

Michigan Tech's E-Rush

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Brief Overview

- Polaris Rush Chassis
- CALB LiFePO₄ Batteries
- Orion Battery Management System
- Curtis 1238 Motor Controller
- AC-20 Induction Motor

Operation (Rider Perspective)

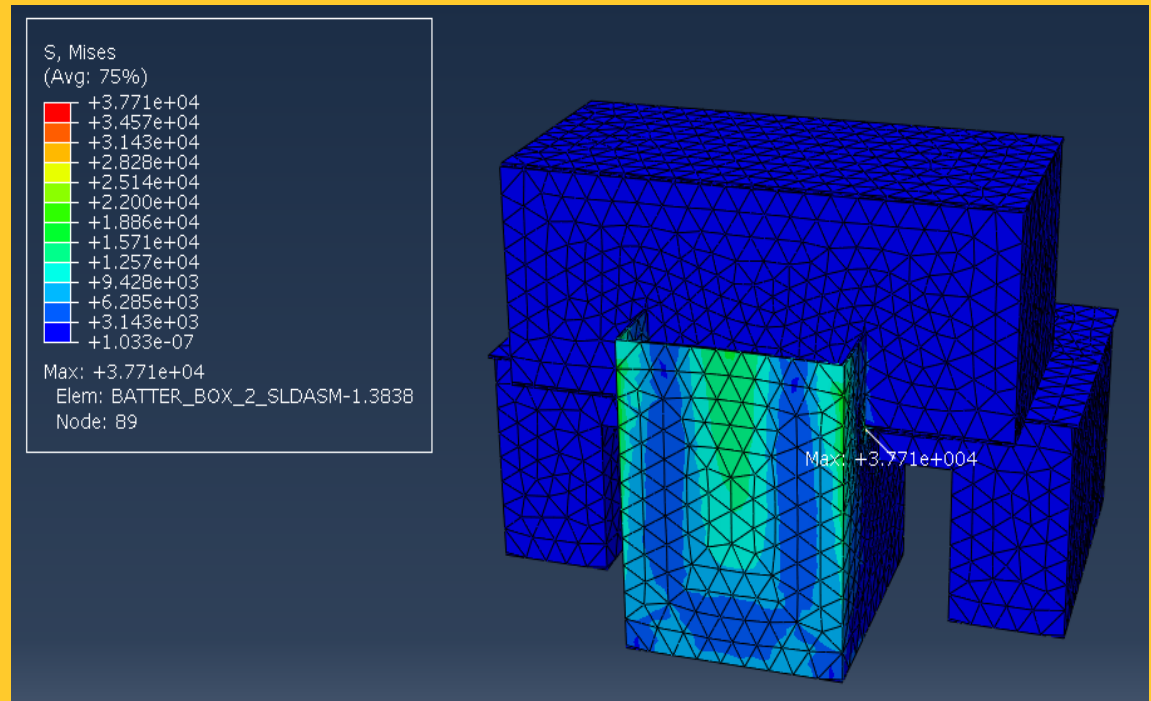
- Faster than foot travel
- No emissions
- Minimal noise pollution
- Towing ability (50 hp motor)
- Rider comfort
- Onboard charging

Operation (Dealer Perspective)

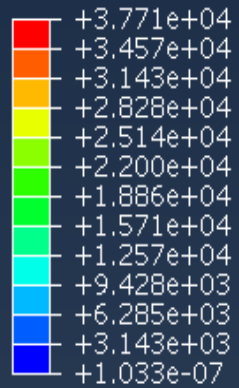
- Rear drive & braking (towing & range)
- On board charger
- Stock appearance/operation
- Cost effective (\$16,041.97 MSRP)
- Easy diagnostics
- Rider forward position (Rush chassis)

Storage Container Design

- Low center of gravity
- Robust design
- All inclusive
- FEA



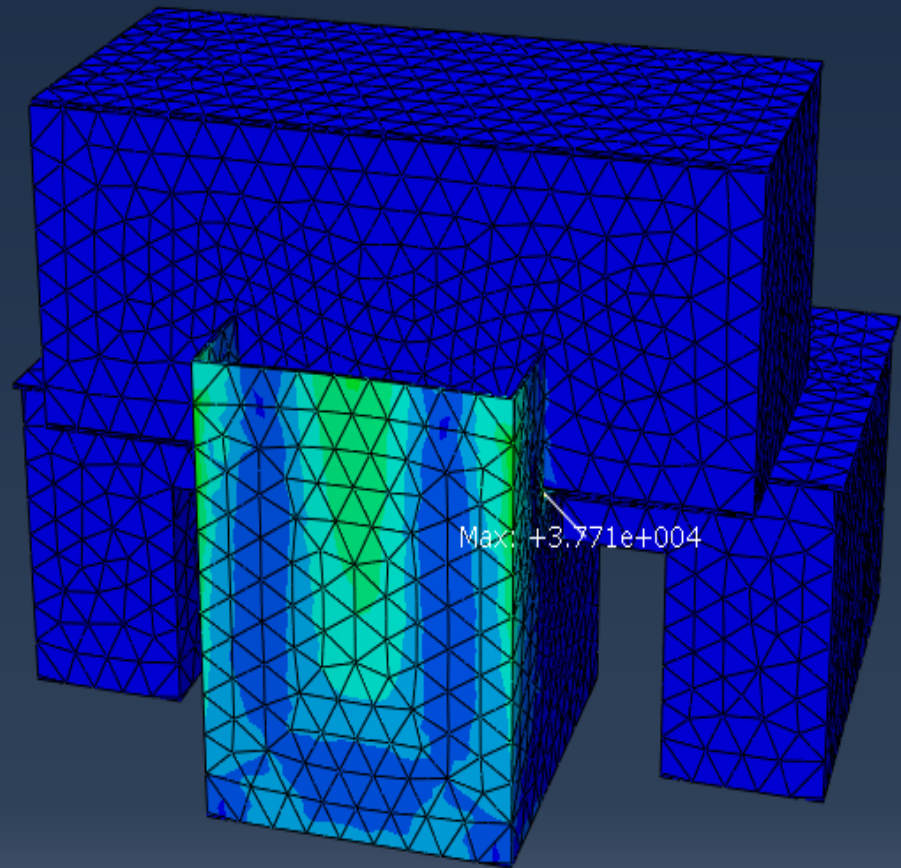
S, Mises
(Avg: 75%)



Max: +3.771e+04

Elem: BATTER_BOX_2_SLDASM-1.3838

Node: 89



Battery Management System

- Orion
- Data logging capabilities
- Customizable parameters
- Fault reading & clearing
- Constant monitoring for safe operation

Onboard Charging

- Plug and go capabilities
- Any 120 AC voltage source
- Easily programmable
- BMS controls
- Charging
- 12V charging



Motor Controller

- Curtis 1238
- Fault protection
- DC to AC conversion
- Customizable
- Well known manufacturer



Operation (Environment)

- Environmentally friendly
 - No emissions
 - Minimal noise pollution
 - Aluminum battery storage container
 - Lithium Iron Phosphate batteries

Safety

- Temperature monitoring
- Voltage & current monitoring
- High Voltage Disconnect (HVD)
- Appropriate fusing
- Multiple tractive system checks
- Robust storage container
- Safe batteries

MichiganTech Create the Future



- Clean
- Quite
- Effective

Questions?