

FRONT POWER SEAT CONTROL SYSTEM (w/ Memory)

PRECAUTION

1. PRECAUTION OF DISCONNECTING BATTERY TERMINAL

NOTICE:

When disconnecting the negative (-) battery terminal, initialize the following system(s) after the terminal is reconnected.

System Name	See procedure
Power Window Control System	IN-29
Sliding Roof System	

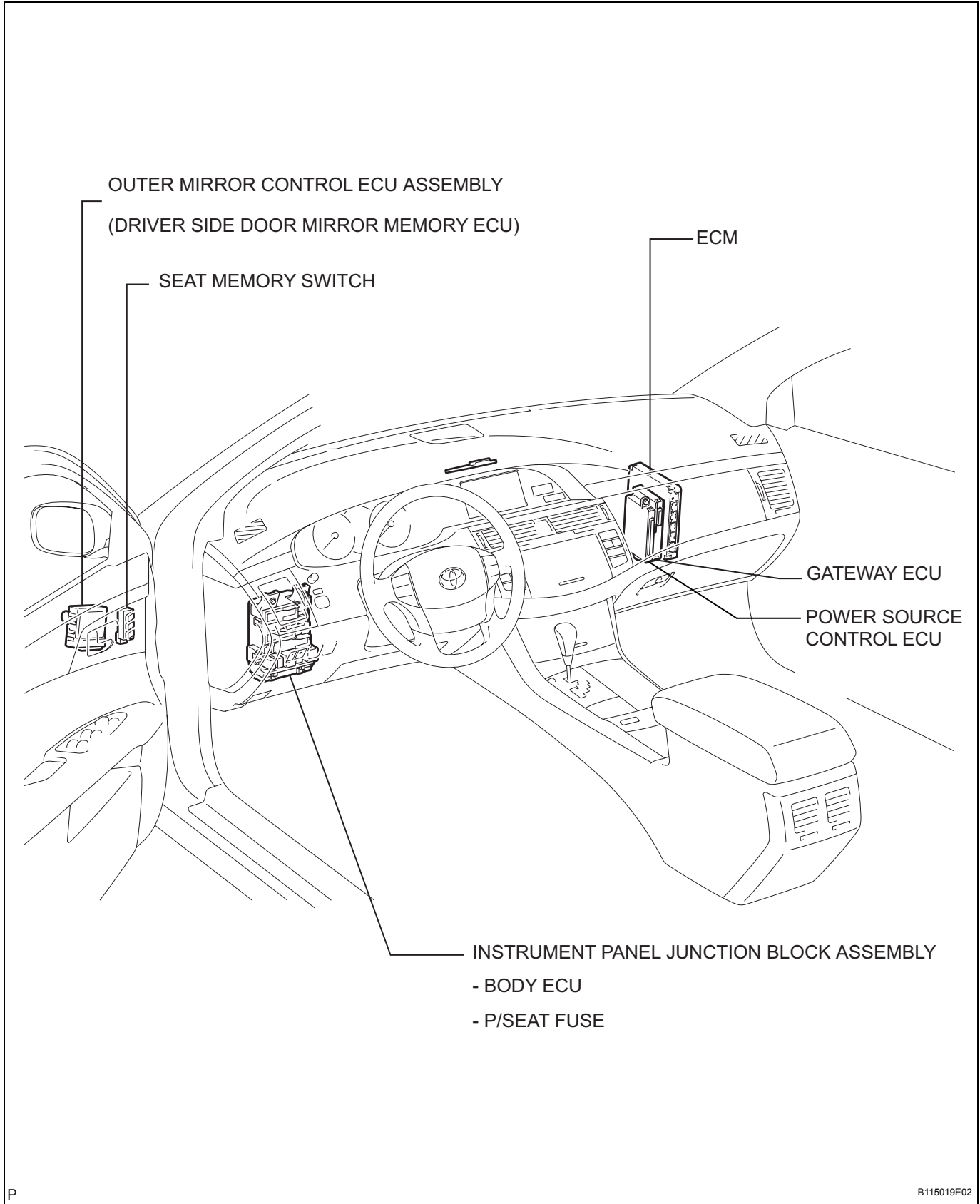
2. EXPRESSIONS OF IGNITION SWITCH

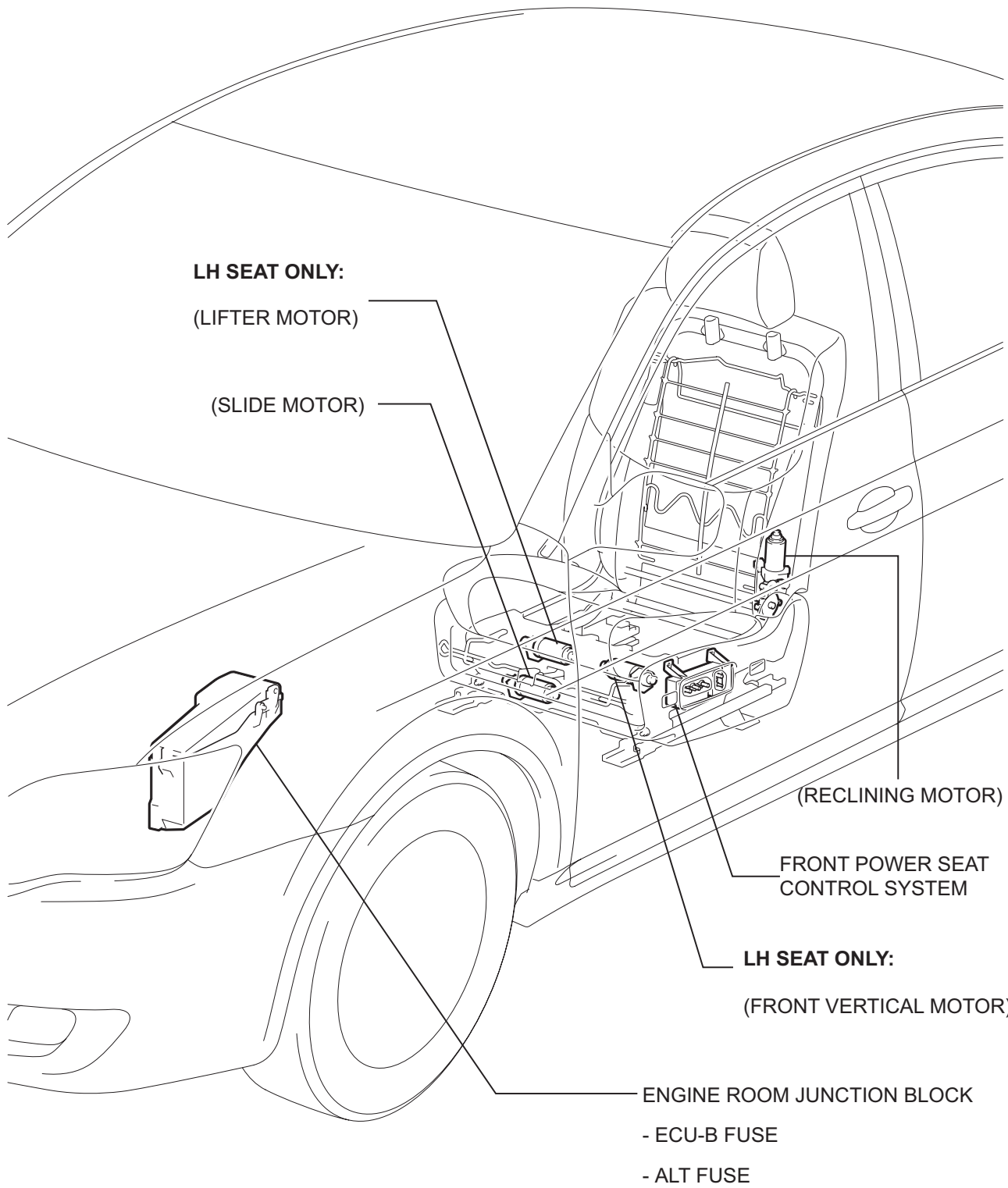
The type of ignition switch used on this model differs according to the specifications of the vehicle.

The expressions listed in the table below are used in this section.

Switch Type	Ignition Switch (position)	Engine Switch (condition)
Expression	Ignition Switch off	Off
	Ignition Switch on (IG)	On (IG)
	Ignition Switch on (ACC)	On (ACC)
	Engine Start	Start

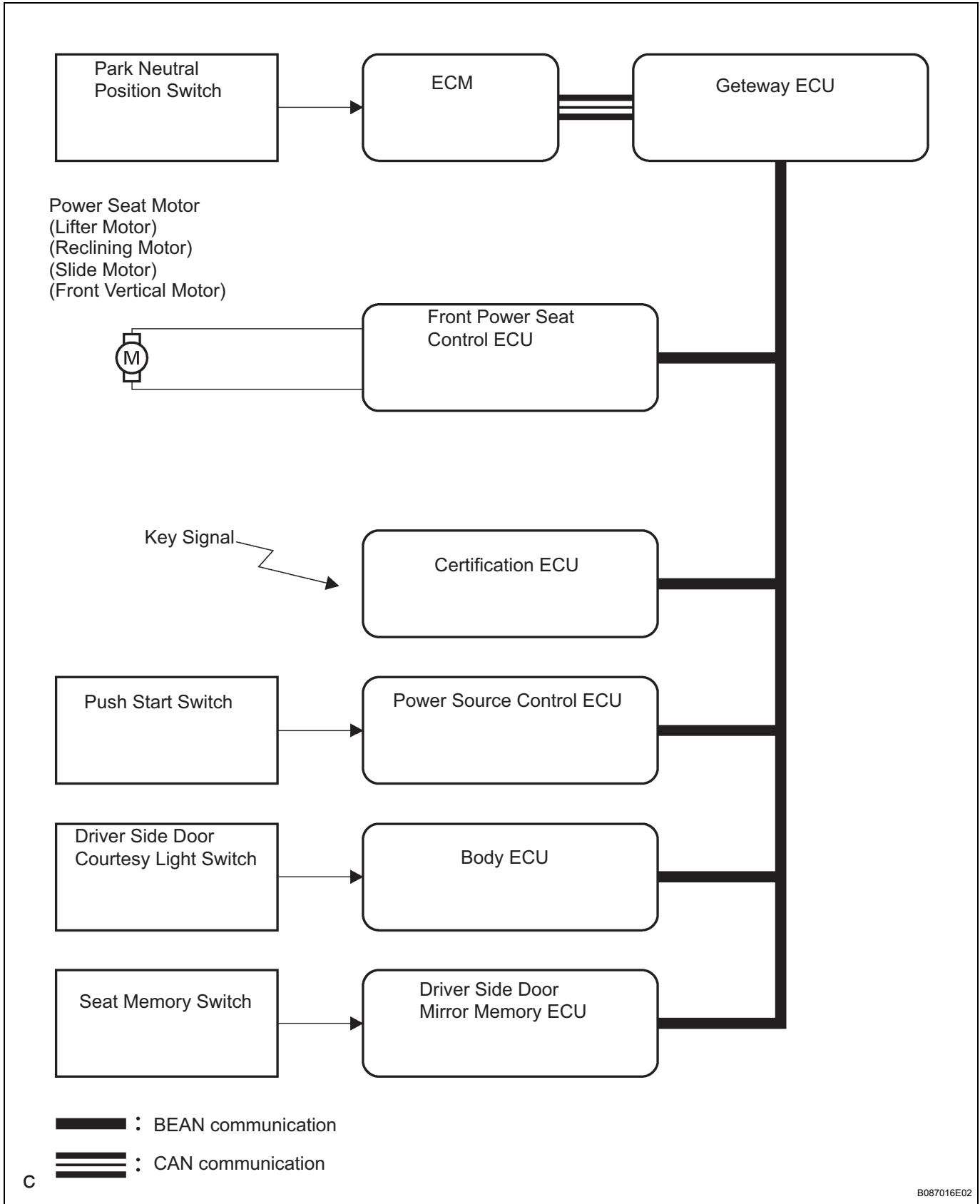
PARTS LOCATION





SE

SYSTEM DIAGRAM



1. SIGNAL COMMUNICATION TABLE

Transmitting ECU (Transmitter)	Receiving ECU	Signals	Communication method
ECM	Power seat control ECU	<ul style="list-style-type: none"> Shift position P signal 	CAN - BEAN
Certification ECU	Power seat control ECU	<ul style="list-style-type: none"> Smart memory call replay request signal Registration key ID code signal (when wireless control is operated) 	BEAN
Front power source control ECU	Power seat control ECU	<ul style="list-style-type: none"> Key code recognition signal 	BEAN
Body ECU	Power seat control ECU	<ul style="list-style-type: none"> Ignition switch on (IG) signal Ignition switch on (ACC) signal Key detection signal Driver side door courtesy light switch signal Front passenger side door courtesy light switch signal Smart door unlock signal Wireless door unlock signal Key ID signal 	BEAN
Driver side door mirror memory ECU	Power seat control ECU	<ul style="list-style-type: none"> Seat memory switch signal 	BEAN

SYSTEM DESCRIPTION

1. GENERAL DESCRIPTION

The power seat control system (w/ memory) controls the following functions:

- Manual operation of the front seat.
- Individual seat positions for two different drivers can be stored for the slide-reclining front-vertical 8-way lifter.
- Similarly, power mirror positions for two different drivers can be stored. These are stored/restored together with the seat positions by pushing the seat memory switch (driver side seat only).
- The above operations are performed using the multiplex communication system.
- As a safety precaution, the system disallows seat position restoration unless the ignition switch is on (IG) and the shift lever position is in P.
- Manual adjustment of the lumbar support function and leg cushion adjustment can be performed even when the position control ECU & switch assembly (front power seat switch) is not functional.

When the power seat control switch is operated, a command signal is sent to the position control ECU & switch assembly (front power seat switch). The position control ECU & switch assembly (front power seat switch) then activates the appropriate seat motor as needed.

This memory system does not use a seat position sensor. The seat position is detected by counting pulses that are output when the motor turns. If there is no pulse output from the motor, the motor will stop operating. The position control ECU & switch assembly (front power seat switch) is designed so that a malfunction of the seat memory system will not interfere with manual seat control. The seat memory switch also sends signals to the position control ECU & switch assembly (front power seat switch) to memorize a given seat position. Two seat positions can be memorized. The seat memory switch is later used to send signals to the position control ECU & switch assembly (front power seat switch) to return the seat to one of the memorized positions.

2. MEMORY CALL FUNCTION

- (a) This function uses the key ID to move the seat automatically into the position previously set for the key ID when the driver side door is opened or the ignition switch is turned on (ACC or IG) after the doors are unlocked.

3. FUNCTION OF MAIN COMPONENT

The following functions are available.

Components	Function
Seat slide motor	Slides the driver side seatback and forth based on signals from the position control ECU & switch assembly (front power seat switch).
Seat reclining motor	Relines the driver side seatback and forth based on signals from the position control ECU & switch assembly (front power seat switch).

Components	Function
Seat front vertical motor	Moves the front part of the driver side seat up and down based on signals from the position control ECU & switch assembly (front power seat switch).
Seat lifter motor	Moves the driver side seat up and down based on signals from the position control ECU & switch assembly (front power seat switch), motor operates, and driver side's seat rear vertical raises and lowers.
Seat switch Memory switch	When the set and memory switches are pressed simultaneously, a SET, 1 or 2 switch signal is input to the outer mirror control ECU assembly and sends the seat memory switch signal via the multiplex communication system. When only the memory switch is pressed, a SET, 1 or 2 switch signal is input to the outer mirror control ECU assembly and driver side seat position changes according to memory.

4. SYSTEM OPERATION

The front power seat adjustment and position memory are shown in the chart below.

Seat Adjustment Function	Driver	Front Passenger
Slide	Power and memory	Power
Reclining	Power and memory	Power
Front Vertical Height	Power and memory	-
Rear Vertical	Power and memory	-
Lumbar Support	Power	-
Leg Cushion Adjuster	Power	-

In the memory function, the memory switch operation is initially transferred from the outer mirror control ECU assembly to the position control ECU & switch assembly (front power seat switch) via the multiplex communication line. Then, either the seat position is stored in memory or a previously stored seat position is recalled to seat the appropriate seat position.

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use this procedure to troubleshoot the front power seat control system with the memory function.
- The intelligent tester should be used in steps 3 and 5.

1 VEHICLE BROUGHT TO WORKSHOP

NEXT

2 CUSTOMER PROBLEM ANALYSIS CHECK AND PROBLEM SYMPTOM CHECK

NEXT

3 CHECK COMMUNICATION FUNCTION OF MULTIPLEX COMMUNICATION SYSTEM (BEAN)

- (a) Use the intelligent tester to check for normal function of the multiplex communication system.
- (1) (ECU not connected, communication line malfunctioning) If no code is output, proceed to A.
 - (2) (ECU not connected, communication line malfunctioning) If any code is output, proceed to B.

B

Go to MULTIPLEX COMMUNICATION SYSTEM

A

4 PROBLEM SYMPTOMS TABLE

- (a) If the fault is not listed on the problem symptoms table, proceed to A.
- (b) If the fault is listed on the problem symptoms table, proceed to B.

B

Go to step 6

A

5 OVERALL ANALYSIS AND TROUBLESHOOTING

- (a) DATA LIST/ACTIVE TEST (See page [SE-10](#)).
- (1) Inspection with the intelligent tester (DATA LIST).
 - (2) Inspection with the intelligent tester (ACTIVE TEST).
- (b) Terminals of ECU (See page [SE-9](#)).
- (c) On vehicle inspection (See page [SE-13](#)).

NEXT

6 ADJUST, REPAIR OR REPLACE

NEXT

7 CONFIRMATION TEST

NEXT

END

PROBLEM SYMPTOMS TABLE

HINT:

Inspect the fuse and relay before confirming the suspected areas in the table below.

Inspect each suspected area in numerical order for the corresponding symptom.

If the malfunction still exists after checking and confirming that all circuits and components are normal, replace the ECU.

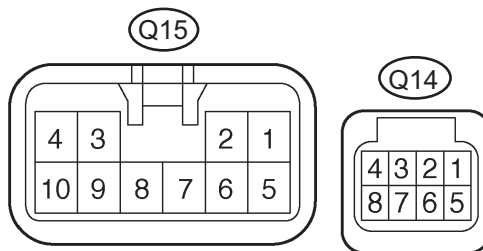
FRONT POWER SEAT CONTROL SYSTEM (W/ MEMORY)

Symptom	Suspected area	See page
Power seat does not operate (manual or memorized positions).	1. ECU power source circuit	SE-22
	2. Position control ECU & switch assembly (front power seat switch)	SE-51
One of the power seat functions does not operate (manual or memorized positions).	1. Power seat motor circuit	SE-16
	2. Position control ECU & switch assembly (front power seat switch)	SE-51
One or all manual seat functions do not operate (memorized positions OK).	Position control ECU & switch assembly (front power seat switch)	SE-51
Memory function does not operate.	1. Memory switch circuit	SE-19
	2. Multiplex communication system	MP-10
	3. Position control ECU & switch assembly (front power seat switch)	SE-51
No memory functions operate or all memory functions operate briefly and then stop (manual functions OK).	1. ECU power source circuit	SE-22
	2. Position control ECU & switch assembly (front power seat switch)	SE-51
One memory function does not operate or operates briefly and then stops (manual functions OK).	1. Power seat motor assembly	SE-16
	2. Position control ECU & switch assembly (front power seat switch)	SE-51

TERMINALS OF ECU

1. POSITION CONTROL ECU & SWITCH ASSEMBLY (POWER SEAT CONTROL ECU)

Connector Front View:



Y

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- Disconnect the Q14 and Q15 connectors.
- Check the voltage of each terminal of the wire harness side connectors.

Voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
IG (Q14-4) - Q15-1 (GND)	Y - W-B	Ignition switch	Ignition switch off → on (IG)	Below 1 V → 10 to 14 V
SYSB (Q14-8) - Q15-1 (GND)	GR - W-B	Power source	Always	10 to 14 V
+B (Q15-5) - Q15-1 (GND)	LG - W-B	Battery	Always	10 to 14 V

If the result is not as specified, there may be a malfunction on the wire harness side.

- Check the resistance of each terminal of the wire harness side connectors.

Resistance

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
GND (Q15-1) - Body ground	W-B - Body Ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

- Reconnect the Q14 and Q15 ECU connectors.
- Check the voltage of each terminal of the connectors.

Voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
MPX1 (Q14-1) - GND (Q15-1)	O - W-B	Multiplex communication signal circuit	Ignition switch on (IG)	Pulse generation
SLD+ (Q15-2) - GND (Q15-1)	L - W-B	Sliding motor signal (Forward)	Seat moving forward using sliding switch → Other conditions	10 to 14 V → Below 1 V
SLD- (Q15-3) - GND (Q15-1)	Y - W-B	Sliding motor signal (Rearward)	Seat moving rearward using sliding switch → Other conditions	10 to 14 V → Below 1 V
FRV- (Q15-4) - GND (Q15-1)	B - W-B	Front vertical motor signal (Downward)	Seat cushion front portion lowering using front vertical switch → Other conditions	10 to 14 V → Below 1 V

SE

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
FRV+ (Q15-6) - GND (Q15-1)	G - W-B	Front vertical motor signal (Upward)	Seat cushion front portion rising using front vertical switch → Other conditions	10 to 14 V → Below 1 V
LFT+ (Q15-7) - GND (Q15-1)	W - W-B	Lifter motor signal (Upward)	Seat rising using lifter switch → Other conditions	10 to 14 V → Below 1 V
RCL+ (Q15-8) - GND (Q15-1)	P - W-B	Reclining motor signal (Forward)	Seatback moving forward using reclining switch → Other conditions	10 to 14 V → Below 1 V
LFT- (Q15-9) - GND (Q15-1)	V - W-B	Lifter motor signal (Downward)	Seat lowering using lifter switch → Other conditions	10 to 14 V → Below 1 V
RCL- (Q15-10) - GND (Q15-1)	BR - W-B	Reclining motor signal (Rearward)	Seatback moving rearward using reclining switch → Other conditions	10 to 14 V → Below 1 V

If the result is not as specified, the front power seat switch may be malfunctioning.

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the intelligent tester's DATA LIST allows the status of a switch, sensor, actuator and other items to be read without removing any parts. Reading the DATA LIST early in troubleshooting is one way to save time.

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch on (IG).
- (c) Read the DATA LIST.

D_SEAT (Power Seat ECU):

Item	Measurement Item/Range (Display)	Normal Condition	Diagnostic Note
RECLIN SW REAR	Reclining switch signal (Rearward)/ ON or OFF	ON: Reclining switch (Rearward) is ON OFF: Reclining switch (Rearward) is OFF	-
RECLIN SW FRONT	Reclining switch signal (Forward)/ ON or OFF	ON: Reclining switch (Forward) is ON OFF: Reclining switch (Forward) is OFF	-
F VTCL SW DOWN	Front vertical switch signal (Downward)/ ON or OFF	ON: Front vertical switch (Downward) is ON OFF: Front vertical switch (Downward) is OFF	-
F VTCL SW UP	Front vertical switch signal (Upward)/ ON or OFF	ON: Front vertical switch (Upward) is ON OFF: Front vertical switch (Upward) is OFF	-
LIFTER SW DOWN	Lifter switch signal (Downward)/ ON or OFF	ON: Lifter switch (Downward) is ON OFF: Lifter switch (Downward) is OFF	-
LIFTER SW UP	Lifter switch signal (Upward)/ ON or OFF	ON: Lifter switch (Upward) is ON OFF: Lifter switch (Upward) is OFF	-
SLIDE SW REAR	Sliding switch signal (Rearward)/ ON or OFF	ON: Sliding switch (Rearward) is ON OFF: Sliding switch (Rearward) is OFF	-
SLIDE SW FRONT	Sliding switch signal (Forward)/ ON or OFF	ON: Sliding switch (Forward) is ON OFF: Sliding switch (Forward) is OFF	-
POWER VOLTAGE	Power supply for driver seat ECU & switch/ MIN: 0 V, MAX: 19.89 V	Within range from 11 to 14 V	-
IG SW	Ignition switch status (IG)/ ON or OFF	ON: Ignition switch is ON OFF: Ignition switch is OFF	-
KEY UNLOCK SW	Key detection signal/ ON or OFF	ON: Key is in the vicinity of the driver's seat OFF: Key is not in the vicinity of the driver's side	-
DOOR WARN SW	Door courtesy switch signal/ ON or OFF	ON: Driver side door is open OFF: Driver side door is closed	-
PNP SW	Shift lever position P signal/ ON or OFF	ON: Shift lever in P position OFF: Shift lever in any position except P	-

Item	Measurement Item/Range (Display)	Normal Condition	Diagnostic Note
KEY CODE CONF	Recognition code is registered/ ON or OFF	ON: One or more recognition codes are registered OFF: No recognition code is registered	-
ACC SW	Ignition switch status (ACC)/ ON or OFF	ON: Ignition switch is ACC OFF: Ignition switch is OFF	-
M2 SW	Seat memory switch M2 signal/ ON or OFF	ON: Seat memory switch M2 is ON OFF: Seat memory switch M2 is OFF	-
M1 SW	Seat memory switch M1 signal/ ON or OFF	ON: Seat memory switch M1 is ON OFF: Seat memory switch M1 is OFF	-
SET SW	Seat memory set switch signal/ ON or OFF	ON: Memory set switch is ON OFF: Memory set switch is OFF	-
SLIDE POS	Seat sliding position/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
RECLIN POS	Seatback position/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
F VTCL POS	Seat front vertical position/ MIN: - 4096, MAX: 4096	Within range from -4096 to 4096	-
LIFTER POS	Seat lifter position/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
MEM M1 SW	Driving position memorized with seat memory switch M1/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
MEM M2 SW	Driving position memorized with seat memory switch M2/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
SEAT MEM M1	Seat position memorized with seat memory switch M1/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
SEAT MEM M2	Seat position memorized with seat memory switch M2/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
SLIDE MEM POS 1	Seat sliding position memorized with seat memory switch M1/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
RECLN MEM POS 1	Seatback position memorized with seat memory switch M1/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
F VTCL MEM POS 1	Front vertical position memorized with seat memory switch M1/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
LIFTER MEM POS 1	Lifter position memorized with seat memory switch M1/ MIN: - 4096, MAX: 4096	Within range from -4096 to 4096	-
SLIDE MEM POS 2	Seat sliding position memorized with seat memory switch M2/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
RECLN MEM POS 2	Seatback position memorized with seat memory switch M2/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
F VTCL MEM POS 2	Front vertical position memorized with seat memory switch M2/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
LIFTER MEM POS 2	Lifter position memorized with seat memory switch M2/ MIN: - 4096, MAX: 4096	Within range from -4096 to 4096	-

2. ACTIVE TEST

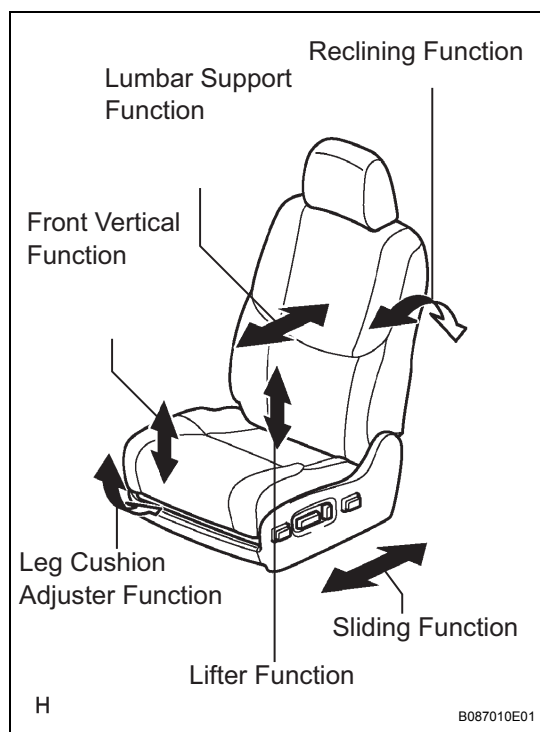
HINT:

Using the intelligent tester's ACTIVE TEST allows the relay, VSV, actuator, and other items to be operated without removing any parts. Reading the ACTIVE TEST early in troubleshooting is one way to save time. The DATA LIST can be displayed during the ACTIVE TEST.

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch on (IG).
- (c) Perform the ACTIVE TEST by following the directions on the tester screen.

D_SEAT (Power Seat ECU):

Item	Test Details	Diagnostic Note
RECLINING	Test detail: reclining operation FRONT/REAR Vehicle condition: stopped	-
F VERTICAL	Test detail: front vertical operation UP/DOWN Vehicle condition: stopped	-
LIFTER	Test detail: lifter operation UP/DOWN Vehicle condition: stopped	-
SLIDE	Test detail: sliding operation UP/DOWN Vehicle condition: stopped	-



ON-VEHICLE INSPECTION

1. CHECK POWER SEAT MOTOR

- (a) Check the basic functions.
 - (1) Operate the power seat switches and check that the following seat functions work:
 - Sliding
 - Front vertical (Driver side seat only)
 - Lifter (Driver side seat only)
 - Reclining
 - Lumbar support (Driver side seat only)
 - Leg cushion adjuster (Driver side seat only)

2. CHECK FRONT SEAT ADJUSTER

- (a) Check PTC operation inside the power seat motor.

HINT:

The PTC thermistor's resistance increases when the power seat switch is held down even after the power seat has been moved to the furthest possible position in one direction. When the resistance increases, the current is shut off to prevent a short circuit.

NOTICE:

Perform procedure "A" to "D" to check the full range of motion for each power seat function.

- (1) Choose a power seat function. Operate the power seat switch and move the seat to the furthest possible position in one direction. Keep the seat in that position for approximately 60 seconds (Procedure "A").

- (2) Operate the power seat switch again and continue to try to move the seat in the same direction as in procedure "A". Measure the time until the electrical current is shut off (motor operation sound will stop) (Procedure "B").

Standard:

4 to 90 seconds

- (3) Turn the power seat switch off after the current is shut off, and maintain that condition for approximately 60 seconds (Procedure "C").
- (4) Operate the same switch again and move the seat to the position opposite to the direction in procedure "A". Check that the motor operates (Procedure "D").
- (5) Repeat procedure "A" to "D" for the remaining power seat functions.

3. CHECK LUMBAR SUPPORT ADJUSTER ASSEMBLY LH

- (a) Inspect PTC operation inside the power seat motor.

NOTICE:

This inspection should be performed with the seat installed in the vehicle.

- (1) Move the lumbar support to either the foremost or rearmost position by operating the lumbar support switch, and hold it there for approx. 60 seconds.
- (2) Try to move the lumbar support past the furthest possible position using the switch and measure the time until the electrical current is shut off (motor operation sound will stop).

Standard:

4 to 90 seconds

- (3) Turn the lumbar support switch off after the current is shut off, and maintain that condition for approx. 60 seconds.
- (4) Operate the lumbar support switch to move the lumbar support to the opposite position and check that the motor operates.

4. CHECK FRONT SEAT ADJUSTER

- (a) Inspect PTC operation inside the power seat motor.

NOTICE:

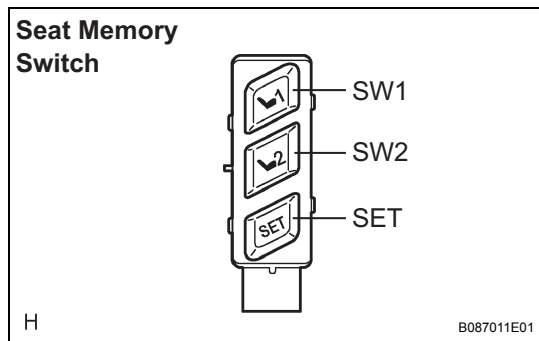
The inspection should be performed with the seat installed in the vehicle.

- (1) Move the leg cushion to either the foremost or rearmost position by operating the leg cushion switch, and hold it there for approx. 60 seconds.
- (2) Try to move the leg cushion past the furthest possible position using the switch and measure the time until the electrical current is shut off (motor operation sound will stop).

Standard:

4 to 90 seconds

- (3) Turn the leg cushion switch off after the current is shut off, and maintain that condition for approx. 60 seconds.
- (4) Operate the leg cushion switch to move the leg cushion to the opposite position and check that the motor operates.



5. CHECK SEAT MEMORY SWITCH

- (a) Turn the ignition switch on (IG) and move the shift lever into the P position.
- (b) Move the seat into the foremost and uppermost positions using each seat switch.
- (c) Check that the buzzer sounds for 0.5 seconds and the seat position is recorded when the SW1 switch is pressed while the SET switch is held down.
- (d) Move the seat from the foremost and uppermost positions using each seat switch.
- (e) Check that the buzzer sounds for 0.5 seconds and the seat position is recorded when the SW2 switch is pressed while the SET switch is held down.
- (f) Check that the buzzer sounds for 0.1 seconds and the seat automatically moves into the foremost and uppermost positions (set positions) when the SW1 switch is pressed.
- (g) Check that the buzzer sounds for 0.1 seconds and the seat automatically moves out of the foremost and uppermost positions (set positions) when the SW2 switch is pressed.
- (h) With the driver side door open and the key in the vicinity of the driver's seat within 30 seconds after the ignition switch is turned off, check that the seat automatically moves into the set position when the SW1 or SW2 switch is pressed.
- (i) Move the seat into both maximum positions of the slide movement, and disconnect the negative terminal cable of the battery while the memory switch is pressed. Then leave the seat in that position for 3 minutes. The seat position memory will be erased.
- (j) Move the seat into all the maximum positions (front/rear and up/down) using each seat switch.
- (k) After the SW1 and SW2 switches are pressed together while the SET switch is held down check that the seat does not move (the seat position is not recorded) when the SW1 or SW2 switches is pressed.

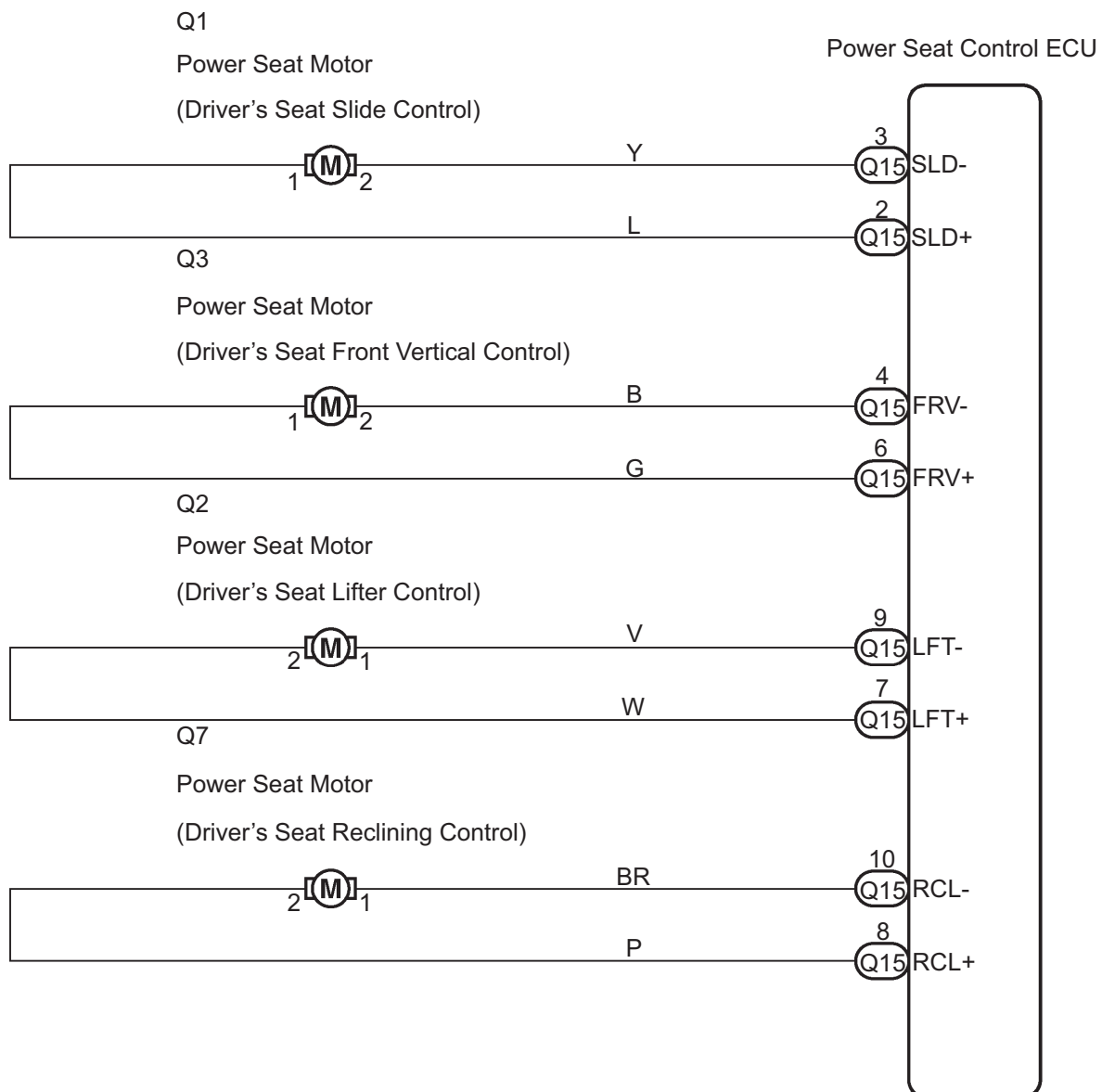
Power Seat Motor Circuit

DESCRIPTION

When the power seat control switch is operated, a command signal is sent to the position control ECU & switch assembly (front power seat switch). The front power seat switch then controls the appropriate seat motor as needed. This memory system does not use a seat position sensor. The seat position is detected by counting pulses that are output when the motor turns. If there is no pulse output from the motor, the motor will stop operating. The front power seat switch is designed so that any malfunction of the seat memory system will not interfere with manual seat control.

If the position control ECU & switch assembly (front power seat switch) detects a low motor speed, abnormal activity, or sudden motor current fluctuation the system will stop the motor. If the motor operates continuously for 120 seconds or more, the system will stop the motor until the switch is turned on again.

WIRING DIAGRAM



INSPECTION PROCEDURE**1 PERFORM ACTIVE TEST BY INTELLIGENT TESTER**

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch on (IG).
- (c) Perform the ACTIVE TEST by following the directions on the tester screen.

D_SEAT (Power Seat ECU):

Item	Test Details	Diagnostic Note
RECLINING	Test detail: reclining operation FRONT/REAR Vehicle condition: stopped	-
F VERTICAL	Test detail: front vertical operation UP/DOWN Vehicle condition: stopped	-
LIFTER	Test detail: lifter operation UP/DOWN Vehicle condition: stopped	-
SLIDE	Test detail: sliding operation UP/DOWN Vehicle condition: stopped	-

OK:

The each power seat motors are moved.

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Go to step 2

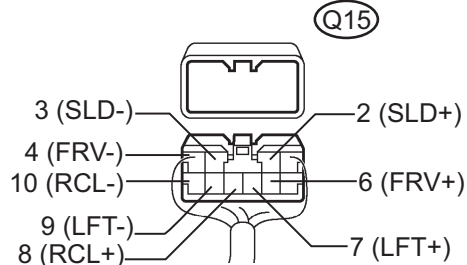
OK**PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE****2 INSPECT POWER SEAT MOTOR ASSEMBLY**

- (a) Inspect the power seat motor (See page [SE-82](#)).

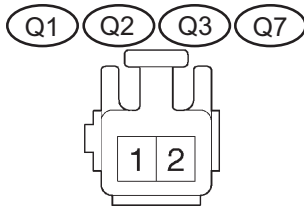
NG**REPLACE POWER SEAT MOTOR ASSEMBLY****OK****SE**

3 CHECK HARNESS AND CONNECTOR (FRONT POWER SEAT SWITCH - POWER SEAT MOTOR ASSEMBLY)

Front Power Seat Switch Connector Wire Harness Rear View:



Power Seat Motor Connector Wire Harness Front View:



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- (a) Disconnect the power seat motor connectors and front power seat switch connector.
- (b) Measure the resistance according to the value(s) in the table below.

Resistance

Tester Connection	Specified Condition
Q15-3 (SLD-) - Q1-2	Below 1 Ω
Q15-2 (SLD+) - Q1-1	Below 1 Ω
Q15-4 (FRV-) - Q3-2	Below 1 Ω
Q15-6 (FRV+) - Q3-1	Below 1 Ω
Q15-9 (LFT-) - Q2-1	Below 1 Ω
Q15-7 (LFT+) - Q2-2	Below 1 Ω
Q15-10 (RCL-) - Q7-1	Below 1 Ω
Q15-8 (RCL+) - Q7-2	Below 1 Ω
Q15-2 (SLD+) - Body ground	10 k Ω or higher
Q15-3 (SLD-) - Body ground	10 k Ω or higher
Q15-4 (FRV-) - Body ground	10 k Ω or higher
Q15-6 (FRV+) - Body ground	10 k Ω or higher
Q15-7 (LFT+) - Body ground	10 k Ω or higher
Q15-8 (RCL+) - Body ground	10 k Ω or higher
Q15-9 (LFT-) - Body ground	10 k Ω or higher
Q15-10 (RCL-) - Body ground	10 k Ω or higher

NG

**REPAIR OR REPLACE HARNESS OR
CONNECTOR**

OK

SE

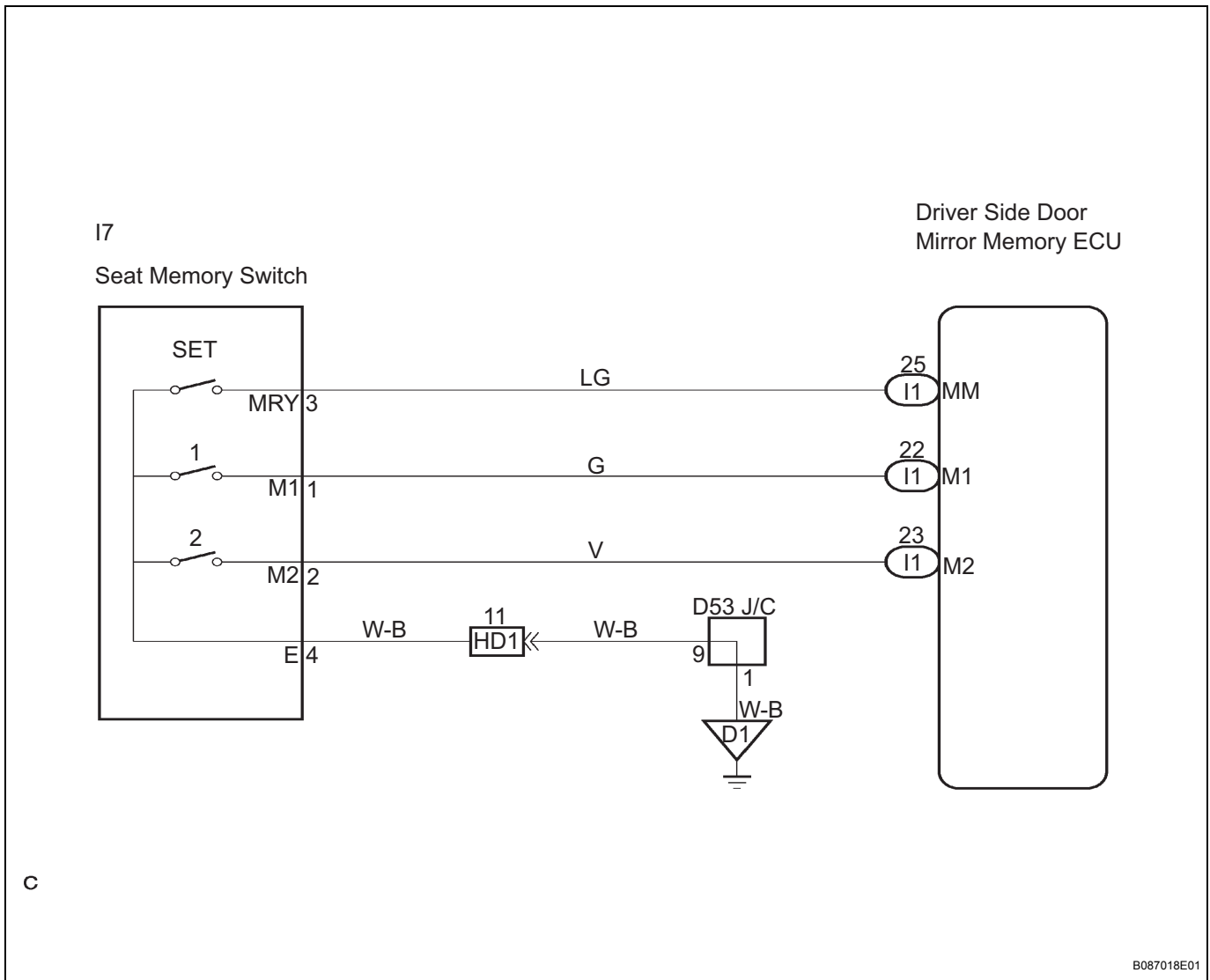
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

Driving Position Memory Switch Circuit (w/ Memory)

DESCRIPTION

The seat memory switch sends signals to the outer mirror control ECU assembly via the multiplex communication system to memorize a given seat position. This memory system does not use a position sensor. The seat position is detected by counting pulses that are output when the motor turns. If there is no pulse output from the motor, the motor will stop operating. The seat memory switch is later used to send signals to the front power seat switch to return the seat to one of the memorized positions. The power seat memory operation can be performed only when the ignition switch is on (IG) and the shift lever position is in P.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 READ VALUE OF INTELLIGENT TESTER

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.

- (b) Turn the ignition switch on (IG).
- (c) Read the DATA LIST.

D_SEAT (Power Seat ECU):

Item	Measurement Item/Range (Display)	Normal Condition	Diagnostic Note
M2 SW	Seat memory switch M2 signal/ ON or OFF	ON: Seat memory switch M2 is ON OFF: Seat memory switch M2 is OFF	-
M1 SW	Seat memory switch M1 signal/ ON or OFF	ON: Seat memory switch M1 is ON OFF: Seat memory switch M1 is OFF	-
SET SW	Seat memory set switch signal/ ON or OFF	ON: Memory set switch is ON OFF: Memory set switch is OFF	-

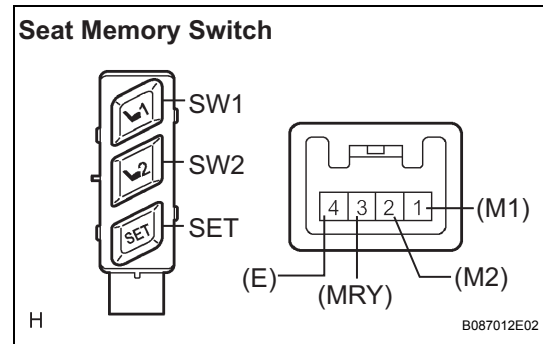
OK:
Condition status can be displayed.

NG → **Go to step 2**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT SEAT MEMORY SWITCH



- (a) Remove the seat memory switch.
- (b) Measure the resistance according to the value(s) in the table below.

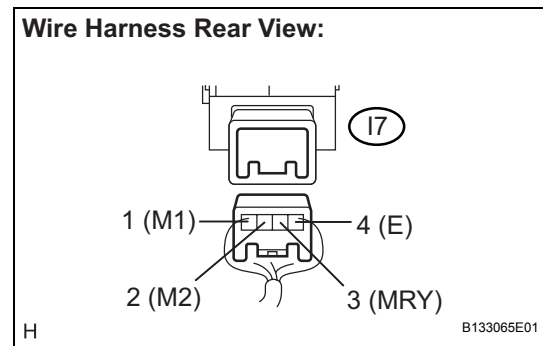
Resistance

Tester Connection	Condition	Specified Condition
1 (M1) - 4 (E)	SW1 switch pushed	Below 1 Ω
2 (M2) - 4 (E)	SW2 switch pushed	Below 1 Ω
3 (MRY) - 4 (E)	SET switch pushed	Below 1 Ω

NG → **REPLACE SEAT MEMORY SWITCH**

OK

3 CHECK HARNESS AND CONNECTOR (SEAT MEMORY SWITCH CIRCUIT)



- (a) Measure the voltage according to the value(s) in the table below.

Voltage

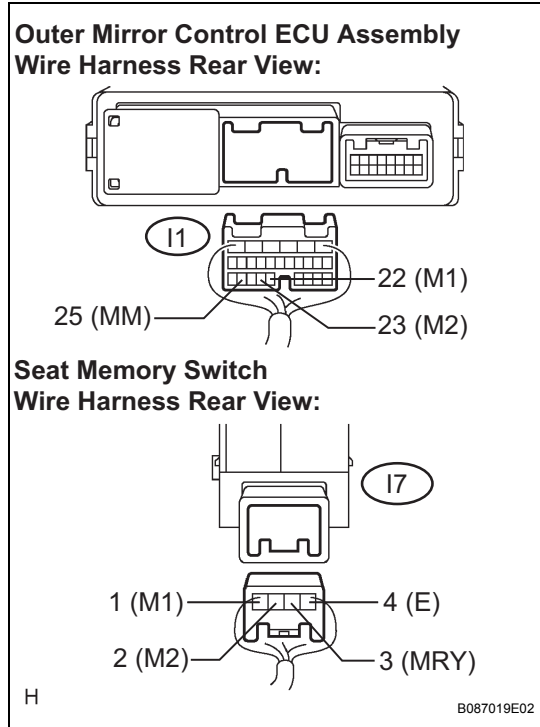
Tester Connection	Condition	Specified Condition
I7-1 (M1) - I7-4 (E)	Ignition switch on (IG)	10 to 14 V
I7-2 (M2) - I7-4 (E)	Ignition switch on (IG)	10 to 14 V
I7-3 (MRY) - I7-4 (E)	Ignition switch on (IG)	10 to 14 V

NG → **Go to step 4**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

4 CHECK HARNESS AND CONNECTOR (OUTER MIRROR CONTROL ECU ASSEMBLY - SEAT MEMORY SWITCH)



- (a) Disconnect the I1 connector from the door ECU.
- (b) Measure the resistance according to the value(s) in the table below.

Resistance

Tester Connection	Condition	Specified Condition
I7-1 (M1) - I1-22 (M1)	Always	Below 1 Ω
I7-2 (M2) - I1-23 (M2)	Always	Below 1 Ω
I7-3 (MRY) - I1-25 (MM)	Always	Below 1 Ω
I7-4 (E) - Body ground	Always	Below 1 Ω
I7-1 (M1) - Body ground	Always	10 kΩ or higher
I7-2 (M2) - Body ground	Always	10 kΩ or higher
I7-3 (MRY) - Body ground	Always	10 kΩ or higher

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE OUTER MIRROR CONTROL ECU ASSEMBLY

ECU Power Source Circuit

DESCRIPTION

The position control ECU & switch assembly (front power seat switch) is contained in the switch assembly. During manual operation, only one switch signal is accepted. If signals are input from 2 or more switches simultaneously, all of them are ignored, except when signals are input from the front vertical switch and lifter switch simultaneously. In this case, the signal from the lifter will operate.

During automatic operation, a manual switch input will override any other operations, i.e. automatic operations will stop and the manual input operation only will be accepted. For example, if a manual switch input is activated during a seat store/restore operation, the previous operation will cease and manual operation will be performed. After the manual operation is performed, the previous automatic operation will not resume.

The power mirror store/restore operation is unaffected by manual switch inputs.

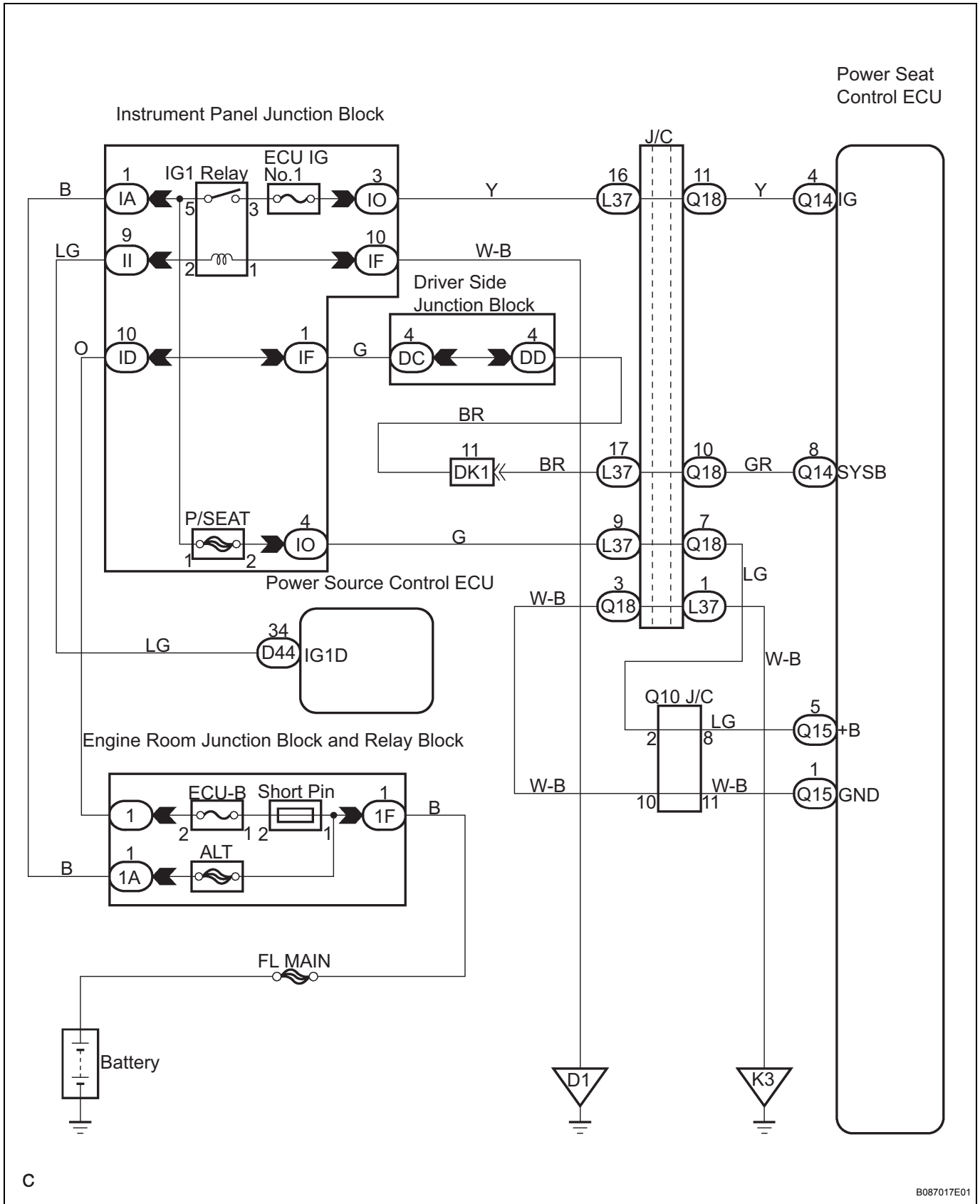
The front power seat switch disallows the restore operation of the power seat when the system detects that the voltage of terminal SYSB is less than 8.0 +/- 0.5 V for 30 ms. or is more than 10 +/- 0.5 V for 30 ms. This circuit is the power source circuit for the front power seat switch.

HINT:

Manual adjustment of the slide, reclining, or lumbar can be performed even when the front power seat switch is not functional if current is allowed to flow into terminals +B and SYSB.

Lumbar support operation can be performed at all times.

WIRING DIAGRAM



C

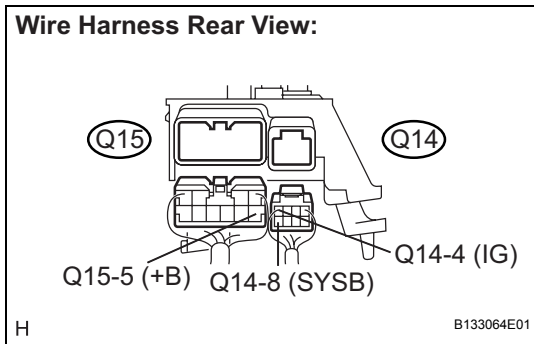
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INSPECTION PROCEDURE

1 INSPECT POSITION CONTROL ECU AND WIRING ASSEMBLY (FRONT POWER SEAT SWITCH POWER SOURCE CIRCUIT)

Wire Harness Rear View:



- (a) Disconnect the front power seat switch connectors.
 (b) Measure the voltage according to the value(s) in the table below.

Voltage

Tester Connection	Condition	Specified Condition
Q15-5 (+B) - Body ground	Always	10 to 14 V
Q14-4 (IG) - Body ground	Ignition switch on (IG)	10 to 14 V
Q14-8 (SYSB) - Body ground	Always	10 to 14 V

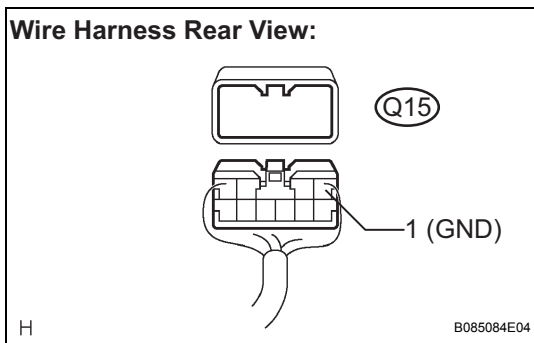
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR (POWER SOURCE CIRCUIT)

OK

2 INSPECT POSITION CONTROL ECU AND WIRING ASSEMBLY (FRONT POWER SEAT SWITCH GROUND CIRCUIT)

Wire Harness Rear View:



- (a) Measure the resistance according to the value(s) in the table below.

Resistance

Tester Connection	Condition	Specified Condition
Q15-1 (GND) - Body ground	Always	Below 1 Ω

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR (GROUND CIRCUIT)

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

FRONT POWER SEAT CONTROL SYSTEM (w/o Memory)

PRECAUTION

1. GENERAL PRECAUTION

- (a) While using the battery during inspection, do not allow the positive and negative tester probes to come too close to each other as a short circuit may occur.

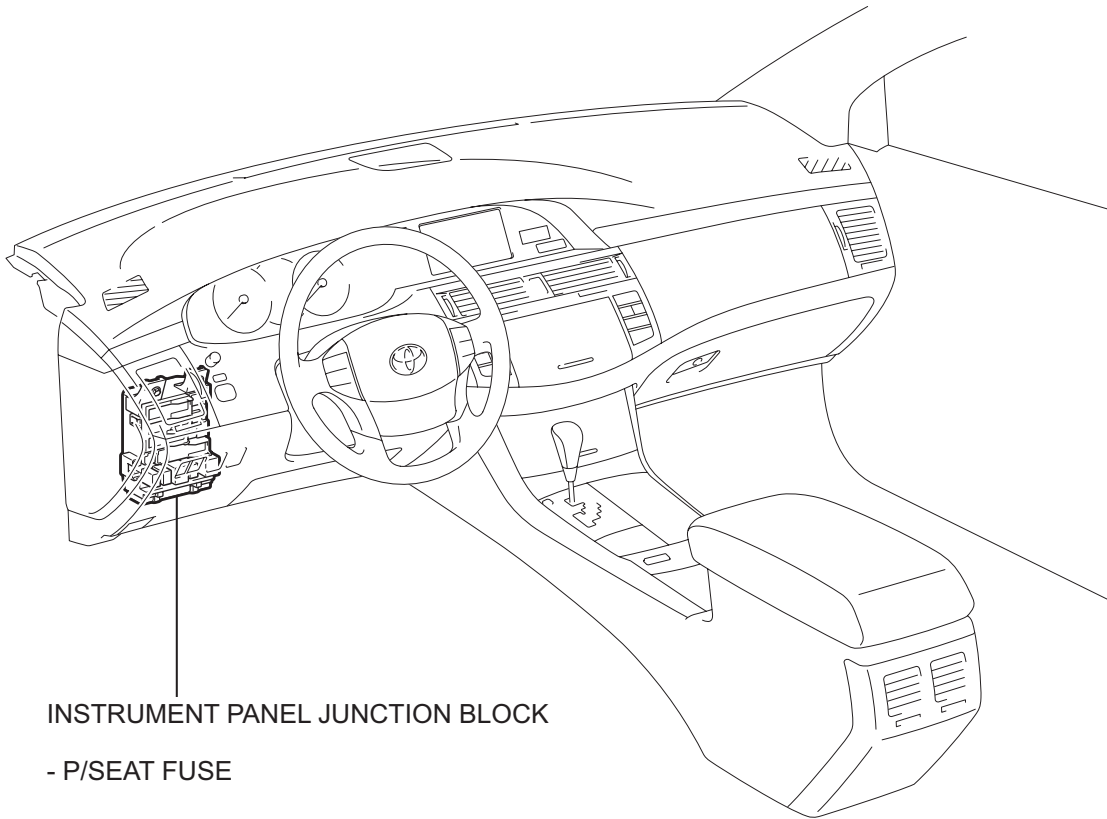
2. EXPRESSIONS OF IGNITION SWITCH

The type of ignition switch used on this model differs according to the specifications of the vehicle.

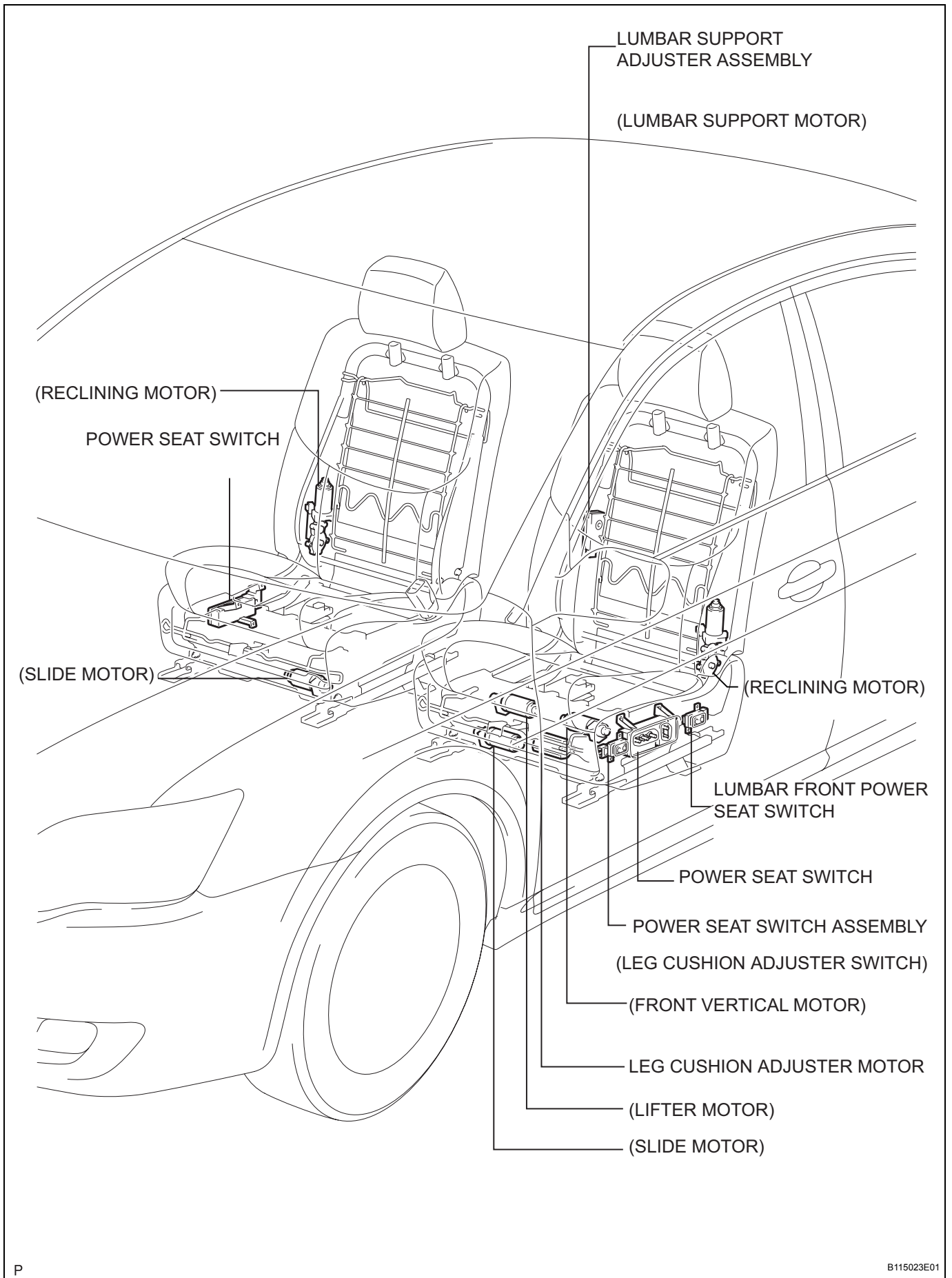
The expressions listed in the table below are used in this section.

	Switch Type	Ignition Switch (position)	Engine Switch (condition)
Expression	Ignition Switch off	LOCK	Off
	Ignition Switch on (IG)	ON	On (IG)
	Ignition Switch on (ACC)	ACC	On (ACC)
	Engine Start	START	Start

PARTS LOCATION



SE



PROBLEM SYMPTOMS TABLE

HINT:

Use the table below, with suspected areas listed in order of possible occurrence, to determine the cause of the problem. Inspect and repair or replace parts as necessary according to the steps on the following pages.

FRONT POWER SEAT CONTROL SYSTEM (W/O MEMORY)

Symptom	Suspected area	See page
Power seat does not operate (slide, front vertical, lifter, reclining).	1. ALT, P/SEAT fuse	-
	2. Front power seat switch	SE-79
	3. Wire harness or connector	-
Slide operation function only does not operate.	1. Front power seat switch	SE-79
	2. Front seat adjuster (Slide motor)	SE-82
	3. Wire harness or connector	-
Front vertical operation function only does not operate.	1. Front power seat switch	SE-79
	2. Front seat adjuster (Front vertical motor)	SE-82
	3. Wire harness or connector	-
Lifter operation function only does not operate.	1. Front power seat switch	SE-79
	2. Front seat adjuster (Lifter motor)	SE-82
	3. Wire harness or connector	-
Reclining operation function only does not operate.	1. Front power seat switch	SE-79
	2. Front seat adjuster (Reclining motor)	SE-82
	3. Wire harness or connector	-
Lumbar support operation function only does not operate (Driver seat only).	1. Lumbar front power seat switch	SE-85
	2. Lumbar support adjuster motor	SE-86
	3. Wire harness or connector	-
Leg cushion adjuster operation function only does not operate (Driver seat only).	1. Power seat switch assembly (Leg cushion adjuster)	SE-81
	2. Front seat adjuster (Leg cushion adjuster motor)	SE-82
	3. Wire harness or connector	-

ON-VEHICLE INSPECTION

1. CHECK POWER SEAT MOTOR

(a) Check the basic functions.

(1) Operate the power seat switches and check that the following seat functions work:

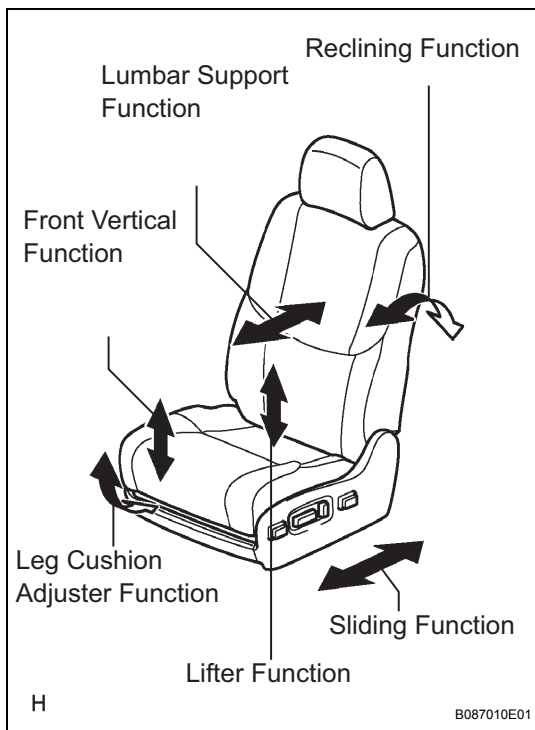
- Sliding
- Front vertical (Driver side seat only)
- Lifter (Driver side seat only)
- Reclining
- Lumbar support (Driver side seat only)
- Leg cushion adjuster (Driver side seat only)

2. CHECK FRONT SEAT ADJUSTER

(a) Check PTC operation inside the power seat motor.

HINT:

The PTC thermistor's resistance increases when the power seat switch is held down even after the power seat has been moved to the furthest possible position in one direction. When the resistance increases, the current is shut off to prevent a short circuit.



NOTICE:

Perform procedure "A" to "D" to check the full range of motion for each power seat function.

- (1) Choose a power seat function. Operate the power seat switch and move the seat to the furthest possible position in one direction. Keep the seat in that position for approximately 60 seconds (Procedure "A").
- (2) Operate the power seat switch again and continue to try to move the seat in the same direction as in procedure "A". Measure the time until the electrical current is shut off (motor operation sound will stop) (Procedure "B").

Standard:

4 to 90 seconds

- (3) Turn the power seat switch off after the current is shut off, and maintain that condition for approximately 60 seconds (Procedure "C").
- (4) Operate the same switch again and move the seat to the position opposite to the direction in procedure "A". Check that the motor operates (Procedure "D").
- (5) Repeat procedure "A" to "D" for the remaining power seat functions.

3. CHECK LUMBAR SUPPORT ADJUSTER ASSEMBLY LH

- (a) Inspect PTC operation inside the power seat motor.

NOTICE:

This inspection should be performed with the seat installed in the vehicle.

- (1) Move the lumbar support to either the foremost or rearmost position by operating the lumbar support switch, and hold it there for approx. 60 seconds.
- (2) Try to move the lumbar support past the furthest possible position using the switch and measure the time until the electrical current is shut off (motor operation sound will stop).

Standard:

4 to 90 seconds

- (3) Turn the lumbar support switch off after the current is shut off, and maintain that condition for approx. 60 seconds.
- (4) Operate the lumbar support switch to move the lumbar support to the opposite position and check that the motor operates.

4. CHECK FRONT SEAT ADJUSTER

- (a) Inspect PTC operation inside the power seat motor.

NOTICE:

The inspection should be performed with the seat installed in the vehicle.

- (1) Move the leg cushion to either the foremost or rearmost position by operating the leg cushion switch, and hold it there for approx. 60 seconds.
- (2) Try to move the leg cushion past the furthest possible position using the switch and measure the time until the electrical current is shut off (motor operation sound will stop).

Standard:

4 to 90 seconds

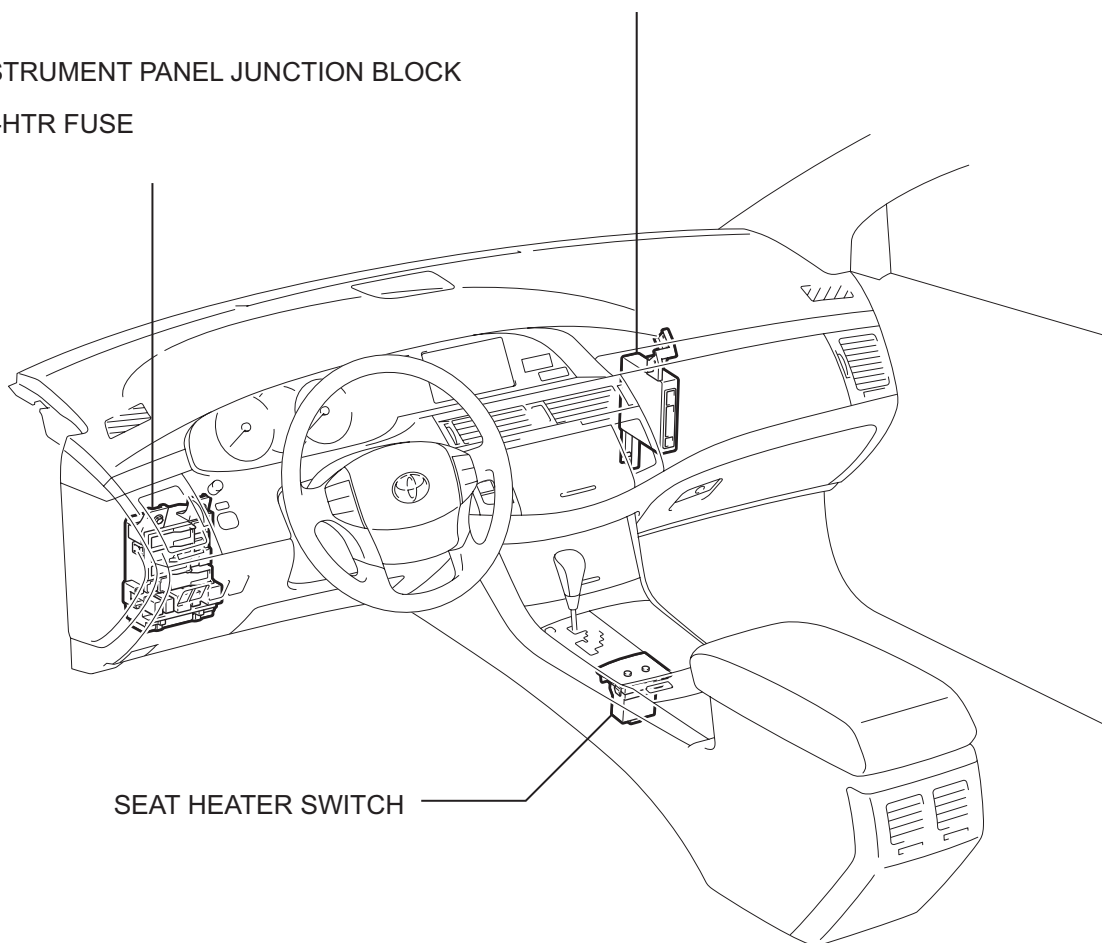
- (3) Turn the leg cushion switch off after the current is shut off, and maintain that condition for approx. 60 seconds.
- (4) Operate the leg cushion switch to move the leg cushion to the opposite position and check that the motor operates.

SEAT HEATER SYSTEM

PARTS LOCATION

AIR CONDITIONING AMPLIFIER(*)

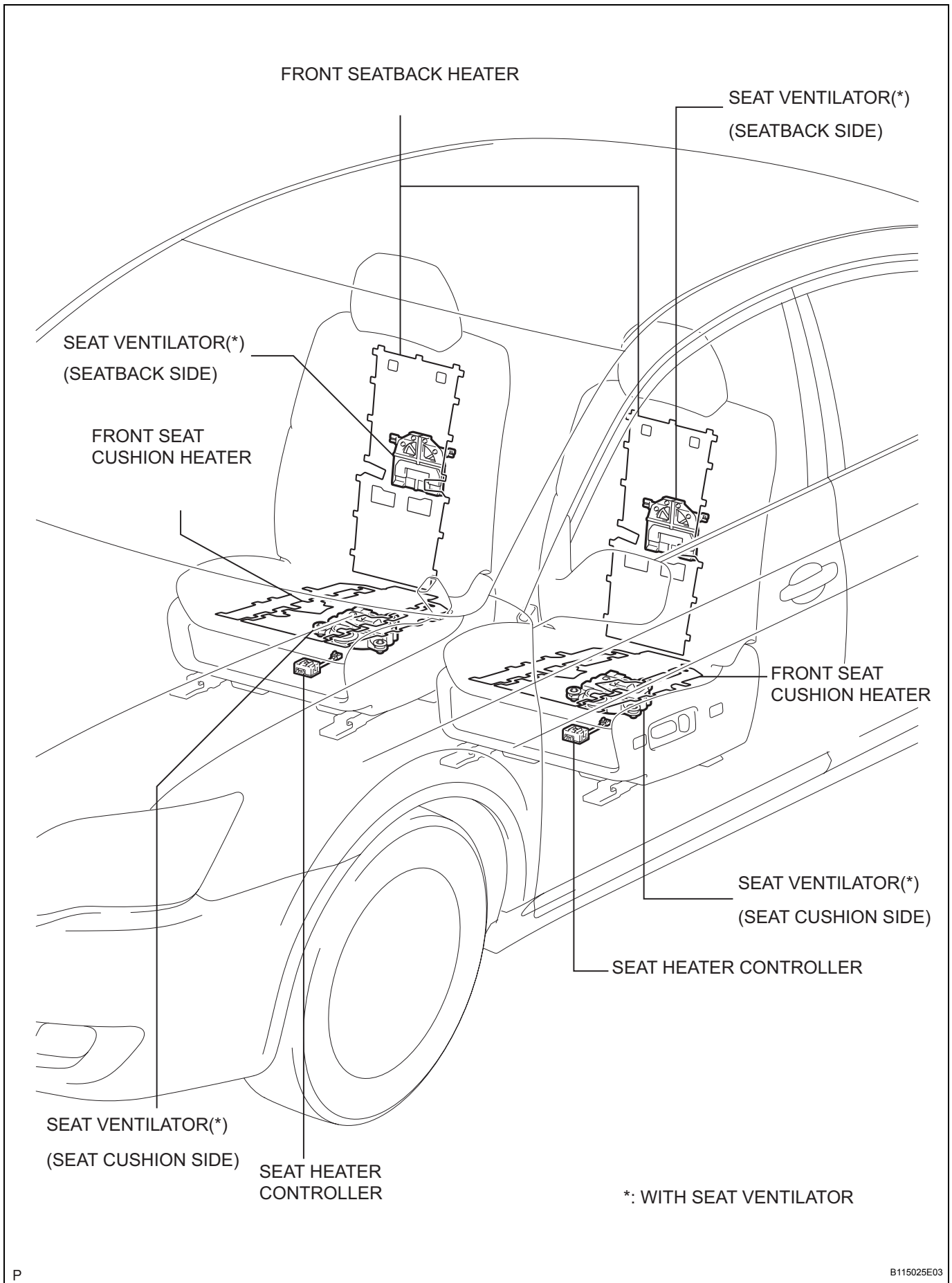
INSTRUMENT PANEL JUNCTION BLOCK
- S-HTR FUSE



SEAT HEATER SWITCH

*: WITH SEAT VENTILATOR

SE



SE

PROBLEM SYMPTOMS TABLE

HINT:

Use the table below, with suspected areas listed in numerical order, to determine the cause of the problem. Inspect and repair or replace parts as necessary according to the steps on the following pages.

SEAT VENTILATION/HEATING SYSTEM

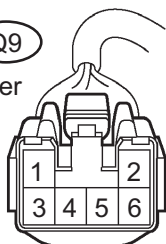
Symptom	Suspected area	See page
Seat heaters do not operate (without seat ventilator).	1. S-HTR fuse	-
	2. Seat heater switch	SE-87
	3. Front seat cushion heater assembly	SE-89
	4. Front seatback heater assembly	SE-88
	5. Seat heater circuit	SE-33
	6. Seat heater controller	-
Seat heaters do not operate (with seat ventilator).	1. S-HTR fuse	-
	2. Front seat cushion heater assembly	SE-89
	3. Front seatback heater assembly	SE-88
	4. Air conditioning amplifier (Seat ventilation/heating switch circuit) (for driver side)	AC-85
	5. Air conditioning amplifier (Seat ventilation/heating switch circuit) (for front passenger side)	AC-88
	6. Seat heater controller	-
Temperature of seat heater cannot be adjusted (without seat ventilator).	Seat heater switch	SE-87
Temperature of seat heater cannot be adjusted (with seat ventilator).	1. Seat ventilator/heater switch (Heater control housing sub-assembly) (for driver side)	AC-85
	2. Seat ventilator/heater switch (Heater control housing sub-assembly) (for front passenger side)	AC-88
	3. Wire harness or connector	-
Seat ventilators do not operate.	1. S-HTR fuse	-
	2. Seat ventilator circuit	SE-33
	3. Air conditioning amplifier (Seat ventilation/heating switch circuit)	AC-108
	4. Seat ventilator	-
Intensity of seat ventilator cannot be adjusted.	1. Seat ventilator/heater switch (Heater control housing sub-assembly)	AC-108
	2. Wire harness or connector	-

Wire Harness Front View:

Driver Side: (Q9)

Front Passenger

Side: (P11)



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ON-VEHICLE INSPECTION

1. INSPECT SEAT HEATER CIRCUIT

- Disconnect the connector from the seat heater controller.
- Measure the voltage according to the value(s) in the table below.

Voltage:

Driver side

Tester Connection	Condition	Specified Condition
Q9-4 (B) - Body ground	Ignition switch off	Below 1 V
Q9-4 (B) - Body ground	Ignition switch on (IG)	10 to 14 V

Front passenger side

Tester Connection	Condition	Specified Condition
P11-4 (B) - Body ground	Ignition switch off	Below 1 V

SE

Tester Connection	Condition	Specified Condition
P11-4 (B) - Body ground	Ignition switch on (IG)	10 to 14 V

If the voltage is not as specified, repair or replace the wire harness or connector.

- (c) Measure the resistance according to the value(s) in the table below.

Resistance:

Driver side

Tester Connection	Condition	Specified Condition
Q9-1 (SWL) - Q9-5 (THL)	Ignition switch off	0.6 to 4.5 k Ω (*1)
Q9-1 (SWL) - Body ground	Ignition switch off	10 k Ω or higher
Q9-5 (THL) - Body ground	Ignition switch off	10 k Ω or higher
Q9-6 (E) - Body ground	Always	Below 1 Ω

Front passenger side

Tester Connection	Condition	Specified Condition
P11-1 (SWR) - P11-5 (THR)	Ignition switch off	0.6 to 4.5 k Ω (*1)
P11-1 (SWR) - Body ground	Ignition switch off	10 k Ω or higher
P11-5 (THR) - Body ground	Ignition switch off	10 k Ω or higher
P11-6 (E) - Body ground	Always	Below 1 Ω

HINT:

*1: Conditions vary with the seat heater switch position.

If the resistance is not as specified, repair or replace the wire harness or connector.

2. INSPECT SEAT HEATER SWITCH CIRCUIT

- (a) Disconnect the seat heater switch connector.
 (b) Measure the voltage according to the value(s) in the table below.

Voltage

Tester Connection	Condition	Specified Condition
D27-2 (IG) - Body ground	Ignition switch off	Below 1 V
D27-2 (IG) - Body ground	Ignition switch on (IG)	10 to 14 V

If the voltage is not as specified, repair or replace the wire harness or connector.

- (c) Measure the resistance according to the value(s) in the table below.

Resistance

Tester Connection	Condition	Specified Condition
D27-7 (E) - Body ground	Always	Below 1 Ω

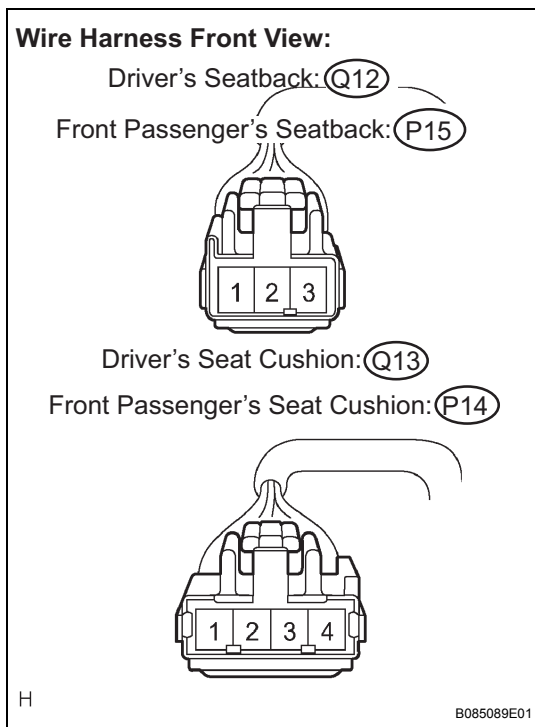
If the resistance is not as specified, repair or replace the wire harness or connector.

Wire Harness Front View:



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3. INSPECT FRONT SEAT ASSEMBLY LH

- (a) Disconnect the seat ventilator connectors.
- (b) Measure the resistance according to the value(s) in the table below.

Resistance:

Driver side

Tester Connection	Condition	Specified Condition
Q12-2 - Q13-2	Always	Below 1 Ω
Q12-3 - Q13-3	Always	Below 1 Ω
Q12-1 - Body ground	Always	Below 1 Ω
Q13-2 - Body ground	Always	10 k Ω or higher
Q13-4 - Body ground	Always	Below 1 Ω

Front passenger side

Tester Connection	Condition	Specified Condition
P15-2 - P14-2	Always	Below 1 Ω
P15-3 - P14-3	Always	Below 1 Ω
P15-1 - Body ground	Always	Below 1 Ω
P14-2 - Body ground	Always	10 k Ω or higher
P14-4 - Body ground	Always	Below 1 Ω

If the continuity is not as specified, repair or replace the wire harness or connector.

- (c) Measure the voltage according to the value(s) in the table below.

Voltage:

Driver side

Tester Connection	Condition	Specified Condition
Q13-1 - Body ground	Ignition switch on (IG)	10 to 14 V

Front passenger side

Tester Connection	Condition	Specified Condition
P14-1 - Body ground	Ignition switch on (IG)	10 to 14 V

If the voltage is not as specified, repair or replace the wire harness or connector.

- (d) Measure the voltage according to the value(s) in the table below.

Voltage:

Driver side

Tester Connection	Condition	Specified Condition
Q12-3 - Body ground	Seat ventilation switch is ON	0 to 5 V (Pulse generation*1)
Q13-3 - Body ground	Seat ventilation switch is ON	0 to 5 V (Pulse generation*1)

Front passenger side

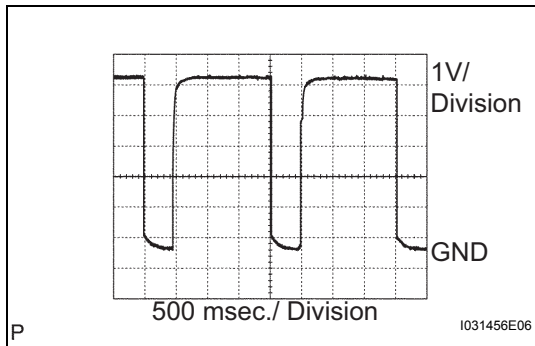
Tester Connection	Condition	Specified Condition
P15-3 - Body ground	Seat ventilation switch is ON	0 to 5 V (Pulse generation*1)
P14-3 - Body ground	Seat ventilation switch is ON	0 to 5 V (Pulse generation*1)

If the voltage is not as specified, inspect the seat ventilator/heater switch (heater control housing) and wire harness or connector according to the problem symptoms table (See page [SE-33](#)).

(1) *1: Waveform

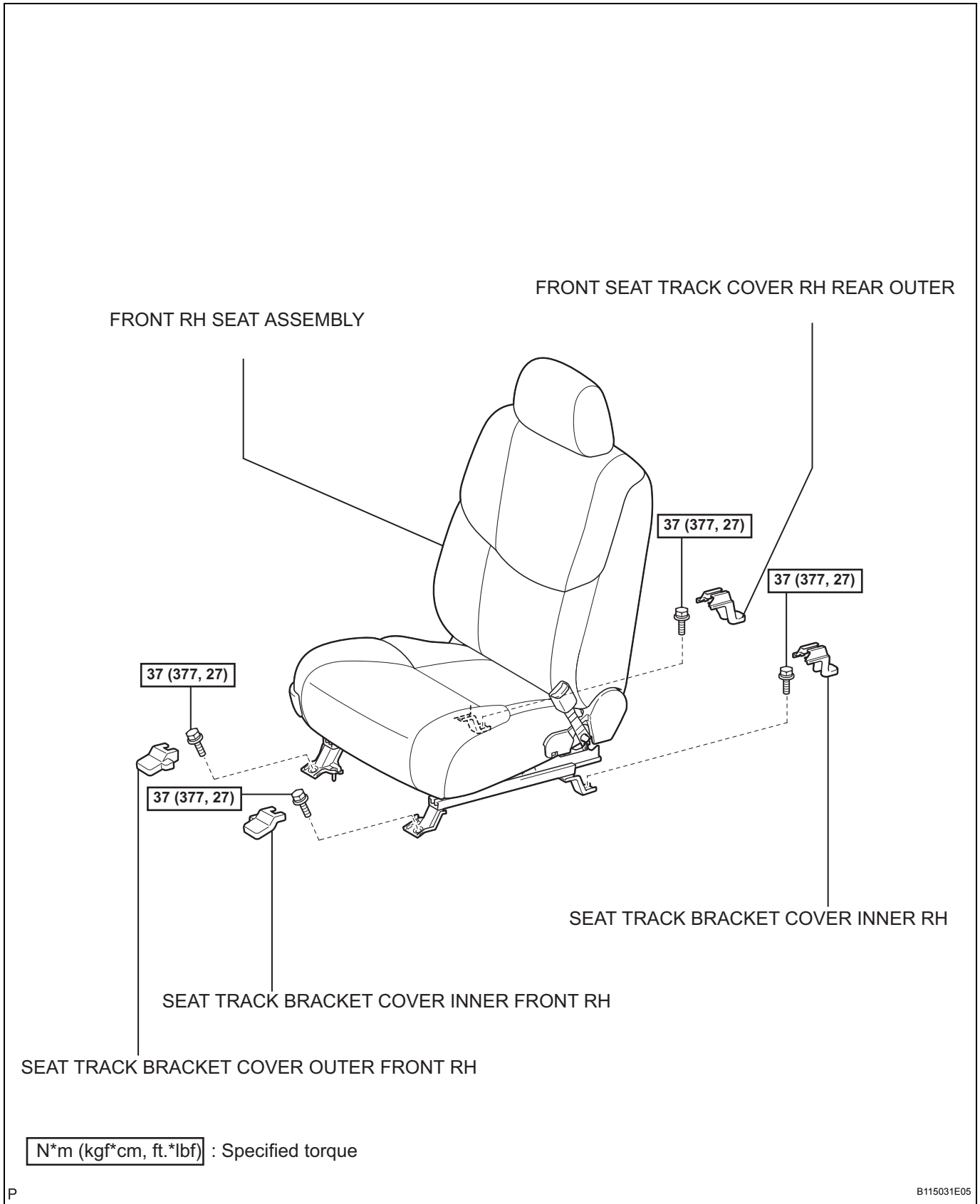
HINT:

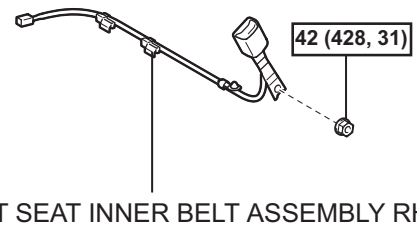
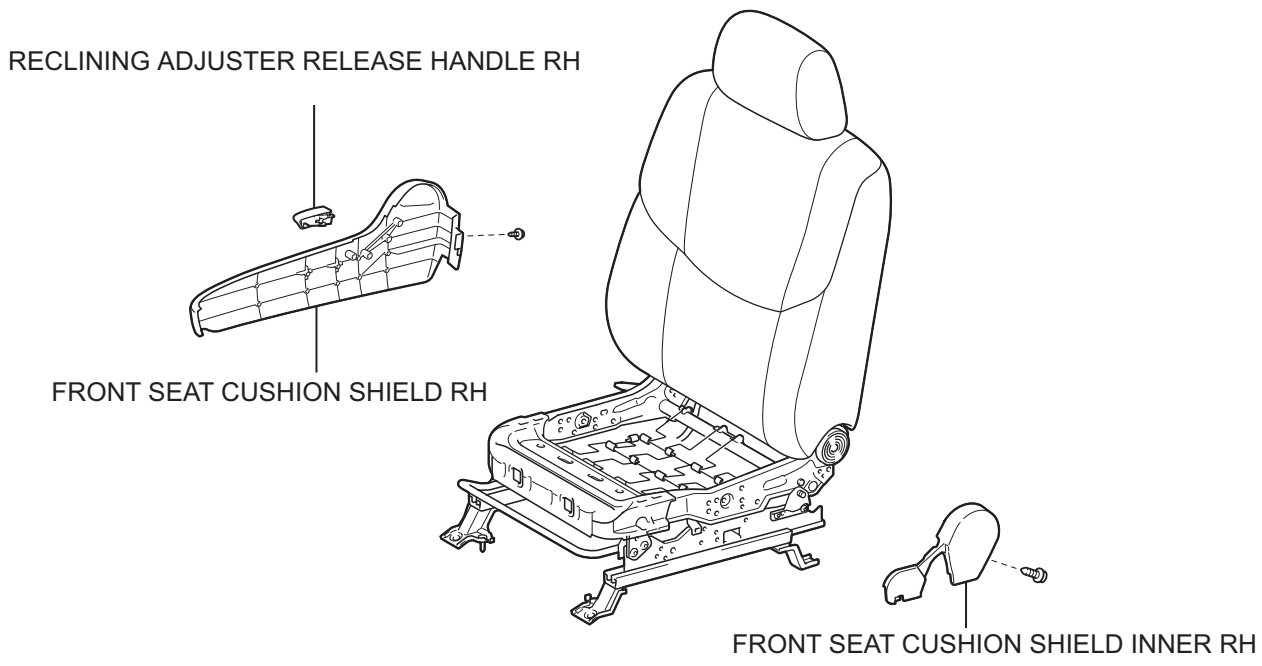
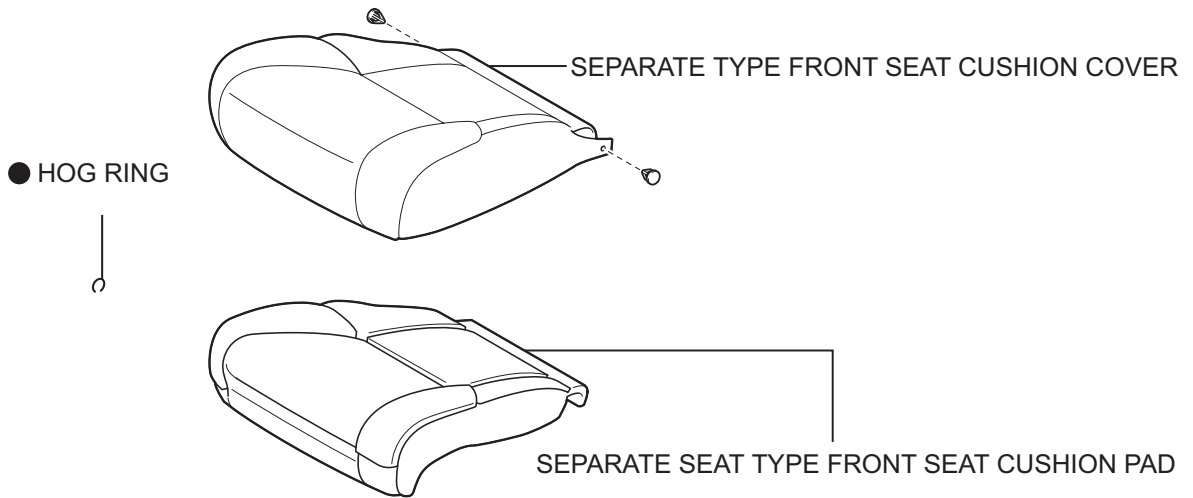
Waveform varies with the blower level.



FRONT SEAT ASSEMBLY (for Manual Seat)

COMPONENTS

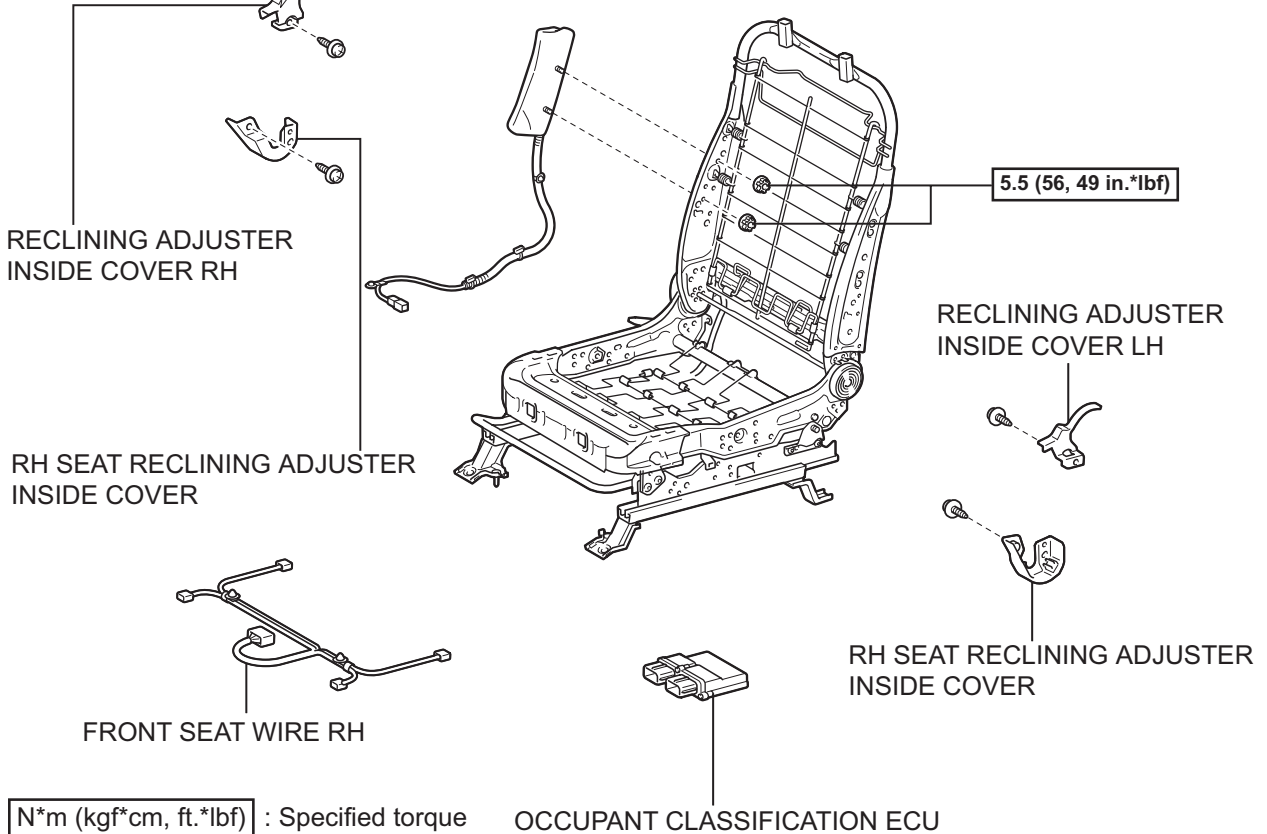
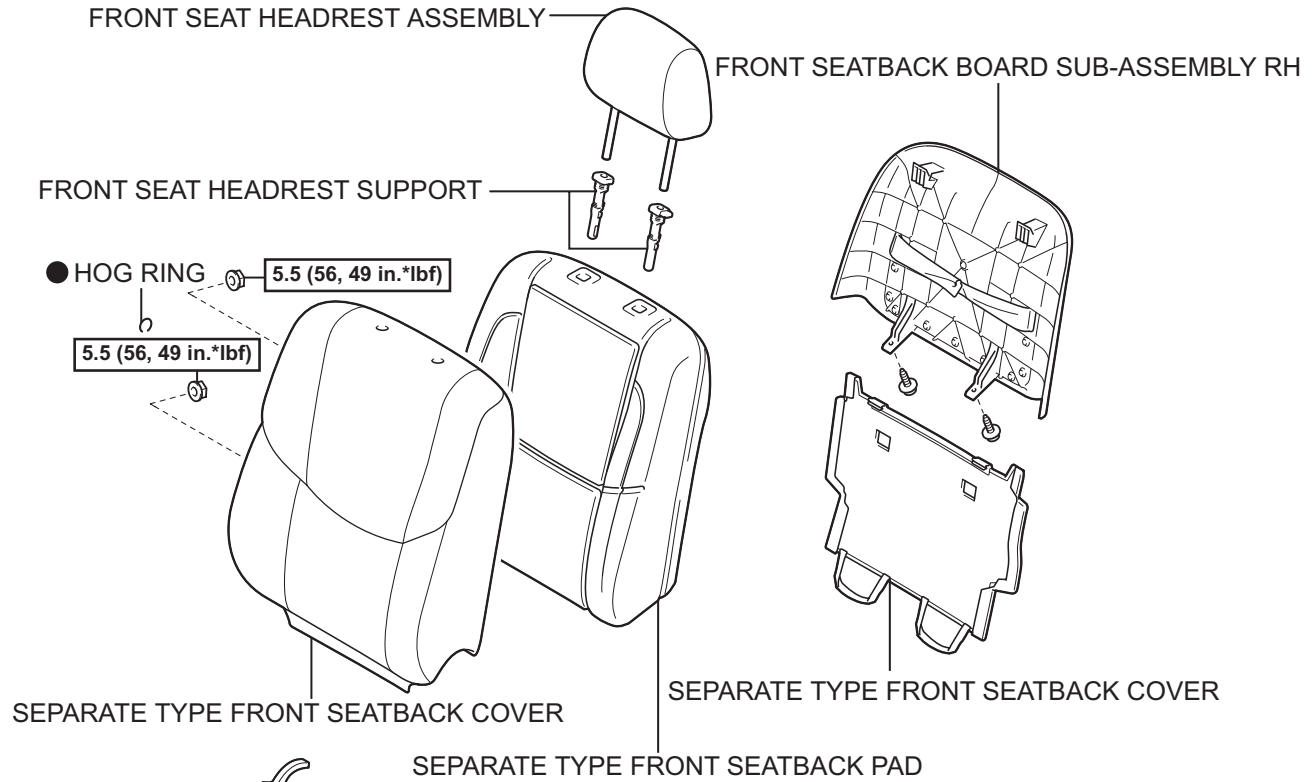




N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

SE



N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

SE

REMOVAL

CAUTION:

- Always wear safety gloves because the edges of the seatback frame and seat adjuster are sharp and may cause injury.
- Work must be started more than 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from the battery. (The SRS is equipped with a back-up power source. If work is started within 90 seconds after disconnecting the negative (-) terminal cable of the battery, the SRS may deploy.)

HINT:

- Installation is in the reverse order of removal. However, special points concerning installation are indicated.
- Use the same procedures for the RH side and LH side.

1. DISCONNECT BATTERY NEGATIVE TERMINAL

HINT:

See page [RS-1](#)

2. REMOVE SEAT TRACK BRACKET COVER OUTER FRONT RH

- (a) Disengage the 2 claws and remove the seat track bracket cover outer front RH.

3. REMOVE SEAT TRACK BRACKET COVER INNER FRONT RH

- (a) Disengage the 2 claws and remove the seat track bracket cover inner front RH.

4. REMOVE FRONT SEAT TRACK COVER RH REAR OUTER

- (a) Disengage the 2 claws and remove the front seat track cover RH rear outer.

5. REMOVE SEAT TRACK BRACKET COVER INNER RH

- (a) Disengage the 2 claws and remove the seat track bracket cover inner RH.

6. REMOVE FRONT RH SEAT ASSEMBLY

- (a) Remove the 4 bolts.
- (b) Disconnect the connectors and clamp.
- (c) Remove the front RH seat assembly.

DISASSEMBLY

1. **REMOVE FRONT SEAT INNER BELT ASSEMBLY RH**
2. **REMOVE RECLINING ADJUSTER RELEASE HANDLE RH**
 - (a) Using a screwdriver, pry out the reclining adjuster release handle RH.
HINT:
Tape the screwdriver tip before use.
3. **REMOVE FRONT SEAT CUSHION SHIELD RH**
 - (a) Remove the screw and the front seat cushion shield RH.
4. **REMOVE FRONT SEAT CUSHION SHIELD INNER RH**
 - (a) Remove the screw and the front seat cushion shield inner RH.
5. **REMOVE SEAT CUSHION COVER WITH PAD**
 - (a) Disengage the hook and remove the 2 clips and the seat cushion cover together with the pad.
6. **REMOVE SEPARATE TYPE FRONT SEAT CUSHION COVER**
 - (a) Remove the hog rings and separate type front seat cushion cover.
7. **REMOVE FRONT SEAT HEADREST ASSEMBLY**
8. **REMOVE FRONT SEATBACK BOARD SUB-ASSEMBLY RH**
 - (a) Remove the 2 screws.
 - (b) Disengage the 2 claws and remove the front seatback board sub-assembly RH.
9. **REMOVE SEPARATE TYPE FRONT SEATBACK COVER**
 - (a) Disengage the hooks and remove the separate type front seatback cover.
10. **REMOVE FRONT SEAT HEADREST SUPPORT**
 - (a) Disengage the 2 claws and remove the front seat headrest support (LH side).
11. **REMOVE FRONT SEAT HEADREST SUPPORT**
HINT:
Use the same procedures for the RH side and LH side.
12. **REMOVE SEATBACK COVER WITH PAD**
 - (a) Remove the 2 nuts and disconnect the separate type front seatback cover bracket.
 - (b) Remove the seatback cover with pad.
13. **REMOVE SEPARATE TYPE FRONT SEATBACK COVER**
 - (a) Remove the hog rings and the separate type front seatback cover.

- 14. REMOVE RH SEAT RECLINING ADJUSTER INSIDE COVER**
 - (a) Remove the screw and the RH seat reclining adjuster inside cover.
- 15. REMOVE RH SEAT RECLINING ADJUSTER INSIDE COVER**

HINT:
Use the same procedures for the RH side and LH side.
- 16. REMOVE RECLINING ADJUSTER INSIDE COVER RH**
 - (a) Remove the screw and the reclining adjuster inside cover RH.
- 17. REMOVE RECLINING ADJUSTER INSIDE COVER LH**

HINT:
Use the same procedures for the RH side and LH side.
- 18. REMOVE OCCUPANT CLASSIFICATION ECU (See page [RS-371](#))**
- 19. REMOVE FRONT SEAT WIRE RH**

REASSEMBLY

1. INSTALL OCCUPANT CLASSIFICATION ECU (See page RS-371)

2. INSTALL SEPARATE TYPE FRONT SEATBACK COVER

- Install the seatback pad.
- Cover the top of the seatback pad with the separate type front seatback cover.
- Using hog ring pliers, install the separate type front seatback cover to the seatback pad with new hog rings.

NOTICE:

- Be careful not to damage the cover.
- When installing the hog rings, take care to minimize wrinkles as much as possible.

3. INSTALL SEATBACK COVER WITH PAD

- Install the seatback cover with pad.
- Install the separate type front seatback cover bracket with the 2 nuts.
Torque: 5.5 N*m (56 kgf*cm, 49 in.*lbf)
- Using hog ring pliers, install the separate type front seatback cover.

NOTICE:

- Be careful not to damage the cover.
- When installing the hog rings, take care to minimize wrinkles as much as possible.

- Engage the hooks.

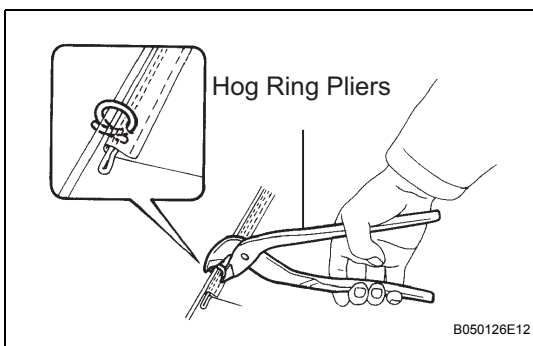
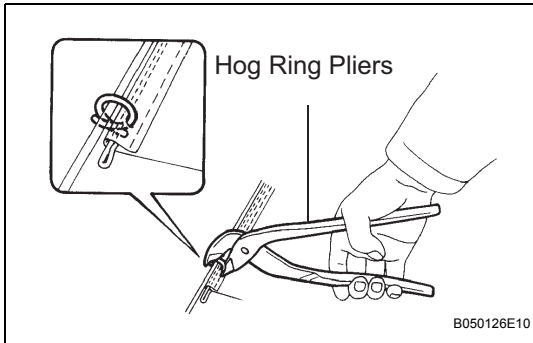
4. INSTALL SEPARATE TYPE FRONT SEAT CUSHION COVER

- Install the front seat cushion pad to the seat cushion cover.
- Using hog ring pliers, install the separate type front seat cushion cover to the seat cushion pad with new hog rings.

NOTICE:

- Be careful not to damage the cover.
- When installing the hog rings, take care to minimize wrinkles as much as possible.

5. INSTALL FRONT SEAT INNER BELT ASSEMBLY RH



INSTALLATION

1. INSTALL FRONT RH SEAT ASSEMBLY

- (a) Connect the connectors under the front seat assembly LH.
- (b) Install the front seat assembly LH with the 4 bolts.
Torque: 37 N*m (375 kgf*cm, 27 ft.*lbf)

2. CONNECT BATTERY NEGATIVE TERMINAL

3. PERFORM SYSTEM INITIALIZE

HINT:

See page [IN-29](#)

4. CHECK SEAT SLIDE ADJUSTER LOOKS

- (a) when sliding the front seat assembly LH, check that both sides of the adjuster lock simultaneously.

5. INITIALIZE FRONT PASSENGER OCCUPANT CLASSIFICATION SYSTEM

HINT:

See page [RS-206](#)

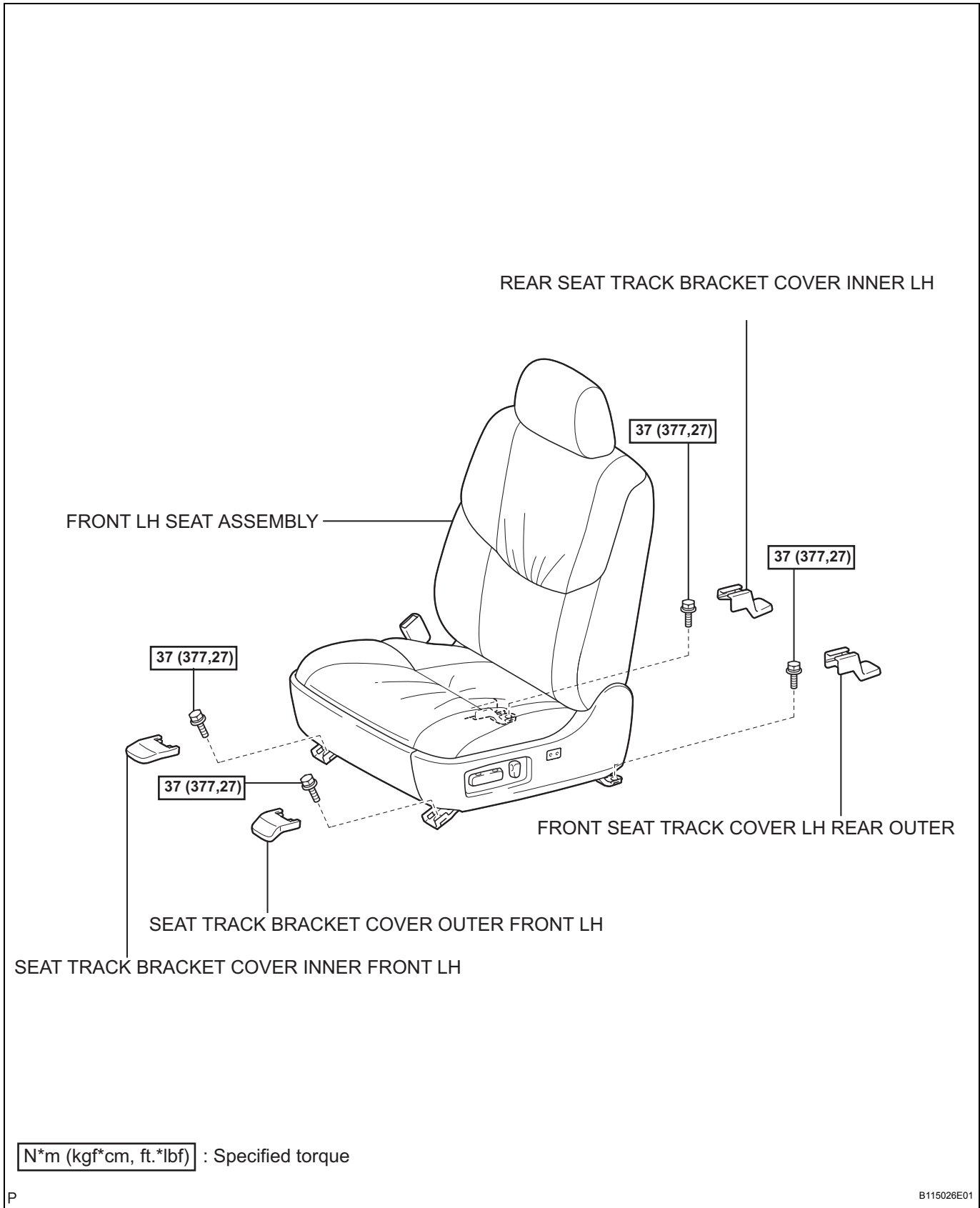
6. INSPECT SRS WARNING LIGHT

HINT:

See page [RS-28](#)

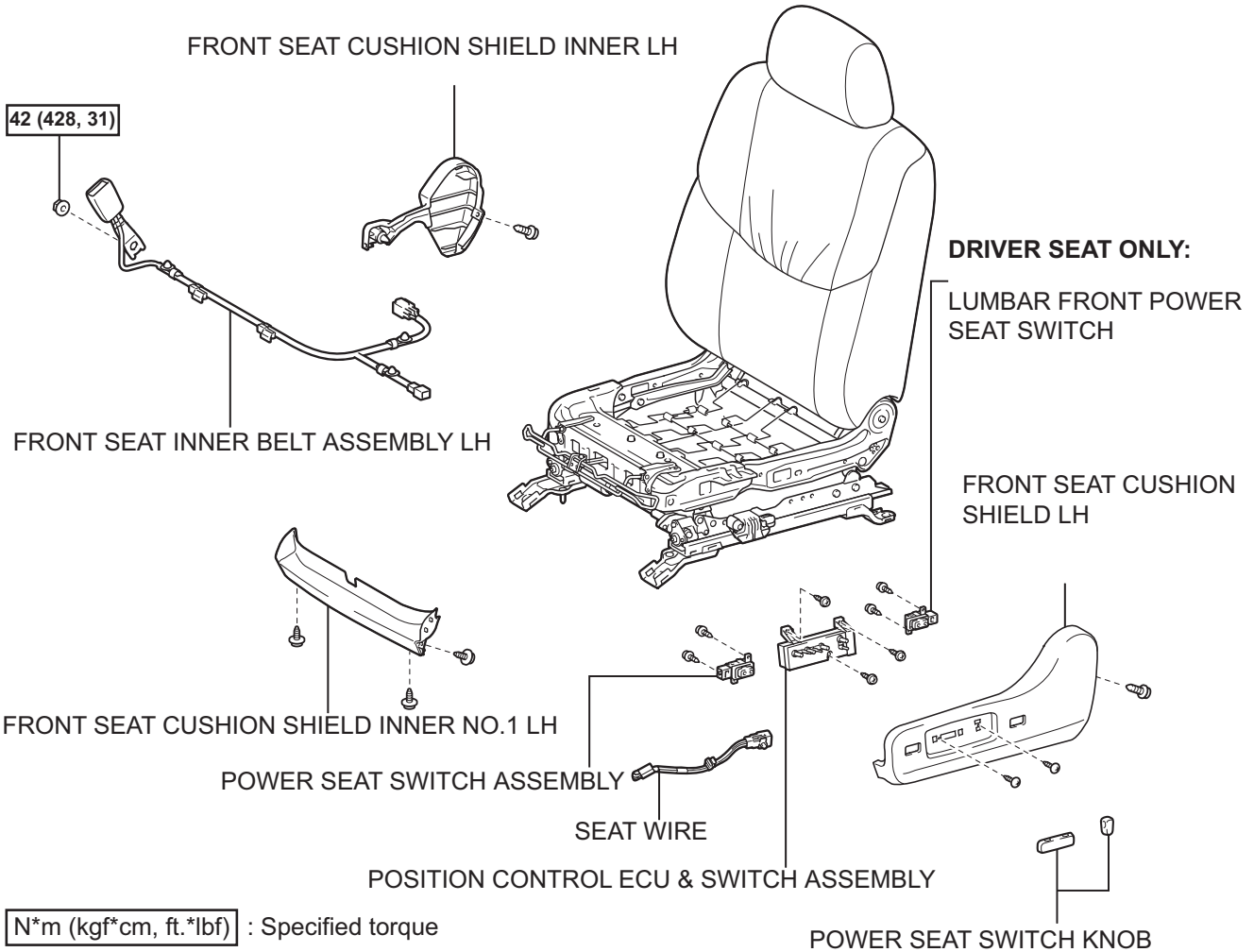
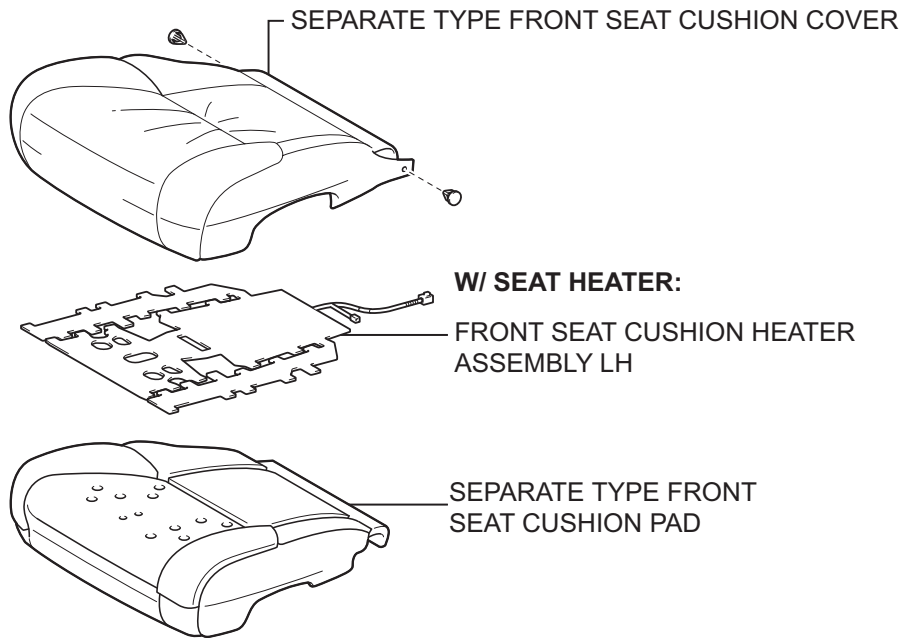
FRONT SEAT ASSEMBLY (for Power Seat)

COMPONENTS



WITH LEG SUPPORT ADJUSTMENT SYSTEM:

- TACK PIN
- HOG RING



N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

SE

WITHOUT LEG SUPPORT ADJUSTMENT SYSTEM:

FRONT SEATBACK BOARD SUB-ASSEMBLY LH

FRONT SEAT HEADREST ASSEMBLY

FRONT SEAT HEADREST SUPPORT

● HOG RING

SEPARATE TYPE FRONT SEATBACK COVER

DRIVER SEAT ONLY:

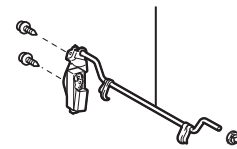
LUMBAR SUPPORT ADJUSTER ASSEMBLY LH

5.5 (56, 49 in.*lbf)

SEPARATE TYPE SEATBACK COVER

RECLINING ADJUSTER INSIDE COVER LH

5.5 (56, 49 in.*lbf)



FRONT SEATBACK SHIELD LH

SEATBACK SPRING

DRIVER SEAT ONLY:

FRONT SEAT CUSHION SHIELD LOWER

5.5 (56, 49 in.*lbf)

RECLINING ADJUSTER INSIDE COVER RH

PASSENGER SEAT ONLY:

DRIVER SEAT ONLY:

SEAT SLIDE POSITION SENSOR PROTECTOR

8.0 (82, 71 in.*lbf)

FRONT SEATBACK SHIELD RH

VERTICAL ADJUSTER BRACKET COVER LH

DRIVER SEAT ONLY:

DRIVER SEAT ONLY: FRONT SEAT CUSHION SHIELD LOWER LH
SEAT POSITION AIRBAG SENSOR

VERTICAL ADJUSTER BRACKET COVER OUTER

FRONT SEAT WIRE LH

PASSENGER SEAT ONLY:

PASSENGER SEAT ONLY:

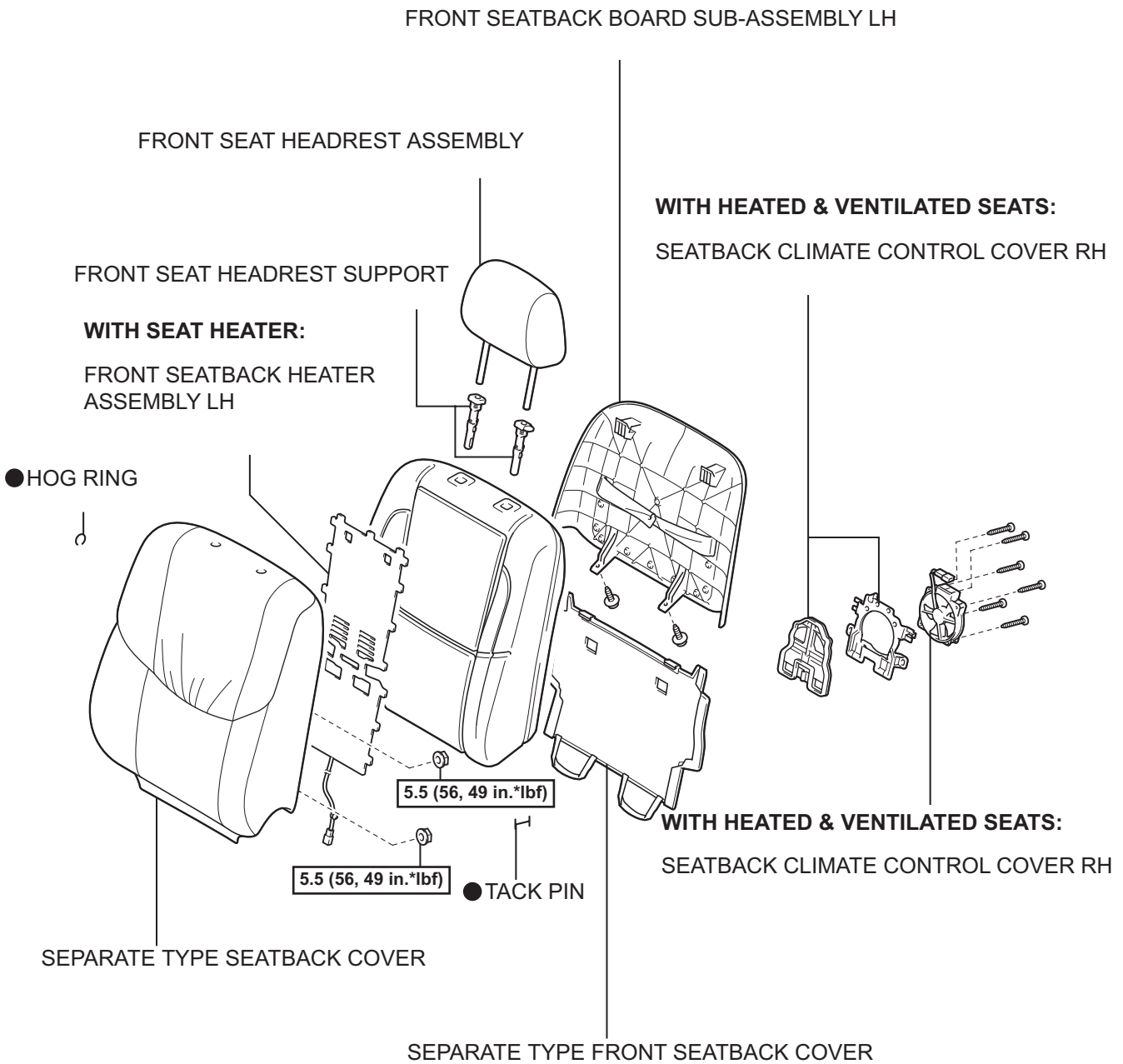
OCCUPANT CLASSIFICATION ECU

N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

SE

WITH LEG SUPPORT ADJUSTMENT SYSTEM:



SE

DRIVER SEAT ONLY:

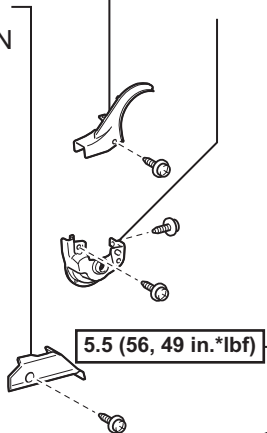
FRONT SEAT CUSHION SHIELD LOWER

PASSENGER SEAT ONLY:



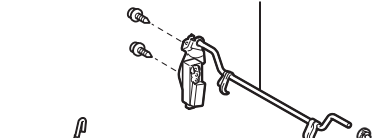
RECLINING ADJUSTER INSIDE COVER LH

FRONT SEATBACK SHIELD LH



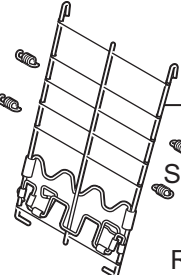
DRIVER SEAT ONLY:

LUMBAR SUPPORT ADJUSTER ASSEMBLY LH



SEATBACK SPRING

RECLINING ADJUSTER INSIDE COVER RH



FRONT SEATBACK SHIELD RH

W/ HEATED & VENTILATED SEATS:

SEATBACK CLIMATE CONTROL COVER RH



FRONT SEAT WIRE LH

DRIVER SEAT ONLY:

SEAT SLIDE POSITION SENSOR PROTECTOR

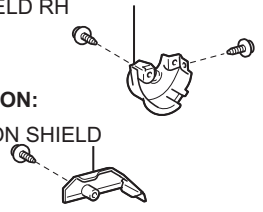
8.0 (82, 71 in.*lbf)



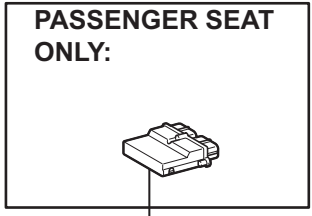
DRIVER SEAT ONLY:
SEAT POSITION AIRBAG SENSOR

DRIVER SEAT POSITION:

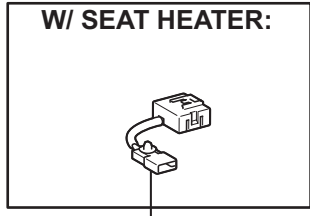
FRONT SEAT CUSHION SHIELD LOWER LH



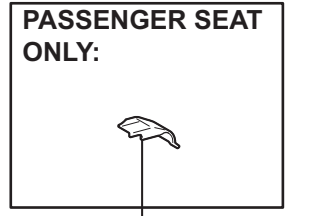
PASSENGER SEAT ONLY:



W/ SEAT HEATER:



PASSENGER SEAT ONLY:



N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part



REMOVAL

CAUTION:

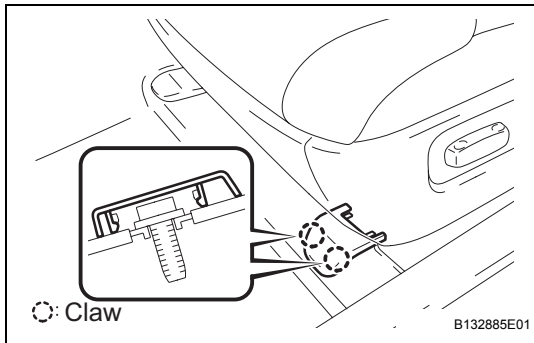
- Always wear safety gloves because the edges of the seatback frame and seat adjuster are sharp and may cause injury.
- Work must be started more than 90 seconds after the ignition switch is turned off and the negative (-) terminal cable is disconnected from the battery. (The SRS is equipped with a back-up power source. If work is started within 90 seconds after disconnecting the negative (-) terminal cable of the battery, the SRS may deploy.)

HINT:

- Installation is in the reverse order of removal. However, special points concerning installation are indicated.
- Use the same procedures for the RH side and LH side.
- When removing/installing or overhauling the passenger seat, check the passenger occupant classification system and perform zero point calibration (See page [RS-206](#)).

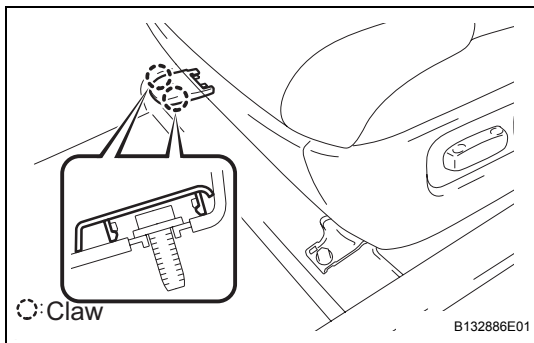
1. REMOVE SEAT TRACK BRACKET COVER OUTER FRONT LH

- Move the front LH seat assembly to the rearmost position by operating the power seat switch knob.
- Disengage the 2 claws and remove the seat track bracket cover outer front LH.



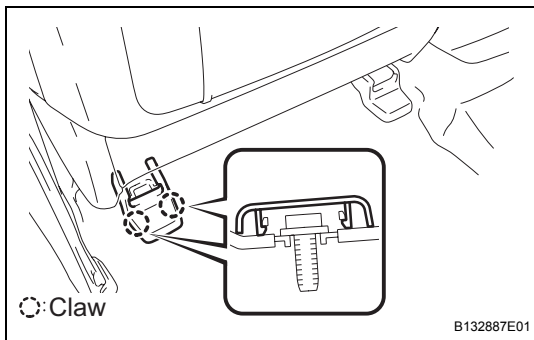
2. REMOVE SEAT TRACK BRACKET COVER INNER FRONT LH

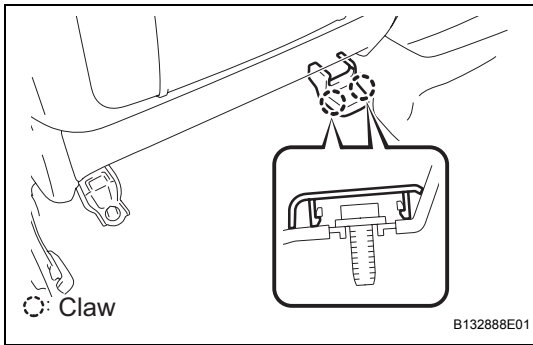
- Disengage the 2 claws and remove the seat track bracket cover inner front LH.



3. REMOVE FRONT SEAT TRACK COVER LH REAR OUTER

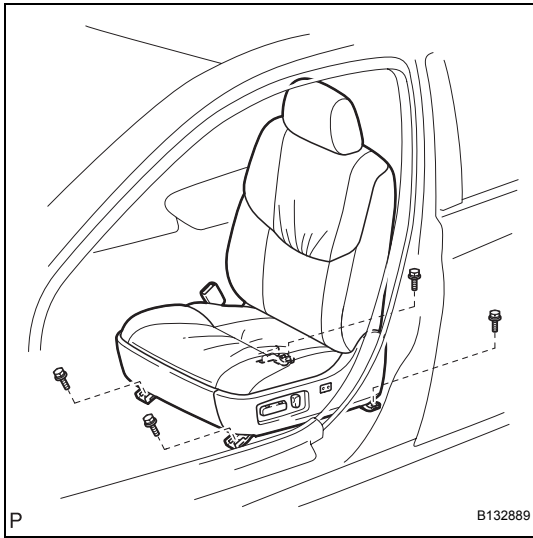
- Move the front LH seat assembly fully forward by operating the power seat switch knob.
- Disengage the 2 claws and remove the front seat track cover LH rear outer.





4. REMOVE REAR SEAT TRACK BRACKET COVER INNER LH

- (a) Disengage the 2 claws and remove the rear seat track bracket cover inner LH.

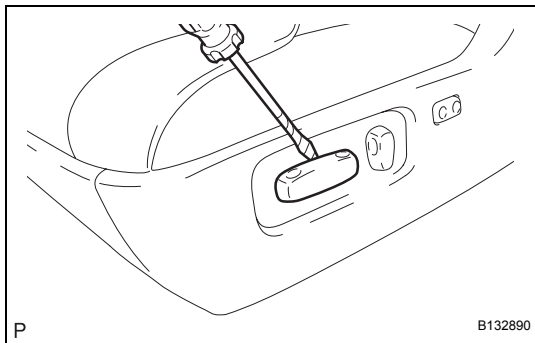


5. REMOVE FRONT LH SEAT ASSEMBLY

- (a) Set the front vertical in the most upright position.
- (b) Move the front LH seat assembly to the rearmost position by operating the power seat switch knob.
- (c) Remove the 2 bolts on the front side.
- (d) Move the front LH seat assembly fully forward by operating the power seat switch knob.
- (e) Remove the 2 bolts on the rear side.
- (f) Disconnect the negative battery terminal (See page [RS-1](#)).
- (g) Disconnect the connectors and clamp.
- (h) Remove the front LH seat assembly.

DISASSEMBLY

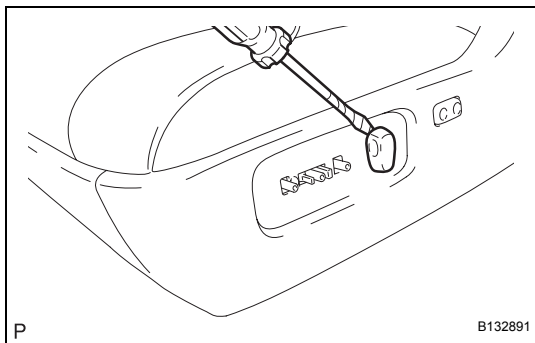
1. REMOVE FRONT SEAT INNER BELT ASSEMBLY LH
2. REMOVE SLIDE & VERTICAL POWER SEAT SWITCH KNOB



- (a) Using a screwdriver, remove the power seat switch knob.

HINT:

Tape up the screwdriver tip before use.

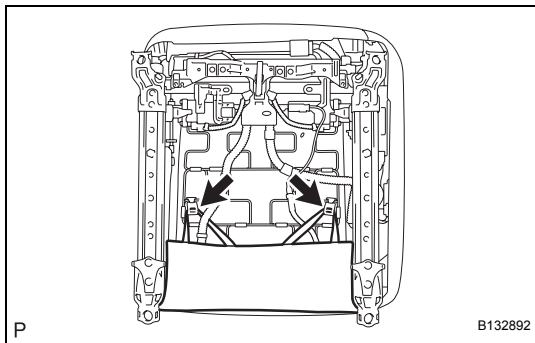


3. REMOVE RECLINING POWER SEAT SWITCH KNOB

- (a) Using a screwdriver, remove the power seat switch knob.

HINT:

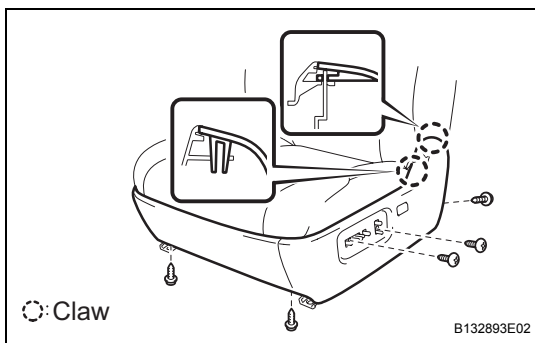
Tape up the screwdriver tip before use.



4. REMOVE FRONT SEAT CUSHION SHIELD INNER NO.1 LH

- (a) Disconnect the 2 clips and the cover.

SE

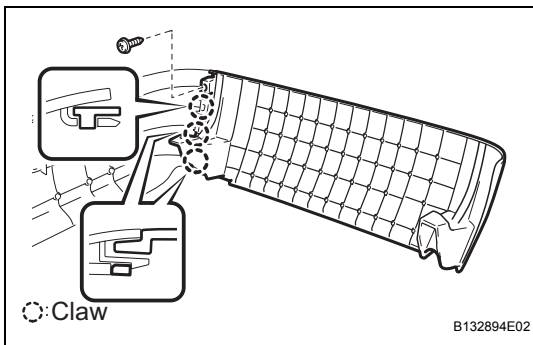


- (b) Remove the 5 screws.

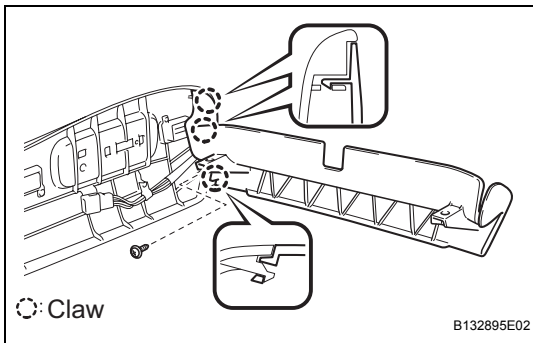
- (c) Driver seat only:

- (1) Disconnect the lumbar front power seat switch connector.

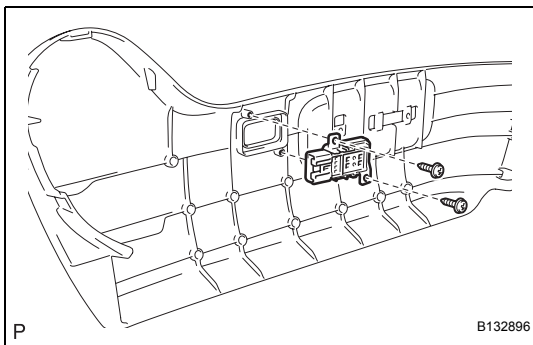
- (d) Disengage the 2 claws and remove the front seat cushion shield inner No.1 LH and front seat cushion shield LH as a unit.



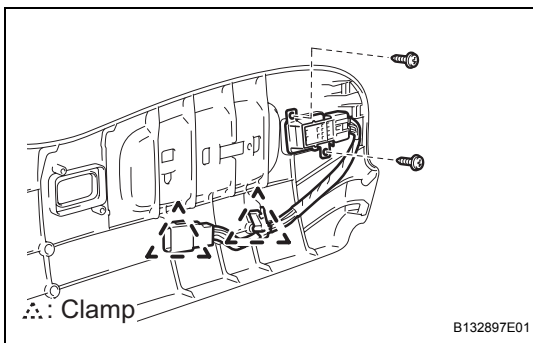
- (e) without Leg support adjustment system:
- (1) Remove the screw.
 - (2) Disengage the 3 claws and remove the front seat cushion shield inner No.1 LH.



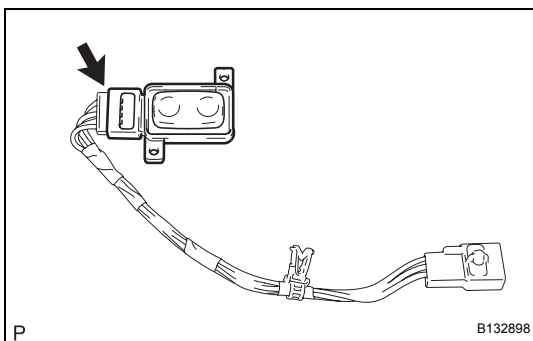
- (f) with Leg support adjustment system:
- (1) Remove the screw.
 - (2) Disengage the 3 claws and remove the front seat cushion shield inner No.1 LH.



5. REMOVE LUMBAR FRONT POWER SEAT SWITCH
- (a) Remove the 2 screws and the lumbar front power seat switch.

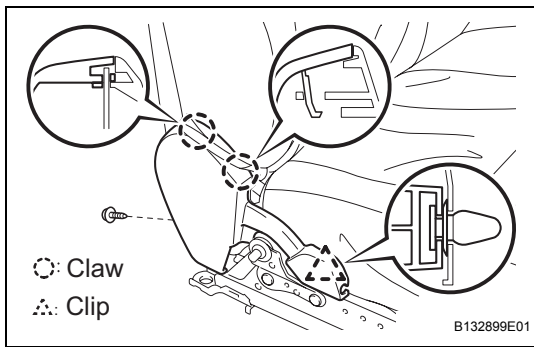


6. REMOVE POWER SEAT SWITCH ASSEMBLY
- (a) Disengage the 2 clamps.
 - (b) Remove the 2 screws and power seat switch assembly and seat wire as a unit.

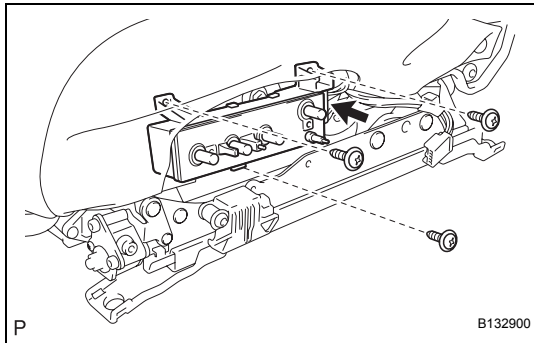


- (c) Disconnect the connector and remove the power seat switch assembly.

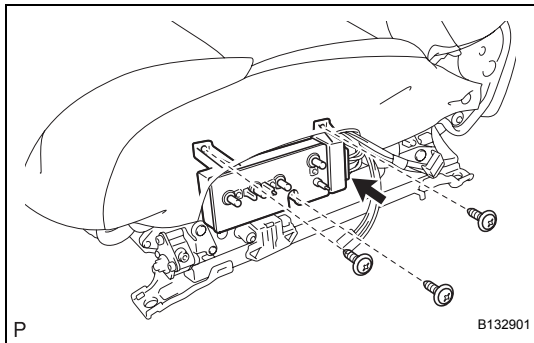
7. REMOVE FRONT SEAT CUSHION SHIELD LH

**8. REMOVE FRONT SEAT CUSHION SHIELD INNER LH**

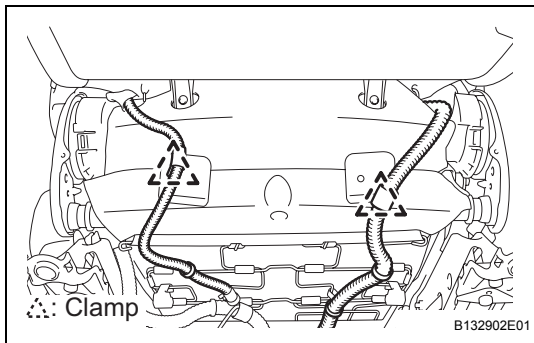
- (a) Remove the screw.
- (b) Disengage the 2 claws and clip and remove the front seat cushion shield inner LH.

**9. REMOVE FRONT POWER SEAT SWITCH**

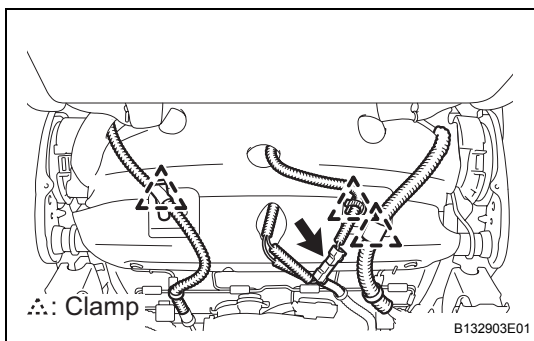
- (a) Disconnect the connector.
- (b) Remove the 3 screws and the front power seat switch.

**10. REMOVE FRONT POWER SEAT SWITCH**

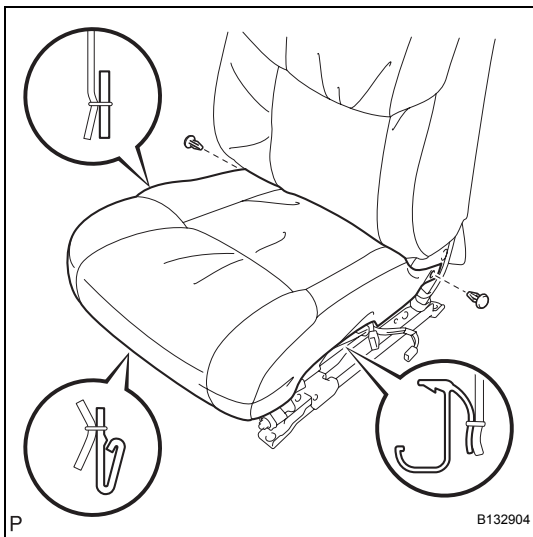
- (a) Disconnect the connector.
- (b) Remove the 3 screws and the position control ECU & switch assembly.

**11. REMOVE SEAT CUSHION COVER WITH PAD**

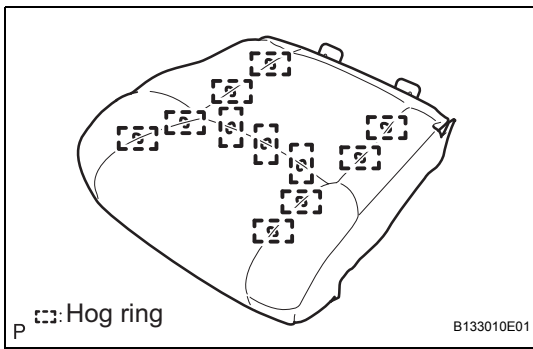
- (a) without Seat heater system:
 - (1) Disengage the 2 clamps.



- (b) with Seat heater system:
 - (1) Disconnect the connector.
 - (2) Disengage the 3 clamps.

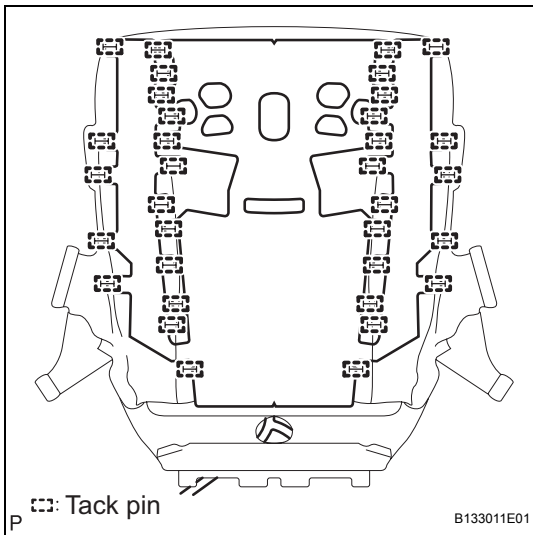


- (c) Disengage the hooks and remove the 2 clips and the seat cushion cover with pad.



12. REMOVE SEPARATE TYPE FRONT SEAT CUSHION COVER

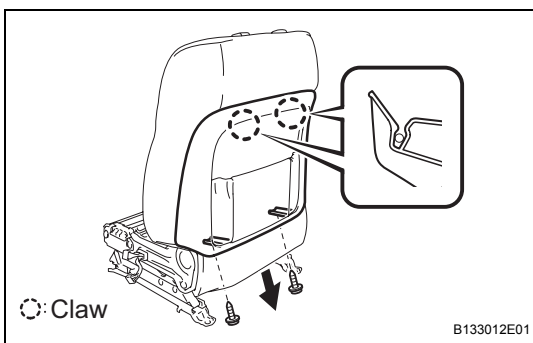
- (a) Remove the 11 hog rings and the separate type front seat cushion cover.



13. REMOVE FRONT SEAT CUSHION HEATER ASSEMBLY LH

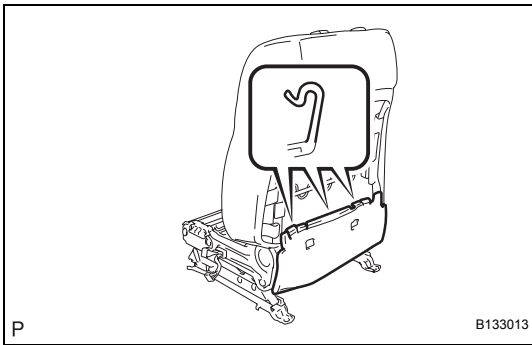
- (a) Detach the 34 tack pins and remove the front seat cushion heater assembly LH.

14. REMOVE FRONT SEAT HEADREST ASSEMBLY



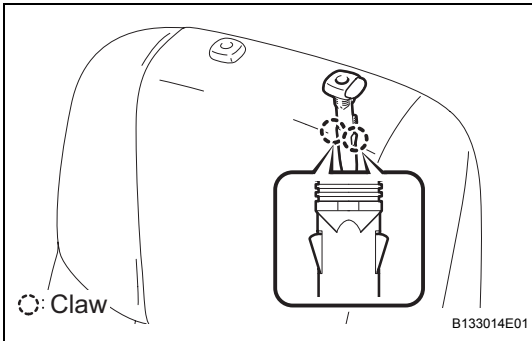
15. REMOVE FRONT SEATBACK BOARD SUB-ASSEMBLY LH

- (a) Remove the 2 screws.
 (b) Disengage the 2 claws and remove the front seatback board sub-assembly LH.



16. REMOVE SEPARATE TYPE FRONT SEATBACK COVER

- (a) Disengage the hooks and remove the separate type front seatback cover.



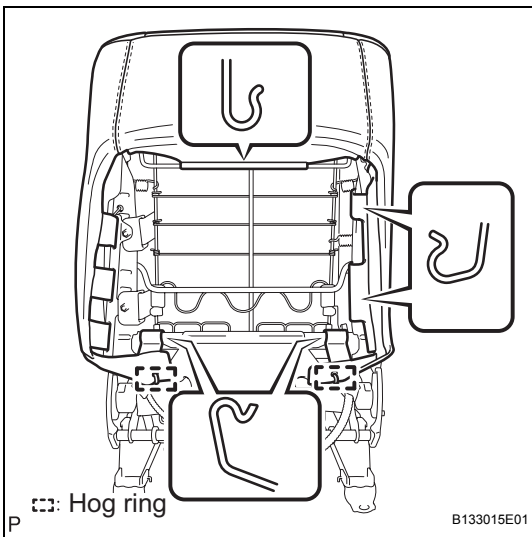
17. REMOVE FRONT SEAT HEADREST SUPPORT

- (a) Disengage the 2 claws and remove the front seat headrest support (LH side).

18. REMOVE FRONT SEAT HEADREST SUPPORT

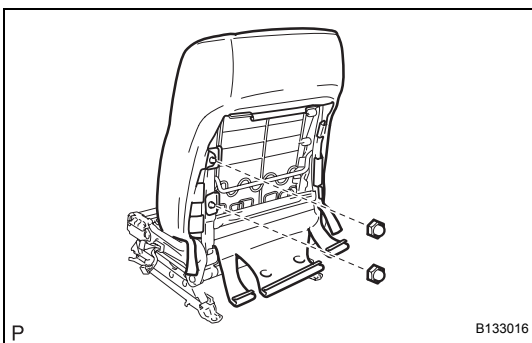
HINT:

Use the same procedures for the RH side and LH side.



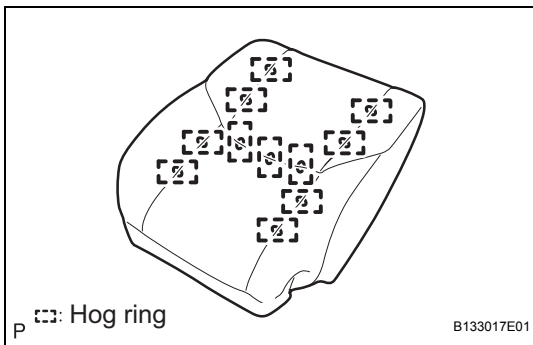
19. REMOVE SEATBACK COVER WITH PAD

- (a) Disengage the 2 hog rings and the hooks.



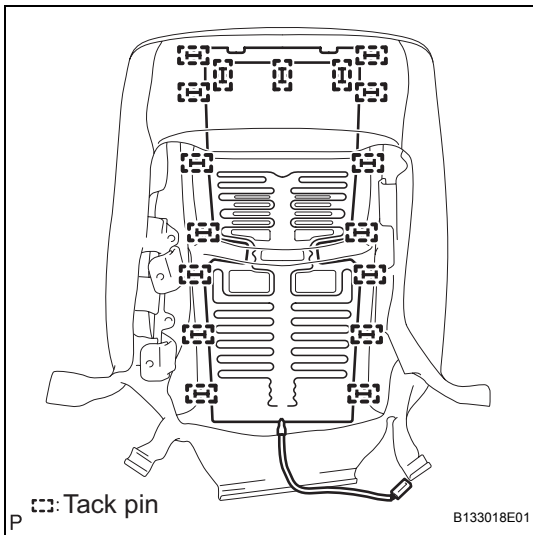
- (b) Remove the 2 nuts and disconnect the separate type front seatback cover bracket.

- (c) Remove the seatback cover with pad.



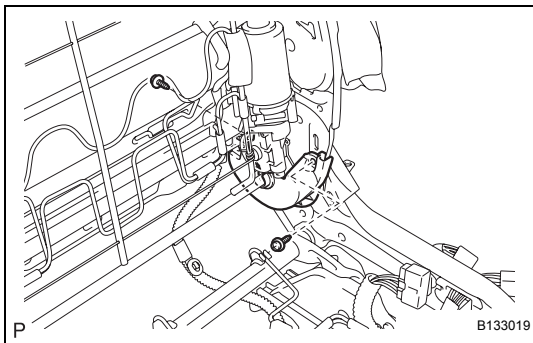
20. REMOVE SEPARATE TYPE FRONT SEATBACK COVER

- (a) Remove the 11 hog rings and the separate type front seatback cover.



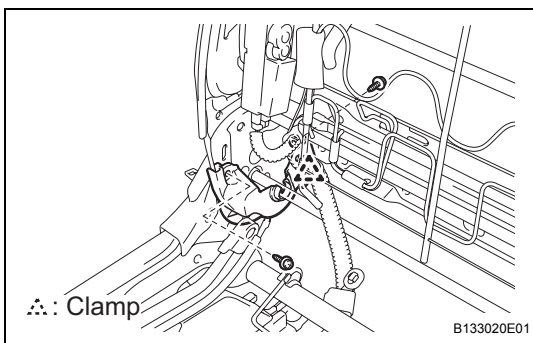
21. REMOVE FRONT SEATBACK HEATER ASSEMBLY LH (w/ Seat Heater System)

- (a) Detach the 17 tack pins and remove the front seatback heater assembly LH.



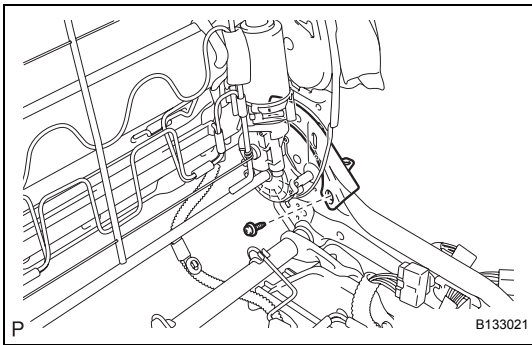
22. REMOVE FRONT SEATBACK SHIELD RH

- (a) Remove the 2 screws and the front seatback shield RH.



23. REMOVE FRONT SEATBACK SHIELD LH

- (a) Disengage the clamp.
 (b) Remove the 2 screws and the front seatback shield LH.

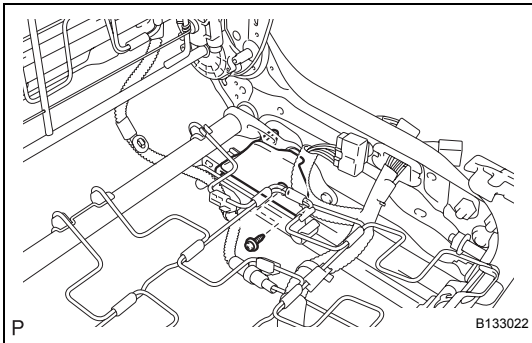
**24. REMOVE RECLINING ADJUSTER INSIDE COVER RH**

- (a) Remove the screw and the reclining adjuster inside cover RH.

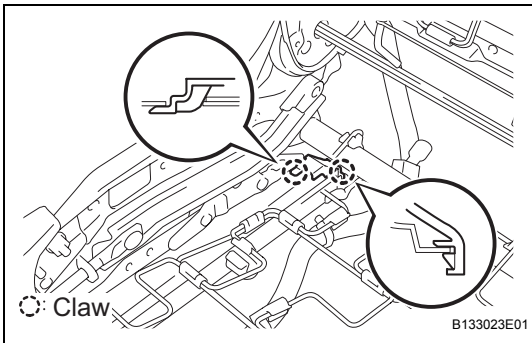
25. REMOVE RECLINING ADJUSTER INSIDE COVER LH

HINT:

Use the same procedures for the RH side and LH side.

**26. REMOVE FRONT SEAT CUSHION SHIELD LOWER LH (for Driver Seat)**

- (a) Remove the screw and the front seat cushion shield lower LH.

**27. REMOVE VERTICAL ADJUSTER BRACKET COVER LH (for Front Passenger Seat)**

- (a) Disengage the 2 claws and remove the vertical adjuster bracket cover LH.

28. REMOVE FRONT SEAT CUSHION SHIELD LOWER (for Driver Seat)

HINT:

Use the same procedures for the RH side and LH side.

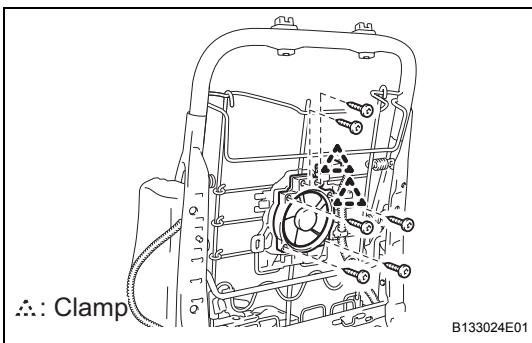
29. REMOVE VERTICAL ADJUSTER BRACKET COVER OUTER (for Front Passenger Seat)

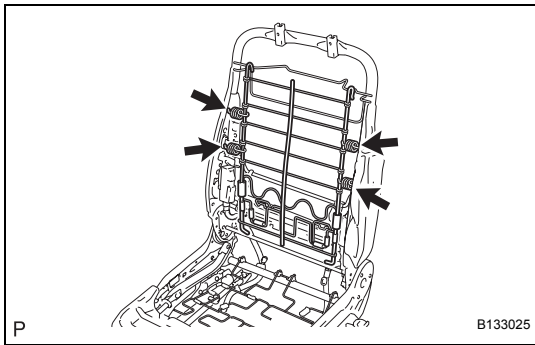
HINT:

Use the same procedures for the RH side and LH side.

30. REMOVE SEAT CLIMATE CONTROL BLOWER RH (w/ Climate Control Seat System)

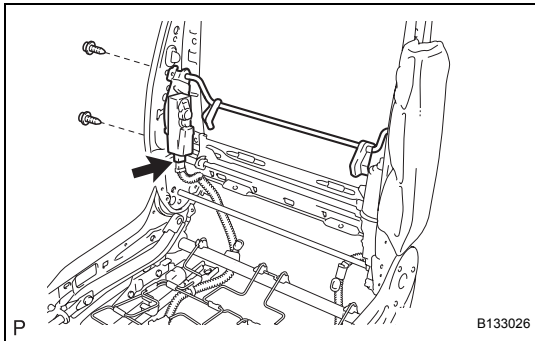
- (a) Disconnect the connector.
 (b) Disengage the 2 clamps.
 (c) Using a torx socket wrench (T20), remove the 6 screws, seat climate control blower RH and seatback climate control cover.

**31. REMOVE SEATBACK CLIMATE CONTROL COVER RH (w/ Climate Control Seat System)**



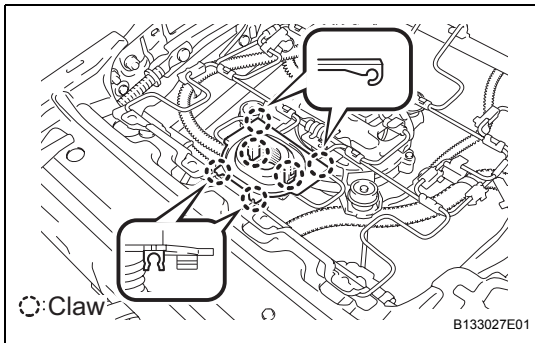
32. REMOVE LUMBAR SUPPORT ADJUSTER ASSEMBLY LH (for Driver Seat)

(a) Remove the 4 springs and the seatback spring.



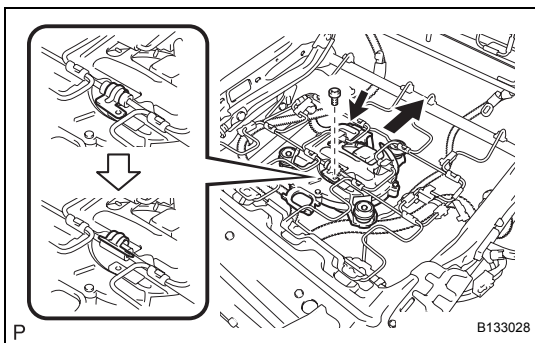
(b) Disconnect the connector.

(c) Remove the 2 screws and the lumbar support adjuster assembly LH.



33. REMOVE SEAT CUSHION CLIMATE CONTROL DUCT RH (w/ Climate Control Seat System)

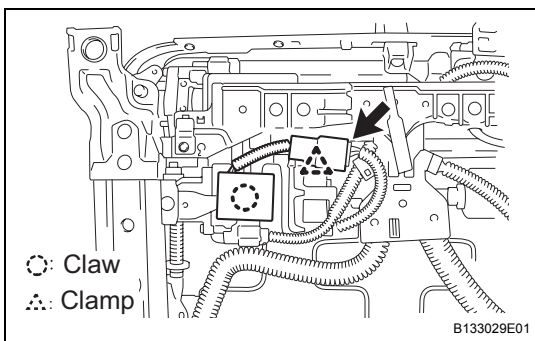
(a) Disengage the 6 claws and remove the seat cushion climate control duct.



34. REMOVE SEAT CLIMATE CONTROL BLOWER (w/ Climate Control Seat System)

(a) Disconnect the connector.

(b) Using a torx socket wrench (T20), remove the screw and the seat climate control blower RH.



35. REMOVE SEAT HEATER CONTROL SUB-ASSEMBLY LH (w/ Seat Heater System)

(a) Disconnect the connector.

(b) Disengage the claw and clamp and remove the seat heater control sub-assembly LH.

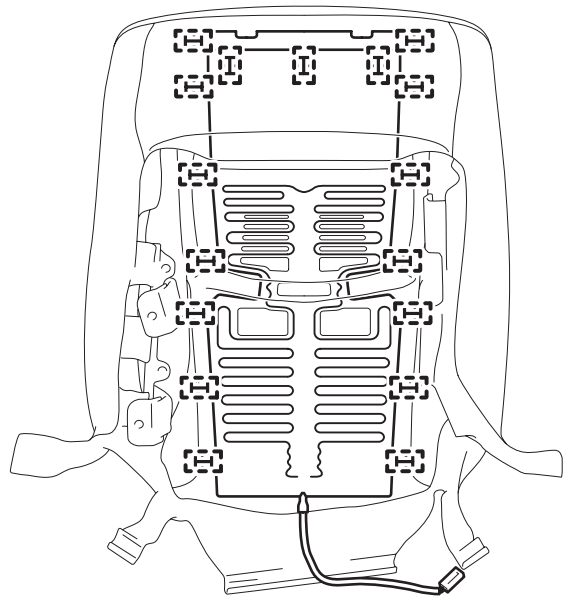
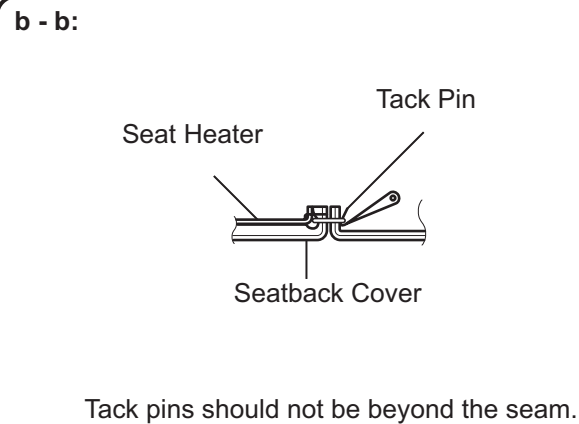
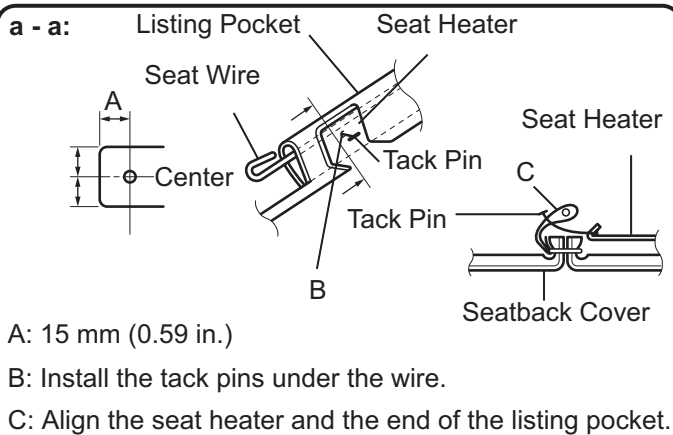
36. REMOVE SEAT SLIDE POSITION SENSOR PROTECTOR (for Driver Seat) (See page RS-368)

37. REMOVE SEAT POSITION AIRBAG SENSOR (for Driver Seat) (See page RS-368)

- 38. REMOVE OCCUPANT CLASSIFICATION ECU (for Front Passenger Seat) (See page [RS-371](#))
- 39. REMOVE FRONT SEAT WIRE LH

REASSEMBLY

1. **INSTALL OCCUPANT CLASSIFICATION ECU (for Front Passenger Seat) (See page RS-371)**
2. **INSTALL SEAT POSITION AIRBAG SENSOR (for Driver Seat) (See page RS-368)**
3. **INSTALL FRONT SEATBACK HEATER ASSEMBLY LH (w/ Seat Heater System)**
 - (a) Set the front seat back heater assembly LH to the separate type front seatback cover.
 - (b) Install the front seat back heater assembly LH with 17 new tack pins.



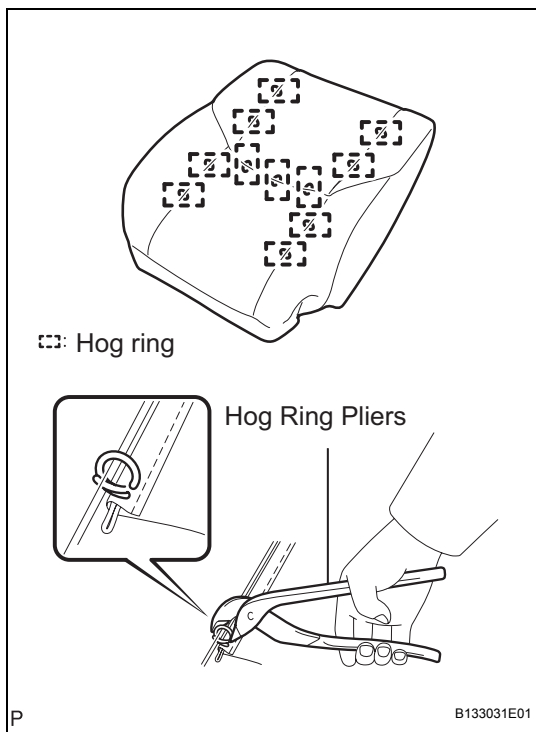
 Tack pin

P

B133030E02

NOTICE:
Do not substitute other metal parts for tack pins.

SE

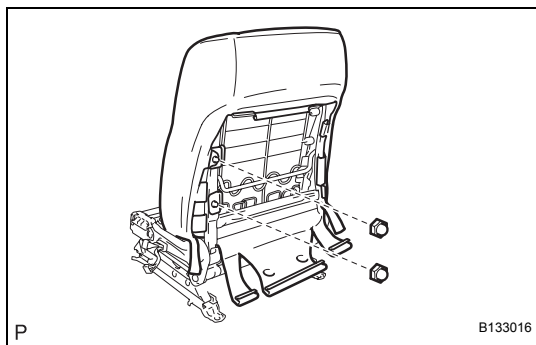


4. INSTALL SEPARATE TYPE FRONT SEATBACK COVER

- (a) Using hog ring pliers, install the separate type front seatback cover with 11 new hog rings.

NOTICE:

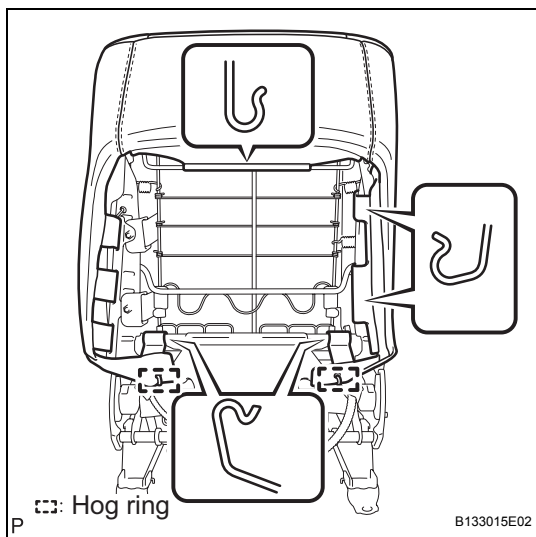
- Be careful not to damage the cover.
- When installing the hog rings, take care to minimize wrinkles as much as possible.



5. INSTALL SEATBACK COVER WITH PAD

- (a) Install the seatback cover with pad.
 (b) Install the separate type front seatback cover bracket with the 2 nuts.

Torque: 5.5 N*m (56 kgf*cm, 49 in.*lbf)



- (c) Using hog ring pliers, install the separate type front seatback cover with 2 new hog rings.

NOTICE:

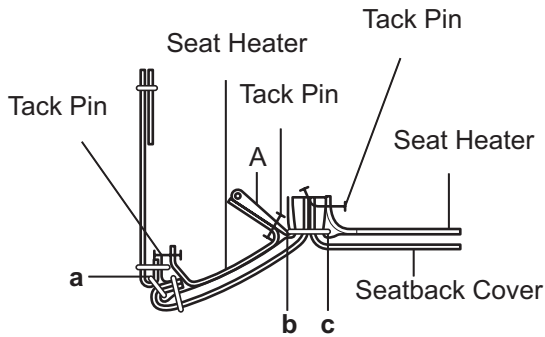
- Be careful not to damage the cover.
- When installing the hog rings, take care to minimize wrinkles as much as possible.

- (d) Engage the hooks.

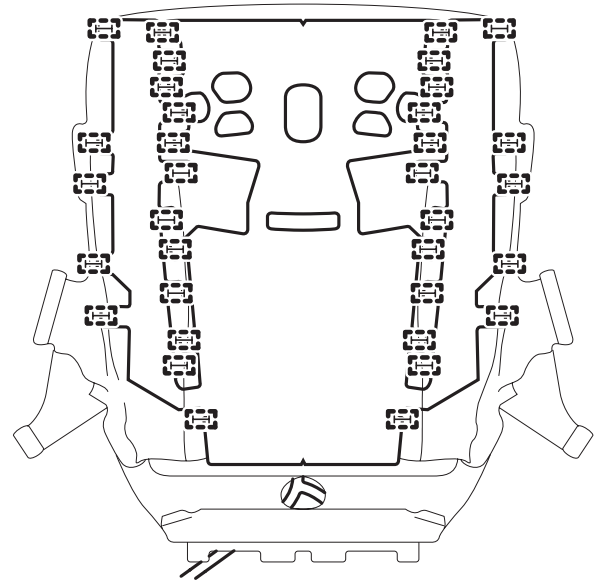
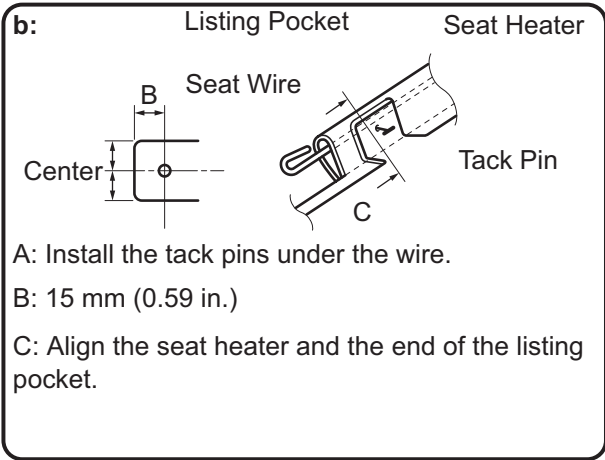
6. INSTALL FRONT SEAT CUSHION HEATER ASSEMBLY LH (w/ Seat Heater System)

- (a) Set the front seat cushion heater assembly LH to the separate type front seat cushion cover.

(b) Install the front seat cushion heater assembly LH with 34 new tack pins.



a, c:
Tack pins should not be beyond the seam.



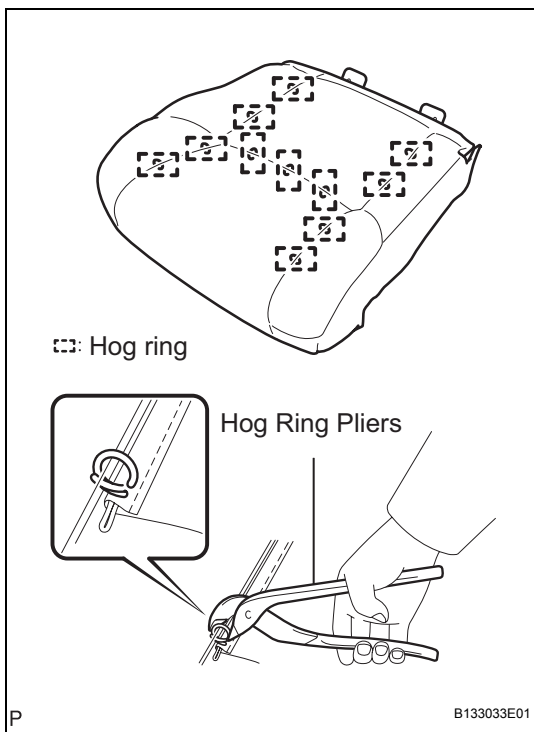
⌘: Tack Pin

P

B133032E01

SE

NOTICE:
Do not substitute other metal parts for tack pins.



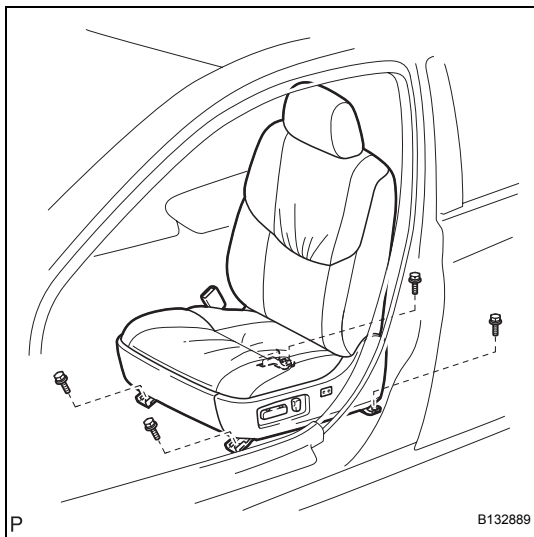
7. INSTALL SEPARATE TYPE FRONT SEAT CUSHION COVER

- (a) Using hog ring pliers, install the separate type front seat cushion cover with 11 new hog rings.

NOTICE:

- Be careful not to damage the cover.
- When installing the hog rings, take care to minimize wrinkles as much as possible.

8. INSTALL FRONT SEAT INNER BELT ASSEMBLY LH



INSTALLATION

1. INSTALL FRONT LH SEAT ASSEMBLY

- (a) Connect the connectors.
- (b) Connect the negative battery terminal.
- (c) Move the front LH seat assembly to the rearmost position by operating the slide & vertical power seat switch knob.
- (d) Tighten the 2 bolts on the front side of the front LH seat assembly.
Torque: 37 N*m (377 kgf*cm, 27 ft.*lbf)
- (e) Move the front LH seat assembly fully forward by operating the slide & vertical power seat switch knob.
- (f) Tighten the 2 bolts on the rear side of the front LH seat assembly.
Torque: 37 N*m (377 kgf*cm, 27 ft.*lbf)

2. PERFORM SYSTEM INITIALIZE

HINT:
See page [IN-29](#)

3. INSPECT POWER SEAT CONTROL SYSTEM

HINT:
See page [SE-13](#)

4. CHECK SEAT HEATER SYSTEM (w/ Seat Heater System)

HINT:
See page [SE-33](#)

5. INITIALIZE FRONT PASSENGER OCCUPANT CLASSIFICATION SYSTEM (for Front Passenger Seat)

HINT:

See page [RS-206](#)

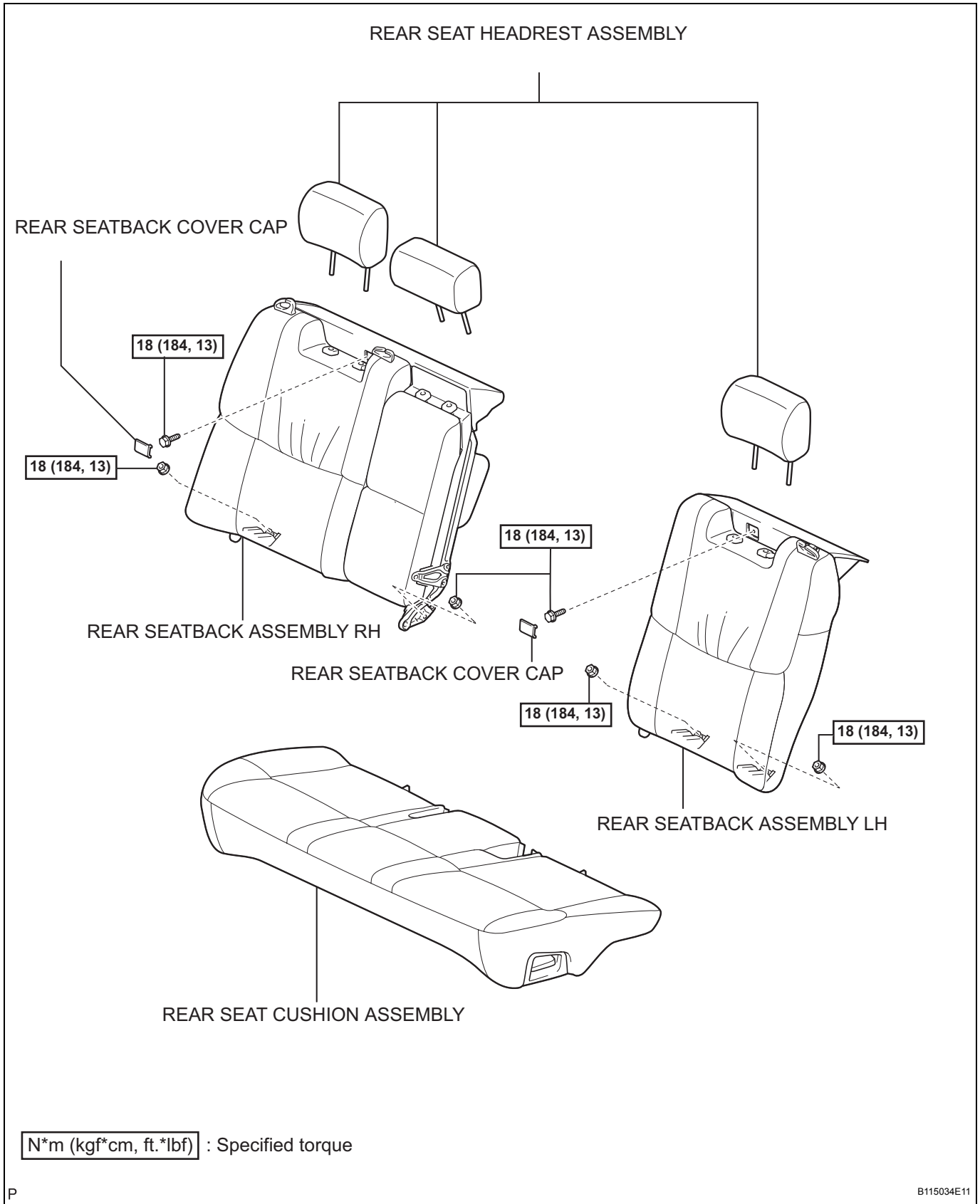
6. INSPECT SRS WARNING LIGHT

HINT:

See page [RS-28](#)

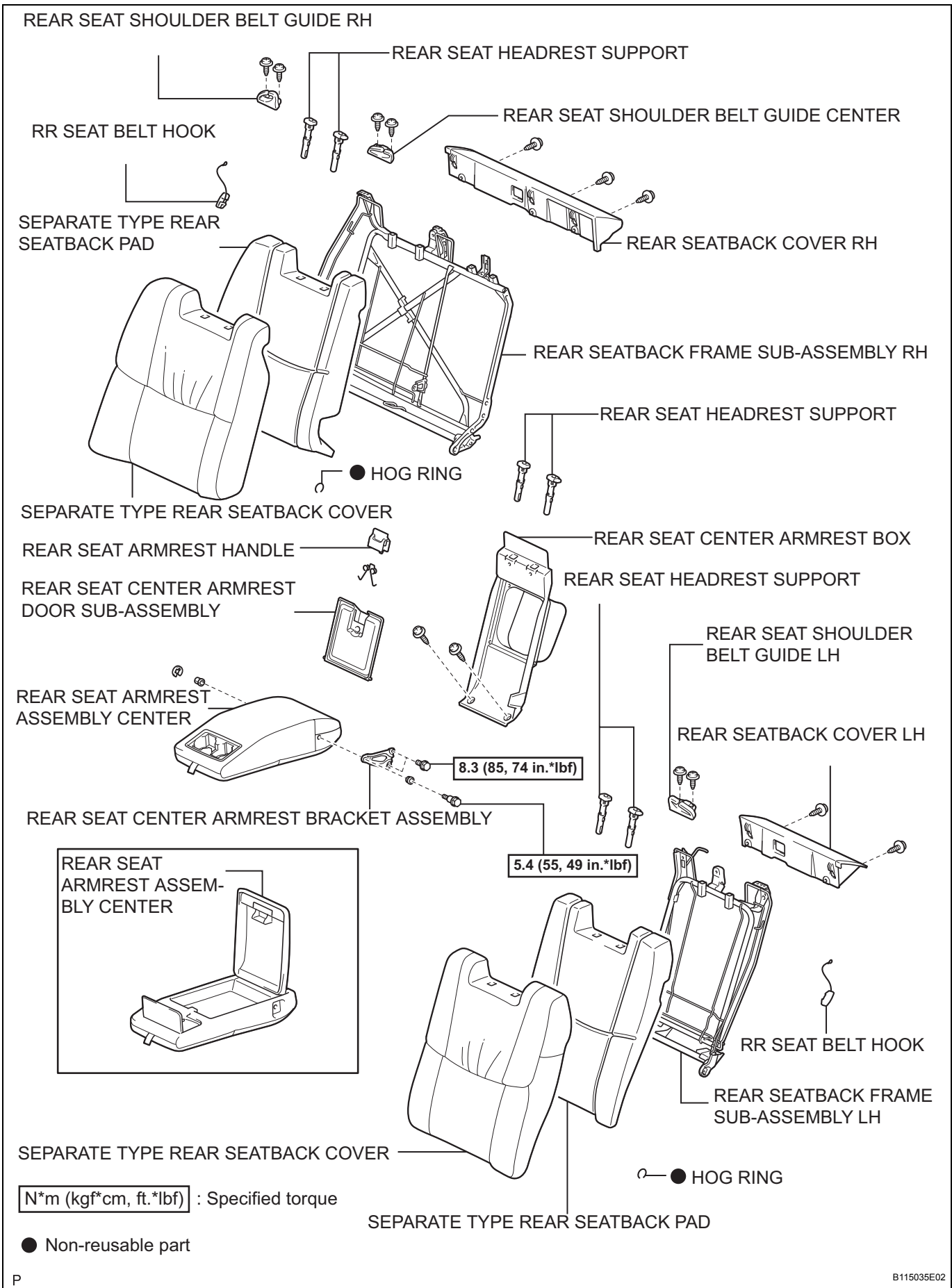
REAR SEAT ASSEMBLY

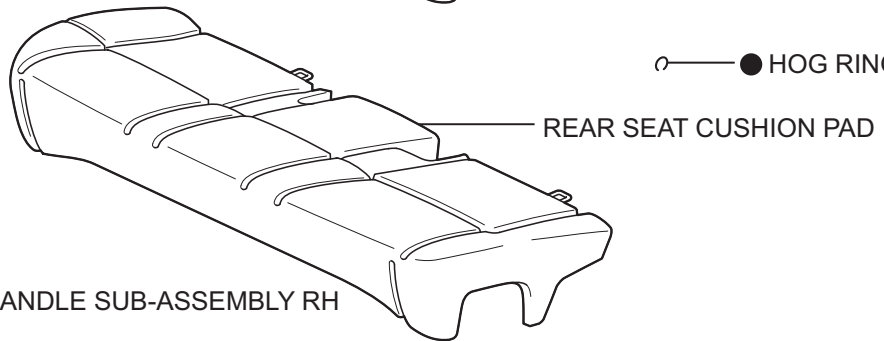
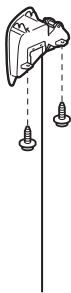
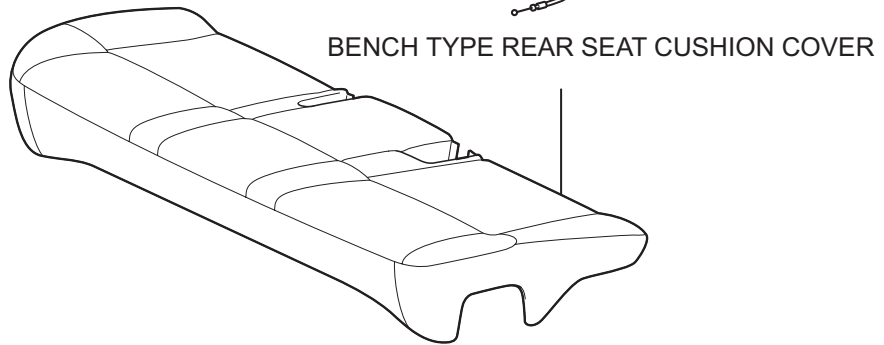
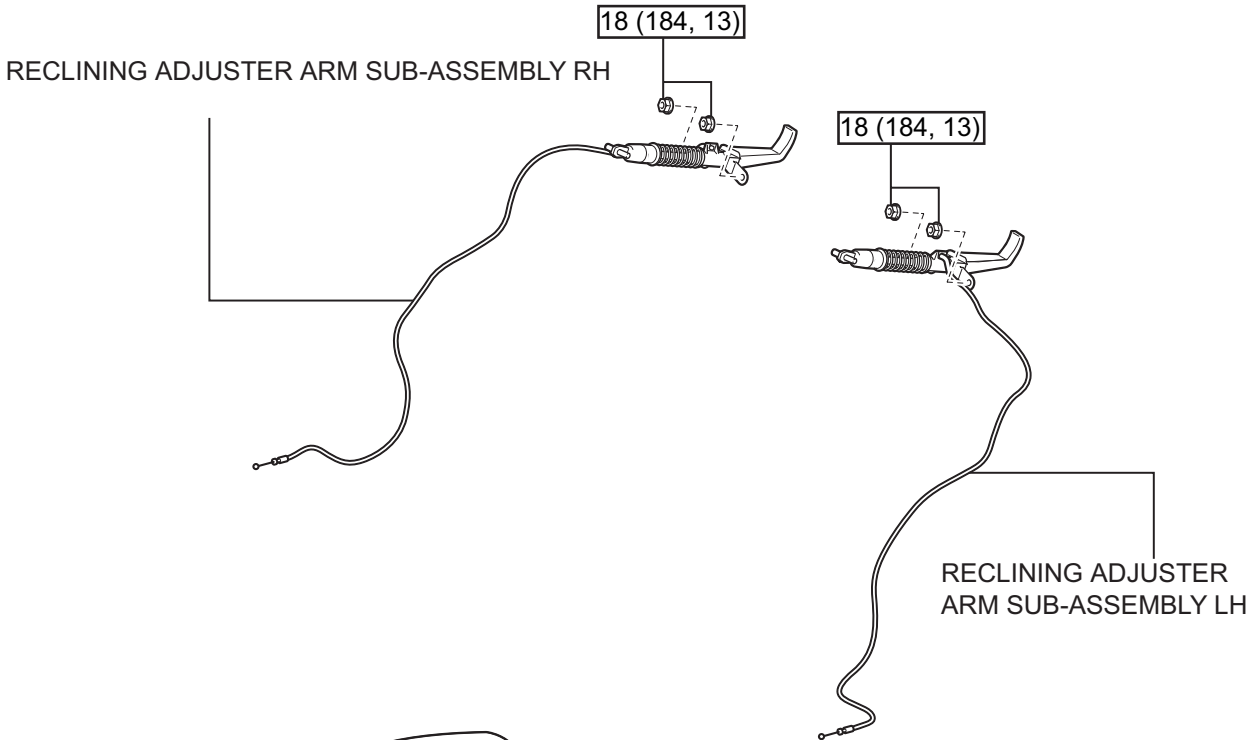
COMPONENTS



SE

N*m (kgf*cm, ft.*lbf) : Specified torque





$\boxed{\text{N*m (kgf*cm, ft.*lbf)}}$: Specified torque

● Non-reusable part

REMOVAL

HINT:

Only installation procedures requiring additional information are included.

1. REMOVE REAR SEAT CUSHION ASSEMBLY

- (a) Pull up the 2 portions of the rear seat cushion assembly as shown in the illustration and remove it.

A:

100 mm (3.94 in.) or less

NOTICE:

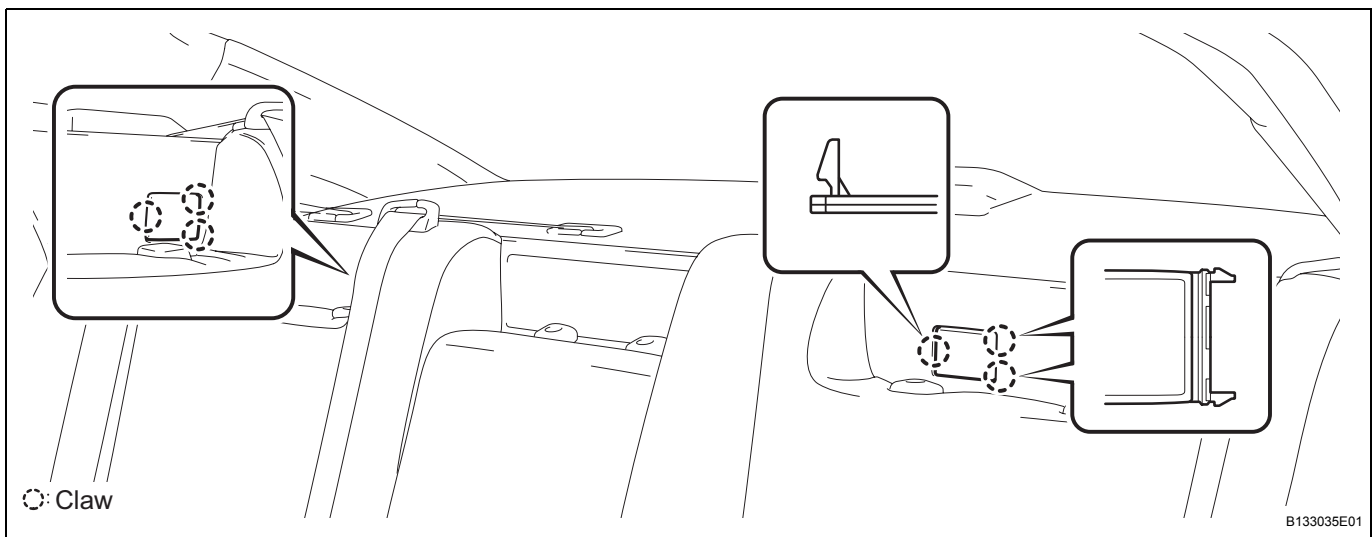
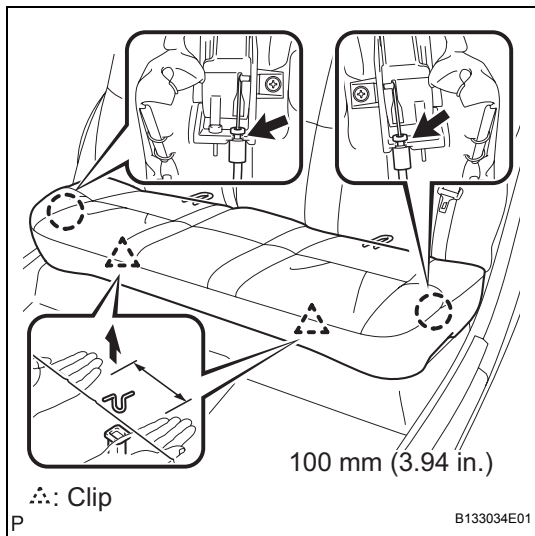
In this case, hold the base of the clip up to prevent the cushion frame from being distorted.

- (b) Disconnect each wire of the reclining adjuster arm sub-assembly RH and remove the rear seat cushion assembly.

2. REMOVE REAR SEAT HEADREST ASSEMBLY

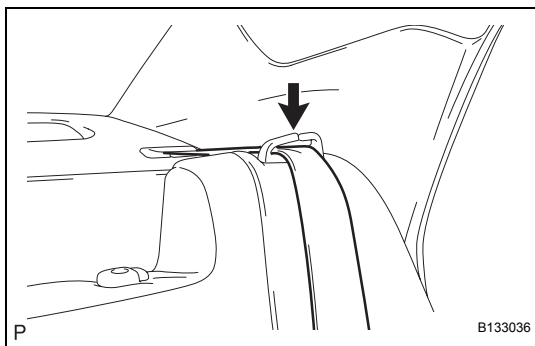
3. REMOVE REAR SEATBACK LOCK COVER CAP

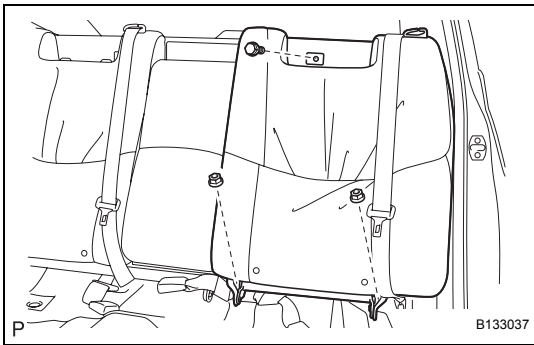
- (a) Disengage the 6 claws and remove the 2 RR shelf cover caps.



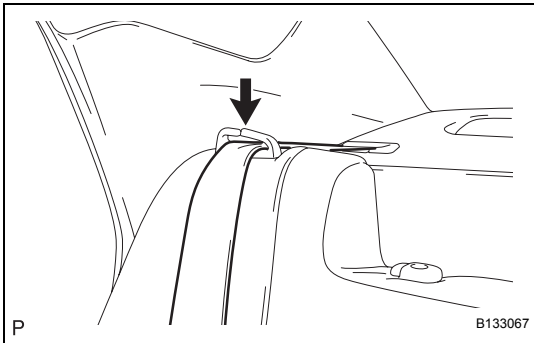
4. REMOVE REAR SEATBACK ASSEMBLY LH

- (a) Remove the rear seat belt from the rear seat shoulder belt guide LH.



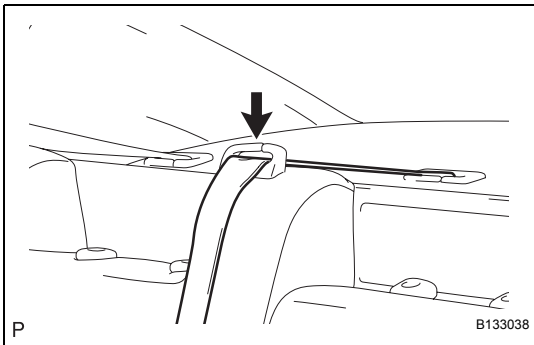


- (b) Remove the bolt, 2 nuts and the rear seatback assembly LH.

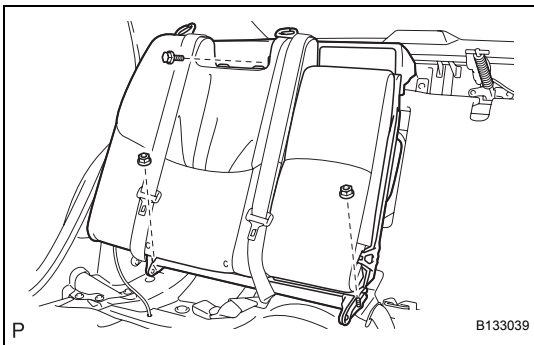


5. REMOVE REAR SEATBACK ASSEMBLY RH

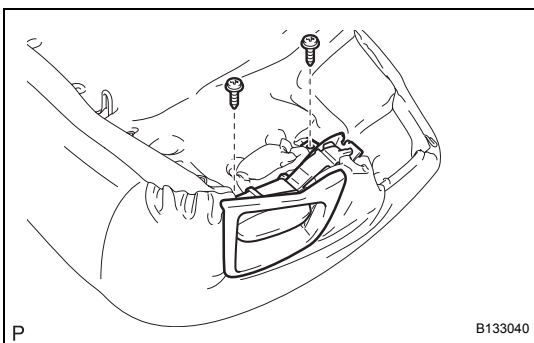
- (a) Remove the rear seat belt from the rear seat shoulder belt guide RH.



- (b) Remove the rear seat belt from the rear seat shoulder belt guide center.



- (c) Remove the bolt, 2 nuts and the rear seatback assembly RH.



DISASSEMBLY

1. REMOVE RECLINING RELEASE HANDLE SUB-ASSEMBLY LH

- (a) Remove the 2 screws and the reclining release handle sub-assembly LH.

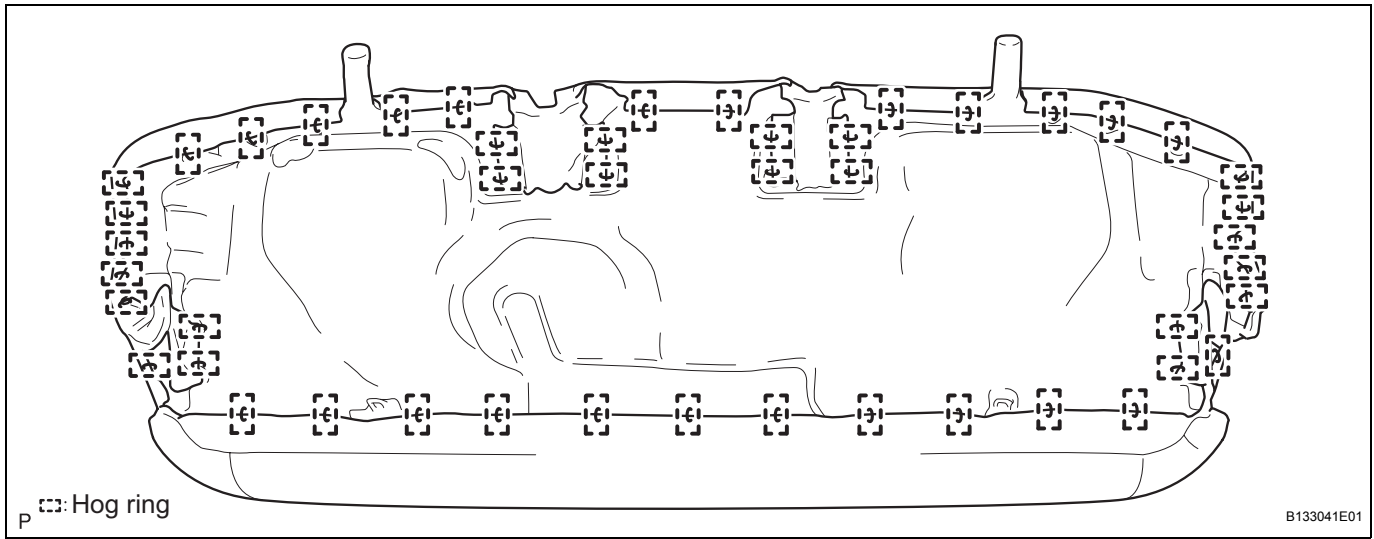
2. REMOVE RECLINING RELEASE HANDLE SUB-ASSEMBLY RH

HINT:

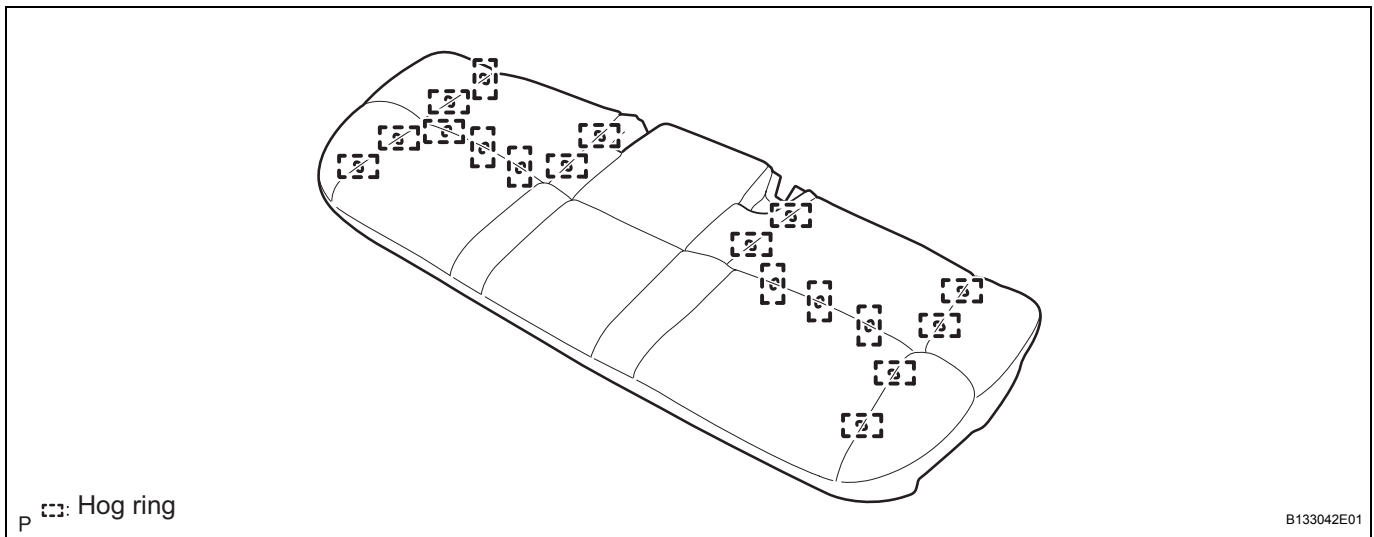
Use the same procedures for the RH side and LH side.

3. REMOVE BENCH TYPE REAR SEAT CUSHION COVER

- (a) Remove the 47 hog rings.



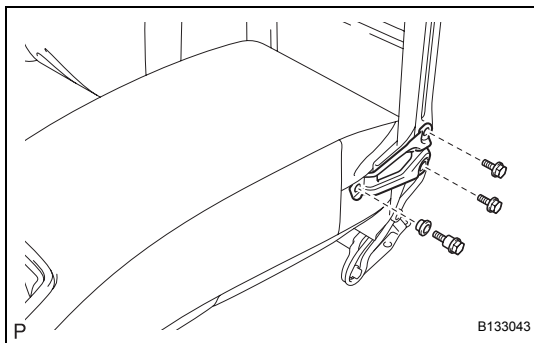
- (b) Remove the 18 hog rings and the bench type rear seat cushion cover.

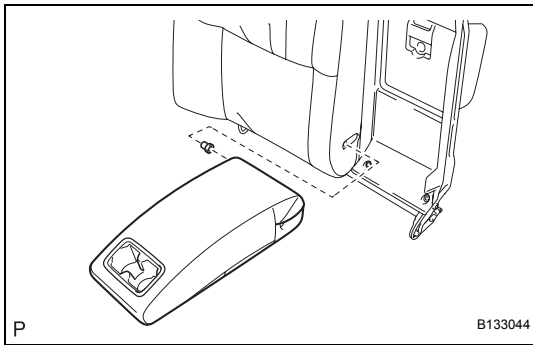


SE

4. REMOVE BRACKET

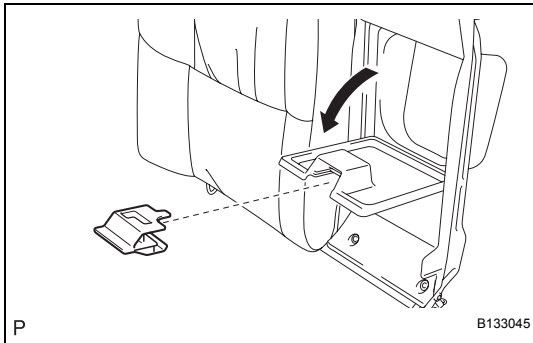
- (a) Remove the 3 bolts, E-ring and the rear seat center armrest bracket LH.





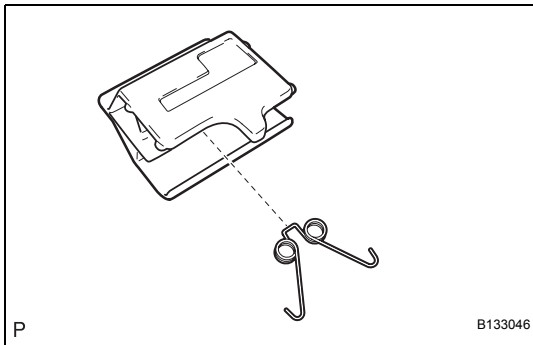
5. REMOVE REAR SEAT ARMREST ASSEMBLY CENTER

- (a) Remove the rear seat armrest assembly center.

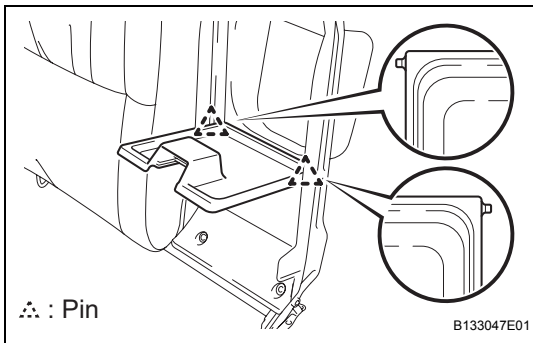


6. REMOVE REAR SEAT ARMREST HANDLE

- (a) Open the rear seat center armrest door sub-assembly as shown in the illustration.
 (b) Remove the ring and remove the rear seat armrest handle and spring as a unit.



- (c) Remove the rear seat armrest handle.

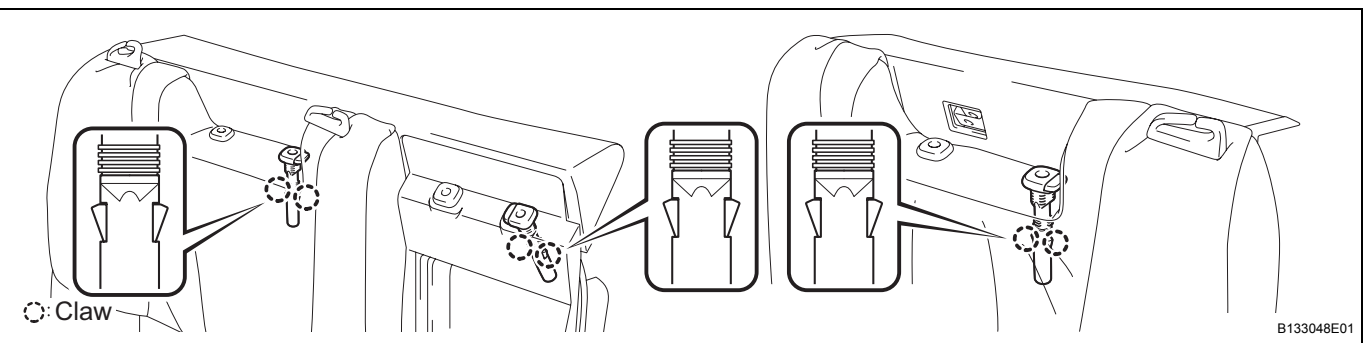


7. REMOVE REAR SEAT CENTER ARMREST DOOR SUB-ASSEMBLY

- (a) Disengage the RH side pin.
 (b) Disengage the LH side pin and remove the rear seat center armrest door sub-assembly.

8. REMOVE REAR SEAT HEADREST SUPPORT

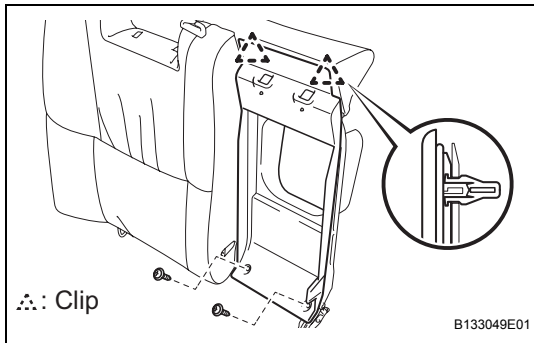
- (a) Disengage the 6 claws and remove the 3 rear seat headrest supports (LH side).



9. REMOVE REAR SEAT HEADREST SUPPORT

HINT:

Use the same procedures for the RH side and LH side.

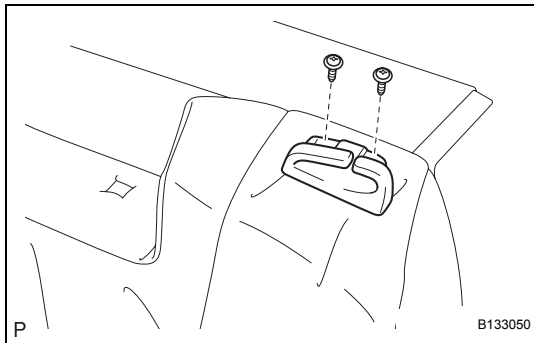
**10. REMOVE REAR SEAT CENTER ARMREST BOX**

(a) Remove the 2 screws.

(b) Disengage the 2 clips and remove the rear seat center armrest box.

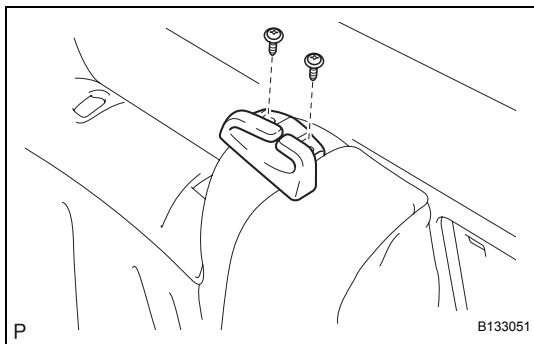
11. REMOVE REAR SEAT SHOULDER BELT GUIDE LH

(a) Remove the 2 screws and the rear seat shoulder belt guide LH.

**12. REMOVE REAR SEAT SHOULDER BELT GUIDE RH**

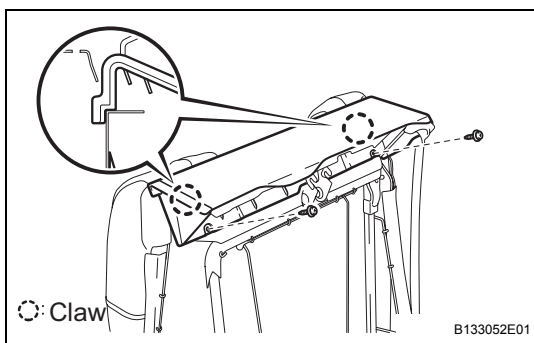
HINT:

Use the same procedures for the RH side and LH side.

**13. REMOVE REAR SEAT SHOULDER BELT GUIDE CENTER**

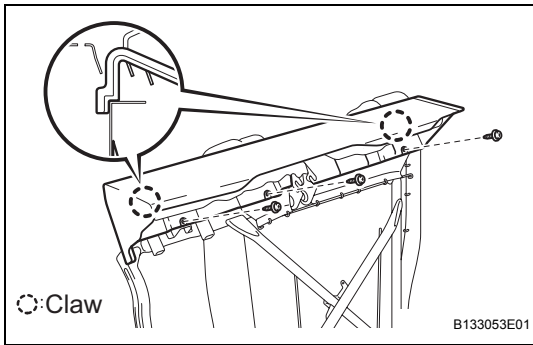
(a) Remove the 2 screws and the rear seat shoulder belt guide center.

SE

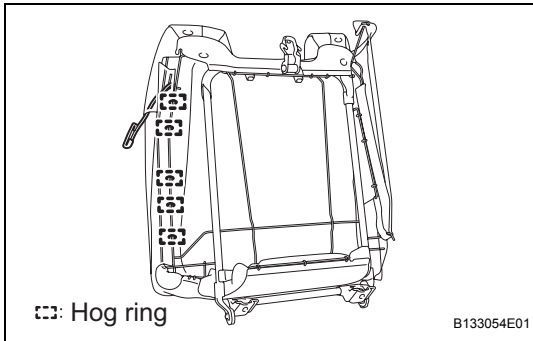
**14. REMOVE REAR SEATBACK COVER LH**

(a) Remove the 2 screws.

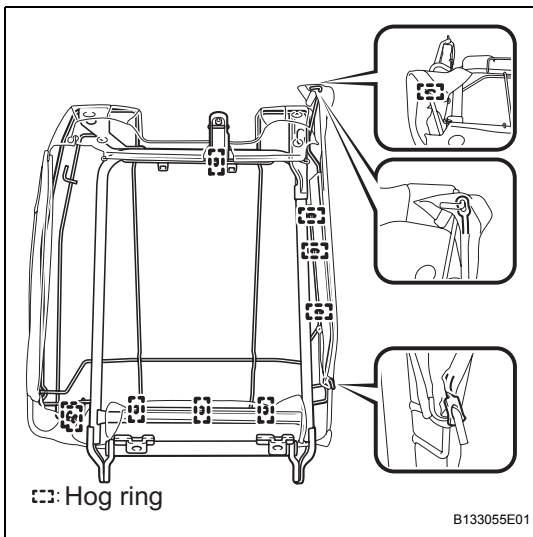
(b) Disengage the 2 claws and remove the rear seatback cover LH.

**15. REMOVE REAR SEATBACK COVER RH**

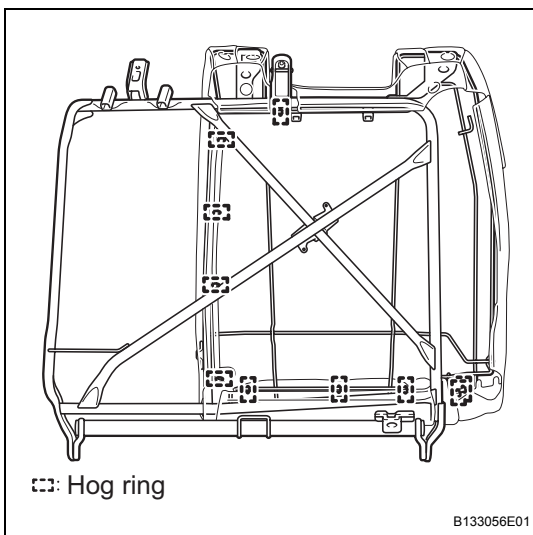
- (a) Remove the 3 screws.
- (b) Disengage the 2 claws and remove the rear seatback cover RH.

**16. REMOVE RR SEAT BELT HOOK**

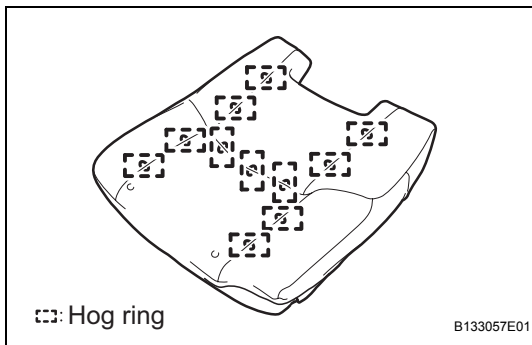
- (a) Remove the 5 hog rings and the RR seat belt hook.
- HINT:
Use the same procedures for the RH side and LH side.

**17. REMOVE REAR SEATBACK FRAME SUB-ASSEMBLY LH**

- (a) Disengage the 2 J-clips.
- (b) Remove the 10 hog rings.
- (c) Disengage the 2 hooks and remove the rear seatback frame sub-assembly LH.

**18. REMOVE REAR SEATBACK FRAME SUB-ASSEMBLY RH**

- (a) Disengage the 2 J-clips.
- (b) Remove the 10 hog rings and the rear seatback frame sub-assembly RH.



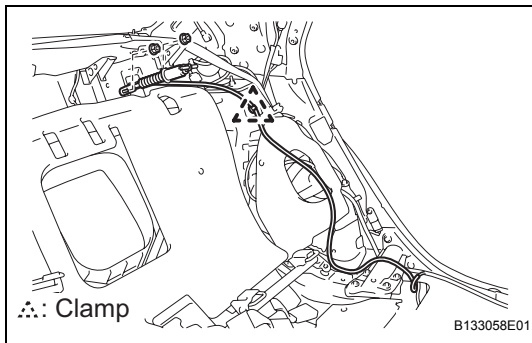
19. REMOVE SEPARATE TYPE REAR SEATBACK COVER

- (a) Remove the 11 hog rings and the separate type rear seatback cover.

20. REMOVE SEPARATE TYPE REAR SEATBACK COVER

HINT:

Use the same procedures for the RH side and LH side.



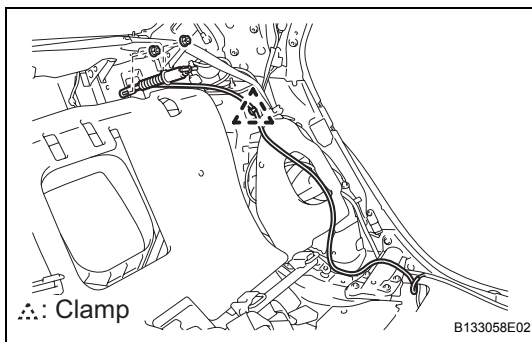
21. REMOVE UPPER NO.2 LH ARM SUB-ASSEMBLY NO.1 SEAT RECLINING ADJUSTER

- (a) Disengage the clamp and remove the 2 nuts and the reclining adjuster arm sub-assembly LH.

22. REMOVE NO.1 SEAT RECLINING ADJUSTER ARM SUB-ASSEMBLY UPPER NO.2 RH

HINT:

Use the same procedures for the RH side and LH side.



REASSEMBLY

1. INSTALL UPPER NO.2 LH ARM SUB-ASSEMBLY NO.1 SEAT RECLINING ADJUSTER

- (a) Install the reclining adjuster arm sub-assembly LH with the 2 nuts.

Torque: 18 N*m (184 kgf*cm, 13 ft.*lbf)

- (b) Engage the clamp.

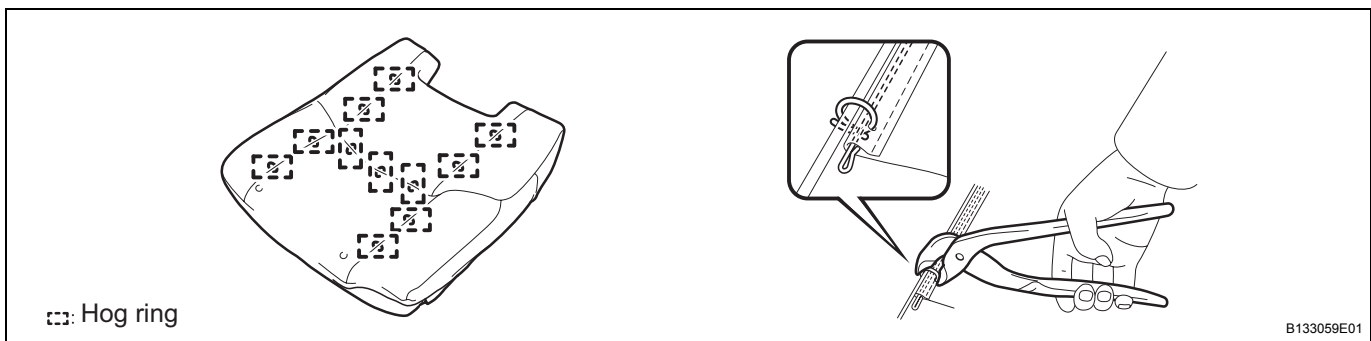
2. INSTALL NO.1 SEAT RECLINING ADJUSTER ARM SUB-ASSEMBLY UPPER NO.2 RH

HINT:

Use the same procedures for the RH side and LH side.

3. INSTALL SEPARATE TYPE REAR SEATBACK COVER

- (a) Using hog ring pliers, install the separate type rear seat back cover with 13 new hog rings.



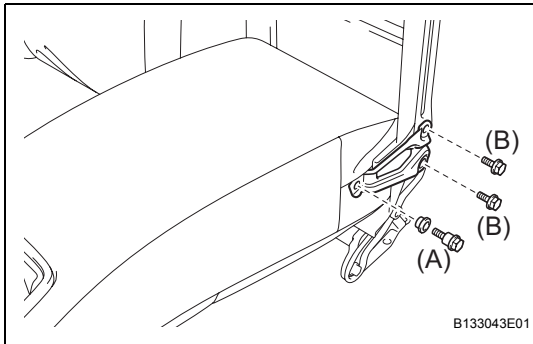
NOTICE:

- Be careful not to damage the cover.
- When installing the hog rings, take care to minimize wrinkles as much as possible.

4. INSTALL SEPARATE TYPE REAR SEATBACK COVER

HINT:

Use the same procedures for the RH side and LH side.



5. INSTALL BRACKET

- (a) Install the rear seat center armrest bracket LH with the 3 bolts.

Torque: Bolt A

5.4 N*m (55 kgf*cm, 48 in.*lbf)

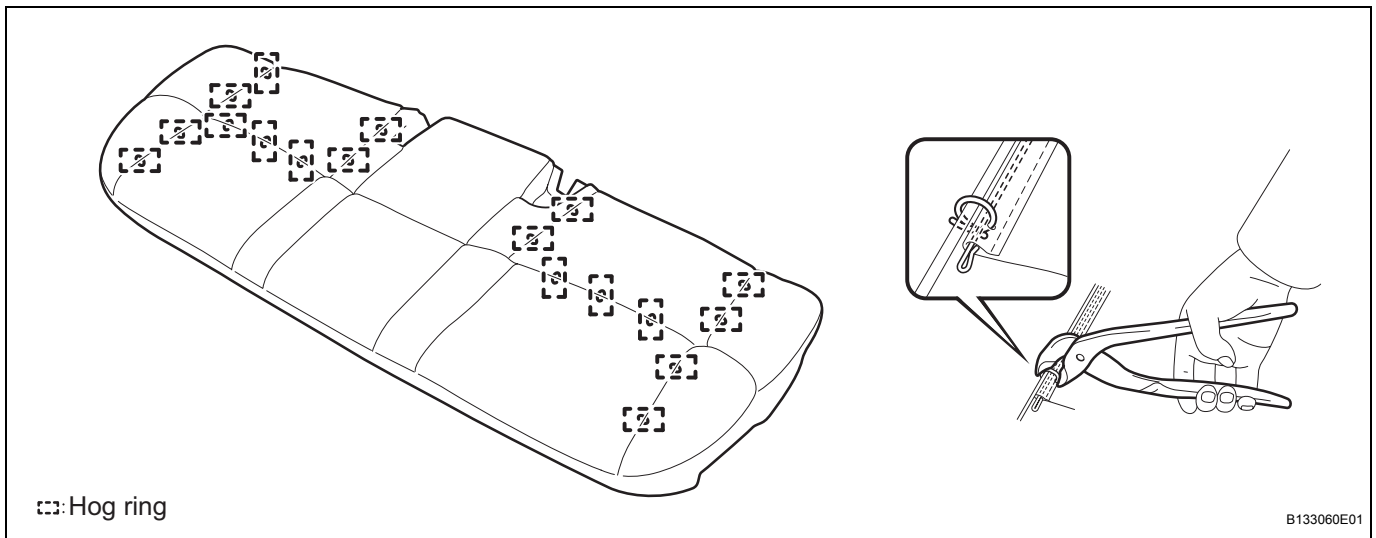
Bolt B

8.3 N*m (85 kgf*cm, 74 in.*lbf)

- (b) Install the E-ring.

6. INSTALL BENCH TYPE REAR SEAT CUSHION COVER

- (a) Using hog ring pliers, install the bench type rear seat cushion cover with 18 new hog rings.

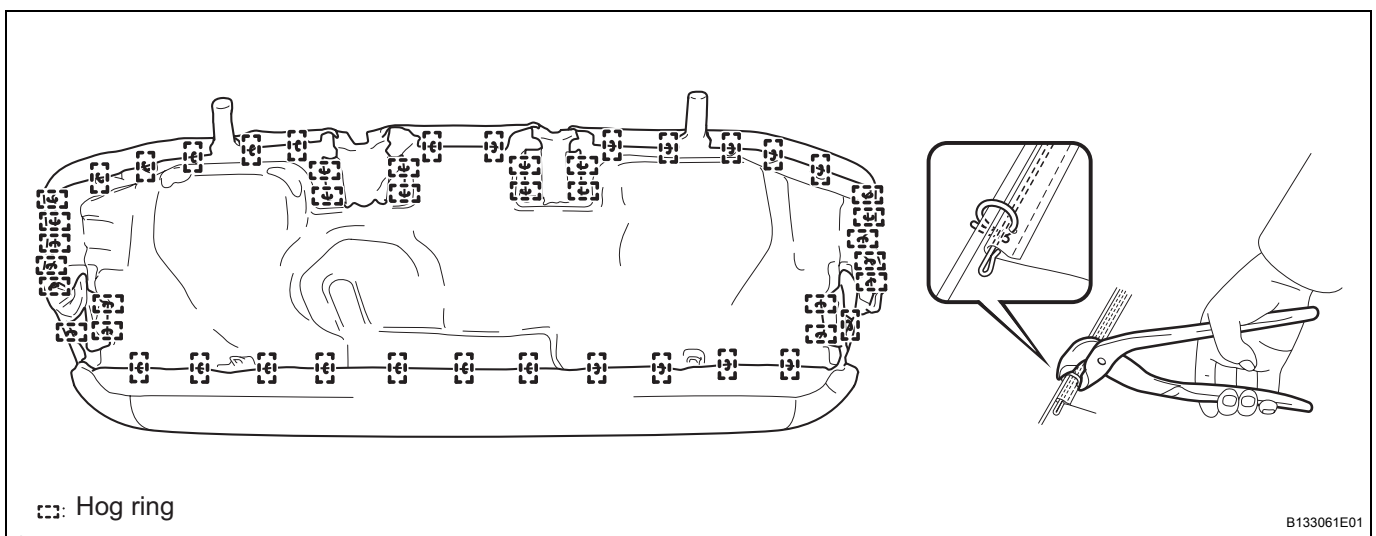


☐ Hog ring

B133060E01

- (b) Using hog ring pliers, install the bench type rear seat cover with 47 new hog rings.

SE



☐ Hog ring

B133061E01

NOTICE:

- Be careful not to damage the cover.

- When installing the hog rings, take care to minimize wrinkles as much as possible.

INSTALLATION

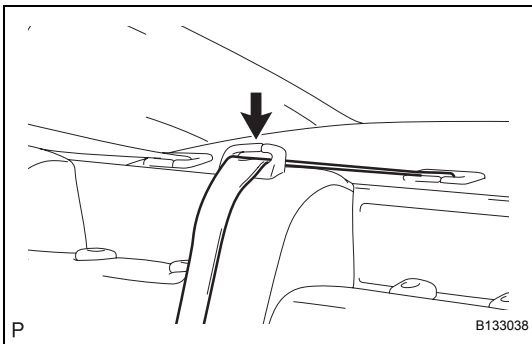
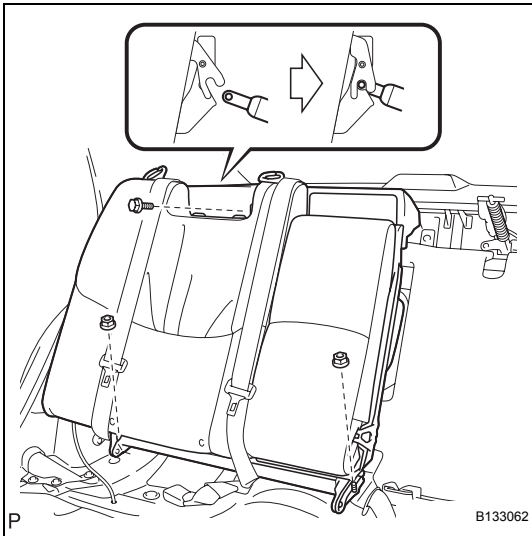
1. INSTALL REAR SEATBACK ASSEMBLY RH

- Engage the rear seatback frame sub-assembly RH with the end of the reclining adjuster arm sub-assembly RH.
- Install the rear seatback assembly RH with the bolt and 2 nuts.

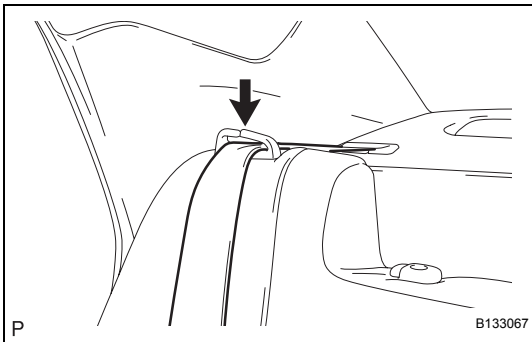
Torque: 18 N*m (184 kgf*cm, 13 ft.*lbf)

HINT:

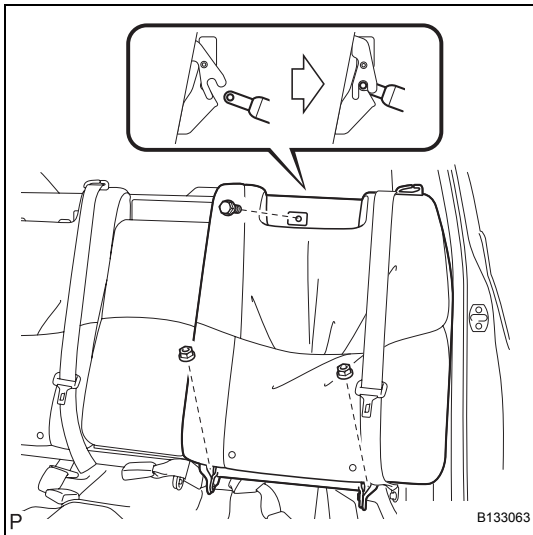
Compress completely adjuster arm sub-assembly before engage rear seatback frame sub-assembly.



- Install the rear seat belt to the rear seat shoulder belt guide center.



- Install the rear seat belt to the rear seat shoulder belt guide RH.

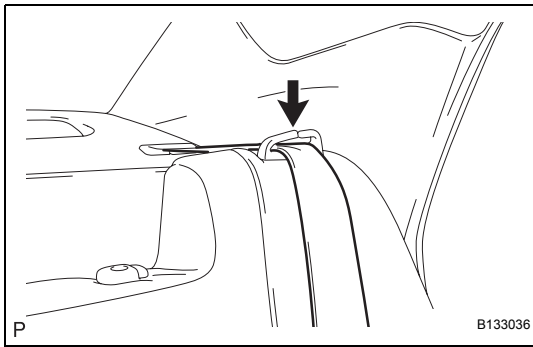
**2. INSTALL REAR SEATBACK ASSEMBLY LH**

- (a) Engage the rear seatback frame sub-assembly LH with the end of the reclining adjuster arm sub-assembly LH.
- (b) Install the rear seatback assembly LH with the bolt and 2 nuts.

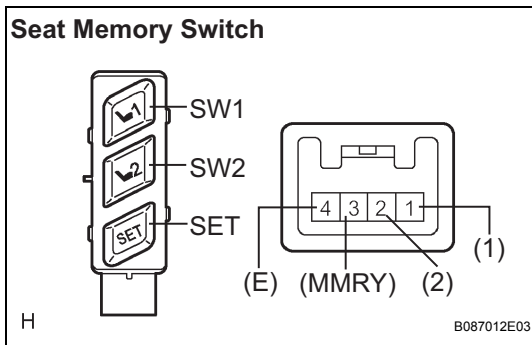
Torque: 18 N*m (184 kgf*cm, 13 ft.*lbf)

HINT:

Compress completely adjuster arm sub-assembly before engage rear seatback frame sub-assembly.



- (c) Install the rear seat belt to the rear seat shoulder belt guide LH.



SEAT MEMORY SWITCH (w/ Memory)

INSPECTION

1. INSPECT SEAT MEMORY SWITCH

- (a) Measure the resistance between the terminals when each switch is operated.

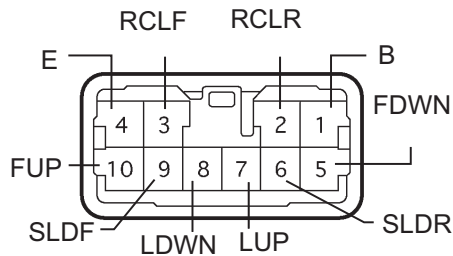
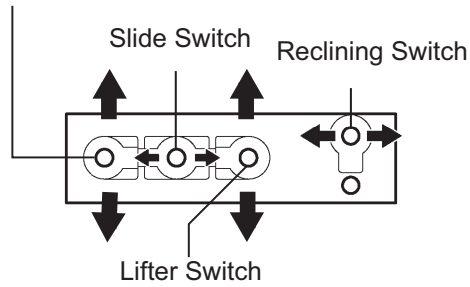
Resistance

Tester Connection	Switch Operation	Specified Condition
1 (1) - 4 (E)	SW1 switch pushed	Below 1 Ω
2 (2) - 4 (E)	SW2 switch pushed	Below 1 Ω
3 (MMRY) - 4 (E)	SET switch pushed	Below 1 Ω

If the result is not as specified, replace the switch.

Front Power Seat Switch LH

Front Vertical Slide Switch



B060011E03

POWER SEAT SWITCH (w/o Memory)

INSPECTION

1. INSPECT FRONT POWER SEAT SWITCH

(a) Inspect the front driver side power seat switch.

- (1) Measure the resistance between the terminals when each switch is operated.

Resistance:

Slide switch

Tester Connection	Switch Operation	Specified Condition
1 (B) - 9 (SLDF)	FRONT	Below 1 Ω
4 (E) - 6 (SLDR)	FRONT	Below 1 Ω
4 (E) - 6 (SLDR)	OFF	Below 1 Ω
4 (E) - 9 (SLDF)	OFF	Below 1 Ω
1 (B) - 6 (SLDR)	REAR	Below 1 Ω
4 (E) - 9 (SLDF)	REAR	Below 1 Ω

Front vertical switch

Tester Connection	Switch Operation	Specified Condition
1 (B) - 10 (FUP)	UP	Below 1 Ω
4 (E) - 5 (FDWN)	UP	Below 1 Ω
4 (E) - 5 (FDWN)	OFF	Below 1 Ω
4 (E) - 10 (FUP)	OFF	Below 1 Ω
1 (B) - 5 (FDWN)	DOWN	Below 1 Ω
4 (E) - 10 (FUP)	DOWN	Below 1 Ω

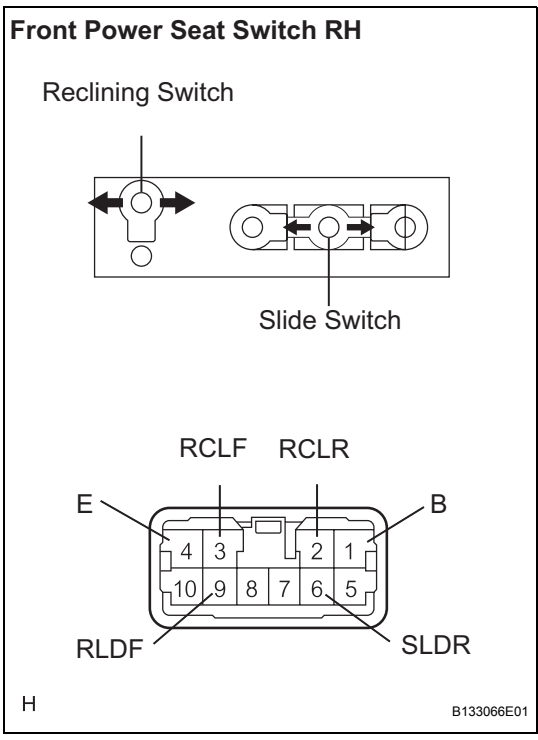
Lifter vertical switch

Tester Connection	Switch Operation	Specified Condition
1 (B) - 7 (LUP)	UP	Below 1 Ω
4 (E) - 8 (LDWN)	UP	Below 1 Ω
4 (E) - 7 (LUP)	OFF	Below 1 Ω
4 (E) - 8 (LDWN)	OFF	Below 1 Ω
1 (B) - 8 (LDWN)	DOWN	Below 1 Ω
4 (E) - 7 (LUP)	DOWN	Below 1 Ω

Reclining switch

Tester Connection	Switch Operation	Specified Condition
1 (B) - 3 (RCLF)	FRONT	Below 1 Ω
2 (RCLR) - 4 (E)	FRONT	Below 1 Ω
2 (RCLR) - 4 (E)	OFF	Below 1 Ω
3 (RCLF) - 4 (E)	OFF	Below 1 Ω
1 (B) - 2 (RCLR)	REAR	Below 1 Ω
3 (RCLF) - 4 (E)	REAR	Below 1 Ω

If the result is not as specified, replace the switch.



- (b) Inspect the front passenger side power seat switch.
 (1) Measure the resistance between the terminals when each switch is operated.

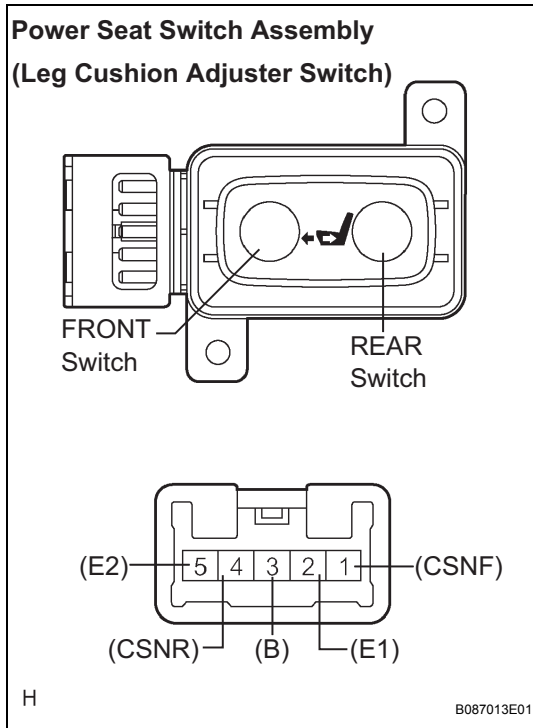
**Resistance:
 Slide switch**

Tester Connection	Switch Operation	Specified Condition
1 (B) - 9 (SLDF)	FRONT	Below 1 Ω
4 (E) - 6 (SLDR)	FRONT	Below 1 Ω
4 (E) - 6 (SLDR)	OFF	Below 1 Ω
4 (E) - 9 (SLDF)	OFF	Below 1 Ω
1 (B) - 6 (SLDR)	REAR	Below 1 Ω
4 (E) - 9 (SLDF)	REAR	Below 1 Ω

Reclining switch

Tester Connection	Switch Operation	Specified Condition
1 (B) - 3 (RCLF)	FRONT	Below 1 Ω
2 (RCLR) - 4 (E)	FRONT	Below 1 Ω
2 (RCLR) - 4 (E)	OFF	Below 1 Ω
3 (RCLF) - 4 (E)	OFF	Below 1 Ω
1 (B) - 2 (RCLR)	REAR	Below 1 Ω
3 (RCLF) - 4 (E)	REAR	Below 1 Ω

If the result is not as specified, replace the switch.



POWER SEAT SWITCH (for Driver Seat)

INSPECTION

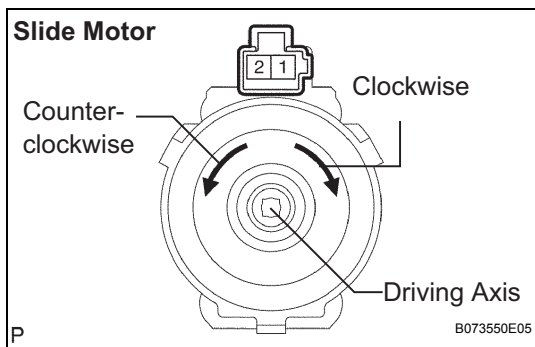
1. INSPECT POWER SEAT SWITCH ASSEMBLY

- (a) Inspect the leg cushion adjuster switch.
 - (1) Measure the resistance between the terminals when each switch is operated.

Resistance

Tester Connection	Switch Operation	Specified Condition
1 (CSNF) - 3 (B)	FRONT switch pushed	Below 1 Ω
4 (CSNR) - 5 (E2)	FRONT switch pushed	Below 1 Ω
1 (CSNF) - 2(E1)	Off	Below 1 Ω
4 (CSNR) - 5 (E2)	Off	Below 1 Ω
1 (CSNF) - 2(E1)	REAR switch pushed	Below 1 Ω
3 (B) - 4 (CSNR)	REAR switch pushed	Below 1 Ω

If the result is not as specified, replace the switch.



FRONT SEAT FRAME WITH ADJUSTER

INSPECTION

1. INSPECT FRONT SEAT ADJUSTER LH

(a) Check slide motor operation.

- (1) Check that the motor rotates smoothly in the direction indicated when the battery is connected to the slide motor connector terminals.

OK

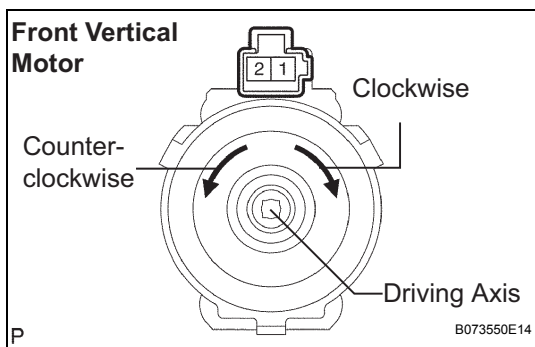
Measurement Condition	Specified Condition
Battery positive (+) → 2 Battery negative (-) → 1	Counterclockwise
Battery positive (+) → 1 Battery negative (-) → 2	Clockwise

If the result is not as specified, replace the front seat adjuster LH.

(b) Check front vertical motor operation.

- (1) Check that the motor rotates smoothly in the direction indicated when the battery is connected to the vertical motor connector terminals.

OK



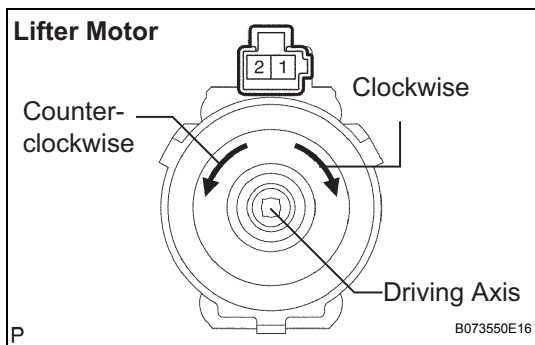
Measurement Condition	Specified Condition
Battery positive (+) → 2 Battery negative (-) → 1	Clockwise
Battery positive (+) → 1 Battery negative (-) → 2	Counterclockwise

If the result is not as specified, replace the front seat adjuster LH.

(c) Check lifter motor operation.

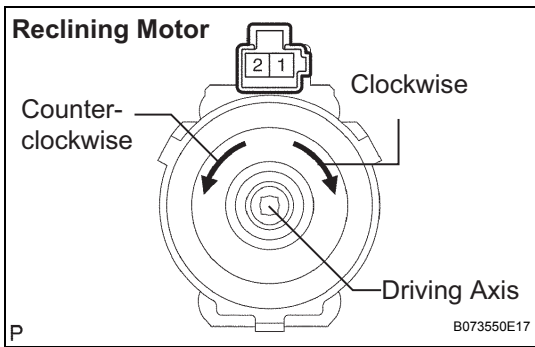
- (1) Check that the motor rotates smoothly in the direction indicated when the battery is connected to the rear vertical motor connector terminals.

OK



Measurement Condition	Specified Condition
Battery positive (+) → 2 Battery negative (-) → 1	Clockwise
Battery positive (+) → 1 Battery negative (-) → 2	Counterclockwise

If the result is not as specified, replace the front seat adjuster LH.

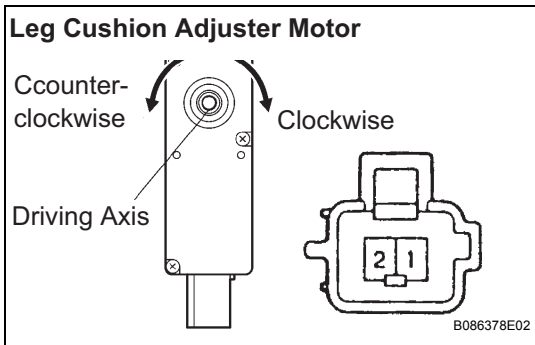


- (d) Check reclining motor operation.
 (1) Check that the motor rotates smoothly in the direction indicated when the battery is connected to the reclining motor connector terminals.

OK

Measurement Condition	Specified Condition
Battery positive (+) → 2 Battery negative (-) → 1	Clockwise
Battery positive (+) → 1 Battery negative (-) → 2	Counterclockwise

If the result is not as specified, replace the front seat adjuster LH.

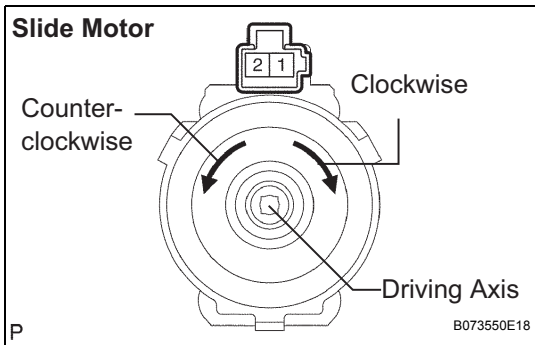


- (e) Check leg cushion adjuster motor operation.
 (1) Check that the motor rotates smoothly in the direction indicated when the battery is connected to reclining slide motor connector terminals.

OK

Measurement Condition	Specified Condition
Battery positive (+) → 2 Battery negative (-) → 1	Counterclockwise
Battery positive (+) → 1 Battery negative (-) → 2	Clockwise

If the result is not as specified, replace the front seat adjuster LH.



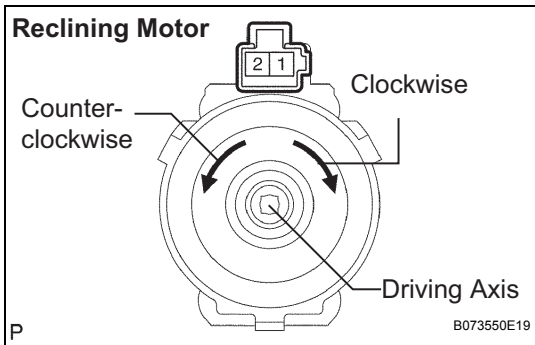
2. INSPECT FRONT SEAT ADJUSTER RH

- (a) Check slide motor operation.
 (1) Check that the motor rotates smoothly in the direction indicated when the battery is connected to the slide motor connector terminals.

OK

Measurement Condition	Specified Condition
Battery positive (+) → 2 Battery negative (-) → 1	Counterclockwise
Battery positive (+) → 1 Battery negative (-) → 2	Clockwise

If the result is not as specified, replace the front seat adjuster RH.

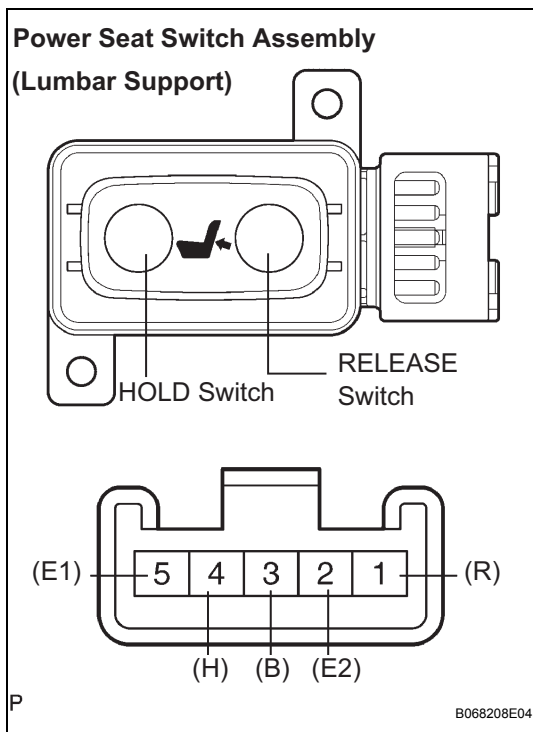


- (b) Check reclining motor operation.
 (1) Check that the motor rotates smoothly in the direction indicated when the battery is connected to the reclining motor connector terminals.

OK

Measurement Condition	Specified Condition
Battery positive (+) → 2 Battery negative (-) → 1	Clockwise
Battery positive (+) → 1 Battery negative (-) → 2	Counterclockwise

If the result is not as specified, replace the front seat adjuster RH.



FRONT POWER SEAT LUMBAR SWITCH (for Driver Seat)

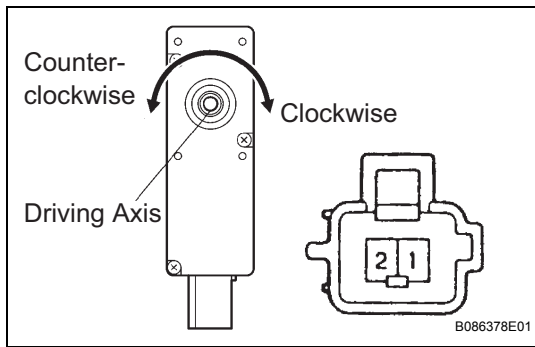
INSPECTION

1. **INSPECT FRONT POWER SEAT LUMBAR SWITCH**
 - (a) Inspect the lumbar support switch.
 - (1) Measure the resistance between the terminals when each switch is operated.

Resistance

Tester Connection	Switch Operation	Specified Condition
1 (R) - 2 (E2)	HOLD switch pushed	Below 1 Ω
3 (B) - 4 (H)	HOLD switch pushed	Below 1 Ω
1 (R) - 2 (E2)	Off	Below 1 Ω
4 (H) - 5 (E1)	Off	Below 1 Ω
1 (R) - 3 (B)	RELEASE switch pushed	Below 1 Ω
4 (H) - 5 (E1)	RELEASE switch pushed	Below 1 Ω

If the result is not as specified, replace the switch.



LUMBAR SUPPORT ADJUSTER ASSEMBLY (for Driver Seat)

INSPECTION

1. INSPECT LUMBAR SUPPORT ADJUSTER ASSEMBLY LH

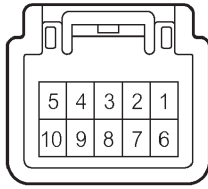
- (a) Check lumbar support motor operation.
 - (1) Check that the motor rotates smoothly in the direction indicated when the battery is connected to the lumbar support motor connector terminals.

OK

Measurement Condition	Specified Condition
Battery positive (+) → 2 Battery negative (-) → 1	Counterclockwise
Battery positive (+) → 1 Battery negative (-) → 2	Clockwise

If the result is not as specified, replace the lumbar support adjuster assembly LH.

Connector Front View:



H

B087023E01

SEAT HEATER SWITCH

INSPECTION

1. INSPECT SEAT HEATER SWITCH

- (a) Measure the resistance according to the value(s) in the table below.

Resistance

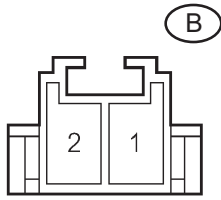
Tester connection	Switch condition	Specified condition
3 - 4	LH side switch minimum position	3.0 to 4.5 k Ω
3 - 4	LH side switch maximum position	0.6 to 0.8 k Ω
1 - 6	RH side switch minimum position	3.0 to 4.5 k Ω
1 - 6	RH side switch maximum position	0.6 to 0.8 k Ω
2 - 4	LH side switch off	10 k Ω or higher
2 - 4	LH side switch on	Below 1 Ω
2 - 6	RH side switch off	10 k Ω or higher
2 - 6	RH side switch on	Below 1 Ω

- (b) Connect the battery positive (+) lead to the terminal 8, and battery negative (-) lead to the terminal 5.

OK:

Illumination comes on.

Connector Front View:



H

B087022E05

FRONT SEATBACK HEATER

INSPECTION

1. INSPECT FRONT SEATBACK HEATER ASSEMBLY LH

- (a) Inspect the seatback heater assembly LH continuity.
Resistance

Terminal No.	Condition	Specified condition
1 - 2	Always	Below 1 Ω

If the continuity is not as specified, replace the seatback heater assembly.

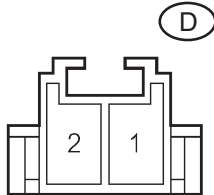
2. INSPECT FRONT SEATBACK HEATER ASSEMBLY RH

- (a) Inspect the seatback heater assembly RH continuity.
Resistance

Terminal No.	Condition	Specified condition
1 - 2	Always	Below 1 Ω

If the continuity is not as specified, replace the seatback heater assembly.

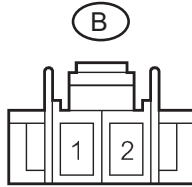
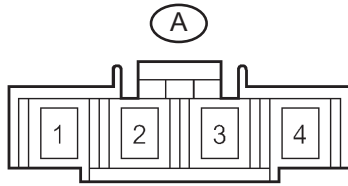
Connector Front View:



H

B087022E06

Connector Front View:



H

B087021E03

FRONT SEAT CUSHION HEATER INSPECTION

1. INSPECT FRONT SEAT CUSHION HEATER ASSEMBLY LH

- (a) Inspect the seat cushion thermostat continuity.
 - (1) Disconnect the seatback heater from the seat cushion heater.
 - (2) Heat the temperature sensor and thermostat with a light.
 - (3) Inspect the seat cushion heater continuity between terminals, as shown below.

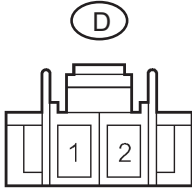
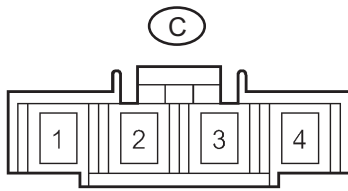
Resistance

Terminal No.	Condition	Specified condition
A-1 - B-2	Seat heater temp. below 25 to 35°C(77 to 95°F)	8,000 to 8,400 Ω
A-1 - B-2	Seat heater temp. 46 to 54°C (115 to 129°F)	3,900 to 4,300 Ω
A-3 - B-1	Seat heater temp. below 25 to 35°C(77 to 95°F)	Below 1 Ω
A-3 - B-1	Seat heater temp. 46 to 54°C (115 to 129°F)	10 kΩ or higher (thermostat OFF)
A-3 - B-2	Seat heater temp. below 25 to 35°C(77 to 95°F)	Below 1 Ω
A-3 - B-2	Seat heater temp. 46 to 54°C (115 to 129°F)	10 kΩ or higher (thermostat OFF)
A-4 - B-1	Always	Below 1 Ω

If the continuity is not as specified, replace the seat cushion heater assembly.

SE

Connector Front View:



H

B087021E04

2. INSPECT FRONT SEAT CUSHION HEATER ASSEMBLY RH

- (a) Inspect the seat cushion thermostat continuity.
- (1) Disconnect the seatback heater from the seat cushion heater.
 - (2) Heat the temperature sensor and thermostat with a light.
 - (3) Inspect the seat cushion heater continuity between terminals, as shown below.

Resistance

Terminal No.	Condition	Specified condition
C-1 - D-2	Seat heater temp. below 25 to 35°C (77 to 95°F)	8,000 to 8,400 Ω
C-1 - D-2	Seat heater temp. 46 to 54°C (115 to 129°F)	3,900 to 4,300 Ω
C-3 - D-1	Seat heater temp. below 25 to 35°C (77 to 95°F)	Below 1 Ω
C-3 - D-1	Seat heater temp. 46 to 54°C (115 to 129°F)	10 kΩ or higher (thermostat OFF)
C-3 - D-2	Seat heater temp. below 25 to 35°C (77 to 95°F)	Below 1 Ω
C-3 - D-2	Seat heater temp. 46 to 54°C (115 to 129°F)	10 kΩ or higher (thermostat OFF)
C-4 - D-1	Always	Below 1 Ω

If continuity is not as specified, replace the seat cushion heater assembly.