

Revoy — Lead Mechanical Engineer

Location: Troutdale, OR (on-site)

Reports to: CTO

Department: Engineering

Type: Full-time

About the Role

[Revoy](#) is building a battery-electric converter dolly that instantly converts Class 8 tractor-trailer combinations into 96% electric power. We are grounded in fleet operations and running units on the road today. If you want your work to show up on real freight lanes inside of a year, this is that job. We need your help to bring our next generation vehicle to commercial scale on a rapid timeline.

You will own every mechanical component on the Revoy dolly: chassis, suspension, drivetrain, brakes, couplings, thermal systems, battery structures, and everything that bolts or welds in between. You will define the mechanical architecture, specify and integrate every major subsystem (frame, axles, air suspension, gearbox, drive axle, fifth-wheel couplings, cooling loops, enclosures), and drive design decisions from raw stock to road test.

You will report to the CTO and partner closely with electrical, controls, firmware, and vehicle test teams.

What You'll Own

- The complete vehicle mechanical architecture including chassis and frame, air suspension, drivetrain (motor mounting, torque-combining gearbox, driveline, wheel ends), brakes, and fifth-wheel / kingpin couplings to both tractor and trailer
- Structural design and analysis of the battery pack enclosure, HV component mounting, and the load paths that tie the powertrain into the frame during both normal and degraded/emergency scenarios
- Thermal management hardware. For example battery and power electronics coolant loops, radiators, pumps, valves, hoses and fittings, fans.
- Release-grade 3D CAD and 2D drawings with GD&T per ASME Y14.5, tolerance stacks, and DFM/DFA for fab vendors and suppliers
- FEA simulation for the chassis, suspension brackets, motor and gearbox mounts, battery pack, and coupling hardware
- DFMEA, DVP&R, and the mechanical side of vehicle-level test plans including road load data acquisition, durability, vibration, shock, brake, and coupling proof testing
- Compliance ownership for FMVSS
- Noise, vibration, harshness design and testing along with ride, and handling characterization at the dolly level, in close partnership with controls and vehicle test teams
- Aid in supplier selection, technical negotiation, and on-floor manufacturing support for axles, brakes, suspension, gearboxes, weldments, and major castings

Required Qualifications

- BS in Mechanical Engineering (MS a plus), or equivalent demonstrated experience
- 5+ years designing mechanical systems for commercial vehicles, EVs, or heavy industrial machinery with an emphasis on Class 8 or heavy-duty experience
- Deep working knowledge of chassis, air suspension, and drivetrain integration on heavy vehicles. For drivetrain we'd especially like to see experience with optimizing for efficiency, not just functionality.
- Hands-on parametric CAD (SolidWorks, NX, or Creo) and fluency with PDM/PLM workflows
- FEA experience including fatigue, modal, and non-linear contact on real structural problems
- High levels of comfort with GD&T. Your drawings should be something a machinist/fabricator loves to work with
- Working fluency with air brake systems, fifth-wheel and coupling hardware, and the relevant FMCSA / SAE recommended practices for heavy trailers and dollies
- Comfort with a diverse set up of assembly processes: welding, frame drilling, etc.
- A bias to be in the shop and on the truck, not only at a desk
- Clear communication with electrical/software engineers, fabricators, drivers, and external suppliers.
- DFMEA and DVP&R experience on a shipped or near-shipping program

Strongly Preferred

- Class 8 or heavy commercial vehicle experience (OEM, Tier 1, or fleet)
- Hands-on time on a shop floor or in a supplier facility
- EV-specific mechanical experience, for example battery pack structural design, e-motor and gearbox integration, or HV thermal systems at 100 kW+
- Track record taking a vehicle program from prototype through DV / PV and into production

To apply: send a resume and a short note about a system you've shipped to ian@revoy.com.