Ms. Jean Shiomoto  
Director  
Office of the Director  
Department of Motor Vehicles  
2415 1st Ave., Mail Station F101  
Sacramento, CA 95818-2606  

May 30, 2018

Request for Investigation of Illegal, Misleading and Dangerous Statements in Marketing of the “Autopilot” Feature Offered in Tesla Motor Vehicles

Dear Director Shiomoto:

Two Americans are dead and one is injured as a result of Tesla deceiving and misleading consumers into believing that the Autopilot feature of its vehicles is safer and more capable than it actually is. After studying the first of these fatal accidents, the National Transportation Safety Board (NTSB) determined that over-reliance on and a lack of understanding of the Autopilot feature can lead to death. The marketing practices of Tesla, combined with Tesla’s CEO Elon Musk’s public statements, have made it reasonable for Tesla owners to believe, and act on that belief, that a Tesla with Autopilot is an autonomous vehicle capable of “self-driving”.

Consumers in the market for a new Tesla see company statements proclaiming, “Full Self-Driving Hardware on All Cars.” They are directed to videos of Tesla vehicles driving themselves through busy public roads, with no human operation whatsoever. They see press releases alleging that Autopilot reduces the likelihood of an accident by 40%. They also hear statements like “the probability of an accident with Autopilot is just less” from Elon Musk. Or they hear him relate Autopilot in a Tesla to autopilot systems in an aircraft. Such statements mislead and deceive consumers into believing that Autopilot is safer and more capable than it is known to be. It creates the impression that a Tesla with Autopilot is an autonomous vehicle, when it is not. Such an impression likely causes users of Autopilot to operate their Tesla vehicles less diligently than they should, which puts those users, and everyone who shares the road with them, at greater risk of harm.

As specified in the newly adopted California Autonomous Vehicle regulations, Vehicle Code Title 13, Division 1, Chapter 1, Article 3.8 §228.28 “Statements About Autonomous Technology” no manufacturer can describe a vehicle as autonomous unless it meets definitions spelled out in Vehicle Code §38750 and §228.02 (b) of Article 3.8.1 Despite Tesla’s and Musk’s

---

1 See https://www.dmv.ca.gov/portal/wcm/connect/a6ea01e0-072f-4f93-aa6c-e12b84443cc/DriverlessAV_Adopted_Regulatory_Text.pdf?MOD=AJPERES.
misleading statements, the vehicles do not reach this threshold and are not, under California Law, autonomous.

The Center for Auto Safety (Center) and Consumer Watchdog believe the statements are illegal under the Vehicle Code. We respectfully request the Department to start an investigation of the dangerously misleading and deceptive statements and marketing practices and representations of Tesla Motors, Inc.\(^2\) (Tesla) regarding the safety and capabilities of its Autopilot feature. We believe Tesla’s marketing efforts also violate Section 5 of the Federal Trade Commission Act (Section 5)\(^3\) because they are likely to deceive even diligent consumers, who would act reasonably in believing them, and are likely to use Autopilot differently than they would if Tesla employed more honest and transparent marketing and advertising strategies. The Center and Consumer Watchdog filed a complaint about Tesla’s practices with the FTC last week. Nonetheless, because Tesla’s actions violate California law and because Tesla is a California corporation, we call on the Department to take appropriate action as soon as possible.

Tesla manufactures and sells electric vehicles in the United States. Currently, Tesla offers three vehicle models: (1) Model S; (2) Model X; and (3) Model 3.\(^4\) All of these vehicles come equipped with the Autopilot feature.\(^5\) Unlike what the name of this feature suggests, Autopilot is only capable of SAE Level 2 automation.\(^6\) As the CEO of Tesla himself has recognized, Tesla consumers often perceive Autopilot to be safer than it actually is, and some of these consumers have been killed or injured while using the feature.\(^7\) Recent high profile incidents, as well as various user accounts, evidence that Tesla is misleading consumers about the safety performance and autonomous capabilities of its Autopilot feature.

The Center, founded in 1970, is an independent, non-profit consumer advocacy organization dedicated to improving vehicle safety, quality, and fuel economy not only for our members, but all drivers, passengers, and pedestrians across the county.

Consumer Watchdog is a nonprofit organization dedicated to providing an effective voice for taxpayers and consumers in an era when special interests dominate public discourse, government and politics.

I. **Autonomous Vehicle Levels of Automation**

The National Highway Traffic Safety Administration (NHTSA) has provided nonbinding guidance on autonomous vehicles (AVs) on two occasions, in September 2016 and September 2017.\(^8\) That guidance indicates that the U.S. Department of Transportation intends to use SAE

---

\(^2\) Tesla Motors, Inc. is headquartered at 2500 Deer Creek Road, Palo Alto, CA 94304.


\(^4\) See [https://www.tesla.com/](https://www.tesla.com/).


International’s Levels of Automation to define the autonomous capabilities of motor vehicles.\(^9\) Only vehicles with Level 1 or 2 autonomous capabilities are currently available for sale in the U.S. Such vehicles, at most, have “partial automation”, which means that “the driver must remain engaged with the driving task and monitor the environment at all times.”\(^10\) Level 3 vehicles are described as those in which the “Driver is a necessity, but is not required to monitor the environment. The driver must be ready to take control of the vehicle at all times with notice” (emphasis added).\(^11\) Thus, if an automaker markets or advertises its vehicles as being capable of Level 3 automation or higher, when in fact those vehicles are only capable of Level 2 automation, the automaker is deceiving consumers, irrespective of whether the SAE Levels of Automation are explicitly mentioned.

California law says an “‘Autonomous vehicle’ means any vehicle equipped with technology that is a combination of both hardware and software that has the capability of performing the dynamic driving task without the active physical control or monitoring of a natural person, excluding vehicles equipped with one or more systems that enhance safety or provide driver assistance but are not capable of driving or operating the vehicle without the active physical control or monitoring of a human. For the purposes of this article an “autonomous vehicle” meets the definition of levels 3, 4, or 5 of the SAE International’s Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles, Standard J3016 (SEP2016), which is hereby incorporated by reference.”\(^12\)

Several automotive manufacturers sell Level 2 vehicles for use by U.S. consumers. Most of these manufacturers market their vehicles as having “driver assistance” or “active safety” features.\(^13\) Notably, these manufacturers do not make any claims about their vehicles being “self-driving” or “fully autonomous” or even “autonomous”. Generally, these vehicles are capable of maintaining their position in lanes at highway speeds, accelerating or decelerating in response to surrounding traffic (adaptive cruise control), automatically braking to avoid collisions, passing other vehicles when requested by the driver, and assisting the driver with parking.

\(^10\) Id.
\(^11\) Id.
\(^12\) See https://www.dmv.ca.gov/portal/wcm/connect/a6ea01e0-072f-4f93-aa6c-e12b844443cc/DriverlessAV_Adopted_Regulatory_Text.pdf?MOD=AJPERES.
\(^13\) For examples of the language used by Tesla’s competitors, see Audi https://www.audiusa.com/models/audi-a8; Toyota https://www.toyota.com/safety-sense/?add DISCLAIMER=tsa1da.drce_auto_highbeam.pre_collision_tss&srchid=sem%7cGOOGLE%7cSafety%7cSupport_Safety_Brand%7cSafety_Brand_Technology%7cETA_Launch_11.21.17%7cTSS&gclid=EALaIqo6ChMIv5uGhtJKK2wlVhlqGC0gwJEAAYASAEgJE2VdBwE&gclsrc=aw.ds; Cadillac http://www.cadillac.com/world-of-cadillac/innovation/super-cruise; and Honda https://automobiles.honda.com/sensing.
II. Tesla’s Deceptive and Misleading Marketing Practices

Tesla is the only automaker to market its Level 2 vehicles as “self-driving”, and the name of its driver assistance suite of features, Autopilot, connotes full autonomy. In addition to these formal marketing ploys, Elon Musk, Tesla’s CEO, frequently misleads and deceives consumers by overstating Autopilot’s safety and capabilities. Also, technical aspects of Autopilot, such as allowing for prolonged periods without touching the steering wheel with no way of determining whether drivers are in fact monitoring their driving environment- a required task for drivers of SAE Level 2 vehicles- deceive and mislead consumers into believing Autopilot is more advanced than it is. These formal and informal representations, combined with the technical features of Tesla vehicles, lead reasonable consumers to believe that Autopilot is more than mere driver assistance. Tesla’s statements violate California law.

Visitors to the Autopilot page on Tesla’s website are greeted with large typeface proclaiming, “Full Self-Driving Hardware on All Cars” and below that message, in standard sized typeface, “All Tesla vehicles produced in our factory, including Model 3, have the hardware needed for full self-driving capability at a safety level substantially greater than that of a human driver.”14 After presenting two links to order a Model S or Model X, ostensibly with “full self-driving hardware”, there is a video of a Tesla vehicle driving itself through a suburb; the video begins with the typed words “THE PERSON IN THE DRIVER’S SEAT IS ONLY THERE FOR LEGAL REASONS. HE IS NOT DOING ANYTHING. THE CAR IS DRIVING ITSELF.”15

Additionally, Tesla has expressly claimed that Autopilot is safer than human drivers. After a man tragically died in March 2018 when his Model X collided with a crash attenuator while operating in Autopilot, Tesla released a statement claiming that “Autopilot was found by the U.S. government to reduce crash rates by as much as 40%.”16 That same statement went on to say “The consequences of the public not using Autopilot, because of an inaccurate belief that it is less safe, would be extremely severe. . . We expect the safety level of autonomous cars to be 10 times safer than non-autonomous cars.”17

However, the findings that Tesla cited were not the result of methodologically sound research. NHTSA, the entity that provided the data cited by Tesla, acknowledged on May 2, 2018, that it did not assess the safety or effectiveness of Autopilot in its 2017 report.18 The data does show that Tesla vehicles equipped with Autopilot are less likely to crash than vehicles without Autopilot, but the information does not reveal whether the use of Autopilot results in fewer accidents. Tesla has used this dubious statistic to promote Autopilot’s safety. Of course, this is merely correlation, not causation, and Tesla must be aware of this fact. Still, Tesla continues to claim that a vehicle operating in Autopilot is safer than a vehicle operated by a human. Further, by making claims about the safety level of “autonomous cars”, Tesla blatantly lies to consumers and violates California law by referring to its vehicles as “autonomous.”

14 See https://www.tesla.com/autopilot.
15 Id.
17 Id.
Elon Musk also makes statements referring to Autopilot as safer than it actually is. In an interview with CBS in April 2018, after Musk was asked what the purpose of Autopilot is if drivers still have to touch the steering wheel, he responded “because the probability of an accident with Autopilot is just less”. On May 14, 2018, after a woman in Utah plowed her Model S into a firetruck at 60 miles-per-hour while using Autopilot, Musk took to Twitter to say “What’s actually amazing about this accident is that a Model S hit a firetruck at 60 mph and the driver only broke an ankle. An impact at that speed usually results in severe injury or death.” Thus, Musk conflates Autopilot’s safety, or lack thereof, with the Model S’s ability to withstand a crash. Almost 22 million people follow Musk on Twitter.

In addition to making false claims about Autopilot’s safety, Musk deceives consumers into believing Autopilot is more capable than it actually is. On October 20, 2016, Musk shared a video on Twitter of a Tesla vehicle driving itself with the caption, “Tesla drives itself (no human input at all) thru urban streets to highway to streets, then finds a parking spot”. In January 2017, after being asked “At what point will ‘Full Self-Driving Capability’ features noticeably depart from ‘Enhanced Autopilot’ features?” Musk responded, “3 months maybe, 6 months definitely”.

The name “Autopilot” is deceptive and misleading in and of itself. When Americans hear the word “autopilot”, they reasonably envision the system on airplanes that safely flies hundreds of millions of passengers through our skies. Elon Musk even analogized Tesla’s Autopilot to the autopilot systems in airplanes in a 2014 interview. Unfortunately, in the vehicle context, the passengers are also the drivers, or, to carry out the analogy, the “pilots”. Unlike the varied and often lax requirements for a driver’s license, pilots of airplanes with autopilot systems must possess extensive training and experience before they are permitted to operate such systems with live passengers. The Federal Aviation Administration (FAA) sets such rigorous standards for the pilots of aircraft with autopilot systems because the risk of failure is so great. More than just setting the standards for the pilots, the FAA has strict and robust requirements for the technical aspects of aircraft autopilot systems. There are no such requirements for Tesla’s Autopilot. Thus, Tesla misleads and deceives consumers by referring to its suite of driver assistance technology as “Autopilot” because that technology and its users are not subject to the extensive requirements that aircraft autopilot systems are, and such a system is what reasonably comes to mind when the term “autopilot” is used.

---

20 Elon Musk, @elonmusk, Twitter.com (May 14, 2018, 1:57 PM), [https://twitter.com/elonmusk/status/996132429772410882](https://twitter.com/elonmusk/status/996132429772410882).
Even with the affirmative knowledge that consumers misunderstand the capabilities of Autopilot, Tesla now advertises that its vehicles are equipped with “Enhanced Autopilot”, yet those vehicles are still at SAE Level 2. What is especially concerning about this advertising ploy is that current owners of Tesla vehicles may be led to believe that if they upgrade to the “Enhanced Autopilot” then they can pay even less attention to their driving environment.

Finally, the technical features of Tesla vehicles cause consumers to erroneously believe that Autopilot is more than just Level 2 autonomy. The NTSB investigated the fatal crash in Williston, Florida in 2016 where a Model S operating in Autopilot collided with a tractor-trailer and found that, of the 37.5 minutes Autopilot was activated, the driver only had his hands on the wheel for approximately 30 seconds. Additionally, there is no way for Tesla vehicles to determine whether a driver is in fact monitoring the driving environment. Though Tesla considered additional sensors to track the eyes and face of drivers to know whether they were looking at the road or elsewhere, the company chose not to install such features. Thus, Autopilot only warns drivers to touch the steering wheel after it detects that the steering wheel has not been touched for a certain amount of time, and there are already companies that have built devices to trick Autopilot into thinking that the steering wheel has been touched. These technical aspects contribute to the circumstances that would lead a reasonable person to believe Autopilot is self-driving or autonomous technology when it is not and does not meet the definition of autonomous vehicle spelled out in California law.

III. Consumers Reasonably Altered Their Behavior When Using Autopilot in Response to Tesla’s Misleading and Deceptive Marketing

Users of Tesla vehicles have already been killed or injured because they misunderstood the safety and capabilities of Autopilot. There is an abundance of Tesla consumers who brag about their vehicles’ “self-driving” abilities. News and other media outlets describe Autopilot as “self-driving”. These realities prove that Tesla, with assistance from Elon Musk, has successfully deceived consumers into believing that Autopilot is safer and more capable than it actually is.

Unfortunately, there is no way to know exactly what the two drivers were doing in the moments preceding the collisions in the deadly Autopilot accidents in May 2016 and March 2018. The man who died in Williston, Florida, Joshua Brown, was known to frequently post videos of himself driving handsfree in his Model S. Witnesses of the crash claim that Mr. Brown may have been watching a movie on a portable DVD player at the time of the collision. Tellingly, the NTSB

26 See https://www.tesla.com/autopilot
found that Mr. Brown’s “pattern of use of the Autopilot system indicated an over-reliance on the automation and a lack of understanding of the system limitations”.  

The NTSB is still investigating the deadly California crash involving a Model X colliding with a crash attenuator while in Autopilot. Tesla claims that the driver had at least five seconds, or approximately 500 feet, of unobstructed view before the fatal collision occurred.  

Additionally, had Tesla installed eye and/or face monitoring technology, the vehicle would have known that this driver was not watching the road, and could have responded.

The woman who was recently injured in Utah when her Model S collided with a firetruck admitted that she was looking at her phone when the collision occurred. Additionally, she had not touched the steering wheel for 80 seconds preceding the crash. If this woman had not been misled by Tesla into believing that her Model S was safer and more capable than it really is, she would have known that she needed to constantly monitor her driving environment, and the collision may have never occurred. Additionally, had Tesla installed eye and/or face monitoring technology, the vehicle would have known that this driver was not watching the road, and could have responded.

On the popular video-sharing website YouTube, Tesla consumers fondly refer to their vehicles as “self-driving”. Some titles of these videos include: “SELF DRIVING ‘AUTOPILOT’ TESLA MODEL S! THE FUTURE IS NOW! ...YO!”, “2018 Tesla Model S Autopilot Demonstration - AMAZING Self-Driving Car”, “2018 Tesla Model X Full-Self Driving TEST DRIVE- Amazing Autopilot System of Elon Musk !”, and “My 2,000+ mile Full Self Driving Tesla Model X AutoPilot Trip from DC to Naples | AP2”. Some Tesla consumers are so confident in Autopilot that they have uploaded videos of themselves using drugs behind the wheel while Autopilot is engaged. Combined, these videos have millions of views. Clearly, these consumers are misinformed about the true nature of Autopilot’s capabilities. If they knew that Autopilot is only capable of driver assistance, and not “self-driving”, they would presumably behave much differently.

Tesla’s deceptive marketing and advertising techniques regarding Autopilot have fooled not only average consumers, but sophisticated news and media outlets as well. When reporting on the Williston, Florida accident, the New York Times ran an article titled “Joshua Brown, Who Died in Self-Driving Accident, Tested Limits of His Tesla”. On October 20, 2016, NPR ran the headline

---


33 An Update on Last Week’s Accident, TESLA (March 30, 2018) [https://www.tesla.com/blog/update-last-week%E2%80%99s-accident](https://www.tesla.com/blog/update-last-week%E2%80%99s-accident).


36 Jasonman36 (Oct. 17, 2015), [https://www.youtube.com/watch?v=d0S-WUBLtFHY](https://www.youtube.com/watch?v=d0S-WUBLtFHY); AutoMoHo (June 21, 2017), [https://www.youtube.com/watch?v=mCj_C1NOVxw](https://www.youtube.com/watch?v=mCj_C1NOVxw); Auto TV (Mar. 11, 2018), [https://www.youtube.com/watch?v=0NdZWU6Bik](https://www.youtube.com/watch?v=0NdZWU6Bik); aDigitalNomad . net (May 22, 2017), [https://www.youtube.com/watch?v=G9xRPUU6R_b](https://www.youtube.com/watch?v=G9xRPUU6R_b).

37 Ilduval (Nov. 11, 2017), [https://www.instagram.com/p/BbXXWd1Zs1/](https://www.instagram.com/p/BbXXWd1Zs1/).

“Tesla Has Begun Making All Its New Cars Self-Driving”.39 Adweek ran the headline “Elon Musk Defends Tesla Following Latest Self-Driving Accident” on May 15, 2018.40 USA Today titled an article “After a Tesla crash, more doubts drivers can be trusted with self-driving tech such as AutoPilot” on May 18, 2018.41 If Tesla is able to fool entities with substantial access to information resources, such as the New York Times and NPR, into thinking Autopilot is a self-driving feature, one can begin to see how consumers are even more susceptible to perceiving Autopilot as equivalent to self-driving capability.

Additionally, reports and statements issued by NHTSA expressly cite consumers’ lack of understanding of Autopilot as a safety risk.

In 2017, after completing its investigation of Joshua Brown’s death, NHTSA spokesman Bryan Thomas said “We are concerned about drivers operating these vehicles having a good understanding of the capabilities and limitations of the systems. . . . It’s not enough to put it in an owners’ manual and hope that drivers will read it and follow it.”42 Tesla and Elon Musk are certainly aware of these concerns, yet they continue to use marketing practices that deceive and mislead consumers.

The facts and circumstances surrounding the Autopilot accidents, the way Tesla owners and users describe Autopilot, news and other media references to Tesla vehicles as “self-driving,” and reports and statements issued by government authorities are enough to satisfy the constructive knowledge requirement of the California law. While constructive knowledge is sufficient to violate the California law, Elon Musk’s statements prove that Tesla also has actual knowledge of the confusion caused by its marketing and advertising practices. Most recently, in a call with analysts on May 2, 2018, Musk discussed the Autopilot accidents and said, “the issue is . . . more one of complacency, like we get used to it.”43 In other words, Tesla is acutely aware of the fact that Autopilot users do not understand the safety performance and autonomous capabilities of Autopilot.

---

Simply put, Tesla and Musk are making statements that lead people to believe that their vehicles operating under Autopilot are autonomous vehicles when those vehicles do not meet the definition of autonomous vehicle spelled out in California law.

IV. Conclusion

Tesla’s marketing of its Autopilot feature violates California law as well as Section 5 of the FTC Act. It leads people to believe the car is an autonomous vehicle when it does not meet the definition of autonomous vehicle in the California Code. Its practices are likely to mislead consumers into reasonably believing that their vehicles have self-driving or autonomous capabilities, and those consumers behave differently while using Autopilot than if they understood that Autopilot was merely a driver assistance feature that requires them to constantly monitor the driving environment and be ready to take control of the vehicle without notice. Both Tesla’s and Elon Musk’s public statements regarding Autopilot mislead and deceive consumers.

Sadly, at least two of Tesla’s consumers have already died, and at least one has been injured. In the case of the sole accident the NTSB was able to fully analyze, the Board attributed a lack of understanding of Autopilot’s capabilities to the death of one of these consumers. The California Department of Motor Vehicles must now investigate Tesla’s unfair and deceptive practices and stop it from violating California law so that consumers have accurate information, understand the limitations of Autopilot, and conduct themselves appropriately and safely. The Center for Auto Safety and Consumer Watchdog urge the Department to take appropriate action to prevent further tragedies.

Sincerely,

Jason Levine  
Executive Director  
Center for Auto Safety

John Simpson  
Privacy and Technology Project Director  
Consumer Watchdog

Cc: Bernard Soriano, Deputy Director  
      Brian Soublet, Deputy Director and Chief Counsel