

Jessica R. Crosby is an Electrical Engineer specializing in automotive and electrical investigations. She spent a decade in the automotive industry, starting her career as a Resident Engineer in truck assembly. Ms. Crosby performs root cause analysis of electrical wiring and control module defects, electrical certification, new software and hardware validation, defect containment, and warranty analysis. As a founding member of the On Board Diagnostics team for electrified programs at Stellantis, she is knowledgeable of the changing requirements and challenges involved in automotive assembly and design, such as calibrating and releasing for new diagnostic monitors, demonstrating emissions capability for certification, creating test plans for new diagnostic trouble codes, and establishing processes and methodology for software application of new regulatory requirements.

Additionally, Ms. Crosby has gained experiential knowledge in fire investigation within the forensic field as an electrical engineer, specifically in residential, commercial, and Battery Energy Storage Systems (BESS). This experience enhances her expertise in identifying and analyzing an array of electrical defects or alleged defects, including knowledge of Lithium Ion Battery failures, cell disassembly, and component failure. Ms. Crosby earned a bachelor's degree in electrical engineering from the Georgia Institute of Technology.

Licenses & Certifications

- State of Michigan P.E. License No. 6201315191

Positions Held

Engineering Systems Inc., Ann Arbor, Michigan

- Senior Staff Consultant, 2023 – Present

Chelsea Proving Grounds, Stellantis, Chelsea, Michigan

- Senior Hybrid and BEV Engine Calibration Engineer, 2018 – 2023

Chelsea Proving Grounds, Fiat Chrysler Automotive, Chelsea, Michigan

- V6 Pentastar Classic Calibration Engineer, 2016 – 2018

Warren Truck Assembly Plant, Fiat Chrysler Automotive, Detroit, Michigan

- Resident Electrical Engineer, 2014 – 2016

Jessica R. Crosby

Senior Staff Consultant

Email: jrcrosby@engsys.com

Phone: 734-221-8126

ESi – Ann Arbor

1174 Oak Valley Drive
Ann Arbor, MI 48108

Education

B.S., Electrical Engineering.
Georgia Institute of Technology.
2013.

Areas of Specialization

Automotive Electrical Systems

Fire Investigation

Engine Calibration

Quality Manufacturing

On Board Diagnostics

Hybrid & Electric Vehicles

Presentations

Batteries: Demonstration and Discussion

J.R. Crosby, J.G. Jordan, J. Sutula (S-E-A), M. Rowe (Techtronic Industries – TTI), presented/demonstrated with panel discussion at 2025 Annual DRI Product Liability Conference, Miami, FL. February 21, 2025

Continuing Education

- Shainin Green Belt, Shainin Black Belt – FCA Training Facility, 2016

Project Experience

Investigations

Fire Investigation

- Provided electrical expertise for residential, automotive, and commercial fire investigations.
- Investigated Battery Energy Storage Systems, including analysis of modular rack design and categorization of cell health as potential areas of failure including cell teardown and glovebox work.

Electrical Failure Analysis

- Applied knowledge of design process to determine standard of care in ADAS product liability.
- Investigated electrical aspects of consumer and industrial devices related to product liability including but not limited to control boards, appliances, solar, utilities, and automotive.

Design and Operational Experience

Engine Calibration

- Calibrated and released new monitors, validated software, and applied statistical methodology to validate OBD systems. Programs included Dodge Ram, Jeep Grande Cherokee, Chrysler Pacifica, Ram Promaster, Jeep Wrangler, Chrysler 300, Dodge Charger, Dodge Challenger, PHEV Chrysler Pacifica, PHEV Jeep Commander, City BEV, and REV Dodge Ram.
- Demonstrated emission capability of OBD systems for Certification activities
- Founding member of OBD calibration for electrified programs at FCA (now Stellantis)

QA Systems and Manufacturing

- Managed electrical aspects of vehicle quality for the Dodge Ram including Huntsville Electrical Certification Tests, body and chassis wiring, and computer modules. This included testing new electrical wiring and modules for compliance with plant processes and overall vehicle quality, collaborating with component engineers to develop solutions for vehicle function and assembly issues, and analyzing warranty data to identify root causes and implement containment measures.
- Managed in-plant evaporative system testing.

Electrical Remediation Design

- Reviewed residential and commercial electrical plans for water and fire damage remediation to ensure code compliance and best practices.