Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

MICHAEL DICICCO
Automotive and Crash Expert

Provide technical investigations, crash reconstruction, testing, analysis, reports, and testimony toward the resolution of litigation arising from motor vehicle collisions, vehicle design/manufacturing defects, improper repairs, and vehicle fires.

Motor Vehicle System Failure Analysis: conventional and anti-lock braking, restraints, power-train, throttle-by-wire (drive-by-wire), seat, suspension, steering, wheels and tires, fuel delivery, emission controls, electrical, climate control, cooling, frame and unibody.

Motor Vehicle Failures: airbag, seat belt, seat performance, structural, suspension, axle, spindle failure and separation, wheel bearing failure, transmission failure, sudden acceleration, cruise control, steering, wheel separation, brakes, fuel injection, fuel delivery, electronic engine controls, electronic throttle control.

Motor Vehicle Repair: diagnosis and repair of engine, transmission, transfer case, differential and final drive, suspension and steering systems, conventional and anti-lock brake systems, stability/traction control, fuel system, emission systems, climate control, entertainment, restraint systems, lighting/electrical, interior/exterior components and systems, and Safety Recall repairs. Proper repair procedures and shop practices including proper use of tools and equipment.

Crash Reconstruction: inspection of vehicles and crash sites. Review of police reports, witness testimony, medical records, scene photos, weather records, repair bills, black box crash data, and other documents. Computational recreation of the crash using facts and scientifically accepted methodology to determine how the crash occurred. Determine the causes(s) of the crash which may typically include driver actions, roadway issues, weather conditions, and vehicle defects.

Manufacturing Processes: experienced in metal fabrication, machining, welding, die-casting, injection molding, stampings, painting and coatings. Common issues and failure modes for these include premature corrosion, porosity, excessive burrs and flash which lead to fires, injuries, and reduced crash performance.

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Over ten years experience validating and launching product designs in the automotive industry including automotive safety restraint systems (airbags, inflators, steering wheels, seatbelts).

PROFESSIONAL EXPERIENCE

2008 to present **Robson Forensic, Inc.**
Associate
Provide technical investigations, analysis, reports, and testimony towards the resolution of commercial and personal injury litigation involving: Vehicle design/manufacturing defects, improper repairs to vehicles, vehicle fires, and crash reconstruction including large trucks, buses, golf carts, ATV's, motorcycles, bicycles, and pedestrian knockdowns.

2007 to 2008 **Ford Motor Company**, Dearborn, MI
Product Engineer - Restraints
Developed and released design changes for the Ford Escape, Edge, and F-150 curtain and side airbags. This process included feasibility analysis, detailed business cases, and determining project timing. Business cases included piece pricing, testing/tooling cost, lump sum and amortized money.

Achievements: Launched several design changes for the MY09 Ford Escape Curtain Airbag to improve performance and significantly reduce cost/weight. Developed and launched Ford first non-sealed SAB connectors. Incorporated product design changes worth over $5 million USD in lifetime savings.

2006 to 2007 **Takata – Automotive Inflation Systems**, Armada, MI
Senior Product Engineer - Inflators
Developed and qualified new inflator designs. Tuned inflators for OEM airbag module testing, coordinated USCAR DV/PV testing, completed FMEA studies, conducted design reviews, released drawings and BOMs, provided mass flow data for system-level testing (Madymo), and evaluated design changes (margin testing, tolerance stack-ups, feasibility/cost analysis).

Achievements: Developed a new inflator ignition system for improved performance and variability. Qualified new vibration fixtures which eliminated previous "over-testing" during environmental DV/PV qualification. Created an inflator benchmarking standard for competitive analysis.

2003 to 2006 **Autoliv – Automotive Safety Products**, Auburn Hills, MI
Project Engineer – Ford Business Unit
Coordinated all cost saving design changes for Ford airbags, seatbelts and steering wheels. Conducted workshops to generate ideas, reviewed ideas for feasibility/cost, maintained a cost reduction database, quoted timing/savings to Ford, and

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benchmarked competitive restraints systems. Completed a 1-week Value Analysis/Engineering workshop and a 2-week Six Sigma Training seminar.

Achievements: Developed and launched Ford's first non-painted passenger airbag cover on the Ford Escape.

2000 to 2003 **Autoliv – Automotive Inflators**, Aurora, CO
Mechanical Design Engineer
Completed DV/PV testing and provided engineering support for automotive airbag inflators. Designed test fixtures, evaluated design changes, completed FMEA's and control plans, investigated lot testing anomalies, reviewed customer complaints, implemented permanent corrective actions, and created/edited drawings and test procedures. Utilized the Ford 8D process to address customer/internal CAR issues, created SPC charts, and performed Gage R/R's on critical processes.

Achievements: Performed several design of experiments to optimize cooling times for a highly critical CO_2 cooling process. Added many safeguards to error-proof the CO_2 cooling process (IR sensors, master standards, setup tools). Successfully completed full PV testing for a new family of dual-stage driver airbag inflators within an aggressive 60-day timeframe. Championed various teams to close over ten internal Corrective Action issues which recovered over $1 million USD in lost productivity due to down-time, sorting, scrap, etc. Implemented support tooling at a punch process to eliminate the potential to crack parts. Also, designed alignment tooling at a gas-fill process to eliminate burst failures.

1998 to 2000 **IMI Norgren, Inc.**, Littleton, CO
Mechanical Engineer, RMA Supervisor
Supervised the Returned Merchandise Department and provided general manufacturing support for pneumatic airline products. Maintained customer complaint and supplier confidence-level reports for Executive review. Conducted laboratory product testing, performed customer product evaluations, maintained ISO 9001 procedures, completed SPC/FMEA studies, and improved products/processes on a Value Analysis Team.

Achievements: Completed all product testing for Norgren's first in-line membrane dryers. Streamlined the Returned Merchandise process to improve turnaround time and minimize cost. Created a monthly Returned Merchandise (PPM) Chart for the Norgren Quarterly Report.

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1997 to 1998 **Jetstream Systems, Inc.**, Denver, CO
Mechanical Design Engineer
Responsible for the design of air conveying systems for the aluminum can industry. Daily activities included creating and releasing bill of material, identifying/ implementing corrective actions, contacting vendors for product availability, ensuring on-time delivery, and providing manufacturing support for new products. Rigorous AutoCad v12/14 design/detail experience.

Achievements: Designed Jetstream's first 48" wide 90-degree turn air-conveyor for the Coors Brewhouse in Golden, Colorado. Also, designed Jetstream's first self-contained high pressure washer.

EDUCATION

B.S, Mechanical Engineering, California Polytechnic State University, San Luis Obispo, CA, 1997
Designed and fabricated brake and engine systems for a competition go-kart in a 6-month timeframe (Senior Project).

Continuing Education:
Traffic Accident Reconstruction I, Northwestern University, 2008
Certified Motor Vehicle Air Conditioning Technician, 2007

PROFESSIONAL MEMBERSHIPS

Society of Automotive Engineers (SAE), 2003
Pi Tau Sigma (Engineering Honor Society), 1995