



James Bowler

BEng PEng

Senior Engineer

contact

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📍 Vancouver

expertise

Collision Reconstruction

areas of specialization

Seat belt investigation

Collision reconstruction

Low speed collisions

Crash Data Recorders

Contract collision testing

As a Senior Engineer in MEA Forensic's Collision Reconstruction group, James Bowler investigates motor vehicle collisions. Since joining the firm in 1995, James has worked on over 3,500 investigations with a wide range of technical issues.

James holds a Bachelor of Engineering degree from the University of Victoria. His expertise in collision reconstruction is supported by the research he has conducted at the firm. He has published peer-reviewed studies on event data recorders in cars, tire friction and bumper performance in low-speed crashes. To date, he has participated in over 2,500 crash tests which provide him with valuable comparison data when interpreting damage from real-life crashes.

Some of James' specialties include conducting in-depth vehicle inspections in the field, obtaining data from event data recorders in cars, and analyzing this "black box" information to reconstruct both high and low-speed accidents. Most modern vehicles record data in their airbag control systems about vehicle speed, throttle and braking, steering, and whether occupants are wearing their seatbelts. This data can be stored in a vehicle for years. "I've completed black box downloads five years after a crash. It's often just a matter of tracking down the car," observes James. "If you are wondering whether there is data stored in a vehicle and whether this information can be extracted, I'd be happy to answer your questions."

James has maintained a life-long interest in cars. He enjoys rebuilding old vehicles and keeping classics on the road. This interest has proven invaluable when it comes to examining vehicles involved in low-speed collisions and working on damage match files, where the damage tends to be more subtle. "In every case, I hunt through the details to get accurate, unbiased results for the client," says James.

education

Bachelor of Engineering, Mechanical Engineering, Co-Op Program, University of Victoria, 1995

professional status

Registered Professional Engineer

Engineers and Geoscientists BC, since 2000.

professional experience

MEA Forensic Engineers & Scientists

Senior Engineer, 1995 to present

Conducts technical investigations, primarily those involving motor vehicle accident technical investigation and reconstruction. Involved in over 5000 technical investigations to date, including severity assessment, collision sequence, occupant kinematics, seat belt use and effectiveness, vehicle speed analysis, mechanical failure, wheel separation, damage match, and fraud investigation. Participated in over 223 series of crash tests which involved over 2500 individual crash tests. Also conducts research in areas such as bumper performance in low-speed motor vehicle accidents and tire performance during locked wheel braking.

Cominco Engineering Services Ltd., Vancouver, BC

Pilot Plant Research Technician (Co-op), September to December 1994

Served as a Pilot Plant Research Technician with Cominco Engineering Services Ltd.

Mobil Oil Canada, Olds, AB

Facilities Engineer (Co-op), January to April 1994

Responsible for responding to plant equipment problems and for performing technical designs for Mobil Oil Canada at the Harmattan Gas Plant.

Soltek Solar Energy Ltd., Victoria, BC

Facilities Engineering (Co-op), May to August 1993

Involved in the production and installation of solar energy equipment with Soltek Solar Energy Ltd.

Energy, Mines and Resources Canada, Devon, AB

Research Technician (Co-op), September to December 1992

Laboratory and field studies on methods for separating water and sand from heavy oil.

Public Works Canada, Edmonton, AB

Design Engineering (Co-op), January to April 1992

Involved in the design and drafting of ventilation and sprinkler systems for government buildings.

research activities

Co-authored a SAE paper in 1997 which described the testing of two prototype MEA Forensic Engineers & Scientists moving barriers in 700 staged collisions. The purpose was to assess the usefulness of moving barriers in assessing the severity of low

speed impacts.

Conducted tests to find the rolling resistance of 10 different vehicles in varying gears when the engine is shut off. This data was used in a SAE paper published in 1998.

Involved in a long term study to determine which factors influence tire-to-road friction. Worked on the design of the test equipment and conducting the tests. A SAE paper published in 2000 used data collected from 540 automated locked wheel skid tests from 60 km/h on wet and dry roads. Follow up work was done in the summer of 2001 which studied locked wheel skids at 20, 40, 60 and 80 km/h.

Conducted low speed collision tests to investigate the applicability of barrier tests for assessing vehicle-to-vehicle collisions involving pickup trucks. This data was published in a 2001 SAE paper.

publications

The Accuracy and Sensitivity of 2005 to 2008 Toyota Corolla Event Data Recorders in Low-Speed Collisions

Low-speed impact testing of pickup truck bumpers

lectures & presentations

March 2000 – Presentation of technical paper “Tire Friction During Locked Wheel Braking”, SAE International Congress, Detroit, MI.

training and professional development

February 25, 2021 – PC-Crash Webinar Series 1 – Tips & Tricks, Online.

August 2019 – SOAR Technical Reconstruction of Heavy Truck Crashes, Denver, CO.

April 2014 – Society of Automotive Engineers World Congress, Detroit, MI.

April 7-8, 2014 – Introduction to Brake Control Systems: ABS, TCS, and ESC, Detroit, MI.

April 2013 – Society of Automotive Engineers World Congress, Detroit, MI.

January 2011 – Crash Data Retrieval Users Conference, Houston, TX.

June 2010 – The Tire as a Vehicle Component and Tire and Wheel Safety, Dr. Joseph D. Walter, Richmond, BC.

January 2010 – Crash Data Retrieval Users Conference, Houston, TX.

October 2009 – Advanced Skills for the Crash Data Retrieval Data Technician, Seattle, WA.

January 2009 – Crash Data Retrieval User’s Conference, Houston, TX.

May 2008 – Motorcycle Skills Course, BC Safety Council, Richmond, BC.

January 2008 – Crash Data Retrieval Users Conference, Houston, TX.

January 2007 – Crash Data Retrieval Users Conference, Houston, TX.

October 2005 – Crash Data Retrieval (CDR) System Operator, Collision Safety Institute, Seattle, WA.

June 2003 – Airbrake Course, Valley Driving School, Surrey, BC.