# 12. Diagnostic Procedure with Diagnostic Trouble Code (DTC) A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

### NOTE:

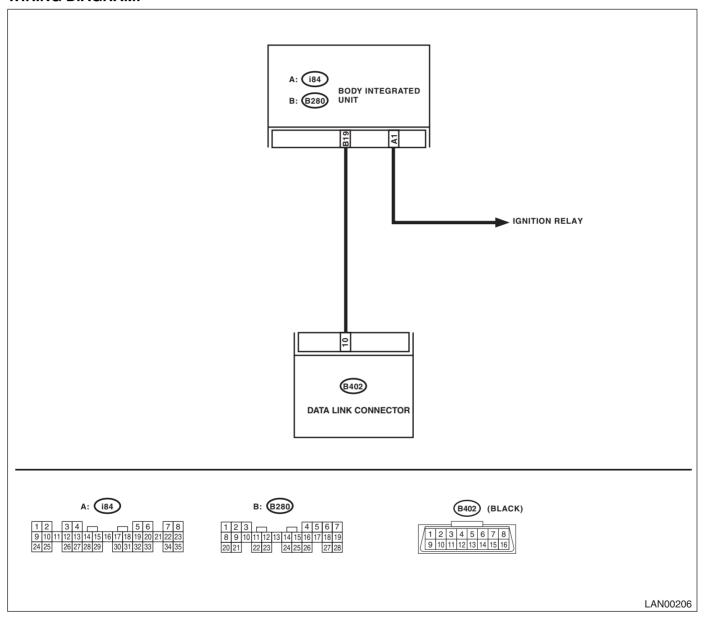
- DTC is displayed in the sequence of the amount of counter numbers.
- When more than two DTCs are displayed, perform the diagnosis of top one.

### **DIAGNOSIS:**

Subaru Select Monitor communication line is open or shorted.

### TROUBLE SYMPTOM:

Not communicable with Subaru Select Monitor.



	Step	Check	Yes	No
1	CHECK IGNITION SWITCH.	Is the ignition switch ON?	Go to step 2.	Turn the ignition
	CHECK IGNITION SWITCH.	is the ignition switch ON?	Go to step 2.	switch to ON, and select Integ. Unit mode using Sub- aru Select Monitor.
2	<ul><li>CHECK BATTERY.</li><li>1) Turn the ignition switch to OFF.</li><li>2) Measure the battery voltage.</li></ul>	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 battery terminal?	Repair or tighten the battery terminal.	Go to step 4.
4	CHECK COMMUNICATION OF SUBARU SE- LECT 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 SE- LECT 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 SE- LECT 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 (B402) No. 10 — Chassis ground:	Is the resistance more than 1 $\mbox{M}\Omega ?$	Go to step 7.	Repair the harness and connector between each con- trol unit and Sub- aru Select Monitor.
7	CHECK OUTPUT SIGNAL TO BODY INTE-GRATED UNIT.  1) Turn the ignition switch to ON.  2) Measure the voltage between body integrated unit and chassis ground.  Connector & terminal  (B402) No. 10 (+) — Chassis ground (-):	Is the voltage less than 1 V?	Go to step 8.	Repair the harness and connector between each con- trol unit and Sub- aru 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 (B402) No. 10 — (B280) No. 19:	Is the resistance less than 1 $\Omega$ ?	Go to step 9.	Repair the harness and connector between body inte- grated unit and Subaru Select Monitor.
9	CHECK INSTALLATION OF BODY INTE- GRATED UNIT CONNECTOR. Turn the ignition switch to OFF.	Is the body integrated unit con- nector inserted into body inte- grated 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.

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	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 more than 1 $\mbox{M}\Omega ?$	Go to step 12.	Repair the poor contact of harness between body integrated unit and ground.
12	CHECK POOR CONTACT OF CONNECTORS.		Repair the poor contact of connector.	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>

#### **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.
- "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 DIS- PLAY WITH COMBINATION METER. Turn the ignition switch to ON.	Is communication error displayed?	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. combination="" idi-12,="" meter.="" to=""></ref.>
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. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>
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. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>

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### 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".
- LAN communication immobilizer function may not be executed normally.

	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read all DTCs.	Is there any DTC other than for the body integrated unit?	Perform the diag- nosis according to the DTC of other control modules.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Go to step 4.
4	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. 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. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>
6	CHECK DTC CONCERNING ECM.	Is output DTC on ECM concerning CAN communication failure?	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Perform the diag- nosis according to DTC concerning ECM.

LAN SYSTEM (DIAGNOSTICS)

### D: DTC B1101 BATT P/SUPPLY MALFUNCTION CONT.

### DTC DETECTING CONDITION:

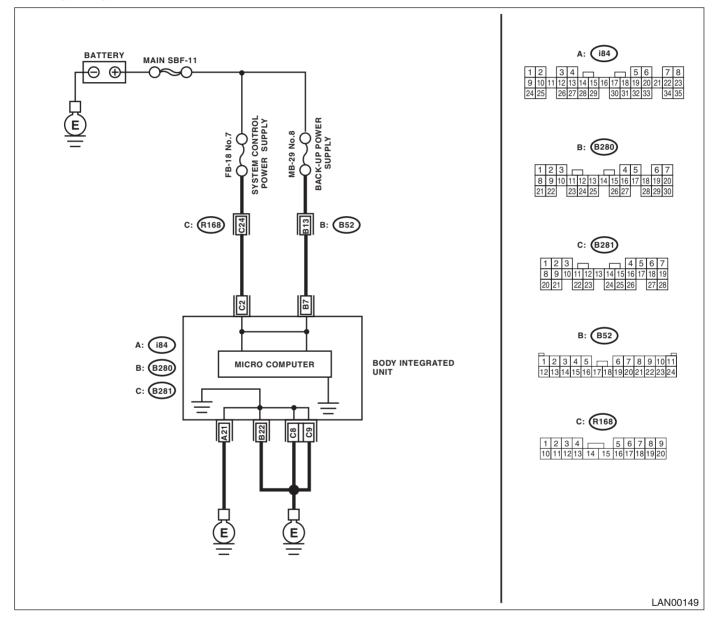
Battery power supply control circuit is open or shorted.

### 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 fail to operate.



	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 the connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Temporary poor contact occurs.

LAN SYSTEM (DIAGNOSTICS)

### E: DTC B1102 BATT P/SUPPLY MALFUNCTION CONT.

### **DTC DETECTING CONDITION:**

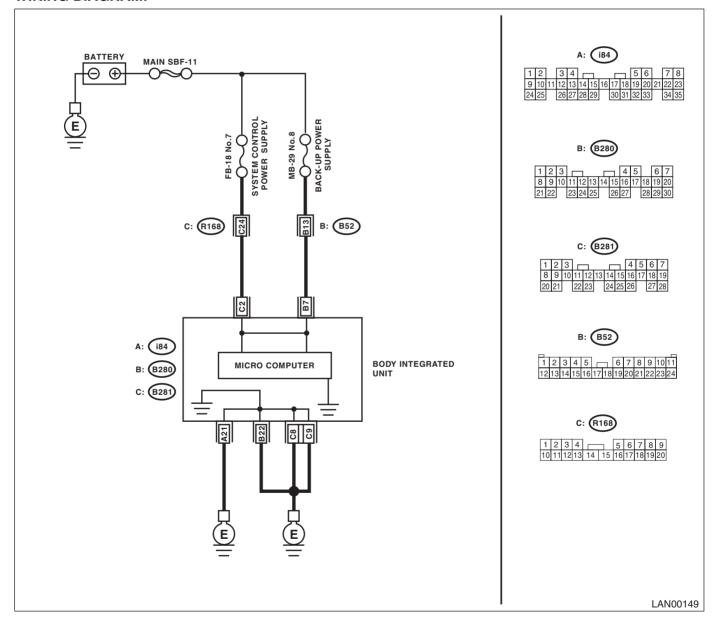
Battery power supply backup circuit is open or shorted.

### 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.

#### NOTE:

When B1101 BATT p/supply (cont.) malfunction are output at the same time, all function of body integrated unit may fail to operate.



	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 the connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Temporary poor contact occurs.

LAN SYSTEM (DIAGNOSTICS)

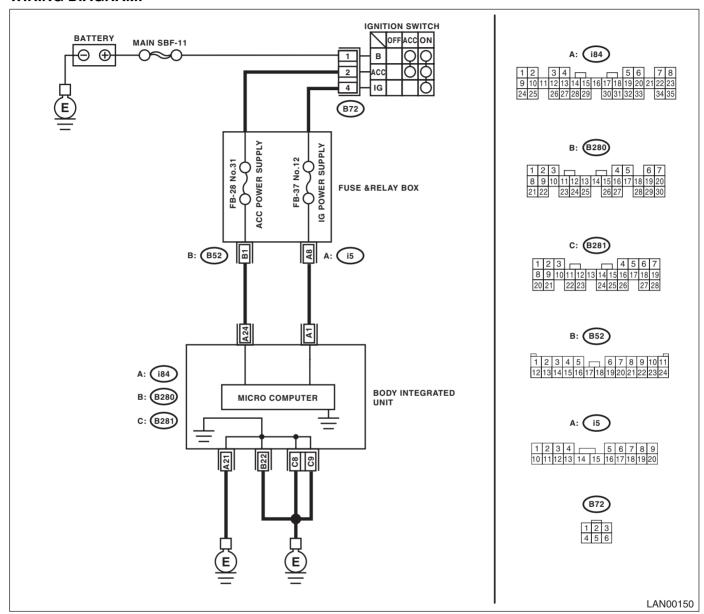
### F: DTC B1103 IGNITION POWER FAILURE

### 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.



	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 IN 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 the connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Temporary poor contact occurs.

LAN SYSTEM (DIAGNOSTICS)

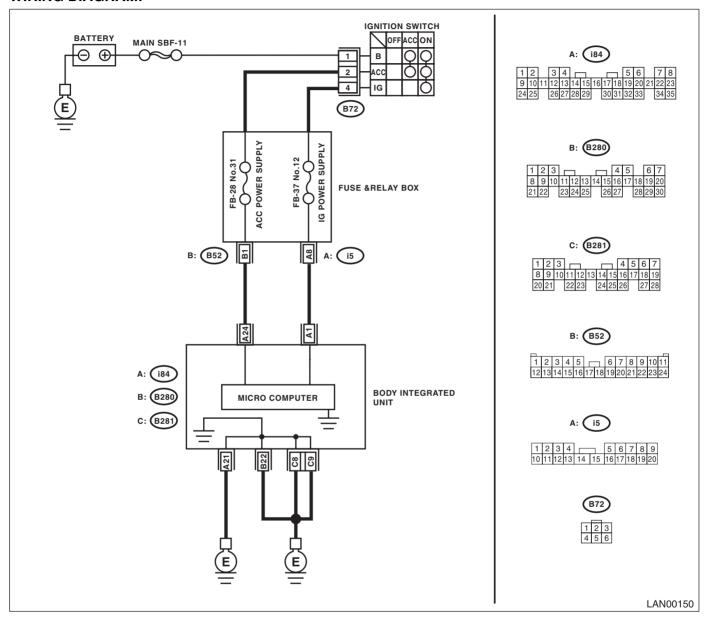
### **G: DTC B1104 ACC POWER FAILURE**

### **DTC DETECTING CONDITION:**

ACC power supply circuit is open or shorted.

### TROUBLE SYMPTOM:

Rear wiper may not operate at ACC position.



	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 IN 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 the connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is DTC displayed?	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Temporary poor contact occurs.

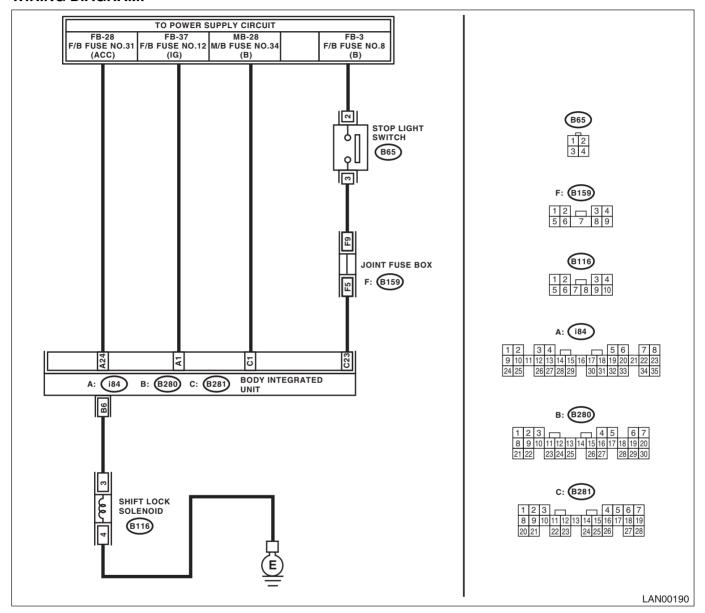
### **H: DTC B1106 SHIFT LOCK CIRCUIT FAILURE**

### DTC DETECTING CONDITION:

Shift lock circuit is shorted to ground.

### TROUBLE SYMPTOM:

Shift lock does not be released or remain locked.



	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 between 10 — 30 $\Omega$ ?	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 (B116).  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 $\Omega$ ?	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 between 10 — 30 $\Omega$ ?	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 shift lock solenoid connector (B116) and chassis ground.  Connector & terminal  (B116) No. 4 — Chassis ground:	Is the resistance less than 10 $\Omega$ ?	Temporary poor contact occurs. Check the connection of each terminal and repair when necessary.	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>
5	CHECK HARNESS.  1) Disconnect the body integrated unit connector (B280) from the ground.  2) Measure the resistance between body integrated unit connector (B280) and chassis ground.  Connector & terminal  (B280) No. 6 — Chassis ground:	Is the resistance more than 1 $\mbox{M}\Omega ?$	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Repair the short circuit of harness or replace harness.

LAN SYSTEM (DIAGNOSTICS)

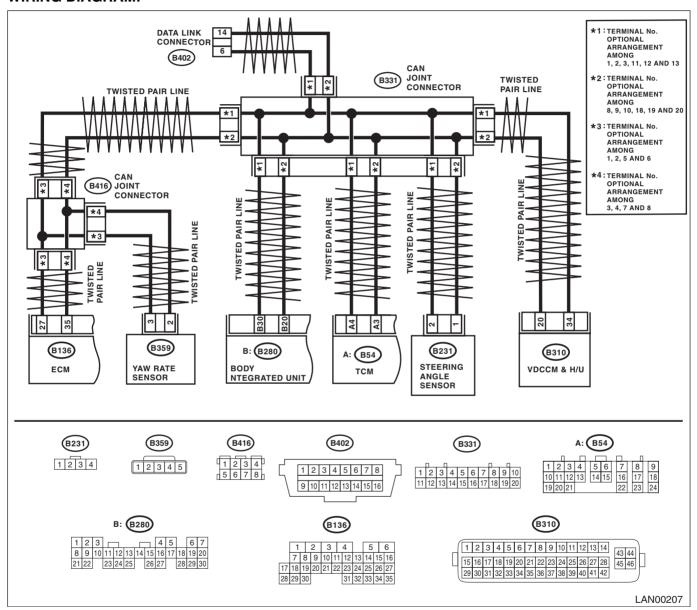
### I: DTC U1201 CAN-HS COUNTER ABNORMAL

### 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.
- Malfunction indicator light illuminates.



	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read all DTCs.	Is there any DTC other than for the body integrated unit?	Perform the diag- nosis according to the DTC of other control modules.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit.	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit.	Go to step 4.
4	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. Perform the Clear Memory operation.	Go to step 5.
5	<ul> <li>CHECK HARNESS.</li> <li>1) Disconnect the body integrated unit connector (B280).</li> <li>2) Connect the tester to vehicle side connector, and measure the resistance.</li> <li>Connector &amp; terminal (B280) No. 20 — No. 30:</li> </ul>	Is the resistance between 55 — 65 $\Omega$ ?	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  (B54) No. 3 — No. 4:	Is the resistance between 55 — 65 $\Omega$ ?	Go to step 7.	Go to step 9.
7	CHECK HARNESS.  1) Disconnect the yaw rate sensor connector (B359).  2) Connect the tester to vehicle side connector, and measure the resistance.  Connector & terminal  (B359) No. 2 — No. 3:	Is the resistance between 55 — 65 $\Omega$ ?	Go to step 8.	Go to step 9.
3	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 $\Omega$ ?	Go to step 16.	Go to step 9.
9	CHECK HARNESS.	Is the measured resistance 115 $-$ 125 $\Omega$ 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 $\Omega$ when connecting the tester to vehicle side connector?	Repair or replace the short circuit of measured related harness.	Go to step 11.
11	CHECK HARNESS.	Is the measured resistance more than 30 $M\Omega$ when connecting the tester to vehicle side connector?	Repair or replace the open circuit of measured related harness.	Go to step 16.

	Step	Check	Yes	No
12	CHECK HARNESS.  1) Disconnect the VDCCM connector.  2) Connect the tester to vehicle side harness, and measure the resistance.  Connector & terminal  (B310) No. 20 — No. 34:	Is the resistance between 115 — 125 $\Omega$ ?	Go to step 13.	Go to step 14.
13	CHECK CONTROL MODULE.  1) Connect the VDCCM connector.  2) Disconnect the connector from ECM.  3) Connect the tester to vehicle side harness, and measure the resistance between terminals.	Is the resistance between 115 — 125 $\Omega$ ?	Go to step 20.	Replace the VDCCM. <ref. to<br="">VDC-8, VDC Con- trol Module and Hydraulic Control Unit (VDCCM&amp;H/ U).&gt;</ref.>
14	CHECK HARNESS.  1) Connect the VDCCM 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 $\Omega$ ?	Go to step 15.	Repair or replace the open circuit of main wiring har- ness.
15	CHECK CONTROL MODULE.  Connect the tester to ECM terminal, and measure the resistance.	Is the resistance between 115 $-$ 125 $\Omega$ ?	Go to step 16.	Replace the ECM. <ref. to<br="">FU(H6DO)-33, Engine Control Module (ECM).&gt;</ref.>
16	CHECK HARNESS.  1) Connect the control module connectors except body integrated unit.  2) Connect the tester to vehicle side harness.  3) Turn the ignition switch to ON, and measure the terminal voltage.  Connector & terminal  (B280) No. 20 (+) — Chassis ground (-):	Is the voltage 6 V or more?	Go to step 17.	Go to step 18.
17	CHECK CONTROL MODULE.  Disconnect each control module connector one by one with the tester connected to vehicle side harness.	Is there any module whose voltage changes to less than 6 V?	Replace the mod- ule whose voltage dropped to 6 V or less.	Repair or replace the short circuit of the harness.
18	CHECK HARNESS.  1) Connect the control module connectors except body integrated unit connector.  2) Connect the tester between vehicle side harness and chassis ground, and measure the resistance.  Connector & terminal  (B280) No. 20 — Chassis ground:  (B280) No. 30 — Chassis ground:	Is the resistance less than 10 $\Omega$ ?	Go to step 19.	Repair or replace the short circuit of the harness.
19	CHECK CONTROL MODULE.  Disconnect each control module connector one by one with the tester connected to vehicle side harness.	Is there any module which its resistance changes to more than 10 $\Omega$ ?	Replace the module whose resistance changed to $10 \Omega$ or more.	Repair or replace the short circuit of the harness.

	Step	Check	Yes	No
20	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. (dtc),="" code="" diagnostic="" lan(diag)-12,="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble=""></ref.>	Is DTC U1201 displayed?	Go to step 21.	Check the TCM. <ref. (dtc),="" 15,="" 5at(diag)-="" aru="" ble="" code="" diag-="" moni-="" nostic="" operation,="" read="" select="" sub-="" to="" tor.="" trou-=""></ref.>
21	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 body integrated unit. <ref. (dtc),="" code="" diagnostic="" lan(diag)-12,="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble=""></ref.>	Is DTC U1201 displayed?	Go to step 22.	Check the steering angle sensor. <ref. (dtc),="" code="" diagnos-tic="" monitor.="" operation,="" read="" select="" sub-aru="" to="" trouble="" vdc(diag)-15,=""></ref.>
22	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 (B359).  4) Turn the ignition switch to ON and read the DTC of body integrated unit. <ref. (dtc),="" code="" diagnostic="" lan(diag)-12,="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble=""></ref.>	Is DTC U1201 displayed?	Go to step 23.	Check the yaw rate sensor. <ref. (dtc),="" code="" diagnostic="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble="" vdc(diag)-15,=""></ref.>
23	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 24.	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>
24	CHECK CONTROL MODULE. Check the data of "body integrated unit counter update" on the data display of ECM.	Is the "Yes" displayed?	Inspect the ECM. <ref. to<br="">EN(H6DO)(diag)- 37, Read Diagnos- tic Trouble Code (DTC).&gt;</ref.>	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>

LAN SYSTEM (DIAGNOSTICS)

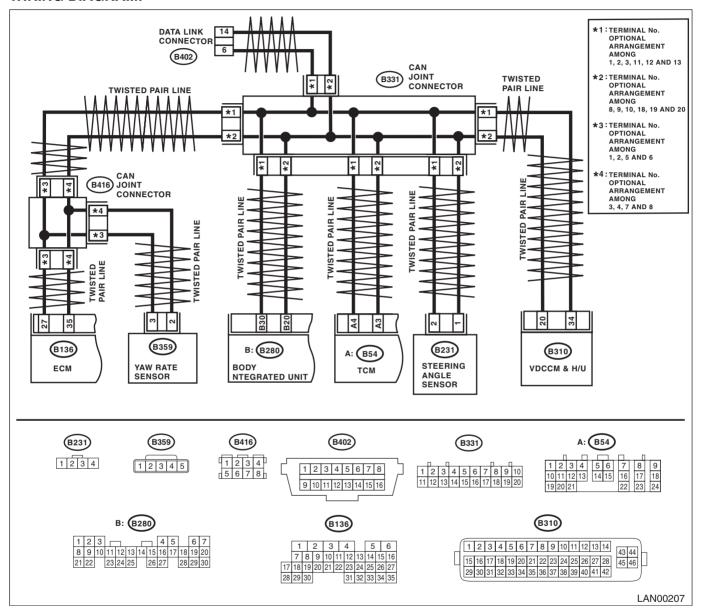
### J: DTC U1202 CAN-HS BUS OFF

### 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.



	Cham	Charle	Vaa	No
_	Step	Check	Yes	No
1	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit.	Go to step 2.
2	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit.	Go to step 3.
3	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. Perform the Clear Memory operation.	Go to step 4.
4	CHECK TCM.  1) Disconnect the TCM connector (B54).  2) Clear the memory of the body integrated unit. <ref. clear="" lan(diag)-20,="" memory="" mode,="" monitor.="" operation,="" select="" subaru="" to="">  3) Read DTC of body integrated unit.</ref.>	Is DTC U1202 displayed?	Go to step 5.	Check the TCM. <ref. 5at(diag)-<br="" to="">15, Subaru Select Monitor.&gt;</ref.>
5	CHECK STEERING ANGLE SENSOR.  1) Disconnect the steering angle sensor connector (B231).  2) Perform the Clear Memory Mode of the body integrated unit. <ref. clear="" lan(diag)-20,="" memory="" mode,="" monitor.="" operation,="" select="" subaru="" to="">  3) Read DTC of body integrated unit.</ref.>	Is DTC U1202 displayed?	Go to step 6.	Replace the steer- ing angle sensor. <ref. to="" vdc-20,<br="">REPLACEMENT, Steering Angle Sensor.&gt;</ref.>
6	CHECK YAW RATE SENSOR.  1) Disconnect the yaw rate sensor connector (B359).  2) Perform the Clear Memory Mode of body integrated unit.  3) Read DTC of body integrated unit.	Is DTC U1202 displayed?	Go to step 7.	Check the yaw rate sensor. <ref. (dtc),="" code="" diagnos-tic="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble="" vdc(diag)-15,=""></ref.>
7	CHECK BODY INTEGRATED UNIT.  1) Disconnect the body integrated unit connector (i84).  2) Read the data between VDC/ABSCM and ECM. Check item:  • Engine speed  • Average front wheel speed (value on constant driving)	Engine speed and front wheel speed are correctly communicated. (Appears same value)	Replace the body integrated unit. <ref. sl-51,<br="" to="">Body Integrated Unit.&gt;</ref.>	Go to step 8.
8	<ul> <li>CHECK HARNESS.</li> <li>1) Disconnect the body integrated unit connector (B280).</li> <li>2) Measure the resistance between harness connector terminals.</li> <li>Connector &amp; terminal (B280) No. 20 — No. 30:</li> </ul>	Is the resistance between 55 — 65 $\Omega$ ?	Go to step 14.	Go to step 9.
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 $\Omega$ ?	Go to step 11.	Go to step 10.

	Step	Check	Yes	No
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 more than 30 M $\Omega$ ?	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 VDCCM (B310) connector.  2) Measure the resistance between harness connector terminals.  Connector & terminal  (B310) No. 13 — No. 29:	Is the resistance between 115 $-$ 125 $\Omega$ ?	Go to step 12.	Go to step 13.
12	CHECK VDCCM.  1) Disconnect the VDCCM (B310) connector.  2) Measure the resistance between VDCCM terminals.  Connector & terminal (B310) No. 20 — No. 34:	Is the resistance between 115 $-$ 125 $\Omega$ ?	Go to step 13.	Open circuit in end resistance of VDCCM. Replace the VDCCM. <ref. (vdccm&h="" and="" control="" hydraulic="" module="" to="" u).="" unit="" vdc="" vdc-8,=""></ref.>
13	CHECK ECM.  1) Disconnect the ECM connector (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 harness connec- tor.	Open circuit in end resistance of ECM. Replace the ECM. <ref. to<br="">FU(H6DO)-33, Engine Control Module (ECM).&gt;</ref.>
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 $\Omega$ ?	Repair or replace the ground short circuit of the har- ness.	Go to step 15.
15	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?	Repair the short circuit of harness or replace har- ness.	Go to step 16.
16	CHECK DTC.  Read the DTC of ECM using the Subaru Select Monitor. <ref. (dtc).="" code="" diagnostic="" en(h6do)(diag)-37,="" opera-="" read="" tion,="" to="" trouble=""></ref.>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Go to step 17.
17	CHECK DTC.  Read the DTC of VDCCM using the Subaru Select Monitor. <ref. (dtc),="" code="" diagnostic="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble="" vdc(diag)-15,=""></ref.>	Is DTC other than "CAN communication" or "C0057" displayed?	Perform the diagnosis according to DTC.	Go to step 18.
18	CHECK DTC.  Read the DTC of TCM using the Subaru Select  Monitor. <ref. 5at(diag)-15,="" monitor.="" operation,="" select="" subaru="" to=""></ref.>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>

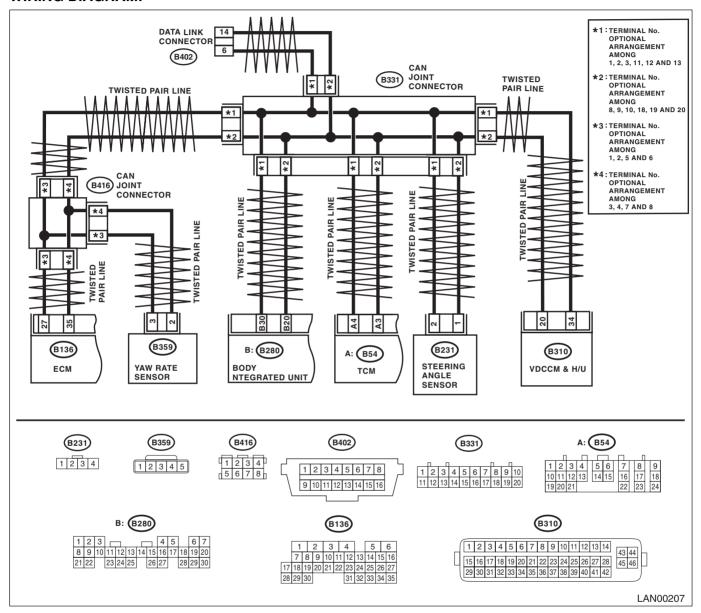
### K: DTC U1211 CAN-HS ECM DATA ABNORMAL

### DTC DETECTING CONDITION:

Defective data from ECM.

### **TROUBLE SYMPTOM:**

"Er HC" or "Er EG" is displayed in odo/trip meter.



	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read all DTCs.	Is there any DTC other than for the body integrated unit?	Perform the diag- nosis according to the DTC of other control modules.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 4.
4	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. Perform the Clear Memory operation.	Go to step 5.
5	CHECK ECM.  Read the DTC of ECM using Subaru Select  Monitor. <ref. (dtc).="" code="" diagnostic="" en(h6do)(diag)-37,="" opera-="" read="" tion,="" to="" trouble=""></ref.>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the ECM. <ref. to<br="">FU(H6DO)-33, Engine Control Module (ECM).&gt;</ref.>

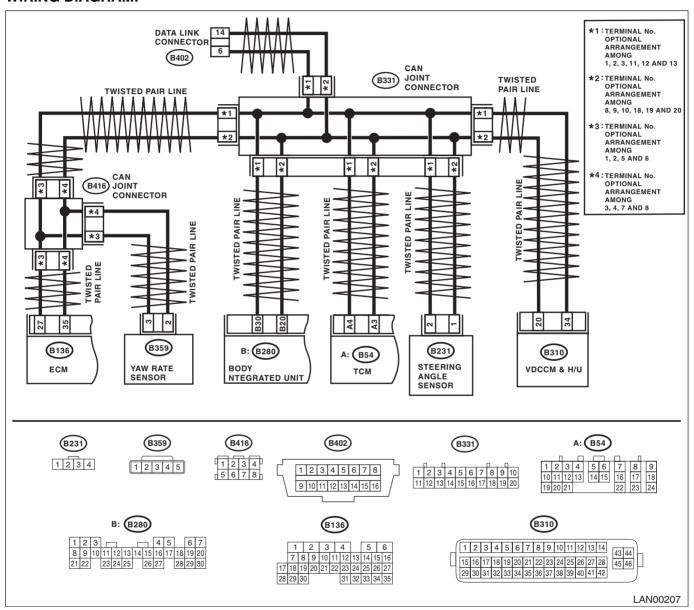
### L: DTC U1212 CAN-HS TCM DATA ABNORMAL

### **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.



	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read all DTCs.	Is there any DTC other than for the body integrated unit?	Perform the diagnosis according to the DTC of other control modules.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	CHECK DTC.  Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 4.
4	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. Perform the Clear Memory operation.	Go to step 5.
5	CHECK TCM.  Read the DTC of TCM using the Subaru Select  Monitor. <ref. 5at(diag)-15,="" monitor.="" operation,="" select="" subaru="" to=""></ref.>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the TCM. <ref. 5at-58,<br="" to="">Transmission Con- trol Module (TCM).&gt;</ref.>

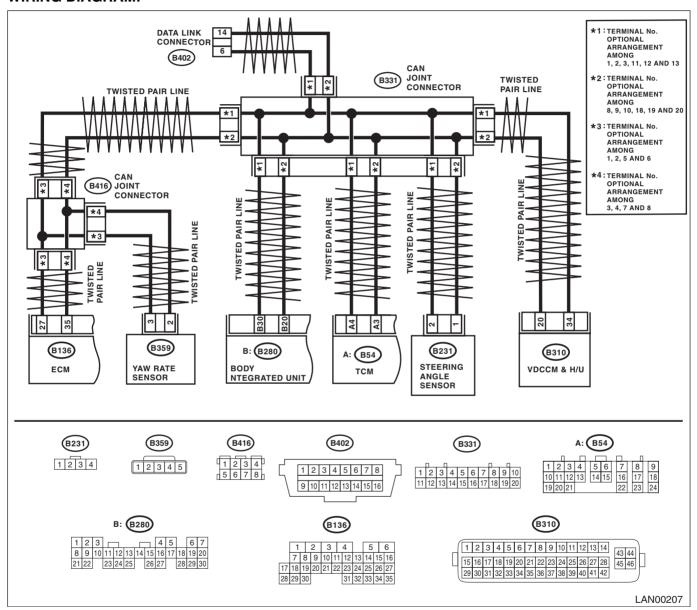
### M: DTC U1213 CAN-HS VDC/ABS DATA ABNORMAL

### **DTC DETECTING CONDITION:**

VDCCM body has error, the main harness is open or shorted, the connector is not connected properly, or the terminal has poor crimping.

#### TROUBLE SYMPTOM:

- ABS warning light and VDC warning light come on.
- "Er HC" or "Er Ab" is displayed in odo/trip meter.



	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read all DTCs.	Is there any DTC other than for the body integrated unit?	Perform the diag- nosis according to the DTC of other control modules.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 4.
4	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. Perform the Clear Memory operation.	Go to step 5.
5	CHECK VDCCM.  Read the DTC of VDCCM using Subaru Select Monitor.	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the VDCCM. <ref. to<br="">VDC-8, VDC Con- trol Module and Hydraulic Control Unit (VDCCM&amp;H/ U).&gt;</ref.>

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

### **DTC DETECTING CONDITION:**

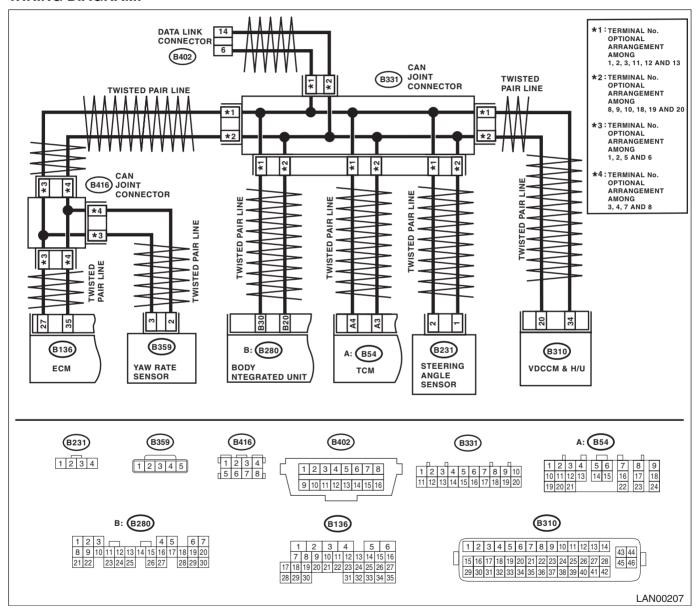
Defective ECM. (If error is in the main harness, DTC P0600 CAN communication link is input simultaneously.)

### NOTE:

When more than two DTCs are displayed. <Ref. to LAN(diag)-30, DTC TABLE, LIST, List of Diagnostic Trouble Code (DTC).>

### **TROUBLE SYMPTOM:**

- · Malfunction indicator light illuminates.
- "Er HC" is displayed in odo/trip meter.
- P1718 (TCM) and C0057 (VDCCM) are output.



	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read all DTCs.	Is there any DTC other than for the body integrated unit?	Perform the diag- nosis according to the DTC of other control modules.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 4.
4	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. 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 $\Omega$ ? (Specification 60 $\Omega$ )	Read the DTC of ECM. Perform the diagnosis according to the DTC. <ref. (dtc)="" (normal="" code="" diagnostic="" en(h6do)(diag)-28,="" engine="" for="" mode),="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble=""></ref.>	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 $\Omega$ ? (End resistance or main wiring harness is open.)	Go to step 7.	Related line of body integrated unit is open when $\infty \Omega$ . Repair the open circuit of harness or replace harness.
7	CHECK HARNESS.  1) Disconnect the ECM connector (B136).  2) Measure the resistance between harness connector terminals.  Connector & terminal  (B136) No. 27 — No. 35:	Is the resistance 115 — 125 $\Omega$ ? (End resistance specification 120 $\Omega$ )	Go to step 8.	Go to step 9.

	Step	Check	Yes	No
8	CHECK ECM.  1) Disconnect the ECM connector (B136).  2) Measure the resistance between ECM terminals.  Connector & terminal  (B136) No. 27 — No. 35:	Is the resistance between 115 — 125 $\Omega$ ?	Read the DTC of ECM. Perform the diagnosis according to the DTC. <ref. (dtc)="" (normal="" code="" diagnostic="" en(h6do)(diag)-28,="" engine="" for="" mode),="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble=""></ref.>	End resistance is open. Replace the ECM. <ref. to<br="">FU(H6DO)-33, Engine Control Module (ECM).&gt;</ref.>
9	CHECK HARNESS.  1) Disconnect the ECM connector (B137).  2) Measure the resistance between harness connector and chassis ground.  Connector & terminal  (B136) No. 27 — Chassis ground:  (B136) No. 35 — Chassis ground:	Is the resistance less than 10 $\Omega$ ?	Repair the short circuit of harness or replace har- ness.	Go to step 10.
10	CHECK HARNESS.  1) Disconnect the body integrated unit (B280), ECM (B136), TCM (B54), VDCCM (B310) and yaw rate sensor (B359) connectors.  2) Measure the voltage between harness connector and chassis ground while turning the ignition switch to ON.  Connector & terminal  (B280) No. 20 (+) — Chassis ground (-):  (B280) No. 30 (+) — Chassis ground (-):	Is the voltage 6 V or more?	Repair or replace the short circuit of the harness.	Read the DTC of ECM. Perform the diagnosis according to the DTC. <ref. (dtc)="" (normal="" code="" diagnostic="" en(h6do)(diag)-28,="" engine="" for="" mode),="" monitor.="" operation,="" read="" select="" subaru="" to="" trouble=""></ref.>

LAN SYSTEM (DIAGNOSTICS)

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

### **DTC DETECTING CONDITION:**

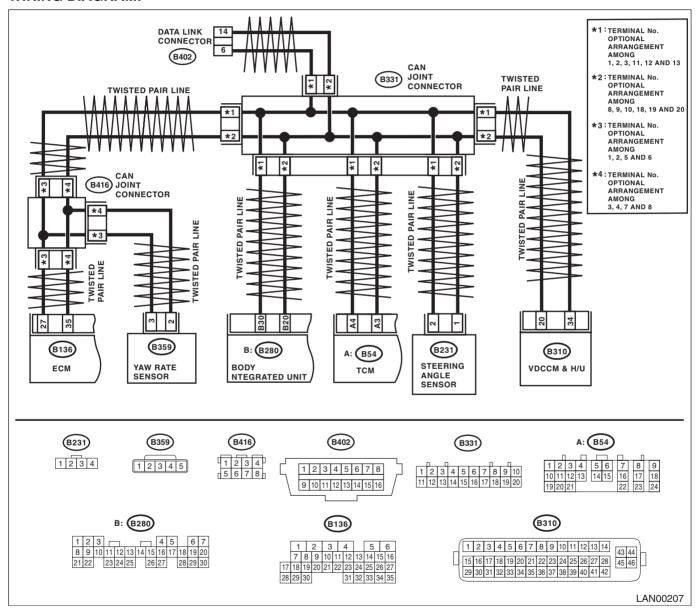
TCM has error, harness between the main harness splice and TCM is open or shorted, connectors are not connected securely, or the terminal has poor crimping.

### NOTE:

When more than two DTCs are displayed. <Ref. to LAN(diag)-30, DTC TABLE, LIST, List of Diagnostic Trouble Code (DTC).>

### **TROUBLE SYMPTOM:**

- · Malfunction indicator light illuminates.
- "Er HC" is displayed in odo/trip meter.
- P0600 (ECM) and C0057 (VDCCM) are output.



	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read all DTCs.	Is there any DTC other than for the body integrated unit?	Perform the diag- nosis according to the DTC of other control modules.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 4.
4	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. 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  (B54) No. 3 — No. 4:	Is the resistance $\infty$ $\Omega$ ?	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 TCM using the Subaru Select  Monitor. <ref. 5at(diag)-15,="" monitor.="" operation,="" select="" subaru="" to=""></ref.>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the TCM. <ref. 5at-58,<br="" to="">Transmission Con- trol Module (TCM).&gt;</ref.>

LAN SYSTEM (DIAGNOSTICS)

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

### **DTC DETECTING CONDITION:**

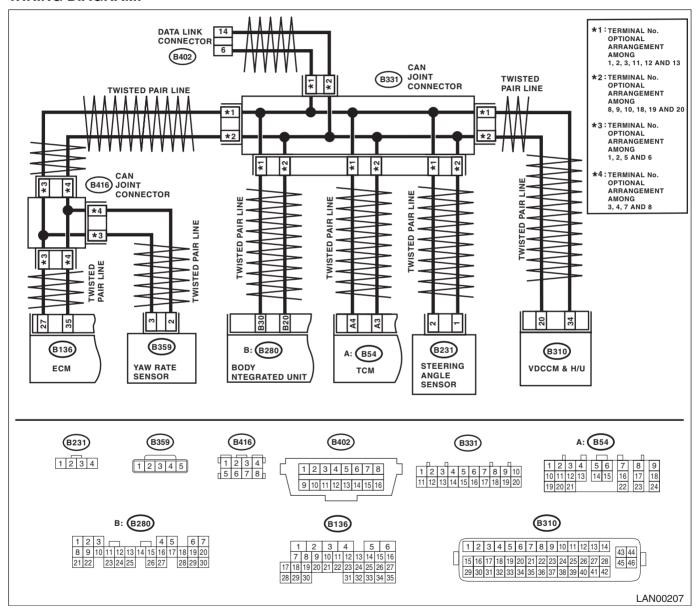
Defective VDCCM. (If error is in the main harness, DTC P0600 High-speed CAN circuit is input at the same time.)

### NOTE:

When more than two DTCs are displayed. <Ref. to LAN(diag)-30, DTC TABLE, LIST, List of Diagnostic Trouble Code (DTC).>

### **TROUBLE SYMPTOM:**

- ABS warning light and VDC warning light come on.
- "Er HC" is displayed in odo/trip meter.
- P0600 (ECM) and C1718 (TCM) are output.



	Step	Check	Yes	No
1	CHECK DTC.	Is there any DTC other than for the body integrated unit?	Perform the diag- nosis according to the DTC of other control modules.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 4.
4	CHECK CURRENT DATA.  On the Subaru Select Monitor, display engine speed and vehicle speed at the ECM, TCM, VDC/ABS and body integrated unit under the same conditions, and compare the data.	Do all data values match?	A temporary poor contact has occurred. 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 $\Omega$ ?	Read the DTC of VDCCM, and per- form the diagnosis according to DTC.	Go to step 6.
6	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 115 — 125 $\Omega$ ?	Go to step 9.	Go to step 7.
7	CHECK HARNESS.  1) Disconnect the harness connector of body integrated unit.  2) Measure the resistance between harness connector terminal and chassis ground.  Connector & terminal  (B280) No. 20 — Chassis ground:  (B280) No. 30 — Chassis ground:	Is the resistance $\infty$ $\Omega$ ?	Open circuit in related line of body integrated unit. Repair the open circuit of harness or replace harness.	Go to step 8.
8	CHECK HARNESS.  1) Disconnect the harness connector of body integrated unit.  2) Measure the voltage between harness connector terminal and chassis ground. (Ignition switch ON)  Connector & terminal  (B280) No. 20 (+) — Chassis ground (-):  (B280) No. 30 (+) — Chassis ground (-):	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Go to step 9.
9	CHECK END RESISTANCE.  1) Disconnect the VDCCM harness connector.  2) Measure the resistance between VDCCM connector terminals.  Connector & terminal  (B310) No. 20 — No. 34:	Is the resistance between 115 — 125 $\Omega$ ?	Go to step 10.	End resistance is open. Replace the VDCCM. <ref. to<br="">VDC-8, VDC Con- trol Module and Hydraulic Control Unit (VDCCM&amp;H/ U).&gt;</ref.>

	Step	Check	Yes	No
10	CHECK HARNESS.  1) Disconnect the body integrated unit connector (B280) and VDCCM connector (B310).  2) Measure the resistance between harness connector terminals.  Connector & terminal  (B310) No. 13 — (B280) No. 20:  (B310) No. 29 — (B280) No. 30:	Is the resistance less than 10 $\Omega$ ?	Go to step 11.	Main wiring har- ness is open. Repair the open circuit of harness or replace har- ness.
11		Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC concerning VDCCM.	Replace the VDCCM. <ref. to<br="">VDC-8, VDC Con- trol Module and Hydraulic Control Unit (VDCCM&amp;H/ U).&gt;</ref.>

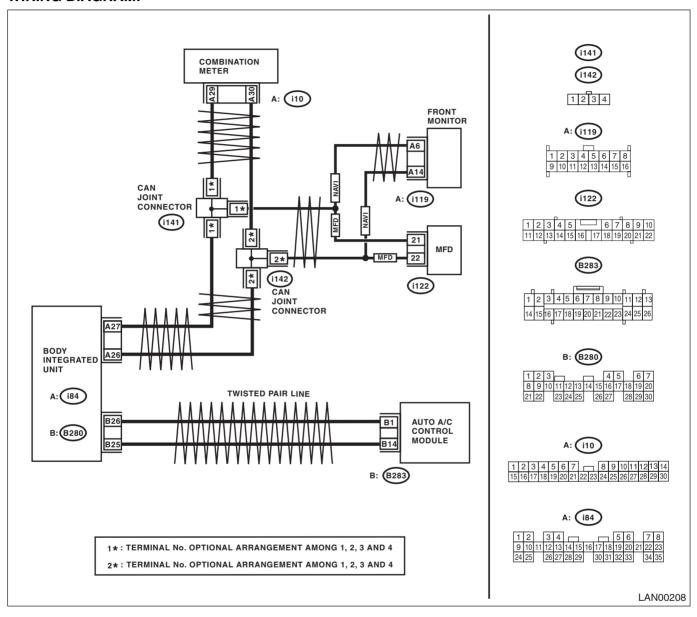
### Q: DTC U1300 CAN-LS MALFUNCTION

### **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, but communicating function is OK.



	Step	Check	Yes	No
1	CHECK DTC.	Are there any other DTC	Perform diagnosis	Go to step 2.
	Connect the Subaru Select Monitor and read the DTC of the body integrated unit.	besides U1300?	according to other DTC.	
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. body="" integrated="" removal,="" sl-51,="" to="" unit.=""></ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is U1300 a current malfunction?	<pre><ref. (dtc).="" can-="" code="" diagnostic="" dtc="" lan(diag)-67,="" ls="" malfunc-="" procedure="" tion,="" to="" trouble="" u1300="" with=""></ref.></pre>	Temporary poor contact occurs.
4	CHECK CURRENT DATA.  Check the current data (auto A/C failure) of the body integrated unit using the Subaru Select Monitor.	Is OK displayed?	Go to step 5.	Perform the auto A/ C self-diagnosis. <ref. ac(diag)-<br="" to="">10, OPERATION, Diagnostic Chart for Self-diagno- sis.&gt;</ref.>
5	CHECK CURRENT DATA.  Check current data (center display failure) of the body integrated unit.	Is OK displayed?	Go to step 6.	Repair or replace the center display or MFD. <ref. to<br="">ET-22, REMOVAL, Navigation Dis- play.&gt;</ref.>
6	CHECK HARNESS.  1) Disconnect the CAN junction connector (i141, i142) and body integrated unit connector (i84).  2) Measure the resistance between connector terminals.  Connector & terminal  (i84) No. 26 — (i142) No. 1 to 4:  (i84) No. 27 — (i141) No. 1 to 4:  NOTE:  The i128 junction connector is freely arranged.	Is the resistance less than 10 $\Omega$ ?	Go to step 7.	Repair the short circuit of harness or replace harness.
7	CHECK HARNESS.	Is the resistance less than 10 $\Omega$ ?	Go to step 8.	Repair the open circuit of harness or replace har- ness.
8	CHECK HARNESS.  1) Disconnect the body integrated unit connector (B280) and Auto A/C control module connector (B283).  2) Measure the resistance between body integrated unit connector and auto A/C control module connector.  Connector & terminal  (B283) No. 1 — (B280) No. 26:  (B283) No. 14 — (B280) No. 25:	Is the resistance less than 10 $\Omega$ ?	Go to step 9.	Repair the open circuit of harness or replace harness.

	Step	Check	Yes	No
9	CHECK HARNESS.  1) Connect the junction connector.  2) Measure the resistance between body integrated unit connector and chassis ground.  Connector & terminal  (B280) No. 25 — Chassis ground:  (B280) No. 26 — Chassis ground:  (i84) No. 26 — Chassis ground:  (i84) No. 27 — Chassis ground:	Is the resistance less than 10 $\Omega$ ?	Repair the short circuit of harness or replace har- ness.	Go to step 10.
10	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. 25 (+) — 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 har- ness.	Go to step 11.
11	CHECK AUTO A/C. Perform the auto A/C self-diagnosis. <ref. a="" ac(diag)-13,="" c="" chart="" control="" diagnostic="" for="" operation,="" self-diagnosis,="" self-diagnosis.="" system="" to=""></ref.>	Is the self-diagnosis OK?	Go to step 11.	Replace the auto A/C control mod- ule. <ref. ac-<br="" to="">33, REMOVAL, Control Unit (Auto A/C Model).&gt;</ref.>
12	CHECK COMBINATION METER.  1) Connect all the connectors.  2) Turn the ignition switch to ON.  3) Check the display of combination meter, odo/trip.	Is "Er SS" and "Er SP" displayed?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Replace the combination meter. <ref. idi-12,<br="" to="">REMOVAL, Combination Meter.&gt;</ref.>

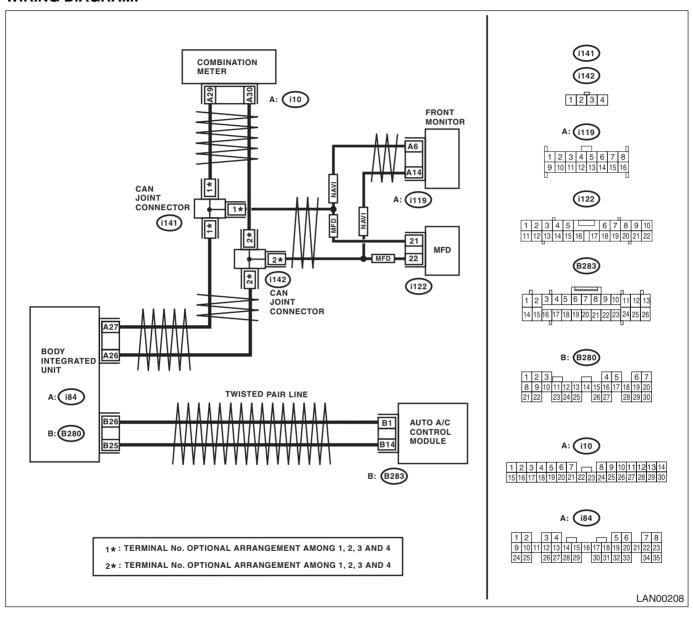
## R: DTC U1301 CAN-LS COUNTER ABNORMAL

### 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 malfunction occurs.)

### TROUBLE SYMPTOM:

"Er LC" is displayed in odo/trip meter.



	Chain	Ohook	Vaa	N-
<u> </u>	Step	Check	Yes	No
1	CHECK DTC.  Connect the Subaru Select Monitor and read the DTC of the body integrated unit.	Are there any other DTC besides U1301?	Perform diagnosis according to other DTC.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. body="" integrated="" removal,="" sl-51,="" to="" unit.=""></ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is U1301 a current malfunction?	<ref. to<br="">LAN(diag)-70, DTC U1301 CAN- LS COUNTER ABNORMAL, Diagnostic Proce- dure with Diagnos- tic Trouble Code (DTC).&gt;</ref.>	Temporary poor contact occurs.
4	CHECK CURRENT DATA.  Check the current data (auto A/C failure) of the body integrated unit using the Subaru Select Monitor.	Is OK displayed?	Go to step 5.	Perform the auto A/ C self-diagnosis. <ref. ac(diag)-<br="" to="">10, OPERATION, Diagnostic Chart for Self-diagno- sis.&gt;</ref.>
5	CHECK CURRENT DATA.  Check current data (center display failure) of the body integrated unit.	Is OK displayed?	Go to step 6.	Repair or replace the center display or MFD. <ref. to<br="">ET-22, REMOVAL, Navigation Dis- play.&gt;</ref.>
6	CHECK AUTO A/C CONTROL MODULE.  1) Display the current data of body integrated unit using Subaru Select Monitor.  2) Display the number of blower fan speed in the analog data.  3) Read the data display when the number of blower fan speed is changed on air conditioner control part.	Does the data display change?	Go to step 7.	Go to step 8.
7	CHECK COMBINATION METER.  1) Display the current data of body integrated unit using Subaru Select Monitor.  2) Display the door switch in analog data.  3) Read the display of data and combination meter when each door is opened/closed.	Do the body integrated unit data indicator and combination meter indicator change according to operation?	Go to step 8.	Go to step 9.
8	CHECK AUTO A/C CONTROL MODULE HARNESS.  1) Disconnect the auto A/C control module connector.  2) Disconnect the body integrated unit connector.  3) Measure the resistance of harness between body integrated unit and auto A/C control module.  Connector & terminal (B280) No. 26 — (D283) No. 1: (B280) No. 25 — (D283) No. 14:	Is the resistance less than 10 $\Omega$ ?	Go to step 10.	Repair the open circuit of harness or replace harness.

	Step	Check	Yes	No
9	CHECK COMBINATION METER HARNESS.  1) Disconnect the combination meter connector.  2) Disconnect the body integrated unit connector.  3) Measure the resistance between body integrated unit and combination meter connector.  Connector & terminal  (i84) No. 26 — (i10) No. 30:  (i84) No. 27 — (i10) No. 29:	Is the resistance less than 10 $\Omega$ ?	Go to step 11.	Repair the open circuit of harness or replace harness.
10	CHECK AUTO A/C CONTROL MODULE. Perform the auto A/C control module self-diagnosis. <ref. a="" ac(diag)-13,="" c="" chart="" control="" diagnostic="" for="" operation,="" self-diagnosis,="" self-diagnosis.="" system="" to=""></ref.>	Is the self-diagnosis OK?	Go to step 11.	Replace the auto A/C control mod- ule. <ref. ac-<br="" to="">33, REMOVAL, Control Unit (Auto A/C Model).&gt;</ref.>
11	CHECK COMBINATION METER.  Perform the self-diagnosis for combination meter system. <ref. combination="" idi-4,="" inspection,="" meter="" self-diagno-sis,="" system.="" to=""></ref.>	Is the self-diagnosis OK?	Go to step 12.	Replace the combination meter. <ref. combination="" idi-12,="" meter.="" removal,="" to=""></ref.>
12	CHECK BODY INTEGRATED UNIT.  Read the data of "body integrated unit data received" on ECM data display using Subaru Select Monitor.	Is "Yes" displayed?	Go to step 13.	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>
13	CHECK BODY INTEGRATED UNIT.  Read the data of "body integrated unit counter update" on ECM data display using Subaru Select Monitor.	Is "Yes" displayed?	Temporary poor contact occurs. Check the connection of connector.	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>

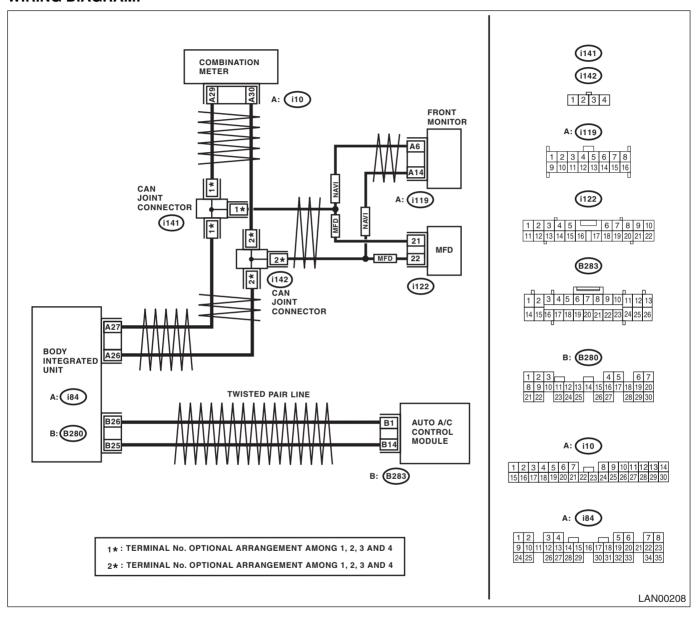
## S: DTC U1302 CAN-LS BUS OFF

### **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.



	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read the DTC of the body integrated unit.	Are there any other DTC besides U1302?	Perform diagnosis according to other DTC.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	DTC again.	Is U1302 a current malfunction?	<ref. to<br="">LAN(diag)-73, DTC U1302 CAN- LS BUS OFF, Diag- nostic Procedure with Diagnostic Trouble Code (DTC).&gt;</ref.>	Temporary poor contact occurs.
4	CHECK CURRENT DATA.  Check the current data (auto A/C failure) of the body integrated unit using the Subaru Select Monitor.	Is OK displayed?	Go to step 5.	Perform the auto A/ C self-diagnosis. <ref. ac(diag)-<br="" to="">10, OPERATION, Diagnostic Chart for Self-diagno- sis.&gt;</ref.>
5	CHECK CURRENT DATA.  Check current data (center display failure) of the body integrated unit.	Is OK displayed?	Go to step 6.	Repair or replace the center display or MFD. <ref. to<br="">ET-22, REMOVAL, Navigation Dis- play.&gt;</ref.>
6	CHECK AUTO A/C CONTROL MODULE.  1) Display the current data of body integrated unit using Subaru Select Monitor.  2) Display the number of blower fan levels in the analog data.  3) Read the data display when the number of blower fan levels is changed on air conditioner control part.	Does the data display change?	Go to step 7.	Go to step 8.
7	CHECK COMBINATION METER.	Do the body integrated unit data indicator and combination meter indicator change according to operation?	Go to step 8.	Go to step 9.
8	CHECK AUTO A/C CONTROL MODULE HARNESS.  1) Disconnect the auto A/C control module connector.  2) Disconnect the body integrated unit connector.  3) Measure the resistance of harness between body integrated unit and auto A/C control module.  Connector & terminal (B280) No. 26 — (D283) No. 1: (B280) No. 25 — (D283) No. 14:	Is the resistance less than 10 $\Omega$ ?	Go to step 9.	Repair the open circuit of harness or replace harness.

	Step	Check	Yes	No
9	CHECK COMBINATION METER HARNESS.  1) Disconnect the combination meter connector.  2) Disconnect the body integrated unit connector.  3) Measure the resistance between body integrated unit and combination meter connector.  Connector & terminal  (i84) No. 26 — (i10) No. 29:  (i84) No. 27 — (i10) No. 30:	Is the resistance less than 10 $\Omega$ ?	Go to step 11.	Repair the open circuit of harness or replace harness.
10	CHECK AUTO A/C CONTROL MODULE. Perform the auto A/C control module self-diagnosis. <ref. a="" ac(diag)-13,="" c="" chart="" control="" diagnostic="" for="" operation,="" self-diagnosis,="" self-diagnosis.="" system="" to=""></ref.>	Is the self-diagnosis OK?	Go to step 11.	Replace the auto A/C control mod- ule. <ref. ac-<br="" to="">33, REMOVAL, Control Unit (Auto A/C Model).&gt;</ref.>
11	CHECK COMBINATION METER.  Perform the self-diagnosis for combination meter system. <ref. combination="" idi-4,="" inspection,="" meter="" self-diagno-sis,="" system.="" to=""></ref.>	Is the self-diagnosis OK?	Go to step 12.	Replace the combination meter. <ref. combination="" idi-12,="" meter.="" removal,="" to=""></ref.>
12	CHECK BODY INTEGRATED UNIT.  Read the data of "body integrated unit data received" on ECM data display using Subaru Select Monitor.	Is "Yes" displayed?	Go to step 13.	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>
13	CHECK BODY INTEGRATED UNIT.  Read the data of "body integrated unit counter update" on ECM data display using Subaru Select Monitor.	Is "Yes" displayed?	Connect all con- nectors, and make sure that the same DTC is not dis- played.	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>

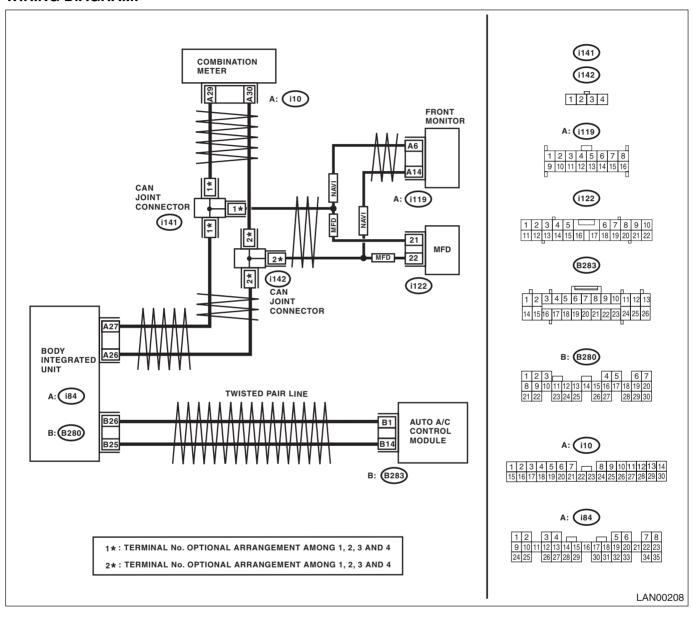
## T: DTC U1311 CAN-LS METER UNIT DATA ABNORMAL

### **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.



	Step	Check	Yes	No
1	CHECK DTC. Connect the Subaru Select Monitor and read the DTC of the body integrated unit.	Are there any other DTC besides U1311?	Perform diagnosis according to other DTC.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed a current malfunction?	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF, and read the DTC again.	Is U1311 a current malfunction?	<ref. p="" to<=""> LAN(diag)-76, DTC U1311 CAN- LS METER UNIT DATA ABNOR- MAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).&gt;</ref.>	Temporary poor contact occurs.
4	CHECK COMBINATION METER. Perform the self-diagnosis of combination meter. <ref. combination="" idi-4,="" inspection,="" meter="" self-diagnosis,="" system.="" to=""></ref.>	Is the self-diagnosis OK?	Read the DTC again, and then perform the diag- nosis according to DTC displayed on the top.	Replace the combination meter. <ref. combination="" idi-12,="" meter.="" removal,="" to=""></ref.>

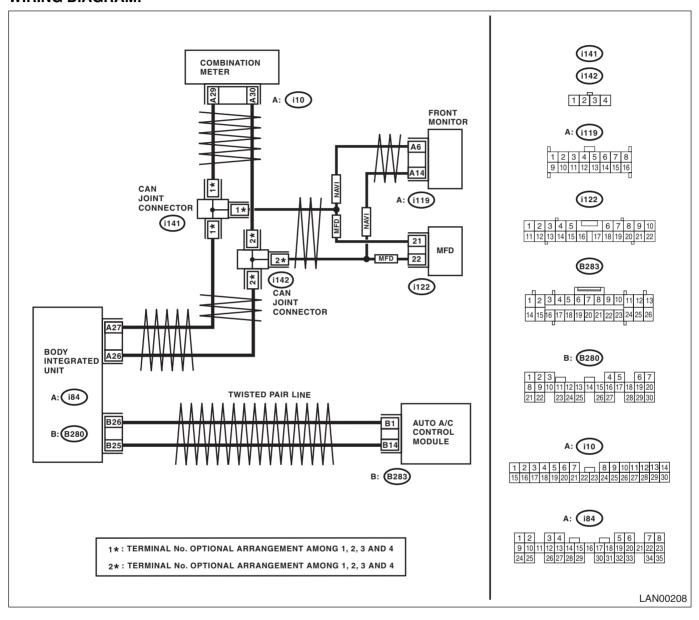
## U: DTC U1313 CAN-LS MONITOR DATA ABNORMAL

### **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.



	Step	Check	Yes	No
1	CHECK CENTER MONITOR.  1) Display the current data of body integrated unit using Subaru Select Monitor.  2) Display center monitor display fail.	Is OK displayed?	Go to step 2.	Refer to MFD or navigation display. <ref. et-22,<br="" to="">REMOVAL, Navi- gation Display.&gt; <ref. et-28,<br="" to="">REMOVAL, Multi- function Display (MFD).&gt;</ref.></ref.>
2	CHECK NAVIGATION.  1) Display the current data of body integrated unit using Subaru Select Monitor.  2) Display NAVI fail.	Is OK displayed?	Refer to MFD or navigation display. <ref. et-22,<br="" to="">REMOVAL, Navi- gation Display.&gt; <ref. et-28,<br="" to="">REMOVAL, Multi- function Display (MFD).&gt;</ref.></ref.>	Refer to navigation body. <ref. et-<br="" to="">23, REMOVAL, Navigation Body.&gt;</ref.>

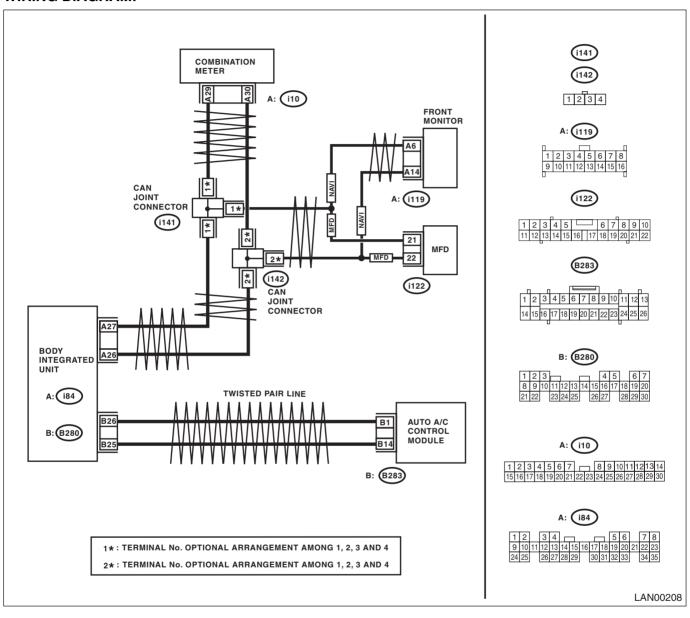
## V: DTC U1321 CAN-LS METER NO-RECEIVE DATA

### **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.



	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 the self-diagnosis of combination meter. <ref. combination="" idi-4,="" inspec-tion,="" meter="" self-diagno-sis,="" system.="" to=""></ref.>
2	CHECK HARNESS.  1) Disconnect the body integrated unit and combination meter connector.  2) Measure the resistance between harness connectors.  Connector & terminal  (i10) No. 29 — (i84) No. 27:  (i10) No. 30 — (i84) No. 26:	Is the resistance less than 10 $\Omega$ ?	Go to step 4.	Go to step 3.
3	CHECK HARNESS.  1) Disconnect the CAN joint connector (i141 and i142) with the unit connector disconnected.  2) Measure the resistance between harness connectors.  Connector & terminal  (i10) No. 29 — (i141) No. 1 to 4:  (i10) No. 30 — (i142) No. 1 to 4:  (i84) No. 27 — (i141) No. 1 to 4:  (i84) No. 26 — (i142) No. 1 to 4:	Is the resistance less than 10 $\Omega$ ?	Go to step 4.	Repair or replace the open circuit of harness.
4	CHECK HARNESS.  Measure the resistance between harness connector (i141 and i142) and chassis ground.  Connector & terminal  (i141) No. 1 to 4 — Chassis ground:  (i142) No. 1 to 4 — Chassis ground:	Is the resistance less than 10 $\Omega$ ?	Repair the short circuit of harness or replace har- ness.	Go to step 5.
5	CHECK HARNESS.  1) Turn the ignition switch to ON. 2) Measure the voltage between harness connector (i141 and i142) and chassis ground.  Connector & terminal  (i141) No. 1 to 4 (+) — Chassis ground (-):  (i142) No. 1 to 4 (+) — Chassis ground (-):		Repair the short circuit of harness or replace har- ness.	Go to step 6.
6	CHECK COMBINATION METER. Perform the self-diagnosis of combination meter. <ref. combination="" idi-4,="" inspection,="" meter="" self-diagnosis,="" system.="" to=""></ref.>	Is the self-diagnosis OK?	Temporary poor contact occurs.	Check the connection of connector. Replace the combination meter. <ref. combination="" idi-12,="" meter.="" removal,="" to=""></ref.>

LAN SYSTEM (DIAGNOSTICS)

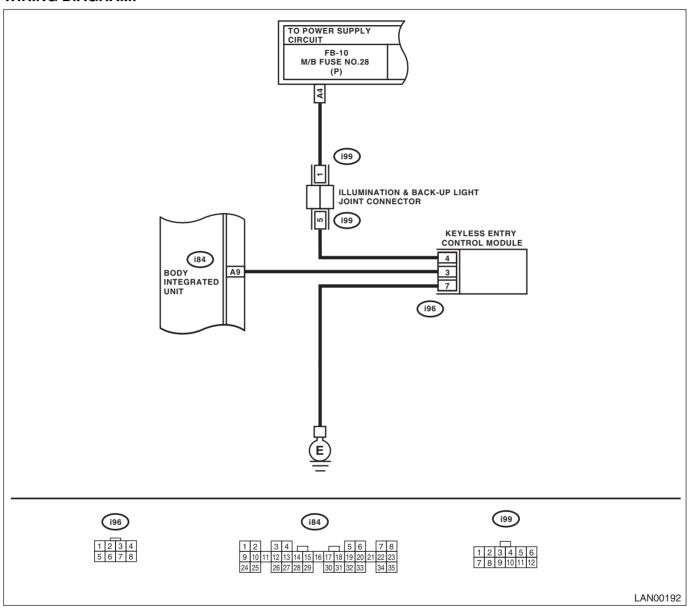
## W: DTC B1500 KEYLESS UART COM. MALFUNCTION

### 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 has poor crimping.

### TROUBLE SYMPTOM:

Door lock does not operate with keyless.



	Step	Check	Yes	No
1	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 $\Omega$ ?	Go to step 2.	Repair the open circuit of harness or replace harness.
2	CHECK HARNESS.  Measure the resistance between harness connector and chassis ground.  Connector & terminal  (i84) No. 9 — Chassis ground:	Is the resistance less than 1 $\mbox{M}\Omega ?$	Repair the short circuit of harness or replace har- ness.	Go to step 3.
3	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 har- ness.	Go to step 4.
4	OPERATION CHECK Check the door lock operation when the doors LOCK/UNLOCK using manual LOCK switch.	Does it operate on switch operation?	Go to step 5.	Replace the body integrated unit. <ref. sl-51,<br="" to="">REMOVAL, Body Integrated Unit.&gt;</ref.>
5	OPERATION CHECK  1) Disconnect the key warning switch connector (B350).  2) Close all the doors, and then perform the LOCK/UNLOCK operation on keyless entry operation.	Does it operate?	Check key warning switch.	Replace the key- less entry control module. <ref. to<br="">SL-49, REMOVAL, Keyless Entry Con- trol Module.&gt;</ref.>