ENGINEERING POSITIONS

POWERING YOUR POTENTIAL

ENTRY LEVEL ENGINEER

An entry level engineer at Cummins Inc. starts out with a partially defined set of common responsibilities and competencies foundational to any technical career path choice you make later. You'll also have unique responsibilities and competencies that are both discipline and product specific aligned to your role. Once you've become familiar with the Cummins culture and worked to establish your technical capabilities, you can then decide on which career path direction best aligns to your technical interests. Always remember that ***success in your current role creates opportunity*** *for deeper proficiency development and greater responsibility whether in your current area of specialization, or other discipline and product areas.*

CUSTOMER ENGINEERING

You'll support the specific engineering activities needed to satisfy customer requirements and expectations.

» Interpret technical specifications and select appropriate products that deliver to the expectations of our customers.

» Apply knowledge of our products and engineering principles to validate the many product applications across Cummins.

» Interface with customers directly along with Sales, Engineering, Purchasing, Manufacturing and Marketing teams to ensure the customer voice is heard and product solutions are delivered.

SERVICE ENGINEERING

You'll act as the technical liaison between the global Cummins Service channel and the Engineering, Quality and Manufacturing functions to identify, define and prioritize product issues and implement solutions.

» Identify and investigate failure trends in field development and production and aid in defining customer impact.

» Communicate with and convey the voice of our distributors, OEMs, dealers and end-user customers across the engineering community.

» Create off-board service diagnostic processes and procedures enabling effective product troubleshooting in the field.

ENVIRONMENTAL STRATEGY AND COMPLIANCE

You'll work with regulatory agencies to influence future regulations, certify current emissions and communicate internally.

» Apply engineering principles and practices to assigned tasks by interpreting, communicating and ensuring adherence to product safety, environmental and other regulatory standards.

» Determine product and component environmental worthiness and adherence through coordinated testing and evaluation.

MECHANICAL SYSTEMS

You'll model, simulate and test products for stress, strain, fatigue, noise and vibration.

» Apply standard practices and techniques, analyze and correlate data, recognize discrepancies in results and develop solutions that mitigate product risks.

» You'll work on vibration/dynamic analysis, strain measurement, data analysis, fatigue testing, noise/vibration/harshness testing (NVH), finite element analysis (FEA), ANSYS® and lots of hands-on experience.

THERMAL AND FLUID SYSTEMS

You'll analyze our products through simulation and physical testing to develop system level optimized solutions for internal combustion engines, fuel systems, air systems, filtration or aftertreatment systems.

» Apply knowledge of fluid mechanics, heat transfer, thermodynamics or combustion science.

» Perform analytical modeling and/or experimental testing that enables product systems integration aligned to both customer and regulatory requirements.

ELECTRONIC SYSTEMS

You'll develop the electronic hardware, software and support tools for Cummins products.

» Apply knowledge of electronics and electronic controls into practice in many areas such as: specification development, diagnostics development, systems and components design, software implementation and verification.

» Troubleshooting, servicing and maintaining of controls, hardware or software issues on Cummins products.

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ENGINEERING POSITIONS

TECHNICAL INFORMATION SYSTEMS

This engineering service based position will have you creating and managing a wealth of information, knowledge or computing solutions that improve the overall quality and productivity of our global technical operations.

» Perform and document requirements analysis of stakeholder needs and translate into system specifications.
» Work with IT or functional excellence specialists to implement solutions that are effective and helpful across the user base.
» Work with business owners to develop and implement transition plans to commonize and/or expand software capabilities.

PRODUCT FUNCTIONAL TEST

This engineering service operations area ensures our test labs operate in a safe and efficient manner and testing equipment is available and capable.

» Assist in specification, design and maintenance of testing environment and instrumentation to support product development.
» Assist in developing laboratory-controlled test equipment and operating procedures that effectively verify product functional performance.
» Conduct laboratory tests, analyze/ensure data integrity and document results.
» Work collaboratively with other engineering disciplines to meet their test expectations.

PRODUCT SYSTEMS DESIGN

You'll use Creo® and other tools to perform the layouts, modeling and analysis of Cummins products.

» Apply engineering principles in the design, analysis and release of products and sub-systems across the product life cycle.
» Perform cross functional design reviews and initiate the release process.
» Assist in creating and developing the spacial designs and architectures, making product decisions with trade-off considerations such as cost, weight, space claim, performance, safety, durability, manufacturability, reliability and service.

PRODUCT ENGINEERING LEADERSHIP

You'll gain a broad understanding of the many specialized areas of our products we need expertise in, working across the life cycle.

» Learning how the components and sub-systems work together to provide reliable functionality and making product decisions with supporting data and evidence.
» Product problem solving to mitigate issues and work with other engineering specialists to analyze and test to ensure the product meets requirements.
» Perform cross functional design reviews and initiate the release process.
» Three areas of expertise include: product engineering (core product knowledge), product development execution and product line and life-cycle management.

CHEMICAL SYSTEMS

You'll be involved in developing new and current chemical-based technologies, and work with partner suppliers to gain better understanding of some of our newer chemical based product sub-systems including catalysts, batteries and fuel cells.

» Understand the degradation factors that occur over time for our products that provide chemical functionality.
» Work with partner suppliers and manufacturing teams to ensure chemical functionality is verified in a robust manner.

MATERIALS SCIENCE AND ENGINEERING

You'll identify, develop and support common materials engineering which enable and leverage Analysis Led Design.

» Conduct mechanical property and chemical composition tests and analyze failed components.
» Work with global, multi-disciplinary teams to develop material and fluid chemistry based solutions that meet engineering and manufacturing requirements.
» Partner with suppliers in the development and selection of materials and processes for next generation products.

PRODUCT SYSTEMS VALIDATION

You'll develop optimized test verification and validation plans that ensure product capability is aligned to customer requirements.

» Apply engineering principles to ensure robust and optimal test plans enabling product know-how down to the physics based failure modes.
» Ensure robust prototype build plans and assist in manufacturing integration activities that mitigate product risk and drive optimized product decisions.

SYSTEMS ENGINEERING

You'll work across many of the discipline areas throughout the product development phase.

» Learn how the complex systems within our products interact to provide desired functionality.
» Elicit and manage the verification and validation of our products in alignment with tiered system-level requirements.
» Apply system level product problem solving techniques, working across disciplines to mitigate complex issues.

SYSTEMS RELIABILITY ENGINEERING

You'll focus on enabling new and current product teams to meet customer reliability requirements.

» Focus on elimination of previous failures, detection of current failures and prevention of new failures.
» Utilize models, parenting and statistics to determine relative product failure risk on new product development.
» Apply basic knowledge of statistical tools and warranty databases to analyze existing components or system reliability, and report product risk status to technical project leadership teams.

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