SECTION SBC
SEAT BELT CONTROL SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006237873

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:

- **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 the “SRS AIR BAG”.**
- **Do not 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:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT 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:0000000006237874

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-11, "System Diagram".**
- **Do not use disassemble buckle or seat belt assembly.**
- **Replace anchor bolts if they are deformed or worn out.**
- **Never oil tongue and buckle.**
- **If any component of seat belt assembly is questionable, do not repair. Replace the whole seat belt assembly.**
- **If webbing is cut, frayed, or damaged, replace seat belt assembly.**
- **When replacing seat belt assembly, use a genuine NISSAN seat belt assembly.**

AFTER A COLLISION

WARNING:

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

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

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

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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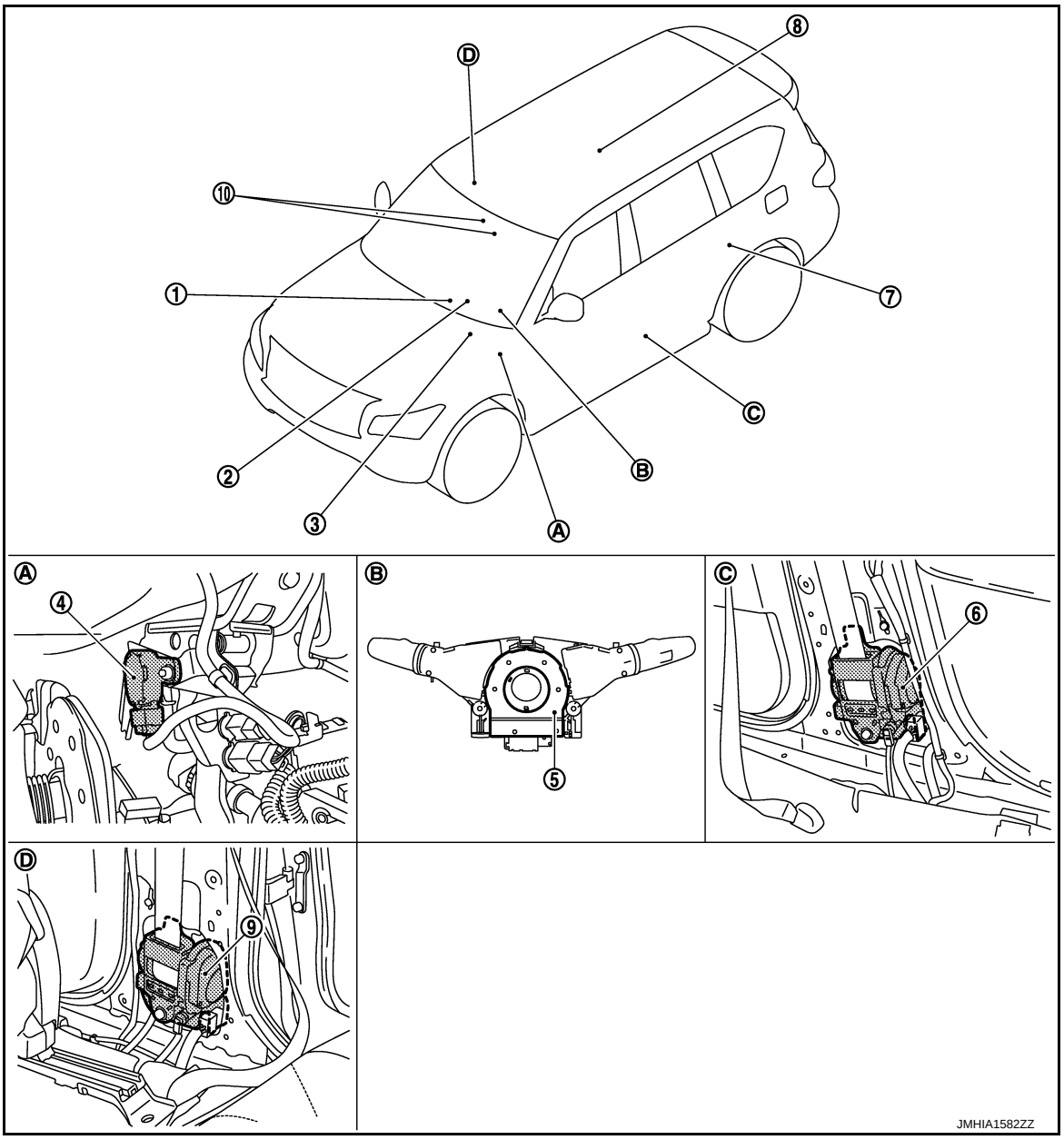

1. BCM
   Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location".
2. Combination meter
   Refer to MWI-6, "METER SYSTEM : Component Parts Location".
3. ABS actuator and electric unit (control unit)
   Refer to BRC-149, "Component Parts Location".
4. Brake pedal stroke sensor
5. Steering angle sensor Pre-crash
6. Pre-crash seat belt control unit (driver side)
7. ADAS control unit
   Refer to DAS-13, "Component Parts Location".
8. Air bag diagnosis sensor unit
   Refer to SRC-8, "Component Parts Location".
9. Seat belt control unit (passenger side)
10. Seat belt buckle switch

A. View with instrument driver lower cover removed
B. Combination switch
C. View with center pillar lower garnish removed (driver side)
D. View with center pillar lower garnish removed (passenger side)

Component Description

INFOID:0000000006237876

Component	Function
ABS actuator and electric unit (control unit)	ABS operation signal is received from ABS actuator and electric unit (control unit) via CAN communication.
ADAS control unit	Intelligent brake assistance operation signal is received from ADAS control unit via CAN communication.
Air bag diagnosis sensor unit	• Detects a collision and supplies power supply for deployment to air bag module and pre-tensioner seat belt. • Performs the deploy judgement of passenger air bag based on the information from Occupant Detection System control unit
BCM	Ignition ON signal, sleep/wake up signal, and door switch signal are received from BCM via CAN communication.
Brake pedal stroke sensor	• 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.
Combination meter	• 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.
Occupant detection system control unit	Judges the passenger seat condition based on the information from occupant detection unit.
Pre-crush seat belt control unit (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), driver seat belt motor, and tension reducer. • Seat belt motor operates each operation of pull, return, and hold.
Pre-crush seat belt control unit (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 (driver seat), driver seat belt motor, and tension reducer. • Seat belt motor operates each operation of pull, return, and hold.
Seat belt buckle switch (driver side)	• Fastening or not fastening of seat belt is judged. This judgment is used for control of driver pre-crash seat belt system. • Seat belt warning lamp on combination meter turns ON when seat belt is not fastened while ignition switch is ON. • The seat belt buckle switch is installed in the seat belt buckle.
Seat belt buckle switch (passenger side)	• Fastening or not fastening of seat belt is judged. This judgment is used to control passenger pre-crash seat belt system. • The seat belt buckle switch is installed in the seat belt buckle.
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.

SYSTEM

PRE-CRASH SEAT BELT SYSTEM

PRE-CRASH SEAT BELT SYSTEM : System Diagram

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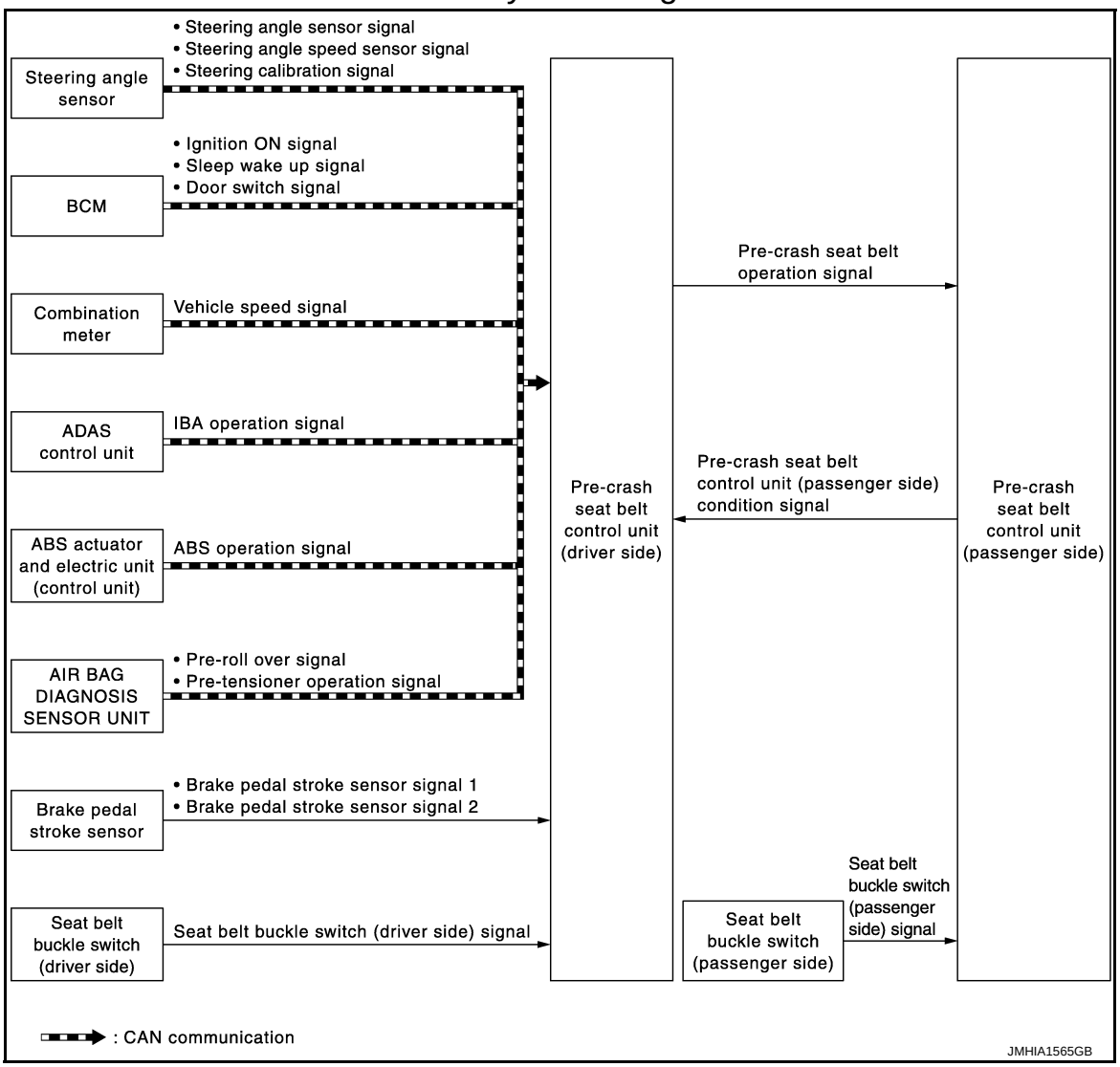

PRE-CRASH SEAT BELT SYSTEM : System Description

INFOID:0000000006237878

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

FUNCTION DESCRIPTION

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

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

- When the vehicle inclined excessively
- 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-crush seat belt are as per the following.

Operation item	Operation start condition	Operation stop condition
During emergency brake operation	• Vehicle speed is 15 km/h (9 MPH) or more • Emergency braking status is detected	• During acceleration • When stopped
When ABS continuously operates	• ABS continuously operates for 2 seconds or more • Brake pedal is in depressed state	
When intelligent brake assistance operates	System detects that intelligent brake assistance is in operating status	2 seconds after operation start
When lateral slippage during cornering occurs	• 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	• Vehicle stopped • 1 second or more after maintaining steering wheel angle in straight driving state
When steering wheel is rotated for emergency	• 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	
When the vehicle inclined excessively	• Vehicle speed is 30 km/h (19 MPH) or more • System detects that the vehicle inclined excessively	• During acceleration • Vehicle stopped

NOTE:
For details of intelligent brake assist system.Refer to BRC-152, "INTELLIGENT BRAKE ASSIST : 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	• Seat belt is in not fastened state • Door is operated to open from closed • Vehicle stopped	• Seat belt retract is complete • 13 seconds after start retracting
Seat belt is fastened	• When door is closed • Seat belt is fastened	• Seat belt is unfastened • 1 second after operation
Seat belt is release	Seat belt is unfastened	• Seat belt retract is complete • 10 seconds after start retracting

Operation Prohibition Condition

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

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

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

MALFUNCTION WARNING

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

PRE-CRASH SEAT BELT SYSTEM : Fail Safe

INFOID:0000000006237879

- 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-III		Fail-safe
U0126	STRG ANG SEN SIG	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
U0428	STRG ANGL CAL	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
U1000	CAN communication circuit	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 Intelligent brake assistance operates • When steering wheel is rotated for emergency • When the vehicle inclined excessively • A part or the whole comfort function
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. • During emergency brake operation • When ABS continuously operates • A part of comfort function
B2454	SEAT BLT PWR DR CIRC	Fully deactivates the whole operation.
B2455	CONTROL UNIT DR	Stops the operation in the conditions as per the following. *1 • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When Intelligent brake assistance operates • When steering wheel is rotated for emergency • When the vehicle inclined excessively • 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. • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When steering wheel is rotated for emergency • When the vehicle inclined excessively • When comfort function operates
B2463	ROLLOVER SIGNAL	Stops the operation in the conditions as per the following. • When the vehicle inclined excessively • A part or the whole comfort function
B2466	DR/AS CONTROL UNIT	Deactivates a part of comfort function.
B2470	SYS HEAT PROTC DR	• 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

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

SEAT BELT WARNING LAMP SYSTEM

SEAT BELT WARNING LAMP SYSTEM : System Diagram

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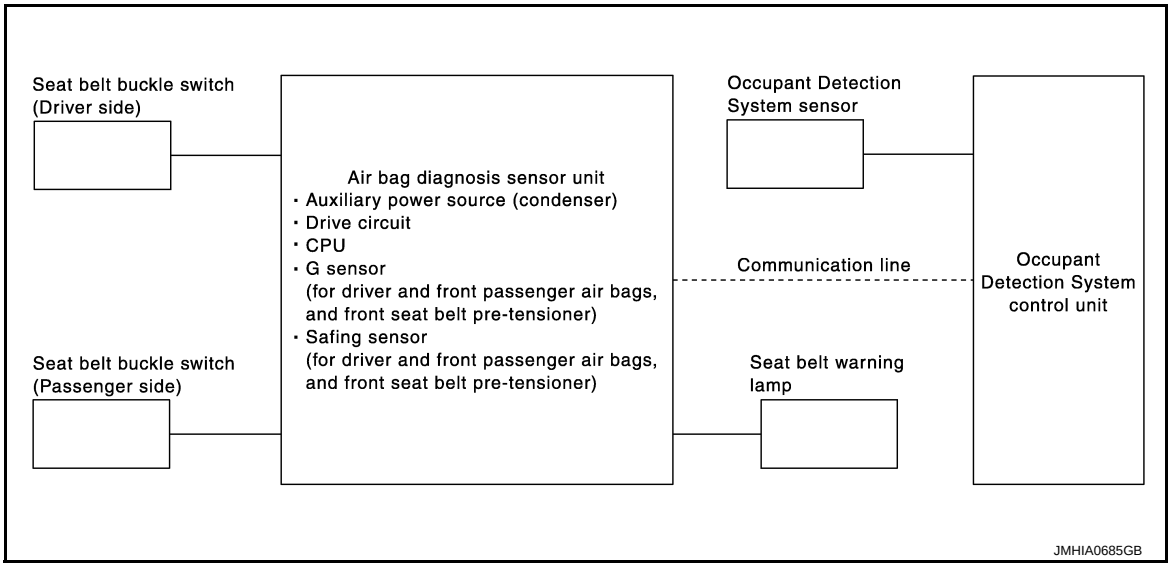

SEAT BELT WARNING LAMP SYSTEM : System Description

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- Turns ON seat belt warning lamp, when the Occupant Detection System judges adult or child in the front passenger seat and the passenger seat belt buckle switch is OFF.
- Operation of air bag diagnosis sensor unit when air bag diagnosis sensor unit receives information from Occupant Detection System.
- In addition, seat belt warning lamp illuminates, when the driver side seat belt is not fasten. This does not relate to the air bag diagnosis sensor unit.
- For driver seat belt function, refer to MWI-16, "MASTER WARNING LAMP : System Diagram"

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

DIAGNOSIS SYSTEM (PRE-CRASH SEAT BELT)

CONSULT-III Function

INFOID:0000000006237882

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

APPLICATION ITEM

Part to be diagnosed	Diagnosis Mode	Function description
Pre-crash seat belt	Self-diagnosis Results	• Displays data recorded when a malfunction is detected. • 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-16, "DTC Index".

CAUTION:

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

A malfunction of system may be displayed when battery voltage is low (when 7 to 8 V is continued for approximately 2 seconds) even though the system is not malfunctioning. Erase DTC memory and never replace any parts after making sure that the system is normal, especially if the malfunctions are displayed after replacing battery.

ERASING SELF-DIAGNOSIS RESULTS

- SELF-DIAGNOSIS RESULTS
  Current “SELF-DIAG RESULTS” are displayed. (If all suspect circuits have been repaired, “NO DTC” is displayed.)

DATA MONITOR

Monitor item	Contents
BUCKLE SW RH	Indicates [ON/OFF] condition of seat belt buckle switch (RH).
BUCKLE SW LH	Indicates [ON/OFF] condition of seat belt buckle switch (LH).
VEHICLE DISTANCE	Indicates [ON/OFF] condition of intelligent brake assist signal.
IGN SW	Indicates [ON/OFF] condition of ignition switch.
FR DOOR SW RH	Indicates [Close/Open] condition of front door switch (RH).
FR DOOR SW LH	Indicates [Close/Open] condition of front door switch (LH).
ABS ACTIVATING	Indicates [ON/OFF] condition of ABS operation signal.
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.
INCLINATION JDMT	Indicates [ON/OFF] condition of pre roll over signal.
PRE-TEN ACTIVTN	Indicates [ON/OFF] condition of pre-tensioner operated signal.
HEAT PROTC RH	Indicates [ON/OFF] condition of heat protection (RH).
HEAT PROTC LH	Indicates [ON/OFF] condition of heat protection (LH).

WORK SUPPORT

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

ECU DIAGNOSIS INFORMATION

PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)

Reference Value

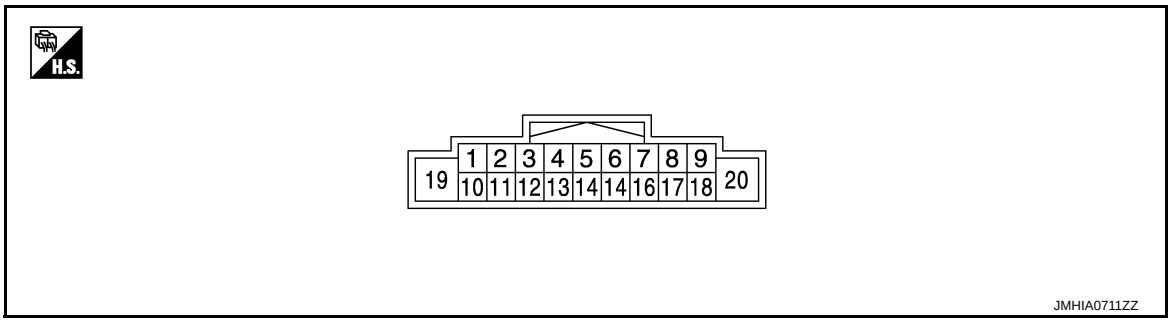
INFOID:0000000006237883

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor item	Condition	Value/Status (Approx.)
BUCKLE SW RH	RH seat belt is not fastened	OFF
	RH seat belt is fastened	ON
BUCKLE SW LH	RH seat belt is not fastened	OFF
	RH seat belt is fastened	ON
VEHICLE DISTANCE	Not activated	OFF
	Activated	ON
IGN SW	Ignition switch OFF	OFF
	Ignition switch ON	ON
FR DOOR SW RH	LH door close	CLOSE
	LH door open	OPEN
FR DOOR SW LH	RH door close	CLOSE
	RH door open	OPEN
ABS ACTIVATING	ABS is inactive	OFF
	ABS is active	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 → 1 V)
STRG ANGLE	Steering wheel: 0° (Neutral)	±2.5 (deg)
	Steering wheel: 90° (Turned right)	+90 (deg)
	Steering wheel: 90° (Turned left)	-90 (deg)
STRG ANGLE SPEED	Steering wheel: Being turned	Depending on steering acceleration speed (deg/s)
INCLINATION JDMT	Vehicle is level	OFF
	Vehicle is inclined	ON
PRE-TEN ACTIVTN	Seat belt pre-tensioner is not activated	OFF
	Seat belt pre-tensioner is activated	ON
HEAT PROTC RH	RH heat protection is not activated	OFF
	RH heat protection is activated	ON
HEAT PROTC LH	LH heat protection is not activated	OFF
	LH heat protection is activated	ON

TERMINAL LAYOUT



PHYSICAL VALUES

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

Fail Safe

INFOID:0000000006237884

- 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-III		Fail-safe
U0126	STRG ANG SEN SIG	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
U0428	STRG ANGL CAL	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
U1000	CAN communication circuit	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 Intelligent brake assistance operates • When steering wheel is rotated for emergency • When the vehicle inclined excessively • A part or the whole comfort function
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. • During emergency brake operation • When ABS continuously operates • A part of comfort function
B2454	SEAT BLT PWR DR CIRC	Fully deactivates the whole operation.
B2455	CONTROL UNIT DR	Stops the operation in the conditions as per the following. *1 • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When Intelligent brake assistance operates • When steering wheel is rotated for emergency • When the vehicle inclined excessively • 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. • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When steering wheel is rotated for emergency • When the vehicle inclined excessively • When comfort function operates
B2463	ROLLOVER SIGNAL	Stops the operation in the conditions as per the following. • When the vehicle inclined excessively • A part or the whole comfort function
B2466	DR/AS CONTROL UNIT	Deactivates a part of comfort function.
B2470	SYS HEAT PROTC DR	• 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

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

DTC Index

INFOID:0000000006237885

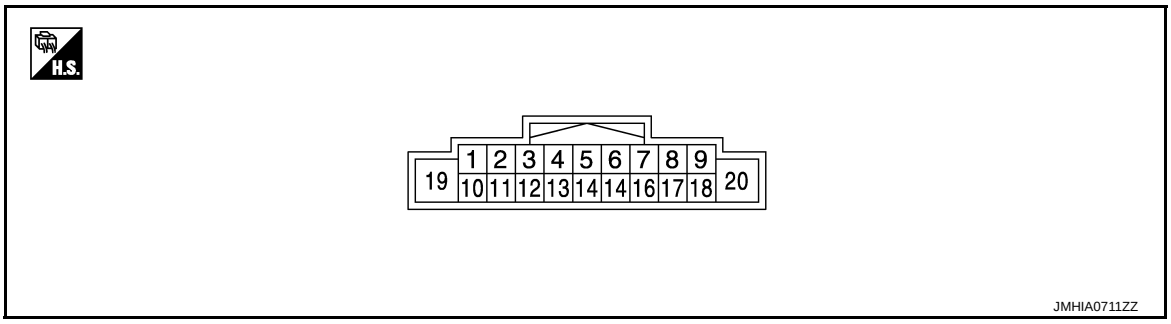
DTC	Trouble diagnosis name (CONSULT-III display)	DTC detection condition	Reference
U0126	STRG ANG SEN SIG	Steering angle sensor malfunction is received	SBC-33
U0428	STRG ANGL CAL	Steering angle sensor calibration incomplete signal is received	SBC-34
U1000	CAN COMM CIRCUIT	Pre-crash seat belt control unit cannot transmit and receive CAN communication signal for 2 seconds or more	SBC-35
B2451	SEAT BLT MTR DR CIRC	• Motor or control unit malfunction • Seat belt motor circuit is open or shorted	SBC-36
B2452	SEAT BLT MTR AS CIRC	• Motor or control unit malfunction • Seat belt motor circuit is open or shorted	SBC-37
B2453	BR_STROKE_SEN_CIRC	• Brake pedal stroke sensor malfunction • Brake pedal stroke sensor circuit is open or shorted	SBC-38
B2454	SEAT BLT PWR DR CIRC	Motor power supply circuit is open or shorted	SBC-41
B2455	CONTROL UNIT DR	Malfunction in pre-crash seat belt control unit	SBC-42
B2456	SEAT BLT PWR AS CIRC	Motor power supply circuit is open or shorted	SBC-43
B2457	CONTROL UNIT AS	Malfunction in pre-crash seat belt control unit	SBC-44
B2458	LOCAL COMM	Local communication line open or shorted	SBC-45
B2461	VHCL SPEED SIGNAL	Vehicle speed signal malfunction is received	SBC-47
B2463	ROLLOVER SIGNAL	Rollover signal malfunction is received	SBC-48
B2466	DR/AS CONTROL UNIT	Control unit is out of the vehicle specification	SBC-49
B2470	SYS HEAT PROTC DR	Deactivation for cooling to prevent system heating due to continuous operation	SBC-50
B2471	SYS HEAT PROTC AS	Deactivation for cooling to prevent system heating due to continuous operation	SBC-51

PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)

Reference Value

INFOID:0000000006237886

TERMINAL LAYOUT



PHYSICAL VALUES

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

Fail Safe

INFOID:0000000006237887

- 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-III		Fail-safe
U0126	STRG ANG SEN SIG	Stops the operation in the conditions as per the following. • 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. • When lateral slippage during cornering occurs • When steering wheel is rotated for emergency

Display contents of CONSULT-III		Fail-safe
U1000	CAN communication circuit	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 Intelligent brake assistance operates • When steering wheel is rotated for emergency • When the vehicle inclined excessively • A part or the whole comfort function
B2452	SEAT BLT MTR AS CIRC	Fully deactivates the whole operation.
B2453	BR_STROKE_SEN_CIRC	Stops the operation in the conditions as per the following. • During emergency brake operation • When ABS continuously operates
B2455	CONTROL UNIT DR	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 Intelligent brake assistance operates • When steering wheel is rotated for emergency • When the vehicle inclined excessively • A part or the whole comfort function
B2456	SEAT BLT PWR AS	Fully deactivates the whole operation.
B2457	CONTROL UNIT AS	Fully deactivates the whole operation.*1
B2458	LOCAL COMM	Fully deactivates the whole operation.*1
B2461	VHCL SPEED SIGNAL	Stops the operation in the conditions as per the following. • During emergency brake operation • When ABS continuously operates • When lateral slippage during cornering occurs • When steering wheel is rotated for emergency • When the vehicle inclined excessively • A part or the whole comfort function
B2463	ROLLOVER SIGNAL	When the vehicle inclined excessively
B2466	DR/AS CONTROL UNIT	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 the vehicle inclined excessively • A part or the whole comfort function
B2471	SYS HEAT PROTC AS	• 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

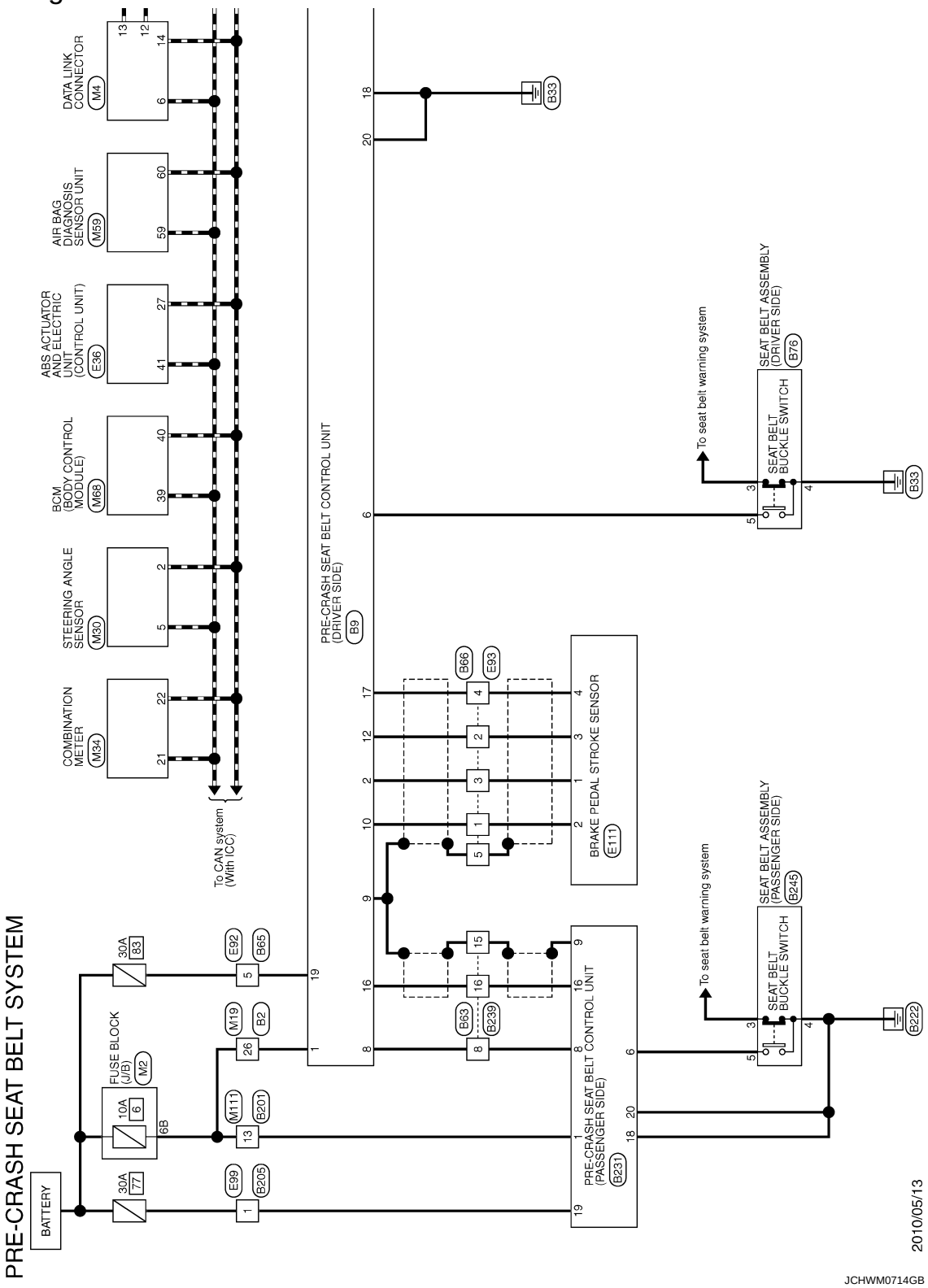
*1: The deactivation mode differs depending on the internal malfunctioning condition of control unit

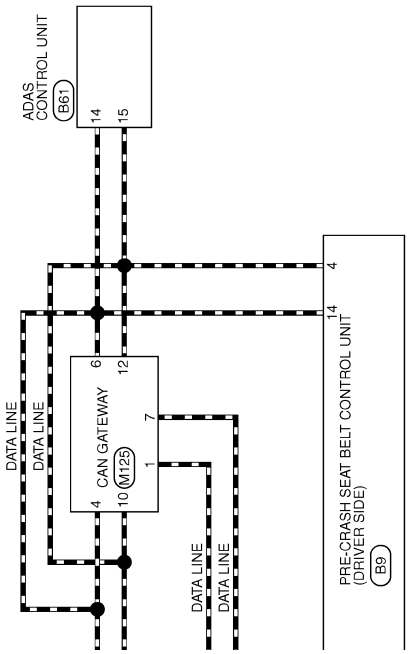
WIRING DIAGRAM

PRE-CRASH SEAT BELT SYSTEM

Wiring Diagram

INFOID:0000000006237888





JCHWM0715GB

PRE-CRASH SEAT BELT SYSTEM

Connector No.	B2
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	L	–
3	BR	–
5	R/W	–
6	L	–
7	V	–
9	G	–
11	W/B	–
12	BR	–
13	G/R	–
14	B/Y	–
15	W/R	–
16	GR/R	–
18	G/W	–
19	V	–
20	W/G	–
21	B/W	–
22	V	–
23	SHIELD	–
24	G	–
25	O	–
26	Y	–
27	L/O	–
28	Y/R	–
29	L	–
30	R	–
31	G/Y	–
32	B/SB	–
33	LG/R	–
34	BR/W	–
35	GR/R	–
36	SB	–
37	LG	–
38	L	–
39	P	–
40	W/G	–
42	G/R	–
43	V/W	–
44	LG/B	–
45	R/Y	–
46	B	–
49	GR	–
50	R/B	–
51	W/R	–
52	BR/Y	–
53	O/B	–
54	G/O	–
55	R/B	–
56	LG/R	–
57	GR/R	–
58	Y/G	–
59	V/W	–
60	R	–
63	Y	–
64	R	–
65	W	–
66	G	–
67	B	–
68	SHIELD	–
69	LG/B	–
70	P/L	–
71	L	–
72	R	–
77	Y/B	–
78	Y/L	–
79	Y	–
80	W/R	–
81	Y/L	–
83	BR	–
84	L/O	–
86	O	–
87	W/R	–
88	O	–
89	W/L	–
90	GR/L	–
91	W	–
92	G	–
94	W/R	–
96	L/W	–
97	R	–
98	V	–
99	L/W	–
100	P/B	–

Connector No.	B9
Connector Name	PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)
Connector Type	TH18FW-CS2

H.S.

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

Connector No.	B61
Connector Name	ADAS CONTROL UNIT
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	V/W	WARNING SYSTEMS SW
3	R/Y	IBA OFF SW
4	LG/B	WARNING SYSTEMS ON IND
5	R	BRAKE HOLD RLY DRIVE SIGNAL
6	B	GND
7	L	ITS COMM–H
8	Y	ITS COMM–L
12	G/R	WARNING BUZZER

Connector No.	B63
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–
2	L	–
3	Y/R	–
4	SB	–
5	LG	–
6	Y	–
7	L/O	–
8	G	–
I3	R/L	–
I4	G	–
I5	SHIELD	–
I6	W	–

I4	L	CAN–H
I5	P	CAN–L
I6	W/G	IGNITION

Connector No.	B65
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	–
3	G	–
5	W	–
8	R	–

JCHWM0716GB

PRE-CRASH SEAT BELT SYSTEM

Connector No.	B66
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH

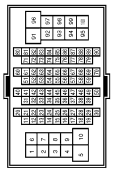
H.S.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	B	–
3	G	–
4	W	–
5	SHIELD	–
7	GR	–
8	R/W	–
11	R	–
12	V	–
13	P/L	–
15	R/Y	–
16	L/W	–

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	–
2	G	–
3	W	–
5	W/B	–
6	L/Y	–
7	R	–
8	G/R	–
9	GR/R	–
11	W	–
12	V	–
13	Y	–
16	L/O	–
17	GR/L	–
18	R/G	–
19	L/Y	–
20	G/Y	–
21	R	–
22	GR	–
27	L/W	–
29	W	–
30	R/L	–
31	Y/L	–
32	W/R	–
33	W/G	–
34	L/R	–
39	P/B	–
40	W/R	–
41	R	–
42	L	–
43	B/W	–
51	L/B	–
52	L/R	–
53	SB	–
54	V/W	–
59	L	–
60	GR	–
61	P/L	–
62	B/SB	–
63	R/Y	–
64	BR	–
70	O	–
71	G/R	–
72	SHIELD	–
73	G/O	–
74	G/Y	–
77	SB	–
78	LG	–
79	R/B	–
90	W/B	–
93	Y	–
94	L	–
95	L/R	–
96	R	–
97	W	–
98	V	–
99	L/W	–
100	W	–

Connector No.	B205
Connector Name	WIRE TO WIRE
Connector Type	NS06MW-CS

H.S.

1	2
3	4
5	6

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	G	–
3	L	–
4	R	–
6	L	–

Connector No.	B231
Connector Name	PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)
Connector Type	TH18FW-CS2

H.S.

19	1	6	8	9
		16	18	20

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	SIG BAT
6	LG/B	BUCKLE SW RH NO
8	G	LOCAL COMM 2
9	SHIELD	SHIELD GND
16	W	LOCAL COMM 1
18	B	SIG GND
19	W	MOTOR BAT
20	B	MOTOR GND

Connector No.	B239
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH

H.S.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–
2	L	–
3	Y	–
4	SB	–
5	LG	–
6	Y	–
7	L	–
8	G	–
13	R/L	–
14	G	–
15	SHIELD	–
16	W	–

Connector No.	B76
Connector Name	SEAT BELT ASSEMBLY (DRIVER SIDE)
Connector Type	AAG06FY-SC

H.S.

1	2	3	4	5

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	PRETEN+
2	G	PRETEN-
3	O/B	BUCKLE SW
4	B	GND
5	LG/R	PRE-CRASH

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PRE-CRASH SEAT BELT SYSTEM

Connector No.	B245
Connector Name	SEAT BELT ASSEMBLY (PASSENGER SIDE)
Connector Type	AAG06FY-SC

H.S.

1 2 3 4 5

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	PRETEN+
2	R/W	PRETEN–
3	L/Y	BUCKLE SW
4	B	GND
5	LG/B	PRE-CRASH

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	SAZ42FB-SJZ4

H.S.

46 43 41 39 37 35 33 31 4 2
27 25 23 21 20 19
17 15 13 10 9 3 1

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	BAT
2	B	GND
3	B	GND
4	W	MOTOR SUPPLY
9	R/B	YAW RATE / SIDE / DECEL G SENSOR COMMUNICATION+H
10	P/B	YAW RATE / SIDE / DECEL G SENSOR COMMUNICATION-L
13	GR	BRAKE FLUID LEVEL SW
17	L/R	STP2
18	W/B	IGN
19	O	DS FR
20	SB	DP FL
21	R/Y	DS RR
22	V	DP RL
27	P	CAN-L
33	LG	DP FR
34	G	DS FL
35	BR	DP RR

36	P	DS RL
37	R	STP
39	L/W	VDC OFF SW
41	L	CAN-H
46	W	STOP LAMP SW ON

Connector No.	E92
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS

H.S.

3 2 1
8 7 6 5 4

Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	–
3	G	–
5	W	–
8	R	–

Connector No.	E93
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH

H.S.

8 7 6 5 4 3 2 1
16 15 14 13 12 11 10 9

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	B	–
3	G	–
4	W	–
5	SHIELD	–
7	GR	–
8	R/W	–
11	R	–
12	V	–
13	P/L	–
15	R/Y	–

16	L/W	–

Connector No.	E99
Connector Name	WIRE TO WIRE
Connector Type	NS06FW-CS

H.S.

2 1
6 5 4 3

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	G	–
3	L	–
4	R	–
6	L/W	–

Connector No.	E111
Connector Name	BRAKE PEDAL STROKE SENSOR
Connector Type	HS04FB

H.S.

1 2 3 4

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

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

H.S.

4B 3B 2B 1B
10B 9B 8B 7B 6B 5B

Terminal No.	Color of Wire	Signal Name [Specification]
1B	R	–
3B	R	–
4B	B	–
5B	BR	–
6B	Y	–
7B	G	–
8B	L/O	–
10B	W/B	–

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

H.S.

11 12 13 14 16
3 4 5 6 7 8

Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	–
4	B	–
5	B	–
6	L	–
7	SB	–
8	GR	–
11	SB	–
12	R	–
13	L	–
14	P	–
16	Y	–

JCHWM0718GB

PRE-CRASH SEAT BELT SYSTEM

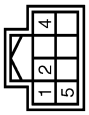
Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	L	–
3	BR	–
5	R/W	–
6	L	–
7	V	–
9	G	–
11	W/B	–
12	BR	–
13	G/R	–
14	B/Y	–
15	W/R	–
16	GR/R	–
18	G/W	–
19	V	–
20	W/G	–
21	B/W	–
22	V	–
23	SHIELD	–
24	G	–
25	O	–
26	Y	–
27	L/O	–
28	Y/R	–
29	L	–
30	R	– [With ICC]
30	P	– [Without ICC]
31	G/Y	–
32	B/SB	–
33	LG/R	–
34	BR/W	–
35	GR/R	–
36	SB	–
37	LG	–
38	L	–
39	P	–
40	W/G	–
42	G/R	–
43	V/W	–
44	LG/B	–
45	R/Y	–
46	B	–
49	GR	–
50	R/B	–
51	W/R	–
52	BR/Y	–
53	O/B	–
54	G/O	–
55	R/B	–
56	LG/R	–
57	GR/R	–
58	Y/G	–
59	V/W	–
60	R	–
63	Y	–
64	R	–
65	W	–
66	G	–
67	B	–
68	SHIELD	–
69	LG/B	–
70	P/L	–
71	L	–
72	R	–
77	Y/B	–
78	Y/L	–
79	Y	–
80	W/R	–
81	Y/L	–
83	BR/W	–
84	L/O	–
86	O	–
87	W/R	–
88	O	–
89	W/L	–
90	GR/L	–
91	W	–
92	G	–
94	W/R	–
96	L/W	–
97	R	–
98	V	–
99	L/W	–
100	P/B	–

Connector No.	M30
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FW-NH

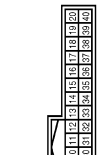
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
2	P	–
4	GR	–
5	L	–

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

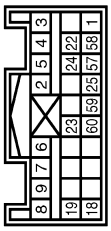
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	BATTERY POWER SUPPLY
2	GR	IGNITION SIGNAL
3	B	GROUND
4	B	GROUND
5	B	ILL GND
7	R	TOW MODE SIGNAL
8	P/L	TRIP RESET SWITCH SIGNAL
11	G	ENTER SWITCH SIGNAL
12	O	SELECT SWITCH SIGNAL
13	W/R	ILLUMINATION CONTROL SWITCH SIGNAL (+)
14	R	ILLUMINATION CONTROL SWITCH SIGNAL (–)
15	R/W	AIR BAG SIGNAL
18	W/R	AMBIENT SENSOR SIGNAL
19	V/W	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
20	B	AMBIENT SENSOR GROUND
21	L	CAN-H
22	P	CAN-L
23	B	GROUND
24	V	FUEL LEVEL SENSOR GROUND
25	O/L	ALTERNATOR SIGNAL
26	W	PARKING BRAKE SWITCH SIGNAL
28	GR/R	SECURITY SIGNAL
29	BR	WASHER LEVEL SWITCH SIGNAL
30	SB	VEHICLE SPEED SIGNAL (2-PULSE)
31	BR/W	VEHICLE SPEED SIGNAL (8-PULSE)
33	W	SNOW MODE SIGNAL
34	BR/Y	FUEL LEVEL SENSOR SIGNAL
35	O/B	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
36	G/Y	PASSENGER SEAT BELT WARNING SIGNAL
37	R/Y	NON-MANUAL MODE SIGNAL
38	L/W	MANUAL MODE SHIFT DOWN SIGNAL
39	Y/B	MANUAL MODE SHIFT UP SIGNAL
40	G/W	MANUAL MODE SIGNAL

Connector No.	M59
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH28FY-EX

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	R/L	IGN
2	B	GND
3	Y	DR1 (+)
4	Y/R	DR1 (–) DR2 (–)
5	Y/G	DR 2 (+)
6	Y/L	AS1 (+)
7	Y/B	AS1 (–)
8	B/Y	AS 2 (+)
9	Y	AS 2 (–)
18	O	EC2S (+)
19	W	EC2S (–)
22	SHIELD	GND
23	R/W	AIRBAG W/L
24	G/Y	SEATBELT W/L
25	R	CUTOFF TELLTALE
59	L	CAN-H
60	P	CAN-L

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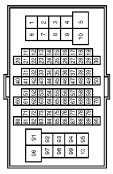
PRE-CRASH SEAT BELT SYSTEM

Connector No.	M68
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

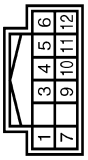
Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/Y	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	V	COMBI SW INPUT 1
8	V	POWER WINDOW SW COMM
9	R	STOP LAMP SW 1
11	R	L&R SENSOR SERIAL LINK
14	P/B	OPTICAL SENSOR
16	L/O	DIMMER SIGNAL
17	Y/G	SENSOR PWR SPLY
18	B/Y	RECEIVER/SENSOR GND
19	BR	RECEIVER PWR SPLY
20	G/R	KYLS ENT RECEIVER COMM
21	P	NATS ANT AMP.
22	W/B	KYLS ENT RECEIVER RSSI
23	GR/R	SECURITY IND CONT
24	SB	DONGLE LINK
25	LG/R	NATS ANT AMP.
29	W	HAZARD SW
30	W/L	BK DOOR OPNR SW
31	W/G	DR DOOR UNLOCK SENSOR
32	LG	COMBI SW OUTPUT 5
33	Y	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/W	COMBI SW OUTPUT 2
36	SB	COMBI SW OUTPUT 1
37	G/Y	SHIFT P
39	L	CAN-H
40	P	CAN-L

Connector No.	M111
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	–
2	G	–
3	W/R	–
5	W/B	–
6	L/Y	–
7	R	–
8	G/R	–
9	GR/R	–
11	W	–
12	V	–
13	Y	–
16	L/O	–
17	GR/L	–
18	R/G	–
19	L/Y	–
20	G/Y	–
21	R	–
22	GR	–
27	L/O	–
29	SB	–
30	R/L	–
31	Y/L	–
32	W/R	–
33	W/G	–
34	L/R	–
38	P/B	–
40	W/R	–
41	R	–
42	L/W	–
43	B/W	–
51	O/L	–
52	L/R	–
53	SB	–
54	V/W	–
59	L	–
60	GR	–
61	P/L	–
62	B/SB	–
63	R/Y	–
64	BR	–
70	O	–
71	G/R	–
72	SHIELD	–
73	G/O	–
74	G/Y	–
77	SB	–
78	LG	–
79	R/B	–
90	W/B	–
93	Y	–
94	L	–
95	L/R	–
96	R	–
97	W	–
98	V	–
99	L/W	–
100	W	–

Connector No.	M125
Connector Name	CAN GATEWAY
Connector Type	TH12FW-NH



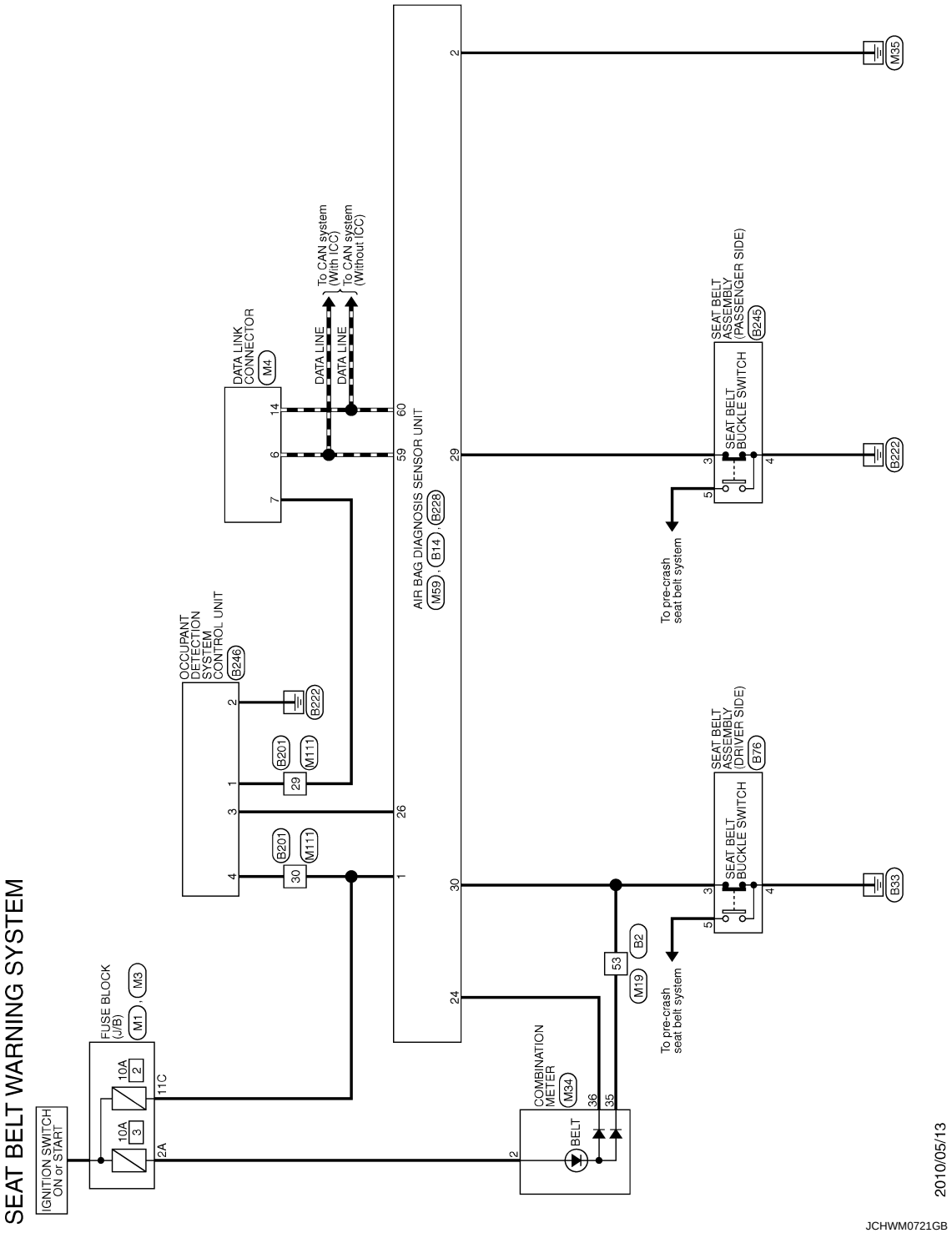
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	CAN-H
3	Y	BATTERY
4	L	CAN-H
5	B	GND
6	L	CAN-L
7	P	IGNITION
9	GR	CAN-L
10	R	GND
11	B	CAN-L
12	R	CAN-L

JCHWM0720GB

SEAT BELT WARNING SYSTEM

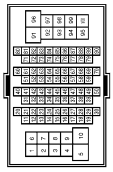
Wiring Diagram

INFOID:0000000006237889



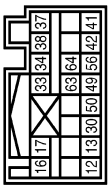
SEAT BELT WARNING SYSTEM

Connector No.	B2
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



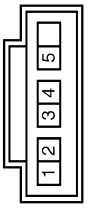
Terminal No.	Color of Wire	Signal Name [Specification]
2	L	–
3	BR	–
5	R/W	–
6	L	–
7	V	–
9	G	–
11	W/B	–
12	BR	–
13	G/R	–
14	B/Y	–
15	W/R	–
16	GR/R	–
18	G/W	–
19	V	–
20	W/G	–
21	B/W	–
22	V	–
23	SHIELD	–
24	G	–
25	O	–
26	Y	–
27	L/O	–
28	Y/R	–
29	L	–
30	R	–
31	G/Y	–
32	B/SB	–
33	LG/R	–
34	BR/W	–
35	GR/R	–
36	SB	–
37	LG	–
38	L	–
39	P	–
40	W/G	–
42	G/R	–
43	V/W	–
44	LG/B	–
45	R/Y	–
46	B	–
49	GR	–
50	R/B	–
51	W/R	–
52	BR/Y	–
53	O/B	–
54	G/O	–
55	R/B	–
56	LG/R	–
57	GR/R	–
58	Y/G	–
59	V/W	–
60	R	–
63	Y	–
64	R	–
65	W	–
66	G	–
67	B	–
68	SHIELD	–
69	LG/B	–
70	P/L	–
71	L	–
72	R	–
77	Y/B	–
78	Y/L	–
79	Y	–
80	W/R	–
81	Y/L	–
83	BR	–
84	L/O	–
86	O	–
87	W/R	–
88	O	–
89	W/L	–
90	GR/L	–
91	W	–
92	G	–
94	W/R	–
96	L/W	–
97	R	–
98	V	–
99	L/W	–
100	P/B	–

Connector No.	B14
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH22FY-2Y-EX



Terminal No.	Color of Wire	Signal Name [Specification]
12	Y/L	PLH (+)
13	O	PLH (–)
16	V	PLH 2 (+)
17	G	PLH 2 (–)
30	O/B	LH BUCKLE SW INPUT
33	Y	SIDE INF LH+
34	Y/R	SIDE INF LH–
37	Y/G	CLH (+)
38	Y/B	CLH (–)
41	Y	CLH (+)
42	Y/R	CLH (–)
49	P	SIDE SENS LH+
50	L	SIDE SENS LH–
56	SHIELD	GND
63	W	SATELLITE LH (+)
64	R	SATELLITE LH (–)

Connector No.	B76
Connector Name	SEAT BELT ASSEMBLY (DRIVER SIDE)
Connector Type	AAG06FY-SC



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	PRETEN+
2	G	PRETEN–
3	O/B	BUCKLE SW
4	B	GND
5	LG/R	PRE-CRASH

JCHWM0722GB

SEAT BELT WARNING SYSTEM

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	–
2	G	–
3	W	–
5	W/B	–
6	L/Y	–
7	R	–
8	G/R	–
9	GR/R	–
11	W	–
12	V	–
13	Y	–
16	L/O	–
17	GR/L	–
18	R/G	–
19	L/Y	–
20	G/Y	–
21	R	–
22	GR	–
27	L/W	–
29	W	–
30	R/L	–
31	Y/L	–
32	W/R	–
33	W/G	–
34	L/R	–
39	P/B	–
40	W/R	–
41	R	–
42	L	–
43	B/W	–
51	L/B	–
52	L/R	–
53	SB	–
54	V/W	–
59	L	–
60	GR	–
61	P/L	–
62	B/SB	–
63	R/Y	–
64	BR	–
70	O	–
71	G/R	–
72	SHIELD	–
73	G/O	–
74	G/Y	–
77	SB	–
78	LG	–
79	R/B	–
90	W/B	–
93	Y	–
94	L	–
95	L/R	–
96	R	–
97	W	–
98	V	–
99	L/W	–
100	W	–

Connector No.	B228
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH22FY-1V-EX

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
10	Y	PRH (+)
11	Y/B	PRH (–)
14	W	PRH 2 (+)
15	R/W	PRH 2 (–)
26	L/R	ODS INPUT
29	L/Y	RH BUCKLE SW INPUT
31	Y	SIDE SENS RH+
32	Y/B	SIDE SENS RH–
35	Y/L	CRH (+)
36	Y/R	CRH (–)
39	Y/G	CRH (+)
40	Y/L	CRH (–)
47	W	SIDE SENS RH+
48	R	SIDE SENS RH–
55	SHIELD	GND
61	V	SATELLITE RH (+)
62	LG	SATELLITE RH (–)

Connector No.	B245
Connector Name	SEAT BELT ASSEMBLY (PASSENGER SIDE)
Connector Type	AAG06FY-SC

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	PRETEN+
2	R/W	PRETEN–
3	L/Y	BUCKLE SW
4	B	GND
5	LG/B	PRE-CRASH

Connector No.	B246
Connector Name	OCCUPANT DETECTION SYSTEM CONTROL UNIT
Connector Type	TH04FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	B	–
3	L/R	–
4	R/L	–

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1A	Y	–
2A	GR	–
3A	W	–
4A	Y/G	–
5A	V	–
6A	L/W	–
7A	LG	–
8A	W	–

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
9C	R	–
7C	B	–
8C	W	–
10C	GR	–
11C	R/L	–
12C	GR/L	–

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SEAT BELT WARNING SYSTEM

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	–
4	B	–
5	B	–
6	L	–
7	SB	–
8	GR	–
11	SB	–
12	R	–
13	L	–
14	P	–
16	Y	–

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	L	–
3	BR	–
5	R/W	–
6	L	–
7	V	–
9	G	–
11	W/B	–
12	BR	–
13	G/R	–
14	B/Y	–
15	W/R	–

16	GR/R	–
18	G/W	–
19	V	–
20	W/G	–
21	B/W	–
22	V	–
23	SHIELD	–
24	G	–
25	O	–
26	Y	–
27	L/O	–
28	Y/R	–
29	L	– [With ICC]
30	P	– [Without ICC]
31	G/Y	–
32	B/SB	–
33	LG/R	–
34	BR/W	–
35	GR/R	–
36	SB	–
37	LG	–
38	L	–
39	P	–
40	W/G	–
42	G/R	–
43	V/W	–
44	LG/B	–
45	R/Y	–
46	B	–
49	GR	–
50	R/B	–
51	W/R	–
52	BR/Y	–
53	O/B	–
54	G/O	–
55	R/B	–
56	LG/R	–
57	GR/R	–
58	Y/G	–
59	V/W	–
60	R	–
63	Y	–
64	R	–
65	W	–
66	G	–
67	B	–
68	SHIELD	–
69	LG/B	–
70	P/L	–
71	L	–
72	R	–

77	Y/B	–
78	Y/L	–
79	Y	–
80	W/R	–
81	Y/L	–
83	BR/W	–
84	L/O	–
86	O	–
87	W/R	–
88	O	–
89	W/L	–
90	GR/L	–
91	W	–
92	G	–
94	W/R	–
96	L/W	–
97	R	–
98	V	–
99	L/W	–
100	P/B	–

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	BATTERY POWER SUPPLY
2	GR	IGNITION SIGNAL
3	B	GROUND
4	B	GROUND
5	B	ILL GND
7	R	TOW MODE SIGNAL
8	P/L	TRIP RESET SWITCH SIGNAL
11	G	ENTER SWITCH SIGNAL
12	O	SELECT SWITCH SIGNAL
13	W/R	ILLUMINATION CONTROL SWITCH SIGNAL (+)
14	R	ILLUMINATION CONTROL SWITCH SIGNAL (–)
15	R/W	AIR BAG SIGNAL
18	W/R	AMBIENT SENSOR SIGNAL
19	V/W	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
20	B	AMBIENT SENSOR GROUND
21	L	CAN-H

22	P	CAN–L
23	B	GROUND
24	V	FUEL LEVEL SENSOR GROUND
25	O/L	ALTERNATOR SIGNAL
26	W	PARKING BRAKE SWITCH SIGNAL
28	GR/R	SECURITY SIGNAL
29	BR	WASHER LEVEL SWITCH SIGNAL
30	SB	VEHICLE SPEED SIGNAL (2-PULSE)
31	BR/W	VEHICLE SPEED SIGNAL (8-PULSE)
33	W	SNOW MODE SIGNAL
34	BR/Y	FUEL LEVEL SENSOR SIGNAL
35	O/B	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
36	G/Y	PASSENGER SEAT BELT WARNING SIGNAL
37	R/Y	NON-MANUAL MODE SIGNAL
38	L/W	MANUAL MODE SHIFT DOWN SIGNAL
39	Y/B	MANUAL MODE SHIFT UP SIGNAL
40	G/W	MANUAL MODE SIGNAL

Connector No.	M59
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH28FY-EX

H.S.

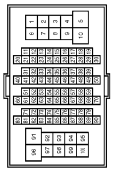
8	9	7	6		2	5	4	3
19				23			24	22
18				60	59	25	57	58	1

Terminal No.	Color of Wire	Signal Name [Specification]
1	R/L	IGN
2	B	GND
3	Y	DR1 (+)
4	Y/R	DR1 (–) DR2 (–)
5	Y/G	DR 2 (+)
6	Y/L	AS1 (+)
7	Y/B	AS1 (–)
8	B/Y	AS 2 (+)
9	Y	AS 2 (–)
18	O	EC2S (+)
19	W	EC2S (–)
22	SHIELD	GND
23	R/W	AIRBAG W/L
24	G/Y	SEATBELT W/L
25	R	CUTOFF TELLTALE
59	L	CAN-H
60	P	CAN-L

JCHWM0724GB

SEAT BELT WARNING SYSTEM

Connector No.	M111
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	–
2	G	–
3	W/R	–
5	W/B	–
6	L/Y	–
7	R	–
8	G/R	–
9	GR/R	–
11	W	–
12	V	–
13	Y	–
16	L/O	–
17	GR/L	–
18	R/G	–
19	L/Y	–
20	G/Y	–
21	R	–
22	GR	–
27	L/O	–
29	SB	–
30	R/L	–
31	Y/L	–
32	W/R	–
33	W/G	–
34	L/R	–
39	P/B	–
40	W/R	–
41	R	–
42	L/W	–
43	B/W	–
51	O/L	–
52	L/R	–
53	SB	–
54	V/W	–
59	L	–
60	GR	–
61	P/L	–
62	B/SB	–
63	R/Y	–
64	BR	–
70	O	–
71	G/R	–
72	SHIELD	–
73	G/O	–
74	G/Y	–
77	SB	–
78	LG	–
79	R/B	–
90	W/B	–
93	Y	–
94	L	–
95	L/R	–
96	R	–
97	W	–
98	V	–
99	L/W	–
100	W	–

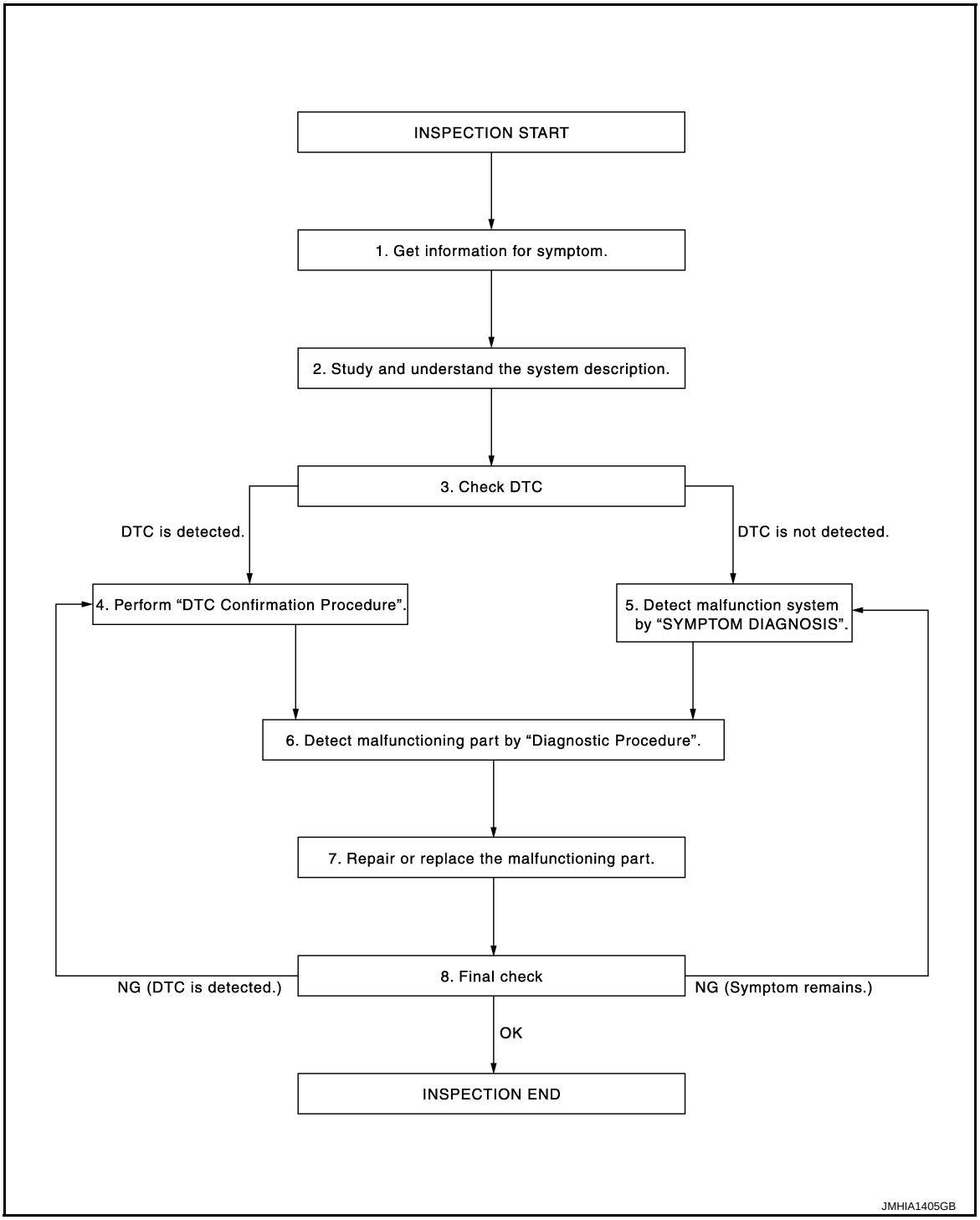
JCHWM0725GB

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000006237890



1.GET INFORMATION FOR SYSTEM

Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much as possible when the customer brings the vehicles in.

>> GO TO 2.

2.STUDY AND UNDERSTAND THE SYSTEM DESCRIPTION

Understand the operation condition or non-operation condition of pre-crash seat belt. Refer to SBC-7, "PRE-CRASH SEAT BELT SYSTEM : System Description".

>> GO TO 3.

3.CHECK DTC

Perform “Self-diagnosis procedure” of appropriate DTC to check if DTC is detected again.
At this time, always connect CONSULT-III to the vehicle, and then check the diagnosis results in real time on “DATA MONITOR (AUTO RECORD)”.
There is no priority for each DTC. Record them based on the following rules.
Current malfunction: Record all DTCs detected.
Past malfunction: Record up to 5 DTCs. When the 6th DTC is detected, it is overwritten to the first recorded DTC.

Is DTC detected?

YES >> GO TO 4.
NO >> GO TO 5.

4.PERFORM DTC CONFIRMATION PROCEDURE

Perform the inspection with “DTC REPRODUCTION PROCEDURE” of the applicable system.

YES >> GO TO 6.
NO >> Check intermittent incident.Refer to GI-40, "Intermittent Incident".

5.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step 3, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 6.

6.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Identify the malfunctioning part with “Diagnosis Procedure”.

>> GO TO 7.

7.REPAIR OR REPLACE THE MALFUNCTIONING PART

Repair or replace the specified malfunctioning parts.

>> GO TO 8.

8.FINAL CHECK

Perform “CONSULT-III function” again to check that the repair is performed correctly.
Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 3.

Are all malfunctions corrected?

YES >> INSPECTION END
NO-1 >> DTC is detected: GO TO 4.
NO-2 >> Symptom remains: GO TO 5.

DTC/CIRCUIT DIAGNOSIS

U0126 ST ANG SEN SIG

Description

INFOID:0000000006237891

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

DTC Logic

INFOID:0000000006237892

DTC DETECTION LOGIC

NOTE:
If DTC U0126 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SBC-35, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

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

1. Turn ignition switch ON.
2. Check “Self-diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Refer to SBC-33, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237893

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

Check “Self-diagnostic result” for “ABS” with CONSULT-III. Refer to BRC-40, "CONSULT-III Function".

Is DTC detected?

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

2. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

U0428 STRG ANGL CAL

Description

INFOID:0000000006237894

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

DTC Logic

INFOID:0000000006237895

DTC DETECTION LOGIC

NOTE:
If DTC U0428 is displayed with DTC U0126, first perform the trouble diagnosis for DTC U0126. Refer to SBC-33, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

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

1. Turn ignition switch ON.
2. Check “Self-diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Refer to SBC-34, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237896

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

Check “Self-diagnostic result” for “ABS” with CONSULT-III. Refer to BRC-40, "CONSULT-III Function".

Is DTC detected?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000006237897

- CAN (Controller Area Network) is a serial communication line for real time applications. It is an on board multiplex communication line with high data communication speed and excellent error detection ability. A modern vehicle is equipped with many ECMs, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, two control units are connected with two communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
- It transmits the vehicle status to pre-crash seat belt control unit using the CAN communication system.
- It consists of CAN system (unified meter and A/C amp., ICC sensor, BCM, steering angle sensor).
- Refer to LAN-27, "CAN COMMUNICATION SYSTEM : CAN System Specification Chart".

DTC Logic

INFOID:0000000006237898

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
U1000	CAN communication circuit	Pre-crash seat belt control unit cannot transmit and receive CAN communication system for 2 seconds or more.	• Harness or connectors (CAN communication line is open or shorted)

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-III.

Is any DTC detected?

YES >> Refer to LAN-27, "CAN COMMUNICATION SYSTEM : CAN System Specification Chart".
NO >> CAN communication system is normal.

B2451 SEAT BLT MTR DR CIRC

DTC Logic

INFOID:0000000006237899

DTC DETECTION LOGIC

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

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-III.

Is DTC detected?

YES >> Refer to SBC-36, "Diagnosis Procedure".
NO >> Driver side pre-crash seat belt motor system is normal.

Diagnosis Procedure

INFOID:0000000006237900

1.INSPECTION START

1. Check “Self-diagnostic result” with CONSULT-III.
2. Touch “ERASE”.
3. Perform DTC Confirmation Procedure. Refer to SBC-36, "DTC Logic".

Is DTC B2451 displayed again?

YES >> Replace pre-crash seat belt control unit (driver side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2452 SEAT BLT MTR AS CIRC

DTC Logic

INFOID:0000000006237901

DTC DETECTION LOGIC

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

DTC REPRODUCTION PROCEDURE

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

1. Turn ignition switch ON.
2. Check “Self-diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Refer to SBC-37, "Diagnosis Procedure".
NO >> Passenger side pre-crash seat belt motor system is normal.

Diagnosis Procedure

INFOID:0000000006237902

1.INSPECTION START

1. Check “Self-diagnostic result” with CONSULT-III.
2. Touch “ERASE”.
3. Perform DTC Confirmation Procedure. Refer to SBC-37, "DTC Logic".

Is DTC B2452 displayed again?

YES >> Replace pre-crash seat belt control unit (passenger side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2453 BR STROKE SEN CIRC

DTC Logic

INFOID:0000000006237903

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2453	BR STROKE SEN CIRC	Circuit of brake pedal stroke sensor output is open or shorted	• Harness or connectors (The sensor circuit is open or shorted) • Pre-crash seat belt control unit (driver side) • Brake pedal stroke sensor

DTC CONFIRMATION PROCEDURE

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

1. Turn ignition switch ON.
2. Check “Self-diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Refer to SBC-38, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237904

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-III.
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 harness connector.
3. Check voltage between brake pedal stroke sensor harness connector and ground.

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

Is the inspection result normal?

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

3. CHECK BRAKE PEDAL STROKE SENSOR POWER SUPPLY CIRCUIT

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

Pre-crash seat belt control unit (driver side)		Brake pedal stroke sensor		Continuity
Connector	Terminal	Connector	Terminal	
B9	10	E111	2	Existed

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

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

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (driver side). Refer to SB-6, "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) harness connector.
2. Check continuity between pre-crash seat belt control unit (driver side) harness connector and brake pedal stroke sensor harness connector.

Pre-crash seat belt control unit (driver side)		Brake pedal stroke sensor		Continuity
Connector	Terminal	Connector	Terminal	
B9	2	E111	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		
B9	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-39, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace brake pedal stroke sensor. Refer to SBC-63, "Removal and Installation".

6. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006237905

COMPONENT PARTS INSPECTION

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	1	Brake released → depressed	1.0 → 0.2
	3		0.2 → 1.0

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace brake pedal stroke sensor. Refer to SBC-63, "Removal and Installation".

B2454 SEAT BLT PWR DR CIRC

DTC Logic

INFOID:0000000006237906

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2454	SEAT BLT PWR DR CIRC	Seat belt motor (driver side) power supply circuit is open or shorted	• Harness or connectors [Pre-crash seat belt control unit (driver side) circuit is open or shorted] • Pre-crash seat belt control unit (driver side)

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-III.

Is DTC detected?

YES >> Refer to SBC-41, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237907

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check 30 A fuse (No. 83).

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse 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) harness 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)
Connector	Terminal		Battery voltage
B9	19		

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2455 CONTROL UNIT DR

DTC Logic

INFOID:0000000006237908

DTC DETECTION LOGIC

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

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-III.

Is DTC detected?

YES >> Refer to SBC-42, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237909

1..INSPECTION START

1. Check “Self-diagnostic result” with CONSULT-III.
2. Touch “ERASE”.
3. Perform DTC Confirmation Procedure.
   See SBC-42, "DTC Logic".

Is DTC B2455 displayed again?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2456 SEAT BLT PWR AS

DTC Logic

INFOID:0000000006237910

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2456	SEAT BLT PWR AS CIRC	Pre-crash seat belt control unit (passenger side) power supply circuit is open or shorted	• Harness or connectors [Pre-crash seat belt control unit (passenger side) circuit is open or shorted] • Pre-crash seat belt control unit (passenger side)

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-III.

Is DTC detected?

YES >> Refer to SBC-43, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237911

1.CHECK FUSE AND FUSIBLE LINK

1. Turn ignition switch OFF.
2. Check 30 A fuse (No.77).

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the blown fuse 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 (passenger side) harness connector.
2. 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		
B231	19		Battery voltage

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2457 CONTROL UNIT AS

DTC Logic

INFOID:0000000006237912

DTC DETECTION LOGIC

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

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-III.

Is DTC detected?

YES >> Refer to SBC-44, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237913

1..INSPECTION START

1. Check “Self-diagnostic result” with CONSULT-III.
2. Touch “ERASE”.
3. Perform DTC Confirmation Procedure.
   See SBC-44, "DTC Logic".

Is DTC B2457 displayed again?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2458 LOCAL COMM

DTC Logic

INFOID:0000000006237914

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2458	LOCAL COMM	Receipt of a malfunction signal between pre-crash seat belt control unit (driver side) and pre-crash seat belt control unit (passenger side)	• Harness or connectors [The 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)

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-III.

Is DTC detected?

YES >> Refer to SBC-45, "Diagnosis Procedure".
NO >> INSPECTIN END

Diagnosis Procedure

INFOID:0000000006237915

1.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check pre-crash seat belt control unit power supply and ground circuit. Refer to SBC-43, "Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK LOCAL COMMUNICATION LINE CIRCUIT

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

Pre-crash seat belt control unit (driver side)		Pre-crash seat belt control unit (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B9	8	B231	8	Existed
	16		16	

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

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

Is the inspection result normal?

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

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

1. Replace pre-crash seat belt control unit (passenger side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".
2. Check “Self-diagnostic result” with CONSULT-III.

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). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".
2. Check “Self-diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> GO TO 5.
NO >> INSPECTION END

5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2461 VHCL SPEED SIGNAL

Description

INFOID:0000000006237916

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

DTC Logic

INFOID:0000000006237917

DTC DETECTION LOGIC

NOTE:
If DTC B2461 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SBC-35, "DTC Logic".

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2461	VHCL SPEED SIGNAL	Receipt of a malfunction signal of the vehicle speed signal	Combination meter

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-III.

Is DTC detected?

YES >> Refer to SBC-47, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237918

1.CHECK COMBINATION METER

Check combination meter. Refer to MWI-57, "Work flow".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2463 ROLLOVER SIGNAL

Description

INFOID:0000000006237919

Inputs the rollover signal from air bag diagnosis sensor unit via CAN communication.

DTC Logic

INFOID:0000000006237920

DTC DETECTION LOGIC

NOTE:
If DTC B2463 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SBC-35, "DTC Logic".

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2463	ROLLOVER SIGNAL	Receipt of a malfunction signal of the rollover signal	Air bag diagnosis sensor 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-III.

Is DTC detected?

YES >> Refer to SBC-48, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237921

1.CHECK DTC WITH AIR BAG DIAGNOSIS SENSOR UNIT

Check “self-diagnostic result” for “AIR BAG DIAGNOSIS SENSOR UNIT” with CONSULT-III. Refer to SRC-19, "CONSULT-III Function".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace air bag diagnosis sensor unit. Refer to SR-26, "Removal and Installation".

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2466 DR/AS CONTROL UNIT

DTC Logic

INFOID:0000000006237922

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2466	DR/AS CONTROL UNIT	Pre-crash seat belt control unit is out of the vehicle specification	• Pre-crash seat belt control unit (driver side) • Pre-crash seat belt control unit (passenger side)

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-III.

Is DTC detected?

YES >> Refer to SBC-49, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237923

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-40, "Intermittent Incident".

>> INSPECTION END

B2470 SYS HEAT PROTC DR

Description

INFOID:0000000006237924

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

DTC Logic

INFOID:0000000006237925

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

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

1. Turn ignition switch ON.
2. Check “Self-diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Refer to SBC-50, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237926

1.CHECK THE VEHICLE CONDITION WITH CONSULT-III DATA MONITOR

1. Check “HEAT PROTC LH” in “DATA MONITOR” with CONSULT-III.
2. Wait until “OFF” appears.
3. Perform the “self-diagnosis result” with CONSULT-III, after performing the check.
4. Touch “ERASE”.
5. Perform DTC Confirmation Procedure. Refer to SBC-50, "DTC Logic".

Is DTC B2470 displayed again?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2471 SYS HEAT PROTC AS

Description

INFOID:0000000006237927

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

DTC Logic

INFOID:0000000006237928

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

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

1. Turn ignition switch ON.
2. Check “Self-diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Refer to SBC-51, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006237929

1.CHECK THE VEHICLE CONDITION WITH CONSULT-III DATA MONITOR

1. Check “HEAT PROTC RH” in “DATA MONITOR” with CONSULT-III.
2. Wait until “OFF” appears.
3. Perform the “self-diagnosis results” with CONSULT-III, after performing the check.
4. Touch “ERASE”.
5. Perform DTC Confirmation Procedure. Refer to SBC-51, "DTC Logic".

Is DTC B2471 displayed again?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000006237930

1.CHECK GROUND CIRCUIT

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

Pre-crash seat belt control unit		Ground	Continuity
Connector	Terminal		
B9 (Driver side)	18		Existed
	20		
B231 (Passenger side)	18		
	20		

Is the measurement value normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connector.

2.CHECK POWER SUPPLY CIRCUIT-I

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

Pre-crash seat belt control unit		Ground	Voltage (Approx.)
Connector	Terminal		
B9 (Driver side)	1		Battery voltage
B231 (Passenger side)			

Is the measurement value normal?

YES >> INSPECTION END
NO >> GO TO 3.

3.CHECKPOWER SUPPLY CIRCUIT-II

1. Disconnect fuse block (J/B) harness connector.
2. Check continuity between pre-crash seat belt control unit (driver side and passenger side) harness connector and fuse block (J/B) harness connector.

Pre-crash seat belt control unit		Fuse block (J/B)		Continuity
Connector	Terminal	Connector	Terminal	
B9 (Driver side)	1	M2	6B	Existed
B231 (Passenger side)				

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

Pre-crash seat belt control unit		Ground	Continuity
Connector	Terminal		
B9 (Driver side)	1		Not existed
B231 (Passenger side)			

Is the measurement value normal?

YES >> Check 10 A fuse (No. 6).
NO >> Repair or replace harness or connector.

SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Component Function Check

INFOID:0000000006237931

1.CHECK SEAT BELT WARNING LAMP FUNCTION

1. Turn ignition switch ON.
2. Sits in the passenger seat.
3. Fasten the seat belt (passenger side).
4. 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 >> Check seat belt warning lamp circuit. Refer to SBC-57, "Diagnosis Procedure".

2.CHECK PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE) FUNCTION

With CONSULT-III

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

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

Is the inspection result normal?

YES >> Seat belt buckle switch (driver side) circuit is normal.
NO >> Check seat belt buckle switch (driver side). Refer to SBC-53, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006237932

1.CHECK PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE) OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect seat belt assembly (driver side) harness connector.
3. Turn ignition switch ON.
4. Check voltage between seat belt assembly (driver side) harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Seat belt assembly (driver side)			
Connector	Terminal		
B76	5	Ground	5

Is the inspection result normal?

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

2.CHECK SEAT BELT ASSEMBLY (DRIVER SIDE) CIRCUIT

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

Pre-crash seat belt control unit (driver side)		Seat belt assembly (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
B9	6	B76	5	Existed

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

Pre-crash seat belt control unit (driver side)		Ground	Continuity
Connector	Terminal		
B9	6		Not existed

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (driver side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".
NO >> Repair or replace harness or connector.

3.CHECK SEAT ASSEMBLY SWITCH GROUND CIRCUIT

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

Seat belt assembly (driver side)		Ground	Continuity
Connector	Terminal		
B76	4		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connector.

4.CHECK SEAT BELT ASSEMBLY (DRIVER SIDE)

Check seat belt assembly (driver side). Refer to SBC-54, "Component Inspection [Seat Belt Assembly (Driver Side)]".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> Replace seat belt assembly (driver side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".

Component Inspection [Seat Belt Assembly (Driver Side)]

INFOID:0000000006237933

1.CHECK SEAT BELT ASSEMBLY (DRIVER SIDE)

1. Turn ignition switch OFF.
2. Disconnect seat belt assembly (driver side) harness connector.
3. Check continuity between seat belt assembly (driver side) terminals.

Seat belt assembly (driver side)		Condition	Continuity
Terminal			
3	4	When driver side seat belt is fastened	Not existed
		When driver side seat belt is not fastened	Existed
5		When driver side seat belt is fastened	Existed
		When driver side seat belt is not fastened	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace seat belt assembly (driver side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".

SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Component Function Check

INFOID:0000000006237934

1.CHECK SEAT BELT WARNING LAMP FUNCTION

1. Turn ignition switch ON.
2. Sits in the passenger seat.
3. Fasten the seat belt (passenger side).
4. 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 >> Check seat belt warning lamp circuit. Refer to SBC-57, "Diagnosis Procedure".

2.CHECK PRE-CRASH SEAT BELT CONTROL UNIT FUNCTION

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

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

Is the inspection result normal?

YES >> Seat belt buckle switch (passenger side) circuit is normal.
NO >> Check seat belt buckle switch (passenger side). Refer to SBC-55, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006237935

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

1. Turn ignition switch OFF.
2. Disconnect seat belt assembly (passenger side) harness connector.
3. Turn ignition switch ON.
4. Check voltage between seat belt assembly (passenger side) and ground.

(+)		(–)	Voltage (V) (Approx.)
Seat belt assembly (passenger side)			
Connector	Terminal		
B245	5	Ground	5

Is the inspection result normal?

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

2.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE) CIRCUIT

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

Pre-crash seat belt control unit (passenger side)		Seat belt assembly (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B231	6	B245	5	Existed

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

Pre-crash seat belt control unit (passenger side)		Ground	Continuity
Connector	Terminal		
B231	6		Not existed

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit (passenger side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".
NO >> Repair or replace harness or connector.

3.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE) GROUND CIRCUIT

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

Seat belt assembly (passenger side)		Ground	Continuity
Connector	Terminal		
B245	4		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connector.

4.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE)

Check seat belt assembly (passenger side). Refer to SBC-56, "Component Inspection [Seat Belt Assembly (Passenger Side)]".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> Replace seat belt assembly (passenger side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".

Component Inspection [Seat Belt Assembly (Passenger Side)]

INFOID:0000000006237936

1.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE)

1. Turn ignition switch OFF.
2. Disconnect seat belt assembly (passenger side) harness connector.
3. Check continuity between seat belt assembly (passenger side) terminals.

Seat belt assembly (passenger side)		Condition	Continuity
Terminal			
3	4	When passenger side seat belt is fastened	Not existed
		When passenger side seat belt is not fastened	Existed
5		When passenger side seat belt is fastened	Existed
		When passenger side seat belt is not fastened	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace seat belt assembly (passenger side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".

SEAT BELT WARNING LAMP CIRCUIT

Component Function Check

INFOID:0000000006237937

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 >> Check combination meter circuit. Refer to MWI-57, "Work flow".

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 >> Check seat belt warning lamp circuit. Refer to SBC-57, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006237938

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.**

1.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE) CIRCUIT-I

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

Air bag diagnosis sensor unit		Seat belt assembly (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B228	29	B245	3	Existed

4. Check continuity between air bag diagnosis sensor unit harness connector and ground.

Air bag diagnosis sensor unit		Ground	Continuity
Connector	Terminal		
B228	29		Not existed

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace harness or connector.

2.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE) CIRCUIT-II

Check continuity between seat belt assembly (passenger side) harness connector and ground.

Seat belt assembly (passenger side)		Ground	Continuity
Connector	Terminal		
B245	4		Existed

Is the inspection result normal?

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

3.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE)

Check seat belt assembly (passenger side).
Refer to SBC-58, "Component Inspection [Seat Belt Assembly (Passenger Side)]".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace seat belt assembly (passenger side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".

4.CHECK SEAT BELT WARNING LAMP CIRCUIT

1. Disconnect combination meter harness connector.
2. Check continuity between air bag diagnosis sensor unit harness connector and combination meter harness connector.

Air bag diagnosis sensor unit		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
M59	24	M34	36	Existed

3. Check continuity between seat belt warning unit and ground.

Air bag diagnosis sensor unit		Ground	Continuity
Connector	Terminal		
M59	24		Not existed

Is the inspection results normal?

YES >> GO TO 5.
NO >> Replace harness or connector.

5.CHECK COMBINATION METER POWER SUPPLY AND GROUND CIRCUIT

Check combination meter power supply and ground circuit.
Refer to MWI-64, "COMBINATION METER : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace harness or connector.

6.REPLACE COMBINATION METER

Replace combination meter.
Refer to MWI-85, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace air bag diagnosis sensor unit. Refer to SR-26, "Removal and Installation".

Component Inspection [Seat Belt Assembly (Passenger Side)]

INFOID:0000000006237939

1.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE)

1. Turn ignition switch OFF.
2. Disconnect seat belt assembly (passenger side) harness connector.
3. Check continuity between seat belt assembly (passenger side) terminals.

Seat belt assembly (passenger side)		Condition	Continuity
Terminal			
3	4	When passenger side seat belt is fastened	Not existed
		When passenger side seat belt is not fastened	Existed
5		When passenger side seat belt is fastened	Existed
		When passenger side seat belt is not fastened	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt assembly (passenger side). Refer to SB-6, "SEAT BELT RETRACTOR : Removal and Installation".

SYMPTOM DIAGNOSIS

PRE-CRASH SEAT BELT DOSE NOT OPERATE

Diagnosis Procedure

INFOID:0000000006237940

1.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit. Refer to SBC-52, "Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK SEAT BELT ASSEMBLY (DRIVER SIDE)

Check seat belt assembly (driver side). Refer to SBC-53, "Component Function Check".

Is the inspection result normal?

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

3.CHECK SEAT BELT ASSEMBLY (PASSENGER SIDE)

Check seat belt assembly (passenger side). Refer to SBC-55, "Component Function Check".

Is the inspection result normal?

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

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> GO TO 1.

SEAT BELT WARNING LAMP DOES NOT TURN OFF

Diagnosis Procedure

INFOID:0000000006237941

1.CHECK SEAT BELT WARNING LAMP CIRCUIT

Check seat belt warning lamp circuit. Refer to SBC-57, "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-40, "Intermittent Incident".
NO >> GO TO 1.

SEAT BELT WARNING LAMP DOES NOT TURN ON

Diagnosis Procedure

INFOID:0000000006237942

1.CHECK SEAT BELT WARNING LAMP CIRCUIT

Check seat belt warning lamp circuit. Refer to SBC-57, "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?

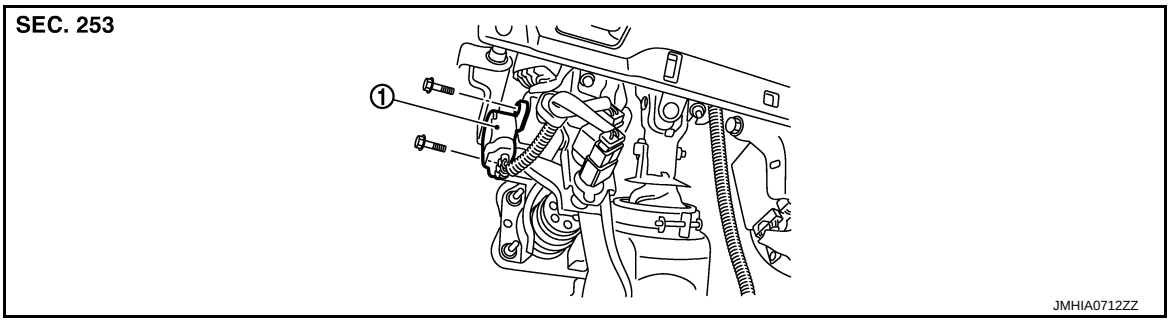
YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> GO TO 1.

REMOVAL AND INSTALLATION

BRAKE PEDAL STROKE SENSOR

Exploded View

INFOID:0000000006237943



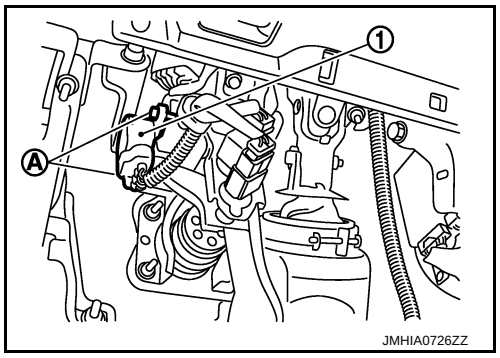
1. Brake pedal stroke sensor

Removal and Installation

INFOID:0000000006237944

REMOVAL

1. Remove the instrument panel lower cover LH. Refer to IP-14, "Removal and Installation".
2. Disconnect the brake pedal stroke sensor connector.
3. Remove the screws (A).
4. Remove the brake pedal stroke sensor (1).



INSTALLATION

Install in the reverse order of removal.