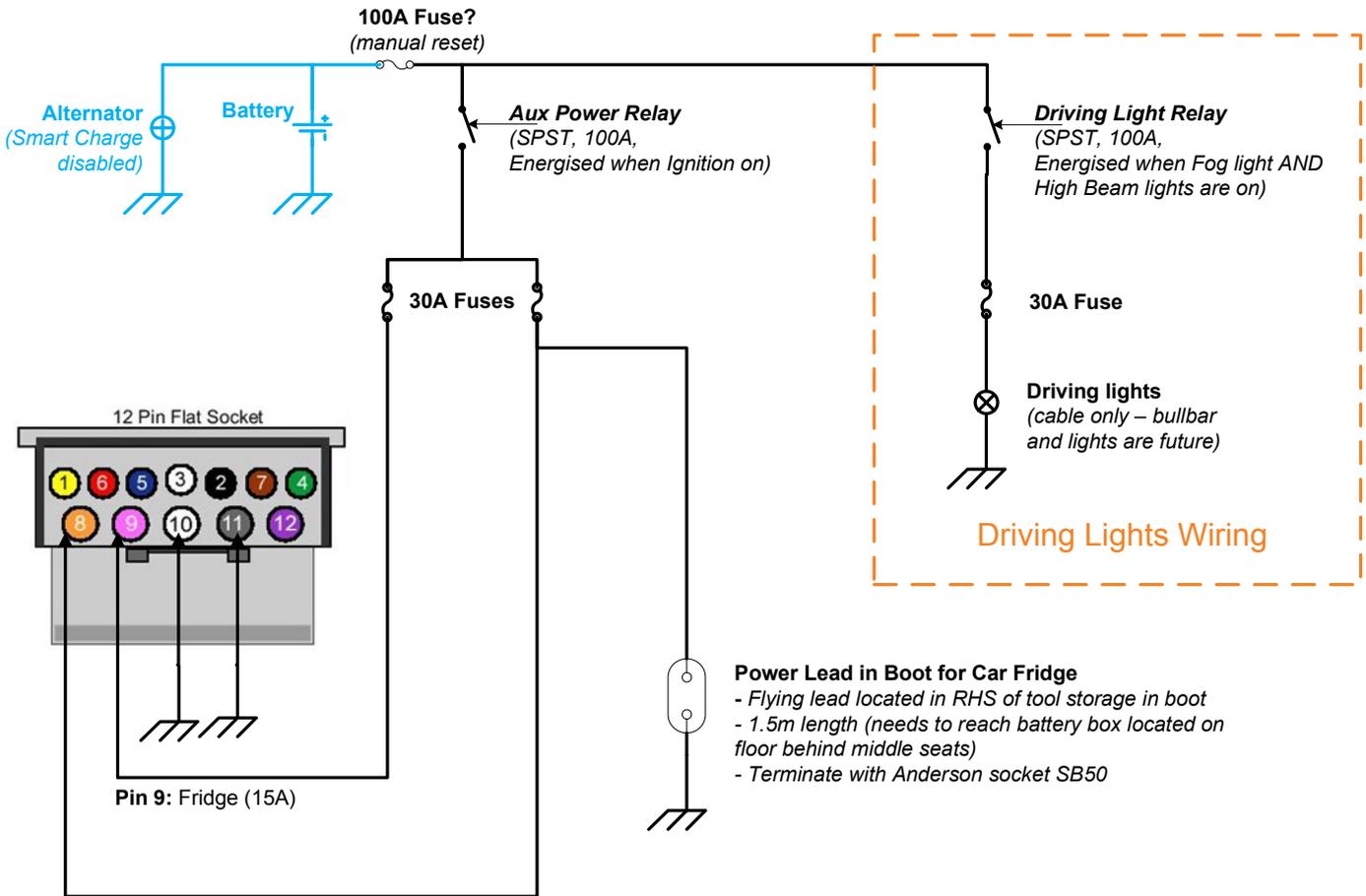


# Vehicle Wiring Changes for Caravan Power



**Pin 8:** 12V Battery Charger in Van + Breakaway + ESC + Aux power (30A), additional wiring and charger to be added to caravan to control caravan battery charge cycles

1	Left-hand turn	Yellow
2	Reversing signal	Black
3	Earth return	White
4	Right-hand turn	Green
5	Service brakes	Blue
6	Stop lamps	Red
7	Rear lamps, clearance & side marker lamps	Brown
8	Battery charger/winch	Orange
9	Auxiliaries/battery lead	Pink
10	Earth return	White
11	Rear fog lamp	Grey
12	Auxiliaries	Violet

## 12 pin wiring standard

### General Notes:

**1) For Relay, Fuses:** Mount in engine bay near battery, bolt on connectors with spring washers

**2) For cables:**

- All external cables on underside of car to be protected in conduit

- Cables passing through metal holes to be protected by grommets or additional cable protection

**3) For Fuses:** prefer manual reset over replaceable, auto-reset not permitted

**4) Cable sizing:**

- Power cables (for pins 8-11): 6 AWG (13mm<sup>2</sup>) x 4 cores (1 per each connector pin)

- Brake Controller cables (power, brake connection to pin 5): 10 AWG 6mm<sup>2</sup> (due to max current for tandem 10" electric brakes being around 15A)

**5) Brake Controller:** Red Arc Tow-Pro Elite (EBRH-AAV2) with the control knob mounted just south of the 4wd mode selector dial on the centre gear stick console and wired to trailer plug pin 5

**6) Driving Lights:** Driving lights (to be mounted centrally on future bullbar). Lights to be turned on when both fog lights AND high beam are on (i.e. No extra switch needed inside the car, fog lights won't turn on with just high beam on - will need fog lights turned on as well for driving lights to work)

**7) Earth/Negative Connections:** Since Smart Charging has been disabled, there is no need to connect to the chassis to avoid the current shunt on the negative lead of the battery, so run same sized negative return cables with the positive supply cables to ensure most reliable current return path.

**8) Reverse Lights (pin 2):** Standard Jayco wiring has the following connected to pin2:

a) Van batteries (2 x 100AH in my case) for charging from car – this is not regulated so can be very high current if van batteries are flat and will also wont charge >75%-80% due to poor voltage levels at van batteries

b) ESC (up to 15A pulse current when brakes are applied)

c) Breakaway battery charging

d) Auxiliary 12V Power (for lights etc in van when connected to car)

Since pin 2 is rated at 10A max, this is not a suitable electrical connection for the above load. I am going to change the van wiring from Pin 2 to Pin 8 and leave the car wiring for pin 2 as reverse lights (so they work on trailers).