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CONTENTS

BASIC INSPECTION3	ALTERNATOR SIGNAL CIRCUIT16	F
DIAGNOSIS AND REPAIR WORKFLOW 3	Description	
Work Flow	Component Function Check16 Diagnosis Procedure16	C
FUNCTION DIAGNOSIS4	ECU DIAGNOSIS18	
SEAT BELT WARNING LAMP4	COMBINATION METER18	SE
System Diagram4	Reference Value18	
System Description4	Wiring Diagram - SEAT BELT WARNING LAMP	
Component Parts Location	CONTROL SYSTEM24	
Component Description5	Fail Safe	
COMPONENT DIAGNOSIS6	DTC Index27	
INDICATOR UNIT POWER SUPPLY CIRCUIT	SYMPTOM DIAGNOSIS28	J
6	DRIVER SIDE SEAT BELT WARNING LAMP	
Component Function Check6	DOES NOT OPERATE28	K
Diagnosis Procedure6	Diagnosis Procedure28	
FRONT SEAT BELT BUCKLE SWITCH	PASSENGER SIDE SEAT BELT WARNING	
(DRIVER SIDE)7	LAMP DOES NOT OPERATE29	L
Description7	Diagnosis Procedure29	
Component Function Check7	REAR SEAT BELT WARNING LAMP DOES	
Diagnosis Procedure	NOT OPERATE30	N
Component Inspection8	Diagnosis Procedure30	
FRONT SEAT BELT BUCKLE SWITCH (PAS-		
SENGER SIDE)9	WARNING LAMP DOES NOT OPERATE EX-	Ν
Description9	CEPT FOR DRIVER SIDE31	
Component Function Check9	Diagnosis Procedure31	
Diagnosis Procedure9	REAR SEAT BELT WARNING LAMP DOSE	C
Component Inspection (seat belt buckle switch	NOT TURN OFF AFTER A LAPSE OF SPEC-	
passenger side)11 Component Inspection (occupant detection unit)11	IFIED TIME32	
Component inspection (occupant detection unit) 11	Diagnosis Procedure32	F
REAR SEAT BELT BUCKLE SWITCH13	·	
Description13	PASSENGER SEAT IS OCCUPIED BUT	
Component Function Check13	SEAT BELT WARNING LAMP DOES NOT	
Diagnosis Procedure13	LIGHT UP33	
Component Inspection14	Diagnosis Procedure33	

PRECAUTION34	ON-VEHICLE REPAIR35	
PRECAUTIONS34	INDICATOR UNIT35	
Precaution for Supplemental Restraint System	Exploded View35	
(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	Removal and Installation35	
SIONIED" 24		

DIAGNOSIS AND REPAIR WORKFLOW < BASIC INSPECTION > **BASIC INSPECTION** Α DIAGNOSIS AND REPAIR WORKFLOW Work Flow INFOID:0000000001182720 В **DETAILED FLOW** 1. OBTAIN INFORMATION ABOUT SYMPTOM Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much as possible when the customer brings the vehicle in. D >> GO TO 2. $2.\mathsf{REPRODUCE}$ THE MALFUNCTION INFORMATION Е Check the malfunction on the vehicle that the customer describes. Inspect the relation of the symptoms and the condition when the symptoms occur. F >> GO TO 3. 3.IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS" Use "Symptom diagnosis" from the symptom inspection result in step 2. Then identify where to start performing the diagnosis based on possible causes and symptoms. SBC >> GO TO 4. f 4.IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS" Perform the diagnosis with "Component diagnosis" of the applicable system. >> GO TO 5. ${f 5}$. REPAIR OR REPLACE THE MALFUNCTIONING PARTS Repair or replace the specified malfunctioning parts. K >> GO TO 6. 6. FINAL CHECK Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2. Are all malfunctions corrected? M YES >> INSPECTION END NO >> GO TO 3.

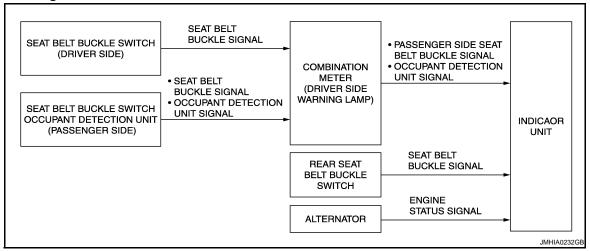
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FUNCTION DIAGNOSIS

SEAT BELT WARNING LAMP

System Diagram

INFOID:0000000001182721



System Description

INFOID:0000000001182722

Seat belt warning lamp will light up if the driver has started the engine or turned ignition switch to ON position.

DRIVER SIDE SEAT BELT WARNING LAMP OPEARATION

- Driver side seat belt warning lamp is built in combination meter.
- Warning lamp lights up if seat belt buckle switch is in OFF position (unbuckled).
- Warning lamp turns off if seat belt buckle switch is in ON position (buckled).

PASSENGER SIDE SEAT BELT WARNING LAMP OPERATION

- Passenger side seat belt warning lamp is located on center consol indicator unit.
- There is an occupant detection unit situated inside passenger seat. Note that passenger seat belt warning lamp will not light up if the seat is unoccupied.
- If passenger seat is occupied and seat belt buckle is in OFF position warning lamp will light up.
- If passenger seat is occupied and seat belt buckle is in ON position warning lamp will turn off.

REAR SEAT BELT WARNING LAMP OPEATION

- · Rear seat belt warning lamps are located on center consol indicator unit.
- After the engine has been started, the rear seat belt warning lights up for approximately 35 seconds if the seat belt is unfastened.
- After the engine has been started for approximately 35 seconds, all the rear seat belts warning lamps will turn OFF regardless of the seat belts status. Therefore if any of the rear seat belts are fastened/unfastened, the unfastened warning lamps will illuminate for 35 seconds.

SEAT BELT WARNING LAMP

< FUNCTION DIAGNOSIS >

Component Parts Location

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- Seat belt warning lamp (built in combination meter M34)
- 4. Occupant detection unit B48
- A. Behind seat cushion trim

2. Indicator unit M91

3. Front seat belt buckle switch (driver side) B22

Component Description

INFOID:0000000001182724

Item	Function
Combination meter	 Driver seat belt warning lamp is built in combination meter. Detects the status of driver side, passenger side seat belt buckle switch and controls warning lamp operation.
Indicator unit	 Passenger side and rear seat belt warning lamps are built in indicator unit. Detects the status of rear seat belt buckle switch and controls the warning lamp illumination. Judges the status of engine by detection of the signal transmitted by alternator and performs the control of seat belt warning lamp ON/OFF function.
Seat belt buckle switch (driver/passenger/rear)	Detects seat belt feature status transmits signal to combination meter or to indicator unit.
Occupant detection unit	Detects the seat status (occupied or unoccupied) and then transmits signal to combination meter or to indicator unit.

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INDICATOR UNIT POWER SUPPLY CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

INDICATOR UNIT POWER SUPPLY CIRCUIT

Component Function Check

INFOID:0000000001182725

1. CHECK INDICATOR UNIT FUNCTION

- 1. All seat belt buckle are unbuckle.
- 2. Turn ignition switch ON.
- 3. Check indicator unit operation.

Is the inspection results normal?

YES >> Indicator unit power supply circuit is OK.

NO >> Refer to SBC-6, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001182726

1. CHECK FUSE

- 1. Turn ignition switch OFF.
- 2. Check the following.
- 10A fuse (No. 4 located in fuse block-junction box).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected if a fuse blown.

2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between indicator unit harness connector and ground.

Indicator unit		Ground	Voltage (V)	
Connector	Terminal	Orodina	(Approx.)	
M91	7	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace power supply circuit.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident"

>> INSPECTION END

FRONT SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

< COMPONENT DIAGNOSIS >

FRONT SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Description INFOID:000000001182727

- Detects if the seat belt is fastened or unfastened.
- Warning lamp turns OFF if the seat belt is fastened.

Component Function Check

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

Check "SEAT BELT W/L" in DATA MONITOR mode with CONSULT-III

Driver seat belt is unfastened SEAT BELT W/L: ON Driver seat belt is fastened SEAT BELT W/L: OFF

Is the inspection results normal?

YES >> Seat belt buckle switch (driver side) function is OK.

NO >> Refer to SBC-7, "Diagnosis Procedure".

Diagnosis Procedure

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

- Turn ignition switch ON.
- 2. Check voltage between combination meter harness connector and ground.

Combina	Combination meter		Condition	Voltage (V)	
Connector	Terminal	Ground	Condition	(Approx.)	
M34	35	Ground	Driver seat belt is unfastened	0	
WOT	33	Ground	Driver seat belt is fastened	5	

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

2.check seat belt buckle switch (driver side) circuit

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

Combination meter		Seat belt buckle switch (driver side)		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M34	35	B22	1	Existed	

Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal	Ground	Continuity
M34	35	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

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

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

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FRONT SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

< COMPONENT DIAGNOSIS >

Seat belt buckle switch (driver side)		Ground	Continuity
Connector	Terminal	Giodila	Continuity
B22	2	Ground	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Check seat belt buckle switch (driver side).

Refer to SBC-8, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace seat belt buckle switch (driver side). Refer to <u>SB-9</u>, "<u>SEAT BELT BUCKLE</u>: Removal and <u>Installation</u>".

CHECK COMBINATION METER OUTPUT SIGNAL

- 1. Connect combination meter connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between combination meter harness connector and ground.

Combination meter		Ground	Voltage (V)	
Connector	Terminal	Oround	(Approx.)	
M34	35	Ground	5	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace combination meter. Refer to MWI-78, "Removal and Installation".

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident"

>> INSPECTION END

Component Inspection

INFOID:0000000001182730

1. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

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

Seat belt buckle switch (driver side)		Condition	Continuity	
Cnnector	Terminal	Condition	Continuity	
B22	1	When seat belt is unfastened	Existed	
	2	- When seat belt is unlastened	LAIStea	
	1	When seat belt is fastened	Not existed	
	2	- When seat beit is fasteried	INOL EXISTED	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle switch (driver side). Refer to <u>SB-9</u>, "<u>SEAT BELT BUCKLE</u>: Removal and Installation".

< COMPONENT DIAGNOSIS >

FRONT SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Description

- Detects if the seat belt is fastened or unfastened.
- Warning lamp turns OFF if the seat belt is fastened.

Component Function Check

INFOID:0000000001182732

${\bf 1.} {\sf CHECK} \; {\sf SEAT} \; {\sf BELT} \; {\sf BUCKLE} \; {\sf SWITCH} \; ({\sf PASSENGER} \; {\sf SIDE}) \; {\sf FUNCTION}$

- 1. Turn ignition switch ON.
- 2. Sits in the passenger seat.
- 3. Fasten the passenger seat belt buckle.
- 4. Check if the warning lamp turns OFF as soon as the seat belt is fastened.

Is the inspection results normal?

YES >> Seat belt buckle switch (passenger side) function is OK.

NO >> Refer to <u>SBC-9</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000001182733

1. CHECK COMBINATION METER INPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between combination meter harness connector and ground.

Combination meter		Ground	Condition	Voltage (V)	
Connector	Terminal	Giodila	Condition	(Approx.)	
M34	14 Ground		Passenger seat belt is unfastened	0	
	14	Ground	Passenger seat belt is fastened	Battery voltage	

Is the inspection result normal?

OK >> GO TO 10.

NO >> GO TO 2.

2.CHECK INDICATOR UNIT CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect indicator unit connector and combination meter connector.
- Check continuity between indicator unit harness connector and combination meter harness connector.

Indicator unit		Combination meter		Continuity	
Connector	Terminal	Connector terminal		Continuity	
M91	1	M34	14	Existed	

4. Check continuity between indicator unit harness connector and ground.

Indicator unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M91	1	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.check seat belt buckle switch (passenger side) function

- 1. Connect combination meter connector.
- Turn ignition switch ON.
- 3. Sits in the passenger seat.
- Check voltage between combination meter harness connector and ground.

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< COMPONENT DIAGNOSIS >

Combina	Combination meter		Condition	Voltage (V)
Connector	Terminal	Ground	Condition	(Approx.)
M34	M34 36		Passenger seat belt is unfastened	0
	30	Ground	Passenger seat belt is fastened	Battery voltage

Is the inspection result normal?

YES >> GO TO 10. NO >> GO TO 4.

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

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

Combina	Combination meter		itch (passenger side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M34	36	B23	1	Existed

4. Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M34	36	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK OCCUPANT DETECTION UNIT CIRCUIT

- 1. Disconnect occupant detection unit connector.
- 2. Check continuity between seat belt buckle switch (passenger side) harness connector and occupant detection unit harness connector.

Seat belt buckle sw	itch (passenger side)	Occupant detection unit		Continuity	
Connector	Terminal	Connector Terminal			
B23	2	B48	1	Existed	

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

Seat belt buckle sw	itch (passenger side)	Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
B23	2	Ground	Not existed	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

O.CHECK GROUND CIRCUIT

Check continuity between occupant detection unit harness connector and ground.

Occupant detection unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
B48	2	Ground	Existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

< COMPONENT DIAGNOSIS >

7.CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

Check seat belt buckle switch (passenger side).

Refer to SBC-11, "Component Inspection (seat belt buckle switch passenger side)".

Is the inspection result normal?

YES >> GO TO 8.

NO

>> Replace seat belt buckle switch (passenger side). Refer to <u>SB-9, "SEAT BELT BUCKLE : Removal and Installation"</u>.

8. CHECK OCCUPANT DETECTION UNIT

Check occupant detection unit.

Refer to SBC-11, "Component Inspection (occupant detection unit)".

Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace occupant detection unit. Refer to <u>SE-15, "Disassembly and Assembly"</u>.

9. CHECK COMBINATION METER OUTPUT SIGNAL

- Connect combination meter connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between combination meter harness connector and ground.

Combination meter		Ground	Voltage (V)	
Connector	Terminal	Ground	(Approx.)	
M34	36	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 10.

NO >> Replace combination meter. Refer to MWI-78, "Removal and Installation".

10. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident"

>> INSPECTION END

Component Inspection (seat belt buckle switch passenger side)

1. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

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

Seat belt buckle switch (passenger side)		Condition	Continuity	
Connector	Terminal	Condition	Continuity	
	1	When seat belt is unfastened	Existed	
B23	2	When seat beit is unlastened	LAISTOG	
D23	1	When seat belt is fastened	Not existed	
	2	When seat beit is fasteried		

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace seat belt buckle switch (passenger side). Refer to <u>SB-9</u>, "<u>SEAT BELT BUCKLE</u>: Removal and Installation".

Component Inspection (occupant detection unit)

1. CHECK OCCUPANT DETECTION UNIT

Check continuity between occupant detection unit connectors.

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< COMPONENT DIAGNOSIS >

Occupant detection unit		Condition	Continuity	
Connector	Terminal	Condition	Continuity	
	1	When getting in the passenger seat	Existed	
B48	2	when getting in the passenger seat	LAISTEG	
Б40	1	Other than above	Not existed	
	2	- Other triair above	Not existed	

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace occupant detection unit. Refer to <u>SE-15</u>. "<u>Disassembly and Assembly"</u>.

REAR SEAT BELT BUCKLE SWITCH

< COMPONENT DIAGNOSIS >

REAR SEAT BELT BUCKLE SWITCH

Description INFOID:000000001182736

- · Detects if the seat belt is fastened or unfastened.
- Warning lamp turns OFF if the seat belt is fastened.

Component Function Check

INFOID:0000000001182737

1. CHECK REAR SEAT BELT BUCKLE SWITCH FUNCTION

- 1. Start engine.
- 2. Check that the LH, center and RH warning lamp illuminate after the engine has started.
- 3. Check if the warning lamp turns OFF as soon as the seat belt is fastened.

Is the inspection results normal?

YES >> Rear seat belt buckle switch function is OK.

NO >> Refer to <u>SBC-13</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000001182738

1. CHECK REAR SEAT BELT BUCKLE CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between rear seat belt buckle switch harness connector and ground.

Rear seat belt buckle switch		Ground	Condition	Voltage (V)
Connector	Terminal	Ground	Tid Gorialion	(Approx.)
	1		Rear seat belt (LH) is fastened	Battery voltage
B63 (LH and center)	C2 (LLL and assets)		Rear seat belt (LH) is unfastened	0
bos (Ln and center)	3	3 Ground	Rear seat belt (center) is fastened	Battery voltage
			Rear seat belt (center) is unfastened	0
	1		Rear seat belt (RH) is fastened	Battery voltage
B64 (RH and center)			Rear seat belt (RH) is unfastened	0
	3		Rear seat belt (center) is fastened	Battery voltage
	3		Rear seat belt (center) is unfastened	0

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

2.CHECK INDICATOR UNIT OUTPUT SIGANL

Check voltage between indicator unit harness connector and ground.

Indicator unit		Ground	Voltage (V)	
Connector	Terminal	Giodila	(Approx.)	
	3		Battery voltage	
M91	4	Ground		
	5			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace indicator unit. Refer to SBC-35, "Removal and Installation".

${f 3.}$ CHECK REAR SEAT BELT BUCKLE SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect indictor unit and rear seat belt buckle switch connector.

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REAR SEAT BELT BUCKLE SWITCH

< COMPONENT DIAGNOSIS >

Check continuity between indictor unit harness connector and rear seat belt buckle switch harness connector.

Indica	Indicator unit		Rear seat belt buckle switch	
Connector	Terminal	Connector	Terminal	Continuity
	3	B63 (LH and center)	1	
M91	_	bos (Li i and center)	3	Existed
IVIÐ I	4	DG4 (DH and center)	3	LXISIGU
	5	B64 (RH and center)	1	

4. Check continuity between indicator unit harness connector and ground.

Indica	tor unit	Ground	Continuity	
Connector	Terminal	Giodila		
	3			
M91	4	Ground	Not existed	
	5			

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

Check continuity between rear sear belt buckle switch harness connector and ground.

Rear seat bel	t buckle switch	Ground	Continuity	
Connector Terminal		Giodila	Continuity	
B63 (LH and center)	2			
bos (Ln and center)	4	Ground	Existed	
PG4 (PH and center)	2	Ground	EXISIEU	
B64 (RH and center)	4			

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK REAR SEAT BELT BUKLE SWITCH

Check rear seat belt buckle switch.

Refer to SBC-14, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace rear seat belt buckle switch. Refer to <u>SB-17</u>, "<u>SEAT BELT BUCKLE</u>: Removal and Installation".

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident"

>> INSPECTION END

Component Inspection

INFOID:0000000001182739

1. CHECK SEAT BELT BUCKLE SWITCH

Check continuity between rear seat belt buckle switch connector.

REAR SEAT BELT BUCKLE SWITCH

< COMPONENT DIAGNOSIS >

Rear seat belt	buckle switch		Condition	Continuity	
Connector	Terr	minal	Condition	Continuity	
	1	2	Rear seat belt (LH) is unfastened	Existed	
DG2 (LU and contar)	l	2	Rear seat belt (LH) is fastened	Not existed	
B63 (LH and center)	2	4	Rear seat belt (center) is unfastened	Existed	
	3	4	Rear seat belt (center) is fastened	Not existed	
	4	0	Rear seat belt (RH) is unfastened	Existed	
DC4 (DLL and contar)	I	2	Rear seat belt (RH) is fastened	Not existed	
B64 (RH and center)	3	4	Rear seat belt (center) is unfastened	Existed	
	3	4	Rear seat belt (center) is fastened	Not existed	

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace seat belt buckle switch. Refer to <u>SB-17, "SEAT BELT BUCKLE : Removal and Installation"</u>.

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ALTERNATOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

ALTERNATOR SIGNAL CIRCUIT

Description INFOID:000000001182740

Transmits the "engine started" signal to indicator unit.

Component Function Check

INFOID:0000000001182741

1. CHECK ALTERNATOR SIGNAL CIRCUIT

Check if the warning lamp turns OFF, approximately 35 seconds after the engine has started.

Is the inspection results normal?

YES >> Alternator signal circuit is OK.

NO >> Refer to SBC-16, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001182742

1. CHECK INDICATOR UNIT INPUT SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect indicator unit connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between indicator unit harness connector and ground.

Indic	Indictor unit		Condition	Voltage (V)	
Connector	Terminal	- Ground	Condition	(Approx.)	
M91	6	Ground	Engine running	Battery voltage	
IVIST	0	Giouna	Other than above	0	

Is the inspection result normal?

YES >> Replace indictor unit. Refer to <u>SBC-35, "Removal and Installation"</u>.

NO >> GO TO 2.

2. CHECK ALTERNATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect alternator connector.
- 3. Check continuity between indictor unit harness connector and alternator harness connector.

Indicator unit		Alter	Continuity	
Connector	Terminal	Connector	terminal	Continuity
M91	6	F15 ^{*1}	3 ^{*1}	Existed
IVI9 I	6	F60 ^{*2}	4*2	EXISTECT

^{*1} Except K9K engine

4. Check continuity between indicator unit harness connector and ground.

Indica	tor unit	Ground	Continuity	
Connector	Terminal	Ground		
M91	6	Ground	Not existed	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident"

^{*2} With K9K engine

ALTERNATOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

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ECU DIAGNOSIS

COMBINATION METER

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item		Condition	Value/Status
SPEED METER [km/h]	Ignition switch ON	While driving	Equivalent to speedometer reading NOTE: 655.35 is displayed when the malfunction signal is received
SPEED OUTPUT [km/h]	Ignition switch ON	While driving	Equivalent to speedometer reading NOTE: 655.35 is displayed when the malfunction signal is received
TACHO METER [rpm]	Ignition switch ON	While driving	Equivalent to tachometer reading NOTE: 8191.875 is displayed when the mal- function signal is received
W TEMP METER [°C]	Ignition switch ON	_	Values according to engine coolant temperature NOTE: 215 is displayed when the malfunction signal is input
FUEL METER [lit]	Ignition switch ON	_	Values according to fuel level
DISTANCE [km]	Ignition switch ON	_	Possible driving distance calculated by combination meter
FUEL W/L	Ignition switch ON	Low-fuel warning lamp ON	On
		Low-fuel warning lamp OFF	Off
O ENO W/I	Ignition switch ON	Malfunction indicator lamp ON	On
C-ENG W/L		Malfunction indicator lamp OFF	Off
SEAT BELT W/L	Ignition switch ON	Seat belt warning lamp ON	On
SEAT BELT W/L		Seat belt warning lamp OFF	Off
BUZZER	Ignition switch	Buzzer ON	On
BUZZEK	ON	Buzzer OFF	Off
C-ENG 2 W/L	Ignition switch	Malfunction indicator lamp 2 ON	On
C-LING 2 W/L	ON	Malfunction indicator lamp 2 OFF	Off
GLOW IND	Ignition switch	Glow indicator lamp ON	On
OLOW IND	ON	Glow indicator lamp OFF	Off
DOOR W/L	Ignition switch	Door warning lamp ON	On
DOOK W/L	ON	Door warning lamp OFF	Off
HI-BEAM IND	Ignition switch	High-beam indicator lamp ON	On
TII-DLAW IND	ON	High-beam indicator lamp OFF	Off
TURN IND	Ignition switch	Turn signal indicator lamp ON	On
TORN IND	ON	Turn signal indicator lamp OFF	Off
FR FOG IND	Ignition switch	Front fog lamp indicator lamp ON	On
I IV LOG IND	ON	Front fog lamp indicator lamp OFF	Off
RR FOG IND	Ignition switch	Rear fog lamp indicator lamp ON	On
IVIV EOR IIND	ON	Rear fog lamp indicator lamp OFF	Off

< ECU DIAGNOSIS >

Monitor Item		Condition	Value/Status		
OIL W/I	Ignition switch	Oil pressure warning lamp ON	On		
OIL W/L	ŎN	Oil pressure warning lamp OFF	Off		
LIGHT IND	Ignition switch	Tail lamp indicator lamp ON	On		
LIGHT IND	ON	Tail lamp indicator lamp OFF	Off		
DPF W/L	Ignition switch	DPF warning lamp ON	On		
DPF W/L	ON	DPF warning lamp OFF	Off		
AT TEMP W/L	Ignition switch	A/T TEMP warning lamp ON	On		
AT TEIVIP VV/L	ON	A/T TEMP warning lamp OFF	Off		
VDC/TCS IND	Ignition switch	ESP OFF indicator lamp ON	On		
VDC/TCS IND	ON	ESP OFF indicator lamp OFF	Off		
ABS W/L	Ignition switch	ABS warning lamp ON	On		
AB2 W/L	ON	ABS warning lamp OFF	Off		
SLIP IND	Ignition switch	SLIP Indicator lamp ON	On		
סרוג וואח	ŎN	SLIP indicator lamp OFF	Off		
	Ignition switch	Brake warning lamp ON	On		
BRAKE W/L	ŎN	Brake warning lamp OFF	Off		
		Oil level 1 is detected	LEVEL1		
		Oil level 2 is detected	LEVEL2		
DIL LEVEL IND		Oil level 3 is detected	LEVEL3	s	
	Ignition switch ON	Oil level 4 is detected	LEVEL4		
	ON	Oil level 5 is detected	LEVEL5		
		OIL LOW is detected	On		
		Oil level is not detected	CR NG		
(E) (O) N//	Ignition switch	KEY warning lamp (green) ON	On		
KEY G W/L	ŎN	KEY warning lamp (green) OFF	Off		
(T) (D) (()	Ignition switch	KEY warning lamp (red) ON	On		
KEY R W/L	ŎN	KEY warning lamp (red) OFF	Off		
(=) (() () () () () () () () (Ignition switch	LOCK warning lamp ON	On		
KEY KNOB W/L	ON	LOCK warning lamp OFF	Off		
454405 000	Ignition switch	Manual mode	On		
M RANGE SW	ON	Other than the above	Off		
	Ignition switch	Manual mode	Off		
NM RANGE SW	ON	Other than the above	On		
AT OFT US 2000	Ignition switch	Selector lever (+) position	On		
AT SFT UP SW	ON	Other than the above	Off		
	Ignition switch	Selector lever (–) position	On		
AT SFT DWN SW	ON	Other than the above	Off		
DANIOE :: : 5	Ignition switch	Selector lever in P position	On		
P RANGE IND	ON	Other than the above	Off		
	Ignition switch	Selector lever in R position	On		
R RANGE IND	ON	Other than the above	Off		
	Ignition switch	Selector lever in N position	On		
N RANGE IND	ON	Other than the above	Off		

SBC-19

< ECU DIAGNOSIS >

Monitor Item		Condition	Value/Status
D RANGE IND	Ignition switch	Selector lever in D position	On
D RAINGE IND	ON	Other than the above	Off
4 RANGE IND	Ignition switch	Shift indicator 4 is displayed	On
	ON	Other than the above	Off
3 RANGE IND	Ignition switch	Shift indicator 3 is displayed	On
3 KANGE IND	ON	Other than the above	Off
2 DANCE IND	Ignition switch	Shift indicator 2 is displayed	On
2 RANGE IND	ON	Other than the above	Off
4 DANCE IND	Ignition switch	Shift indicator 1 is displayed	On
1 RANGE IND	ON	Other than the above	Off
AT 0050774	Ignition switch	TCM electronic control system warning lamp ON	On
AT CHECK-W/L	ŎN	TCM electronic control system warning lamp OFF	Off
0.7.00	Ignition switch	CVT indicator lamp ON	On
CVT IND	ŎN	CVT indicator lamp OFF	Off
ODUNOE IND	Ignition switch	Cruise indicator lamp ON	On
CRUISE IND	ON	Cruise indicator lamp OFF	Off
CET IND	Ignition switch	SET indicator lamp ON	On
SET IND	ON	SET indicator lamp OFF	Off
414/0.1.0014.014	Ignition switch	4WD LOCK switch ON	On
4WD LOCK SW	ON	4WD LOCK switch OFF	Off
4WD LOCK IND	Ignition switch	4WD LOCK indicator lamp ON	On
4WD LOCK IND	ON	4WD LOCK indicator lamp OFF	Off
4WD W/L	Ignition switch	4WD warning lamp ON	On
400D 00/L	ON	4WD warning lamp OFF	Off
EPS W/L	Ignition switch	EPS warning lamp ON	On
LF 3 VV/L	ON	EPS warning lamp OFF	Off

NOTE:

Some items are not available according to vehicle specification.

TERMINAL LAYOUT

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 JSNIA0457ZZ

PHYSICAL VALUES

< ECU DIAGNOSIS >

	nal No. color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
2 (GR)	Ground	IGN signal	Input	Ignition switch ON	_	Battery voltage
3 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
11 (B)* ¹	Ground	Steering switch (trip computer) signal	Input	Ignition switch ON	Press the steering switch (trip computer)	0 V
(R)* ²				ON	Other than the above	5 V
15 (W)	Ground	Air bag signal	Input	Ignition switch	Air bag warning lamp ON Air bag warning lamp	4 V
19 (V)	Ground	OAT sensor signal	Input	Ignition switch ON	OFF —	(V) 4 3 2
20 (L/O)	Ground	OAT sensor ground	_	Ignition switch ON	_	0 10 20 30 40 [c] c] 10 (14) (32) (50) (68) (86) (104) [c] F] JSNIA0014GB
21 (L)	_	CAN-H	_	_	_	_
22 (P)	_	CAN-L	_	_	_	_
23 (B)	Ground	Ground	-	Ignition switch ON	_	0 V
24 (G)	Ground	Fuel level sensor signal ground	_	Ignition switch ON	_	0 V
25	_			Ignition	Charge warning lamp ON	0 V
(L)	Ground	Alternator signal	Input	switch ON	Charge warning lamp OFF	12 V
26	Ground	Parking brake switch signal	Input	Ignition switch	Parking brake ON	0 V
(V)	Cround	. arking branc switch signal	mpat	ON	Parking brake OFF	5 V
27		Proko fluid lovol aviitab air		Ignition	Brake fluid level is normal	5 V
27 (BR)	Ground	Brake fluid level switch signal	Input	switch ON	Brake fluid level is less than LOW level	0 V
28		0		Ignition	Security warning lamp ON	0 V
(SB)	Ground	Security signal	Input	switch ON	Security warning lamp OFF	12 V

< ECU DIAGNOSIS >

	nal No. color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
31 (Y)	Ground	Vehicle speed signal (8 pulse)	Output	Ignition switch ON	Vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).
32 (Y)	Ground	Oil level sensor signal	Input	Ignition switch ON	_	Refer to MWI-32, "Component Inspection (HR16DE Engine Models)" or MWI-33, "Component Inspection (Except HR16DE Engine Models)". NOTE: The measurement cannot be performed because the signal is input for a moment with the ignition switch ON.
33 (P)	Ground	Oil level sensor signal ground	_	Ignition switch ON	_	0 V
34 (B)	Ground	Fuel level sensor signal	Input	Ignition switch ON	_	(V) 4 3 2 1 0 E 1/4 1/2 3/4 F JSNIA0322GB
35 (O)	Ground	Seat belt buckle switch signal (driver side)	Input	Ignition switch	When driver seat belt is fastened	5 V
(0)		riai (diiver side)		ON	When driver seat belt is un- fastened	0 V
36	Ground	Seat belt buckle switch sig-	Input	Ignition switch	When getting in the passenger seat When passenger seat belt is fastened	12 V
(GR)		nal (passenger side)		ON	When getting in the passenger seatWhen passenger seat belt is not fastened	0 V
37 (R)	Ground	Not manual mode signal	Input	Ignition switch ON	Manual mode Other than the above	12 V 0 V
38		Manual mode shift down		Ignition	Selector lever (–) position	0 V
(LG)	Ground	signal	Input	switch ON	Other than the above	12 V
39		Manual mode shift up sig-		Ignition	Selector lever (+) position	0 V
(W)	Ground	nal	Input	switch ON	Other than the above	12 V

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value
+	_	Signal name	Input/ Output	Contactor		(Approx.)
40				Ignition	Manual mode	0 V
(L)	Ground	Manual mode signal	Input	switch ON	Other than the above	12 V

*1: With NAVI

*2: Without NAVI

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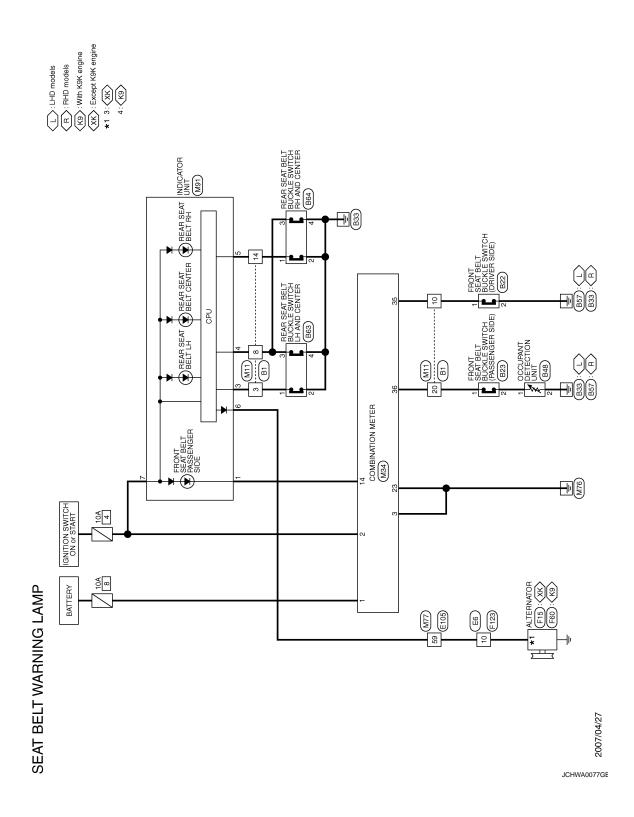
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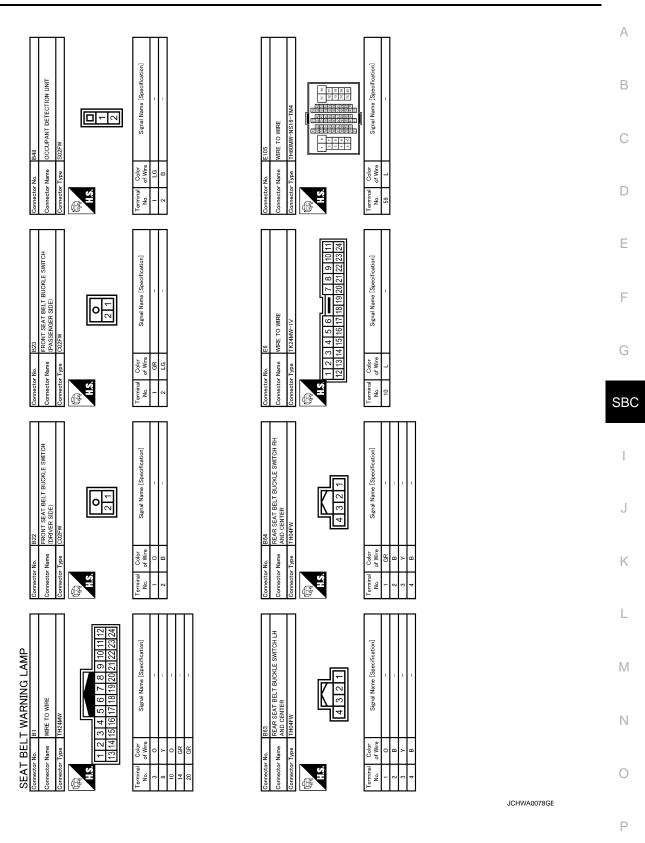
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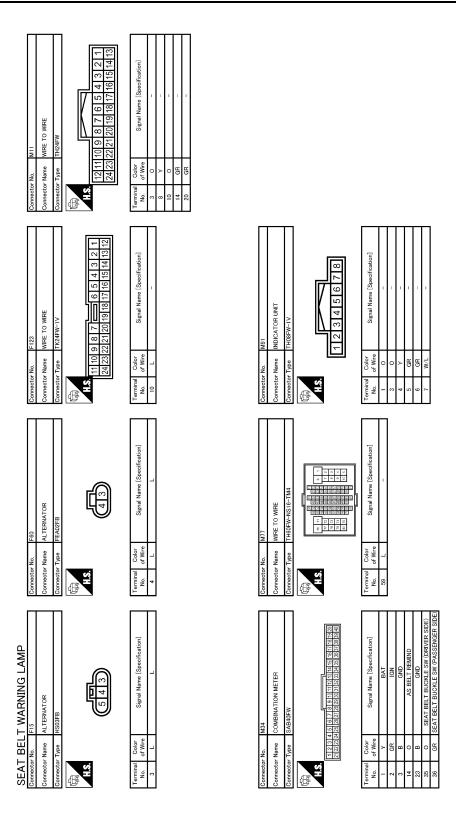
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INFOID:0000000001182744







JCHWA0079GE

Fail Safe

INFOID:0000000001555140

The combination meter activates the fail-safe control if the CAN communication lines between each unit are malfunctioning.

< ECU DIAGNOSIS >

	Function	Specifications	А
Speedometer Tachometer		Reset to zero by suspending communication.	
Buzzer		Turned off by suspending communication.	
	ABS warning lamp		C
	Brake warning lamp		
	EPS OFF indicator lamp	Turned on by suspending communication.	
	VDC OFF indicator lamp		
	SLIP indicator lamp		
	CVT indicator lamp		E
	AT CHECK warning lamp		
	Oil pressure warning lamp		
	Door warning lamp		F
	Malfunction indicator lamp		
Warning lamp/indicator	CRUISE indicator lamp		(-
lamp	Tail lamp indicator lamp		
	Front fog indicator lamp		
	Rear fog indicator lamp	Turned off by suspending communication.	SE
	Glow indicator lamp		
	DPF warning lamp		
	Malfunction indicator lamp 2		I
	Trailer indicator lamp		
	KEY R/G warning lamp		
	KEY LOCK warning lamp		
	High beam indicator lamp		
	Turn signal indicator lamp		K

DTC Index

Display contents of CONSULT-III	Time	Diagnostic item is detected when	Refer to
CAN COMM CIRCUIT [U1000]	CRNT, 1 - 39	Combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.	<u>MWI-30</u>
VEHICLE SPEED [B2205]	CRNT, 1 - 39	The abnormal vehicle speed signal is input from ABS actuator and electric unit (control unit) for 2 seconds or more.	<u>MWI-31</u>
OIL LEV SEN OPEN [B2321]	CRNT, 1 - 39	Combination meter judged that the oil level sensor signal circuit is open-circuited for 1 second or more.	MWI-32 (HR16DE) MWI-32 (Except
OIL LEV SEN SHORT [B2322]	CRNT, 1 - 39	Combination meter judged that the oil level sensor signal circuit is short-circuited for 1 second or more.	HR16DE)

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DRIVER SIDE SEAT BELT WARNING LAMP DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

DRIVER SIDE SEAT BELT WARNING LAMP DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001182747

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

Check font seat belt buckle switch (driver side).

Refer to SBC-7, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK COMBINATION METER

Check combination meter.

Refer to MWI-4, "Work Flow".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident"

NO >> GO TO 1.

PASSENGER SIDE SEAT BELT WARNING LAMP DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >	
PASSENGER SIDE SEAT BELT WARNING LAMP DOES NOT OPERATE	
Diagnosis Procedure	Α
1. CHECK FRONT SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)	В
Check front seat belt buckle switch (passenger side). Refer to SBC-9, "Component Function Check".	
Is the inspection result normal? YES >> GO TO 2.	С
NO >> Repair or replace the malfunctioning parts.	
2.CONFIRM THE OPERATION	D
Confirm the operation again. <u>Is the result normal?</u>	Е
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident"	_
NO >> GO TO 1.	F
	G
	SBC
	I
	J
	K
	L
	M
	N
	1.4
	0

REAR SEAT BELT WARNING LAMP DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

REAR SEAT BELT WARNING LAMP DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001182749

1. CHECK REAR SEAT BELT BUCKLE SWITCH

Check rear seat belt buckle switch.

Refer to SBC-13, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident"

NO >> GO TO 1.

WARNING LAMP DOES NOT OPERATE EXCEPT FOR DRIVER SIDE

< SYMPTOM DIAGNOSIS > WARNING LAMP DOES NOT OPERATE EXCEPT FOR DRIVER SIDE Α Diagnosis Procedure INFOID:0000000001182750 1. CHECK INDICATOR UNIT POWER SUPPLY CIRCUIT В Check indicator unit power supply circuit. Refer to SBC-6, "Component Function Check". C Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2.CONFIRM THE OPERATION D Confirm the operation again. Is the result normal? Е YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident" NO >> GO TO 1. F G SBC J K L M

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REAR SEAT BELT WARNING LAMP DOSE NOT TURN OFF AFTER A LAPSE OF SPECIFIED TIME

< SYMPTOM DIAGNOSIS >

REAR SEAT BELT WARNING LAMP DOSE NOT TURN OFF AFTER A LAPSE OF SPECIFIED TIME

Diagnosis Procedure

INFOID:0000000001182754

1. CHECK ALTERNATOR SIGNAL CIRCUIT

Check alternator signal circuit.

Refer to SBC-16, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident"

NO >> GO TO 1.

PASSENGER SEAT IS OCCUPIED BUT SEAT BELT WARNING LAMP DOES NOT LIGHT UP

< SYMPTOM DIAGNOSIS >

< SYMPTOM DIAGNOSIS >	
PASSENGER SEAT IS OCCUPIED BUT SEAT BELT WARNING LAMP DOES NOT LIGHT UP	Α
Diagnosis Procedure	В
1. CHECK FRONT SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)	
Check front seat belt buckle switch (passenger side). Refer to SBC-9, "Component Function Check".	С
Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2.CONFIRM THE OPERATION	D
Confirm the operation again.	Е
Is the result normal? YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident" NO >> GO TO 1.	F
	G

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

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 AIRBAG" and "SEAT BELT" of this Service Manual.

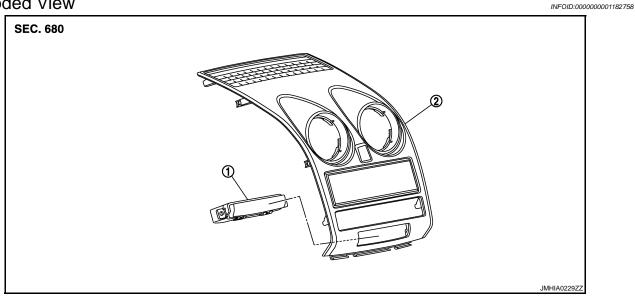
WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 AIRBAG".
- 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.

ON-VEHICLE REPAIR

INDICATOR UNIT

Exploded View



1. Indicator unit 2. Cluster lid C

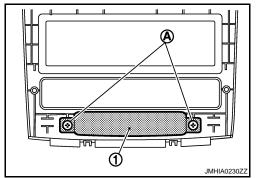
Removal and Installation

REMOVAL

CAUTION:

When removing and installing, use shop cloths to protect parts from damage.

- 1. Remove the battery negative terminal.
- 2. Remove the cluster lid C. Refer to <u>IP-12</u>, "Removal and Installation".
- 3. Remove the screws (A).
- 4. Remove indicator unit (1).



INSTALLATION

Install in the reverse order of removal.

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