

SUBJECT: Adding 12v Upfit Accessories
MODEL YEARS: 2024 & Beyond
AFFECTED MODELS: UU Model THREE
INITIATION DATE: 05/22/2024
REVISION: xx/xx/xxxx

AWARENESS:

Description of Concerns:

- Upfit vehicle accessories may require a 12v DC source. Care must be taken to insure upfit accessories when added to the 12v start battery circuit do not overload the battery and sensitive powertrain electronics.
- The `Second Stage Manufacturer` when adding upfit accessories must insure the `Completed Vehicle` FMVSS compliance with the Mullen Rev 3 Incomplete Vehicle Document (IVD).

Solution:

- The Dealer, Second Stage Manufacturer, Lease or Owner should adhere to the following recommendations when installing upfit accessories requiring a 12v D.C. electrical power source.
 - Use the 12v Battery or Source. The High Voltage (HV) battery is off limits.
 - Follow OEM EV recommended electrical precautions.
 - Follow Accessory Manufacturer Instructions and Precautions for installing Lighting, Lifts, Pumps, Compressors, Hoists etc.
 - Follow SAE electrical Best Practices.
 - Follow FMVSS electrical requirements for conformance.
- Upfit Accessory operations that are susceptible to voltage or current spikes must inhibit protective features (fuse, high current relay/solenoid etc.) in the upfit circuit.
- Use approved OEM 12v power source for Upfit Accessory connections.

12v Battery Source / Connection Instructions

- 1) Locate 12v Chassis source; Start Battery (Lead Acid) under Cab (Figure 1), Master Switch (Figure 2) or Chassis fuse center box on chassis (Figure 3).
- 2) Determine best routing solution from Upfit Electrical Accessory to either of the above 12v sources.
- 3) Install and route Accessory wiring harness/electronic components securely per Upfitter manufacturer's instructions & Best Practices
- 4) Connect & properly ground Upfit Accessory electrical connections at 12v Start Battery or Chassis fuse center accessory terminal posts.
- 5) Do not exceed OEM Chassis & Upfit Accessory max Voltage and Current loads.
- 6) Do not install Upfit Accessories that produce voltage draw when not in operation.

12v Battery / Recovery

- 7) Follow OEM vehicle powertrain operation instructions when using Upfit Electrical Accessories.
 - Use the HV power source (turn ignition key to `Ready` position) for 12v battery charge recovery while operating Upfit Electrical Accessories.



Figure 1

OEM 12v 750 CCA Start Battery located under the Cab

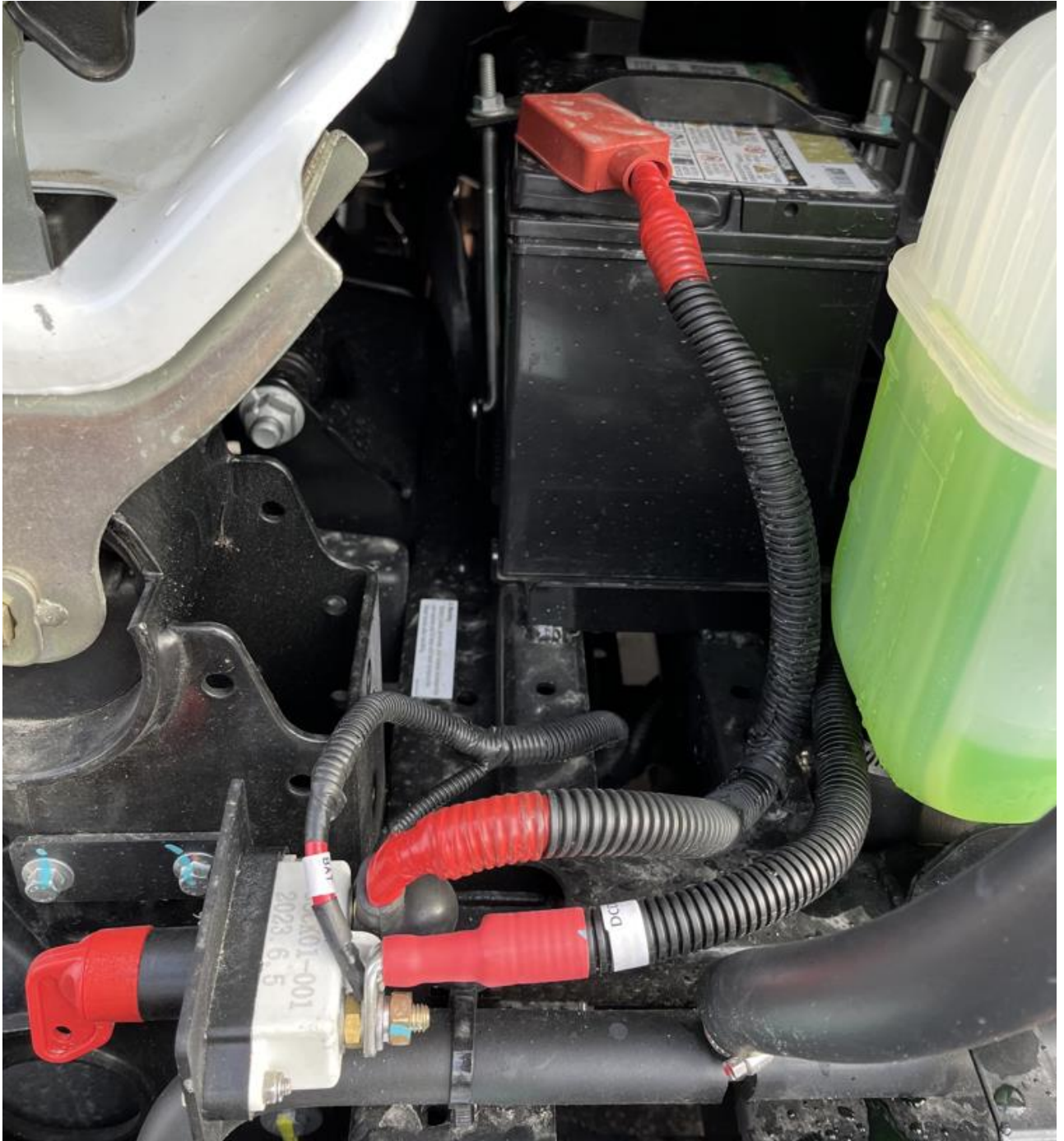


Figure 2 OEM Chassis `Master Switch' located just aft of Cab.
(D.C. + / - terminal connection posts)

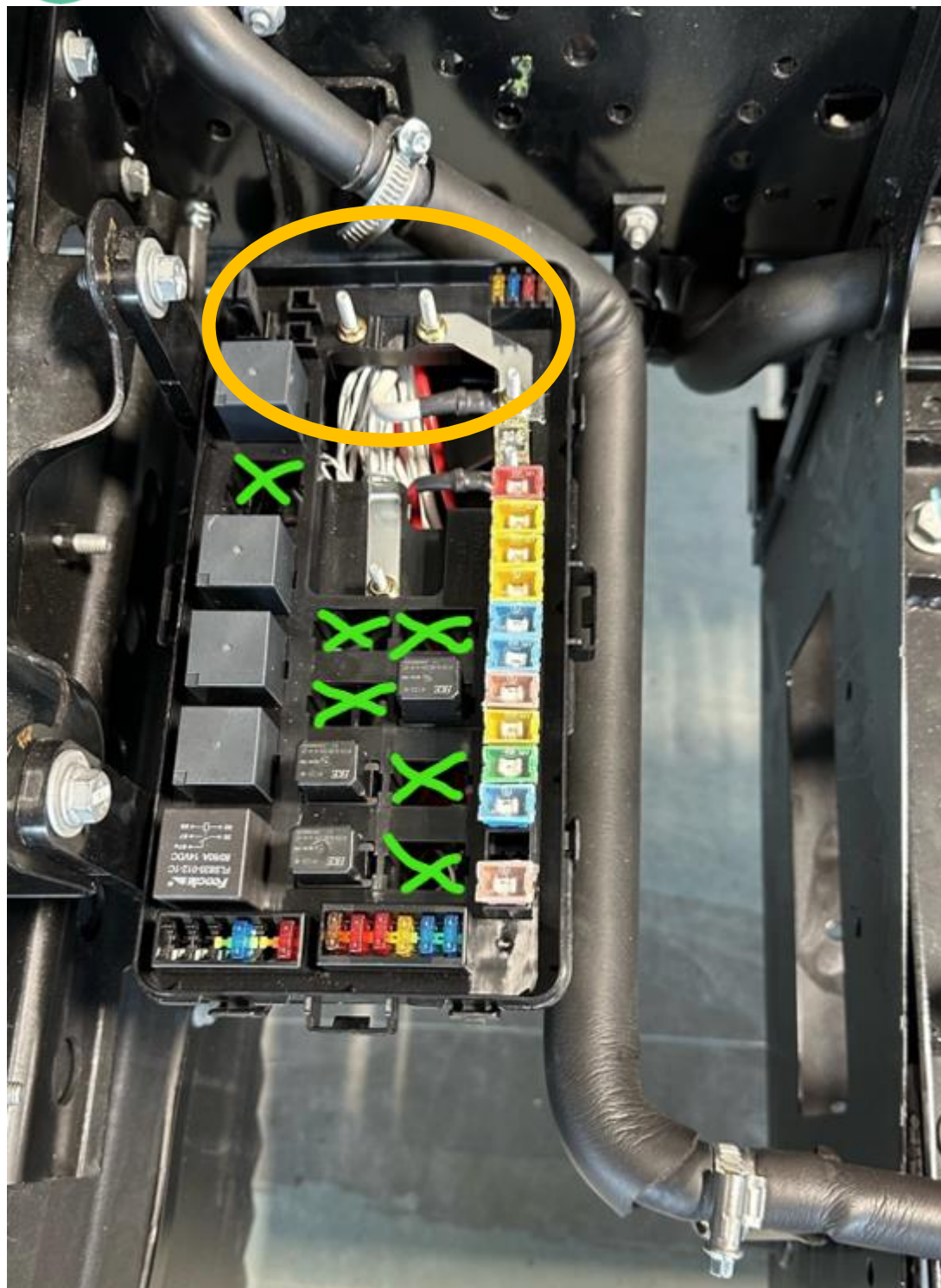


Figure 3 OEM Chassis Fuse Center located aft of Cab.
(D.C. + / - terminal connection posts)