SWITCH

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SWITCH

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SWITCH

REMOVAL AND INSTALLATION

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SWITCH

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GENERAL INFORMATION

1. SPECIFICATIONS

▶ Power window main switch

	Specifications		
	Rated voltage		12 V
	Operating voltage		9 to 16 V
Dower window main	Operating temperature		-30°C to +80°C
Power window main switch	Rated load	AUTO switch	Check contact
		Manual switch	10 A (motor load)
		Window LOCK switch	10 A (motor load)
		Door UNLOCK switch	Check contact

Outside rearview mirror switch

	انه (مسئوایت	Specifications		
	9	9,09	Rated voltage	12 V
	Outside rearview mirror switch	Operating voltage		9 to 16 V
		Ope	rating temperature	-30°C to +80°C
		Rated load	Outside rearview mirror switch	0.2 A (motor load)

▶ Power window sub switch

Item			Specifications
	Rated voltage		12 V
Power window sub	Operating voltage		9 to 16 V
switch	Ope	rating temperature	-30°C to +80°C
	Rated load	Manual switch	10 A (motor load)

8520-01

T I V O L I

► Multifunction switch

	Specifications				
	Rated voltage				
	Operating	temperature		-30°C to +80°C	
		Light sw	itch	0.2 A (BCM)	
		AUTO light	switch	0.2 A (BCM)	
Multifunction light		Dissessed	Up	0.2 A (relay load)	
switch	Rated load	Dimmer and passing switch	Down	0.2 A (relay load)	
			Passing	0.2 A (BCM)	
		Turn signal lamp switch		0.2 A (BCM)	
		Fog lamp switch		0.2 A (relay load)	
	<u>.</u>	Wiper switch	AUTO	0.2 A (BCM)	
			LO	0.2 A (BCM)	
			HI	0.2 A (BCM)	
Multifunction wiper		AUTO wiper and washer switch		5 mA (BCM)	
switch	Rated load	Front washer switch		0.2 A (BCM)	
ىئولىت محدود	سامانه (مس	Rear washer switch		0.2 A (BCM)	
فيدرود البال	ومن کاران	INT		Max. 25 mA	
فودرو در ایران	عميرتاران	Door win on	LO	0.2 A (BCM)	
		Rear wiper	HI	0.2 A (BCM)	

► Center fascia switch

	ltem				
		Rated voltage	12 V at 50 mA		
	Operating temperature		-30°C to +80°C		
Center fascia switch		Rear glass/outside rearview mirror heating switch			
SWILCH	Rated load	TRIP/RESET switch	12 V ~ 50 mA		
		Hazard warning lamp switch			
		Smart steer switch			

▶ Lower main switch

 $T \quad I \quad V \quad \mathbf{0} \quad L \quad I$

	Specifications				
	Rated	voltage	12 V at 50 mA		
	Operating temperature				
	Rated load	E-W-P switch			
		ESP OFF switch			
Lower main		4WD LOCK switch	12 V ~ 50 mA		
switch		Steering wheel warmer switch			
		PAS OFF switch			
		Headlamp leveling switch			

► START/STOP switch

		ltem				
		Rated voltage	12 V			
	START/STOP switch	Operating voltage	9 to 16 V			
	SWITCH	Operating temperature	-30°C to +80°C			
شرکت دیجیتال خودرو سامانه (مسئولیت محدود						

► Tailgate switch

رال حودرو در	Specifications	
Tailgate open	Rated voltage	12 V at 60 mA or lower
switch	Operating temperature	-30°C to +80°C

▶ PAB OFF switch

	Specifications		
	Rated	12V	
PAB OFF	Rated	0.1A	
switch	Switch operating force	Push	0.7±0.25Kgf
	Switch operating lorce	Rotary	MAX 3.0Kgf

T I V O L I

► Steering wheel switch

	Specifications				
	Rated voltage				
	Rated load		DC 5 V at 0.1 A		
	Operating temperature		-30°C to +80°C		
	Item	Resistance	Operating voltage		
	Volume down	196 Ω ± 1%	0 to 0.4 V		
	Volume up	1.02 KΩ ± 1%	0.7 to 1.1 V		
	Mode	2.21 KΩ ± 1%	1.4 to 1.8 V		
Audio remote	Mute	34.8 KΩ ± 1%	4.2 to 4.6 V		
control switch	SEEK up	4.02 KΩ ± 1%	2.1 to 2.5 V		
	SEEK down	6.98 kΩ ± 1%	2.8 to 3.2 V		
	Bluetooth (hands-free) - ON	13.3 KΩ ± 1%	3.5 to 3.9 V		
	Bluetooth (hands-free) - OFF	34.8 KΩ ± 1%	4.2 to 4.6 V		
Crusina apartual	ON/OFF	75 Ω ± 1%	0.15 to 0.55 V		
Cruise control switch	CANCEL (RESUME)	1.2 KΩ ± 1%	2.52 to 2.92 V		
G16DF (D16DTF)	بتال خودر و _{SET} مانه (مسئ	560 Ω ± 1%	1.6 to 2.0 V		
(510511)	RES- (SET-)	220 Ω ± 1%	0.7 to 1.1 V		

▶ Front seat heater and ventilation switch

ltem			Specifications
		Rated voltage	DC 12 V
Front seat heater Ope		Operating temperature	-40℃ to +80℃
and ventilation switch	Dilver's Seat Heater Switch		Max. 150 mA
SWIGH	Rated load	Driver's seat ventilation switch	Max. 150 mA
		Passenger's seat heater switch	Max. 150 mA

▶ Rear seat heater switch

Item		Specifications
	Rated voltage	12 V
Rear seat heater	Operating voltage	9 to 16 V
switch	Operating temperature	-30°C to +80°C
	Rated load	4 to 6 A (unit load)

SWITCH

Modification basis			
Application basis	1		
Affected VIN	021	62	99

V O L

OVERVIEW AND OPERATING PROCESS

1. OVERVIEW

The switch system allows the driver to drive the vehicle safely and comfortably by operating the switches properly according to the driving conditions. The switch system is divided into following parts depending on the mounting location.

- 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



اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



V O L

2. COMPONENTS



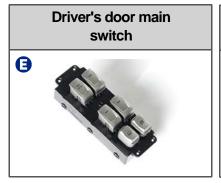


















Manual

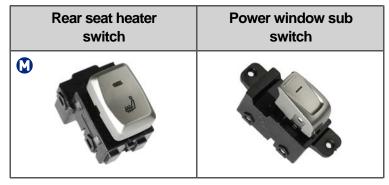


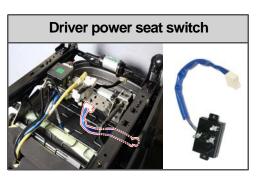












CONFIGURATION AND FUNCTIONS

8520-01 POWER WINDOW MAIN SWITCH ASSEMBLY

1) Overview

The power window main switch is mounted to the driver's door trim and offers the following:

- All windows up/down
- All doors lock/unlock
- All windows except driver's window up/down limit
- Driver's window AUTO up/down (with Anti-Trap)

2) Mounting Location and Components



3) Operating Process

Power window main switch

Driver's window switch

The driver's window switch has AUTO up/down (with anti-trap) and manual up/down features. The window can be controlled for 30 seconds after turning off the ignition switch.

However, if the driver's or passenger's door open signal or the door lock signal (entering theft deterrent mode) is input during the 30 seconds delay, the delay for window operation will be canceled immediately.

Rear LH window switch

Passenger's window switch

The window goes up or down only while the switch is pressed. The switch remains active for 30 seconds after the ignition has been turned off.

The window goes up or down only while the switch is pressed. The switch remains active for 30 seconds after the ignition has been turned off.

Rear RH window switch

The window goes up or down only while the switch is pressed. The switch remains active for 30 seconds after the ignition has been turned off.

Door lock/unlock switch

If the door lock/unlock switch is pressed with all doors including the tailgate locked, all doors will be unlocked. If the switch is pressed with all doors unlocked, all doors will be locked.

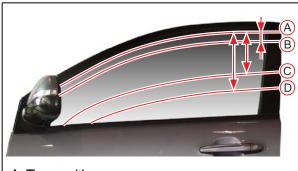
Window lock switch

If the window lock switch is pressed down, only the driver's window is operative. The switches for front passenger and rear windows are disabled.

► Anti-trap function for driver's window

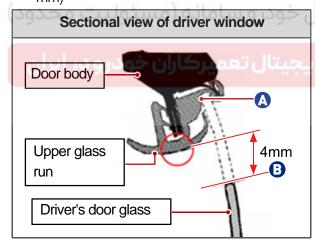
Anti-trap function enables the driver's window to automatically reverse to the anti-trap park position when an obstacle is detected in the way of the glass during the AUTO up. When the sensor detects an obstacle. This function is only available for the vehicle with anti-trap feature.

Driver's window anti-trap operating range



- A. Top position
- B. Minimum operating range for anti-trap (about 4 mm)
- C. Maximum operating range for anti-trap (about 200 mm)
- D. Anti-trap park position (250 mm \pm 10 mm)

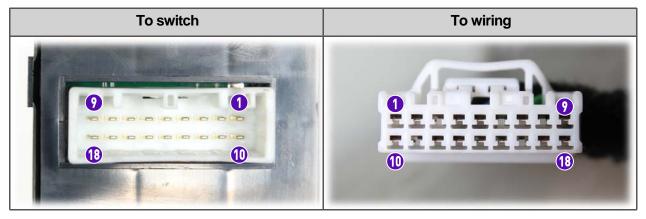
The operating range of the anti-trap function is between 4 mm and 200 mm from the bottom of the upper glass run. When a reverse force of 100 N or more is detected in this operating range, the window goes down automatically up to about 250 mm from the bottom of the upper glass run.





4) Connector

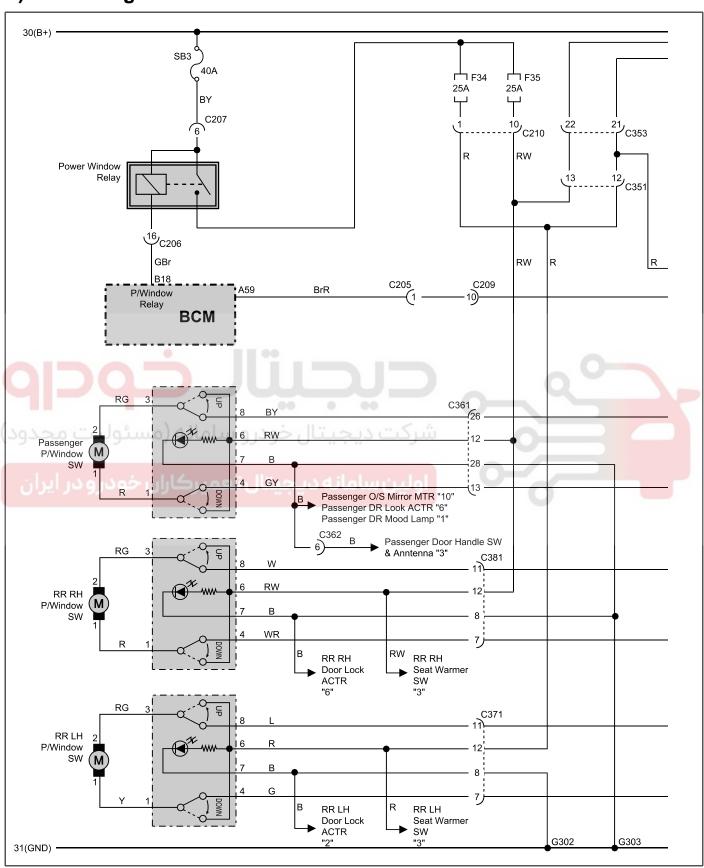
T I V O L I

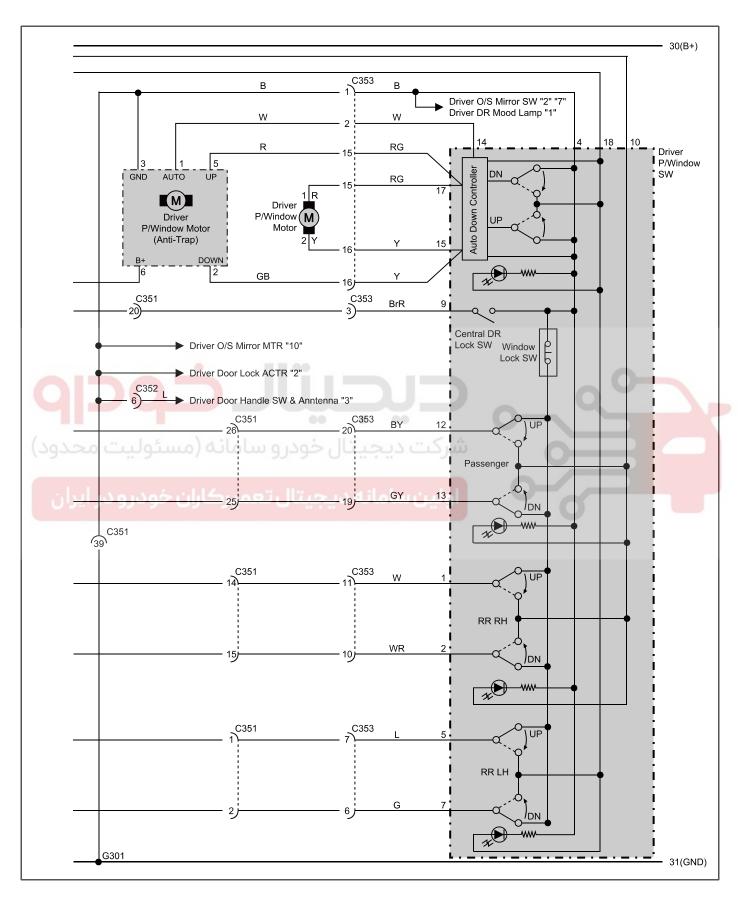


Pin No.	Function	Pin No.	Function
1	Rear RH window UP	10	Power supply (Power window relay)
2	Rear RH window DOWN	11	-
3	-	12	Passenger's window UP
4	Ground	13	Passenger's window DOWN
5	Rear LH window UP	14	Automatic
6	- 00 0	15	Driver's window DOWN (anti-trap)
ىئول ى ت ە	Rear LH window DOWN	ركى16ديج	ů O
8	112 " 10"	17	Driver's window UP (anti-trap)
729999	Door LOCK switch	18	Power (B+)

0 L

5) Circuit Diagram





V O L I

8520-05 OUTSIDE REARVIEW MIRROR SWITCH **ASSEMBLY**

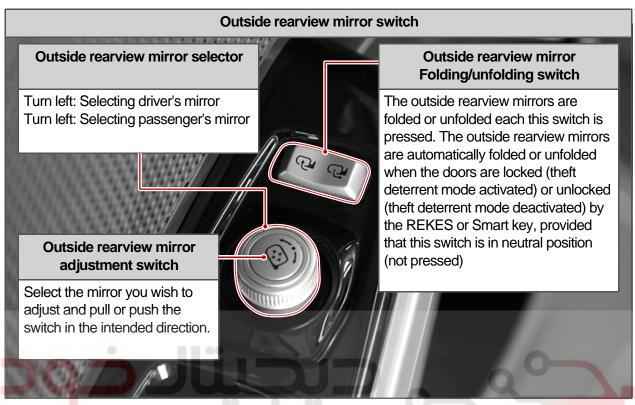
1) Overview

The outside rearview mirror switch assembly is mounted to the driver's door trim. You can adjust the outside rearview mirror up, down, left or right by using this switch to get a clear view of the rear of the vehicle. You can also fold the outside rearview mirror with this switch when passing by the narrow road or parking the vehicle. The adjustment switch is a joystick type switch, while the folding/unfolding switch is a see-saw type switch. Do not try to fold/unfold or adjust the outside rearview mirror by hand. That kind of force may cause a malfunction of the relevant devices.

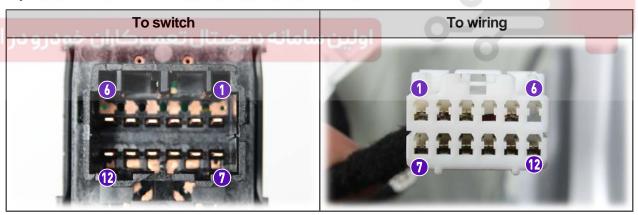
2) Mounting Location and Components



3) Operating Process



شرکت دیجیتال خودرو سامان Connector

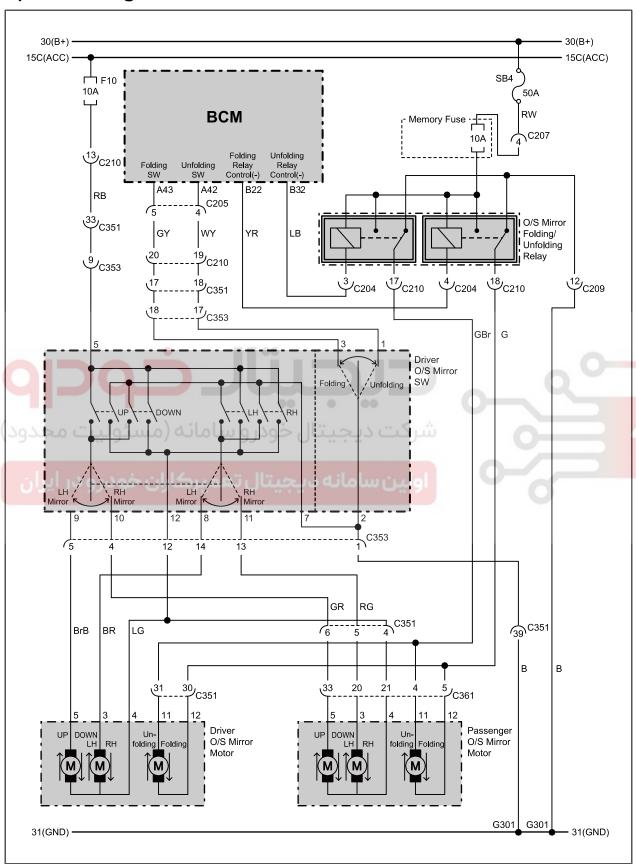


Pin No.	Function	Pin No.	Function
1	Unfolding switch signal	7	Ground (switch)
2	Ground (folding/unfolding)	8	LH mirror left/right
3	Folding switch signal	9	LH mirror UP/DOWN
4	-	10	RH mirror UP/DOWN
5	Power supply (ACC)	11	RH mirror left/right
6	-	12	Mirror up/down/left/right, ground

8520-05 05-18

0 L

5) Circuit Diagram



POWER WINDOW SUB SWITCH ASSEMBLY -**PASSENGER SIDE**

1) Overview

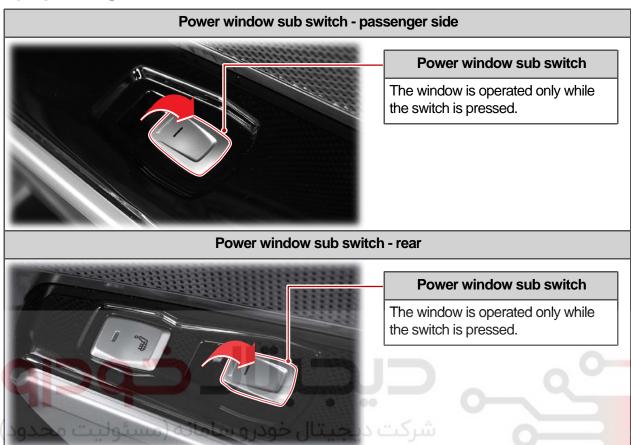
The power window sub switch assembly is installed to the passenger's door trim.

2) Mounting Location and Components

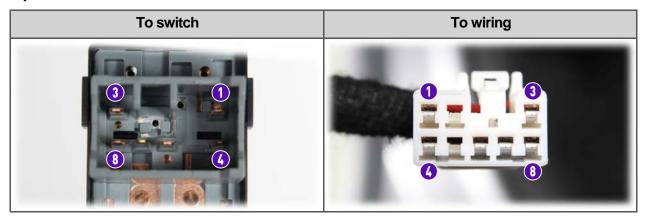


V O L

3) Operating Process



4) Connector

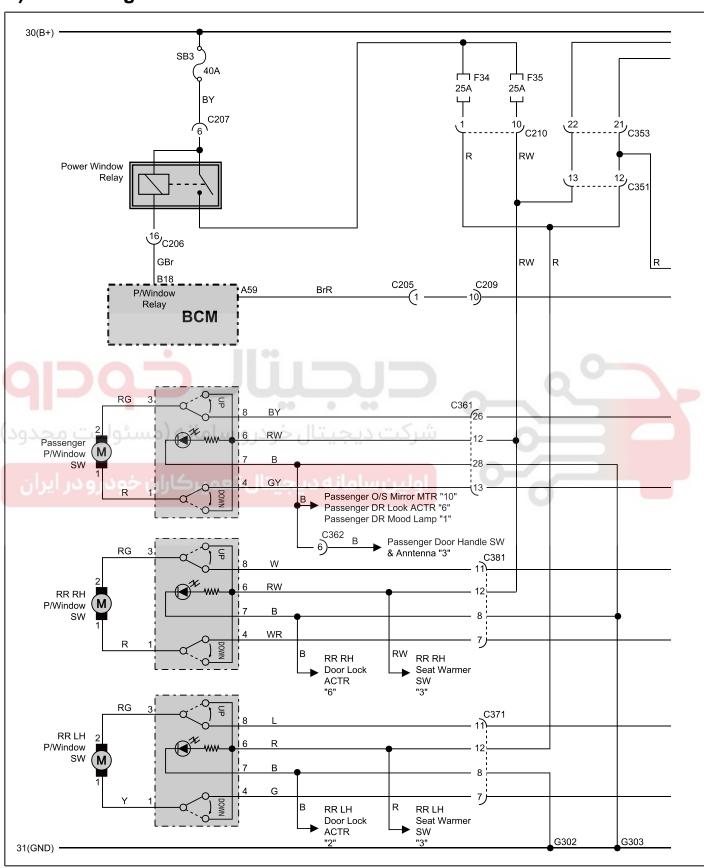


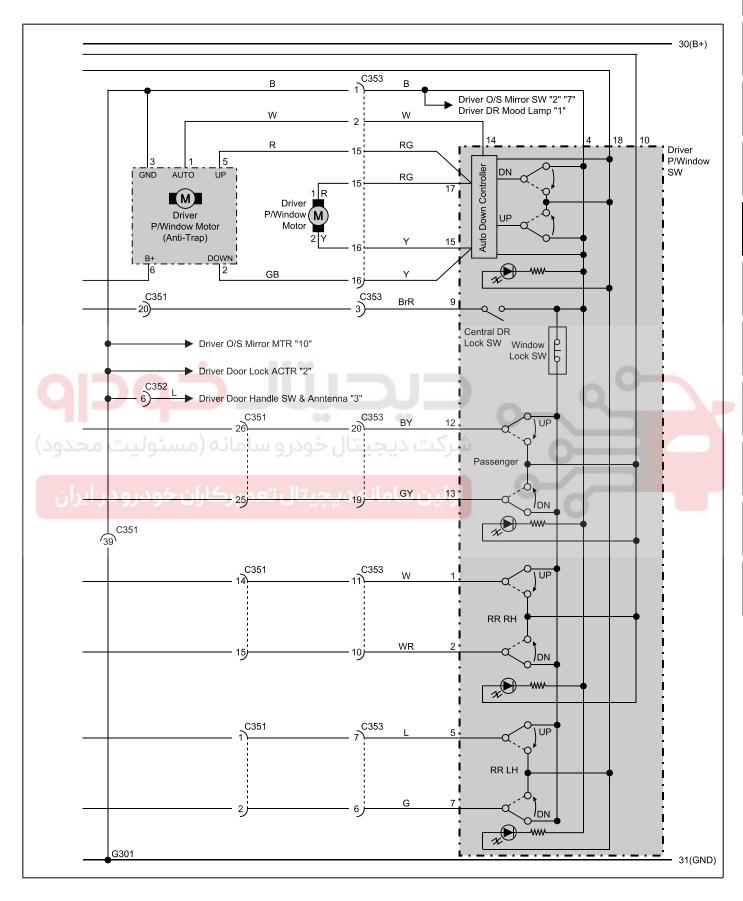
Pin No.	Function	Pin No.	Function
1	Window motor UP	5	-
2	-	6	Power supply
3	Window motor DOWN	7	Ground
4	Window down (main)	8	Window up (main)

شرکت دیجیتال خودر و سامانه (مسئولیت محدود

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

5) Circuit Diagram





TIVOLI

6810-01 HEATER AND A/C CONTROL ASSEMBLY

1) Overview

The heater and A/C control assembly is divided into two categories: dual automatic temperature control (DATC) and manual temperature control (MTC).

► Heater and A/C control (automatic)

DATC is a temperature control device which receives the signals from various sensors (interior temperature sensor, ambient temperature sensor, water temperature sensor, and sun load sensor) and the control switches to control the blower motor and all kinds of actuators (mode door actuator, mix door actuator, intake door actuator) through the logical operation of the MICOM. Because of this control of the DATC, the interior temperature of the vehicle is maintained at a temperature set by the driver. The driver can check the status of A/C through the dial indicator of DATC. The fan speed and the temperature are adjusted automatically based on the input signals from various sensors to keep the indoor air fresh.

If the DATC system is defective, the MICOM performs self-diagnosis for the system to inform the driver of the defect. The driver can get the detailed information about the defect by using the self-diagnosis function.

► Heater and A/C control (manual)

The manual temperature control (MTC) system controls all the actuators (mode door actuator, mix door actuator, intake door actuator) and blower motor with driver inputs.

The driver can check the status of A/C through the dial indicator of MTC.

2) Mounting Location and Components

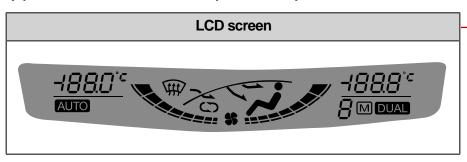




V O L

3) Operating Process

(1) Heater and A/C control (automatic)



Defroster mode switch

This is used to remove the condensation on the windshield. When you press the switch, the indicator comes on and the air is directed through the windshield outlet. After changing to fresh air mode, 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.

MEMORY switch

When this switch is pressed, the driver temperature, passenger temperature, AC ON or OFF status, air distribution, air source selection, dual function are memorized. This switch allows the driver to store up to three different memory profiles (1M, 2M, 3M). Pressing the switch turns on the indicator and recalls the memory settings.

ON/OFF switch

Pressing the switch turns the DATC on/off. When the DATC is turned on, the system recalls the previous settings which were set before it is switched off.

Driver side temperature control switch

Pressing the switch changes the set temperature. The LCD screen shows the set temperature.

A/C switch

W)

MEMORY

ON/OFF

TEMP

When the switch is pressed, the indicator comes on and the air conditioner starts at the same time. Pressing the switch again turns off the indicator lamp and stops the air conditioner operation at the same time.

SWITCH

TIVOLI 2015.06

4888° A M DUAL

I V O L I

AUTO switch

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

Air source selection switch

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

DUAL switch

When this switch is pressed, the indicator is turned on and the heater and A/C operation for the passenger's seat can be adjusted separately from the heater and A/C operation for the driver's seat

Air distribution switch (switches in order)

Pressing the switch changes the air distribution mode from among vent, bi-level, floor, and defrost & floor. The selected mode is displayed on the LCD screen.

Fan speed dial

DUAL

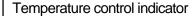
Turn the dial to the left or right to adjust the fan speed in 8 steps and the fan speed can be checked through the LCD screen.

Passenger side temperature control switch

Pressing the switch changes the set temperature. The LCD screen shows the set temperature.

V O L

(2) Heater and A/C control (manual)



Defroster mode switch

This is used to remove the condensation on the windshield. When you press the switch, the indicator comes on and the air is directed through the windshield outlet. After changing to fresh air mode, the air conditioner starts to operate.

Air recirculation switch

When the switch is pressed, the indicator comes on and the interior air recirculates at the same time.

Vent mode switch

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

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 turns off the indicator lamp and stops the air conditioner operation at the same time.

Bi-level mode switch

If the switch is pressed, the indicator comes on and the air is distributed through the panel vents and floor vents.

SWITCH

TIVOLI 2015.06

Temperature control switch

Pressing the switch changes the set temperature.

MAX A/C control switch

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

Fresh air switch

When the switch is pressed, the indicator comes on and the outside air flows in at the same time.

Defrost & floor mode switch

When the switch is pressed, the indicator comes on and the air is distributed through the windshield defroster ducts and floor vents.

Fan speed dial

Turn the dial to the left or right to adjust the fan speed in 7 steps.

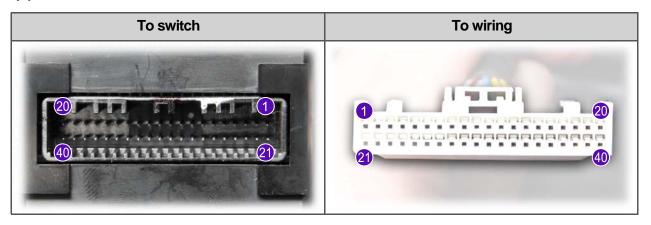
Floor mode switch

When the switch is pressed, the indicator comes on and the air is directed through the floor vents.

T I V O L I

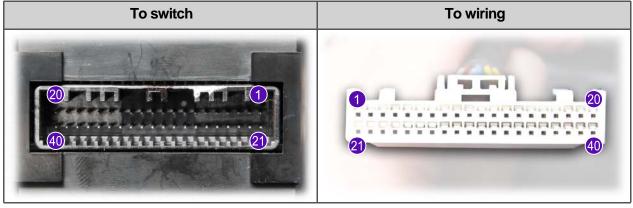
4) Connector

(1) Automatic



Pin No.	Function	Pin No.	Function	
1	Ground	21	-	
2	Sensor ground	22	-	
3	Detecting passenger's air mix	23		
	position	24		
4	Detecting intake position	25	0 -	
ا محدود	Detecting driver's air mix position	26	شرکت	
6	Detecting mode position	27		
ار ای ر ان	Passenger's air mix (P2_COOL)	28	Ambient temperature sensor	
8	Passenger's air mix (P1_HOT)		REF (5V)	
9	Intake (P2_RECIRC)	29	-	
10	Intake (P1_FRESH)	30	-	
11	Driver's air mix (P2_COOL)	31	Sun-load sensor signal	
12	Driver's air mix (P1_HOT)	32	Ambient temperature sensor signal	
13	Mode (P2_DEF)	33	Water temperature sensor signal	
14	Mode (P1_VENT)	34	Intake sensor signal	
15	Vehicle speed	35	Blower motor feedback	
16	Illumination ground	36	Blower motor control	
17	Illumination power supply	37	Max. blower speed signal (D16DTF)	
18	Actuator REF (5 V)	38	Blower ON signal (D16DTF)	
19	IGN2	39	A/C compressor ON signal	
20	B+	40	PTC ON signal (D16DTF)	

(2) Manual



Pin No.	Function	Pin No.	Function
1	Ground	21	-
2	Sensor ground	22	-
3	-	23	-
4	Detecting intake position	24	
5	Detecting air mix position	25	0
6	Detecting mode position	26	0 -
ئولىت م	یجیتال خودرو سامانه (مس	27	0
8		28	Ambient temperature sensor
9	Intake (P2_RECIRC)	اولین،	REF (5V)
10	Intake (P1_FRESH)	29	-
11	Air mix (P2_COOL)	30	-
12	Air mix (P1_HOT)	31	Sun-load sensor signal
13	Mode (P2_DEF)	32	Ambient temperature sensor signal
14	Mode (P1_VENT)	33	Water temperature sensor signal
15	Vehicle speed	34	Intake sensor signal
16	Illumination ground	35	Blower motor feedback
17	Illumination power supply	36	Blower motor control
18	Actuator REF (5 V)	37	Max. blower speed signal (D16DTF)
19	IGN2	38	Blower ON signal (D16DTF)
20	B+	39	A/C compressor ON signal

40

	Modification basis		
	Application basis		
www.		LKHODR	O.COM

PTC ON signal (D16DTF)

V O L

8510-15 CENTER FASCIA SWITCH ASSEMBLY

1) Overview

The center fascia switch consists of the rear glass/outside rear view mirror heating switch, TRIP/SET switch, hazard warning flasher switch and smart steer switch.

2) Mounting Location and Components



3) Operating Process

(1) Rear glass/outside rearview mirror heating switch



Rear glass/outside rearview mirror heating switch

When the rear glass/outside rearview mirror heating switch is pressed, the heated wires on the rear glass and the outside rearview mirror are turned on for about 12 minutes. Pressing the switch again turns off the heating elements.

When the switch is pressed again within 10 minutes after completion of its first operation cycle (12 minutes), the heated wires will be turned on for about 6 minutes The indicator lamp illuminates while the heated wires are activated.

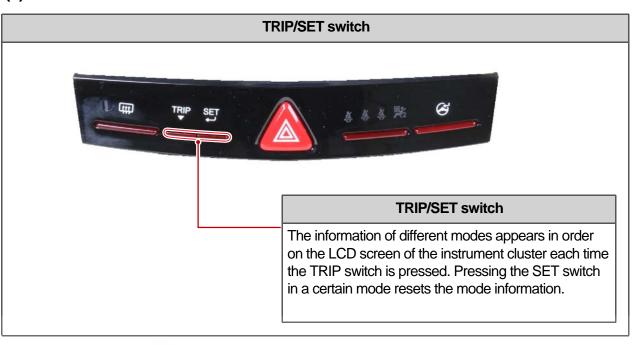


🕹 NOTE

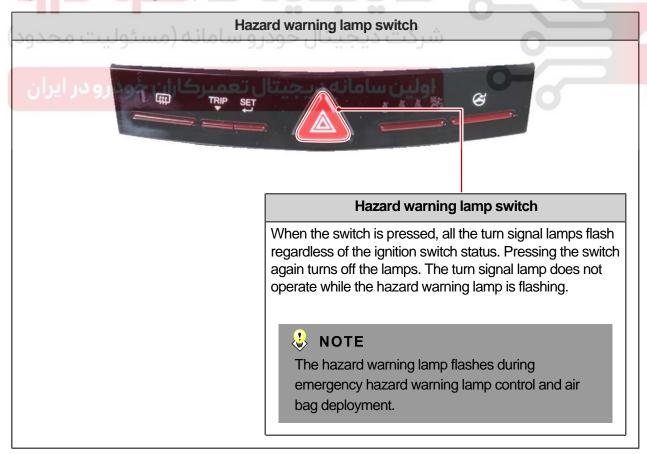
The switch is operable only when the engine is running.

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(2) TRIP/SET switch



(3) Hazard warning lamp switch



(4) Rear seat belt indicator & PAB OFF indicator

(4) Rear seat belt indicator & PAB OFF indicator

Rear seat belt indicator

- 1. The indicators for unfastened rear seat belts (LH, RH and center) come on for 33 seconds with the engine started (rear doors closed).
- 2. The indicator goes out when the seat belt is fastened with the rear seat belt indicator on.
- 3. The indicator goes out when the ignition is turned off with the rear seat belt indicator on.
- 4. The rear seat belt indicator comes on for max. 33 seconds when the rear seat belt is unfastened. (Passenger recognized when the rear LH, RH or center seat belt is fastened with engine started)
- 5. It illuminates the indicator for max. 33 seconds each time the rear seat belt which has been buckled by a passenger is unfastened.
- 6. When the vehicle is stationary and the rear LH and RH doors are open, the rear seat belt passenger recognition is reset, the rear seat belt indicator output is off. The operation above is repeated when the rear door is closed.



PAB OFF indicator

The PAB is deactivated and PAB OFF indicator comes on when the PAB OFF switch is turned off.

V O L

(5) Smart steer switch

Smart steer switch



Smart steer switch

Pressing the smart steer switch displays the currently selected steer mode on the screen of the instrument cluster. The mode is changed in the order of COMFORT \rightarrow NORMAL \rightarrow SPORT each time the switch is pressed within 4 sec. If the switch is not pressed within 4 sec., the mode returns to the previously selected mode. The selected smart steer mode is maintained even if the ignition switch is turned OFF and ON again.

Supervision instrument cluster	Standard instrument cluster	Operating conditions
Steering Mode COMFORT	COMFORT	The COMFORT mode is used when smoother or more comfortable ride than NORMAL mode is required.
نه (م سئولیت مح دود)	•• ديجيتال خودرو ساما	شرکت
Steering Mode NORMAL	NORMAL	The NORMAL mode is used for typical driving conditions.
Steering Mode SPORT	SPORT	The SPORT mode is used for heavy steering (heavier than NORMAL mode) and high speed operation.

A CAUTION

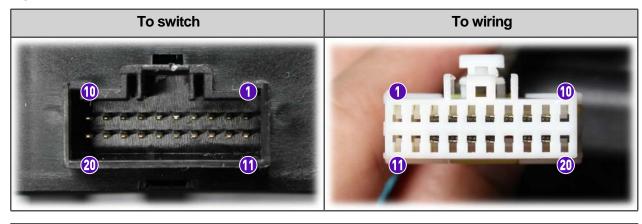
- When changing smart steer mode during driving, all attention should be kept on the roadway ahead. When changing the smart steer mode while turning the steering wheel, the selected mode is
- displayed on the instrument cluster screen, but the steering force may not change immediately. If this is the case, the mode will be changed to the selected mode automatically after the steering wheel has been operated.
 - If the EPS system does not operate because of the malfunction in the system, the smart steer mode
- will not be available.

SWITCH

TIVOLI 2015.06

4) Connector

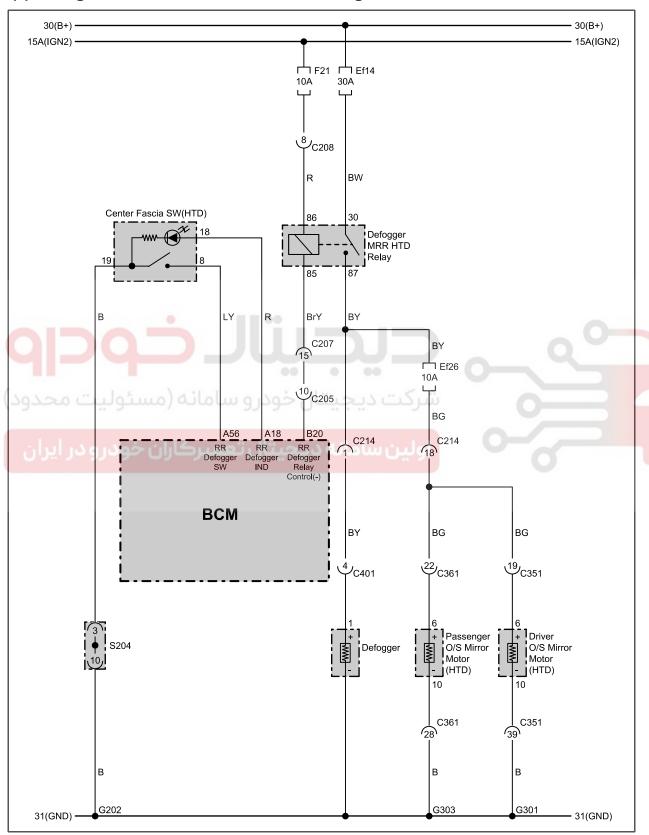
T I V O L I



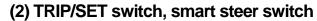
Pin No.	Function	Pin No.	Function
1	-	11	-
2	-	12	-
3	IGN+	13	PAB OFF indicator
4	Smart steer switch signal	14	Rear seat belt indicator 1
5	Hazard warning lamp switch signal	15	Rear seat belt indicator 2
ىئەرگىت م	SET switch signal	ش16	Rear seat belt indicator 3
7	TRIP Switch signal	17	
خودھ و در	Rear glass heating switch signal	18	Rear glass heating switch indicator
9	Tail lamp relay "87" (Interior)	19	Ground
10	-	20	-

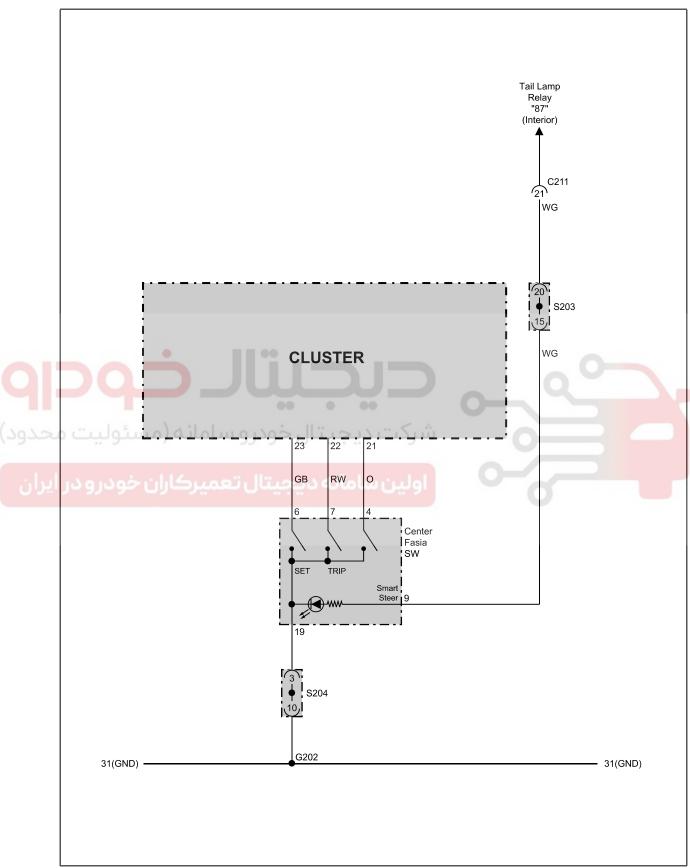
5) Circuit Diagram

(1) Rear glass/outside rearview mirror heating switch

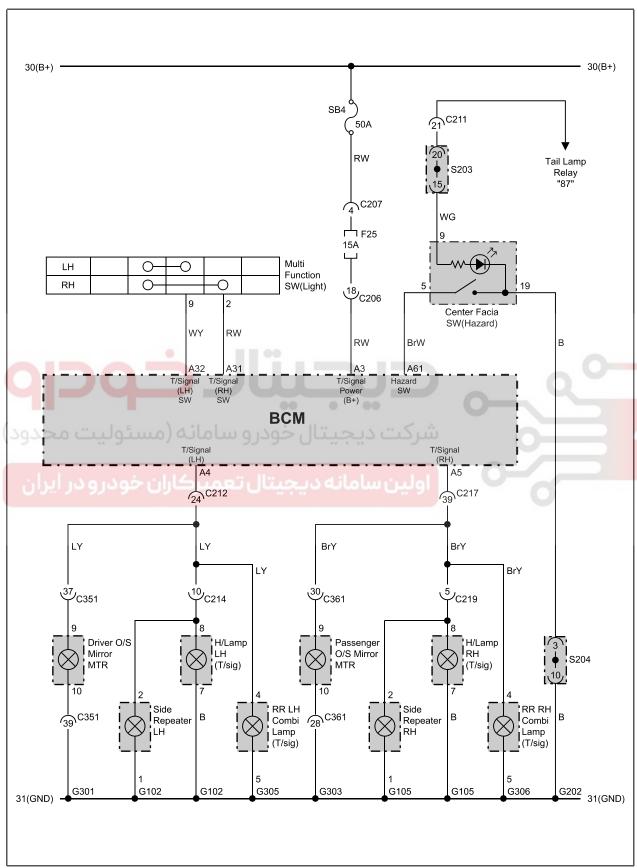


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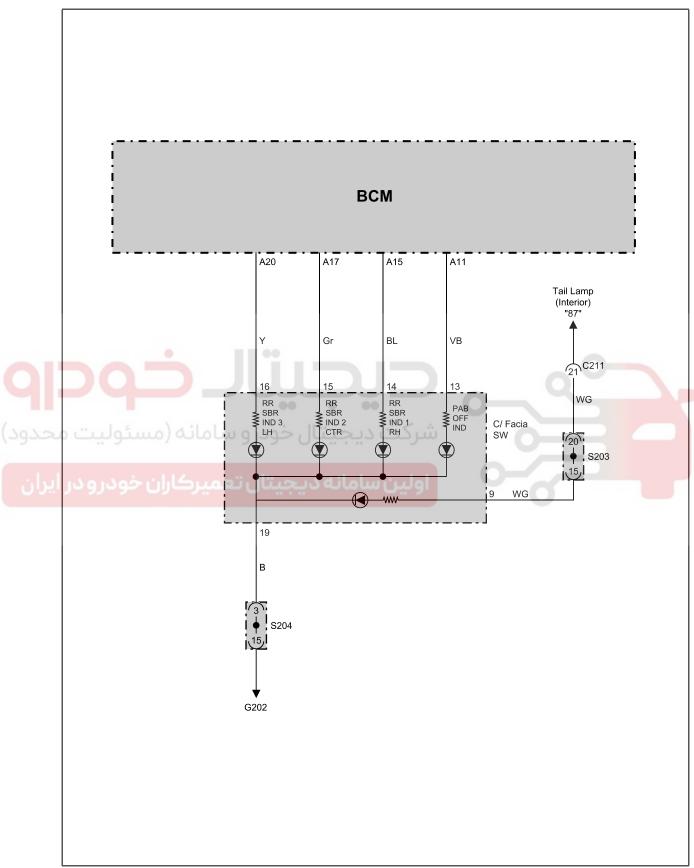


(3) Hazard warning lamp switch



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V O L

8510-07 LOWER MAIN SWITCH ASSEMBLY

1) Overview

The lower main switch consists of the driving mode switch (E \rightarrow P \rightarrow W switch), ESP OFF switch (ESP deactivation switch), 4WD LOCK switch (for 4WD vehicle), steering wheel warmer switch, and the PAS front sensor OFF switch.

2) Mounting Location and Components



I V O L

3) Operating Process

(1) Driving mode switch



▶ E (ECO) mode switch

This fuel-saving mode is used for normal driving and does not trigger any indicator lamp on the instrument cluster.

▶ P (POWER) mode switch



The driving force of the vehicle is increased forcibly by a certain amount in this mode. Pressing the mode switch once in E (ECO) mode changes the driving mode to POWER mode and turns on the POWER mode indicator on the instrument cluster.

W (WINTER) mode switch



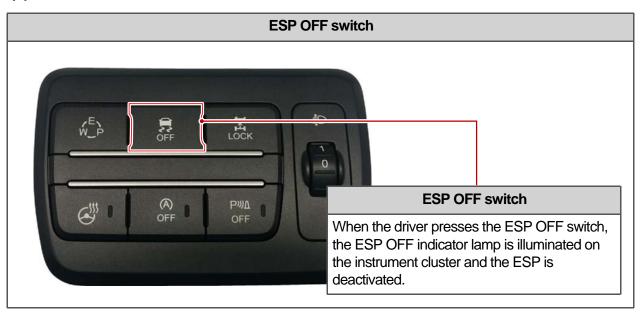
When starting off the vehicle in this mode on icy roads, the 2nd gear is selected to prevent slipping.

Pressing the drive mode switch once in POWER mode changes the mode to WINTER mode and turns on the WINTER mode indicator on the instrument cluster.

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T I V O L

(2) ESP OFF switch



► ESP ON indicator/warning lamp

The electronic stability program (ESP) is a supplementary safety system. This is used when your vehicle is unstable in a certain situation, such as during a sharp cornering. The ESP controls the brake on a certain wheel(s) or the engine torque to stabilize the vehicle. This system reduces the risk of the vehicle skidding or overturning.

If the driving wheels are slipping on snowy or icy roads, the engine rpm may not be increased even when the accelerator pedal is depressed, and accordingly, the vehicle may not start off. In this case, stop the ESP function by pressing the ESP OFF switch. When the ESP OFF switch is pressed, the ESP function is deactivated and the ESP OFF indicator lamp is turned off. Therefore, the vehicle can be driven independently from the sensor outputs. However, the ABS function is still available.

▶ ESP OFF indicator



When the ESP OFF switch is pressed, the ESP function is deactivated and the ESP OFF indicator on the instrument cluster comes on. Pressing the switch again resumes the ESP function. At this time, the ESP OFF indicator goes out.

► ESP ON indicator/warning lamp



Flashing: When ESP is activated.

Stays ON: Faulty ESP system

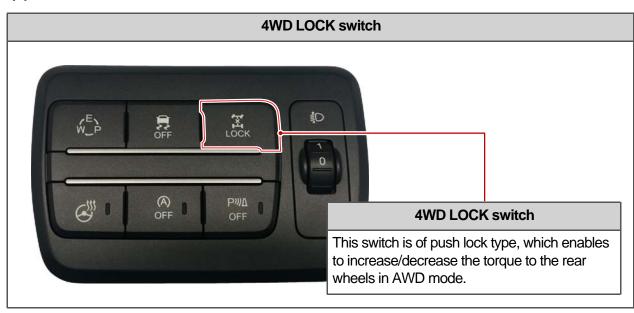
The indicator flashes when the ESP function is activated. The indicator stays on when the ESP system is faulty.

SWITCH

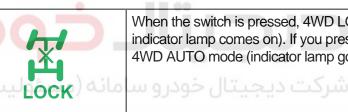
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(3) 4WD LOCK switch



▶ 4WD LOCK indicator



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 LOCK mode (4WD LOCK switch pressed)

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

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V O L

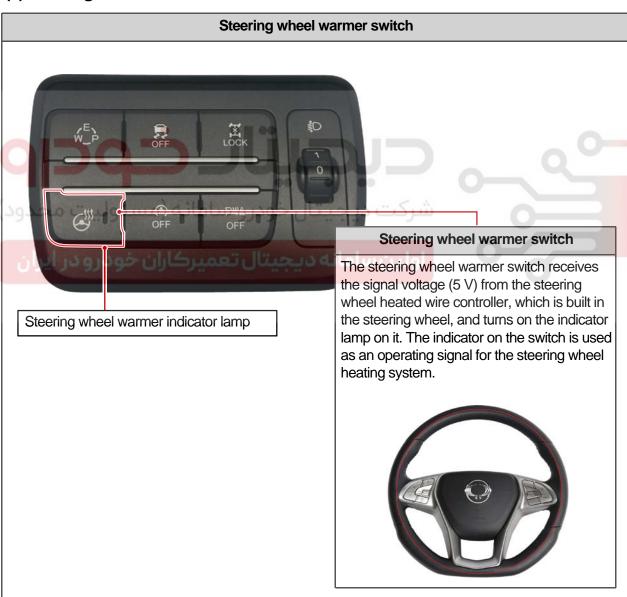


🕹 NOTE

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.

(4) Steering wheel warmer switch



(5) ISG OFF switch

I V O L I

ISG OFF switch



ISG OFF switch

When the ISG OFF switch is pressed, the message "AUTO STOP System OFF" appears for 5 seconds on the instrument cluster display and the ISG is deactivated.

Instrument cluster display

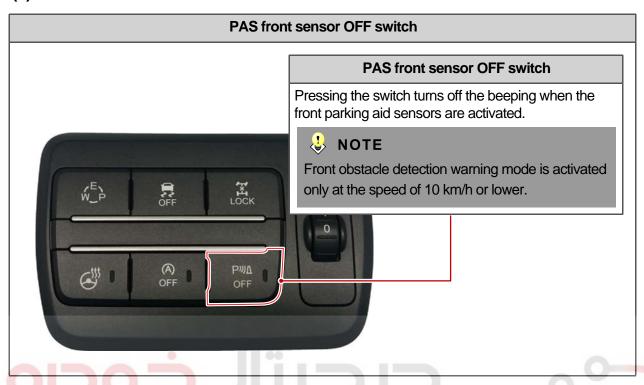


♣ NOTE

- The ISG is not activated when the ISG operating conditions are not met even if the ISG OFF switch is not pressed.
- Refer to "ISG SYSTEM" for ISG operating conditions.

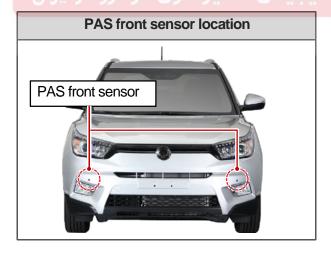
V O L

(6) PAS front sensor OFF switch



▶ PAS front sensor OFF switch

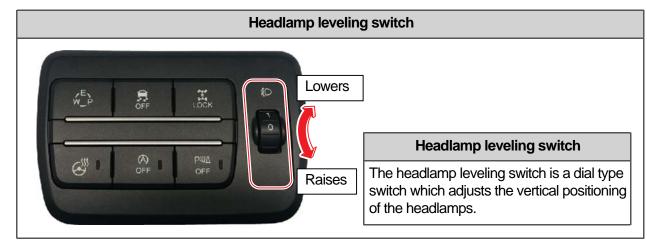
When the switch is pressed, the LED on the switch is turned on and no sound is heard even if obstacles in front of the vehicle are detected. However, the detection is displayed on the LCD screen of the instrument cluster.



Instrument cluster display		
When driving forward (D)	When driving backward (R)	
0000 265649km	H	

I V O L

(7) Headlamp leveling switch



► Headlamp leveling switch

The angle of the headlamp beam varies depending on the load carried

by the vehicle. This device allows the headlamp leveling actuator to adjust the vertical positioning of the headlamp in 4 stages (level 0 to 3)

depending on the electrical signal when the headlamp leveling switch is operated by the driver, in order to compensate for the aiming angle variation due to the vehicle load change.

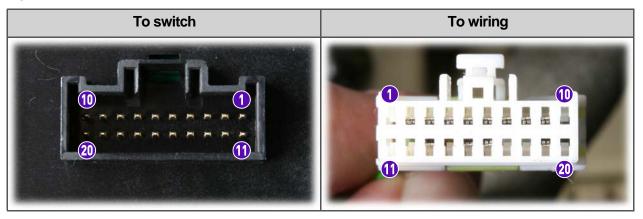
- To raise the level of headlamp: rotate the button downward (level 0 direction)
- To lower the level of headlamp: rotate the button upward (level 3 direction)

▶ Adjusting aiming level (weight per person: 75 kg)

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Level 0	Level 1		Level 2	Level 3
Driver only/ Driver + 1 front passenger (normal driving condition)	Driver only/ Driver + 1 front passenger with 90 kg luggage loading	4 to 5 passengers (including driver)	4 to 5 passengers (including driver) with 100kg luggage loading	Driver only with 400kg luggage loading
	90kg		100kg	400kg

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4) Connector

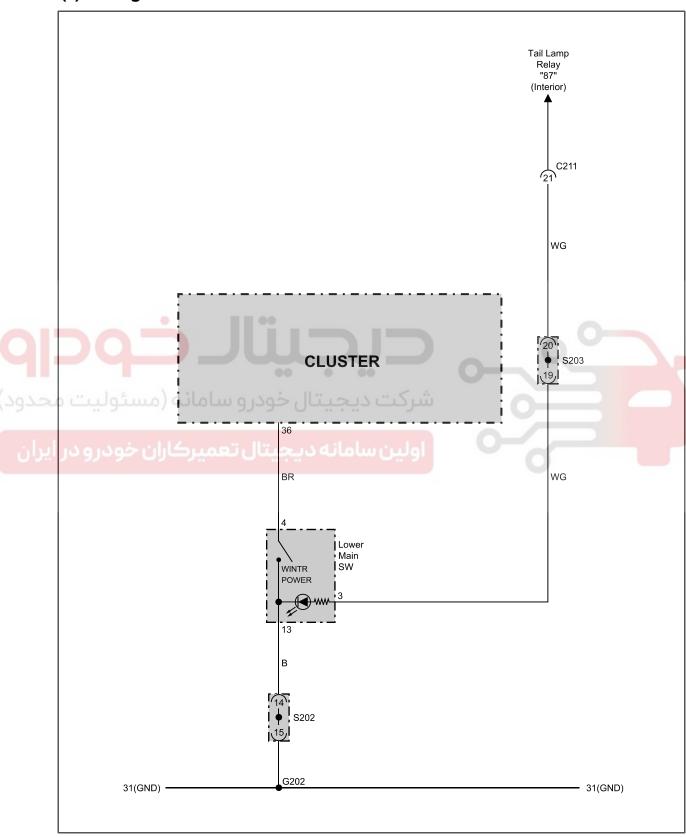


Pin No.	Function	Pin No.	Function
1	-	11	-
2	IGN+	12	-
3	Tail lamp relay "87" (Interior)	13	Ground
4	WINTER/POWER mode switch signal	14	
ت محدود)	Front PAS OFF switch indicator lamp	15 ت دیجیت	Steering wheel warmer switch indicator
6	Front PAS OFF switch signal	16 ن سامانه	Steering wheel warmer switch signal
7	ESP OFF switch signal	17	ISG OFF indicator
8	Headlamp leveling switch power	18	ISG OFF switch signal
9	Headlamp leveling switch signal	19	4WD LOCK switch signal
10	-	20	-

I V O L

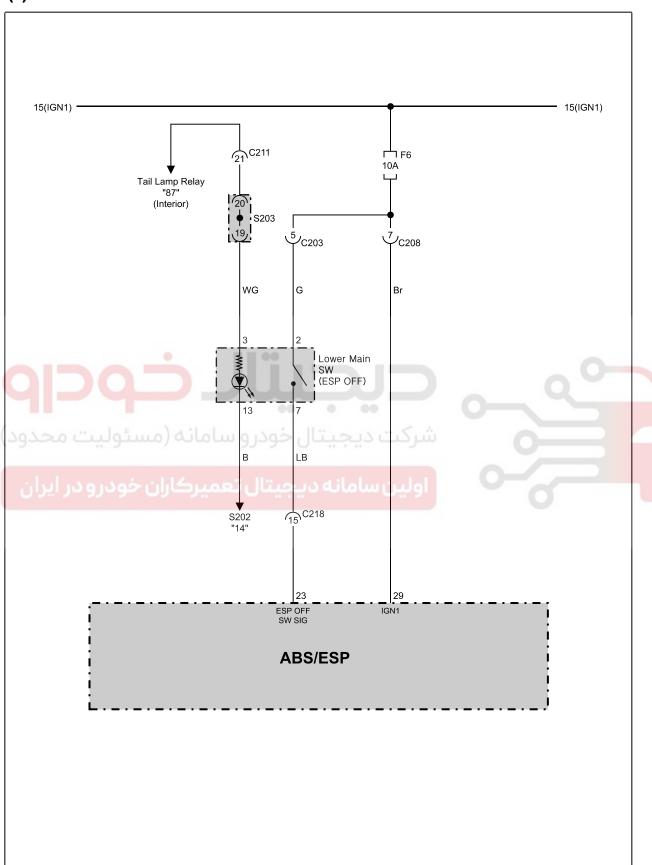
5) Circuit Diagram

(1) Driving mode switch



T I V O L I

(2) ESP OFF switch

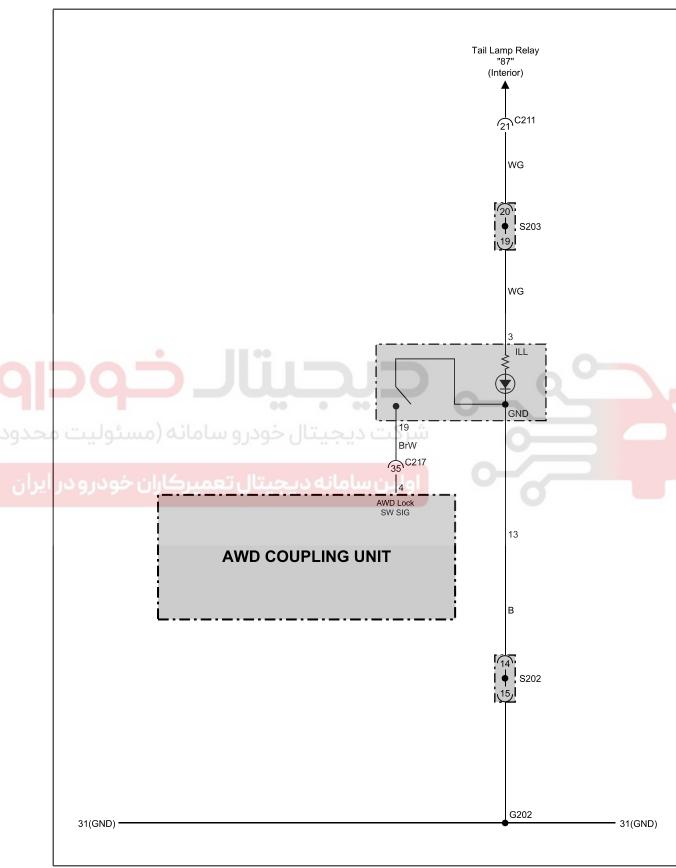


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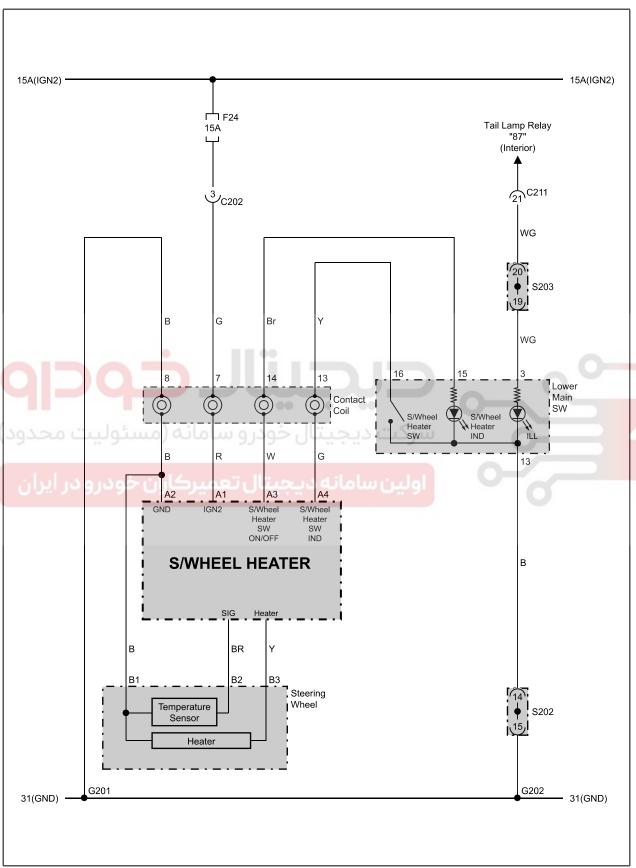
(3) 4WD LOCK switch



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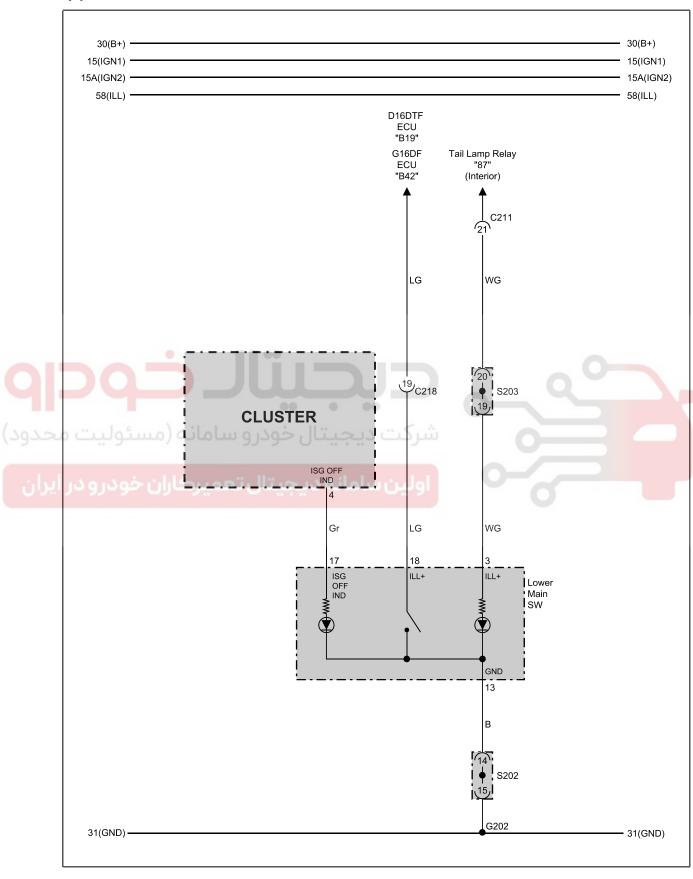
V O L

(4) Steering wheel warmer switch



(5) ISG OFF switch

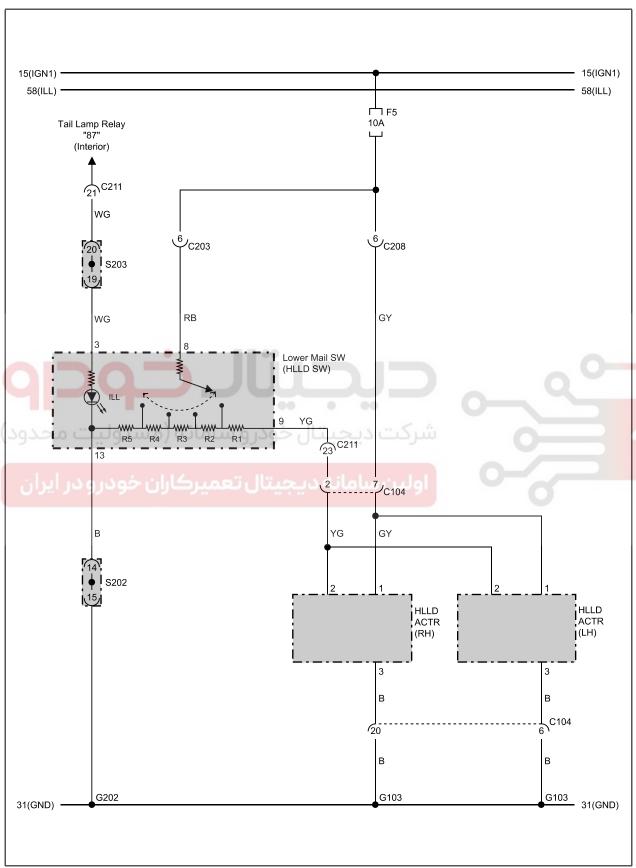
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V O L

(6) Headlamp leveling switch



SWITCH

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8530-01 MULTIFUNCTION TURN SIGNAL LAMP SWITCH

1) Overview

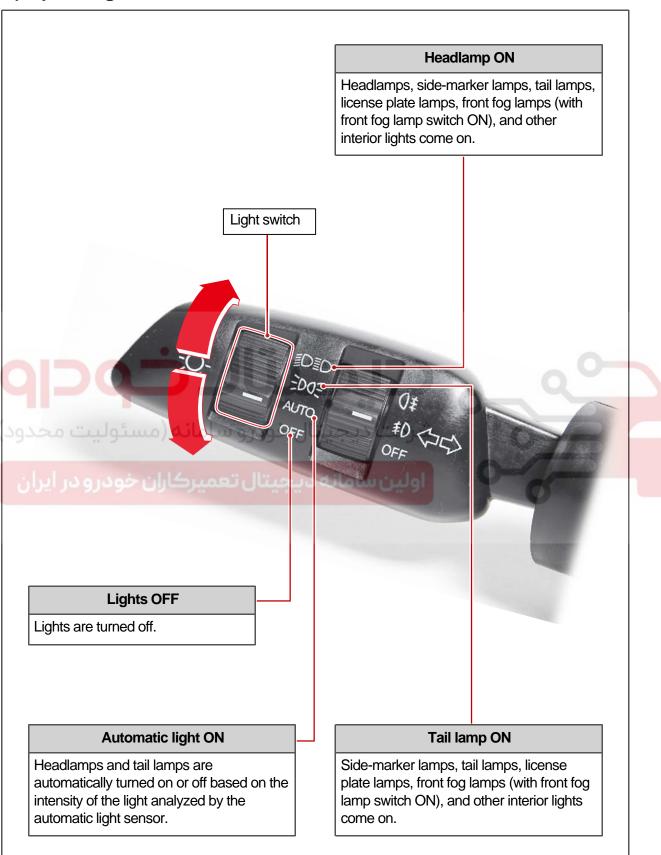
The multifunction turn signal lamp switch turns on or off the headlamps (high beam, low beam), tail lamps, fog lamps, turn signal lamps, license plate lamps, and other interior lights. The BCM controls the various lamps including the headlamps, tail lamps, AUTO lights, fog lamps by using the operation signals from the multifunction turn signal lamp switch. The AUTO light control system is to turn on or off the tail lamps and headlamps automatically. The AUTO light sensor unit for the system is installed behind the ECM mirror on the top center of the windshield glass. This sensor unit detects the ambient brightness and automatically turns on or off the tail lamps and headlamps when the multifunction turn signal lamp switch is move to the AUTO position.

2) Mounting Location and Components



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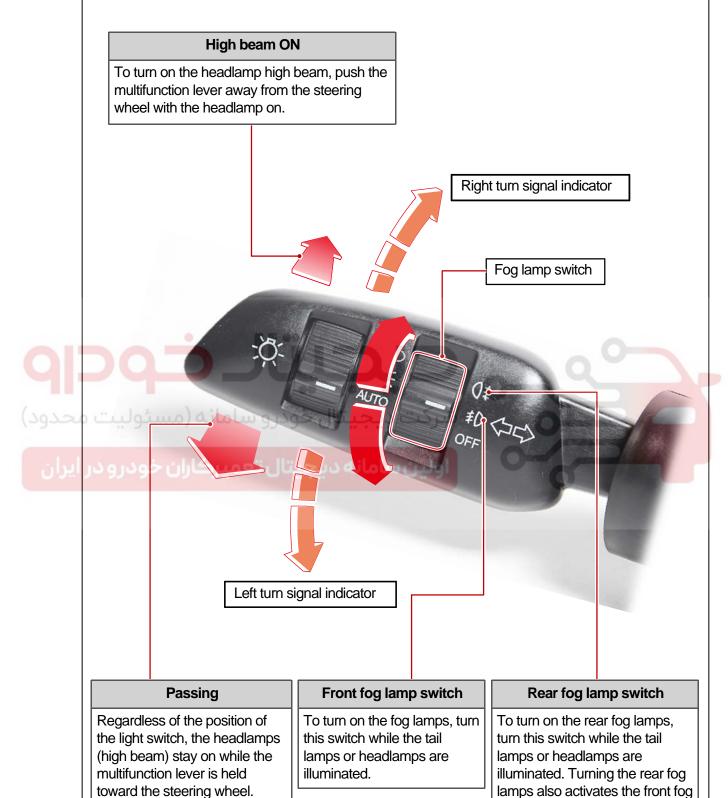
3) Operating Process



SWITCH

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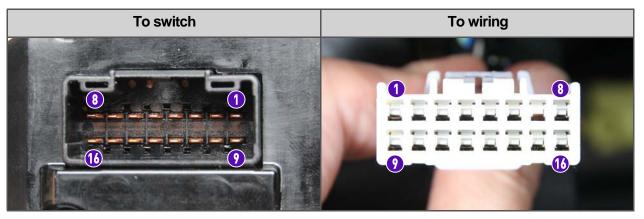
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lamps.

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4) Connector



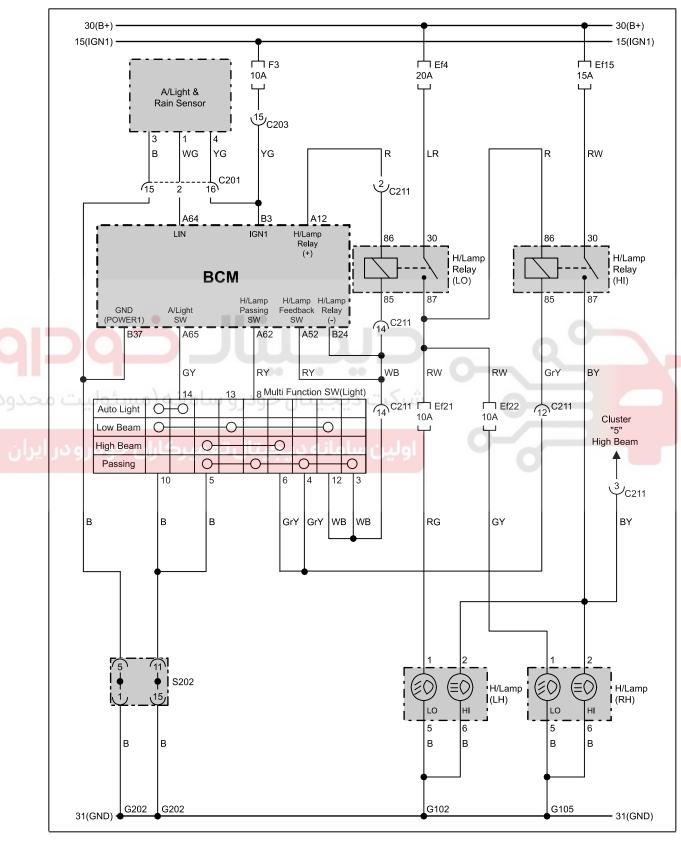
Pin No.	Function	Pin No.	Function
1	Ground (turn signal lamp)	9	Left turn signal indicator signal
2	Right turn signal indicator signal	10	Ground (light/fog lamps/hazard warning lamp)
3	Headlamp switch (passing)	11	-
4	Headlamp high beam signal (passing)	12	Headlamp switch signal (passing)
5	Ground (dimmer)	13	Tail lamp switch signal
6	Headlamp high beam signal (dimmer)	14	AUTO light switch signal
در ایران	ديجيتال تعميركاران خودروا	ن س15س	Rear fog lamp switch signal
8	Headlamp switch (passing)	16	Front fog lamp switch signal

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5) Circuit Diagram

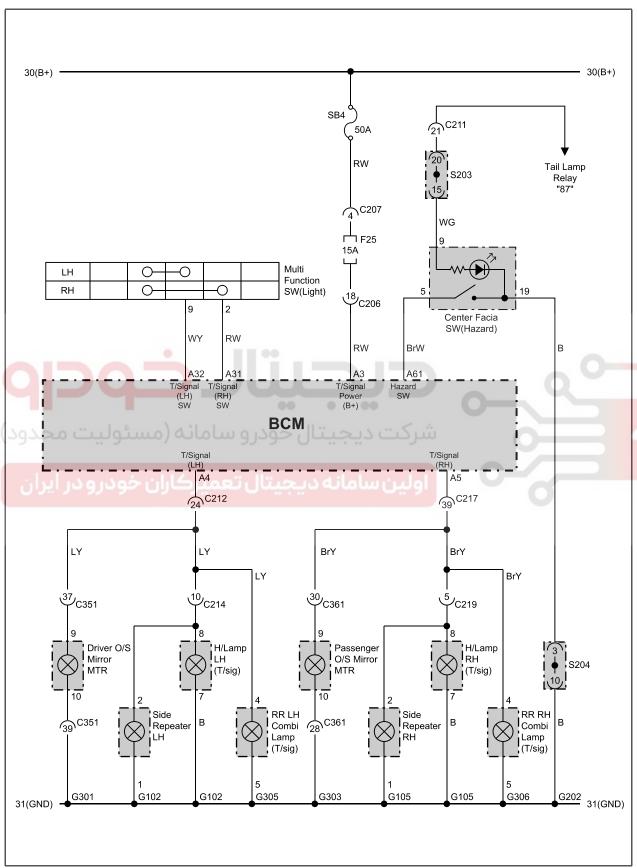
(1) Headlamp (AUTO light, low beam, high beam, passing)



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T I V O L I

(2) Turn signal lamp



0 L

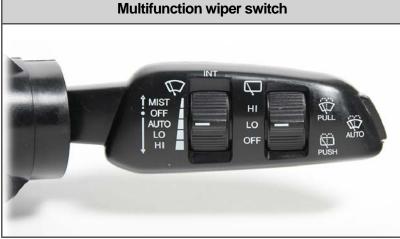
8530-02 MULTIFUNCTION WIPER SWITCH

1) Overview

The multifunction wiper switch controls the windshield wipers, windshield washer, rear wiper, and rear washer operations. The functions for the windshield wipers include MIST, OFF, AUTO, LO/HI, washer, and wiper sensitivity, while the functions for the rear wiper include HI/LO, OFF, and washer.

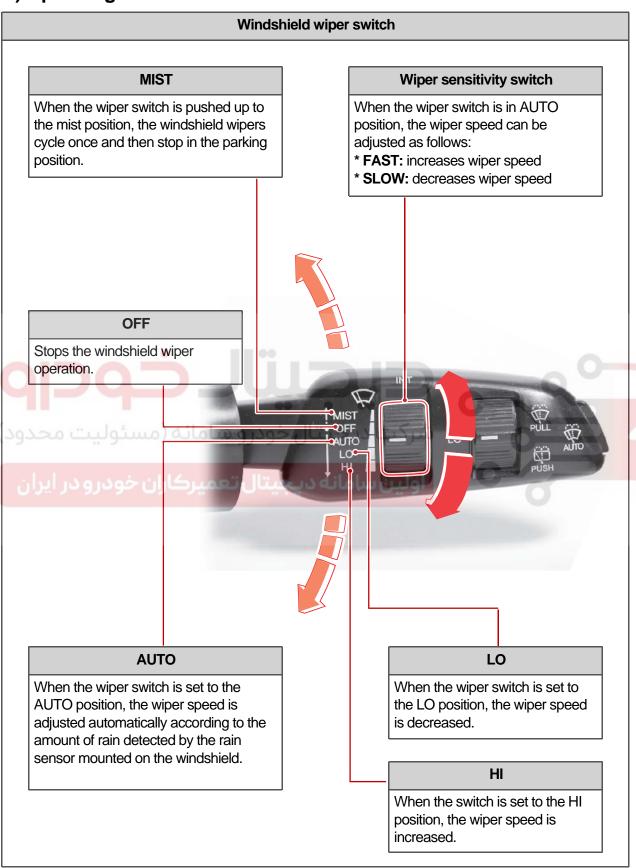
2) Mounting Location and Components





V O L

3) Operating Process



SWITCH

TIVOLI 2015.06

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Front auto washer switch

When the AUTO washer switch is pressed,

the washer fluid is sprayed once and the wiper cycles 4 times. Then, the fluid is sprayed once again with 3 cycles of the

Rear wiper switch

wiper.

HI

When the switch is set to the HI position, the rear wiper speed is increased.

LO

INT

 $\langle \nabla \rangle$

OFI

When the wiper switch is set to the LO position, the rear wiper speed is decreased.

OFF

Stops the rear wiper operation.

Washer coupled with wiper operation switch

MIST OFF

Pulled for 0.6 seconds or lower: Wiper cycles once more when the switch is released

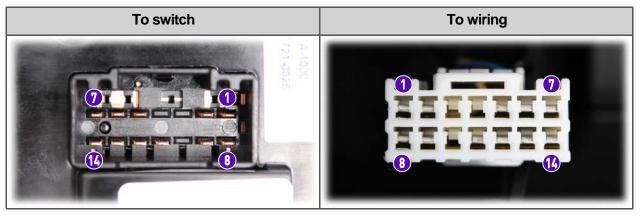
Pulled for 0.6 seconds or higher: Wiper cycles three times more when the switch is released

PUSH

The washer fluid is sprayed and the wiper cycles as long as this switch is pressed. When the switch is released, it returns to the "OFF" position and the wiper and washer operations are deactivated.

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4) Connector



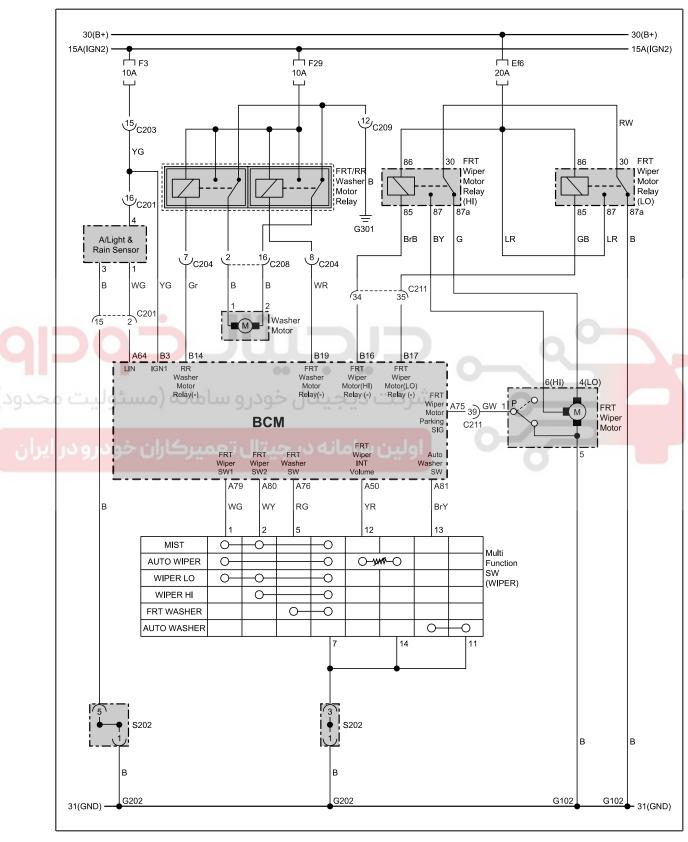
Pin No.	Function	Pin No.	Function
1	Windshield wiper switch signal 1	8	Rear wiper HI switch signal
2	Windshield wiper switch signal 2	9	Wiper low LO switch signal
3	-	10	-
4		11	Ground (rear wiper, AUTO washer)
5	Windshield washer switch signal	12	Wiper volume switch signal
3036	Rear washer switch signal	13	AUTO washer switch signal
7	Ground (windshield wiper and washer)	14	Ground (Wiper volume)

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5) Circuit Diagram

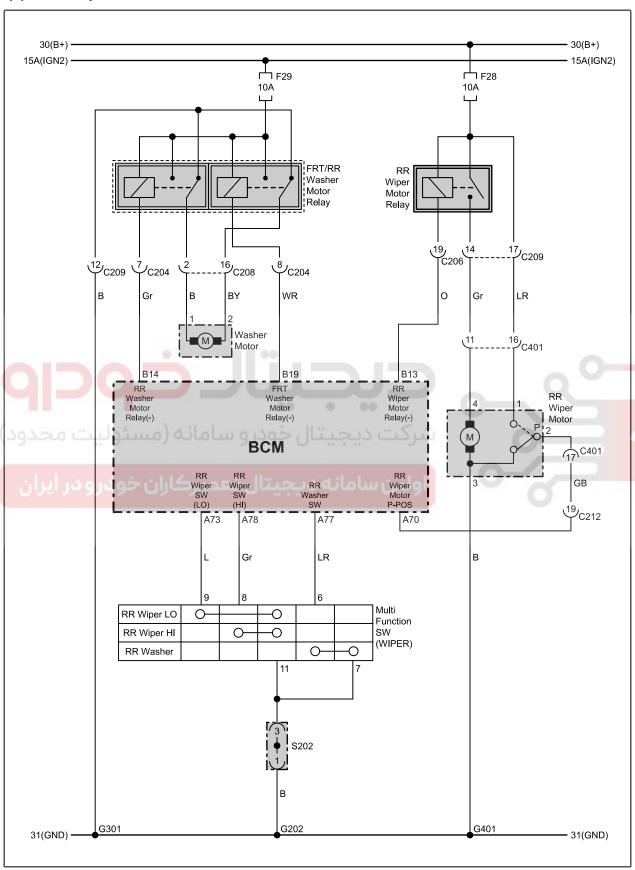
(1) Windshield wiper washer



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(2) Rear wiper washer



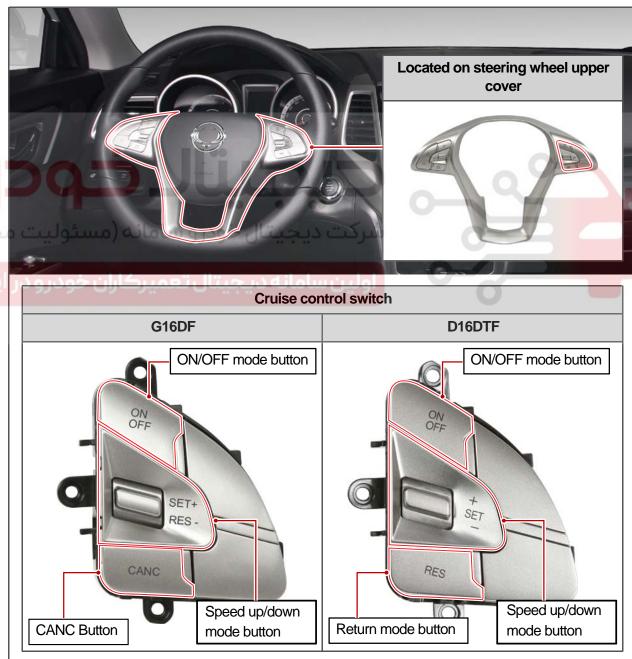
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8530-11 CRUISE CONTROL SWITCH ASSEMBLY

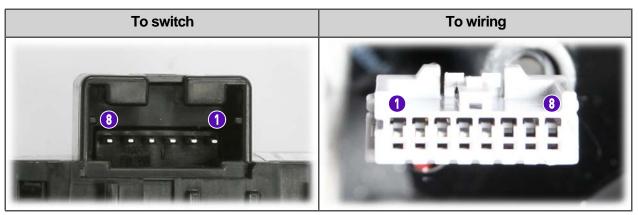
1) Overview

The cruise control switch assembly installed on the right side of the steering wheel controls the cruise control system. While the G16DF cruise control switch consists of the speed up (SET +), speed down (RES -), cruise ON/OFF and deactivation (CANC) modes, the D16DTF cruise control switch speed up/down (SET +/-), cruise ON/OFF and return (RES) modes.

2) Mounting Location and Components



3) Connector



Pin No.	Function	Pin No.	Function
1	ILL -	5	Ground
2	ILL+	6	-
3	Power supply	7	-
4	Cruise control signal	8	-

▶ Terminal No. 4 (Cruise control signal) voltage change by switch operation

Switch operation	Resistance Resistance	Operating voltage
No operation	Approx. 5 V	Approx. 5 V
ON/OFF JULY	75 Ω ± 1%	0.15 to 0.55 V
SET+	560 Ω ± 1%	1.6 to 2.0 V
RES- (SET-)	220 Ω ± 1%	0.7 to 1.1 V
CANCEL (RESUME)	1.2 KΩ ± 1%	2.52 to 2.92 V

* G16DF (D16DTF)

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8530-11

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FUSE

BCM

SKM

■ LCH

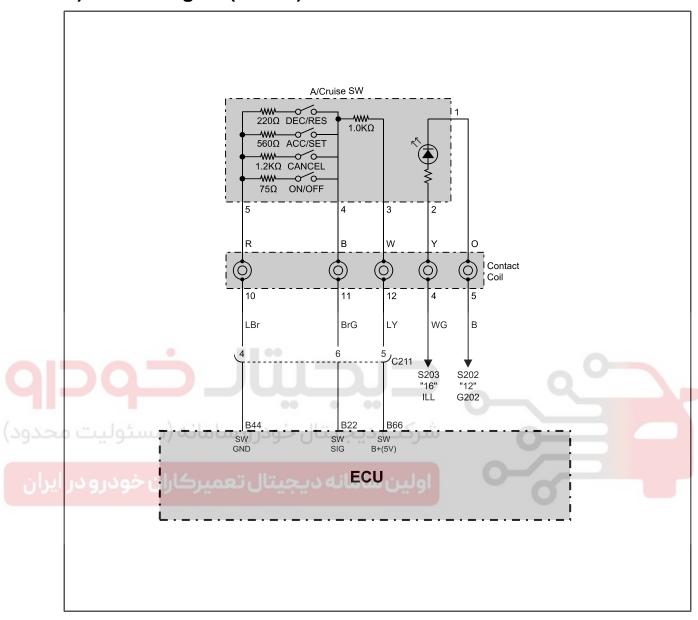
LAMP

AND

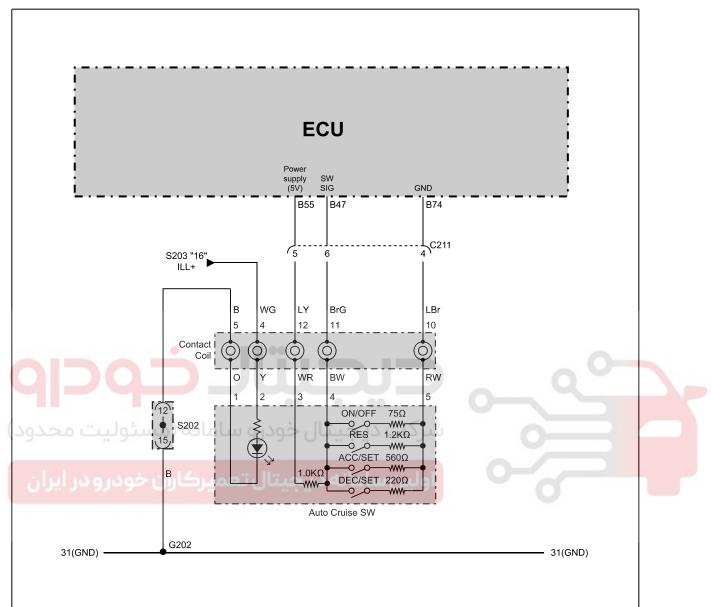
AUDIO

ISG SYSTEN

4) Circuit Diagram(G16DF)



5) Circuit Diagram(D16DTF)

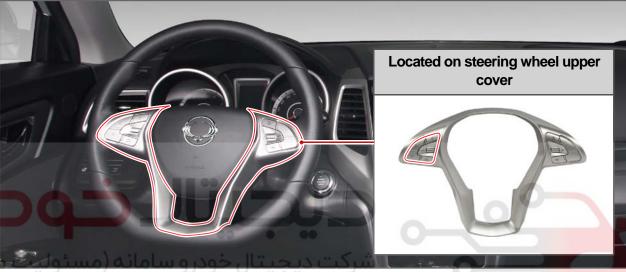


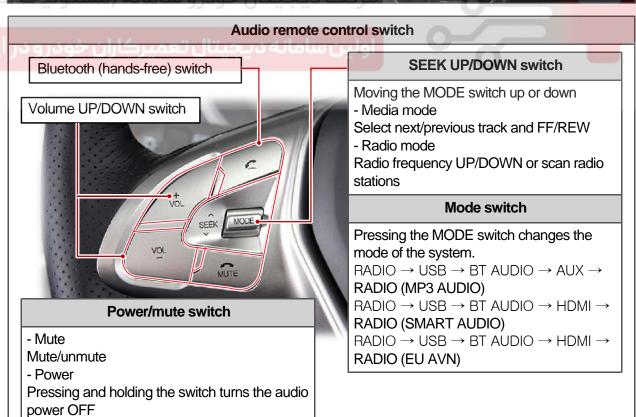
V O L I

8530-10 AUDIO REMOTE CONTROL SWITCH ASSEMBLY

1) Overview

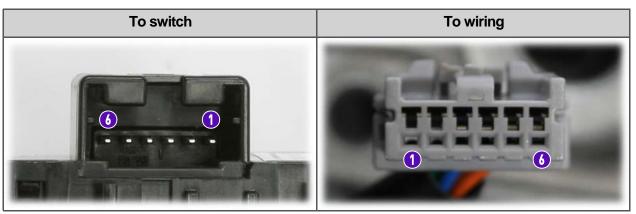
The audio control switch assembly installed on the left side of the steering wheel controls the audio remote control system. The audio remote control switch assembly consists of the Bluetooth handsfree switch, SEEK UP/DOWN switch, volume UP/DOWN switch, audio power switch, and audio operation mode switch.





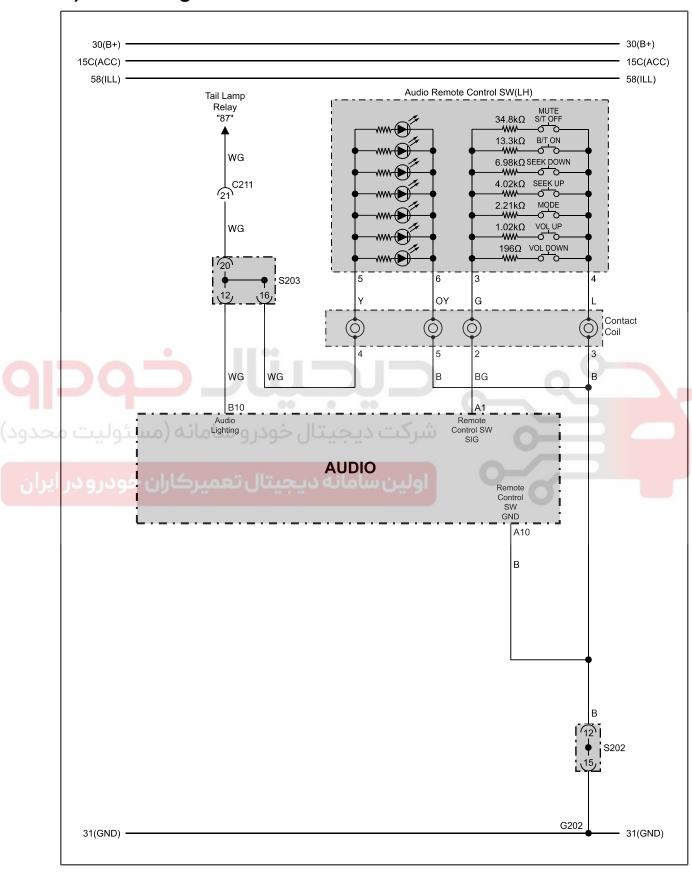
T I V O L I

3) Connector



Pin No.	Function	Pin No.	Function
1	-	4	Audio remote control switch signal ground
2	-	5	Illumination power supply
3	Audio remote control switch signal	6	Illumination ground

Switch operation	Resistance	Operating voltage
Volume down	196 Ω ± 1%	0 to 0.4 V
Volume up	1.02 KΩ ± 1%	0.7 to 1.1 V
عمیرکاران Mode و در ایران	2.21 KΩ ± 1%	1.4 to 1.8 V
MUTE	34.8 KΩ ± 1%	4.2 to 4.6 V
SEEK up	4.02 KΩ ± 1%	2.1 to 2.5 V
SEEK down	6.98 kΩ ± 1%	2.8 to 3.2 V
Bluetooth (hands-free) - ON	13.3 KΩ ± 1%	3.5 to 3.9 V
Bluetooth (hands-free) - OFF	34.8 KΩ ± 1%	4.2 to 4.6 V

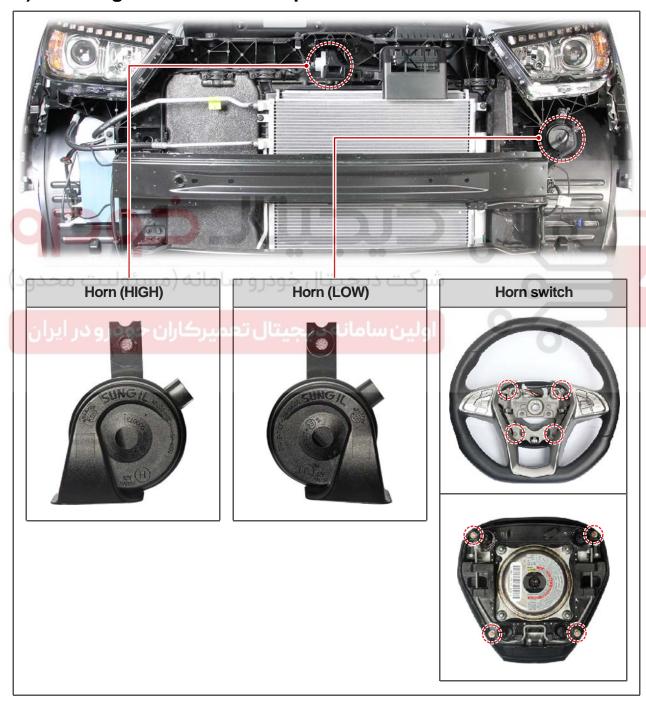


V O L I

8610-06 HORN ASSEMBLY

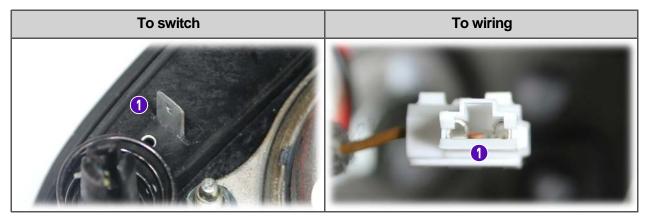
1) Overview

When pressing the horn switch on the steering wheel, the horn relay is switched on, causing the horn sounds.



3) Connector

► Horn switch connector



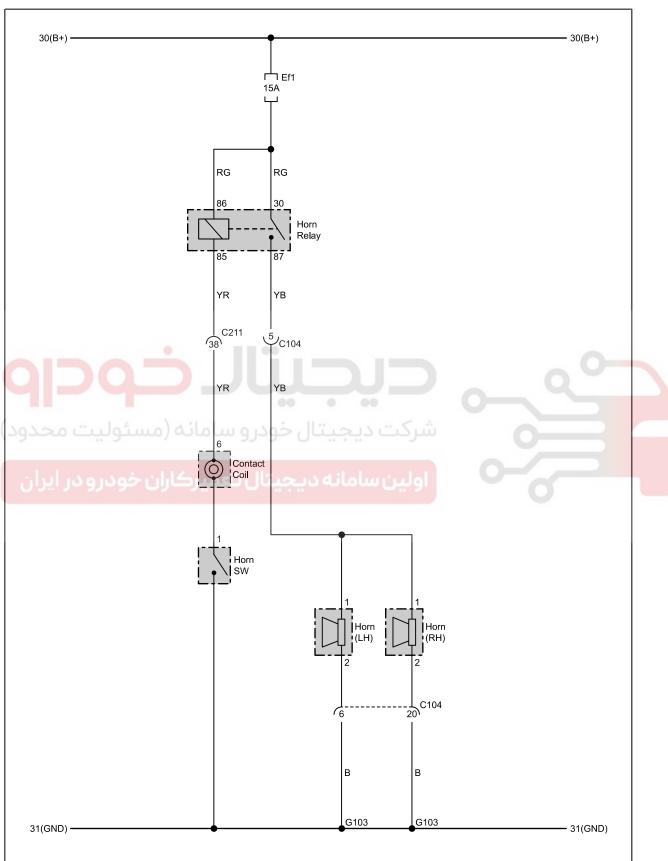
Pin No.	Function
1	Power supply

► Horn connector (HIGH, LOW)



Pin No.	Function	Pin No.	Function
1	Power supply	2	Ground

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V O L I

7410-26 POWER SEAT SWITCH ASSEMBLY

1) Overview

The power seat switch assembly is mounted on the bottom left of the driver's seat. Pressing the power seat switch activates the power seat motor which adjusts the seat slide, seatback recline, and cushion height.



V O L I

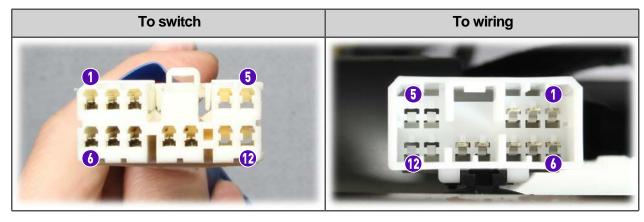
3) Operating Process Seat slide adjustment (forward/rearward) Seatback reclining adjustment

Seat cushion height adjustment





4) Connector

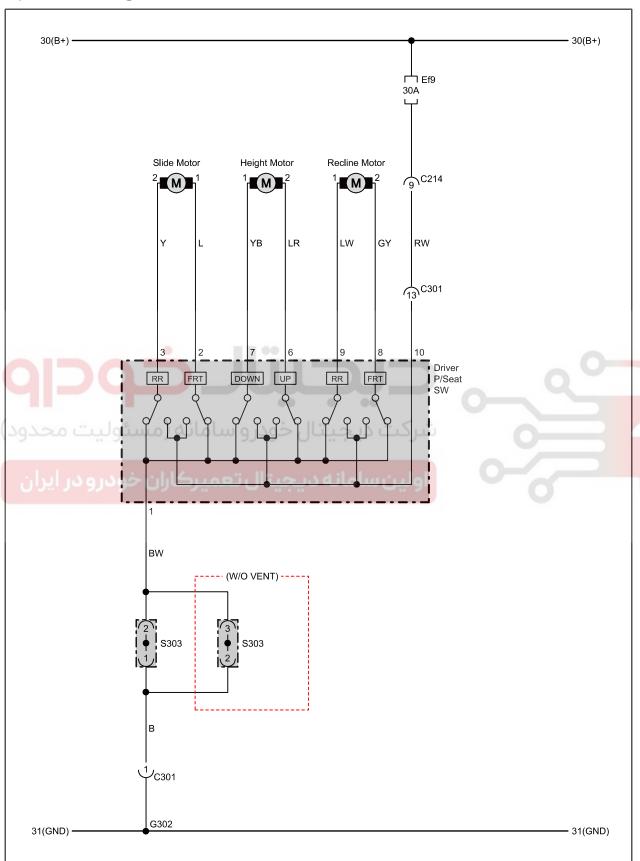


Pin No.	Function	Pin No.	Function
1	Ground	7	Height (Down)
2	Slide (FRT)	8	Recline (FRT)
3	Slide (RR)	9	Recline (RR)
4	<u> </u>	10	Power supply
5		11	0
6	Height (Up)	12	0

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شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

V O L



8510-01 FRONT SEAT HEATER AND VENTILATION **SWITCH ASSEMBLY**

1) Overview

The front seat heater and ventilation switch assembly is located at the bottom of the center fascia. The seat heater is adjustable in 2 steps. The ventilation function applies only to the driver's seat and is adjustable in 2 steps.



Front seat heater and ventilation switch		
Driver's seat heater and ventilation switch	Passenger's seat heater switch	

V O L

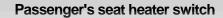
3) Operating Process

Front seat heater and ventilation switch



Driver's seat heater and ventilation switch

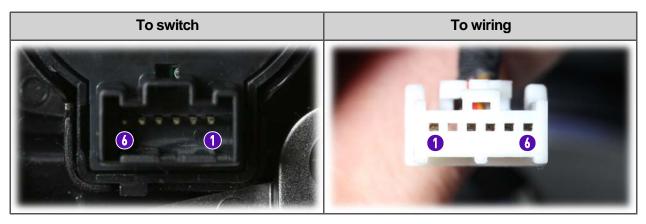
The front seat heater and ventilation switch (dial type) has 3 settings (Level 1 → Level 2 \rightarrow OFF). Rotating the switch to the left or right heats the seat cushion and seatback or activates the seat ventilation function. The seat heated wire and ventilation unit controls the rpm of the motor for seat ventilation using pulse width modulation (PWM) control.



The thermistor fitted in the seat cuts off or supplies the power to the heated wire in the seatback and seat cushion to maintain a uniform temperature.

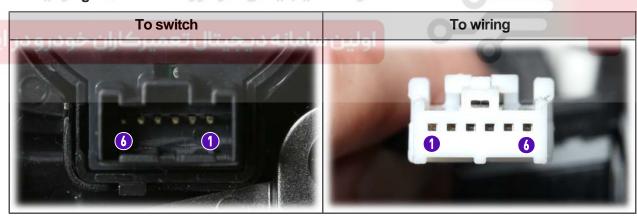
4) Connector

▶ Driver side



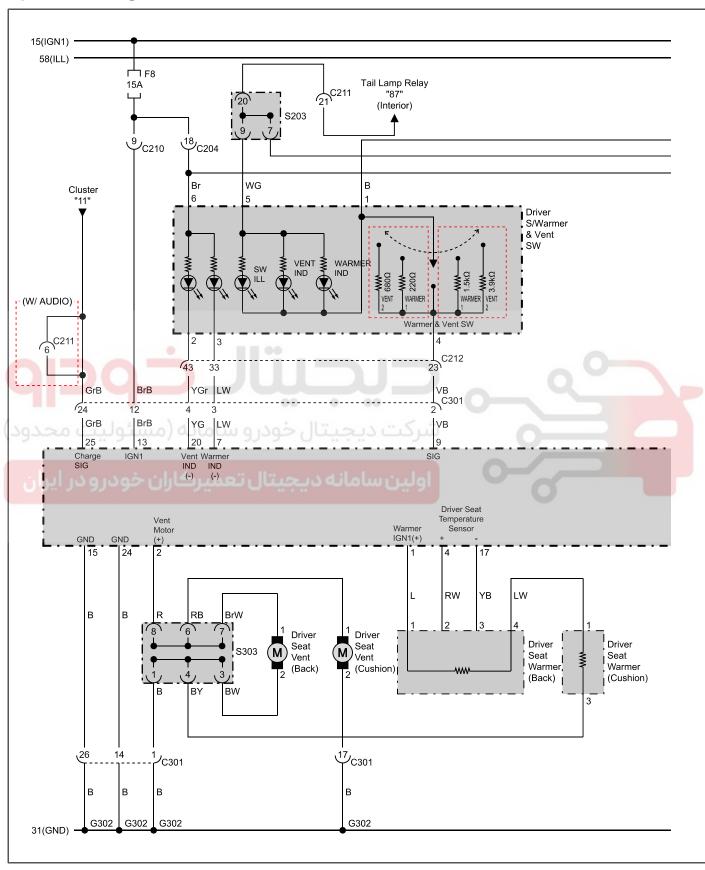
Pin No.	Function	Pin No.	Function
1	Ground	4	Heater and ventilation switch signal
2	Ventilation indicator	5	Illumination
3	Heater indicator	6	IGN 1

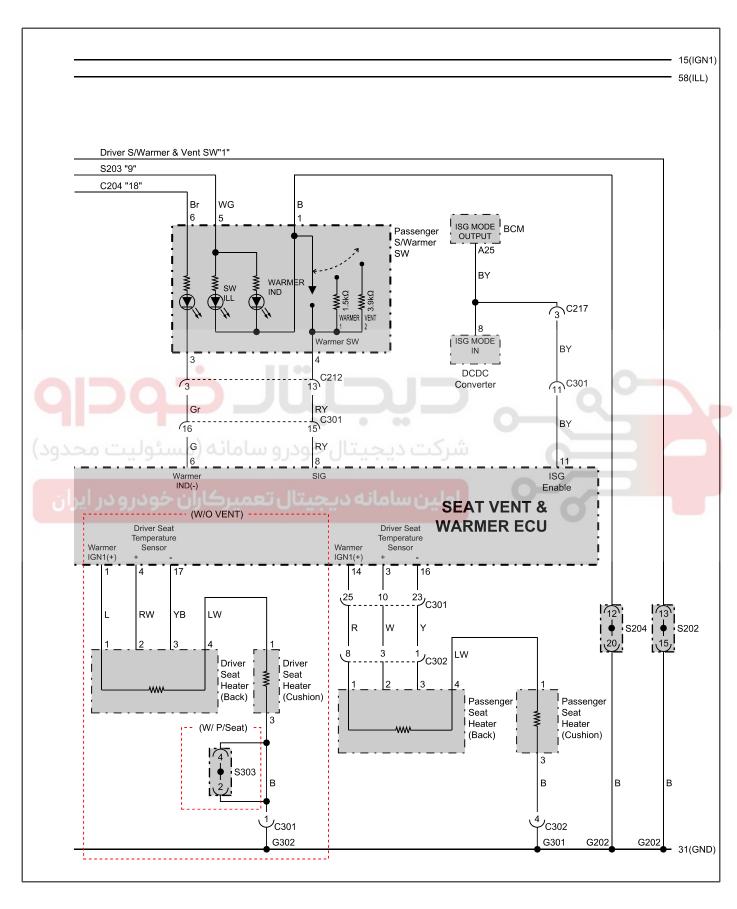
شرکت دیجیتال خودرو ساما Passenger side



Pin No.	Function	Pin No.	Function
1	Ground	4	Heater switch signal
2	-	5	Illumination
3	Heater indicator	6	IGN 1

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V O L I

8520-10 REAR SEAT HEATER SWITCH ASSEMBLY (KOREA Only)

1) Overview

The rear seat heater switch assembly is mounted to the rear door trim.

Pressing the rear seat heater switch activates the heated wire of the corresponding seat cushion and pressing the switch again turns off the heated wire operation.

2) Mounting Location and Components



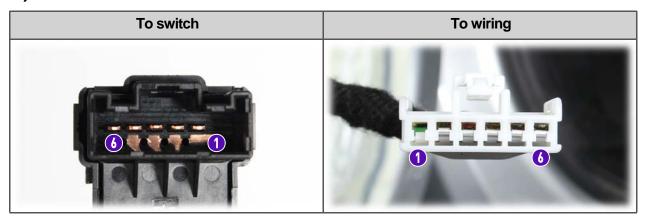
WWW.DIGITALKHODRO.COM

3) Operating Process



0 L

4) Connector

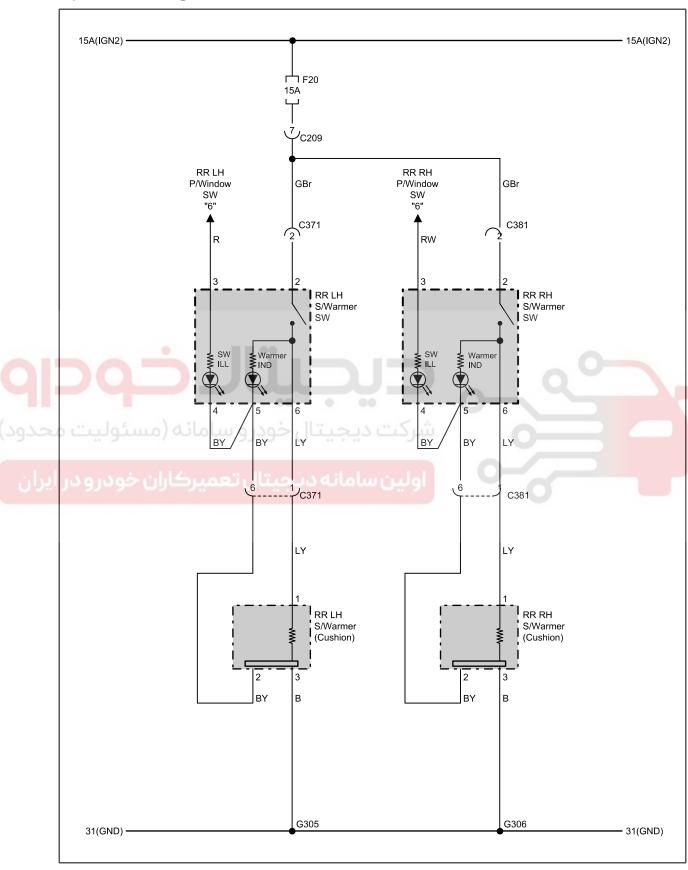


Pin No.	Function	Pin No.	Function
1	-	4	Illumination -
2	Seat heater power supply (IGN+)	5	Seat heater indicator -
3	Illumination +	6	Seat heater output +





I V O L



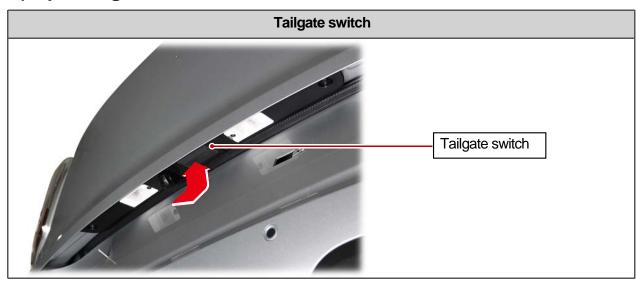
8520-16 TAILGATE SWITCH ASSEMBLY

1) Overview

The tailgate switch is mounted to the tailgate panel. When the tailgate switch is operated for 0.1 seconds with the driver's door unlocked in disarmed state, the BCM activates the tailgate OPEN relay to open the tailgate.



3) Operating Process

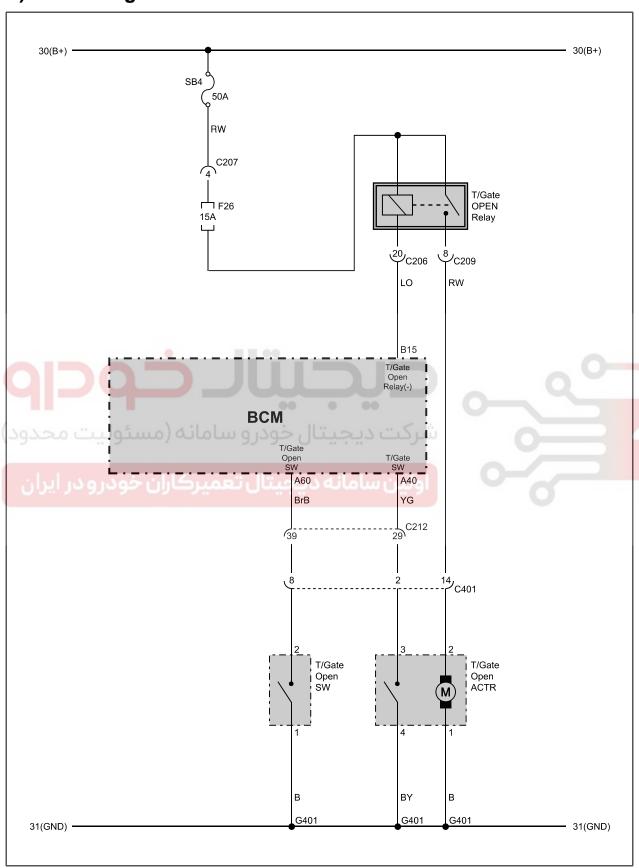


4) Connector



Pin No.	Function	Pin No.	Function
1	Ground	2	Tailgate open switch signal

0 L

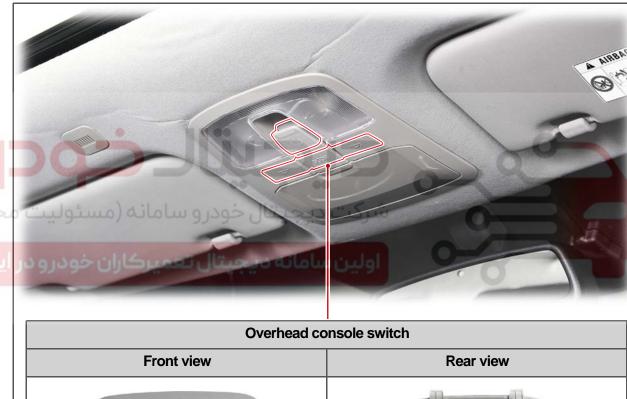


V O L I

7770-20 OVERHEAD CONSOLE SWITCH ASSEMBLY

1) Overview

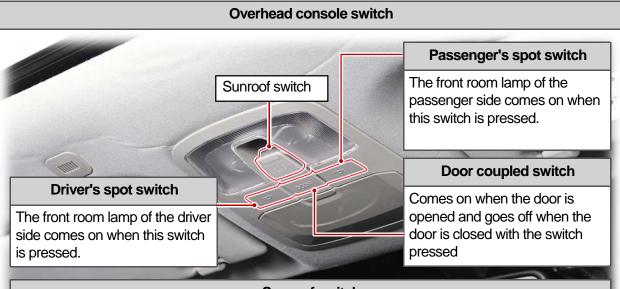
The front room lamp is controlled by the BCM. The front room lamp comes on when opening the driver's or passenger's door (with the door coupled operation switch ON). When closing the driver's or passenger's door, the front room lamp stays on for 2 seconds and then fades out over 3 seconds (with the door coupled operation switch ON). The front room lamp comes on or goes off depending on the operation of the front room lamp ON/OFF switch (spot switch).



Overnead Console Switch				
Front view	Rear view			

0 L

3) Operating Process



Sunroof switch

▶ Short push up of switch to open direction: 2-step auto sliding open

The sunroof is automatically opened when the switch is pushed up shortly to the open direction. Opening is carried out in 2 steps. In the first step, the 10 cm part behind the sunroof is not opened. The sunroof is fully opened when the switch is pushed up again to the open direction. The opening movement of the sunroof can be stopped in any position by operating the switch again.

- Long push up of switch to open direction: manual sliding open The sunroof slides open as long as the switch is pushed up.
- Short pull down of switch to close direction: auto sliding close

When the switch is pulled down to the close direction briefly, the sunroof automatically slides close. To stop the closing sunroof, operate the switch again.

▶ Long pull down of switch to close direction

The sunroof slides close as long as the switch is pulled down to the close direction.

► Tilt Up

The rear side of the sunroof is tilted up when the switch is pulled down to the close direction with the sunroof closed.

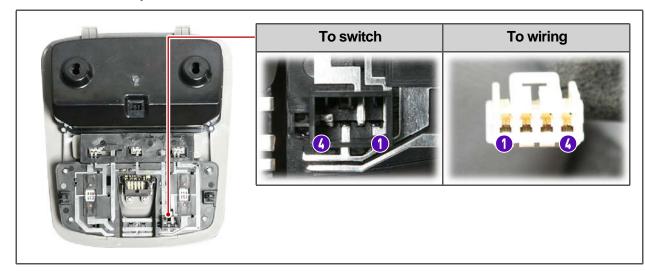
► Tilt Down

The rear side of the sunroof is tilted down when the switch is pushed up to the open direction with the sunroof tilted up.

Modification basis

4) Connector

► Front room lamp



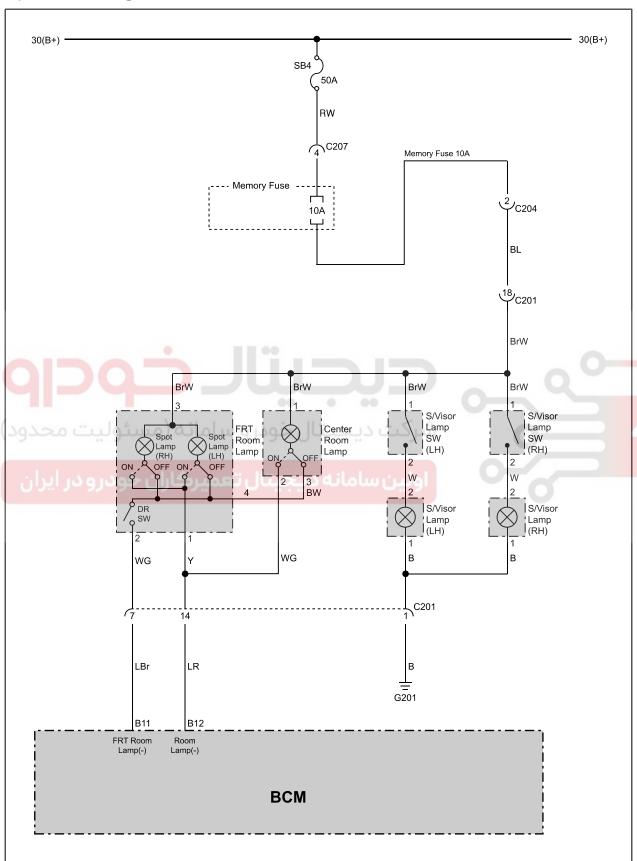
Pin No.	Function	Pin No.	Function
1	Front room lamp signal	3	Power (B+)
2	Door coupled front room lamp Switch ground	4	Door coupled center room lamp ground

شرکت دیجیتال خودرو سامانه (مسئولیت ► Sunroof



Pin No.	Function	Pin No.	Function
1	-	4	Slide
2	Illumination (power supply)	5	Tilt
3	Illumination (ground)	6	ACC

T I V O L I



8510-08 START/STOP SWITCH

1) Overview

The START/STOP switch is mounted on the instrument panel to the right of the steering wheel. The driver can turn the ignition ON and OFF with this switch while carrying the key.



T I V O L I

3) Operating Process



START/STOP switch

The switch operates in a sequence of IGN OFF-ACC-IGN ON-Engine running.

▶ Features

- START switch operation (ACC/IGN/engine start/engine stop)
- Displays ignition status
- 2-point contact type

IGN OFF	ACC	IGN ON	START	
ENGINE START STOP	ENGINE START STOP	ENGINE START STOP	ENGINE START STOP	
LED: OFF	LED: ORANGE ON	LED: RED ON	LED: GREEN ON	

3) Connector

T I V O L I

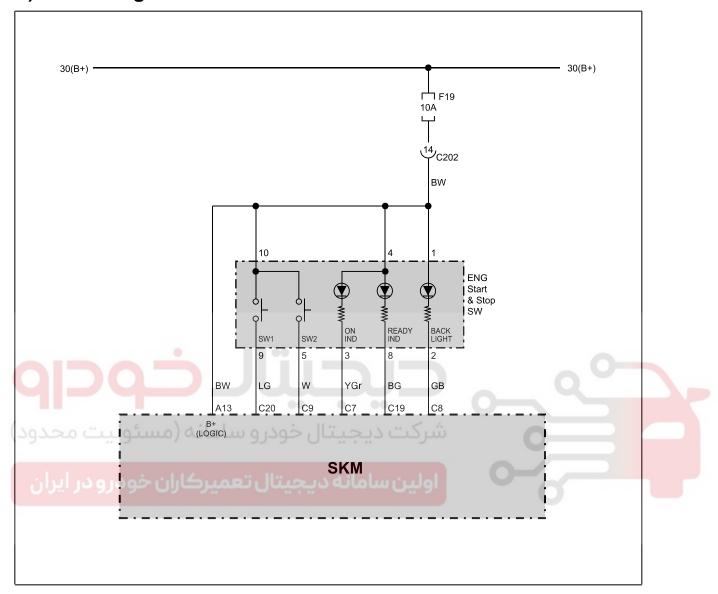
To switch	To wiring

Pin No.	Function				
1	START/STOP switch indicator power supply				
2	START/STOP switch indicator ground (SKM)				
3	IGN ON (red) LED ground (SKM)				
4	START/STOP switch LED power				
5	START/STOP switch 2 ground (SKM)				
6					
نه (مسځولیت ه	- شرکت دیجیتال خودرو ساما				
8	START READY (green) LED ground (SKM)				
9,009	START/STOP switch1 ground (SKM)				
10	START/STOP switch power				

Pin No. Switch status (indicator color)	1	2	3	4	8
ACC(Orange)			<u> </u>	0	
ON(Red)			0		
START READY(Green)				0	
Illumination(White)	0	-0			

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T I V O L I



8610-35 CIGARETTE LIGHTER SWITCH ASSEMBLY

1) Overview

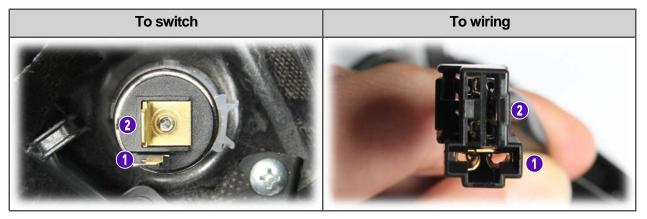
The cigarette lighter switch assembly is located on the front console fascia.



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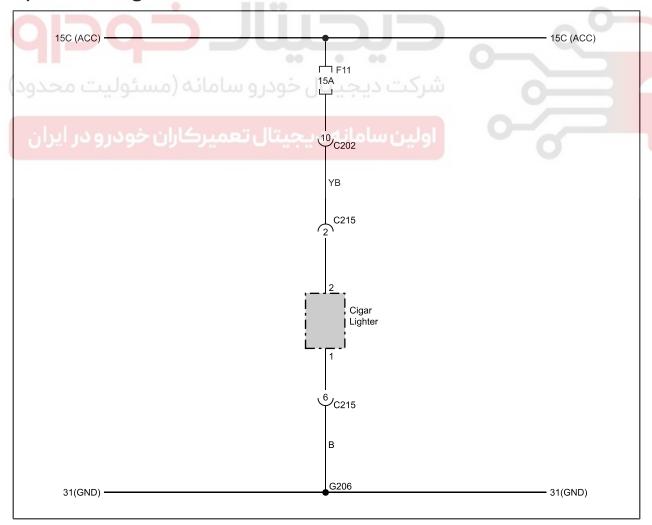
V O L

3) Connector



Pin No.	Function	Pin No.	Function
1	Ground	2	Power supply

4) Circuit Diagram



SWITCH

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V O L I

8510-17 PAB OFF SWITCH

1) Overview

The PAB OFF switch is fitted on the front passenger's crash pad side cover, which deactivates the PAB. The PAB OFF indicator on the center fascia switch assembly comes on when this switch is turned off.

2) Mounting Location and Components



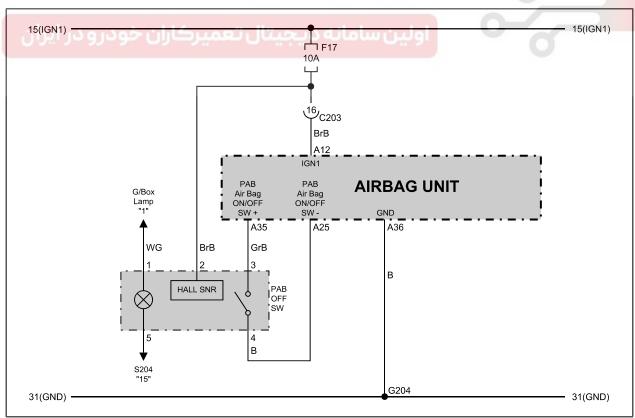
The PAB OFF switch is push & rotary type; you can turn the switch on and off by pressing the switch to the arrow direction A and operating to arrow direction B (left/right).

3) Connector



Pin No.	Function
1	BCM +
2	Ground
3	SDM -
4	SDM +
5	IGN+

4) Circuit Diagram شرکت دیجیتال خودرو سامانه



SWITCH

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REMOVAL AND INSTALLATION

8520-01 POWER WINDOW MAIN SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.

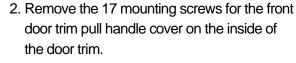


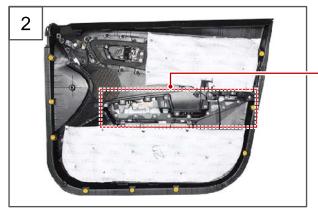


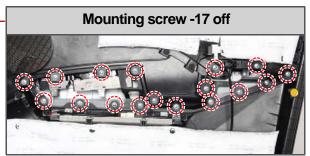
1. Remove the front door trim.

♣ NOTE

Refer to "FRONT DOOR TRIM ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.









3. Remove the front door trim pull handle cover from the outside of the front door trim.



4. Unscrew the 4 mounting screws for the power window main switch on the inside of the door trim.



5. Remove the power window main switch.



6. Install in the reverse order of removal.



8520-05

OUTSIDE REARVIEW MIRROR SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Remove the power window main switch.

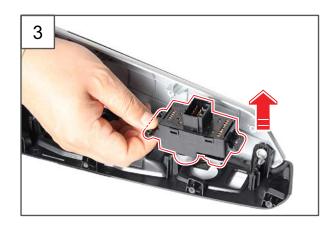


Refer to "POWER WINDOW MAIN SWITCH" under this subsection.



2. Remove the mounting screw for the outside rearview mirror switch (A).

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3. Remove the outside rearview mirror switch.







V O L I

8520-07 POWER WINDOW SUB SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.

1) Passenger's Door Side





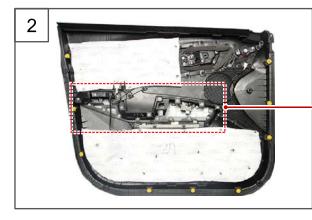


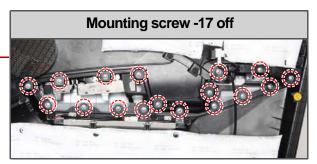
1. Remove the passenger's door trim.

♦ NOTE

Refer to "PASSENGER'S DOOR TRIM" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.

2. Remove the 17 mounting screws for the passenger's door trim pull handle cover on the inside of the door trim.





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3. Remove the passenger's door trim pull handle cover from the outside of the passenger's door trim.



4. Unscrew the 2 mounting screws for the power window sub switch on the inside of the passenger's door trim pull handle cover.



5. Remove the power window sub switch.





2) Rear Door Side

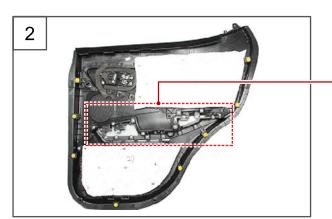




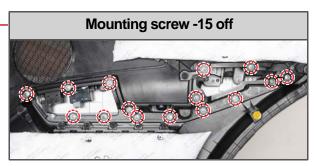
1. Remove the rear door trim.

♣ NOTE

Refer to "REAR DOOR TRIM ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.



Remove the 15 mounting screws for the rear door trim pull handle cover on the inside of the door trim.





3. Remove the rear door trim pull handle cover from the outside of the rear door trim.



4. Unscrew the 2 mounting screws for the power window sub switch on the inside of the door trim.



5. Remove the power window sub switch.





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HEATER AND A/C CONTROL ASSEMBLY

Preceding work

- Disconnect the negative battery cable.







1. Remove the center fascia LH panel by prying off the bottom (A) using a hand remover. (The same method applies to the RH panel.)

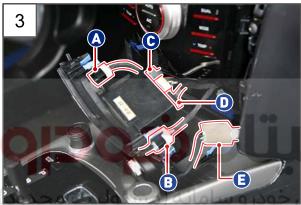
A CAUTION

Take care not to damage the fixing clips (5 off) when removing the center fascia LH panel.

Front view	Rear view



2. Prise apart the center fascia front seat heater switch assembly panel with a hand remover.



- 3. Disconnect the connectors at the rear side of the front seat heater switch assembly panel.
 - (A)Driver's seat heater and ventilation switch connector
 - (B)Passenger's seat heater switch connector
 - (C)USB connector
 - (D)HDMI connector
 - (E)IP center lower mood lamp connector
- Remove the front seat heater switch assembly panel completely.



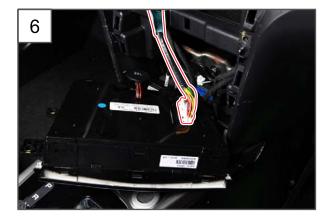




Unscrew the 4 mounting screws for the heater and A/C control assembly.

SWITCH

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Disconnect the heater and A/C control assembly connector (A) at the rear side of the heat and A/C control assembly by prising the assembly off.



7. Remove the heater and A/C control assembly.



8. Install in the reverse order of removal.



The removal and installation of the heater and A/C assembly are the same for the Remove and install the automatic and manual systems.



V O L

8510-15 CENTER FASCIA SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.

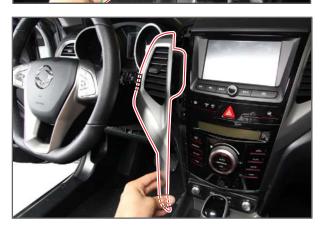




1. Remove the center fascia LH panel by prying off the bottom (A) using a hand remover.(The same method applies to the RH panel.)

A CAUTION

Take care not to damage the fixing clips (5 off) when removing the center fascia LH panel.



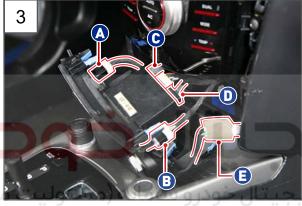
Front view	Rear view

SWITCH

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2. Prise apart the center fascia front seat heater switch assembly panel with a hand remover.



- 3. Disconnect the connectors at the rear side of the front seat heater switch assembly panel.
 - (A)Driver's seat heater and ventilation switch connector
 - (B)Passenger's seat heater switch connector
 - (C)USB connector
 - (D)HDMI connector
 - (E)IP center lower mood lamp connector
- 4. Remove the front seat heater switch assembly panel completely.







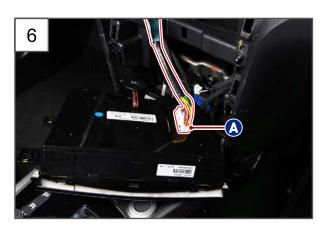
Retaining clip (6 off)



5. Unscrew the 4 mounting screws for the heater and A/C control assembly.

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T I V O L I



Disconnect the heater and A/C control assembly connector (A) at the rear side of the heat and A/C control assembly by prising the assembly off.



7. Remove the heater and A/C control assembly.



8. Unscrew the 2 mounting screws (A) for the center fascia switch assembly.



Prise apart the center fascia switch assembly and disconnect the connector (A).



SWITCH

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10. Remove the center fascia switch assembly.



11.Install in the reverse order of removal.

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V O L

8510-07 LOWER MAIN SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Pry out the lower main switch assembly using a hand remover.

- 2. Disconnect the connectors (A) at the rear side of the lower main switch assembly panel.

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3. Remove the lower main switch assembly.



V O L I

8530-01

MULTIFUNCTION TURN SIGNAL LAMP SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Remove the steering wheel.

♣ NOTE

Refer to "STEERING WHEEL" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.

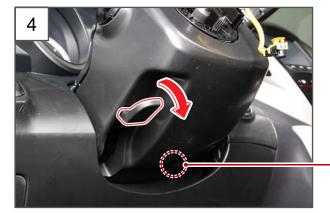


2. Unscrew the 2 mounting screws on the shroud upper and lower panels.

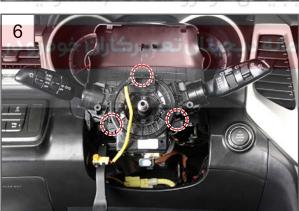
SWITCH

TIVOLI 2015.06

V O L I









4. Unscrew the mounting screw (A) for the shroud lower panel, and push down the steering column tilting lever in the direction of the arrow.



5. Prise apart the shroud upper panel (A) and lower panel (B) and remove the shroud lower panel.

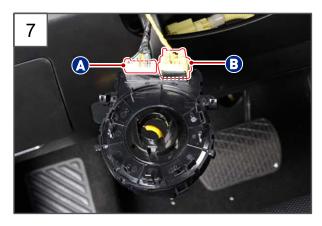
NOTE

For a vehicle without smart key, remove the lower main panel before removing the shroud lower panel.

6. Disengage the mountings (3 points) and lift out the contact coil assembly from the column shaft.

T I V O L I

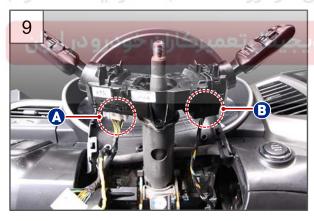
05-126 8530-01



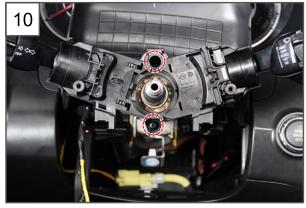
7. Disconnect the connectors (A) and (B) connected to the contact coil assembly.



8. Remove the contact coil assembly.



Disconnect the turn signal lamp switch connector (A) and the wiper switch connector (B).



10.Remove the 2 mounting screws for the multifunction switch assembly.

SWITCH

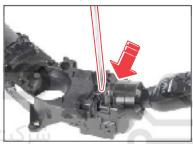
TIVOLI 2015.06



11. Remove the multifunction switch assembly.



12.Detach the multifunction wiper switch mounting (A) from the multifunction switch assembly with a flat bladed screwdriver.



10.Remove the multifunction wiper switch from the multifunction switch assembly.



10



V O L

8530-02 MULTIFUNCTION WIPER SWITCH

Preceding work

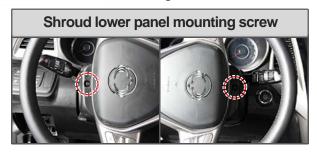
- Disconnect the negative battery cable.







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



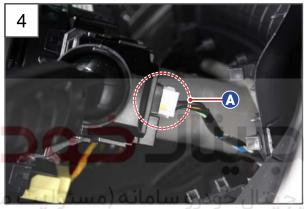
2. Unscrew the mounting screw (A) for the shroud lower panel, and push down the steering column tilting lever in the direction of the arrow.



SWITCH

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3. Separate the shroud upper and lower panels with a hand remover.

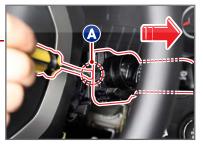


4. Disconnect the multifunction wiper switch connector (A).





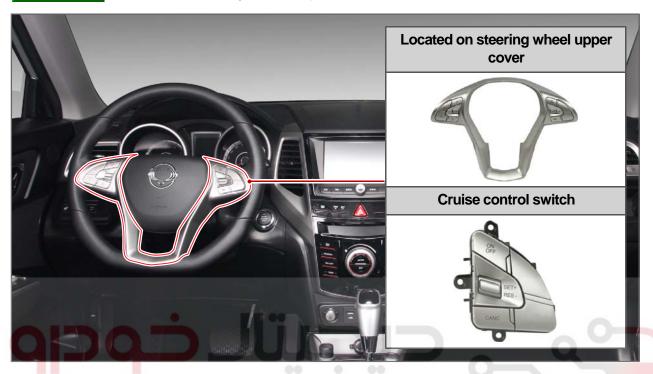
5. Prise apart the mounting (A) with a flat bladed screwdriver to remove the multifunction wiper switch.



V O L

8530-11 CRUISE CONTROL SWITCH

Preceding work - Disconnect the negative battery cable.





1. Remove the driver air bag module from the steering wheel by following the procedures below:

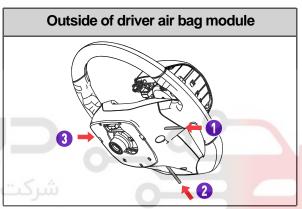


a. Insert a flat bladed screw driver to the 3 holes on the rear side of the steering wheel to press out the snap rings securing the air bag module.

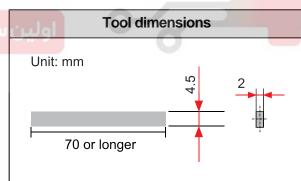
A CAUTION

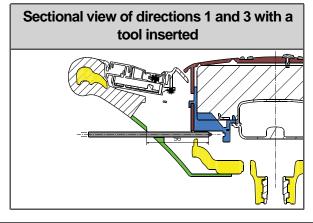
Insert a screwdriver by paying close attention to the short circuit due to wirings in the driver air bag module.

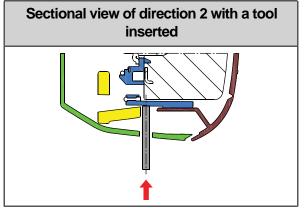














- b. Lift out the driver's air bag module and disconnect the connectors (A) and (B).
 - (A) Horn connector
 - (B) Driver's air bag module connector

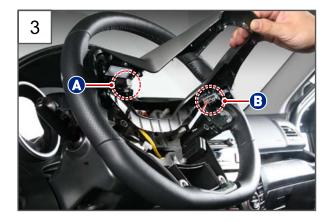


c. Remove the driver's air bag module.



2. Remove the 4 mounting screws for steering wheel upper cover at the back side of the steering wheel.





- 3. Remove the steering wheel upper cover and disconnect the connectors (A) and (B).
 - (A) Audio remote control switch connector
 - (B) Cruise control switch connector



4. Remove the steering wheel upper cover.



5. Remove the 3 mounting screws for the cruise control switch at the back side of the removed steering wheel upper cover.



6. Remove the cruise control switch.



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7. Install in the reverse order of removal.



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8530-10 AUDIO REMOTE CONTROL SWITCH

Preceding work

- Disconnect the negative battery cable.





1. Remove the driver air bag module from the steering wheel by following the procedures below:

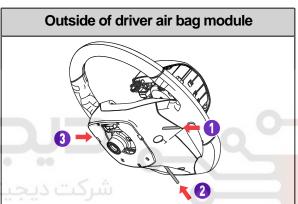


a. Insert a flat bladed screw driver to the 3 holes on the rear side of the steering wheel to press out the snap rings securing the air bag module.

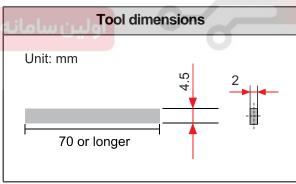
A CAUTION

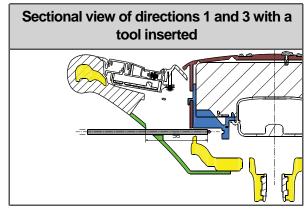
Insert a screwdriver by paying close attention to the short circuit due to wirings in the driver air bag module.

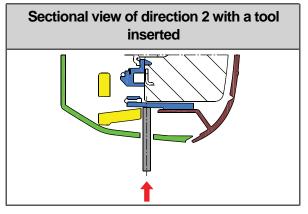












SWITCH





b. Lift out the driver's air bag module and disconnect the connectors (A) and (B).

- (A) Horn connector
- (B) Driver's air bag module connector





Remove the 4 mounting screws for steering wheel upper cover at the back side of the steering wheel.



V O L



- 3. Remove the steering wheel upper cover and disconnect the connectors (A) and (B).
 - (A) Audio remote control switch connector
 - (B) Cruise control switch connector



4. Remove the steering wheel upper cover.



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5. Remove the 3 mounting screws for the audio remote control switch at the back side of the steering wheel upper cover.



6. Remove the audio remote control switch.



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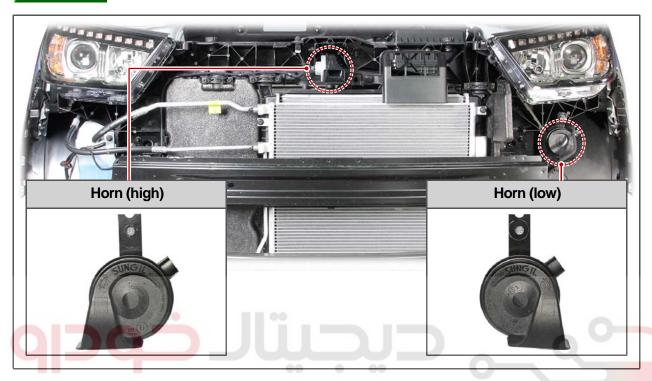


V O L

8610-06 HORN ASSEMBLY

Preceding work

- Disconnect the negative battery cable.



شرکت دیجیتال خودر و سامانه (مسئرhigh) To horn (high)



1. Remove the 7 front end upper cover mounting screw rivets to remove the front end cover.

Front end upper cover

V O L I

► To horn (high)





2. Remove the mounting nut (A, 12 mm) for the horn (high).



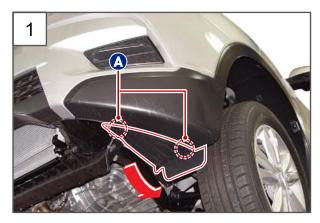
3. Lift out the horn (high) assembly and disconnect the connector.



4. Remove the horn (high) assembly.



► To horn (low)



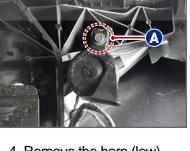
 Undo the 2 driver wheel house cover mounting screw rivets (A) under the vehicle and pull it out to the arrow direction.



2. Disconnect the horn (low) connector.



3. Remove the mounting bolt (A, 12 mm) for the horn (high).



4. Remove the horn (low).









V O L I

7410-26 POWER SEAT SWITCH ASSEMBLY

Preceding work

- Disconnect the negative battery cable.

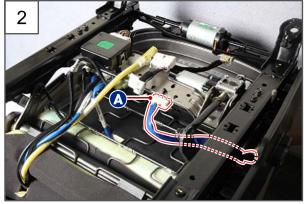




1. Remove the driver's seat.

♣ NOTE

Refer to "FRONT SEAT ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "SEAT/SEAT BELT" section in "BODY" chapter.



2. Disconnect the power seat switch connector (A) under the driver's seat.



3. Prise apart the power seat panel using a flat bladed screwdriver.



4. Remove the power seat panel by sliding it forward.



A CAUTION

Take care not to damage the fixing clips (5 off) when removing the power seat panel.



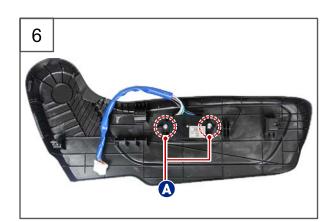


5. Prise apart the power seat switch nob with a flat bladed screwdriver.



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V O L



6. Remove the 2 mounting screws (A) for the power seat switch at the back side of the power seat panel.



7. Remove the power seat switch.



FRONT SEAT HEATER AND VENTILATION **SWITCH ASSEMBLY**

Preceding work

- Disconnect the negative battery cable.





1. Remove the center fascia LH panel by prying off the bottom (A) using a hand remover. (The same method applies to the RH panel.)



A CAUTION

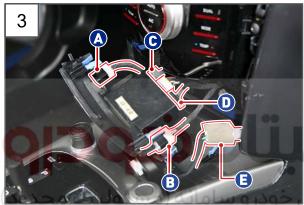
Take care not to damage the fixing clips (5 off) when removing the center fascia LH panel.



Front view	Rear view

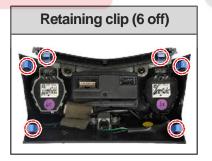


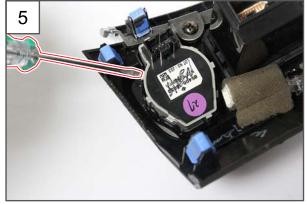
2. Prise apart the center fascia front seat heater switch assembly panel with a hand remover.



- 3. Disconnect the connectors at the rear side of the front seat heater switch assembly panel.
 - (A)Driver's seat heater and ventilation switch connector
 - (B)Passenger's seat heater switch connector
 - (C)USB connector
 - (D)HDMI connector
 - (E)IP center lower mood lamp connector
- 4. Remove the front seat heater switch assembly panel completely.



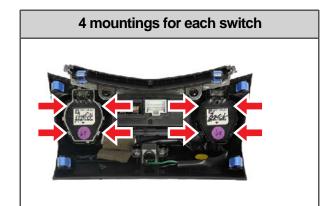


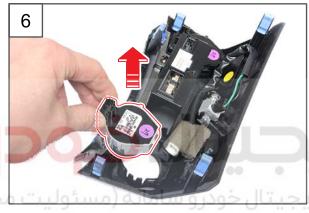


 Prise off the 4 mountings for the driver's seat heater and ventilation switch and passenger's seat heater switch on the rear side of the front seat heater switch assembly panel.

SWITCH

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6. Remove the driver's seat heater and ventilation switch and passenger's seat heater switch.



7. Install in the reverse order of removal.



The removal and installation are the same for the driver and passenger sides.

V O L I

8520-10 REAR SEAT HEATER SWITCH

Preceding work

- Disconnect the negative battery cable.

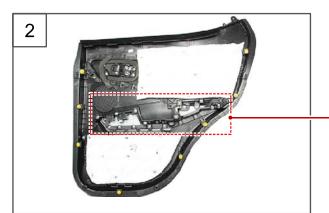




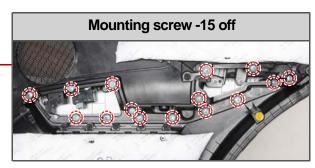
1. Remove the rear door trim.

♣ NOTE

Refer to "REAR DOOR TRIM ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.



2. Remove the 15 mounting screws for the rear door trim pull handle cover on the inside of the door trim.



SWITCH

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3. Remove the rear door trim pull handle cover from the outside of the rear door trim.



4. Unscrew the 2 mounting screws for the power window main switch on the inside of the door trim.



5. Remove the power window sub switch.

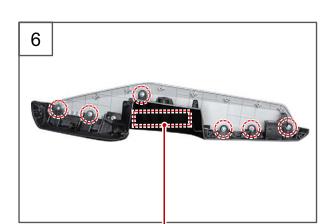




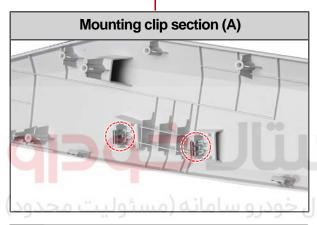
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Remove the 7 mounting screws for the rear door trim pull handle cover and disengage the mounting clip (A).

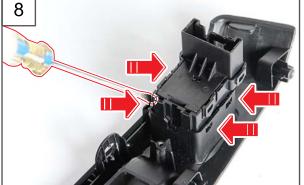


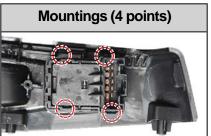
7. Remove the rear door trim pull handle cover.



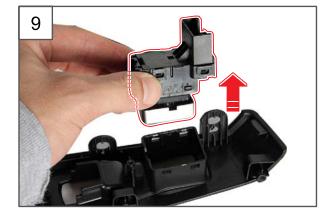
8. Detach the rear seat heater switch mountings from the rear door trim pull handle cover with a flat bladed screwdriver.

Mountings (4 points)





SWITCH



9. Remove the rear heater switch from the rear door trim pull handle cover.



10.Install in the reverse order of removal.

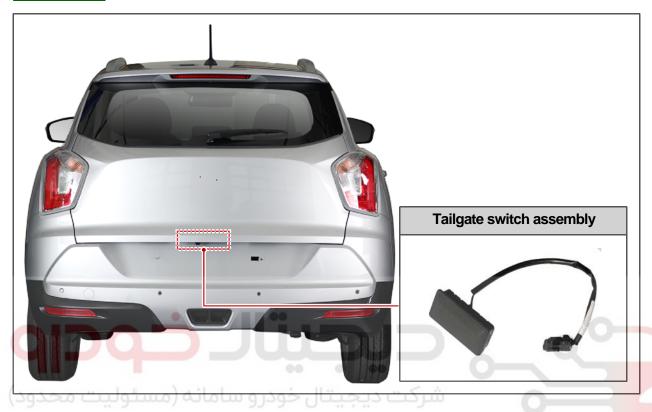
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V O L

8520-16 TAILGATE SWITCH ASSEMBLY

Preceding work

- Disconnect the negative cable from the battery.

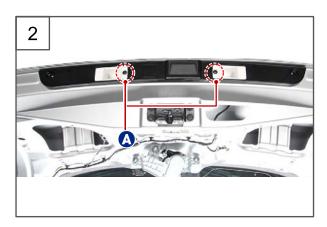




1. Remove the tailgate trim.

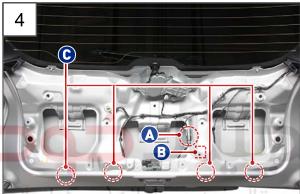
♣ NOTE

Refer to "TAILGATE TRIM ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.

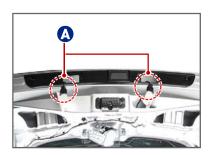


2. Remove the mounting screws (A) for the license plate lamps to pull out the license plate lamps.

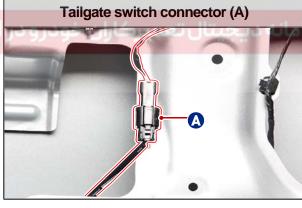


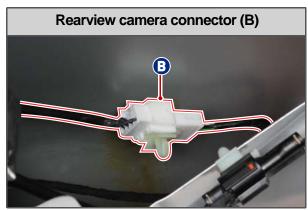


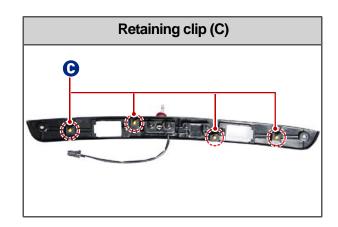
3. Disconnect the connectors (A) to remove the license plate lamps.



4. Disconnect the tailgate switch connector (A) and rearview camera connector (B) and disengage the retaining clips (C) on the inside of the tailgate panel.







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5. Remove the tailgate switch panel from the outside of the tailgate panel.



6. Remove the 2 mounting screws for the tailgate switch.



7. Remove the tailgate switch.





7770-20 OVERHEAD CONSOLE SWITCH ASSEMBLY

Preceding work

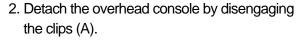
- Disconnect the negative battery cable.





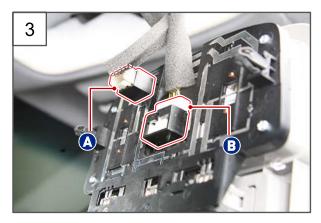
1. Unscrew the 2 mounting bolts (10 mm) on the overhead console.











3. Disconnect the front room lamp connector (A) and the sunroof switch connector (B).



4. Remove the overhead console switch assembly.



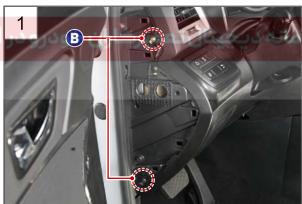
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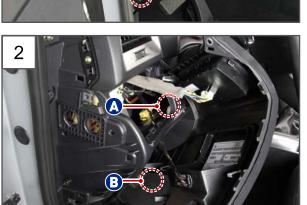
8510-08 START/STOP SWITCH AND EMERGENCY ANTENNA

Preceding work

- Disconnect the negative battery cable.







1. Remove the 2 mounting screws (B) for the lower main panel after remove the LH crash pad side cover (A).



Remove the lower main panel, disconnect the connector (B, lower main switch) and (C, diagnosis connector) and remove the lower main panel.









3. Remove the center fascia LH panel by prying off the bottom (A) using a hand remover.

A CAUTION

Take care not to damage the fixing clips (5 off) when removing the center fascia LH panel.



4. Remove the side cover LH.



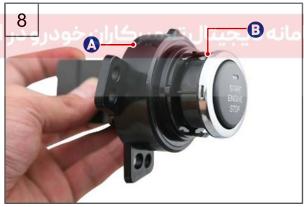
5. Remove the 3 mounting screws for the START/STOP switch.



6. Remove the START/STOP switch connector (A) and emergency antenna connector (B).



7. Remove the START/STOP switch.



8. Remove the START/STOP switch (B) from the emergency antenna (A).



V O L

8610-35 CIGARETTE LIGHTER ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Remove the center fascia lower panel assembly.



♣ NOTE

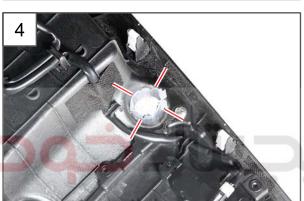
Refer to "INSTRUMENT PANEL" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.



2. Disconnect the cigarette lighter power and lamp connector at the rear side of the center fascia lower panel.

SWITCH





Disengage the 2 retaining keys for the cigarette lighter socket with a flat bladed screwdriver and lift out the cigarette lighter socket in the direction of the arrow.



 Disengage the 4 retaining keys for the cigarette lighter socket cover with a flat bladed screwdriver.



5. Remove the cigarette lighter socket cover.



V O L

8510-17 PAB OFF SWITCH

Preceding work

- Disconnect the negative battery cable.





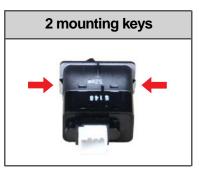


1. Remove the glove box assembly.

♣ NOTE

Refer to "GLOVE BOX" under "REMOVAL AND INSTALLATION" in "BODY INTERIOR" chapter.

2. Disconnect the connector at the rear side of the PAB OFF switch from inside RH crash side cover and remove the switch by pressing the 2 mounting keys.



SWITCH

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3. Remove the PAB OFF switch.



4. Install in the reverse order of removal.

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