DTC	C1241/41	LOW BATTERY POSITIVE VOLTAGE OR ABNORMALLY HIGH BATTERY POSITIVE VOLTAGE

DTC	C1242/42	IG2 POWER SOURCE CIRCUIT

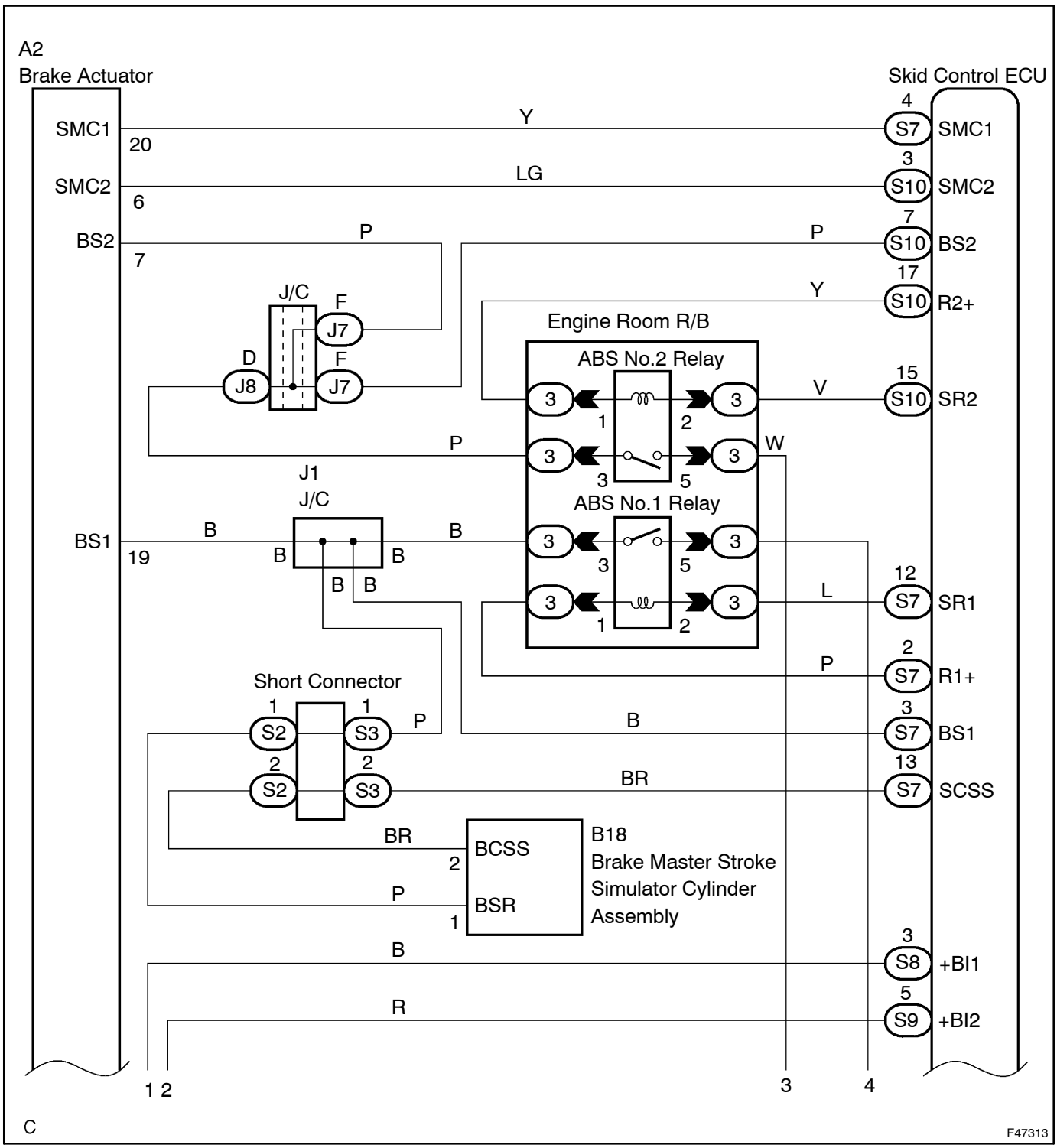
CIRCUIT DESCRIPTION

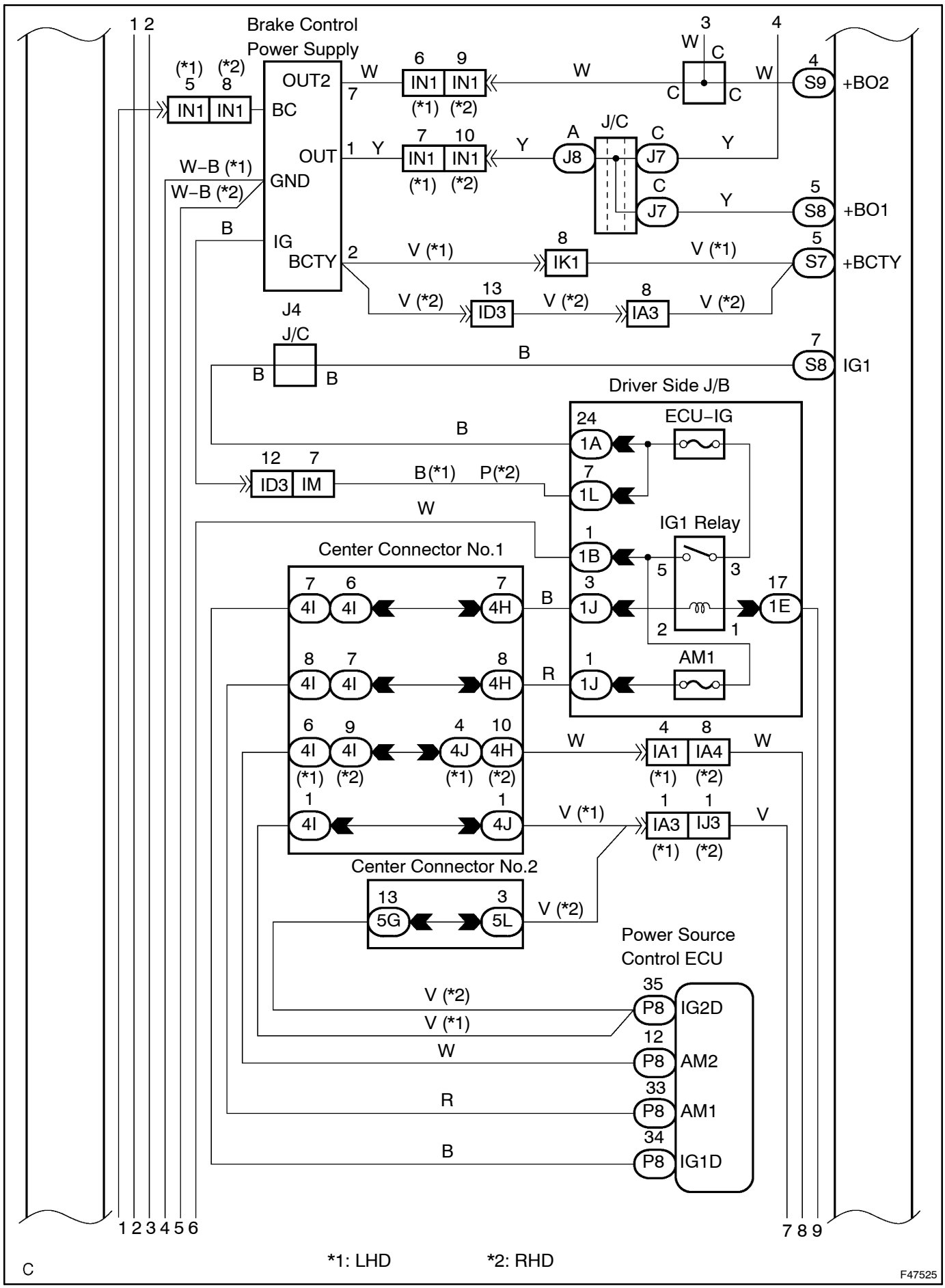
These codes are memorized when the power source voltage for the skid control ECU drops or the voltage for the ABS No.1, ABS No.2 relay operation drops.
Codes may be memorized when the voltage of the auxiliary battery temporarily drops.
When the power source voltage is too high, the skid control ECU stops functioning and outputs no DTCs, and the ABS and BRAKE warning light remain on.
HINT:
DTC C1256/56 (accumulator low pressure) may be memorized if the power source voltage drops.

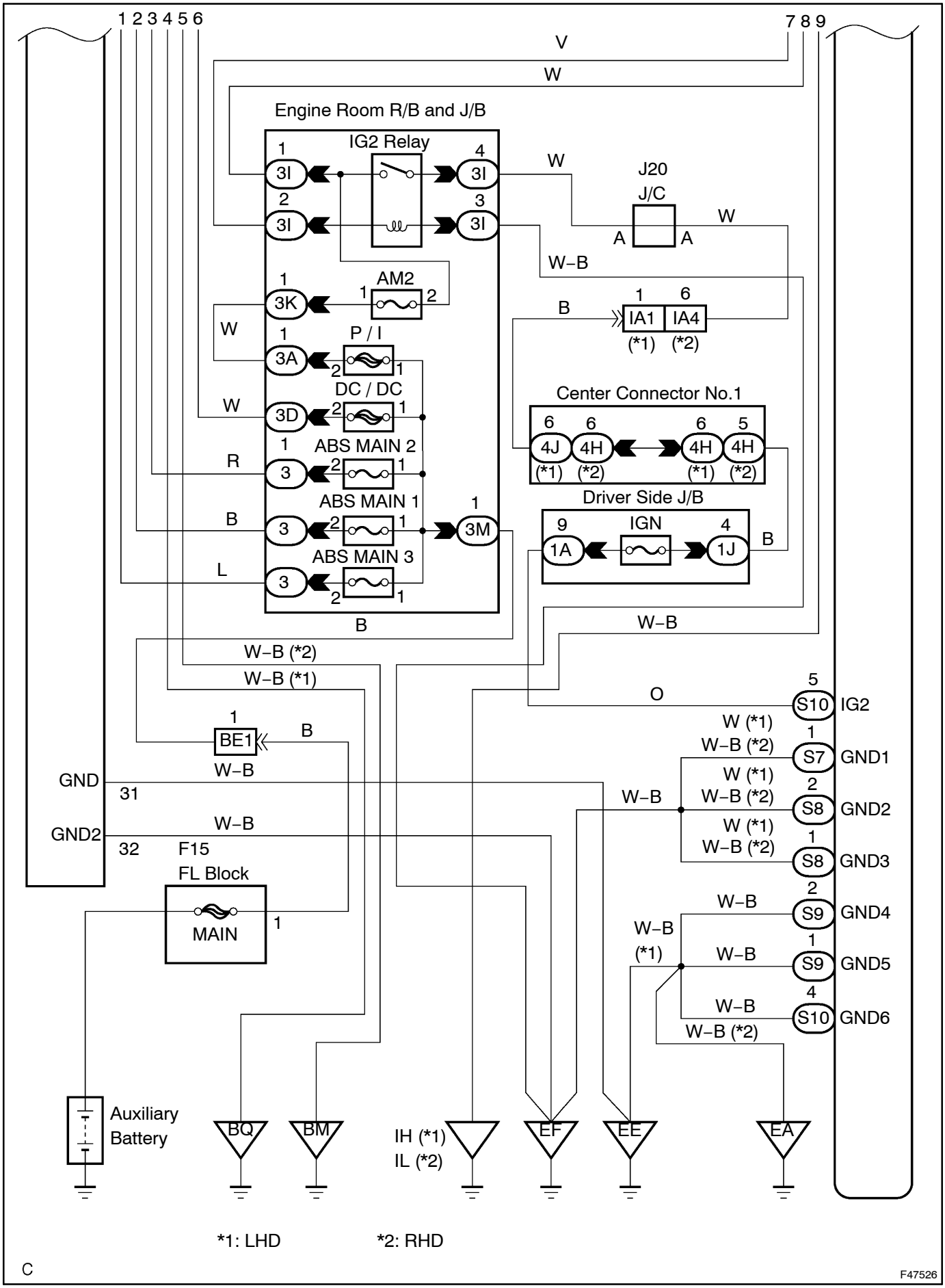
DTC No.	Detailed Code	DTC Condition	Trouble Area
C1241/41	81	System 1 is under the following conditions when READY is on: • Linear solenoid cannot receive enough current (brake is applied). • BS voltage is less than 8.9 V for at least 3 sec. (brake is not applied). • 12 V–power source voltage inside ECU is less than 8.5 V when main relay is opened or VCM voltage is less than 4.7 V or 5 V or more for at least 0.05 sec.	• ABS No.1 relay • Harness and connector • Skid control power supply circuit • Brake control power supply assy • Hybrid control system
C1241/41	82	System 2 is under the following conditions when READY is on: • Linear solenoid cannot receive enough current (brake is applied). • BS voltage is less than 8.9 V for at least 3 sec. (brake is not applied). • 12 V–power source voltage inside ECU is less than 8.5 V when main relay is opened or VCM voltage is less than 4.7 V or 5.3 V or more for at least 0.05 sec.	• ABS No.2 relay • Harness and connector • Skid control power supply circuit • Brake control power supply assy • Hybrid control system
C1241/41	83	Capacitor mode signal is received from brake control power supply for 3 sec. or more when READY is on.	• Brake control power supply assy • Brake control power supply • Hybrid control system
C1241/41	84	ABS is requested to operate when the power source voltage of the main relay system is dropping.	• ABS No.1 relay • ABS No.2 relay • Harness and connector

DTC No.	Detailed Code	DTC Condition	Trouble Area
C1242/42	87	Voltage is applied to IG2 terminal, but not applied to IG1 terminal for at least 4 sec.	• ABS No.1 relay • Harness and connector • Skid control power supply circuit • Brake control power supply assy • Hybrid control system
C1242/42	88	Voltage is applied to IG 1 terminal, but not applied to IG 2 terminal for at least 4 sec.	• ABS No.2 relay • Harness and connector • Skid control power supply circuit • Brake control power supply assy • Hybrid control system

WIRING DIAGRAM




Brake Control
Power Supply
OUT2
BC
OUT
GND
IG
BCTY
W–B (*1)
W–B (*2)
B
W
Y
V (*1)
V (*2)
IN1
IK1
ID3
IA3
J/C
J4
J7
J8
S9
+BO2
S8
+BO1
S7
+BCTY
IG1
Driver Side J/B
ECU–IG
1A
1L
1B
1J
IG1 Relay
1E
AM1
IM
Center Connector No.1
4I
4H
4J
IA1
IA4
IJ3
Center Connector No.2
5G
5L
Power Source
Control ECU
P8
IG2D
AM2
AM1
IG1D
1 2 3 4 5 6
7 8 9
*1: LHD
*2: RHD
C
F47525


1 2 3 4 5 6
7 8 9
V
W
Engine Room R/B and J/B
IG2 Relay
1
4
3I
2
3
W
J20
J/C
A
A
W
W–B
1
AM2
3K
1
2
B
1
6
IA1
IA4
(*1)
(*2)
W
1
P / I
3A
2
1
DC / DC
W
3D
Center Connector No.1
6
6
6
5
4J
4H
4H
4H
(*1)
(*2)
(*1)
(*2)
R
1
ABS MAIN 2
3
ABS MAIN 1
B
3
1
3M
Driver Side J/B
9
IGN
4
1A
1J
B
ABS MAIN 3
L
3
B
W–B
W–B (*2)
W–B (*1)
5
O
S10
IG2
W (*1)
W–B (*2)
1
S7
GND1
1
BE1
B
W–B
GND
31
W (*1)
W–B (*2)
2
S8
GND2
W–B
GND2
32
W–B
F15
W (*1)
W–B (*2)
1
S8
GND3
FL Block
2
W–B
S9
GND4
MAIN
1
W–B
(*1)
1
W–B
S9
GND5
4
W–B
S10
GND6
W–B (*2)
Auxiliary
Battery
BQ
BM
IH (*1)
IL (*2)
EF
EE
EA
*1: LHD
*2: RHD
C
F47526

INSPECTION PROCEDURE

1	CHECK DTC(HYBRID CONTROL SYSTEM)

(a) Is DTC output for HYBRID CONTROL SYSTEM?
Result:

DTC is not output	A
DTC is output	B

B → **REPAIR HYBRID CONTROL SYSTEM (SEE PAGE 05–268)**

A

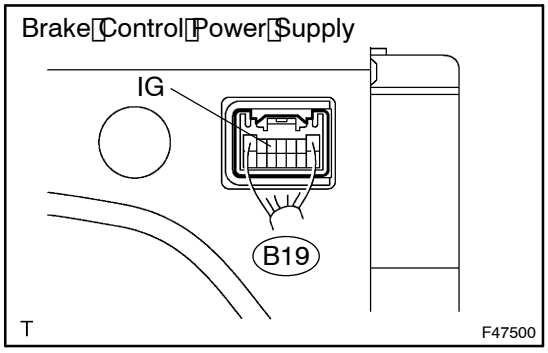
2	CHECK AUXILIARY BATTERY VOLTAGE

(a) Check the auxiliary battery voltage.
Standard:
10 to 14 V

NG → **CHARGE OR REPLACE AUXILIARY BATTERY**

OK

3	CHECK BRAKE CONTROL POWER SUPPLY



(a) Measure the voltage according to the value(s) in the table below.

HINT:
Measure the voltage behind the connector with the connector connected.

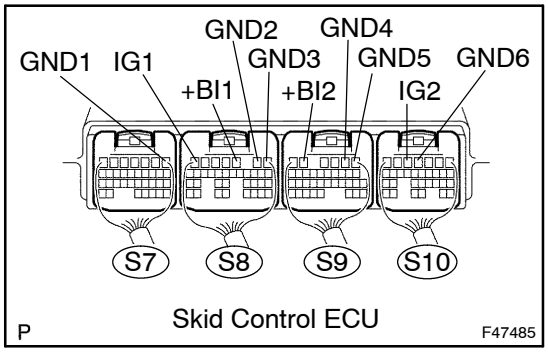
Standard:

Tester Connection	Specified Condition
B19–5 (IG) – Body ground	10 to 14 V

NG → **CHARGE OR REPLACE BRAKE CONTROL POWER SUPPLY**

OK

4 CHECK HARNESS AND CONNECTOR



(a) Measure the voltage according to the value(s) in the table below.

HINT:

Measure the voltage from behind the connector with the connector connected to the skid control ECU.

Standard:

Tester Connection	Specified Condition
S8–7 (IG1) – Body ground	10 to 14 V
S10–5 (IG2) – Body ground	10 to 14 V
S8–3 (+BI1) – Body ground	10 to 14 V
S9–5 (+BI2) – Body ground	10 to 14 V

(b) Measure the resistance according to the value(s) in the table below.

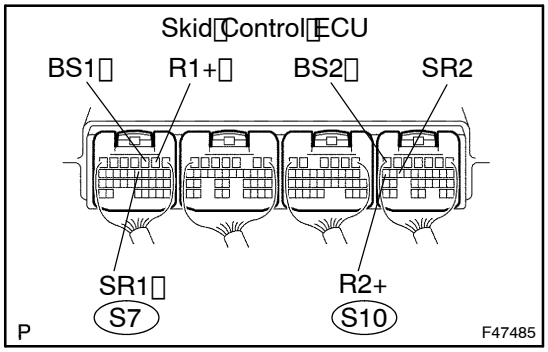
Standard:

Tester Connection	Specified Condition
S7–1 (GND1) – Body ground	Below 1 Ω
S8–2 (GND2) – Body ground	Below 1 Ω
S8–1 (GND3) – Body ground	Below 1 Ω
S9–2 (GND4) – Body ground	Below 1 Ω
S9–1 (GND5) – Body ground	Below 1 Ω
S10–4 (GND6) – Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5 INSPECT SKID CONTROL ECU TERMINAL VOLTAGE



(a) Measure the voltage according to the value(s) in the table below.

HINT:

Measure the voltage from behind the connector with the connector connected to the skid control ECU.

Standard:

Tester Connection	Condition	Specified Condition
S7–2 (R1+) – Body ground	Power switch ON (READY)	8 to 13 V
S10–17 (R2+) – Body ground	Power switch ON (READY)	8 to 13 V
S7–12 (SR1) – Body ground	Power switch ON (READY)	Below 1.5 V
S10–15 (SR2) – Body ground	Power switch ON (READY)	Below 1.5 V
S7–3 (BS1) – Body ground	Power switch ON (READY)	10 to 14 V
S10–7 (BS2) – Body ground	Power switch ON (READY)	10 to 14 V

Result:

All OK	A
NG (R1+, R2+)	B
NG (SR1, SR2, BS1, BS2)	C

B → **REPLACE SKID CONTROL ECU ASSY (SEE PAGE 32–81 or 32–82)**

NOTICE:

When replacing the skid control ECU assy, perform initialization of linear solenoid valve and calibration (see page 05–721).

C → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

A

6	RECONFIRM DTC

(a) Clear the DTCs.
(b) Turn the power switch ON (READY).
(c) Check the same DTCs are recorded (see page 05–738).

Result:

DTC is not output	A
DTC is output	B

B → **REPLACE SKID CONTROL ECU ASSY (SEE PAGE 32–81 or 32–82)**

NOTICE:
When replacing the skid control ECU assy, perform initialization of linear solenoid valve and calibration (see page 05–721).

A →

END (DTC MAY BE STORED DUE TO TEMPORARY POWER SOURCE VOLTAGE DROP)