

ERIK ANDERSON
Mechanical Engineer

Provide technical investigations, crashworthiness and engineering, and accident reconstruction analysis.

Motor Vehicle Design, Development and Testing: from requirements, concept through validation field-testing of complete vehicles, including manufacturing. Failure Mode Effects Analysis (FMEA) for products & process, DVP&R development, as well as writing trouble shooting and service procedures. Testing pre-production and production vehicles in extreme environments at or above rated capabilities. Federal Motor Vehicle Safety Standard (FMVSS) and other regulatory requirement compliance.

Motor Vehicle System Design, Development and Testing: body structure; closures structure; door hinges; door checkers; water sealing components; door handles; slide door rails & rollers; glass; window regulator; NVH components; door latches; exterior trim; power-slide door; crash beams; pinch detection; side impact; out of position airbag deployment; static door retention; electrical; head impact; roof crush; anti-corrosion; wind noise; and closures kinematics.

Motor Vehicle Failures: structural; air bag; seat belt; seat retention; steering; brakes; suspension; fatigue durability; power-slide door operation and pinch detection; water leak; wind noise; corrosion; latch operation; side impact injury; crash beams; window regulator operation and anti-pinch; door slam; head impact; roof crush, and door retention.

Motor Vehicle Repair: diagnosis and/or repair of suspension and steering systems, conventional and anti-lock brake systems, closures, window regulators, water sealing, door latches, power slide door, fuel system, primary and supplemental restraint systems, lighting/ electrical, interior/exterior components and systems, interaction of dealers and manufacturers, and safety recall repairs. Proper use of service repair tools and equipment, repair procedures and shop operations.

Manufacturing Process and Equipment: extrusion; molding; pneumatic and DC powered tools, hand tools, torque verification means and methods, fit and finish control, statistical process control (SPC), stamping, body-in-white (BIW) structure assembly, adhesives; welding (TIG/MIG/RSW), machining, roll forming, mistake and error proofing, poka-yoke, kaizen activities, operator protection means and methods, and operator ergonomics.

Vehicle Accident Reconstruction: inspection of damaged vehicle and components. Site inspection. Review of police report, witness statements, scene photos and other documents. Computational recreation of the accident using facts and scientifically accepted methodology to determine how the accident occurred, including elements within the accident. All to determine cause(s) of the accident, including the resulting severity.

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PROFESSIONAL EXPERIENCE

2018 to present **Robson Forensic, Inc.**
Associate

Provide technical investigations, analysis, reports and testimony toward the resolution of commercial and personal injury litigation involving vehicle collisions, vehicle crashworthiness and engineering issues, mechanical defects and malfunctions, and vehicle repair issues for passenger cars, light trucks, SUVs and medium trucks.

2012 to 2018 **Honda R&D Americas, Inc.**
Senior Engineer I

Engineering design and team leadership for closure systems throughout product development cycle and production.

- Responsible for 2018 Odyssey slide door closure system; led team of engineers to develop door metal structure, sealing, power-slide door, and fitting systems, from early feasibility to mass production launch
- Responsible for 2020 Ridgeline closure innovations and quality improvements; led team of engineers to enhance product for minor model change
- Managed engineering deliverables as Design Chief to issue drawings, specs, and CAD data on-time to achieve product performance/mass/cost targets
- Supported Honda factory during development phase, prototype builds, and mass production phases with on-the-spot support and collaborative problem solving to achieve manufacturability with high quality
- Supported wind-noise performance, including wind-tunnel on-site testing and countermeasure development
- Worked closely in support of all closure development and validation testing and any needed countermeasure development in the physical testing phase to achieve durability, water sealing, safety, strength, and other functional requirements
- Supported advance development research for new innovation in closures technology

2004 to 2012 **Nissan Technical Center, North America**
Senior Project Engineer – Safety Engineering

Engineering design and test of automotive programs for North American models throughout product development cycle and production launch. Highlights include:

- Responsible for side impact performance of Infiniti JX35 / Nissan Pathfinder; led both cross-functional work with design departments as well as physical testing activities to achieve safety targets.
- Responsible for side impact performance of Nissan NV200; led both cross-functional work with design departments as well as physical testing activities to achieve safety targets.
- Oversaw crash testing, data collection, and post-crash analysis for side impact, rollover, and out of position (OOP) modes.
- Supported side impact development for 2013 Sentra rear door crash beam

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Mechanical Engineer

Senior Project Engineer – Body/Door Design Engineering

- Designed 2011 Nissan NV25/3500 Slide Door metal structure, sealing, and fitting systems; responsible through digital design phases, prototype testing lots, pre-launch, and mass production.
- Led and executed multiple Advanced Development projects for future vehicle innovations; responsible for project management to meet deliverables within allocated budget.
- Developed cost reduction design changes on existing vehicles, working side-by-side with plant engineers to guide implementation; achieved over \$1,000,000 in annual savings.
- Improved quality (IQS) of Titan pickup through manufacturing process review and countermeasure adoption throughout supply chain.
- Coordinated efforts with a wide array of engineering, manufacturing, purchasing, and styling colleagues across Mexico, Japan, and the U.S., including travel to Japan for advanced development and U.S. plants for manufacturing support.
- Design responsible for 2007 body side structure, including development of sunroof-unique roof rail structure which achieved safety target for side impact.

EDUCATION

B.S., Mechanical Engineering, University of Michigan, Ann Arbor, Michigan, 2004

Continuing Education:

Heavy Vehicle Forensic Mechanical Inspection for Collision Investigators,
Northwestern University – Center for Public Safety, 2022

Advanced Crash Reconstruction Utilizing Human Factors, Northwestern University
Center for Public Safety, 2020

EDR Summit, Collision Safety Institute, 2020

Vehicle Fire Investigation Training Program, National Association of Fire Investigators,
International (NAFI), 2019

Interactive Driver Response Research Program (I.DRR) Instruction, Crash Safety
Solutions, 2019

Introducing Human Factors in Roadway Design and Operations, NHI, 2019

Traffic Crash Reconstruction 2, Northwestern University Center for Public Safety, 2019

Accident Reconstruction, the Autonomous Vehicle and ADAS, SAE, 2019

International Fire, Arson, and Explosion Investigation Training Program, NAFI, 2019

Fundamentals of Motor Vehicle Fire Investigation, SAE International, 2019

Traffic Crash Reconstruction I, Northwestern University Center for Public Safety, 2018

CAE Simulation (CATIA); Honda R&D, 2013

FMEA & FTA Methods, Nissan Tech. Center, NA, 2008

Kepner-Tregoe Problem Solving and Root Cause, Nissan Tech. Center, NA, 2008

Geometric Dimensioning and Tolerancing, Nissan Tech. Center, NA, 2007

Statistical Tolerance Stack for Design, Nissan Tech. Center, NA, 2007

Sheetmetal Stamping Design, Nissan Tech. Center NA, 2006

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Taguchi Methods, Nissan Tech. Center, NA, 2006
Automotive Manufacturing Foundations, Nissan Tech. Center, NA, 2005

PROFESSIONAL MEMBERSHIPS

Society of Automotive Engineers (SAE) 1991-2005, 2018-present
American Society of Mechanical Engineers (ASME), 2018-present
National Association of Fire Investigators (NAFI), 2019-present

PATENTS

Datum pin assembly, U.S. Patent #10279662 (2019)
Methods and apparatus for overriding power vehicle door, U.S. Patent #10017978 (2016)
Side door extension support assembly, U.S. Patent #9259996 (2013)
Vehicle door reinforcement, U.S. Patent #8511740 (2011)
Vehicle sliding door structure, U.S. Patent #8186743 (2009)
Vehicle sliding door structure, U.S. Patent #8186742 (2009)
Vehicle cargo sidewall structure, U.S. Patent #7651146 (2008)
Vehicle frame structure, U.S. Patent #7510234 (2006)

ADDITIONAL EXPERIENCE

Michigan SAE Mini-baja racing team

- Member of SAE Mini-baja race team, assisting in the design, construction, and race support of vehicle, 2001-2003.
- Served as Interface sub-team leader and Frame sub-team leader, leading the design and manufacture of key components.

German Minor

- University of Michigan, Ann Arbor MI, 2004