Zeus Patent Application 63/ 190,474

UNIVERSAL CHASSIS FRAME FOR MEDIUM-DUTY CONFIGURABLE ELECTRIC TRUCKS

SUMMARY

Named Inventor: **Bob Grinstead**

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U.S. Patent Type: **Provisional**

Foreign Patent Type: **Not filed**

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Patent Firm: **Patterson, Thuente, Pedersen**

Lead Attorney: **Bradley Pedersen**

Miscellaneous: **Patent Application includes 24 drawings and photographs**

Patent Description:

- **General Description:** The patent is for a universal chassis frame for configurable electric trucks that can support gross vehicle weights across a range of medium-duty weight classes for commercial trucks, and is configured to interface with any of a set of multiple configurable rear payload modules.
- **Physical Description of Chassis:** The universal chassis frame includes a central frame having a pair of main frame rails configured to support at least two battery modules substantially within an intra-frame space defined between the pair of main frame rails and between at least a pair of cross members transversely interconnected to the pair of main frame rails.

- **Front Subframe Description:** A front subframe is configured to support a cab, the front portion including a pair of upper frame members mounted directly above the corresponding pair of the main frame rails, and a front axle unit mounted under the front subframe.
- **Rear Subframe Description.** A rear subframe includes a common connection interface configured to support any of the set of multiple configurable rear units and at least one rear axle unit mounted under the rear subframe.
- **Axle Power Description and Location.** Each axle unit has a single electric motor powered by a battery management system. In various embodiments, each motor is mounted forward of the corresponding axle unit.
- **Battery Management System:** In various embodiments, the battery management system manages the distribution of electrical power from the at least two battery modules to both the motors for propulsion as well as to any auxiliary power used, for example, by the rear payload module.

NOTE: This summary is not intended to describe each illustrated embodiment or every implementation of the patent application. The summary is intended to provide a very high-level overview of the patent.