REPRINT

CD corporate disputes

EVOLVING PRODUCT LIABILITY IN HIGHLY AUTOMATED AND CONNECTED VEHICLES

REPRINTED FROM:
CORPORATE DISPUTES MAGAZINE
JUL-SEP 2020 ISSUE

www.corporatedisputesmagazine.com

Visit the website to request
a free copy of the full e-magazine

SHOOK
HARDY & BACON

Published by Financier Worldwide Ltd
corporatedisputes@financierworldwide.com

ONE-ON-ONE INTERVIEW

EVOLVING PRODUCT LIABILITY IN HIGHLY AUTOMATED AND CONNECTED VEHICLES

Grant Law
Partner
Shook, Hardy & Bacon
T: +1 (415) 544 1946
E: hlaw@shb.com

Grant Law is a trial lawyer with more than 25 years of experience representing corporate clients in product liability, class action, environmental contamination, construction defect, trucking and consumer fraud matters. The Legal 500 recognised that Mr Law "enjoys a growing reputation with clients that appreciate his 'excellent technical knowledge and fine trial skills". He has an AV rating from Martindale-Hubbell, which indicates he has reached the height of professional excellence and has been recognised for the highest level of integrity.

CD: Could you provide an overview of recent technological developments for automated and connected vehicles?

Law: The main advances have been in machine learning and related artificial intelligence, improvements in the processing power needed to handle the stored and real-time data, and the refinement of the sensing hardware, such as light detection and ranging (LIDAR), radar and cameras. LIDAR is a great example of hardware improvements and cost containment. Four years ago, LIDAR units were the size of large cantaloupes, with spinning, roof-mounted sensors, and cost more than $70,000 each. More recently, suppliers are offering hockey puck-sized solid state LIDAR units for around $500. These advancements are being incorporated by suppliers into advanced driver assistance systems (ADAS) 'suites' and are bringing the systems into the range of affordability for many customers. Pricing is also expected to continue to drop.

CD: Although the concepts are complementary, what are the differences between automated and connected vehicles? What are the benefits and challenges associated with each?

Law: Automated vehicles in some ways have to do heavier lifting than connected vehicles. They cannot rely on feedback from any surrounding vehicles or infrastructure. They need to respond to a real-time environment that may have changed dramatically since the last mapping data was uploaded to the vehicle. A typical example is where lane lines have been shifted or blocked off for construction, where a stop sign has been replaced by a traffic light, or where a two-way street has been converted to a one-way street. Connected vehicles, when fully deployed, will greatly improve the flow of traffic. And not just on freeways, but in urban and rural settings. If 100 percent of the vehicles are talking to each other, there would be no need for stop signs and traffic lights, at least in areas where pedestrian traffic is restricted. And where lights are needed, connected traffic controls can adjust to the density of traffic and pedestrians to greatly reduce inefficient 'down time' that normally occurs with pre-set phasing. A very early example of such a connected vehicle is the fire truck that can override a light signal and turn it green as the truck responds to a call. Research studies and computer simulations have shown that in heavy, but flowing freeway traffic, all it takes is one car to jam on the brakes to cause a chain reaction of braking that can lead to a bumper-to-bumper traffic jam. Connected vehicles would eliminate unnecessary braking and keep traffic flowing, thereby shortening commutes, which in turn improves productivity, reduces fuel consumption, and perhaps more importantly, permits more time at home with family and friends. Connected vehicles will also improve safety by learning in real

time about any potential dangers ahead or behind. Examples include the situation where the lead connected vehicle is rounding a blind curve and encounters a downed power line, or a deer, or a disabled vehicle blocking the road. The lead vehicle's abrupt braking would be instantly communicated to the connected vehicle approaching the blind curve, so that the vehicle can safely stop and pull over instead of ploughing into the lead car.

CD: In the event of an accident, what particular issues do these technologies raise when it comes to assigning liability?

Law: We do not expect any major changes in the motor vehicle code with respect to the 'rules of the road'. So, the starting point in assessing liability will continue to be determining, for example, which vehicle ran the red light, which made an unsafe lane change, or which was traveling too fast for conditions. Since all current ADAS in place are by definition 'driver assist' and not 'driver substitute', liability will still be assessed against the person who violated the particular code section. This framework will of course not prevent a potential claim for indemnity from the at-fault driver against the manufacturer if there is a perceived malfunction, nor will it prevent a direct product liability claim by the injured party against the manufacturer. We are already seeing some of those claims. Once a vehicle can legally operate at Level 3 – wherein a driver can turn over full control to the vehicle – and if the crash was caused by a malfunction of the system, for now the human operator will be primarily liable, but there is a push to make the manufacturer the 'operator' and thus liable for any damages. For example, the Uniform Law Commission proposed a 'Uniform Automated Operations of Vehicles Act' which requires that the final stage assembler – the 'nameplate' – or the company primarily responsible for the technology, register with the state as both the 'manufacturer', and also the 'operator', and be responsible for vehicle code violations occurring while the vehicle is in an autonomous mode. However, a manufacturer would be entitled to defend its product, potentially pointing to other factors such as poor vehicle maintenance or intentional interference with the system.

CD: If a product liability claim is made, what key factors will determine how liability is assessed?

Law: Foremost will be whether the vehicle's ADAS malfunctioned in a manner that took complete control away from the operator, such as a total loss of steering or braking ability. We are starting to see those allegations, but they have yet to be proven. Another key area will be the specific product liability law of a given state. For example, some states that have adopted the 'Consumer Expectations Test', where a plaintiff will claim that he or she does

not need an expert to explain to the jury how the technology malfunctioned, but only that it 'failed to perform as safely as an ordinary consumer would have expected it to perform'. That is a very low burden for the plaintiff. On the other hand, in states that employ the 'risk/utility' test, the plaintiff will likely need expensive experts who can delve into the hardware and the software and explain what specifically is allegedly deficient about the design. That is a difficult task and one that will likely be rebutted by a team of in-house engineers and consulting experts who will be able to explain to a jury why the hardware and software was safe and appropriate for the vehicle.

CD: To reduce their liability, do manufacturers need to be very clear about the precise role of specific technologies and their limitations? How should they go about this?

Law: Manufacturers should remain cautious about how they 'brand' ADAS technologies so as to avoid implying that the technologies have more autonomous capabilities than they do. They should continue to communicate to consumers in clear and concise language that ADAS features are for 'driver assistance' and not to replace attentive driving. This communication should be made, at least in general terms, in marketing materials, including commercials, websites, brochures and print advertisements that feature ADAS technology. More in-depth descriptions of the technology, its proper use, precautions and its limitations need to be communicated to the consumer in the vehicle owner's manuals. Specific driving scenarios, in which a vehicle's ADAS features may not function properly or function at all, should be highlighted for the consumer. For example, adaptive cruise control can be affected by harsh weather conditions and poor visibility, driving in turning lanes or exit ramps, or other vehicles ahead suddenly changing lanes. Consumers should also be reminded in both marketing and ownership materials that although a vehicle is equipped with ADAS technology, it cannot replace the driver's attention and the driver must be ready to intervene in a traffic situation at all times.

"Manufacturers should remain cautious about how they 'brand' ADAS technologies so as to avoid implying that the technologies have more autonomous capabilities than they do."

Grant Law,
Shook, Hardy & Bacon

CD: In general terms, what are the prevailing legislative and regulatory requirements in this emerging and rapidly developing arena? How confident are you that regulation can keep pace with technology?

Law: At the federal level, the National Highway and Transportation Safety Agency (NHTSA) sets safety standards for automobiles. Federal motor vehicle safety standards (FMVSS) are performance standards that typically take years to enact, requiring publication of the proposed standard, a comment period, and a comprehensive economic analysis of the cost of compliance versus the number of lives saved and injuries reduced or prevented. Even when finally adopted, there is usually a phase-in period ranging from two to five years. Recognising that advances in ADAS and autonomous technology are moving faster that the regulatory process can reasonably accommodate, the NHTSA had made a policy statement that 'encourages' voluntary deployment of ADAS technologies without making them mandatory. A great example of this was an industry-wide pledge to equip all vehicles with automatic emergency braking (AEB) by 2022. At the state level, regulatory efforts are focusing on making sure there is insurance in place that will cover crashes involving autonomous vehicles, and also that the vehicles comply with the motor vehicle rules of the road. Still being worked out is whether the owner or the manufacturer should be liable for a motor vehicle code infraction when the vehicle is being operated at levels three to five, which do not require any human driver inputs.

CD: Could you outline some of the differences between federal and state regulations? What are the implications for manufacturers?

Law: The FMVSS govern the manufacture and sale of all automobiles in the US. As a general rule, the FMVSS creates performance standards only, and leaves the designs up to the manufacturer. So, for example, FMVSS 208 requires that occupant injuries not exceed a defined severity threshold in a defined frontal crash scenario. As a practical matter, currently the manufacturer can only meet the standard by utilising an airbag, but the regulation does not require one. The NHTSA is not setting specific FMVSS standards for ADAS, but has made clear that it still has final authority over ADAS, and that states should not interfere with their own design or performance standards for these technologies. On the legislative and regulatory level, states for the most part stay out of regulating automotive design and performance requirements. But common law strict liability and negligence claims can have the same practical effect of regulating automotive design and performance. That was the key issue in a recent Arizona case in which the plaintiff claimed

that a 2008 vehicle was defective because it did not have AEB. The court found federal "implied conflict pre-emption" and dismissed the case. In fact, one of the arguments that the court found persuasive was that if Arizona permitted a defect claim based on the absence of a feature that the FMVSS did not require, any vehicle without AEB would be rendered defective the moment it crossed state lines into Arizona. More recently, in *Varela v. FCA*, a different Arizona appellate panel held that there was no pre-emption for a defect claim based on failure to install AEB. We expect that decision to go up to the Arizona Supreme Court.

CD: What additional challenges do connected vehicles raise in terms of access to and protection of personal data?

Law: As vehicle processing and communications capabilities expand, it will be handling more and more real-time data over the air, which increases the opportunities for hacking. Hacking can be as benign as unauthorised monetisation of data or tracking a person who does not want to be tracked. It may be as serious as taking over control of the vehicle, as we saw a few years back when 'white hat' hackers remotely took over control of a sport utility vehicle (SUV). Another big concern is who has the right to the data. Currently, the black box crash data is generally available to law enforcement to assist in crash investigations, and also to parties in any crash-related litigation. But some states require permission from the owner or a court order to access the crash data. More concerning is the developing ability to access a vehicle's driving history going back hours or even days. Do you want the police, or opposing counsel, to know every person or business you visited a day or more before an accident?

CD: What are your predictions for the advance of automated and connected vehicles in the months and years ahead? What essential advice would you offer to manufacturers on addressing product liability concerns to maximise future prospects?

Law: Geofencing of closed corporate campuses and defined public spaces will be the first step toward deploying fully autonomous and connected vehicles. In those environments, where 100 percent of vehicles can communicate with each other and the surrounding infrastructure, vehicles will be able to operate safely with no human supervision or intervention. That is already happening on a limited scale at testing facilities, such as the University of Michigan, the American Center for Mobility and the SMART Center in Ohio. Because of the logistical hurdles of installing the needed communications infrastructure and restricting the area to autonomous vehicles only, it will likely take five to

10 more years before we see any major deployment on public roads. As far as advice I would give to manufacturers, the most important thing they can do right now is to continue to educate consumers about both the performance benefits and performance limitations of ADAS technologies. Manufacturers already do a great job of impressing on consumers through publicly available information and owner's manuals that ADAS are driver assist features, and not a substitute for a focused, attentive driver. That is going to be the case until we have level 3 and 4 functionality, and even then manufacturers will need to be vigilant in reminding drivers that even vehicles with those capability levels will not function in all environments, and that the operator may have to take over control if needed. CD