

## BIO/CV

Benn Karne has over 10 years of experience in traffic accident reconstruction and failure analysis, and 30 years of experience in mechanical engineering across a variety of industries. Both ACTAR certified and a registered professional engineer, he performs accident reconstruction and analysis, provides expert testimony, and teaches in the field of accident reconstruction.



Benn has had a life-long love of automobiles and affinity for all things mechanical, and when not analyzing accidents, he enjoys modifying, racing, and restoring cars and motorcycles. On occasional weekends Benn can be found throwing his classic Corvette around an autocross course or working on a Bonneville land speed racing project. This direct experience with vehicles and their behavior and construction is a decided advantage over those who have only a theoretical background.

### Qualifications:

- Bachelor of Science degree in Mechanical Engineering, University of California at Berkeley.
- California Registered Professional Engineer (M18705).
- Traffic Accident Reconstructionist (#1045) accredited by ACTAR (Accreditation Commission for Traffic Accident Reconstruction).
- Over 30 years of engineering design, documentation, testing, fabrication, and analysis in fields ranging from microsurgery to heavy industrial equipment.
- Developed brake, axle, wheel, and suspension fitments for on- and off-road heavy duty trucks while employed as a design engineer by Peterbilt Motors 1976-1978.
- Experience operating, repairing, and/or modifying a wide range of vehicles, including motorcycles, light- and medium-duty commercial vehicles, forklifts, antique autos, and racing cars.
- Comprehensive hands-on mechanical expertise with virtually every part of passenger vehicles, with attendant strong understanding of normal and abnormal operational characteristics as well as parts conditions. This knowledge is readily extended to vehicles encountered in collision investigations.
- Reconstruction of dozens of collision cases over more than 10 years, including manufacturing defects, low-speed “no damage” cases, bicycle and pedestrian accidents, mechanical failures, fraud cases, forklift accidents, complex multiple-vehicle collisions, and road rage incidents (including no-contact cases).
- Hands-on experience with vehicle dynamics under widely different conditions, including typical public roadway situations and under racing conditions on closed courses.

- Member of the Society of Automotive Engineers (SAE), NorCal Section Treasurer 2005-2007.
- Member of the California Association of Accident Reconstruction Specialists (CAARS), Training Director 2001-2003.
- Member of the National Association of Professional Accident Reconstruction Specialists (NAPARS)
- Teacher of 4-hour “Mechanics for Accident Reconstructionists” California Peace Officer Standards and Training (POST) class through Los Medanos College, Concord CA, 2003-2011.
- Technical Inspector for Formula SAE West student-built open-wheeled race car competition, California/Auto Club Speedway, Fontana CA, June 14-17, 2006, June 25-27, 2008, and June 16-17, 2011.

#### **Collision Coursework, Training, and Testing:**

- Vehicle Inspection and Analysis for Repair and Loss Fraud (6 hours), Dr. Ken Zion, CAARS, San Jose CA, April 7, 2011.
- Railroad Accident Investigation and Reconstruction (6 hours), Robert W. Halstead, CAARS, Vacaville CA, February 11, 2011.
- Energy and Crush Methods of Accident Reconstruction, and Tire Forces (20 hours), John Daily, Nathan Shigemura, and Daniel Vomhof III, CAARS Fall Conference, South Lake Tahoe CA, October 14-16, 2010.
- Collision Fraud Investigation (6 hours), Steve Hardy and Chris Mendez, CAARS, Sacramento CA, August 19, 2010.
- Accident Reconstruction & Biomechanical Analysis of Auto-Pedestrian Collisions (6 hours), Jesse Wobrock, Tia Orton, and Patricia Fyhrie, CAARS, Roseville CA, May 13, 2010.
- Investigation and Analysis of Rollover Collisions (6 hours), Kurt D. Weiss, CAARS, San Jose CA, February 18, 2010.
- Crash Reconstruction at Traffic Signal Intersections (8 hours), Daren Marceau; Bicycle Accident Reconstruction (2 hours), Roman Beck; Auto-Pedestrian Accident Reconstruction (4 hours), David Casteel, Greg Sullenberger; Vehicular Homicide Investigation (4 hours), Wesley VanDiver; CAARS Fall Conference, Anaheim CA, October 1-3, 2009.
- Motorcycle Crash Reconstruction and Case Studies (6 hours), Toby Gloekler, CAARS, Vallejo CA, August 19, 2009.

- Seat Belt Analysis and Occupant Kinematics (6 hours), Robert Stearns, CAARS, Sacramento CA, May 13, 2009.
- Human Factors for Traffic Accident Reconstruction including visual detection limits and perception, reaction, and response times (40 hours), Jeffrey Muttart, Sacramento CA, January 12-16, 2009.
- Drag factors, Narrow Object Impacts, Critical Speed Yaws, Investigation of Roll-overs and Tumbles, Human Factors, Testimony and Cross Examination, Errors in Reconstruction Cases, Crash Photography Issues; (20 hours), CAARS Fall Conference, Sacramento CA, October 16-18, 2008.
- Bicycle Crash Investigation (6 hours), CAARS, Vallejo CA, January 9, 2008.
- Vehicle Damage Documentation (6 hours), CAARS, Anaheim CA, August 22, 2007.
- Forensic Mapping Systems (6 hours), CAARS, Vallejo CA, May 22, 2007.
- Various topics in Reconstruction (20 hours), CAARS Conference, Anaheim CA, October 18-20, 2007.
- Crash Scene 3D software training, Basic and Advanced (40 hours), Pittsburg CA, May 7-11, 2007.
- Crash Data Retrieval System Technician Training (8 hours), Kent Boots, Vacaville CA, January 17, 2007; updated (8 hours), Collision Safety Institute, Vallejo CA, March 29, 2010.
- Multiple topics in Crash Reconstruction (20 hours), CAARS Conference, South Lake Tahoe CA, November 16-18, 2006.
- Traffic Collision Photography (3 hours), CAARS, Riverside CA, June 14, 2006.
- Anti-lock Braking Systems (6 hours), CAARS, Vallejo CA, January 18, 2006.
- Investigating Emergency Vehicle Collisions (20 hours), CAARS Conference, Temecula CA, October 13-15, 2005.
- Crash Data Retrieval (CDR) System Operator (24 hours), Collision Safety Institute, San Diego CA, May 11-13, 2005.
- Vehicle Inspection and Analysis for Fraud (8 hours), CAARS, Vallejo CA, January 21, 2005.
- Motorcycle Crash Investigation, Reconstruction, and Crash Testing (18 hours), CAARS Conference, Santa Rosa CA, October 28-30, 2004.
- Review of Momentum Methods of Accident Reconstruction (8 hrs), CAARS, Stockton CA, August 25, 2004.

- Post-Collision Mechanical and Seat Belt Examination and Evaluation (8 hours), CAARS, Vallejo CA, May 19, 2004.
- Reconstruction Methods and Safety Developments in Vehicle Design, SAE World Congress, Detroit MI, March 8-11, 2004.
- Lamp Examination, CAARS, Antioch CA, Jan. 28, 2004.
- Pedestrian, Razor Scooter, Bicycle, Rollerblade, Segway, Skateboard, Motorcycle, and Powered Scooter Collisions and Testing, and Biomechanical Injury Causation (24 hours), CAARS Conference, Anaheim CA, October 15-17, 2003.
- Tire Failures, CAARS, Concord CA, January 22, 2003.
- Heavy Vehicle Off-tracking, Acceleration, Skid (ABS/non-ABS), and Crash Testing (including rearenders, under-rides, and turn/sideswipes) and Accident Reconstruction including use of Event Data Recorders ("Black Boxes") (24 hours), CAARS Conference, Anaheim CA, October 3-5, 2002
- Testimony in Criminal and Civil Proceedings (8 hours), CAARS, Concord CA, July 24, 2002.
- Fires in Vehicle Accident Reconstruction (8 hours), CAARS, Concord CA, April 10, 2002
- Injury Mechanisms During Motor Vehicle Collisions (8 hours), CAARS, Davis CA, January 23, 2002
- Energy/Crush Methods of Accident Reconstruction, Momentum, Scene Work, Insurance Fraud, and Staged Collisions (18 hours), CAARS Conference, Concord CA, Oct. 11-13, 2001
- Heavy Vehicle Inspection with emphasis on Brakes (8 hours), CAARS, Hayward CA, July 11, 2001.
- Crash/Event Data Recorders ("Black boxes") and Data Retrieval and Air Bag Deployments, Society of Forensic Engineers and Scientists meeting (SFES), Monterey CA, February 10-11, 2001
- Pedestrian Collisions and Crash Testing (16 hours), CAARS, Concord CA, October 14, 15, 18, 2000.
- Auto, Commercial Vehicle, and Motorcycle Crash, Deformation, and Friction Tests; Vehicle Issues including Lamp Examination; Driver Issues including Factors Affecting Hazard Detection and Response, and Alcohol Impairment; Roadway Issues including Edge Defects; Reconstruction Methods including Crash/Event Data Recorders and Retrieval; (40 hours total all subjects in this group), World Reconstruction Exhibition (WREX) Conference, College Station TX, September 24-29, 2000.

- Bus Acceleration and Skid Testing, Mechanics, and Crash Reconstruction, CAARS, Hayward CA, July 19,2000.
- Speed Determination from Crush Analysis (40 hours), UC Riverside Extension, Riverside CA, May 1-5, 2000.
- Tire Damage Analysis training by Michelin N.A. Inc. (8 hours), Riverside CA, February 8, 2000
- Traffic Accident Reconstruction (80 hours), Los Medanos College,Concord CA, February 28-March 10, 2000.
- Speed from Crush, and Crash Data Recorder (“Black Box”) Technology (16 hours), CAARS Conference, Concord CA, October 15-16, 1999.
- Principles of Investigating Low Speed Impacts (40 hours), UC Riverside Extension, Riverside CA, October 25-29, 1999.
- Basic, Intermediate, and Advanced Traffic Accident Investigation (160 hours), Los Medanos College, various 1992-1999.

**Miscellany:**

Co-producer of the documentary [Bonneville: Wide Open](#), a feature-length video about the hundreds of amateurs who annually pursue land speed records on Utah’s fabled salt flats. At its premiere during the 2004 California Independent Film Festival, the film won the Audience Award.

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