

SECTION

SBC

SEAT BELT CONTROL SYSTEM

A

B

C

CONTENTS

E

PRECAUTION	3	WARNING/INDICATOR/CHIME LIST	15	F
PRECAUTIONS	3	WARNING/INDICATOR/CHIME LIST : Warning		
Precaution for Supplemental Restraint System		Lamp/Indicator Lamp	16	
(SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	3	WARNING/INDICATOR/CHIME LIST : Warning		G
Precaution for Seat Belt Service	3	Chime	16	
SYSTEM DESCRIPTION	5	DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)	17	SBC
COMPONENT PARTS	5	CONSULT Function	17	
PRE-CRASH SEAT BELT SYSTEM	5	ECU DIAGNOSIS INFORMATION	19	I
PRE-CRASH SEAT BELT SYSTEM : Component		PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)	19	J
Parts Location	5	Reference Value	19	
PRE-CRASH SEAT BELT SYSTEM : Pre-crush		Fail-Safe	20	
Seat Belt Control Unit	6	DTC Index	21	K
PRE-CRASH SEAT BELT SYSTEM : Seat Belt		PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)	23	L
Buckle Switch	6	Reference Value	23	
PRE-CRASH SEAT BELT SYSTEM : Brake pedal		Fail-Safe	23	
stroke sensor	7	DIAGNOSIS SENSOR UNIT	25	M
SEAT BELT WARNING LAMP SYSTEM	7	List of ECU Reference	25	
SEAT BELT WARNING LAMP SYSTEM : Component		WIRING DIAGRAM	26	N
Parts Location	8	PRE-CRASH SEAT BELT CONTROL UNIT	26	
SEAT BELT WARNING LAMP SYSTEM : Seat		Wiring Diagram	26	
Belt Buckle Switch	8	SEAT BELT WARNING SYSTEM	32	O
SYSTEM	9	Wiring Diagram	32	
PRE-CRASH SEAT BELT SYSTEM	9	BASIC INSPECTION	37	P
PRE-CRASH SEAT BELT SYSTEM : System Description	9	DIAGNOSIS AND REPAIR WORK FLOW	37	
PRE-CRASH SEAT BELT SYSTEM : Circuit Diagram	11	Work Flow	37	
PRE-CRASH SEAT BELT SYSTEM : Fail-Safe	11	DTC/CIRCUIT DIAGNOSIS	40	
SEAT BELT WARNING LAMP SYSTEM	13	U1000 CAN COMM CIRCUIT	40	
SEAT BELT WARNING LAMP SYSTEM : System		DTC Description	40	
Description	14			
SEAT BELT WARNING LAMP SYSTEM : Circuit				
Diagram	15			

U0126 ST ANG SEN SIG	41	POWER SUPPLY AND GROUND CIRCUIT	62
DTC Description	41	Diagnosis Procedure	62
Diagnosis Procedure	41	SEAT BELT BUCKLE SWITCH (DRIVER	
U0428 STRG ANGL CAL	43	 SIDE)	63
DTC Description	43	Description	63
Diagnosis Procedure	43	Component Function Check	63
B2451 SEAT BLT MTR DR CIRC	45	Diagnosis Procedure	63
DTC Description	45	Component Inspection	64
Diagnosis Procedure	45	SEAT BELT BUCKLE SWITCH (PASSEN-	
B2452 SEAT BLT MTR AS CIRC	46	 GER SIDE)	65
DTC Description	46	Description	65
Diagnosis Procedure	46	Component Function Check	65
B2453 BR STROKE SEN CIRC	47	Diagnosis Procedure	65
DTC Description	47	Component Inspection	66
Diagnosis Procedure	47	SEAT BELT WARNING LAMP CIRCUIT	67
Component Inspection	49	Component Function Check	67
B2454 SEAT BLT PWR DR CIRC	50	Diagnosis Procedure	67
DTC Description	50	Component Inspection	69
Diagnosis Procedure	50	SYMPTOM DIAGNOSIS	71
B2455 CONTROL UNIT DR	51	PRE-CRASH SEAT BELT DOSE NOT OPER-	
DTC Description	51	 ATE	71
Diagnosis Procedure	51	BOTH SIDES	71
B2456 SEAT BLT PWR AS	52	BOTH SIDES : Diagnosis Procedure	71
DTC Description	52	DRIVER SIDE	71
Diagnosis Procedure	52	DRIVER SIDE : Diagnosis Procedure	71
B2457 CONTROL UNIT AS	54	PASSENGER SIDE	71
DTC Description	54	PASSENGER SIDE : Diagnosis Procedure	71
Diagnosis Procedure	54	SEAT BELT WARNING LAMP DOES NOT	
B2458 LOCAL COMM	55	 TURN OFF	72
DTC Description	55	Diagnosis Procedure	72
Diagnosis Procedure	55	SEAT BELT WARNING LAMP DOES NOT	
B2461 VHCL SPEED SIGNAL	57	 TURN ON	73
DTC Description	57	Diagnosis Procedure	73
Diagnosis Procedure	57	SEAT BELT WARNING CHIME DOES NOT	
B2466 DR/AS CONTROL UNIT	59	 SOUND	74
DTC Description	59	Diagnosis Procedure	74
Diagnosis Procedure	59	REMOVAL AND INSTALLATION	75
B2470 SYS HEAT PROTC DR	60	BRAKE PEDAL STROKE SENSOR	75
DTC Description	60	Removal and Installation	75
Diagnosis Procedure	60	PRE-CRASH SEAT BELT CONTROL UNIT	76
B2471 SYS HEAT PROTC AS	61	Exploded View	76
DTC Description	61	Removal and Installation	76
Diagnosis Procedure	61		

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000009767472

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:000000009237178

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. Refer to [SRC-15, "Description"](#).
- Do not use disassemble buckle or seat belt assembly.
- Replace anchor bolts if they are deformed or worn out.
- Never oil tongue and buckle.
- If any component of seat belt assembly is questionable, do not repair. Replace the whole seat belt assembly.
- If webbing is cut, frayed, or damaged, replace seat belt assembly.
- When replacing seat belt assembly, use a genuine NISSAN seat belt assembly.

AFTER A COLLISION

WARNING:

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

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

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.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

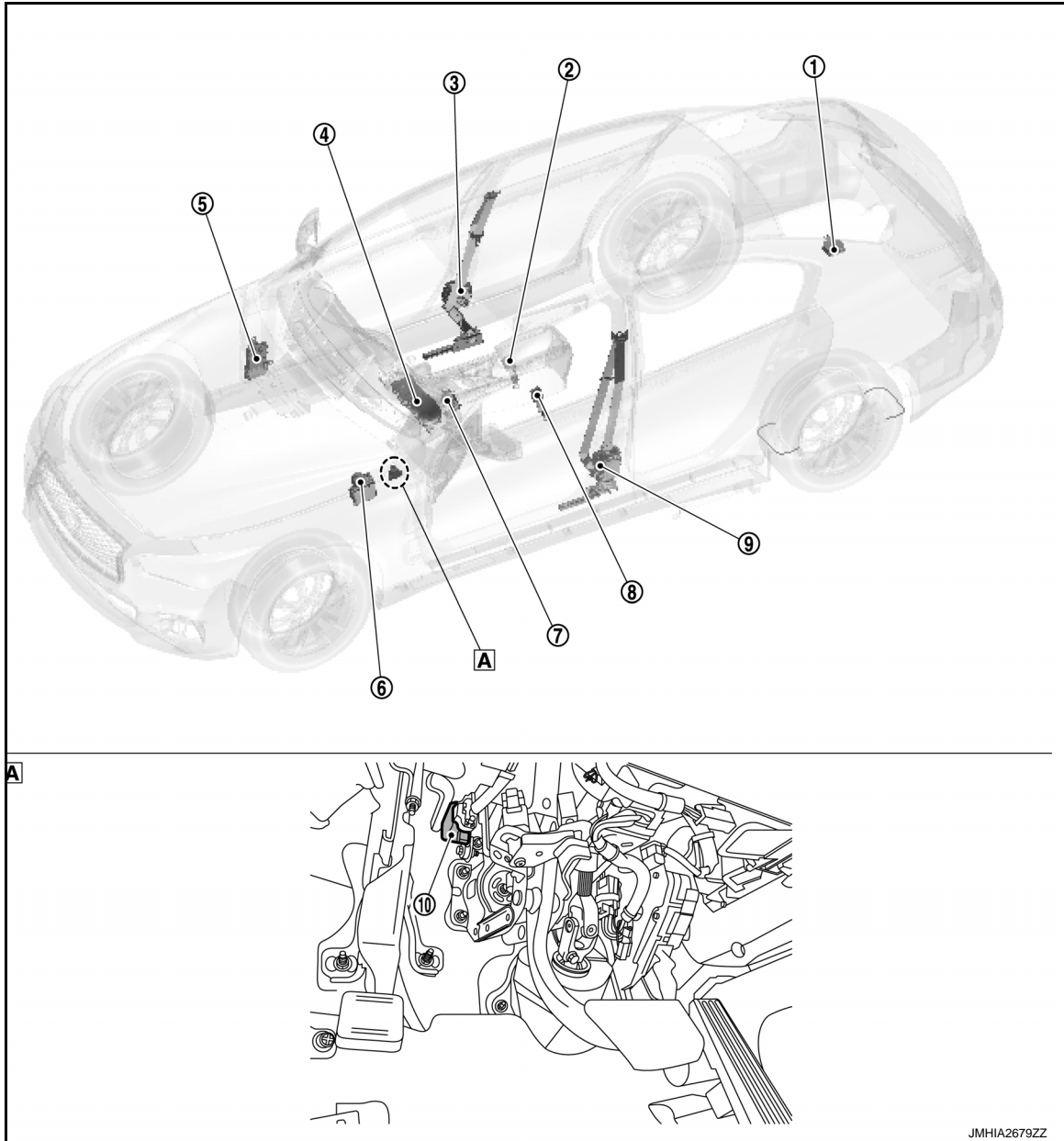
SYSTEM DESCRIPTION

COMPONENT PARTS

PRE-CRASH SEAT BELT SYSTEM

PRE-CRASH SEAT BELT SYSTEM : Component Parts Location

INFOID:000000009724654



A

View with instrument lower panel LH removed

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

COMPONENT PARTS

< SYSTEM DESCRIPTION >

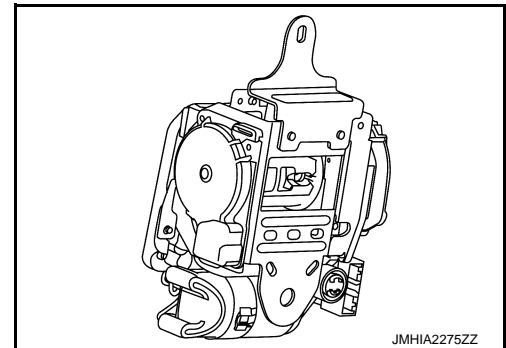
No.	Component	Function
③	Pre-crash seat belt control unit (passenger side)	Refer to SBC-6, "PRE-CRASH SEAT BELT SYSTEM : Pre-crash Seat Belt Control Unit" .
④	Combination meter	<ul style="list-style-type: none"> Transmits vehicle speed signal to pre-crash seat belt control unit (driver side). Turns the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

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

INFOID:000000009724655

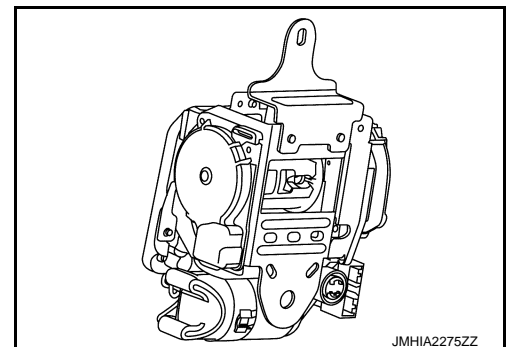
DRIVER SIDE

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



PASSENGER SIDE

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



PRE-CRASH SEAT BELT SYSTEM : Seat Belt Buckle Switch

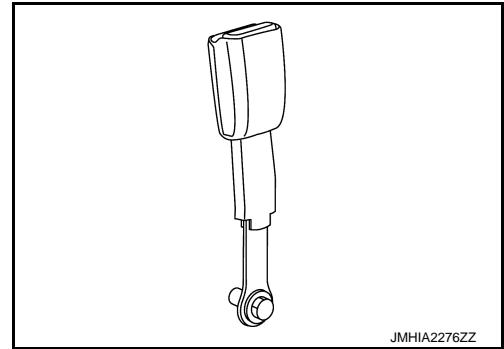
INFOID:000000009724656

DRIVER SIDE

COMPONENT PARTS

< SYSTEM DESCRIPTION >

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



A

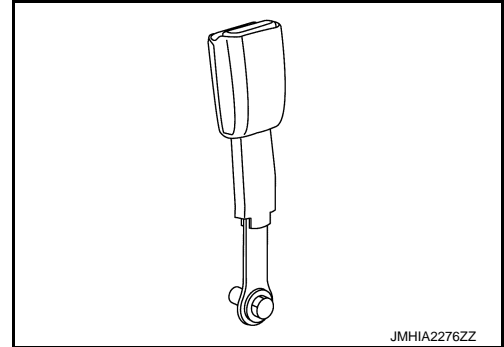
B

C

D

PASSENGER SIDE

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



E

F

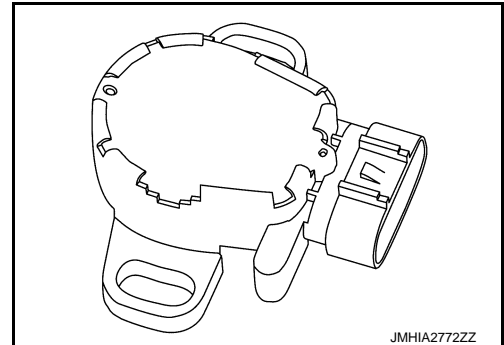
G

PRE-CRASH SEAT BELT SYSTEM : Brake pedal stroke sensor

INFOID:000000009781073

SBC

- 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.



I

J

K

SEAT BELT WARNING LAMP SYSTEM

L

M

N

O

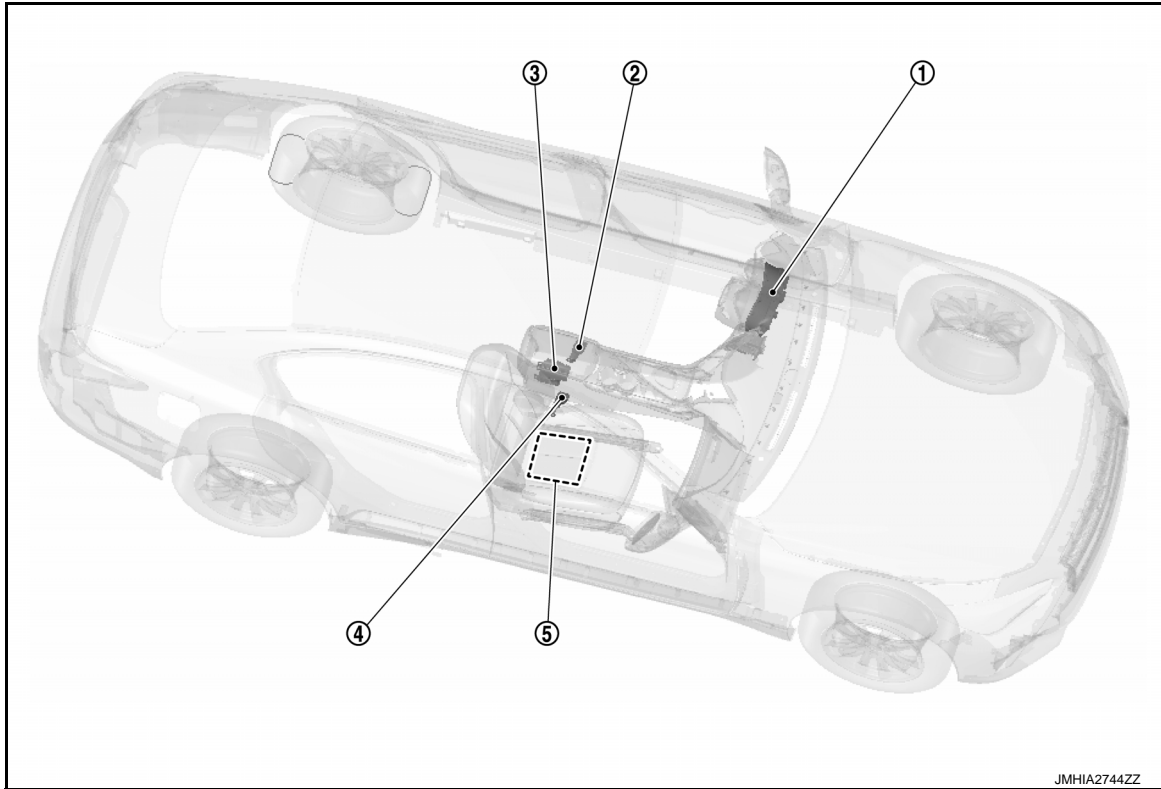
P

COMPONENT PARTS

< SYSTEM DESCRIPTION >

SEAT BELT WARNING LAMP SYSTEM : Component Parts Location

INFOID:000000009724657



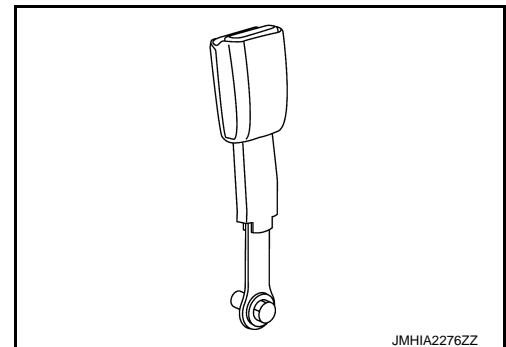
JMHIA2744ZZ

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

SEAT BELT WARNING LAMP SYSTEM : Seat Belt Buckle Switch

INFOID:000000009724659

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



JMHIA2276ZZ

SYSTEM

< SYSTEM DESCRIPTION >

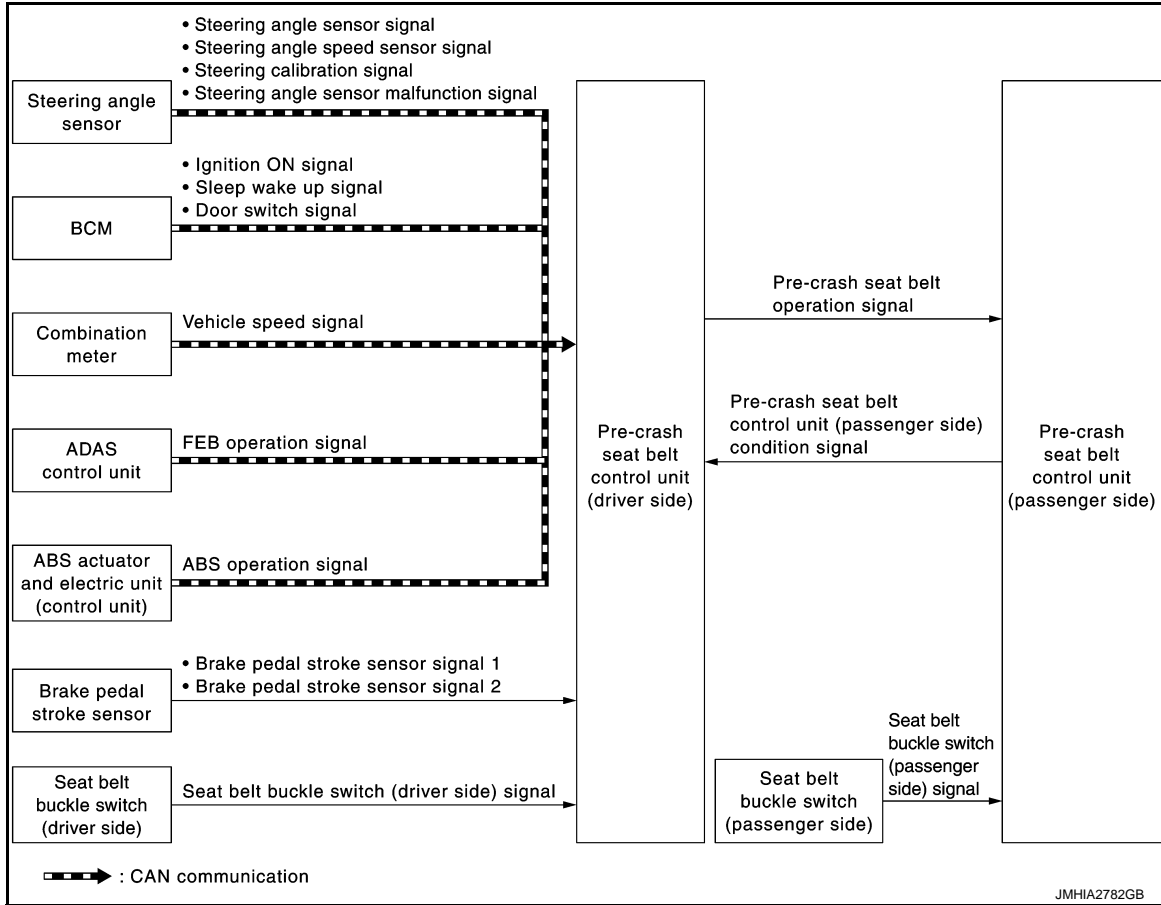
SYSTEM

PRE-CRASH SEAT BELT SYSTEM

PRE-CRASH SEAT BELT SYSTEM : System Description

INFOID:000000009724660

SYSTEM DIAGRAM



DESCRIPTION

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

Function Description

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

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

Operation Condition

Operation while driving

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

SYSTEM

< SYSTEM DESCRIPTION >

Operation item	Operation start condition	Operation stop condition
During emergency brake operation	<ul style="list-style-type: none"> Vehicle speed is 15 km/h (9 MPH) or more Emergency braking status is detected 	<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 forward emergency braking operates	System detects that forward emergency braking is in operating status	2 seconds after operation start
When lateral slippage during cornering occurs	<ul style="list-style-type: none"> 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 forward emergency braking system. Refer to [BRC-14. "System Description"](#).

Comfort Function

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

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

Operation Prohibition Condition

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

- When seat belt is not fastened (only the seat belt that is not fastened does not operate)
- When motor is overheat due to contentious operation*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

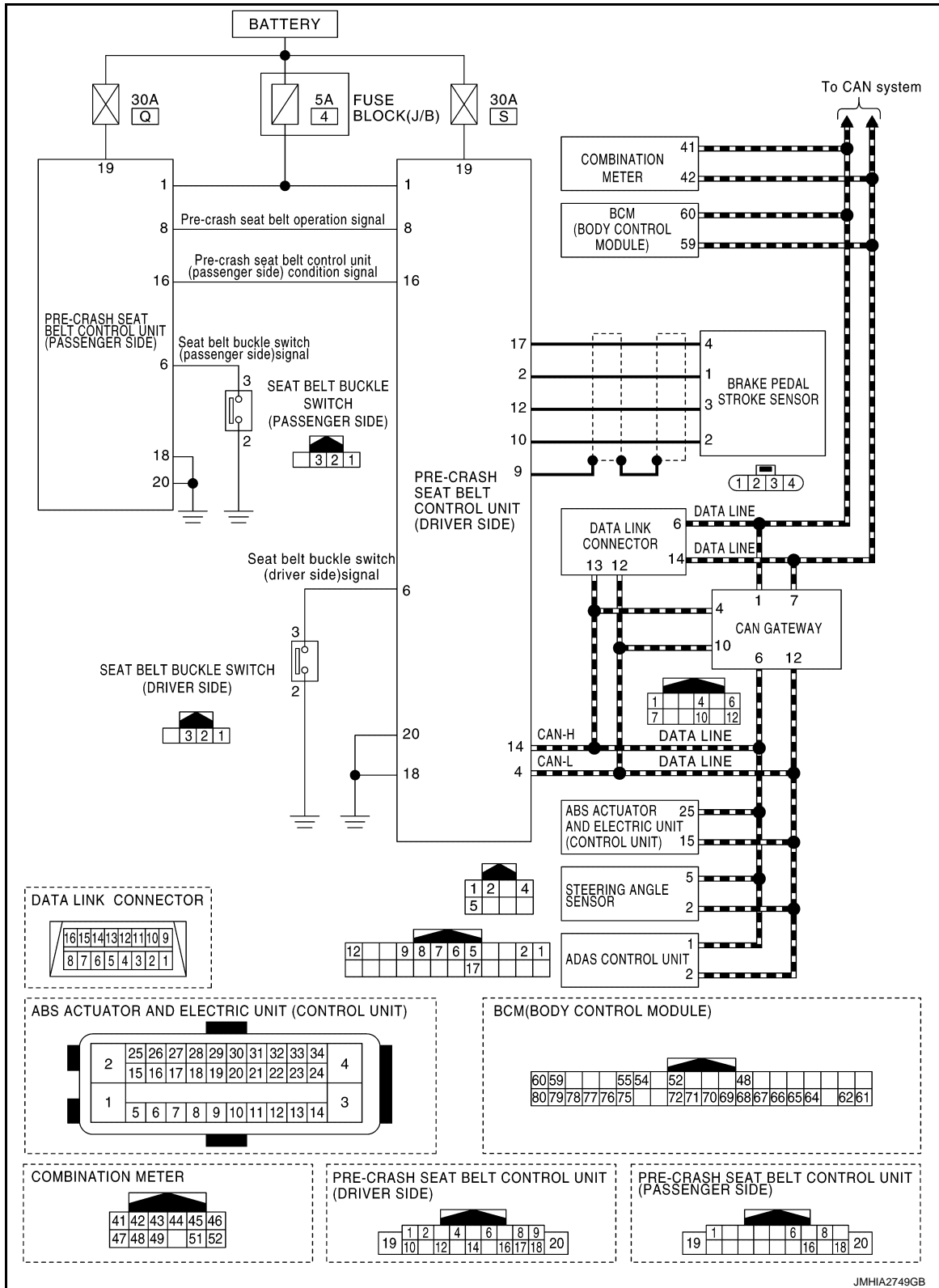
When system malfunction is detected, comfort function is deactivated to warn customer of system malfunction.

SYSTEM

< SYSTEM DESCRIPTION >

PRE-CRASH SEAT BELT SYSTEM : Circuit Diagram

INFOID:000000009724661



PRE-CRASH SEAT BELT SYSTEM : Fail-Safe

INFOID:000000009724662

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

SYSTEM

< SYSTEM DESCRIPTION >

DTC	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.* <ul style="list-style-type: none"> • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When forward emergency braking operates • When steering wheel is rotated for emergency • A part or the whole comfort function
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
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	ST 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
U1000	CAN COMM CIRCUIT	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 forward emergency braking operates • When steering wheel is rotated for emergency • A part or the whole comfort function

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

PASSENGER SIDE

DTC	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

SYSTEM

< SYSTEM DESCRIPTION >

DTC	Display contents of CONSULT	Fail-safe
B2455	CONTROL UNIT DR	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When forward emergency braking operates • When steering wheel is rotated for emergency • A part or the whole comfort function
B2456	SEAT BLT PWR AS	Fully deactivates the whole operation.
B2457	CONTROL UNIT AS	Fully deactivates the whole operation.*
B2458	LOCAL COMM	Fully deactivates the whole operation.*
B2461	VHCL SPEED SIGNAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> • 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
B2466	DR/AS CONTROL UNIT	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 forward emergency braking 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	ST 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
U1000	CAN COMM CIRCUIT	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 forward emergency braking operates • When steering wheel is rotated for emergency • A part or the whole comfort function

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

SEAT BELT WARNING LAMP SYSTEM

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

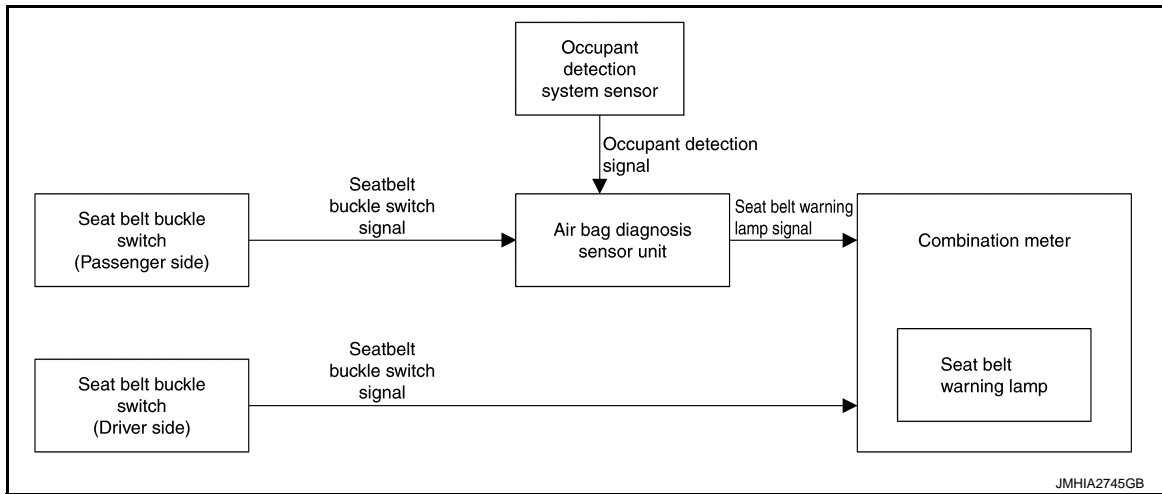
SYSTEM

< SYSTEM DESCRIPTION >

SEAT BELT WARNING LAMP SYSTEM : System Description

INFOID:000000009724663

SYSTEM DIAGRAM



DESCRIPTION

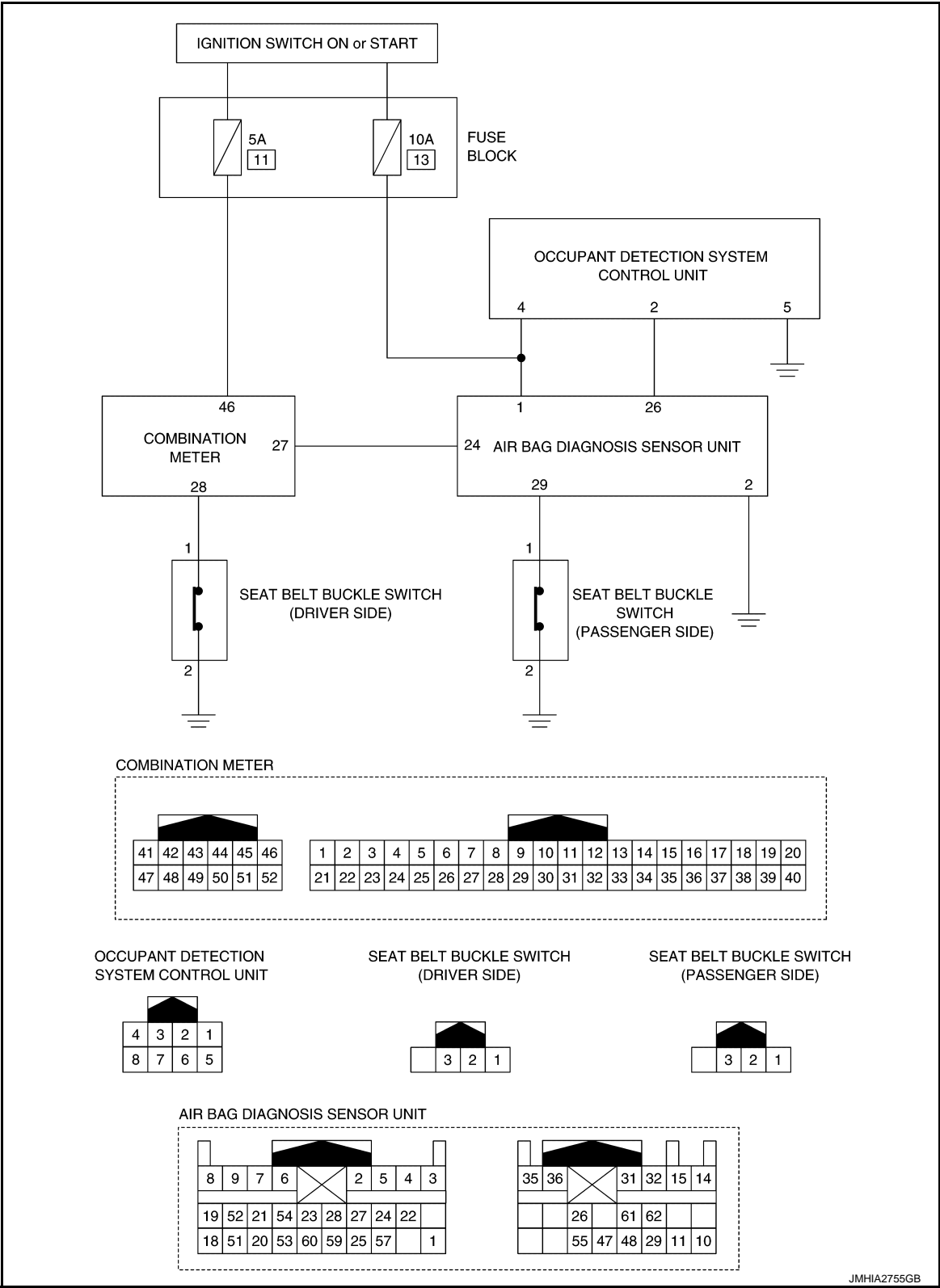
Seat belt warning lamp warns the driver that driver or passenger seat belt is not fastened. For details information, refer to [MWI-39. "WARNING LAMPS/INDICATOR LAMPS : Seat Belt Warning Lamp"](#).

SYSTEM

< SYSTEM DESCRIPTION >

SEAT BELT WARNING LAMP SYSTEM : Circuit Diagram

INFOID:000000009725181




WARNING/INDICATOR/CHIME LIST

SYSTEM

< SYSTEM DESCRIPTION >

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

INFOID:000000009724664

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

WARNING/INDICATOR/CHIME LIST : Warning Chime

INFOID:000000009724665

Item	Reference
Seat belt warning	Refer to WCS-17, "WARNING CHIME : Seat Belt Warning" .

DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

CONSULT Function

INFOID:000000009724666

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

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

CAUTION:

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

ERASING SELF-DIAGNOSIS RESULTS

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

DATA MONITOR

NOTE:

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

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

DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

< SYSTEM DESCRIPTION >

WORK SUPPORT

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

PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

Reference Value

INFOID:0000000009237189

VALUES ON THE DIAGNOSIS TOOL

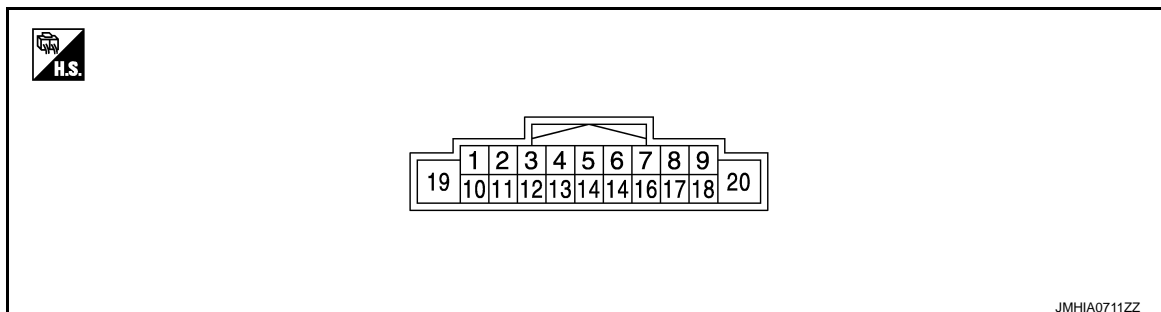
CONSULT MONITOR ITEM

NOTE:

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

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

TERMINAL LAYOUT



PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

< ECU DIAGNOSIS INFORMATION >

PHYSICAL VALUES

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

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

Fail-Safe

INFOID:000000009237190

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

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

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

PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe
B2455: CONTROL UNIT DR	Stops the operation in the conditions as per the following.* <ul style="list-style-type: none"> • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When forward emergency braking operates • When steering wheel is rotated for emergency • A part or the whole comfort function
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
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: ST 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
U1000: CAN COMM CURCUIT	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 forward emergency braking operates • When steering wheel is rotated for emergency • A part or the whole comfort function

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

DTC Index

INFOID:000000009237191

DISPLAY ITEM LIST (PRE-CRASH SEAT BELT)

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

PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

< ECU DIAGNOSIS INFORMATION >

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

PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)

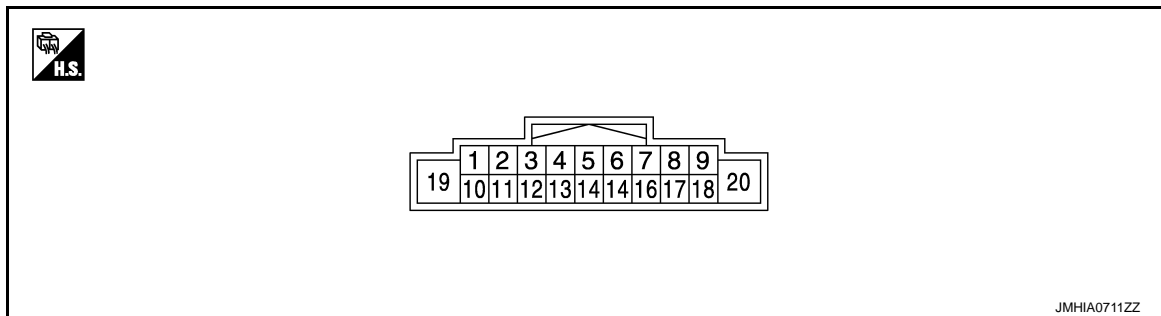
< ECU DIAGNOSIS INFORMATION >

PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)

Reference Value

INFOID:0000000009237192

TERMINAL LAYOUT



PHYSICAL VALUES

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

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

Fail-Safe

INFOID:0000000009237193

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

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

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

PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe
B2456: SEAT BLT PWR AS	Fully deactivates the whole operation.
B2457: CONTROL UNIT AS	Fully deactivates the whole operation.*
B2458: LOCAL COMM	Fully deactivates the whole operation.*
B2461: VHCL SPEED SIGNAL	Stops the operation in the conditions as per the following. <ul style="list-style-type: none"> • 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
B2466: DR/AS CONTROL UNIT	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 ABS continuously operates • When lateral slippage during cornering occurs • When forward emergency braking operates • When steering wheel is rotated for emergency • A part or the whole comfort function
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: ST 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
U1000: CAN COMM CIRCUIT	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 forward emergency braking operates • When steering wheel is rotated for emergency • A part or the whole comfort function

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

DIAGNOSIS SENSOR UNIT

< ECU DIAGNOSIS INFORMATION >

DIAGNOSIS SENSOR UNIT

List of ECU Reference

INFOID:0000000009237194

ECU	Reference
Air bag diagnosis sensor unit	SRC-22, "DTC_Index"

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

PRE-CRASH SEAT BELT CONTROL UNIT

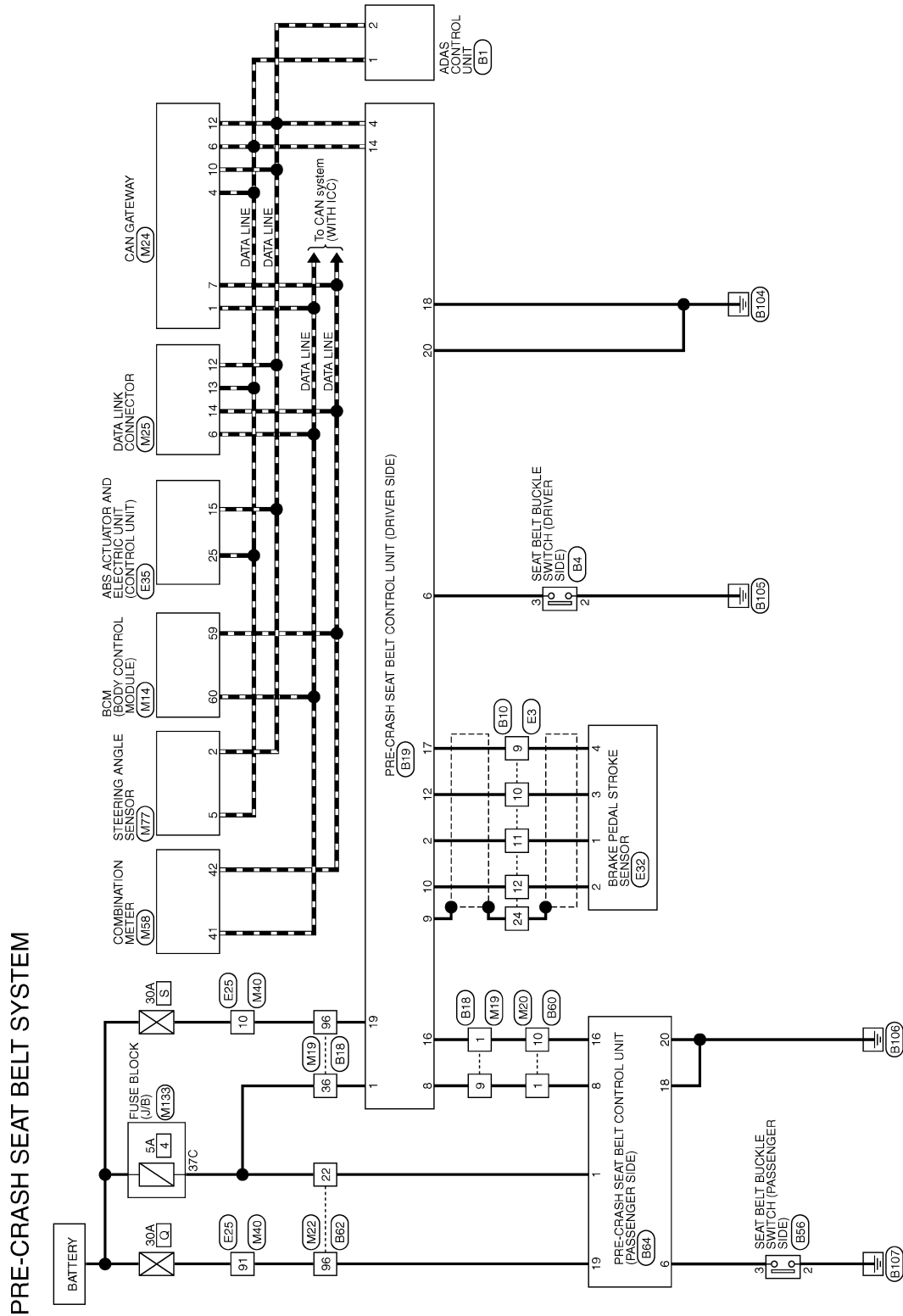
< WIRING DIAGRAM >

WIRING DIAGRAM

PRE-CRASH SEAT BELT CONTROL UNIT

Wiring Diagram

INFOID:000000009237195



2013/05/17

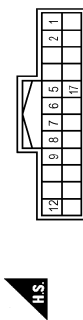
JRHWC0594GB

PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

PRE-CRASH SEAT BELT SYSTEM

Connector No.	B1
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FW-NH



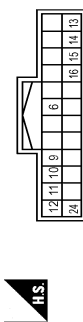
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	GM-H
2	B	GM-H
3	B	GROUND
4	L	ITS COMM-H
5	L	ITS COMM-L
6	L	CHASSIS COMM-H
7	P	CHASSIS COMM-L
8	L	CHASSIS COMM-L
9	V	CHASSIS COMM-L
10	GR	IGNITION
11	V	BRAKE HOLD RLY DRIVE SIGNAL

Connector No.	B4
Connector Name	SEAT BELT BUDDLE SWITCH (DRIVER SIDE)
Connector Type	TH04FW-NH



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

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



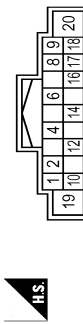
Terminal No.	Color Of Wire	Signal Name [Specification]
6	V	-
8	W	-
9	B	-
10	B	-
11	G	-
12	R	-
13	GR	-
14	BG	-
15	BR	-
16	LG	-
24	SHIELD	-

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-CS16-TM4



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

Connector No.	B19
Connector Name	PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)
Connector Type	TH18FW-CS2



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	SG BAT
2	G	COM LO
3	W	BACKLASH L/H NO
4	BR	LOCAL COMM 2
5	SHIELD	SHIELD GND
6	R	SENS POWER 1
7	R	OUT 2
8	L	CAN HI
9	Y	LOCAL COMM 1
10	W	SENS GND 1
11	B	SG GND
12	Y	MOTOR BAT
13	B	MOTOR GND

Connector No.	B56
Connector Name	SEAT BELT BUDDLE SWITCH (PASSENGER SIDE)
Connector Type	TH04FW-NH



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

JRHWC0595GB

PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

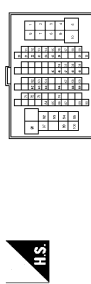
PRE-CRASH SEAT BELT SYSTEM

Connector No.	BB9
Connector Name	WIRE TO WIRE
Connector Type	TH88FW-NH



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

Connector No.	BB2
Connector Name	WIRE TO WIRE
Connector Type	TH88FW-CS16-TM4

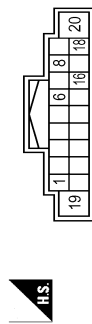


Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	R	- (With BOSE system)
4	SHIELD	- (Without BOSE system)
5	G	-
6	W	-
7	BR	- (Without BOSE system)
8	B	- (With BOSE system)
9	Y	- (Without BOSE system)
10	V	-
11	GR	-

12	Y	-
13	R	-
14	BG	-
15	GR	-
16	V	-
17	P	-
18	L	-
19	R	-
20	GR	-
21	R	-
22	P	-
23	W	-
24	V	-
25	SB	-
26	G	-
27	P	-
28	LG	-
29	R	-
30	W	-
31	GR	-
32	Y	-
33	R	-
34	GR	-
35	P	-
36	LG	-
37	L	-
38	W	-
39	W	-
40	G	-
41	SHIELD	-
42	G	-
43	BG	-
44	G	-
45	Y	-
46	B	-
47	R	-
48	GR	-
49	P	-
50	L	-
51	P	-
52	L	-
53	P	-
54	W	-
55	LG	-
56	L	-
57	P	-
58	W	-
59	GR	-
60	Y	-
61	R	-
62	LG	-
63	L	-
64	W	-
65	LG	-
66	L	-
67	P	-
68	R	-
69	G	-
70	SHIELD	-
71	GR	-
72	BR	-
73	W	-
74	B	-
75	Y	-
76	V	-
77	GR	-
78	R	-
79	LG	-
80	L	-
81	W	-
82	V	-
83	W	-
84	R	-
85	GR	-
86	Y	-
87	B	-
88	G	-
89	SHIELD	-
90	V	-
91	W	-
92	R	-
93	R	-

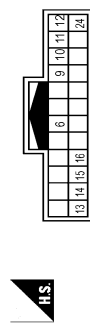
84	R	-
85	Y	-
86	W	-
87	L	-
88	BR	-
89	BR	-
90	BR	-

Connector No.	BB4
Connector Name	PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)
Connector Type	TH18FW-CS2



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

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	TH2AMW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
6	Y	-
9	W	-
10	B	-
11	G	-
12	R	-

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

Connector No.	E23
Connector Name	WIRE TO WIRE
Connector Type	TH88FW-CS16-TM4



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

PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

PRE-CRASH SEAT BELT SYSTEM

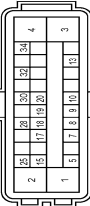
30	BR	-
31	W	-
32	W	-
33	V	-
34	P	-
55	W	-
56	SB	-
57	EG	-
58	B	-
59	W	-
61	R	-
64	Y	-
65	SB	-
66	GR	-
67	LG	-
68	EG	-
71	LG	-
72	V	-
73	G	-
74	BR	-
75	V	-
76	P	-
78	SB	-
83	R	-
86	EG	-
91	G	-
92	Y	-
94	GR	-
95	EG	-
96	LG	-
97	LG	-
98	L	-
99	P	-
100	SHIELD	-

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



Terminal No.	Color	Wire	Signal Name [Specification]
1	G	-	OUT 1
2	G	-	OUT 2
3	B	-	OUT 2
4	W	-	GND

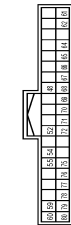
Connector No.	E35
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	SA2MFB-SJ24-U



Terminal No.	Color	Wire	Signal Name [Specification]
1	B	-	GROUND
2	B	-	GROUND
3	G	-	VALVE BATTERY
4	Y	-	MOTOR BATTERY
5	LG	-	STOP LAMP SW SIGNAL [With ICC]
5	V	-	STOP LAMP SW SIGNAL [With ASD]
7	GR	-	RR LH WHEEL SENSOR SIGNAL
8	G	-	RR LH WHEEL SENSOR SIGNAL
9	BR	-	FR RH WHEEL SENSOR SIGNAL
10	R	-	FR RH WHEEL SENSOR SIGNAL
13	R	-	VACUUM SENSOR SIGNAL
15	P	-	CAN-L [Without Gateway]
15	R	-	CAN-L [With Gateway]
17	Y	-	RR RH WHEEL SENSOR SIGNAL
18	V	-	RR RH WHEEL SENSOR SIGNAL
19	SB	-	FR LH WHEEL SENSOR SIGNAL

20	EG	FR LH WHEEL SENSOR POWER SUPPLY
28	G	VACUUM SENSOR POWER SUPPLY
30	R	VCC OFF SW SIGNAL
32	SHIELD	VACUUM SENSOR GROUND
34	G	IGN

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



Terminal No.	Color	Wire	Signal Name [Specification]
48	R	-	PUSH-BTN IGN SW ILL PWR
52	G	-	DORNGLE LINK
54	V	-	COMM LINE
55	R	-	RAIN SENSOR
59	P	-	CAN-L
60	L	-	CAN-H
61	G	-	REAR WINDOW DEF RLY CONT
62	G	-	REAR WINDOW DEF RLY CONT
64	V	-	LOCK MASTER CYCLES
65	B	-	OUTS HD LAMP CONT
66	B	-	BLOWER FAN RLY CONT
67	W/B	-	IGN RLYAY (F/B) CONT
68	R	-	DIMMER
69	GR	-	A/T SHIFT SELECT PWR SPLY
70	B	-	IGN RLYAY (PDM/E/R) CONT
71	G	-	DR DOOR REQ SW
72	SB	-	PASS DOOR REQ SW
75	BR	-	COMBI SW INPUT 5
76	EG	-	COMBI SW INPUT 4
77	V	-	COMBI SW INPUT 3
78	L	-	COMBI SW INPUT 2
79	LG	-	COMBI SW INPUT 1
80	L	-	TR LED ON/OFF SW

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS12-TM4



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

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

PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

PRE-CRASH SEAT BELT SYSTEM

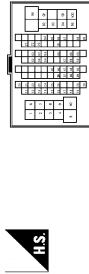
Terminal No.	Color Of Wire	Signal Name [Specification]
63	BR	-
64	SP	-
65	W	-
70	LG	-
71	W	-
72	B	-
74	L	-
75	W	-
76	BR	-
77	B	-
81	B	-
83	BG	-
84	L	-
85	W	-
86	B	-
88	G	-
91	GR	-
94	GR	-
96	W	-
97	V	-
98	BR	-

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH18MP-NH



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

Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH180MW-QS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	L	-
3	R	-
4	SHIELD	-
5	G	-
6	BG	-
7	LG	-
8	P	-
9	SHIELD	-
10	V	-
11	GR	-
12	V	-
13	LG	-
14	LG	-
15	GR	-
16	SB	- [Wired DCM]
17	V	- [Wired DCM]
18	Y	-
19	G	-
20	GR	-
21	R	-
22	W	-
23	L	-
24	V	-
25	LG	-
26	GR	-
29	SB	-
30	G	-
36	R	-
37	R	-
38	W	-
39	V	-
45	G	-
46	SHIELD	-
47	G	-

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

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



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	CAN-H
3	W	BATTERY
4	L	CANZ-H
5	B	GND
6	L	CAN3-H
7	P	CAN-L
9	R	IGN
10	R	CANZ-L
11	B	GND
12	R	CAN-L

Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	BD18FW



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

PRE-CRASH SEAT BELT CONTROL UNIT

< WIRING DIAGRAM >

PRE-CRASH SEAT BELT SYSTEM

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Type	TH08PW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	GR	-
3	V	-
4	V	-
5	W/B	-
6	V	-
7	V	-
8	W	-
9	W	-
10	W	-
11	W	-
12	B	-
13	GR	-
14	B	-
15	SB	-
16	B	-
17	LG	-
18	B	-
19	W	-
20	V	-
21	EG	-
22	EG	-
23	G	-
24	G	-
25	B	-
26	L	-
27	Y	-
28	Y	-
29	Y	-
30	Y	-
31	L	-
32	GR	-
33	BR	-
34	BR	-
35	W	-
36	G	-
37	G	-
38	G	-
39	G	-
40	G	-
41	L	-
42	BR	-
43	W	-
44	G	-
45	G	-
46	G	-
47	R	-
48	SHIELD	-
49	B	-
50	BR	-
51	BR	-
52	W	-
53	G	-
54	Y	-
55	P	-
56	EG	-

48	SB	AV COMMUNICATION SIGNAL (L)
49	BR	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND

Connector No.	MT7
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08PW-NH



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

Connector No.	MT33
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH08PW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
11C	V	-
11G	V	-
11B	L	-
11C	R	-
11C	R	-
11C	L	-
11C	BG	- [Without DRPO]
11C	P	- [With DRPO]
11C	B	-



Connector No.	M58
Connector Name	COMBINATION METER
Connector Type	TH12PW-NH

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

JRHWC0599GB

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

SEAT BELT WARNING SYSTEM

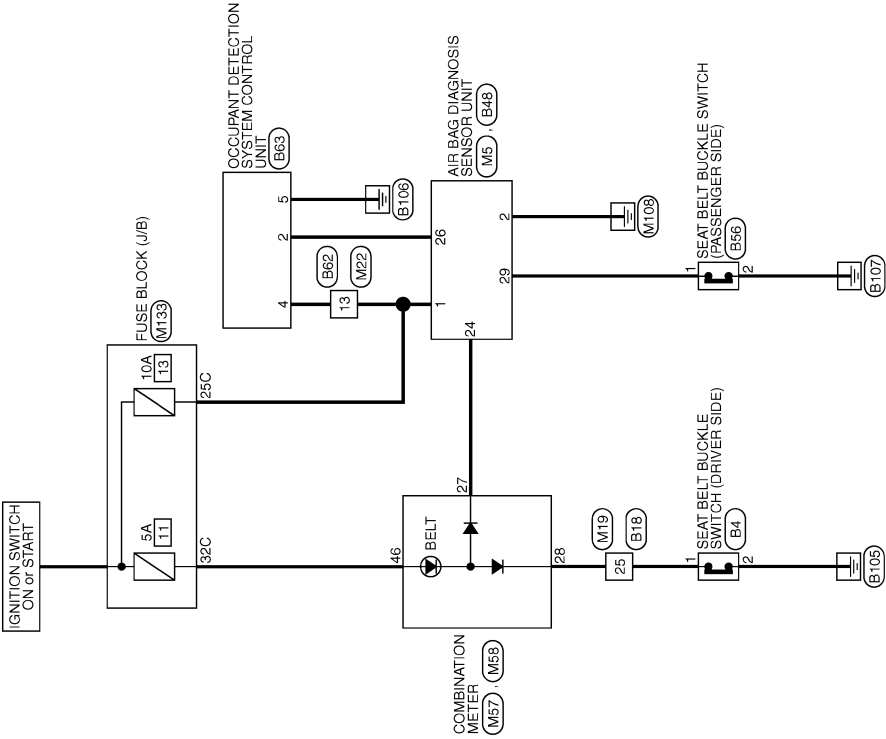
< WIRING DIAGRAM >

SEAT BELT WARNING SYSTEM

Wiring Diagram

INFOID:000000009237196

FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM



2013/05/17

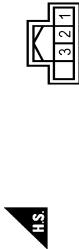
JRHWC0600GB

SEAT BELT WARNING SYSTEM

< WIRING DIAGRAM >

FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM

Connector No.	B4
Connector Name	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	TH08FW-NH



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

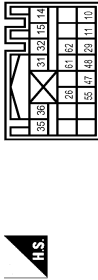
Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-CS16-TM4



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

Terminal No.	Color Of Wire	Signal Name [Specification]
33	B	-
34	G	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	SB	-
42	BR	-
43	EG	-
44	EG	-
46	R	-
51	SB	-
52	V	-
54	R	-
55	GR	-
56	W	-
58	GR	-
62	BG	-
63	BR	-
64	Y	-
65	W	-
70	R	-
71	W	-
72	B	-
74	L	-
75	V	-
76	BR	-
81	B	-
83	BG	-
84	L	-
85	V	-
86	B	-
88	G	-
91	GR	-
94	GR	-
96	Y	-
97	V	-
98	BR	-

Connector No.	B48
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH22FY-IV-EX



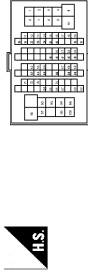
Terminal No.	Color Of Wire	Signal Name [Specification]
10	Y/R	RRH (+)
11	Y/B	RRH (-)
14	Y/G	ELR RH2+
15	Y	ELR RH2-
26	V	OCS INPUT
29	LG	RH BUCKLE SW INPUT
31	Y/R	SRH (+)
32	Y/B	SRH (-)
35	Y	GRH (+)
36	L	GRH (-)
47	R	SIDE SENS RH+
48	L	SIDE SENS RH-
55	B	GND
61	G	SATELLITE RH (+)
62	R	SATELLITE RH (-)

Connector No.	B58
Connector Name	SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)
Connector Type	TH08FW-NH



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

Connector No.	B92
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-CS16-TM4



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

JRHWC0601GB

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

SEAT BELT WARNING SYSTEM

< WIRING DIAGRAM >

FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM

46	SHIELD	-
47	SHIELD	-
48	EG	-
49	G	-
50	Y	-
51	R	-
52	GR	-
53	P	-
54	LG	-
55	W	-
56	Y	-
57	R	-
58	GR	-
59	W	-
60	Y	-
61	R	-
62	GR	-
63	W	-
64	Y	-
65	R	-
66	GR	-
67	W	-
68	Y	-
69	R	-
70	GR	-
71	W	-
72	Y	-
73	R	-
74	GR	-
75	W	-
76	Y	-
77	R	-
78	GR	-
79	W	-
80	Y	-
81	R	-
82	GR	-
83	W	-
84	Y	-
85	R	-
86	GR	-
87	W	-
88	Y	-
89	R	-
90	GR	-
91	W	-
92	Y	-
93	R	-
94	GR	-
95	W	-
96	Y	-
97	R	-
98	GR	-
99	W	-
100	Y	-

Connector No.	BES
Connector Name	OCCUPANT DETECTION SYSTEM CONTROL UNIT
Connector Type	TH08FW-NH



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

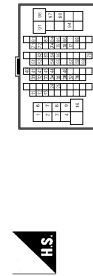
Connector No.	M5
Connector Name	APR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH02FY-EX



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	IGN
2	B	GND
3	Y/R	DR1 (-)
4	Y/B	DR1 (+)
5	Y	DR2 (-)
6	Y/R	DR2 (+)
7	Y/B	AS1 (-)
8	Y/G	AS1 (+)
9	Y	AS2 (-)
10	Y	AS2 (+)
11	BR	ECSS-
12	Y/R	ACT VENT+
13	Y/B	ACT VENT-
14	SHIELD	GND
15	V	AIRBAG W/L
16	G	-

25	GR	A R OFF MD
26	Y	SAT LITE BAP (+)
27	R	SIDE SENS BAP+
28	V	SIDE SENS BAP-
29	L	SIDE SENS LH+
30	LG	SIDE SENS LH-
31	W	IVCS
32	L	GAM-H
33	P	GAM-L

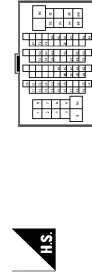
Connector No.	MT9
Connector Name	WIRE TO WIRE
Connector Type	TH08MW-CS1P-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	SR	-
4	BR	-
5	Y	-
6	W	-
7	V	-
8	Y	-
9	BR	-
10	P	-
11	BR	-
12	LG	-
13	GR	-
14	Y	-
15	W	-
16	Y	-
17	BR	-
18	Y	-
19	B	-
20	B	-
21	Y	-
22	W	-
23	Y	-
24	SR	-
25	LG	-
26	P	-
27	G	-
28	BR	-
29	Y	-
30	BR	-

44	BR	-
45	EG	-
46	Y	-
47	V	-
48	R	-
49	W	-
50	Y	-
51	W	-
52	LG	-
53	W	-
54	B	-
55	L	-
56	W	-
57	W	-
58	BR	-
59	B	-
60	EG	-
61	B	-
62	EG	-
63	BR	-
64	Y	-
65	W	-
66	Y	-
67	W	-
68	LG	-
69	W	-
70	B	-
71	L	-
72	W	-
73	W	-
74	W	-
75	W	-
76	BR	-
77	B	-
78	B	-
79	EG	-
80	L	-
81	W	-
82	B	-
83	G	-
84	GR	-
85	GR	-
86	Y	-
87	Y	-
88	BR	-

Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH08MW-CS1P-TM4



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

JRHWC0602GB

SEAT BELT WARNING SYSTEM

< WIRING DIAGRAM >

FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM

4	SHIELD	-
5	G	-
6	GR	-
7	LG	-
8	P	-
9	SHIELD	-
10	V	-
11	GR	-
12	V	-
13	LG	-
14	LG	-
15	P	-
16	SB	- [With DOM]
17	V	- [Without DOM]
18	Y	-
19	L	-
20	G	-
21	GR	-
22	R	-
23	L	-
24	V	-
25	LG	-
26	GR	-
29	SB	-
30	LG	-
36	R	-
37	R	-
38	W	-
39	V	-
45	G	-
46	SHIELD	-
47	G	-
48	BR	-
49	SB	-
52	Y	-
53	R	-
54	GR	-
57	R	-
58	SB	-
59	LG	-
62	V	-
63	L	-
64	W	-
66	R	-
68	L	-
69	P	-
71	R	-
72	G	-
73	SHIELD	-

76	V	-
77	GR	-
78	BR	-
86	LG	-
87	V	-
88	BR	-
89	V	-
90	V	-
92	W	-
93	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
98	BR	-
100	BR	-

Connector No.	M67
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
7	B	SECURITY SIGNAL
8	B	-
11	W	ALTERNATOR SIGNAL
12	G	LED HEADLAMP (RH) WARNING SIGNAL
13	BR	LED HEADLAMP (LH) WARNING SIGNAL
14	V	ACC POWER SUPPLY
16	V	AIR BAG SIGNAL
17	BR	METER CONTROL SWITCH GROUND
18	SB	TRIP/RESET SIGNAL
21	B	STEERING SWITCH SIGNAL GROUND
22	B	STEERING SWITCH SIGNAL A
23	W/B	STEERING SWITCH SIGNAL B
24	LG	WASHER LEVEL SWITCH SIGNAL
25	LG	BRAKE FLUID LEVEL SWITCH SIGNAL
26	V	PARKING BRAKE SWITCH SIGNAL
27	G	PASSENGER SEAT BELT WARNING SIGNAL
28	W	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
30	SB	MANUAL MODE SIGNAL

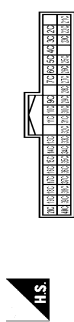
31	G	NON-MANUAL MODE SIGNAL
32	GR	MANUAL MODE SHIFTER DOWN SIGNAL
33	GR	MANUAL MODE SHIFTER UP SIGNAL
34	GR	PADDER SHIFTER UP SIGNAL
35	G	PADDER SHIFTER DOWN SIGNAL
36	V	ILLUMINATION CONTROL SWITCH SIGNAL (+)
37	GR	ILLUMINATION CONTROL SWITCH SIGNAL (-)
38	R	VEHICLE SPEED SIGNAL (8-PULSE)
39	L	VEHICLE SPEED SIGNAL (2-PULSE)

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



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

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



Terminal No.	Color Of Wire	Signal Name [Specification]
102	V	-
103	Y	-
132	Y	-
142	Y	-
152	R	-
162	R	-
172	L	-
182	EG	- [Without DRPO]
183	P	- [With DRPO]
192	B	-
202	W	-
212	L	-
222	L	-
232	L	-
252	LG	-
262	SB	-
272	W	-
282	W	-
292	R	-
302	R	-
312	W	-
322	R	-
332	B	-
342	W/B	-
352	SB	-
362	R	-
372	W	-
382	SB	-
392	P	-
402	G	-
422	P	-
432	P	-
442	G	-
452	G	-
462	G	-
472	G	-

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

SEAT BELT WARNING SYSTEM

< WIRING DIAGRAM >

FRONT SEAT BELT WARNING LAMP CONTROL SYSTEM

IG	+	
	-	

JRHWC0604GB

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

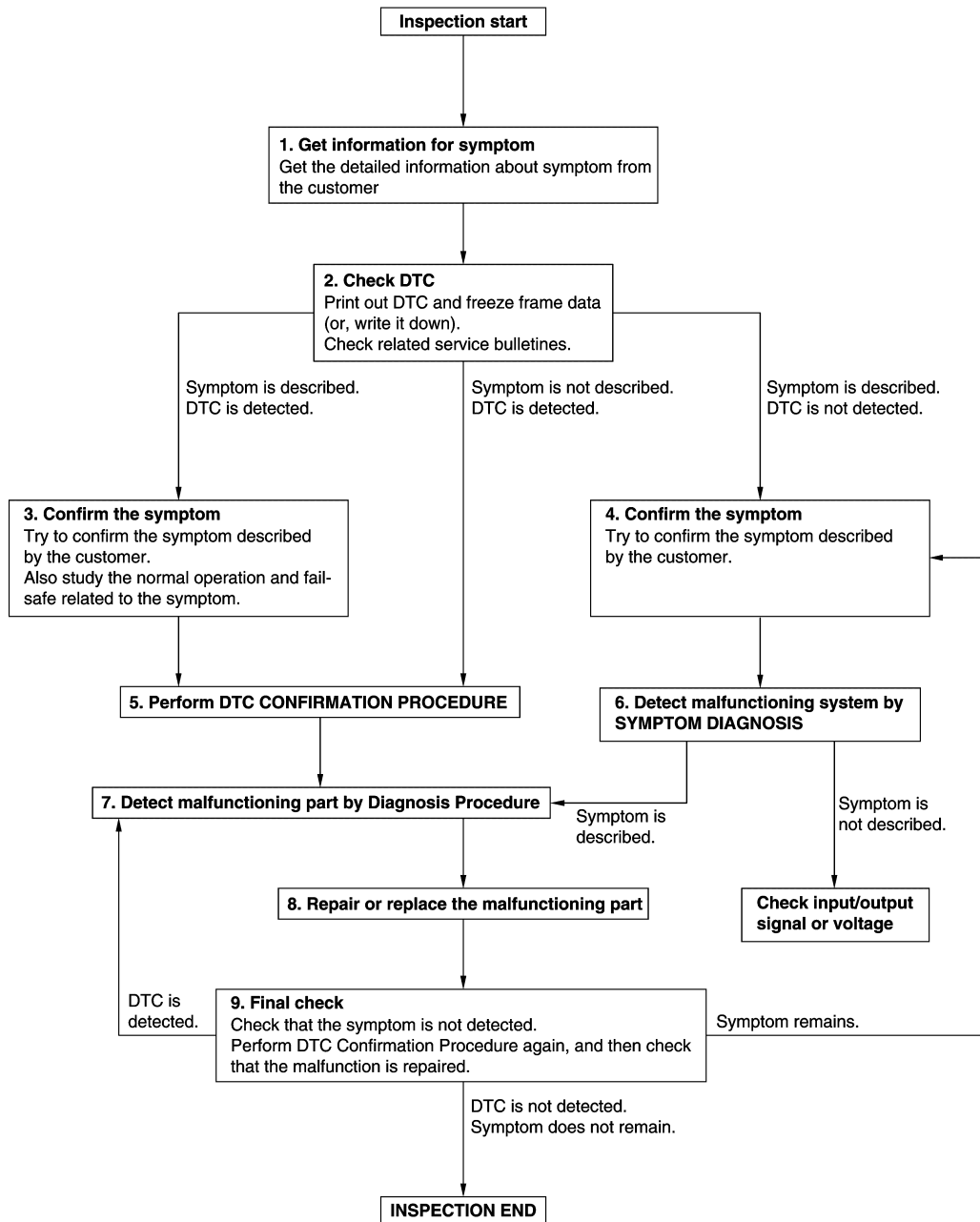
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000009237197

OVERALL SEQUENCE



DETAILED FLOW

JMKIA8652GB

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

Are any symptoms described and any DTC detected?

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

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

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

3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

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

NOTE:

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

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

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-43, "Intermittent Incident"](#).

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 7.

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

7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

YES >> GO TO 8.

NO >> Check according to [GI-43, "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.

A

B

C

D

E

F

G

SBC

I

J

K

L

M

N

O

P

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Description

INFOID:000000009237199

- CAN (Controller Area Network) is a serial communication line for real time applications. It is an on board multiplex communication line with high data communication speed and excellent error detection ability. A modern vehicle is equipped with many electric control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, two control units are connected with two communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
- Refer to [LAN-42, "CAN COMMUNICATION SYSTEM : CAN System Specification Chart"](#) in LAN section for CAN communication unit.

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

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

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

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

DTC CONFIRMATION PROCEDURE

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

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

Is DTC "U1000" displayed?

- YES >> Refer to [LAN-26, "Trouble Diagnosis Flow Chart"](#).
- NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END.

U0126 ST ANG SEN SIG

< DTC/CIRCUIT DIAGNOSIS >

U0126 ST ANG SEN SIG

DTC Description

INFOID:000000009237200

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

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

Driver side

Stop the operation in the conditions as per the following.

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

Passenger side

Stop the operation in the conditions as per the following.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

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

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

Is DTC detected?

- YES >> Refer to [SBC-41, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237202

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

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

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

Is DTC detected?

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

3.CHECK INTERMITTENT INCIDENT

U0126 ST ANG SEN SIG

< DTC/CIRCUIT DIAGNOSIS >

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

U0428 STRG ANGL CAL

< DTC/CIRCUIT DIAGNOSIS >

U0428 STRG ANGL CAL

DTC Description

INFOID:000000009237204

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

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Steering angle sensor calibration incomplete

FAIL-SAFE

Driver side

Stops the operation in the conditions as per the following.

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

Passenger side

Stops the operation in the conditions as per the following.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

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

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000009237205

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

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

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

Is DTC detected?

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

3.CHECK INTERMITTENT INCIDENT

U0428 STRG ANGL CAL

< DTC/CIRCUIT DIAGNOSIS >

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

B2451 SEAT BLT MTR DR CIRC

< DTC/CIRCUIT DIAGNOSIS >

B2451 SEAT BLT MTR DR CIRC

DTC Description

INFOID:000000009237206

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Pre-crash seat belt control unit (driver side)

FAIL-SAFE

Fully deactivates the whole operation.

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

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

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237207

1.INSPECTION START

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

Is DTC B2451 displayed again?

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

NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

B2452 SEAT BLT MTR AS CIRC

< DTC/CIRCUIT DIAGNOSIS >

B2452 SEAT BLT MTR AS CIRC

DTC Description

INFOID:000000009237208

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Pre-crash seat belt control unit (passenger side)

FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Fully deactivates the whole operation.

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

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

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237209

1. INSPECTION START

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

Is DTC B2452 displayed again?

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

NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

B2453 BR STROKE SEN CIRC

< DTC/CIRCUIT DIAGNOSIS >

B2453 BR STROKE SEN CIRC

DTC Description

INFOID:000000009237210

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

Driver side

Stops the operation in the conditions as per the following.

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

Passenger side

Stops the operation in the conditions as per the following.

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

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

- YES >> Refer to [SBC-47, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237211

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

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

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

Is the inspection result normal?

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

2.CHECK BRAKE PEDAL STROKE SENSOR POWER SUPPLY

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

B2453 BR STROKE SEN CIRC

< DTC/CIRCUIT DIAGNOSIS >

Brake pedal stroke sensor		Ground	Voltage (V) (Approx.)
Connector	Terminal		
E32	2		5

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK BRAKE PEDAL STROKE SENSOR POWER SUPPLY CIRCUIT

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

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

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

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B19	10		Not existed

Is the inspection result normal?

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

NO >> Repair or replace harness or connector.

4.CHECK BRAKE PEDAL STROKE SENSOR CIRCUIT

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

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

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

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B19	2		Not existed
	12		
	17		

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connector.

5.CHECK BRAKE PEDAL STROKE SENSOR

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

Is the inspection result normal?

YES >> GO TO 6.

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

B2453 BR STROKE SEN CIRC

< DTC/CIRCUIT DIAGNOSIS >

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:0000000009237212

1.CHECK BRAKE PEDAL STROKE SENSOR

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

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

Is the inspection result normal?

YES >> INSPECTION END

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

SBC

B2454 SEAT BLT PWR DR CIRC

< DTC/CIRCUIT DIAGNOSIS >

B2454 SEAT BLT PWR DR CIRC

DTC Description

INFOID:000000009237213

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

Fully deactivates the whole operation.

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

- YES >> Refer to [SBC-50, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237214

1.CHECK FUSIBLE LINK

Check that the following fusible link is not blown.

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

Is the inspection result normal?

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

2.CHECK PRE-CRASH SEAT BELT MOTOR POWER SUPPLY

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

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

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

B2455 CONTROL UNIT DR

< DTC/CIRCUIT DIAGNOSIS >

B2455 CONTROL UNIT DR

DTC Description

INFOID:000000009237215

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Pre-crash seat belt control unit (driver side)

FAIL-SAFE

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

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

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

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

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

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237216

1..INSPECTION START

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

Is DTC B2455 displayed again?

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

NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

B2456 SEAT BLT PWR AS

< DTC/CIRCUIT DIAGNOSIS >

B2456 SEAT BLT PWR AS

DTC Description

INFOID:0000000092372.17

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Fully deactivates the whole operation.

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

YES >> Refer to [SBC-52, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000092372.18

1.CHECK FUSIBLE LINK

Check that the following fusible link is not blown.

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fusible link after repairing the affected circuit if a fuse or fusible link is blown.

2.CHECK PRE-CRASH SEAT BELT MOTOR POWER SUPPLY

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

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

Is the inspection result normal?

YES >> GO TO 3.

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

B2456 SEAT BLT PWR AS

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK SELF DIAGNOSTIC RESULT

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

Is DTC B2456 displayed again?

- YES >> Replace pre-crash seat belt control unit (passenger side). Refer to [SB-9, "SEAT BELT RETRAC-TOR : Removal and Installation"](#).
- NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "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

DTC Description

INFOID:000000009237219

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Pre-crash seat belt control unit (passenger side)

FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Fully deactivates the whole operation.*¹

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

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

YES >> Refer to [SBC-54, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237220

1..INSPECTION START

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

Is DTC B2457 displayed again?

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

NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

B2458 LOCAL COMM

< DTC/CIRCUIT DIAGNOSIS >

B2458 LOCAL COMM

DTC Description

INFOID:000000009237221

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

Fully deactivates the whole operation.*¹

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

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

- YES >> Refer to [SBC-55, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237222

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

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

Is the inspection result normal?

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

2.CHECK LOCAL COMMUNICATION LINE CIRCUIT

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

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

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

B2458 LOCAL COMM

< DTC/CIRCUIT DIAGNOSIS >

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

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-43, "Intermittent Incident"](#).

>> INSPECTION END

B2461 VHCL SPEED SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

B2461 VHCL SPEED SIGNAL

DTC Description

INFOID:000000009237224

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

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Combination meter

FAIL-SAFE

Driver side

Stops the operation in the conditions as per the following.

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

Passenger side

Stops the operation in the conditions as per the following.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

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

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

Is DTC detected?

- YES >> Refer to [SBC-57. "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237225

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

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

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

B2461 VHCL SPEED SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

Is DTC detected?

YES >> Repair or replace malfunctioning parts.

NO >> GO TO 3.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

B2466 DR/AS CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

B2466 DR/AS CONTROL UNIT

DTC Description

INFOID:000000009237226

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

Driver side

Deactivates a part of comfort function.

Passenger side

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

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

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

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

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

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237227

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-43, "Intermittent Incident"](#).

>> INSPECTION END

B2470 SYS HEAT PROTC DR

< DTC/CIRCUIT DIAGNOSIS >

B2470 SYS HEAT PROTC DR

DTC Description

INFOID:000000009237229

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

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Belt retracting function activates continuously in a short period of time

FAIL-SAFE

Driver side

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

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

YES >> Refer to [SBC-60, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237230

1.CHECK THE VEHICLE CONDITION WITH CONSULT DATA MONITOR

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

Is DTC B2470 displayed again?

YES >> GO TO 2.

NO >> INSPECTION END

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

B2471 SYS HEAT PROTC AS

< DTC/CIRCUIT DIAGNOSIS >

B2471 SYS HEAT PROTC AS

DTC Description

INFOID:000000009237232

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

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Belt retracting function activates continuously in the short period of time

FAIL-SAFE

Passenger side

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

DTC CONFIRMATION PROCEDURE

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

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

Is DTC detected?

- YES >> Refer to [SBC-61, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009237233

1.CHECK THE VEHICLE CONDITION WITH CONSULT DATA MONITOR

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

Is DTC B2471 displayed again?

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

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-43, "Intermittent Incident"](#).

>> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000009237234

1.CHECK FUSE

Check that the following fuse is not blown.

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

Is the fuse blown?

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

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

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

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

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK GROUND CIRCUIT

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

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

Does continuity exist?

YES >> INSPECTION END

NO >> Repair or replace harness.

SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Description

INFOID:000000009237235

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

Component Function Check

INFOID:000000009237236

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

 With CONSULT

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

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

Is the inspection result normal?

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

Diagnosis Procedure

INFOID:000000009237237

SBC

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

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

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

Is the inspection result normal?

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

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

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

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

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

SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

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

Is the inspection result normal?

YES >> GO TO 3.

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

3.CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

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

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

Is the inspection result normal?

YES >> GO TO 4.

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

4.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Check seat belt buckle switch (driver side).

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

Is the inspection result normal?

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

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

Component Inspection

INFOID:000000009237238

1.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

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

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

Is the inspection result normal?

YES >> INSPECTION END

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

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Description

INFOID:000000009237239

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

Component Function Check

INFOID:000000009237240

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

 With CONSULT

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

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

Is the inspection result normal?

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

NO >> Refer to [SBC-65, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009237241

SBC

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

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

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

Is the inspection result normal?

YES >> Replace seat belt buckle switch (passenger side). Refer to [SB-9, "SEAT BELT RETRACTOR : Removal and Installation"](#).

NO >> GO TO 2.

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

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

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

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

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

Pre-crash seat belt control unit (passenger side)		Ground	Continuity
Connector	Terminal		
B64	6		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		
B56	2		Existed

Is the inspection result normal?

YES >> GO TO 4.

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

4.CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Check seat belt buckle switch (passenger side).

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

Is the inspection result normal?

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

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

Component Inspection

INFOID:000000009237242

1.CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

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

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

Is the inspection result normal?

YES >> INSPECTION END

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

SEAT BELT WARNING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT WARNING LAMP CIRCUIT

Component Function Check

INFOID:000000009237243

1.CHECK SEAT BELT WARNING LAMP FUNCTION-I

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

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

Is the inspection results normal?

YES >> GO TO 2.

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

2.CHECK SEAT BELT WARNING LAMP FUNCTION-II

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

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

Is the inspection results normal?

YES >> Seat belt warning lamp circuit is normal.

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

Diagnosis Procedure

INFOID:000000009237244

1.CHECK SEAT BELT WARNING LAMP

Check seat belt warning lamp component function check result.

Which seat belt warning lamp circuit is not normal?

>> Driver side: GO TO 4.

>> Passenger side: GO TO 8.

>> Both side: GO TO 2.

2.CHECK COMBINATION METER POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness connector.

3.CHECK COMBINATION METER INTERNAL CIRCUIT

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

SEAT BELT WARNING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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

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

Is the inspection result normal?

YES >> GO TO 13.

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

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

- 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	
M57	28	B4	1	Existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness connector.

5.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Check seat belt buckle switch.

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

Is the inspection result normal?

YES >> GO TO 6.

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

6.CHECK COMBINATION METER GROUND CIRCUIT

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

Combination meter		Ground	Continuity
Connector	Terminal		
M57	28		Existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness connector.

7.CHECK COMBINATION METER INTERNAL CIRCUIT

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

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

Is the inspection result normal?

YES >> GO TO 13.

SEAT BELT WARNING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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

8.CHECK HARNESS CONNECTOR

WARNING:

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

Check the harness connector.

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness connector.

9.CHECK WIRING HARNESS

Check the wiring harness externals.

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace wiring harness.

10.CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Check seat belt buckle switch (passenger side).

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

Is the inspection result normal?

YES >> GO TO 11.

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

11.REPLACE COMBINATION METER

1. Replace combination meter.

Refer to [MWI-126. "Removal and Installation"](#).

2. Confirm the operation after replacement.

Is the result normal?

YES >> INSPECTION END

NO >> GO TO 12.

12.REPLACE AIR BAG DIAGNOSIS SENSOR UNIT

1. Replace bag diagnosis sensor unit.

Refer to [SR-35. "Removal and Installation"](#).

2. Confirm the operation after replacement.

Is the result normal?

YES >> INSPECTION END

NO >> GO TO 13.

13.CHECK INTERMITTENT INCIDENT

Refer to [GI-43. "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000009237245

1.CHECK SEAT BELT BUCKLE SWITCH

1. Turn ignition switch OFF.

2. Disconnect seat belt buckle switch harness connector.

3. Check continuity between seat belt buckle switch terminals.

SEAT BELT WARNING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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

Is the inspection result normal?

YES >> INSPECTION END

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

PRE-CRASH SEAT BELT DOSE NOT OPERATE

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

PRE-CRASH SEAT BELT DOSE NOT OPERATE
BOTH SIDES

BOTH SIDES : Diagnosis Procedure

INFOID:000000009237246

1.CHECK POWER SUPPLY AND GROUND CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-43, "Intermittent Incident"](#).

NO >> GO TO 1.

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:000000009237247

1.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-43, "Intermittent Incident"](#).

NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000009237248

1.CHECK POWER SUPPLY AND GROUND CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-43, "Intermittent Incident"](#).

NO >> GO TO 1.

SEAT BELT WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

SEAT BELT WARNING LAMP DOES NOT TURN OFF

Diagnosis Procedure

INFOID:000000009237249

1.CHECK SEAT BELT WARNING LAMP CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-43, "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:000000009237250

1.CHECK SEAT BELT WARNING LAMP CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-43, "Intermittent Incident"](#).

NO >> GO TO 1.

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

SBC

SEAT BELT WARNING CHIME DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

SEAT BELT WARNING CHIME DOES NOT SOUND

Diagnosis Procedure

INFOID:000000009724644

1.CHECK SEAT BELT WARNING LAMP CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-43, "Intermittent Incident"](#).

NO >> GO TO 1.

BRAKE PEDAL STROKE SENSOR

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

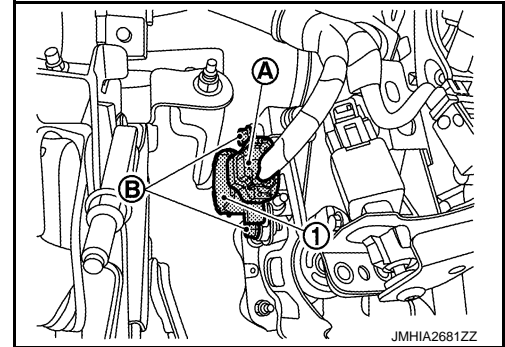
BRAKE PEDAL STROKE SENSOR

Removal and Installation

INFOID:000000009724645

REMOVAL

1. Remove instrument lower panel LH. Refer to [IP-12. "Removal and Installation"](#).
2. Disconnect brake pedal stroke sensor connector (A).
3. Remove mounting bolts (B).
4. Remove brake pedal stroke sensor (1).



INSTALLATION

Install in the reverse order of removal.

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

SBC

PRE-CRASH SEAT BELT CONTROL UNIT

< REMOVAL AND INSTALLATION >

PRE-CRASH SEAT BELT CONTROL UNIT

Exploded View

INFOID:000000009724646

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

Removal and Installation

INFOID:000000009724647

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