

# SECTION **SBC**

## SEAT BELT CONTROL SYSTEM

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000011562009

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

#### Precautions for Removing Battery Terminal

INFOID:000000011562010

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

#### **NOTE:**

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

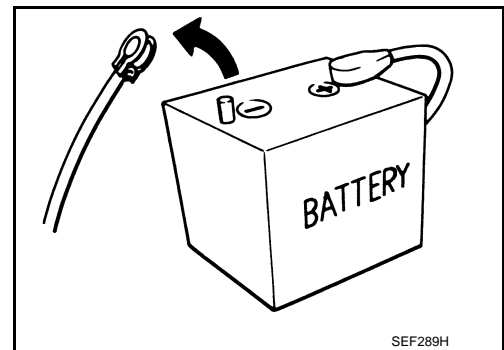
#### **NOTE:**

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

#### **NOTE:**

The removal of 12V battery may cause a DTC detection error.



#### Precaution for Seat Belt Service

INFOID:000000011281292

#### **CAUTION:**

- Before removing the seat belt pre-tensioner assembly, turn the ignition switch off, disconnect the both battery cables and wait at least 3 minutes.
- Do not use electrical test equipment for seat belt pre-tensioner connector.

## PRECAUTIONS

### < PRECAUTION >

- After replacing or reinstalling seat belt pre-tensioner assembly, or reconnecting front seat belt pre-tensioner connector, check the system function. Refer to [SRC-16, "Description"](#).
- Do not use disassemble buckle or seat belt assembly.
- Replace anchor bolts if they are deformed or worn out.
- Never oil tongue and buckle.
- If any component of seat belt assembly is questionable, do not repair. Replace the whole seat belt assembly.
- If webbing is cut, frayed, or damaged, replace seat belt assembly.
- When replacing seat belt assembly, use a genuine NISSAN seat belt assembly.

### AFTER A COLLISION

#### **WARNING:**

Inspect all seat belt assemblies including retractors and attaching hardware after any collision.

NISSAN recommends that all seat belt assemblies in use during a collision be replaced unless the collision was minor and the belts show no damage and continue to operate properly. Failure to do so could result in serious personal injury in an accident. Seat belt assemblies not in use during a collision should also be replaced if either damage or improper operation is noted. Seat belt pre-tensioner should be replaced even if the seat belts are not in use during a frontal collision in which the air bags are deployed.

Replace any seat belt assembly (including anchor bolts) if:

- The seat belt was in use at the time of a collision (except for minor collisions and the belts, retractors and buckles show no damage and continue to operate properly).
- The seat belt was damaged in an accident. (i.e. torn webbing, bent retractor or guide).
- The seat belt attaching point was damaged in an accident. Inspect the seat belt attaching area for damage or distortion and repair as necessary before installing a new seat belt assembly.
- Anchor bolts are deformed or worn out.
- The seat belt pre-tensioner should be replaced even if the seat belts are not in use during the collision in which the air bags are deployed.

# COMPONENT PARTS

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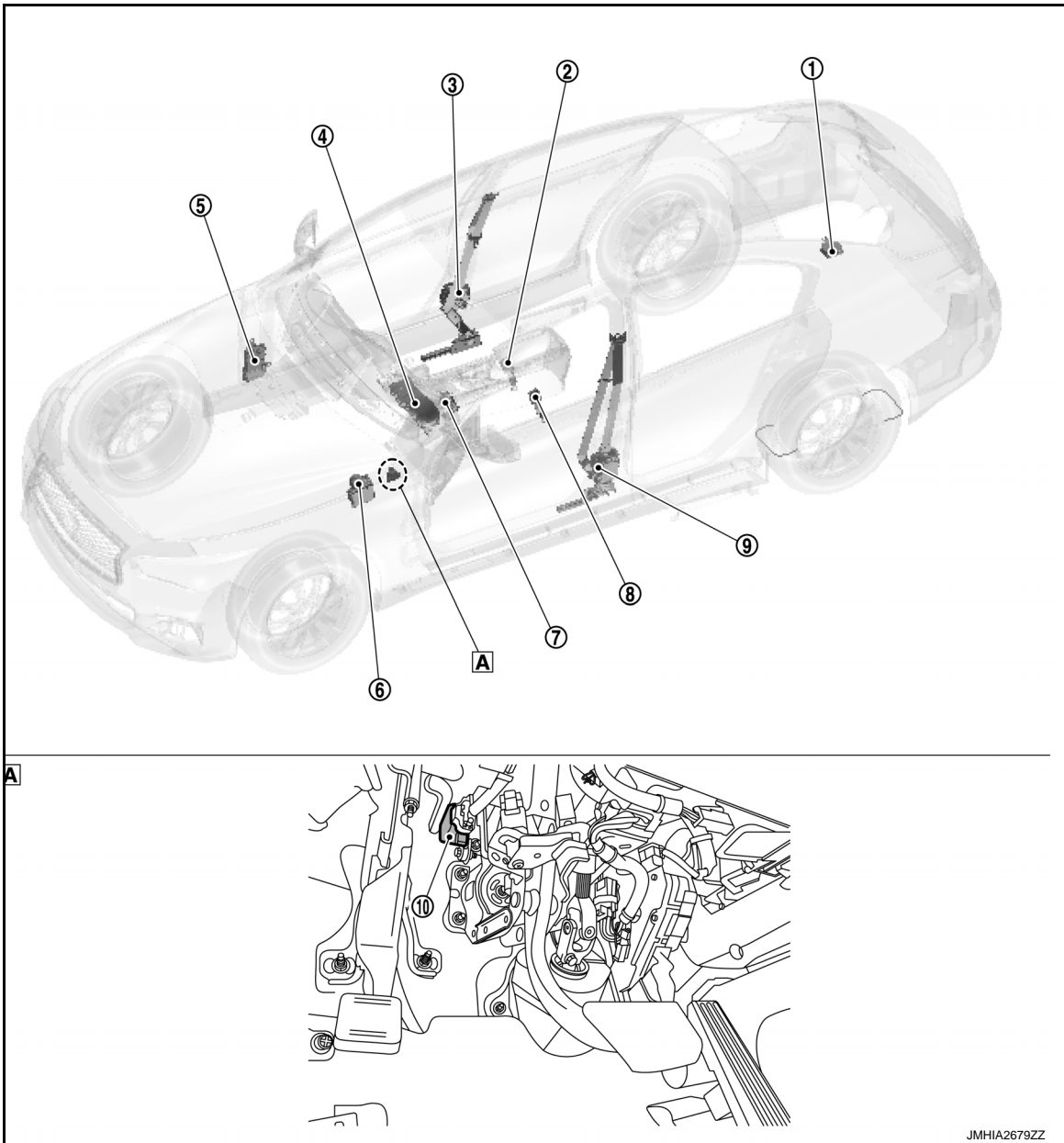
## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### PRE-CRASH SEAT BELT SYSTEM

#### PRE-CRASH SEAT BELT SYSTEM : Component Parts Location

INFOID:000000011281293



**A** View with instrument lower panel LH removed

No.	Component	Function
①	ADAS control unit	Forward emergency braking operation signal is received from ADAS control unit via CAN communication. Refer to <a href="#">DAS-14, "Component Parts Location"</a> for detailed installation location.
②	Seat belt buckle switch (passenger side)	Refer to <a href="#">SBC-6, "PRE-CRASH SEAT BELT SYSTEM : Seat Belt Buckle Switch"</a> .

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# COMPONENT PARTS

## < SYSTEM DESCRIPTION >

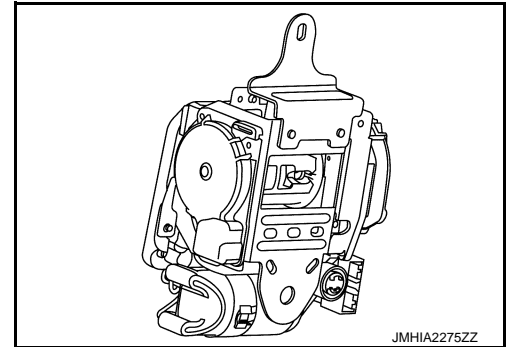
No.	Component	Function
③	Pre-crash seat belt control unit (passenger side)	Refer to <a href="#">SBC-6, "PRE-CRASH SEAT BELT SYSTEM : Pre-crash Seat Belt Control Unit"</a> .
④	Combination meter	<ul style="list-style-type: none"> <li>Transmits vehicle speed signal to pre-crash seat belt control unit (driver side).</li> <li>Turns the seat belt warning lamp ON when the seat belt is unfastened.</li> </ul>
⑤	BCM	Ignition ON signal, sleep/wakeup signal, and door switch signal are received from BCM via CAN communication. Refer to <a href="#">BCS-4, "BODY CONTROL SYSTEM : Component Parts Location"</a> for detailed installation location.
⑥	ABS actuator and electric unit (control unit)	ABS operation signal is received from ABS actuator and electric unit (control unit) via CAN communication. Refer to <a href="#">BRC-10, "Component Parts Location"</a> for detailed installation location.
⑦	Steering angle sensor	Steering angle sensor signal, steering angle speed signal, steering angle sensor neutral position adjustment completion signal, and steering angle sensor malfunction signal are received via CAN communication. Refer to <a href="#">BRC-10, "Component Parts Location"</a> for detailed installation location.
⑧	Seat belt buckle switch (driver side)	Refer to <a href="#">SBC-6, "PRE-CRASH SEAT BELT SYSTEM : Seat Belt Buckle Switch"</a> .
⑨	Pre-crash seat belt control unit (driver side)	Refer to <a href="#">SBC-6, "PRE-CRASH SEAT BELT SYSTEM : Pre-crash Seat Belt Control Unit"</a> .
⑩	Brake pedal stroke sensor	Refer to <a href="#">SBC-7, "PRE-CRASH SEAT BELT SYSTEM : Brake pedal stroke sensor"</a> .

## PRE-CRASH SEAT BELT SYSTEM : Pre-crash Seat Belt Control Unit

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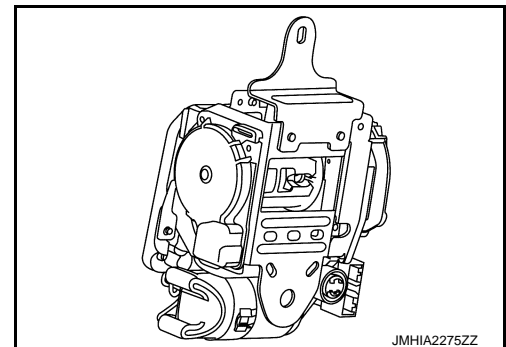
### DRIVER SIDE

- Total control of pre-crash seat belt system is operated according to transmit signal.
- Driver seat belt retractor integrates pre-crash seat belt control unit (driver side) and driver seat belt motor.
- Seat belt motor operates each operation of pull, return, and hold.



### PASSENGER SIDE

- Control of passenger pre-crash seat belt is operated according to transmit signal.
- Passenger seat belt retractor integrates pre-crash seat belt control unit (passenger seat) and passenger seat belt motor.
- Seat belt motor operates each operation of pull, return, and hold.
- The pre-crash seat belt control unit (passenger side) controls each function from pre-crash seat belt control unit (driver side) according to operation signal.



## PRE-CRASH SEAT BELT SYSTEM : Seat Belt Buckle Switch

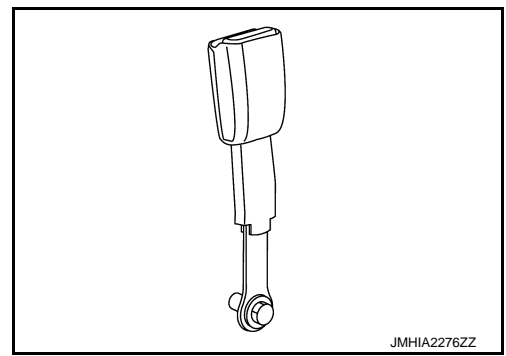
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### DRIVER SIDE

# COMPONENT PARTS

## < SYSTEM DESCRIPTION >

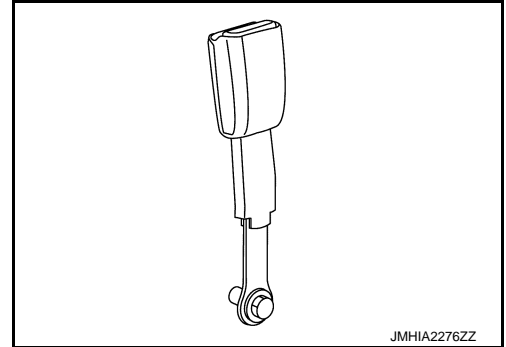
- Fastening or not fastening of seat belt is judged. This judgment is used for control of driver pre-crash seat belt system.
- The seat belt buckle switch is installed in the seat belt buckle.



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## PASSENGER SIDE

- Fastening or not fastening of seat belt is judged. This judgment is used for control of passenger pre-crash seat belt system.
- The seat belt buckle switch is installed in the seat belt buckle.



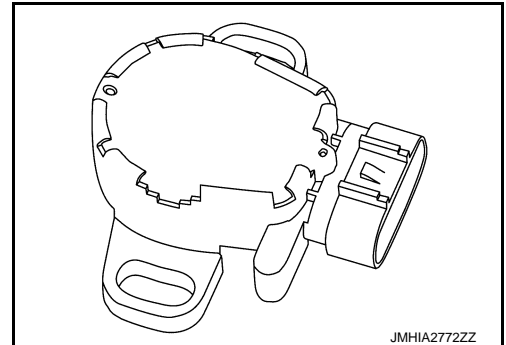
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## PRE-CRASH SEAT BELT SYSTEM : Brake pedal stroke sensor

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- It changes voltage according to brake pedal depressed amount and sends the signal to pre-crash seat belt control unit.
- There are 2 signals (brake pedal stroke sensor 1 and 2) sent from the brake pedal stroke sensor. Pre-crash seat belt control unit judges the stroke amount and the speed of the brake pedal according to the voltage of the signal sent by each side.



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## SEAT BELT WARNING LAMP SYSTEM

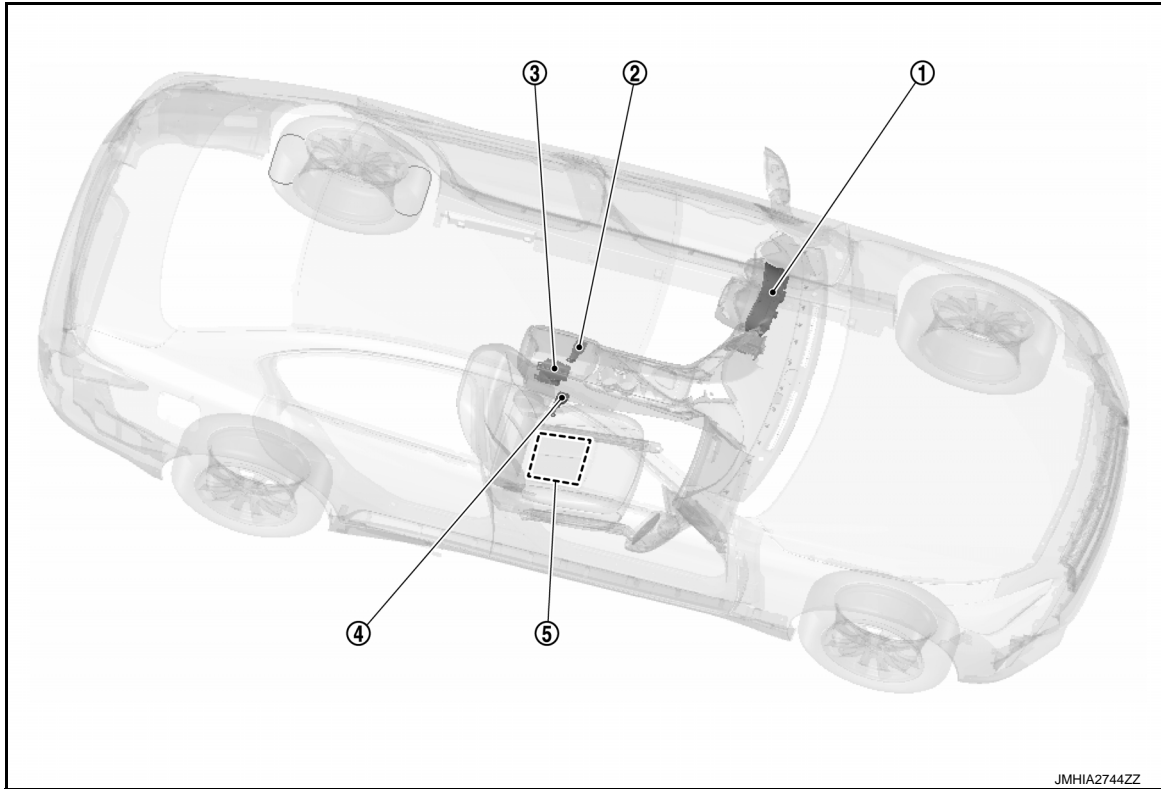
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# COMPONENT PARTS

< SYSTEM DESCRIPTION >

## SEAT BELT WARNING LAMP SYSTEM : Component Parts Location

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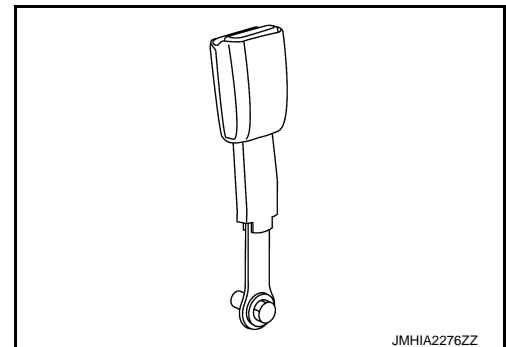
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No.	Component	Function
①	Combination meter	Turns the seat belt warning lamp ON when the seat belt is unfastened.
②	Seat belt buckle switch (Driver side)	Refer to <a href="#">SBC-6, "PRE-CRASH SEAT BELT SYSTEM : Seat Belt Buckle Switch"</a> .
③	Air bag diagnosis sensor unit	Turns ON seat belt warning lamp based on the information from occupant detection system control unit. Refer to <a href="#">SRC-6, "Component Parts Location"</a> for detailed installation location.
④	Seat belt buckle switch (Passenger side)	Refer to <a href="#">SBC-6, "PRE-CRASH SEAT BELT SYSTEM : Seat Belt Buckle Switch"</a> .
⑤	Occupant detection system control unit and sensor	Judges the passenger seat condition based on the information from occupant detection system control unit. Refer to <a href="#">SRC-6, "Component Parts Location"</a> for detailed installation location.

## SEAT BELT WARNING LAMP SYSTEM : Seat Belt Buckle Switch

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Fasting or not fasting of seat belt is judged. This judgement is used to control seat belt warning lamp system.



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# SYSTEM

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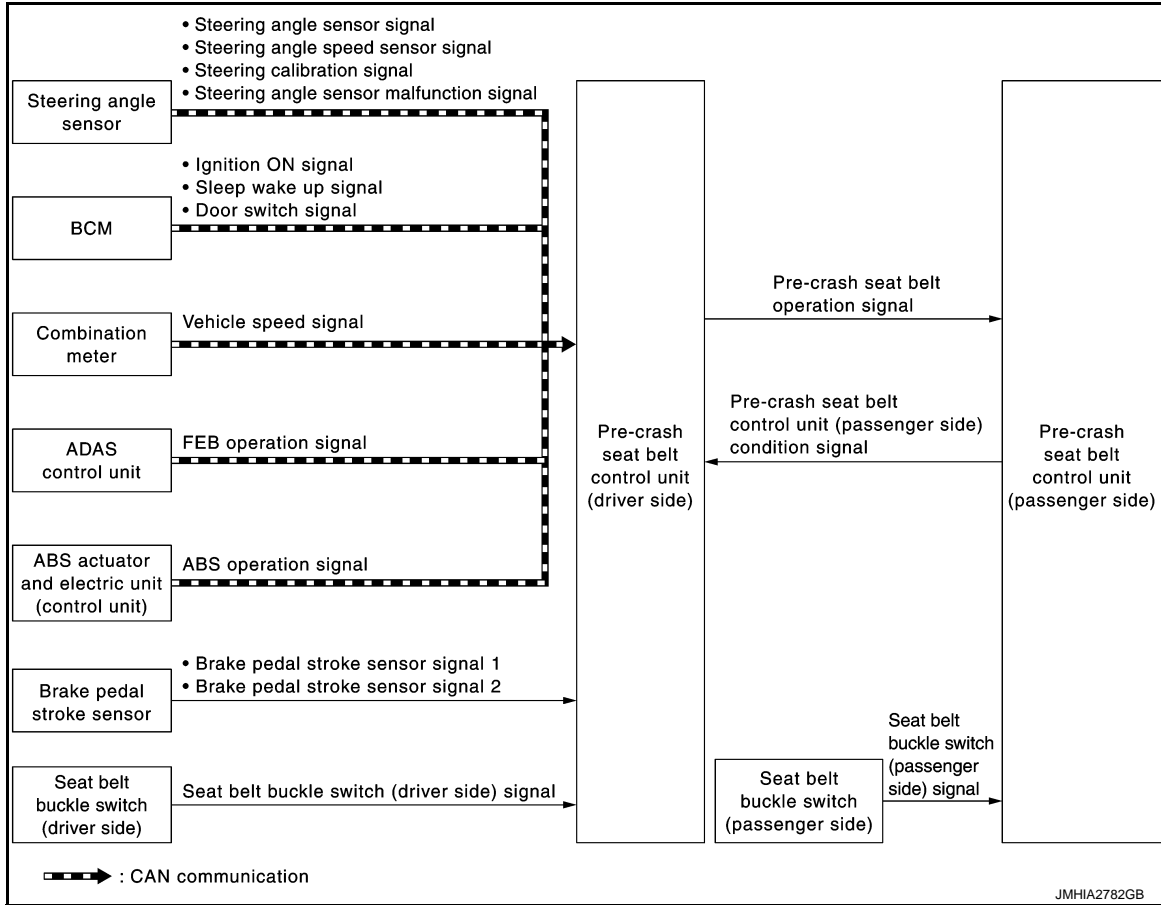
## SYSTEM

### PRE-CRASH SEAT BELT SYSTEM

#### PRE-CRASH SEAT BELT SYSTEM : System Description

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#### SYSTEM DIAGRAM



#### DESCRIPTION

- Pre-crash seat belt system integrates control unit and motor in driver and passenger seat belt retractors.
- Provides a sense of ease when pre-crash seat belt control unit judges the emergency braking operation, the forward emergency braking operating status, the continuous ABS operating status, the emergency steering wheel operation, or the lateral slippage status during cornering. The motor immediately retracts the seat belt and suppresses change in occupant posture.
- Even in a situation where a collision is unavoidable, effects of other safety devices, like the air bag, are maximized and damages are reduced.
- Motor retracts seat belt when unfastening and extracts seat belt when fastening to reduce the feeling of pressure. (comfort function)

#### Function Description

Pre-crash seat belt system operates under the following conditions.

- During emergency brake operation
- When ABS continuously operates
- When forward emergency braking operates
- When lateral slippage during cornering occurs
- When steering wheel is rotated for emergency
- When comfort function operates

#### Operation Condition

##### Operation while driving

- Operation start and stop conditions of pre-crash seat belt system are as shown in the following table.
- The activation and deactivation conditions of pre-crash seat belt are as per the following.

# SYSTEM

## < SYSTEM DESCRIPTION >

Operation item	Operation start condition	Operation stop condition
During emergency brake operation	<ul style="list-style-type: none"> <li>Vehicle speed is 15 km/h (9 MPH) or more</li> <li>Emergency braking status is detected</li> </ul>	<ul style="list-style-type: none"> <li>During acceleration</li> <li>When stopped</li> </ul>
When ABS continuously operates	<ul style="list-style-type: none"> <li>ABS continuously operates for 2 seconds or more</li> <li>Brake pedal is in depressed state</li> </ul>	
When forward emergency braking operates	System detects that forward emergency braking is in operating status	2 seconds after operation start
When lateral slippage during cornering occurs	<ul style="list-style-type: none"> <li>Vehicle speed is 30 km/h (19 MPH) or more</li> <li>System detects that the vehicle is in lateral slippage state</li> <li>System detects that the vehicle is driving on a curve</li> </ul>	<ul style="list-style-type: none"> <li>Vehicle stopped</li> <li>1 second or more after maintaining steering wheel angle in straight driving state</li> </ul>
When steering wheel is rotated for emergency	<ul style="list-style-type: none"> <li>Vehicle speed is 60 km/h (36 MPH) or more</li> <li>Steering wheel angle is 90 degrees or more</li> <li>System detects that steering wheel is rotated for emergency</li> </ul>	

### NOTE:

For details of forward emergency braking system. Refer to [BRC-15. "System Description"](#).

### Comfort Function

- Seat belt is retracted and the looseness is reduced in the state as shown in the following table.
- Operation start and stop conditions of pre-crash seat belt system are as shown in the following table.

Operation item	Activating condition	Deactivating condition
Door open	<ul style="list-style-type: none"> <li>Seat belt is in not fastened state</li> <li>Door is operated to open from closed</li> <li>Vehicle stopped</li> </ul>	Seat belt retract is complete
Seat belt is fastened	<ul style="list-style-type: none"> <li>When door is closed</li> <li>Seat belt is fastened</li> </ul>	<ul style="list-style-type: none"> <li>Seat belt is unfastened</li> <li>1 second after operation</li> </ul>
Seat belt is release	Seat belt is unfastened	Seat belt retract is complete

### Operation Prohibition Condition

Pre-crash seat belt system does not operate in the following conditions.

- When seat belt is not fastened (only the seat belt that is not fastened does not operate)
- When motor is overheat due to contentious operation\*<sup>1</sup>
- When the system is in fail-safe mode

\*<sup>1</sup>: System operation is temporarily deactivated to avoid overheating, when comfort function is continuously operated (18 times or more) during a short period of time by fastening and unfastening seat belts or opening and closing doors.

### Malfunction Warning

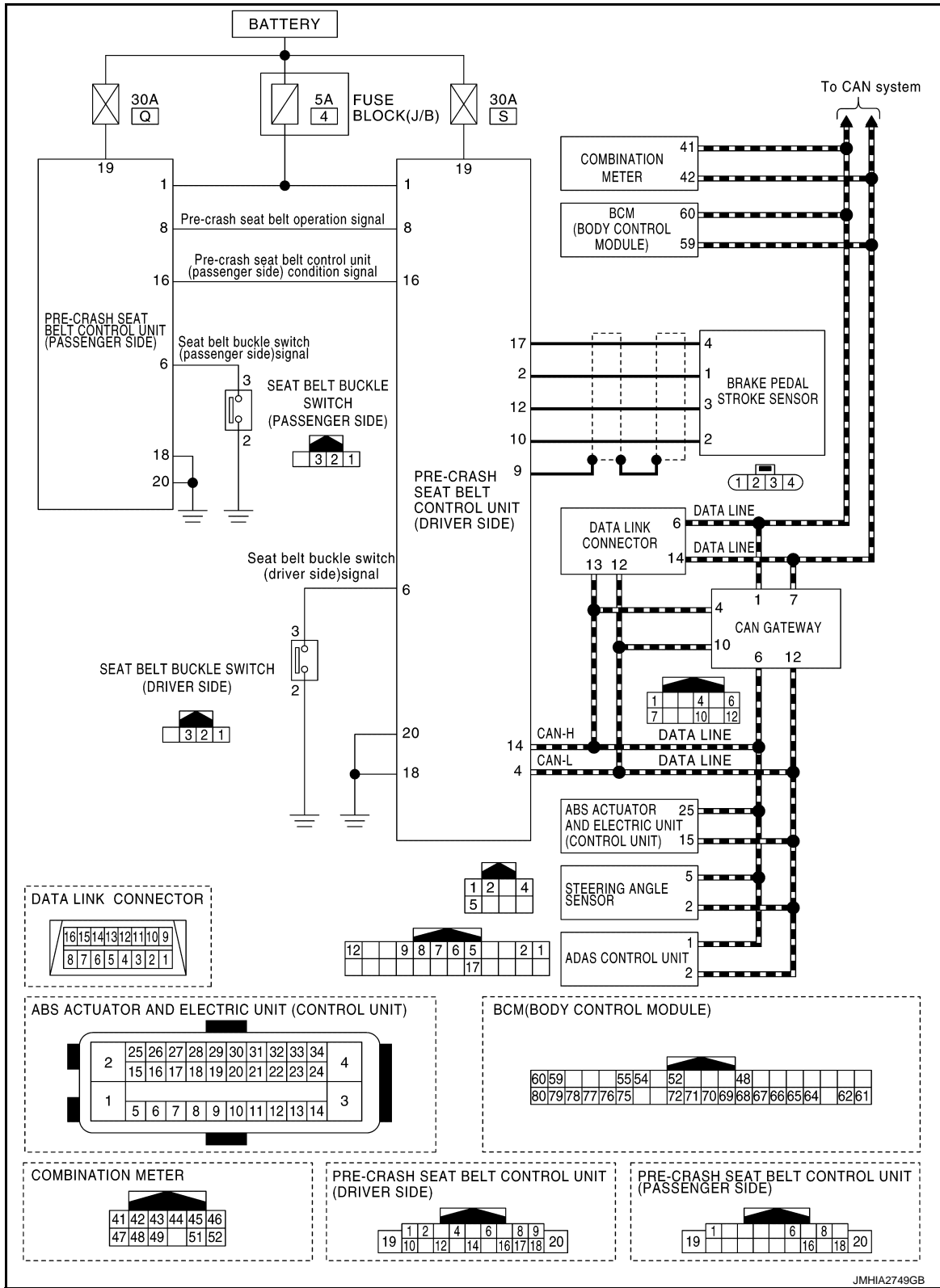
When system malfunction is detected, comfort function is deactivated to warn customer of system malfunction.

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< SYSTEM DESCRIPTION >

## PRE-CRASH SEAT BELT SYSTEM : Circuit Diagram

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## PRE-CRASH SEAT BELT SYSTEM : Fail-Safe (Driver Side)

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When a system malfunction is detected, deactivates a part of the system or all functions depending on the malfunctioning part.  
When the malfunction condition recovers to the normal condition, the system returns to the normal operation.

# SYSTEM

## < SYSTEM DESCRIPTION >

Display contents of CONSULT	Fail-safe
B2451: SEAT BLT MTR DR CIRC	Fully deactivates the whole operation.
B2452: SEAT BLT MTR AS CIRC	Deactivates a part of comfort function.
B2453: BR STROKE SEN CIRC	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• A part of comfort function</li> </ul>
B2454: SEAT BLT PWR DR CIRC	Fully deactivates the whole operation.
B2455: CONTROL UNIT DR	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>
B2456: SEAT BLT PWR AS	Deactivates a part of comfort function.
B2457: CONTROL UNIT AS	Deactivates a part of comfort function.
B2458: LOCAL COMM	Deactivates a part of comfort function.
B2461: VHCL SPEED SIGNAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> <li>• When comfort function operates</li> </ul>
B2466: DR/AS CONTROL UNIT	Deactivates a part of comfort function.
B2470: SYS HEAT PROTC DR	<ul style="list-style-type: none"> <li>• Fully deactivates the whole operation.</li> <li>• Operation return</li> <li>- 1 time operation becomes possible after approximately 30 seconds</li> <li>- Returns to the initial condition after approximately 8 minutes</li> </ul>
U0126: ST ANG SEN SIG	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part of comfort function</li> </ul>
U0428: STRG ANGL CAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part of comfort function</li> </ul>
U1000: CAN COMM CURCUI	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>

\*: The deactivation mode differs depending on the internal malfunctioning condition of control unit

## PRE-CRASH SEAT BELT SYSTEM : Fail-Safe (Passenger Side)

INFOID:000000011562016

When a system malfunction is detected, deactivates a part of the system or all functions depending on the malfunctioning part.

When the malfunction condition recovers to the normal condition, the system returns to the normal operation.

Display contents of CONSULT	Fail-safe
B2452: SEAT BLT MTR DR CIRC	Fully deactivates the whole operation.
B2453: BR STROKE SEN CIRC	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> </ul>

# SYSTEM

## < SYSTEM DESCRIPTION >

Display contents of CONSULT	Fail-safe
B2455: CONTROL UNIT DR	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>
B2456: SEAT BLT PWR AS	Fully deactivates the whole operation.
B2457: CONTROL UNIT AS	Fully deactivates the whole operation.*
B2458: LOCAL COMM	Fully deactivates the whole operation.*
B2461: VHCL SPEED SIGNAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>
B2466: DR/AS CONTROL UNIT	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When ABS continuously operates When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>
B2471: SYS HEAT PROTC AS	<ul style="list-style-type: none"> <li>• Fully deactivates the whole operation.</li> <li>• Operation return</li> <li>- 1 time operation becomes possible after approximately 30 seconds</li> <li>- Returns to the initial condition after approximately 8 minutes</li> </ul>
U0126: ST ANG SEN SIG	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> </ul>
U0428: STRG ANGL CAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> </ul>
U1000: CAN COMM CIRCUIT	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>

\*: The deactivation mode differs depending on the internal malfunctioning condition of control unit

## SEAT BELT WARNING LAMP SYSTEM

A  
B  
C  
D  
E  
F  
G  
SBC  
I  
J  
K  
L  
M  
N  
O  
P

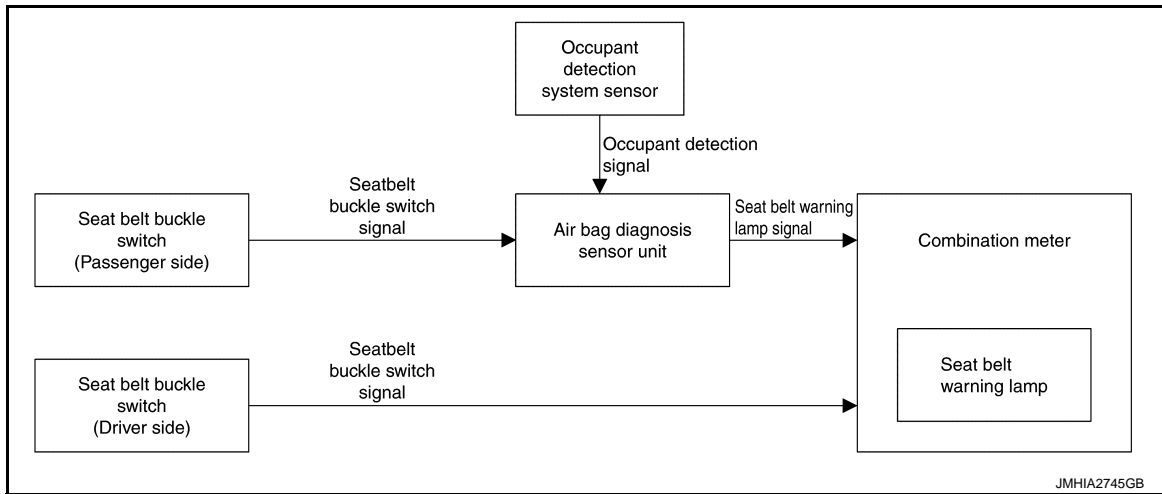
# SYSTEM

< SYSTEM DESCRIPTION >

## SEAT BELT WARNING LAMP SYSTEM : System Description

INFOID:000000011281302

### SYSTEM DIAGRAM



### DESCRIPTION

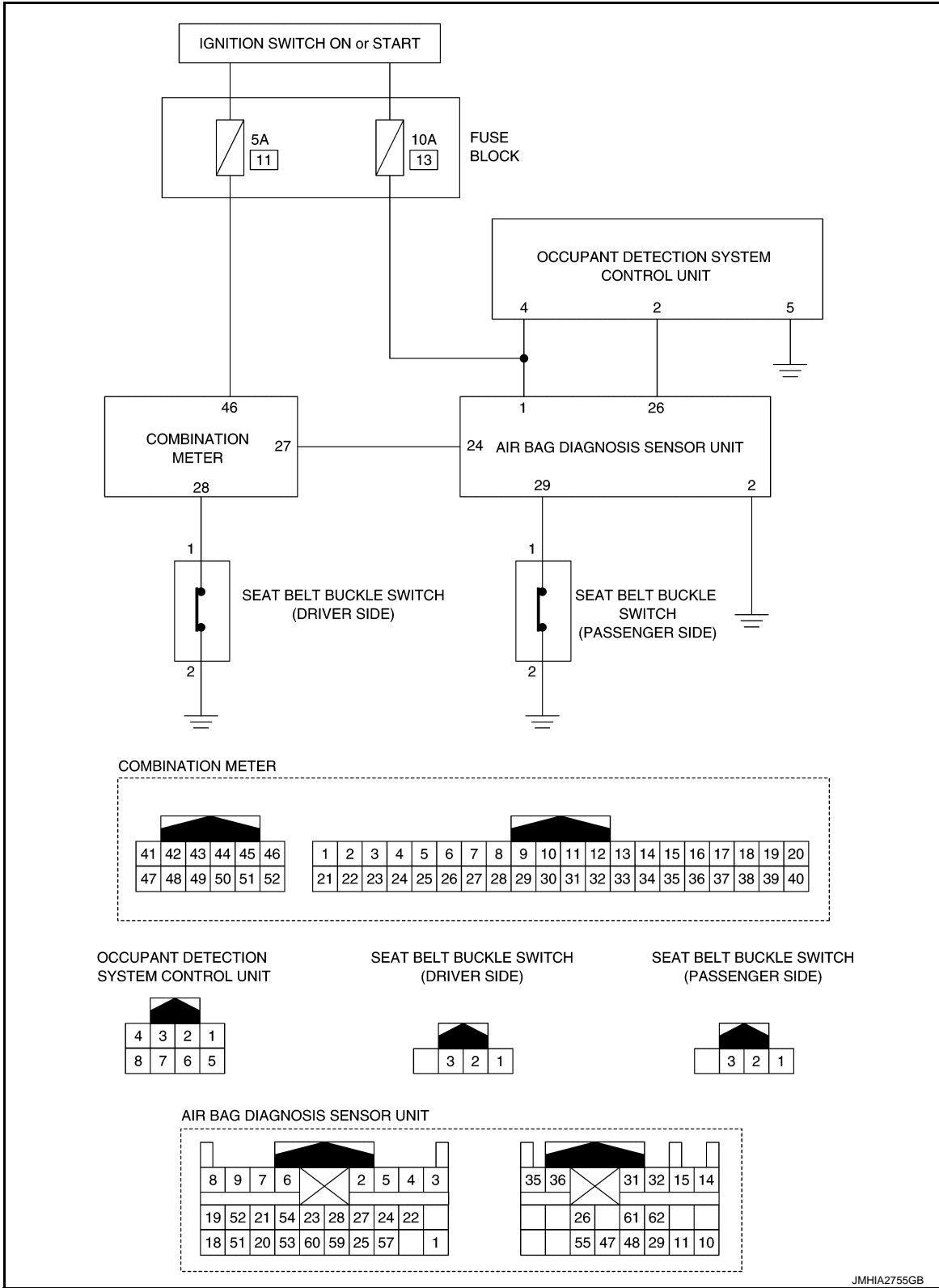
Seat belt warning lamp warns the driver that driver or passenger seat belt is not fastened. For details information, refer to [MWI-39. "WARNING LAMPS/INDICATOR LAMPS : Seat Belt Warning Lamp"](#).

# SYSTEM

< SYSTEM DESCRIPTION >

## SEAT BELT WARNING LAMP SYSTEM : Circuit Diagram

INFOID:000000011281303



A  
B  
C  
D  
E  
F  
G  
SBC  
I  
J  
K  
L  
M  
N  
O  
P


### WARNING/INDICATOR/CHIME LIST

# SYSTEM

< SYSTEM DESCRIPTION >

## WARNING/INDICATOR/CHIME LIST : Warning Lamp/Indicator Lamp

INFOID:000000011281304

Item	Design	Reference
Seat belt warning lamp		For layout, refer to <a href="#">MWI-8, "METER SYSTEM : Design"</a> .
		For function, refer to <a href="#">MWI-39, "WARNING LAMPS/INDICATOR LAMPS : Seat Belt Warning Lamp"</a> .

## WARNING/INDICATOR/CHIME LIST : Warning Chime

INFOID:000000011281305

Item	Reference
Seat belt warning	Refer to <a href="#">WCS-17, "WARNING CHIME : Seat Belt Warning"</a> .



# DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

### CONSULT Function

INFOID:0000000011281306

Diagnosis for pre-crash seat belt system can be performed using CONSULT.

### APPLICATION ITEM

Part to be diagnosed	Diagnosis Mode	Function description
Pre-crash seat belt	Self-diagnosis Results	<ul style="list-style-type: none"> <li>Displays data recorded when a malfunction is detected.</li> <li>Can print out the display.</li> <li>Erases DTC recorded in memory.</li> </ul>
	Data Monitor	Displays input data for pre-crash seat belt control unit in real time.
	Work Support	Changes the setting for each system function.
	CAN DIAG SUPPORT MNTR	Monitors communication status of CAN communication.
	ECU Identification	Displays pre-crash seat belt control unit part number.

### SELF-DIAGNOSIS RESULTS

Refer to [SBC-21, "DTC Index"](#).

#### CAUTION:

**When malfunctions are detected in several systems, including the CAN communication [U1000], troubleshoot the CAN communication [U1000].**

### ERASING SELF-DIAGNOSIS RESULTS

- SELF-DIAGNOSIS RESULTS  
Current "SELF-DIAG RESULTS" are displayed. (If all suspect circuits have been repaired, "NO DTC" is displayed.)
- SELF-DIAG RESULTS [MEMORY]  
Resume trouble diagnosis item selection screen, confirm "SELF-DIAG RESULTS", and then touch ERASE MEMORY.

### DATA MONITOR

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Contents
BUCKLE SW RH	Indicates [On/Off] condition of seat belt buckle switch (RH).
BUCKLE SW LH	Indicates [On/Off] condition of seat belt buckle switch (LH).
VEHICLE DISTANCE	Indicates [On/Off] condition of forward emergency braking signal.
IGN SW	Indicates [On/Off] condition of ignition switch.
FR DOOR SW RH	Indicates [Close/Open] condition of front door switch (RH).
FR DOOR SW LH	Indicates [Close/Open] condition of front door switch (LH).
ABS ACTIVATING	Indicates [On/Off] condition of ABS activating.
VHCL SPEED	Indicates [km/h] vehicle speed signal.
BRK PEDAL SNSR1	Indicates [V] voltage of brake pedal stroke sensor 1 signal.
BRK PEDAL SNSR2	Indicates [V] voltage of brake pedal stroke sensor 2 signal.
STRG ANGLE	Indicates [deg] steering angle signal.
STRG ANGLE SPEED	Indicates [deg/s] steering angle speed signal.
HEAT PROTC RH	Indicates [On/Off] condition of heat protection (RH).
HEAT PROTC LH	Indicates [On/Off] condition of heat protection (LH).

# DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

< SYSTEM DESCRIPTION >

---

WORK SUPPORT

Monitor item	Description
DOOR OPENING RETRACT RETRY	Changes the number of times for the seat belt retract retry when the door opens.

# PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

< ECU DIAGNOSIS INFORMATION >

## ECU DIAGNOSIS INFORMATION

### PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

Reference Value

INFOID:0000000011281307

VALUES ON THE DIAGNOSIS TOOL

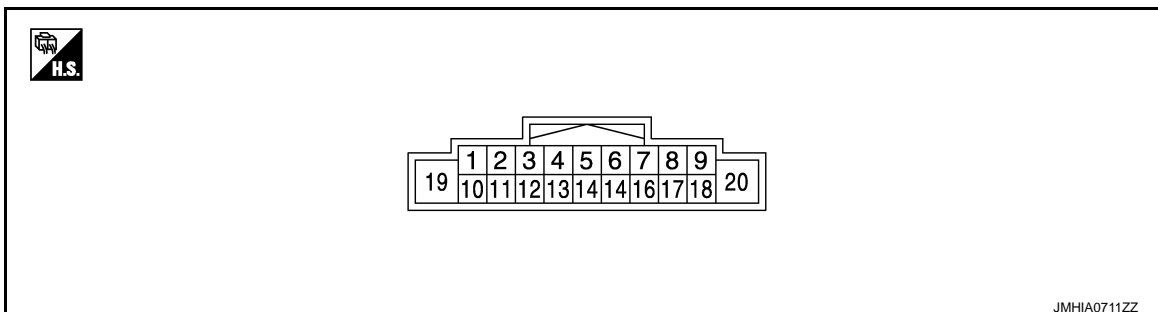
CONSULT MONITOR ITEM

**NOTE:**

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition	Value/Status (Approx.)
BUCKLE SW RH	RH seat belt is not fastened	OFF
	RH seat belt is fastened	ON
BUCKLE SW LH	LH seat belt is not fastened	OFF
	LH seat belt is fastened	ON
VEHICLE DISTANCE	Not activated	OFF
	Activated	ON
IGN SW	Ignition switch OFF	OFF
	Ignition switch ON	ON
FR DOOR SW RH	RH door close	CLOSE
	RH door open	OPEN
FR DOOR SW LH	LH door close	CLOSE
	LH door open	OPEN
ABS ACTIVATING	ABS not activating	OFF
	ABS activating	ON
VHCL SPEED	While driving	Equivalent speedometer reading (km/h)
BRK PEDAL SNSR1	Brake released → depressed	(1 V → 4 V)
BRK PEDAL SNSR2	Brake released → depressed	(4 V → 1V)
STRG ANGLE	Steering wheel: 0° (Neutral)	0 (deg)
	Steering wheel: 90° (Turned right)	+90 (deg)
	Steering wheel: 90° (Turned left)	-90 (deg)
STRG ANGLE SPEED	Ignition switch ON	Depending on steering angle speed (deg/s)
HEAT PROTC RH	RH heat protection is not activated	OFF
	RH heat protection is activated	ON
HEAT PROTC LH	LH heat protection is not activated	OFF
	LH heat protection is activated	ON

### TERMINAL LAYOUT



# PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

< ECU DIAGNOSIS INFORMATION >

## PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Value* (Approx.)
+	-	Signal name	Input/ Output		
1 (W)	GND	Power supply	Input	—	Battery voltage
2 (G)	GND	Brake pedal stroke sensor signal 1	Input	Brake released → de- pressed	1V→4V
4 (R)	GND	CAN-L	Input/ Output	—	—
6 (W)	GND	Seat belt buckle (driver side) switch signal	Input	Seat belt (driver side) is fas- tened	0 V
				Seat belt (driver side) is un- fastened	5 V
8 (BR)	GND	Local communication line 2	Input/ Output	IGN ON	5 V
9 (-)	—	Shield	—	—	—
10 (R)	GND	Brake pedal stroke sensor power supply	Output	IGN ON	5 V
12 (B)	GND	Brake pedal stroke sensor signal 2	Input	Brake released → de- pressed	4V→1V
14 (L)	GND	CAN-H	Input/ Output	—	—
16 (Y)	GND	Local communication line 1	Input/ Output	—	—
17 (W)	GND	Brake pedal stroke sensor ground circuit	Input	—	0 V
18 (B)	GND	Ground	Output	—	0 V
19 (Y)	GND	Motor drive circuit power supply	Input	—	Battery voltage
20 (B)	GND	Motor drive circuit ground	Output	—	0 V

\*: Perform the measurement while connecting the control unit and the harness.

## Fail-Safe (Driver Side)

INFOID:000000011281308

When a system malfunction is detected, deactivates a part of the system or all functions depending on the malfunctioning part.

When the malfunction condition recovers to the normal condition, the system returns to the normal operation.

Display contents of CONSULT	Fail-safe
B2451: SEAT BLT MTR DR CIRC	Fully deactivates the whole operation.
B2452: SEAT BLT MTR AS CIRC	Deactivates a part of comfort function.
B2453: BR STROKE SEN CIRC	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• A part of comfort function</li> </ul>
B2454: SEAT BLT PWR DR CIRC	Fully deactivates the whole operation.

# PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

## < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe
B2455: CONTROL UNIT DR	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>
B2456: SEAT BLT PWR AS	Deactivates a part of comfort function.
B2457: CONTROL UNIT AS	Deactivates a part of comfort function.
B2458: LOCAL COMM	Deactivates a part of comfort function.
B2461: VHCL SPEED SIGNAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> <li>• When comfort function operates</li> </ul>
B2466: DR/AS CONTROL UNIT	Deactivates a part of comfort function.
B2470: SYS HEAT PROTC DR	<ul style="list-style-type: none"> <li>• Fully deactivates the whole operation.</li> <li>• Operation return               <ul style="list-style-type: none"> <li>- 1 time operation becomes possible after approximately 30 seconds</li> <li>- Returns to the initial condition after approximately 8 minutes</li> </ul> </li> </ul>
U0126: ST ANG SEN SIG	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part of comfort function</li> </ul>
U0428: STRG ANGL CAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part of comfort function</li> </ul>
U1000: CAN COMM CURCUIT	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>

\*: The deactivation mode differs depending on the internal malfunctioning condition of control unit

## DTC Index

INFOID:0000000011281309

## DISPLAY ITEM LIST (PRE-CRASH SEAT BELT)

DTC	Trouble diagnosis name (CONSULT display)	Reference
U1000	CAN COMM CIRCUIT	<a href="#">SBC-40, "DTC Description"</a>
B2451	SEAT BLT MTR DR CIRC	<a href="#">SBC-45, "DTC Description"</a>
B2452	SEAT BLT MTR AS CIRC	<a href="#">SBC-46, "DTC Description"</a>
B2453	BR STROKE SEN CIRC	<a href="#">SBC-47, "DTC Description"</a>
B2454	SEAT BLT PWR DR CIRC	<a href="#">SBC-50, "DTC Description"</a>
B2455	CONTROL UNIT DR	<a href="#">SBC-51, "DTC Description"</a>
B2456	SEAT BLT PWR AS	<a href="#">SBC-52, "DTC Description"</a>
B2457	CONTROL UNIT AS	<a href="#">SBC-54, "DTC Description"</a>
B2458	LOCAL COMM	<a href="#">SBC-55, "DTC Description"</a>
B2461	VHCL SPEED SIGNAL	<a href="#">SBC-57, "DTC Description"</a>

## PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

< ECU DIAGNOSIS INFORMATION >

DTC	Trouble diagnosis name (CONSULT display)	Reference
B2466	DR/AS CONTROL UNIT	<a href="#">SBC-59, "DTC Description"</a>
B2470	SYS HEAT PROTC DR	<a href="#">SBC-60, "DTC Description"</a>
B2471	SYS HEAT PROTC AS	<a href="#">SBC-61, "DTC Description"</a>
U0126	ST ANG SEN SIG	<a href="#">SBC-41, "DTC Description"</a>
U0428	STRG ANGL CAL	<a href="#">SBC-43, "DTC Description"</a>

# PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)

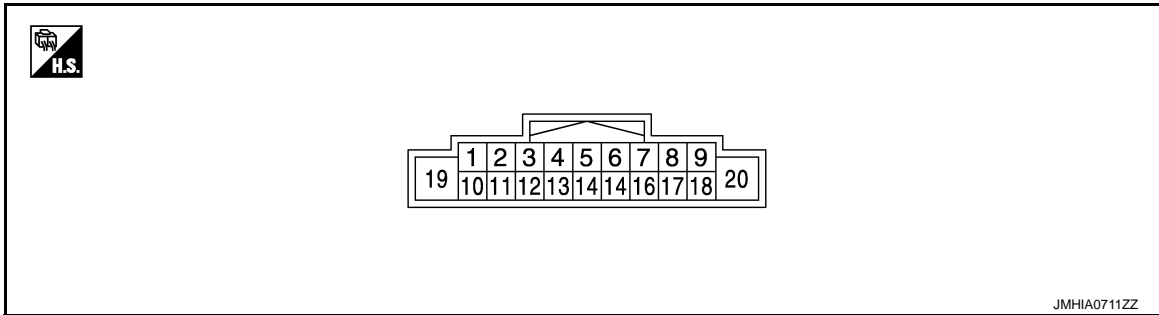
< ECU DIAGNOSIS INFORMATION >

## PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)

Reference Value

INFOID:0000000011281310

### TERMINAL LAYOUT



### PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Value* (Approx.)
+	-	Signal name	Input/ Output		
1 (P)	GND	Power supply	Input	—	Battery voltage
6 (LG)	GND	Seat belt buckle switch signal	Input	Seat belt is fastened	0 V
				Seat belt is unfastened	5 V
8 (BR )	GND	Local communication line 2	Input/ Output	IGN ON	5 V
16 (Y)	GND	Local communication line 1	Input/ Output	—	—
18 (B)	GND	Ground	Output	—	0 V
19 (W)	GND	Motor passenger circuit power supply	Input	—	Battery voltage
20 (B)	GND	Motor passenger circuit ground	Output	—	0 V

\*: Perform the measurement while connecting the control unit and the harness.

### Fail-Safe (Passenger Side)

INFOID:0000000011281311

When a system malfunction is detected, deactivates a part of the system or all functions depending on the malfunctioning part.

When the malfunction condition recovers to the normal condition, the system returns to the normal operation.

Display contents of CONSULT	Fail-safe
B2452: SEAT BLT MTR DR CIRC	Fully deactivates the whole operation.
B2453: BR STROKE SEN CIRC	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> </ul>
B2455: CONTROL UNIT DR	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>

# PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)

## < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe
B2456: SEAT BLT PWR AS	Fully deactivates the whole operation.
B2457: CONTROL UNIT AS	Fully deactivates the whole operation.*
B2458: LOCAL COMM	Fully deactivates the whole operation.*
B2461: VHCL SPEED SIGNAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>
B2466: DR/AS CONTROL UNIT	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When ABS continuously operates When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>
B2471: SYS HEAT PROTC AS	<ul style="list-style-type: none"> <li>• Fully deactivates the whole operation.</li> <li>• Operation return</li> <li>- 1 time operation becomes possible after approximately 30 seconds</li> <li>- Returns to the initial condition after approximately 8 minutes</li> </ul>
U0126: ST ANG SEN SIG	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> </ul>
U0428: STRG ANGL CAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> <li>• When lateral slippage during cornering occurs</li> <li>• When steering wheel is rotated for emergency</li> </ul>
U1000: CAN COMM CIRCUIT	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> <li>• During emergency brake operation</li> <li>• When ABS continuously operates</li> <li>• When lateral slippage during cornering occurs</li> <li>• When forward emergency braking operates</li> <li>• When steering wheel is rotated for emergency</li> <li>• A part or the whole comfort function</li> </ul>

\*: The deactivation mode differs depending on the internal malfunctioning condition of control unit



# DIAGNOSIS SENSOR UNIT

< ECU DIAGNOSIS INFORMATION >

## DIAGNOSIS SENSOR UNIT

### List of ECU Reference

INFOID:000000011281312

ECU	Reference
Air bag diagnosis sensor unit	<a href="#">SRC-23, "DTC Index"</a>

A

B

C

D

E

F

G

**SBC**

I

J

K

L

M

N

O

P

# PRE-CRASH SEAT BELT CONTROL UNIT

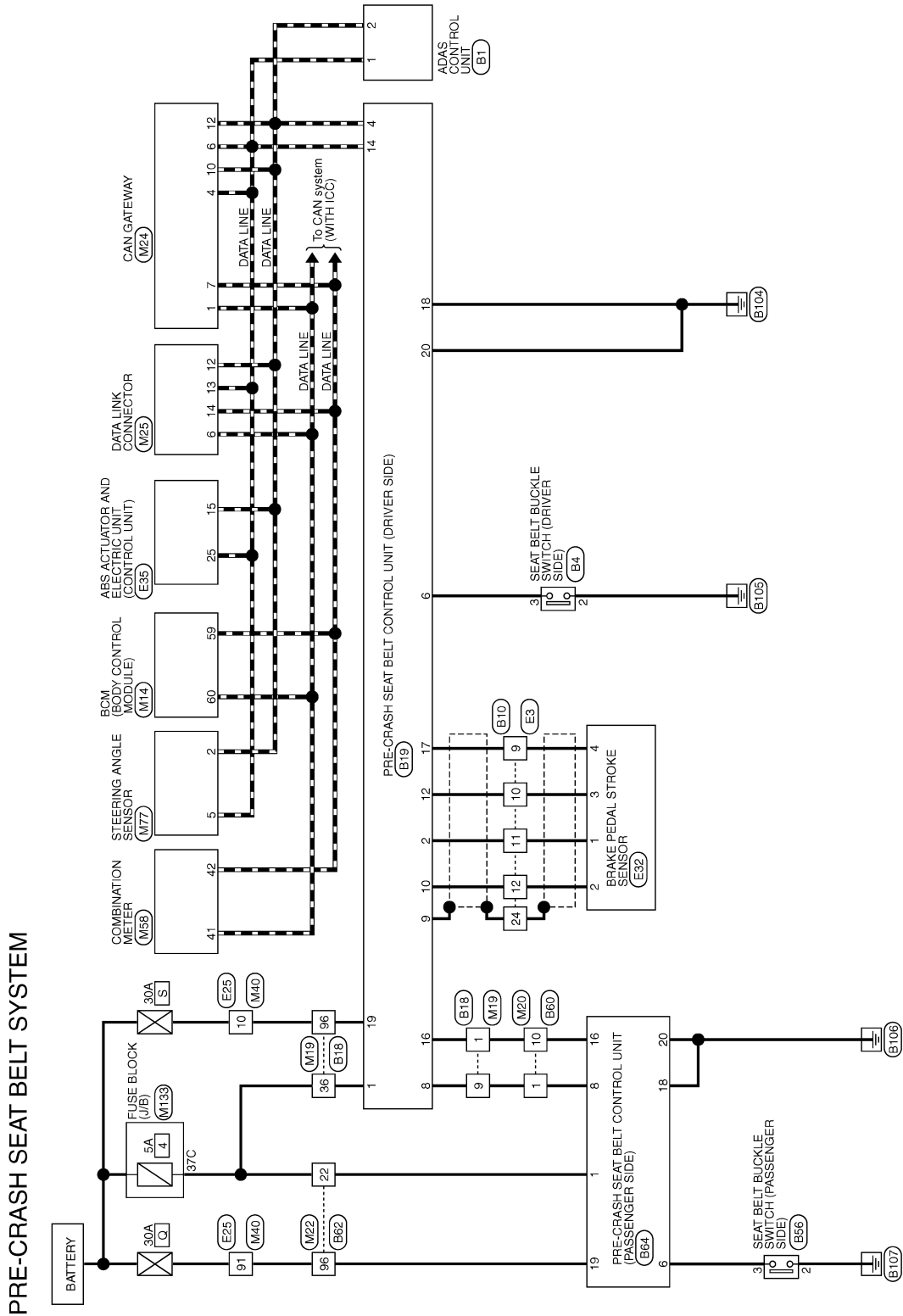
< WIRING DIAGRAM >

## WIRING DIAGRAM

### PRE-CRASH SEAT BELT CONTROL UNIT

Wiring Diagram

INFOID:000000011281313



2013/05/17

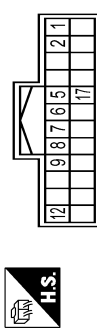
JRHWC0594GB

# PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

## PRE-CRASH SEAT BELT SYSTEM

Connector No.	B1
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FM-NH



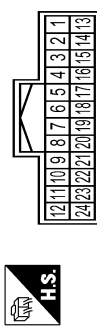
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CANH
2	R	CANL
3	B	GROUND
4	L	ITS COMM-H
5	P	ITS COMM-L
6	L	CHASSIS COMM-H
7	R	CHASSIS COMM-L
8	R	IGNITION
9	R	CHASSIS COMM-L
10	GR	IGNITION
11	V	BRAKE HOLD RLY DRIVE SIGNAL

Connector No.	B4
Connector Name	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	TH34FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	B	-
3	W	-

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Type	TH24FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
5	V	-
6	W	-
7	W	-
8	B	-
9	G	-
10	B	-
11	G	-
12	R	-
13	GR	-
14	GR	-
15	BR	-
16	LG	-
24	SHIELD	-

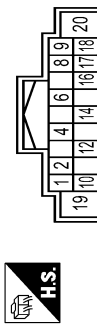
Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FM-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	L	-
4	LG	-
5	R	-
6	R	-
7	V	-
8	LG	-
9	BR	-
10	P	-

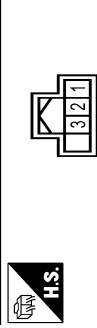
11	BG	-
12	LG	-
13	GR	-
24	Y	-
25	W	-
31	B	-
32	B	-
33	B	-
34	LG	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	SB	-
42	BR	-
43	EG	-
44	EG	-
46	R	-
51	SB	-
52	V	-
54	R	-
55	R	-
57	W	-
58	V	-
59	GR	-
62	BG	-
63	BR	-
64	Y	-
65	W	-
70	R	-
71	W	-
72	B	-
74	L	-
75	R	-
76	BR	-
77	B	-
81	B	-
83	BG	-
84	L	-
85	R	-
86	B	-
88	G	-
91	GR	-
94	GR	-
86	V	-
87	V	-
9	BR	-
98	BR	-

Connector No.	B19
Connector Name	PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)
Connector Type	TH18FM-CS2



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	SIG BAT
2	G	OUT 1
4	B	CAN L
6	W	BACKL SV LH NO
8	BR	LOCAL COMM 2
9	SHIELD	SHIELD GND
10	R	SENS POWER 1
12	B	OUT 2
14	L	CAN H
16	Y	LOCAL COMM 1
17	W	SENS GND 1
18	B	SIG GND
19	Y	MOTOR BAT
20	B	MOTOR GND

Connector No.	B58
Connector Name	SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)
Connector Type	TH34FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	B	-
3	LG	-

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SBC

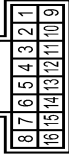
JRHWC2940GB

# PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

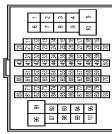
## PRE-CRASH SEAT BELT SYSTEM

Connector No.	B80
Connector Name	WIRE TO WIRE
Connector Type	TH8FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
10	Y	-
11	SHIELD	-
12	B	-
13	W	-
14	R	-

Connector No.	B82
Connector Name	WIRE TO WIRE
Connector Type	TH8FW-CS16-TM4

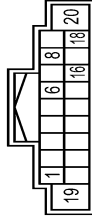


Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	R	- [With BOSE system]
3	W	- [Without BOSE system]
4	SHIELD	-
5	G	-
6	W	-
7	BR	- [Without BOSE system]
7	W	- [With BOSE system]
8	B	- [With BOSE system]
8	Y	- [Without BOSE system]
9	SHIELD	-
10	V	-
11	GR	-

12	Y	-
13	R	-
14	BG	-
15	GR	-
16	V	-
17	P	-
18	L	-
19	R	-
20	GR	-
21	R	-
22	P	-
23	W	-
24	V	-
25	SB	-
26	G	-
28	LG	-
29	P	-
30	LG	-
36	R	-
37	R	-
38	W	-
39	W	-
45	G	-
46	SHIELD	-
47	G	-
48	BG	-
49	G	-
52	Y	-
53	R	-
54	GR	-
57	R	-
58	P	-
59	LG	-
62	P	-
63	L	-
64	W	-
66	LG	-
68	L	-
69	P	-
71	R	-
72	G	-
73	SHIELD	-
76	GR	-
84	BR	-
85	BG	-
86	W	-
87	LG	-
89	V	-
90	V	-
92	W	-

93	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
99	BR	-
100	BR	-

Connector No.	B84
Connector Name	PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)
Connector Type	TH8FW-CS2



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	SIG BAT
6	LG	BACKLE SW RH NO
8	BR	LOCAL COMM 2
16	Y	LOCAL COMM 1
18	B	SIG GND
19	W	MOTOR BAT
20	B	MOTOR GND

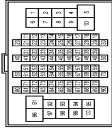
Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
6	Y	-
8	W	-
10	B	-
11	G	-
13	LG	-
14	SB	-
16	Y	-
17	BR	-
18	P	-
31	Y	-
32	GR	-
35	GR	-
36	R	-
37	V	-
38	L	-
39	Y	-
40	SB	-
41	LG	-
44	Y	-
45	W	-
46	B	-
47	G	-
48	SHIELD	-

12	R	-
13	GR	-
14	G	-
15	V	-
16	Y	-
24	SHIELD	-

Connector No.	E25
Connector Name	WIRE TO WIRE
Connector Type	TH8FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
3	LG	-
4	BR	-
6	V	-
7	L	-
10	BR	-
11	L	-
12	GR	-
13	W	-
14	B	-
15	SB	-
16	Y	-
17	BR	-
18	P	-
31	Y	-
32	GR	-
35	GR	-
36	R	-
37	V	-
38	L	-
39	Y	-
40	SB	-
41	LG	-
44	Y	-
45	W	-
46	B	-
47	G	-
48	SHIELD	-

# PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

## PRE-CRASH SEAT BELT SYSTEM

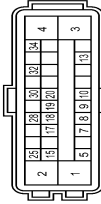
49	R	-	-
50	BR	-	-
51	L	-	-
52	W	-	-
53	V	-	-
54	P	-	-
55	SB	-	-
56	WB	-	-
57	EG	-	-
58	B	-	-
59	W	-	-
60	R	-	-
61	R	-	-
62	SB	-	-
63	LG	-	-
64	Y	OUT1	-
65	SB	VCC	-
66	GR	OUT2	-
67	LG	GND	-
68	BS	-	-
70	LG	-	-
71	V	-	-
72	V	-	-
73	G	-	-
74	BR	-	-
75	V	-	-
78	P	-	-
79	SB	-	-
80	R	-	-
81	R	-	-
82	EG	-	-
83	R	-	-
84	Y	-	-
85	EG	-	-
86	EG	-	-
87	Y	-	-
88	Y	-	-
89	Y	-	-
90	Y	-	-
91	G	-	-
92	Y	-	-
93	Y	-	-
94	GR	-	-
95	EG	-	-
96	W	-	-
97	LG	-	-
98	L	-	-
99	P	-	-
100	SHIELD	-	-

Connector No.	E32
Connector Name	BRAKE PEDAL STROKE SENSOR
Connector Type	HS34FB



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	OUT1
2	R	VCC
3	B	OUT2
4	W	GND

Connector No.	E55
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	SAZ30FB-SJ24-U



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	B	VALVE BATTERY
3	G	MOTOR BATTERY
4	Y	STOP LAMP SW SIGNAL
5	LG	RR LH WHEEL SENSOR SIGNAL
6	G	RR LH WHEEL SENSOR POWER SUPPLY
7	GR	FR RH WHEEL SENSOR SIGNAL
8	G	FR RH WHEEL SENSOR POWER SUPPLY
9	BR	FR RH WHEEL SENSOR SIGNAL
10	GR	FR RH WHEEL SENSOR POWER SUPPLY
11	R	VACUUM SENSOR SIGNAL
12	P	CANH
13	P	CANL
14	Y	RR RH WHEEL SENSOR SIGNAL
15	V	RR RH WHEEL SENSOR POWER SUPPLY
16	SB	FR LH WHEEL SENSOR SIGNAL
17	EG	FR LH WHEEL SENSOR POWER SUPPLY
18	V	FR LH WHEEL SENSOR SIGNAL
19	SB	FR LH WHEEL SENSOR POWER SUPPLY
20	EG	FR LH WHEEL SENSOR POWER SUPPLY
21	L	CANH

28	G	VACUUM SENSOR POWER SUPPLY
30	R	VDC OFF SW SIGNAL
32	SHIELD	VACUUM SENSOR GROUND
34	G	IGN

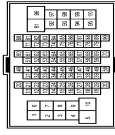


Connector No.	M14
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-AH



Terminal No.	Color Of Wire	Signal Name [Specification]
48	R	PUSHBTN IGN SW/ILL PWR
52	G	DONGLE LINK
54	V	COMM LINE
55	R	RAIN SENSOR
59	P	CANL
60	L	CANH
61	G	REAR WINDOW DEF RLY CONT
62	R	STARTER RLY CONT
64	V	L-KEY WARN BUZZER
65	B	OUTS HD LAMP CONT
66	B	BLOWER FAN RLY CONT
67	WB	IGN RLYAY (F/B) CONT
68	R	DIMMER
69	GR	A/T SHIFT SELECT PWR SPPLY
70	B	IGN RLYAY (IPDM E/R) CONT
71	G	DR DOOR REQ SW
72	SB	PASS DOOR REQ SW
75	BR	COMBI SW INPUT 5
76	EG	COMBI SW INPUT 4
77	V	COMBI SW INPUT 3
78	V	COMBI SW INPUT 2
79	LG	COMBI SW INPUT 1
80	L	TR LID OPEN SW

Connector No.	M19
Connector Name	WIPE TO WIRE
Connector Type	TH80MV-GS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	SB	-
4	BR	-
6	R	-
7	W	-
8	V	-
9	BR	-
10	P	-
11	BR	-
12	LG	-
13	GR	-
24	Y	-
25	W	-
31	BR	-
32	B	-
33	B	-
34	V	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	G	-
42	BR	-
43	BR	-
44	BR	-
46	EG	-
51	Y	-
52	V	-
54	R	-
55	R	-
57	W	-
58	V	-
59	EG	-
62	BG	-

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# PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

## PRE-CRASH SEAT BELT SYSTEM

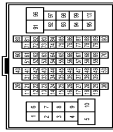
Terminal No.	Color Of Wire	Signal Name [Specification]
63	BR	-
64	Y	-
65	W	-
70	LG	-
71	W	-
72	B	-
74	L	-
75	W	-
76	BR	-
77	B	-
81	B	-
83	BG	-
84	L	-
85	W	-
86	B	-
88	G	-
91	GR	-
94	GR	-
95	W	-
97	V	-
98	BR	-

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
10	Y	-
11	SHIELD	-
12	B	-
13	W	-
14	R	-

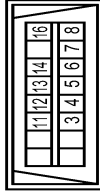
Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	L	-
3	R	-
4	SHIELD	-
5	G	-
6	BG	-
7	LG	-
8	P	-
9	SHIELD	-
10	V	-
11	GR	-
12	V	-
13	LG	-
14	LG	-
15	P	-
16	SB	- [With DCM]
16	V	- [Without DCM]
17	Y	-
18	L	-
19	G	-
20	GR	-
21	R	-
22	W	-
23	L	-
24	V	-
25	LG	-
26	GR	-
28	LG	-
29	SB	-
30	LG	-
36	R	-
37	R	-
38	W	-
39	V	-
45	G	-
46	SHIELD	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
3	W	BATTERY
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-H
9	R	IGN
10	R	CAN-L
11	B	GND
12	R	CAN-L

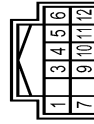
Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	AV COMM (L)
4	B	EARTH
5	B	EARTH
6	L	CAN-H
7	V	KLING
8	W	IGN SW
11	LG	AV COMM (H)
12	R	CAN-L
13	L	CAN-L
14	P	CAN-L
16	W	POWER

Terminal No.	Color Of Wire	Signal Name [Specification]
47	G	-
48	BR	-
49	SB	-
52	Y	-
53	R	-
54	GR	-
57	R	-
58	SB	-
59	LG	-
62	V	-
63	L	-
64	W	-
66	R	-
68	L	-
69	P	-
71	R	-
72	G	-
73	SHIELD	-
76	V	-
84	BR	-
85	BR	-
86	V	-
87	LG	-
89	BR	-
90	V	-
92	W	-
93	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
99	BR	-
100	BR	-

Connector No.	M24
Connector Name	CAN GATEWAY
Connector Type	TH12FW-NH



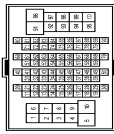
JRHWC2943GB

# PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

## PRE-CRASH SEAT BELT SYSTEM

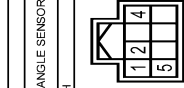
Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	-
3	GR	-
4	V	-
5	V/B	-
6	V	-
7	V	-
10	W	-
11	W	-
12	B	-
13	GR	-
14	B	-
15	SB	-
16	B	-
17	LG	-
18	B	-
31	W	-
32	V	-
35	BG	-
36	G	-
37	B	-
38	L	-
39	Y	-
40	GR	-
41	L	-
44	BR	-
45	W	-
46	G	-
47	R	-
48	SHIELD	-
49	B	-
50	BR	-
51	B	-
52	W	-
53	G	-
54	Y	-
55	P	-
56	BG	-

46	R	IGNITION SIGNAL
47	LG	AV COMMUNICATION SIGNAL (H)
48	SB	AV COMMUNICATION SIGNAL (L)
51	BR	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND

Connector No.	M77
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH80FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	P	CANL [Without Gateway]
2	R	CANL [With Gateway]
4	G	IGN
5	L	CANH

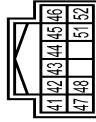
Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH40FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	V	-
11C	V	-
13C	L	-
14C	Y	-
15C	R	-
16C	R	-
17C	L	-
18C	BG	- [Without DRPO]

57	GR	-
58	B	-
59	SB	-
61	W/B	-
62	SB	-
63	LG	-
64	Y	-
65	R	-
66	V	-
67	LG	-
68	BG	-
71	V	-
72	LG	-
73	R	-
74	BR	-
75	B	-
76	G	-
78	R	-
83	R	-
86	V	-
91	W	-
92	R	-
94	BG	-
95	BR	-
96	W	-
97	LG	-
98	Y	-
99	BR	-
100	SHIELD	-

Connector No.	M58
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CANH
42	P	CANL
43	B	ILLUMINATION CONTROL SIGNAL
44	Y	FUEL LEVEL SENSOR GROUND
45	W	BATTERY POWER SUPPLY

18C	P	- [With DRPO]
19C	B	-
20C	W	-
21C	L	-
22C	L	-
23C	L	-
25C	LG	-
26C	SB	-
27C	P	-
28C	W	-
29C	W	-
2C	R	-
30C	R	-
31C	W	-
32C	R	-
33C	B	-
34C	W/B	-
35C	SB	-
36C	R	-
37C	W	-
38C	SB	-
38C	V	-
3C	P	-
40C	G	-
4C	P	-
5C	P	-
6C	G	-
7C	G	-
9C	V	-

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# SEAT BELT WARNING SYSTEM

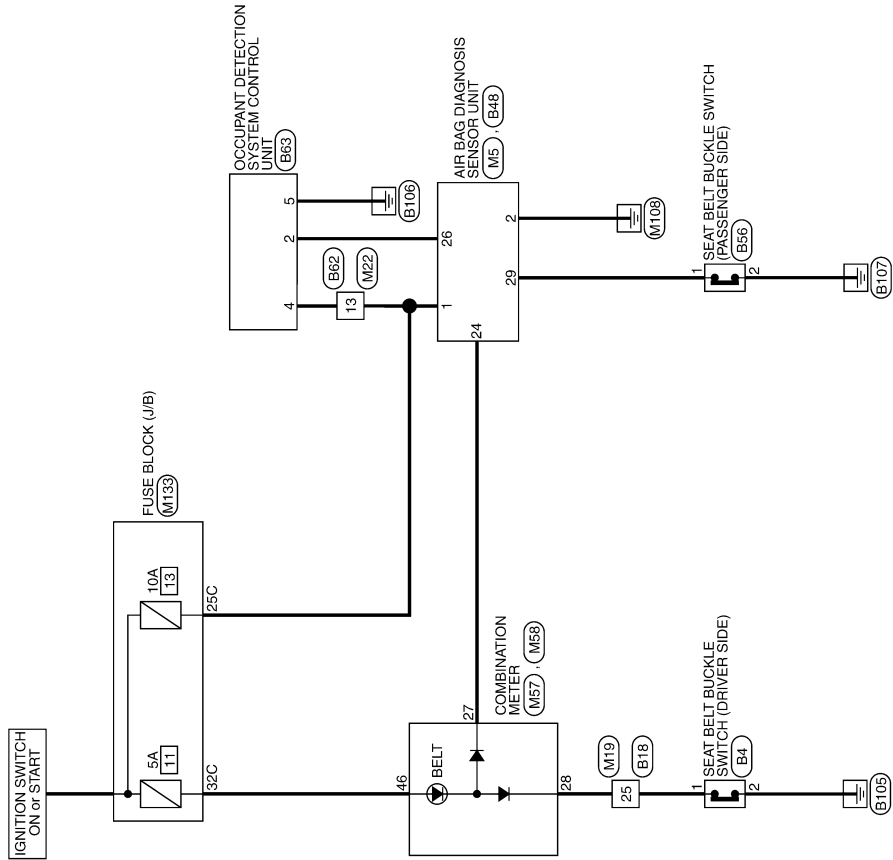
< WIRING DIAGRAM >

## SEAT BELT WARNING SYSTEM

Wiring Diagram

INFOID:000000011281314

### FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM



2014/07/28

JRHWC2945GB



# SEAT BELT WARNING SYSTEM

< WIRING DIAGRAM >

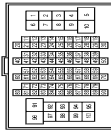
## FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM

Connector No.	B4
Connector Name	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	TH04FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	B	-
3	W	-

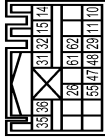
Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH09FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	L	-
4	LG	-
6	R	-
7	V	-
8	LG	-
9	BR	-
10	P	-
11	BG	-
12	LG	-
13	GR	-
24	W	-
25	B	-
31	B	-
32	B	-

33	B	-
34	LG	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	SB	-
42	BR	-
43	BG	-
44	BG	-
46	R	-
51	SB	-
52	V	-
54	R	-
55	R	-
57	W	-
58	V	-
59	GR	-
62	BG	-
63	BR	-
64	Y	-
65	W	-
70	R	-
71	W	-
72	B	-
74	L	-
75	R	-
76	BR	-
77	B	-
81	B	-
83	BG	-
84	L	-
85	R	-
86	B	-
88	G	-
91	GR	-
94	GR	-
96	Y	-
97	V	-
98	BR	-

Connector No.	B48
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NL22FY-1V-EX



Terminal No.	Color Of Wire	Signal Name [Specification]
10	Y/R	PRH (+)
11	Y/B	PRH (-)
14	Y/G	ELR RH2+
15	Y	ELR RH2-
26	V	ODS INPUT
29	LG	RHBUCKLE SW INPUT
31	Y/R	SRRH (+)
32	Y/B	SRRH (-)
35	Y	CRH (+)
36	L	CRH (-)
47	R	SIDE SENS RH+
48	L	SIDE SENS RHL
55	B	GND
61	G	SATELLITE RH (+)
62	R	SATELLITE RH (-)

Connector No.	B56
Connector Name	SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)
Connector Type	TH04FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	B	-
3	LG	-

Connector No.	B62
Connector Name	WIRE TO WIRE
Connector Type	TH09FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	B	- [With BOSE system]
4	W	- [Without BOSE system]
4	SHIELD	-
5	G	-
6	W	-
7	BR	- [Without BOSE system]
7	W	- [With BOSE system]
8	B	- [Without BOSE system]
8	Y	- [With BOSE system]
9	SHIELD	-
10	V	-
11	GR	-
12	Y	-
13	R	-
14	BG	-
15	GR	-
16	V	-
17	P	-
18	L	-
19	R	-
20	GR	-
21	R	-
22	P	-
23	W	-
24	V	-
25	SB	-
26	G	-
28	LG	-
29	P	-
30	LG	-
36	R	-
37	R	-
38	W	-

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SBC

# SEAT BELT WARNING SYSTEM

< WIRING DIAGRAM >

## FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM

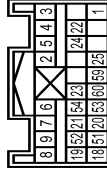
39	W	-
45	G	-
46	SHIELD	-
47	G	-
48	BG	-
49	G	-
52	Y	-
53	R	-
54	GR	-
57	R	-
58	P	-
59	LG	-
62	P	-
63	L	-
64	W	-
66	LG	-
68	V	-
69	P	-
71	R	-
72	G	-
73	SHIELD	-
76	GR	-
84	BR	-
85	BG	-
86	W	-
87	LG	-
89	LG	-
90	V	-
92	W	-
93	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
99	BR	-
100	BR	-

Connector No.	M853
Connector Name	OCCUPANT DETECTION SYSTEM CONTROL UNIT
Connector Type	TH88FW-NH



Terminal Color Of No.	Wire	Signal Name [Specification]
2	V	COMMUNICATION
4	R	IGN
5	B	GND
7	Y	K-LINE

Connector No.	M5
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	N428FY-EX



Terminal Color Of No.	Wire	Signal Name [Specification]
1	LG	IGN
2	B	GND
3	Y/R	DR1(+)
4	Y/B	DR1(-)
5	Y	DR2(+)
6	Y/R	AS1(+)
7	Y/B	AS1(-)
8	Y/G	AS2(+)
9	Y	AS2(-)
18	Y	ECZS+
19	BR	ECZS-
20	Y/R	ACT_VENT+
21	Y/B	ACT_VENT-
22	SHIELD	GND
23	V	AIRBAG W/L
24	G	-

25	GR	A/B OFF IND
51	G	SATELLITE RH2(+)
52	R	SIDE SENS RH2-
53	V	SIDE SENS LH2+
54	L	SIDE SENS LH2-
57	LG	IVCS
59	L	CAN-H
60	P	CAN-L

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal Color Of No.	Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	SB	-
4	BR	-
6	R	-
7	W	-
8	V	-
9	BR	-
10	P	-
11	BR	-
12	LG	-
13	GR	-
24	Y	-
25	W	-
31	BR	-
32	B	-
33	B	-
34	V	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	G	-
42	BR	-
43	BR	-

44	BR	-
46	BG	-
51	Y	-
52	V	-
54	R	-
55	R	-
57	W	-
58	V	-
59	BG	-
62	BG	-
63	BR	-
64	Y	-
65	W	-
70	LG	-
71	W	-
72	B	-
74	L	-
75	W	-
76	BR	-
77	B	-
81	B	-
83	BG	-
84	L	-
85	W	-
86	B	-
88	G	-
91	GR	-
94	GR	-
96	W	-
97	V	-
98	BR	-

Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal Color Of No.	Wire	Signal Name [Specification]
1	LG	-
2	L	-
3	R	-

JRHWC2947GB

# SEAT BELT WARNING SYSTEM

< WIRING DIAGRAM >

## FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM

No.	Color Of Wire	Signal Name [Specification]
4	SHIELD	-
5	G	-
6	BG	-
7	LG	-
8	P	-
9	SHIELD	-
10	V	-
11	GR	-
12	V	-
13	LG	-
14	LG	-
15	P	-
16	SB	- [With DCM]
17	V	- [Without DCM]
18	Y	-
19	G	-
20	GR	-
21	R	-
22	W	-
23	L	-
24	V	-
25	LG	-
26	GR	-
28	LG	-
29	SB	-
30	LG	-
35	R	-
37	R	-
38	W	-
39	V	-
45	G	-
46	SHIELD	-
47	G	-
48	BR	-
49	SB	-
52	Y	-
53	R	-
54	GR	-
57	R	-
58	SB	-
59	LG	-
62	V	-
63	L	-
64	W	-
66	R	-
68	L	-
69	P	-
71	R	-
72	G	-

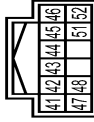
No.	Color Of Wire	Signal Name [Specification]
73	SHIELD	-
76	V	-
84	BR	-
85	BR	-
86	V	-
87	LG	-
89	BR	-
90	V	-
92	W	-
93	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
99	BR	-
100	BR	-

Connector No.	M57
Connector Name	COMBINATION METER
Connector Type	TH40FM-NH



No.	Color Of Wire	Signal Name [Specification]
30	SB	MANUAL MODE SIGNAL
31	G	NON-MANUAL MODE SIGNAL
32	BG	MANUAL MODE SHIFT UP SIGNAL
33	GR	MANUAL MODE SHIFT DOWN SIGNAL
34	BG	PADDLE SHIFTER UP SIGNAL
35	G	PADDLE SHIFTER DOWN SIGNAL
36	V	ILLUMINATION CONTROL SWITCH SIGNAL (I)
37	GR	ILLUMINATION CONTROL SWITCH SIGNAL (I)
38	R	VEHICLE SPEED SIGNAL (8-PULSE)
39	L	VEHICLE SPEED SIGNAL (2-PULSE)

Connector No.	M58
Connector Name	COMBINATION METER
Connector Type	TH12FM-NH



Connector No.	M133
Connector Name	FUSE BLOCK (JIB)
Connector Type	TH40FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	V	-
11C	V	-
13C	L	-
14C	Y	-
16C	R	-
16C	R	-
17C	L	-
18C	BG	- [Without DRPO]
18C	P	- [With DRPO]
19C	B	-
20C	W	-
21C	L	-
22C	L	-
23C	L	-
25C	LG	-
26C	SB	-
27C	P	-
28C	W	-
28C	W	-
2C	R	-
30C	R	-
31C	R	-
32C	R	-
33C	B	-
34C	W/B	-
35C	SB	-
36C	R	-
37C	W	-
38C	SB	-
38C	V	-
3C	P	-
40C	G	-
4C	P	-
5C	P	-
6C	G	-
7C	G	-

Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CANH
42	P	CAN-L
43	B	ILLUMINATION CONTROL SIGNAL
44	Y	FUEL LEVEL SENSOR GROUND
45	W	BATTERY POWER SUPPLY
46	R	IGNITION SIGNAL
47	LG	AV COMMUNICATION SIGNAL (H)
48	SB	AV COMMUNICATION SIGNAL (L)
51	BR	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND

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# SEAT BELT WARNING SYSTEM

< WIRING DIAGRAM >

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FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM

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JRHWC2949GB

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

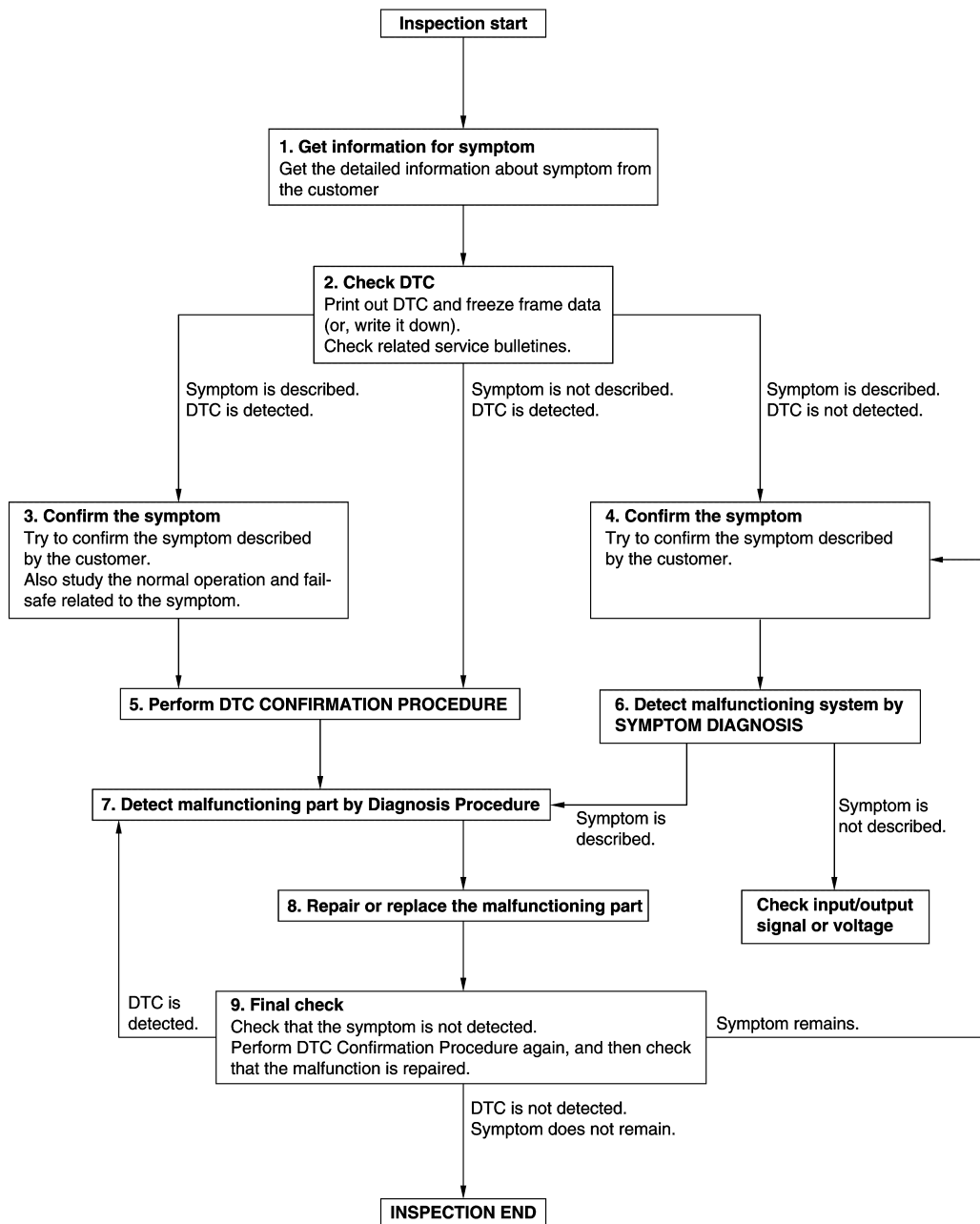
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000011281315

OVERALL SEQUENCE



DETAILED FLOW

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# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

---

## 1. GET INFORMATION FOR SYMPTOM

---

1. Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).
2. Check operation condition of the function that is malfunctioning.

>> GO TO 2.

## 2. CHECK DTC

---

1. Check DTC.
2. Perform the following procedure if DTC is detected.
  - Record DTC and freeze frame data (Print them out using CONSULT.)
  - Erase DTC.
  - Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.

Symptom is described, DTC is not detected>>GO TO 4.

Symptom is not described, DTC is detected>>GO TO 5.

## 3. CONFIRM THE SYMPTOM

---

Try to confirm the symptom described by the customer.

Also study the normal operation and fail-safe related to the symptom.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

## 4. CONFIRM THE SYMPTOM

---

Try to confirm the symptom described by the customer.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

## 5. PERFORM DTC CONFIRMATION PROCEDURE

---

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time.

**NOTE:**

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.

If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIRMATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-42, "Intermittent Incident"](#).

## 6. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

---

Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

Is the symptom described?

YES >> GO TO 7.

NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

## 7. DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

---

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

# DIAGNOSIS AND REPAIR WORK FLOW

## < BASIC INSPECTION >

---

YES >> GO TO 8.

NO >> Check according to [GI-42, "Intermittent Incident"](#).

## 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

---

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnosis Procedure again after repair and replacement.
3. Check DTC. If DTC is detected, erase it.

>> GO TO 9.

## 9. FINAL CHECK

---

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.

When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

### Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

YES-2 >> Symptom remains: GO TO 4.

NO >> Before returning the vehicle to the customer, always erase DTC.

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SBC

# U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

#### DTC Description

INFOID:000000011281316

- CAN (Controller Area Network) is a serial communication line for real time applications. It is an on board multiplex communication line with high data communication speed and excellent error detection ability. A modern vehicle is equipped with many electric control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, two control units are connected with two communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
- Refer to [LAN-40. "CAN COMMUNICATION SYSTEM : CAN System Specification Chart"](#) in LAN section for CAN communication unit.

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	Pre-crash seat belt control unit cannot transmit and receive CAN communication system for 2 seconds or more.

#### POSSIBLE CAUSE

Harness or connectors (CAN communication line is open or shorted)

#### FAIL-SAFE

Stops the operation in the conditions as per the following.\*<sup>1</sup>

- During emergency brake operation.
- When ABS continuously operates.
- When lateral slippage during cornering occurs.
- When forward emergency braking operates.
- When steering wheel is rotated for emergency.
- A part or the whole comfort function.

\*<sup>1</sup>: The deactivation mode differs depending on the internal malfunctioning condition of control unit.

#### DTC CONFIRMATION PROCEDURE

##### 1.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check "Self-diagnostic result" with CONSULT.

##### Is DTC "U1000" displayed?

- YES >> Refer to [LAN-24. "Trouble Diagnosis Flow Chart"](#).  
NO >> GO TO 2.

##### 2.CHECK INTERMITTENT INCIDENT

Refer to [GI-42. "Intermittent Incident"](#).

>> INSPECTION END.



# U0126 ST ANG SEN SIG

< DTC/CIRCUIT DIAGNOSIS >

## U0126 ST ANG SEN SIG

### DTC Description

INFOID:000000011281317

Inputs the steering angle signal from steering angle sensor via CAN communication.

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection Condition
U0126	ST ANG SEN SIG (Steering angle sensor signal)	Receipt of a malfunction signal of Steering angle signal

### POSSIBLE CAUSE

Steering angle sensor

### FAIL-SAFE

Driver side

Stop the operation in the conditions as per the following.

- When lateral slippage during cornering occurs.
- When steering wheel is rotated for emergency.
- A part of comfort function.

Passenger side

Stop the operation in the conditions as per the following.

- When lateral slippage during cornering occurs.
- When steering wheel is rotated for emergency.

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK DTC PRIORITY

If DTC U0126 is displayed with DTC U1000, first perform the confirmation procedure for DTC U1000.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [SBC-40, "DTC Description"](#).  
NO >> GO TO 2.

#### 2.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

Is DTC detected?

- YES >> Refer to [SBC-41, "Diagnosis Procedure"](#).  
NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).  
NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281318

#### 1.CHECK DTC PRIORITY

If DTC U0126 is displayed with DTC U1000, first perform the confirmation procedure for DTC U1000.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [SBC-40, "DTC Description"](#).  
NO >> GO TO 2.

#### 2.CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"

Check "Self-diagnostic result" for "ABS" with CONSULT. Refer to [SBC-17, "CONSULT Function"](#).

Is DTC detected?

- YES >> Repair or replace malfunctioning parts.  
NO >> GO TO 3.

#### 3.CHECK INTERMITTENT INCIDENT

## U0126 ST ANG SEN SIG

< DTC/CIRCUIT DIAGNOSIS >

---

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# U0428 STRG ANGL CAL

< DTC/CIRCUIT DIAGNOSIS >

## U0428 STRG ANGL CAL

### DTC Description

INFOID:000000011281319

Inputs the steering calibration incomplete signal from steering angle sensor via CAN communication.

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
U0428	STRG ANGL CAL (Steering angle calibration not compiled with)	Receipt of the calibration incomplete signal

### POSSIBLE CAUSE

Steering angle sensor calibration incomplete

### FAIL-SAFE

Driver side

Stops the operation in the conditions as per the following.

- When lateral slippage during cornering occurs.
- When steering wheel is rotated for emergency.
- A part of comfort function.

Passenger side

Stops the operation in the conditions as per the following.

- When lateral slippage during cornering occurs.
- When steering wheel is rotated for emergency.

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK DTC PRIORITY

If DTC U0428 is displayed with DTC U0126, first perform the confirmation procedure for DTC U0126.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [SBC-41, "DTC Description"](#).  
NO >> GO TO 2.

#### 2.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

Is DTC detected?

- YES >> Refer to [SBC-43, "Diagnosis Procedure"](#).  
NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).  
NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281320

#### 1.CHECK DTC PRIORITY

If DTC U0428 is displayed with DTC U0126, first perform the confirmation procedure for DTC U0126.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [SBC-41, "DTC Description"](#).  
NO >> GO TO 2.

#### 2.CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"

Check "Self-diagnostic result" for "ABS" with CONSULT. Refer to [SBC-17, "CONSULT Function"](#).

Is DTC detected?

- YES >> Repair or replace malfunctioning parts.  
NO >> GO TO 3.

#### 3.CHECK INTERMITTENT INCIDENT

## U0428 STRG ANGL CAL

< DTC/CIRCUIT DIAGNOSIS >

---

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# B2451 SEAT BLT MTR DR CIRC

< DTC/CIRCUIT DIAGNOSIS >

## B2451 SEAT BLT MTR DR CIRC

### DTC Description

INFOID:000000011281321

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2451	SEAT BLT MTR DR CIRC (Seat belt motor driver circuit)	Circuit of seat belt motor (driver side) is open or shorted

### POSSIBLE CAUSE

Pre-crash seat belt control unit (driver side)

### FAIL-SAFE

Fully deactivates the whole operation.

### DTC CONFIRMATION PROCEDURE

#### 1. SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

YES >> Refer to [SBC-45, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281322

#### 1. INSPECTION START

1. Check "Self-diagnostic result" with CONSULT.
2. Touch "ERASE".
3. Perform DTC Confirmation Procedure.  
See [SBC-45, "DTC Description"](#).

#### Is DTC B2451 displayed again?

YES >> Replace pre-crash seat belt control unit (driver side). Refer to [SB-9, "SEAT BELT RETRACTOR : Removal and Installation"](#).

NO >> GO TO 2.

#### 2. CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# B2452 SEAT BLT MTR AS CIRC

< DTC/CIRCUIT DIAGNOSIS >

## B2452 SEAT BLT MTR AS CIRC

### DTC Description

INFOID:000000011281323

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2452	SEAT BLT MTR AS CIRC (Seat belt motor assist circuit)	Circuit of seat belt motor (passenger side) is open or shorted

### POSSIBLE CAUSE

Pre-crash seat belt control unit (passenger side)

### FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Fully deactivates the whole operation.

### DTC CONFIRMATION PROCEDURE

#### 1. SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

YES >> Refer to [SBC-46. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-42. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281324

#### 1. INSPECTION START

1. Check "Self-diagnostic result" with CONSULT.
2. Touch "ERASE".
3. Perform DTC Confirmation Procedure.  
See [SBC-46. "DTC Description"](#).

#### Is DTC B2452 displayed again?

YES >> Replace pre-crash seat belt control unit (passenger side). Refer to [SB-9. "SEAT BELT RETRAC-TOR : Removal and Installation"](#).

NO >> GO TO 2.

#### 2. CHECK INTERMITTENT INCIDENT

Refer to [GI-42. "Intermittent Incident"](#).

>> INSPECTION END

# B2453 BR STROKE SEN CIRC

< DTC/CIRCUIT DIAGNOSIS >

## B2453 BR STROKE SEN CIRC

### DTC Description

INFOID:000000011281325

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2453	BR STROKE SEN CIRC (Brake stroke sensor circuit)	Circuit of brake pedal stroke sensor output is open or shorted

### POSSIBLE CAUSE

- Harness or connectors (brake pedal stroke sensor circuit is open or shorted)
- Pre-crash seat belt control unit (driver side)
- Brake pedal stroke sensor

### FAIL-SAFE

Driver side

Stops the operation in the conditions as per the following.

- During emergency brake operation.
- When ABS continuously operates.
- A part of comfort function.

Passenger side

Stops the operation in the conditions as per the following.

- During emergency brake operation.
- When ABS continuously operates.

### DTC CONFIRMATION PROCEDURE

#### 1. SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

Is DTC detected?

- YES >> Refer to [SBC-47, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281326

#### 1. CHECK PRE-CRASH SEAT BELT CONTROL UNIT INPUT SIGNAL

1. Turn ignition switch ON.
2. Select "BRK PEDAL SNSR1" and "BRK PEDAL SNSR2" in "DATA MONITOR" mode with CONSULT.
3. Check "BRK PEDAL SNSR1" and "BRK PEDAL SNSR2" indication under the following conditions.

Monitor item	Condition	Voltage (V) (Approx.)
BRK PEDAL SNSR1	Brake released → depressed	1 → 4
BRK PEDAL SNSR2		4 → 1

Is the inspection result normal?

- YES >> GO TO 6.
- NO >> GO TO 2.

#### 2. CHECK BRAKE PEDAL STROKE SENSOR POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect brake pedal stroke sensor connector.
3. Check voltage between brake pedal stroke sensor harness connector and ground.

## B2453 BR STROKE SEN CIRC

### < DTC/CIRCUIT DIAGNOSIS >

Brake pedal stroke sensor		Ground	Voltage (V) (Approx.)
Connector	Terminal		
E32	2		

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

### 3. CHECK BRAKE PEDAL STROKE SENSOR POWER SUPPLY CIRCUIT

1. Disconnect pre-crash seat belt control unit (driver side) connector.
2. Check continuity between pre-crash seat belt control unit (driver side) harness connector and brake pedal stroke sensor harness connector.

Pre-crash seat belt control unit (driver side)		Brake pedal stroke sensor		Continuity
Connector	Terminal	Connector	Terminal	
B19	10	E32	2	Existed

3. Check continuity between pre-crash seat belt control unit (driver side) and ground.

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B19	10		

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (driver side) Refer to [SB-9. "SEAT BELT RETRACTOR : Removal and Installation"](#).

NO >> Repair or replace harness or connector.

### 4. CHECK BRAKE PEDAL STROKE SENSOR CIRCUIT

1. Disconnect pre-crash seat belt control unit (driver side) connector.
2. Check continuity between pre-crash seat belt control unit (driver side) harness connector and brake pedal stroke sensor harness connector.

Pre-crash seat belt control unit (driver side)		Brake pedal stroke sensor		Continuity
Connector	Terminal	Connector	Terminal	
B19	2	E32	1	Existed
	12		3	
	17		4	

3. Check continuity between pre-crash seat belt control unit harness connector (driver side) and ground.

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B19	2		
	12		
	17		

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connector.

### 5. CHECK BRAKE PEDAL STROKE SENSOR

Refer to [SBC-49. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace brake pedal stroke sensor. Refer to [SBC-75. "Removal and Installation"](#).



# B2453 BR STROKE SEN CIRC

< DTC/CIRCUIT DIAGNOSIS >

## 6. CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

## Component Inspection

INFOID:000000011281327

## 1. CHECK BRAKE PEDAL STROKE SENSOR

1. Turn ignition switch OFF.
2. Disconnect brake pedal stroke sensor connector.
3. Check resistance between brake pedal stroke sensor terminal as per the following.

Brake pedal stroke sensor		Condition	Resistance (kΩ) (Approx.)
Terminal			
2	3	Brake released → depressed	1.0 → 0.2
	1		0.2 → 1.0

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace brake pedal stroke sensor. Refer to [SBC-75, "Removal and Installation"](#).

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SBC

# B2454 SEAT BLT PWR DR CIRC

< DTC/CIRCUIT DIAGNOSIS >

## B2454 SEAT BLT PWR DR CIRC

### DTC Description

INFOID:000000011281328

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2454	SEAT BLT PWR DR CIRC (Seat belt motor power supply driver side circuit)	Seat belt motor (driver side) power supply circuit is open or shorted

### POSSIBLE CAUSE

- Harness or connectors [Pre-crash seat belt control unit (driver side) circuit is open or shorted]
- Pre-crash seat belt control unit (driver side)
- Fuse

### FAIL-SAFE

Fully deactivates the whole operation.

### DTC CONFIRMATION PROCEDURE

#### 1.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

- YES >> Refer to [SBC-50, "Diagnosis Procedure"](#).  
NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).  
NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281329

#### 1.CHECK FUSIBLE LINK

Check that the following fusible link is not blown.

Terminal No.	Signal name	Fusible link No.
19	Battery power supply	S (30 A)

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace the blown fusible link after repairing the affected circuit if a fuse is blown.

#### 2.CHECK PRE-CRASH SEAT BELT MOTOR POWER SUPPLY

1. Disconnect pre-crash seat belt control unit (driver side) connector.
2. Check voltage between pre-crash seat belt control unit (driver side) harness connector and ground.

Pre-crash seat belt control unit (driver side)		Ground	Voltage (V) (Approx.)
Connector	Terminal		Battery voltage
B19	19		

#### Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace harness or connector.

#### 3.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# B2455 CONTROL UNIT DR

< DTC/CIRCUIT DIAGNOSIS >

## B2455 CONTROL UNIT DR

### DTC Description

INFOID:000000011281330

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2455	CONTROL UNIT DR (Pre-clash seat belt control unit driver side internal circuit)	Pre-crash seat belt control unit (driver side) internal circuit malfunction

### POSSIBLE CAUSE

Pre-crash seat belt control unit (driver side)

### FAIL-SAFE

Stops the operation in the conditions as per the following.\*1

- During emergency brake operation.
- When ABS continuously operates.
- When lateral slippage during cornering occurs.
- When steering wheel is rotated for emergency.
- A part or the whole comfort function.

\*1: The deactivation mode differs depending on the internal malfunctioning condition of control unit.

### DTC CONFIRMATION PROCEDURE

#### 1.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

YES >> Refer to [SBC-51, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281331

#### 1..INSPECTION START

1. Check "Self-diagnostic result" with CONSULT.
2. Touch "ERASE".
3. Perform DTC Confirmation Procedure.  
See [SBC-51, "DTC Description"](#).

#### Is DTC B2455 displayed again?

YES >> Replace pre-crash seat belt control unit (driver side). Refer to [SB-9, "SEAT BELT RETRACTOR : Removal and Installation"](#).

NO >> GO TO 2.

#### 2.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# B2456 SEAT BLT PWR AS

< DTC/CIRCUIT DIAGNOSIS >

## B2456 SEAT BLT PWR AS

### DTC Description

INFOID:000000011281332

### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC Detection Condition
B2456	SEAT BLT PWR AS (Seat belt motor power supply assist side circuit)	Pre-crash seat belt control unit (passenger side) power supply circuit is open or shorted

### POSSIBLE CAUSE

- Harness or connectors [Pre-crash seat belt control unit (passenger side) circuit is open or shorted]
- Pre-crash seat belt control unit (passenger side)

### FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Fully deactivates the whole operation.

### DTC CONFIRMATION PROCEDURE

#### 1.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

- YES >> Refer to [SBC-52, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281333

#### 1.CHECK FUSIBLE LINK

Check that the following fusible link is not blown.

Terminal No.	Signal name	Fusible link No.
19	Battery power supply	Q (30 A)

#### Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Replace the blown fusible link after repairing the affected circuit if a fuse or fusible link is blown.

#### 2.CHECK PRE-CRASH SEAT BELT MOTOR POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect pre-crash seat belt control unit (passenger side) connector.
3. Check voltage between pre-crash seat belt control unit (passenger side) harness connector and ground.

Pre-crash seat belt control unit (passenger side)		Ground	Voltage (V) (Approx.)
Connector	Terminal		Battery voltage
B64	19		

#### Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace harness between pre-crash seat belt control unit (passenger side) and fusible link.

## B2456 SEAT BLT PWR AS

< DTC/CIRCUIT DIAGNOSIS >

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### 3. CHECK SELF DIAGNOSTIC RESULT

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1. Connect pre-crash seat belt control unit (passenger side) connector.
2. Turn ignition switch ON.
3. Check "Self-diagnostic result" with CONSULT.
4. Touch "ERASE".
5. Perform DTC Confirmation Procedure.  
See [SBC-52, "DTC Description"](#).

Is DTC B2456 displayed again?

YES >> Replace pre-crash seat belt control unit (passenger side). Refer to [SB-9, "SEAT BELT RETRAC-TOR : Removal and Installation"](#).

NO >> GO TO 4.

### 4. CHECK INTERMITTENT INCIDENT

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Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

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# B2457 CONTROL UNIT AS

< DTC/CIRCUIT DIAGNOSIS >

## B2457 CONTROL UNIT AS

### DTC Description

INFOID:000000011281334

### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC Detection Condition
B2457	CONTROL UNIT AS (Pre-clash seat belt control unit assist side internal circuit)	Pre-crash seat belt control unit (passenger side) internal circuit malfunction

### POSSIBLE CAUSE

Pre-crash seat belt control unit (passenger side)

### FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Fully deactivates the whole operation.\*<sup>1</sup>

\*<sup>1</sup>: The deactivation mode differs depending on the internal malfunctioning condition of control unit.

### DTC CONFIRMATION PROCEDURE

#### 1.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

Is DTC detected?

- YES >> Refer to [SBC-54, "Diagnosis Procedure"](#).  
NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).  
NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281335

#### 1..INSPECTION START

1. Check "Self-diagnostic result" with CONSULT.
2. Touch "ERASE".
3. Perform DTC Confirmation Procedure.  
See [SBC-54, "DTC Description"](#).

Is DTC B2457 displayed again?

- YES >> Replace pre-crash seat belt control unit (passenger side). Refer to [SB-9, "SEAT BELT RETRAC-TOR : Removal and Installation"](#).  
NO >> GO TO 2.

#### 2.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# B2458 LOCAL COMM

< DTC/CIRCUIT DIAGNOSIS >

## B2458 LOCAL COMM

### DTC Description

INFOID:000000011281336

### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC Detection Condition
B2458	LOCAL COMM (Local communication system malfunction)	Receipt of a malfunction signal between pre-crash seat belt control unit (driver side) and pre-crash seat belt control unit (passenger side)

### POSSIBLE CAUSE

- Harness or connectors[Pre-crash seat belt control unit (driver side) and pre-crash seat belt (passenger side) circuit is open or shorted]
- Pre-crash seat belt control unit (driver side)
- Pre-crash seat belt control (passenger side)

### FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Fully deactivates the whole operation.\*<sup>1</sup>

\*<sup>1</sup>: The deactivation mode differs depending on the internal malfunctioning condition of control unit.

### DTC CONFIRMATION PROCEDURE

#### 1. SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

- YES >> Refer to [SBC-55, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281337

#### 1. CHECK PRE-CRASH-SEAT BELT CONTROL UNIT (PASSENGER SIDE)

Check pre-crash seat belt control unit (passenger side) power supply. Refer to [SBC-52, "Diagnosis Procedure"](#).

#### Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace harness between pre-crash seat belt control unit (passenger side) connector and fusible link.

#### 2. CHECK LOCAL COMMUNICATION LINE CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect pre-crash seat belt control unit (driver side and passenger side) connectors.
3. Check continuity between local communication line harness connectors.

Pre-crash seat belt control unit (driver side)		Pre-crash seat belt control unit (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B19	8	B64	8	Existed
	16		16	

4. Check continuity between pre-crash seat belt control unit (driver side) harness connector and ground.

## B2458 LOCAL COMM

### < DTC/CIRCUIT DIAGNOSIS >

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Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B19	8		Not existed
	16		

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Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace local communication line.

### 3.REPLACE PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)

---

1. Replace pre-crash seat belt control unit (passenger side)
2. Check "Self-diagnostic result" with CONSULT.

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

### 4.REPLACE PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

---

1. Replace pre-crash seat belt control unit (driver side)
2. Check "Self-diagnostic result" with CONSULT.

Is DTC detected?

YES >> GO TO 5.

NO >> INSPECTION END

### 5.CHECK INTERMITTENT INCIDENT

---

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END



# B2461 VHCL SPEED SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

## B2461 VHCL SPEED SIGNAL

### DTC Description

INFOID:0000000011281338

Inputs the vehicle speed signal from combination meter via CAN communication.

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2461	VHCL SPEED SIGNAL (Vehicle speed signal malfunction)	Receipt of a malfunction signal of the vehicle speed signal

### POSSIBLE CAUSE

Combination meter

### FAIL-SAFE

Driver side

Stops the operation in the conditions as per the following.

- During emergency brake operation
- When ABS continuously operates
- When lateral slippage during cornering occurs
- When steering wheel is rotated for emergency
- When comfort function operates

Passenger side

Stops the operation in the conditions as per the following.

- During emergency brake operation.
- When ABS continuously operates.
- When lateral slippage during cornering occurs.
- When steering wheel is rotated for emergency.
- A part or the whole comfort function.

### DTC CONFIRMATION PROCEDURE

#### 1.CHECK DTC PRIORITY

If DTC B2461 is displayed with DTC U1000, first perform the confirmation procedure for DTC U1000.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [SBC-40. "DTC Description"](#).  
NO >> GO TO 2.

#### 2.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

Is DTC detected?

- YES >> Refer to [SBC-57. "Diagnosis Procedure"](#).  
NO-1 >> To check malfunction symptom before repair: Refer to [GI-42. "Intermittent Incident"](#).  
NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000011281339

#### 1.CHECK DTC PRIORITY

If DTC B2461 is displayed with DTC U1000, first perform the confirmation procedure for DTC U1000.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [SBC-40. "DTC Description"](#).  
NO >> GO TO 2.

#### 2.CHECK DTC WITH "UNIFIED METER AND A/C AMP."

Check "Self-diagnostic result" for "METER/M&A" with CONSULT. Refer to [SBC-17. "CONSULT Function"](#).

## B2461 VHCL SPEED SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

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Is DTC detected?

YES >> Repair or replace malfunctioning parts.

NO >> GO TO 3.

**3.**CHECK INTERMITTENT INCIDENT

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Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# B2466 DR/AS CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

## B2466 DR/AS CONTROL UNIT

### DTC Description

INFOID:0000000011281340

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2466	DR/AS CONTROL UNIT (DR side and AS side control unit miss installation)	Pre-crash seat belt control unit is out of the vehicle specification

### POSSIBLE CAUSE

- Pre-crash seat belt control unit (driver side)
- Pre-crash seat belt control unit (passenger side)

### FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Stops the operation in the conditions as per the following.\*1

- During emergency brake operation.
- When ABS continuously operates.
- When lateral slippage during cornering occurs.
- When forward emergency braking operate.
- When steering wheel is rotated for emergency.
- A part or the whole comfort function.

\*1: The deactivation mode differs depending on the internal malfunctioning condition of control unit.

### DTC CONFIRMATION PROCEDURE

#### 1.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

YES >> Refer to [SBC-59, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:0000000011281341

#### 1.CHECK THE VEHICLE SPECIFICATION

Check the part number.

#### Does the part application fit to the vehicle specification?

YES >> GO TO 2.

NO >> Replace the malfunction parts.

#### 2.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# B2470 SYS HEAT PROTC DR

< DTC/CIRCUIT DIAGNOSIS >

## B2470 SYS HEAT PROTC DR

### DTC Description

INFOID:000000011281342

When fastening and unfastening seat belt or opening and closing door is repeated continuously for a short period of time, the system temporarily deactivates the retracting function of seat belt to prevent excessive heating. The system recovers automatically.

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2470	SYS HEAT PROTC DR (System heat protection DR)	Deactivates to prevent excessive heating

### POSSIBLE CAUSE

Belt retracting function activates continuously in a short period of time

### FAIL-SAFE

Driver side

- Fully deactivates the whole operation.
- Operation return.
  - 1 time operation becomes possible after approximately 30 seconds.
  - Returns to the initial condition after approximately 8 minutes.

### DTC CONFIRMATION PROCEDURE

#### 1. SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

- YES >> Refer to [SBC-60. "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-42. "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281343

#### 1. CHECK THE VEHICLE CONDITION WITH CONSULT DATA MONITOR

1. Check "HEAT PROTC LH" of DATA MONITOR.
2. Wait until "OFF" appears.
3. Perform the self-diagnosis, after performing the check.
4. Touch "ERASE".
5. Perform DTC Confirmation Procedure.  
See [SBC-60. "DTC Description"](#).

#### Is DTC B2470 displayed again?

- YES >> GO TO 2.
- NO >> INSPECTION END

#### 2. CHECK INTERMITTENT INCIDENT

Refer to [GI-42. "Intermittent Incident"](#).

>> INSPECTION END

# B2471 SYS HEAT PROTC AS

< DTC/CIRCUIT DIAGNOSIS >

## B2471 SYS HEAT PROTC AS

### DTC Description

INFOID:000000011281344

When fastening and unfastening seat belt or opening and closing door is repeated continuously for a short period of time, the system temporarily deactivates the retracting function of seat belt to prevent excessive heating. The system recovers automatically.

### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition
B2471	SYS HEAT PROTC AS (System heat protection AS)	Deactivates to prevent excessive heating

### POSSIBLE CAUSE

Belt retracting function activates continuously in the short period of time

### FAIL-SAFE

Passenger side

- Fully deactivates the whole operation.
- Operation return.
- 1 time operation becomes possible after approximately 30 seconds.
- Returns to the initial condition after approximately 8 minutes.

### DTC CONFIRMATION PROCEDURE

#### 1. SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check "Self-diagnostic result" with CONSULT.

#### Is DTC detected?

- YES >> Refer to [SBC-61, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-42, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000011281345

#### 1. CHECK THE VEHICLE CONDITION WITH CONSULT DATA MONITOR

1. Check "HEAT PROTC RH" of DATA MONITOR.
2. Wait until "OFF" appears.
3. Perform the self-diagnosis, after performing the check.
4. Touch "ERASE".
5. Perform DTC Confirmation Procedure.  
See [SBC-61, "DTC Description"](#).

#### Is DTC B2471 displayed again?

- YES >> GO TO 2.
- NO >> INSPECTION END

#### 2. CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## POWER SUPPLY AND GROUND CIRCUIT

### Diagnosis Procedure

INFOID:000000011281346

#### 1.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.		Signal name	Fuse No.
Driver side	1	Battery power supply	4 (5 A)
Passenger side			

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

NO >> GO TO 2.

#### 2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect pre-crash seat belt control unit (driver side and passenger side) connectors.
3. Check voltage between harness pre-crash seat belt control unit (driver side and passenger side) connector and ground.

Pre-crash seat belt control unit			Ground	Voltage (V) (Approx.)
Connector		Terminal		Battery voltage
Driver side	B19	1		
Passenger side	B64			

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK GROUND CIRCUIT

Check continuity between pre-crash seat belt control unit harness connector and ground.

Pre-crash seat belt control unit			Ground	Continuity
Connector		Terminal		Existed
Driver side	B19	18		
		20		
Passenger side	B64	18		
		20		

Does continuity exist?

YES >> INSPECTION END

NO >> Repair or replace harness.

# SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

## SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

### Description

INFOID:0000000011281347

- Detects whether or not the seat belt is fastened when the ignition switch turns ON. If the seat belt is not fastened, illuminates the seat belt warning lamp on the combination meter.
- The seat belt buckle switch is installed in the seat belt buckle.

### Component Function Check

INFOID:0000000011281348

#### 1. CHECK PRE-CRASH SEAT BELT CONTROL UNIT INPUT SIGNAL

 With CONSULT

1. Turn ignition switch ON.
2. Select "BUCKLE SW LH" in "DATA MONITOR" mode with CONSULT.
3. Check "BUCKLE SW LH" indication under the following conditions.

Monitor item	Condition		Indication
BUCKLE SW LH	Driver side seat belt	Not fastened	OFF
		Fastened	ON

Is the inspection result normal?

- YES >> Seat belt buckle switch (driver side) circuit is normal.  
NO >> Refer to [SBC-63, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000011281349

SBC

#### 1. CHECK PRE-CRASH SEAT BELT CONTROL UNIT INPUT SIGNAL

1. Turn ignition switch ON.
2. Check the voltage between seat belt buckle switch (driver side) and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
B4	3	Ground	When driver side seat belt is not fastened	5
			When driver side seat belt is fastened	0

Is the inspection result normal?

- YES >> Replace seat belt buckle switch (driver side). Refer to [SB-12, "SEAT BELT BUCKLE : Removal and Installation"](#).  
NO >> GO TO 2.

#### 2. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect pre-crash seat belt control unit (driver side) connector and seat belt buckle switch (driver side) connector.
3. Check continuity between pre-crash seat belt control unit (driver side) and seat belt buckle switch (driver side).

Pre-crash seat belt control unit (driver side)		Seat belt buckle switch (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
B19	6	B4	3	Existed

4. Check continuity between pre-crash seat belt control unit (driver side) and ground.

# SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

## < DTC/CIRCUIT DIAGNOSIS >

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B19	6		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between pre-crash seat belt control unit (driver side) and seat belt buckle switch (driver side).

### 3. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

Check continuity between seat belt buckle switch (driver side) and ground.

Seat belt buckle switch (driver side)		Ground	Continuity
Connector	Terminal		
B4	2		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness between seat belt buckle switch and ground.

### 4. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Check seat belt buckle switch (driver side).

Refer to [SBC-64. "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (driver side). Refer to [SB-9. "SEAT BELT RETRACTOR : Removal and Installation"](#).

NO >> Replace seat belt buckle switch (driver side). Refer to [SB-12. "SEAT BELT BUCKLE : Removal and Installation"](#).

## Component Inspection

INFOID:000000011281350

### 1. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

1. Turn ignition switch OFF.
2. Disconnect seat belt buckle switch connector.
3. Check continuity of seat belt buckle (driver side).

Seat belt buckle switch (driver side)		Condition	Continuity
Terminal			
3	2	When driver side seat belt is not fastened	Not existed
		When driver side seat belt is fastened	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle switch (driver side). Refer to [SB-12. "SEAT BELT BUCKLE : Removal and Installation"](#).



# SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

## SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

### Description

INFOID:0000000011281351

- Detects whether or not the seat belt is fastened when the ignition switch turns ON. If the seat belt switch is not fastened, illuminates the seat belt warning lamp on the combination meter.
- The seat belt buckle switch is installed in the seat belt buckle.

### Component Function Check

INFOID:0000000011281352

#### 1. CHECK PRE-CRASH SEAT BELT CONTROL UNIT INPUT SIGNAL

 With CONSULT

1. Turn ignition switch ON.
2. Select "BUCKLE SW LH" in "DATA MONITOR" mode with CONSULT.
3. Check "BUCKLE SW LH" indication under the following conditions.

Monitor item	Condition		Indication
BUCKLE SW RH	Passenger side seat belt	Not fastened	OFF
		Fastened	ON

Is the inspection result normal?

- YES >> Seat belt buckle switch (passenger side) circuit is normal.  
 NO >> Refer to [SBC-65, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000011281353

SBC

#### 1. CHECK PRE-CRASH SEAT BELT CONTROL UNIT INPUT SIGNAL

1. Turn ignition switch ON.
2. Check the voltage between seat belt buckle switch (passenger side) and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
B56	3	Ground	When driver side seat belt is not fastened	5
			When driver side seat belt is fastened	0

Is the inspection result normal?

- YES >> Replace seat belt buckle switch (passenger side). Refer to [SB-9, "SEAT BELT RETRACTOR : Removal and Installation"](#).  
 NO >> GO TO 2.

#### 2. CHECK SEAT BELT BUCKLE (PASSENGER SIDE) SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect pre-crash seat belt control unit (passenger side) connector and seat belt buckle switch (passenger side) connector.
3. Check continuity between pre-crash seat belt control unit (passenger side) and seat belt buckle switch (passenger side).

Pre-crash seat belt control unit (passenger side)		Seat belt buckle switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B64	6	B56	3	Existed

4. Check continuity between pre-crash seat belt control unit (passenger side) and ground.

## SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

### < DTC/CIRCUIT DIAGNOSIS >

Pre-crash seat belt control unit (passenger side)		Ground	Continuity
Connector	Terminal		
B64	6		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between pre-crash seat belt control unit (passenger side) and seat belt buckle switch (passenger side).

### 3. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

Check continuity between seat belt buckle switch (passenger side) and ground.

Seat belt buckle switch (passenger side)		Ground	Continuity
Connector	Terminal		
B56	2		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness between seat belt buckle switch and ground.

### 4. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Check seat belt buckle switch (passenger side).

Refer to [SBC-66. "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (passenger side). Refer to [SB-9. "SEAT BELT RETRAC-TOR : Removal and Installation"](#).

NO >> Replace seat belt buckle switch (passenger side). Refer to [SB-12. "SEAT BELT BUCKLE : Removal and Installation"](#).

## Component Inspection

INFOID:000000011281354

### 1. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

1. Turn ignition switch OFF.
2. Disconnect seat belt buckle switch connector.
3. Check continuity of seat belt buckle (passenger side).

Seat belt buckle switch (passenger side)		Condition	Continuity
Terminal			
3	2	When driver side seat belt is not fastened	Not existed
		When driver side seat belt is fastened	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle switch (passenger side). Refer to [SB-12. "SEAT BELT BUCKLE : Removal and Installation"](#).

# SEAT BELT WARNING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## SEAT BELT WARNING LAMP CIRCUIT

### Component Function Check

INFOID:000000011281355

#### 1. CHECK SEAT BELT WARNING LAMP FUNCTION-I

1. Turn ignition switch ON.
2. Check seat belt warning lamp function.

Condition	Seat belt warning lamp
Seat belt (driver side) is fastened	Not illuminated
Seat belt (driver side) is unfastened	Illuminated

Is the inspection results normal?

- YES >> GO TO 2.  
NO >> Refer to [SBC-67, "Diagnosis Procedure"](#).

#### 2. CHECK SEAT BELT WARNING LAMP FUNCTION-II

1. Sits in the passenger seat.
2. Fasten the seat belt (passenger side).
3. Check seat belt warning lamp function.

Condition	Seat belt warning lamp
Seat belt (passenger side) is fastened	Not illuminated
Seat belt (passenger side) is unfastened	Illuminated

Is the inspection results normal?

- YES >> Seat belt warning lamp circuit is normal.  
NO >> Refer to [SBC-67, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000011281356

#### 1. CHECK SEAT BELT WARNING LAMP

Check seat belt warning lamp component function check result.

Which seat belt warning lamp circuit is not normal?

- >> Driver side: GO TO 4.  
>> Passenger side: GO TO 8.  
>> Both side: GO TO 2.

#### 2. CHECK COMBINATION METER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Turn ignition switch ON.
4. Check voltage between combination meter harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Combination meter			
Connector	Terminal	Ground	Battery voltage
M58	46		

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace harness connector.

#### 3. CHECK COMBINATION METER INTERNAL CIRCUIT

1. Turn ignition switch OFF.
2. Connect combination meter connector.
3. Disconnect seat belt buckle switch (driver side) connector.

# SEAT BELT WARNING LAMP CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

4. Turn ignition switch ON.
5. Check voltage between seat belt buckle switch (driver side) harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Seat belt buckle switch (driver side)			
Connector	Terminal	Ground	Battery voltage
B4	1		

Is the inspection result normal?

YES >> GO TO 13.

NO >> Replace combination meter. Refer to [MWI-126, "Removal and Installation"](#).

### 4. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and seat belt buckle switch (driver side) connector.
3. Check continuity between combination meter harness connector and seat belt buckle switch (driver side) harness connector.

Combination meter		Seat belt buckle switch (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
M57	28	B4	1	Existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness connector.

### 5. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Check seat belt buckle switch.

Refer to [SBC-69, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace seat belt buckle (driver side). Refer to [SB-12, "SEAT BELT BUCKLE : Removal and Installation"](#).

### 6. CHECK COMBINATION METER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M57	28		Existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness connector.

### 7. CHECK COMBINATION METER INTERNAL CIRCUIT

1. Connect combination meter connector.
2. Turn ignition switch ON.
3. Check voltage between seat belt buckle switch (driver side) harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Seat belt buckle switch (driver side)			
Connector	Terminal	Ground	Battery voltage
B4	1		

Is the inspection result normal?

YES >> GO TO 13.

# SEAT BELT WARNING LAMP CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

NO >> Replace combination meter. Refer to [MWI-126. "Removal and Installation"](#).

### 8. CHECK HARNESS CONNECTOR

#### **WARNING:**

- Before servicing, turn ignition switch OFF, disconnect battery negative terminal and wait at least 3 minutes. (To discharge backup capacitor.)
- Never use unspecified tester or other measuring device.

Check the harness connector.

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness connector.

### 9. CHECK WIRING HARNESS

Check the wiring harness externals.

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace wiring harness.

### 10. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Check seat belt buckle switch (passenger side).

Refer to [SBC-66. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 11.

NO >> Replace seat belt buckle (passenger side). Refer to [SB-12. "SEAT BELT BUCKLE : Removal and Installation"](#).

### 11. REPLACE COMBINATION METER

1. Replace combination meter.  
Refer to [MWI-126. "Removal and Installation"](#).
2. Confirm the operation after replacement.

Is the result normal?

YES >> INSPECTION END

NO >> GO TO 12.

### 12. REPLACE AIR BAG DIAGNOSIS SENSOR UNIT

1. Replace bag diagnosis sensor unit.  
Refer to [SR-37. "Removal and Installation"](#).
2. Confirm the operation after replacement.

Is the result normal?

YES >> INSPECTION END

NO >> GO TO 13.

### 13. CHECK INTERMITTENT INCIDENT

Refer to [GI-42. "Intermittent Incident"](#).

>> INSPECTION END

## Component Inspection

INFOID:000000011281357

### 1. CHECK SEAT BELT BUCKLE SWITCH

1. Turn ignition switch OFF.
2. Disconnect seat belt buckle switch harness connector.
3. Check continuity between seat belt buckle switch terminals.

## SEAT BELT WARNING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Seat belt buckle switch		Condition	Continuity
Terminal			
1	2	When passenger side seat belt is fastened	Not existed
		When passenger side seat belt is not fastened	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle. Refer to [SB-12. "SEAT BELT BUCKLE : Removal and Installation"](#).

# PRE-CRASH SEAT BELT DOSE NOT OPERATE

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### PRE-CRASH SEAT BELT DOSE NOT OPERATE BOTH SIDES

#### BOTH SIDES : Diagnosis Procedure

INFOID:0000000011281358

#### 1.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit. Refer to [SBC-62, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

### DRIVER SIDE

#### DRIVER SIDE : Diagnosis Procedure

INFOID:0000000011281359

#### 1.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Check seat belt buckle switch (driver side). Refer to [SBC-63, "Component Function Check"](#)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

### PASSENGER SIDE

#### PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000011281360

#### 1.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit. Refer to [SBC-62, "Diagnosis Procedure"](#)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Check seat belt buckle switch (passenger side). Refer to [SBC-65, "Component Function Check"](#)

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

#### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

A  
B  
C  
D  
E  
F  
G  
I  
J  
K  
L  
M  
N  
O  
P

SBC

# SEAT BELT WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

---

## SEAT BELT WARNING LAMP DOES NOT TURN OFF

### Diagnosis Procedure

INFOID:000000011281361

#### 1. CHECK SEAT BELT WARNING LAMP CIRCUIT

---

Check seat belt warning lamp circuit. Refer to [SBC-67, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2. CONFIRM THE OPERATION

---

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.



# SEAT BELT WARNING LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

---

## SEAT BELT WARNING LAMP DOES NOT TURN ON

### Diagnosis Procedure

INFOID:000000011281362

#### 1.CHECK SEAT BELT WARNING LAMP CIRCUIT

---

Check seat belt warning lamp circuit. Refer to [SBC-67, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CONFIRM THE OPERATION

---

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

A  
B  
C  
D  
E  
F  
G  
I  
J  
K  
L  
M  
N  
O  
P

SBC

# SEAT BELT WARNING CHIME DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

---

## SEAT BELT WARNING CHIME DOES NOT SOUND

### Diagnosis Procedure

INFOID:000000011281363

#### 1. CHECK SEAT BELT WARNING LAMP CIRCUIT

---

Check seat belt warning lamp circuit. Refer to [SBC-67, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2. CONFIRM THE OPERATION

---

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

# BRAKE PEDAL STROKE SENSOR

< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

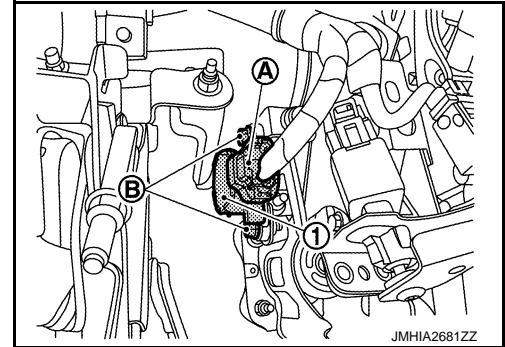
### BRAKE PEDAL STROKE SENSOR

#### Removal and Installation

INFOID:000000011281364

#### REMOVAL

1. Remove instrument lower panel LH. Refer to [IP-13. "Removal and Installation"](#).
2. Disconnect brake pedal stroke sensor connector (A).
3. Remove mounting bolts (B).
4. Remove brake pedal stroke sensor (1).



#### INSTALLATION

Install in the reverse order of removal.

A

B

C

D

E

F

G

SBC

I

J

K

L

M

N

O

P

## PRE-CRASH SEAT BELT CONTROL UNIT

< REMOVAL AND INSTALLATION >

---

### PRE-CRASH SEAT BELT CONTROL UNIT

#### Exploded View

INFOID:000000011281365

Refer to [SB-9. "SEAT BELT RETRACTOR : Removal and Installation"](#).

#### Removal and Installation

INFOID:000000011281366

For removal and installation procedures, refer to [SB-9. "SEAT BELT RETRACTOR : Removal and Installation"](#).