone wheel.

**10H23 : CHECK HUB RUNOUT.**

Measure hub runout.

**CHECK** : *Is the runout less than 0.05 mm (0.0020 in)?*

**YES** : Go to step 10H24.

**NO** : Repair hub.

**10H24 : CHECK GROUND SHORT OF ABS SENSOR.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABS sensor and chassis ground.

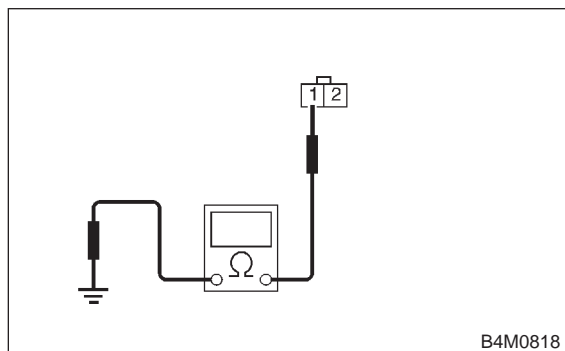
**Terminals**

**Front RH No. 1 — Chassis ground:**

**Front LH No. 1 — Chassis ground:**

**Rear RH No. 1 — Chassis ground:**

**Rear LH No. 1 — Chassis ground:**



**CHECK** : *Is the resistance more than 1 MΩ?*

**YES** : Go to step 10H25.

**NO** : Replace ABS sensor and ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**10H25 : CHECK GROUND SHORT OF HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Connect connector to ABS sensor.
- 3) Measure resistance between ABSCM&H/U connector terminal and chassis ground.

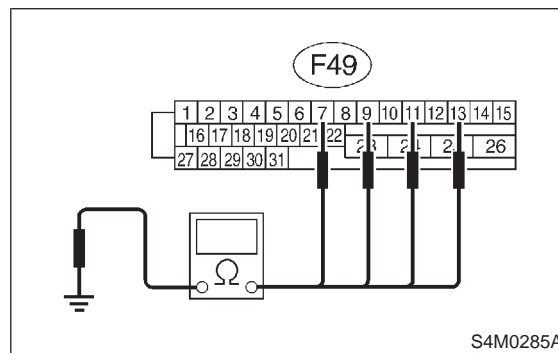
**Connector & terminal**

**Trouble code 21 / (F49) No. 11 — Chassis ground:**

**Trouble code 23 / (F49) No. 9 — Chassis ground:**

**Trouble code 25 / (F49) No. 13 — Chassis ground:**

**Trouble code 27 / (F49) No. 7 — Chassis ground:**



**CHECK** : *Is the resistance more than 1 MΩ?*

**YES** : Go to step 10H26.

**NO** : Repair harness between ABSCM&H/U and ABS sensor. And replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**10H26 : CHECK POOR CONTACT IN CONNECTORS.**

**CHECK** : *Is there poor contact in connectors between ABSCM&H/U and ABS sensor? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step 10H27.

**10H27 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10H28**.

**10H28 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**NOTE:**

Check harness and connectors between ABSCM&H/U and ABS sensor.

**MEMO:**

**I: TROUBLE CODE 22 FRONT RIGHT ABS SENSOR ABNORMAL SIGNAL**

**J: TROUBLE CODE 24 FRONT LEFT ABS SENSOR ABNORMAL SIGNAL**

**K: TROUBLE CODE 26 REAR RIGHT ABS SENSOR ABNORMAL SIGNAL**

**L: TROUBLE CODE 28 REAR LEFT ABS SENSOR ABNORMAL SIGNAL**  
**— ABNORMAL ABS SENSOR (ABS SENSOR ABNORMAL SIGNAL) —**

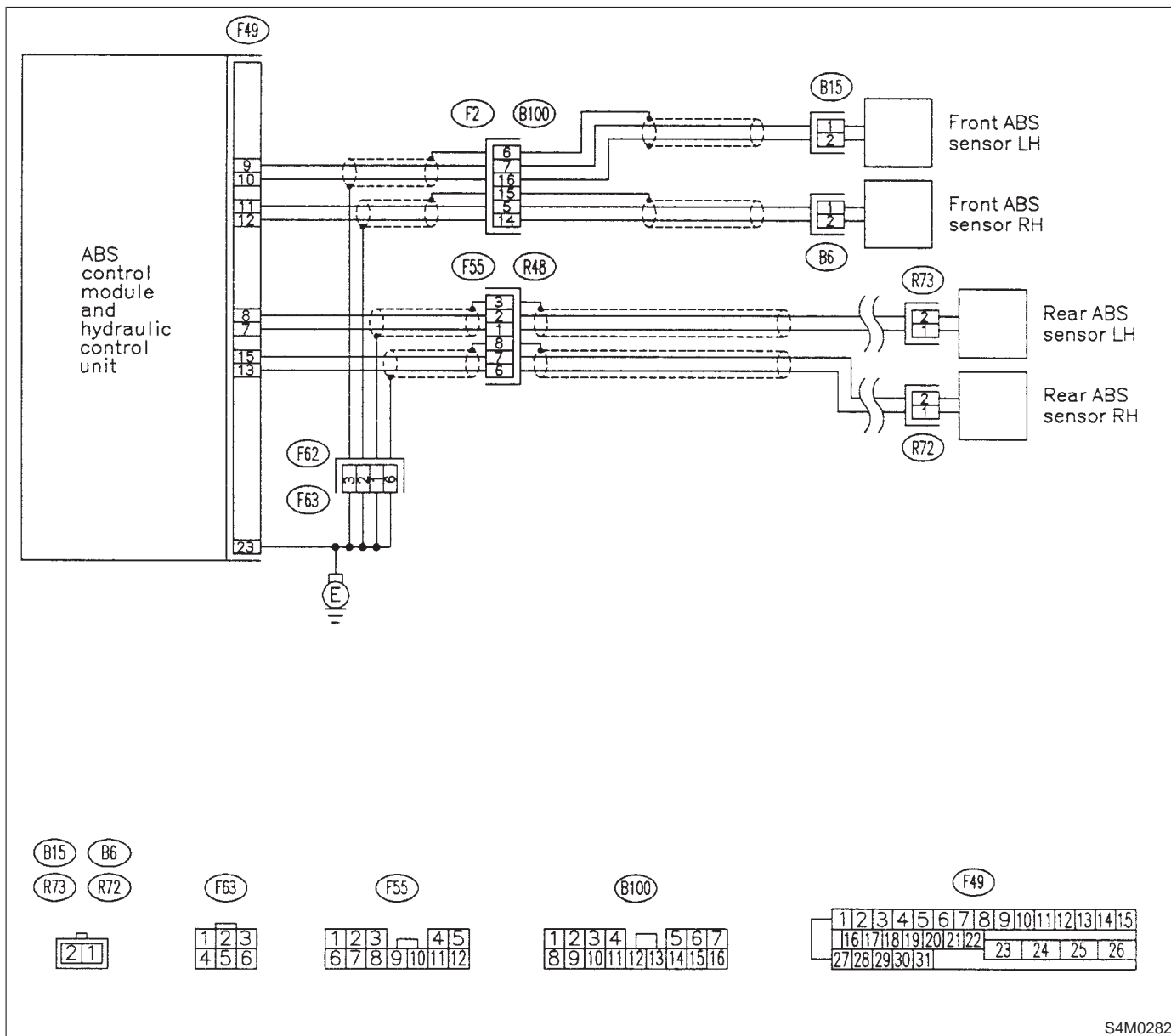
**DIAGNOSIS:**

- Faulty ABS sensor signal (noise, irregular signal, etc.)
- Faulty harness/connector

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



**10L1 : CHECK OUTPUT OF ABS SENSOR USING SELECT MONITOR.**

- 1) Select "Current data display & Save" on the select monitor.
- 2) Read the ABS sensor output corresponding to the faulty system in the select monitor data display mode.

**CHECK** : Does the speed indicated on the display change in response to the speedometer reading during acceleration/deceleration when the steering wheel is in the straight-ahead position?

**YES** : Go to step 10L2.

**NO** : Go to step 10L8.

**10L2 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

**CHECK** : Is there poor contact in connectors between ABSCM&H/U and ABS sensor? <Ref. to FOREWORD [W3C1].>

**YES** : Repair connector.

**NO** : Go to step 10L3.

**10L3 : CHECK SOURCES OF SIGNAL NOISE.**

**CHECK** : Is the car telephone or the wireless transmitter properly installed?

**YES** : Go to step 10L4.

**NO** : Properly install the car telephone or the wireless transmitter.

**10L4 : CHECK SOURCES OF SIGNAL NOISE.**

**CHECK** : Are noise sources (such as an antenna) installed near the sensor harness?

**YES** : Install the noise sources apart from the sensor harness.

**NO** : Go to step 10L5.

**10L5 : CHECK SHIELD CIRCUIT.**

- 1) Turn ignition switch to OFF.
- 2) Connect all connectors.
- 3) Measure resistance between shield connector and chassis ground.

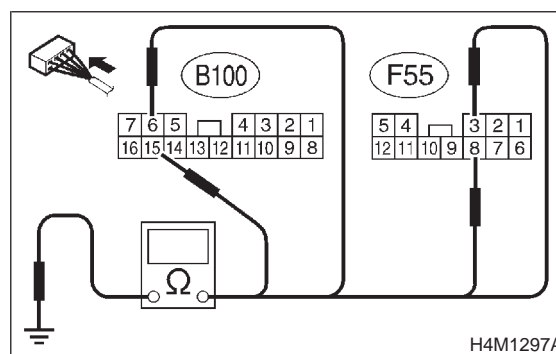
**Connector & terminal**

**Trouble code 22 / (B100) No. 15 — Chassis ground:**

**Trouble code 24 / (B100) No. 6 — Chassis ground:**

**Trouble code 26 / (F55) No. 8 — Chassis ground:**

**Trouble code 28 / (F55) No. 3 — Chassis ground:**



**CHECK** : Is the resistance less than 0.5 Ω?

**YES** : Go to step 10L6.

**NO** : Repair shield harness.

**10L6 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : Is the same trouble code as in the current diagnosis still being output?

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step 10L7.

**10L7 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : Are other trouble codes being output?

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary noise interference.

**10L8 : CHECK INSTALLATION OF ABS SENSOR.**

**Tightening torque:**

**$32 \pm 10 \text{ N}\cdot\text{m}$  ( $3.3 \pm 1.0 \text{ kg}\cdot\text{m}$ ,  $24 \pm 7 \text{ ft}\cdot\text{lb}$ )**

- CHECK** : Are the ABS sensor installation bolts tightened securely?
- YES** : Go to step 10L9.
- NO** : Tighten ABS sensor installation bolts securely.

**10L9 : CHECK TROUBLE CODE.**

- CHECK** : Is the trouble code 22 and/or 24?
- YES** : Go to step 10L11.
- NO** : Go to step 10L10.

**10L10 : CHECK INSTALLATION OF REAR TONE WHEEL.**

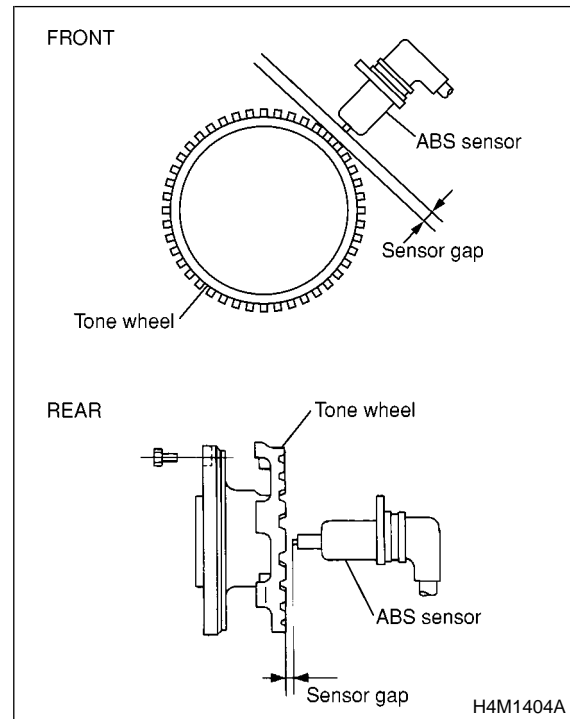
**Tightening torque:**

**$13 \pm 3 \text{ N}\cdot\text{m}$  ( $1.3 \pm 0.3 \text{ kg}\cdot\text{m}$ ,  $9 \pm 2.2 \text{ ft}\cdot\text{lb}$ )**

- CHECK** : Are the rear tone wheel installation bolts tightened securely?
- YES** : Go to step 10L11.
- NO** : Tighten rear tone wheel installation bolts securely.

**10L11 : CHECK ABS SENSOR GAP.**

Measure tone wheel to pole piece gap over entire perimeter of the wheel. <Ref. to 4-4 [W13C0].>



	Front wheel	Rear wheel
Specifications	0.3 — 0.8 mm (0.012 — 0.031 in)	0.7 — 1.2 mm (0.028 — 0.047 in)

- CHECK** : Is the gap within the specifications?
- YES** : Go to step 10L12.
- NO** : Adjust the gap.

**NOTE:**

Adjust the gap using spacer (Part No. 26755AA000). If spacers cannot correct the gap, replace worn sensor or worn tone wheel.

**10L12 : PREPARE OSCILLOSCOPE.**

- CHECK** : Is an oscilloscope available?
- YES** : Go to step 10L13.
- NO** : Go to step 10L14.

**10L13 : CHECK ABS SENSOR SIGNAL.**

- 1) Raise all four wheels of ground.
- 2) Turn ignition switch to OFF.
- 3) Connect the oscilloscope to the connector.
- 4) Turn ignition switch to ON.
- 5) Rotate wheels and measure voltage at specified frequency.

**NOTE:**

When this inspection is completed, the ABSCM&H/U sometimes stores the trouble code 29.

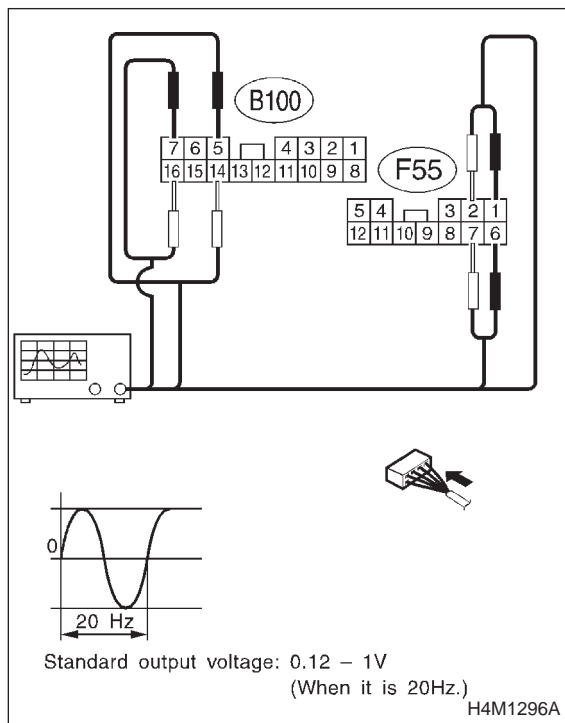
**Connector & terminal**

**Trouble code 22 / (B100) No. 5 (+) — No. 14 (-):**

**Trouble code 24 / (B100) No. 7 (+) — No. 16 (-):**

**Trouble code 26 / (F55) No. 6 (+) — No. 7 (-):**

**Trouble code 28 / (F55) No. 1 (+) — No. 2 (-):**



**CHECK** : *Is oscilloscope pattern smooth, as shown in figure?*

**YES** : Go to step 10L17.

**NO** : Go to step 10L14.

**10L14 : CHECK CONTAMINATION OF ABS SENSOR OR TONE WHEEL.**

Remove disc rotor or drum from hub in accordance with trouble code.

**CHECK** : *Is the ABS sensor pole piece or the tone wheel contaminated by dirt or other foreign matter?*

**YES** : Thoroughly remove dirt or other foreign matter.

**NO** : Go to step 10L15.

**10L15 : CHECK DAMAGE OF ABS SENSOR OR TONE WHEEL.**

**CHECK** : *Are there broken or damaged in the ABS sensor pole piece or the tone wheel?*

**YES** : Replace ABS sensor or tone wheel.

**NO** : Go to step 10L16.

**10L16 : CHECK HUB RUNOUT.**

Measure hub runout.

**CHECK** : *Is the runout less than 0.05 mm (0.0020 in)?*

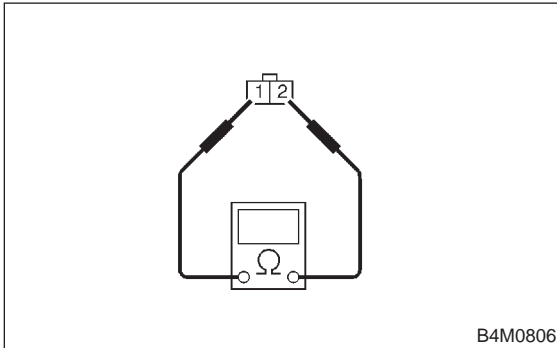
**YES** : Go to step 10L17.

**NO** : Repair hub.



**10L17 : CHECK RESISTANCE OF FRONT ABS SENSOR.**

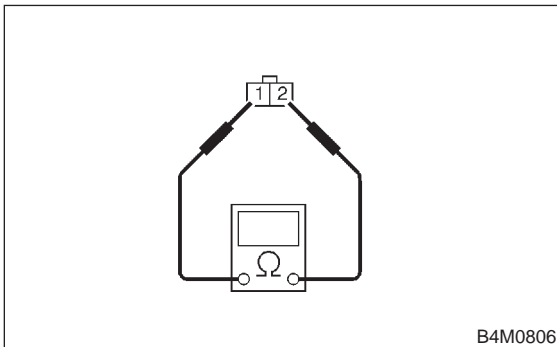
- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from front ABS sensor.
- 3) Measure resistance between front ABS sensor connector terminals.

**Terminals****RH No. 1 — No. 2:****LH No. 1 — No. 2:**

- CHECK** : **Is the resistance between 1.0 and 1.5 k $\Omega$ ?**
- YES** : Go to step **10L18**.
- NO** : Replace front ABS sensor.

**10L18 : CHECK RESISTANCE OF REAR ABS SENSOR.**

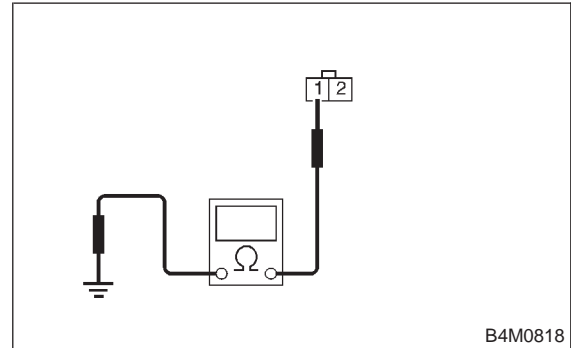
- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from rear ABS sensor.
- 3) Measure resistance between rear ABS sensor connector terminals.

**Terminals****RH No. 1 — No. 2:****LH No. 1 — No. 2:**

- CHECK** : **Is the resistance between 0.8 and 1.2 k $\Omega$ ?**
- YES** : Go to step **10L19**.
- NO** : Replace rear ABS sensor.

**10L19 : CHECK GROUND SHORT OF ABS SENSOR.**

Measure resistance between ABS sensor and chassis ground.

**Terminals****Front RH No. 1 — Chassis ground:****Front LH No. 1 — Chassis ground:****Rear RH No. 1 — Chassis ground:****Rear LH No. 1 — Chassis ground:**

- CHECK** : **Is the resistance more than 1 M $\Omega$ ?**
- YES** : Go to step **10L20**.
- NO** : Replace ABS sensor.

**10L20 : CHECK TROUBLE CODE.**

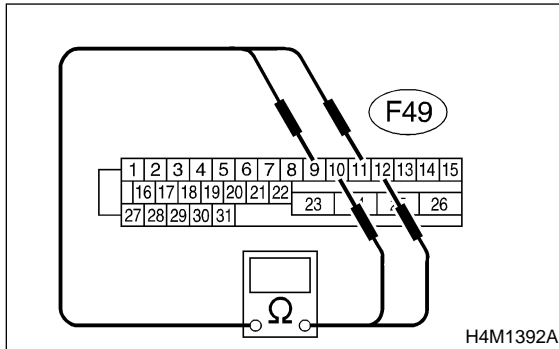
- CHECK** : **Is the trouble code 22 and/or 24?**
- YES** : Go to step **10L21**.
- NO** : Go to step **10L22**.

**10L21 : CHECK HARNESS/CONNECTOR BETWEEN ABSCM&H/U AND ABS SENSOR.**

- 1) Connect connector to ABS sensor.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Measure resistance at ABSCM&H/U connector terminals.

**Connector & terminal**

**Trouble code 22 / (F49) No. 11 — No. 12:**  
**Trouble code 24 / (F49) No. 9 — No. 10:**



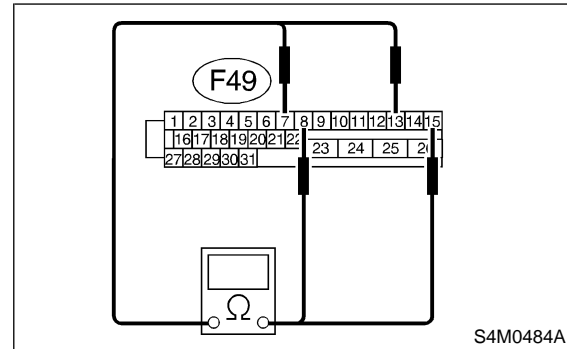
- CHECK** : **Is the resistance between 1.0 and 1.5 kΩ?**
- YES** : Go to step **10L23**.
- NO** : Repair harness/connector between ABSCM&H/U and ABS sensor.

**10L22 : CHECK HARNESS/CONNECTOR BETWEEN ABSCM&H/U AND ABS SENSOR.**

- 1) Connect connector to ABS sensor.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Measure resistance at ABSCM&H/U connector terminals.

**Connector & terminal**

**Trouble code 26 / (F49) No. 13 — No. 15:**  
**Trouble code 28 / (F49) No. 7 — No. 8:**



- CHECK** : **Is the resistance between 0.8 and 1.2 kΩ?**
- YES** : Go to step **10L23**.
- NO** : Repair harness/connector between ABSCM&H/U and ABS sensor.

**10L23 : CHECK GROUND SHORT OF HARNESS.**

Measure resistance between ABSCM&H/U connector and chassis ground.

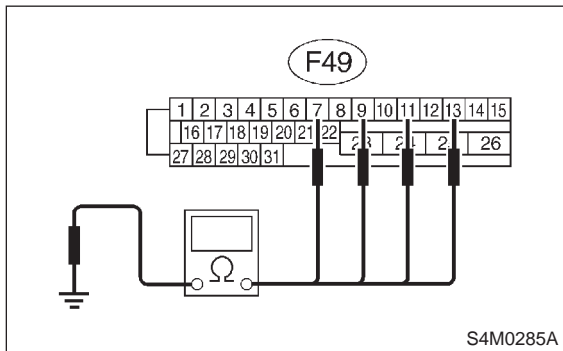
**Connector & terminal**

**Trouble code 22 / (F49) No. 11 — Chassis ground:**

**Trouble code 24 / (F49) No. 9 — Chassis ground:**

**Trouble code 26 / (F49) No. 13 — Chassis ground:**

**Trouble code 28 / (F49) No. 7 — Chassis ground:**



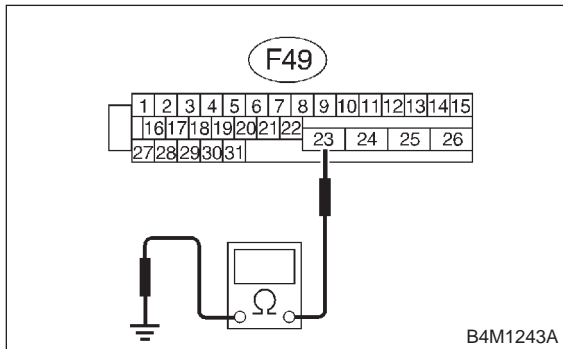
- CHECK** : *Is the resistance more than 1 MΩ?*
- YES** : Go to step **10L24**.
- NO** : Repair harness/connector between ABSCM&H/U and ABS sensor.

**10L24 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

Measure resistance between ABSCM&H/U and chassis ground.

**Connector & terminal**

**(F49) No. 23 — Chassis ground:**



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Go to step **10L25**.
- NO** : Repair ABSCM&H/U ground harness.

**10L25 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connectors between ABSCM&H/U and ABS sensor? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step **10L26**.

**10L26 : CHECK SOURCES OF SIGNAL NOISE.**

- CHECK** : *Is the car telephone or the wireless transmitter properly installed?*
- YES** : Go to step **10L27**.
- NO** : Properly install the car telephone or the wireless transmitter.

**10L27 : CHECK SOURCES OF SIGNAL NOISE.**

- CHECK** : *Are noise sources (such as an antenna) installed near the sensor harness?*
- YES** : Install the noise sources apart from the sensor harness.
- NO** : Go to step **10L28**.

**10L28 : CHECK SHIELD CIRCUIT.**

- 1) Connect all connectors.
- 2) Measure resistance between shield connector and chassis ground.

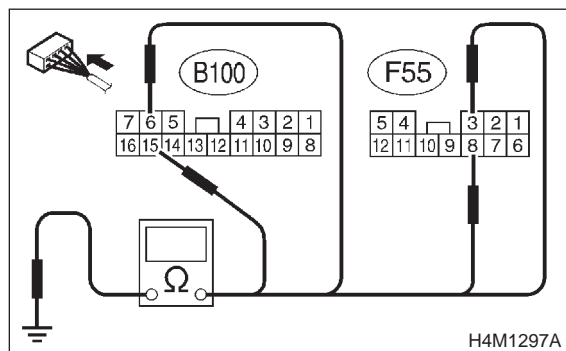
**Connector & terminal**

**Trouble code 22 / (B100) No. 15 — Chassis ground:**

**Trouble code 24 / (B100) No. 6 — Chassis ground:**

**Trouble code 26 / (F55) No. 8 — Chassis ground:**

**Trouble code 28 / (F55) No. 3 — Chassis ground:**



- CHECK** : **Is the resistance less than 0.5 Ω?**
- YES** : Go to step **10L29**.
- NO** : Repair shield harness.

**10L29 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

- CHECK** : **Is the same trouble code as in the current diagnosis still being output?**
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step **10L30**.

**10L30 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : **Are other trouble codes being output?**
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary noise interference.

**M: TROUBLE CODE 29 ABNORMAL ABS SENSOR SIGNAL ON ANY ONE OF FOUR SENSOR**

**— ABNORMAL ABS SENSOR SIGNAL ON ANY ONE OF FOUR —**

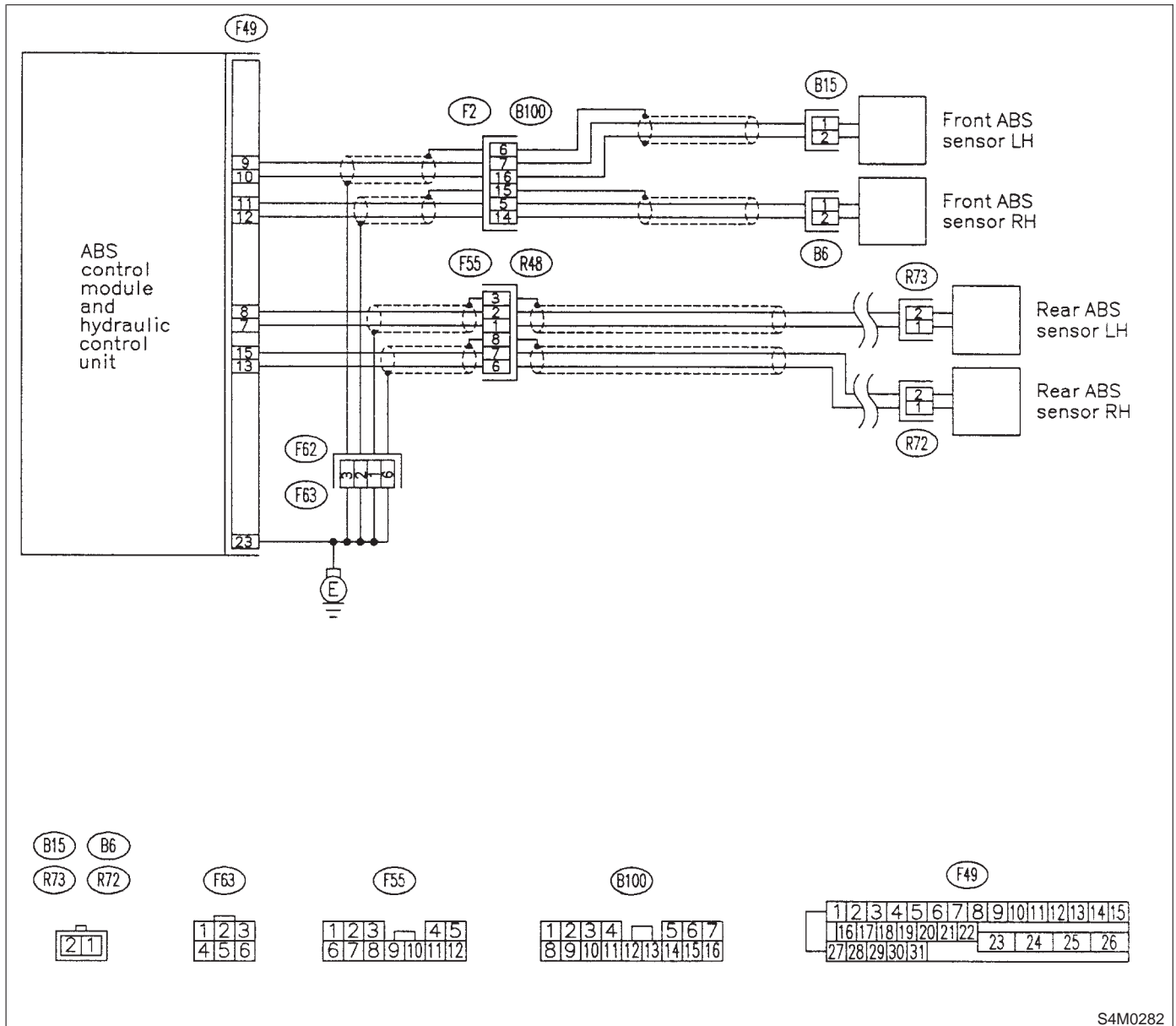
**DIAGNOSIS:**

- Faulty ABS sensor signal (noise, irregular signal, etc.)
- Faulty tone wheel
- Wheels turning freely for a long time

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



S4M0282

**10M1 : CHECK IF THE WHEELS HAVE TURNED FREELY FOR A LONG TIME.**

- CHECK** : Check if the wheels have been turned freely for more than one minute, such as when the vehicle is jacked-up, under full-lock cornering or when tire is not in contact with road surface.
- YES** : The ABS is normal. Erase the trouble code.

**NOTE:**

When the wheels turn freely for a long time, such as when the vehicle is towed or jacked-up, or when steering wheel is continuously turned all the way, this trouble code may sometimes occur.

- NO** : Go to step 10M2.

**10M2 : CHECK TIRE SPECIFICATIONS.**

Turn ignition switch to OFF.

- CHECK** : Are the tire specifications correct?
- YES** : Go to step 10M3.
- NO** : Replace tire.

**10M3 : CHECK WEAR OF TIRE.**

- CHECK** : Is the tire worn excessively?
- YES** : Replace tire.
- NO** : Go to step 10M4.

**10M4 : CHECK TIRE PRESSURE.**

- CHECK** : Is the tire pressure correct?
- YES** : Go to step 10M5.
- NO** : Adjust tire pressure.

**10M5 : CHECK INSTALLATION OF ABS SENSOR.**

**Tightening torque:**

**32±10 N-m (3.3±1.0 kg-m, 24±7 ft-lb)**

- CHECK** : Are the ABS sensor installation bolts tightened securely?
- YES** : Go to step 10M6.
- NO** : Tighten ABS sensor installation bolts securely.

**10M6 : CHECK INSTALLATION OF REAR TONE WHEEL.**

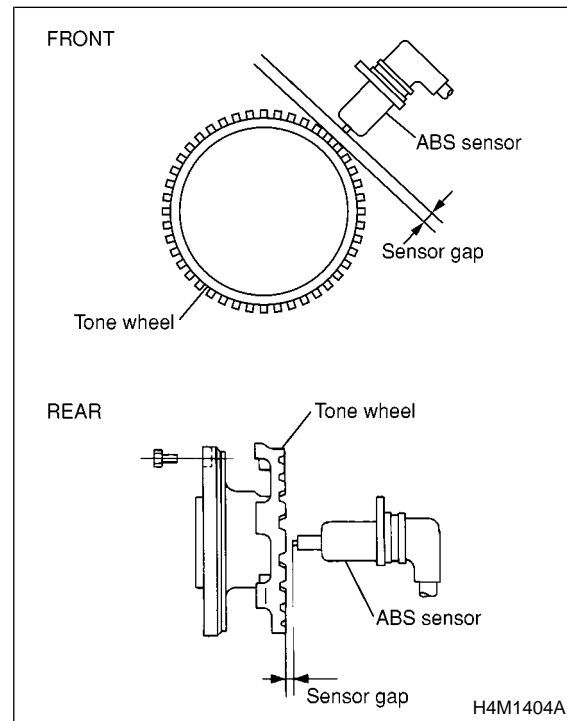
**Tightening torque:**

**13±3 N-m (1.3±0.3 kg-m, 9±2.2 ft-lb)**

- CHECK** : Are the rear tone wheel installation bolts tightened securely?
- YES** : Go to step 10M7.
- NO** : Tighten rear tone wheel installation bolts securely.

**10M7 : CHECK ABS SENSOR GAP.**

Measure tone wheel to pole piece gap over entire perimeter of the wheel. <Ref. to 4-4 [W13C0].>



Specifications	Front wheel	Rear wheel
	0.3 — 0.8 mm (0.012 — 0.031 in)	0.7 — 1.2 mm (0.028 — 0.047 in)

- CHECK** : Is the gap within the specifications?
- YES** : Go to step 10M8.
- NO** : Adjust the gap.

**NOTE:**

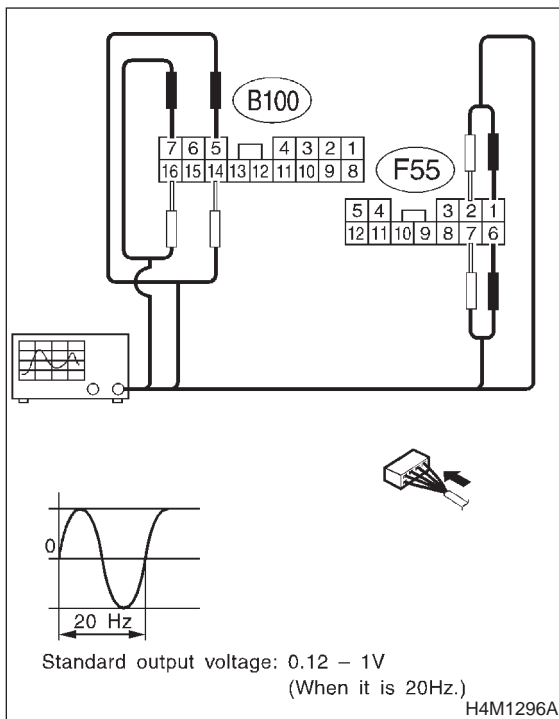
Adjust the gap using spacer (Part No. 26755AA000). If spacers cannot correct the gap, replace worn sensor or worn tone wheel.

**10M8 : PREPARE OSCILLOSCOPE.****CHECK** : *Is an oscilloscope available?***YES** : Go to step **10M9**.**NO** : Go to step **10M10**.**10M9 : CHECK ABS SENSOR SIGNAL.**

- 1) Raise all four wheels of ground.
- 2) Turn ignition switch to OFF.
- 3) Connect the oscilloscope to the connector.
- 4) Turn ignition switch to ON.
- 5) Rotate wheels and measure voltage at specified frequency.

**NOTE:**

When this inspection is completed, the ABSCM&H/U sometimes stores the trouble code 29.

**Connector & terminal****(B100) No. 5 (+) — No. 14 (-) (Front RH):****(B100) No. 7 (+) — No. 16 (-) (Front LH):****(F55) No. 6 (+) — No. 7 (-) (Rear RH):****(F55) No. 1 (+) — No. 2 (-) (Rear LH):****CHECK** : *Is oscilloscope pattern smooth, as shown in figure?***YES** : Go to step **10M13**.**NO** : Go to step **10M10**.**10M10 : CHECK CONTAMINATION OF ABS SENSOR OR TONE WHEEL.**

Remove disc rotor from hub.

**CHECK** : *Is the ABS sensor pole piece or the tone wheel contaminated by dirt or other foreign matter?***YES** : Thoroughly remove dirt or other foreign matter.**NO** : Go to step **10M11**.**10M11 : CHECK DAMAGE OF ABS SENSOR OR TONE WHEEL.****CHECK** : *Are there broken or damaged teeth in the ABS sensor pole piece or the tone wheel?***YES** : Replace ABS sensor or tone wheel.**NO** : Go to step **10M12**.**10M12 : CHECK HUB RUNOUT.**

Measure hub runout.

**CHECK** : *Is the runout less than 0.05 mm (0.0020 in)?***YES** : Go to step **10M13**.**NO** : Repair hub.**10M13 : CHECK ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Connect all connectors.
- 3) Erase the memory.
- 4) Perform inspection mode.
- 5) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?***YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>**NO** : Go to step **10M14**.**10M14 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.****CHECK** : *Are other trouble codes being output?***YES** : Proceed with the diagnosis corresponding to the trouble code.**NO** : A temporary poor contact.

**MEMO:**



**N: TROUBLE CODE 31 FRONT RIGHT INLET VALVE MALFUNCTION**

**O: TROUBLE CODE 33 FRONT LEFT INLET VALVE MALFUNCTION**

**P: TROUBLE CODE 35 REAR RIGHT INLET VALVE MALFUNCTION**

**Q: TROUBLE CODE 37 REAR LEFT INLET VALVE MALFUNCTION**

**— INLET SOLENOID VALVE MALFUNCTION —**

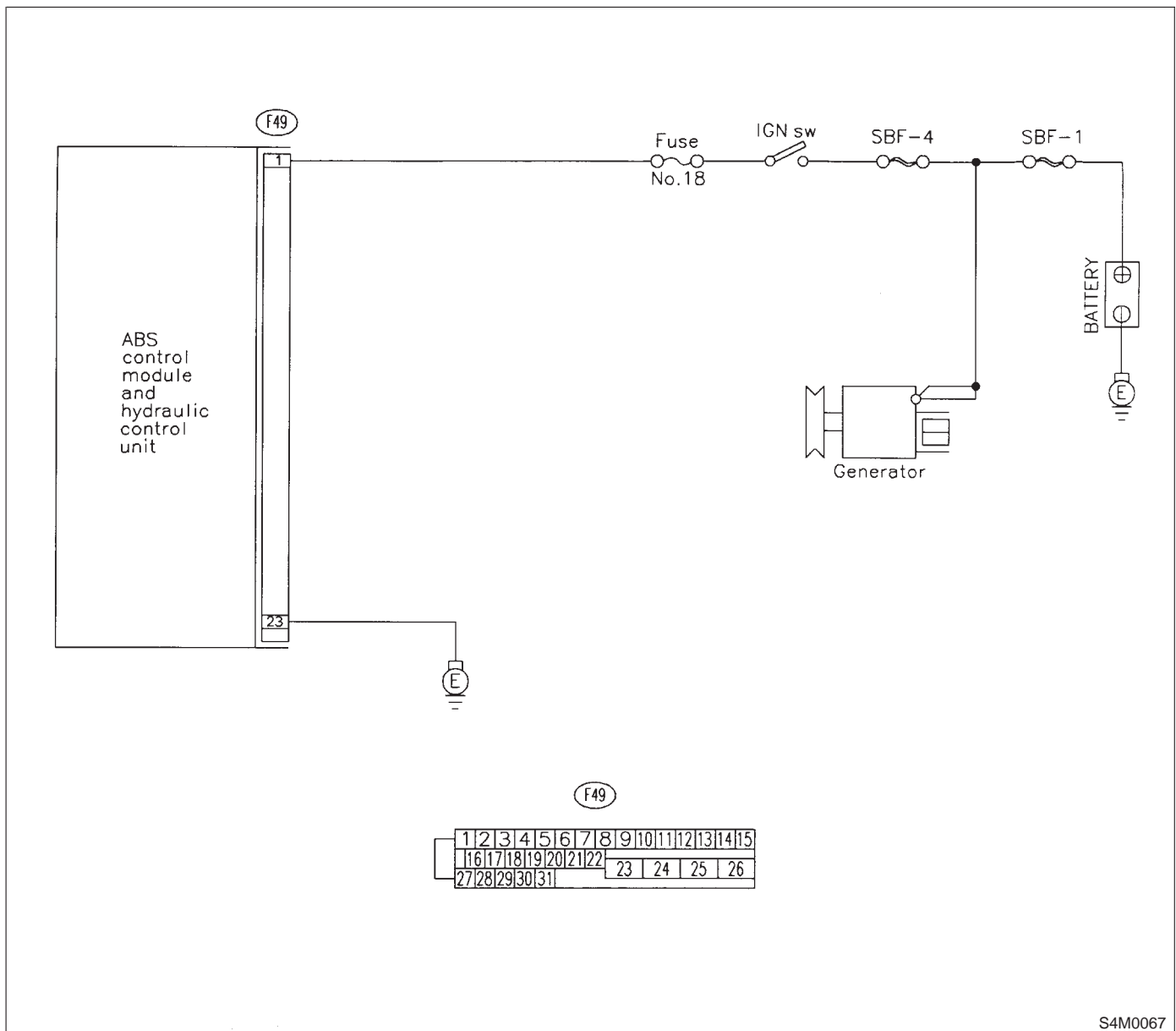
**DIAGNOSIS:**

- Faulty harness/connector
- Faulty inlet solenoid valve

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



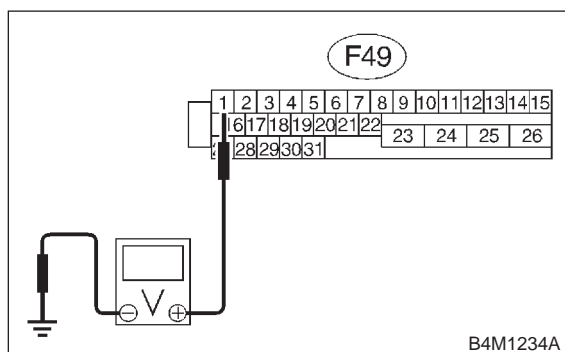
S4M0067

**10Q1 : CHECK INPUT VOLTAGE OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Run the engine at idle.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 1 (+) — Chassis ground (-):**



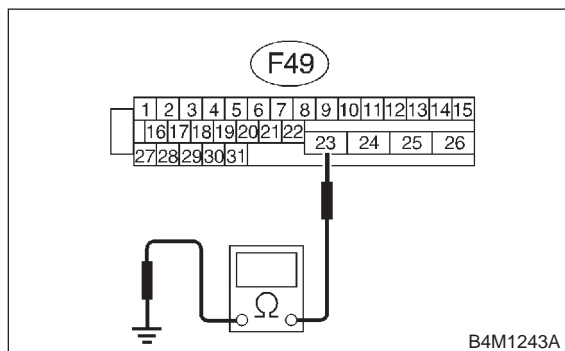
- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step 10Q2.
- NO** : Repair harness connector between battery, ignition switch and ABSCM&H/U.

**10Q2 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 23 — Chassis ground:**



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Go to step 10Q3.
- NO** : Repair ABSCM&H/U ground harness.

**10Q3 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step 10Q4.

**10Q4 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
  - 2) Erase the memory.
  - 3) Perform inspection mode.
  - 4) Read out the trouble code.
- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step 10Q5.

**10Q5 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : *Are other trouble codes being output?*
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary poor contact.

**R: TROUBLE CODE 32 FRONT RIGHT OUTLET VALVE MALFUNCTION**

**S: TROUBLE CODE 34 FRONT LEFT OUTLET VALVE MALFUNCTION**

**T: TROUBLE CODE 36 REAR RIGHT OUTLET VALVE MALFUNCTION**

**U: TROUBLE CODE 38 REAR LEFT OUTLET VALVE MALFUNCTION**

**— OUTLET SOLENOID VALVE MALFUNCTION —**

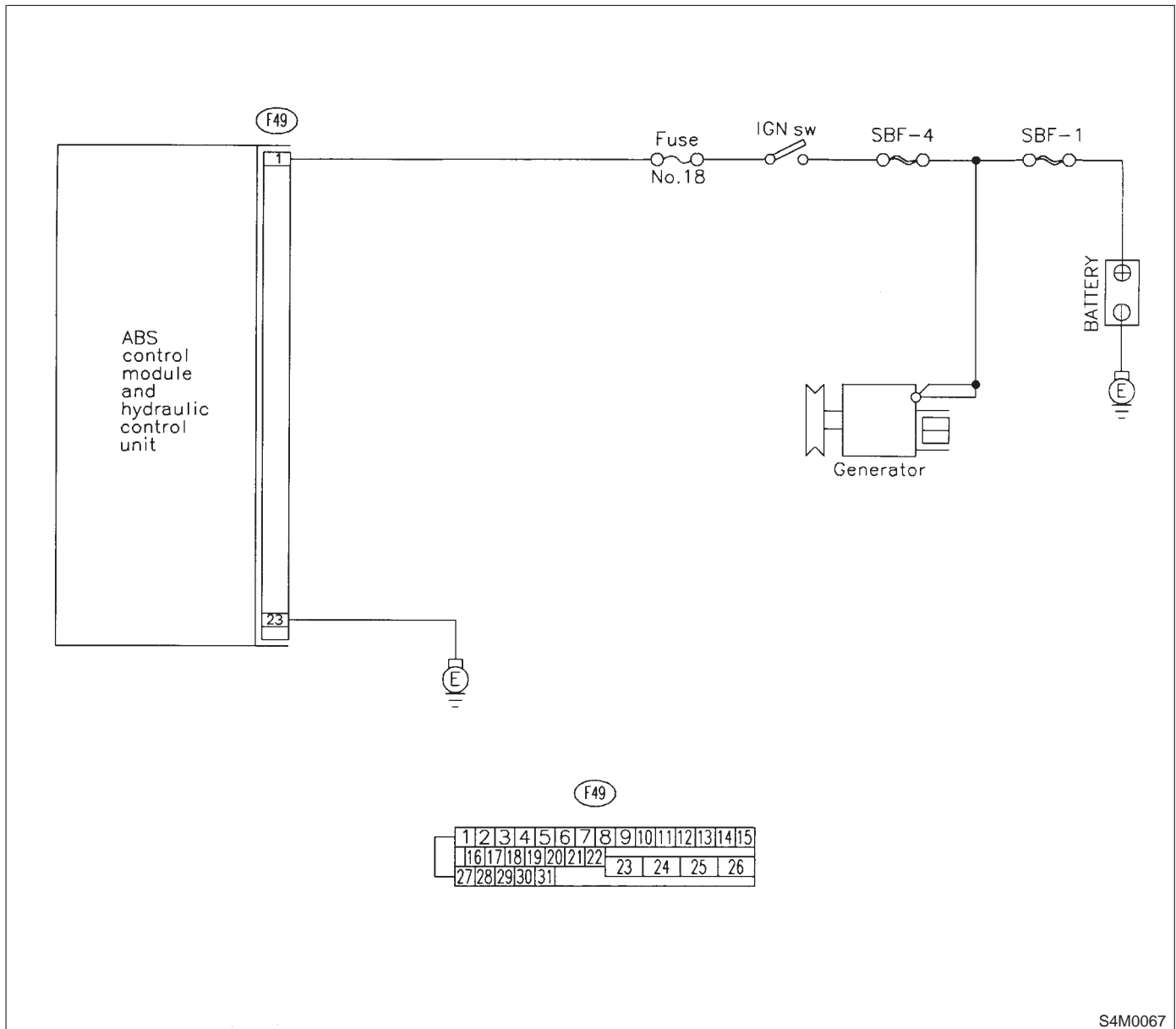
**DIAGNOSIS:**

- Faulty harness/connector
- Faulty outlet solenoid valve

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**

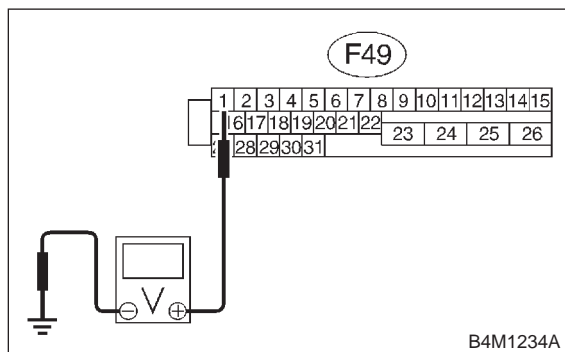


S4M0067

**10U1 : CHECK INPUT VOLTAGE OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Run the engine at idle.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 1 (+) — Chassis ground (-):**

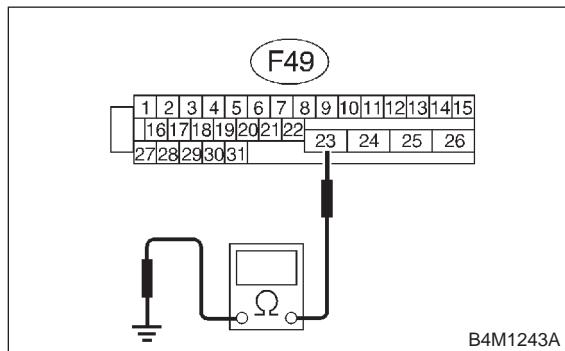


- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step 10U2.
- NO** : Repair harness connector between battery, ignition switch and ABSCM&H/U.

**10U2 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 23 — Chassis ground:**



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Go to step 10U3.
- NO** : Repair ABSCM&H/U ground harness.

**10U3 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step 10U4.

**10U4 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
  - 2) Erase the memory.
  - 3) Perform inspection mode.
  - 4) Read out the trouble code.
- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step 10U5.

**10U5 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : *Are other trouble codes being output?*
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary poor contact.

**V: TROUBLE CODE 41 ABS CONTROL MODULE MALFUNCTION  
— ABS CONTROL MODULE AND HYDRAULIC CONTROL UNIT  
MALFUNCTION —**

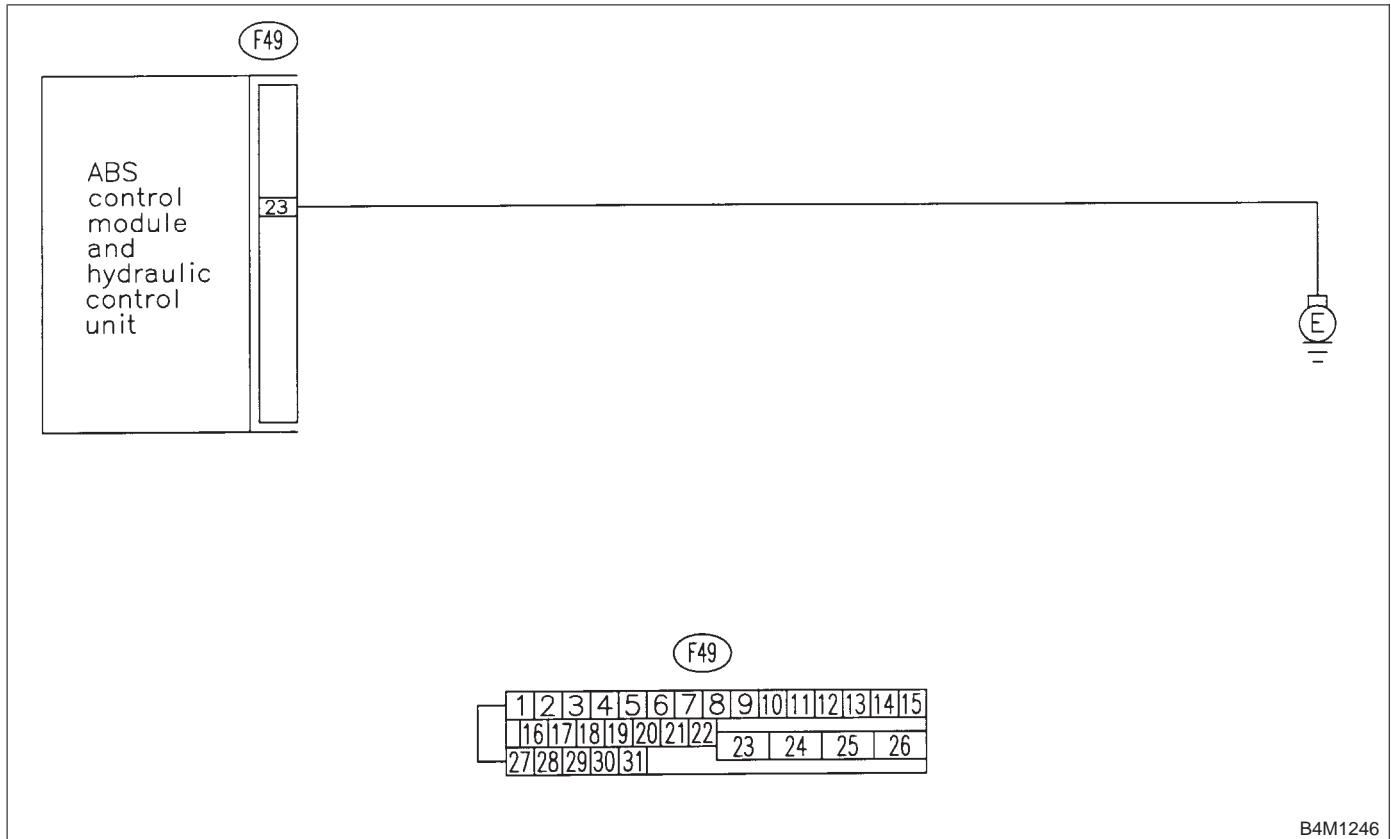
**DIAGNOSIS:**

- Faulty ABSCM&H/U

**TROUBLE SYMPTOM:**

- ABS does not operate.

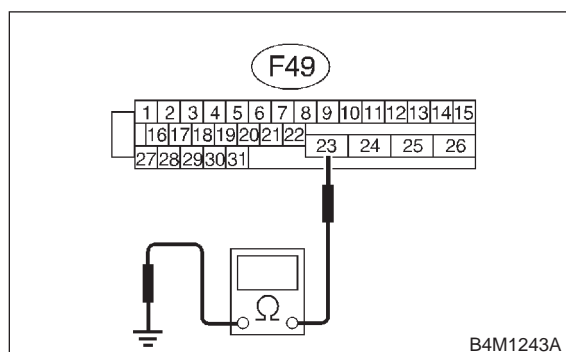
**WIRING DIAGRAM:**



B4M1246

**10V1 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Measure resistance between ABSCM&H/U and chassis ground.

**Connector & terminal****(F49) No. 23 — Chassis ground:**

- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Go to step 10V2.
- NO** : Repair ABSCM&H/U ground harness.

**10V2 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connectors between battery, ignition switch and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step 10V3.

**10V3 : CHECK SOURCES OF SIGNAL NOISE.**

- CHECK** : *Is the car telephone or the wireless transmitter properly installed?*
- YES** : Go to step 10V4.
- NO** : Properly install the car telephone or the wireless transmitter.

**10V4 : CHECK SOURCES OF SIGNAL NOISE.**

- CHECK** : *Are noise sources (such as an antenna) installed near the sensor harness?*
- YES** : Install the noise sources apart from the sensor harness.
- NO** : Go to step 10V5.

**10V5 : CHECK ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
  - 2) Connect all connectors.
  - 3) Erase the memory.
  - 4) Perform inspection mode.
  - 5) Read out the trouble code.
- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step 10V6.

**10V6 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : *Are other trouble codes being output?*
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary poor contact.

**W: TROUBLE CODE 42 POWER SUPPLY VOLTAGE TOO LOW**  
**— POWER SUPPLY VOLTAGE TOO LOW —**

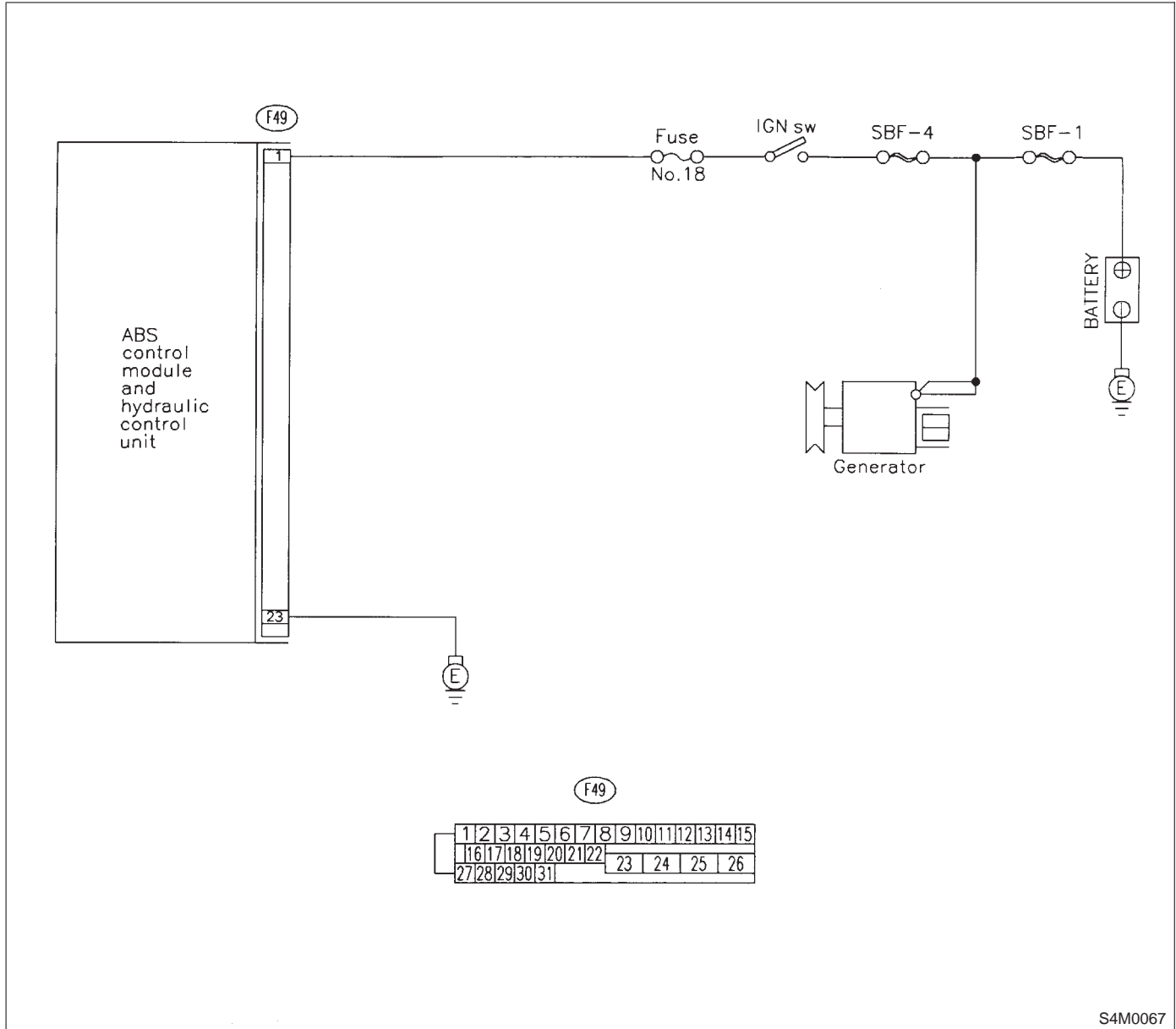
**DIAGNOSIS:**

- Power source voltage of the ABSCM&H/U is low.

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**

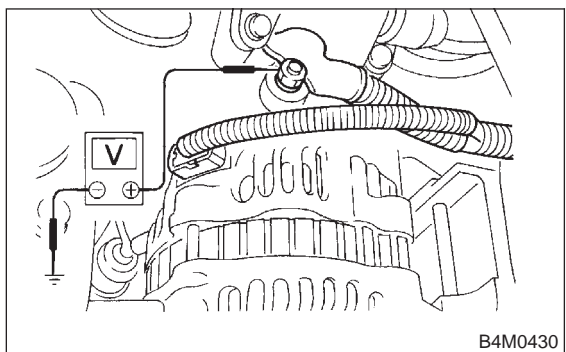


**10W1 : CHECK GENERATOR.**

- 1) Start engine.
- 2) Idling after warm-up.
- 3) Measure voltage between generator B terminal and chassis ground.

**Terminals**

**Generator B terminal — Chassis ground:**



- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step 10W2.
- NO** : Repair generator. <Ref. to 6-1 [W2A0].>

**10W2 : CHECK BATTERY TERMINAL.**

Turn ignition switch to OFF.

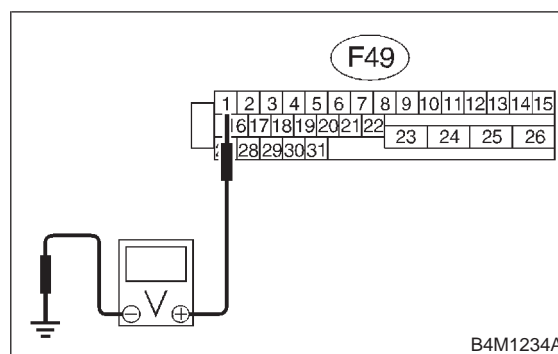
- CHECK** : *Are the positive and negative battery terminals tightly clamped?*
- YES** : Go to step 10W3.
- NO** : Tighten the clamp of terminal.

**10W3 : CHECK INPUT VOLTAGE OF ABSCM&H/U.**

- 1) Disconnect connector from ABSCM&H/U.
- 2) Run the engine at idle.
- 3) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 1 (+) — Chassis ground (-):**



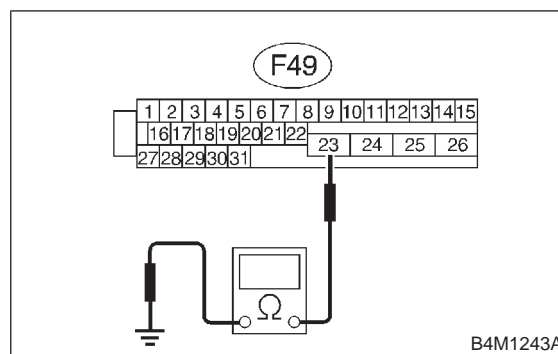
- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step 10W4.
- NO** : Repair harness connector between battery, ignition switch and ABSCM&H/U.

**10W4 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 23 — Chassis ground:**



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Go to step 10W5.
- NO** : Repair ABSCM&H/U ground harness.



**10W5 : CHECK POOR CONTACT IN CONNECTORS.**

**CHECK** : *Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step **10W6**.

**10W6 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10W7**.

**10W7 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

MEMO:

**X: TROUBLE CODE 42 POWER SUPPLY VOLTAGE TOO HIGH  
— POWER SUPPLY VOLTAGE TOO HIGH —**

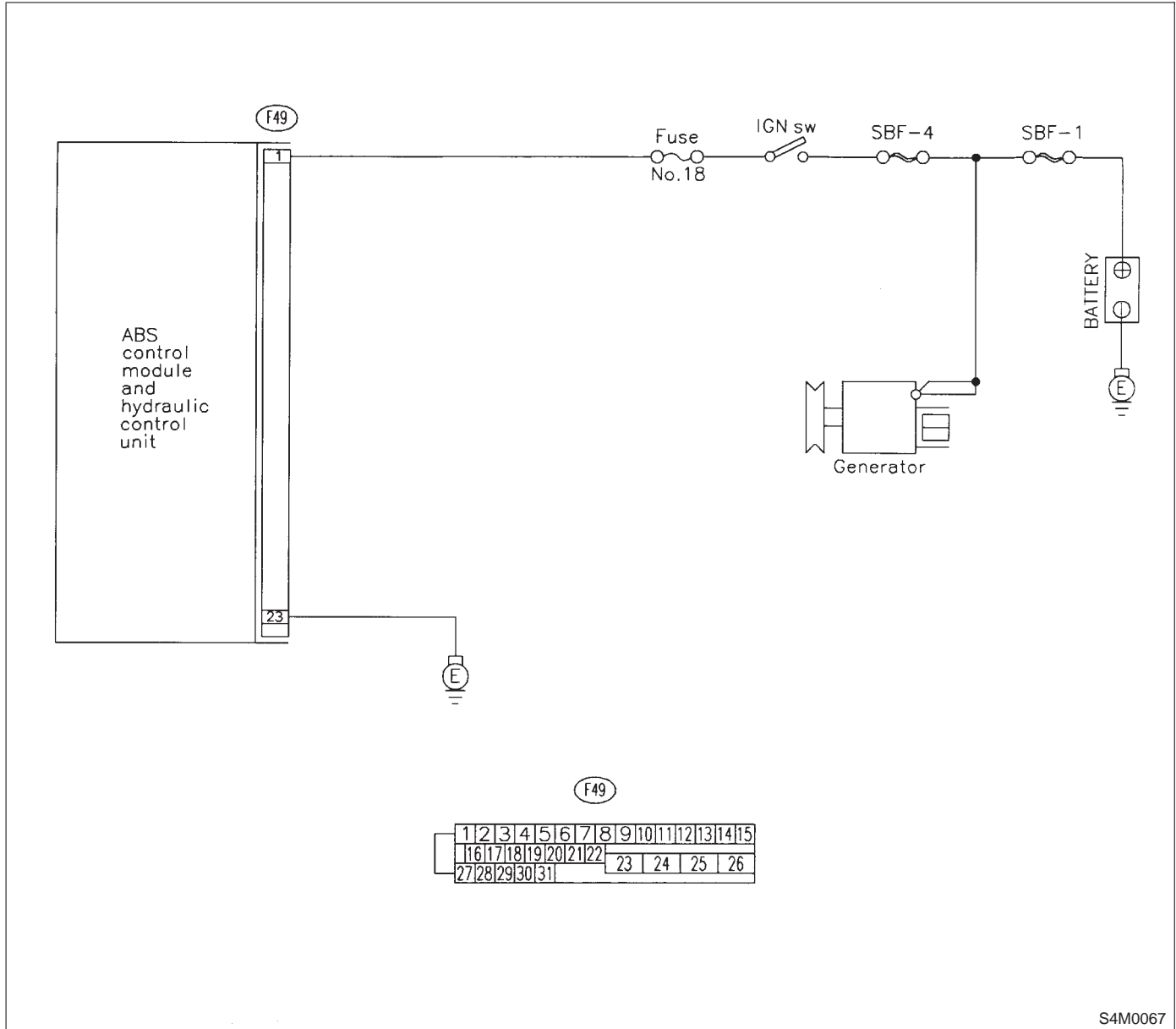
**DIAGNOSIS:**

- Power source voltage of the ABSCM&H/U is high.

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



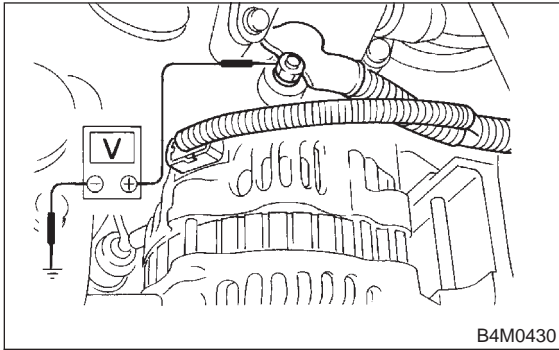
S4M0067

**10X1 : CHECK GENERATOR.**

- 1) Start engine.
- 2) Idling after warm-up.
- 3) Measure voltage between generator B terminal and chassis ground.

**Terminals**

**Generator B terminal — Chassis ground:**



- CHECK** : Is the voltage between 10 and 15 V?
- YES** : Go to step 10X2.
- NO** : Repair generator. <Ref. to 6-1 [W2A0].>

**10X2 : CHECK BATTERY TERMINAL.**

Turn ignition switch to OFF.

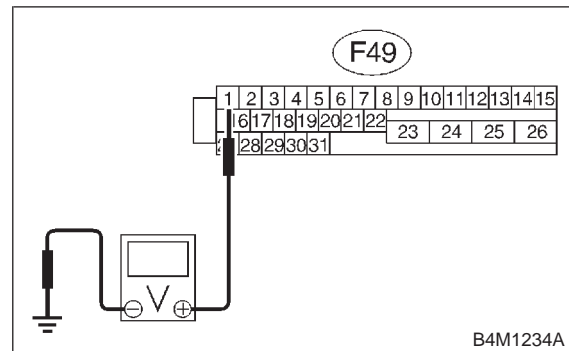
- CHECK** : Are the positive and negative battery terminals tightly clamped?
- YES** : Go to step 10X3.
- NO** : Tighten the clamp of terminal.

**10X3 : CHECK INPUT VOLTAGE OF ABSCM&H/U.**

- 1) Disconnect connector from ABSCM&H/U.
- 2) Run the engine at idle.
- 3) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 1 (+) — Chassis ground (-):**



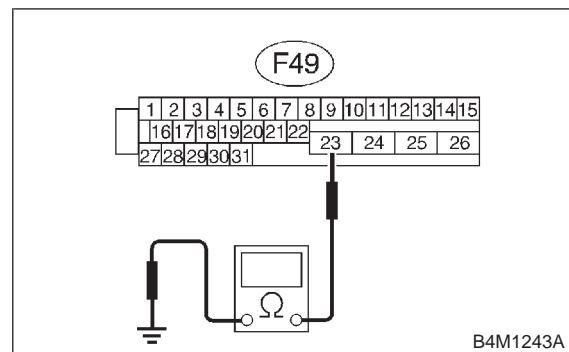
- CHECK** : Is the voltage between 10 and 15 V?
- YES** : Go to step 10X4.
- NO** : Repair harness connector between battery, ignition switch and ABSCM&H/U.

**10X4 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 23 — Chassis ground:**



- CHECK** : Is the resistance less than 0.5 Ω?
- YES** : Go to step 10X5.
- NO** : Repair ABSCM&H/U ground harness.

**10X5 : CHECK POOR CONTACT IN CONNECTORS.**

**CHECK** : *Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step **10X6**.

**10X6 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10X7**.

**10X7 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**MEMO:**

**Y: TROUBLE CODE 44 ABS-AT CONTROL (NON CONTROLLED)**  
**— ABS-AT CONTROL (NON CONTROLLED) —**

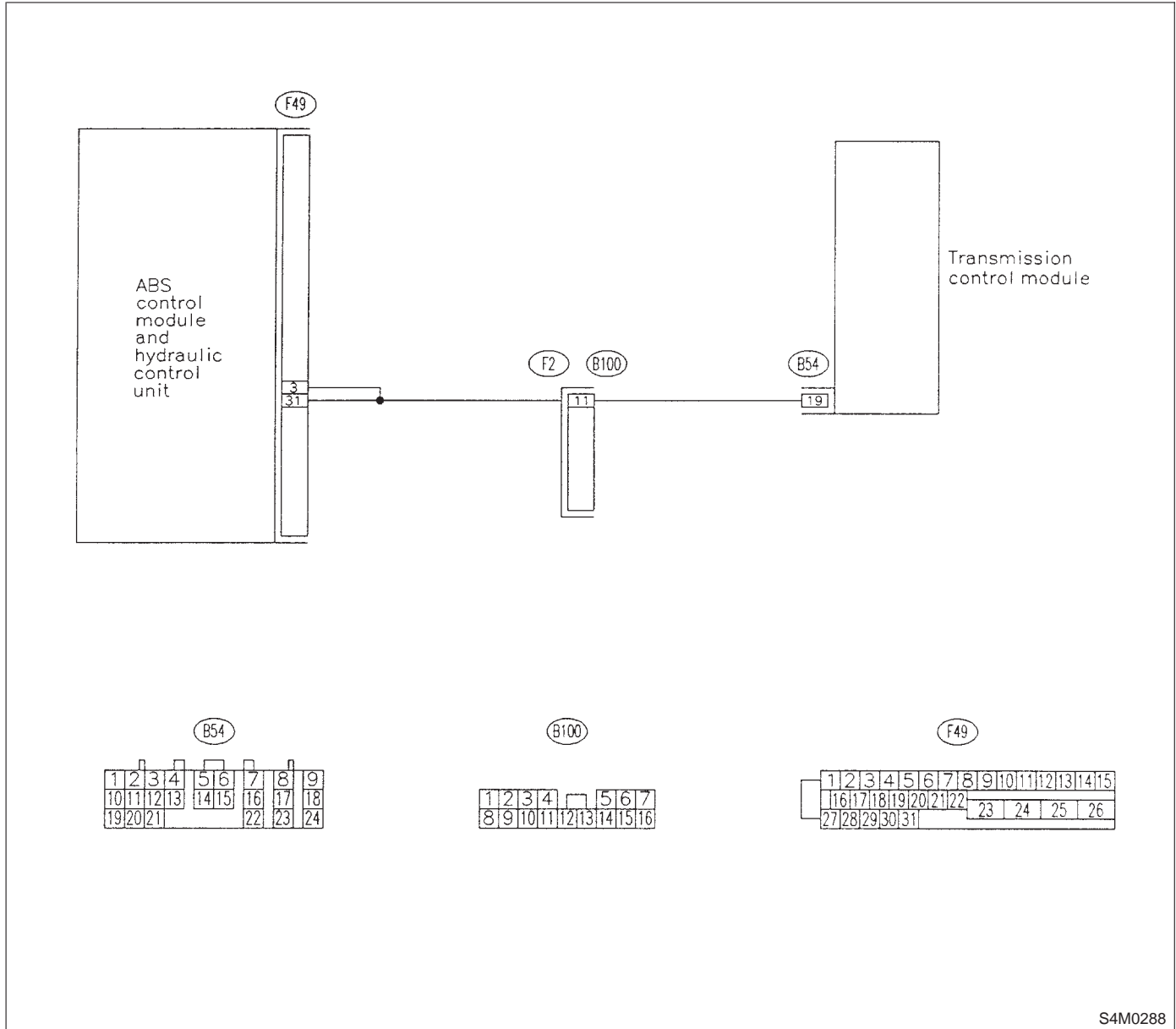
**DIAGNOSIS:**

- Combination of AT control faults

**TROUBLE SYMPTOM:**

- ABS does not operate.

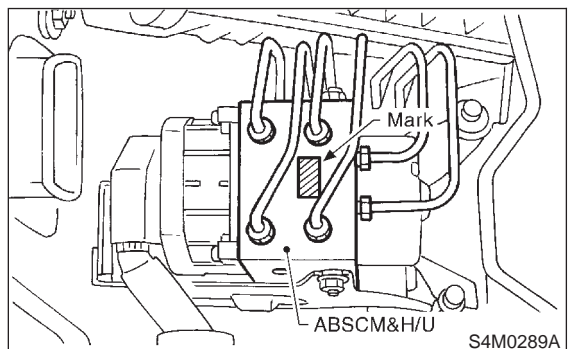
**WIRING DIAGRAM:**



S4M0288

**10Y1 : CHECK SPECIFICATIONS OF THE ABSCM&H/U.**

Check specifications of the mark to the ABSCM&H/U.



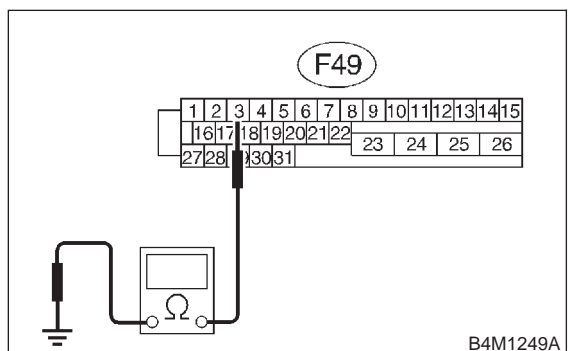
Mark	Model
C7	AWD AT
C8	AWD MT

- CHECK** : *Is an ABSCM&H/U for AT model installed on a MT model?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step 10Y2.

**10Y2 : CHECK GROUND SHORT OF HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect the two connectors from TCM.
- 3) Disconnect connector from ABSCM&H/U.
- 4) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 3 — Chassis ground:**

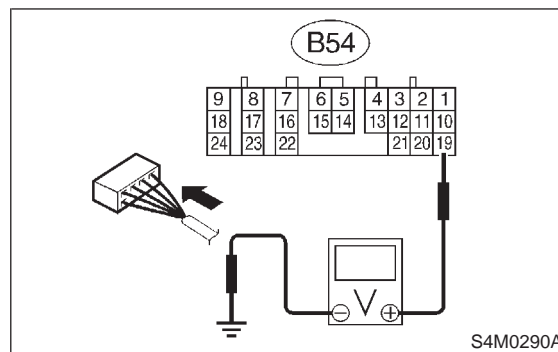


- CHECK** : *Is the resistance more than 1 MΩ?*
- YES** : Go to step 10Y3.
- NO** : Repair harness between TCM and ABSCM&H/U.

**10Y3 : CHECK TCM.**

- 1) Connect all connectors to TCM.
- 2) Turn ignition switch to ON.
- 3) Measure voltage between TCM connector terminal and chassis ground.

**Connector & terminal**  
**(B54) No. 19 (+) — Chassis ground (-):**



- CHECK** : *Is the voltage between 6 and 15 V?*
- YES** : Go to step 10Y5.
- NO** : Go to step 10Y4.

**10Y4 : CHECK AT.**

- CHECK** : *Is the AT functioning normally?*
- YES** : Replace TCM. <Ref. to 3-2 [W23A0].>
- NO** : Repair AT. <Ref. to 3-2 [T100].>



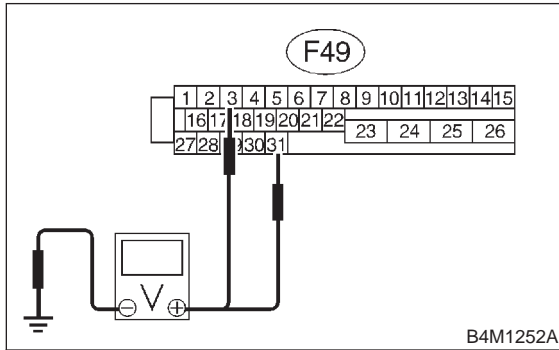
**10Y5 : CHECK OPEN CIRCUIT OF HARNESS.**

Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 3 (+) — Chassis ground (-):**

**(F49) No. 31 (+) — Chassis ground (-):**



**CHECK** : **Is the voltage between 5.5 and 15 V?**

**YES** : Go to step **10Y6**.

**NO** : Repair harness/connector between TCM and ABSCM&H/U.

**10Y6 : CHECK POOR CONTACT IN CONNECTORS.**

**CHECK** : **Is there poor contact in connectors between TCM and ABSCM&H/U?**  
**<Ref. to FOREWORD [W3C1].>**

**YES** : Repair connector.

**NO** : Go to step **10Y7**.

**10Y7 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : **Is the same trouble code as in the current diagnosis still being output?**

**YES** : Replace ABSCM&H/U. **<Ref. to 4-4 [W14A0].>**

**NO** : Go to step **10Y8**.

**10Y8 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : **Are other trouble codes being output?**

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**MEMO:**

**Z: TROUBLE CODE 44 ABS-AT CONTROL (CONTROLLED)**  
**— ABS-AT CONTROL (CONTROLLED) —**

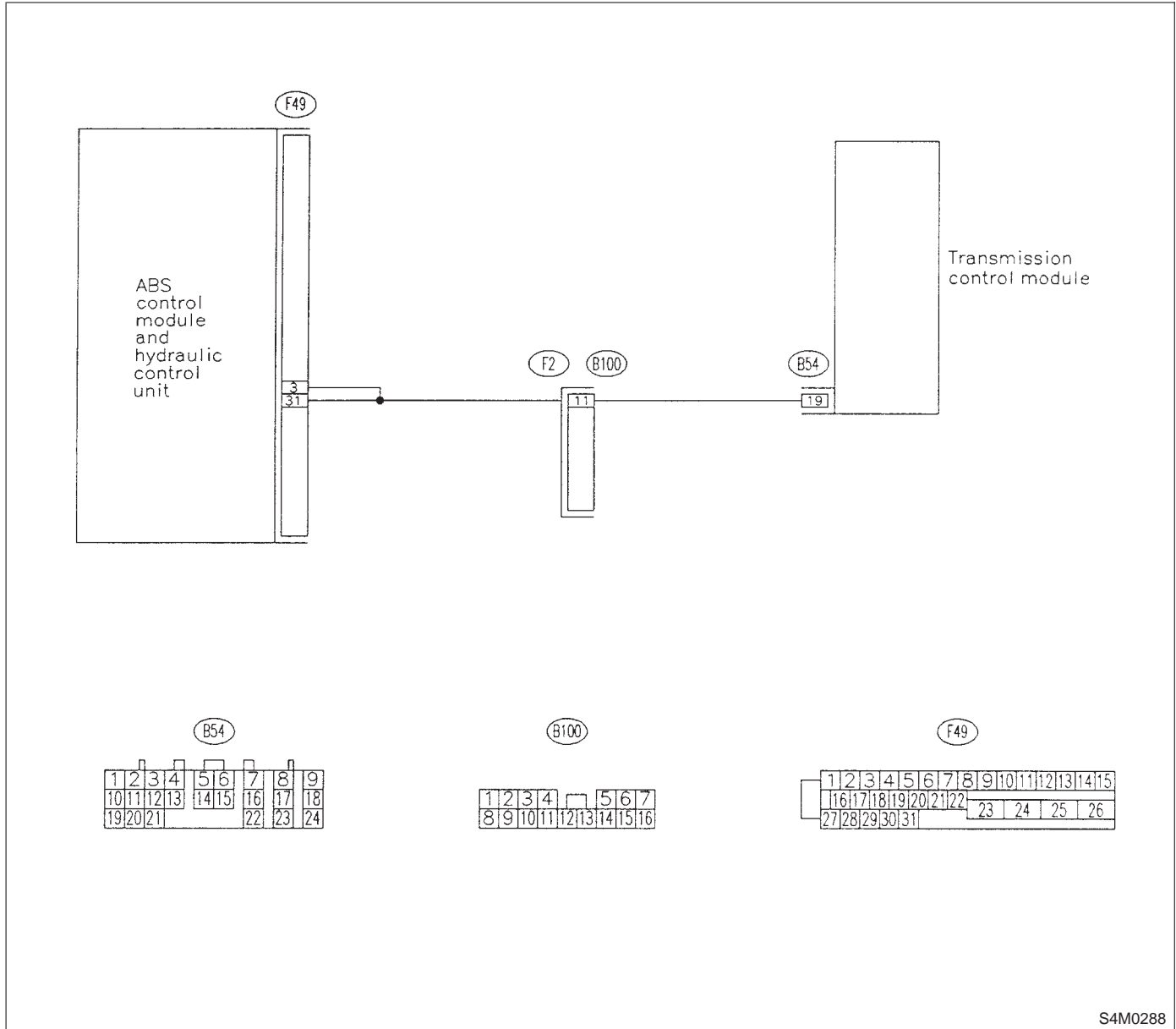
**DIAGNOSIS:**

- Combination of AT control faults

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**

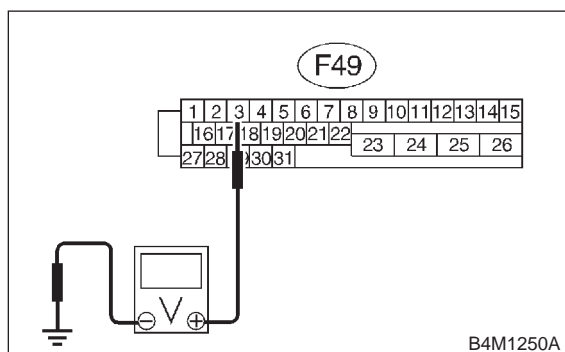


S4M0288

**10Z1 : CHECK BATTERY SHORT OF HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect the two connectors from TCM.
- 3) Disconnect connector from ABSCM&H/U.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 3 (+) — Chassis ground (-):**

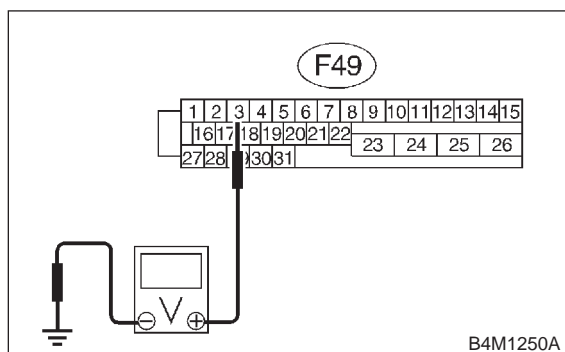


- CHECK** : *Is the voltage less than 1 V?*
- YES** : Go to step 10Z2.
- NO** : Repair harness between TCM and ABSCM&H/U.

**10Z2 : CHECK BATTERY SHORT OF HARNESS.**

- 1) Turn ignition switch to ON.
- 2) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 3 (+) — Chassis ground (-):**

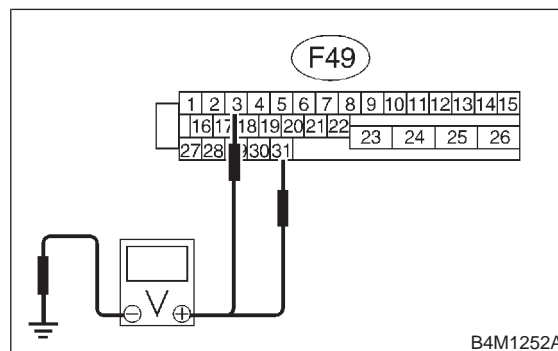


- CHECK** : *Is the voltage less than 1 V?*
- YES** : Go to step 10Z3.
- NO** : Repair harness between TCM and ABSCM&H/U.

**10Z3 : CHECK OPEN CIRCUIT OF HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Connect all connectors to TCM.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 3 (+) — Chassis ground (-):**  
**(F49) No. 31 (+) — Chassis ground (-):**



- CHECK** : *Is the voltage between 5.5 and 15 V?*
- YES** : Go to step 10Z4.
- NO** : Repair harness/connector between TCM and ABSCM&H/U.

**10Z4 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

- CHECK** : *Is there poor contact in connectors between TCM and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step 10Z5.

**10Z5 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step 10Z6.

**10Z6 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**MEMO:**

**AA: TROUBLE CODE 51 VALVE RELAY MALFUNCTION  
— VALVE RELAY MALFUNCTION —**

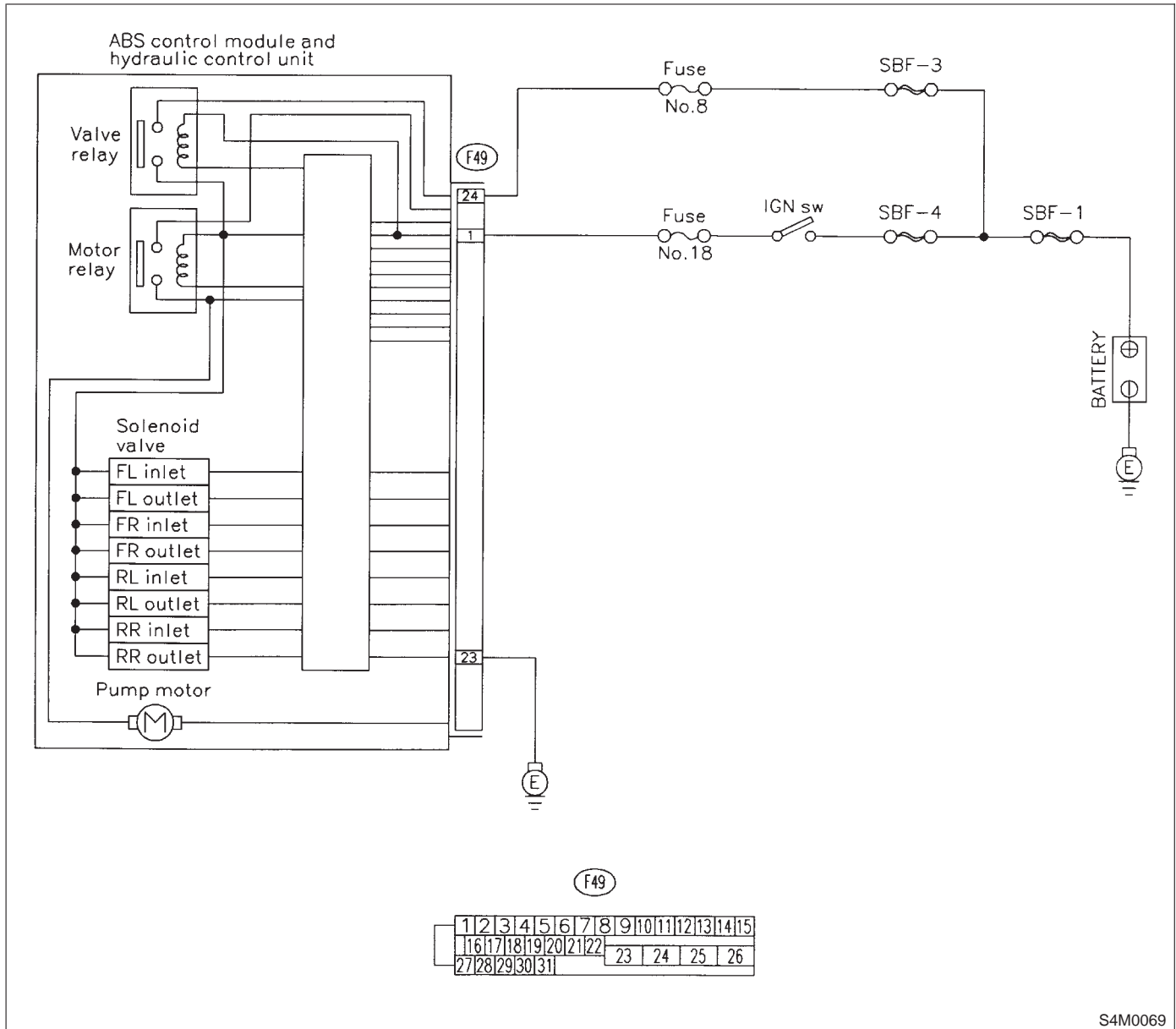
**DIAGNOSIS:**

- Faulty valve relay

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



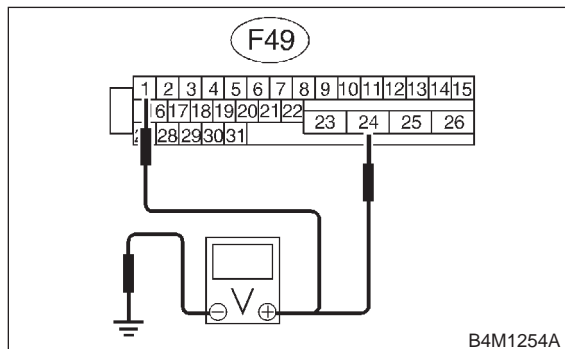
S4M0069

**10AA1 : CHECK INPUT VOLTAGE OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Run the engine at idle.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 1 (+) — Chassis ground (-):**  
**(F49) No. 24 (+) — Chassis ground (-):**



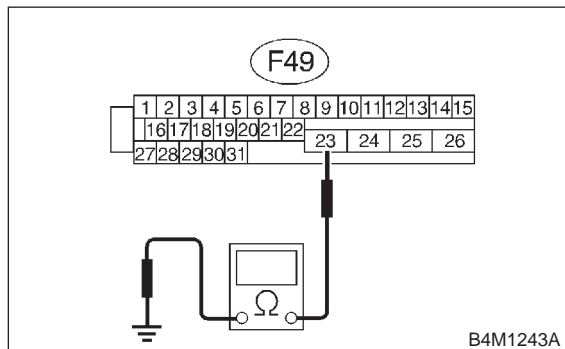
- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step 10AA2.
- NO** : Repair harness connector between battery and ABSCM&H/U.

**10AA2 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 23 — Chassis ground:**



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Go to step 10AA3.
- NO** : Repair ABSCM&H/U ground harness.

**10AA3 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step 10AA4.

**10AA4 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
  - 2) Erase the memory.
  - 3) Perform inspection mode.
  - 4) Read out the trouble code.
- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step 10AA5.

**10AA5 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : *Are other trouble codes being output?*
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary poor contact.



**AB: TROUBLE CODE 51 VALVE RELAY ON FAILURE**  
**— VALVE RELAY ON FAILURE —**

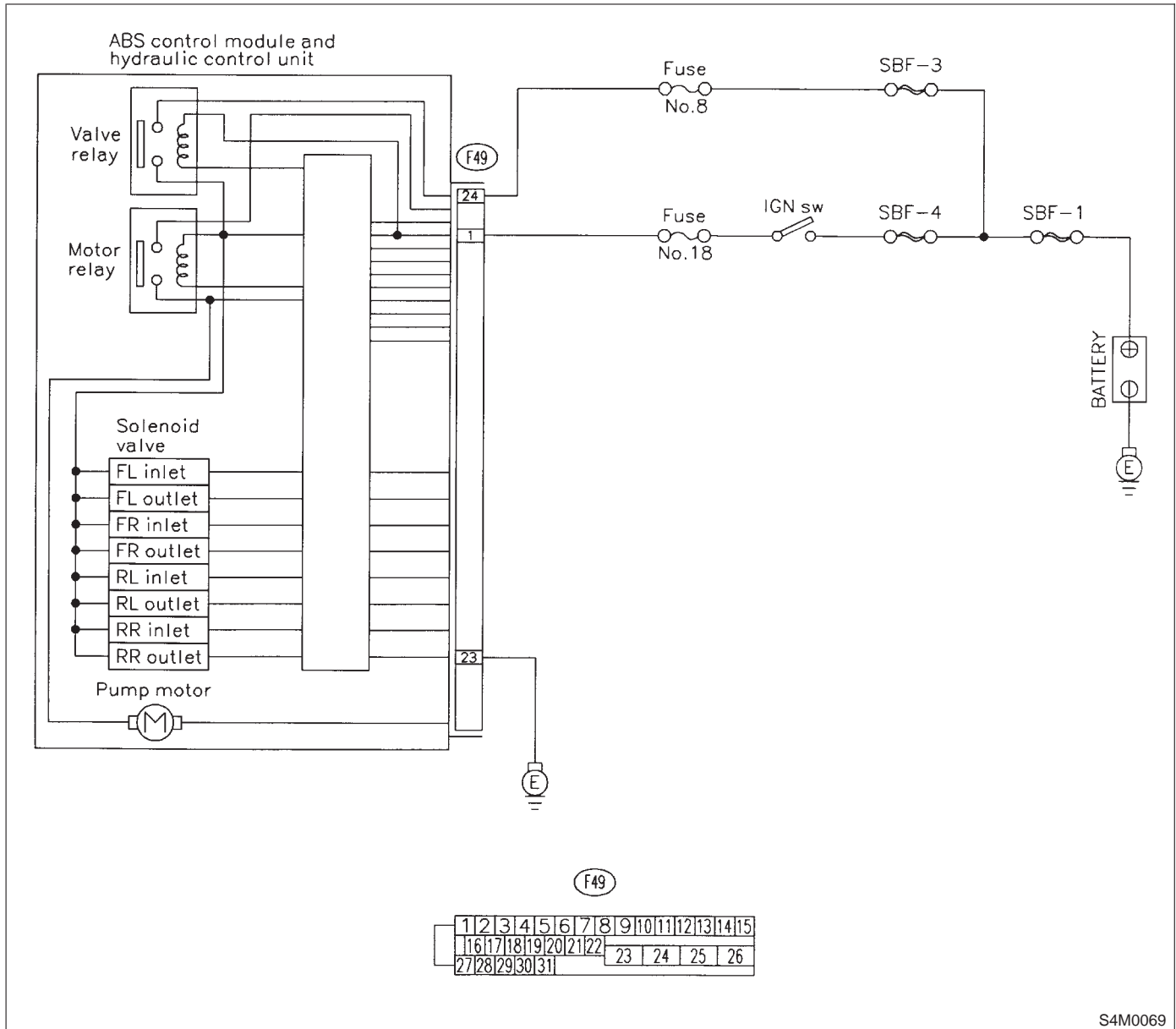
**DIAGNOSIS:**

- Faulty valve relay

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



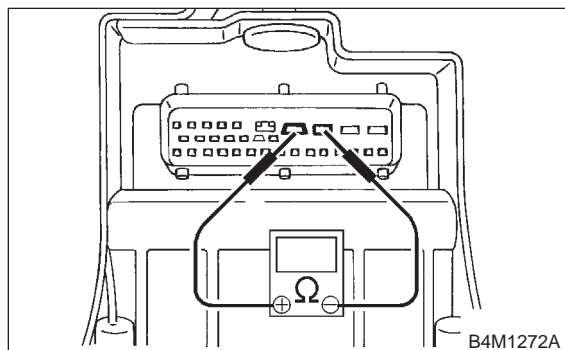
S4M0069

**10AB1 : CHECK VALVE RELAY IN ABSCM&H/U.**

Measure resistance between ABSCM&H/U terminals.

**Terminals**

**No. 23 (+) — No. 24 (-):**



- CHECK** : *Is the resistance more than 1 MΩ?*
- YES** : Go to step **10AB2**.
- NO** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**10AB2 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step **10AB3**.

**10AB3 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step **10AB4**.

**10AB4 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : *Are other trouble codes being output?*
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary poor contact.

**AC: TROUBLE CODE 52 OPEN CIRCUIT IN MOTOR RELAY CIRCUIT — OPEN CIRCUIT IN MOTOR RELAY CIRCUIT —**

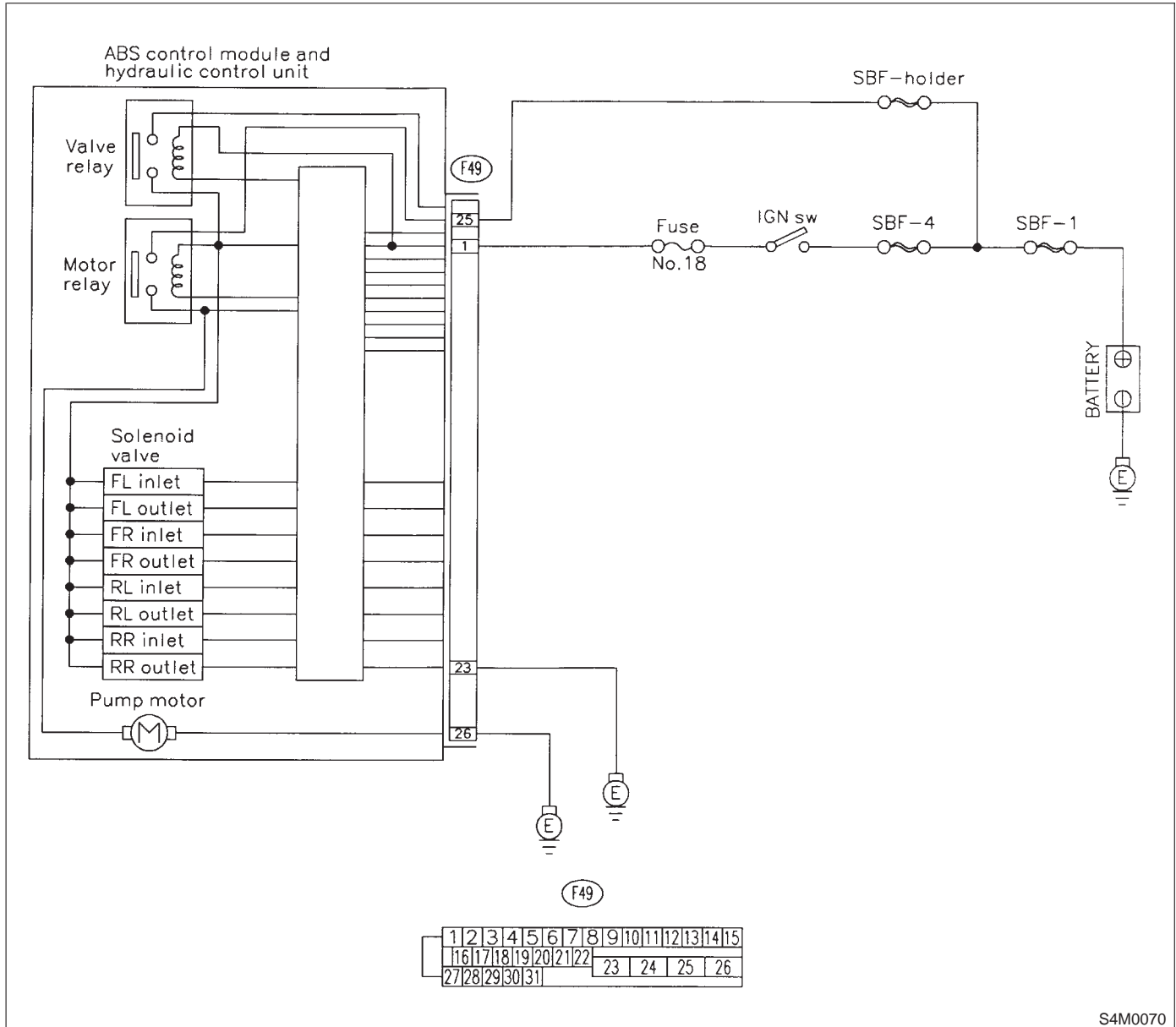
**DIAGNOSIS:**

- Faulty motor
- Faulty motor relay
- Faulty harness connector

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**

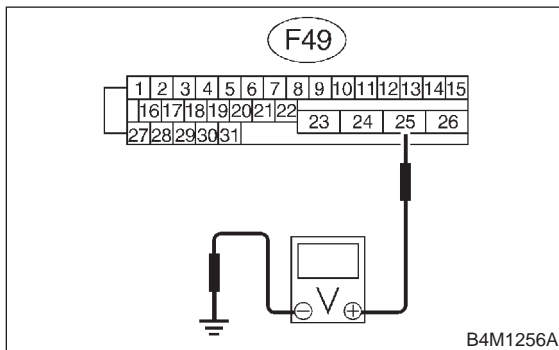


S4M0070

**10AC1 : CHECK INPUT VOLTAGE OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 25 (+) — Chassis ground (-):**

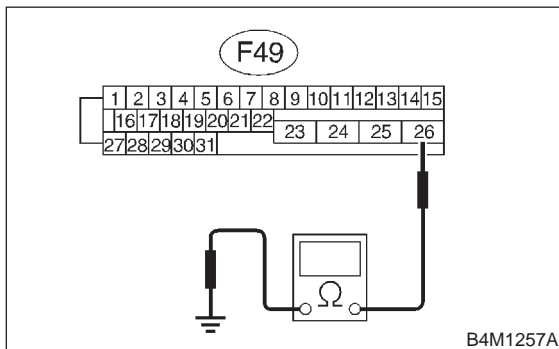


- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step **10AC2**.
- NO** : Repair harness/connector between battery and ABSCM&H/U and check fuse SBF-6.

**10AC2 : CHECK GROUND CIRCUIT OF MOTOR.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 26 — Chassis ground:**



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Go to step **10AC3**.
- NO** : Repair ABSCM&H/U ground harness.

**10AC3 : CHECK MOTOR OPERATION.**

Operate the sequence control. <Ref. to 4-4 [W14D1].>

NOTE:

Use the diagnosis connector to operate the sequence control.

- CHECK** : *Can motor revolution noise (buzz) be heard when carrying out the check sequence?*
- YES** : Go to step **10AC4**.
- NO** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**10AC4 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

- CHECK** : *Is there poor contact in connector between hydraulic unit, relay box and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step **10AC5**.

**10AC5 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step **10AC6**.

**10AC6 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : *Are other trouble codes being output?*
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary poor contact.

**AD: TROUBLE CODE 52 MOTOR RELAY ON FAILURE**  
**— MOTOR RELAY ON FAILURE —**

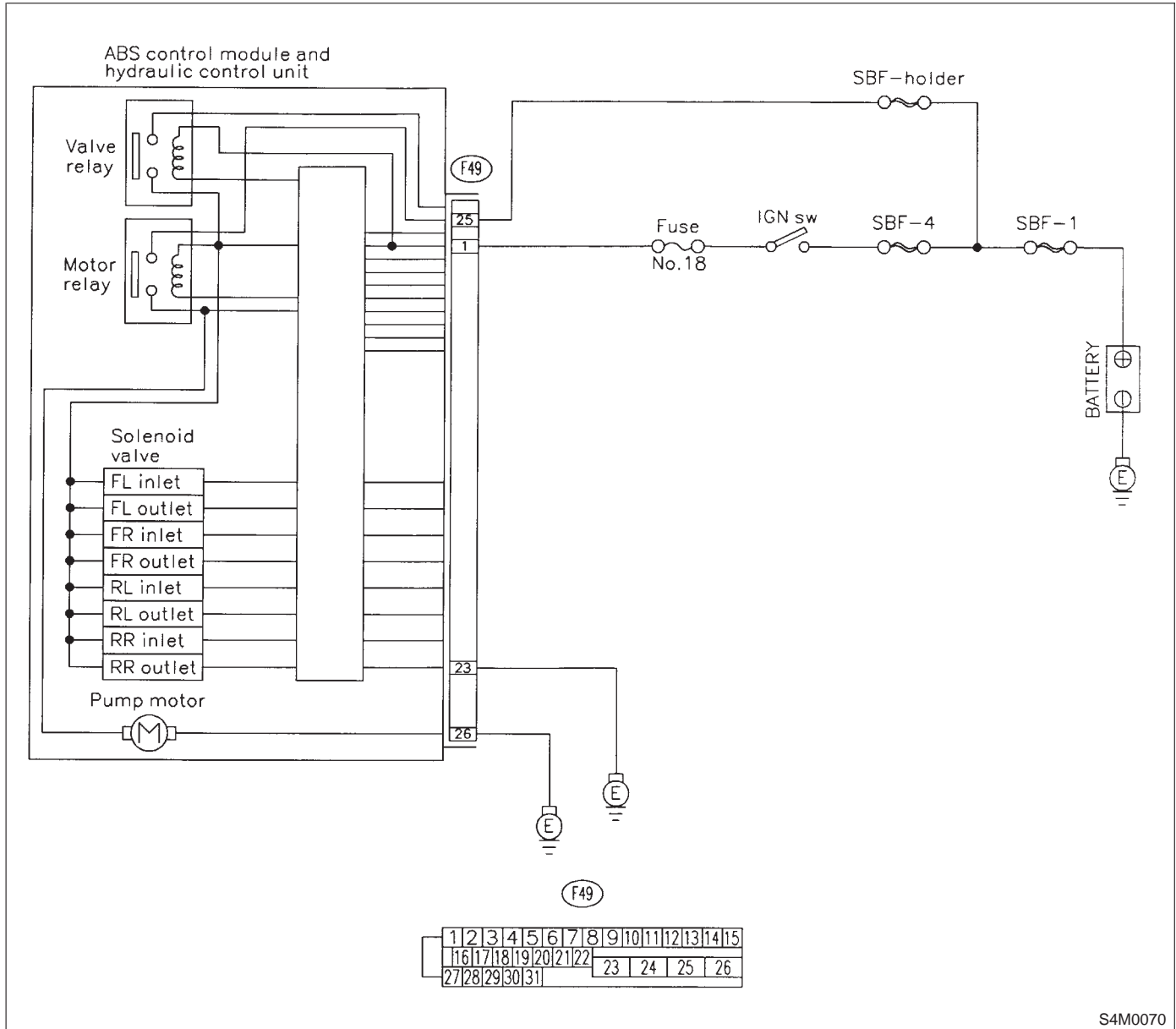
**DIAGNOSIS:**

- Faulty motor
- Faulty motor relay
- Faulty harness connector

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



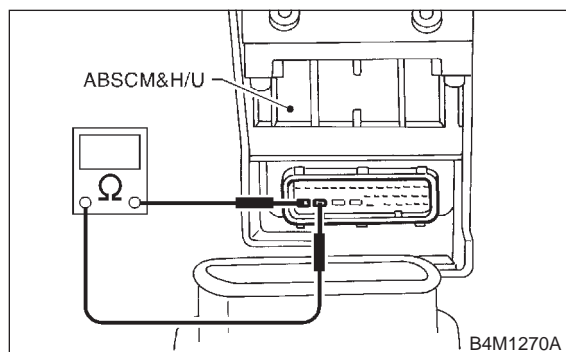
S4M0070

**10AD1 : CHECK MOTOR RELAY IN ABSCM&H/U.**

Measure resistance between ABSCM&H/U terminals.

**Terminals**

**No. 25 — No. 26:**



- CHECK** : *Is the resistance more than 1 MΩ?*  
**YES** : Go to step **10AD2**.  
**NO** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**10AD2 : CHECK MOTOR OPERATION.**

Operate the sequence control. <Ref. to 4-4 [W14D1].>

**NOTE:**

Use the diagnosis connector to operate the sequence control.

- CHECK** : *Can motor revolution noise (buzz) be heard when carrying out the sequence control?*  
**YES** : Go to step **10AD3**.  
**NO** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**10AD3 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

- CHECK** : *Is there poor contact in connector between hydraulic unit, relay box and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*  
**YES** : Repair connector.  
**NO** : Go to step **10AD4**.

**10AD4 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*  
**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>  
**NO** : Go to step **10AD5**.

**10AD5 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : *Are other trouble codes being output?*  
**YES** : Proceed with the diagnosis corresponding to the trouble code.  
**NO** : A temporary poor contact.

**AE: TROUBLE CODE 52 MOTOR MALFUNCTION  
— MOTOR MALFUNCTION —**

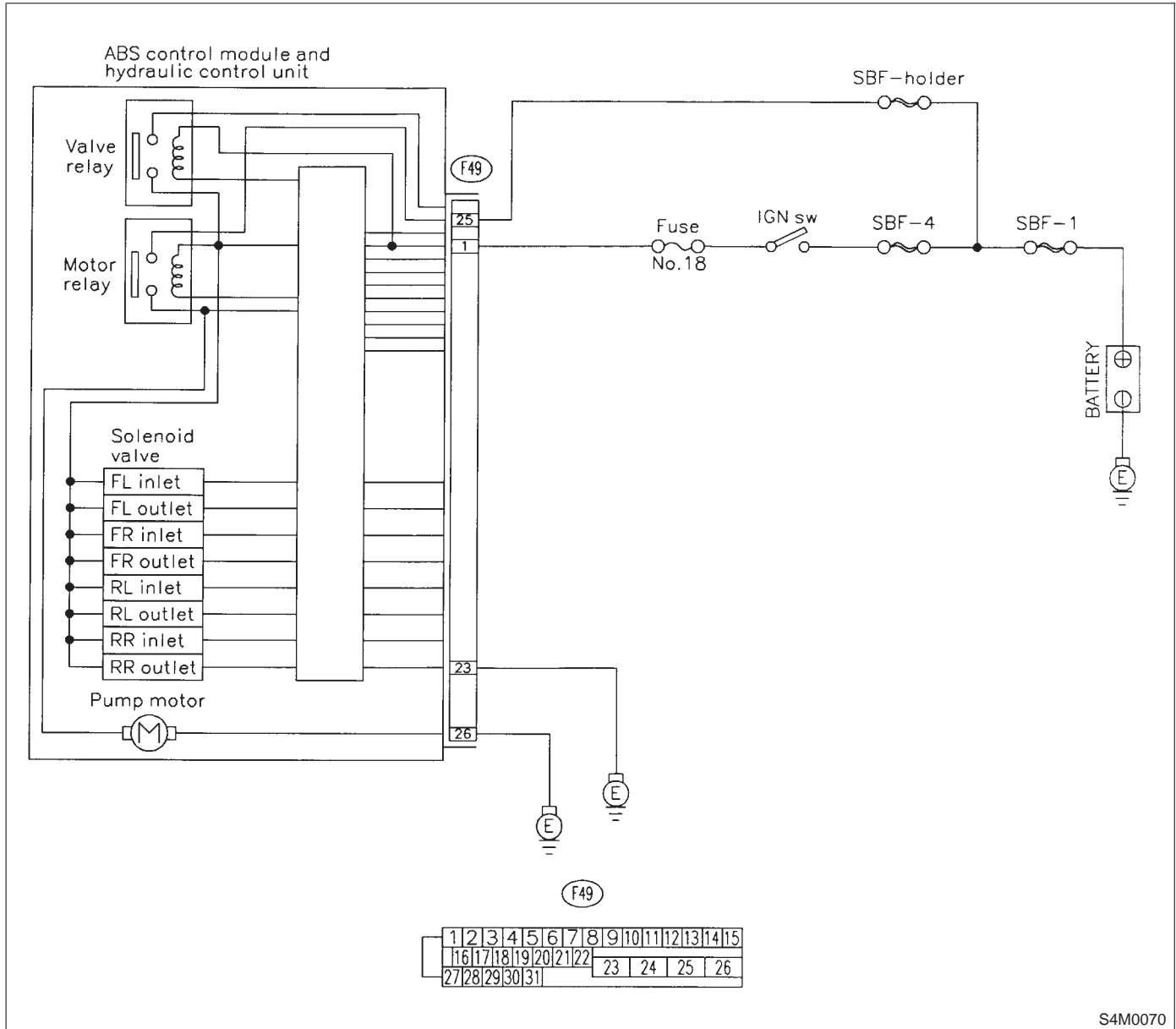
**DIAGNOSIS:**

- Faulty motor
- Faulty motor relay
- Faulty harness connector

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



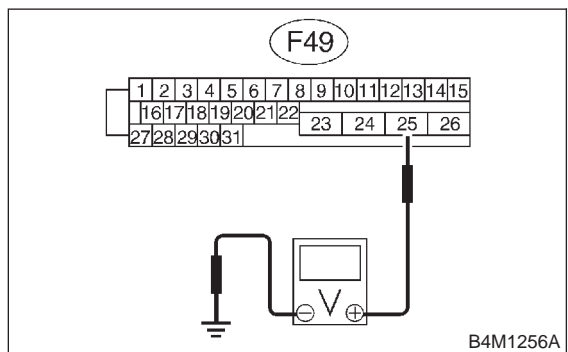
S4M0070

**10AE1 : CHECK INPUT VOLTAGE OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 25 (+) — Chassis ground (-):**



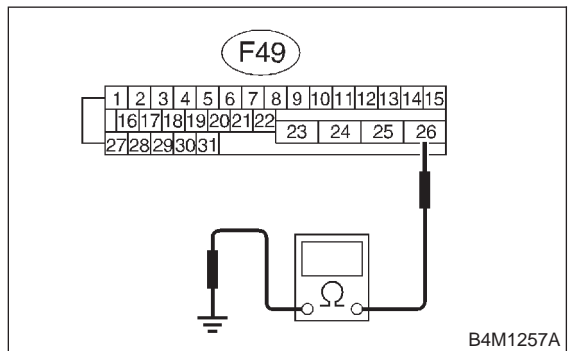
- CHECK** : Is the voltage between 10 and 15 V?  
**YES** : Go to step 10AE2.  
**NO** : Repair harness/connector between battery and ABSCM&H/U and check fuse SBF-6.

**10AE2 : CHECK GROUND CIRCUIT OF MOTOR.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 26 — Chassis ground:**



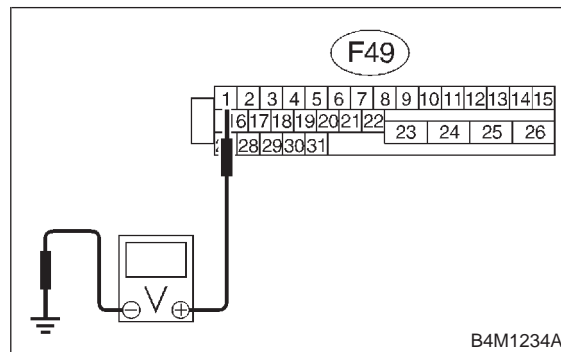
- CHECK** : Is the resistance less than 0.5 Ω?  
**YES** : Go to step 10AE3.  
**NO** : Repair ABSCM&H/U ground harness.

**10AE3 : CHECK INPUT VOLTAGE OF ABSCM&H/U.**

- 1) Run the engine at idle.
- 2) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 1 (+) — Chassis ground (-):**



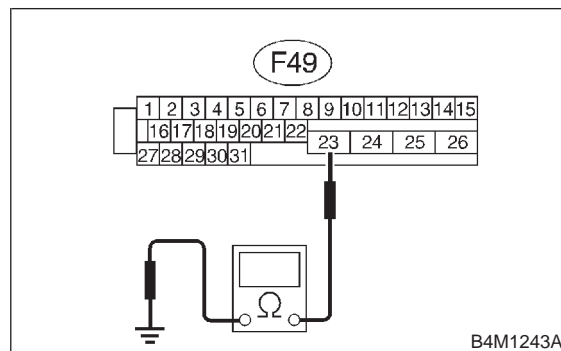
- CHECK** : Is the voltage between 10 and 15 V?  
**YES** : Go to step 10AE4.  
**NO** : Repair harness connector between battery, ignition switch and ABSCM&H/U.

**10AE4 : CHECK GROUND CIRCUIT OF ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**

**(F49) No. 23 — Chassis ground:**



- CHECK** : Is the resistance less than 0.5 Ω?  
**YES** : Go to step 10AE5.  
**NO** : Repair ABSCM&H/U ground harness.



**10AE5 : CHECK MOTOR OPERATION.**

Operate the sequence control. <Ref. to 4-4 [W14D1].>

NOTE:

Use the diagnosis connector to operate the sequence control.

**CHECK** : *Can motor revolution noise (buzz) be heard when carrying out the sequence control?*

**YES** : Go to step **10AE6**.

**NO** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**10AE6 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

**CHECK** : *Is there poor contact in connector between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step **10AE7**.

**10AE7 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10AE8**.

**10AE8 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**MEMO:**

**AF: TROUBLE CODE 54 STOP LIGHT SWITCH SIGNAL CIRCUIT MALFUNCTION**

**— STOP LIGHT SWITCH SIGNAL CIRCUIT MALFUNCTION —**

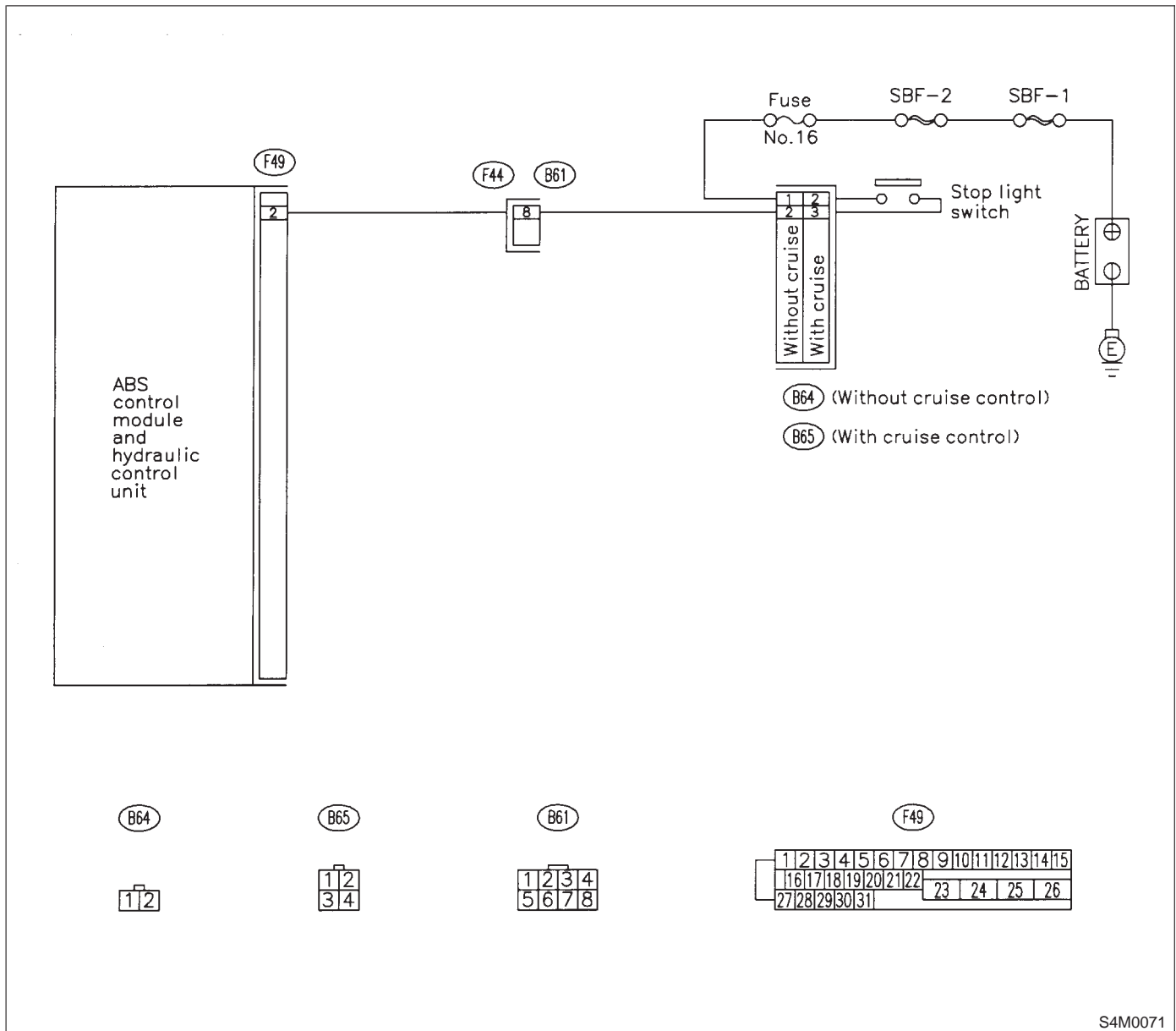
**DIAGNOSIS:**

- Faulty stop light switch

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



S4M0071

**10AF1 : CHECK OUTPUT OF STOP LIGHT SWITCH USING SELECT MONITOR.**

- 1) Select "Current data display & Save" on the select monitor.
- 2) Release the brake pedal.
- 3) Read the stop light switch output in the select monitor data display.

- CHECK** : *Is the reading indicated on monitor display less than 1.5 V?*
- YES** : Go to step 10AF2.
- NO** : Go to step 10AF3.

**10AF2 : CHECK OUTPUT OF STOP LIGHT SWITCH USING SELECT MONITOR.**

- 1) Depress the brake pedal.
- 2) Read the stop light switch output in the select monitor data display.

- CHECK** : *Is the reading indicated on monitor display between 10 and 15 V?*
- YES** : Go to step 10AF5.
- NO** : Go to step 10AF3.

**10AF3 : CHECK IF STOP LIGHTS COME ON.**

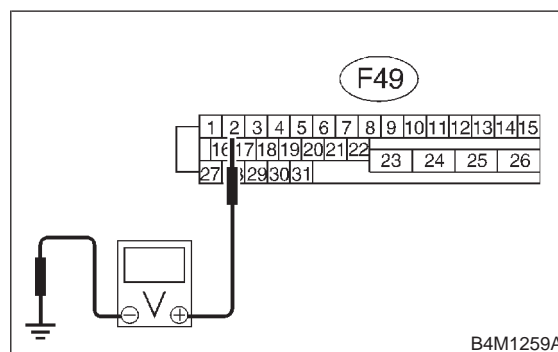
Depress the brake pedal.

- CHECK** : *Do stop lights turn on?*
- YES** : Go to step 10AF4.
- NO** : Repair stop lights circuit.

**10AF4 : CHECK OPEN CIRCUIT IN HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Depress brake pedal.
- 4) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 2 — Chassis ground:**



- CHECK** : *Is the voltage between 10 and 15 V?*
- YES** : Go to step 10AF5.
- NO** : Repair harness between stop light switch and ABSCM&H/U connector.

**10AF5 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connector between stop light switch and ABSCM&H/U? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step 10AF6.

**10AF6 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
  - 2) Erase the memory.
  - 3) Perform inspection mode.
  - 4) Read out the trouble code.
- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step 10AF7.

**10AF7 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**MEMO:**

**AG: TROUBLE CODE 56 OPEN OR SHORT CIRCUIT IN G SENSOR CIRCUIT — OPEN OR SHORT CIRCUIT IN G SENSOR CIRCUIT —**

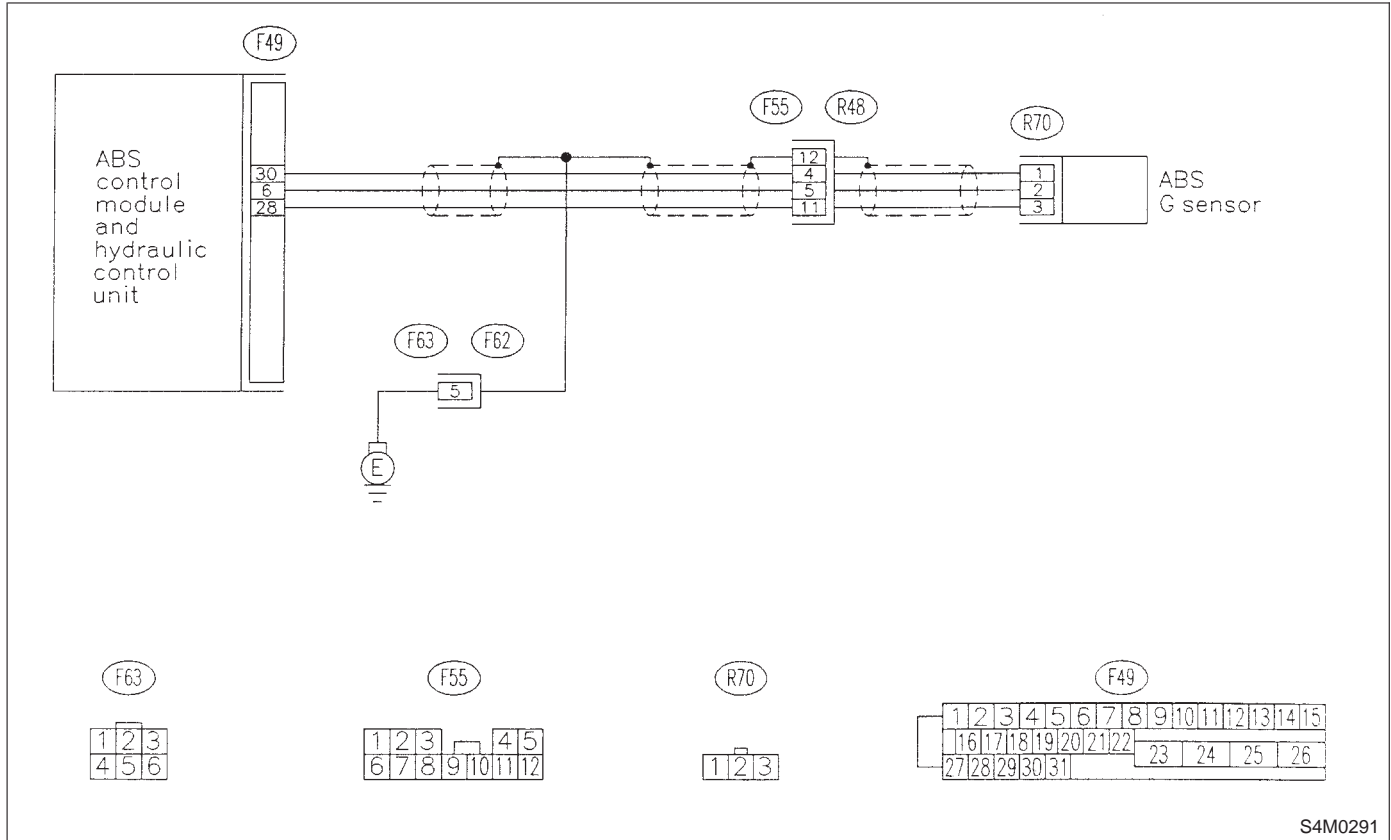
**DIAGNOSIS:**

- Faulty G sensor output voltage

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



S4M0291

**10AG1 : CHECK OUTPUT OF G SENSOR USING SELECT MONITOR.**

- 1) Select "Current data display & Save" on the select monitor.
- 2) Read the G sensor output in select monitor data display.

**CHECK** : *Is the G sensor output on the monitor display between 2.1 and 2.5 V when the G sensor is in horizontal position?*

**YES** : Go to step **10AG2**.

**NO** : Go to step **10AG5**.

**10AG2 : CHECK POOR CONTACT IN CONNECTORS.**

**CHECK** : *Is there poor contact in connector between ABSCM&H/U and G sensor? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step **10AG3**.

**10AG3 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10AG4**.

**10AG4 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

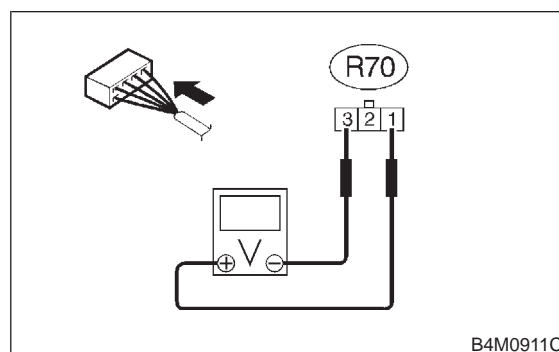
**NO** : A temporary poor contact.

**10AG5 : CHECK INPUT VOLTAGE OF G SENSOR.**

- 1) Turn ignition switch to OFF.
- 2) Remove console box.
- 3) Disconnect G sensor from body. (Do not disconnect connector.)
- 4) Turn ignition switch to ON.
- 5) Measure voltage between G sensor connector terminals.

**Connector & terminal**

**(R70) No. 1 (+) — No. 3 (-):**



**CHECK** : *Is the voltage between 4.75 and 5.25 V?*

**YES** : Go to step **10AG6**.

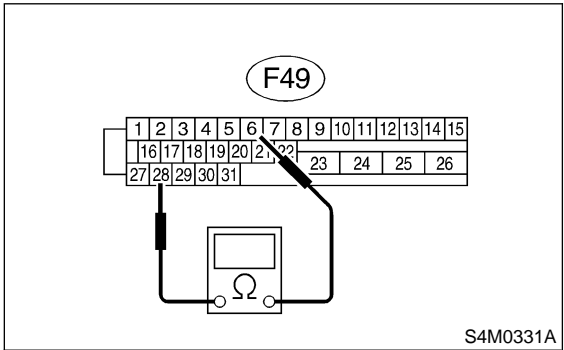
**NO** : Repair harness/connector between G sensor and ABSCM&H/U.



**10AG6 : CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Measure resistance between ABSCM&H/U connector terminals.

**Connector & terminal**  
**(F49) No. 6 — No. 28:**



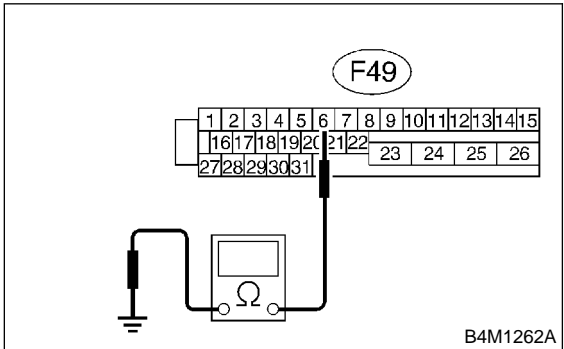
S4M0331A

- CHECK** : Is the resistance between 4.3 and 4.9 kΩ?
- YES** : Go to step 10AG7.
- NO** : Repair harness/connector between G sensor and ABSCM&H/U.

**10AG7 : CHECK GROUND SHORT IN G SENSOR OUTPUT HARNESS.**

- 1) Disconnect connector from G sensor.
- 2) Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 6 — Chassis ground:**



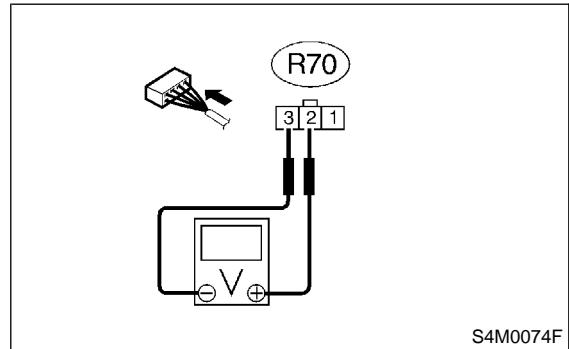
B4M1262A

- CHECK** : Is the resistance more than 1 MΩ?
- YES** : Go to step 10AG8.
- NO** : Repair harness between G sensor and ABSCM&H/U.

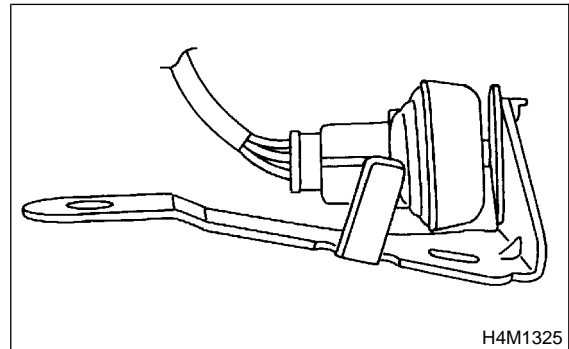
**10AG8 : CHECK G SENSOR.**

- 1) Connect connector to G sensor.
- 2) Connect connector to ABSCM&H/U.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between G sensor connector terminals.

**Connector & terminal**  
**(R70) No. 2 (+) — No. 3 (-):**



S4M0074F



H4M1325

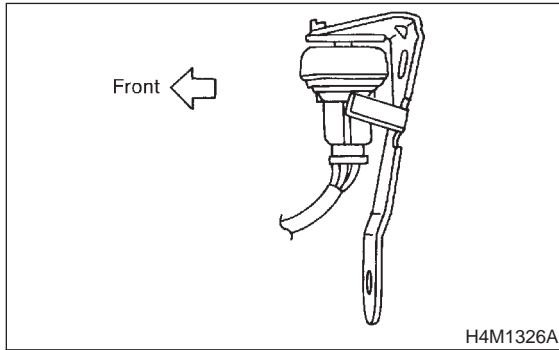
- CHECK** : Is the voltage between 2.1 and 2.5 V when G sensor is horizontal?
- YES** : Go to step 10AG9.
- NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AG9 : CHECK G SENSOR.**

Measure voltage between G sensor connector terminals.

**Connector & terminal**

(R70) No. 2 (+) — No. 3 (-):



**CHECK** : *Is the voltage between 3.7 and 4.1 V when G sensor is inclined forwards to 90°?*

**YES** : Go to step **10AG10**.

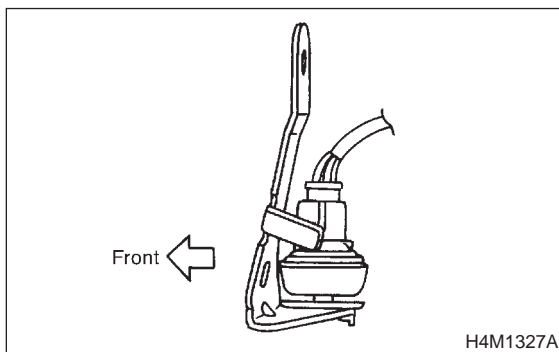
**NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AG10 : CHECK G SENSOR.**

Measure voltage between G sensor connector terminals.

**Connector & terminal**

(R70) No. 2 (+) — No. 3 (-):



**CHECK** : *Is the voltage between 0.5 and 0.9 V when G sensor is inclined backwards to 90°?*

**YES** : Go to step **10AG11**.

**NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AG11 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

**CHECK** : *Is there poor contact in connector between ABSCM&H/U and G sensor? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step **10AG12**.

**10AG12 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10AG13**.

**10AG13 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**AH: TROUBLE CODE 56 BATTERY SHORT IN G SENSOR CIRCUIT  
— BATTERY SHORT IN G SENSOR CIRCUIT —**

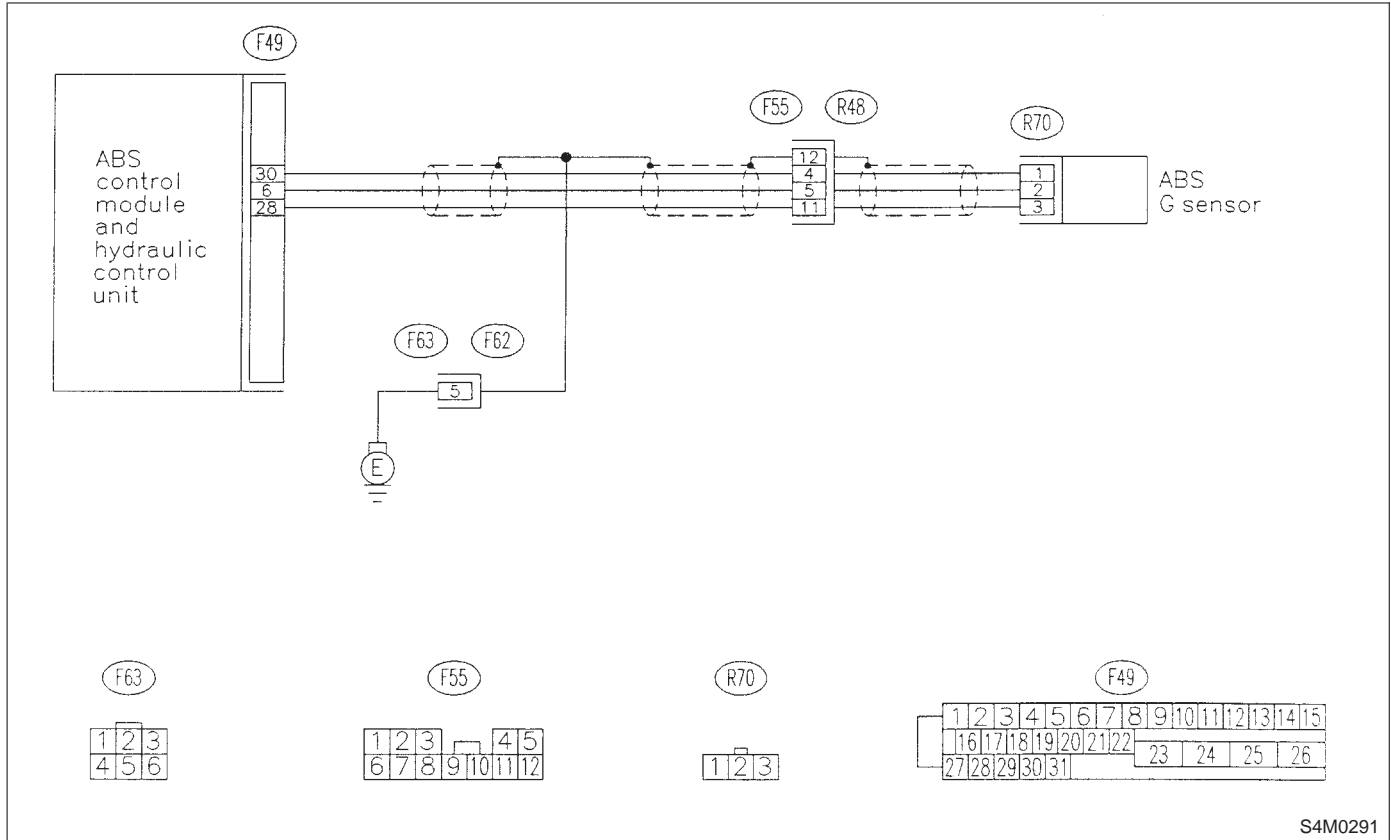
**DIAGNOSIS:**

- Faulty G sensor output voltage

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



S4M0291

**10AH1 : CHECK OUTPUT OF G SENSOR USING SELECT MONITOR.**

- 1) Select "Current data display & Save" on the select monitor.
- 2) Read the G sensor output in select monitor data display.

**CHECK** : *Is the G sensor output on the monitor display between 2.1 and 2.5 V when the G sensor is in horizontal position?*

**YES** : Go to step 10AH2.

**NO** : Go to step 10AH5.

**10AH2 : CHECK POOR CONTACT IN CONNECTORS.**

**CHECK** : *Is there poor contact in connector between ABSCM&H/U and G sensor? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step 10AH3.

**10AH3 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step 10AH4.

**10AH4 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**10AH5 : CHECK FREEZE FRAME DATA.**

- 1) Select "Freeze frame data" on the select monitor.
- 2) Read front right wheel speed on the select monitor display.

**CHECK** : *Is the front right wheel speed on monitor display 0 km?*

**YES** : Go to step 10AH6.

**NO** : Go to step 10AH14.

**10AH6 : CHECK FREEZE FRAME DATA.**

Read front left wheel speed on the select monitor display.

**CHECK** : *Is the front left wheel speed on monitor display 0 km?*

**YES** : Go to step 10AH7.

**NO** : Go to step 10AH14.

**10AH7 : CHECK FREEZE FRAME DATA.**

Read rear right wheel speed on the select monitor display.

**CHECK** : *Is the rear right wheel speed on monitor display 0 km?*

**YES** : Go to step 10AH8.

**NO** : Go to step 10AH14.

**10AH8 : CHECK FREEZE FRAME DATA.**

Read rear left wheel speed on the select monitor display.

**CHECK** : *Is the rear left wheel speed on monitor display 0 km?*

**YES** : Go to step 10AH9.

**NO** : Go to step 10AH14.

**10AH9 : CHECK FREEZE FRAME DATA.**

Read G sensor output on the select monitor display.

**CHECK** : *Is the G sensor output on monitor display more than 3.65 V?*

**YES** : Go to step 10AH10.

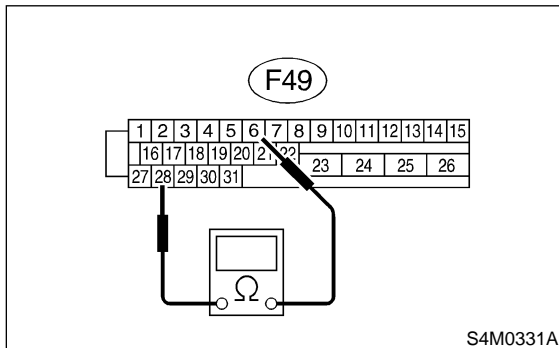
**NO** : Go to step 10AH14.

**10AH10 : CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Measure resistance between ABSCM&H/U connector terminals.

**Connector & terminal**

**(F49) No. 6 — No. 28:**



- CHECK** : *Is the resistance between 4.3 and 4.9 k $\Omega$ ?*
- YES** : Go to step **10AH11**.
- NO** : Repair harness/connector between G sensor and ABSCM&H/U.

**10AH11 : CHECK POOR CONTACT IN CONNECTORS.**

- CHECK** : *Is there poor contact in connector between ABSCM&H/U and G sensor? <Ref. to FOREWORD [W3C1].>*
- YES** : Repair connector.
- NO** : Go to step **10AH12**.

**10AH12 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

- CHECK** : *Is the same trouble code as in the current diagnosis still being output?*
- YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>
- NO** : Go to step **10AH13**.

**10AH13 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

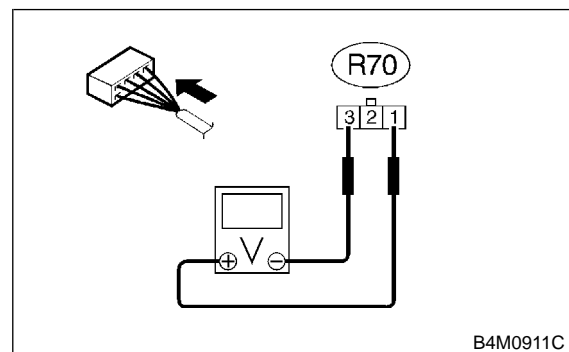
- CHECK** : *Are other trouble codes being output?*
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary poor contact.

**10AH14 : CHECK INPUT VOLTAGE OF G SENSOR.**

- 1) Turn ignition switch to OFF.
- 2) Remove console box.
- 3) Disconnect G sensor from body. (Do not disconnect connector.)
- 4) Turn ignition switch to ON.
- 5) Measure voltage between G sensor connector terminals.

**Connector & terminal**

**(R70) No. 1 (+) — No. 3 (-):**

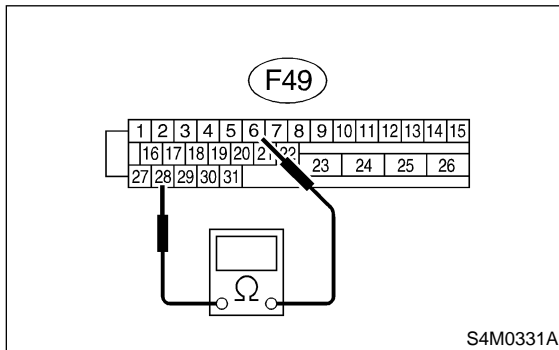


- CHECK** : *Is the voltage between 4.75 and 5.25 V?*
- YES** : Go to step **10AH15**.
- NO** : Repair harness/connector between G sensor and ABSCM&H/U.

**10AH15 : CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Measure resistance between ABSCM&H/U connector terminals.

**Connector & terminal**  
**(F49) No. 6 — No. 28:**

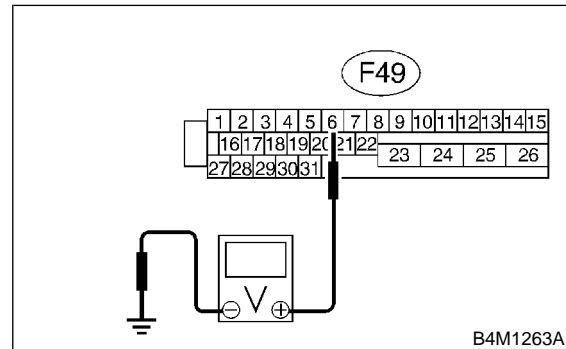


- CHECK** : *Is the resistance between 4.3 and 4.9 kΩ?*
- YES** : Go to step 10AH16.
- NO** : Repair harness/connector between G sensor and ABSCM&H/U.

**10AH16 : CHECK BATTERY SHORT OF HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Remove console box.
- 3) Disconnect connector from G sensor.
- 4) Disconnect connector from ABSCM&H/U.
- 5) Measure voltage between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 6 (+) — Chassis ground (-):**

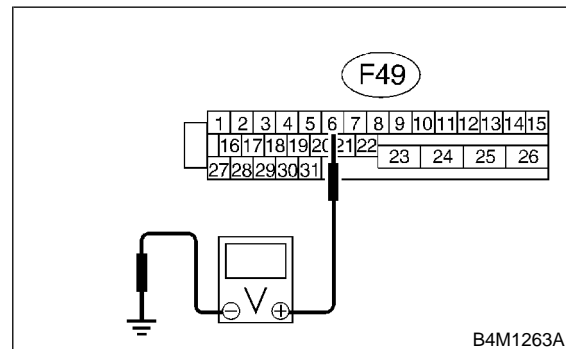


- CHECK** : *Is the voltage less than 1 V?*
- YES** : Go to step 10AH17.
- NO** : Repair harness between G sensor and ABSCM&H/U.

**10AH17 : CHECK BATTERY SHORT OF HARNESS.**

- 1) Turn ignition switch to ON.
- 2) Measure voltage between ABSCM&H/U connector and chassis ground.

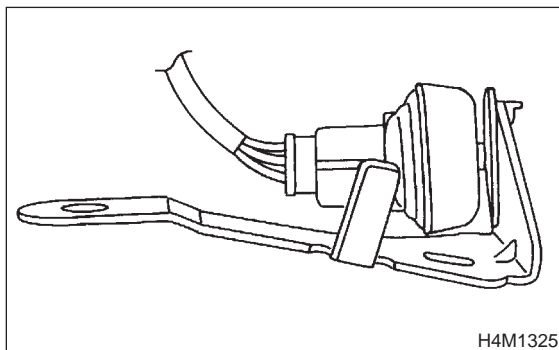
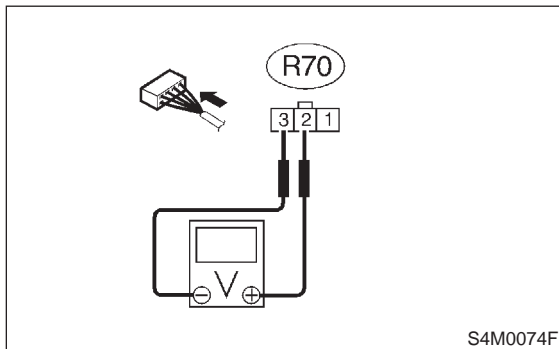
**Connector & terminal**  
**(F49) No. 6 (+) — Chassis ground (-):**



- CHECK** : *Is the voltage less than 1 V?*
- YES** : Go to step 10AH18.
- NO** : Repair harness between G sensor and ABSCM&H/U.

**10AH18 : CHECK G SENSOR.**

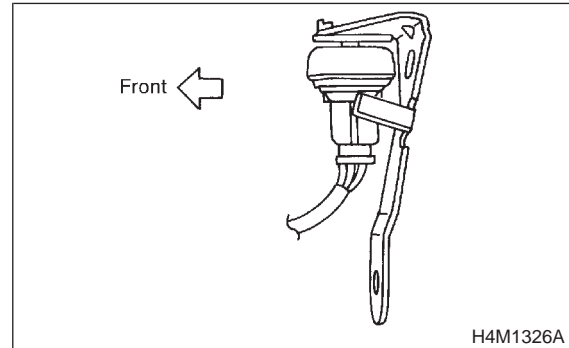
- 1) Connect connector to G sensor.
- 2) Connect connector to ABSCM&H/U.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between G sensor connector terminals.

**Connector & terminal****(R70) No. 2 (+) — No. 3 (-):**

- CHECK** : *Is the voltage between 2.1 and 2.5 V when G sensor is horizontal?*
- YES** : Go to step **10AH19**.
- NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AH19 : CHECK G SENSOR.**

Measure voltage between G sensor connector terminals.

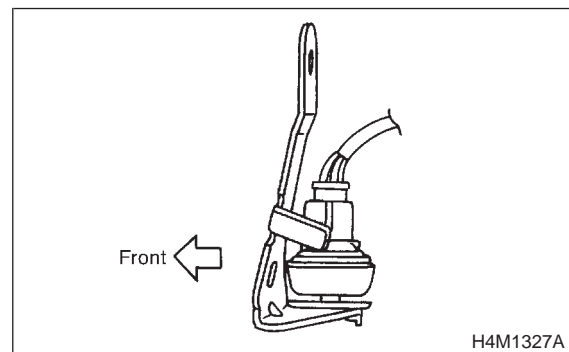
**Connector & terminal****(R70) No. 2 (+) — No. 3 (-):**

- CHECK** : *Is the voltage between 3.7 and 4.1 V when G sensor is inclined forwards to 90°?*

- YES** : Go to step **10AH20**.
- NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AH20 : CHECK G SENSOR.**

Measure voltage between G sensor connector terminals.

**Connector & terminal****(R70) No. 2 (+) — No. 3 (-):**

- CHECK** : *Is the voltage between 0.5 and 0.9 V when G sensor is inclined backwards to 90°?*

- YES** : Go to step **10AH21**.
- NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AH21 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

**CHECK** : *Is there poor contact in connector between ABSCM&H/U and G sensor? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step **10AH22**.

**10AH22 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10AH23**.

**10AH23 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.



**AI: TROUBLE CODE 56 ABNORMAL G SENSOR HIGH  $\mu$  OUTPUT — ABNORMAL G SENSOR HIGH  $\mu$  OUTPUT —**

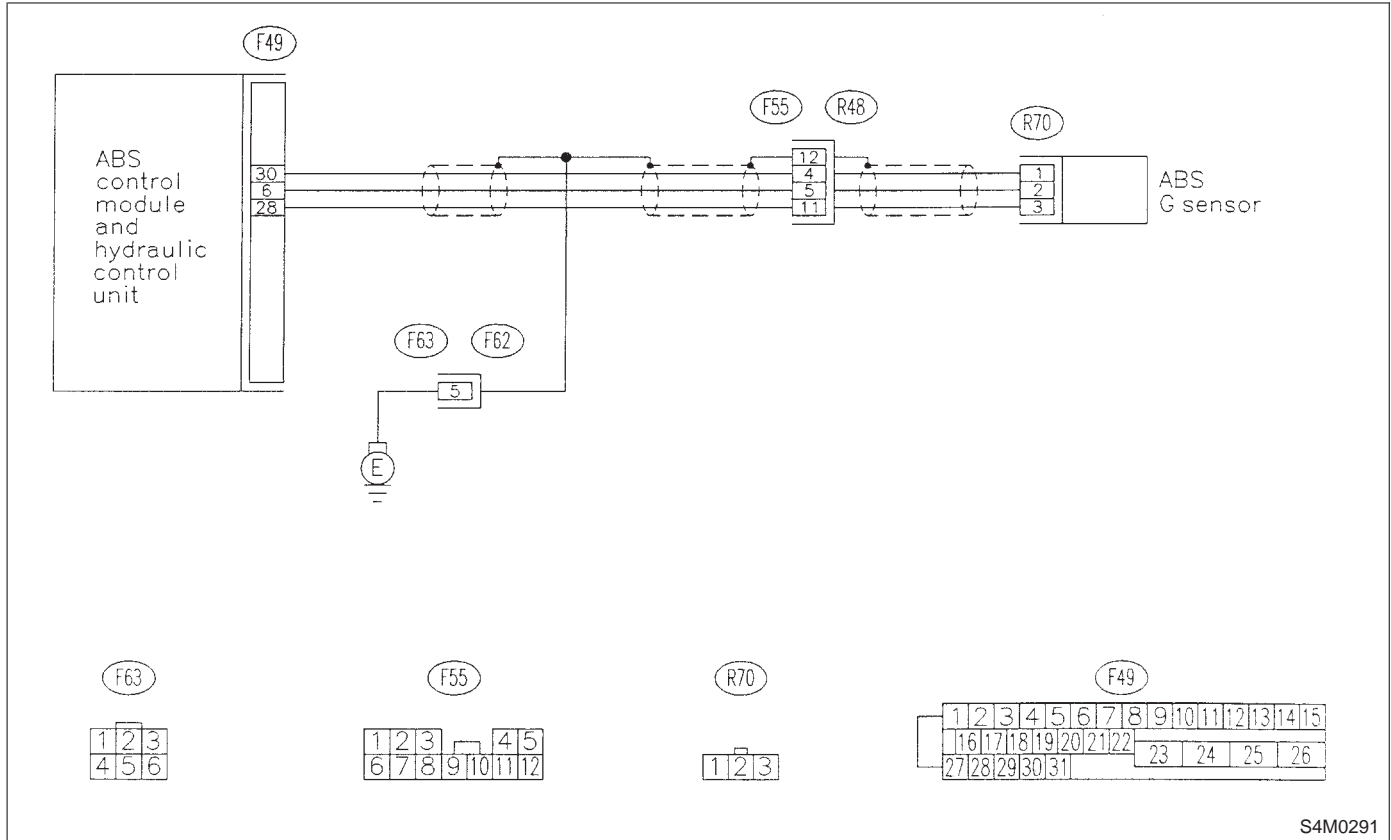
**DIAGNOSIS:**

- Faulty G sensor output voltage

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



S4M0291

**10A11 : CHECK OUTPUT OF G SENSOR USING SELECT MONITOR.**

- 1) Select "Current data display & Save" on the select monitor.
- 2) Read G sensor output on the select monitor display.

**CHECK** : *Is the G sensor output on monitor display between 2.1 and 2.5 V when the G sensor is in horizontal position?*

**YES** : Go to step 10A12.

**NO** : Go to step 10A15.

**10A12 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

**CHECK** : *Is there poor contact in connector between ABSCM&H/U and G sensor? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step 10A13.

**10A13 : CHECK ABSCM&H/U.**

- 1) Connect all connectors.
- 2) Erase the memory.
- 3) Perform inspection mode.
- 4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step 10A14.

**10A14 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

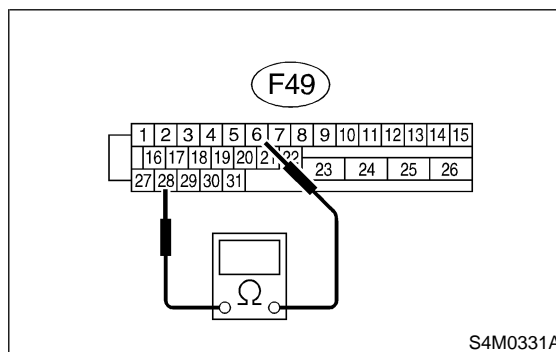
**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**10A15 : CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Measure resistance between ABSCM&H/U connector terminals.

**Connector & terminal**  
**(F49) No. 6 — No. 28:**



**CHECK** : *Is the resistance between 4.3 and 4.9 kΩ?*

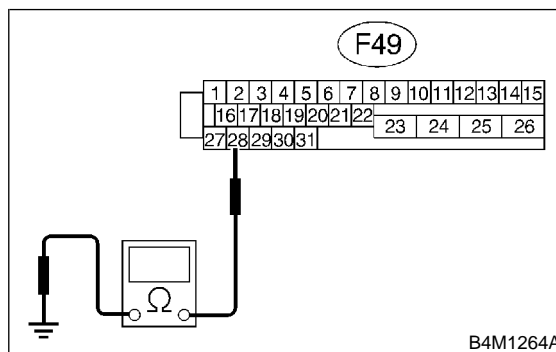
**YES** : Go to step 10A16.

**NO** : Repair harness/connector between G sensor and ABSCM&H/U.

**10A16 : CHECK GROUND SHORT OF HARNESS.**

Measure resistance between ABSCM&H/U connector and chassis ground.

**Connector & terminal**  
**(F49) No. 28 — Chassis ground:**



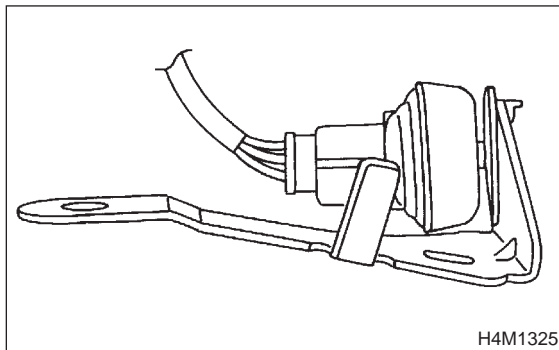
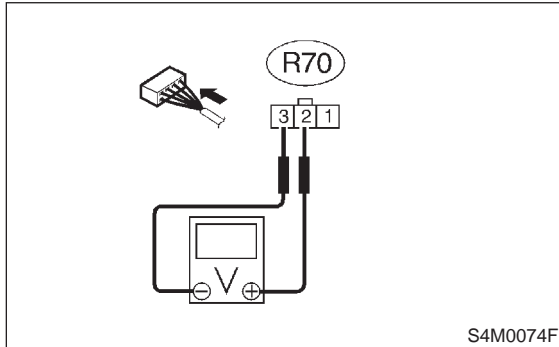
**CHECK** : *Is the resistance more than 1 MΩ?*

**YES** : Go to step 10A17.

**NO** : Repair harness between G sensor and ABSCM&H/U.

**10A17 : CHECK G SENSOR.**

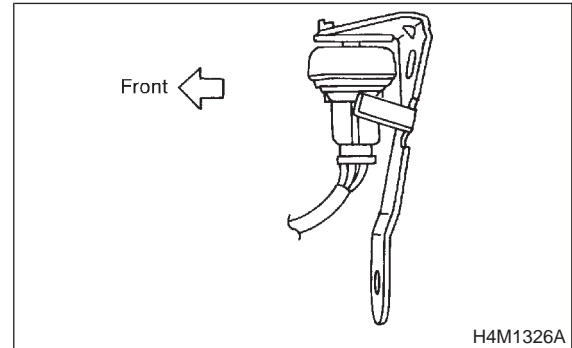
- 1) Remove console box.
- 2) Remove G sensor from vehicle.
- 3) Connect connector to G sensor.
- 4) Connect connector to ABSCM&H/U.
- 5) Turn ignition switch to ON.
- 6) Measure voltage between G sensor connector terminals.

**Connector & terminal****(R70) No. 2 (+) — No. 3 (-):**

- CHECK** : *Is the voltage between 2.1 and 2.5 V when G sensor is horizontal?*
- YES** : Go to step **10A18**.
- NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10A18 : CHECK G SENSOR.**

Measure voltage between G sensor connector terminals.

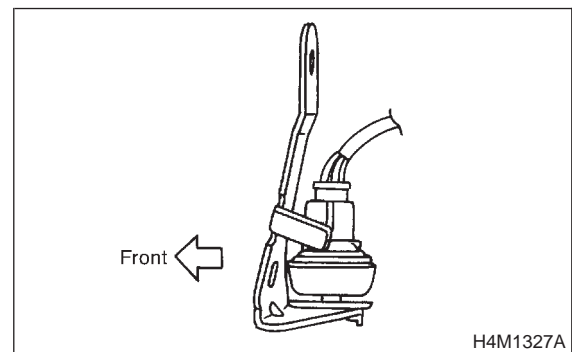
**Connector & terminal****(R70) No. 2 (+) — No. 3 (-):**

**CHECK** : *Is the voltage between 3.7 and 4.1 V when G sensor is inclined forwards to 90°?*

- YES** : Go to step **10A19**.
- NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10A19 : CHECK G SENSOR.**

Measure voltage between G sensor connector terminals.

**Connector & terminal****(R70) No. 2 (+) — No. 3 (-):**

**CHECK** : *Is the voltage between 0.5 and 0.9 V when G sensor is inclined backwards to 90°?*

- YES** : Go to step **10A10**.
- NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AI10 : CHECK ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Connect all connectors.
- 3) Erase the memory.
- 4) Perform inspection mode.
- 5) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10AI11**.

**10AI11 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : *Are other trouble codes being output?*

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.

**AJ: TROUBLE CODE 56 DETECTION OF G SENSOR STICK  
— DETECTION OF G SENSOR STICK —**

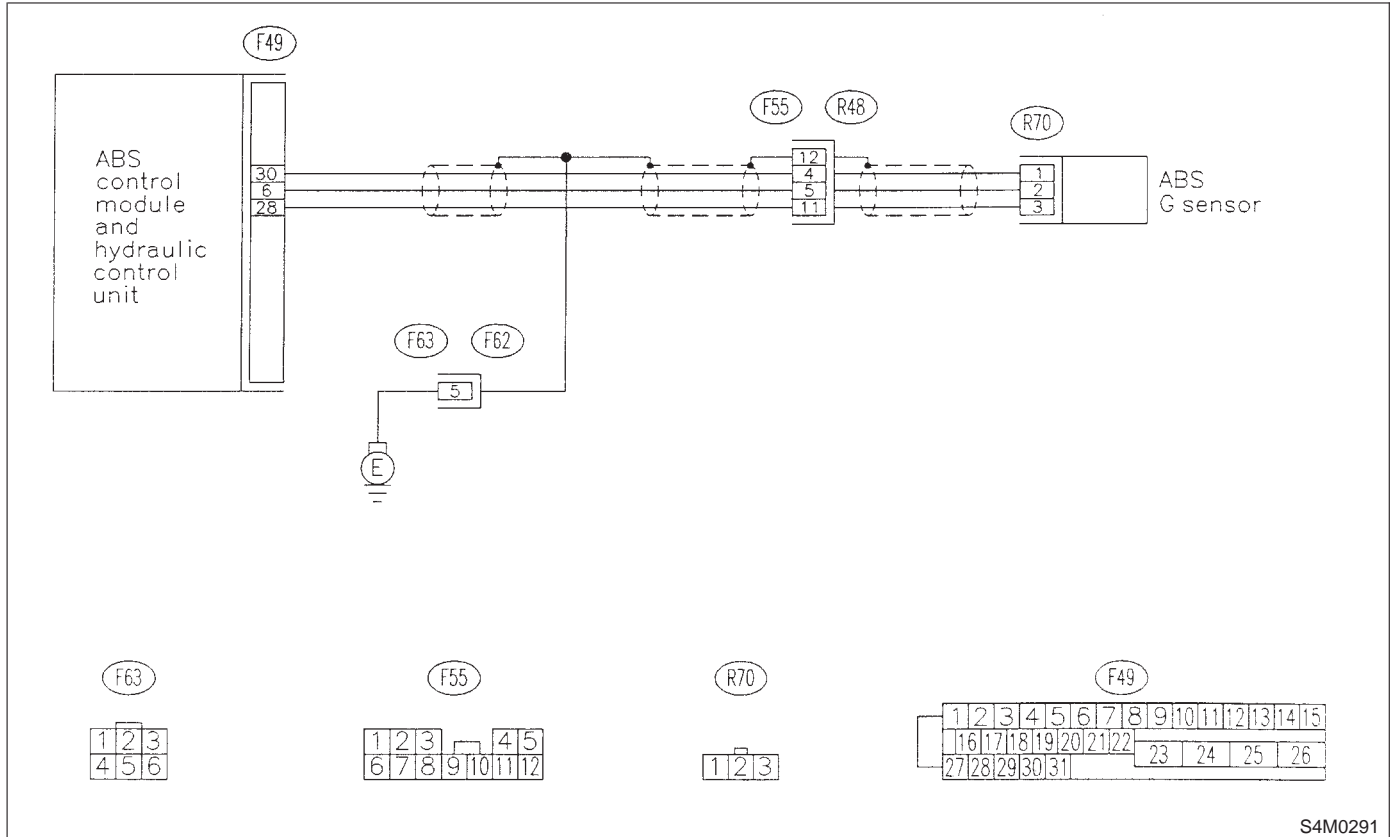
**DIAGNOSIS:**

- Faulty G sensor output voltage

**TROUBLE SYMPTOM:**

- ABS does not operate.

**WIRING DIAGRAM:**



S4M0291

**10AJ1 : CHECK ALL FOUR WHEELS FOR FREE TURNING.**

**CHECK** : *Have the wheels been turned freely such as when the vehicle is lifted up, or operated on a rolling road?*

**YES** : The ABS is normal. Erase the trouble code.

**NO** : Go to step **10AJ2**.

**10AJ2 : CHECK OUTPUT OF G SENSOR USING SELECT MONITOR.**

1) Select "Current data display & Save" on the select monitor.

2) Read the select monitor display.

**CHECK** : *Is the G sensor output on the monitor display between 2.1 and 2.5 V when the vehicle is in horizontal position?*

**YES** : Go to step **10AJ3**.

**NO** : Go to step **10AJ8**.

**10AJ3 : CHECK OUTPUT OF G SENSOR USING SELECT MONITOR.**

1) Turn ignition switch to OFF.

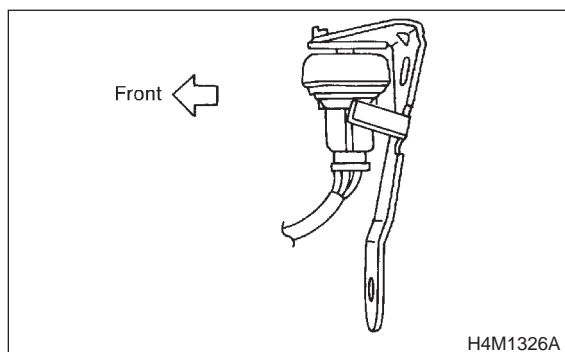
2) Remove console box.

3) Remove G sensor from vehicle. (Do not disconnect connector.)

4) Turn ignition switch to ON.

5) Select "Current data display & Save" on the select monitor.

6) Read the select monitor display.



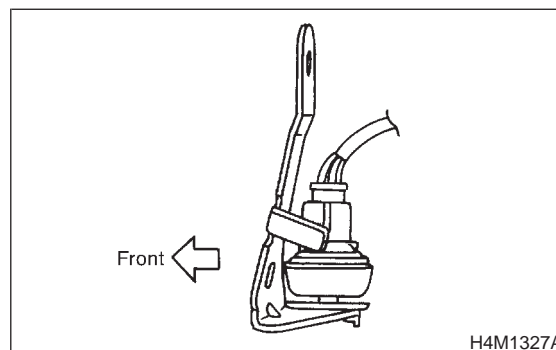
**CHECK** : *Is the G sensor output on the monitor display between 3.7 and 4.1 V when G sensor is inclined forwards to 90°?*

**YES** : Go to step **10AJ4**.

**NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AJ4 : CHECK OUTPUT OF G SENSOR USING SELECT MONITOR.**

Read the select monitor display.



**CHECK** : *Is the G sensor output on the monitor display between 0.5 and 0.9 V when G sensor is inclined backwards to 90°?*

**YES** : Go to step **10AJ5**.

**NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AJ5 : CHECK POOR CONTACT IN CONNECTORS.**

Turn ignition switch to OFF.

**CHECK** : *Is there poor contact in connector between ABSCM&H/U and G sensor? <Ref. to FOREWORD [W3C1].>*

**YES** : Repair connector.

**NO** : Go to step **10AJ6**.

**10AJ6 : CHECK ABSCM&H/U.**

1) Connect all connectors.

2) Erase the memory.

3) Perform inspection mode.

4) Read out the trouble code.

**CHECK** : *Is the same trouble code as in the current diagnosis still being output?*

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10AJ7**.

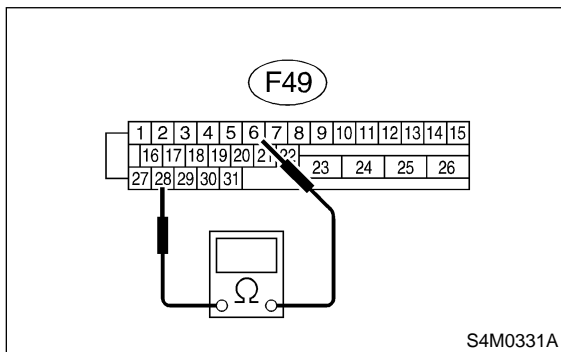
**10AJ7 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

- CHECK** : Are other trouble codes being output?
- YES** : Proceed with the diagnosis corresponding to the trouble code.
- NO** : A temporary poor contact.

**10AJ8 : CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.**

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from ABSCM&H/U.
- 3) Measure resistance between ABSCM&H/U connector terminals.

**Connector & terminal**  
(F49) No. 6 — No. 28:

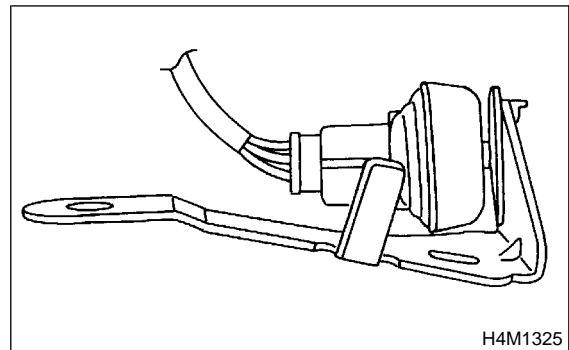
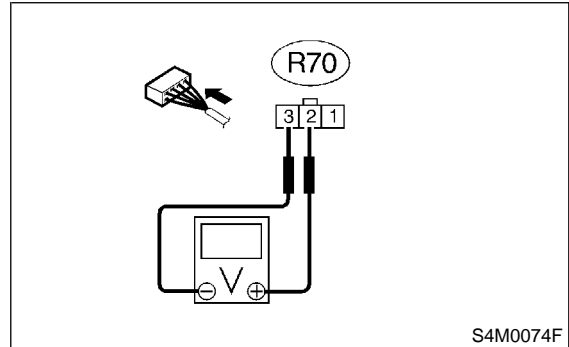


- CHECK** : Is the resistance between 4.3 and 4.9 kΩ?
- YES** : Go to step 10AJ9.
- NO** : Repair harness/connector between G sensor and ABSCM&H/U.

**10AJ9 : CHECK G SENSOR.**

- 1) Remove console box.
- 2) Remove G sensor from vehicle.
- 3) Connect connector to G sensor.
- 4) Connect connector to ABSCM&H/U.
- 5) Turn ignition switch to ON.
- 6) Measure voltage between G sensor connector terminals.

**Connector & terminal**  
(R70) No. 2 (+) — No. 1 (-):



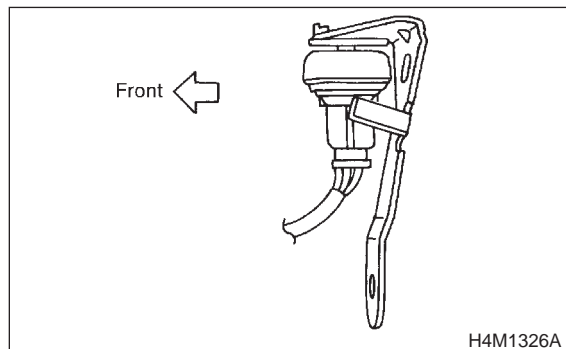
- CHECK** : Is the voltage between 2.1 and 2.5 V when G sensor is horizontal?
- YES** : Go to step 10AJ10.
- NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AJ10 : CHECK G SENSOR.**

Measure voltage between G sensor connector terminals.

**Connector & terminal**

**(R70) No. 2 (+) — No. 1 (-):**



**CHECK** : **Is the voltage between 3.7 and 4.1 V when G sensor is inclined forwards to 90°?**

**YES** : Go to step **10AJ11**.

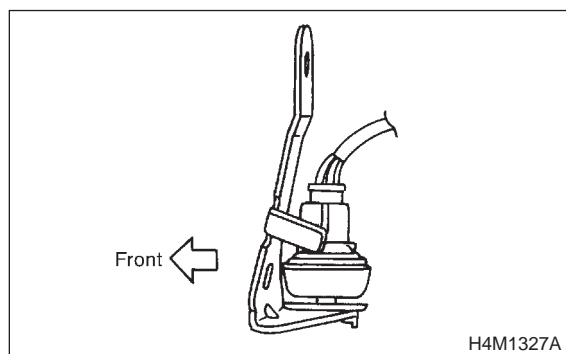
**NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AJ11 : CHECK G SENSOR.**

Measure voltage between G sensor connector terminals.

**Connector & terminal**

**(R70) No. 2 (+) — No. 1 (-):**



**CHECK** : **Is the voltage between 0.5 and 0.9 V when G sensor is inclined backwards to 90°?**

**YES** : Go to step **10AJ12**.

**NO** : Replace G sensor. <Ref. to 4-4 [W15A0].>

**10AJ12 : CHECK ABSCM&H/U.**

- 1) Turn ignition switch to OFF.
- 2) Connect all connectors.
- 3) Erase the memory.
- 4) Perform inspection mode.
- 5) Read out the trouble code.

**CHECK** : **Is the same trouble code as in the current diagnosis still being output?**

**YES** : Replace ABSCM&H/U. <Ref. to 4-4 [W14A0].>

**NO** : Go to step **10AJ13**.

**10AJ13 : CHECK ANY OTHER TROUBLE CODES APPEARANCE.**

**CHECK** : **Are other trouble codes being output?**

**YES** : Proceed with the diagnosis corresponding to the trouble code.

**NO** : A temporary poor contact.