

Large Loss Experts

SAMAC Engineering is a dedicated failure analysis firm supporting insurance, legal, and commercial clients across Western Canada. We offer clients a proven record in large loss investigations of all types and an excellent industry reputation.



Property

SAMAC is an industry leader with multiple experts across a broad range of disciplines, including:

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|--------------------------------|--------------------------------------|
| Mechanical | Construction Defects |
| Materials | OH&S Investigations |
| Electrical | Product Liability |
| Fire Origin & Cause | Structures & Architecture |
| Metallurgical | Geotechnical |
| Aviation | |

At SAMAC, we pride ourselves on:

- Determining the 'fingerprint' of a failure using our in-house materials laboratory and inspection bay, along with routine use of SEM, FTIR, and other advanced analysis tools.
- Reviewing all potential technical issues – design, manufacturing, installation, operation & maintenance.
- Assessing what caused or contributed to the failure using data and logic.
- Providing readers a clearly written technical report in simple language.

Transportation, Injury Biomechanics & Infotainment

Our team has the leading edge knowledge and litigation experience to analyze any type of vehicle incident.

Transportation

In house expertise includes on-road and off-road vehicles, trucking fleets, computer simulation and animations, analysis of Event Data Recorders (both passenger vehicle and heavy truck), testing, and product liability issues.

Injury Biomechanics

Biomechanical & personal injury investigations include seat belt effectiveness, low speeds, slip/trips/falls, OH&S worker safety and ladders. Analyses can also include testing as well as design, building code and lighting issues.

Infotainment

We can extract and analyze data from in-car communication and navigation systems, including:

- Voice and text data
- GPS locations
- Destinations
- Speed logs
- Doors opening, parking lights, etc.

Property Personnel

Gilles Amirault PEng, Director – Property.

MECHANICAL

HVAC, boilers, engines, design; industrial to residential. Mobile and industrial/oil & gas equipment; maintenance & reliability. Commercial and residential failures; testing.

Vladimir Panlilio MSc, MEng, PEng, Lead

Gilles Amirault PEng

Jonathan McCarthy MEng, PEng

Masoud Mashkournia MSc, PEng

ELECTRICAL

Electrical & electronic design, installation & failure analysis. Failure analysis of commercial, industrial, and residential installations, incl. transmission, distribution, appliance, equipment failures, and fire investigations.

Dave Hines PEng, CFEI, Lead

Ian Read PEng, CFEI

AVIATION

Failure analysis of airframes, engines, propellers, systems, etc. Aircraft maintenance – piston & gas turbines, airframes & systems.

David Coates PhD, PE (California)

Dave Bakker AME, C-Tech

MATERIALS & LABORATORY

Buildings, pipelines, plumbing/HVAC, plants. Industrial plants, buildings, pipelines and plumbing, aircraft, vehicles, tools, medical implants, etc.

David Coates PhD, PE (California), Lead

Gilles Amirault PEng

Oksana Shevchenko CET, Lab Manager

FIRE ORIGIN & CAUSE

Fire origin & cause, particularly large loss (Chris) and electrical issues (Dave).

Chris deRosenroll CCFI, CFEI, CFII

Dave Hines PEng, CFEI

OIL & GAS

Kursad Ulusoy MSc, PEng

Process design & operation – upgraders, refineries, SAGD.

Chris Pierce PEng

Design, construction & operation of facilities and pipelines.

Dave Bakker C-Tech, AME

Rotating equipment, plant operations, turbines, compressors.

John Gray PEng

Drilling, workover, production & development operations.

SAFETY

Industrial hazard investigations; OH&S compliance; human factors; industrial hygiene; hazardous materials management.

Ryan Campbell BSc, CSR

Ted Semeniuk

STRUCTURES & ARCHITECTURE

Failure related design & construction, fires, failure analysis.

Ron Harder PEng

John Hallett MRAIC, AAA

GEOTECHNICAL

Geotechnical analysis, permafrost, and mine wastes.

Kevin Biggar PhD, PEng

Transportation, Injury & Infotainment Personnel

Steve MacInnis PEng, Director - Transportation, Injury, and Infotainment.

TRANSPORTATION

Collision reconstruction, event data recorders, simulations; potential to avoid, animations, re-enactments, seatbelt use, injury mitigation.

Heavy duty mechanic - failures, defects, OH&S.

Tyler Dyck PEng, Lead

Tyler Haladuick MASC, PEng

Robert Townsley BASc

Ted Semeniuk

INJURY BIOMECHANICS

Biomechanics & injury analysis - vehicle; slips, trips and falls; mTBI.

Tyler Haladuick MASC, PEng

INFOTAINMENT & TELEMATICS

Data collected by in-car systems including call and SMS logs, media files, connected devices, destinations, travel routes, velocity logs, odometer readings and more.

Ian Read PEng, CFEI