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## Electrical Engineer

Omni Powertrain Technologies began supplying power transmission equipment for agricultural machinery in 1958. Today, we are a world class manufacturer supplying mechanical, hydrostatic & electrical powertrain solutions globally for a variety of industries & applications.

Omni Powertrain Solutions has created the most compact, powerful, light-weight axial flux electric powertrains on earth. Innovation is our core value, and whether we are manufacturing mechanical drivelines for agricultural equipment, hydrostatic powertrains for off-highway equipment or state-of-the-art electric powertrain for commercial vehicles and motorsports, we strive to exceed the power and quality demanded by our clients no matter their industry & strive to become a 'One Stop Shop' for all powertrain requirements for our customers.

In this role, you will have the opportunity to approach design in unconventional ways, apply your knowledge while working on significant and complex projects, work alongside professionals known for advanced engineering solutions, observe how a successful engineering firm operates, establish ties that could solidify your professional future, and learn within a friendly, supportive environment.

### Job description

- Support customer inquiries regarding customer (custom) applications, application of standard products and engineering assistance (including occasional travel to customer facilities, assisting in customer application design of motion control, participating in trade show booths and advertisement opportunities such as engineering white papers)
- Perform analysis and calculations to support the required performance and specifications of electric engineering design projects and follow through with appropriate documentation.
- Design, inspect, and validate hardware/electrical interfaces, schematics, CAN bus communication, various sensors and instrumentation using DAQ systems. Incorporate gearbox system components into designs with regards to motors, shafting, bearings, seals, coatings, lubrication, material selection, hardware, etc.
- Incorporating design changes in current product lines as per FMEA Analysis and/or Application changes from the customer.
- Efficient Communication between Manufacturing plants located around the globe (America, Asia & Europe) to ensure smooth and meticulous completion of Customer orders and requirements.
- Design tools and/or machines of varying types (some of complex nature) for use in the testing of company products (along with verifying intended function and providing schematics and operational documentation).
- Attend trade shows and conduct customer visits/service calls. International travel for extended periods of time as needed for training and development.
- Other related duties as assigned.

## Requirements

- Self-initiating and able to work effectively with little direction and/or few guidelines.
- BSEE Degree (2–3 years' experience) or M.S.E.E. degree or a M.S. degree with a concentration of coursework in Machine Design, Product Design or engineering applicable to Powertrain Solutions.
- Experience in electronic systems and architecture such as PMSM motors, high voltage/low voltage inverters/power electronics, Lion batteries with BMS etc.
- Experience with engineering tools and communication protocols such as– CAN, J1939, CANOpen, CANalyzer, CANape, Kvaser, Peak etc is highly desired.
- Experience in MBD and Simulation using Simulink, Stateflow
- Experience in real time controllers such as Parker, Pi-Innovo, MotoHawk etc
- Experience in code generation from Simulink
- Experience in EV technology is a plus.
- Understanding of safety standards such as ISO 26262 etc would be a plus.
- Understanding of electric motor control technology such as FOC, DTC etc. is a plus.
- System level controls such as vehicle energy management, wheel traction control, torque vectoring, BMS would be a plus.
- Working knowledge of computer systems and office software. (MS Word, Excel, Outlook, etc.)