



Cigar lighter (power outlet) fuses in the KIA Optima are located in the Instrument panel fuse box (see fuse “C/LIGHTER” – Cigar lighter), and in the Engine compartment fuse box (fuse “P/OUTLET” – Power outlet).

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Instrument panel

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2007, 2008

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Fuse box location

Instrument panel

The fuse box is located behind the cover on the driver's side of the instrument panel.

Engine compartment

Inside the fuse/relay panel covers, you can find the label describing fuse/relay name and capacity. Not all fuse panel descriptions in this manual may be applicable to your vehicle.



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2007, 2008

Assignment of the fuses in the Instrument panel (2007, 2008)

Description	Amp rating	Protected component
H/LP	10A	Headlight
A/CON SW	10A	Air conditioner
START	10A	Start motor
P/SEAT RH	30A	Power seat (right)
P/WDW RH	25A	Power window (right)
WIPER	25A	Front wiper
MIRR HTD	10A	Outside rearview mirror defroster

Description	Amp rating	Protected component
RR FOG	15A	Rear fog light
P/SEAT LH	30A	Power seat (left)
P/WDW LH	25A	Power window (left)
SPARE	10A	Spare fuse
MODULE-2	10A	Cluster
W/DEICER	15A	Deicer
TAIL RH	10A	Taillight (right)
TAIL LH	10A	Taillight (left)
EPS	10A	Power steering wheel
A/CON	10A	Air conditioner
SAFETY PWR	20A	Safety power window
A/BAG IND	10A	Airbag warning
A/BAG	15A	Airbag
DR LOCK	25A	Central door lock
SPARE	10A	Spare fuse
CLUSTER	10A	Cluster
MODULE-1	10A	BWS buzzer, ESP switch
HAZARD	15A	Hazard warning light
STOP LP	15A	Stop light
SPARE	15A	Spare fuse
TELL TALE	10A	Clock
T/LID OPEN	15A	Trunk lid opener

Description	Amp rating	Protected component
ADJ PEDAL	10A	Adjust pedal relay
SPARE	15A	Spare fuse
T/SIG	10A	Turn signal light
TPMS	10A	TPMS
BLOWER MTR	10A	Blower. Air conditioner
MEMORY	15A	Cluster. ETACS. A/C. Clock. Room lamp
AUDIO	15A	Audio
C/LIGHTER	25A	Cigar lighter
D/CLOCK	10A	Clock

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Assignment of the fuses in the engine compartment (2007, 2008)

Assignment of the fuses in the Engine compartment (2007, 2008)

Description	Amp rating	Protected component
I/P B+ 2	50A	Instrument panel B+
ABS 2	40A	ABS
DRL	15A	Daytime running light
HORN	15A	Horn
H/LP LOW	15A	Headlight (low)
F/PUMP	20A	Fuel pump

Description	Amp rating	Protected component
H/LP HI	15A	Headlight (high)
ECU	10A	Engine control unit
ABS 1	40A	ABS
ALT	125A (150A)	Alternator
SPARE	10A	Spare fuse
SPARE	15A	Spare fuse
SPARE	20A	Spare fuse
FRT FOG	15A	Front fog light
ECU RELAY	30A	Engine control unit
POWER AMP	20A	Amplifier
SPARE	15A	Spare fuse
SPARE	20A	Spare fuse
P/OUTLET	25A	Power outlet
RAD FAN	30A (40A)	Radiator fan
PCU	10A	Power train control system sensors, TCU
ABS	10A	ABS
S/WARMER	25A	Seat warmer
ATM	20A	Automatic transaxle control
S/ROOF	20A	Sunroof
SPARE	20A	Spare fuse
BACK UP	10A	Back-up light
RR HTD	40A	Rear window defroster

Description	Amp rating	Protected component
IGN 1	30A	Ignition
B+	30A	In pannel B
TAIL	20A	Taillight
A/CON	10A	Air conditioner
ECU-1	20A	Engine control unit
IGN COIL	20A	Ignition coil
SNSR3	10A	Sensors
BLOWER	40A	Blower
IGN 2	30A	Ignition
SNSR2	15A	Sensors
SNSR 1	15A	Sensors
HORN RELAY	-	Horn relay
HDLP_LOW RELAY	-	Headlight (low) relay
RAD FAN_HI RELAY	-	Radiator fan relay
RAD FAN_LOW RELAY	-	Radiator fan relay
F/PUMP RELAY	-	Fuel pump relay
WIPER RELAY	-	Wiper relay
MAIN RELAY	-	Main relay
START RELAY	-	Start motor relay
ATM CONT RELAY	-	Automatic transaxle control relay
A/CON RELAY	-	Air conditioner relay

2009

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Assignment of the fuses in the Instrument panel (2009)

Name	Amp rating	Protected component
D/CLOCK	10A	O/S MIRROR SW, AUDIO, ETACS, D/CLOCK
C/LIGHTER	15A	C/LIGHTER
A/BAG	15A	ACU, PAB_DISPLAY, PAB C_OFF SW
T/SIG	10A	TURN LAMP, S/REPEATER LAMP, M/F SW, HAZARD SW, CLUSTER
CLUSTER	10A	CLUSTER, ETACS, PDM_UNIT_B
A/BAG IND	10A	CLUSTER
MODULE-1	10A	S_REMOCON SW. BWS BUZZER, PIC UNIT A, S_ANGLE SNSR, ESC SW
TELL TAIL	10A	D/CLOCK(TELLTALE)
H/LP	10A	H/LP LOW RLY COIL, H/LP HIGH RLY COIL
WIPER	25A	WASHER MTR, WIPER MOTOR, WIPER RLY
A/CON	10A	A/CON AUTO_1
EPS	10A	EPS UNIT, PDM_UNIT_B
MODULE-2	10A	BLOWER RLY COIL, ETACS, S/ROOF, WIPER HI RLY COIL, CLUSTER, RAIN SENSOR, RHEOSTAT, S/WARMER RLY COIL, AIH

Name	Amp rating	Protected component
		SNSR
A/CON S/W	10A	A/CON AUTO_2
START	10A	START RLY COIL, INHIBITOR SW, CLUTCH LOCK SW
AUDIO	15A	AV, AUDIO
MEMORY	15A	T/ROOM LAMP, ETACS, CLUSTER, D/CLOCK, A/CON MANU_AUTO, KEYJLL(+), SUN VISOR LAMP, ROOM LAMP. O/H CONSOLE LP, DR LAMP
P/SEAT LH	30A	P/SEAT_LH
P/SEAT RH	30A	P/SEAT.RH
ECS/RR FOG	15A	RR FOG SW(IND.), RR FOG LAMP ETACS
W/DEICER	15A	FRT_GLASS_HTD, ETACS
P/WDW LH	25A	P/WDW MTR LH
P/WDW RH	25A	P/WDW MTR RH
SAFETY PWR	20A	SAFETY WDW
MIRR HTD	10A	RR MIRROR HTD
T/LID OPEN	15A	F/FILLER ACTR, LATCH_T_LID, ETACS
ADJ PEDAL	10A	KEY SOL, ATM SOL, ADJ PEDAL SW, ADJ PEDAL MTR, ATM&K/LOCK CTRL UNIT
STOP LP	15A	STOP LAMP, HIGH MOUNTED STOP LAMP
HAZARD	15A	TURN LAMP, S/REPEATER LAMP, CLUSTER. ETACS, OBDII
TPMS (if equipped)	10A	DR WARN PIC SW, PIC UNIT_A, FOB HOLDER_EXTN
DR LOCK	25A	D/LOCK MOTOR, T/TURN UNLOCK MTR, ETACS

Name	Amp rating	Protected component
TAIL LH	10A	FRT FOG RLY COIL, COMBI LP_LH, LICENSE LAMP.LH, POS.LP LH
TAIL RH	10A	POS.LP RH, GLOVE BOX LP, COMBI LP_RH, LICENSE LAMP.RH, RR.FOG SW, P/WINDOW SW, ESP SW, HAZARD SW, A/CON SW, SEAT WARMER SW, A.CON SW, S_REMOCON_SW, SPORT_MODE_SW
BLOWER MTR	10A	BLOWER_MTR
SPARE	10A	-
PDM-1	10A	PDM_UNIT_B, SSB
PDM-2	20A	PDM_UNIT_A

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Assignment of the fuses in the engine compartment (2009)

No	Description	Amp rating	Protected component
	FUSIBLE LINK:		
	ALT	150A(2.7L) / 125A(2.4L)	FUSIBLE LINK, FUSE
	IGN1	30A	FUSE (A/BAG, TURN, CLUSTER, TELTAIL, A/BAG IND., 21, PCU, MODULE-1, SPARE)
	IGN2	30A	FUSE (MODULE-2, H/LP, A/CON, WIPER, SPARE, SATRT), BUTTON RELAY

No	Description	Amp rating	Protected component
	TAIL	20A	TAIL_LP_LH. TAIL_LP_RH
	RR HTD	40A	MIRR HTD, RR_HTD_RELAY
	BLOWER	40A	BLOWER MTR, FUSE (A/CON SW)
	I/P B+1	30A	FUSE (HAZARD, STOP LP. TPMS, T/LID, PEDAL ADJ, DR_LOCK)
	I/P B+2	50A	P/WINDOW RELAY, FUSE (RR FOG, P/SEAT_LH, P/SEAT_RH, W/DEICER, POWER CONNECTOR, PDM_1, PDM_2)
	ECU RLY	30A	PCU, IGN COIL, INJECTOR, SENSOR
	FUSES:		
1	RAD FAN	40A(2.7L) / 30A(2.4L)	RAD FAN MTR
2	ABS1	40A	ABS/ESC UNIT
3	ABS2	40A	ABS/ESC UNIT
4	A/CON	10A	A/CON COMPRESSOR
5	S/WARMER	25A	S/WARMER.LH, S/WARMER_RH
6	P/AMP	20A	P/AMP, AV-AMP
7	S/ROOF	20A	S/ROOF MTR
8	P/OUTLET	25A	P/OUTLET
9	FRTFOG	15A	FRT FOG LAMP
10	HEAD LP HI	15A	HEAD LP HI
11	HEAD LP LOW	15A	HEAD LP LOW
12	HORN	15A	HORN, B/ALARM HORN. HORN SW

No	Description	Amp rating	Protected component
13	SNSR1	15A	MAR MAF, CMR CCV, VIS. CPSV, ISCA, OCV. EGR. CAM. CKP, TDC SENSOR
14	SNSR2	15A	O2 SENSOR. EGR ACTR
15	SNSR3	10A	INJECTOR, PCU
16	IGN COIL	20A	IGN COIL. PCU. O2 SENSOR
17	ECU-1	20A	PCU
18	F/PUMP	20A	F/PUMP MTR
19	ECU	10A	PCU
20	ATM	20A	TCU, ATM_SOLENOID
21	BACK UP	10A	BACK UP LAMP. ECM MIRROR. BWS UNIT
22	ABS	10A	ABS/ESC UNIT
23	PCU	10A	PCU, SPEED SENSOR
24	DRL	15A	DRL CONTROL MODULE

2010

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Assignment of the fuses in the Instrument panel (2010)

Name	Amp rating	Protected component
D/CLOCK	10A	O/S MIRROR SW, AUDIO, ETACS, D/CLOCK, ATM_K_LOCK, PDM, O/H CONSOLE LP
C/LIGHTER	15A	C/LIGHTER, OIC
A/BAG	15A	ACU, PAB DISPLAY, PAB C_OFF SW, D/CLOCK, PASS_OC
T/SIG	10A	TURN LAMP, S/REPEATER LAMP, M/F SW, HAZARD SW, CLUSTER, HANDLE SW
CLUSTER	10A	CLUSTER, ETACS, PDM_UNIT_B, HANDLE SW, RESISTOR_W_D
A/BAG IND	10A	CLUSTER
MODULE-1	10A	S_REMOCON SW, BWS BUZZER, PIC UNIT A, S_ANGLE SNSR, ESP SW, ATM K LOCK, TPMS
TELL TAIL	10A	D/CLOCK(TELLTALE)
H/LP	10A	H/LP LOW RLY COIL, H/LP HIGH RLY COIL
WIPER	25A	WASHER MTR, WIPER MOTOR, WIPER RLY
A/CON	10A	A/CON AUTO_1,PCU
EPS	10A	EPS UNIT, PDM_UNIT_B
MODULE-2	10A	BLOWER RLY COIL, ETACS, S/ROOF, WIPER HI RLY COIL, CLUSTER, RAIN SENSOR, RHEOSTAT, S/WARMER RLY COIL, AIH SNSR, ECM, H/LINK
A/CON S/W	10A	A/CON AUTO 2
START	10A	START RLY COIL, INHIBITOR SW, CLUTCH LOCK SW, B/ALARM RLY
AUDIO	15A	AV, AUDIO
MEMORY	15A	T/ROOM LAMP, ETACS, CLUSTER, D/CLOCK, A/CON MANU_AUTO, KEY_ILL(+) SUN VISOR LAMP, ROOM LAMP, O/H CONSOLE LP, DR LAMP, RF_MODULE, H/LINK

Name	Amp rating	Protected component
P/SEAT LH	30A	P/SEAT LH
P/SEAT RH	30A	P/SEATRH
ECS/RR FOG	15A	RR FOG SW(IND.), RR FOG LAMP, ETACS
W/DEICER	15A	FRT_GLASS_HTD, ETACS, SW_FRT_HTD
P/WDW LH	25A	P/WDW MTR LH
P/WDW RH	25A	P/WDW MTR RH
SAFETY PWR	20A	SAFETY WDW
MIRR HTD	10A	0_S_MIRR HTD, A/CON UNIT
T/LID OPEN	15A	F/FILLER ACTR, LATCH_T_LID, ETACS
ADJ PEDAL	10A	KEY SOL, ATM SOL, ADJ PEDAL SW, ADJ PEDAL MTR, ATM&K/LOCK CTRL UNIT
STOP LP	15A	STOP LAMP, HIGH MOUNTED STOP LAMP
HAZARD	15A	TURN LAMP, S/REPEATER LAMP, CLUSTER, ETACS, OBDII
TPMS	10A	TPMS
DR LOCK	25A	D/LOCK MOTOR, T/TURN UNLOCK MTR, ETACS
TAIL LH	10A	FRT FOG RLY COIL, COMBI LP_LH, LICENSE LAM PL H, POS.LP LH
TAIL RH	10A	POS.LP RH, GLOVE BOX LP, COMBI LP RH, LICENSE LAMP_RH, RR.FOG SW, P/WINDOW SW, ESP SW, HAZARD SW, A/CON SW, SEAT WARMER SW, A.CON SW, S_REMOCON_SW, SPORT_MODE_SW
BLOWER MTR	10A	BLOWER MTR

Name	Amp rating	Protected component
SPARE	10A	-
PDM-1	10A	PDM UNIT B, SSB
PDM-2	20A	PDM_UNIT_A
SMART KEY	10A	PIC UNIT, FOB_HOLDER_EXTN

Advertisements

Assignment of the fuses in the engine compartment (2010)

No	Description	Amp rating	Protected component
	FUSIBLE LINK:		
	ALT	150A(2.7L) / 125A(2.4L)	FUSIBLE LINK, FUSE
	IGN1	30A	FUSE (A/BAG, TURN, CLUSTER, TELTAIL, A/BAG IND., 21, PCU, MODULE-1, SPARE)
	IGN2	30A	FUSE (MODULE-2, H/LP, A/CON, WIPER, SPARE, SATRT), BUTTON RELAY
	TAIL	20A	TAIL_LP_LH. TAIL_LP_RH
	RR HTD	40A	MIRR HTD, RR_HTD_RELAY
	BLOWER	40A	BLOWER MTR, FUSE (A/CON SW)
	I/P B+1	30A	FUSE (HAZARD, STOP LP. TPMS, T/LID, PEDAL ADJ, DR_LOCK)

No	Description	Amp rating	Protected component
	I/P B+2	50A	P/WINDOW RELAY, FUSE (RR FOG, P/SEAT_LH, P/SEAT_RH, W/DEICER, POWER CONNECTOR, PDM_1, PDM_2)
	ECU RLY	30A	PCU, IGN COIL, INJECTOR, SENSOR
	FUSES:		
1	RAD FAN	40A(2.7L) / 30A(2.4L)	RAD FAN MTR
2	ABS1	40A	ABS/ESC UNIT
3	ABS2	40A	ABS/ESC UNIT
4	A/CON	10A	A/CON COMPRESSOR
5	S/WARMER	25A	S/WARMER.LH, S/WARMER_RH
6	P/AMP	20A	P/AMP, AV-AMP
7	S/ROOF	20A	S/ROOF MTR
8	P/OUTLET	25A	P/OUTLET
9	FRTFOG	15A	FRT FOG LAMP
10	HEAD LP HI	15A	HEAD LP HI
11	HEAD LP LOW	15A	HEAD LP LOW
12	HORN	15A	HORN, B/ALARM HORN. HORN SW
13	SNSR1	15A	MAR MAF, CMR CCV, VIS. CPSV, ISCA, OCV. EGR. CAM. CKP, TDC SENSOR
14	SNSR2	15A	O2 SENSOR. EGR ACTR
15	SNSR3	10A	INJECTOR, PCU
16	IGN COIL	20A	IGN COIL. PCU. O2 SENSOR

No	Description	Amp rating	Protected component
17	ECU-1	20A	PCU
18	F/PUMP	20A	F/PUMP MTR
19	ECU	10A	PCU
20	ATM	20A	TCU, ATM_SOLENOID
21	BACK UP	10A	BACK UP LAMP. ECM MIRROR. BWS UNIT
22	ABS	10A	ABS/ESC UNIT
23	PCU	10A	PCU, SPEED SENSOR
24	DRL	15A	DRL CONTROL MODULE

Learn more:



- [How to check the fuses?](#)
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