

Under Hood Ignition Feeds 2020+

- Ram trucks do not have upfitter switched battery circuits readily available under hood
- On vehicles with Auxiliary switches there is an ignition feed available in the I/P but not under hood.
- On vehicles equipped with VSIM (Vehicle System Interface Module), which is standard on Cab Chassis starting 2019, there is a run/start relay control circuit that can be used to control an added relay, that circuit is in the VSIM jumper black connector harness that is plugged into the VSIM in the I//P. See the VSIM document in the Body Builders Site for information.

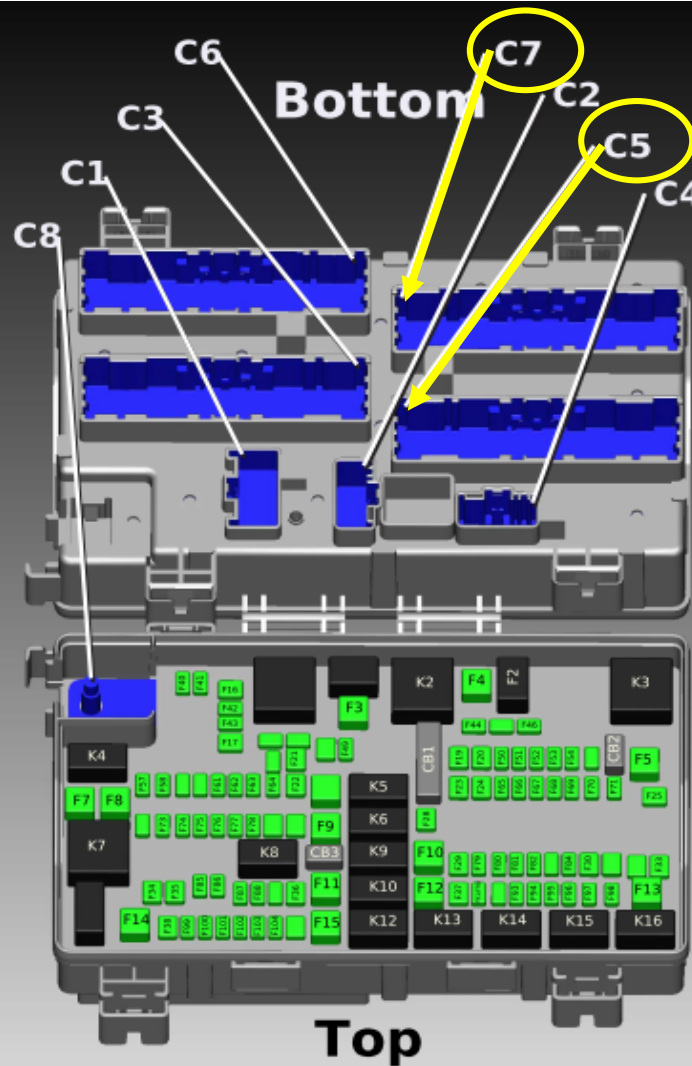
On all vehicles there are circuits F781 (Run/Accessory feed), and a selectable power outlet feed W880 (Run/Accessory or Battery). On vehicles with auxiliary switches (standard on Cab Chassis and optional on Pick Ups) there is an additional F606 a Run circuit. The F781 circuit is fed by a 10A fuse that feeds several modules inside the vehicle (USB Charging Port, Wireless Charging Module and the Invertor Module). The F781 circuit comes out of the bottom of the main power distribution center (PDC) in pin 7 of connector C5. The W880 circuit is fed by a 20A fuse and feeds the Power Outlet inside the vehicle and comes out of the bottom of the main PDC in pin 5 of connector C7. W880 can be fed by ignition (Run/Acc) or battery depending on the fuse position in the Main Power Distribution Center. Unless using either one of the circuits to feed a low current device, we recommend using either of them to control a relay with a fuse to provide the switched power.

Auxiliary Switch equipped vehicle -- The auxiliary Run (F606) circuit runs from the auxiliary run relay output pin 47 in the Auxiliary PDC to the I/P where it is terminated at an open connector. The open connector has a mating connector included with the vehicle in the upfitter accessories bag. To access this auxiliary run feed under hood you will need to temporarily raise the Aux PDC to get access and splice into the F606 circuit. Additional information on F606 is included in the Upfitter Schematics that are located on the Body Builders Site.

Information on these circuits and their locations are on the following pages.

Main Power Distribution Center (PDC) forward of the battery on driver side. Connectors C5 & C7 have ignition circuits that can be used. The circuit and pin information is in the following pages.

FUSES			
Fuse	Alternate	Description	Amperage
F02	-	ABS PUMP MOTOR	60A
F03	-	RAD FAN - IF EQUIPPED	60A
F04	-	400W INVERTER - IF EQUIPPED	50A
F05	-	COMPRESSOR FOR AIR SUSPENSION - IF EQUIPPED	40A
F07	-	STARTER SOLENOID	40A
F08	-	NOX SENSOR - IF EQUIPPED	20A
F09	-	AUXILIARY RELAY OUTPUT / DIESEL FUEL HEATER - IF EQUIPPED	40A
F10	-	BRAKE VACUUM PUMP - IF EQUIPPED	30A
F11	-	BODY CONTROLLER / EXTERIOR LIGHTING #2	40A
F11	-	BRAKE SYSTEM MODULE (ECU AND VALVES)	40A
F12	-	BODY CONTROLLER #B	40A
F13	-	BLOWER MOTOR	40A
F14	-	BODY CONTROLLER #4/ EXTERIOR LIGHTING	40A
F15	-	POWER SIDE STEPS - IF EQUIPPED	30A
F16	-	SMART BAR MODULE - IF EQUIPPED	30A
F17	-	WINCH CONTROL MODULE - IF EQUIPPED	30A
F19	-	SCR - IF EQUIPPED	30A
F20	-	PASSENGER DOOR MODULE	30A
F21	-	DRIVE TRAIN CONTROL MODULE	30A
F22	-	ENGINE CONTROL MODULE GPEC / HEAVY DUTY / OTHER - IF EQUIPPED	20A
F23	-	PCM - IF EQUIPPED	25A
F23	-	CBC FEED #1	30A
F24	-	DRIVER DOOR MODULE	30A
F25	-	FRONT WIPER	30A
F28	-	TRAILER TOW BACKUP LIGHTS - IF EQUIPPED	20A
F29	-	TRAILER TOW PARKING LIGHTS - IF EQUIPPED	20A
F30	-	TRAILER TOW RECEPTACLE / TRAILER TOW (SEPARATE E-BRAKE) / TRAILER TOW (BLK)	30A
F33	-	TRANSMISSION CONTROL MODULE - IF EQUIPPED	20A
F34	-	VEHICLE SYSTEM INTERFACE MODULE #2- IF EQUIPPED	30A
F35	-	SUNROOF - IF EQUIPPED	30A
F36	-	ELECTRIC BACK LIGHT - IF EQUIPPED	30A
F37	-	FUEL HEATER #2 AUXILIARY RELAY 2 - IF EQUIPPED	30A
F38	-	INTEGRATED TRAILER BRAKE MODULE - IF EQUIPPED	30A
F40	-	VENTILATED SEATS - IF EQUIPPED	10A
F41	-	ACTIVE GRILLE SHUTTER / ACTIVE AIR DAM - IF EQUIPPED	10A
F42	-	HORN	20A
F43	-	HEATED STEERING WHEEL - IF EQUIPPED	15A
F44	-	DIAGNOSTIC PORT	10A
F46	-	UPFITTERS RELAY COIL - IF EQUIPPED	10A
F49	-	INSTRUMENT CLUSTER / MCO CSG	10A
F50	-	AIR SUSPENSION CONTROL MODULE - IF EQUIPPED	20A
F51	-	IGNITION NODE MODULE / KEYLESS IGNITION NODE MODULE, RADIO FREQUENCY HUB MODULE / ELECTRIC STEERING COLUMN LOCK - IF EQUIPPED	10A
F52	-	BATTERY SENSOR	5A
F53	-	TRAILER TOW - LEFT TURN / STOP LIGHTS - IF EQUIPPED	20A
F54	-	NON MEMORY ADJUSTABLE PEDALS - IF EQUIPPED	20A
F57	-	TCM / PCM / SOLENOID TRANS PRESSURE SW (RFE TRANS ONLY) - IF EQUIPPED	20A
F58	-	BED LIGHTING (LED) - IF EQUIPPED	10A
F61	-	UREA SENSOR / PM SENSOR - IF EQUIPPED	10A
F62	-	AIR CONDITIONING CLUTCH	10A
F63	-	IGNITION COILS (GAS), IGNITION COILS CAPACITORS (GAS) / SHORT RUNNER VALVE ACTUATOR	20A
F64	-	FUEL INJECTORS / POWERTRAIN CONTROL MODULE / SRV - IF EQUIPPED	25A
F65	-	MOD INVERTER (WAKE UP) / POWER PORT / USB IP / WCPM - IF EQUIPPED	10A
F66	-	SUNROOF / LIGHT AND RAIN SENSOR MODULE / INSIDE REAR VIEW MIRROR / PASSENGER WINDOW SW / USB PORT REAR / FEED FOR R/A RLY #2COIL - IF EQUIPPED	10A
F67	-	CD / DVD / UCI PORT - IF EQUIPPED	10A
F68	-	AEB RACAM HTR - IF EQUIPPED	10A
F69	-	SCR MODULE - IF EQUIPPED	15A
F70	-	FUEL PUMP MOTOR / KO9RLY COIL FEED - IF EQUIPPED	30A
F71	-	AMPLIFIER / ACTIVE NOISE CANCELLATION - IF EQUIPPED	25A
F73	-	FUEL TRANSFER PUMP (REAR TANK) - IF EQUIPPED	20A
F74	-	BACKUP ALARM - IF EQUIPPED	10A
F75	-	ATMM / COIL - SCR MODULE RLY - IF EQUIPPED	10A



FUSES			
Fuse	Alternate	Description	Amperage
F76	-	ELECTRONIC STABILITY CONTROL	10A
F77	-	DRIVETRAIN CONTROL MODULE / FRONT AXLE DISCONNECT MODULE / TCM	10A
F78	-	ENGINE CONTROL MODULE / POWERTRAIN CONTROL MODULE / AEB RACM MOD / FEED TO AUX PDC RELAY COILS	15A
F79	-	ID / CLEARANCE LIGHTS	15A
F80	-	ASSY OVERHEAD CONSOLE / SW ASSIST / SW 911- IF EQUIPPED	10A
F81	-	TRAILER TOW RIGHT TURN / STOP LIGHTS - IF EQUIPPED	20A
F82	-	STEERING COLUMN CONTROL MODULE / CRUISE CONTROL	10A
F84	-	ASBM / HVAC / ICS / REAR HEATED SEAT SWITCHES	15A
F85	-	AIRBAG MODULE	10A
F86	-	AIRBAG MODULE	10A
F87	-	AIR SUSPENSION / ITBM / STEERING COLUMN CONTROL MODULE / MOD GATEWAY CAN/C TRAILER TPM	10A
F88	-	INSTRUMENT PANEL CLUSTER	15A
F90	-	IGN OR BATT CUSTOMER SELECTABLE - IF EQUIPPED	20A
F91	-	IGN OR BATT CUSTOMER SELECTABLE - IF EQUIPPED	20A
F93	-	CIGAR LIGHTER - IF EQUIPPED	20A
F94	-	SHIFT-BY-WIRE / TRANSFER CASE SWITCH / MODULE TPM TRAILER / MODULE GATEWAY CAN/C TRAILER TPM	10A
F95	-	REARVIEW CAMERA / PARK ASSIST / CHMSL CAMERA / BLIND SPOT SENSOR / SURROUND VIEW CAMERA	10A
F96	-	TRAILER CAMERA - IF EQUIPPED	10A
F97	-	FRONT HEATED SEAT PASSENGER - IF EQUIPPED	20A
F98	-	FRONT HEATED SEAT DRIVER - IF EQUIPPED	20A
F99	-	HVAC / IN CAR TEMPERATURE SENSOR / CSG MOD / HUMIDITY SENSOR	10A
F100	-	UPFITTERS - IF EQUIPPED	10A
F101	-	REAR HEATED SEAT RIGHT	20A
F102	-	REAR HEATED LEFT SEAT / RUN/RELAY #3COIL	20A
F103	-	HEADLAMP AFL5	10A
F104	-	UCI PORT / USB REAR	20A

RELAYS			
Relay	Alternate	Description	Amperage
K02	D83B	RADIATOR FAN - HIGH	N/A
K03	R663Q	AIR SUSPENSION	N/A
K04	D824	SCR 2	N/A
K05	D820	AUTO SHUT DOWN	N/A
K06	D851A	RUN / ACCESSORY 1	N/A
K07	D879	STARTER	N/A
K08	D899	RUN / START	N/A
K09	D275B	VACUUM PUMP	N/A
K10	D810	FUEL HEATER	N/A
K11	D821	REAR WINDOW DEFOGGER	N/A
K12	D842B	RUN2	N/A
K13	D810B	FUEL HEATER 2	N/A
K14	D851B	RUN / ACCESSORY 2	N/A
K15	D842A	RUN1	N/A
K16	D876	BLOWER MOTOR	N/A

CIRCUIT BREAKER			
CB	Alternate	Description	Amperage
CB1	-	RR POWER WINDOWS / POWER BACKLITE	25A
CB2	-	POWER SEAT - DRIVER / MEMORY	25A
CB3	-	POWER SEAT - PASSENGER	25A

8/5/2020

ASSEMBLY-POWER DISTRIBUTION CENTER C5

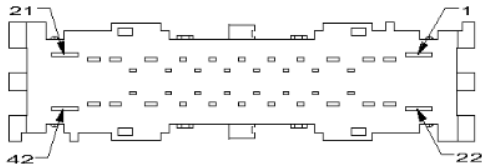
Harness Family: DASH_LEFT
Color: BLUE
Gender: FEMALE
Part Number: 7287-8886-90
Part Description:
Connector No: D6630E
Option: Standard
Repair Kit Part Number: 68396629AA
Cavity Count: 42
Available Views: [Location View](#)

F781 Run Accessory circuit Pink wire with Yellow tracer in pin 7 of connector C5 that plugs into the bottom of the Main Power Distribution Center

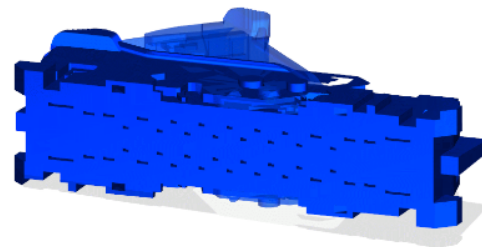


Pin	Circuit	Wire Color	Gauge/Size	Function	Option
1	N0	NA	0	NO CONNECT	
2	F203	PK/BU	2.0	SCR RELAY OUTPUT	
3	A905	RD	2.0	FUSED B(+)	
4	F947	PK/GN	0.50	IGN RS	
5	A924	RD	2.0	FUSED B(+)	
6	Z907	BK	0.35	GROUND	
7	F781	PK/YE	0.35	IGNITION RUN ACC	
8	X4	DG/WH	0.35	HORN RELAY CONTROL	
9	F982	PK/YE	0.35	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)	
11	A936	RD	0.35	FUSED B(+)	
12	L655	WH/OG	0.35	LEFT REAR TURN SIGNAL CONTROL	
13	C9	BU/VT	0.35	ELECTRIC WINDSHIELD WIPER DE-ICER CONTROL	
14	P201	GN/DB	0.50	ADJUSTABLE PEDALS RELAY CONTROL	
15	A969	RD	0.75	FUSED B(+)	
16	Y39	BN/GN	0.35	COMPRSR RELAY RTN	
17	N1	DB/OG	2.0	FUEL PUMP CONTROL OUTPUT	
18	N0	NA	0	NO CONNECT	
19	A931	RD	1.5	FUSED B(+)	
20	W3	BN/WH	2.0	WIPER LOW SPEED CONTROL OUTPUT	
21	N0	NA	0	NO CONNECT	
22	N0	NA	0	NO CONNECT	
23	F981	PK/YE	2.0	FUSED IGNITION RUN/ACCESSORY CONTROL OUTPUT	
24	N0	NA	0	NO CONNECT	
25	A937	RD	0.35	FUSED B(+)	
26	A925	RD	2.0	FUSED B(+)	
27	A900	GY/RD	0.35	FUSED B(+)	
28	A206	RD	1.0	FUSED B(+)	
30	A910	RD	0.35	FUSED B(+)	
31	A998	RD	0.35	FUSED B(+)	
32	A916	RD	0.35	FUSED B(+)	
33	N0	NA	0	NO CONNECT	
34	W753	YE	1.0	TRAILER TOW LEFT STOP/TURN SIGNAL	
35	Y38	BN/DG	0.35	COMPRESSOR RELAY FEED	
36	A128	RD/OG	1.0	ADJUSTABLE PEDALS MOTOR DRIVER	
37	N0	NA	0	NO CONNECT	
38	N0	NA	0	NO CONNECT	
39	N0	NA	0	NO CONNECT	
40	A942	RD	2.0	FUSED B(+)	
41	W4	BN/OG	2.0	WIPER HIGH SPEED CONTROL OUTPUT	
42	Y40	OG/BN	3.0	AIR SUSPENSION AIR COMPRSR FEED	

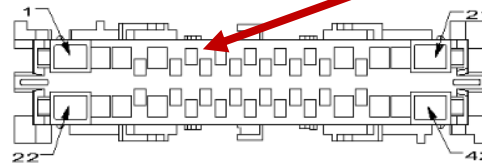
Mating Side:



Isometric View:



Wire Insertion Side:



Pin 7 of connector C5

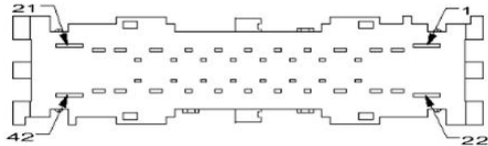
NOTE: When connector cavities are identified as "NO CONNECT" in the following table, there may be "Dummy (blunt cut) wires" or Cavities may be "Open", "Plugged, or "Flashed over" depending on vehicle option content.

ASSEMBLY-POWER DISTRIBUTION CENTER C7

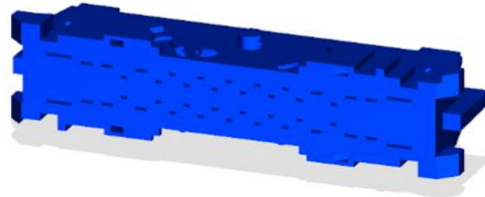
Harness Family: DASH_LEFT
Color: GREEN
Gender: FEMALE
Part Number: 7287-8884-60
Part Description:
Connector No: D6630G
Option: Standard
Repair Kit Part Number: 68396631AA
Cavity Count: 42
Available Views: [Location View](#)

W880 is a selectable feed either Run Accessory or Battery depending on the fuse position in the under hood main PDC. To use as a Run/Accessory feed the fuse F91/F90 needs to be in position 2 in the PDC. W880 circuit is a Red wire with Pink tracer in pin 5 of connector C7 that plugs into the bottom of the main Power Distribution Center. See Fuse location information on Page 5.

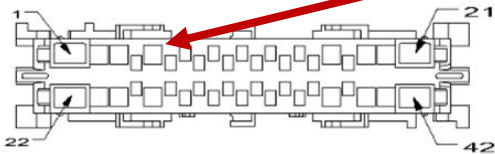
Mating Side:



Isometric View:



Wire Insertion Side:

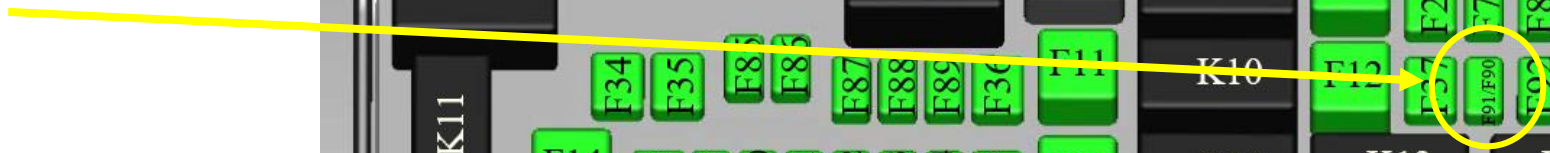
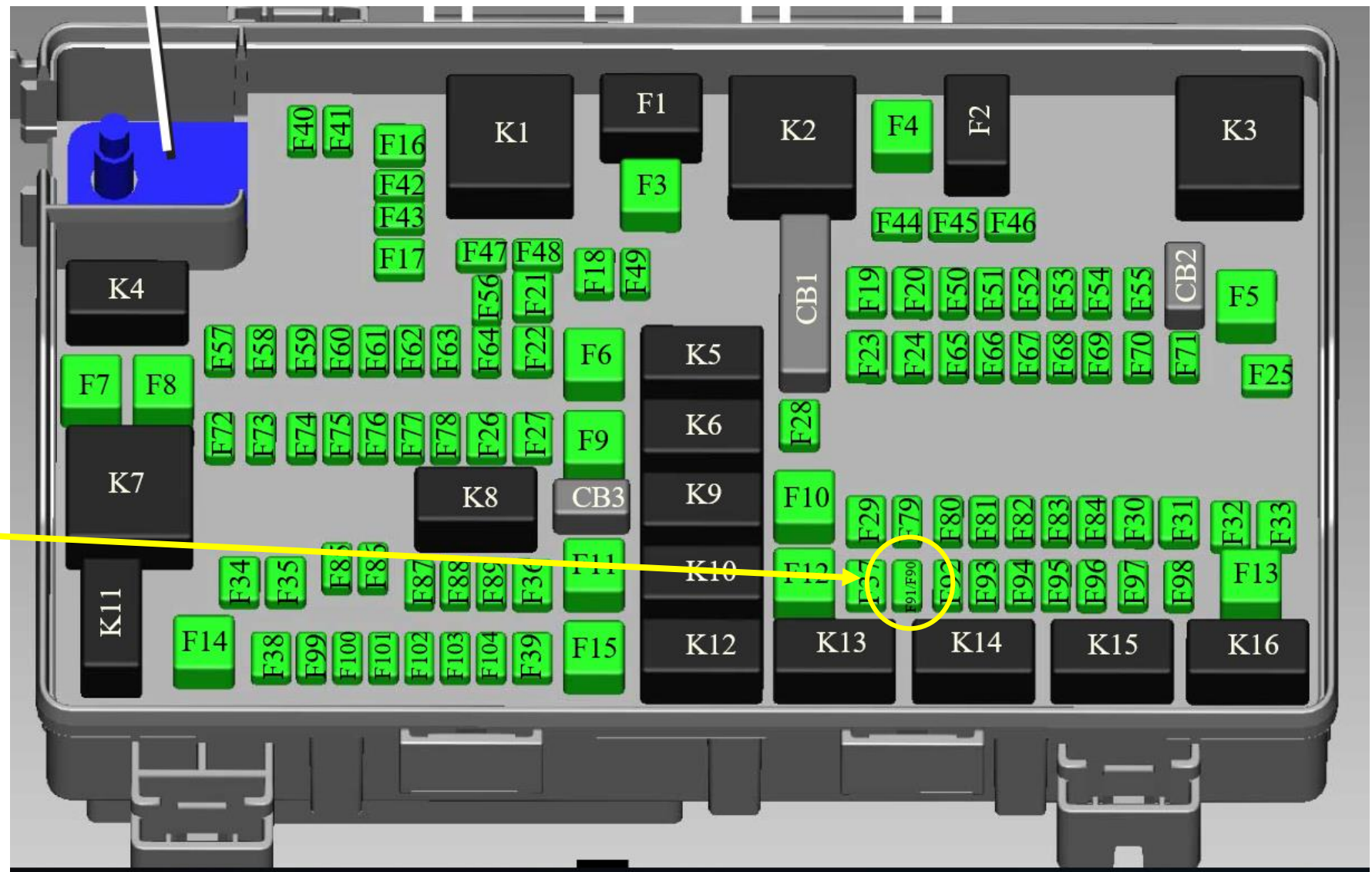


Pin 5 of connector C7

NOTE: When connector cavities are identified as "NO CONNECT" in the following table, there may be "Dummy (blunt cut) wires" or Cavities may be "Open", "Plugged, or "Flashed over" depending on vehicle option content.

Pin	Circuit	Wire Color	Gauge/Size	Function	Option
1	A886	RD/PK	3.0	FUSED D(+)	
2	NA	NA	0	NO CONNECT	
3	NA	NA	0	NO CONNECT	GAS
3	F327	PK/BU	2.0	DIESEL FUEL HEATER 2 SUPPLY	DIESEL
4	NA	NA	0	NO CONNECT	GAS
4	K57	GN/WHT	0.58	FUEL HEATER RELAY CONTROL	DIESEL
5	W880	RD/PK	1.5	FUSED D(+)	
6	P387	GN/PK	0.58	ACCESSORY DELAY RELAY CONTROL	
7	NA	NA	0	NO CONNECT	
8	Z807	DK	0.35	GROUND	DIESEL
8	NA	NA	0	NO CONNECT	GAS
9	NA	NA	0	NO CONNECT	
10	NA	NA	0	NO CONNECT	DIESEL
10	T110	DK/YC	0.58	VACUUM PUMP RELAY CONTROL	GAS
11	A185	RD/YC	0.35	FUSED D(+)	
12	KE18	DN/OG	0.58	IGNITION RUN CONTROL OUTPUT	
13	F823	PK/YC	0.35	RUN RELAY CONTROL	
14	NA	NA	0	NO CONNECT	
15	NA	NA	0	NO CONNECT	
16	Z807	DK	0.35	GROUND	
17	F822	PK/YC	1.8	RUN RELAY OUTPUT	
18	W0	DN/BU	0.35	WIPER ON/OFF RELAY CONTROL	
18	F821	PK/YC	1.8	RUN RELAY OUTPUT	
20	A188	VC/RD	1.5	FUSED D(+)	
21	C7	DK	3.0	BLOWER MOTOR SUPPLY	
22	A883	RD	3.0	FUSED D(+)	
23	W751	DK	1.8	TRAILER TOW BACKUP LAMP FEED	
24	W756	DK	1.8	TRAILER TOW PARK LIGHT	
25	P385	GN/BU	0.58	ACCESSORY DELAY RELAY CONTROL	
26	L17	WHDN	0.75	PARK LAMP FEED	
27	L658	WHDN	0.35	TRAILER TOW BACKUP LAMP RELAY CONTROL	
28	A888	RD	0.35	FUSED D(+)	
28	L657	WHDN	0.35	TRAILER TOW TAIL LAMP RELAY CTRL	
30	W752	DK	1.8	TRAILER TOW RIGHT STOP/TURN SIGNAL	
31	C888	DK	0.58	ELECTRIC WINDSHIELD WIPER DE-ICER CONTROL	
32	A889	RD	0.35	FUSED D(+)	
33	L656	WHDG	0.35	RIGHT REAR TURN SIGNAL CONTROL	
34	NA	NA	0	NO CONNECT	
35	NA	NA	0	NO CONNECT	
36	A838	RD	0.75	FUSED D(+)	
37	W1	DN/BN	0.35	WIPER HIGH/Low RELAY CONTROL	
38	W758	RD	2.0	FUSED D(+)	
38	Z807	DK	0.75	GROUND	
40	NA	NA	0	NO CONNECT	
41	NA	NA	0	NO CONNECT	
42	NA	NA	0	NO CONNECT	

The selectable power outlet fuse is in the position F91 / F90. This fuse feeds the W880 circuit that powers the power outlet. It is located in Main Power Distribution Center (PDC) forward of the battery on driver side.



The Auxiliary Power Distribution Center (PDC) is rearward of the battery on driver side near the bulkhead. The Auxiliary PDC is a hardwired PDC so all the wiring circuit terminals are directly plugged into the PDC cavities under the PDC. The main battery feed to the PDC is connected with a stud and nut.

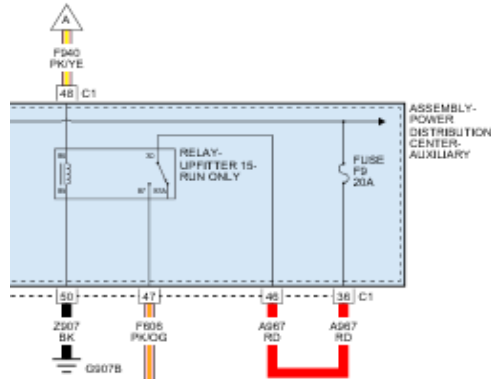
RAM HEAVY DUTY

RELAYS			
Relay	Alternate	Description	Amperage
R1	D2848	UPFITTER 1	N/A
R2	D2421	UPFITTER 2	N/A
R3	D844	UPFITTER 3	N/A
R4	D2871	UPFITTER 4	N/A
R5	D811	UPFITTER 5	N/A
R6	D808	UPFITTER 6	N/A
R15	D2887	UPFITTER 15 - RUN ONLY	N/A
PTC1	D870	PTC 1	N/A
PTC2	D871	PTC 2	N/A
PTC3	D872	PTC 3	N/A

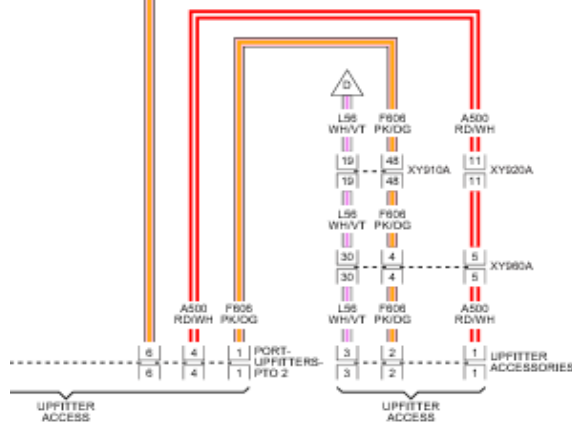
FUSES			
Fuse	Alternate	Description	Amperage
F1	F001	FUSED B+	50A
F2	F002	FUSED B+	50A
F3	F003	FUSED B+	50A
F4	F004	FUSED B+	40A
F5	F005	FUSED B+	40A
F6	F006	FUSED B+	25A
F7	F007	FUSED B+	25A
F8	F008	FUSED B+	40A
F9	F009	FUSED B+	20A
F10	F010	FUSED B+	20A
F11	F011	AUXILIARY RELAY	10A
F12	F012	FUSED B+	20A

AUX PDC

Ignition Run Output on vehicles equipped with Auxiliary Switches

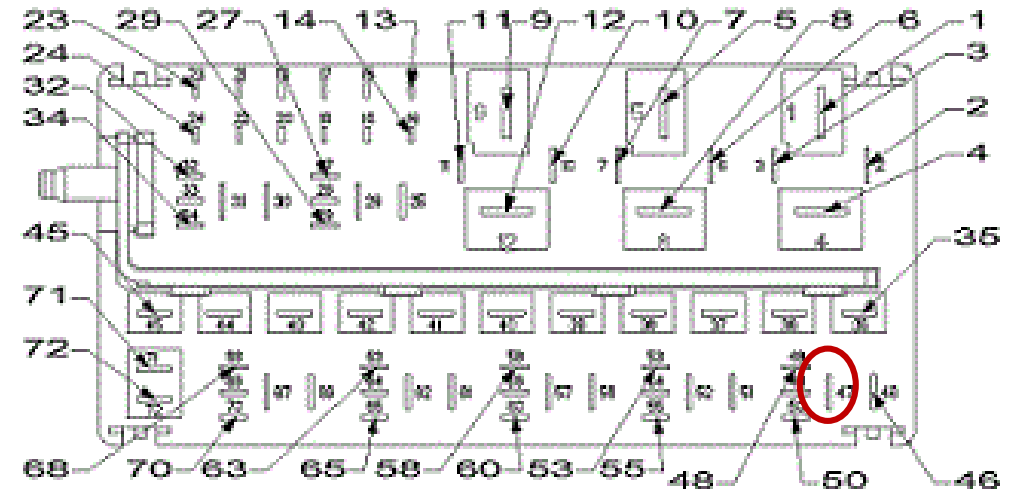


← F606 Pink/Orange Ignition Run Output



F606 Pink/Orange Ignition Run Output from terminal 47 the output of the Auxiliary Run Relay →

Top of Auxiliary PDC



Bottom (Wire insertion side) of Auxiliary PDC

