

CURRICULUM VITAE

COLIN A. SOMMER, P.E.

CURRENT POSITION

Vice President and Aircraft Mishap and Failure Investigator with Aeroscope, Inc. Aeroscope, Inc. performs engineering services related to aviation accident analysis, forensic engineering, computer modeling, failure analysis and testing of airframes, engines, and aircraft systems. Aeroscope has investigated in excess of 1000 aircraft accidents and incidents including the well known crashes of TWA 800, United 232, United 585, Continental 1713, USAir 427, Alaska Airlines 261, Silk MI 185, Flash Air 604, SAS SK686, Air Algerie Flight 6289, Helios 522 and the crashes that killed the former governor of Missouri and golfer Payne Stewart. Aeroscope was also hired by the State of Florida to aid the criminal prosecution resulting from the crash of Value Jet 592.

EDUCATION

- Bachelor of Science Engineering -Civil and Environmental Engineer
 - Emphasis in Structural Design
 - University of Michigan, Ann Arbor
 - Dean's Honor List two semesters

- NTSB Academy, Washington DC, Aircraft Accident Investigator Training Program. Training included: Accident Investigation, Failure Analysis of Airframes and Engines, Mid-air Collisions, In-flight Breakups, Fault Tree Analysis, Piston and Turbine Engine Failures, Pre and Post impact Fire Analysis, Metallurgy, Pathology, Biomedics, Crash Survivability, Aircraft Performance, Impact Kinematics, Propeller Analysis, Aviation Weather, Aircraft Maintenance, and many others.

- Southern California Safety Institute, Aircraft Accident Investigation Training Program. Training included: Investigation Methodology, Causation Theory, Wreckage Pattern Analysis, Aviation Operations, Weather, Aircraft Performance, Aircraft Maintenance, Human Factors, Crash Survivability, Structural Analysis, Fire Damage, Reciprocating and Turbine Engine Failure, Propeller Analysis, Metallurgy and Material Science, Aircraft Structure and System Design, Impact Dynamics and Kinematics, Aerodynamic Loading, Aeromedics, and many others.

- Teledyne Continental Motors Aviation Technician Advanced Training Program. Training included: 40 hours of advanced factory training, with focus on General Engine Theory of Operation, Crankcase Threading, Crankshaft Component R & R, Cylinder R & R, 100-Hour/Annual Inspection Fuel Injection System Fuel Pump Adjustment, Cylinder Borescope Inspections, TCM Ignition Systems and Service Bulletin Exercises.

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- FAA Ratings
 - Private Pilot Certificate – Single Engine Land
 - Multi Engine Land
 - Instrument Airplane
- Routine training in numerous aspects of aircraft accident reconstruction and failure analysis
- Fundamentals of Engineering (FE) / Engineer in Training (EIT) Completed.
- Principles & Practice of Engineering Exam (PE) Completed
- Licensed Professional Engineer – State of Michigan No. 6201055608
- Licensed Professional Engineer – State of Colorado No. PE-43554

ENGINEERING EXPERIENCE

- I have personally investigated over 350 different aircraft accidents including:
 - Alaska Airlines Flight 261 McDonnell Douglas MD 83
 - Silk Air MI 185 Boeing 737-300
 - Oklahoma State Basketball Team King Air 200
 - Governor Mel Carnahan Cessna 335
 - Payne Stewart Learjet 35
 - Flash Air 603 Boeing 737-300
 - Air Algerie Flight 6289
 - Comair Flight 191
 - Helios Flight 522
 - Many other single and multi-engine aircraft both piston and turbine as well as helicopter
- I have personally investigated accidents involving the following equipment types:

-Aero Commander	-Beech General Aviation
-Aerospatiale/Eurocopter	-Beech King Air 90, 200
-Airbus 310, 320	-Beech 1900
-Air Tractor	-Bellanca
-Allison/Rolls Royce Engines	-Bell Helicopters
-American Champion	-Boeing 737, 767, 777, Vertol
-Astra	-Bombardier Challenger, CRJ
-Augusta Helicopters 109, 119	-Caterpillar Fork Lift

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- Cessna General Aviation
- Cessna Citation
- Commander Aircraft
- Cirrus Aircraft
- De Havilland
- Diamond Aircraft
- Ercoupe
- Express
- Fairchild/Swearingen
- Garrett Engines
- Grumman American
- Gulfstream
- Hawker
- Hughes Helicopters
- Kaman Helicopters
- Lancair
- Lake Aircraft
- Learjet
- MBB Helicopters
- McDonnell Douglas MD-80, DC-10
- McDonnell Douglas Helicopters
- Mitchell Wing
- Mitsubishi MU-2B
- Mooney
- Piper General Aviation
- Pilatus PC-12
- Pratt & Whitney Engines
- Precision Airmotive
- Rans
- Raytheon -Revolution Mini 500
- Rockwell OV-10
- Robinson Helicopter
- Rotax Engines
- Schweizer Helicopter
- Sikorsky S-58, S-61, S-76
- Taylorcraft
- Teledyne Continental Motors
- Textron Lycoming Engines
- Turbo Mecca Engines
- Ultralight
- Vans
- Westwind
- Zivco

PROFESSIONAL MEMBERSHIPS

- International Society of Air Safety Investigators (ISASI)
- Vice President Colorado/Wyoming ISASI Chapter
- Aircraft Owners & Pilots Association (AOPA)
- National Council of Examiners for Engineering & Surveying (NCEES)

AREAS OF SPECIALIZATION

- Fixed Wing Accident Reconstruction Analysis and Testing
- Helicopter Accident Reconstruction Analysis and Testing
- Flight Path Analysis
- Mechanical, Pneumatic and Hydraulic Systems
- Aircraft Performance
- Aircraft Auto Pilot Systems
- Aircraft Navigation Systems
- Aircraft Design and Operation
- Aircraft Control Systems
- Aircraft Fuel Systems
- Aircraft Crashworthiness
- Helicopter and Fixed Wing Structural Design and Failure Analysis

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- FAA Regulations
- FAA Airworthiness Directives
- Vehicular Kinematic Impact Analysis and Mathematical Modeling of Crashes
- Pressurization Systems
- Aircraft Vacuum Systems
- Carburetor Design and Operation
- Rotorcraft Aerodynamics
- In-Flight Break Up
- Video Animation
- Aircraft Systems Analysis
- Fluid Mechanics
- Internal combustion engine failures
- Fuel Injection Systems
- Turbine engine failures
- Mid Air Collisions
- Post Impact Fire Investigation
- Aircraft Crash Survival Design
- Aircraft Avionics
- Aircraft Engine Vibration
- Wire Strike Protection
- Aircraft Stall Protection

PUBLICATIONS

→ Robb, Gary C. (2010). *Helicopter Crash Litigation*. Tucson, AZ: Lawyers & Judges Publishing Company Inc. – Technical Advisor and Contributor