

Mechanical Design Engineer

Department: Engineering | **Reports To:** Engineering Manager | **Employment Type:** Full-Time

Job Summary

McLellan Industries is seeking a Mechanical Design Engineer to design, develop, and support custom truck-mounted equipment, including fuel trucks, water trucks, and related tank and chassis-mounted systems. The Mechanical Design Engineer will work closely with sales, manufacturing, and quality teams to translate customer requirements into manufacturable, code-compliant designs, and will provide engineering support throughout the build and delivery process.

Key Responsibilities

- Design and detail mechanical components and assemblies for fuel trucks, water trucks, and other specialty truck bodies using 3D CAD software (e.g., SolidWorks or equivalent).
- Develop and maintain 3D models, detailed fabrication drawings, and bills of material (BOMs) for new and existing product lines.
- Design tank structures, chassis mounting and subframes, plumbing and hydraulic layouts, and structural supports in accordance with applicable codes and standards (e.g., DOT, ASME).
- Perform engineering calculations, including structural, weight distribution, and stress analysis, to validate designs.
- Collaborate with sales and estimating to review customer specifications and support accurate, buildable quotes.
- Work with production and shop personnel to resolve fabrication and assembly issues, and incorporate manufacturability feedback into designs.
- Create and update engineering documentation, including drawings, specifications, and change orders.
- Support prototyping, testing, and validation of new designs and product improvements.
- Assist in the selection of components, materials, and suppliers in coordination with purchasing.
- Ensure designs comply with relevant industry, safety, and regulatory standards.
- Provide technical support to production, service, and field teams as needed.
- Participate in continuous improvement initiatives to enhance product quality, cost, and manufacturing efficiency.

Required Qualifications

- Bachelor's degree in Mechanical Engineering or a related field, or equivalent combination of education and experience.
- 2+ years of mechanical design experience, preferably in truck bodies, heavy equipment, tanks, or industrial fabrication.
- Proficiency with 3D CAD software (SolidWorks preferred) and associated PDM/PLM tools.
- Working knowledge of sheet metal fabrication, welding processes, and structural design principles.
- Familiarity with GD&T and formal drawing standards (ASME Y14.5).
- Understanding of relevant codes and standards applicable to trucks, tanks, and vessels (DOT, NFPA, ASME, etc.).
- Strong problem-solving skills and attention to detail.
- Effective communication skills, with the ability to work cross-functionally with sales, production, and quality teams.

Preferred Qualifications

- Experience designing fuel, water, or other liquid-handling truck bodies or tanks.
- Familiarity with hydraulic and plumbing system design.
- Experience with finite element analysis (FEA) software.
- Knowledge of DOT requirements for tank trucks.
- Prior experience in a low-volume, custom manufacturing or job-shop environment.

McLellan Industries is an Equal Opportunity Employer.