

PROFILE

A Technical Consultant with over 12 years industry experience, Paul Rankin is an Australian Aerospace & Mechanical Engineer whose previous experience includes Design Release Engineer, Quality and Product Investigator experience within multi-national automotive corporations. Paul has an extensive background in forensic investigations of equipment, with a specialty focus in vehicle fire investigations and crash data retrieval. Paul also has extensive project management and expert witness experience, having given expert testimony for law enforcement in the County Court of Victoria, the NSW District Court, and the Queensland Coroner's Court. He has also acted as a technical expert in the Melbourne Magistrates Court.

Key strengths include the following:

- ▶ Mechanical Engineering
- ▶ Failure Analysis
- ▶ Fire Investigation
- ▶ Vehicle Fire Investigation
- ▶ Crash Data Retrieval
- ▶ Project Management
- ▶ Warranty Engineering
- ▶ Training Instruction
- ▶ Japanese Language
- ▶ Vehicle Accident Reconstruction

- ▶ *Industries:* Automotive, Fire Forensics, Manufacturing

EDUCATION

Bachelor of Mechanical Engineering / Aerospace Technology (First Class Honours) 2007
Monash University, Melbourne, VIC

CERTIFICATIONS

PUAFIR501B & PUALAW001B – Qualified Vehicle Fire Origin & Cause Investigation 2011
Salamander Fire Australia

PROFESSIONAL BACKGROUND

June 2020 – Present: Envista Forensics, Melbourne, VIC
Technical Consultant

Primary responsibilities include carrying out forensic investigations of equipment-related incidents such as, equipment breakdown causation analysis, workplace accident investigations, and other equipment failures. Damage assessment and reinstatement options analysis for a wide range of contaminated/damaged machinery and equipment.

OFFICE

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WEBSITE

www.envistaforensics.com

September 2018 – June 2020, November 2010 – June 2017: GM Holden Ltd

Lead Technical Specialist Engineer – Product Investigations & Engineering Analysis (2018-2020)

Lead Technical Investigator – Product Investigations & Engineering Analysis (2010-2017)

- Conducted root cause investigation, risk assessment, development of production containment strategies, develop production solutions for all Holden products, both locally produced and imported.
- Mentored all GM Holden and GM Thailand Product Investigation technical staff in all aspects of technical investigation and root cause analysis.
- Manage Holden Product Investigations through the GM Global SFI Process, coordinating with global business units.
- Managed execution of the Takata Recall for GM Holden's impacted vehicle population. Responsible for planning completion rate targets, development of work instructions, customer communications, determination and documentation of required evidence to demonstrate completion or application for exemption, set out in the Recall Notice. Designed and developed automated reporting techniques required to communicate recall progress to GM Holden and GM global senior leadership teams.
- Loss investigator / project manager of technical insurance loss. Fixed and mobile plant machinery.
- GM Holden single-point liaison to all state and territory law enforcement agencies for technical product inquiry.
- Manage the GM global project for implementation of Active and Passive safety EDR systems into the Bosch Crash Data Retrieval (CDR) tool for all GM regions outside North America

July 2017 to August 2018 General Motors North America

Safety Forensics Engineer

- Conducted root cause investigation, risk assessment, emerging trend analysis for GM product field performance issues, specializing in vehicle fire, chassis, powertrain, electrical and HVAC systems.
- Developed and maintained GM Emerging Issues group capability with Crash Data Retrieval and conduct analysis of GM company vehicles involved in accidents, assessing restraint system performance.
- Provided training to GM North America Emerging Issues (SFE) team in field investigation, evidence and data gathering.
- Supported GM Engineering Analysis in fire investigation and restraint system performance
- Authored standardized work instructions and provided training to GM business units globally and external organizations (St. Claire and Livingstone Country Sheriff Departments & Michigan State Police
- Acted as liaison between GM North America EI and GM International Product Investigations.
- Completion of External Object Calculation Module (EOCM) Electronic Data Recorder coverage for GM products with Crash Data Retrieval (CDR) tool.
- Authored Automated Occupant Sensing (AOS) Electronic Data Recorder Specification document and coverage for GM products with Crash Data Retrieval (CDR) tool.

February 2010 to November 2010 GM Holden Ltd

Warranty Engineering

Holden warranty engineer and single point contact for export programs to Korea, Middle East, China and United States.

January 2008 to February 2010 Toyota Technical Center Australia

Design Release Engineer

2012 Aurion Exterior Body Design:

- Concept benchmarking and simultaneous engineering (2D technical drawing and 3D modelling using CATIA v5 R18) of aluminium rear bumper reinforcement.
- Application of relevant design regulations (ECE R42 Rear Protective Devices), confirmed by FEA prior to physical test.
- Cross-cultural interaction with Japanese suppliers (Aisin) and manufacturing (Toyota Motomachi) in Japanese and English based in TMC Japan for 12 months.

2010-2011 Australian Camry & Aurion Cost Management:

- Lead exterior engineer achieved \$50 per vehicle cost reduction.

PUBLICATIONS/SEMINARS

- ▶ GM Safety & Field Investigator Global Work Procedures & Business Practices
- ▶ GM Fire Investigations and SRS Deployment Performance / Crash Analysis Training documents used by investigators within GM International
- ▶ Bosch 2018 & 2019 Crash Data Retrieval (CDR) participant on behalf of GM, co-authored GM's business strategy on Autonomous vehicles as related to EDR technology

PROFESSIONAL MEMBERSHIPS/ REGISTRATION/ AWARDS

- ▶ Member, Institute of Engineers, Australia
- ▶ Oakland County Association of Arson & Fire Investigators
- ▶ AWARD– '**Best Employee**'. GM International Vehicle Safety