

BODY CONTROL SYSTEM (DIAGNOSTICS)

BC(diag)

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Basic Diagnostic Procedure

BODY CONTROL SYSTEM (DIAGNOSTICS)

1. Basic Diagnostic Procedure

A: PROCEDURE

CAUTION:

- Subaru Select Monitor is required for reading DTC, performing diagnosis and reading current data.
- Remove foreign matter (dust, water, oil, etc.) from the body integrated unit connector during removal and installation.
- Registration of the immobilizer is necessary after the replacement of the control module, etc. For detailed procedure, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

NOTE:

- To check harness for open or short circuits, shake the suspected trouble spot or connector.
- Check List for Interview <Ref. to BC(diag)-3, Check List for Interview.>

Step	Check	Yes	No
1 CHECK PRE-INSPECTION. Ask the customer when and how the trouble occurred using the interview check list. <Ref. to BC(diag)-3, Check List for Interview.>	Did you interview the customer?	Go to step 2.	Interview the customer.
2 BASIC INSPECTION. Check components which might affect body control. <Ref. to BC(diag)-4, INSPECTION, General Description.>	Is the component that might influence the body control problem normal?	Go to step 3.	Repair or replace each component.
3 CHECK DTC. 1) Read the DTC. <Ref. to BC(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: If the communication function of the Subaru Select Monitor cannot be executed properly, check the communication circuit. <Ref. to LAN(diag)-11, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.> 2) Record all DTCs, time stamp and freeze frame data. NOTE: For time stamp, refer to "LAN SYSTEM". <Ref. to LAN(diag)-6, TIME STAMP, CAUTION, General Description.>	Is DTC displayed on Subaru Select Monitor?	Go to step 5.	Go to step 4.
4 PERFORM GENERAL DIAGNOSTICS. Inspect using the "General Diagnostic Table". <Ref. to BC(diag)-39, General Diagnostic Table.>	Is result of inspection OK?	The body control system is normal.	Go to step 5.
5 PERFORM DIAGNOSIS. 1) Correct the cause of trouble. 2) Perform the Clear Memory Mode. <Ref. to BC(diag)-10, OPERATION, Clear Memory Mode.> 3) Read the DTC. <Ref. to BC(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed on Subaru Select Monitor?	Repeat step 5 until DTC is not shown.	Finish the diagnosis.

Check List for Interview

BODY CONTROL SYSTEM (DIAGNOSTICS)

2. Check List for Interview

A: CHECK

Inspect the following items regarding the vehicle's state.

Body Control System Check List for Interview		Date of Vehicle Bring-in	Year	Month	Day
Customer's name		Registration No.	Initial year of registration		
			Year	Month	Date
		Vehicle model	Frame number		
Interviewer	Inspector	Engine type	Odometer reading		
Customer specified content					
Date and time when the trouble occurred		Frequency of trouble occurrence			
Condition of trouble occurrence		Weather			
Road conditions		Occurrence location			
Accessory installation condition					
Trouble condition					
☐ Diagnostic code			☐ ()		



General Description

BODY CONTROL SYSTEM (DIAGNOSTICS)

3. General Description

A: CAUTION

1. SRS AIRBAG SYSTEM

Airbag system wiring harness is routed near the body integrated unit and body control circuits.

CAUTION:

- Do not use the electrical test equipment on all airbag system wiring harnesses and connectors.
- Be careful not to damage the airbag system wiring harness, when servicing the body control system.

B: INSPECTION

Before performing diagnosis, check the following items which might affect body control system problems.

1) Measure the battery voltage and check electrolyte.

Standard voltage: 12 V or more

Specific gravity: 1.260 or more

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 BC(diag)-17, OPERATION, Registration Body Integrated Unit.>

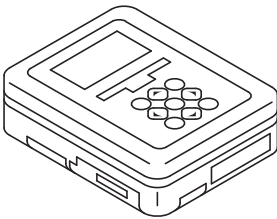
5) Make sure that the User Customizing of the body integrated unit matches the vehicle equipment. <Ref. to BC(diag)-15, OPERATION, User Customizing.>

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
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

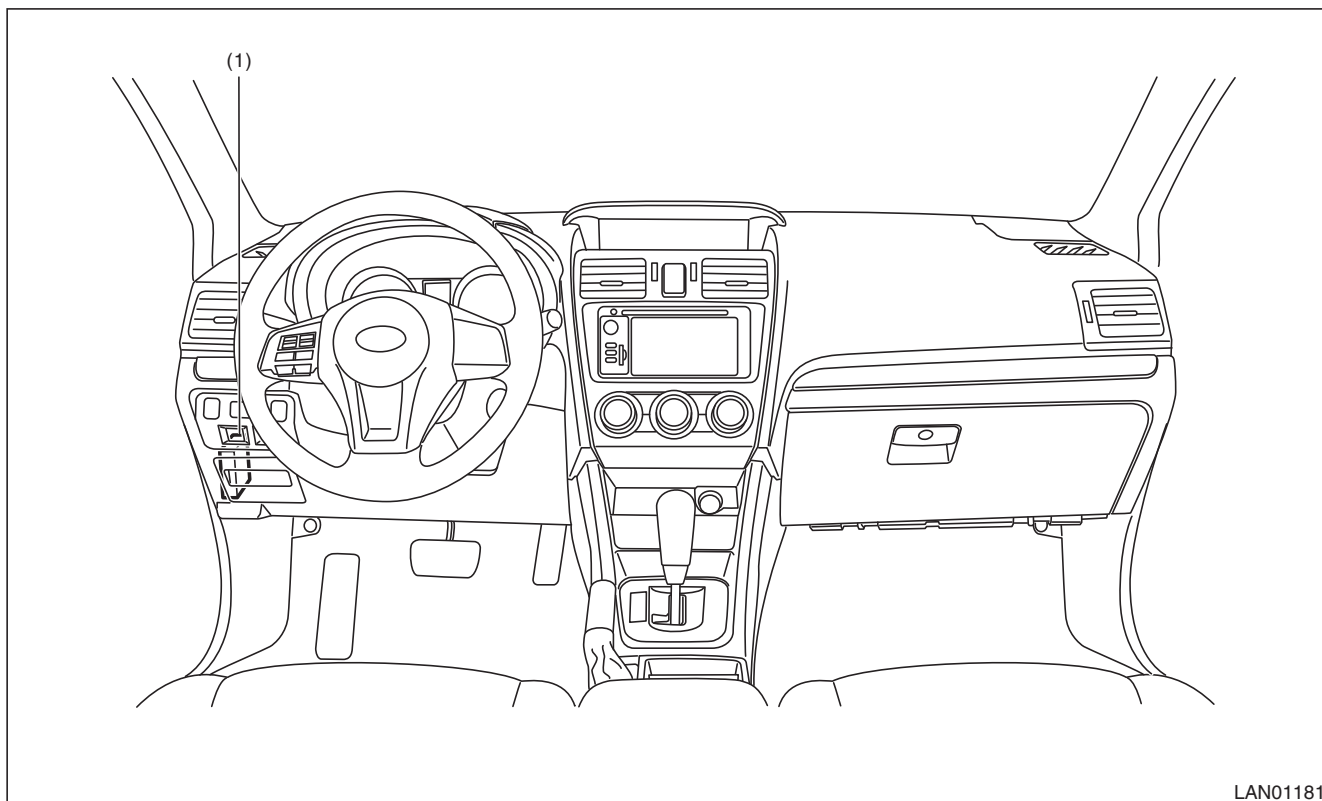
TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

Electrical Component Location

BODY CONTROL SYSTEM (DIAGNOSTICS)

4. Electrical Component Location

A: LOCATION



(1) Body integrated unit

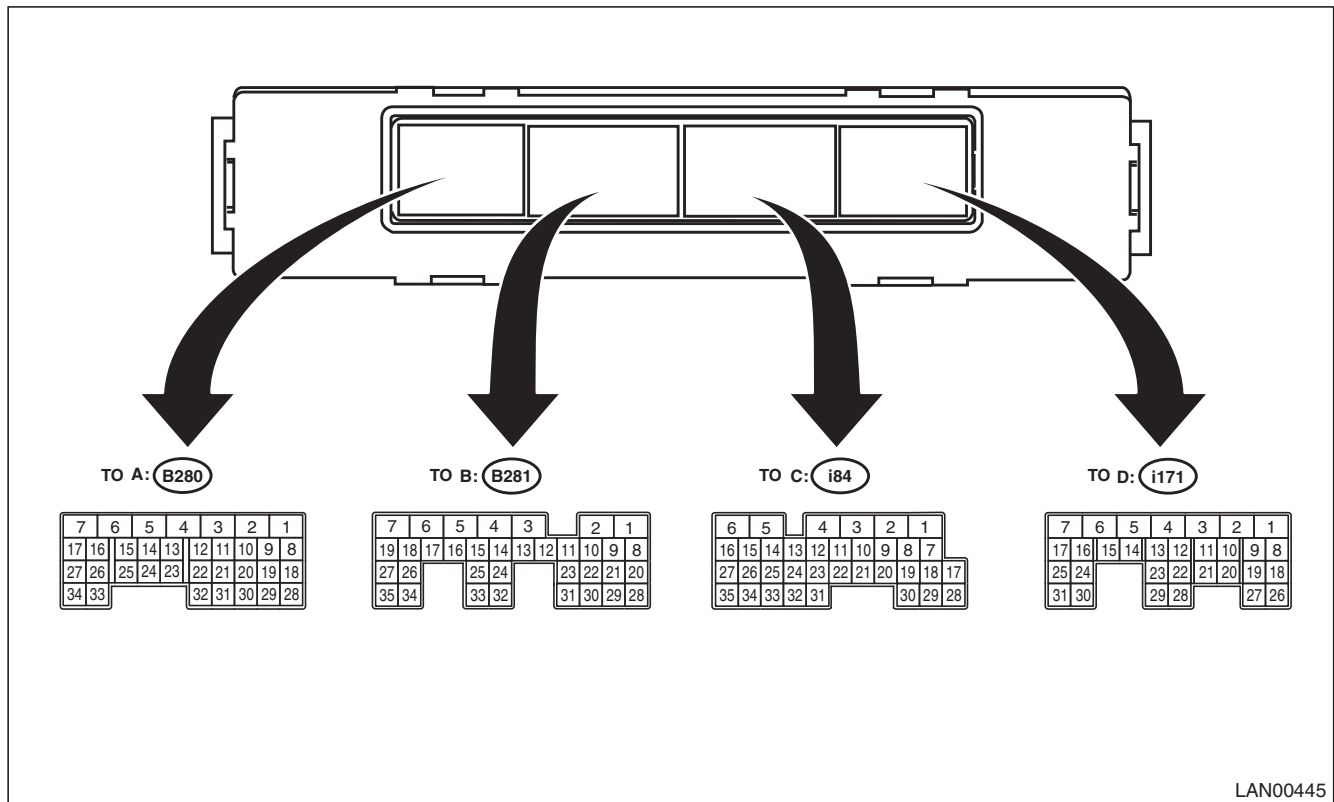


Control Module I/O Signal

BODY CONTROL SYSTEM (DIAGNOSTICS)

5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



DESCRIPTION	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Ignition power supply (rear wiper)	A5 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 10 — 13 V	Ignition switch OFF $\rightarrow$ ON
Battery power supply (shift lock/key lock)	B6 $\longleftrightarrow$ Chassis ground	10 — 13 V	Always
Battery power supply (door lock)	D1 $\longleftrightarrow$ Chassis ground	10 — 13 V	Always
Battery power supply (control)	C6 $\longleftrightarrow$ Chassis ground	10 — 13 V	Always
Ground	A1 $\longleftrightarrow$ Chassis ground	Less than 1.5 V	Always
	B31 $\longleftrightarrow$ Chassis ground		
	C1 $\longleftrightarrow$ Chassis ground		
	D29 $\longleftrightarrow$ Chassis ground		
Battery power supply (back-up)	B7 $\longleftrightarrow$ Chassis ground	10 — 13 V	Always
Ignition power supply	B3 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 10 — 13 V	Ignition switch OFF $\rightarrow$ ON
ACC power supply	A32 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 10 — 13 V	Ignition switch OFF $\rightarrow$ Accessory ON
Key-in switch	A4 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 10 — 13 V	Key inserted
P range SW	B18 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	P range to other than P range
Stop light SW	A10 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 8 V	Stop light switch OFF $\rightarrow$ ON
Door SW (driver's)	C14 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Front right door closed $\rightarrow$ open
Door SW (passenger's)	C13 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Front left door closed $\rightarrow$ open
Door SW (rear right)	C25 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Rear right door closed $\rightarrow$ open

BC(diag)-6

Control Module I/O Signal

BODY CONTROL SYSTEM (DIAGNOSTICS)

DESCRIPTION	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Door SW (rear left)	C24 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Rear left door closed $\rightarrow$ open
Rear gate SW/trunk SW	C33 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Rear gate/trunk closed $\rightarrow$ open
Opener SW (trunk/rear gate)	C10 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Rear gate/trunk opener switch ON
Manual switch (LOCK)	C9 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Door lock switch ON
Manual switch (UNLOCK)	C20 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Door unlock switch ON
Lighting AUTO	B16 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at AUTO position
Lighting II	A34 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at II position
	B34 $\longleftrightarrow$ Chassis ground		
Lighting I	B17 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at I position
Dimmer passing	B25 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at passing position
Dimmer Hi beam	B15 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at Hi beam position
Front fog light SW	B26 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Front fog light switch ON
Illumination sensor power supply	B1 $\longleftrightarrow$ A29	Less than 1.5 V $\rightarrow$ 4.5 V or more	Ignition switch OFF $\rightarrow$ ON
Illumination sensor signal	A19	0.2 — 4.5 V	Ignition switch OFF $\rightarrow$ ON
Ground (illumination sensor)	A29 $\longleftrightarrow$ Chassis ground	Less than 1.5 V	Always
Rear wiper SW ON	A12 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at ON position
Rear wiper SW INT	A22 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at INT position
Rear washer SW	A30 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at ON position
Illumination SW (Vi1)	D12 $\longleftrightarrow$ Chassis ground	Approx. 5 V	While clearance light illuminates
Illumination SW (Vi2)	D22 $\longleftrightarrow$ Chassis ground	0.5 — 4.8 V	
Illumination SW (Vi3)	D28 $\longleftrightarrow$ Chassis ground	Less than 1.5 V	Always
Bright SW	C21 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch at ON position
Reverse SW (MT)	B12 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	Reverse SW ON
Impact sensor	A11 $\longleftrightarrow$ Chassis ground	8 V or more	Apply an impact
Hi-speed CAN communication circuit 1 (Hi)	B20	Serial communication	Except for sleep status*1
Hi-speed CAN communication circuit 1 (Lo)	B28		
Hi-speed CAN communication circuit 2 (Hi)	C27	Serial communication	Except for sleep status*1
Hi-speed CAN communication circuit 2 (Lo)	C35		
X mode switch	B14 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	X mode switch ON
Immobilizer antenna (B)	B22	Serial communication	Communication with ignition key in progress
Immobilizer antenna (A)	B10		
Immobilizer antenna amplifier GND	B30 $\longleftrightarrow$ Chassis ground	Less than 1.5 V	Always
Immobilizer antenna amplifier power supply	B2 $\longleftrightarrow$ B30	4.5 — 5.5 V	Always
Security UART	A21	Serial communication	Always
Front wiper return	A2 $\longleftrightarrow$ Chassis ground	8 V	When front wiper is operated
Rear washer switch	A30 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	When rear washer switch is ON
Door UNLOCK (driver's seat) output	D4 $\longleftrightarrow$ Chassis ground	Less than 0.5 V $\rightarrow$ 8 V or more	When driver's side door unlock is output



Control Module I/O Signal

BODY CONTROL SYSTEM (DIAGNOSTICS)

DESCRIPTION	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Door UNLOCK (passenger's seat) output	D6 $\longleftrightarrow$ Chassis ground	Less than 0.5 V $\rightarrow$ 8 V or more	When passenger's side door unlock is output (with push button start)
Keyless entry communication line	D11	Serial communication	When door lock/unlock is operated with the keyless transmitter, or when TPMS is operated
Rear defogger switch	C18 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	When the rear defogger switch is ON
Parking brake switch	C32 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.5 V	When parking brake is ON
Shift lock solenoid	B5 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	When shift lock is operating (AT models)
Key actuator	B4 $\longleftrightarrow$ Chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	LOCK status ON (AT models)
Rear wiper ON output	A7 $\longleftrightarrow$ Chassis ground	Less than 0.5 V $\rightarrow$ 8 V or more	Rear wiper operation in progress
Rear wiper return	A6 $\longleftrightarrow$ Chassis ground	Less than 0.5 V $\rightarrow$ 8 V or more	Rear wiper operation in progress
Door LOCK output	D2 $\longleftrightarrow$ Chassis ground	Less than 0.5 V $\rightarrow$ 8 V or more	When LOCK signal is output
Door UNLOCK output	D3 $\longleftrightarrow$ Chassis ground	Less than 0.5 V $\rightarrow$ 8 V or more	When UNLOCK signal is output
Rear gate/trunk UNLOCK output	D7 $\longleftrightarrow$ Chassis ground	Less than 0.5 V $\rightarrow$ 8 V or more	When UNLOCK signal is output
Lighting relay power supply	A3 $\longleftrightarrow$ Chassis ground	10 — 13 V	ACC or key-in SW ON
	B19 $\longleftrightarrow$ Chassis ground	10 — 13 V	ACC or key-in SW ON
Lighting relay Hi output	A17 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	Dimmer SW at Hi position
Lighting relay Lo output	B35 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	Lighting II SW at ON position
Lighting Lo relay output 2	A27 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	Lighting II SW at ON position
Lighting relay I output	A16 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	Lighting I SW at ON position
Front fog light output	A15 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	Front fog light SW at ON position
DRL cancel output	D10 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	Headlight switch ON or Hi beam ON, passing switch ON
Illumination output	B8	Pulse output	Illumination ON
	C16	Pulse output	Illumination ON
Key ring illumination	A25	Pulse output	Illumination ON
Room light output	C4	Pulse output	Room light ON (doors interlocked)
Map light output	D8	Pulse output	Map light ON (keyless answer-back, etc.)
Luggage/trunk light output	C3	Pulse output	Luggage/trunk at open state
Rear defogger relay output	A26 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	Rear defogger SW ON
Wiper deicer relay output	D9 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	Wiper deicer SW ON
Turn/hazard output	D18 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	When answer-back is output
Security horn output	A24 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	When security is operating
Security light	D26	Pulse control	When security light is illuminating
Answer-back buzzer output	A20 $\longleftrightarrow$ Chassis ground	8 V or more $\rightarrow$ less than 1.0 V	When answer-back operates
Immobilizer communication	A31	Serial communication	

*1: For CAN sleep state, hold on for approx. one minute with ignition OFF and the doors, trunk, and rear gate all closed.

Read Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

6. Read Diagnostic Trouble Code (DTC)

A: OPERATION

For details concerning the work procedure, refer to the "PC application help for Subaru Select Monitor".

NOTE:

For details concerning DTC, refer to List of Diagnostic Trouble Code (DTC). <Ref. to BC(diag)-22, List of Diagnostic Trouble Code (DTC).>

Clear Memory Mode

BODY CONTROL SYSTEM (DIAGNOSTICS)

7. Clear Memory Mode

A: OPERATION

For details concerning the work procedure, refer to the "PC application help for Subaru Select Monitor".

Read Current Data

BODY CONTROL SYSTEM (DIAGNOSTICS)

8. Read Current Data

A: OPERATION

For details concerning the work procedure, refer to the "PC application help for Subaru Select Monitor".

B: LIST

Items to be displayed	Unit of measure	Content	Note
BATT voltage (control)	10 — 15 V	Body integrated unit input value	Always
BATT voltage (BACKUP)	10 — 15 V	Body integrated unit input value	Always
ABS_CM Power Voltage	10 — 15 V	Body integrated unit input value	Ignition switch ON
ACC voltage	10 — 15 V	Body integrated unit input value	Ignition switch ACC
Illumination VR Voltage	0 — 5 V	Body integrated unit input value	Input value from illumination volume
Illumi. output d-ratio	0 — 100%	Body integrated unit output value	Small light ON Illumination volume is other than bright.
number of regist.	0 — 4	Number of keyless key registered	
Front Wheel Speed	km/h	CAN data input value	Reception from VDC module
Fuel consumption	cc/s	CAN data input value	Reception from ECM
Coolant Temp.	−40 — 215°C	CAN data input value	Reception from ECM
Shift Position	1 — 3, D — S, D, N, R, P	CAN data input value	Reception from TCM
Buzzer beeping request	Status for 'beeping deactivated' Reverse warning Key warning buzzer Light Remained Buzzer Customize 1 Customize 2 Registration completed 1 Registration completed 2 Registered Registration NG	CAN data output value	Reception from body integrated unit
Destination	JPN U4, U5, U6 C0 EC, EA, E2, EL K4, C4, C6 KS EK ER, EN KA, KC EH C6	CAN data input value	—
Illumination Sensor Output	0 — 5 V	CAN data input value	—
Off delay time	OFF 10 Sec 20 Sec 30s	Body integrated unit setting value	Customize setting
Auto Light Sensitivity Adjustment	Dull Normal Sensitive Very sensitive	Body integrated unit setting value	Customize setting
key-lock warning SW	ON/OFF	Body integrated unit input value	ON when ignition key inserted
Stop light SW	ON/OFF	Body integrated unit input value	ON when brake pedal is depressed
Front fog lamp SW input	ON/OFF	Body integrated unit input value	When front fog light switch is ON
Driver's door SW input	ON/OFF	Body integrated unit input value	ON when driver's door is open



Read Current Data

BODY CONTROL SYSTEM (DIAGNOSTICS)

Items to be displayed	Unit of measure	Content	Note
P-door SW input	ON/OFF	Body integrated unit input value	ON when passenger's door is open
Rear right door SW input	ON/OFF	Body integrated unit input value	ON when rear right door is open
Rear left door SW input	ON/OFF	Body integrated unit input value	ON when rear left door is open
R Gate SW input	ON/OFF	Body integrated unit input value	ON when rear gate/trunk open
Manual lock SW input	ON/OFF	Body integrated unit input value	Manual lock switch ON
Manual unlock SW input	ON/OFF	Body integrated unit input value	Manual unlock switch ON
Bright SW input	ON/OFF	Body integrated unit input value	Bright switch ON
P SW	ON/OFF	Body integrated unit input value	ON when shift range is in parking Shift lever P switch signal
MT Reverse Switch	ON/OFF	Body integrated unit input value	Reverse switch ON (for MT vehicle only)
R wiper ON SW input	ON/OFF	Body integrated unit input value	Rear wiper switch ON
R wiper INT SW input	ON/OFF	Body integrated unit input value	Rear wiper switch (INT ON)
R washer SW input	ON/OFF	Body integrated unit input value	Rear washer switch ON
Rr Defogger SW	ON/OFF	Body integrated unit input value	Rear defogger switch ON
Fr wiper input	ON/OFF	Body integrated unit input value	ON when front wiper is operating
Parking Brake SW	ON/OFF	Body integrated unit input value	Parking brake ON
Driver's seat lock status SW input	ON/OFF	Body integrated unit input value	Displays latch state, ON when locked
Passenger's seat lock status SW input	ON/OFF	Body integrated unit input value	Displays latch state, ON when locked
R gate lock status SW input	ON/OFF	Body integrated unit input value	Displays latch state, ON when locked
R Gate Release SW input	ON/OFF	Body integrated unit input value	Rear gate release switch ON
Rr Defogger output	ON/OFF	Body integrated unit output value	ON when rear defogger relay is operating
lock actuat. LOCK output	ON/OFF	Body integrated unit output value	ON when LOCK signal is output
All seat UNLOCK output	ON/OFF	Body integrated unit output value	ON when unlock signal is output
D-seat UNLOCK output	ON/OFF	Body integrated unit output value	ON when unlock signal is output
R gate/trunk UNLK output	ON/OFF	Body integrated unit output value	ON when rear gate/trunk unlock signal is output
R wiper output	ON/OFF	Body integrated unit output value	ON when rear wiper motor is operating
Shift Lock Solenoid	ON/OFF	Body integrated unit output value	ON when shift lock solenoid is operating (only AT)
Key lock solenoid output	Lock/Unlock	Body integrated unit output value	LOCK when the key is locked
wiper deicer output	ON/OFF	Body integrated unit output value	ON when wiper deicer relay is operating
Hazard Output	ON/OFF	Body integrated unit output value	ON when answer-back signal is received or when hazard is operating
Keyless Buzzer Output	ON/OFF	Body integrated unit output value	ON when lock/unlock signal is received
Horn Output	ON/OFF	Body integrated unit output value	ON when security warning is operating
Illumination lamp O/P	ON/OFF	Body integrated unit output value	ON when illumination is illuminated
Room lamp output	ON/OFF	Body integrated unit output value	ON when keyless lock/unlock signal is received, or when opening or closing the door
key illumi. lamp o/p	ON/OFF	Body integrated unit output value	ON when key illumination light is illuminated
Immobilizer lamp output	ON/OFF	Body integrated unit output value	ON when immobilizer pilot light blinks
Keyless operation 1	Regist./Normal	Body integrated unit input value	When keyless registration connector connected
Keyless operation 2	Deletion/Normal	Body integrated unit input value	When keyless registration is deleted
Small Lamp SW	ON/OFF	Body integrated unit input value	ON when small light is illuminated
Headlamp	ON/OFF	Body integrated unit input value	ON when headlight Lo is illuminated
High Beam	ON/OFF	Body integrated unit input value	ON when headlight Hi is illuminated

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Read Current Data

BODY CONTROL SYSTEM (DIAGNOSTICS)

Items to be displayed	Unit of measure	Content	Note
Blower fan information	ON/OFF	CAN data input value	Reception from ECM
Power rear gate setting	ON/OFF	Body integrated unit setting value	
Back auto rear wiper setting	ON/OFF	Body integrated unit setting value	
XmodeSW setting	ON/OFF	Body integrated unit setting value	
XmodeSW input	ON/OFF	Body integrated unit input value	
XmodeSW output	ON/OFF	Body integrated unit output value	
TPMS Setting	TPMS/No TPMS	Body integrated unit setting value	Customize item
Driver's door select unlock	Selection/ALL	Body integrated unit setting value	Customize item
R gate select unlock	Selection/ALL	Body integrated unit setting value	Customize item
Lighting I Switch Input	ON/OFF	Body integrated unit input value	Small light switch ON
Lighting II Switch Input	ON/OFF	Body integrated unit input value	Headlight switch ON
Lighting AUTO input	ON/OFF	Body integrated unit input value	Headlight AUTO switch ON
Dimmer Hi Switch Input	ON/OFF	Body integrated unit input value	Dimmer Hi switch ON
Dimmer Pass Switch Input	ON/OFF	Body integrated unit input value	Dimmer Pass switch ON
Illumination sensor flag	ON/OFF	Body integrated unit setting value	Shows the existence of illumination sensor
Lighting I Lamp Output	ON/OFF	Relay drive	ON when small light is illuminated
Lighting II Lamp Output	ON/OFF	Relay drive	ON when headlight is illuminated
Lighting Hi Lamp Output	ON/OFF	Relay drive	ON when headlight Hi is illuminated
Front Fog Lamp Output	ON/OFF	Relay drive	When front fog light relay ON output
DRL Cancel Output	ON/OFF	Relay drive	When DRL cancel relay ON output
Power Supply Tr	ON/OFF	Inner Tr drive	Headlight auxiliary power supply ON
Map lamp output	ON/OFF	Body integrated unit output value	ON when map light is illuminated
Luggage/Trunk lamp output	ON/OFF	Body integrated unit output value	ON when luggage/trunk light is illuminated
Rr defogger op. mode	Continuous/Normal	Body integrated unit setting value	Customize setting
Security Alarm Setup	ON/OFF	Body integrated unit setting value	Customize setting
Impact Sensor Setup	ON/OFF	Body integrated unit setting value	Customize setting
Alarm delay setup	ON/OFF	Body integrated unit setting value	Customize setting
Lockout prevention	ON/OFF	Body integrated unit setting value	Customize setting
Impact sensor	ON/OFF	Body integrated unit setting value	Customize setting
Buzzer sounding setting	ON/OFF	Body integrated unit setting value	Customize setting
Abnormal warning lamp flashing setting	ON/OFF	Body integrated unit setting value	Customize setting
Ans.-back Buzzer	ON/OFF	Body integrated unit setting value	Customize setting
Passive Alarm	ON/OFF	Body integrated unit setting value	Customize setting
Door open warning	ON/OFF	Body integrated unit setting value	Customize setting
Dome Light Alarm Setting	ON/OFF	Body integrated unit setting value	Customize setting
Auto A/C Setting	ON/OFF	Body integrated unit setting value	Customize setting
wiperdeicer	ON/OFF	Body integrated unit setting value	Customize setting
Illumination Control On/Off	ON/OFF	Body integrated unit setting value	Customize setting
Sedan/Wagon Setting	Sedan/Wagon	Body integrated unit setting value	Customize setting
MT/AT Setting	MT/AT	Body integrated unit setting value	Customize setting
6MT Setting	6MT/Other than 6MT	Body integrated unit setting value	Customize setting



Read Current Data

BODY CONTROL SYSTEM (DIAGNOSTICS)

Items to be displayed	Unit of measure	Content	Note
Destination Setting	JPN KA, KC KS For Europe LHD other than KS C0, C5 U4, U5, U6, C6 EK, ER	Body integrated unit setting value	Displays body integrated unit customizing
Illumination Sensor Setting	ON/OFF	Body integrated unit setting value	Customize setting
Factory initial setting	Market/Factory	Body integrated unit setting value	Displays body integrated unit customizing

NOTE:

For detailed operation procedures, refer to "PC application help for Subaru Select Monitor".



User Customizing

BODY CONTROL SYSTEM (DIAGNOSTICS)

9. User Customizing

A: OPERATION

- 1) On «Main Menu» display, select {Each System Check}.
- 2) On «System Selection Menu» display, select {Integ. unit mode}.
- 3) On «Integ. unit mode failure diag.» display, select {Work Support}.
- 4) On «Work Support» display, select {Unit customizing}.
- 5) Change the setting with UP/DOWN key and set with the [OK] key.

List of User Customizing item

Data	Initial setting value	Customize setting	Remarks
Off delay time	30s	OFF	Room light off delay time can be selected.
		10 Sec	
		20 Sec	
		30s	
Auto Light Sensitivity Adjustment	Normal	Dull	Slow response
		Normal	Standard
		Sensitive	Quick response
		Very sensitive	Fairly quick response
Back auto rear wiper setting	ON	ON	Existence of rear wiper linked with reverse operation can be set.
		OFF	
Driver's door select unlock	Select	ALL	The door to be unlocked when you touch the driver's door can be set.
		Selection	
R gate select unlock	Selection	ALL	The door to be unlocked when you touch the rear gate switch can be set.
		Selection	
Rr defogger op. mode	Normal	Normal	Automatically stops in 15 minutes after switch is turned to ON.
		Continuous	Repeats active condition for 15 minutes and inactive condition for 2 minutes until switch is turned to OFF.
Security Alarm Setup	ON	ON	Security alarm (hazard, horn or siren) in active condition
		OFF	Security alarm in inactive condition
Impact Sensor Setup	OFF	ON	Workable when Impact Sensor Setup is set to "ON". Impact sensor function becomes activated.
		OFF	Impact sensor in inactive condition (Set to "OFF" in models without sensors.)
Alarm delay setup	ON		After the keyless lock operation, the alarm monitor starts after the following delay time has passed.
		ON	Delay time is 30 seconds.
		OFF	Delay time is 0 seconds.
Lockout prevention	ON	ON	key lockout prevention function is activated. (The function does not operate if safety knob is locked by hand.)
		OFF	Key lockout prevention function is deactivated.
Impact sensor (OP)	OFF	ON	Vehicle is controlled in impact sensor equipped mode. (Make sure to set to "OFF" for models without the impact sensor. When "ON", hazard, horn or siren become activated by keyless lock (alarm monitor start).)
		OFF	Vehicle is controlled in no impact sensor mode.
Buzzer sounding setting	ON	ON	When lock/unlock is selected by keyless entry system operation, buzzer operates.
		OFF	When lock/unlock is selected by keyless entry system operation, buzzer does not operate.

User Customizing

BODY CONTROL SYSTEM (DIAGNOSTICS)

Data	Initial setting value	Customize setting	Remarks
Abnormal warning lamp flashing setting	ON	ON	When lock/unlock is selected by keyless entry system operation, hazard blinks.
		OFF	When lock/unlock is selected by keyless entry system operation, hazard does not interlock.
Passive Alarm	OFF	ON	
		OFF	
Door open warning	ON	ON	
		OFF	
Dome Light Alarm Setting	OFF	ON	Room light illuminates interlocking with alarm.
		OFF	Room light does not illuminate interlocking with alarm.
Auto A/C Setting	—	ON	Diagnoses with auto A/C CM.
		OFF	Diagnoses without auto A/C CM.
wiperdeicer	—	ON	Wiper deicer control is performed.
		OFF	Wiper deicer control is not performed.
Illumination Control On/Off	ON	ON	
		OFF	
Sedan/Wagon Setting	—	Sedan	Body control is performed by Sedan.
		Wagon	Body control is performed by Wagon.
MT/AT Setting	—	MT	Body control is performed by MT.
		AT	Body control is performed by AT.
6MT Setting	—	6MT	Body control is performed by 6MT.
		Other than 6MT	Body control is performed by other than 6MT.
Factory initial setting	Market	Market	Customize setting is reset when mode is switched from Market to Factory.
		Factory	

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

CAUTION:

- The above settings must match the actual vehicle equipment.
- Do not change settings except for setting above while setting the functions.
- Be sure not to change Factory initial setting except when installing a new body integrated unit.

NOTE:

For detailed operation procedures, refer to "PC application help for Subaru Select Monitor".

Registration Body Integrated Unit

BODY CONTROL SYSTEM (DIAGNOSTICS)

10.Registration Body Integrated Unit

A: OPERATION

1. CONFIRM CURRENT SETTING

- 1) On «Main Menu» display, select {Others}.
- 2) On «Others» display, select {Customized Setting}.
- 3) Save the setting.

Required items for new registration. (Except for system not equipped)

Item	Item to confirm				Remarks
number of regist.	1	2	3	4	Number of registered ID
Off delay time	OFF	10 Sec	20 Sec	30s	Setting for lighting off time
Auto Light Sensitivity Adjustment	Dull	Normal (Standard)	Sensitive	Very sensitive	1st (slow) — 4th (fairly quick)
Power rear gate setting	ON		OFF		
Back auto rear wiper setting	ON		OFF		
TPMS Setting	TPMS		No TPMS		
Driver's door select unlock	ALL		Selection		
R gate select unlock	ALL		Selection		
Rr defogger op. mode	Normal		Continuous		
Security Alarm Setup	ON		OFF		
Impact Sensor Setup	ON		OFF		Option setting
Alarm delay setup	ON		OFF		
Lockout prevention	ON		OFF		
Impact sensor	ON		OFF		Option setting
Buzzer sounding setting	ON		OFF		
Abnormal warning lamp flashing setting	ON		OFF		
Passive Alarm	ON		OFF		
Door open warning	ON		OFF		
Dome Light Alarm Setting	ON		OFF		
Auto A/C Setting	ON		OFF		
wiperdeicer	ON		OFF		Option setting
Illumination Control On/Off	ON		OFF		
Sedan/Wagon Setting	Wagon		Sedan		
MT/AT Setting	MT		AT		
6MT Setting	6MT		Other than 6MT		
Illumination Sensor Setting	ON		OFF		
Factory initial setting	Factory		Market		Do not change to factory mode.

Registration Body Integrated Unit

BODY CONTROL SYSTEM (DIAGNOSTICS)

2. REGISTRATION BODY INTEGRATED UNIT (FUNCTION SETTING)

CAUTION:

For the body integrated unit, function selection is available to control the entire vehicle systems. 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 following item.

- Be sure to correspond registrations, or User Customizing settings to vehicle equipment.
- Do not change the settings of vehicle improperly.
- Make sure that the key illumination does not blink with ignition switch ON, or that the body integrated unit registration item, "Factory initial setting", is set as "Market". If "Factory initial setting" is set to "Factory", key illumination blinks when the ignition switch is turned ON, to notify that the settings are not confirmed.
- Key illumination does not blink with ignition switch turned ON and go off with door closed.
- Be sure to register immobilizer if body integrated unit is replaced with a new part.
- Make a registration of immobilizer when the parts related to immobilizer have been replaced. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

- 1) On «Main Menu» display, select {Each System Check}.
- 2) On «System Selection Menu» display, select {Integ. unit mode}.
- 3) Click the [OK] button after the control module name (integrated unit) is displayed.
- 4) On «Integ. unit mode failure diag.» display, select {Work Support}.
- 5) On «Work Support» display, select {Unit customizing}.

NOTE:

For the vehicle requiring the destination setting, if the destination setting is not finished, display can not be shifted into customizing screen. <Ref. to BC(diag)-19, DESTINATION SETTING, OPERATION, Registration Body Integrated Unit.>

- 6) Change the setting to the contents saved at confirmation of current setting.

CAUTION:

- To perform normal operation of vehicle and diagnosis, the above settings must match the actual vehicle equipment.
- When the body integrated unit is new or in Factory mode, the key illumination blinks, and user customizing is incomplete. Check the user customizing settings.
- Be sure not to change Factory initial setting except when installing a new body integrated unit.

NOTE:

"Factory" mode:

- Body integrated unit has not been set yet. It can be recognized by key illumination blinking with ignition switch turned to ON.
- All replacement body integrated units 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 ring illumination coming on in concocting with room light and going off with ignition switch turned to ON.

- 7) Perform the Factory initial setting. On the «Unit customizing» display screen of Subaru Select Monitor, select the {Factory initial setting}.

- 8) Change the mode from Factory to Market.

- 9) Turn the ignition switch to OFF to settle the setting.

- 10) Change the Subaru Select Monitor system selection to «Immobilizer» to register the immobilizer key.

- 11) Perform the registration according to the procedures of the "REGISTRATION MANUAL FOR IMMOBILIZER".

- 12) When key registration is completed, "Do you want to register remote engine start?" is displayed. Perform registration only for equipped models.

- 13) Perform the User Customizing. <Ref. to BC(diag)-15, OPERATION, User Customizing.>

NOTE:

For detailed operation procedures, refer to "PC application help for Subaru Select Monitor".

Registration Body Integrated Unit

BODY CONTROL SYSTEM (DIAGNOSTICS)

3. DESTINATION SETTING

NOTE:

For the vehicle requiring the destination setting, if the destination setting is not finished, display can not be shifted into customizing screen.

Step	Check	Yes	No
1 CONFIRM CURRENT SETTING. Always perform confirmation of current setting before replacing the module. Record the contents of the "Destination Setting". NOTE: Refer to the "Read Current Data" and "CONFIRMATION OF CURRENT SETTING" to confirm the current setting. <Ref. to BC(diag)-17, CONFIRM CURRENT SETTING, OPERATION, Registration Body Integrated Unit.> <Ref. to BC(diag)-11, OPERATION, Read Current Data.>	Is the current setting recorded?	Go to step 2.	Confirm the current setting. Go to step 1.
2 CONFIRM DESTINATION SETTING. 1) Connect the Subaru Select Monitor, and run the application. 2) On «Main Menu» display, select {Each System Check}. 3) On the «System Selection Menu» display, select {Integ. unit mode}. 4) On «Integ. unit mode» display, select {Work Support}. 5) On «Work Support» display, select {Unit customizing}. 6) The vehicle destination screen is displayed.	Is the vehicle destination setting screen displayed?	Go to step 3.	Go to step 4.
3 CONFIRM DESTINATION SETTING. Confirm the screen displayed on Subaru Select Monitor and the actual vehicle destination.	Is it necessary to change the destination setting?	Select [Yes], Go to step 4.	Select [No], Go to step 5.
4 ENTER DESTINATION CODE. Enter the appropriate code in the screen. U4, U5, U6, C4: U400 C0, C5: C000	Is the appropriate code entered?	Select [OK]. Go to step 5.	Enter the destination code. Go to step 4.
5 REGISTER VEHICLE EQUIPMENT. Customizing screen is displayed. NOTE: Match the each item setting of body integrated unit registration item list with the vehicle equipment.	Do all setting contents match with the vehicle equipment specification?	Go to step 6.	Change the items until each content setting match with the vehicle equipment specification. Go to step 5.
6 CONFIRM MARKET MODE. 1) Customizing screen, select the {Factory initial setting} to change the setting from "Factory" mode to "Market" mode. 2) Turn the ignition switch to OFF. NOTE: When the setting is changed from "Factory" mode to "Market" mode, turning the ignition switch from ON → OFF confirms the setting. 3) Turn the ignition switch to ON, and check the contents of settings.	Is the mode changed to "Market" mode?	Go to step 7.	Perform the destination setting from the first step. Go to step 1.

Registration Body Integrated Unit

BODY CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
7 CONFIRM MARKET MODE. Check the following. • Destination: When U4, U5, U6, and C4 are set The "Destination Setting" in the current data display is U4, U5, U6, and C4. • Destination: When C0 and C5 are set (models without keyless access) The "Destination Setting" in the current data display is C0 and C5.	Is the display the same as indicated?	Registration of body integrated unit is finished.	It is possible that harness malfunction may occur. Perform the diagnosis.

NOTE:

How to confirm when the destination code is not known.

Option code (destination code + OP code)	Application range	Destination code
U4**	Must be set for all vehicles.	U400
U5**		
U6**		
C4**		
C0**	Must be set only for models without keyless access.	C000
C5**		



11.Function Check

A: OPERATION

NOTE:

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 «Main Menu» display, select {Each System Check}.
- 2) On «System Selection Menu» display, select {Integ. unit mode}.
- 3) On «Integ. unit mode failure diag.» display, select {Work Support}.
- 4) On «Work Support» display, select {Active Test}.
- 5) Select an item to be operated on «Active Test» display, and press the [OK] button.
- 6) Pressing [Next] starts, [End] cancels the operation and [OK] returns to the System Operation Check Mode display screen.

NOTE:

- If not equipped (based on area or condition), process will not go on.
- For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

List of Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

12.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	Content of diagnosis	Note
None	Communication for Initializing Impossible	Subaru Select Monitor communication is open or shorted.	<Ref. to LAN(diag)-11, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>
B1100	Integ. Unit System Error	Body integrated unit internal error	<Ref. to BC(diag)-23, DTC B1100 INTEG. UNIT SYSTEM ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1101	BATT P/Supply Malfunction Cont	Voltage malfunction caused by poor contact of battery power supply control circuits	<Ref. to BC(diag)-24, DTC B1101 BATT P/SUPPLY MALFUNCTION CONT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1102	BATT P/Supply Malfunction Backup	Voltage malfunction caused by poor contact of battery power supply backup circuits	<Ref. to BC(diag)-26, DTC B1102 BATT P/SUPPLY MALFUNCTION BACKUP, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1103	Ignition Power Failure	Voltage malfunction caused by poor contact of IGN power supply circuits	<Ref. to BC(diag)-28, DTC B1103 IGNITION POWER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1104	ACC Power Failure	Voltage malfunction caused by poor contact of ACC power supply circuits	<Ref. to BC(diag)-30, DTC B1104 ACC POWER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1105	Key Interlock Circuit Abnormal	GND-output short of key interlock circuit	<Ref. to BC(diag)-32, DTC B1105 KEY INTERLOCK CIRCUIT ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1106	Shift Lock Circuit Failure	Voltage malfunction caused by poor contact of shift lock circuits	<Ref. to BC(diag)-34, DTC B1106 SHIFT LOCK CIRCUIT FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1401	M Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-36, DTC B1401 M COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1402	Immobilizer Key Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-36, DTC B1402 IMMOBILIZER KEY COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1405	SCU Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-36, DTC B1405 SCU COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1406	SCU_EEPROM_NG	Malfunction of security control module	<Ref. to BC(diag)-36, DTC B1406 SCU_EEPROM_NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1407	M Communication Abnormal	Communication failure between body integrated unit and combination meter	<Ref. to BC(diag)-36, DTC B1407 M COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1408	Meter EEPROM Abnormal	Combination meter malfunction	<Ref. to BC(diag)-36, DTC B1408 METER EEPROM ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1409	SCU Communication Abnormal	Communication failure between body integrated unit and security control module	<Ref. to BC(diag)-36, DTC B1409 SCU COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1410	Transponder Communication Abnormal	Communication failure between key and body integrated unit	<Ref. to BC(diag)-36, DTC B1410 TRANSPONDER COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1411	Immobilizer Antenna Abnormal	Faulty antenna	<Ref. to BC(diag)-36, DTC B1411 IMMOBILIZER ANTENNA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1500	Keyless UART Com. Malfunction	Open or short circuit in keyless UART circuit	<Ref. to BC(diag)-37, DTC B1500 KEYLESS UART COM. MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

13. Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC B1100 INTEG. UNIT SYSTEM ERROR

DTC DETECTING CONDITION:

System error in body integrated unit

TROUBLE SYMPTOM:

LAN communication immobilizer function may not be executed normally.

	Step	Check	Yes	No
1	CHECK DTC. Check DTC indicated by body integrated unit.	Is B1100 current malfunction?	Go to step 2.	Temporary EEPROM access error occurred.
2	CHECK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector. 3) Connect the disconnected connectors. 4) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1100 current malfunction?	Replace the body integrated unit. <Ref. to SL-74, REMOVAL, Body Integrated Unit.>	Temporary EEPROM access error occurred.



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

B: DTC B1101 BATT P/SUPPLY MALFUNCTION CONT

DTC DETECTING CONDITION:

- Voltage malfunction caused by poor contact of battery power supply control circuit
- Battery voltage of body integrated unit is not within the 8.5 — 16.5 V range.

TROUBLE SYMPTOM:

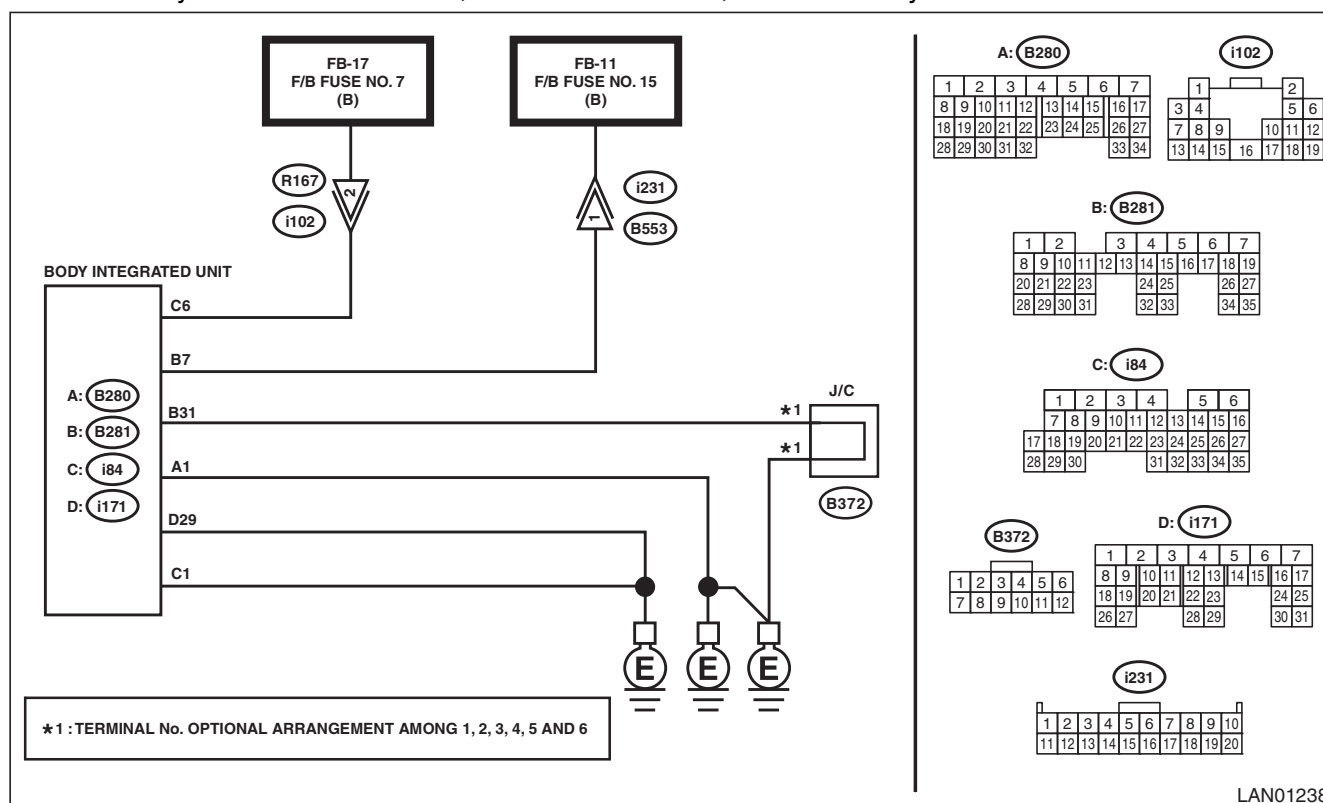
Functions of body integrated unit stop.

NOTE:

When B1102 BATT P/SUPPLY MALFUNCTION BACKUP is output at the same time, all the function of body integrated unit may not operate.

WIRING DIAGRAM:

Immobilizer system <Ref. to WI-269, WIRING DIAGRAM, Immobilizer System.>



Step	Check	Yes	No
1	CHECK DTC. Read the DTC of body integrated unit using Subaru Select Monitor.	Go to step 2.	Go to step 5.
2	CHECK DTC. 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Go to step 3.	Go to step 5.
3	CHECK FUSE. 1) Turn the ignition switch to OFF. 2) Check the fuse.	Go to step 4.	Replace the defective fuse.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
4	CHECK HARNESS. 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. Connector & terminal (i84) No. 6 (+) — Chassis ground (–):	Is the voltage 8.5 — 16.5 V?	Replace the body integrated unit. <Ref. to SL-74, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.
5	CHECK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
4	CHECK HARNESS. 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. Connector & terminal (B281) No. 7 (+) — Chassis ground (–):	Is the voltage 8.5 — 16.5 V?	Replace the body integrated unit. <Ref. to SL-74, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.
5	CHECK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
5	CHECK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

E: DTC B1104 ACC POWER FAILURE

DTC DETECTING CONDITION:

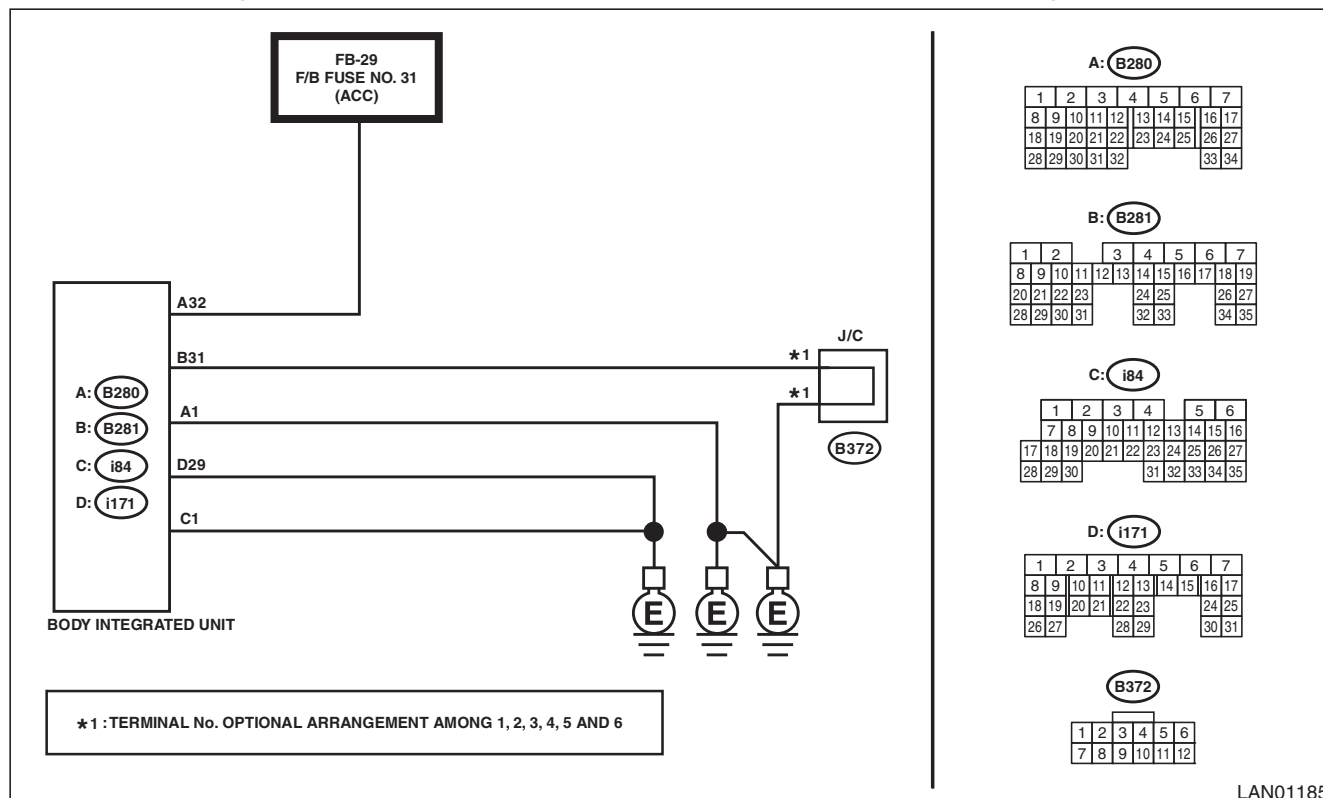
Voltage malfunction caused by poor contact of ACC power supply circuit

TROUBLE SYMPTOM:

DRL may not illuminate.

WIRING DIAGRAM:

Shift lock control system <Ref. to WI-388, WIRING DIAGRAM, Shift Lock Control System.>



	Step	Check	Yes	No
1	CHECK DTC. Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1104 current malfunction?	Go to step 2.	Go to step 5.
2	CHECK DTC. 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1104 current malfunction?	Go to step 3.	Go to step 5.
3	CHECK FUSE. 1) Turn the ignition switch to OFF. 2) Check the fuse.	Is the fuse OK?	Go to step 4.	Replace the defective fuse.
4	CHECK HARNESS. 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. Connector & terminal (B280) No. 32 (+) — Chassis ground (-):	Is the voltage 8.5 — 16.5 V?	Replace the body integrated unit. <Ref. to SL-74, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
5	CHECK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
3 CHECK KEY ACTUATOR. 1) Turn the ignition switch to OFF. 2) Disconnect the key actuator connector (B557). 3) Measure the resistance between key actuator connectors. Connector & terminal (B557) No. 1 — No. 2:	Is the resistance 12 — 14.5 Ω ?	Go to step 4.	Replace the key actuator.
4 CHECK KEY ACTUATOR. Connect the battery terminals to the key actuator. Terminals (B557) No. 2 — positive terminal: (B557) No. 1 — ground terminal:	Is the actuator activated and then key locked?	Go to step 5.	Replace the key actuator.
5 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B281). 2) Measure the resistance between body integrated unit and key actuator using tester. Connector & terminal (B557) No. 1 — (B281) No. 4:	Is the resistance less than 10 Ω ?	Go to step 6.	Repair or replace the open circuit of harness.
6 CHECK HARNESS. Measure the resistance between body integrated unit and chassis ground using tester. Connector & terminal (B281) No. 4 — Chassis ground:	Is the resistance 1 M Ω or more?	Go to step 7.	Repair or replace the short circuit of the harness.
7 CHECK HARNESS. 1) Connect the body integrated unit. 2) Turn the ignition switch to ON. 3) Measure the voltage between body integrated unit and chassis ground using tester. Connector & terminal (B281) No. 4 (+) — Chassis ground (-):	Is the voltage 6 V or more?	Repair or replace the short circuit of the harness.	Replace the body integrated unit. <Ref. to SL-74, REMOVAL, Body Integrated Unit.>
8 CHECK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector (B281) and key actuator connector (B557).	Is there poor contact at disconnected connector terminal?	Repair the terminal where poor contact exists, or replace harness.	It is possible that temporary poor contact occurs.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

G: DTC B1106 SHIFT LOCK CIRCUIT FAILURE

DTC DETECTING CONDITION:

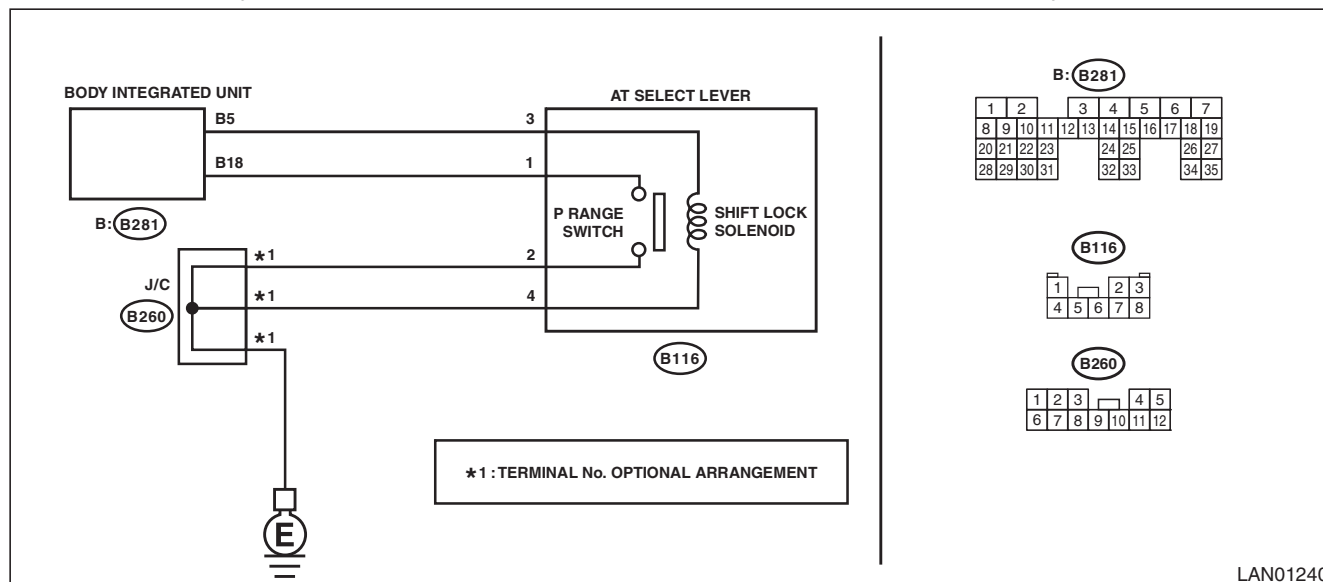
Open or power supply-output short, GND-output short in shift lock circuit.

TROUBLE SYMPTOM:

Shift lock does not be released or remain locked.

WIRING DIAGRAM:

Shift lock control system <Ref. to WI-388, WIRING DIAGRAM, Shift Lock Control System.>



Step	Check	Yes	No
1	CHECK DTC. 1) Turn the ignition switch to ON. 2) Keep the Parking range for approx. 5 seconds. 3) Read the DTC of body integrated unit using Subaru Select Monitor.	Go to step 6.	Go to step 2.
2	CHECK DTC. 1) Turn the ignition switch to OFF. 2) Disconnect the shift lock solenoid connector. 3) Connect the disconnected connectors. 4) Turn the ignition switch to ON, then keep the Parking range for approx. 5 seconds. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Go to step 3.	Go to step 7.
3	CHECK HARNESS. 1) Turn the ignition switch to OFF. 2) Disconnect the shift lock solenoid connector. 3) Using the tester, measure the resistance between terminals. Connector & terminal (B116) No. 4 — Chassis ground:	Go to step 4.	Repair or replace the open circuit of harness.
4	CHECK SHIFT LOCK SOLENOID. Using a tester, measure the resistance between shift lock solenoid terminals. Connector & terminal (B116) No. 4 — No. 3:	Go to step 5.	Replace the shift lock solenoid. <Ref. to CS-54, REMOVAL, AT Shift Lock Solenoid and "P" Range Switch.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
5 CHECK SHIFT LOCK SOLENOID. Connect the battery terminal to shift lock solenoid. <i>Connector & terminal</i> <i>(B116) No. 3 — positive terminal:</i> <i>(B116) No. 4 — ground terminal:</i>	Does the shift lock solenoid operate and then release the lock?	Go to step 6.	Replace the shift lock solenoid. <Ref. to CS-54, REMOVAL, AT Shift Lock Solenoid and "P" Range Switch.>
6 CHECK HARNESS. Use a tester to measure the resistance between harness terminals. <i>Connector & terminal</i> <i>(B116) No. 3 — (B281) No. 5:</i> NOTE: If body integrated unit and shift lock connector are not disconnected, disconnect them first and then perform measurement.	Is the resistance less than 10 Ω ?	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>	Repair or replace the open circuit of harness.
7 CHECK DTC. 1) Depress the brake pedal at the parking range. 2) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 current malfunction?	Go to step 8.	Go to step 9.
8 CHECK DTC. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector and shift lock connector. 3) Connect the disconnected connectors. 4) Turn the ignition switch to ON. 5) Depress the brake pedal at the parking range. 6) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 current malfunction?	Go to step 4.	Go to step 9.
9 CHECK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector and shift lock connector.	Is there poor contact of connector terminal?	Repair or replace the poor contact of terminal.	It is possible that temporary poor contact occurs.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

H: DTC B1401 M COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAG). <Ref. to IM(diag)-25, DTC B1401 M COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

I: DTC B1402 IMMOBILIZER KEY COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAG). <Ref. to IM(diag)-26, DTC B1402 IMMOBILIZER KEY COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

J: DTC B1405 SCU COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAG). <Ref. to IM(diag)-26, DTC B1405 SCU COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

K: DTC B1406 SCU_EEPROM_NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAG). <Ref. to IM(diag)-26, DTC B1406 SCU_EEPROM_NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

L: DTC B1407 M COMMUNICATION ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-27, DTC B1407 M COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

M: DTC B1408 METER EEPROM ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-27, DTC B1408 METER EEPROM ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

N: DTC B1409 SCU COMMUNICATION ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-28, DTC B1409 SCU COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

O: DTC B1410 TRANSPONDER COMMUNICATION ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-30, DTC B1410 TRANSPONDER COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

P: DTC B1411 IMMOBILIZER ANTENNA ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-30, DTC B1411 IMMOBILIZER ANTENNA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

Q: DTC B1500 KEYLESS UART COM. MALFUNCTION

DTC DETECTING CONDITION:

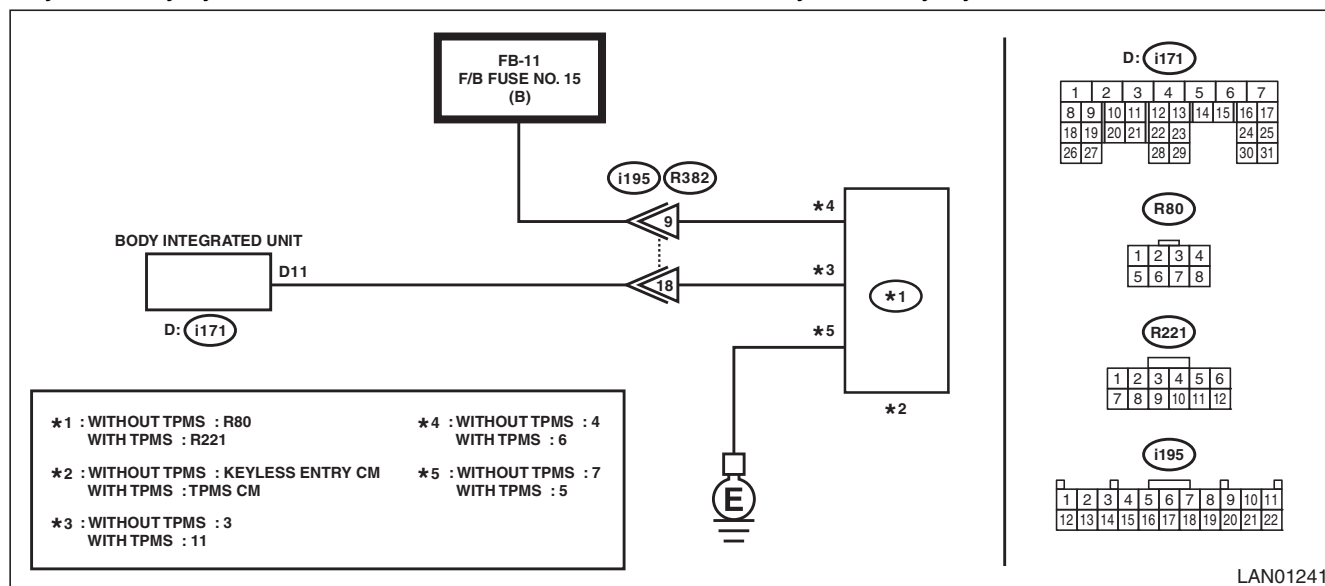
UART between the keyless control module or TPMS CM and body integrated unit is open or shorted, or has communication failure.

TROUBLE SYMPTOM:

- Door lock does not operate with keyless.
- TPMS does not operate. (The indicator blinks.)

WIRING DIAGRAM:

Keyless entry system <Ref. to WI-289, WIRING DIAGRAM, Keyless Entry System.>



Step	Check	Yes	No
1	CHECK DTC. 1) Insert the ignition key to the ignition key cylinder and remove. 2) Read the DTC of body integrated unit using Subaru Select Monitor.	Go to step 2.	Go to step 7.
2	CHECK DTC. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit and keyless entry control module connector. 3) Connect the disconnected connectors. 4) Insert the ignition key to the ignition key cylinder and remove. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Go to step 3.	Go to step 7.
3	CHECK HARNESS. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit and keyless entry control module connector. 3) Using the tester, measure the resistance between terminals. Connector & terminal With TPMS (i171) No. 11 — (R221) No. 11: Without TPMS (i171) No. 11 — (R80) No. 3:	Go to step 4.	Repair the open circuit of harness or replace harness.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

BODY CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
4 CHECK HARNESS. 1) Turn the ignition switch to OFF. 2) Use a tester to measure the voltage between the terminals. <i>Connector & terminal</i> <i>With TPMS</i> (R221) No. 6 (+) — Chassis ground (–): <i>Without TPMS</i> (R80) No. 4 (+) — Chassis ground (–):	Is the voltage 10 V or more?	Go to step 5.	Repair the power supply circuit.
5 CHECK HARNESS. Using the tester, measure the resistance between terminals. <i>Connector & terminal</i> <i>With TPMS</i> (R221) No. 5 — Chassis ground: <i>Without TPMS</i> (R80) No. 7 — Chassis ground:	Is the resistance 10 Ω or less?	Go to step 6.	Repair the ground circuit.
6 CHECK CONTROL MODULE. 1) Turn the ignition switch to OFF. 2) Remove the keyless entry control module. 3) Install a keyless entry control module that was operating normally on another vehicle.	Does it operate with the remote control key of another vehicle?	Replace the keyless entry control module. <Ref. to SL-72, REMOVAL, Keyless Entry Control Module.>	Replace the body integrated unit.
7 CHECK CONNECTOR. Check the connector used for keyless communication for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

General Diagnostic Table

BODY CONTROL SYSTEM (DIAGNOSTICS)

14. General Diagnostic Table

A: INSPECTION

Using the Subaru Select Monitor, read DTC, or check the following data on the current data display to make judgments.

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.	—
Clearance light (Low beam) (High beam)	Clearance light and low/high beams illuminate normally when the switch is operated. Indicator in the meter illuminates at the same time.	System is normal.	Check the lighting system, combination meter system and LAN system.	—
Auto light	When the area around the light control sensor is darkened after the ignition switch and the lighting switch (AUTO) are turned to ON, the clearance light and the low beam illuminate after 15 seconds. Indicator in the combination meter illuminates at the same time.	System is normal.	Check the lighting system, combination system and LAN system.	—
	When the ignition switch and the lighting switch (AUTO) are turned to ON after the area around the light control sensor is darkened, the clearance light and the low beam illuminate immediately. Indicator in the combination meter illuminates at the same time.			—
Fog light	Front fog light illuminates when the switch is operated. Indicator in the meter illuminates at the same time.	System is normal.	Check the lighting system, combination meter system and LAN system.	—
Rear defogger	Rear defogger operates when the switch is operated. The indicator illuminates at the same time.	System is normal.	Check the rear window defogger system and A/C system.	—
Wiper deicer	Wiper deicer operates when the switch is operated. The indicator illuminates at the same time. When the ambient temperature is 5°C (41°F) or higher, press the switch 3 seconds or more to forcibly activate the system.	System is normal.	Check the wiper deicer system and A/C system.	Wiper deicer operates when "Wiper deicer setting" of the body integrated unit is set to on.
DRL	After starting the engine and releasing the parking brake, the DRL illuminates.	System is normal.	Check the lighting system and LAN system.	—
Rear wiper	Rear wiper operates when the switch is operated.	System is normal.	Check wiper or washer system.	Depending on user customizing "Sedan/Wagon Setting" of the body integrated unit, vehicle sensory time varies.
Key interlock	- Key cannot be removed in other than P range. - Key can be removed in other than P range.	System is normal.	Check the body control system.	—



General Diagnostic Table

BODY CONTROL SYSTEM (DIAGNOSTICS)

Item	Operation	Specifications		Note
		YES	NO	
Shift lock	The select lever can be moved from the P range to other ranges only when the brake pedal is depressed with IG ON.	System is normal.	Check the body control system.	—
Key warning switch alarm	When the driver's door is open without the key removed, the buzzer sounds.	System is normal.	Check the combination meter and body control system.	—
Door lock	The doors lock/unlock when the door switch is operated. Rear gate/trunk opens when the rear gate/trunk release switch is operated.	System is normal.	Check the security & lock and body control system.	If user customizing "Sedan/Wagon Setting" is different, trunk and rear gate do not open.
Keyless entry	The lock locks/unlocks when the keyless transmitter is operated. Trunk/rear gate unlocks when trunk/rear gate unlock button is operated.	System is normal.	Check the keyless entry and body control system.	—
Answer back	Answer-back operates when the keyless entry locks/unlocks.	System is normal.	Check the security & lock system, and LAN system.	—
Room light	The light illuminates/goes off according to the door open/close.	System is normal.	Check the room light system, security & lock system, and LAN system.	—
Map light	The light illuminates/goes off according to the door open/close. (Except for rear gate)	System is normal.	Check the spot map light, security & lock system, and LAN system.	—
Luggage/trunk light	The light illuminates/goes off according to the rear gate open/close.	System is normal.	Check the luggage/trunk light, security & lock system, and LAN system.	—
Key illumination	The light illuminates/goes off according to the driver's door open/close.	System is normal.	Check the ignition switch illumination, security & lock, and LAN system.	—
Illumination control	Illumination volume control is available.	System is normal.	Check the illumination control switch, combination meter, and body control system.	Illumination volume control is not available when user customizing "Illumination Control On/Off" of the body integrated unit is set to off.
Engine start	Engine starts.	System is normal.	Check the engine system, immobilizer, and LAN system.	—
Vehicle security	Security monitoring/security canceling can be performed by operating the keyless entry.	System is normal.	Check the security & lock system, and LAN system.	Security monitoring starts and at the same time the warning buzzer sounds, when impact sensor is not connected and user customizing "Impact Sensor" of the body integrated unit is set to on.