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## MARK H. KITTEL, P.E.

### EDUCATION:

BSME University of Colorado, Denver, Colorado, specialty in vehicle design. National Honors Society, Dean's List, Dean's Leadership award, President of the student chapter of Society of Automotive Engineers (SAE).

### REGISTRATION:

Registered Professional Engineer (P.E.) in the States of Colorado (42176), California (M 35526), and Nevada (029791)  
Board Certified in Forensic Engineering by the National Academy of Forensic Engineers (NAFE #757).  
Certified by the National Council of Examiners for Engineering and Surveying (NCEES #35979).

### EXPERIENCE:

Principal Engineer, Veritech Consulting Engineering, LLC, Castle Rock, CO, April 2011 to present  
Senior Engineer, Knott Laboratory, LLC, Centennial, Colorado, June 2006 to April 2011.  
Senior Test Engineer, Honda Research and Development of Americas, Marysville, Ohio, August 1998 to June 2006.

### ENGINEERING AND DESIGN:

As a Senior Engineer with the Research and Development division of Honda Motor Corporation, Mr. Kittel was a key member of Honda's Powersport Vehicle development teams. He has first-hand experience with the development and testing of several varieties of powersport vehicles including All-Terrain Vehicles (ATV's), on-road motorcycles, jet-skis (PWC's), and side-by-side utility vehicles (UTV's) similar to the Polaris Ranger and the Yamaha Rhino. Mr. Kittel's testing and development responsibilities at Honda Research and Development included areas such as dynamic handling and stability, component part strength analysis, and fatigue life analysis of safety critical parts. Mr. Kittel's involvement at Honda R&D led to his participation in the conceptualization and development of an innovative suspension system for an experimental half-track utility terrain vehicle (UTV) for which he was awarded a patent.

While at Honda, Mr. Kittel also gained experience and knowledge with various manufacturing methods such as the casting, forging, stamping and machining of metal parts and the blow-molding and injection-molding of plastic parts. In addition to his product development responsibilities, Mr. Kittel provided post-production support through the investigation and analysis of failures reported in the marketplace. His investigation and analysis of market failures were utilized to improve the product's quality and were occasionally used to determine whether a product should be recalled for safety concerns. As a result of his involvement at Honda, Mr. Kittel has a thorough understanding of the product develop process, from initial concept to mass production release to the public.

### ACCIDENT RECONSTRUCTION:

Mr. Kittel currently specializes in motor vehicle accident reconstruction and product failure analysis, with specific emphasis on the investigation and reconstruction of accidents involving motorcycles, ATV's, UTV's and other Powersport vehicles. In addition, Mr. Kittel has expertise in the investigation and reconstruction of accidents involving, passenger cars, commercial vehicles, bicycles and pedestrians. His expertise in the area of accident reconstruction includes vehicle dynamics, vehicle performance, time-space relationship, and driver/rider reaction. Frequent aspects of these investigations involve the failure or malfunction of vehicle systems such as brakes, tires, seat belts, and airbags as well as investigating issues related to occupant kinematics, human factors, and visibility analysis.

### PRODUCT FAILURE ANALYSIS:

Mr. Kittel has investigated and analyzed numerous product failures including the failures of individual parts as well as complicated hydraulic, pneumatic and mechanical systems and structures. He has worked with government agencies, such as OSHA, to determine system failures and to evaluate the influence of an operator's actions on a system's failure or malfunction. Mr. Kittel's development and manufacturing experience gives him unique insights as to why and how a product may have failed or malfunctioned and whether the failure can be attributed to a design flaw, manufacturing flaw, or operator error.

### MOTORCYCLE SPECIFIC EXPERIENCE:

Mr. Kittel has over 10 years of on-road motorcycle racing experience, beginning at a local club level and culminating as a Honda sponsored rider competing at a professional level in the American Motorcyclist Association (AMA) Supersport and Formula Extreme classes. In addition, Mr. Kittel also has over 40 years of off-road riding and racing experience including participation in local and national level off-road competitions for hare-scramble and enduro racing. Mr. Kittel's extensive riding and racing experience, combined with his engineering training, gives him a thorough understanding of motorcycle dynamics, vehicle capabilities, rider reaction, and vehicle response to rider inputs.

### EXPERT TESTIMONY:

As a result of his investigations and expertise, Mr. Kittel has been asked to provide expert testimony in cases both nationwide and internationally. Mr. Kittel has been retained by, and testified at the request of, both plaintiff and defense counsel and has been qualified as an expert witness, in both state and federal courts, in the areas of mechanical engineering, accident reconstruction, vehicle dynamics and motorcycle riding techniques and practices.

### PROFESSIONAL AFFILIATIONS:

**NAFE** - National Academy of Forensic Engineers, Diplomate

**AMA** – American Motorcycle Association, Member

**NSPE** - National Society of Professional Engineers, Member

**ASME** - American Society of Mechanical Engineers, Member

**SAE** - Society of Automotive Engineers, Member

\*Note: Mr. Kittel's expert testimony history, publications, continuing education, and fee schedule are available upon request.