

# Sprinter Engineering and Compliance Support Team



## Auxiliary Battery Retrofit Guideline

05-01-07

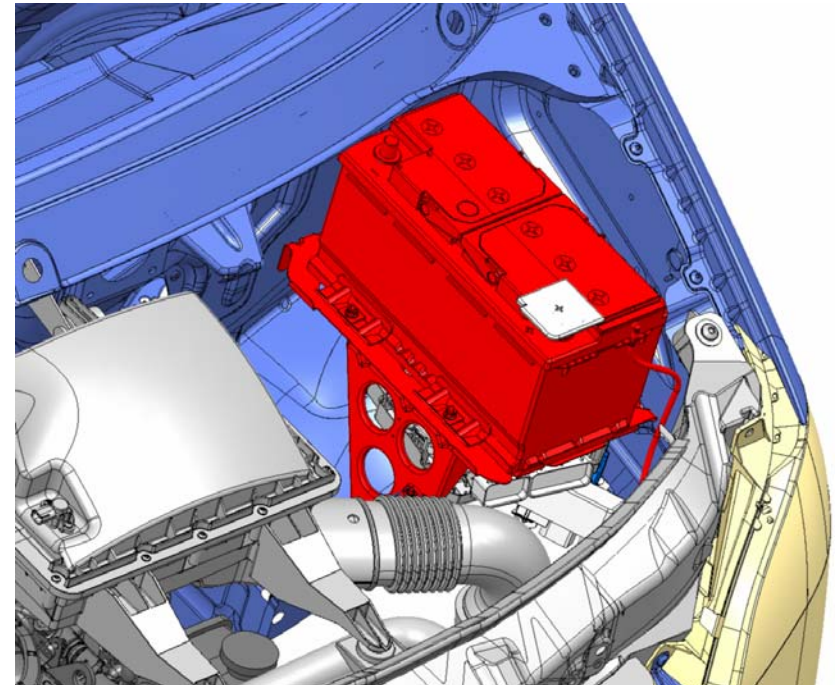


# Auxiliary battery retrofit guideline

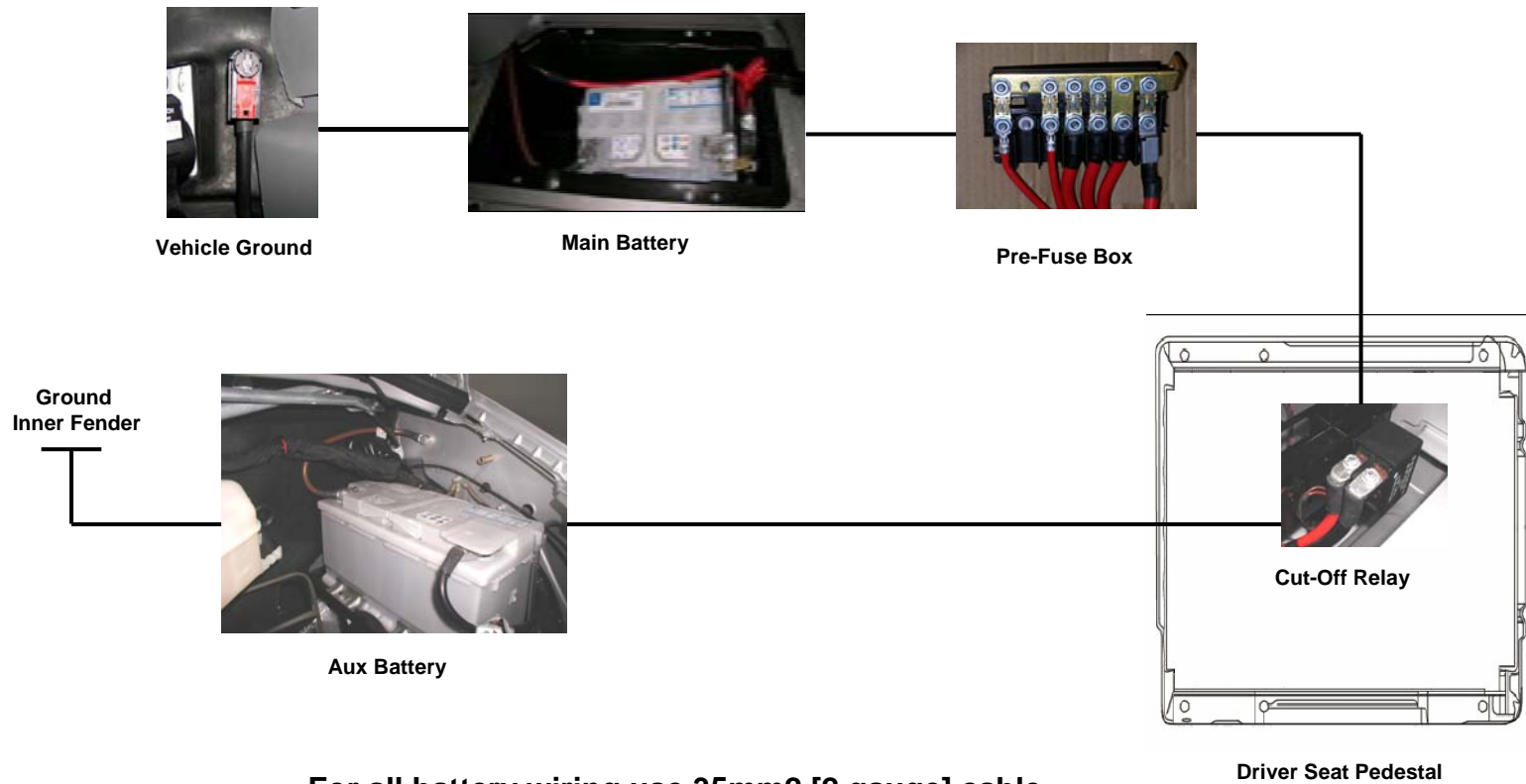
When installing electrical aftermarket equipment with an AMP draw of more than 25A in 2007 Dodge/Freightliner Sprinters it is necessary to use the optional aux battery 12V/100Ah (CODE BC1; lead-antimony, high cycle strength).

For cost and practical reason we recommend to order this option directly from the plant.

**Note:**  
This guideline is not intended as a complete work instruction but as an aid for body builders and upfitters that need to retrofit 2007 Dodge/Freightliner Sprinters with an aux battery.

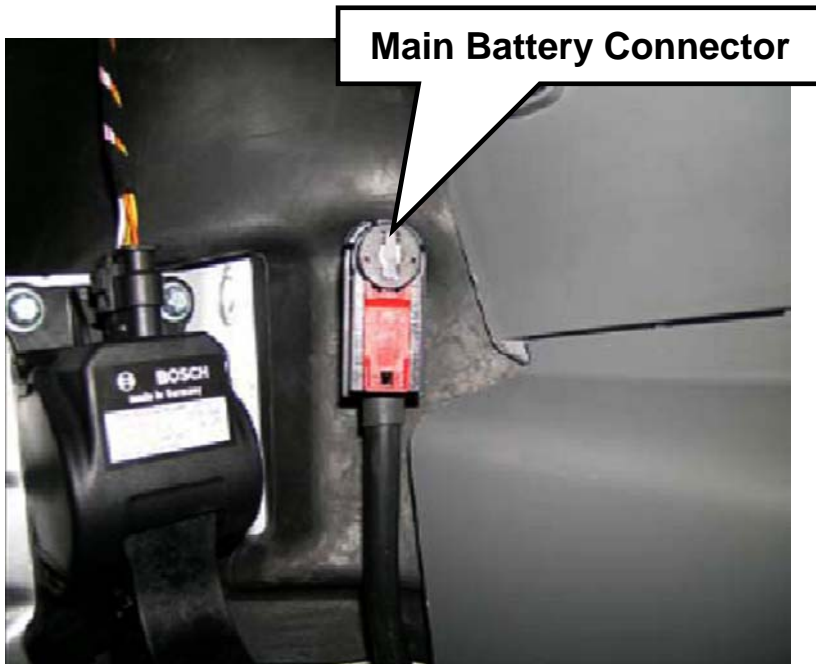


# Work Flowchart



**For all battery wiring use 35mm<sup>2</sup> [2 gauge] cable (local supply).**

# Disconnect main battery



## Warning:

Before working on the electrical system disconnect the main battery using the quick connect located right to the accelerator pedal in the driver foot well.

Failure to disconnect the battery may cause serious damage to the electrical system and its components.

Do not disconnect the battery before ensuring that the vehicle ignition key is in position 0 (off) or the key is removed, otherwise serious damage to the electrical system and its components may occur.

Do not install an auxiliary battery without a battery cut-off relay and suitable fuses for the charge current.

# Prefuse box at main battery



Locate starter battery under driver floor matt. Disconnect all electrical seat connectors. Remove driver seat (4 screws). Insert finger into the pull hole near the back of the foam seat riser cover and pull the cover upward very gently and evenly to disengage the tabs that secure the edges of the cover to the top of the seat riser.

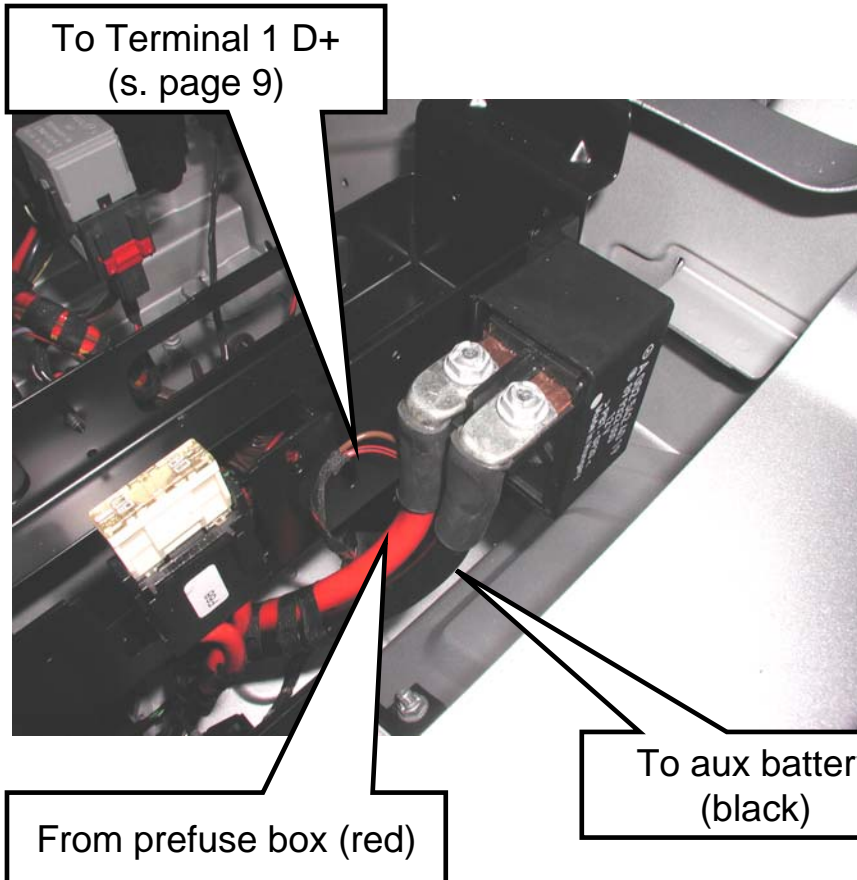


Unhook prefuse box and use existing empty terminal Position #4. See owners manual for fuse locations. Use 150A (MOPAR# 68036369AA) fuse.

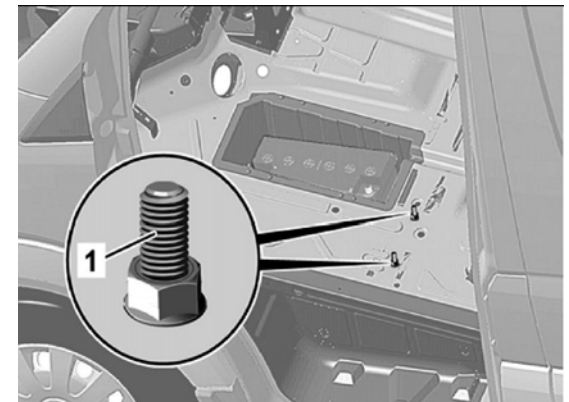
For all battery wiring use 35mm<sup>2</sup> [2 gauge] cable (local supply).



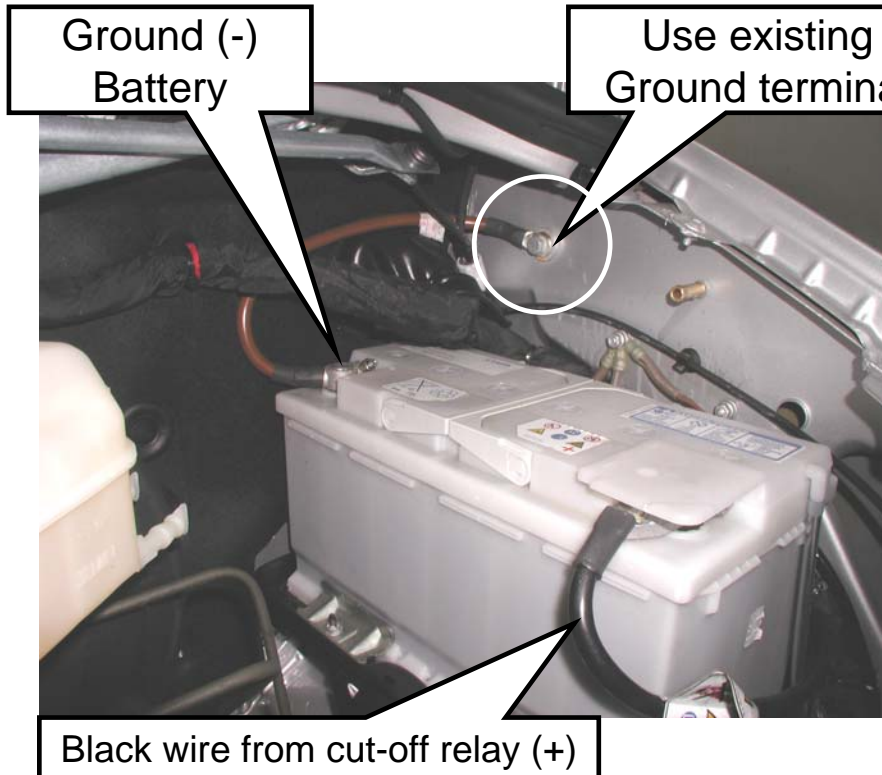
# Battery cut-off relay mounting inside seat pedestal



- Mount battery cut-off relay (MOPAR # 05120361AA or equivalent) inside driver seat pedestal (location s. page 9)
- Route a red cable from cut-off relay to prefuse terminal using provided cable duct.
- Route a black cable from cut-off relay to aux battery through provided opening in firewall. (Stay clear of steering column and use convoluted tubing or equivalent)
- Connect circuit switching wire to the EK1 Terminal 1 D+ (s. Page 9) and use only existing ground terminals on driver seat base floor (1)



# Only recommended aux battery location



## Warning:

Only install aux battery under hood on driver side.

Always ground battery first

- Use battery support bracket (MOPAR# 68011034AA)
- Aux Battery 12V / 100Ah (MOPAR# 05133941AA)
- Connect battery ground cable (-) only to provided ground terminal inside inner fender
- Connect black wire coming from cut-off relay to the auxiliary battery terminal (+).

For all battery wiring use 35mm<sup>2</sup>  
[2 gauge] cable (local supply).

# Aux Battery pre-fuse

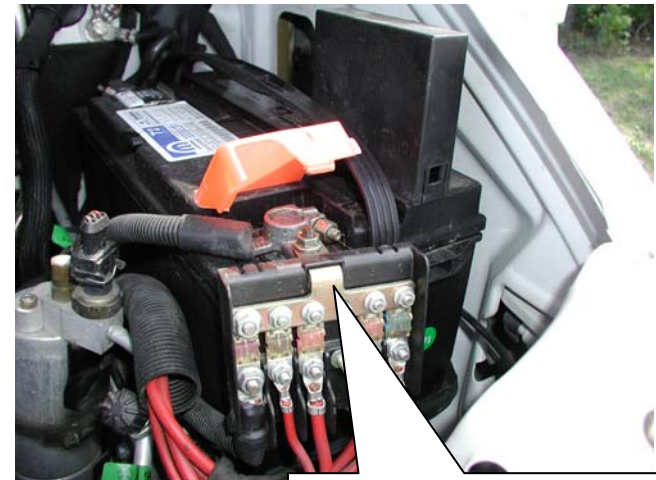
We recommend using a fused battery terminal similar shown in the picture. (local supply)

**Note:**

If no fused battery terminal is used, an inline fuse must be used as close to the aux battery positive (+) pole as possible to avoid having a hot wire without a fuse.

Do not mount the fuse to the inner fender. The hot wire is already to long.

When installing optional equipment on the aux battery do not have hot wires running from the battery.

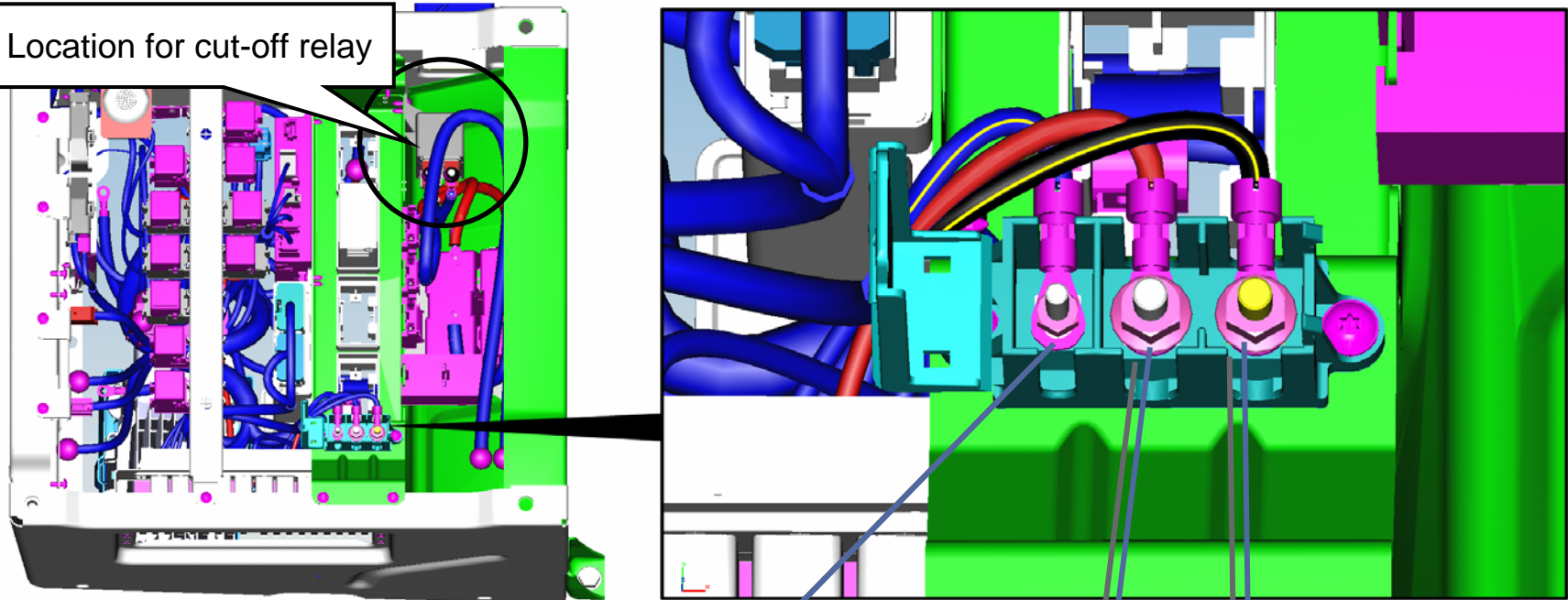


Distribution Center on aux battery



# EK1 (3EN) Terminal under Driver Seat

Location for cut-off relay

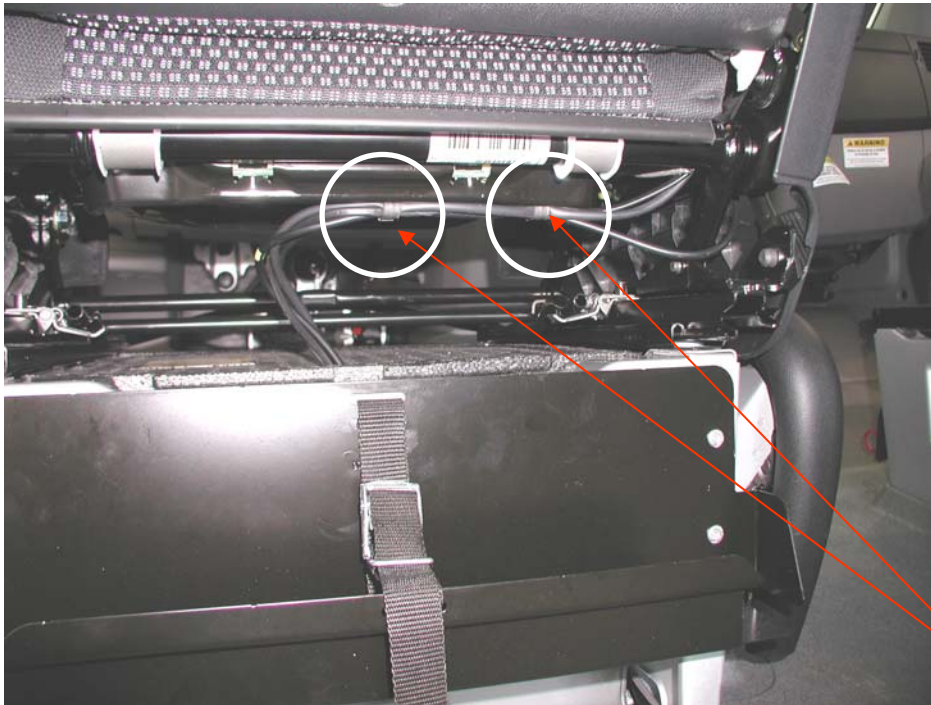


**X145/1 Terminal 1 (D+)**  
 Power with engine running  
 Wire color: blue/yellow  
 12 V/10 A (120 W)

**X145/1 Terminal 2 (30)**  
 Battery direct power  
 Wire color: red/gray  
 12 V/25 A (300 W)

**X145/1 Terminal 3 (15)**  
 Ignition power  
 Color: black/yellow  
 12 V/15 A (180 W)

# Seat reinstallation



Rear view of driver seat and pedestal

**Attach driver seat to pedestal (4 screws) and torque with 37Nm [27.3 ft-lbs].**

**Slide seat all the way forward and very carefully reassemble foam seat riser cover. Hole has to be in the back.**

**Reconnect all seat connectors:**

- Seat belt warning
- Heated seat (optional equipment)
- Seat airbag (optional equipment)

**Reattach wire harness with provided clips located on the seat.**

**Reconnect main battery (s. page 4)**