13.Diagnostics Procedure with Subaru Select Monitor

A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

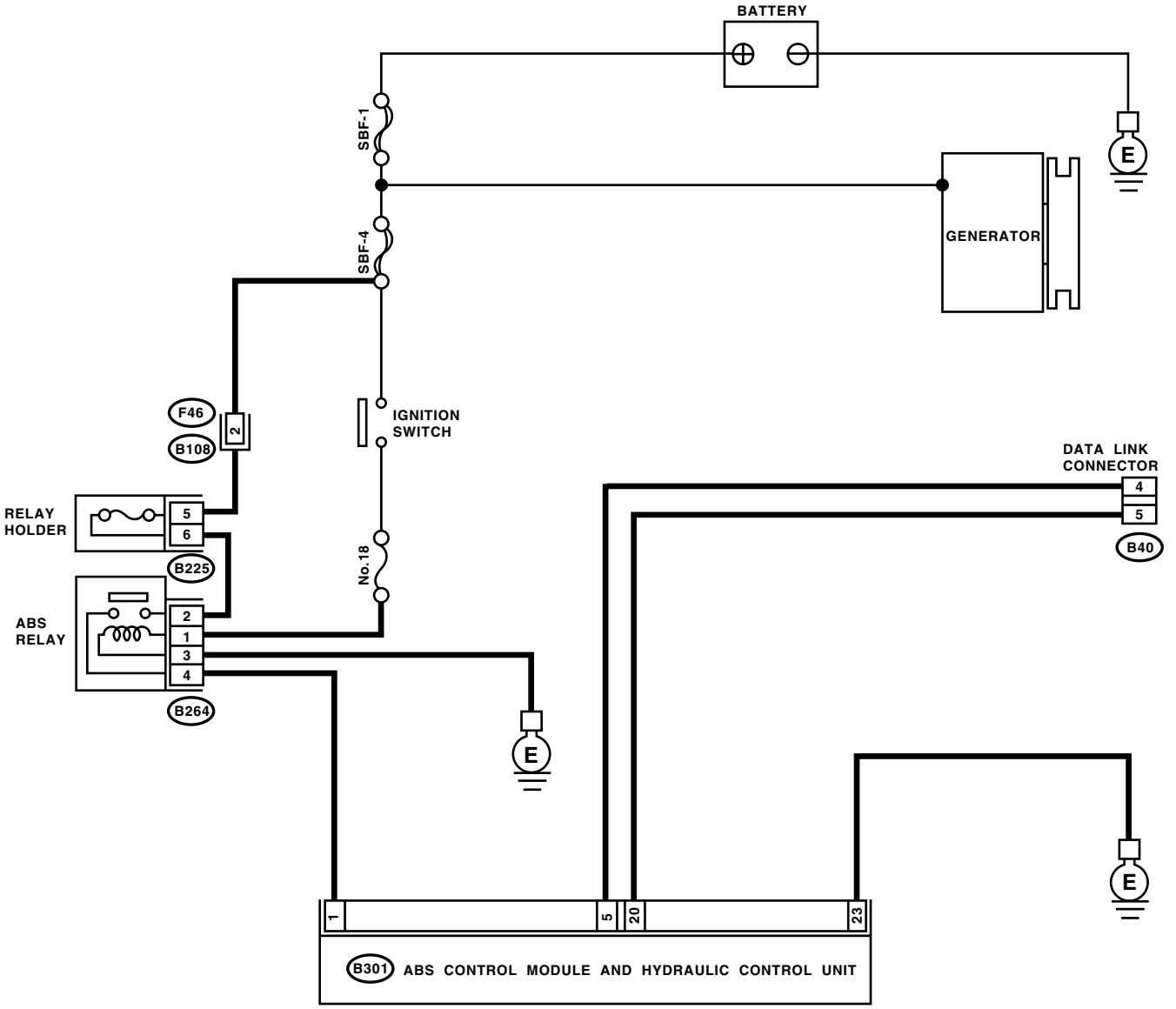
DIAGNOSIS:

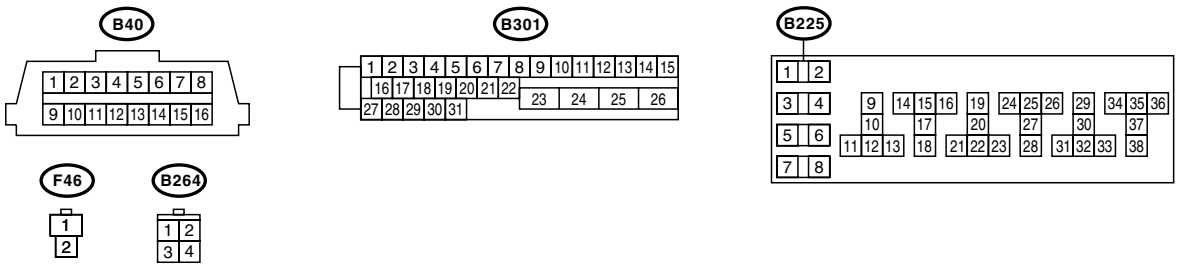
- Faulty harness connector

TROUBLE SYMPTOM:

- Communication cannot be executed between ABS and Subaru select monitor.

WIRING DIAGRAM:





ABS00328

	Step	Check	Yes	No
1	**CHECK IGNITION SWITCH.**	Is the ignition switch turned to ON?	Go to step **2.**	Turn the ignition switch to ON, and select ABS mode using Subaru Select Monitor.
2	**CHECK BATTERY.** 1)Turn the ignition switch to OFF. 2)Measure the battery voltage.	Is the voltage or more 11 V?	Go to step **3.**	Charge or replace the battery.
3	**CHECK BATTERY TERMINAL.**	Is there poor contact at battery terminal?	Repair or tighten the battery terminal.	Go to step **4.**
4	**CHECK COMMUNICATION OF SUBARU SELECT MONITOR.** 1)Turn the ignition switch to ON. 2)Using the Subaru Select Monitor, check whether communication to other system can be executed normally.	Are the name and year of system displayed on Subaru Select Monitor?	Go to step **8.**	Go to step **5.**
5	**CHECK COMMUNICATION OF SUBARU SELECT MONITOR.** 1)Turn the ignition switch to OFF. 2)Disconnect the ABSCM&H/U connector. 3)Turn the ignition switch to ON. 4)Check whether communication to other systems can be executed normally.	Are the name and year of system displayed on Subaru Select Monitor?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **6.**
6	**CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL MODULE AND DATA LINK CONNECTOR.** 1)Turn the ignition switch to OFF. 2)Disconnect the ABSCM&H/U, ECM and TCM connectors. 3)Measure the resistance between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 5 — Chassis ground:*** ***(B40) No. 4 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **7.**	Repair the harness and connector between each control module and data link connector.
7	**CHECK OUTPUT SIGNAL FOR ABSCM&H/U.** 1)Turn the ignition switch to ON. 2)Measure the voltage between ABSCM&H/U and chassis ground. ***Connector & terminal*** ***(B40) No. 5 (+) — Chassis ground (–):*** ***(B40) No. 4 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **8.**	Repair the harness and connector between each control module and data link connector.
8	**CHECK HARNESS/CONNECTOR BETWEEN ABSCM&H/U AND DATA LINK CONNECTOR.** Measure the resistance between ABSCM&H/U connector and data link connector. ***Connector & terminal*** ***(B301) No. 20 — (B40) No. 5:*** ***(B301) No. 5 — (B40) No. 4:***	Is the resistance less than 0.5 Ω?	Go to step **9.**	Repair the harness and connector between ABSCM&H/U and data link connector.
9	**CHECK INSTALLATION OF ABSCM&H/U CONNECTOR.** Turn the ignition switch to OFF.	Is the ABSCM&H/U connector inserted into ABSCM&H/U until the clamp locks onto it?	Go to step **10.**	Insert the ABSCM&H/U connector into ABSCM&H/U.

	Step	Check	Yes	No
10	**CHECK POWER SUPPLY CIRCUIT.** 1)Turn the ignition switch to ON (engine OFF). 2)Measure the ignition power supply voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **11.**	Repair the open circuit in harness between ABSCM&H/U and battery.
11	**CHECK HARNESS CONNECTOR BETWEEN ABSCM&H/U AND CHASSIS GROUND.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U and transmission. 3)Measure the resistance of harness between ABSCM&H/U and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **12.**	Repair the open circuit in harness between ABSCM&H/U and inhibitor side connector, and poor contact in coupling connector.
12	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in control module power supply, ground line and data link connector?	Repair the connector.	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>

B: NO TROUBLE CODE

DIAGNOSIS:

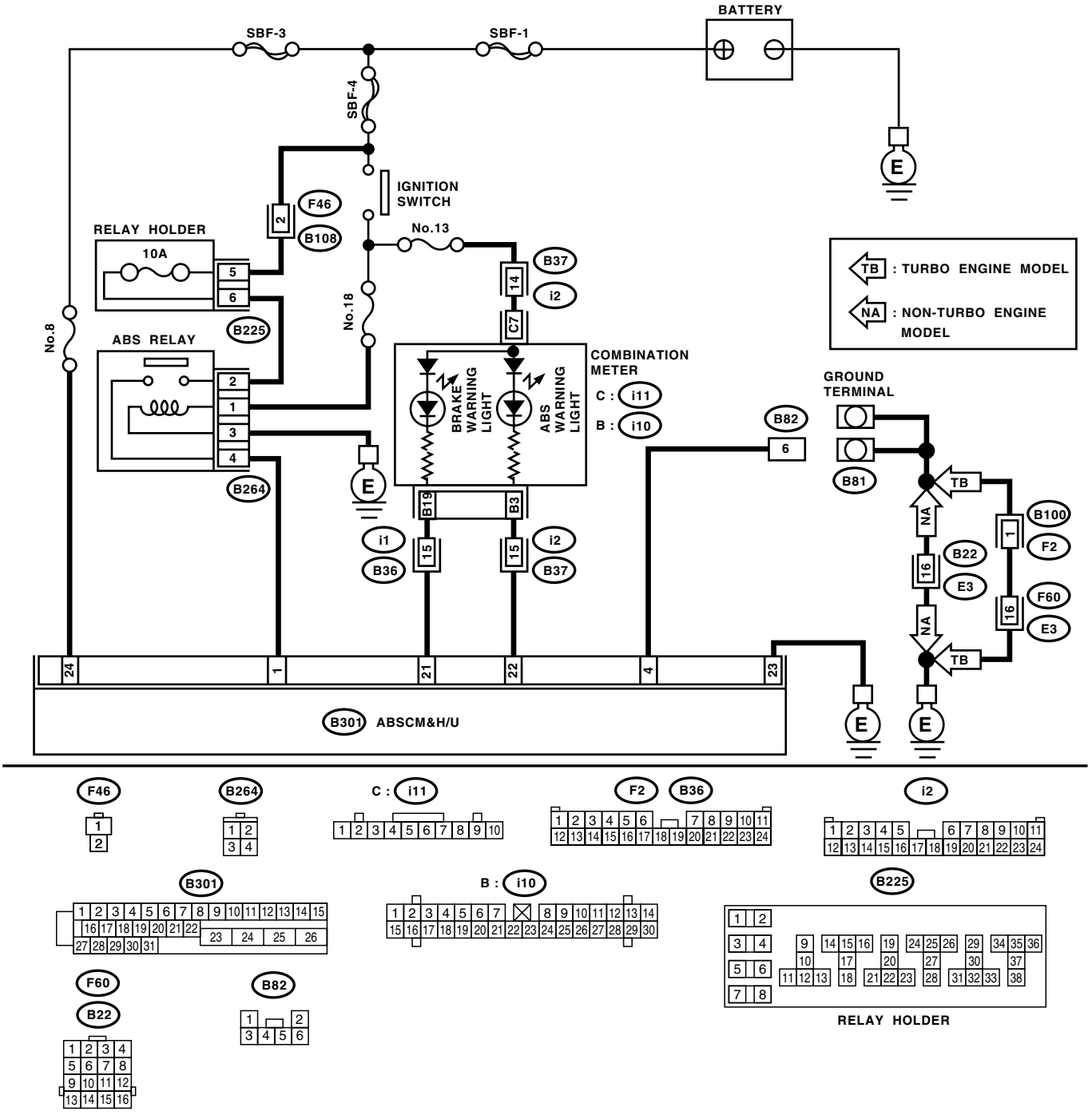
- ABS warning light circuit is shorted.

TROUBLE SYMPTOM:

- ABS warning light remains on.
- NO TROUBLE CODE displayed on the Subaru Select Monitor.

NOTE:
When the ABS warning light is OFF and “NO TROUBLE CODE” is displayed on Subaru Select Monitor, the system is in normal condition.

WIRING DIAGRAM:



ABS00347

Step		Check	Yes	No
1	**CHECK WIRING HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector (i2) from connector (B37). 3)Turn the ignition switch to ON.	Does the ABS warning light turn on?	Go to step **2.**	Repair the front wiring harness.

	Step	Check	Yes	No
2	**CHECK PROJECTION AT ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. NOTE: For detail of connector switch, refer to following. <Ref. to ABS-12, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>	Is there any damage on projection which switches connector switch?	Go to step **3.**	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
3	**CHECK ABSCM&H/U.** Measure the resistance between ABSCM&H/U terminals. ***Terminals*** ***No. 22 — No. 23:***	Is the resistance more than 1 MΩ?	Go to step **4.**	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
4	**CHECK WIRING HARNESS.** Measure the resistance between connector and chassis ground. ***Connector & terminal*** ***(B301) No. 22 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **5.**	Repair the harness.
5	**CHECK WIRING HARNESS.** 1)Connect the connector to ABSCM&H/U. 2)Measure the resistance between connector and chassis ground. ***Connector & terminal*** ***(B301) No. 22 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **6.**	Repair the harness.
6	**CHECK POOR CONTACT IN ABSCM&H/U CONNECTOR.**	Is there poor contact in ABSCM&H/U connector?	Repair the connector.	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>

C: DTC 21 — OPEN OR SHORT CIRCUIT IN FRONT RIGHT ABS WHEEL SPEED SENSOR CIRCUIT —

NOTE:
For the diagnostic procedure, refer to DTC 27. <Ref. to ABS-86, DTC 27 — OPEN OR SHORT CIRCUIT IN REAR LEFT ABS WHEEL SPEED SENSOR CIRCUIT —, Diagnostics Procedure with Subaru Select Monitor.>

D: DTC 23 — OPEN OR SHORT CIRCUIT IN FRONT LEFT ABS WHEEL SPEED SENSOR CIRCUIT —

NOTE:
For the diagnostic procedure, refer to DTC 27. <Ref. to ABS-86, DTC 27 — OPEN OR SHORT CIRCUIT IN REAR LEFT ABS WHEEL SPEED SENSOR CIRCUIT —, Diagnostics Procedure with Subaru Select Monitor.>

E: DTC 25 — OPEN OR SHORT CIRCUIT IN REAR RIGHT ABS WHEEL SPEED SENSOR CIRCUIT —

NOTE:
For the diagnostic procedure, refer to DTC 27. <Ref. to ABS-86, DTC 27 — OPEN OR SHORT CIRCUIT IN REAR LEFT ABS WHEEL SPEED SENSOR CIRCUIT —, Diagnostics Procedure with Subaru Select Monitor.>

F: DTC 27
— OPEN OR SHORT CIRCUIT IN REAR LEFT ABS WHEEL SPEED SENSOR CIRCUIT —

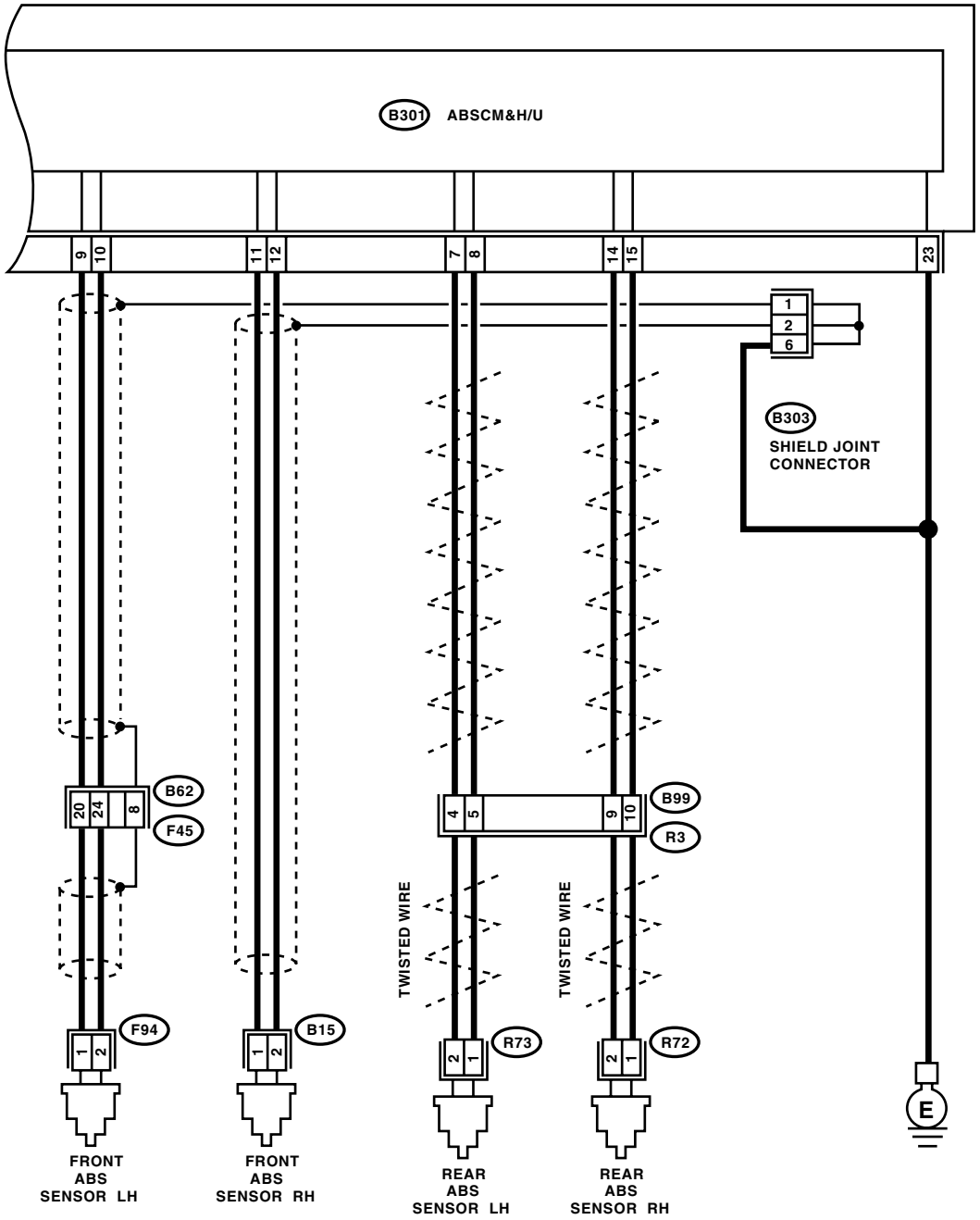
DIAGNOSIS:

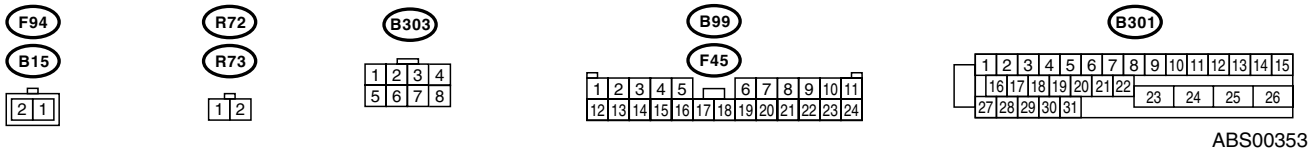
- Faulty ABS wheel speed sensor (Broken wire, input voltage too high)
- Faulty harness connector

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00353

	Step	Check	Yes	No
1	**CHECK OUTPUT OF ABS WHEEL SPEED SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read the ABS wheel speed sensor output corresponding to faulty system in the Subaru Select Monitor data display mode.	Does the speed indicated on display change in response to speedometer reading during acceleration/deceleration when the steering wheel is in straight-ahead position?	Go to step **2.**	Go to step **8.**
2	**CHECK INSTALLATION OF ABS WHEEL SPEED SENSOR.**	Are the ABS wheel speed sensor installation bolts tightened 33 N·m (3.3 kgf-m, 24 ft-lb)?	Go to step **3.**	Tighten the ABS wheel speed sensor installation bolts securely.
3	**CHECK ABS WHEEL SPEED SENSOR GAP.** Measure the tone wheel to ABS wheel speed sensor piece gap over entire perimeter of the wheel.	Is the gap as following value? Front wheel: 0.3 — 0.8 mm (0.012 — 0.031 in) Rear wheel 0.7 — 1.2 mm (0.028 — 0.047 in)	Go to step **4.**	Adjust the gap. NOTE: Adjust the gap using spacers (Part No. 26755AA000). If the spacers cannot correct gap, replace worn sensor or worn tone wheel.
4	**CHECK TONE WHEEL RUNOUT.** Measure the tone wheel runout.	Is the runout less than 0.05 mm (0.0020 in)?	Go to step **5.**	Replace the tone wheel. Front: <Ref. to ABS-18, Front Tone Wheel.> Rear: <Ref. to ABS-19, Rear Tone Wheel.>
5	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connectors between ABSCM&H/U and ABS wheel speed sensor?	Repair the connector.	Go to step **6.**
6	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **7.**
7	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact. NOTE: Check the harness and connectors between ABSCM&H/U and ABS wheel speed sensor.

	Step	Check	Yes	No
8	**CHECK ABS WHEEL SPEED SENSOR.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABS wheel speed sensor. 3)Measure the resistance of ABS wheel speed sensor connector terminals while shaking the harness lightly. ***Terminals*** ***Front RH No. 1 — No. 2:*** ***Front LH No. 1 — No. 2:*** ***Rear RH No. 1 — No. 2:*** ***Rear LH No. 1 — No. 2:***	Is the resistance as following value? Front: 1 — 1.5 kΩ Rear: 1.025 — 1.265 kΩ	Go to step **9.**	Replace the ABS wheel speed sensor. Front: <Ref. to ABS-12, Front ABS Wheel Speed Sensor.> Rear: <Ref. to ABS-15, Rear ABS Wheel Speed Sensor.>
9	**CHECK BATTERY SHORT OF ABS WHEEL SPEED SENSOR.** 1)Disconnect the connector from ABSCM&H/U. 2)Measure the voltage between ABS wheel speed 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 (–):***	Is the voltage less than 1 V?	Go to step **10.**	Replace the ABS wheel speed sensor. Front: <Ref. to ABS-12, Front ABS Wheel Speed Sensor.> Rear: <Ref. to ABS-15, Rear ABS Wheel Speed Sensor.>
10	**CHECK BATTERY SHORT OF ABS WHEEL SPEED SENSOR.** 1)Turn the ignition switch to ON. 2)Measure the voltage between ABS wheel speed 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 (–):***	Is the voltage less than 1 V?	Go to step **11.**	Replace the ABS wheel speed sensor. Front: <Ref. to ABS-12, Front ABS Wheel Speed Sensor.> Rear: <Ref. to ABS-15, Rear ABS Wheel Speed Sensor.>
11	**CHECK HARNESS/CONNECTOR BETWEEN ABSCM&H/U AND ABS WHEEL SPEED SENSOR.** 1)Turn the ignition switch to OFF. 2)Connect the connector to ABS wheel speed sensor. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***DTC 21*** ***(B301) No. 11 — No. 12:*** ***DTC 23*** ***(B301) No. 9 — No. 10:*** ***DTC 25*** ***(B301) No. 14 — No. 15:*** ***DTC 27*** ***(B301) No. 7 — No. 8:***	Is the resistance as following value? Front: 1 — 1.5 kΩ Rear: 1.025 — 1.265 kΩ	Go to step **12.**	Repair the harness/connector between ABSCM&H/U and ABS wheel speed sensor.

	Step	Check	Yes	No
12	**CHECK BATTERY SHORT OF HARNESS.** Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***DTC 21*** ***(B301) No. 11 (+) — Chassis ground (–):*** ***DTC 23*** ***(B301) No. 9 (+) — Chassis ground (–):*** ***DTC 25*** ***(B301) No. 14 (+) — Chassis ground (–):*** ***DTC 27*** ***(B301) No. 7 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **13.**	Repair the harness between ABSCM&H/U and ABS wheel speed sensor.
13	**CHECK BATTERY SHORT OF HARNESS.** 1)Turn the ignition switch to ON. 2)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***DTC 21*** ***(B301) No. 11 (+) — Chassis ground (–):*** ***DTC 23*** ***(B301) No. 9 (+) — Chassis ground (–):*** ***DTC 25*** ***(B301) No. 14 (+) — Chassis ground (–):*** ***DTC 27*** ***(B301) No. 7 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **14.**	Repair the harness between ABSCM&H/U and ABS wheel speed sensor.
14	**CHECK INSTALLATION OF ABS WHEEL SPEED SENSOR.**	Are the ABS wheel speed sensor installation bolts tightened 33 N·m (3.3 kgf-m, 24 ft-lb)?	Go to step **15.**	Tighten the ABS wheel speed sensor installation bolts securely.
15	**CHECK ABS WHEEL SPEED SENSOR GAP.** Measure the tone wheel to ABS wheel speed sensor piece gap over entire perimeter of the wheel.	Is the gap as following value? Front wheel: 0.3 — 0.8 mm (0.012 — 0.031 in) Rear wheel: 0.7 — 1.2 mm (0.028 — 0.047 in)	Go to step **16.**	Adjust the gap. NOTE: Adjust the gap using spacers (Part No. 26755AA000). If the spacers cannot correct gap, replace worn sensor or worn tone wheel.
16	**CHECK TONE WHEEL RUNOUT.** Measure the tone wheel runout.	Is the runout less than 0.05 mm (0.0020 in)?	Go to step **17.**	Replace the tone wheel. Front: <Ref. to ABS-18, Front Tone Wheel.> Rear: <Ref. to ABS-19, Rear Tone Wheel.>

	Step	Check	Yes	No
17	**CHECK GROUND SHORT OF ABS WHEEL SPEED SENSOR.** 1)Turn the ignition switch to ON. 2)Measure the resistance between ABS wheel speed 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:***	Is the resistance more than 1 MΩ?	Go to step **18.**	Replace the ABS wheel speed sensor and ABSCM&H/U. Front: <Ref. to ABS-12, Front ABS Wheel Speed Sensor.> Rear: <Ref. to ABS-15, Rear ABS Wheel Speed Sensor.> and <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
18	**CHECK GROUND SHORT OF HARNESS.** 1)Turn the ignition switch to OFF. 2)Connect the connector to ABS wheel speed sensor. 3)Measure the resistance between ABSCM&H/U connector terminal and chassis ground. ***Connector & terminal*** ***DTC 21*** ***(B301) No. 11 — Chassis ground:*** ***DTC 23*** ***(B301) No. 9 — Chassis ground:*** ***DTC 25*** ***(B301) No. 14 — Chassis ground:*** ***DTC 27*** ***(B301) No. 7 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **19.**	Repair the harness between ABSCM&H/U and ABS wheel speed sensor. And replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
19	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between ABSCM&H/U and ABS wheel speed sensor?	Repair the connector.	Go to step **20.**
20	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U.	Go to step **21.**
21	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact. NOTE: Check the harness and connectors between ABSCM&H/U and ABS wheel speed sensor.

G: DTC 22
— FRONT RIGHT ABNORMAL ABS WHEEL SPEED SENSOR SIGNAL —

NOTE:
For the diagnostic procedure, refer to DTC 28. <Ref. to ABS-92, DTC 28 — REAR LEFT ABNORMAL ABS WHEEL SPEED SENSOR SIGNAL —, Diagnostics Procedure with Subaru Select Monitor.>

H: DTC 24
— FRONT LEFT ABNORMAL ABS WHEEL SPEED SENSOR SIGNAL —

NOTE:
For the diagnostic procedure, refer to DTC 28. <Ref. to ABS-92, DTC 28 — REAR LEFT ABNORMAL ABS WHEEL SPEED SENSOR SIGNAL —, Diagnostics Procedure with Subaru Select Monitor.>

I: DTC 26
— REAR RIGHT ABNORMAL ABS WHEEL SPEED SENSOR SIGNAL —

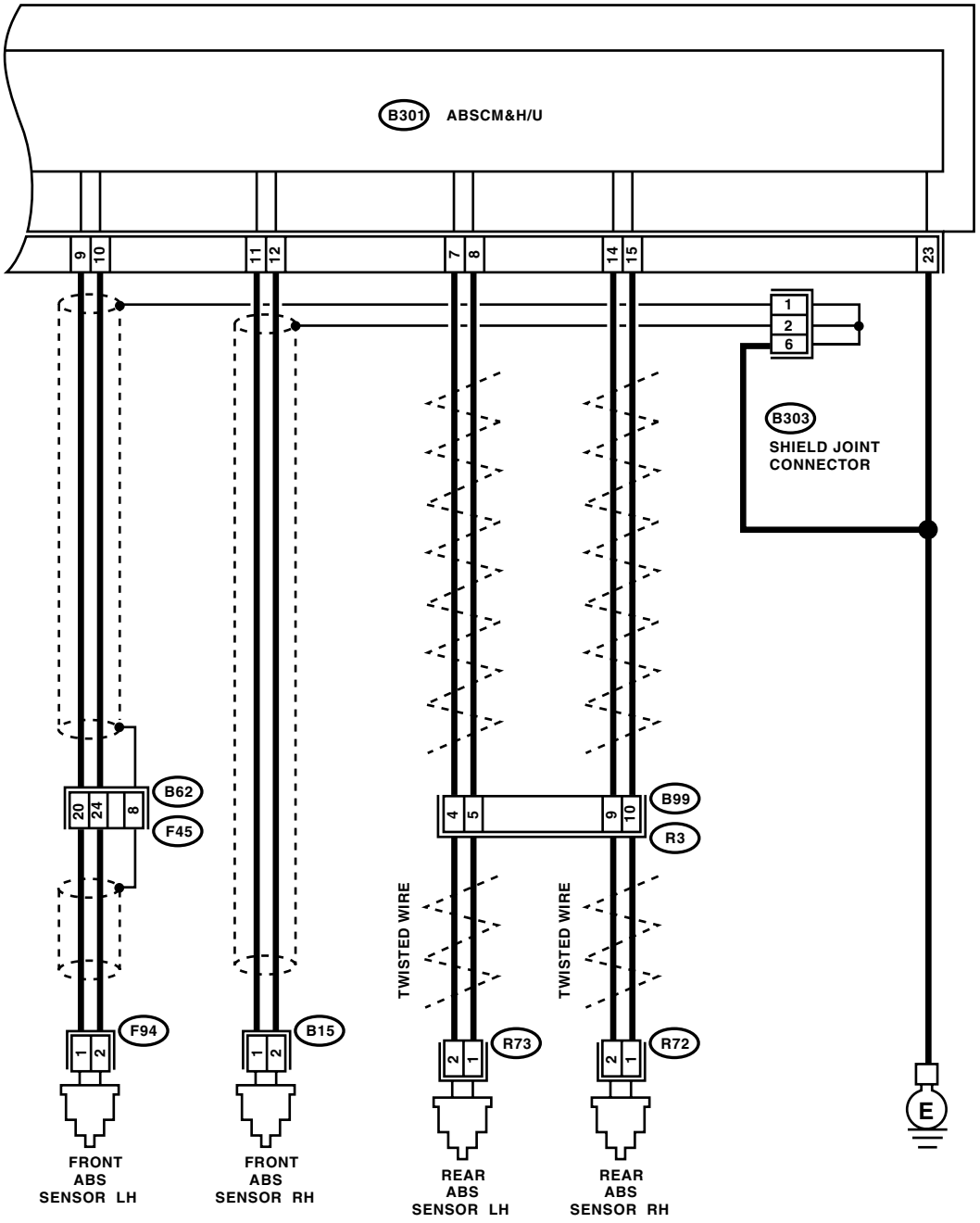
NOTE:
For the diagnostic procedure, refer to DTC 28. <Ref. to ABS-92, DTC 28 — REAR LEFT ABNORMAL ABS WHEEL SPEED SENSOR SIGNAL —, Diagnostics Procedure with Subaru Select Monitor.>

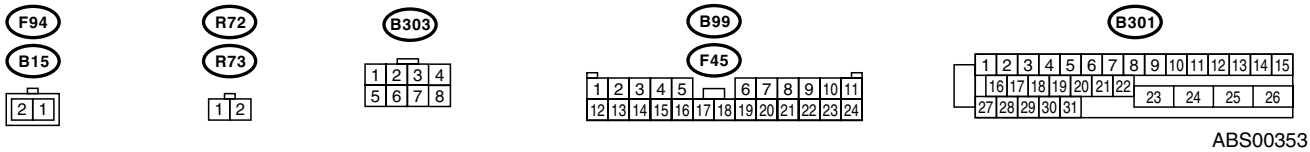
J: DTC 28
— REAR LEFT ABNORMAL ABS WHEEL SPEED SENSOR SIGNAL —

DIAGNOSIS:
- Faulty ABS wheel speed sensor signal (noise, irregular signal, etc.)
- Faulty harness/connector

TROUBLE SYMPTOM:
- ABS does not operate.

WIRING DIAGRAM:





ABS00353

	Step	Check	Yes	No
1	**CHECK OUTPUT OF ABS WHEEL SPEED SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read the ABS wheel speed sensor output corresponding to faulty system in the Subaru Select Monitor data display mode.	Does the speed indicated on display change in response to speedometer reading during acceleration/deceleration when the steering wheel is in straight-ahead position?	Go to step **2.**	Go to step **8.**
2	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connectors between ABSCM&H/U and ABS wheel speed sensor?	Repair the connector.	Go to step **3.**
3	**CHECK SOURCES OF SIGNAL NOISE.**	Is the car telephone or wireless transmitter properly installed?	Go to step **4.**	Properly install the car telephone or wireless transmitter.
4	**CHECK SOURCES OF SIGNAL NOISE.**	Are noise sources (such as an antenna) installed near the sensor harness?	Install the noise sources apart from sensor harness.	Go to step **5.**
5	**CHECK SHIELD CIRCUIT.** 1)Turn the ignition switch to OFF. 2)Connect all connectors. 3)Measure the resistance between shield connector and chassis ground. ***Connector & terminal*** ***DTC 22*** ***(B303) No. 2 — Chassis ground:*** ***DTC 24*** ***(B303) No. 1 — Chassis ground:*** NOTE: If the DTC is 26, 28: Go to YES.	Is the resistance less than 0.5 Ω?	Go to step **6.**	Repair the shield harness.
6	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **7.**
7	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary noise interference.
8	**CHECK INSTALLATION OF ABS WHEEL SPEED SENSOR.**	Are the ABS wheel speed sensor installation bolts tightened 33 N·m (3.3 kgf-m, 24 ft-lb)?	Go to step **9.**	Tighten the ABS wheel speed sensor installation bolts securely.
9	**CHECK ABS WHEEL SPEED SENSOR GAP.** Measure the tone wheel to ABS wheel speed sensor piece gap over entire perimeter of wheel.	Is the gap as following value? Front wheel: 0.3 — 0.8 mm (0.012 — 0.031 in) Rear wheel: 0.7 — 1.2 mm (0.028 — 0.047 in)	Go to step **10.**	Adjust the gap. NOTE: Adjust the gap using spacer (Part No. 26755AA000). If the spacers cannot correct gap, replace worn sensor or worn tone wheel.
10	**PREPARE OSCILLOSCOPE.**	Is an oscilloscope available?	Go to step **11.**	Go to step **12.**

	Step	Check	Yes	No
11	**CHECK ABS WHEEL SPEED SENSOR SIGNAL.** 1)Raise all four wheels off ground. 2)Turn the ignition switch to OFF. 3)Connect the oscilloscope to the connector. 4)Turn the ignition switch to ON. 5)Rotate the wheels and measure voltage at specified frequency. <Ref. to ABS-15, WAVEFORM, Control Module I/O Signal.> NOTE: When this inspection is completed, the ABSCM&H/U sometimes stores DTC 29 or DTC 56. ***Connector & terminal*** ***DTC 22*** ***(B15) No. 1 (+) — No. 2 (–):*** ***DTC 24*** ***(B62) No. 20 (+) — No. 24 (–):*** ***DTC 26*** ***(B99) No. 10 (+) — No. 9 (–):*** ***DTC 28*** ***(B99) No. 5 (+) — No. 4 (–):***	Is an oscilloscope pattern smooth, as shown in the figure?	Go to step **15.**	Go to step **12.**
12	**CHECK CONTAMINATION OF ABS WHEEL SPEED SENSOR OR TONE WHEEL.** Remove the disc rotor or drum from hub in accordance with DTC.	Is the ABS wheel speed sensor piece or tone wheel contaminated by dirt or other foreign matter?	Thoroughly remove dirt or other foreign matter.	Go to step **13.**
13	**CHECK DAMAGE OF ABS WHEEL SPEED SENSOR OR TONE WHEEL.**	Are there broken or damaged in the ABS wheel speed sensor piece or tone wheel?	Go to step **14.**	Replace the ABS wheel speed sensor or tone wheel. Front: <Ref. to ABS-12, Front ABS Wheel Speed Sensor.> Rear: <Ref. to ABS-15, Rear ABS Wheel Speed Sensor.> and Front: <Ref. to ABS-18, Front Tone Wheel.> Rear: <Ref. to ABS-19, Rear Tone Wheel.>
14	**CHECK TONE WHEEL RUNOUT.** Measure the tone wheel runout.	Is the runout less than 0.05 mm (0.0020 in)?	Go to step **15.**	Replace the tone wheel. Front: <Ref. to ABS-18, Front Tone Wheel.> Rear: <Ref. to ABS-19, Rear Tone Wheel.>

	Step	Check	Yes	No
15	**CHECK RESISTANCE OF ABS WHEEL SPEED SENSOR.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABS wheel speed sensor. 3)Measure the resistance between ABS wheel speed sensor connector terminals while shaking the harness lightly. ***Terminals*** ***Front RH No. 1 — No. 2:*** ***Front LH No. 1 — No. 2:*** ***Rear RH No. 1 — No. 2:*** ***Rear LH No. 1 — No. 2:***	Is the resistance as following value? Front: 1 — 1.5 kΩ Rear: 1.025 — 1.265 kΩ	Go to step **16.**	Replace the ABS wheel speed sensor. Front: <Ref. to ABS-12, Front ABS Wheel Speed Sensor.> Rear: <Ref. to ABS-15, Rear ABS Wheel Speed Sensor.>
16	**CHECK GROUND SHORT OF ABS WHEEL SPEED SENSOR.** Measure the resistance between ABS wheel speed 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:***	Is the resistance more than 1 MΩ?	Go to step **17.**	Replace the ABS wheel speed sensor. Front: <Ref. to ABS-12, Front ABS Wheel Speed Sensor.> Rear: <Ref. to ABS-15, Rear ABS Wheel Speed Sensor.>
17	**CHECK HARNESS/CONNECTOR BETWEEN ABSCM&H/U AND ABS WHEEL SPEED SENSOR.** 1)Connect the connector to ABS wheel speed sensor. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance at ABSCM&H/U connector terminals. ***Connector & terminal*** ***DTC 22*** ***(B301) No. 11 — No. 12:*** ***DTC 24*** ***(B301) No. 9 — No. 10:*** ***DTC 26*** ***(B301) No. 14 — No. 15:*** ***DTC 28*** ***(B301) No. 7 — No. 8:***	Is the resistance as following value? Front: 1 — 1.5 kΩ Rear: 1.025 — 1.265 kΩ	Go to step **18.**	Repair the harness/connector between ABSCM&H/U and ABS wheel speed sensor.
18	**CHECK GROUND SHORT OF HARNESS.** Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***DTC 22*** ***(B301) No. 11 — Chassis ground:*** ***DTC 24*** ***(B301) No. 9 — Chassis ground:*** ***DTC 26*** ***(B301) No. 14 — Chassis ground:*** ***DTC 28*** ***(B301) No. 7 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **19.**	Repair the harness/connector between ABSCM&H/U and ABS wheel speed sensor.
19	**CHECK GROUND CIRCUIT OF ABSCM&H/U.** Measure the resistance between ABSCM&H/U and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **20.**	Repair the ABSCM&H/U ground harness.
20	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between ABSCM&H/U and ABS wheel speed sensor?	Repair the connector.	Go to step **21.**

	Step	Check	Yes	No
21	**CHECK SOURCES OF SIGNAL NOISE.**	Is the car telephone or the wireless transmitter properly installed?	Go to step **22.**	Properly install the car telephone or wireless transmitter.
22	**CHECK SOURCES OF SIGNAL NOISE.**	Are noise sources (such as an antenna) installed near the sensor harness?	Install the noise sources apart from sensor harness.	Go to step **23.**
23	**CHECK SHIELD CIRCUIT.** 1)Connect all connectors. 2)Measure the resistance between shield connector and chassis ground. ***Connector & terminal*** ***DTC 22*** ***(B303) No. 2 — Chassis ground:*** ***DTC 24*** ***(B303) No. 1 — Chassis ground:*** NOTE: If the DTC is 26, 28: Go to YES.	Is the resistance less than 0.5 Ω?	Go to step **24.**	Repair the shield harness.
24	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **25.**
25	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary noise interference. NOTE: Although the ABS warning light remains illuminating at this point, this is a normal condition. Vehicle must be driven at approx. 12 km/h (7.46 MPH) or faster to turn off ABS warning light. Make sure that the ABS warning light goes off after driving vehicle.

K: DTC 29 — ABNORMAL ABS WHEEL SPEED SENSOR SIGNAL ON ANY ONE OF FOUR SENSOR —

DIAGNOSIS:

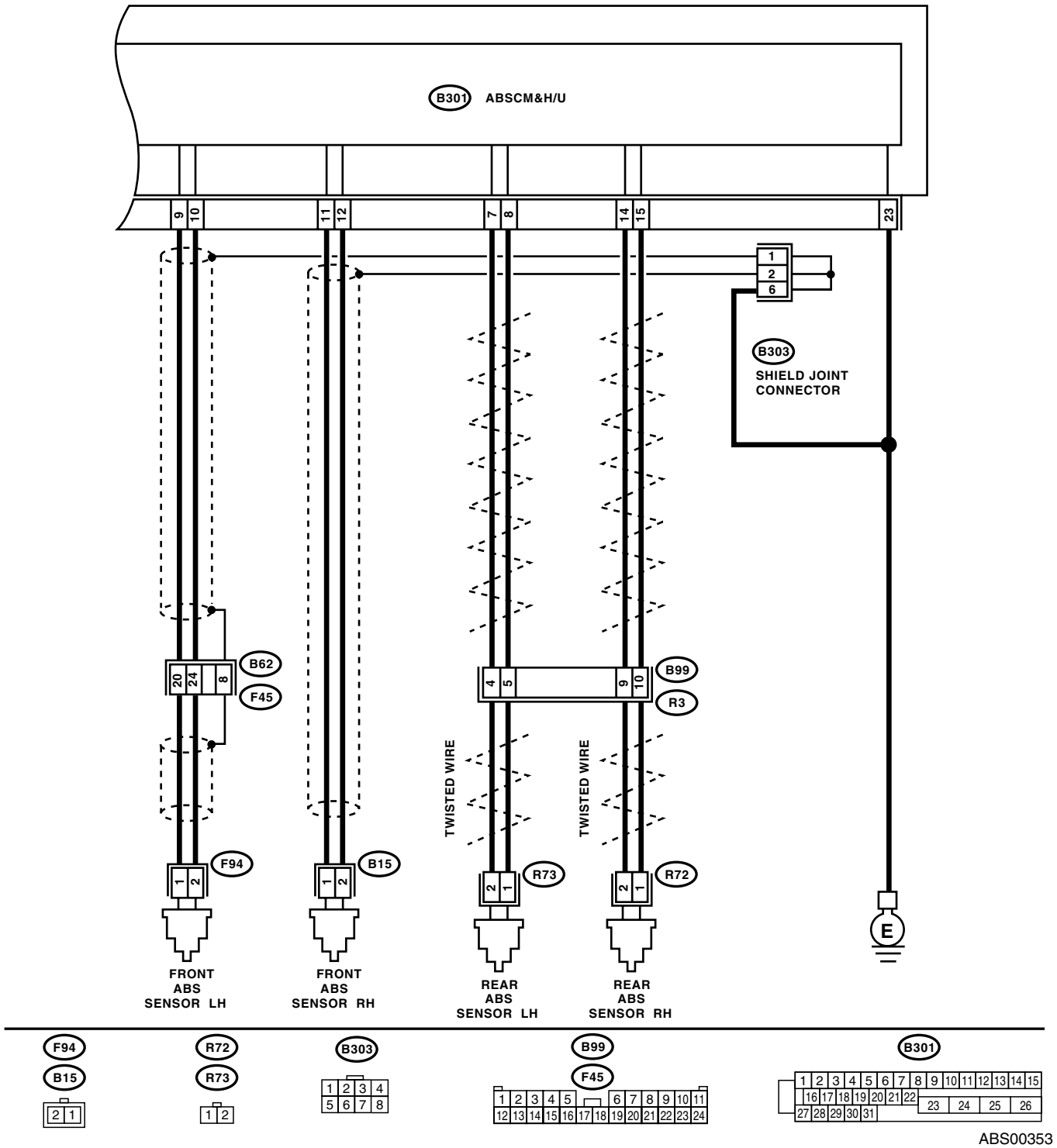
- Faulty ABS wheel speed sensor signal (noise, irregular signal, etc.)
- Faulty tone wheel
- Wheels turning freely for a long time

TROUBLE SYMPTOM:

- ABS does not operate.
- EBD does not operate.

NOTE:
In addition to the ABS warning light, brake warning light illuminates.

WIRING DIAGRAM:



ABS00353

	Step	Check	Yes	No
1	**CHECK IF THE WHEELS HAVE TURNED FREELY FOR A LONG TIME.**	Is the wheels have been turned freely for more than one minute, such as when vehicle is jacked-up, under full-lock cornering or the tires not in contact with road surface?	Go to step **2.**	The ABS is normal. Erase the DTC. NOTE: When the wheels turn freely for a long time, such as when vehicle is towed or jacked-up, or when steering wheel is continuously turned all way, this DTC may sometimes occur.
2	**CHECK TIRE SPECIFICATIONS.** Turn the ignition switch to OFF.	Are the tire specifications correct?	Go to step **3.**	Replace the tire.
3	**CHECK WEAR OF TIRE.**	Is the tire worn excessively?	Replace the tire.	Go to step **4.**
4	**CHECK TIRE PRESSURE.**	Is the tire pressure correct?	Go to step **5.**	Adjust the tire pressure.
5	**CHECK INSTALLATION OF ABS WHEEL SPEED SENSOR.**	Are the ABS wheel speed sensor installation bolts tightened 33 N·m (3.3 kgf-m, 24 ft-lb)?	Go to step **6.**	Tighten the ABS wheel speed sensor installation bolts securely.
6	**CHECK ABS WHEEL SPEED SENSOR GAP.** Measure the tone wheel to ABS wheel speed sensor piece gap over entire perimeter of the wheel.	Is the gap as following value? Front wheel: 0.3 — 0.8 mm (0.012 — 0.031 in) Rear wheel: 0.7 — 1.2 mm (0.028 — 0.047 in)	Go to step **7.**	Adjust the gap. NOTE: Adjust the gap using spacer (Part No. 26755AA000). If the spacers cannot correct gap, replace worn sensor or worn tone wheel.
7	**PREPARE OSCILLOSCOPE.**	Is an oscilloscope available?	Go to step **8.**	Go to step **9.**
8	**CHECK ABS WHEEL SPEED SENSOR SIGNAL.** 1)Raise all four wheels off ground. 2)Turn the ignition switch to OFF. 3)Connect the oscilloscope to the connector. 4)Turn the ignition switch to ON. 5)Rotate the wheels and measure voltage at specified frequency. <Ref. to ABS-15, WAVEFORM, Control Module I/O Signal.> NOTE: When this inspection is completed, ABSCM& H/U sometimes stores the DTC 29. ***Connector & terminal*** ***Front RH*** ***(B15) No. 1 (+) — No. 2 (–):*** ***Front LH*** ***(B62) No. 20 (+) — No. 24 (–):*** ***Rear RH*** ***(B99) No. 10 (+) — No. 9 (–):*** ***Rear LH*** ***(B99) No. 5 (+) — No. 4 (–):***	Is an oscilloscope pattern smooth, as shown in the figure?	Go to step **12.**	Go to step **9.**
9	**CHECK CONTAMINATION OF ABS WHEEL SPEED SENSOR OR TONE WHEEL.** Remove the disc rotor or drum from hub.	Is the ABS wheel speed sensor piece or tone wheel contaminated by dirt or other foreign matter?	Thoroughly remove dirt or other foreign matter.	Go to step **10.**

	Step	Check	Yes	No
10	**CHECK DAMAGE OF ABS WHEEL SPEED SENSOR OR TONE WHEEL.**	Are there broken or damaged teeth in the ABS wheel speed sensor piece or tone wheel?	Replace the ABS wheel speed sensor or tone wheel. Front: <Ref. to ABS-12, Front ABS Wheel Speed Sensor.> Rear: <Ref. to ABS-15, Rear ABS Wheel Speed Sensor.> and Front: <Ref. to ABS-18, Front Tone Wheel.> Rear: <Ref. to ABS-19, Rear Tone Wheel.>	Go to step **11.**
11	**CHECK TONE WHEEL RUNOUT.** Measure the tone wheel runout.	Is the runout less than 0.05 mm (0.0020 in)?	Go to step **12.**	Replace the tone wheel. Front: <Ref. to ABS-18, Front Tone Wheel.> Rear: <Ref. to ABS-19, Rear Tone Wheel.>
12	**CHECK ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Connect all connectors. 3)Erase the memory. 4)Perform the inspection mode. 5)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **13.**
13	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

L: DTC 31
— FRONT RIGHT INLET VALVE MALFUNCTION —

NOTE:
For the diagnostic procedure, refer to DTC 37. <Ref. to ABS-102, DTC 37 — REAR LEFT INLET VALVE MALFUNCTION —, Diagnostics Procedure with Subaru Select Monitor.>

M: DTC 33
— FRONT LEFT INLET VALVE MALFUNCTION —

NOTE:
For the diagnostic procedure, refer to DTC 37. <Ref. to ABS-102, DTC 37 — REAR LEFT INLET VALVE MALFUNCTION —, Diagnostics Procedure with Subaru Select Monitor.>

N: DTC 35
— REAR RIGHT INLET VALVE MALFUNCTION —

NOTE:
For the diagnostic procedure, refer to DTC 37. <Ref. to ABS-102, DTC 37 — REAR LEFT INLET VALVE MALFUNCTION —, Diagnostics Procedure with Subaru Select Monitor.>

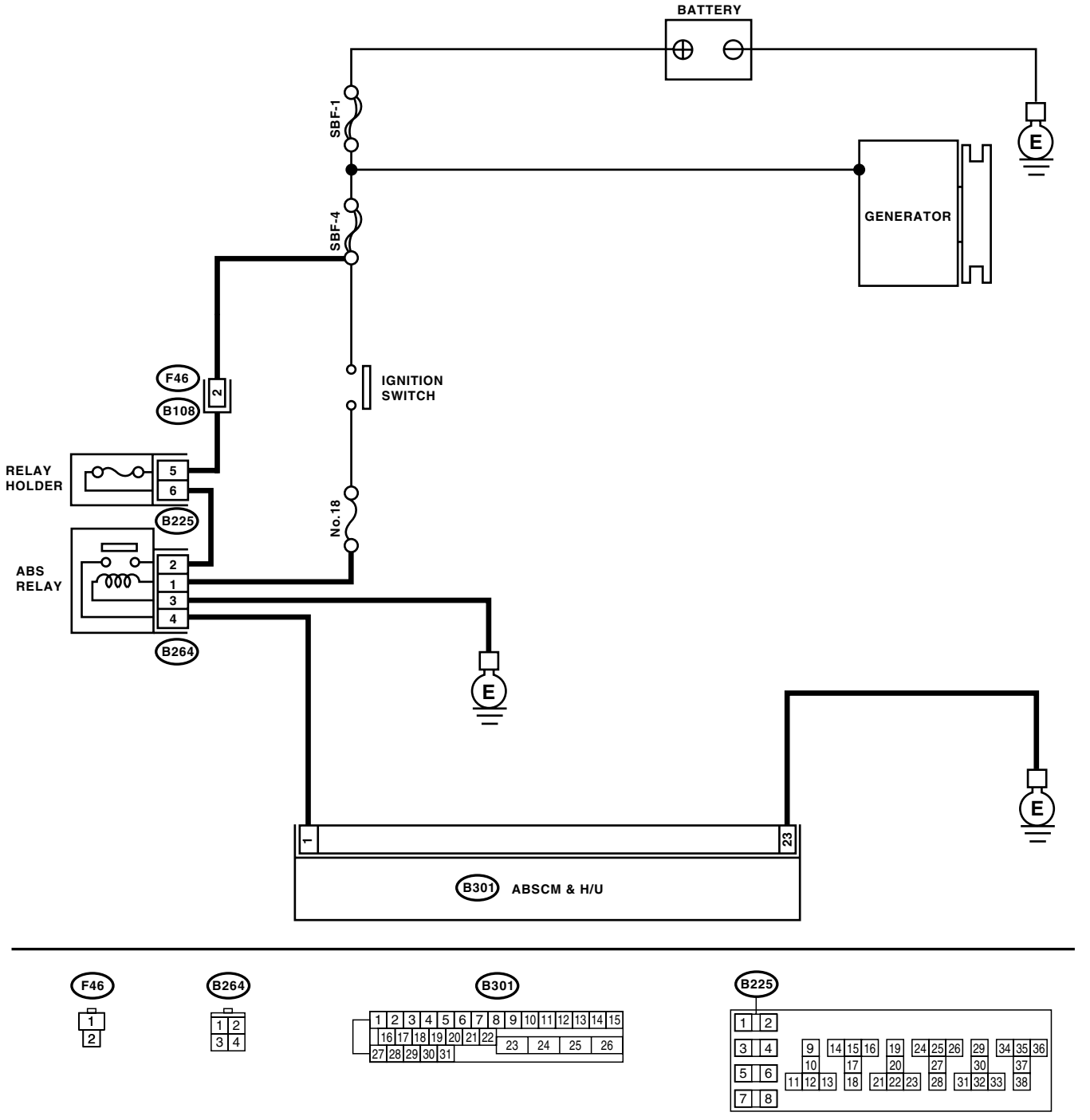
O: DTC 37
— REAR LEFT INLET VALVE MALFUNCTION —

DIAGNOSIS:
- Faulty harness/connector
- Faulty inlet solenoid valve

TROUBLE SYMPTOM:
- ABS does not operate.
- EBD does not operate.

NOTE:
In addition to the ABS warning light, brake warning light illuminates.

WIRING DIAGRAM:



ABS00322

	Step	Check	Yes	No
1	**CHECK INPUT VOLTAGE OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Run the engine at idle. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **2.**	Repair the harness connector between battery, ignition switch and ABSCM&H/U.
2	**CHECK GROUND CIRCUIT OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **3.**	Repair the ABSCM&H/U ground harness.
3	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **4.**
4	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **5.**
5	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

P: DTC 32 — FRONT RIGHT OUTLET VALVE MALFUNCTION —

NOTE:
For the diagnostic procedure, refer to DTC 38. <Ref. to ABS-105, DTC 38 — REAR LEFT OUTLET VALVE MALFUNCTION —, Diagnostics Procedure with Subaru Select Monitor.>

Q: DTC 34 — FRONT LEFT OUTLET VALVE MALFUNCTION —

NOTE:
For the diagnostic procedure, refer to DTC 38. <Ref. to ABS-105, DTC 38 — REAR LEFT OUTLET VALVE MALFUNCTION —, Diagnostics Procedure with Subaru Select Monitor.>

R: DTC 36 — REAR RIGHT OUTLET VALVE MALFUNCTION —

NOTE:
For the diagnostic procedure, refer to DTC 38. <Ref. to ABS-105, DTC 38 — REAR LEFT OUTLET VALVE MALFUNCTION —, Diagnostics Procedure with Subaru Select Monitor.>

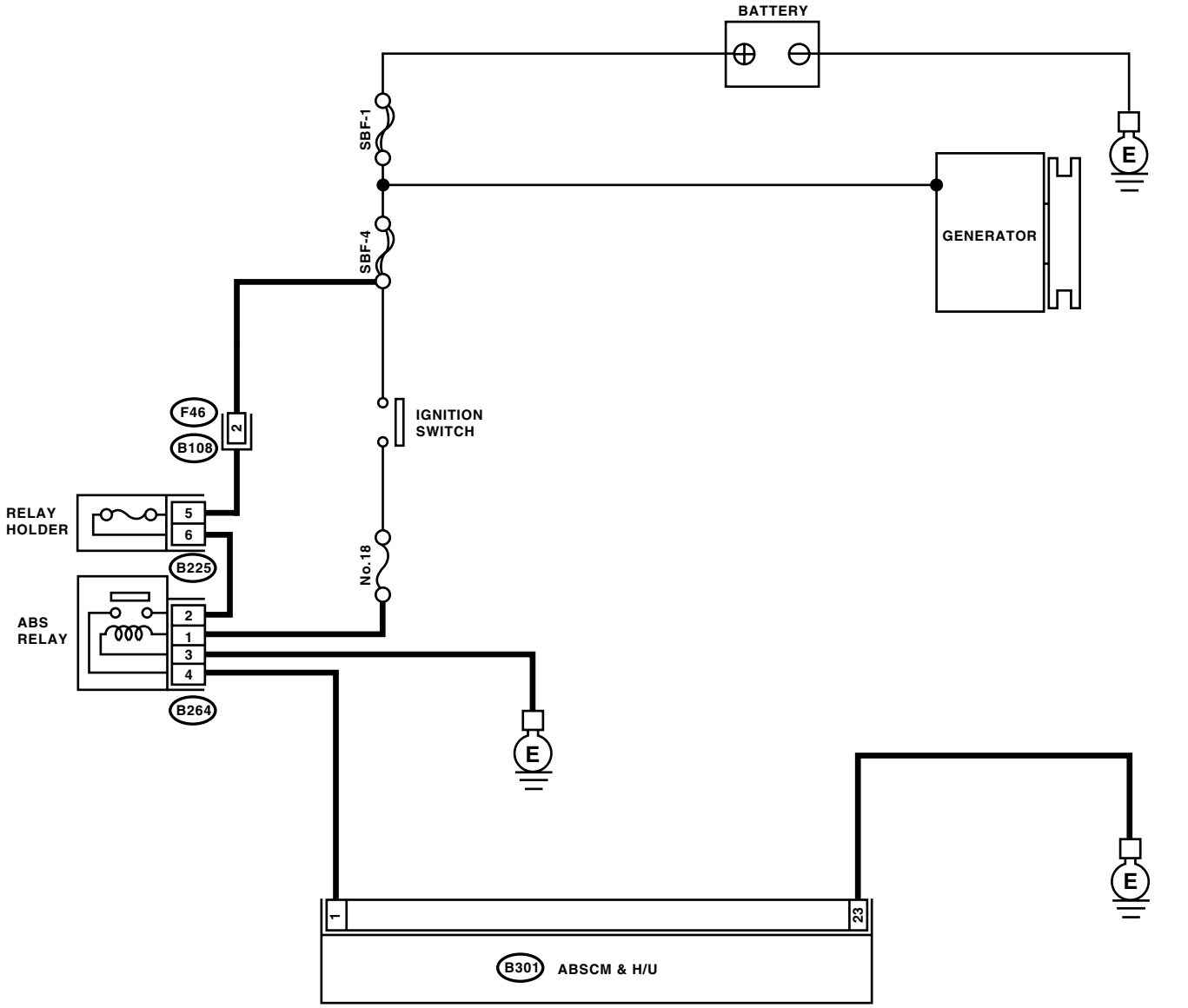
S: DTC 38
— REAR LEFT OUTLET VALVE MALFUNCTION —

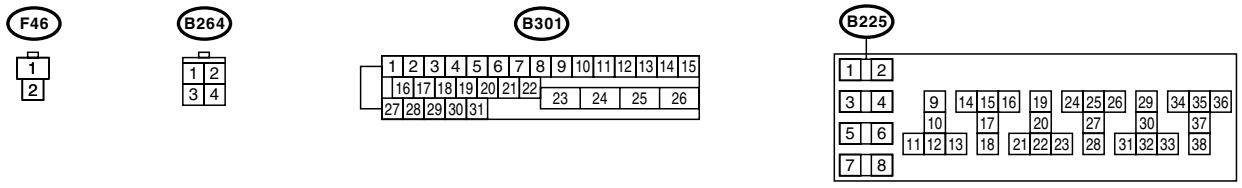
DIAGNOSIS:
- Faulty harness/connector
- Faulty outlet solenoid valve

TROUBLE SYMPTOM:
- ABS does not operate.
- EBD does not operate.

NOTE:
In addition to the ABS warning light, brake warning light illuminates.

WIRING DIAGRAM:





ABS00322

	Step	Check	Yes	No
1	**CHECK INPUT VOLTAGE OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Run the engine at idle. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **2.**	Repair the harness connector between battery, ignition switch and ABSCM&H/U.
2	**CHECK GROUND CIRCUIT OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **3.**	Repair the ABSCM&H/U ground harness.
3	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **4.**
4	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **5.**
5	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

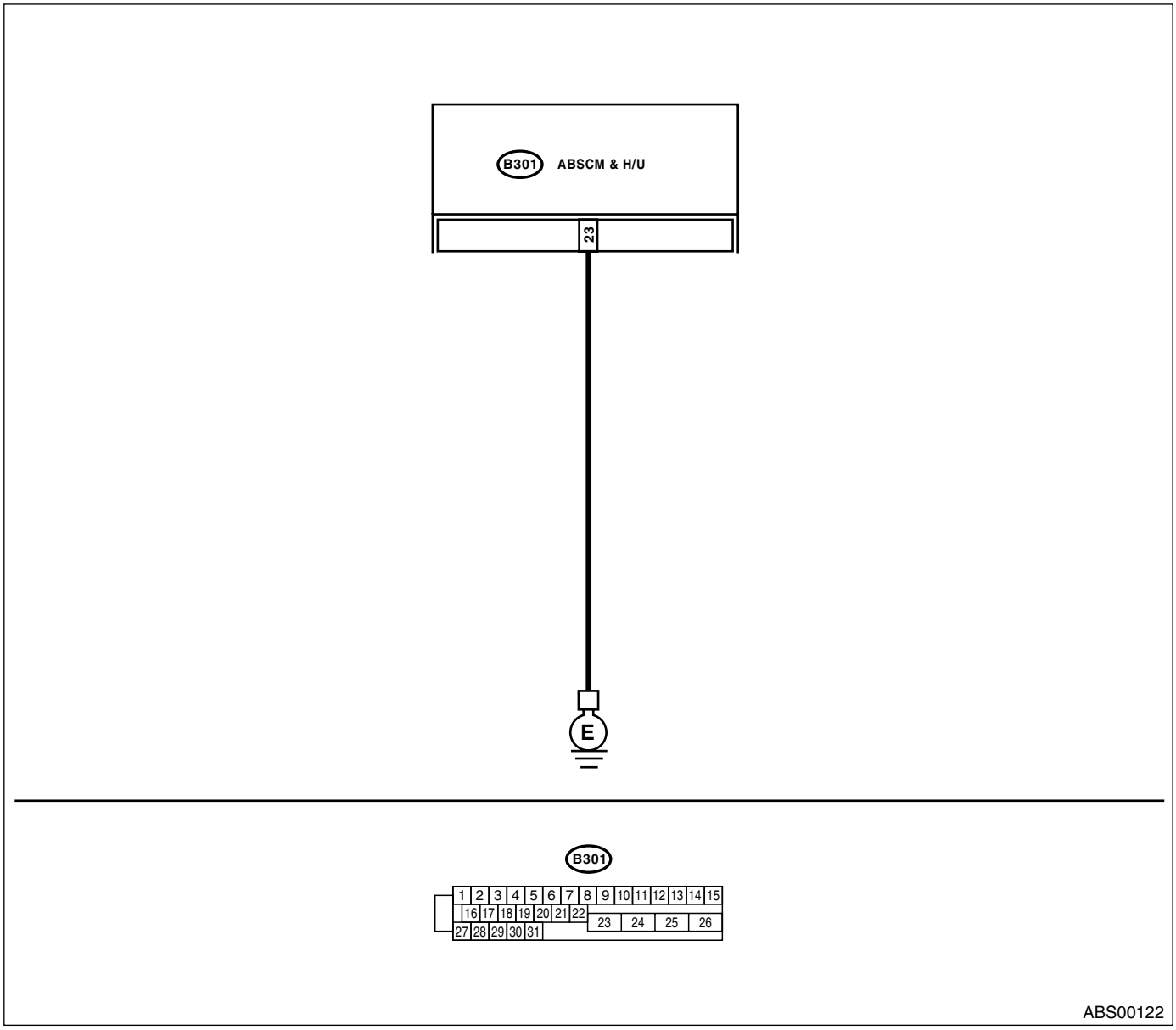
T: DTC 41
— ABS CONTROL MODULE MALFUNCTION —

DIAGNOSIS:
- Faulty ABSCM&H/U

TROUBLE SYMPTOM:
- ABS does not operate.
- EBD does not operate.

NOTE:
In addition to the ABS warning light, brake warning light illuminates.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK GROUND CIRCUIT OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **2.**	Repair the ABSCM&H/U ground harness.
2	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between battery, ignition switch and ABSCM&H/U?	Repair the connector.	Go to step **3.**
3	**CHECK SOURCES OF SIGNAL NOISE.**	Is the car telephone or wireless transmitter properly installed?	Go to step **4.**	Properly install the car telephone or wireless transmitter.
4	**CHECK SOURCES OF SIGNAL NOISE.**	Are noise sources (such as an antenna) installed near the sensor harness?	Install the noise sources apart from sensor harness.	Go to step **5.**
5	**CHECK ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Connect all connectors. 3)Erase the memory. 4)Perform the inspection mode. 5)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **6.**
6	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

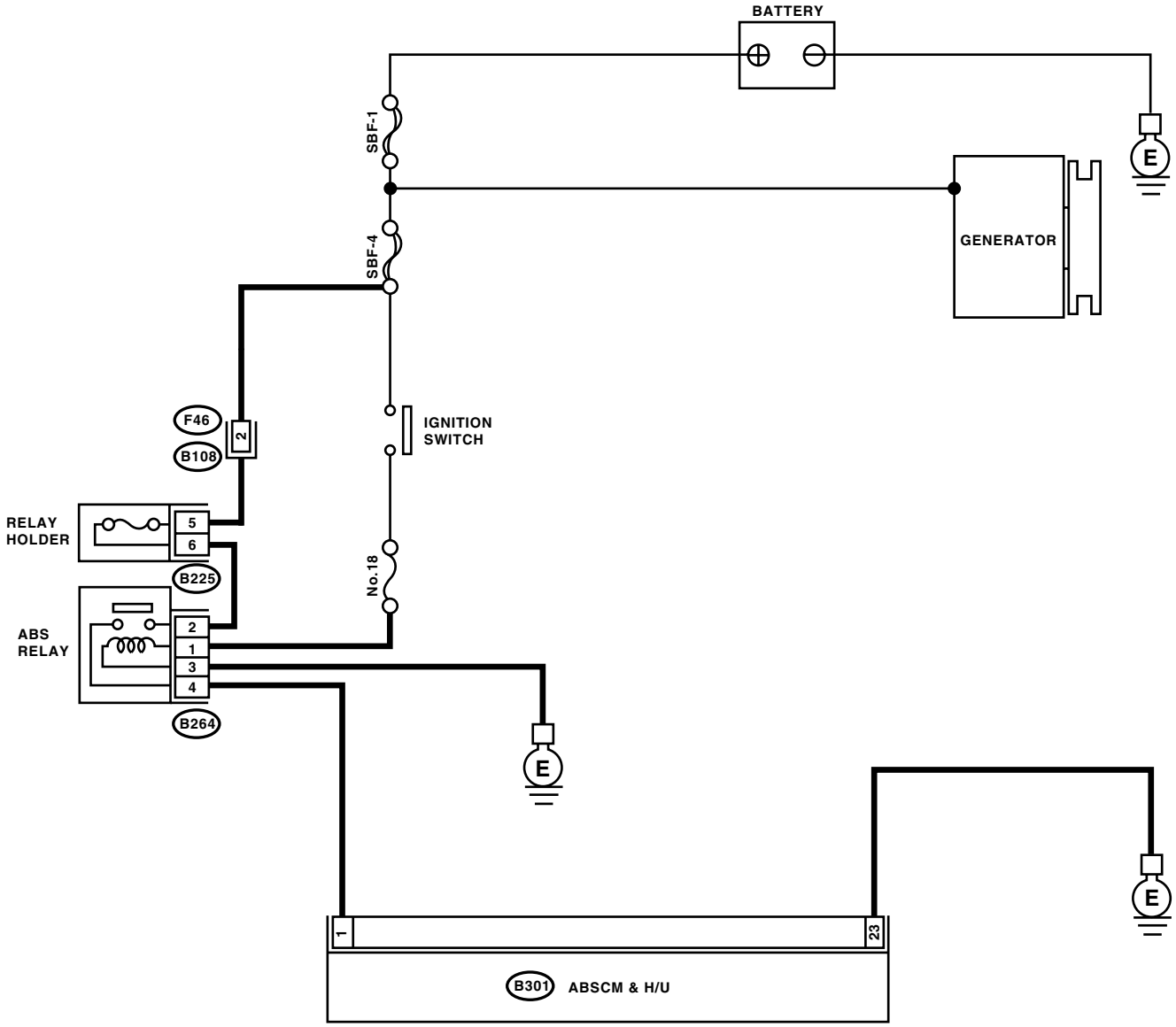
U: DTC 42
— POWER SUPPLY VOLTAGE TOO LOW —

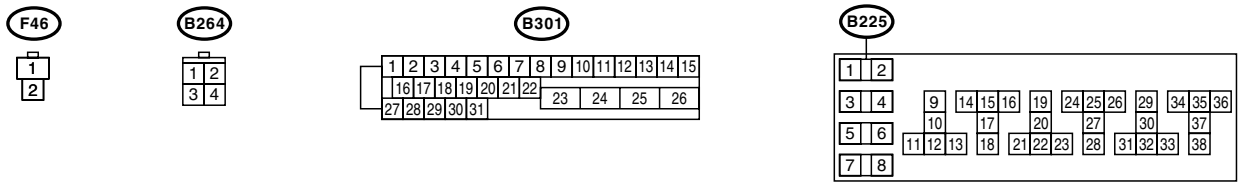
DIAGNOSIS:
- Power source voltage of the ABSCM&H/U is low.

TROUBLE SYMPTOM:
- ABS does not operate.
- EBD does not operate.

NOTE:
In addition to the ABS warning light, brake warning light illuminates temporarily. Both warning lights go off on the recovery of voltage.

WIRING DIAGRAM:





ABS00322

	Step	Check	Yes	No
1	**CHECK GENERATOR.** 1)Start the engine. 2)Idle after warm-up. 3)Measure the voltage between generator B terminal and chassis ground. ***Terminals*** ***Generator B terminal (+) — Chassis ground (–):***	Is the voltage 10 — 17 V?	Go to step **2.**	Repair the generator. <Ref. to SC(H4SO)-14, Generator.>
2	**CHECK BATTERY TERMINAL.** Turn the ignition switch to OFF.	Are the positive and negative battery terminals tightly clamped?	Go to step **3.**	Tighten the clamp of terminal.
3	**CHECK INPUT VOLTAGE OF ABSCM&H/U.** 1)Disconnect the connector from ABSCM&H/U. 2)Run the engine at idle. 3)Operate the electric load applying devices, such as the headlight, A/C, and defogger. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 — 17 V?	Go to step **4.**	Repair the harness connector between battery, ignition switch and ABSCM&H/U.
4	**CHECK GROUND CIRCUIT OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **5.**	Repair the ABSCM&H/U ground harness.
5	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **6.**
6	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **7.**
7	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

V: DTC 42 — POWER SUPPLY VOLTAGE TOO HIGH —

DIAGNOSIS:

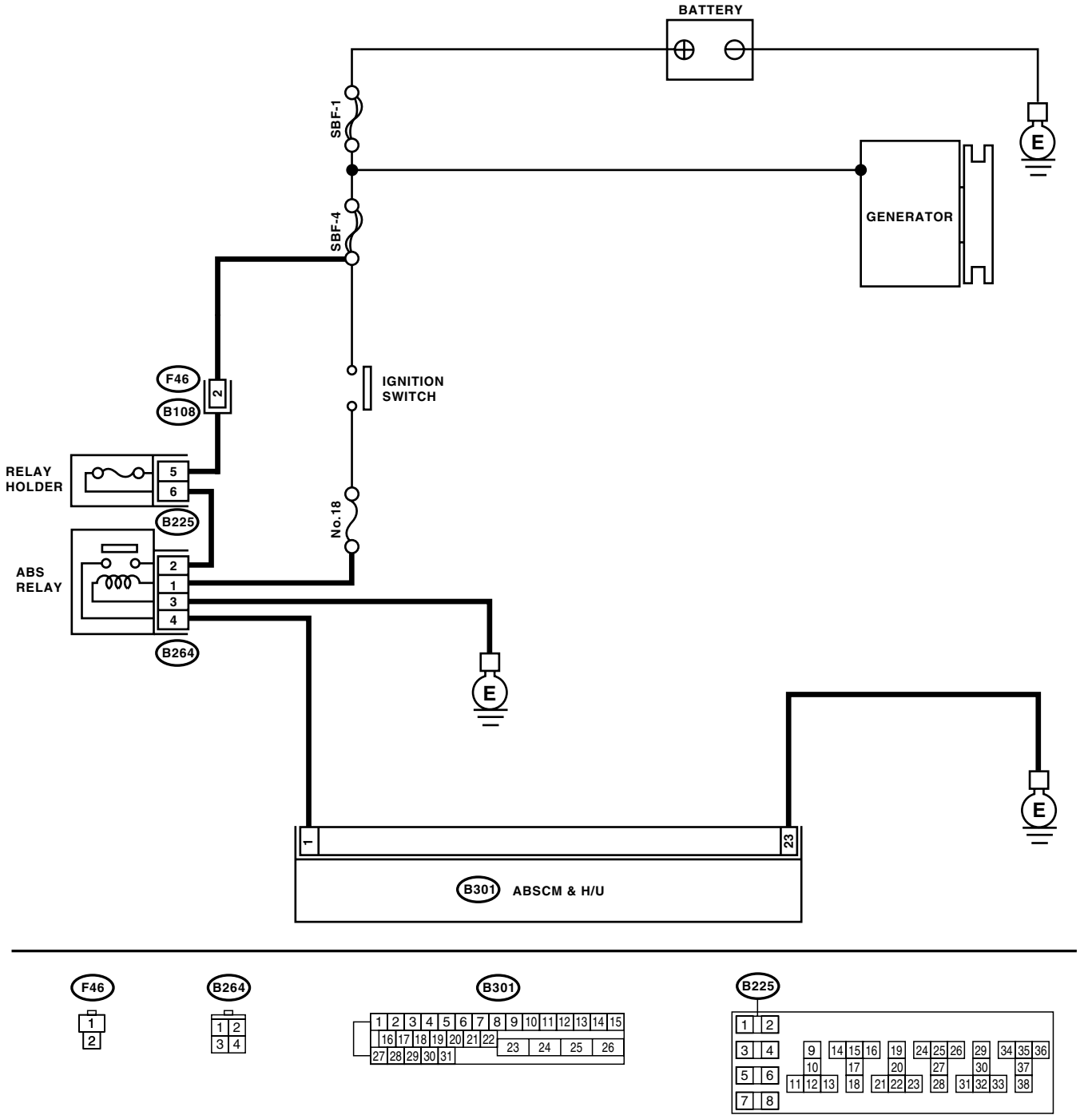
- Power source voltage of the ABSCM&H/U is high.

TROUBLE SYMPTOM:

- ABS does not operate.
- EBD does not operate.

NOTE:
In addition to the ABS warning light, brake warning light illuminates temporarily. Both warning lights go off on the recovery of voltage.

WIRING DIAGRAM:



ABS00322

	Step	Check	Yes	No
1	**CHECK GENERATOR.** 1)Start the engine. 2)Idle after warm-up. 3)Measure the voltage between generator B terminal and chassis ground. ***Terminals*** ***Generator B terminal (+) — Chassis ground (–):***	Is the voltage 10 — 17 V?	Go to step **2.**	Repair the generator. <Ref. to SC(H4SO)-14, Generator.>
2	**CHECK BATTERY TERMINAL.** Turn the ignition switch to OFF.	Are the positive and negative battery terminals tightly clamped?	Go to step **3.**	Tighten the clamp of terminal.
3	**CHECK INPUT VOLTAGE OF ABSCM&H/U.** 1)Disconnect the connector from ABSCM&H/U. 2)Run the engine at idle. 3)Operate the electric load applying devices, such as the headlight, A/C, and defogger. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 and 17 V?	Go to step **4.**	Repair the harness connector between battery, ignition switch and ABSCM&H/U.
4	**CHECK GROUND CIRCUIT OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **5.**	Repair the ABSCM&H/U ground harness.
5	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **6.**
6	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **7.**
7	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

W: DTC 44
— ABS-AT CONTROL (NON CONTROLLED) —

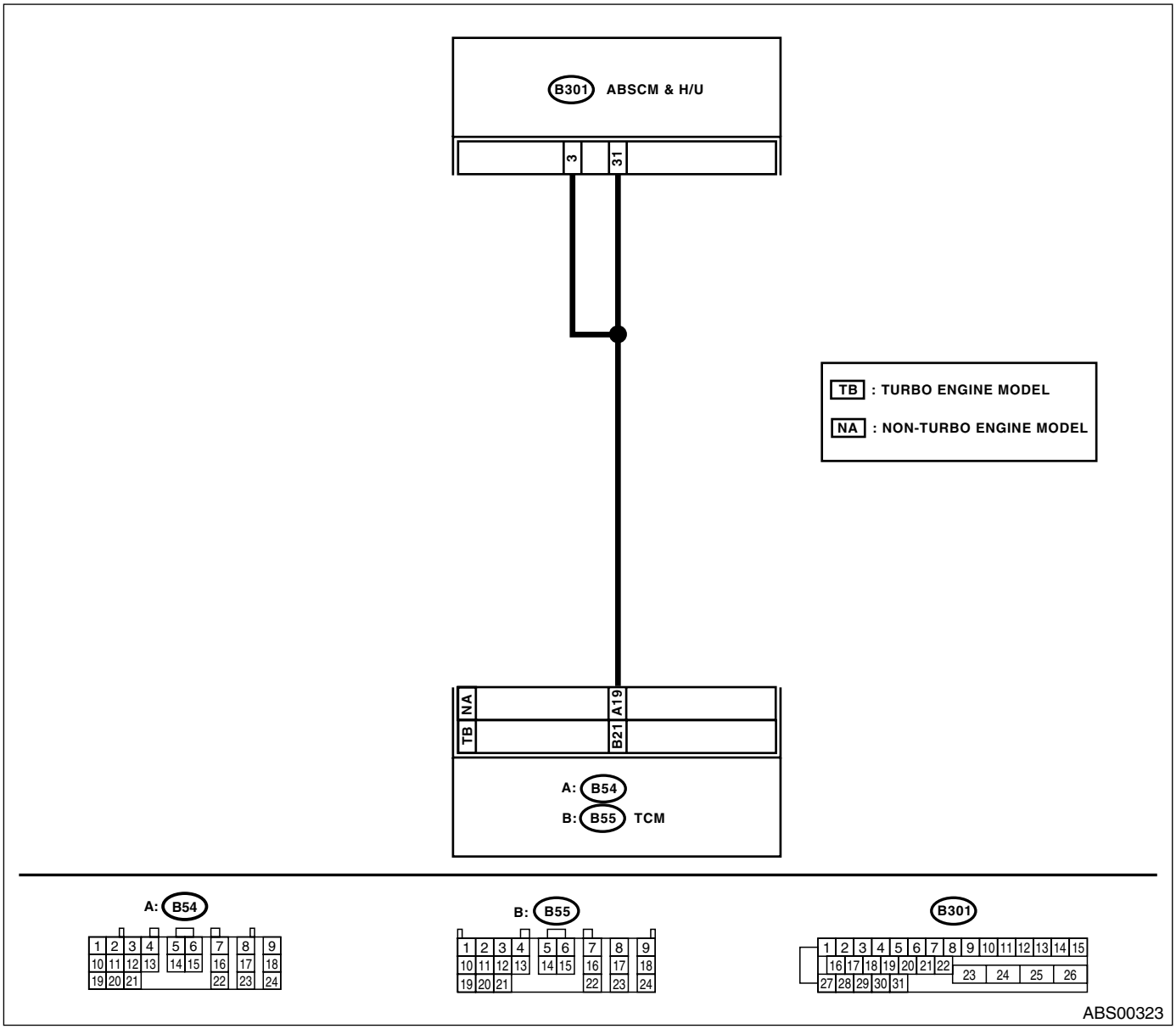
DIAGNOSIS:

- Combination of AT control faults

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK SPECIFICATIONS OF THE ABSCM&H/U.** Check specifications of mark on ABSCM&H/U. ***CU: AT*** ***CV: MT (Except STi model)*** ***CY: MT (STi model)***	Does the vehicle specification and ABSCM&H/U specification match?	Go to step **2.**	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>

	Step	Check	Yes	No
2	**CHECK GROUND SHORT OF HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the two connectors from TCM. 3)Disconnect the connector from ABSCM&H/U. 4)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 3 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **3.**	Repair the harness between TCM and ABSCM&H/U.
3	**CHECK TCM.** 1)Connect all connectors to TCM. 2)Turn the ignition switch to ON. 3)Measure the voltage between TCM connector terminal and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 19 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 21 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **5.**	Go to step **4.**
4	**CHECK AT.**	Is the AT functioning normally?	Replace the TCM.	Repair the AT.
5	**CHECK OPEN CIRCUIT OF HARNESS.** Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 3 (+) — Chassis ground (–):*** ***(B301) No. 31 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **6.**	Repair the harness/connector between TCM and ABSCM&H/U.
6	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between TCM and ABSCM&H/U?	Repair the connector.	Go to step **7.**
7	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **8.**
8	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

X: DTC 44
— ABS-AT CONTROL (CONTROLLED) —

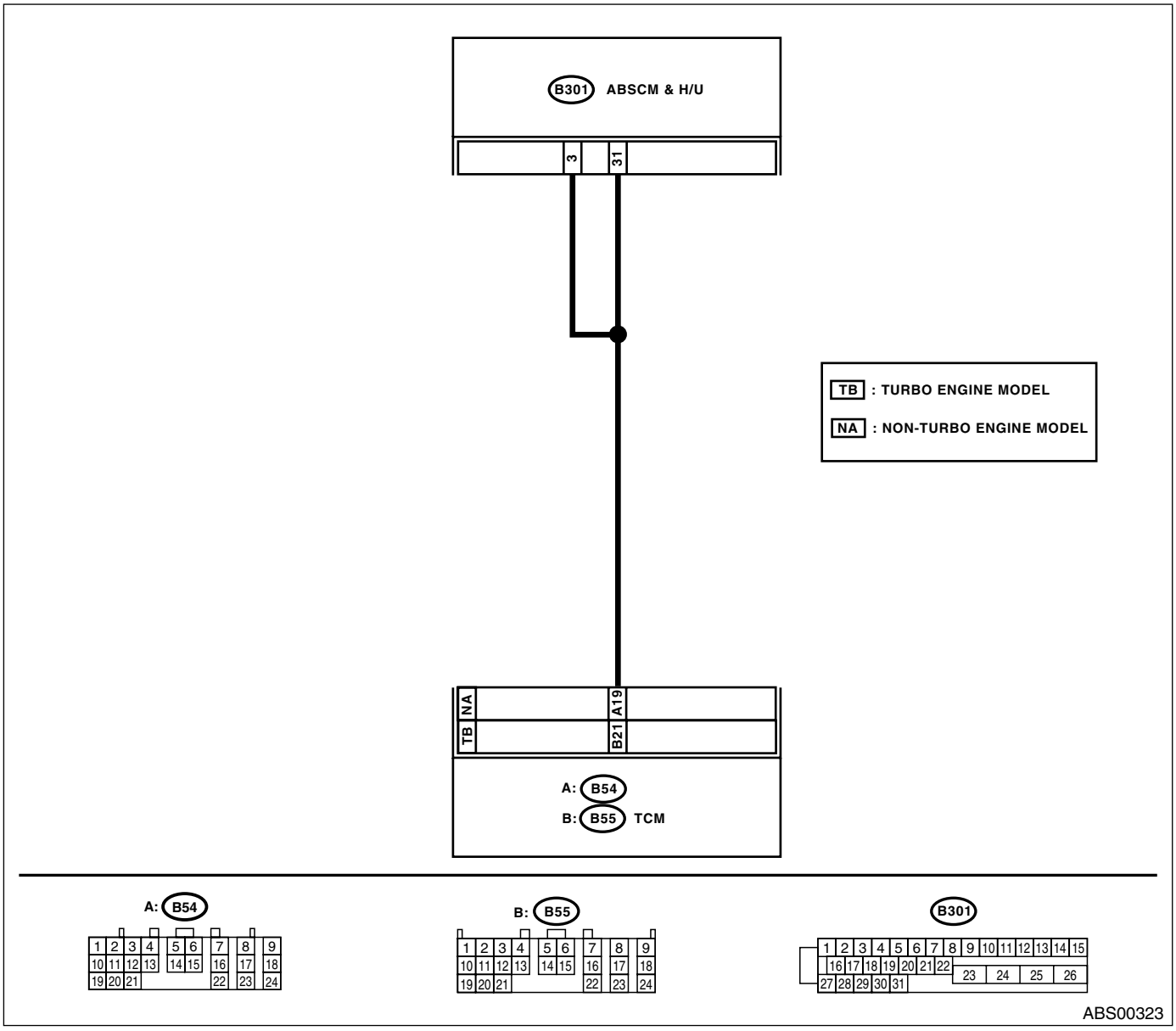
DIAGNOSIS:

- Combination of AT control faults

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK BATTERY SHORT OF HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect all connectors from TCM. 3)Disconnect the connector from ABSCM&H/U. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 3 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **2.**	Repair the harness between TCM and ABSCM&H/U.
2	**CHECK BATTERY SHORT OF HARNESS.** 1)Turn the ignition switch to ON. 2)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 3 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **3.**	Repair the harness between TCM and ABSCM&H/U.
3	**CHECK OPEN CIRCUIT OF HARNESS.** 1)Turn the ignition switch to OFF. 2)Connect all connectors to TCM. 3)Turn the ignition switch to ON. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 3 (+) — Chassis ground (–):*** ***(B301) No. 31 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **4.**	Repair the harness/connector between TCM and ABSCM&H/U.
4	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connectors between TCM and ABSCM&H/U?	Repair the connector.	Go to step **5.**
5	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **6.**
6	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

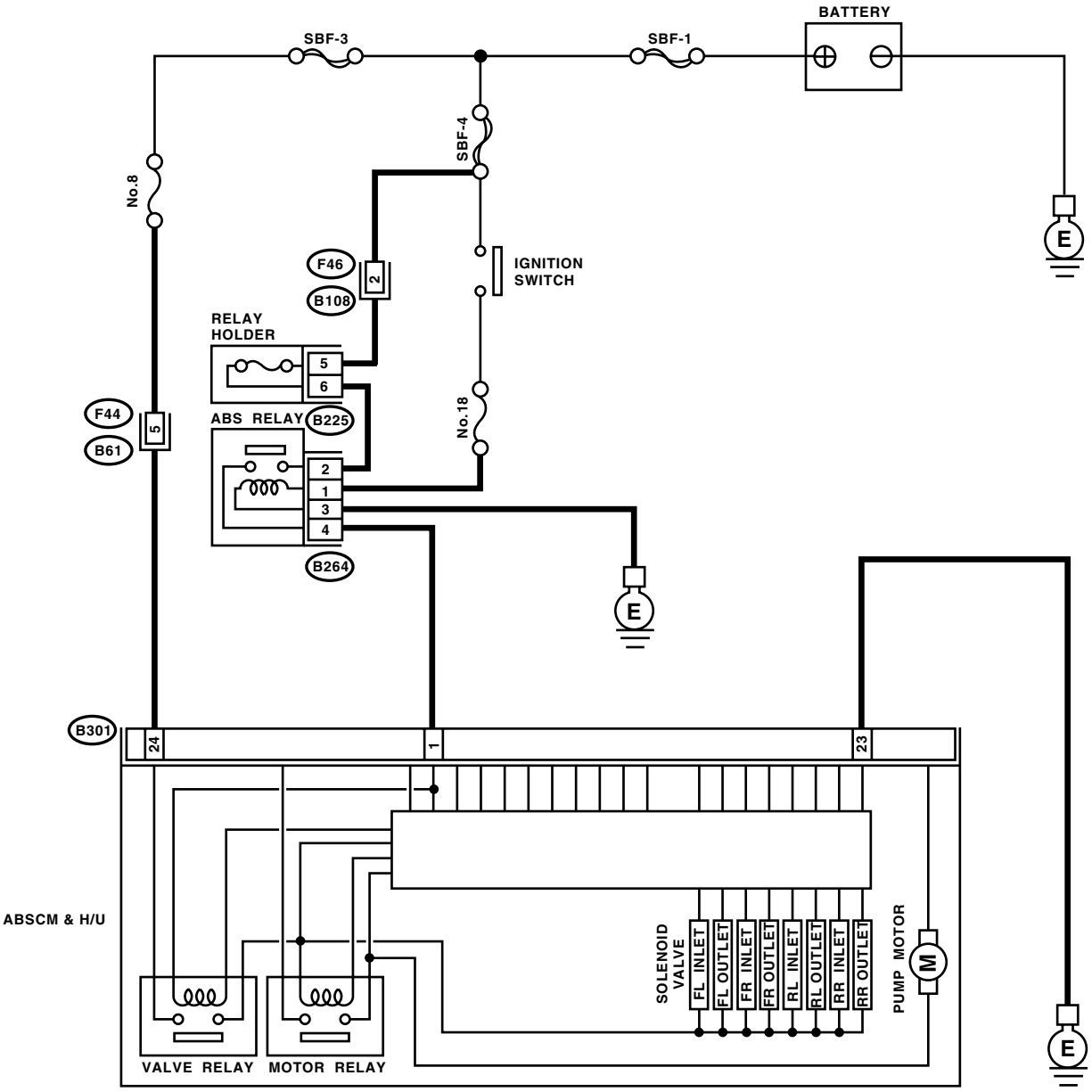
Y: DTC 51
— VALVE RELAY MALFUNCTION —

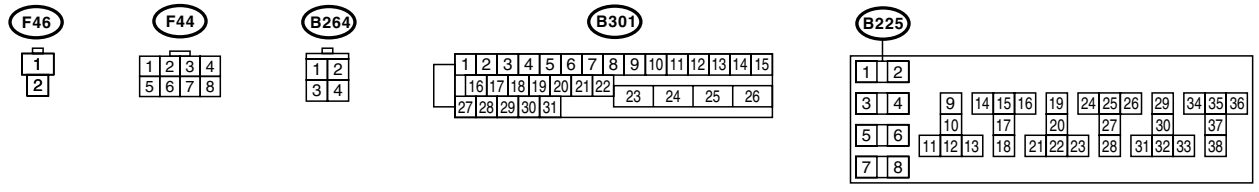
DIAGNOSIS:
- Faulty valve relay

TROUBLE SYMPTOM:
- ABS does not operate.
- EBD does not operate.

NOTE:
In addition to the ABS warning light, brake warning light illuminates.

WIRING DIAGRAM:





ABS00377

	Step	Check	Yes	No
1	**CHECK INPUT VOLTAGE OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Run the engine at idle. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 1 (+) — Chassis ground (–):*** ***(B301) No. 24 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **2.**	Repair the harness connector between battery and ABSCM&H/U.
2	**CHECK GROUND CIRCUIT OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **3.**	Repair the ABSCM&H/U ground harness.
3	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **4.**
4	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **5.**
5	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

Z: DTC 51
— VALVE RELAY ON FAILURE —

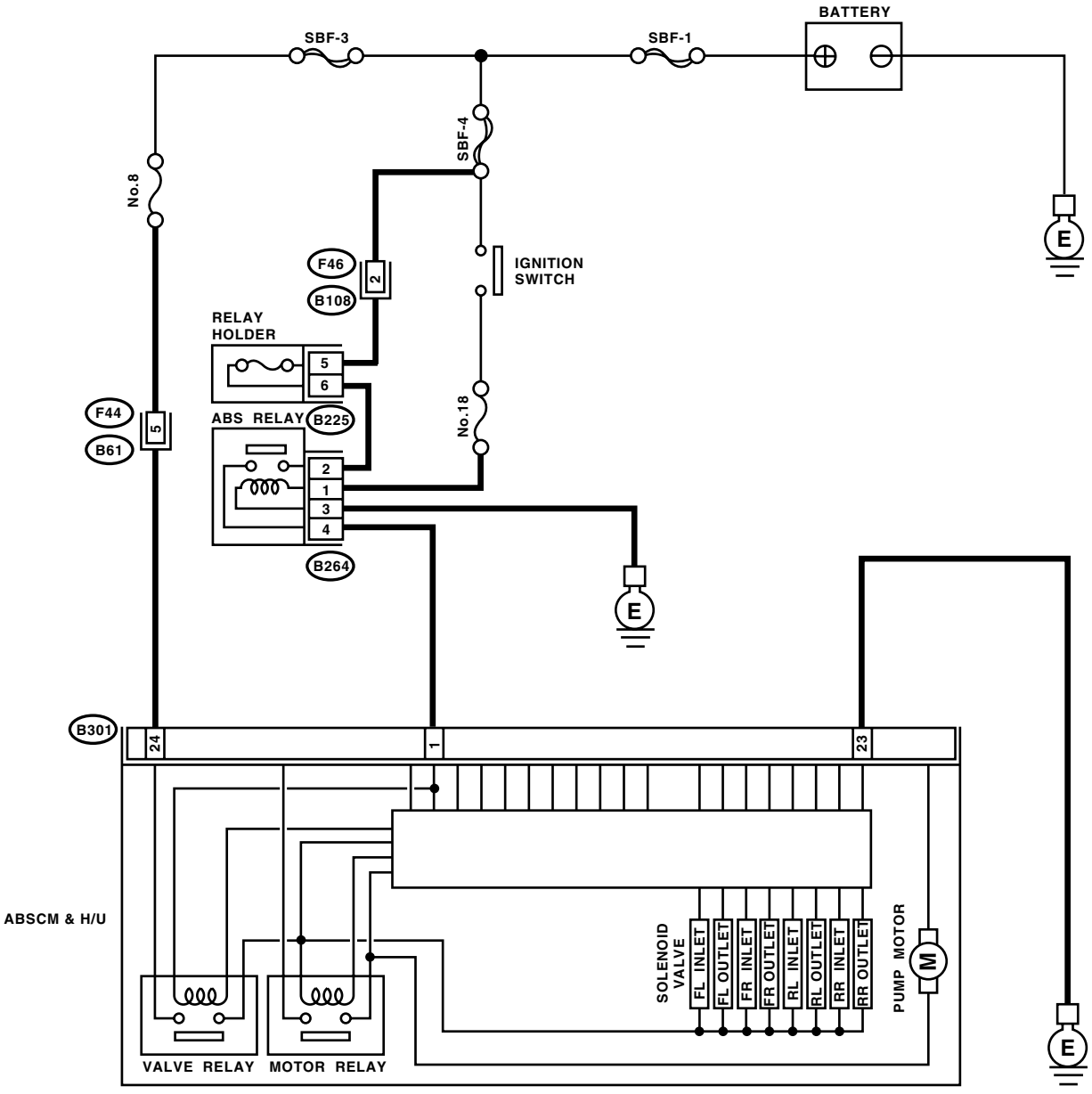
DIAGNOSIS:

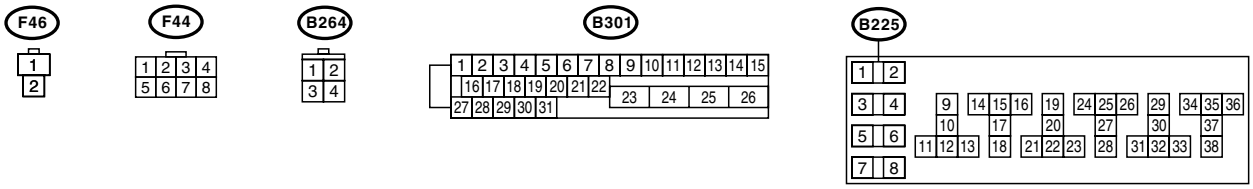
- Faulty valve relay

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00377

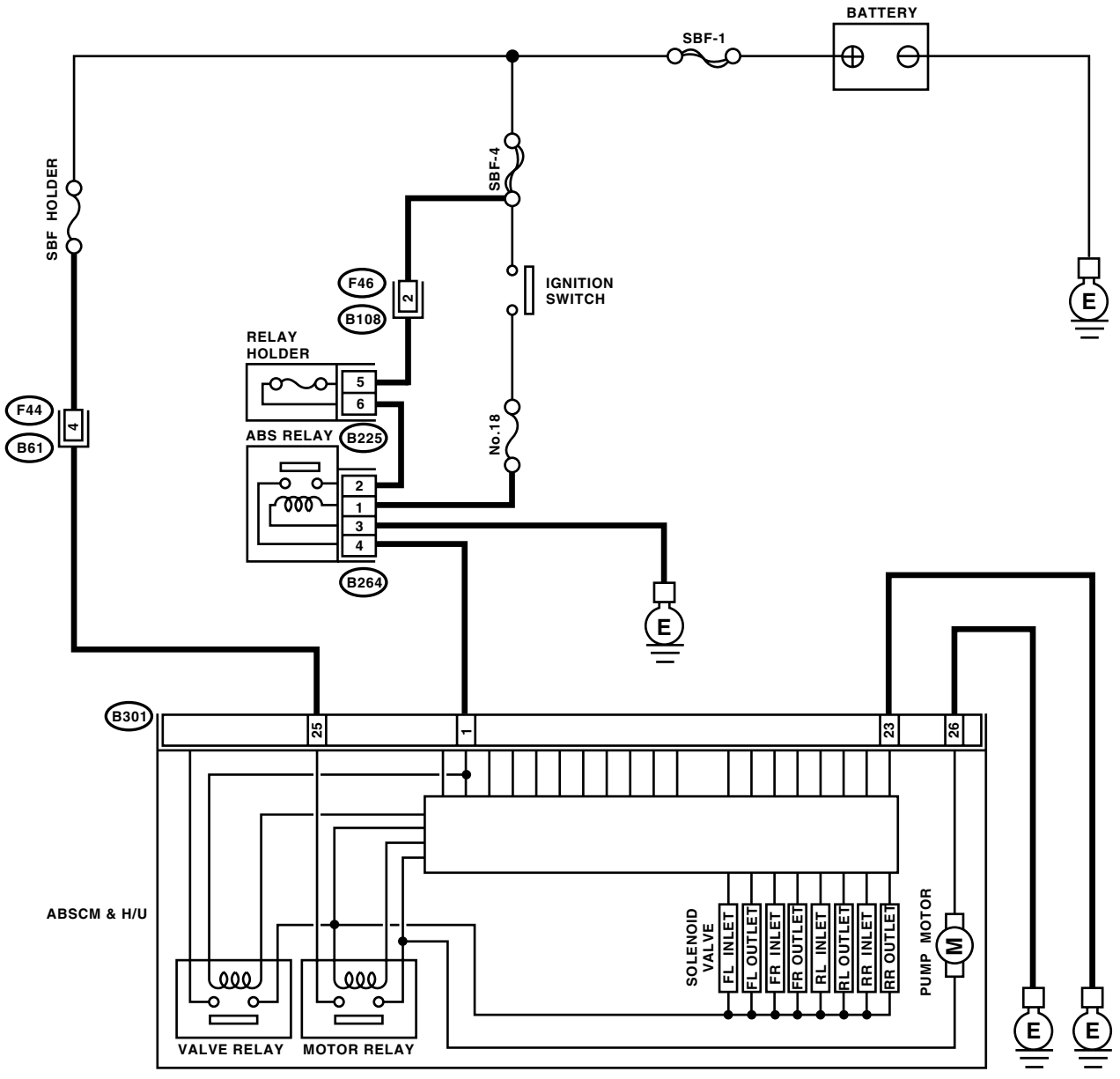
	Step	Check	Yes	No
1	**CHECK VALVE RELAY IN ABSCM&H/U.** 1)Disconnect the connector from ABSCM&H/U. 2)Measure the resistance between ABSCM&H/U terminals. ***Terminals*** ***No. 23 — No. 24:***	Is the resistance more than 1 MΩ?	Go to step **2.**	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
2	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connectors between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **3.**
3	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **4.**
4	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

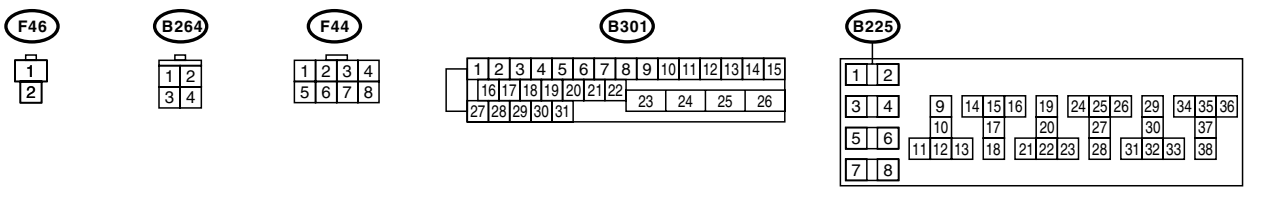
AA:DTC 52
— OPEN CIRCUIT IN MOTOR RELAY CIRCUIT —

DIAGNOSIS:
- Faulty motor
- Faulty motor relay
- Faulty harness connector

TROUBLE SYMPTOM:
- ABS does not operate.

WIRING DIAGRAM:





ABS00325

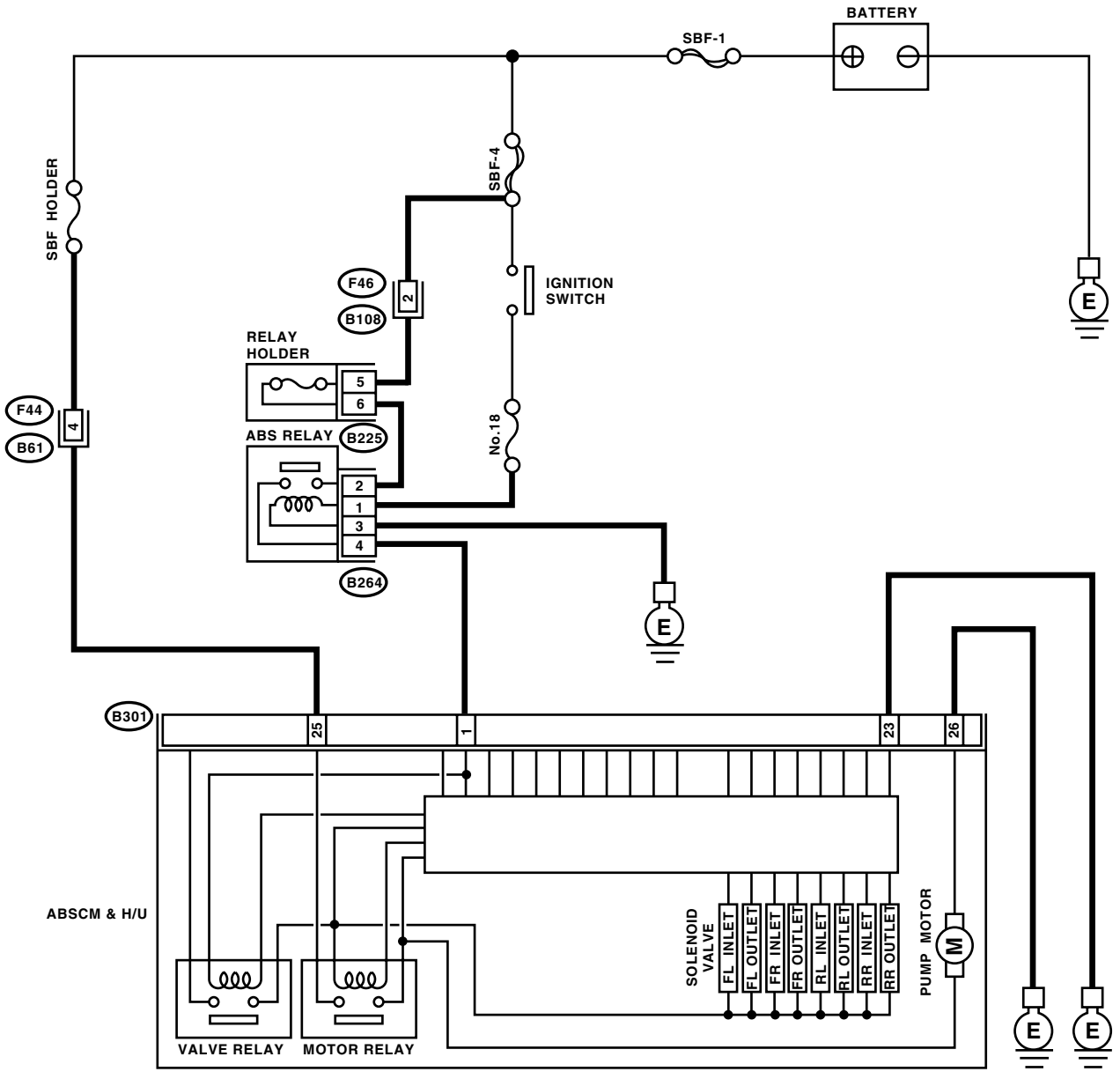
	Step	Check	Yes	No
1	**CHECK INPUT VOLTAGE OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Turn the ignition switch to ON. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 25 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **2.**	Repair the harness/connector between battery and ABSCM&H/U and check fuse SBF8.
2	**CHECK GROUND CIRCUIT OF MOTOR.** 1)Turn the ignition switch to OFF. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 26 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **3.**	Repair the ABSCM&H/U ground harness.
3	**CHECK MOTOR OPERATION.** Operate the sequence control. <Ref. to ABS-9, ABS Sequence Control.> NOTE: Use the diagnosis connector to operate sequence control.	Can motor revolution noise (buzz) be heard when carrying out the check sequence?	Go to step **4.**	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
4	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **5.**
5	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **6.**
6	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

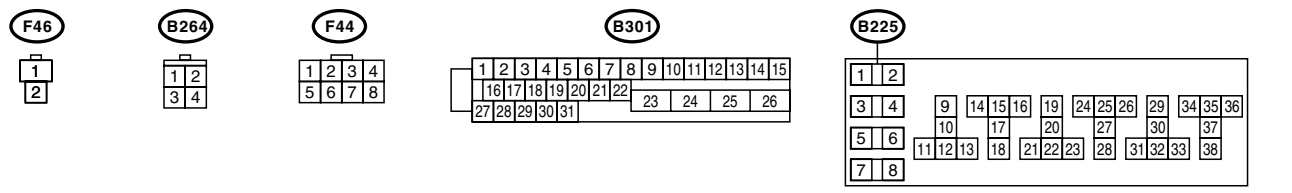
AB:DTC 52
— MOTOR RELAY ON FAILURE —

DIAGNOSIS:
- Faulty motor
- Faulty motor relay
- Faulty harness connector

TROUBLE SYMPTOM:
- ABS does not operate.

WIRING DIAGRAM:





ABS00325

	Step	Check	Yes	No
1	**CHECK MOTOR RELAY IN ABSCM&H/U.** 1)Disconnect the connector from ABSCM&H/U. 2)Measure the resistance between ABSCM&H/U terminals. ***Terminals*** ***No. 25 — No. 26:***	Is the resistance more than 1 MΩ?	Go to step **2.**	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
2	**CHECK MOTOR OPERATION.** Operate the sequence control. <Ref. to ABS-9, ABS Sequence Control.> NOTE: Use the diagnosis connector to operate sequence control.	Can motor revolution noise (buzz) be heard when carrying out the sequence control?	Go to step **3.**	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
3	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **4.**
4	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **5.**
5	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact. NOTE: Although the ABS warning light remains illuminating at this point, this is a normal condition. Vehicle must be driven at approx. 12 km/h (7.46 MPH) or faster to turn off ABS warning light. Make sure that the ABS warning light goes off after driving vehicle.

AC:DTC 52
— MOTOR MALFUNCTION —

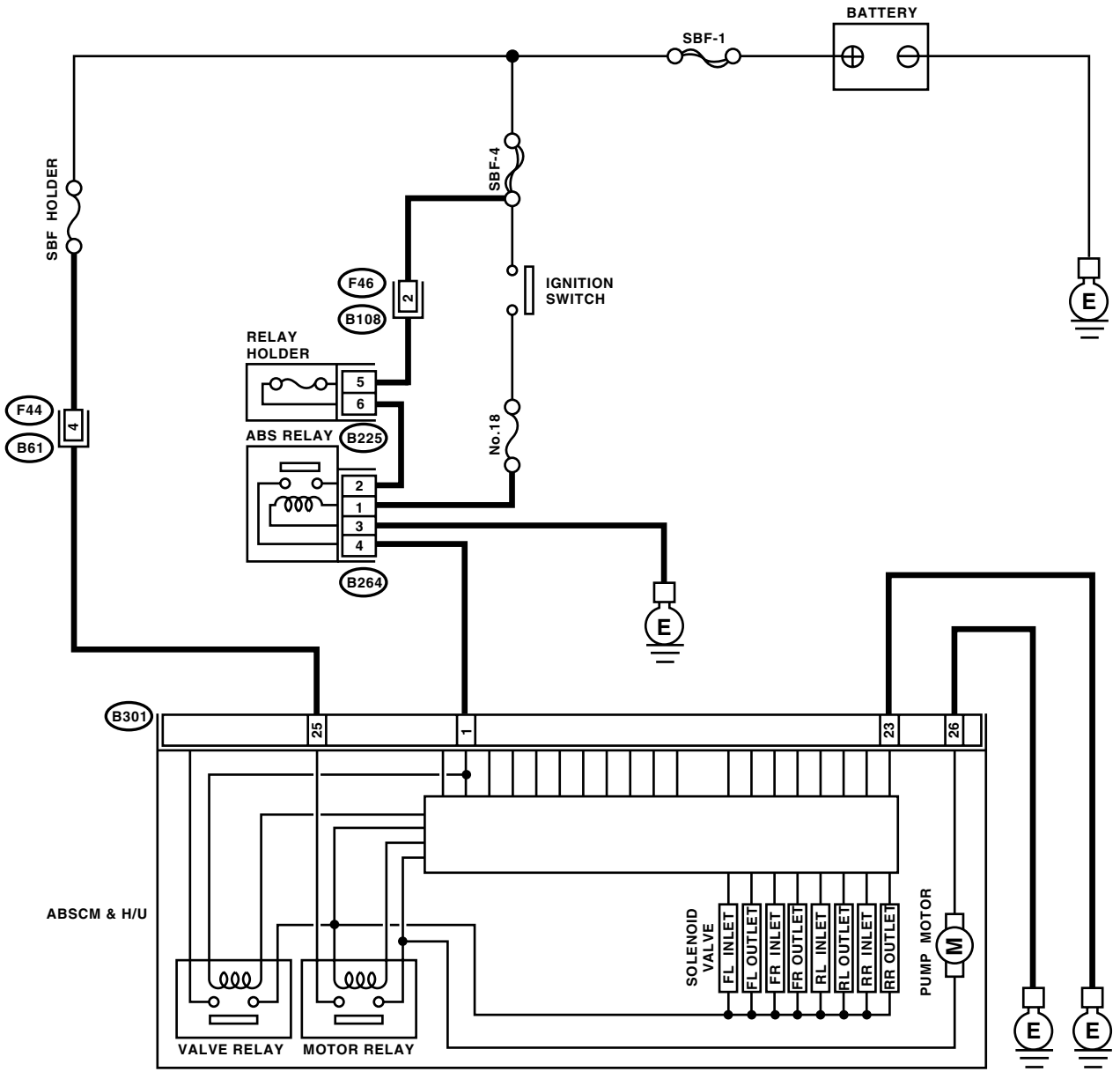
DIAGNOSIS:

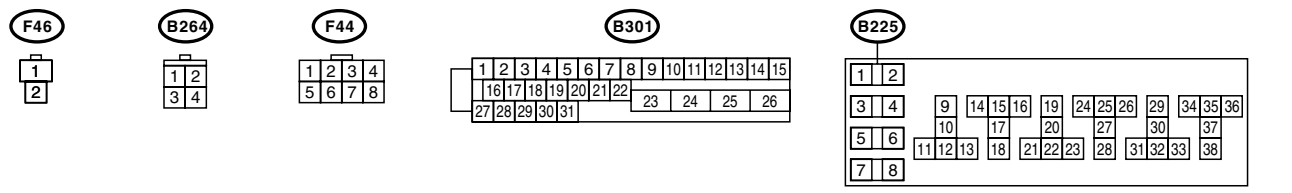
- Faulty motor
- Faulty motor relay
- Faulty harness connector

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00325

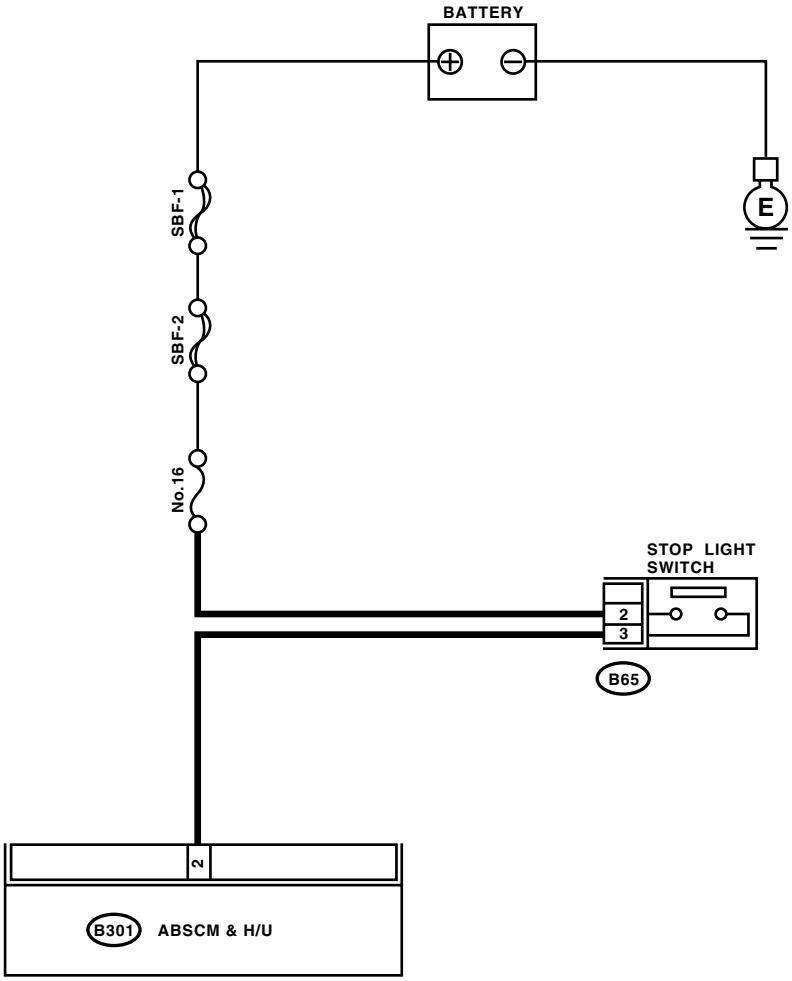
	Step	Check	Yes	No
1	**CHECK INPUT VOLTAGE OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Turn the ignition switch to ON. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 25 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **2.**	Repair the harness/connector between battery and ABSCM&H/U and check fuse SBF8.
2	**CHECK GROUND CIRCUIT OF MOTOR.** 1)Turn the ignition switch to OFF. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 26 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **3.**	Repair the ABSCM&H/U ground harness.
3	**CHECK INPUT VOLTAGE OF ABSCM&H/U.** 1)Run the engine at idle. 2)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **4.**	Repair the harness connector between battery, ignition switch and ABSCM&H/U.
4	**CHECK GROUND CIRCUIT OF ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 23 — Chassis ground:***	Is the resistance less than 0.5 Ω?	Go to step **5.**	Repair the ABSCM&H/U ground harness.
5	**CHECK MOTOR OPERATION.** Operate the sequence control. <Ref. to ABS-9, ABS Sequence Control.> NOTE: Use the diagnosis connector to operate sequence control.	Can motor revolution noise (buzz) be heard when carrying out the sequence control?	Go to step **6.**	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
6	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between generator, battery and ABSCM&H/U?	Repair the connector.	Go to step **7.**
7	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **8.**
8	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

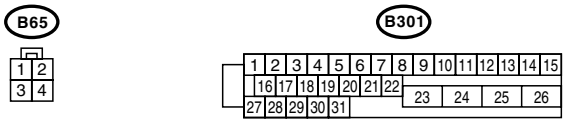
AD:DTC 54
— STOP LIGHT SWITCH SIGNAL CIRCUIT MALFUNCTION —

DIAGNOSIS:
- Faulty stop light switch

TROUBLE SYMPTOM:
- ABS does not operate.

WIRING DIAGRAM:





ABS00378

	Step	Check	Yes	No
1	**CHECK OUTPUT OF STOP LIGHT SWITCH USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Release the brake pedal. 3)Read the stop light switch output in Subaru Select Monitor data display.	Is the reading indicated on monitor display less than 1.5 V?	Go to step **2.**	Go to step **3.**
2	**CHECK OUTPUT OF STOP LIGHT SWITCH USING SUBARU SELECT MONITOR.** 1)Depress the brake pedal. 2)Read the stop light switch output in Subaru Select Monitor data display.	Is the reading indicated on monitor display 10 — 15 V?	Go to step **5.**	Go to step **3.**
3	**CHECK IF STOP LIGHTS COME ON.** Depress the brake pedal.	Do the stop lights turn on?	Go to step **4.**	Repair the stop lights circuit.
4	**CHECK OPEN CIRCUIT IN HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Depress the brake pedal. 4)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 — 15 V?	Go to step **5.**	Repair the harness between stop light switch and ABSCM&H/U connector.
5	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connector between stop light switch and ABSCM&H/U?	Go to step **6.**	Repair the connector.
6	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **7.**
7	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

AE:DTC 56
— OPEN OR SHORT CIRCUIT IN G SENSOR CIRCUIT —

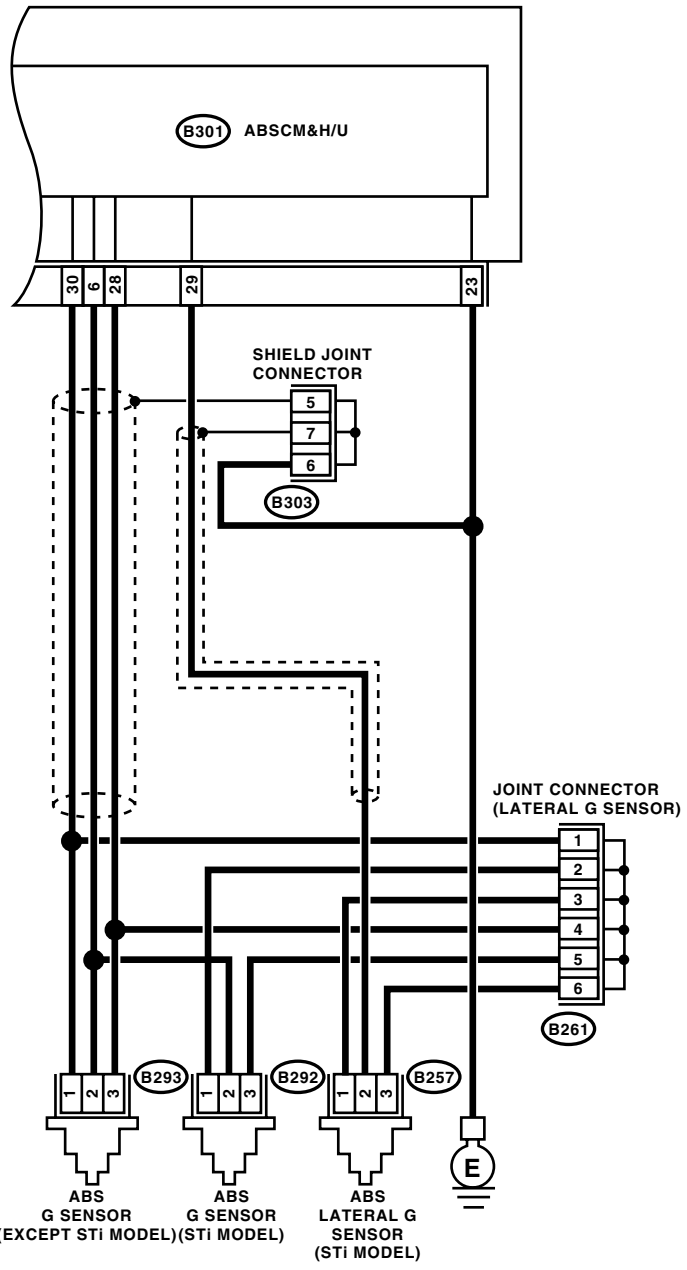
DIAGNOSIS:

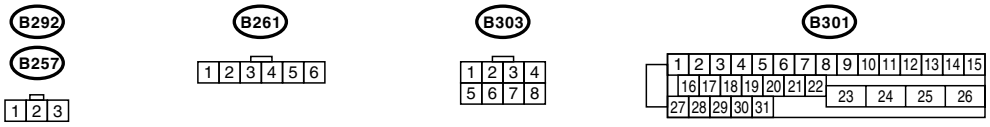
- Faulty G sensor output voltage

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00368

	Step	Check	Yes	No
1	**CHECK OUTPUT OF G SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read the G sensor output in Subaru Select Monitor data display.	Is the G sensor output on monitor display 2.1 — 2.5 V when G sensor is in horizontal position?	Go to step **2.**	Go to step **5.**
2	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connector between ABSCM&H/U and G sensor?	Repair the connector.	Go to step **3.**
3	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **4.**
4	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
5	**CHECK INPUT VOLTAGE OF G SENSOR.** 1)Turn the ignition switch to OFF. 2)Remove the console box. 3)Remove the G sensor from vehicle. (Do not disconnect connector.) 4)Turn the ignition switch to ON. 5)Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 1 (+) — No. 3 (–):***	Is the voltage 4.75 — 5.25 V?	Go to step **6.**	Repair the harness/connector between G sensor and ABSCM&H/U.
6	**CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 6 — No. 28:***	Is the resistance 5.0 — 5.6 kΩ?	Go to step **7.**	Repair the harness/connector between G sensor and ABSCM&H/U.
7	**CHECK GROUND SHORT IN G SENSOR OUTPUT HARNESS.** 1)Disconnect the connector from G sensor. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 6 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **8.**	Repair the harness between G sensor and ABSCM&H/U.
8	**CHECK G SENSOR.** 1)Connect the connector to G sensor. 2)Connect the connector to ABSCM&H/U. 3)Turn the ignition switch to ON. 4)Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 2.1 — 2.5 V when G sensor is in horizontal position?	Go to step **9.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
9	**CHECK G SENSOR.** Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 3.7 — 4.1 V when G sensor is inclined forwards to 90°?	Go to step **10.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>

	Step	Check	Yes	No
10	**CHECK G SENSOR.** Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 0.5 — 0.9 V when G sensor is inclined backwards to 90°?	Go to step **11.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
11	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between ABSCM&H/U and G sensor?	Repair the connector.	Go to step **12.**
12	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **13.**
13	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

AF:DTC 56
— BATTERY SHORT IN G SENSOR CIRCUIT —

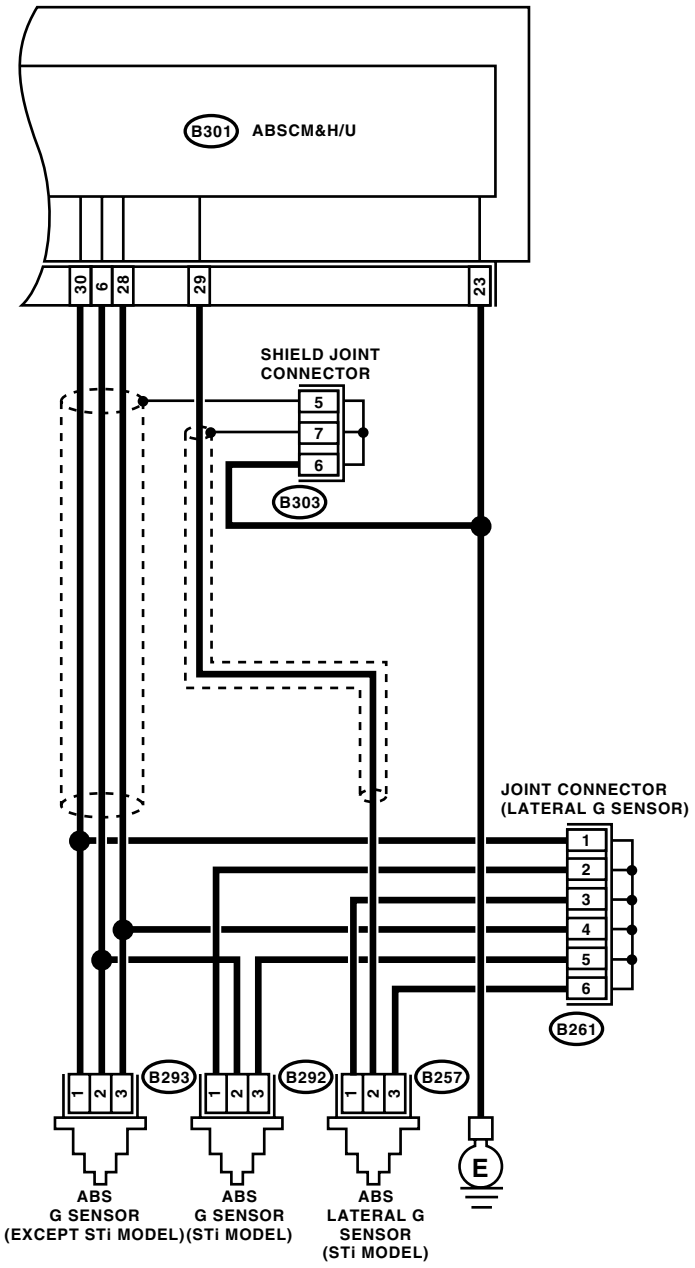
DIAGNOSIS:

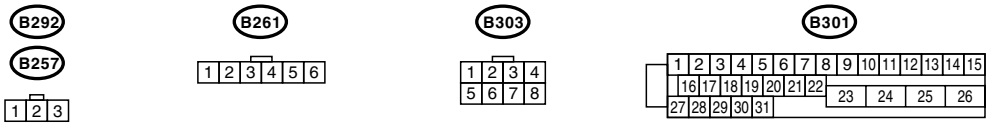
- Faulty G sensor output voltage

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00368

	Step	Check	Yes	No
1	**CHECK OUTPUT OF G SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read the G sensor output in Subaru Select Monitor data display.	Is the voltage 2.1 — 2.5 V when G sensor is in horizontal position?	Go to step **2.**	Go to step **5.**
2	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connector between ABSCM&H/U and G sensor?	Repair the connector.	Go to step **3.**
3	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **4.**
4	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
5	**CHECK FREEZE FRAME DATA.** 1)Select “Freeze frame data” on the Subaru Select Monitor. 2)Read front right wheel speed on the Subaru Select Monitor display.	Is the front right wheel speed on monitor display 0 km/h (0 MPH)?	Go to step **6.**	Go to step **16.**
6	**CHECK FREEZE FRAME DATA.** Read front left wheel speed on the Subaru Select Monitor display.	Is the front left wheel speed on monitor display 0 km/h (0 MPH)?	Go to step **7.**	Go to step **16.**
7	**CHECK FREEZE FRAME DATA.** Read rear right wheel speed on the Subaru Select Monitor display.	Is the rear right wheel speed on monitor display 0 km/h (0 MPH)?	Go to step **8.**	Go to step **16.**
8	**CHECK FREEZE FRAME DATA.** Read rear left wheel speed on the Subaru Select Monitor display.	Is the rear left wheel speed on monitor display 0 km/h (0 MPH)?	Go to step **9.**	Go to step **16.**
9	**CHECK FREEZE FRAME DATA.** Read G sensor output on the Subaru Select Monitor display.	Is the G sensor output on monitor display more than 3.65 V?	Go to step **10.**	Go to step **16.**
10	**CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 6 — No. 28:***	Is the resistance 4.3 — 4.9 kΩ?	Go to step **11.**	Repair the harness/connector between G sensor and ABSCM&H/U.
11	**CHECK BATTERY SHORT OF HARNESS.** 1)Turn the ignition switch to OFF. 2)Remove the console box. 3)Disconnect the connector from G sensor. 4)Disconnect the connector from ABSCM&H/U. 5)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 6 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **12.**	Repair the harness between G sensor and ABSCM&H/U.

	Step	Check	Yes	No
12	**CHECK BATTERY SHORT OF HARNESS.** 1)Turn the ignition switch to ON. 2)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 6 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **13.**	Repair the harness between G sensor and ABSCM&H/U.
13	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connector between ABSCM&H/U and G sensor?	Repair the connector.	Go to step **14.**
14	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **15.**
15	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
16	**CHECK INPUT VOLTAGE OF G SENSOR.** 1)Turn the ignition switch to OFF. 2)Remove the console box. 3)Remove the G sensor from vehicle. (Do not disconnect connector.) 4)Turn the ignition switch to ON. 5)Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 1 (+) — No. 3 (–):***	Is the voltage 4.75 — 5.25 V?	Go to step **17.**	Repair the harness/connector between G sensor and ABSCM&H/U.
17	**CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 6 — No. 28:***	Is the resistance 5.0 — 5.6 kΩ?	Go to step **18.**	Repair the harness/connector between G sensor and ABSCM&H/U.
18	**CHECK G SENSOR.** 1)Connect the connector to G sensor. 2)Connect the connector to ABSCM&H/U. 3)Turn the ignition switch to ON. 4)Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 2.1 — 2.5 V when G sensor is in horizontal position?	Go to step **19.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
19	**CHECK G SENSOR.** Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 3.7 — 4.1 V when G sensor is inclined forwards to 90°?	Go to step **20.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
20	**CHECK G SENSOR.** Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 0.5 — 0.9 V when G sensor is inclined backwards to 90°?	Go to step **21.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
21	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between ABSCM&H/U and G sensor?	Repair the connector.	Go to step **22.**

	Step	Check	Yes	No
22	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **23.**
23	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

AG:DTC 56
— ABNORMAL G SENSOR HIGH μ OUTPUT —

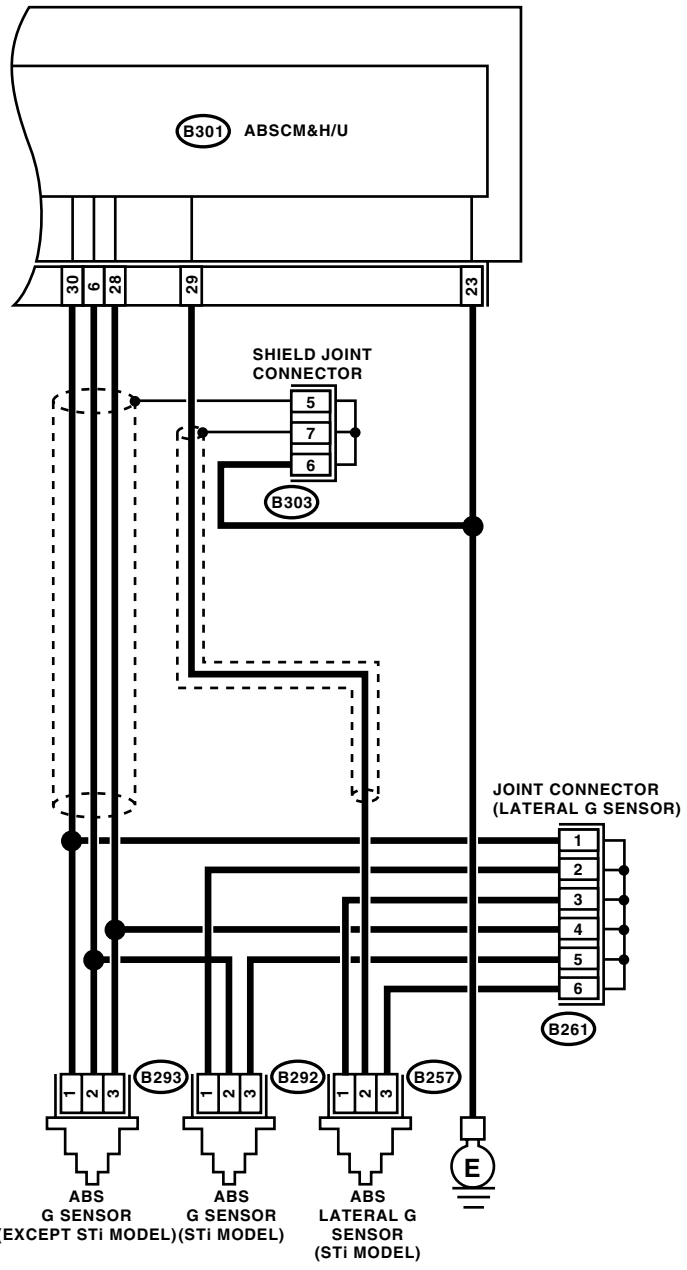
DIAGNOSIS:

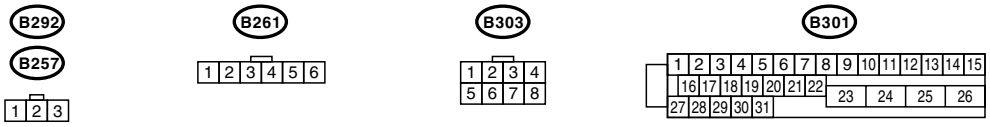
- Faulty G sensor output voltage

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00368

	Step	Check	Yes	No
1	**CHECK OUTPUT OF G SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read G sensor output on the Subaru Select Monitor display.	Is the voltage 2.1 — 2.5 V when G sensor is in horizontal position?	Go to step **2.**	Go to step **6.**
2	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between ABSCM&H/U and G sensor?	Repair the connector.	Go to step **3.**
3	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **4.**
4	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
5	**CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 6 — No. 28:***	Is the resistance 5.0 — 5.6 kΩ?	Go to step **6.**	Repair the harness/connector between G sensor and ABSCM&H/U.
6	**CHECK GROUND SHORT OF HARNESS.** Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 28 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **7.**	Repair the harness between G sensor and ABSCM&H/U. Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
7	**CHECK G SENSOR.** 1)Remove the console box. 2)Remove the G sensor from vehicle. 3)Connect the connector to G sensor. 4)Connect the connector to ABSCM&H/U. 5)Turn the ignition switch to ON. 6)Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 2.1 — 2.5 V when G sensor is in horizontal position?	Go to step **8.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
8	**CHECK G SENSOR.** Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 3.7 — 4.1 V when G sensor is inclined forwards to 90°?	Go to step **9.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
9	**CHECK G SENSOR.** Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 0.5 — 0.9 V when G sensor is inclined backwards to 90°?	Go to step **10.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>

	Step	Check	Yes	No
10	**CHECK ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Connect all connectors. 3)Erase the memory. 4)Perform the inspection mode. 5)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **11.**
11	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

AH:DTC 56
— DETECTION OF G SENSOR STICK —

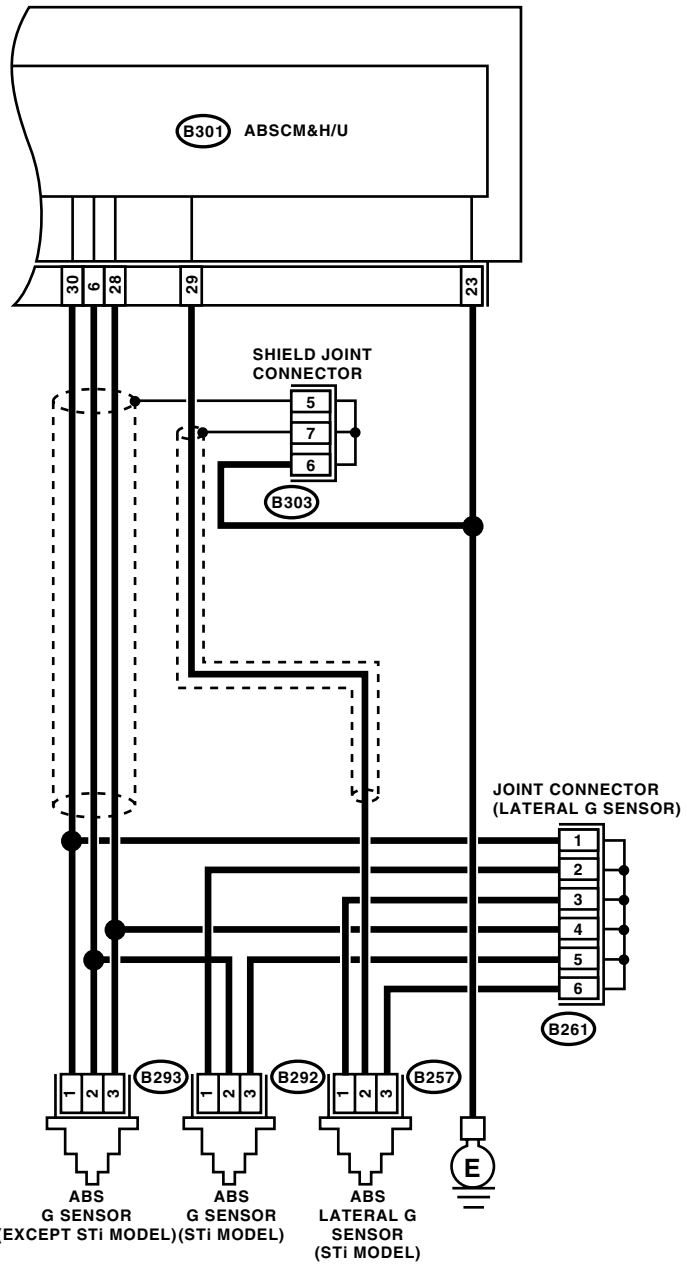
DIAGNOSIS:

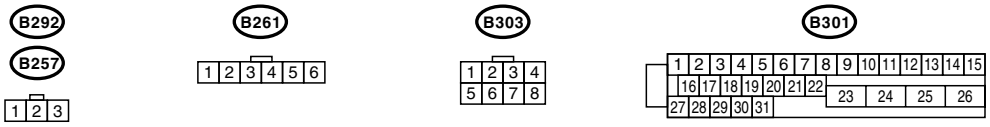
- Faulty G sensor output voltage

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00368

	Step	Check	Yes	No
1	**CHECK ALL FOUR WHEELS FOR FREE TURNING.**	Have the wheels been turned freely such as when vehicle is lifted up, or operated on a rolling road?	The ABS is normal. Erase the DTC.	Go to step **2.**
2	**CHECK OUTPUT OF G SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read the Subaru Select Monitor display.	Is the G sensor output on monitor display 2.1 — 2.5 V when the vehicle is in horizontal position?	Go to step **3.**	Go to step **8.**
3	**CHECK OUTPUT OF G SENSOR USING SUBARU SELECT MONITOR.** 1)Turn the ignition switch to OFF. 2)Remove the console box. 3)Remove the G sensor from vehicle. (Do not disconnect the connector.) 4)Turn the ignition switch to ON. 5)Select “Current data display & Save” on the Subaru Select Monitor. 6)Read the Subaru Select Monitor display.	Is the voltage 3.7 — 4.1 V when G sensor is inclined forwards to 90°?	Go to step **4.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
4	**CHECK OUTPUT OF G SENSOR USING SUBARU SELECT MONITOR.** Read the Subaru Select Monitor display.	Is the voltage 0.5 — 0.9 V when G sensor is inclined backwards to 90°?	Go to step **5.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
5	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between ABSCM&H/U and G sensor?	Repair the connector.	Go to step **6.**
6	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **7.**
7	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
8	**CHECK OPEN CIRCUIT IN G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 6 — No. 28:***	Is the resistance 5.0 — 5.6 kΩ?	Go to step **9.**	Repair the harness/connector between G sensor and ABSCM&H/U.
9	**CHECK G SENSOR.** 1)Remove the console box. 2)Remove the G sensor from vehicle. 3)Connect the connector to G sensor. 4)Connect the connector to ABSCM&H/U. 5)Turn the ignition switch to ON. 6)Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 2.1 — 2.5 V when G sensor is in horizontal position?	Go to step **10.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>

	Step	Check	Yes	No
10	**CHECK G SENSOR.** Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 3.7 — 4.1 V when G sensor is inclined forwards to 90°?	Go to step **11.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
11	**CHECK G SENSOR.** Measure the voltage between G sensor connector terminals. ***Connector & terminal*** ***(B292) No. 2 (+) — No. 3 (–):***	Is the voltage 0.5 — 0.9 V when G sensor is inclined backwards to 90°?	Go to step **12.**	Replace the G sensor. <Ref. to ABS-20, G Sensor.>
12	**CHECK ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Connect all connectors. 3)Erase the memory. 4)Perform the inspection mode. 5)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **13.**
13	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

AI: DTC 73
— OPEN OR SHORT CIRCUIT IN LATERAL G SENSOR CIRCUIT —

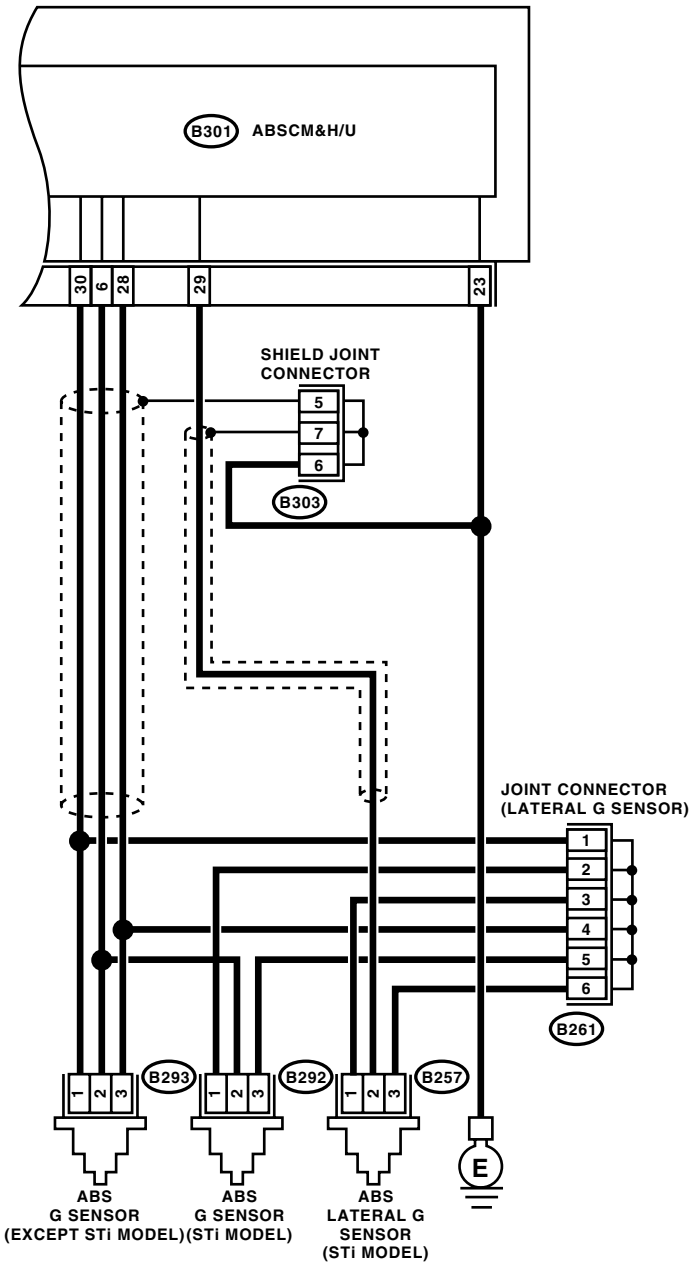
DIAGNOSIS:

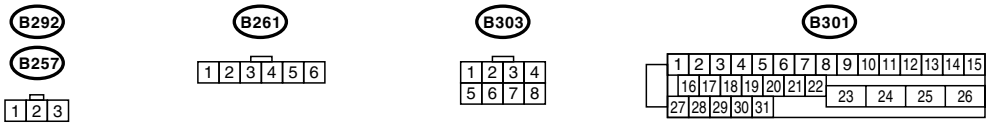
- Faulty Lateral G sensor output voltage

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00368

	Step	Check	Yes	No
1	**CHECK OUTPUT OF LATERAL G SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read the lateral G sensor output in Subaru Select Monitor data display.	Is the lateral G sensor output on monitor display 2.3 — 2.7 V when lateral G sensor is in horizontal position?	Go to step **2.**	Go to step **5.**
2	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connector between ABSCM&H/U and lateral G sensor?	Repair the connector.	Go to step **3.**
3	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in the current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **4.**
4	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
5	**CHECK INPUT VOLTAGE OF LATERAL G SENSOR.** 1)Turn the ignition switch to OFF. 2)Remove the console box. 3)Remove the lateral G sensor from vehicle. (Do not disconnect connector.) 4)Turn the ignition switch to ON. 5)Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 1 (+) — No. 3 (–):***	Is the voltage 4.75 — 5.25 V?	Go to step **6.**	Repair the harness/connector between lateral G sensor and ABSCM&H/U.
6	**CHECK OPEN CIRCUIT IN LATERAL G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 28 — No. 30:***	Is the resistance 5.0 — 5.6 kΩ?	Go to step **7.**	Repair the harness/connector between lateral G sensor and ABSCM&H/U.
7	**CHECK GROUND SHORT IN LATERAL G SENSOR OUTPUT HARNESS.** 1)Disconnect the connector from lateral G sensor. 2)Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 29 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **8.**	Repair the harness between lateral G sensor and ABSCM&H/U.
8	**CHECK LATERAL G SENSOR.** 1)Connect the connector to lateral G sensor. 2)Connect the connector to ABSCM&H/U. 3)Turn the ignition switch to ON. 4)Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 2.1 — 2.5 V when lateral G sensor is in horizontal position?	Go to step **9.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>

	Step	Check	Yes	No
9	**CHECK LATERAL G SENSOR.** Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 3.7 — 4.1 V when lateral G sensor is inclined right to 90°?	Go to step **10.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
10	**CHECK LATERAL G SENSOR.** Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 0.5 — 0.9 V when lateral G sensor is inclined left to 90°?	Go to step **11.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
11	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between ABSCM&H/U and lateral G sensor?	Repair the connector.	Go to step **12.**
12	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **13.**
13	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

AJ:DTC 73
— BATTERY SHORT IN LATERAL G SENSOR CIRCUIT —

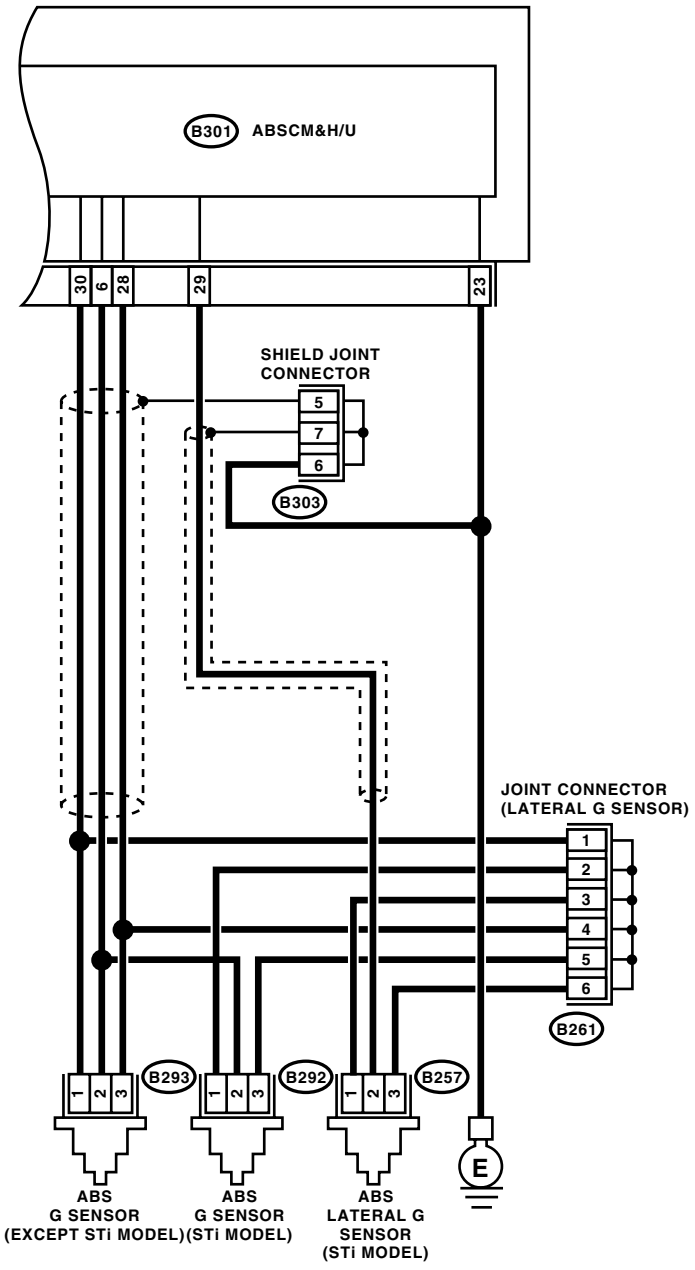
DIAGNOSIS:

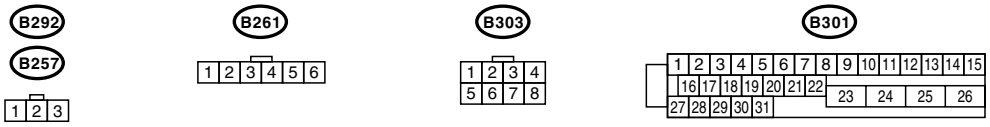
- Faulty Lateral G sensor output voltage

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00368

	Step	Check	Yes	No
1	**CHECK OUTPUT OF LATERAL G SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read the lateral G sensor output in Subaru Select Monitor data display.	Is the voltage 2.3 — 2.7 V when lateral G sensor is in horizontal position?	Go to step **2.**	Go to step **5.**
2	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connector between ABSCM&H/U and lateral G sensor?	Repair the connector.	Go to step **3.**
3	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **4.**
4	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
5	**CHECK FREEZE FRAME DATA.** 1)Select “Freeze frame data” on the Subaru Select Monitor. 2)Read front right wheel speed on the Subaru Select Monitor display.	Is the front right wheel speed on monitor display 0 km/h (0 MPH)?	Go to step **6.**	Go to step **16.**
6	**CHECK FREEZE FRAME DATA.** Read front left wheel speed on the Subaru Select Monitor display.	Is the front left wheel speed on monitor display 0 km/h (0 MPH)?	Go to step **7.**	Go to step **16.**
7	**CHECK FREEZE FRAME DATA.** Read rear right wheel speed on the Subaru Select Monitor display.	Is the rear right wheel speed on monitor display 0 km/h (0 MPH)?	Go to step **8.**	Go to step **16.**
8	**CHECK FREEZE FRAME DATA.** Read rear left wheel speed on the Subaru Select Monitor display.	Is the rear left wheel speed on monitor display 0 km/h (0 MPH)?	Go to step **9.**	Go to step **16.**
9	**CHECK FREEZE FRAME DATA.** Read lateral G sensor output on the Subaru Select Monitor display.	Is the lateral G sensor output on monitor display more than 3.65 V?	Go to step **10.**	Go to step **16.**
10	**CHECK OPEN CIRCUIT IN LATERAL G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 29 — No. 28:***	Is the resistance 4.3 — 4.9 kΩ?	Go to step **11.**	Repair the harness/connector between Lateral G sensor and ABSCM&H/U.
11	**CHECK BATTERY SHORT OF HARNESS.** 1)Turn the ignition switch to OFF. 2)Remove the console box. 3)Disconnect the connector from lateral G sensor. 4)Disconnect the connector from ABSCM&H/U. 5)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 29 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **12.**	Repair the harness between lateral G sensor and ABSCM&H/U.

	Step	Check	Yes	No
12	**CHECK BATTERY SHORT OF HARNESS.** 1)Turn the ignition switch to ON. 2)Measure the voltage between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 29 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **13.**	Repair the harness between lateral G sensor and ABSCM&H/U.
13	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in connector between ABSCM&H/U and lateral G sensor?	Repair the connector.	Go to step **14.**
14	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **15.**
15	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
16	**CHECK INPUT VOLTAGE OF LATERAL G SENSOR.** 1)Turn the ignition switch to OFF. 2)Remove the console box. 3)Remove the lateral G sensor from vehicle. (Do not disconnect connector.) 4)Turn the ignition switch to ON. 5)Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 1 (+) — No. 3 (–):***	Is the voltage 4.75 — 5.25 V?	Go to step **17.**	Repair the harness/connector between Lateral G sensor and ABSCM&H/U.
17	**CHECK OPEN CIRCUIT IN LATERAL G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 29 — No. 28:***	Is the resistance 5.0 — 5.6 kΩ?	Go to step **18.**	Repair the harness/connector between lateral G sensor and ABSCM&H/U.
18	**CHECK LATERAL G SENSOR.** 1)Connect the connector to lateral G sensor. 2)Connect the connector to ABSCM&H/U. 3)Turn the ignition switch to ON. 4)Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 2.1 — 2.5 V when lateral G sensor is in horizontal position?	Go to step **19.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
19	**CHECK LATERAL G SENSOR.** Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 3.3 — 3.7 V when lateral G sensor is inclined right to 90°?	Go to step **20.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
20	**CHECK LATERAL G SENSOR.** Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 0.5 — 0.9 V when lateral G sensor is inclined left to 90°?	Go to step **21.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>

	Step	Check	Yes	No
21	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between ABSCM&H/U and lateral G sensor?	Repair the connector.	Go to step **22.**
22	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **23.**
23	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

AK:DTC 73
— ABNORMAL LATERAL G SENSOR HIGH μ OUTPUT —

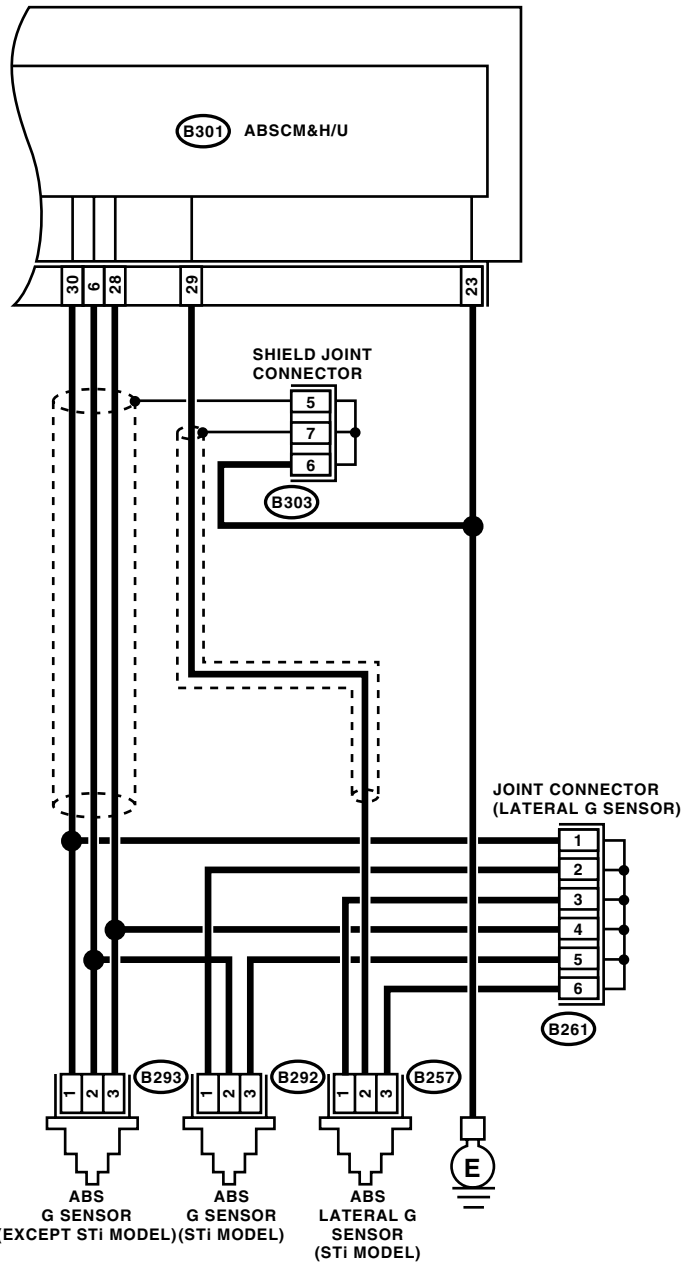
DIAGNOSIS:

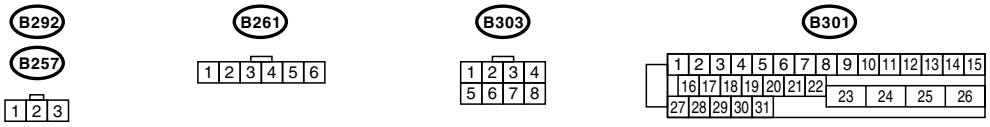
- Faulty Lateral G sensor output voltage

TROUBLE SYMPTOM:

- ABS does not operate.

WIRING DIAGRAM:





ABS00368

	Step	Check	Yes	No
1	**CHECK OUTPUT OF LATERAL G SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read Lateral G sensor output on the Subaru Select Monitor display.	Is the voltage 2.3 — 2.7 V when Lateral G sensor is in horizontal position?	Go to step **2.**	Go to step **6.**
2	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between ABSCM&H/U and lateral G sensor?	Repair the connector.	Go to step **3.**
3	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **4.**
4	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
5	**CHECK OPEN CIRCUIT IN LATERAL G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 29 — No. 28:***	Is the resistance 5.0 — 5.6 kΩ?	Go to step **6.**	Repair the harness/connector between lateral G sensor and ABSCM&H/U.
6	**CHECK GROUND SHORT OF HARNESS.** Measure the resistance between ABSCM&H/U connector and chassis ground. ***Connector & terminal*** ***(B301) No. 28 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **7.**	Repair the harness between lateral G sensor and ABSCM&H/U. Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>
7	**CHECK LATERAL G SENSOR.** 1)Remove the console box. 2)Remove the lateral G sensor from vehicle. 3)Connect the connector to lateral G sensor. 4)Connect the connector to ABSCM&H/U. 5)Turn the ignition switch to ON. 6)Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 2.1 — 2.5 V when lateral G sensor is in horizontal position?	Go to step **8.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
8	**CHECK LATERAL G SENSOR.** Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 3.3 — 3.7 V when lateral G sensor is inclined right to 90°?	Go to step **9.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>

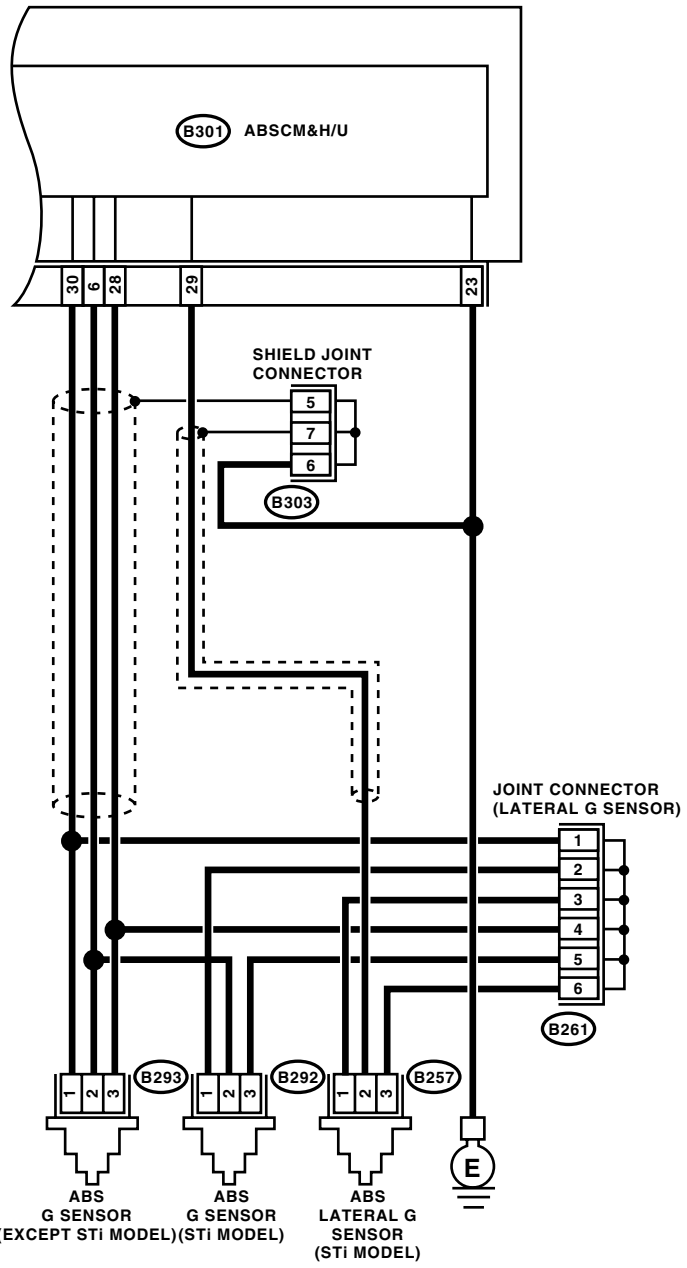
	Step	Check	Yes	No
9	**CHECK LATERAL G SENSOR.** Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal (B257) No. 2 (+) — No. 3 (–):***	Is the voltage 0.5 — 0.9 V when lateral G sensor is inclined left to 90°?	Go to step **10.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
10	**CHECK ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Connect all connectors. 3)Erase the memory. 4)Perform the inspection mode. 5)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **11.**
11	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.

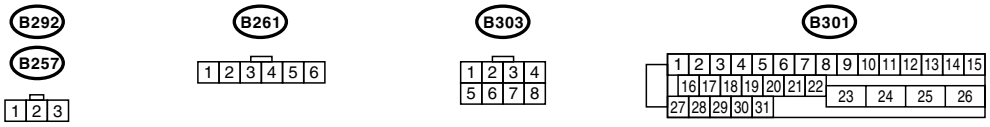
AL:DTC 73
— DETECTION OF LATERAL G SENSOR STICK —

DIAGNOSIS:
- Faulty Lateral G sensor output voltage

TROUBLE SYMPTOM:
- ABS does not operate.

WIRING DIAGRAM:





ABS00368

	Step	Check	Yes	No
1	**CHECK ALL FOUR WHEELS FOR FREE TURNING.**	Have the wheels been turned freely such as when vehicle is lifted up, or operated on a rolling road?	The ABS is normal. Erase the DTC.	Go to step **2.**
2	**CHECK OUTPUT OF LATERAL G SENSOR USING SUBARU SELECT MONITOR.** 1)Select “Current data display & Save” on the Subaru Select Monitor. 2)Read the Subaru Select Monitor display.	Is the lateral G sensor output on monitor display 2.3 — 2.7 V when the vehicle is in horizontal position?	Go to step **3.**	Go to step **8.**
3	**CHECK OUTPUT OF LATERAL G SENSOR USING SUBARU SELECT MONITOR.** 1)Turn the ignition switch to OFF. 2)Remove the console box. 3)Remove the lateral G sensor from vehicle. (Do not disconnect the connector.) 4)Turn the ignition switch to ON. 5)Select “Current data display & Save” on the Subaru Select Monitor. 6)Read the Subaru Select Monitor display.	Is the voltage 3.7 — 4.1 V when lateral G sensor is inclined right to 90°?	Go to step **4.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
4	**CHECK OUTPUT OF LATERAL G SENSOR USING SUBARU SELECT MONITOR.** Read the Subaru Select Monitor display.	Is the voltage 0.5 — 0.9 V when lateral G sensor is inclined left to 90°?	Go to step **5.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
5	**CHECK POOR CONTACT IN CONNECTORS.** Turn the ignition switch to OFF.	Is there poor contact in connector between ABSCM&H/U and lateral G sensor?	Repair the connector.	Go to step **6.**
6	**CHECK ABSCM&H/U.** 1)Connect all connectors. 2)Erase the memory. 3)Perform the inspection mode. 4)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **7.**
7	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.
8	**CHECK OPEN CIRCUIT IN LATERAL G SENSOR OUTPUT HARNESS AND GROUND HARNESS.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from ABSCM&H/U. 3)Measure the resistance between ABSCM&H/U connector terminals. ***Connector & terminal*** ***(B301) No. 29 — No. 28:***	Is the resistance 5.0 — 5.6 kΩ?	Go to step **9.**	Repair the harness/connector between lateral G sensor and ABSCM&H/U.
9	**CHECK LATERAL G SENSOR.** 1)Remove the console box. 2)Remove the lateral G sensor from vehicle. 3)Connect the connector to lateral G sensor. 4)Connect the connector to ABSCM&H/U. 5)Turn the ignition switch to ON. 6)Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 2.1 — 2.5 V when lateral G sensor is in horizontal position?	Go to step **10.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>

	Step	Check	Yes	No
10	**CHECK LATERAL G SENSOR.** Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 3.3 — 3.7 V when lateral G sensor is inclined right to 90°?	Go to step **11.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
11	**CHECK LATERAL G SENSOR.** Measure the voltage between lateral G sensor connector terminals. ***Connector & terminal*** ***(B257) No. 2 (+) — No. 3 (–):***	Is the voltage 0.5 — 0.9 V when lateral G sensor is inclined left to 90°?	Go to step **12.**	Replace the lateral G sensor. <Ref. to ABS-22, Lateral G Sensor.>
12	**CHECK ABSCM&H/U.** 1)Turn the ignition switch to OFF. 2)Connect all connectors. 3)Erase the memory. 4)Perform the inspection mode. 5)Read out the DTC.	Is the same DTC as in current diagnosis still being output?	Replace the ABSCM&H/U. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step **13.**
13	**CHECK ANY OTHER DTC APPEARANCE.**	Are other DTCs being output?	Proceed with the diagnosis corresponding to DTC.	A temporary poor contact.