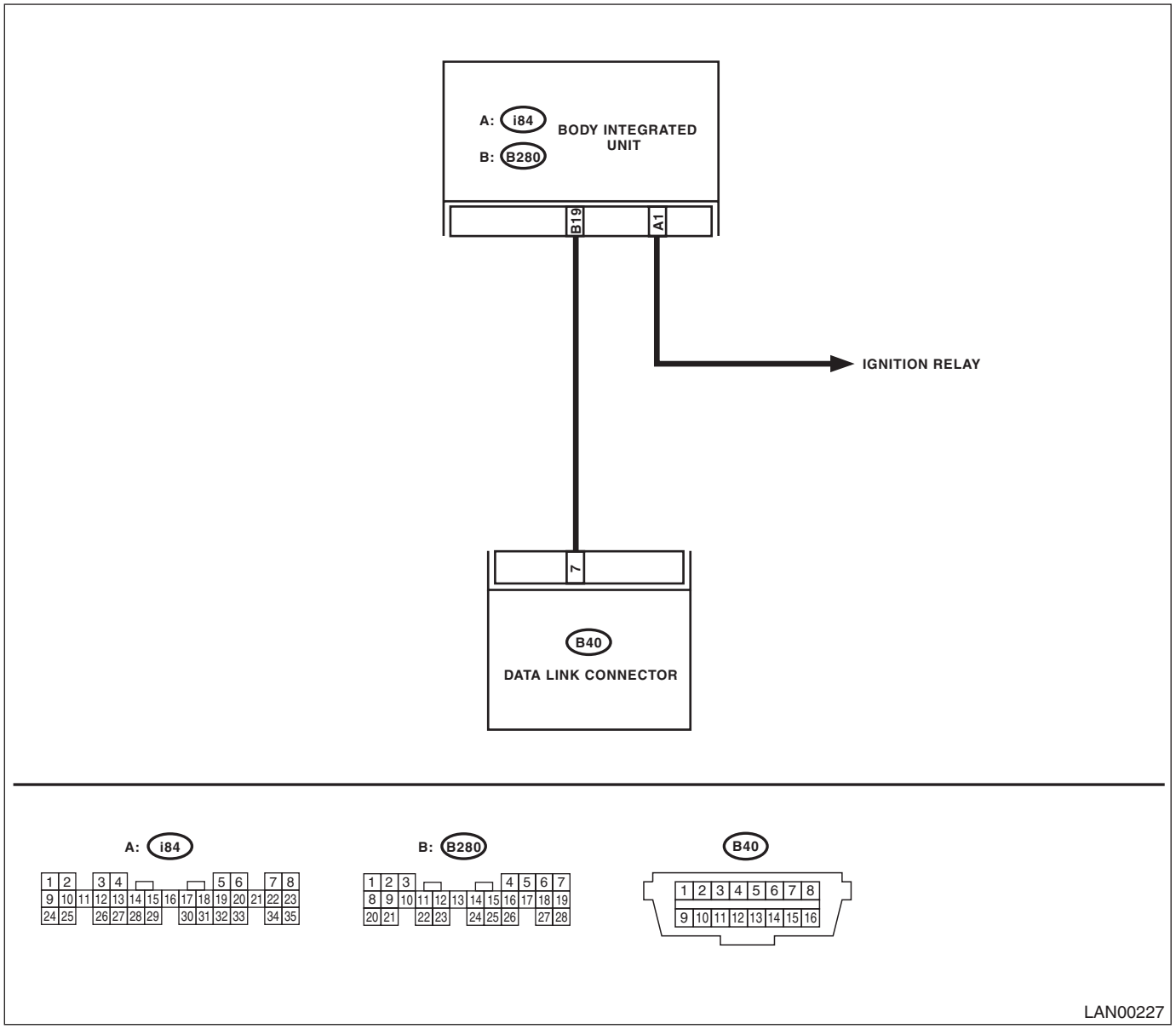
12.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

NOTE:
- DTC is displayed in the sequence of the amount of counter numbers.
- When more than two DTCs are displayed, perform the diagnosis of top one.

DIAGNOSIS:
Subaru Select Monitor communication line is open or shorted.
TROUBLE SYMPTOM:
Not communicable with Subaru Select Monitor.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK IGNITION SWITCH.**	Is the ignition switch ON?	Go to step **2**.	Turn the ignition switch to ON, and select Integ. Unit mode using Subaru Select Monitor.
2	**CHECK BATTERY.** 1) Turn the ignition switch to OFF. 2) Measure the battery voltage.	Is the voltage 11 V or more?	Go to step **3**.	Charge or replace the battery.
3	**CHECK BATTERY TERMINAL.**	Is there poor contact at the 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 systems can be executed normally.	Are system and model year displayed?	Go to step **7**.	Go to step **5**.
5	**CHECK COMMUNICATION OF SUBARU SELECT MONITOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector. 3) Turn the ignition switch to ON. 4) Check whether communication to other systems can be executed normally.	Are system and model year displayed?	Go to step **7**.	Go to step **6**.
6	**CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL UNIT AND SUBARU SELECT MONITOR.** 1) Turn the ignition switch to ON. 2) Disconnect the body integrated unit connector. 3) Measure the resistance between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 7 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **7**.	Repair the harness and connector between each control unit and Subaru Select Monitor.
7	**CHECK OUTPUT SIGNAL TO BODY INTEGRATED UNIT.** 1) Turn the ignition switch to ON. 2) Measure the voltage between body integrated unit and chassis ground. ***Connector & terminal*** ***(B40) No. 7 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **8**.	Repair the harness and connector between each control unit and Subaru Select Monitor.
8	**CHECK HARNESS CONNECTOR BETWEEN BODY INTEGRATED UNIT AND DATA LINK CONNECTOR.** Measure the resistance between body integrated unit and data link connector. ***Connector & terminal*** ***(B40) No. 7 — (B280) No. 19:***	Is the resistance less than 1 Ω?	Go to step **9**.	Repair the harness and connector between body integrated unit and Subaru Select Monitor.
9	**CHECK INSTALLATION OF BODY INTEGRATED UNIT CONNECTOR.** Turn the ignition switch to OFF.	Is the body integrated unit connector inserted into body integrated unit until the clamp locks onto it?	Go to step **10**.	Insert the body integrated unit connector into body integrated unit.
10	**CHECK POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to ON (engine OFF). 2) Measure the ignition voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(i84) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **11**.	Repair the open circuit of harness between body integrated unit and battery.

	Step	Check	Yes	No
11	**CHECK HARNESS CONNECTOR BETWEEN BODY INTEGRATED UNIT AND CHASSIS GROUND.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from body integrated unit. 3) Measure the resistance of harness between the body integrated unit and chassis ground. ***Connector & terminal*** ***(B280) No. 19 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **12**.	Repair the poor contact of harness between body integrated unit and ground.
12	**CHECK POOR CONTACT OF CONNECTORS.**	Is there poor contact at control unit ground and Subaru Select Monitor?	Repair the poor contact of connector.	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>

CAUTION:
When replacing body integrated unit on the model with immobilizer system, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

B: DIAGNOSTIC TROUBLE CODE (DTC) IS NOT STORED

DIAGNOSIS:
Defective combination meter
TROUBLE SYMPTOM:
- Communication error display in odo/trip meter is not cleared. (Except for meter with MID)
- "No trouble code" is displayed on Subaru Select Monitor.

NOTE:
If DTC is not displayed on Subaru Select Monitor, LAN communication System should be OK.

	Step	Check	Yes	No
1	**CHECK COMMUNICATION ERROR DISPLAY WITH COMBINATION METER.** Turn the ignition switch to ON.	Is communication error displayed? (except for meter with MID)	Inspect the DTC.	Go to step **2**.
2	**CHECK COMBINATION METER.** Perform the self-diagnosis of combination meter.	Is combination meter OK?	Go to step **3**.	Replace the combination meter. <Ref. to IDI-19, Combination Meter.>
3	**CHECK BODY INTEGRATED UNIT.** 1) Display the current data of ECM using Subaru Select Monitor. 2) Check data of "body integrated unit data received".	Is "Yes" displayed?	Go to step **4**.	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>
4	**CHECK BODY INTEGRATED UNIT.** 1) Display the current data of ECM using Subaru Select Monitor. 2) Check data of "body Integrated unit counter update".	Is "Yes" displayed?	Repair the poor contact of connector.	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>

C: DTC B1100 INTEG. UNIT SYSTEM ERROR

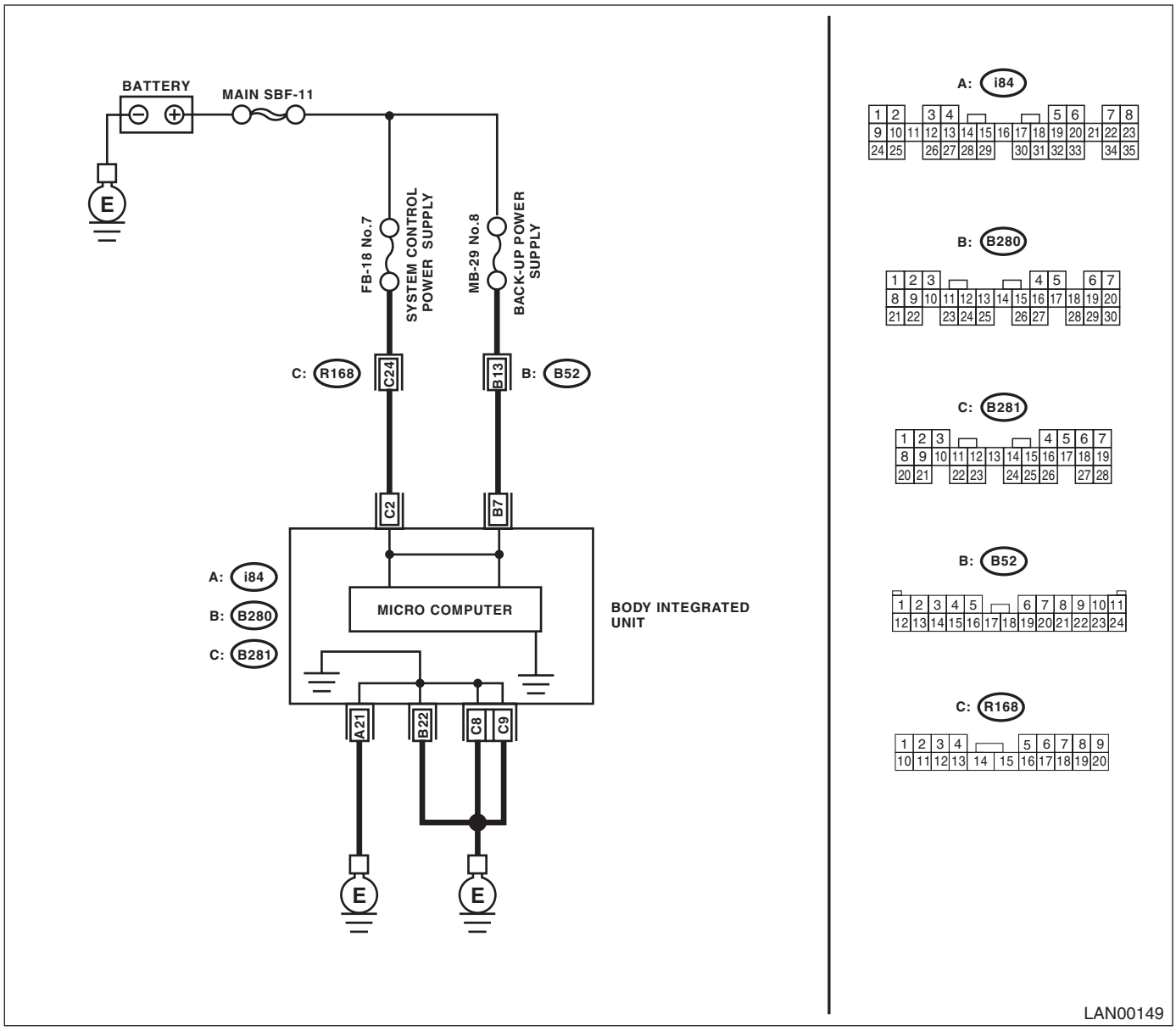
DTC DETECTING CONDITION:
System error in body integrated unit
TROUBLE SYMPTOM:
• Check light comes on in the combination meter, and displays communication error display “Er IU”. (Except for meter with MID)
• LAN communication immobilizer function may not be executed normally.

Step		Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read all DTCs.	Are there DTCs other than that of body integrated unit?	Perform the diagnosis according to DTCs for other control units.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of body integrated unit. Go to step **3**.	Go to step **3**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Go to step **5**.	Go to step **4**.
4	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **5**.
5	**CHECK ALL DTCS.**	Is DTC concerning ECM displayed?	Go to step **6**.	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>
6	**CHECK DTC CONCERNING ECM.**	Is output DTC on ECM concerning CAN communication failure?	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>	Perform the diagnosis according to DTC concerning ECM.

D: DTC B1101 BATT P/SUPPLY MALFUNCTION CONT

DTC DETECTING CONDITION:
Battery power supply control circuit is open or shorted.
TROUBLE SYMPTOM:
No malfunction occurs because the back-up power supply is activated.

NOTE:
When B1102 BATT p/supply (backup) malfunction is output at the same time, all the function of body integrated unit may not operate.
WIRING DIAGRAM:

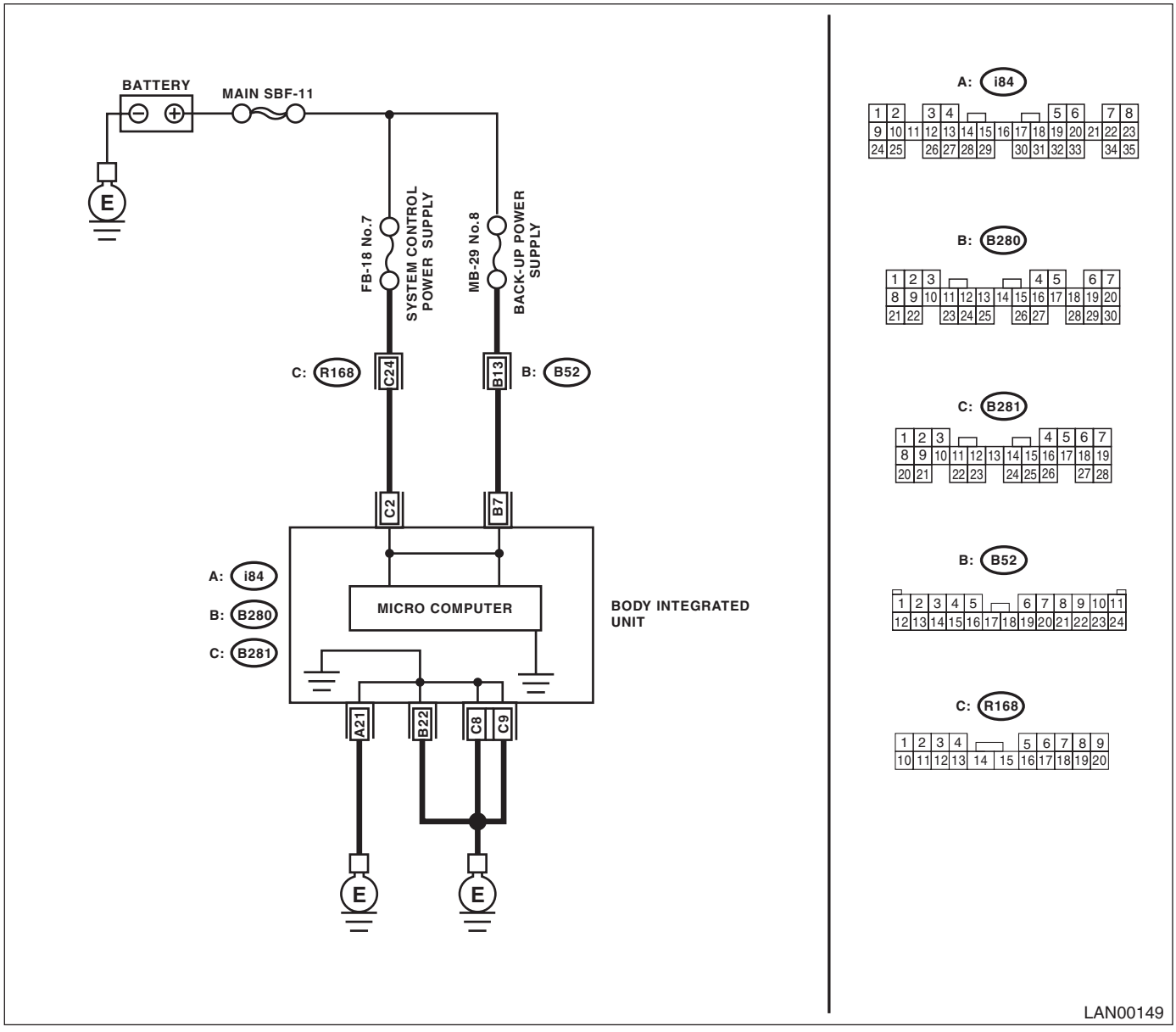


	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 7).	Is the fuse blown out?	Replace the fuse (No. 7). If the replaced fuse has blown out easily, repair the short circuit of harness between fuse (No. 7) and body integrated unit.	Go to step **2**.
2	**CONTINUITY CHECK OF WIRING HARNESS.** 1) Disconnect the connector (B281) from body integrated unit. 2) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B281) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3	**CHECK POOR CONTACT OF CONNECTORS.**	Is there poor contact in body integrated unit connector?	Repair the poor contact of connector.	Go to step **4**.
4	**CHECK BODY INTEGRATED UNIT HARNESS.** 1) Connect all connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>	Temporary poor contact occurs.

E: DTC B1102 BATT P/SUPPLY MALFUNCTION CONT

DTC DETECTING CONDITION:
Battery power supply backup circuit is open or shorted.
TROUBLE SYMPTOM:
- Engine malfunction indicator light may illuminates.
- Keyless entry, room light and key illumination do not operate.
- “En IU” may display in combination meter. (Except for meter with MID)

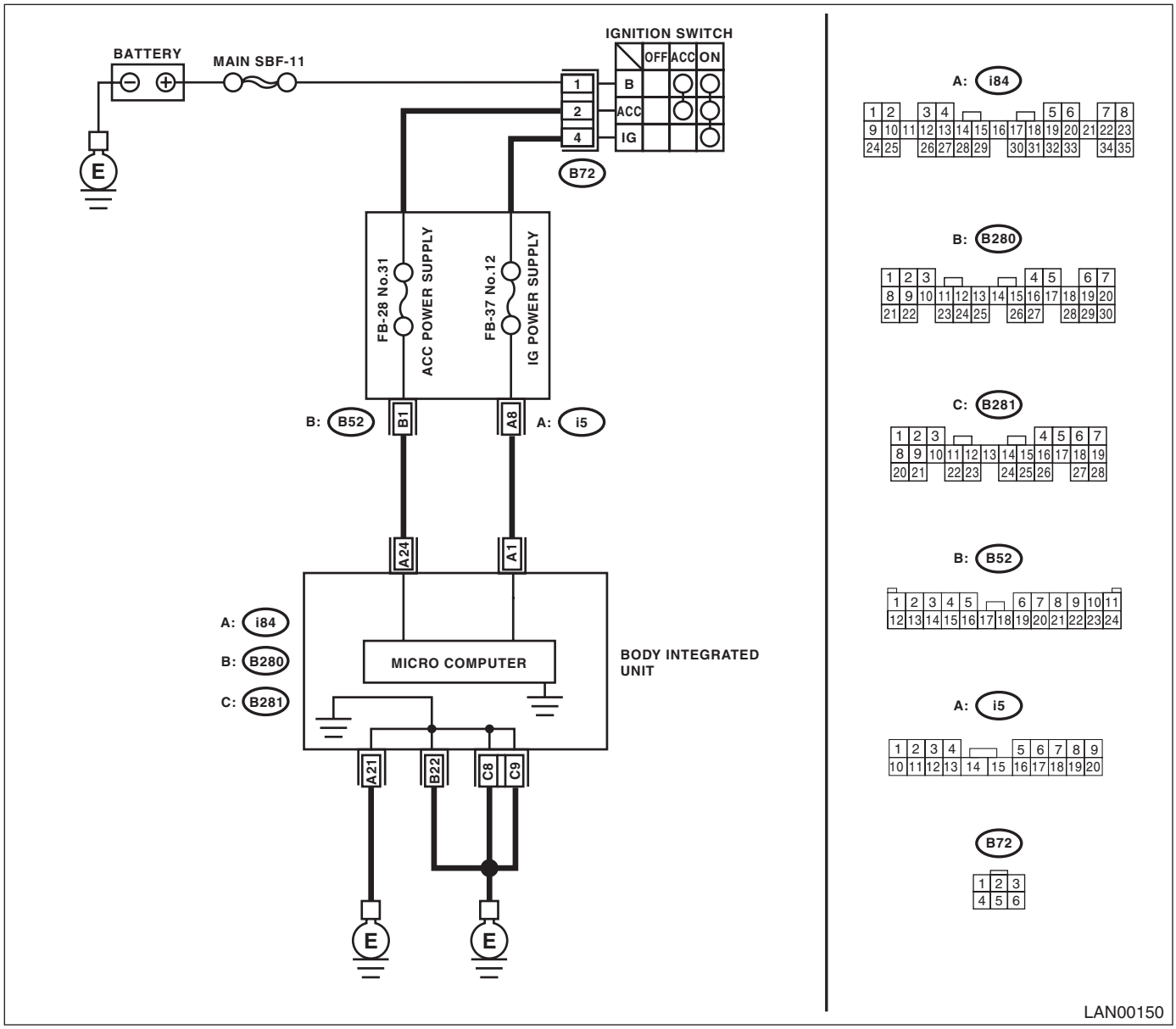
NOTE:
When some B1101 BATT p/supply (control) malfunction cont. are output at the same time, all function of body integrated unit may not function.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 8).	Is the fuse blown out?	Replace the fuse (No. 8). If the replaced fuse has blown out easily, repair the short circuit of harness between fuse (No. 8) and body integrated unit.	Go to step **2**.
2	**CONTINUITY CHECK OF WIRING HARNESS.** 1) Disconnect the connector (B280) from body integrated unit. 2) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 7 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3	**CHECK POOR CONTACT OF CONNECTORS.**	Is there poor contact in body integrated unit connector?	Repair the poor contact of connector.	Go to step **4**.
4	**CHECK BODY INTEGRATED UNIT HARNESS.** 1) Connect all connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>	Temporary poor contact occurs.

F: DTC B1103 IGNITION POWER FAILURE

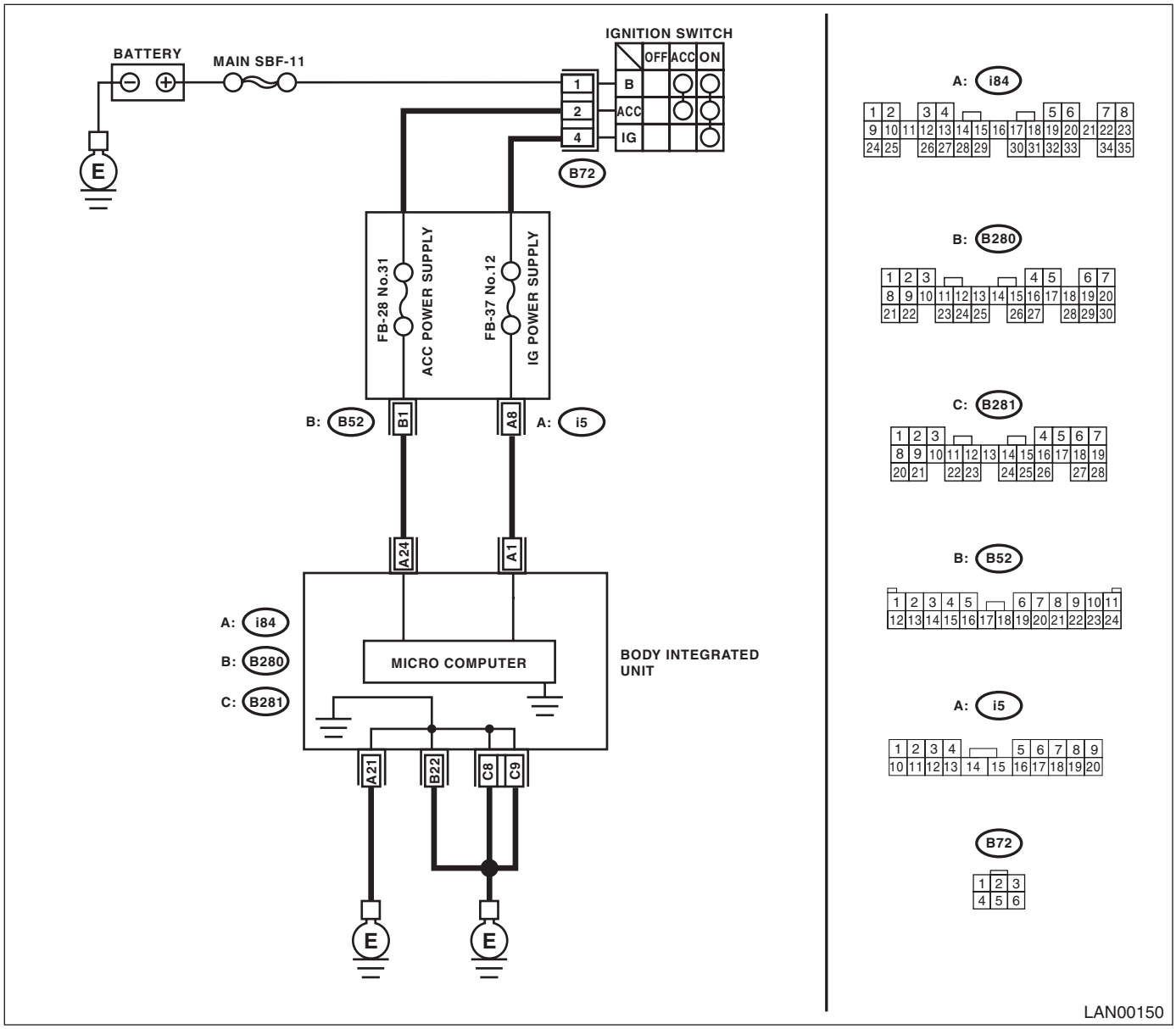
DTC DETECTING CONDITION:
IGN power supply circuit is open or shorted.
TROUBLE SYMPTOM:
Symptoms such as illuminating the malfunction indicator light or high speed CAN error display “Er HC” may occur. (Except for meter with MID)
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 12).	Is the fuse blown out?	Replace the fuse (No. 12). If the replaced fuse has blown out easily, repair the short circuit of harness between fuse (No. 12) and body integrated unit.	Go to step **2**.
2	**CONTINUITY CHECK OF WIRING HARNESS.** 1) Disconnect the connector (i84) from body integrated unit. 2) Turn the ignition switch to ON. 3) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(i84) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3	**CHECK POOR CONTACT OF CONNECTOR.**	Is there poor contact in body integrated unit connector?	Repair the poor contact of connector.	Go to step **4**.
4	**CHECK BODY INTEGRATED UNIT HARNESS.** 1) Connect all connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>	Temporary poor contact occurs.

G: DTC B1104 ACC POWER FAILURE

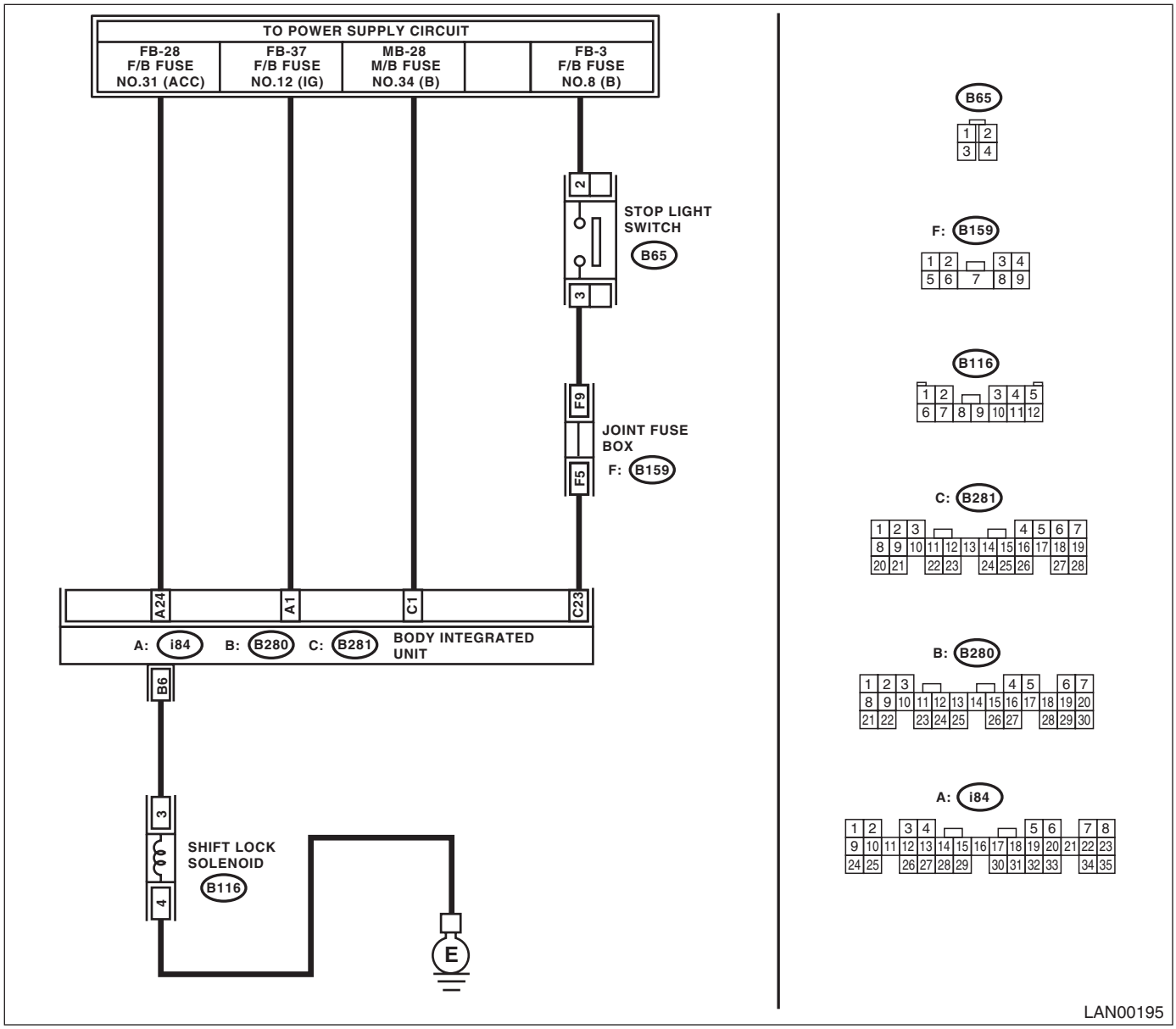
DTC DETECTING CONDITION:
ACC power supply circuit is open or shorted.
TROUBLE SYMPTOM:
Rear wiper may not operate at ACC position.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 31).	Is the fuse blown out?	Replace the fuse (No. 31). If the replaced fuse has blown out easily, repair the short circuit of harness between fuse (No. 31) and body integrated unit.	Go to step **2**.
2	**CONTINUITY CHECK OF WIRING HARNESS.** 1) Disconnect the connector (i84) from body integrated unit. 2) Turn the ignition switch to ON. 3) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(i84) No. 24 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3	**CHECK POOR CONTACT OF CONNECTOR.**	Is there poor contact in body integrated unit connector?	Repair the poor contact of connector.	Go to step **4**.
4	**CHECK BODY INTEGRATED UNIT HARNESS.** 1) Connect all connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is DTC displayed?	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>	Temporary poor contact occurs.

H: DTC B1106 SHIFT LOCK CIRCUIT FAILURE

DTC DETECTING CONDITION:
Shift lock circuit is shorted to ground.
TROUBLE SYMPTOM:
Shift lock does not be released or remain locked.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 6 — Chassis ground:***	Is the resistance 22±5 Ω?	Go to step **5**.	Go to step **2**.
2	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Disconnect the shift lock solenoid connector. 3) Measure the resistance between body integrated unit connector and shift lock solenoid connector. ***Connector & terminal*** ***(B280) No. 6 — (B116) No. 3:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair or replace the open or short circuit of harness.
3	**CHECK SHIFT LOCK SOLENOID.** 1) Disconnect the shift lock solenoid connector. 2) Measure the internal resistance of shift lock solenoid. ***Connector & terminal*** ***(B116) No. 3 — No. 4:***	Is the resistance 22±5 Ω?	Go to step **4**.	Replace the shift lock solenoid.
4	**CHECK GROUND CIRCUIT.** 1) Disconnect the shift lock solenoid connector. 2) Measure the resistance between the shield connector and chassis ground. ***Connector & terminal*** ***(B116) No. 4 — Chassis ground:***	Is the resistance less than 10 Ω?	Temporary poor contact occurs. Check the connection of each terminal and repair when necessary.	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>
5	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280) and shift lock solenoid connector (B116). 2) Measure the resistance between body integrated unit connector (B280) and chassis ground. ***Connector & terminal*** ***(B280) No. 6 — Chassis ground:***	Is the resistance 1 MΩ or more?	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>	Repair the short circuit of harness or replace harness.

I: DTC U1201 CAN-HS COUNTER ABNORMAL

DTC DETECTING CONDITION:

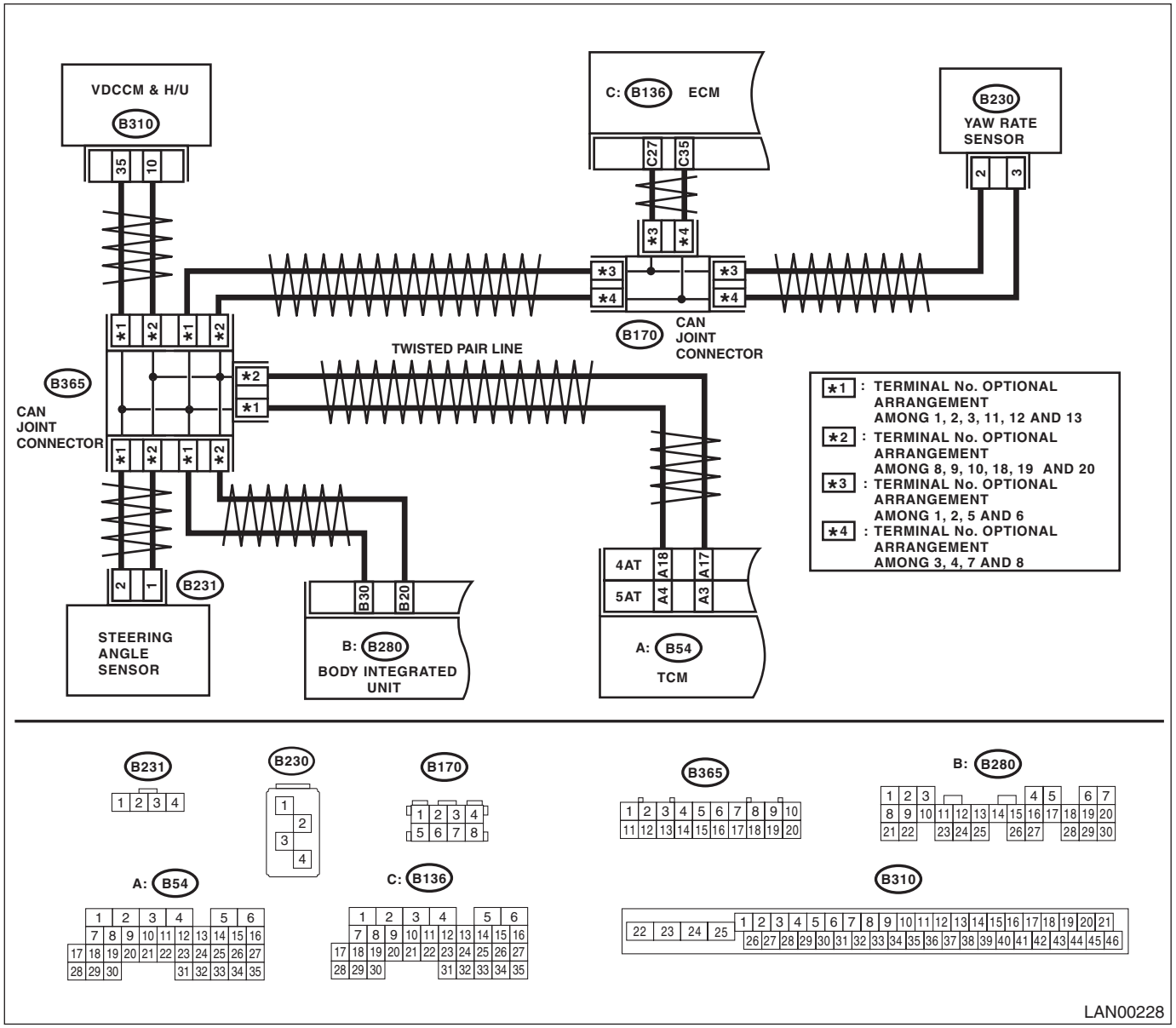
High speed CAN communication of body integrated unit which monitor the error data and non-received data are faulty.

TROUBLE SYMPTOM:

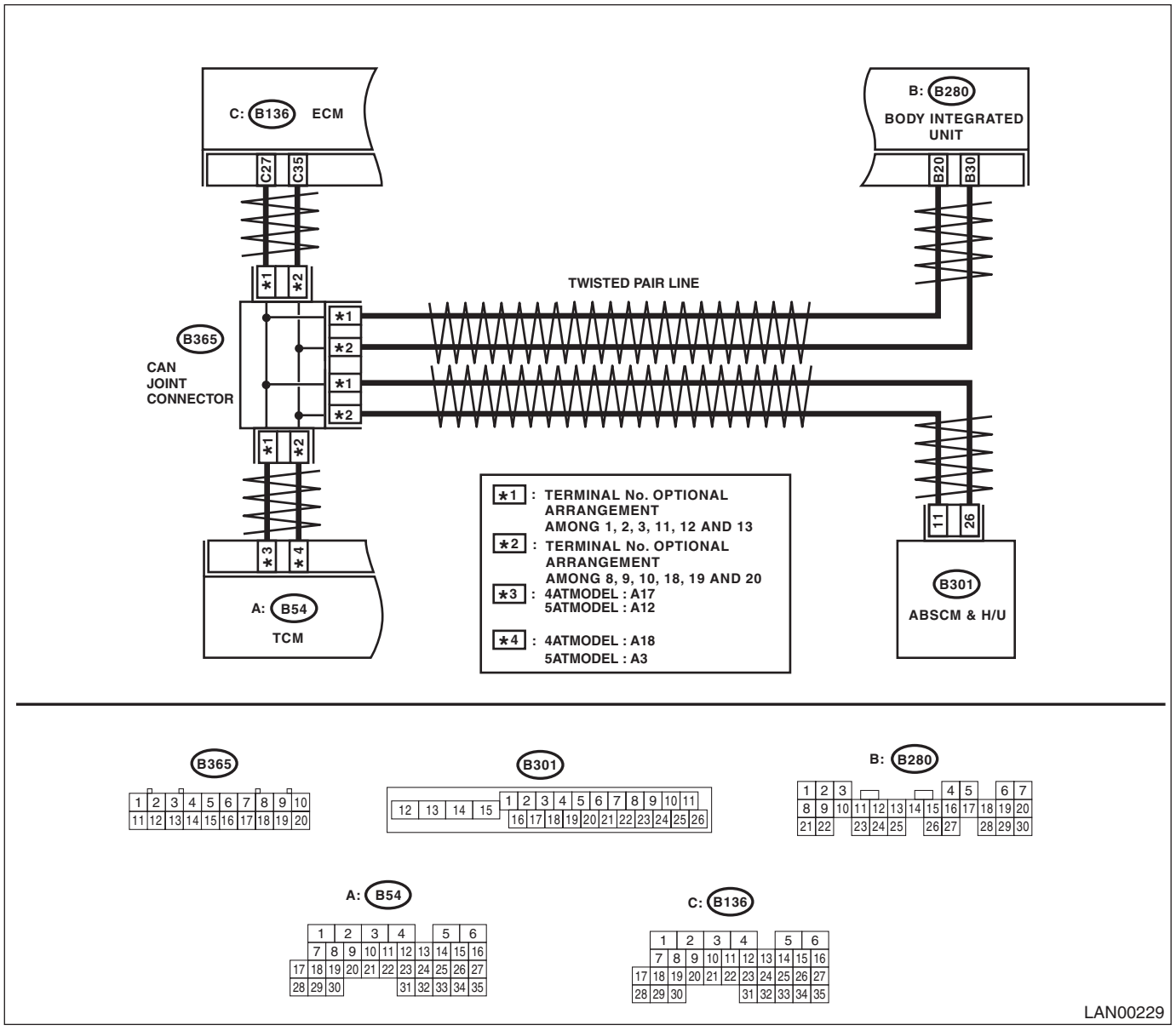
- "Er HC" is displayed in odo/trip meter. (Except for meter with MID)
- Malfunction indicator light illuminates.

WIRING DIAGRAM:

- VDC model:



- ABS model


C: B136 ECM
C27
C35
B: B280
BODY INTEGRATED UNIT
B20
B30
TWISTED PAIR LINE
B365
CAN JOINT CONNECTOR
*1
*2
*3
*4
A: B54
TCM
B301
ABSCM & H/U
11
26
*1 : TERMINAL No. OPTIONAL ARRANGEMENT AMONG 1, 2, 3, 11, 12 AND 13
*2 : TERMINAL No. OPTIONAL ARRANGEMENT AMONG 8, 9, 10, 18, 19 AND 20
*3 : 4ATMODEL : A17
5ATMODEL : A12
*4 : 4ATMODEL : A18
5ATMODEL : A3
B365
B301
B: B280
A: B54
C: B136
LAN00229

	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read all DTCs.	Are there DTCs other than that of body integrated unit?	Perform the diagnosis according to DTCs for other control units.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Go to step **5**.	Go to step **4**.
4	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **5**.
5	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Connect the tester to vehicle side connector, and measure the resistance. ***Connector & terminal*** ***(B280) No. 20 — No. 30:***	Is the resistance between 55 — 65 Ω?	Go to step **6**.	Go to step **9**.
6	**CHECK HARNESS.** 1) Disconnect the TCM connector (B54). 2) Connect the tester to vehicle side connector, and measure the resistance. ***Connector & terminal*** ***5AT model:*** ***(B54) No. 3 — No. 4:*** ***4AT model:*** ***(B54) No. 17 — No. 18:***	Is the resistance between 55 — 65 Ω?	Go to step **7**.	Go to step **9**.
7	**CHECK HARNESS.** NOTE: For ABS model, Go to step **12**. 1) Disconnect the yaw rate sensor connector (B230). 2) Connect the tester to vehicle side connector, and measure the resistance. ***Connector & terminal*** ***(B230) No. 2 — No. 3:***	Is the resistance between 55 — 65 Ω?	Go to step **8**.	Go to step **9**.
8	**CHECK HARNESS.** 1) Disconnect the steering angle sensor connector (B231). 2) Connect the tester to vehicle side connector, and measure the resistance. ***Connector & terminal*** ***(B231) No. 1 — No. 2:***	Is the resistance between 55 — 65 Ω?	Go to step **12**.	Go to step **9**.
9	**CHECK HARNESS.**	Is the measured resistance 115 — 125 Ω when connecting the tester to vehicle side connector?	Go to step **12**.	Go to step **10**.
10	**CHECK HARNESS.**	Is the measured resistance less than 10 Ω when connecting the tester to vehicle side connector?	Repair or replace the short circuit of measured related harness.	Go to step **11**.

	Step	Check	Yes	No
11	**CHECK HARNESS.**	Is the measured resistance 30 MΩ or more when connecting the tester to vehicle side connector?	Repair or replace the open circuit of measured related harness.	Go to step **12**.
12	**CHECK HARNESS.** 1) Disconnect the VDC/ABS CM connector. 2) Connect the tester to vehicle side harness, and measure the resistance. ***Connector & terminal*** ***VDC model:*** ***(B310) No. 10 — No. 35:*** ***ABS model:*** ***(B301) No. 11 — No. 26:***	Is the resistance between 115 — 125 Ω?	Go to step **13**.	Go to step **14**.
13	**CHECK CONTROL MODULE.** 1) Connect the VDC/ABS CM connector. 2) Disconnect the connector from ECM. 3) Connect the tester to vehicle side harness, and measure the resistance between terminals. ***Connector & terminal*** ***(B136) No. 27 — No. 35:***	Is the resistance between 115 — 125 Ω?	Go to step **16**.	Replace the VDC/ABS CM. <Ref. to VDC-7, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>
14	**CHECK HARNESS.** 1) Connect the VDC/ABS CM connector. 2) Disconnect the connector from ECM. 3) Connect the tester to vehicle side harness, and measure the resistance between terminals. ***Connector & terminal*** ***(B136) No. 27 — No. 35:***	Is the resistance between 115 — 125 Ω?	Go to step **15**.	Repair or replace the open circuit of main wiring harness.
15	**CHECK CONTROL MODULE.** Connect the tester to ECM terminal, and measure the resistance. ***Connector & terminal*** ***(B136) No. 27 — No. 35:***	Is the resistance between 115 — 125 Ω?	Go to step **16**.	Replace the ECM. <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>
16	**CHECK CONTROL MODULE.** 1) Connect all the control module connectors. 2) Connect the Subaru Select Monitor and perform the clear memory. 3) Disconnect the TCM connector (B54). 4) Turn the ignition switch to ON and read the DTC of body integrated unit. <Ref. to LAN(diag)-12, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC U1201 displayed?	Go to step **17**.	Check the TCM. <Ref. to 5AT(diag)-16, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>
17	**CHECK CONTROL MODULE.** 1) Connect the TCM control module connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Disconnect the steering angle sensor connector (B231). 4) Turn the ignition switch to ON and read the DTC of the body integrated unit. <Ref. to LAN(diag)-12, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC U1201 displayed?	Go to step **18**.	Check the steering angle sensor. <Ref. to VDC(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>

	Step	Check	Yes	No
18	**CHECK CONTROL MODULE.** 1) Connect the steering angle sensor connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Disconnect the yaw rate sensor connector (B230). 4) Turn the ignition switch to ON and read the DTC of the body integrated unit. <Ref. to LAN(diag)-12, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC U1201 displayed?	Go to step **19**.	Check the yaw rate sensor. <Ref. to VDC(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>
19	**CHECK CONTROL MODULE.** 1) Connect all the control module connectors. 2) Check the data of “body integrated unit data received” on the current data display of ECM using Subaru Select Monitor.	Is the “Yes” displayed?	Go to step **20**.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>
20	**CHECK CONTROL MODULE.** Check the data of “body integrated unit counter update” on the data display of ECM.	Is the “Yes” displayed?	Inspect the ABS/VDC CM and ECM. <Ref. to ABS(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to VDC(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to EN(H6DO)(diag)-42, Read Diagnostic Trouble Code (DTC).>	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

J: DTC U1202 CAN-HS BUS OFF

DTC DETECTING CONDITION:

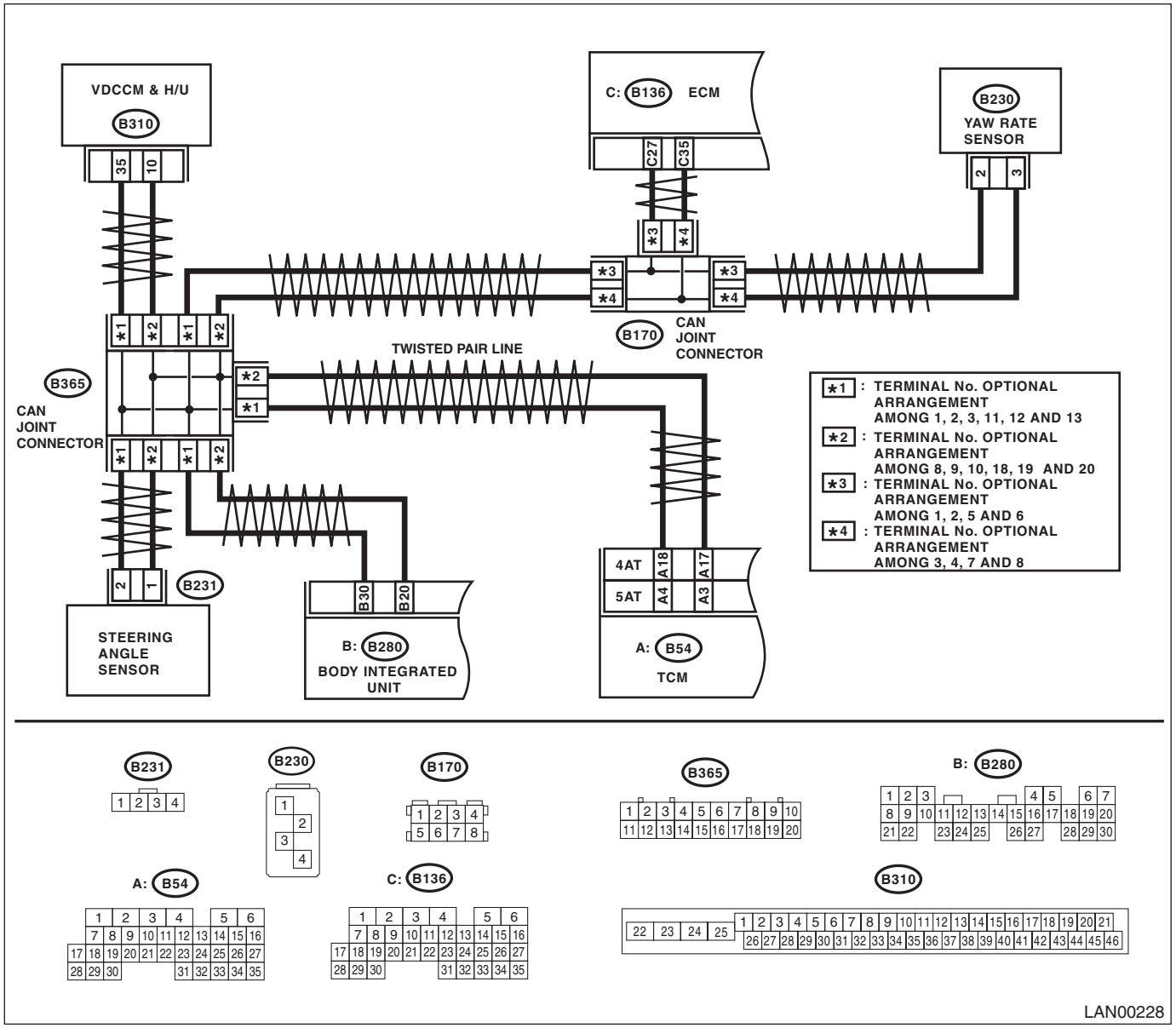
- Find the unit or CAN line in which trouble occurs, and repair and replace it.
- Not received data and error data may be detected at the same time.

TROUBLE SYMPTOM:

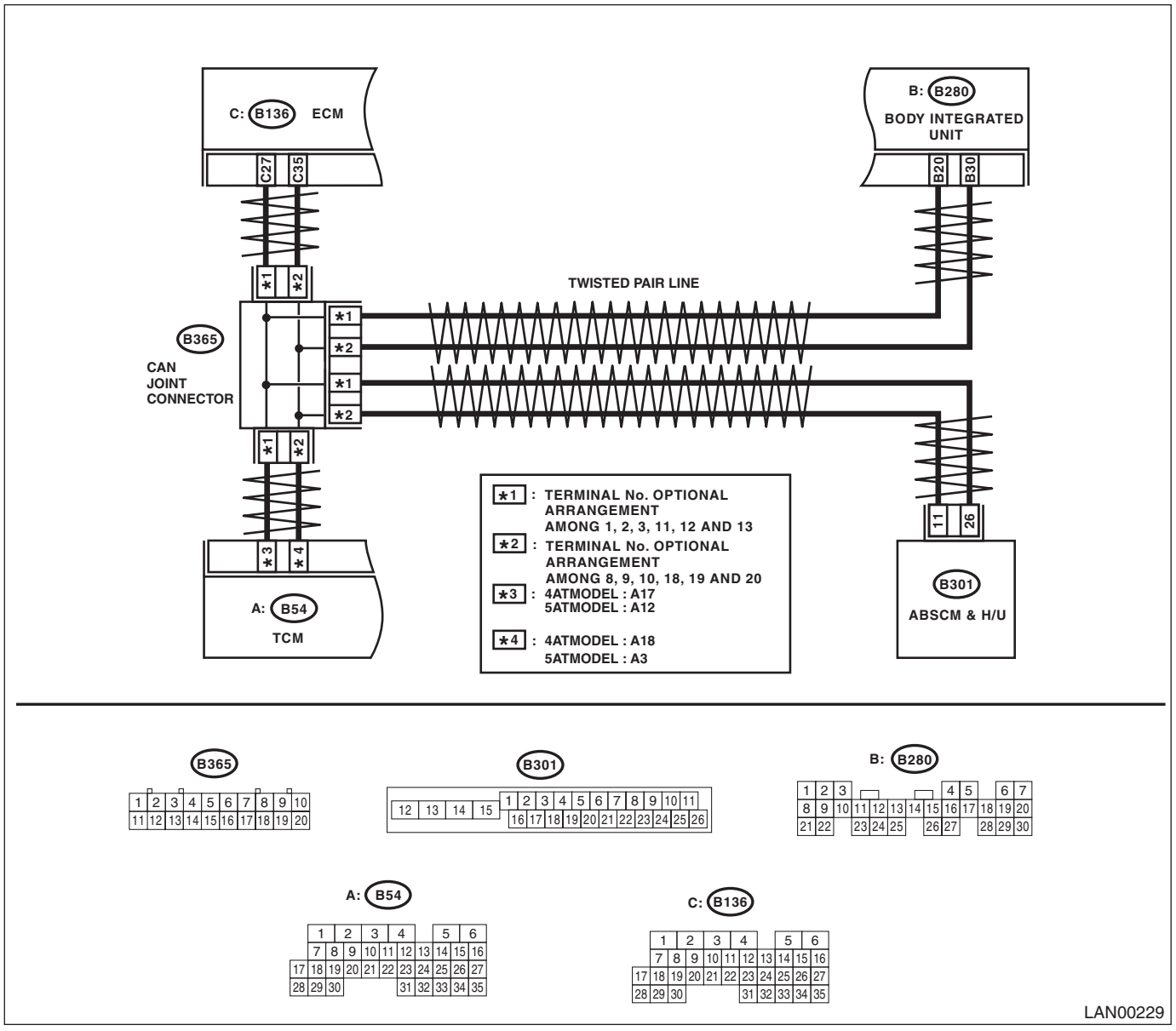
"Er HC" is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:

- VDC model:



- ABS model


C: B136 ECM
C27
C35
B: B280
BODY INTEGRATED UNIT
B20
B30
TWISTED PAIR LINE
B365
CAN JOINT CONNECTOR
*1
*2
*3
*4
A: B54
TCM
B301
ABSCM & H/U
11
26
*1 : TERMINAL No. OPTIONAL ARRANGEMENT AMONG 1, 2, 3, 11, 12 AND 13
*2 : TERMINAL No. OPTIONAL ARRANGEMENT AMONG 8, 9, 10, 18, 19 AND 20
*3 : 4ATMODEL : A17
5ATMODEL : A12
*4 : 4ATMODEL : A18
5ATMODEL : A3
B365
B301
B: B280
A: B54
C: B136
LAN00229

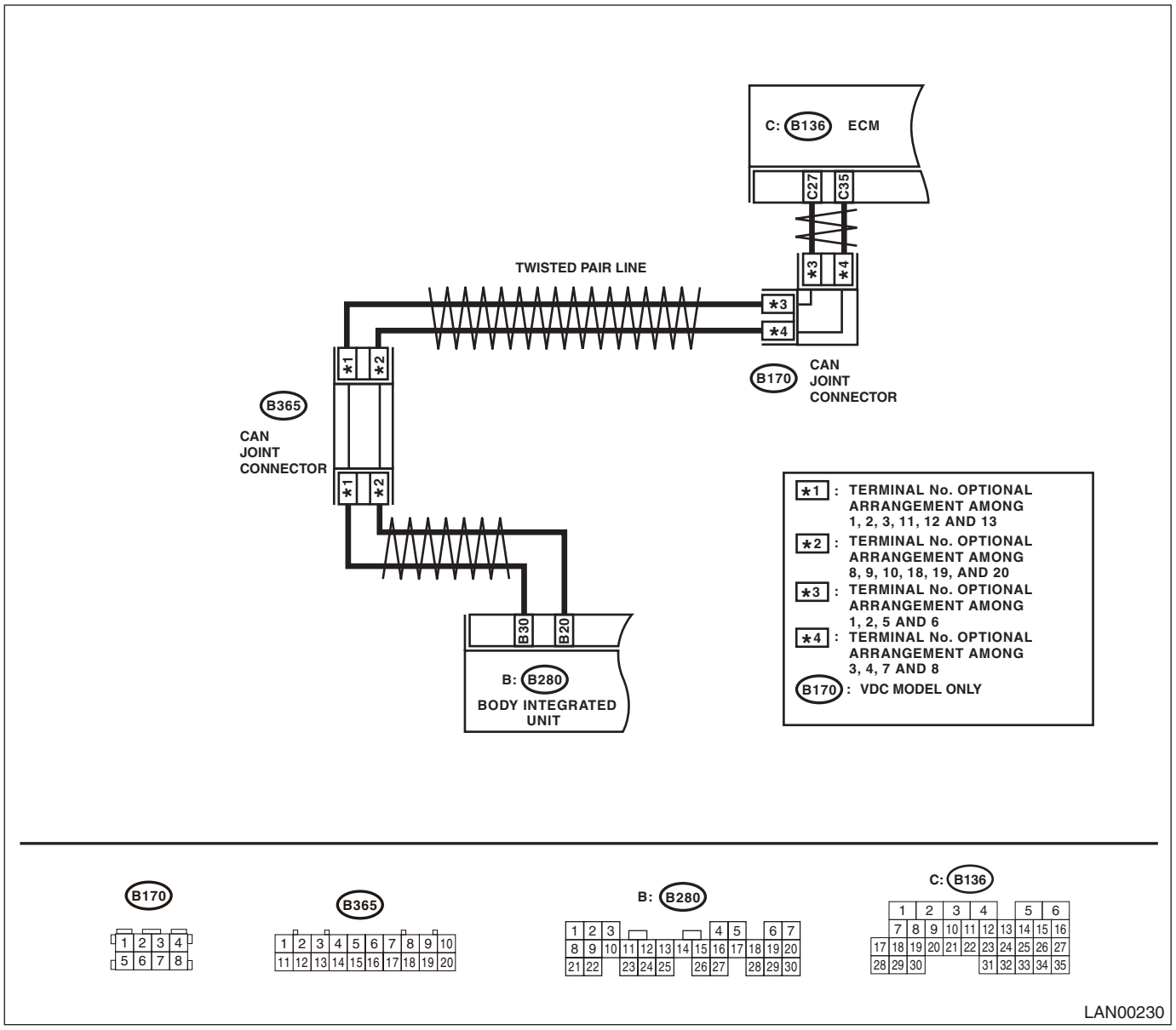
	Step	Check	Yes	No
1	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **2**.	Go to step **2**.
2	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **4**.	Go to step **3**.
3	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **4**.
4	**CHECK TCM.** 1) Disconnect the TCM connector (B54). 2) Perform the clear memory operation for the body integrated unit. <Ref. to LAN(diag)-21, CLEAR MEMORY MODE, OPERATION, Subaru Select Monitor.> 3) Read DTC of the body integrated unit.	Is DTC (U1202) displayed?	Go to step **5**.	Check the TCM. <Ref. to 5AT(diag)-16, Subaru Select Monitor.>
5	**CHECK STEERING ANGLE SENSOR.** 1) Disconnect the steering angle sensor connector (B231). 2) Perform Clear Memory Mode for the body integrated unit. <Ref. to LAN(diag)-21, CLEAR MEMORY MODE, OPERATION, Subaru Select Monitor.> 3) Read DTC of the body integrated unit.	Is DTC (U1202) displayed?	Go to step **6**.	Replace the steering angle sensor. <Ref. to VDC-17, REPLACEMENT, Steering Angle Sensor.>
6	**CHECK YAW RATE SENSOR.** 1) Disconnect the yaw rate sensor connector (B230). 2) Perform Clear Memory Mode for the body integrated unit. 3) Read DTC of the body integrated unit.	Is DTC (U1202) displayed?	Go to step **7**.	Check the yaw rate sensor. <Ref. to VDC(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>
7	**CHECK BODY INTEGRATED UNIT.** 1) Disconnect the body integrated unit connector (i84). 2) Read data between VDC/ABS CM and ECM. Check item: • Engine speed • Average front wheel speed (at constant speed)	Engine speed and front wheel speed are normal in communication. (Their values are the same.)	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>	Go to step **8**.
8	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between harness connector terminals. ***Connector & terminal (B280) No. 20 — No. 30:***	Is the resistance between 55 — 65 Ω?	Go to step **14**.	Go to step **9**.

	Step	Check	Yes	No
9	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***(B280) No. 20 — No. 30:***	Is the resistance between 115 — 125 Ω?	Go to step **11**.	Go to step **10**.
10	**CHECK HARNESS.** 1) Disconnect the harness connector of body integrated unit. 2) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***(B280) No. 20 — No. 30:***	Is the resistance 30 MΩ or more?	Open circuit in related line of body integrated unit. Repair the open circuit of harness or replace harness.	Go to step **11**.
11	**CHECK HARNESS.** 1) Disconnect the VDC/ABS CM connector. 2) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***VDC model:*** ***(B310) No. 10 — No. 35:*** ***ABS model:*** ***(B301) No. 11 — No. 26:***	Is the resistance between 115 — 125 Ω?	Go to step **12**.	Go to step **13**.
12	**CHECK VDC/ABS CU.** 1) Disconnect the VDC/ABS CU connector. 2) Measure the resistance between VDC/ABS CU connector terminals. ***Connector & terminal*** ***VDC model:*** ***(B310) No. 10 — No. 35:*** ***ABS model:*** ***(B301) No. 11 — No. 26:***	Is the resistance between 115 — 125 Ω?	Go to step **13**.	End resistance of VDC/ABS CU is open. Replace the VDC/ABS CU. <Ref. to VDC-7, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>
13	**CHECK ECM.** 1) Disconnect the ECM connector (B135 or B136). 2) Measure the resistance between ECM connector terminals. ***Connector & terminal*** ***(B136) No. 27 — No. 35:***	Is the resistance between 115 — 125 Ω?	Repair or replace the open circuit of the harness connector.	End resistance of ECM is open. Replace the ECM. <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>
14	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 20 — Chassis ground:*** ***(B280) No. 30 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **15**.	Go to step **16**.
15	**CHECK CONTROL MODULE.** 1) Turn the ignition switch to ON. 2) Disconnect each control module connector one by one with the tester connected to vehicle side harness. ***Connector & terminal*** ***(B280) No. 20 — Chassis ground:*** ***(B280) No. 30 — Chassis ground:***	Are there any modules whose resistance has become 10 Ω or more?	Replace modules whose resistance has become 10 Ω or more.	Repair or replace the short circuit of the harness.

	Step	Check	Yes	No
16	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 20 (+) — Chassis ground (–):*** ***(B280) No. 30 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Go to step **17**.	Go to step **18**.
17	**CHECK CONTROL MODULE.** 1) Turn the ignition switch to ON. 2) Disconnect each control module connector one by one with the tester connected to vehicle side harness. ***Connector & terminal*** ***(B280) No. 20 — Chassis ground:*** ***(B280) No. 30 — Chassis ground:***	Is there any module for which the voltage has changed to 6 V or less?	Replace modules whose voltage has changed to 6 V or less.	Repair or replace the short circuit of the harness.
18	**CHECK DTC.** Connect the Subaru Select Monitor and read the Diagnostic Trouble Code (DTC) of ECM. <Ref. to EN(H6DO)(diag)-42, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Go to step **19**.
19	**CHECK DTC.** Connect the Subaru Select Monitor and read the Diagnostic Trouble Code (DTC) of VDC/ABS CU. <Ref. to VDC(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC other than "CAN communication" or "C0057" displayed?	Perform the diagnosis according to DTC.	Go to step **20**.
20	**CHECK DTC.** Connect the Subaru Select Monitor and read the Diagnostic Trouble Code (DTC) of TCM. <Ref. to 5AT(diag)-16, OPERATION, Subaru Select Monitor.>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

K: DTC U1211 CAN-HS ECM DATA ABNORMAL

DTC DETECTING CONDITION:
Defective data from ECM.
TROUBLE SYMPTOM:
“Er HC” or “Er EG” is displayed in odo/trip meter. (Except for meter with MID)
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read all DTCs.	Are there DTCs other than that of body integrated unit?	Perform the diagnosis according to DTCs for other control units.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Replace the ECM. <Ref. to FU(H4DOTC)-44, REMOVAL, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, REMOVAL, Engine Control Module (ECM).> <Ref. to FU(H4SO)-35, REMOVAL, Engine Control Module (ECM).>	Go to step **4**.
4	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **5**.
5	**CHECK ECM.** Read the DTC of ECM using the Subaru Select Monitor. <Ref. to EN(H6DO)(diag)-42, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-53, Body Integrated Unit.>

L: DTC U1212 CAN-HS TCM DATA ABNORMAL

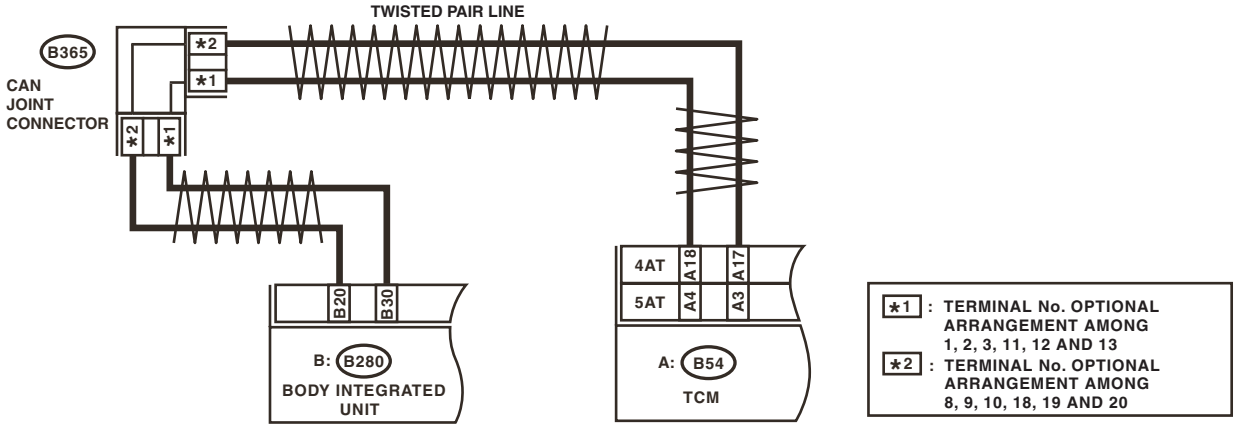
DTC DETECTING CONDITION:

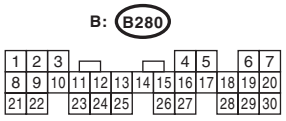
TCM has error, harness between the main harness splice and TCM is open or shorted, connectors are not connected securely, or the terminal has poor crimping.

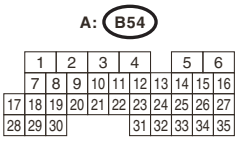
TROUBLE SYMPTOM:

- SPORT indicator light blinks.
- “Er HC” or “Er tC” is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:







LAN00231

	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read all DTCs.	Are there DTCs other than that of body integrated unit?	Perform the diagnosis according to DTCs for other control units.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Replace the TCM. <Ref. to 5AT-58, Transmission Control Module (TCM).>	Go to step **4**.
4	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **5**.
5	**CHECK TCM.** Read the DTC of the TCM using Subaru Select Monitor. <Ref. to 5AT(diag)-16, OPERATION, Subaru Select Monitor.>	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

M: DTC U1213 CAN-HS VDC/ABS DATA ABNORMAL

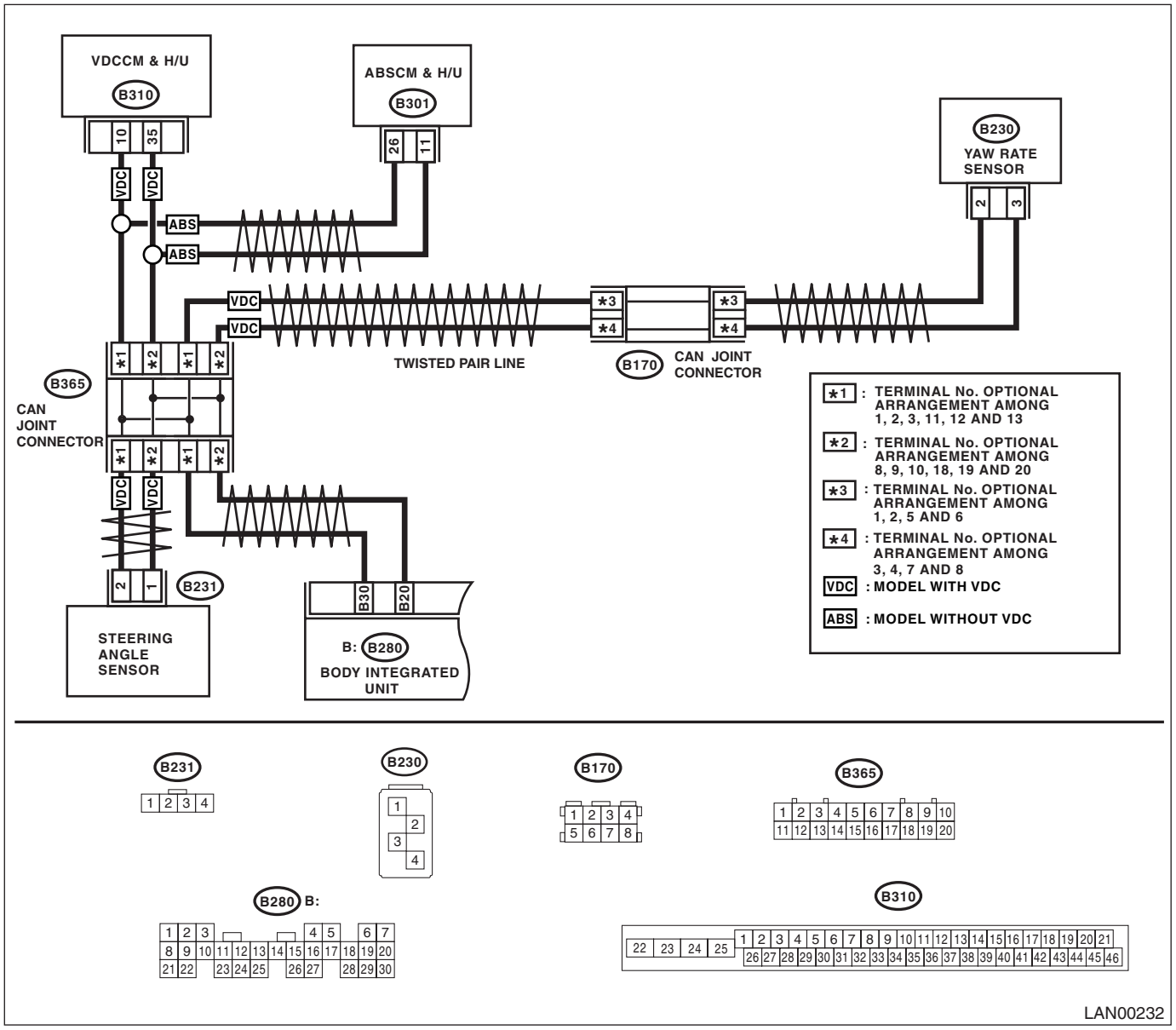
DTC DETECTING CONDITION:

VDC/ABSCM itself is malfunctioning, the main harness is open or shorted, the connector is not connected properly, or the terminal is crimped poorly.

TROUBLE SYMPTOM:

- ABS warning light and VDC warning light illuminates.
- “Er HC” or “Er Ab” is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:



LAN00232

	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read all DTCs.	Are there DTCs other than that of body integrated unit?	Perform the diagnosis according to DTCs for other control units.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Replace the VDC/ABS CU. <Ref. to VDC-7, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Go to step **4**.
4	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **5**.
5	**CHECK VDC/ABS CU.** Read the DTC of VDCCM using the Subaru Select Monitor.	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

N: DTC U1221 CAN-HS ECM NO-RECEIVE DATA

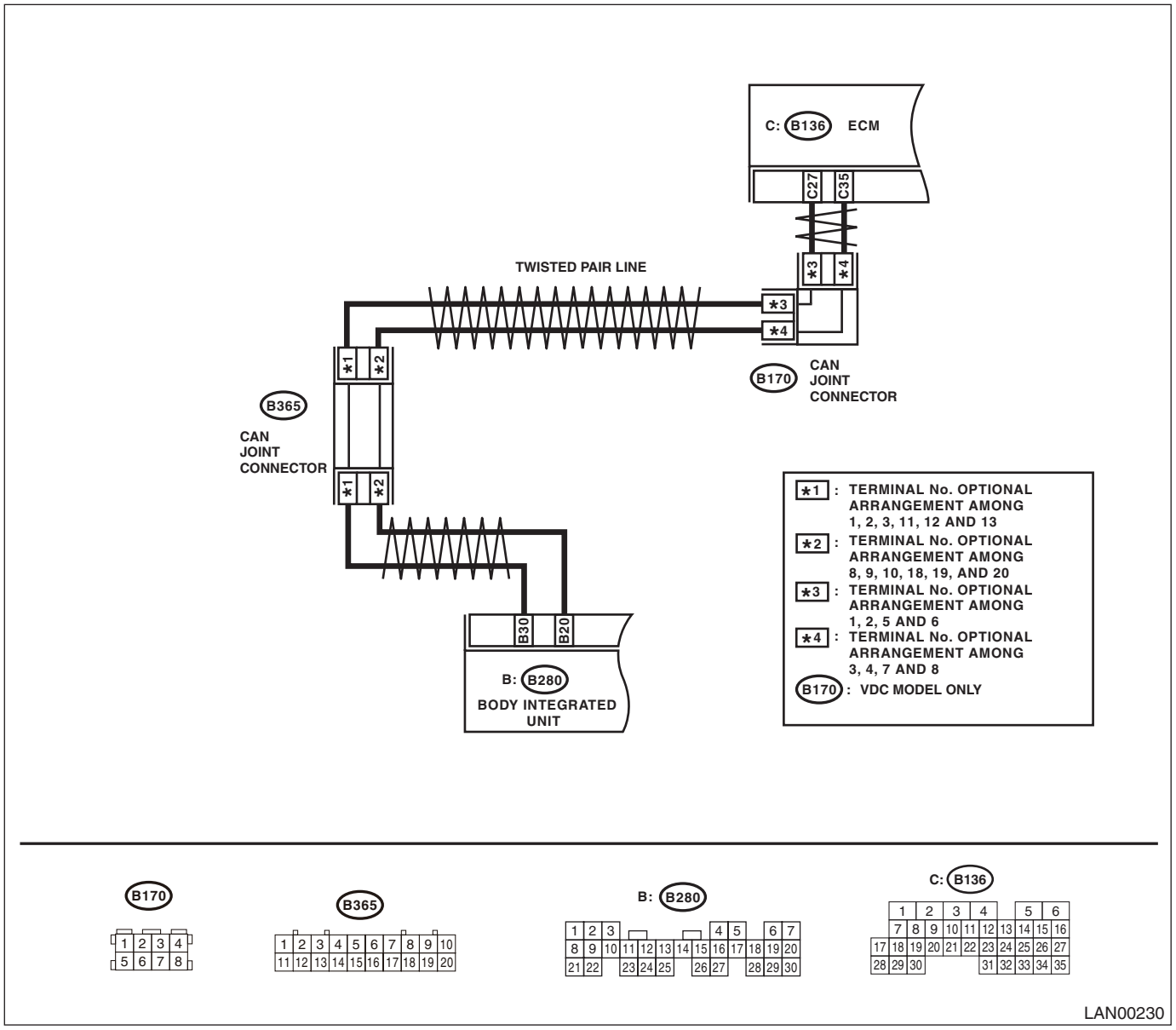
DTC DETECTING CONDITION:

Defective ECM. (If error is in the main harness, DTC P0600 CAN communication link is input simultaneously.)

TROUBLE SYMPTOM:

- Malfunction indicator light illuminates.
- "Er HC" is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:



LAN00230

	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read all DTCs.	Are there DTCs other than that of body integrated unit?	Perform the diagnosis according to DTCs for other control units.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Go to step **5**.	Go to step **4**.
4	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **5**.
5	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between harness connectors. ***Connector & terminal (B280) No. 20 — No. 30:***	Is the resistance 55 — 65 Ω? (Specification 60 Ω)	Go to step **8**.	Go to step **6**.
6	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between harness connectors. ***Connector & terminal (B280) No. 20 — No. 30:***	Is the resistance 115 — 125 Ω? (End resistance or main wiring harness is open.)	Go to step **7**.	If the resistance is 1 M Ω or larger, a line related to the body integrated unit is open. Repair the open circuit of harness or replace harness.
7	**CHECK ECM.** Read the DTC of ECM using the Subaru Select Monitor. <Ref. to EN(H6DO)(diag)-33, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.>	Are there any DTCs other than one for “CAN communication”?	Perform the diagnosis according to DTC. <Ref. to EN(H6DO)(diag)-33, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.>	Go to step **8**.
8	**CHECK BODY INTEGRATED UNIT.** 1) Connect all the control module connectors. 2) Check the data of “body integrated unit data received” on the current data display of ECM using Subaru Select Monitor.	Is the “Yes” displayed?	Go to step **9**.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>
9	**CHECK BODY INTEGRATED UNIT.** Check the data of “body integrated unit counter update” on the data display of ECM.	Is the “Yes” displayed?	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>	Inspect the ECM. <Ref. to FU(H4SO)-35, REMOVAL, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-44, REMOVAL, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>

O: DTC U1222 CAN-HS TCM NO-RECEIVE DATA

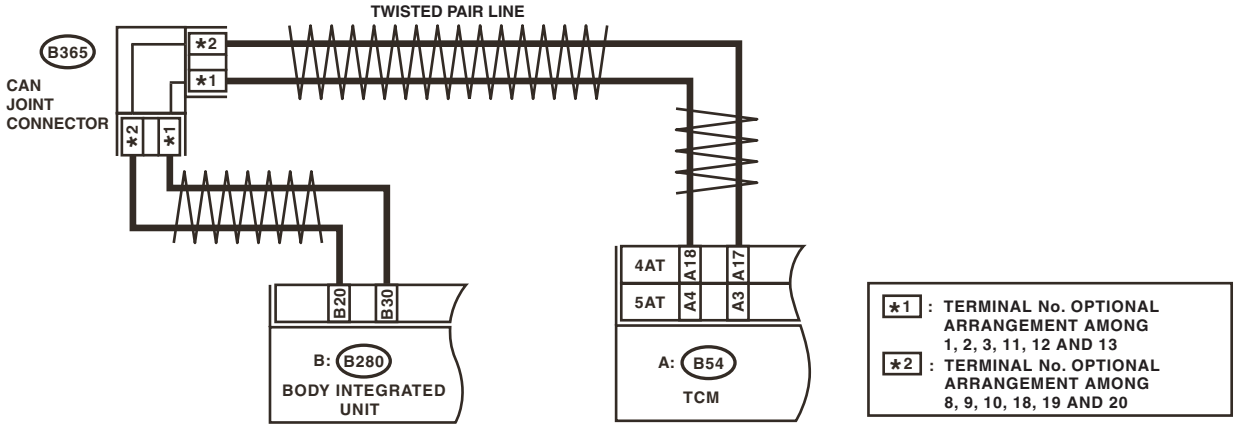
DTC DETECTING CONDITION:

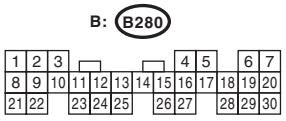
TCM has error, harness between the main harness splice and TCM is open or shorted, connectors are not connected securely, or the terminal has poor crimping.

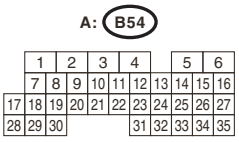
TROUBLE SYMPTOM:

- Malfunction indicator light illuminates.
- “Er HC” is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:







LAN00231

	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read all DTCs.	Are there DTCs other than that of body integrated unit?	Perform the diagnosis according to DTCs for other control units.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **3**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Go to step **5**.	Go to step **4**.
4	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **5**.
5	**CHECK HARNESS.** 1) Disconnect the TCM connector (B54). 2) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***4AT model:*** ***(B54) No. 17 — No. 18:*** ***5AT model:*** ***(B54) No. 3 — No. 4:***	Is the resistance 1 MΩ or more?	Open circuit in related lines of TCM. Repair the open circuit of harness or replace harness.	Go to step **6**.
6	**CHECK TCM.** Read the DTC of the TCM using Subaru Select Monitor. <Ref. to 5AT(diag)-16, OPERATION, Subaru Select Monitor.>	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Go to step **7**.
7	**CHECK BODY INTEGRATED UNIT.** 1) Connect all the control module connectors. 2) Check the data of “body integrated unit data received” on the current data display of ECM using Subaru Select Monitor.	Is the “Yes” displayed?	Go to step **8**.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>
8	**CHECK BODY INTEGRATED UNIT.** Check the data of “body integrated unit counter update” on the data display of ECM.	Is the “Yes” displayed?	Replace the TCM. <Ref. to 4AT-60, REMOVAL, Transmission Control Module (TCM).> <Ref. to 5AT-58, REMOVAL, Transmission Control Module (TCM).>	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

P: DTC U1223 CAN-HS VDC/ABS NO-RECEIVE DATA

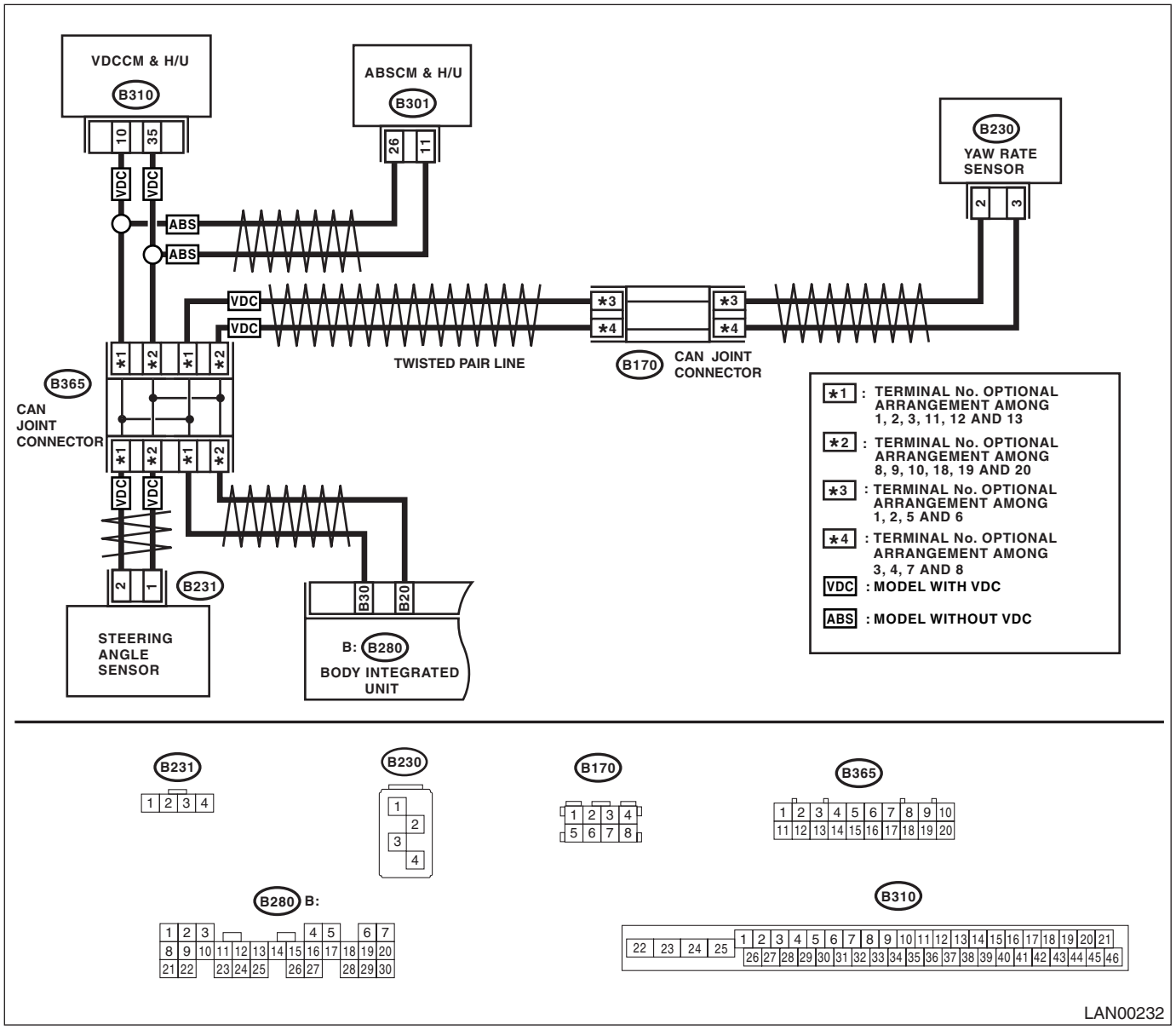
DTC DETECTING CONDITION:

Defective VDC/ABSCM. (If error is in the main harness, DTC P0600 High-speed CAN circuit is input at the same time.)

TROUBLE SYMPTOM:

- ABS warning light and VDC warning light illuminates.
- "Er HC" is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:



LAN00232

	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read all DTCs.	Are there DTCs other than that of body integrated unit?	Perform the diagnosis according to DTCs for other control units.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **3**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Does the displayed DTC indicate current malfunction?	Go to step **5**.	Go to step **4**.
4	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display engine speed and vehicle speed signal from EGM, TCM, VDC/ABS and body integrated unit under the same conditions and compare data.	Does each data match each other?	Temporary poor contact occurs. Perform the clear memory operation.	Go to step **5**.
5	**CHECK HARNESS.** 1) Disconnect the harness connector of body integrated unit. 2) Measure the resistance between harness connector terminals. ***Connector & terminal (B280) No. 20 — No. 30:***	Is the resistance between 55 — 65 Ω?	Go to step **6**.	Open circuit in related line of body integrated unit. Repair the open circuit of harness or replace harness.
6	**CHECK VDC/ABS CU.** 1) Connect all connectors. 2) Read the DTC of VDC/ABS CU using the Subaru Select Monitor.	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC of VDC/ABS CU.	Go to step **7**.
7	**CHECK BODY INTEGRATED UNIT.** 1) Connect all the control module connectors. 2) Check the data of “body integrated unit data received” on the current data display of ECM using Subaru Select Monitor.	Is the “Yes” displayed?	Go to step **8**.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>
8	**CHECK BODY INTEGRATED UNIT.** Check the data of “body integrated unit counter update” on the data display of ECM.	Is the “Yes” displayed?	Replace the VDC/ABS CU. <Ref. to VDC-7, REMOVAL, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).> <Ref. to ABS-6, REMOVAL, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

Q: DTC U1300 CAN-LS MALFUNCTION

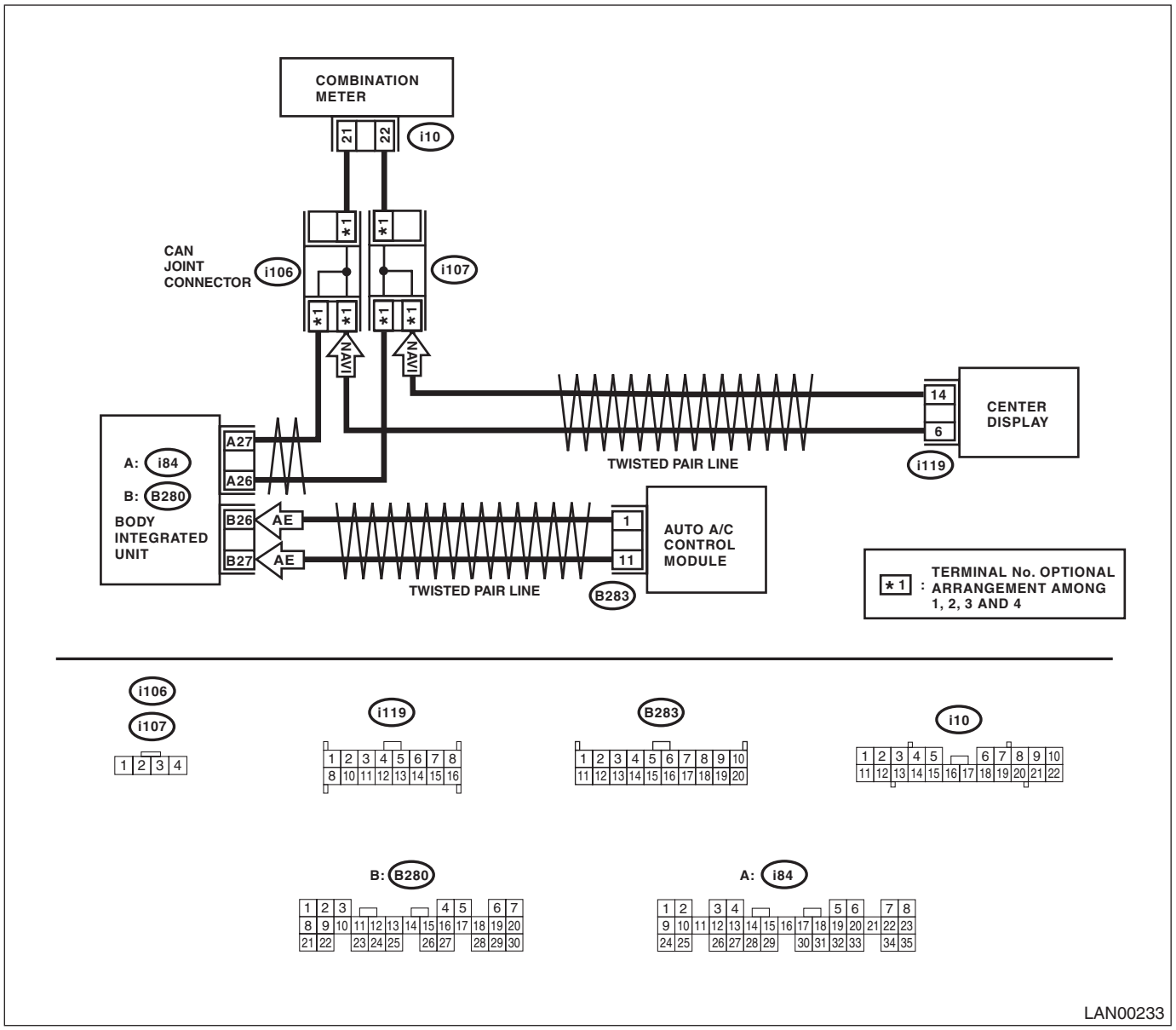
DTC DETECTING CONDITION:

Either end of low-speed CAN communication line is open or shorted, the connector is not connected properly, or the terminal has poor crimping.

TROUBLE SYMPTOM:

“Er LC” is displayed in odo/trip meter (except for meters with MID), but communicating function is normal.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read DTC of body integrated unit.	Are there DTCs other than U1300?	Perform the diagnosis according to other DTCs.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Is U1300 current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **3**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Is U1300 current malfunction?	Go to step **4**.	Temporary poor contact occurs.
4	**CHECK CURRENT DATA.** Display the current data (Auto A/C failure) of body integrated unit using the Subaru Select Monitor.	Is OK displayed?	Go to step **5**.	Perform auto A/C self-diagnosis. <Ref. to AC(diag)-9, OPERATION, Diagnostic Chart for Self-diagnosis.>
5	**CHECK AUTO A/C ECM.** 1) Turn the ignition switch to OFF. 2) Disconnect the auto A/C ECM connector (B283). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1300 detected?	Go to step **7**.	Go to step **6**.
6	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280) and auto A/C control module connector (B283). 2) Check open or short conditions between body integrated unit connector and auto A/C control module connector. ***Connector & terminal*** ***(B283) No. 1 — (B280) No. 26:*** ***(B283) No. 11 — (B280) No. 27:***	Is harness normal?	Repalce auto A/C ECM. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.
7	**CHECK CURRENT DATA.** Check current data (center display failure) of the body integrated unit.	Is OK displayed?	Go to step **8**.	Repair or replace the center display. <Ref. to ET-17, REMOVAL, Navigation Display.>
8	**CHECK CENTER DISPLAY.** 1) Turn the ignition switch to OFF. 2) Disconnect the center display connector (i119). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1300 detected?	Go to step **10**.	Go to step **9**.
9	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (i84) and center display connector (i119). 2) Check open or short conditions between body integrated unit connector and center display connector. ***Connector & terminal*** ***(i119) No. 14 — (i84) No. 26:*** ***(i119) No. 6 — (i84) No. 27:***	Is harness normal?	Replace the center display. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.

	Step	Check	Yes	No
10	**CHECK CURRENT DATA.** Check current data (meter failure) of the body integrated unit.	Is OK displayed?	Go to step **11**.	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>
11	**CHECK COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the combination meter connector (i10). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1300 detected?	Go to step **13**.	Go to step **12**.
12	**CHECK HARNESS.** 1) Disconnect the combination meter connector (i10). 2) Check open or short conditions between body integrated unit connector and combination meter connector. ***Connector & terminal*** ***(i10) No. 21 — (i84) No. 27:*** ***(i10) No. 22 — (i84) No. 26:***	Is harness normal?	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>	Repair or replace the open or short circuit of harness.
13	**CHECK HARNESS.** 1) Disconnect connectors of A/C ECM (B283), center monitor (i119), combination meter (i10) and body integrated unit connector (i84). 2) Measure the resistance between connector terminals. ***Connector & terminal*** ***(i84) No. 27 — (i84) No. 26:***	Is the resistance 1 MΩ or more?	Go to step **14**.	Repair the short circuit of harness or replace harness.
14	**CHECK HARNESS.** 1) Connect the junction connector. 2) Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 27 — Chassis ground:*** ***(B280) No. 26 — Chassis ground:*** ***(i84) No. 26 — Chassis ground:*** ***(i84) No. 27 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the short circuit of harness or replace harness.	Go to step **15**.
15	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 27 (+) — Chassis ground (–):*** ***(B280) No. 26 (+) — Chassis ground (–):*** ***(i84) No. 26 (+) — Chassis ground (–):*** ***(i84) No. 27 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

R: DTC U1301 CAN-LS COUNTER ABNORMAL

DTC DETECTING CONDITION:

Find the unit in which trouble occurs and open or short CAN line, and repair and replace them.
(Free running counter error may be detected at the same time from the unit in which the malfunction occurs.)

TROUBLE SYMPTOM:

"Er LC" is displayed in odo/trip meter. (Except for meter with MID)

	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read DTC of body integrated unit.	Are there DTCs other than U1301?	Perform the diagnosis according to other DTCs.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Is U1301 current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **3**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Is U1301 current malfunction?	Go to step **4**.	Temporary poor contact occurs.
4	**CHECK CURRENT DATA.** Display the current data (Auto A/C failure) of body integrated unit using the Subaru Select Monitor.	Is OK displayed?	Go to step **5**.	Perform auto A/C self-diagnosis. <Ref. to AC(diag)-9, OPERATION, Diagnostic Chart for Self-diagnosis.>
5	**CHECK AUTO A/C ECM.** 1) Turn the ignition switch to OFF. 2) Disconnect the auto A/C ECM connector (B283). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1301 detected?	Go to step **7**.	Go to step **6**.
6	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280) and auto A/C control module connector (B283). 2) Check open or short conditions between body integrated unit connector and auto A/C control module connector. ***Connector & terminal*** ***(B283) No. 1 — (B280) No. 26:*** ***(B283) No. 11 — (B280) No. 27:***	Is harness normal?	Replace auto A/C ECM. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.
7	**CHECK CURRENT DATA.** Check current data (center display failure) of the body integrated unit.	Is OK displayed?	Go to step **8**.	Repair or replace the center display. <Ref. to ET-17, REMOVAL, Navigation Display.>
8	**CHECK CENTER DISPLAY.** 1) Turn the ignition switch to OFF. 2) Disconnect the center display connector (i119). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1301 detected?	Go to step **10**.	Go to step **9**.

	Step	Check	Yes	No
9	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280) and center display connector (i119). 2) Check open or short conditions between body integrated unit connector and center display connector. ***Connector & terminal*** ***(i119) No. 14 — (i84) No. 26:*** ***(i119) No. 6 — (i84) No. 27:***	Is harness normal?	Replace the center display. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.
10	**CHECK CURRENT DATA.** Check current data (meter failure) of the body integrated unit.	Is OK displayed?	Go to step **11**.	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>
11	**CHECK COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the combination meter connector (i10). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1301 detected?	Go to step **13**.	Go to step **12**.
12	**CHECK HARNESS.** 1) Disconnect the combination meter connector (i10). 2) Check open or short conditions between body integrated unit connector and combination meter connector. ***Connector & terminal*** ***(i10) No. 21 — (i84) No. 27:*** ***(i10) No. 22 — (i84) No. 26:***	Is harness normal?	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>	Repair or replace the open or short circuit of harness.
13	**CHECK HARNESS.** 1) Disconnect connectors of A/C ECM (B283), center monitor (i119), combination meter (i10) and body integrated unit connector (i84). 2) Measure the resistance between connector terminals. ***Connector & terminal*** ***(i84) No. 27 — (i84) No. 26:***	Is the resistance 1 MΩ or more?	Go to step **14**.	Repair the short circuit of harness or replace harness.
14	**CHECK HARNESS.** 1) Connect the junction connector. 2) Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 27 — Chassis ground:*** ***(B280) No. 26 — Chassis ground:*** ***(i84) No. 26 — Chassis ground:*** ***(i84) No. 27 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the short circuit of harness or replace harness.	Go to step **15**.
15	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 27 (+) — Chassis ground (–):*** ***(B280) No. 26 (+) — Chassis ground (–):*** ***(i84) No. 26 (+) — Chassis ground (–):*** ***(i84) No. 27 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

S: DTC U1302 CAN-LS BUS OFF

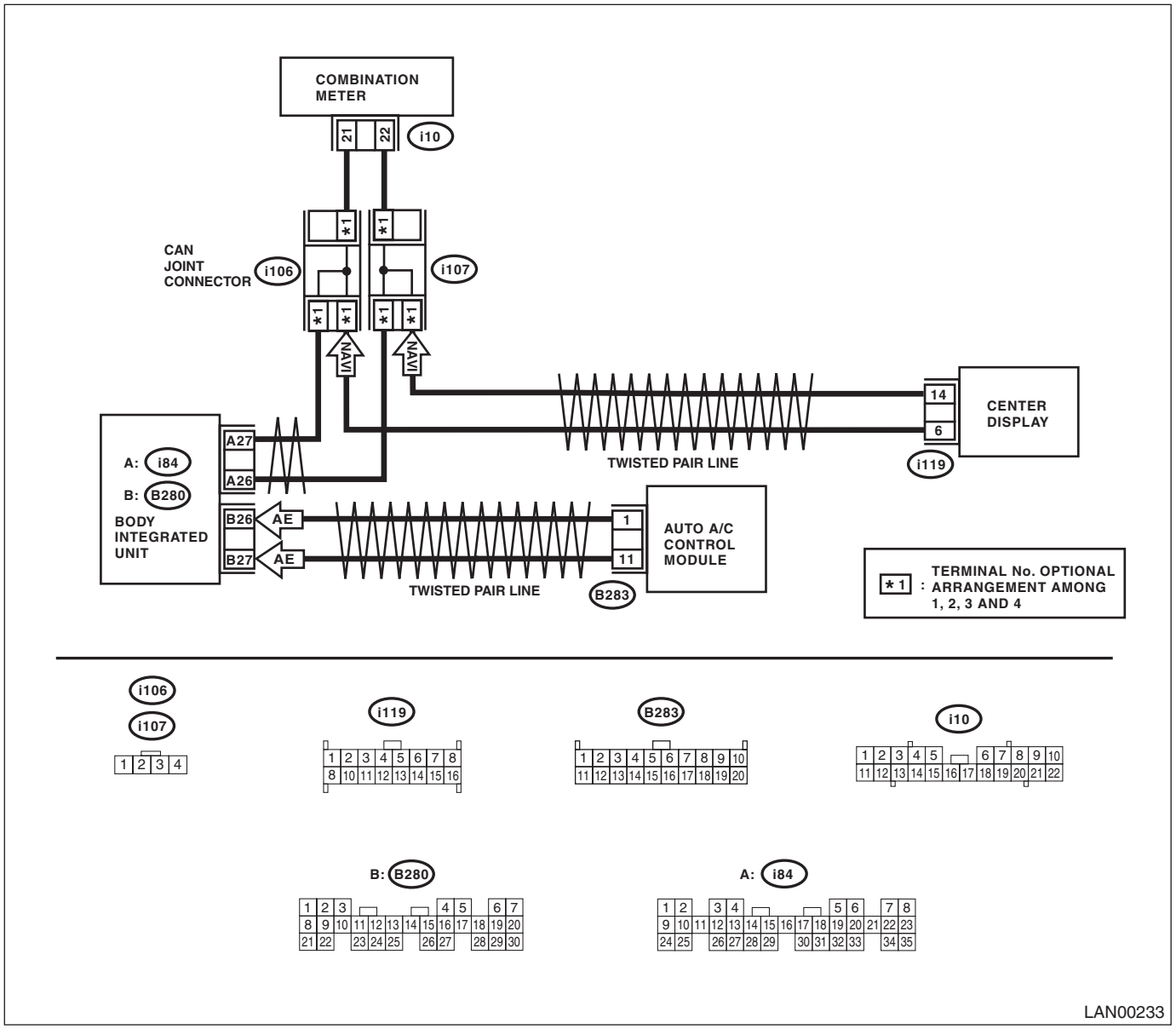
DTC DETECTING CONDITION:

- Because of a lot of error data occurred, some units have been disconnected not to affect other units.
- Communication failure from the unit in which error is occurred is input at the same time.

TROUBLE SYMPTOM:

"Er LC" is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:



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	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read DTC of body integrated unit.	Are there DTCs other than U1302?	Perform the diagnosis according to other DTCs.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **3**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Is U1302 current malfunction?	Go to step **4**.	Temporary poor contact occurs.
4	**CHECK CURRENT DATA.** Display the current data (Auto A/C failure) of body integrated unit using the Subaru Select Monitor.	Is OK displayed?	Go to step **5**.	Perform auto A/C self-diagnosis. <Ref. to AC(diag)-9, OPERATION, Diagnostic Chart for Self-diagnosis.>
5	**CHECK AUTO A/C ECM.** 1) Turn the ignition switch to OFF. 2) Disconnect the auto A/C ECM connector (B283). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1302 detected?	Go to step **7**.	Go to step **6**.
6	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280) and auto A/C control module connector (B283). 2) Check open or short conditions between body integrated unit connector and auto A/C control module connector. ***Connector & terminal*** ***(B283) No. 1 — (B280) No. 26:*** ***(B283) No. 11 — (B280) No. 27:***	Is harness normal?	Repalce auto A/C ECM. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.
7	**CHECK CURRENT DATA.** Check current data (center display failure) of the body integrated unit.	Is OK displayed?	Go to step **8**.	Repair or replace the center display. <Ref. to ET-17, REMOVAL, Navigation Display.>
8	**CHECK CENTER DISPLAY.** 1) Turn the ignition switch to OFF. 2) Disconnect the center display connector (i119). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1302 detected?	Go to step **10**.	Go to step **9**.
9	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280) and center display connector (i119). 2) Check open or short conditions between body integrated unit connector and center display connector. ***Connector & terminal*** ***(i119) No. 14 — (i84) No. 26:*** ***(i119) No. 6 — (i84) No. 27:***	Is harness normal?	Replace the center display. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.

	Step	Check	Yes	No
10	**CHECK CURRENT DATA.** Check current data (meter failure) of the body integrated unit.	Is OK displayed?	Go to step **11**.	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>
11	**CHECK COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the combination meter connector (i10). 3) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 4) Perform the clear memory operation for the body integrated unit. 5) Read the DTC of the body integrated unit.	Is DTC U1302 detected?	Go to step **13**.	Go to step **12**.
12	**CHECK HARNESS.** 1) Disconnect the combination meter connector (i10). 2) Check open or short conditions between body integrated unit connector and combination meter connector. ***Connector & terminal*** ***(i10) No. 21 — (i84) No. 27:*** ***(i10) No. 22 — (i84) No. 26:***	Is harness normal?	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>	Repair or replace the open or short circuit of harness.
13	**CHECK HARNESS.** 1) Disconnect connectors of A/C ECM (B283), center monitor (i119), combination meter (i10) and body integrated unit connector (i84). 2) Measure the resistance between connector terminals. ***Connector & terminal*** ***(i84) No. 27 — (i84) No. 26:***	Is the resistance 1 MΩ or more?	Go to step **14**.	Repair the short circuit of harness or replace harness.
14	**CHECK HARNESS.** 1) Connect the junction connector. 2) Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 27 — Chassis ground:*** ***(B280) No. 26 — Chassis ground:*** ***(i84) No. 26 — Chassis ground:*** ***(i84) No. 27 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the short circuit of harness or replace harness.	Go to step **15**.
15	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 27 (+) — Chassis ground (–):*** ***(B280) No. 26 (+) — Chassis ground (–):*** ***(i84) No. 26 (+) — Chassis ground (–):*** ***(i84) No. 27 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>

T: DTC U1311 CAN-LS METER UNIT DATA ABNORMAL

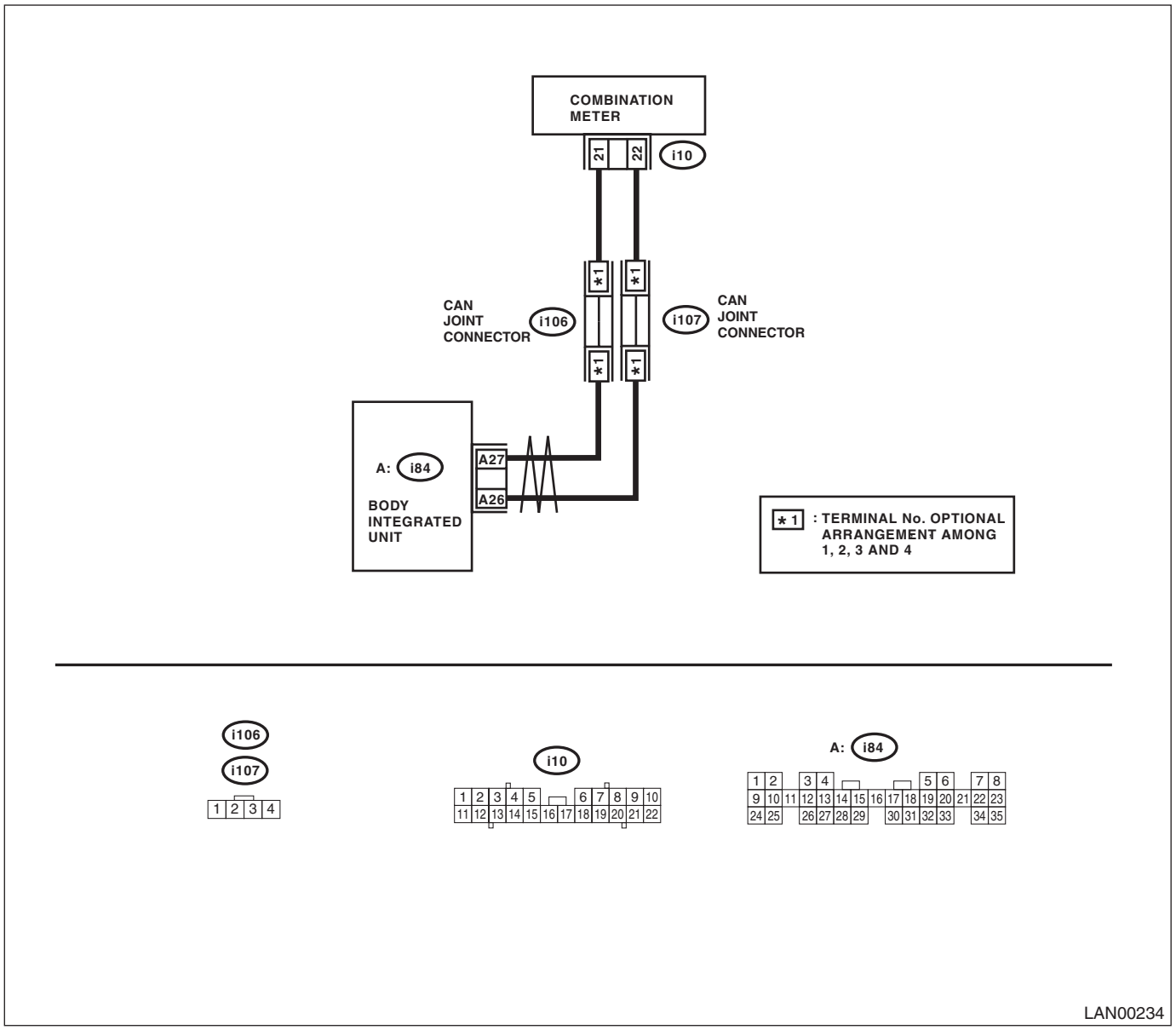
DTC DETECTING CONDITION:

Combination meter has error, the harness between main harness splice and combination meter is open or shorted, the connector is not connected properly, or the terminal has poor crimping.

TROUBLE SYMPTOM:

"Er Lc" is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read DTC of body integrated unit.	Are there DTCs other than U1311?	Perform the diagnosis according to other DTCs.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **3**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Is U1311 current malfunction?	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>	Go to step **4**.
4	**CHECK COMBINATION METER.** Perform self-diagnosis of the combination meter. <Ref. to IDI-4, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Temporary poor contact occurs.	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>

U: DTC U1313 CAN-LS MONITOR DATA ABNORMAL

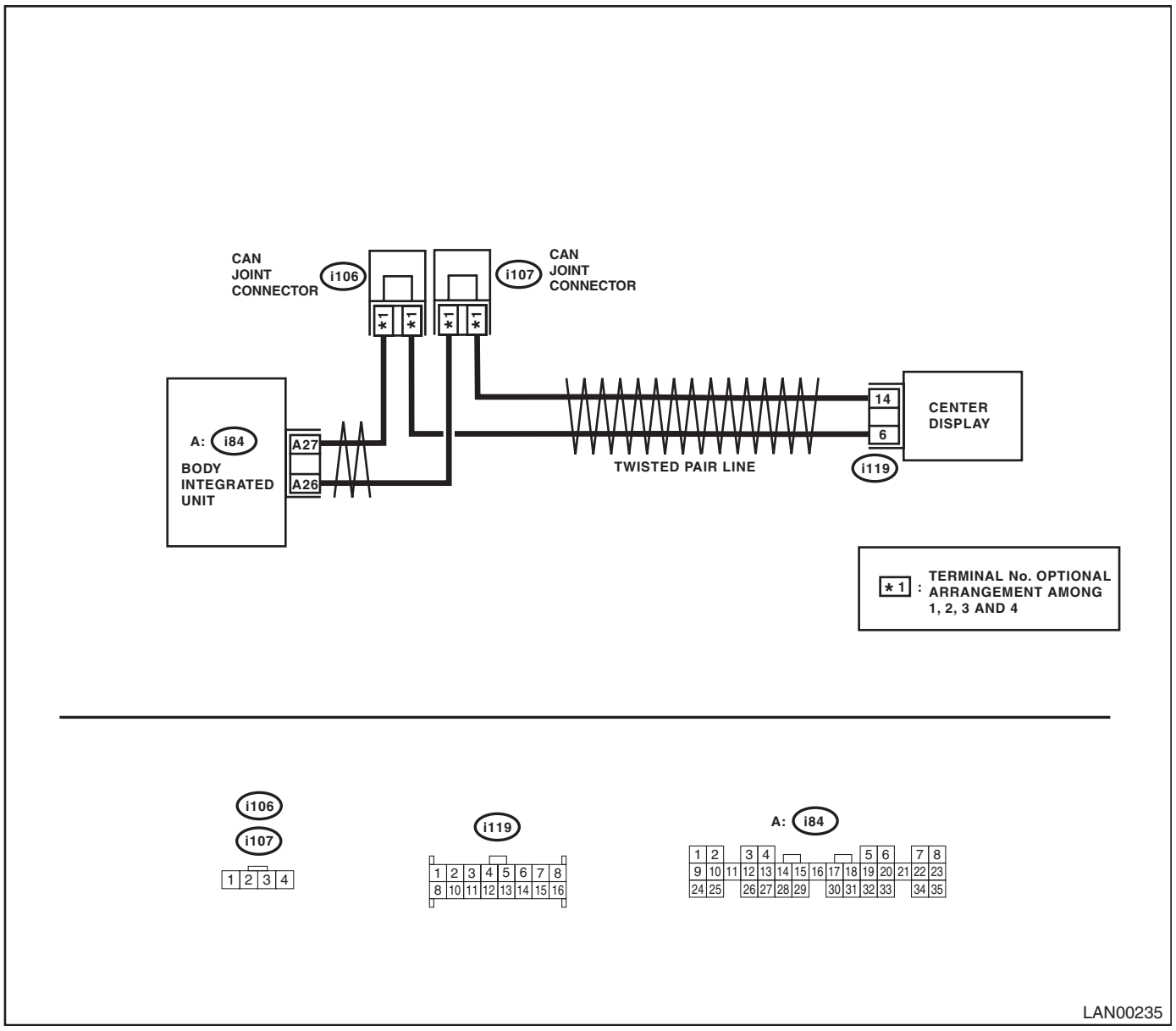
DTC DETECTING CONDITION:

Center display unit error, or harness between the main harness splice and center display unit is open or shorted, the connector is not connected securely and the terminal has poor crimping.

TROUBLE SYMPTOM:

"Er LC" is displayed in odo/trip meter. (Except for meter with MID)

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CENTER MONITOR.** 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Display the center display fail display.	Is the displayed data OK?	Go to step **2**.	Refer to the navigation display. <Ref. to ET-17, REMOVAL, Navigation Display.>
2	**CHECK NAVIGATION.** 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Display NAVI fail.	Is the displayed data OK?	Refer to the navigation display. <Ref. to ET-17, REMOVAL, Navigation Display.>	Refer to the navigation unit. <Ref. to ET-19, REMOVAL, Navigation Body.>

V: DTC U1321 CAN-LS METER NO-RECEIVE DATA

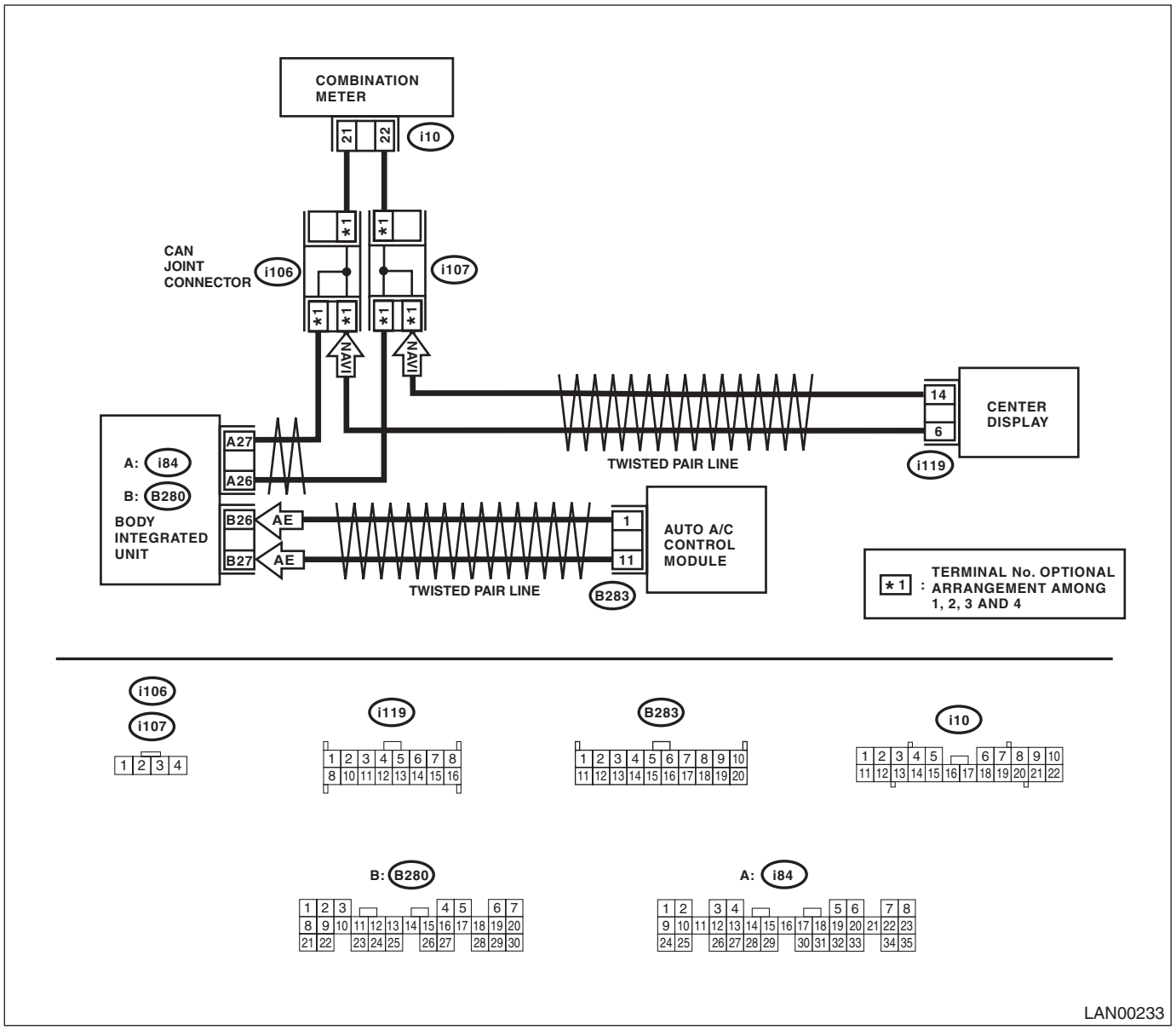
DTC DETECTING CONDITION:

Combination meter unit error, or harness between the main harness splice and combination meter unit is open or shorted, the connector is not connected properly and the terminal has poor crimping.

TROUBLE SYMPTOM:

Fail mode occurs because the data is not received from combination meter unit.

WIRING DIAGRAM:



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	Step	Check	Yes	No
1	**CHECK COMMUNICATION LINE.** 1) Warm up the engine. 2) Compare the data of body integrated unit and combination meter using Subaru Select Monitor. Check item: • Engine speed • Shift range	Is the data displayed same?	Go to step **2**.	Perform self-diagnosis of the combination meter. <Ref. to IDI-4, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>
2	**CHECK HARNESS.** 1) Disconnect the body integrated unit and combination meter connector. 2) Measure the resistance between harness connectors. ***Connector & terminal*** ***(i10) No. 21 — (i84) No. 27:*** ***(i10) No. 22 — (i84) No. 26:***	Is the resistance less than 10 Ω?	Go to step **4**.	Go to step **3**.
3	**CHECK HARNESS.** 1) Disconnect the CAN joint connectors (i106 and i107) with the connector of the unit disconnected. 2) Measure the resistance between harness connectors. ***Connector & terminal*** ***(i10) No. 21 — (i106) No. 1 — 4:*** ***(i10) No. 22 — (i106) No. 1 — 4:*** ***(i84) No. 27 — (i107) No. 1 — 4:*** ***(i84) No. 26 — (i107) No. 1 — 4:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** Measure the resistance between harness connectors (i106 and i107) and chassis ground. ***Connector & terminal*** ***(i106) No. 1 — 4 — Chassis ground:*** ***(i107) No. 1 — 4 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the short circuit of harness or replace harness.	Go to step **5**.
5	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between harness connectors (i106 and i107) and chassis ground. ***Connector & terminal*** ***(i106) No. 1 — 4 (+) — Chassis ground (–):*** ***(i107) No. 1 — 4 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Go to step **6**.
6	**CHECK COMBINATION METER.** Perform self-diagnosis of the combination meter. <Ref. to IDI-4, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Temporary poor contact occurs. Check the connection of each connector.	Replace the combination meter. <Ref. to IDI-19, REMOVAL, Combination Meter.>

W: DTC B1500 KEYLESS UART COM. MALFUNCTION

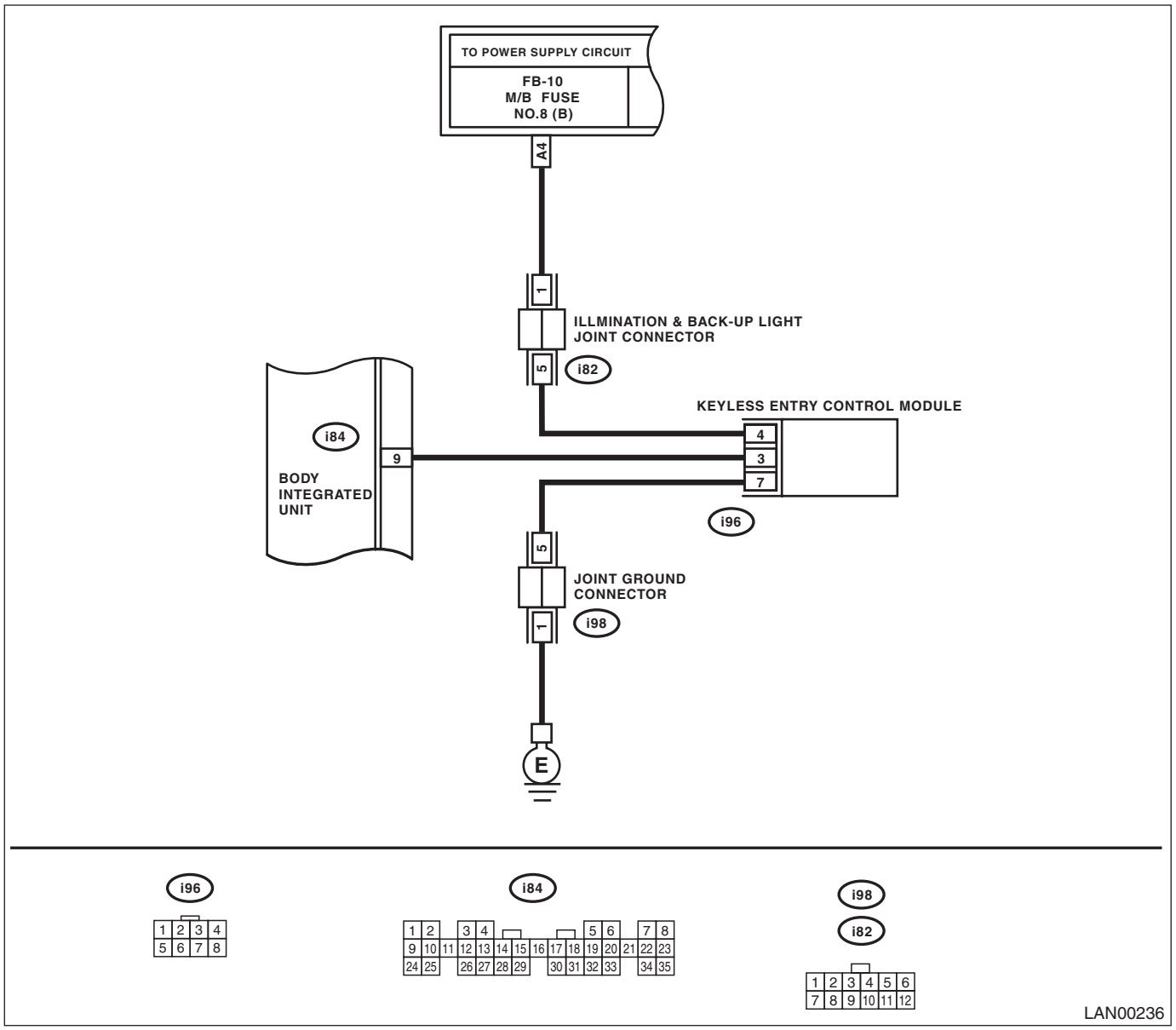
DTC DETECTING CONDITION:

UART between keyless control unit and body integrated unit is open or shorted, the connector is not connected properly, or the terminal is crimped improperly.

TROUBLE SYMPTOM:

Door lock does not operate with keyless.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK DTC.** Connect the Subaru Select Monitor to read DTC of body integrated unit.	Are there DTCs other than B1500?	Perform the diagnosis according to other DTCs.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated by body integrated unit.	Does the displayed DTC indicate current malfunction?	Check the connection of harness connectors. Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF and read DTCs again.	Is B1500 current malfunction?	<Ref. to LAN(diag)-82, DTC B1500 KEYLESS UART COM. MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	<Ref. to LAN(diag)-82, DTC B1500 KEYLESS UART COM. MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (i84) and keyless entry control module connector (i96). 2) Measure the resistance between harnesses. ***Connector & terminal*** ***(i84) No. 9 — (i96) No. 3:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair the open circuit of harness or replace harness.
5	**CHECK HARNESS.** Measure the resistance between harness connector and chassis ground. ***Connector & terminal*** ***(i84) No. 9 — Chassis ground:***	Is the resistance less than 1 MΩ?	Repair the short circuit of harness or replace harness.	Go to step **6**.
6	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between harness connector and chassis ground. ***Connector & terminal*** ***(i84) No. 9 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Go to step **7**.
7	**CHECK OPERATION.** Check the door lock operation when the doors LOCK/UNLOCK using manual LOCK switch.	Does it operate on switch operation?	Go to step **8**.	Replace the body integrated unit. <Ref. to SL-53, REMOVAL, Body Integrated Unit.>
8	**CHECK OPERATION.** 1) Remove the ignition key. 2) Close all the doors, and then perform the LOCK/UNLOCK operation on keyless entry operation.	Does it operate?	Temporary poor contact occurs.	Replace the keyless entry control module. <Ref. to SL-51, REMOVAL, Keyless Entry Control Module.>