# CONTENTS

BASIC INSPECTION4
DIAGNOSIS AND REPAIR WORK FLOW 4 Work Flow
SYSTEM DESCRIPTION5
POWER SEAT5System Description5Component Parts Location5Component Description5
TILT&TELESCOPIC SYSTEM       6         System Description       6         Component Parts Location       6         Component Description       7
SIDE SUPPORT
HEATED SEAT9System Diagram9System Description9Component Parts Location10Component Description10
LUMBAR SUPPORT11 System Description
DTC/CIRCUIT DIAGNOSIS12
POWER SUPPLY AND GROUND CIRCUIT12
AUTOMATIC DRIVE POSITIONER CONTROL UNIT

HEATED SEAT CONTROL UNIT ......12

HEATED SEAT CONTROL UNIT : Diagnosis Pro- cedure12	F
HEATED SEAT SWITCH14 HEATED SEAT SWITCH : Diagnosis Procedure14	G
HEATED SEAT SWITCH17	
DRIVER SIDE	H
DRIVER SIDE : Diagnosis Procedure	
PASSENGER SIDE	SE
Component Function Check	K
HEATED SEAT RELAY       21         Description       21         Component Function Check       21         Diagnosis Procedure       21         Component Inspection       22	L
HEAT SENSOR23	
DRIVER SIDE	N
DRIVER SIDE : Diagnosis Procedure23 DRIVER SIDE : Component Inspection24	0
PASSENGER SIDE	Ρ
PASSENGER SIDE : Diagnosis Procedure25 PASSENGER SIDE : Component Inspection27	
SEAT CUSHION HEATER28	

А

С

D

Е

SEAT

SECTION SE

DRIVER SIDE	28
DRIVER SIDE : Description	28
DRIVER SIDE : Component Function Check	28
DRIVER SIDE : Diagnosis Procedure	28
	20
PASSENGER SIDE	29
PASSENGER SIDE : Description	29
Component Function Check	29
PASSENGER SIDE : Diagnosis Procedure	29
PASSENGER SIDE : Component Inspection	31
SEATBACK HEATER	32
DRIVER SIDE	32
DRIVER SIDE : Description	32
DRIVER SIDE : Component Function Check	32
DRIVER SIDE : Diagnosis Procedure	32
PASSENGER SIDE	32
PASSENGER SIDE : Description	32
Component Function Check	32
PASSENGER SIDE : Diagnosis Procedure	32
HEATED SEAT SWITCH INDICATOR	3/
	54
	34
DRIVER SIDE : Description DRIVER SIDE : Component Function Check	34
DRIVER SIDE : Diagnosis Procedure	34
	24
PASSENGER SIDE : Description	34
PASSENGER SIDE :	
Component Function Check	34
PASSENGER SIDE : Diagnosis Procedure	34
TILT&TELESCOPIC SWITCH	36
Description	36
Component Function Check	36
Component Inspection	30
	0.
TILT&TELESCOPIC MOTOR	39
Component Function Check	39 39
Diagnosis Procedure	39
Component Inspection	40
TILT&TELESCOPIC SENSOR	41
Description	41
Component Function Check	41
Diagnosis Procedure	41
POWER SEAT	43
Wiring Diagram - POWER SEAT SYSTEM (DRIV-	
EK SIDE)	43
SENGER SIDE)	47
-	

LUMBAR SUPPORT
SIDE SUPPORT
TILT & TELESCOPIC SYSTEM       59         Wiring Diagram - TILT&TELESCOPIC SYSTEM 59
ECU DIAGNOSIS INFORMATION 62
AUTOMATIC DRIVE POSITIONER CON-
TROL UNIT   62     Reference Value   62
Wiring Diagram - AUTOMATIC DRIVE POSI- TIONER CONTROL SYSTEM
HEATED SEAT CONTROL UNIT
DRIVER SIDE
DRIVER SIDE : Reference Value
SYSTEM (WITH M/T)
SYSTEM (WITH A/T)
PASSENGER SIDE91
PASSENGER SIDE : Reference Value
SEAT SYSTEM (WITH M/T)
PASSENGER SIDE : Wiring Diagram - HEATED SEAT SYSTEM (WITH A/T)
SYMPTOM DIAGNOSIS107
HEATED SEAT DOES NOT OPERATE
BOTH SIDES
BOTH SIDES : Diagnosis Procedure 107
DRIVER SIDE
PASSENGER SIDE
PASSENGER SIDE : Diagnosis Procedure 108
SEATBACK HEATER ONLY DOES NOT OP- ERATE109
DRIVER SIDE
PASSENGER SIDE
CANNOT ADJUST HEATED SEAT TEMPER- ATURE110
DRIVER SIDE 110
DRIVER SIDE : Diagnosis Procedure 110
PASSENGER SIDE

HEATED SEAT SWITCH INDICATOR DOES NOT TURN ON111
DRIVER SIDE
PASSENGER SIDE
STEERING POSITION FUNCTION DOES NOT OPERATE
TILT FUNCTION DOES NOT OPERATE 113 Diagnosis Procedure
TELESCOPIC FUNCTION DOES NOT OPER-         ATE       114         Diagnosis Procedure       114
SQUEAK AND RATTLE TROUBLE DIAG- NOSES
PRECAUTION121
PRECAUTIONS       121         Precaution for Supplemental Restraint System       (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-SIONER"         SIONER"       121         Precaution for Work       121
PREPARATION123
PREPARATION

CLIP LIST	A
REMOVAL AND INSTALLATION125	
FRONT SEAT125Exploded View125Removal and Installation128Disassembly and Assembly129	B
REAR SEAT137Exploded View137Removal and Installation138Disassembly and Assembly138	D
AUTOMATIC DRIVE POSITIONER CON- TROL UNIT	E
HEATED SEAT CONTROL UNIT       141         Exploded View       141         Removal and Installation       141	F
POWER SEAT SWITCH	G
SIDE SUPPORT SWITCH	Н
LUMBAR SUPPORT SWITCH	I
TILT&TELESCOPIC SWITCH         145           Removal and Installation         145	SE
HEATED SEAT SWITCH146Exploded View146Removal and Installation146	K

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< BASIC INSPECTION >

# BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000005622061

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.

>> GO TO 2.

### 2.REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes. Inspect the relation of the symptoms and the condition when the symptoms occur.

### >> 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.

### >> GO TO 4.

### **4.** IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

Perform the diagnosis with "Component diagnosis" of the applicable system.

#### >> GO TO 5.

**5.**REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

### >> GO TO 6.

### **6.**FINAL CHECK

Is the malfunctioning part repaired or replaced?

(Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.)

### YES or NO

YES >> Trouble diagnosis is completed.

NO >> GO TO 2.

## < SYSTEM DESCRIPTION > SYSTEM DESCRIPTION POWER SEAT

## System Description

BCM can operate regardless of the ignition switch position, because battery power is supplied at all times to power seat switch.

### SLIDING OPERATION

While operating the sliding switch located in power seat switch, sliding motor operates and makes possible the seat front and back position adjustment.

### RECLINING OPERATION

While operating the reclining switch located in power seat switch, reclining motor operates and makes possible the seat back forward and backward position adjustment.

### LIFTING OPERATION

While operating the lifting switch located in power seat switch, lifting motor operates and makes possible the seat cushion up and down position adjustment.

### Component Parts Location



## Component Description

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Item	Function	
BCM	Supplies at all times the power received from battery to power seat switch.	
Power seat switch	Built-in reclining switch, sliding switch and lifting switch, controls the power supplied to each motor.	
Reclining motor	With the power supplied to power seat switch, operates the forward and backward movement of seatback.	
Sliding motor	With the power supplied to power seat switch, operates the forward and backward slide of se	
Lifting motor (front/rear) With the power supplied to power seat switch, operates the up and down movement of seat c ion.		

### < SYSTEM DESCRIPTION >

## TILT&TELESCOPIC SYSTEM

### System Description

INFOID:000000005622065

Power from battery is supplied at all times to automatic driver positioner control unit, tilt and telescopic system can operate regardless of the ignition switch position.

#### TILT OPERATION

- While operating the tilt and telescopic switch, tilt motor operates, and allows up or down position adjustment of steering wheel.
- During tilt motor operation tilt sensor detects the position of steering wheel and automatically cuts the power when the operation limit is reached.

### **TELESCOPIC OPERATION**

- Operating the tilt and telescopic switch, telescopic motor operates and allows forward and backward position regulation of steering wheel.
- During telescopic motor operation telescopic sensor detects the position of steering wheel and automatically cuts the power when the operation limit is reached.

### **Component Parts Location**



- 1. Automatic drive positioner control unit M51, M52
- 4. Tilt sensor M48
- A. View with instrument driver lower panel is removed.
- D. View with steering column cover is removed.
- 2. Tilt & telescopic switch M31
- 5. Telescopic motor M49
- B. Steering column cover
- E. View with instrument lower cover is removed.
- 3. Telescopic sensor M48
- 6. Tilt motor M49
- C. View with steering column cover is removed.

## TILT&TELESCOPIC SYSTEM

< SYSTEM DESCRIPTION >

## **Component Description**

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Item	Function	
Automatic drive positioner control unit	Detects data input signal of tilt and telescopic switch and tilt and telescopic sensor, per- forms tilt and telescopic motor control.	
Tilt and telescopic switch       Tilt switch and telescopic switch, as a unit, transmit switch operation signal to auto drive positioner control unit.		
Tilt and telescopic motor	Operates with the power received from automatic drive control unit.	
Tilt and telescopic sensor	Detects the position of steering, send signal to automatic drive positioner control un	

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### SIDE SUPPORT

### < SYSTEM DESCRIPTION >

## SIDE SUPPORT

### System Description

- While operating the side support switch, the pump located inside side support unit operates and adjust the air pressure in seat cushion and seatback side support.
- It is possible to soften the side support, by allowing some air to escape, by deflating the solenoid located inside side support.
- It is possible to adjust seat cushion and seatback differently while inflating or deflating solenoid located in side support unit.

### **Component Parts Location**



- 1. Side support (seat cushion) (Side support unit B465)
- Side support (seat back)
   Side support unit B465)
   Side support unit B465)
- Side support switch (seat back side)Side support switch (cushion side)B464B464
- A. View with seat cushion pad and seat back pad are removed.

## **Component Description**

4.

INFOID:000000005622070

Item	Function	
Side support switch	With a built-in cushion side and seat back side, controls the power supplied to pump and to each solenoid.	
Side support unit	Built-in pump, pump relay and solenoid, operates when pressing ON/OFF on side support switch.	

INFOID:000000005622068

INFOID:000000005622069

## HEATED SEAT

### < SYSTEM DESCRIPTION > HEATED SEAT



### System Description

INFOID:000000005622072

- Heated seat is activated by heated seat switch while ignition switch is ON, and has the function to warm seat cushion and seatback.
- Heated seat equips the 6-stage temperature adjustment function that adjusts temperature by operating heated seat switch to the optimal position.
- Heated seat equips a thermostat in heater unit to prevent heater unit overheating.

### **OPERATION DESCRIPTION**

- When operating heated seat switch to any position between 1 and 6 while ignition switch is ON, indicator illuminates, heated seat control unit supplies power supply to heater unit, and warms seat cushion and seatback.
- Heat sensor that is built in seat cushion heater detects seat cushion heater temperature and outputs to heated seat control unit.
- Heated seat control unit monitors the heated seat switch position and heater sensor temperature, and interrupts power supply to heater unit when the heat sensor temperature reaches preset temperature.
- Heated seat control unit adjusts temperature to preset temperature by supplying or interrupting power supply to heater unit.

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## **HEATED SEAT**

## < SYSTEM DESCRIPTION >

## **Component Parts Location**

#### INFOID:000000005622073



- 1. Heated seat switch
  - Driver side
  - With A/T M141
  - With M/T M175
  - · Passenger side
  - With A/T M142
  - With M/T M176
- 4. Seat cushion heater
  - Driver side B467, B424
    - Passenger side B441, B444
- A. Behind cluster lid C

## **Component Description**

- 5. Heated seat control unit • Driver side B466
  - Passenger side B440
- B. Backside of seat cushion

INFOID:000000005622074

Driver side B425

• Passenger side B445

Item	Function	
Heated seat switch	<ul> <li>Adjusts heated seat temperature and deactivates heated seat</li> <li>Equips indicator that indicates the operating condition</li> </ul>	
Seat cushion heater	<ul><li>Warms seat cushion</li><li>Contains heater sensor that outputs seat cushion temperature to heated seat control unit</li></ul>	
Seatback heater	Warms seatback	
Heated seat control unit	Controls heated seat temperature and is independently placed in each seat cushion (driver seat and passenger seat)	

## LUMBAR SUPPORT

## < SYSTEM DESCRIPTION >

## LUMBAR SUPPORT

### System Description

- Lumbar support can operate regardless of the ignition switch position because battery power is supplied to it В at all times.
- · While operating the lumbar support switch, lumbar support motor operates which allows forward and backward operation of seatback support.

### **Component Parts Location**



- Lumbar support switch B457 1.
- Lumbar support motor B458 2.

## **Component Description**

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Lumbar support switch	Controls the power supplied to lumbar support motor.	
Lumbar support motor	Support motor With the power supplied to lumbar support switch, operates the forward and backward movement of seatback support device.	

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< DTC/CIRCUIT DIAGNOSIS >

# DTC/CIRCUIT DIAGNOSIS

# POWER SUPPLY AND GROUND CIRCUIT

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

## AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Diagnosis Procedure

INFOID:000000005622078

### **1.**CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
39	Battery power supply	K (40 A)
34		10 (10 A)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse and fusible link after repairing the affected circuit if fuse and fusible link are blown.

## 2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect automatic drive positioner control unit connector.
- 3. Check voltage between automatic drive positioner control unit harness connector and ground.

(+) Automatic drive posit	tioner control unit	(-)	Voltage (V) (Approx.)	
Connector	Terminal			
M52	34	Ground	Battery voltage	
10152	39	Gibuna	Ballery vollage	

Is the inspection result normal?

YES >> GO TO 3.

NO-1 >> Repair or replace harness.

NO-2 >> Check circuit breaker, and replace if NG.

### **3.**CHECK GROUND CIRCUIT

Check continuity between automatic drive positioner control unit harness connector and ground.

Automatic drive position	oner control unit		Continuity	
Connector	Terminal	Ground	Continuity	
ME2	40	Giouna	Evicted	
M32	48		Existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

HEATED SEAT CONTROL UNIT

## HEATED SEAT CONTROL UNIT : Diagnosis Procedure

#### INFOID:000000005622079

### 1.CHECK FUSE

Check that the following fuses is not fusing.

Signal name	Fuse No.		
Battery power supply	35 (15A)		

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection res	sult normal?				
YES >> GO TO	2.				
NO >> Replace	e the blown fuse a	fter repairing the	affected circuit if	a fuse is blown.	
2.CHECK POWER	SUPPLY 1				
<ol> <li>Turn ignition sw</li> <li>Disconnect hea</li> <li>Turn ignition sw</li> <li>Check voltage I</li> </ol>	ritch OFF. ted seat control u ritch ON. petween heated s	nit connector. eat control unit h	arness connector	and ground.	
	(+)				
	Heated seat cor	itrol unit		(-)	Voltage (V)
	Connector		minal		(Approx.)
Driver side	B466		67		Battery voltage
Passenger side	B440		14	Ground	
Is the inspection res	sult normal?				
YES >> GO TO	4.				
NO >> GO TO	3.				
<b>3</b> .CHECK POWER	SUPPLY CIRCU	IT 1			
<ol> <li>Turn ignition sw</li> <li>Disconnect hea</li> <li>Check continuit nector.</li> </ol>	ritch OFF. ted seat relay. y between heatec	seat control unit	t harness connecto	or and heated se	eat relay terminal cor
	Heated seat control unit		Heated	seat relav	
Con	nector	Terminal	Connector	Terminal	Continuity
Driver side	B466	67			
Passenger side	B440	14	M70	3	Existed

4. Check continuity between heated seat control unit harness connector and ground.

	Heated seat control unit			Continuity	•
Con	nector	Terminal	Ground	Continuity	
Driver side	B466	67	Giouna	Not ovisted	
Passenger side	B440	14	1	NUL EXISTED	

Is the inspection result normal?

YES >> Repair or replace harness between heated seat relay and fuse holder.

NO >> Repair or replace harness between heated seat control unit and heated seat relay.

### **4.**CHECK POWER SUPPLY 2

Check voltage between heated seat control unit harness connector and ground.

(+) Heated seat control unit		(-)	Con	Voltage (V)			
Conr	ector	Terminal				(Approx.)	
Driver eide	<b>P466</b>	60			ON	Battery voltage	
Driver side	B400	69	Cround	Heated seat		0	
Dessenger side	Ground switc	switch	ON	Battery voltage			
Fassenger side	ae B440 16			OFF	0		

Is the inspection result normal?

YES >> GO TO 7. NO >> GO TO 5. SE

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### < DTC/CIRCUIT DIAGNOSIS >

## 5. CHECK POWER SUPPLY CIRCUIT 2

- 1. Turn ignition switch OFF.
- Disconnect heated seat switch connector. 2.
- Check continuity between heated seat control unit harness connector and heated seat switch harness 3. connector.

	Heated seat control ur	nit	Heated s	Continuity	
Con	nector	Terminal Connector Terminal			Continuity
Driver side	B466	69	A/T models: M141 M/T models: M175	1	Evisted
Passenger side	B440	16	A/T models: M142 M/T models: M176	l l	LAISIEU

4. Check continuity between heated seat control unit harness connector and ground.

	Heated seat control unit		Continuity		
Connector		Terminal			Ground
Driver side	Driver side B466		Glound	Not ovisted	
Passenger side B440		16		Not existed	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

**6.**CHECK HEATED SEAT SWITCH

Check heated seat switch.

Driver side: Refer to <u>SE-18, "DRIVER SIDE : Component Inspection"</u>.
Passenger side: Refer to <u>SE-20, "PASSENGER SIDE : Component Inspection"</u>.

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace heated seat switch. Refer to SE-146, "Removal and Installation".

**1**.CHECK GROUND CIRCUIT

Turn ignition switch OFF. 1.

2. Check continuity between heated seat control unit harness connector and ground.

	Heated seat control unit		Continuity	
Connector		Terminal		
Driver side	B466	48	Giouna	Evicted
Passenger side	B440	2		Existed

#### Is the inspection result normal?

>> INSPECTION END YES

NO >> Repair or replace harness.

8.CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-38, "Intermittent Incident".

>> INSPECTION END HEATED SEAT SWITCH

**HEATED SEAT SWITCH : Diagnosis Procedure** 

1.CHECK FUSE

Check that the following fuses is not fusing.

INFOID:000000005622080

### < DTC/CIRCUIT DIAGNOSIS >

5	-	Signa	i name			i use no.
5		Ignition power supply			3 (10A)	
the inspection result (ES >> GO TO 2 IO >> Replace 1	It normal? the blown fuse after	repairing the	affected ci	rcuit if a fus	e is blowr	۱.
CHECK POWER S	SUPPLY					
Turn ignition swite Disconnect heate Turn ignition swite Check voltage be	ch OFF. ed seat switch conne ch ON. etween heated seat	ector. switch harnes	s connecto	or and grou	nd.	
	(+)					
	Heated seat switc	h		(-	)	Voltage (V) (Approx.)
Co	onnector	Teri	minal			(
Driver side	A/T models: M141 M/T models: M175	5	5	Gro	ind	Battery voltage
Passenger side	A/T models: M142 M/T models: M176	2	5			Dattery voltage
Turn ignition swite Disconnect fuse to Check continuity	ch OFF. olock (J/B) connecto between heated sea	or. at switch harn	ess conne	ctor and fus	e block (J	I/B) harness conr
Turn ignition swite     Disconnect fuse t     Check continuity	ch OFF. block (J/B) connecto between heated sea Heated seat switch	or. at switch harn	ess conne	ctor and fus Fuse block (	e block (J I/B)	I/B) harness conr
Turn ignition swite     Disconnect fuse t     Check continuity	ch OFF. block (J/B) connecto between heated sea Heated seat switch	or. at switch harn Terminal	ess conne	ctor and fus Fuse block ( ctor	e block (J I/B) Terminal	I/B) harness conr ————————————————————————————————————
Turn ignition swite     Disconnect fuse t     Check continuity     F     Connect     Driver side	Ch OFF. block (J/B) connector between heated seat Heated seat switch ctor A/T models: M141 M/T models: M175	or. at switch harn Terminal 5	ess conne Conne	Ctor and fus Fuse block ( ctor	e block (J I/B) Terminal 2A	I/B) harness conr Continuity Existed
Turn ignition swite         Disconnect fuse t         Check continuity         Image: side         Driver side         Passenger side	Ch OFF. block (J/B) connector between heated seat Heated seat switch ctor A/T models: M141 M/T models: M142 M/T models: M175	or. at switch harn Terminal 5	ess conne Conne M1	Ctor and fus Fuse block ( ctor	e block (J I/B) Terminal 2A	I/B) harness conr Continuity Existed
Turn ignition swite     Disconnect fuse t     Check continuity	ch OFF. block (J/B) connector between heated seat Heated seat switch ctor A/T models: M141 M/T models: M142 M/T models: M142 between heated seat	or. at switch harn Terminal 5 at switch harn	ess conne Conne M1 ess conne	Ctor and fus	e block (J J/B) Terminal 2A Dund.	I/B) harness conr Continuity Existed
Turn ignition swite     Disconnect fuse t     Check continuity     Driver side     Passenger side     Check continuity	ChOFF. block (J/B) connected between heated seat Heated seat switch ctor A/T models: M141 M/T models: M175 A/T models: M175 between heated seat Heated seat switch	or. at switch harn Terminal 5 at switch harn	ess conne Conne M1 ess conne	ctor and fus Fuse block ( ctor	e block (J I/B) Terminal 2A Dund.	I/B) harness conr Continuity Existed
Turn ignition swite     Disconnect fuse I     Check continuity     Driver side     Passenger side     Check continuity	ch OFF. block (J/B) connector between heated seat Heated seat switch ctor A/T models: M141 M/T models: M175 A/T models: M175 between heated seat Heated seat switch between heated seat	or. at switch harn Terminal 5 at switch harn h Tern	ess conne Conne M1 ess conne minal	ctor and fus	e block (J I/B) Terminal 2A Dund.	I/B) harness conr Continuity Existed
Turn ignition swite     Disconnect fuse I     Check continuity     Driver side     Connect fuse I     C	Ch OFF. bolock (J/B) connector between heated seat Heated seat switch ctor A/T models: M141 M/T models: M142 M/T models: M142 between heated seat Heated seat switch onnector A/T models: M147 M/T models: M147	or. at switch harn Terminal 5 at switch harn h Tern 5	ess conne Conne M1 ess conne minal	ctor and fus	e block (J I/B) Terminal 2A Dund.	I/B) harness conr Continuity Existed Continuity
Turn ignition swite     Disconnect fuse I     Check continuity     Passenger side     Contect	Ch OFF.         plock (J/B) connector         between heated seat         Heated seat switch         ctor         A/T models: M141         M/T models: M175         A/T models: M142         M/T models: M176         between heated seat         switch         M/T models: M176         between heated seat         Models: M176         A/T models: M176	or. at switch harn Terminal 5 at switch harn h Terri 5 2 5	ess conne Conne M1 ess conne minal	ctor and fus	e block (J I/B) Terminal 2A Dund.	I/B) harness conr Continuity Existed Continuity Not existed

Turn ignition switch ON.
 Check voltage between fuse block (J/B) connector (fuse block side) and ground.

### < DTC/CIRCUIT DIAGNOSIS >

( Fuse bl	+) ock (J/B)	()	Voltage (V)	
Connector	Connector Terminal		(Approx.)	
M1 2A		Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace fuse block (J/B).

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u>

>> INSPECTION END

## HEATED SEAT SWITCH

< D	TC/CIRCUIT DIA	GNOSIS >					1	
HE	EATED SEAT	SWITCH						
Dr	VIVER SIDE							
DF	RIVER SIDE : D	Description						INFOID:000000005622081
Ad	justs heated seat te	mperature and c	deactivat	tes hea	ated seat.			
DF	RIVER SIDE : C	Component F	unctic	on Ch	neck			INFOID:000000005622082
1								
						4:10 0	beeted east aud	tab ta tha antimal nasi
tior	eck that heated sea 1.	at warms to pres	set temp	erature	e wnen opera	ating	neated seat swi	tch to the optimal posi-
<u>ls t</u>	he inspection result	t normal?						
Y	ES >> Heated se	eat switch functio	on is OK.	Diagno	sis Procedur	<b>o</b> "		
		Diagnosis Pro			SIS FIUCEUUN	<u>e</u> .		
	LIVER SIDE . L	hagnosis Pro	Cedur	е				INFOID:000000005622083
1.	CHECK HEATED S	SEAT CONTROL	. UNIT II	NPUT	SIGNAL			
1. 2. 3. 4.	Turn ignition switc Disconnect heated Turn ignition switc Check voltage bet	h OFF. d seat control un h ON. ween heated sea	it conne at contro	ctor. ol unit l	harness conr	necto	or and ground.	
	(+)							
	Heated seat c	ontrol unit	(—)			Co	ndition	Voltage (V) (Approx.)
	Connector	Terminal						
						-	OFF	0
					-	1 (Min. temperature	) 12.24	
	B466	68	Grour	nd	Heated seat	2		12.33
					switch position	ו	4	12.63
							5	12.76
						-	6 (Max. temperature	e) 12.90
<u>ls t</u> Y N	he inspection result ES >> Heated se O >> GO TO 2.	t normal? eat switch circuit	is OK.					
2.	CHECK HEATED S	SEAT SWITCH C	IRCUIT					
1. 2. 3.	Turn ignition switc Disconnect heated Check continuity connector.	h OFF. d seat switch cor between heated	nnector. I seat sv	witch h	arness conn	ecto	or and heated se	at control unit harness
-	Heated	seat switch			Heated seat	cont	rol unit	Continuity
_	Connector	Terminal		Co	onnector		Terminal	Continuity
_	A/T models: M141	2			B466		68	Existed

4. Check continuity between heated seat switch harness connector and ground.

M/T models: M175

## HEATED SEAT SWITCH

### < DTC/CIRCUIT DIAGNOSIS >

Heated sea	t switch		Continuity
Connector	Terminal	Ground	Continuity
A/T models: M141 M/T models: M175	2		Not existed
Is the inspection result normal	<u>?</u>		
YES >> GO TO 3.			

NO >> Repair or replace harness.

**3.**CHECK HEATED SEAT SWITCH

Check heated seat switch.

Refer to <u>SE-18</u>, "DRIVER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace heated seat switch. Refer to <u>SE-146, "Removal and Installation"</u>.

**4.**CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GL38 "Intermittent Incider

Refer to GI-38, "Intermittent Incident".

### >> INSPECTION END

## **DRIVER SIDE : Component Inspection**

INFOID:000000005622084

**1.**CHECK HEATED SEAT SWITCH

1. Turn ignition switch OFF.

2. Disconnect heated seat switch connector.

3. Check resistance between heated seat switch terminals.

Heated seat switch		Condition		Resistance (KΩ)	
Connector	Terr	ninal			(Approx.)
		1		ON	0
		I		OFF	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
			Heated acet quitab position	1 (Min. temperature)	2.400
A/T models: M141	5			2	1.800
M/T models: M175	5	2	Treated Seat Switch position	3	1.200
		2		4	0.910
				5	0.620
				6 (Max. temperature)	0.348

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace heated seat switch. Refer to <u>SE-146, "Removal and Installation"</u>. PASSENGER SIDE

### PASSENGER SIDE : Description

Adjusts heated seat temperature and deactivates heated seat.

### PASSENGER SIDE : Component Function Check

**1.**CHECK FUNCTION

Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position.

INFOID:000000005622085

INFOID:000000005622086

## HEATED SEAT SWITCH

the inspection r	esult norma	12				
ES >> Heate O >> Refer	ed seat swite to <u>SE-19,</u> "	ch function is C PASSENGER \$	)K. <u>SIDE : Dia</u>	agnosis Procedu	<u>re"</u> .	
ASSENGER	SIDE : D	) iagnosis Pr	ocedure	Э		INFOID:000000005622087
CHECK HEAT	ED SEAT C	ONTROL UNIT	INPUT S	IGNAL		
Turn ignition :	switch OFF.					
Disconnect he Turn ignition s Check voltage	eated seat c switch ON. e between h	control unit con	nector. Itrol unit h	arness connecto	or and ground.	
	(+)					
Heated se	at control unit	(-	-)	Co	ndition	Voltage (V)
Connector	ctor Terminal		(Approx.)			
					OFF	0
					1 (Min. temperature)	12.24
					2	12.33
B440	15	Gro	und F	Heated seat switch	3	12.49
			4		4	12.63
					5	12.76
					6 (Max. temperature)	12.90
IO >> GO T CHECK HEAT Turn ignition s	O 2. ED SEAT S <sup>1</sup> switch OFF.		IT			
IO >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector.	O 2. ED SEAT S switch OFF. eated seat s uity betwee	witch connectors of heated seat	IT or. switch ha	arness connecto	r and heated seat o	control unit harness
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector.	O 2. ED SEAT S switch OFF. eated seat s uity betwee	witch connectors on heated seat	IT or. switch ha	arness connecto Heated seat cont	r and heated seat o	control unit harness
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector.	O 2. ED SEAT S switch OFF. eated seat s uity betwee	WITCH CIRCU WITCH CIRCU switch connecto n heated seat	IT or. switch ha	arness connecto Heated seat cont	r and heated seat o	control unit harness
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M	ED SEAT SWITCO 2. ED SEAT S switch OFF. eated seat seat suity betwee eated seat switch 142	WITCH CIRCU switch connecto in heated seat tch Terminal	IT switch ha Cor B	Arness connecto Heated seat cont Innector	r and heated seat of rol unit Terminal	control unit harness Continuity Existed
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M Check continu	ED SEAT SWITC O 2. ED SEAT S switch OFF. eated seat s uity betwee eated seat switch 142 176	witch connectors witch connectors in heated seat tech Terminal 2 n heated seat s	IT or. switch ha Cor B witch harr	Heated seat cont Heated seat cont Intector 3440 Thess connector a	r and heated seat of rol unit Terminal 15 and ground.	control unit harness Continuity Existed
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M Check continu	ED SEAT SWITCO 2. ED SEAT S switch OFF. eated seat seat suity betwee eated seat switch 142 176 uity between Heated se	witch connectors witch connectors in heated seat tech Terminal 2 n heated seat s	IT switch ha Cor B witch harr	Arness connecto Heated seat cont Intector 3440 ness connector a	r and heated seat of rol unit Terminal 15 and ground.	Continuity Existed
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M Check continu	D SEAT Switch O 2. ED SEAT S switch OFF. eated seat s uity betwee eated seat swit 142 176 uity betweer Heated se tor	ch CIRCUIT IS OK WITCH CIRCU switch connecto switch connecto is heated seat 2 n heated seat s eat switch Termina	IT or. switch ha Cor B witch harr	Arness connecto Heated seat cont Inector 3440 ness connector a Grour	r and heated seat of rol unit Terminal 15 and ground.	control unit harness Continuity Existed Continuity
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M Check continu Check continu Connect	ED SEAT Switch O 2. ED SEAT S switch OFF. eated seat seat suity betwee eated seat switch 142 176 Lity between Heated se tor E M142 E M176	Ch CIRCUIT IS OK WITCH CIRCU switch connector in heated seat ach Terminal 2 in heated seat s eat switch Termina 2 2	IT switch ha Cor B witch harr	Arness connecto Heated seat cont Inector 3440 ness connector a Grour	r and heated seat of rol unit Terminal 15 and ground.	control unit harness Continuity Existed Continuity Not existed
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M Check continu Connec A/T models M/T models M/T models	D SEAT Switch O 2. ED SEAT S switch OFF. eated seat s uity between eated seat switch 142 176 uity between Heated se tor Heated se tor M142 : M142 : M176	ch circuit is OK WITCH CIRCU switch connecto in heated seat ch Terminal 2 in heated seat s iat switch Termina 2 iat switch 2 iat switch	IT switch ha Cor B witch harr	Arness connector Heated seat cont Intector 3440 Dess connector a Grour	r and heated seat of rol unit Terminal 15 and ground.	Continuity Existed Continuity Not existed
O >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M Check continu Check continu Check continu Connector A/T models: M Check continu Connector A/T models M Check continu	ED SEAT Switch O 2. ED SEAT S switch OFF. eated seat swit uity betwee eated seat swit 142 176 uity betweer Heated se tor Heated se tor M142 : M176 esult norma O 3.	witch connectors witch connectors in heated seat	IT or. switch ha Cor B witch harr	Arness connecto Heated seat cont inector 3440 ness connector a Grour	r and heated seat of rol unit Terminal 15 and ground.	control unit harness Continuity Existed Continuity Not existed
IO >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M Check continu Check continu Connect	D SEAT Switch O 2. ED SEAT S switch OFF. eated seat swit heated seat swit	ch circuit is OK WITCH CIRCU switch connecto in heated seat ch Terminal 2 h heated seat s eat switch Termina 2 h harness. WITCH	IT or. switch ha Cor B witch harr	Arness connecto Heated seat cont Inector 3440 ness connector a Grour	r and heated seat of rol unit Terminal 15 and ground.	Continuity Existed Continuity Not existed
IO >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. A/T models: M Check continu Connect A/T models: M Check continu Connect A/T models M/T models M/T models M/T models M/T models CONNECT	ED SEAT Switch O 2. ED SEAT S switch OFF. eated seat swit ated seat swit 142 176 	Ch CIrcuit IS OK WITCH CIRCU switch connecto in heated seat ch Terminal 2 h heated seat s eat switch Termina 2 al? e harness. WITCH	IT or. switch ha Cor B witch harr al	Arness connecto Heated seat cont Inector 3440 ness connector a Grour	r and heated seat of rol unit Terminal 15 and ground.	Continuity Existed Continuity Not existed
IO >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M M/T models: M Check continu Connec A/T models: M M/T models M Check continu Connec S CHECK HEAT Deck heated sea efer to <u>SE-20, "F</u>	D SEAT Switch O 2. ED SEAT S Switch OFF. Eated seat s uity between ated seat switch Heated se tor Heated se tor Heated se tor M142 M176 ESUIT norma O 3. For replace ED SEAT S at switch. PASSENGE	Ch CIRCUIT IS OK WITCH CIRCU switch connector in heated seat 2 in heated seat s bat switch 2 in heated seat s in heated seat	IT or. switch ha Cor B witch harr al	Arness connecto Heated seat cont inector 3440 ness connector a Grour	r and heated seat of rol unit Terminal 15 and ground.	Continuity Existed Continuity Not existed
NO >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M Check continu Connector A/T models: M Check continu Connector A/T models M/T models	ated seat switch o 2. ED SEAT S switch OFF. eated seat s uity betwee eated seat switch 142 176 uity betweer Heated se tor EM142 M142 M142 M142 M142 M142 M142 M142	Ch CIrcuit IS OK WITCH CIRCU switch connecto in heated seat 2 in heated seat s eat switch 2 in heated seat s eat switch 2 in heated seat s in	IT or. switch ha Cor B witch harr al	Arness connecto Heated seat cont inector 3440 ness connector a Grour	r and heated seat of rol unit Terminal 15 and ground.	Continuity Existed Continuity Not existed
NO >> GO T CHECK HEAT Turn ignition s Disconnect he Check contin connector. He Connector A/T models: M M/T models: M M/T models: M Check continu Connector A/T models: M M/T models M Check continu Connector A/T models M Connector A/T models M M/T models M Connector A/T models M A/T models M A	D SEAT Switch O 2. ED SEAT S Switch OFF. Eated seat suity betwee eated seat switch 142 176 Uity betweer Heated se tor Heated se tor M142 M176 ED SEAT S at switch. PASSENGE esult norma O 4. D SEAT S	Ch CIRCUIT IS OK WITCH CIRCU switch connector in heated seat 2 in heated seat s in heated s in heated s in heated seat s in heated s	IT or. switch ha Cor B witch harr al	Arness connecto Heated seat cont inector 3440 ness connector a Grour spection".	r and heated seat of rol unit Terminal 15 and ground.	Continuity Existed Continuity Not existed

< DTC/CIRCUIT DIAGNOSIS >

Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u>.

### >> INSPECTION END

## PASSENGER SIDE : Component Inspection

INFOID:000000005622088

## **1.**CHECK HEATED SEAT SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect heated seat switch connector.
- 3. Check resistance between heated seat switch terminals.

Heated seat switch					Resistance
Connector	Terr	minal	Condition		(KO2) (Approx.)
		4		ON	0
		ļ		OFF	∞
		_		1 (Min. temperature)	2.400
A/T models: M142	F			2	1.800
M/T models: M176	5	2	Healed seal switch position	3	1.200
		2		4	0.910
				5	0.620
				6 (Max. temperature)	0.348

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace heated seat switch. Refer to <u>SE-146, "Removal and Installation"</u>.

## **HEATED SEAT RELAY**

< [] HI	TC/CIRCUIT DIAGNO	DSIS > ELAY				
٦ć	escription					
	Schption					INFOID:000000005622089
Po	wer is supplied to the h	eated seat using ic	gnition pow	er supply	control.	
Сс	omponent Function Check					INFOID:000000005622090
1.	CHECK FUNCTION					
Ch	eck that heated seat w	arms to preset ten	nperature v	when oper	ating heated seat	switch to the optimal posi-
loi	).	rm al 2				
<u>is i</u> Y	FS >> Heated seat r	relay function is Ok	¢			
Ň	O >> Refer to SE-2	<u>1, "Diagnosis Proc</u>	:edure"			
Di	agnosis Procedur	Э				INFOID:000000005622091
1						
Ι.	CHECK HEATED SEA	T RELAY POWER	SUPPLY			
1. ว	Turn ignition switch O	FF.				
2. 3.	Turn ignition switch C	N.				
4.	Check voltage betwee	en heated seat rela	ay terminal	connector	and ground.	
-		(+)				
-	Heat	ed seat relay		- (-)	Voltage (V)	
_	Connector	Termina	al			(/ ()
-	M70	2			Ground	Battery voltage
<u>s t</u>	he inspection result no	rmal?				
Y	ES >> GO TO 3.					
יי 2						
- •			SUFFLIC			
2.	Disconnect fuse block	(J/B) connector.				
3.	Check continuity betw	veen heated seat re	elay termin	al connect	tor and fuse block	(J/B) harness connector.
-	Heated sea	t relav		Fuse bl	ock (J/B)	
-	Connector	Terminal	Conr	nector	Terminal	Continuity
-	M70	2	Ν	/11	2A	Existed
4.	Check continuity betw	veen heated seat re	elay termin	al connect	tor and ground.	
-	Heat	ed seat relay				
-	Connector	Termina	al		Ground	Continuity
		2				Not existed
-	M70	2				NUL EXISIEU
<u>s t</u>	M70 he inspection result no	rmal?				
<u>s t</u> Y	M70 <u>he inspection result no</u> ES >> GO TO 5.	rmal?				NULEAISLEU
l <u>s t</u> Y N	M70 he inspection result no ES >> GO TO 5. O >> Repair or repl	rmal? ace harness.				NULEAISLEU

Turn ignition switch OFF.
 Check continuity between heated seat relay terminal connector and ground.

## HEATED SEAT RELAY

### < DTC/CIRCUIT DIAGNOSIS >

		Heated s	eat relay				
	Connector		Terminal	Grour	nd	L.	ontinuity
	M70		1				Existed
Is the insp YES > NO > 4.CHECH	ection resu > GO TO 4 > Repair o < HEATED	<u>ult norma</u> 4. r replace SEAT R	al? e harness. RELAY				
Check hea Refer to <u>S</u> Is the insp YES > NO > <b>5.</b> CHECH Check inter Refer to G	ated seat re E-22, "Cor ection resu > Heated s > Replace < INTERM ermittent in il-38, "Inter	elay. nponent ult norma seat rela heated ITTENT cident. rmittent l	Inspection". al? y is OK. seat relay. INCIDENT ncident"				
Compor 1.CHECI 1. Turn i 2. Disco 3. Check	> INSPEC nent Insp < HEATED gnition swi nnect heat	TION EN Dection SEAT R tch OFF. ed seat i	ND RELAY relay. n heated seat relay termina	ls.			INFOID:000000005622092
01 011001	( oontinuity	201100			<u> </u>		
heated s	seat relay		Condition	Continuity	3		
Terr	minal		Condition	Continuity			
3	5	12 V dire nals 1 ar	ect current supply between termi- nd 2.	Existed	AT A	5	3
		No curre	nt supply	Not existed		ųμ	5
Is the insp	ection resu	ult norma	al?		¥==	JX	
YES > NO >	> INSPEC > Replace	TION EN heated	ND seat relay.		(2)	1	

SEF497Y

< [	DTC/CIRCU	IT DIAGNO	SIS >				
HE DF	EAT SEN RIVER SI	NSOR IDE					А
DF	RIVER SI	DE : Desc	ription			INFOID:000000005622093	В
De	tects seat c	ushion heate	r temperature	and outputs to heated s	seat control unit.		
DF	RIVER SI	DE : Com	ponent Fun	ction Check		INFOID:000000005622094	С
1.	CHECK FU	NCTION					
Ch	eck that hean	ated seat wa	rms to preset	temperature when oper	ating heated seat sw	itch to the optimal posi-	D
ls t	 the inspectio	on result norr	nal?				
Y	ES >> He	eat sensor fu	nction is OK.				Е
Ν	0 >> Re	efer to <u>SE-23</u>	<u>, "DRIVER SIE</u>	<u> DE : Diagnosis Procedu</u>	<u>re"</u>		
DF	RIVER SI	DE : Diag	nosis Proce	dure		INFOID:000000005622095	
1	CHECK HE			ΔΙ			F
1							
1. 2.	Check volt	age between	n heated seat o	control unit harness cor	nector and ground.		G
	(·	+)					
_	Heated sea	t control unit	(-)	Cond	ition	(Approx.)	Н
_	Connector	Terminal					
					OFF	0	
					1 (Min. temperature)	10.87 – 11.02	
	<b>B</b> 400	74			2	10.93 - 11.07	ог
	B466	/1	Ground	Heated seat switch position	1 3	11.04 - 11.17	SE
					4	11.13 - 11.26	
					o 6 (Max temperature)	11.22 - 11.34	Κ
-	NOTE:				o (max. temperature)	11.31 - 11.43	
	Voltage is	repeated wit	hin the value s	hown as per the above	list depending on hea	ater unit temperature.	L
<u>ls t</u>	the inspectic	on result norr	<u>nal?</u>				
Y	ES >> he	at sensor is	OK.				
2							M
<u> </u>							
1. 2.	Disconnec	on switch OF	r. It control unit c	onnector and seat cush	ion heater connector.		Ν
3.	Check cor	ntinuity betwo	een heated se	at control unit harness	connector and seat of	cushion heater harness	
	connector.						
-	ŀ	leated seat cor	trol unit	Seat cus	hion heater		0
-	Connec	ctor	Terminal	Connector	Terminal	Continuity	
-	B466	6	71	B467	71	Existed	Ρ
4.	Check con	itinuity betwe	en heated sea	at control unit harness c	onnector and ground.		
-		Heated se	eat control unit			Continuity	
-	Con	nector	Terr	minal	Ground	Continuity	

B466 Is the inspection result normal? 71

Not existed

### < DTC/CIRCUIT DIAGNOSIS >

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

**3.**CHECK HEAT SENSOR POWER SUPPLY

- 1. Turn ignition switch ON.
- 2. Heated seat switch ON.

3. Check voltage between seat cushion heater harness connector and ground.

( Seat cush	(+) Seat cushion heater		Voltage (V) (Approx.)
Connector	Terminal		
B467	69	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

**4.**CHECK HEAT SENSOR POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect heated seat switch connector.
- 3. Check continuity between heated seat control unit harness connector and seat cushion heater harness connector.

Heated seat control unit		Seat cush	Seat cushion heater		
Connector	Connector Terminal		Terminal	Continuity	
B466	69	B467	69	Existed	

4. Check continuity between heated seat control unit harness connector and ground.

 Heated sea	t control unit		Continuity
 Connector Terminal		Ground	Continuity
 B466	69		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

**5.**CHECK HEAT SENSOR

Check heat sensor. Refer to SE-24. "DRIVER SIDE : Component Inspection".

### Is the inspection result normal?

- YES >> GO TO 6.
- NO >> Replace seat cushion heater. Refer to <u>SE-125, "Exploded View"</u>.

**6.**CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u>

### >> INSPECTION END

### **DRIVER SIDE : Component Inspection**

### **1.**CHECK HEAT SENSOR

1. Turn ignition switch OFF.

- 2. Disconnect seat cushion heater connector.
- 3. Check resistance between seat cushion heater terminals.

INFOID:000000005622096

### < DTC/CIRCUIT DIAGNOSIS >

Condition       (RL) (Approx.)         B467       69       71       When heat sensor temperature is 25°C (77°F)       9.9 – 10.1         NOTE: Resistance value changes according to temperature. s the inspection result normal? YES       >> INSPECTION END NO       >> Replace seat cushion heater. Refer to SE-125. "Exploded View".         PASSENGER SIDE       PASSENGER SIDE : Description       >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Seat cushion heater		er	<b>0</b>	Resistance
B467       69       71       When heat sensor temperature is 25°C (77°F)       9.9 – 10.1         NOTE: Resistance value changes according to temperature.       Sthe inspection result normal?         YES       >> INSPECTION END NO       >> Replace seat cushion heater. Refer to SE-125, "Exploded View".         PASSENGER SIDE       Description       Protococcocceccer         PASSENGER SIDE : Description       Protoccccccccccccccccccccccccccccccccccc	Connector	Terr	ninal	Condition	(KΩ) (Approx.)
NOTE:         Resistance value changes according to temperature.         sthe inspection result normal?         YES       >> INSPECTION END         NO       >> Replace seat cushion heater. Refer to SE-125, "Exploded View".         PASSENGER SIDE       Description         PASSENGER SIDE : Description       wroncocconcessor         Detects seat cushion heater temperature and outputs to heated seat control unit.       PASSENGER SIDE : Component Function Check         PASSENGER SIDE : Component Function Check       wroncocconcessor         .CHECK FUNCTION	B467	69	71	When heat sensor temperature is 25°C (77°F)	9.9 – 10.1
s the inspection result normal?   YES >> INSPECTION END   NO >> Replace seat cushion heater. Refer to SE-125. "Exploded View".   PASSENGER SIDE PASSENGER SIDE : Description   PASSENGER SIDE : Component Function Check Information concrete   PASSENGER SIDE : Component Function Check Information concrete   I.CHECK FUNCTION Information is OK.   NO >> Refer to SE-25, "PASSENGER SIDE : Diagnosis Procedure"   PASSENGER SIDE : Diagnosis Procedure Information concrete   I.CHECK HEAT SENSOR INPUT SIGNAL Information switch ON.   I.CHECK voltage between heated seat control unit harness connector and ground.	<b>NOTE:</b> Resistance	value changes	according to	temperature.	
YES >> INSPECTION END NO >> Replace seat cushion heater. Refer to <u>SE-125. "Exploded View"</u> . PASSENGER SIDE : Description Detects seat cushion heater temperature and outputs to heated seat control unit. PASSENGER SIDE : Component Function Check ACHECK FUNCTION Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position. S the inspection result normal? YES >> Heat sensor function is OK. NO >> Refer to <u>SE-25, "PASSENGER SIDE : Diagnosis Procedure"</u> PASSENGER SIDE : Diagnosis Procedure ACHECK HEAT SENSOR INPUT SIGNAL CHECK HEAT SENSOR INPUT SIGNAL (+) (*)	<u>s the inspection</u>	result normal	<u>?</u>		
PASSENGER SIDE : Description   Detects seat cushion heater temperature and outputs to heated seat control unit.   PASSENGER SIDE : Component Function Check   Acheck FUNCTION   Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position.   sthe inspection result normal?   YES   YE	YES >> INS NO >> Rep PASSENGE	PECTION ENI lace seat cush R SIDE	D nion heater. R	efer to <u>SE-125, "Exploded View"</u> .	
Detects seat cushion heater temperature and outputs to heated seat control unit.   PASSENGER SIDE : Component Function Check   .CHECK FUNCTION   Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position.   s the inspection result normal?   YES   YES   YES   >> Heat sensor function is OK.   NO   >> Refer to SE-25, "PASSENGER SIDE : Diagnosis Procedure"   PASSENGER SIDE : Diagnosis Procedure   .CHECK HEAT SENSOR INPUT SIGNAL   .	PASSENGE	R SIDE : De	escription		INFOID:000000005622.097
PASSENGER SIDE : Component Function Check  INFOLDO00000662209  CHECK FUNCTION  Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position.  s the inspection result normal?  YES >> Heat sensor function is OK. NO >> Refer to SE-25, "PASSENGER SIDE : Diagnosis Procedure"  PASSENGER SIDE : Diagnosis Procedure  INFOLDO00000662209  CHECK HEAT SENSOR INPUT SIGNAL  (	Detects seat cus	shion heater te	mperature an	d outputs to heated seat control unit.	
.CHECK FUNCTION         Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position.         sthe inspection result normal?         YES       >> Heat sensor function is OK.         NO       >> Refer to SE-25, "PASSENGER SIDE : Diagnosis Procedure"         PASSENGER SIDE : Diagnosis Procedure       INFOLOR000005622009         .CHECK HEAT SENSOR INPUT SIGNAL	PASSENGE	R SIDE : Co	omponent	Function Check	INFOID:000000005622098
Check that heated seat warms to preset temperature when operating heated seat switch to the optimal posi- ion. <u>s the inspection result normal?</u> YES >> Heat sensor function is OK. NO >> Refer to <u>SE-25</u> , "PASSENGER SIDE : Diagnosis Procedure"  PASSENGER SIDE : Diagnosis Procedure  .CHECK HEAT SENSOR INPUT SIGNAL  . Turn ignition switch ON. 2. Check voltage between heated seat control unit harness connector and ground.  (+)  Voltage (1)	I.CHECK FUN	CTION			
s the inspection result normal?         YES       >> Heat sensor function is OK.         NO       >> Refer to SE-25, "PASSENGER SIDE : Diagnosis Procedure"         PASSENGER SIDE : Diagnosis Procedure       INFOID:0000005622099         .CHECK HEAT SENSOR INPUT SIGNAL       Infoinition switch ON.         .       Check voltage between heated seat control unit harness connector and ground.	Check that heat	ed seat warms	s to preset ter	nperature when operating heated seat swi	tch to the optimal posi-
YES       >> Heat sensor function is OK.         NO       >> Refer to SE-25, "PASSENGER SIDE : Diagnosis Procedure"         PASSENGER SIDE : Diagnosis Procedure       INFOID:0000005622009         .CHECK HEAT SENSOR INPUT SIGNAL       INFOID:0000005622009         . Turn ignition switch ON.       Check voltage between heated seat control unit harness connector and ground.	s the inspection	result normal	2		
NO       >> Refer to SE-25, "PASSENGER SIDE : Diagnosis Procedure"         PASSENGER SIDE : Diagnosis Procedure       INFOID:0000005622099         I. CHECK HEAT SENSOR INPUT SIGNAL       INFOID:0000005622099         I. Turn ignition switch ON.       Infoid: Check voltage between heated seat control unit harness connector and ground.         (+)       Voltage (i)	YES >> Hea	t sensor functi	<u>.</u> on is OK.		
PASSENGER SIDE : Diagnosis Procedure  . CHECK HEAT SENSOR INPUT SIGNAL  . Turn ignition switch ON.  . Check voltage between heated seat control unit harness connector and ground.  (+) Voltage (1)	NO >> Refe	er to <u>SE-25, "P</u>	ASSENGER	SIDE : Diagnosis Procedure"	
CHECK HEAT SENSOR INPUT SIGNAL  Turn ignition switch ON. Check voltage between heated seat control unit harness connector and ground.  (+)	PASSENGE	R SIDE : Di	agnosis Pi	rocedure	INFOID:000000005622099
Turn ignition switch ON.     Check voltage between heated seat control unit harness connector and ground.     (+)	1. СНЕСК НЕА	T SENSOR IN	PUT SIGNAL		
(+)	<ol> <li>Turn ignition</li> <li>Check voltage</li> </ol>	i switch ON. ge between he	eated seat cor	ntrol unit harness connector and ground.	
	(+	-)			

(+) Heated seat control unit		(-)	Conditio	on	Voltage (V)	
Connector	Terminal				(Approx.)	r
				OFF	0	
				1 (Min. temperature)	10.87 – 11.02	L
				2	10.93 – 11.07	
B440	18	Ground	Heated seat switch position	3	11.04 – 11.17	
				4	11.13 – 11.26	I\
				5	11.22 – 11.34	
				6 (Max. temperature)	11.31 – 11.43	Ν

### NOTE:

Voltage is repeated within the value shown as per the above list depending on heater unit temperature. <u>Is the inspection result normal?</u>

- YES >> heat sensor function is OK.
- NO >> GO TO 2.

2. CHECK HEAT SENSOR CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect heated seat control unit connector and seat cushion heater connector.
- 3. Check continuity between heated seat control unit harness connector and seat cushion heater harness connector.

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### < DTC/CIRCUIT DIAGNOSIS >

Heated seat control unit		Seat cush	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B440	18	B441	18	Existed

4. Check continuity between heated seat control unit harness connector and ground.

Heated sea	t control unit		Continuity
Connector Terminal		Ground	Continuity
B440	18		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## $\mathbf{3}.$ CHECK HEAT SENSOR POWER SUPPLY

1. Turn ignition switch ON.

2. Heated seat switch ON.

3. Check voltage between seat cushion heater harness connector and ground.

( Seat cush	+) iion heater	(-)	Voltage (V) (Approx.)	
Connector	Terminal			
B441 16		Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

**4.**CHECK HEAT SENSOR POWER SUPPLY CIRCUIT

#### 1. Turn ignition switch OFF.

2. Disconnect heated seat switch connector.

3. Check continuity between heated seat control unit harness connector and seat cushion heater harness connector.

Heated seat control unit		Seat cush	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B440	16	B441	16	Existed

4. Check continuity between heated seat control unit harness connector and ground.

Heated sea	t control unit		Continuity	
Connector	Connector Terminal		Continuity	
B440	16		Not existed	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

**5.**CHECK HEAT SENSOR

Check heat sensor. Refer to SE-27, "PASSENGER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace seat cushion heater. Refer to <u>SE-125, "Exploded View"</u>.

**6.**CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to <u>GI-38</u>, "Intermittent Incident"

PASSENGER SIDE : Component Inspection       NFORECONCRETE         1. CHECK HEAT SENSOR       1. Turn ignition switch OFF.         2. Disconnect seat cushion heater connector.       3. Check resistance between seat cushion heater terminals.         Seat cushion heater       Condition         K(Ω)       (Approx.)         B441       16         18       When heat sensor temperature is 25°C (77°F)         9.9 – 10.1       IIII         NOTE:       Resistance value changes according to temperature.         Is the inspection result normal?       YES         YES       >> INSPECTION END         NO       >> Replace seat cushion heater. Refer to <u>SE-125, "Exploded View"</u> .		>> INS	PECTION ENI	D			A
1. CHECK HEAT SENSOR       1. Turn ignition switch OFF.         2. Disconnect seat cushion heater connector.       3. Check resistance between seat cushion heater terminals.         2. Disconnect seat cushion heater       Condition       (KΩ) (KΩ)         3. Check resistance between seat cushion heater terminals.       Resistance (KΩ)       Resistance (KΩ)         3. Example 1       16       18       When heat sensor temperature is 25°C (77°F)       9.9 – 10.1         NOTE: Resistance value changes according to temperature.         Is the inspection result normal? YES >> INSPECTION END NO >> Replace seat cushion heater. Refer to <u>SE-125, "Exploded View"</u> .	PA	SSENGE	R SIDE : Co	omponent	Inspection	INFOID:000000005622100	
1. Turn ignition switch OFF.         2. Disconnect seat cushion heater connector.         3. Check resistance between seat cushion heater terminals. <u>Seat cushion heater</u> Condition <u>Connector</u> Terminal <u>Connector</u> Terminal <u>B441</u> 16       18         When heat sensor temperature is 25°C (77°F)       9.9 – 10.1         NOTE:       Resistance value changes according to temperature.         Is the inspection result normal?       YES         YES       >> INSPECTION END         NO       >> Replace seat cushion heater. Refer to <u>SE-125, "Exploded View"</u> .	1.	CHECK HEA	T SENSOR				В
Seat cushion heater         Condition         Resistance (KΩ) (Approx.)         I           B441         16         18         When heat sensor temperature is 25°C (77°F)         9.9 – 10.1         I           NOTE: Resistance value changes according to temperature.         Is the inspection result normal?         YES         >> INSPECTION END NO         >> Replace seat cushion heater. Refer to SE-125, "Exploded View".         F	1. 2. 3.	Turn ignitior Disconnect Check resis	n switch OFF. seat cushion h tance betweer	neater connec n seat cushior	tor. heater terminals.		С
B441       16       18       When heat sensor temperature is 25°C (77°F)       9.9 – 10.1         NOTE: Resistance value changes according to temperature.         Is the inspection result normal? YES >> INSPECTION END NO >> Replace seat cushion heater. Refer to SE-125, "Exploded View".	-	S	Seat cushion heat	er ninal	Condition	Resistance (KΩ)	D
NOTE:       Resistance value changes according to temperature.         Is the inspection result normal?         YES       >> INSPECTION END         NO       >> Replace seat cushion heater. Refer to <u>SE-125, "Exploded View"</u> .	_	B441	16	18	When heat sensor temperature is 25°C (77°F)	9.9 – 10.1	
	<u>Is t</u> YI N	NOTE: Resistance <u>he inspection</u> ES >> INS O >> Rep	value changes <u>result normal</u> PECTION ENI lace seat cush	according to ? D nion heater. R	temperature. efer to <u>SE-125, "Exploded View"</u> .		F

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< DTC/CIRCUIT DIAGNOSIS >

## SEAT CUSHION HEATER DRIVER SIDE

**DRIVER SIDE : Description** 

Warms the seat cushion.

## DRIVER SIDE : Component Function Check

## **1.**CHECK FUNCTION

Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position.

Is the inspection result normal?

- YES >> Seat cushion heater function is OK.
- NO >> Refer to <u>SE-28, "DRIVER SIDE : Diagnosis Procedure"</u>.
- DRIVER SIDE : Diagnosis Procedure

INFOID:000000005622103

INFOID:000000005622101

INFOID:000000005622102

## **1.**CHECK SEAT CUSHION HEATER INPUT SIGNAL

### 1. Turn ignition switch OFF.

- 2. Disconnect seat cushion heater connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between seat cushion heater harness connector and ground.

( Seat cusł	(+) Seat cushion heater		Condition		Voltage (V) (Approx.)	
Connector	Terminal			( + 12, 67, 0)		
B467	70	Ground	Heated seat	Operated	0 – Battery voltage	
6407	70	Ground	ricaleu seal	Other than above	0	

### NOTE:

Voltage is repeated within the value shown as per the above list depending on heater unit temperature. <u>Is the inspection result normal?</u>

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK SEAT CUSHION HEATER CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect heated seat control unit connector.

3. Check continuity between seat cushion heater harness connector and heated seat control unit harness connector.

Seat cushion heater		Heated sea	Continuity	
Connector	Terminal	Connector Terminal		Continuity
B467	70	B466	70	Existed

4. Check continuity between seat cushion heater harness connector and ground.

Seat cush	nion heater		Continuity	
Connector	Connector Terminal		Continuity	
B467	70		Not existed	

Is the inspection result normal?

YES >> Replace heated seat control unit. Refer to <u>SE-141, "Removal and Installation"</u>.

NO >> Repair or replace harness.

**3.**CHECK SEAT CUSHION HEATER

## SEAT CUSHION HEATER

< D	TC/CIRCUI	T DIAGNOS	SIS >				
Che Ref	eck seat cusł fer to <u>SE-29,</u>	nion heater. "DRIVER SI	DE : Componen	nt Inspection	<u>n"</u> .		А
<u>ls t</u>	he inspection	result norm	al?				
YE N(	ES >> GO O >> Rep	TO 4. lace seat cu	shion heater. Re	efer to <u>SE-</u>	125, "Exploded View".		В
4.	CHECK SEA	T CUSHION	HEATER GRO	UND CIRC	UIT		
Che	eck continuity	/ between se	eat cushion heat	er harness	connector and ground.		С
		Seat cush	nion heater			Continuity	
_	Conn	ector	Termina	al	Ground	Continuity	D
	B4(	67	48			Existed	
<u>ls t</u> l ∨r	he inspection	result norm	<u>al?</u>				F
N	_3	air or replac	e harness.				
5.	CHECK INTE	RMITTENT	INCIDENT				_
Che Ref	eck intermitte fer to <u>GI-38, "</u>	nt incident. Intermittent	Incident"				F
							G
	>> INS	PECTION E	ND				
DF	RIVER SID	E : Comp	onent Inspe	ction		INFOID:000000005622104	ш
1.	CHECK SEA	T CUSHION	HEATER				
1. 2. 3.	Turn ignitior Disconnect Check resis	n switch OFF seat cushior tance betwe	: heater connect en seat cushion	tor and sea heater terr	tback heater connector. ninals.		
_	S	Seat cushion he	ater			Resistance	SF
_	Connector	Te	erminal	-	Condition	(Ω) (Approx.)	02
_	B467	48	70	When heat	sensor temperature is 20°C (68°F)	2.6 - 3.0	K
_	NOTE:		oo ooording to	tomporatur			
ls t	he inspection	result norm	al?	temperatur	e.		I
YE	ES >> INS	PECTION E	ND				
	0 >> Rep	lace seat cu	shion heater. Re	efer to <u>SE-</u>	125, "Exploded View"		
							IVI
PA	SSENGE	R SIDE : [	Description			INFOID:000000005622105	
Wa	rms the seat	cushion.					Ν
PA	SSENGE	R SIDE : (	Component	Function	Check	INFOID:000000005622106	
1.	CHECK FUN	CTION					0
Che	eck that heat	ed seat warr	ms to preset ten	nperature v	when operating heated seat	switch to the optimal posi-	_
ls t	i. he inspection	result norm	al?				Ρ
YE	ES >> Sea	t cushion he	ater function is	OK.			
N	0 >> Ref	er to <u>SE-29.</u>	"PASSENGER	SIDE : Diag	nosis Procedure".		
PA	SSENGE	R SIDE : [	Diagnosis Pr	ocedure		INFOID:000000005622107	
1.	CHECK FRO	NT SEAT C	USHION HEATE	ER INPUT S	SIGNAL		

## SEAT CUSHION HEATER

### < DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.

- 2. Disconnect seat cushion heater connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between seat cushion heater harness connector and ground.

( Seat cusł	(+) Seat cushion heater		Condition		Voltage (V) (Approx.)	
Connector	Terminal			( + + ,		
B441	17	Ground	Heated soat	Operated	0 – Battery voltage	
D441	17	Ground	Tiealeu Seal	Other than above	0	

NOTE:

Voltage is repeated within the value shown as per the above list depending on heater unit temperature. Is the inspection result normal?

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

2. CHECK SEAT CUSHION HEATER CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect heated seat control unit connector.

 Check continuity between seat cushion heater harness connector and heated seat control unit harness connector.

Seat cushion heater		Heated sea	Continuity	
Connector	Terminal	Connector Terminal		Continuity
B441	17	B440	17	Existed

4. Check continuity between seat cushion heater harness connector and ground.

Seat cush	ion heater		Continuity	
Connector Terminal		Ground	Continuity	
B441	17		Not existed	

Is the inspection result normal?

YES >> Replace heated seat control unit. Refer to <u>SE-141, "Removal and Installation"</u>.

NO >> Repair or replace harness.

**3.**CHECK SEAT CUSHION HEATER

Check seat cushion heater.

Refer to <u>SE-31</u>, "PASSENGER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace seat cushion heater. Refer to <u>SE-125. "Exploded View"</u>.

**4.**CHECK SEAT CUSHION HEATER GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Check continuity between seat cushion heater harness connector and ground.

Seat cush	nion heater		Continuity	
Connector	Connector Terminal		Continuity	
B441	2		Existed	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

**5.**CHECK INTERMITTENT INCIDENT

Check intermittent incident.

## SEAT CUSHION HEATER

< DTC/CIRCUIT DIAGNOSIS >

Refer to GI-38, "Intermittent Incident"

### >> INSPECTION END

### PASSENGER SIDE : Component Inspection

INFOID:000000005622108

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## **1.**CHECK SEAT CUSHION HEATER

1. Turn ignition switch OFF.

2. Disconnect seat cushion heater connector and seatback heater connector.

3. Check resistance between seat cushion heater terminals.

Seat cushion heater		er	Que divier	Resistance	L
Connector	or Terminal		Condition	(Approx.)	
B441	2 17		When heat sensor temperature is 20°C (68°F)	2.6 - 3.0	E

#### NOTE:

Resistance value changes according to temperature.

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat cushion heater. Refer to <u>SE-125, "Exploded View"</u>.

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## SEATBACK HEATER

< DTC/CIRCUIT DIAGNOSIS >

## SEATBACK HEATER DRIVER SIDE

**DRIVER SIDE : Description** 

Warms the seat cushion.

### **DRIVER SIDE : Component Function Check**

### **1.**CHECK FUNCTION

Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position.

Is the inspection result normal?

- YES >> Seatback heater function is OK.
- NO >> Refer to SE-32, "DRIVER SIDE : Diagnosis Procedure".

### **DRIVER SIDE : Diagnosis Procedure**

### **1.**CHECK SEATBACK HEATER

### 1. Turn ignition switch OFF.

- 2. Disconnect seatback heater connector.
- 3. Check resistance between seatback heater terminals.

Seatback heater				Resistance	
Connector	Terminal		Condition	(Ω) (Approx.)	
B425	1 2		When heat sensor temperature is 20°C (68°F)	4.0 - 4.7	

### NOTE:

Resistance value changes according to temperature.

### Is the inspection result normal?

YES >> Replace seat cushion heater. Refer to <u>SE-125, "Exploded View"</u>.

NO >> Replace seatback heater. Refer to <u>SE-125, "Exploded View"</u>.

### PASSENGER SIDE

### PASSENGER SIDE : Description

Warms the seat cushion.

### PASSENGER SIDE : Component Function Check

## **1.**CHECK FUNCTION

Check that heated seat warms to preset temperature when operating heated seat switch to the optimal position.

#### Is the inspection result normal?

YES >> Seatback heater function is OK.

NO >> Refer to <u>SE-32, "PASSENGER SIDE : Diagnosis Procedure"</u>.

### PASSENGER SIDE : Diagnosis Procedure

### **1.**CHECK SEATBACK HEATER

1. Turn ignition switch OFF.

- 2. Disconnect seatback heater connector.
- 3. Check resistance between seatback heater terminals.

INFOID:000000005622114

INFOID:000000005622111

INFOID:000000005622110

INFOID:000000005622109

INFOID:000000005622112

INFOID:000000005622113

## SEATBACK HEATER

### < DTC/CIRCUIT DIAGNOSIS >

Connector       Terminal       (Approx.)         B45       1       2       When heat sensor temperature is 20°C (68°F)       4.0 – 4.7         NOTE       Resistance value changes according to temperature.       Isspection result normal?       S       >> Replace seat cushion heater. Refer to SE-125, "Exploded View".         20       >> Replace seat cushion heater. Refer to SE-125, "Exploded View".       >> Replace seatback heater. Refer to SE-125, "Exploded View".         20       >> Replace seatback heater. Refer to SE-125, "Exploded View".       >> Replace seatback heater.	Seatback heater			Condition	Resistance (Ω)	
B445       1       2       When heat sensor temperature is 20°C (68°F)       4.0-4.7         NOTE:       Resistance value changes according to temperature.       Is inspection result normal?       Image: Source control of the sensor temperature is 20°C (68°F)       4.0-4.7         S       >> Replace seat cushion heater. Refer to SE-125, "Exploded View".       Image: Source control of the sensor temperature is 20°C (68°F)       4.0-4.7         S       >> Replace seat cushion heater. Refer to SE-125, "Exploded View".       Image: Source control of the sensor temperature is 20°C (68°F)       1         S       >> Replace seat cushion heater. Refer to SE-125, "Exploded View".       Image: Source control of the sensor temperature is 20°C (68°F)       1         S       >> Replace seat cushion heater. Refer to SE-125, "Exploded View".       Image: Source control of the sensor temperature is 20°C (68°F)       1         S       >> Replace seatback heater. Refer to SE-125, "Exploded View".       Image: Source control of temperature is 20°C (68°F)       1         S       >> Replace seatback heater. Refer to SE-125, "Exploded View".       Image: Source control of temperature is 20°C (68°F)       1         S       >> Replace seatback heater. Refer to SE-125, "Exploded View".       Image: Source control of temperature is 20°C (68°F)       1         S       >> Replace seatback heater.       Source control of temperature is 20°C (68°F)       1       1	Connector	Term	ninal		(Approx.)	
<ul> <li>NOTE:</li> <li>Resistance value changes according to temperature.</li> <li>aispection result normal?</li> <li>&gt; Replace seat cushion heater. Refer to <u>SE-125</u>. "Exploded View".</li> <li>&gt; Replace seatback heater. Refer to <u>SE-125</u>. "Exploded View".</li> </ul>	B445	1	2	When heat sensor temperature is 20°C (68°F)	4.0 - 4.7	
<ul> <li>inspection result normal?</li> <li>S &gt;&gt; Replace seat cushion heater. Refer to <u>SE-125</u>, "Exploded View".</li> <li>&gt;&gt; Replace seatback heater. Refer to <u>SE-125</u>, "Exploded View".</li> </ul>	NOTE: Resistance va	alue changes	according to	temperature		
<ul> <li>&gt;&gt; Replace seat cushion heater. Refer to <u>SE-125</u>, "<u>Exploded View</u>".</li> <li>&gt;&gt; Replace seatback heater. Refer to <u>SE-125</u>, "<u>Exploded View</u>".</li> </ul>	the inspection r	esult normal?	2000101119 to			
> Replace seatback heater. Refer to <u>SE-125. "Exploded View"</u> .	ES >> Repla	ce seat cush	- ion heater. R	efer to <u>SE-125, "Exploded View"</u> .		
	IO >> Repla	ce seatback	heater. Refer	to <u>SE-125, "Exploded View"</u> .		

#### < DTC/CIRCUIT DIAGNOSIS > HEATED SEAT SWITCH INDICATOR DRIVER SIDE **DRIVER SIDE : Description** INFOID:000000005622115 Illuminates the indicator that indicates the operating status of heated seat. **DRIVER SIDE : Component Function Check** INFOID:000000005622116 1. CHECK FUNCTION Check that the related indicator lamp illuminates when heated seat switch is set to ON. Is the inspection result normal? YES >> Heated seat switch indicator function is OK. NO >> Refer to SE-34, "DRIVER SIDE : Diagnosis Procedure". DRIVER SIDE : Diagnosis Procedure INFOID:000000005622117 1. CHECK HEATED SEAT SWITCH INDICATOR GROUND CIRCUIT Turn ignition switch OFF 1. 2. Disconnect heated seat switch connector. 3. Check continuity between heated seat switch harness connector and ground. Heated seat switch Continuity Connector Terminal Ground A/T models: M141 6 Existed M/T models: M175 Is the inspection result normal? >> Replace heated seat switch. Refer to SE-146, "Removal and Installation". YES NO >> Repair or replace harness. PASSENGER SIDE **PASSENGER SIDE** : Description INFOID:000000005622118 Illuminates the indicator that indicates the operating status of heated seat. **PASSENGER SIDE : Component Function Check** INFOID:000000005622119 **1.**CHECK FUNCTION Check that the related indicator lamp illuminates when heated seat switch is set to ON. Is the inspection result normal? YES >> Heated seat switch indicator function is OK. >> Refer to SE-34, "PASSENGER SIDE : Diagnosis Procedure". NO PASSENGER SIDE : Diagnosis Procedure INEOID:000000005622120 1. CHECK HEATED SEAT SWITCH INDICATOR GROUND CIRCUIT 1. Turn ignition switch OFF 2. Disconnect heated seat switch connector. 3. Check continuity between heated seat switch harness connector and ground. Heated seat switch Continuity Connector Terminal Ground A/T models: M142 6 Existed M/T models: M176

HEATED SEAT SWITCH INDICATOR

Is the inspection result normal?

#### - -\_ \_ \_

	CIRCUIT DIAGNOSIS >				
NO	>> Replace heated seat switch. Refer to <u>SE-146, "Removal and Installation"</u> .	А			
		D			
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### < DTC/CIRCUIT DIAGNOSIS >

## TILT&TELESCOPIC SWITCH

### Description

Tilt switch and telescopic switch as a unit, transmit switch operation signal to automatic drive positioner control unit.

### **Component Function Check**

## **1.**CHECK TILT AND TELESCOPIC SWITCH FUNCTION

Check tilt and telescopic operation with tilt and telescopic switch.

Is the inspection results normal?

YES >> Tilt and telescopic switch is OK.

NO >> Refer to <u>SE-36</u>, "Diagnosis Procedure".

### Diagnosis Procedure

## **1.**CHECK TILT AND TELESCOPIC SWITCH FUNCTION

Check voltage between tilt and telescopic switch and ground.

Tilt and tele	Tilt and telescopic switch		Switch condition	Voltage (V)
Connector	Terminal			Approx.
	2 3 4	Ground	Forward position	0
			Other than above	5
			Backward position	0
M21			Other than above	5
NIS I			Upward position	0
			Other than above	5
	5		Downward	0
			Other than above	5

Is the inspection result normal?

YES >> Tilt and telescopic switch is OK.

NO >> GO TO 2.

### 2. CHECK TILT AND TELESCOPIC SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect tilt and telescopic switch and automatic drive positioner control unit connectors.

3. Check continuity between tilt and telescopic switch and automatic drive positioner control unit.

Tilt and telescopic switch connec- tor	Terminal	Automatic drive positioner control unit	Terminal	Continuity
M31	2		11	Existed
	3	NE1	27	
	4		1	
	5		17	

4. Check continuity between tilt and telescopic switch and ground.

INFOID:000000005622123

INFOID:000000005622121

INEOID:000000005622122
## TILT&TELESCOPIC SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

Tilt and telescopic switch conne			
	ctor Terminal		Continuity
	2		
M04	3	Ground	Not eviated
MI3 I	4		Not existed
	5		Continuity         Not existed         Continuity         Existed         Voltage (V)         Approx.         5         Removal and Installation".
s the inspection result normal?			
YES >> GO TO 3.			
NO >> Repair or replace o	ircuit.		
<b>5.</b> CHECK TILT AND TELESC	OPIC SWITCH GROUN	D CIRCUIT	
Check continuity between tilt ar	nd telescopic switch and	ground.	
Tilt and telescopic switch conne	ector Terminal		Continuity
 M31	1	Ground	Existed
s the inspection result normal?	)		
YES >> GO TO 4.	•		
NO >> Repair or replace of	ircuit.		
LCHECK TILT AND TELESC	OPIC SWITCH		
Check tilt and telescopic switch	I.		
Refer to <u>SE-37, "Component In</u>	spection".		
s the inspection result normal?	, -		
YES >> GO TO 5.			
NO >> Replace tilt and tel			
CHECK AUTOMATIC DRIVI	E POSITIONER CONTR	OL UNIT	
. Connect automatic drive po	ositioner control unit con	nector.	
	tomotio drivo popitionor (	مصغتما ببجائة محط متحبيهما	
. Uneck voltage between au	tomatic drive positioner (	control unit and ground	l.
. спеск voltage between au Tilt and telescop	tomatic drive positioner (	control unit and ground	Voltage (V)
. Спеск voltage between au Tilt and telescop Connector	tomatic drive positioner ( vic switch Terminal	control unit and ground	Voltage (V) Approx.
Tilt and telescop	tomatic drive positioner ( vic switch Terminal 1	control unit and ground	Voltage (V) Approx.
Спеск voltage between au Tilt and telescop Connector	tomatic drive positioner ( bic switch Terminal 1 11	control unit and ground	Voltage (V) Approx.
Спеск voltage between au Tilt and telescop Connector M51	tomatic drive positioner ( vic switch Terminal 1 11 17	Control unit and ground (-) Ground	Voltage (V) Approx. 5
Спеск voltage between au Tilt and telescop Connector М51	tomatic drive positioner of bic switch Terminal 1 1 11 17 27	control unit and ground (-) Ground	Voltage (V) Approx. 5
Спеск voltage between au Tilt and telescop Соппесtor M51 s the inspection result normal?	tomatic drive positioner of bic switch Terminal 1 11 17 27	Control unit and ground (-) Ground	Voltage (V) Approx. 5
Спеск voltage between au Tilt and telescop Connector M51 <u>s the inspection result normal?</u> YES >> GO TO 6.	tomatic drive positioner of bic switch Terminal 1 1 11 17 27	control unit and ground (-) Ground	Voltage (V) Approx. 5
Спеск voltage between au Tilt and telescop Connector M51 s the inspection result normal? YES >> GO TO 6. NO >> Replace automatic	tomatic drive positioner of bic switch Terminal 1 11 17 27 drive positioner control of	(-) Ground	Voltage (V) Approx. 5
Спеск voltage between au Tilt and telescop Connector M51 the inspection result normal? YES >> GO TO 6. NO >> Replace automatic CHECK INTERMITTENT IN	tomatic drive positioner of bic switch Terminal 1 1 1 1 1 27 drive positioner control of CIDENT	(-) Ground	Voltage (V) Approx. 5
Спеск voltage between au Tilt and telescop Connector M51 M51 the inspection result normal? YES >> GO TO 6. NO >> Replace automatic CHECK INTERMITTENT IN beck intermittent incident	tomatic drive positioner of bic switch Terminal 1 1 1 17 27 drive positioner control of CIDENT	(-) Ground	Voltage (V) Approx. 5
Спеск voltage between au Tilt and telescop Connector M51 Sthe inspection result normal? YES >> GO TO 6. NO >> Replace automatic CHECK INTERMITTENT IN Check intermittent incident. Refer to GI-38, "Intermittent Incident.	tomatic drive positioner of bic switch Terminal 1 1 11 17 27 drive positioner control of CIDENT Sident"	(-) Ground	Voltage (V) Approx. 5
Спеск voltage between au         Tilt and telescop         Connector         M51         s the inspection result normal?         YES       >> GO TO 6.         NO       >> Replace automatic         Check intermittent incident.         Refer to GI-38, "Intermittent Incident.	tomatic drive positioner of bic switch Terminal 1 1 1 17 27 drive positioner control of CIDENT :ident"	(-) Ground	Voltage (V) Approx. 5
Tilt and telescop Connector M51 <u>s the inspection result normal?</u> YES >> GO TO 6. NO >> Replace automatic CHECK INTERMITTENT IN CHECK INTERMITTENT IN Check intermittent incident. CHECK INTERMITTENT IN Check intermittent incident. CHECK INTERMITTENT IN Check intermittent incident. CHECK INTERMITTENT IN Check intermittent incident.	tomatic drive positioner ( bic switch Terminal 1 11 17 27 drive positioner control ( CIDENT Sident"	(-) Ground	Voltage (V) Approx. 5
Check voltage between au         Tilt and telescop         Connector         M51         s the inspection result normal?         YES         YES         >> GO TO 6.         NO         >> Replace automatic         CHECK INTERMITTENT IN         Check intermittent incident.         Refer to GI-38. "Intermittent Incident.         >> INSPECTION END         Component Inspection	tomatic drive positioner (	(-) Ground	Voltage (V) Approx. 5 <u>Removal and Installation"</u> .
Tilt and telescop Connector M51 Sthe inspection result normal? YES >> GO TO 6. NO >> Replace automatic CHECK INTERMITTENT IN Check intermittent incident. CHECK INTERMITTENT IN CHECK IN CHECK IN CHECK IN CHECK IN CHE	tomatic drive positioner (	(-) Ground	Voltage (V) Approx. 5 'Removal and Installation".
Cneck voltage between au Tilt and telescop Connector M51 M51 Sthe inspection result normal? YES >> GO TO 6. NO >> Replace automatic CHECK INTERMITTENT IN Check intermittent incident. CHECK INTERMITTENT IN Check intermittent incident. Somponent Inspection CHECK TILT SWITCH	tomatic drive positioner (	(-) Ground	Voltage (V) Approx. 5 'Removal and Installation".

- 2. Remove tilt and telescopic switch.
- 3. Check continuity between tilt and telescopic switch terminals.

## **TILT&TELESCOPIC SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Termin	al	Switch condition	Continuity
2		Forward	Existed
2		Other than above	Not existed
0	3	Backward	Existed
3		Other than above	Not existed
	1	Upward	Existed
4		Other than above	Not existed
_		Downward	Existed
5		Other than above	Not existed

Is the inspection result normal?

YES >> Tilt and telescopic switch is OK.

NO >> Replace tilt and telescopic switch. Refer to <u>SE-145</u>, "Removal and Installation".

## **TILT&TELESCOPIC MOTOR**

< DTC/CIRCUIT DIA	GNOSIS >				
TILT&TELESC	OPIC MOTOR				Δ
Description				INFOID:000000005622125	Λ
Tilt and telescopic mo	tor operates with the	power received from aut	tomatic drive pos	itioner control unit.	В
Component Fund	tion Check			INFOID:000000005622126	
<b>1.</b> CHECK TILT AND	TELESCOPIC MOTO	R FUNCTION			С
Check tilt and telesco Is the inspection resu YES >> Tilt and te NO >> Refer to S	pic operation with tilt a <u>Its normal?</u> elescopic motor are Ol SE-39, "Diagnosis Pro	and telescopic switch. K. <u>cedure"</u> .			D
Diagnosis Procee	dure			INFOID:000000005622127	Е
1.CHECK MALFUNG	CTIONING PART				
Check malfunctioning Is it tilt operation or te Tilt >> GO TO 2 Telescopic>>GO TO	part. lescopic operation? 3.				F
2.CHECK TILT MOT	OR POWER SUPPLY	AND GROUND CIRCL	ЛТ		
<ol> <li>Turn ignition swite</li> <li>Disconnect tilt mo</li> <li>Check continuity</li> </ol>	ch OFF. otor and automatic driv between tilt motor and	ve positioner control uni l automatic drive positio	t. ner control unit.		Η
Tilt and telescopic m connector	otor Terminal	Power seat switch con- nector	Terminal	Continuity	
M49	3	M52	42 35	Existed	E
Is the inspection resu	t normal?				
YES >> GO TO 4	replace circuit				Κ
3.CHECK TELESCO	PIC MOTOR POWER		ND CIRCUIT		
1. Turn ignition swite	ch OFF.				L
<ol> <li>Disconnect teleso</li> <li>Check continuity</li> </ol>	copic motor and autom between telescopic m	natic drive positioner con otor and automatic drive	ntrol unit. e positioner contr	ol unit.	
					M
Tilt and telescopic m connector	otor Terminal	Power seat switch con- nector	Terminal	Continuity	
M49	1	M52	44	Existed	Ν
le the increation recu	2		36		
YES >> GO TO 4	<u>it normal?</u>				0
NO >> Repair or	replace circuit.				
4.CHECK TILT AND	TELESCOPIC MOTO	R			Ρ
Check tilt and telesco Refer to <u>SE-40, "Com</u>	pic motor. ponent Inspection".				
Is the inspection resu	It normal?				
NO >> Replace 1	ilt and telescopic mot	or.			
5.CHECK ADP CON					

## TILT&TELESCOPIC MOTOR

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect automatic drive positioner control unit connector.
- 2. Check voltage between automatic drive positioner control unit and ground.

Tilt and teles	Tilt and telescopic switch		Tilt and telescopic switch	Voltage (V)	
Connector	Terminal	(-)	condition	Approx.	
	35		Upward	Battery voltage	
			Other than above	0	
	36		Forward	Battery voltage	
M51	30	Ground	Other than above	0	
WIS 1	42	Ground	Downward	Battery voltage	
	72		Other than above	0	
	11		Backward	Battery voltage	
			Other than above	0	

#### Is the inspection result normal?

NO >> Replace automatic drive positioner control unit. Refer to <u>SE-140, "Removal and Installation"</u>.

**6.**CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to <u>GI-38. "Intermittent Incident"</u>

#### >> INSPECTION END

#### Component Inspection

INFOID:000000005622128

## 1.CHECK TILT AND TELESCOPIC MOTOR-I

Check visually the tilt and telescopic motor to see if any foreign object is not disturbing the functionment or if the tilt and telescopic motor is not broken.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace tilt and telescopic motor.

2. CHECK TILT AND TELESCOPIC MOTOR-II

- 1. Turn ignition switch OFF.
- 2. Disconnect tilt and telescopic motor connector.
- 3. Supply tilt and telescopic motor terminals with battery voltage and check operation.

Item	Terr	minal	Operation	
nem	(+)	()	Operation	
Tolosconic motor	1	2	Backward	
	2	1	Forward	
Tilt motor	3	4	Downward	
	4	3	Upward	

Is the inspection result normal?

YES >> Tilt and telescopic motor is OK.

NO >> Replace tilt and telescopic motor.

## TILT&TELESCOPIC SENSOR

<pre>&lt; DTC/CIRCUIT DIAC TILT&amp;TELESCC</pre>	NOSIS	> SENSOR				
Description						А
Description					INFOID:000000005622129	
Tilt and telescopic sentioner control unit.	sor detec	ts the position of	f steering wheel	and transmits s	signals to automatic drive posi-	В
Component Funct	ion Ch	eck			INFOID:000000005622130	0
1.CHECK TILT AND	TELESCO	OPIC SENSOR F	UNCTION			C
Check tilt and telescopIs the inspection resultYESYESNO>> Refer to S	ic operat <u>s normal</u> escopic s E-41, "Di	ion with tilt and t <u>?</u> sensor is OK. agnosis Procedu	elescopic switch <u>Ire"</u> .	ו.		D
<b>Diagnosis Proced</b>	ure				INFOID:000000005622131	
<b>1.</b> CHECK TILT AND	FELESCO	OPIC SENSOR (	CIRCUIT			Г
<ol> <li>Turn ignition switc</li> <li>Disconnect tilt and</li> <li>Check continuity b</li> </ol>	n OFF. telescop etween ti	vic sensor and au ilt and telescopic	utomatic drive p sensor and au	ositioner control comatic drive po	unit connector. sitioner control unit.	G
Tilt and telescopic sens nector	or con-	Terminal	Automatic drive positioner contro unit	Terminal	Continuity	Н
		1		33		
M48		2	M51	23	Existed	
		3	MEO	7	_	
1 Check continuity h	etween ti	4 ilt and telescopic	sensor and are	41		SE
	etween t					
Tilt and telescopic sen tor	sor connec	- Termina	I		Continuity	K
M48		1 2 3 4		Ground	Not existed	L
Is the inspection result	normal?					M
YES >> GO TO 2. NO >> Repair or 1 2 CHECK TH T AND	eplace ci	ircuit. OPIC SENSOR F		v		N
1 Connect automatic	drive po			_1		IN
<ol> <li>Check voltage bet</li> </ol>	ween aut	comatic drive pos	itioner control u	nit and ground.		0
Tilt ar	nd telescop	ic sensor			Voltage	
Connector		Terminal	Gi	ound		D
M52		33			Approx. 5V	Γ.
YES >> GO TO 3. NO >> Replace a 3.CHECK TILT AND	<u>normal?</u> utomatic FELESC0	drive positioner. OPIC SENSOR (	Refer to <u>SE-14</u> GROUND	0. "Removal and	d Installation".	

Check continuity between automatic drive positioner control unit and ground.

## TILT&TELESCOPIC SENSOR

#### < DTC/CIRCUIT DIAGNOSIS >

Tilt and telesco	pic sensor		Continuity
Connector	Terminal	Ground Continu Existe	Continuity
M48	4		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace automatic drive positioner. Refer to <u>SE-140, "Removal and Installation"</u>.

**4.**CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u>.

>> INSPECTION END



#### < DTC/CIRCUIT DIAGNOSIS >



JCJWM1114GB

#### < DTC/CIRCUIT DIAGNOSIS >



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JCJWM1116GB



#### < DTC/CIRCUIT DIAGNOSIS >



JCJWM1117GB

#### < DTC/CIRCUIT DIAGNOSIS >



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JCJWM1119GB



## LUMBAR SUPPORT

#### < DTC/CIRCUIT DIAGNOSIS >



JCJWM1125GE

#### LUMBAR SUPPORT

#### < DTC/CIRCUIT DIAGNOSIS >



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JCJWM1127GE

< DTC/CIRCUIT DIAGNOSIS >

# SIDE SUPPORT



## SIDE SUPPORT

#### < DTC/CIRCUIT DIAGNOSIS >



JCJWM1122GB

## SIDE SUPPORT

#### < DTC/CIRCUIT DIAGNOSIS >



JCJWM1123GE



JCJWM1124GE





Wiring Diagram - TILT&TELESCOPIC SYSTEM -



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INFOID:000000005622136

## **TILT & TELESCOPIC SYSTEM**

#### < DTC/CIRCUIT DIAGNOSIS >



JCJWM1120GE

TILT & TELESCOPIC SYSTEM						
Connector No. M48	Terminal	Color of Wire	Signal Name [Specification]	40 B	GND (SIGNAL)	
Connector Name TILT & TELESCOPIC SENSOR	1	} 	TILT SW (UPWARD)	42 BG		
Connector Type TK04FW	2	LG	MIRROR SELECT SW (RH)	44 G	TELESCOPIC MOTOR (BACKWARD)	
4	3	σ	MIRROR SW (UPWARD)	48 B	GND (POWER)	
(MM)	4	× ۱	MIRROR SW (LEFTWARD)			
H.S.	c a	r G	MIRRUR SENSOR (RH VERTICAL) MIRDOD SENSOD (LU VERTICAL)	Connector No Mo		
	7	L Ca	MIRROR SENSOR (LA VERTICAL) TILT SENSOR		22	
4 3 2 1	. 6	BR	ADDRESS 1	Connector Name CI	RCUIT BREAKER	
	10	>	TX (UART)	Connector Type M(	02FW-P-LC	
	11	GR	TELESCOPIC SW (FRONTWARD)			
Terminal Color Simul Name [Convitionation]	12	BG	I ND 1	ſ		
No. of Wire Used Internet Copecification 1	13	٩	IND 2		[	
1 W -	14	×	MIRROR MOTOR (RH VERTICAL)		F	
2 P -	15	BG	MIRROR MOTOR (RH HORIZONTAL)			
3 BG -	16	>	MIRROR MOTOR (LH COMMON)		2	
4 Y =	17	ВR	TILT SW (DOWNWARD)		]	
	18	×	MIRROR SELECT SW (LH)			
	19	BB	MIRROR SW (DOWNWARD)	Terminal Color	Signal Name [Specification]	
Connector No. M49	20	_	MIRROR SW (RIGHTWARD)	No. of Wire	7	
Connector Name TILT & TELESCOPIC MOTOR	21	_	MIRROR SENSOR (RH HORIZONTAL)		1	
Connector Time NEOMERI-OS	77	n c		2 28	I	
	07 V					
	25	< >	ADDRESS 2			
	26	•	RX (IIART)			
15	27	. c	TELESCOPIC SW (BACKWARD)			
	30	SB	MIRROR MOTOR (RH COMMON)			
4 3 2 1	31	J	MIRROR MOTOR (LH VERTICAL)			
	32	_	MIRROR MOTOR (LH HORIZONTAL)			
I erminal Golor Signal Name [Specification]	Connecto	νN.	452			
-			201			
2 GR -	Connecto	- Name	UTOMATIC DRIVE POSITIONER CONTROL UNIT			
3 BG -	Connecto	Type	VS16FW-CS			
4 L –	4					
	E					
	SH	Ľ				
Connector No. M51		g	34 35 36 23 37 38 39			
Connector Name AUTOMATIC DRIVE POSITIONER CONTROL UNIT		40	41 42 43 44 45 46 47 48			
Connector Tyne TH32EN-NH		J				
	Terminal	Color	- - - - - - - - - - - - - - - - - 			
	No.	of Wire	Signal Name [Specification]			
	33	×	POWER SUPPLY (SENSOR)			
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	34	>	BAT (FUSE)			
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	35	_	TILT MOTOR (UPWARD)			
	36	GR	TELESCOPIC MOTOR (FORWARD)			
	39	N	BAT (C/B)			
	60	-				

**TILT & TELESCOPIC SYSTEM** 

< DTC/CIRCUIT DIAGNOSIS >

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< ECU DIAGNOSIS INFORMATION >

# ECU DIAGNOSIS INFORMATION AUTOMATIC DRIVE POSITIONER CONTROL UNIT

#### **Reference Value**

INFOID:000000005622137

#### **TERMINAL LAYOUT**







JMJIA0199ZZ

#### PHYSICAL VALUES

Termiı (Wire	nal No. color)	Description		Conditi	on	Voltage (V)
+	_	Signal name	Input/ Output	Condition	JII	(Approx.)
1	Cround	Tilt owitch unword signal	locut	Tilt quitch	Operate (upward)	0
(Y)	Ground	The switch upward signal	input	The Switch	Other than above	5
2		Changeover switch RH		Changeover	RH	0
(LG)	Ground	signal	Input	switch position	Neutral or LH	5
3	Ground	Mirror switch upward sig-	Input	Mirror switch	Operated (upward)	0
(G)	Giodila	nal	input	WIND SWICH	Other than above	5
4	Ground	Mirror switch leftward sig-	locut	Mirror owitch	Operated (leftward)	0
(V)	Ground	nal	input		Other than above	5
5 (R)	Ground	Door mirror sensor (RH) upward/downward signal	Input	Mirror face (door mirror RH)		Change between 3.4 (close to peak) 0.6 (close to valley)
6 (GR)	Ground	Door mirror sensor (LH) upward/downward signal	Input	Mirror face (door mirror LH)		Change between 3.4 (close to peak) 0.6 (close to valley)
7 (O)	Ground	Tilt sensor signal	Input	Tilt position		Change between 1.2 (close to top) 3.8 (close to bottom)
0					Press	0
(BR)	Ground	Memory switch 1 signal	Input	Memory switch 1	Other than above	5
10 (V)	Ground	UART communication (TX)	Output	Ignition switch ON		2mSec/div

#### < ECU DIAGNOSIS INFORMATION >

Termiı (Wire	nal No. color)	Description		Conditi	<b>20</b>	Voltage (V)	А
+	-	Signal name	Input/ Output	Condition	וזכ	(Approx.)	
11	Cround	Telescopic switch forward	Innut	Tologoonia owitch	Operate (forward)	0	В
(GR)	Ground	signal	input	relescopic switch	Other than above	5	С
10					Illuminate	1	
(O)	Ground	Memory indictor 1 signal	Output	Memory indictor 1	Other than above	Battery voltage	D
13					Illuminate	1	
(P)	Ground	Memory indictor 2 signal	Output	Memory indictor 2	Other than above	Battery voltage	Е
14	Ground	Door mirror motor (RH)	Output	Door mirror RH	Operate (upward)	Battery voltage	_
(W)	Cround	upward output	Output		Other than above	0	F
15	Ground	Door mirror motor (RH)	Output	Door mirror RH	Operate (leftward)	Battery voltage	G
(O)	Ground	leftward output	Output		Other than above	0	
		Door mirror motor (LH)			Operate (down- ward)	Battery voltage	Н
16 (Y) Ground		Output	ut Door mirror (LH)	Other than above	0		
		Door mirror motor (LH)			Operate (rightward)	Battery voltage	SE
		rightward output			Other than above	0	
17 (BR)	Ground	Tilt switch downward sig-	Input	Tilt switch	Operate (down- ward)	0	K
					Other than above	5	L
18		Changeover switch I H		Changeover	LH	0	
(P)	Ground	signal	Input	switch position	Neutral or RH	5	$\mathbb{M}$
19 (SB)	Ground	Mirror switch downward	Input	Mirror switch	Operate (down- ward)	0	Ν
(00)		Signal			Other than above	5	0
20	Ground	Mirror switch rightward	Input	Mirror switch	Operate (rightward)	0	0
(BR)	Cround	signal	input		Other than above	5	Ρ
21 (L)	Ground	Door mirror sensor (RH) leftward/rightward signal	Input	Door mirror RH po	sition	Change between 3.4 (close to left edge) 0.6 (close to right edge)	
22 (G)	Ground	Door mirror sensor (LH) leftward/rightward signal	Input	Door mirror LH pos	sition	Change between 0.6 (close to left edge) 3.4 (close to right edge)	
23 (P)	Ground	Telescopic sensor signal	Input	Telescopic position	l	Change between 0.8 (close to top) 4.4 (close to bottom)	

#### < ECU DIAGNOSIS INFORMATION >

Termi (Wire	nal No. color)	Description				Voltage (V)
+	_	Signal name	Input/ Output	Conditio	n	(Approx.)
24					Press	0
(R)	Ground	Set switch signal	Input	Set switch	Other than above	5
25					Press	0
(V)	Ground	Memory switch 2 signal	Input	Memory switch 2	Other than above	5
26 (P)	Ground	UART communication (RX)	Input	Ignition switch ON		10mSec/div 2V/div JMJIA0121ZZ
27	Ground	Telescopic switch back-	Input	Telescopic switch	Operate (backward)	0
(G)		ward signal			Other than above	5
		Door mirror motor (RH)			Operate (down- ward)	Battery voltage
30 (SB) Ground		Output	utput Door mirror (RH)	Other than above	0	
		Door mirror motor (RH)			Operate (rightward)	Battery voltage
		rightward output			Other than above	0
31	Ground	Door mirror motor (LH)	Output	Door mirror (I H)	Operate (upward)	Battery voltage
(G)	Giouna	upward output	Output		Other than above	0
32	Ground	Door mirror motor (LH)	Output	Door mirror (I H)	Operate (leftward)	Battery voltage
(L)	Giouna	leftward output	Output		Other than above	0
33 (W)	Ground	Sensor power supply	Input	_		5
34 (V)	Ground	Power source (Fuse)	Input	_		Battery voltage
35	Ground	Tilt motor upward output	Output	Steering tilt	Operate (upward)	Battery voltage
(L)	Ground		Output	Sieering in	Other than above	0
36	Ground	Telescopic motor forward	Outout	Steering telescop-	Operate (forward)	Battery voltage
(GR)	Ground	output signal	Output	ic	Other than above	0
39 (W)	Ground	Power source (C/B)	Input			Battery voltage
40 (B)	Ground	Ground				0

Revision: 2009 November

#### < ECU DIAGNOSIS INFORMATION >

Termi (Wire	nal No. color)	Description	Description			Voltage (V)	A
+	-	Signal name	Input/ Output	Condition		(Approx.)	
41 (Y)	Ground	Sensor ground	_	_		0	В
42	Ground	Tilt motor downward out-	Output	Steering tilt	Operate (down- ward)	Battery voltage	С
(O)	put			Other than above	0	D	
44	Ground	Telescopic motor back-	Output	Steering telescop-	Operate (backward)	Battery voltage	
(G)	Ground	ward output	Output	ic	Other than above	0	E
48 (B)	Ground	Ground	_	_		0	F

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< ECU DIAGNOSIS INFORMATION >



## AUTOMATIC DRIVE POSITIONER CONTROL UNIT < ECU DIAGNOSIS INFORMATION >

A → With A/T
 M → With M/T
 ★ : This connector is not shown in "Harness Layout".



#### < ECU DIAGNOSIS INFORMATION >



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#### < ECU DIAGNOSIS INFORMATION >



JCJWM1142GE

#### < ECU DIAGNOSIS INFORMATION >



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#### < ECU DIAGNOSIS INFORMATION >



JCJWM1144GE
#### AUTOMATIC DRIVE POSITIONER CONTROL UNIT < ECU DIAGNOSIS INFORMATION >



# AUTOMATIC DRIVE POSITIONER CONTROL UNIT

#### < ECU DIAGNOSIS INFORMATION >



JCJWM1146GE

# AUTOMATIC DRIVE POSITIONER CONTROL UNIT

#### < ECU DIAGNOSIS INFORMATION >



JCJWM1147GB

# AUTOMATIC DRIVE POSITIONER CONTROL UNIT

#### < ECU DIAGNOSIS INFORMATION >



JCJWM1148GE

#### < ECU DIAGNOSIS INFORMATION >

# HEATED SEAT CONTROL UNIT DRIVER SIDE

# DRIVER SIDE : Reference Value

INFOID:000000005622139

JMJIA2446ZZ

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### TERMINAL LAYOUT



# PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Voltage (V)	0
(+)	()	Signal name	Input/ Output	(Approx.)			G
48 (B)	Ground	Ground	-	Ignition switch ON		0	Н
67 (R)	Ground	IGN power supply	Input	Ignition switch	OFF or ACC	0	-
					ON	Battery voltage	-
68 (L)* <sup>1</sup> (L/W)* <sup>2</sup>	Ground	Heated seat switch signal	Input	Heated seat switch	OFF	0	_
					1 (Min. temperature)	12.24	
					2	12.33	SE
					3	12.49	-
					4	12.63	ĸ
					5	12.76	- 1
					6 (Max. temperature)	12.90	-
69		Lipstad as at an aratism sim		Heated seat	Operate	Battery voltage	L
(BR/W)* <sup>1</sup> (R/W)* <sup>2</sup>	Ground	nal	Input		Other than above	0	-
70					Operate	0 – Battery voltage*	M
(L/W)* <sup>1</sup> (R/L)* <sup>2</sup>	Ground	Heater unit power supply	Output	Heated seat	Other than above	0	-
71 (R/B)	Ground	Heat sensor signal	Input	Heated seat switch	OFF	0	N
					1 (Min. temperature)	10.87 – 11.02*	-
					2	10.93 – 11.07*	
					3	11.04 – 11.17*	- 0
					4	11.13 – 11.26*	-
					5	11.22 – 11.34*	P
					6 (Max. temperature)	11.31 – 11.43*	-

\*: Voltage is repeated within the value shown as per the following list depending on heater unit temperature.

\*1: With automatic drive positioner

\*2: Without automatic drive positioner



#### < ECU DIAGNOSIS INFORMATION >



#### < ECU DIAGNOSIS INFORMATION >



JCJWM1128GE

#### < ECU DIAGNOSIS INFORMATION >



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#### < ECU DIAGNOSIS INFORMATION >



JCJWM1130GE

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JCJWM1132GE



< ECU DIAGNOSIS INFORMATION >



Revision: 2009 November

#### < ECU DIAGNOSIS INFORMATION >



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#### < ECU DIAGNOSIS INFORMATION >



JCJWM1134GE

#### < ECU DIAGNOSIS INFORMATION >



#### < ECU DIAGNOSIS INFORMATION >



JCJWM1136GE

#### < ECU DIAGNOSIS INFORMATION >



# PASSENGER SIDE

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С

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#### < ECU DIAGNOSIS INFORMATION >

# PASSENGER SIDE : Reference Value

INFOID:000000005622142

#### TERMINAL LAYOUT



#### PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Voltage (V)
(+)	(–)	Signal name	Input/ Output		(Approx.)	
2 (B)	Ground	Ground	_	Ignition switch ON		0
14 (R)	Ground	IGN power supply	Input	Ignition switch	OFF or ACC	0
					ON	Battery voltage
15 (L/W)	Ground	Heated seat switch signal	Input	Heated seat switch	OFF	0
					1 (Min. temperature)	12.24
					2	12.33
					3	12.49
					4	12.63
					5	12.76
					6 (Max. temperature)	12.90
16	Ground	Heated seat operation sig- nal	Input	Heated seat	Operate	Battery voltage
(R/W)					Other than above	0
17	Ground	Heater unit power supply	Output	Heated seat	Operate	0 – Battery voltage*
(R/L)					Other than above	0
18 (R/B)	Ground	Heat sensor signal	Input	Heated seat switch	OFF	0
					1 (Min. temperature)	10.87 – 11.02*
					2	10.93 – 11.07*
					3	11.04 – 11.17*
					4	11.13 – 11.26*
					5	11.22 – 11.34*
					6 (Max. temperature)	11.31 – 11.43*

\*: Voltage is repeated within the value shown as per the following list depending on heater unit temperature.

#### < ECU DIAGNOSIS INFORMATION >





< ECU DIAGNOSIS INFORMATION >



Revision: 2009 November

#### < ECU DIAGNOSIS INFORMATION >



#### < ECU DIAGNOSIS INFORMATION >



JCJWM1129GB

#### < ECU DIAGNOSIS INFORMATION >



JCJWM1130GE

#### < ECU DIAGNOSIS INFORMATION >



JCJWM1131GB

< ECU DIAGNOSIS INFORMATION >

#### А В С 6 GR D Е Signal Name [Specification] HEATED SEAT SWITCH (PASSENGER SIDE) Signal Name [Specification] HEATED SEAT SWITCH (DRIVER SIDE) F 6 **1** 4 3 2 2 M175 Ī G Color of Wire GR SB Color of Wire ≍≥병병 Connector Name Connector Name Connector No. u ≤ ≤ ∞ GH Connector Type eq Connector H.S. srminal No H.S. erminal No. G Æ Н Signal Name [Specification] Signal Name [Specification] 12 -| ト 3 4 9 10 o 0 4 SE WIRE TO WIRE WIRE TO WIRE ω N M174 M13 Color of Wire Color of Wire nector No. lector Name 8 nector Name БG GR BG ector No. Κ 稳 H.S. H.S. erminal No. erminal No. ß L Signal Name [Specification] HEATED SEAT (WITH M/T) 81 96 92 96 95 99 95 000 Μ 1 1 1 1 1 1 1 1 1 2 1 1 1 1 1 3 7 1 WIRE TO WIRE Ν Color of Wire LG SB G LG R R SHIELD P SHIELD SHIELD inector Name LG SB G - B × ۳ В - ≥ 비명필지의 H.S. rminal No. Ο 倨

JCJWM1132GE

#### < ECU DIAGNOSIS INFORMATION >

PASSENGER SIDE : Wiring Diagram - HEATED SEAT SYSTEM (WITH A/T) -



#### < ECU DIAGNOSIS INFORMATION >



#### < ECU DIAGNOSIS INFORMATION >



JCJWM1133GE

#### < ECU DIAGNOSIS INFORMATION >



#### < ECU DIAGNOSIS INFORMATION >



JCJWM1135GE

#### < ECU DIAGNOSIS INFORMATION >



< ECU DIAGNOSIS INFORMATION >



JCJWM1137GE

# HEATED SEAT DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >					
SYMPTOM DIAGNOSIS					
HEATED SEAT DOES NOT OPERATE					
BOTH SIDES					
BOTH SIDES : Diagnosis Procedure					
1.CHECK HEATED SEAT SWITCH POWER SUPPLY	С				
Check heated seat switch power supply. Refer to <u>SE-14, "HEATED SEAT SWITCH : Diagnosis Procedure"</u> . <u>Is the inspection result normal?</u>	D				
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2.CHECK HEATED SEAT RELAY	Е				
Check heated seat relay. Refer to <u>SE-21, "Component Function Check"</u> . Is the inspection result normal?	F				
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. <b>3.</b> CHECK HEATED SEAT CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT	G				
Check heated seat switch power supply and ground circuit. Refer to SE-12, "HEATED SEAT CONTROL UNIT : Diagnosis Procedure".	Н				
Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts. 4.CONFIRM THE OPERATION	I				
Confirm the operation again.	SE				
<u>Is the inspection result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u> . NO >> GO TO 1. DRIVER SIDE	К				
DRIVER SIDE : Diagnosis Procedure	I				
1.CHECK HEATED SEAT SWITCH POWER SUPPLY	_				
Check heated seat switch power supply. Refer to SE-14, "HEATED SEAT SWITCH : Diagnosis Procedure".	M				
<u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	Ν				
2. CHECK HEATED SEAT CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT					
Check heated seat switch power supply and ground circuit. Refer to SE-12, "HEATED SEAT CONTROL UNIT : Diagnosis Procedure".	0				
Is the inspection result normal?					
YES >> GO TO 3.	Р				
<b>3</b> .CHECK HEATED SEAT SWITCH					
Check heated seat switch					
Refer to <u>SE-17, "DRIVER SIDE : Component Function Check"</u> .					

Is the inspection result normal?

# HEATED SEAT DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

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

**4.**CHECK SEAT CUSHION HEATER

Check seat cushion heater.

Refer to SE-28, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

**5.**CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38. "Intermittent Incident".

NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000005622147

**1.**CHECK HEATED SEAT SWITCH POWER SUPPLY

Check heated seat switch power supply. Refer to <u>SE-14, "HEATED SEAT SWITCH : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK HEATED SEAT CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check heated seat switch power supply and ground circuit.

Refer to SE-12, "HEATED SEAT CONTROL UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

**3.**CHECK HEATED SEAT SWITCH

Check heated seat switch.

Refer to SE-18, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

**4.**CHECK SEAT CUSHION HEATER

Check seat cushion heater.

Refer to SE-29, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

**5.**CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".

NO >> GO TO 1.
SEATBACK HEATER ONLY DOES NOT OPERATE	
< SYMPTOM DIAGNOSIS >	
SEATBACK HEATER ONLY DOES NOT OPERATE DRIVER SIDE	A
DRIVER SIDE : Diagnosis Procedure	В
1.CHECK SEATBACK HEATER	D
Check seatback heater. Refer to <u>SE-32, "DRIVER SIDE : Component Function Check"</u> . Is the inspection result normal?	С
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	D
Confirm the operation again.	Е
YES >> Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u> . NO >> GO TO 1. PASSENGER SIDE	F
PASSENGER SIDE : Diagnosis Procedure	G
1.CHECK SEATBACK HEATER	
Check seatback heater. Refer to <u>SE-32, "PASSENGER SIDE : Component Function Check"</u> .	Н
Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2 CONFIRM THE OREPATION	I
	SE
Confirm the operation again.	
YES >> Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u> . NO >> GO TO 1.	К

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CANNOT ADJUST HEATED SEAT	TEMPERATURE
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< SYMPTOM DIAGNOSIS >

# CANNOT ADJUST HEATED SEAT TEMPERATURE DRIVER SIDE

DRIVER SIDE : [	<b>Diagnosis Procedure</b>
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INFOID:000000005622150

**1.**CHECK HEATED SEAT SWITCH

Check heated seat switch. Refer to <u>SE-17, "DRIVER SIDE : Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK HEAT SENSOR

Check heat sensor.

Refer to SE-23, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

**3.**CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u>.

NO >> Replace heated seat control unit. Refer to <u>SE-141, "Removal and Installation"</u>.

PASSENGER SIDE

# PASSENGER SIDE : Diagnosis Procedure

**1.**CHECK HEATED SEAT SWITCH

Check heated seat switch.

Refer to SE-18, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK HEAT SENSOR

Check heat sensor.

Refer to <u>SE-25, "PASSENGER SIDE : Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u>.

NO >> Replace heated seat control unit. Refer to <u>SE-141, "Removal and Installation"</u>.

#### ATED SEAT SWITCH INDICATOR DOES NOT THRN ON . . .

HEATED SEAT SWITCH INDICATOR DOES NOT TURN ON	
< SYMPTOM DIAGNOSIS >	
HEATED SEAT SWITCH INDICATOR DOES NOT TURN ON	
DRIVER SIDE	А
DRIVER SIDE : Diagnosis Procedure	R
1.CHECK HEATED SEAT SWITCH INDICATOR	D
Check heated seat switch indicator. Refer to <u>SE-34, "DRIVER SIDE : Component Function Check"</u> .	С
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts	D
2.CONFIRM THE OPERATION	
Confirm the operation again.	Ε
<u>Is the inspection result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u> . NO >> GO TO 1.	F
PASSENGER SIDE	
PASSENGER SIDE : Diagnosis Procedure	G
1.CHECK HEATED SEAT SWITCH INDICATOR	
Check heated seat switch indicator. Refer to <u>SE-34, "PASSENGER SIDE : Component Function Check"</u> .	Н
Is the inspection result normal?	
YES >> GO TO 2.	
2.CONFIRM THE OPERATION	95
Confirm the operation again.	SE
Is the inspection result normal?	
YES >> Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u> . NO >> GO TO 1.	Κ
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# STEERING POSITION FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

# STEERING POSITION FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000005622154

1. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check automatic drive positioner control unit power supply and ground circuit. Refer to ADP-66, "AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK TILT AND TELESCOPIC SWITCH

Check tilt and telescopic switch. Refer to <u>SE-36, "Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 ${f 3.}$ CHECK TILT AND TELESCOPIC SENSOR

Check tilt and telescopic sensor. Refer to <u>SE-41. "Component Function Check"</u>.

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to <u>GI-38. "Intermittent Incident"</u>.
- NO >> Repair or replace the malfunctioning parts.

# TILT FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >	
TILT FUNCTION DOES NOT OPERATE	Δ
Diagnosis Procedure	$\cap$
1. CHECK TILT AND TELESCOPIC SWITCH	В
Check tilt switch. Refer to <u>SE-36, "Component Function Check"</u> .	
Is the inspection result normal?	С
NO >> Repair or replace the malfunctioning parts.	
2.CHECK TILT AND TELESCOPIC MOTOR	D
Check tilt motor. Refer to <u>SE-39, "Component Function Check"</u> .	E
<u>Is the inspection result normal?</u> YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts. 3.CHECK TILT AND TELESCOPIC SENSOR	F
Check tilt sensor. Refer to <u>SE-41, "Component Function Check"</u> . Is the inspection result normal?	G
YES >> Check intermittent incident. Refer to <u>GI-38, "Intermittent Incident"</u> . NO >> Repair or replace the malfunctioning parts.	Н

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# **TELESCOPIC FUNCTION DOES NOT OPERATE**

#### < SYMPTOM DIAGNOSIS >

# TELESCOPIC FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000005622156

**1.**CHECK TILT AND TELESCOPIC SWITCH

Check telescopic switch. Refer to SE-36, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK TILT AND TELESCOPIC MOTOR

Check telescopic motor. Refer to <u>SE-39, "Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

**3.**CHECK TILT AND TELESCOPIC SENSOR

Check telescopic sensor. Refer to <u>SE-41, "Component Function Check"</u>.

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-38. "Intermittent Incident".
- NO >> Repair or replace the malfunctioning parts.

#### < SYMPTOM DIAGNOSIS >

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

#### Work Flow



#### CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any of customer's comments; refer to <u>SE-119</u>, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, perform a diagnosis and repair the noise that the customer is concerned about. This can be accomplished by performing a cruise test on the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics SE are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak (Like tennis shoes on a clean floor)
   Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces
   a higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping
- Creak (Like walking on an old wooden floor)
   Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle (Like shaking a baby rattle) Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock (Like a knock on a door)
   Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick (Like a clock second hand)
   Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump (Heavy, muffled knock noise) Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz (Like a bumblebee)
   Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending up on the person. A noise that a technician may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

#### DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when the repair is reconfirmed.

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#### < SYMPTOM DIAGNOSIS >

If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

- 1) Close a door.
- 2) Tap or push/pull around the area where the noise appears to be coming from.
- 3) Rev the engine.
- 4) Use a floor jack to recreate vehicle "twist".
- 5) At idle, apply engine load (electrical load, half-clutch on M/T models, drive position on A/T models).
- 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
- If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

#### CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.

If a TSB relates to the symptom, follow the procedure to repair the noise.

#### LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

- 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis ear: J-39570, Engine ear and mechanics stethoscope).
- 2. Narrow down the noise to a more specific area and identify the cause of the noise by:
- Removing the components in the area that is are suspected to be the cause of the noise. Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
- Tapping or pushing/pulling the component that is are suspected to be the cause of the noise. Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- Feeling for a vibration by hand by touching the component(s) that is are suspected to be the cause of the noise.
- Placing a piece of paper between components that are suspected to be the cause of the noise.
- Looking for loose components and contact marks. Refer to <u>SE-117</u>, "Inspection Procedure".

#### REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
- Separate components by repositioning or loosening and retightening the component, if possible.
- Insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A Nissan Squeak and Rattle Kit (J-43980) is available through the authorized Nissan Parts Department.

#### CAUTION:

# Never use excessive force as many components are constructed of plastic and may be damaged. NOTE:

Always check with the Parts Department for the latest parts information.

The following materials are contained in the Nissan Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005: 100  $\times$  135 mm (3.94  $\times$  5.31 in)/76884-71L01: 60  $\times$  85 mm (2.36  $\times$  3.35 in)/76884-71L02:15  $\times$  25 mm (0.59  $\times$  0.98 in)

INSULATOR (Foam blocks)

Insulates components from contact. Can be used to fill space behind a panel.

73982-9E000: 45 mm (1.77 in) thick,  $50 \times 50$  mm (1.97  $\times$  1.97 in)/73982-

50Y00: 10 mm (0.39 in) thick,  $50 \times 50$  mm (1.97  $\times$  1.97 in)

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick,  $30 \times 50$  mm (1.18  $\times$  1.97in)

FELT CLOTHTAPE

Used to insulate where movement does not occur. Ideal for instrument panel applications. 68370-4B000: 15  $\times$  25 mm (0.59  $\times$  0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll

The following materials, not found in the kit, can also be used to repair squeaks and rattles. UHMW (TEFLON) TAPE

< S	YMPTOM DIAGNOSIS >	
Ins	ulates where slight movement is present. Ideal for instrument panel applications.	
SIL Use SII	ICONE GREASE ed in place of UHMW tape that is be visible or does not fit. Will only last a few months. ICONE SPRAY	A
Use	ed when grease cannot be applied.	B
DU	CT TAPE ed to eliminate movement	D
C0		
Cor	nfirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same inditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.	С
Ins	spection Procedure	D
Ref	fer to Table of Contents for specific component removal and installation information.	
INS	STRUMENT PANEL	Е
Mo	st incidents are caused by contact and movement between:	
1.	The cluster lid A and instrument panel	
2.	Acrylic lens and combination meter housing	F
3.	Instrument panel to front pillar garnish	
4.	Instrument panel to windshield	0
5.	Instrument panel mounting pins	G
6.	Wiring harnesses behind the combination meter	
7.	A/C defroster duct and duct joint	Н
	These incidents can usually be located by tapping or moving the components to duplicate the noise or by	
	applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate	
	CALITION:	1
	Never use silicone spray to isolate a squeak or rattle. If the area is saturated with silicone, the recheck of repair becomes impossible.	SE
CE	NTER CONSOLE	
Cor	mponents to pay attention to include:	
1.	Shifter assembly cover to finisher	Κ
2.	A/C control unit and cluster lid C	
3.	Wiring harnesses behind audio and A/C control unit	
The	e instrument panel repair and isolation procedures also apply to the center console.	L
DO	ORS	
Рау	y attention to the following:	M
1.	Finisher and inner panel making a slapping noise	
2.	Inside handle escutcheon to door finisher	
3.	Wiring harnesses tapping	Ν
4.	Door striker out of alignment causing a popping noise on starts and stops	
Tap mai the	pping or moving the components or pressing on them while driving to duplicate the conditions can isolate ny of these incidents. The areas can usually be insulated with felt cloth tape or insulator foam blocks from Nissan Squeak and Rattle Kit (J-43980) to repair the noise.	0
TR	UNK	-
Tru In a	nk noises are often caused by a loose jack or loose items put into the trunk by the customer. addition look for the following:	Ρ
1.	Trunk lid dumpers out of adjustment	
2.	Trunk lid striker out of adjustment	

- 3. The trunk lid torsion bars knocking together
- 4. A loose license plate or bracket

#### < SYMPTOM DIAGNOSIS >

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

#### SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

- 1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
- 2. Sunvisor shaft shaking in the holder
- 3. Front or rear windshield touching headlining and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

#### SEATS

When isolating seat noise it's important to note the position the seats in and the load placed on the seat when the noise occurs. These conditions should be duplicated when verifying and isolating the cause of the noise. Cause of seat noise include:

- 1. Headrest rods and holder
- 2. A squeak between the seat pad cushion and frame
- 3. The rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

#### UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.

Causes of transmitted underhood noise include:

- 1. Any component mounted to the engine wall
- 2. Components that pass through the engine wall
- 3. Engine wall mounts and connectors
- 4. Loose radiator mounting pins
- 5. Hood bumpers out of adjustment
- 6. Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

< SYMPTOM DIAGNOSIS >

**Diagnostic Worksheet** 



SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

#### Dear Infiniti Customer:

We are concerned about your satisfaction with your Infiniti vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Infiniti right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service consultant or technician to ensure we confirm the noise you are hearing.

#### I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.



Continue to page 2 of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

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#### < SYMPTOM DIAGNOSIS >

#### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

II. WHEN DOES IT OCCUR? (please check the boxes that apply)					
<ul> <li>anytime</li> <li>1st time in the morning</li> <li>only when it is cold outside</li> <li>only when it is hot outside</li> </ul>	<ul> <li>after sitting out in the rain</li> <li>when it is raining or wet</li> <li>dry or dusty conditions</li> <li>other:</li> </ul>				
III. WHEN DRIVING:	IV. WHAT TYPE OF NOISE				
<ul> <li>through driveways</li> <li>over rough roads</li> <li>over speed bumps</li> <li>only about mph</li> <li>on acceleration</li> <li>coming to a stop</li> <li>on turns: left, right or either (circle)</li> <li>with passengers or cargo</li> <li>other:</li> <li>after drivingmiles or</li> </ul>	<ul> <li>squeak (like tennis shoes on a clean floor)</li> <li>creak (like walking on an old wooden floor)</li> <li>rattle (like shaking a baby rattle)</li> <li>knock (like a knock at the door)</li> <li>tick (like a clock second hand)</li> <li>thump (heavy, muffled knock noise)</li> <li>buzz (like a bumble bee)</li> </ul>				

#### TO BE COMPLETED BY DEALERSHIP PERSONNEL

**Test Drive Notes:** 

	YES	NO	Initials of person performing
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confirm repair			
VIN: Cus	tomer Na	me:	

# < 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 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 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 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 set battery, and wait at least 3 minutes before performing any service.

#### Service Notice

- When removing or installing various parts, place a cloth or padding onto the vehicle body to prevent scratches.
- Handle trim, molding, instruments, grille, etc. carefully during removing or installing. Be careful not to oil or damage them.
- Apply sealing compound where necessary when installing parts.
- When applying sealing compound, be careful that the sealing compound does not protrude from parts.
- When replacing any metal parts (for example body outer panel, members, etc.), be sure to take rust prevention measures.

#### Precaution for Work

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and keep them.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After re-installation is completed, be sure to check that each part works normally.
- Follow the steps below to clean components.
- Water soluble foul: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the fouled area.

Then rub with a soft and dry cloth.

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# PRECAUTIONS

< PRECAUTION >

- Oily foul: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the fouled area.

Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.

- Never use organic solvent such as thinner, benzene, alcohol, and gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

# PREPARATION

#### < PREPARATION >

# PREPARATION PREPARATION

# Special Service Tool

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

	Tool number (Kent-Moore No.) Tool name	Description	С
(J39570) Chassis ear	SIIA0993E	Locates the noise	D E F
(J43980) NISSAN Squeak and Rattle Kit	SIIA0994E	Repairs the cause of noise	G
Commercial Service Tool		INFOID:000000005622164	I
	Tool name	Description	
	Tool Hallio	Description	SF
Engine ear	SIIA0995E	Locates the noise	SE K L
Engine ear Remover tool	SIIA0995E	Locates the noise Removes the clips, pawls and metal clips	SE K L M

Hook and pick tool

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Removes the snap pins

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# < PREPARATION > CLIP LIST

Clip List



# < REMOVAL AND INSTALLATION >

# **REMOVAL AND INSTALLATION FRONT SEAT**

# Exploded View

DRIVER'S SEAT

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#### < REMOVAL AND INSTALLATION >

- 1. Headrest
- 4. Rear outer slide cover
- 7. Headrest holder (free)
- 10. Seat slide and lifter switch knob
- 13. Seat control switch
- 16. Side air bag module
- 19. Seatback trim
- 22. Seatback side support bag and unit
- 25. Seatback frame
- 28. Reclining device inner cover (front)
- 31. Thigh extension pad
- 34. Seat cushion side support bag
- 37. Seat slide inner finisher
- 40. Seat cushion frame

2. Front outer slide cover

- 5. Rear inner slide cover
- 8. Headrest holder (locked)
- 11. Seat reclining switch knob
- 14. Side support switch
- 17. Snap ring
- 20. Seatback pad
- 23. Lumbar support unit
- 26. Reclining device outer cover (front)
- 29. Reclining device inner cover (rear)
- 32. Seat cushion trim
- 35. Seat slide outer finisher (outside)
- 38. Seat control unit

- 3. Front inner slide cover
- 6. Seatback board
- 9. Seat cushion outer finisher
- 12. Lumbar support switch
- 15. Seat cushion inner finisher
- 18. Lumbar support lever knob
- 21. Seatback silencer
- 24. Lumbar support motor
- 27. Reclining device outer cover (rear)
- 30. Seat cushion front finisher
- 33. Seat cushion pad
- 36. Seat slide outer finisher (inside)
- 39. Seat harness

Refer to GI-4, "Components" for symbols in the figure.

#### PASSENGER'S SEAT

#### < REMOVAL AND INSTALLATION >

SEC. 870



- 1. Headrest
- 4. Rear outer slide cover
- 7. Headrest holder (free)
- 10. Seat slide and lifter switch knob
- 13. Seat cushion inner finisher
- 16. Seatback pad

- 2. Front outer slide cover
- 5. Rear inner slide cover
- 8. Headrest holder (locked)
- Seat reclining switch knob 11.
- 14. Side air bag module
- 17. Seatback silencer
- 9. Seat cushion outer finisher

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12. Seat control switch

Seatback board

Front inner slide cover

- 15. Seatback trim
- 18. Seatback frame

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# < REMOVAL AND INSTALLATION >

19. Reclining device outer cover (front)

25. Seat slide outer finisher (outside)

- 20. Reclining device outer cover (rear)
- 22. Reclining device inner cover (rear) 23. Seat cushion front finisher
  - 26. Seat slide outer finisher (inside)
- 28. Seat cushion assembly

Refer to <u>GI-4, "Components"</u> for symbols in the figure.

# Removal and Installation

#### REMOVAL

#### **CAUTION:**

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

- 1. Remove the headrest.
- 2. Remove the front slide cover.
- a. Front outer slide cover
  - Slide the seat to the rearmost position.
  - Pull up the front edge of the front slide cover to release the pawls.
  - Slide the front slide cover forward to release the pawls.

: Pawl



- b. Front inner slide cover
  - Slide the seat to the rearmost position.
  - Pull up the front edge of the front slide cover to release the pawls.
  - Slide the front slide cover forward to release the pawls.

: Pawl



- 3. Remove the mounting bolts on the front side of the front seat.
- 4. Remove the rear slide cover.
- a. Rear outer slide cover
  - Slide the seat to the foremost position.
  - Pull up the rear edge of the rear outer slide cover to release the pawls.
  - Open the front end of the rear outer slide cover to release the pawls.

2 : Pawl



e) 27. Seat slide inner finisher

24. Thigh extension pad

21. Reclining device inner cover (front)

#### < REMOVAL AND INSTALLATION >

- b. Rear inner slide cover
  - Slide the seat to the foremost position.
  - Pull up the rear edge of the rear inner slide cover to release the pawls.
  - Slide the rear inner slide cover rearward to release the pawls.

$\Delta$	:	Pawl
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- 5. Remove the mounting bolts on the rear side of the front seat.
- 6. Set seatback in a standing position.
- Disconnect harness connector under the seat and remove harness securing clips. CAUTION: Before removal, turn ignition switch OFF, disconnect battery negative terminal and then wait for at least 3 minutes.
- 8. Remove seat from the vehicle.

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

#### INSTALLATION

CAUTION:

Install in the reverse order of removal.

#### **CAUTION:**

- Before installation, turn ignition switch OFF, disconnect battery negative terminal and then wait for at least 3 minutes.
- Clamp the harness in position.

#### NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal.(Automatic drive positioner model only) Refer to <u>ADP-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGA-TIVE TERMINAL</u> : <u>Special Repair Requirement</u>".

#### Disassembly and Assembly

#### SEATBACK

#### Disassembly

- 1. Remove the seat cushion outer finisher.
  - Remove the seat slide and lifter switch knob (1) and seat reclining switch knob (2). Using a remover tool (A).



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#### < REMOVAL AND INSTALLATION >

- Remove the metal clips, clips and pawls, and then pull out seat cushion outer finisher.
  - ( ) : Clip
  - : Metal clip
  - 八:Pawl



• Disconnect the seat control switch, lumbar support switch and side support switch harness connectors.



- Remove the reclining device outer cover (front, rear).
- 2. Remove the seat cushion inner finisher.
  - Remove the reclining device inner covers (front, rear) by releasing the metal clip and pull it up together with the cover.
  - Remove the relining device inner covers (front, rear) from the seat cushion inner finisher by releasing the pawls.
    - : Metal clip



- 3. Remove the back board.
  - Remove the metal clips and clips, and then pull out seatback board (1).
  - Pull down the seatback board to release the upper pawls.





4. Remove the lumbar support lever knob. (Manual lumbar support model only.)

#### < REMOVAL AND INSTALLATION >

Pull snap ring (1) upward, and remove lumbar support lever knob (2) from seatback frame with hook and pick tool.



• Remove the seatback retainer (1) on the back side of the seatback.

 Remove the headrest holder. **CAUTION:** Before installing headrest holder check its orientation. (front/rear and right/left)

• Remove the side support hose joint (1) located under the seat



• Remove the side air bag module.











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#### < REMOVAL AND INSTALLATION >

- Disconnect the reclining motor harness connector (1) and remove the harness clamp.
- Disconnect the lumbar support motor harness connector (2) and remove the harness clamp. (Power lumbar support model only.)
- Disconnect the side support unit harness connector (3) and remove the harness clamp. (Side support model only.)



- Remove the seatback pad and seatback trim from the seatback frame.
- Remove the hog rings, and separate the trim and pad.
- 6. Remove the seatback silencer.

7. Remove the lumbar support motor. (Power lumbar support model only.)

- Remove the bolts, and then remove lumbar support unit.
- Remove the screws, and then remove lumbar support motor.
- 8. Remove the side support bag and unit. (Side support model only.)
  - Remove the pawls, and then remove side support bag (1).
  - Remove the side support unit.

2 : Pawl

9. Remove the seatback frame. Remove the seatback frame mounting bolts (A).



Assembly

Assemble in the reverse order of disassembly.

#### **CAUTION:**

Install the hog rings of seatback trim in position, and then securely connect the trim or trim cord with the pad side wire.

#### SEAT CUSHION

#### Disassembly

#### CAUTION:

- Never disassemble front passenger seat cushion assembly.
- Always replace as an assembly.
- For front passenger seat service parts, refer to the service part catalogue.
- 1. Remove the seat cushion outer finisher.

#### < REMOVAL AND INSTALLATION >

• Remove the seat slide and lifter switch knob (1) and seat reclining switch knob (2). Using a remover tool (A).

- Remove the metal clips, clips and pawls, and then pull out seat cushion outer finisher.
  - ( ) : Clip : Metal clip 六 : Pawl
- · Disconnect the seat control switch, lumbar support switch and side support switch harness connectors.

- Remove the reclining device outer cover (front, rear).
- 2. Remove the seat cushion inner finisher.
  - Remove the reclining device inner covers (front, rear) by releasing the metal clip and pull it up together with the cover.
  - Remove the relining device inner covers (front, rear) from the seat cushion inner finisher by releasing the pawls.
    - : Metal clip
- 3. Remove the seat cushion front finisher.





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#### < REMOVAL AND INSTALLATION >

Remove the metal clips, and then pull out seat cushion front finisher (1).

- : Metal clip
- : Pawl  $\hat{\wedge}$



- Remove the seatback board. 4.
  - · Remove the metal clips and clips, and then pull out seatback board (1).
  - Pull down the seatback board to release the upper pawls.





- Remove the seatback assembly. 5.
  - Disconnect the reclining motor harness connector (1) and remove the harness clamp.
  - Disconnect the lumbar support motor harness connector (2) and remove the harness clamp. (Power lumbar support model only.)
  - Disconnect the side support unit harness connector (3) and remove the harness clamp. (Side support model only.)



- Remove the seat cushion retainer, and then side air bag harness clamp and seatback heater unit harness connector.
- Remove the side support hose joint (1) located under the seat cushion. (Side support model only.)



#### < REMOVAL AND INSTALLATION >

• Remove the seatback mounting bolts (A), and then remove the seatback assembly.

6. Remove the thigh extension. (Thigh extension model only.)• Remove the retainer.



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- Remove the thigh extension pad.
- Remove the mounting screws (A).
- Remove the seat cushion trim wire (1) from the hooks (2).
- Remove the thigh extension frame by sliding it.





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- Remove the retainer.
- Disconnect the seat cushion heater unit harness connector.
- Remove the hog rings, and separate the trim and pad.
- 8. Remove the side support bag. (Side support model only.)• Remove the hose clamp.

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#### < REMOVAL AND INSTALLATION >

- Remove the pawls, and then remove side support bag (1).
  - 2 : Pawl



- 9. Remove the seat slide outer finisher.
  - Remove the metal clips and pawls, and then pull out seat slide outer finisher (outside).
  - Remove the metal clip, and then pull out seat slide outer finisher (inside).
    - [ ] : Metal clip



- 10. Remove the seat slide inner finisher. Remove the metal clip, and then pull out seat slide inner finisher.
  - : Metal clip



Assembly

Assemble in the reverse order of disassembly.

#### **CAUTION:**

Install the hog rings of seat cushion trim in position, and then securely connect the trim or trim cord with the pad side wire.

# REAR SEAT

Exploded View

REAR SEAT



#### ARMREST



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# REAR SEAT

# < REMOVAL AND INSTALLATION >

1. Cup holder

- 2. Armrest side console
- 4. Armrest bracket outer cover 5. bushing

Refer to <u>GI-4, "Components"</u> for symbols in the figure.

### Removal and Installation

#### REMOVAL

#### **CAUTION:**

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

- 1. Remove the seat cushion.
  - Pull the lock lever (1) at the front bottom of the seat cushion forward (1 for each side), and pull the seat cushion upward to release the wire (2) from the seat cushion hook. Then pull the seat cushion forward to remove.
  - Remove the seat cushion from the vehicle.



- Remove the nuts under seatback.
- Lift up seatback from underneath, and then remove seatback from seatback hook that is fixed to the vehicle.
- Remove the seatback from the vehicle.
- 3. Remove the armrest assembly.
  - Remove the fastener.
  - Remove the armrest mounting bolts.
  - Remove the clip.
  - Remove the armrest assembly from the vehicle.

#### INSTALLATION

Install in the reverse order of removal.

#### CAUTION:

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

Disassembly and Assembly

#### SEATBACK

Disassembly Remove the hog rings, and separate the trim and pad.

Assembly Assemble in the reverse order of disassembly.

#### SEAT CUSHION

Disassembly

Remove the hog rings, and separate the trim and pad.

#### Assembly

Assemble in the reverse order of disassembly.

#### ARMREST

#### Disassembly

- 1. Remove the screws, and then remove the cup holder.
- 2. Remove the screws, and then remove the armrest side console

#### **SE-138**

- 3. Armrest bracket
- 6. Armrest trim and pad

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2010 G37 Sedan

< REMOVAL AND INSTALLATION >	
<ol> <li>Remove the bolts, and then remove the armrest bracket.</li> <li>Remove the armrest bracket outer cover from armrest bracket.</li> </ol>	A
Assembly Assemble in the reverse order of disassembly.	В
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# AUTOMATIC DRIVE POSITIONER CONTROL UNIT

#### < REMOVAL AND INSTALLATION >

# AUTOMATIC DRIVE POSITIONER CONTROL UNIT

#### Removal and Installation

#### REMOVAL

- 1. Remove the instrument driver lower panel. Refer to <u>IP-13, "A/T</u> <u>MODELS : Removal and Installation"</u>.
- 2. Remove the screws (A).
- 3. Remove automatic drive positioner control unit (1).



INSTALLATION Install in the reverse order of removal. CAUTION:

• Be sure to clamp the harness to the right place.

# HEATED SEAT CONTROL UNIT

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HEATED SEAT CONTROL UNIT		Λ
Exploded View	INFOID:000000005622172	~
Refer to <u>SE-125, "Exploded View"</u> .		В
Removal and Installation	INFOID:000000005622173	
REMOVAL CAUTION:		С
<ul> <li>When removing and installing, use shop cloths to protect parts from damage.</li> <li>1. Remove the front seat.</li> <li>2. Disconnect heated seat control unit connector.</li> </ul>		D
<ol> <li>Remove the heated seat control unit from the heated seat control unit stay. Refer to <u>SE-1</u> <u>View</u>".</li> </ol>	<u>25, "Exploded</u>	E
INSTALLATION Install in the reverse order of removal. CAUTION:		F
Always clamp the namess to the right place.		G

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# < REMOVAL AND INSTALLATION >

# POWER SEAT SWITCH

Removal and Installation

REMOVAL

#### **CAUTION:** When removing and installing, use shop cloths to protect parts from damage.

- 1. Remove the seat cushion outer finisher (1). Refer to <u>SE-128.</u> <u>"Removal and Installation"</u>.
- 2. Remove the screws (A).
- 3. Remove the power seat switch (2) from the seat cushion outer finisher (1).



INSTALLATION Install in the reverse order of removal. CAUTION:

• Be sure to clamp the harness to the right place.

# SIDE SUPPORT SWITCH

# < REMOVAL AND INSTALLATION >

# SIDE SUPPORT SWITCH

# Removal and Installation

#### REMOVAL

#### CAUTION:

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

- 1. Remove the seat cushion outer finisher (1). Refer to SE-128. "Removal and Installation".
- 2. Remove the screws (A).
- 3. Remove side support switch (2) from the seat cushion outer finisher.



#### INSTALLATION Install in the reverse order of removal. CAUTION:

• Be sure to clamp the harness to the right place.

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## < REMOVAL AND INSTALLATION >

# LUMBAR SUPPORT SWITCH

## Removal and Installation

#### REMOVAL

#### CAUTION:

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

- 1. Remove the seat cushion outer finisher (1). Refer to <u>SE-128</u>, <u>"Removal and Installation"</u>
- 2. Remove lumbar support switch (2).



INSTALLATION Install in the reverse order of removal. CAUTION: • Be sure to clamp the harness to the right place.
## **TILT&TELESCOPIC SWITCH**

# < REMOVAL AND INSTALLATION >

# TILT&TELESCOPIC SWITCH

#### Removal and Installation

## REMOVAL

#### CAUTION:

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

- 1. Disconnect battery negative terminal.
- 2. Remove the steering column mask (1). Refer to IP-13, "A/T MODELS : Removal and Installation".
- 3. Press pawls and remove tilt & telescopic switch (2) from the steering column mask (1).

<u>\_\_\_\_</u>: Pawl



INSTALLATION Install in the reverse order of removal. CAUTION: • Be sure to clamp the harness to the right place.



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# < REMOVAL AND INSTALLATION >

HEATED SEAT SWITCH

**Exploded View** 

Refer to IP-33, "A/T MODELS : Exploded View".

Removal and Installation

# REMOVAL

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

- 1. Remove the console body assembly. Refer to IP-34, "A/T MODELS : Removal and Installation"
- 2. Remove heated seat switch (1) from switch bracket (2) with flatbladed screwdriver (A).

کے : Pawl

#### NOTE:

The same procedure is performed for passenger side.



INSTALLATION

Install in the reverse order of removal.

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