

## Recommended Vehicle's Ignition Information

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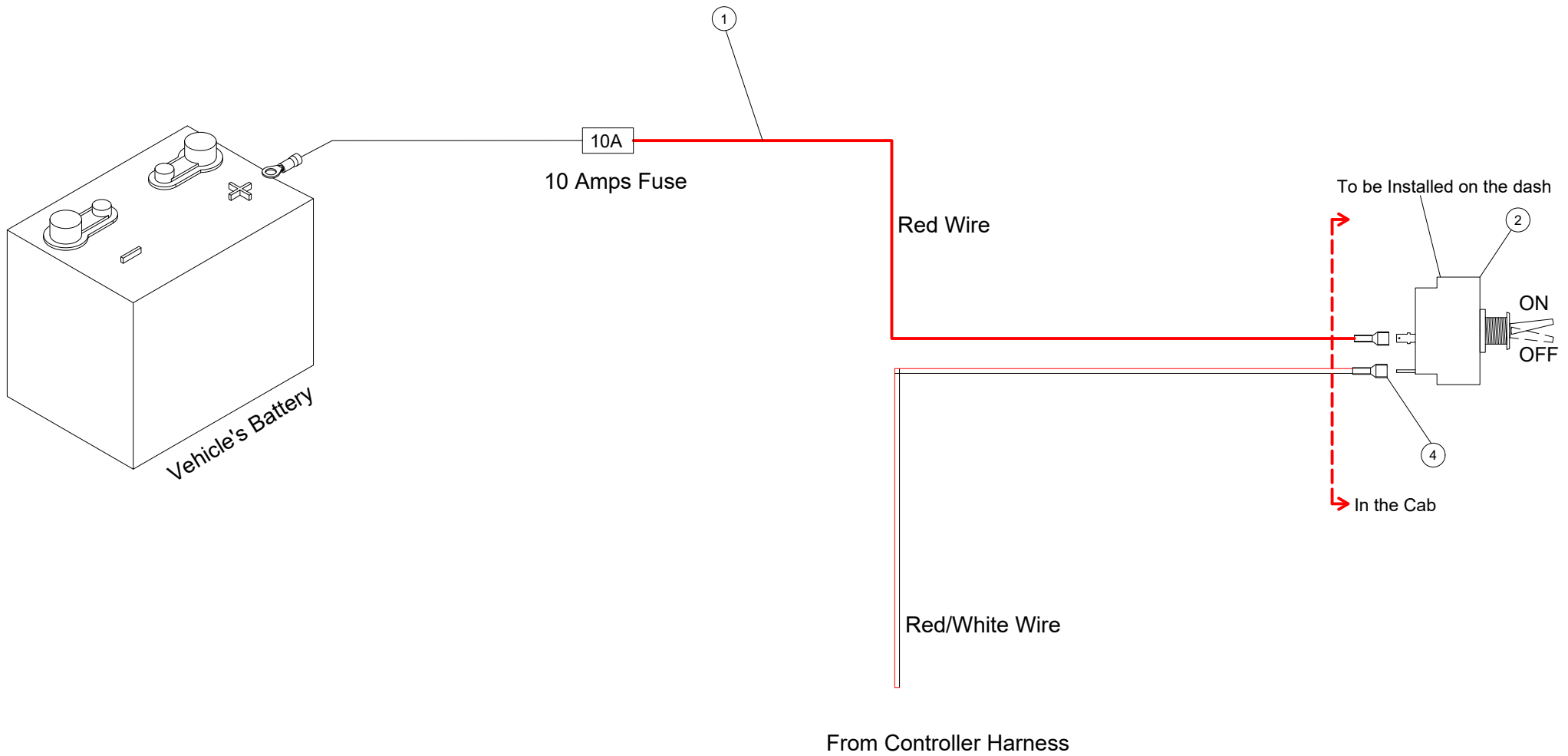
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# Battery Ignition Harness

53880-M



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## Installation Instructions

- Use this kit if the installer is having trouble finding the 10A Ignition fuse on a vehicle.
- Cut yellow 10A fuse that is on Red/White wire from Controller harness and add a female spade connector to Red/White wire and connect it to a 2 way ON/OFF switch.
- Attach Red wire (provided in kit) on the other terminal of switch and connect it to Battery Positive (+).
- Flip the switch to ON Position to operate the plow.

53880-M			
Item	Part #	Description	Quantity
1	53880-01-M	Red wire c/w connectors and fuse	1
2	90004-M	ON/OFF Switch	1
3	52018-M	Switch Bracket	1
4	761326	Female Spade Connector	1

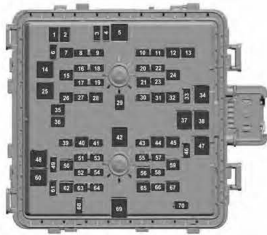
1. For Ford 2019 and older truck: Ignition fuse can be found inside the cab- passenger side



2. For Ford 2020 and newer truck: Ignition fuse can be found under vehicle's hood

Recommended Fuse on Vehicle's Ignition Panel for 2020 and newer trucks, Use Fuse number 6 allocated for Snowplowing 10A

**Body Builders Layout Book**  
**ALL SUPER-DUTY**  
**FUSE LAYOUT – PDB / HCFB**



Fuse Number	Fuse Rating	Protected Component
1	20 A	Power point 4.
2	20 A	Power point 3.
3	10 A	Spot light module.
4	10 A	Four-wheel drive vacuum solenoid.
5	40 A	Active front steering.
6	10 A	Snow plow.
7	30 A	Trailer tow battery charge.
8	10 A	Anti-lock brake system module.
9	10 A	Electronic power assisted steering module.
10	30 A	Trailer tow park lamps.
11	20 A	Horn.
12	30 A	Torque overlay.
13	30 A	Power sliding rear window.
14	40 A	Body control module - battery power in feed 1.
15	30 A	Passenger seat power.
16	10 A	Powertrain control module. Transmission control module.
17	10 A	Blind spot information system.
18	10 A	Four-wheel drive module.
19	5 A	Adaptive cruise control.
20	15 A	Heated mirrors.
21	40 A	Heated rear window.
22	10 A	On-board diagnostic module. Smart data link connector.
23	15 A	Transmission control module.
24	30 A	Driver power seat.
25	25 A	Voltage quality module.
26	30 A	Trailer tow battery charge.
27	20 A	Rear heated seats.
28	25 A	Glow plug (diesel).
28	—	Not used (gas).
29	40 A	Electric power assisted steering motor.
31	20 A	Power point 5.
32	25 A	Four-wheel drive module.
33	10 A	Alternator sense line 2.
34	50 A	Electric cooling fan (gas). Supplemental air heater (diesel).
35	20 A	Power point 2.

Note: Spare fuse amperage may vary.

Fuse Number	Fuse Rating	Protected Component
36	20 A	Power point 1.
37	60 A	Anti-lock brake system pump.
38	60 A	Inverter.
39	25 A	Four-wheel drive module.
40	30 A	Starter motor solenoid.
41	10 A	Tailgate release solenoid.
42	40 A	Blower motor.
43	10 A	Trailer tow backup lamps.
44	40 A	Trailer tow lighting module.
45	30 A	Anti-lock brake system valve.
46	30 A	Compressed natural gas module power.
47	50 A	Supplemental air heater (diesel).
47	—	Not used (gas).
48	50 A	Supplemental air heater (diesel).
48	—	Not used (gas).
49	—	Not used.
50	30 A	Heated and cooled seats.
51	20 A	Powertrain control module.
52	15 A	Compressed natural gas (gas). Fuel rail pressure relief control (diesel).
53	20 A	Exhaust gas recirculation stepper motor (gas). Universal exhaust gas oxygen sensors (gas). Exhaust gas recirculation cooler bypass (diesel). Urea pump motor controller (diesel). Oxygen sensors.
54	20 A	A/C clutch relay power. Fan clutch.
55	5 A	Rain sensor.
56	30 A	Windshield wipers.
57	10 A	Uplifter interface module.
58	10 A	Alternator sense line.
59	30 A	Power running boards.
60	40 A	Body control module - battery power in feed 2.
61	10 A	Telescopic mirror motors.
62	40 A	Trailer brake control. Aftermarket e-brake access.
63	15 A	Multi-contour seats.
64	20 A	Ignition coil (gas). Glow plug module (diesel). Nitrogen oxide module (diesel). Urea level and quality sensor (diesel).
65	30 A	Fuel pump.
66	10 A	A/C clutch solenoid.
67	40 A	Auxiliary lighting module.
68	10 A	Powertrain control module.
69	60 A	Body control module power.
70	30 A	Trailer tow stop and turn lamps.

3. For Dodge vehicles, Auxiliary Switches can be used if equipped, to power on the snowplow. See below for more details.

## AUXILIARY SWITCHES

Starting in 2019 vehicles equipped with Auxiliary (Aux) Switches will have 6 Aux Switches. Vehicles equipped with PTO Prep will have 5 Aux Switches and a PTO Switch. These switches are integrated into the vehicle electrical architecture and communicate over a LIN bus to the vehicle. The low current outputs control relays in the Aux Power Distribution Center (PDC). The outputs of the relays go to the 2 four way connectors (light gray and dark gray) that are located on the inboard side of the Aux PDC. The vehicle comes with a kit containing wires terminated with the proper terminal that can be installed into the 4 way connectors and spliced to. The Aux switch functionality can be programmed to change how each one works. The PTO switch on PTO Prep vehicles cannot be programmed.



### Non PTO Vehicles

- 6 Switches located in the lower switch bank of the I/P – all are auxiliary switches
- All aux switches can be programmed in the EVIC to be battery or ignition function, momentary or latching, and remember last state (for ignition operation). Please see the programming flow chart on page 6.
- Fuse sizes (rating) for the switches are customer choice via fuse relocations. See the Upfitter Schematic for detailed instructions.
- Connections to the auxiliary switch controlled outputs are located in two 4-way connectors mounted on the side of the Auxiliary Power Distribution Center (PDC) located under hood on the drivers side against the bulkhead.
- The caps of the two 4-way connectors (light gray and dark gray) are used in conjunction with the eight wires that have ¼ inch blade terminals crimped on them that are in the upfitter wiring kit that comes with the vehicle. Remove the green plugs for the circuits that are to be used and insert the blade terminal with the seal around the wire into the desired cavity. It will “click” into place.

## AUXILIARY SWITCHES WITH THE PTO SWITCH



### PTO Prep Vehicles

- 5 Auxiliary Switches and the PTO switch are located in the lower switch bank of the I/P
- All aux switches can be programmed in the EVIC to be battery or ignition function, momentary or latching, and remember last state (for ignition operation). Please see the programming flow chart on page 6.
- Fuse sizes (rating) for the switches are customer choice via fuse relocations. See the Upfitter Schematic for detailed instructions .
- Connections to the auxiliary switch controlled outputs are located in two 4-way connectors mounted on the side of the Auxiliary Power Distribution Center (PDC) located under hood on the drivers side against the bulkhead.
- The PTO relay output is also located in the Auxiliary PDC.
- The caps of the two 4-way connectors (light gray and dark gray) are used in conjunction with the eight wires that have ¼ inch blade terminals crimped on them that are in the upfitter wiring kit that comes with the vehicle. Remove the green plugs for the circuits that are to be used and insert the blade terminal with the seal around the wire into the desired cavity. It will “click” into place.



## AUXILIARY POWER DISTRIBUTION CENTER

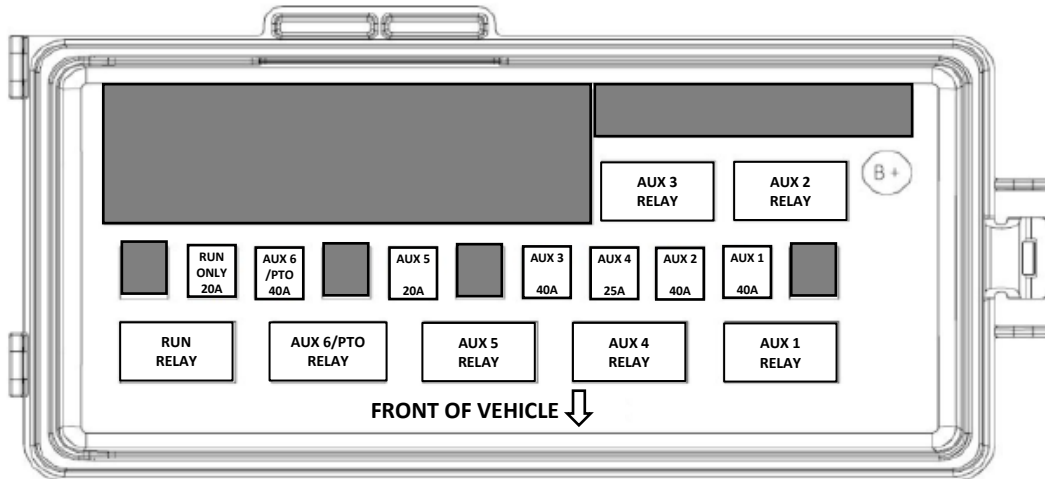
### Auxiliary Power Distribution Center (Aux PDC)

The Aux PDC contains 7 relays related to auxiliary functions.

6 relays are for Aux switch outputs on non PTO vehicles. On PTO Prep vehicles there are 5 Aux relays and a PTO relay. There is also an Upfitter Ignition relay as well. The fuses for the outputs can be moved to provide the necessary current depending on the specific Aux output load. The fuses are not to exceed the total current as noted in the Upfitter Schematics portions of the information in the Upfitter Schematics are shown below. Refer to the Upfitter Schematics for detailed schematics of the system.

### AUXILIARY PDC Topology

The Aux related fuses and relay locations are shown below. Additional relays and fuses located in the Aux PDC that are not related to Auxiliary functions are grayed out/not shown. These NON-Auxiliary fuses and relays are not to be manipulated or relocated.



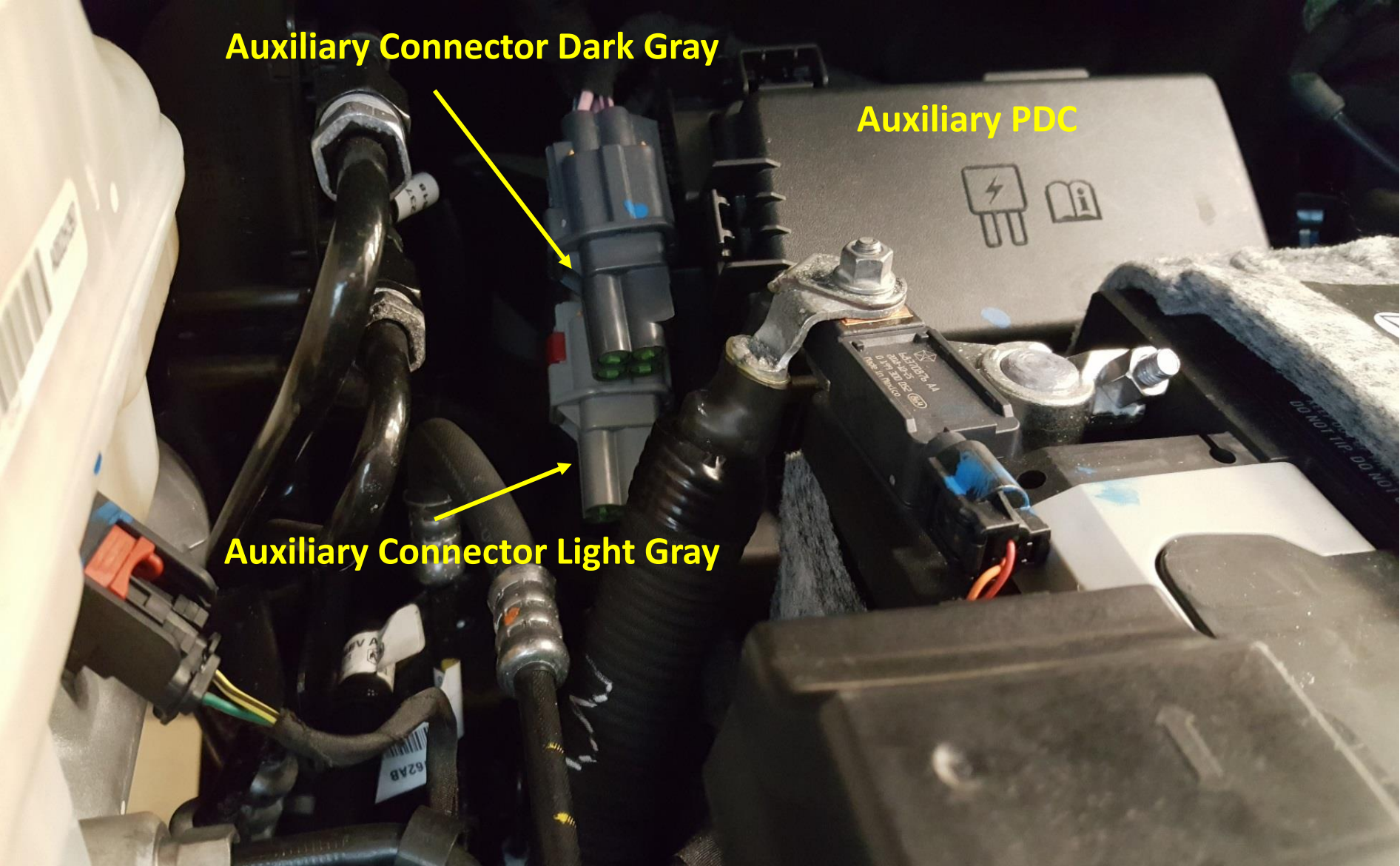
Max Combined Fuse “rating” allowed for Aux Swit hes 1,2,3,4,5, 6/PTO and Run Only is 225A. These Aux/PTO/Run fuses can be relocated to accommodate the loading on them. The maximum allowable total continuous amperage is 135A. Maximum fuse rating in any one location is 40A.

**\*The upfitter/customer is responsible for placing the correct fuse in the correct location depending on the actual load.**

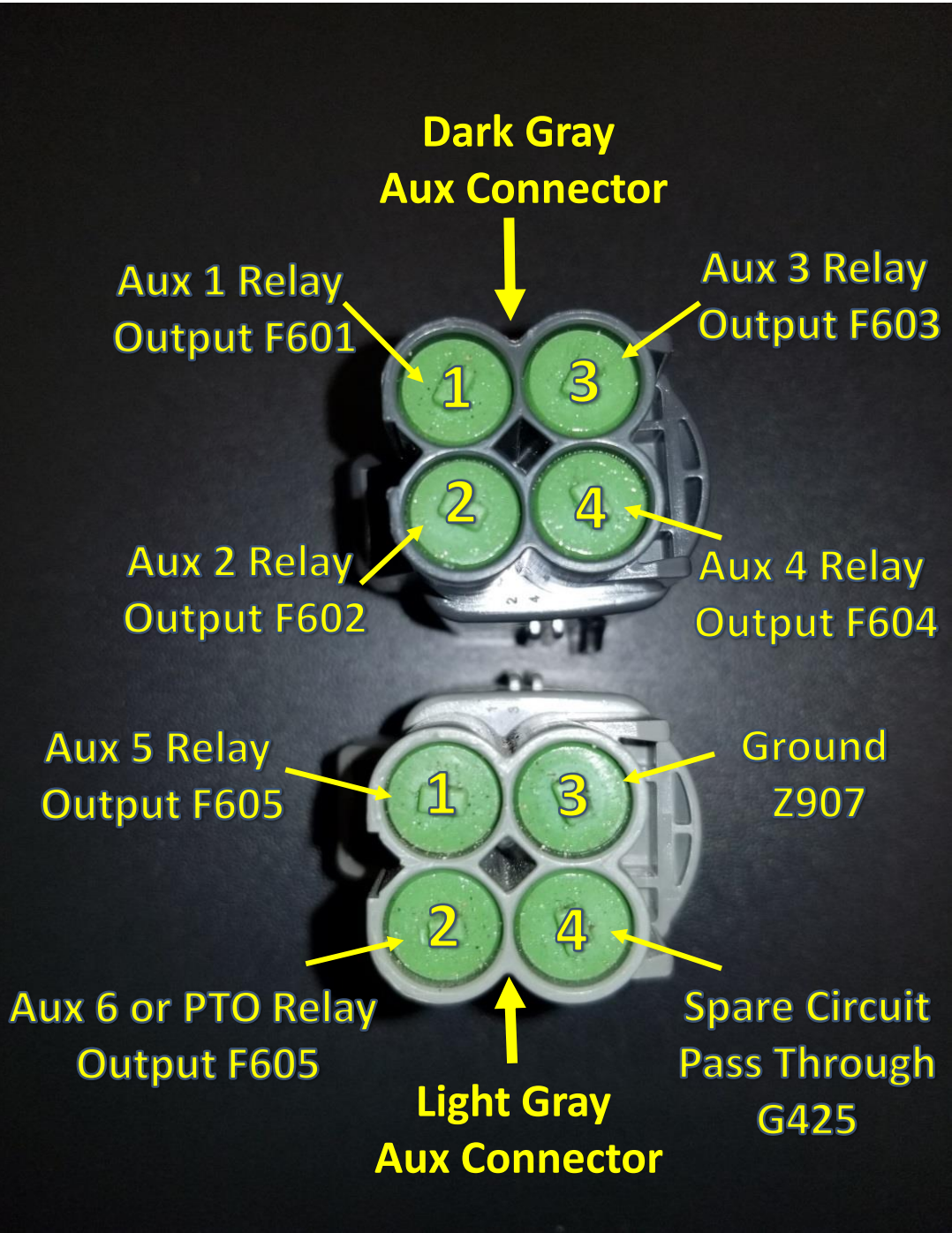
**\*The fuse amperage ratings shown in the Upfitter Schematics are for the fuses/circuits as installed in the Aux PDC for the vehicle as sold and will change as fuses are reconfigured.**

MAX ALLOWABLE CONTINUOUS CURRENT PER FUSE RATING	
FUSE RATING	MAXIMUM ALLOWABLE CONTINUOUS CURRENT (AMPERES)
20A	14A
25A	17.5A
40A	28A

Auxiliary PDC & Connector Locations

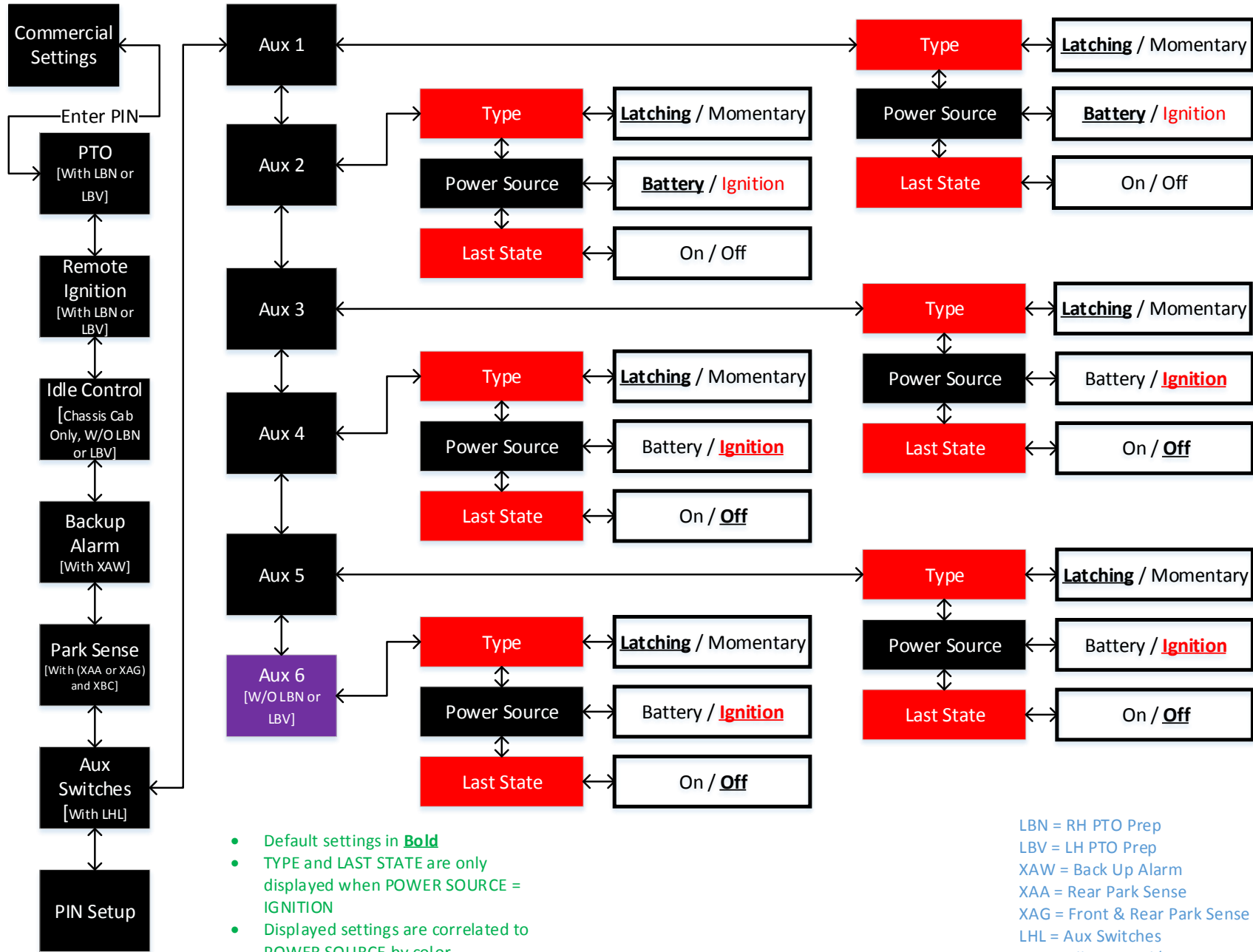


Auxiliary & PTO Switch  
Circuit Locations





# Auxiliary Switches Programming Flow Chart



- Default settings in **Bold**
- TYPE and LAST STATE are only displayed when POWER SOURCE = IGNITION
- Displayed settings are correlated to POWER SOURCE by color
- Aux 6 Not Displayed with PTO Prep

- LBN = RH PTO Prep
- LBV = LH PTO Prep
- XAW = Back Up Alarm
- XAA = Rear Park Sense
- XAG = Front & Rear Park Sense
- LHL = Aux Switches
- BNF = Idle Control/SEEI
- XBC = Delete Pickup Box