

Component
Location

[1]



[4]



[2]



[3]



[5]



1. Lumber support motor
2. Reclining motor
3. Front height motor
4. Slide motor

5. Rear height motor
6. Lumbar support switch
7. Reclining switch
8. Power seat switch

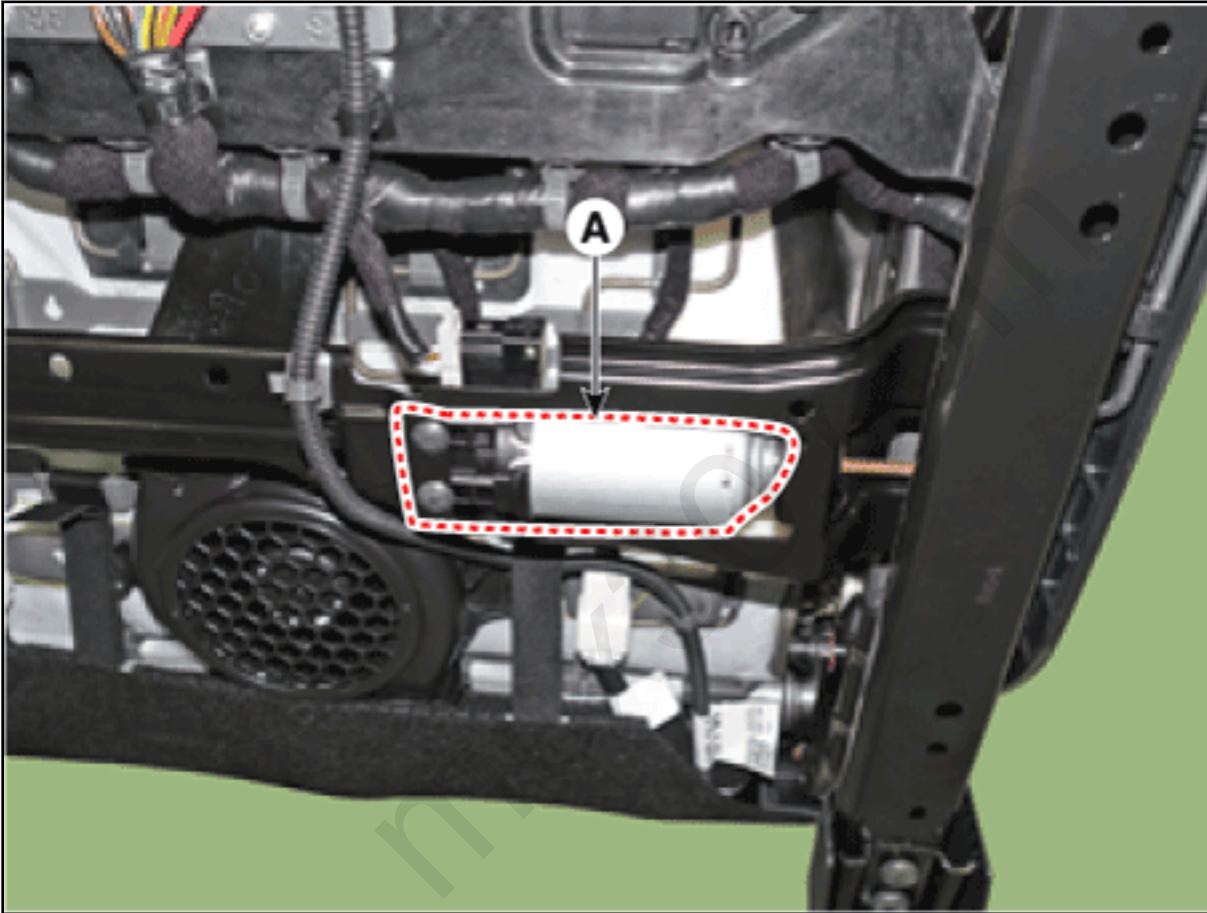
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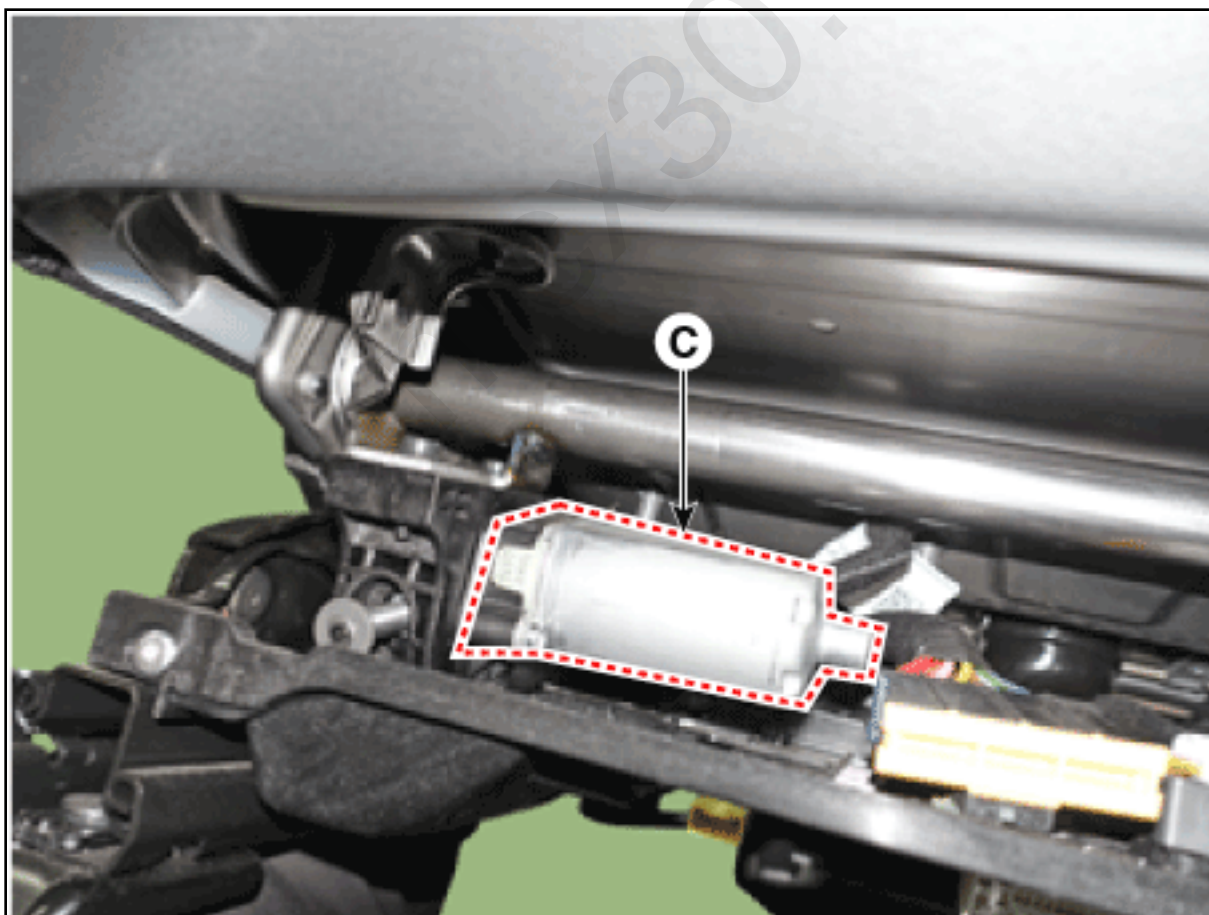
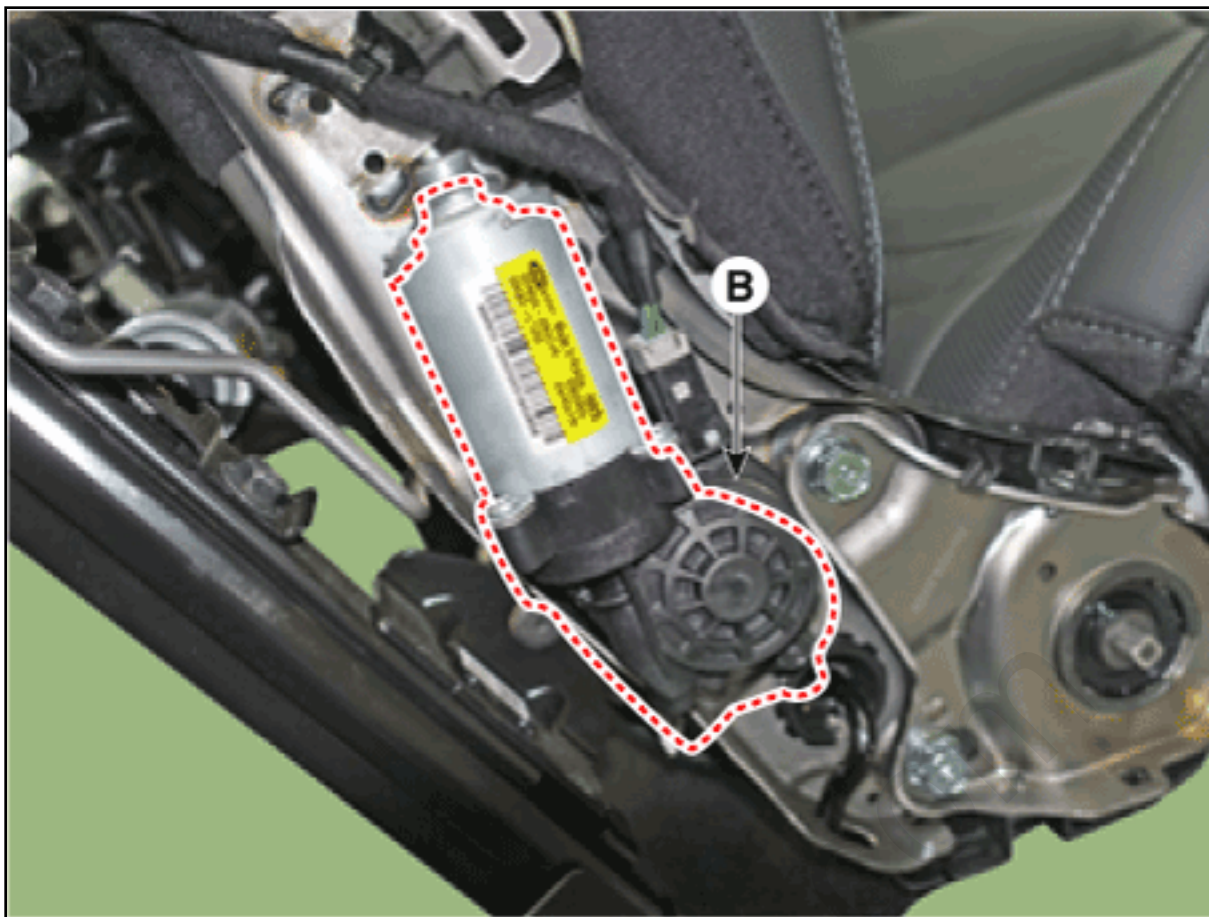
Inspection

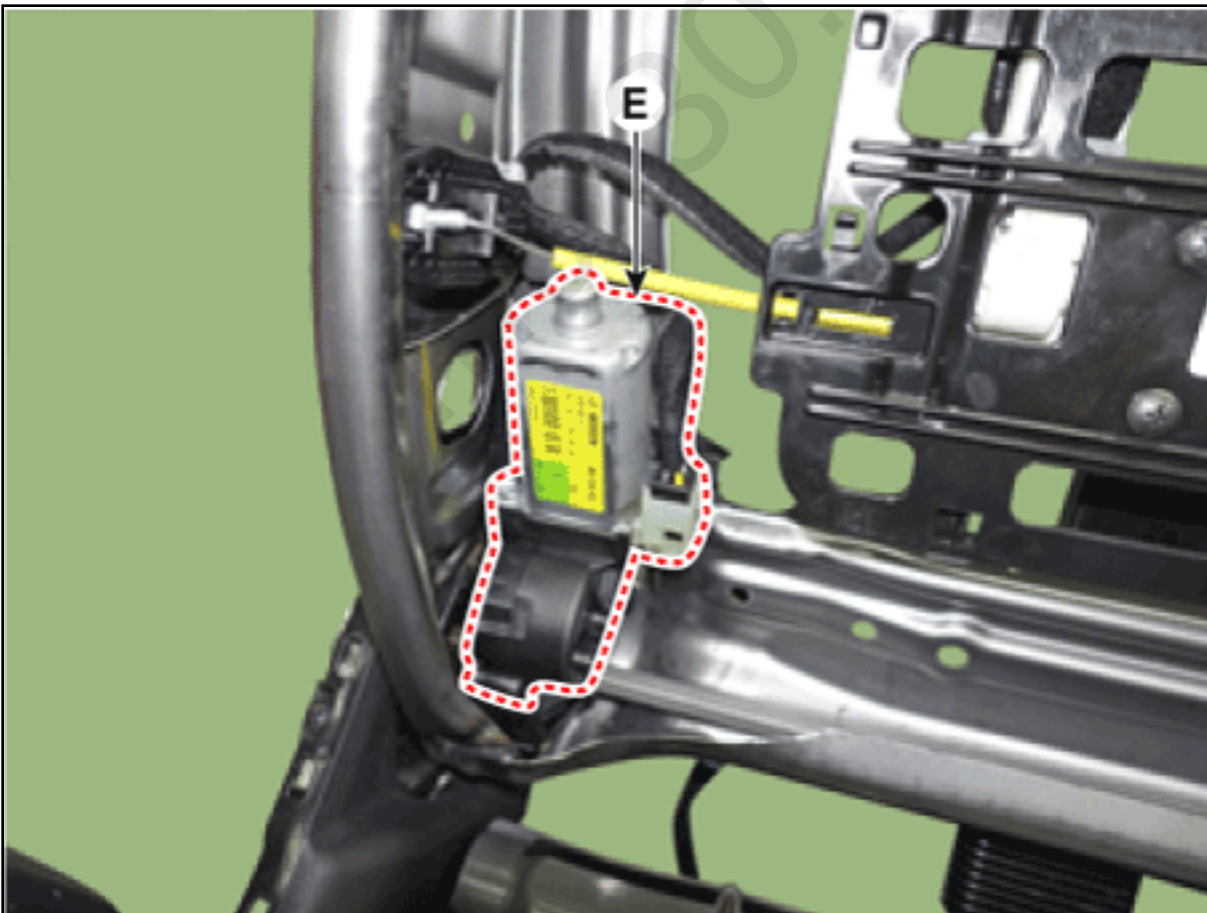
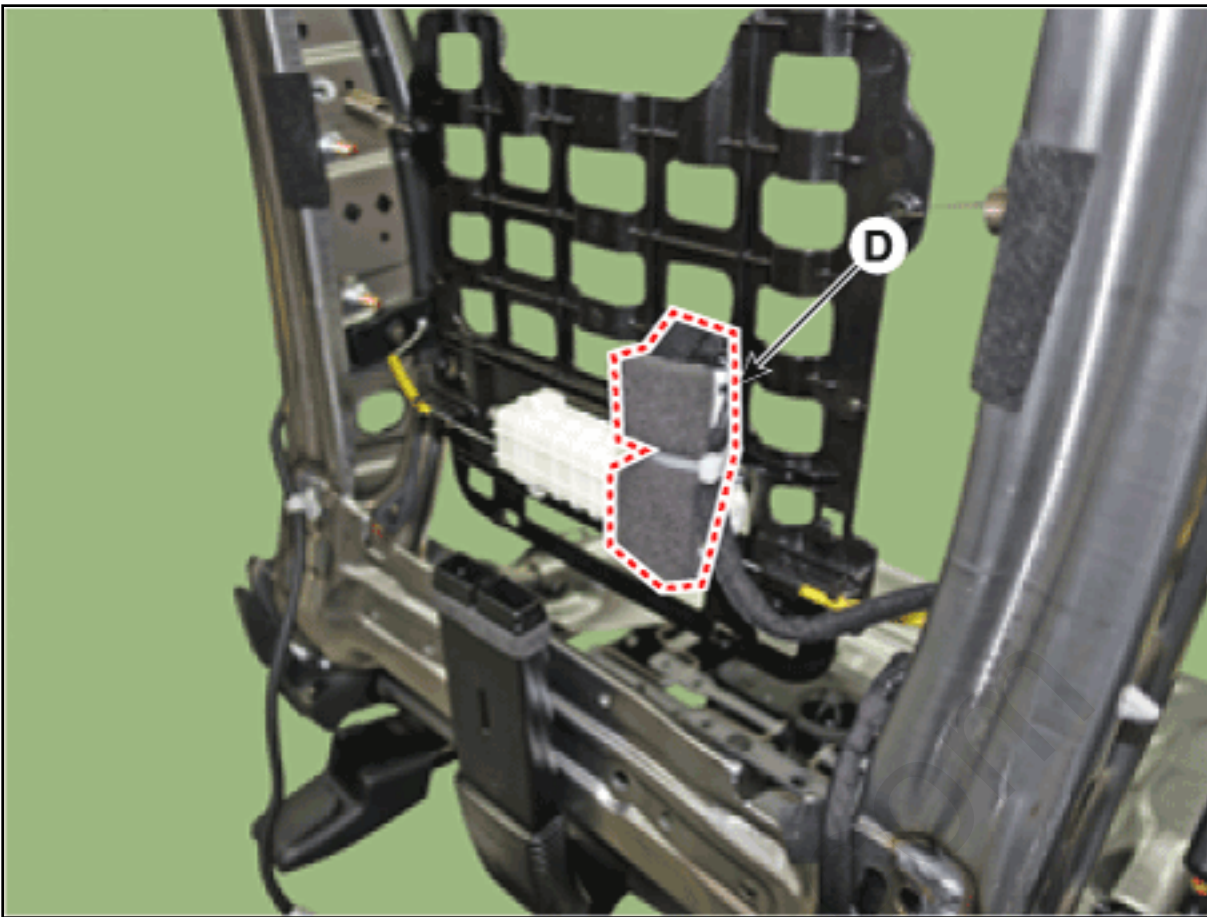
ower Seat Motor

1. Remove the front seat assembly.
(Refer to Body - "Front Seat Assembly")

- A: Slide motor
- B: Rear height motor
- C: Front height motor
- D: Lumbar support motor
- E: Reclining motor

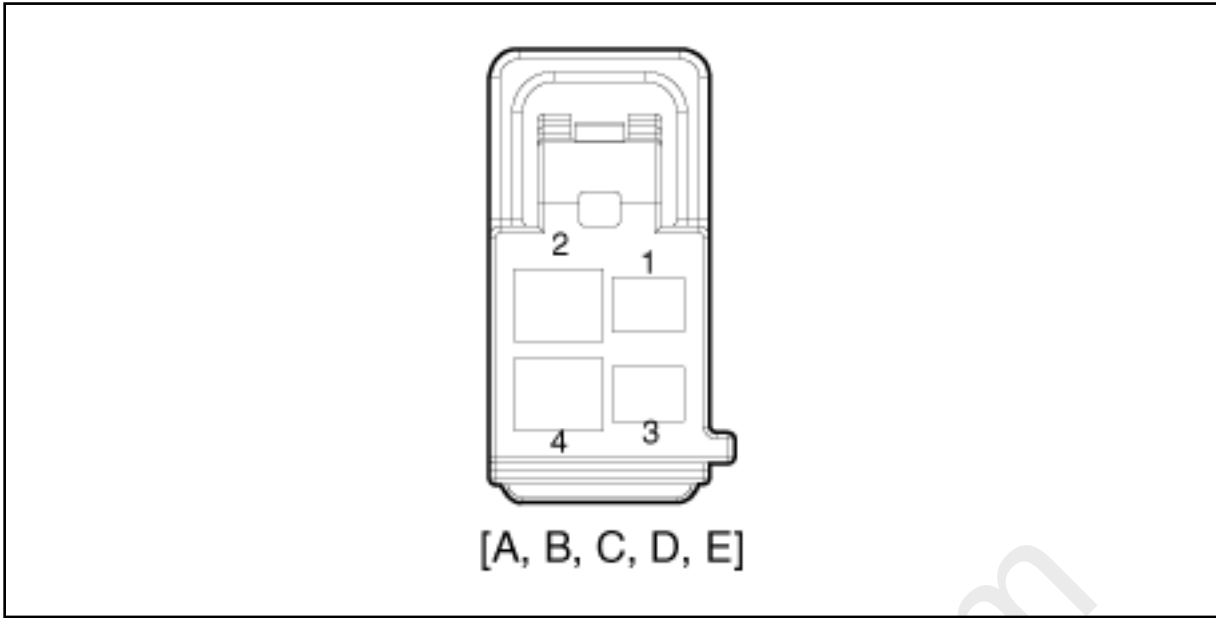






2. When the battery power is supplied to the motor connector, check the motor for smooth operation.

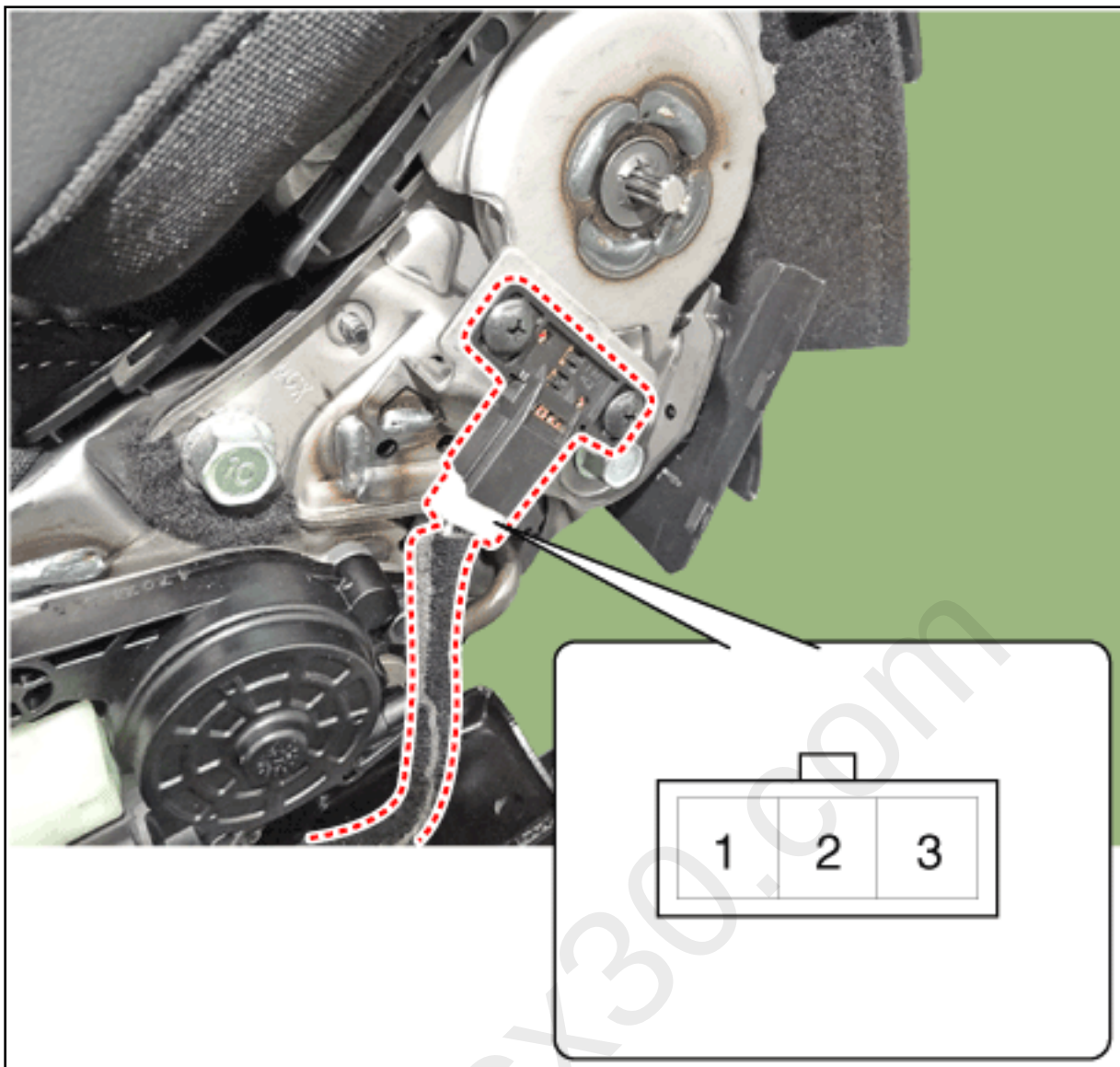
3. Reverse the connections and check that the motor turns in reverse.
4. If there is an abnormality, replace the motors.



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Reclining Motor Limit Switch

1. Disconnect the limit switch and operate the limit switch and then check for continuity between the terminals.
2. Make sure that the seat operation is normal in the reverse after the maximum operation.
3. If there is an abnormality, replace the limit switch.



Terminal Position	1	2	3
Forward		○ — ○	○
Neutral	○ — ○	○ — ○	○
Backward	○ — ○	○	

Circuit Diagram

Driver Power Seat Swtich

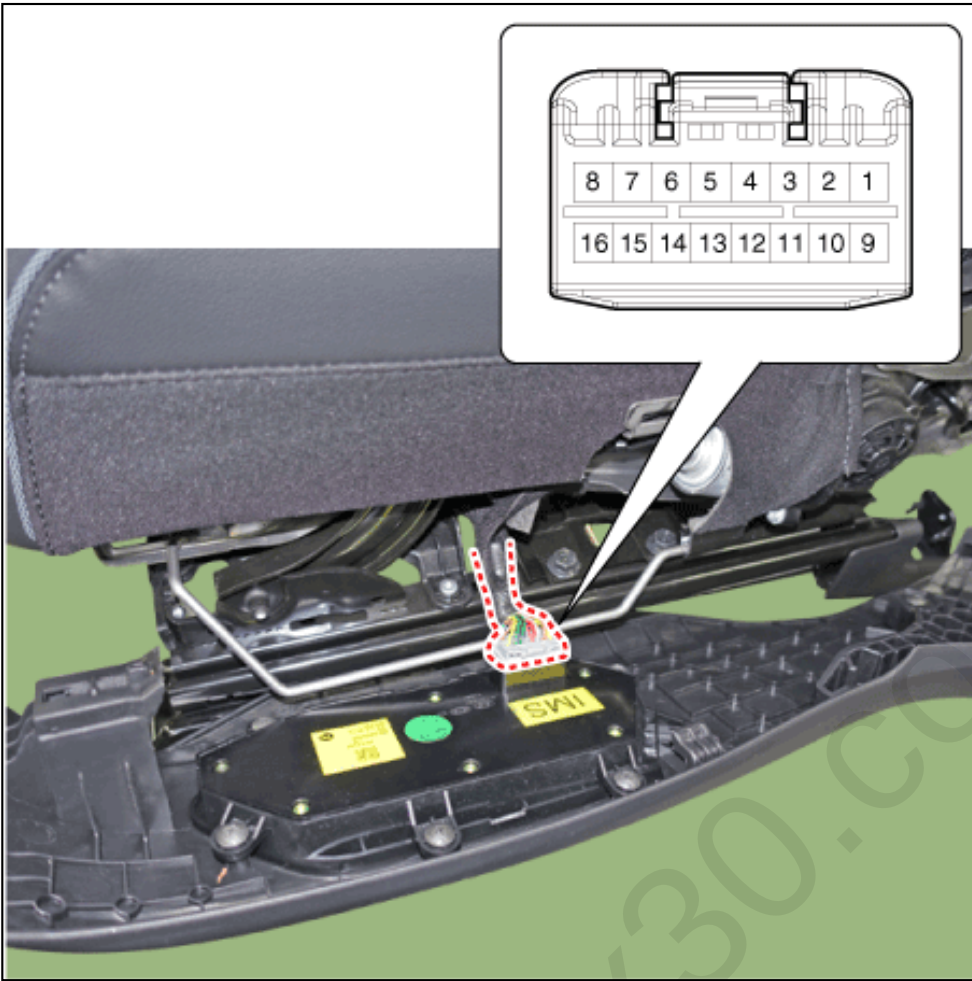


Passenger Power Seat Swtich



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1. With the power seat switch in each position, make sure that continuity exists between the terminals below. If continuity is not as specified, replace the power seat switch.



	TILT ADJ. SW		SLIDE ADJ. SW				HEI ADJ. SW		RECL ADJ. SW				L/SUPT ADJ. SW			Remark
LHD DRV	UP	Down	N		LHD DRV		UP	Down	N		LHD DRV		FWD	BWD	N	
			TILT	SLIDE	FWD	BWD			HEI	RECL	FWD	BWD				
3																B+
4	○	○			○	○	○	○			○	○	○	○		
13																GND
14			○	○	○	○			○	○					○	
8	○		○	○	○	○										TILT MTR UP
16		○	○	○	○	○										TILT MTR DOWN
15				○	○	○										SLIDE MTR FWD
7				○		○										SLIDE MTR BWD
5							○		○							HEI MTR UP
6								○	○							HEI MTR DOWN
2											○					RECL MTR FWD
1												○				RECL MTR BWD
10													○		○	L/SUPT MTR FWD
9														○	○	L/SUPT MTR BWD

	TILT ADJ. SW		SLIDE ADJ. SW		HEI ADJ. SW		RECL ADJ. SW		L/SUPT ADJ. SW			Remark				
LHD DRV	UP	Down	N		LHD DRV		UP	Down	N		LHD DRV		FWD	BWD	N	
			TILT	SLIDE	FWD	BWD			HEI	RECL	FWD		BWD			
3																B+
4	○	○			○	○	○	○			○	○	○	○		
13																GND
14			○	○	○	○			○	○					○	
8	○		○													TILT MTR UP
16		○		○												TILT MTR DOWN
15				○	○											SLIDE MTR FWD
7					○											SLIDE MTR BWD
5							○		○							HEI MTR UP
6								○		○						HEI MTR DOWN
2											○					RECL MTR FWD
1												○				RECL MTR BWD
10													○		○	L/SUPT MTR FWD
9														○	○	L/SUPT MTR BWD

2. With the power seat switch in each position, make sure that continuity exists between the terminals below. If continuity is not as specified, replace the power seat switch.

Passenger Walk in Switch



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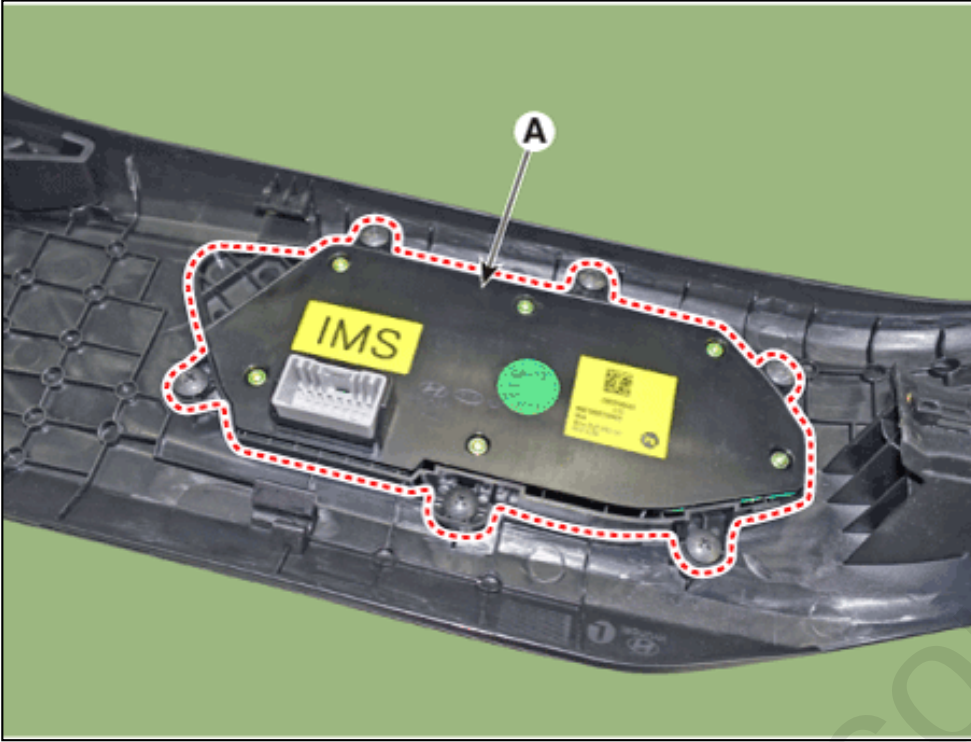
Passenger Power Seat Control Switch

LHD PASS	TILT ADJ. SW		SLIDE ADJ. SW				HEI ADJ. SW		RECL ADJ. SW				Remark
	UP	Down	LHD PASS		FWD	BWD	UP	Down	LHD PASS		FWD	BWD	
			TILT	SLIDE					HEI	RECL			
7													B+
8													
11													GND
12													
20													TILT MTR UP
19													TILT MTR DOWN
1													SLIDE FWD SIGNAL
3													SLIDE BWD SIGNAL
2													HEI MTR UP
4													HEI MTR DOWN
9													RECL FWD SIGNAL
10													RECL BWD SIGNAL

Removal

1. Disconnect the negative (-) battery terminal.

2. Remove the front seat shield outer cover.
(Refer to Body - "Front Seat Shield Outer Cover")
3. Remove the power seat control switch (A) after loosening screws.



Installation

1. Install the power seat control switch after connecting the connector.
2. Install the front seat shield outer cover.
3. Connect the negative (+) battery terminal.

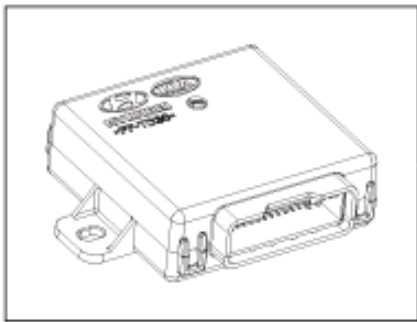
Components



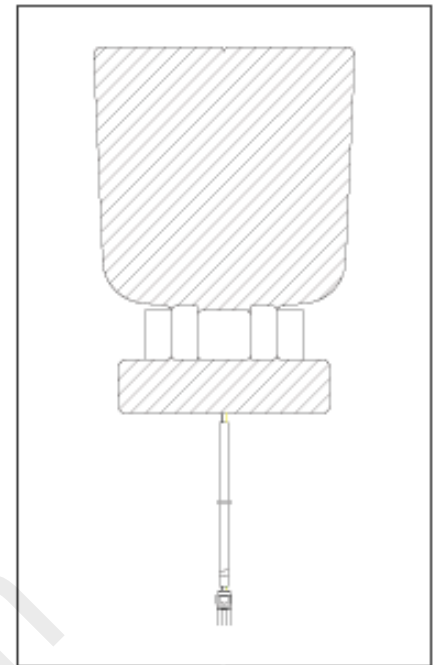
1. Seat heater unit
2. Seat cushion heater

3. Seat back heater

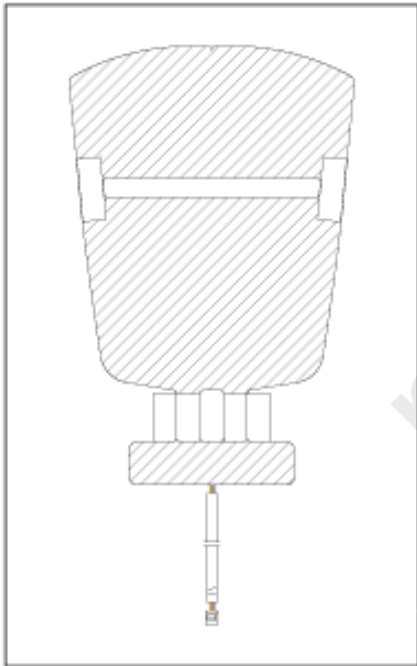
[1]



[3]



[2]

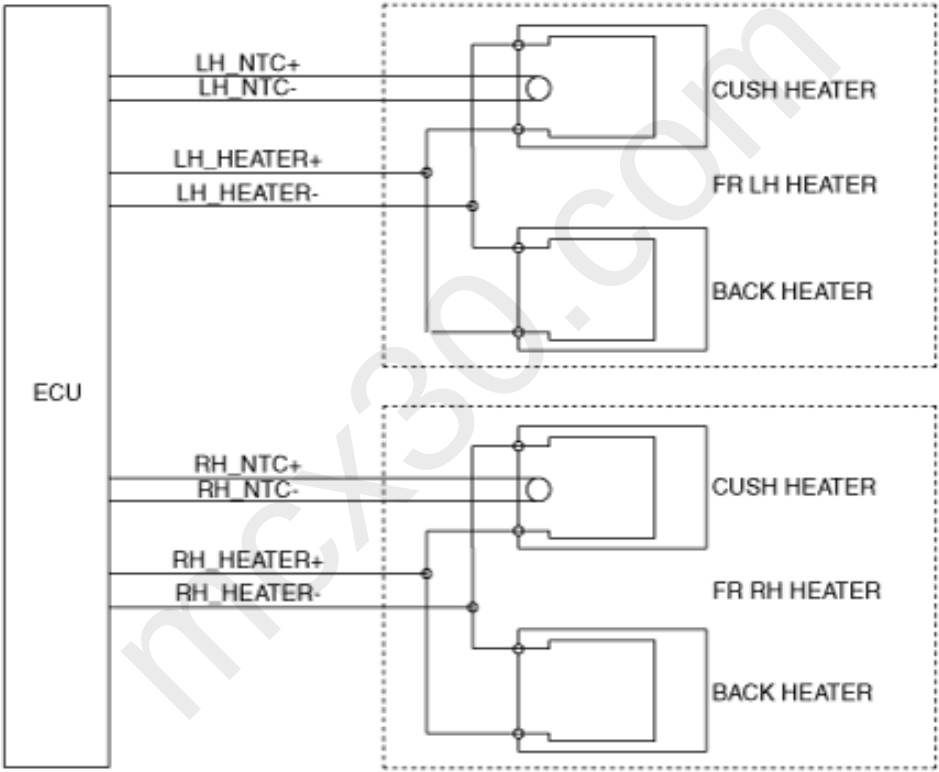


1. Second line seat heater unit
2. Second line seat cushion heater

3. Second line seat back heater

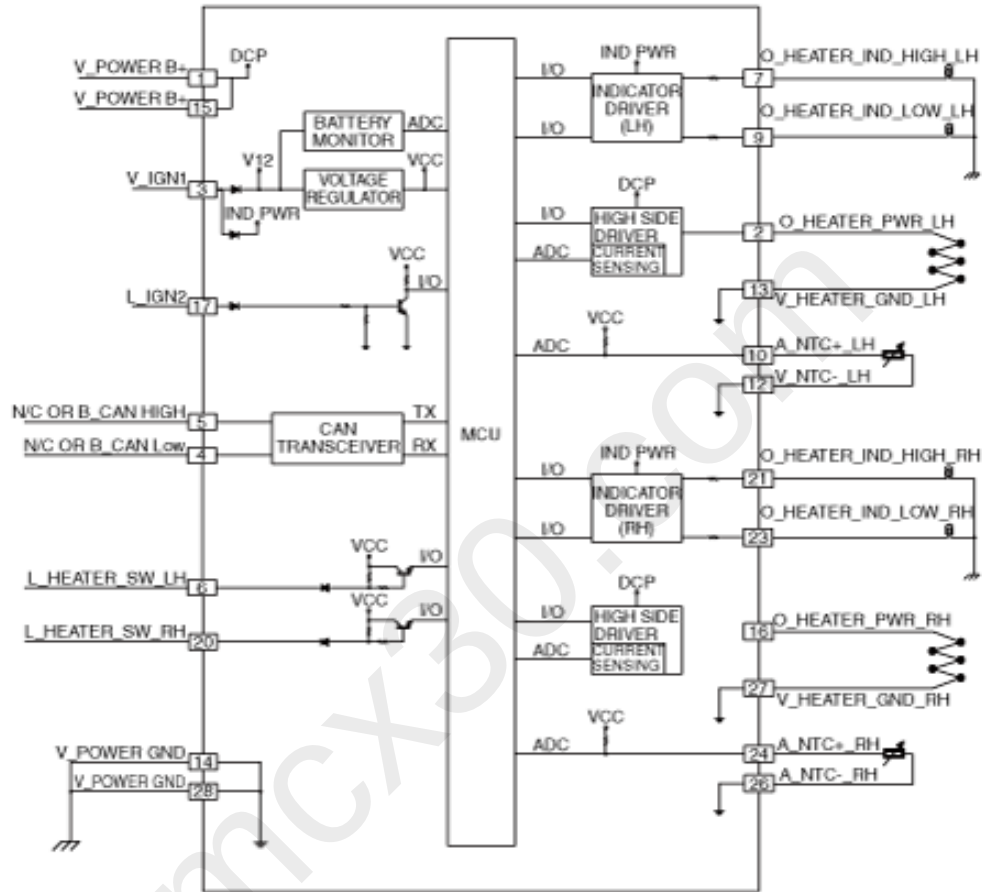
Components

Driver/Passenger Seat Heater



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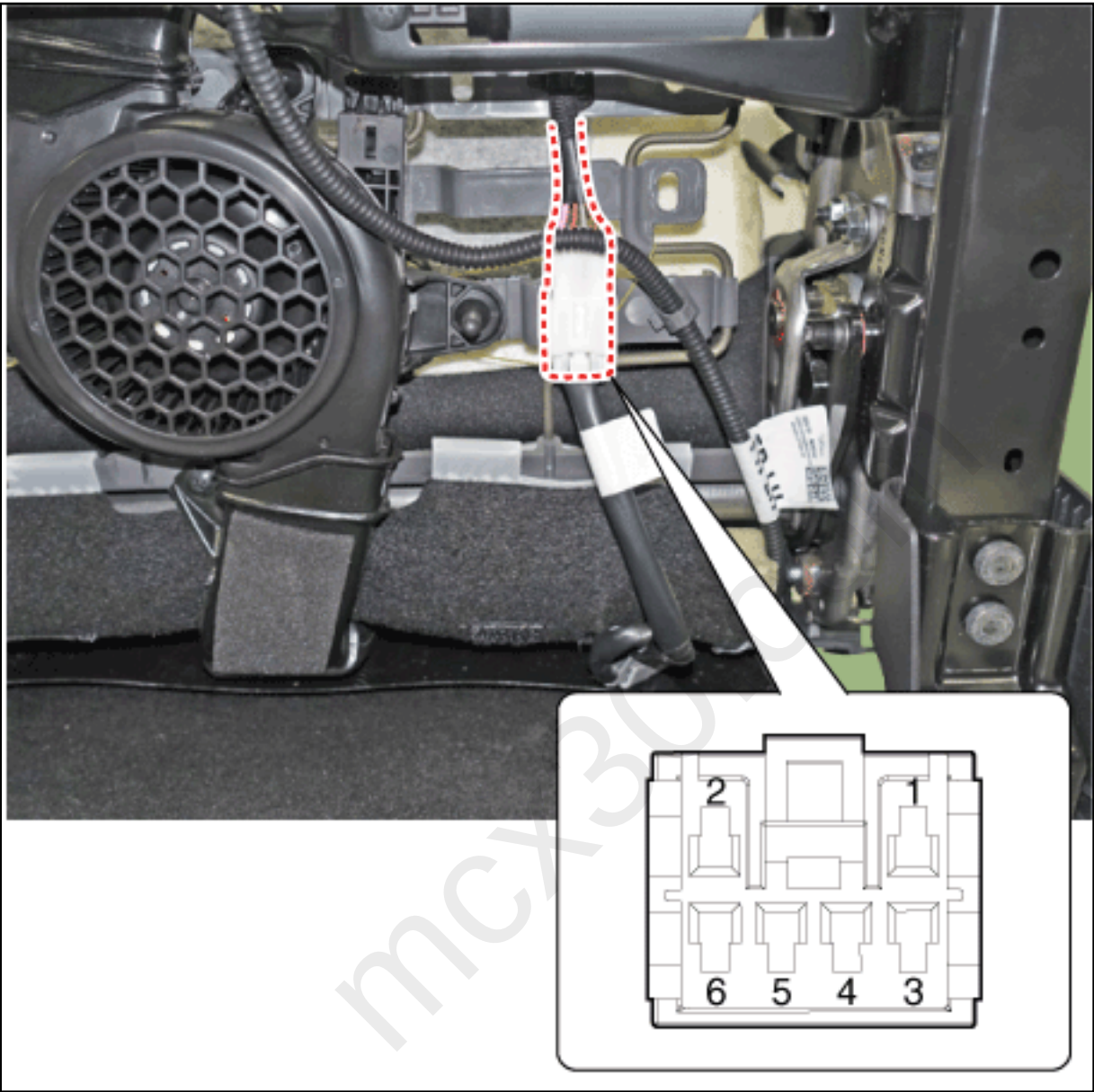
Second Line Seat Heater



Inspection

Driver/Passenger

- 1. Check for continuity and measure the resistance between terminals.



No	Description	No	Description
1	-	4	NTC (+)
2	-	5	Heater (-)
3	Heater (+)	6	NTC (-)

2. Operate the seat heater after connecting the connector, and then check the thermostat by measuring the temperature of seat surface.

Driver/Passenger	Cushion/Back	NTC Resistance (k Ω)
High	42/50 °C	4.24 k Ω
Mid	39/45 °C	6.4 k Ω
Low	36/40 °C	9.62 k Ω

Diagnosis mode

1. Enter the diagnostic mode referring to below description.
 - In failure mode, press the ventilation seat button for 4 seconds and release it.
 - Press the ventilation seat button for 2 seconds and release it.
 - Lastly, press the ventilation seat button for 4 seconds and release it.
 - When entering the failure mode, the LED of the ventilation seat button turns ON/OFF/blinks at each stage.
2. After entering the diagnosis mode, you can check what failed by checking the blinking LED.
3. The table below indicates the failure based on priority, upper item means higher priority.
4. If more than one failure is detected, higher priority failure is displayed through the LED flashing pattern.
5. Lower priority failure will be displays if higher priority failure is reset.

[Heater Switch]



[Driver/Passenger]

Failure indicator	Inspection items	Detailed inspections
High : ON Middle : FLASHING Low : FLASHING (Low/Over voltage detection) Low : OFF (Fuse disconnection)	Low voltage detection Over voltage detection Fuse disconnection	1) IGN1 Less than 8.5V 2) IGN1 Less than 16.5V 3) IGN2 fuse disconnection

High : FLASHING Middle : ON Low : OFF	Detection of NTC/Heater disconnect	- NTC element failure - Heater mat disconnection 1) Cushion/Seat back heater mat disconnection 2) Disconnection in the NTC (+) wiring 3) Disconnection in the NTC (-) wiring 4) Disconnection in the heating wire (+) 5) Disconnection in the heating wire (-)
High : OFF Middle : ON Low : FLASHING	Short of between the connector terminals	Disconnection in the NTC (+)/NTC (-) wiring
High : OFF Middle : ON Low : FLASHING		Short in the NTC (+)/Heater(-) wiring
High : OFF Middle : ON Low : FLASHING	Short of between the connector terminals	1) Short in the NTC (+)/Heater (-) wiring 2) Short in the Heater (+)/Heater (-) wiring 3) Short in the Heater (+)/NTC (-) wiring
	Heater wiring short	4) Disconnection in the NTC (+)/NTC (-) wiring
High : FLASHING Middle : ON Low : OFF	Heater wiring short	Short in the Heater (+)/NTC(+) wiring
High : OFF Middle : ON Low : FLASHING	Heater wiring short	1) Short in the NTC(+)/Heater (-) wiring 2) Short in the Heater (+)/Heater (-) wiring 3) Short in the Heater (+)/NTC (-) wiring
High : FLASHING Middle : ON Low : FLASHING	Loss of temperature feedback	Target temperature not reached within 40 minutes

[Second line seat heater]

Failure indicator	Inspection items	Detailed inspections
High : OFF Low : FLASHING	Low voltage detection Over voltage detection	1) IGN1 Less than 8.5V 2) IGN1 Less than 16.5V
High : ON Low : OFF	Fuse disconnection	IGN2 fuse disconnection
High : ON Low : FLASHING	Detection of NTC/Heater disconnect	1) Cushion/Seat back heater mat disconnection 2) Disconnection in the NTC (+) wiring 3) Disconnection in the NTC (-) wiring 4) Disconnection in the heating wire (+) 5) Disconnection in the heating wire (-)
High : FLASHING Low : OFF	Short of between the connector terminals	Short in the NTC (+)/NTC (-) wiring
High : FLASHING Low : ON		Short in the NTC (+)/Heater (-) wiring
High : FLASHING Low : OFF	Short of between the connector terminals	1) Short in the NTC (+)/Heater (-) wiring 2) Short in the Heater (+)/Heater (-) wiring 3) Short in the Heater (+)/NTC (-) wiring
	Heater wiring short	Short in the NTC (+)/NTC (-) wiring
High : ON Low : FLASHING	Heater wiring short	Short in the NTC (+)/Heater (+) wiring
High : FLASHING Low : OFF	Heater wiring short	1) Short in the NTC (+)/Heater (-) wiring 2) Short in the Heater (+)/Heater (-) wiring 3) Short in the Heater (+)/NTC (-) wiring

High : OFF Low : ON	Loss of temperature feedback	Target temperature not reached within 40 minutes
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6. If you press the seat heater button for more than five seconds, the LED for malfunctioning memory will blink four times and the recorded memory will be deleted.
7. Pressing the IGN OFF button will end the diagnosis mode for the seat.
8. You can check whether the heating seat system works properly after turning the IGN ON. If you want to check the error code, you can refer to the procedure of 2 above.

Removal

Seat Cushion Heater

1. Disconnect the negative (-) battery terminal.
2. Remove the cushion assembly after separating the seat cushion cover.
(Refer to Body - "Front Seat Cushion Cover")
(Refer to Body - "Rear Seat Cushion Cover")

Seat Back Heater

1. Disconnect the negative (-) battery terminal.
2. Remove the seat back cover.
(Refer to Body - "Front Seat Back Cover")
(Refer to Body - "Rear Seat Back Cover")

Installation

1. Install the seat cover with seat cushion/back assembly.
2. Install the front/rear seat.
3. Connect the negative (+) battery terminal.

Components



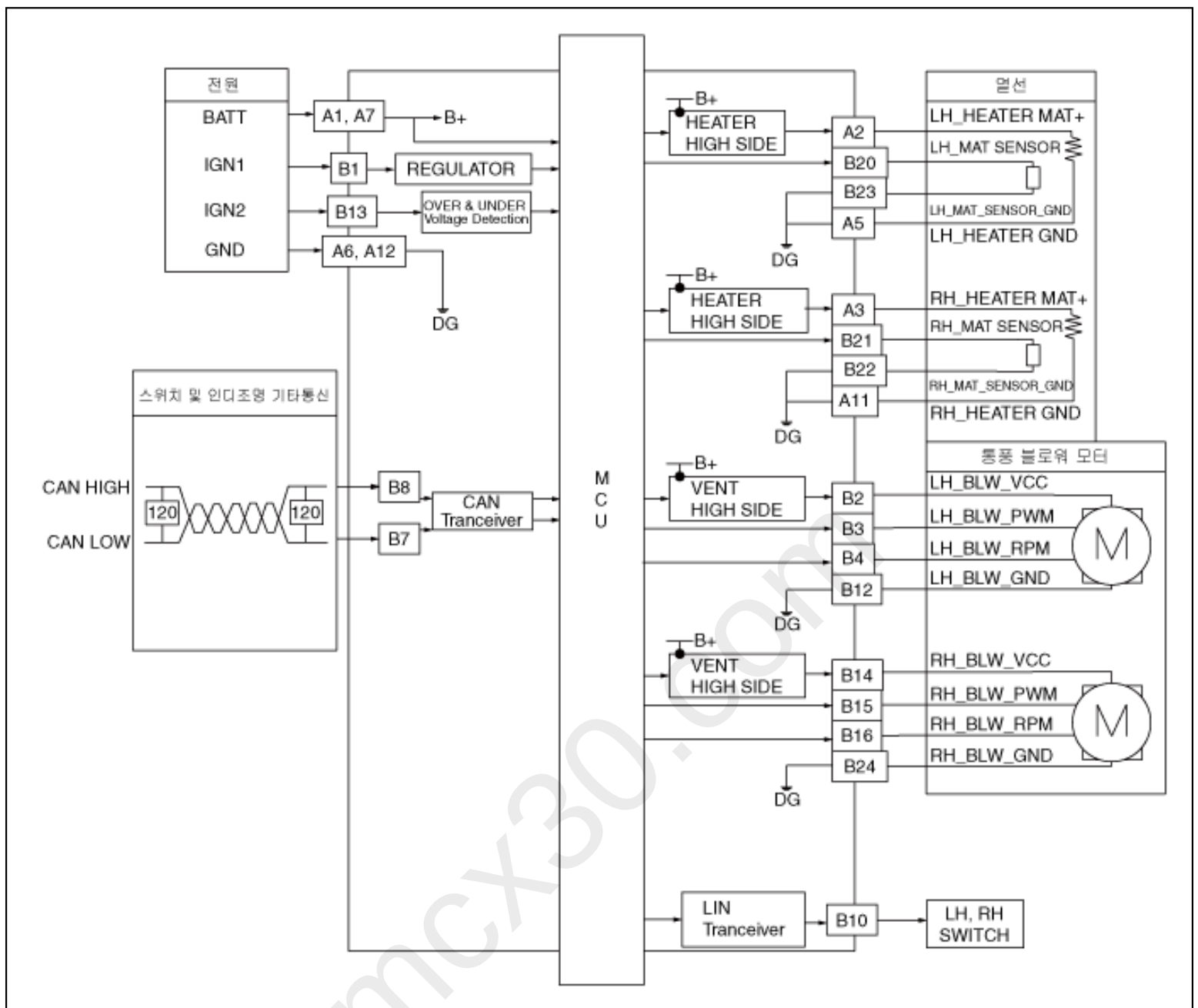
1. Seat cushion heater (Ventilation)
2. Seat heater (Ventilation) unit

3. Seat back heater (Ventilation)

Circuit
Diagram



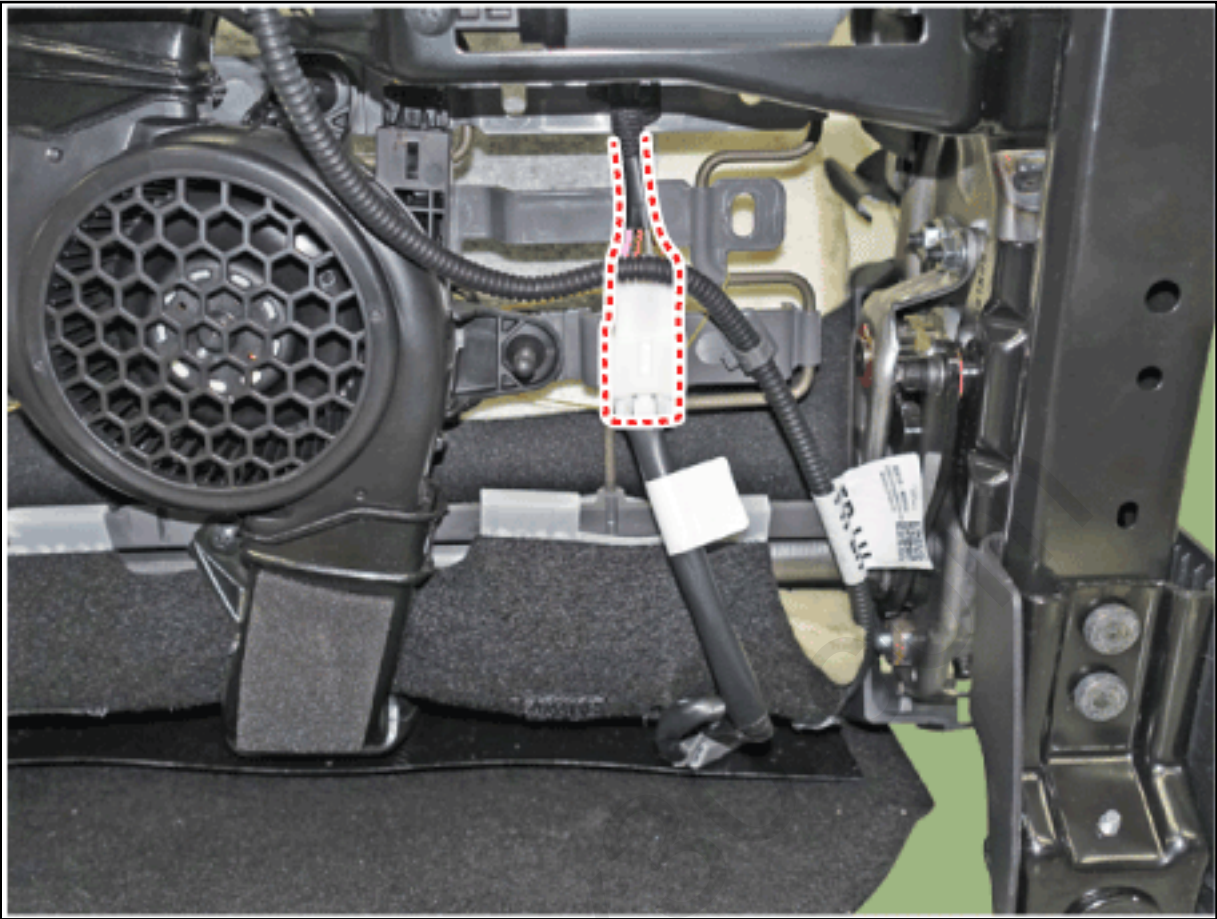
Pin	Connector A	Connector B
1	IGN 1	Ventilation heater battery (+)
2	Blower power_LH	Heater power_LH
3	Blower speed_LH	Heater power_RH
4	Blower RPM input_LH	-
5	-	Heater ground_LH
6	-	Ventilation heater ground
7	CAN LOW	Ventilation heater battery (+)
8	CAN HIGH	-
9	-	-
10	LIN	-
11	-	Heater ground_RH
12	Blower ground_LH	Ventilation heater ground
13	IGN 2	
14	Blower power_RH	
15	Blower speed_RH	
16	Blower RPM input_RH	
17	-	
18	-	
19		
20	NTC (+)_LH	
21	NTC (+)_RH	
22	NTC (-)_RH	
23	NTC (-)_LH	
24	Blower ground_RH	



Inspection

Driver/Passenger

1. Check for continuity and measure the resistance between terminals.



Pin	Description	Pin	Description
1	-	4	NTC (+)
2	-	5	Heater (-)
3	Heater (+)	6	NTC (-)

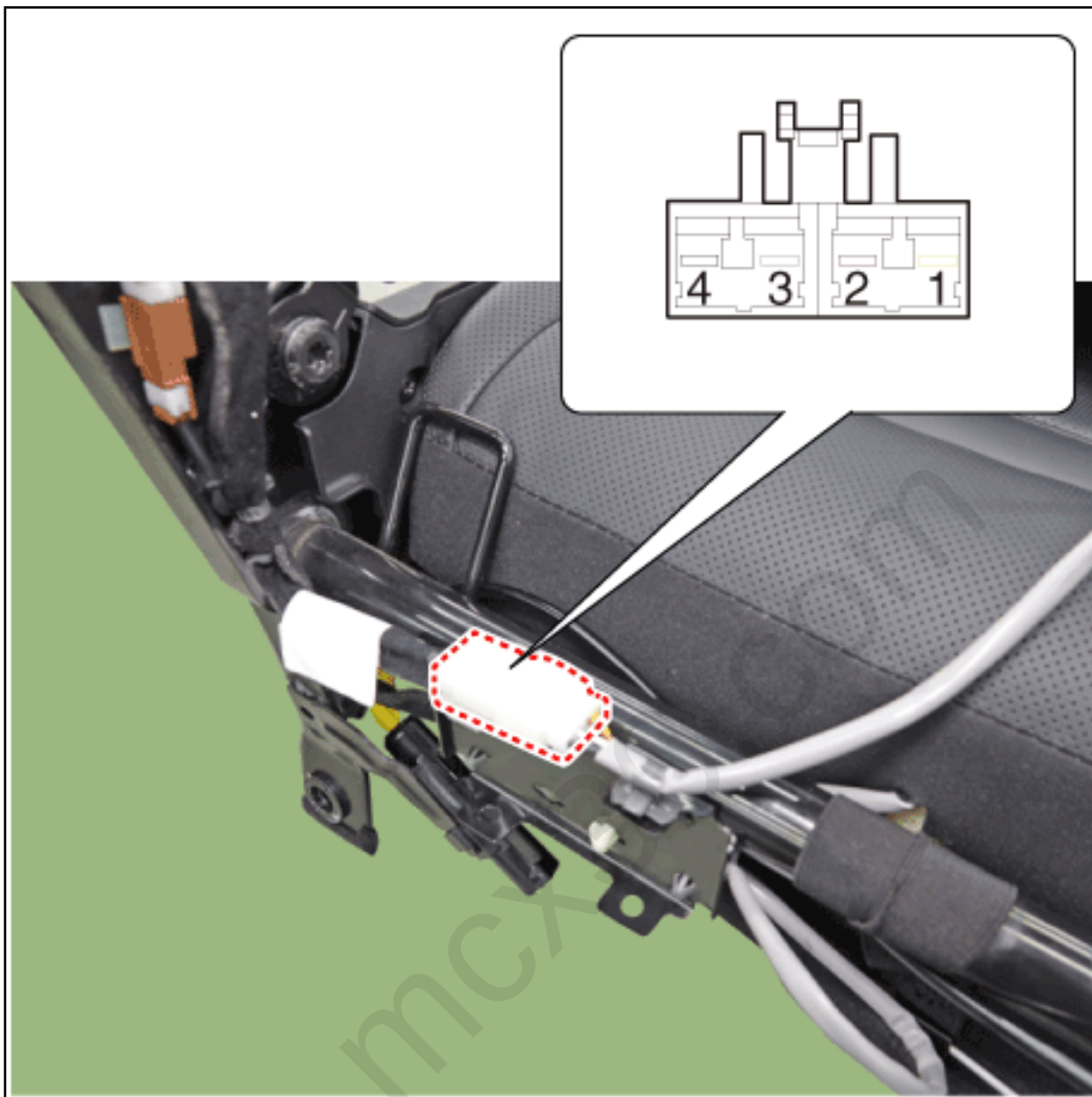
2. Operate the seat heater after connecting the connector, and then check the thermostat by measuring the temperature of seat surface.

Driver/Passenger	Cushion/Back	NTC Resistance (kΩ)
High	42/50 °C	4.24 kΩ
Mid	39/45 °C	6.4 kΩ
Low	36/40 °C	9.62 kΩ

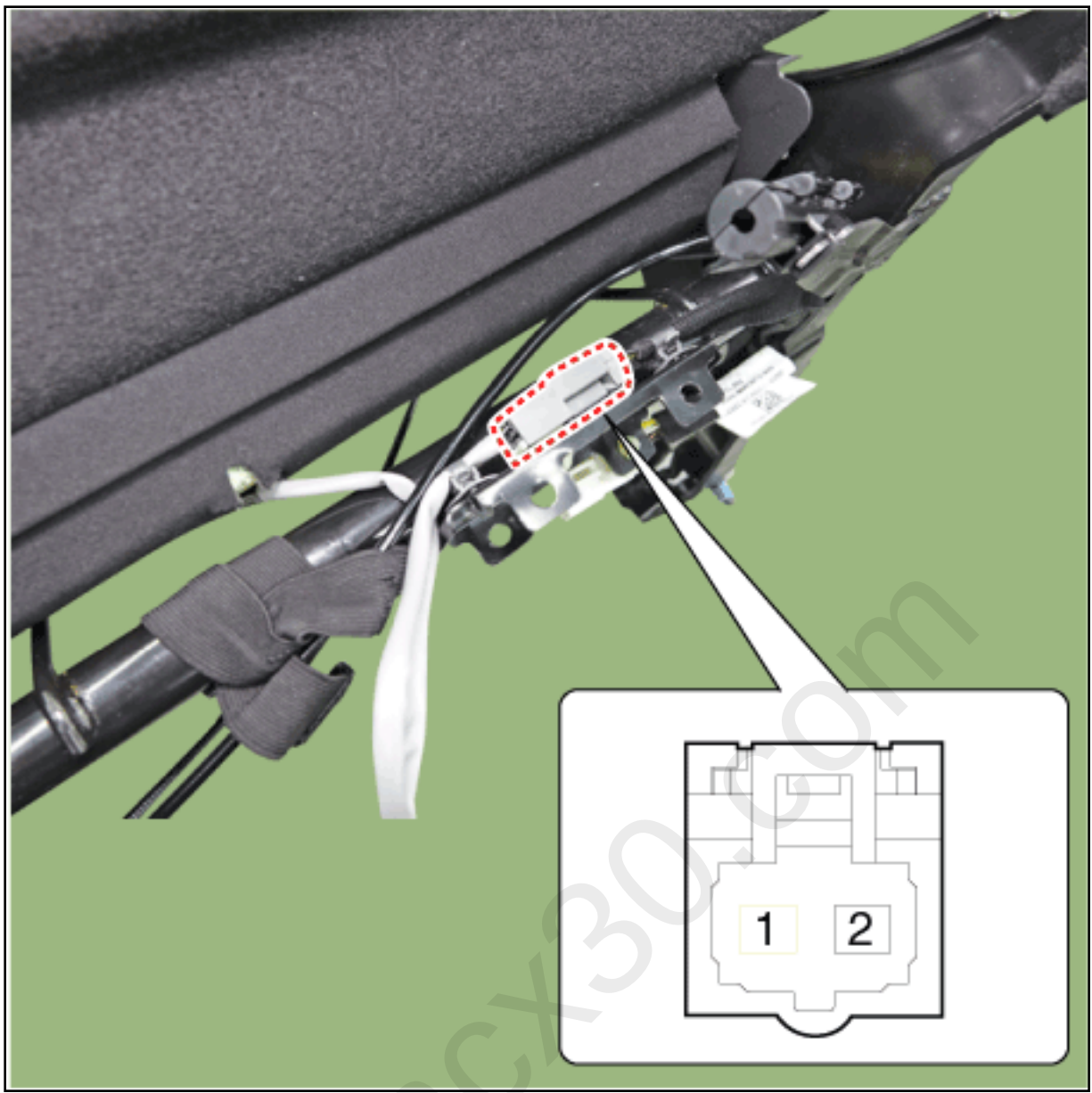
Second Line Seat

1. Check for continuity and measure the resistance between terminals.

[Cushion]



[Back]



[Cushion]

Pin	Description		Description
1	Heater (+)	3	NTC (-)
2	NTC (+)	4	Heater (-)

[Back]

Pin	Description	Pin	Description
1	Heater (+)	2	Heater (-)

2. Operate the seat heater after connecting the connector, and then check the thermostat by measuring the temperature of seat surface.

Rear heater			
Vomlume	Max.temperature ($\pm 2^{\circ}\text{C}$)		NTC Resistance ($\text{k}\Omega$) $\pm 1\%$
	Cushion	Back	
High	42	50	4.909
Low	38	45	7.453

Diagnosis mode

1. Enter the diagnostic mode referring to below description.
 - In failure mode, press the ventilation seat button for 4 seconds and release it.
 - Press the ventilation seat button for 2 seconds and release it.
 - Lastly, press the ventilation seat button for 4 seconds and release it.
 - When entering the failure mode, the LED of the ventilation seat button turns ON/OFF/blinks at each stage.
2. After entering the diagnosis mode, you can check what failed by checking the blinking LED.
3. The table below indicates the failure based on priority, upper item means higher priority.
4. If more than one failure is detected, higher priority failure is displayed through the LED flashing pattern.
5. Lower priority failure will be displays if higher priority failure is reset.

[Heater Switch]



[Driver/Passenger]

Failure indicator	Inspection items	Detailed inspections
High : ON Middle : FLASHING Low : FLASHING (Low/Over voltage detection) Low : OFF (Fuse disconnection)	Low voltage detection Over voltage detection Fuse disconnection	1) IGN1 Less than 8.5V 2) IGN1 Less than 16.5V 3) IGN2 fuse disconnection

High : FLASHING Middle : ON Low : OFF	Detection of NTC/Heater disconnect	- NTC element failure - Heater mat disconnection 1) Cushion/Seat back heater mat disconnection 2) Disconnection in the NTC (+) wiring 3) Disconnection in the NTC (-) wiring 4) Disconnection in the heating wire (+) 5) Disconnection in the heating wire (-)
High : OFF Middle : ON Low : FLASHING	Short of between the connector terminals	Disconnection in the NTC (+)/NTC (-) wiring
High : OFF Middle : ON Low : FLASHING		Short in the NTC (+)/Heater(-) wiring
High : OFF Middle : ON Low : FLASHING	Short of between the connector terminals	1) Short in the NTC (+)/Heater (-) wiring 2) Short in the Heater (+)/Heater (-) wiring 3) Short in the Heater (+)/NTC (-) wiring
	Heater wiring short	4) Disconnection in the NTC (+)/NTC (-) wiring
High : FLASHING Middle : ON Low : OFF	Heater wiring short	Short in the Heater (+)/NTC(+) wiring
High : OFF Middle : ON Low : FLASHING	Heater wiring short	1) Short in the NTC(+)/Heater (-) wiring 2) Short in the Heater (+)/Heater (-) wiring 3) Short in the Heater (+)/NTC (-) wiring
High : FLASHING Middle : ON Low : FLASHING	Loss of temperature feedback	Target temperature not reached within 40 minutes

[Second line seat heater]

Failure indicator	Inspection items	Detailed inspections
High : OFF Low : FLASHING	Low voltage detection Over voltage detection	1) IGN1 Less than 8.5V 2) IGN1 Less than 16.5V
High : ON Low : OFF	Fuse disconnection	IGN2 fuse disconnection
High : ON Low : FLASHING	Detection of NTC/Heater disconnect	1) Cushion/Seat back heater mat disconnection 2) Disconnection in the NTC (+) wiring 3) Disconnection in the NTC (-) wiring 4) Disconnection in the heating wire (+) 5) Disconnection in the heating wire (-)
High : FLASHING Low : OFF	Short of between the connector terminals	Short in the NTC (+)/NTC (-) wiring
High : FLASHING Low : ON		Short in the NTC (+)/Heater (-) wiring
High : FLASHING Low : OFF	Short of between the connector terminals	1) Short in the NTC (+)/Heater (-) wiring 2) Short in the Heater (+)/Heater (-) wiring 3) Short in the Heater (+)/NTC (-) wiring
	Heater wiring short	Short in the NTC (+)/NTC (-) wiring
High : ON Low : FLASHING	Heater wiring short	Short in the NTC (+)/Heater (+) wiring
High : FLASHING Low : OFF	Heater wiring short	1) Short in the NTC (+)/Heater (-) wiring 2) Short in the Heater (+)/Heater (-) wiring 3) Short in the Heater (+)/NTC (-) wiring

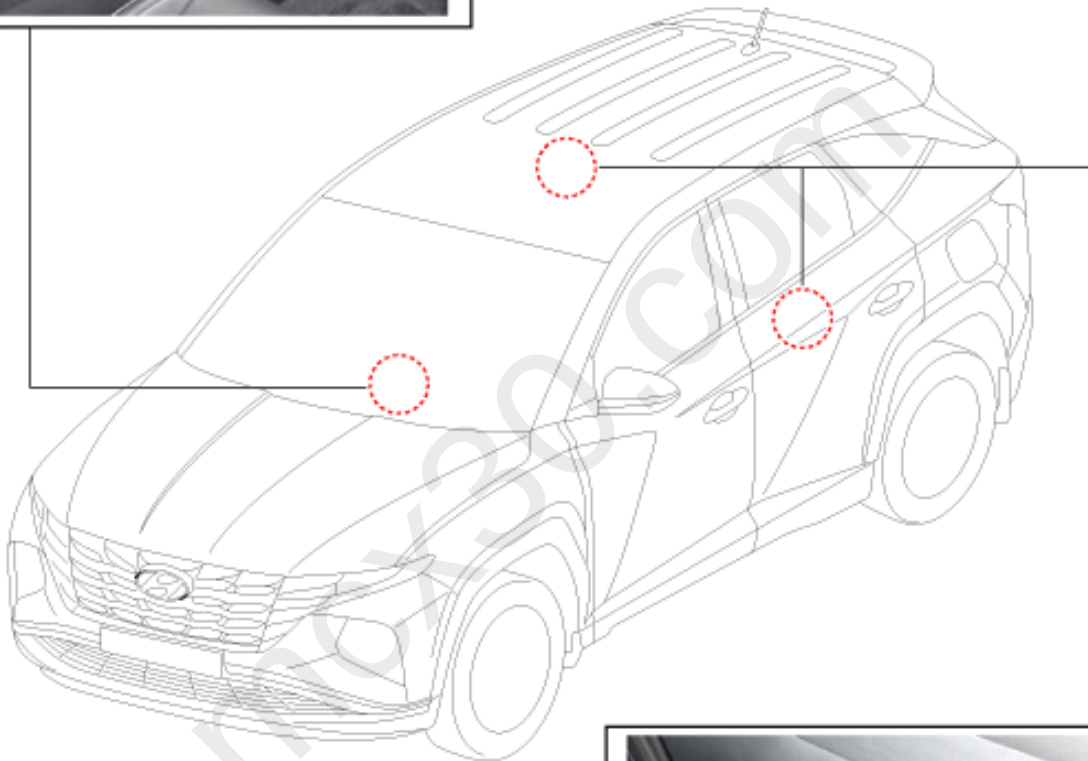
High : OFF Low : ON	Loss of temperature feedback	Target temperature not reached within 40 minutes
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6. If you press the seat heater button for more than five seconds, the LED for malfunctioning memory will blink four times and the recorded memory will be deleted.
7. Pressing the IGN OFF button will end the diagnosis mode for the seat.
8. You can check whether the heating seat system works properly after turning the IGN ON. If you want to check the error code, you can refer to the procedure of 2 above.

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Components

[1]



[2]

1. Front seat heater switch

2. Rear seat heater switch



Connector Pin Information

Pin	Description	Pin	Description
1	IGN 1	17	PDW switch
2	ILL (+)	18	PDW IND
3	4WD lock swtich	19	-
4	Grip control swtich (+)	20	Heater LH
5	Grip control swtich (-)	21	Heater IND High_LH
6	Driver/Terrain mode symbol	22	Heater IND Mid_LH
7	ISG OFF IND	23	Heater IND Low_LH
8	ISG OFF switch	24	Heater RH
9	-	25	Heater IND High_RH
10	Steering wheel heater switch	26	Heater IND Mid_RH
11	Steering wheel heater IND	27	Heater IND Low_RH
12	SVM switch	28	-
13	-	29	DETENT
14	DBC switch	30	-
15	-	31	ILL (-)
16	LIN	32	Ground

Removal

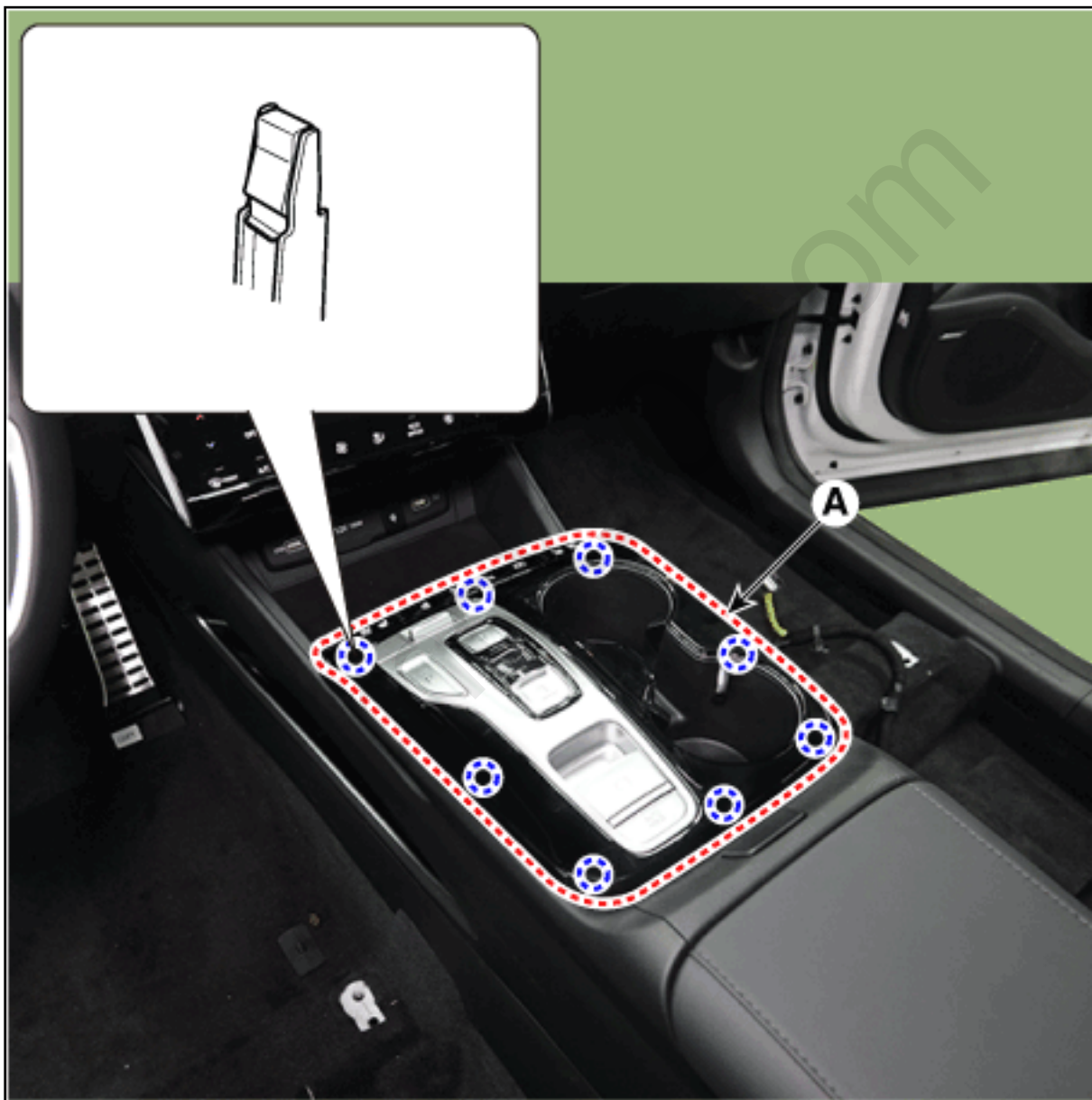


- When removing with a flat-tip screwdriver or remover, wrap protective tape around the tools to prevent damage to components.
- Put on gloves to prevent hand injuries.

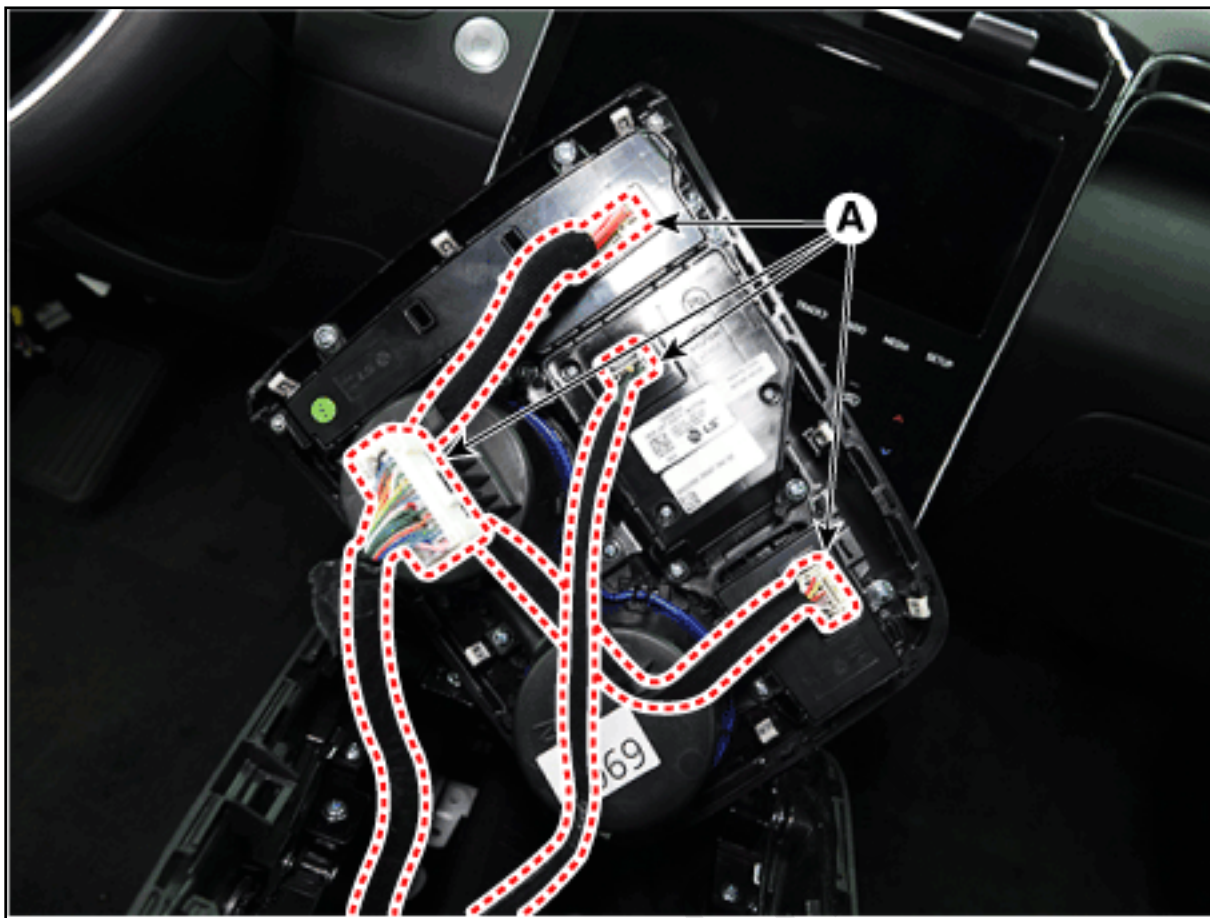


- Take care not to bend or scratch the trim and panels.

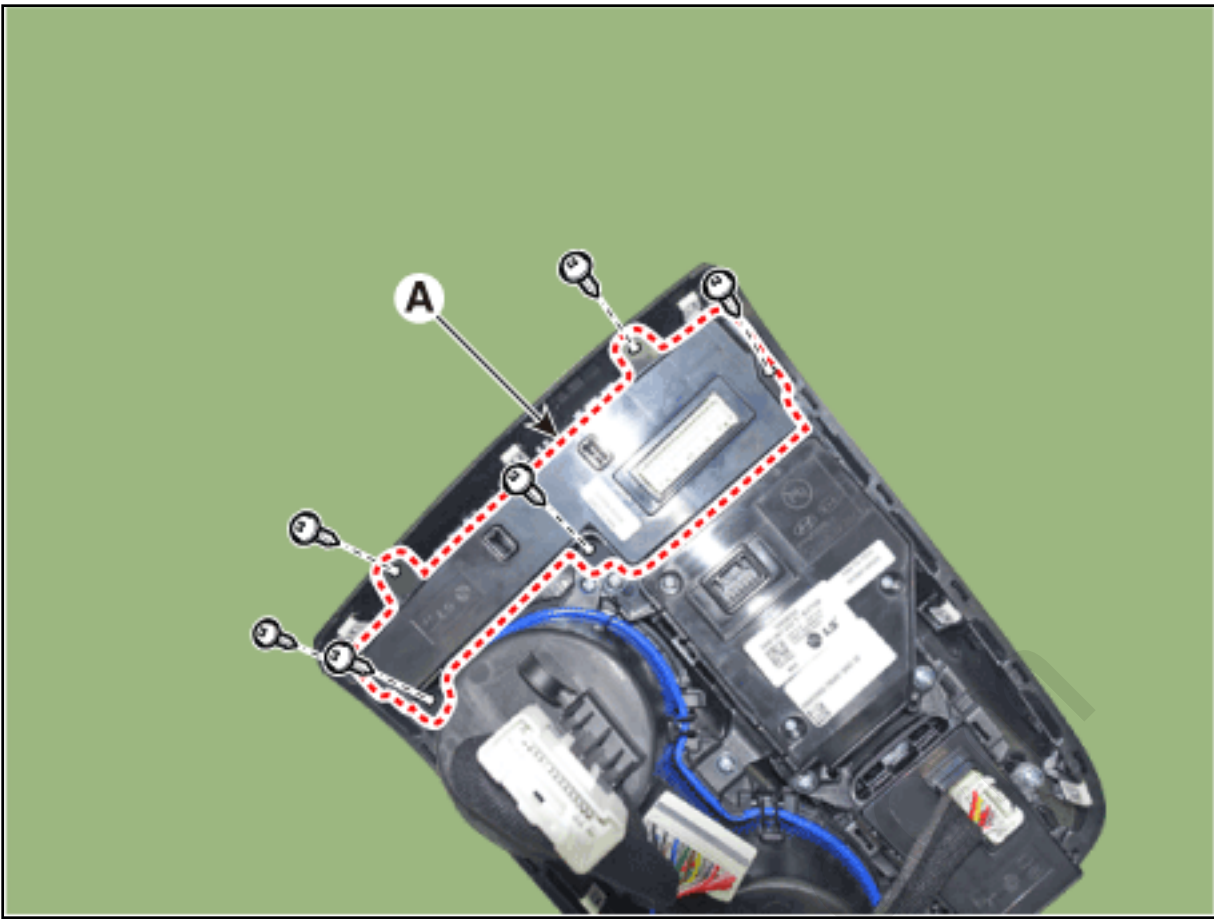
1. Remove the console upper cover (A).



2. Press the lock pin, separate the connectors (A).



3. Remove the seat heater switch (A) after loosening mounting screws.



Installation

1. Install the front seat heater switch.
2. Install the console upper cover.
3. Connect the negative (-) battery terminal.

Component
Location



- 1. Air ventilation seat blower
- 2. Air ventilation seat control unit

- 3. Air ventilation seat duct

Components



Pin	Connector A	Connector B
1	IGN 1	Ventilation heater battery (+)
2	Blower power_LH	Heater power_LH
3	Blower speed_LH	Heater power_RH
4	Blower RPM input_LH	-
5	-	Heater ground_LH
6	-	Ventilation heater ground
7	CAN LOW	Ventilation heater battery (+)
8	CAN HIGH	-
9	-	-
10	LIN	-
11	-	Heater ground_RH
12	Blower ground_LH	Ventilation heater ground
13	IGN 2	
14	Blower power_RH	
15	Blower speed_RH	
16	Blower RPM input_RH	
17	-	
18	-	
19		
20	NTC (+)_LH	
21	NTC (+)_RH	
22	NTC (-)_RH	
23	NTC (-)_LH	
24	Blower ground_RH	

Removal

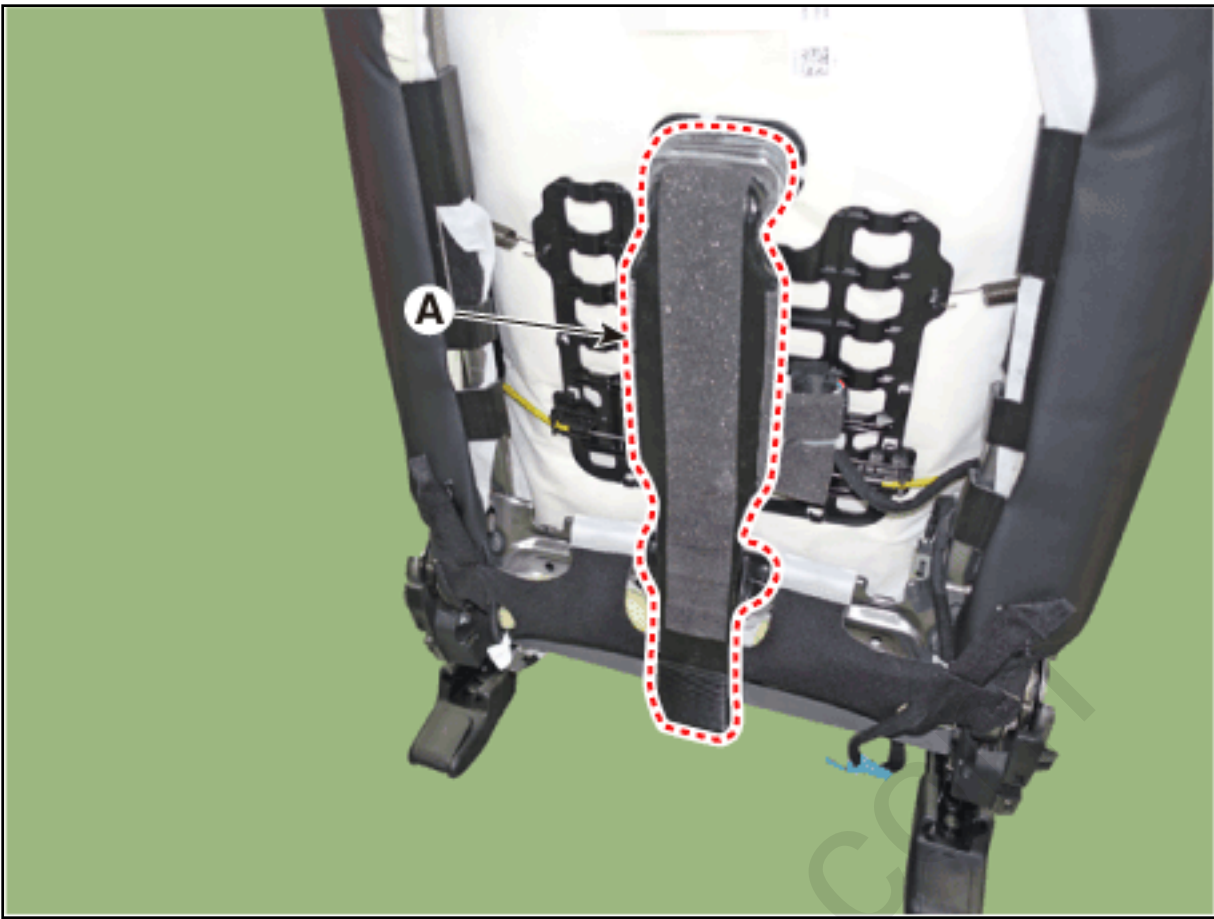
Cushion Blower

1. Remove the front seat assembly.
(Refer to Body - "Front Seat Assembly")
2. Remove the cushion blower(A) after loosening the disconnecting the connector.



Air Duct

1. Remove the front seat back cover.
(Refer to Body - "Front Seat Back Cover")
2. Remove the air duct (A) after loosening mounting screws.



Air Ventilation Unit

1. Remove the front seat assembly.
(Refer to Body - "Front Seat Assembly")
2. Remove the air ventilation unit (A) after loosening mounting screws.



3. Remove the air ventilation unit (A) after disconnecting unit connector.



Installation

Cushion Blower

1. Install the cushion blower.
2. Install the front seat assembly.

Air Ventilation Unit

1. Install the air ventilation unit.
2. Install the front seat assembly.

Air Duct

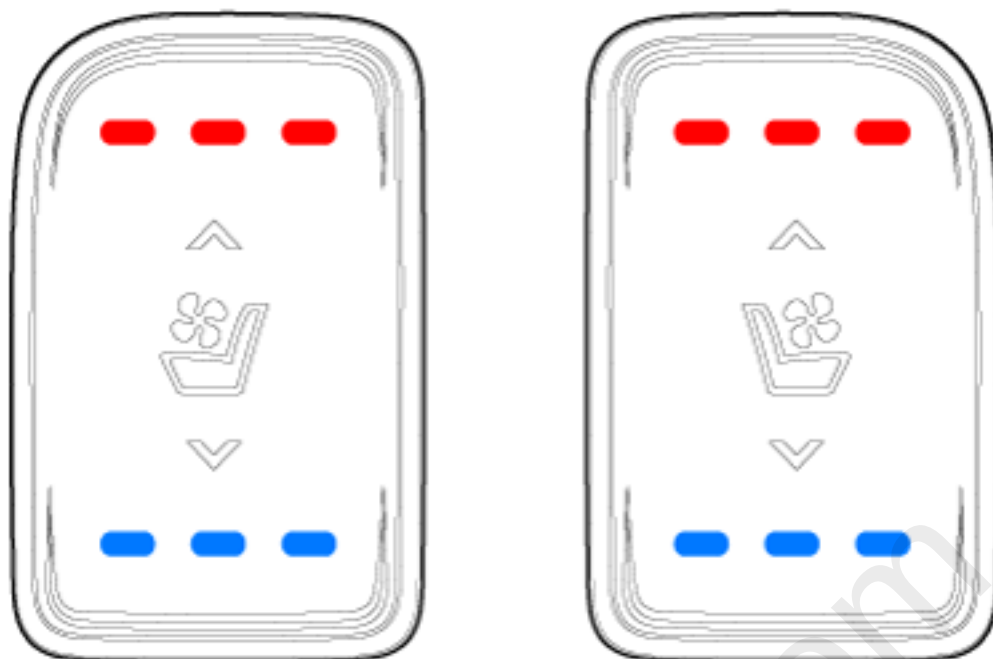
1. Install the air duct.
2. Install the front seat back cover.

Inspection

Diagnosis mode

1. You can enter the diagnosis mode by turning the ventilation seat button on.
2. Enter the diagnostic mode referring to below description.
 - In failure mode, press the ventilation seat button for 4 seconds and release it.
 - Press the ventilation seat button for 2 seconds and release it.
 - Lastly, press the ventilation seat button for 4 seconds and release it.
 - When entering the failure mode, the LED of the ventilation seat button turns ON/OFF/blinks at each stage.
3. After entering the diagnosis mode, you can check what failed by checking the blinking LED.

[Ventilation & Heater Switch]



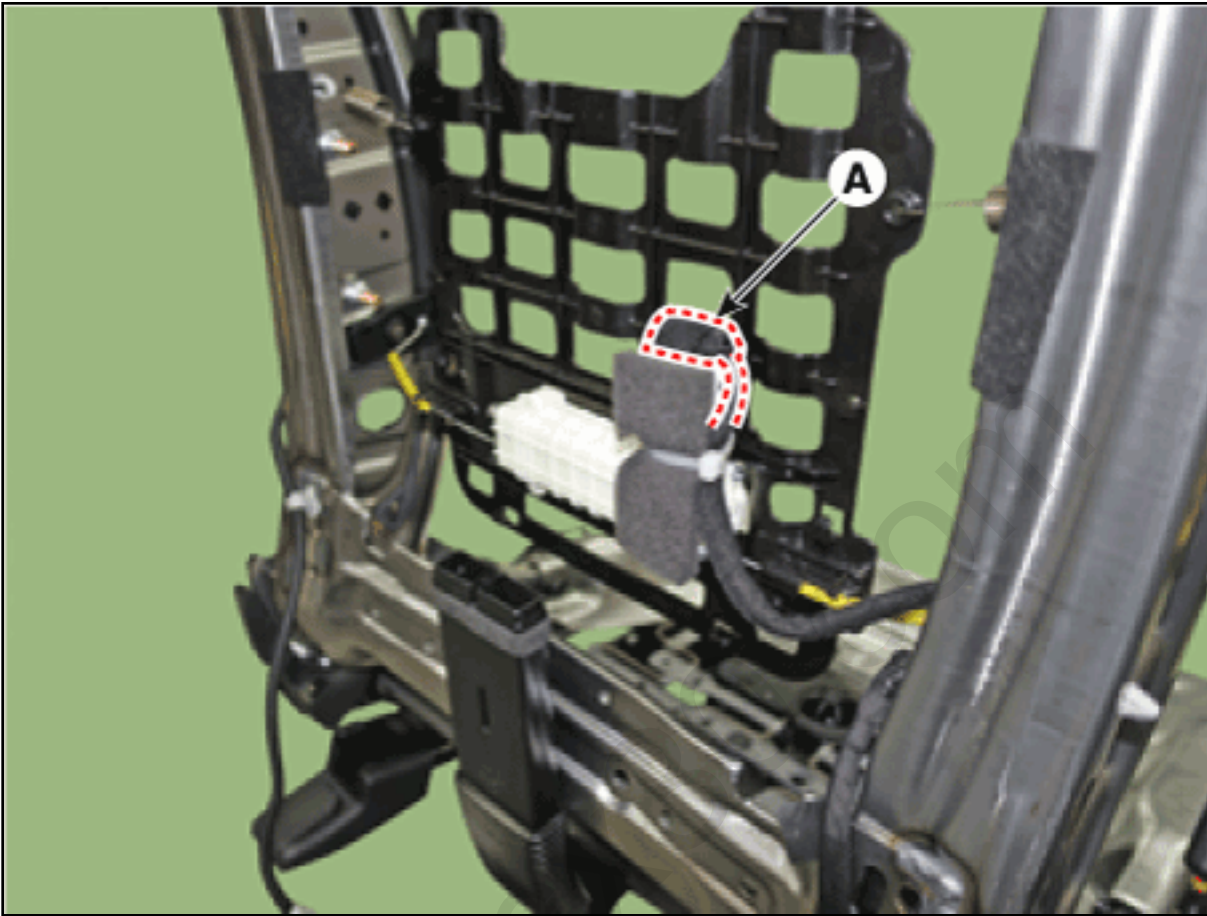
Failure indicator	Inspection items	Detailed inspections
	[Seat heater LED] High : OFF Middle : FLASHING Low : OFF	NTC (Disconnecter) 1) NTC (disconnecter) 2) Disconnection or missing connector of NTC
	[Seat heater LED] High : OFF Middle : OFF Low : FLASHING	NTC (Short) 1) NTC terminal short

	[Seat heater LED] High : OFF Middle : FLASHING Low : FLASHING	Power disconnection of seat heating wire (Disconnecter)	1) Disconnection or missing connector of heating seat power line
	[Seat heater LED] High : FLASHING Middle : FLASHING Low : FLASHING	Short circuit of seat heating wire power (Short)	1) Short circuit of seat heating wire power (short)
	[Ventilation seat LED] High : OFF Middle : FLASHING Low : FLASHING	Power disconnection of ventilation blower	1) Disconnection or missing connector of ventilation power line 2) Disconnection or missing connector of ventilation signal line
	[Ventilation seat LED] High : FLASHING Middle : FLASHING Low : FLASHING	Short circuit of ventilation blower power (short)	1) Short circuit of ventilation blower power (Short)

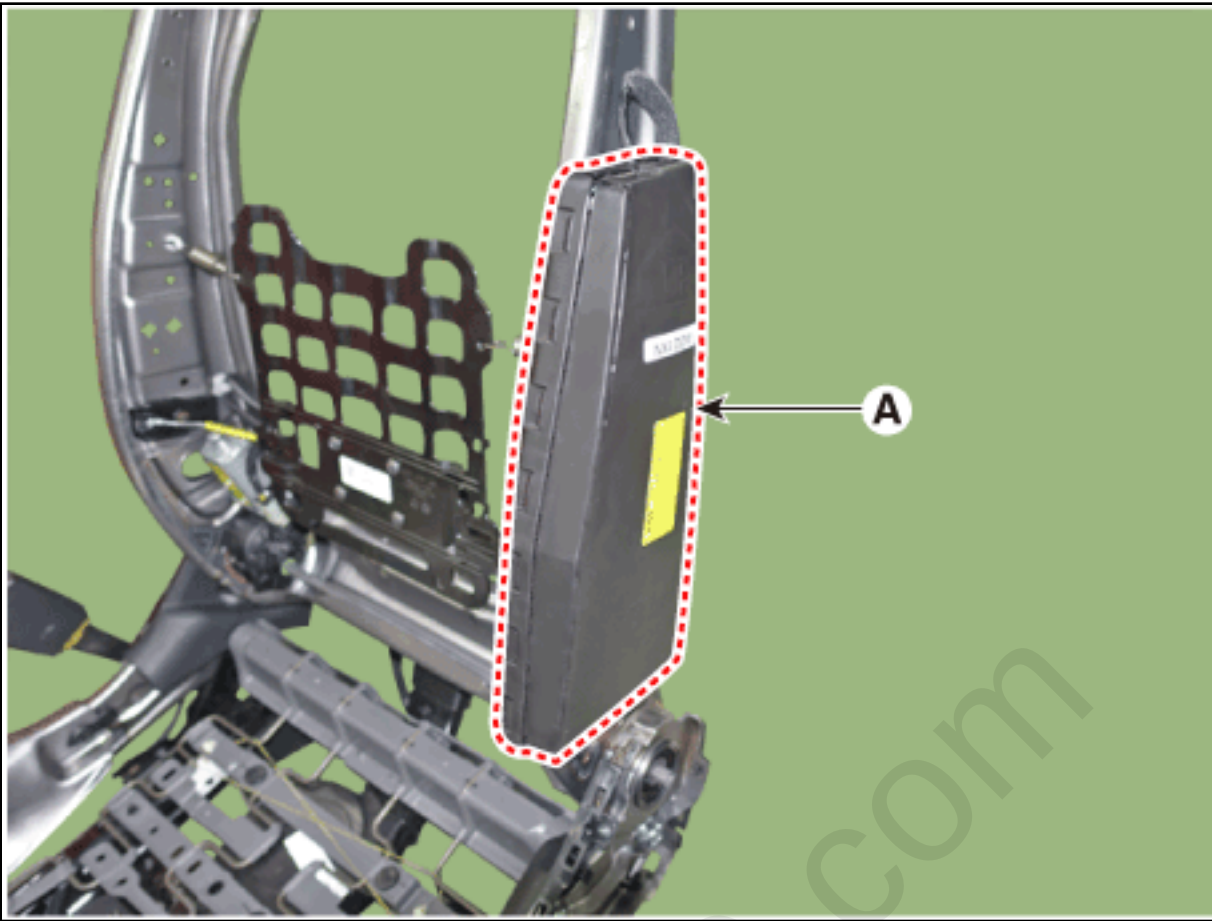
4. You can check the malfunctioning by checking the blinking LED.
5. The ventilating seat unit will record the malfunctioning that occurred.
6. If you press the seat heater button for more than five seconds, the LED for malfunctioning memory will blink four times and the recorded memory will be deleted.
7. Pressing the IGN OFF button will end the diagnosis mode for the ventilating seat.
8. You can check whether the ventilating seat system works properly after turning the IGN ON. If you want to check the error code, you can refer to the procedure of 2 above.

Removal

1. Disconnect the negative (-) battery terminal.
2. Remove the front seat back cover.
(Refer to Body - "Front Seat Back Cover")
3. Disconnect motor connector (A).



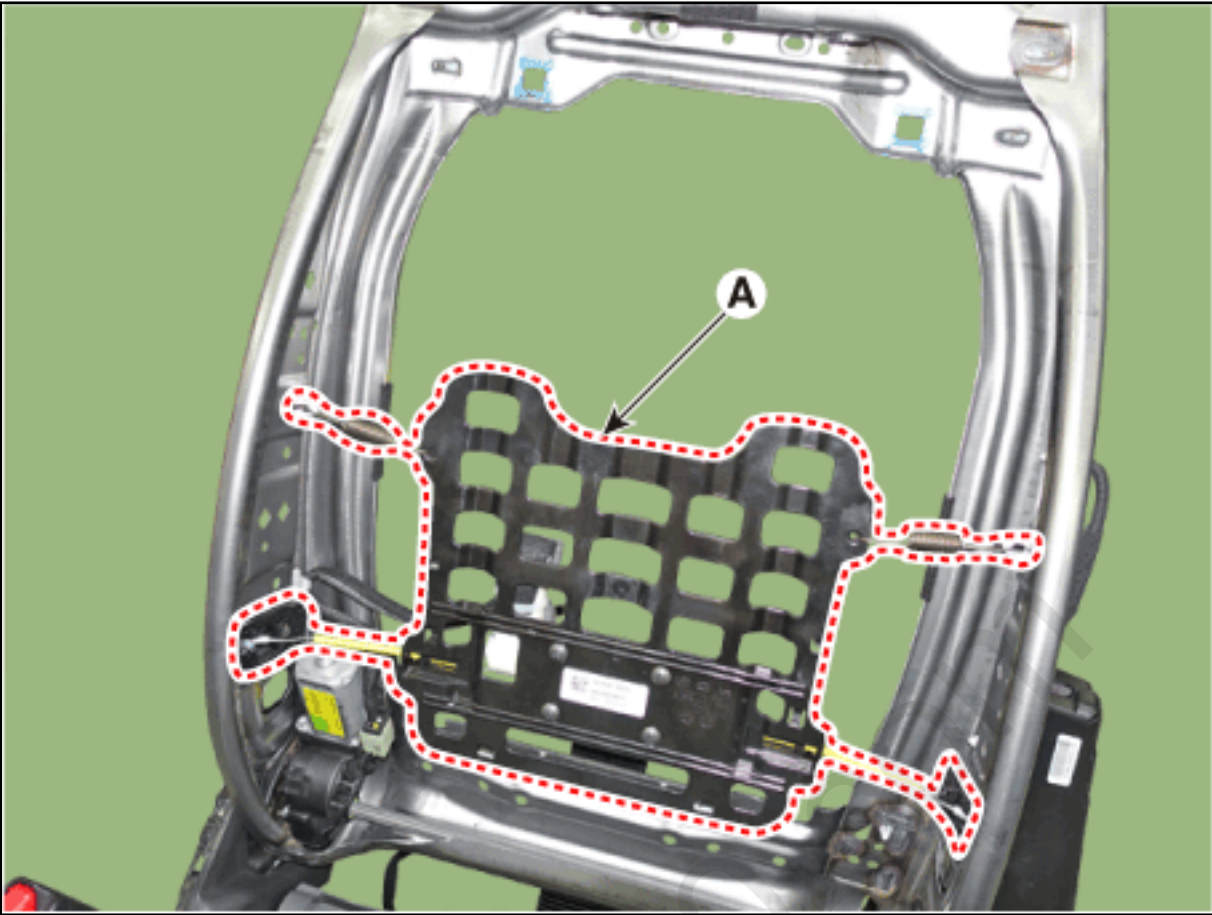
4. Remove the front side airbag (A).



5. Remove the lumbar support cable bracket after loosening mounting screws.



6. Remove the lumbar support (A).

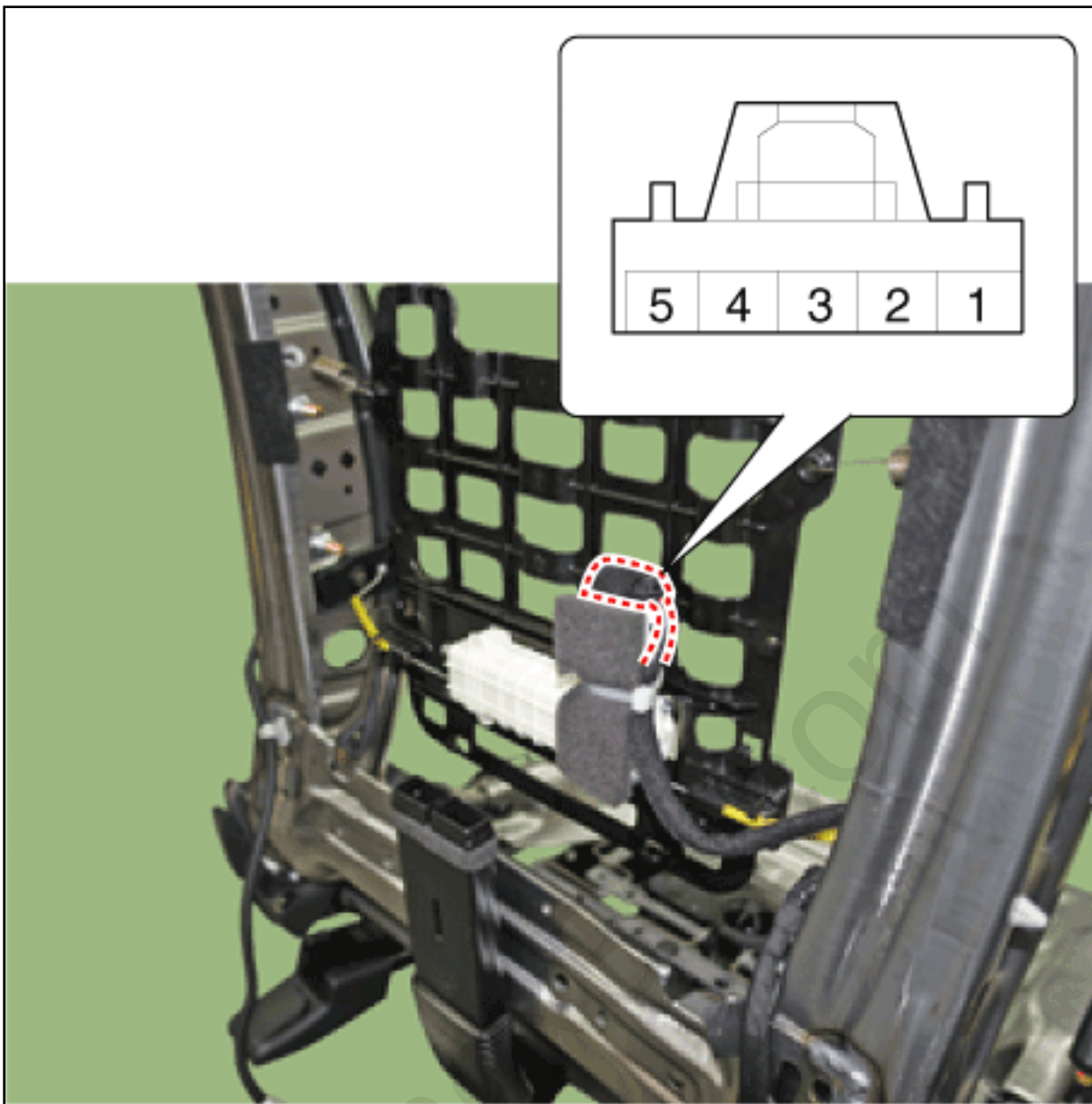


Installation

1. Install the lumbar support assembly.
2. Install the seat back cover.

Inspection

1. Remove the front seat back cover.



2. When the battery power is supplied to the motor connector, check the motor for smooth operation.
3. Reverse the connections and check that the motor turns in reverse.
4. If the motor runs abnormally, replace it.

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