

## Jeffry Abel, PE | Senior Mechanical Engineer

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### Professional Summary:

Mr. Abel is a Mechanical Engineer that has worked on projects in the commercial, industrial, residential, defense, and other sectors. He has a diverse and complimentary background. His combination of technical knowledge and practical application allows him to bring a unique perspective to solving problems.

Mr. Abel has background that includes product and system design and development, research and development, product and system performance and verification testing, failure analysis, structural design and analysis, product and system evaluation and more.

Some notable losses that Mr. Abel has worked include hydrochloric acid fabrication plant failures, ethanol plant equipment damage, plumbing failures, agriculture equipment failures, heavy equipment failures, garbage truck fire, gas heater failures, fireplace and chimney fires, residential and commercial structural failures, fire damaged equipment, LP and natural gas equipment, and sprinkler system failures.

His experience includes, but is not limited to the following:

- Product Failure – Mechanical
- Electronics cooling system design and failure analysis
- Equipment Damage Evaluation
- HVAC and Geothermal Systems
- Structural Failure
- Industrial Equipment
- Automation Equipment
- Fire Sprinkler Failure
- Roofing Evaluation
- Storm Damage Evaluation
- Hail Damage
- Plumbing Failures
- Heavy Equipment Failure
- Logging Equipment Failure
- Manlift/Forktruck Failures
- Agricultural Equipment Failure
- Wind Turbine Failure

### Licenses and Certifications:

Professional Engineer, MN, #45956

Professional Engineer, WI, #32076-6

Professional Engineer, ND, #PE-8302

Professional Engineer, SD, #11543

Professional Engineer, IA, #21323

Professional Engineer, NE, #E-16709

Professional Engineer, WA, #22014291

Professional Engineer, OR, #100742PE

Professional Engineer, FL, #PE95523

Professional Engineer, TX, #152886

Professional Engineer, IL, #062.076333

### Professional Experience:

EFI Global, Edina, MN, Engineer, 2015 – Present

Normandale Community College, Bloomington, MN, Engineering Faculty 2021 - Present

Century College, White Bear Lake, MN, Engineering and ECAD Faculty, 2012 – Present

North Hennepin Community College, Brooklyn Park, MN, Engineering Faculty, 2013 – Present

Donan Engineering, Minneapolis, MN, Forensic Mechanical Engineer, 2012 -2013

Abel Mechanical Engineering, Lino Lakes, MN, Owner, 2010 - 2012

Guidant Corporation/Boston Scientific, Arden Hills, MN, Mechanical R&D Engineer, 2002 - 2010

Abel Mechanical Engineering, Waukesha, WI, Owner, 1998 – 2002

Eaton Corporation, Milwaukee, WI, Mechanical Engineer, 1993 – 1998

### Specialized Education:

GWO Basic Technical Training – Hydraulic, Mechanical, Electrical, 2022

GWO Basic Safety Training, 2022

Adult First Air/CPR/AED HSI Certified, 2022

### Education:

Master of Science, Mechanical Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1993

Bachelor of Science, Mechanical Engineering, Michigan Technological University, Houghton, MI, 1991

### Affiliations:

National Society of Professional Engineers

American Society of Gas Engineers

### Courses Instructed/ Guest Lecturer:

Interpreting Engineering Drawings – Century College – White Bear Lake, Minnesota

Advanced Solidworks – Century College – White Bear Lake, Minnesota

Introduction to Solidworks – Century College – White Bear Lake, Minnesota

Using SolidWorks, Guest Lecturer, AEM Senior Design Course – University of Minnesota – Minneapolis, Minnesota

Deformable Body Mechanics – Century College – White Bear Lake, Minnesota

Intro to Engineering – Century College – White Bear Lake, Minnesota

Intro to Engineering – North Hennepin Community College – Brooklyn Park, Minnesota  
Intro to Engineering – Normandale Community College – Bloomington, Minnesota  
Statics – Century College -White Bear Lake, Minnesota  
Statics - North Hennepin Community College – Brooklyn Park, Minnesota  
Dynamics - Century College -White Bear Lake, Minnesota  
Manufacturing and Materials – Century College – White Bear Lake, Minnesota  
How to Make Almost Anything/Digital Manufacturing – Century College – White Bear Lake, Minnesota  
Blueprint Reading – Century College – White Bear Lake, Minnesota  
Blueprint Reading for Solar Installers – Century College – White Bear Lake, Minnesota  
Foundations of Math – Rasmussen College – Blaine, Minnesota  
Sections of Fundamentals of Engineering Review Course – Minnesota Society of Professional Engineers, St. Paul, Minnesota  
Sections taught include: Math I, Math II, Math III, Probability and Statistics, Computational Tools, Heat Transfer, Statics, Dynamics, Mechanics of Materials, Material Properties and Testing, Measurement Instrumentation and Controls  
Sections of Mechanical Professional Engineering Review Course - Minnesota Society of Professional Engineers, St. Paul, Minnesota  
Sections taught include: Statics, Dynamics, Mechanics of Materials, Heat Transfer, Mechanical Systems and Materials Depth Q&A

#### Honors and Awards:

Extra Mile Award, Minnesota Society of Professional Engineers, 2009