

Jeremy Amundson

Forensic Engineering Expertise

Mechanical Failure

Determine root cause of mechanical failure, including agricultural and construction equipment failures, industrial equipment failures, vehicle failures, failures of appliances, HVAC equipment, plumbing, fireplaces, auxiliary heating appliances, and fire suppression systems.

Vehicle Collision Reconstruction

This includes: Incident site documentation, vehicle documentation and imaging Event Data Recorder (EDR) systems, determining impact speeds and impact severity, analysis of seatbelt usage, pedestrian impact analysis, sight distance analysis, mechanical failures, and data recovery.

Building Pathology

The building pathologist relies on an in-depth knowledge of building design, construction, use, and changes, as well as assessing the environment of use and the materials and how these interrelate to systematically identify, investigate, and diagnose defects in a building.

Examination and Evaluation of Roofing Systems

Including various types of roofing materials installed on steep slope roofs, including both common and unique roofing applications. Past work involved offering opinions and repairs related to installation deficiencies and storm-related damages, including hail and wind damages.

Qualifications & Training

- Danfoss Hydraulics Training - Basics and Advanced, November 2009
- Introduction to Electric Machines and Drives, Engineering Professional Development Course, University of Wisconsin, March 2022

Education

Bachelor of Science, Mechanical Engineering
South Dakota State University, Brookings, SD
December 2003

Associate of Applied Science Degree, Mechanical Engineering Technology
Southeast Technical Institute, Sioux Falls, SD
May 1998

Licenses & Certifications

PE - Professional Engineer
Licensed by the State of Minnesota - Number 46760
Minnesota Commercial Driver's License – Class A

Employment History

Forensic Engineer
Nederveld, Grand Rapids, MI
2025 - Present

Duties include forensic engineering analysis relating to mechanical system failures (agricultural and construction equipment failures, industrial equipment failures, vehicle failures, failures of appliances, HVAC equipment, plumbing, water intrusion, fireplaces and auxiliary heating appliances, fire suppression systems, and vehicle/equipment fires).

Innovation Engineer
Case IH, Benson, MN
2022 - 2025

Lead engineer on electrification integration project for Case IH 50 Series self-propelled agricultural sprayers. Hydraulic systems replaced by electrified components.

Integration Engineer
Case IH, Benson, MN
2018 - 2022

Lead engineer for agricultural application equipment related to precision farming with a focus on Raven Technologies and proprietary precision farming and telematics software integration, testing, and release to production.

Product Validation Engineer
Case IH, Benson, MN
2014 - 2018

Support execution of product development test plans related to noise, vibration, and harshness, field performance, durability, and product improvement for agricultural application equipment. Compile and publish measured test data into clear reports. Compose and publish new product standard test procedures.

Project Engineer
Case IH, Benson, MN
2012 - 2013

Support the design team with the development of agricultural application equipment. Focused on concept development, performance evaluation, general machine layout, test requests, component design, and design reviews.

Design Engineer / FEA Analyst
Bobcat Attachments, Litchfield, MN
2006 - 2012

Provided engineering design and support for all types of skid-steer loader attachments. Specializing in Finite Element Analysis (FEA) and physical testing. Organized and completed assigned design projects involving strength, performance improvement, reliability, and safety.

Professional Affiliations

Member: National Association of Fire Investigators
Member: National Society of Professional Engineers

Patents

US 9212470 B2 – Quick Release Hose Guide
WO 2010/009395 A1 – Integral 90 Degree Fitting Hydraulic Quick Coupler and Attachments and Work Machines Employing the Same
US 2019/0210406 A1 – Drive Line Arrangement for a Self-Propelled Agricultural Product Applicator

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Last Modified: 6/17/2025

US 11708061 B2 – Systems and Methods for Product System of an Agricultural Applicator

US 2021/0298286 A1 – Electronically Controlled Valve System for Distributing Particulate Material

US 12024153 B2 – System and Method for Controlling Boom Assembly Movement of an Agricultural Sprayer

US 2025/0145000 A1 – Drive Systems and Methods for an Agricultural Applicator

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