

8. Diagnostics Chart with Trouble Code by ABS Warning Light

A: LIST OF TROUBLE CODE

Trouble code	Contents of diagnosis	Index No.
11	Start code <ul style="list-style-type: none"> ● Trouble code is shown after start code. ● Only start code is shown in normal condition. 	—
21	Abnormal ABS sensor (Open circuit or input voltage too high)	Front right ABS sensor
23		Front left ABS sensor
25		Rear right ABS sensor
27		Rear left ABS sensor
22	Abnormal ABS sensor (Abnormal ABS sensor signal)	Front right ABS sensor
24		Front left ABS sensor
26		Rear right ABS sensor
28		Rear left ABS sensor
29		Any one of four
31		Front right inlet valve
32	Abnormal solenoid valve circuit(s) in ABS control module and hydraulic unit	Front right outlet valve
33		Front left inlet valve
34		Front left outlet valve
35		Rear right inlet valve
36		Rear right outlet valve
37		Rear left inlet valve
38		Rear left outlet valve
41		Abnormal ABS control module
42	Source voltage is abnormal.	
44	A combination of AT control abnormal	
51	Abnormal valve relay	
52	Abnormal motor and/or motor relay	
54	Abnormal stop light switch	
56	Abnormal G sensor output voltage	

B: TROUBLE CODE 21 (FRONT RH)

C: TROUBLE CODE 23 (FRONT LH)

D: TROUBLE CODE 25 (REAR RH)

E: TROUBLE CODE 27 (REAR LH)

— **ABNORMAL ABS SENSOR (OPEN CIRCUIT OR INPUT VOLTAGE TOO HIGH)** —

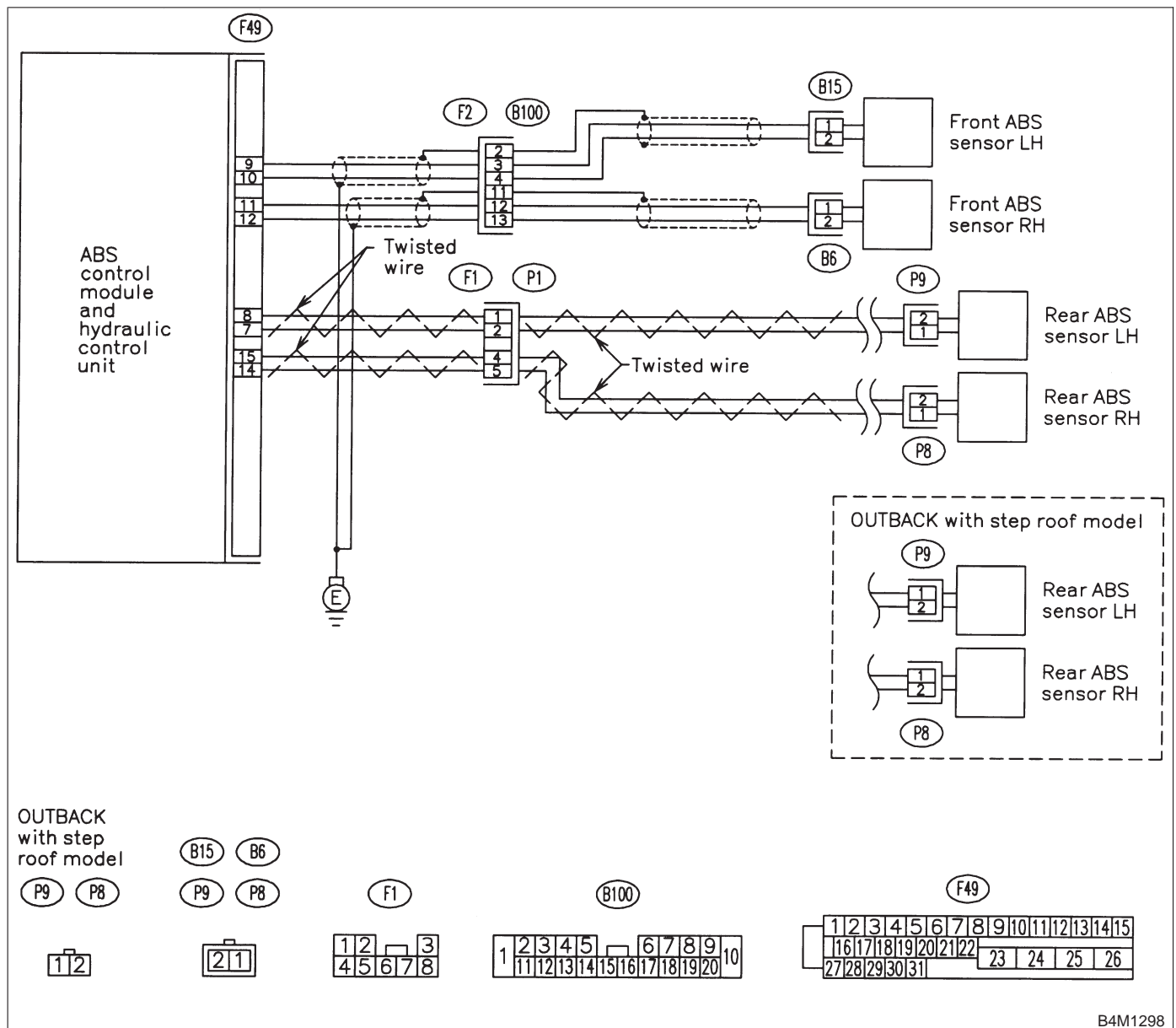
DIAGNOSIS:

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

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:



8E1 : CHECK ABS SENSOR.

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

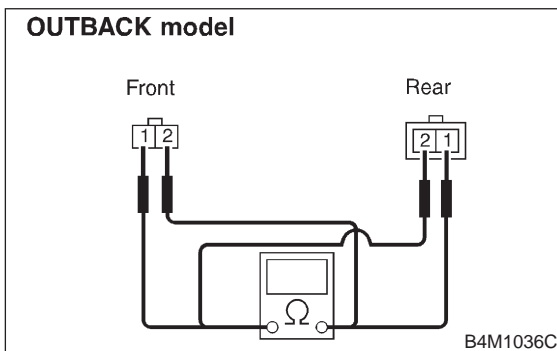
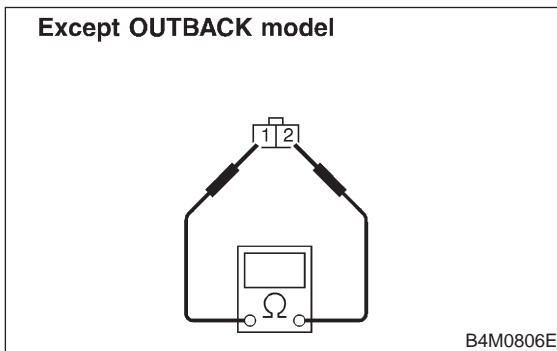
Terminal

Front RH No. 1 — No. 2:

Front LH No. 1 — No. 2:

Rear RH No. 1 — No. 2:

Rear LH No. 1 — No. 2:



CHECK : Is the resistance between 0.8 and 1.2 kΩ?

YES : Go to step 8E2.

NO : Replace ABS sensor.

8E2 : CHECK BATTERY SHORT OF ABS SENSOR.

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

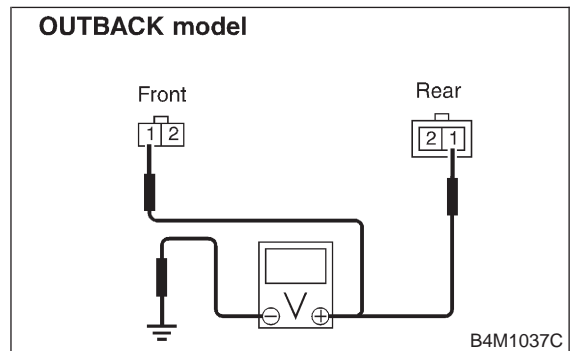
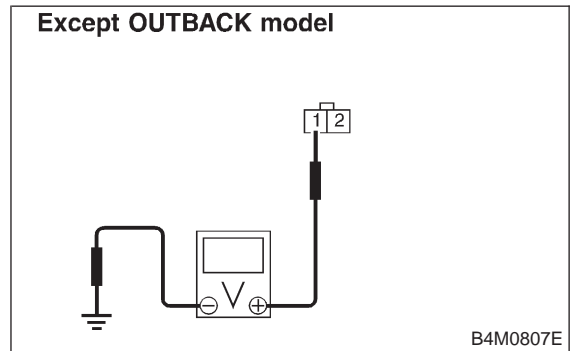
Terminal

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 8E3.

NO : Replace ABS sensor.

4-4 [T8E3]

BRAKES

8. Diagnostics Chart with Trouble Code by ABS Warning Light

8E3 : CHECK BATTERY SHORT OF ABS SENSOR.

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

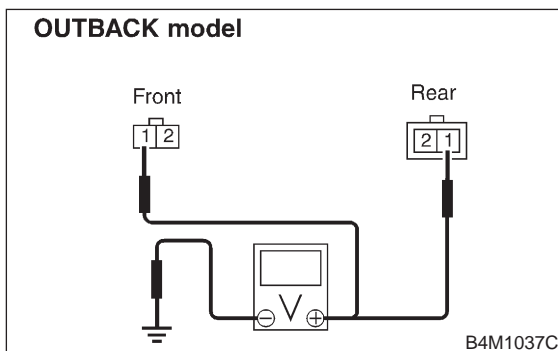
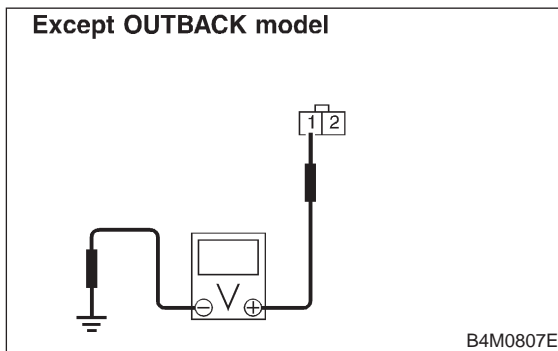
Terminal

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 8E4.

NO : Replace ABS sensor.

8E4 : 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.

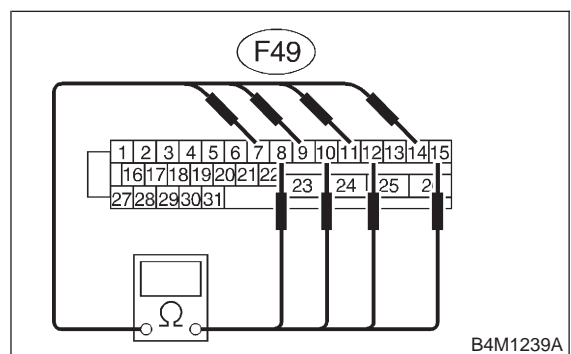
Connector & terminal

Trouble code 21 / (F49) No. 11 — No. 12:

Trouble code 23 / (F49) No. 9 — No. 10:

Trouble code 25 / (F49) No. 14 — 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 8E5.

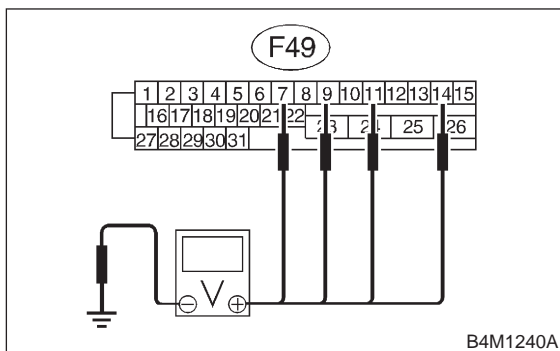
NO : Repair harness/connector between ABSCM&H/U and ABS sensor.

**8E5 : CHECK BATTERY SHORT OF HAR-
NESS.**

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



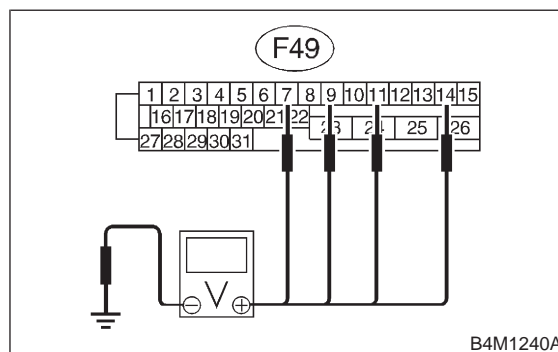
- CHECK** : *Is the voltage less than 1 V?*
- YES** : Go to step **8E6**.
- NO** : Repair harness between ABSCM&H/U and ABS sensor.

**8E6 : CHECK BATTERY SHORT OF HAR-
NESS.**

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



- CHECK** : *Is the voltage less than 1 V?*
- YES** : Go to step **8E7**.
- NO** : Repair harness between ABSCM&H/U and ABS sensor.

**8E7 : CHECK INSTALLATION OF ABS SEN-
SOR.**

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 **8E8**.
- NO** : Tighten ABS sensor installation bolts securely.

4-4 [T8E8]

BRAKES

8. Diagnostics Chart with Trouble Code by ABS Warning Light

8E8 : CHECK INSTALLATION OF TONE WHEEL.

Tightening torque:

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

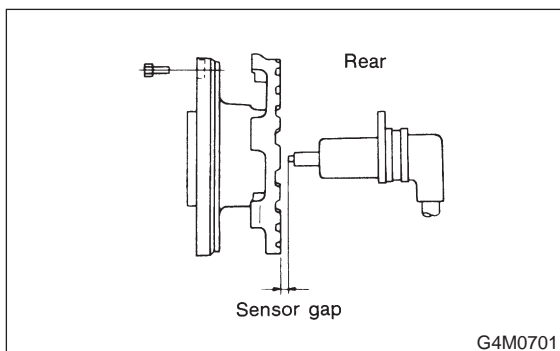
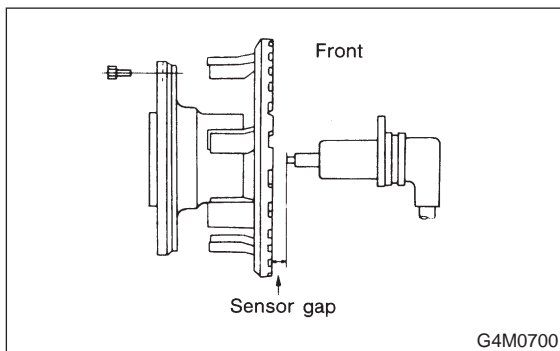
CHECK : Are the tone wheel installation bolts tightened securely?

YES : Go to step 8E9.

NO : Tighten tone wheel installation bolts securely.

8E9 : CHECK ABS SENSOR GAP.

Measure tone wheel-to-pole piece gap over entire perimeter of the wheel.



Specifications	Front wheel	Rear wheel
	0.9 — 1.4 mm (0.035 — 0.055 in)	0.7 — 1.2 mm (0.028 — 0.047 in)

CHECK : Is the gap within the specifications?

YES : Go to step 8E10.

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.

8E10 : CHECK HUB RUNOUT.

Measure hub runout.

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

YES : Go to step 8E11.

NO : Repair hub.

8E11 : CHECK GROUND SHORT OF ABS SENSOR.

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

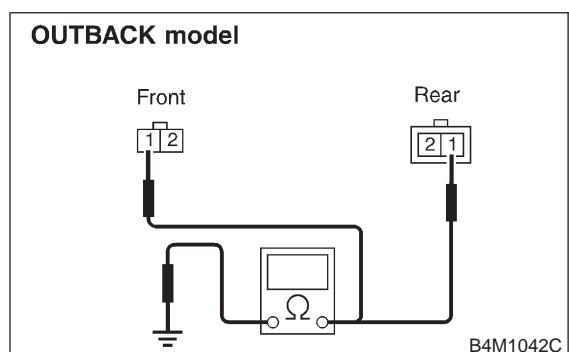
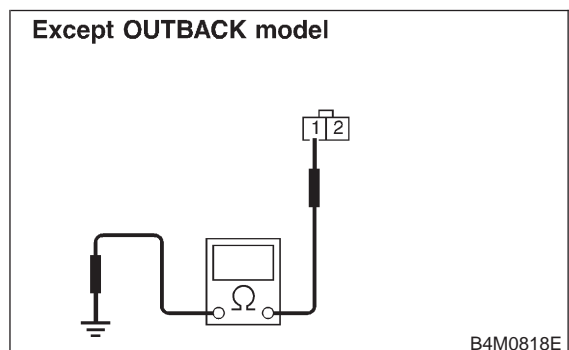
Terminal

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 8E12.

NO : Replace ABS sensor and ABSCM&H/U.

8E12 : 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.

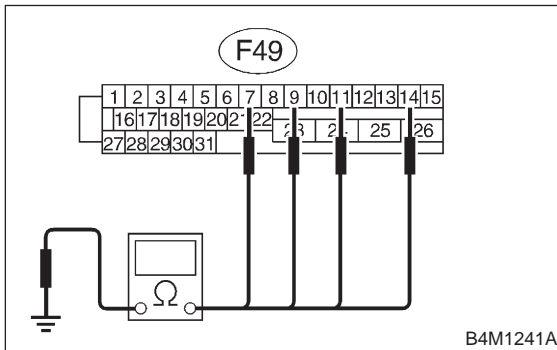
Connector & terminal

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

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

Trouble code 25 / (F49) No. 14 — Chassis ground:

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



- CHECK** : *Is the resistance more than 1 MΩ?*
- YES** : Go to step **8E13**.
- NO** : Repair harness between ABSCM&H/U and ABS sensor.
Replace ABSCM&H/U.

8E13 : CHECK POOR CONTACT IN CONNECTORS.

- CHECK** : *Is there poor contact in connectors between ABSCM&H/U and ABS sensor? <Ref. to FOREWORD [T3C1].>*
- YES** : Repair connector.
- NO** : Go to step **8E14**.

8E14 : 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.

NO : Go to step **8E15**.

8E15 : 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.

F: TROUBLE CODE 22 (FRONT RH)

G: TROUBLE CODE 24 (FRONT LH)

H: TROUBLE CODE 26 (REAR RH)

I: TROUBLE CODE 28 (REAR LH)

— **ABNORMAL ABS SENSOR (ABNORMAL ABS SENSOR SIGNAL)** —

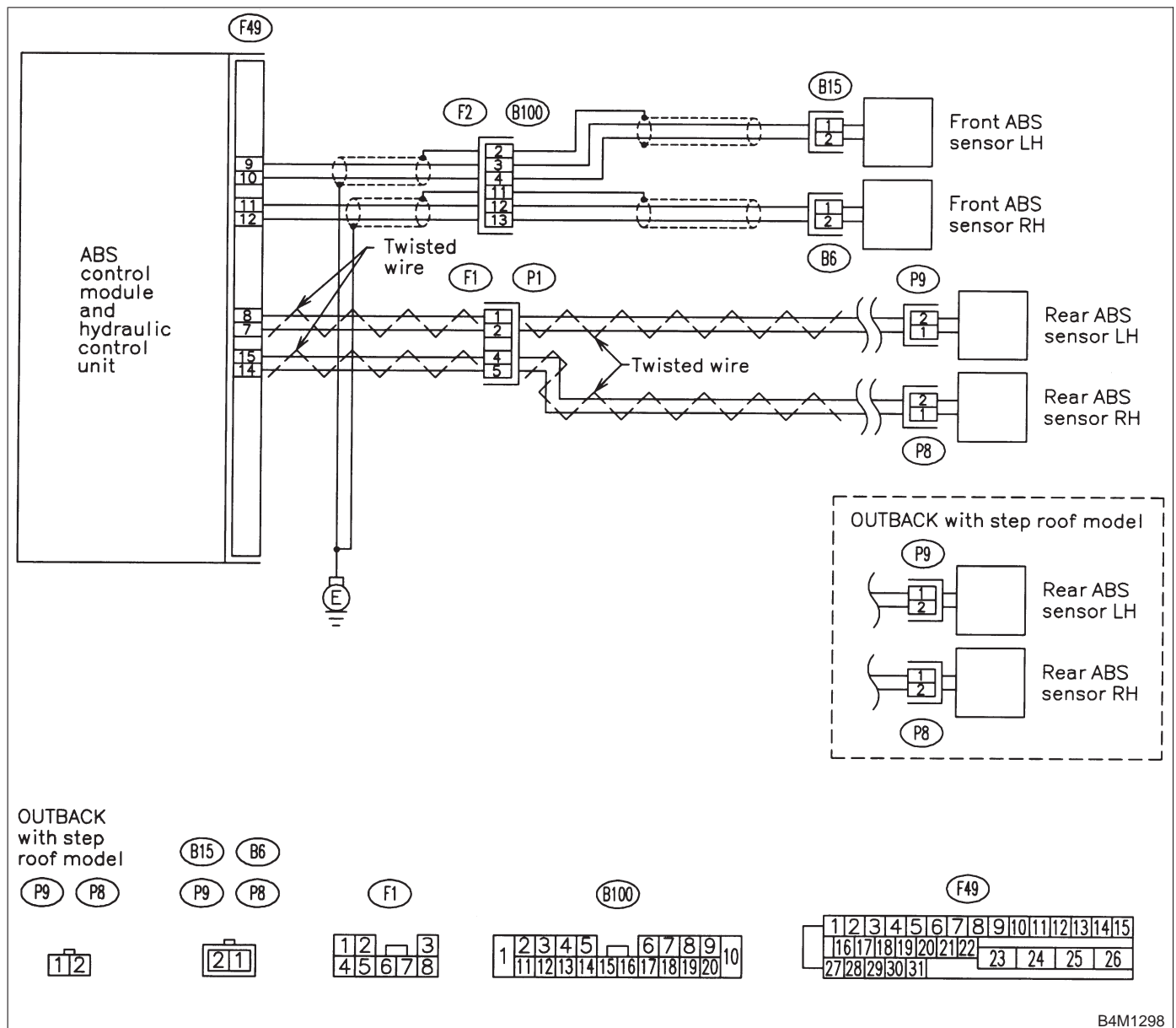
DIAGNOSIS:

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

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:



811 : 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 812.
- NO** : Tighten ABS sensor installation bolts securely.

812 : CHECK INSTALLATION OF TONE WHEEL.

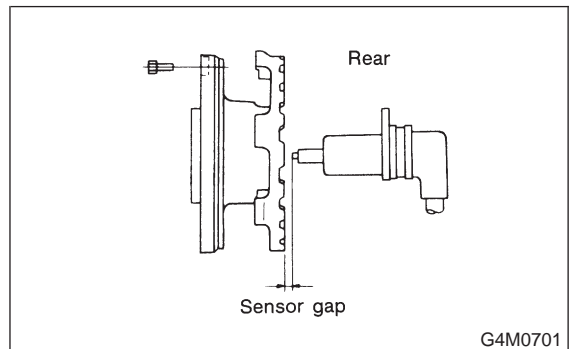
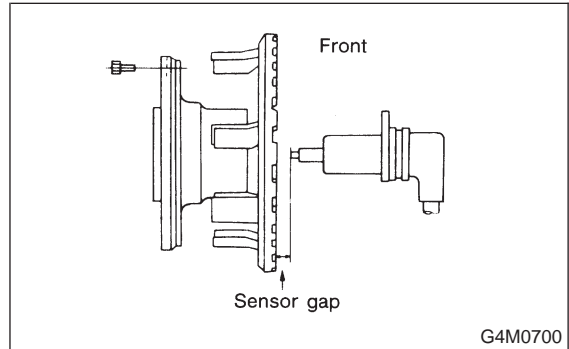
Tightening torque:

13±3 N·m (1.3±0.3 kg·m, 9±2.2 ft·lb)

- CHECK** : Are the tone wheel installation bolts tightened securely?
- YES** : Go to step 813.
- NO** : Tighten tone wheel installation bolts securely.

813 : CHECK ABS SENSOR GAP.

Measure tone wheel to pole piece gap over entire perimeter of the wheel.



	Front wheel	Rear wheel
Specifications	0.9 — 1.4 mm (0.035 — 0.055 in)	0.7 — 1.2 mm (0.028 — 0.047 in)

- CHECK** : Is the gap within the specifications?
- YES** : Go to step 814.
- 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.

814 : CHECK OSCILLOSCOPE.

- CHECK** : Is an oscilloscope available?
- YES** : Go to step 815.
- NO** : Go to step 816.

8I5 : CHECK ABS SENSOR SIGNAL.

- 1) Raise all four wheels of ground.
- 2) Turn ignition switch OFF.
- 3) Connect the oscilloscope to the connector (B100) or connector (F1).
- 4) Turn ignition switch ON.
- 5) Rotate wheels and measure voltage at specified frequency.

NOTE:

When this inspection is completed, the ABS control module sometimes stores the trouble code 29.

Connector & terminal

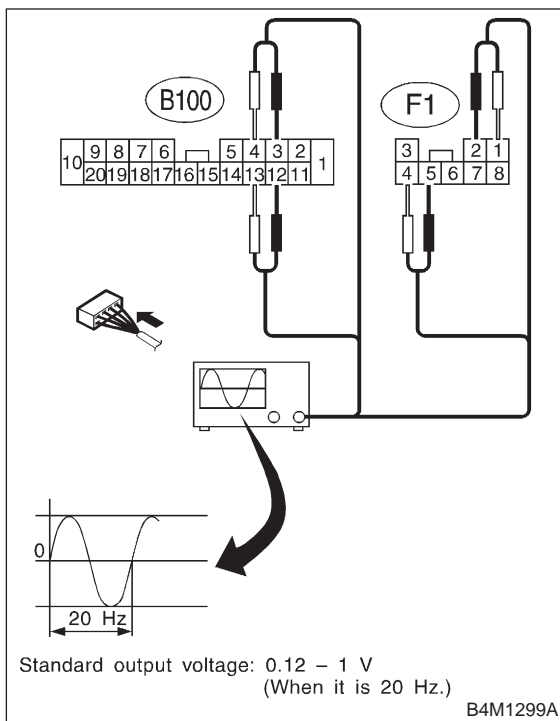
Trouble code 22 / (B100) No. 12 (+) — No. 13 (-):

Trouble code 24 / (B100) No. 3 (+) — No. 4 (-):

Trouble code 26 / (F1) No. 5 (+) — No. 4 (-):

Trouble code 28 / (F1) No. 2 (+) — No. 1 (-):

Specified voltage: 0.12 — 1 V (When it is 20 Hz.)



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

YES : Go to step 8I9.

NO : Go to step 8I6.

8I6 : 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 8I7.

8I7 : 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 8I8.

8I8 : CHECK HUB RUNOUT.

Measure hub runout.

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

YES : Go to step 8I9.

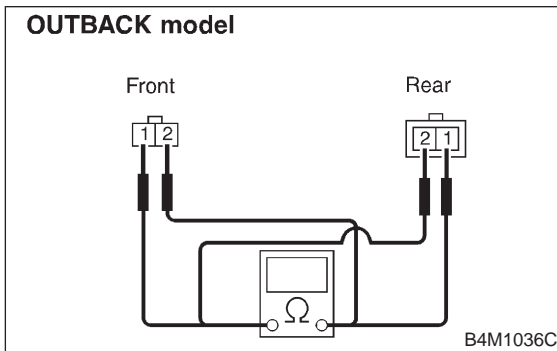
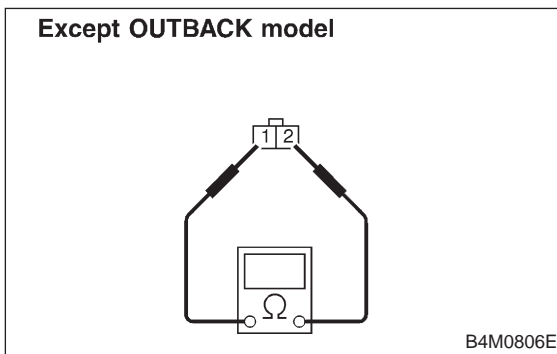
NO : Repair hub.

819 : CHECK RESISTANCE OF ABS SENSOR.

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

Terminal

- Front RH No. 1 — No. 2:**
- Front LH No. 1 — No. 2:**
- Rear RH No. 1 — No. 2:**
- Rear LH No. 1 — No. 2:**



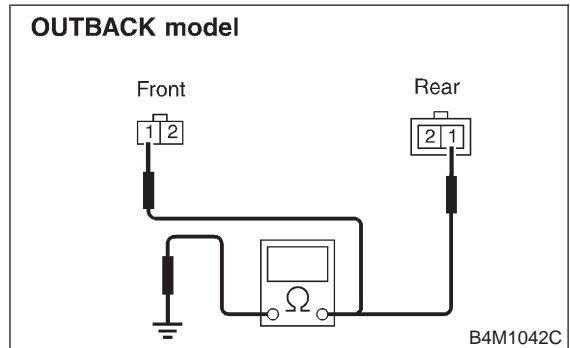
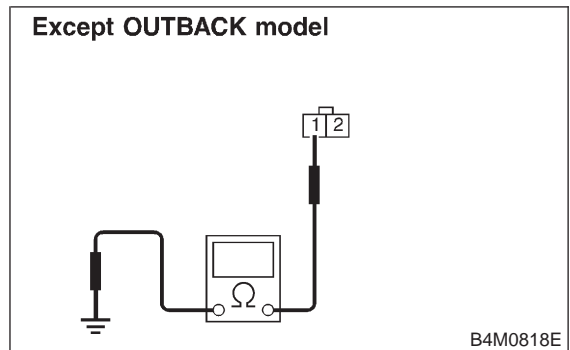
- CHECK** : Is the resistance between 0.8 and 1.2 kΩ?
- YES** : Go to step 8110.
- NO** : Replace ABS sensor.

8110 : CHECK GROUND SHORT OF ABS SENSOR.

Measure resistance between ABS sensor and chassis ground.

Terminal

- 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 8111.
- NO** : Replace ABS sensor.

4-4 [T8I11]

BRAKES

8. Diagnostics Chart with Trouble Code by ABS Warning Light

8I11 : 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.

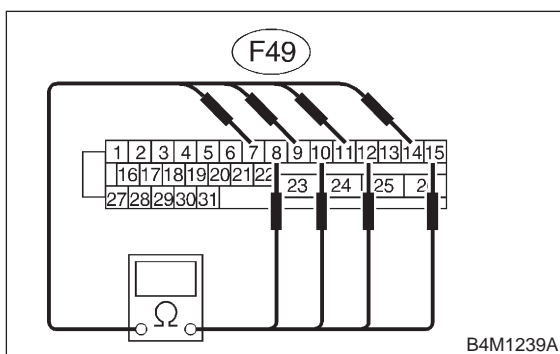
Connector & terminal

Trouble code 22 / (F49) No. 11 — No. 12:

Trouble code 24 / (F49) No. 9 — No. 10:

Trouble code 26 / (F49) No. 14 — No. 15:

Trouble code 28 / (F49) No. 7 — No. 8:



- CHECK** : Is the resistance between 0.8 and 1.2 k Ω ?
- YES** : Go to step 8I12.
- NO** : Repair harness/connector between ABSCM&H/U and ABS sensor.

8I12 : CHECK GROUND SHORT OF HARNESS.

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

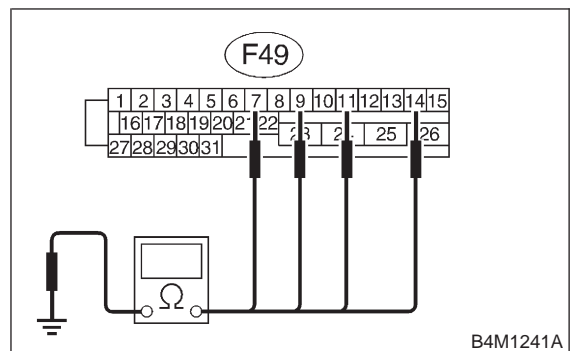
Connector & terminal

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

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

Trouble code 26 / (F49) No. 14 — Chassis ground:

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



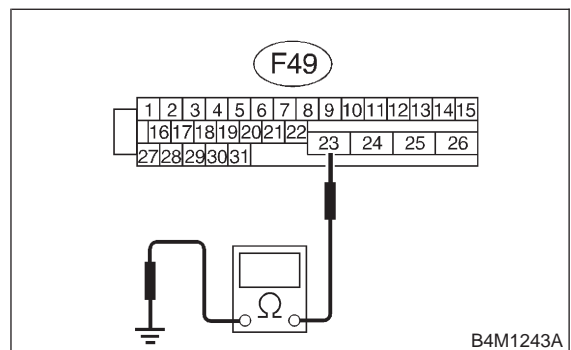
- CHECK** : Is the resistance more than 1 M Ω ?
- YES** : Go to step 8I13.
- NO** : Repair harness/connector between ABSCM&H/U and ABS sensor.

8I13 : CHECK GROUND CIRCUIT OF ABSCM&H/U.

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

Connector & terminal

(F49) No. 23 — GND:



- CHECK** : Is the resistance less than 0.5 Ω ?
- YES** : Go to step 8I14.
- NO** : Repair ABSCM&H/U ground harness.

8I14 : CHECK POOR CONTACT IN CONNECTORS.

- CHECK** : *Is there poor contact in connectors between ABSCM&H/U and ABS sensor? <Ref. to FOREWORD [T3C1].>*
- YES** : Repair connector.
- NO** : Go to step 8I15.

8I15 : CHECK SOURCES OF SIGNAL NOISE.

- CHECK** : *Is the car telephone or the wireless transmitter properly installed?*
- YES** : Go to step 8I16.
- NO** : Properly install the car telephone or the wireless transmitter.

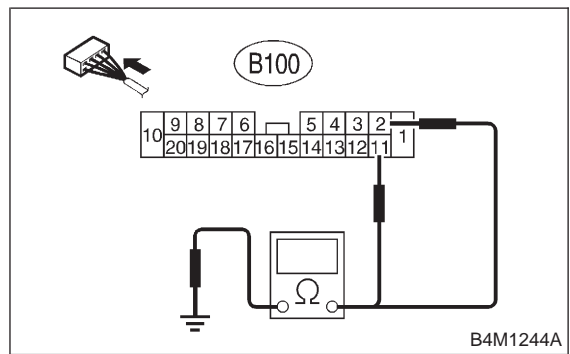
8I16 : CHECK SOURCES OF SIGNAL NOISE.

- 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 8I17.

8I17 : CHECK SHIELD CIRCUIT.

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

Connector & terminal
Trouble code 22 / (B100) No. 11 — Chassis ground:
Trouble code 24 / (B100) No. 2 — Chassis ground:
Trouble code 26 / Go to step 8I18.
Trouble code 28 / Go to step 8I18.



- CHECK** : *Is the resistance less than 0.5 Ω?*
- YES** : Go to step 8I18.
- NO** : Repair shield harness.

8I18 : 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.
 - NO** : Go to step 8I19.

8I19 : 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.

J: TROUBLE CODE 29

— ABNORMAL ABS SENSOR SIGNAL (ANY ONE OF FOUR) —

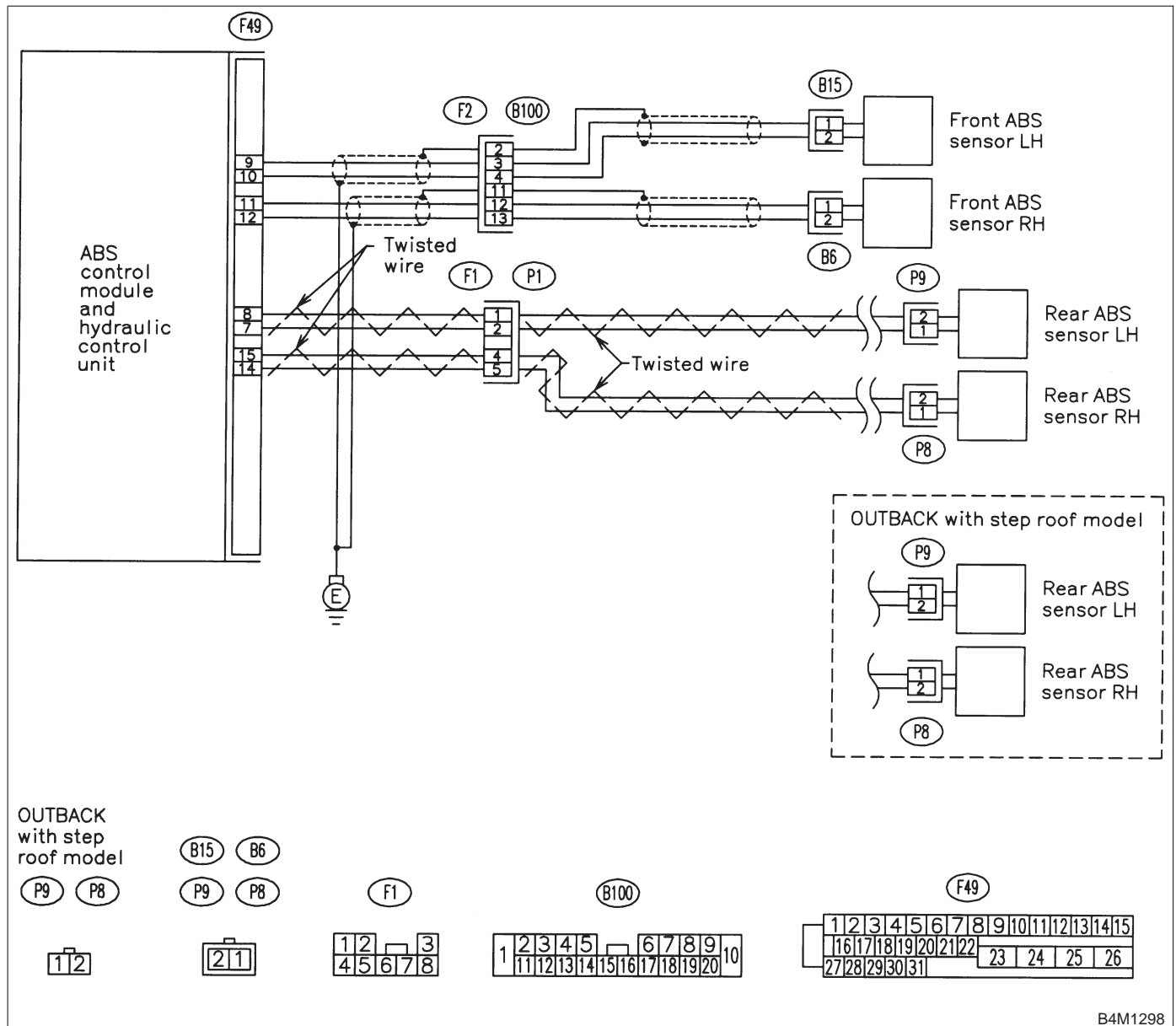
DIAGNOSIS:

- 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:



BRAKES

[T8J7] 4-4

8. Diagnostics Chart with Trouble Code by ABS Warning Light

8J1 : 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 8J2.

8J2 : CHECK TIRE SPECIFICATIONS.

CHECK : Are the tire specifications correct?

YES : Go to step 8J3.

NO : Replace tire.

8J3 : CHECK WEAR OF TIRE.

CHECK : Is the tire worn excessively?

YES : Replace tire.

NO : Go to step 8J4.

8J4 : CHECK TIRE PRESSURE.

CHECK : Is the tire pressure correct?

YES : Go to step 8J5.

NO : Adjust tire pressure.

8J5 : 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 8J6.

NO : Tighten ABS sensor installation bolts securely.

8J6 : CHECK INSTALLATION OF TONE WHEEL.

Tightening torque:

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

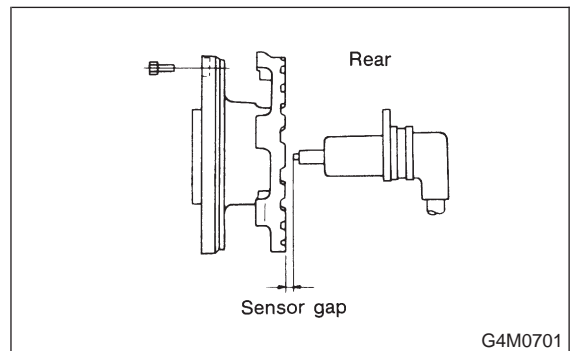
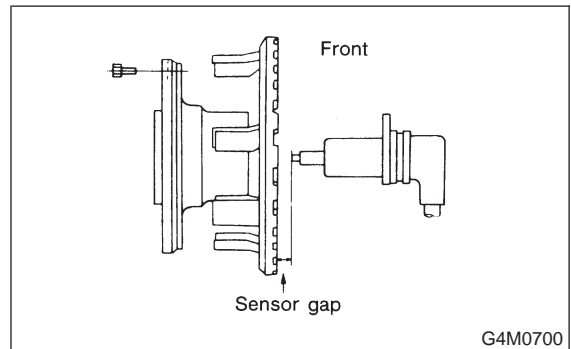
CHECK : Are the tone wheel installation bolts tightened securely?

YES : Go to step 8J7.

NO : Tighten tone wheel installation bolts securely.

8J7 : CHECK ABS SENSOR GAP.

Measure tone wheel to pole piece gap over entire perimeter of the wheel.



	Front wheel	Rear wheel
Specifications	0.9 — 1.4 mm (0.035 — 0.055 in)	0.7 — 1.2 mm (0.028 — 0.047 in)

CHECK : Is the gap within the specifications?

YES : Go to step 8J8.

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.

8J8 : CHECK OSCILLOSCOPE.

- CHECK** : *Is an oscilloscope available?*
- YES** : Go to step **8J9**.
- NO** : Go to step **8J10**.

8J9 : CHECK ABS SENSOR SIGNAL.

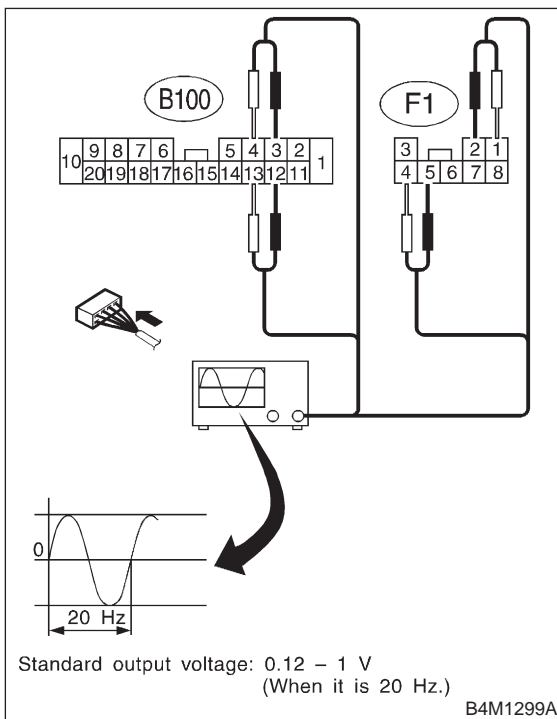
- 1) Raise all four wheels of ground.
- 2) Turn ignition switch OFF.
- 3) Connect the oscilloscope to the connector (B100) or connector (F1).
- 4) Turn ignition switch ON.
- 5) Rotate wheels and measure voltage at specified frequency.

NOTE:

When this inspection is completed, the ABS control module sometimes stores the trouble code 29.

Connector & terminal

- (B100) No. 12 (+) — No. 13 (-) (Front RH):**
- (B100) No. 3 (+) — No. 4 (-) (Front LH):**
- (F1) No. 5 (+) — No. 4 (-) (Rear RH):**
- (F1) No. 2 (+) — No. 1 (-) (Rear LH):**
- Specified voltage: 0.12 — 1 V (When it is 20 Hz.)**



- CHECK** : *Is oscilloscope pattern smooth, as shown in figure?*
- YES** : Go to step **8J13**.
- NO** : Go to step **8J10**.

8J10 : 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 **8J11**.

8J11 : 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 **8J12**.

8J12 : CHECK HUB RUNOUT.

Measure hub runout.

- CHECK** : *Is the runout less than 0.05 mm (0.0020 in)?*
- YES** : Go to step **8J13**.
- NO** : Repair hub.

8J13 : 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.
- NO** : Go to step **8J14**.

8J14 : 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.

BRAKES

[T8J14] 4-4

8. Diagnostics Chart with Trouble Code by ABS Warning Light

MEMO:

K: TROUBLE CODE 31 (FRONT RH)

L: TROUBLE CODE 33 (FRONT LH)

M: TROUBLE CODE 35 (REAR RH)

N: TROUBLE CODE 37 (REAR LH)

— ABNORMAL INLET SOLENOID VALVE CIRCUIT(S) IN ABSCM&H/U —

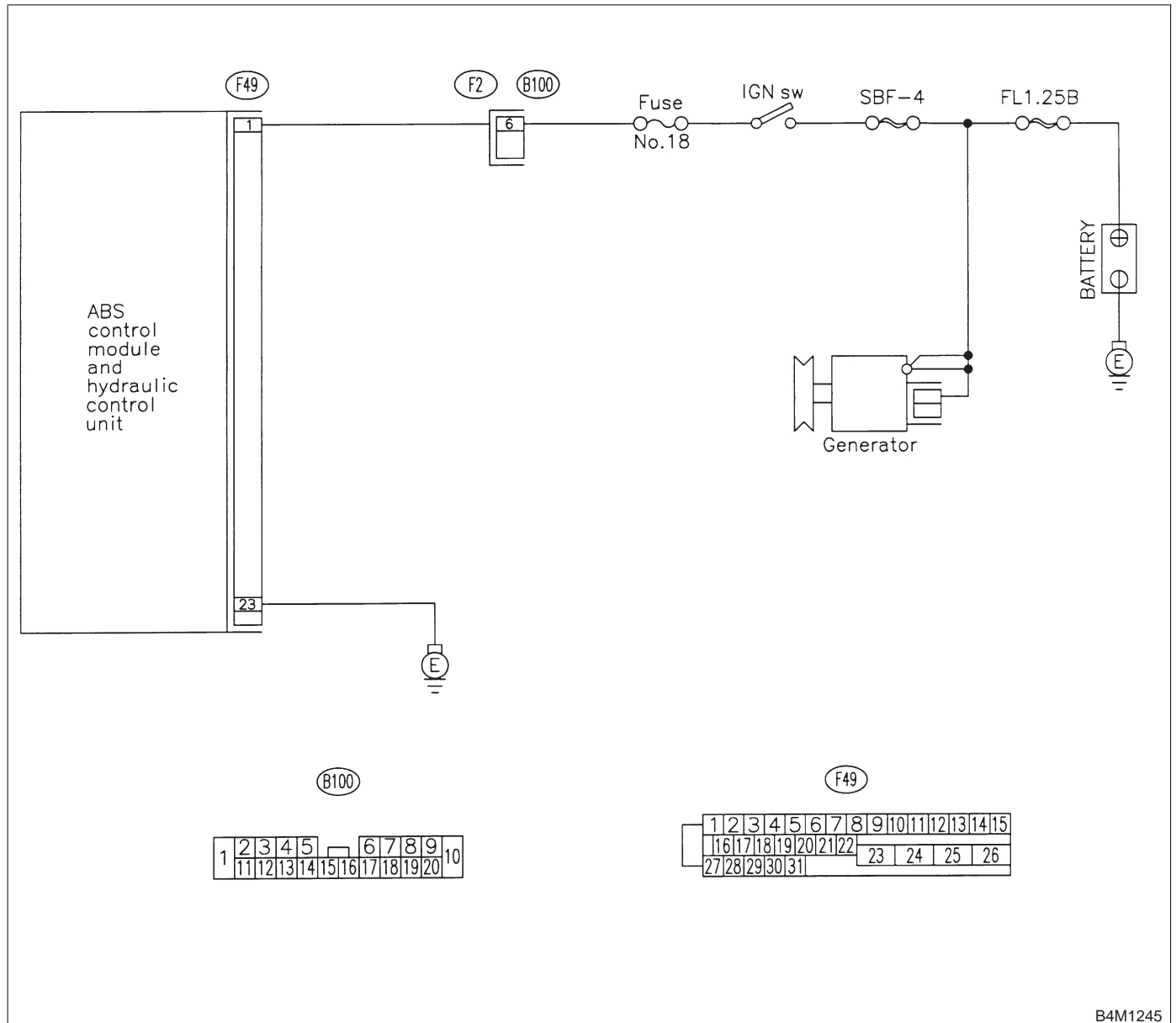
DIAGNOSIS:

- Faulty harness/connector
- Faulty inlet solenoid valve in ABSCM&H/U

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:

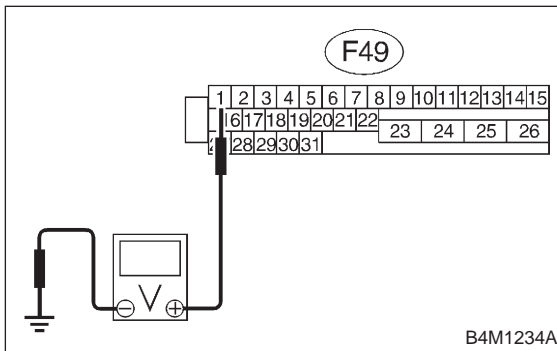


8N1 : CHECK INPUT VOLTAGE OF ABSCM&H/U.

- 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 (-):



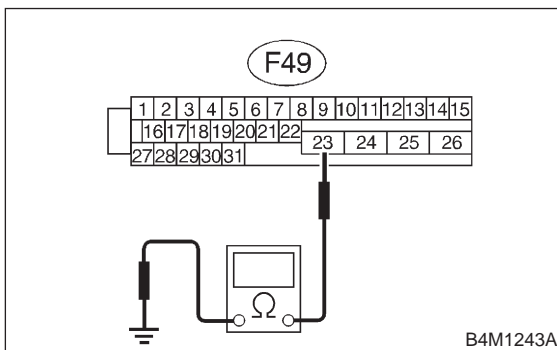
- CHECK** : **Is the voltage between 10 V and 15 V?**
- YES** : Go to step **8N2**.
- NO** : Repair harness connector between battery, ignition switch and ABSCM&H/U.

8N2 : 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 **8N3**.
- NO** : Repair ABSCM&H/U ground harness.

8N3 : CHECK POOR CONTACT IN CONNECTORS.

- CHECK** : **Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [T3C1].>**

YES : Repair connector.

NO : Go to step **8N4**.

8N4 : 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.

NO : Go to step **8N5**.

8N5 : 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.

O: TROUBLE CODE 32 (FRONT RH)

P: TROUBLE CODE 34 (FRONT LH)

Q: TROUBLE CODE 36 (REAR RH)

R: TROUBLE CODE 38 (REAR LH)

— ABNORMAL OUTLET SOLENOID VALVE CIRCUIT(S) IN ABSCM&H/U —

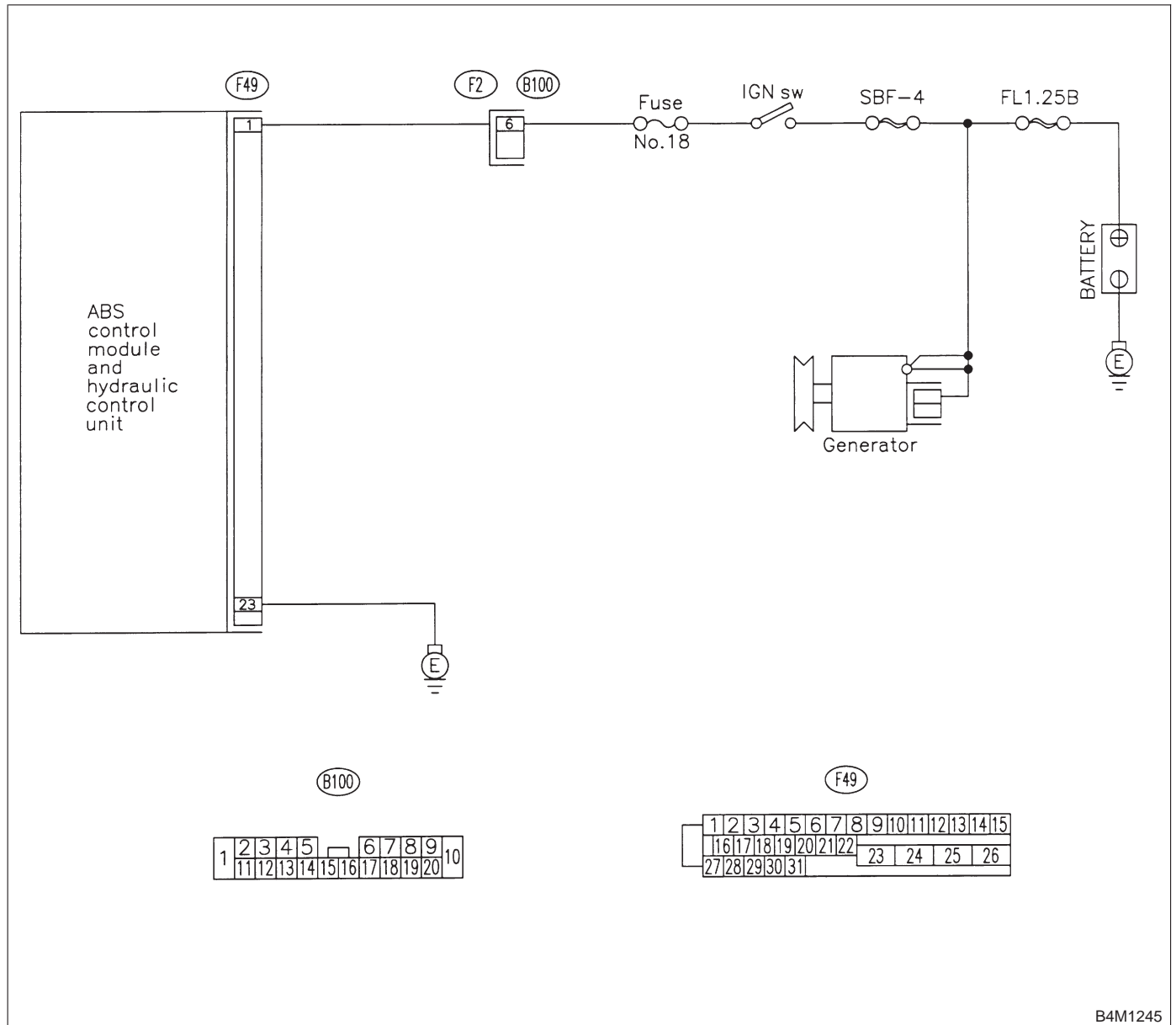
DIAGNOSIS:

- Faulty harness/connector
- Faulty outlet solenoid valve in ABSCM&H/U

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:

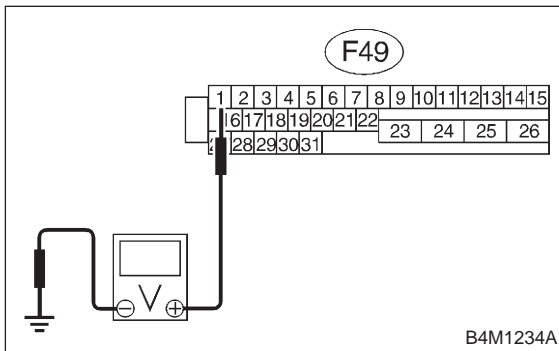


8R1 : CHECK INPUT VOLTAGE OF ABSCM&H/U.

- 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 (-):



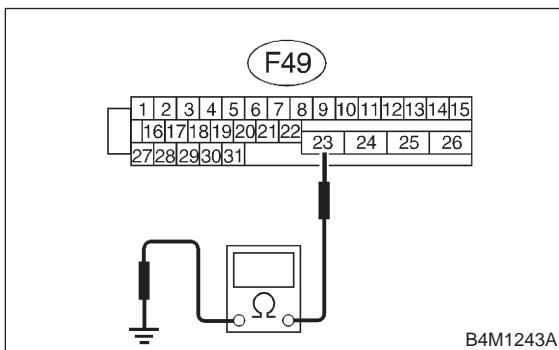
- CHECK** : **Is the voltage between 10 V and 15 V?**
- YES** : Go to step **8R2**.
- NO** : Repair harness connector between battery, ignition switch and ABSCM&H/U.

8R2 : 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 **8R3**.
- NO** : Repair ABSCM&H/U ground harness.

8R3 : CHECK POOR CONTACT IN CONNECTORS.

- CHECK** : **Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [T3C1].>**

YES : Repair connector.

NO : Go to step **8R4**.

8R4 : 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.

NO : Go to step **8R5**.

8R5 : 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.

S: TROUBLE CODE 41

— ABNORMAL ABS CONTROL MODULE —

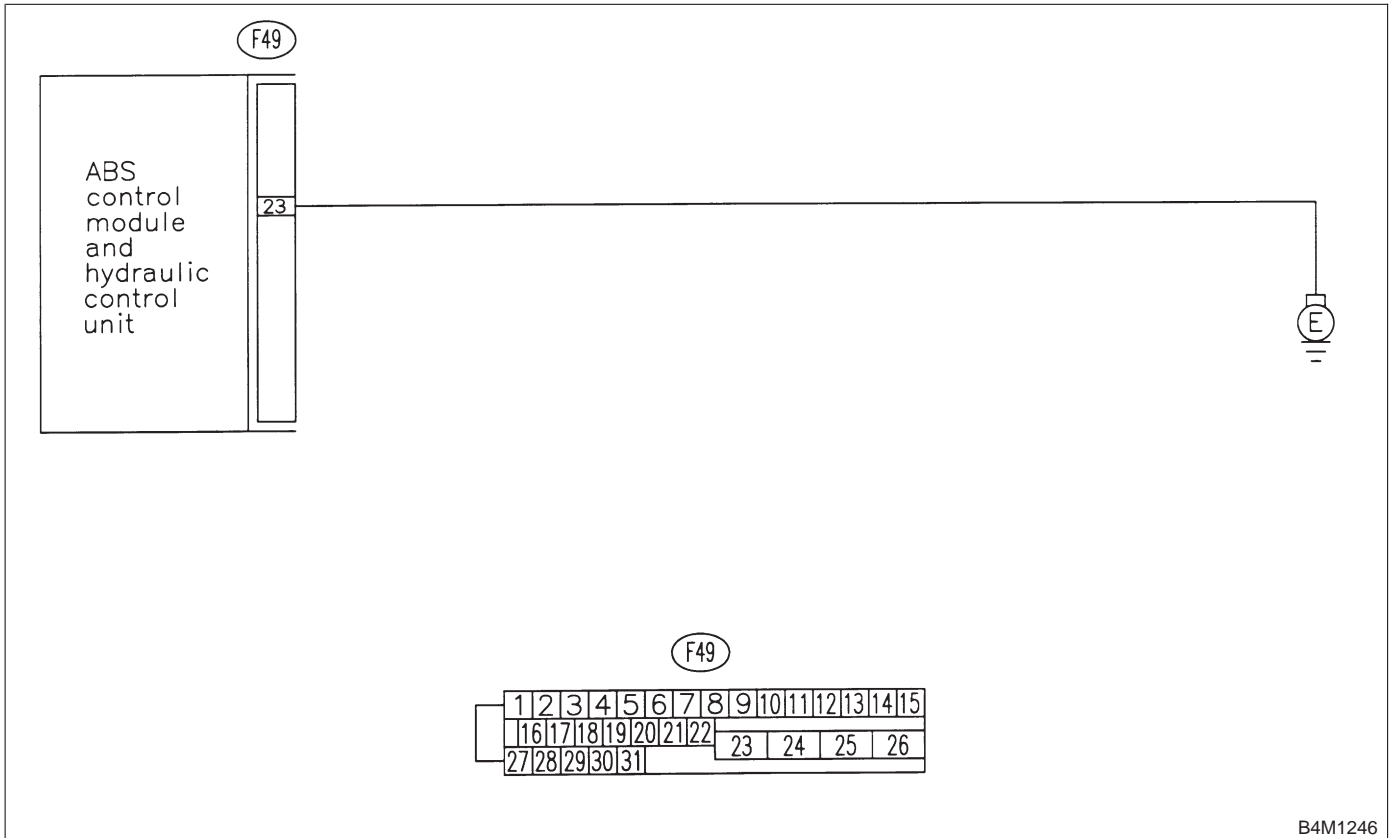
DIAGNOSIS:

- Faulty ABSCM&H/U.

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:



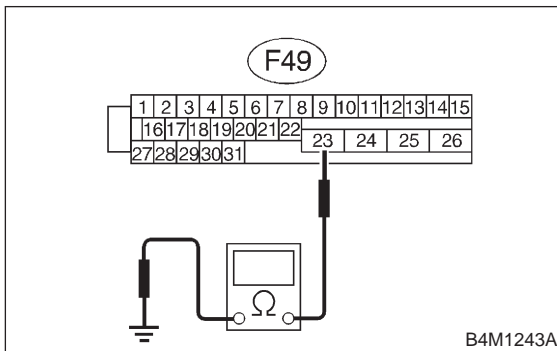
B4M1246

8S1 : 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 **8S2**.
- NO** : Repair ABSCM&H/U ground harness.

8S2 : CHECK POOR CONTACT IN CONNECTORS.

- CHECK** : *Is there poor contact in connectors between battery, ignition switch and ABSCM&H/U? <Ref. to FOREWORD [T3C1].>*
- YES** : Repair connector.
- NO** : Go to step **8S3**.

8S3 : CHECK SOURCES OF SIGNAL NOISE.

- CHECK** : *Is the car telephone or the wireless transmitter properly installed?*
- YES** : Go to step **8S4**.
- NO** : Properly install the car telephone or the wireless transmitter.

8S4 : 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 **8S5**.

8S5 : 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.
 - NO** : Go to step **8S6**.

8S6 : 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.

T: TROUBLE CODE 42

— SOURCE VOLTAGE IS ABNORMAL. —

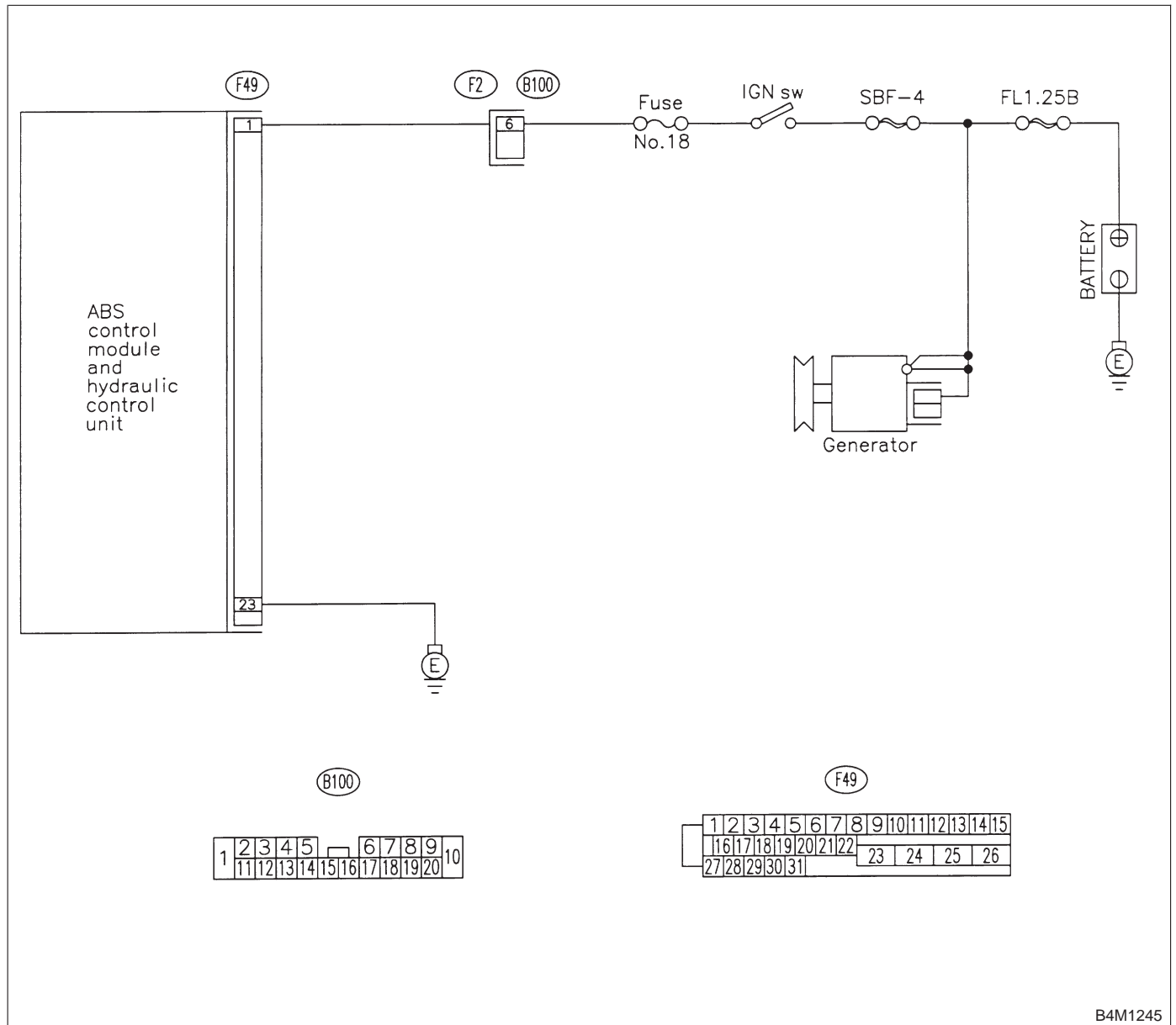
DIAGNOSIS:

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

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:

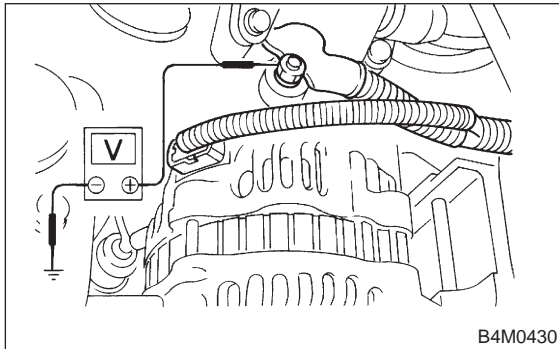


8T1 : CHECK GENERATOR.

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

Terminal

Generator B terminal — Chassis ground:



B4M0430

- CHECK** : **Is the voltage between 10 V and 17 V?**
- YES** : Go to step **8T2**.
- NO** : Repair generator.

8T2 : CHECK BATTERY TERMINAL.

Turn ignition switch to OFF.

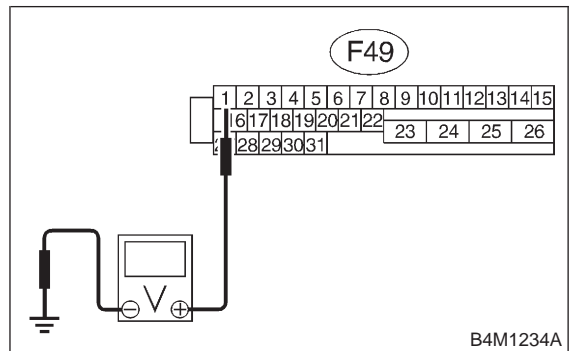
- CHECK** : **Are the positive and negative battery terminals tightly clamped?**
- YES** : Go to step **8T3**.
- NO** : Tighten the clamp of terminal.

8T3 : 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 (-):



B4M1234A

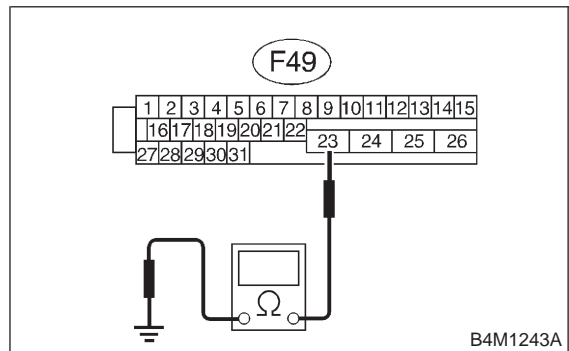
- CHECK** : **Is the voltage between 10 V and 17 V?**
- YES** : Go to step **8T4**.
- NO** : Repair harness connector between battery, ignition switch and ABSCM&H/U.

8T4 : 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:



B4M1243A

- CHECK** : **Is the resistance less than 0.5 Ω?**
- YES** : Go to step **8T5**.
- NO** : Repair ABSCM&H/U ground harness.

8T5 : CHECK POOR CONTACT IN CONNECTORS.

CHECK : *Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [T3C1].>*

YES : Repair connector.

NO : Go to step **8T6**.

8T6 : 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.

NO : Go to step **8T7**.

8T7 : 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.

BRAKES

[T8T7] 4-4

8. Diagnostics Chart with Trouble Code by ABS Warning Light

MEMO:

U: TROUBLE CODE 44

— A COMBINATION OF AT CONTROL ABNORMAL —

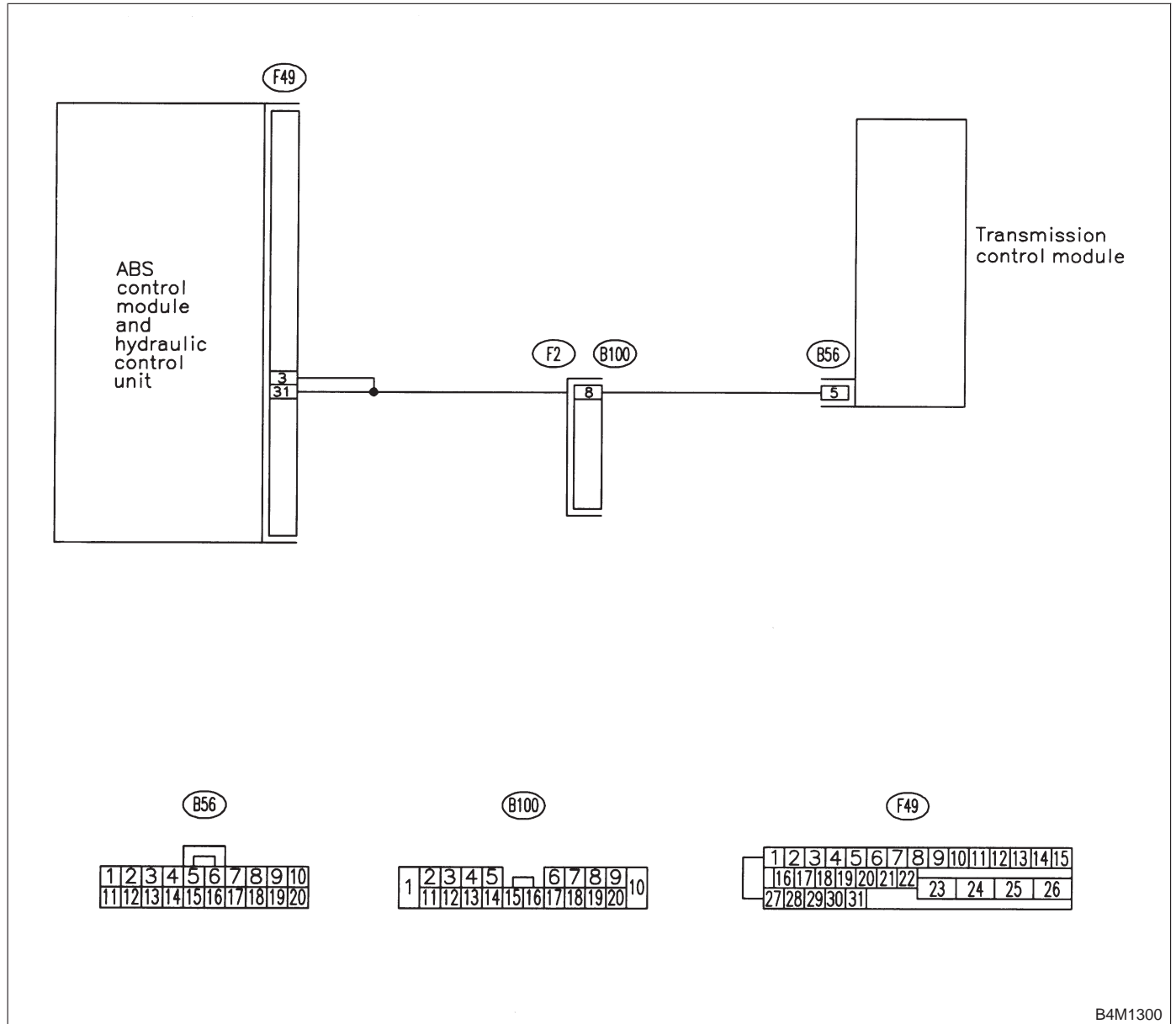
DIAGNOSIS:

- Combination of AT control faults

TROUBLE SYMPTOM:

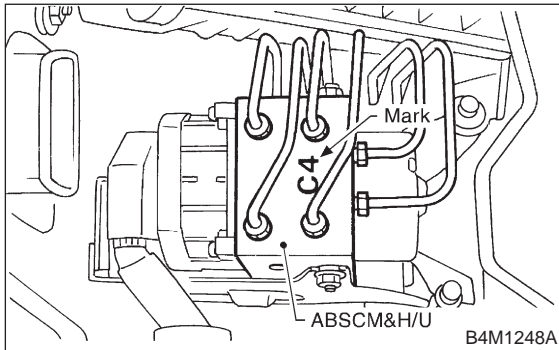
- ABS does not operate.

WIRING DIAGRAM:



8U1 : CHECK SPECIFICATIONS OF THE ABSCM&H/U.

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



Mark	Model
C1	FWD AT
C3	AWD AT
C4	AWD MT

CHECK : Is an ABSCM&H/U for AT model installed on a MT model?

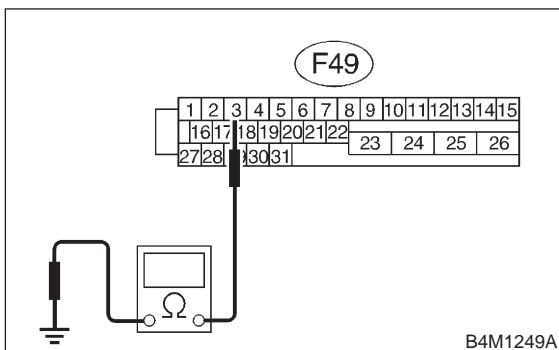
YES : Replace ABSCM&H/U.

NO : Go to step 8U2.

8U2 : CHECK GROUND SHORT OF HARNESS.

- 1) Turn ignition switch to OFF.
- 2) Disconnect 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?

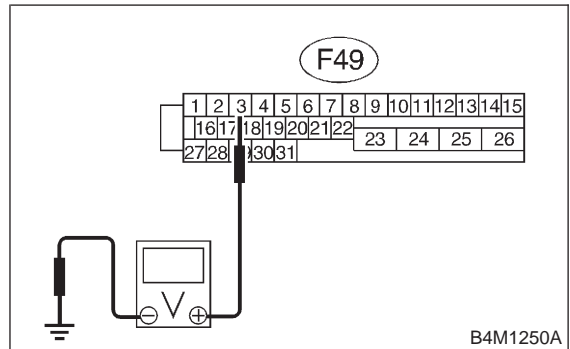
YES : Go to step 8U3.

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

8U3 : CHECK BATTERY SHORT OF HARNESS.

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?

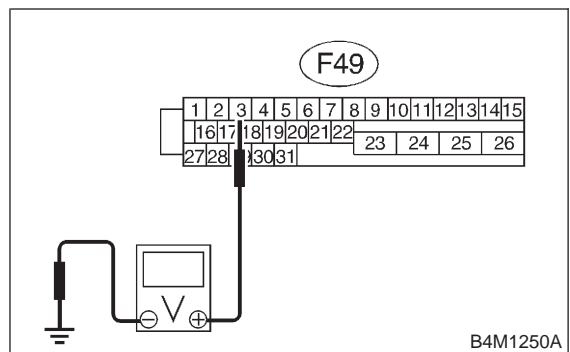
YES : Go to step 8U4.

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

8U4 : 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 8U5.

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

4-4 [T8U5]

BRAKES

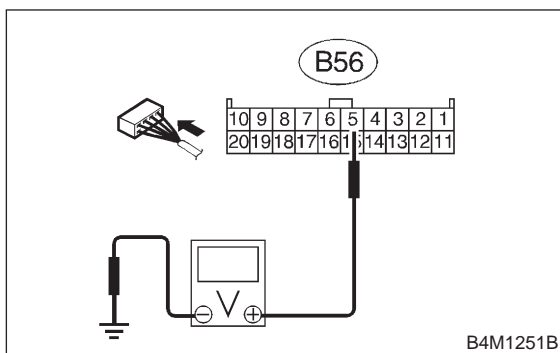
8. Diagnostics Chart with Trouble Code by ABS Warning Light

8U5 : CHECK TCM.

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

Connector & terminal

(B56) No. 5 (+) — Chassis ground (-):



- CHECK** : Is the voltage between 10 V and 15 V?
YES : Go to step 8U7.
NO : Go to step 8U6.

8U6 : CHECK AT.

- CHECK** : Is the AT functioning normally?
YES : Replace TCM.
NO : Repair AT.

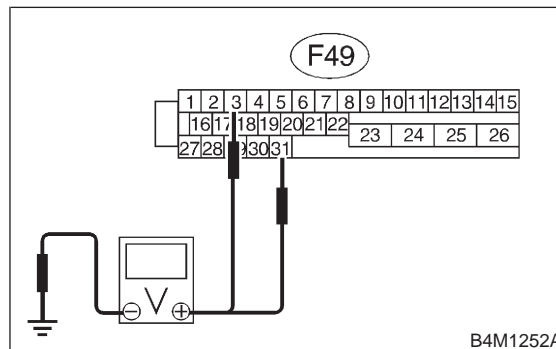
8U7 : CHECK OPEN CIRCUIT OF HARNESS.

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 10 V and 15 V?
YES : Go to step 8U8.
NO : Repair harness/connector between TCM and ABSCM&H/U.

8U8 : CHECK POOR CONTACT IN CONNECTORS.

- CHECK** : Is there poor contact in connectors between TCM and ABSCM&H/U? <Ref. to FOREWORD [T3C1].>
YES : Repair connector.
NO : Go to step 8U9.

8U9 : 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.
NO : Go to step 8U10.

8U10 : 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 51

— ABNORMAL VALVE RELAY —

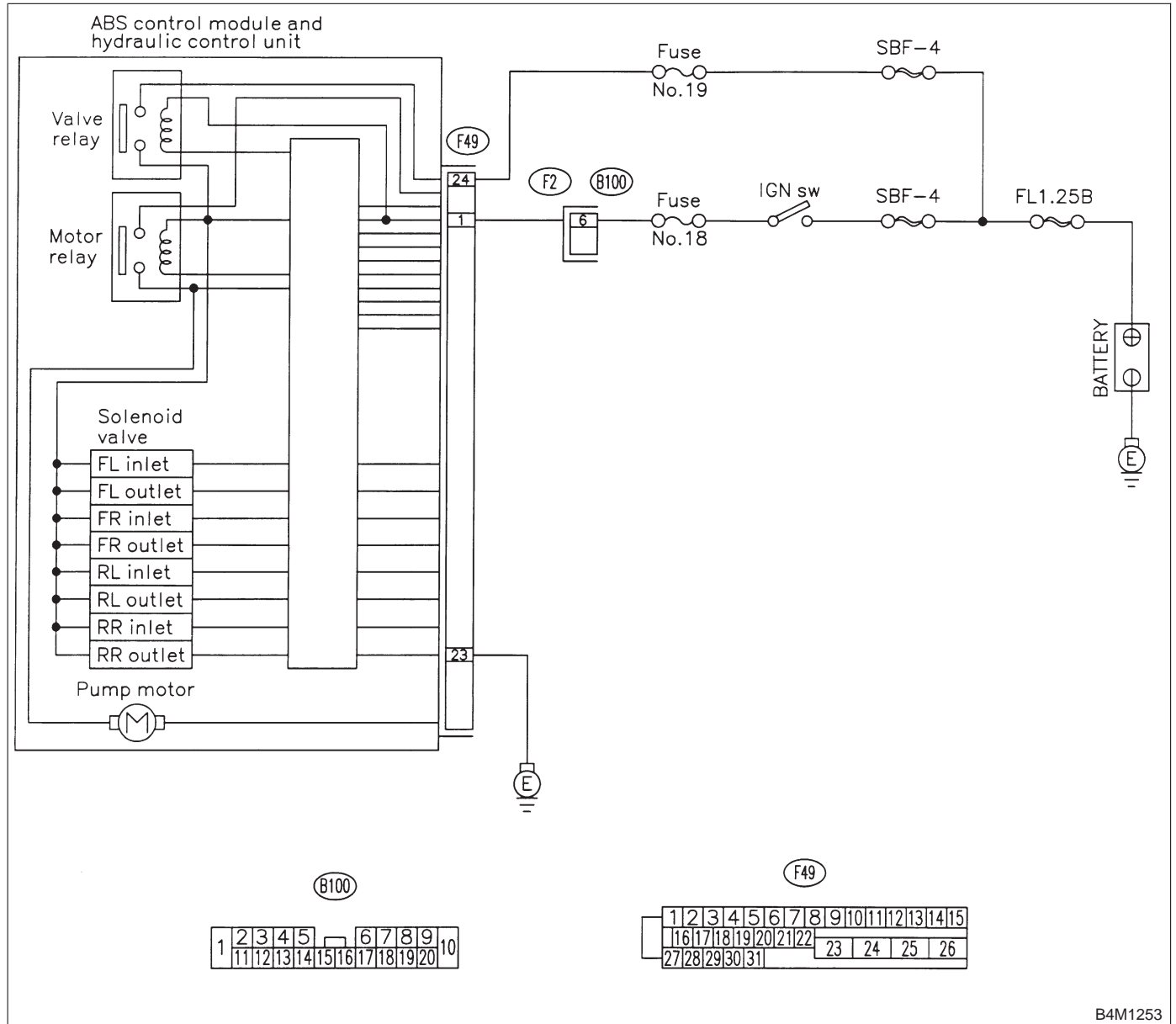
DIAGNOSIS:

- Faulty valve relay

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:



B4M1253

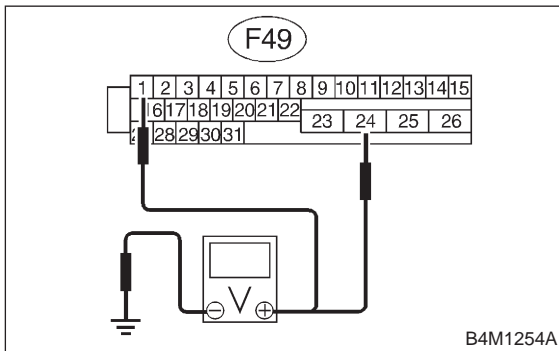
8V1 : CHECK INPUT VOLTAGE OF ABSCM&H/U.

- 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 (-):



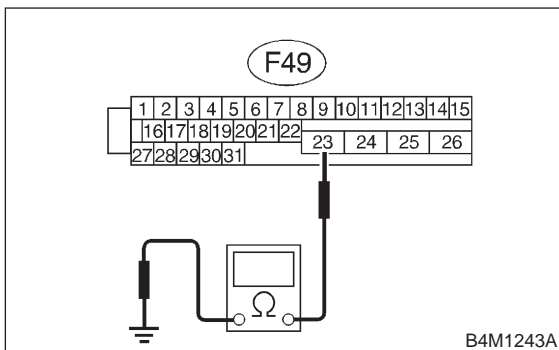
- CHECK** : **Is the voltage between 10 V and 15 V?**
- YES** : Go to step **8V2**.
- NO** : Repair harness connector between battery and ABSCM&H/U.

8V2 : 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:



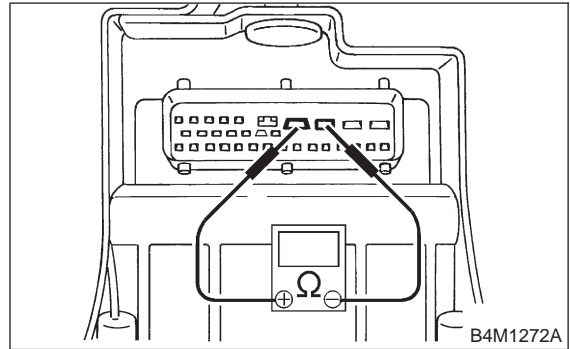
- CHECK** : **Is the resistance less than 0.5 Ω?**
- YES** : Go to step **8V3**.
- NO** : Repair ABSCM&H/U ground harness.

8V3 : CHECK VALVE RELAY IN ABSCM&H/U.

Measure resistance between ABSCM&H/U and terminals.

Terminals

No. 23 (+) — No. 24 (-):



- CHECK** : **Is the resistance more than 1 MΩ?**
- YES** : Go to step **8V4**.
- NO** : Replace ABSCM&H/U.

8V4 : CHECK POOR CONTACT IN CONNECTORS.

- CHECK** : **Is there poor contact in connectors between generator, battery and ABSCM&H/U? <Ref. to FOREWORD [T3C1].>**
- YES** : Repair connector.
- NO** : Go to step **8V5**.

8V5 : 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.
- NO** : Go to step **8V6**.

8V6 : 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.

BRAKES

[T8V6] 4-4

8. Diagnostics Chart with Trouble Code by ABS Warning Light

MEMO:

W: TROUBLE CODE 52

— ABNORMAL MOTOR AND/OR MOTOR RELAY —

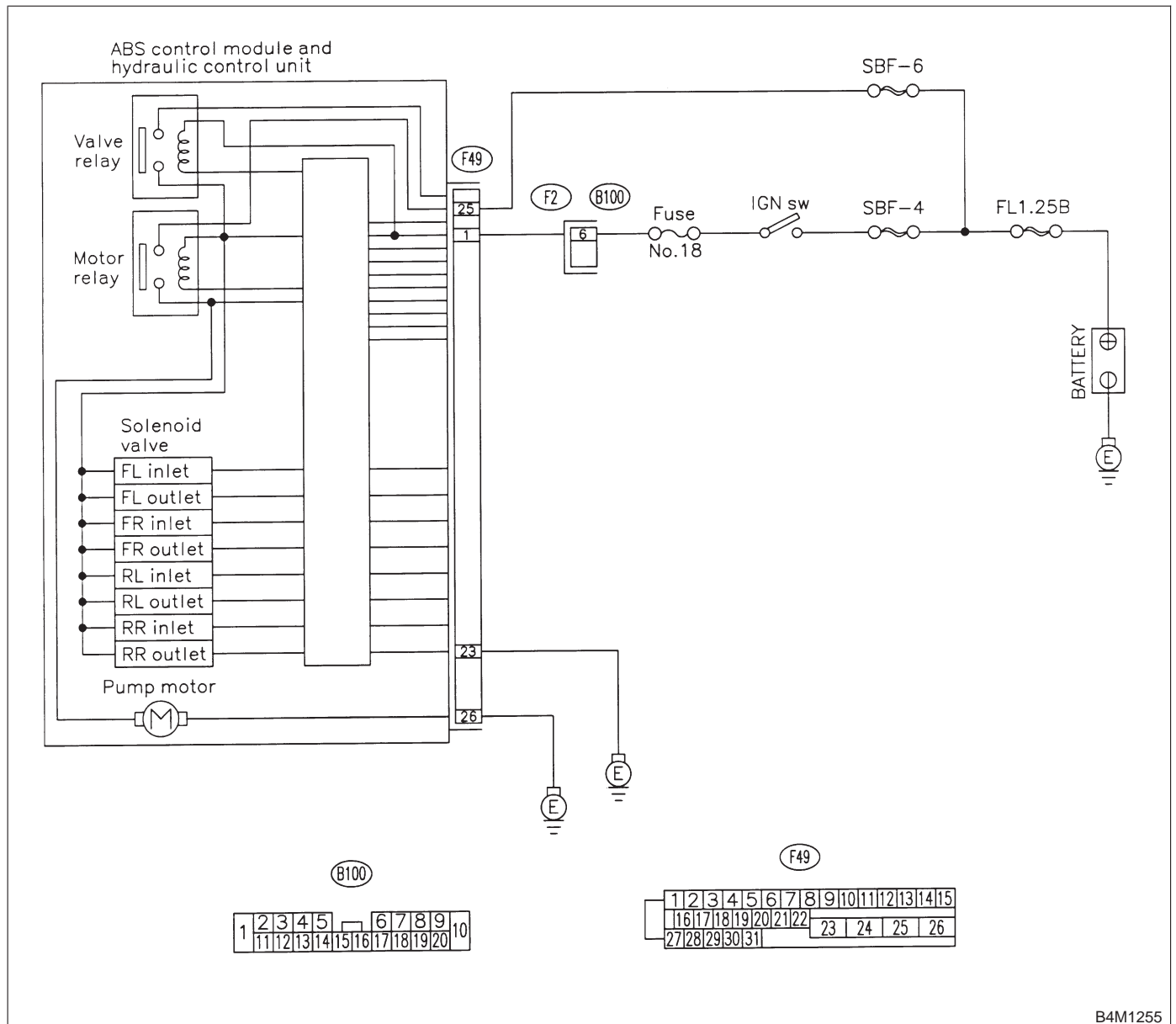
DIAGNOSIS:

- Faulty motor
- Faulty motor relay
- Faulty harness connector

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:

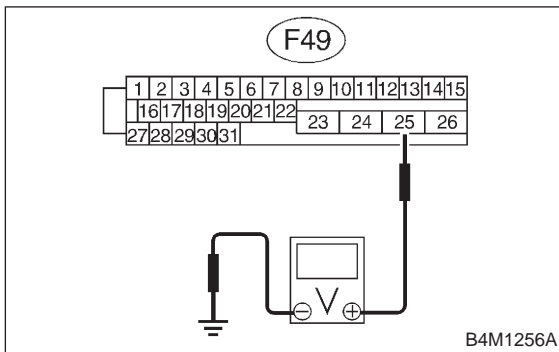


B4M1255

8W1 : 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 (-):

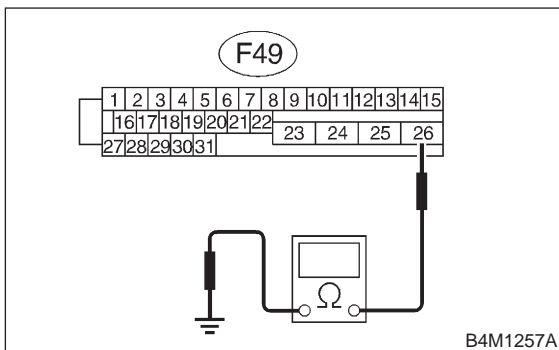


- CHECK** : Is the voltage between 10 V and 15 V?
YES : Go to step 8W2.
NO : Repair harness/connector between battery and ABSCM&H/U and check fuse SBF-6.

8W2 : 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:

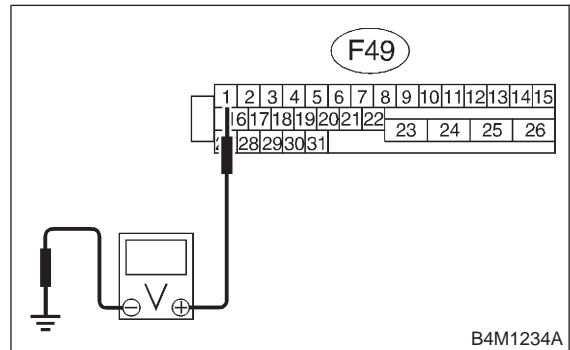


- CHECK** : Is the resistance less than 0.5 Ω?
YES : Go to step 8W3.
NO : Repair ABSCM&H/U ground harness.

8W3 : 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 (-):

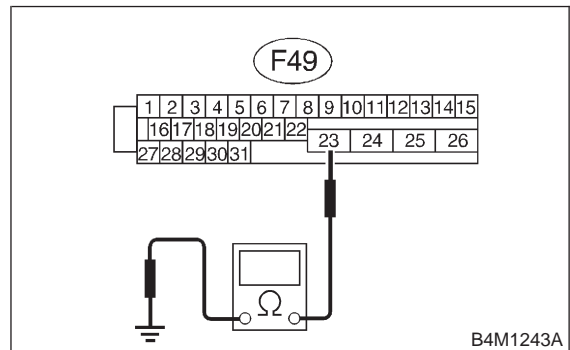


- CHECK** : Is the voltage between 10 V and 15 V?
YES : Go to step 8W4.
NO : Repair harness connector between battery, ignition switch and ABSCM&H/U.

8W4 : 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 8W5.
NO : Repair ABSCM&H/U ground harness.

8W5 : CHECK MOTOR OPERATION.

Operate the sequence control. <Ref. to 4-4 [W15D0].>

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 **8W6**.

NO : Replace ABSCM&H/U.

8W6 : 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 [T3C1].>*

YES : Repair connector.

NO : Go to step **8W7**.

8W7 : 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.

NO : Go to step **8W8**.

8W8 : 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.

BRAKES

[T8W8] 4-4

8. Diagnostics Chart with Trouble Code by ABS Warning Light

MEMO:

X: TROUBLE CODE 54

— ABNORMAL STOP LIGHT SWITCH —

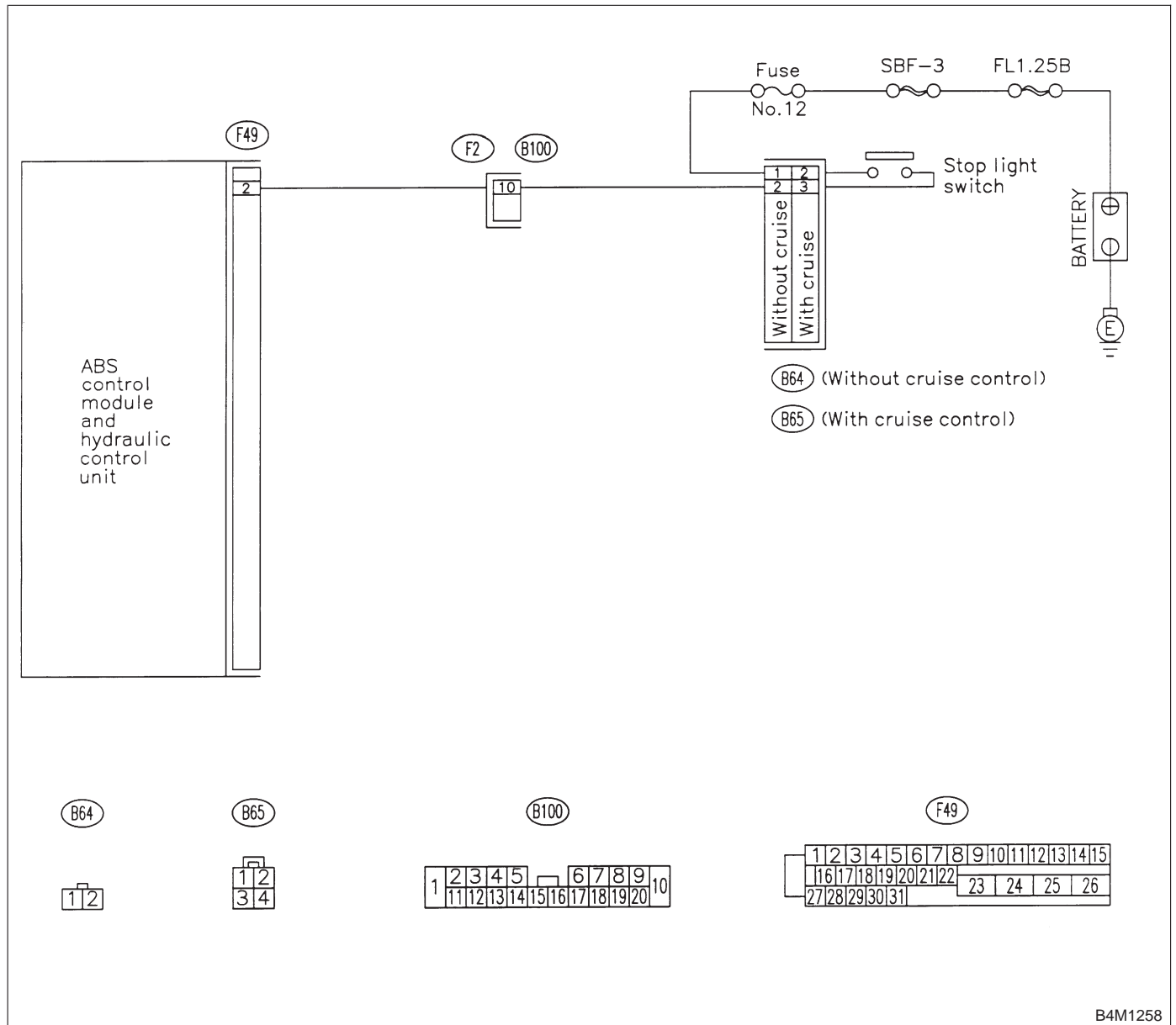
DIAGNOSIS:

- Faulty stop light switch

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:



B4M1258

8X1 : CHECK STOP LIGHTS COME ON.

Depress the brake pedal.

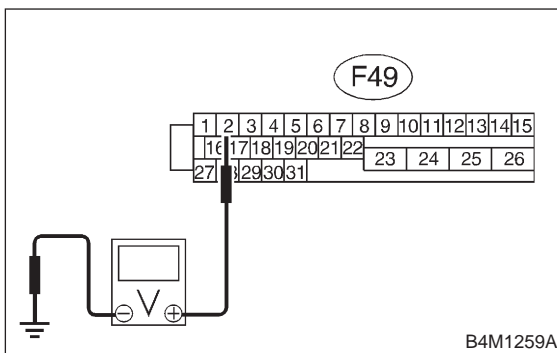
- CHECK** : *Do stop lights come on?*
- YES** : Go to step **8X2**.
- NO** : Repair stop lights circuit.

8X2 : 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 V and 15 V?*
- YES** : Go to step **8X3**.
- NO** : Repair harness between stop light switch and ABSCM&H/U.

8X3 : CHECK POOR CONTACT IN CONNECTORS.

- CHECK** : *Is there poor contact in connector between stop light switch and ABSCM&H/U? <Ref. to FOREWORD [T3C1].>*
- YES** : Repair connector.
- NO** : Go to step **8X4**.

8X4 : 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.
- NO** : Go to step **8X5**.

8X5 : 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.

Y: TROUBLE CODE 56

— ABNORMAL G SENSOR OUTPUT VOLTAGE —

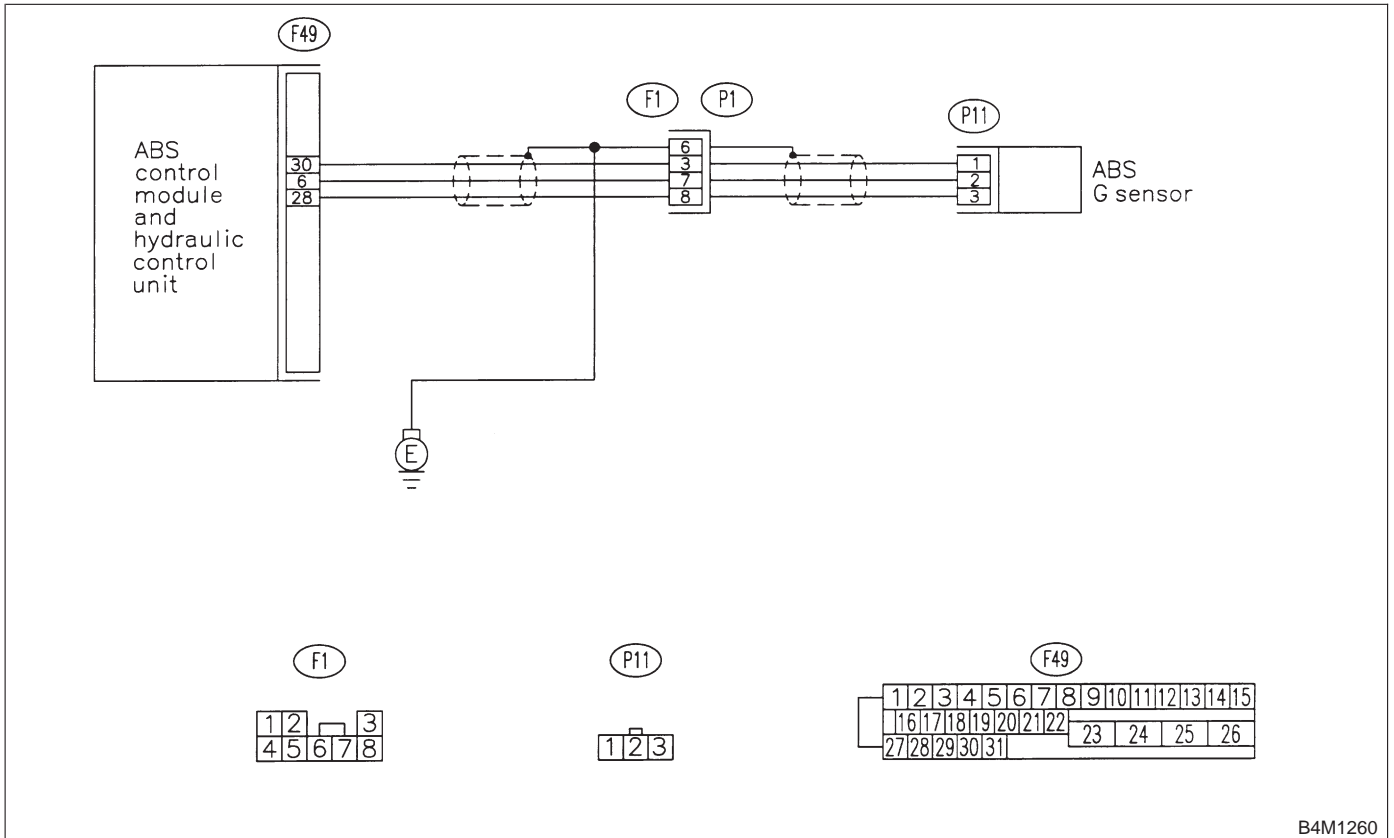
DIAGNOSIS:

- Faulty G sensor output voltage

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:



B4M1260

BRAKES

[T8Y3] 4-4

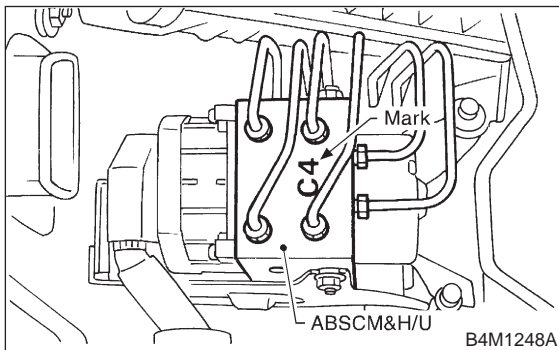
8. Diagnostics Chart with Trouble Code by ABS Warning Light

8Y1 : 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 8Y2.

8Y2 : CHECK SPECIFICATIONS OF ABSCM&H/U.

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



Mark	Model
C1	FWD AT
C3	AWD AT
C4	AWD MT

- CHECK** : *Is an ABSCM for AWD model installed on a FWD model?*
- YES** : Replace ABSCM&H/U.

CAUTION:

Be sure to turn ignition switch to OFF when removing ABSCM&H/U.

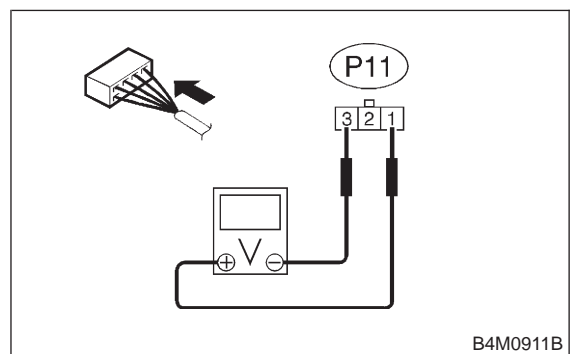
- NO** : Go to step 8Y3.

8Y3 : 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

(P11) No. 1 (+) — No. 3 (-):



- CHECK** : *Is the voltage between 4.75 and 5.25 V?*
- YES** : Go to step 8Y4.
- NO** : Repair harness/connector between G sensor and ABSCM&H/U.

4-4 [T8Y4]

BRAKES

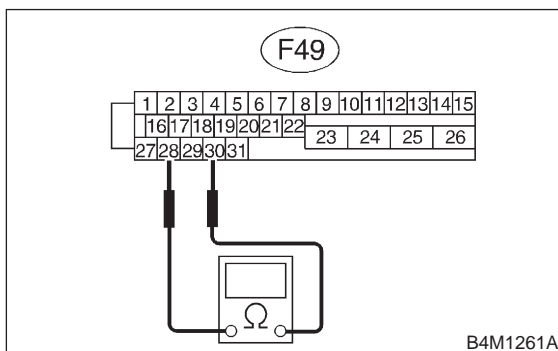
8. Diagnostics Chart with Trouble Code by ABS Warning Light

8Y4 : 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. 30 — No. 28:



CHECK : Is the resistance between 4.3 and 4.9 kΩ?

YES : Go to step 8Y5.

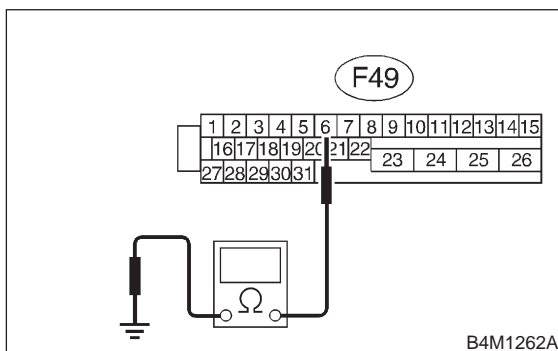
NO : Repair harness/connector between G sensor and ABSCM&H/U.

8Y5 : 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:



CHECK : Is the resistance more than 1 MΩ?

YES : Go to step 8Y6.

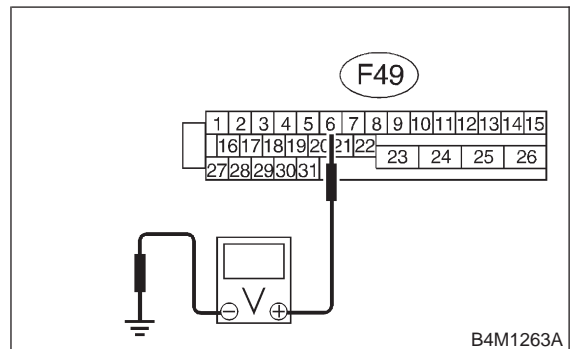
NO : Repair harness between G sensor and ABSCM&H/U.

8Y6 : CHECK BATTERY SHORT OF HARNESS.

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 8Y7.

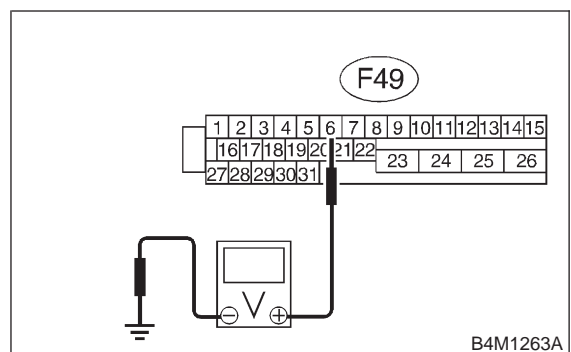
NO : Repair harness between G sensor and ABSCM&H/U.

8Y7 : 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 8Y8.

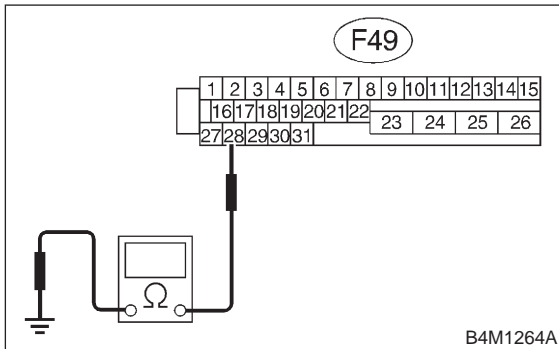
NO : Repair harness between G sensor and ABSCM&H/U.

8Y8 : CHECK GROUND SHORT OF HARNESS.

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

Connector & terminal

(F49) No. 28 — Chassis ground:



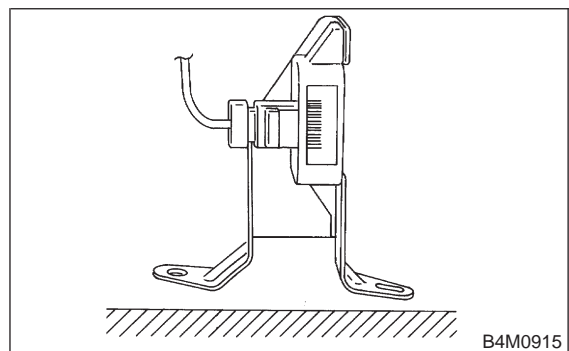
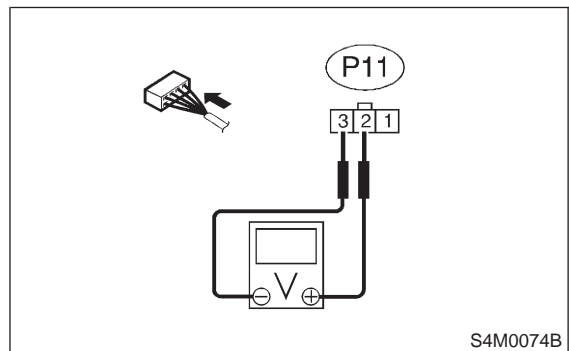
- CHECK** : *Is the resistance more than 1 MΩ?*
- YES** : Go to step **8Y9**.
- NO** : Repair harness between G sensor and ABSCM&H/U.
Replace ABSCM&H/U.

8Y9 : CHECK G SENSOR.

- 1) Turn ignition switch to OFF.
- 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

(P11) No. 2 (+) — No. 3 (-):



- CHECK** : *Is the voltage between 2.1 and 2.4 V when G sensor is horizontal?*
- YES** : Go to step **8Y10**.
- NO** : Replace G sensor.

4-4 [T8Y10]

BRAKES

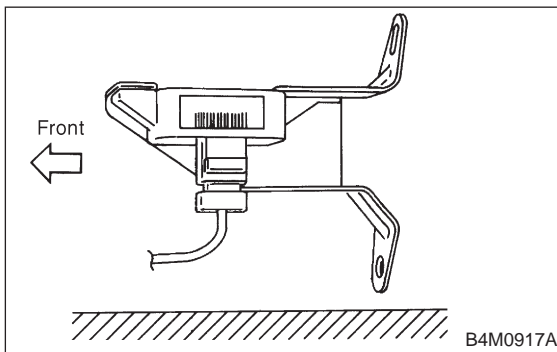
8. Diagnostics Chart with Trouble Code by ABS Warning Light

8Y10 : CHECK G SENSOR.

Measure voltage between G sensor connector terminals.

Connector & terminal

(P11) 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 8Y11.

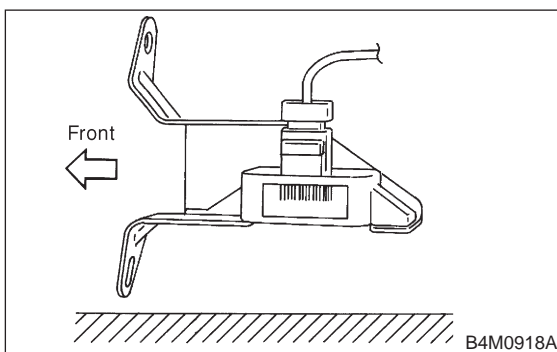
NO : Replace G sensor.

8Y11 : CHECK G SENSOR.

Measure voltage between G sensor connector terminals.

Connector & terminal

(P11) 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 8Y12.

NO : Replace G sensor.

8Y12 : CHECK POOR CONTACT IN CONNECTORS.

CHECK : *Is there poor contact in connector between ABSCM&H/U and G sensor? <Ref. to FOREWORD [T3C1].>*

YES : Repair connector.

NO : Go to step 8Y13.

8Y13 : 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.

NO : Go to step 8Y14.

8Y14 : 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.