



Unified Engineering LP

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David E. Dix, P.E. Mechanical Engineering

Mr. Dix has over forty years of consulting experience in the analysis, testing, and inspection of mechanical systems. This work has included failure analysis, accident investigation and reconstruction, design review and evaluation, machinery and product testing, motion and still photography analysis including photogrammetry, stress analysis using finite element and classical techniques, fluid mechanics, heat transfer, dynamic and static testing, and durability testing.

Employment

1995-present	Principal, Unified Engineering
1995	Manager of Mechanical Engineering, Packer Engineering, Inc.
1983-1995	Staff Consultant, Packer Engineering, Inc.
1982-1983	Short term missionary in Zaire, Africa Inland Mission

Education

1988	M.S. in Mechanical Engineering, University of Illinois at Chicago (Thesis: <i>Heat Transfer From a Sphere in Natural and Forced Convection of Subcooled Freon-113</i>)
1982	B.S. in Mechanical Engineering, John Brown University, Arkansas

Professional license and registration

1992-present	Professional Engineer, State of Illinois, License Number 062-047674
2024-present	Federal Aviation Administration, Remote Pilot, SUAS

Accreditations

2011-2026	The Accreditation Commission for Traffic Accident Reconstruction #2345 (January 26, 2011 to May 31, 2026)
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Continuing Education

2023	Video Evidence Training Symposium (2020 & 2022) – iNPUT ACE
2021	Accessing and Interpreting Heavy Vehicle Event Data Recorders - SAE
2021	Video Evidence Training Symposium (2021) – iNPUT ACE
2020	Event Data Recorder Summit – Crash Data Group
2018	Event Data Recorder Summit – Crash Data Group
2017	Driver Distraction from Electronic Devices - SAE

2016 ARC-CSI Crash Conference
2015 Introduction to Brake Control Systems - SAE
2014 ARC-CSI Crash Conference
2013 Vehicle Dynamics for Passenger Cars and Light Trucks - SAE
2013 Commercial Vehicle Braking Systems - SAE
2011 Tire & Wheel Safety Issues - Society of Automotive Engineers
2010 PhotoModeler - Collision Reconstruction
2009 CDR Technician and CDR Data Analyst Course - Collision Safety Institute
2007 Heavy Vehicle Crash Reconstruction; NW University Center for Public Safety
2007 Crash Data Retrieval Technician Training- Collision Safety Institute
2004 Traffic Accident Reconstruction II; Northwestern University- Traffic Institute
1998 Traffic Accident Reconstruction I; Northwestern University- Traffic Institute
1996 Digital Video International; Adobe
1993 The Bolted Joint; ASME
1989 Vibration Measurement and Analysis; Bruel & Kjaer

Professional Societies

American Society of Mechanical Engineers
Society of Automotive Engineers

Selected Publications

“An Experimental Study in Nucleate Boiling Heat Transfer From a Sphere”,
Collected Papers in Heat Transfer, (D. Dix, J. Orozco, and H. Francisco),
ASME Heat Transfer Division, Volume 104, 1988

“An Experimental Study in Nucleate Boiling Heat Transfer From a Sphere”,
Journal of Heat Transfer, (D. Dix and J. Orozco), Transactions of the ASME,
February 1990

“Film Boiling Heat Transfer From a Sphere in Natural and Forced Convection
of Freon-113”, *Journal of Experimental Heat Transfer*, (D. Dix and J. Orozco),
Volume 3, No. 2, 1990

“Accident Reconstruction”, presented at Association of Iron and Steel Engineers
conference on New Handling Technology for Material and Scrap, 1998