

AMENDED IN ASSEMBLY AUGUST 7, 2012

AMENDED IN ASSEMBLY JUNE 19, 2012

AMENDED IN SENATE APRIL 16, 2012

AMENDED IN SENATE APRIL 9, 2012

SENATE BILL

No. 1298

Introduced by Senator Padilla

February 23, 2012

An act to add Division 16.6 (commencing with Section 38750) to the Vehicle Code, relating to vehicles.

LEGISLATIVE COUNSEL'S DIGEST

SB 1298, as amended, Padilla. Vehicles: autonomous vehicles: safety and performance requirements.

Existing law requires the Department of the California Highway Patrol to adopt rules and regulations that are designed to promote the safe operation of specific vehicles, including, among other things, schoolbuses and commercial motor vehicles. Existing law also requires the Department of Motor Vehicles to register vehicles that are being operated in this state and to issue a license plate to an applicant for the operation and identification of that person's vehicle.

This bill would authorize the operation of an autonomous vehicle, as defined, on public roads, by a driver who possesses the proper class of license for the type of vehicle being operated, *or without the presence of a driver inside the vehicle*, if an application is submitted to the Department of Motor Vehicles and ~~either of 2 specified~~ conditions are met. ~~The first condition is~~ *In cases in which the autonomous vehicle is to be operated on public roads for testing purposes, the bill would require, among other things, that the driver be seated in the driver's*

seat, monitoring the safe operation of the autonomous vehicle, and be capable of taking over immediate manual control of the autonomous vehicle in the event of an autonomous technology failure or other emergency, ~~and the 2nd condition is that. To otherwise operate an autonomous vehicle on public roads, the bill would require the manufacturer of the autonomous technology provides, among other things, that the~~ *to provide an autonomous vehicle has a mechanism to engage and disengage the autonomous technology that is easily accessible to the operator that satisfies specific criteria. If there is no person in the driver's seat, the operator is the person who causes the autonomous technology to engage in the vehicle, and the bill would authorize the department to impose additional requirements it deems necessary to ensure the safe operation of that vehicle.* The bill would require that the autonomous vehicle's technology meets federal Motor Vehicle Safety Standards for the vehicle's model year and all other applicable safety standards and performance requirements set forth in state and federal law and the regulations promulgated pursuant to those laws.

~~The bill would require, until January 1, 2017, that, until such time that an autonomous vehicle meets the requirements established by the National Highway Traffic Safety Administration (NHTSA), or the State of California establishes regulations or standards for the operation of autonomous vehicles, an autonomous vehicle may not be operated on public roads unless a licensed driver is seated in the driver's seat of the vehicle. The bill would require, prior to January 1, 2014, that the Department of Motor Vehicles to adopt regulations setting forth requirements for the submission and approval of an application to operate an autonomous vehicle, including any testing standards, as specified, and to hold public hearings on the adoption of any regulation applicable to the operation of an autonomous vehicle without the presence of a driver inside the vehicle. The bill would provide that federal regulations promulgated by HHTS the National Highway Traffic Safety Administration supersede state law or regulation when found to be in conflict. The bill would also require the department to notify the Legislature of the receipt of an application from a manufacturer seeking approval to operate an autonomous vehicle capable of operating without the presence of a driver inside the vehicle and the approval of the application. The bill would provide that approval of the application is effective no sooner than 180 days after the date the application is submitted.~~

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: no.

The people of the State of California do enact as follows:

1 SECTION 1. Division 16.6 (commencing with Section 38750)
2 is added to the Vehicle Code, to read:

3

4

DIVISION 16.6. AUTONOMOUS VEHICLES

5

6 38750. The Legislature finds and declares all of the following:

7 (a) Development is actively under way of new technology that,
8 through the use of computers, sensors, and other systems, permits
9 a motor vehicle to operate without the active control and continuous
10 monitoring of a human operator. Motor vehicles with this
11 technology, referred to as “autonomous vehicles,” offer significant
12 potential safety, mobility, and commercial benefits for individuals
13 and businesses in the state and elsewhere.

14 (b) Autonomous vehicles have been operated safely on public
15 roads in the state in recent years by entities developing and testing
16 this technology.

17 (c) The State of California, which presently does not prohibit
18 or specifically regulate the operation of autonomous vehicles,
19 desires to encourage the current and future development, testing,
20 and operation of autonomous vehicles on the public roads of the
21 state. The state seeks to avoid interrupting these activities while
22 at the same time creating appropriate rules intended to ensure that
23 the testing and operation of autonomous vehicles in the state are
24 conducted in a safe manner.

25 (d) Toward that end, the Legislature finds it appropriate to
26 authorize the establishment of specific safety requirements for the
27 testing and operation of autonomous vehicles, and to require that
28 future testing and operation of autonomous vehicles in the state
29 comply with those requirements.

30 38751. (a) For purposes of this division, the following
31 definitions apply:

32 (1) “Autonomous technology” means technology that has the
33 capability to drive a vehicle without the active physical control or
34 monitoring by a human operator.

1 (2) (A) “Autonomous vehicle” means any vehicle equipped
2 with autonomous technology that has been integrated into that
3 vehicle.

4 (B) An autonomous vehicle does not include a vehicle that is
5 equipped with one or more collision avoidance systems, including,
6 but not limited to, electronic blind spot assistance, automated
7 emergency braking systems, park assist, adaptive cruise control,
8 lane keep assist, lane departure warning, traffic jam and queuing
9 assist, or other similar systems that enhance safety or provide driver
10 assistance, but are not capable, collectively or singularly, of driving
11 the vehicle without the active control or monitoring of a human
12 operator.

13 (3) An “operator” of an autonomous vehicle is the person who
14 is seated in the driver’s seat, or *if there is no person in the driver’s*
15 *seat*, causes the autonomous technology to engage.

16 (4) (A) A “manufacturer” of autonomous technology is the
17 person as defined in Section 470 that originally manufactures a
18 vehicle and equips autonomous technology on the originally
19 completed vehicle or, in the case of a vehicle not originally
20 equipped with autonomous technology by the vehicle manufacturer,
21 the person that modifies the vehicle by installing autonomous
22 technology to convert it to an autonomous vehicle after the vehicle
23 was originally manufactured.

24 (B) *If the vehicle was not originally equipped with autonomous*
25 *technology by the vehicle manufacturer, a person may modify the*
26 *vehicle by installing autonomous technology that converts that*
27 *vehicle into an autonomous vehicle. It is the intent of the*
28 *Legislature that current law governing the conversion of vehicles*
29 *originally manufactured by a third party shall control issues of*
30 *liability arising from the operation of the autonomous vehicle if*
31 *that vehicle was converted by an autonomous technology*
32 *manufacturer. It is not the intent of the Legislature to relieve an*
33 *original equipment manufacturer (OEM) from liability under*
34 *existing law where the OEM has participated in or facilitated the*
35 *adaptation of the vehicle to autonomous technology. Further, it is*
36 *not the intent of the Legislature that the enactment of this division,*
37 *establishing requirements for the testing and operation of an*
38 *autonomous vehicle that has been converted after the vehicle was*
39 *originally manufactured, makes the conversion of that vehicle a*
40 *reasonably foreseeable occurrence to the original manufacturer*

1 *of that vehicle. Enactment of this division imposes no additional*
2 *duty, or additional liability, on an original manufacturer of a*
3 *vehicle that is converted to an autonomous vehicle by an*
4 *autonomous vehicle manufacturer other than the original*
5 *manufacturer of that vehicle.*

6 (b) An autonomous vehicle may be operated on public roads
7 by a driver who possesses the proper class of license for the type
8 of vehicle being operated if either of the following applies:

9 (1) The autonomous vehicle is being operated on roads in this
10 state solely by employees, contractors, or other persons designated
11 by the manufacturer of the autonomous technology for testing
12 purposes. The driver shall be seated in the driver's seat, monitoring
13 the safe operation of the autonomous vehicle, and capable of taking
14 over immediate manual control of the autonomous vehicle in the
15 event of an autonomous technology failure or other emergency.
16 Prior to the start of testing in this state, the person performing the
17 testing shall obtain an instrument of insurance, surety bond, or
18 proof of self-insurance *as specified in regulations adopted by the*
19 *Department of Motor Vehicles pursuant to paragraph (1) of*
20 *subdivision (d), in the amount of five million dollars (\$5,000,000).*

21 (2) The manufacturer of the autonomous technology provides
22 all of the following:

23 (A) The autonomous vehicle has a mechanism to engage and
24 disengage the autonomous technology that is easily accessible to
25 the operator.

26 (B) The autonomous vehicle has a visual indicator inside the
27 cabin to indicate when the autonomous technology is engaged.

28 (C) The autonomous vehicle has a system to safely alert the
29 operator if an autonomous technology failure is detected while the
30 autonomous technology is engaged, and when an alert is given,
31 the system shall do either of the following:

32 (i) Require the operator to take control of the autonomous
33 vehicle.

34 (ii) If the operator does not or is unable to take control of the
35 autonomous vehicle, the autonomous vehicle shall be capable of
36 coming to a complete stop.

37 (D) The autonomous vehicle shall allow the operator to take
38 control in multiple manners, including, without limitation, through
39 the use of the brake, the accelerator pedal, or the steering wheel,

1 and it shall alert the operator that the autonomous technology has
 2 been disengaged.

3 (E) The autonomous vehicle’s autonomous technology meets
 4 Federal Motor Vehicle Safety Standards for the vehicle’s model
 5 year and all other applicable safety standards and performance
 6 requirements set forth in state and federal law and the regulations
 7 promulgated pursuant to those laws.

8 (F) The autonomous technology does not make inoperative any
 9 Federal Motor Vehicle Safety Standards for the vehicle’s model
 10 year and all other applicable safety standards and performance
 11 requirements set forth in state and federal law and the regulations
 12 promulgated pursuant to those laws.

13 (G) The autonomous vehicle has a separate mechanism, in
 14 addition to, and separate from, any other mechanism required by
 15 law, to capture and store the autonomous technology sensor data
 16 for at least 30 seconds before a collision occurs between the
 17 autonomous vehicle and another vehicle, object, or natural person
 18 while the vehicle is operating in autonomous mode. The
 19 autonomous technology sensor data shall be captured and stored
 20 in a read-only format by the mechanism so that the data is retained
 21 until extracted from the mechanism by an external device capable
 22 of downloading and storing the data. The data shall be preserved
 23 for three years after the date of the collision.

24 ~~(e) (1) Until such time that an autonomous vehicle meets the~~
 25 ~~requirements established by the National Highway Traffic Safety~~
 26 ~~Administration (NHTSA), or the State of California establishes~~
 27 ~~regulations or standards for the operation of autonomous vehicles,~~
 28 ~~an autonomous vehicle may not be operated on public roads unless~~
 29 ~~a licensed driver is seated in the driver’s seat of the vehicle.~~

30 ~~(2) This subdivision shall remain in effect only until January 1,~~
 31 ~~2017, and as of that date is repealed, unless a later enacted statute,~~
 32 ~~that is enacted before January 1, 2017, deletes or extends that date.~~

33 ~~(d)~~

34 (c) Except as provided in paragraph (1) of subdivision (b), an
 35 autonomous vehicle may not be operated on public roads unless
 36 the manufacturer first submits an application to the Department
 37 of Motor Vehicles that contains, at a minimum, all of the following:

38 (1) A certification by the manufacturer that the autonomous
 39 technology meets all of the requirements of paragraph (2) of
 40 subdivision (b).

1 (2) A certification that the manufacturer has tested the
2 autonomous technology on public roads *and has complied with*
3 *the testing standards, if any, established by the Department of*
4 *Motor Vehicles pursuant to paragraph (1) of subdivision (d).*

5 (3) A certification that the manufacturer will maintain a surety
6 bond, or proof of self-insurance *as specified in regulations adopted*
7 *by the Department of Motor Vehicles pursuant to paragraph (1)*
8 *of subdivision (d), in an amount of five million dollars*
9 *(\$5,000,000); to compensate for losses due to injuries or property*
10 *damage caused by a defect in the autonomous technology.*

11 ~~(e)-(1)-~~

12 (d) Prior to January 1, 2014, the Department of Motor Vehicles
13 ~~may shall~~ adopt regulations setting forth requirements for the
14 submission and approval of an application to operate an
15 autonomous vehicle pursuant to this ~~division~~. *division and shall*
16 *hold public hearings on the adoption of any regulation applicable*
17 *to the operation of an autonomous vehicle without the presence*
18 *of a driver inside the vehicle. The regulations shall include any*
19 *testing standards, in addition to those established by paragraph*
20 *(1) of subdivision (b), developed by the Department of the*
21 *California Highway Patrol (CHP), the Institute of Transportation*
22 *Studies at the University of California, or any other entity chosen*
23 *by the department that has expertise in automotive technology,*
24 *automotive safety, and autonomous system design, that the*
25 *department approves and concludes are necessary to ensure the*
26 *safe operation of autonomous vehicles on public roads. The*
27 *department may establish additional requirements by the adoption*
28 *of regulations, which it determines, in consultation with the*
29 ~~Department of the California Highway Patrol~~ *CHP, are necessary*
30 *to ensure the safe operation of autonomous vehicles on public*
31 *roads, including regulations regarding the number of deployments*
32 *of autonomous vehicles on public roads.*

33 (e) *The Department of Motor Vehicles shall approve an*
34 *application submitted by a manufacturer pursuant to subdivision*
35 *(c) upon verification that the manufacturer has submitted test*
36 *results demonstrating that the autonomous vehicles are safe to*
37 *operate on public roads. Notwithstanding the foregoing, if the*
38 *application seeks approval for autonomous vehicles capable of*
39 *operating without the presence of a driver inside the vehicle, the*
40 *department may impose additional requirements it deems necessary*

1 *to ensure the safe operation of those vehicles, and may require the*
2 *presence of a driver in the driver's seat of the vehicle if it*
3 *determines, based on its review of the testing conducted by the*
4 *manufacturer, that such a requirement is necessary to ensure the*
5 *safe operation of those vehicles on public roads. The Department*
6 *of Motor Vehicles shall notify the Legislature of the receipt of an*
7 *application from a manufacturer seeking approval to operate an*
8 *autonomous vehicle capable of operating without the presence of*
9 *a driver inside the vehicle and approval of the application.*
10 *Approval of the application shall be effective no sooner than 180*
11 *days after the date the application is submitted.*

12 ~~(2)~~

13 *(f) Nothing in this division shall limit or expand the existing*
14 *authority to operate autonomous vehicles on public roads, until*
15 *120 days after the Department of Motor Vehicles adopts the*
16 *regulations authorized by this subdivision.*

17 ~~(f)~~

18 *(g) Federal regulations promulgated by the National Highway*
19 *Traffic Safety Administration shall supersede the provisions of*
20 *this division when found to be in conflict with any other state law*
21 *or regulation.*

22 *(h) The manufacturer of the autonomous technology installed*
23 *on a vehicle shall provide a written disclosure to the purchaser of*
24 *an autonomous vehicle that describes what information is collected*
25 *by the autonomous technology equipped on the vehicle.*