

**Professional Perspective**

# **The Litigation Landscape for Autonomous Vehicle Crash Liability, Part 2: New Tech, New Claims**

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# The Litigation Landscape for Autonomous Vehicle Crash Liability, Part 2: New Tech, New Claims

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As vehicle manufacturers and their suppliers work to develop vehicles with fully automated driving systems, they must plan for a shift in emphasis on accident liability from operator error to potential defects in system design, performance and maintenance, and warnings and instructions for use. History suggests that recalls and related litigation also may be inevitable as automated driving system technology evolves. In the short term, however, fully autonomous technology will probably debut in fleets providing on-demand transportation and delivery services rather than through individual consumer ownership.

## An Expanded Product Liability Claims Environment

Vehicle manufacturers and insurers must plan for liability and future plaintiffs' claims to shift away from negligence and towards product liability as vehicles become more fully autonomous. See Ian Bogost, *Can You Sue a Robocar?*, *The Atlantic* (Mar. 20, 2018), <https://www.theatlantic.com/technology/archive/2018/03/can-you-sue-a-robocar/556007/>. However, as shown by the results of the recent post-crash investigations and lack of widespread availability of driverless vehicles, investigation of a plaintiff's own negligence will continue to play a major role in determining liability.

The elements that make up automated driving systems—software, radar, sensors, on-board cameras and LIDARS (light detection and ranging systems) that use infrared pulses to help the vehicle map its environment—add to the list of potential product liability issues, parties and expert witnesses in a vehicle crash case that already features traditional issues surrounding operator error, crashworthiness, design or performance of physical components and electrical and restraint systems. For example, with electric vehicles, when a fire occurs, the batteries might be a subject of claims along with the automated system. Defects in any one of the vehicle's systems could lead to litigation.

Product liability claims grounded in the performance of, and warnings and instructions for, automated vehicle systems will invoke “consumer expectation” or “risk-utility” theories, or both, as determined by state law.

State of the art as an element of a claim or defense, or both, will be a major focus for assessment of liability and fault, particularly with respect to artificial intelligence, software and the capability to handle weather, navigate multiple road conditions and environments, communicate with the human driver or passenger and interact with other drivers and vehicles.

For now, the investigation of potential contributory negligence of a human remains a critical component of the defense of motor vehicle accident claims.

## Representative Accident Scenarios

Because many companies have been testing self-driving vehicles in California with a human operator, the accident data there provides perspective on the performance of the current technology. August 2018 data from the California Department of Motor Vehicles show approximately sixty-two companies with self-driving car testing permits and humans at fault in sixty-one of sixty-two accidents between 2014 and August 2018, where an involved vehicle was in autonomous mode.

The California Department of Motor Vehicles November 2018 *Report of Traffic Collision Involving an Autonomous Vehicle* reported that:

- 31 such accidents occurred between September and December 2018;
- 16 of those accidents involved a vehicle that was in autonomous mode;
- in three of these incidents, the human operator had disengaged autonomous mode; and
- in one, autonomous mode was disengaged accidentally.

The *Report* also noted that between 2014 and the end of 2018, the California DMV received a total of 129 autonomous vehicle collision reports. In all but a few of the reported collisions, a conventional vehicle, motorcycle or bicycle struck the autonomous vehicle.

Although accidents involving self-driving cars have raised concerns about the lack of regulation, a close examination of each case suggests that a thorough fact investigation and accident reconstruction will remain key to the defense of automotive product liability cases.

NTSB post-crash investigations of four cases illustrate the difficulties inherent in a system where human and machine operators must effectively communicate and collaborate to avoid crashes. Simply stated, human error continues to play a significant role in vehicle accidents.

1. The NTSB report on a fatal May 2016 collision involving a truck and a Tesla vehicle operating in “autopilot” mode analyzed data recorded and provided by Tesla through a proprietary system that indicated that the Tesla's driver kept his hands off the wheel despite warnings not to do so. Reportedly, the system gave him seven separate visual warnings that said “Hands Required Not Detected,” and a chime sounded six separate times. The NHTSA investigation report did not cite any defects in the “autopilot” system and concluded that “the truck should have been visible to Brown for at least seven seconds before impact” and that he “took no braking, steering or other actions to avoid the collision.” Tesla subsequently announced upgrades to its “autopilot” system, including a feature that “will not allow reengagement of Autosteer until parked if user ignores repeated warnings”; for instance, the system will disengage if the operator ignores warnings to keep hands on the wheel.

2. The January 2018 lawsuit against GM arose from a December 7, 2017 incident in San Francisco involving a Chevy Bolt that is part of GM's Cruise autonomous vehicle test program. According to the California DMV report, the Bolt was traveling in the center of three one-way lanes when it identified a space between two vehicles in the left lane. The Bolt reportedly began to merge into the left lane, but re-centered itself in the center lane when one of the left-lane vehicles decelerated. The motorcyclist lane-split between two vehicles in the center and right lanes, then moved into the center lane, glanced the side of the Chevy Bolt, wobbled and fell over. Ultimately, “the motorcyclist was determined to be at fault for attempting to overtake and pass another vehicle on the right under conditions that did not permit that movement in safety in violation of CVC 21755(a).”

3. A Preliminary NTSB report (<https://www.nts.gov/investigations/AccidentReports/Reports/HWY18MH010-prelim.pdf>) indicates that the human operator of an Uber Volvo test vehicle did not intervene quickly enough with an emergency braking maneuver to avoid striking and killing a pedestrian as she crossed a Tempe, Arizona street with her bicycle in March 2018. The radar and LIDAR detected the pedestrian about six seconds before impact, when the vehicle was traveling at forty-three mph. The self-driving system software classified her as an unknown object, as a vehicle, and then as a bicycle. The system did not have the capability to alert the operator when it determined at 1.3 seconds before impact that an emergency braking maneuver was necessary. The operator took the wheel at less than one second before impact, but did not brake until after impact. The NTSB has not issued its final report with a determination of the probable cause of this fatal accident, but noted preliminarily that the self-driving system operated normally and there were no faults or diagnostic messages.

4. The NTSB has not determined the probable cause of the crash that killed the driver of a Tesla vehicle with “autopilot” mode that crashed into a highway barrier, but a preliminary report includes a detailed description of the event based in part on data downloaded from the vehicle. As in the Brown case, the Tesla data indicate the driver received warnings from the system because he did not have his hands on the steering wheel. Reportedly, more than fifteen minutes before the Tesla crashed into a highway crash attenuator, “the vehicle provided two visual alerts and one auditory alert for the driver to place his hands on the steering wheel.” In the sixty seconds before impact, the system detected the driver's hands on the steering wheel on three separate occasions, for a total of thirty-four seconds; the vehicle did not detect the driver's hands on the steering wheel in the last six seconds. In the three seconds before the crash, the data show the Tesla's speed increased from 62 to 70.8 mph, with no braking or evasive steering movement detected.

The driver's family retained counsel to pursue a wrongful death suit against Tesla. According to a post on the law firm's website:

The Huang family intends to file a wrongful death lawsuit against Tesla and, possibly, its subcontractors involved in the design and construction of the Autopilot system. The grounds for the suit may include product liability, defective product design, failure to warn, breach of warranty, intentional and negligent misrepresentation, and false advertising. The family may also file a lawsuit against the California Department of Transportation for dangerous condition of public property.

In sum, it is clear that the investigation of potential contributory negligence of a human remains a critical component of the defense of motor vehicle accident claims involving vehicles that collided while in self-driving mode.