

SECTION **SBC**

SEAT BELT CONTROL SYSTEM

A

B

C

D

E

F

G

SBC

I

J

K

L

M

N

O

P

CONTENTS

<p>BASIC INSPECTION 4</p> <p>DIAGNOSIS AND REPAIR WORKFLOW 4</p> <p style="padding-left: 20px;">Work Flow4</p> <p>SYSTEM DESCRIPTION 7</p> <p>PRE-CRASH SEAT BELT SYSTEM 7</p> <p style="padding-left: 20px;">System Diagram7</p> <p style="padding-left: 20px;">System Description7</p> <p style="padding-left: 20px;">Component Parts Location9</p> <p style="padding-left: 20px;">Component Description 10</p> <p>SEAT BELT WARNING SYSTEM11</p> <p style="padding-left: 20px;">System Diagram 11</p> <p style="padding-left: 20px;">System Description 11</p> <p style="padding-left: 20px;">Component Parts Location 12</p> <p style="padding-left: 20px;">Component Description 12</p> <p>DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)13</p> <p style="padding-left: 20px;">CONSULT Function 13</p> <p>DTC/CIRCUIT DIAGNOSIS15</p> <p>U1000 CAN COMM CIRCUIT15</p> <p style="padding-left: 20px;">Description 15</p> <p style="padding-left: 20px;">DTC Logic 15</p> <p>B2451 SEAT BLT MTR DR CIRC16</p> <p style="padding-left: 20px;">Description 16</p> <p style="padding-left: 20px;">DTC Logic 16</p> <p style="padding-left: 20px;">Diagnosis Procedure 16</p> <p>B2452 SEAT BLT MTR AS CIRC17</p> <p style="padding-left: 20px;">Description 17</p> <p style="padding-left: 20px;">DTC Logic 17</p> <p style="padding-left: 20px;">Diagnosis Procedure 17</p> <p>B2453 BR STROKE SEN CIRC18</p> <p style="padding-left: 20px;">Description 18</p> <p style="padding-left: 20px;">DTC Logic 18</p>	<p style="padding-left: 20px;">Diagnosis Procedure18</p> <p style="padding-left: 20px;">Component Inspection19</p> <p>B2454 SEAT BLT PWR DR CIRC21</p> <p style="padding-left: 20px;">Description21</p> <p style="padding-left: 20px;">DTC Logic21</p> <p style="padding-left: 20px;">Diagnosis Procedure21</p> <p>B2455 CONTROL UNIT DR23</p> <p style="padding-left: 20px;">Description23</p> <p style="padding-left: 20px;">DTC Logic23</p> <p style="padding-left: 20px;">Diagnosis Procedure23</p> <p>B2456 SEAT BLT PWR AS24</p> <p style="padding-left: 20px;">Description24</p> <p style="padding-left: 20px;">DTC Logic24</p> <p style="padding-left: 20px;">Diagnosis Procedure24</p> <p>B2457 CONTROL UNIT AS26</p> <p style="padding-left: 20px;">Description26</p> <p style="padding-left: 20px;">DTC Logic26</p> <p style="padding-left: 20px;">Diagnosis Procedure26</p> <p>B2458 LOCAL COMM27</p> <p style="padding-left: 20px;">Description27</p> <p style="padding-left: 20px;">DTC Logic27</p> <p style="padding-left: 20px;">Diagnosis Procedure27</p> <p>B2461 VHCL SPEED SIGNAL29</p> <p style="padding-left: 20px;">Description29</p> <p style="padding-left: 20px;">DTC Logic29</p> <p style="padding-left: 20px;">Diagnosis Procedure29</p> <p>B2462 VHCL DISTANCE SIGNAL30</p> <p style="padding-left: 20px;">Description30</p> <p style="padding-left: 20px;">DTC Logic30</p> <p style="padding-left: 20px;">Diagnosis Procedure30</p> <p>B2466 DR/AS CONTROL UNIT31</p> <p style="padding-left: 20px;">Description31</p> <p style="padding-left: 20px;">DTC Logic31</p> <p style="padding-left: 20px;">Diagnosis Procedure31</p>
---	--

B2470 SYS HEAT PROTC DR	32	SEAT BELT WARNING LAMP SYSTEM : Component Function Check	42
Description	32	SEAT BELT WARNING LAMP SYSTEM : Diagnosis Procedure	43
DTC Logic	32	SEAT BELT WARNING LAMP SYSTEM : Component Inspection (Belt Buckle Switch)	44
Diagnosis Procedure	32	SEAT BELT WARNING LAMP CIRCUIT	45
B2471 SYS HEAT PROTC AS	33	Diagnosis Procedure	45
Description	33	SEAT BELT WARNING SYSTEM	46
DTC Logic	33	Wiring Diagram - SEAT BELT WARNING SYSTEM -	46
Diagnosis Procedure	33	ECU DIAGNOSIS INFORMATION	52
U0126 ST ANG SEN SIG	34	PRE-CRASH SEAT BELT CONTROL UNIT	52
Description	34	Reference Value	52
DTC Logic	34	Fail Safe	54
Diagnosis Procedure	34	DTC Index	55
U0428 STRG ANGL CAL	35	Wiring Diagram - PRE-CRASH SEAT BELT SYSTEM -	57
Description	35	SYMPTOM DIAGNOSIS	64
DTC Logic	35	PRE-CRASH SEAT BELT DOSE NOT OPERATE	64
Diagnosis Procedure	35	BOTH SIDES	64
POWER SUPPLY AND GROUND CIRCUIT	36	BOTH SIDES : Diagnosis Procedure	64
Diagnosis Procedure	36	DRIVER SIDE	64
SEAT BELT BUCKLE SWITCH (DRIVER SIDE)	37	DRIVER SIDE : Diagnosis Procedure	64
PRE-CRASH SEAT BELT SYSTEM	37	PASSENGER SIDE	64
PRE-CRASH SEAT BELT SYSTEM : Description..	37	PASSENGER SIDE : Diagnosis Procedure	64
PRE-CRASH SEAT BELT SYSTEM : Component Function Check	37	SEAT BELT WARNING LAMP DOES NOT TURN OFF	66
PRE-CRASH SEAT BELT SYSTEM : Diagnosis Procedure	37	Diagnosis Procedure	66
PRE-CRASH SEAT BELT SYSTEM : Component Inspection (Belt Buckle Switch)	38	SEAT BELT WARNING LAMP DOES NOT TURN ON	67
SEAT BELT WARNING LAMP SYSTEM	38	Diagnosis Procedure	67
SEAT BELT WARNING LAMP SYSTEM : Description	38	PRECAUTION	68
SEAT BELT WARNING LAMP SYSTEM : Component Function Check	38	PRECAUTIONS	68
SEAT BELT WARNING LAMP SYSTEM : Diagnosis Procedure	39	Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	68
SEAT BELT WARNING LAMP SYSTEM : Component Inspection (Belt Buckle Switch)	40	Precaution for Seat Belt Service	68
SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)	41	Precautions For Xenon Headlamp Service	69
PRE-CRASH SEAT BELT SYSTEM	41	Precautions for Removing Battery Terminal	69
PRE-CRASH SEAT BELT SYSTEM : Description..	41	PERIODIC MAINTENANCE	70
PRE-CRASH SEAT BELT SYSTEM : Component Function Check	41	PRE-INSPECTION FOR DIAGNOSTIC	70
PRE-CRASH SEAT BELT SYSTEM : Diagnosis Procedure	41	Description	70
PRE-CRASH SEAT BELT SYSTEM : Component Inspection (Belt Buckle Switch)	42	BRAKE PEDAL STROKE SENSOR	71
SEAT BELT WARNING LAMP SYSTEM	42	Exploded View	71
SEAT BELT WARNING LAMP SYSTEM : Description	42		

Removal and Installation	71	Exploded View	72
PRE-CRASH SEAT BELT CONTROL UNIT	72	Removal and Installation	72

A

B

C

D

E

F

G

SBC

I

J

K

L

M

N

O

P

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

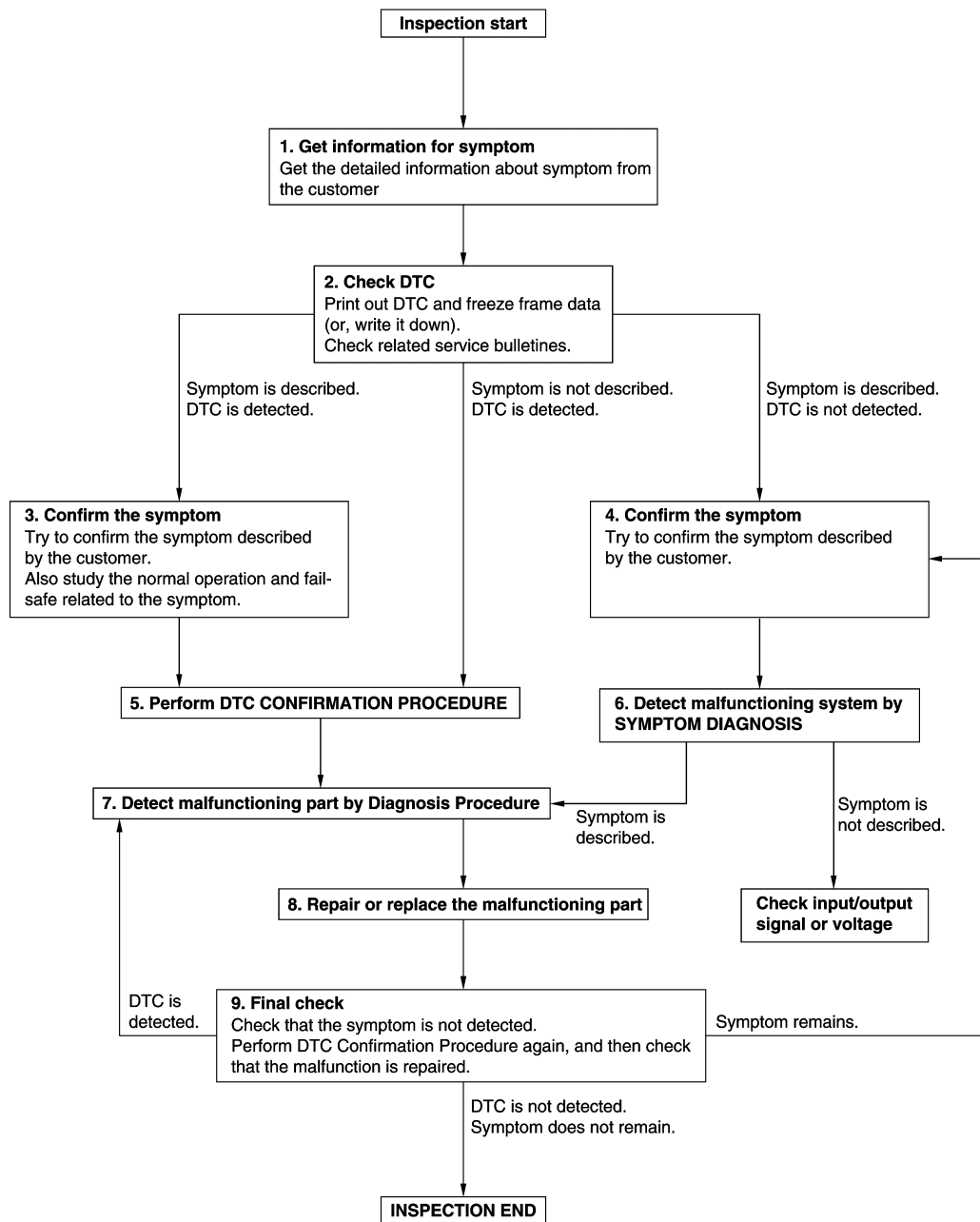
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000010580869

OVERALL SEQUENCE



JMKIA8652GB

DETAILED FLOW

DIAGNOSIS AND REPAIR WORKFLOW

< 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-47. "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?

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

SBC

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

YES >> GO TO 8.

NO >> Check according to [GI-47, "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.

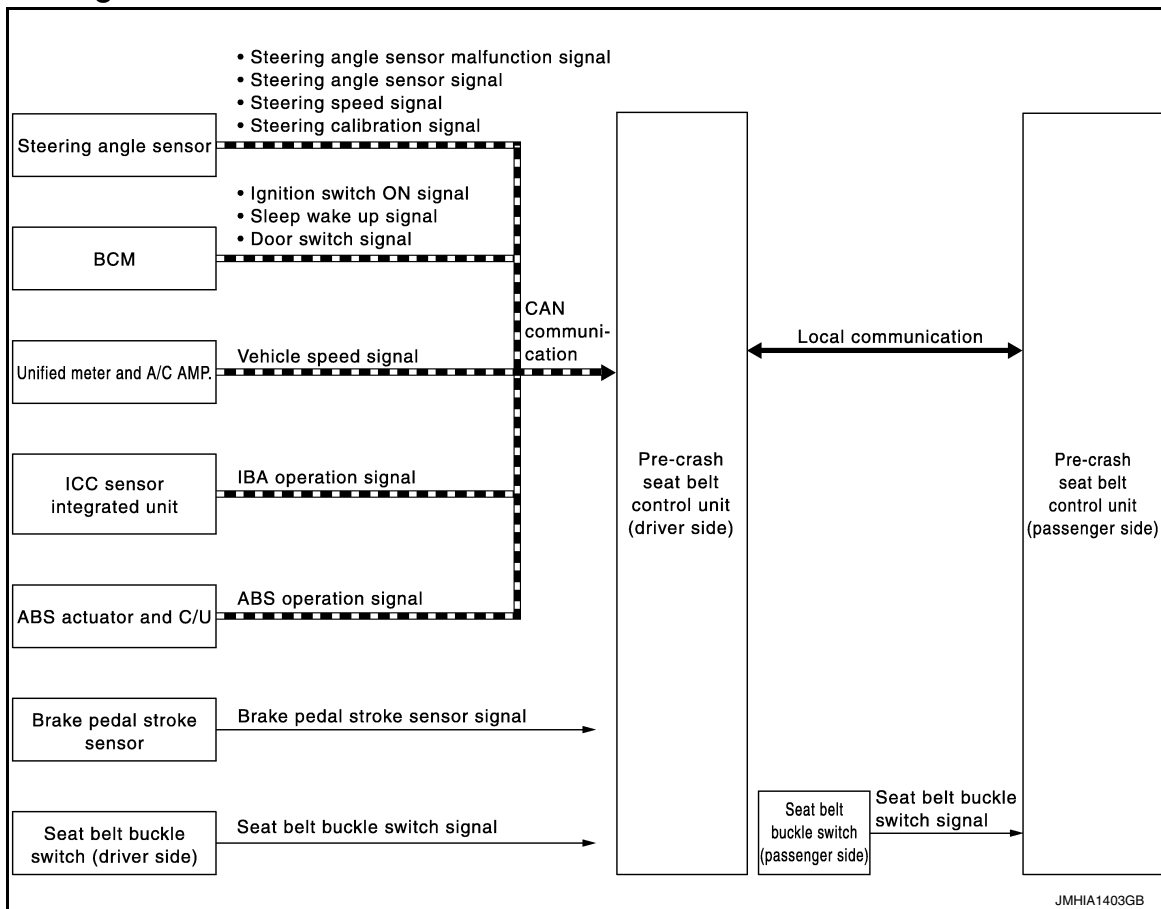
PRE-CRASH SEAT BELT SYSTEM

< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

PRE-CRASH SEAT BELT SYSTEM

System Diagram



System Description

INFOID:0000000010580871

- Pre-crash seat belt system (with comfort function) is adopted for driver and passenger seat belts.
- 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 intelligent brake assistance 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 intelligent brake assistance operates
- When lateral slippage during cornering occurs
- When steering wheel is rotated for emergency
- When comfort function operates

OPERATION CONDITION

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

PRE-CRASH SEAT BELT SYSTEM

< SYSTEM DESCRIPTION >

Operation starts when all of the operation start conditions are satisfied and operation stops when any one of the stop conditions is satisfied.

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

NOTE:

For details of intelligent brake assist system. Refer to [BRC-147, "System Description"](#).

Comfort function

- Seat belt is retracted and the looseness is reduced in the state as shown in the following table.
- Operation starts when all of the operation start conditions are satisfied and operation stops when any one of the stop conditions is satisfied.

	Activating condition	Deactivating condition
Door open	<ul style="list-style-type: none"> Seat belt not installed condition Door is operated to open from close Vehicle stopped 	<ul style="list-style-type: none"> Seat belt retract is complete 13 seconds after start retracting
Seat belt is fastened	<ul style="list-style-type: none"> When door is closed Seat belt is fastened 	<ul style="list-style-type: none"> Seat belt is unfastened 1 second after operation
Seat belt is released	Seat belt is unfastened	<ul style="list-style-type: none"> Seat belt retract is complete 10 seconds after start retracting

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*1
- When the system is in fail-safe mode

*1: 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

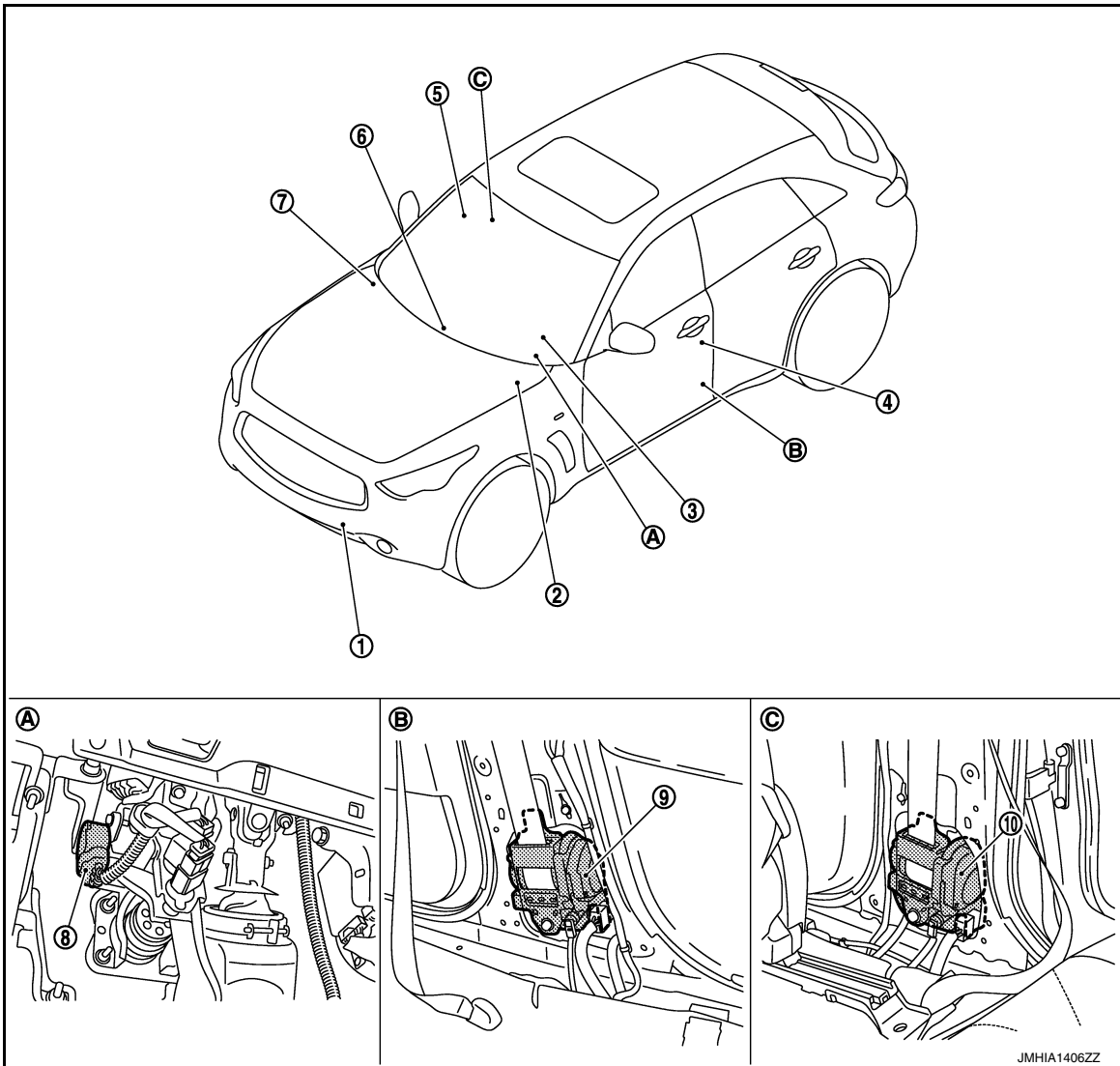
When system malfunction is detected, comfort function is deactivated to warn customer of system malfunction.

PRE-CRASH SEAT BELT SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:0000000110580872



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

- | | | |
|--|--|---|
| 1. ICC sensor integrated unit | 2. ABS actuator and electric unit (control unit) | 3. Steering angle sensor Pre-crash |
| 4. Seat belt buckle switch (driver side) | 5. Seat belt buckle switch (passenger side) | 6. Unified meter and A/C amp. |
| 7. BCM | 8. Brake pedal stroke sensor | 9. Pre-crash seat belt control unit (driver side) |
| 10. seat belt control unit (passenger side) | | |
| A. View with instrument driver lower cover removed | B. View with center pillar lower garnish removed (driver side) | C. View with center pillar lower garnish removed (passenger side) |

PRE-CRASH SEAT BELT SYSTEM

< SYSTEM DESCRIPTION >

Component Description

INFOID:000000010580873

Component	Function
Pre-tensioner seat belt with pre-crash control unit built in motor	<ul style="list-style-type: none">• It controls pre-crash seat belt motor according to input signal.• It is built into seat belt retractor, and it pulls, returns, and maintains according to the motor rotation.
Brake pedal stroke sensor	<ul style="list-style-type: none">• 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.
Seat belt buckle switch	It is arranged in the seat belt buckle and judges whether the seat belt is fastened or not fastened.
CAN system <ul style="list-style-type: none">• Unified meter and A/C amp• BCM• Steering angle sensor• ABS actuator and electric unit (control unit)	It transmits the vehicle status to pre-crash seat belt control unit using the CAN communication system.

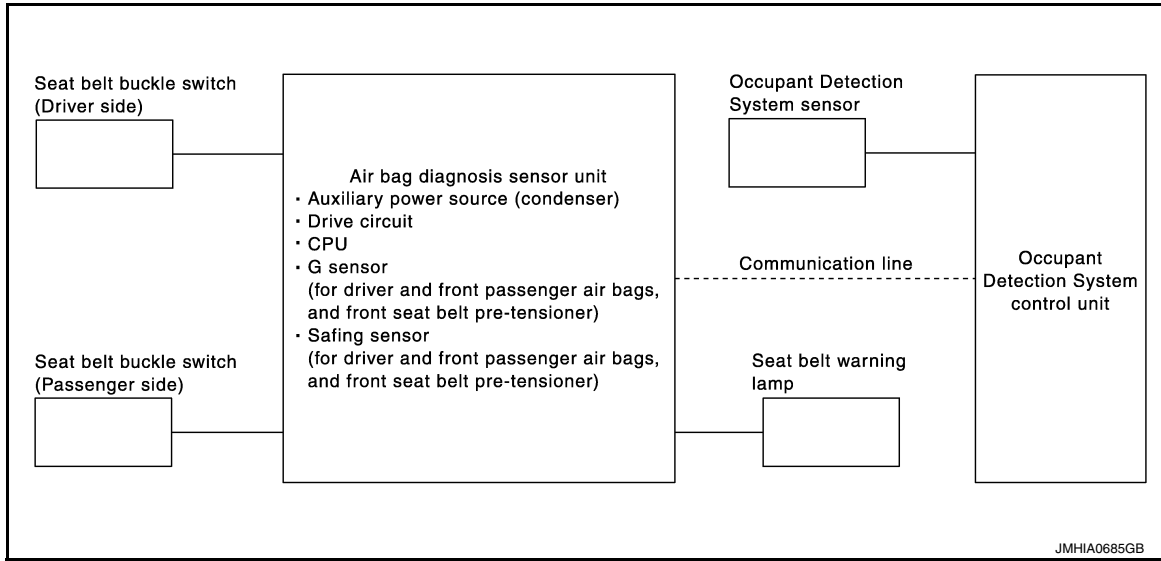
SEAT BELT WARNING SYSTEM

< SYSTEM DESCRIPTION >

SEAT BELT WARNING SYSTEM

System Diagram

INFOID:000000010580874



System Description

INFOID:000000010580875

- Turns ON seat belt warning lamp, when the Occupant Detection System judges adult or child in the front passenger seat and the passenger seat belt buckle switch is OFF.
- Operation of air bag diagnosis sensor unit when air bag diagnosis sensor unit receives information from Occupant Detection System.
- In addition, seat belt warning lamp illuminates, when the driver side seat belt is not fasten. This does not relate to the air bag diagnosis sensor unit.
- For driver seat belt function, refer to [MWI-6. "METER SYSTEM : System Diagram"](#)

SBC

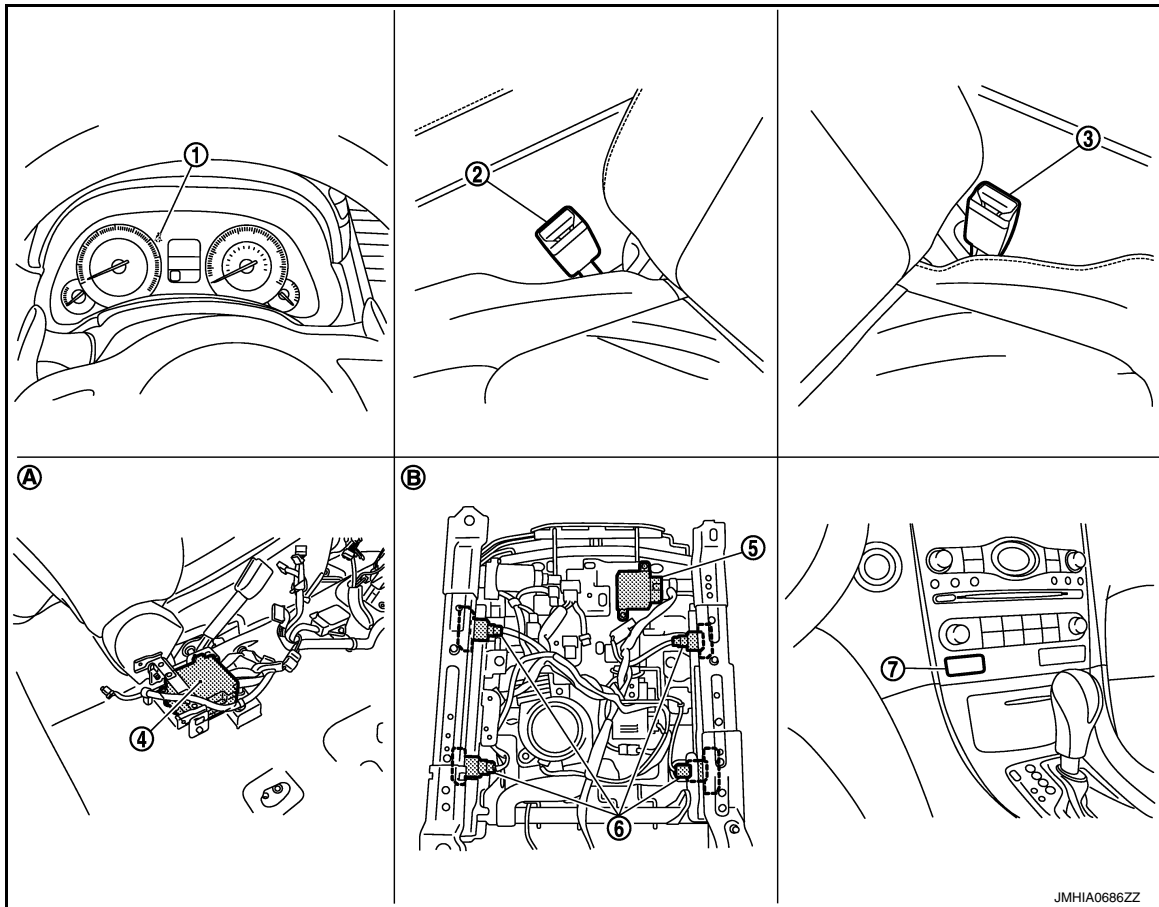
Status (front passenger seat)	Seat belt warning lamp (When front passenger seat is unbuckled)
Empty	OFF
An object	OFF
Child/ child-seat	ON
Adult	ON
Malfunction	OFF
Zero point reset Not yet performed (service parts only)	OFF

SEAT BELT WARNING SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:0000000110580876



- | | | |
|---|--|---|
| 1. Combination meter (seat belt warning lamp) | 2. Seat belt buckle switch (driver side) | 3. Seat belt buckle switch (passenger side) |
| 4. Air bag diagnosis sensor unit | 5. Occupant Detection Sensor unit | 6. Occupant Detection Sensor sensor |
| 7. Passenger air bag OFF indicator | | |
| A. View with center console assembly removed | B. Backside of the seat cushion | |

Component Description

INFOID:0000000110580877

Component parts	Outline of function
Seat belt buckle switch (Driver side)	Detects if the seat belt buckle switch (driver side) is fastened or unfastened
Seat belt buckle switch (Passenger side)	Detects if the seat belt buckle switch (passenger side) is fastened or unfastened
Seat belt warning lamp	Turns the seat belt warning lamp ON when the seat belt is unfastened
Occupant Detection System control unit	Judges the passenger seat condition based on the information from Occupant Detection System control unit
Occupant Detection System sensor	Detects if the passenger seat is empty or occupied
Air bag diagnosis sensor unit	Turns ON seat belt warning lamp based on the information from Occupant Detection System control unit
Front passenger air bag OFF indicator	Turns the front passenger air bag OFF indicator lamp ON when the front passenger seat is occupied by a child or a child seat

DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

CONSULT Function

INFOID:000000010580878

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"> Displays data recorded when a malfunction is detected. Can print out the display. Erases DTC recorded in memory.
	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

Check self-diagnosis results.

CAUTION:

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

DTC	Trouble diagnosis name (CONSULT display)	DTC detection condition	Reference
U1000	CAN COMM CIRCUIT	Pre-crash seat belt control unit cannot transmit and receive CAN communication signal for 2 seconds or more	SBC-15
B2451	SEAT BLT MTR DR CIRC	<ul style="list-style-type: none"> Motor or control unit malfunction Seat belt motor circuit is shorted or open 	SBC-16
B2452	SEAT BLT MTR DR CIRC	<ul style="list-style-type: none"> Motor or control unit malfunction Seat belt motor circuit is shorted or open 	SBC-17
B2453	BR_STROKE_SEN_CIRC	<ul style="list-style-type: none"> Brake pedal stroke sensor malfunction Brake pedal stroke sensor circuit is short 	SBC-18
B2454	SEAT BLT PWR DR CIRC	Motor power supply circuit is shorted or open	SBC-21
B2455	CONTROL UNIT DR	Malfunction in pre-crash seat belt control unit	SBC-23
B2456	SEAT BLT PWR AS	Motor power supply circuit is shorted or open	SBC-24
B2457	CONTROL UNIT AS	Malfunction in pre-crash seat belt control unit	SBC-26
B2458	LOCAL COMM	Local communication line shorted or open	SBC-27
B2461	VHCL SPEED SIGNAL	Vehicle speed signal malfunction is received	SBC-29
B2462	VHCL DISTANCE SIGNAL	ACC signal malfunction is received	SBC-30
B2466	DR/AS CONTROL UNIT	Control unit is out of the vehicle specification	SBC-31
B2470	SYS HEAT PROTC DR	Deactivation for cooling to prevent system heating due to continuous operation	SBC-32
B2471	SYS HEAT PROTC AS	Deactivation for cooling to prevent system heating due to continuous operation	SBC-33
U0126	STRG ANG SEN SIG	Steering angle sensor malfunction is received	SBC-34
U0428	STRG ANGL CAL	Steering angle sensor calibration incomplete signal is received	SBC-35

ERASING SELF-DIAGNOSIS RESULTS

- SELF-DIAGNOSIS RESULTS

DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

< SYSTEM DESCRIPTION >

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

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 intelligent brake assist 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).
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 ACCL SPEED	Indicates [deg/s] steering acceleration speed signal.
HEAT PROTC RH	Indicates [ON/OFF] condition of heat protection (RH).
HEAT PROTC LH	Indicates [ON/OFF] condition of heat protection (RH).

WORK SUPPORT

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

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000010580879

- 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 ECMs, 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.
- It transmits the vehicle status to pre-crash seat belt control unit using the CAN communication system.
- It consists of CAN system (unified meter and A/C amp., ICC sensor, BCM, steering angle sensor).
- Refer to [LAN-34. "CAN System Specification Chart"](#) in LAN section for CAN communication unit (2WD).

DTC Logic

INFOID:0000000010580880

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
U1000	CAN communication circuit	Pre-crash seat belt control unit cannot transmit and receive CAN communication system for 2 seconds or more.	CAN message reception malfunction

DTC CONFIRMATION PROCEDURE

SBC

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 any DTC detected?

- YES >> Refer to [LAN-34. "CAN System Specification Chart"](#) in LAN section for CAN communication or CAN system.
- NO >> CAN communication system is normal.

B2451 SEAT BLT MTR DR CIRC

< DTC/CIRCUIT DIAGNOSIS >

B2451 SEAT BLT MTR DR CIRC

Description

INFOID:000000010580881

- It pulls, returns, and maintains according to the motor rotation.
- It is built into the seat belt retractor.
- It is installed to back of driver side center pillar garnish.

DTC Logic

INFOID:000000010580882

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2451	SEAT BLT MTR DR CIRC	Circuit of seat belt motor (driver side) is open or shorted	Control unit internal malfunction

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-16. "Diagnosis Procedure"](#).
- NO >> Driver side pre-crash seat belt motor system is normal.

Diagnosis Procedure

INFOID:000000010580883

1.INSPECTION START

1. Check "Self-diagnostic result" with CONSULT.
2. Touch "ERASE".
3. Perform DTC Confirmation Procedure.
See [SBC-16. "DTC Logic"](#).

Is DTC B2451 displayed again?

- YES >> Replace pre-crash seat belt control unit (driver side).
- NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-47. "Intermittent Incident"](#).

>> INSPECTION END

B2452 SEAT BLT MTR AS CIRC

< DTC/CIRCUIT DIAGNOSIS >

B2452 SEAT BLT MTR AS CIRC

Description

INFOID:000000010580884

- It pulls, returns, and maintains according to the motor rotation.
- It is built into the seat belt retractor.
- It is installed to the back of passenger side center pillar garnish.

DTC Logic

INFOID:000000010580885

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2452	SEAT BLT MTR AS CIRC	Circuit of seat belt motor (passenger side) is open or shorted	Control unit internal malfunction

DTC REPRODUCTION 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-17. "Diagnosis Procedure"](#).
- NO >> Passenger side pre-crash seat belt motor system is normal.

Diagnosis Procedure

INFOID:000000010580886

SBC

1. INSPECTION START

1. Check "Self-diagnostic result" with CONSULT.
2. Touch "ERASE".
3. Perform DTC Confirmation Procedure.
See [SBC-17. "DTC Logic"](#).

Is DTC B2452 displayed again?

- YES >> Replace pre-crash seat belt control unit (passenger side).
- NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-47. "Intermittent Incident"](#).

>> INSPECTION END

B2453 BR STROKE SEN CIRC

< DTC/CIRCUIT DIAGNOSIS >

B2453 BR STROKE SEN CIRC

Description

INFOID:000000010580887

- 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.
- It is installed to back of driver instrument panel (lower).

DTC Logic

INFOID:000000010580888

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2453	BR STROKE SEN CIRC	Circuit of brake pedal stroke sensor output is open or shorted	<ul style="list-style-type: none">• Open circuit, short circuit to battery, and short circuit to ground in brake pedal stroke sensor harness• Control unit internal malfunction• Brake pedal stroke sensor malfunction

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-18, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000010580889

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 5.
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.

Brake pedal stroke sensor		Ground	Voltage (V) (Approx.)
Connector	Terminal		
E111	2		5

Is the inspection result normal?

- YES >> GO TO 3.
NO >> GO TO 4.

B2453 BR STROKE SEN CIRC

< DTC/CIRCUIT DIAGNOSIS >

3. CHECK BRAKE PEDAL STROKE SENSOR CIRCUIT

1. Disconnect pre-crash seat belt control unit connector.
2. Check continuity between pre-crash seat belt control unit 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	
B9	2	E111	1	Existed
	12		3	
	17		4	

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

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B9	2	Ground	Not existed
	10		
	12		
	17		

Is the inspection result normal?

YES >> Refer to [SBC-19, "Component Inspection"](#).

NO >> Repair or replace harness between pre-crash seat belt control unit and brake pedal stroke sensor.

4. 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	
B9	10	E111	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		
B9	10	Ground	Not existed

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (driver side).

NO >> Repair or replace harness between pre-crash seat belt control unit and brake pedal stroke sensor.

5. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000010580890

COMPONENT PARTS INSPECTION

1. CHECK BRAKE PEDAL STROKE SENSOR

Check that continuity between brake pedal stroke sensor terminal 2 and terminals 1 and 3 is normal when performing the brake operation.

B2453 BR STROKE SEN CIRC

< DTC/CIRCUIT DIAGNOSIS >

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

Is the inspection result normal?

- YES >> Brake pedal stroke sensor system is normal.
NO >> Replace brake pedal stroke sensor.

B2454 SEAT BLT PWR DR CIRC

< DTC/CIRCUIT DIAGNOSIS >

B2454 SEAT BLT PWR DR CIRC

Description

INFOID:0000000010580891

- When control unit activates pre-crash seat belt system, it retracts the shoulder belt with the electric motor and reduces seat belt slack.
- Power supply is supplied constantly from battery power supply.

DTC Logic

INFOID:0000000010580892

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2454	SEAT BLT PWR DR CIRC	Motor power supply circuit is open or shorted CAUTION: Malfunction is judged when 30A (F/L-J) fusible link blows out even if motor power supply circuit is not malfunctioning.	<ul style="list-style-type: none">• Open circuit and short circuit to ground in drive circuit power supply harness• Control unit internal malfunction

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-21, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000010580893

1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Terminal No.	Signal name	Fuse and fusible link No.
19	Battery power supply	J

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Replace the blown fuse or 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 (driver side) connector.
3. 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
B9	19		

Is the inspection result normal?

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

3. CHECK SELF DIAGNOSTIC RESULT

1. Connect pre-crash seat belt control unit (driver side) connector.
2. Turn ignition switch ON.
3. Check "Self-diagnostic result" with CONSULT.

B2454 SEAT BLT PWR DR CIRC

< DTC/CIRCUIT DIAGNOSIS >

4. Touch "ERASE".
5. Perform DTC Confirmation Procedure.
See [SBC-21, "DTC Logic"](#).

Is DTC B2454 displayed again?

- YES >> Replace pre-crash seat belt control unit (driver side).
NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> INSPECTION END

B2455 CONTROL UNIT DR

< DTC/CIRCUIT DIAGNOSIS >

B2455 CONTROL UNIT DR

Description

INFOID:000000010580894

- It controls pre-crash seat belt motor according to input signal
- Built in driver side seat belt retractor

DTC Logic

INFOID:000000010580895

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2455	CONTROL UNIT DR	Pre-crash seat belt control unit internal circuit malfunction	Control unit internal malfunction

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-23, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000010580896

1..INSPECTION START

1. Check "Self-diagnostic result" with CONSULT.
2. Touch "ERASE".
3. Perform DTC Confirmation Procedure.
See [SBC-23, "DTC Logic"](#).

Is DTC B2455 displayed again?

- YES >> Replace pre-crash seat belt control unit (driver side).
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> INSPECTION END

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

SBC

B2456 SEAT BLT PWR AS

< DTC/CIRCUIT DIAGNOSIS >

B2456 SEAT BLT PWR AS

Description

INFOID:0000000010580897

- When control unit activates pre-crash seat belt system, it retracts the shoulder belt with the electric motor and reduces the seat belt slack.
- Power supply is supplied constantly from battery power supply.

DTC Logic

INFOID:0000000010580898

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2456	SEAT BLT PWR AS	Pre-crash seat belt control unit power supply circuit is open or shorted CAUTION: Malfunction is judged when 30A (F/L-K) fusible link blows out even if motor power supply circuit is not malfunctioning.	<ul style="list-style-type: none">• Open circuit and short circuit to ground in drive circuit power supply harness• Control unit internal malfunction

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-24, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000010580899

1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Terminal No.	Signal name	Fuse and fusible link No.
19	Battery power supply	K

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Replace the blown fuse or 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
B221	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.

3. CHECK SELF DIAGNOSTIC RESULT

1. Connect pre-crash seat belt control unit (passenger side) connector.

B2456 SEAT BLT PWR AS

< DTC/CIRCUIT DIAGNOSIS >

2. Turn ignition switch ON.
3. Check "Self-diagnostic result" with CONSULT.
4. Touch "ERASE".
5. Perform DTC Confirmation Procedure.
See [SBC-24, "DTC Logic"](#).

Is DTC B2456 displayed again?

- YES >> Replace pre-crash seat belt control unit (passenger side).
NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> INSPECTION END

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

SBC

B2457 CONTROL UNIT AS

< DTC/CIRCUIT DIAGNOSIS >

B2457 CONTROL UNIT AS

Description

INFOID:0000000010580900

- It controls pre-crash seat belt motor according to input signal
- Built in passenger side seat belt retractor

DTC Logic

INFOID:0000000010580901

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2457	CONTROL UNIT AS	Pre-crash seat belt control unit internal circuit malfunction	Control unit internal malfunction

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-26, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000010580902

1..INSPECTION START

1. Check "Self-diagnostic result" with CONSULT.
2. Touch "ERASE".
3. Perform DTC Confirmation Procedure.
See [SBC-26, "DTC Logic"](#).

Is DTC B2457 displayed again?

- YES >> Replace pre-crash seat belt control unit (passenger side).
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> INSPECTION END

B2458 LOCAL COMM

< DTC/CIRCUIT DIAGNOSIS >

B2458 LOCAL COMM

Description

INFOID:000000010580903

Consists of driver seat side control unit and passenger seat side control unit.

DTC Logic

INFOID:000000010580904

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2458	LOCAL COMM	Receipt of a malfunction signal between driver seat side control unit and passenger seat side control unit	<ul style="list-style-type: none"> Local communication line between driver side control unit and passenger side control unit is open circuit, short, short to power supply, or short to ground Driver side pre-crash seat belt control unit internal circuit malfunction Passenger side pre-crash seat belt control unit internal circuit malfunction Power supply is not supplied to pre-crash seat belt control unit (passenger side)

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

- YES >> Refer to [SBC-27. "Diagnosis Procedure"](#).
 NO >> INSPECT IN END

Diagnosis Procedure

INFOID:000000010580905

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

Check pre-crash seat belt control unit (passenger side) power supply. Refer to [SBC-24. "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

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

Pre-crash seat belt control unit (driver side)		Pre-crash seat belt control unit (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B9	8	B211	8	Existed
	16		16	

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

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B9	8		Not existed
	16		

B2458 LOCAL COMM

< DTC/CIRCUIT DIAGNOSIS >

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-47, "Intermittent Incident"](#).

>> INSPECTION END

B2461 VHCL SPEED SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

B2461 VHCL SPEED SIGNAL

Description

INFOID:000000010580906

Inputs the vehicle speed signal from UNIFIDE METER AND A/C AMP. via CAN communication.

DTC Logic

INFOID:000000010580907

DTC DETECTION LOGIC

NOTE:

If DTC B2461 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SBC-15. "DTC Logic"](#).

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2461	VHCL SPEED SIGNAL	Receipt of a malfunction signal of the vehicle speed signal	UNIFIDE METER AND A/C AMP.

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-29. "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000010580908

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

Check "Self-diagnostic result" for "METER/M&A" with CONSULT. Refer to [MWI-45. "CONSULT Function \(METER/M&A\)"](#).

Is DTC detected?

- YES >> Repair or replace malfunctioning parts.
NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-47. "Intermittent Incident"](#).

>> INSPECTION END

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

SBC

B2462 VHCL DISTANCE SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

B2462 VHCL DISTANCE SIGNAL

Description

INFOID:000000010580909

Inputs the distance signal of two vehicles from ICC sensor integrated unit via CAN communication.

DTC Logic

INFOID:000000010580910

DTC DETECTION LOGIC

NOTE:

If DTC B2462 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SBC-15, "DTC Logic"](#).

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2462	VHCL DISTANCE SIGNAL	Receipt of a malfunction signal of the distance signal between two vehicles	ICC sensor integrated 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-30, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000010580911

1. CHECK DTC WITH "ICC SENSOR INTEGRATED UNIT"

Check "Self-diagnostic result" for "ICC" with CONSULT. Refer to [CCS-39, "CONSULT Function \(ICC/ADAS\)"](#).

Is DTC detected?

- YES >> Repair or replace malfunctioning parts.
NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> INSPECTION END

B2466 DR/AS CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

B2466 DR/AS CONTROL UNIT

Description

INFOID:0000000010580912

Consists of driver seat side control unit and passenger seat side control unit.

DTC Logic

INFOID:0000000010580913

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2466	DR/AS CONTROL UNIT	Driver seat side control unit or passenger seat side control unit is out of the vehicle specification	Driver seat side control unit or passenger side control unit that is installed is out of the vehicle specification

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-31. "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000010580914

SBC

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-47. "Intermittent Incident"](#).

>> INSPECTION END

B2470 SYS HEAT PROTC DR

< DTC/CIRCUIT DIAGNOSIS >

B2470 SYS HEAT PROTC DR

Description

INFOID:0000000010580915

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 Logic

INFOID:0000000010580916

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2470	SYS HEAT PROTC DR	Deactivates to prevent excessive heating	Belt retracting function activates continuously in a short period of time.

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-32. "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000010580917

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-32. "DTC Logic"](#).

Is DTC B2470 displayed again?

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

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-47. "Intermittent Incident"](#).

>> INSPECTION END

B2471 SYS HEAT PROTC AS

< DTC/CIRCUIT DIAGNOSIS >

B2471 SYS HEAT PROTC AS

Description

INFOID:000000010580918

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 Logic

INFOID:000000010580919

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2471	SYS HEAT PROTC AS	Deactivates to prevent excessive heating	Belt retracting function activates continuously in the short period of time

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-33, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000010580920

SBC

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-33, "DTC Logic"](#).

Is DTC B2471 displayed again?

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

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> INSPECTION END

U0126 ST ANG SEN SIG

< DTC/CIRCUIT DIAGNOSIS >

U0126 ST ANG SEN SIG

Description

INFOID:000000010580921

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

DTC Logic

INFOID:000000010580922

DTC DETECTION LOGIC

NOTE:

If DTC U0126 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SBC-15, "DTC Logic"](#).

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
U0126	ST ANG SEN SIG	Receipt of a malfunction signal of Steering angle signal	Steering angle sensor

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-34, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000010580923

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

Check "Self-diagnostic result" for "ABS" with CONSULT. Refer to [BRC-31, "CONSULT Function"](#).

Is DTC detected?

- YES >> Repair or replace malfunctioning parts.
NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> INSPECTION END

U0428 STRG ANGL CAL

< DTC/CIRCUIT DIAGNOSIS >

U0428 STRG ANGL CAL

Description

INFOID:000000010580924

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

DTC Logic

INFOID:000000010580925

DTC DETECTION LOGIC

NOTE:

If DTC U0428 is displayed with DTC U0126, first perform the trouble diagnosis for DTC U0126. Refer to [SBC-34. "DTC Logic"](#).

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
U0428	STRG ANGL CAL	Receipt of the calibration incomplete signal	Steering angle sensor calibration incomplete

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-35. "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000010580926

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

Check "Self-diagnostic result" for "ABS" with CONSULT. Refer to [BRC-31. "CONSULT Function"](#).

Is DTC detected?

- YES >> Repair or replace malfunctioning parts.
NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-47. "Intermittent Incident"](#).

>> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000010580927

1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Terminal No.		Signal name	Fuse and fusible link No.
Driver side	1	Battery power supply	11
Passenger side			

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link 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 (driver side and passenger side)		Ground	Voltage (V) (Approx.)
Connector	Terminal		
B9	1		Battery voltage
B221			

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 (driver side and passenger side) harness connector and ground.

Pre-crash seat belt control unit (driver side and passenger side)		Ground	Continuity
Connector	Terminal		
B9	18		Existed
	20		
B221	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)

PRE-CRASH SEAT BELT SYSTEM

PRE-CRASH SEAT BELT SYSTEM : Description

INFOID:0000000010580928

- Performs the control of tension reducer according to the seat belt buckle switch ON/OFF.
- 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.

PRE-CRASH SEAT BELT SYSTEM : Component Function Check

INFOID:0000000010580929

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

 With CONSULT

When checking "BUCKLE SW LH" on DATA MONITOR screen, check that ON/OFF display changes synchronized with the insertion operation to the seat belt buckle.

Monitor item	Condition
BUCKLE SW LH	When driver side seat belt is not fastened: OFF
	When driver side seat belt is fastened: ON

Is the inspection result normal?

YES >> Seat belt buckle switch (driver side) circuit is normal.

NO >> Refer to [SBC-37, "PRE-CRASH SEAT BELT SYSTEM : Diagnosis Procedure"](#).

PRE-CRASH SEAT BELT SYSTEM : Diagnosis Procedure

INFOID:0000000010580930

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

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

(+)		(-)	Condition	Voltage (V) (Approx.)
Seat belt buckle switch (driver side) Connector	Terminal			
B503	59	Ground	When driver side seat belt is not fastened	5
			When driver side seat belt is fastened	0

Is the inspection result normal?

YES >> Seat belt buckle switch (driver side) circuit is normal.

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	
B9	6	B503	59	Existed

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

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

SBC

SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B9	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		
B503	60		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-38. "PRE-CRASH SEAT BELT SYSTEM : Component Inspection \(Belt Buckle Switch\)"](#).

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (driver side).

NO >> Replace seat belt buckle switch (driver side).

PRE-CRASH SEAT BELT SYSTEM : Component Inspection (Belt Buckle Switch)

INFOID:000000010580931

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			
59	60	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).

SEAT BELT WARNING LAMP SYSTEM

SEAT BELT WARNING LAMP SYSTEM : Description

INFOID:000000010580932

- Performs the control of tension reducer according to the seat belt buckle switch ON/OFF.
- 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.

SEAT BELT WARNING LAMP SYSTEM : Component Function Check

INFOID:000000010580933

1.CHECK SEAT BELT BUCKLE SWITCH

SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

④ With CONSULT

When checking "BUCKLE SW" on DATA MONITOR of METER/M&A, check that ON/OFF display changes synchronized with the insertion operation to the seat belt buckle.

Monitor item	Condition
BUCKLE SW	When driver side seat belt is not fastened: ON
	When driver side seat belt is fastened: OFF

Is the inspection result normal?

YES >> Seat belt buckle switch (driver side) circuit is normal.

NO >> Refer to [SBC-39, "SEAT BELT WARNING LAMP SYSTEM : Diagnosis Procedure"](#).

SEAT BELT WARNING LAMP SYSTEM : Diagnosis Procedure

INFOID:000000010580934

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

- Turn the ignition switch ON.
- Check that voltage between seat belt buckle switch (driver side) harness connector and ground.

(+) Seat belt buckle switch (driver side)		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
B503	61	Ground	When driver side seat belt is fastened	8.5
			When driver side seat belt is not fastened	0

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

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

- Turn ignition switch OFF.
- Disconnect combination meter connector and seat belt buckle switch (driver side) connector.
- 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	
M53	29	B503	61	Existed

- Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M53	29		Not existed

Is the inspection result normal?

YES >> Repair or replace combination meter.

NO >> Repair or replace harness between combination meter and seat belt buckle switch (driver side).

3. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

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

Seat belt buckle switch (driver side)		Ground	Continuity
Connector	Terminal		
B503	60		Existed

Is the inspection result normal?

SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

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-40. "SEAT BELT WARNING LAMP SYSTEM : Component Inspection \(Belt Buckle Switch\)".](#)

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle switch (driver side).

SEAT BELT WARNING LAMP SYSTEM : Component Inspection (Belt Buckle Switch)

INFOID:000000010580935

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
Connector	Terminal			
B503	61	60	When driver side seat belt is not fastened	Existed
			When driver side seat belt is fastened	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle switch (driver side).

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

PRE-CRASH SEAT BELT SYSTEM

PRE-CRASH SEAT BELT SYSTEM : Description


INFOID:0000000010580936

- Performs the control of tension reducer according to the seat belt buckle switch ON/OFF.
- 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.

PRE-CRASH SEAT BELT SYSTEM : Component Function Check

INFOID:0000000010580937

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

 With CONSULT

When checking "BUCKLE SW RH" on DATA MONITOR screen, check that ON/OFF display changes are synchronized with the insertion operation to the seat belt buckle.

Monitor item	Condition
BUCKLE SW RH	When driver side seat belt is not fastened: OFF
	When driver side seat belt is fastened: ON

Is the inspection result normal?

- YES >> Seat belt buckle switch (passenger side) circuit is normal.
 NO >> Refer to [SBC-41, "PRE-CRASH SEAT BELT SYSTEM : Diagnosis Procedure"](#).

PRE-CRASH SEAT BELT SYSTEM : Diagnosis Procedure

INFOID:0000000010580938

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

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

(+)		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
B513	59	Ground	When driver side seat belt is not fastened	5
			When driver side seat belt is fastened	0

Is the inspection result normal?

- YES >> Seat belt buckle switch (passenger side) circuit is normal.
 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	
B221	6	B513	59	Existed

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

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

SBC

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

Pre-crash seat belt control unit (passenger side)		Ground	Continuity
Connector	Terminal		
B221	6		Not existed

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		
B513	60		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 (PASSENGER SIDE)

Check seat belt buckle switch (passenger side). Refer to [SBC-42. "PRE-CRASH SEAT BELT SYSTEM : Component Inspection \(Belt Buckle Switch\)".](#)

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (passenger side).

NO >> Replace seat belt buckle switch (passenger side).

PRE-CRASH SEAT BELT SYSTEM : Component Inspection (Belt Buckle Switch)

INFOID:000000010580939

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			
59	60	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).

SEAT BELT WARNING LAMP SYSTEM

SEAT BELT WARNING LAMP SYSTEM : Description

INFOID:000000010580940

- Performs the control of tension reducer according to the seat belt buckle switch ON/OFF.
- 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.

SEAT BELT WARNING LAMP SYSTEM : Component Function Check

INFOID:000000010580941

1.CHECK SEAT BELT WARNING FUNCTION

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

1. Sit down to passenger seat.
2. Check that seat belt warning lamp turns OFF when passenger seat belt is fastened, and then turns ON when passenger seat belt is unfastened.

Is the inspection result normal?

- YES >> Seat belt buckle switch (passenger side) circuit is normal.
 NO >> Refer to [SBC-43, "SEAT BELT WARNING LAMP SYSTEM : Diagnosis Procedure"](#).

SEAT BELT WARNING LAMP SYSTEM : Diagnosis Procedure

INFOID:000000010580942

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

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

(+)		(-)	Condition	Voltage (V) (Approx.)
Seat belt buckle switch (passenger side)				
Connector	Terminal			
B513	61	Ground	When passenger side seat belt is fastened	8.5
			When passenger side seat belt is not fastened	0

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> GO TO 2.

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

1. Turn the ignition switch OFF.
2. Disconnect air bag diagnosis sensor unit connector and seat belt buckle switch (passenger side) connector.
3. Check continuity between air bag diagnosis sensor unit harness connector and seat belt buckle switch (passenger side) harness connector.

Air bag diagnosis sensor unit		Seat belt buckle switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B103	20	B513	61	Existed

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

Air bag diagnosis sensor unit		Ground	Continuity
Connector	Terminal		
B103	20		Not existed

Is the inspection result normal?

- YES >> INSPECTION END
 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) harness connector and ground.

Seat belt buckle switch (passenger side)		Ground	Continuity
Connector	Terminal		
B513	60		Existed

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Repair or replace harness between seat belt buckle switch and ground.

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

4. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Check seat belt buckle switch (passenger side). Refer to [SBC-44, "SEAT BELT WARNING LAMP SYSTEM : Component Inspection \(Belt Buckle Switch\)"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle switch (passenger side).

SEAT BELT WARNING LAMP SYSTEM : Component Inspection (Belt Buckle Switch)

INFOID:000000010580943

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
Connector	Terminal			
B513	61	60	When passenger side seat belt is not fastened	Existed
			When passenger side seat belt is fastened	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle switch (passenger side).

SEAT BELT WARNING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT WARNING LAMP CIRCUIT

Diagnosis Procedure

INFOID:000000010580944

1. CHECK SEAT BELT WARNING LAMP CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect air bag diagnosis sensor unit connector.
3. Turn ignition switch ON.
4. Check that voltage between air bag diagnosis sensor unit harness connector and ground.

Air bag diagnosis sensor unit		Ground	Voltage (V) (Approx.)
Connector	Terminal		Battery voltage
M224	38		

Is the inspection result normal?

- YES >> Replace air bag diagnosis sensor unit.
NO >> GO TO 2.

2. CHECK SEAT BELT WARNING LAMP CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Check continuity between combination meter harness connector and air bag diagnosis sensor unit harness connector.

Combination meter		Air bag diagnosis sensor unit		Continuity
Connector	Terminal	Connector	Terminal	
B53	30	M224	38	Existed

4. Check continuity between combination meter and ground.

Combination meter		Ground	Continuity
Connector	Terminal		Not existed
B53	30		

Is the inspection result normal?

- YES >> Repair or replace combination meter.
NO >> Repair or replace harness between combination meter and air bag diagnosis sensor unit.

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

SBC

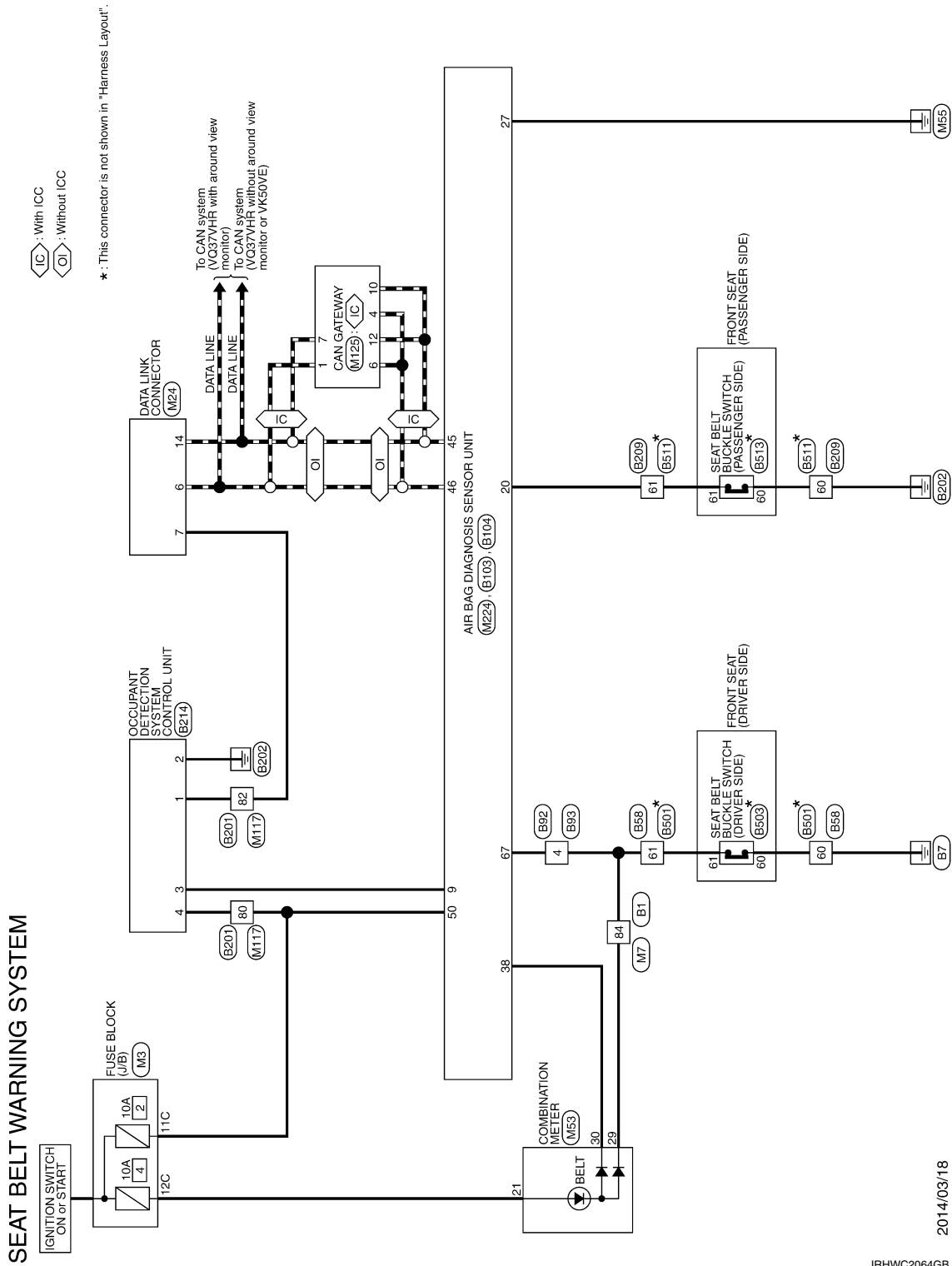
SEAT BELT WARNING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT WARNING SYSTEM

Wiring Diagram - SEAT BELT WARNING SYSTEM -

INFOID:000000010580945



2014/03/18

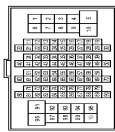
JRHWC2064GB

SEAT BELT WARNING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT WARNING SYSTEM

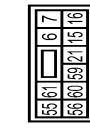
Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FM-CS1G-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	W	-
3	G	-
4	P	-
5	BG	-
6	SB	-
7	B	-
8	GR	-
9	L	-
10	SB	-
11	SB	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-
17	L	-
18	P	-
19	G	-
20	Y	-
21	W	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	BG	-
28	W	-
38	B	-
39	B	-
43	SB	-
44	V	-
45	GR	-
51	V	-
52	SB	-
53	SHIELD	-
54	BR	-
55	Y	-
56	SHIELD	-

57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	P	-
62	GR	-
63	G	-
64	BG	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	GR	-
71	G	-
72	B	-
73	W	-
74	V	-
75	BG	-
76	LG	-
77	L	-
78	GR	-
79	W	-
80	L	-
81	P	-
82	L	-
83	P	-
84	SB	-
85	R	-
86	Y	-
87	B	-
88	G	-
89	BR	-
91	R	-
92	BG	-
93	BR	-
94	V	-
96	BG	-
97	W	-
98	GR	-
99	W	-

Connector No.	B58
Connector Name	WIRE TO WIRE
Connector Type	NS10FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	V	-
7	GR	-
15	BR	-
16	B	-
21	BG	-
55	G	-
56	L	-
59	LG	-
60	B	-
61	SB	-

Connector No.	B92
Connector Name	WIRE TO WIRE
Connector Type	TH84FM-NH



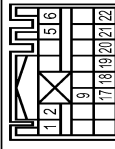
Terminal No.	Color Of Wire	Signal Name [Specification]
4	SB	-

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Type	TH84FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
4	SB	-

Connector No.	B103
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	IN22FT-1V-EX



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	SIDE INF_RH+
2	Y	SIDE_INF_RH-
5	Y/B	INF_CURTAIN_RR_RH-
6	Y	INF_CURTAIN_RR_RH+
9	G	ODS_INPUT
17	SHIELD	GND
18	G	SIDE SENS_RH+
19	R	SIDE SENS_RH-
20	LG	BUCKLE_SW_RH
21	Y	ELR_RH-
22	Y	ELR_RH+

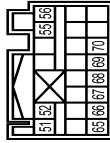
A
B
C
D
E
F
G
SBC
I
J
K
L
M
N
O
P

SEAT BELT WARNING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

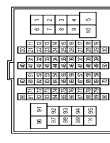
SEAT BELT WARNING SYSTEM

Connector No.	B104
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	IN22FY-2V-EX



Terminal No.	Color Of Wire	Signal Name [Specification]
51	Y	SIDE INF LH+
52	Y	SIDE INF LH
55	Y/B	INF CURTAIN RR LH
56	Y	INF CURTAIN RR LH+
65	Y	ELR LH
66	Y	ELR LH
67	SB	BUXOLE SW LH
68	R	SIDE SENS LH-
69	G	SIDE SENS LH+
70	SHIELD	GND

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FVW-CS16-TM4

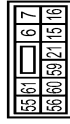


Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	
2	R	
3	BR	
4	SB	
6	BG	
7	GR	
8	W	
10	C	
11	SHIELD	
20	L	

21	P	
22	GR	
23	LG	
24	W	
25	V	
26	G	
27	Y	
28	SHIELD	
31	W	
32	GR	
33	SB	
36	L	
37	P	
38	L	
39	P	
40	LG	- [With ICC]
40	V	- [Without ICC]
41	SB	- [With ICC]
41	V	- [Without ICC]
42	V	- [With ICC]
42	W	- [Without ICC]
43	B	- [With ICC]
43	BR	- [Without ICC]
44	R	
45	G	
46	BG	- [With ICC]
46	SHIELD	- [Without ICC]
47	B	- [With ICC]
47	L	- [Without ICC]
48	P	- [With ICC]
48	R	- [Without ICC]
49	G	- [With ICC]
49	W	- [Without ICC]
50	SHIELD	
51	W	
52	R	
53	G	
54	L	
55	SB	
60	GR	
61	LG	
62	SB	
63	P	
64	BR	
65	BG	
66	Y	
67	W	
69	G	
71	SB	
72	V	

73	LG	
74	W	
75	BR	
76	V	
77	LG	
80	BG	
82	P	
83	Y	
84	R	
85	SB	
86	GR	
87	L	
91	V	
92	W	
93	R	
94	LG	
95	GR	
96	W	
97	G	
98	BG	
99	L	

Connector No.	B209
Connector Name	WIRE TO WIRE
Connector Type	IN10FVW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	G	
7	R	
15	W	
16	G	
21	P	
55	W	
56	B	
59	L/Y	
60	R/Y	
61	B/Y	
61	LG	

Connector No.	B214
Connector Name	OCCUPANT DETECTION SYSTEM CONTROL UNIT
Connector Type	TH04FVW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	K LINE
2	B	GROUND
3	G	COMMUNICATION
4	BG	IGN

Connector No.	B501
Connector Name	WIRE TO WIRE
Connector Type	IN10M1W-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	R	
7	L	
15	W	
16	G	
21	P	
55	W	
56	B	
59	L/Y	
60	R/Y	
61	B/Y	

SEAT BELT WARNING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT WARNING SYSTEM

Connector No.	B503
Connector Name	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
59	L/Y	-
60	R/Y	-
61	B/Y	-

Connector No.	B511
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	R	-
7	L	-
15	W	-
16	G	-
21	P	-
55	W	-
56	B	-
59	L/Y	-
60	R/Y	-
61	B/Y	-

Connector No.	B513
Connector Name	SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)
Connector Type	A03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
59	L/Y	-
60	R/Y	-
61	B/Y	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	L	-
11C	LG	-
12C	R	-
6C	P	-
7C	B	-
9C	BG	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	- [With Auto aircon seat]
2	Y	- [With Auto aircon seat]
3	B	-
4	W	-
6	P	-
7	V	-
8	BG	-
10	W	-
11	BG	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-
17	L	-
18	P	-
19	G	-
20	R	-
21	LG	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	BG	-
28	W	-
38	B	-
39	B	-
43	SB	-
44	W	-
45	B	-
51	V	-
62	LG	-
63	SHIELD	-
84	BR	-
85	Y	-
86	SHIELD	-

57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	BR	-
62	R	-
63	Y	-
64	L	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	V	-
71	W	-
72	B	-
73	W	-
74	LG	-
75	P	-
76	LG	-
77	SB	-
78	GR	-
79	R	-
80	L	-
81	P	-
82	L	-
83	P	-
84	SB	-
85	W	-
86	Y	-
87	B	-
88	G	-
89	BG	-
91	R	-
92	BG	-
93	BR	-
94	V	-
96	BG	-
97	W	-
98	R	-
99	BG	-

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

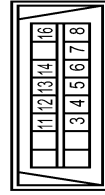
SBC

SEAT BELT WARNING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT WARNING SYSTEM

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
7	GR	-
8	G	-
11	SB	-
12	P	-
13	L	-
14	P	-
16	BG	-

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



Terminal No.	Wire	Signal Name [Specification]
1	BG	BATTERY POWER SUPPLY
2	LG	COMMUNICATION SIGNAL (METER->AMP)
3	GR	COMMUNICATION SIGNAL (AMP->METER)
5	B	GROUND
6	W	ALTERNATOR SIGNAL
7	D	AIR BAG SIGNAL
10	G	SECURITY INDICATOR SIGNAL
13	B	GROUND
16	B	METER CONTROL SWITCH GROUND

21	R	IGNITION SIGNAL
24	BR	COMMUNICATION SIGNAL (LCD->AMP.)
25	Y	COMMUNICATION SIGNAL (AMP->LCD)
26	R	VEHICLE SPEED SIGNAL (8-PULSE)
27	V	PARKING BRAKE SWITCH SIGNAL
28	W	BRAKE FLUID LEVEL SWITCH SIGNAL
29	SB	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SEBEL)
30	G	PASSENGER SEAT BELT WARNING SIGNAL
31	L	WASHER LEVEL SWITCH SIGNAL
34	B	ILLUMINATION CONTROL SIGNAL
36	LG	SELECT SWITCH SIGNAL
37	SB	ENTER SWITCH SIGNAL
38	L	TRIP AB RESET SWITCH SIGNAL
39	P	ILLUMINATION CONTROL SWITCH SIGNAL (-)
40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TR60MM-CS16-TM4

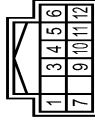


Terminal No.	Wire	Signal Name [Specification]
1	GR	-
2	BR	-
3	V	-
4	SB	-
6	Y	-
7	B	-
8	W	-
10	W	-
11	SHIELD	-
20	R	-
21	G	-
22	GR	-
23	V	-
24	W	-
25	R	-
26	P	-
27	L	-
28	SHIELD	-
31	W	-

32	W	-
33	SB	-
36	L	-
37	P	-
38	L	-
39	P	-
40	V	-
41	SB	- [With ICC]
42	Y	- [Without ICC]
43	W	- [With ICC]
44	B	- [Without ICC]
45	R	- [With ICC]
46	G	- [Without ICC]
47	BG	- [With ICC]
48	SHIELD	- [Without ICC]
49	B	- [With ICC]
50	L	- [Without ICC]
51	P	- [With ICC]
52	R	- [Without ICC]
53	W	- [With ICC]
54	W	- [Without ICC]
55	GR	-
60	LG	-
61	R	-
62	SB	-
63	V	-
64	Y	-
65	BR	-
66	BG	-
67	W	-
69	G	-
71	SB	-
72	V	-
73	V	-
74	LG	-
75	BR	-
76	V	-
77	LG	-
80	R	-
82	Y	-
83	BG	-
84	W	-

85	SB	-
86	B	-
87	P	-
91	L	-
92	L	-
93	G	-
94	BG	-
95	V	-
96	G	-
97	G	-
98	L	-
99	LG	-

Connector No.	M125
Connector Name	CAN GATEWAY
Connector Type	TH2FW-NH



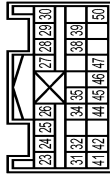
Terminal No.	Wire	Signal Name [Specification]
1	L	CANH
3	GR	BATTERY
4	L	CANH
5	B	GROUND
6	L	CANH
7	P	CAN-L
9	LG	IGNITION
10	P	CAN-L
11	B	GROUND
12	P	CAN-L

SEAT BELT WARNING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT WARNING SYSTEM

Connector No.	M224
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH28FY-EX



Terminal No.	Color Of Wire	Signal Name [Specification]
23	Y	INFLATOR_ASS2+
24	Y	INFLATOR_ASS-
25	Y	INFLATOR_ASS1-
26	Y	INFLATOR_ASS1+
27	B	GND
28	Y	INFLATOR_DR2+
29	Y	INFLATOR_DR2-DR2-
30	Y	INFLATOR_DR+
31	V	ECZS-
32	BR	SIDE_SENS_RH2-
34	G	SIDE_SENS_LH2-
35	P	A/B_WIL
38	G	SEATBELT_WIL
39	SHIELD	GND
41	SB	ECZS+
42	Y	SIDE_SENS_RH2+
44	R	SIDE_SENS_LH2+
45	P	CAN_LO
46	L	CAN_HI
47	P	A/B_CUTOFF_TELLTALE
50	LG	IGN

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

JRHWC2069GB

PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

PRE-CRASH SEAT BELT CONTROL UNIT

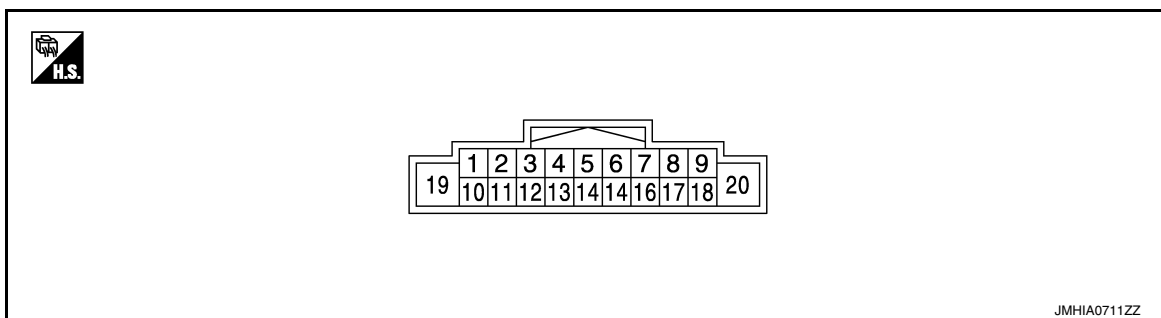
Reference Value

INFOID:0000000010580946

VALUES ON THE DIAGNOSIS TOOL
CONSULT MONITOR ITEM

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	RH seat belt is not fastened	OFF
	RH 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	LH door close	CLOSE
	LH door open	OPEN
FR DOOR SW LH	RH door close	CLOSE
	RH door open	OPEN
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	Ignition switch ON	Depending on steering angle (deg)
STRG ACCL SPEED	Ignition switch ON	Depending on steering acceleration 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



PHYSICAL VALUES (DRIVER SIDE)

PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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

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

PHYSICAL VALUES (PASSENGER SIDE)

Terminal No. (Wire color)		Description		Condition	Value*1 (Approx.)
+	-	Signal name	Input/ Output		
1 (Y)	GND	Power supply	Input	—	Battery voltage
6 (V)	GND	Seat belt buckle switch signal	Input	Seat belt is fastened	0 V
				Seat belt is unfastened	5 V
8 (G)	GND	Local Communication Line 2	Input/ Output	IGN ON	5 V
16 (W)	GND	Local Communication Line 1	Input/ Output	—	—
18 (B)	GND	GND	Output	—	0 V

PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value*1 (Approx.)
+	-	Signal name	Input/ Output		
19 (W)	GND	Motor passenger circuit power supply	Input	—	Battery voltage
20 (B)	GND	Motor passenger circuit ground	Output	—	0 V

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

Fail Safe

INFOID:000000010580947

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.

DRIVER SIDE

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"> • During emergency brake operation • When ABS continuously operates • A part of comfort function
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. *1 <ul style="list-style-type: none"> • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When Intelligent brake assistance operates • When steering wheel is rotated for emergency • A part or the whole comfort function
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"> • 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
B2462:B2462:VHCL DISTANCE SIGNAL	Deactivates a part of comfort function.
B2466:DR/AS CONTROL UNIT	Deactivates a part of comfort function.
B2470:SYS HEAT PROTC DR	<ul style="list-style-type: none"> • 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
U0126:STRG ANG SEN SIG	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> • When lateral slippage during cornering occurs • When steering wheel is rotated for emergency • A part of comfort function
U0428:STRG ANGL CAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> • When lateral slippage during cornering occurs • When steering wheel is rotated for emergency • A part of comfort function

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

PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

PASSENGER SIDE

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"> • During emergency brake operation • When ABS continuously operates
B2455:CONTROL UNIT DR	Stops the operation in the conditions as per the following. *1 <ul style="list-style-type: none"> • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When Intelligent brake assistance operates • When steering wheel is rotated for emergency • A part or the whole comfort function
B2456:SEAT BLT PWR AS	Fully deactivates the whole operation.
B2457:CONTROL UNIT AS	Fully deactivates the whole operation. *1
B2458:LOCAL COMM	Fully deactivates the whole operation. *1
B2461:VHCL SPEED SIGNAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> • 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
B2462:VHCL DISTANCE SIGNAL	Deactivates a part of comfort function.
B2466:DR/AS CONTROL UNIT	Stops the operation in the conditions as per the following. *1 <ul style="list-style-type: none"> • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When Intelligent brake assistance operates • When steering wheel is rotated for emergency • A part or the whole comfort function
B2471:SYS HEAT PROTC AS	<ul style="list-style-type: none"> • 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
U0126:STRG ANG SEN SIG	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> • When lateral slippage during cornering occurs • When steering wheel is rotated for emergency
U0428:STRG ANGL CAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> • When lateral slippage during cornering occurs • When steering wheel is rotated for emergency

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

DTC Index

INFOID:0000000010580948

DISPLAY ITEM LIST (PRE-CRASH SEAT BELT)

DTC	Trouble diagnosis name (CONSULT display)	DTC detection condition	Reference
U1000	CAN COMM CIRCUIT	Pre-crash seat belt control unit cannot transmit and receive CAN communication signal for 2 seconds or more	SBC-15
B2451	SEAT BLT MTR DR CIRC	<ul style="list-style-type: none"> • Motor or control unit malfunction • Seat belt motor circuit is shorted or open 	SBC-16
B2452	SEAT BLT MTR DR CIRC	<ul style="list-style-type: none"> • Motor or control unit malfunction • Seat belt motor circuit is shorted or open 	SBC-17

PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

DTC	Trouble diagnosis name (CONSULT display)	DTC detection condition	Reference
B2453	BR_STROKE_SEN_CIRC	<ul style="list-style-type: none">• Brake pedal stroke sensor malfunction• Brake pedal stroke sensor circuit is short	SBC-18
B2454	SEAT BLT PWR DR CIRC	Motor power supply circuit is shorted or open	SBC-21
B2455	CONTROL UNIT DR	Malfunction in pre-crash seat belt control unit	SBC-23
B2456	SEAT BLT PWR AS	Motor power supply circuit is shorted or open	SBC-24
B2457	CONTROL UNIT AS	Malfunction in pre-crash seat belt control unit	SBC-26
B2458	LOCAL COMM	Local communication line shorted or open	SBC-27
B2461	VHCL SPEED SIGNAL	Vehicle speed signal malfunction is received	SBC-29
B2462	VHCL DISTANCE SIGNAL	ACC signal malfunction is received	SBC-30
B2466	DR/AS CONTROL UNIT	Control unit is out of the vehicle specification	SBC-31
B2470	SYS HEAT PROTC DR	Deactivation for cooling to prevent system heating due to continuous operation	SBC-32
B2471	SYS HEAT PROTC AS	Deactivation for cooling to prevent system heating due to continuous operation	SBC-33
U0126	STRG ANG SEN SIG	Steering angle sensor malfunction is received	SBC-34
U0428	STRG ANGL CAL	Steering angle sensor calibration incomplete signal is received	SBC-35

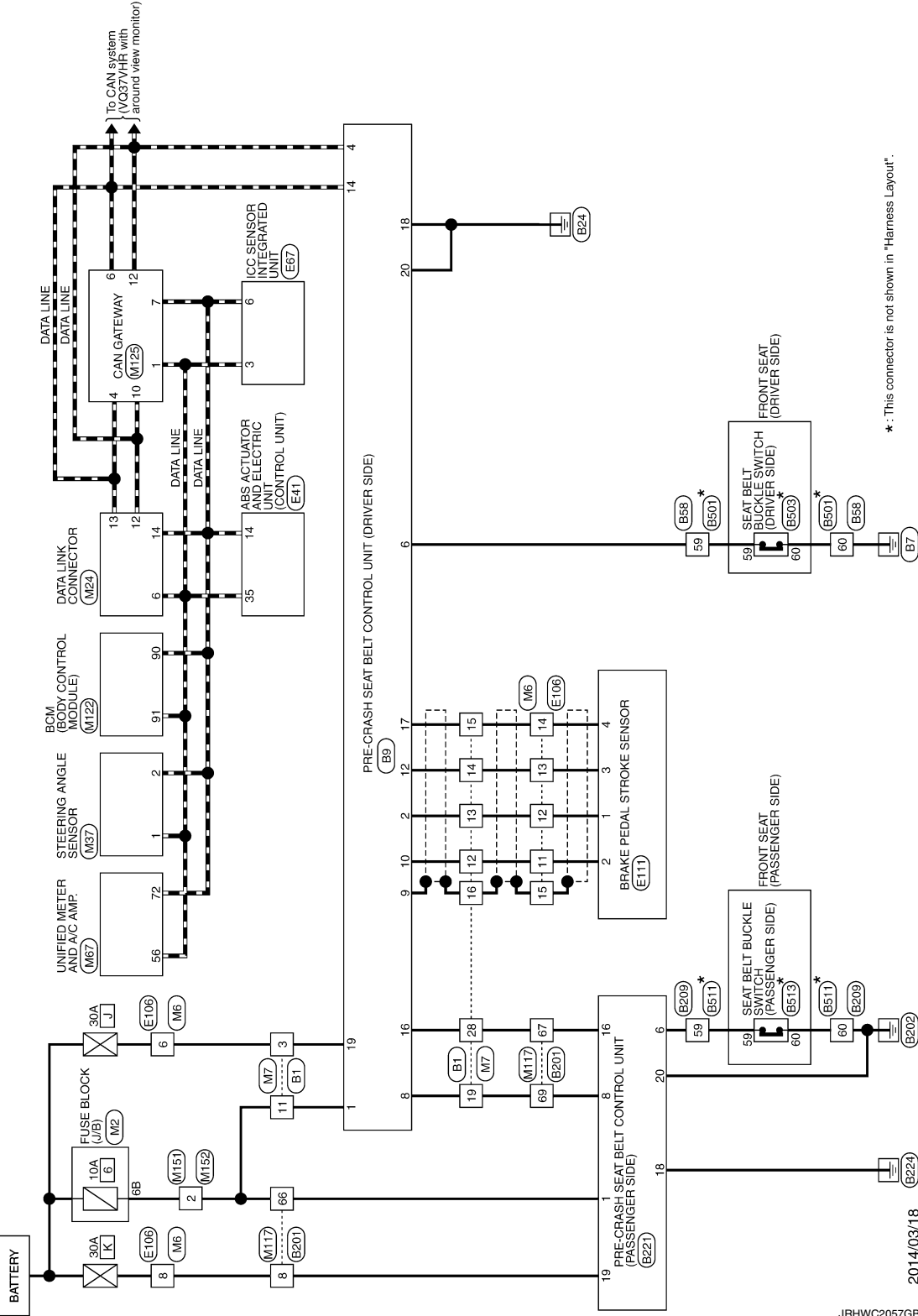
PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

Wiring Diagram - PRE-CRASH SEAT BELT SYSTEM -

INFOID:000000010580949

PRE-CRASH SEAT BELT SYSTEM



*: This connector is not shown in "Harness Layout".

2014/03/18

JRHWC2057GB

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

SBC

PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

PRE-CRASH SEAT BELT SYSTEM

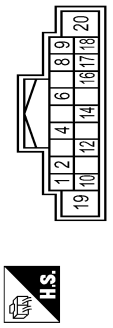
Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	L	-
3	W	-
4	G	-
7	P	-
8	BG	-
10	SB	-
11	SB	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-
17	L	-
18	P	-
19	G	-
20	Y	-
21	W	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	BG	-
28	W	-
38	B	-
39	B	-
43	SB	-
44	V	-
45	GR	-
51	V	-
52	SB	-
53	SHIELD	-
54	BR	-
55	Y	-
56	SHIELD	-

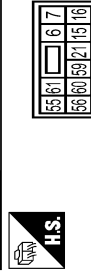
57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	P	-
62	GR	-
63	G	-
64	BG	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	GR	-
71	G	-
72	B	-
73	W	-
74	V	-
75	RG	-
76	LG	-
77	L	-
78	GR	-
79	W	-
80	L	-
81	P	-
82	L	-
83	P	-
84	SB	-
85	R	-
86	Y	-
87	B	-
88	G	-
89	BR	-
91	R	-
92	BG	-
93	BR	-
94	V	-
96	BG	-
97	W	-
98	GR	-
99	W	-

Connector No.	B9
Connector Name	PRE-CRASH SEAT BELT CONTROL UNIT (POWER SIDE)
Connector Type	TH80FW-CS2



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

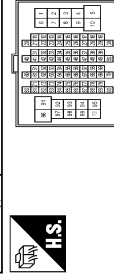
Connector No.	B58
Connector Name	WIRE TO WIRE
Connector Type	NS10FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	V	-
7	GR	-
15	BR	-
16	P	-
21	BG	-

55	G	-
56	L	-
59	LG	-
60	B	-
61	SB	-

Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-
3	BR	-
4	SB	-
6	BG	-
7	GR	-
8	W	-
10	G	-
11	SHIELD	-
20	L	-
21	P	-
22	GR	-
23	LG	-
24	W	-
25	V	-
26	G	-
27	Y	-
28	SHIELD	-
31	W	-
32	GR	-
33	SB	-
36	L	-
37	P	-
38	L	-
39	P	-
40	LG	- [With ICC]
40	V	- [Without ICC]
41	SB	- [With ICC]
41	SB	- [Without ICC]

PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

PRE-CRASH SEAT BELT SYSTEM

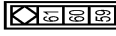
41	Y	-	[Without ICC]
42	V	-	[With ICC]
43	W	-	[Without ICC]
43	B	-	[Without ICC]
43	BR	-	[With ICC]
44	R	-	-
45	G	-	-
46	BG	-	[With ICC]
46	SHIELD	-	[Without ICC]
47	B	-	[Without ICC]
47	L	-	[With ICC]
48	P	-	[Without ICC]
48	R	-	[Without ICC]
49	G	-	[With ICC]
49	R	-	[Without ICC]
49	W	-	[Without ICC]
50	SHIELD	-	-
51	W	-	-
52	R	-	-
53	G	-	-
54	L	-	-
55	SB	-	-
60	GR	-	-
61	LG	-	-
62	SB	-	-
63	P	-	-
64	BR	-	-
65	BG	-	-
66	Y	-	-
67	W	-	-
69	G	-	-
71	SB	-	-
72	V	-	-
73	LG	-	-
74	W	-	-
75	BR	-	-
76	V	-	-
77	LG	-	-
80	BG	-	-
82	P	-	-
83	Y	-	-
84	R	-	-
85	SB	-	-
86	GR	-	-
87	V	-	-
91	V	-	-
92	W	-	-
93	R	-	-
94	LG	-	-
95	GR	-	-
96	W	-	-

Connector No.	B511
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	R	-
7	L	-
15	W	-
16	G	-
21	P	-
55	W	-
56	B	-
59	LY	-
60	RY	-
61	BY	-

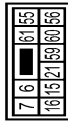
Connector No.	B513
Connector Name	SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)
Connector Type	A03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
59	LY	-
60	RY	-
61	BY	-

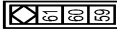
19	W	MOTOR BAT
20	B	MOTOR GND

Connector No.	B501
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	R	-
7	L	-
15	W	-
16	G	-
21	P	-
55	W	-
56	B	-
59	LY	-
60	RY	-
61	BY	-

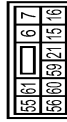
Connector No.	B503
Connector Name	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
59	LY	-
60	RY	-
61	BY	-

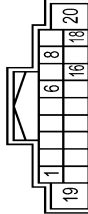
97	G	-
98	BG	-
99	L	-

Connector No.	B209
Connector Name	WIRE TO WIRE
Connector Type	NS10FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	G	-
7	R	-
15	W	-
16	L	-
21	SB	-
55	BG	-
56	GR	-
59	V	-
60	B	-
61	LG	-

Connector No.	B221
Connector Name	PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)
Connector Type	TH18FM-CS2



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	SIG BAT
6	V	BUCKLE SW RH NO
8	G	LOCAL COMM 2
16	W	LOCAL COMM 1
18	B	SIG GND

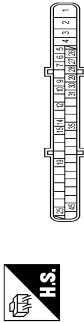
A
B
C
D
E
F
G
SBC
I
J
K
L
M
N
O
P

PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

PRE-CRASH SEAT BELT SYSTEM

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BAA42FB-AHZ4-LH



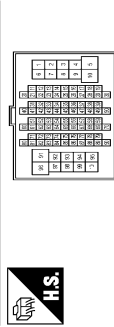
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	G	UBVR
3	R	UBVR
4	B	GROUND
5	Y	DS FL
6	BG	DP RL
7	BR	DP RR
9	B	DP FR
10	W	DS FR
12	L	VAC
14	P	CAN-L
15	SHIELD	AGND
19	P	UST
25	Y	BUS-L
26	R	DP FL
27	GR	DS RL
28	G	UZ
29	LG	DS RR
30	SB	BLS
31	R	VDC OFF SW
35	L	CAN-H
45	B	BUS-H

Connector No.	E67
Connector Name	ICC SENSOR INTEGRATED UNIT
Connector Type	RS08FB-FR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	IGNITION
2	L	ITS COMM-H
3	L	CAN-H
4	B	GROUND
5	P	ITS COMM-L
6	P	CAN-L

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-GS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	SB	-
4	LG	-
5	Y	-
6	W	-
7	G	-
8	V	-
9	R	-
10	BR	-
11	B	-
12	G	-
13	R	-
14	W	-

Terminal No.	Color Of Wire	Signal Name [Specification]
15	SHIELD	-
16	SB	-
17	L	-
18	P	-
19	G	-
20	W	- [With ICC]
20	Y	- [Without ICC]
21	BR	-
22	R	- [With ICC]
22	V	- [Without ICC]
23	G	-
24	L	- [With ICC]
24	P	- [Without ICC]
25	L	- [With ICC]
25	Y	- [Without ICC]
26	SHIELD	-
28	G	-
29	LG	-
30	BG	-
32	W	-
33	Y	-
34	BG	-
37	Y	-
38	GR	-
39	LG	-
41	LG	-
42	V	-
43	R	-
44	G	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	SB	-
50	BR	-
51	B	-
52	Y	-
53	BG	-
54	R	-
55	SB	-
59	P	-
60	SB	-
61	V	-
62	P	-
63	LG	-
64	L	-
65	BG	-
66	L	-
70	SHIELD	-
71	G	-

Terminal No.	Color Of Wire	Signal Name [Specification]
72	G	-
73	R	-
74	BR	-
76	L	-
77	W	-
78	Y	-
80	SB	-
81	L	-
82	W	-
83	LG	-
84	GR	-
85	G	-
86	P	-
87	W	-
88	BG	-
89	LG	-
90	BR	-
91	GR	-
92	BR	-
93	SB	-
95	Y	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	E111
Connector Name	BRAKE PEDAL STROKE SENSOR
Connector Type	HSM4FB



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

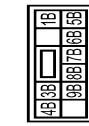
PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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

PRE-CRASH SEAT BELT SYSTEM

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1B	LG	-
3B	P	-
4B	G	-
5B	BG	-
7B	Y	-
8B	L	-
9B	BR	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-
3	LG	- [Without Auto aircon seat]
4	LG	- [With Auto aircon seat]
5	GR	-
6	W	-
7	G	-
8	W	-
9	P	-
10	BR	-
11	B	-

12	G	-
13	R	-
14	W	-
15	SHIELD	-
16	BR	-
17	L	-
18	P	-
19	G	-
20	GR	- [Without ICC]
21	BR	- [With ICC]
22	L	- [Without ICC]
23	R	- [With ICC]
24	G	-
25	P	- [With ICC]
26	B	- [Without ICC]
27	W	- [With ICC]
28	SHIELD	-
29	V	-
30	BG	-
32	Y	-
33	Y	-
34	L	-
37	G	-
38	R	-
39	G	-
41	L	-
42	W	-
43	R	-
44	LG	-
45	GR	-
46	W	-
47	L	-
48	P	-
49	BG	-
50	LG	-
51	SB	-
52	Y	-
53	BG	-
54	BR	-
55	SB	-
59	SB	-
60	SB	-
61	V	-
62	P	-
63	R	-
64	L	-

65	BG	-
69	V	-
70	SHIELD	-
71	BG	-
72	GR	-
73	W	-
74	SB	-
76	V	-
77	Y	-
78	Y	-
80	BG	-
81	L	-
82	W	-
83	Y	-
84	L	-
85	P	-
86	BR	-
87	P	-
88	V	-
89	G	-
90	P	-
91	R	-
92	R	-
93	GR	-
95	G	-
96	W	-
97	W	-
98	SHIELD	-
100	Y	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	- [With Auto aircon seat]
1	Y	- [Without Auto aircon seat]
3	W	-
6	P	-

7	V	-
8	BG	-
10	W	-
11	BG	-
12	B	-
13	G	-
14	R	-
15	W	-
16	SHIELD	-
17	L	-
18	P	-
19	G	-
20	R	-
21	LG	-
23	V	-
24	P	-
25	BR	-
26	GR	-
27	BG	-
28	W	-
38	B	-
39	B	-
43	SB	-
44	W	-
45	B	-
51	V	-
52	LG	-
53	SHIELD	-
54	BR	-
55	Y	-
56	SHIELD	-
57	P	-
58	L	-
59	SHIELD	-
60	L	-
61	BR	-
62	R	-
63	Y	-
64	L	-
65	W	-
66	V	-
67	LG	-
68	Y	-
69	G	-
70	V	-
71	W	-
72	B	-
73	W	-
74	LG	-
75	P	-

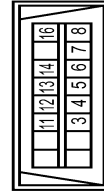
PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

PRE-CRASH SEAT BELT SYSTEM

76	LG	-	-
77	SB	-	-
78	GR	-	-
79	R	-	-
80	L	-	-
81	P	-	-
82	L	-	-
83	P	-	-
84	SB	-	-
85	W	-	-
86	Y	-	-
87	B	-	-
88	G	-	-
89	BG	-	-
91	R	-	-
92	BG	-	-
93	BR	-	-
94	V	-	-
96	BG	-	-
97	W	-	-
98	R	-	-
99	BG	-	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



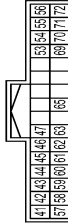
Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
7	GR	-
8	G	-
11	SB	-
12	P	-
13	L	-
14	P	-
16	BG	-

Connector No.	M37
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH88FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CANH
2	P	CANH
7	B	GROUND
8	GR	IGN

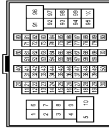
Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH82FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	V	ACC POWER SUPPLY
42	Y	FUEL LEVEL SENSOR SIGNAL
43	R	INTAKE SENSOR SIGNAL
44	LG	IN-VEHICLE SENSOR SIGNAL
45	P	AMBIENT SENSOR SIGNAL
46	BG	SUNLOAD SENSOR SIGNAL
47	V	GAS SENSOR SIGNAL
53	G	IGNITION POWER SUPPLY
54	BG	BATTERY POWER SUPPLY
55	B	GROUND
56	L	CANH
57	W	BRAKE FLUID LEVEL SWITCH SIGNAL
58	B	FUEL LEVEL SENSOR GROUND
59	GR	INTAKE SENSOR GROUND
60	L	IN-VEHICLE SENSOR GROUND
61	BR	AMBIENT SENSOR GROUND

62	SB	SUNLOAD SENSOR GROUND
63	R	ION MODE SIGNAL
65	BG	ECV SIGNAL
69	L	A/C LAN SIGNAL
70	R	EACH DOOR MOTOR POWER SUPPLY
71	B	GROUND
72	P	CANH

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	BR	-
3	V	-
4	SB	-
6	Y	-
7	B	-
8	W	-
10	W	-
11	SHIELD	-
20	R	-
21	G	-
22	GR	-
23	V	-
24	W	-
25	R	-
26	P	-
27	L	-
28	SHIELD	-
31	W	-
32	W	-
33	SB	-
36	L	-
37	P	-
39	L	-
39	P	-
40	V	-
41	SB	- [With ICC]

41	Y	- [Without ICC]
42	V	- [With ICC]
43	W	- [Without ICC]
43	B	- [Without ICC]
43	P	- [With ICC]
44	R	-
45	G	- [Without ICC]
45	L	- [With ICC]
46	BG	- [Without ICC]
46	SHIELD	- [With ICC]
47	B	- [Without ICC]
47	L	- [With ICC]
48	P	- [With ICC]
48	R	- [Without ICC]
49	G	- [With ICC]
49	W	- [Without ICC]
50	SHIELD	- [Without ICC]
51	BG	-
52	GR	-
53	G	-
54	L	-
55	P	-
60	LG	-
61	R	-
62	SB	-
63	V	-
64	Y	-
65	BR	-
66	BG	-
67	W	-
69	G	-
71	SB	-
72	V	-
73	V	-
74	LG	-
75	BR	-
76	V	-
77	LG	-
80	R	-
82	Y	-
83	BG	-
84	W	-
85	SB	-
86	B	-
87	P	-
91	L	-
92	L	-
93	G	-
84	BG	-
84	BG	-
95	V	-

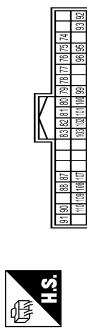
PRE-CRASH SEAT BELT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

PRE-CRASH SEAT BELT SYSTEM

96	G	-
97	G	-
98	L	-
99	LG	-

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Wire	Signal Name [Specification]
74	SB	PASSENGER DOOR ANT-
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT-
79	BR	ROOM ANT+
80	GR	NATS ANT AMP
81	W	NATS ANT AMP
82	P	IGN RELAY (F/B) CONT
83	GR	KEYLESS ENTRY RECEIVER SIGNAL
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CANL
91	L	CANH
92	LG	KEY SLOT ILL
93	V	ON IND
95	BG	ACC RELAY CONT
96	GR	AT/SHIFT SELECTOR POWER SUPPLY
99	R	SHIFT P
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
102	BG	BLOWER FAN MOTOR RELAY CONT
103	BR	HEATLESS ENTRY RECEIVER POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW

Connector No.	M152
Connector Name	WIRE TO WIRE
Connector Type	M03MMW-LC



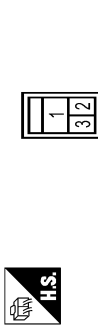
Terminal No.	Wire	Signal Name [Specification]
1	W	-
2	Y	-
3	R	-

Connector No.	M125
Connector Name	CAN GATEWAY
Connector Type	TH12FM-NH



Terminal No.	Wire	Signal Name [Specification]
1	L	CANH
3	GR	BATTERY
4	L	CANH
5	B	GROUND
6	L	CANH
7	P	CANL
9	LG	IGNITION
10	P	CANL
11	B	GROUND
12	P	CANL

Connector No.	M151
Connector Name	WIRE TO WIRE
Connector Type	M03FW-LC



Terminal No.	Wire	Signal Name [Specification]
1	W	-
2	Y	-
3	R	-

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

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:0000000010580950

1. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit. Refer to [SBC-36. "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-47. "Intermittent Incident"](#).

NO >> GO TO 1.

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000010580951

1. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Check seat belt buckle switch (driver side). Refer to [SBC-37. "PRE-CRASH SEAT BELT SYSTEM : 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-47. "Intermittent Incident"](#).

NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000010580952

1. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit. Refer to [SBC-36. "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-41. "PRE-CRASH SEAT BELT SYSTEM : 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?

PRE-CRASH SEAT BELT DOSE NOT OPERATE

< SYMPTOM DIAGNOSIS >

YES >> Check intermittent incident. Refer to [GI-47. "Intermittent Incident"](#).
NO >> GO TO 1.

A

B

C

D

E

F

G

SBC

I

J

K

L

M

N

O

P

SEAT BELT WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

SEAT BELT WARNING LAMP DOES NOT TURN OFF

Diagnosis Procedure

INFOID:000000010580953

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

Check seat belt buckle switch circuit (driver side). Refer to [SBC-42. "SEAT BELT WARNING LAMP SYSTEM : Component Function Check"](#)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

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

Check seat belt buckle switch circuit (passenger side). Refer to [SBC-38. "SEAT BELT WARNING LAMP SYSTEM : Component Function Check"](#)

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CHECK SEAT BELT WARNING LAMP CIRCUIT

Check seat belt warning lamp circuit. Refer to [SBC-45. "Diagnosis Procedure"](#)

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-47. "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:000000010580954

1.CHECK SELF DIAGNOSIS RESULT

Perform "COMBINATION METER" self diagnostic result. Refer to [MWI-45, "CONSULT Function \(METER/M&A\)"](#)

Is DTC detected?

- YES >> Repair or replace the malfunctioning parts.
- NO >> GO TO 2.

2.CHECK POWER SUPPLY

Check fuse are not blown.

Check ignition power supply of combination meter. Refer to [MWI-58, "COMBINATION METER : Diagnosis Procedure"](#)

Is the inspection result normal?

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

3.CHECK SEAT BELT BUCKLE SWITCH CIRCUIT (DRIVER SIDE)

Check seat belt buckle switch circuit (driver side). Refer to [SBC-42, "SEAT BELT WARNING LAMP SYSTEM : Component Function Check"](#)

Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace the malfunctioning parts.

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

Check seat belt buckle switch circuit (passenger side). Refer to [SBC-38, "SEAT BELT WARNING LAMP SYSTEM : Component Function Check"](#)

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace the malfunctioning parts.

5.CHECK SEAT BELT WARNING LAMP CIRCUIT

Check ground circuit. Refer to [SBC-45, "Diagnosis Procedure"](#)

Is the inspection result normal?

- YES >> GO TO 6.
- NO >> Repair or replace the malfunctioning parts.

6.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).
- NO >> GO TO 1.

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

SBC

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000010580955

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.

Precaution for Seat Belt Service

INFOID:000000010580956

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.
- After replacing or reinstalling seat belt pre-tensioner assembly, or reconnecting front seat belt pre-tensioner connector, check the system function.
- 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.

PRECAUTIONS

< PRECAUTION >

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.

Precautions For Xenon Headlamp Service

INFOID:000000011007771

WARNING:

Comply with the following warnings to prevent any serious accident.

- **Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.**
- **Never work with wet hands.**
- **Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)**
- **Never touch the bulb glass immediately after turning it OFF. It is extremely hot.**

CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- **Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)**
- **Never perform HID circuit inspection with a tester.**
- **Never touch the xenon bulb glass with hands. Never put oil and grease on it.**
- **Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.**
- **Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).**

Precautions for Removing Battery Terminal

INFOID:000000010763726

- 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.

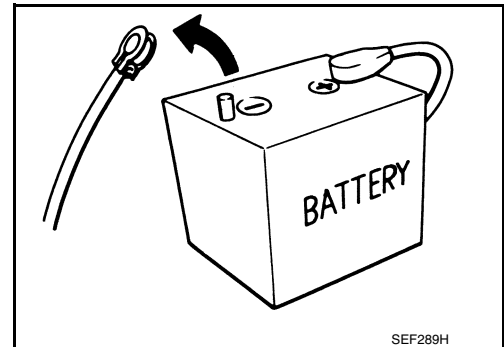
NOTE:

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.



PRE-INSPECTION FOR DIAGNOSTIC

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Description

INFOID:0000000010580957

WARNING:

- The following tests should be performed in a safe, open place that is free of traffic and obstacles.
 - The tests should be performed on a dry, paved road. Never attempt to perform the tests on a wet or unpaved road, open road, or highway. (This may cause an accident or personal injury.)
 - Driver and passenger should assume seat belt may operate and prepare themselves accordingly.
1. Fasten driver and passenger seat belts.
 2. Drive at approximately 25 km/h (16 MPH).
 3. Notify passenger of a sudden stop. Driver and passenger prepare themselves for the possibility of system not operating. Then, driver fully depresses the brake pedal to stop suddenly.
 4. Check that the shoulder of the seat belt is pulled while braking.

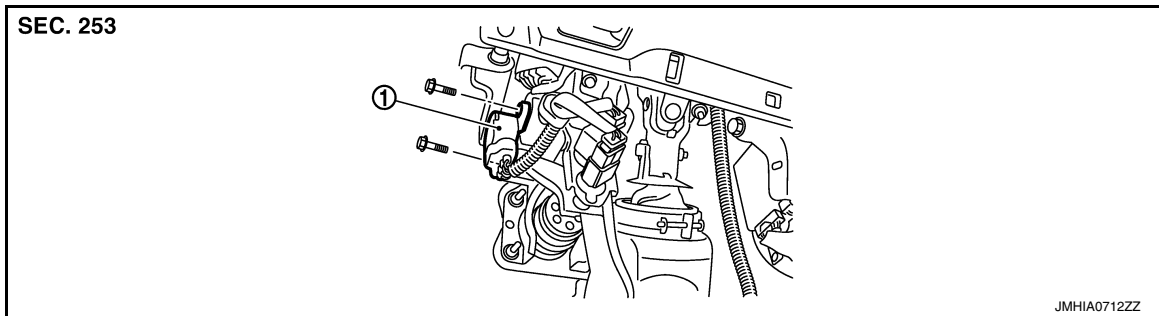
BRAKE PEDAL STROKE SENSOR

< PERIODIC MAINTENANCE >

BRAKE PEDAL STROKE SENSOR

Exploded View

INFOID:000000010580958



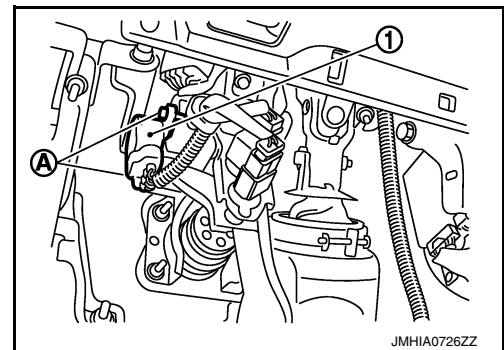
1. Brake pedal stroke sensor

Removal and Installation

INFOID:000000010580959

REMOVAL

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



INSTALLATION

Install in the reverse order of removal.

PRE-CRASH SEAT BELT CONTROL UNIT

< PERIODIC MAINTENANCE >

PRE-CRASH SEAT BELT CONTROL UNIT

Exploded View

INFOID:000000010580960

Refer to [SB-6. "SEAT BELT RETRACTOR : Exploded View"](#).

Removal and Installation

INFOID:000000010580961

For removal and installation procedures, refer to [SB-6. "SEAT BELT RETRACTOR : Removal and Installation"](#).