

Overview:

This guide provides instruction for installing Adventure Wagon's Auxiliary Battery Tray and the charging bundle.

Package Contents:

- Adventure Wagon Battery Tray includes the tray plus mounting hardware (does not include charging bundle)
- Adventure Wagon Battery Bundle Includes Adwag Tray plus all fuses, breakers, Blue Sea Charge Relay, Cables
- Two Group GC2 6 Volt batteries are not included.

**Installation Time and Skill Set:**

The full installation can be done in about 3 hours and involves mounting the battery tray under the hood (Part 1) and then connecting/cabing this new auxiliary battery (part 2) to the main sprinter battery via a Blue Sea charging relay as well as providing cable access to the battery for your accessories under the driver seat.

Supported Sprinter Vehicles:

2007+ NVC3 Sprinter Platforms. Including all 170 and 144 systems. Our tray works as a dual battery upgrade for vehicles that do not already have a factory auxiliary battery charging system. Our tray can also be a > 220 Amp-Hour replacement for vehicles that already have the factory auxiliary battery and want to more than double the existing capacity

Tools you will need:

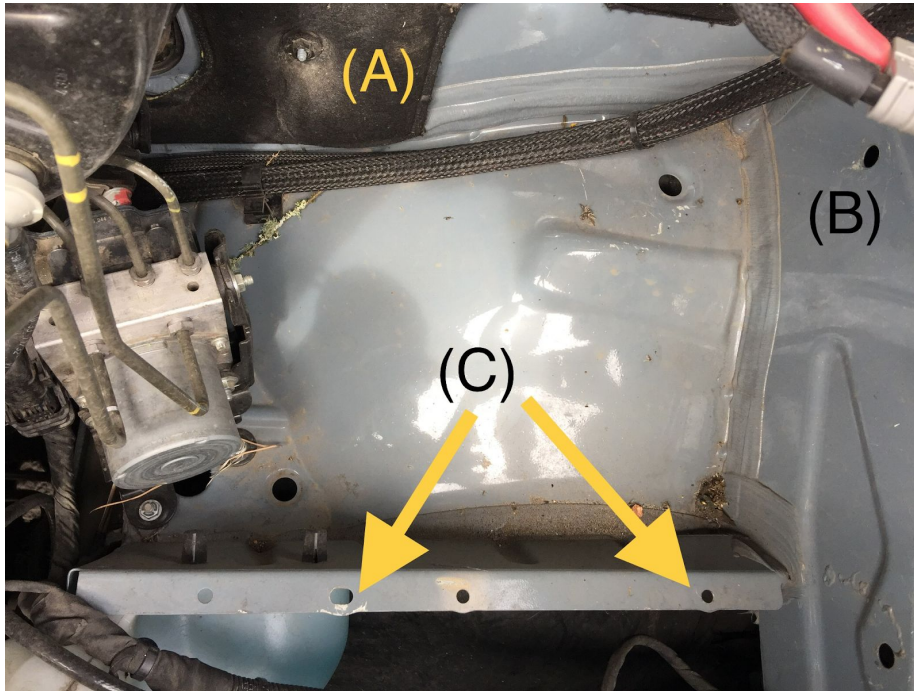
- Screwdrivers, Metric Sockets, Hook and Loop Tape or Zip Ties, Shop Light, Wire cutters, Wire crimping tool

Labelling of Cables:

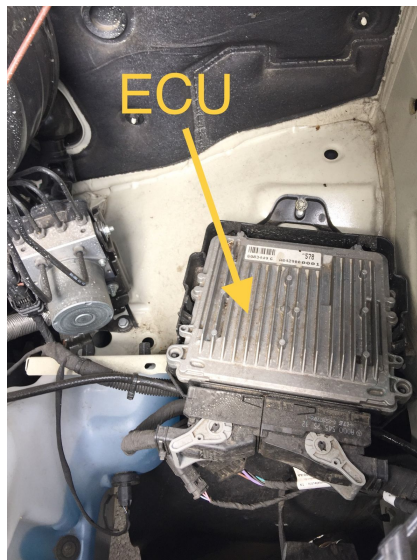
- Cable A- Red Heat protected cable that goes from AdWag battery tray to the charge relay "Post A" in the seat base
- Cable B- Red Cable goes from the Sprinter starting battery to the charge relay "Post B"
- Cable C- Black ground cable (smaller gauge)
- Cable D- Red cable goes from breaker to positive post on battery
- Cable E- Series cable for battery
- Cable F- Black Chassis ground cable

Part 1: Battery Tray Installation

1. Remove the ground connection above the gas pedal in the driver footwell
2. Open hood and locate where the tray will mount above the driver side wheel well as well as the mounting points (A), (B) and (C)



3. Remove the Factory Engine Control Unit if it is mounted on top of the driver side wheel well. See our install video for relocating the ECU.



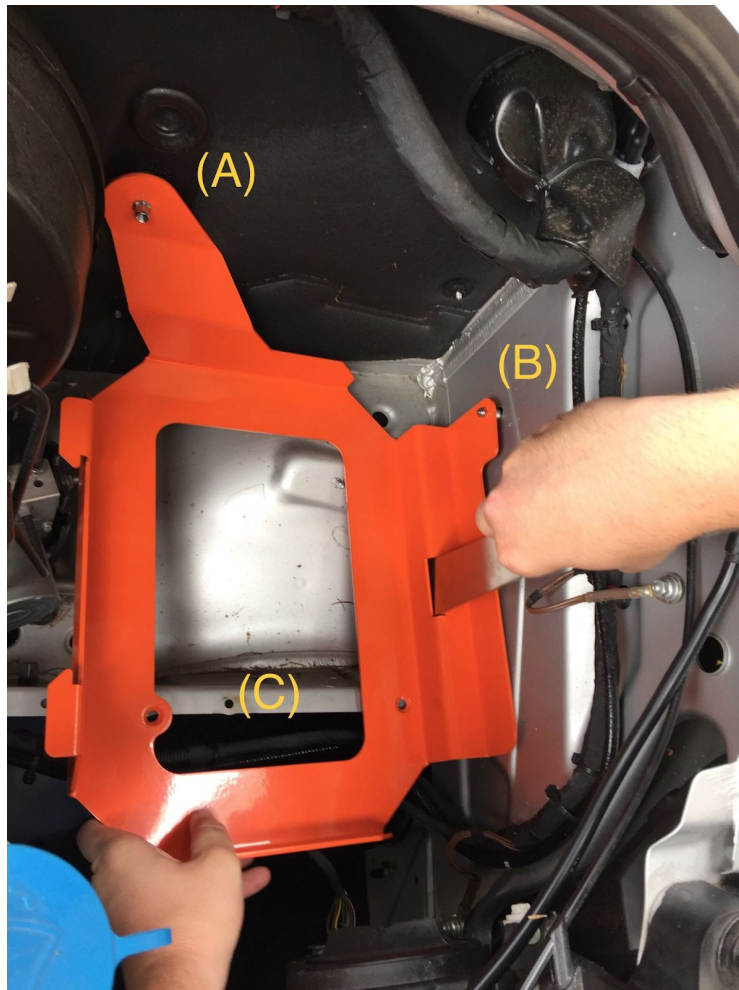
4. Remove the rubber grommet at location (A) located on the van firewall against the driver footwell.



5. Prepare the battery tray by inserting the stainless vertical mount into the cutout in the base



6. Place the tray into the driver side engine compartment. Align tab (A) with the hole in the firewall, Tab B will slot into the available hole in the wheel well housing. The holes in area (C) will align with the existing battery mount holes at the base of the tray



7. Attachment (A) in the firewall: Place bolt through the hole in the firewall. Go into the driver footwell and locate the bolt in the floor. Place the smaller balloon washer on the bolt first, then the larger washer followed by the nut



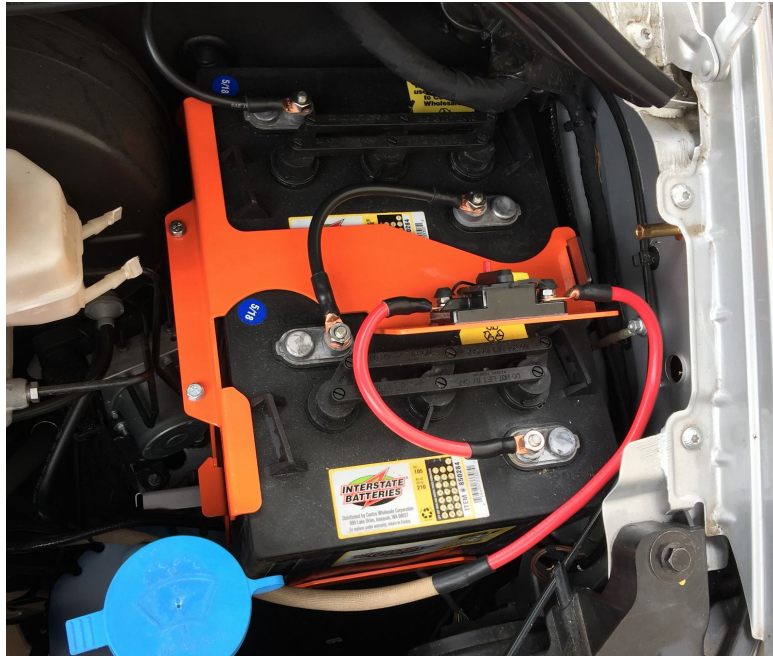
8. Attachment (B) to the engine compartment sidewall. The stainless post should be placed into the opening on the side of the van. No additional fastening is needed



9. Attachment (C) to the engine compartment frame. Attach two stainless M6 bolts on the topside fastened via a washer and nylon locking nut from the bottom side.

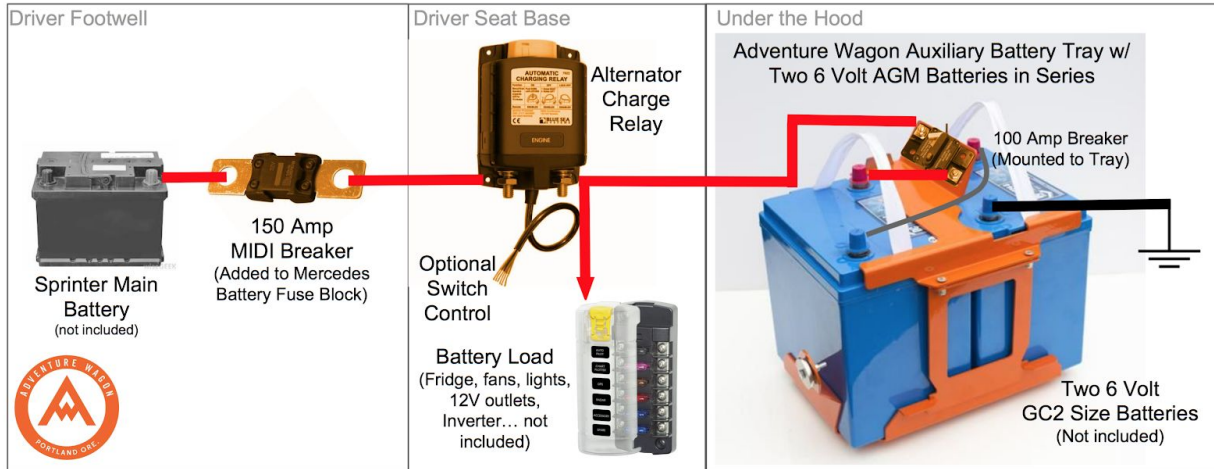


10. Place two group GC2 6 volt batteries in the tray and assemble side bolt down bracket and top hold down per the photo below with stainless nuts.



Part 2: Battery Wiring Connections:

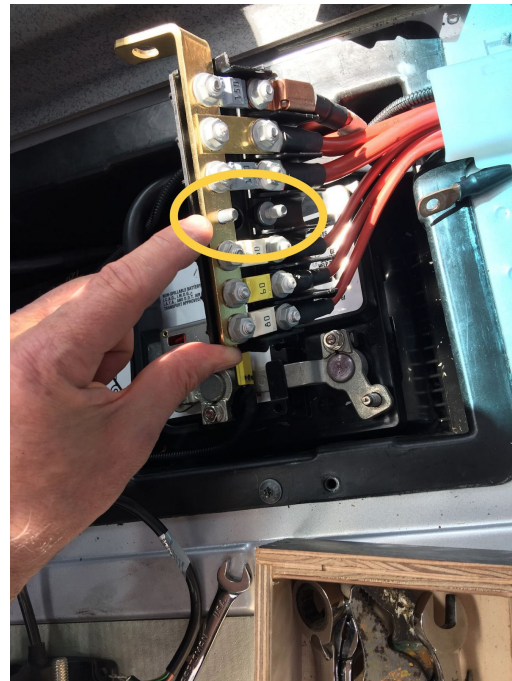
Adventure Wagon Auxiliary Battery Kit Diagram



1. Remove the ground connection above the gas pedal in the driver footwell
2. Remove driver seat

Installing "Cable B" - Starting Battery to Blue Sea Relay under the Seat

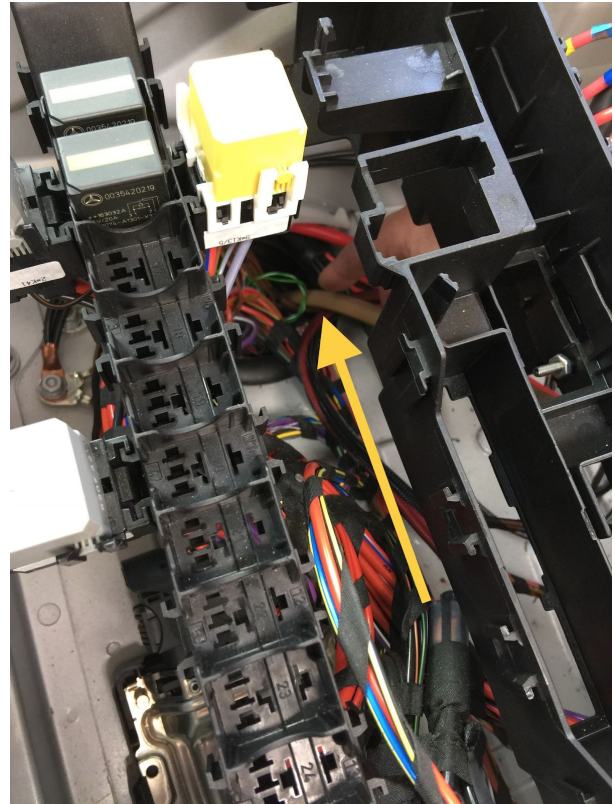
3. Remove the main battery cover in the driver footwell
4. Unscrew the MIDI circuit harness located alongside the rear side of the main battery. Attach the 150 Amp MIDI connector in an empty slot.
5. Connect the small terminal ring of Cable B the other side of the 150 Amp MIDI breaker. Feed this cable through the channel alongside the driver seat base and into the the driver seat base area.
6. Connect the larger ring of Cable B to the "B Post" on the Blue Sea Relay.



to

Installing Cable A - The long heat-shielded cable from the battery tray under the hood to under the driver seat

7. Go under the driver seat area and locate the rubber boot under the driver seat base. Unclip the zip tie to the boot and feed the end of Cable A with the larger ring up through the pass thru in the driver floor.
8. Feed cable A underneath along the base of to the back of the driver seat floor and connect Cable A to "Post A" on the Blue Sea Relay



9. Feed the other end of Cable A under the van up through the opening alongside the AdWag Battery Tray. Zip tie the cable to the existing plastic covered wiring harness to secure the cable. Be careful to avoid placing Cable A close to the engine block (or any heat source) and away from any steering mechanism.



Mount the Blue Sea Charge Relay

10. Peel back the 3M Tape and Mount the Blue Sea Relay along the back inside wall of the driver seat base



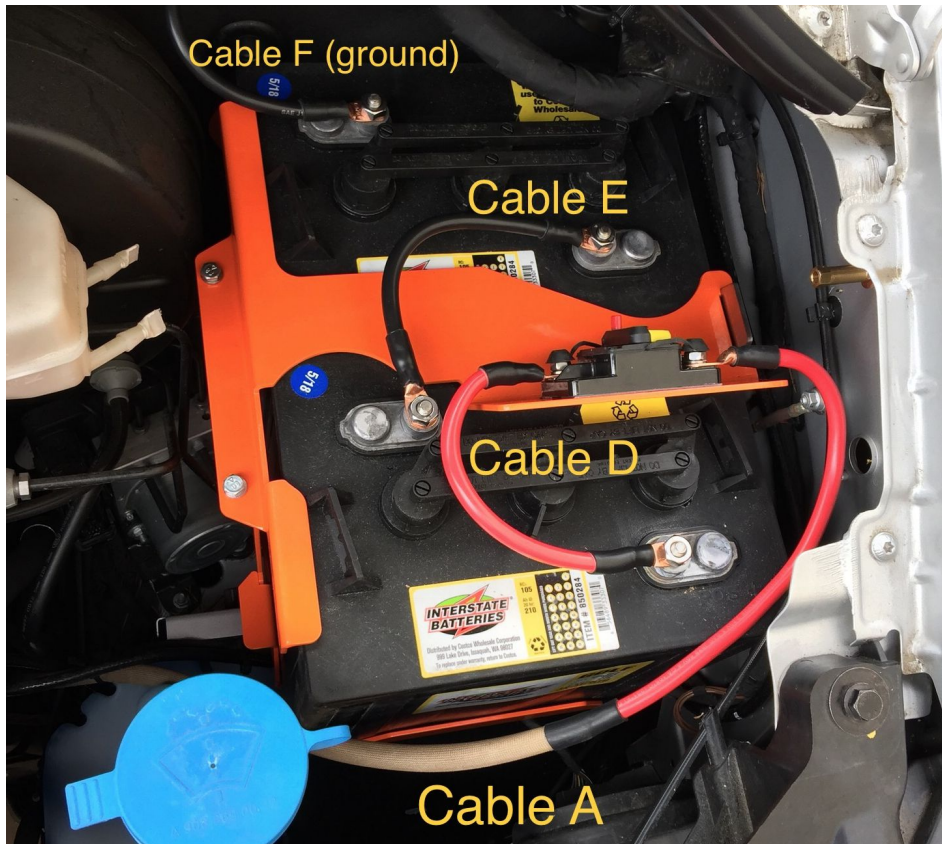
Blue Sea Pigtail Ground Connection

11. Find the small black wire in the Blue Sea wiring pigtail. Using a crimp tool crimp the small black wire (Cable C) in the AdWag connection kit to this wire and fasten the other end of cable C to the ground post located in the seat base floor. You can tape the other electrical wires in the harness as they are for an optional switch. With just the black cable grounded the AdWag system will automatically operate the same as the Mercedes Auxiliary battery does from the factory.

Connecting House Load to the battery

12. Lights, Fans, Fridges, outlets... all should be on a circuit breaker panel and that panel's positive lead can be connected to "Post A" of the Blue Sea Charging Relay under the driver seat base

Final Connections at the Battery Tray Under the Hood



13. Mount the 100 Amp Mechanical breaker on top of the battery tray using the supplied 3M tape. Connect cable A to the breaker, connect cable D from the breaker the positive post on the 6 volt battery
14. The two six volt batteries will be set up in series for a combined 12 Volts. Connect Cable E from the rearward battery positive post to the forward battery negative post. Connect the negative post on the rearward battery to the chassis ground on the engine bay side wall using cable F (Ground Cable).

Cable Labelling:

- Cable A- Red Heat protected cable that goes from AdWag battery tray to the charge relay "Post A" in the seat base
- Cable B- Red Cable goes from the Sprinter starting battery to the charge relay "Post B"
- Cable C- Black ground cable (smaller gauge)
- Cable D- Red cable goes from breaker to positive post on battery
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