

STEVEN K. MALEK  
Automotive Engineer

Provide technical investigations, crash investigations, accident reconstruction, engineering analysis, and towing and recovery operations analysis.

**Vehicle Accident Reconstruction** – Inspection of damaged vehicles 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 to determine cause(s) of the accident, including the resulting severity.

**Motor Vehicle Manufacturing Design, Testing and Manufacturing** – OEM manufacturing requirements, vehicle design requirements, validation testing of complete vehicles and manufacturing processes. Failure Mode Effects Analysis (FMEA) for products and processes, and trouble shooting and service procedures. Testing pre-production and production vehicles in extreme environments at or above rated capabilities. Manufacturing engineering expertise in paint shop, body shop, trim/chassis, final line, and repair areas, including root cause analysis.

**Manufacturing Process and Equipment** – extrusion; 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/LAW); machining; roll forming; mistake and error proofing; poka-yoke; kaizen activities; operator protection means/methods and operator ergonomics.

**Motor Vehicle Failures** – Structural; air bag; seat belt; seat retention; steering; brakes; suspension; power lift gate operation; water leak; wind noise; anti-corrosion system; latch operation; window regulator operation; anti-pinch operation; door slam; power train failures and aftermarket products/upgrades, and warranty data analysis.

**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 lift gate; fuel systems (gasoline and diesel); air bags, seatbelts, head restraints, lighting; electrical; interior/exterior components/systems; exhaust systems, power train systems; aftermarket software programming; engine/transmission/brake upgrades; proper dealer repair procedures; and safety recall repairs. Proper use of service repair tools; equipment; repair procedures and shop operations.

**Heavy Duty Equipment, Truck Operator and Mechanic** – CDL licensed vehicle operation; medium and heavy-duty trucks and trailers. Rollback trucks; trailers; wreckers; rotators; excavators; wheel loaders; dozers; steam rollers; skid steers; tractors; scissor lifts; small cranes; drop deck trailers; beam trailers and landoll trailers. Heavy vehicle maintenance and field repairs; perform recoveries of automobiles, medium and heavy-duty trucks, trailers, load spills, and locomotive/rail car derailments.

**Power Sports Rider, Builder** – Operate & maintain snowmobiles, ATVs, side-by-sides, jet skis, wave runners and power boats. Certified in safe boat operation; certified in safe snowmobile operation. Off road/race car vehicle design, fabrication, and testing; NHRA licensed race car driver.

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## PROFESSIONAL EXPERIENCE

2023 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, engineering issues, mechanical defects, malfunctions, vehicle repair issues for passenger cars, light trucks, SUVs, medium and heavy-duty vehicle, including matters involving towing and recovery operations.

2019 to Present **Maggio Truck Center**  
*Towing/Repairs*

- CDL Class A Heavy/Medium duty tow truck operator/Mechanic/Fabricator
- Maintained Medium and Heavy-duty trucks for the business including maintaining air brake systems and components, troubleshooting electrical systems and powertrain failures.
- Trailer and liftgate repairs.
- Perform truck and trailer DOT safety inspections.
- Heavy duty truck and trailer recoveries.
- Laborer and operator for train derailments and planned train maintenance (wheel changes and traction motor swap outs).
- Initial securing and clearing of the train track rails to be put back into operation.
- Recovery and rescue of train cars, wheels, and cargo
- Reposition cargo from load shifts caused by inadequate load securements both on rail cars and tractor/trailer loads.

2022 to present **Collins Aerospace**  
*Principal Engineer, Mechanical Engineer*

- Engineering design for facility test equipment.
- Mechanical Engineer for the facility on all site test equipment/stands. This includes the new installation and stand prove out for the 220 knot wind tunnel to test Ram Air Turbines.
- New facility upgrades to allow for new test stand upgrades and installations.
- Realtime vibration analysis and oil sampling software programs.
- Lead implementation projects for product engineering.
- Lead the validation of test software and standards with government officials.
- Design and develop fixturing and new equipment to test current and new products more efficiently on our test stands.

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- 2011 to 2022     **Stellantis/FCA/Chrysler (Belvidere Assembly Plant)**     2021-2022
- Production Engineering*
- Oversaw powertrain engineers as well as the 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers for the engines and transmissions. Managed suppliers 8 disciplines of problem solving for quality control achievements.
  - Led continuous improvement and cost savings initiatives.
- Supplier Table Engineer Manager/Electrical Lead*     2018-2020
- Supported the 11 modules on the Jeep Cherokee with Engineering Changes and current build SQA concerns. Managed the Supplier Table Engineers at Belvidere Assembly.
- Engineering Manager for Body and Stamping*     2017-2018
- Metal coating and corrosion processes. Enforced and prepared repair procedures that meet government regulations. Reduced build variation in the sheet metal and stamping as well as work to meet EPA standards for our coating systems. Reviewed results in weld destruct booth on our panels.
- Engineering lead for the relaunch of the 2017 KL*     2016-2017
- Bridged the launch Engineer and Resident Engineer teams together to help with station readiness which included creating and reviewing the Occurrences and Releases for the plant and proactively creating Quality Matrix's for the areas of concern.
- Resident Engineer First Responder*     2014-2016
- Fielded all the radio calls for Engineering. Quickly performed a 4m1d to rapidly resolve the problem in the plant. Subject matter expert for Engine/transmission mounts and cradles.
- B Crew Quality Manager/2<sup>nd</sup> Shift Quality Manager*     2013-2014
- Responsible for supplier quality and internal quality metrics for the plant on nights. Led salary and hourly operators to meet the plant metrics to ship the highest quality vehicles for FCA. Supported FCA during the launch of the Dodge Dart which included the development phase, prototype builds, and mass production phases with on-the-spot support and collaborative problem solving to achieve manufacturability with high quality.
- QVS Supervisor*     2011-2013
- Led QVS supervisor for the 3 crews. Supported and maintained all QVS stations in the plant including inspectors and supervisors. Maintenance, PFS and SOP changes/updates, tracking of defects, CPA findings.

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2008 to **Lin-Mar Towing and Recovery**

2012 *Equipment Operator and Mechanic*

- Maintained Medium and Heavy-duty trucks for the business including maintaining air brake systems and components, troubleshooting electrical systems and powertrain failures.
- Trained new operators on properly using wreckers and flat beds as well as the booms and wheel lifts that are on the trucks.
- Prepared new drivers for obtaining their CDL both class B and class A
- Trailered specialty permitted equipment to job sites, low boy, drop deck, and landoll trailers.
- Regularly dispatched to car, motorcycle, medium and heavy-duty truck crashes.
- Drove and operated light and medium duty flat beds, light, medium and heavy-duty wreckers, and rotators.

2004 to **Hamilton Sundstrand**

2011 *Senior Engineer – Generator, Quality and Structural Dynamics Engineering*

Generator Engineering – failure analysis and repair of aerospace generator assemblies, design of test stands for testing, writing engineering change orders. Reviewed government requirements for repairs to what was done and wrote the repair reports that would be sent and bought off by the customer to ship the repaired units back.

Quality Inspection – analyzed defective parts, building failure summary spread sheets, data trending analysis, measuring parts to print specifications and tolerances. This included ultrasonic testing on magnesium castings and dye penetrant inspection.

Structural Dynamics – acoustic testing and analysis, developmental testing, vibration and oscillatory testing and software analysis.

2006 **Caterpillar**

*Manufacturing Specialist/Wheel Loader Assembly Planning*

- Supported articulating front-end wheel loader assembly line issues including weld inspection and CMM room checks. Helped with the development of production line tooling. Handled daily assembly line operator and component problems.
- Worked with production line assemblers to create tooling and fixtures to assemble wheel loaders more efficiently.
- Supported new and changed product prototype builds. Helped with trouble shoot problems with the wheel loaders after assembly.

## EDUCATION

M.S., Industrial Management, Northern Illinois University, DeKalb, Illinois, 2011

M.S., Interdisciplinary Engineering, Purdue University, Lafayette, Indiana, 2009

B.S., Manufacturing Engineering Technology, Northern Illinois University, DeKalb, Illinois, 2006

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#### **CONTINUING EDUCATION**

Vehicle Crash Reconstruction: Principles and Technology, 2023  
Reactive Black Belt Certification, CTC, Dearborn MI, 2019  
Kepner-Tregoe Green Belt Certification, CTC, Dearborn MI, 2015

#### **INVITED SPEAKER/PRESENTATIONS**

Forensic Crash Course – Product Liability/Defect Investigations - National Highway  
Traffic and Safety Administration - Office of Defects Investigation, September 2023

#### **PROFESSIONAL MEMBERSHIPS**

Society of Automotive Engineers (SAE) 2023-present  
Towing Recovery Association America (TRAA) 2023-present  
Clinton Fence Hoppers Snowmobile Club 2023-present  
Chicagoland Mopar Club 2020-present  
NHRA Drag Racing League 2009-present

#### **ADDITIONAL EXPERIENCE**

NHRA Member/Licensed Driver for 20 years  
Build, test and competitively drive drag racing vehicles at a semiprofessional level  
Illinois Department of Conservation snowmobile safety certified rider (1994-present)  
Wisconsin Department of Natural Resources snowmobile safety certified rider (2021-present)  
U.S. Coast Guard Auxiliary Boating Skills and Seamanship Certification (1995-present)