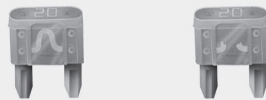


## FUSES

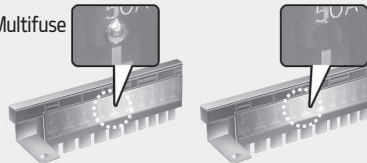
### ■ Blade type



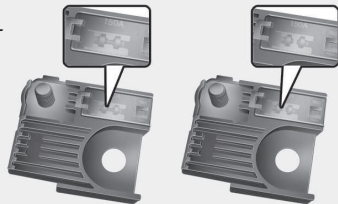
### ■ Cartridge type



### ■ Multifuse



### ■ BFT



OJF075021

\* Left side: Normal

Right side: blown

A vehicle's electrical system is protected from electrical overload damage by fuses.

This vehicle has 2 (or 3) fuse panels, one located in the driver's side panel bolster, the others in the engine compartment near the battery.

If any of your vehicle's lights, accessories, or controls do not work, check the appropriate circuit fuse. If a fuse has blown, the element inside the fuse will melt.

If the electrical system does not work, first check the driver's side fuse panel. Before replacing a blown fuse, disconnect the negative battery cable.

Always replace a blown fuse with one of the same rating.

If the replacement fuse blows, this indicates an electrical problem. Avoid using the system involved and immediately consult an authorized Kia dealer.

Three kinds of fuses are used: blade type for lower amperage rating, cartridge type, and multi fuse for higher amperage ratings.

### ⚠ WARNING

#### ■ Fuse replacement

- **Never replace a fuse with anything but another fuse of the same rating.**
- **A higher capacity fuse could cause damage and possibly a fire.**
- **Never install a wire or aluminum foil instead of the proper fuse even as a temporary repair. It may cause extensive wiring damage and a possible fire.**
- **Do not arbitrarily modify or add-on electric wiring of the vehicle.**

### ⚠ CAUTION

**Do not use a screwdriver or any other metal object to remove fuses because it may cause a short circuit and damage the system.**

## \* NOTICE

The actual fuse/relay panel label may differ from equipped items.

## ⚠ CAUTION

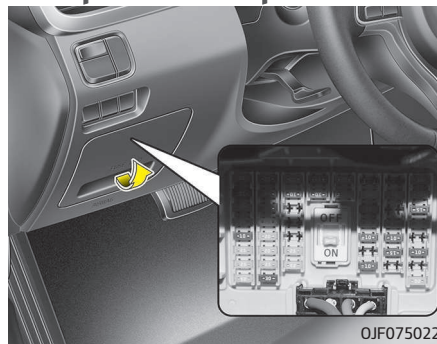
- When replacing a blown fuse or relay with a new one, make sure the new fuse or relay fits tightly into the clips. The incomplete fastening fuse or relay may cause the vehicle wiring and electric systems damage and a possible fire.
- Do not remove fuses, relays and terminals fastened with bolts or nuts. The fuses, relays and terminals may be fastened incompletely, and it may cause a possible fire. If fuses, relays and terminals fastened with bolts or nuts are blown, we recommend that you consult an authorized Kia dealer.

(Continued)

(Continued)

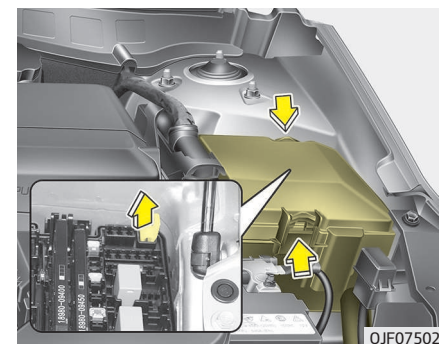
- Do not input any other objects except fuses or relays into fuse/relay terminals such as a driver or wiring. It may cause contact failure and system malfunction.
- Do not plug in screwdrivers or aftermarket wiring into the terminal originally designed for fuse and relays only. The electrical system and wiring of the vehicle interior may be damaged or burned due to contact failure.

## Inner panel fuse replacement



1. Turn the ignition switch and all other switches off.

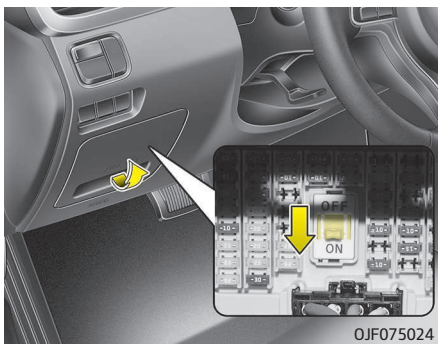
2. Open the fuse panel cover. If the switch is located in the "OFF", caution will be displayed in the cluster.



3. Pull the suspected fuse straight out. Use the removal tool provided in the main fuse box in the engine compartment.
4. Check the removed fuse; replace it if it is blown. Spare fuses are provided in the instrument panel fuse panel (or in the engine compartment fuse panel).
5. Push in a new fuse of the same rating, and make sure it fits tightly in the clips.

If it fits loosely, we recommend that you consult an authorized Kia dealer. If you do not have a spare, use a fuse of the same rating from a circuit you may not need for operating the vehicle, such as the cigarette lighter fuse. If the headlights or taillights, stop lights, courtesy lamp, day time running lights (D.R.L) do not work and the fuses are OK, check the fuse panel in the engine compartment. If a fuse is blown, it must be replaced.

## Fuse switch



Always put the fuse switch at the ON position.

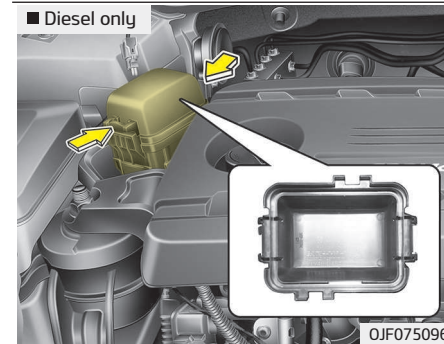
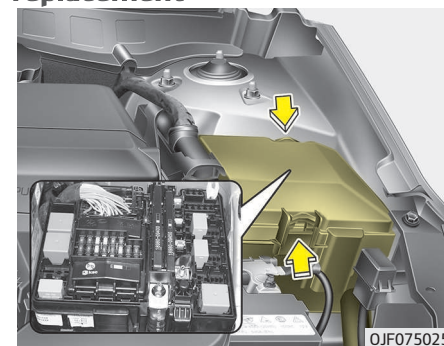
If you move the switch to the OFF position, some items such as audio and digital clock must be reset and transmitter (or smart key) may not work properly.

If the fuse switch is in OFF, a warning sign will illuminate on the dashboard.

## CAUTION

- Put all switches in ON when driving.
- If the vehicle remains idle for over 1 month, put all switches in OFF to prevent the batteries from being discharged.
- Excluding long-term parking for over 1 month, the contact points of switches may wear out upon extensive use. Please refrain from excessive use of switches.

## Engine compartment fuse replacement



1. Turn the ignition switch and all other switches off.

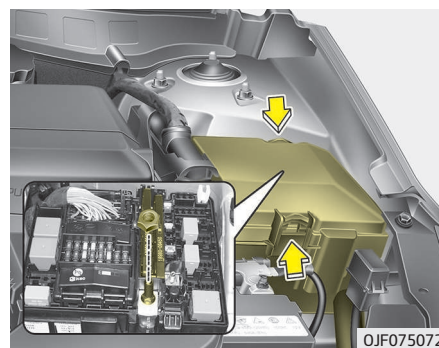
# کیان باتری

2. Remove the fuse panel cover by pressing the tab and pulling the cover up. When the blade type fuse is disconnected, remove it by using the clip designed for changing fuses located in the engine room fuse box. Upon removal, securely insert reserve fuse of equal quantity.
3. Check the removed fuse; replace it if it is blown. To remove or insert the fuse, use the fuse puller in the engine compartment fuse panel.
4. Push in a new fuse of the same rating, and make sure it fits tightly in the clips. If it fits loosely, we recommend that you consult an authorized Kia dealer.

## ⚠ CAUTION

**After checking the fuse panel in the engine compartment, securely install the fuse panel. If not, cover through the audible clicking sound. Electrical failures may occur from water contact.**

## Multi fuse



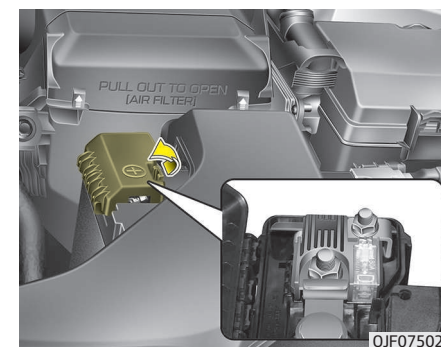
If the multi fuse is blown, it must be removed as follows:

1. Disconnect the negative battery cable.
2. Remove the nuts shown in the picture above.
3. Replace the fuse with a new one of the same rating.
4. Reinstall in the reverse order of removal.

## \* NOTICE

If the multi fuse is blown, we recommend that you consult an authorized Kia dealer.

## Main fuse



If the main fuse is blown, it must be removed as follows:

1. Turn off the engine.
2. Disconnect the negative battery cable.
3. Remove the nuts shown in the picture above.

4. Replace the fuse with a new one of the same rating.
5. Reinstall in the reverse order of removal.

## \* NOTICE

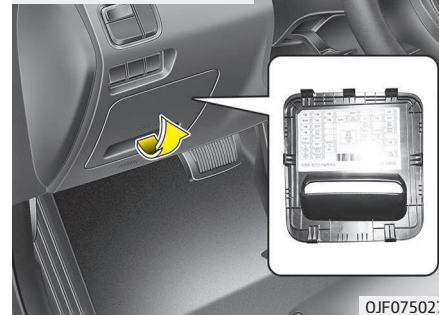
The electronic system may not function correctly even when the engine room and internal fuse box's individual fuses are not disconnected. In such case the cause of the problem may be disconnection of the main fuse (BFT type), which is located inside the positive battery terminal (+) cap. Since the main fuse is designed more intricately than other parts, please visit the nearest Kia dealer and service center.

## ⚠ CAUTION

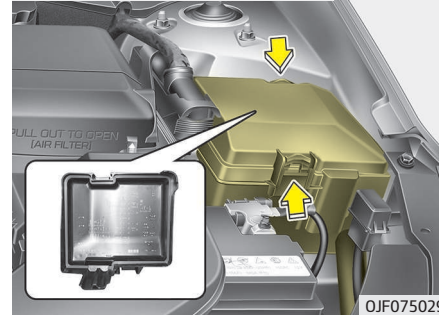
**Visually inspect the battery cap for secure closing. If the battery cap is not securely latched, the electrical system may be damaged to due influx of moisture into the system.**

## Fuse-relay panel description

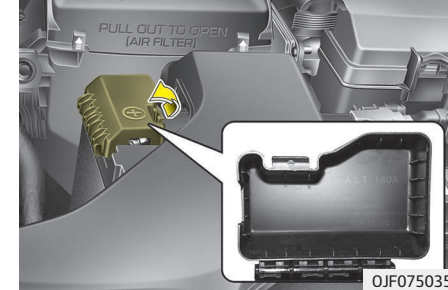
■ Driver's side fuse panel



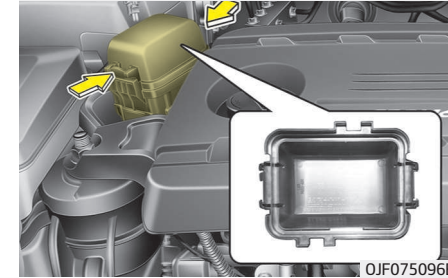
■ Engine compartment fuse panel



■ Engine compartment fuse panel (Battery terminal cover)



■ Engine compartment fuse panel (Diesel engine) (Passenger side)



Inside the fuse/relay panel covers, you can find the fuse/relay label describing fuse/relay name and capacity.

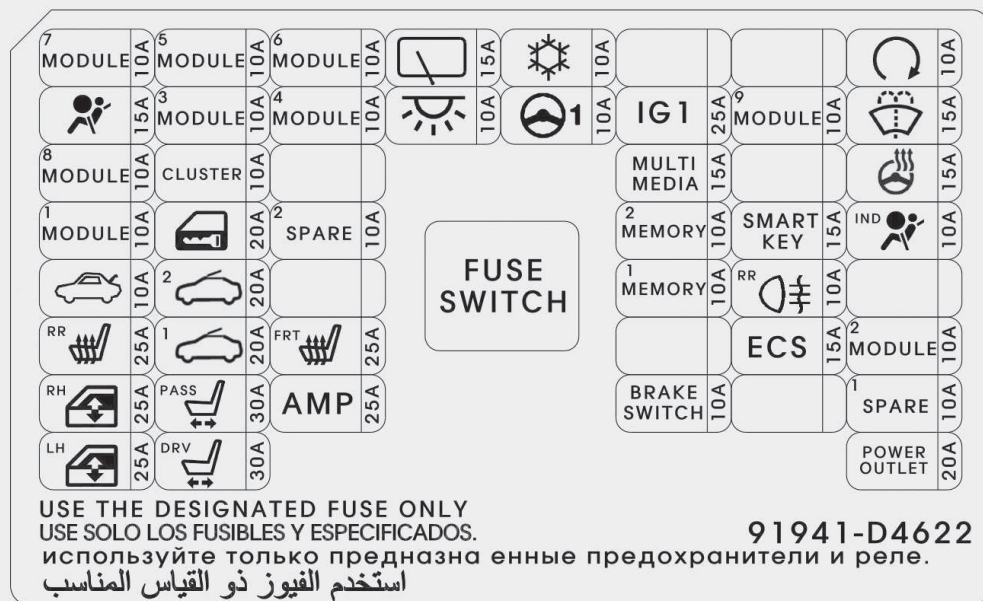


### \* NOTICE

Not all fuse panel descriptions in this manual may be applicable to your vehicle. It is accurate at the time of printing. When you inspect the fuse panel in your vehicle, refer to the fuse panel label.



## Driver's side fuse panel (Sedan)



OJFW076199L





















## Instrument panel (Driver's side fuse panel)

Fuse name	Symbol	Fuse rating	Circuit Protected
MODULE 7	<sup>7</sup> MODULE	10A	Around View Unit, Front Air Ventilation Seat Control Module, Front Seat Warmer Control Module, Rear Seat Warmer Control Module
MODULE 5	<sup>5</sup> MODULE	10A	A/C Control Module, Electro Chromic Mirror, Crash Pad Switch, Head Lamp LH/RH, Auto Head Lamp Leveling Device Module, A/V & Navigation Head Unit, Fuel Lid & Trunk Open Switch, Shift Lever Indicator, Driver IMS Module, Driver IMS Module, Oil Level Sensor (D4FD), DC-DC Converter (AMP)/(Audio), Front Air Ventilation Seat Control Module, Front Seat Warmer, Control Module, Rear Seat Warmer Control Module
MODULE 6	<sup>6</sup> MODULE	10A	BCM, Smart Key Control Module
A/CON		10A	A/C Control Module, E/R Junction Block (RLY. 3 - Blower Relay), Ionizer, Diesel Junction Block (RLY. 3/4 - PTC Heater #2/#3 Relay)
START		10A	[W/O Smart Key & IMMO.] ICM Relay Box (Burglar Alarm Relay) [With Smart Key / IMMO. - A/T, DCT] Transaxle Range Switch, PCM (G4KH/G4KE) [With Smart Key / IMMO. - M/T] PCM/ECM (G4ND/D4FD), Smart Key Control Module, E/R Junction Block (RLY. 5 - Start Relay)
A/BAG		15A	SRS Control Module
MODULE 3	<sup>3</sup> MODULE	10A	BCM, ATM Shift Lever, Stop Lamp Switch, DBL Unit, Keyboard, A/C Control Module
MODULE 4	<sup>4</sup> MODULE	10A	Console Switch, Blind Spot Detection Radar LH/RH, ECS Unit, Smart Parking Assist Control Module, Smart Cruise Control Unit, AEB Module, Lane Keeping Assist Module, Clutch Sensor
INTERIOR LAMP		10A	Trunk Room Lamp, Ignition Key Ill. & Door Warning Switch, Glove Box Lamp, Driver/Passenger Smart Key Outside Handle, Front Vanity Lamp Switch LH/RH, Overhead Console Lamp, Center Room Lamp, Center Personal Lamp, Rear Personal Lamp LH/RH, Driver/Passenger Foot Lamp, Driver/Passenger Door Lamp

Fuse name	Symbol	Fuse rating	Circuit Protected
MDPS	 1	7.5A	MDPS Unit (Column/Rack), Steering Angle Sensor
IG1	<b>IG 1</b>	25A	PCB Block (Fuse - GLOW, TCU2, ABS3, VACUUM PUMP2, ECU3)
MODULE 9	<b>9 MODULE</b>	10A	Immobilizer Module, Smart Key Control Module
WASHER		15A	Multifunction Switch (Wiper Low & Washer Switch)
MODULE 8	<b>8 MODULE</b>	10A	A/C Control Module, Driver/Passenger Door Module
CLUSTER	<b>CLUSTER</b>	10A	Instrument Cluster (IG1)
MULTI MEDIA	<b>MULTI MEDIA</b>	15A	Audio, A/V & Navigation Head Unit, DC-DC Converter (Audio)
HTD STRG		15A	BCM (Steering Wheel Heated)
MODULE 1	<b>1 MODULE</b>	10A	Console Switch, Key Solenoid, Driver/Passenger Door Module
DR LOCK		20A	Door Lock Relay, Door Unlock Relay, ICM Relay Box (Dead Lock Relay)
MEMORY 2	<b>2 MEMORY</b>	10A	Siren Control Module, Ultrasonic Intrusion Protection Sensor
SMART KEY	<b>SMART KEY</b>	15A	Smart Key Control Module
A/BAG IND		10A	Instrument Cluster (Air Bag IND. Power)
TRUNK		10A	Trunk Lid Relay, Fuel Filler & Trunk Open Switch, Trunk Lid Motor, ICM Relay Box (Fuel Filler Open Relay)
SUNROOF 2		20A	Sunroof Control Unit (Roller)
MEMORY 1	<b>1 MEMORY</b>	10A	Instrument Cluster, A/C Control Module, Data Link Connector, BCM, Wireless Charger, Driver IMS Module, Rain Sensor, ICM Relay Box (Outside Mirror Folding/Unfolding Mirror Relay), Security Indicator, Auto Light & Photo Sensor, Driver/Passenger Door Module

Fuse name	Symbol	Fuse rating	Circuit Protected
FOG LAMP REAR		10A	ICM Relay Box (Rear Fog Lamp Relay)
S/HEATER REAR		25A	Rear Seat Warmer Control Module
SUNROOF 1		20A	Sunroof Control Unit (Glass)
S/HEATER FRONT		25A	Front Air Ventilation Seat Control Module, Front Seat Warmer Control Module
ECS	<b>ECS</b>	15A	ECS Unit
MODULE 2	<b>2 MODULE</b>	10A	Audio, A/V & Navigation Head Unit, Keyboard, Around View Unit, AMP, DC-DC Converter (AMP), DC-DC Converter (Audio), Power Outside Mirror Switch, Smart Key Control Module, BCM, Wireless Charger, Rear USB Charger, MTS E-Call Module, E/R Junction Block (RLY. 7 - Power Outlet Relay)
P/WDW RH		25A	Power Window RH Relay, Rear Safety Power Window Module LH, Rear Power Window Switch LH, Power Window Main Switch, [LHD] Passenger Safety Power Window Module [RHD] Driver Safety Power Window Module
P/SEAT PASS		25A	Passenger Seat Manual Switch, Walk In Relay Module, Passenger Reclining Limit Switch
AMP	<b>AMP</b>	25A	AMP (JBL/MOBIS), DC-DC Converter (AMP)
BRAKE SWITCH	<b>BRAKE SWITCH</b>	10A	Stop Lamp Switch, Immobilizer Module, Smart Key Control Module, Start/Stop Button Switch
P/WDW LH		25A	Power Window LH Relay, Rear Safety Power Window Module RH, Rear Power Window Switch RH, Power Window Main Switch, [LHD] Driver Safety Power Window Module [RHD] Passenger Safety Power Window Module

# کیان باتری

Fuse name	Symbol	Fuse rating	Circuit Protected
P/SEAT DRV		30A	Driver Seat Manual Switch, Driver IMS Module
POWER OUTLET		20A	Front Power Outlet #1, Front Cigarette Lighter & Power Outlet #2

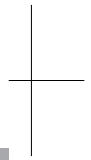
The diagram illustrates a fuse block layout with various fuse slots and labels. The layout is organized into several sections:

- Top Left:** A large empty rectangular area.
- Top Right:** A section with a "FUSE PULLER" label and a grid of fuse slots.
- Bottom Left:** A section with a "CVVL" label and a grid of fuse slots.
- Bottom Right:** A section with a "FRONT" label and a grid of fuse slots.
- Center:** A large grid of fuse slots with various labels and icons.

The fuse slots are labeled with their respective amperage ratings and functions:

- Top Row:** SPARE, 15A, SPARE, 20A, SPARE, SPARE, 30A, 25A.
- Second Row:** SPARE, SPARE, SPARE, SPARE, SPARE, SPARE, SPARE, SPARE.
- Third Row:** IG2, 30A, (ABS), 30A.
- Fourth Row:** 1 POWER OUTLET, 2 DCT, 40A, 40A, 40A, 40A, 40A, 40A.
- Fifth Row:** (Flower icon), 40A, IG1, 40A, 40A, 40A, 40A, 40A.
- Sixth Row:** 1 DCT, 40A, 1 (ABS), 40A, 40A, 40A, 40A, 40A.
- Seventh Row:** 3 (Battery icon), 50A, 2 (Battery icon), 60A, 60A, 60A, 60A, 60A.
- Eighth Row:** 1 (Gear icon), 50A, 5 (Battery icon), 60A, 60A, 60A, 60A, 60A.
- Ninth Row:** CVVL, 50A, 1 (Battery icon), 60A, 60A, 60A, 60A, 60A.
- Tenth Row:** 2 (Gear icon), 60A, 1 (Battery icon), 100A, 100A, 100A, 100A, 100A.
- Eleventh Row:** 1 (Mountain icon), 80A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twelfth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirteenth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Fourteenth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Fifteenth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Sixteenth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Seventeenth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Eighteenth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Nineteenth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twentieth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-first Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-second Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-third Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-fourth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-fifth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-sixth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-seventh Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-eighth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Twenty-ninth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirtieth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-first Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-second Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-third Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-fourth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-fifth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-sixth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-seventh Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-eighth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Thirty-ninth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Fortieth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-first Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-second Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-third Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-fourth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-fifth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-sixth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-seventh Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-eighth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Forty-ninth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.
- Fiftieth Row:** 1 (Mountain icon), 100A, 2 (Mountain icon), 100A, 100A, 100A, 100A, 100A.

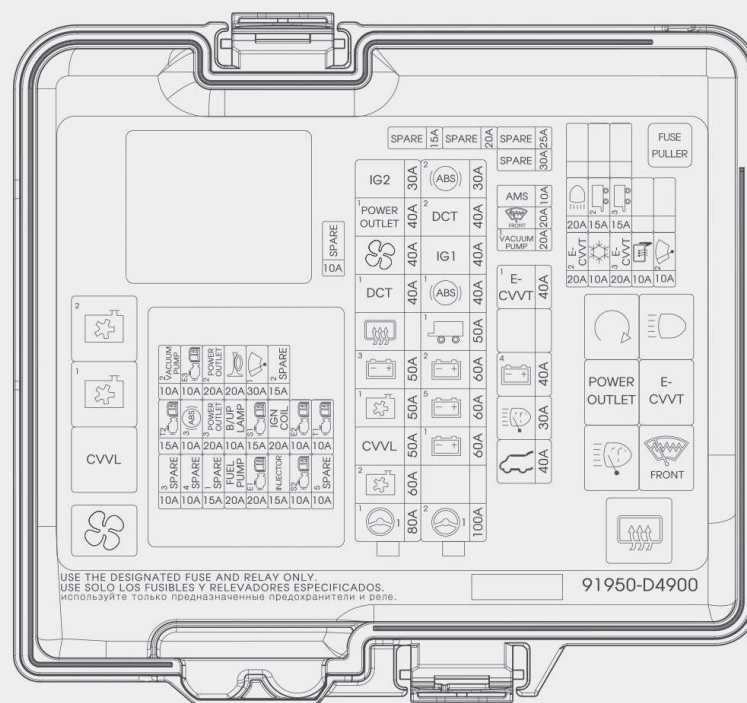
8-88



8



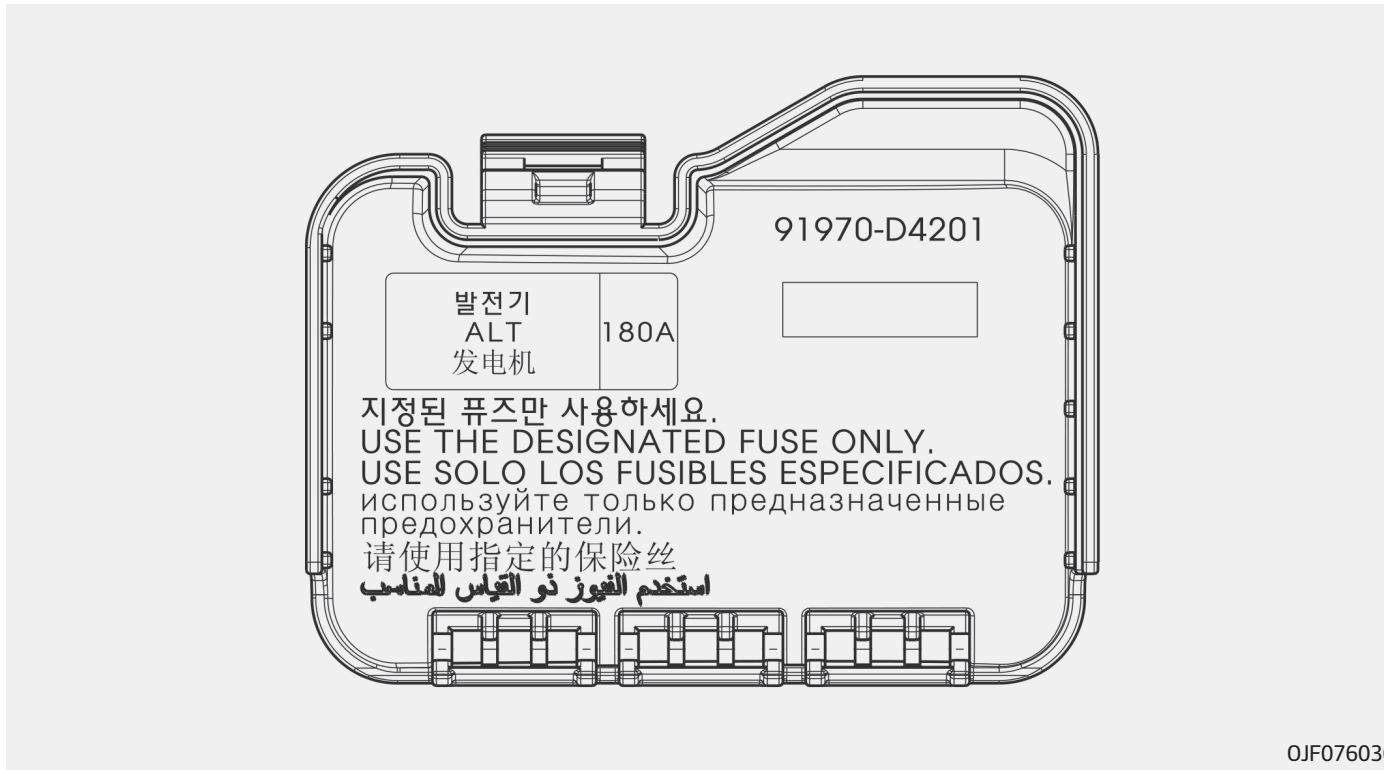
## Engine compartment fuse panel (Gasoline engine) (Wagon)



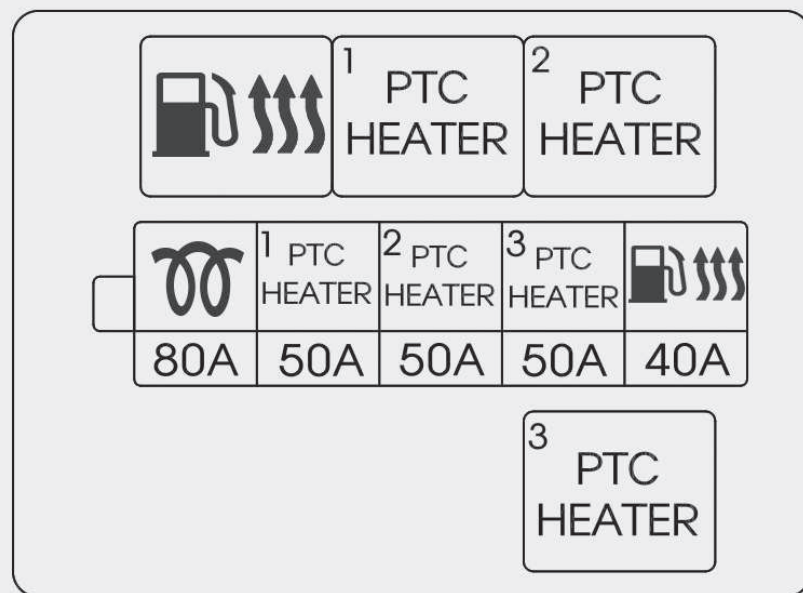
OJFW076207L



## Engine compartment fuse panel (Battery terminal cover)



## Engine compartment fuse panel (Diesel engine) (Passenger side)












OJF076099L

Maintenance







8

## Engine room compartment fuse panel








	Fuse Name	Symbol	Fuse Rating	Circuit Protected
MULTI FUSE	MDPS 1		80A	MDPS Unit (Column)
	COOLING FAN 2		60A	[G4KH/D4FD/G4ND (Europe/Australia)/G4NA (Middle East)/G4KE (Europe/Australia/Middle East)] RLY. 1 (Cooling Fan2 Relay), RLY. 2 (Cooling Fan1 Relay)
	CVVL	<b>CVVL</b>	50A	[G4ND] RLY. 3 (CVVL Relay)
	COOLING FAN 1		50A	[G4ND (Except Europe/Australia)/G4NA (Except Middle East)/G4KE (Except Europe/Australia/Middle East)] RLY. 1 (Cooling Fan2 Relay), RLY. 2 (Cooling Fan1 Relay)
	B+3		50A	Smart Junction Block (IPS 2 (IPS 5), IPS 3 (IPS 6), IPS 7, IPS 8)
	REAR HEATED		50A	RLY. 11 (Rear Heated Relay)
	DCT 1	<sup>1</sup> <b>DCT</b>	40A	[D4FD-DCT] TCM
	BLOWER		40A	RLY. 4 (Blower Relay)
	POWER OUTLET 1	<sup>1</sup> <b>POWER OUTLET</b>	40A	RLY. 7 (Power Outlet Relay)
	IG2	<b>IG 2</b>	30A	[W/O Smart Key] RLY. 5 (Start Relay), Ignition Switch, [With Smart Key] RLY. 5 (Start Relay), PCB Block (IG2 Relay)
	MDPS 2		100A	MDPS Unit (Rack)

	Fuse Name	Symbol	Fuse Rating	Circuit Protected
MULTI FUSE	B+1	<sup>1</sup> 	60A	Smart Junction Block (Fuse - TRUNK, SUNROOF2, S/ HEATER REAR, SUNROOF1, P/WDW RH, P/SEAT PASS, P/WDW LH, P/SEAT DRV)
	B+5	<sup>5</sup> 	60A	PCB Block (Engine Control Relay, Fuse - FUEL PUMP, ECU2, TCU1, HORN, WIPER1)
	B+2	<sup>2</sup> 	60A	Smart Junction Block (IPS 1, IPS 4, Fuse - FOG LAMP REAR, S/HEATER FRONT, ECS, AMP)
	ABS1	<sup>1</sup> 	40A	ESC Control Module
	IG1	<b>IG 1</b>	40A	[W/O Smart Key] Ignition Switch, [With Smart Key] PCB Block (IG1/ACC Relay)
	DCT2	<sup>2</sup> <b>DCT</b>	40A	[D4FD-DCT] TCM
	ABS2	<sup>2</sup> 	30A	ESC Control Module, Multipurpose Check Connector
FUSE	H/Lamp Washer		30A	RLY. 9 (H/Lamp Washer Relay)
	B+4	<sup>4</sup> 	40A	Smart Junction Block (Leak Current Autocut Device Fuse - INTERIOR LAMP, MULTI MEDIA, MEMORY2, MEMORY1, Fuse - MODULE1, DR LOCK, SMART KEY, BRAKE SWITCH)
	E-CVVT 1	<sup>1</sup> <b>E-CVVT</b>	40A	[G4KH] RLY. 8 (E-CVVT Relay)
	VACUUM PUMP 1	<sup>1</sup> <b>VACUUM PUMP</b>	20A	[G4KH] Vacuum Pump
	DEICER		20A	RLY. 10 (Deicer Relay)
	AMS	<b>AMS</b>	10A	Battery Sensor
	E-CVVT 2	<sup>2</sup> <b>E-CVVT</b>	20A	[G4KH] PCM
	A/CON		10A	A/C Control Module





Fuse Name	Symbol	Fuse Rating	Circuit Protected
E-CVVT 3	<sup>3</sup> E-CVVT	20A	[G4KH] PCM
HEATED MIRROR		10A	A/C Control Module, Driver/Passenger Power Outside Mirror
WIPER 2	<sup>2</sup> 	10A	BCM, PCM/ECM
H/LAMP HI		20A	[Bi-Function] RLY. 6 (Head Lamp High Relay)
GLOW		10A	[D4FD] Glow Relay Unit
FUEL PUMP	<b>FUEL PUMP</b>	20A	Fuel Pump Relay
ECU 1	<sup>E1</sup> 	20A	PCM/ECM
INJECTOR	<b>INJECTOR</b>	15A	[G4KE/G4ND/G4NA] Injector #1/#2/#3/#4
SENSOR4	<sup>S4</sup> 	15A	[D4FD] Camshaft Position Sensor, Air Flow Sensor, Diesel Junction Block (RLY. 2 - PTC Heater #1 Relay)


Fuse Name	Symbol	Fuse Rating	Circuit Protected
FUSE	SENSORS	10A	E/R Junction Block (RLY. 1/RLY. 2 - Cooling Fan 1/2 Relay)
			[G4KH] Fuel Pump Relay, Oil Control Valve (Exhaust), RCV Control Solenoid Valve, Purge Control Solenoid Valve
			[G4KE] Fuel Pump Relay, Oil Control Valve #1/#2, Camshaft Position Sensor #1/#2, Crankshaft Position Sensor, Variable Intake Solenoid Valve, Purge Control Solenoid Valve
			[G4ND] Fuel Pump Relay, Variable Intake Solenoid Valve, Mass Air Flow Sensor, Oil Control Valve #1/#2, Camshaft Position Sensor #1/#2, Purge Control Solenoid Valve
			[G4NA] Fuel Pump Relay, Variable Intake Solenoid Valve, Oil Control Valve #1/#2, Camshaft Position Sensor #1/#2, Purge Control Solenoid Valve
			[D4FD] Lambda Sensor #1/#2, Rail Pressure Regulating Valve
	TCU 2	15A	[A/T, DCT] Transaxle Range Switch, TCM (DCT), [M/T] PCB Block (Fuse - B/UP LAMP)
	ABS 3	10A	ESC Control Module, Multipurpose Check Connector
	POWER OUTLET 3	20A	Rear Power Outlet

Fuse Name	Symbol	Fuse Rating	Circuit Protected
B/UP LAMP	<b>B/UP LAMP</b>	10A	PCM/TCM, Transaxle Range Switch, Audio, Electro Chromic Mirror, Rear Combination Lamp (IN) LH/RH, MTS E-Call Module, Back-Up Lamp Switch (M/T)
SENSOR 1	<sup>S1</sup> 	15A	[G4KH/G4KE/G4ND/G4NA] Oxygen Sensor (Up/Down) [D4FD] Electronic VGT Actuator, PM (Particulate Matter) Sensor
IGN COIL	IGN COIL	20A	[G4KH/G4KE/G4ND/G4NA] Ignition Coil #1/#2/#3/#4, Condenser
SENSOR 3	<sup>S3</sup> 	20A	[D4FD] Fuel Pump Relay, Fuel Pressure Regulating Valve, EGR Cooling Bypass Solenoid Valve, Diesel Junction Block (RLY. 1 - Fuel Heater Relay)
ECU 2	<sup>E2</sup> 	10A	PCM/ECM
TCU 1	<sup>T1</sup> 	10A	PCM/TCM
VACUUM PUMP2	<sup>2</sup> <b>VACUUM PUMP</b>	10A	[G4KH] Vacuum Pump, Vacuum Switch
ECU 3	<sup>E3</sup> 	10A	PCM/ECM
POWER OUTLET2	<sup>2</sup> <b>POWER OUTLET</b>	20A	Front Power Outlet #1
HORN		20A	Horn Relay, ICM Relay Box (Burglar Alarm Horn Relay)
WIPER 1	<sup>1</sup> 	30A	Wiper Power Relay

Engine room compartment fuse panel (Diesel engine) (Passenger side)  
Circuit

Fuse Name	Symbol	Fuse rating	Circuit Protected
Glow Relay		80A	Glow Relay Unit
PTC Heater 1 Relay	<sup>1</sup> PTC HEATER	50A	RLY. 2 (PTC Heater #1 Relay)
PTC Heater 2 Relay	<sup>2</sup> PTC HEATER	50A	RLY. 3 (PTC Heater #2 Relay)
PTC Heater 3 Relay	<sup>3</sup> PTC HEATER	50A	RLY. 4 (PTC Heater #3 Relay)
Fuel Heater Relay		40A	RLY. 1 (Fuel Filter Heater Relay)

## Relay

Relay No.	Symbol	Relay Name	Type
RLY. 1		Fuel Filter Heater Relay	MICRO PLUG
RLY. 2	<sup>1</sup> PTC HEATER	PTC Heater Relay #1	MICRO PLUG
RLY. 3	<sup>2</sup> PTC HEATER	PTC Heater Relay #2	MICRO PLUG
RLY. 4	<sup>3</sup> PTC HEATER	PTC Heater Relay #3	MICRO PLUG

## LIGHT BULBS

### Bulb replacement precaution

Please prepare bulbs with appropriate standards in case of emergencies (Refer to "Bulb wattage" on page 9-09 for further information).

When changing bulbs and sorts, first turn off the engine at a safe place, firmly apply the side brake and take out the battery's negative (-) terminal.

#### ⚠ WARNING

##### ■ Working on the lights

**Prior to working on the light, firmly apply the parking brake, ensure that the ignition switch is turned to the LOCK position and turn off the lights to avoid sudden movement of the vehicle and burning your fingers or receiving an electric shock.**

*Use only the bulbs of the specified wattage.*

#### ⚠ WARNING

**Be sure to replace the burned out bulb with one of the same wattage rating. Otherwise, it may cause extensive wiring damage and possible fire.**

#### ⚠ CAUTION

**If you don't have necessary tools, the correct bulbs and the expertise, consult an authorized Kia dealer. In many cases, it is difficult to replace vehicle light bulbs because other parts of the vehicle must be removed before you can get to the bulb. This is especially true if you have to remove the headlight assembly to get to the bulb(s). Removing/installing the headlight assembly can result in damage to the vehicle.**

#### ⚠ CAUTION

• **If unauthentic parts or substandard lights are used when changing lights, it may lead to fuse disconnection and malfunction, and other wiring damages.**

• **Do not install extra lamps or LED to the vehicle. If supplementary lights are installed, it may lead to lamp malfunction and flickering of the lights. In addition, the fuse box and other wiring may be damaged.**

• **Lamp part malfunction due to network failure**

The headlamp, taillight, and fog light may lit up when the head lamp switch is turned ON, and not light up when the taillight or fog light switch is turned ON. This may be caused by network failure or vehicle electrical control system malfunction. If there is a problem, we recommend the system be serviced by an authorized Kia dealer.

## • Lamp part malfunction due to electrical control system stabilization

A normally functioning lamp may flicker momentarily. This momentary occurrence is due to stabilization function of the vehicle's electrical control system. If the lamp soon returns to normal, the vehicle does not require service.

However, if the lamp goes out after the momentary flickering, or the flickering continues, we recommend the system be serviced by an authorized Kia dealer.

## \* NOTICE

- If the light bulb or lamp connector is removed from an operating lamp activated by electricity, the fuse box's electronic device may scan it as a malfunction. Therefore, a lamp malfunction history may be recorded in Diagnostic Trouble Code (DTC) in the fuse box.

(Continued)

(Continued)

- It is normal for an operating lamp may blink temporarily. Since this occurrence is due to stabilization function of the vehicle's electronic control device, if the lamp lights up normally after temporary blinking, there is no problem in the vehicle. However, if the lamp continues to blink several times or turn off completely, there may be an error in the vehicle's electronic control device. So we recommend that you have the vehicle checked by an authorized Kia dealer immediately.

## \* NOTICE

We recommend that the headlight aiming be adjusted after an accident or after the headlight assembly is reinstalled at an authorized Kia dealer.

## \* NOTICE

After driving in heavy rain or washing, headlamp and tail lamp lenses could appear frosty. This condition is caused by the temperature difference between the lamp inside and outside. This is similar to the condensation on your windows inside your vehicle during the rain and doesn't indicate a problem with your vehicle. If the water leaks into the lamp bulb circuitry, have the vehicle checked by an authorized Kia dealer.

## \* NOTICE

### ■ Traffic Change (For Europe)

The low beam light distribution is asymmetric. If you go abroad to a country with opposite traffic direction, this asymmetric part will dazzle oncoming car driver. To prevent dazzle, ECE regulation demand several technical solutions (ex. automatic (Continued)