

Date of Hearing: April 17, 2017

ASSEMBLY COMMITTEE ON TRANSPORTATION  
Jim Frazier, Chair  
AB 1160 (Bonta) – As Proposed to be Amended April 17, 2017

**SUBJECT:** Autonomous vehicles

**SUMMARY:** Expands the definition of “autonomous vehicle” to also include any vehicle equipped with technology that makes it capable of operation that meets the definitions of Levels 3, 4, or 5 of the Society of Automotive Engineers’ (SAE) “Taxonomy and Definitions for Terms Related to On-Road Motor Vehicle Automated Driving Systems, Standard J3016.”

**EXISTING LAW:**

- 1) Defines “autonomous technology” as technology that has the capability to drive a vehicle without the active physical control or monitoring by a human operator, and defines “autonomous vehicle” as any vehicle equipped with autonomous technology that has been integrated into that vehicle.
- 2) Authorizes the operation of autonomous vehicles on public roads for testing purposes under certain circumstances specified in regulations adopted by the Department of Motor Vehicles (DMV).
- 3) Prohibits the operation of autonomous vehicles on public roads for non-testing purposes unless the manufacturer of the vehicles submits an application to DMV that is approved pursuant to DMV regulations.
- 4) Requires DMV, by January 1, 2015, to adopt regulations setting forth requirements for the application to operate autonomous vehicles on public roads for non-testing purposes.

**FISCAL EFFECT:** Unknown

**COMMENTS:** In response to arguments for the traffic safety benefits of increasingly automated vehicle technology, the Legislature passed and Governor Brown signed legislation in 2012 requiring DMV to adopt regulations for the operation of autonomous vehicles on California’s public roads [SB 1298 (Padilla), Chapter 570, Statutes of 2012]. The rollout of DMV’s regulations was separated into two stages: regulations for insurance requirements for the purposes of testing autonomous vehicles and regulations for the full deployment of autonomous vehicles on California roads for non-testing purposes. Both sets of regulations were required to be adopted by January 1, 2015. DMV adopted testing regulations on May 19, 2014, and submitted proposed regulations for non-testing purposes for public comment on March 10, 2017. The public comment period will end on April 24, 2017, and DMV anticipates adopting finalized regulations before the end of 2017.

In October 2016, the National Highway Traffic Safety Administration (NHTSA) issued its Federal Automated Vehicles Policy, the first major policy guidance for states on the development on rules relating autonomous vehicles. In that guidance, NHTSA adopted the SAE definitions for levels of automation. As summarized by NHTSA, the SAE definitions divide vehicles into levels based on “who does what, when.” NHTSA describes the levels as follows:

- At SAE Level 0, the human driver does everything;
- At SAE Level 1, an automated system can sometimes assist the human driver conduct some parts of the driving task, as with traditional cruise control;
- At SAE Level 2, an automated system can actually conduct some parts of the driving task, while the human driver continues to monitor the driving environment and performs the rest of the driving task, as with functions such as Tesla’s “autopilot” feature;
- At SAE Level 3, an automated system can both actually conduct some parts of the driving task and monitor the driving environment in some instances, but the human driver must be ready to take back control when the automated system requests;
- AT SAE Level 4, an automated system can conduct the driving task and monitor the driving environment, and the human need not take back control, but the automated system can operate only in certain environments and under certain conditions; and,
- At SAE Level 5, the automated system can perform all driving tasks, under all conditions that a human driver could perform them.

Levels 3-5 are considered “highly automated” and are used in DMV’s proposed regulations to denote what the department considers to be an autonomous vehicle.

This bill would formally adopt the SAE levels of automation into California’s autonomous vehicle laws.

The author contends that California has fallen behind other states in developing autonomous vehicle regulations that promote innovation with the state and balance public safety in a competitive way.

By formally adopting the SAE levels of automation, California’s autonomous vehicle statutes will begin to more closely resemble federal policy, and policies of states that also choose to adopt NHTSA’s guidance, potentially leading to a more desirable climate for testing and innovation for companies developing autonomous vehicle technology.

*Previous legislation:* SB 1298 (Padilla), Chapter 570, Statutes of 2012, established conditions for the operation of autonomous vehicles upon public roadways.

#### **REGISTERED SUPPORT / OPPOSITION:**

##### **Support**

None on file

##### **Opposition**

TechNet (February 17, 2017 version of the bill)

**Analysis Prepared by:** Justin Behrens / TRANS. /