

Mahindra JS11 PIK UP Kit

INS0200

cangoee

power

off-grid / on-grid / on-demand.



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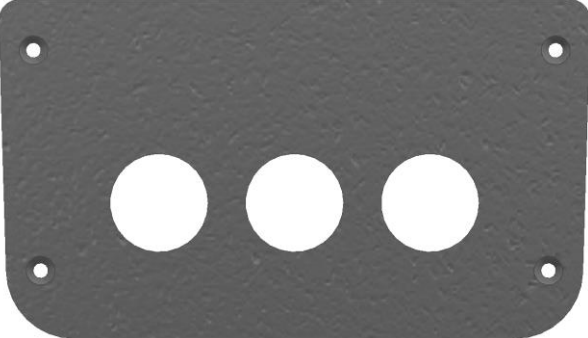
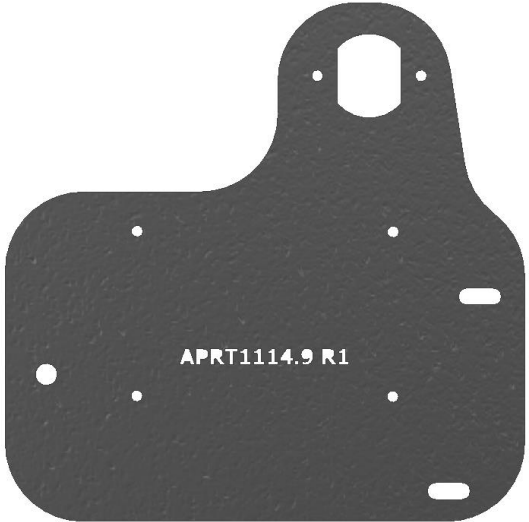
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Revision	Date	Author/ Edit	Checked	Comments
R1	13/03/23	Ryan J	Daniel K	This is a Preliminary First Revision
R2	29/06/23	Ryan J	Daniel K	Second revision after new metalwork

Purpose

The purpose of this document is to instruct users on the installation of the Cangoee battery kit for the Mahindra JS11 Pik-Up MY22. This installation works with electrical equipment and Live cables, **please ensure** that this build is carried out by a competent and cautious individual.

Parts

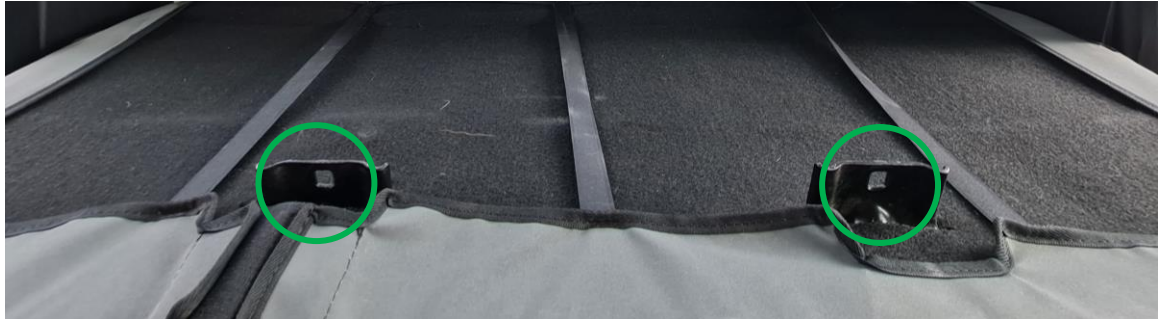
Part Image	Part Name	QTY
	APRT1114.1 R1 Top Mounted Battery Bracket	1
	APRT1114.4 R1 Output Branded Faceplate	1
	APRT1114.9 R1 Gear Plate/ Switch Plate	1

	<p>APRT1114.2 R1 Battery holders Rear surround</p>	<p>2</p>
	<p>APRT1114.6 R1 Output Standoff Plate</p>	<p>1</p>
	<p>APRT1114.5 R1 Anderson Socket Holder</p>	<p>1</p>

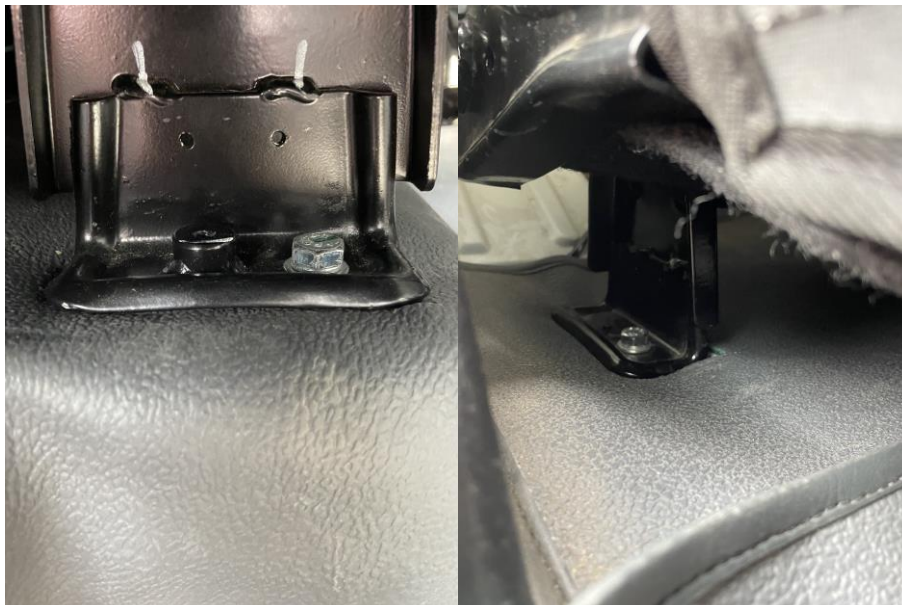
Preparing The Vehicle for Install

Removing The Rear Seats

1. Remove two bolts behind the seats using a 14mm socket head and fold down the rear seat.



2. Unbolt the six (6) bolts holding the seats to the floor using a 14mm hex socket, these are easy to locate and will require a short socket head as there is minimal room.



4. Once unhooked remove the seat through the rear door.

Accessing the Passenger Side Cable Tray

1. Remove the securing plates located in the passenger side front and rear door openings. This is done by removing the two screws using a PH2 screwdriver, then prying the plates off with a panel removal tool.



2. Remove the door seal from the passenger front and rear door openings. This is done by pulling on the door seal until it comes away from the opening. Make note of where the door seal starts and ends, this will aid with re-installing the door seals.
3. The floor lining can now be peeled away revealing the passenger-side cable channel.

Removing The Centre Console

4. To remove the centre console assembly, begin by prying off the top plate with the gear shift cover. Gently twist and pull upwards to remove the shift knob, then disconnect the cables underneath. Using the appropriate tools, unscrew the hex bolts and Phillips head screws. Lift the centre console carefully, as the wiring is delicate and may break if pulled too hard. Finally, remove the console from the vehicle for the time being. Remember to handle everything with care.



Removing The Glove Box

1. Open the glove box.
2. To gain access to the mounting bolts, the sides of the glove box can be flexed inward, allowing it to open beyond its end stops.
3. Remove the glove box by unbolting the 2 bolts holding it in place.



Removing The Kick Panel

1. Remove the left side kick panel under the glove box by unscrewing the 2 screws holding it in place.
2. Using your hands pull the kick panel away from the car.

Accessing The Driver Side Fuse Box

1. Using your hands, remove the fuse box access panel to the bottom right of the steering wheel.

Removing The Rear Passenger Seat Belt Trim

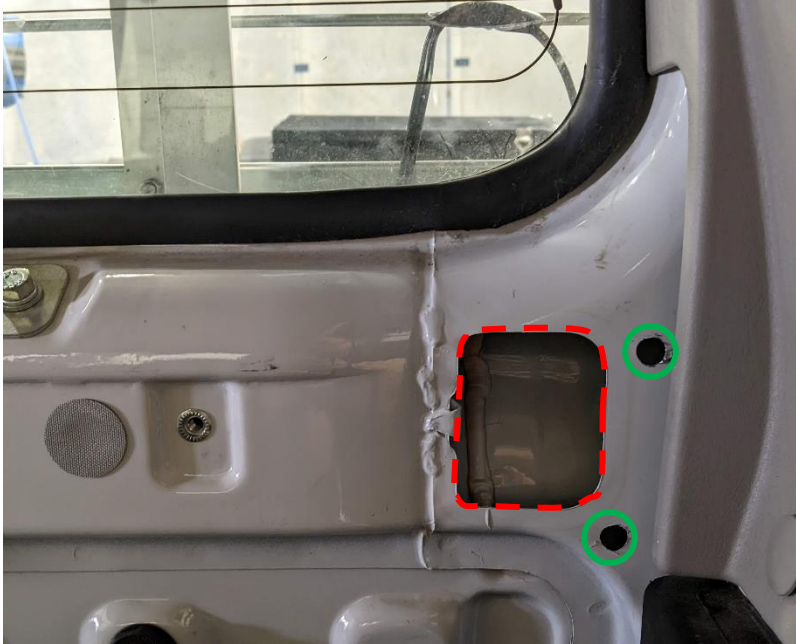
1. Using a trim removal tool remove the plastic clips holding the lower trim piece in place.
2. Undo the lower bolt securing the end of the seat belt to the car chassis.
3. With your hands gently pull the lower trim piece away from the car.
4. Using a trim removal tool remove the plastic clips holding the upper trim piece in place.
5. Using your hands gently pull the upper trim piece away from the car.

Installing The Nut Rivets

1. Drill out the indicated holes to 10mm
2. Take M6 Nut Rivets and crimp them into the standoffs and indicated holes
- 3.



2. Mark and drill 10mm holes in the below indicated OEM holes to accept M6 Nut Rivets. Ensure the OEM plug is removed.



3. Crimp M6 Nut Rivets into holes drilled in the previous step.

Installing The Cangoee Battery Attaching The Mounting Brackets

1. Attach the Top Mounting Bracket onto the battery using the 3mm self-tapping sheet screws in the holes shown below.



2. Attach the Mounting Brackets (the large hook shaped braces) onto the Cangoee Battery.

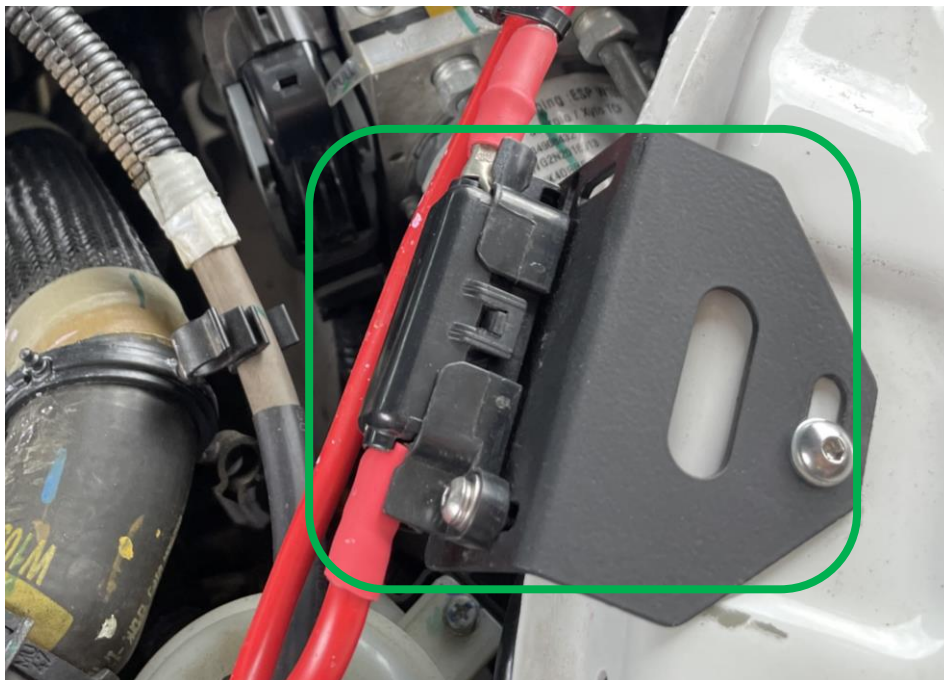
Mounting The Battery

1. Bolt the battery onto the rear wall of the vehicle using the supplied M6 bolts and washers. There are 6 bolts in total, the four long bolts are screwed into the wall, the two short bolts are screwed into the two standoffs.



Installing The DC-DC Charge Loom

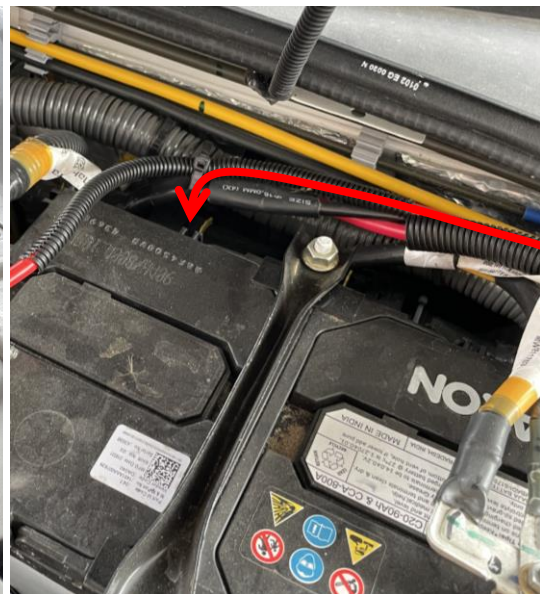
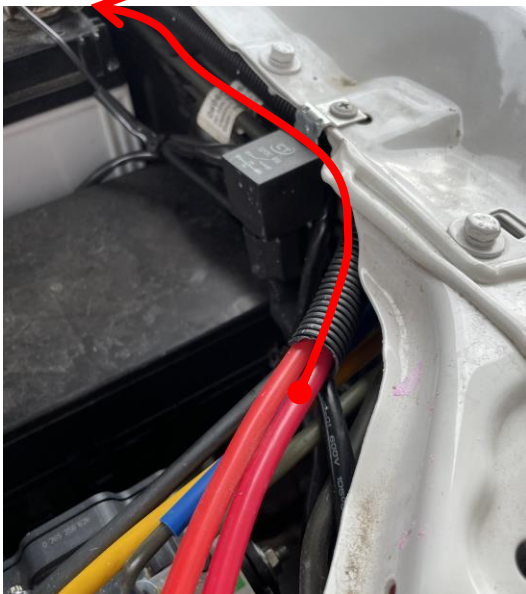
- 1 In the engine bay, attach the midi fuse bracket and midi fuse holder onto the chassis as shown.

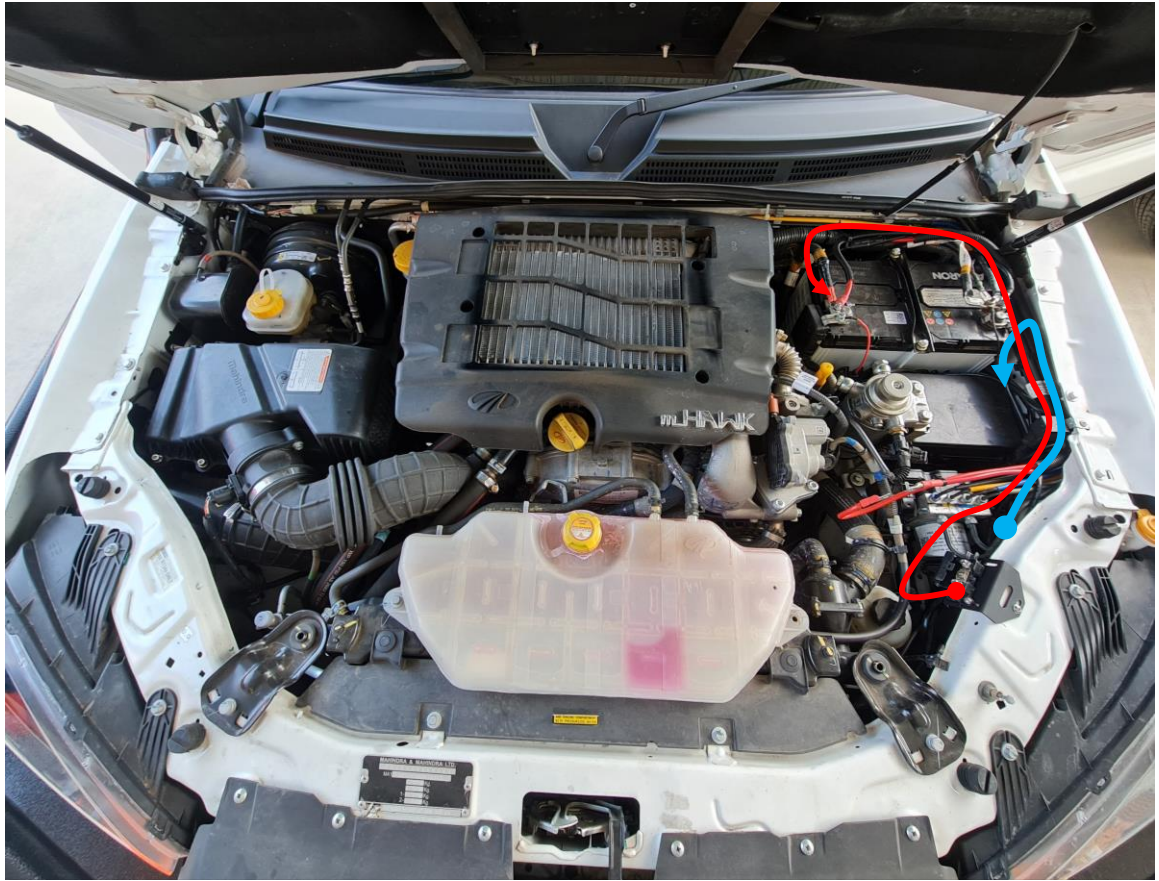


- 2 Attach one end of the Main Battery to Midi Fuse Cable to one side of the Midi Fuse. Attach the other end of the cable to the positive stud of the car battery.



- 3 Attach the red wire of the DC-DC Power Loom to the other end of the MIDI fuse.
- 4 Attach the black wire of the DC-DC Power Loom to the negative post of the vehicle battery.
- 5 Run DC-DC power loom down the firewall behind the battery. The DC-DC Power Loom is then run beside the chassis rail to the rear of the vehicle.





- 6 The DC-DC Power Loom then enters the vehicle through a cable gland in the floor.

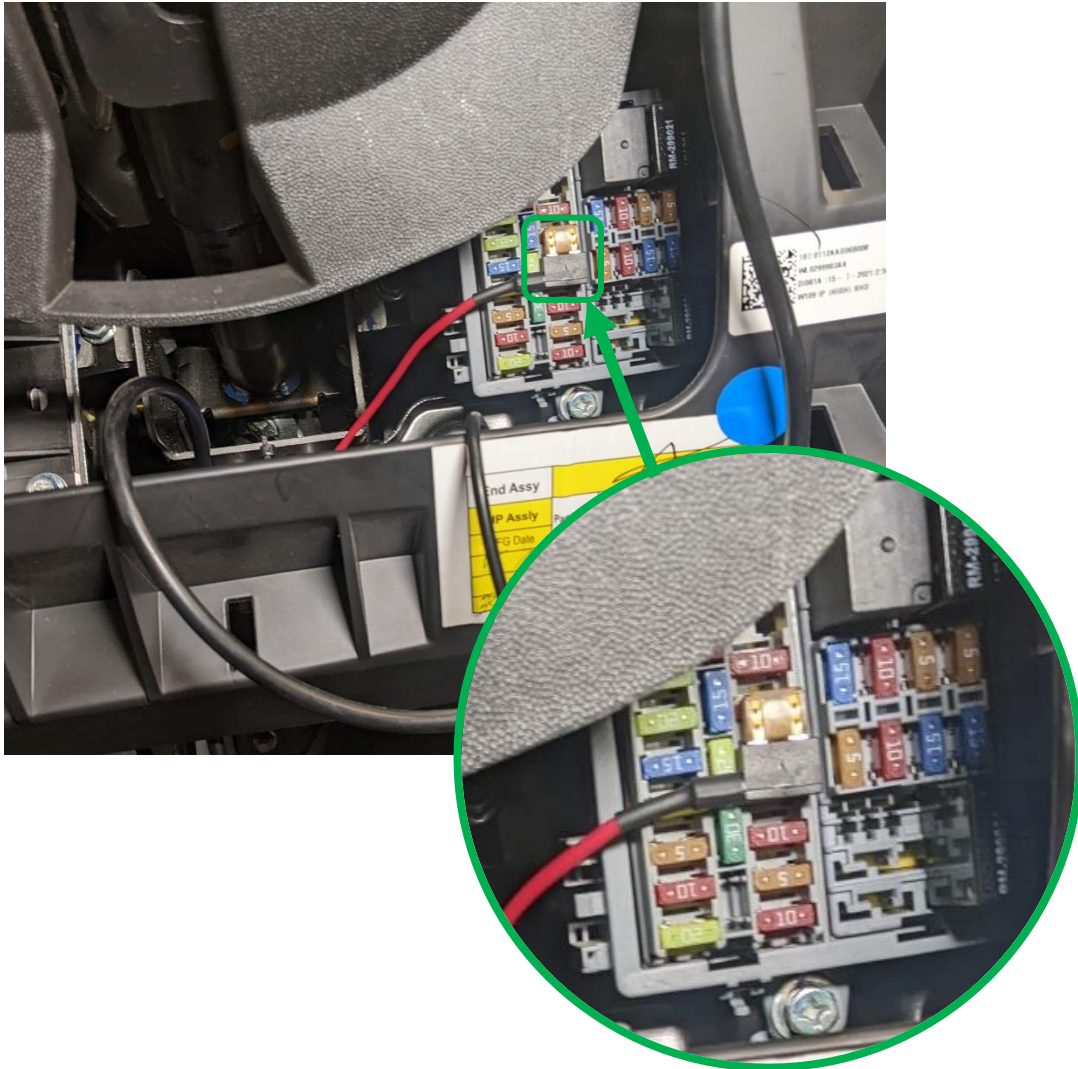


- 7 The DC-DC Power Loom is then routed up the rear wall under the carpet to the battery.



Installing The Ignition Sense Loom

- 1 Insert a 5 Amp fuse into the fuse tap of the Ignition Sense Loom. The driver's side fuse box is located at the bottom right of the steering wheel. Insert the fuse tap into the fuse slot shown in the following image.



Installing The External Connectors

1. Remove the OEM grommet located in the rear wall of the cabin, near the mounted Cangoee battery. Pull this out to pass wires through.



2. Run the cables for External Connections Loom, these are the 12V DC Out (Red & Black) and the Solar input (Brown & White) through the cable gland at the rear as shown.



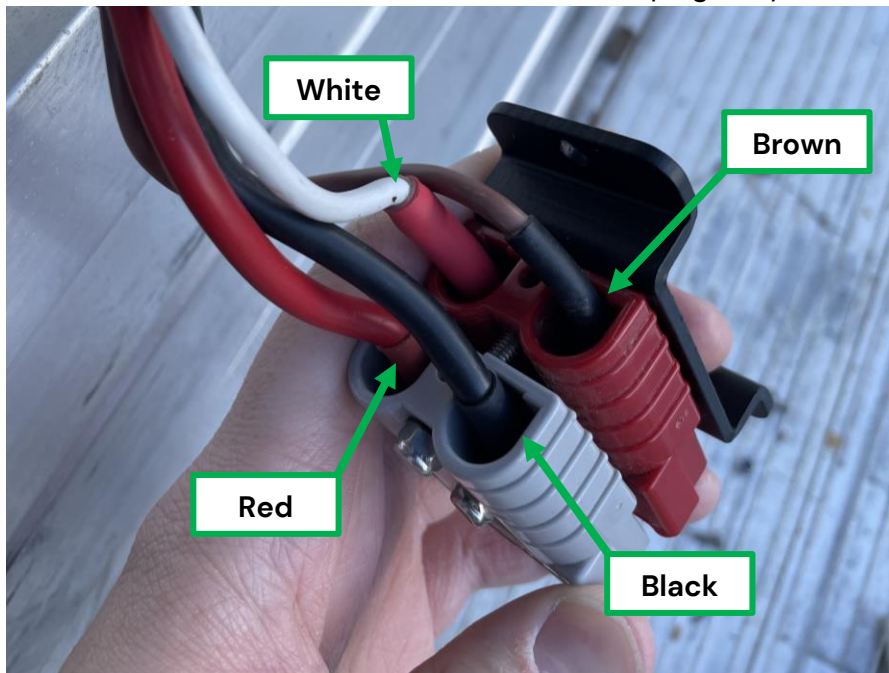
3. Install the supplied cable gland in the grommet hole by installing the gland through and tightening with an adjustable spanner, ensure the rubber lips are flat against the surface of the vehicles metal work.



4. Using the mounting bracket as a template drill 5mm holes into the vehicle tray. The mounting bracket needs to be installed between the tray and the cabin on the passenger side. Also keep in mind cable length when positioning the mounting holes.



5. Insert the tabs on the cables into the anderson plugs. Layout is shown below.

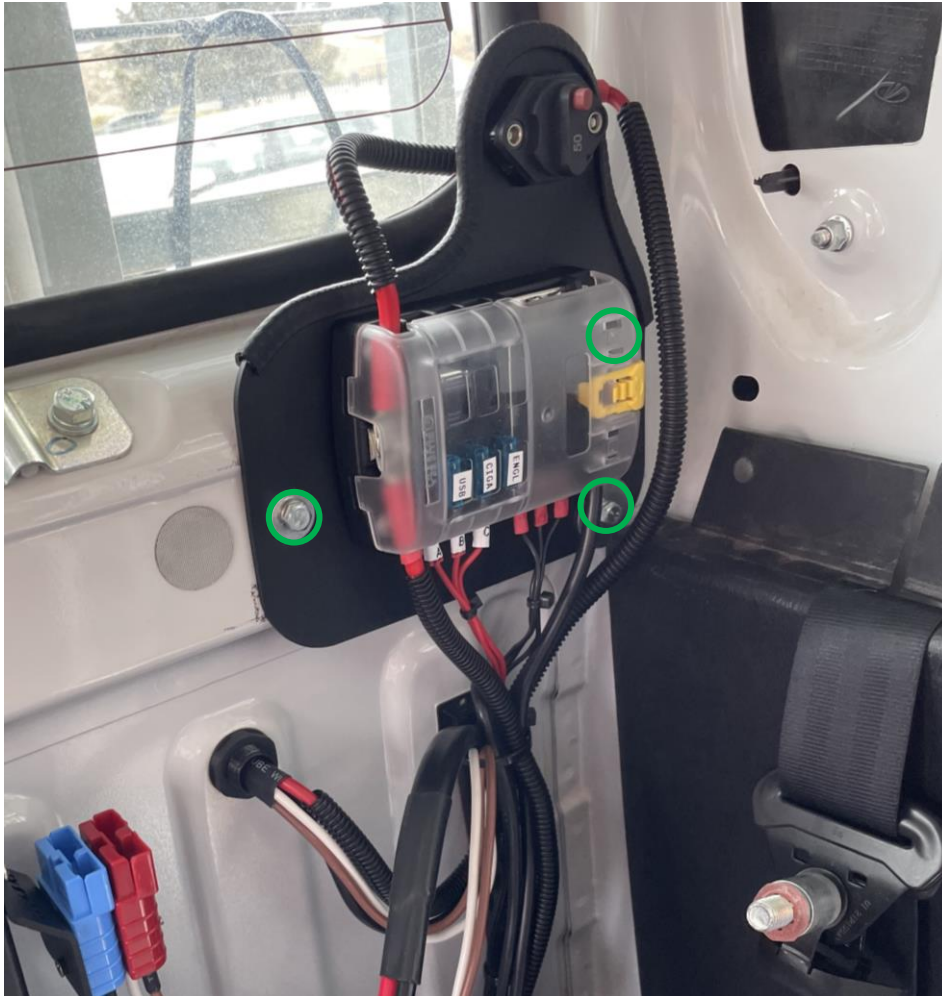


- White cable goes to the positive terminal on the Red Anderson.
- Black cable goes to the negative terminal on the Red Anderson
- Red cable goes to the positive terminal on the Grey Anderson
- Black cable goes to the negative terminal on the Grey Anderson

Installing The Fuse Plate

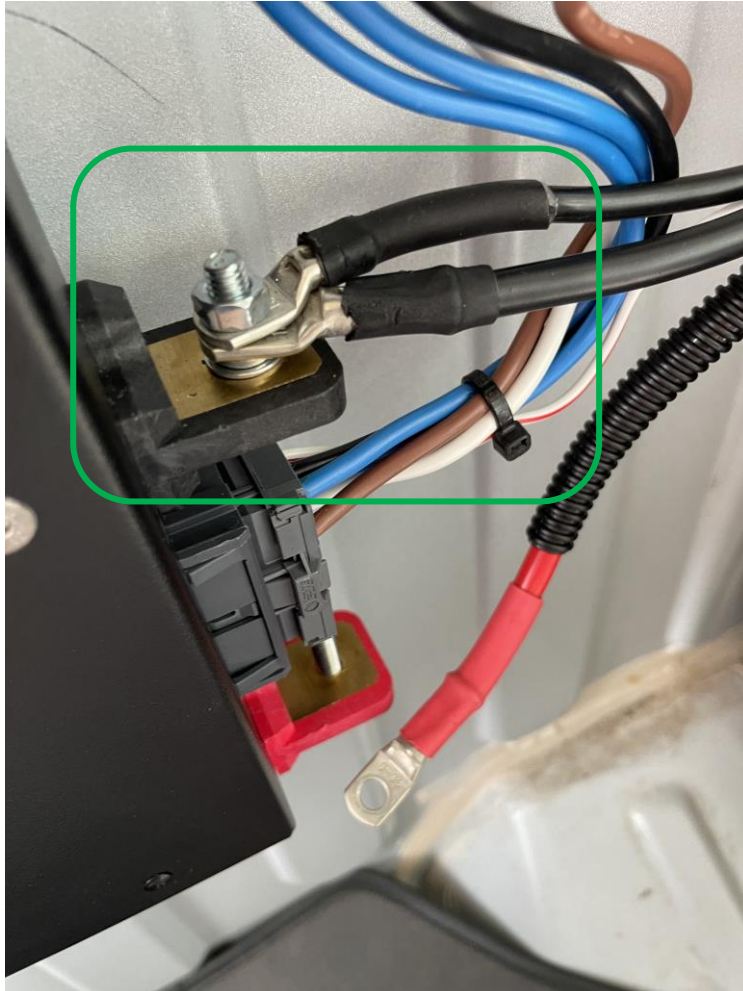
Mounting The Fuse Plate

1. Using the supplied bolts and washers, attach the Fuse Plate to the rear wall of the cabin. These will require a 10mm socket head to fasten.



Wiring The Cangoee Battery

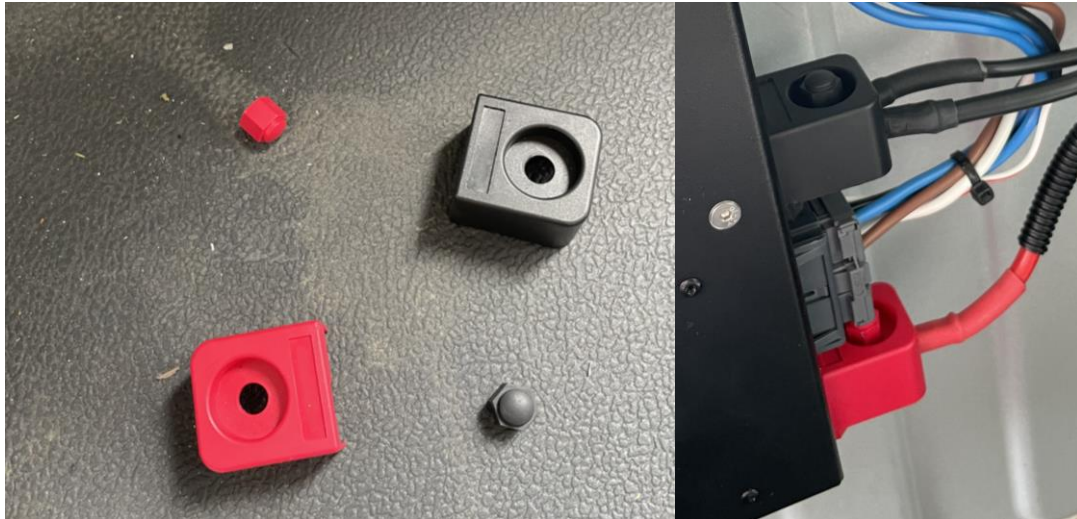
1. Connect the black wire of the External Connection Loom and the Fuse Plate Negative Wire to the negative terminal of the battery. Screw on the nut tightly to the terminal.



2. Connect the positive ring terminal to the positive of the battery. Screw on the nut tightly to the terminal.



3. Place the red and black terminal covers back on and screw down with the plastic dome ends. The black end cap will need to be trimmed to allow the wiring off the studs to pass through.



4. Connect the MCP and click into place.



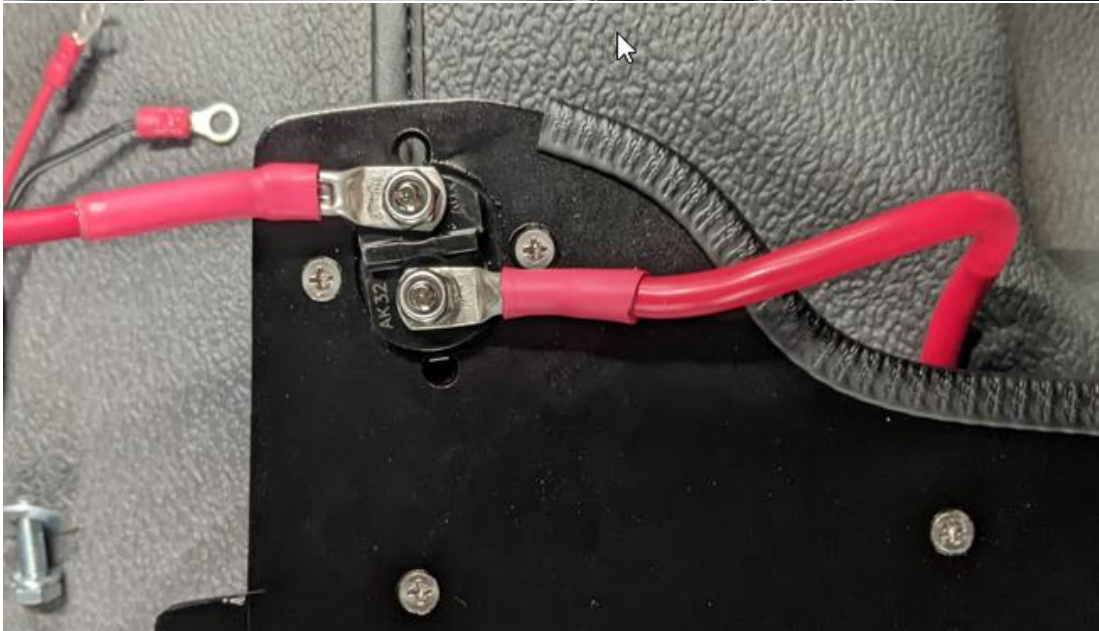
5. Connect the corresponding A, B, C positive ring terminals to the fuse box. (A – USB, B – CIGA, C – ENGL)



6. Connect the ring terminal to the short ring connector cable to the left-hand side of the isolator, connect the adjacent end to the fuse box.



7. Connect the DC power to the right-side lug of the isolator.



ACCESSORY- Installing The Centre Console Loom

- 1 Route the Centre Console Loom in the following way:
 - Down the rear cabin wall
 - Under the floor lining
 - Into the foot well
 - Along the transmission tunnel
 - Come out from under the floor lining at the centre console.



Installing Centre Console Accessory Plate

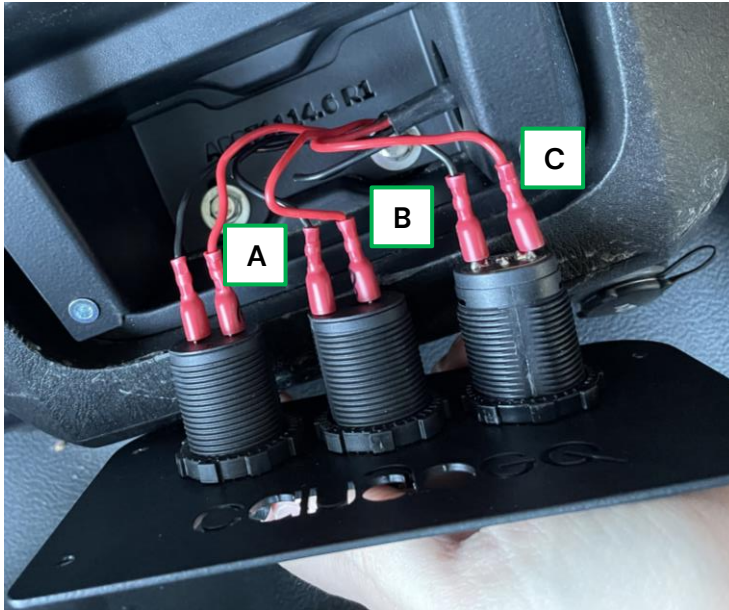
1. Using the Accessory Mounting Bracket as a template drill a 25mm hole into the cup holder section of the Centre Console.



2. Insert the Accessory Mounting Bracket in the cupholder and fix it to the car using the supplied bolts and washers.



1. Connect the wires as shown below, follow the A, B and C labelled scheme on the red connectors. A corresponds to the USB Outlet, B corresponds to the ACC outlet and C corresponds to the DC Power outlet.



2. Screw on the faceplate, via the 4 M4 bolts to hold it in place.

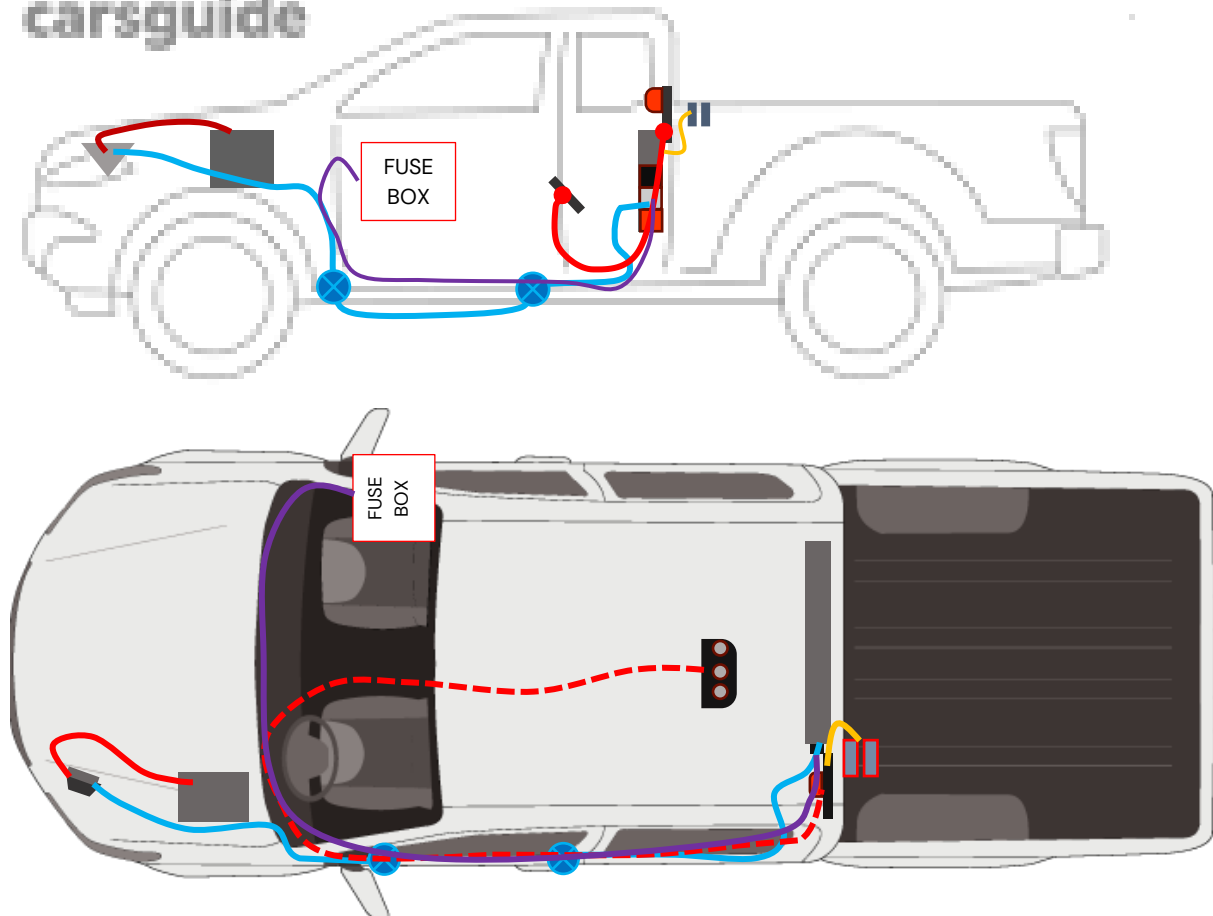


Clean up and Finish





1. Bundle and tidy up wires using zip ties and cable sleeving.
2. Re-install trim pieces removed in the process of the install.
3. Re-install the rear seat ensuring the bolts are tightened correctly and securely.

Wiring Schematic:

carsguide



KEY:

- DCDC Main Cable: **Blue** —————
- Main B+ Cable: **Red** —————
- 12V Sockets cables: **Red Dashed** - - - - -
- Ignition Sense Cable: **Purple** —————
- Exterior Power and Solar Connection Cable: **Orange** —————
- Cangoee Battery: 
- Midi Fuse and Holder 
- Outlets Plate 
- Hole/ Opening Marker 
- Outlets 