

SECTION **SE**  
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# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORK FLOW

#### Work Flow

INFOID:000000008290727

#### 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 "DTC/CIRCUIT DIAGNOSIS"

---

Perform the diagnosis with "DTC/CIRCUIT 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.

# POWER SEAT

< SYSTEM DESCRIPTION >

## SYSTEM DESCRIPTION

### POWER SEAT

#### System Description

INFOID:000000008290728

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

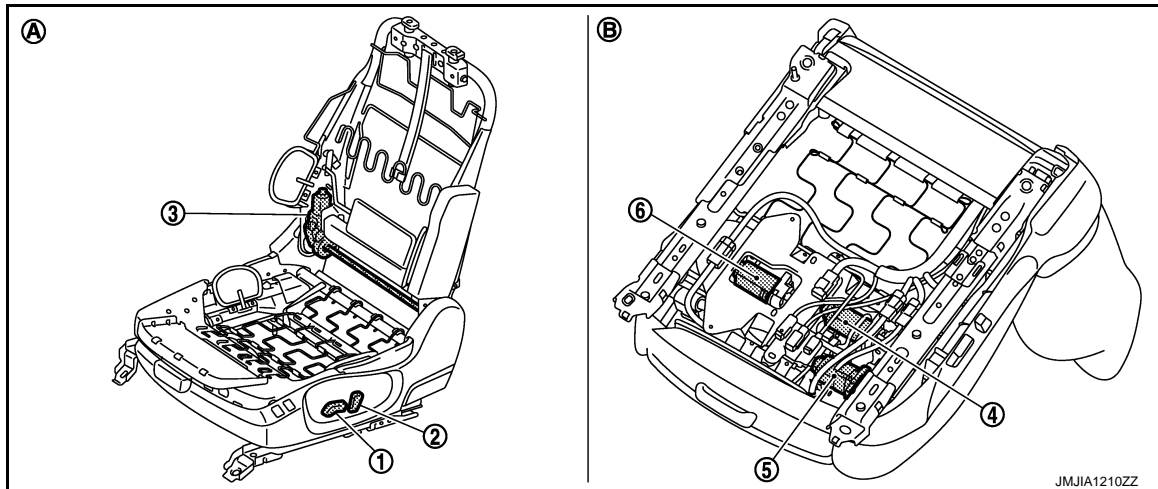
While operating the reclining switch located in power seat switch, reclining motor operates and makes possible the seat back forward and backward position adjustment.

#### 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

INFOID:000000008290729



- |   |  |   |
|---|--|---|
| 1. Sliding switch and lifting switch<br>B414 (driver side)<br>B434 (passenger side) | 2. Reclining switch<br>B414 (driver side)<br>B434 (passenger side) | 3. Reclining motor<br>B415 (driver side)<br>B435 (passenger side)       |
| 4. Lifting motor (rear)<br>B418 (driver side)<br>B438 (passenger side)              | 5. Sliding motor<br>B416 (driver side)<br>B436 (passenger side)    | 6. Lifting motor (front)<br>B417 (driver side)<br>B437 (passenger side) |
| A. View with seat cushion pad and seat back pad are removed.                        | B. View with back side of seat cushion.                            |   |

#### Component Description

INFOID:000000008290730

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 seat.
Lifting motor (front/rear)	With the power supplied to power seat switch, operates the up and down movement of seat cushion.

# SIDE SUPPORT

< SYSTEM DESCRIPTION >

## SIDE SUPPORT

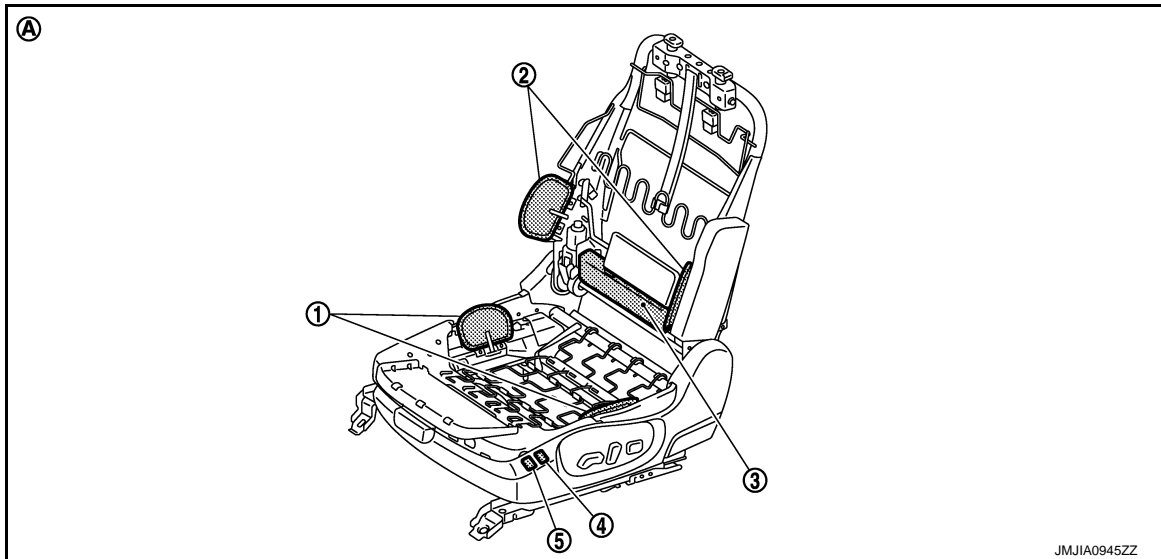
### System Description

INFOID:000000008290731

- 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

INFOID:000000008290732



- |  |   |                           |
|--|---|---------------------------|
| 1. Side support (seat cushion)<br>(Side support unit B465) | 2. Side support (seat back)<br>(Side support unit B465) | 3. Side support unit B465 |
| 4. Side support switch (seat back side)<br>B464            | 5. Side support switch (cushion side)<br>B464           |                           |

A. View with seat cushion pad and seat back pad are removed.

### Component Description

INFOID:000000008290733

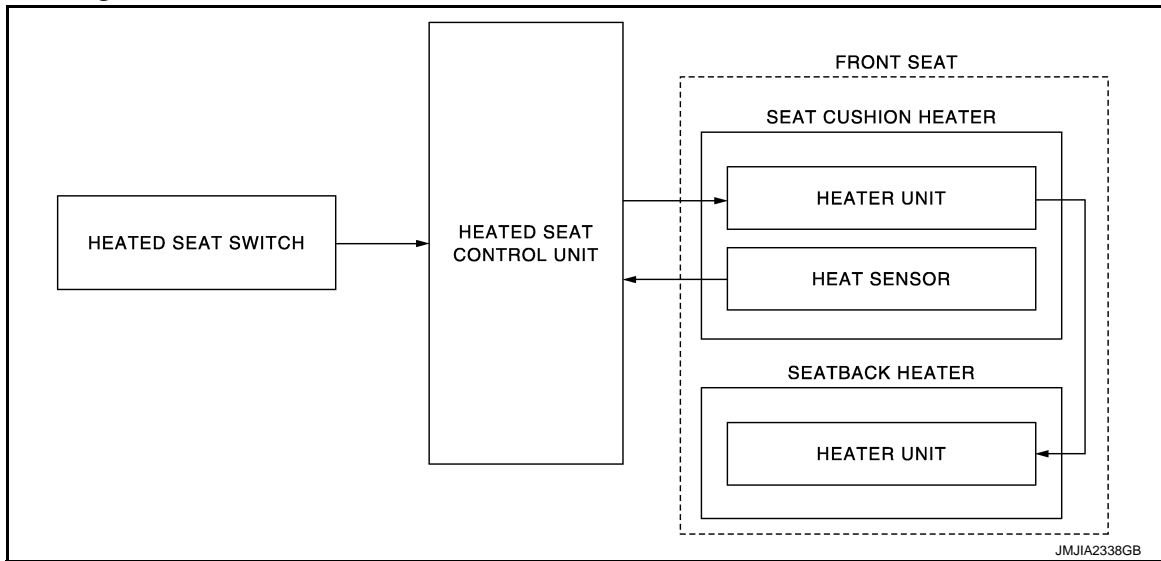
Item	Function
Side support switch	With a built-in cushion side and seat back side, controls the power supplied to pump and to each solenoid.
Side support unit	Built-in pump, pump relay and solenoid, operates when pressing ON/OFF on side support switch.

# HEATED SEAT

< SYSTEM DESCRIPTION >

## HEATED SEAT

### System Diagram



### System Description

INFOID:000000008290735

- 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

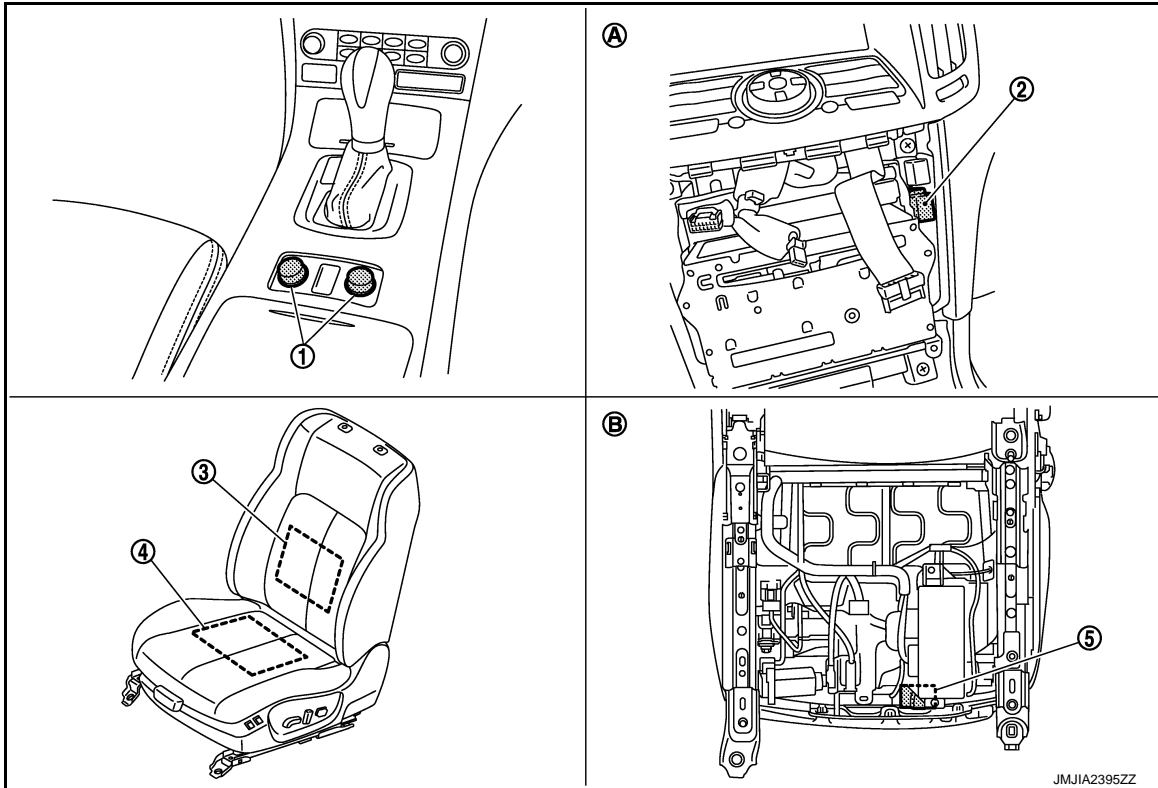
- When operating heated seat switch to any position between 1 and 6 while ignition switch is ON, indicator illuminates, heated seat control unit supplies power supply to heater unit, and warms seat cushion and seatback.
- Heat sensor that is built in seat cushion heater detects seat cushion heater temperature 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.

# HEATED SEAT

< SYSTEM DESCRIPTION >

## Component Parts Location

INFOID:000000008290736



- |   |   |   |
|---|---|---|
| <p>1. Heated seat switch</p> <ul style="list-style-type: none"> <li>• Driver side</li> <li>- With A/T M141</li> <li>- With M/T M175</li> <li>• Passenger side</li> <li>- With A/T M142</li> <li>- With M/T M176</li> </ul> <p>4. Seat cushion heater</p> <ul style="list-style-type: none"> <li>• Driver side B467, B424</li> <li>• Passenger side B441, B444</li> </ul> <p>A. Behind cluster lid C</p> | <p>2. Heated seat relay M70</p> <p>5. Heated seat control unit</p> <ul style="list-style-type: none"> <li>• Driver side B466</li> <li>• Passenger side B440</li> </ul> <p>B. Backside of seat cushion</p> | <p>3. Seatback heater</p> <ul style="list-style-type: none"> <li>• Driver side B425</li> <li>• Passenger side B445</li> </ul> |
|---|---|---|

## Component Description

INFOID:000000008290737

Item	Function
Heated seat switch	<ul style="list-style-type: none"> <li>• Adjusts heated seat temperature and deactivates heated seat</li> <li>• Equips indicator that indicates the operating condition</li> </ul>
Seat cushion heater	<ul style="list-style-type: none"> <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)



# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT HEATED SEAT CONTROL UNIT

#### HEATED SEAT CONTROL UNIT : Diagnosis Procedure

INFOID:000000008290738

#### 1. CHECK FUSE

Check that the following fuses is not fusing.

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

Is the inspection result normal?

YES >> GO TO 2.

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

#### 2. CHECK POWER SUPPLY 1

1. Turn ignition switch OFF.
2. Disconnect heated seat control unit connector.
3. Turn ignition switch ON.
4. Check voltage between heated seat control unit harness connector and ground.

(+) Heated seat control unit			(-)	Voltage (V) (Approx.)
Connector	Terminal			
Driver side	B466	67	Ground	Battery voltage
Passenger side	B440	14		

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

#### 3. CHECK POWER SUPPLY CIRCUIT 1

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

Heated seat control unit			Heated seat relay		Continuity
Connector	Terminal		Connector	Terminal	
Driver side	B466	67	M70	3	Existed
Passenger side	B440	14			

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

Heated seat control unit			Ground	Continuity
Connector	Terminal			
Driver side	B466	67		Not existed
Passenger side	B440	14		

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.

# POWER SUPPLY AND GROUND CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

(+)			(-)	Condition	Voltage (V) (Approx.)		
Heated seat control unit							
Connector	Terminal		Ground	Heated seat switch			
Driver side	B466	69				ON	Battery voltage
							OFF
Passenger side	B440	16				ON	Battery voltage
			OFF	0			

Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 5.

### 5.CHECK POWER SUPPLY CIRCUIT 2

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

Heated seat control unit			Heated seat switch		Continuity
Connector	Terminal		Connector	Terminal	
Driver side	B466	69	A/T models: M141 M/T models: M175	1	Existed
Passenger side	B440	16	A/T models: M142 M/T models: M176		

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

Heated seat control unit			Ground	Continuity
Connector	Terminal			
Driver side	B466	69		Not existed
Passenger side	B440	16		

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 [SE-14. "DRIVER SIDE : Component Inspection"](#).
- Passenger side: Refer to [SE-16. "PASSENGER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace heated seat switch. Refer to [SE-78. "Removal and Installation"](#).

### 7.CHECK GROUND CIRCUIT

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## 8. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

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

>> INSPECTION END

## HEATED SEAT SWITCH

### HEATED SEAT SWITCH : Diagnosis Procedure

INFOID:000000008290739

#### 1. CHECK FUSE

Check that the following fuses is not fusing.

Terminal No.	Signal name	Fuse No.
5	Ignition power supply	3 (10A)

Is the inspection result normal?

YES >> GO TO 2.

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

#### 2. CHECK POWER SUPPLY

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

(+)		Terminal	(-)	Voltage (V) (Approx.)
Heated seat switch				
Connector				
Driver side	A/T models: M141 M/T models: M175	5	Ground	Battery voltage
Passenger side	A/T models: M142 M/T models: M176			

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

#### 3. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect fuse block (J/B) connector.
3. Check continuity between heated seat switch harness connector and fuse block (J/B) harness connector.

Heated seat switch		Terminal	Fuse block (J/B)		Continuity
Connector			Connector	Terminal	
Driver side	A/T models: M141 M/T models: M175	5	M1	2A	Existed
Passenger side	A/T models: M142 M/T models: M176				

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

## POWER SUPPLY AND GROUND CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

Heated seat switch		Terminal	Ground	Continuity
Connector				5
Driver side	A/T models: M141 M/T models: M175	5	Ground	Not existed
Passenger side	A/T models: M142 M/T models: M176			

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK FUSE BLOCK (J/B)

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

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

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

>> INSPECTION END

# HEATED SEAT SWITCH

< DTC/CIRCUIT DIAGNOSIS >

## HEATED SEAT SWITCH DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000008290740

Adjusts heated seat temperature and deactivates heated seat.

### DRIVER SIDE : Component Function Check

INFOID:000000008290741

#### 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 >> Heated seat switch function is OK.  
 NO >> Refer to [SE-13, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290742

#### 1. CHECK HEATED SEAT CONTROL UNIT INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect heated seat control unit connector.
3. Turn ignition switch ON.
4. Check voltage between heated seat control unit harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Heated seat control unit					
Connector	Terminal				
B466	68	Ground	Heated seat switch position	OFF	0
			1 (Min. temperature)	12.24	
			2	12.33	
			3	12.49	
			4	12.63	
			5	12.76	
			6 (Max. temperature)	12.90	

Is the inspection result normal?

- YES >> Heated seat switch circuit is OK.  
 NO >> GO TO 2.

#### 2. CHECK HEATED SEAT SWITCH CIRCUIT

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

Heated seat switch		Heated seat control unit		Continuity
Connector	Terminal	Connector	Terminal	
A/T models: M141 M/T models: M175	2	B466	68	Existed

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

# HEATED SEAT SWITCH

## < DTC/CIRCUIT DIAGNOSIS >

Heated seat switch		Ground	Continuity
Connector	Terminal		
A/T models: M141 M/T models: M175	2		Not existed

Is the inspection result normal?

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

### 3.CHECK HEATED SEAT SWITCH

Check heated seat switch.

Refer to [SE-14, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Replace heated seat switch. Refer to [SE-78, "Removal and Installation"](#).

### 4.CHECK INTERMITTENT INCIDENT

Check intermittent incident.

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

>> INSPECTION END

## DRIVER SIDE : Component Inspection

INFOID:000000008290743

### 1.CHECK HEATED SEAT SWITCH

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

Heated seat switch		Condition	Resistance (K $\Omega$ ) (Approx.)	
Connector	Terminal			
A/T models: M141 M/T models: M175	5	1	ON OFF	0 $\infty$
		2	Heated seat switch position	1 (Min. temperature) 2 3 4 5 6 (Max. temperature)

Is the inspection result normal?

- YES >> INSPECTION END  
NO >> Replace heated seat switch. Refer to [SE-78, "Removal and Installation"](#).

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000008290744

Adjusts heated seat temperature and deactivates heated seat.

### PASSENGER SIDE : Component Function Check

INFOID:000000008290745

### 1.CHECK FUNCTION

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

# HEATED SEAT SWITCH

## < DTC/CIRCUIT DIAGNOSIS >

### Is the inspection result normal?

- YES >> Heated seat switch function is OK.  
 NO >> Refer to [SE-15, "PASSENGER SIDE : Diagnosis Procedure"](#).

## PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290746

### 1. CHECK HEATED SEAT CONTROL UNIT INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect heated seat control unit connector.
- Turn ignition switch ON.
- Check voltage between heated seat control unit harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Heated seat control unit					
Connector	Terminal				
B440	15	Ground	Heated seat switch position	OFF	0
				1 (Min. temperature)	12.24
				2	12.33
				3	12.49
				4	12.63
				5	12.76
				6 (Max. temperature)	12.90

### Is the inspection result normal?

- YES >> Heated seat switch circuit is OK.  
 NO >> GO TO 2.

### 2. CHECK HEATED SEAT SWITCH CIRCUIT

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

Heated seat switch		Heated seat control unit		Continuity
Connector	Terminal	Connector	Terminal	
A/T models: M142 M/T models: M176	2	B440	15	Existed

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

Heated seat switch		Ground	Continuity
Connector	Terminal		
A/T models: M142 M/T models: M176	2		Not existed

### Is the inspection result normal?

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

### 3. CHECK HEATED SEAT SWITCH

Check heated seat switch.  
 Refer to [SE-16, "PASSENGER SIDE : Component Inspection"](#).

### Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> Replace heated seat switch. Refer to [SE-78, "Removal and Installation"](#).

### 4. CHECK INTERMITTENT INCIDENT

# HEATED SEAT SWITCH

## < DTC/CIRCUIT DIAGNOSIS >

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

>> INSPECTION END

## PASSENGER SIDE : Component Inspection

INFOID:000000008290747

### 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 (K $\Omega$ ) (Approx.)	
Connector	Terminal			
A/T models: M142 M/T models: M176	5	1	ON OFF	0 $\infty$
		2	1 (Min. temperature)	2.400
	2		1.800	
	3		1.200	
	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 [SE-78, "Removal and Installation"](#).



# HEATED SEAT RELAY

< DTC/CIRCUIT DIAGNOSIS >

## HEATED SEAT RELAY

### Description

INFOID:000000008290748

Power is supplied to the heated seat using ignition power supply control.

### Component Function Check

INFOID:000000008290749

#### 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 >> Heated seat relay function is OK.
- NO >> Refer to [SE-17. "Diagnosis Procedure"](#)

### Diagnosis Procedure

INFOID:000000008290750

#### 1. CHECK HEATED SEAT RELAY POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect heated seat relay.
3. Turn ignition switch ON.
4. Check voltage between heated seat relay terminal connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Heated seat relay			
Connector	Terminal	Ground	Battery voltage
M70	2		

Is the inspection result normal?

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

#### 2. CHECK HEATED SEAT RELAY POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect fuse block (J/B) connector.
3. Check continuity between heated seat relay terminal connector and fuse block (J/B) harness connector.

Heated seat relay		Fuse block (J/B)		Continuity
Connector	Terminal	Connector	Terminal	
M70	2	M1	2A	Existed

4. Check continuity between heated seat relay terminal connector and ground.

Heated seat relay		Ground	Continuity
Connector	Terminal		
M70	2		Not existed

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace harness.

#### 3. CHECK HEATED SEAT RELAY GROUND CIRCUIT

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

# HEATED SEAT RELAY

## < DTC/CIRCUIT DIAGNOSIS >

Heated seat relay		Ground	Continuity
Connector	Terminal		
M70	1		Existed

Is the inspection result normal?

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

### 4.CHECK HEATED SEAT RELAY

Check heated seat relay.

Refer to [SE-18, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Heated seat relay is OK.  
 NO >> Replace heated seat relay.

### 5.CHECK INTERMITTENT INCIDENT

Check intermittent incident.

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

>> INSPECTION END

## Component Inspection

INFOID:000000008290751

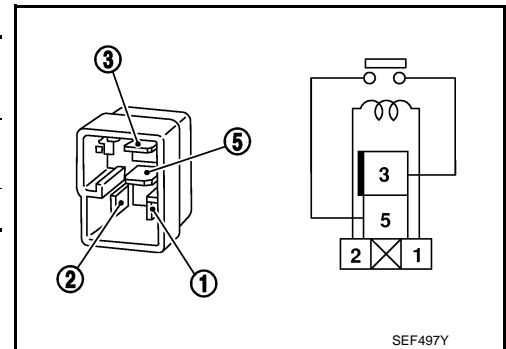
### 1.CHECK HEATED SEAT RELAY

1. Turn ignition switch OFF.
2. Disconnect heated seat relay.
3. Check continuity between heated seat relay terminals.

heated seat relay		Condition	Continuity
Terminal			
3	5	12 V direct current supply between terminals 1 and 2.	Existed
		No current supply	Not existed

Is the inspection result normal?

- YES >> INSPECTION END  
 NO >> Replace heated seat relay.



SEF497Y

# HEAT SENSOR

< DTC/CIRCUIT DIAGNOSIS >

## HEAT SENSOR

### DRIVER SIDE

#### DRIVER SIDE : Description

INFOID:000000008290752

Detects seat cushion heater temperature and outputs to heated seat control unit.

#### DRIVER SIDE : Component Function Check

INFOID:000000008290753

### 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 >> Heat sensor function is OK.

NO >> Refer to [SE-19, "DRIVER SIDE : Diagnosis Procedure"](#)

#### DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290754

### 1.CHECK HEAT SENSOR INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between heated seat control unit harness connector and ground.

(+) Heated seat control unit		(-)	Condition	Voltage (V) (Approx.)	
Connector	Terminal				
B466	71	Ground	Heated seat switch position	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	

#### NOTE:

Voltage is repeated within the value shown as per the above list depending on heater unit temperature.

Is the inspection result normal?

YES >> heat sensor 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.

Heated seat control unit		Seat cushion heater		Continuity
Connector	Terminal	Connector	Terminal	
B466	71	B467	71	Existed

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

Heated seat control unit		Ground	Continuity
Connector	Terminal		
B466	71		Not existed

Is the inspection result normal?

# HEAT SENSOR

## < 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.

(+)		(-)	Voltage (V) (Approx.)
Seat cushion heater			
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 cushion heater		Continuity
Connector	Terminal	Connector	Terminal	
B466	69	B467	69	Existed

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

Heated seat control unit		Ground	Continuity
Connector	Terminal		
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-20, "DRIVER SIDE : Component Inspection"](#).

#### Is the inspection result normal?

- YES >> GO TO 6.  
NO >> Replace seat cushion heater. Refer to [SE-60, "Exploded View"](#).

### 6.CHECK INTERMITTENT INCIDENT

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

>> INSPECTION END

## DRIVER SIDE : Component Inspection

INFOID:000000008290755

### 1.CHECK HEAT SENSOR

1. Turn ignition switch OFF.
2. Disconnect seat cushion heater connector.
3. Check resistance between seat cushion heater terminals.

# HEAT SENSOR

## < DTC/CIRCUIT DIAGNOSIS >

Seat cushion heater			Condition	Resistance (KΩ) (Approx.)
Connector	Terminal			
B467	69	71	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-60, "Exploded View"](#).

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000008290756

Detects seat cushion heater temperature and outputs to heated seat control unit.

### PASSENGER SIDE : Component Function Check

INFOID:000000008290757

#### 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 >> Heat sensor function is OK.

NO >> Refer to [SE-21, "PASSENGER SIDE : Diagnosis Procedure"](#)

### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290758

#### 1.CHECK HEAT SENSOR INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between heated seat control unit harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Heated seat control unit					
Connector	Terminal				
B440	18	Ground	Heated seat switch position	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	

**NOTE:**

Voltage is repeated within the value shown as per the above list depending on heater unit temperature.

Is the inspection result normal?

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.

# HEAT SENSOR

## < DTC/CIRCUIT DIAGNOSIS >

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

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

Heated seat control unit		Ground	Continuity
Connector	Terminal		
B440	18		Not existed

Is the inspection result normal?

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.

(+)		(-)	Voltage (V) (Approx.)
Seat cushion heater			
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 cushion heater		Continuity
Connector	Terminal	Connector	Terminal	
B440	16	B441	16	Existed

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

Heated seat control unit		Ground	Continuity
Connector	Terminal		
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-23, "PASSENGER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace seat cushion heater. Refer to [SE-60, "Exploded View"](#).

### 6.CHECK INTERMITTENT INCIDENT

Check intermittent incident.

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

# HEAT SENSOR

< DTC/CIRCUIT DIAGNOSIS >

>> INSPECTION END

## PASSENGER SIDE : Component Inspection

INFOID:000000008290759

### 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	Resistance (K $\Omega$ ) (Approx.)
Connector	Terminal		
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-60, "Exploded View"](#).

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SE

# SEAT CUSHION HEATER

< DTC/CIRCUIT DIAGNOSIS >

## SEAT CUSHION HEATER DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000008290760

Warms the seat cushion.

### DRIVER SIDE : Component Function Check

INFOID:000000008290761

## 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 [SE-24, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290762

## 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.

(+)		(-)	Condition		Voltage (V) (Approx.)
Seat cushion heater					
Connector	Terminal				
B467	70	Ground	Heated seat	Operated	0 – Battery voltage
				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.
3. Check continuity between seat cushion heater harness connector and heated seat control unit harness connector.

Seat cushion heater		Heated seat control unit		Continuity
Connector	Terminal	Connector	Terminal	
B467	70	B466	70	Existed

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

Seat cushion heater		Ground	Continuity
Connector	Terminal		
B467	70		Not existed

Is the inspection result normal?

YES >> Replace heated seat control unit. Refer to [SE-75, "Removal and Installation"](#).

NO >> Repair or replace harness.

## 3.CHECK SEAT CUSHION HEATER



# SEAT CUSHION HEATER

## < DTC/CIRCUIT DIAGNOSIS >

Check seat cushion heater.

Refer to [SE-25, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace seat cushion heater. Refer to [SE-60, "Exploded View"](#).

### 4.CHECK SEAT CUSHION HEATER GROUND CIRCUIT

Check continuity between seat cushion heater harness connector and ground.

Seat cushion heater		Ground	Continuity
Connector	Terminal		
B467	48		Existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5.CHECK INTERMITTENT INCIDENT

Check intermittent incident.

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

>> INSPECTION END

## DRIVER SIDE : Component Inspection

INFOID:000000008290763

### 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		Condition	Resistance (Ω) (Approx.)
Connector	Terminal		
B467	48	70	When heat sensor temperature is 20°C (68°F) 2.6 – 3.0

**NOTE:**

Resistance value changes according to temperature.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat cushion heater. Refer to [SE-60, "Exploded View"](#)

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000008290764

Warms the seat cushion.

### PASSENGER SIDE : Component Function Check

INFOID:000000008290765

### 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 [SE-25, "PASSENGER SIDE : Diagnosis Procedure"](#).

### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290766

### 1.CHECK FRONT SEAT CUSHION HEATER INPUT 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.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Seat cushion heater					
Connector	Terminal				
B441	17	Ground	Heated seat	Operated	0 – Battery voltage
				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.
3. Check continuity between seat cushion heater harness connector and heated seat control unit harness connector.

Seat cushion heater		Heated seat control unit		Continuity
Connector	Terminal	Connector	Terminal	
B441	17	B440	17	Existed

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

Seat cushion heater		Ground	Continuity
Connector	Terminal		
B441	17		Not existed

Is the inspection result normal?

- YES >> Replace heated seat control unit. Refer to [SE-75. "Removal and Installation"](#).  
NO >> Repair or replace harness.

## 3.CHECK SEAT CUSHION HEATER

Check seat cushion heater.

Refer to [SE-27. "PASSENGER SIDE : Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Replace seat cushion heater. Refer to [SE-60. "Exploded View"](#).

## 4.CHECK SEAT CUSHION HEATER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between seat cushion heater harness connector and ground.

Seat cushion heater		Ground	Continuity
Connector	Terminal		
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-43. "Intermittent Incident"](#)

>> INSPECTION END

PASSENGER SIDE : Component Inspection

INFOID:000000008290767

## 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			Condition	Resistance ( $\Omega$ ) (Approx.)
Connector	Terminal			
B441	2	17	When heat sensor temperature is 20°C (68°F)	2.6 – 3.0

**NOTE:**

Resistance value changes according to temperature.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat cushion heater. Refer to [SE-60. "Exploded View"](#).

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SE

# SEATBACK HEATER

< DTC/CIRCUIT DIAGNOSIS >

## SEATBACK HEATER DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000008290768

Warms the seat cushion.

### DRIVER SIDE : Component Function Check

INFOID:000000008290769

#### 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-28, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290770

#### 1.CHECK SEATBACK HEATER

1. Turn ignition switch OFF.
2. Disconnect seatback heater connector.
3. Check resistance between seatback heater terminals.

Seatback heater			Condition	Resistance ( $\Omega$ ) (Approx.)
Connector	Terminal			
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 [SE-60, "Exploded View"](#).

NO >> Replace seatback heater. Refer to [SE-60, "Exploded View"](#).

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000008290771

Warms the seat cushion.

### PASSENGER SIDE : Component Function Check

INFOID:000000008290772

#### 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-28, "PASSENGER SIDE : Diagnosis Procedure"](#).

### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290773

#### 1.CHECK SEATBACK HEATER

1. Turn ignition switch OFF.
2. Disconnect seatback heater connector.
3. Check resistance between seatback heater terminals.

# SEATBACK HEATER

## < DTC/CIRCUIT DIAGNOSIS >

Seatback heater			Condition	Resistance ( $\Omega$ ) (Approx.)
Connector	Terminal			
B445	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 [SE-60, "Exploded View"](#).
- NO >> Replace seatback heater. Refer to [SE-60, "Exploded View"](#).

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SE

# HEATED SEAT SWITCH INDICATOR

< DTC/CIRCUIT DIAGNOSIS >

## HEATED SEAT SWITCH INDICATOR DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000008290774

Illuminates the indicator that indicates the operating status of heated seat.

### DRIVER SIDE : Component Function Check

INFOID:000000008290775

#### 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-30. "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290776

#### 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		Ground	Continuity
Connector	Terminal		
A/T models: M141 M/T models: M175	6		Existed

Is the inspection result normal?

YES >> Replace heated seat switch. Refer to [SE-78. "Removal and Installation"](#).

NO >> Repair or replace harness.

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000008290777

Illuminates the indicator that indicates the operating status of heated seat.

### PASSENGER SIDE : Component Function Check

INFOID:000000008290778

#### 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-30. "PASSENGER SIDE : Diagnosis Procedure"](#).

### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290779

#### 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		Ground	Continuity
Connector	Terminal		
A/T models: M142 M/T models: M176	6		Existed

Is the inspection result normal?

# HEATED SEAT SWITCH INDICATOR

## < DTC/CIRCUIT DIAGNOSIS >

---

YES >> Replace heated seat switch. Refer to [SE-78. "Removal and Installation"](#).  
NO >> Repair or replace harness.

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
# POWER SEAT

< DTC/CIRCUIT DIAGNOSIS >

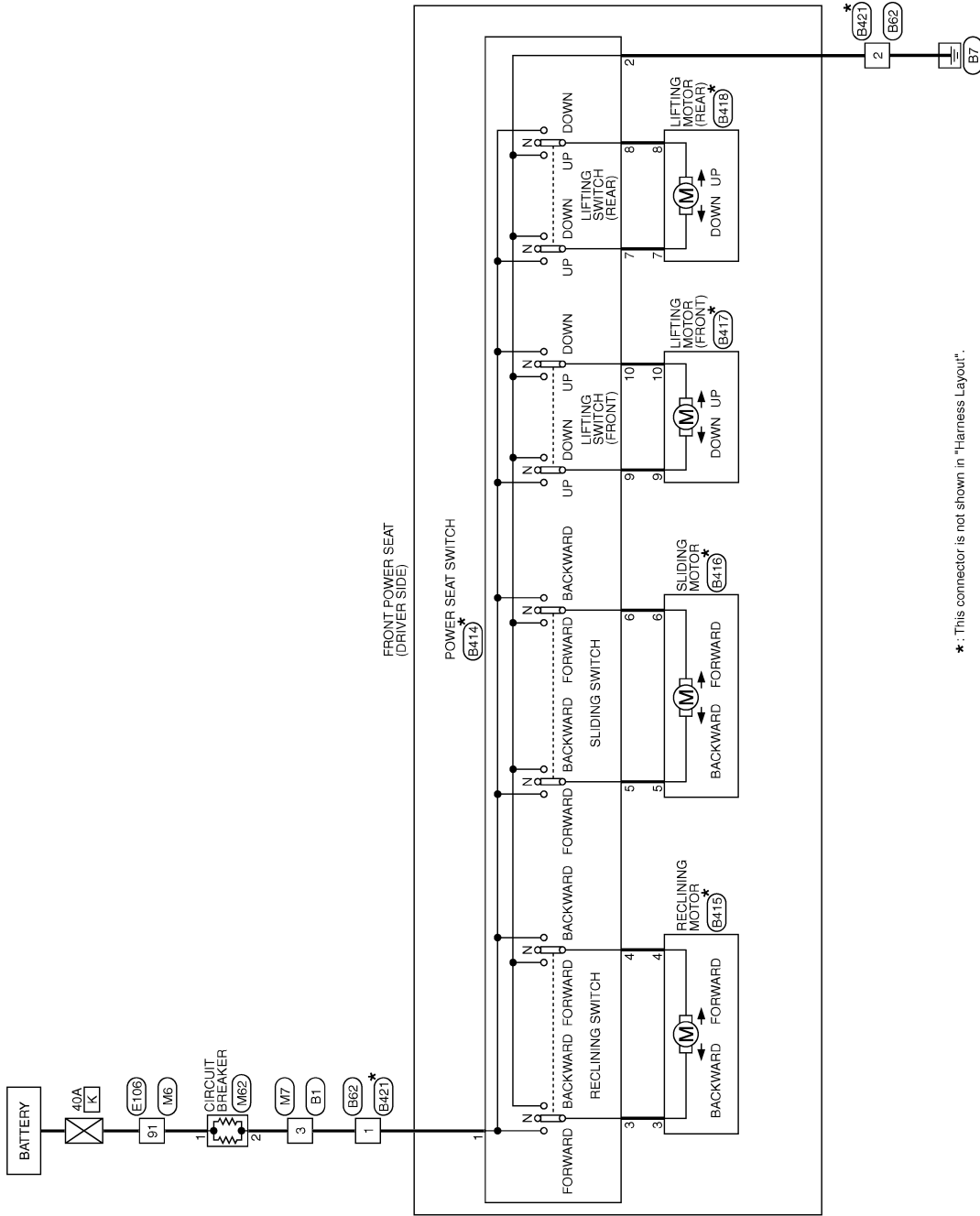
## POWER SEAT

### Wiring Diagram - POWER SEAT SYSTEM (DRIVER SIDE) -

INFOID:000000008290780

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12, "Connector Information"](#).

#### POWER SEAT FOR DRIVER SIDE



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

2010/08/18

JCJWM1642GB




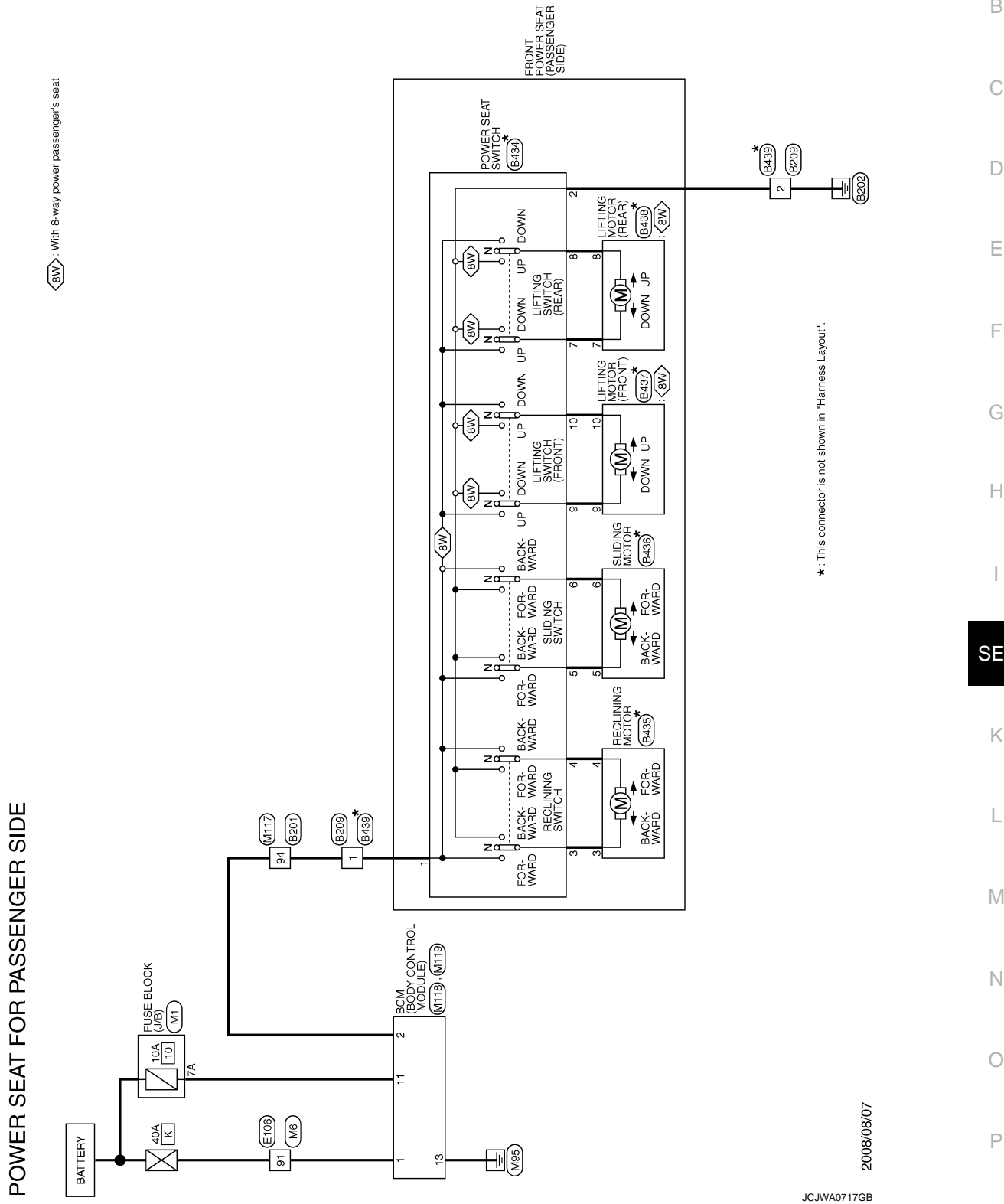
# POWER SEAT

< DTC/CIRCUIT DIAGNOSIS >

## Wiring Diagram - POWER SEAT SYSTEM (PASSENGER SIDE) -

INFOID:000000008290781

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12, "Connector Information"](#).




# SIDE SUPPORT

< DTC/CIRCUIT DIAGNOSIS >

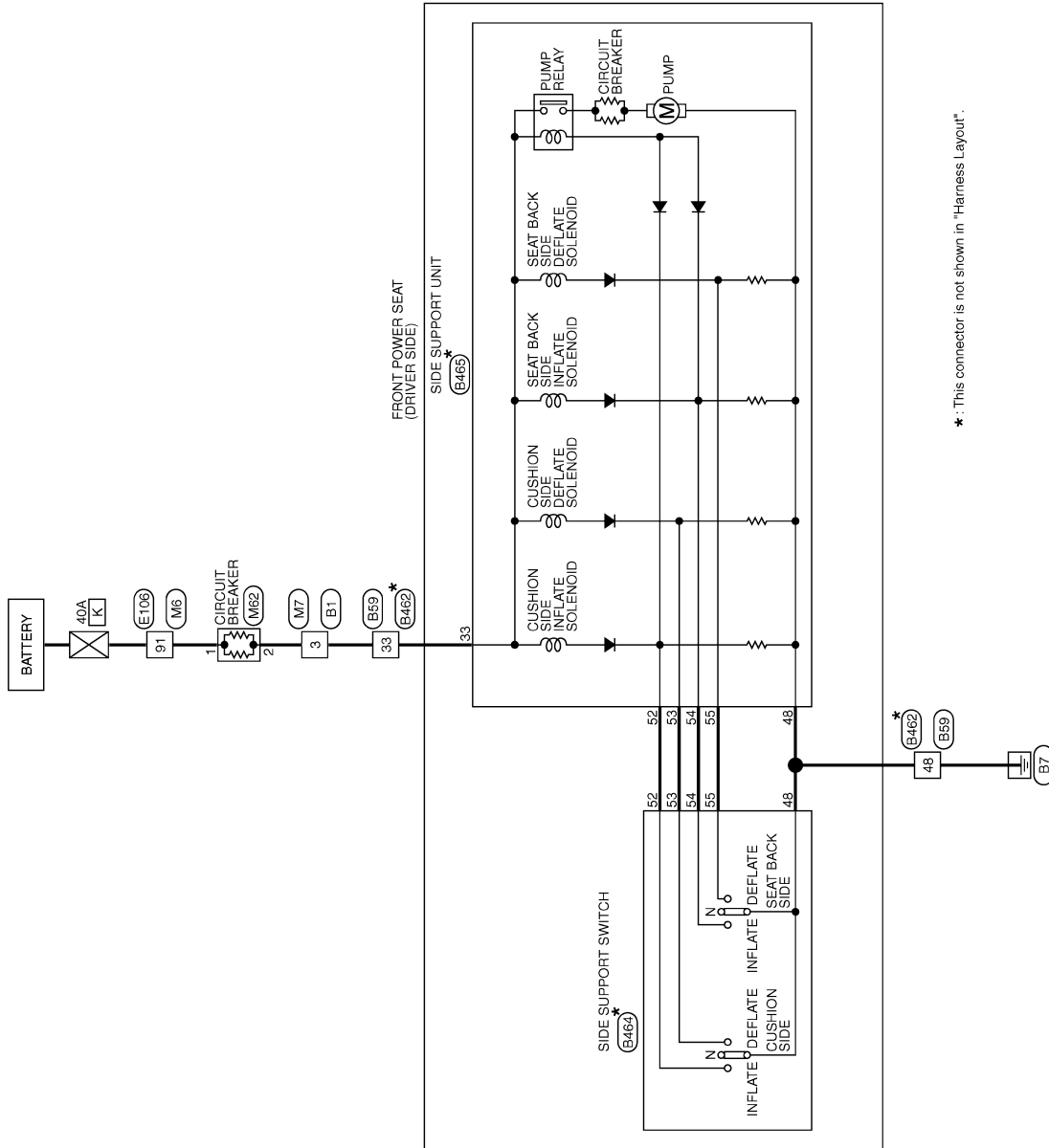
## SIDE SUPPORT

### Wiring Diagram - SIDE SUPPORT SYSTEM -

INFOID:000000008290782

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12, "Connector Information"](#).

SIDE SUPPORT



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

2010/08/18

JCJWM1651GB

# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

## ECU DIAGNOSIS INFORMATION

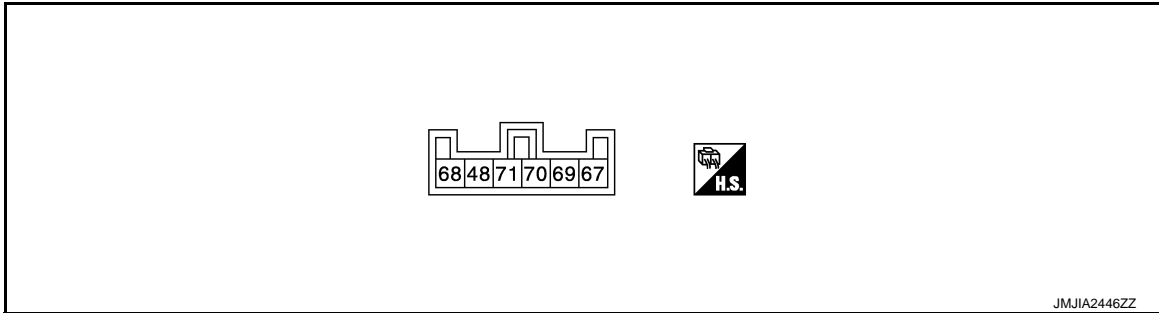
HEATED SEAT CONTROL UNIT

DRIVER SIDE

DRIVER SIDE : Reference Value

INFOID:000000008290783

### TERMINAL LAYOUT



### PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx.)
(+)	(-)	Signal name	Input/ Output		
48 (B)	Ground	Ground	-	Ignition switch ON	0
67 (R)	Ground	IGN power supply	Input	Ignition switch	OFF or ACC ON Battery voltage
68 (L)*1 (L/W)*2	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
69 (BR/W)*1 (R/W)*2	Ground	Heated seat operation signal	Input	Heated seat	Operate Other than above Battery voltage 0
70 (L/W)*1 (R/L)*2	Ground	Heater unit power supply	Output	Heated seat	Operate Other than above 0 – Battery voltage*3 0
71 (R/B)	Ground	Heat sensor signal	Input	Heated seat switch	OFF 0 1 (Min. temperature) 10.87 – 11.02*3 2 10.93 – 11.07*3 3 11.04 – 11.17*3 4 11.13 – 11.26*3 5 11.22 – 11.34*3 6 (Max. temperature) 11.31 – 11.43*3

\*1: With automatic drive positioner


\*2: Without automatic drive positioner

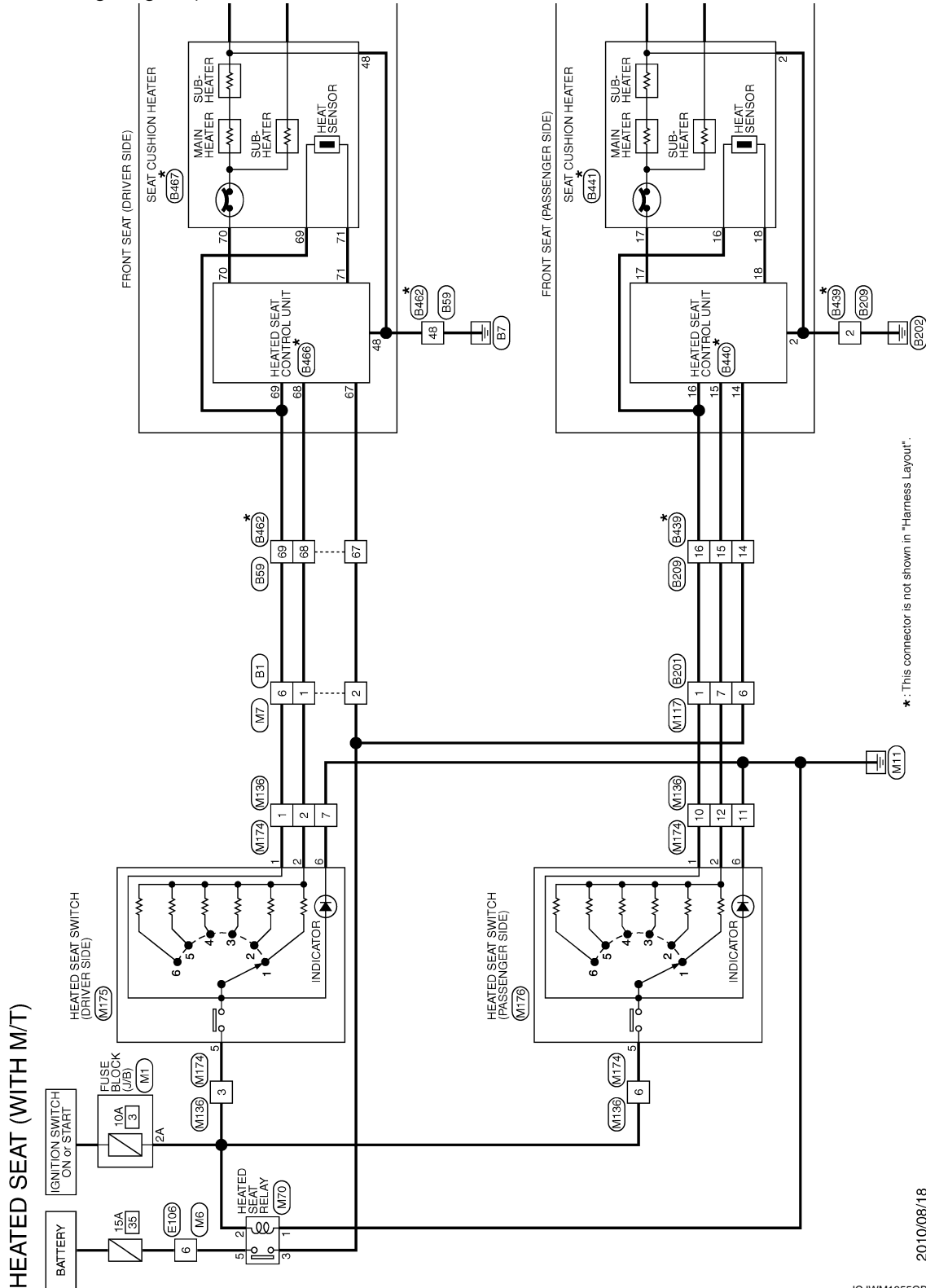
# HEATED SEAT CONTROL UNIT

## < ECU DIAGNOSIS INFORMATION >

\*3: Voltage varies within this range depending on heater unit temperature.

## DRIVER SIDE : Wiring Diagram - HEATED SEAT SYSTEM (WITH M/T) - INFOID:000000008290784

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12. "Connector Information"](#).



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

2010/08/18

JCJWM1655GB

# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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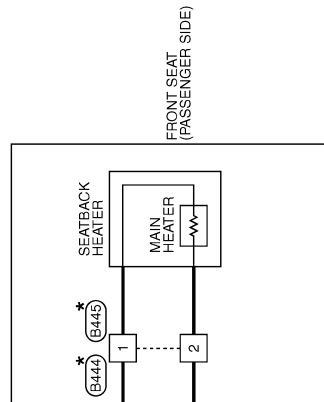
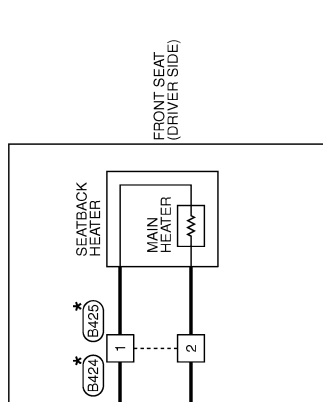
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
\*: This connector is not shown in "Harness Layout".  
JCJWM1656GB

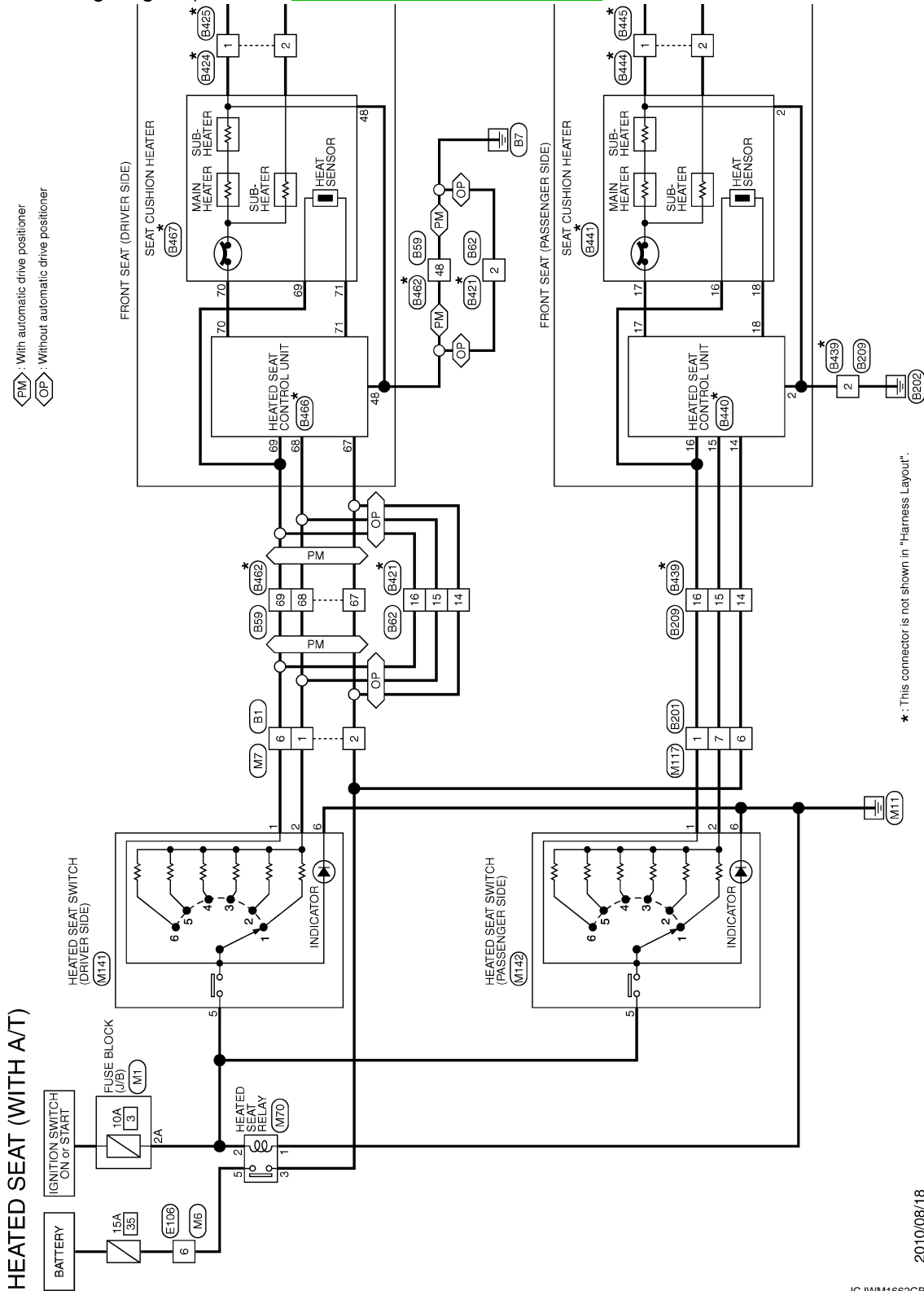
# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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

INFOID:000000008290785

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12, "Connector Information"](#).



2010/08/18

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# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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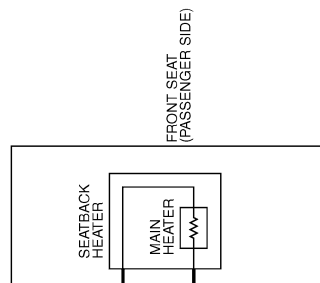
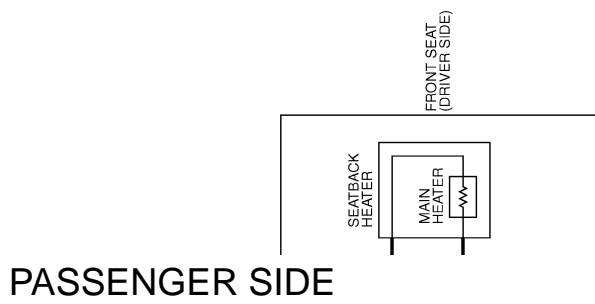
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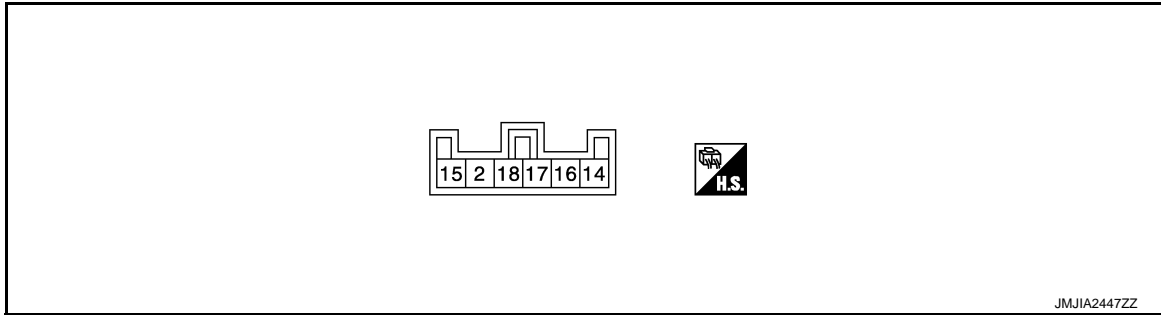
# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

PASSENGER SIDE : Reference Value

INFOID:000000008290786

## TERMINAL LAYOUT



## PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Voltage (V) (Approx.)
(+)	(-)	Signal name	Input/ Output			
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
16 (R/W)	Ground	Heated seat operation signal	Input	Heated seat	Operate	Battery voltage
					Other than above	0
17 (R/L)	Ground	Heater unit power supply	Output	Heated seat	Operate	0 – Battery voltage*
					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 varies within this range depending on heater unit temperature.




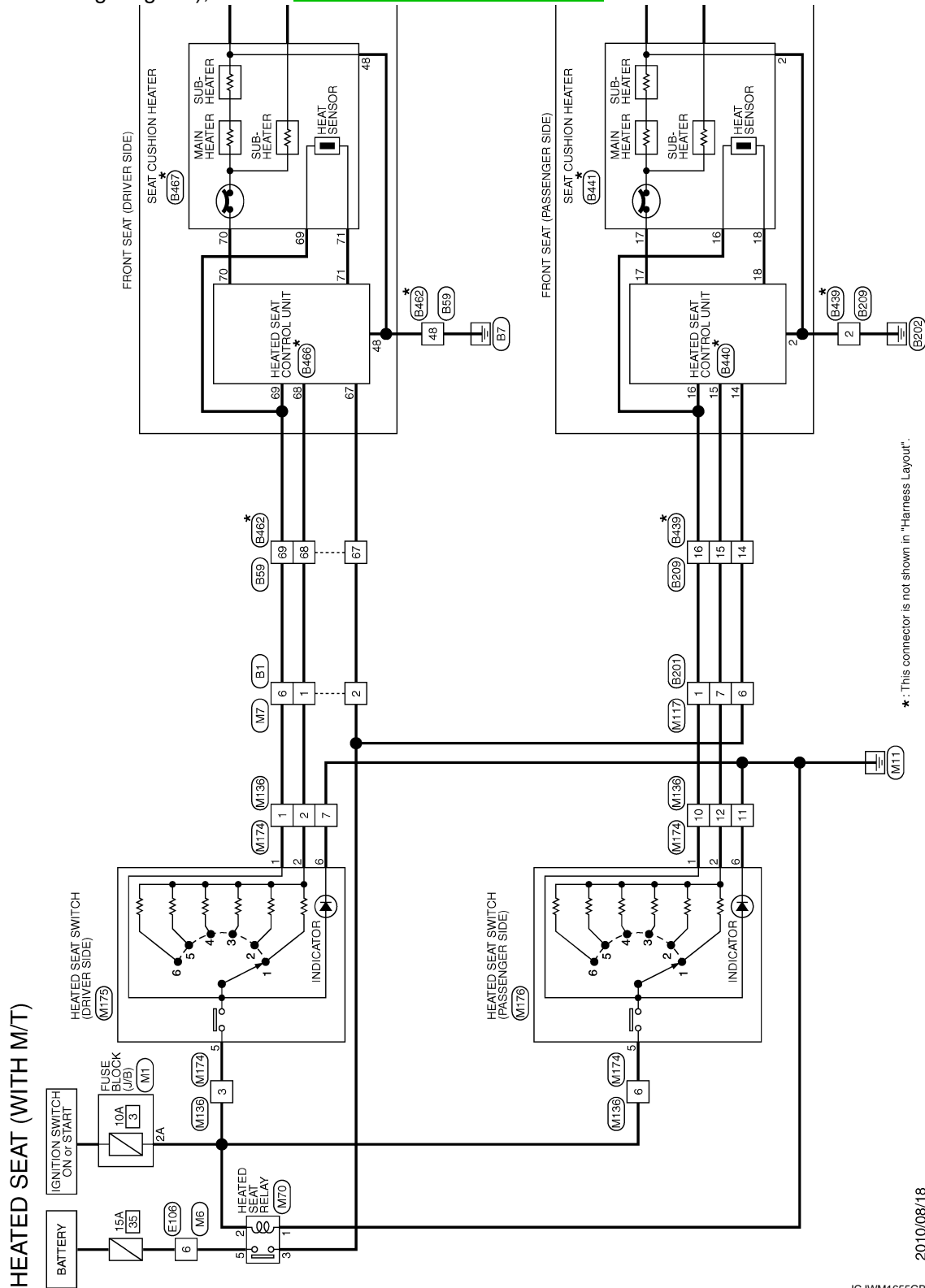
# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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

INFOID:0000000008290787

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12. "Connector Information"](#).



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

2010/08/18

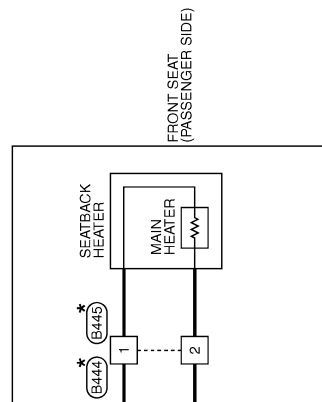
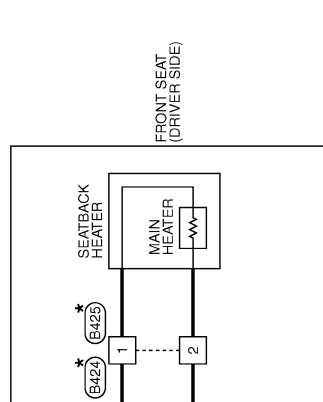
JCJWM1655GB

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# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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


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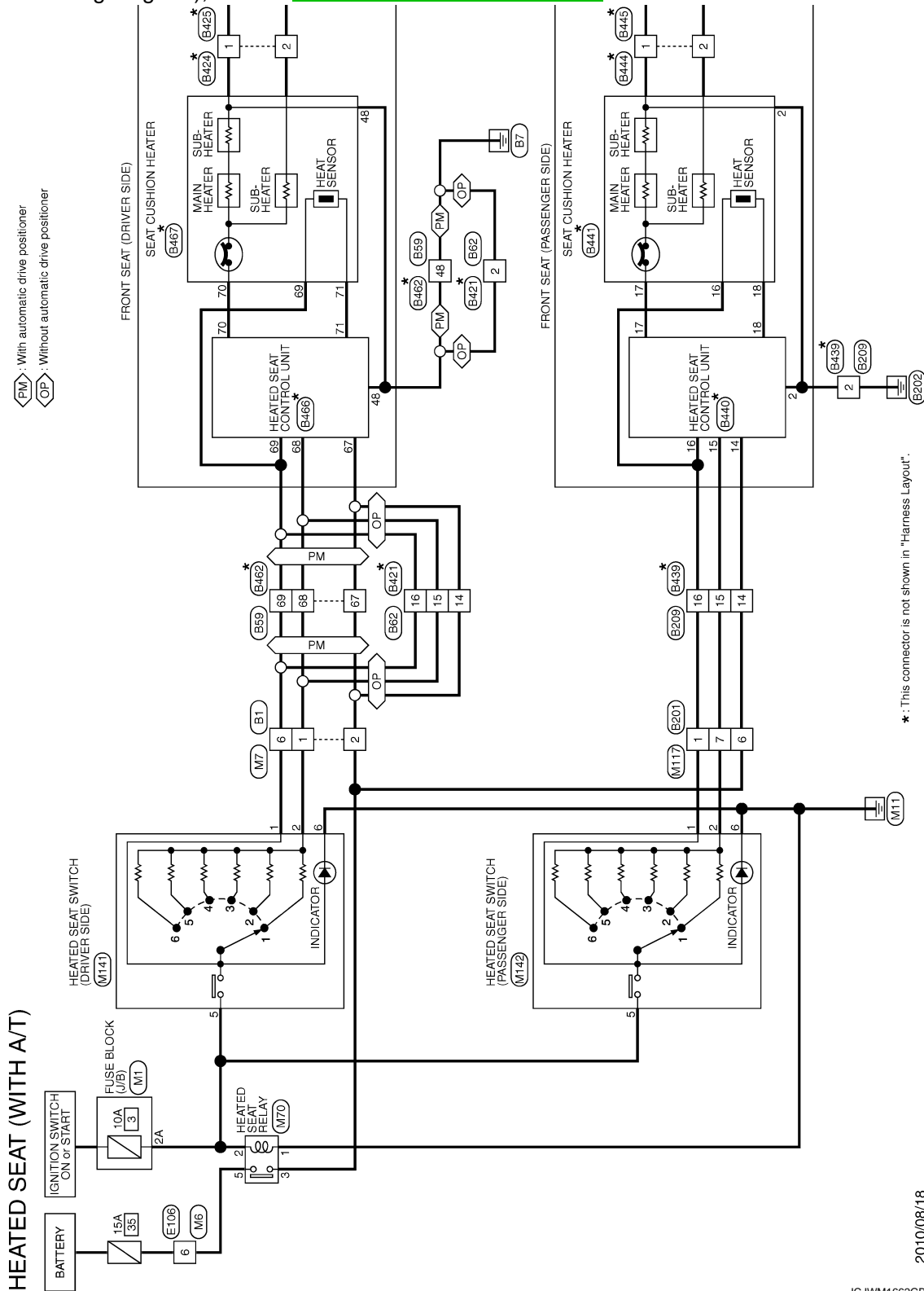
# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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

INFOID:000000008290788

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12. "Connector Information"](#).



2010/08/18

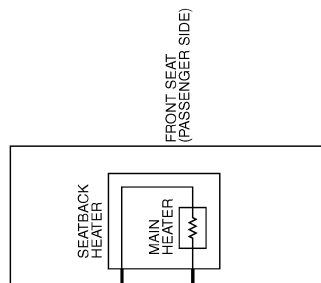
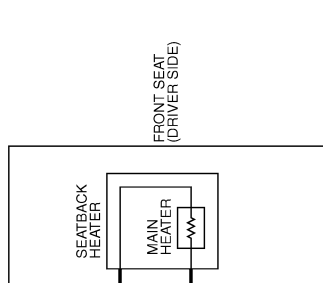
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# HEATED SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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JCJWM1663GB

# HEATED SEAT DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

HEATED SEAT DOES NOT OPERATE  
BOTH SIDES

BOTH SIDES : Diagnosis Procedure

INFOID:000000008290789

### 1.CHECK HEATED SEAT SWITCH POWER SUPPLY

Check heated seat switch power supply.  
Refer to [SE-11, "HEATED SEAT SWITCH : Diagnosis Procedure"](#).

Is the inspection result normal?

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

### 2.CHECK HEATED SEAT RELAY

Check heated seat relay.  
Refer to [SE-17, "Component Function Check"](#).

Is the inspection result normal?

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

### 3.CHECK HEATED SEAT CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check heated seat switch power supply and ground circuit.  
Refer to [SE-9, "HEATED SEAT CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

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

### 4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-43, "Intermittent Incident"](#).
- NO >> GO TO 1.

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290790

### 1.CHECK HEATED SEAT SWITCH POWER SUPPLY

Check heated seat switch power supply.  
Refer to [SE-11, "HEATED SEAT SWITCH : Diagnosis Procedure"](#).

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-9, "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-13, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

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# 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-24, "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-43, "Intermittent Incident"](#).
- NO >> GO TO 1.

## PASSENGER SIDE

### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290791

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

---

Check heated seat switch power supply.

Refer to [SE-11, "HEATED SEAT SWITCH : Diagnosis Procedure"](#).

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-9, "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-14, "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-25, "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-43, "Intermittent Incident"](#).
- NO >> GO TO 1.

# SEATBACK HEATER ONLY DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

## SEATBACK HEATER ONLY DOES NOT OPERATE DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290792

### 1.CHECK SEATBACK HEATER

Check seatback heater.

Refer to [SE-28, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

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

NO >> GO TO 1.

## PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290793

### 1.CHECK SEATBACK HEATER

Check seatback heater.

Refer to [SE-28, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

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

NO >> GO TO 1.

# CANNOT ADJUST HEATED SEAT TEMPERATURE

< SYMPTOM DIAGNOSIS >

---

## CANNOT ADJUST HEATED SEAT TEMPERATURE DRIVER SIDE

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290794

#### 1.CHECK HEATED SEAT SWITCH

---

Check heated seat switch.

Refer to [SE-13, "DRIVER 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 [SE-19, "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 [GI-43, "Intermittent Incident"](#).

NO >> Replace heated seat control unit. Refer to [SE-75, "Removal and Installation"](#).

## PASSENGER SIDE

### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290795

#### 1.CHECK HEATED SEAT SWITCH

---

Check heated seat switch.

Refer to [SE-14, "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 [SE-21, "PASSENGER 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 [GI-43, "Intermittent Incident"](#).

NO >> Replace heated seat control unit. Refer to [SE-75, "Removal and Installation"](#).



# HEATED SEAT SWITCH INDICATOR DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

## HEATED SEAT SWITCH INDICATOR DOES NOT TURN ON DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:000000008290796

### 1.CHECK HEATED SEAT SWITCH INDICATOR

Check heated seat switch indicator.

Refer to [SE-30, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

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

NO >> GO TO 1.

## PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008290797

### 1.CHECK HEATED SEAT SWITCH INDICATOR

Check heated seat switch indicator.

Refer to [SE-30, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

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

NO >> GO TO 1.

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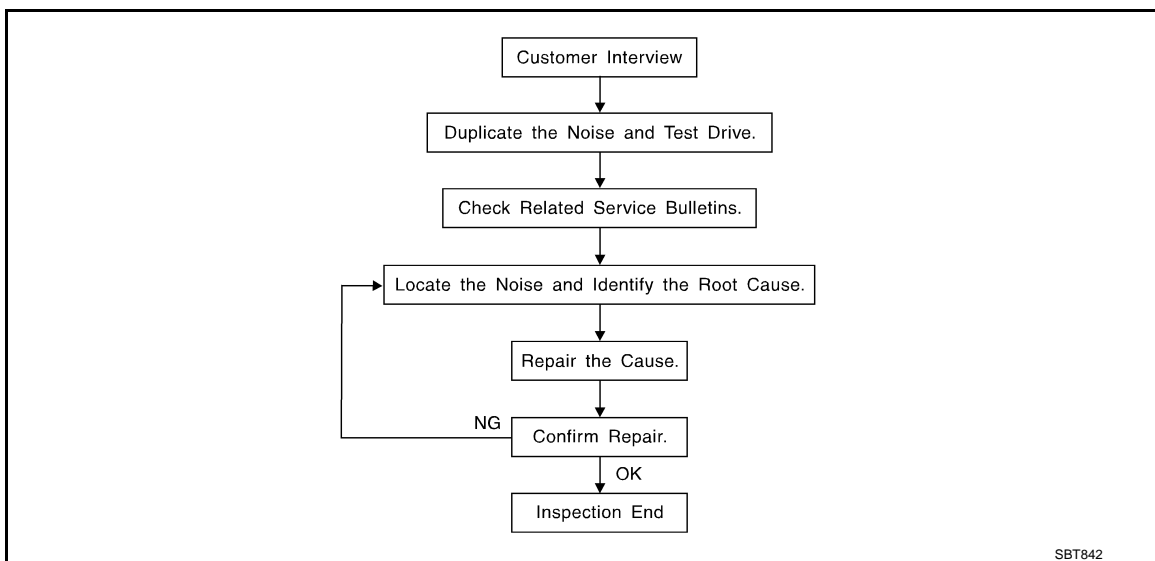
# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

### Work Flow

INFOID:000000008290798



### 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 [SE-54, "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 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 = 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.

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < 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 [SE-52, "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 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60 × 85 mm (2.36 × 3.35 in)/76884-71L02: 15 × 25 mm (0.59 × 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 × 50 mm (1.97 × 1.97 in)/73982-

50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97in)

FELT CLOTHTAPE

Used to insulate where movement does not occur. Ideal for instrument panel applications.

68370-4B000: 15 × 25 mm (0.59 × 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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

---

Insulates where slight movement is present. Ideal for instrument panel applications.

### SILICONE GREASE

Used in place of UHMW tape that is be visible or does not fit. Will only last a few months.

### SILICONE SPRAY

Used when grease cannot be applied.

### DUCT TAPE

Used to eliminate movement.

## CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

## Inspection Procedure

INFOID:000000008290799

Refer to Table of Contents for specific component removal and installation information.

## INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

### **CAUTION:**

**Never use silicone spray to isolate a squeak or rattle. If the area is saturated with silicone, the recheck of repair becomes impossible.**

## CENTER CONSOLE

Components to pay attention to include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

## DOORS

Pay attention to the following:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. The areas can usually be insulated with felt cloth tape or insulator foam blocks from the Nissan Squeak and Rattle Kit (J-43980) to repair the noise.

## TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the customer.

In addition look for the following:

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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < 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.

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## Diagnostic Worksheet

INFOID:000000008290800



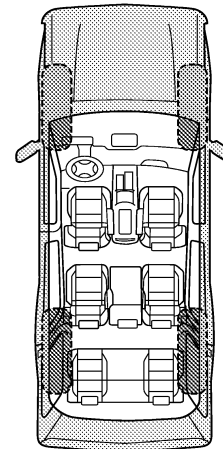
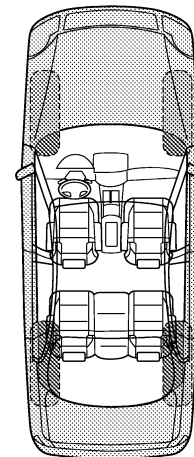
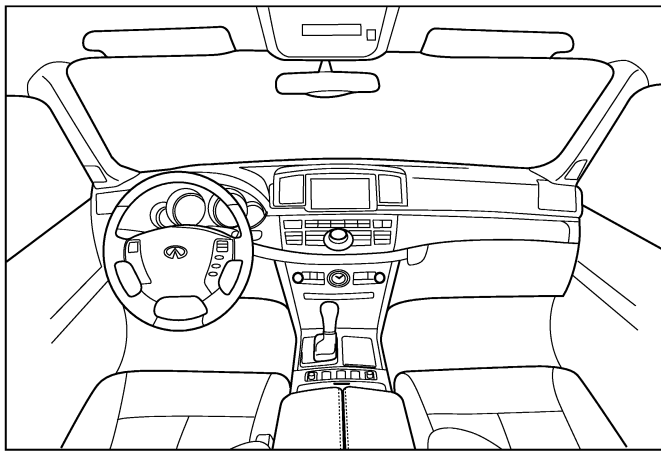
### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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.

PIIB8741E

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

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### II. WHEN DOES IT OCCUR? (please check the boxes that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> anytime                      | <input type="checkbox"/> after sitting out in the rain |
| <input type="checkbox"/> 1st time in the morning      | <input type="checkbox"/> when it is raining or wet     |
| <input type="checkbox"/> only when it is cold outside | <input type="checkbox"/> dry or dusty conditions       |
| <input type="checkbox"/> only when it is hot outside  | <input type="checkbox"/> other:                        |

### III. WHEN DRIVING:

- through driveways
- over rough roads
- over speed bumps
- only about \_\_\_\_ mph
- on acceleration
- coming to a stop
- on turns: left, right or either (circle)
- with passengers or cargo
- other: \_\_\_\_\_
- after driving \_\_\_\_ miles or \_\_\_\_ minutes

### IV. WHAT TYPE OF NOISE

- squeak (like tennis shoes on a clean floor)
- creak (like walking on an old wooden floor)
- rattle (like shaking a baby rattle)
- knock (like a knock at the door)
- tick (like a clock second hand)
- thump (heavy, muffled knock noise)
- buzz (like a bumble bee)

### TO BE COMPLETED BY DEALERSHIP PERSONNEL

#### Test Drive Notes:

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	YES	NO	Initials of person performing
Vehicle test driven with customer	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise verified on test drive	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise source located and repaired	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Follow up test drive performed to confirm repair	<input type="checkbox"/>	<input type="checkbox"/>	_____

VIN: \_\_\_\_\_ Customer Name: \_\_\_\_\_  
W.O.# \_\_\_\_\_ Date: \_\_\_\_\_

This form must be attached to Work Order

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# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000008290801

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

**Always observe the following items for preventing accidental activation.**

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

**Always observe the following items for preventing accidental activation.**

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

#### Service Notice

INFOID:000000008290802

- 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

INFOID:000000008290803

- 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.



# PRECAUTIONS

## < PRECAUTION >

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- Then rub with a soft and dry cloth.
- 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.

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# PREPARATION

< PREPARATION >

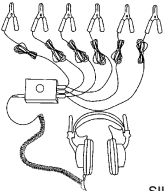
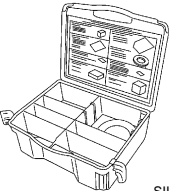
## PREPARATION

### PREPARATION

#### Special Service Tool

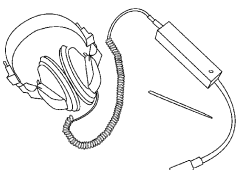
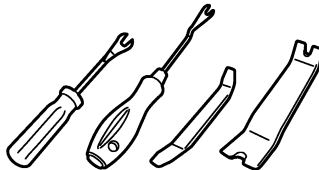
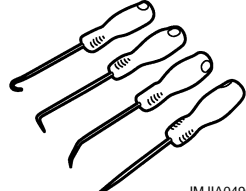
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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
<p>(J39570) Chassis ear</p>  <p style="text-align: right;">SIIA0993E</p>	<p>Locates the noise</p>
<p>(J43980) NISSAN Squeak and Rattle Kit</p>  <p style="text-align: right;">SIIA0994E</p>	<p>Repairs the cause of noise</p>

#### Commercial Service Tool

INFOID:000000008290805

Tool name	Description
<p>Engine ear</p>  <p style="text-align: right;">SIIA0995E</p>	<p>Locates the noise</p>
<p>Remover tool</p>  <p style="text-align: right;">JMKIA3050ZZ</p>	<p>Removes the clips, pawls and metal clips</p>
<p>Hook and pick tool</p>  <p style="text-align: right;">JMJIA0490ZZ</p>	<p>Removes the snap pins</p>

# CLIP LIST

< PREPARATION >

## CLIP LIST

### Clip List

INFOID:000000008290806

Shapes	Removal & Installation	Shapes	Removal & Installation
	<p><b>Removal:</b> Remove by bending up with flat-bladed screwdrivers or clip remover.</p>		<p><b>Removal:</b></p>
	<p><b>Removal:</b> Remove with a clip remover.</p>		<p><b>Removal:</b></p>
	<p><b>Removal:</b> Push center pin to catching position. (Do not remove center pin by hitting it.)</p> <p><b>Installation:</b></p>		<p><b>Removal:</b> Holder portion of clip must be spread out to remove rod.</p>
	<p><b>Removal:</b> Remove by bending up with flat-bladed screwdrivers or clip remover.</p>		<p><b>Removal:</b></p> <ol style="list-style-type: none"> <li>Screw out with a Phillips screwdriver.</li> <li>Remove female portion with flat-bladed screwdriver.</li> </ol>
	<p><b>Removal:</b></p>		<p><b>Removal:</b></p> <p>Rotate 45° to remove.</p> <p><b>Installation:</b></p>
	<p><b>Removal:</b></p>		<p><b>Removal:</b></p>

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# FRONT SEAT

< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

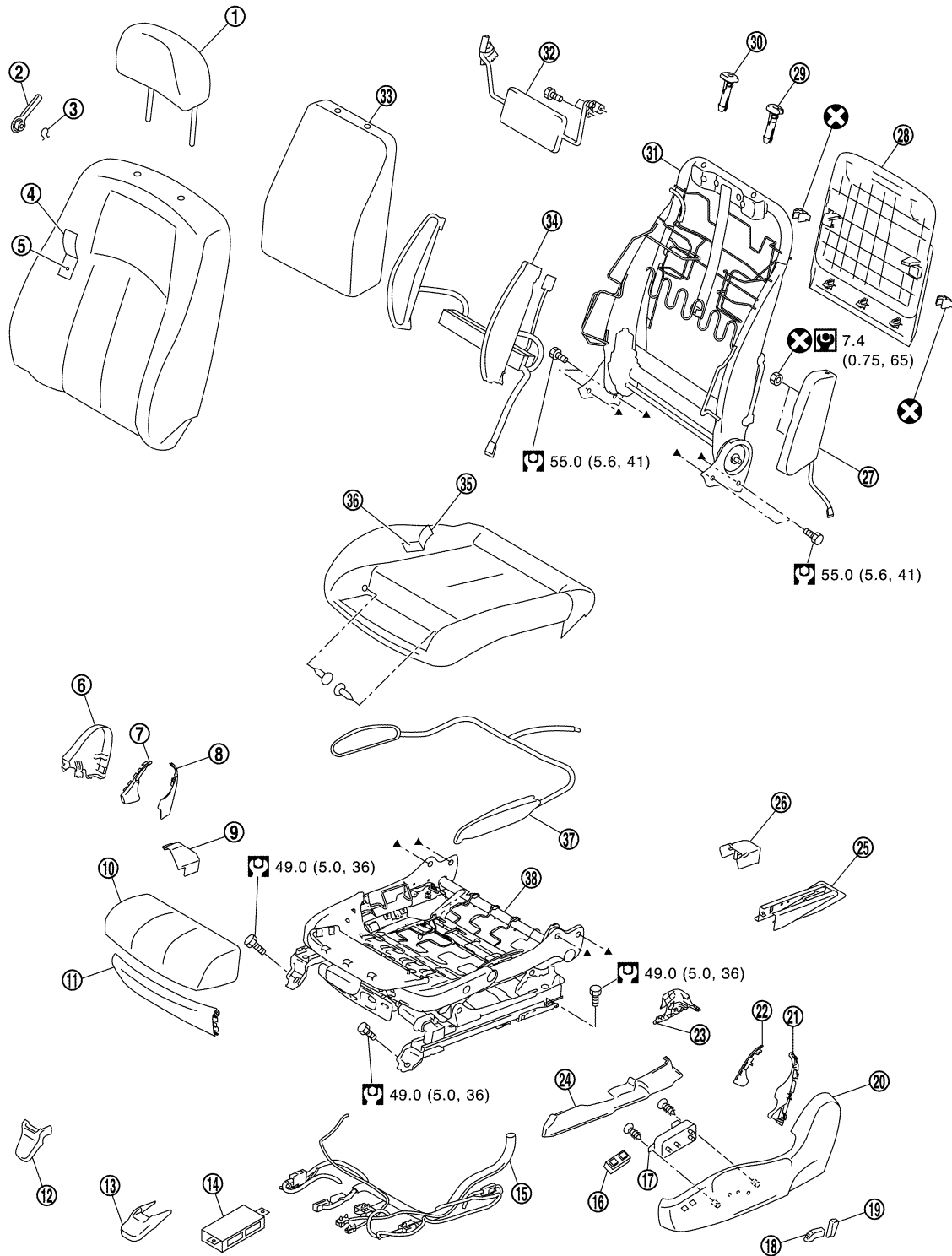
### FRONT SEAT

Exploded View

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DRIVER'S SEAT

SEC. 870



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## FRONT SEAT

### < REMOVAL AND INSTALLATION >

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1. Headrest	2. Lumbar support lever knob	3. Snap ring	A
4. Seatback trim	5. Seatback pad	6. Seat cushion inner finisher	
7. Reclining device inner cover (front)	8. Reclining device inner cover (rear)	9. Seat slide inner finisher	
10. Thigh extension pad	11. Seat cushion front finisher	12. Front inner slide cover	B
13. Front outer slide cover	14. Seat control unit	15. Seat harness	
16. Side support switch	17. Seat control switch	18. Seat slide and lifter switch knob	
19. Seat reclining switch knob	20. Seat cushion outer finisher	21. Reclining device outer cover (rear)	C
22. Reclining device outer cover (front)	23. Seat slide outer finisher (inside)	24. Seat slide outer finisher (outside)	
25. Rear outer slide cover	26. Rear inner slide cover	27. Side air bag module	
28. Seatback board	29. Headrest holder (locked)	30. Headrest holder (free)	D
31. Seatback frame	32. Lumbar support unit	33. Seatback silencer	
34. Seatback side support bag and unit	35. Seat cushion trim	36. Seat cushion pad	E
37. Seat cushion side support bag	38. Seat cushion frame		

Refer to [GI-4, "Components"](#) for symbols in the figure.

### PASSENGER'S SEAT

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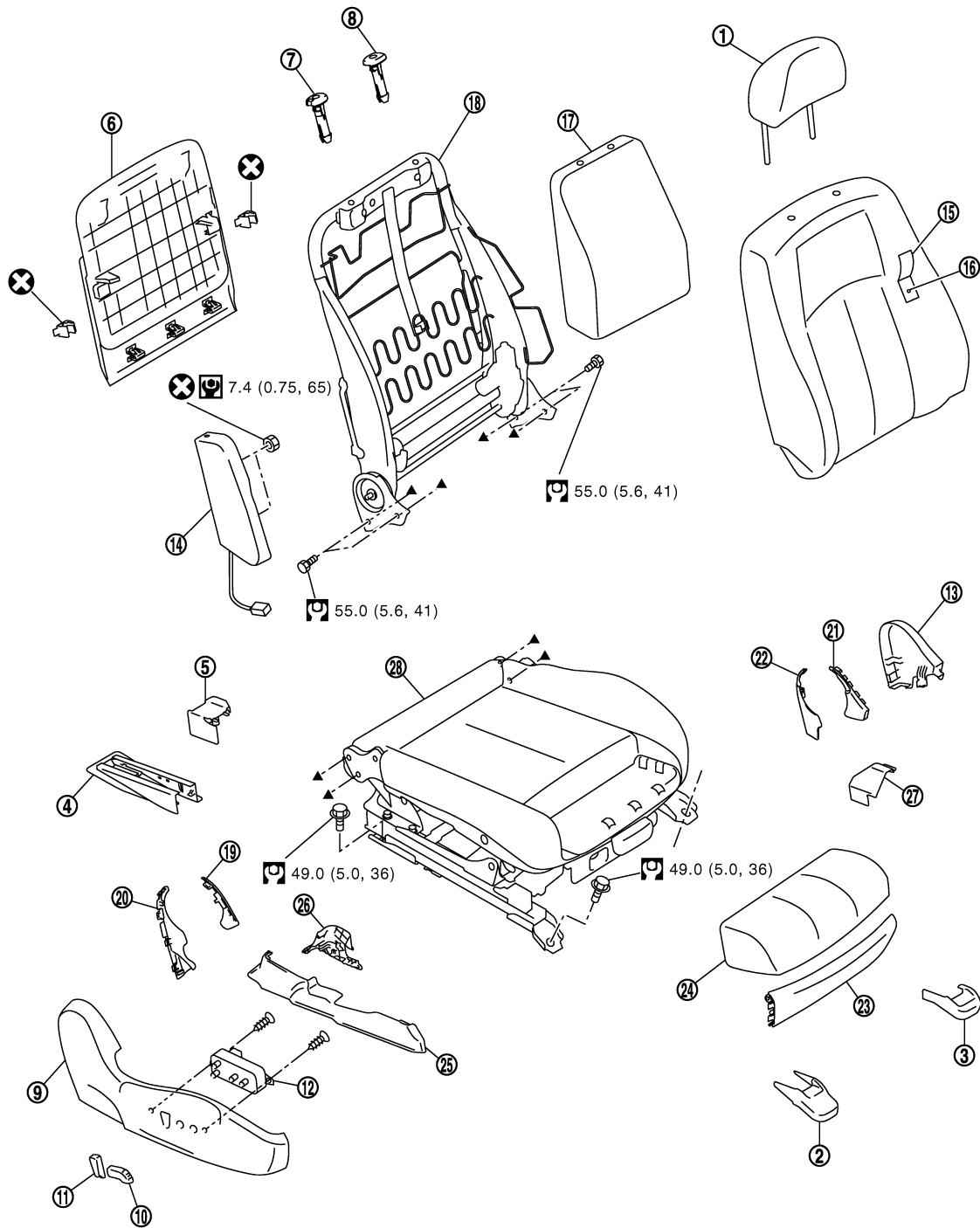
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# FRONT SEAT

## < REMOVAL AND INSTALLATION >

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- |                                       |                                |                                |
|---------------------------------------|--------------------------------|--------------------------------|
| 1. Headrest                           | 2. Front outer slide cover     | 3. Front inner slide cover     |
| 4. Rear outer slide cover             | 5. Rear inner slide cover      | 6. Seatback board              |
| 7. Headrest holder (free)             | 8. Headrest holder (locked)    | 9. Seat cushion outer finisher |
| 10. Seat slide and lifter switch knob | 11. Seat reclining switch knob | 12. Seat control switch        |
| 13. Seat cushion inner finisher       | 14. Side air bag module        | 15. Seatback trim              |
| 16. Seatback pad                      | 17. Seatback silencer          | 18. Seatback frame             |

# FRONT SEAT

## < REMOVAL AND INSTALLATION >

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|--|---|--|
| 19. Reclining device outer cover (front) | 20. Reclining device outer cover (rear) | 21. Reclining device inner cover (front) |
| 22. Reclining device inner cover (rear)  | 23. Seat cushion front finisher         | 24. Thigh extension pad                  |
| 25. Seat slide outer finisher (outside)  | 26. Seat slide outer finisher (inside)  | 27. Seat slide inner finisher            |
| 28. Seat cushion assembly                |   |  |

Refer to [GI-4. "Components"](#) for symbols in the figure.

## Removal and Installation


INFOID:000000008290808

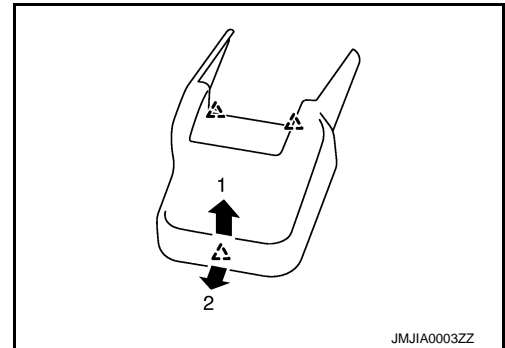
### REMOVAL

#### CAUTION:


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

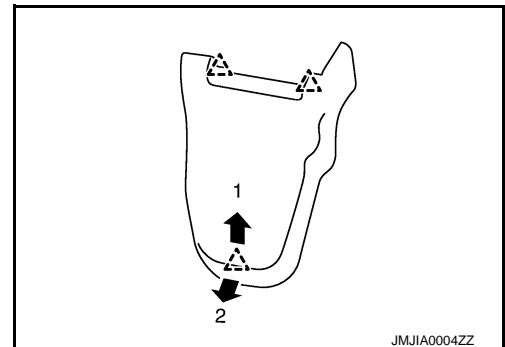
1. Remove the headrest.
2. Remove the front slide cover.
  - a. Front outer slide cover
    - Slide the seat to the rearmost position.
    - Pull up the front edge of the front slide cover to release the pawls.
    - Slide the front slide cover forward to release the pawls.

 : Pawl




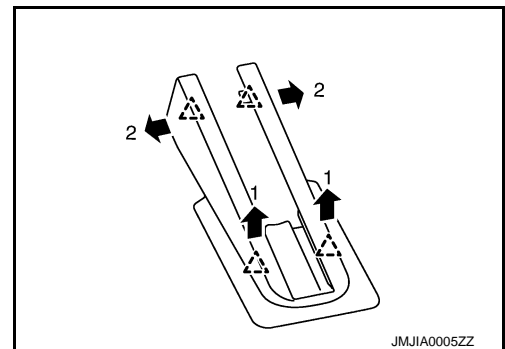
- b. Front inner slide cover
  - Slide the seat to the rearmost position.
  - Pull up the front edge of the front slide cover to release the pawls.
  - Slide the front slide cover forward to release the pawls.

 : 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.

 : Pawl




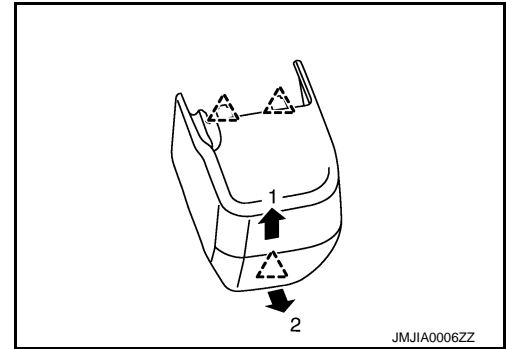
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## FRONT SEAT

### < 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.

 : Pawl



5. Remove the mounting bolts on the rear side of the front seat.  
6. Set seatback in a standing position.  
7. 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.

**CAUTION:**

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

### INSTALLATION

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 [ADP-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

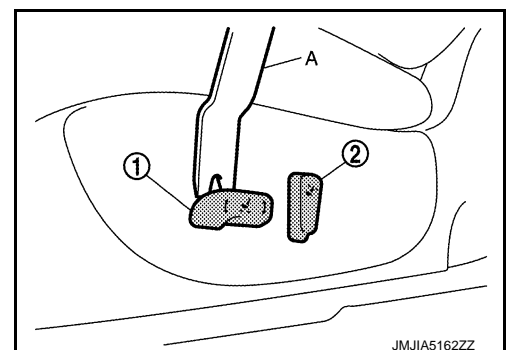
### Disassembly and Assembly

INFOID:000000008290809

### 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).

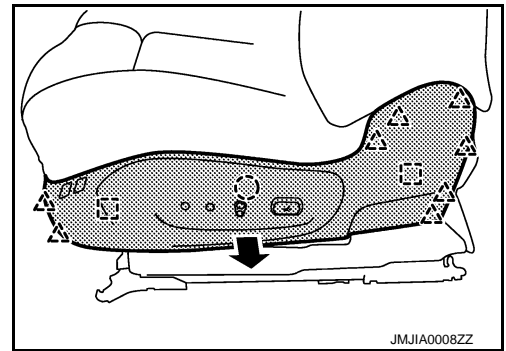
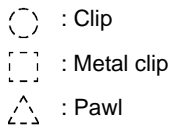




# FRONT SEAT

## < REMOVAL AND INSTALLATION >

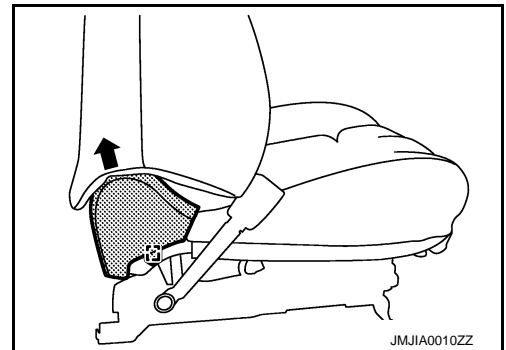
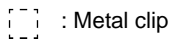
- Remove the metal clips, clips and pawls, and then pull out seat cushion outer finisher.



- Disconnect the seat control switch and side support switch harness connectors.
- Remove the reclining device outer cover (front, rear).

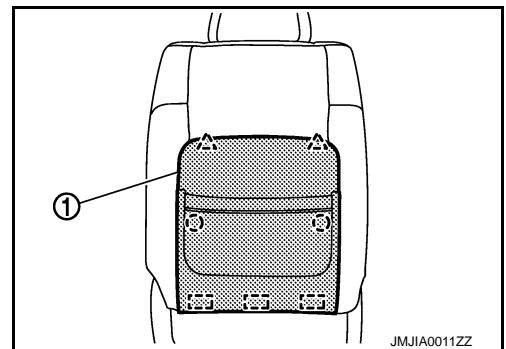
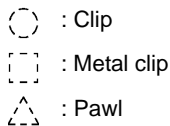
### 2. Remove the seat cushion inner finisher.

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



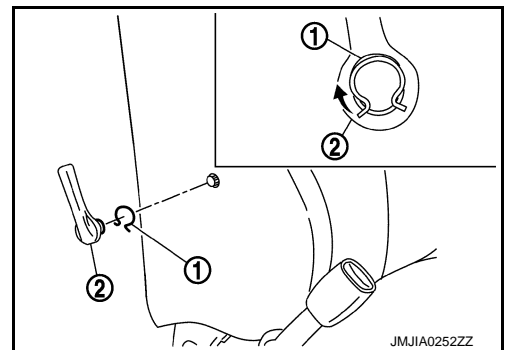
### 3. Remove the back board.

- 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.

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



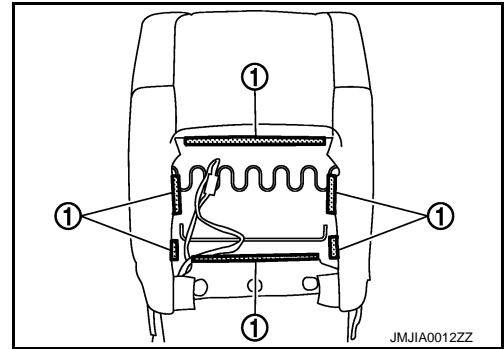
### 5. Remove the seatback pad and trim.

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# FRONT SEAT

## < REMOVAL AND INSTALLATION >

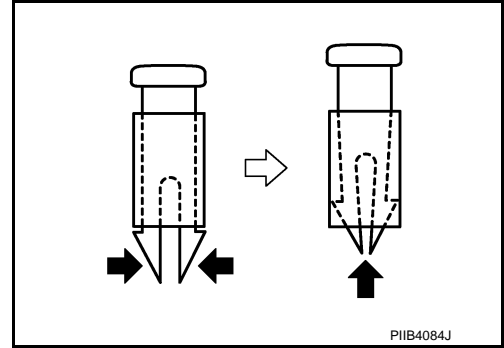
- Remove the seatback retainer (1) on the back side of the seatback.



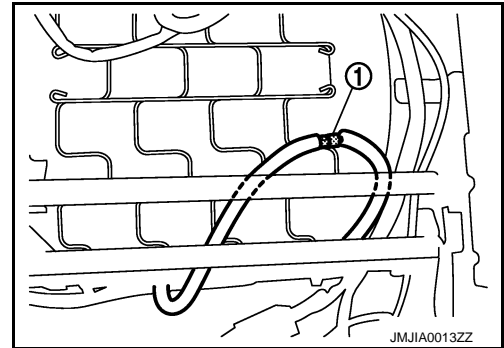
- Remove the headrest holder.

**CAUTION:**

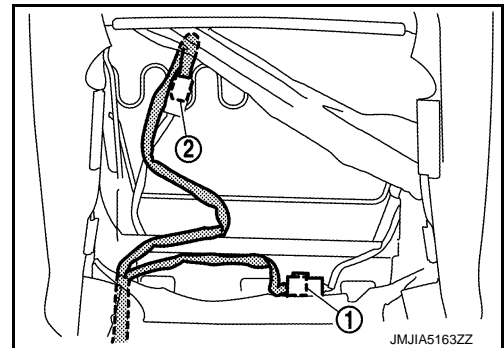
Before installing headrest holder check its orientation. (front/rear and right/left)



- Remove the side air bag module.
- Remove the side support hose joint (1) located under the seat cushion. (Side support model only.)



- Disconnect the seatback heater unit harness connector.
- Disconnect the reclining motor harness connector (1) and remove the harness clamp.
- Disconnect the side support unit harness connector (2) 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.

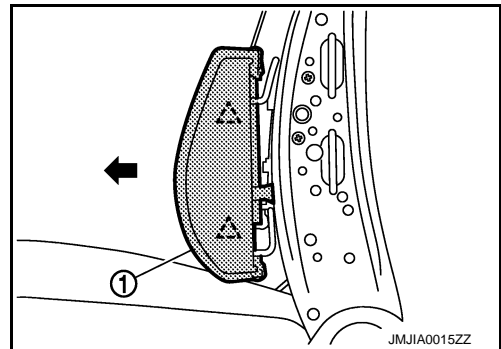
6. Remove the seatback silencer.
7. Remove the bolts, and then remove lumbar support unit.
8. Remove the side support bag and unit. (Side support model only.)

## FRONT SEAT

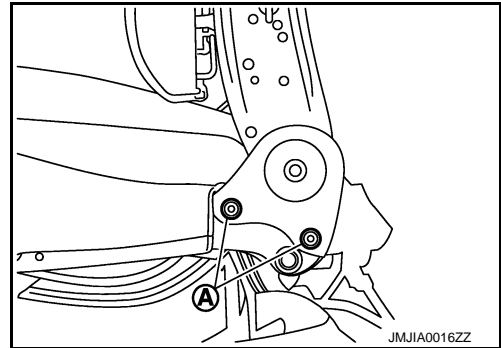
### < REMOVAL AND INSTALLATION >

- Remove the pawls, and then remove side support bag (1).
- Remove the side support unit.

 : 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.**

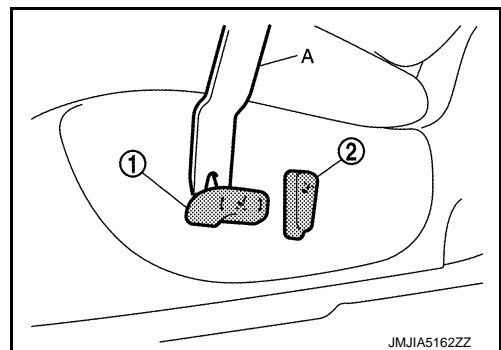
### SEAT CUSHION

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






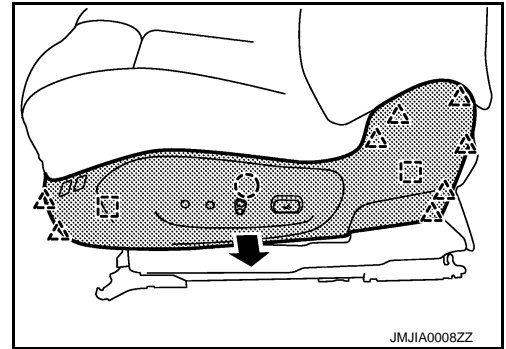
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# FRONT SEAT

## < REMOVAL AND INSTALLATION >

- Remove the metal clips, clips and pawls, and then pull out seat cushion outer finisher.


-  : Clip
-  : Metal clip
-  : Pawl

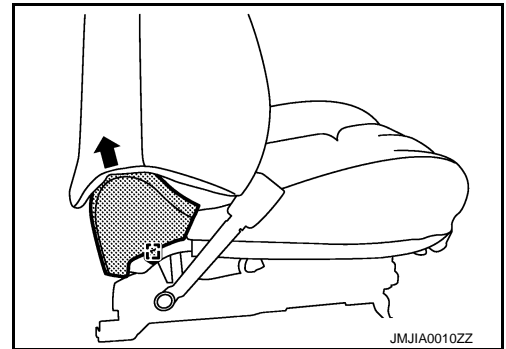


- Disconnect the seat control switch and side support switch harness connectors.
- Remove the reclining device outer cover (front, rear).

### 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 reclining device inner covers (front, rear) from the seat cushion inner finisher by releasing the pawls.

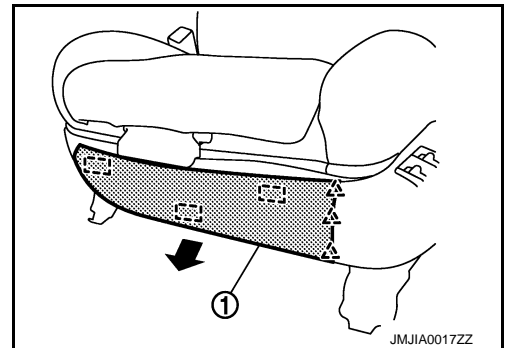
-  : Metal clip



### 3. Remove the seat cushion front finisher.




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

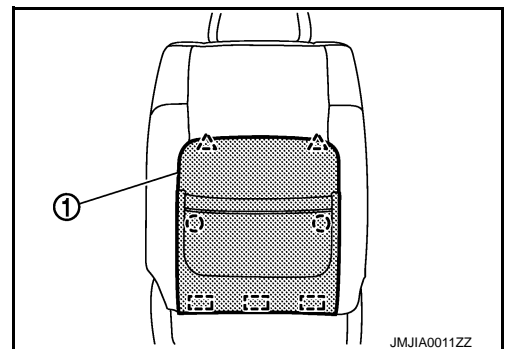
-  : Metal clip
-  : Pawl



### 4. Remove the seatback board.

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

-  : Clip
-  : Metal clip
-  : Pawl

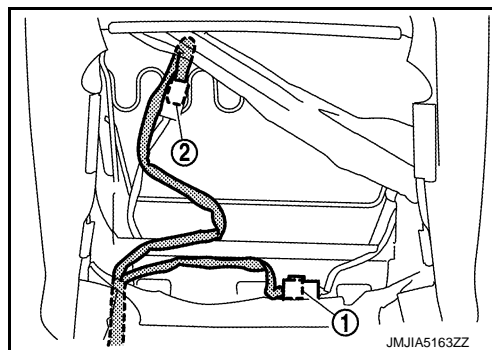


### 5. Remove the seatback assembly.

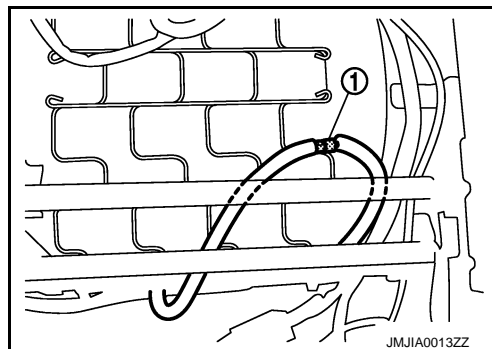
# FRONT SEAT

## < REMOVAL AND INSTALLATION >

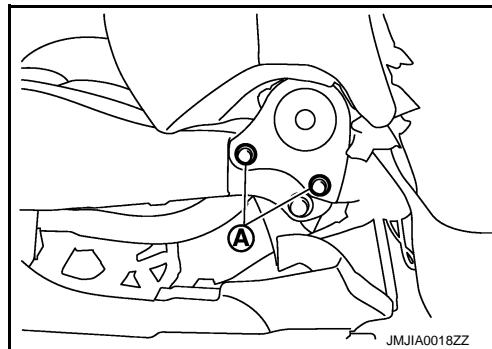
- Disconnect the reclining motor harness connector (1) and remove the harness clamp.
- Disconnect the side support unit harness connector (2) and remove the harness clamp. (Side support model only.)



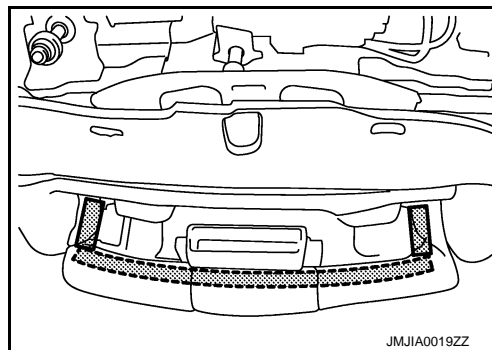
- Remove the seat cushion retainer, and then side air bag harness clamp and seatback heater unit harness connector.
- Remove the side support hose joint (1) located under the seat cushion. (Side support model only.)



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



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



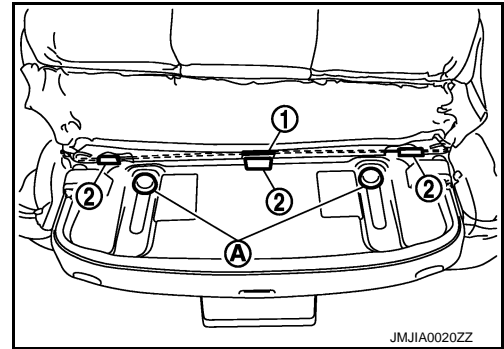
- Remove the thigh extension pad.

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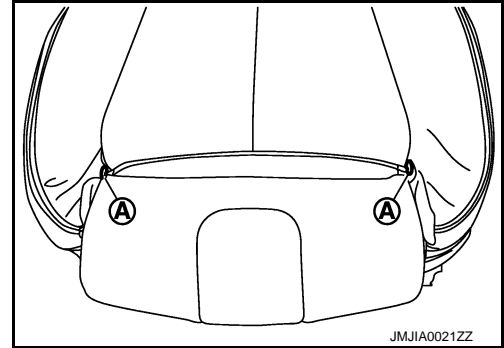
# FRONT SEAT

## < REMOVAL AND INSTALLATION >

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




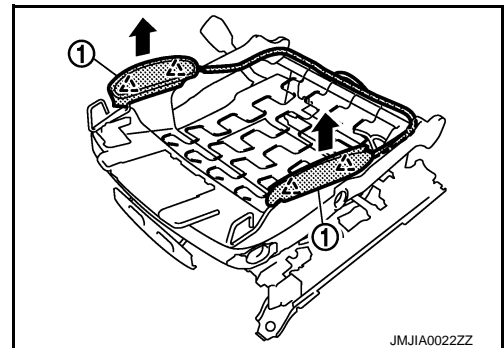
7. Remove the seat cushion pad and trim.
- Remove the clips (A). (Thigh extension model only.)




- 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.

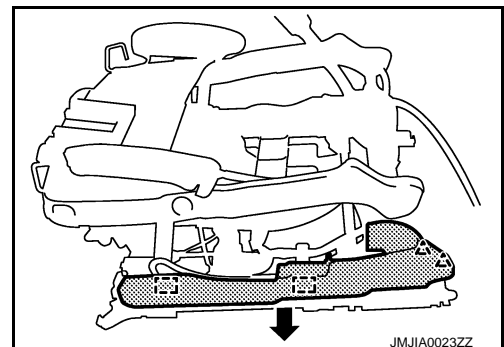
- Remove the pawls, and then remove side support bag (1).

 : 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



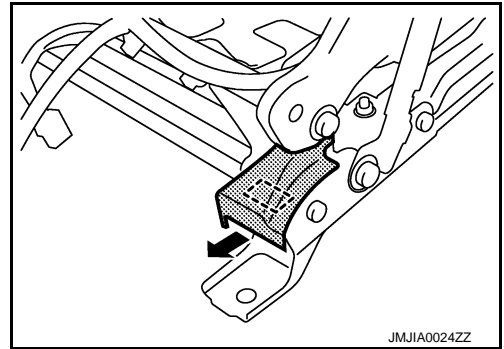
10. Remove the seat slide inner finisher.

# FRONT SEAT

## < REMOVAL AND INSTALLATION >

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.**

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# REAR SEAT

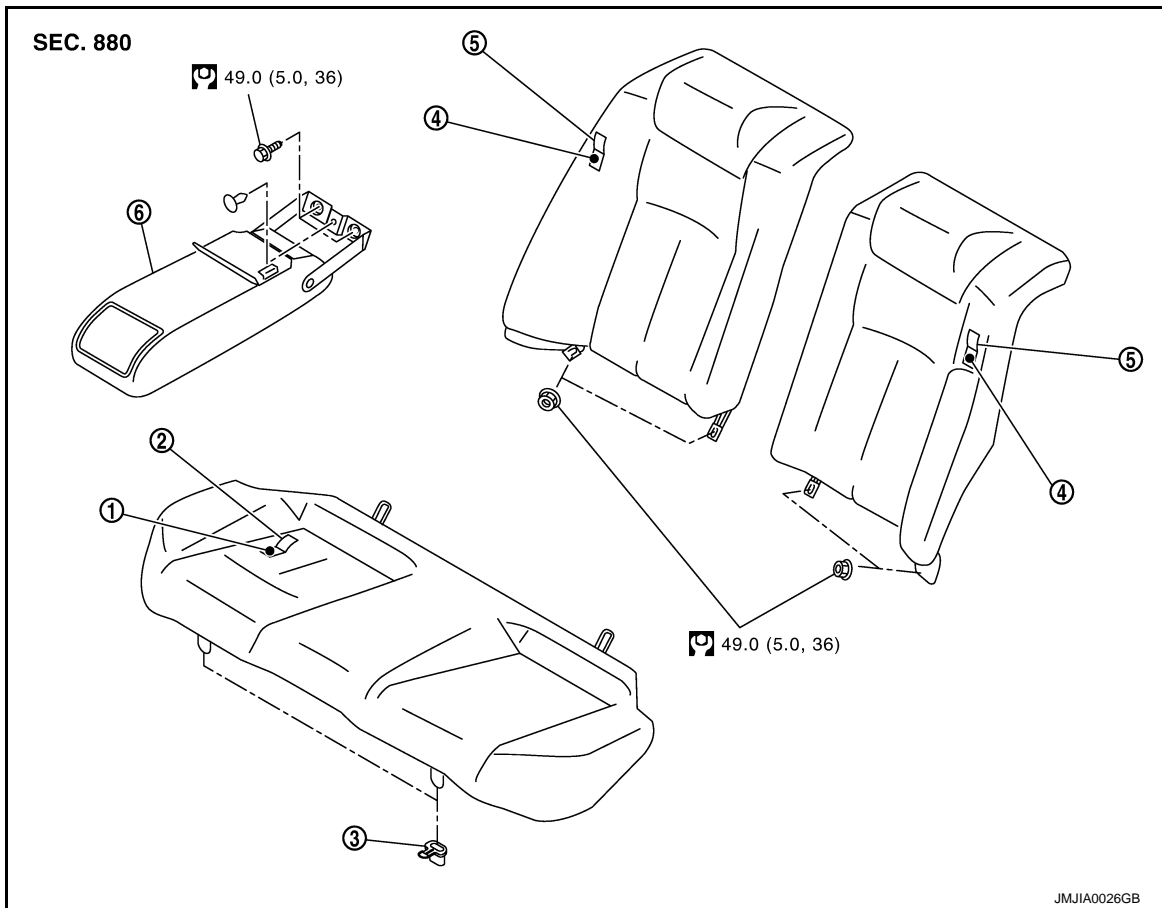
< REMOVAL AND INSTALLATION >

## REAR SEAT

Exploded View

INFOID:000000008290810

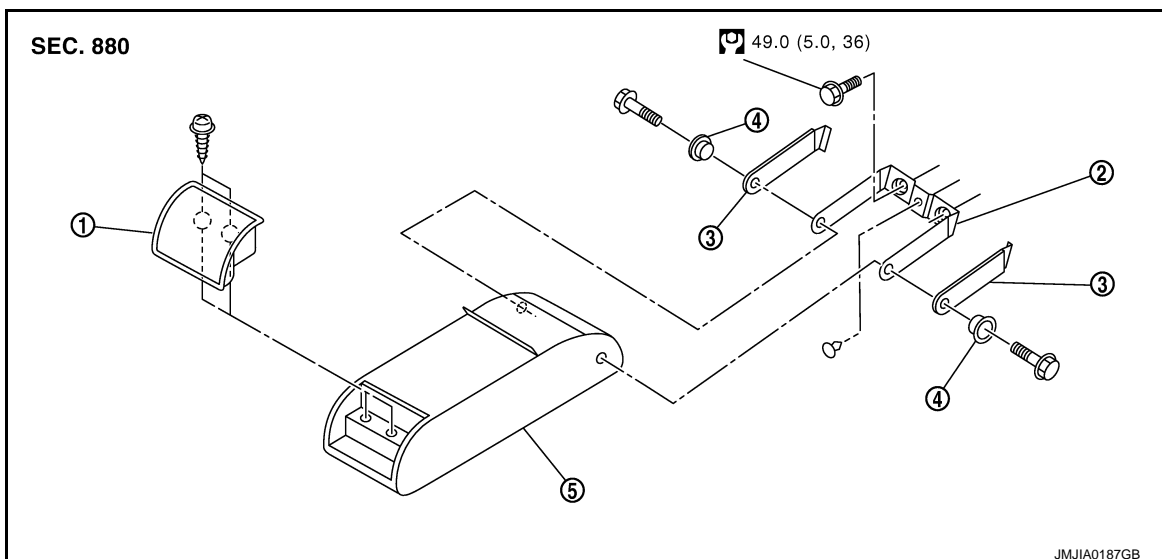
REAR SEAT



- 1. Seat cushion pad
- 2. Seat cushion trim
- 3. Seat cushion hook
- 4. Seatback pad
- 5. Seatback trim
- 6. Armrest assembly

Refer to [GI-4. "Components"](#) for symbols in the figure.

## ARMREST





# REAR SEAT

## < REMOVAL AND INSTALLATION >

- |               |                         |                                |
|---------------|-------------------------|--------------------------------|
| 1. Cup holder | 2. Armrest bracket      | 3. Armrest bracket outer cover |
| 4. bushing    | 5. Armrest trim and pad |                                |

Refer to [GI-4, "Components"](#) for symbols in the figure.

## Removal and Installation

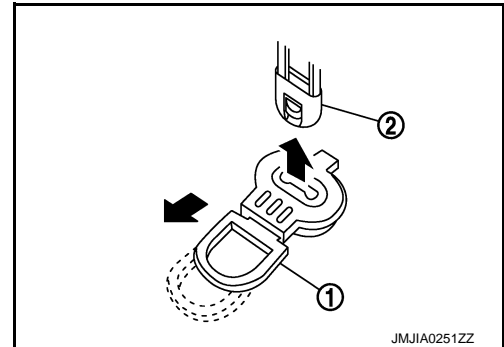
INFOID:000000008290811

### 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.



2. Remove the seatback.
  - 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

INFOID:000000008290812

### 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 bolts, and then remove the armrest bracket.

## REAR SEAT

### < REMOVAL AND INSTALLATION >

---

3. Remove the armrest bracket outer cover from armrest bracket.

Assembly

Assemble in the reverse order of disassembly.

# HEATED SEAT CONTROL UNIT

< REMOVAL AND INSTALLATION >

## HEATED SEAT CONTROL UNIT

### Exploded View

INFOID:000000008290813

Refer to [SE-60, "Exploded View"](#).

### Removal and Installation

INFOID:000000008290814

#### REMOVAL

**CAUTION:**

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

1. Remove the front seat.
2. Disconnect heated seat control unit connector.
3. Remove the heated seat control unit from the heated seat control unit stay. Refer to [SE-60, "Exploded View"](#).

#### INSTALLATION

Install in the reverse order of removal.

**CAUTION:**

**Always clamp the harness to the right place.**

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# POWER SEAT SWITCH

< REMOVAL AND INSTALLATION >

## POWER SEAT SWITCH

### Removal and Installation

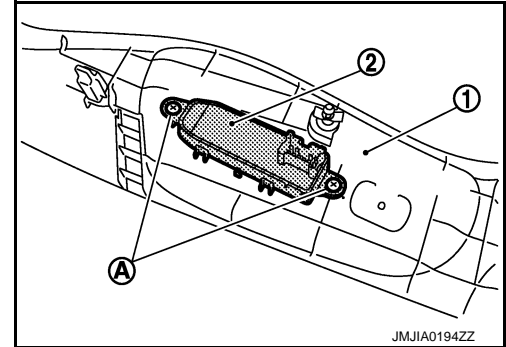
INFOID:000000008290815

#### 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-63](#). "[Removal and Installation](#)".
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

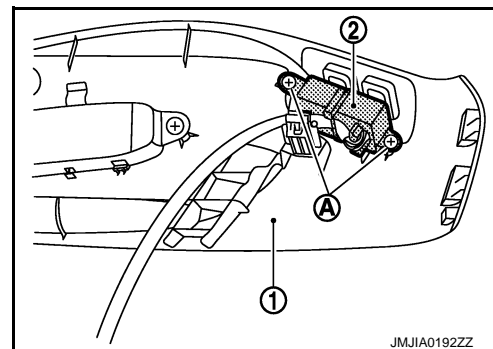
INFOID:000000008290816

#### 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-63, "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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# HEATED SEAT SWITCH

< REMOVAL AND INSTALLATION >

## HEATED SEAT SWITCH

### Exploded View

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Refer to [IP-33, "A/T MODELS : Exploded View"](#).

### Removal and Installation


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#### REMOVAL

##### **CAUTION:**

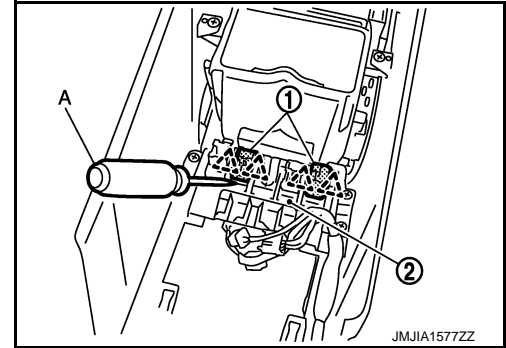
**When removing and installing, use shop cloths to protect from damage.**

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 remover tool (A).

 : Pawl

##### **NOTE:**

The same procedure is performed for passenger side.



#### INSTALLATION

Install in the reverse order of removal.