

JAMES LOVEJOY

5511 Glenview Ave Downers Grove, IL 60517 • Phone: (630) 740-3285 • james.lovejoy2@gmail.com

Mechanical Engineer / Maintenance Technician / Field Instructor

FAILURE ANALYSIS ~ FACILITY MAINTENANCE ~ OUTDOOR EDUCATION ~ ASPIRING FULLSTACK CODER

SUMMARY OF QUALIFICATIONS

- Bachelor of Science in Mechanical Engineering from University of Illinois. Extensive technical experience gained from working as a mechanical engineer in a manufacturing setting and performing failure analysis on a variety of mechanical systems while working as a forensic engineer. Worked in customer service and as a maintenance technician while attending college. Punctual, responsible, patient, and quick to learn new skills.

PROFESSIONAL TRAINING

- Experience working in a manufacturing environment and implementing continuous improvement principles.
- Handpicked as a problem solving coach for team members based on advanced troubleshooting expertise.
- Outdoor leadership and adventure skills involving education, navigation, and leave no trace principles.
- Sound knowledge of fatigue failure in metals and failure of elastomers in dynamic and static sealing applications.
- Significant experience in a team-driven environment and highly skilled at coaching and training staff on new procedures.

PROFESSIONAL EXPERIENCE

Two Brothers Brewing Company, Warrenville, IL December 2018 to Present

Machine Operator/Technician

- Start-up, sterilization, operation, and clean-up of the brewery's can or bottle line
- Strong mechanical ability with problem solving/troubleshooting skills
- Perform preventative & emergency maintenance on Can and Bottle fillers as well as all other machinery associated with the lines
- Record all necessary quality assurance and production data

Oracle Forensics, Phoenix, AZ, July 2015 to Aug 2018

Forensic Engineer

- Exercised sharp critical thinking abilities to perform forensic and engineering work on major fire loss project involving fault currents associated with a neon sign.
- Performed failure analysis examinations on variety of electronic components from exhaust fans, attic fans, oscillating fans, vacuums, aquarium equipment, Li-po batteries, Lithium ion batteries, vehicular fires, refrigerators, washers, dryers, microwaves, resistive heating conditions, GFCI failures, motor failures, HVAC units, condensing units, air handlers with heat strips, air handlers with gas trains, copper to aluminum splices, Speed Control Deactivation Switch failures, and computer and printed circuit board failures
- Photographed and documented the scene and evidence
- Fully trained in taking and editing of radiography and fluoroscopy imaging technology.
- Maintained warehouse and documentation and storage of evidence for cases.
- Disposed of evidence once case was closed

Invoke Therapy, Bend, OR Aug 2014 to July 2015

Field Instructor

- Ensured the safety of clients by teaching and facilitating safe backpacking/camping skills, low-impact camping ethics, mindful practices, team building activities and group therapy.
- Role modeled healthy expression of emotion and appropriate behavior for clients
- Shared my passion for living a healthy outdoor lifestyle and educated clients on Leave No Trace principles
- Aided in the implementation of therapeutic programs with guidance from Therapists on staff.

Deublin Company, Waukegan, IL, January 2011 to April 2014

Manufacturing Engineer

- Supervised training and implementation of work instructions.
- Applied considerable leadership talents toward training and coaching new staff on lean manufacturing principles.
- Actively resolved issues with parts made in various manufacturing processes by working with suppliers and manufacturing team members.
- Installed and in charge of maintaining optimal performance of various motors, pneumatic presses, hydraulic lifts, and laser markers in area.
- Provided vital manufacturing support by spearheading designs of new assembly cells, special testing requirements and implementation of test fixtures and equipment for new product designs.
- Created and maintained engineering work instructions for assembly, machining, and lapping processes.
- Product Failure Analysis:
 - Inspection and testing of products returned due to premature failure at Customer's Facility.
 - Summarize findings in inspection report and communicate with Customer to determine best course of action from the results found during the inspection and testing.

Manufacturing Support:

- In charge of designing, testing, and implementing test fixtures and equipment required for production of new product designs.
- Continuously improve manufacturing processes via problem solving and standardization.
- Work with Team member to identify and remove wasteful and time consuming steps from the manufacturing processes while keeping quality a top priority.
- Engineering support for any issues that manufacturing employees experience during fabrication, assembly and testing of the 2800 different models in the 11 families of products that my area is responsible for. Tasks include
 - Analysis of products that fail our quality inspections and manufacturing tests
 - Thorough inspection of product and equipment to determine the root cause of failure.
 - Design and evaluate potential countermeasures to prevent re-occurrence of failure mode. Evaluation based on cost, time to implement, and ability to improve quality
 - Implementation of countermeasure if it passes testing and evaluation. Create and maintain engineering work instructions for assembly, machining, and lapping processes in facility
 - Supervise training and implementation of new work instructions
 - Work with vendors to achieve a cost-effective solution with any non-conforming material issues and corrective actions.
 - Installed and in charge of maintaining various testing motors, pneumatic presses, laser markers, and barcode scanners in area.
- Research and Development
 - Performed material comparison testing with the ultimate goal of removing processes and cost from a specific product line.
 - Experience performing compression and tensile tests on a Universal United Tester.
 - Designed, ran and set up testing to evaluate whether certain material changes improved performance of the unions. Tests were run at speeds of up to 1600 RPM and pressures up to 4000 psi. Water, air, or hydraulic oil was used as a media.
- Trained in "Toyota Way" lean manufacturing with emphasis on continuous improvement and the 5S's.
 - Problem solving coach for team members emphasizing root cause analysis method.
 - Knowledge of fatigue failure in metals, failure of elastomers in dynamic and static sealing applications under various pressures & temperatures.
 - Understanding of tribology of sealing components such as carbon, carbon graphite, SiC, TC, and ceramic coatings when run against one another. Also with metals such as carbon steel, aluminum, stainless steel, and cast iron.

Illinois Street Residence Hall, Urbana, IL, August 2009 to December 2011

Front Desk Clerk

- Provided quality customer service to residents, parents, alumni, conference guests, staff, and any other members of the campus community.
- Processed resident arrival and departure (key distribution, database management, and related notifications)
- Monitored building security as it related to resident access cards, keys, and entry/exit points.

- Notified appropriate personnel of any emergencies or urgent situations.
- Assisted staff during emergencies if requested.
- Issued and maintain accountability for keys, movies, tools and various supplies.

Village IV Homeowners Association, Woodridge, IL, July 2006 - June 2009

Maintenance

EDUCATION

National Outdoor Leadership School Graduate – December 2009

Leave No Trace Master Educator - December 2009

Bachelor's of Science Degree, Mechanical Engineering, University of Illinois, Champaign, IL, 2010

Passed F.E. Mechanical - 2016

Passed P.E. Test Mechanical Design & Analysis – December 2017

Northwestern Webdevelopment Coding Bootcamp – October 2019 to present

INTERESTS

Completed Chicago Marathon – October 2007, October 2012

Completed Christie Clinic Illinois Marathon - May 2013

EDUCATION

National Outdoor Leadership School Graduate – December 2009

Leave No Trace Master Educator - December 2009

Bachelor's of Science Degree, Mechanical Engineering, University of Illinois, Champaign, IL, 2010