



HAYDEN FETTER, BSME, MSc, CFEI, CVFI **STAFF CONSULTANT**

hjfetter@engsys.com

Hayden Fetter is a Forensic Mechanical Engineer and Fire Investigator for Engineering Systems Inc. (ESi), where he assists the automotive and fire & explosion groups. Mr. Fetter has over 4 years of technical experience and training in forensic investigations. He has performed origin and cause analysis for residential, vehicle, marine, and product fire investigations. He has performed data collection and analysis for automotive crash reconstruction. He has performed failure analysis of automotive equipment, industrial and residential machinery, and plumbing.

Mr. Fetter received a B.S. in Mechanical Engineering from University of Colorado Boulder and a MSc in Forensic Investigation from Cranfield University in the UK. At Cranfield University, he received technical training in a variety of forensic disciplines and activities including fire investigation, firearms and ballistics, materials engineering, analytical techniques, and expert witness testimony. Mr. Fetter is the only mechanical engineering consultant in the United States to have completed a Master of Science in Forensic Investigation.

Areas of Specialization

Fire and Explosion Investigation
Automobile & Heavy Truck Accident Investigation
Event Data Recorders
Vehicle Fires
Residential Fires & Explosions
Piping, Boilers, and Pressure Vessels

Education

Cranfield University, England, 2022
MSc Forensic Investigation

University of Colorado, Boulder, 2021
B.S. Mechanical Engineering
Engineering Management Certificate, Philosophy Minor

Professional Affiliations

National Association of Fire Investigators International (NAFI) Member
International Association of Arson Investigators (IAAI) Member - Colorado Chapter
National Association of Professional Accident Reconstruction Specialists (NAPARS) Member
American Society for Engineering Management (ASEM) Member
Society of Fire Protection Engineers (SFPE) Member



Positions Held

Engineering Systems Inc., Centennial, Colorado

Staff Consultant

October 2022- Present

Jensen Hughes, Englewood, Colorado

Associate Forensic Mechanical Engineer

Mechanical Engineering Intern/Technician-Forensics

May 2021- July 2022

May 2019- May 2021

Certifications

Certified Fire and Explosion Investigator (CFEI) – NAFI, License No. 27501-15678v

Certified Vehicle Fire Investigator (CVFI) – NAFI, License No. 27501-15678v

Fire Investigation Technician (FIT) – IAAI

Fire Investigation for Fire Officers, Concentration in: Motor Vehicle Fires – IAAI

Principles of Fire Investigation Multi-Program – IAAI

Bosch Crash Data Retrieval (CDR) Technician – Collision Safety Institute

FARO Laser Scanner Operator – FARO Technologies

Aerial Lift/Scissor Lift Certification – Cert. #: AWP-1201-MB

Continued Education

Certified Vehicle Fire Investigator (CVFI) Training Program (Four-day), National Association of Fire Investigators (NAFI), 2023

World Reconstruction Exposition (Five-day), 2023

Event Data Recorder Update and Analysis, Ruth Consulting, 2023

Bosch CDR Technician, Collision Safety Institute, 2023

Science of Fire and Explosion Hazards from Lithium-Ion Batteries, UL Fire Safety Research Institute, 2023

Aerial Lift/Scissor Lift Certification, Colorado Safety Supply, 2023

Arc Mapping Basics, CFITrainer.net (IAAI), 2023

Basic Electricity, CFITrainer.net (IAAI), 2023

Fire Investigation for Fire Officers, CFITrainer.net (IAAI), 2023

Fire Protection Systems, CFITrainer.net (IAAI), 2023

How First Responders Impact the Fire Investigation, CFITrainer.net (IAAI), 2023

Investigating Natural Gas Systems, CFITrainer.net (IAAI), 2023

FARO Laser Scanner Operator (Two-day), FARO Technologies, 2022

Master's Thesis, Title: Development of a Guide for the Investigation of Alternative Motor Vehicle Fires, Cranfield University, 2022

Courtroom Skills, Cranfield University, United Kingdom, 2022

Fires, Explosions and their Investigation, Cranfield University, 2022

Forensic Investigation of Explosives and Explosive Devices, Cranfield University, 2022

Firearms Investigations, Cranfield University, United Kingdom, 2022

Forensic Ballistics Investigations, Cranfield University, 2022

Introduction to Firearms Investigations and Forensic Ballistics, Cranfield University, 2022

Materials Engineering and Processing, Cranfield University, 2022

Radiographic Investigations in Forensic Science, Cranfield University, 2022

Analytical Techniques, Cranfield University, United Kingdom, 2022

Reasoning for Forensic Science, Cranfield University, 2022

Lithium-Ion Battery Fires, CFITrainer.net (IAAI), 2022

Alternative Fuel Vehicle, CFITrainer.net (IAAI), 2022

Electric & Hybrid Vehicle Design Basics, CFITrainer.net (IAAI), 2022

Electric & Hybrid Vehicle Fires, CFITrainer.net (IAAI), 2022

Investigation and Evidence Collection, Cranfield University, 2021

Introductory Studies (Forensic Investigation), Cranfield University, 2021

Accreditation, Certification, and Certificates, CFITrainer.net (IAAI), 2020

Charting Your Career Path in Fire Investigation, CFITrainer.net (IAAI), 2020

Critical Evaluation and Testing of Commonly Reported Accidental Causes, CFITrainer.net (IAAI), 2020

DNA, CFITrainer.net (IAAI), 2020

Documenting the Event, CFITrainer.net (IAAI), 2020

Effective Investigation and Testimony, CFITrainer.net (IAAI), 2020

Ethics and the Fire Investigator, CFITrainer.net (IAAI), 2020

Explosion Dynamics, CFITrainer.net (IAAI), 2020

Fire Chemistry, CFITrainer.net (IAAI), 2020

Fire Flow Analysis, CFITrainer.net (IAAI), 2020

Evidence Examination: What Happens at the Lab?, CFITrainer.net (IAAI), 2020

Fundamentals of Interviewing, CFITrainer.net (IAAI), 2020



Fire Investigator Scene Safety, CFITrainer.net (IAAI), 2020
Insurance and the Fire Investigation, CFITrainer.net (IAAI), 2020
Introduction to Appliances, CFITrainer.net (IAAI), 2020
Introduction to Evidence, CFITrainer.net (IAAI), 2020
Investigating Motor Vehicle Fires, CFITrainer.net (IAAI), 2020
Motor Vehicles: The Engine and the Ignition, Electrical, and Fuel Systems,
CFITrainer.net (IAAI), 2020
Motor Vehicles: Transmission, Exhaust, Brake, and Accessory Systems, CFITrainer.net
(IAAI), 2020
NFPA 1033 and Your Career, CFITrainer.net (IAAI), 2020
Physical Evidence at the Fire Scene, CFITrainer.net (IAAI), 2020
Residential Electrical Systems, CFITrainer.net (IAAI), 2020
Residential Natural Gas Systems, CFITrainer.net (IAAI), 2020
The Practical Application of the Relationship Between NFPA 1033 and NFPA 921,
CFITrainer.net (IAAI), 2020
Understanding Undetermined, CFITrainer.net (IAAI), 2020
Writing the Initial Origin and Cause Report, CFITrainer.net (IAAI), 2020
The Scientific Method for Fire and Explosion Investigation, CFITrainer.net (IAAI), 2020