# **SWITCH**

6810-20/7410-26/7770-20/8510-01/8510-15/8510-21/8510-23/8510-25/8510-28/8510-29/8520-01/8520-05/8520-07/8520-10/8520-16/8530-01/8530-02/8530-03/8530-10/8610-06/

# **SWITCH**

# **GENERAL INFORMATION**

1. SPECIFICATIONS	3	8510-15 CENTER FASCIA SWITCH	65
2. MAJOR CHANGES	6	8510-21 4WD SWITCH ASSEMBLY	69
		8510-23 ESP OFF SWITCH ASSEMBLY	71
		8510-29 STEERING WHEEL HETAING	
OVERVIEW AND OPERATING		SWITCH ASSEMBLY	73
PROCESS   A   A   A   A   A   A   A   A   A		8510-25 REAR FOG LAMP SWITCH	
ال خودرو سامانه (م	ديجيا	ASSEMBLY	77
1. OVERVIEW	7	8510-28 HEADLAMP LEVELING SWITCH.	81
2. SWITCH CLUSTER ON DOOR TRIM	10	7410-26 POWER SEAT SWITCH	
3. INTEGRATED INSTRUMENT PANEL		ASSEMBLY	83
SWITCH	19	8530-10 AUDIO REMOTE CONTROL	
4. STEERING WHEEL SWITCH	35	SWITCH ASSEMBLY	85
5. SEAT HEATING AND VENTILATION		8530-01 MULTIFUNCTION TURN SIGNAL	
SWITCH	43	LAMP ASSEMBLY	88
6. OVERHEAD CONSOLE SWITCH	45	8530-02 MULTIFUNCTION WIPER	
7. TAILGATE SWITCH	49	ASSEMBLY	89
		8530-03 CRUISE CONTROL SWITCH	
		ASSEMBLY	90
<b>CONFIGURATION AND FUNCTIO</b>	N	8610-06 HORN ASSEMBLY	92
		8510-01 FRONT SEAT HEATING AND	
8520-01 POWER WINDOW MAIN SWITCH.	51	VENTILATION SWITCH	
8520-05 OUTSIDE REARVIEW MIRROR		ASSEMBLY	93
SWITCH	55	8520-10 REAR SEAT HEATING SWITCH	
8520-07 POWER WINDOW SUB SWITCH	59	ASSEMBLY	99
6810-20 HEATER AND A/C CONTROL		7770-20 OVERHEAD CONSOLE SWITCH	101
ASSEMBLY	60	8520-16 TAILGATE SWITCH ASSEMBLY.	105

# **SWITCH**

# **REMOVAL AND INSTALLATION**

8520-01 POWER WINDOW MAIN SWITCH		8530-03 CRUISE CONTROL SWITCH	
ASSEMBLY	106	ASSEMBLY	124
8520-05 OUTSIDE MIRROR SWITCH		8530-10 AUDIO REMOTE CONTROL	
ASSEMBLY	107	SWITCH ASSEMBLY	128
8520-07 POWER WINDOW SUB SWITCH		8610-06 HORN ASSEMBLY	131
ASSEMBLY	108	7410-26 POWER SEAT SWITCH	
6810-20 HEATER AND A/C CONTROL		ASSEMBLY	133
ASSEMBLY	109	8510-01 FRONT SEAT HEATING AND	
8510-15 CENTER FASCIA SWITCH		VENTILATION SWITCH	
ASSEMBLY	114	ASSEMBLY	135
8510-29 LOWER MAIN PANEL SWITCH		8520-10 REAR SEAT HEATING SWITCH	
ASSEMBLY	118	ASSEMBLY	138
8530-01 MULTIFUNCTION TURN LIGHT		8520-16 TAILGATE SWITCH ASSEMBLY.	139
ASSEMBLY	120	7770-20 OVERHEAD CONSOLE SWITCH	
8530-02 MULTIFUNCTION WIPER		ASSEMBLY	141
ASSEMBLY	122		

# **SWITCH**

# **8510-00**

# GENERAL INFORMATION

# 1. SPECIFICATIONS

# ▶ Multifunction switch

	Unit			Specification	
			Rated vo	oltage	DC 12 V
				Light switch	ON: 1 A (relay load)
			Multifunction	Dimmer & passing switch	High beam: 0.3 A (relay load) Low beam: 0.3 A (relay load) Passing: 0.3 A (relay load)
			turn light switch	Turn signal lamp switch	0.1 A (relay load)
Oľ	50-		Jlïı-	AUTO hazard warning flasher switch	0.1 A (relay load)
بحدود)	Multifunction switch	Rated load	•• نال خودرو س	Wiper switch	LO: 0.1 A (relay load) HI: 0.1 A (relay load) AUTO: 0.22±0.05 A (relay load) Fixed: Max. 0.1 A (relay load)
ايران	ن خودرو در	ميركار	Multifunction	AUTO washer switch	0.1 A (relay load)
			wiper switch	Washer switch	0.1 A (relay load)
				Wiping speed control switch	Max. 25 mA
				Mist switch	0.1 A (relay load)
				Rear wiper & washer switch	Rear wiper: 0.1 A (relay load)

Modification basis	
Application basis	
Affected VIN	



# ▶ Lower main switch

Item		Specification
	4WD LOCK switch	DC 12V - 0.1A
Lower main switch	ESP OFF switch	DC 12V - 0.1A
	Steering wheel heating switch	DC 12V - 0.1A

### ► Center fascia switch

ltem		Specification
	Hazard warning flasher switch	DC 12V - 0.1A (max. 30 mA)
	TRIP/RESET switch	DC 12V - 0.1A (max. 30 mA)
Center fascia switch	Windshield heating switch	DC 12V - 0.1A (max. 30 mA)
	Rear glass and outside rearview mirror heating switch	DC 12V - 0.1A (max. 30 mA)

# ► Power window main switch

Item			Specification
سئوليت محدود	Rated voltage		DC 12 V
	Oper	ating voltage	DC 9 to 16 V
Power window main	بتال تعميركاران	AUTO switch	0.7 A (motor load)
switch	Rated load	AUTO/MANUAL switch	10 A (motor load)
	rated lead	Window lock switch	10 A (motor load)
		Door unlock switch	0.4 A (motor load)

# ▶ Power window sub switch

ltem			Specification
	Rat	ted voltage	DC 12 V
Power window sub switch	Operating voltage		DC 9 to 16 V
	Rated load	Manual switch	10 A (motor load)

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# ► Audio remote control switch

ltem		Resistance	Output voltage
	VOL -	0 Ω ± 5%	0 to 0.3 V
	VOL+	3.3 KΩ ± 5%	0.4 to 1.0 V
	MODE	6 KΩ ± 5%	1.1 to 1.4 V
Audio	MUTE	9.9 KΩ ± 5%	1.5 to 1.8 V
remote control	SEEK UP	16.7 KΩ ± 5%	1.9 to 2.25 V
switch	SEEK DOWN	31.3 KΩ ± 5%	2.26 to 2.64 V
	TIP -	670 Ω ± 5%	-
	TIP+	1.08 KΩ ± 5%	-
	Bluetooth (hands-free)	64.7 KΩ ± 5%	2.66 to 3.0 V

# ► Cruise control switch

	Cluise control swi		
		Item	Specification
4		ON/OFF	DC 5V - 10mA
Cruise control switch	شرکت دDECELل خودرو ساه	DC 5V - 10mA	
		ACCEL	DC 5V - 10mA
ايران	برکاران خودرو در	اولین RESUME یحیتال تعمیا	DC 5V - 10mA

# ▶ Front seat heating and ventilation switch

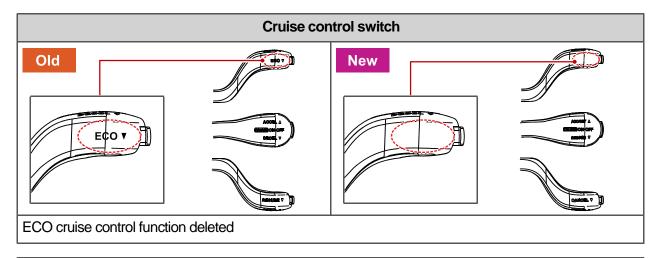
ltem		Specification
Front seat heating	Driver seat heating switch	12V - 0.1A (max. 30 mA)
and ventilation switch	Driver seat ventilation switch	12V - 0.1A (max. 30 mA)
	Passenger seat heating switch	12V - 0.1A (max. 30 mA)





# 2. MAJOR CHANGES

### ► Cruise control switch



# Audio remote control switch's internal resistance

Old

	•	<b>III 00</b>
Item	Resistance	Output voltage
VOL -	0Ω ± 5%	0~0.3V
مطلاود	$670\Omega \pm 5\%$	ن خودرو سامان
TIP+	1.08kΩ ± 5%	-

New

Item	Resistance	Output voltage
VOL-	$0\Omega \pm 0\Omega$	0~0.3V
ن دالک	$0\Omega \pm 1\Omega$	0
TIP+	$0\Omega \pm 1\Omega$	

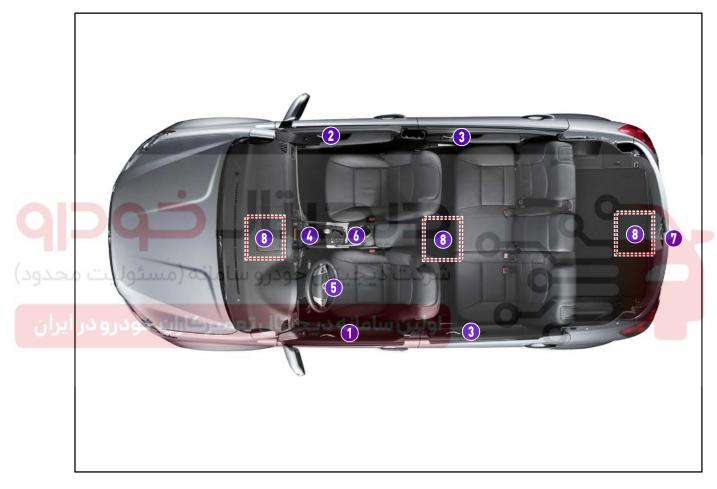
- Audio remote control switch's internal resistance changed
- TIP switch's internal resistance changed

# **OVERVIEW AND OPERATING PROCESS**

# 1. OVERVIEW

This helps to enable the driver to drive the vehicle safely and comfortably by operating the switch for the driving situation.

# 1) Mounting Locations



- 1. Door panel switch (driver)
- 2. Door panel switch (passenger)
- 3. Door panel switch (rear)
- 4. IP panel switch
- 5. Steering wheel switch
- 6. Front console switch
- 7. Trunk switch
- 8. Headlining switch

1	Modification basis	
Į,	Application basis	
Į.	Affected VIN	

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# **▶** Switch layout



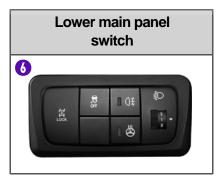


















Modification basis	
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Application basis	
Affected VIN	



# 2. SWITCH CLUSTER ON DOOR TRIM

# 1) Driver Door Switches

# (1) Power window main switch

It is mounted to the door trim and can open or close the 4 windows. It has the switches which can lock or unlock all the doors and windows. The window main switch has the auto open and close function (only for driver), anti-trap system and driver window safety function.



- A. Driver door window switch
- B. Passenger door window switch
- C. Rear LH window switch

- D. Rear RH window switch
- E. Door lock/unlock switch
- F. Window lock switch

### ▶ Driver window safety function

The anti-trap system enables the driver's window to automatically reverse when something is caught in the window as it is closing. When the sensor detects an obstacle, the window will be lowered immediately. The anti-trap safety system is available only for the driver's window equipped with the automatic rolling up (Auto-up) function. The anti-trap safety system does not operate when the window is about to touch its window frame.

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Application basis	
Affected VIN	

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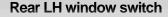
AUDIO SYSTEM

### **Driver door window switch**

The driver's door window switch has Auto down/Auto up function. The window can be controlled within 30 seconds by activating the power window relay even after turning off the ignition switch.

However, if any of front doors is opened or the Lock switch on the remote control key is pressed (theft deterrent mode is activated) during the delaying period, the delaying time is immediately canceled (power window relay is deactivated).

There are two variants of this: only auto down and anti-trap (auto down and auto up).



The window moves upwards or downwards while this switch is operated.

# Passenger door switch

The window moves upwards or downwards while this switch is operated.

# Rear RH window switch

The window moves upwards or downwards while this switch is operated.

# Door lock/unlock switch

When the door lock/unlock switch is pressed while all doors including the tailgate are locked, all doors will be unlocked. When the switch is pressed again, all doors will be locked.

# Window lock switch

If the window lock switch is pressed down, only driver window is operative. Passenger and rear windows cannot be operated by their switches.

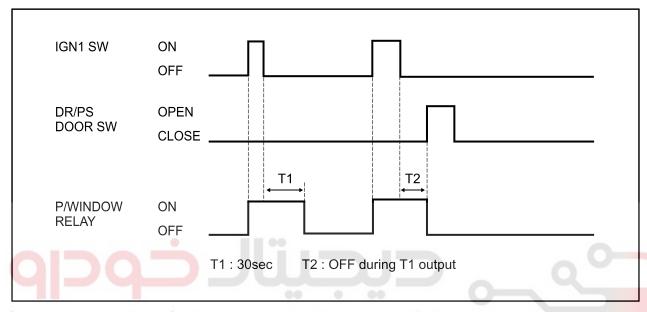
Modification basis
Application basis
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# ► Time lag power window control

- 1. When turning the ignition switch to ON position, the power window relay is turned ON.
- 2. The power window relay keeps ON for 30 seconds even when stopping the engine. However, the power window relay is turned OFF when opening a front door.
- 3. When locking the door (activation of theft deterrent mode), the power window relay is immediately turned OFF.



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### ▶ Function of door lock/unlock switch

There are 5 actuators in door lock/unlock system (including tailgate). All of them can control the corresponding door lock and unlock separately. But, the driver door lock switch can control all door locks. The BCM controls the lock/unlock switch using the door lock/unlock relay. This is a same control type with Auto door lock function that locks the doors when the vehicle speed exceeds 30 km/h. (see circuit diagram)



# ▶ Door lock/unlock relay (integrated in BCM)



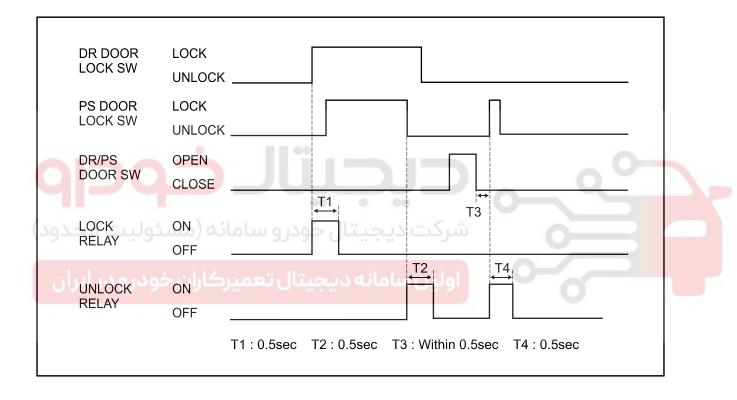
Modification basis
Application basis
Affected VIN

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# ▶ Door lock/unlock control by door LOCK switch

- 1. When moving the driver or passenger door lock (knob) switch to LOCK from UNLOCK position, BCM sends the LOCK signal for 0.5 seconds.
- 2. When moving the driver or passenger door lock (knob) switch to UNLOCK from LOCK position, BCM sends the UNLOCK signal for 0.5 seconds.
- 3. The LOCK (UNLOCK) operation by the door lock (knob) switch is not available when sending the LOCK (UNLOCK) signal by any other method such as remote control key.
- 4. When reconnecting the battery, the door lock (knob) switch is not operational regardless of the door lock switch positions.
- 5. All doors stay unlocked when receiving the door lock signal in 0.5 seconds after closing the doors.



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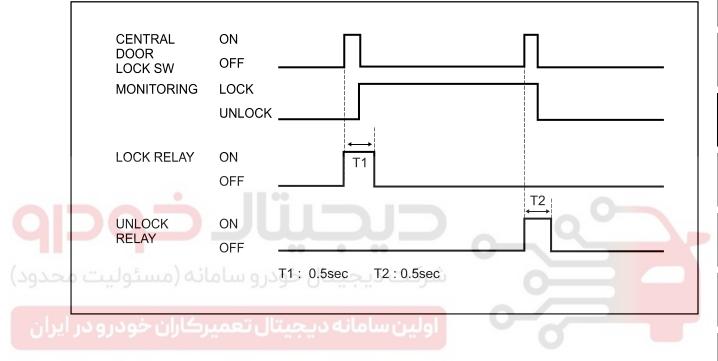
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AUDIO SYSTEM

# ▶ Door lock/unlock control by central door lock switch

- 1. When pressing the central door lock/unlock switch, BCM sends the LOCK or UNLOCK signal according to the previous condition of driver door lock switch for 0.5 seconds.
- 2. The central door dock switch is not available when the system is in theft deterrent mode.
- 3. When turning the ignition off, all doors are automatically unlocked if any of the door lock (knob) switches is in LOCK position.
- 4. When pressing the central door lock switch with any door open, the system unlocks the doors immediately after locking them.





# 2) Outside Mirror Switch

# (1) Overview

It is mounted to the door trim and can be adjusted to up, down, left or right so that the driver can obtain a clear view of the rear of the vehicle depending on the driver's physical condition. The driver can fold the outside rearview mirror when passing by the narrow road or parking the vehicle. Do not fold or unfold the outside rearview mirrors manually since the outside rearview mirror folding switch is a push-lock type switch. This may cause a malfunction of the relevant devices.





# A. Outside mirror folding/unfolding switch

The outside mirrors are folded/unfolded whenever pressing this switch.

# **B. Mirror selection switch**

LH: Driver side mirror

RH: Passenger side mirror

# C. Mirror aiming switch

Adjust the selected mirror up, down, left, or right by pressing the corresponding edges of the switch to get a desired view.

**SWITCH** 

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Modification basis	
Application basis	
Affected VIN	

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AUDIO SYSTEM

# ► Folding/unfolding control

- 1. When you turn the folding switch to the "ON" position, the folding relay is activated for 16 seconds.
- 2. When you turn the folding switch to the "OFF" position, the unfolding relay is activated for 16 seconds.
- 3. When you turn the folding switch to the "OFF" position with the folding relay activated, the unfolding relay is activated for 0.1 second.
  - The control logic is the same for folding to unfolding operation and unfolding to folding operation.



- The AUTO folding/unfolding function is not available when the folding switch is ON.
- The AUTO folding/unfolding function is available when the folding switch is OFF.





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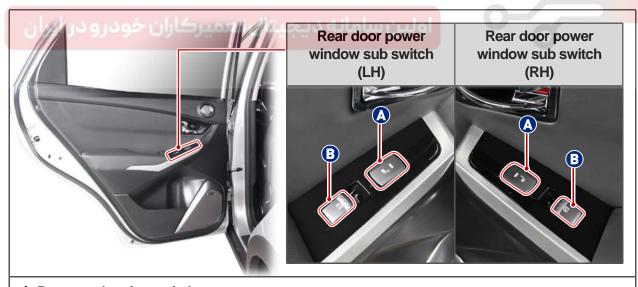
# 3) Power Window Sub Switch (Passenger)

It is mounted to the door trim and can open or close only the window at the door.



# 4) Rear Door Power Window Sub Switch

It is mounted to the door trim and can open or close only the window at the door.



# A. Rear seat heating switch

When you press the switch, the heating is operated and indicator lamp comes on.

### B. Power window switch

The window is operated only when the switch is operated.

Modification basis	
Application basis	
Affected VIN	

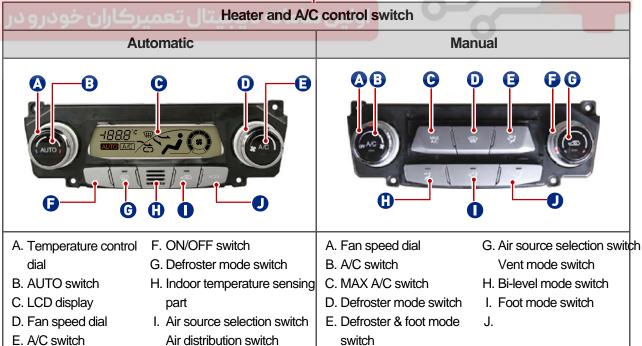
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# 3. INTEGRATED INSTRUMENT PANEL SWITCH

# 1) Overview

It is mounted to the instrument panel and combined with the cooler; which provides cooling and dehumidification by repeating the cycles of compression -> condensation -> expansion -> evaporation, and heater; which controls the heating systemically in the course of circulating the coolant heated by the engine heat to the heater. This allows the driver to maintain the indoor comfortable conditions throughout the year.





F. Temperature control dial

Modification basis	
Application basis	
Affected VIN	

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# Description

a. Automatic

# Temperature control dial

To set the temperature, turn the dial to the left or right. The LCD display shows the set temperature.

### **AUTO** switch

When pressing this switch, "AUTO" is shown on the display and the fan speed and air distribution mode are adjusted automatically to keep interior temperature to the set temperature.

# Fan speed dial

Turn the dial to the left or right to adjust the fan speed in 8 steps and the fan speed can be checked through the LCD display.

### A/C switch

When the switch is pressed, the indicator comes on and the air conditioner starts at the same time. Pressing the switch again gets the indicator lamp go off and the air conditioner stop at the same time.

LCD display



# **ON/OFF** switch

Pressing the switch turns the FATC on/off. When the FATC is turned on, it memorizes the previous status before becoming off.

# Defroster mode switch

This is used to remove the condensation from the windshield. When you press the switch, the indicator comes on and the air distribution is changed to the windshield at the same time, then the air conditioner starts to operate. When you press the switch again, the indicator goes off and the air distribution returns to the previous status.

# Air source selection switch

When the switch is pressed, the indicator comes on and the mode is switched to the recirculation mode at the same time. When pressed again, the indicator goes out and switched to the fresh air mode at the same time.

# Air distribution switch

The mode is switched in the following order each time the switch is pressed: Vent mode→Bi-level mode→Foot mode→Defroster & Foot mode.

Modification basis	
Application basis	
Affected VIN	

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b. Manual

# Fan speed dial

Turn the dial to the left or right to adjust the fan speed in 7 steps. At this time, the indicator lamp comes on.

# MAX A/C switch

This is designed for increasing driver comfort. When the switch is pressed, the indicator comes on and the air conditioner starts at the same time and vent and recirculation modes are selected automatically.

# Defroster & foot mode switch

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If the switch is pressed, the indicator comes on while the air flows to the footwell and the windshield.

### A/C switch

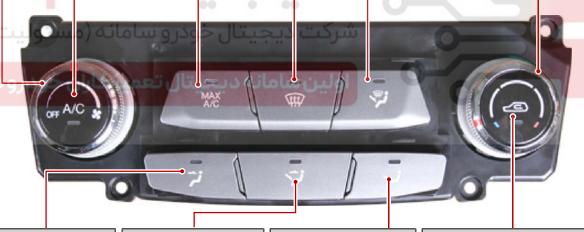
When the switch is pressed, the indicator comes on and the air conditioner starts at the same time. Pressing the switch again gets the indicator lamp go off and the air conditioner stop at the same time.

### Defroster mode switch

This is used to remove the condensation from the windshield. When you press the switch, the indicator comes on and the air distribution is changed to the windshield at the same time, then the air conditioner starts to operate.

# Temperature control dial

Turn the dial to the left or right to adjust the set temperature.



# Vent mode switch

If the switch is pressed, the indicator comes on while the air flows to the upper part of the body.

# Bi-level mode switch

If the switch is pressed, the indicator comes on while the air flows to the footwell and the upper part of the body.

# Foot mode switch

If the switch is pressed, the indicator comes on while the air flows to the footwell and the upper part of the body.

# Air source selection switch

When the switch is pressed, the indicator comes on and the mode is switched to the recirculation mode at the same time. When pressed again, the indicator goes out and switched to the fresh air mode at the same time.

Modification basis	
Application basis	
Affected VIN	

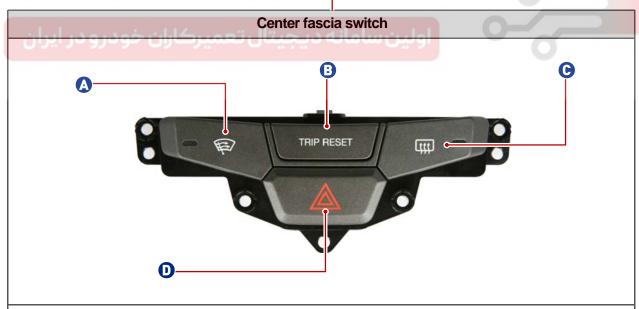
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# 2) Center Fascia Switch

This helps the driver to drive the vehicle comfortably by operating the switch for the driving situation. It consists of the windshield heating switch, TRIP/RESET switch, rear glass/outside rearview mirror heating switch and hazard warning flasher switch.





- A. Windshield heating switch
- B. TRIP/RESET switch
- C. Rear glass/outside rearview mirror heating switch
- D. Hazard warning flasher switch

Modification basis Application basis Affected VIN

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# Description

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# Windshield heating switch

Press this switch to operate the windshield heating system for 12 minutes. Press the switch again to stop the system. The heated glass will operate for about 6 minutes when the switch is pressed again within 10 minutes after completion of its first operation cycle. The indicator lamp for the switch comes on when the heating is on.



### NOTE

The switch is operable only when the engine is started.

# TRIP/RESET switch

Whenever pressing this button, the information is displayed in the following order: Odometer, Trip A, Trip B, Distance to empty, Average fuel economy, Instant fuel economy, Illumination level, Tire pressure (with TPMS), Ambient air temperature (for STD); Trip A, Trip B, Distance to empty, Average fuel economy/Instant fuel economy, Illumination level, Tire pressure (with TPMS), Ambient air temperature (for SVC). Press and hold this button to initialize (reset) Trip A/Trip B and average fuel consumption, adjust illumination level or change the unit of temperature.



# Hazard warning flasher switch

When the driver presses the switch, all the turn signal lamps flash regardless of the ignition switch status. Pressing the switch again turns off the turn signal lamps. The turn signal lamp does not operate while the hazard warning flasher operates.



# 🕹 NOTE

The hazard warning flasher blinks during emergency hazard warning lamp control and air bag deployment signal activation.

# Rear glass/outside rearview mirror heating switch

Press this switch to operate the rear glass and outside rearview mirror heating system for 12 minutes. Press the switch again to stop the system. The heated glass will operate for about 6 minutes when the switch is pressed again within 10 minutes after completion of its first operation cycle. The indicator lamp for the switch comes on when the heating is on.



# 👃 NOTE

The switch is operable only when the engine is started.

Modification basis	
Application basis	
Affected VIN	



# (1) Rear glass/outside mirror heating switch

### **▶** Overview

The rear glass/outside mirror heating is operated by BCM.

The heating operates for about 12 minutes when the switch is pressed with the engine started.

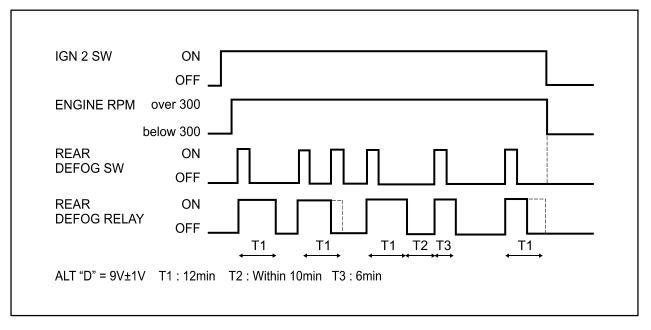
Press the switch again to stop the operation.

The output is "ON" only for 6 minutes when turning on the rear defogger switch within 10 minutes after completion of output for 12 minutes. This can be done only once.

This function is available only when the engine is running.



# ▶ Operation curve



**SWITCH** 

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Modification basis	
Application basis	
Affected VIN	

# (2) Windshield heating switch

The windshield glass/outside mirror heating is operated by BCM.

The heating operates for about 12 minutes when the switch is pressed with the engine started.

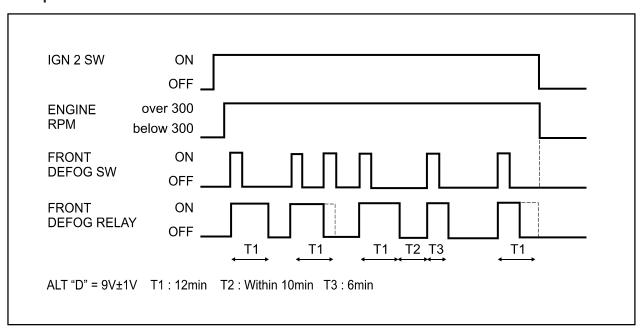
Press the switch again to stop the operation.

The output is "ON" only for 6 minutes when turning on the rear defogger switch within 10 minutes after completion of output for 12 minutes. This can be done only once.

This function is available only when the engine is running.



# ▶ Operation curve



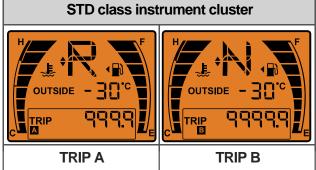
Modification basis	
Application basis	
Affected VIN	

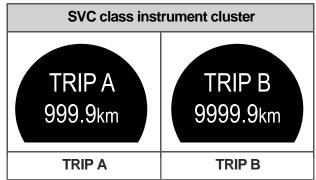


# (3) Trip switch

Whenever pressing this button, the information is displayed in the following order: Odometer, Trip A, Trip B, Distance to empty, Average fuel consumption, Instant fuel consumption, Illumination level, Ambient air temperature (for STD); Trip A, Trip B, Distance to empty, Average fuel consumption, Instant fuel consumption, Illumination level, Ambient air temperature (for SVC). Press and hold (for more than 1 sec) this button to initialize (reset) Trip A/Trip B and average fuel consumption, adjust illumination level or change the unit of temperature.

# **Display**





# Description



Mode Switch	Detecting time	Function	
Briefly and hold	Below 1 second	STD	- Mode change (Odo→Trip A→Trip B→DTE →Average fuel consumption→Instant fuel consumption →Illumination level→Ambient air temperature)
and note	(60 to 980 ms)	SVC	- Mode change (Trip A→Trip B→DTE→Average fuel consumption →Instant fuel consumption→Illumination level →Ambient air temperature)
Press and hold	Over 1 seconds	- Reset (Trip A, B, average fuel consumption) - Change (Illumination level (6 to 1), temperature unit (°C↔°F)) - Mode change (Illumination level→Ambient air temperature→Odo)	
Not press	Over 3 seconds		

**\*\* The factory setting is DTE mode.** 

**SWITCH** 

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Modification basis	
Application basis	
Affected VIN	

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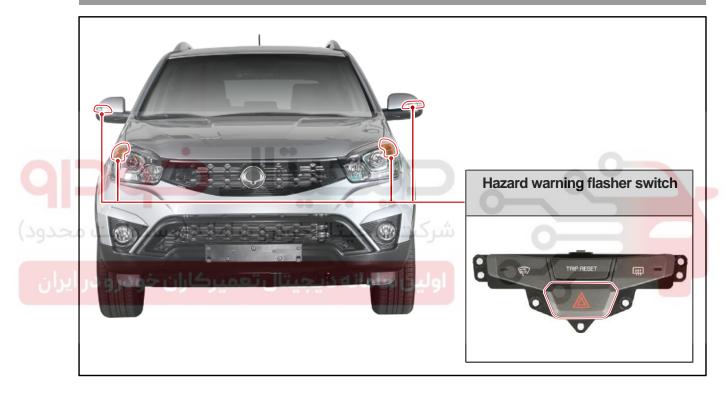
# (4) Hazard warning flasher switch

# **▶** Operation process

When the driver presses the switch, all the turn signal lamps flash regardless of the ignition switch status. Pressing the switch again turns off the turn signal lamps. The turn signal lamp does not operate while the hazard warning flasher operates.

# NOTE

The hazard warning flasher blinks during emergency hazard warning lamp control and air bag deployment signal activation.



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# 3) Lower Main Panel Switch

This helps the driver to drive the vehicle comfortably by operating the switch for the driving situation.



**SWITCH** 

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# **4WD LOCK switch**

This switch is of push lock type, which enables to increase/decrease the torque to the rear wheels in AWD mode.

# Rear fog lamp switch (EU ONLY)

This switch is of push return type, which sends ON/OFF signal to the BCM so that the BCM can switch on the lamps by activating the rear fog lamp relay.

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# **ESP OFF switch**

The ESP OFF switch is of push return type, which is used to stop or resume the ESP function.

# HLLD (Headlamp Leveling Device)

The headlamp aiming can be adjusted by using this dial-type switch.

# Steering wheel heating switch

This switch is of push return type, which is used to activate or deactivate the steering wheel heating function.

Modification basis	
Application basis	
Affected VIN	

07-30 8510-00



# (1) 4WD LOCK switch

# ▶ How to operate 4WD LOCK switch

When the switch is pressed, 4WD LOCK mode is activated (4WD LOCK indicator lamp comes on). If you press the switch again, the system enters 4WD AUTO mode (indicator lamp goes off).



# ► 4WD AUTO mode (normal)

This provides a slip control for the rear wheels depending on the driving conditions such as stationary, straight-line motion or cornering motion.

# ▶ 4WD LOCK mode (4WD LOCK switch pressed)

- In 4WD LOCK mode, the 4WD LOCK control works in the same way as the AUTO mode, but it increases the driving force to the rear wheels more than in AUTO mode.
- If the rear wheel speed is over 40 km/h, the vehicle enters into the 4WD AUTO mode automatically. If it is below 40 km/h, the vehicle returns to the 4WD LOCK mode.

### ▶ 4WD mode operation table

4WD LOCK switch	Vehicle speed	Drive mode
Deactivated (4WD AUTO)	Unlimited	4WD AUTO
Activated (4WD LOCK)	40 km/h or higher	4WD AUTO
Activated (4WD LOCK)	Below 40 km/h	4WD LOCK

# 🕹 NOTE

4WD: 4WD stands for Four Wheel Drive and drives all the wheels to maximize the vehicle's driving force on the unpaved road, rough road, steep hills, sandy or muddy road for enhanced driving performance.

Electric AWD (All Wheel Drive): 4-wheel drive is an electric drive system in which the vehicle is usually driving in 2WD mode but, if the vehicle determines that 4WD is needed because of the differences in slip and cornering between front and rear wheels, road gradient and etc., it is switched to 4WD automatically by the E-coupling control unit.

**SWITCH** 

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Modification basis	
Application basis	
Affected VIN	

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# (2) ESP OFF switch

### Overview

The ESP OFF switch is located to the driver's lower panel. When the driver press the ESP OFF switch, the ESP OFF indicator lamp comes on in the instrument cluster and the ESP becomes disabled. However, the ABS still works as it should.



# ► ESP ON/OFF switch (only for vehicle with ESP)

- The ESP function turns ON and OFF each time the driver presses the ESP ON/OFF switch. This
  switch is a constant-open type instant contact switch and grounded to IGN1. The default setting is
  ESP ON and it is turned on and off each time the switch is pressed.
  - If the driving wheels are slipping on snowy or icy roads, the engine rpm may not increase even when you depress the accelerator pedal, and accordingly, you may not be able to move your vehicle. In this case, stop the ESP function by pressing the ESP OFF switch. When the ESP OFF switch is pressed, the ESP function stops and the vehicle is driven independently from the sensor outputs.

# ► ESP OFF indicator lamp module (only for vehicle with ESP)

The ESP OFF lamp shows how the ESP function works.

The ESP OFF lamp comes on when:

- ESP function is deactivated by switch input

Modification basis	
Application basis	
Affected VIN	

8510-00



# ► ESP warning lamp module

The ESP warning lamp shows self-diagnosis result of ESP function and whether there is a fault. The ESP warning lamp comes on when:

 Initialization mode after IGN ON, ESP disabled due to failure, during ESP operation (blink), under diagnostic mode, indicator lamp ON in instrument cluster, impossible to communicate with CAN module.

		Warning Lamp	arning Lamp		
Mode	BRAKE (1) (P) (ABS) EBD warning lamp	(ABS)  ABS warning lamp	OFF ESP OFF Lamp	ESP warning lamp	
EBD Error	ON	ON	OFF	ON	
ABS Error	OFF	ON	OFF	ON	
ESP Error	OFF	OFF	OFF	ON	

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

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Modification basis	
Application basis	
Affected VIN	

# (3) Operation process

# ► Steering wheel heating switch

The steering wheel heating switch is mounted to the lower main panel. In that, signal voltage from the steering wheel heating controller, which is installed in the steering wheel, is grounded. This is used as an operation signal for the steering wheel heating system. The indicator in the switch comes on when it is operated.



# (4) Headlamp Leveling Switch Operating Process

# ► Headlamp leveling switch

The headlamp leveling switch is fitted to the lower main panel and is of dial type which the driver can adjust the headlamp level at his/her disposal according to the number of passengers and cargo weight. There are a total of 4 levels, from 0 to 3. The closer to lever 3, the lower headlamp aims. The level 0 can be also used as a reference for aiming.



# 4) Power Seat Switch Assembly

# (1) Power seat switch (Driver side)



Seat sliding	Seatback reclining	Seat height adjustment

Modification basis	
Application basis	
Affected VIN	

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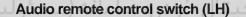
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# 4. STEERING WHEEL SWITCH

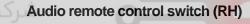
# 1) Audio Remote Control Switch







- **MUTE & MODE switch**
- Volume UP/DOWN switch
- C Tip switch (D-)





- A SEEK UP/DOWN switch
- B Handsfree switch
- Tip switch (D+)

# **MUTE & MODE switch**

To eliminate the sound (MUTE), briefly press this switch. To change the audio mode (Radio-CD-USB-AUX-Radio), press and hold this switch.

# **SEEK UP/DOWN switch**

- CD mode Select next/previous track and FF/REW
- Radio mode Change frequency UP or DOWN Press and hold to auto search

# Volume UP/DOWN switch

Increases/decreases volume

# Tip switch (D-)

Gear change switch -Change down

# Handsfree switch

To make/receive/end a call, press and hold this switch.

# Tip switch (D-)

Gear change switch -Change up

**SWITCH** 

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Modification basis	
Application basis	
Affected VIN	

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### 2) Multifunction Switch

The multifunction switch contains the auto washer and wiper switch, front fog lamp switch and auto hazard warning flasher switch. For the vehicle with air bag, since the contact coil is fitted to the upper part of the multifunction switch and ESP steering wheel angle sensor is fitted to upper part of the contact coil, pay attention to when removing and fitting or checking the wiring.



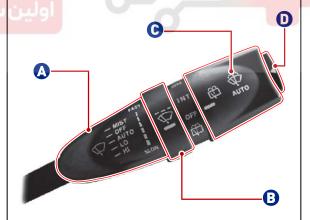


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- A Light switch
- Front fog lamp switch

### Multifunction wiper switches



- A Front wiper switch
- Wiper speed dial
- Rear wiper switch
- Front auto washer switch

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### ▶ Light switch



### **High beam ON**

To turn on the headlamp high beam, push the lever towards the instrument cluster with the headlamp low beam on.

### Left turn signal lamp blinks

Regardless of the position of the light switch, when holding the lever toward the steering wheel, the headlights are on high beam during the hold.

### Front fog lamp switch

Right turn signal lamp blinks

To turn on the fog lights, turn this switch while the tail lamps or headlamps are turned on.

**SWITCH** 

KORANDO 2015.01

**Passing** 

Modification basis	
Application basis	
Affected VIN	

### ▶ Wiper switch

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### MIST

If you move the wiper switch to "MIST" position and release it, the windshield wipers operate one wiping cycle. The wipers will operate continuously if the switch is held in this position.

#### **OFF**

Wipers are not in operation.

#### AUTO

Operates automatically according to the vehicle speed and amount of rainfall.

#### LC

Continuous wipe, slow operation

#### HI

Continuous wipe, fast operation

#### Front automatic wiping speed control switch

Auto washer switch

wiper operates 4 times.

times.

If pressing the switch when the wiper switch turns to the "OFF" position,

After a while, washer fluid is sprayed

once more and the wiper operates 3

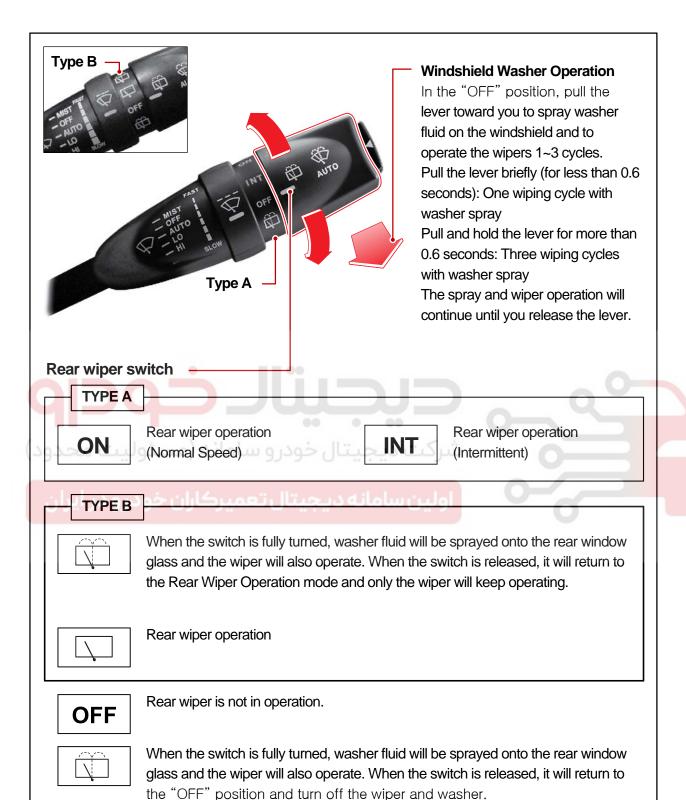
washer fluid is sprayed once and

The interval of wiping speed can be adjusted by turning the control knob upward or downward when the windshield wiper switch is in AUTO position.

Fast: Fast interval Slow: Slow interval

Modification basis
Application basis
Affected VIN

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### 3) Cruise Control Switch

The cruise control is an automatic speed control system that maintains a desired driving speed without using the accelerator pedal. The cruise control switch is fitted to the bottom right section of the steering wheel. When this switch is operated, the AUTO CRUISE lamp on the instrument cluster comes on.

The cruise control switch has a fivefold switch in it. The engine ECU can determine the current driving condition since the resistance varies depending on the operation of the switch.

The cruise control system is operated at vehicle speed of between 38 km/h and 150 km/h. The manual transmission is operated in the range of 3rd gear or higher.

This function can be used at the following traffic condition. (It is important to be careful for using this function)





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### Cruise control switch





- Cruise control (ON)
- B Cruise control (OFF)
- Cruise control (Acceleration)
- Cruise control (Deceleration)
- (Reset)

Modification basis
Application basis
Affected VIN

SWITCH

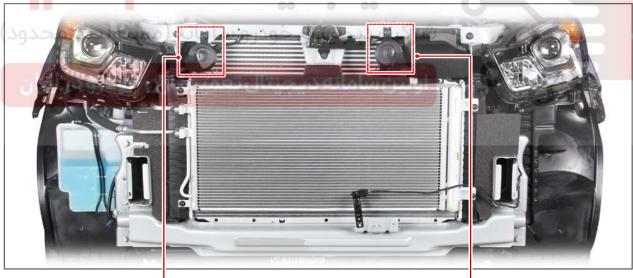


### 4) Horn Switch

Two horns are installed in the radiator grille at the bottom of both sides (one on each side). There is another horn installed at the bottom of the battery tray side in the engine compartment for theft alarm. Operating the horn switch on the steering wheel applies the power to the horn relay to operate both horns (Dual horn). The theft deterrent horn is controlled by the BCM in armed mode regardless of the horn relay operation.

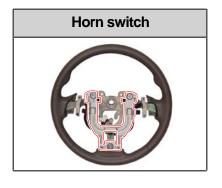
#### ► Theft deterrent horn





### ► Horn (dual horn)







**SWITCH** KORANDO 2015.01

Modification basis	
Application basis	
Affected VIN	

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07 - 43

### 5. SEAT HEATING AND VENTILATION SWITCH

- Front seat heating & ventilation switch (2-level of driver seat heating and ventilation, 2-level of passenger seat heating)
- Front seat & rear seat heating (Driver and passenger seats: LO↔HI, rear seats: ON↔OFF)

### Seat heating and ventilation unit & switch application

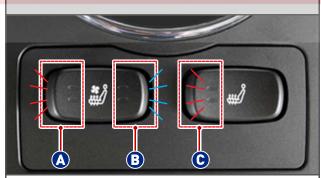
•: New, o: Already used, -: N/A

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Item	Heating and ventilation specification	Heating specification	
Heating and ventilation unit	•	<del>-</del>	
Heating and ventilation switch	•	-	
Heating switch	-	0	
How to operate	Driver: heating and ventilation (two-step) Passenger: heating (two-step)	Driver: heating (LO↔HI) Passenger: heating (LO↔HI)	

# 1) Front Seat Heating and Ventilation Switch Overview (2-level of Driver Seat Heating and Ventilation, 2-level of Passenger Seat Heating)

Front seat heating and ventilation switch (2level of driver seat heating and ventilation, 2level of passenger seat heating)



- A. Driver seat heating switch
- B. Driver seat ventilation switch
- C. Passenger seat heating switch

The temperature of the seat can be adjusted in 3 levels (Level 2 → Level 1 → OFF) with the seat heated wire and ventilation switch. Every time the seat heating and ventilation switch is pressed, the temperature level goes down by one level. Pressing the switch a third time will turn off the operation. Pressing the desired side of the switch heats the seat cushion and seatback or activates the seat ventilation function. The temperature of the seat is kept uniform by cutting off or connecting power through thermistor fitted in the seat. The seat heating and ventilation unit controls the rpm of the motor using PWM control to operate the seat ventilation.



#### 👃 NOTE

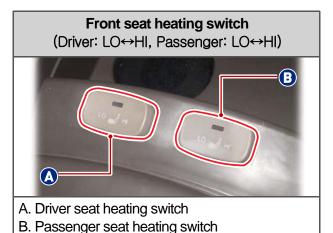
- The front seat heating and ventilation functions cannot be operated at the same time.
- The front seat heating and ventilation switch functions only when the engine is started.

Modification basis	
Application basis	
Affected VIN	

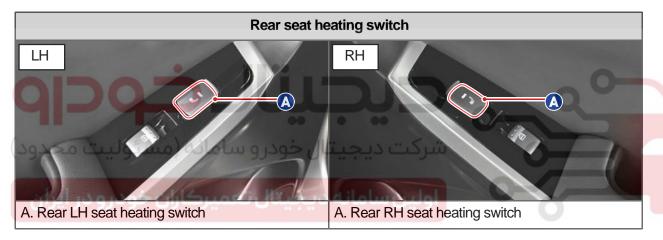


# 2) Front Seat & Rear Seat Heating Switch Overview

(Driver and Passenger Seats: LO↔HI, Rear Seats: ON↔OFF)



The front seat heating switch can be operated to the desired temperature (LO/HI) by pressing the front seat heating switch. Press the "HI (High temperature)" or "LO (Low temperature)" on the seat heating switch to heat the seat and seatback. When the temperature reaches 40  $\pm 5\,^{\circ}\mathrm{C}$ , the thermistor integrated in seat connects and cuts the power to keep the temperature stable. There is no separate seat warmer unit to control the temperature of the seat heating system.



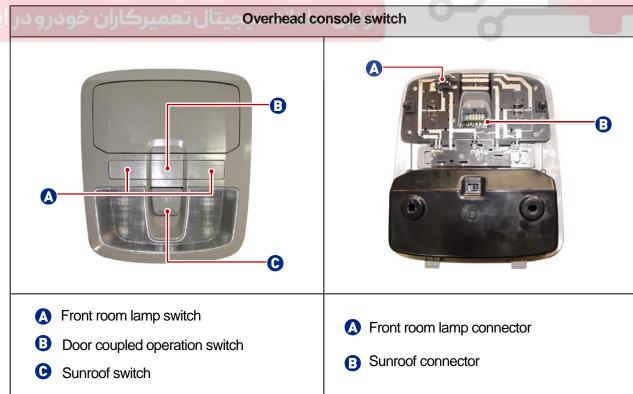


- The front seat and rear seat heating switches operates with IGN ON.
- The seat heating and ventilation unit is not fitted in a vehicle without seat ventilation function.

### 6. OVERHEAD CONSOLE SWITCH

- The front room lamp is controlled by the BCM.
- The front room lamp comes on when opening the driver or passenger door. (door coupled operation switch ON)
- When closing the driver or passenger door, the front room lamp comes on for 2 seconds and then dims down for 3 seconds. (door coupled operation switch ON)
- The front room lamp turns on/off depending on the operation of the front room lamp ON/OFF switch (spot switch).





Modification basis	
Application basis	
Affected VIN	



### Front room lamp switch

The driver/passenger room lamps turns on when pressing in these switches.

### Door coupled operation switch

The front room lamp and center room lamp come on when opening a door with this switch pressed in.



### Sunroof switch

#### ▶ Push up the switch briefly: 2-step auto sliding open

When pushing up the switch briefly, the sunroof is automatically opened. Opening is carried out in 2 steps. In first step, the area 5 cm behind the sunroof is not opened. Push up the switch once again in order to open the sunroof completely. The sunroof operation stops if you operate the switch during its operation.

#### ▶ Push up and hold the switch: manual sliding open

The sunroof is opened as long as pushing up the switch.

### ▶ Pull down the switch briefly: auto sliding close

When pulling down the switch briefly, the sunroof is automatically closed. To stop the closing sunroof, operate the switch to either direction.

### ▶ Pull down and hold the switch: manual sliding close

The sunroof is closed as long as pulling down the switch.

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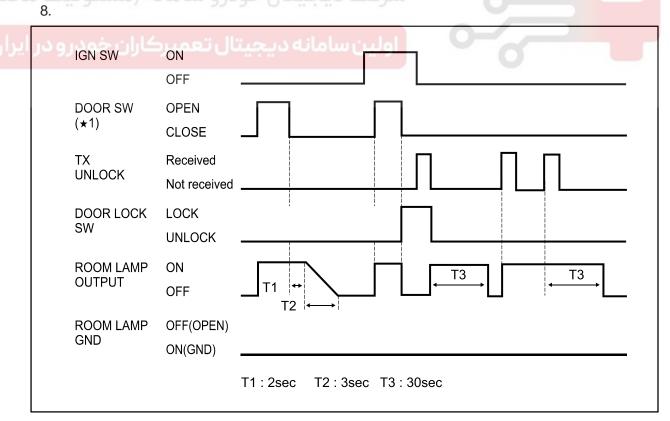
Modification basis	
Application basis	
Affected VIN	

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### ▶ Door coupled room lamp operation and dimming control

When opening any of doors while the room lamp switch in overhead console is pressed in ("Door" coupled position), the front and center room lamps come on. If the key is removed and door stays open, the room lamps automatically goes off after 10 minutes. The sleep mode will be deactivated when the door is locked or closed with the lamp OFF automatically.

- 1. When closing the door with IGN ON, the room lamps go off immediately.
- 2. When closing the door with IGN OFF, the room lamps stay on for 2 seconds more and are dimmed out the side fascia panel.
- 3. When turning the ignition switch to ON position during dimming out operation, the room lamps go off immediately.
- 4. When receiving the door unlock signal with IGN OFF, key removed and door closed, the overhead console room lamp/center room lamp come on for 30 seconds.
  For specification with the SKM, the lamps come on by the REKES unlock or passive unlock signal.
- 5. When receiving the door unlock signal again while the lamps stay on by the REKES or passive unlock signal, the overhead console/center room lamps stays on for 30 seconds more. (the lamps stay on when receiving door unlock signal)
- 6. When opening a door during the coupled operation and dimming operation, the room lamps stays
  ON. When closing it again, the lamps stay on for 2 seconds more and are dimmed out for 3 seconds.
  While the room lamps dim out when the driver/passenger/rear doors are open and closed, they go off
- immediately when entering into the theft deterrent mode.
   The room lamps come on when AUTO approach signal is received.



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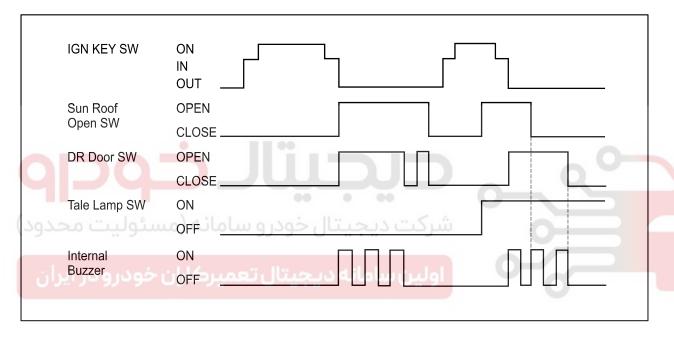


#### ► Sunroof warning control

- 1. When removing the ignition key with the sunroof open (without SKM) or when opening the driver door with IGN OFF or ACC and sunroof open (with SKM), the indoor buzzer sounds for 10 seconds with the interval of 0.02s ON/1.58s OFF.
- 2. When opening and closing the driver door or closing the sunroof during indoor buzzer operation, the buzzer stops its operation immediately.
- 3. When closing the driver door or sunroof and opening again during warning operation, the sunroof warning does not work. If the condition is met after the ignition switch is turned to "ON" position again, the indoor buzzer sounds for 10 seconds with the interval of 0.02s ON/1.58s OFF.

  The sunroof warning has a priority over the tail lamp ON warning.

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### 7. TAILGATE SWITCH



Modification basis	
Application basis	
Affected VIN	

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AUDIO SYSTEM

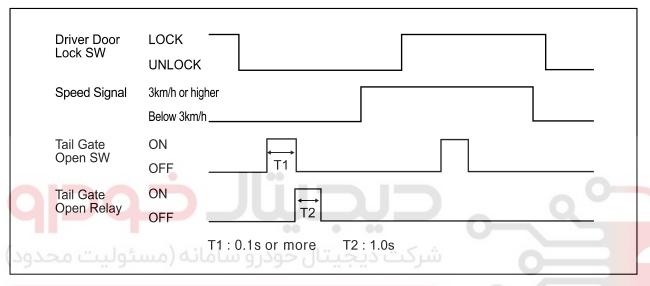
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### ► Tailgate open

#### Without SKM

- 1. When pressing the tailgate switch for more than 0.1 second with driver door unlocked and vehicle speed below 3 (±0.1) km/h, the tailgate open relay is turned ON for about 1 second, with power OFF, ACC ON or IGN ON. However, it is turned ON when the vehicle speed is below 3 (±0.1) km/h, with IGN ON.
- 2. The tailgate open relay is turned OFF immediately after the driver door is locked or the vehicle speed goes over 3 km/h with IGN ON during its operation. However, the BCM does not operate if the tailgate open switch is pressed when the vehicle speed is above 3 km/h.



Tailgate open: REKES unlock (disarmed deterrent mode) → Tailgate open signal → Tailgate open

#### With SKM

- 1. When pressing the tailgate switch for more than 0.1 second with driver door unlocked and vehicle speed below 3  $(\pm 0.1)$  km/h, the tailgate open relay is turned ON for about 1 second.
- 2. The tailgate open relay is turned OFF immediately after the driver door is locked or the vehicle speed goes over 3 km/h during its operation.
- 3. When the tailgate switch on smart key is pressed in theft deterrent mode or with the smart key detected by the exterior antenna, the SKM verifies the smart key and disarms the tailgate only. When the tailgate is open and closed, the system enters into the theft deterrent mode again. If the tailgate switch is not operated for 30 seconds, the system also does so.
- 4. The BCM checks that the verified smart key is in the luggage room 1 second after when the closed tailgate is detected by the tailgate open switch with power OFF.
  - If there is a verified smart key in the luggage room when the tailgate is open and closed in theft deterrent mode, the external buzzer sounds for 5 seconds.
  - When the driver press the tailgate open switch in order to look for the smart key, the BCM deactivates lock so that the tailgate can be opened even though the driver door is locked. (maintains standby for opening without verification)

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Modification basis	
Application basis	
Affected VIN	

# CONFIGURATION AND FUNCTION

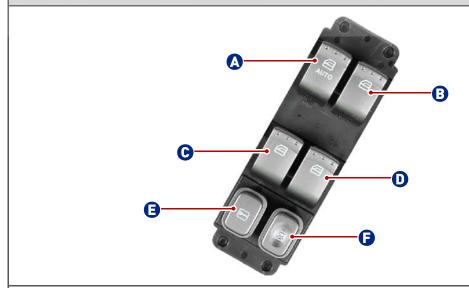
# 8520-01 POWER WINDOW MAIN SWITCH

### 1) Function

It is mounted to the driver's door trim and consists of driver's window switch, passenger's window switch, rear seat (LH/RH) window switches, door lock/unlock switch, window lock switch.



### Power window main switch



- A. Driver door window switch
- B. Passenger door window switch
- C. Rear LH window switch

- D. Rear RH window switch
- E. Door lock/unlock switch
- F. Window lock switch

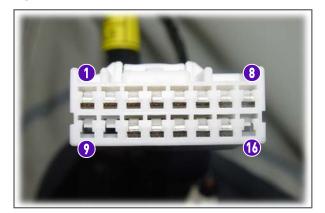
Modification basis
Application basis
Affected VIN

SWITCH

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# 2) Connector Functions



Pin No.	Function	
1	Rear RH UP	
2	Power supply for RH window	
3	Ground	
4	Rear RH DOWN	
5	Rear LH UP	
6	Central door lock	
7	Rear LH DOWN	
8	Power supply for LH window	
11	Passenger's window UP	
12	Passenger's window DOWN	
13	Driver's window DOWN (anti-trap)	
14	Driver's window DOWN	
15	Driver's window UP	

شركت ديجيتال خودرو سامانه (مسئوليت محدود)

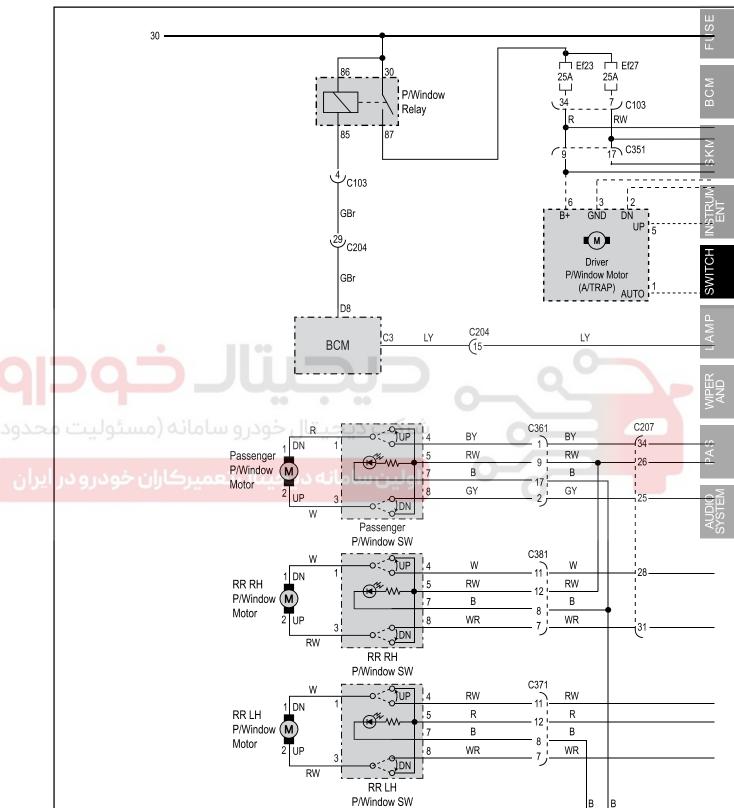
**SWITCH** KORANDO 2015.01

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Application basis	
Affected VIN	

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# 3) Circuit Diagram



Modification basis
Application basis
Affected VIN

31

SWITCH

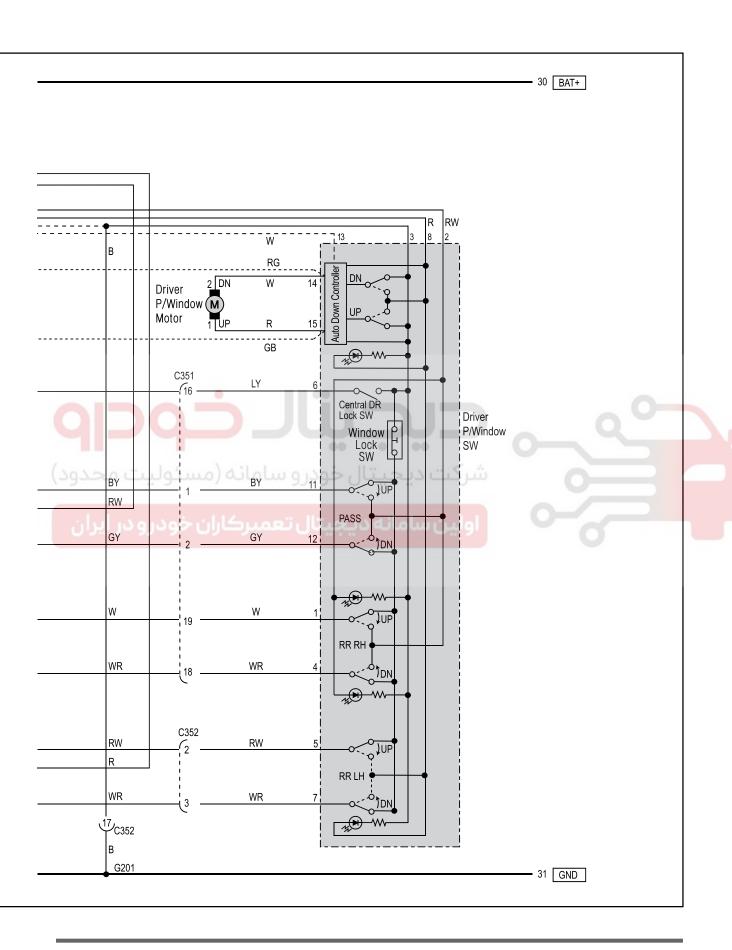
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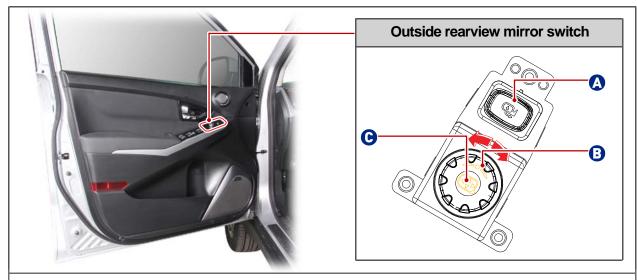
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**SWITCH** KORANDO 2015.01

# 8520-05 OUTSIDE REARVIEW MIRROR SWITCH

# 1) Function



- A. Outside mirror folding/unfolding switch
- B. Outside rearview mirror selection switch
- C. Outside rearview mirror aiming switch

# 2) Connector Functions



Pin No.	Function		
اولين	Folding switch signal		
2	-		
3	Folding switch ground		
4	-		
5	-		
6	ACC power		
7	Mirror actuator ground		
8	LH mirror left/right		
9	LH mirror up/down		
10	RH mirror up/down		
11	RH mirror left/right		
12	Mirror selection (ground)		

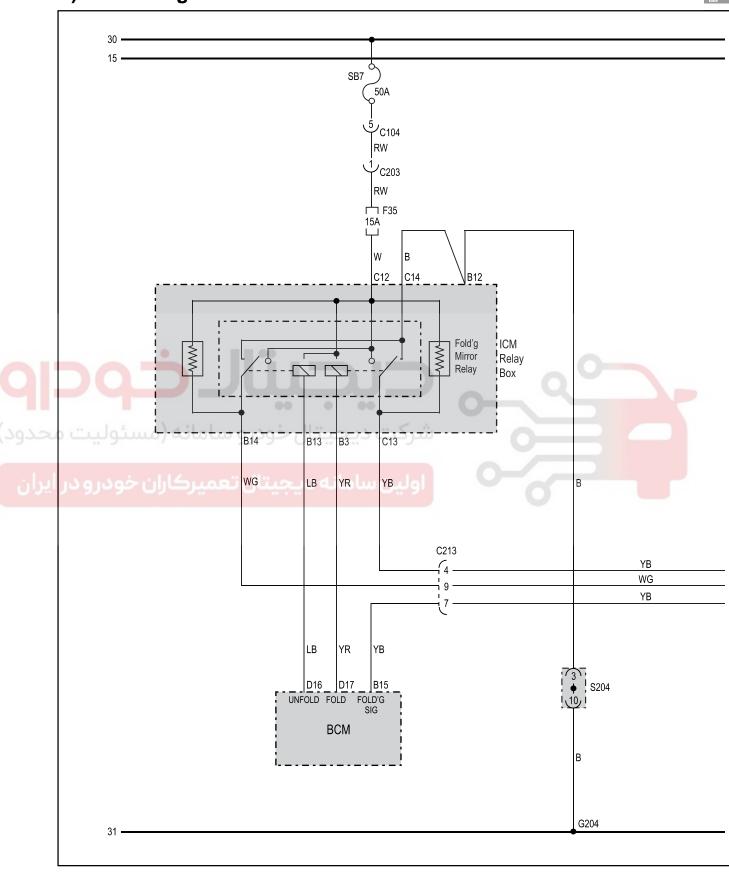
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# 3) Circuit Diagram



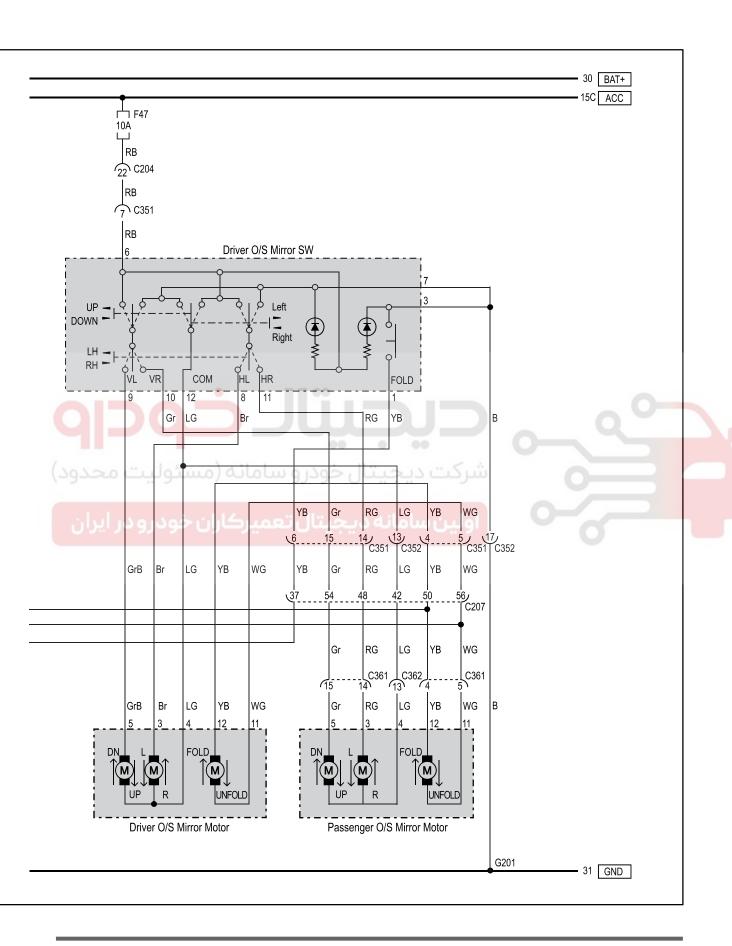


Modification basis
Application basis
Affected VIN

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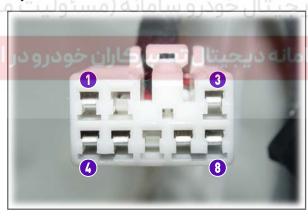
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# 8520-07 POWER WINDOW SUB SWITCH

# 1) Function



# 2) Connector Functions

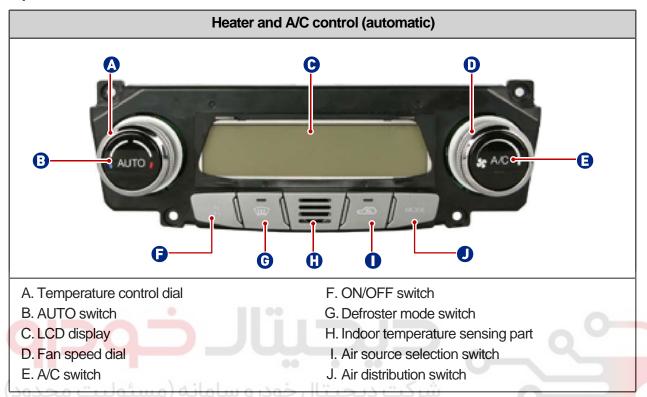


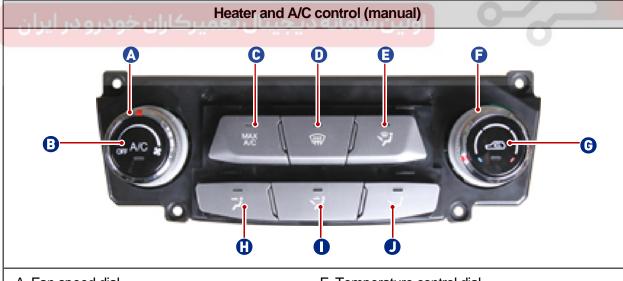
	Pin No. Functions (Connector A	
1 Window motor D		Window motor DOWN
	2	-
	3	Window motor UP
	4	Window switch UP
	5	B+
	6	-
	7	Ground
	8	Window switch DOWN



### 6810-20 HEATER AND A/C CONTROL ASSEMBLY

# 1) Function





- A. Fan speed dial
- B. A/C switch
- C. MAX A/C control switch
- D. Defroster mode switch
- E. Defroster & foot mode switch

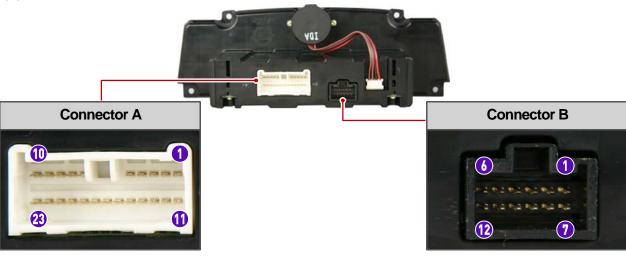
- F. Temperature control dial
- G. Air source selection switch
- H. Vent mode switch
- I. Bi-level mode switch
- J. Foot mode switch

**SWITCH** KORANDO 2015.01

Modification basis	
Application basis	
Affected VIN	

# 2) Heater & A/C Control Connector

### (1) Auto



### **▶** Function Description

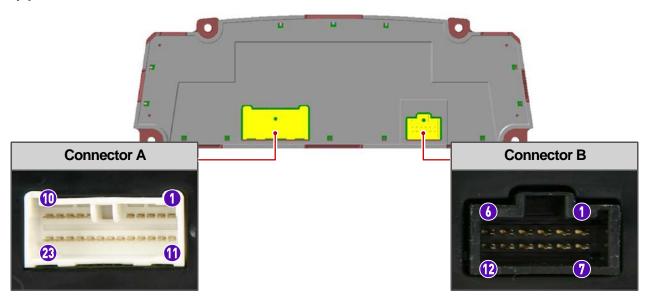
Pin No.	Function	Pin No.	Function
A1	Intake actuator (P2)	A19	Temp actuator position
A2	Mode actuator (P2)	A20	Intake actuator position
ئو A3	Temp actuator (P2)	A21	Blower operation signal
A4	Temp actuator (P1)	A22	FATC illumination +
J > A5 > 94	Mode actuator (P1)	A23	FATC illumination -
A6	Vehicle speed signal	B1	-
A7	REF	B2	-
A8	PTC signal	B3	-
A9	IGN+	B4	Water temperature sensor signal
A10	B+	B5	Blower motor maximum operating signal
A11	Intake actuator (P1)	B6	-
A12	Compressor operation signal	B7	-
A13	Intake sensor signal	B8	-
A14	Blower feedback signal	B9	-
A15	Blower motor control signal	B10	Sun-load sensor signal
A16	Sensor ground	B11	Ambient temperature sensor signal
A17	Ground	B12	-
A18	Mode actuator position		

Modification basis	
Application basis	
Affected VIN	

07-62 6810-20



### (2) Manual



### ► Function Description

Pin No.	Function	Pin No.	Function
A1	Intake actuator (P2)	A19	Temp actuator position
A2	Mode actuator (P2)	A20	Intake actuator position
، مهA3 ود	Temp actuator (P2)	A21	Blower operation signal
A4	Temp actuator (P1)	A22	MTC illumination +
A5	Mode actuator (P1)	A23	- MTC illumination طولين سا
A6	Vehicle speed signal	B1	-
A7	Actuator power	B2	-
A8	PTC signal	B3	-
A9	A9 IGN+		
A10	A10 B+		Blower motor maximum operating signal
A11	Intake actuator (P1)	B6	-
A12	Compressor operation signal	B7	-
A13	Intake sensor signal	B8	-
A14	Blower feedback signal	B9	-
A15	A15 Blower motor control signal		-
A16	Sensor ground	B11	Ambient temperature sensor signal
A17	Ground	B12	-
A18	Mode actuator position		

**SWITCH** KORANDO 2015.01

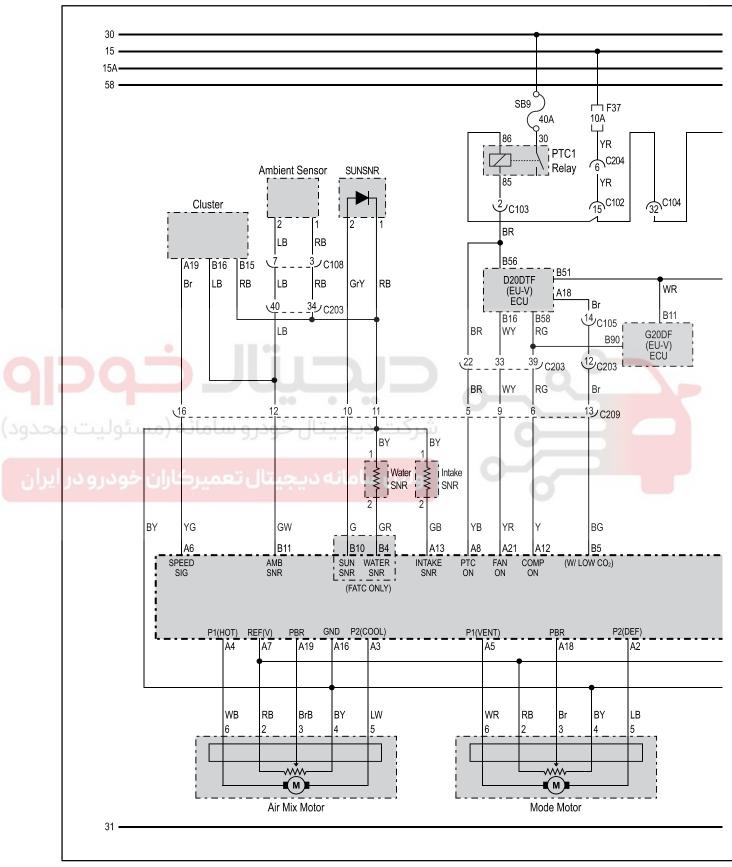
Modification basis	
Application basis	
Affected VIN	

6810-20

07-63

# LECTRO NIC

## 3) Circuit Diagram



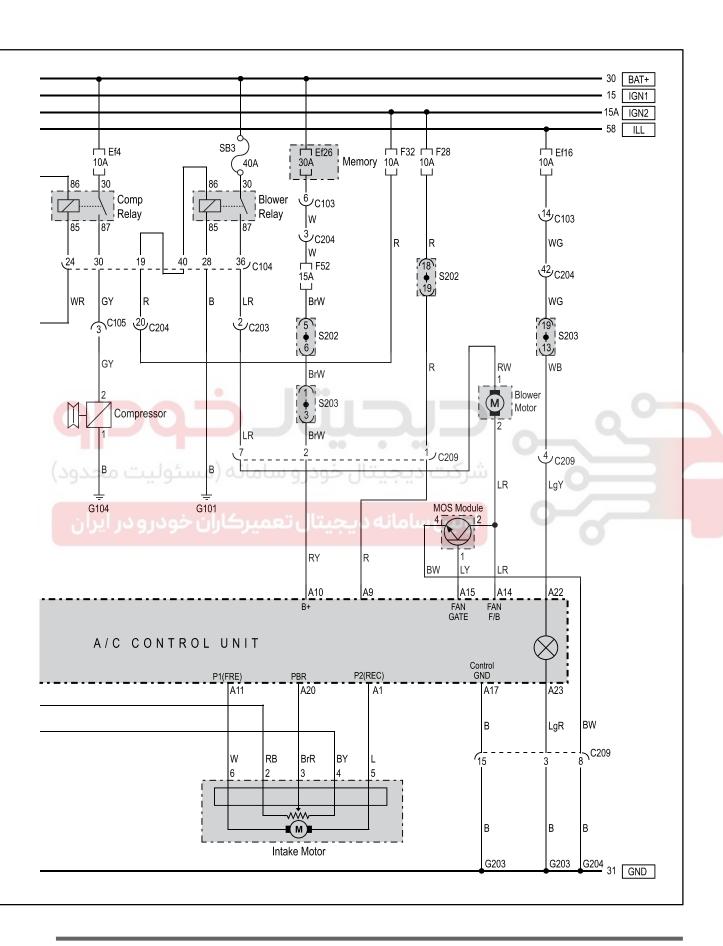
Modification basis
Application basis
Affected VIN

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SWITCH

6810-20

korando

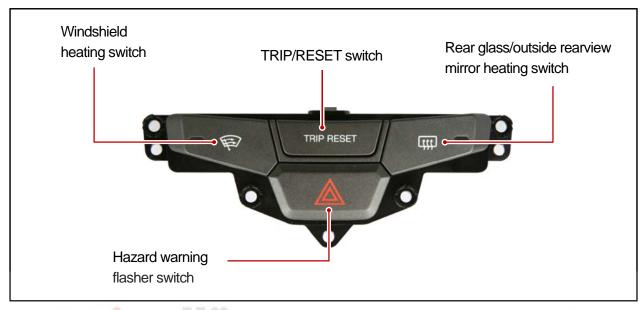


SWITCH KORANDO 2015.01

8510-15

# 8510-15 CENTER FASCIA SWITCH

# 1) Function



# 2) Connector Functions



Pin No.	Function
1	ILL+
2	Hazard warning flasher switch
3	Rear glass heating switch
4	Windshield heating switch operation lamp
5	TRIP/RESET switch
6	Ground
7	Ground
8	Windshield heating switch
9	-
10	Rear glass heating operation lamp
11	-
12	-

Memo				
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مسئوليت محدود	خودرو سامانه (۱	سركت ديجيتال		
ن خودرو در ایران				

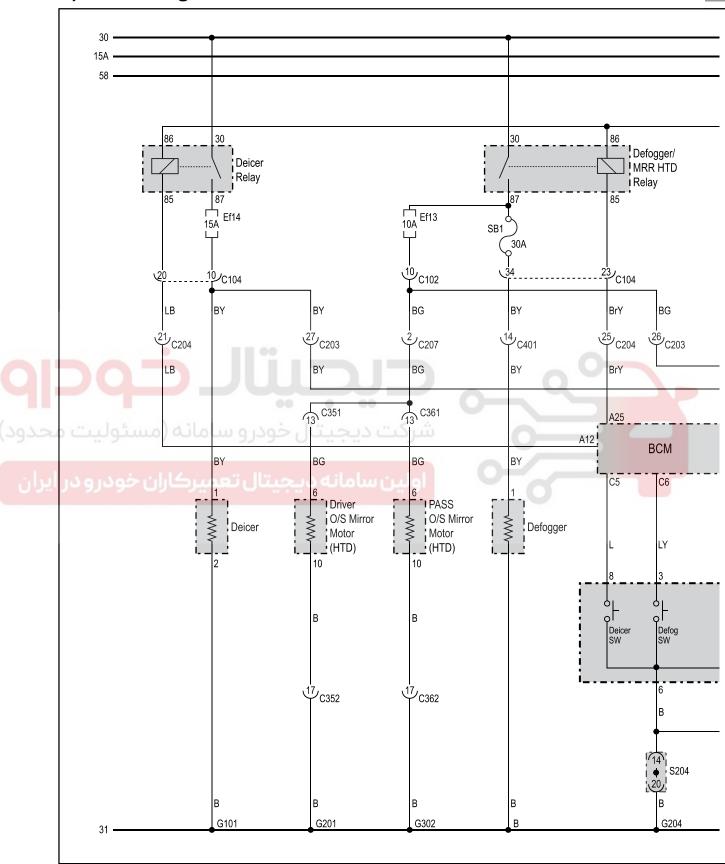
korando

8510-15

07-67

# CTRO

# 3) Circuit Diagram

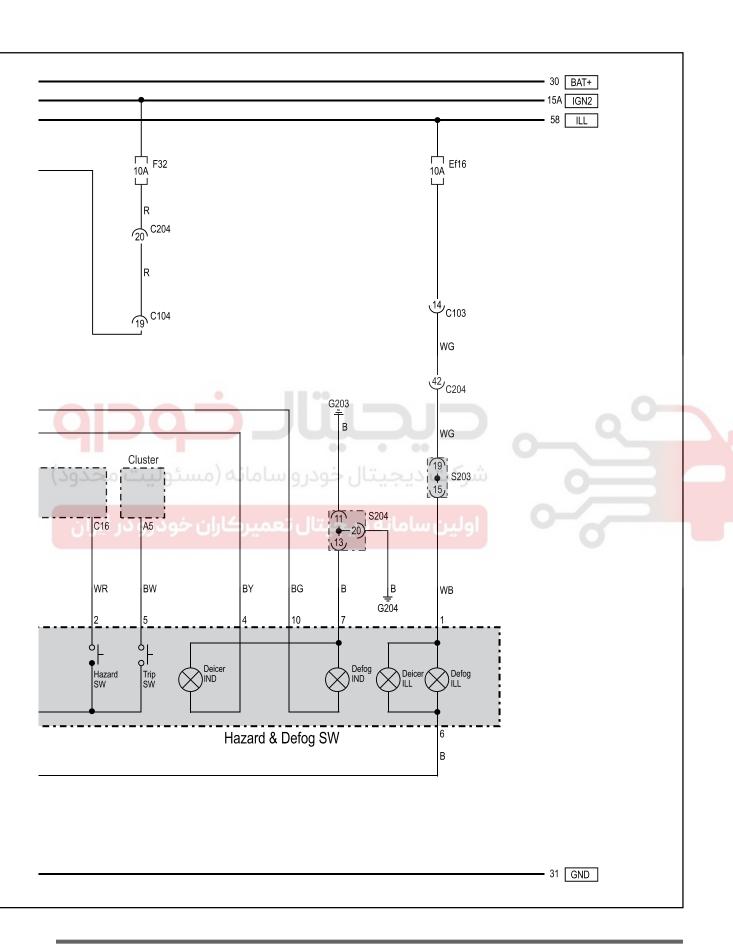


Modification basis
Application basis
Affected VIN

SWITCH

8510-15

korando



SWITCH

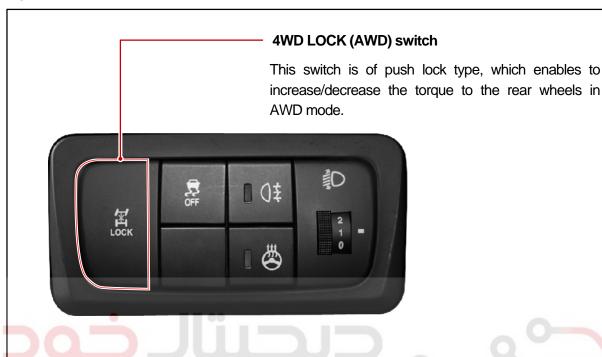
KORANDO 2015.01

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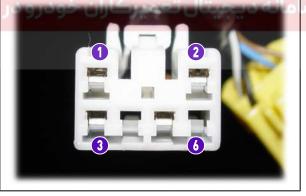
8510-21

# 8510-21 4WD SWITCH ASSEMBLY

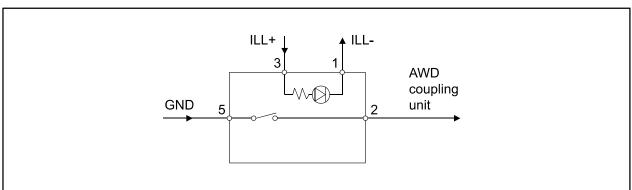
# 1) Function



# شرکت دیجیتال خودرو سامانه (مسئولیت 2) Connector



Pin No.	Function
1	ILL (-)
2	Switch signal
3	ILL (+)
4	-
5	Ground
6	-

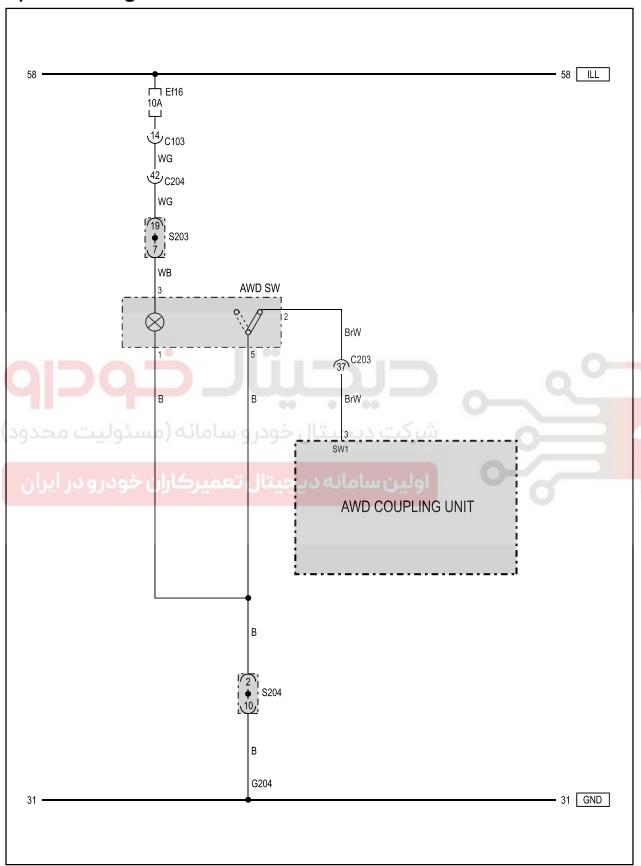


Modification basis	
Application basis	
Affected VIN	

07-70 8510-21



# 3) Circuit Diagram



**SWITCH** KORANDO 2015.01

8510-23

# 8510-23 ESP OFF SWITCH ASSEMBLY

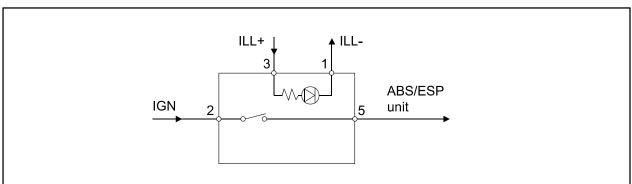
# 1) Function



# 2) Connector Functions



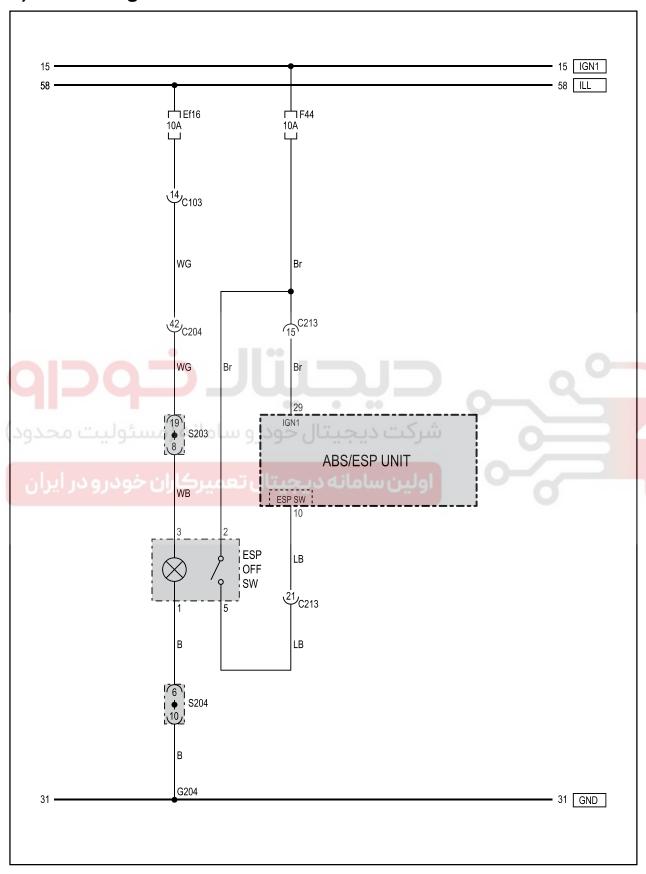
Pin No.	Function
1	ILL (-)
2	Switch signal
3	ILL (+)
4	-
5	HECU
6	-



Modification basis	
Application basis	
Affected VIN	



# 3) Circuit Diagram

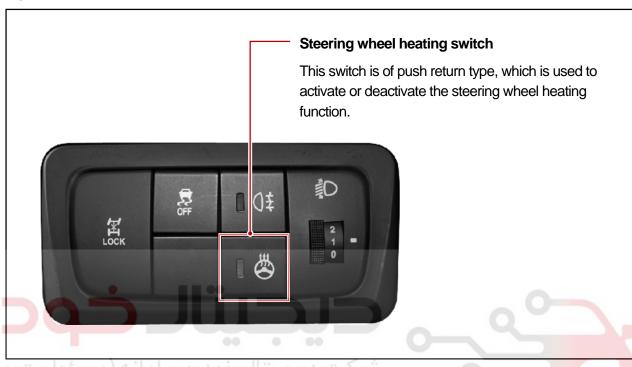


SWITCH KORANDO 2015.01

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# 8510-29 STEERING WHEEL HETAING SWITCH ASSEMBLY

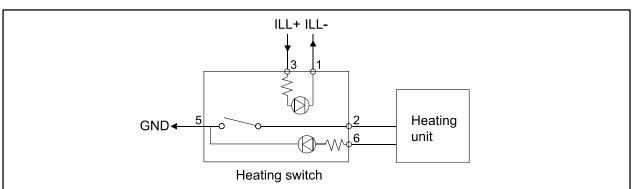
## 1) Function



## 2) Connector Functions



9	Pin No.	Function	
	1	ILL (-)	
	2	Switch signal	
	3	ILL (+)	
	4	-	
	5	Ground	
	6	Indicator	

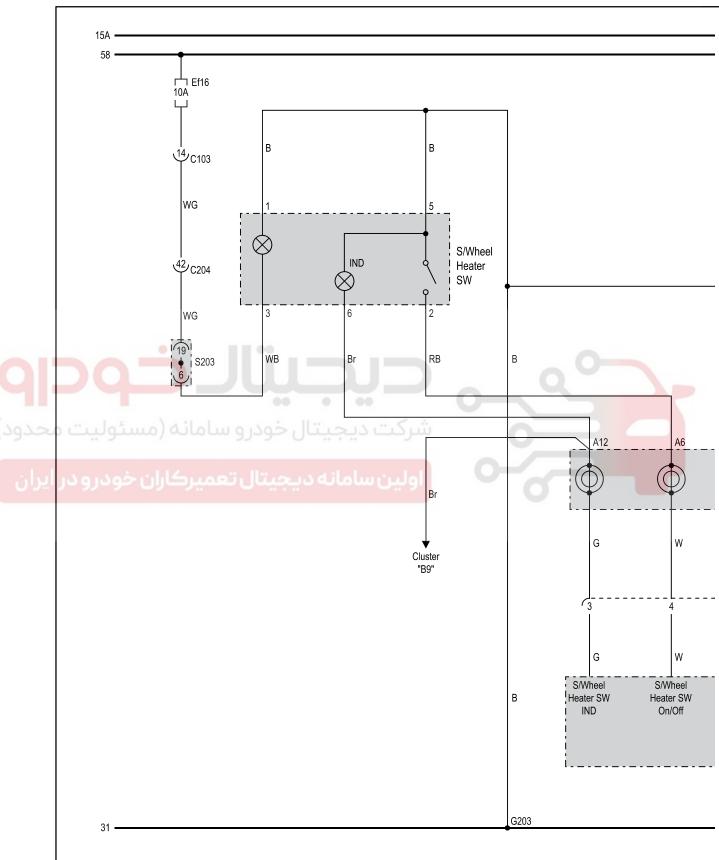


Memo				
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مسئوليت محدود	خودرو سامانه (۱	سركت ديجيتال		
ن خودرو در ایران				

8510-29

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## 3) Circuit Diagram

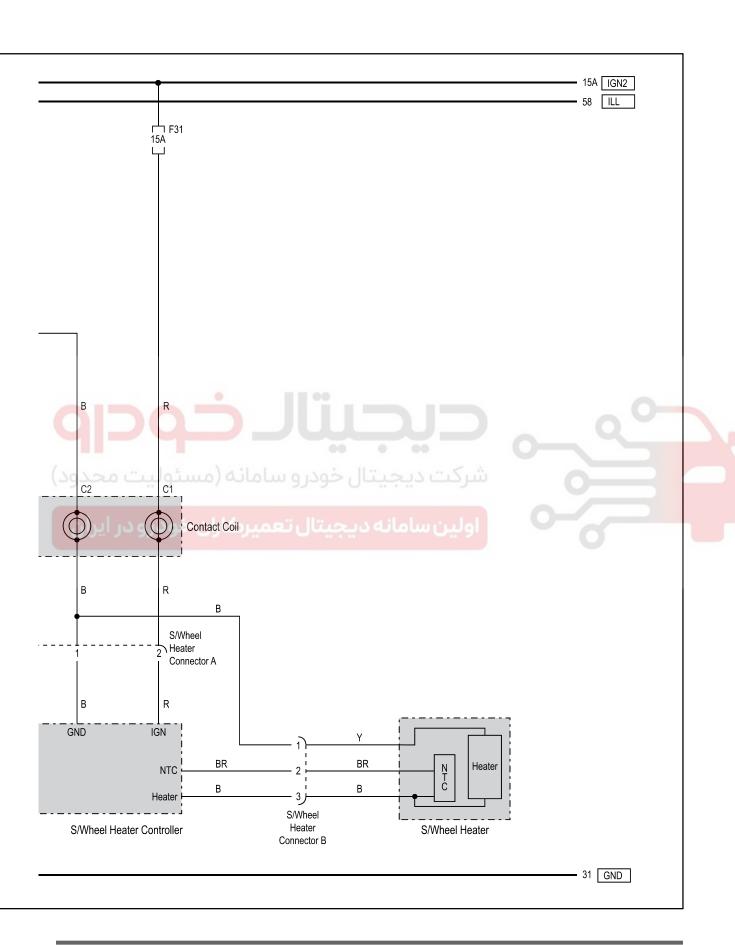


Modification basis
Application basis
Affected VIN

SWITCH KORANDO 2015.01

8510-29

korando



SWITCH

KORANDO 2015.01

## 8510-25 REAR FOG LAMP SWITCH ASSEMBLY

## 1) Function

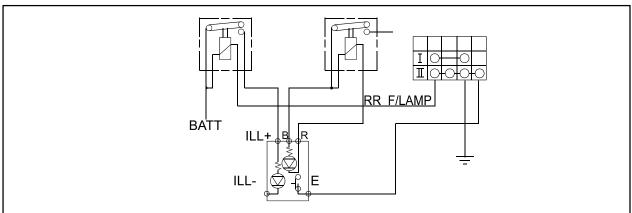


## Rear fog lamp switch

This switch is of push return type, which sends ON/OFF signal to the BCM so that the BCM can switch on the lamps by activating the rear fog lamp relay.



	Pin No.	Function
U	اولين	ILL (-)
	2	BCM signal
	3	ILL (+)
	4	-
	5	Ground
	6	LED



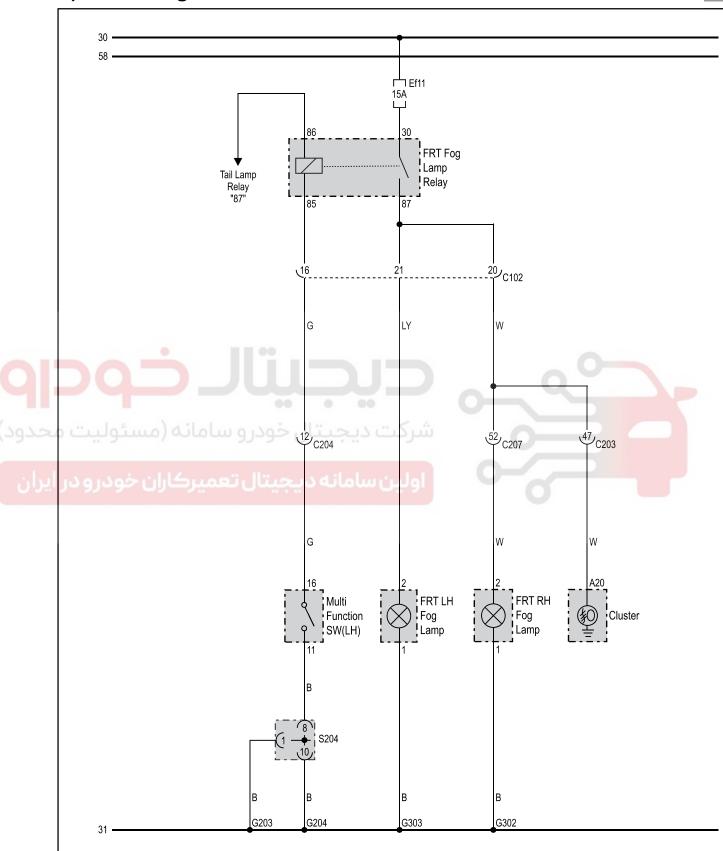
Modification basis	
Application basis	
Affected VIN	

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خودرو در ایران	عميركاران	ديجيتال	اولین سامانه		6
				/	

8510-25

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## 3) Circuit Diagram

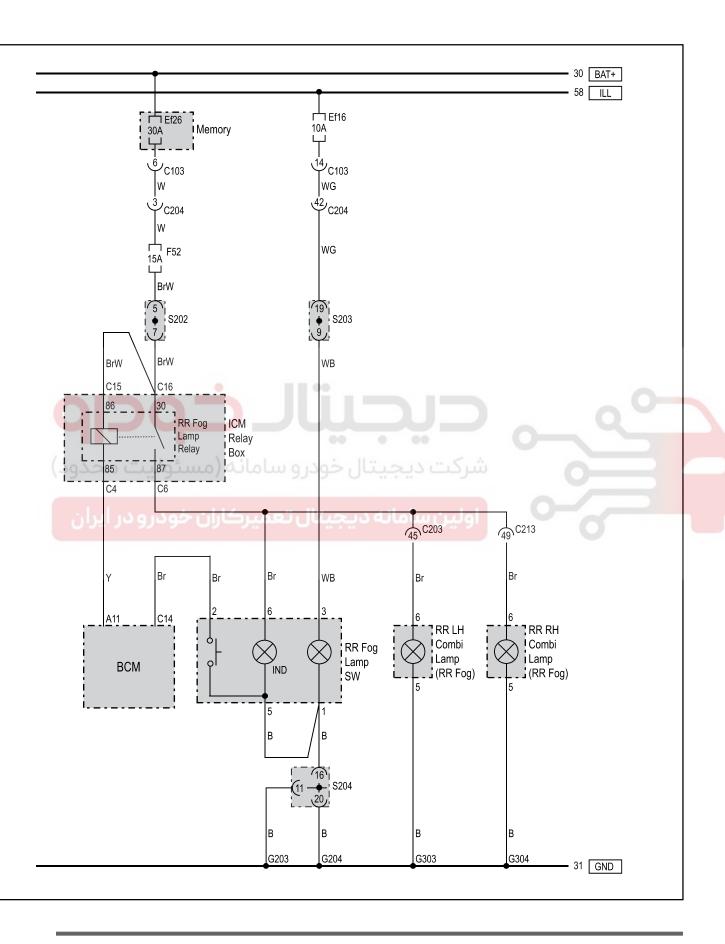


Modification basis
Application basis
Affected VIN

SWITCH

8510-25

korando



SWITCH

KORANDO 2015.01

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## 8510-28 HEADLAMP LEVELING SWITCH

## 1) Function



### Headlamp leveling switch

The headlamp aiming can be adjusted by using this dial-type switch.

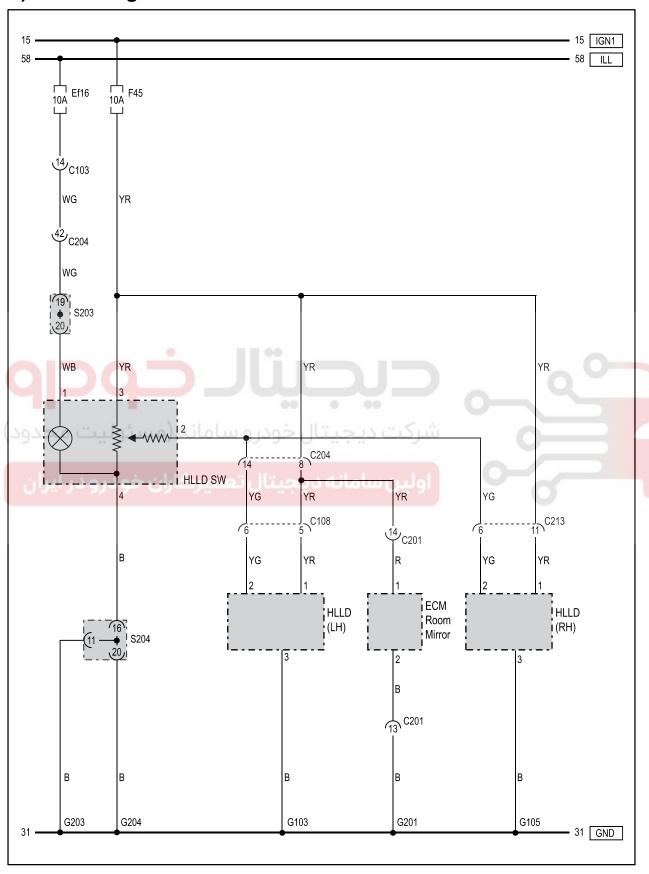


Pin No.	Function	
1	ILL (+)	
2	Switch signal	
3	IGN	
4	Ground	
5	-	

8510-28



## 3) Circuit Diagram

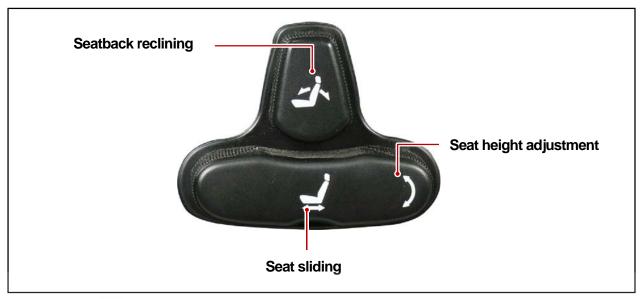


SWITCH KORANDO 2015.01

7410-26

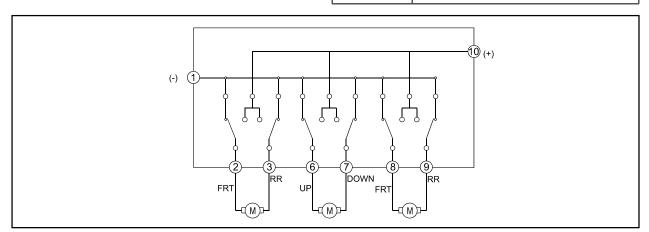
## 7410-26 POWER SEAT SWITCH ASSEMBLY

## 1) Function (Driver Side)





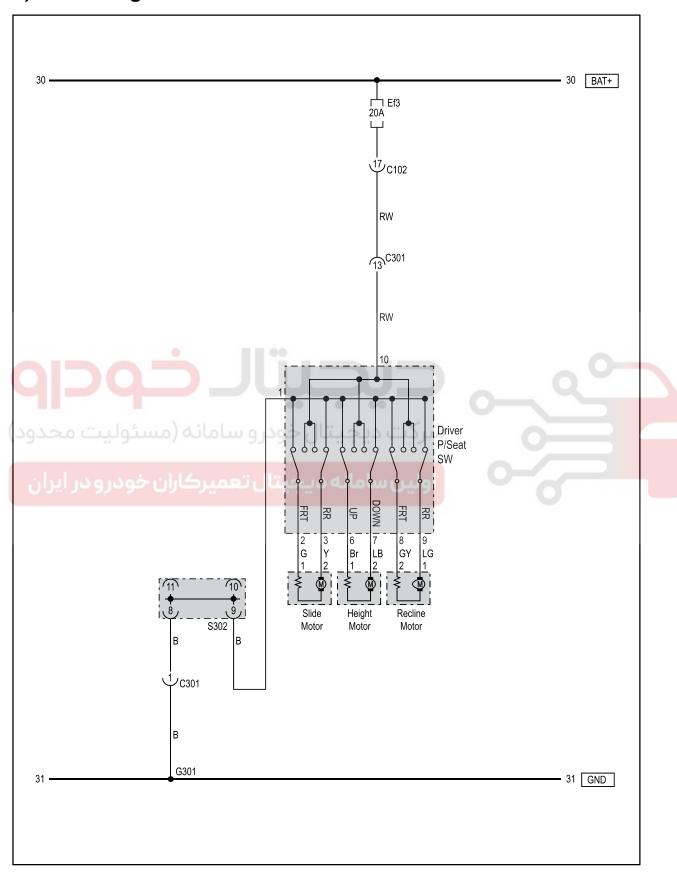
Pin No.	Function	
1 Ground		
2	Slide (FRT)	
3 لين	Slide (RR)	
6	Height (Up)	
7	Height (Down)	
8	Recline (FRT)	
9	Recline (RR)	
10	B+	



Mod	ification basis	
Appl	ication basis	
Affe	cted VIN	



## 3) Circuit Diagram



**SWITCH** 

KORANDO 2015.01

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## 8530-10 AUDIO REMOTE CONTROL SWITCH ASSEMBLY

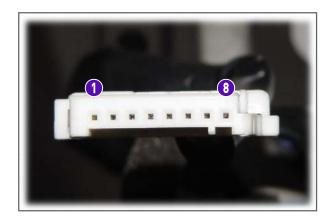
## 1) Function

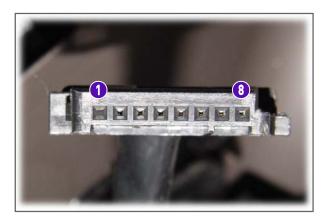


07-86 8530-10



## 2) Connector Functions





Pin No.	Function	
1	-	
2	Audio (signal output)	
3	Audio (ground)	
4	Audio (signal input)	
5	Tip switch ground	
6	Tip switch signal	
7	ILL (-)	
8	ر جيتال الله (+) ه ي	

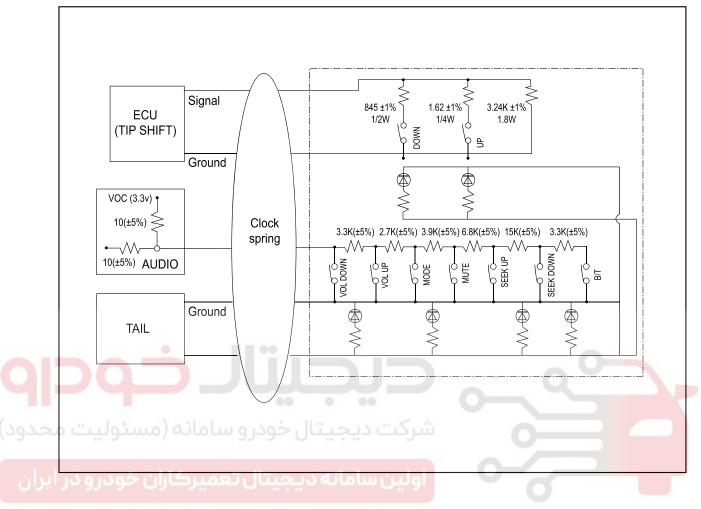
Pin No.	Function	
1	-	
2	-	
3	Audio (ground)	
4	Audio (signal output)	
5	Tip switch ground	
6	Tip switch signal	
7	ILL (-)	
ب سامان	ILL (+)	

	Switch	Resistance	Output voltage
1	VOL -	0 Ω ± 5%	0 to 0.3 V
2	VOL+	3.3 KΩ ± 5%	0.4 to 1.0 V
3	MODE	6 KΩ ± 5%	1.1 to 1.4 V
4	MUTE	9.9 KΩ ± 5%	1.5 to 1.8 V
5	SEEK UP	16.7 KΩ ± 5%	1.9 to 2.25 V
6	SEEK DOWN	31.3 KΩ ± 5%	2.26 to 2.64 V
7	TIP -	670 Ω ± 5%	-
8	TIP+	1.08 KΩ ± 5%	-
9	B/T	64.7 KΩ ± 5%	2.66 to 3.0 V

**SWITCH** KORANDO 2015.01

07-87

## 3) Circuit Diagram



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AUDIO VSTEM

07-88 8530-01



## 8530-01 MULTIFUNCTION TURN SIGNAL LAMP **ASSEMBLY**

## 1) Function



## 2) Connector Functions



Pin No.	Function	
1	Left turn signal switch	
2	Turn signal ground	
3	Right turn signal switch	
4	-	
5	-	

PIII NO.	Function
ىن ى6مان	High beam
7	Dimmer & passing ground
8	Headlamp switch power
9	Passing (headlamp switch)
10	-
11	Light/fog lamp/hazard switch ground
12	Auto light
13	Headlamp switch
14	Tail lamp switch
15	Hazard warning flasher switch
16	Front fog lamp switch
17	-
18	-

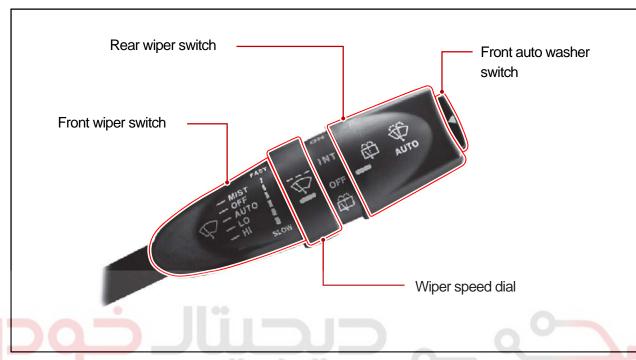
**SWITCH** KORANDO 2015.01

Modification basis	
Application basis	
Affected VIN	

8530-02

## 8530-02 MULTIFUNCTION WIPER ASSEMBLY

## 1) Function





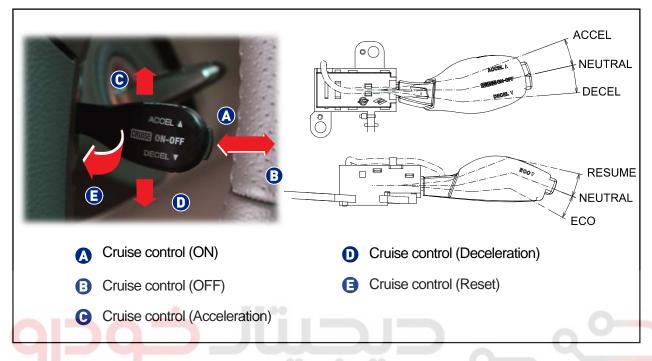
Pin No.	Function
1	Wiper SIG1
2	Wiper switch ground
3	-
4	-
5	Wiper SIG2
6	Rear washer switch
7	INT wiper ground
8	INT wiper
9	AUTO washer switch
10	Rear wiper/washer/auto washer ground
11	Rear wiper
12	Windshield washer switch

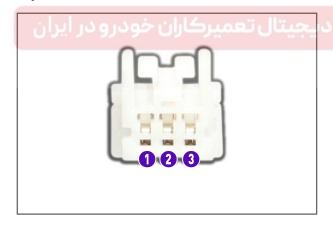




## 8530-03 CRUISE CONTROL SWITCH ASSEMBLY

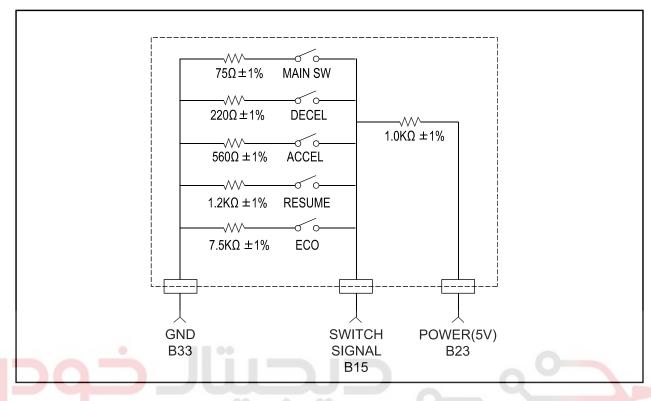
## 1) Function





Pin No.	Function
1	Ground
2	Power
3	Switch signal

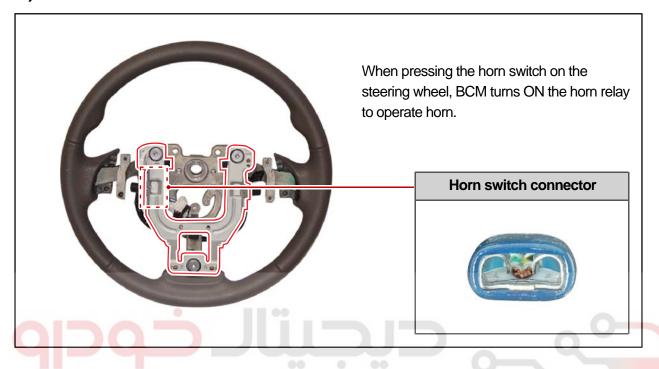
## 3) Circuit Diagram



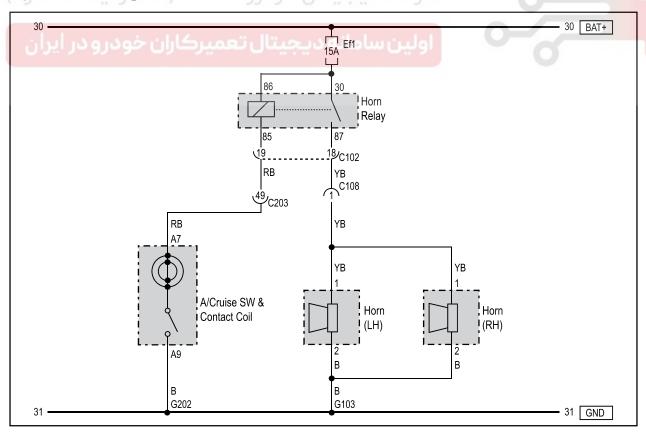


## 8610-06 HORN ASSEMBLY

## 1) Function



# 2) Circuit Diagram شرکت دیجیتال خودرو سامانه



**SWITCH** 

KORANDO 2015.01

Modification basis	
Application basis	
Affected VIN	

07-93

## LECTRO NIC

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# 8510-01 FRONT SEAT HEATING AND VENTILATION SWITCH ASSEMBLY

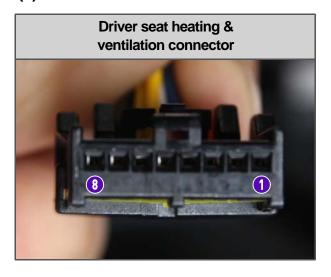
1) Front Seat Heating & Ventilation Unit (2-level of Driver Seat Heating and Ventilation, 2-level of Passenger Seat Heating)

(1) Function

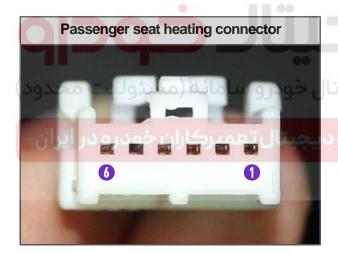




## (2) Connector function



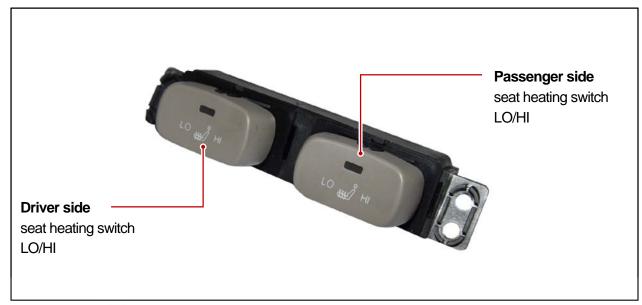
Pin No.	Function
1	GND
2	Two-level of ventilation for driver seat
3	One-level of ventilation for driver seat
4	Two-level of heating for driver seat
5	One-level of heating for driver seat
6	Driver ventilation switch signal
7	Driver heating switch signal
8	IGN2



Pin No.	Function
-1	Ground
کت2دیجا	ش
3	BCM "C20"
لین 4 مان	Two-level of heating for passenger
5	One-level of heating for passenger
6	Passenger heating switch signal

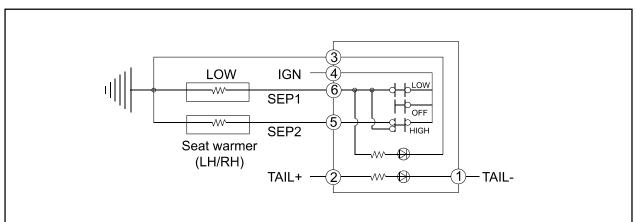
## 2) Front Seat Heating Function (Driver & passenger: LO↔HI)

## (1) Function





	Pin No.	Functions (Connector A)
) (	شركت	ILL (-)
	2	ILL (+)
	3	LED ground
	4	IGN
	5	HIGH
	6	LOW



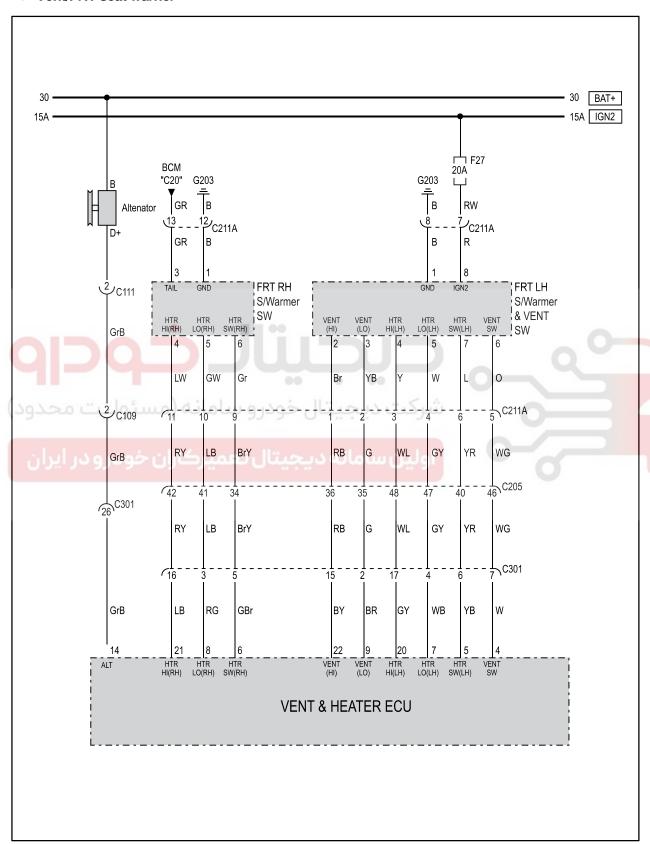
Modification basis	
Application basis	
Affected VIN	

8510-01



## 3) Circuit Diagram

### ▶ Vent/FRT seat warner

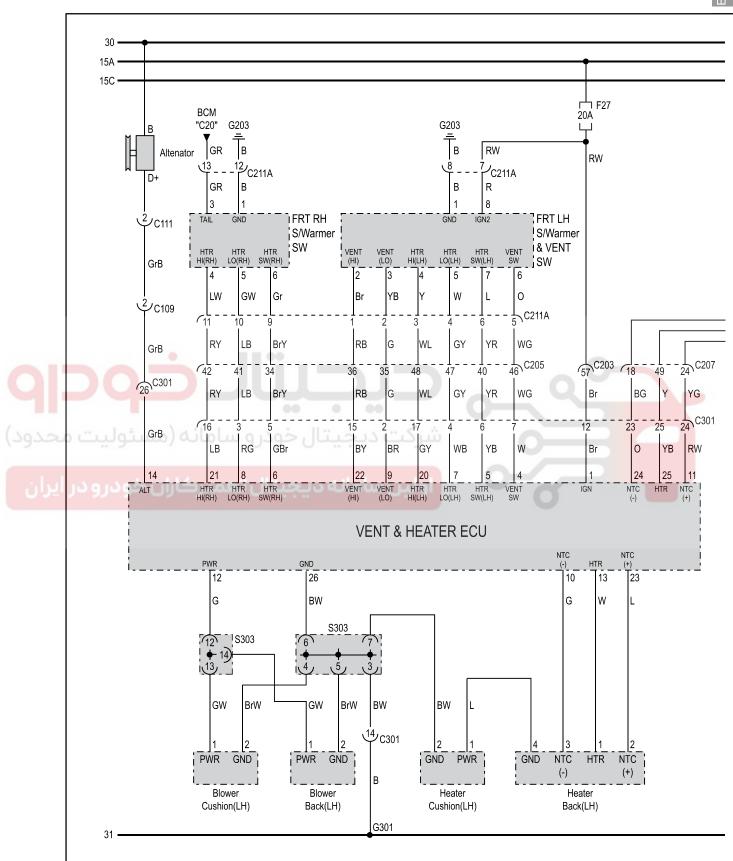


SWITCH KORANDO 2015.01

8510-01

07-97

### ▶ Vent/FRT seat warner



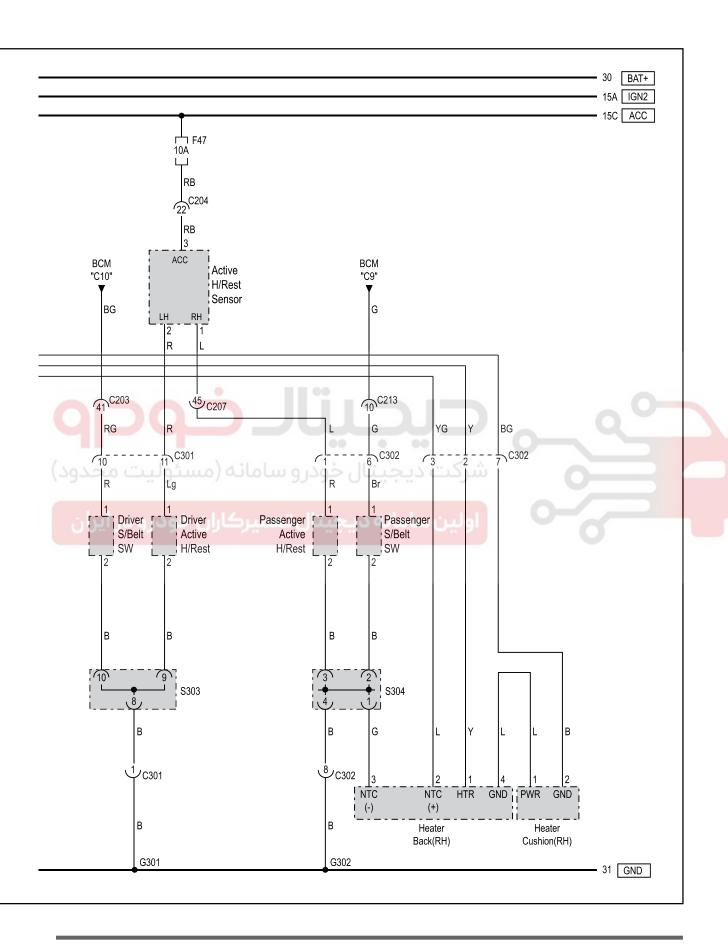
Modification basis
Application basis
Affected VIN

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SWITCH

8510-01

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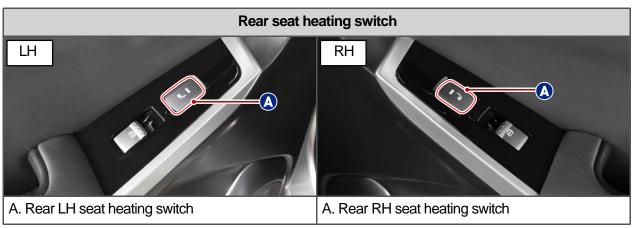
SWITCH KORANDO 2015.01

07-99

8520-10

## 8520-10 REAR SEAT HEATING SWITCH ASSEMBLY

## 1) Function



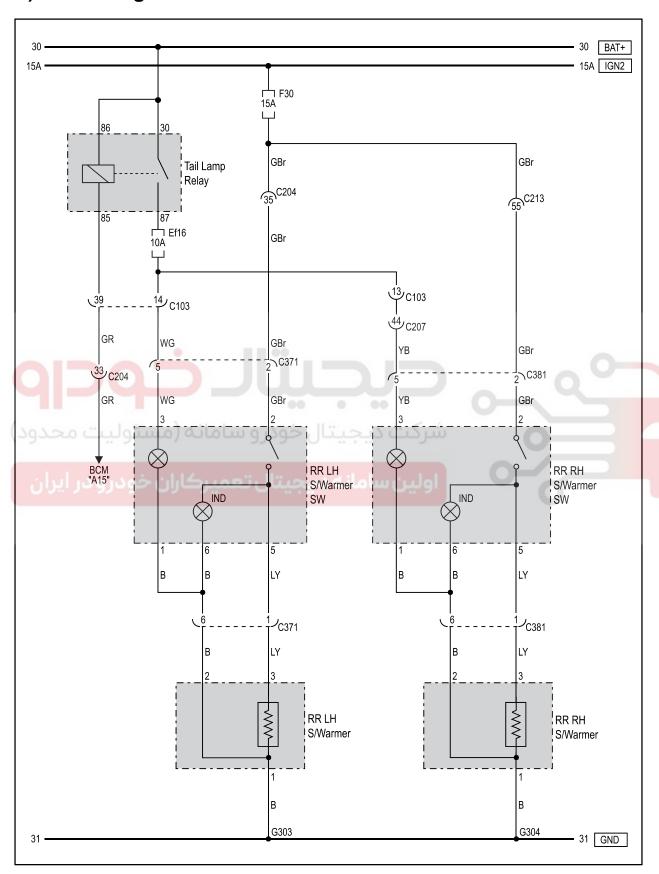


ı	Pin No.	Functions (Connector A)
ĺ	1	ILL (-)
	2	IGN
	ش کت	BAT+
	4	
	5لين	Heating output
	6	LED ground

07-100 8520-10



## 3) Circuit Diagram

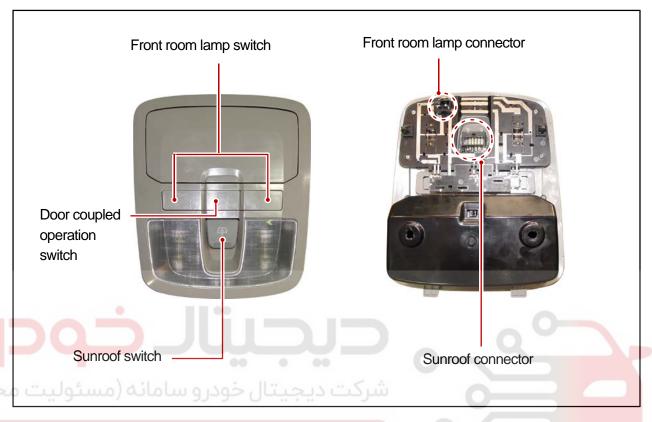


SWITCH KORANDO 2015.01

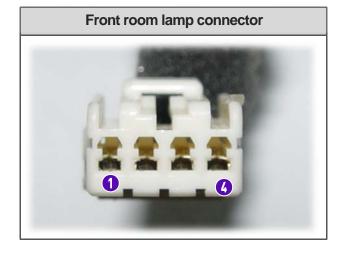
7770-20 07-101

## 7770-20 OVERHEAD CONSOLE SWITCH

## 1) Function



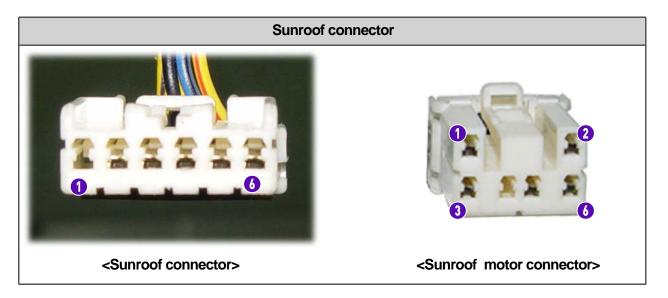
# اولین سامانه دیجیتال تعمیرکاران خودره در 2) Function



Pin No.	Function
1	Ground for BCM
2	Ground for BCM
3	B+
4	Ground for BCM (Ground the center room lamp when door coupled operation is ON)

07-102 7770-20

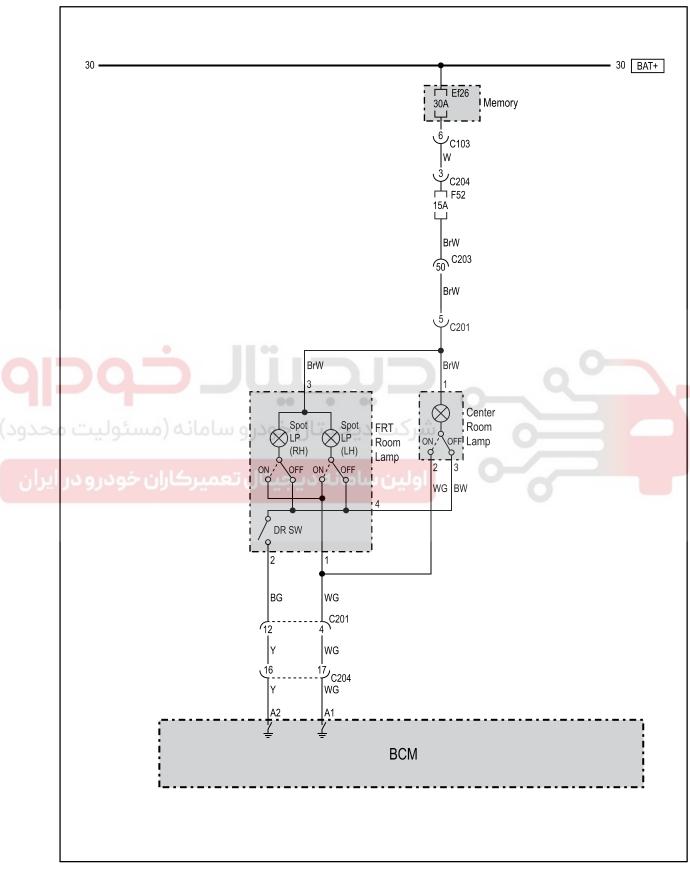




Pin No.	Function
1	-
2	ILL (+)
3	ILL (-)
4	Slide
5	Tilt
6	IGN

Pin No.	Function
1	B+
2	GND
3	- 0-
4	Alarm signal
5	Tilt
6	Slide

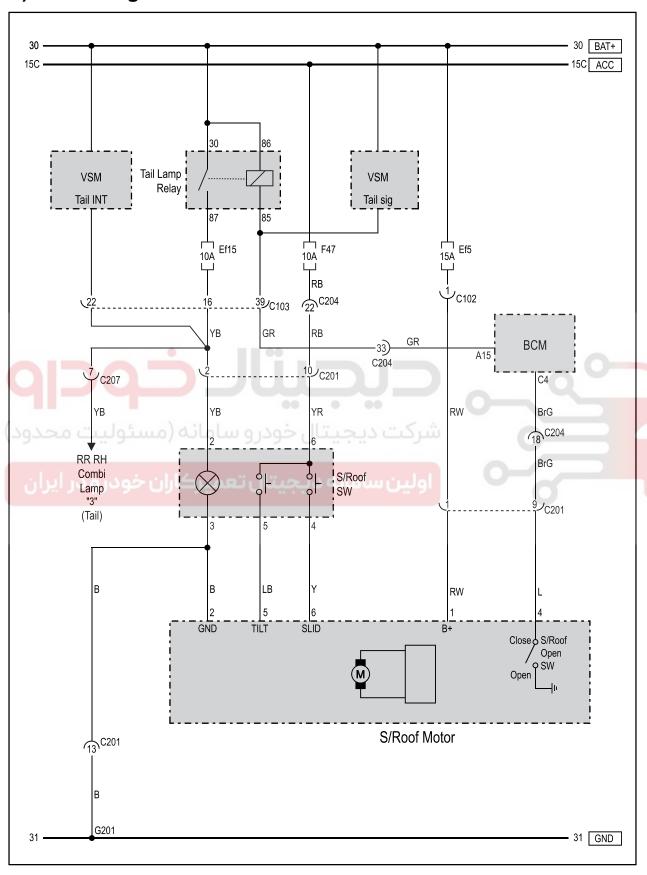
## 3) Circuit Diagram of Front Room Lamp



07-104 7770-20

korando

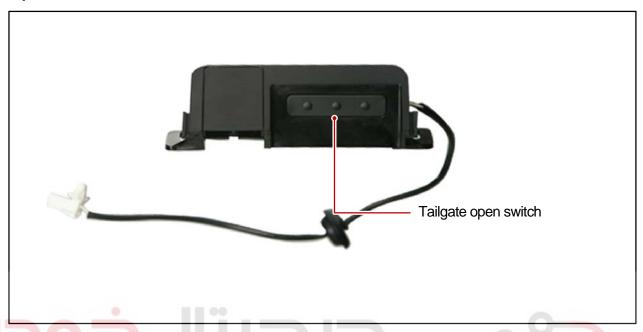
## 4) Circuit Diagram



SWITCH KORANDO 2015.01

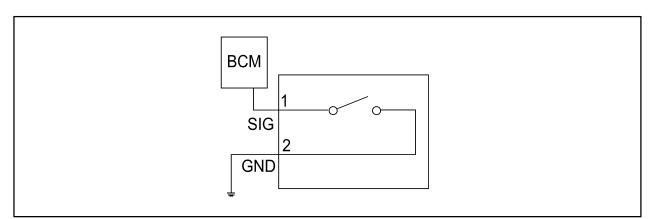
## 8520-16 TAILGATE SWITCH ASSEMBLY

## 1) Function





	Pin No.	Function
ú	1 اولیر	Signal
	2	Ground



Modification basis	
Application basis	
Affected VIN	



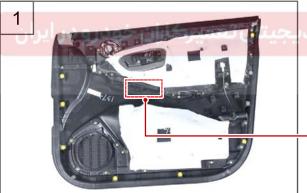
## REMOVAL AND INSTALLATION

## 8520-01 POWER WINDOW MAIN SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.
- Remove the front door trim. (See "FRONT DOOR TRIM" under "REMOVEAL AND INSTALLATION" in "BODY INTERIOR")





1. Unscrew the 4 power window main switch mounting screws from inside of the door trim to remove the power window main switch.



2. Install in the reverse order of removal.

**SWITCH** KORANDO 2015.01

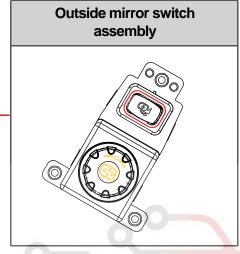
Modification basis	
Application basis	
Affected VIN	

## 8520-05 OUTSIDE MIRROR SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.
- Remove the front door trim. (See "FRONT DOOR TRIM" under "REMOVEAL AND INSTALLATION" in "BODY INTERIOR")



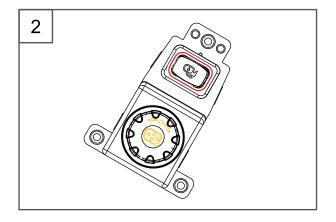




1. Unscrew the outside rearview mirror switch mounting screws from inside of the door trim to remove the outside rearview mirror switch.



2. Install in the reverse order of removal.



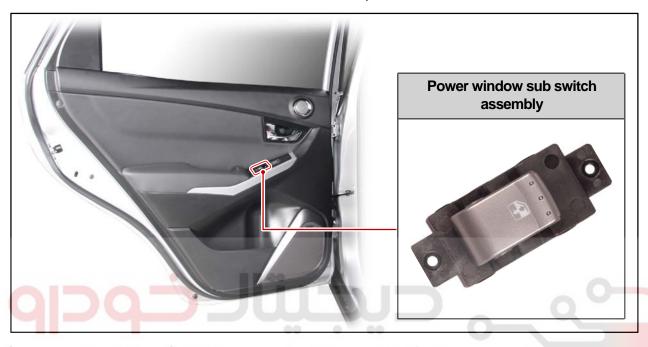
07-108 8520-07

FOLUNGO

## 8520-07 POWER WINDOW SUB SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.
- Remove the rear door trim. (See "REAR DOOR TRIM" under "REMOVEAL AND INSTALLATION" in "BODY INTERIOR")

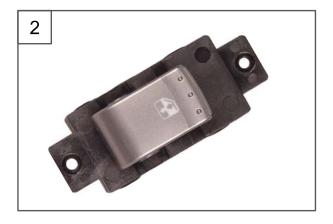




1. Unscrew the 2 power window sub switch mounting screws from inside of the door trim to remove the power window sub switch.



2. Install in the reverse order of removal.



**SWITCH** KORANDO 2015.01

	Modification basis	
	Application basis	
	Affected VIN	

Foravdo

6810-20 07-109

# 6810-20 HEATER AND A/C CONTROL ASSEMBLY

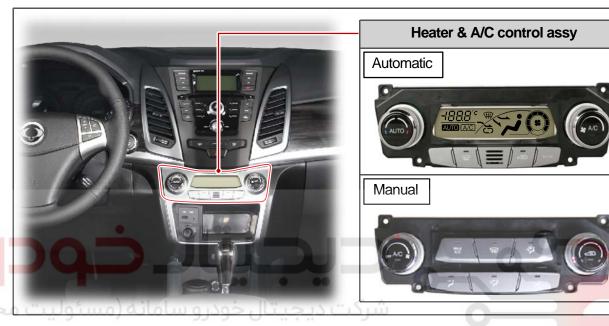
Preceding work

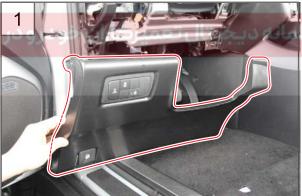
- Disconnect the negative battery cable.



#### **♣** NOTE

Remove and install the heater and A/C control assembly with FATC and one with MTC in the same way.





1. Remove the lower main panel assembly.



Refer to "INSTRUMENT PANEL" under "REMOVEAL AND INSTALLATION" in "BODY INTERIOR" chapter.



2. Remove the LH side fascia molding using a remover.

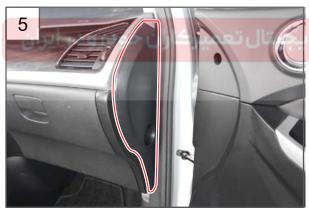
Modification basis	
Application basis	
Affected VIN	



3. Unscrew the one mounting screw on the LH center fascia panel.



4. Remove the LH center fascia panel.



5. Remove the RH crash pad side cover.



6. Unscrew the 3 RH side fascia molding mounting screws to remove the side fascia molding.



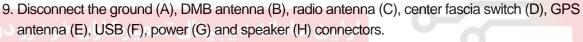
Modification basis	
Application basis	
Affected VIN	

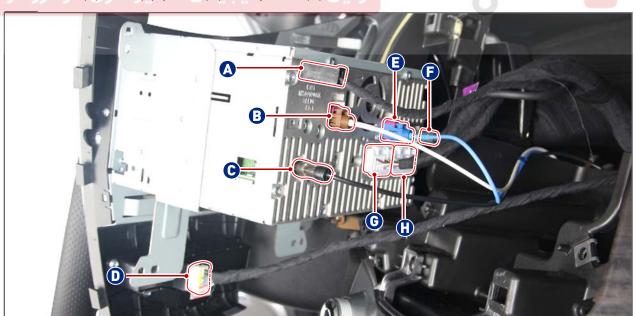


7. Unscrew the one RH center fascia panel mounting screw to remove the center fascia panel.



8. Unscrew the 4 AVN head unit mounting screws.





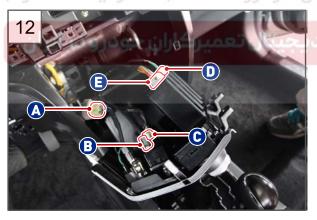
Modification basis Application basis Affected VIN



10. Remove the AVN head unit assembly.



11. Unscrew the two mounting screws on the center fascia lower panel assembly.



12.Remove the cigarette lighter (A), USB (B), AUX (C), heater (D) and air control (E) assembly connectors.



13. Remove the center fascia lower panel assembly.

Modification basis	
Application basis	
Affected VIN	

FOLUNDO

6810-20 07-113

14

14.Unscrew the 4 mounting screws for the heater and A/C control assembly from the removed center fascia lower panel assembly.



15.Remove the heater and A/C control assembly from the center fascia lower panel assembly.



Automatic	Manual
AUTO AUTO AUTO AUTO	

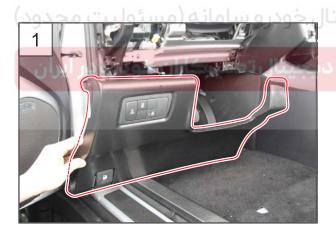
Foravdo

### 8510-15 CENTER FASCIA SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Remove the lower main panel assembly.



Refer to "INSTRUMENT PANEL" under "REMOVEAL AND INSTALLATION" in "BODY INTERIOR" chapter.



2. Remove the LH side fascia molding using a remover.

Modification basis	
Application basis	
Affected VIN	

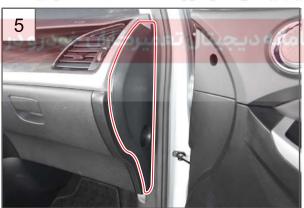
FOLUNDO



3. Unscrew the one mounting screw on the LH center fascia panel.



4. Remove the LH center fascia panel.



5. Remove the RH crash pad side cover.



Unscrew the 3 RH side fascia molding mounting screws to remove the side fascia molding.



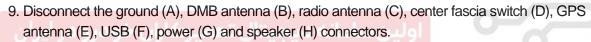
Modification basis	
Application basis	
Affected VIN	

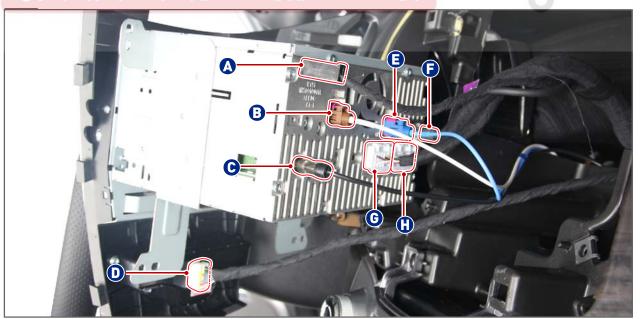


7. Unscrew the one RH center fascia panel mounting screw to remove the center fascia panel.



8. Unscrew the 4 AVN head unit mounting screws.





Modification basis	
Application basis	
Affected VIN	



10. Remove the AVN head unit assembly.



11. Unscrew the 4 center fascia switch assembly mounting screws on the removed AVN head unit assembly.



12.Remove the center fascia switch assembly from the AVN head unit assembly.



13.Install in the reverse order of removal.



Modification basis Application basis Affected VIN

07-118 8510-29

FOLUNGO

### 8510-29 LOWER MAIN PANEL SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Detach the lower main panel switch using a remover.



- 2. Disconnect the lower main panel switch connector.
  - A: 4WD LOCK switch connector
  - B: ESP OFF switch connector
  - C: Steering wheel heating switch connector

Modification basis	
Application basis	
Affected VIN	





3. Remove the lower main panel switch assembly.



4. Install in the reverse order of removal.

Modification basis Application basis Affected VIN

#### 8530-01 MULTIFUNCTION TURN LIGHT ASSEMBLY

Preceding work

- Disconnect the negative battery cable.







1. Unscrew the 2 mounting screws for the shroud lower panel after rotating the steering wheel to make room for working.



2. Unscrew the one mounting screw for shroud lower panel under the steering wheel, and push down the steering column tilting lever in the direction of the arrow shown in the picture.

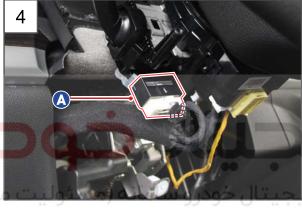


	Modification basis	
	Application basis	
	Affected VIN	

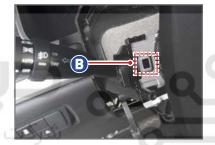
FOLUNDO



3. Remove the shroud lower panel.



4. Disconnect the multifunction turn light switch connector (A) and press the fixing part (B) to remove it.



5. Remove the multifunction turn light assembly.



6. Install in the reverse order of removal.



Modification basis Application basis Affected VIN

07-122 8530-02

FOLUNGO

#### 8530-02 MULTIFUNCTION WIPER ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Unscrew the 2 mounting screws for the shroud lower cover after rotating the steering wheel to make room for working.





2. Unscrew the mounting screw for shroud lower cover under the steering wheel, and push down the steering column tilting lever in the direction of the arrow shown in the picture.



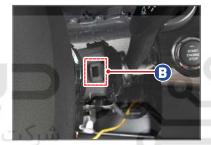
Modification basis	
Application basis	
Affected VIN	



3. Remove the shroud lower cover.



Disconnect the multifunction wiper switch connector (A) and press the fixing part (B) to remove it.



5. Remove the multifunction wiper assembly.



6

6. Install in the reverse order of removal.

07-124 8530-03

FOLUNGO

### 8530-03 CRUISE CONTROL SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.
- Remove the steering wheel.





1. Remove the cruise control switch cover.



2. Unscrew the one mounting screw of the cruise control switch (A) in the steering wheel.

	Modification basis	
	Application basis	
	Affected VIN	



3. Unscrew the one mounting screw for the cruise control switch on the outside of the steering wheel to remove the cruise control switch.



4. Disconnect the audio remote control switch connectors (left/right).



5. Unscrew the two mounting bolts on the steering wheel damper and remove the damper.



6. Unscrew the three steering wheel rear cover mounting screws.



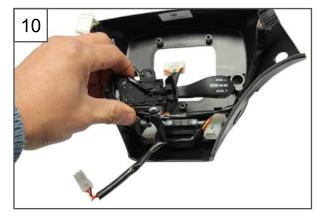
7. Disconnect the steering wheel heated wire connector.



8. Remove the steering wheel rear cover.



9. Disconnect the cruise control switch connector.



10. Remove the cruise control switch.

Modification basis	
Application basis	
Affected VIN	

8530-03 07-127





11.Install in the reverse order of removal.



Modification basis Application basis Affected VIN

07-128 8530-10

FOLUNGO

#### 8530-10 AUDIO REMOTE CONTROL SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.
- Remove the steering wheel. (See "INSTRUMENT PANEL" under "REMOVEAL AND INSTALLATION" in "BODY INTERIOR" chapter)







1. Remove the cruise control switch cover from the removed steering wheel.



2. Unscrew the mounting screws (A, B) on the cruise control switch.



#### **♣** NOTE

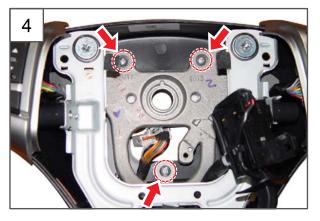
The mounting screws for the cruise control switch are tightened to the front and rear of the steering wheel.



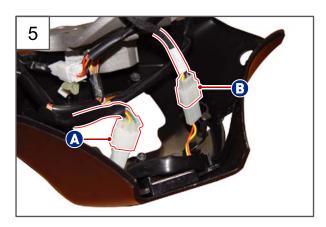
3. Separate the cruise control switch, unscrew the 2 mounting screws and remove the steering wheel damper (A).



4. Unscrew the three steering wheel lower cover mounting screws.



Modification basis Application basis Affected VIN



5. Separate the steering wheel lower cover and disconnect the steering wheel heating unit connectors (A, B).



6. Remove the steering lower cover.



7. Unscrew the 2 mounting screws (LH/RH) and remove the audio remote control switch.



8. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

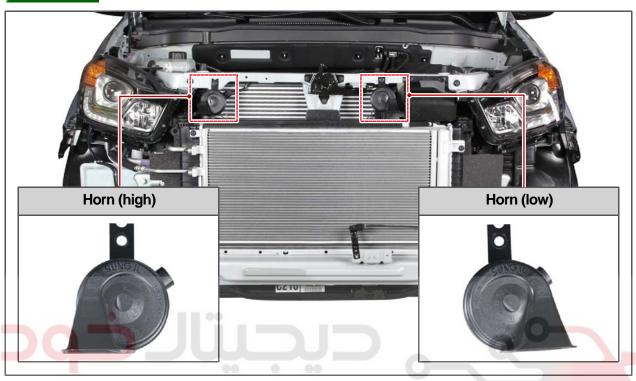
FOLUNDO

8610-06 07-131

## 8610-06 HORN ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





 Remove the 10 mounting screw rivets securing the front end upper cover.

#### ► To horn (high)



2. Unscrew the one horn (high) mounting bolt (A, 12 mm) and disconnect the connector.

Modification basis	
Application basis	
Affected VIN	





3. Remove the horn (high) assembly.

#### ▶ To horn (low)



2. Unscrew the one horn (low) mounting bolt (A, 12 mm) and disconnect the connector.



3. Remove the horn (low) assembly.



4. Install in the reverse order of removal.

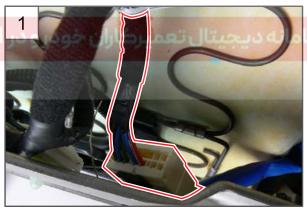
	Modification basis	
	Application basis	
	Affected VIN	

#### 7410-26 POWER SEAT SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.
- Remove the driver seat.





1. Disconnect the power seat switch connector.



2. Remove the knob for the power seat switch.

Modification basis	
Application basis	
Affected VIN	



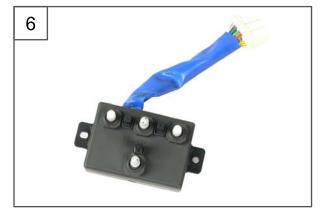
3. Unscrew the one mounting screw from the trim on the back side of the seat.



4. Remove the power seat panel.



5. Unscrew the 2 mounting screws on the power seat switch.



6. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

### 8510-01 FRONT SEAT HEATING AND VENTILATION **SWITCH ASSEMBLY**

Preceding work

- Disconnect the negative battery cable.



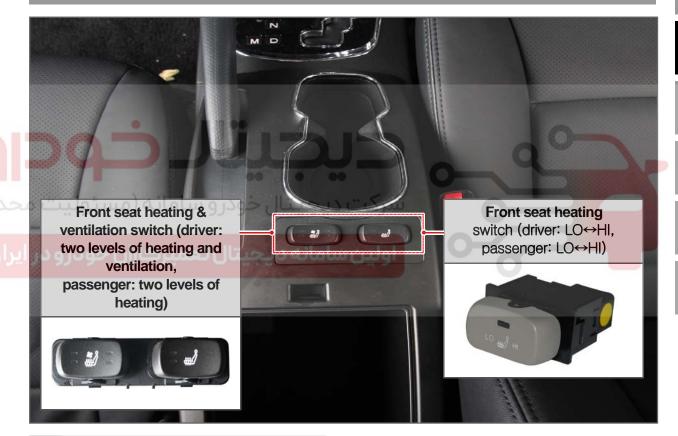
#### 🕹 NOTE

- This section describes how to remove and install the automatic transmission console and do the same for the manual transmission console.

The front seat heating and ventilation switches are classified according to the specifications.

- Front seat heating & ventilation switch (2-level of driver seat heating and ventilation, 2-level of passenger seat heating)

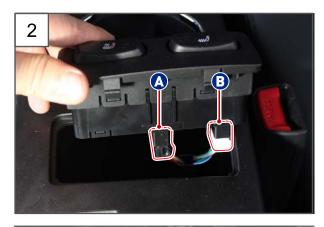
Front seat heating switch (driver and passenger: LO↔HI)

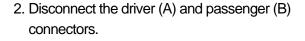


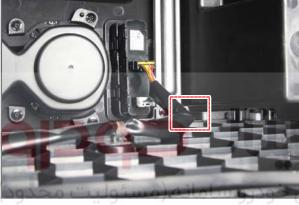


1. Lift off the seat heating and ventilation switch from the front console using a remover.

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- When disconnecting the connector using a flat screwdriver, detach the wiring from the mounting clip in the console box to facilitate the removal.







3. Press the left/right fixing parts (4 locations) for the front seat heating and ventilation switch to detach it.



4. Remove the seat heating and ventilation bezel.

Modification basis	
Application basis	
Affected VIN	

Front seat heating and ventilation switch (Driver: two levels of heating and ventilation, passenger: two levels of heating)



5. Install in the reverse order of removal.

Front seat heating switch (Driver: LO↔HI, Passenger: LO↔HI)



Modification basis Application basis Affected VIN WWW.DIGITALKHODRO.COM 07-138 8520-10

FOLUNGO

### 8520-10 REAR SEAT HEATING SWITCH ASSEMBLY

- Preceding work Disconnect the negative battery cable.
  - Remove the rear door trim. (See "REAR DOOR TRIM" under "REMOVEAL AND INSTALLATION" in "BODY INTERIOR")





1. Remove the rear seat heating switch by pushing the rear seat heating switch outwards from inside the door trim.



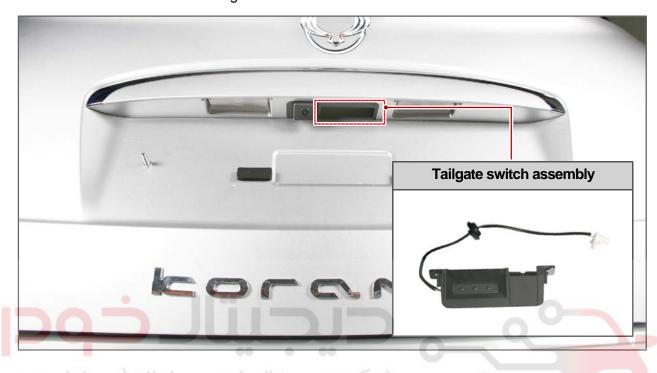
2. Install in the reverse order of removal.

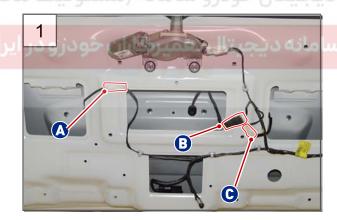
	Modification basis	
	Application basis	
	Affected VIN	

### 8520-16 TAILGATE SWITCH ASSEMBLY

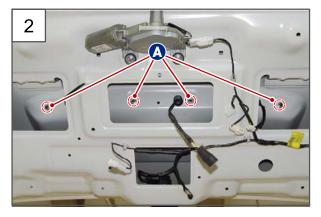
Preceding work

- Disconnect the negative cable from the battery.
- Remove the tailgate trim.



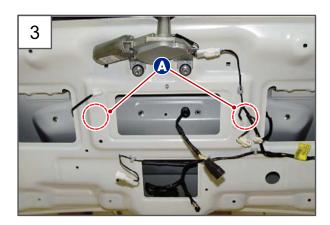


- 1. Disconnect the following connectors:
  - (A) Rearview camera connector
  - (B) Tailgate switch connector
  - (C) License plate lamp connector



2. Unscrew the four mounting nuts (A, 10 mm).

Modification basis	
Application basis	
Affected VIN	



3. Remove the rear garnish assembly from the tailgate by pushing the mounting groove (A) of the rear garnish assembly.



4. Remove the tailgate switch from the removed rear garnish assembly.



5. Install in the reverse order of removal.



### 7770-20 OVERHEAD CONSOLE SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.

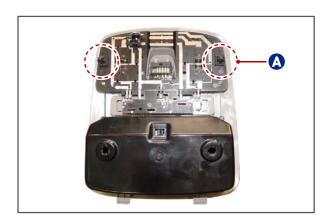




1. Unscrew the 2 mounting bolts (10 mm) on the overhead console.



2. Remove the overhead console clip (B).



#### reference

Overhead console clip section (A)



3. Disconnect the front room lamp connector (A) and the sunroof switch connector (B), and remove the overhead console switch assembly.



4. Install in the reverse order of removal.

