BODY SECTION

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicles.
This manual includes the procedures for maintenance, disassembling, reassembling, inspection and adjustment of components and diagnostics for guidance of experienced mechanics.
Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

BODY SECTION

LAN SYSTEM (DIAGNOSTICS)

LAN(diag)

1. Basic Diagnostic Procedure

A: PROCEDURE

1. WITH SUBARU SELECT MONITOR

CAUTION:
• Subaru Select Monitor is required for reading DTC, performing diagnosis and reading current data.
• Remove foreign matter (dust, water and oil etc.) from the body integrated unit connector during removal and installation.
• For the model with immobilizer, registration of immobilizer may be needed after the replacement of controller and etc. For detail procedure, refer to "REGISTRATION MANUAL FOR IMMOBILIZER".

NOTE:
• To check harness for broken wires or short circuits, shake it while holding it or the connector.
• Check List for Interview <Ref. to LAN(diag)-3, Check List for Interview.>

	Step	Check	Yes	No
1	**CHECK PRE-INSPECTION.** 1) Ask the customer when and how the trouble occurred using interview check list. <Ref. to LAN(diag)-3, Check List for Interview.> 2) Check the display of freeze frame data. (Combination meter, odo/trip meter)	Is freeze frame data displayed?	Go to step **3.**	Go to step **2.**
2	**BASIC INSPECTION.** Check the components which might affect body control. <Ref. to LAN(diag)-5, INSPECTION, General Description.>	Is the component that might influence the body control problem normal?	Go to step **3.**	Repair or replace each unit.
3	**CHECK INDICATION OF DTC.** 1) Read the DTC. <Ref. to LAN(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> NOTE: If the communication function of the Subaru Select Monitor cannot be executed normally, check the communication circuit. <Ref. to LAN(diag)-30, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> 2) Record all DTCs and freeze frame data.	Is DTC displayed?	Go to step **5.**	Go to step **4.**
4	**PERFORM THE GENERAL DIAGNOSTICS.** Inspect using "General Diagnostics Table". <Ref. to LAN(diag)-79, General Diagnostic Table.>	Is result of inspection OK?	LAN system is normal.	Go to step **5.**
5	**PERFORM THE DIAGNOSIS.** 1) Fix the wrong part. 2) Perform the clear memory mode. <Ref. to LAN(diag)-20, CLEAR MEMORY MODE, OPERATION, Subaru Select Monitor.> 3) Read DTC. <Ref. to LAN(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC displayed?	Repeat step 5 until DTC is not shown.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Inspect the following items about the vehicle's state.

1. DISPLAY OF FREEZE FRAME DATA

Freeze frame data is displayed in odo/trip meter.	When and how often are they displayed? ❑ Always ❑ Sometimes ❑ Only once
	Which freeze frame data is displayed? (Record them all) ❑ Er IU (Fail in the body integrated unit) ❑ Er HC (Fail of high-speed CAN) ❑ Er LC (Fail of low-speed CAN) ❑ Er –– (Fails of both high-speed and low-speed CAN) ❑ Er EG (Fail of EGI communication counter) ❑ Er TC (Fail of TCM communication counter) ❑ Er Ab (Fail of vehicle dynamics control (VDC)/ABS communication counter)
Ignition key position	❑ OFF ❑ ACC ❑ ON (before starting engine) ❑ START ❑ ON (after Engine starting, engine is running) ❑ ON (after Engine starting, engine is at a standstill)
Timing	❑ Immediately after turning the ignition to ON ❑ Immediately after turning the ignition to START

2. DISPLAY IN COMBINATION METER

Display in combination meter	a) Display of temperature gauge	❑ OK / ❑ NG
	b) Display of fuel gauge	❑ OK / ❑ NG
Center display	c) Display of ambient temperature	❑ OK / ❑ NG
Display of other indicators	d) Malfunction indicator light	❑ ON / ❑ OFF
	e) SPORT indicator light (AT warning light)	❑ ON / ❑ OFF
	f) ABS warning light/Vehicle dynamics control (VDC) warning light	❑ ON / ❑ OFF
	g) Immobilizer indicator light	❑ ON / ❑ Blink / ❑ OFF
	h) Seat belt warning light (Driver's seat)	❑ ON / ❑ OFF
	i) Seat belt warning light (Passenger's seat)	❑ ON / ❑ OFF

3. SYMPTOMS

Behavior of vehicle	a) Illumination volume control is not available.	❑ Yes / ❑ No
	b) Rear wiper does not operate.	❑ Yes / ❑ No
	c) Wiper deicer does not operate.	❑ Yes / ❑ No
	d) Rear defogger does not operate.	❑ Yes / ❑ No
	e) Door lock does not operate.	❑ Yes / ❑ No
	f) Trunk/rear gate lock does not operate	❑ Yes / ❑ No
	g) Driver's door lock does not operate.	❑ Yes / ❑ No
	h) Shift lock does not operate.	❑ Yes / ❑ No
	i) Rear fog light does not come on.	❑ Yes / ❑ No
	j) Double lock does not operate. (EK model)	❑ Yes / ❑ No
	k) Heater cock valve does not operate.	❑ Yes / ❑ No
	l) Key illumination blinks.	❑ Yes / ❑ No

4. CONDITIONS UNDER WHICH TROUBLE OCCURS

Driving condition	❑ At standstill (While idling)			
	❑ When the vehicle is running	Vehicle speed	km/h (MPH)	
	❑ When accelerating	Acceleration	km/h (MPH) to	km/h (MPH)
	❑ Decelerating (With braking)	Deceleration	km/h (MPH) to	km/h (MPH)
	❑ Decelerating (Without braking)	Deceleration	km/h (MPH) to	km/h (MPH)
	❑ Flat road ❑ Uphill ❑ Downhill ❑ Gravel road ❑ Bumpy road ❑ Snowy road			
	Does it occur when operating any part? Operated part: Trouble Symptom:			
	Are other troubles occurred? From where: Trouble Symptom:			

3. General Description

A: CAUTION

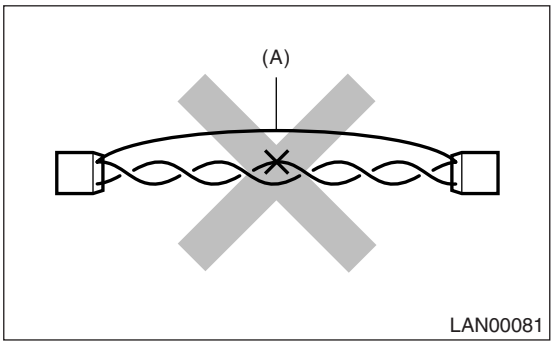
1. SRS AIRBAG SYSTEM

Airbag system wiring harness is routed near the body integrated unit and twisted pair line.

CAUTION:
• All airbag system wiring harness and connectors are colored yellow. Do not use the electrical test equipment on these circuits.
• Be careful not to damage the Airbag system wiring harness when servicing the body integrated unit and LAN system.

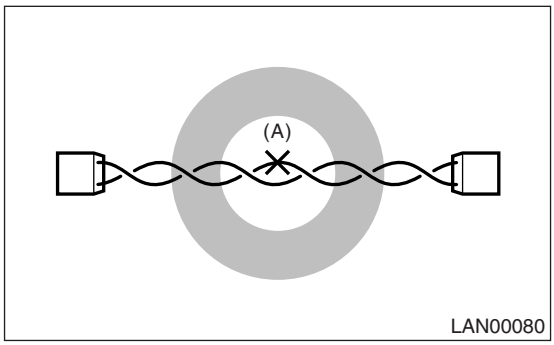
2. LAN SYSTEM

• Bus line of LAN system is twisted pair line. Be careful not to bypass or partly unbind the twisted pair line.
• Do not make clearance between bus lines (CAN High, CAN Low).
• Difference of bus line length should be within 10 cm (3.94 in).
• Fray near the connector should be within 8 cm (3.94 in).



(A) Bypass wire connection

• If the characteristics of the twisted pair line is changed, it may cause extremely weakness to the noise.
• When repairing the harness, connect the wires using soldering and protect it with insulating tape, etc.



(A) Soldering and protection with insulating tape

B: INSPECTION

Before performing diagnostics, check the following items which might affect body integrated unit malfunctions.
1) Measure the battery voltage and check electrolyte.

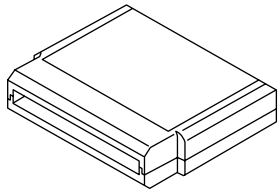
Standard voltage: 12 V, or more

Specific gravity: Above 1.260

2) Check the fuse condition.
Make sure that ampere of the fuse is setting value, and it is not blown out.
3) Check the connecting condition of harness and harness connector.
4) Confirm settings of body integrated unit are corresponded to vehicle equipment. <Ref. to LAN(diag)-18, REGISTRATION BODY INTEGRATED UNIT (EQUIPMENT SETTING), OPERATION, Subaru Select Monitor.>
5) Confirm setting are corresponded to vehicle equipment by function setting (ECM customizing) of body integrated unit. <Ref. to LAN(diag)-20, FREEZE FRAME DATA, OPERATION, Subaru Select Monitor.>
6) Confirm “Factory initial setting” of body integrated unit registrations is “Market”.
7) Confirm key illumination does not blink with ignition switch turned to ON.

C: PREPARATION TOOL

1. SPECIAL TOOL

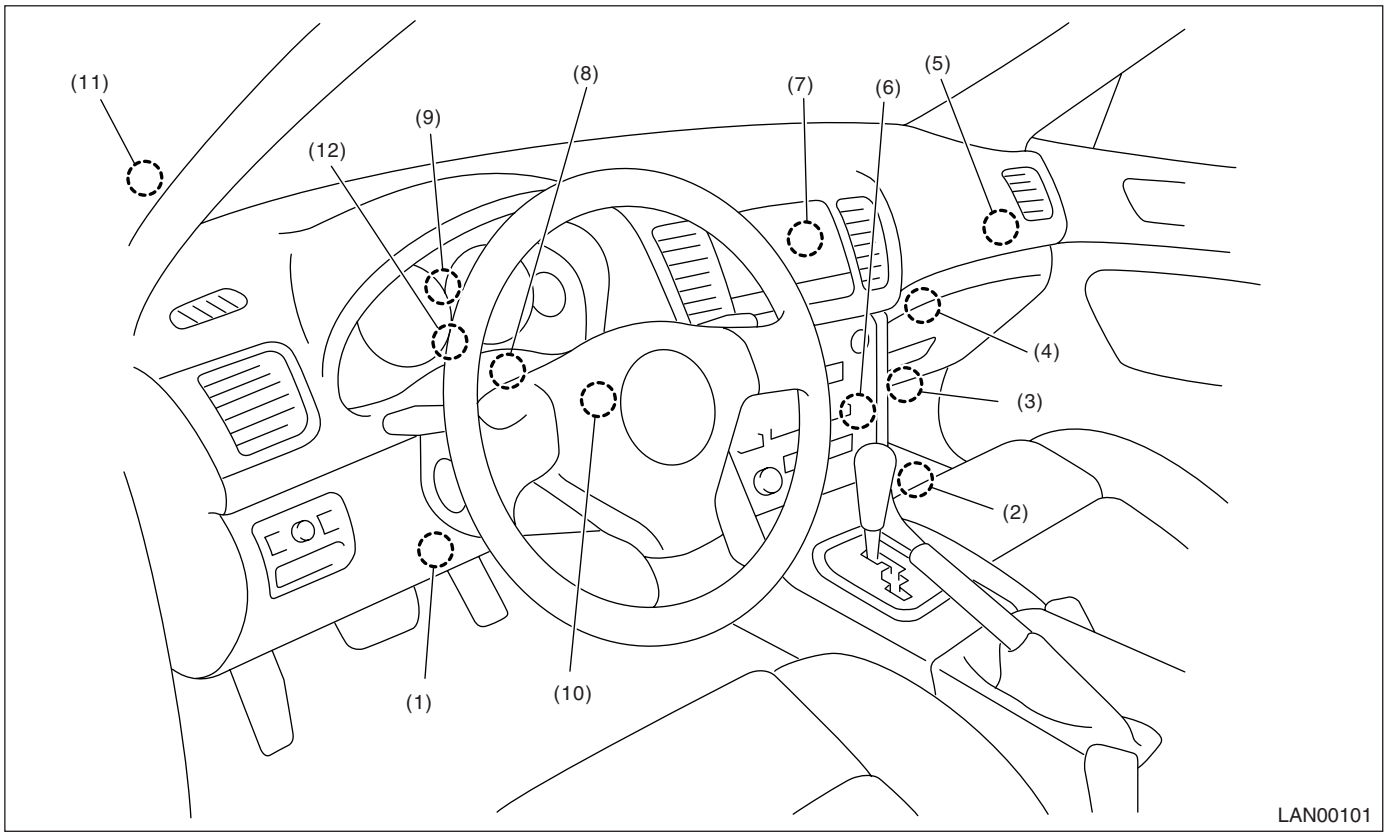
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST24082AA230	24082AA230	CARTRIDGE	Troubleshooting for electrical system.
 ST22771AA030	22771AA030	SUBARU SELECT MONITOR KIT	Troubleshooting for electrical system. • English: 22771AA030 (Without printer) • German: 22771AA070 (Without printer) • French: 22771AA080 (Without printer) • Spanish: 22771AA090 (Without printer)

2. GENERAL TOOL

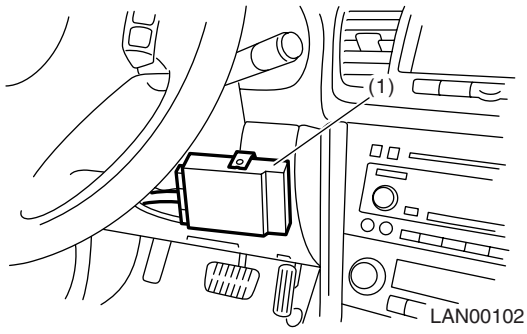
TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and ampere.

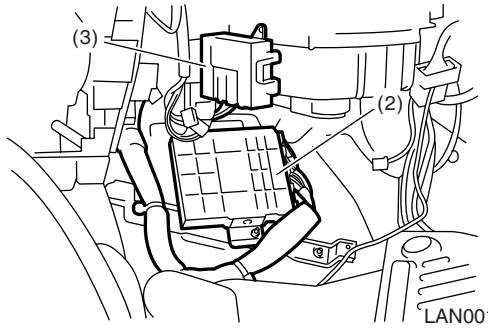
4. Electrical Component Location

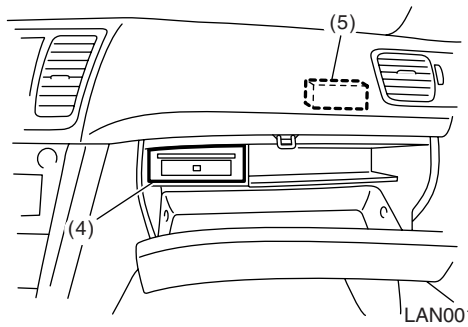
A: LOCATION

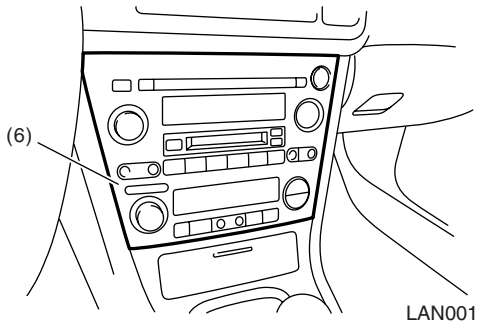


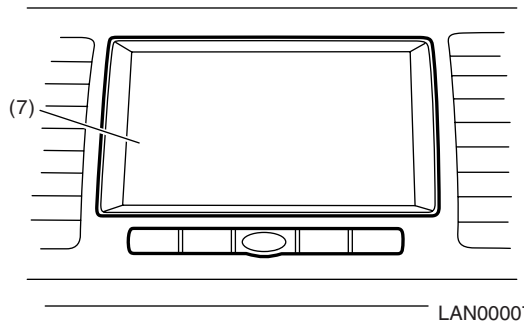
(1) Body integrated unit
(2) Engine control module (ECM)
(3) Auto A/C control unit
(4) Navigation module
(5) Keyless entry control unit (Antenna)
(6) A/C control panel
(7) Center display
(8) Transmission control module (TCM)
(9) Combination meter
(10) Steering angle sensor
(11) ABSCM&H/U or VDCCM&H/U (In engine compartment)
(12) Odo/trip meter

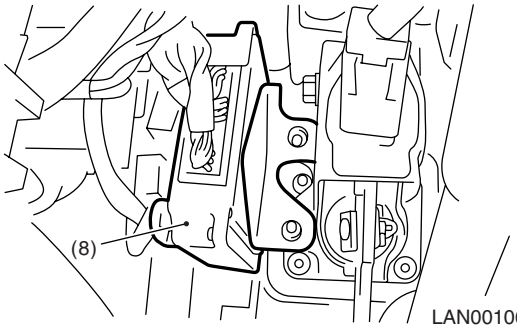


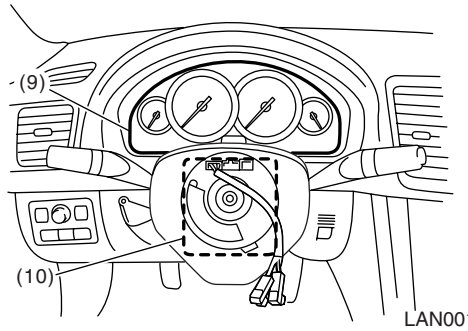


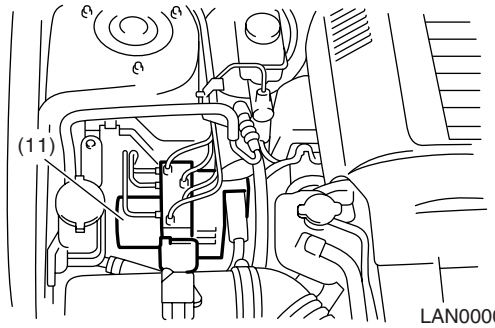

(5)
(4)
LAN00104

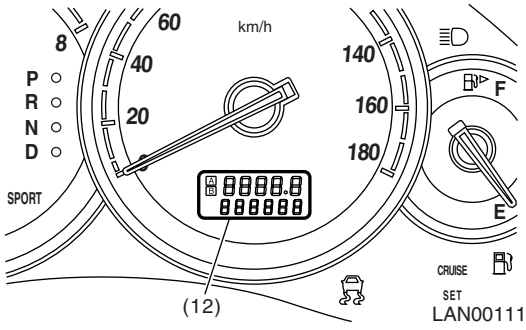

(6)
LAN00105


(7)
LAN00007


(8)
LAN00106

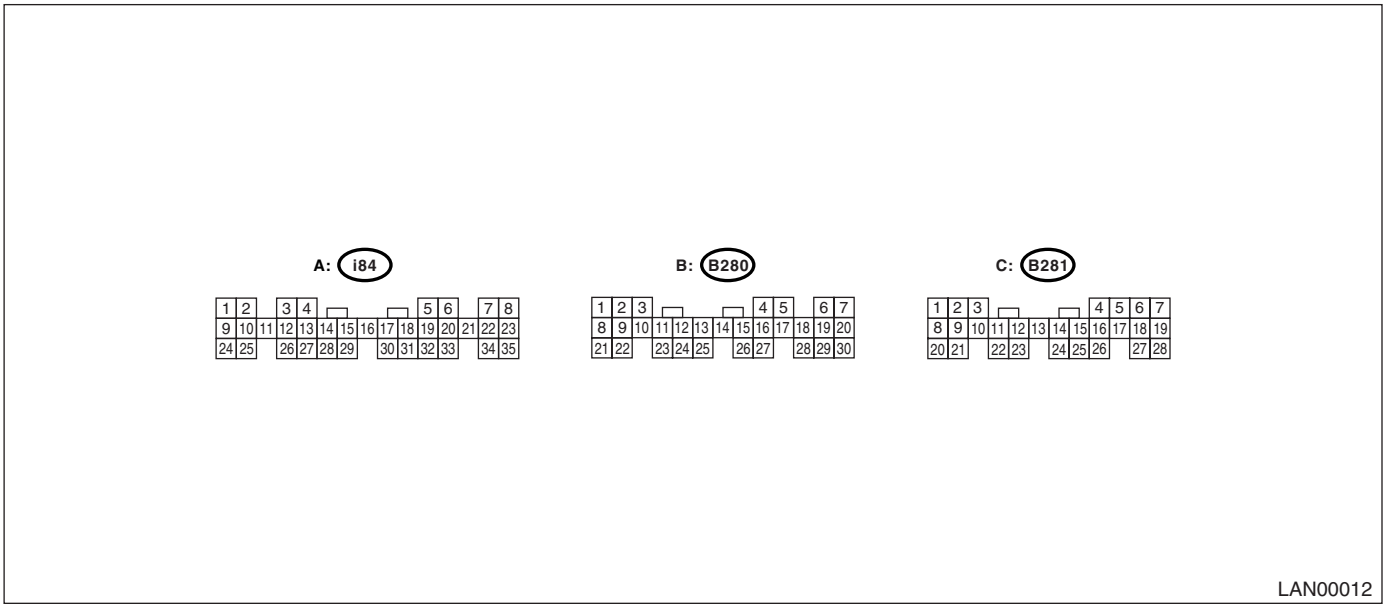

(9)
(10)
LAN00107


(11)
LAN00008


8
60
km/h
40
140
20
160
180
P
R
N
D
SPORT
F
E
CRUISE
SET
(12)
LAN00111

5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



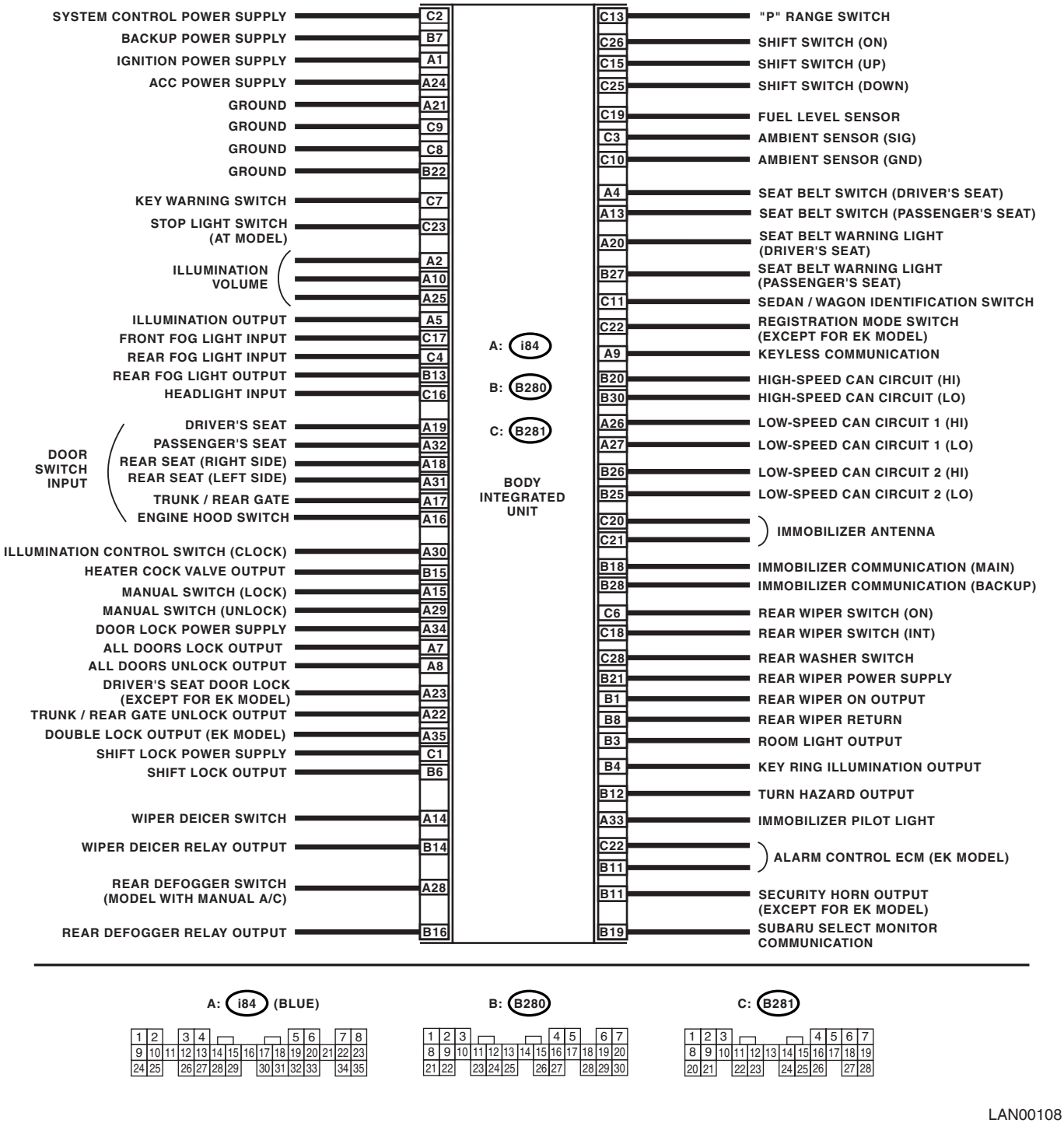
Description	Connector No.	Terminal No.	Signal (V or Ω)	NOTE
			Ignition switch ON (engine OFF)	
System control power supply	B281	C2	10 — 13 V	Always
Backup power supply	B280	B7	10 — 13 V	Always
Ignition power supply	i84	A1	10 — 13 V	Ignition ON
ACC power supply	i84	A24	10 — 13 V	ACC ON
Ground	i84	A21	Less than 1 Ω	Always
	B281	C9		
	B281	C8		
	B280	B22		
Key warning switch	B281	C7	10 — 13 V	When ignition key inserted
Stop light switch	B281	C23	10 — 13 V	When brake pedal depressed
Illumination volume (Vi1)	i84	A10	4.5 — 5.5 V	Small light ON
Illumination volume (Vi 2)	i84	A2	0.5 — 4.5 V	—
Illumination volume (Vi 3)	i84	A25	Less than 1 Ω	Ground circuit
Illumination output	i84	A5	10 — 13 V	Small light ON
Front fog light input	B281	C17	10 — 13 V	Front fog light ON
Rear fog light input	B281	C4	10 — 13 V	Small light ON Front fog light ON Rear fog light ON
Rear fog light output	B280	B13	10 — 13 V	Rear fog light ON
Headlight input	B281	C16	10 — 13 V	Headlight ON (Both of Hi, Lo)
Door switch input Driver's seat	i84	A19	Less than 1 V (10 — 13 V at OFF)	Driver's door open (ON)
Door switch input Passenger's seat	i84	A32	Less than 1 V (10 — 13 V at OFF)	Passenger's door open (ON)
Door switch input Rear RH seat	i84	A18	Less than 1 V (10 — 13 V at OFF)	Rear RH door open (ON)

Control Module I/O Signal

Description	Connector No.	Terminal No.	Signal (V or Ω)	NOTE
			Ignition switch ON (engine OFF)	
Door switch input Rear LH seat	i84	A31	Less than 1 V (10 — 13 V at OFF)	Rear LH door open (ON)
Door switch Trunk/Rear gate	i84	A17	Less than 1 V (10 — 13 V at OFF)	Trunk/Rear gate open (ON)
Illumination control switch	i84	A30	10 — 13 V (at dimmer ON)	Extinct the clock and audio illumination
Manual switch (LOCK)	i84	A15	Less than 1 Ω	Door lock switch ON
Manual switch (UNLOCK)	i84	A29	Less than 1 Ω	Door lock switch ON
Door lock power supply	i84	A34	10 — 13 V	
All door LOCK output	i84	A7	10 — 13 V	Manual, door key switch ON
All door UNLOCK output	i84	A8	10 — 13 V	Manual, door key switch ON
Trunk/Rear gate UNLOCK output	i84	A22	10 — 13 V	When the trunk open signal received with keyless entry (Sedan model)
Key/shift lock power supply	B281	C1	10 — 13 V	
Shift lock output	B280	B6	10 — 13 V	Ignition switch ON, at “P” range, foot brake ON
Wiper deicer switch	i84	A14	Less than 1 Ω	Wiper deicer switch ON
Wiper deicer relay output	B280	B14	Less than 1 Ω	Wiper deicer relay ON
Rear defogger switch	i84	A28	Less than 1 Ω	Rear defogger switch ON
Rear defogger relay output	B281	B16	Less than 1 Ω	Rear defogger relay ON
Shift switch (ON)	B281	C26	Less than 1 Ω	At Manual mode
Shift switch (UP)	B281	C15	Less than 1 Ω	At Manual mode UP
Shift switch (DOWN)	B281	C25	Less than 1 Ω	At Manual mode DOWN
“P” range switch	B281	C13	Less than 1 Ω	
Impact sensor	B281	C5	Less than 1 Ω	Impact sensor ON (Model with immobilizer)
Fuel level sensor	B281	C19	0 — 102.3 Ω	
Ambient sensor	B281	C3	0.5 — 4.5 V	SIG
	B281	C10	Less than 1 Ω	GND
Seat belt switch (driver’s seat)	i84	A4	Less than 1 Ω	Driver’s seat belt worn
Seat belt switch (passenger’s seat)	i84	A13	Less than 1 Ω	Passenger’s seat belt worn
Seat belt warning light (driver’s seat)	i84	A20	Less than 1 Ω	Driver’s seat belt worn
Seat belt warning light (passenger’s seat)	B281	C24	Less than 1 Ω	Passenger’s seat belt worn
Sedan/Wagon identification switch	B281	C11	Sedan 10 — 13 V Wagon 0 — 5 V	
Rear wiper switch (ON)	B281	C6	Less than 1 Ω	Rear wiper switch ON
Rear wiper switch (INT)	B281	C18	Less than 1 Ω	Rear wiper switch ON
Rear washer switch	B281	C27	Less than 1 Ω	Rear washer switch ON
Rear wiper power supply	B280	B21	10 — 13 V	
Rear wiper ON output	B280	B1	10 — 13 V	Rear wiper switch ON
Rear wiper return	B280	B8	Less than 1 Ω B1 — B8 1 Ω or less	At wiper reversing

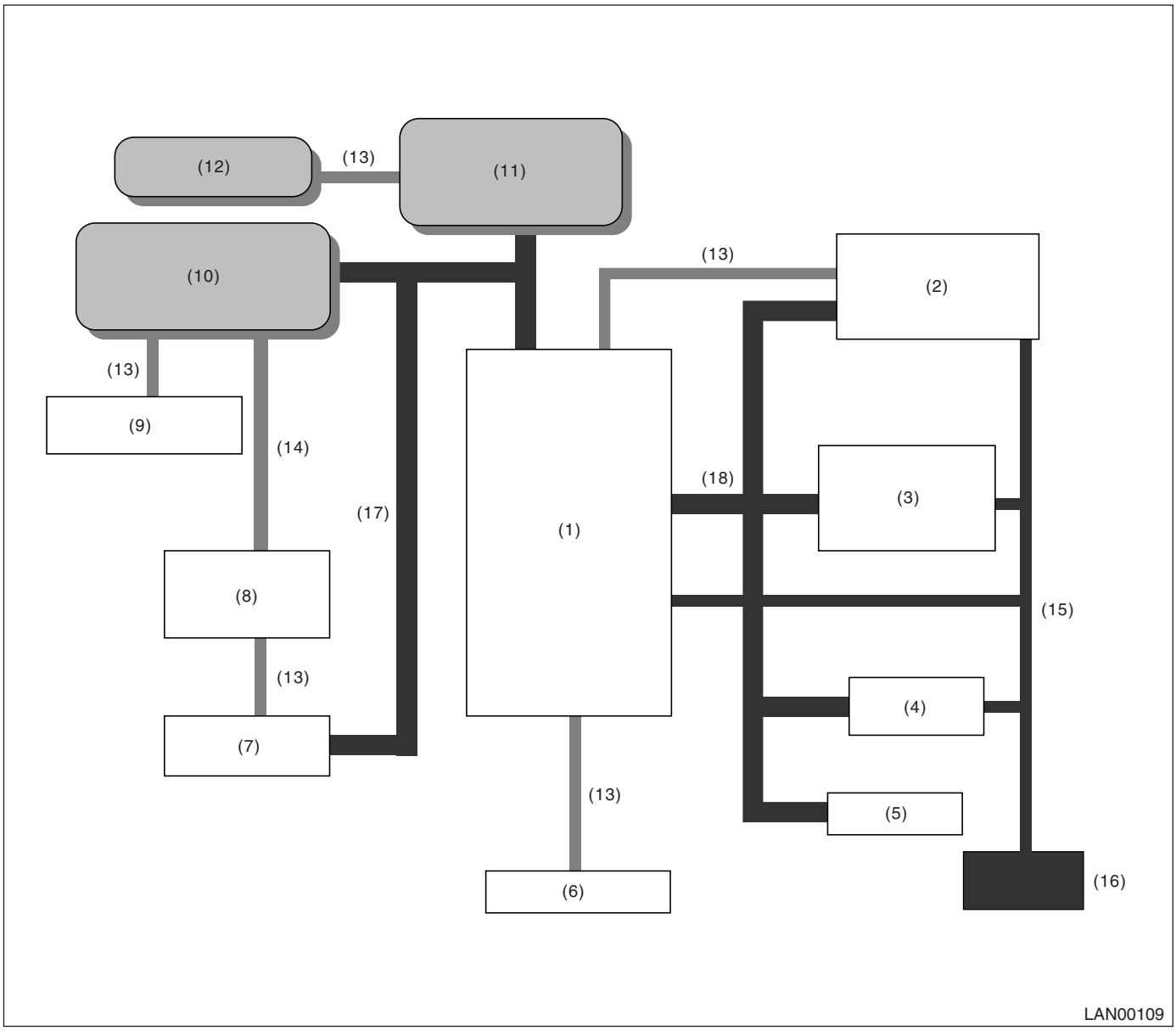
Description	Connector No.	Terminal No.	Signal (V or Ω)	NOTE
			Ignition switch ON (engine OFF)	
Room light output	B280	B3	Less than 1 Ω	When LOCK, UNLOCK with key-less entry
Key ring illumination output	B280	B4	Less than 1 Ω	Ignition key removed, driver door open
Turn hazard output	B280	B12	Less than 1 Ω	When operating keyless entry answer back
Keyless buzzer output	i84	A6	Less than 1 Ω	When operating keyless entry answer back
Immobilizer pilot light	i84	A33	Less than 1 Ω	At ignition key removed, immobi-lizer operating
Kick down switch	B280	B12	Less than 1 Ω	Kick down switch ON
Keyless communication	i84	A9	2 — 10 V	At keyless entry signal received
High-speed CAN circuit (Hi)	B280	B20	Between B20 — B30 Serial communication	At communicating (sending and receiving)
High-speed CAN circuit (Lo)	B280	B30		
Low-speed CAN circuit 1 (Hi)	i84	A26	Between A25 — A26 Serial communication	At communicating (sending and receiving)
Low-speed CAN circuit 1 (Lo)	i84	A25		
Low-speed CAN circuit 2 (Hi)	B280	B26	Between B25 — B27 Serial communication	At communicating (sending and receiving) (Model with auto A/C)
Low-speed CAN circuit 2 (Lo)	B280	B27		
Immobilizer antenna	B281	C20 — C21	Serial communication	
Immobilizer communi-cation (Main)	B280	B18 (Back-up B28)	Serial communication	
Subaru Select Monitor communication	B280	B19	Serial communication	

B: WIRING DIAGRAM



LAN00108

C: LAN SYSTEM



(1) Body integrated unit
(2) ECM
(3) TCM
(4) VDC/ABSCM
(5) Steering angle sensor
(6) Keyless entry receiver
(7) A/C control unit
(8) Audio·A/C control panel
(9) Navigation system
(10) Center display
(11) Combination meter
(12) Clock
(13) Exclusive communication line
(14) IE-Bus (AV)
(15) Subaru Select Monitor communication line
(16) Subaru Select Monitor
(17) Low speed CAN (Body integrated unit)
(18) High speed CAN (Driving control)

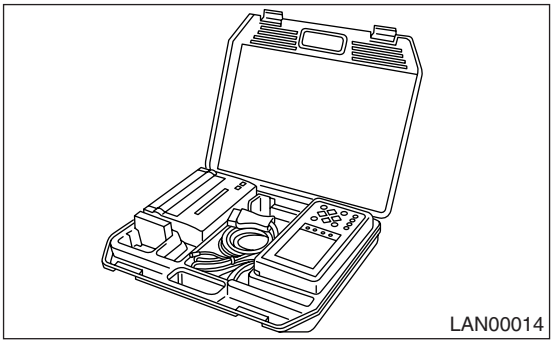
6. Subaru Select Monitor

A: OPERATION

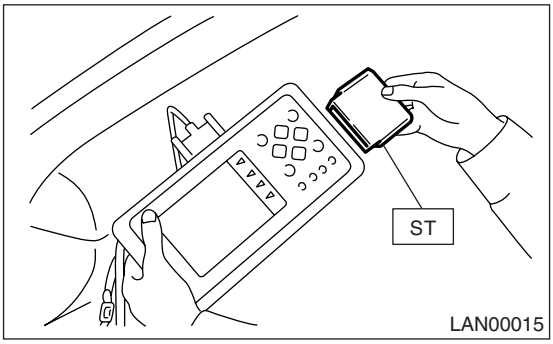
1. READ DIAGNOSTIC TROUBLE CODE (DTC)

NOTE:
• DTC is displayed in the sequence of inputting. (When inputting more than two simultaneously, DTC is displayed in the sequence of priority.)
• When more than two DTCs are displayed, perform the diagnosis of top of them.

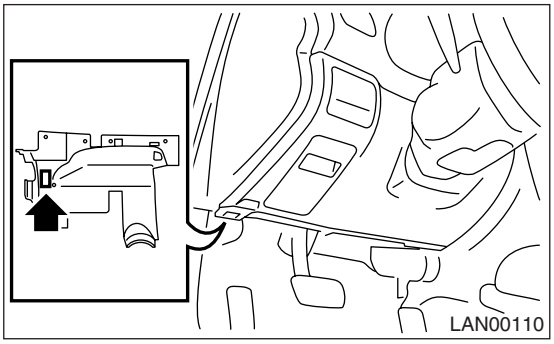
1) Prepare the Subaru Select Monitor kit.



2) Connect the diagnosis cable to Subaru Select Monitor.
3) Insert the cartridge to Subaru Select Monitor. <Ref. to LAN(diag)-6, SPECIAL TOOL, PREPARATION TOOL, General Description.>

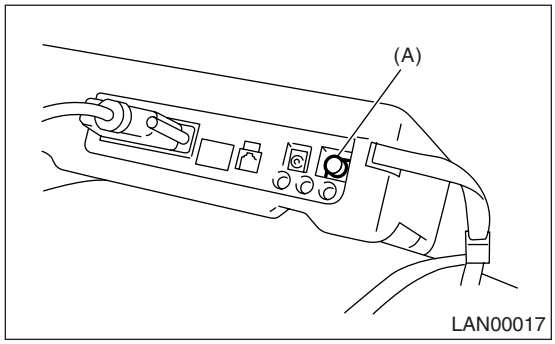


4) Connect the Subaru Select Monitor to data link connector.
Data link connector is located in the lower portion of the instrument panel (on the driver's side).



CAUTION:
Do not connect scan tools except for Subaru Select Monitor.

5) Turn the ignition switch to ON (engine OFF) and turn the Subaru Select Monitor switch to ON.



(A) Power switch

6) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
7) On the «System Selection Menu» display screen, select the {Integ. Unit mode} and press the [YES] key.
8) On the «Integ. Unit mode failuer diag» display screen, select the {Diagnostic Code(s) Display} and press the [YES] key.

NOTE:
• For details concerning operation procedure, refer to "SUBARU SELECT MONITOR OPERATION MANUAL".
• For details concerning DTCs, refer to the List of Diagnostic Trouble Code (DTC). <Ref. to LAN(diag)-28, List of Diagnostic Trouble Code (DTC).>

2. READ CURRENT DATA

1) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
2) On the «System Selection Menu» display screen, select the {Integ. Unit mode} and press the [YES] key.
3) On the «Integ. Unit mode failuer diag» display screen, select the {Current Data Display & Save} and press the [YES] key.
4) On the «Current Data Display & Save» display screen, select the {12 Data Display} and press the [YES] key.
5) Using the scroll key, scroll the display screen up or down until the desired data is shown.
• A support list contains both of analog and digital data, and they are shown in the following table.

3. DISPLAY OF ANALOG DATA

Items to be displayed	Unit of measure	NOTE
BATT Voltage (Control)	10 — 15 V	—
BATT Voltage (BACK UP)	10 — 15 V	—
IG power supply voltage	10 — 15 V	—
ACC voltage	10 — 15 V	—
Illumination VR voltage	0 — 5 V	—
Illumi. output d-ratio	0 — 100%	—
ambient temp sensor V	0 — 5 V	—
Ambient temperature	−40 — 87.5°C	—
Fuel level voltage	0 — 8 V	—
Fuel level resistance	0 — 102.3 Ω	Body integrated unit input value
key-lock solenoid V	6 — 12 V	—
number of regist.	0 — 4	—
Front Wheel Speed	km/h	—
VDC/ABS latest f-code	DTC display (Temporarily)	This is normal when the DTC is not input though the this code is displayed
Blower fan steps	0 — 2 level	0: OFF, 1: Low, 2: More than 2 level
Fuel level resistance2	0 — 102.3 Ω	Body integrated unit output
Fuel consumption	cc/s	—
Coolant Temp.	−40 — 130°C	—
Vehicle lateral G	m/s^2	—
SPORT Shift Stages	0 — 7 levels	(0: light OFF, 6: fail, 7: ATF temperature High/Low)
Shift Position	0 — 7 levels	(8 is no input)
Off delay time	OFF, Short, Normal, Long	—
Auto lock time	20, 30, 40, 50, 60 seconds	—

4. DISPLAY OF ON/OFF DATA

Items to be displayed	Unit of measure
key-lock warning SW	ON/OFF
Stop Light Switch	ON/OFF
Front fog lamp SW input	ON/OFF
Rear fog lamp SW input	ON/OFF
lighting SW input	ON/OFF
Door key-lock SW input	ON/OFF
Door unlock SW input	ON/OFF
Driver's door SW input	ON/OFF
P-door SW input	ON/OFF
Rear right door SW input	ON/OFF
Rear left door SW input	ON/OFF
R Gate SW input	ON/OFF
Manual lock SW input	ON/OFF
Manual unlock SW input	ON/OFF
Lock SW (front hood)	ON/OFF
Bright SW input	ON/OFF
Tiptronic Mode Switch	ON/OFF
TIP UPSW input	ON/OFF
TIP DOWN SW input	ON/OFF
P SW	ON/OFF
R wiper ON SW input	ON/OFF
R wiper INT SW input	ON/OFF
R washer SW input	ON/OFF
wiper deicer SW input	ON/OFF
Rear Defogger SW	ON/OFF
Driver's Seat SW input	ON/OFF
P seatbelt SW input	ON/OFF
Fr wiper input	ON/OFF
Registration SW input	ON/OFF
Identification SW input	ON/OFF
Rr defogger output	ON/OFF
lock actuat. LOCK output	ON/OFF
All seat UNLOCK output	ON/OFF
D-seat UNLOCK output	ON/OFF
R gate/trunk UNLK output	ON/OFF
Double lock output	ON/OFF
R wiper output	ON/OFF
Shift Lock Solenoid	ON/OFF
Key locking output	ON/OFF
wiper deicer SW input	ON/OFF
Starter cutting output	ON/OFF
Hazard Output	ON/OFF
Keyless Buzzer Output	ON/OFF
Horn Output	ON/OFF
Siren Output	ON/OFF
D-belt warning light O/P	ON/OFF
P-belt warning light O/P	ON/OFF
Illumination lamp O/P	ON/OFF
Room lamp output	ON/OFF
key illumi. lamp o/p	ON/OFF

Items to be displayed	Unit of measure
R fog lamp output	ON/OFF
R fog lamp monitor	ON/OFF
Immobilizer lamp output	ON/OFF
Keyless operation 1	Registration/Normal
Keyless operation 2	Clear/Normal
CC Main Lamp	On/Off
CC Set Lamp	On/Off
SPORT Lamp	On/Off
SPORT Blink	Blink/Off
ATF Temperature Lamp	On/Off
ATF Blink	Blink/Off
Tire diameter abnormal 1	On/Off
Tire diameter abnormal 2	Blink/Off
SPORT Shift (UP)	UP/OFF
SPORT Shift (DOWN)	DOWN/OFF
SPORT Shift (buzzer 1)	ON/OFF
SPORT Shift (buzzer 2)	ON/OFF
ABS/VDC Judging	ABS/VDC
ADA Existence Judging	Yes/No
Small lamp SW	ON/OFF
Headlamp	ON/OFF
Headlight HI	ON/OFF
Turn signal LH	ON/OFF
Turn signal RH	ON/OFF
Rr Defogger SW	ON/OFF
Australia Judging Flag	Australia/Others
Tire 18inch flag	18 in/others
Number of cylinders	4 cylinders/6 cylinders
Cam shaft specification	SOHC/DOHC
Turbo	Turbo/Non-turbo
E/G displacement (2.5L)	2.5 L/ OFF
E/G displacement (3.0L)	3.0 L/ OFF
AT/MT identification terminal	AT model/MT model
E/G cooling fan	ON/OFF
Heater cock valve	ON/OFF
Power window (Up)	ON/OFF
Power window (Down)	ON/OFF
Keyless buzzer	ON/OFF
Bright Request	ON/OFF
P/W ECM Failure	NG/OK
Keyless Hook SW	ON/OFF
Door lock SW (Open)	ON/OFF
Door lock SW (Close)	ON/OFF
Door Key SW (Open)	ON/OFF
Door Key SW (Close)	ON/OFF
Under hook registration	ON/OFF
Hook registration end	ON/OFF
Unlock request	ON/OFF
Center display failure	OK/NG
NAVI Failure	OK/NG
IE Bus failure	Can not use

Items to be displayed	Unit of measure
Auto A/C failure	OK/NG
EBD Warning Light	OK/OFF
ABS Warning Light	OK/OFF
VDC OFF flag	ON/OFF
VDC/ABS OK B	OK/NG
VDC/ABS condition	0 — 4
Destinat.	0 — 16
Touch SW	0 — 64

NOTE:
For details concerning operation procedure, refer to “SUBARU SELECT MONITOR OPERATION MANUAL”.

5. CONFIRMATION OF CURRENT SETTING

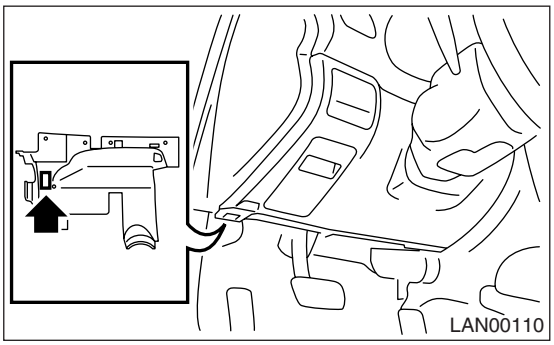
1) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
2) On the «System Selection Menu» display screen, select the {Integ. Unit mode} and press the [YES] key.
3) On the «Integ. Unit mode failuer diag» display screen, select the {Current Data Display & Save} and press the [YES] key.
4) On the «Current Data Display & Save» display screen, select the {12 Data Display} and press the [YES] key.
5) Using the scroll key, scroll the display screen up or down until the desired data is shown.
6) Display the following items and record the settings.
Required items for new registration (Except for system not equipped)

Item	Item to confirm				Remarks
Key No. to register	1	2	3	4	Registered ID type
Off delay	OFF	Long	Normal	Short	Setting for lighting off time
Auto-lock	60, 50, 40, 30, 20		OFF		(Unit sec.)
Rr defogger op. mode	Normal		Continuous		
Wiper deicer op. mode	Normal		Continuous		Optional setting
Security Alarm Setup	ON		OFF		
Impact Sensor Setup	ON		OFF		Optional setting
Alarm monitor delay setting	ON		OFF		
Lockout prevention	ON		OFF		
Impact Sensor	Yes		No		Optional setting
Siren setting	Yes		No		Optional setting
Answer-back buzzer setup	ON		OFF		Not equipped
Hazard answer-back setup	ON		OFF		
Automatic locking setup	ON		OFF		
Ans.-back Buzzer	Yes		No		Not equipped
Auto locking	Yes		No		
Door open warning (prevention of battery run-out)	Yes		No		
A/C ECM setting	Yes		No		Model with auto A/C
P/W ECM setting	Yes		No		Not equipped
Center display failure	Yes		No		Model with center display
Wiper deicer	Yes		No		Optional setting
Rear fog light setting	Yes		No		Optional setting
Factory initial setting	Manufacture		Market		Not change to Manufacture mode
Security setting (Specified security set-ting)	Yes		No		Operate the selected security set. (EK model)

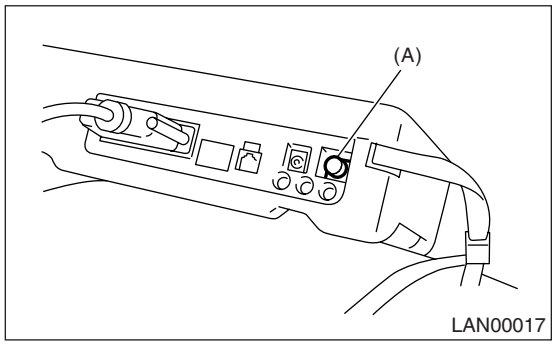
6. REGISTRATION BODY INTEGRATED UNIT (EQUIPMENT SETTING)

CAUTION:
Body integrated unit is core of LAN system, and also can select the function of all vehicle system control. It is possible to control the original functions of vehicle when registrations of body integrated unit and function setting are corresponded to vehicle equipment.
If registrations and function setting are different from vehicle equipment, vehicle system does not operate normally and diagnosis cannot be performed correctly. Pay attention to items below.
• Be sure to correspond registrations and function settings to vehicle equipment.
• Do not change the settings of vehicle improperly.
• Confirm key illumination does not blink or "Factory initial setting" of body integrated unit registrations is "Market". If "Factory initial setting" is set to "Factory", key illumination blinks with ignition key turned to ON to give warning of unconfirmed settings.
• Key illumination does not blink with ignition switch turned to ON and go off with door closed.
• Be sure to register immobilizer if body integrated unit is replaced with a new one. (Model with immobilizer)
• Make a registration of immobilizer when the parts replaced related to immobilizer. Refer to "REGISTRATION MANUAL FOR IMMOBILIZER".

1) Turn the ignition switch to OFF.
2) Connect the Subaru Select Monitor to data link connector.



3) Turn the ignition switch to ON and Subaru Select Monitor to ON.



(A) Power switch

4) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
5) On the «Each System Check» display screen, select the {Integ. Unit mode} and then select the "ECM customizing".

6) Change the setting with UP/DOWN key and press the [YES] key.
- List of body integrated unit registration item

NOTE:
Setting is different depending on grade of vehicle.

Data		Initial setting	Registration	Remarks
21	A/C ECM setting	OFF	ON	Illumination control does not operate if A/C ECM setting is set to “OFF” in case of model with auto A/C.
			OFF	If A/C ECM setting is set to “ON” in case of model without auto A/C, illumination change to night illumination and it is difficult to be recognized.
22	P/W ECM setting	OFF	ON	Be sure to set P/W ECM setting to “OFF”. Auto-reverse function
			OFF	
23	Center display failure (OP)	OFF	ON	Information may not be displayed on center display if Center display failure is set to “OFF” in case of model with center display.
			OFF	
24	Wiperdeicer (OP)	OFF	ON	ON signal does not output with operation of wiper deicer switch if Wiperdeicer is set to “OFF” in model with wiper deicer.
			OFF	
25	Rear fog light setting (OP)	OFF	ON	Vehicle is controlled in rear fog light equipped mode.
			OFF	Vehicle is controlled in rear fog light no-equipped mode. (Be sure to set to “OFF” in model without rear fog light.
26	Factory initial setting (Reset of body integrated unit)	Factory	Factory (Reset)	If Factory initial setting is set to “Factory”, registrations of items above is changed to “OFF”. Be sure to set to “Market”.
			Market (Settlement)	

CAUTION:
• It is possible to control the original functions of vehicle when registrations of body integrated unit and function setting are corresponded to vehicle equipment.
• When body integrated unit is new one or “Factory” mode, key illumination blinks to show equipment settings does not completed.
• Be sure not to change Factory initial setting except installation of new body integrated unit.

NOTE:
- “Factory” mode:
  - Body integrated unit has been not set yet. It can be recognized by key illumination blinking with ignition switch turned to ON.
  - All body integrated units as part for repair are set to “Factory” mode. When replacing a body integrated unit, be sure to perform the registration operation.
- “Market” mode:
  Each settings have been set. It can be recognized by key illumination coming on in concocting with room light and going off with ignition switch turned to ON.

7) Perform the Factory setting. On the «ECM customizing» display screen of Subaru Select Monitor, select the {Factory initial setting} and press the [YES] key.
8) Change the mode from Factory into Market.
9) Replace the immobilizer cartridge, and register the immobilizer key. (Model with immobilizer)
10) Perform the registration according to the procedures of “IMMOBILIZER REGISTRATION MANUAL”.
11) When key registration is completed, “Do you want to register remote engine start?” is displayed. Perform the registration only if equipped.
12) Perform the function setting (ECM customizing).
<Ref. to LAN(diag)-21, FUNCTION SETTING (ECM CUSTOMIZING), OPERATION, Subaru Select Monitor.>

NOTE:
For details concerning operation procedure, refer to “SUBARU SELECT MONITOR OPERATION MANUAL”.

7. CLEAR MEMORY MODE

1) On the «Main Menu» display screen, select the {2. Each System Check} and press the [YES] key.
2) On the «System Selection Menu» display screen, select the {Integ. Unit mode} and press the [YES] key.
3) Press [YES] key after displayed the information of body integrated unit type.
4) On the «Integ. Unit mode failuer diag» display screen, select the {Clear Memory} and press the [YES] key.

Display	Contents to be monitored
Clear memory?	Clear function of DTC and freeze frame data

5) When the “Done” are shown on the display screen, turn the ignition switch to OFF.

NOTE:
For detailed operation procedure, refer to “SUBARU SELECT MONITOR OPERATION MANUAL”.

8. FREEZE FRAME DATA

NOTE:
• Data stored at the time of trouble occurrence is shown on display.
• Freeze frame data will be memorized maximum to 20.
• If freeze frame data is not stored in memory correctly (caused by low power supply of body integrated unit), DTC will be displayed with “?” on the head of it in the Subaru Select Monitor display. This shows it may be an unreliable reading.

9. FUNCTION SETTING (ECM CUSTOMIZING)

1) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
2) On the «System Selection Menu» display screen, select the {Integ. Unit mode} and press the [YES] key.
3) On the «Integ. Unit mode failuer diag» display screen, select the {ECM customizing} and press the [YES] key.
4) Change the setting with UP/DOWN key and press the [YES] key.

• List of function setting item (ECM customizing)

<table>
<tr><th>No.</th><th>Data</th><th>Initial setting value</th><th>Customize setting</th><th colspan="2">Remarks</th></tr>
<tr><td rowspan="6">1</td><td rowspan="6">Off delay time</td><td rowspan="6">Normal</td><td></td><td colspan="2">Delay time below can be selected by setting.</td></tr>
<tr><td>Setting</td><td>After door closed</td><td>After key unlock</td></tr>
<tr><td>OFF</td><td>0 sec.</td><td>0 sec.</td></tr>
<tr><td>Short</td><td>3 sec.</td><td>10 sec.</td></tr>
<tr><td>Normal</td><td>5 sec.</td><td>20 sec.</td></tr>
<tr><td>Long</td><td>8 sec.</td><td>30 sec.</td></tr>
<tr><td>2</td><td>Auto-lock time</td><td>30 sec.</td><td>0 — 60 seconds</td><td colspan="2">Workable when Auto locking is set to “ON” and Automatic locking setup is “ON”
Time can be changed by 10 seconds: 0 (OFF) — 60 (maximum).</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Rr defogger op. mode</td><td rowspan="2">15 min.</td><td>15 min.</td><td colspan="2">Rear defogger stops in 15 minutes automatically after switch is turned to ON.</td></tr>
<tr><td>Continuation</td><td colspan="2">Rear defogger repeats active condition for 15 minutes and inactive condition for 2 minutes until switch is turned to OFF.</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Wiper deicer op. mode</td><td rowspan="2">15 min.</td><td>15 min.</td><td colspan="2">Wiper deicer stops in 15 minutes automatically after switch is turned to ON.</td></tr>
<tr><td>Continuation</td><td colspan="2">Wiper deicer repeats active condition for 15 minutes and inactive condition for 2 minutes until switch is turned to OFF.</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">Security Alarm Setup</td><td rowspan="2">OFF</td><td>ON</td><td colspan="2">Security alarm (horn or siren) in active condition</td></tr>
<tr><td>OFF</td><td colspan="2">Security alarm in inactive condition</td></tr>
<tr><td rowspan="2">6</td><td rowspan="2">Impact Sensor Setup</td><td rowspan="2">OFF</td><td>ON</td><td colspan="2">Workable when Impact Sensor Setup is set to “ON”
Impact sensor in active condition</td></tr>
<tr><td>OFF</td><td colspan="2">Impact sensor in inactive condition
(Set Impact Sensor Setup of model without impact sensor to “OFF”.)</td></tr>
<tr><td rowspan="3">7</td><td rowspan="3">Alarm monitor delay setting</td><td rowspan="3">ON</td><td></td><td colspan="2">After doors are locked by keyless entry system operated, Alarm monitor starts in following time.</td></tr>
<tr><td>ON</td><td colspan="2">Delay time is 30 seconds.</td></tr>
<tr><td>OFF</td><td colspan="2">Delay time is 0 second.</td></tr>
<tr><td rowspan="2">8</td><td rowspan="2">Lockout prevention</td><td rowspan="2">ON</td><td>ON</td><td colspan="2">Lockout prevention in active condition
(Lockout prevention does not operate if safety knob is locked by hand.)</td></tr>
<tr><td>OFF</td><td colspan="2">Lockout prevention in inactive condition</td></tr>
<tr><td rowspan="2">9</td><td rowspan="2">Impact sensor (OP)</td><td rowspan="2">OFF</td><td>ON</td><td colspan="2">Vehicle is controlled in impact sensor equipped mode. (Set Impact sensor to “OFF” in model without impact sensor. If Impact sensor is set to “ON”, hazard, horn or siren operate after doors are locked by keyless entry system operated (Alarm monitor starting).</td></tr>
<tr><td>OFF</td><td colspan="2">Vehicle is controlled in impact sensor no-equipped mode.</td></tr>
<tr><td rowspan="2">10</td><td rowspan="2">Siren setting</td><td rowspan="2">OFF</td><td>ON</td><td colspan="2">Siren sounds when alarm operates.
(Set Siren setting to “OFF” in model without siren. Horn does not sound if Siren setting is set to “ON”.)</td></tr>
<tr><td>OFF</td><td colspan="2">Horn sounds when alarm operates.</td></tr>
</table>

No.	Data	Initial setting value	Customize setting	Remarks
11	Answer-back buzzer setup	ON	ON	Workable when Answer-back buzzer setup is set to “ON” When lock/unlock is selected by keyless entry system operated, answer-back buzzer sounds.
			OFF	When lock/unlock is selected by keyless entry system operated, answer-back buzzer does not sound.
12	Hazard answer-back setup	ON	ON	Workable when Hazard answer-back setup is set to “ON” When lock/unlock is selected by keyless entry system operated, hazard answer-back operates.
			OFF	When lock/unlock is selected by keyless entry system operated, hazard answer-back does not operate.
13	Automatic locking setup	ON	ON	Workable when Automatic locking setup is set to “ON” When lock/unlock is selected by keyless entry system operated, automatic locking operates.
			OFF	When lock/unlock is selected by keyless entry system operated, automatic locking does not operate.
14	Ans.-back Buzzer	ON	ON	Vehicle is controlled in answer-back buzzer equipped mode.
			OFF	Vehicle is controlled in answer-back buzzer non-equipped mode. (Set Ans.-back Buzzer to “OFF” in model without answer back buzzer.)
15	Auto locking	ON	ON	Vehicle is controlled in auto locking equipped mode.
			OFF	Vehicle is controlled in auto locking non-equipped mode. (Set Auto locking to “OFF” in model without answer-back buzzer.)
16	Initial Keyless Setting	—	—	—
			Execution	Settings of keyless entry system are initialized. (No. 2: 30 sec., No.11: ON, No.12: ON, No.13: ON, No.14: ON)
17	Initial button setting	—	—	—
			Execution	Settings of each function are initialized. (No. 1: Normal, No. 3: 15 min., No. 4: 15 min., No. 8: ON)
18	Initial Security setting	—	—	—
			Execution	Settings of security system are initialized. (No. 5: OFF, No. 6: OFF, No. 7: ON, No.10: OFF)
19	Passive Alarm (Not used)	OFF	ON	Applicable to North America model (If Passive Alarm is set to “ON”, nothing operates and there is no negative effect.)
			OFF	
20	Door open warning (prevention of battery run-out)	OFF	ON	If detecting door open for 30 minutes, room light, key illumination and door warning light are turned off to prevent battery run-out.
			OFF	Room light, key illumination and door warning light is not turned off.
21	(Specification) Security setup	OFF	ON	Selected security settings in active condition (EK model)
			OFF	Normally in active condition

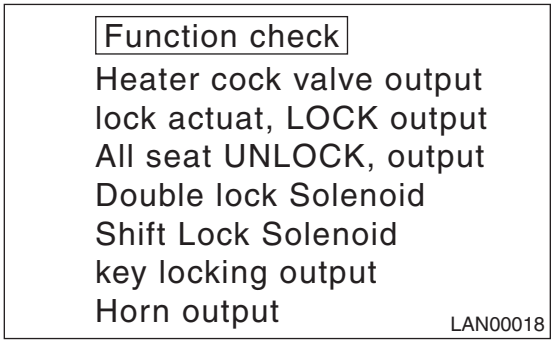
5) After setting, make sure that vehicle equipment is same as the setting changed in the {Current Data Display & Save}.

CAUTION:
• It is possible to control the original functions of vehicle when settings above are corresponded to vehicle equipment.
• Do not change the settings except for setting above during operation of equipment setting.
• Be sure not to change “Factory” initial setting except in installation of new body integrated unit.

NOTE:
For details concerning operation procedure, refer to “SUBARU SELECT MONITOR OPERATION MANUAL”.

10.FUNCTION CHECK

In order to check the body integrated unit function, inspect the body integrated unit and actuator using Subaru Select Monitor without operating switches.
1) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
2) On the «System Selection Menu» display screen, select the {Integ. Unit mode} and press the [YES] key.
3) On the «Integ. Unit mode failuer diag» display screen, select the {System Operation Check Mode} and press the [YES] key.
4) Select item to operate on the «System Operation Check Mode» display screen with “UP/Down key”, and press the [YES] key.



5) Pressing [YES] starts, [NO] cancels the operation and [YES] returns to the System Operation Check Mode display screen.

NOTE:
If not equipped (based on area or condition), process will not go on.

7. Read Diagnostic Trouble Code (DTC)

A: OPERATION

1. WITHOUT SUBARU SELECT MONITOR

NOTE:
Use the Subaru Select Monitor, because DTCs can not be read out.

2. WITH SUBARU SELECT MONITOR

For details concerning DTC reading procedure, refer to “Subaru Select Monitor”. <Ref. to LAN(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>

8. Clear Memory Mode

A: OPERATION

1. WITHOUT SUBARU SELECT MONITOR

NOTE:
Use the Subaru Select Monitor for Clear Memory Mode.

2. WITH SUBARU SELECT MONITOR

For detailed procedures of clearing DTC, refer to “SUBARU SELECT MONITOR”. <Ref. to LAN(diag)-20, CLEAR MEMORY MODE, OPERATION, Subaru Select Monitor.>

9. Read Current Data

A: OPERATION

1) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
2) On the «System Selection Menu» display screen, select the {Integ. Unit mode} and press the [YES] key.
3) On the «Integ. Unit mode failuer diag» display screen, select the {Current Data Display & Save} and press the [YES] key.
4) On the «Data Display Menu» screen, select the {12 Data Display} and press the [YES] key.
5) Using the scroll key, scroll the display screen up or down until the desired data is shown.
<Ref. to LAN(diag)-15, DISPLAY OF ANALOG DATA, OPERATION, Subaru Select Monitor.> <Ref. to LAN(diag)-16, DISPLAY OF ON/OFF DATA, OPERATION, Subaru Select Monitor.> <Ref. to LAN(diag)-17, CONFIRMATION OF CURRENT SETTING, OPERATION, Subaru Select Monitor.>

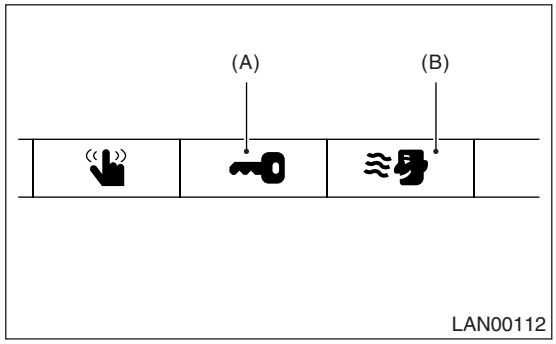
10.Function Setting (Customize)

A: OPERATION

1. WITHOUT SUBARU SELECT MONITOR

NOTE:
Applied to the Model with center display.

1) Display the information screen with pressing the “INFO” switch of center display.
2) Select “SET” on the touch panel at the right top of center display screen.
3) Select the item from “A: Keyless entry” or “B: Various setup” on the touch panel.



4) Change the setting on the touch panel which contains item to be changed.
5) Return to the information display screen and complete it.

Function setting item list

Item	Setting
Keyless	Auto lock
	Auto lock time setting
	Answerback hazard
Each function	Room light delay time
	Anti-lock out
	Rear defogger
	Wiper deicer

2. WITH SUBARU SELECT MONITOR

For detailed procedures of function setting (ECM customizing), refer to “SUBARU SELECT MONITOR”. <Ref. to LAN(diag)-21, FUNCTION SETTING (ECM CUSTOMIZING), OPERATION, Subaru Select Monitor.>

11.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	Content of diagnosis	NOTE
None	Communication for initializing impossible	Open or short in Subaru Select Monitor communication line.	<Ref. to LAN(diag)-30, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
None	DTC is not stored.	Internal error of combination meter.	<Ref. to LAN(diag)-33, DIAGNOSTIC TROUBLE CODE (DTC) IS NOT STORED, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0100	Integ. unit system error	Body integrated unit internal error	<Ref. to LAN(diag)-33, DTC B0100 INTEG. UNIT SYSTEM ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0101	BATT power supply (Control) error	Open or short in battery power supply control circuit	<Ref. to LAN(diag)-34, DTC B0101 BATT P/SUPPLY MALFUNCTION CONT., Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0102	BATT p/supply malfunction cont.	Open or short in BATT power backup circuit	<Ref. to LAN(diag)-36, DTC B0102 BATT P/SUPPLY MALFUNCTION CONT., Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0103	IGN power failure	Open or short in IGN power supply circuit	<Ref. to LAN(diag)-38, DTC B0103 IGNITION POWER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0104	ACC power failure	Open or short in ACC power supply circuit	<Ref. to LAN(diag)-40, DTC B0104 ACC POWER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0106	shift lock circuit Failure	Ground short of shift lock circuit	<Ref. to LAN(diag)-42, DTC B0106 SHIFT LOCK CIRCUIT FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0107	R Fog lamp circuit Failure	Ground short of rear fog circuit	<Ref. to LAN(diag)-44, DTC B0107 R FOG LAMP CIRCUIT FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0201	High speed CAN fail · error counter abnormal	Malfunction of high-speed CAN communication	<Ref. to LAN(diag)-46, DTC B0201 CAN-HS COUNTER ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0202	CAN-HS bus off	Any unit is cut communication.	<Ref. to LAN(diag)-47, DTC B0202 CAN-HS BUS OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0211	CAN-HS (EGI) data abnormal	Received error data from ECM.	<Ref. to LAN(diag)-51, DTC B0211 CAN-HS ECM DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0212	CAN-HS (TCM) data abnormal	Received error data from TCM.	<Ref. to LAN(diag)-53, DTC B0212 CAN-HS TCM DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0213	CAN-HS VDC/ABS data abnormal	Received error data from VDC/ABS unit.	<Ref. to LAN(diag)-54, DTC B0213 CAN-HS VDC/ABS DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0221	CAN-HS ECM no-receive data	Not received error data from ECM.	<Ref. to LAN(diag)-56, DTC B0221 CAN-HS ECM NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0222	CAN-HS TCM no-receive data	Not received error data from TCM	<Ref. to LAN(diag)-60, DTC B0222 CAN-HS TCM NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

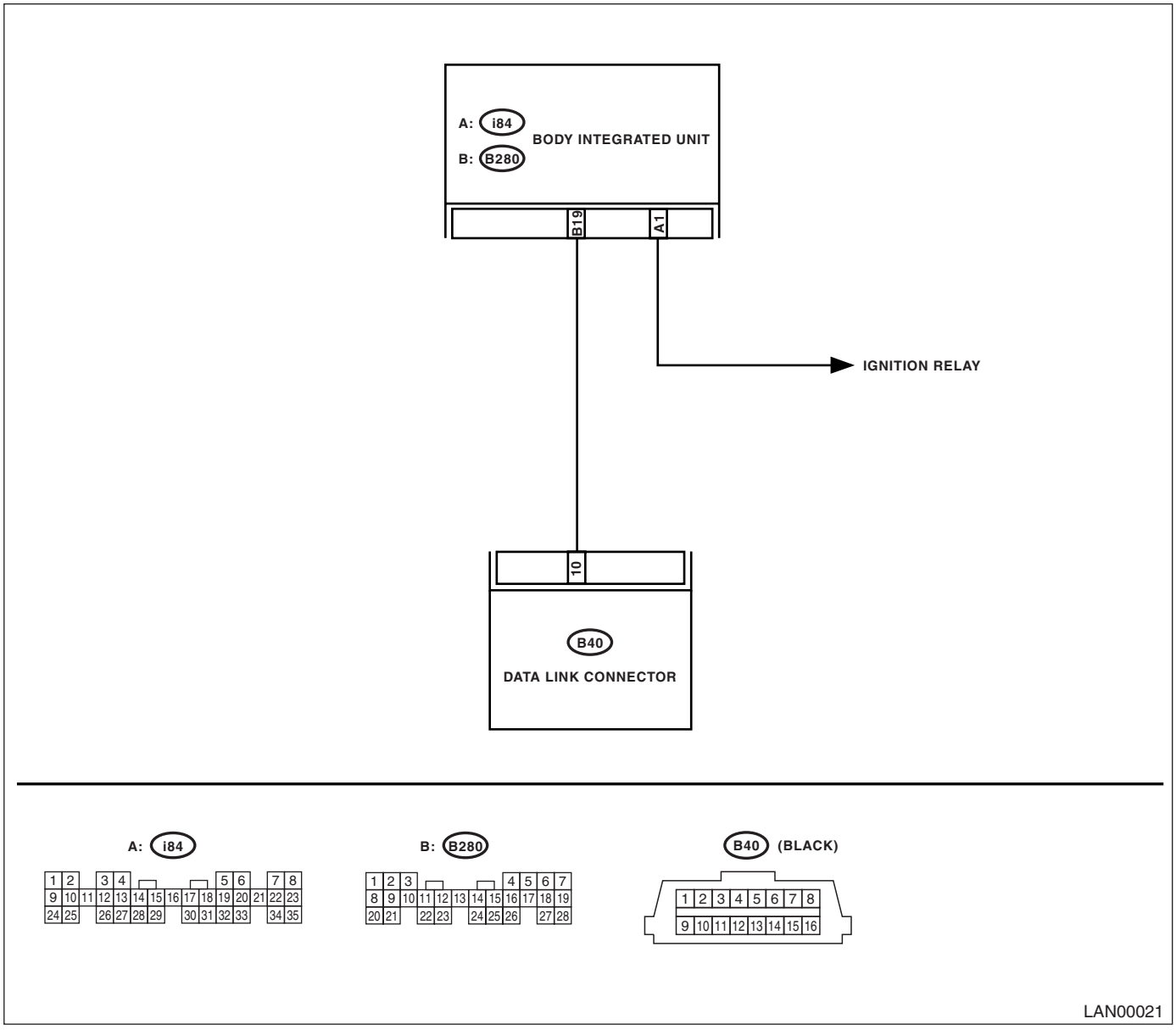
DTC	Item	Content of diagnosis	NOTE
B0223	CAN-HS VDC/ABS no-receive data	Not received error data from VDC/ABS unit.	<Ref. to LAN(diag)-62, DTC B0223 CAN-HS VDC/ABS NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0300	CAN-LS malfunction	Open or short in low-speed CAN circuit, on each side or both sides.	<Ref. to LAN(diag)-65, DTC B0300 CAN-LS MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0301	CAN-LS fail / error counter abnormal	Malfunction of low-speed CAN communication	<Ref. to LAN(diag)-68, DTC B0301 CAN-LS COUNTER ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0302	CAN-LS bus off	Any unit is cut communication.	<Ref. to LAN(diag)-70, DTC B0302 CAN-LS BUS OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0311	CAN-LS meter unit data abnormal	Received error data from meter.	<Ref. to LAN(diag)-73, DTC B0311 CAN-LS METER UNIT DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0313	CAN-LS monitor data abnormal	Received error data from monitor unit.	<Ref. to LAN(diag)-74, DTC B0313 CAN-LS MONITOR DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0321	CAN-LS meter no-receive data	Not received error data from meter	<Ref. to LAN(diag)-75, DTC B0321 CAN-LS METER NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B0401	M collation NG	Malfunction related immobilizer	<Ref. to IM(diag)-15, List of Diagnostic Trouble Code (DTC).>
B0402	Immobilizer Key collation NG	Malfunction related immobilizer	<Ref. to IM(diag)-15, List of Diagnostic Trouble Code (DTC).>
B0403	E/G request NG	Malfunction related immobilizer	<Ref. to IM(diag)-15, List of Diagnostic Trouble Code (DTC).>
B0500	Keyless UART com. Malfunction	Open or short circuit in keyless UART circuit	<Ref. to LAN(diag)-77, DTC B0500 KEYLESS UART COM. MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

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 of them.

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 more than 11 V?	Go to step **3.**	Charge or replace the battery.
3	**CHECK BATTERY TERMINAL.**	Is there poor contact at battery terminal?	Repair or tighten the battery terminal.	Go to step **4.**
4	**CHECK COMMUNICATION OF SUBARU SELECT MONITOR.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check whether communication to other 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. 10 — Chassis ground:***	Is the resistance more than 1 MΩ?	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. 10 (+) — 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. 10 — (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.

	Step	Check	Yes	No
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 more than 10 V?	Go to step **11.**	Repair the open circuit of harness between the body integrated unit and battery.
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 harness resistance between the body integrated unit and chassis ground. ***Connector & terminal*** ***(B280) No. 19 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **12.**	Repair the poor contact of harness between the body integrated unit and ground.
12	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact at control unit ground and Subaru Select Monitor?	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>	Repair the poor contact connector.

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

B: DIAGNOSTIC TROUBLE CODE (DTC) IS NOT STORED

DTC DETECTING CONDITION:

Defective combination meter

DIAGNOSIS:

- Freeze frame data 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 FREEZE FRAME DATA WITH COMBINATION METER.** Turn the ignition switch to ON.	Is the freeze frame data displayed?	Perform the diagnosis according to freeze frame data.	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-16, Combination Meter Assembly.>
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 the “Yes” displayed?	Go to step **4.**	Replace the body integrated unit. <Ref. to SL-46, 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 the “Yes” displayed?	Repair the poor contact connector.	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>

C: DTC B0100 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 freeze frame data “Er IU”.
- LAN communication immobilizer function may not be executed normally.

	Step	Check	Yes	No
1	**CHECK ALL DTCS.**	Is DTC concerning ECM displayed?	Go to step **2.**	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>
2	**CHECK DTC CONCERNING ECM.**	Is output DTC on ECM concerning CAN communication error?	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>	Perform the diagnosis according to DTC concerning ECM.

D: DTC B0101 BATT P/SUPPLY MALFUNCTION CONT.

DTC DETECTING CONDITION:

BATT power supply control circuit is open or shorted.

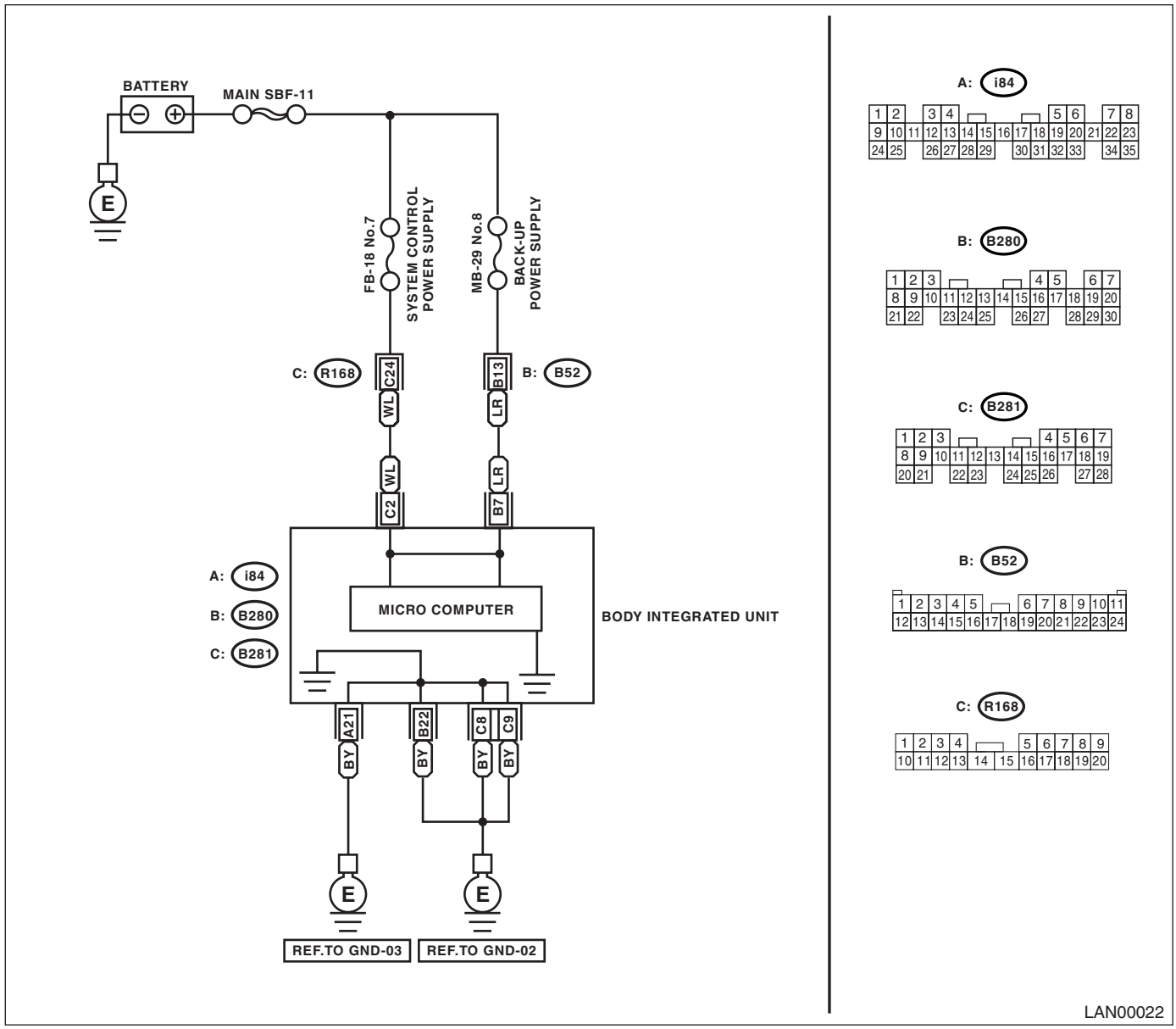
TROUBLE SYMPTOM:

No malfunction occurs with back-up power supply function.

NOTE:

When some B0102 BATT p/supply malfunction backup are output at the same time, all function of body integrated unit may not function.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK FUSE (No. 7).** 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 in 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 more than 10 V?	Go to step **3.**	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in body integrated unit connector?	Repair the poor contact 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. to SL-46, Body Integrated Unit.>	Temporary poor contact occurs.

E: DTC B0102 BATT P/SUPPLY MALFUNCTION CONT.

DTC DETECTING CONDITION:

BATT power backup circuit is open or shorted.

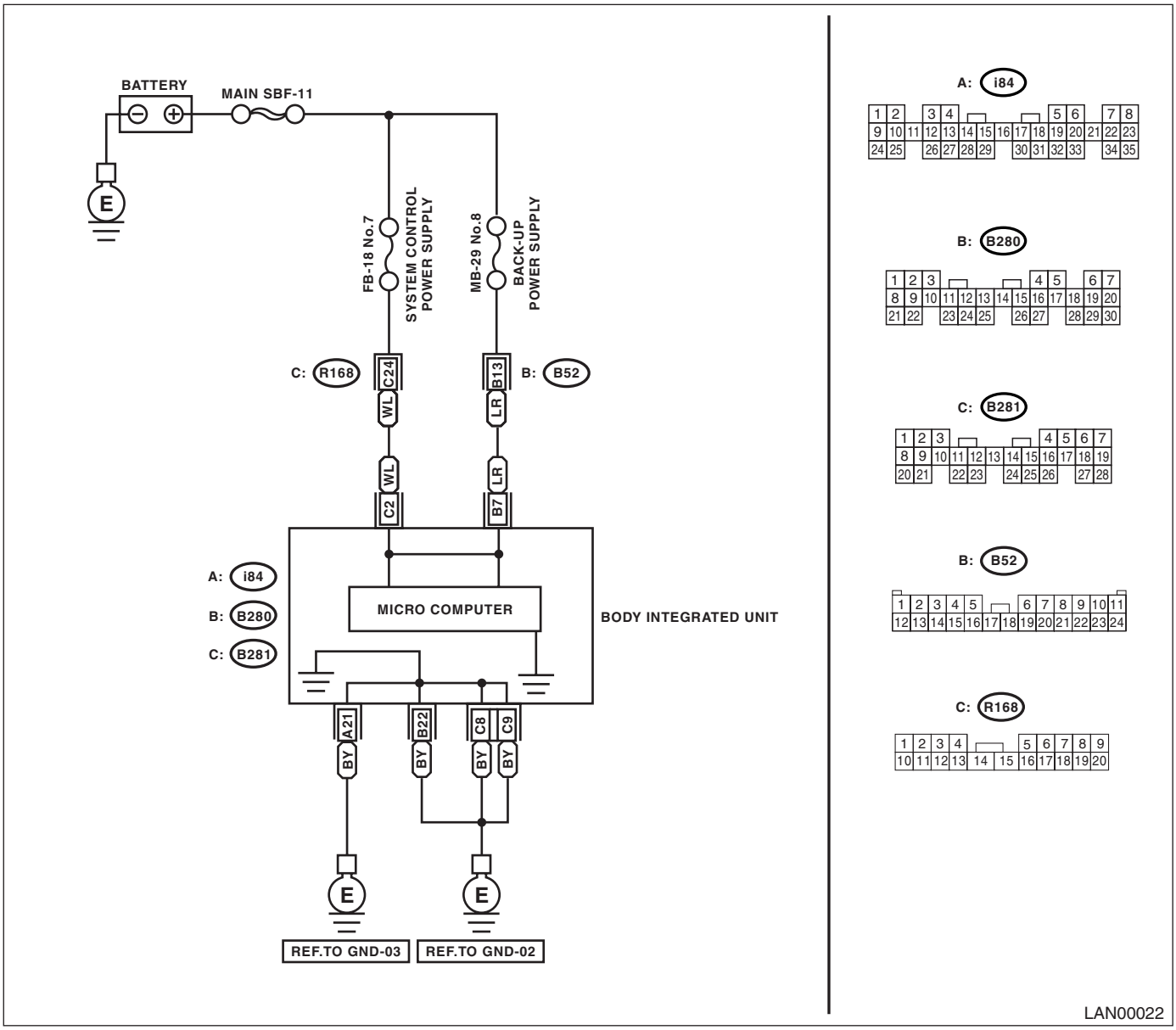
TROUBLE SYMPTOM:

- Engine malfunction indicator light may be illuminates.
- Keyless entry, room light, key illumination does not operate.
- “En IU” may display in combination meter.

NOTE:

When some B0101 BATT p/supply 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 (No. 8).** 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 in 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 more than 10 V?	Go to step **3.**	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3	**CHECK POOR CONTACT IN CONNECTORS.**	Is there poor contact in body integrated unit connector?	Repair the poor contact 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. to SL-46, Body Integrated Unit.>	Temporary poor contact occurs.

F: DTC B0103 IGNITION POWER FAILURE

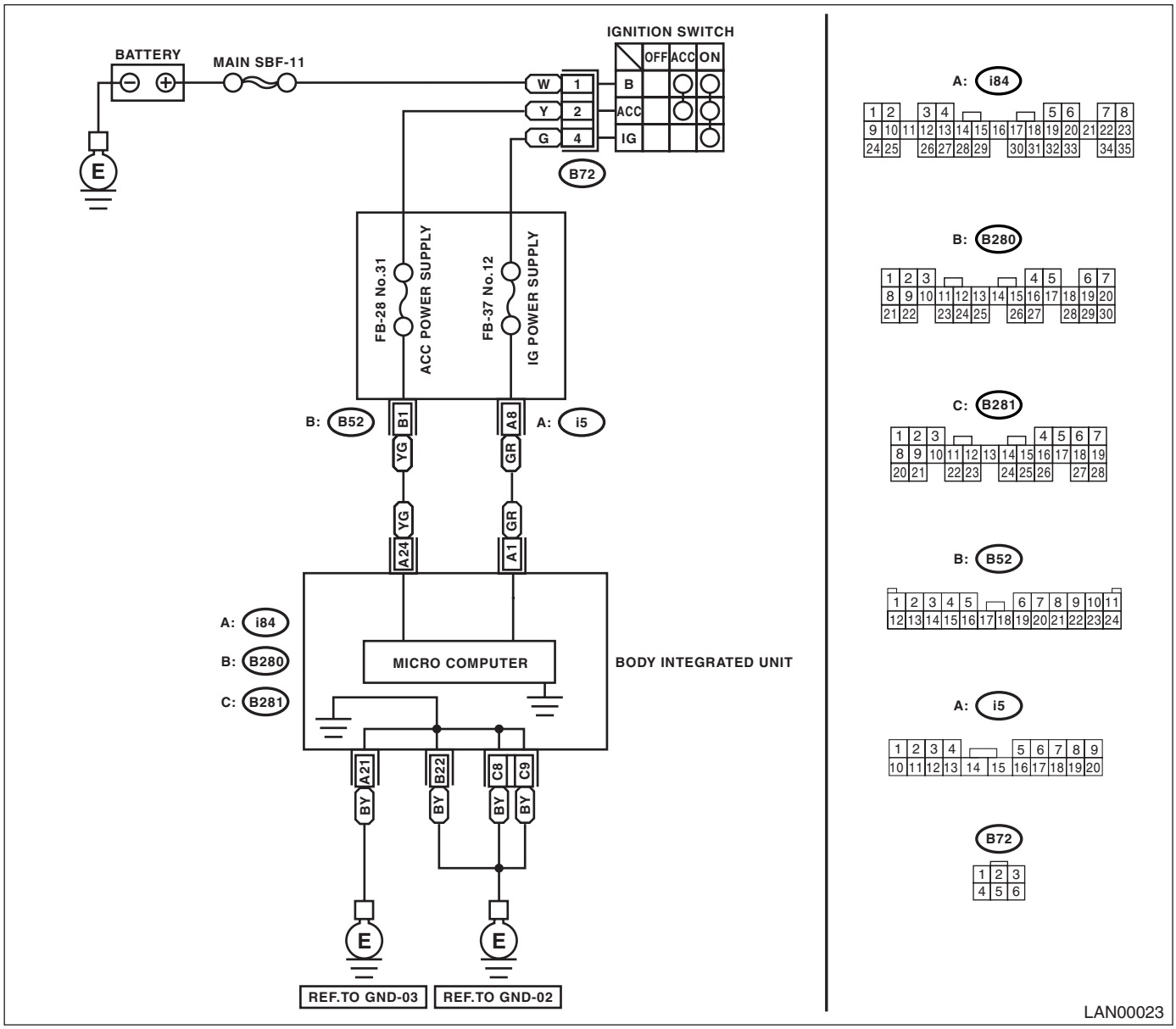
DTC DETECTING CONDITION:

IGN power supply circuit is open or shorted.

TROUBLE SYMPTOM:

Symptom that illuminating engine malfunction indicator light, “Er HC” high speed CAN error display may be occurred.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK FUSE (No. 12).** 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 in 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 more than 10 V?	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 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. to SL-46, Body Integrated Unit.>	Temporary poor contact occurs.

G: DTC B0104 ACC POWER FAILURE

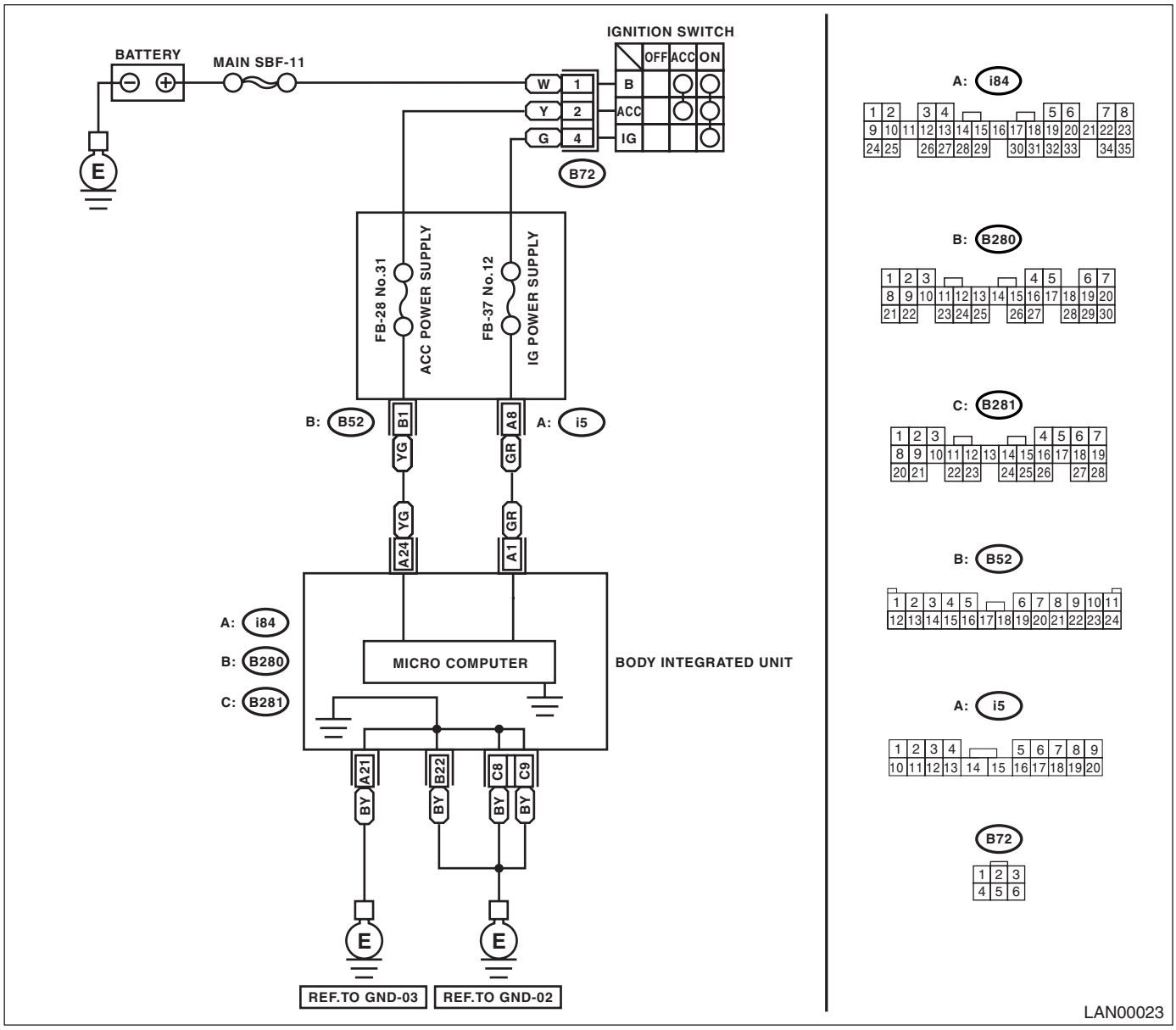
DTC DETECTING CONDITION:

ACC power supply circuit is open or shorted.

TROUBLE SYMPTOM:

Rear wiper may not operate on ACC.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK FUSE (No. 31).** 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 in 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 more than 10 V?	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 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. to SL-46, Body Integrated Unit.>	Temporary poor contact occurs.

H: DTC B0106 SHIFT LOCK CIRCUIT FAILURE

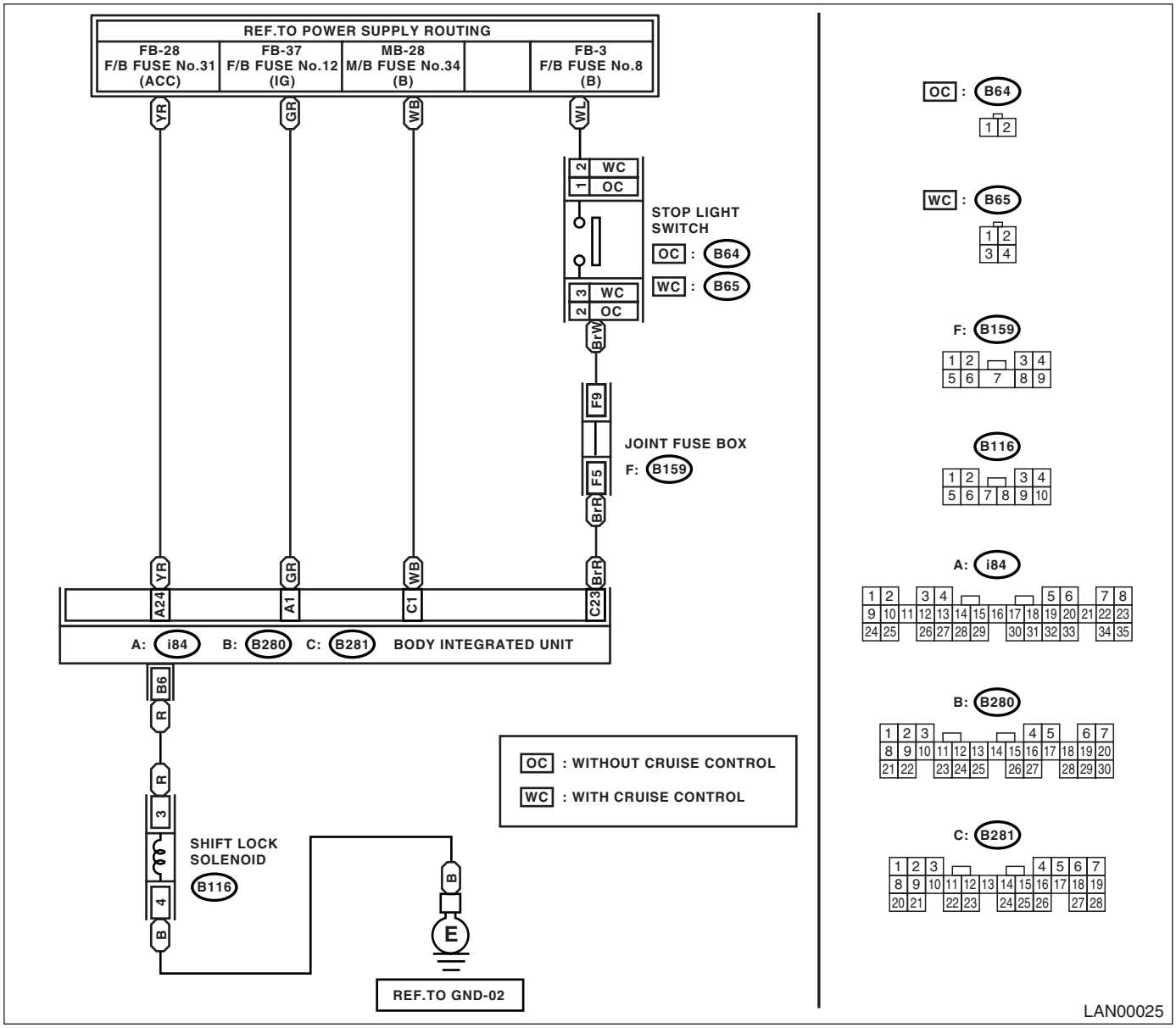
DTC DETECTING CONDITION:

Shift lock circuit is ground shorted.

TROUBLE SYMPTOM:

Key interlock does not unlock or lock.

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 10 — 30 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 10 — 30 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 shift lock solenoid 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 terminals, and then repair them if necessary.	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>
5	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 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 MΩ?	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>	Repair or replace the short circuit of harness.

I: DTC B0107 R FOG LAMP CIRCUIT FAILURE

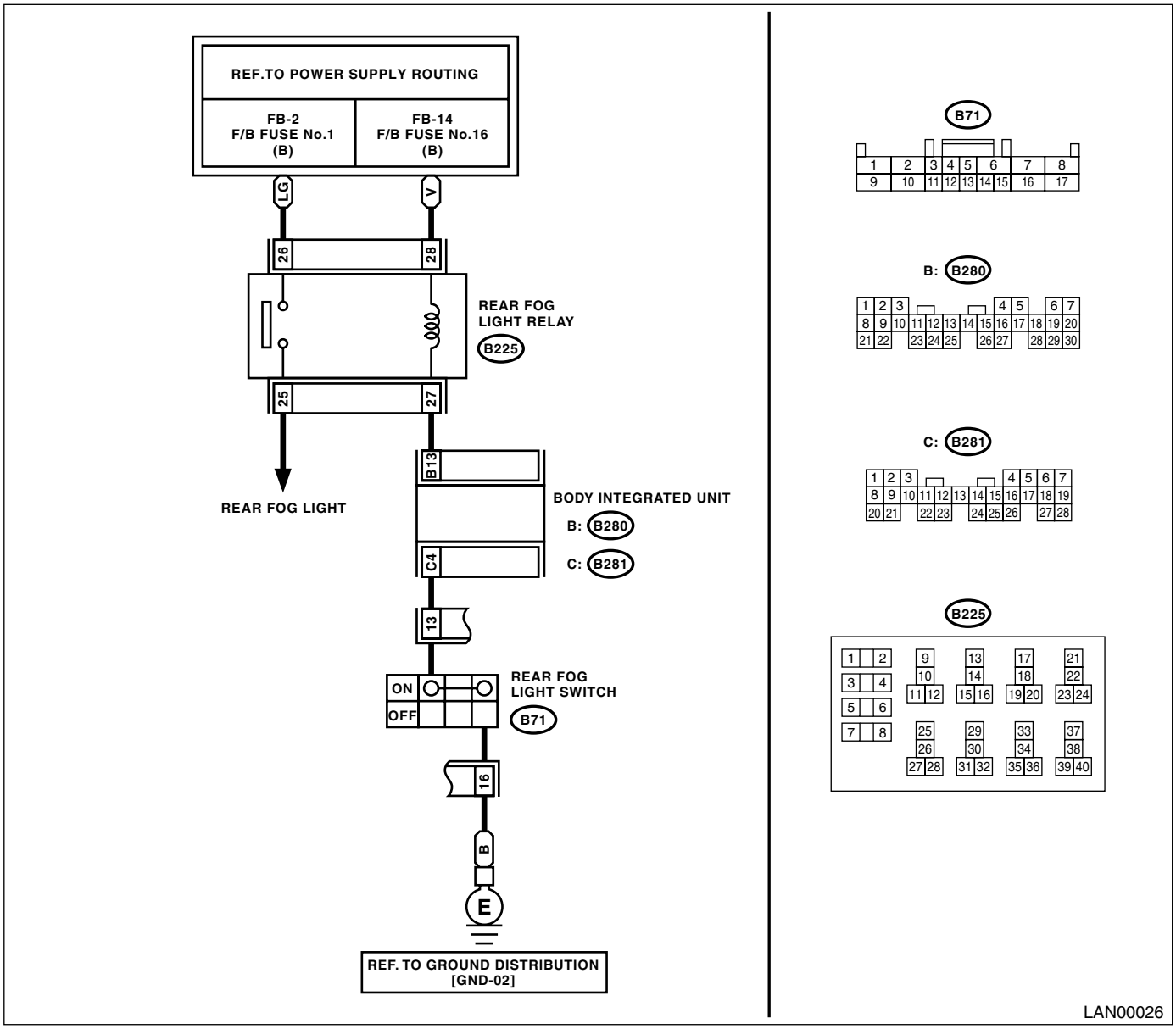
DTC DETECTING CONDITION:

Rear fog input/output circuits are ground shorted.

TROUBLE SYMPTOM:

- Rear fog light does not come on or go off.
- Indicator in the combination meter may not be goes off.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**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. 13 (+) — Chassis ground (–):***	Is the voltage 10 — 13 V?	Temporary poor contact.	Go to step **2.**
2	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Disconnect the rear fog light relay. 3) Measure the resistance between body integrated unit connector and rear fog light relay connector. ***Connector & terminal*** ***(B280) No. 13 — (B225) No. 27:***	Is the resistance less than 1 Ω?	Go to step **3.**	Repair the open or short circuit of harness.
3	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Disconnect the rear fog light relay. 3) Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 13 — Chassis ground:***	Is the resistance more than 1 MΩ?	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>	Repair or replace the short circuit of harness.

J: DTC B0201 CAN-HS COUNTER ABNORMAL

DTC DETECTING CONDITION:

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

TROUBLE SYMPTOM:

- "Er HC" is displayed in odo/trip meter.
- Engine malfunction indicator light illuminates.

	Step	Check	Yes	No
1	**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 55 — 65 Ω?	Temporary poor contact occurs.	Go to step **2.**
2	**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 more than 30 MΩ?	Repair or replace the open circuit of harness.	Go to step **3.**
3	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the input 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 more than 6 V?	Repair or replace the short circuit of harness.	Go to step **4.**
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between harness connector and chassis ground. ***Connector & terminal*** ***(B280) No. 20 — Chassis ground:*** ***(B280) No. 30 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair or replace the short circuit of harness.	Go to step **5.**
5	**CHECK BODY INTEGRATED UNIT.** Read the data of "body integrated unit data received" on ECM data display using Subaru Select Monitor.	Is the "Yes" displayed?	Go to step **6.**	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>
6	**CHECK BODY INTEGRATED UNIT.** Read the data of "body integrated unit counter update" on ECM data display using Subaru Select Monitor.	Is the "Yes" displayed?	Temporary poor contact occurs. Check the connected condition of connector, read the DTC again to make sure that the DTC is not output.	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>

K: DTC B0202 CAN-HS BUS OFF

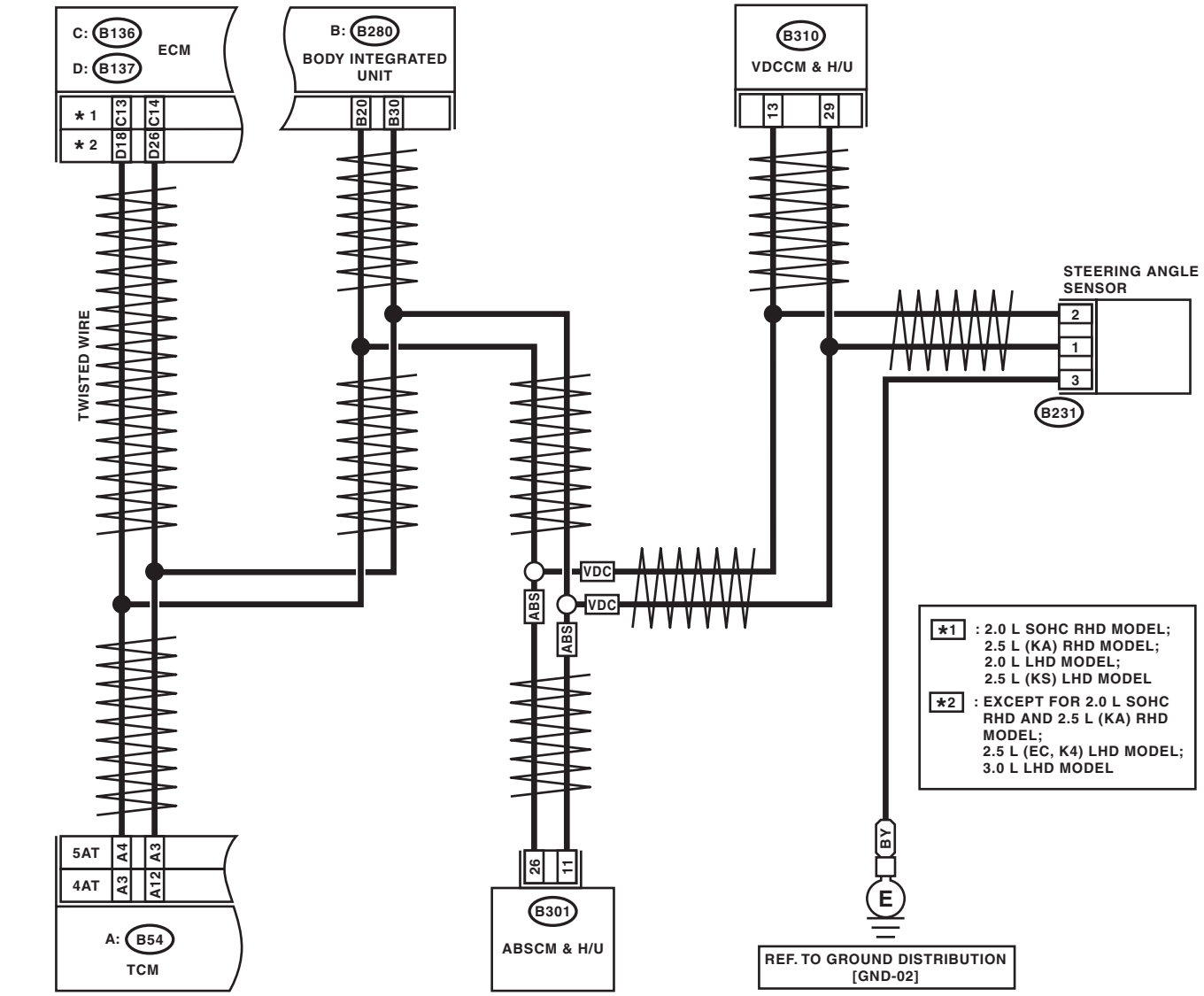
DTC DETECTING CONDITION:

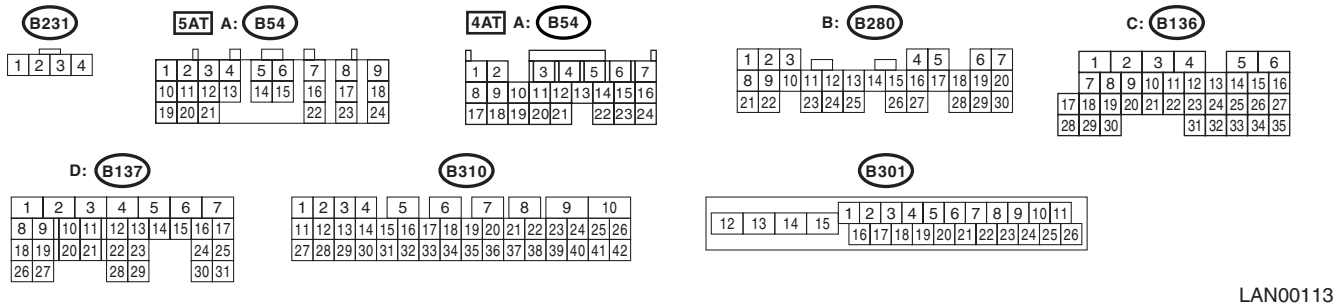
- Locate the unit or CAN line which trouble occurs, and repair and replace it.
- Not received data and error data may be detected at the same time.

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:





LAN00113

	Step	Check	Yes	No
1	**CHECK TCM.** 1) Disconnect the TCM connector (B54). 2) Perform the clear memory of body integrated unit. <Ref. to LAN(diag)-20, CLEAR MEMORY MODE, OPERATION, Subaru Select Monitor.> 3) Read DTC of body integrated unit.	Is DTC (B0202) displayed?	Go to step **2.**	Replace the TCM. <Ref. to 4AT-140, Transmission Control Device.> <Ref. to 5AT-61, Transmission Control Module (TCM).>
2	**CHECK STEERING ANGLE SENSOR.** 1) Disconnect the steering angle sensor connector (B231). 2) Perform the clear memory mode of body integrated unit. <Ref. to LAN(diag)-20, CLEAR MEMORY MODE, OPERATION, Subaru Select Monitor.> 3) Read DTC of body integrated unit.	Is DTC (B0202) displayed?	Go to step **3.**	Replace the steering angle sensor. <Ref. to VDC-16, REPLACEMENT, Steering Angle Sensor.>
3	**CHECK BODY INTEGRATED UNIT.** 1) Disconnect the body integrated unit connector (B280). 2) Read the data between VDC/ABSCM and ECM. Check item: • Engine speed • Average front wheel speed (value on constant driving)	Engine speed, front wheel speed is correctly communicated. (Appears same value)	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>	Go to step **4.**
4	**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 55 — 65 Ω?	Go to step **10.**	Go to step **5.**
5	**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 115 — 125 Ω?	Go to step **7.**	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 more than 30 MΩ?	Open harness on related line of body integrated unit. Repair or replace the open circuit of harness.	Go to step **7.**
7	**CHECK HARNESS.** 1) Disconnect the VDC/ABSCM connector (ABS:B301, VDC:310). 2) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***ABS*** ***(B301) No. 11 — No. 26:*** ***VDC*** ***(B310) No. 13 — No. 29:***	Is the resistance 115 — 125 Ω?	Go to step **8.**	Go to step **9.**

	Step	Check	Yes	No
8	**CHECK VDC/ABSCM.** 1) Disconnect the VDC/ABSCM connector (ABS:B301, VDC:310). 2) Measure the resistance between VDC/ABSCM terminals. ***Connector & terminal*** ***ABS*** ***(B301) No. 11 — No. 26:*** ***VDC*** ***(B310) No. 13 — No. 29:***	Is the resistance 115 — 125 Ω?	Go to step **9.**	Open harness in end resistance of VDC/ABSCM. Replace the VDC/ABSCM. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).> <Ref. to VDC-7, VDC Control Module & Hydraulic Control Unit (VDCCM&H/U).>
9	**CHECK ECM.** 1) Disconnect the ECM connector (*1: B136, *2: B137). 2) Measure the resistance between ECM connector terminals. ***Connector & terminal*** ****1: 2.0 L SOHC RHD model, 2.5 L (KA) RHD model, 2.0 L LHD model, 2.5 L (KS) LHD model*** ***(B136) No. 13 — No. 14:*** ****2: Except for 2.0 L SOHC RHD and 2.5 L (KA) RHD model, 2.5 L (EC, K4) LHD model, 3.0 L LHD model*** ***(B137) No. 18 — No. 26:***	Is the resistance 115 — 125 Ω?	Repair or replace the open circuit of harness connector.	Open harness in end resistance of ECM. Replace the ECM. <Ref. to FU(H4SO 2.0)-34, Engine Control Module (ECM).> <Ref. to FU(H4SO 2.5)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-35, Engine Control Module (ECM).> <Ref. to FU(H6DO)-34, Engine Control Module (ECM).>
10	**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? (Ground)	Repair or replace the ground short circuit of the harness.	Go to step **11.**
11	**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 more than 6 V? (Power)	Repair or replace the short circuit of harness.	Go to step **12.**
12	**CHECK DTC.** Read the DTC of ECM using Subaru Select Monitor. <Ref. to EN(H4SO 2.0)(diag)-25, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4DOTC)(diag)-21, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.>	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Go to step **13.**

	Step	Check	Yes	No
13	**CHECK DTC.** Read the DTC of VDC/ABSCM using Subaru Select Monitor. <Ref. to ABS(diag)-15, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to VDC(diag)-16, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Go to step **14.**
14	**CHECK DTC.** Read the DTC of TCM using Subaru Select Monitor. <Ref. to 4AT(diag)-17, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to 5AT(diag)-16, READ DIAGNOSTIC TROUBLE CODE (DTC), 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-46, Body Integrated Unit.>

L: DTC B0211 CAN-HS ECM DATA ABNORMAL

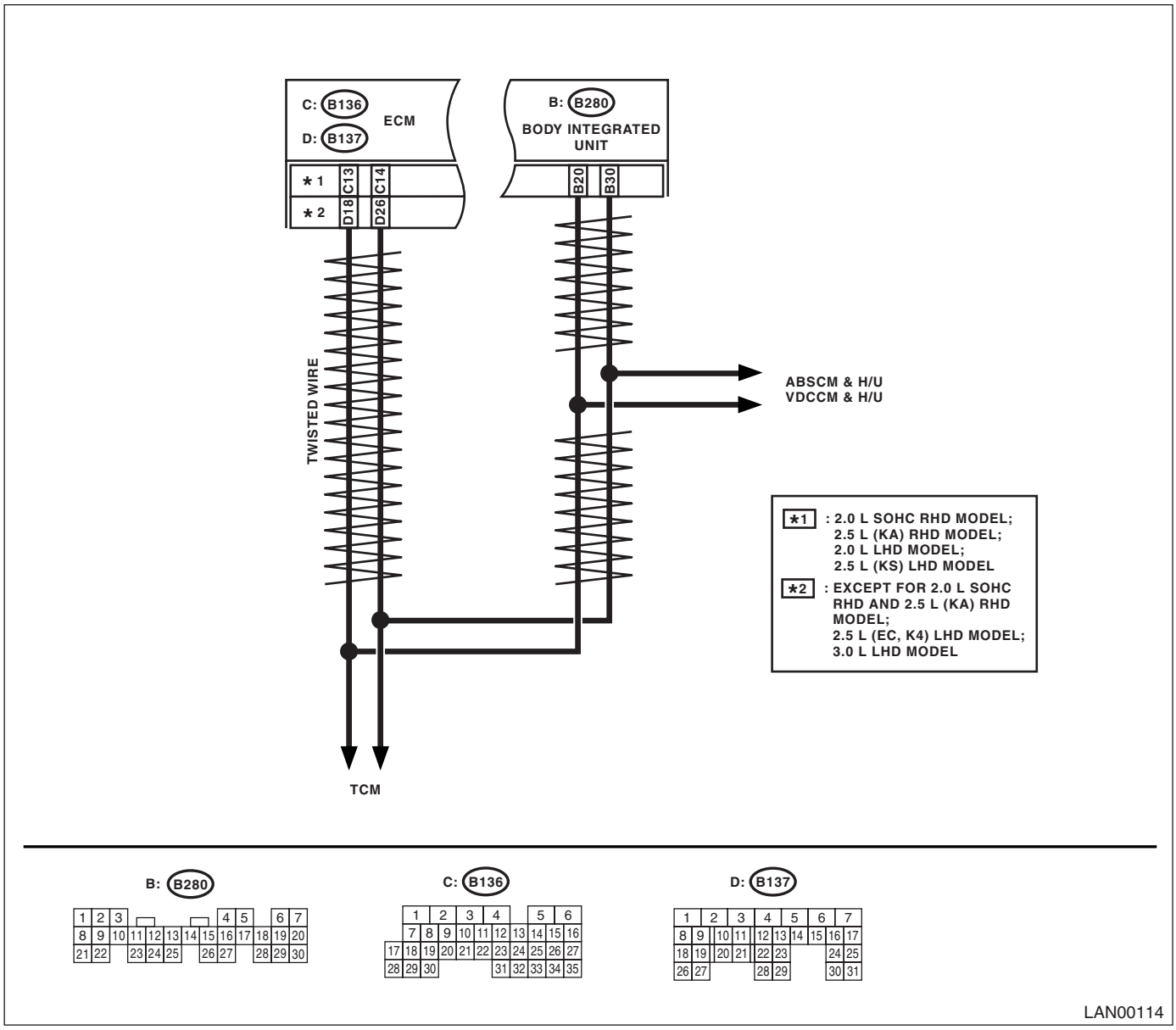
DTC DETECTING CONDITION:

Defective data from ECM.

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK ECM.** Read the DTC of ECM using Subaru Select Monitor.	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Replace the ECM. <Ref. to FU(H4SO 2.0)-34, Engine Control Module (ECM).> <Ref. to FU(H4SO 2.5)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-35, Engine Control Module (ECM).> <Ref. to FU(H6DO)-34, Engine Control Module (ECM).>

M: DTC B0212 CAN-HS TCM DATA ABNORMAL

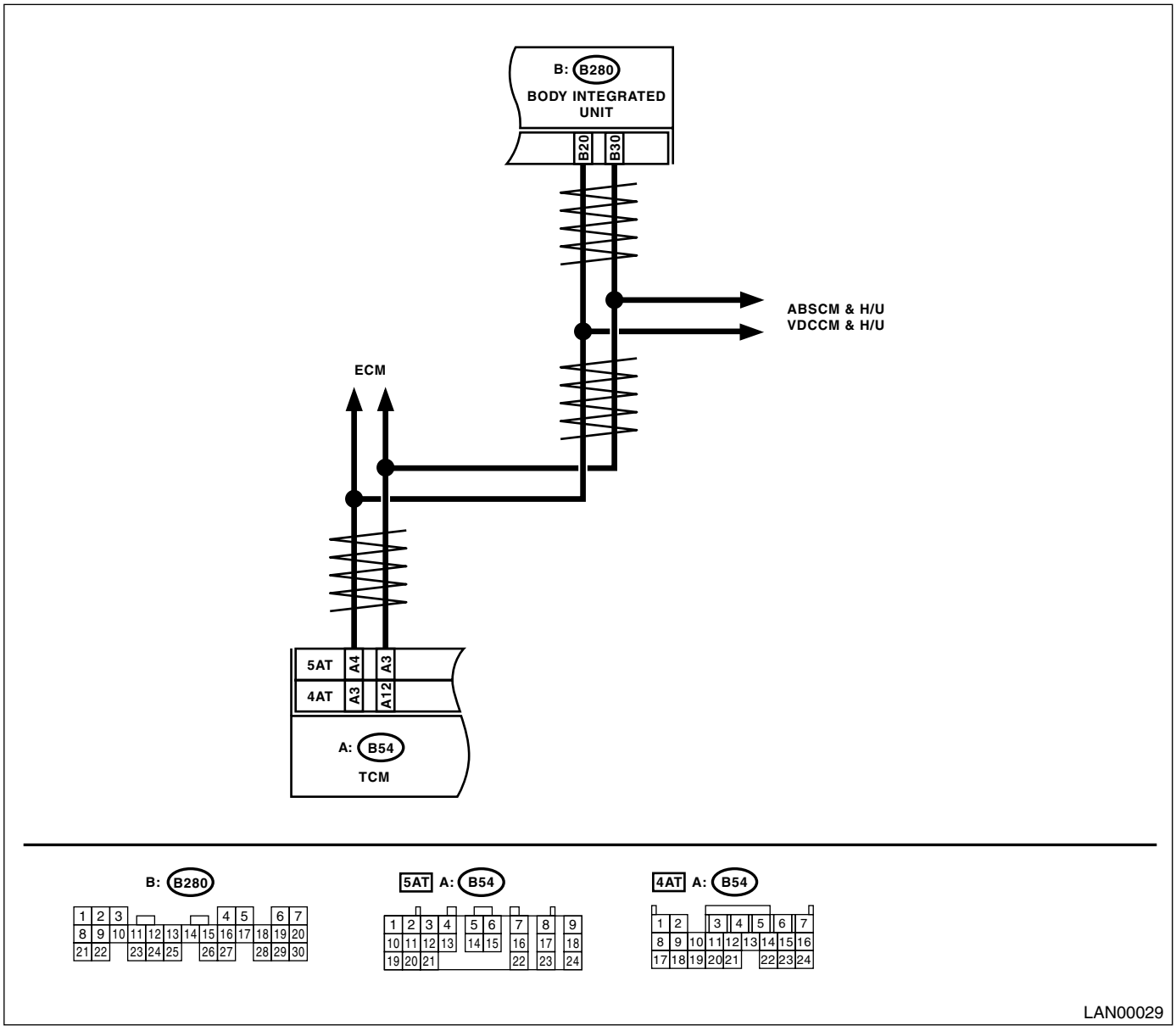
DTC DETECTING CONDITION:

TCM error, or harness between the main harness splice and TCM is open or short, the connector is not connected securely and the terminal has poor caulking.

TROUBLE SYMPTOM:

- SPORT indicator light blinks.
- "Er HC" or "Er tC" is displayed in odo/trip meter.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK TCM.** Read the DTC of TCM using Subaru Select Monitor. <Ref. to 4AT(diag)-17, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to 5AT(diag)-16, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the TCM. <Ref. to 4AT-65, Transmission Control Module (TCM).> <Ref. to 5AT-61, Transmission Control Module (TCM).>

N: DTC B0213 CAN-HS VDC/ABS DATA ABNORMAL

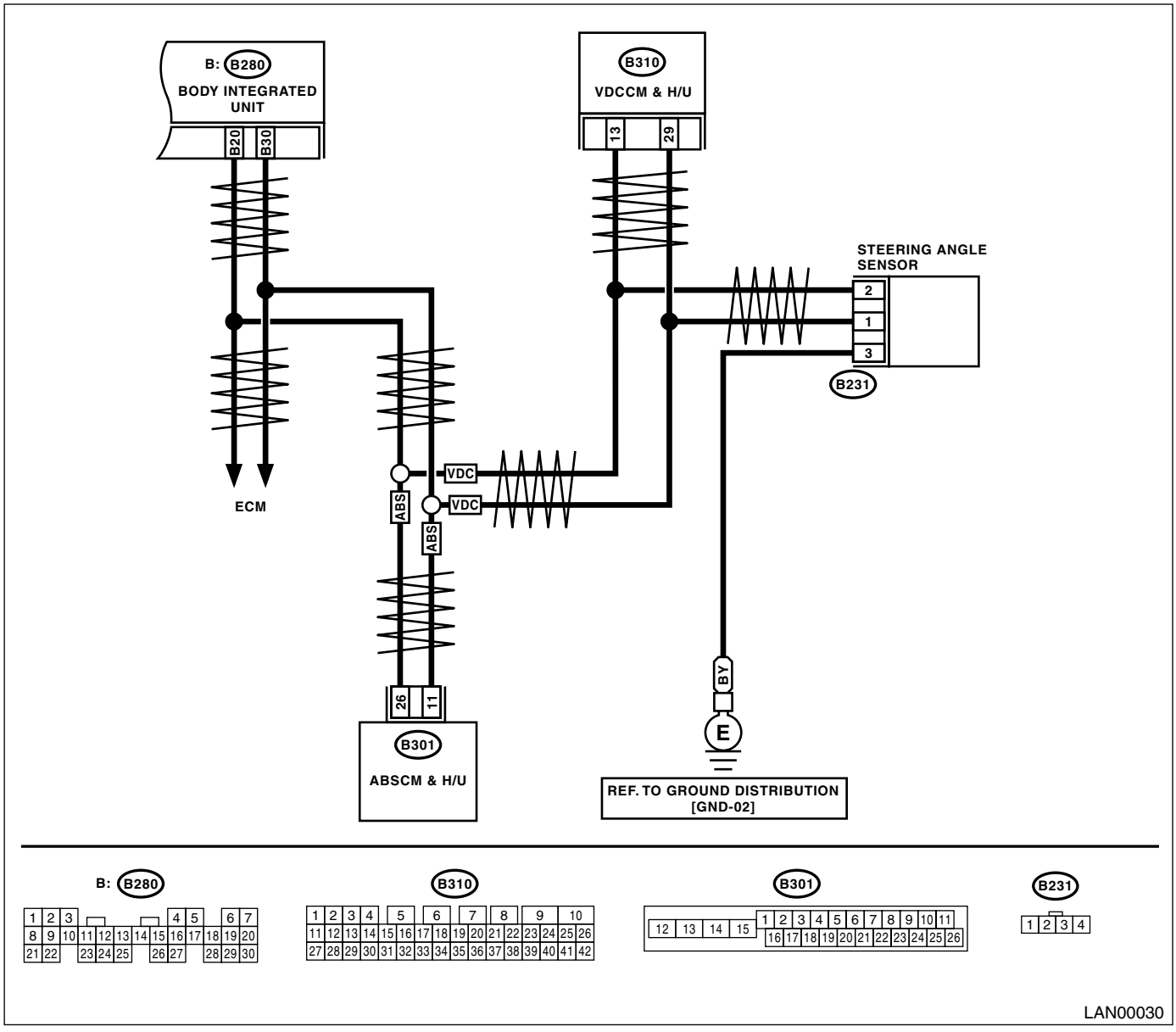
DTC DETECTING CONDITION:

VDC/ABSCM body error, or harness between the main harness splice and TCM is open or short, the connector is not connected securely and the terminal has poor caulking.

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK VDC/ABSCM.** Read the DTC of VDC/ABSCM using Subaru Select Monitor.	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Replace the VDC/ABSCM. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).> <Ref. to VDC-7, VDC Control Module & Hydraulic Control Unit (VDCCM&H/U).>

O: DTC B0221 CAN-HS ECM NO-RECEIVE DATA

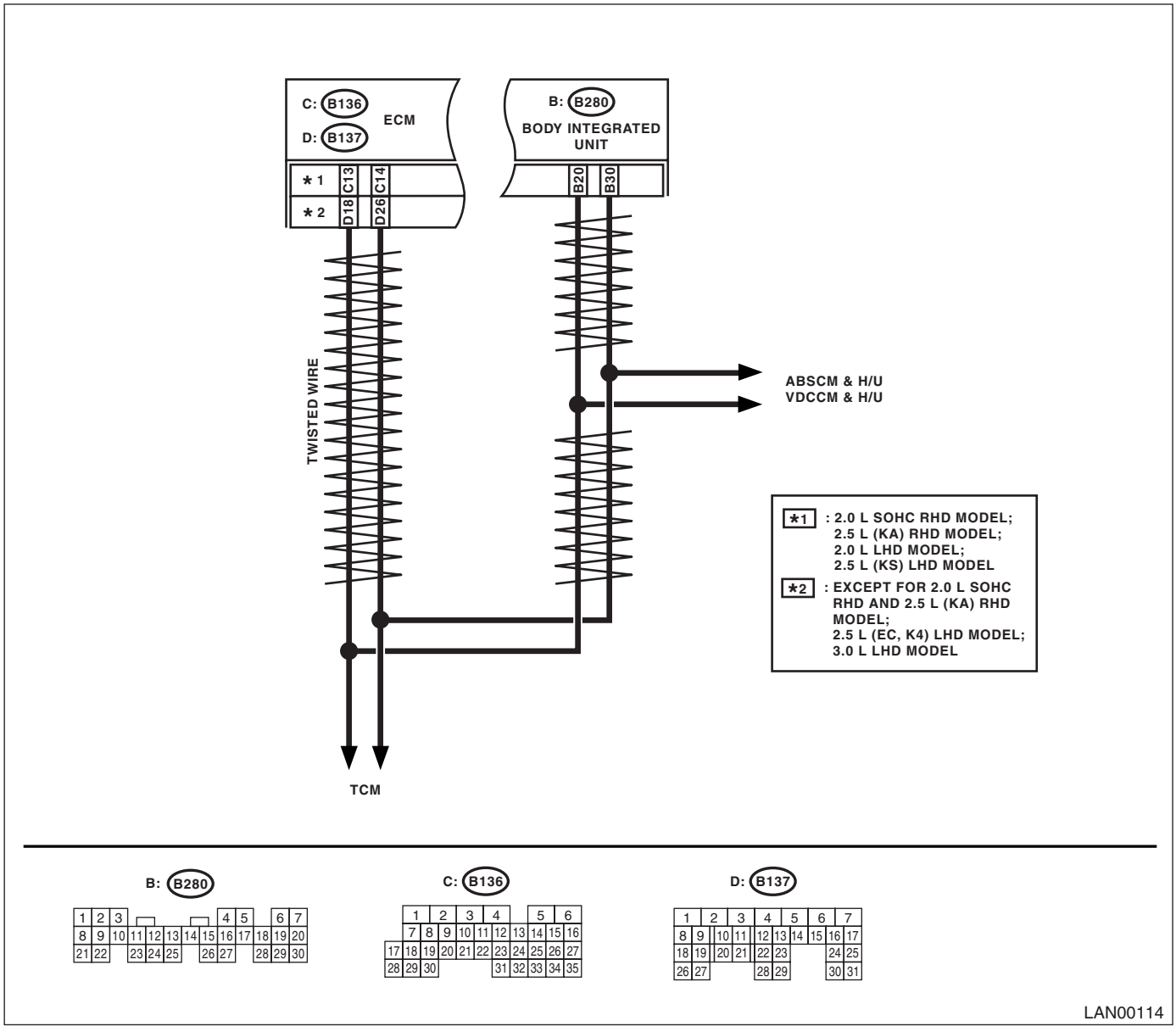
DTC DETECTING CONDITION:

Defective ECM. (If error is in the main harness, Diagnostic Trouble Code (DTC) P0600 High-speed CAN circuit is input simultaneously.)

TROUBLE SYMPTOM:

- Engine malfunction indicator light illuminates.
- “Er HC” is displayed in odo/trip meter.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**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? (Standard 60 Ω)	Read the DTC of ECM. Perform the diagnosis according to DTC. <Ref. to EN(H4SO 2.0)(diag)-25, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4SO 2.5)(diag)-26, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4DOTC)(diag)-21, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H6DO)(diag)-25, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.>	Go to step **2.**
2	**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 line is open)	Go to step **3.**	Related line of body integrated unit is open when ∞ Ω. Repair or replace the open circuit of harness.

	Step	Check	Yes	No
3	**CHECK HARNESS.** 1) Disconnect the ECM connector (*1: B136, *2: B137). 2) Measure the resistance between harness connector terminals. ***Connector & terminal*** ****1: 2.0 L SOHC RHD model, 2.5 L (KA) RHD model, 2.0 L LHD model, 2.5 L (KS) LHD model*** ***(B136) No. 13 — No. 14:*** ****2: Except for 2.0 L SOHC RHD and 2.5 L (KA) RHD model, 2.5 L (EC, K4) LHD model, 3.0 L LHD model*** ***(B137) No. 18 — No. 26:***	Is the resistance 115 — 125 Ω? (End resistance standard 120 Ω)	Go to step **4.**	Go to step **5.**
4	**CHECK ECM.** 1) Disconnect the ECM connector (*1: B136, *2: B137). 2) Measure the resistance between ECM connector terminals. ***Connector & terminal*** ****1: 2.0 L SOHC RHD model, 2.5 L (KA) RHD model, 2.0 L LHD model, 2.5 L (KS) LHD model*** ***(B136) No. 13 — No. 14:*** ****2: Except for 2.0 L SOHC RHD and 2.5 L (KA) RHD model, 2.5 L (EC, K4) LHD model, 3.0 L LHD model*** ***(B137) No. 18 — No. 26:***	Is the resistance 115 — 125 Ω?	Read the DTC of ECM. Perform the diagnosis according to DTC. <Ref. to EN(H4SO 2.0)(diag)-25, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4SO 2.5)(diag)-26, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4DOTC)(diag)-21, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H6DO)(diag)-25, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.>	End resistance is open. Replace the ECM. <Ref. to FU(H4SO 2.0)-34, Engine Control Module (ECM).> <Ref. to FU(H4SO 2.5)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-35, Engine Control Module (ECM).> <Ref. to FU(H6DO)-34, Engine Control Module (ECM).>

	Step	Check	Yes	No
5	**CHECK HARNESS.** 1) Disconnect the ECM connector (*1: B136, *2: B137). 2) Measure the resistance between harness connector and chassis ground. ***Connector & terminal*** ****1: 2.0 L SOHC RHD model, 2.5 L (KA) RHD model, 2.0 L LHD model, 2.5 L (KS) LHD model*** ***(B136) No. 13 — Chassis ground:*** ***(B136) No. 14 — Chassis ground:*** ****2: Except for 2.0 L SOHC RHD and 2.5 L (KA) RHD model, 2.5 L (EC, K4) LHD model, 3.0 L LHD model*** ***(B137) No. 18 — Chassis ground:*** ***(B137) No. 26 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair or replace the short circuit of harness.	Go to step **6.**
6	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280), ECM connector (*1: B136, *2: B137), TCM connector (B54), ABS (B301)/ VDC (B310) CM connector. 2) Measure the input 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 more than 6 V?	Repair or replace the short circuit of harness.	Read the DTC of ECM. Perform the diagnosis according to DTC. <Ref. to EN(H4SO 2.0)(diag)-25, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4SO 2.5)(diag)-26, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4DOTC)(diag)-21, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H6DO)(diag)-25, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.>

P: DTC B0222 CAN-HS TCM NO-RECEIVE DATA

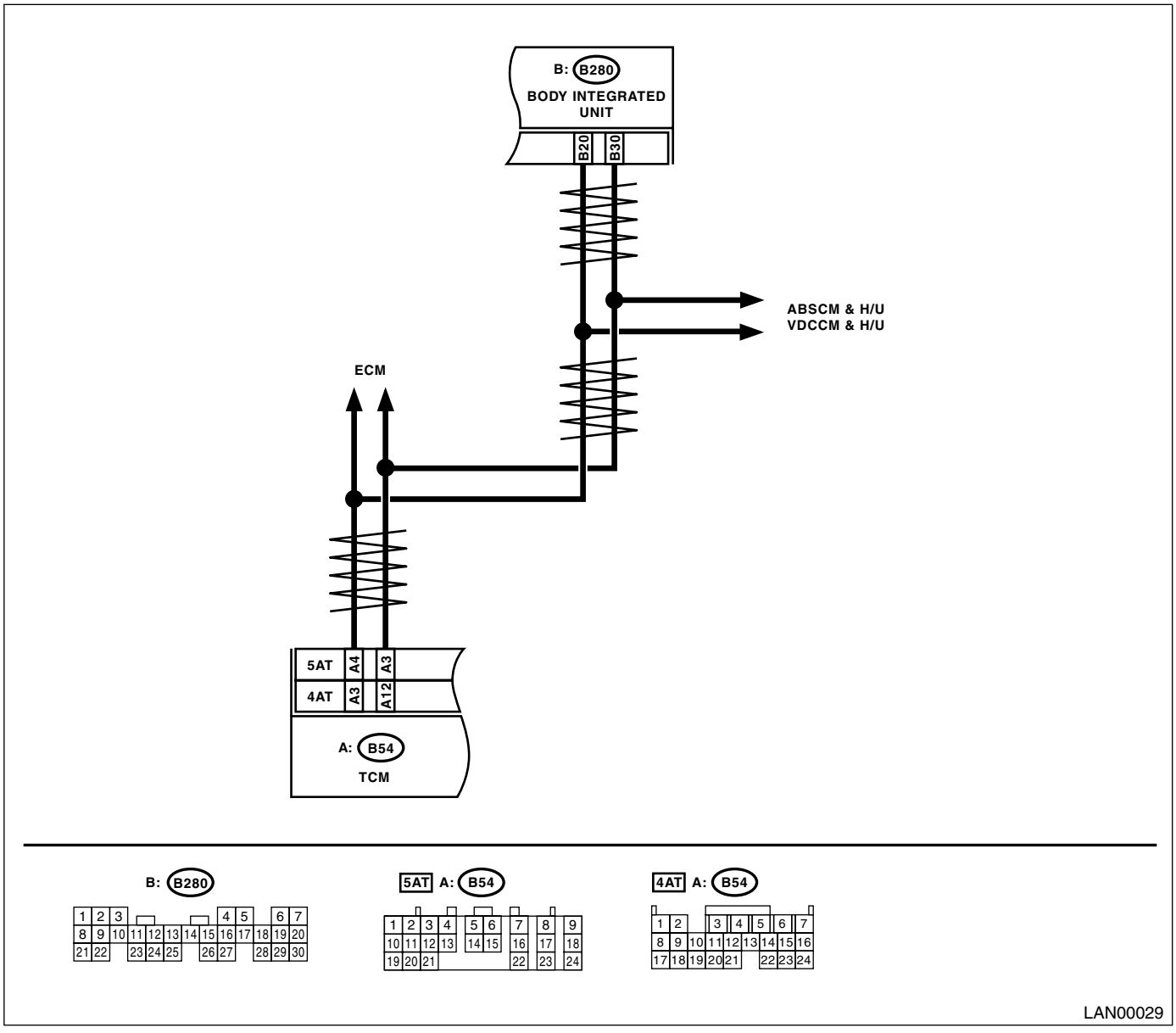
DTC DETECTING CONDITION:

TCM error, or harness between the main harness splice and TCM is open or short, the connector is not connected securely and the terminal has poor caulking.

TROUBLE SYMPTOM:

- Engine malfunction indicator light illuminates.
- “Er HC” is displayed in odo/trip meter.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK HARNESS.** 1) Disconnect the TCM connector (B54) 2) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***4AT MODEL*** ***(B54) No. 3 — No. 12:*** ***5AT MODEL*** ***(B54) No. 3 — No. 4:***	Is the resistance ∞ Ω?	Open harness in related lines of TCM. Repair or replace the open circuit of harness.	Go to step **2.**
2	**CHECK TCM.** Read the DTC of TCM using Subaru Select Monitor. <Ref. to 4AT(diag)-17, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to 5AT(diag)-16, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC.	Replace the TCM. <Ref. to 4AT-65, Transmission Control Module (TCM).> <Ref. to 5AT-61, Transmission Control Module (TCM).>

Q: DTC B0223 CAN-HS VDC/ABS NO-RECEIVE DATA

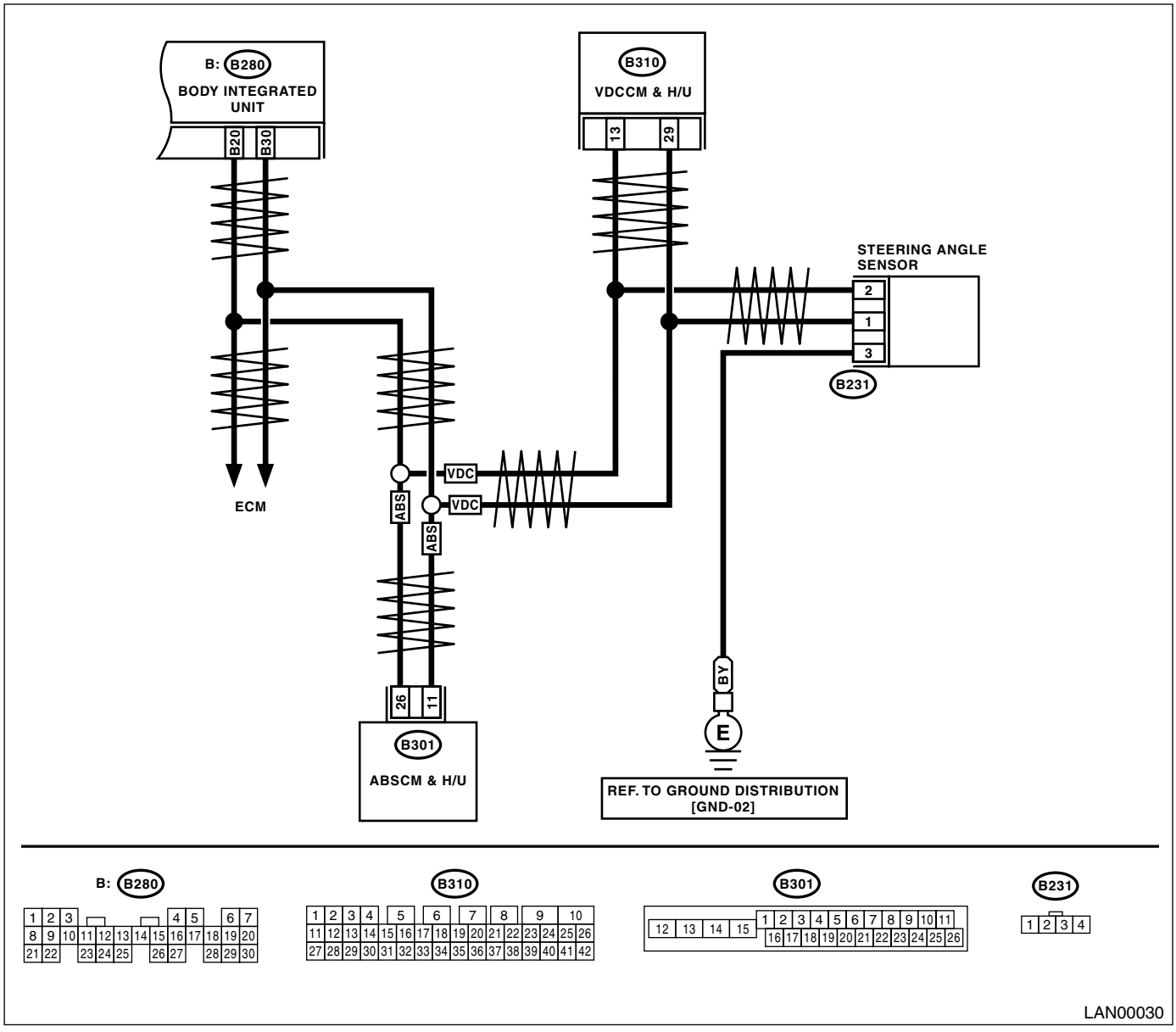
DTC DETECTING CONDITION:

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 come on.
- “Er HC” is displayed in odo/trip meter.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**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 55 — 65 Ω?	Read the DTC of VDC/ABSCM, and perform the diagnosis according to DTC.	Go to step **2.**
2	**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 115 — 125 Ω?	Go to step **5.**	Go to step **3.**
3	**CHECK HARNESS.** 1) Disconnect the harness connector of body integrated unit. 2) Measure the resistance between the harness connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 20 — Chassis ground:*** ***(B280) No. 30 — Chassis ground:***	Is the resistance ∞ Ω?	Open harness on related line of body integrated unit. Repair or replace the open circuit of harness.	Go to step **4.**
4	**CHECK HARNESS.** 1) Disconnect the harness connector of body integrated unit. 2) Measure the voltage between the harness connector terminal and chassis ground. (Ignition switch ON) ***Connector & terminal*** ***(B280) No. 20 (+) — Chassis ground (−):*** ***(B280) No. 30 (+) — Chassis ground (−):***	Is the voltage more than 6 V?	Repair or replace the short circuit of harness.	Go to step **5.**
5	**CHECK END RESISTANCE.** 1) Disconnect the VDC/ABSCM harness connector. 2) Measure the resistance between VDC/ABSCM connector terminals. ***Connector & terminal*** ***ABS*** ***(B301) No. 11 — No. 26:*** ***VDC*** ***(B310) No. 13 — No. 29:***	Is the resistance between 115 — 125 Ω?	Go to step **6.**	End resistance is opened. Replace the VDC/ABSCM. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).> <Ref. to VDC-7, VDC Control Module & Hydraulic Control Unit (VDCCM&H/U).>
6	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280) and VDC/ABSCM connector (ABS:B301, VDC:310). 2) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***ABS*** ***(B301) No. 11 — (B280) No. 30:*** ***(B301) No. 26 — (B280) No. 20:*** ***VDC*** ***(B310) No. 13 — (B280) No. 20:*** ***(B310) No. 29 — (B280) No. 30:***	Is the resistance less than 10 Ω?	Go to step **7.**	Main wiring harness opened. Repair or replace the open circuit of harness.

Step		Check	Yes	No
7	**CHECK VDC/ABSCM.** 1) Connect all the connectors. 2) Read the DTC of VDC/ABSCM using Subaru Select Monitor.	Is DTC other than “CAN communication” displayed?	Perform the diagnosis according to DTC concerning VDC/ABSCM.	Temporary poor contact occurs. Check the connecting condition of connector and terminals.

R: DTC B0300 CAN-LS MALFUNCTION

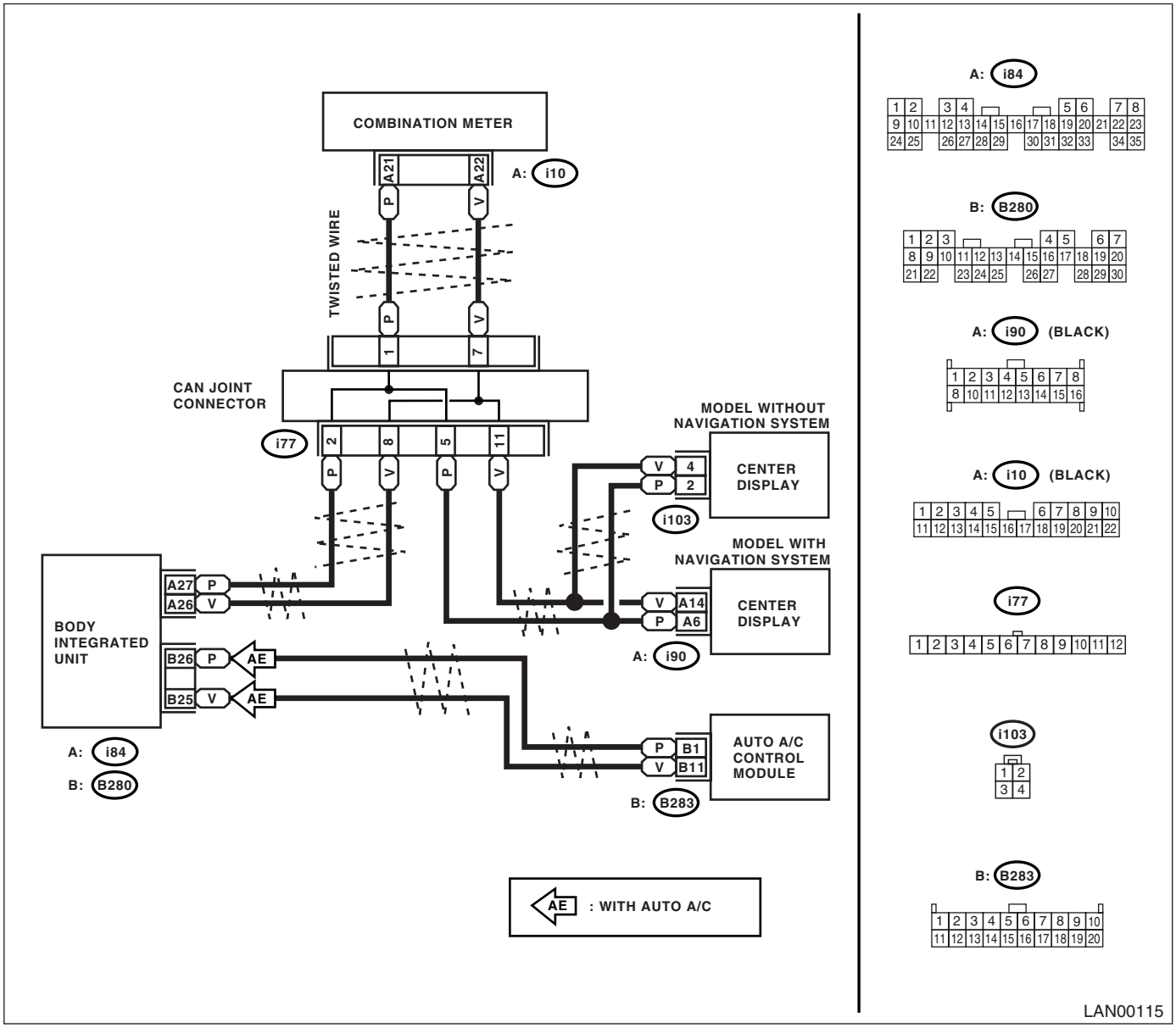
DTC DETECTING CONDITION:

Each side of low-speed CAN communication line is open or shorted, connector is not connected securely, the terminal has poor caulking.

TROUBLE SYMPTOM:

“Er LC” is displayed in odo/trip meter, but no interfere on communication.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK HARNESS.** 1) Disconnect the CAN junction connector (i77) and body integrated unit connector (i84). 2) Measure the resistance between connector terminals. ***Connector & terminal*** ***(i84) No. 26 — (i77) No. 8:*** ***(i84) No. 27 — (i77) No. 2:***	Is the resistance less than 10 Ω?	Go to step **2.**	Repair or replace the short circuit of harness.
2	**CHECK HARNESS.** 1) Disconnect the combination meter connector. 2) Measure the resistance between junction connector and combination meter connector. ***Connector & terminal*** ***(i10) No. 21 — (i77) No. 1:*** ***(i10) No. 22 — (i77) No. 7:***	Is the resistance less than 10 Ω?	Go to step **3.**	Repair or replace the open circuit of harness.
3	**CHECK HARNESS.** 1) Disconnect the center display connector (i90). 2) Measure the resistance between junction connector and center display connector. ***Connector & terminal*** ***Model with navigation*** ***(i90) No. 6 — (i77) No. 5:*** ***(i90) No. 14 — (i77) No. 11:*** ***Model without navigation*** ***(i103) No. 2 — (i77) No. 5:*** ***(i103) No. 4 — (i77) No. 11:***	Is the resistance less than 10 Ω?	Go to step **4.**	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B280) and auto A/C control unit connector (B238). 2) Measure the resistance between body integrated unit connector and auto A/C control unit connector. ***Connector & terminal*** ***(B238) No. 1 — (B280) No. 26:*** ***(B238) No. 11 — (B280) No. 25:***	Is the resistance less than 10 Ω?	Go to step **5.**	Repair or replace the open circuit of harness.
5	**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 Ω?	Repair or replace the short circuit of harness.	Go to step **6.**
6	**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 more than 6 V?	Repair or replace the short circuit of harness.	Go to step **7.**
7	**CHECK CENTER DISPLAY FAIL.** Read the current data of body integrated unit.	Is center display fail OK?	Go to step **8.**	Replace the center display.

	Step	Check	Yes	No
8	**CHECK AUTO A/C.** Perform the auto A/C self-diagnosis. <Ref. to AC(diag)-13, A/C CONTROL SYSTEM SELF-DIAGNOSIS, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Is the self-diagnosis OK?	Go to step **9.**	Replace the auto A/C control unit. <Ref. to AC-32, Control Unit (Auto A/C Model).>
9	**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. to SL-46, Body Integrated Unit.>	Replace the combination meter. <Ref. to IDI-16, Combination Meter Assembly.>

S: DTC B0301 CAN-LS COUNTER ABNORMAL

DTC DETECTING CONDITION:

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

TROUBLE SYMPTOM:

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

	Step	Check	Yes	No
1	**CHECK CENTER DISPLAY.** 1) Display the accelerator opening angle in the meter on "Information" of center display menu. 2) Read the display when the accelerator opening angle is fully opened from fully closed.	Does the value changed from 0 to 100?	Go to step **2.**	Go to step **7.**
2	**CHECK AUTO A/C CONTROL UNIT.** 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Display the number of blower fan level in the analog data. 3) Read the data display when the blower fan level is changed on air conditioner control part.	Does the data display change?	Go to step **3.**	Go to step **5.**
3	**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.	Does the indicator of data and combination meter on body integrated unit change according to operation?	Go to step **4.**	Go to step **6.**
4	**CHECK CENTER DISPLAY HARNESS.** 1) Disconnect the center display harness connector and CAN joint connector. 2) Measure the resistance between harness connectors. ***Connector & terminal*** ***(i90) No. 14 — (i77) No. 1:*** ***(i90) No. 6 — (i77) No. 5:***	Is the resistance less than 10 Ω?	Go to step **7.**	Repair or replace the open circuit of harness.
5	**CHECK AUTO A/C CONTROL UNIT 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 unit. ***Connector & terminal*** ***(B280) No. 26 — (B283) No. 1:*** ***(B280) No. 25 — (B283) No. 11:***	Is the resistance less than 10 Ω?	Go to step **8.**	Repair or replace the open circuit of harness.
6	**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. 22:*** ***(i84) No. 27 — (i10) No. 21:***	Is the resistance less than 10 Ω?	Go to step **9.**	Repair or replace the open circuit of harness.

	Step	Check	Yes	No
7	**CHECK CENTER DISPLAY.** 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Read the fail display of center display.	Is center display fail OK?	Go to step **8.**	Replace the center display.
8	**CHECK AUTO A/C CONTROL UNIT.** Perform the auto A/C control unit self-diagnosis. <Ref. to AC(diag)-13, A/C CONTROL SYSTEM SELF-DIAGNOSIS, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Is the self-diagnosis OK?	Go to step **9.**	Replace the auto A/C control unit. <Ref. to AC-32, Control Unit (Auto A/C Model).>
9	**CHECK COMBINATION METER.** Perform the self-diagnosis for combination meter system. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Go to step **10.**	Replace the combination meter. <Ref. to IDI-16, Combination Meter Assembly.>
10	**CHECK BODY INTEGRATED UNIT.** Read the data of “body integrated unit data received” on ECM data display using Subaru Select Monitor.	Is the “Yes” displayed?	Go to step **11.**	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>
11	**CHECK BODY INTEGRATED UNIT.** Read the data of “body integrated unit counter update” on ECM data display using Subaru Select Monitor.	Is the “Yes” displayed?	Temporary poor contact occurs. Check the connection of connector.	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>

T: DTC B0302 CAN-LS BUS OFF

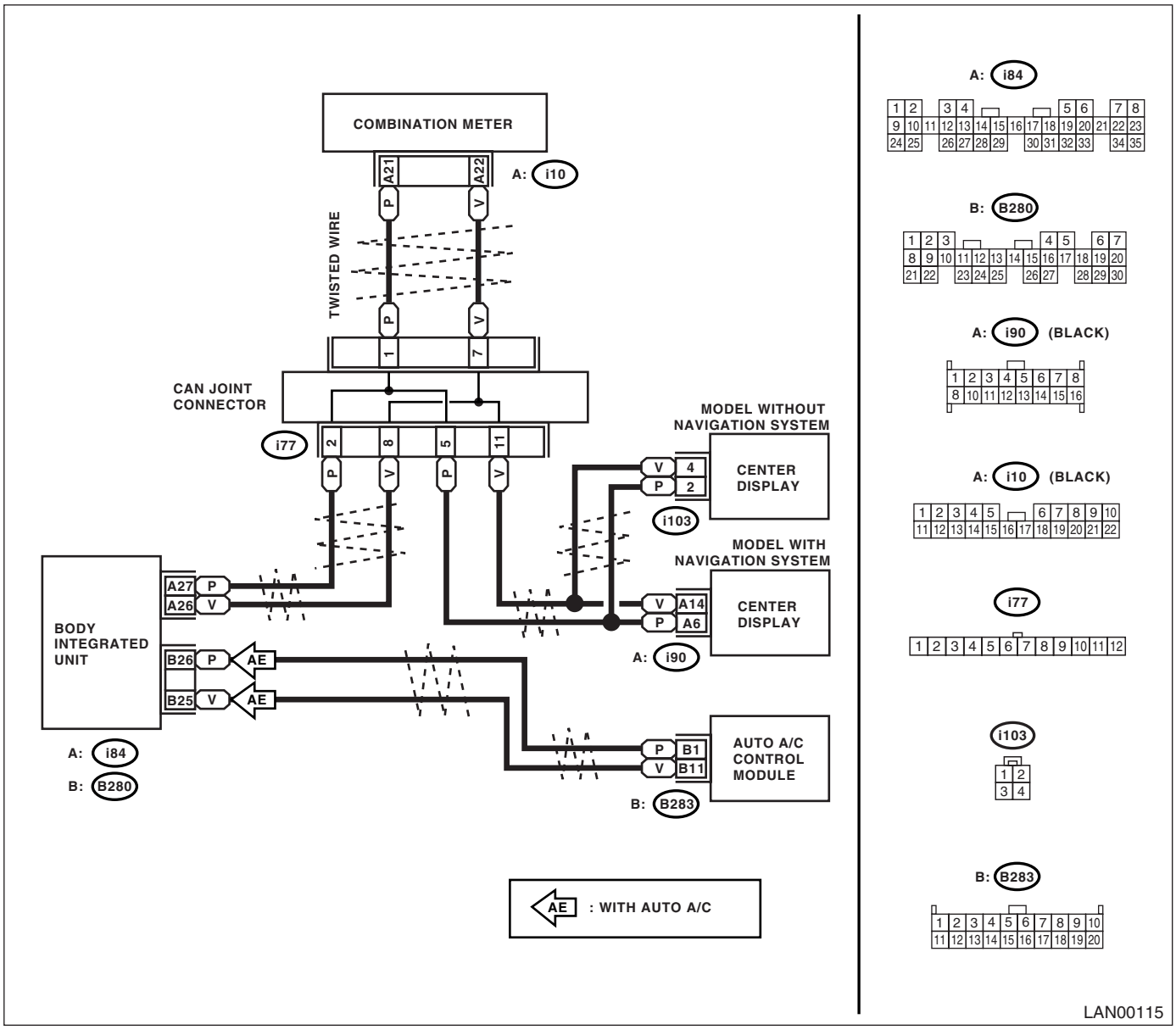
DTC DETECTING CONDITION:

Because of occurring a lot of error data, some units are disconnected not to affect other units.
Communication error from the unit which error is occurred is input at the same time.

TROUBLE SYMPTOM:

“Er LC” is displayed in odo/trip meter.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CENTER DISPLAY.** 1) Display the accelerator opening angle in the meter on “Information” of center display menu. 2) Read the display when the accelerator opening angle is fully opened from fully closed.	Is the value changes from 0 to 100?	Go to step **2.**	Go to step **7.**
2	**CHECK AUTO A/C CONTROL UNIT. (FOR MANUAL A/C, GO TO STEP 3.)** 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Display the number of blower fan level in the analog data. 3) Read the data display when the number of blower fan level is changed on air conditioner control part.	Does the data display change?	Go to step **3.**	Go to step **5.**
3	**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.	Does the indicator of data and combination meter on body integrated unit change according to operation?	Go to step **4.**	Go to step **6.**
4	**CHECK CENTER DISPLAY HARNESS.** 1) Disconnect the center display harness connector and CAN joint connector. 2) Measure the resistance between harness connectors. ***Connector & terminal*** ***(i90) No. 14 — (i77) No. 11:*** ***(i90) No. 6 — (i77) No. 5:***	Is the resistance less than 10 Ω?	Go to step **7.**	Repair or replace the open circuit of harness.
5	**CHECK AUTO A/C CONTROL UNIT 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 unit. ***Connector & terminal*** ***(B280) No. 26 — (D283) No. 1:*** ***(B280) No. 25 — (D283) No. 11:***	Is the resistance less than 10 Ω?	Go to step **8.**	Repair or replace the open circuit of harness.
6	**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. 22:*** ***(i84) No. 27 — (i10) No. 21:***	Is the resistance less than 10 Ω?	Go to step **9.**	Repair or replace the open circuit of harness.
7	**CHECK CENTER DISPLAY.** 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Read the fail display of center display.	Is center display fail OK?	Go to step **8.**	Replace the center display.
8	**CHECK AUTO A/C CONTROL UNIT.** Perform the auto A/C control unit self-diagnosis. <Ref. to AC(diag)-13, A/C CONTROL SYSTEM SELF-DIAGNOSIS, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Is the self-diagnosis OK?	Go to step **9.**	Replace the auto A/C control unit. <Ref. to AC-32, Control Unit (Auto A/C Model).>

Step		Check	Yes	No
9	**CHECK COMBINATION METER.** Perform the self-diagnosis for combination meter system. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Go to step **10.**	Replace the combination meter. <Ref. to IDI-16, Combination Meter Assembly.>
10	**CHECK BODY INTEGRATED UNIT.** Read the data of “body integrated unit data received” on ECM data display using Subaru Select Monitor.	Is the “Yes” displayed?	Go to step **11.**	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>
11	**CHECK BODY INTEGRATED UNIT.** Read the data of “body integrated unit counter update” on ECM data display using Subaru Select Monitor.	Is the “Yes” displayed?	Connect all the connector, and make sure same DTC is not displayed.	Replace the body integrated unit. <Ref. to SL-46, Body Integrated Unit.>

U: DTC B0311 CAN-LS METER UNIT DATA ABNORMAL

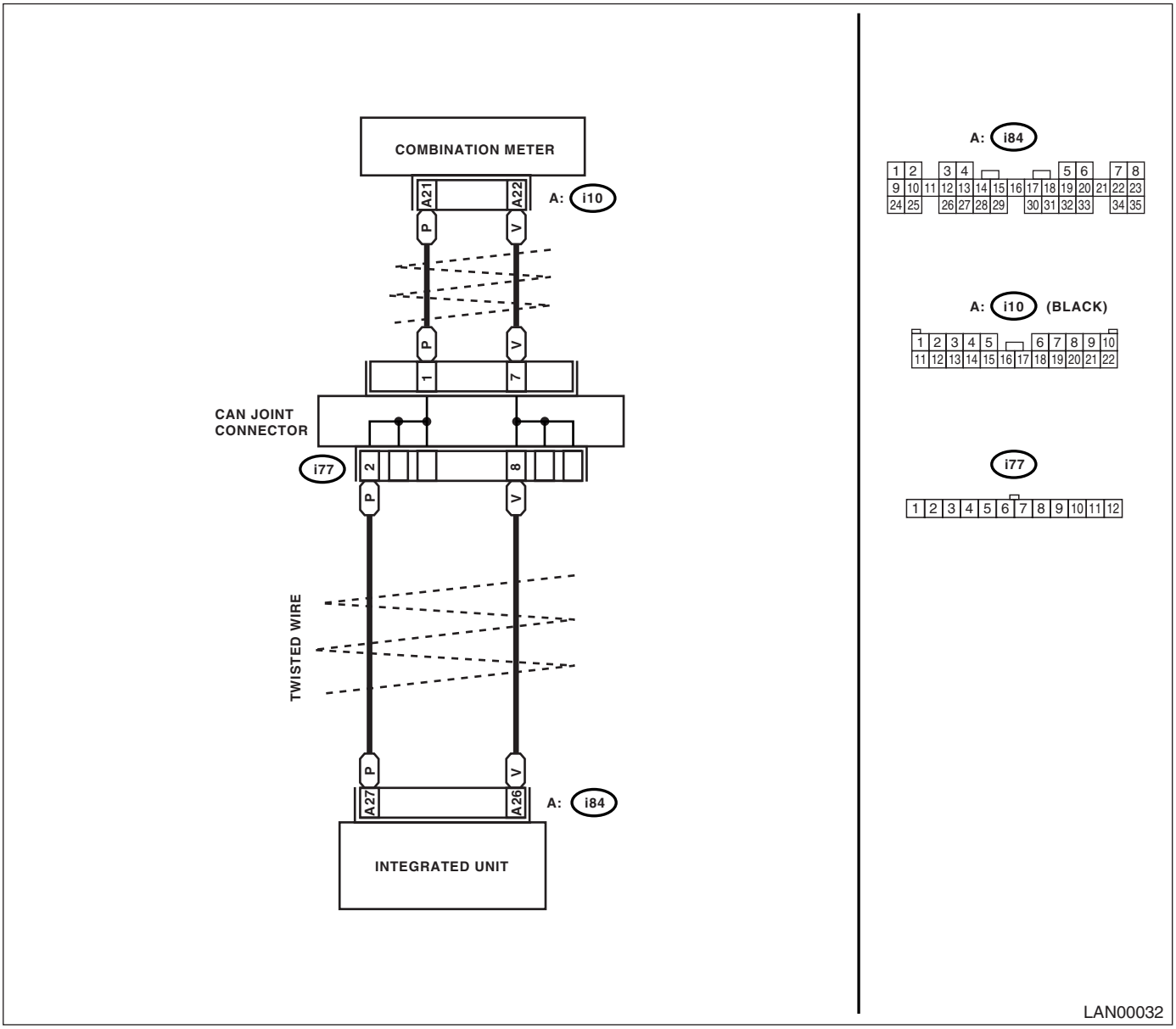
DTC DETECTING CONDITION:

Combination meter error, or harness between the main harness splice and combination meter is open or short, the connector is not connected securely and the terminal has poor caulking.

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK COMBINATION METER.** Perform the self-diagnosis for combination meter. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Read the DTC again, and then perform the diagnosis according to DTC displayed on the top.	Replace the combination meter. <Ref. to IDI-16, Combination Meter Assembly.>

V: DTC B0313 CAN-LS MONITOR DATA ABNORMAL

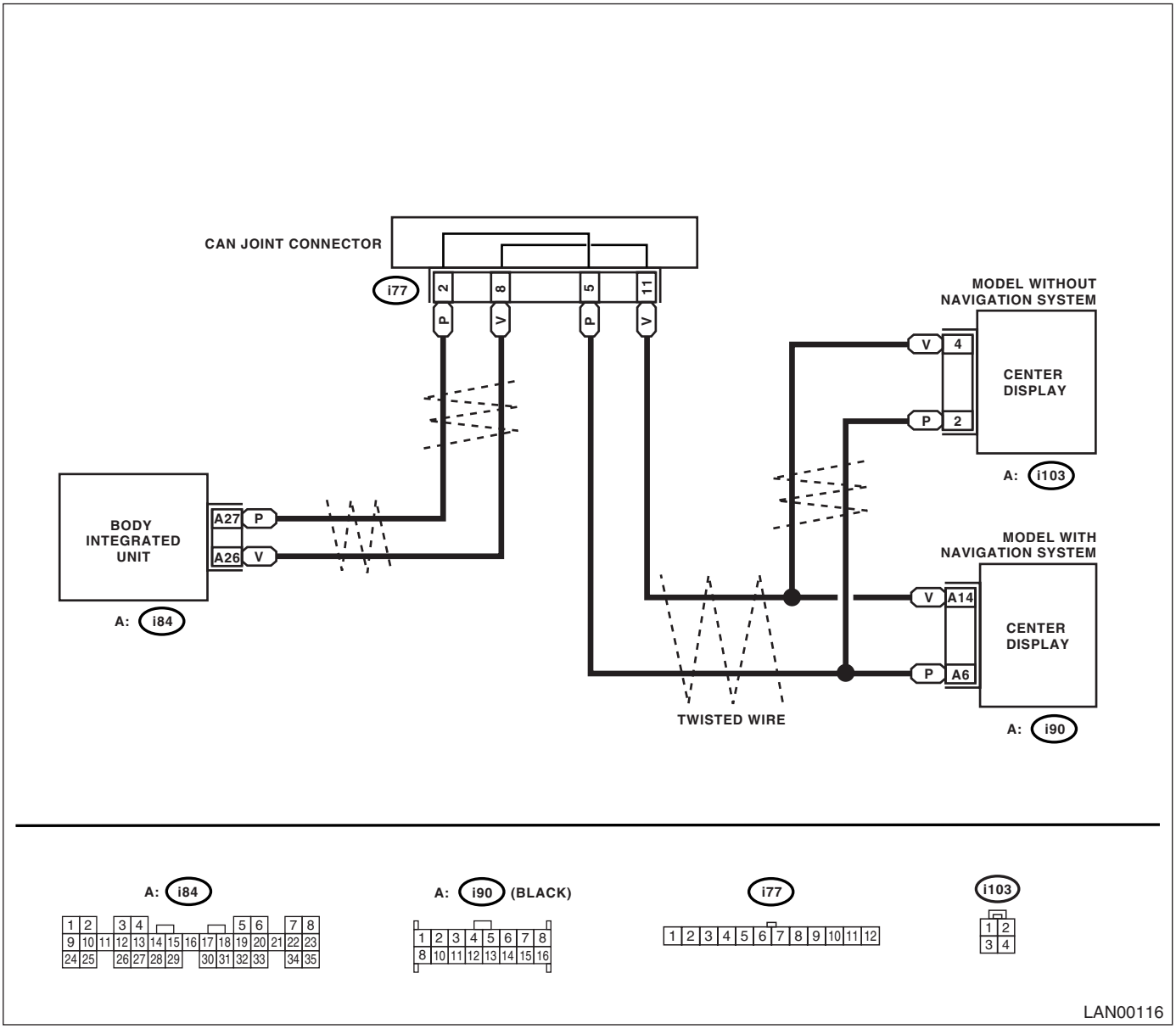
DTC DETECTING CONDITION:

Center display unit error, or harness between the center display unit and combination meter is open or short, the connector is not connected securely and the terminal has poor caulking.

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CENTER DISPLAY.** 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Read the fail display of center display.	Is center display fail OK?	Go to step **2.**	Replace the center display.
2	**CHECK NAVIGATION.** 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Read the display of NAVI fail.	Is NAVI fail OK?	Replace the center display.	Send the navigation unit to repair center.

W: DTC B0321 CAN-LS METER NO-RECEIVE DATA

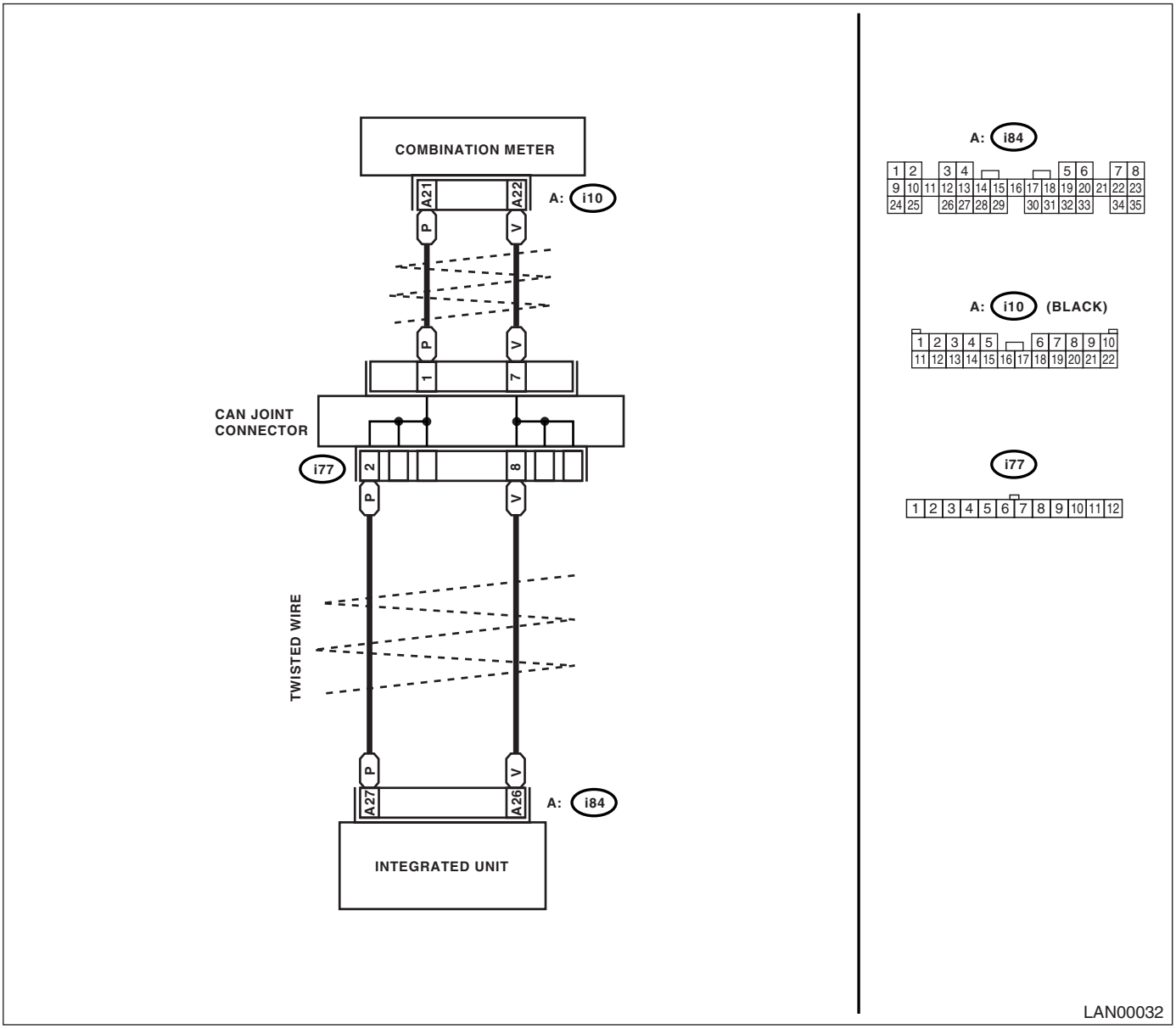
DTC DETECTING CONDITION:

Combination meter unit error, or harness between the main harness splice and combination meter unit is open or short, the connector is not connected securely and the terminal has poor caulking.

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



	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 • Each door switch • P switch	Is the data displayed same?	Go to step **2.**	Perform the self-diagnosis for combination meter. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>
2	**CHECK HARNESS.** 1) Disconnect the body integrated unit, combination meter connector. 2) Measure the resistance between harness connectors. ***Connector & terminal*** ***(i10) No. 21 — (i84) No. 27:*** ***(i10) No. 26 — (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 connector (i77) with connector of unit is disconnected. 2) Measure the resistance between harness connector. ***Connector & terminal*** ***(i10) No. 21 — (i77) No. 1:*** ***(i10) No. 26 — (i77) No. 7:*** ***(i84) No. 27 — (i77) No. 2:*** ***(i84) No. 26 — (i77) No. 8:***	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 connector (i77) and chassis ground. ***Connector & terminal*** ***(i77) No. 1 — Chassis ground:*** ***(i77) No. 7 — Chassis ground:*** ***(i77) No. 2 — Chassis ground:*** ***(i77) No. 8 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair or replace the short circuit of harness.	Go to step **5.**
5	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between harness connector (i77) and chassis ground. ***Connector & terminal*** ***(i77) No. 1 (+) — Chassis ground (−):*** ***(i77) No. 7 (+) — Chassis ground (−):*** ***(i77) No. 2 (+) — Chassis ground (−):*** ***(i77) No. 8 (+) — Chassis ground (−):***	Is the voltage more than 6 V?	Repair or replace the short circuit of harness.	Go to step **6.**
6	**CHECK COMBINATION METER.** Perform the self-diagnosis for combination meter. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Temporary poor contact occurs.	Check the connection of connector. Replace the combination meter. <Ref. to IDI-16, Combination Meter Assembly.>

X: DTC B0500 KEYLESS UART COM. MALFUNCTION

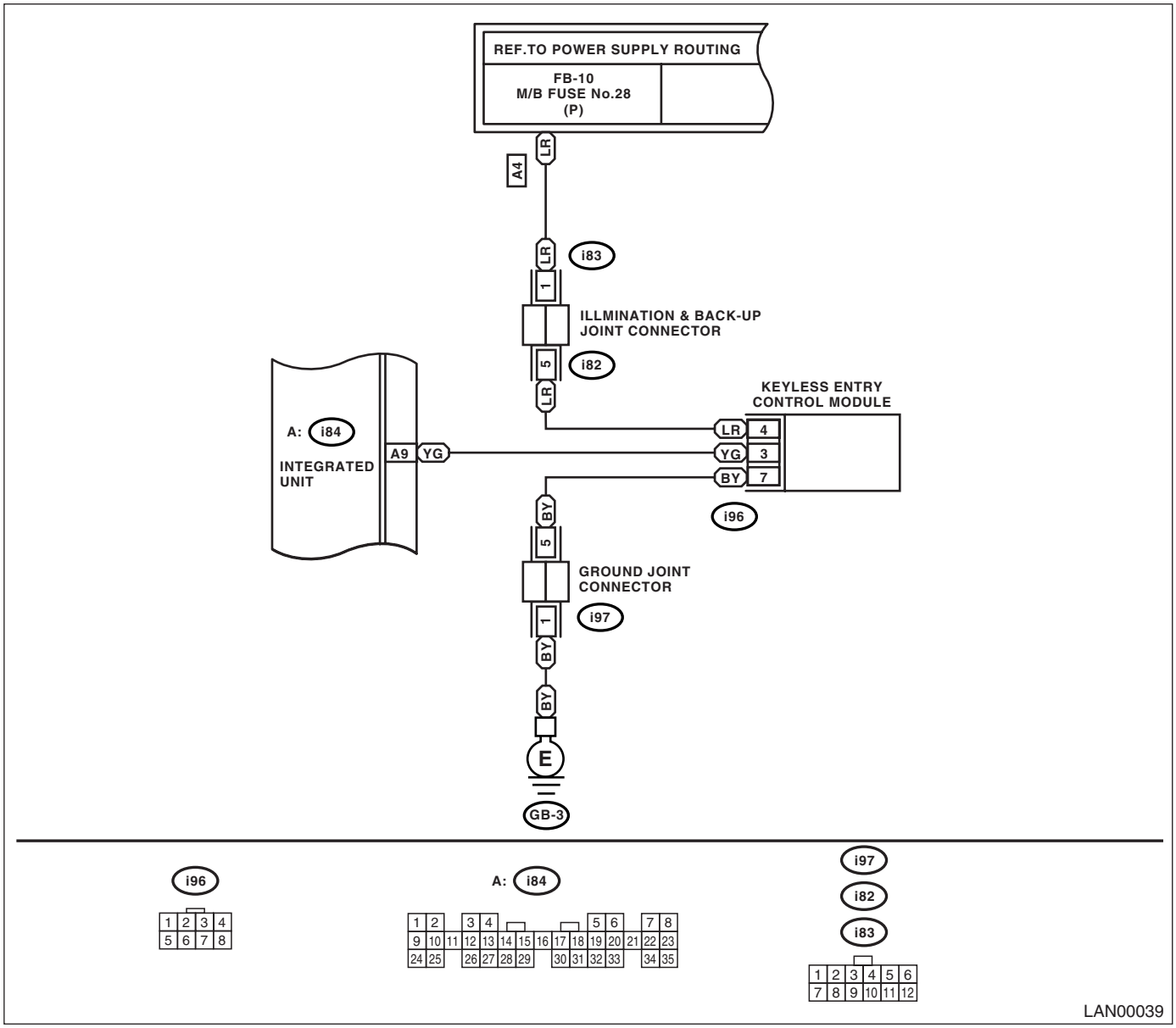
DTC DETECTING CONDITION:

UART between keyless control unit and body integrated unit is open or shorted, connector is not connected securely, the terminal has poor caulking.

TROUBLE SYMPTOM:

Door lock does not operate with keyless.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (i84) and keyless entry control unit connector (i96). 2) Measure the resistance between harness. ***Connector & terminal*** ***(i84) No. 9 — (i96) No. 3:***	Is the resistance less than 10 Ω?	Go to step **2.**	Repair or replace the open circuit of 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 MΩ?	Repair or replace the short circuit of harness.	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 more than 6 V?	Repair or replace the short circuit of harness.	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. to SL-46, Body Integrated Unit.>
5	**OPERATION CHECK.** 1) Disconnect the key warning switch connector (B350). 2) Close all the door, and then perform the LOCK/UNLOCK operation on keyless entry operation.	Does it operate?	Check key warning switch.	Replace the keyless entry control module. <Ref. to SL-45, Keyless Entry Control Unit.>

13.General Diagnostic Table

A: INSPECTION

Read the DTC or inspect and diagnose the following data in the current data display using Subaru Select Monitor.

1. LAN SYSTEM

Item	Operation	Specifications		NOTE
		YES	NO	
Diagnostic code	DTC is not displayed when inspecting all DTCs.	DTC is not displayed.	Perform the diagnosis according to DTC.	—
Engine coolant temperature	Check the current data display of ECM, TCM and body integrated unit, and make sure all data have same values.	Same values	Inspect LAN system.	If engine coolant temperature sensor is not OK, inspect the sensor circuit.
R defogger SW	It turns to ON when pressing switch. (Low-speed CAN is OK)	Turns to ON.	Inspect rear defogger switch.	Rear defogger switch is connected with Low-speed CAN.
R defogger output	When switch input, it is output.	Output	Replace the body integrated unit.	If not operate with output, check the rear defogger relay.
Door lock SW	When locked with door lock switch, it turns to ON.	Turns to ON.	Inspect door lock switch.	Door lock switch is connected with Low-speed CAN.
Door lock actuator	When locked with door lock switch, it is output.	Output	Replace the body integrated unit.	—

2. BODY INTEGRATED UNIT

Item	Operation	Specifications		NOTE
		YES	NO	
Illumination VR power supply	Operate the illumination volume, illumination light is controlled with changing of data display voltage.	Illumination light is controlled with changing of data.	Inspect the illumination volume.	—
Fuel level resistance	Check the fuel level resistance and fuel level resistance 2. Both resistances are same.	Same values	Inspect body integrated unit.	Compare the input and output values of body integrated unit.
R fog light input	When turned rear fog light switch to ON, data display turns to ON.	Turns to ON.	Inspect rear fog light switch.	—
R fog light output	When turned rear fog light switch to ON, output turns to ON.	Turns to ON.	Inspect body integrated unit.	If not operate with output turned to ON, check the rear fog light relay.
R wiper SW input	When rear wiper SW to ON, data display turns to ON.	Turns to ON.	Inspect rear wiper switch.	—
R wiper output	When rear wiper switch to ON, output signal turns to ON.	Turns to ON.	Replace the body integrated unit.	If not operate with output turned to ON, check the rear wiper motor.
Keyless Entry	Keyless entry LOCK/UNLOCK the doors.	Operate	Inspect the keyless antenna.	If the antenna is OK, replace the body integrated unit.
Brake SW	When brake pedal is depressed, it turns to ON.	Turns to ON.	Inspect brake switch.	—
Shift lock solenoid	The shift lock releases when depressing the brake pedal.	Released	Inspect the shift lock.	—

General Diagnostic Table

Item	Operation	Specifications		NOTE
		YES	NO	
Body integrated unit registration function setting	Does Vehicle equipment correspond to setting values?	Correspondence	Reconfigure the values according to vehicle equipment.	—
Customize	When changing customize setting, the registration completes correctly.	Registered	Inspect body integrated unit.	—
Manual mode	Switch the shift (UP/DOWN) on Manual mode. Indicator is changed in 1 — 2.	Change	Inspect the shift lever.	—
Function check	Each checking item operate correctly. (Except for not equipped)	Operate	Inspect for non-functional actuator.	—
Security	After looking with keyless entry system and open the door, security system is armed and the horn sounds.	Horn sounds. (Security system operates.)	Inspect the security system.	—