# JACKSON LECLERC

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## EMPLOYMENT AND EXPERIENCE

**Mechanical Engineer III** *Feb 2022 – Present*
**Mechanical Engineer II** *Mar 2018 – Jan 2022*
**Johnson Controls Inc. – Fire Suppression Products** *Cranston, RI*

- Lead designer on electronic pressure switch NPI project, achieving unit cost of 50% below target
- Designed printed circuit board assemblies and mitigated supply chain issues during semi-conductor shortage
- Created die-cast and sheet metal enclosures. Drafted drawings and worked with procurement on obtaining prototypes.
- Coordinated witness testing of new products with independent approval agencies
- Supported work on multiple programs, including procurement of prototype parts, virtual and physical fit-checks, verifying print compliance, and drafting test plans
- Developed 3D-Printed tool to mitigate urgent field issue, used to rework up to 100,000 units
- Designed and constructed data acquisition systems to automate data collection for standard test practices
- Mentor high school students in WiT (Women in Technology) program to spread awareness of STEM careers

**Senior Product Engineer** *Jan 2017 – Feb 2018*
**Product Validation Engineer** *Feb 2015 – Dec 2016*
**Cummins Inc. – High Horsepower Development** *Seymour, IN*

Product Development:

- Developed and maintained Technical Profiles and DFMEAs for Power Cylinder components
- Worked with suppliers to review component drawings, request quotes, and resolve quality issues
- Tracked and maintained validation requirements through DVP&Rs for complete subsystem
- Created test plans for engine/rig testing and documented results in technical reports
- Provided test cell support for engine testing and informed stakeholders using RACIs/Gantt Charts
- Held cross-functional design reviews for components through each phase of development
- Collaborated and communicated effectively to complete current product resourcing with international test facilities
- Led failure investigations for scuffed liners, cracked piston rings, quality issues, oil consumption using 7-Step problem solving

Product Resourcing:

- Led two piston resourcing efforts, saving up to $700k/year
- Full DVP&R-guided resourcing including PPAP and performance validation/transparency testing
- Regularly utilized Cost/Benefit Analyses and Risk Assessments to prioritize value-added work

**Product Validation Engineer Intern** *May 2014 – Aug 2014*
**Cummins Inc. – High Horsepower Development** *Columbus, IN*

- Developed test plans and acquired instrumentation for high-speed diesel engine components
- Provided test cell support for a QSK19 Tier 4 thermal management Design of Experiment
- Successfully employed seven-step problem solving method to analyze and resolve component failure

## EDUCATION

Bachelor of Science in Mechanical Engineering *Obtained: Dec 2014*

University of Massachusetts Dartmouth

## RELEVANT ACADEMIC PROJECTS

**Formula SAE, *Mechanical Engineering Department*, University of Massachusetts** *Fall 2011 – Fall 2013*

- Founding Member/Vice President of UMassD Formula SAE Team
- Successfully worked as a team to create prototype Formula SAE cars tested at Formula Midwest in Nebraska
- Designed and developed Engine and Drivetrain components including a chain-drive differential

**Automated Abrasive Disk Boring Machine, *Mechanical Engineering Department*, University of Massachusetts** *Spring 2014*

- Senior Capstone project designed to automate a manual manufacturing process on rotary grinding discs
- Responsible for designing and analyzing several components using Solidworks and ANSYS Workbench
- Achieved first place overall in graduating class

## SKILLS

- Software: Altium Designer 21, NI Labview 14, Cura 4.0, PTC Creo 4, PTC Windchill, ANSYS Workbench, Microsoft Office
- Machine Tools: Work experience operating milling machines, lathes, band saws and GTAW/MIG Welding