L663 Defender – dual „hotel” battery

General remarks:

Prepare outer **D-pilar box** as a base for the **electric panel**.

It was my deliberate choice. I know that the cost of these boxes is high ☺ but I want to have an easy access to the electricity on the camp site.
Boxes came with mounting plates that supposed to be mounted using rivets provided.
Following many advices, I’ve decided to mount them using rivnuts instead.

Fish wires:

This was the hardest part... both:
• from the trunk to the left D-pillar and
• from the main battery (under the passenger seat) to the back of the vehicle (where I’ve positioned my secondary battery)

Youtube provides info on how to deal with internal and external panels

Initial setup:

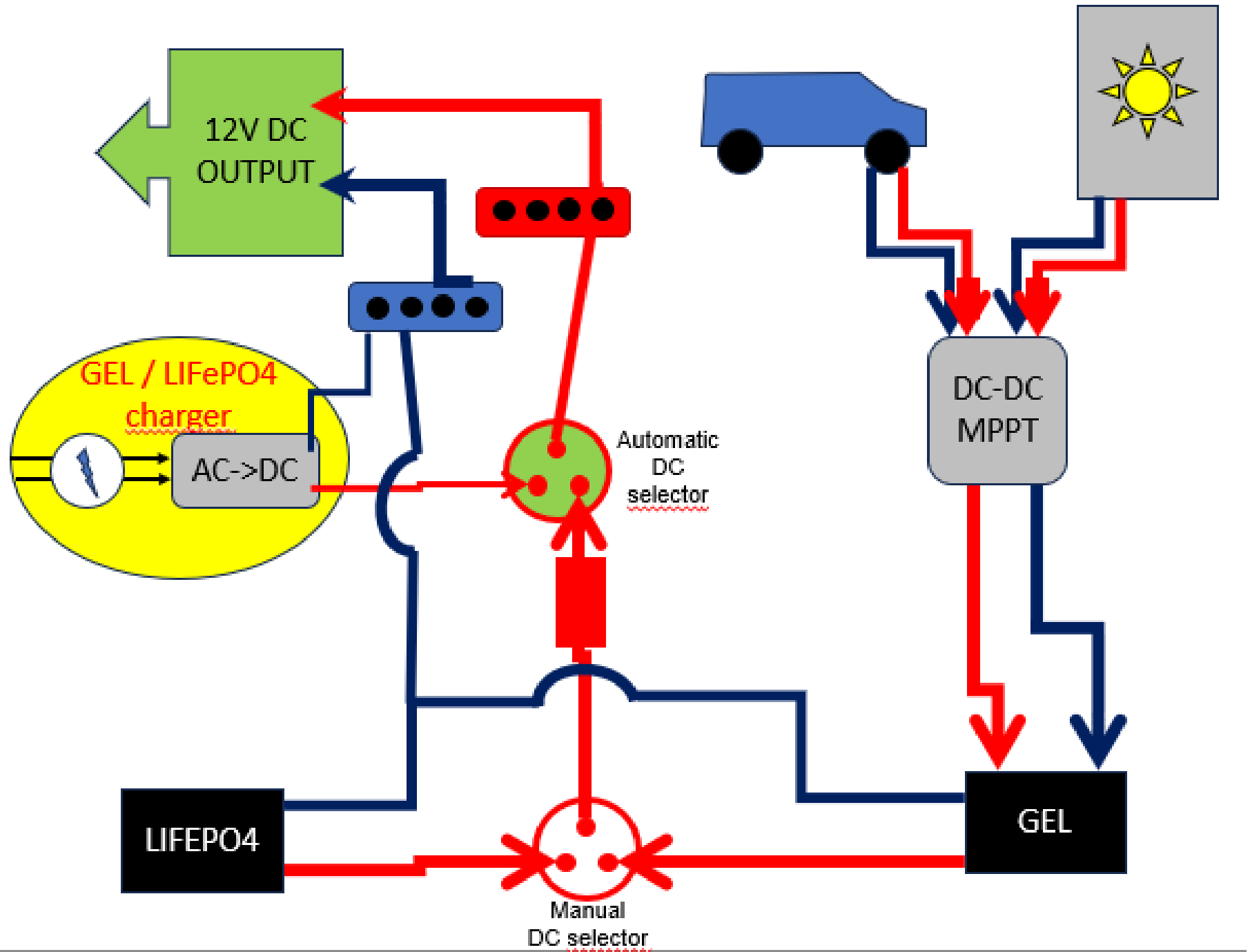
I plan to charge the **secondary battery in 3 modes**:

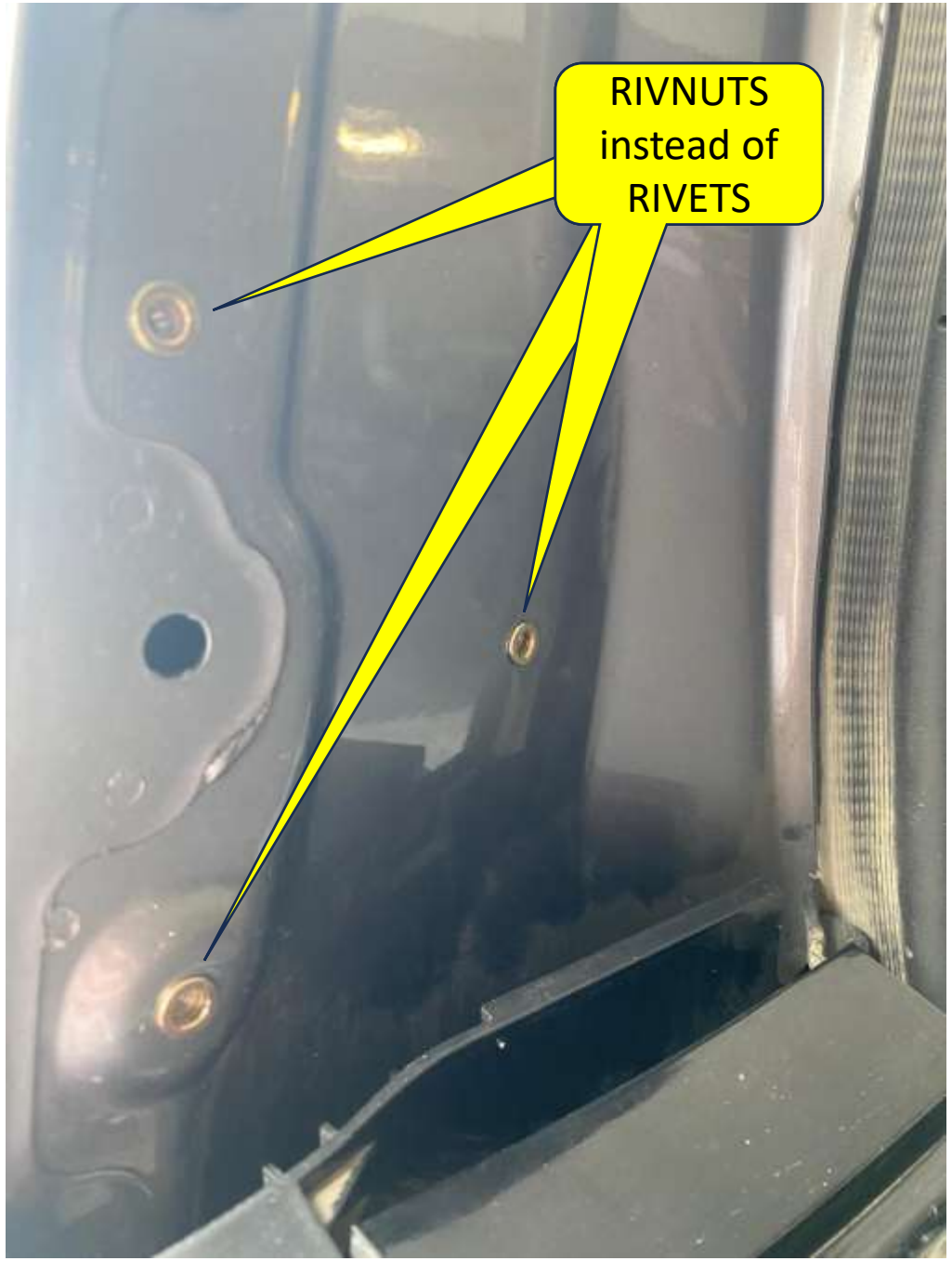
- the vehicle’s alternator – underway;
- the solar panel (camping) or
- the battery charger using 230V AC (camping / home)

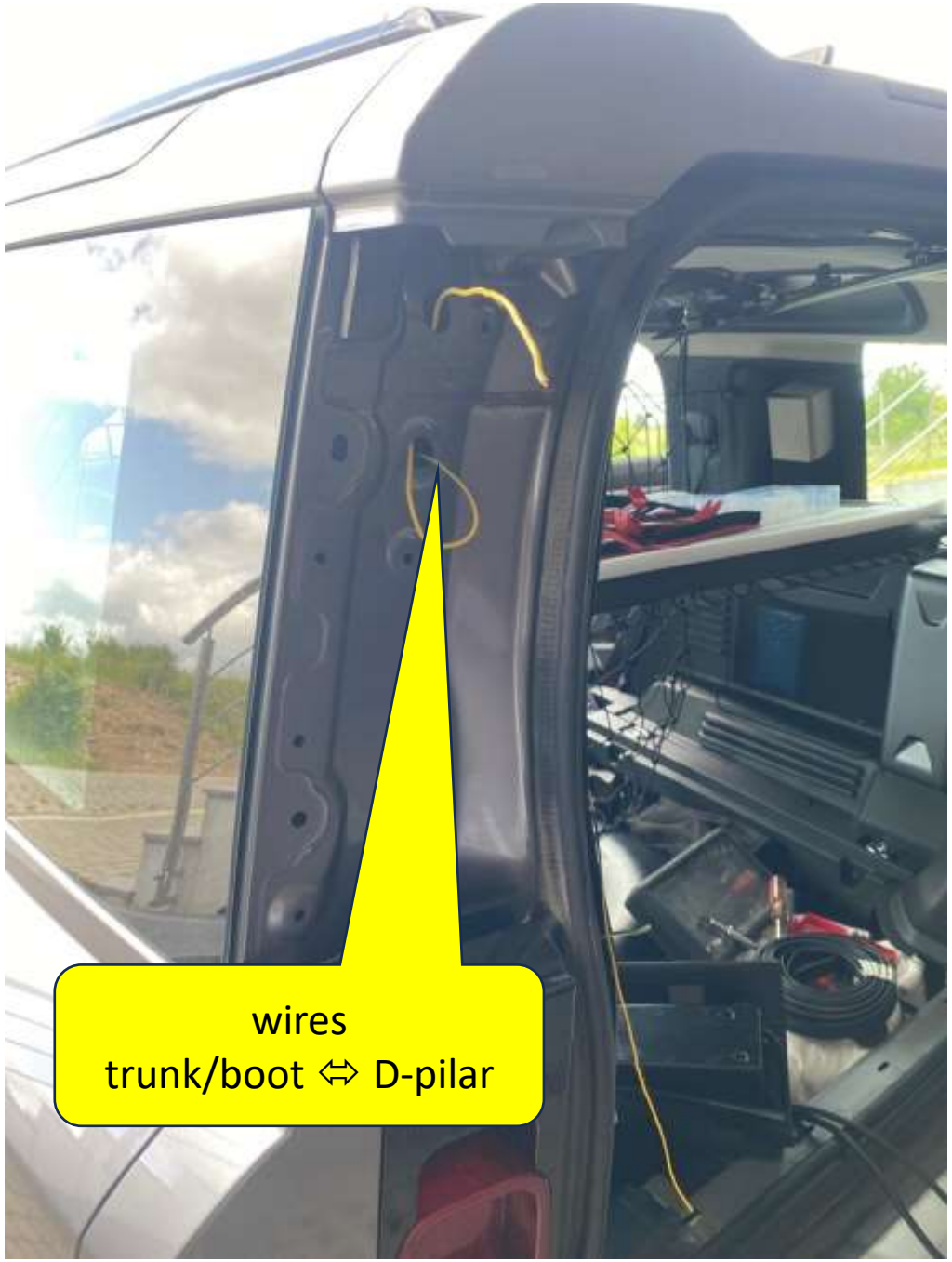
Therefore, I’ve installed the ATEMPOWER „magic box” that controls and distributes 12V power.

The **main control unit** (including additional 30A circuit breaker, fuses, connectors) is located where some may have installed the additional compressor.

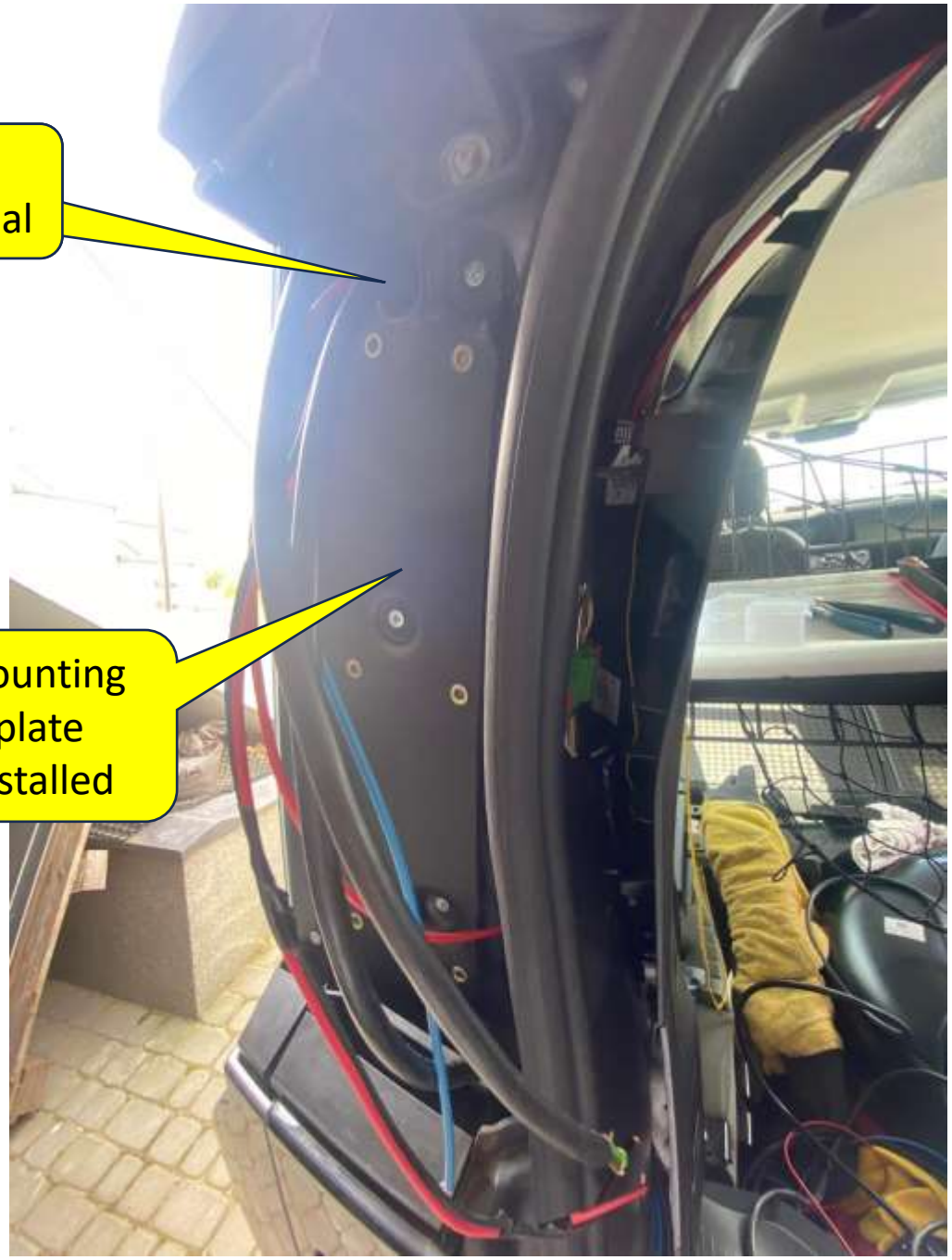
The main idea:

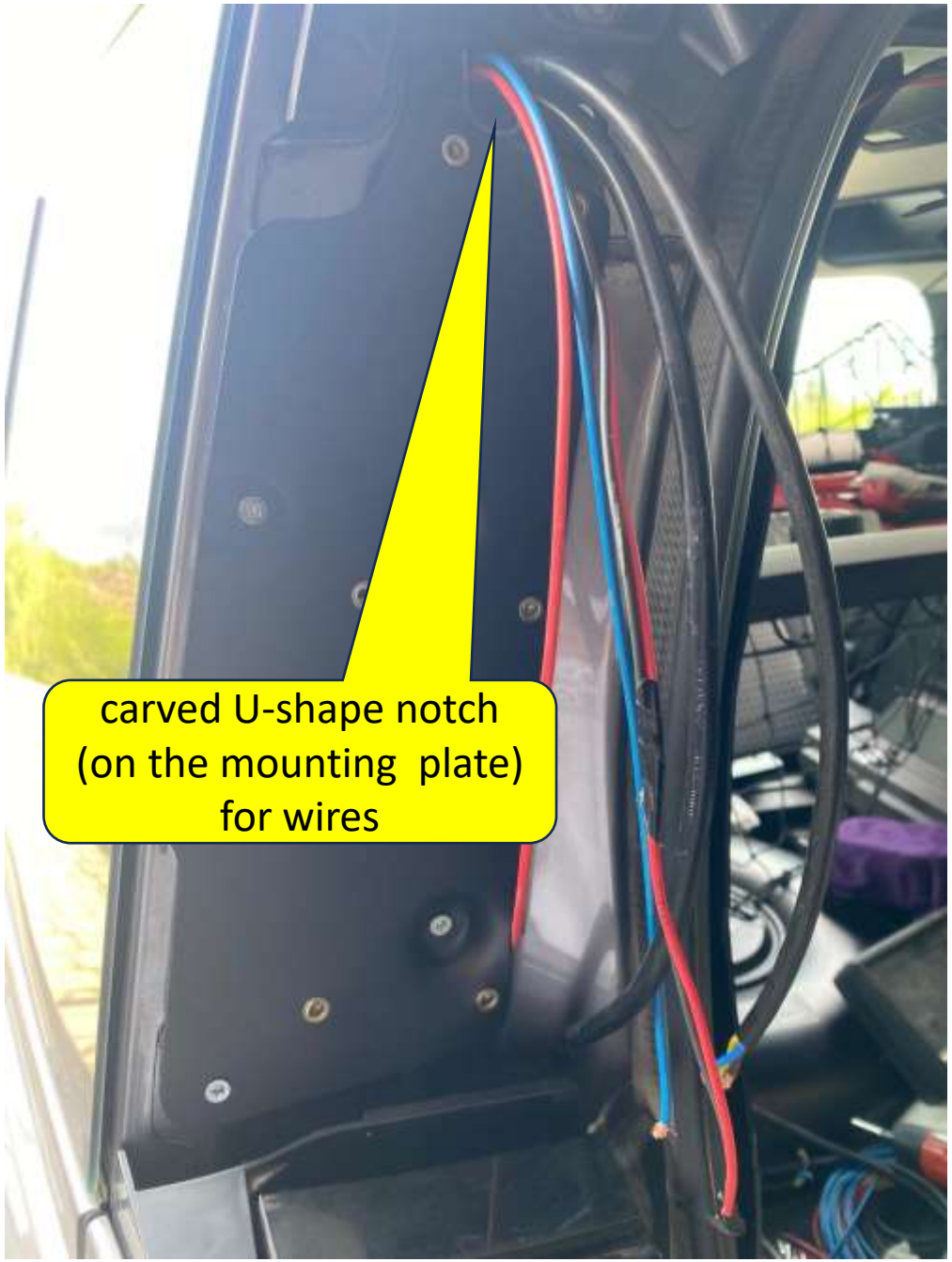


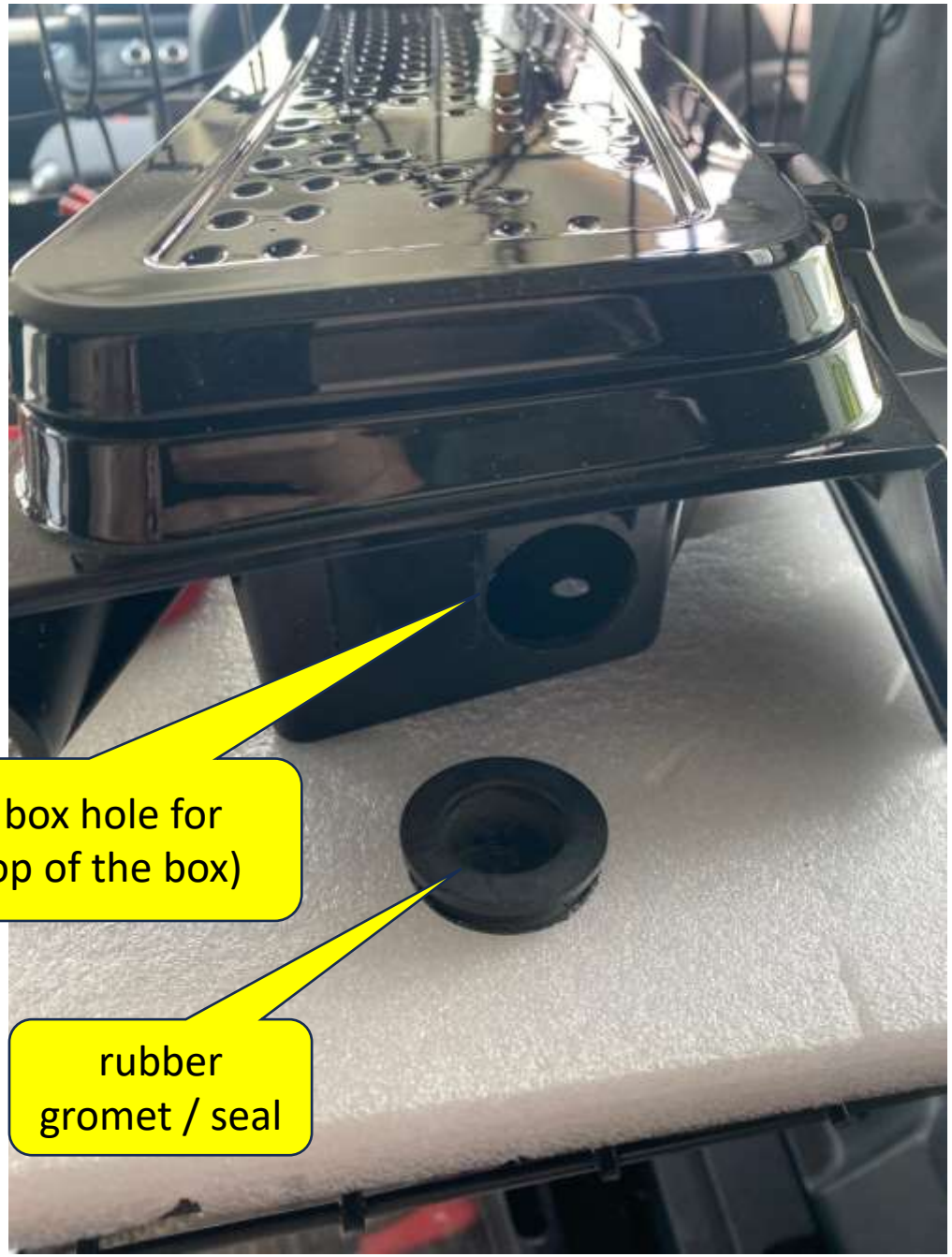

RIVNUTS
instead of
RIVETS


wires
trunk/boot ⇔ D-pilar

rubber
gromet / seal



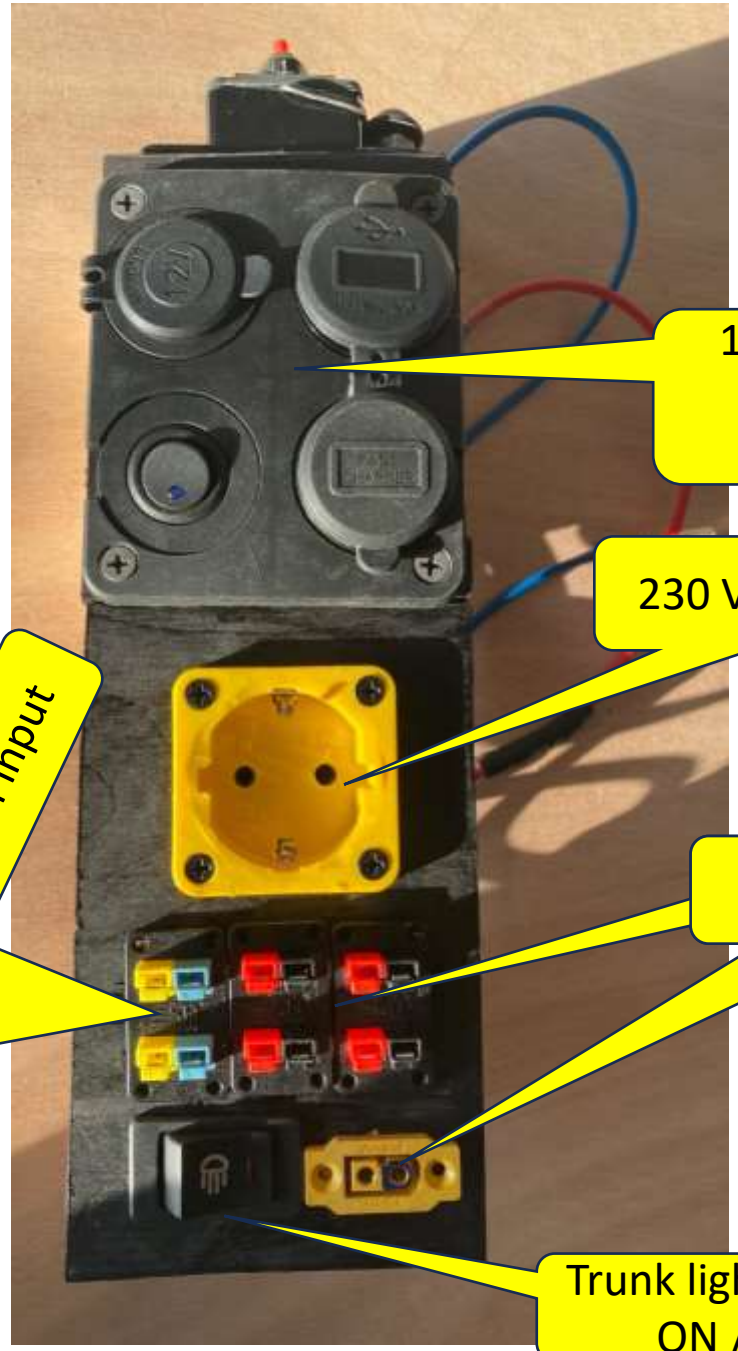

carved U-shape notch
(on the mounting plate)
for wires


D-pilar box hole for
wires (top of the box)
rubber
gromet / seal

Box mounted

D-pilar control panel:

some plywood, connectors, switches, hot glue, screws etc.



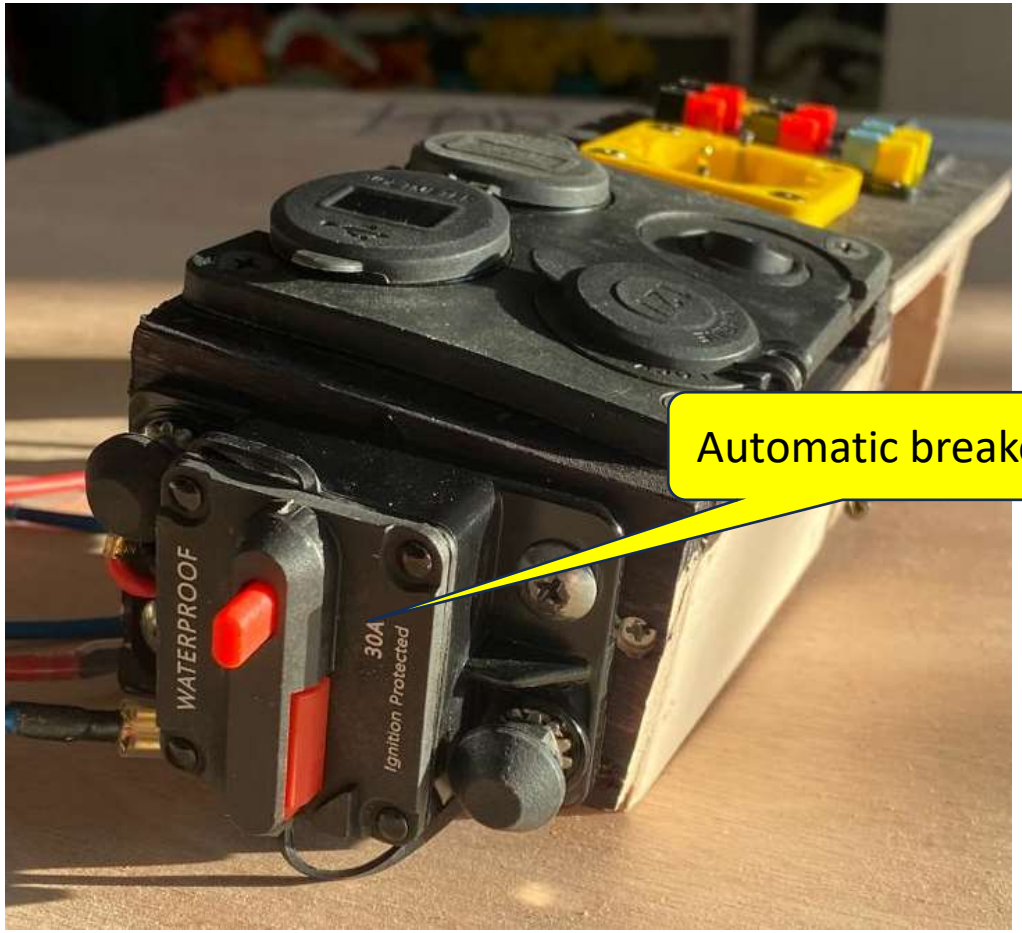
12V DC output
- lighter
- USB

230 V AC input

2 x SOLAR panel input

12V DC output

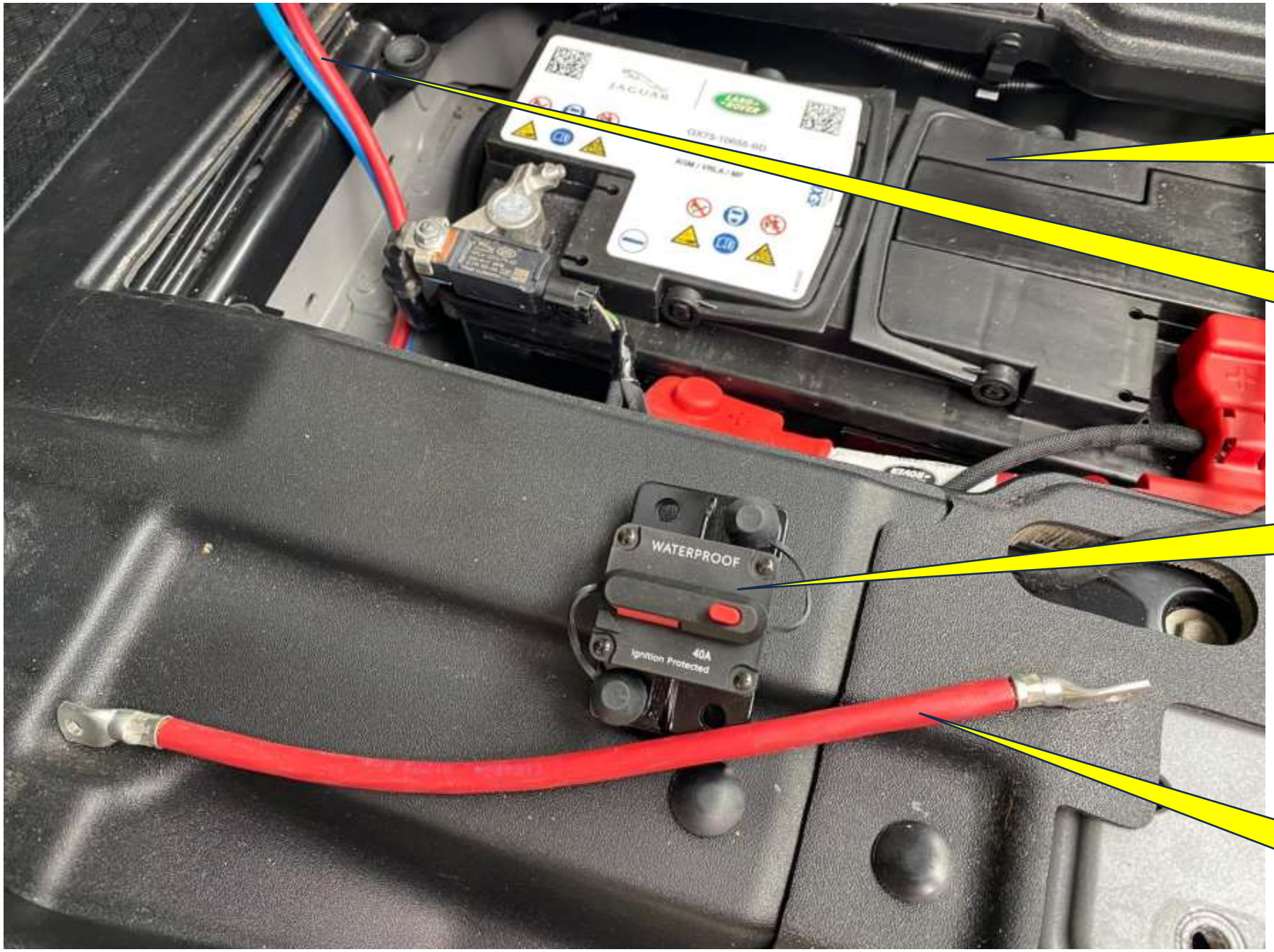
Trunk lights switch
ON / OFF



Automatic breaker


Panel installed


External AC input

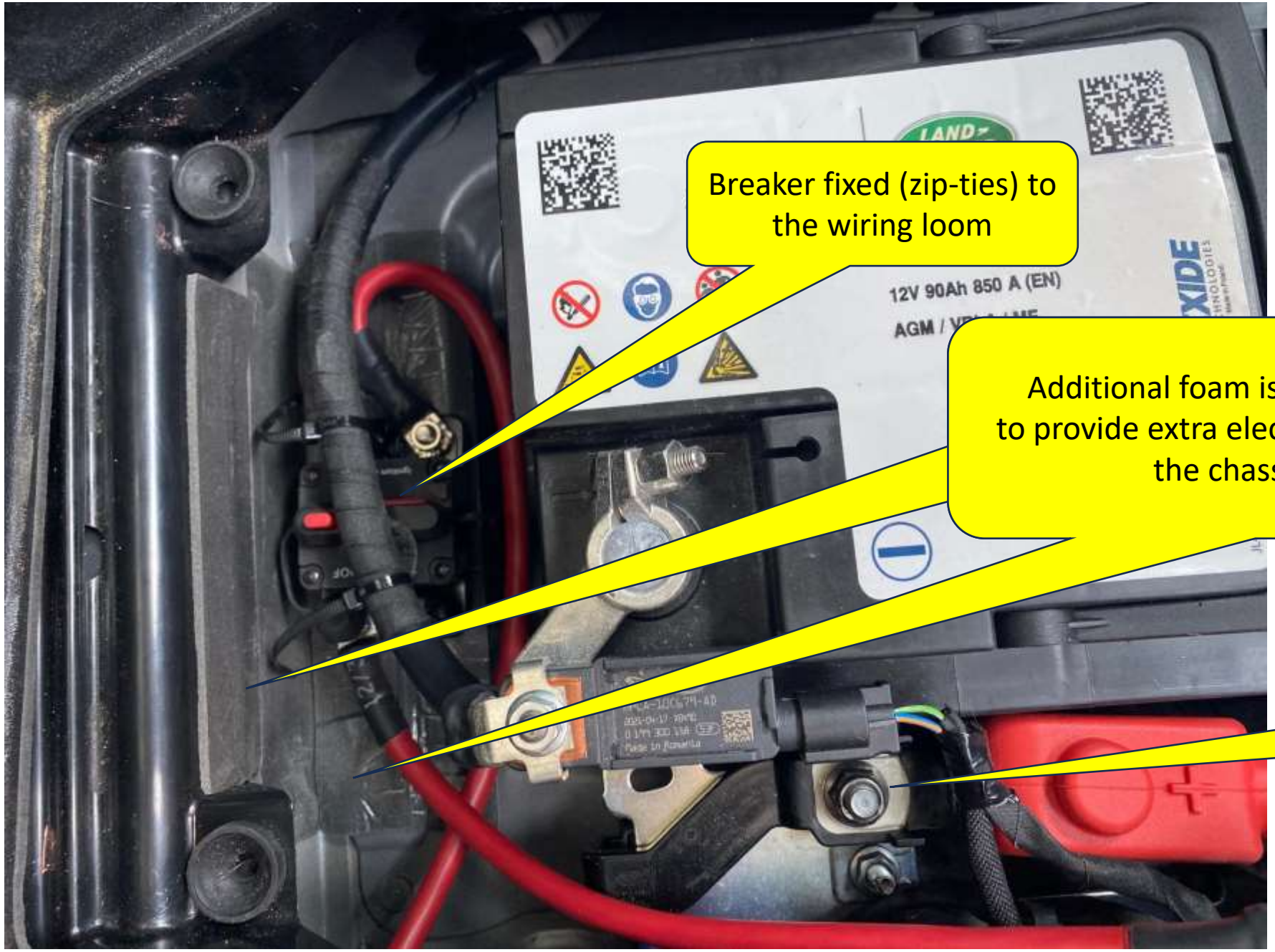


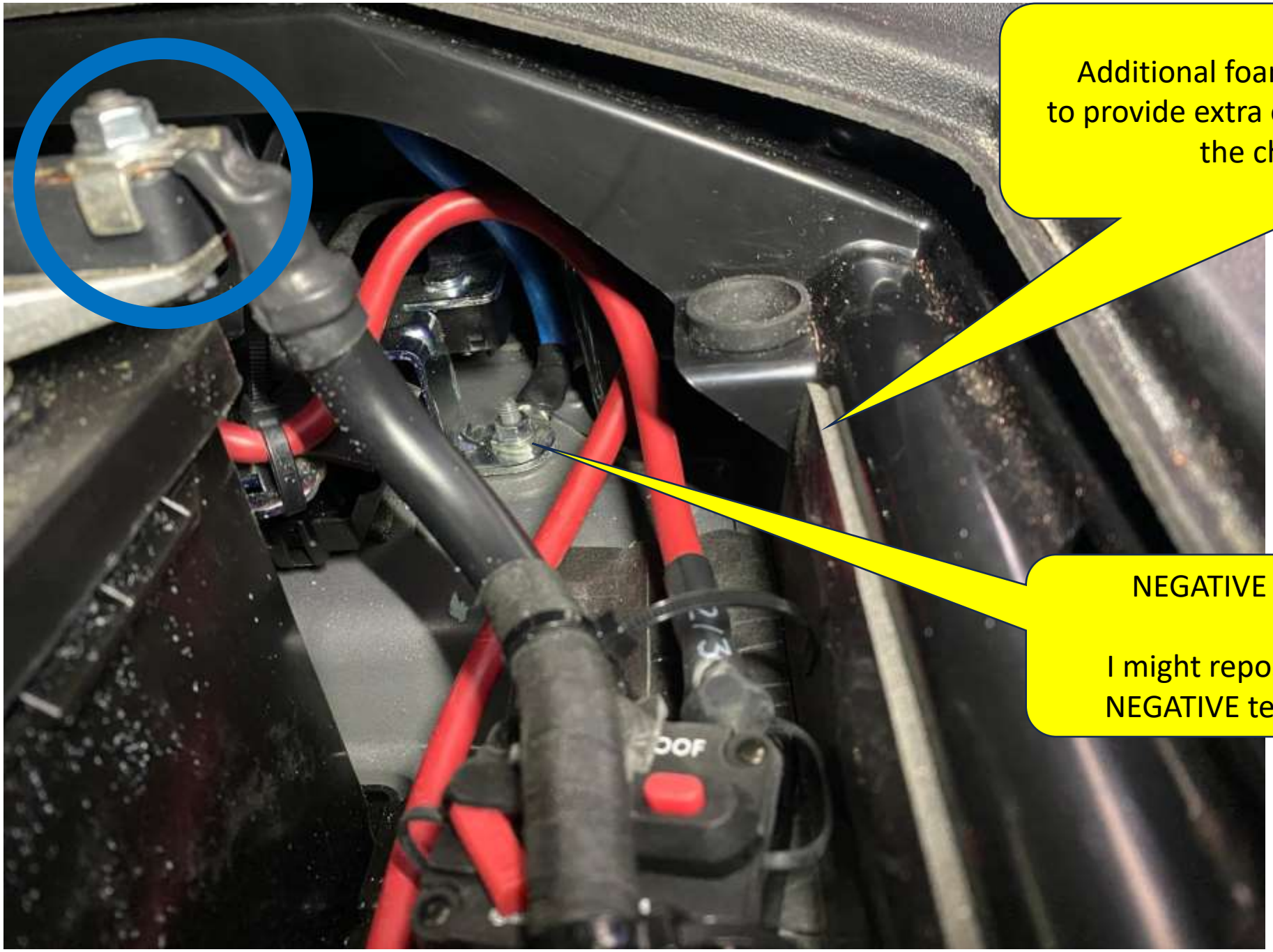
main vehicle's battery

25 mm^2 wires (+) and (-)

40A automatic breaker

battery-breaker connector

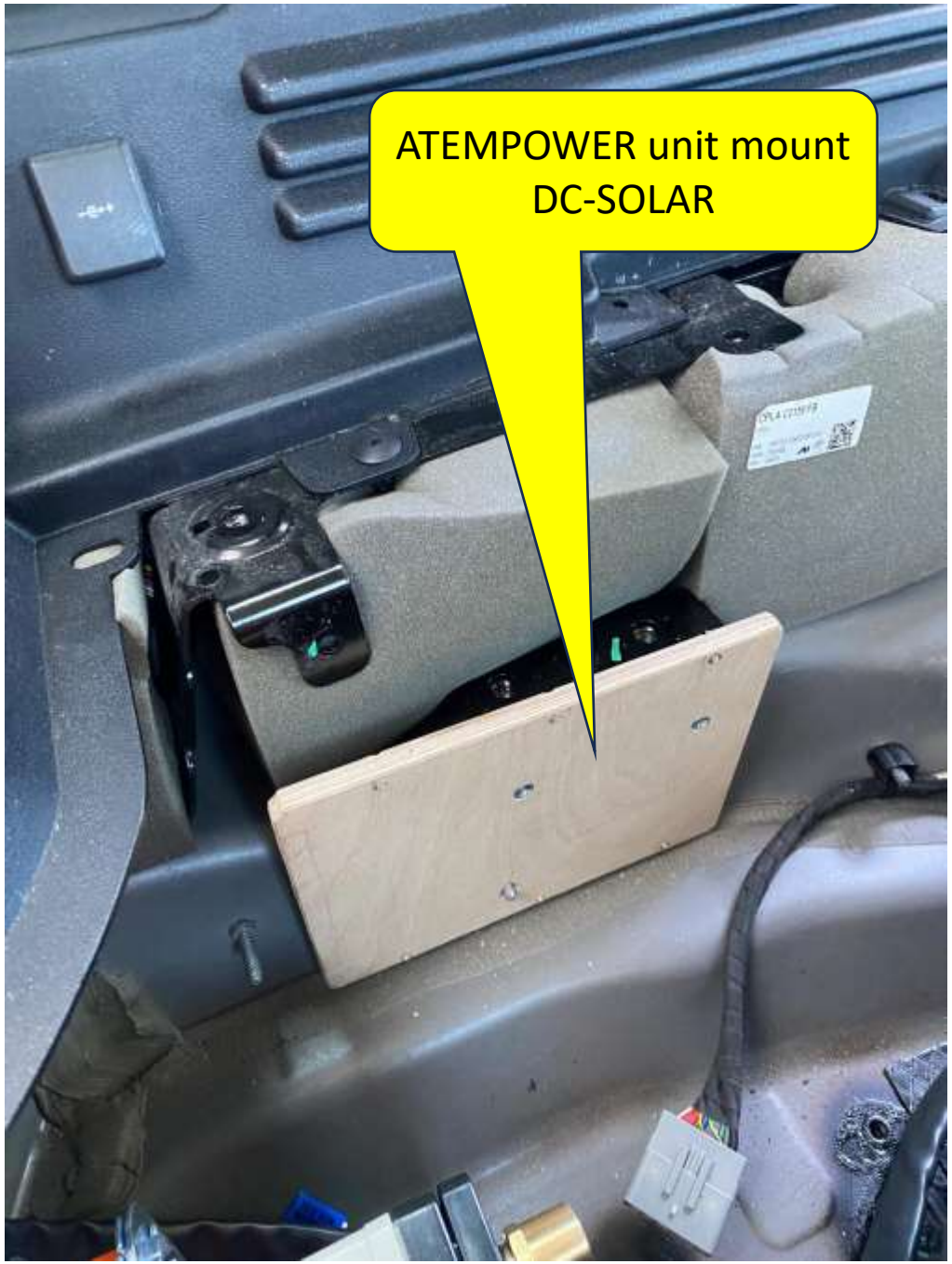

Breaker fixed (zip-ties) to the wiring loom
Additional foam isolation (side & bottom) to provide extra electrical protection between the chassis and breaker
Positive (+) connection point
12V 90Ah 850 A (EN)
AGM

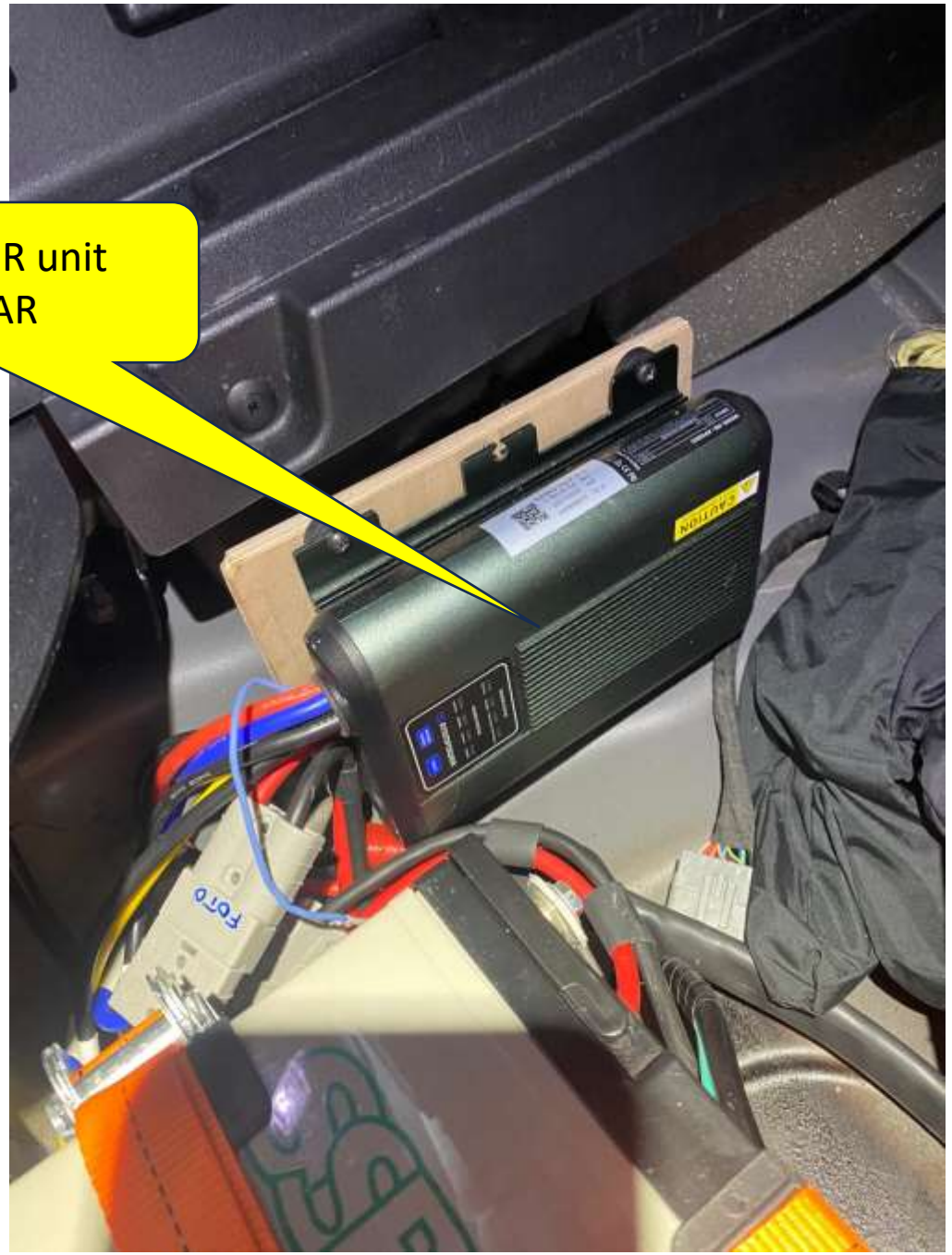


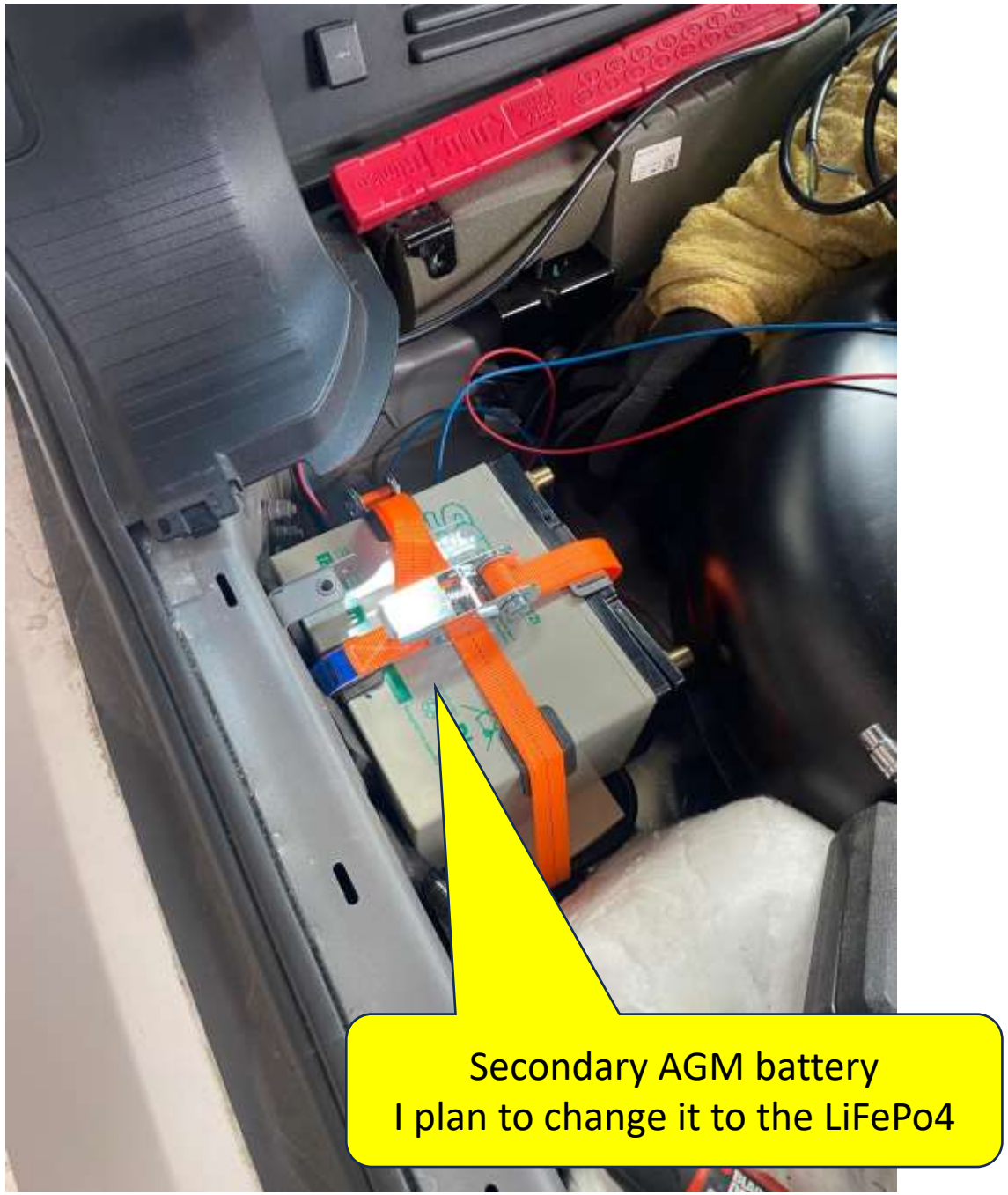
Additional foam isolation (side & bottom)
to provide extra electrical protection between
the chassis and breaker

NEGATIVE (-) connection point

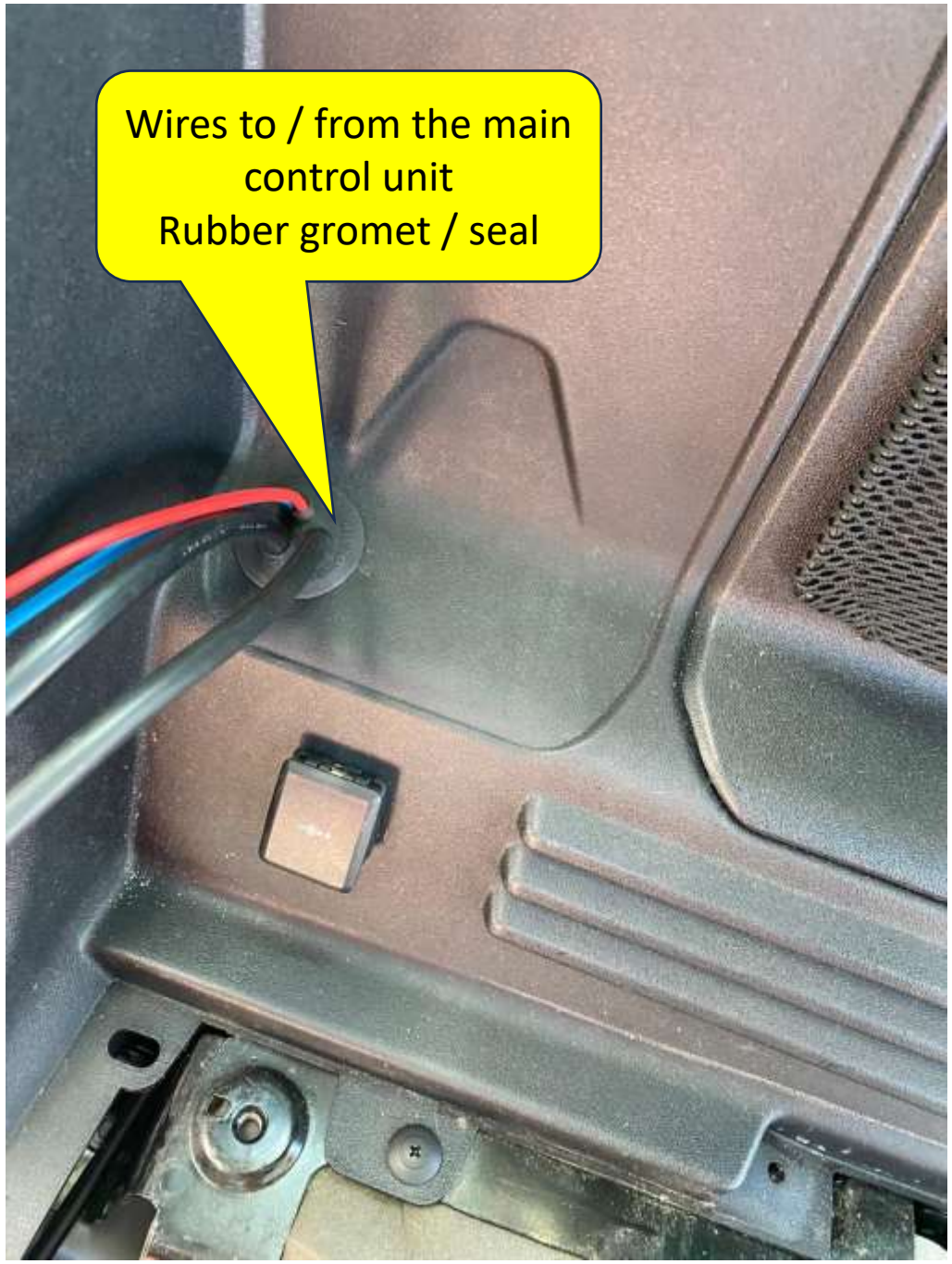
I might reposition it to the battery
NEGATIVE terminal (marked **BLUE**)


ATEMPOWER unit mount
DC-SOLAR

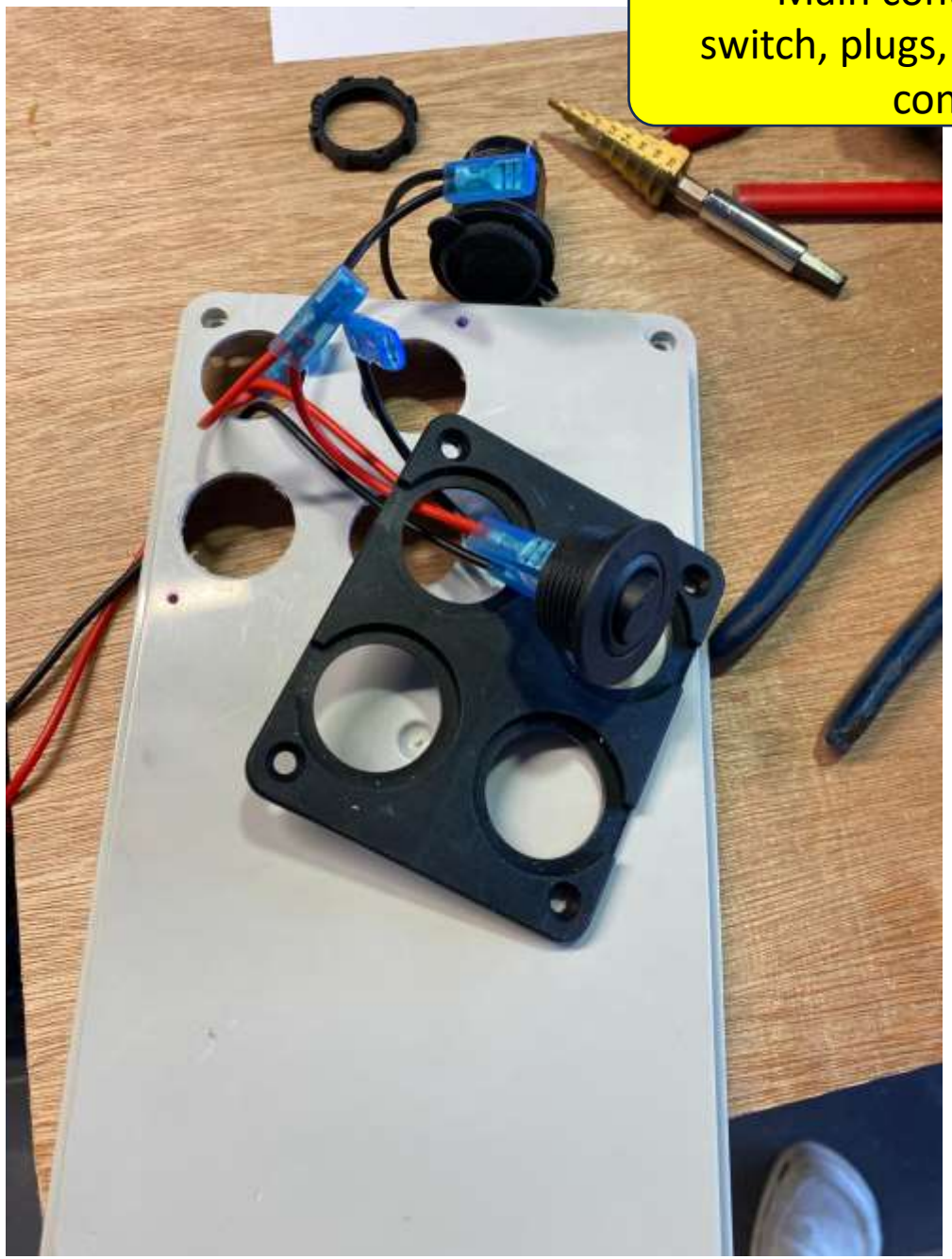

ATEMPOWER unit
DC-SOLAR

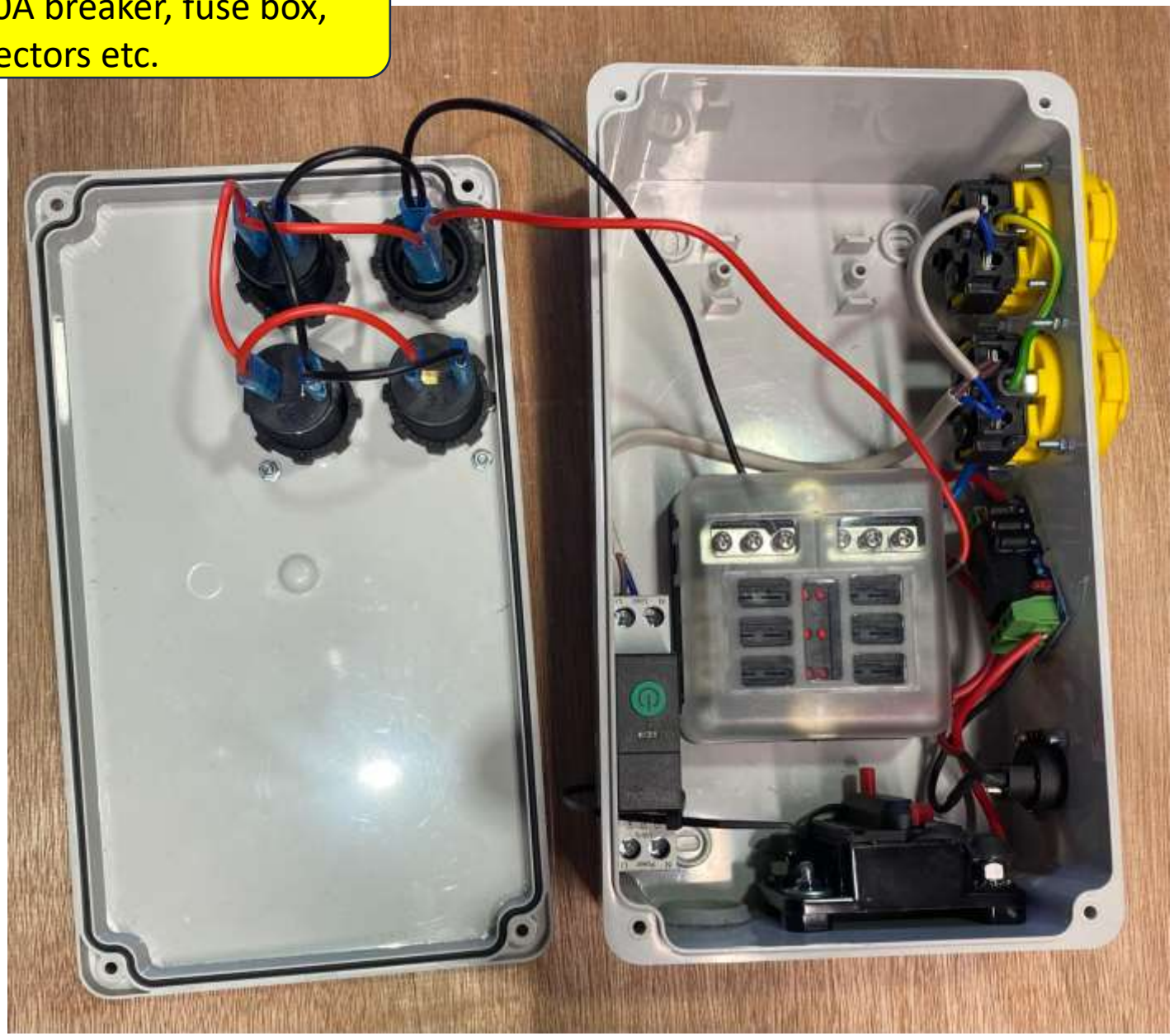

Secondary AGM battery
I plan to change it to the LiFePo4


Wiring loom opening

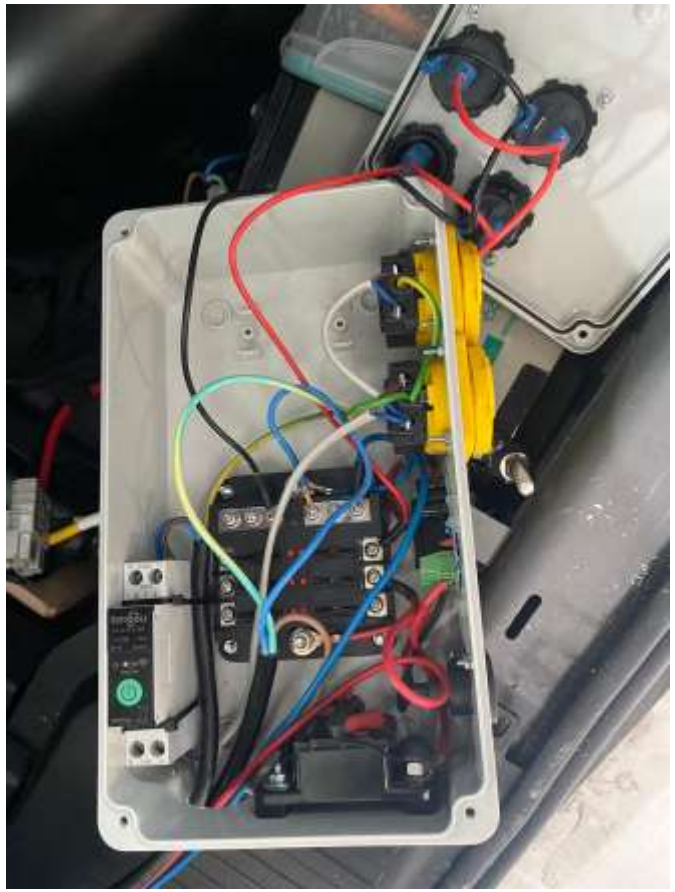

Wires to / from the main control unit
Rubber gromet / seal

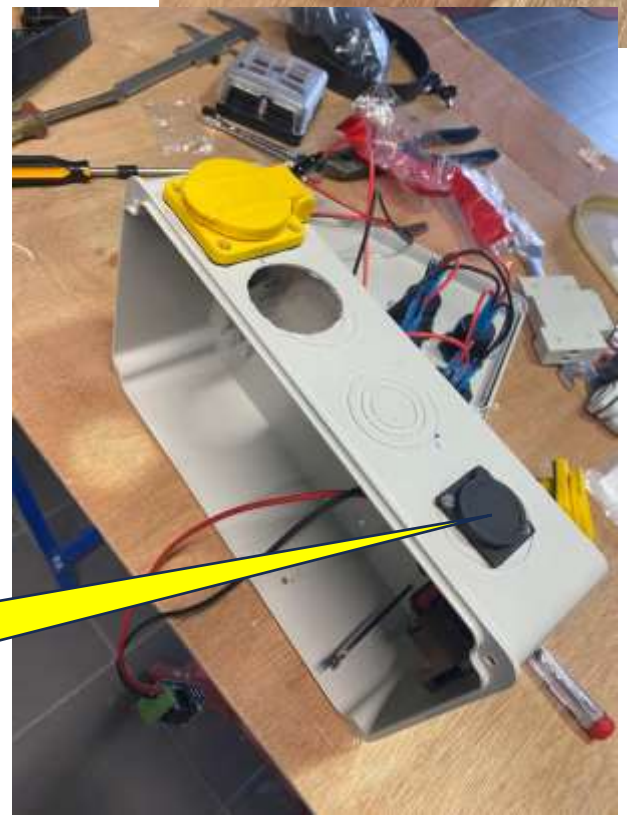
Main control unit assembly:
switch, plugs, 30A breaker, fuse box,
connectors etc.

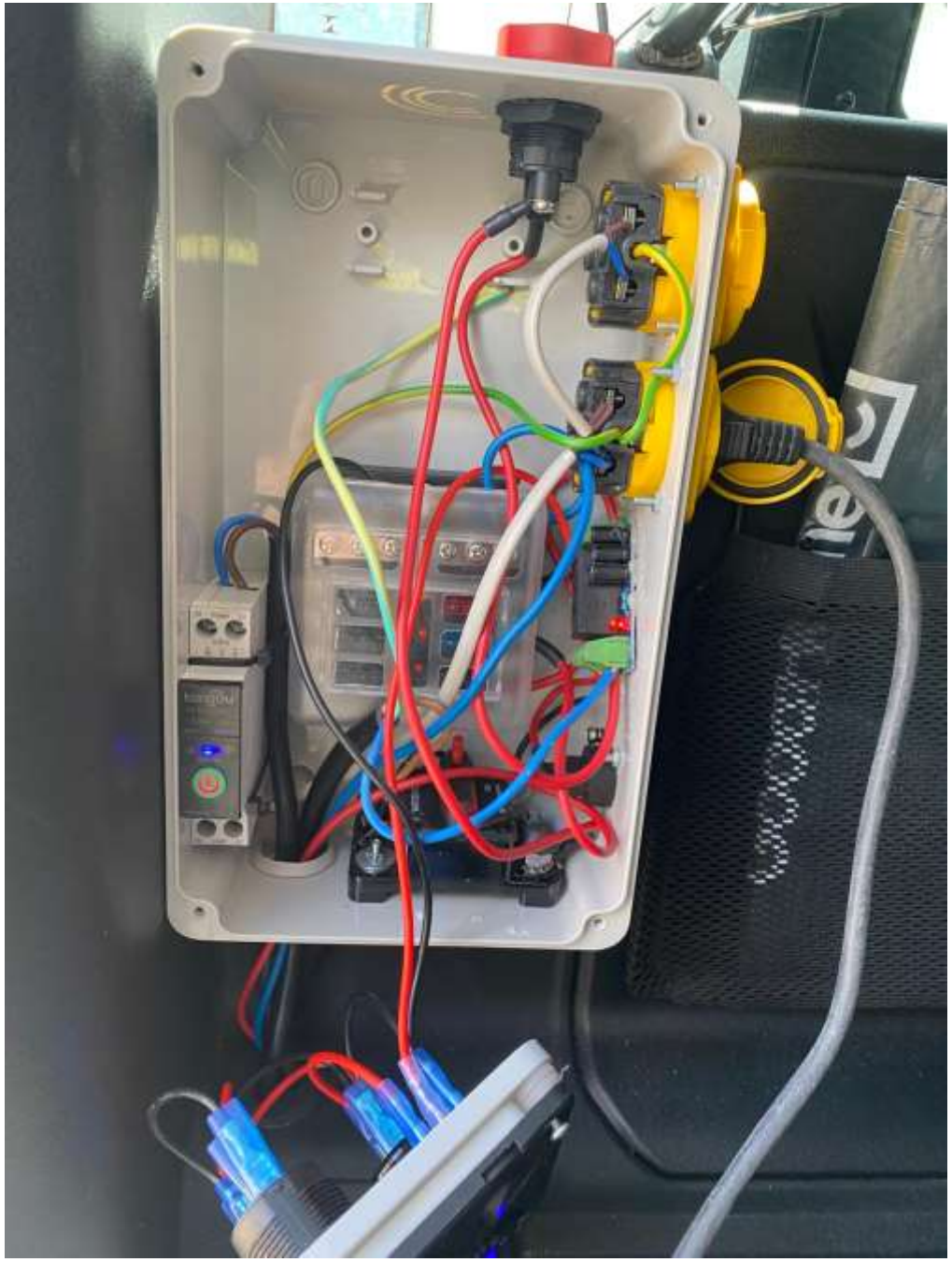





Main kill switch




External 12V DC input



GRANDE FINALE